



Sustainable Systems within Community Design
Re:Center

by
Adele Theriot

An Undergraduate Thesis Proposal
submitted to the School of Interior Design
in partial fulfillment of the requirements
for the degree of Bachelor of Interior Design

Faculty Advisor
Matthew Dunn, Associate Professor

Louisiana State University
December 8th, 2025
Graduating Class of May 2026

Biographical Note

Adele Theriot is a senior completing her fourth year in interior design at Louisiana State University. During the spring of her junior year, she studied at the Santa Reparata International School of Art in Florence, Italy. This experience broadened her perspective and deepened her appreciation for global design influences. Adele is passionate about creating functional, purposeful designs that enhance the users' experience. After graduating from college, she intends to pursue a career in commercial design. She also plans to obtain the NCIDQ certificate to become a registered interior designer.

Acknowledgments

I would like to thank my professors and advisors at Louisiana State University. The knowledge and guidance they have shared has supported my growth throughout this program. I would also like to thank my family and classmates for the encouragement they have given me during my time as a student.

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01

INTRODUCTION

Chapter 1

Introduction

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Introduction

Design Philosophy

My work is driven by a commitment to creating spaces that are purposeful, clear, and supportive of the user experience. I approach design through research, observation, and feedback, which allows me to understand how people interact with their environment and what they need from it. I prioritize creating meaningful connections between users and the spaces they inhabit, ensuring each environment encourages engagement and awareness. I rely on principles such as form, contrast, harmony, and hierarchy to organize information and guide spatial decisions. I define successful design as work that functions effectively, communicates its intent, and allows users to navigate and experience a space with ease. My goal is to design with intention and to create environments that reflect thoughtful decision-making and well-grounded design principles.

Introduction

Purpose and Goals

The undergraduate senior Thesis is a self-directed yearlong investigation. It begins with identifying a problem and proposed solution in the fall semester, and concludes with testing the solution through a design project in the spring (Robinson and Parman 2010). The Thesis combines skills from the classroom and studio, which I have acquired over the past 4 years and it is structured to encourage critical thinking, develop deeper knowledge, solve challenging problems, and advance my design skills.

My goals for the Thesis are....

1. Understand how to apply in-depth research to address complex environmental and social challenges through design.
2. Improve my ability to combine creativity with data-driven design thinking.
3. Strengthen my ability to communicate design ideas clearly through writing, visuals, and presentations.
4. Become an expert in designing community-based spaces.

Introduction

Research Question

How can a community center be designed to promote recycling and reuse practices that reduce the environmental impacts of plastic and clothing overconsumption?

Thesis

The overconsumption of plastics and textiles contributes to a growing waste challenge. A community center based on circular economy principles can help address this need by offering spaces for recycling, repair, and reuse, along with educational programs that inform and engage the public. Through thoughtful design, such a center can support more mindful consumption habits and encourage people to consider the value and lifespan of everyday materials.

Concept Map



Introduction

Problem

Every year, millions of tons of recyclable materials end up in landfills around the world, which reflects how disconnected many people are from recycling and upcycling practices. Most recycling centers are built for processing rather than public engagement, so they do not offer spaces that teach, motivate, or involve the community. Recycling bins, drop-off sites, and community recycling events are also often overlooked, mainly because people are not aware of them or do not find these options appealing enough to encourage regular participation. When recycling feels inconvenient, unengaging, or disconnected from everyday life, there is little motivation for people to take part in these efforts. As a result, many people remain unaware of the impact their actions can have and lack opportunities to see how materials can be reused or given new value.

Location

The Contemporary Arts Center is located at 900 Camp Street in the Warehouse District of New Orleans. The historic four-story building currently houses galleries, studios, and offices, and its spacious interior and existing layout make it well suited for adaptive reuse. The surrounding neighborhood is a walkable arts district with major destinations such as the Ogden Museum of Southern Art, the National WWII Museum, the Louisiana Children's Museum, and numerous local galleries. Nearby schools, including the New Orleans Center for Creative Arts (NOCCA), along with public transit access on St. Charles Avenue and a variety of local businesses, bring steady activity to the area. A community recycling center would do great in this location because the district already attracts residents, students, tourists, and creative professionals who are open to learning and engaging with new ideas. The building's visibility, accessibility, and cultural setting create strong opportunities for public participation, workshops, and educational outreach focused on recycling and upcycling.

Project Type and Title

Re:Center is a community-focused facility for recycling, upcycling, and education that promotes sustainability and environmental awareness. It includes plastic and clothing collection, a factory and studio for repurposing materials, an upcycling retail store, and a coffee shop that incorporates on-site recycled products. Re:Center also serves as an educational hub, teaching visitors about recycling processes and the importance of circular design. The facility aims to reshape perceptions of waste through creativity and community engagement, encouraging people to participate in more sustainable practices.

Introduction

Theme

The interiors of Re:Center reflect the values of sustainability, community, and creativity through the use of natural and recycled materials, transparency, neutral tones, and selective blue accents. The blue tones introduce a sense of freshness and reinforce the idea of renewal within the circular design process. The layout emphasizes openness and clear visual connections between spaces so visitors can follow how materials move through the space and are transformed. Daylighting is maximized to bring natural light deeper into occupied areas. Acoustic strategies, including sound-absorptive materials and zoning, help reduce noise and create a comfortable environment. Together, these elements create a space that invites people to explore and participate in sustainable practices.



FIGURE 1.2

02

RESEARCH

Chapter 2

Research

Abbreviated Literature Review

Purpose

Literature Review

Summary

Precedent Studies

Purpose

Precedents

Findings

Literature Reviews

Purpose

The purpose of an abbreviated literature review is to become aware of the existing literature on a topic, and select 3 sources to read, summarize and identify significant contributions to the topic in question.

Literature Review 1

Recycling of Plastics in the United States: Plastic Material Flows and Polyethylene Terephthalate (PET) Recycling Processes

Smith, Raymond L., Devika S. Bansal, Christina C. Wong, and Randolph Kirchain. "Recycling of Plastics in the United States: Plastic Material Flows and Polyethylene Terephthalate (PET) Recycling Processes." *ACS Sustainable Chemistry and Engineering* 10, no. 8 (2022): 2842–2854. doi:10.1021/acssuschemeng.1c06845.

The purpose of this article is to map how PET plastic moves through the recycling system in the United States and to measure the efficiency of each stage, including collection, sorting, reclaiming, contamination, and final product output.

One of the key findings is that PET is one of the most successful plastics to recycle in the United States. About 1.8 million tons of PET are produced each year, and roughly 29 percent of PET bottles are collected for recycling, which is significantly higher than the recycling rate of most other plastics. PET works well in recycling systems because it is easy to identify, widely used, and maintains its quality after being reprocessed.

The study explains that PET is mainly found in water bottles, soda bottles, food containers, and packaging trays. These everyday items make PET easier to collect because consumers recognize them. The authors also note that recycled PET (rPET) can be turned into high-quality new products, including new bottles, textiles, carpeting, and food packaging. This is possible because PET retains its material strength better than many other plastics, which allows it to be recycled multiple times without losing performance.

The article also identifies what is not working. A significant amount of PET never reaches a recycling facility. The Environmental Protection Agency reports that more than 70 percent of PET bottles are still thrown away. Even when PET is collected, roughly 20 to 30 percent becomes residue because it is contaminated with food, mixed with other plastics, or damaged during sorting. Residue refers to material that cannot be recycled and must be landfilled. These losses show that the success of PET recycling depends heavily on proper sorting, clear instructions, and clean collection streams.

This study supports my project because Re:Center will include a recycling collection area and a factory space that repurposes PET cups for use in the café. The information in the article helped me understand how important proper sorting and decontamination are for successful PET recycling. Since recycling rates are not as high as they should be compared to the amount of PET produced, I learned that clear signage promoting recycling is necessary to encourage visitors to recycle their plastic materials correctly. The research also reinforces the value of showing people that recycled PET is durable and can be renewed through the recycling process, which supports my decision to make parts of the recycling and upcycling stages visible within the building.

Literature Review 2

Business Model Innovation through Second Hand Retailing

Turunen, Linda L. M., and Hanna-Kaisa Lähtinen. "Business Model Innovation through Second-Hand Retailing." *Journal of Business Research* 116 (2020): 411–420. <https://doi.org/10.1016/j.jbusres.2019.10.029>.

The purpose of this article is to explain how second-hand retail stores can create successful and innovative business models. The authors explore what makes second-hand retail appealing to customers, how it supports sustainability, and how design, branding, and customer experience can help these spaces grow.

The authors found that second-hand retail works best when the shopping experience feels organized, trustworthy, and enjoyable. Many customers avoid traditional second-hand stores because they expect them to be cluttered, confusing, or unattractive. Successful second-hand retailers overcome these challenges by improving store layout, creating clear product categories, and offering a clean and welcoming atmosphere.

Another major finding is that storytelling and transparency increase customer trust. When shoppers understand where items came from and how they were cleaned, repaired, or upcycled, they are more willing to buy second-hand products. The study also shows that second-hand stores benefit from adding services such as repair, customization, or upcycling workshops, since these activities give old items new value and help customers feel more connected to the products.

The article explains that second-hand retail supports sustainability because it extends the life of clothing and other goods. This reduces waste, lowers the demand for new production, and gives communities more affordable purchasing options. The authors also note that younger consumers are becoming more interested in sustainable shopping, which creates new opportunities for well-designed second-hand spaces.

Challenges include inconsistent inventory, mixed public perceptions, and the need for constant organization. However, the authors show that thoughtful design, clear communication, and engaging experiences can help second-hand businesses overcome these issues.

This article provides useful information for the upcycled retail store within Re:Center. I found the storytelling aspect of second-hand clothing especially interesting, and it showed me how sharing the history or transformation of items can strengthen customer engagement. The study also emphasized the importance of clear organization in second-hand spaces, which supports my decision to design a clean and uncluttered retail layout.

Literature Review 3

Educating Students on Sustainability and Recyclability in a World with Underdeveloped Recycling Systems

O’Kane, Brigid, and Braden Trauth. “Educating Students on Sustainability and Recyclability in a World with Underdeveloped Recycling Systems.” University of Cincinnati, 2024. <https://www.daap.uc.edu/content/dam/refresh/daap-62/documents/centers-and-lab-documents/sustainability-initiative/2024-O’Kane-Trauth.pdf>.

The purpose of this article is to explore how education can improve recycling behavior and sustainability awareness, especially in places where recycling systems are limited. The authors focus on teaching students how materials move through their life cycle, how products are assembled, and how design choices affect recyclability.

The article highlights the importance of teaching young people about sustainability through hands-on experiences. The authors show that students learn better when they can physically take apart, sort, and reuse materials rather than only hearing about recycling in a classroom. The study stresses the concept of designing for disassembly, which means creating products that can be easily repaired, separated, or recycled at the end of their use. This approach helps students understand how design decisions influence whether something becomes waste or can be reintroduced into the material cycle.

Another important finding is that education fills the gap created by underdeveloped recycling systems. When communities lack strong recycling infrastructure, schools and local programs become key spaces for teaching proper sorting, reuse, and material awareness. The article explains that students who participate in hands-on sustainability activities are more likely to develop long-term recycling habits and influence the behavior of their families and peers.

The authors also note that simple, creative projects, such as building objects from discarded materials or experimenting with recycled plastics, help students see waste as a resource. These activities increase confidence, reduce confusion about what can be recycled, and show the value of rethinking everyday objects.

This article provides useful insight for the educational workshop space in Re:Center. The study showed me that hands-on learning is an effective way to teach people how recycling works and why materials matter. This supports my decision to include spaces where visitors, especially children, can participate in simple recycling and upcycling activities. Overall, the article helped shape how I plan to introduce educational elements into the building in a way that is accessible, engaging, and practical.

Precedent Studies

Purpose

The purpose of conducting a precedent study in interior design is to examine and analyze the attributes of an existing project that serve as an example for the concept, programming, and/or design of a proposed design project.

Precedent Study 1



FIGURE 2.1, SOURCE: ArchDaily

Name: Kamikatsu Zero Waste Center

Location: Kamikatsu, Japan

Project Type: Mixed-use waste management, education, & reuse center

Total Area: 59,815 sq ft

Architect: Hiroshi Nakamura & NAP

Year: 2020



FIGURE 2.2, SOURCE: ArchDaily

The Kamikatsu Zero Waste Center embodies the principles of sustainability and circular design by combining recycling, education, and community functions within one facility. The building's horseshoe-shaped layout connects key processes such as sorting, storage, and reuse into a continuous and visible flow, which allows residents to participate in recycling activities while learning about waste reduction. The design encourages transparency through open spaces that let visitors see how waste is sorted into 45 different categories under covered outdoor areas. The building is constructed with local cedar wood and reused materials, and it uses bolts instead of adhesives so it can be disassembled in the future. The addition of a reuse shop, community hall, and educational spaces transforms the facility from a simple waste center into a place for environmental awareness, collaboration, and sustainable living.



FIGURE 2.3, SOURCE: ArchDaily

Precedent Study 1

Quantitative Analysis

SPACE	SQ FT	USERS	ADJACENCY	DESIGN FEATURES	SPECIAL REQUIREMENTS
Public Drop-off Zone	2,150 SQ FT	Citizens, Staff	Sorting Hall, Storage Yard	Covered canopy, clear signage, concrete paving	Vehicle circulation, drainage
Sorting Hall	3,100 SQ FT	Staff	Drop-off Zone, Storage Yard, Office	Daylighting through translucent façade, steel structure	Ventilation, safety barriers
Storage & Container Yard	4,250 SQ FT	Staff, Delivery Trucks	Sorting Hall, Loading Area	Open-air layout, reinforced concrete, visual screening	Heavy load capacity, truck access
Administration / Office	860 SQ FT	Staff	Sorting Hall, Education Area	Glazing for supervision, acoustic panels, daylight control	Accessibility, HVAC
Education & Display Space	640 SQ FT	Visitors, Students, Staff	Office, Public Entry	Glazing, wood finishes, information displays	ADA accessibility, digital displays
Staff Facilities (Breakroom, WC, Locker)	530 SQ FT	Staff	Office, Sorting Hall	Durable finishes, natural ventilation	Water supply, sanitation
Circulation / Outdoor Canopy	1,200 SQ FT	All Users	All Program Areas	Covered walkway, visual connection, natural light	Weather protection

Precedent Study 1

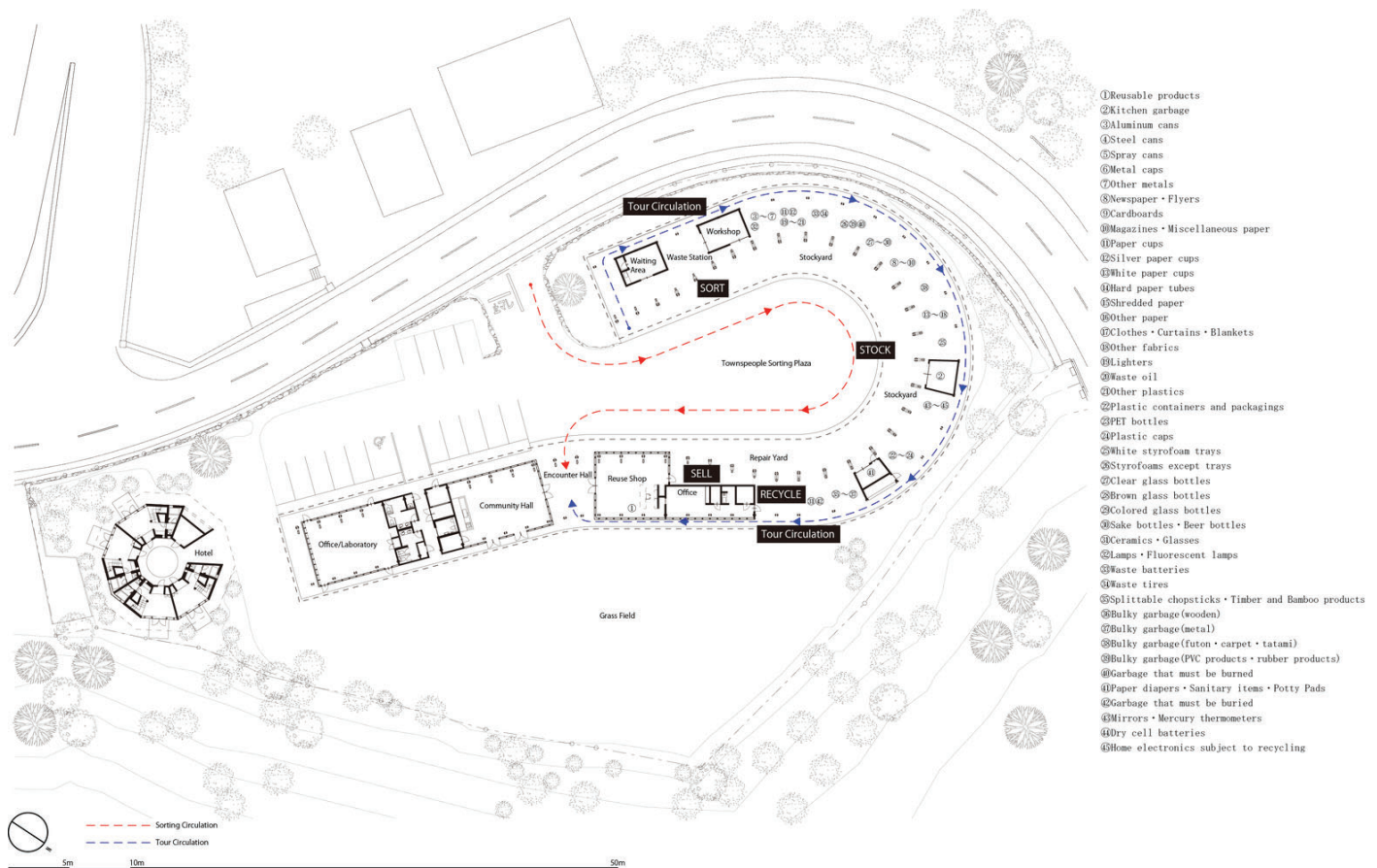


FIGURE 2.4, SOURCE: ArchDaily

Qualitative Analysis

The Collection Center for Recyclable Materials by RUHM Architekten uses a simple and intentional design language that reflects functionality, transparency, and environmental awareness. The color palette is minimal, with natural grays from concrete, muted greens from the surrounding landscape, and light wood tones that create a calm and utilitarian atmosphere. The lighting strategy relies heavily on natural daylight, supported by large glazed openings and translucent panels that illuminate the sorting areas without the need for harsh artificial lighting. Circulation throughout the site is intuitive, separating pedestrian and vehicle paths while still maintaining visual connections between the public drop-off, sorting, and storage zones. The use of durable industrial materials such as concrete, steel, and glass reinforces the building's purpose while keeping the overall design clean and cohesive. What drew me to this project is the way the architects transformed a typically industrial program into an open, well-lit, and approachable space that feels efficient and community friendly.

Precedent Study 2



FIGURE 2.5, SOURCE: ArchDaily



FIGURE 2.6, SOURCE: ArchDaily



FIGURE 2.7, SOURCE: ArchDaily

Name: MANOA Used Clothing Store

Location: Hiroshima, Japan

Project Type: Retail, Clothing
Upcycling & Thrift Store

Total Area: 807 sq ft

Architect: FATHOM

Year: 2023

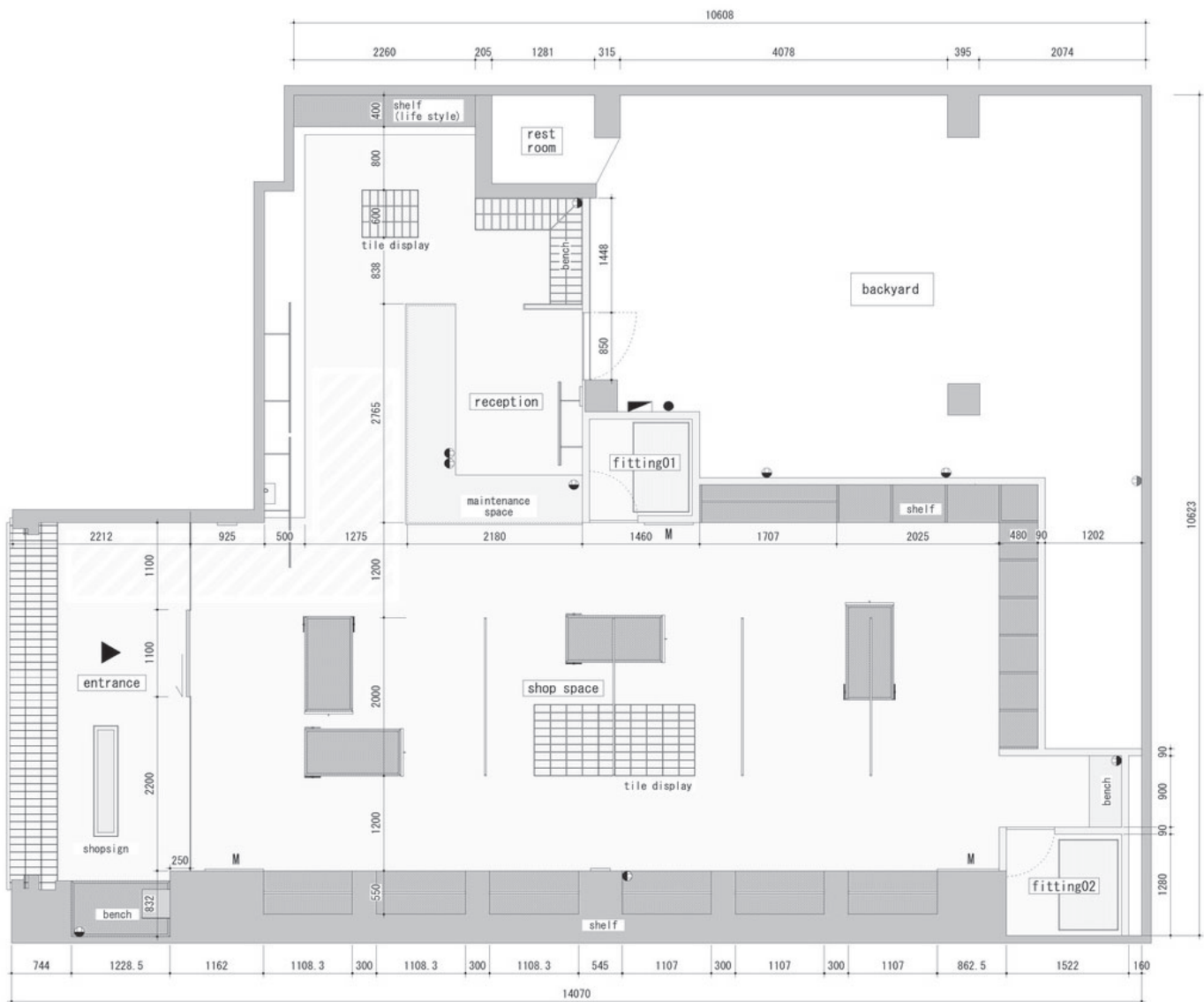
The MANOA Used Clothing Store by FATHOM is an 807 sq. ft. retail space in Hiroshima, Japan that combines clothing sales, repair services, and upcycling activities in one location. The store collects secondhand garments, repairs or repurposes them, and then returns them to circulation for customers to purchase. Its layout places the retail area, repair counter, and storage zone in close proximity, which allows staff to move easily between tasks and makes the process of reuse visible to shoppers. This organization helps create a straightforward shopping experience, since customers can browse items, see repairs happening in real time, and understand how the clothing has been renewed. Overall, the store offers a clear and accessible environment that supports the idea of giving clothing a second life.

Precedent Study 2

Quantitative Analysis

SPACE	SQ FT	USERS	ADJACENCY	DESIGN FEATURES	SPECIAL REQUIREMENTS
Retail Floor / Display Area	430 SQ FT	Customers, Staff	Entry, Repair Counter, Fitting Area	Natural light from storefront, warm ambient lighting, plywood shelving	Accessibility, flexible layout
Repair & Maintenance Counter	110 SQ FT	Staff, Customers	Retail Floor, Storage	Worktable, task lighting, durable surfaces	Power supply, ventilation
Fitting Area	80 SQ FT	Customers	Retail Floor, Storage	Curtains for privacy, warm lighting, mirrors	Accessibility clearance
Storage / Back-of-House	120 SQ FT	Staff	Repair Counter, Retail Floor	Open shelving, metal racks, organized sorting	Fire safety, ventilation
Staff Break / Check-out Counter	67 SQ FT	Staff, Customers	Retail Floor	Wood counter, POS system, concealed storage	Electrical access, security
Circulation	807 SQ FT (total)	All Users	Throughout all zones	Clear paths, open visibility, seamless flow	ADA compliance, unobstructed aisles

Precedent Study 2



Qualitative Analysis

The MANOA Used Clothing Store by FATHOM takes a minimalist, sustainable design approach that highlights simplicity and reuse. The soft, neutral palette of light wood, white walls, and concrete allows the clothing to stand out. Warm ambient and track lighting, along with natural daylight from the storefront, create a comfortable and inviting atmosphere. Raw materials such as plywood and recycled metal reflect the store's sustainable focus. Open circulation connects the retail floor, repair counter, and checkout areas, while flexible furniture supports changing displays. The design promotes a calm, functional retail experience that encourages mindful consumption.

Precedent Study 3



FIGURE 2.9, SOURCE: ArchDaily

Name: Collection Center for Recyclable Materials

Location: Amstetten, Austria

Project Type: Waste Management, Recycling Facility, & Community Drop-off Center

Total Area: 7,500 sq ft

Architect: RUHM Architekten

Year: 2020



FIGURE 2.10, SOURCE: ArchDaily

The Collection Center for Recyclable Materials by RUHM Architekten is a small recycling facility in Amstetten, Austria, designed to make waste separation clear, efficient, and easy for the public. The building relies on durable materials such as concrete, steel, and glass, which support heavy use and keep the facility functional over time. Its open and organized layout guides users through the process from drop-off to sorting and storage in a straightforward sequence, helping reduce congestion and maintaining safe circulation for both pedestrians and vehicles. Translucent wall panels provide consistent natural daylight, which improves visibility in the sorting areas and lowers the need for artificial lighting. Although the program is industrial, the design keeps the space approachable and intuitive so visitors can quickly understand how to use the center. These decisions allow the facility to operate smoothly while supporting effective community recycling.



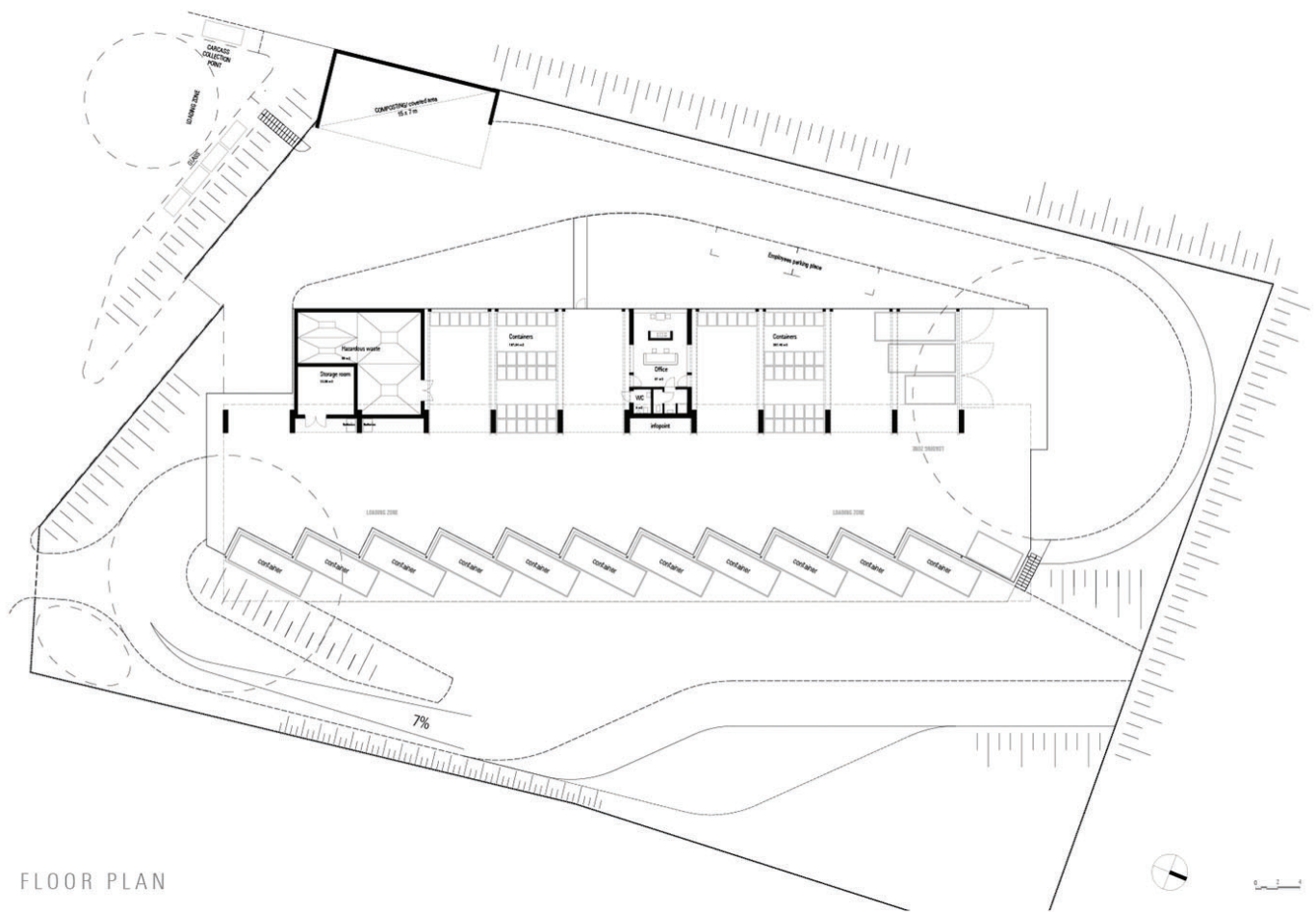
FIGURE 2.11, SOURCE: ArchDaily

Precedent Study 3

Quantitative Analysis

SPACE	SQ FT	USERS	ADJACENCY	DESIGN FEATURES	SPECIAL REQUIREMENTS
Public Drop-Off Zone	2,000 SQ FT	Citizens, Staff	Sorting Hall, Storage Yard	Covered canopy, durable concrete surface, clear signage	Vehicle access, drainage
Sorting Hall	2,800 SQ FT	Staff	Drop-Off Zone, Storage Area, Office	High ceilings, natural daylight from translucent panels, open circulation	Ventilation, safety barriers
Storage / Container Yard	1,800 SQ FT	Staff, Delivery Trucks	Sorting Hall, Loading Area	Reinforced concrete, outdoor canopy, visual screening	Heavy load capacity, truck maneuvering space
Administration / Office	450 SQ FT	Staff	Sorting Hall, Education Space	Glass façade for visibility, acoustic panels, wood detailing	Heating/cooling, accessibility
Education / Display Area	300 SQ FT	Visitors, Staff	Office, Public Entry	Informational panels, open layout, natural light	ADA accessibility, power for displays
Staff Facilities (Breakroom, WC, Locker)	150 SQ FT	Staff	Office, Sorting Hall	Durable finishes, compact layout	Water supply, sanitation

Precedent Study 3



FLOOR PLAN

FIGURE 2.12, SOURCE: ArchDaily

Quantitative Analysis

The Collection Center for Recyclable Materials by RUHM Architekten presents a straightforward architectural approach that highlights order, clarity, and environmental responsibility. The design relies on light gray concrete, steel framing, and subtle wood accents, creating a calm industrial atmosphere that supports the center's daily operations. Ample daylight enters through translucent wall panels and wide openings, giving the interior a bright, even quality while limiting the need for artificial lighting. Movement through the site is easy to understand, with clearly marked areas for visitors on foot and distinct routes for vehicles. This organization helps users see how materials move from drop-off to handling and storage, reinforcing the center's emphasis on openness. Robust materials and simple forms ensure longevity and reduce maintenance demands. Overall, the project demonstrates how a recycling facility can feel orderly and inviting, encouraging the public to participate in responsible waste practices.

Findings

Precedent Study 1

Kamikatsu Zero Waste Center / Hiroshi Nakamura & NAP

The Kamikatsu Zero Waste Center informed the design of Re:Center through its combination of recycling, education, and community use within one cohesive facility. Its transparent layout shows visitors how materials move through sorting, reuse, and processing, which supports Re:Center's goal of making recycling easier to understand and more accessible. The precedent also highlights the impact of choosing sustainable materials, showing how thoughtful material selection can strengthen the project's environmental goals. These ideas reinforced key decisions in Re:Center related to visibility, educational engagement, and material selection.

Precedent Study 2

MANOA Used Clothing Store / FATHOM

The MANOA Used Clothing Store demonstrates how a clear and efficient layout can support multiple functions within a small space. Its simple organization and neutral material palette create a calm backdrop that allows the clothing to stand out. The open flow between the retail floor and repair areas shows how visibility and flexibility can enhance the overall user experience. This precedent informs Re:Center by illustrating how different program elements can be connected in a straightforward way, allowing visitors to easily understand where activities take place and how materials move through the space.

Precedent Study 3

Collection Center for Recyclable Materials / RUHM Architekten

The Collection Center for Recyclable Materials demonstrates how an industrial facility can remain functional, organized, and easy to understand. Its straightforward layout separates public and staff circulation while still maintaining visual transparency across the site. Natural light enhances visibility and contributes to a clean and efficient working environment. This precedent informs Re:Center by showing how clear circulation and visible operations can support a facility that is both practical and purposeful.

03

FOCUS AREA

Chapter 3

Focus Area

Introduction

Research

Design Criteria

Application Potential

Introduction

The focus areas for this project are LEED and acoustics. LEED, which stands for Leadership in Energy and Environmental Design, is a certification system that evaluates how environmentally responsible a building is in both its design and operation. It provides guidelines for reducing energy use, improving air quality, and choosing materials that have lower environmental impact. Acoustics is also an important aspect of building design, as it addresses how sound moves through a space and how noise affects comfort and usability. Understanding both LEED and acoustics helps ensure that buildings perform well, support user well-being, and create environments that function effectively.

Research

LEED focuses on creating healthy, efficient interior environments, which can be supported in Re:Center through strategies such as maximizing natural daylight, reducing energy use, improving indoor air quality, and choosing low-impact materials. These goals can be addressed inside the building by bringing daylight deeper into occupied spaces through interior glazing, using energy-efficient LED lighting with sensors, selecting low-VOC paints and finishes, and incorporating recycled-content materials for surfaces and furnishings. Integrating LEED strategies is especially important because Re:Center is built around sustainable practices, and the interior environment should reflect the same values promoted by the programs inside it. Acoustics is also a critical part of interior performance, since sound levels directly affect comfort, focus, and overall user well-being. Because Re:Center contains both active factory areas and quieter community spaces, interior acoustic strategies such as sound-absorptive ceiling panels, acoustic wall treatments, cushioned flooring, and buffer zones between noisy and quiet rooms are essential. Together, LEED-aligned interior choices and thoughtful acoustic planning create a healthier, more comfortable interior environment that supports the building's purpose and the needs of its users.

Focus Area

Design Criteria

<i>Issue</i>	<i>Design Criteria</i>
Maximizing Daylight	Use interior glazing and layouts that bring natural light deeper into occupied spaces.
Energy Efficiency	Use LED lighting with occupancy or daylight sensors to cut interior energy use.
Indoor Air Quality	Select low-VOC paints, adhesives, and finishes to support healthy air conditions.
Material Selection	Use recycled-content or low-impact materials for interior surfaces and furnishings.
Noise Control	Add sound-absorptive ceilings, acoustic wall panels, and cushioned flooring.
Acoustic Zoning	Place buffer zones between noisy factory areas and quiet community spaces.

Application Potential

Focusing on LEED and acoustics has the potential to shape Re:Center into a building that not only performs well but also enhances the user experience in meaningful ways. Integrating LEED strategies into the interior design will guide decisions about daylighting, material selection, lighting systems, and air quality, resulting in a space that feels healthier, more efficient, and aligned with the facility's mission of responsible consumption and production. At the same time, applying acoustic research will influence the spatial layout, finishes, and zoning, ensuring that noisy operational areas are appropriately separated from quiet community spaces. Together, these priorities will lead to a final design solution that is environmentally responsible, comfortable to inhabit, and capable of supporting a wide range of activities without compromising well-being or performance.

04

SITE AND BUILDING

Chapter 4

Site and Building

Site and Building Selection

Existing Conditions

Opportunities and Constraints

Site and Building

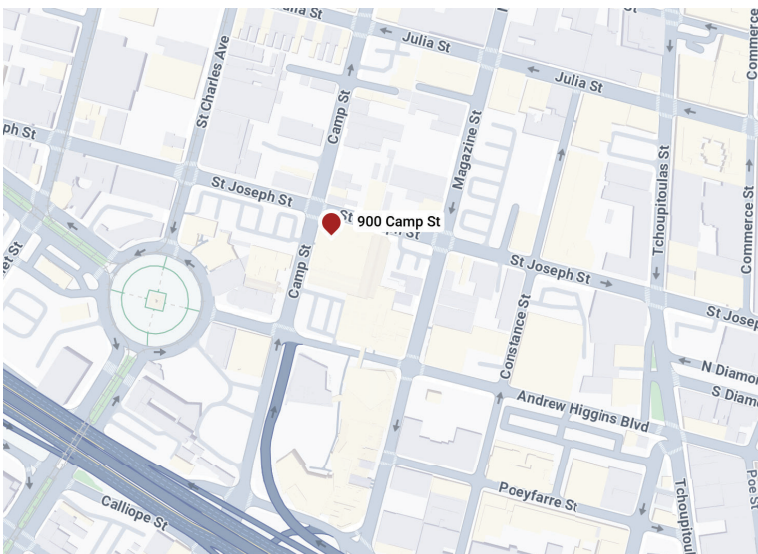
Site and Building Selection



LOCATION MAP: CITY SCALE

The Contemporary Arts Center is located at 900 Camp Street in the Warehouse District of New Orleans, an area known for art, culture, and renovated industrial buildings. The building is an 88,000-square-foot former warehouse with exposed brick, large windows, and open floor plates that reflect its industrial history. It is historically significant as one of the first warehouses converted into an arts space, helping to revitalize the district.

I selected this building because its large open interiors and industrial character support the main spaces in my project, including the recycling factory, textile upcycling area, Re:Store retail space, café, community learning room, and administrative areas. The building is suitable because it already functions as a public, community-oriented place with galleries and offices on the upper levels.



LOCATION MAP: BLOCK SCALE

My project improves the site by giving the building a new purpose centered on education and environmental awareness. By reorganizing circulation, creating clear program zones for community use, and incorporating recycled interior materials, the design adds character and creates a more engaging and meaningful place for visitors. The proposed zones will support hands-on interaction, learning, and leisure throughout the building.

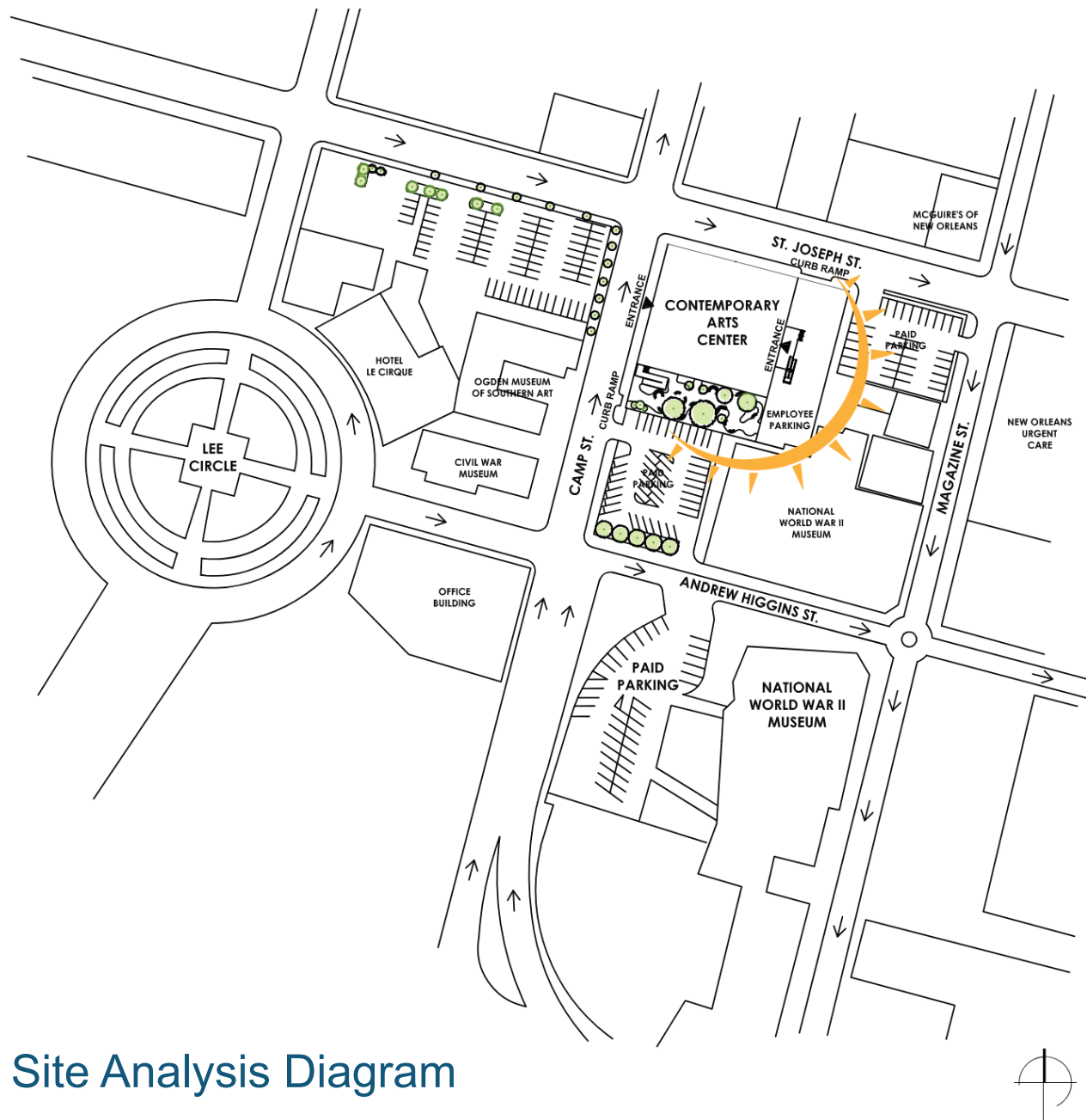
Existing Conditions

Name: Contemporary Arts Center

Location: Warehouse District

Address: 900 Camp Street, New Orleans, LA 70130

Square Footage: 88,000



Site Analysis Diagram

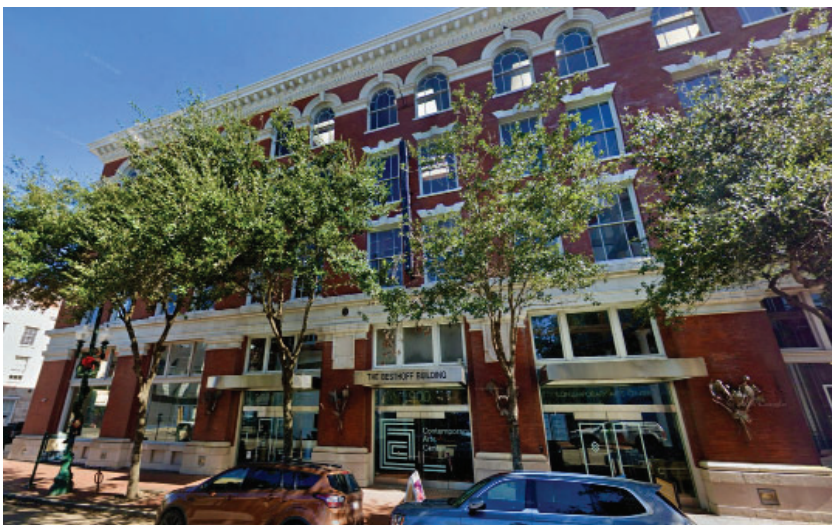
Existing Conditions



Corner of Camp St. and Joseph St.



View from Andrew Higgins St.



Main Building Entrance on Camp St.

Exterior Materials

The exterior features red brick masonry with white-painted stone or cast-stone trim surrounding the windows and arched openings.

Architectural Style

The building reflects an early 20th-century industrial warehouse style.

Historic Preservation Regulations

The building contributes to the historic character of the Warehouse District and falls within the New Orleans Historic District Landmarks Commission (HDLC) jurisdiction. Any major exterior changes require HDLC review to ensure compatibility with the surrounding historic context.

Adjacent Businesses

Surrounded by galleries, museums, offices, and restaurants in the Warehouse District.

Adjacent Transportation

Accessible by streetcar, bus routes, bike lanes, and nearby public parking.

Relationship to Community

Serves as a cultural hub that supports public events, creativity, and community engagement.

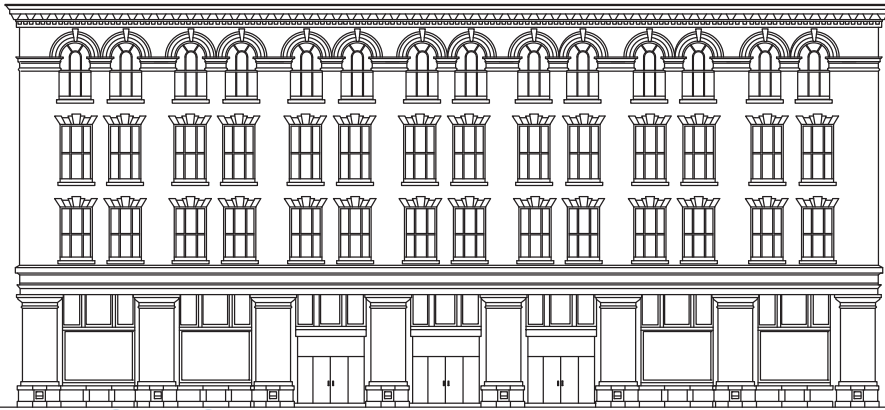
Exterior Circulation – Site Access

All surrounding streets provide accessible entry points, with ADA-compliant curb ramps located at each corner around the building.

Exterior Circulation – Building Access

The main entrance to the building is located on Camp Street.

Existing Conditions



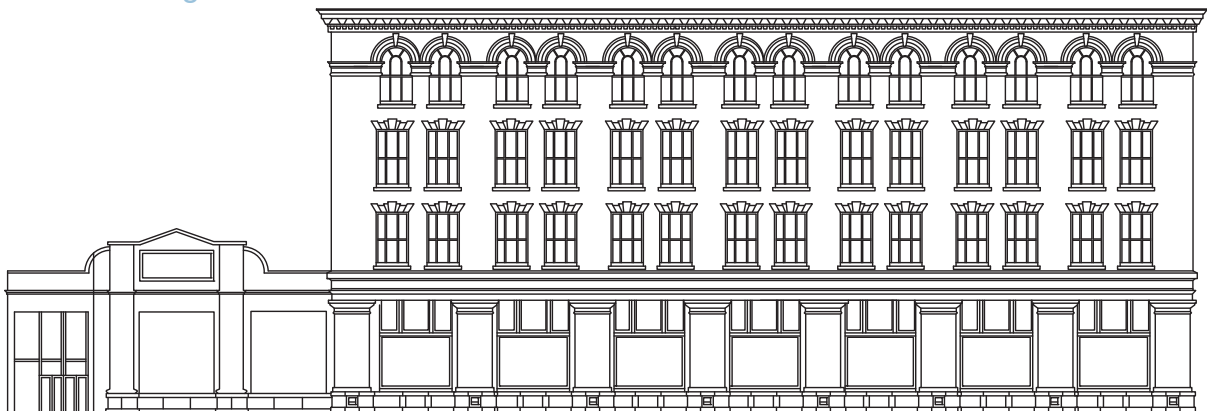
Elevation - Camp Street



Elevation - Andrew Higgins Street

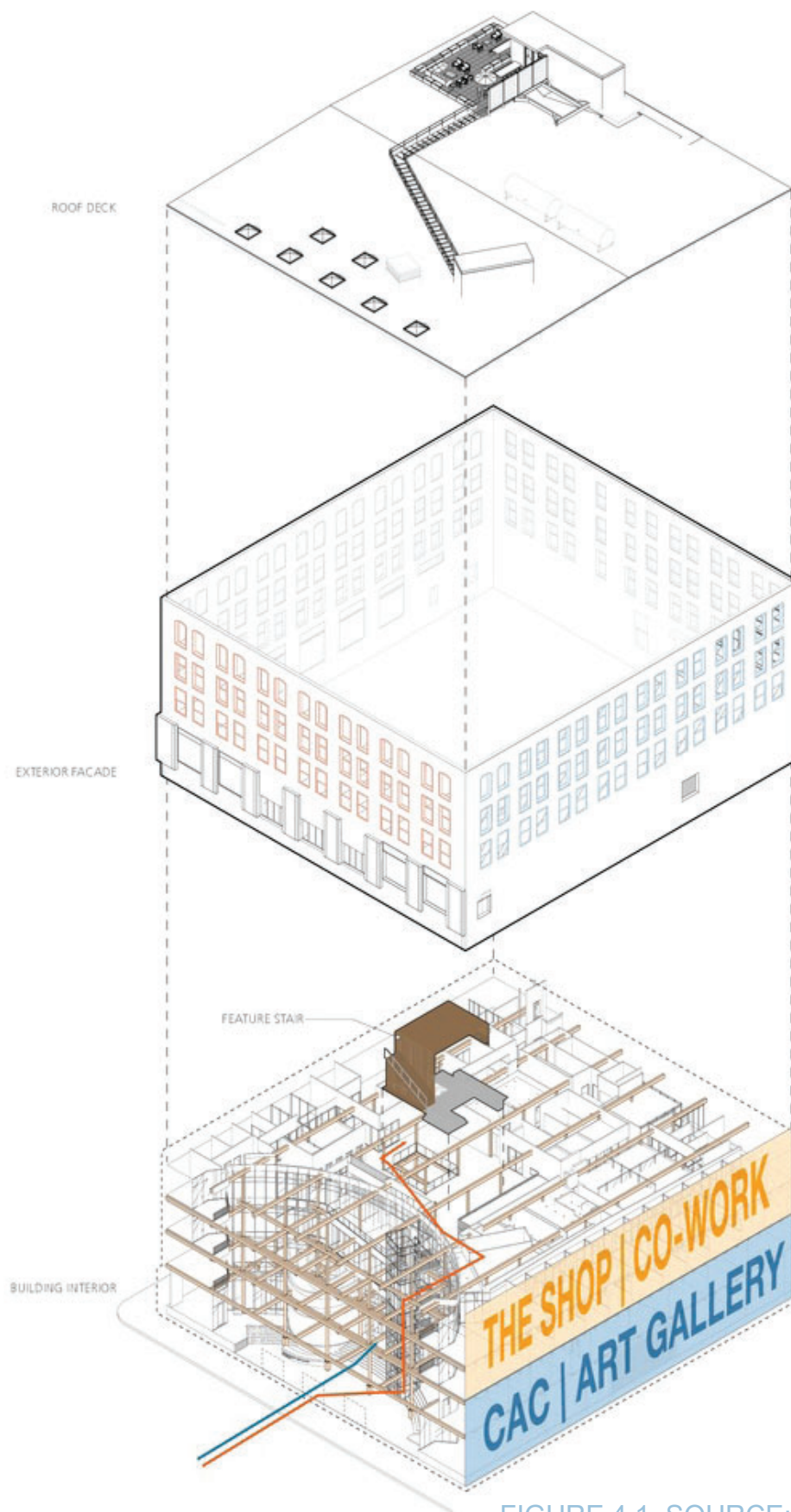


Elevation - Magazine Street



Elevation - St. Joseph Street

Existing Conditions

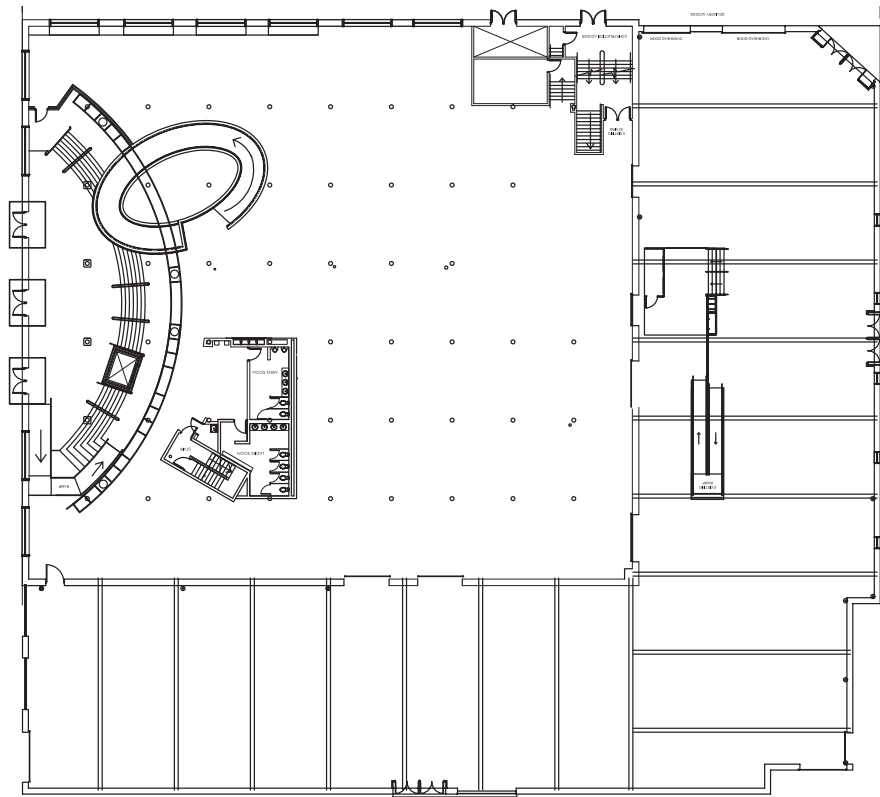


Structural System

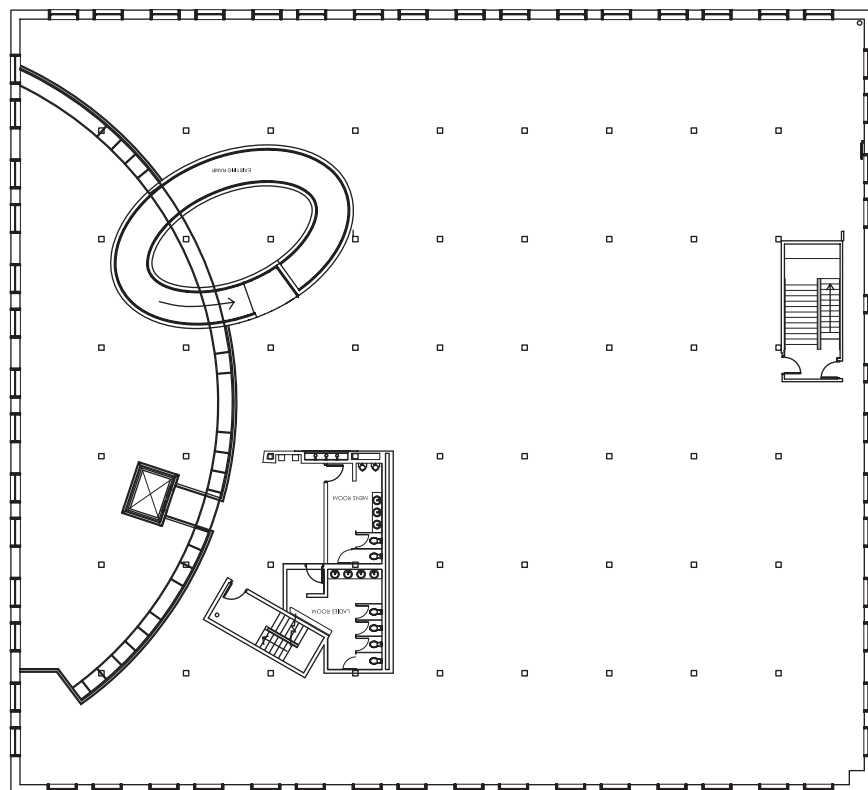
The primary structure consists of large timber columns and beams supporting the floors, combined with steel framing in areas that were reinforced during renovations. The exterior walls are load-bearing brick masonry, and the wide interior spans are supported by a regular grid of timber columns. This combination of brick, heavy timber, and steel allows for open floor plates and high ceilings

FIGURE 4.1, SOURCE: ArchDaily

Existing Conditions

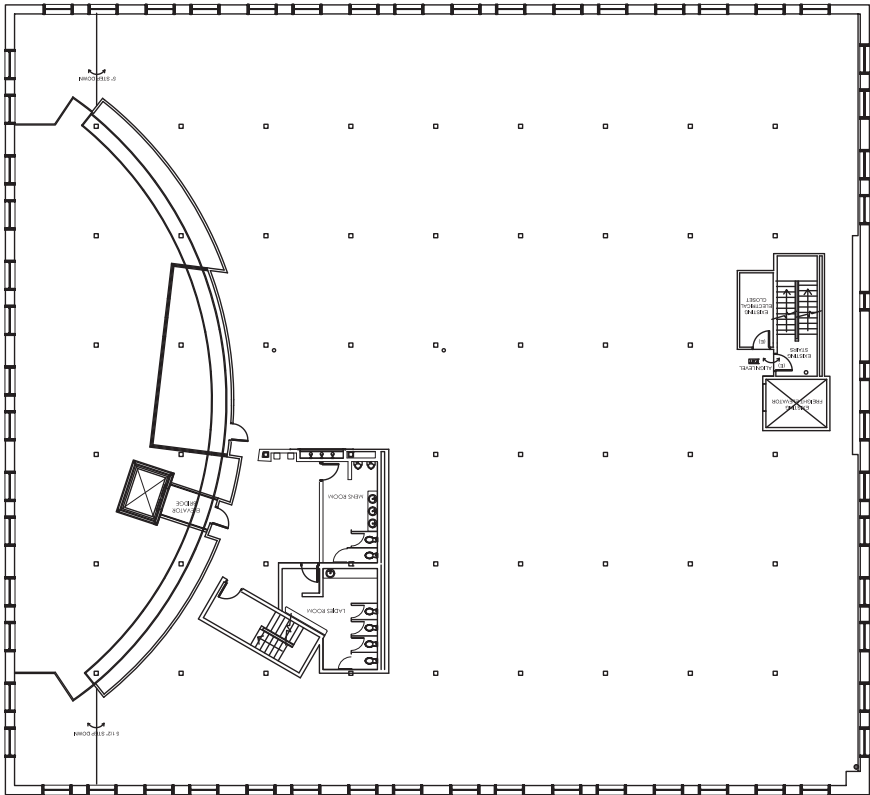


First Floor Plan

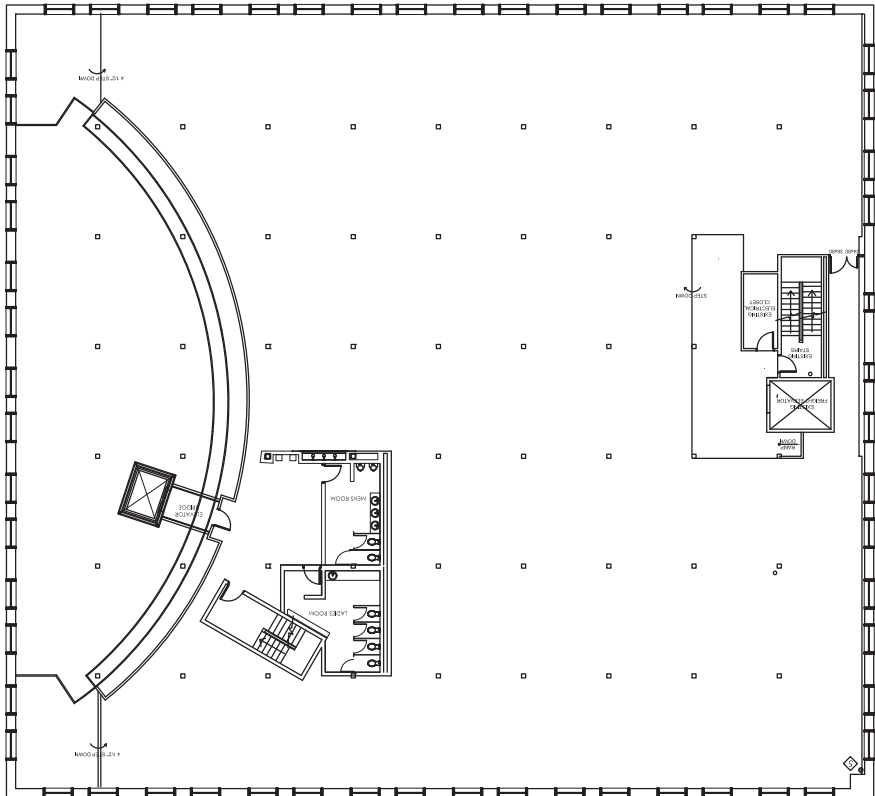


Second Floor Plan

Existing Conditions



Third Floor Plan



Fourth Floor Plan

Existing Conditions



Modified Longitudinal Section



Modified Longitudinal Section



Modified Cross Section



Modified Cross Section

Existing Conditions



Lobby Entry



Mezzanine View



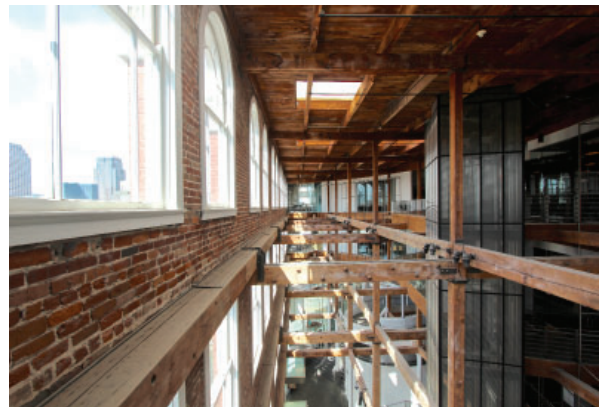
Office Stair Zone



Window View



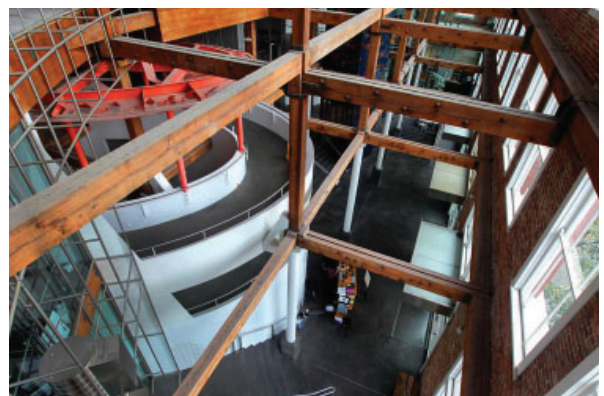
Gallery Ramp



Atrium Overlook



Main Gallery



Atrium Structure

Opportunities and Constraints

The main opportunity within the Contemporary Arts Center lies in its prime location in the heart of New Orleans' Warehouse District. As Re:Center focuses on community engagement, sustainability, and creative reuse, being surrounded by galleries, studios, and cultural institutions strengthens the overall concept. This vibrant neighborhood already attracts artists, tourists, and local residents, making it an ideal setting for a public-facing recycling and upcycling hub.

However, the dense urban context presents a constraint. The building is situated closely between other structures, which could limit natural daylight and create challenges for material drop-off, truck circulation and deliveries.

Another significant opportunity comes from the CAC's existing character. Its large interior spaces and generous ceiling heights make it particularly well-suited for flexible programming, especially for the workshop and factory placement. That said, given that the building has four floors and only specific areas designed for heavy loads, functions such as machinery for plastic processing may need to be strategically placed on lower levels to avoid any structural strain.

Although, while the open design of the building presents many benefits, it can also pose challenges. Noise from machinery or workshops may interfere with quieter zones, such as offices, a coffee shop, or the upcycling store, if not managed properly.

Overall, the strongest opportunities of the Contemporary Arts Center are its cultural surroundings, its adaptable industrial shell, and its generous interior volumes that support Re:Center's mission. The main constraints are the tight urban site, the limited access for service vehicles, and structural considerations that will influence where the heavier processing functions can be placed.

05

PROGRAM

Chapter 5

Program

Goals

- Functional Goals

- Form and Aesthetic Goals

- End User Profile

- Activity Requirements

Program Requirements

- Program Summary

- Detailed Program

- Codes and Building Occupancy

Goals

The goal of Re:Center is to create a community-focused environment that supports sustainable practices, hands-on learning, and everyday leisure. Through features such as a café and an upcycled retail store, the design brings people together while promoting awareness of material reuse. The space should operate smoothly and efficiently, while reinforcing the core values Re:Center aims to introduce to the community.

Functional Goals

For People

- Ensure clear circulation so users and staff can move easily through the space.
- Offer welcoming and desirable spaces for leisure, learning, and comfortable working conditions for the staff.

For Objects

- Develop well-structured and efficient flow zones for the machinery within the factory section of the building.
- Create an enticing display for showcasing upcycled products.

For Activities

- Provide a flexible space for guest workshops, classes, and community events.
- Make sure the retail and coffee shop areas attract customers and encourage them to return.

Form and Aesthetic Goals

For Site

- Establish clear entry points through signage that welcomes visitors from the street.
- Design exterior elements to hint at the theme of recycling and reuse.

For Building

- Maximize the use of daylight within the building, especially for the retail and coffee shop.
- Create brand transparency using exposed or translucent materials in the upcycling workshop and factory areas.

For Environment

- Create an energetic environment that encourages community interaction and learning through the use of color, texture, and lighting.

End User Profile

The primary users of Re:Center are community members of all ages who wish to take part in sustainable practices. This includes local residents, students, families, artists, designers, and volunteers who want to participate in workshops, donate materials, or simply enjoy the retail and coffee shop areas. Many users may not have prior knowledge about recycling or upcycling, so the space needs to be approachable, educational, and easy to navigate. The user may also have specific wants and needs, such as clear wayfinding, accessibility, and comfortable seating areas. Visitors to the coffee shop and retail areas may want to feel a sense of separation from the factory and workshop areas to avoid being overwhelmed. The user has a strong influence on the project because Re:Center is meant to be shaped by the community it serves. The user drives the overall design goals and help determine how the spaces are organized, how information is presented, and how the environment supports engagement with sustainable practices.

Activity Requirements

Re:Center's primary function is to provide spaces for recycling and upcycling, along with flexible workshop areas where visitors can engage in hands-on activities. The building will also host a retail shop that showcases upcycled products and a coffee shop that promotes recycling by using cups collected at the building's collection center. Re:Center aims to educate the community on how everyday materials can be repurposed into something new. The primary end user activities within the building include learning, creating, observing, shopping, and socializing.

Program Requirements

Program Summary

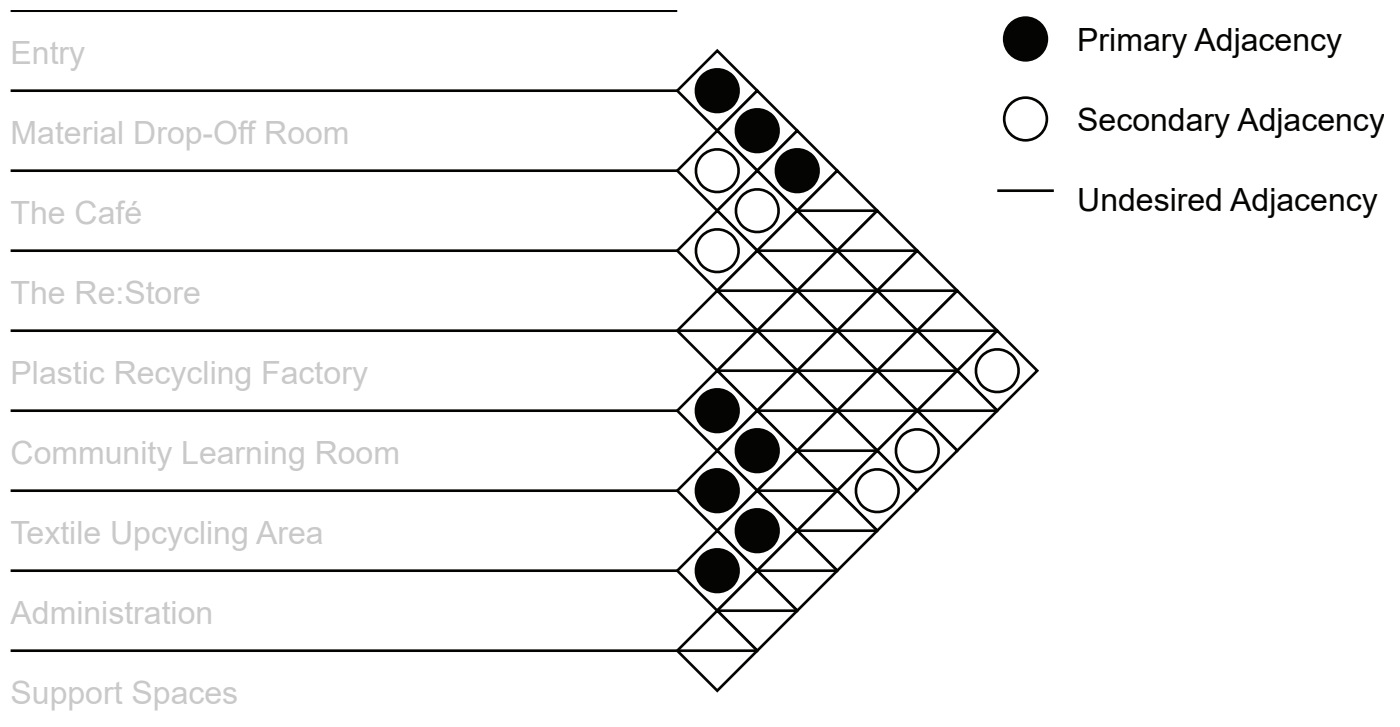
Assignable Space	Occupancy		Maximum No. of Occupants	Unit SF	No. of Units	Total Occupants	Total Net Assignable SF
	Function	OLF					
First Floor						215	4,655
Lobby	Assembly: unconcentrated	15 net/person	174	2,600	1	174	2,600
Material Drop-Off Room	Business	150 gross/person	5	685	1	5	685
Reception Desk	Business	150 gross/person	2	270	1	2	270
Lounge	Assembly: unconcentrated	15 net/person	34	500	1	34	500
Restrooms	Tare				2	0	600
The Café						116	3,665
Café Seating Area	Assembly: unconcentrated	15 net/person	106	1,600	1	106	1,600
Point of Sale	Business	150 gross/person	2	200	1	2	200
Beverage Prep Area	Kitchen	200 gross/person	2	365	1	2	365
Light Kitchen	Kitchen	200 gross/person	2	400	1	2	400
Staff Break Room	Business	150 gross/person	3	450	1	3	450
Recycling Room	Storage	300 gross/person	1	200	1	1	200
Café Restroom	Tare				1	0	450
The Re:Store						45	3,680
Retail Sales Floor	Mercantile	60 gross/person	31	1,845	1	31	1,845
Point of Sale	Mercantile	60 gross/person	3	140	1	3	140
Stock Room	Storage	300 net/person	1	300	1	1	300
Back-of-House Receiving Area	Business	150 net/person	4	525	1	4	525
Display Prep Area	Business	150 net/person	2	290	1	2	290
Staff Break Room	Business	150 net/person	3	380	1	3	380
Recycling Room	Storage	300 net/person	1	200	1	1	200
Support Spaces						1	300
Loading Dock	Tare				1	0	0
Janitorial Closet	Tare				1	0	0
Mechanical Room	Tare				1	0	0
Electrical / IT Closet	Tare				1	0	0
General Storage	Storage	300 net/person	1	300	1	1	300
Second Floor						0	800
Restrooms	Tare				2	0	800
Mechanical Room	Tare				1	0	0
Plastic Recycling Factory						35	4,670
Material Intake Area	Business	150 net/person	4	540	1	4	540
Sorting Area	Business	150 net/person	4	585	1	4	585
Cleaning & Prep Area	Business	150 net/person	4	540	1	4	540
Shredding Area	Business	100 net/person	4	540	1	4	540
Processing / Melting Area	Business	100 net/person	4	585	1	4	585
Fabrication Area	Business	100 net/person	4	540	1	4	540
Finishing Area	Business	100 net/person	4	540	1	4	540
Processed Material Storage Room	Storage	300 net/person	4	400	1	4	400
Staff Break Room	Business	150 net/person	3	400	1	3	400
Mechanical / Utility Area	Tare				1	0	0
Community Learning Room						96	2,400
Seminar Area	Assembly – unconcentrated	15 net/person	68	1,010	1	68	1,010
Workshop Area	Shop / Vocational	50 gross/person	28	1,390	1	28	1,390
Textile Upcycling Room						56	3,630
Material Intake Area	Business	150 net/person	3	430	1	3	430
Cutting & Pattern-Making Area	Shop / Vocational	50 net/person	8	400	1	8	400
Sewing & Construction Area	Shop / Vocational	50 net/person	24	1,200	1	24	1,200
Textile Prep Area	Shop / Vocational	50 net/person	8	400	1	8	400
Finishing Area	Shop / Vocational	50 net/person	8	400	1	8	400
Storage Room	Storage	300 net/person	2	400	1	2	400
Staff Break Area	Business	150 net/person	3	400	1	3	400
Administration						72	2,840
Offices	Business	150 net/person	31	1,590	11	11	1,590
Conference Room	Assembly – unconcentrated	15 net/person	34	500	1	34	500
Kitchen	Assembly – unconcentrated	15 net/person	24	360	1	24	360
Lounge	Business	150 net/person	3	390	1	3	390
						Total Occupants	Total Net Assignable SF
						636	26,640
						Tare	39%
						Total SF	44,000

Program Requirements

Detailed Program

Assignable Space	Unit SF	No. of Units	Total Net Assignable SF	Users	Activities	Equipment
First Floor/Entry	4,655	1	4,655	Visitors, community members, staff	Arrival, orientation, circulation, waiting, transition to other program areas	Reception desk, signage, digital kiosks, security camera
Material Drop-Off Room	685	1	685	Visitors, donors, staff	Dropping off materials, verifying condition, staging incoming items	Sorting carts, scales, bins, PPE station
The Café	3,665	1	3,665	Visitors, staff	Ordering, food prep, dining, socializing	POS system, beverage machines, refrigerator, prep counters
The Re:Store	3,680	1	3,680	Shoppers, visitors, staff	Browsing, purchasing, retail display of upcycled items	Checkout counter, shelving, display racks
Plastic Recycling Factory	4,670	1	4,670	Technicians, designers, supervised participants	Sorting, cleaning, shredding, melting, fabrication	Shredder, wash station, extruder, molds, PPE
Community Learning Room	2,400	1	2,400	Students, community groups, instructors	Workshops, classes, demonstrations, group learning	AV system, tables, chairs, instructor station
Textile Upcycling Area	3,630	1	3,630	Designers, volunteers, community members	Cutting, sewing, pattern-making, textile assembly	Cutting tables, sewing machines, irons, PPE
Administration	2,840	1	2,840	Directors, coordinators, admin staff	Planning, meetings, administrative operations	Desks, computers, printers, phones
Support Spaces	300	1	300	Staff, maintenance personnel	Storing supplies, cleaning, mechanical operations	Shelving, janitorial sink, mechanical equipment

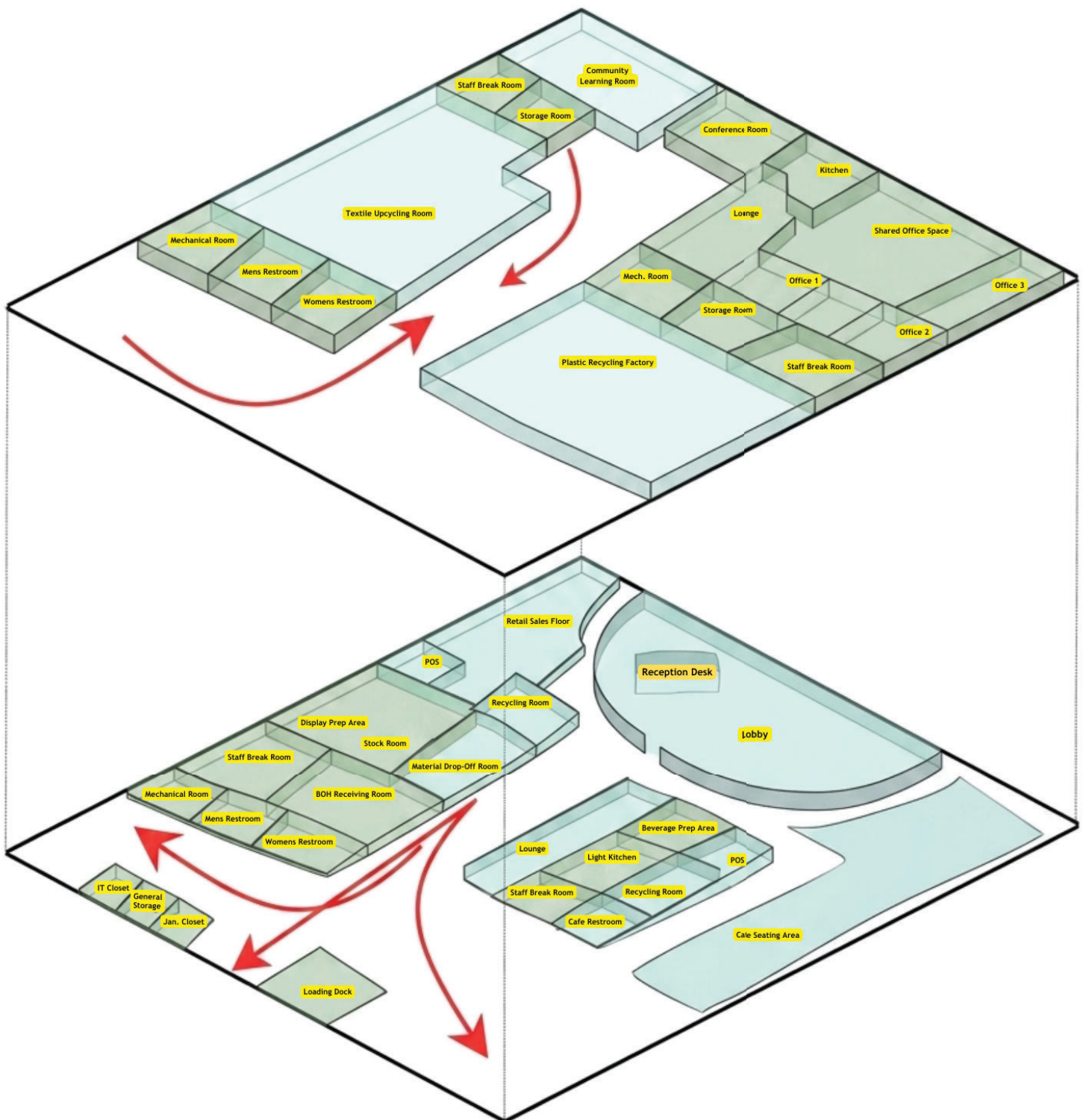
Adjacency Matrix



Program Requirements

Furniture and Material Performance Requirements	Lighting and Acoustical Requirements	Storage Requirements	Special Considerations
Durable seating, occasional tables, floor mats, resilient flooring	Bright ambient lighting with accent fixtures for signage; daylight if possible	Brochure holders, small storage for front-of-house supplies	Establishes first impression; must provide intuitive wayfinding and ADA-compliant circulation
Heavy-duty tables, durable flooring	Bright, even lighting suitable for inspecting materials	Short-term holding racks and bins for donations	Located adjacent to Entry for convenience; requires good ventilation and clear circulation
Tables, chairs, benches, washable flooring	Warm ambient lighting; bright task lighting at counters	Dry storage, cold storage, cleaning supplies	Accessible seating required; clear movement paths for customers
Flexible display furniture, durable flooring	Bright retail lighting with accent spotlights	Back-of-house inventory storage	Display layouts should be adaptable for changing merchandise
Industrial worktables, heat-resistant surfaces	High-bay lighting with strong task lighting at machinery	Raw plastic storage, mold storage, PPE lockers	Requires mechanical ventilation, noise control, and safety zoning
Reconfigurable tables and chairs, writable surfaces	Adjustable lighting for presentations and hands-on work	Cabinets for teaching supplies and AV equipment	Must support flexible learning setups; emphasis on acoustics
Durable work tables, stools	Bright task lighting for detailed textile work	Shelving for fabrics, bins for notions, equipment storage	Ventilation recommended; layouts should support multiple workstations
Ergonomic desks and chairs, filing cabinets	Soft ambient lighting with task lamps	Document storage, supply storage	Should be acoustically separated from noisy production areas
N/A	Utility lighting appropriate for back-of-house	Bulk storage, janitorial storage, mechanical storage	Access restricted to staff; maintain required clearances

Preliminary Blocking Diagram



Codes and Building Occupancy

Codes

2021 International Building Code (IBC)

2021 International Fire Code (IFC)

2021 International Mechanical Code (IMC)

2021 International Plumbing Code (IPC)

2021 International Energy Conservation Code (IECC)

NFPA 101 — Life Safety Code

NFPA 70 — National Electrical Code (NEC)

ANSI A117.1 – Accessible and Usable Buildings and Facilities (ADA guidelines)

Building Occupancy

A-3 (Assembly) — public gathering, event / workshop spaces

B (Business) — offices, administration

F-1 (Factory, Moderate Hazard) — plastic recycling & textile fabrication

M (Mercantile) — The Re:Store

S-1 (Storage, Moderate Hazard) — material drop-off, back-of-house storage

E, if children's instructional programs are present (only if minors are regularly supervised)

06

DESIGN SOLUTION

Chapter 6

Design Solution

Design Criteria

Pre-Schematic Design

Introduction

Pre-Schematic Design Drawings -
and Diagrams

Schematic Design

Introduction

Schematic Design Solution

Design Development

Introduction

Concept Statement

Design Development Solution

Specifications

Focus Area

Integration

Design Criteria

Issue

How can a community-centered circular economy hub educate users, increase access to sustainable practices, and facilitate safe material transformation while promoting creativity, learning, and environmental responsibility?

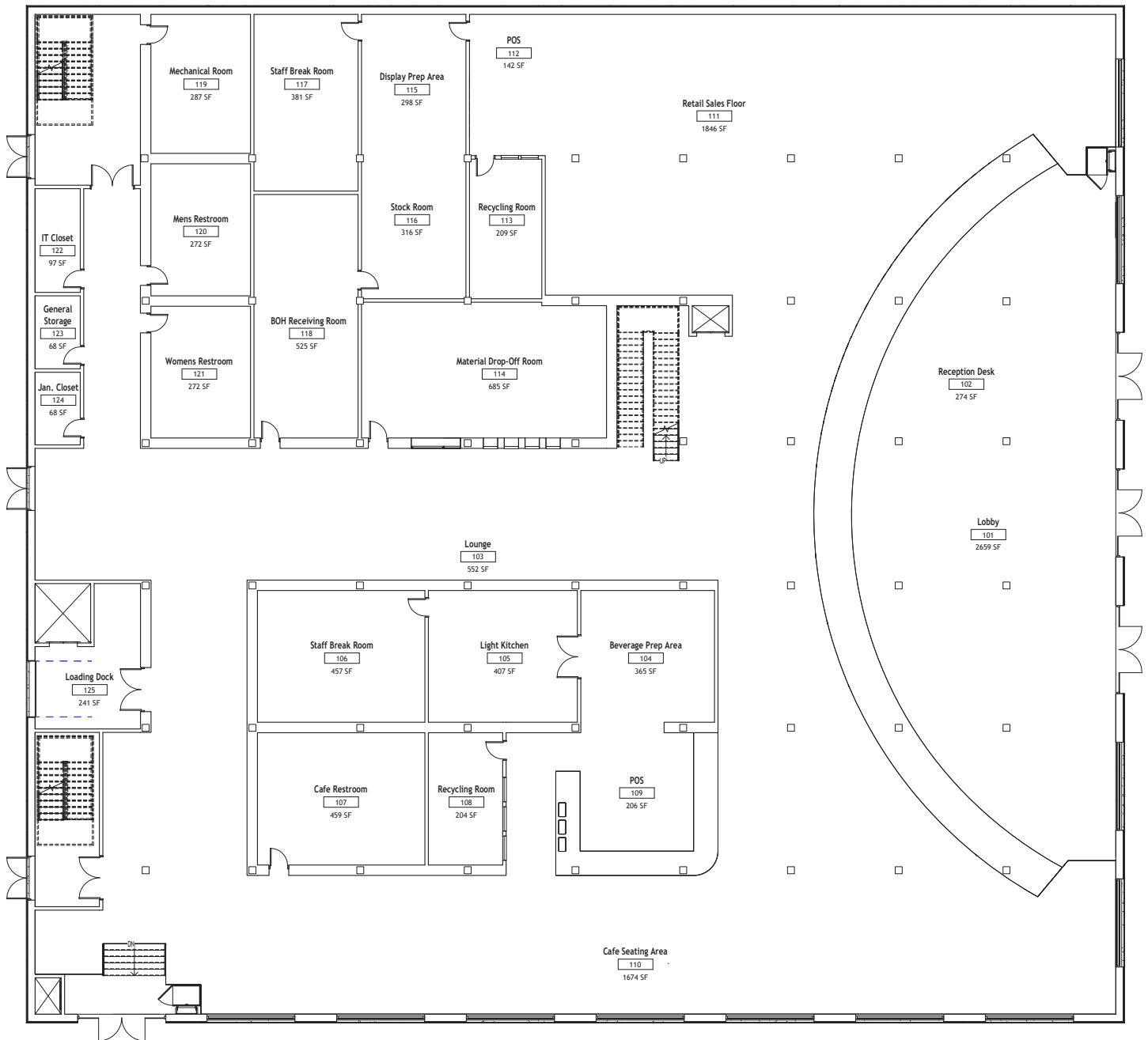
Design Criteria

Issue	Design Criteria
Accessibility to Recycling	Design intuitive, user-friendly drop-off zones and clear sorting interfaces to increase access to recycling and reduce barriers to sustainable behavior.
Education & Awareness	Integrate hands-on learning environments, visible making processes, and environmental storytelling to deepen public understanding of the circular economy and inspire long-term change.
Connection Between Public & Production	Incorporate transparent boundaries, viewing corridors, and controlled thresholds to visually connect visitors with making processes and increase engagement with sustainable material transformation.
Equitable Use	Provide accessible pathways, comfortable sightlines, and inclusive spatial arrangements to ensure all community members can participate fully in workshops, retail, and learning activities.

Design Criteria: Universal Design

Issue	Design Criteria
Equitable Use	Provide accessible pathways, comfortable sightlines, and inclusive spatial arrangements to ensure all community members can participate fully in workshops, retail, and learning activities.
Wayfinding & Navigation	Use clear circulation paths, visual cues, and environmental landmarks to support intuitive navigation and independent movement throughout the large, historic building.

Pre-Schematic Design



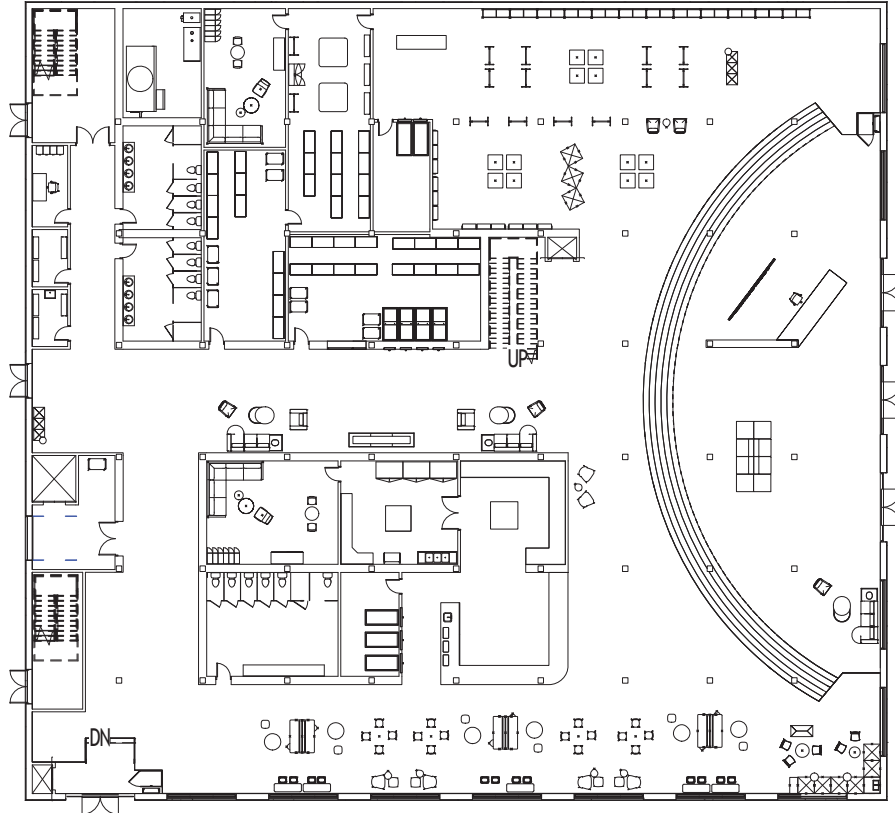
First Floor - Labeled Floor Plan

Pre-Schematic Design

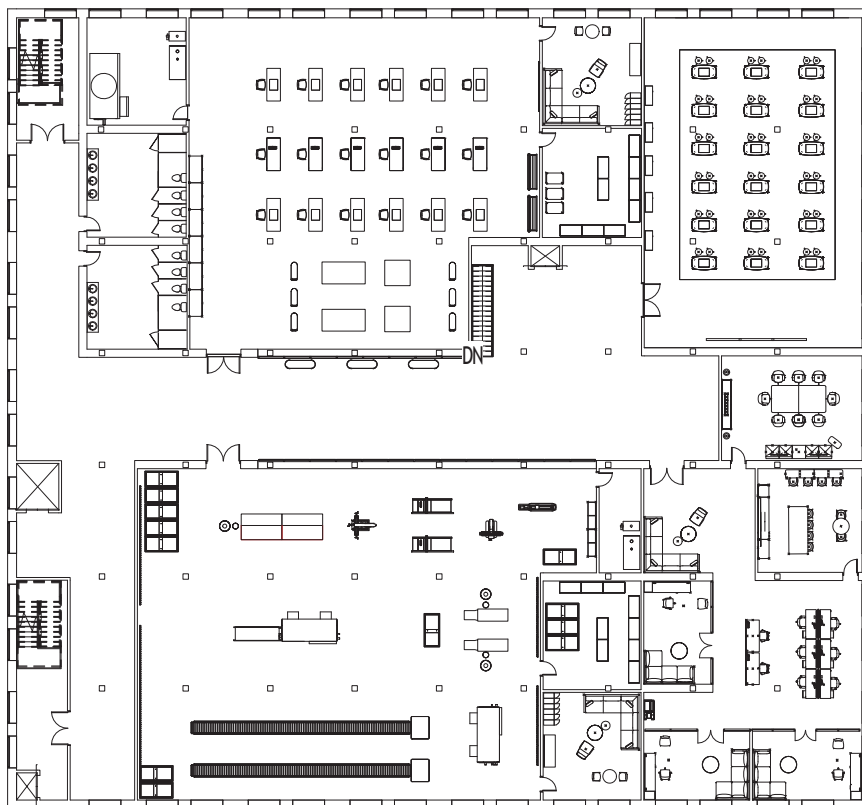


Second Floor - Labeled Floor Plan

Schematic Design



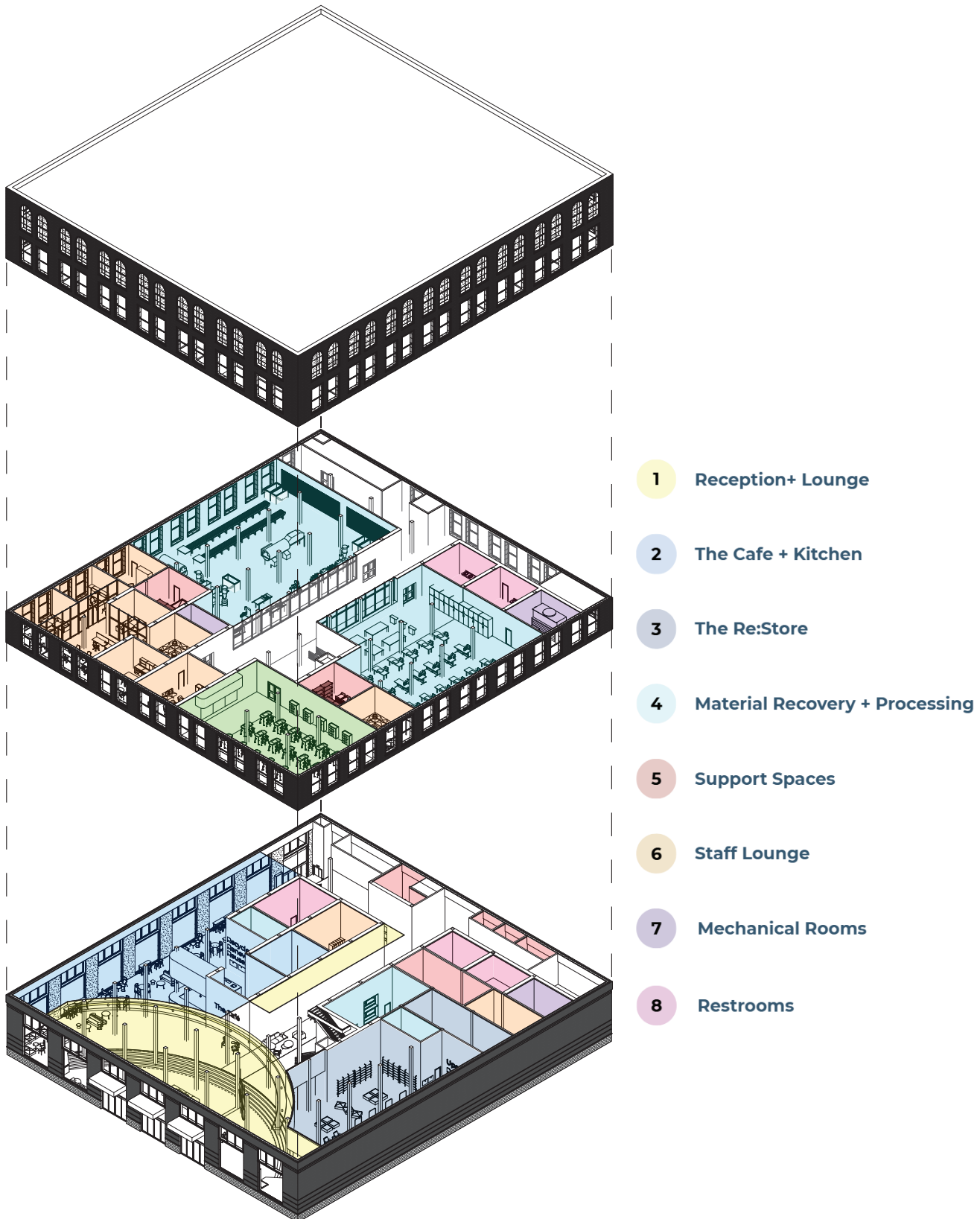
① First Floor - Furniture Plan
1/32" = 1'-0"



② Second Floor - Furniture Plan
1/32" = 1'-0"

Schematic Design

First Floor & Second Floor - Axon View



Design Development

Concept Statement

The interiors of Re:Center reflect the values of sustainability, community, and creativity through the use of natural and recycled materials, transparency, neutral tones, and selective blue accents. The blue tones introduce a sense of freshness and reinforce the idea of renewal within the circular design process. The layout emphasizes openness and clear visual connections between spaces so visitors can follow how materials move through the space and are transformed. Daylighting is maximized to bring natural light deeper into occupied areas. Acoustic strategies, including sound-absorptive materials and zoning, help reduce noise and create a comfortable environment. Together, these elements create a space that invites people to explore and participate in sustainable practices.

Renderings



Lobby / Reception:
Central hub connecting The Re:Store and The Café, designed as a flexible, multi-purpose gathering space.



Material Drop-Off Room:
Accessible collection point for plastics and textiles, supporting sustainable reuse.

Design Development

Renderings



The Café:

Community gathering space utilizing recycled plastics from within the building for serviceware.



Café Recycling Room:

Collection point for post-use plastics, with integrated waste bins and a rinse station to prepare materials for reprocessing.

Design Development

Renderings



The Re:Store:

Retail space showcasing garments upcycled by in-house workers.



Re:Store Recycling Room:

Convenient drop-off space encouraging accessible recycling within the store.

Design Development

Renderings



Textile Upcycle Room:
Hands-on workspace where materials are reimagined and crafted into renewed goods.



Plastic Recycling Facility:
On-site factory where collected plastics are processed into materials reused within the café.

Design Development

Renderings



Community Learning Room:

Space for workshops and seminars on recycling, upcycling, and sustainable practices.



Second Floor Hall:

Circulation space with views into the Textile Upcycle Room and Plastic Recycling Facility, providing transparency and education into Re:Center operations.

Building Codes

Occupancy Classification

- Primary occupancy: Group B Business
- Secondary occupancies: Group F 1 Factory Industrial, Group A 3 Assembly, Group M Mercantile, and Group S 1 Storage

Automatic Sprinkler System

- The building is sprinklered

Occupancy Load per Floor

- First floor occupancy load is 316 occupants
- Second floor occupancy load is 282 occupants

Exit Width Stair Width

- The first floor has the highest occupancy load of 316
- Using a sprinklered multiplier of 0 point 2 inches per occupant the required stair width is 64 inches

Number of Exits

- The building requires three exits based on the total occupancy load

Width of Each Exit

- Each stair must be at least 44 inches wide which exceeds the code minimum for this occupancy load

Remote Distance of Exits

- Exits in a sprinklered building must be separated by at least one third of the longest diagonal of the floor

Common Path of Egress Travel

- The maximum allowed common path of travel for this sprinklered mixed occupancy building is 100 feet

Exit Access Travel Distance

- The maximum exit access travel distance for this sprinklered building type is 300 feet

Dead End Corridors

- The maximum allowable dead end corridor length in this sprinklered building is 50 feet

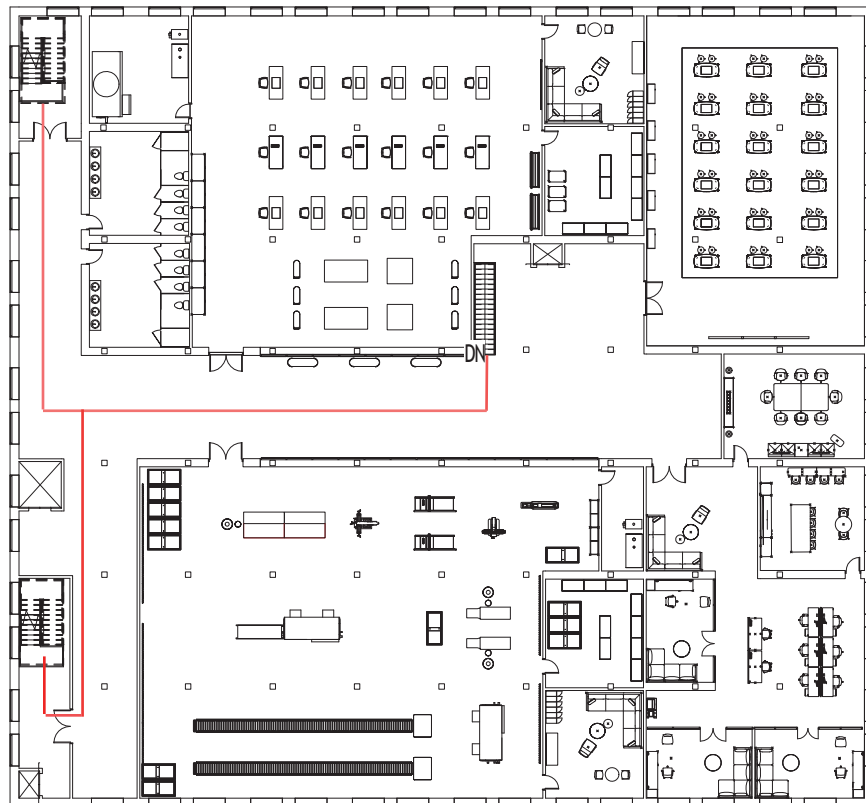
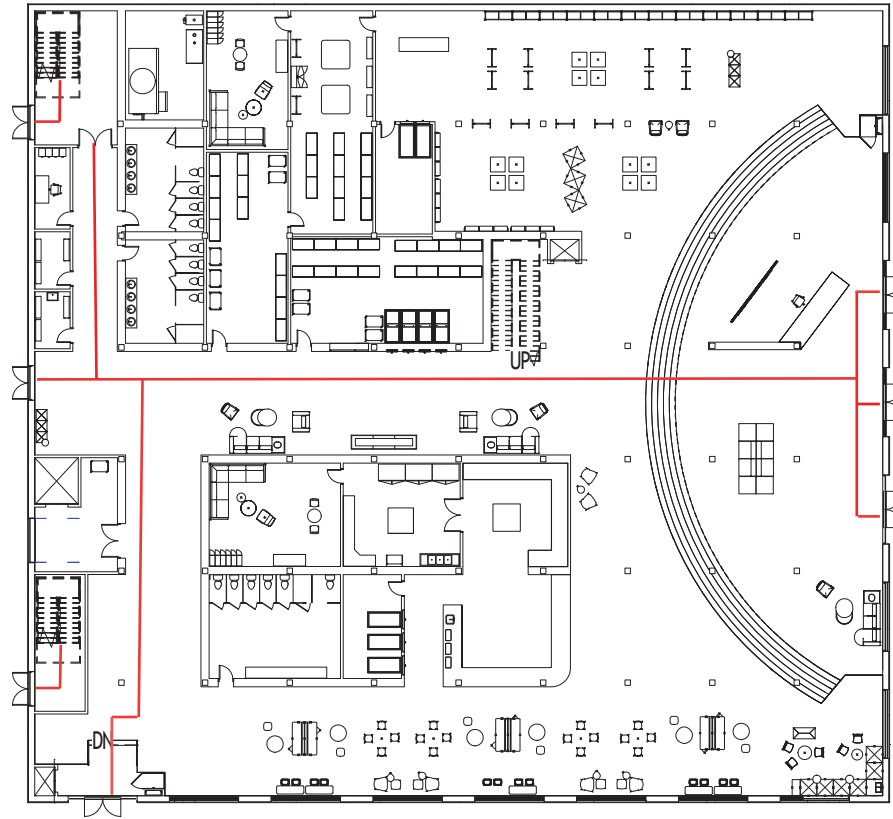
Minimum Corridor Width per Floor

- The first floor requires a corridor width of 48 inches
- The second floor requires a corridor width of 44 inches

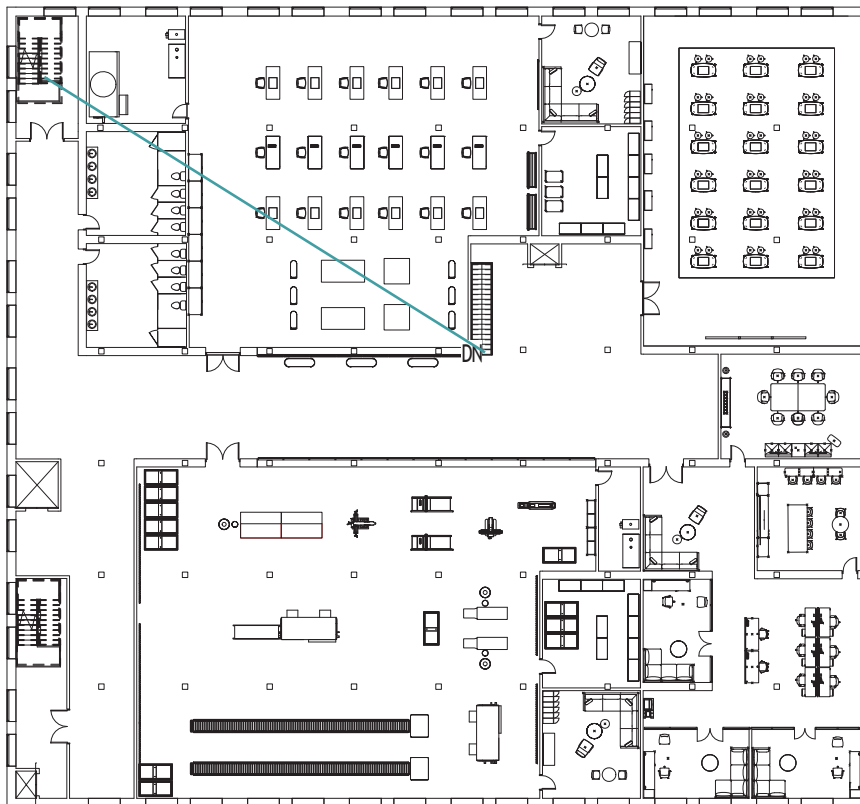
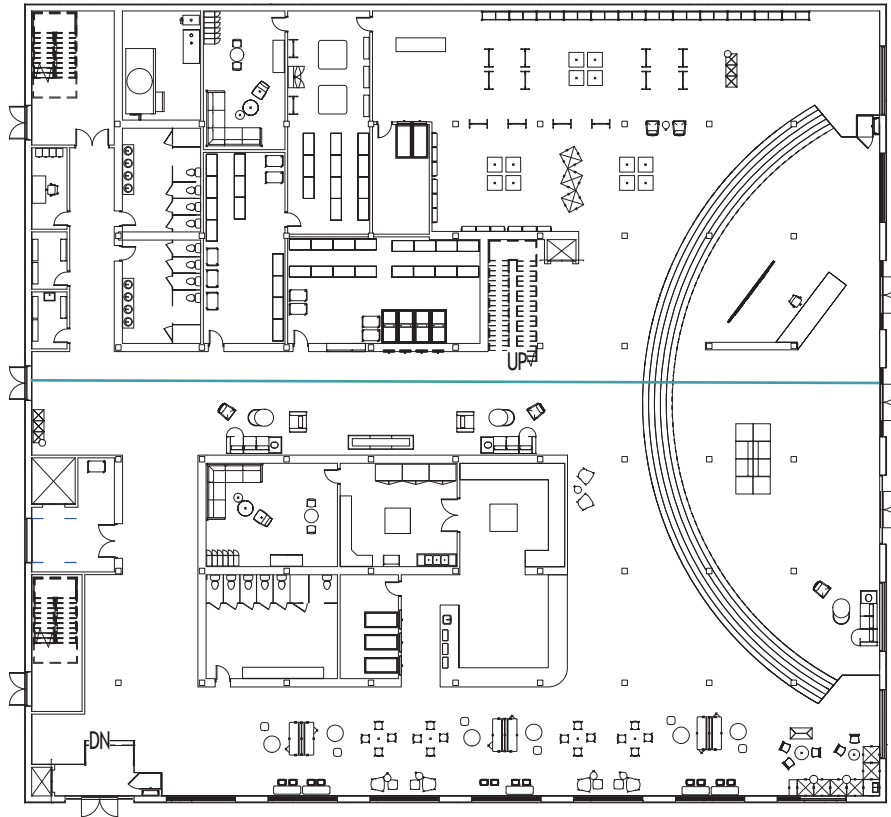
Minimum Exit Passageway Width per Floor

- The first floor requires a passageway width of 48 inches
 - The second floor requires a passageway width of 44 inches
- The remaining floors are not used

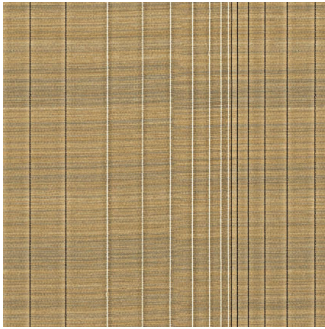
Code Compliance - Egress



Code Compliance - Remote Distance of Exits

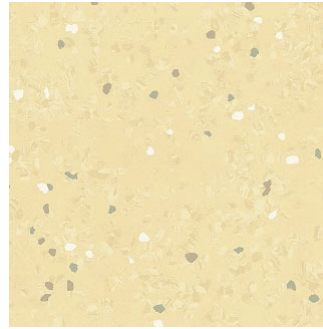


Specifications



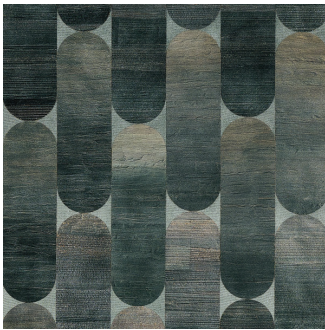
WALLCOVERING

MANUFACTURE: DesignTex
PRODUCT: Keshi
COLOR: Flax
NOTES: 100% Vinyl,
LEED-contributing



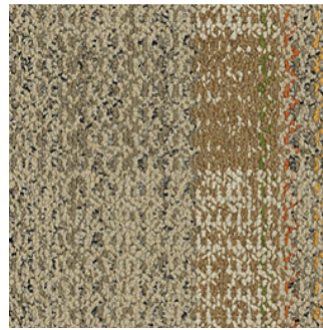
RUBBER FLOOR

MANUFACTURE: NORA
PRODUCT: noraplan
environcare 913
COLOR: Candlelight Dinner
NOTES: LEED-contributing



WALLCOVERING

MANUFACTURE:
Phillip Jeffries
PRODUCT: Bali Bark
COLOR: Navy Infusion
NOTES: 45% Banana Bark,
45% Water Hyacinth, 10%
Cotton



CARPET

MANUFACTURE: Interface
PRODUCT: Summerhouse
Brights
COLOR: Topaz/Raffia
NOTES: 100% Vinyl,
LEED-contributing



WALLCOVERING

MANUFACTURE: ARTE
PRODUCT: Elements
COLOR: 38241
NOTES: Natural wallcovering,
Paulownia wood



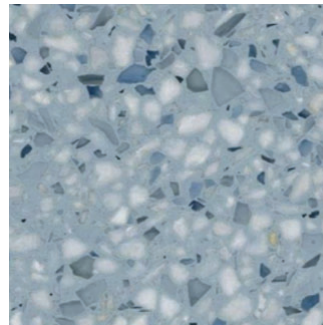
ACOUSTIC CEILING FEATURE

MANUFACTURE: 3Form
PRODUCT: Seeyond Ceiling
Feature
COLOR: Mustard
NOTES: LEED-contributing



WALLCOVERING

MANUFACTURE:
Phillip Jeffries
PRODUCT: Amalfi Silk
COLOR: Imperial Night
NOTES: 100% Silk



SOLID SURFACE

MANUFACTURE: Durat
PRODUCT: 391
COLOR: Grey-Blue
NOTES: Terrazzo

07

CONCLUSION

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This EPA report provides official statistics on textile waste in the United States. It notes that Americans generated about 17 million tons of textile waste in 2018 and recycled only 14.7 percent of it. Most discarded textiles were landfilled or incinerated, which highlights significant gaps in recycling infrastructure. The data establishes the scale of overconsumption in clothing and supports the need for improved waste management strategies in the thesis.

Shamsuzzaman, M., Md. Shafiul Azam, Md. Shahinur Rahman, and Md. Mazedul Islam. 2025. "Fashion and Textile Waste Management in the Circular Economy."

This peer-reviewed article explores global textile waste and the challenges of integrating circular economy practices into the fashion industry. The authors report that more than 80 percent of clothing waste ends up in landfills or incinerators. They also discuss the effects of fast fashion on increased consumption and short product life cycles. The study identifies emerging recycling technologies and policy approaches that can reduce textile waste, which helps contextualize sustainable solutions for the thesis.

Bick, Rachel, Erika Halsey, and Christine Ekenga. 2018. "The Global Environmental Injustice of Fast Fashion."

This article examines how fast fashion contributes to environmental harm and social inequity. The authors explain that rapid production cycles and low-cost clothing create large amounts of waste and place disproportionate burdens on low-income communities worldwide. They describe how pollution from dyeing, production, and waste disposal affects human and environmental health. This source supports the ethical dimension of the thesis by connecting overconsumption with environmental justice concerns.

Smith et al. 2022. "Recycling of Plastics in the United States: Plastic Material Flows and Polyethylene Terephthalate (PET) Recycling Processes."

Smith and colleagues analyze how PET waste is generated, collected, sorted, and recycled in the United States. They identify technical and economic barriers that limit recycling efficiency and highlight gaps in current systems. The article also outlines potential improvements in sorting and recovery. This source supports the thesis by providing scientific insight into challenges within plastic recycling.

Turunen and Lähtinen 2020. "Business Model Innovation through Second-Hand Retailing."

Turunen and Lähtinen examine how second-hand retailing encourages more sustainable consumption by extending product lifecycles and reducing waste. They analyze value creation within resale environments and explore consumer motivations for choosing reused goods. The study highlights how resale systems support circular economy practices. This source helps contextualize alternative consumption models that align with the sustainability goals of the thesis.

Kamikatsu Zero Waste Center 2020. Hiroshi Nakamura & NAP. ArchDaily.

The Kamikatsu Zero Waste Center in Japan serves as a community hub for waste sorting, reuse, and education. The design incorporates reclaimed materials and guides residents through detailed separation processes. The project includes a reuse shop and learning areas that raise public awareness. This precedent supports the thesis by showing how architecture can make recycling more transparent and encourage community participation.

Annotated Bibliography

MANOA Used Clothing Store 2021. Atelier tao+c. ArchDaily.

MANOA Used Clothing Store transforms second-hand retail into a thoughtful spatial experience focused on reuse and material longevity. The architects designed modular racks, adaptable shelving, and simple finishes that highlight the lifecycle of garments rather than new production. The project promotes slow consumption and encourages customers to value reused materials. This precedent is relevant to the thesis because it shows how interior environments can support circular economy principles and influence consumer behavior toward more sustainable choices.

Collection Center for Recyclable Materials 2023. Bembé Arquitectos. ArchDaily.

This collection center in Mexico organizes community recycling through clear spatial zoning, intuitive circulation, and visible material storage areas. The design accommodates sorting, temporary storage, and drop-off functions while using durable, low-maintenance materials appropriate for industrial reuse facilities. The architects emphasize accessibility and public participation in recycling programs. This precedent reinforces the thesis by illustrating how well-planned facilities can streamline recycling processes and make waste collection easier for surrounding communities.

U.S. Green Building Council 2023. “LEED v4.1 Building Design and Construction Guide.”

The U.S. Green Building Council's LEED v4.1 guide outlines updated performance standards for sustainable building design and construction. The document explains credit categories such as materials, indoor environmental quality, and energy use, with an emphasis on transparency and life cycle assessment. The materials section highlights the importance of recycled content and responsible sourcing, which aligns with the thesis's goals for sustainable material management. This source provides a foundational understanding of industry standards related to environmental performance in interior spaces.

Long 2014. Architectural Acoustics.

Long provides a comprehensive overview of acoustics within architectural and interior environments. The book explains principles such as sound absorption, transmission, and reverberation, and it offers strategies for improving acoustic comfort in various interior settings. Long also discusses material properties and spatial configurations that affect noise levels and user experience. This source is useful for the thesis because it supports evidence-based decisions regarding materials and layout considerations in spaces that include workshops, machinery, or community learning functions.

Contemporary Arts Center New Orleans 2025. About the CAC.

The Contemporary Arts Center (CAC) in New Orleans was founded in 1976 by a group of visual artists seeking a space devoted to multidisciplinary contemporary art and performance. Originally artist-run, the center expanded its role to support exhibitions, education, and community-focused programming. It remains a platform for innovative artistic expression and cultural dialogue, offering exhibitions, performances, and outreach that engage diverse audiences. This source provides important context on the CAC's mission and development in the city's arts landscape.