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The Jazzy Building: A Revitalization Plan

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The Jazzy Building: A Revitalization Plan

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An Honors Thesis Submitted to the Faculty of the University of
Tennessee at Chattanooga in Partial
Fulfillment of the Requirements of the Honors Degree of Interior Design

The University of Tennessee at Chattanooga
Chattanooga, Tennessee

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Abstract

The Jazzy building is located at 619-621 Market Street in Chattanooga, TN in the City Center downtown area. Both the interior and exterior of the building show signs of being vacant for a long period. The Jazzy building has significant historical value, especially the east and west facades that feature various ornamentations and details that testify to its significance. Although the building's interior has been severely damaged, it is still possible to salvage and reuse some of the materials. To determine the appropriate use of the Jazzy building, a market analysis of downtown Chattanooga research was referenced, along with a survey by the UTC (University of Tennessee at Chattanooga) interior design students from the class of 2024. The building's interior space and design must comply with the current building codes. Finally, the renovation materials and finishes must meet some of the LEED and Well Credits standards, which focus on sustainable designs that enhance human health and experience.

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Chapter 1

Research Statement

The goal of this project is to preserve the historic integrity of the Jazzy building which is represented in the east and west facades. There are some interior materials that can be preserved. These elements include the interior exposed brick, the flooring, and the ceiling elements that can be preserved and reused.

Introduction

Chapter 1 will cover an introduction of the research, the research statement of problem, the purpose of the study, and the research questions that will help in understanding the Jazzy building history, location, and downtown needs. Moreover, additional information about the limitations, delimitations, and the definitions of technical terminology and abbreviations will be included.

The Jazzy Building, located at 619 and 621 Market Street, Chattanooga, TN, is a historic structure that is currently undergoing an adaptive reuse process. The goal of this process is to preserve the building's historic appearance while also taking advantage of its materials and envelope to repurpose it for new uses. Unfortunately, due to years of alteration, many of the interior features that hold historical significance have been lost. Therefore, the majority of the preservation efforts are focused on the east and west facades, which are mostly intact and can be substantiated by historic records.

Historic buildings contribute architecturally, historically, and economically to communities. They create a bridge between the past and the present and are a visual record of communities, nations, and countries. These buildings should be preserved, when possible, to

protect the integrity of the area and add value to communities, and downtowns (*Why preservation? What are the benefits?* (n.d.).

People are attracted to historical buildings located in denser areas, like the downtowns, which provide great opportunities for locals and tourists to live, work, and visit together. The areas where these buildings are located contribute to walkable neighborhoods, known to be denser in businesses, and preserve the traditional development patterns (*Why preservation? What are the benefits?*, n.d.).

There is a strong relationship between preserving historic buildings and sustainability; “The greenest building is the one that’s already built” (Technical Preservation Services: Sustainability). Preserving historical buildings is considered a large recycling project and benefits larger communities. By preserving historical buildings, builders can focus on maintaining and updating the existing infrastructure, such as the building’s interior needs (*Why preservation? What are the benefits?* (n.d.).

Jazzy Building History

The Jazzy Building, located at 619 and 621 Market Street in Chattanooga, TN (See Figure 1), has been home to many different businesses throughout its history. The Jazzy building was built in 1886 (*Two Buildings in Downtown Opportunity Zone*, n.d.). The building has two main store fronts, one on Market Street and the other on Broad Street (619 & 621 Market Street, n. d.).



Figure 1. 1904 Chattanooga Downtown Map, ChattanoogaHistory.com. (n.d.).

The first business the Jazzy building housed in 1888 was Gibson-Lee Manufacturing. The founders were Fillmore Gibson and Gordon Lee. Mr. Lee departed one year after he opened his manufacturer in downtown Chattanooga. William E. Love took his place, and the business was renamed Gibson-Love Manufacturing (see Figures 1 and 2). They operated as an appliance store and sold stoves, ranges, and china until 1889. The third occupants of the building were Fritts and Wiehl Paints and Oils. After the death of Mr. Wiehl, Kate F. Wiehl took over the business with B.F. Fritts. In 1928, Haverty Furniture Company took over the 619 Market Street building, until its closing in August 1982. Jazzy's Casuals Store (which the building is nicknamed after) was briefly located there, and shortly after their business was closed the Jazzy building became vacant. (Jolley, 2004). The Jazzy building has been approved by the National Historic Register District for its antiquity and culture to the locals of Chattanooga in a formal form published in 7/24/1992 (see figure 3, *NPGallery Asset Detail*, 2023).



Figure 2. Haverty's Furniture at 619 Market St. – 1948 (*Remember When* (n.d.).

The Jazzy building is a four-story, painted brick, Romanesque Revival-style commercial building (see Figures 2 and 3). It faces both Market and Broad Street and is oriented both east and west. The building is bordered by Regions Bank parking to the North and connected to a historic, five-story, commercial building to the south. “The low-pitched shed roof is concealed by a flat parapet with a corbelled cornice, round arch motif, and decorative brickwork” (*Preserve Chattanooga Downtown Historic District Database.xlsx*, n.d.). The windows are 1/1 sash. Currently, many windows are covered in plywood for stabilization. The fourth story has five arched openings. The third story has four rectangular openings. The second story has four segmental arched openings on Market Street.



Figure 3. View of the Jazzy Building on Broad Street. The Jazzy Building is adjacent to the Parking lot. (Loopnet. (n.d.).



Figure 4. The Haverty Furniture Store on Broad Street (Student Work)

The Jazzy building elevation facing Market Street has more ornamentation than that on Broad Street (see Figures 4 and 5), with “pilasters supporting a segmental arch spanning the second story and remnants of an embellished rounded pilaster at the ground level” (See figure 4) (*Preserve Chattanooga Downtown Historic District Database.xlsx*, n.d.). The ground level facing Market Street has been completely modified. Currently it has a large metal panel over a glass storefront system. On Broad Street, the original brick paneling is visible. Temporary plywood boarding was added in the storefront as it undergoes renovation.



Figure 5. The Jazzy Building View on Market Street (Refer to Appendix p. 58)

Statement of Problem

The Jazzy building faces serious challenges. The first challenge would be the building envelope. This building has a great location, but the building itself is quite elongated. This creates lighting, safety, and circulation challenges. There is no north or south facing windows. There is minimal natural light that comes from the east and west windows. These windows are not enough to lighten the interior and will add glare and heat to the building. The building circulation and egress are not up to code. Addressing the necessary codes could affect the integrity of the historic building. The second challenge is the historic reference in the interior of the building. Unlike the exterior facades that retain a lot of historical details and decorations, the interior of the building is deteriorating including paints are falling off, broken stairs and walls, ceiling materials are falling off, and broken wooden floors. Finally, there is a challenge of giving this building a new function that will serve the sustainability of downtown Chattanooga. There are various needs for the City Center area in downtown Chattanooga which includes housing, entertainment, grocery and pharmacy stores and creative office spaces. Therefore, the main points that could help in solving these challenges are codes requirements, sustainability of preservation, and assigning the proper functions.

Purpose of the Study

This study seeks to put forth a comprehensive plan for the adaptive reuse of the Jazzy building, with the goal of enabling people to live, work, and entertain in downtown Chattanooga while also preserving the building's distinctive character. This plan incorporates modern building codes and sustainable practices, with the aim of creating lively and sustainable spaces that contribute to the city's economic and cultural growth while also cherishing the building's rich history. The proposed functions have been carefully crafted to provide sustainable businesses for the thriving

downtown market, as per the market analysis which has proven successful in Chattanooga's downtown City center.

Research Questions

The following questions were used to guide the adaptative reuse design proposal for the Jazzy building.

Question 1: What end uses should be included to support making downtown Chattanooga more livable and sustainable?

Question 2: How can the Jazzy building adapt to new codes?

Question 3: How can adaptive reuse of the Jazzy building contribute to sustainability?

Limitations of the Study

These were the following limitations of this study:

1. The data collected by the survey is limited based on the accuracy of the responders.
2. The data collected by the survey is limited based on the number of residents who responded to the survey.
3. The answers of the interviewees are based on full honesty to engage in answers to the questions.
4. The data collected from the site visit is limited due to the short time the class of interior design students spent surveying the Jazzy building.
5. The time frame of the research project is only two semesters.

Delimitations of the Study

1. The survey conducted by the interior design class of 2024 was focusing on residents of Chattanooga.
2. The sample used to collect the information was generalized to help assign new purposes for the Jazzy building.
3. Different questions were included in the survey to understand what is lacking downtown and what should be included.
4. The questions prepared will not be able to cover all the challenges and the opportunities pertaining to this project. The survey collected is limited because it only reflects the responses of a small group of people living in Chattanooga and mostly women.

Definitions

Adaptive Reuse: changing the function of the building and giving it a new use. (*What is Adaptive Reuse Architecture and why its important*, 2021)

Codes: these are laws that set up rules specifying the standards for structural systems. (NIST, 2022).

National Historic Register (NHR): recognizes the historical areas or buildings that are worth preserving and adds the historical integrity of the community.

Sustainability: the focus of meeting the needs of the present without hindering and preventing future generations to meet their own needs. Sustainability encourages recycling, reusing and reclaiming materials which has a positive effect on the environment. (*What Are the Pillars and Strategies of Sustainable Interior Design?*, n.d.).

Rehabilitation: “the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values. The Rehabilitation Standards acknowledge the need to alter or add to a historic building to meet continuing or new uses while retaining the building’s historic character.” (*The Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings*, 2017)

Creative Office: “creative office space is anything that falls outside of a traditional office environment, represented by the presence of standard carpeting, nine-foot ceilings with traditional tiles and dry wall. Originally fueled by creative and tech firms seeking extraordinary work environments, deviations from this norm have proliferated, with wide variation (Resnick, 2014).

Medical Office: “means premises designed and used for the diagnosis, examination, and treatment of human patients, including pharmacies and dispensaries which are limited to a maximum of 50 square meters in leasable floor area, waiting rooms, treatment rooms, blood testing clinics, but shall not include overnight accommodation for in-patient care.” (*Zoning by Law*, 2023)

Summary

Chapter I covered important information including the statement of the problem, the introduction to the paper, and the research questions. Chapter II will review literature which establishes the background work necessary to propose an adaptive reuse proposal for the historic Jazzy building that focuses on the importance and sustainability of reusing historic buildings, the codes, and the added value the Jazzy building could add to downtown Chattanooga.

Chapter II: Findings

A- Introduction: Preserving the Historic Character of the Jazzy Building

1- Preserving the exterior facades (east and west)

- The final design will preserve the historical character of the Jazzy building which is presented in its historical east and west facades (refer to Figures 4 and 5)
- The East facade is located on Market Street and the West facade is located on Broad Street (see Figure 6).



Figure 6. The Jazzy Building Site Plan

- The building's overall style is Romanesque revival.
- There are two entrances on each façade based on the new programming (see Figures 7 and 8)

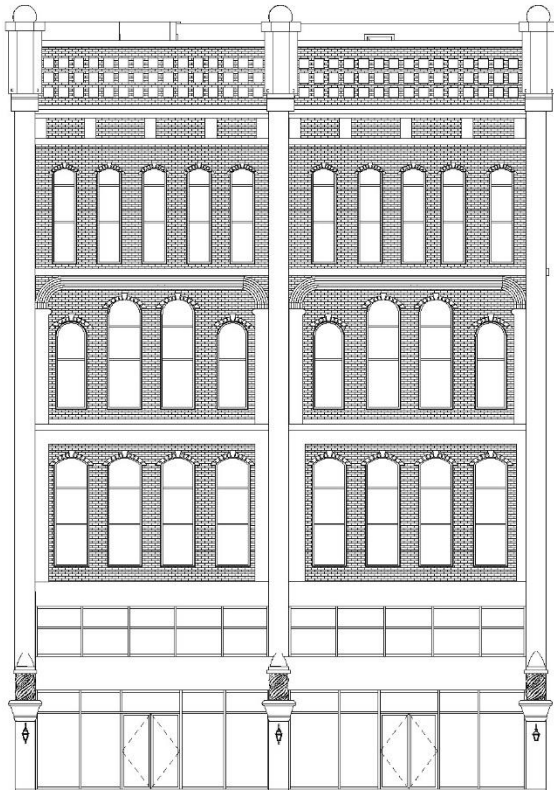


Figure 7. East Façade Elevation

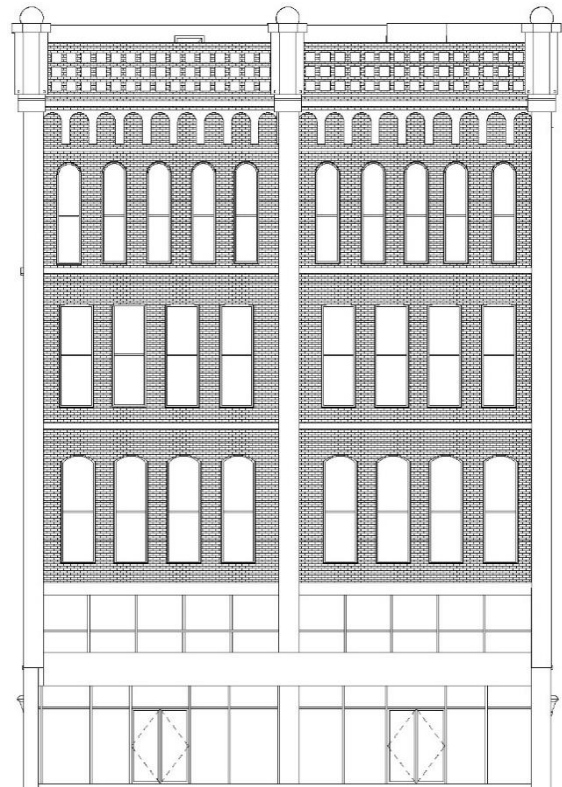


Figure 8. West Façade Elevation

- The guidelines of the Secretary of the Interiors Standards for Rehabilitation is considered in this project ([The Secretary of the Interior's Standards for Rehabilitation - Historic Preservation Tax Incentives \(U.S. National Park Service\) \(nps.gov\)](#))
 - The building is programmed for a new use, yet it does not have changes to the defining characteristics of the building.
 - The character of the building is preserved.
 - Distinctive features are preserved.

2- Preserving of the East Façade

- The Jazzy Building's east facade is a stunning brick structure adorned with intricate carvings around its pilasters, windows, and exterior (refer to Figure 5 and see figure 9)
- The east facade windows span three levels. The windows of each level vary slightly in shape and size (refer to Figure 5 and see figure 9).



Figure 9. The Jazzy Building View on Market Street

- The exterior facade on the east wall stands out with its low-pitched shed roof, concealed by a flat parapet with a corbelled cornice, round arch motif, and intricate brickwork (see Figure 5).
- The east facade on Market Street boasts the most ornamentation “with pilasters supporting a segmental arch spanning the third floor and remnants of a large embellished rounded pilaster at the ground level” (Preserve Chattanooga Downtown Historic District Database.xlsx, n.d.) (see figures 5, 10, 11, 12, 13, 14, 15, and 16).
- Details from the top of the façade to bottom cornice of decorative brickwork in a diaper work pattern over a shallow arcade of Romanesque arches. Additional motifs include mask, quarter fans, shallow plaques, window lentils with keystones, roundels with diamond point lozenges. Pilasters with Romanesque capitals.

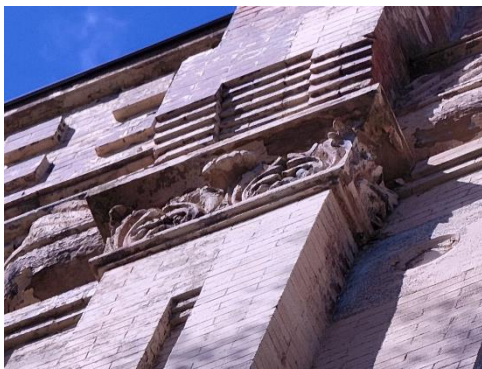


Figure 10. Finial Detail on East Elevation



Figure 11. Decorative Mask on East Elevation



Figure 12. Decorative Work/ Draper Work



Figure 13. Pilasters Topped with Romanesque Capitals



Figure 14. Quarter Fan Detail



Figure 15. Arched Lintel with Key Stone



Figure 16. Column with Details

Changes To the East Facade

- The first floor and the awning part, which includes the mezzanine; will be changed to reflect the facade's historic look (see Figure 17)



Figure 17. Jazzy Building Showing the Exterior of the First Level and Mezzanine on Market Street (Google Map Image)

Changes Justification, Suggested Solutions and Updates

- The ground level on Market Street has undergone extensive changes throughout history and is considered by the Preserve Chattanooga Downtown Historic District as nonhistorical.
- Current Condition: “The ground level on Market Street has been completely modified to be framed by brick piers with a large metal panel over a glass storefront system.” (Preserve Chattanooga) (refer to Figure 17)
- The Jazzy building historically utilized storefront entrances to provide a comfortable pedestrian environment, engage the streetscape, and encourage engagement with the building (refer to Figure 5).
- Therefore, the design solution will adapt the placement of a storefront curtain wall finish that will be added to the first floor and the mezzanine to reflect the historic character of the building (refer to Figure 7) and encourage pedestrian engagement.
- All remaining windows will be repaired, if possible (refer to Figure 9)
- Historic replacement windows will be added if the windows cannot be repaired.
- The historic replacement windows will be similar to the existing windows and will minimally change the authentic look of the building.
- Stabilization must be done to support the current brick on the east facade.
- These updates are necessary for the historic fabric of the building to support the building for future use.

3- Preserving the West Façade

- The exterior facades on the west walls stand out with their low-pitched shed roof, concealed by a flat parapet with a round arch motif, and intricate brickwork (see Figure 18).



Figure 18. The West Façade

- The west facade on Broad Street has less ornamentation compared to the east facade on Market Street.
- The west facade windows span three levels. The windows of each level vary slightly in shape and size (refer to Figure 17)

- The west façade has diaper work at the very top of the building (see Figures 18 and 19).



Figure 19. Diaper Work

- Below the diaper work there are Romanesque arches (see Figures 18 and 20).



Figure 20. Romanesque Arches

- Below the diaper work there are historic windows with arched lintel with keystone (see Figures 18 and 21).



Figure 21. Arched Lintel with Keystone

- **Below the arched windows there are decorative plaques details (see Figures 18 and 22)**



Figure 22. Plaques Details

- The side of the west façade has decorative fluting (see Figures 18 and 23).



Figure 23. Fluting

- Decorative geometric tiles below the fluting (see Figure 24)



Figure 24. Decorative Geometric Tiles

Changes Justification, Suggested Solutions and Updates

- The Jazzy building historically utilized storefront entrances to provide a comfortable pedestrian environment, engage the streetscape, and encourage engagement with the building.
- This area of the facade has undergone extensive changes throughout the history of the building and therefore is not considered historic (see Figure 25)

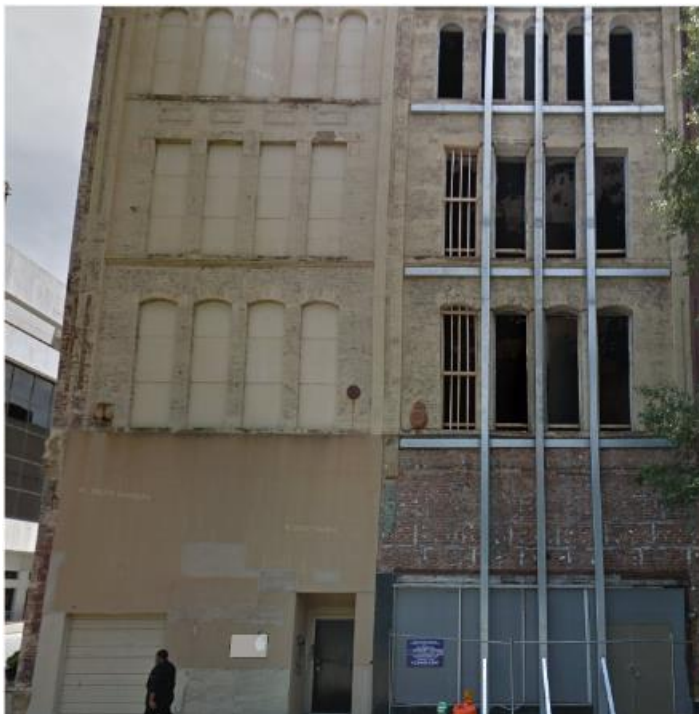


Figure 25. The West Façade, Google Map Image

- Broad Street is set to undergo a renovation that will utilize urban design analysis to improve the public realm, enhance multi-modal transportation, integrate technology, implement green infrastructure, and promote economic development. This renovation will support local businesses and urban residents, with a focus on creating a pedestrian-oriented public space that will benefit the downtown area (Reimagining Broad Street (n.d.)). The renovation will make Broad Street more pedestrian-friendly, encouraging

more foot traffic in the downtown area. The project will involve modifying the streets to create more space for pedestrians.

Changes Justification, Suggested Solutions and Updates

- The design solution will adapt the placement of a new storefront curtain wall finish that will be added to the first floor and the mezzanine to restore the historic character of the building and encourage pedestrian engagement (Figure 12),
- All remaining windows will be repaired if possible.
- Historic replacement windows will be added to the west facade's windows if the windows cannot be repaired.
- The historic replacement windows will be similar to the existing windows and will not change the authentic look of the building.
- Stabilization must be done to support the current brick on the west facades.

4- Preserving the North Wall and Roof

- The North Wall does not have a historic significance because it was originally a shared wall with another building (see Figure 26), therefore, changes will be made to this side.

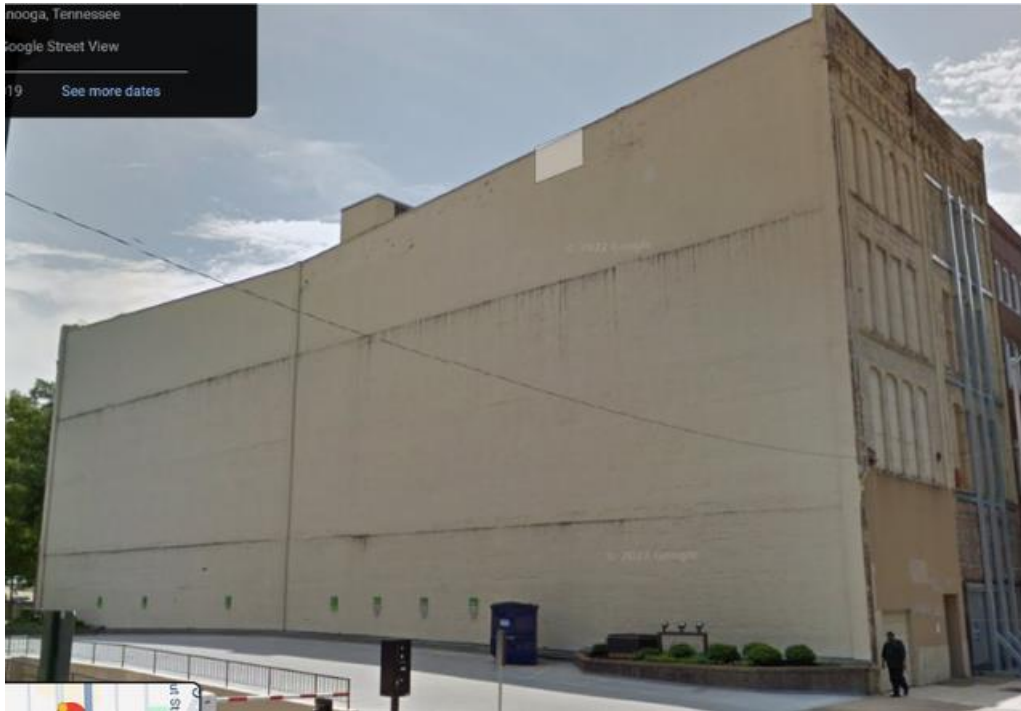


Figure 26. The North Elevation of the Jazzy Building, Google Map Image

Changes and Justification for the North Wall

- The current parapet and the roof will not be able to support the intended functions of the roof due to the slope in the wall and the roof. This includes adding a dining area, mechanical storage, and a green roof.
- New windows will be added to the north wall. North-face windows are considered the best windows because they add natural light without the glare and heat (see Figure 27)

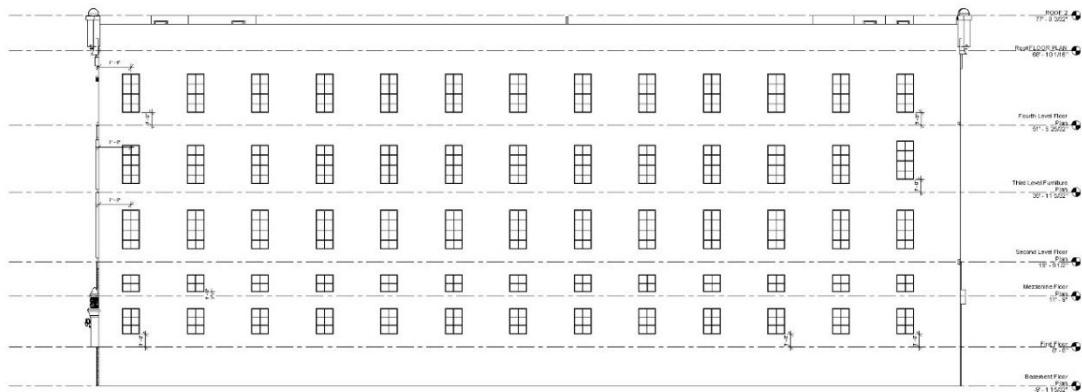


Figure 27. The Suggested North Wall Elevation

Changes and Justification for the Roof

- The current roof is slanted, a parapet wall is going to be added to flatten the sloped wall and a new flat roof (the current is slanted) is going to be placed to support the roof garden and the dining area.
- The new roof will support the new programming. The current sloped roof will be replaced with a flat roof that supports new programming.

5- The Structural Brick wall separating the Jazzy Building into 619 and 621 Market Street

- The beauty of exposed brick is going to be preserved (refer to figure 28) with slight alterations.



Figure 28. The Current State of the Structural Brick Wall

Changes Justification for the Structural Brick Wall

- The Brick wall (an existing structural party wall) is going to have some openings to allow natural light from the new north-facing windows to flush both buildings (see figure 29).
- These openings facilitate the connection between the two buildings and aid in the circulation of occupants. They are crucial because they lead to the corridor (see Figure 50. Level Four Life Safety Plan), which in turn leads to the exit stairs, contributing to safe evacuation in case of an emergency.
- Placement of openings in the walls allows for a seamless visual transition between rooms, resulting in an expansive feel and greater connectivity for occupants. This design element enhances the space's overall aesthetic appeal, adding depth and dimension to the interior design.



Figure 29. Openings in the Structural Brick Wall

6- Flooring

- The existing floor on all four levels will be repaired and replaced as needed to save the flooring material and save the original character of the building (See figures 30 and 31).



Figure 30. The Current Flooring Condition



Figure 31. The Current Flooring Condition

Changes and Justification for the Flooring

- Remove the damaged flooring on all four levels and replace it with a wooden floor that is similar in shape and size to the historic flooring to ensure that the original character of the building is preserved.
- In kitchen areas, floating flooring will be used to protect and preserve the existing flooring.
- Floating floors, also known as engineered wood floors, consist of multiple layers of wood fused together and are designed to float above the existing subfloor without the need for nailing or gluing.
- Encapsulated the repaired wooden flooring with commercial grade vinyl tile to be used in the kitchens (see Figure 32). This will help maintain and protect the existing flooring from spills and stains.



Figure 32. CoreLuxe 5mm w/pad deer ridge maple waterproof rigid vinyl plank flooring

7- Ceiling

- The design solution aims to restore the ceiling structure, repair and utilize similar wooden beam material to pay homage to the historical materials in all four levels (see Figure 33)



Figure 33. Current Ceiling Condition

Changes and Justification for the Ceiling

- The ceiling currently has severe damage in structural and wood beams.
- Adding a plaster ceiling which will cover the wooden ceiling beams in all four levels.

8- Interior Stairs

- Repair and utilize stair materials of the existing stair (See Figures 34 and 35).



Figure 34. Current Stair Condition



Figure 35. Current Stair Condition

- The existing stair's materials will be utilized for building the stair connecting the first floor to the mezzanine.
- The new stairs will use the same wooden baluster and spindles in pattern and ornamentation.

Changes and Justification for the Stairs

- Building a new stair while utilizing historic materials and finishes to pay homage to the historic heritage.
- This approach is approved by the Treatment Guidelines 2017. It states that decorative materials and features that had to be removed as part of the rehabilitation process can be reused in other areas (The Secretary of the Interior's Standards for the Treatment (n.d.)).

- The wood planks that are not deteriorated will be reused to build the new stairs, and the decorative railing will be repurposed for the interior stair connecting the third and fourth levels.

Question 1 conclusion:

The Jazzy building's exterior façade is adorned with beautiful historical details and decorative finishes. However, the interior of the building has deteriorated significantly as observed during site visits. To preserve the building's historical significance, the east and west façade be preserved along with any interior materials that can be repaired and reused. Most of our preservation efforts will be focused on the exterior façades, which are mostly intact and have been substantiated by historical records. Openings will be added to the structural wall separating the Jazzy building, connecting 619 and 621 Market Street buildings together. This will allow for easier occupant circulation and meet egress requirements.

B-Proposed Adaptive Reuse Plan (Research Question 1) What end uses should be included to support making downtown Chattanooga more livable and sustainable?

- The following businesses are proposed for the Jazzy building: convenient store, coffee shop, restaurants, and creative office spaces.
- The building was used for commercial purposes throughout its history.
- There is a dire need for retail business that serves the city center downtown community based on the market analysis of downtown Chattanooga.
- Adding residential units to this building will create a heavier load for plumbing.

- The building will have four entrances. Two of the entrances will lead to the lobby and exit stairs and the others will lead to the business (coffee shop and convenience store).

1- Introduction

There is a great gap between the housing market and the retail market in the City Center where the project is located (see Figure 36). The housing market including Multi-family and Owner-occupied housing is 7,650,000 sf compared to the retail market which is 1,250,000 sf. This shows the dire need to include more retail services downtown.

“New residential communities face challenges integrating with scarce neighborhood-serving retail options, especially given that large swaths of the fastest-growing residential nodes, including Cameron Harbor, the east section of Riverfront, and Southside-are removed from the major retail corridors along Market Street, MLK Boulevard, and Main Street.” (Strategic Market Analysis for Future Urban Development, n.d.).

Boundaries of Downtown Chattanooga
Chattanooga, TN



Estimated Number and Size of Properties by Type, 2022;
Downtown Chattanooga

USE	RENTABLE SPACE		PROPERTIES	
	SF (Est.)	%	# (Est.)	%
Multi-Family	5,690,000	24.1%	100	6.2%
Owner-Occupied Housing	1,980,000	8.4%	850	52.6%
Office	9,840,000	41.7%	250	15.5%
Retail	1,250,000	5.3%	300	18.6%
Industrial	4,200,000	17.8%	85	5.3%
Flex	610,000	2.6%	30	1.9%
TOTAL	23,570,000	100.0%	1,615	100.0%

Figure 36. Downtown City Center Map, Strategic Market Analysis for Future Urban Development. (n.d.).

2- Convenient Store

- A market (convenience store) and drug (pharmacy) store are going to be added to the Jazzy building due to its need for downtown Chattanooga (See figures 36 and 37)
- The grocery and pharmacy stores have a strong location appeal and supply/demand balance (See figure 37). The following businesses have a promising market opportunity and a high likelihood of success. (see figure 37).

	OPPORTUNITIES		
	SUPPLY / DEMAND BALANCE		MARKET OPPORTUNITY
	LOCATION APPEAL		
RETAIL			
Grocery & Drug	STRONG	STRONG	STRONG
Restaurant	STRONG	MODERATE	MODERATE / STRONG
Entertainment & Fitness	STRONG	VERY WEAK	MODERATE / WEAK
Services	STRONG	VERY WEAK	MODERATE / WEAK
Soft Goods	MODERATE	VERY WEAK	WEAK
Hard Goods	MODERATE	MODERATE	MODERATE
Auto & Gas	WEAK	MODERATE	MODERATE / WEAK

Figure 37. Market Retail Information, Strategic Market Analysis for Future Urban Development. (n.d.).

- The UTC interior design students class of 2024 conducted a survey to understand the needs and desires of downtown residents.
- Most of the responders lived in Chattanooga between one and five years.
- The age range of the participants was mostly between 19-34 years old.
- Most of the participants eat in the downtown once a week.
- Almost all the participants hang out with friends in the downtown.
- The most wanted uses, according to a survey conducted by the UTC class of 2024, for the Jazzy building are grocery, market, restaurant, and entertainment spaces (see figure 38)

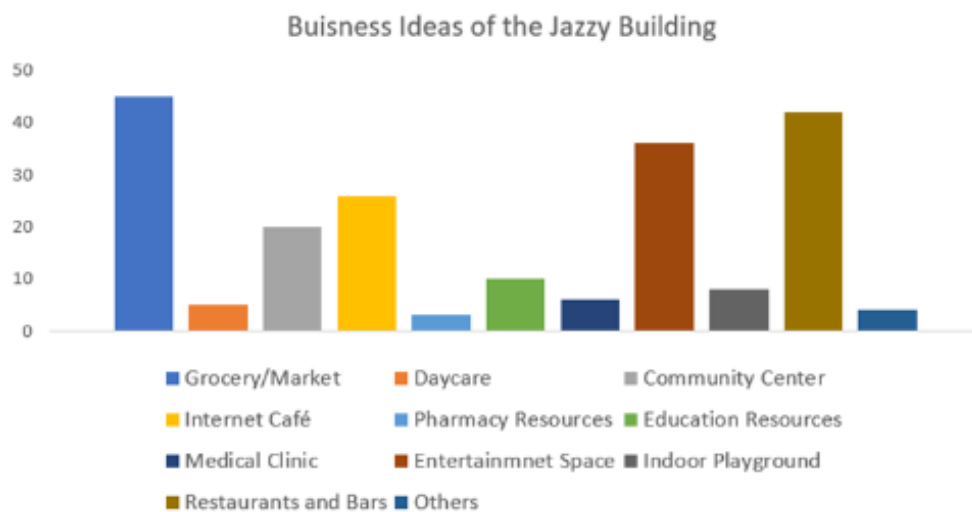


Figure 38. Chart of the Survey Result

3- Restaurants and Coffee Shop

- The Jazzy building is going to have restaurants (Mediterranean, Middle Eastern, and Mexican) in the second level along with a spacious dining area. The second level will also include a bar. The first level will include a coffee shop (faces Broad Street) and the mezzanine will have a pizza shop. According to the market analysis of downtown Chattanooga, the restaurant business exhibits strong market potential and is well-positioned to meet the retail needs of the downtown area (See figure 37).

4- Creative Office Spaces

Traditional offices are not as strong in demand as they used to be decades ago. (Strategic Market Analysis for Future Urban Development, n.d.). Traditional offices typically have small cubicles for employees and require workers to come in every day. However, these offices do not prioritize the well-being of workers in the same way creative offices do. Creative offices are designed to be more open, flexible, and accommodating, with dedicated spaces for rejuvenation, nursing mothers, and various types of furniture. In addition, due to changes brought about by Covid-19, workers may now have the option to work hybrid schedules and not come to the office every day. By prioritizing the physical and well-being needs of employees, creative offices can encourage more people to return to the workplace. These types of offices can have a positive impact on workers, making them more likely to enjoy their work and be more productive. Traditional office landscapes changed during Covid 19 pandemic. Many workers did not need to return to their traditional offices. The new creative offices interior design reflects the current needs from open

floor plans, community breakout areas, collaborative and creative spaces and providing social identity designs and healthy and sustainable designs/areas (Pegley, 2021)

- These offices are going to be rental offices. Creative offices have a strong appeal when it comes to location, and they also have a moderate balance between supply and demand (See figure 39).

	OPPORTUNITIES		
	LOCATION APPEAL	SUPPLY / DEMAND BALANCE	MARKET OPPORTUNITY
OFFICE			
Corporate Office	STRONG	WEAK	MODERATE
Creative Office	STRONG	MODERATE	MODERATE / STRONG

Figure 39. Retail Market Table for Office, Strategic Market Analysis for Future Urban Development. (n.d.).

Therefore, creative offices are added to the Jazzy building. These offices will cater to different businesses based on their needs, and there will be varying sizes available. Additionally, a rejuvenation area and a work café area will be provided to the users. The rejuvenation includes sofas, chairs, and plants; it provides a space to rest and relax. The work café includes a kitchenette with a bar, high table and chairs. There are also different furniture types and layouts (see Figure 40 and 41). The creative offices have a moderate/strong market opportunity. The expansion of downtown urbanization creates potential for success in creative offices.

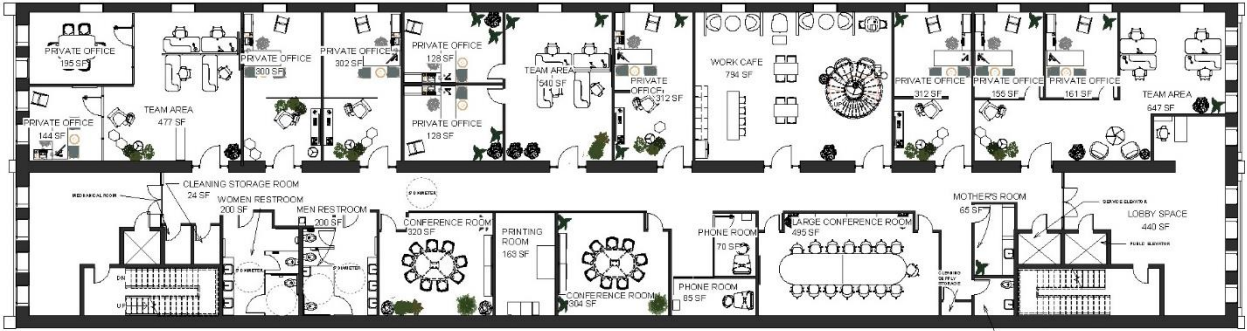


Figure 40. Third Level Furniture Plan

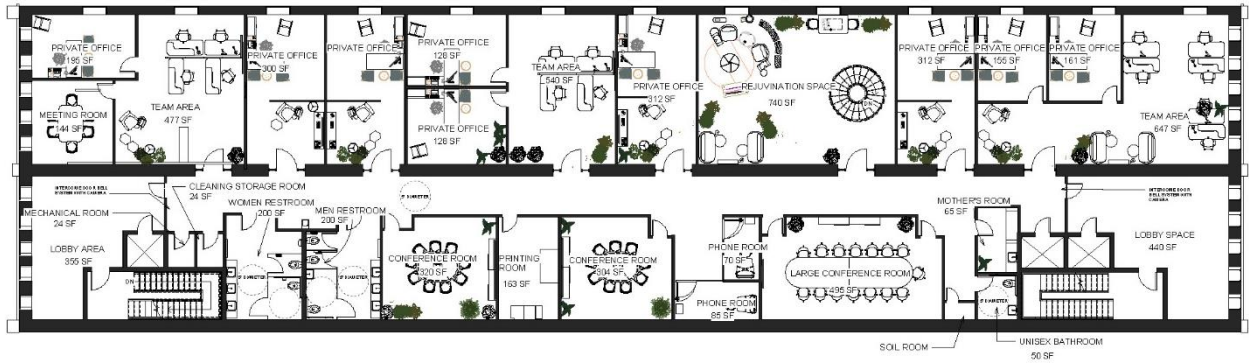


Figure 41. Four Level Furniture Plan

Conclusion:

After conducting a market analysis for downtown Chattanooga, it has been observed that the Jazzy building has the potential to host a variety of retail businesses that could potentially succeed. These businesses include convenience stores/grocery stores, pharmacies, restaurants, and creative offices. The market opportunities for these businesses range from strong to moderate, indicating that they are viable options for the Jazzy building. Therefore, the building will host a convenience store, pharmacy, restaurants, and creative offices, which are businesses that the downtown area needs and will serve the residents of this locality. Finally, these business matched the needs of the downtown based on the survey that was conducted by UTC interior design students class of 2024.

C- Code Applications (Research Question 2) How can the Jazzy building adapt to new codes?

- All existing egress is not code compliant, and all egress will be new construction to meet current fire regulations. Current building codes must be applied to ensure the safety of people as they enter and exit the building.

1- Means of Egress and Accessibility

Doorway and Door Size: ICC A117.1 Standard

Chattanooga adopted the International Building Code, 2018 Edition (1005.7.1 Doors):

- Doors are swinging in the direction of exit travel to ease the movement in case of emergency. (Kennon & Harmon, 2022, p. 151) (see Figure 42)

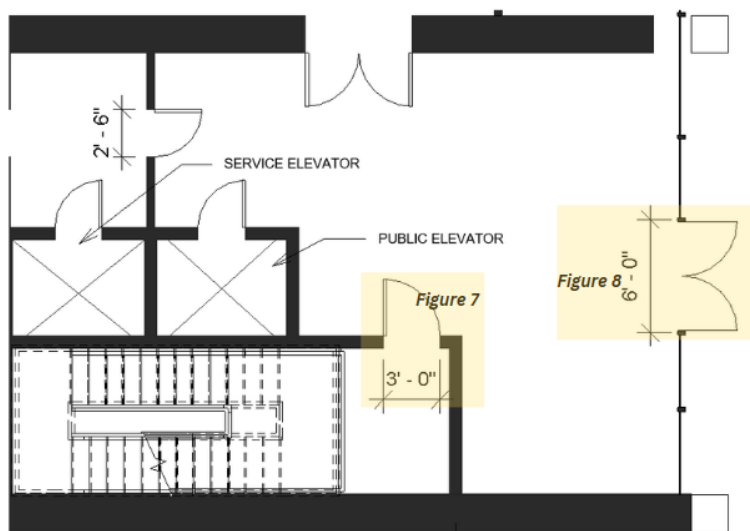


Figure 42. Enlarged Level One Floor Plan

- Doors that are used as part of the means of egress are min 80" height. (Kennon & Harmon, 2022, p.149)
- Doors must provide a minimum of 32" of clear width. (Kennon & Harmon, 2022, p. 150)
(refer to Figure 42)

Door Hardware: ICC A117.1 Standards

Chattanooga adopted the International Building Code, 2018 Edition (1010.1.9.1

Hardware):

- Doors have handle hardware which is accessible and universal (see Figure 43)
- EMTEK door handle is specified for this project.
- Door handles are more user-friendly than doorknobs, which makes them accessible to a wider range of people. With knobs, one has to use their fingers to hold and turn the knob, which can be challenging for some people. In contrast, door handles are easier to operate with the use of the elbow or hand, meaning that one person can open the door without the need to grab the handle.

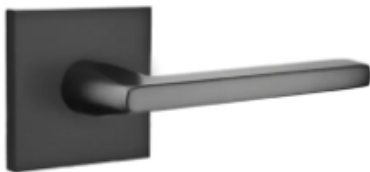


Figure 43. EMTEK Door Handle, Handlesets.com. (n.d.).

Door Type and Configuration: ICC A117.1 Standards

- In the third and fourth floor of the Jazzy building, alcoves were created so that door swings do not reduce the required corridor dimension width (Kennon & Harmon, 2022, p.151) (see Figure 44)

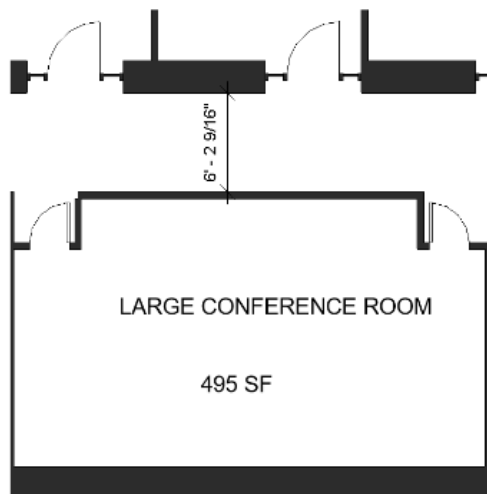


Figure 44. Enlarged Level Three Floor Plan

Chattanooga adopted the International Building Code, 2018 Edition (1024.1 Exit Passageways):

- Exit stairs are added to the east and the west of the building. Exit stairs have fire-resistant partitions. (Kennon & Harmon, 2022, p.156) (See Figures 45 and 46)

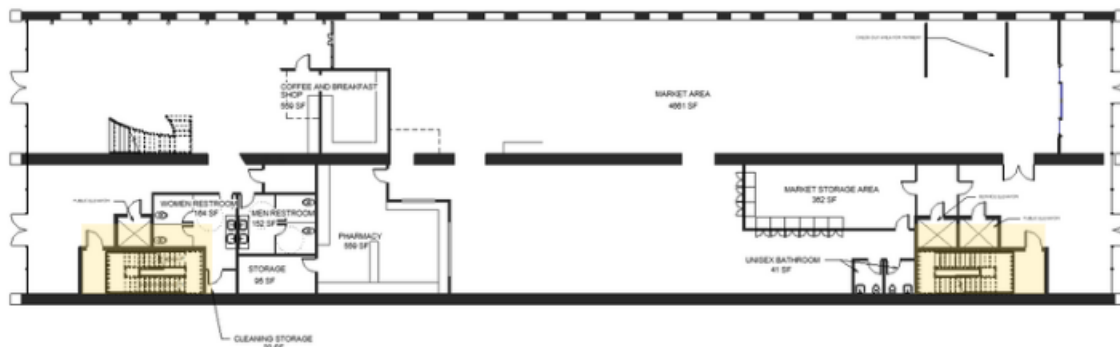


Figure 45. Level One Floor Plan

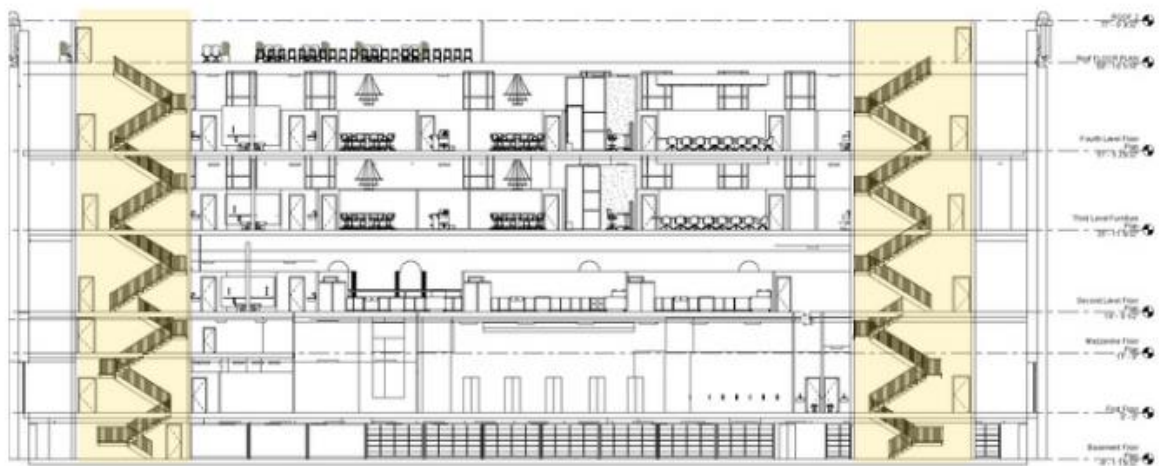


Figure 46. Jazzy Building Section Plan

Stair Dimensions: ICC A117.1 Standards

Chattanooga adopted the International Building Code, 2018 Edition (1029.14.2.1 Treads and 1029.14.2.2 Risers):

- All stairs (new stairs, exit stairs, monumental stairs and convenient stairs at mezzanine and third and fourth floors) are designed based on IBC code requirements with 7-inch height riser and 11-inch-deep treads for each step (Kennon & Harmon, 2022, p. 156) (see Figure 47)

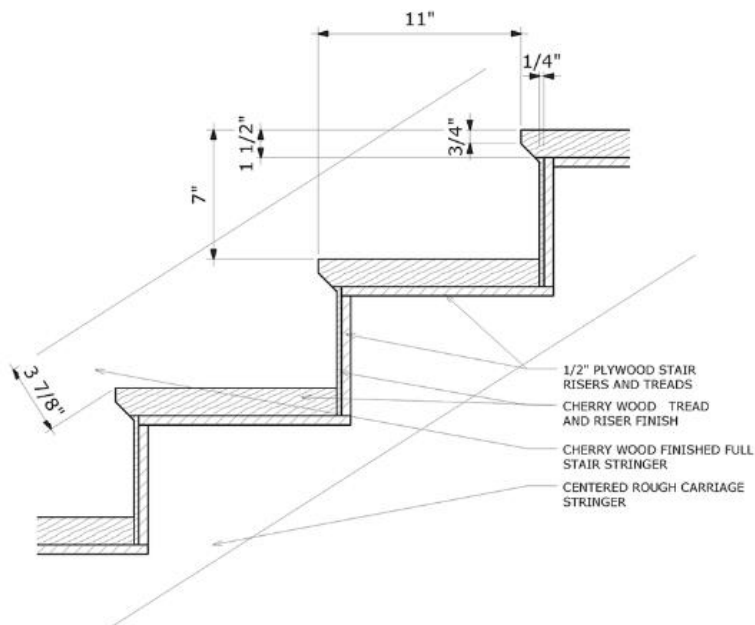


Figure 47. Tread and Riser Dimensions, Quora. (n.d.).

Railing Dimensions: ICC A117.1 Standards

Chattanooga adopted the International Building Code, 2018 Edition (1029.16 Handrails):

- The stairs have rails to support clients' movement between floors and to prevent falls and injuries (see Figure 48). Baluster spacing is 4" diameter maximum.

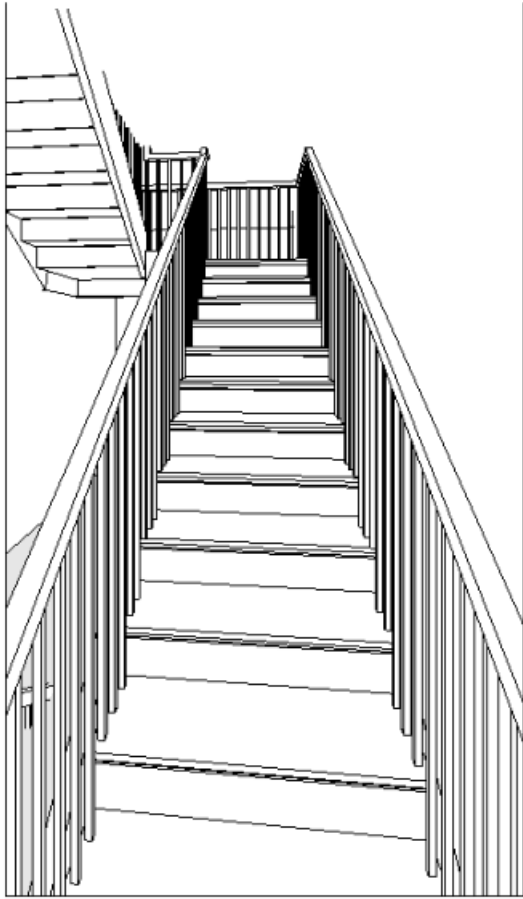


Figure 48. A Perspective of the Exit Stair

- The mezzanine is accessible by adding an elevator that stops at mezzanine level (see figure 49).

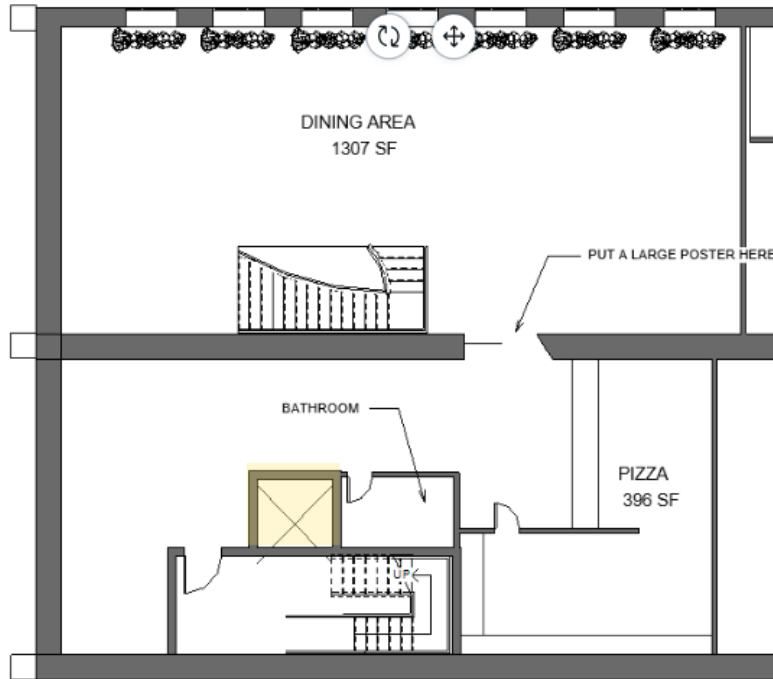


Figure 49. Floor Plan of the Mezzanine

Chattanooga adopted the International Building Code, 2018 Edition (1020.2 Minimum Corridor Width):

- The corridor width throughout the building is wide enough to accommodate occupancy and accessibility needs (see figure 50). The minimum width of the corridor is 44”.

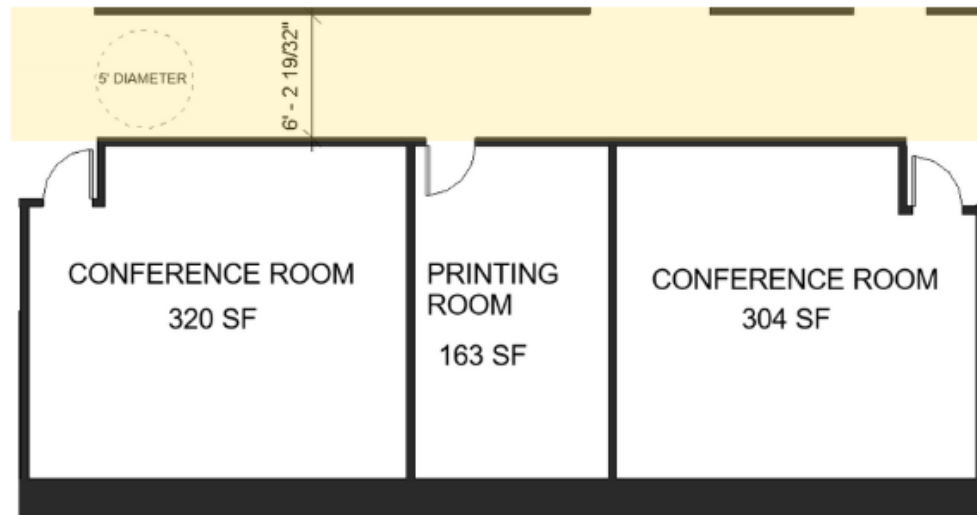


Figure 50. Third Level Floor Plan

Chattanooga adopted the International Building Code, 2018 Edition (1007.1.1 Two exits or exit access doorways):

- Exit doors are carefully placed based on exist safety by using the diagonal rule from the International Building Code. (Kennon & Harmon, 2022, p. 199) (see Figure 51). The Life Safety Plan shows the locations in relation to the diagonal measurement. The diagonal rule is calculated to place exit doors to a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building ([BU_12_42_12.pdf](#)

(iccsafe.org)

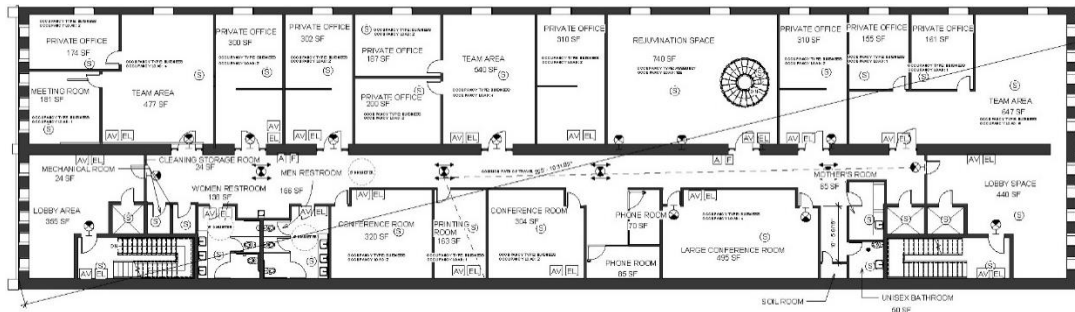


Figure 51. Level Four Life Safety Plan

Chattanooga adopted the International Building Code, 2018 Edition (1029.8 Common path of egress travel):

- The common path of travel is measured to ensure that the current design meets the code requirements for means of egress. (Kennon & Harmon, 2022, p. 201) (see Figure 52). The common path of travel maximum distance is determined by the occupancy type, occupancy load, and the building sprinkler system. The whole building has a sprinkler system. Level four is designated for business occupancy with a maximum allowable path

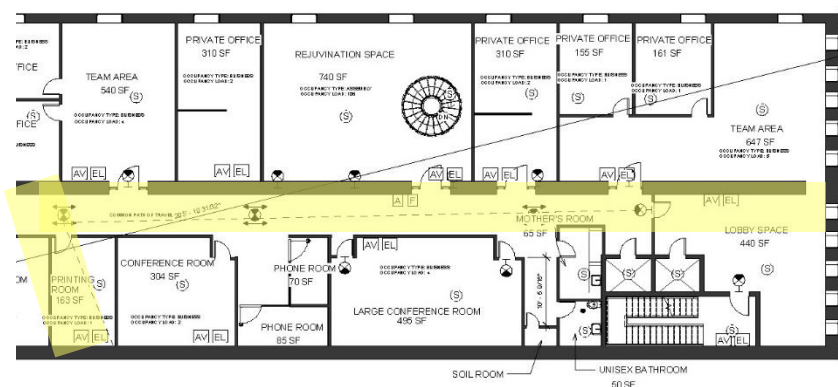


Figure 52. Enlarged Level Four Furniture Plan

of travel of 100 feet. ([2018 INTERNATIONAL BUILDING CODE \(IBC\) | ICC DIGITAL CODES](https://www.iccsafe.org) (iccsafe.org))

Chattanooga adopted the International Building Code, 2018 Edition (1020.4 Dead ends):

- Dead end corridors do not exceed more than 20 feet. (Kennon & Harmon, 2022, p. 206)
(See Figures 53 and 54)

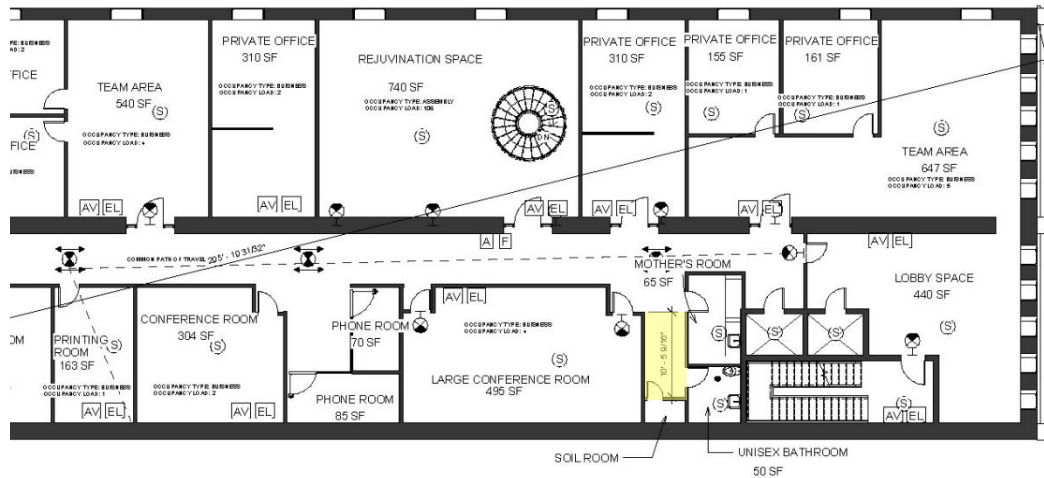


Figure 53. Enlarged Level Four Floor Plan

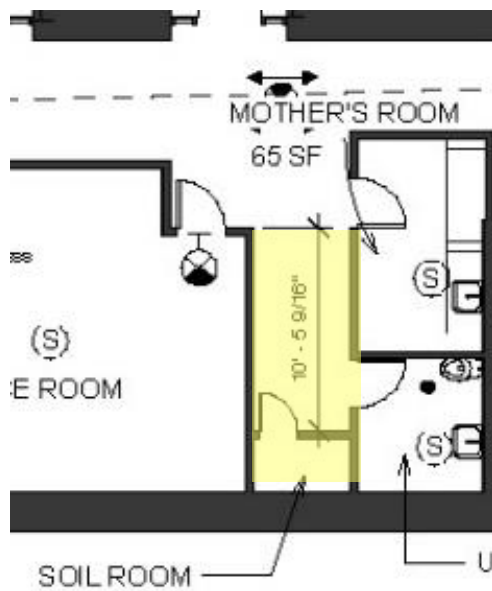


Figure 54. Enlarged Corridor on Level Four

Chattanooga adopted the International Building Code, 2018 Edition (1013.1 Where required):

- Exit signs with directional arrows are added throughout the building (Kennon & Harmon, 2022, p. 209) (see Figure 55)

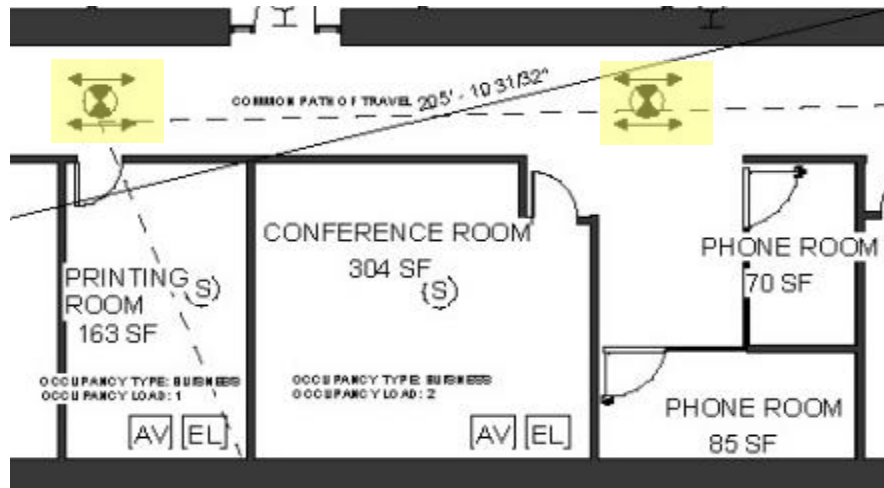


Figure 55. Exit Signs

ADA

- Accessible toilets are added for each level (Kennon & Harmon, 2022, p.335) (see Figure 56). There is an ADA bathroom with grab bars. There is a 5 feet diameter circle for wheelchair turnaround based on the 210 ADA Standard for Accessible (Kennon & Harmon, 2022, p.46).

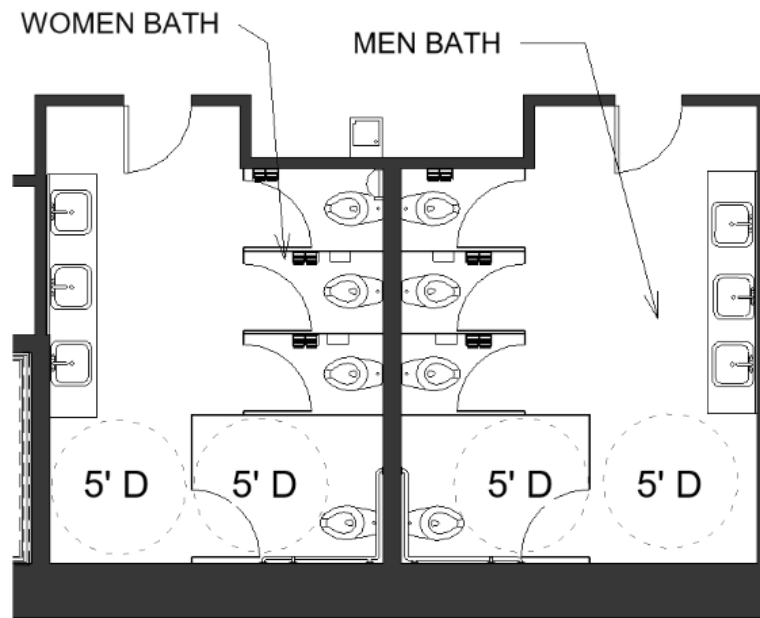


Figure 56. Accessible Bathrooms

- Water closets have accessible vertical/horizontal grab bars which are required by the ICC A.117.1 standard (Kennon & Harmon, 2022, p. 324 and 325) (see Figures 57 and 58).

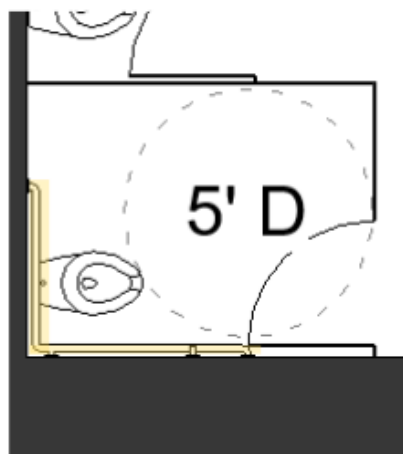


Figure 57. ADA Bathroom Floor Plan

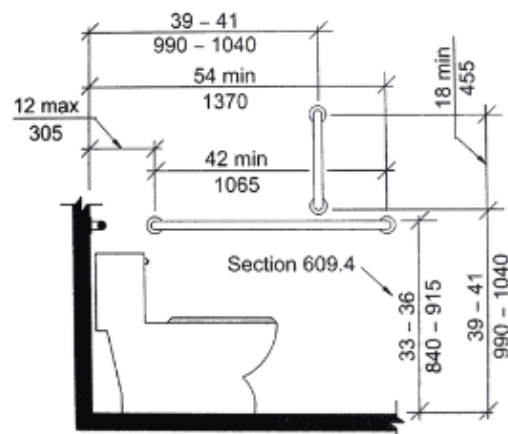


Figure 58. Bathroom Section showing Grab Bar Locations (ICC)

- lavatories and drinking fountains have 8" minimum knee space and 6" max toe space.

(Kennon & Harmon, 2022, p. 326) (see Figure 59)

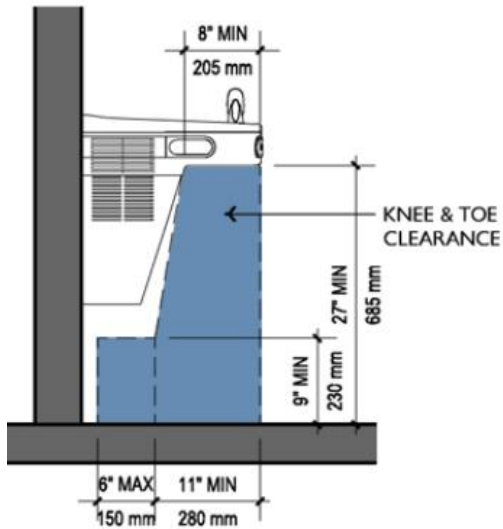


Figure 59. Knee Space and Toe Space (Ryan, 2020)

3- Fire Protection System

Chattanooga adopted the International Building Code, 2018 Edition (901.6.2.2Smoke control systems):

- Smoke detectors are added to every room in the building. Smoke detectors are required to comply with NFPA 72 and UL 217 Standard for Smoke Alarms. (Kennon & Harmon, 2022, p. 280) (see Figure 60)



Figure 60. Level Four Life Safety Plan (Smoke Detector Locations)

- Smoke detectors are drawn in the plan as circles with letter S (see Figure 60).

Chattanooga adopted the International Building Code, 2018 Edition (Fire protection and Life Safety Systems 903.2 Where required):

- It is required to install fire barriers to enclose elevators, dumbwaiters, atriums, exit stairways, and shafts for building systems. This is a critical measure that is necessary to maintain the safety and security of the building and its occupants. The fire barrier walls that enclose the exit stairs must be 2-hour rating as this is four level building (Kennon & Harmon, 2022, p. 238 and 239) (see Figure 61).

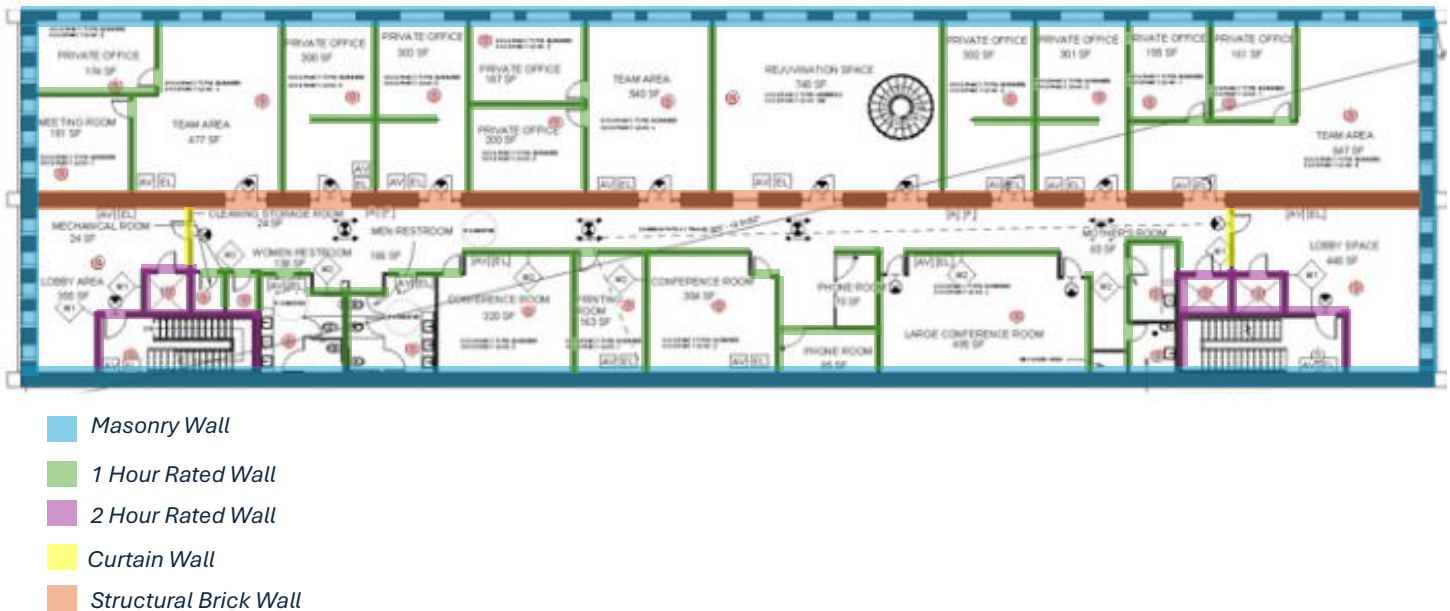


Figure 61. Fourth Level Floor Plan Showing Different Wall Types and Ratings

Visual and Audible Alarm Systems: ICC A117.1 Standards

Chattanooga adopted the International Building Code, 2018 Edition (901.6.3 Fire alarm systems):

- Fire alarms (audio and visual) are also added to every room in the building and in the corridor and open spaces leading occupants to exits. The alarms should be positioned along the natural path of escape to help occupants locate the exits during a fire with both noise and visual cues. (Kennon & Harmon, 2022, p. 287) (see Figure 62)



Figure 62. Level Four Life Safety Plan (Audio and Visual Alarms)

Fire Extinguishers: NFPA 10, Standard for Portable Fire Extinguisher

Chattanooga adopted the International Building Code, 2018 Edition (906.5 Conspicuous location and 906.6 Unobstructed and unobscured):

- Fire extinguishers are placed in several locations in the building including the work cafe on the third floor. Fire extinguishers are required in the commercial kitchens, laboratories, computer rooms, smaller kitchens, and break rooms. Fire extinguisher should be placed within 30 feet of commercial cooking (Kennon & Harmon, 2022, p. 291) (see Figure 63)



Figure 63. Level Three Life Safety Plan (Fire Extinguishers)

Conclusion:

The Jazzy building will implement the building code adopted by Chattanooga, which is the 2018 edition of the International Building Code. The code includes detailed regulations that cover important aspects related to the safety and accessibility of the building. Regarding accessibility, the code requires the building to have means of egress that are easily accessible and free from any obstructions. Door hardware, type, and configuration should also be considered, making sure that they can be conveniently operated by people with disabilities. The exit stairs must meet specific dimensions, and the railings must be adequate in height to prevent falls. Corridors must be wide enough to accommodate wheelchair users, and the common path of travel should be free from any obstacles that may impede movement. Exit signs must be visible and clearly indicate the direction of exit. The code also requires strict adherence to the Americans with Disabilities Act (ADA) to ensure that the building meets the needs of individuals with disabilities. Regarding fire protection, the code demands the installation of a fire protection system, including smoke detectors, alarms, sprinklers, and extinguishers, to ensure that the building is safe in the event of a fire. Adopting these codes ensures that the building is safe and accessible, allowing occupants to enter and exit the building safely and effectively.

D-Sustainability Applications (Research Question 3) How can adaptive reuse of the Jazzy building contribute to sustainability?

- The design finishes and specifications will meet some of the LEED and WELL credits.

1- Paint

- Sherwin Williams Zero VOC is specified (See Figure 64)



Figure 64. Zero VOC Paint, Ovation® plus Interior Paint & Primer. Williams. (n.d.).

- Antimicrobial - provides a mold- and mildew-resistant finish.
- GREENGUARD Gold Certified
- Contributes towards credits for LEED v4 and v4.1

Meets LEED EQ Credit: Indoor Air Quality Assessment

- Specifying low emitting finish

Meets WELL VOC Restrictions

- Part 1: Limit VOCs from Wet-Applied Products

2- Light

- LED lighting finishes that will save on energy. Cooper Lighting CJB Integrated JBox Downlight is one of the LED lightings specified for this project. (see Figure 65)



Figure 65. LED Light Fixture, Cooper Lighting Solutions. (n.d.).

- Provides 35,000 hours of maintenance-free operation.
- 120V LE/TE phase cut dimming to 5% with select controls.
- ENERGY STAR, Air-tite, IC-Rated. Wet location listed.

3- Ventilation and the HVAC System

- All mechanical systems are new and will require outdoor air intakes to meet the codes.
- Mechanical systems provide ventilation and regulate the interior temperature, ensuring healthy indoor air quality for occupants and maintaining a healthy indoor environment.
- The Jazzy building has a mechanical room on each level along with an area dedicated to mechanical equipment on the roof. This meets the mechanical room code requirements (Kennon & Harmon, 2022, p. 351)
- Ventilation helps eliminate harmful elements and odors released into indoor air by equipment or building materials (Kennon & Harmon, 2022, p. 354)
- Ventilation is a biophilic solution to the Jazzy building as it contributes to healthier interior spaces and better IAQ (Indoor Air quality) rating.
- Adding a heat recovery unit will add natural air into the building and improve air quality (see Figure 66)



Figure 66. Ventilation System (Emerson Swan, 2023)

Meets WELL A03 Ventilation Design

- Part 1: Ensure adequate ventilation.
 - Mechanical Ventilation: the newly ventilation system is designed to meet the supply and exhaust rates ([Standard | WELL V2 \(wellcertified.com\)](#))

Air Quality Monitoring Sensor

- Installing sensors in the building that measure air quality.
- Sanalife sensor monitor the particular matter levels, the total volatile organic compounds, carbon dioxide levels, formaldehyde, ambient temperature and humidity levels (see figure)



Figure 67. Sanalife Sensor Readings

Meets WELL A08 Install Indoor Air Monitors

- Part 1: Sensor requirements
 - The project deploys monitors with sensors that measures at least three of the flowing parameters:
 - a. PM_{2.5} or PM₁₀
 - b. Carbon dioxide
 - c. Carbon monoxide
 - d. Ozone
 - e. Nitrogen dioxide
 - f. Total VOCs
 - g. Formaldehyde

Manage Air Pollution

- Installing hood overhands for commercial kitchens.
- Install Thermador Pro Grand 36 inch wide wall mounted range hood (see Figure 68)



Figure 68. Thermador PH36GWS Pro Grand® 36 inch wide wall mounted

Meets WELL A11 Source Separation

- Option 1: Control Cooking Pollution
 - “Type II hood overhands and setbacks comply with ASHRAE 154-2011”
 - “Replacement air velocity near the hood is less than 75 fpm”
 - “Replacement air introduced directly into the exhaust hood cavity does not exceed 10% of the hood exhaust airflow rate”

4- Air Quality

WELL: A02 Smoke-Free Environment

Option 1: No Smoking Signage

- Adding a clear and visible permanent signage that prohibits smoking in the Jazzy building.

5- Natural Light

- Adding north-facing windows to the north wall (Refer to Figure 26). This qualified with the LEED EQ Credit: Daylight. The intent of this credit is to reduce the use of electric lighting and introduce natural daylight into the interior space.
- Using the tinted glass technology that allows clients to control the tint level 1 of the windows from the phone (see Figure 69)

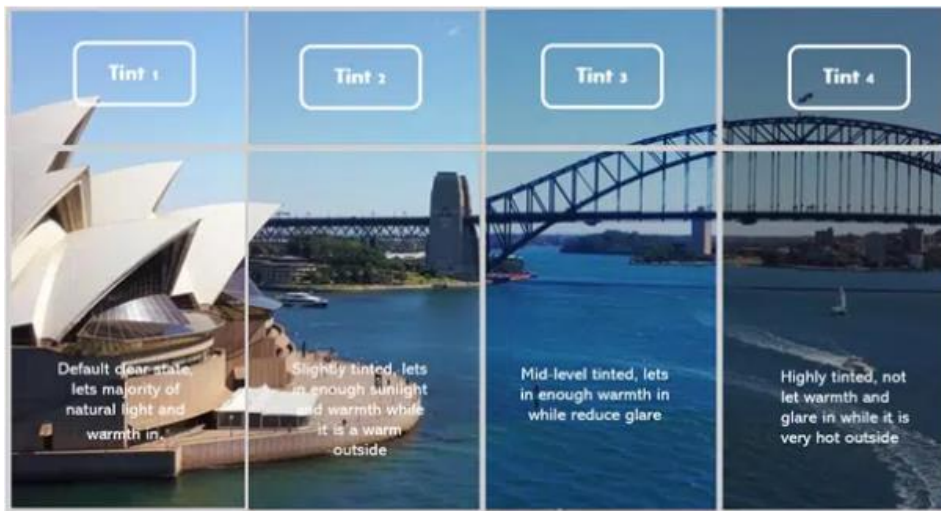


Figure 69. Tinted Smart Glass (Scale, 2023)

6- Building Management System

- The building management system connects, controls, and monitors mechanical, electrical and electromechanical systems in a facility (Kirvan & Zaharoff, 2024).
- Controlled systems including, power, heating, ventilation, air conditioning, physical access control, fire safety systems, water pumps, elevators, and lights (Kirvan & Zaharoff, 2024).
- The building management system (BMS) optimizes indoor environment and electricity usage, leading to lower energy consumption by reducing seasonal loads.
- The software of the Building Management System (BMS) monitors the conditions in the building (see Figure 70) through specialized sensors (Kirvan & Zaharoff, 2024).

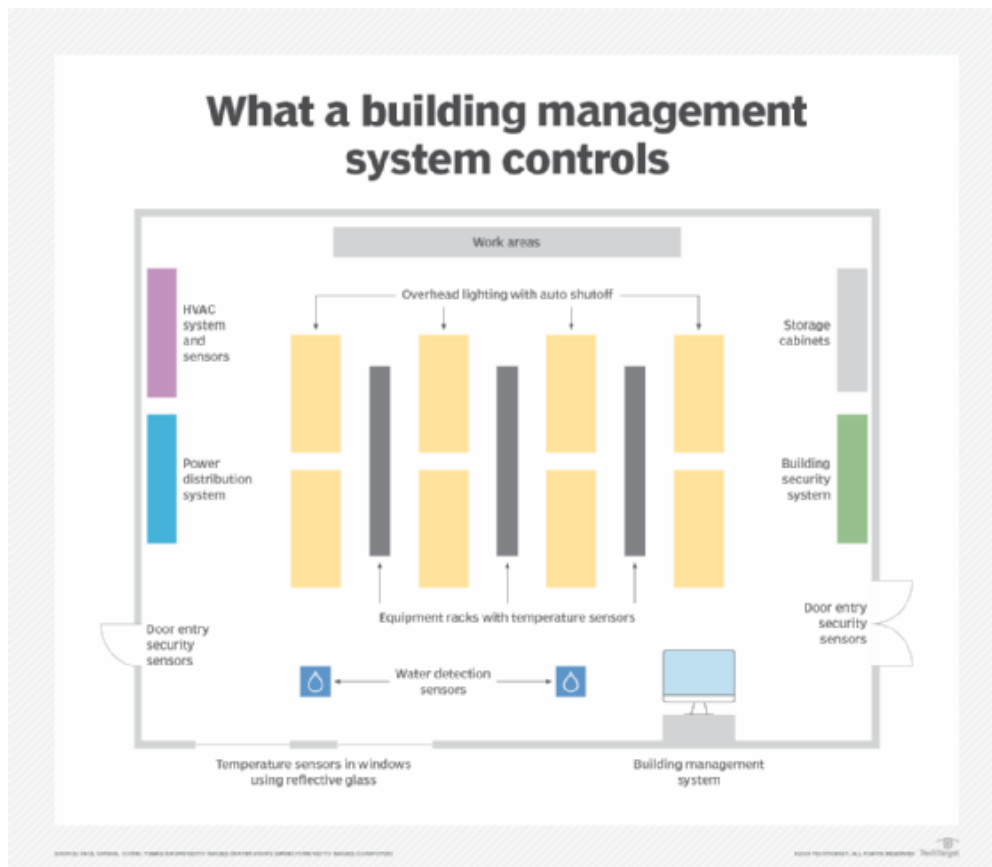


Figure 70. Building Management System Control

- This counts as 7 points based on Table 1. Points for walkable location (see Figure 72) (USGBC (n.d.)).

Walk Score®	Points
90 to 100	8
80 to 89	7
75 to 79	6
70 to 74	5
65 to 69	4
60 to 64	3
55 to 59	2
50 to 54	1

Figure 72. LEED Walk Score Table

WELL: V05 Site Planning and Selection

1- Pedestrian Friendly Streets

- a. The project achieves a minimum walk score of 70.

8- Access to Transit

LT Credit: Access to Quality Transit

Path 1. Access to Public Transit Service (2-7 points)

Locating the entry of the project with $\frac{1}{4}$ -mile walking distance of existing or planned bus, informal transit stops. Or withing a $\frac{1}{2}$ -mile walking distance of existing or planned bus transit stops (see Figure 73).

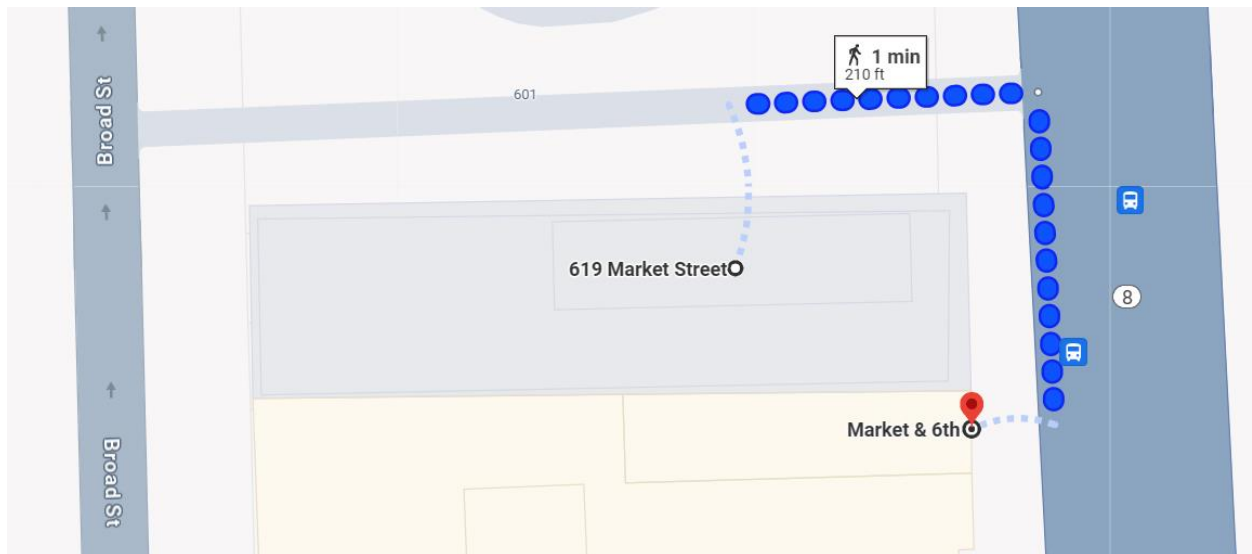


Figure 73. Google Map Image Showing the Location of bus stops.

9- Indoor Water Use

LEED: WE Prerequisite: Indoor Water Use Reduction

All newly installed toilets, urinals, and faucets are going to be Water Sense labeled.

American Standard Madera 1.25 GPF Elongated one-piece toilet (see Figure 74) is specified for this project. It is ADA compliant, approved for commercial use. It has HET High Efficiency flush technology.



Figure 74. American standard Madera 1.28 GPF Elongated

10- Sound

WELL: S03 Sound Barriers

Interior walls in the third and fourth levels, where there are creative offices spaces and conference rooms, will have interior walls that meet a minimum STC. For adjacent quite rooms it requires a minimum of 50 STC. Rooms of concentration and other regularly occupied spaces required a minimum of 45 STC (see Figure 75) (WELL Standards).

Interior Wall Type	Minimum STC or Rw	OR	Minimum STC or Rw for Projects That Achieve Feature S06.1
Between loud zones and other occupiable spaces.	60	OR	60
Between areas for conferencing, learning or sleeping and other regularly occupied spaces.	55	OR	50
Between adjacent quiet zones.	50	OR	45
Between rooms for concentration and other regularly occupied spaces.	45	OR	40
Between circulation zones and regularly occupied spaces.	40	OR	35

Figure 75. LEED Walk Score Table

Conclusion:

The Jazzy building is an excellent example of sustainable design, as it incorporates various sustainable measures to ensure that the building is environmentally friendly and efficient. The sustainable measures cover different aspects, including location, light, sound, air, water, electricity, and HVAC systems. The building's location is conveniently located near bus stops and the downtown has a high score for walkability. This means that occupants can easily access public transportation and walk to nearby amenities, reducing the need for driving and, therefore, reducing carbon emissions. The building design also features north-facing windows that allow for more natural light to enter the building, reducing the need for artificial lighting during the day. Energy Star-certified LED lights are used to illuminate the building, which consumes less energy than traditional lighting systems, reducing energy costs and carbon emissions. The building is also painted with zero VOC and Greenguard certified paint, which reduces the release of harmful chemicals into the atmosphere, improving indoor air quality. Walls are designed to minimize sound transfer between rooms, creating a quieter and more pleasant environment for occupants. To ensure proper air quality, the building has a ventilation system that adds more natural air into the building. This improves the occupants' health and wellbeing by reducing the risk of airborne illnesses, allergies, and respiratory problems. The Building Management System is equipped with sensors and controls that manage power, heating, ventilation, air conditioning, physical access control, fire safety systems, water pumps, elevators, and lights. This system ensures that the building operates efficiently and effectively, reducing energy consumption and operating costs. In conclusion, the Jazzy building's sustainable practices and standards make it an environmentally friendly and efficient design solution that benefits both the occupants and the environment.

Chapter 2 Summary:

The Jazzy building is a testament to the preservation of history, as its facades and other reusable interior materials are being carefully preserved. In addition, the building will strictly adhere to Chattanooga's 2018 International Building Code. The code is an extensive set of regulations covering aspects related to safety and accessibility, such as ADA-compliant codes, door and hardware, egress, exit stairs, and a fire protection system. These codes are meant to ensure that the building is accessible and safe for everyone.

The market analysis for downtown Chattanooga has revealed that the Jazzy building has the potential to be a hub for various retail businesses that could thrive in the area. The building is set to house a convenience store, pharmacy, restaurants, and creative offices. These businesses are crucial for the downtown area and will serve the locality's residents. They will provide a much-needed source of convenience and entertainment for the area.

The Jazzy building is an excellent example of sustainable design, incorporating multiple measures to ensure that the building is environmentally friendly and efficient. These measures cover different aspects, including location, light, sound, air, water, electricity, and HVAC systems. The building is conveniently located near bus stops, and the downtown area has a high score for walkability. The building's design features north-facing windows, allowing an abundance of natural light to enter the building. This reduces the need for artificial lighting during the day, making it more energy-efficient. Additionally, the Jazzy building is painted with zero VOC and Greenguard-certified paint. The Building Management System helps the building to operate efficiently and effectively. These sustainable practices and standards make it an environmentally friendly and efficient design solution that benefits both the occupants and the environment.

References

1904 chattanooga plat book. SAM HALL's | ChattanoogaHistory.com. (n.d.).

<https://chattanoogahistory.com/1904map.php>

(2023, April 4). *Zoning By-law 2009-189* [Review of *Zoning By-law 2009-189*]. Town of

Oakville; Town of Oakville. <https://www.oakville.ca/getmedia/3204ce59-fbb0-45de-9891-91cfb00ba69f/zoning-by-law-2009-189-definitions.pdf>

619 & 621 Market Street, Chattanooga, TN 37402 | Hospitality Space Building for Sale. (n.d.).

Digsy. <https://www.getdigsy.com/listing/619--621-market-street-chattanooga-tn-for-sale-381731/>

Builders have to follow guidelines on the rise and run of stairs when building a staircase. ratio is a rise of 7.75 in, for a run of 9.75... Quora. (n.d.). <https://www.quora.com/Builders-have-to-follow-guidelines-on-the-rise-and-run-of-stairs-when-building-a-staircase-Ratio-is-a-rise-of-7-75-in-for-a-run-of-9-75-in-A-builder-is-using-this-ratio-to-build-a-staircase-that-is-15-feet-high-how>

CJB integrated jbox downlight. Cooper Lighting Solutions. (n.d.).

<https://www.cooperlighting.com/global/brands/halo/10383537/cjb-integrated-jbox-downlight>

CoreLuxe 5mm w/pad deer ridge maple waterproof rigid vinyl plank flooring 5.75 in. wide X 48 in. long. LL Flooring. (n.d.). https://www.llflooring.com/p/corelux-5mm-w-pad-deer-ridge-maple-waterproof-rigid-vinyl-plank-flooring-5.75-in.-wide-x-48-in.-long-10052755.html?c3api=6090%2CPMAX%2C19996824229&gad_source=1&gclid=CjwKC

AjwuJ2xBhA3EiwAMVjkVCE5cgJQA6DaxgGU49u1hThbL03b3sqDv8Gtt9woC2BEyvV
1p5v28RoCP-8QAvD_BwE

E360 indoor air quality monitoring. E360 Indoor Air Quality Monitoring. (n.d.).

https://www.sanalifewellness.com/e360/indoor-air-quality-monitoring?utm_account=Sanalife&utm_adgroup=&utm_device=c&utm_source=google_ads&utm_campaign=WFX-E360&utm_term=air+quality+monitoring+system&utm_medium=paid&hsa_acc=7099443186&hsa_cam=20582654521&hsa_grp=153232523505&hsa_ad=674888085241&hsa_src=g&hsa_tgt=kwd-1813904591&hsa_kw=air+quality+monitoring+system&hsa_mt=p&hsa_net=adwords&hsa_ver=3&gad_source=1&gclid=CjwKCAjwuJ2xBhA3EiwAMVjkVJyC34Bs99v6N9K24mLJpqEKb5JKn1dnd1K5Z4W78XPxJououMOMeRoCVoMQAvD_BwE

Emerson Swan, Inc. (2023, May 23). *Improving indoor air quality with a heat recovery ventilator (HRV)*. LinkedIn. <https://www.linkedin.com/pulse/improving-indoor-air-quality-heat-recovery-ventilator-hrv/>

Emtek C5210hlous19 Flat Black Helios Privacy Door Lever set with square rose and CF mechanism from the Brass Modern Collection. Handlesets.com. (n.d.).

<https://www.handlesets.com/emtek-c5210hlo-helios-privacy-door-lever-set-with-square-rose-and-cf-mechanism-from-the-brass-modern-collection/p4586790>

Google. (n.d.). Google maps.

<https://www.google.com/maps/dir/619+Market+Street,+Chattanooga,+TN/Market+%26+6>

th,+Chattanooga,+TN+37402/@35.04904,-

85.3103382,20.04z/data=!4m14!4m13!1m5!1m1!1s0x88605e6314f94253:0x6c90519df74

71e2c!2m2!1d-

85.3098856!2d35.0490467!1m5!1m1!1s0x88605e636a950a9f:0x2cef443ca8b7cc5f!2m2!1

d-85.309658!2d35.04892!3e2?entry=ttu

(ICC), I. C. C. (n.d.). Digital codes. <https://codes.iccsafe.org/s/icca117-12003/chapter-6->

plumbing-elements-and-facilities/ICCA117.1-2003-Ch06-Sec604.5.1

Jolley, H. (2004, November 8). *What Did That Building Used To Be: 619 Market Street* [Review of *What Did That Building Used To Be: 619 Market Street*]. Chattanooga.com ;

Chattanooga.com . <https://www.chattanooga.com/2004/11/8/58335/What-Did-That-Building-Used-To-Be-619.aspx>

Kennon, K. E., & Harmon, S. K. (2022). *The codes guidebook for Interiors*. John Wiley & Sons, Inc.

Kirvan, P., & Zaharoff, S. (2024, April 17). *What is a building management system?: Definition from TechTarget*. Data Center.

<https://www.techtarget.com/searchdatacenter/definition/building-management-system>

Loopnet. (n.d.). [https://images1.loopnet.com/d2/wuvW-uGrJAjut3LmX-](https://images1.loopnet.com/d2/wuvW-uGrJAjut3LmX-qMjnqPkjb4MKGHfmybDSH0QE8/document.pdf)

[qMjnqPkjb4MKGHfmybDSH0QE8/document.pdf](https://images1.loopnet.com/d2/wuvW-uGrJAjut3LmX-qMjnqPkjb4MKGHfmybDSH0QE8/document.pdf)

- NIST. (2022). Understanding Building Codes. *NIST*. <https://www.nist.gov/buildings-construction/understanding-building-codes>
- NPGallery Asset Detail*. (2023). Nps.gov. <https://npgallery.nps.gov/AssetDetail/a4ceb6a9-5baf-43ff-bad0-5a50cf38d067/>
- Ovation® plus Interior Paint & Primer*. Williams. (n.d.).
<https://www.hgtvhomebysherwinwilliams.com/paint-products/ovation-plus>
- Pegley, R. (2021, September 10). *How covid-19 changed the Traditional Office Forever*. The CEO Magazine. <https://www.theceomagazine.com/opinion/post-pandemic-office/>
- Preserve Chattanooga Downtown Historic District Database.xlsx*. (n.d.). Google Docs.
Retrieved February 17, 2024, from <https://docs.google.com/spreadsheets/d/1PwDJqBL-LMvJfaASfojKSEhoDlBXLmt3/edit#gid=524553701>
- Reimagining broad street*. Reimagining Broad Street. (n.d.). <https://www.broadstreetcha.com/>
- Resnick, N. (2014). Creative office space, defined. *Commercial Property Executive (Online)*, 28(1), 19-19,21. Retrieved from
<https://proxy.lib.utc.edu/login?url=https://www.proquest.com/trade-journals/creative-office-space-defined/docview/1474345261/se-2>
- Ryan, C. (2020, August 2). *Requirements for interior and exterior accessible drinking fountains - rethink access - registered accessibility specialist: TDLR RAS*. reThink Access - Registered Accessibility Specialist | TDLR RAS.
<https://www.rethinkaccess.com/articles/accessible-drinking-fountains>

Sam Hall's. Remember When. (n.d.). <https://chattanoogahistory.com/rememberwhen.php>

Scale, S. at. (2023, March 28). *Technology review - smart glass*. 3E Group.

<https://3egroup.com.au/news-insights/technology-review-smart-glass/>

Strategic Market Analysis For Future Urban Development. (n.d.). Retrieved February 17, 2024, from

https://static1.squarespace.com/static/600aee7e0d9165627e3084ba/t/64dcd3d11a49910d62a0270b/1692193750838/13205.01_RCLCO+Report_River+City+Co_Downtown+Chattanooga_8-15-23.pdf

THE SECRETARY OF THE INTERIOR'S STANDARDS FOR THE TREATMENT OF HISTORIC PROPERTIES WITH GUIDELINES FOR PRESERVING, REHABILITATING, RESTORING & RECONSTRUCTING HISTORIC BUILDINGS. (2007).

<https://www.nps.gov/orgs/1739/upload/treatment-guidelines-2017-part1-preservation-rehabilitation.pdf>

Thermador PH36GWS Pro Grand® 36 inch wide wall mounted. Build.com. (n.d.).

https://www.build.com/product/summary/1655755?uid=3918063&jmtest=gg-gbav2_3918063&gad_source=1&gclid=CjwKCAjwuJ2xBhA3EiwAMVjkVCsMTF853BAW3z91q_By9-RJVastgU8Zf2J4_XJJ7Lh7HFwR_34-6RoCVdIQAvD_BwE&gclsrc=aw.ds

Two buildings in Downtown Opportunity Zone. (n.d.). Brevitas. Retrieved February 17, 2024,

from <https://brevitas.com/p/pCPWDnDQL/two-buildings-in-downtown-opportunity-zone>

USGBC. (n.d.). https://build.usgbc.org/ID+C_Guide

Very walkable. Walk Score. (n.d.). <https://www.walkscore.com/score/nice-3-bedroom-2-bath-red-bank-duplex-chattanooga#:~:text=Downtown%20Neighborhood,-This%20location%20is&text=Downtown%20is%20the%20most%20walkable,neighborhood%20Walk%20Score%20of%2069>.

Well. (n.d.). *Standard: Well V2*. WELL Standard.
<https://v2.wellcertified.com/en/wellv2/concepts>

What Are The Pillars And Strategies of Sustainable Interior Design? (n.d.). Wilson & Dorset.
<https://wilsondorset.com/blogs/news/sustainable-interior-design#:~:text=Sustainable%20interior%20design%20is%20environmentally>

Why preservation? What are the benefits? (n.d.). Preservation Virginia.
<https://preservationvirginia.org/why-preservation-what-are-the-benefits/#:~:text=Historic%20buildings%20are%20a%20record>

Appendix

The preceding are strictly loan associations; do no actual building, but loan money to the highest bidders on real estate security, thus enabling them to build and pay for their houses in small weekly or monthly installments; but there is another association,

THE MUTUAL REAL ESTATE AND HOME BUILDING ASSOCIATION, organized under another law, which does the actual building, or will sell a lot and receive pay in monthly installments. It was organized June, 1885. Its capital stock is 400 shares of \$500 each, all of which have been taken and its shares can now only be had by purchase from



PHOENIX BLOCK.

private parties at a premium. Its methods of operation are to buy tracts of land for cash or on short time and subdivide and sell out in smaller lots at a profit and on easy terms. Also to build homes, charge a reasonable profit, such as will compare favorably with other builders, and give its patrons easy terms for payment. Its terms are ten per cent. cash, balance in monthly installments of \$12 per month on each thousand for eight years. This association finds a demand for ten times the amount of work its capital allows it to do. Besides houses it has sold some 150 homes on its liberal terms since it commenced operations. Its last annual statement issued June, 1889, shows assets \$143,430.28,

Haverty's to Remodel, Expand



(Staff photo by George Moody)

REPAINTING EXTERIOR OF HAVERTY'S DOWNTOWN

Haverty Furniture Decides To Remodel Downtown Store