

Retail Reform: profitable shopping-mall revitalization that reflects
changes in projected retail, residential and mixed-use markets

by

Brian Studer

A REPORT

submitted in partial fulfillment of the requirements for the degree

MASTER OF LANDSCAPE ARCHITECTURE

Department of Landscape Architecture and Regional & Community Planning
College of Architecture, Planning and Design

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Manhattan, Kansas

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Approved by:

Major Professor
Howard Hahn

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Abstract

The discussion of what is next for underperforming shopping malls has been a consistent issue in the realm of urban redevelopment and consumerism over the past decade. While the future of retail shopping and the effects of online shopping has been widely explored in recent years, less attention has been paid to the potential monetary and community value that these underutilized shopping malls offer. This project and report address the issue by examining the efficiency of the social, environmental, and financial aspects of shopping mall redevelopment through a mixed-use approach. More specifically, this report investigates how Mayfair Mall, an underperforming mall located in Wauwatosa, Wisconsin, can be revitalized to potentially increase overall profitability of the asset while reinvigorating the community with new amenities and experiences. This specific mall was not only chosen due to personal familiarity, but also from the site's typical characteristics and context of a traditional shopping mall, such as building organization, community size, and the overall economic health of the community. This project used a mixed method approach to collect data from invested stakeholders and participants of the Mayfair Mall community to better communicate to the audience about the potential for this undervalued site. The tools used to collect data included a precedent analysis, case studies, and interviews, which informed three distinct projective designs based on current redevelopment strategies. These findings offer some insight and recommendations towards the future development strategies of underperforming malls around the country, while contributing to the existing body of literature through the identification and influence of projected retail, residential, and industrial/office markets. The broader outcome of this report highlights the role of real estate developers, urban planners, and landscape architects in redeveloping underperforming shopping malls into a central community asset that aligns with current development trends.



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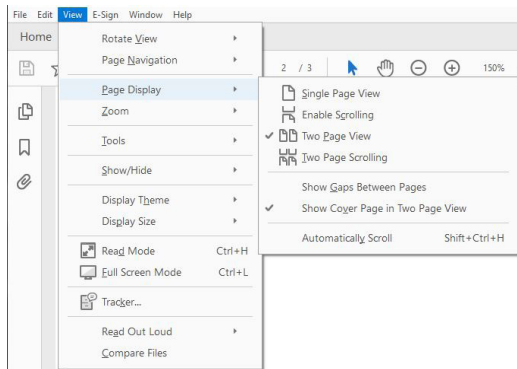
Profitable Shopping-Mall Revitalization that Reflects Changes
in Projected Retail, Residential and Mixed-Use Markets

Brian Studer

Masters Project Report
Landscape Architecture
Spring 2022



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A report submitted in partial fulfillment of the requirements for the degree:
Master of Landscape Architecture

Department of Landscape Architecture and Regional and Community Planning
College of Architecture, Planning, and Design
Kansas State University

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Lastly, I would like to thank my family and friends who have given me constant love and support leading up to this point in my academic career. Though not always acknowledged, your words and actions have always been appreciated and inspiring.

Abstract:

The discussion of what is next for underperforming shopping malls has been a consistent issue in the realm of urban redevelopment and consumerism over the past decade. While the future of retail shopping and the effects of online shopping has been widely explored in recent years, less attention has been paid to the potential monetary and community value that these underutilized shopping malls offer. This project and report address the issue by examining the efficiency of the social, environmental, and financial aspects of shopping mall redevelopment through a mixed-use approach.

More specifically, this report investigates how Mayfair Mall, an underperforming mall located in Wauwatosa, Wisconsin, can be revitalized to potentially increase overall profitability of the asset while reinvigorating the community with new amenities and experiences. This specific mall was not only chosen due to personal familiarity, but also from the site's typical characteristics and context of a traditional shopping mall, such as building organization, community size, and the overall economic health of the community.

This project used a mixed method approach to collect data from invested stakeholders and participants of the Mayfair Mall community to better communicate to the audience about the potential for this undervalued site. The tools used to collect data included a precedent analysis, case studies, and interviews, which informed three distinct projective designs based on current redevelopment strategies.

These findings offer some insight and recommendations towards the future development strategies of underperforming malls around the country, while contributing to the existing body of literature through the identification and influence of projected retail, residential, and industrial/office markets. The broader outcome of this report highlights the role of real estate developers, urban planners, and landscape architects in redeveloping underperforming shopping malls into a central community asset that aligns with current development trends.

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01

INTRODUCTION

The first step in this report was to identify my topic of research and provide sound reasoning for why this specific subject is relevant and valuable to the field of landscape architecture. Through identification and background research, many questions arose surrounding the topic of underperforming shopping malls and the possibility for these spaces through redevelopment that this report aims to answer.

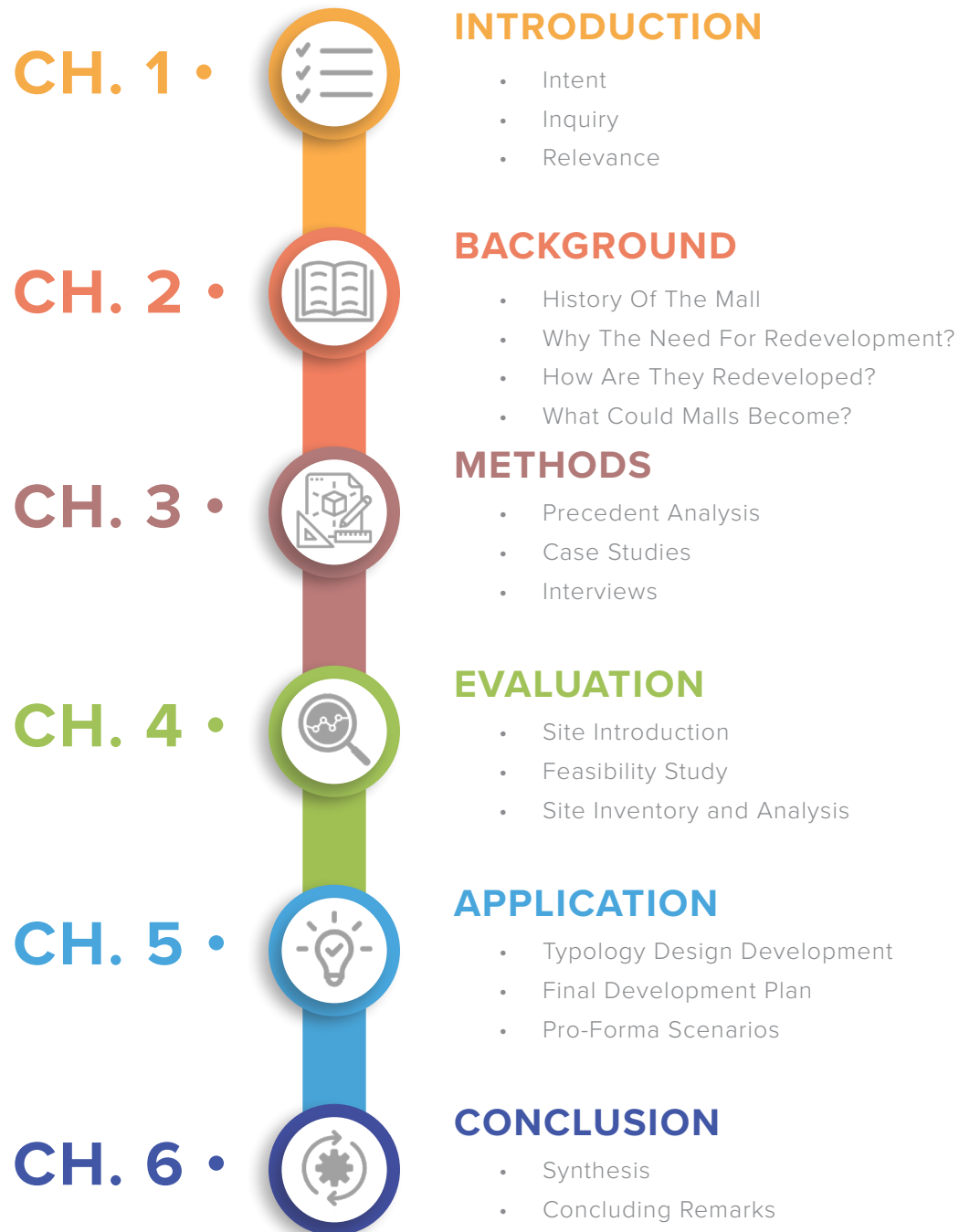


Figure 1.2 | Process Introduction Map
(Author, 2021)

Driving Forces

The primary force driving this project is providing viable redevelopment options to stakeholders such as real-estate developers, municipalities, architects, landscape architects, and planners who are involved with mall sites. Traditional shopping malls have been steadily declining for decades, with many

anchor stores unable to maintain profitability, thus forcing entire malls to close down. Although the decline of the shopping mall has been an ongoing problem, the solution to redeveloping these declining or underperforming sites into a community asset is still evolving and specific to each unique location.

Project Objectives

- Illustrate how repositioned shopping malls (or re-envisioned scenarios) can maximize the full potential value of the site, locations, and the infrastructure investments to support them.
- Assist cities and communities to regain experiential gathering places once offered by shopping malls.
- Aim to develop an informative project to gain valuable insight into this growing dilemma for real estate investors and the communities they serve.
- Re-envision the shopping mall as a central hub for changing communities.
- Add value to the current discussion on the future of shopping malls.

Project Strategies

This project presents three distinct strategies for redeveloping shopping malls based on a literature review and research into relevant precedents and case studies. These strategies are based on the decision of what to do with physical mall structures: complete demolition and new construction (new mall or other urban form), semi-adaptive re-use, or re-purposing the existing structures. Using the Mayfair Mall in Wauwatosa, Wisconsin as an example, three projective designs were undertaken to apply the three strategies and draw comparative conclusions. The designs are prefaced with an existing site inventory and review of local policies, demographics, retail trends,

housing types, infrastructure, and other contextual considerations. The designs are also supported by a cursory financial and metric analysis. Finally, interviews will be conducted with local developers and city officials within the Milwaukee metropolitan area to receive their feedback, assess overall viability, and get their opinions on which strategy seems best suited for the location. Even though this project and report are an academic exercise, the principles and strategies explored could be a reference document for real estate investors, urban planners and design professionals involved with repositioning malls or reconstructing new urban developments that best meet community needs.

Central Dilemma

Many malls in the United States are in decline and may not be reaching the full potential value of the land in terms of real estate investment,

commercial and retail forms and services, integrating work and living, and meeting community social needs.

Research Question

“WHICH REDEVELOPMENT STRATEGIES ARE AVAILABLE AND MOST VIABLE UNDER VARIOUS CONTEXT CONDITIONS FOR TRANSFORMING UNDER-PERFORMING SHOPPING MALLS INTO A VALUABLE COMMUNITY ASSET THROUGH SPATIAL PLANNING AND ADAPTIVE MIXED-USE?”

This specific research question was chosen based on the ongoing issue of underutilized shopping malls, the current shifts and projections in consumer tendencies, and the absence of an in-depth report focusing on the feasibility and profitability of redeveloping these sites. Within the next five to ten years, many shopping malls throughout the United States will be reconstructed. Without thorough

background research and spatial planning strategies, these developments will likely fade out with the change in retail and experiential trends. This report aims to capture and analyze the challenges developers and planners are facing with these massive under-performing sites, while also providing detailed guidelines and potential design solutions to enhance the value and benefits derived from these assets.

Exploratory Questions

- What specific conditions – infrastructural, economic, environmental, and social – will enable a mixed-use development to succeed in the current marketplace?
- How can new mixed-use developments utilize improvements made in surrounding infrastructure to site performance and enhance tax revenues?
- What are some future scenarios for declining or underperforming mall sites given the trajectory of retail, residential, and entertainment relative to short-term and long-term factors?
- What does the future look like for big-box department stores, lifestyle centers, and commercial power centers, and how can strategic development combat online competitors?
- How will the potential re-development of the Mayfair site impact surrounding businesses?
- Are there other adjacent parcels of land that could potentially be purchased or leased to improve the overall re-development of the Mayfair site?

Anticipated Findings

This project aims to identify the most current strategies of shopping mall redevelopments, in hopes of finding new design solutions that give these sites and communities a new identity and purpose. Using the findings from the precedent analysis and case studies, which were chosen based on the implemented strategy and overall success of the project, three different design proposals (one for

each redevelopment strategy) will be developed along with metrics and cost estimates to offer a range of solutions to use for various underperforming mall sites. The goal of this master's report is to have end-products that real estate investors, urban planners and design professionals can use as a reliable reference to aid in the redevelopment of their future shopping malls projects.

Relevance Of Project

The importance and value of this project relative to the conversation of commercial redevelopment is elevated due to its relatable characteristics of malls and the rapid decrease in shopping mall visitation across the country. Factors contributing to this decline include changing demographics and socioeconomic factors from aging suburban areas, outdated structures and spatial organization, and varying

consumer tastes and trends. Every major city or metropolitan area in the country has a plethora of traditional shopping malls, so this project will be applicable to cities throughout the country considering mall redevelopment options. Revitalizing these facilities and land uses will contribute to a thriving community hub that benefits both the surrounding businesses and residents.

Significance to Landscape Architecture

The profession of Landscape Architecture directly involves urban planning and design, social and environmental spaces, and market economics, all of which play a huge role in the redevelopment of underperforming shopping malls. Fluctuating consumer markets and the rapidly decreasing trend of visiting shopping malls has resulted in many developments closing down,

or exhibiting declining performance in terms of revenue, retail provision, socialization, and quality-of-life factors. Landscape architects and urban planners have major influence over the future of these sites, and with strategic spatial organization and a community-based approach, these declining assets can be transformed into vibrant community centers.



Figure 2.1 | Mayfair Mall
(Author, 2021)

02

BACKGROUND

During this step in the process, a thorough and deliberate review of relevant literature was completed to better understand the dilemma at hand by looking into the history as well as the future possibilities of these sites. The reasons why U.S shopping malls have been in decline for the recent past are discussed in detail, while also identifying potential outcomes for these underperforming assets.

2. BACKGROUND

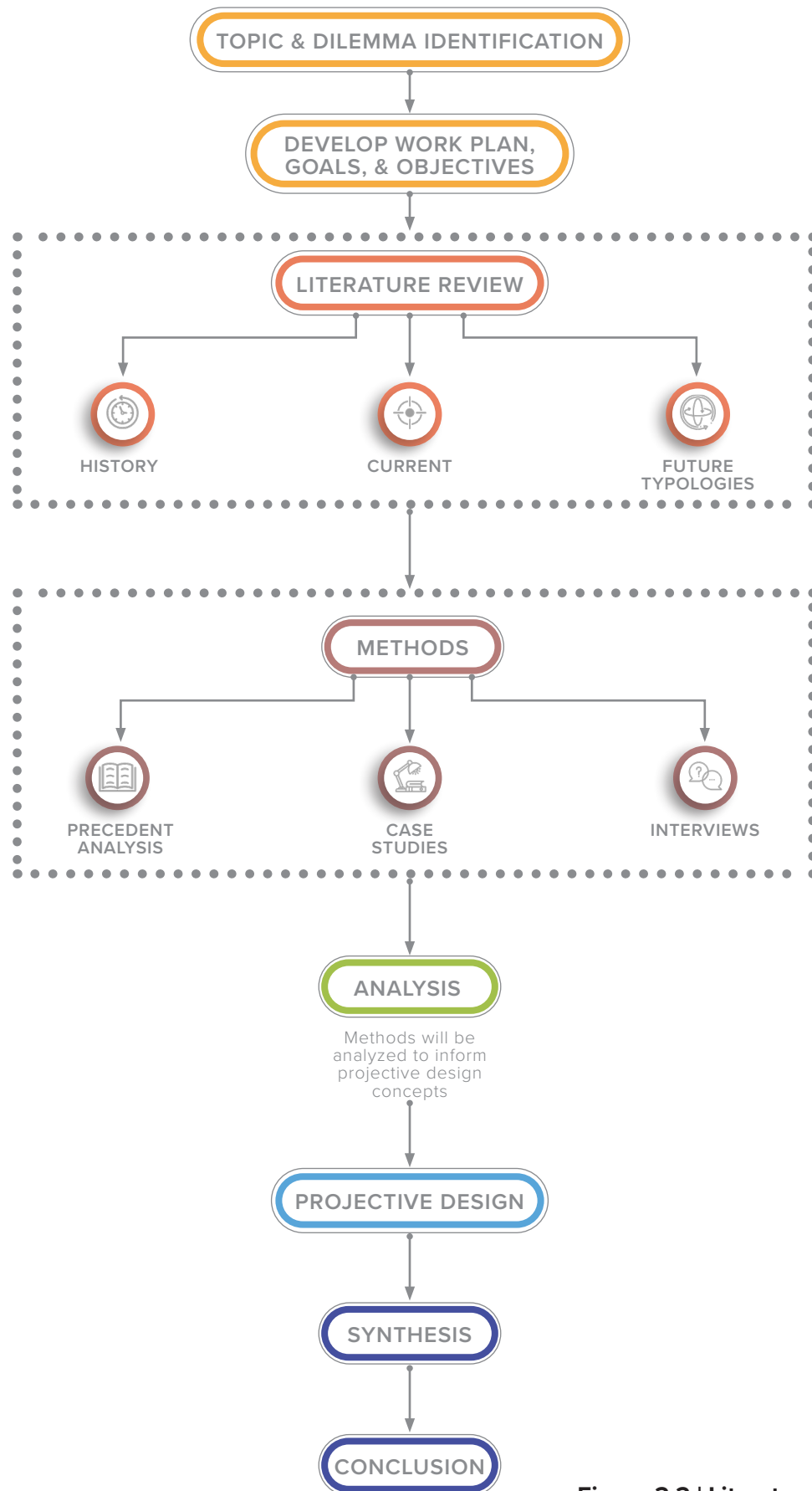


Figure 2.2 | Literature Map
(Author, 2022)

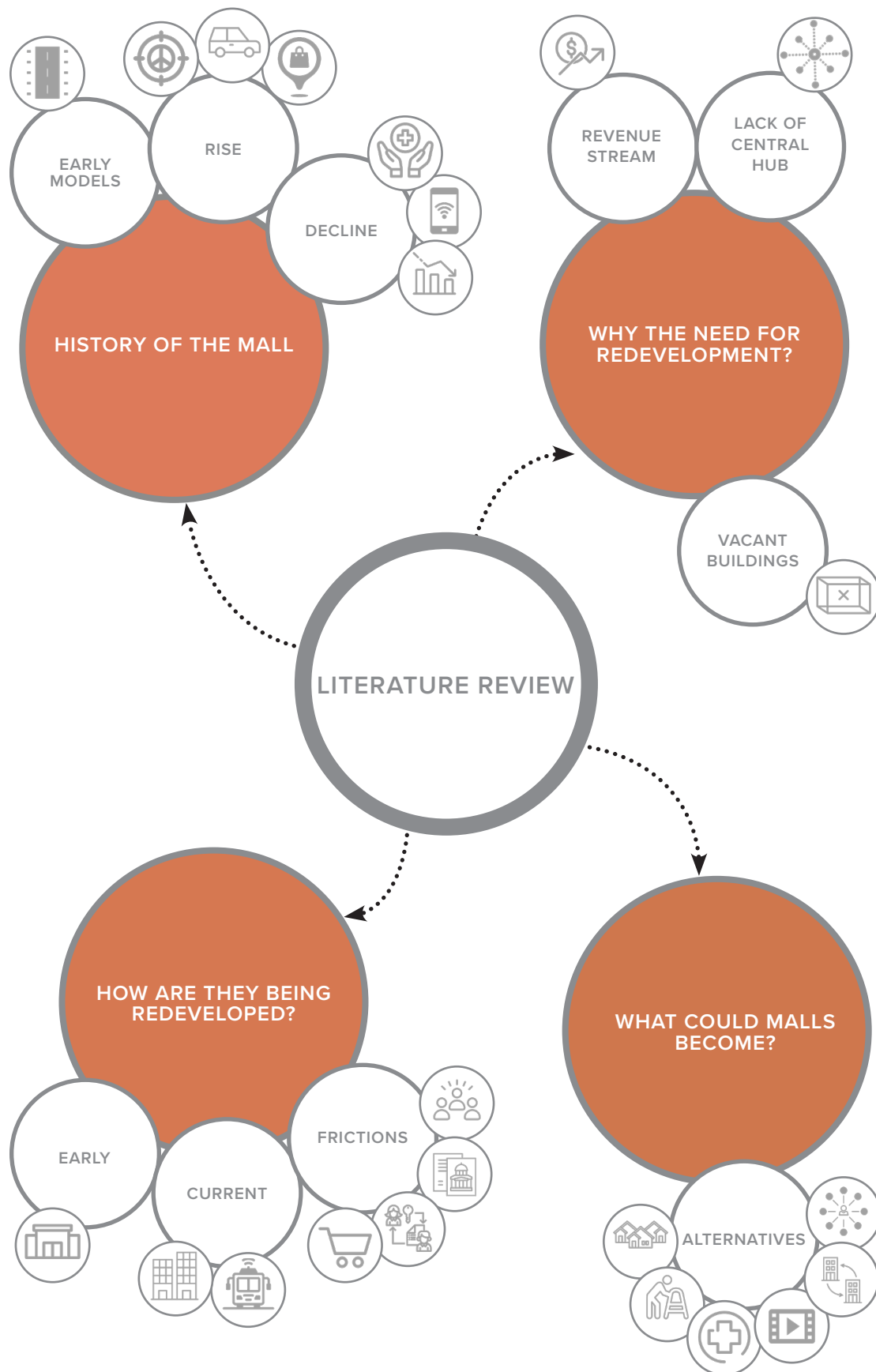


Figure 2.3 | Literature Bubble Diagram
(Author, 2022)

HISTORY OF THE SHOPPING MALL

EARLY BUSINESS MODELS

Old Mainstreet

The act of purchasing goods and services from concentrated businesses has a long history in the United States. It is widely known that consumers tend to purchase products not only for their specific function, but also for the pleasant experiences in the act of consuming (Kocak et. al. 2016). During the early 1900s, Americans started to identify with “main streets,” or the major thoroughfare through the central business district. The strong axis of these historic main streets had always been developed along the city grid, incorporating retail, restaurants, and offices that meshed well with civic uses such as libraries, post offices, and city buildings (Dunham-Jones & Williamson 2011). Entire towns

would congregate on the main streets to interact and socialize with one another, given the downtown strip was a familiar and accessible space during pre-automobile times, not to mention the area was dense with commercial amenities. Often times, these downtown corridors were built near pre-existing transit systems such as streetcars and trolleys, which provided nearby residents the opportunity to access amenities without deviating from their transit route. With the model of a live-work-shop environment within the town center, increasing convenience and accessibility to amenities allowed main streets to surge in popularity for decades. In fact, we are still seeing the lasting effect of main streets on cities across the U.S, although it is now referred to as the downtown strip or central business district.



Figure 2.4 | Historic Main Street
(Author, 2022)

RISE OF THE MALL

Post World-War II Life

Although main streets were extremely popular for pedestrians in the early 1900s, immediately after World War II, a lot of returning soldiers and their families started moving into planned communities of single-family houses in suburban locations (Dunham-Jones & Williamson 2011). With the enactment of the G.I. Bill signed by President Franklin D. Roosevelt on June 22, 1944 (U.S Department of Veterans Affairs 2021), many veterans used that money to capitalize on scant housing regulations, accessible federal mortgage funding, and the vast amounts of available land just outside the urban infrastructure (Dunham-Jones & Williamson 2011).

Automobiles

Automobile manufacturing basically came to a halt between 1940-1945 due to the lack of demand, and a lack of materials and available workers. Although, shortly after the war ended, the automotive industry hired many returning veterans and gained close to 900,000 workers (Huddle 1945). At this point, automobile manufacturers started to mass produce vehicles by

the thousands due to the necessity of owning a car while living in suburban areas. With the changing demand and popularity of possessing a car, a lot of new developments were organized to better accommodate vehicular visitors (Dunham-Jones & Williamson 2011). Retail centers, downtown streetscapes, and other city development projects began designing to prioritize the vehicle first, in hopes of attracting more people to the site through an improvement in accessibility. Shopping malls and other retail centers started to epitomize the car-dominated landscape with vast amounts of surface parking and greyfields (Sobel 2002), eventually changing the surrounding urban fabric to accommodate the vehicle first. One major catalyst to the transformation of the city road network was the implementation of the Federal-Aid Highway Act in 1956, which created a 41,000-mile network of interstate highways, allowing for easier access to larger community developments. Unfortunately, with the introduction of the Highway Act of 1956 came the sprawl of the upper socioeconomic classes from the dense urban areas, separating their homes from the commercial sector (Cohen 2002).

This was until the EPA classified large shopping centers as an indirect source of air pollution under the Clean Air Act of 1970, eventually restricting the vehicular access to these developments by limiting the number of parking spaces available (Cohen 2002). During the early years of restricted parking spaces at shopping centers, electric trolleys, cable cars, and other alternative forms of mass transit started to become very popular, providing the community with less environmentally detrimental ways to visit these attractive destinations.

First Mall Development

Early suburban shopping centers sought to maintain the imagery of a traditional Main Street with modifications to accommodate newly popular automobiles and mass transit systems. In the early 1940s, there was much speculation about the ways in which neighborhood shopping centers could be reconfigured to better accommodate visitors arriving by trains, street cars, trolleys, and automobiles (Dunham-Jones & Williamson 2011). With the construction of Park Forest Plaza near Chicago, a shopping development in 1949, Phillip Klutznick was the first person to put that speculation to action (Dunham-Jones & Williamson 2011). Park Forest Plaza was one of the first developments



Figure 2.5 | Automobile Oriented Arrival
(Mattison, 1970)

that included an open-air, pedestrian-only shopping center with integrated circulation through the plaza with the surrounding residential communities (Dunham-Jones & Williamson 2011).

“Most of the mall developments that followed Park Forest Plaza, such as Victor Gruen’s Northgate in Seattle (1950) and Southdale Center in Edina, Minnesota (1956), assumed that patrons would arrive by car and sought to maximize traffic circulation patterns on the mall periphery and parking lots, while focusing on the pedestrian shopper within” (Dunham-Jones & Williamson 2011).

Although a large part of Victor Gruen’s focus was on the arrival of the pedestrian, he had a different, more urbanized vision for shopping malls and was not pleased with the trajectory of shopping mall development. Although Gruen had never built a shopping center before, he strongly advertised that “shopping centers should represent a mosaic of all urban functions: high-density living quarters, parks, churches, schools, government institutions, all types of working places. Each of these centers should contain

shops and theaters, movie houses and eating places, places of amusement and recreation for all groups. Only then can these centers become meaningful points of urban and civic life” (Cohen 2002). With little to no experience of developing a shopping center, Victor Gruen ambitiously set out to make Northland Shopping Center in Southfield Township, Michigan one of the largest and most integrated developments of its time. The design included more than a million feet of leasable space, over 7,500 parking spots, and was the first shopping center to have retail stores on two different levels. The space also provided various open-air courtyards and promenades with pristine landscaping, surrounded by over 80 different stores (Cohen 2002). Gruen’s idea of a shopping center was not to be conceived as a one-stop shop for material needs, but instead was a place of social interaction where people would spend hours strolling the premise. Financially, this made a ton of sense, as Gruen said “more people – for more hours – means cash registers ringing more often and for longer periods” (Cohen 2002).

2. BACKGROUND

When discussing the early developments of experiential retail outside of the central business district, the Country Club Plaza in Kansas City, MO was one of the first shopping center plazas that focused on attracting shoppers “from areas well beyond the confines of his own development, which simply had not been done outside of central downtown shopping districts served by streetcars and interurban transportation lines” (Worley 2013). “Allocating space for automobile traffic and parking near the main shopping area was of high importance from the very beginning,” said J.C Nichols, the Country Club Plaza developer. “He argued that traffic

congestion was directly related to the height of buildings, as taller buildings accommodated more people” (Worley 2013). The degree to which Kansas City natives and visitors became attached to the Plaza is a testament to how successful the designer/developer was at creating a space that improves the quality and focus of life.

“It is our plan to provide for both exclusive and popular shops not only to serve Rockhill and other nearby property, becoming the general market of the Country Club District, to which this section becomes the gateway, but to also serve the general trade in Kansas City and tributary territory” (Worley 2013).



Figure 2.6 | Kansas City Plaza
(Author, 2022)

FACTORS CONTRIBUTING TO RISING MALL POPULARITY

The rise in popularity of shopping malls during the latter half of the 20th century cannot be narrowed down to one factor, but rather was attributable to multiple aspects. One major characteristic that contributed to the mall's success was the spatial organization and form of having many concentrated stores under one roof. Grouping these amenities into the same building gave consumers the ability to walk from store to store during inclement weather giving the mall year-round convenience. The critical reason behind this success was due to the landlord's ability to internalize shopping externalities by putting together an optimal mix of tenants. Another major appeal to consumers was having the shopping

mall built around themes, providing the visitors with a unique experience through place-making. The next major contribution to the rise of the mall was the location in which these buildings were typically developed. To keep development costs to a minimum, these malls were built on parcels with lower land value. In retrospect, this was a brilliant idea because eventually the surrounding context densified, increasing the regional land value. The less desirable land these malls were commonly developed on were near major travel ways, providing direct access to a large population. A large attraction for visitors was free and available parking spaces, although providing parking for a large group of people unfortunately consumes land and limits potential for development expansion.

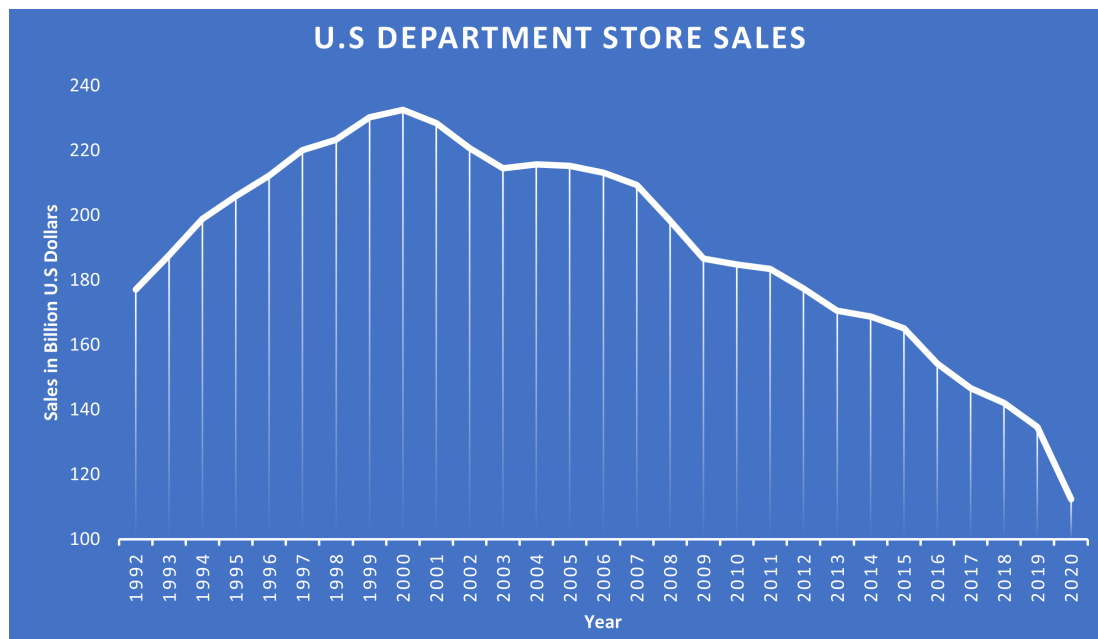


Figure 2.7 | U.S. Department Store Sales
(U.S. Census Bureau, 2022)

2. BACKGROUND

SOCIAL SPACES BEYOND CONSUMERISM

As shopping malls became increasingly more attractive to the public, these developments transformed from strictly providing material items to consumers to vital social spaces within the community. Shopping centers had taken on a new life beyond serving retail needs to the community, becoming cultural, social, entertainment centers, providing jobs, revenues and, especially in smaller markets, real community pride

(Cohen 2002). More specifically, these spaces became the place where teens gathered after school, neighbors sparked a conversation, families spent the weekends, couples dined and saw a movie, and senior citizens strolled to get exercise, protected from weather year-round (Cohen 2002). The theory with this business model was that more people will spend longer periods of time in the shopping mall due to their desire to socialize and be among people, rather than strictly providing the consumers with materialistic goods.

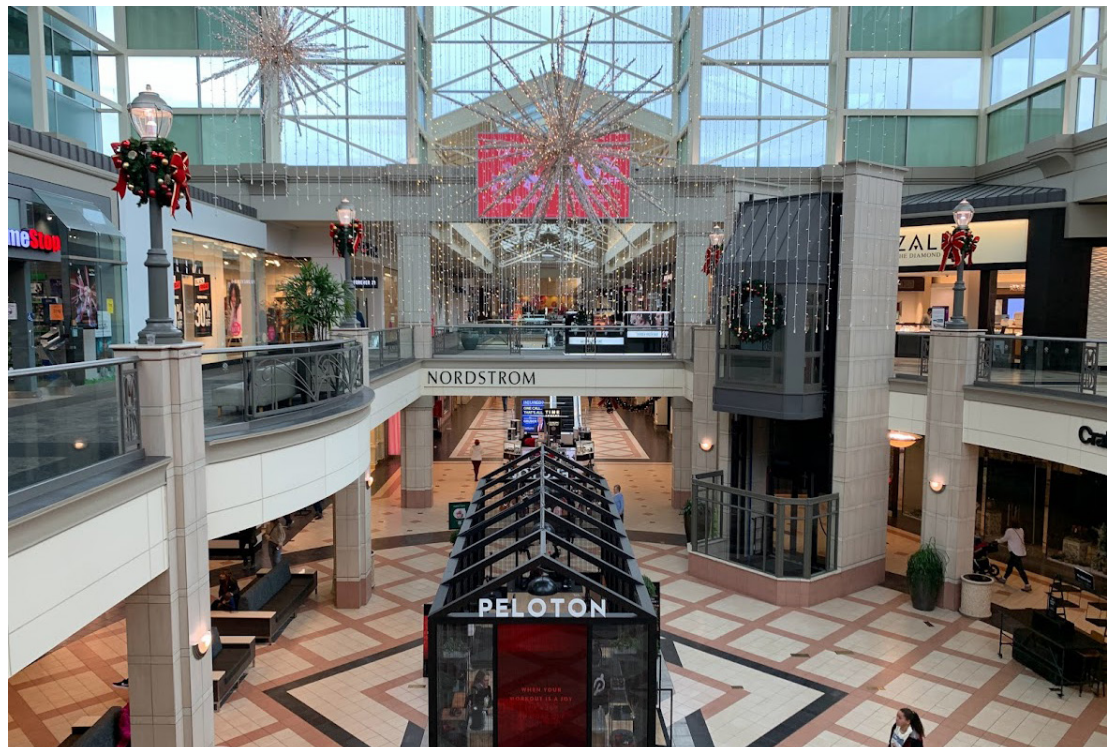


Figure 2.8 | Malls as Gathering Spaces
(Author, 2022)

MALL RETAIL FORMS THAT CONTRIBUTED TO ITS POPULARITY

The shopping mall had many different factors that contributed to its success and popularity, but the spatial organization and form of the mall were the core reasons that efficiency and attractiveness were used to increase customers. With the large scale of diverse and concentrated stores, both in terms of number and size, customers from all over the region would flock to these developments, not just for the products, but for the experiences as well. With a larger development area such as a shopping mall, the cost of land needed to be as low as possible for financial viability, which led to these

malls being located in suburban areas adjacent to major highway systems. These shopping malls were also developed in these locations to increase the value of offering commercial amenities where the public had easy and convenient access to them.

As stated earlier, the form of transportation changed during the 1940s and 1950s as the automobile became popular, providing more freedom of mobility in terms of schedules, routes, and overall greater convenience. With the intent to attract vehicular users to shopping centers, the developments started to become closely associated with parking requirements, cost, and overall function.

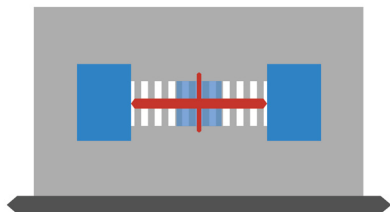


Figure 2.9 | Typical Retail Form
(Adapted from Rao, 2019)

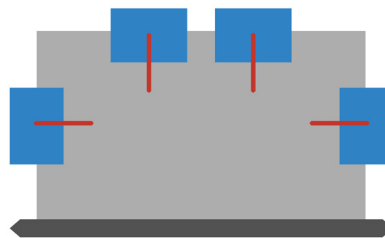


Figure 2.10 | Alternate Retail Form
(Adapted from Rao, 2019)

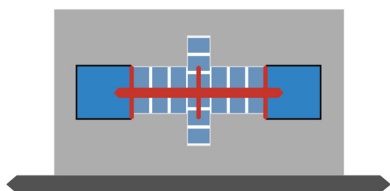


Figure 2.11 | Typical Town Center Form
(Adapted from Rao, 2019)

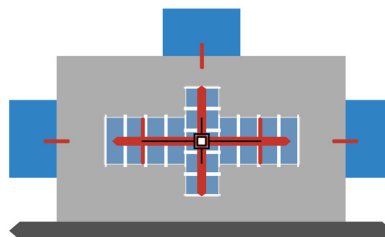
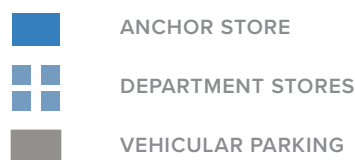


Figure 2.12 | Alternate Town Center Form
(Adapted from Rao, 2019)



FACTORS CONTRIBUTING TO THE DECLINE OF MALLS

Social Issues

Over time, we have seen major socioeconomic and demographic changes in communities that surround large shopping centers due to their drastically oscillating values. As previously stated, these shopping malls were typically developed on cheap land so profit could be maximized, but little thought went into how surrounding communities would respond to such an influx of people and attraction in a short period of time. “As the segmentation of consumer markets became the guiding principle in postwar commerce, no amount of revitalization could make a city whose population was becoming increasingly minority and poor, attractive to the predominately white, middle-class shoppers” (Cohen 2002). This triggered a large movement as the surrounding neighborhoods quickly went from upper-middle class homes to run-down impoverished areas.

Alternative Development Models

During the 1980s and 1990s, new strategies for development had emerged such as category killers and power-centers. These developments were consisted of a mix of single-building department stores and chain

restaurants that complimented each other well, offering similar experiences to a traditional shopping mall.

“Category killers simply got their name from “killing” the product category by offering a wide and deep assortment of goods in a store with a large building footprint. In some retail sectors, this development strategy has transcended the sector while also weeding out weaker competitors, which is exactly what happened with the suburban shopping mall” (Sampson 2008).

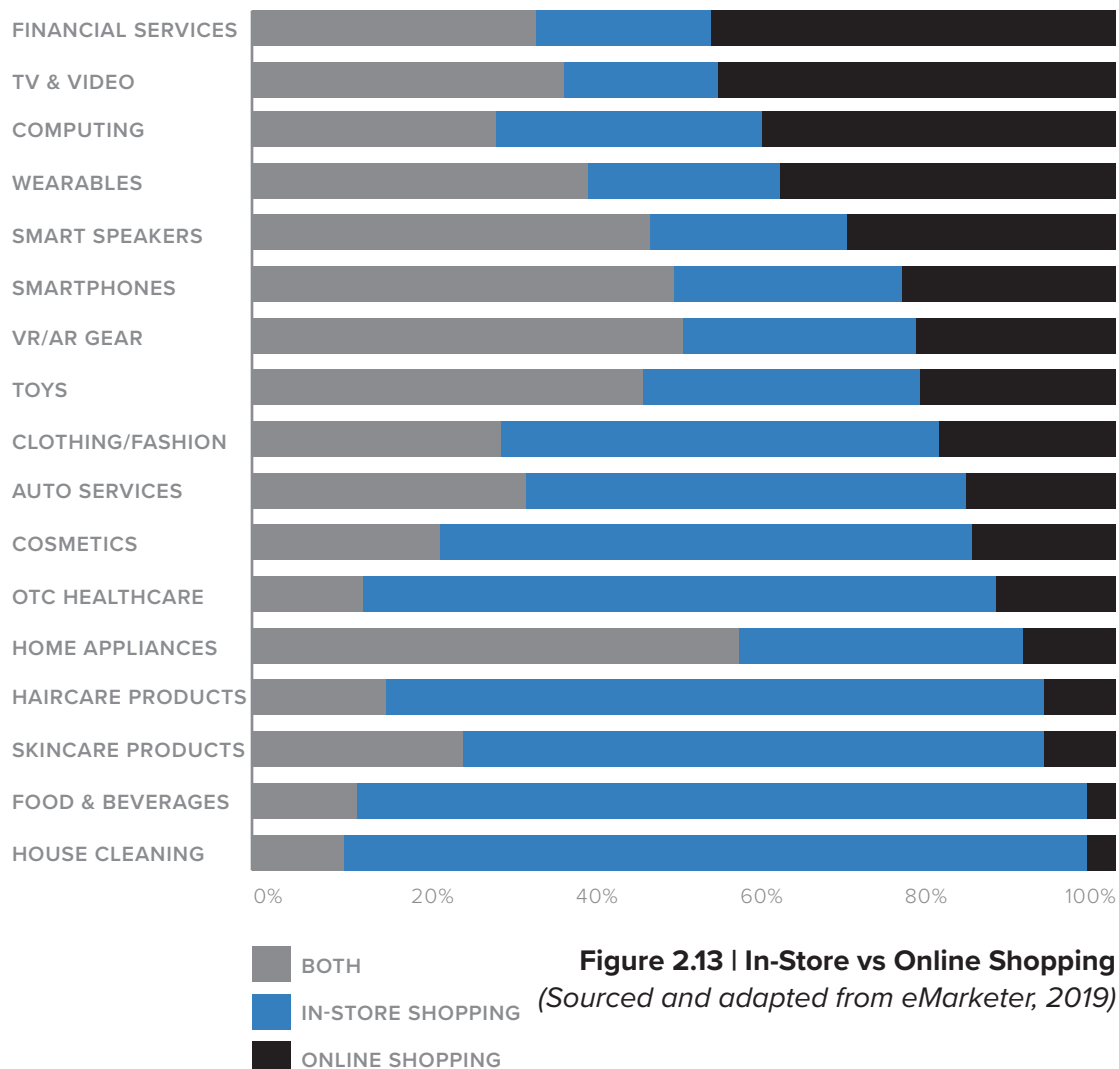
One distinction that may have contributed to the downfall of the shopping mall is that many of these power-centers were organized to have the stores on the perimeter of the site with surface parking in the middle, rather than a confined building surrounded by surface parking. This allowed visitors to park their vehicles directly in front of the store they wish to visit, providing them efficient access to their needs.

Another major contributor to the decline of the shopping mall was the rapid expansion of Walmart across the United States, redefining the notion of convenience and one-stop shopping. During the late 1980s, Walmart Supercenter had around 276 stores and employed over 21,000 associates, quickly making them the nation’s largest retailer (Walmart 2022).

E-commerce

The trend of online shopping put shopping mall developments in danger because of the access consumers had to wide ranging products; being able to compare prices, see the entire inventory, and apply the best deals (Carvalho, Isabella, Mazzon 2017). With the accessibility that online shopping

provides consumers from the comfort of their home, material shopping space and the idea of physically visiting department stores is significantly fading. Between 2014 and 2016 alone, online sales increased by 31% in the United States, consequently lowering the number of in-store shoppers and mall visitors (Rao 2019).



Automobile Oriented Arrival

“With the rapid increase of the number of shopping malls and vehicles throughout the U.S, unplanned and uncontrolled growth spanned across cities causing extreme detriment to retail developments as well as the environment” (Gruen 2017). As climate change and environmental impact become a trending topic in the late 1990s and early 2000s, consumers began to look for developments that offered both public transportation options and space for private automobile access. With many suburban shopping malls unable to reinvigorate their transit systems due to financial reasons and the consumption of highway infrastructure, consumers started to flock towards newer lifestyle centers that focused on the pedestrian experience.

Selective Retail Tenants

During the early years of the shopping mall, developers used detailed formulas to determine the most lucrative composition for tenants. “Branches of national chains such as J.C Penny, K-Mart, Macy’s, etc., were much more reliable sources of income than individually owned stores, causing developers to charge the local stores with higher rent prices and shorter leases” (Sorkin 1992). Although this method of mall management was profitable for many years, eventually consumers became stultified with the shopping experiences and patterns of these nationwide department stores.

2008 Recession

Another economic factor that affected the decline of the shopping mall was the recession of 2008-2010. During this time, people were not looking to buy new products and spending unnecessary money. One of the big outcomes of the recession that affected shopping centers was the acceleration of technology and the growth of online shopping (Carvalho, Isabella, Mazzon 2017).

COVID-19

During the Covid-19 pandemic in 2020-2021, the population was forced to stay home during quarantine, making it extremely difficult to visit shopping malls and other retail locations. By this time, e-commerce corporations such as Amazon were already well-established and controlled a significant portion of the market.

No Outdoor Pedestrian-Friendly Experience

Although direct access to numerous amenities under one roof was one of the reasons for the popularity of shopping malls, it also has drawbacks. As market trends changed over time, mall visitors started to prefer a combination of indoor-outdoor spaces to enjoy. Due to the parking requirements for a large development like a shopping mall, expansion to add these outdoor amenities are near impossible without costly parking structures.

NEGATIVE IMPACTS OF DECLINING MALLS

Rise in Crime/Homelessness

As seen over the past decade, underutilized malls have become a hotspot for crime and homelessness. With more vacant spaces and less people around, some anchor stores have been transformed into homeless communities and tent cities. Studies have also shown that with less visitors and understaffed security in the mall, motivated crime has increased which deters consumers from visiting due to safety concerns (Johnson-Wright 2006).

Surrounding Development Lacks Visitors

With shopping centers becoming less frequently visited over the past few years, surrounding developments are also negatively impacted from the lack of traffic. During the peak of shopping malls, surrounding business were generating high amounts of revenue from the increased pedestrian and vehicular traffic.

City Is Losing Money

Municipalities in which these declining malls are located still generate some tax revenue from the current development, but the assessment could be much larger with a newer, more attractive mixed-use development.

WHY DO MALLS NEED TO BE REDEVELOPED?

BENEFITS FROM REDEVELOPMENT

Introduction to Underperforming Malls

With the rapid decrease in shopping mall visitors and continuous closures of malls across the United States, a thorough analysis needs to be completed in order to properly redevelop these spaces. One of the major problems in the decline of malls is they are not fulfilling their value potential of the land in terms of real estate investment, commercial and retail forms and services, integrating work and living, and meeting community social needs. The numerous problems that shopping malls typically face will be addressed to identify the priorities during redevelopment phases.

Near Vacant Buildings on Valuable Land

One of the biggest reasons underperforming malls need to be redeveloped in the near future is the fact that these near vacant developments are just deteriorating on extremely valuable land. In most cases, the surrounding infrastructure of shopping malls is well built out with additional retail stores, single- and multi-family residential developments, and a major expressway nearby. With an abundance of adjacent amenities, the land value of the mall site has skyrocketed over the years, providing the opportunity for developers to either sell or redevelop.

Non-profitable Development Into Revenue Stream

Recently, many shopping mall developments have struggled to maintain big-box tenant occupancy and generate net profits, but the potential to turn these underperforming malls into a growing revenue stream is exponential. “The key to successful real estate development and community building is to understand the trends of the American people and move deftly to satisfy changing market demands and needs in the real estate places we create” (Booth 2002). Without understanding this key concept, new developments will soon fail due to a lack of attractive experiences for the consumer. Orienting the development design around the future trends of the consumer, while being flexible and transformative as demands change will keep real estate development profitable for a longer-period of time.

Lack of Community Center Hub

In the past, malls have served the public in many other ways than strictly providing a place to purchase goods and services. Shopping mall customers visit these places not solely to buy products, but also to utilize these spaces for entertainment activities and social interaction (Makgopa 2016). At their peak, shopping malls were serving suburban communities as a central hub, providing residents and visitors with an opportunity for social interaction and activities.

Unfortunately, when people stopped visiting malls due to shifting consumer habits, they started to lose their sense of community and people began to gather more privately. Without the revitalization of these underutilized shopping malls, sadly communities are beginning to lack centralized developments that promote public interaction. Developments that enhance social interaction opportunities and offer new experiences are becoming increasingly important as society evolves, and a reimagined shopping mall model may transcend the retail market.

HOW ARE MALLS BEING REDEVELOPED?

EARLY REDEVELOPMENT (1990 – 2010)

In the early 2000s, underperforming shopping malls were starting to become “America’s best opportunities for developing transit-oriented infill neighborhoods” (Sobel 2002). Although greyfield mall sites may have been “inadequate by current shopping center industry standards at this time, these spaces generally offered the acreage needed to create unified development projects implementing new urbanist principles” (Sobel 2002). Some of the principles that were developed early were organized around creating new urbanist neighborhoods and communities (Sobel 2002).

Strip Malls/Outlet Malls

During the early 2000s, typical enclosed shopping malls were starting to fade at an alarming rate. Instead of redeveloping existing shopping malls, new outlet strip malls started to pop up, in hopes “the industry will be changed to a more direct consumption straight from name brands at a fraction of the cost” (Barnes 2005).

Big-Box Retail Power Centers

“Another alternative to these failed shopping malls were power centers, where big commercial retailers clump together or lifestyle centers, where a more consumer-oriented approach is taken to ensure positive experiences” (O’Malley 2016).

Principles for Creating New Urbanist Neighborhoods:

- Re-orient activity on the site to face the street
- Re-establish a street pattern that connects with the streets of the surrounding community
- Use site planning and architectural elements to make the redeveloped mall site fully a part of its community
- Integrate multiple uses (ideally including employment and/or housing) on the site
- Emphasize public space for shared activity
- Provide a range of housing types, to provide homes for people of all ages and incomes

Table 2.1 | Principles for Creating New Urbanist Neighborhoods
(Sourced from Sobel, 2002)

CURRENT REDEVELOPMENT (2010 – 2021)

Vertical and Horizontal Integration of Mixed-use

In recent years, newer developments are starting to incorporate a variety of mixed-uses into their designs, “relying on both the vertical and horizontal integration of office, retail, residential, and community uses through the creation of places that Americans find so special and irresistible that they visit them again and again, invest in them, or choose them to reside in” (Booth 2002). Providing different types of land uses on different levels of the same building not only gives consumers and residents more accessible options, but it also gives developers and cities an economic advantage to better prepare and give more time to flexibly respond to shifts in demand (Dunham-Jones & Williamson 2011). Successful redevelopments have also reintroduced civic uses back into their spaces such as post offices, libraries, and town halls in addition to outdoor public spaces like public plazas, green spaces, and bodies of water. (Dunham-Jones & Williamson 2011).

Transform to a Community Center

As noted earlier with the decline of shopping malls, these spaces began to lack the identity of a community center. Luckily, newly transformed shopping malls have started to become “large

community centers that offer a range of live-work-shop opportunities seamlessly integrated into the surrounding community through strong pedestrian interconnections” (Booth 2002). These redevelopments have also started to change the layout of parking lots, providing more pedestrian-friendly environments and recreating a sense of place. Rather than designing these developments based on the arrival of the vehicle, newer developments are beginning to focus their efforts on improving pedestrian experiences to enhance social interaction.

Creating a Sense of Place

The ability to create a sense of place is ultimately the essence of a successful real estate development, which is exactly what these redeveloped shopping malls are doing by generating a live-work-shop and entertain environment. Developments that are successful typically appeal to all five of the senses, - sight, sound, smell, taste, touch - through characteristics such as a mix of activities, aesthetic design, quality, and price (Booth 2002). Not only do most communities aspire for a live-work-shop environment in their area, but they also reward developments that create a sense of place by “generating real estate value through increased rents, heightened retail sales, and growing capital revenue” (Booth 2002).

Provide Easy Transportation

During the planning phases of many shopping mall redevelopments, many cities proposed updates to existing transit systems that would better serve the new land uses and configuration of the site. These updates often include increasing the number of metro bus routes, coverage of bus stops, and efficiency of the transit schedule, while some developments have reintroduced tram or trolley systems within the site itself. Expanding the number of public transportation options to and from the site adds value by making the development accessible to a larger demographic, while also attracting a younger population and workforce (Booth 2002). By increasing densities within the mixed-use development, the high-trafficked areas will be able to support the public transportation infrastructure physically and financially.

Another important aspect of successful real estate development in terms of providing easy transportation is enhancing pedestrian connections at streetscape level. Well-designed void spaces, both indoor and outdoor areas, create strong pedestrian connections by enhancing consumers' feeling of belonging. In addition to the indoor/outdoor pedestrian connections, the physical walking distance between amenities also plays a large part in the attraction and popularity of site navigation throughout the development.

Retailer Selection

For years, shopping mall developers have selected and organized tenants to occupy their stores based on profitability, but over time it has been recognized that this may not be the best way to increase the longevity and lifespan of the asset. Consumers have begun to prioritize local and independently owned retail shops in support of subsidizing community-owned businesses. In response, developers have started to create and organize their tenant mixes around specific themes or local cultures rather than strictly the financial incentive, improving the consumer experience and providing exposure to local restaurants, cafes, etc. (Sorkin 1992).

FRICTIONS PREVENTING REDEVELOPMENT

Local Politics

There are many factors that may prohibit a project from being redeveloped, but the most common obstacle developers face, aside from financial stress, is the pushback from local government and members of the community. Often times, there is push back from the city when redeveloping underperforming shopping malls specifically, due to the rezoning process that must take place by the city planners. In the past, shopping malls have been zoned as planned commercial or central business, so in order for the asset to be redeveloped into a mixed-use space that includes housing options, the city needs to be convinced the proposed development will be profitable and benefit the community before starting the rezoning process.

Another major problem developers tend to encounter is resistance from local community members who do not agree with the proposed development. The reasons vary as to why community members challenge the need for development, but without the community's approval, the short and long-term success of the project is at risk.

Engineering Issues

When transforming an enclosed shopping mall into a mixed-use community center, engineering problems could arise such as underground and building utility layout. Expanding the network of water, electrical, plumbing, and other utility lines across the site increases initial development costs while also leaving room for potential mishaps during the construction phase. Without proper land development strategy and site engineering, complications could be encountered during initial construction phases that may plummet the project financially.

Market Competition

Understanding which markets are in direct competition with the proposed development is necessary when trying to produce a mix of tenants that are essential and valuable to the nearby consumers. If proposed land-uses and amenities are similar to existing surrounding developments, the site will be less attractive to customers, and therefore less profitable overall.

WHAT COULD MALLS BECOME?

INTRODUCTION

Shopping malls in need of redevelopment should aim to transform these privately owned public spaces into more than strictly a consumer environment, but rather create ample opportunities for social gathering and interaction. If one thing is known, it is that shopping malls have proven they are one of the most adaptable and resilient forms of development over the past few decades. “Whatever challenges shopping centers face, whatever forms they take and wherever they develop, the key to their continued future is the one that assured their past success: the ability to continuously remake themselves” (Cohen, 2002). These underperforming spaces are still extremely valuable to their communities and have the potential to serve as even more valuable social spaces in the future. This section will emphasize what malls, their locations, and the land they sit on could become, adding new ideas and perspectives to the existing dialogue of shopping mall redevelopment.

EFFICIENT ALTERNATIVE USES:

Mixed-Use Community Center

One of the most common redevelopment strategies over the past two decades has been integrating multiple uses within the same building or area, but it is important to note that successful mixed-use developments reflect the unique local culture and environment (Kircher 2019). There are many benefits to a mixed-use developments that include but are not limited to, creating a sense of place, providing jobs, and maximizing transit efficiency through shared parking. Studies have shown that mixed-use developments also tend to be more environmentally friendly than the previous single-use mall due to shared utilities and the encouragement of its’ users to walk, bike, or use public transportation (Kircher 2019).

Corporate Campus/Distribution Center

Large corporations such as Apple and Amazon are starting to become involved in real estate development, purchasing underperforming shopping malls and transforming them into corporate campuses with on-site distribution centers. When business and warehouse management offices are located on the same property, supply chain issues are nearly eliminated, causing business to be more efficient and profitable. Some newer corporate campus developments have also started to include employee housing options within walking distance of their jobs, reducing the need for parking spaces and automobile trips (Dunham-Jones & Williamson 2011).

Medical Center

Another common alternative for redeveloping shopping malls is transforming them into hospitals and other medical facilities. The existing layout and circulatory function of the shopping mall coincides with the workspaces of medical centers, providing sufficient parking for visitors, direct access to the building for emergency use, ample space for patient rooms, and expansive linear corridors on multiple levels.

Entertainment/Lifestyle Center

Entertainment centers were very prevalent during the birth of the shopping mall, but after dying off due to reoccurring experiences and overstimulation, this redevelopment strategy has made a comeback in the twenty-first century with a new approach. The most common entertainment uses found in lifestyle centers include restaurants, bars, clubs, live performances, theaters, miniature theme parks, and other unique experiences that are not typically offered (Schwanke et al 2003). In these specialized conglomerates of entertainment, the objective is to provide consumers with a multi-purpose destination that entices visitors to spend additional leisure-time within the development. One conventional strategy to emotionally influence the visitors to stay for longer periods of time is to design ambiance such as fountains, street furniture, live plant specimens, and decorative lighting to conduce casual strolling and social interactions (Kircher 2019).

Senior Living Center

During the waning years of shopping mall attraction, many professionals in the industry were shocked to see the absence of decline in trends showing the number of senior citizen visitation. With the majority of senior citizens using the mall specifically for cardiovascular exercise, new ideas sparked about transforming these declining spaces into senior living centers that provide housing, restaurants, fitness amenities, and other attractions tailored to the elderly.

Civic and Cultural Facility

Some redevelopments have begun to re-integrate the civic and commercial world, creating robust communities through the implementation of institutional (library, museum), educational (schools, universities, technical colleges, daycare), governmental (post-office, DMV, police and fire stations), and cultural (theater, performing art center) facilities (Calthorpe 1993). Grouping these instrumental facilities all in one location not only creates a sense of identity for the area, but also provides the public with easy access to common necessities that improve the quality of life for all social and economic classes.

Multi-Family Apartment Housing

Using adaptive reuse techniques, some shopping malls across the country have transformed retail spaces into affordable multi-family housing. Many developers have taken this approach in their redevelopments, capitalizing on the existing spatial organization of the shopping mall to lower construction costs. Implementing multi-family housing, as well as associated daycares into these spaces evokes the sense of identity of single-family neighborhoods that many lower income families strive for (Calthorpe 1993). Providing multi-family housing within a mixed-use development is extremely optimal as it provides residents with job opportunities, social environments, and lifestyle amenities that are not typically offered in strictly residential areas.

Literature Review Conclusion

Understanding the history and lifespan of the shopping mall is crucial in identifying what the recent downfall of the mall was caused by and what alternatives development models were introduced to combat new competitors. With a comprehensive knowledge base about how the U.S shopping mall came to be, a more detailed examination of the potential outcomes of these valuable land spaces can be completed.



Figure 3.1 | Mayfair Mall
(Author, 2021)

03

METHODS

Within the methodology section of this report, applied research with a qualitative approach will be taken to ensure a complete and accurate representation of the dilemma in which dying shopping malls face today will be portrayed throughout this project. Specific methods included in this section are as follows: literature review, precedent analysis, case studies, interviews, and projective design. These five methods will build off one another to present a final projective design that encapsulates current and future trends related to the redevelopment of declining shopping malls. The data collection tools being used to conduct the applied research include a review of relevant literature, interview/survey questions, maps/site plans and photographs/images while the data will be analyzed through site analysis, precedent/case study analysis, and geospatial analysis. While working through the methods and framework, it is vital for the success of the project to be extremely clear, concise, and organized.

PRECEDENT ANALYSIS:

BACKGROUND

During this step in the process, eighteen precedents of redeveloped shopping malls were examined based on site conditions and land use. After brief analysis, six distinct projects (two for each typology) were looked at in further detail to provide direction and guidance during the projective design phase. These projects were selected due to either their high popularity and

recognition around the country, being recently constructed and implemented, or relevancy to the project objectives. The main purpose of the precedent analysis is to collect a wide array of examples typifying the three synthesized development strategies (facelift, adaptive reuse, and complete demolition/rebuild) that were created using the literature review to understand redevelopment trends.

<u>Project Name</u>	<u>Type</u>	<u>Project Location</u>	<u>Acreage</u>	<u>Cost</u>	<u>Parking Use</u>
King of Prussia	<i>Facelift</i>	<i>Philadelphia, PA</i>	122 Acres	\$150 Mil	Surface
The Arcade Mall	<i>Facelift</i>	<i>Providence, RI</i>	3 Acres	\$8 Mil	Surface
Highland Mall	<i>Facelift</i>	<i>Austin, TX</i>	81 Acres	\$30 Mil	Garage & Surface
100 Oaks Mall	<i>Facelift</i>	<i>Nashville, TN</i>	56 Acres	\$10 Mil	Surface
Mayfield Mall	<i>Facelift</i>	<i>Mountain View, CA</i>	27 Acres	\$72 Mil	Garage & Surface
Northpark Mall	<i>Facelift</i>	<i>Joplin, MO</i>	7 Acres	\$20 Mil	Surface
Southlands Town Center	<i>Re-Use</i>	<i>Aurora, CO</i>	10 Acres	\$161 Mil	Surface
Stonebriar Mall	<i>Re-Use</i>	<i>Frisco, TX</i>	150 Acres	\$16 Mil	Garage & Surface
Redbird Mall	<i>Re-Use</i>	<i>Dallas, TX</i>	94 Acres	\$200 Mil	Garage & Surface
Aiken Mall	<i>Re-Use</i>	<i>Aiken, SC</i>	39 Acres	\$30 Mil	Surface
Winter Park Village	<i>Re-Use</i>	<i>Winter Park, FL</i>	40 Acres	\$23 Mil	Surface
Ballston Common Mall	<i>Re-Use</i>	<i>Arlington, VA</i>	18 Acres	\$330 Mil	Garage
Castle Rock Mall	<i>Demo</i>	<i>Castle Rock, CO</i>	55 Acres	\$24 Mil	Surface
Belmar Shopping Center	<i>Demo</i>	<i>Lakewood, CO</i>	100 Acres	\$300 Mil	Garage & Surface
Watters Creek	<i>Demo</i>	<i>Allen, TX</i>	100 Acres	\$600 Mil	Garage
CITYCENTRE	<i>Demo</i>	<i>Houston, TX</i>	47 Acres	\$575 Mil	Garage & Surface
Dallas Midtown	<i>Demo</i>	<i>Dallas, TX</i>	430 Acres	\$4 Bil	Garage & Surface
Country Club Plaza	<i>Demo</i>	<i>Kansas City, MO</i>	55 Acres	\$166 Mil	Garage

Table 3.1 | Precedent Site Information
(Author, 2022)

PRECEDENT SELECTION

Of the eighteen precedents that were looked at, six of them were chosen to further analyze and explore based off their strategy of redevelopment, site characteristics, land uses and

amenities, and overall success of the project. Understanding the approaches used to plan and develop a project of this scale and the experiences the site provides its visitors can help determine the value and life-expectancy of the redevelopment.

	<u>Residential</u>	<u>Retail</u>	<u>Office</u>	<u>Outdoor Amenities</u>	<u>Anchor Space</u>
King of Prussia		✓	✓		✓
The Arcade Mall	✓	✓			✓
Highland Mall	✓	✓	✓	✓	✓
100 Oaks Mall		✓	✓		✓
Mayfield Mall	✓	✓	✓	✓	✓
Northpark Mall		✓	✓	✓	
Southlands Town Center	✓	✓	✓	✓	✓
Stonebriar Mall	✓	✓	✓	✓	✓
Redbird Mall	✓	✓	✓	✓	✓
Aiken Mall	✓	✓		✓	
Winter Park Village	✓	✓	✓	✓	✓
Ballston Common Mall	✓	✓	✓	✓	✓
Castle Rock Mall	✓	✓			
Belmar Shopping Center	✓	✓	✓	✓	
Watters Creek	✓	✓	✓	✓	
CITYCENTRE	✓	✓	✓	✓	✓
Dallas Midtown	✓	✓	✓	✓	✓
Country Club Plaza	✓	✓	✓	✓	✓

Table 3.2 | Precedent Amenity Analysis
(Author, 2022)

TYPOLGY CLASSIFICATION

Facelift

Projects that are categorized within the facelift typology use roughly the same structures and spatial organization as the previous shopping mall but repurpose the façade and interior space to create a new amenity. This approach of redevelopment is most common in projects that are attempting to lower construction costs or maintain the existing sense of place.

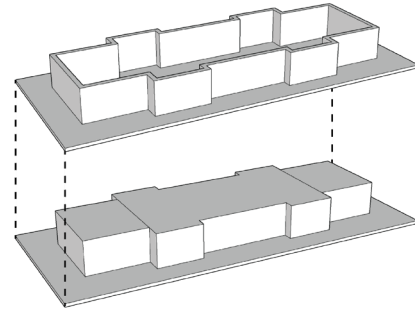


Figure 3.2 | Facelift Typology
(Author, 2022)

Adaptive Reuse

Adaptive reuse redevelopments have been one of the most popular models for repositioning shopping malls into community assets in recent years. When projects retain familiar forms within the proposed development such as anchor stores, pedestrian corridors, and social gathering spaces but continue to construct new services on the peripheral, they minimize construction and energy costs while allowing development to expand beyond the confinements of the original structure.

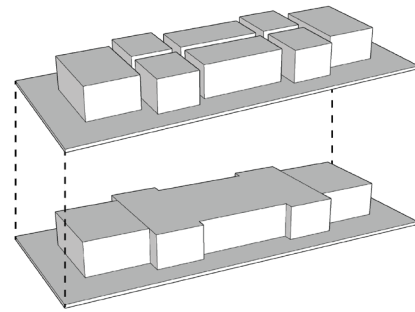


Figure 3.3 | Adaptive Reuse Typology
(Author, 2022)

Complete Demolition

Although completely wiping the site is the most expensive and time-consuming development approach, the possibilities are endless in terms of spatial form and organization. Many times, developers use this method if the main goal of the project is to create a new identity within a central business district.

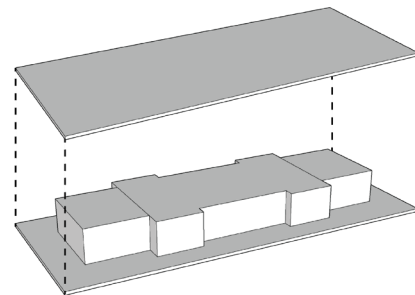


Figure 3.4 | Complete Demolition Typology
(Author, 2022)

THEMES OF EVALUATION

- 1. ECONOMIC:** Identifying the financial stresses and successes
- 2. RECREATION:** Identifying the uses of entertainment
- 3. OUTDOOR:** Categorizing the quality of open-air spaces
- 4. ECOLOGICAL:** Acknowledging the efforts of reducing environmental impact
- 5. SOCIAL:** Identifying the social value and community influence
- 6. PARKING:** Distinguishing the method of arrival and parking organization
- 7. SPATIAL ARRANGEMENT:** Identifying the building layout and relationship
- 8. CIRCULATION:** Categorizing pedestrian and vehicular patterns/movements

SCORING OF PRECEDENTS

The scoring of the following precedents was completed by examining existing case studies, diagramming figure ground maps, and understanding the land uses on site to inform a subjective decision about the quality and value of each theme. Estimated scoring values were based on a numeric percentage system with increments of five percent. To articulate, the economic and social influences of the redevelopment were taken from existing case studies that identified

land acquirement values, construction costs, community engagement techniques, and overall impacts on the area. Recreation, outdoor, ecological, parking, spatial arrangement, and circulation were also analyzed based on previous case studies, but in many cases the documents did not provide sufficient information on the specific theme. Plan view renderings, perspectives, and other image mapping software was additionally used to support the theme scoring of each precedent.

FACELIFT PRECEDENT

King of Prussia Town Center

The King of Prussia Town Center is a 125-acre mixed-use and transit-oriented development located in Upper Merion Township, PA. The planned community offers an abundance of residential units, retail shops, office

space, hotels, and a 130,000 square foot children’s hospital (Media 2016). In the latter phases of the project, a rail system, bus connections, and a pedestrian walkshed also plan to be implemented in alignment with the Southeastern Pennsylvania Transportation Authority (SEPTA) mass transit system (Svekla 2018).

Development Team		Site Information	
Developer	The Kravco Co.	Total Acreage	122 Acres
Master Planner	RTKL Associates	Number of Buildings	10
Landscape Architects	RTKL Associates	Total Square Feet	5.3 Million
Project Architects	RTKL Associates, BCT Architects	Site Uses	
Engineers	IMC, Construction, NOVUM Structures	Retail	2.9 Million
Development Costs		Parking	13,376 Spaces
Land/Building Acquisition	\$183 Million		
Development Cost	\$17 Billion		

Table 3.3 | King of Prussia Information
(Extracted and adapted from Media, 2016)

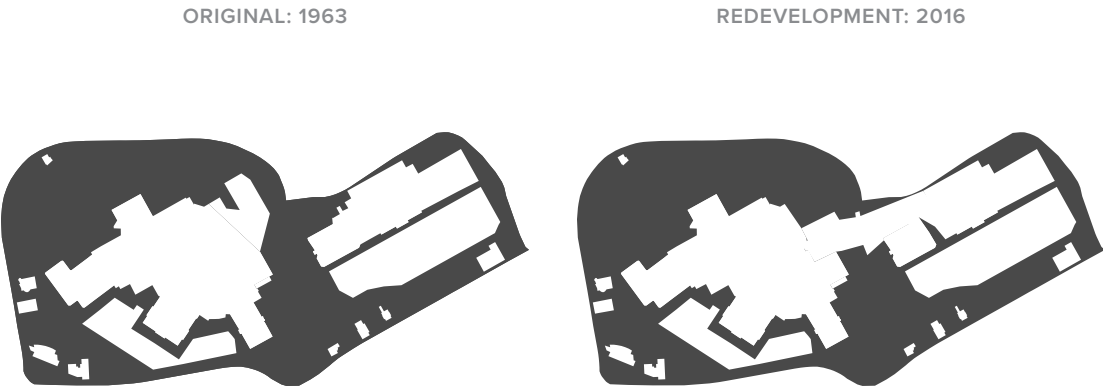


Figure 3.5 | King of Prussia Figure Ground
(Author, 2022)

FACELIFT PRECEDENT

Highland Mall

Highland Mall, located in Austin, TX, is a very recent mixed-use redevelopment of an old regional shopping mall. Using adaptive re-use techniques throughout the project, developers created an ideal destination that offers a living, working, shopping and entertainment center featuring amenities such as multi-level income

residential units, office spaces, academic and educational spaces, public parks, and a hotel. Redleaf Properties, the owner of the site also collaborated with Austin Community College in a public-private partnership to aid in the repositioning of the mall into a neighborhood urban center, aiming to bring new jobs and services to a disadvantaged neighborhood (Beske 2019).

Development Team	
Developer	ReadLeaf Properties, LLC
Master Planner	McCann Adams
Landscape Architects	DWG, TBG, Coleman
Project Architects	Gensler, Hsu Design, BGK
Engineers	Stantec, Big Red Dog, MWM
Development Costs	
Land/Building Acquisition	\$41 Million
Development Cost	\$1 Billion

Site Information	
Total Acreage	81 Acres
Number of Buildings	15
Total Square Feet	3.5 Million
Site Uses	
Retail	100,000 SF
Residential	1,200 Units
Office	940,000 SF
Academic	1.3 Million SF
Hotel	200 Rooms
Parking	9,400 Spaces

Table 3.4 | Highland Mall Information
(Extracted and adapted from Beske, 2019)

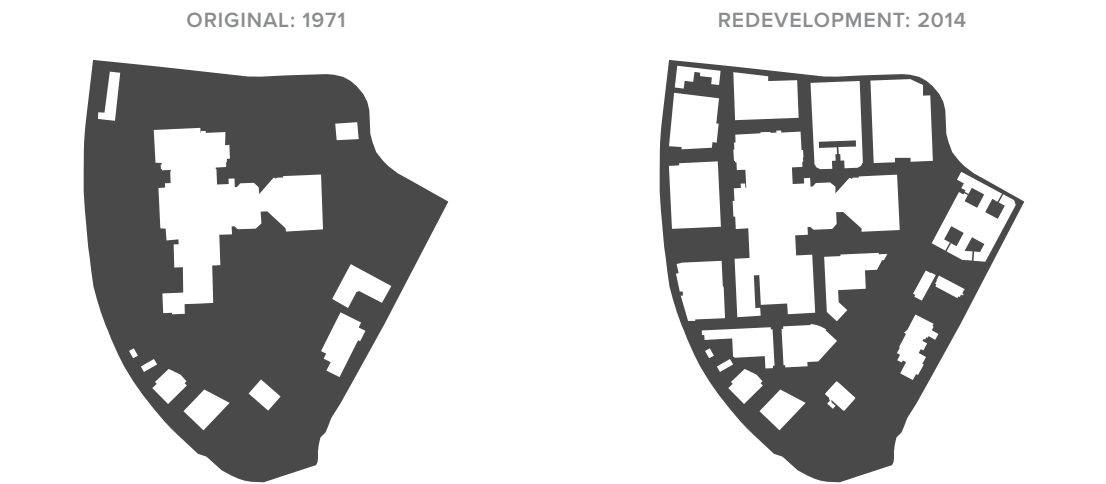


Figure 3.6 | Highland Mall Figure Ground
(Author, 2022)

ADAPTIVE REUSE PRECEDENT

Redbird Mall

Redbird Mall is a 94-acre mixed-use development situated in the southwest suburbs of Dallas, Texas that offers a multitude of mixed-use amenities including multi-family residential, office buildings, a medical center, destination retail stores mixed

with unique dining establishments, and public plazas and green spaces (ULI 2009). The developer of Redbird Mall had a vision to create a quality place where visitors can come to work, shop, live, and be entertained. The layout of development meshes well with the surrounding urban fabric while also tying in nicely to the adjacent major highway systems.

Development Team	
Developer	Peter Brodsky, Russel Glen
Master Planner	OMNIPLAN
Landscape Architects	Kimley-Horn Associates
Project Architects	BGO Architects
Engineers	Mayse & Associates, Inc.
Development Costs	
Land/Building Acquisition	\$22 Million
Development Cost	\$200 Million

Site Information	
Total Acreage	95 Acres
Number of Buildings	15
Total Square Feet	4 Million
Site Uses	
Retail	175,000 SF
Residential	300 Units
Office	300,000 SF
Medical	200,000 SF
Hotel	124 Rooms
Parking	650 Spaces

Table 3.5 | Redbird Mall Information
(Extracted and adapted from ULI, 2009)

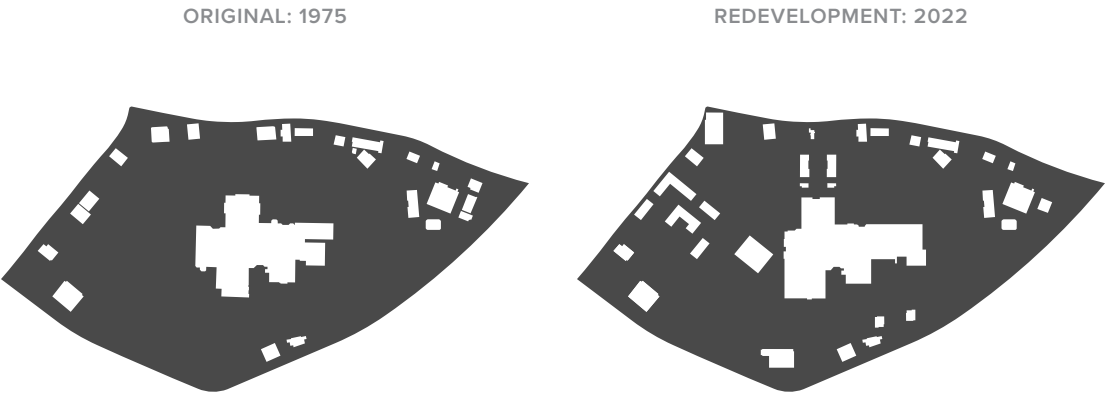


Figure 3.7 | Redbird Mall Figure Ground
(Author, 2022)

ADAPTIVE REUSE PRECEDENT

Winter Park Village

Winter Park Village is a 12-acre mixed-use lifestyle center that is located in Winter Park, Florida that was redeveloped on the site of a failed regional shopping mall. The development offers multi-family and

loft apartments, office space, high-end retail and restaurant space, and a large cinema (Stern 2006). One of the most attractive aspects of this project was the indoor-outdoor relationships, confirming the planners and developers’ vision to create an urban sense of place that offers unique experiences for long periods of time.

Development Team	
Developer	Casto Lifestyle Properties
Master Planner	Dover, Kohl & Partners
Project Architects	Charlan Brock Architects
Development Costs	
Land/Building Acquisition	\$500,000
Development Cost	\$54 Million

Site Information	
Total Acreage	40 Acres
Number of Buildings	14
Total Square Feet	1.7 Million
Site Uses	
Retail	331,294 SF
Residential	52 Units
Office	54,280 SF
Parking	5,050 Spaces

Table 3.6 | Winter Park Village Information
(Extracted and adapted from Stern, 2006)

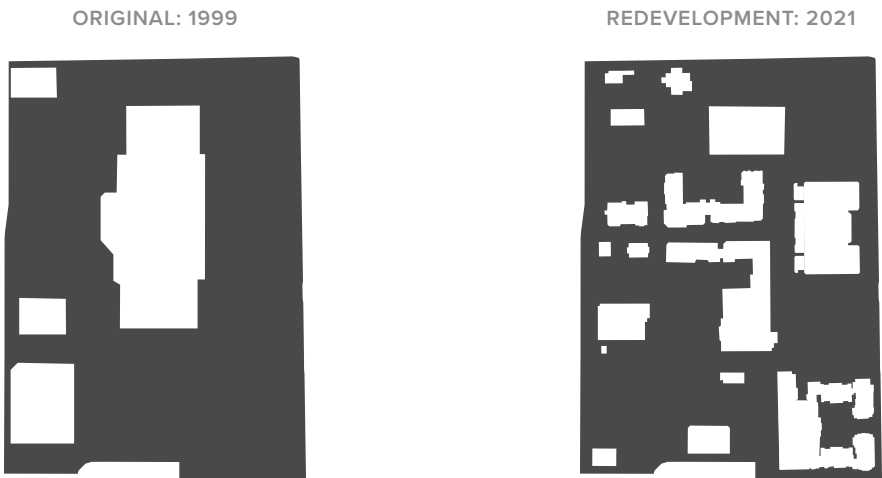


Figure 3.8 | Winter Park Village Figure Ground
(Author, 2022)

DEMOLITION PRECEDENT

Dallas Midtown

Dallas Midtown is a 430-acre mixed-use urban community center that successfully creates a unique environment and sense of identity within the central business district. Amenities offered on site include residential housing, office space, retail and restaurants, and a 20-acre public park in the center of the development

(OMNIPLAN 2013). The new mixed-use development is bordered by two major highways that support the Dallas/Fort Worth metropolitan area, Interstate 635, and the Dallas North Tollway. In addition to the retail, office, and residential aspects, this new development integrates well within the existing urban fabric with connections to vehicular roadways as well as existing hiking and biking trails in the Dallas area.

Development Team		Site Information	
Developer	Midtown Development, Beck Ventures	Total Acreage	430 Acres
Master Planner	OMNIPLAN	Number of Buildings	61
Landscape Architects	StudioOutside	Total Square Feet	22 Million
Project Architects	WDG Architects, Jacobs	Site Uses	
Engineers	Pacheco Koch	Retail	1,015,000 SF
Development Costs		Residential	9,250 Units
Land/Building Acquisition	\$70 Million	Office	6,500,000 SF
Development Cost	\$4 Billion	Hotel	650 Rooms
		Parking	42,000 Spaces

Table 3.7 | Dallas Midtown Information
(Extracted and adapted from OMNIPLAN, 2013)

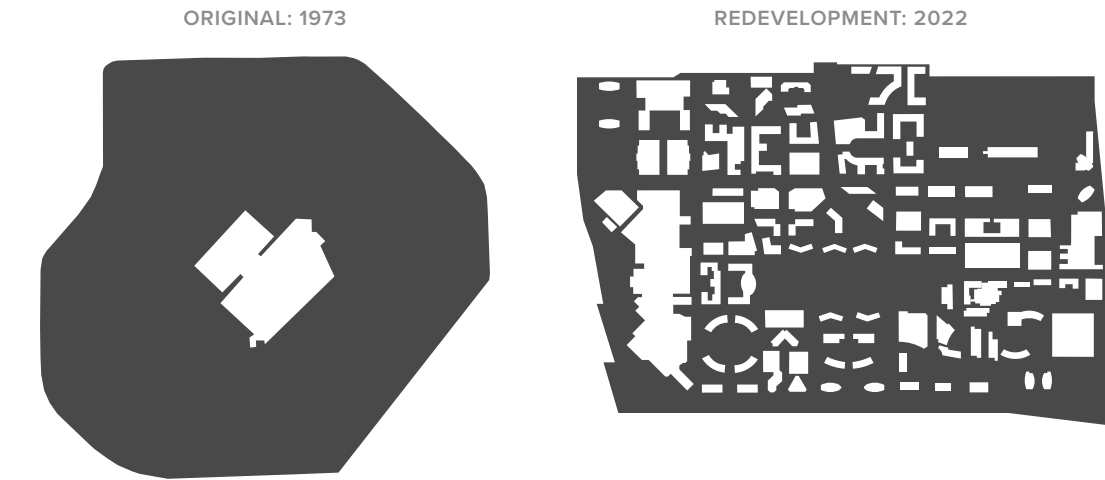


Figure 3.9 | Dallas Midtown Figure Ground
(Author, 2022)

DEMOLITION PRECEDENT
CITYCENTRE

In 2009, CityCentre was redeveloped on the former site of Town & Country Mall in Southeast Houston. This 47-acre mixed-use development offers a variety of uses and amenities including hotels, retail, residential, office spaces, and outdoor parks and plazas. The goal of this project was to create a truly walkable urban district by bringing in tenants and partners

such as Amazon, Warby Parker, Life-Time Work, and other cutting-edge retailers while providing employees with adjacent residential opportunities. The Midway City Centre is a sub-development oriented towards luxury living with 625,000 SF of Class-A office space, 400,000 SF of upscale shopping and dining, 75,000 SF of meeting and event space, 140,000 SF of fitness facilities, 266 luxury hotel rooms, and 1,120 high-end multi-family residences (Phillips 2015).

Development Team	
Developer	Midway
Master Planner	Kirksey
Landscape Architects	Office of James Burnett
Project Architects	Munoz + Albin
Engineers	Gensler, Haynes Whaley Associates
Development Costs	
Land/Building Acquisition	\$96.5 Million
Development Cost	\$112 Million

Site Information	
Total Acreage	47 Acres
Number of Buildings	38
Total Square Feet	2 Million
Site Uses	
Retail	400,000 SF
Residential	836 Units
Office	625,000 SF
Hotel	255 Rooms
Parking	3,600 Spaces

Table 3.8 | CITYCENTRE Information
(Extracted and adapted from Phillips, 2015)

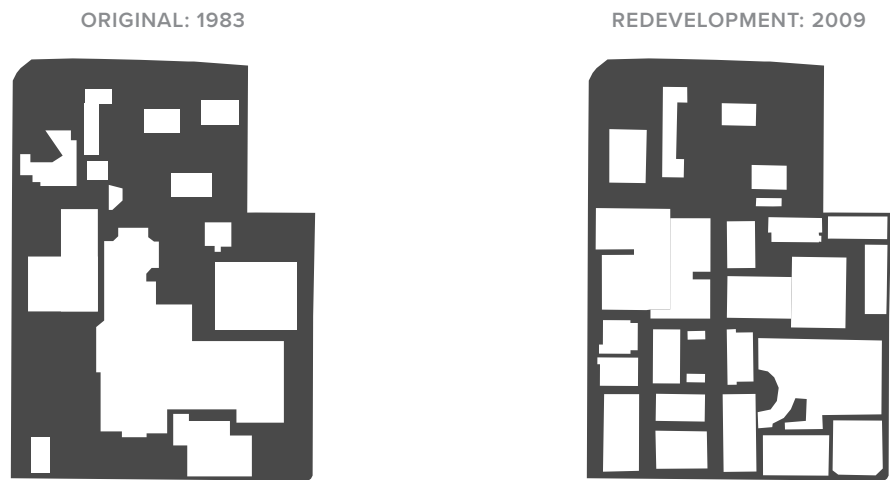


Figure 3.10 | CITYCENTRE Figure Ground
(Author, 2022)

KING OF PRUSSIA TOWN CENTER

Economic: **20%** - Low Return Rate
Recreation: **15%** - Strictly Retail Offered
Outdoor: **10%** - No Green Spaces
Ecological: **5%** - Greyfield
Social: **40%** - Multiple Nodes for Interaction
Parking: **30%** - Surface to Structure Parking
Spatial Arrangement: **15%** - Enclosed Mall
Circulation: **20%** - Easy Access to Inside



Figure 3.11 | Radial Diagram
(Author, 2022)

HIGHLAND MALL

Economic: **70%** - Low Development Cost
Recreation: **20%** - Institution/Residential
Outdoor: **40%** - Pocket Parks Throughout
Ecological: **55%** - High Bio-retention Rate
Social: **65%** - Provides New Experiences
Parking: **70%** - Surface to Structure Parking
Spatial Arrangement: **75%** - Increased Density
Circulation: **60%** - Pedestrian Focused



Figure 3.12 | Radial Diagram
(Author, 2022)

REDBIRD MALL

Economic: **5%** - High Construction Cost
Recreation: **25%** - Added Land Uses
Outdoor: **15%** - Small Greenspace
Ecological: **5%** - Poor sustainability effort
Social: **45%** - Multiple Nodes for Interaction
Parking: **10%** - Surface Parking to Remain
Spatial Arrangement: **25%** - Similar to Existing
Circulation: **15%** - Vehicular Oriented



Figure 3.13 | Radial Diagram
(Author, 2022)

WINTER PARK VILLAGE

Economic: **45%** - High Construction Costs
Recreation: **35%** - Multiple Attractions
Outdoor: **15%** - Pedestrian Walkway
Ecological: **5%** - Pavement Dominated
Social: **70%** - Provides New Experiences
Parking: **25%** - Majority Surface Parking
Spatial Arrangement: **60%** - Decongested Retail
Circulation: **45%** - Central Axis to Anchors



Figure 3.14 | Radial Diagram
(Author, 2022)

DALLAS MIDTOWN

Economic: **80%** - Increases City Revenue
Recreation: **90%** - Complimentary Land Uses
Outdoor: **75%** - Large Central Park
Ecological: **70%** - Sufficient Open Space
Social: **65%** - Multiple Nodes for Interaction
Parking: **70%** - Surface to Structure Parking
Spatial Arrangement: **95%** - Urban CBD
Circulation: **60%** - Vehicular Grid System



Figure 3.15 | Radial Diagram
(Author, 2022)

CITYCENTRE

Economic: **70%** - Low Development Costs
Recreation: **45%** - Multiple Attractions
Outdoor: **35%** - Pocket Parks Throughout
Ecological: **40%** - Sufficient Open Space
Social: **60%** - Provides New Experiences
Parking: **60%** - Surface to Structure Parking
Spatial Arrangement: **85%** - Decongested Retail
Circulation: **60%** - Vehicular Grid System



Figure 3.16 | Radial Diagram
(Author, 2022)

CASE STUDIES:

BACKGROUND

Using the findings from the precedent review, six projects have been selected and analyzed in more depth as case studies. Two projects were selected from each redevelopment strategy (facelift, adaptive reuse, and complete demolition/rebuild) and were examined in greater detail, looking at aspects such as the economic influence, building layout and cover, open space

and outdoor amenities, transportation and parking, and overall site use. The analysis was conducted by referencing published information and previous case studies about the specifics of each project, creating a series of tables explaining program/layout/ transportation/etc., and developing brief financial/success reports of the new development. Information collected will be organized in written text and dotted tables.

CASE STUDY SUMMARY TABLE

Previous Purpose	Redeveloped Purpose	Location	Employment Impact
Winter Park Mall	Winter Park Village (Mixed-Use/Multi-Use	Winter Park, Florida	~1,048 Employees
Town & Country Mall	CITYCENTRE (Mixed-Use)	Houston, Texas	~6,127 Employees

Table 3.9 | Case Study Summary
(Author, 2022)

SELECTION REASONING

The preliminary research of each precedent helped determine which projects were selected to be analyzed further within a case study. Although not scoring the highest in the precedent study radial diagram evaluation, Winter Park Village and CITYCENTRE were chosen due to their similarities to the Mayfair Mall site such as previous site land uses, adjacent infrastructure, surrounding population densities, and unfulfilled market demands. Overall project success, longevity, and reception of the community also played large roles in the selection of these case studies. Both of these developments became community changing projects and revitalized the adjacent commercial and residential areas, providing high density mixed-use amenities in close proximity.

APPLICABILITY TO MAYFAIR

Aside from both case studies becoming successful redevelopments of under-performing shopping malls, Winter Park Village and CITYCENTRE have many similarities to the possibilities and opportunities that are present at Mayfair Mall. The replacement of a large development with extensive history and sentimental value such as many suburban shopping malls can be a lengthy process, but with public input, support from city and state governments, and strong design solutions, entire communities can be reborn. Both case studies overachieved in that sense, and by using Winter Park Village and CityCentre's development and planning strategies, Mayfair Mall can also be a prominent example of redeveloping undervalued shopping malls.

Case Study 1: Winter Park Village

Winter Park, Florida

BACKGROUND

Located in the suburbs of Orlando, the Winter Park Mall first opened in 1964 hosting Ivey's and J.C. Penny as their original anchor stores (Dover 2003). The original mall was first developed to compete with Park Avenue, a nearby traditional main street development, but after only a few years, consumers became tiresome of the amenities and began to turn back towards Park Avenue for their retail needs. Park Avenue continued to grow stronger over the next few decades and was eventually labeled as

“the Main Street that killed the Mall” (Dover 2003). However, in 1996 Casto Lifestyle Properties purchased the undervalued shopping mall with plans to redevelop the site into a mixed-use lifestyle center that offered a number of residences, jobs, and amenities (Stern 2006). The 40-acre site is located about a mile east of I-4 Express, a major Florida interstate highway, with adjacent land uses such as commercial office buildings, single-family and low-density apartment buildings, and strip retail centers (Stern 2006).

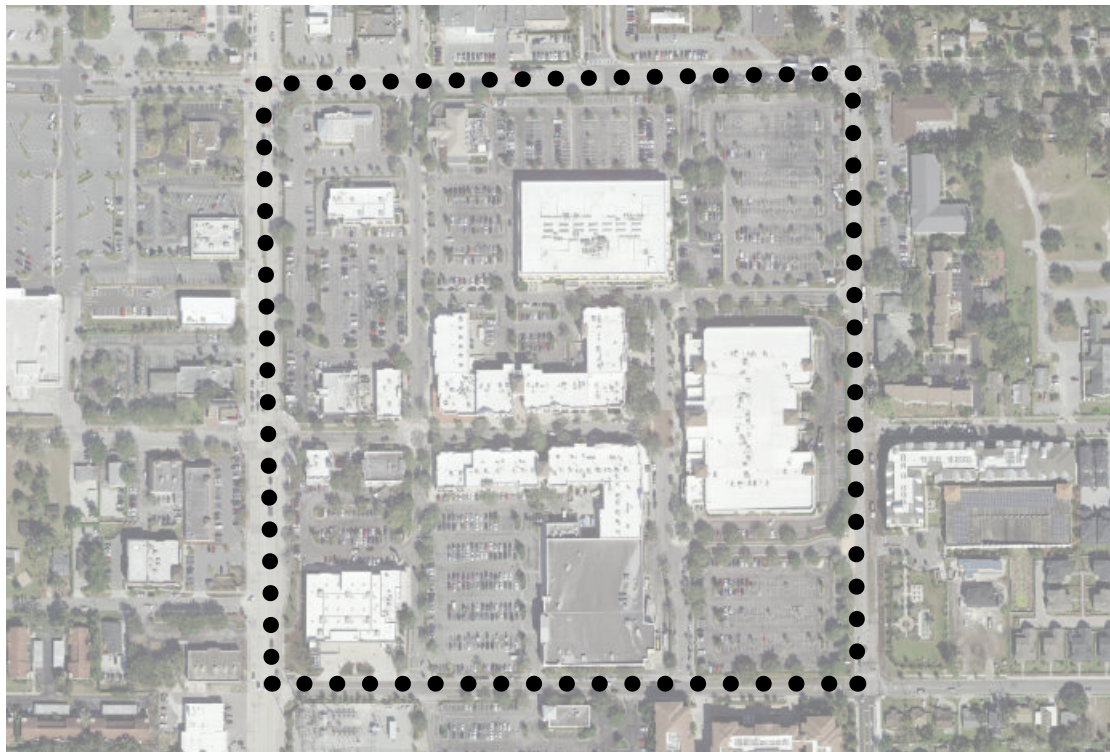


Figure 3.17 | Winter Park Village Site Boundary
(Sourced from Google Earth, 2022)

PLANNING AND DESIGN

In 1996, Commercial Centers Management, a large real estate firm was tasked with finding consultants to redevelop the declining Winter Park Mall (Stern 2006). After the land was acquired, Casto Lifestyle Properties was able to begin the planning process, although many preliminary concepts were met with a lot of pushback from the city government and community members. “Donald Martin, the director of city planning, envisioned something different: a new urbanist, mixed-use project that would create a sense of place and transform the site into an urban village” (Stern 2006). Another major objective of the project was to create a destination that would complement the central business district of Winter Park, rather than compete with it.

Reverting back to the original street grid that was in place during the 1950s, Casto Lifestyle Properties and Dorsky Hodgson + Partners devised a plan to incorporate a pedestrian-scale streetscape aligned with two to three story buildings offering retail and civic uses on the first floor, and residential and commercial office uses

on the upper levels (Stern 2006). Many of the streets flowing through the site were narrowed and shortened to slow vehicular traffic within the pedestrian environment. Parallel parking was added to the streets in order to mimic an urban district, locating larger surface parking lots on the exterior edges of the site to separate parking from the consumers experience (Stern 2006). Many tertiary sidewalks and pedestrian paths were added to create clear connections from surrounding neighborhoods and commercial districts to the site (Stern 2006).

Like many projects, the original intent was to provide a substantial amount of public green space along the pedestrian corridor of the site, but this idea was unfortunately replaced due to construction and development costs (Stern 2006). Although the large open areas were removed from the project design, smaller implementations of grassy areas, benches, trees, fountains, and outdoor recreation activities were scattered throughout the pedestrian streetscape, providing small gathering places for the community (Stern 2006).

EXPERIENCE GAINED

Each building at Winter Park Village was developed to offer a public side and a private side, separating storefronts, apartment entrances, etc. from the loading docks, mechanical rooms, and parking courts (Dover 2003). Designers and developers are faced with many challenges when creating a community asset of this magnitude, but Casto Lifestyle Properties and the City of Winter

Park did an excellent job of alleviating these obstacles through strong design solutions that put the community's interests first. Many current efforts of redeveloping shopping malls can use Winter Park Village as a prime example of how to transform an undervalued site into an optimal collection of retailers, restaurants, residential and office uses all while creating a beautiful, inviting environment.



Figure 3.18 | Winter Park Village Amenities
(Sourced from CASTO, 1999)

PROJECT DATA: WINTER PARK VILLAGE

Land Use Information		Development Cost Information	
Site Area	40 acres	Land Acquisition Cost	\$500,000
Gross Building Area	1,726,000 SF	Site Improvement Cost	\$7,981,000
Gross Leasable Area (GLA)	534,000 SF	Construction Cost	\$38,477,000
Levels	4	Soft Costs	\$7,042,000
Parking	818,700 SF	Total Development Cost	\$54,000,000
Land Use Plan		Development Schedule	
Buildings	14	Site Purchased	1996
Parking Structures	19 acres	Planning Started	1997
Landscaping/Open Space	8 acres	Construction Started	1998
Total	40 acres	Sales/Leasing Started	1998
Retail Tenant Information		Project Opened	2000
General Merchandise	4 stores / 32,125 SF		
Food Service	15 stores / 133,339 SF		
Clothing and Accessories	8 stores / 22,318 SF		
Total	27 stores / 187,782 SF		
Major Tenants			
Regal Cinema	83,624 SF		
Albertson's	55,922 SF		
Borders Books & Music	25,474 SF		
Chamberlin's Market & Cafe	17,746 SF		
World Publications	45,000 SF		
Progressive Insurance	24,483 SF		
Hill, Adams, Hall, & Schieffelin	15,000 SF		
Lease Terms			
Length of Lease: Office	5–7 years		
Annual Rents: Office	\$14–\$25/SF		
Length of Lease: Retail	5–10 years		
Annual Rents: Retail	\$13–\$38/SF		

Table 3.10 | Winter Park Village Case Study
(Sourced from Stern, 2006)

Case Study 2: CITYCENTRE

Houston, Texas

BACKGROUND

“The majority of the CityCentre site was for many years the home of the Town & Country Mall, a regional shopping center first opened in the early 1980s that was anchored by several department stores, including JCPenney, which left the mall, and Neiman Marcus, which still owned and operated a department store on the site when it was acquired” (Phillips 2015). Midway development group acquired the Town & Country Mall

in 2004 due to its large decline in the market share, tenant occupancy, and customer satisfaction, but had immediate plans to start the planning and design process. The original site occupied 37 acres of prime real estate in the Houston suburbs, but when the developers acquired the mall, they also purchased approximately 10 additional acres in order to increase the potential opportunities the proposed design could provide (Phillips 2015).

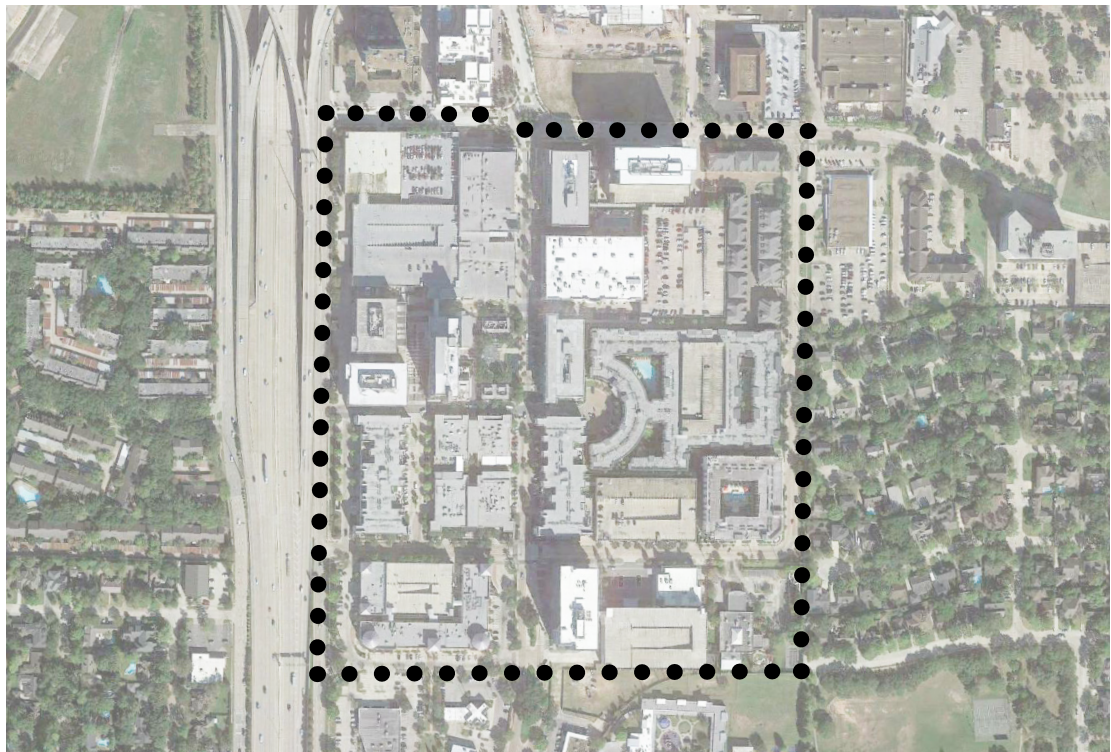


Figure 3.19 | CITYCENTRE Site Boundary
(Sourced from Google Earth, 2022)

PLANNING AND DESIGN

When first acquiring the parcels of land, there was no specific plan or strategy in place to redevelop the old mall, but “with extensive research on mixed-use urban villages and town centers across the U.S., Midway quickly decided that a mix of uses in a pedestrian-friendly environment would be the best strategy for the property” (Phillips 2015). Members of the Midway research team decided that the project would be driven largely by typical tenants of a mixed-use development, although they wanted to stray away from the idea of designing solely based on the spatial layout and needs of the retailers (Phillips 2015).

Midway started the planning and design process by holding an internal design competition that included architects and landscape architects from Gensler, Kirksey, and the Office of James Burnett (Phillips 2015). By working with multiple professionals from different companies, Midway

decided they could extract the best design solutions from each team and apply the strengths towards the final concept.

This 2,188,294 square foot development offers a variety of uses and amenities including hotels, retail, residential, office spaces, and outdoor parks and plazas. The goal of this project was to create a truly walkable urban district by bringing in tenants and partners such as Amazon, Warby Parker, Life-Time Work, and other cutting-edge retailers while providing employees with adjacent residential opportunities (Phillips 2015). The Midway City Centre is a development oriented towards luxury living with 625,000 SF of Class-A office space, 400,000 SF of upscale shopping and dining, 75,000 SF of meeting and event space, 140,000 SF of fitness facilities, 266 luxury hotel rooms, and 1,120 high-end multi-family residences (Phillips 2015).

EXPERIENCE GAINED

Reflecting on the new developed CITYCENTRE, Midway stated that they should have aimed for a higher overall density of the project, although there are opportunities to densify the site in the future (Phillips 2015). Looking back, Midway also indicated that “the project would have been more successful if they had looked at the leasing of tenant spaces in a more holistic way” (Phillips 2015). Priority was put on leasing office and restaurant spaces first, and therefore overlooked the importance of the retailer’s ability to attract consumers, especially following the 2008 recession and the

emergence of online shopping (Phillips 2015). One decision of Midway’s planning process that greatly benefitted the proposed development was to purchase and develop all properties on site, rather than involving partnerships with individual developers for different components of the project (Phillips 2015). This idea of having one real estate development firm acquire the entire site creates opportunity to develop a more cohesive plan while making the planning much easier to navigate, eliminating differing opinions about the outlook of the project.



Figure 3.20 | CITYCENTRE Plaza
(Sourced from O’Hara, 2015)

PROJECT DATA: CITYCENTRE

Land Use Information		Development Cost Information	
Site Area	46.9 acres	Land Acquisition Cost	\$2,053.50
Gross Building Area	2,188,294 SF	Office Development Cost	\$162,500,000
Gross Leasable Area (GLA)	325,527 SF	Residential Development Cost	\$129,382,050
Levels	16	Retail Development Cost	\$104,000,000
Parking	1,082,246 SF	Hotel Development Cost	\$56,261,450
Key Retail Tenant Information		Total Development Cost	\$452,145,553.5
Clothing and Apparel	33,256 SF	Financing Source Information	
Home Furnishings	14,110 SF	Cypress Real Estate Advisors	Land Acquisition
Accessories	5,633 SF	Aegon	Retail
Total	52,999 SF	J.P. Morgan Asset Management	Apartments
Major Tenants		Alaska Permanent Fund Corp.	Office and Retail
Life Time Athletic	140,000 SF	Stanford Financial	Hotel and Retail
ERM	44,198 SF	Midway Companies	All development
Texas A&M School of Business	29,865 SF	Development Schedule	
Seacor Marine	25,742 SF	Site Purchased/Planning Began	2004
Life Time Athletic	140,000 SF	Mall Demolished	2005
Urban Outfitters	11,370 SF	Construction Started	2007
McGriff	77,476 SF	Grand Opening	2010
Lease Terms		CityCentre Construction Updates	2014
Length of Lease: Office	5–10 years	Completion of Development	2015
Annual Rents: Office	\$25–\$32/SF		
Length of Lease: Retail	10 years		
Annual Rents: Retail	\$43/SF		

Table 3.11 | CITYCENTRE Case Study
(Sourced from Phillips, 2015)

INTERVIEWS

BACKGROUND

Interviews with relevant and renowned shopping mall developers and other mixed-use specialists were attempted to better understand the perspectives of the people who play a major role in the outcome of many underperforming malls throughout the U.S. These interviews aimed to spark new ideas and goals about the future of shopping mall redevelopment, not only for the projective design of this report, but also for the audience of this report such as numerous real estate developers and city planners around the country. Gathering information and opinions of the key players who are physically redeveloping these sites would add great value to the ongoing conversation revolving around underperforming malls, while also providing current strategies being used in the market for the audience to build upon. An Institutional Review Board (IRB) Application was submitted and approved to ensure all Kansas State University protocols associated with engaging the public were met.

REASON FOR CHOOSING INTERVIEWEES

The reasoning behind choosing this mix of specialists to interview was to get a broader perspective on the redevelopment of underperforming shopping malls from different professionals within the industry. Interviewing different kinds of real estate developers, urban planners and designers, and city planners allows this project to gain a multitude of viewpoints from people who are involved in the redevelopment process at different planning phases and levels of engagement. The professionals who were contacted all have vast backgrounds and experience in real projects involving the retransformation of shopping malls.

Questions for Interviewees

- Please state your name, company, and your role within the company.
- What are some of the biggest differences you see in how users interact with today's shopping centers compared to the malls of the 1990s and early 2000s?
- What kinds of amenities and building uses are being incorporated in redeveloped shopping centers? How were these uses chosen?
- What is the anticipated life-expectancy of newly developed mixed-use shopping centers/communities?
- What specific users are you designing for when redeveloping a shopping mall?
- Do you approach the project from a younger generation's point of view to better project future trends and technology?
- Would you agree that most shopping malls within the U.S are in decline and other redevelopment options need to be considered?
- When redeveloping a declining or closed shopping mall, what are some of the major challenges being faced? How do you work around those challenges?
- With the automobile having played a major role in the development of shopping centers, what are the strategies being implemented today to accommodate the users without the need of a vehicle?
- With the majority of these declining or closed malls being near major highway systems, what are some of the ways newly redeveloped malls are connecting to these highways in order to decrease dependency of the automobile?

COMPLICATIONS OF INTERVIEWEES

Many real estate development, planning, and design professionals are extremely knowledgeable about the topic of underperforming shopping malls and the strategies for repositioning them into valuable community assets. The main problem that arose during attempts to interview these professionals was finding availability in their schedules to sit down and have an extensive discussion about the problems and solutions of redeveloping shopping malls. Of the five professionals that were contacted to conduct the interviews, only two of them responded and were willing to assist in the completion of this report. Unfortunately, these two professionals were not available to meet until the end of March 2022 due to company deadlines and previous commitments, and therefore would not be able to contribute to this report by the time of submittal. Although specific interviews were not able to be conducted in accordance with the Kansas State University Institutional Review Board (IRB), informal conversations were held with the owners of the Mayfair Mall site as well as design professionals who are currently working on redeveloping underperforming shopping malls throughout the U.S.

LEARNING OUTCOMES

As previously stated, specific interview questions were not asked during informal conversations held regarding the future of retail spaces and mixed-use developments of old shopping malls. Although this may be the case, plenty of insight and expertise were shared that greatly contributed and informed the typology design concepts. One specific takeaway from the conversations held over the past few months includes aiming for a much higher building density than originally anticipated. As seen in many precedents and case studies, one of the biggest regrets that developers have post-construction is missing opportunities to generate more income in the form of increasing density of land uses and amenities on site. Another learning outcome that is crucial in the success of any redevelopment is the inclusion of the community members and city government staff during the beginning stages of the project. Complete transparency during the planning and design phases is crucial for gaining community support, ensuring positive social influence and overall project success.

Methodology Conclusion

When conducting the literature review, precedent analysis, case study, and interview methodologies, valuable information and strategies were gathered and synthesized to inform the typology design concepts and final projective design. Within each redevelopment and planning strategy (facelift, adaptive reuse, and complete demolition), key benefits and challenges were noted to provide applicable approaches and solutions for the redevelopment of the Mayfair Mall site. Other valuable information gathered from the methodology section include ideal composition of tenants, spatial organization and layout, and building density targets. Looking at the longevity and overall success of the projects analyzed in this section also highlighted obvious challenges and oversights of the developers, hopefully encouraging all stakeholders on future shopping mall redevelopment projects to avoid the same shortcomings.



Figure 4.1 | Mayfair Mall
(Author, 2021)

04

EVALUATION

During this step in the project, a detailed analysis of the Mayfair Mall shopping center in Wauwatosa, Wisconsin was conducted to help inform the typology design development and final projective design concept of the site. Numerous aspects of the site were thoroughly examined including retail, residential, and mixed-use markets, the financial viability of the site, social impacts, etc., in order to understand the correct approach for repositioning the site functions.

SITE INTRODUCTION

BACKGROUND

Mayfair Mall is a suburban shopping mall located in Wauwatosa, Wisconsin, due west of the city of Milwaukee. The asset is owned by Mayfair Mall LLC., a real estate investment trust created by Brookfield Properties, the leading real estate firm dealing with shopping malls in the United States. Although Mayfair Mall once served as the most prominent shopping mall in the Milwaukee metropolitan area, over the recent years the development has seen drastic declines in visitation, consumption, and overall profit. With the city of Wauwatosa beginning to reinvent their city and sense of identity over the past decade, the need to reposition Mayfair Mall into a new community asset is more prevalent than ever.

PHYSICAL SITE BOUNDARIES

The physical scope of this project is limited to the land owned by Brookfield Properties, which is bounded by N Mayfair Blvd., W Center St., and W North Ave, although with the support of the city and community, there is potential to obtain additional parcels that connect the site to the adjacent Menomonee River corridor. General site characteristics include one large, enclosed building composed of underperforming retail outlets, surrounded by a large expanse of impervious surface parking. Similar to many other suburban shopping malls, the proposed site is located less than one block away from Interstate 41, a major arterial road that carries traffic from northern Wisconsin down to Chicago, Illinois.



Figure 4.2 | Site Proximity
(Sourced from Google Earth, 2022)

SITE PHOTOGRAPHS

During the initial site visit, photograph documentation was taken to better understand interior and exterior site characteristics from a

pedestrian perspective. Photos were taken during the late morning of a November weekday to ensure pictures would accurately depict average visitation levels of the site.



Figure 4.3 | Site Photo 1
(Author, 2022)



Figure 4.4 | Site Photo 2
(Author, 2022)



Figure 4.5 | Site Photo 3
(Author, 2022)



Figure 4.6 | Site Photo 4
(Author, 2022)



Figure 4.7 | Site Photo 5
(Author, 2022)



Figure 4.8 | Site Photo 6
(Author, 2022)

FEASIBILITY STUDY

INTRODUCTION

When conducting a thorough feasibility analysis, understanding the history and background information of the site is the first step and a top priority in the process. Quantitative and geographical parcel information such as site boundaries and existing infrastructure, both on and off-site,

are just a few of the core physical characteristics for gaining background insight. Having a better grasp on the less tangible aspects of the site such as current and past parcel ownership, revenue streams, and popularity/attractiveness levels can tell a story about the value and potential of a new development.

FEASIBILITY OF MAYFAIR MALL

With the economic and social value Mayfair Mall provided the community of Wauwatosa in the late 1990s and early 2000s, many community members, property owners, and city planners are ready to see new ideas that rejuvenate the area. This type of support, along with the

growing momentum to implement the proposed plans to revitalize the Mayfair Rd. corridor further south, make the process of approval to redevelop Mayfair Mall much more feasible. Individual aspects that pertain to the current and future conditions of the mall will be explored in order to predict the likelihood of this asset being repositioned in the near future.

ASPECTS OF A FEASIBILITY ANALYSIS

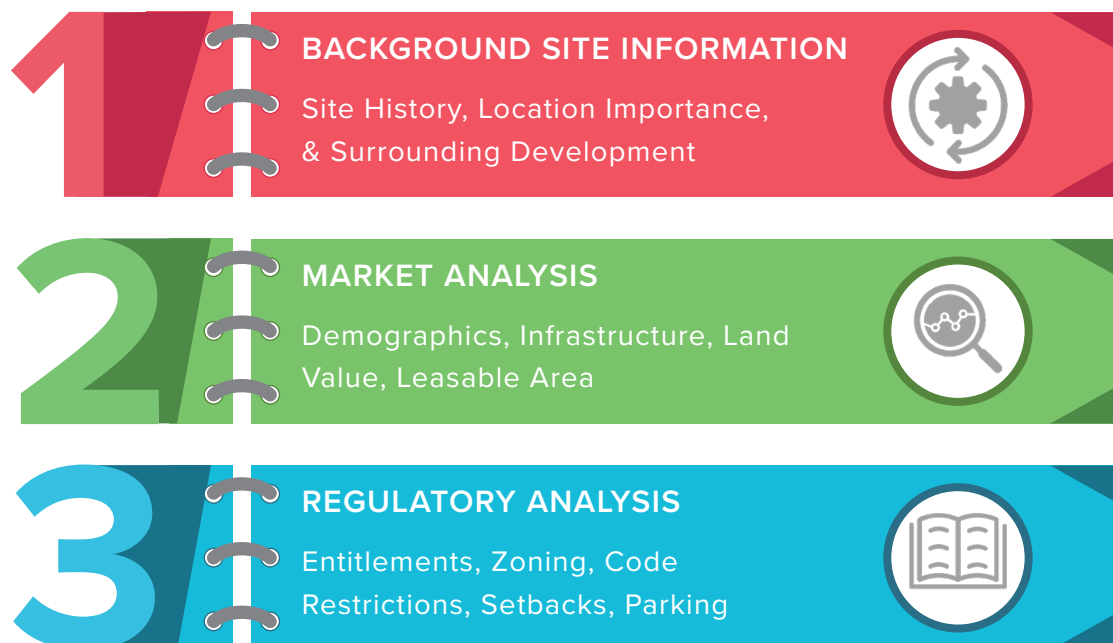


Figure 4.9 | Aspects of Feasibility Analysis
(Author, 2022)

SITE BACKGROUND

History

Mayfair Mall, located in Wauwatosa, Wisconsin, was originally developed in 1958 by Kurtis Freodtert and Hunzinger Construction Company (Daykin 2000). The original layout of the mall was constructed to be an open-air concourse offering 70 different retail options with Marshall Field's and Gimbels acting as the dumbbell anchor stores. Three east-west corridors also dissected the mall creating prominent indoor-outdoor relationships with the implementation of small courtyards, pocket parks, and other areas for social interaction in the outdoor environment. In 1973, the mall concourses were enclosed to provide

consumers with the opportunity to shop year-round. Over the next decade, Mayfair Mall continued to make renovations that included the addition of an office tower on the south side of the mall and a 78,000 square foot retail space on the second story of the mall (Daykin 2000). General Growth Properties purchased the asset in 1998 and immediately began expanding and renovating the mall, adding an AMC movie theater, Barnes & Noble bookstore, and over 100,000 square feet of upper-level retail space (Daykin 2000). With these new expansions in the early 2000s, consumers around the area started to congregate towards Mayfair Mall, eventually making it the most profitable shopping mall in the Milwaukee metropolitan area.



Figure 4.10 | History of Mayfair
(Budny, 2015)

MARKET ANALYSIS

Demographics

Understanding the regional demographics of the site location will give developers a better grasp of who will be the main users and investors in the redevelopment. With major demographic shifts in America, unique mixes of people are creating “new yet unsatisfied demands and opportunities, which is why it is essential to understand the demographic and market trends of the area” (Booth 2002). The table of demographic and census data shown below illustrates the current and estimated population levels as well as the surrounding housing information. That demographic information is delineated by three

distinct zones, a one-mile, three-mile, and five-mile radius of the Mayfair Mall site. All information provided by Co-Star, a commercial real estate, information, and analytic software, is assumed to be averaged based on the boundaries of each study area.

Becoming knowledgeable on average household income levels and the surrounding market will provide a better idea of what amenities and land uses will best serve the community. The annual average household income of the adjacent Mayfair area is around \$67,000, which means that the proposed development must include affordable retail and residential options in order to attract the largest demographic of people.

Population	1 Mile	3 Mile	5 Mile
2021 Total Population:	11,557	83,221	273,828
Estimated 2026 Population:	12,410	87,818	288,480
Population Growth 2021–2026:	7.38%	5.52%	5.35%
Average Age	41.20	41.40	39.50
Households			
2021 Total Households	5,052	35,905	121,345
Household Growth 2021–2026:	6.65%	5.08%	5.11%
Median Household Income	\$60,444	\$76,871	\$62,831
Average Household Size:	2.00	2.20	2.20
Average Household Vehicles:	1.00	2.00	2.00

Table 4.1 | Demographics of Mayfair
(Sourced from CoStar, 2022)

Vacancy and Availability Rates

The trends of vacancy and availability rates with comparable developments in the area of study is very important when trying to understand the future needs of an

entire community. For shopping malls specifically, the rate of vacant and available tenant spaces are drastically increasing, which begs the question of what exactly will replace these vacant lots full of potential?

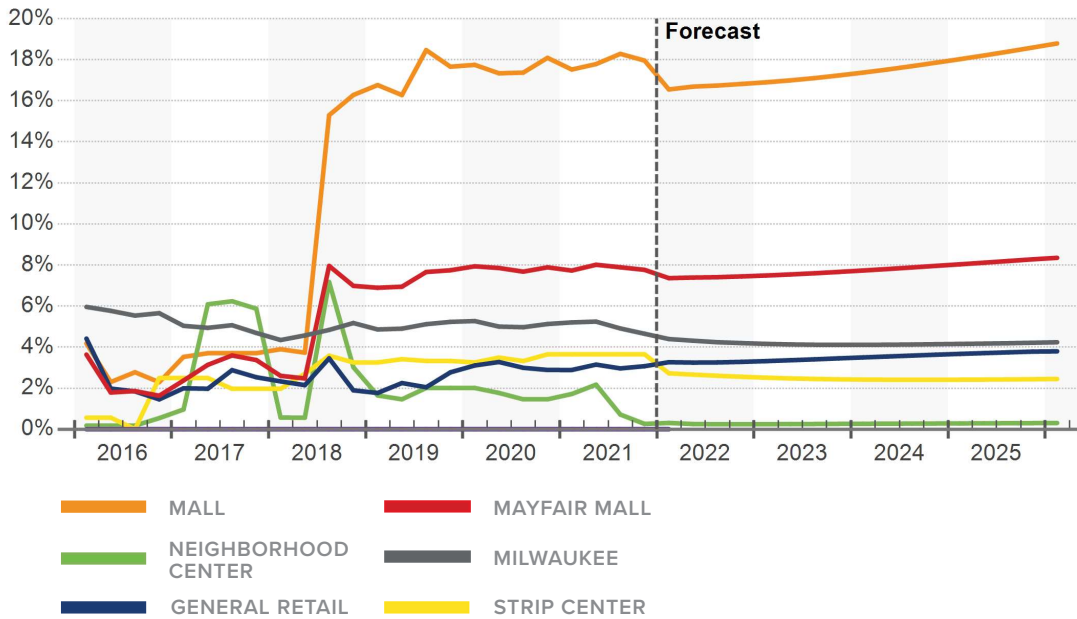


Figure 4.11 | Market Vacancy Rates
(Sourced from CoStar, 2022)

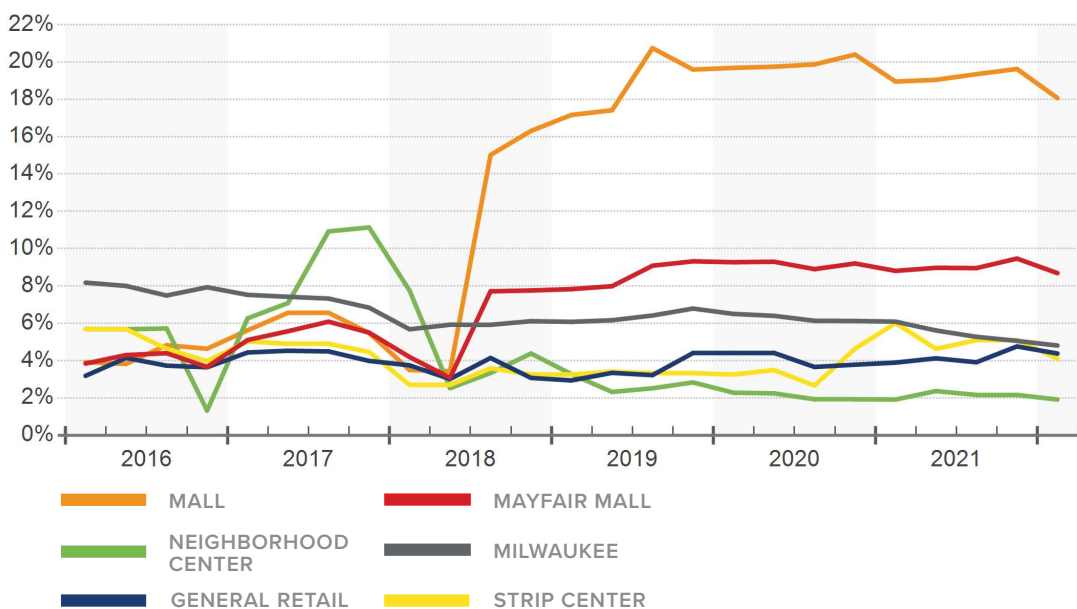


Figure 4.12 | Market Availability Rates
(Sourced from CoStar, 2022)

Existing Infrastructure

“PWC found that mall obsolescence is associated with formidable competition. On average, greyfield malls have 2.3 million square feet of competing retail space in 22 other centers (including neighborhood and community centers and other regional malls) within 5 miles” (Sobel 2002). This supports the idea that having a good understanding of the existing infrastructure on and surrounding the site of interest will present better solutions when analyzing and completing design development.

These key components to the site will also provide information on traffic patterns, site users, and market demands. Investigating the uses of the adjacent infrastructure can provide clear indicators of what amenities need to be added to the redevelopment in order to capture the surrounding market. Notable infrastructure to be analyzed include, but are not limited to schools, churches, retail, residential buildings, restaurants, highways, roads, lakes, and natural areas.

The infrastructure surrounding the Mayfair Mall site has extreme potential to be redeveloped into a valuable asset that could create a sense of identity for the area. Adjacent land uses to the site of interest include two golf courses, a middle school, high school, and college campus, planned commercial retailers, and a network of single-family residential homes. Other land uses in close proximity to the site include the Menomonee River corridor, a large public green space and park, and the Medical College of Wisconsin campus.

The site is also located less than a block away from Highway 141, a major interstate that spans from northern Wisconsin into Chicago. Existing infrastructure along N Mayfair Road is also being analyzed for redevelopment in the near future, so coordinating proposed plans for Mayfair Mall with the City of Wauwatosa’s comprehensive plan will be crucial to the success of the community.



Figure 4.13 | Mayfair Area Figure Ground
(Author, 2022)



Figure 4.14 | Adjacent Land Uses
(Sourced from Google Earth, 2022)

Transit Infrastructure

With the major impacts that transit infrastructure has had on retail focused developments in the past, understanding the surrounding circulation patterns, both vehicular and pedestrian, is crucial to the success of the project. The arrival and departure experience of a designed space plays a major role in the attractiveness of a site, as these events are the first and last memories consumers have about the development. Consumers have shown to prefer transit-oriented

design using a combination of public transportation and private automobiles to commute to and from the site, giving more opportunity for the site to be pedestrian-friendly and easily accessible. With the incorporation of public transportation on site, it is crucial to understand what kind of infrastructure is already in place as well as what is being proposed on other projects throughout the county. This will help inform the design and allow stakeholders to suggest ways to improve the flow of pedestrian traffic.

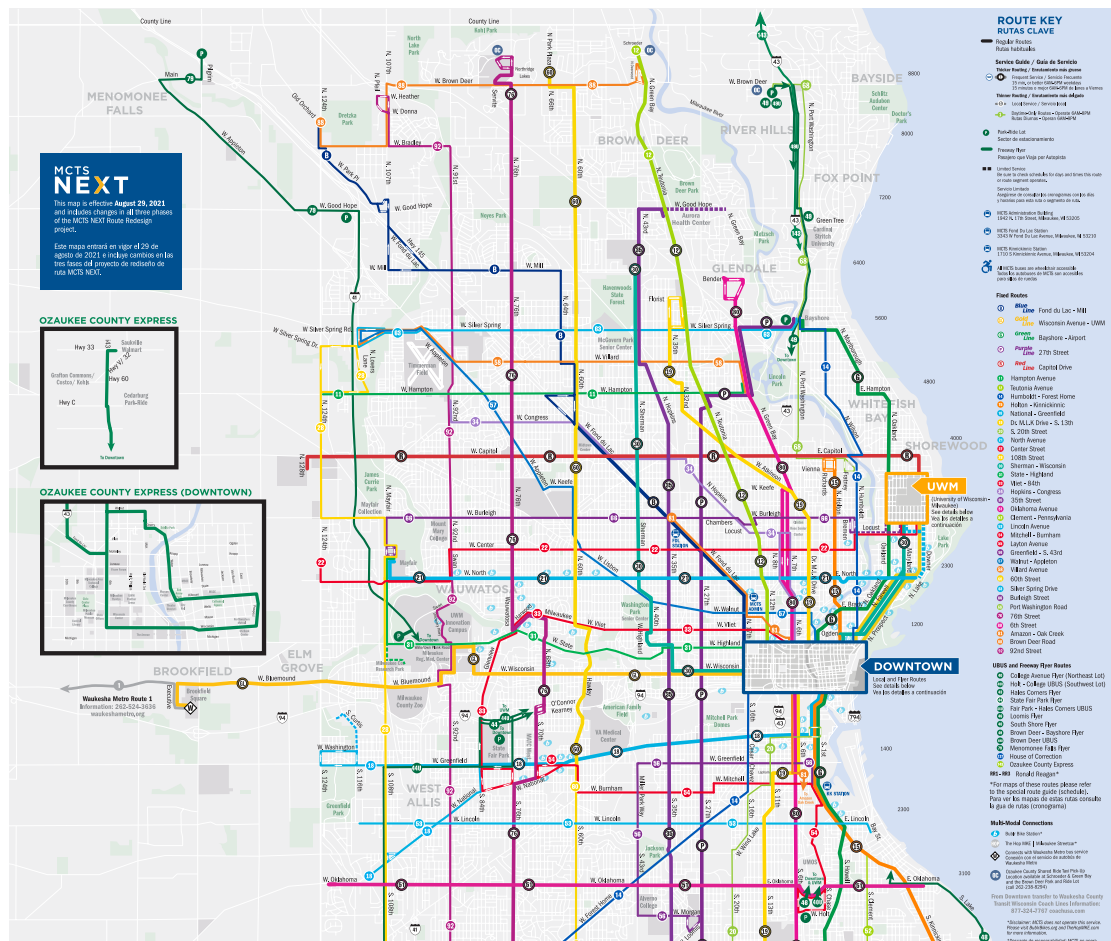
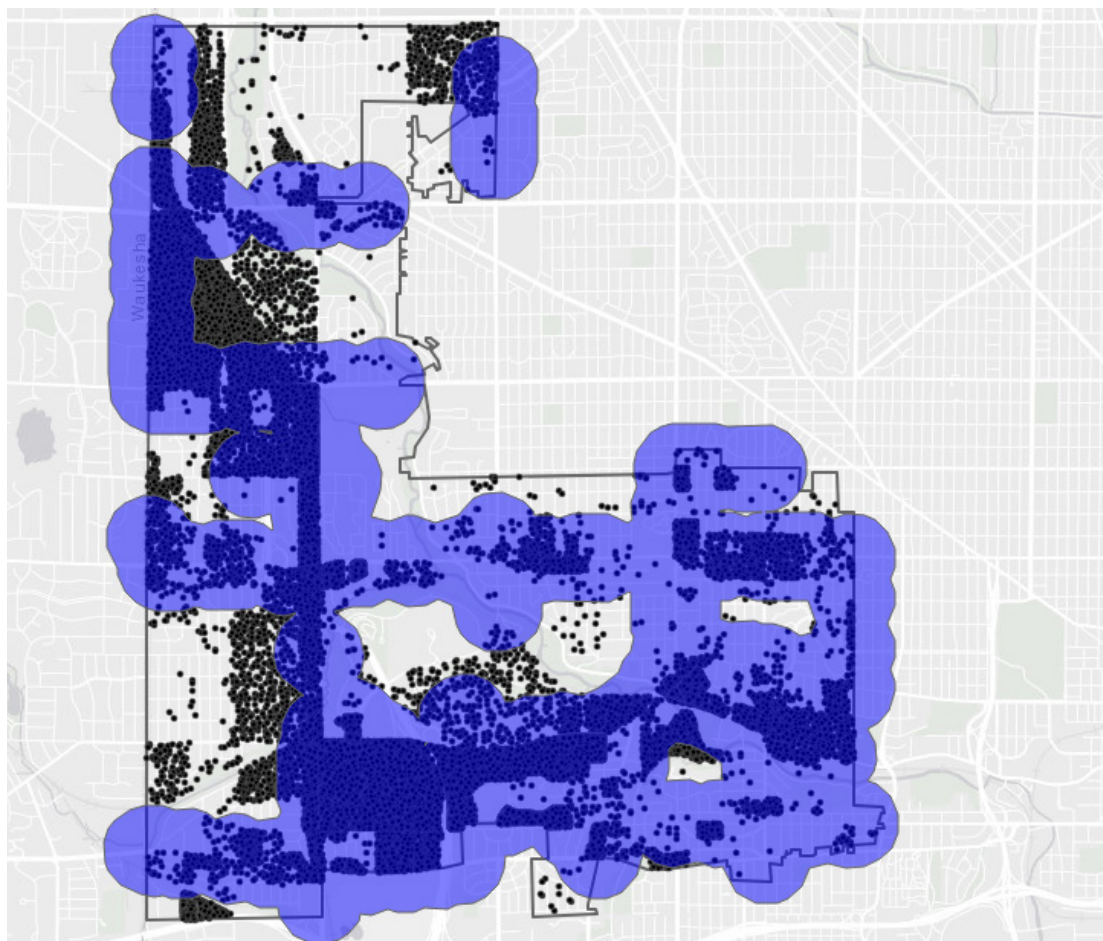


Figure 4.15 | MCTS Bus Routes
(Milwaukee County, 2021)

Milwaukee County Transit System (MCTS)

Overall, the Milwaukee County Transit System (MCTS) has an expansive network of metro bus routes that span across the majority of the City of Wauwatosa. Using Wauwatosa census data from the United State Census Bureau, as well as transit stop data from the General Transit Feed Specification (GTFS), maps were

created to analyze the number of jobs located within a 0.25-mile buffer of each stop within the MCTS transit system of Wauwatosa. The analysis shows that 74% of all jobs throughout the City of Wauwatosa are located within a quarter mile of a transit stop, providing excellent coverage and accessibility to public transportation options.



- Transit Line Buffer (.25 Miles)
- Wauwatosa Job Locations
- Wauwatosa City Boundary

Figure 4.16 | Transit Equity
(Author, 2022)

REGULATORY ANALYSIS

Entitlements

Involving the local government early in the process of redevelopment will be extremely beneficial throughout the entitlement and permitting phases of the project. In most cases, land use is matter of local government control, and without their approval through entitlements, there is no development, no potential income stream, and therefore no profitable development project (Booth 2002).

Zoning/Code (Building height restrictions, Density Controls, Setbacks, Land Use)

Local zoning ordinances play an important role in possibilities and success of a project, so understanding building height restrictions, density controls, setbacks, land use, and other development limitations will improve

the efficiency of the design phases as well as increase the chances of receiving a city approved construction permit. An important part of successful land use development is recognizing that zoning systems may be outdated and need reform, changing the focus from the separation of uses towards the integration of complimentary activities. Developing a strategic land use plan that draws on all of the senses to create desired placemaking experiences will influence people to repeatedly visit, invest, and live in these places (Booth 2002). More recently, zoning codes have been increasingly aware of the synergies between complimentary mixed-use developments and what benefits that provides in terms of shared parking (Dunham-Jones & Williamson 2011).

CITY OF WAUWATOSA MUNICIPAL CODE

Lot and Building Standards (s.f)		Maximum Building Height (ft)	
Minimum Lot Area	None	Principal Buildings	No Max.
Minimum Lot Area Per Unit	1,000	Accessory Buildings	20
Minimum Lot Width	None	Maximum Building Coverage (% of lot)	
Minimum Setbacks (ft)		Interior Lots	No Max.
Front	10	Corner Lots	No Max.
Street Side	5	Zoning District	
Interior Side	3[3][5]	General Commercial	C2 - AA - Commercial
Rear	10[4]		
Rear and Interior Side	3		
Rear Alley	10		

Table 4.2 | Wauwatosa Municipal Code
(City of Wauwatosa, 2022)

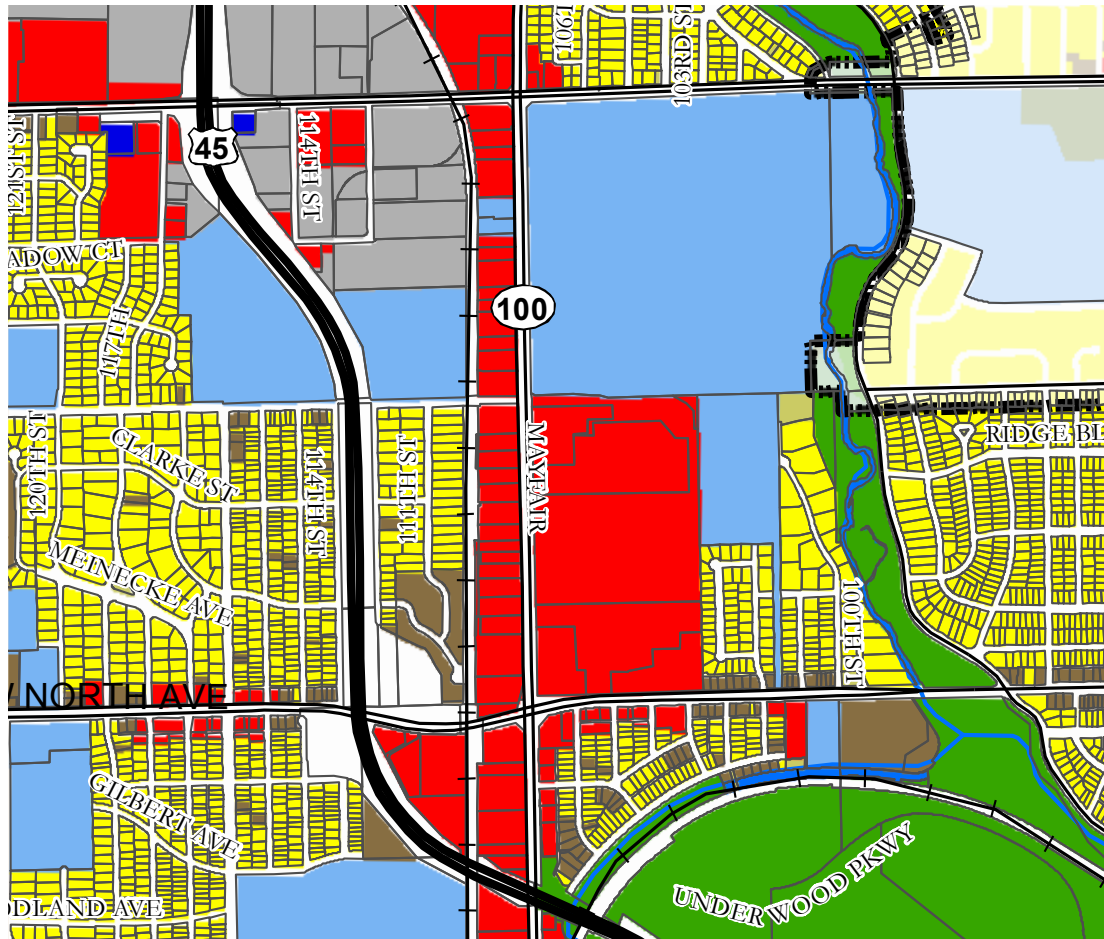


Figure 4.17 | City of Wauwatosa Zoning Map
(Milwaukee County LIO, 2022)

- Single-Family Residential
- Mixed Residential
- Commercial
- Downtown
- Industrial/Manufacturing
- Institutional
- Public Utilities
- Vacant
- Public Parks & Open Space

Parking/Transportation Requirements

Parking demand and the coinciding requirements at shopping malls around the U.S has been a controversial issue for many years, as vehicle access contributed to both the increase in popularity and the decline of the mall. Throughout the industry, the consensus is that a new strategy needs to be developed that aims to avoid creating greyfields while simultaneously maximizing the efficiency of usage based on demand times.

“With increasing public awareness of reducing carbon emissions and the cost/inconvenience of traffic congestion, suburban business districts are beginning to offer multiple transportation options outside of the typical 9:00 – 5:00 range of activities, thus promoting travel at other times than peak hours” (Booth 2002). Metropolitan areas who implement these additional transportation options throughout all times of the day do not only receive a competitive advantage themselves, but also provide unprecedented access to surrounding developments that improve attraction and consumer rates (Booth 2002). Implementing multifamily residential

buildings within the urban fabric also creates new and more equitable transportation opportunities.

Aside from mass transit systems and other vehicles, many cities have developed extensive networks of walking and biking trails that reduce carbon emissions, traffic congestion, and parking limitations.

Community Engagement/Local Politics

When developing a new asset, the response of the local community is a good indicator of how successful the project will be in the long-term, as the community members are generally the primary consumers of the development. “Transforming these underperforming shopping malls requires a three-way partnership of the private sector, government, and the broader community, which is why engagement and transparent relationships with members of the community must be instilled from the beginning” (Booth 2002). When community members raise concerns with the development plan, it is usually a result from poor graphics and marketing tools that do not accurately represent the vision and outlook of the proposed development (Booth 2002).

CITY OF WAUWATOSA PARKING REQUIREMENTS

USE	MIN. VEHICLE PARKING
Eating and Drinking Establishments	1 space per 500 s.f
Theaters/Places of Assembly	1 space per 200 s.f
Groceries	1 space per 200 s.f
All Other Office & Commercial Uses	1 space per 500 s.f
All Other Uses	As required in Sec. 24.11.020B
RESIDENTIAL	MIN. OFF-STREET PARKING
Two-Unit Building	2.0 spaces per dwelling unit
Attached House	2.0 spaces per dwelling unit
Multi-Unit Building - Studio	1.0 spaces per dwelling unit
Multi-Unit Building - 1 Bedroom	1.0 spaces per dwelling unit
Multi-Unit Building - 2 Bedroom	1.5 spaces per dwelling unit
Multi-Unit Building - 3 or more Bedroom	2.0 spaces per dwelling unit
Elderly	1.0 spaces per dwelling unit
Mixed-Use Building, Vertical	Same as Multi-Unit Building
Group Living	Determined by zoning admin.
PUBLIC/CIVIC	
Day Care	2.0 spaces + 1.0 nonresident
Hospital	Determined by zoning admin.
Library/Cultural Facility	3.0 spaces per 1,000 s.f
Park/Recreation/Open Space	Determined by zoning admin.
COMMERCIAL	
Building Maintenance Service	1.0 space per employee
Business Support Service	2.5 spaces per 1,000 s.f
Entertainment & Sports	1 space per 6 seats
Food & Beverage Retail Sales	4.0 spaces per 1,000 s.f
Lodging	1.0 space per guest room
Office, Admin., Professional	3 spaces per 1,000 s.f
Retail Sales	4 spaces per 1,000 s.f
Repair or Laundry Service	4 spaces per 1,000 s.f

Table 4.3 | Wauwatosa Parking Requirements
(City of Wauwatosa, 2022)

SITE INVENTORY AND ANALYSIS

INTRODUCTION

Numerous methods will be used to analyze not only the site itself, but surrounding infrastructure, related aspects including housing markets, consumer markets, demographics, regulations and much more. Some of the primary physical aspects to look at when conducting site inventory and

analysis include utilities, setbacks/easements, and acreage. Utility corridors and other underground infrastructure will influence the spatial layout of site while setbacks and easements will determine the limits and boundaries of the site. The acreage and existing infrastructure will determine the zoning ordinances and ultimately affect the density and use of the site.

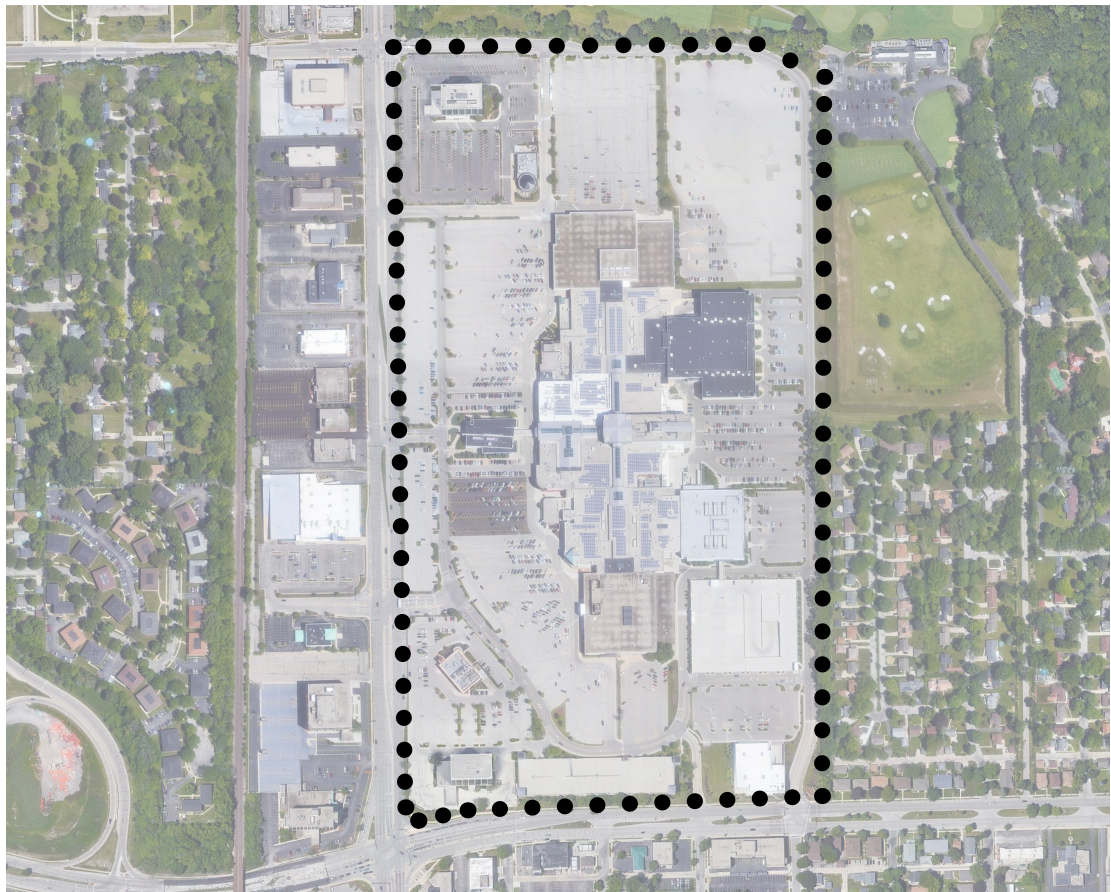


Figure 4.18 | Site Boundary
(Sourced from Google Earth, 2022)

MAYFAIR MALL SITE INFORMATION

Site Information		Mayfair Mall Building Information	
Site Acreage	86	Overall GLA:	216,771 SF
Number of Tenants	180	Lower Level GLA:	83,012 SF
Number of Employees	1,400	Main Level GLA:	66,879 SF
Number of Surface Parking Spaces	6,600	Second Level GLA:	66,880 SF
% Leased	83.20%		

Table 4.4 | Mall Building Specifications
(Sourced from Glaser and Weiland, 2022)



Figure 4.19 | Mayfair Mall Figure Ground
(Author, 2022)

Mayfair Leasing Comparables

When developing a site, it is crucial to analyze and understand the short and long-term players of building/tenant space ownership in order to maximize the overall profit. Identifying the tenants who are currently leasing space versus long-term tenants who have purchased the retail

space will provide better guidance and phasing strategies for redevelopment. Determining which tenants would be better suited for a long-term lease versus an outright purchase of the building depends on the potential longevity and revenue projections of each business as well as the current and projected retail market trends in the area.

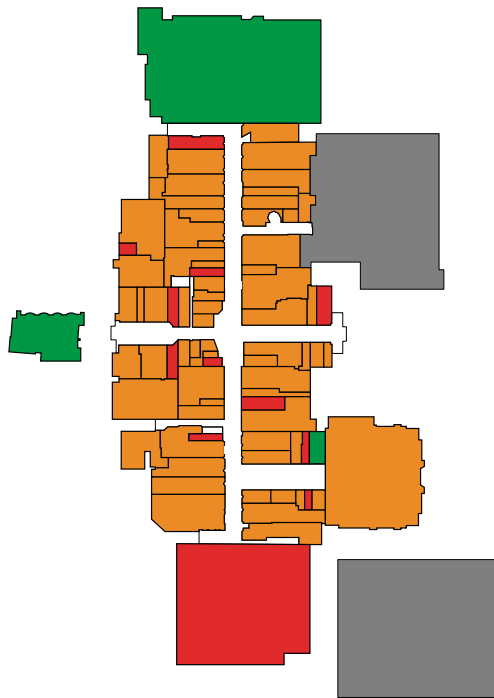


Figure 4.20 | 1st Floor Leasing Map
(Author, 2022)

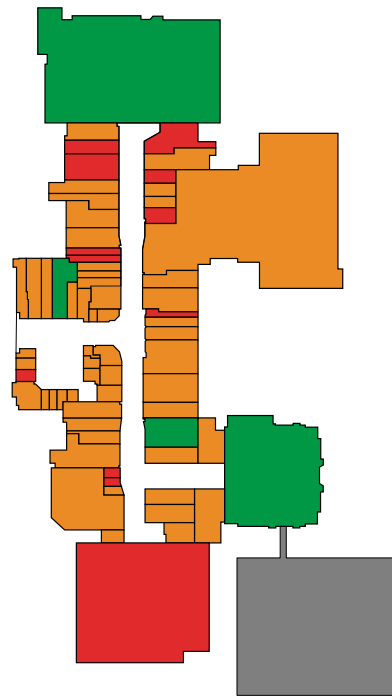
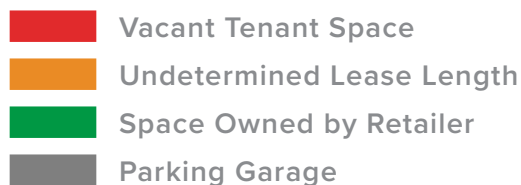


Figure 4.21 | 2nd Floor Leasing Map
(Author, 2022)



Assess Land Value

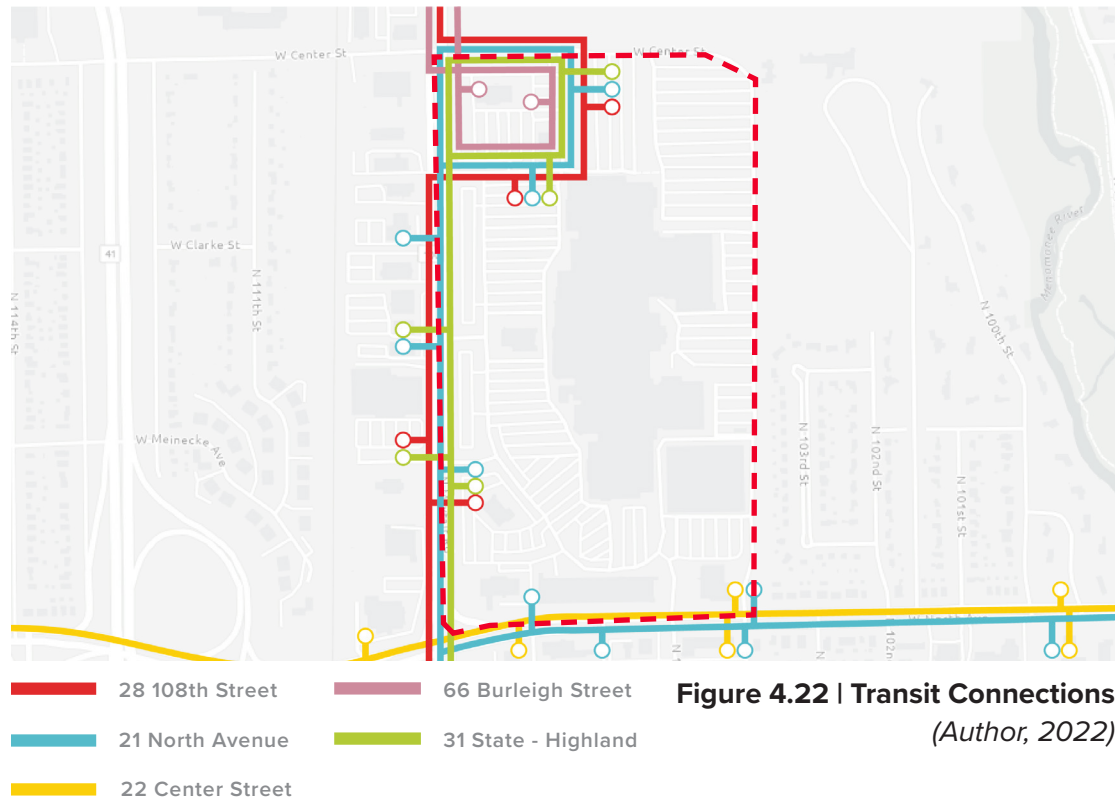
Before construction development can begin, the value of the land needs to be determined and analyzed, as this asset should be included in the financial statements. Typically, the value of the land can be accessed through past appraisals from the local tax department, given this information is public. As shown in the table below, the assessed and improvement value

of Mayfair Mall has been in decline in recent years, providing ample reasoning to further look into redevelopment options for the future. This decline indicates that the city and community do not evaluate the value of the asset very highly, and therefore may be looking for alternative uses to revitalize the neighborhood and generate continuous revenue for the city.

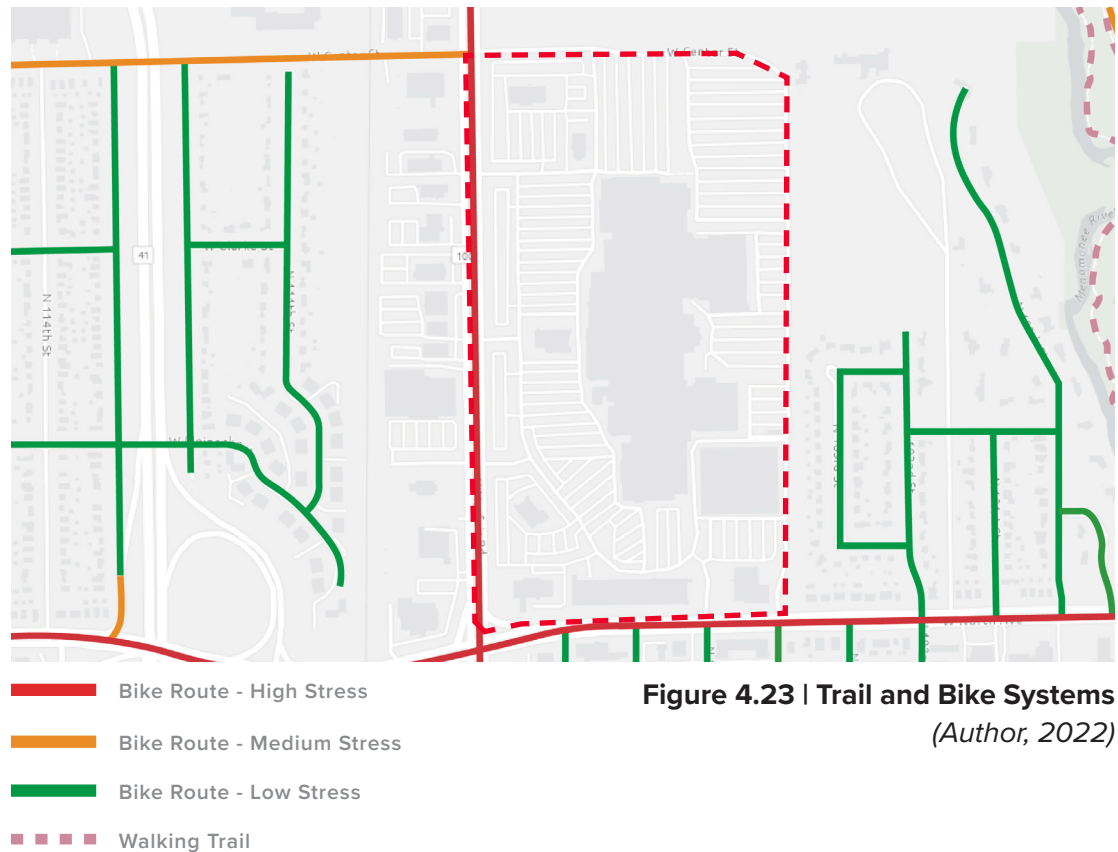
2020 Mayfair Land Value		Mayfair Property Tax History	
Assessed Value	\$435,600,000	2020 (2.2%)	\$9,602,636.40
Land Value	\$77,026,900	2019 (2.2%)	\$10,079,249.02
Improvement Value	\$358,573,100	2018 (2.3%)	\$10,654,946.05
2019 Mayfair Land Value		2017 (2.3%)	\$10,546,698.82
Assessed Value	\$449,700,000	2016 (2.4%)	\$10,544,869.82
Land Value	\$77,026,900	2015 (2.3%)	\$9,822,652.84
Improvement Value	\$372,673,100		

Table 4.5 | Mayfair Land Value
(Sourced from GCS Software, 2022)

TRANSIT CONNECTIONS



PEDESTRIAN TRAIL/BIKE SYSTEMS



MENOMONEE RIVER FLOODPLAIN

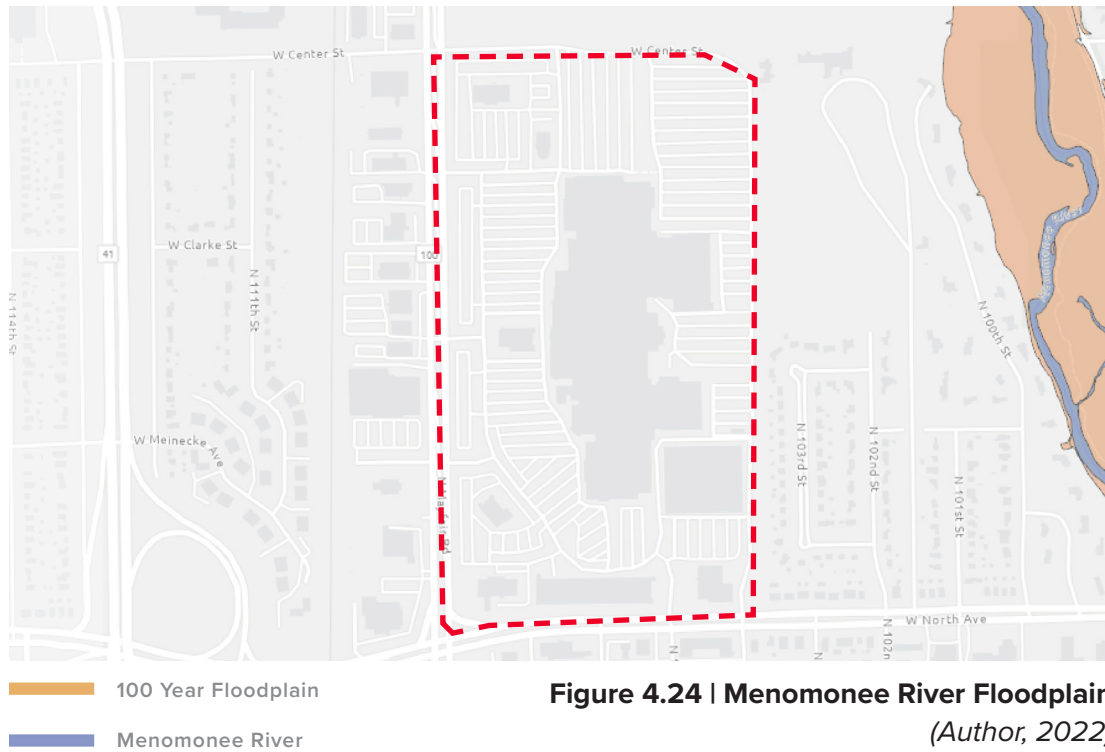


Figure 4.24 | Menomonee River Floodplain
(Author, 2022)

SITE GRADING

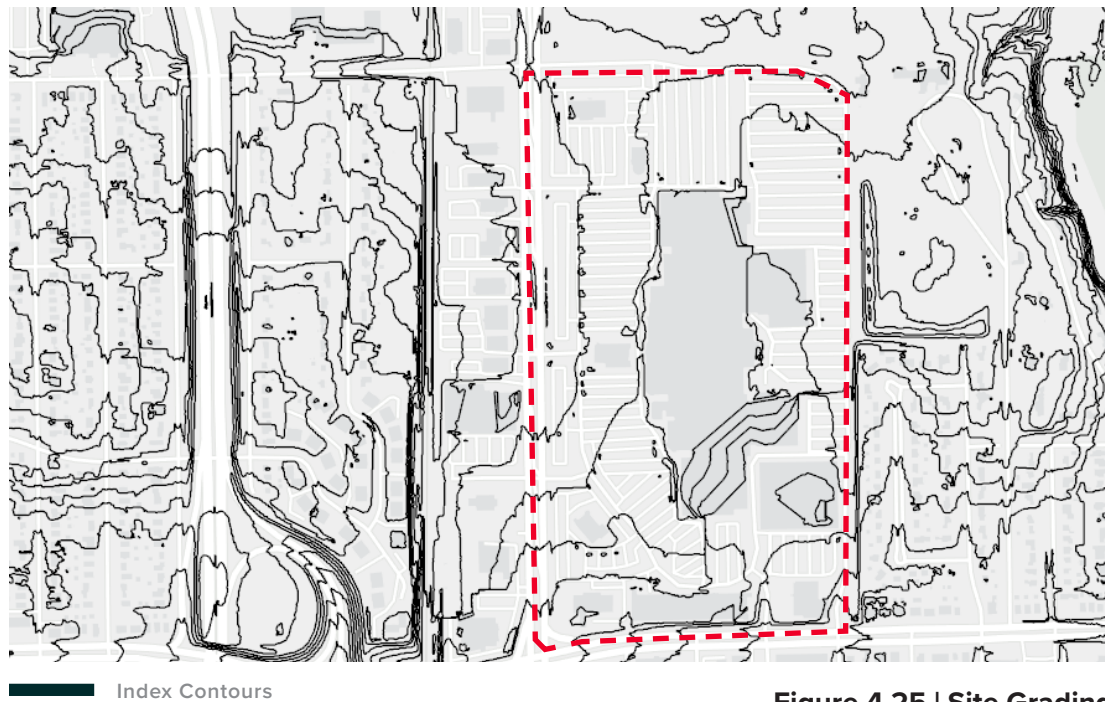


Figure 4.25 | Site Grading
(Author, 2022)

EXISTING UTILITY INFRASTRUCTURE

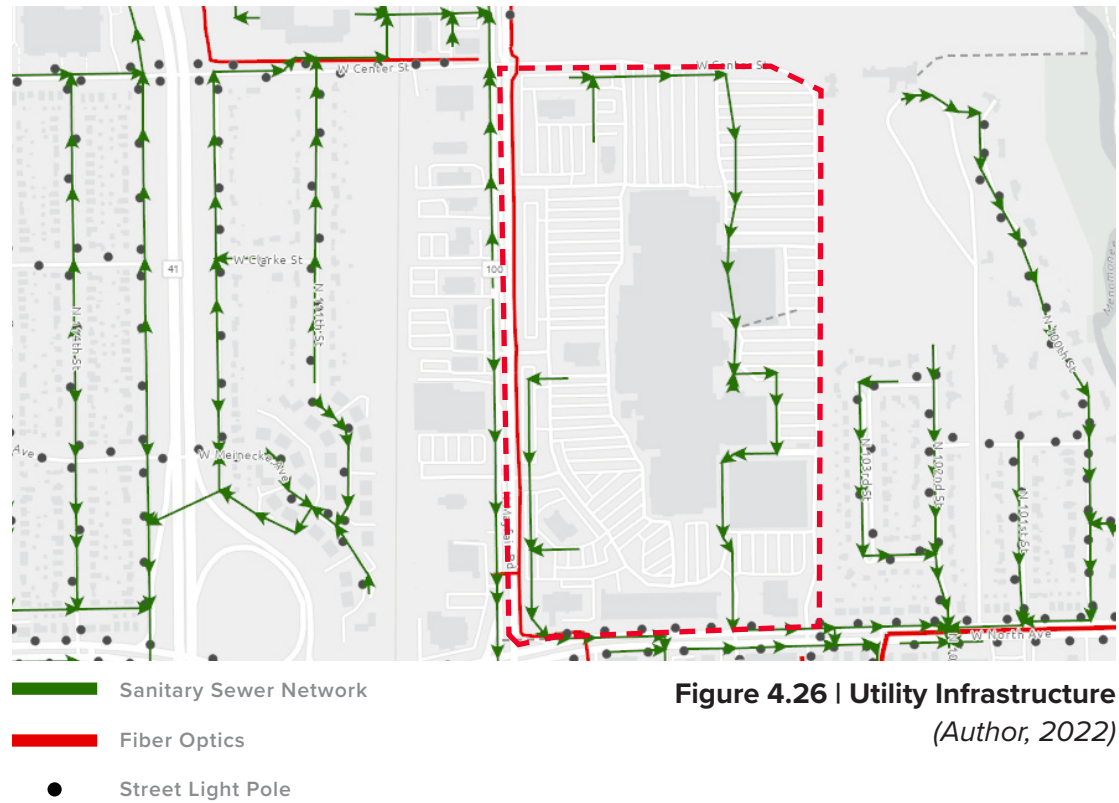


Figure 4.26 | Utility Infrastructure
(Author, 2022)

SOIL COMPOSITION

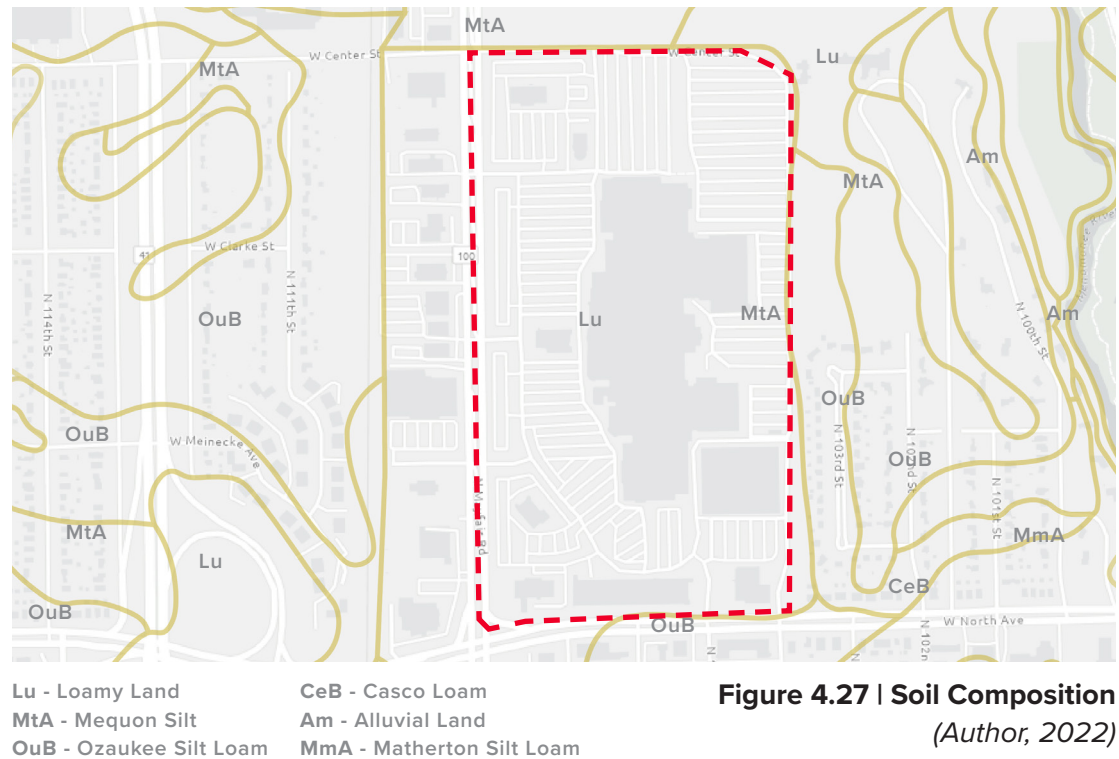


Figure 4.27 | Soil Composition
(Author, 2022)

Evaluation Conclusion

Completing a thorough feasibility study that included background site information, market analysis, and regulatory analysis provided valuable data and knowledge that will aid in the projective design of Mayfair Mall. Understanding these crucial aspects of the site will improve the viability of the proposed design by providing the opportunity to alter the concepts to suit the financial, social, political, and environmental limitations of the project. When working to develop a large commercial site such as Mayfair Mall, understanding the sentimental value, market constraints, zoning restrictions, on-site infrastructure, and most importantly the audience you are designing for will generate better design solutions that reposition the asset in the most sensible way possible.



Figure 5.1 | Mayfair Mall
(Author, 2021)

05

APPLICATION

The last section of the methodology will be a projective design, where detailed design concepts based on three redevelopment strategies will be applied to the declining Mayfair Mall in Wauwatosa, WI. This mall was selected for numerous reasons, some of which include drastic declining sales and popularity over the past few years, recent plans to develop adjacent properties, and personal site familiarity and experience. Using all the findings from the literature review, precedent study, case studies, surveys, and interviews, three different design concepts were created based on the redevelopment strategies stated earlier in the project. To begin the projective design method, a thorough background search of the site history, location importance, and future development plans were conducted to gain familiarity with the project site. Following the initial site background search, additional steps were taken to carry out the remainder of the projective design which led to three development concepts. From those finely developed concepts within each strategy, pro-forma scenarios were developed to understand the strengths of each concept, which in turn were used to develop one final design for the envisioned Mayfair Mall.

TYPOLGY DESIGN DEVELOPMENT

BACKGROUND

In the conceptual design phase of the projective design, three separate concepts were developed that differentiate based on the typology of the development strategy: complete demolition and new construction (new mall or other urban form), semi-adaptive re-use, and re-purposing the existing structure. The three concepts

will have many similarities including land use, parking/transportation, and amenities offered due to surrounding markets and demand, but differed in aspects such as spatial planning (dependent on typology) and circulation. Concepts were developed to a level where accurate financial, ecological, and social analysis and metrics can be completed.

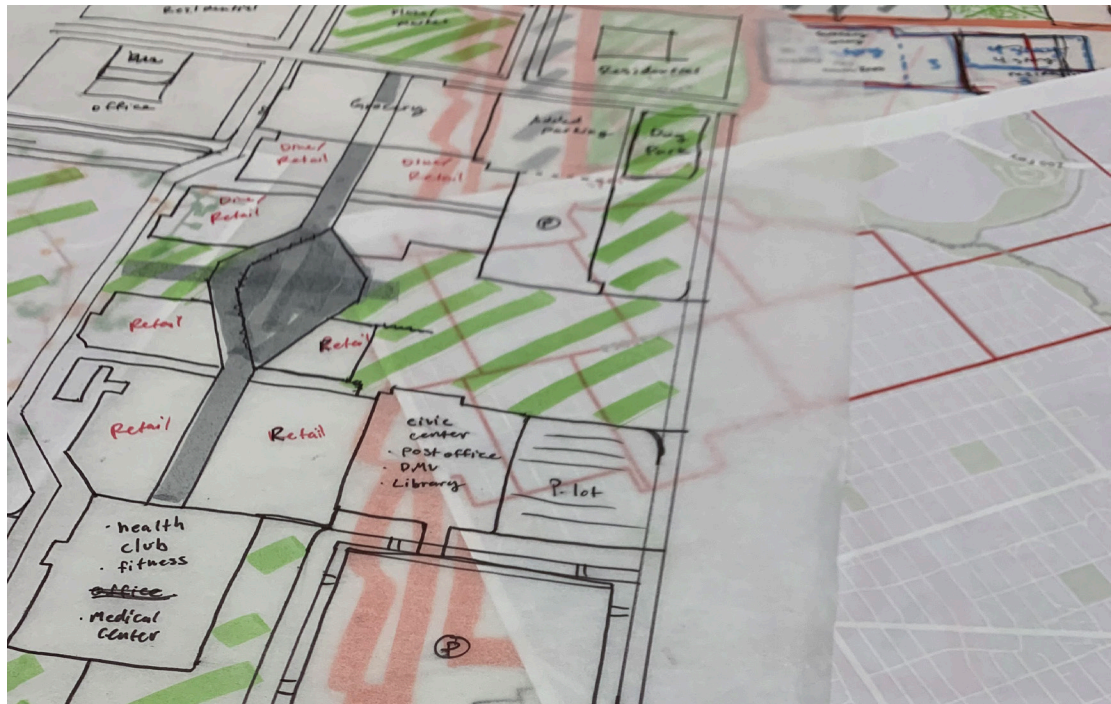


Figure 5.2 | Typology Process
(Author, 2022)

TPOLOGY CLASSIFICATION

Facelift

This concept introduces parking and residential infrastructure on the perimeter of the existing mall, while reorganizing the tenant composition on the interior of the mall. This allows the large existing greyfield parking lots to be replaced by active parks and other outdoor spaces, creating the opportunity for unique outdoor experiences within a consumer-oriented environment.



Figure 5.3 | Facelift Figure Ground
(Author, 2022)

Adaptive Reuse

Converting the existing malls' main corridors into open-air pedestrian streetscapes creates robust indoor/outdoor relationships for residents, employees, and site visitors. The implementation of residential and office buildings in addition to the existing retail infrastructure provides the surrounding community with a live-work-play environment within a prominent area of the city.

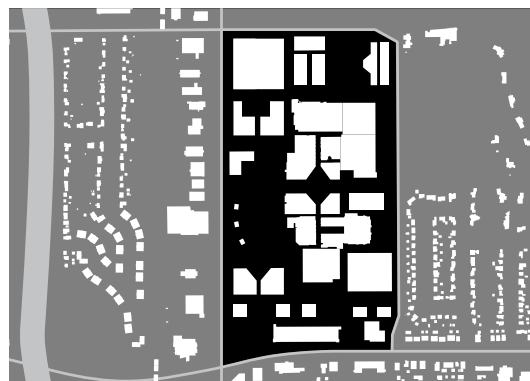


Figure 5.4 | Adaptive Reuse Figure Ground
(Author, 2022)

Complete Demolition

Clearing the site of all existing infrastructure allows for the proposed design to better integrate into the urban fabric, in terms of both spatial organization and land use. Reorganizing the land uses throughout the site will provide more space for community needs such as access to city transportation networks, public parks, plazas, and civic amenities.

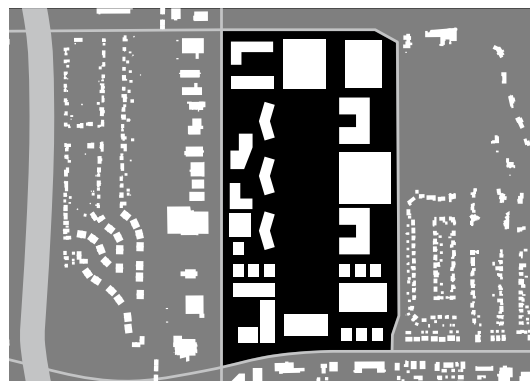


Figure 5.5 | Demolition Figure Ground
(Author, 2022)

FACELIFT DESIGN CONCEPT

Repurposing the existing mall structure while adding new land uses to the perimeter of the site allows the space to serve as a mixed-use community while maintaining low construction costs. Although the main structure of the old shopping mall will remain, a new composition of retail and restaurant tenants will occupy the spaces, generating new environments and experiences throughout the

development. Providing a number of multi-family residential and office space within the proposed concept creates a livable community where residents can work and shop in one place. Shared parking garages were also added to the first and second stories of the residential and office buildings, leaving room for large green spaces to occupy the current parking lots.

LEGEND

- A. Multi-Family Residential
- B. Retail
- C. Office Building
- D. Discovery Center
- E. Hotel
- F. Restaurant Dining
- G. Civic Center
- H. Grocery Store
- I. Parking Garage
- J. Surface Parking
- K. Green Space/Plaza

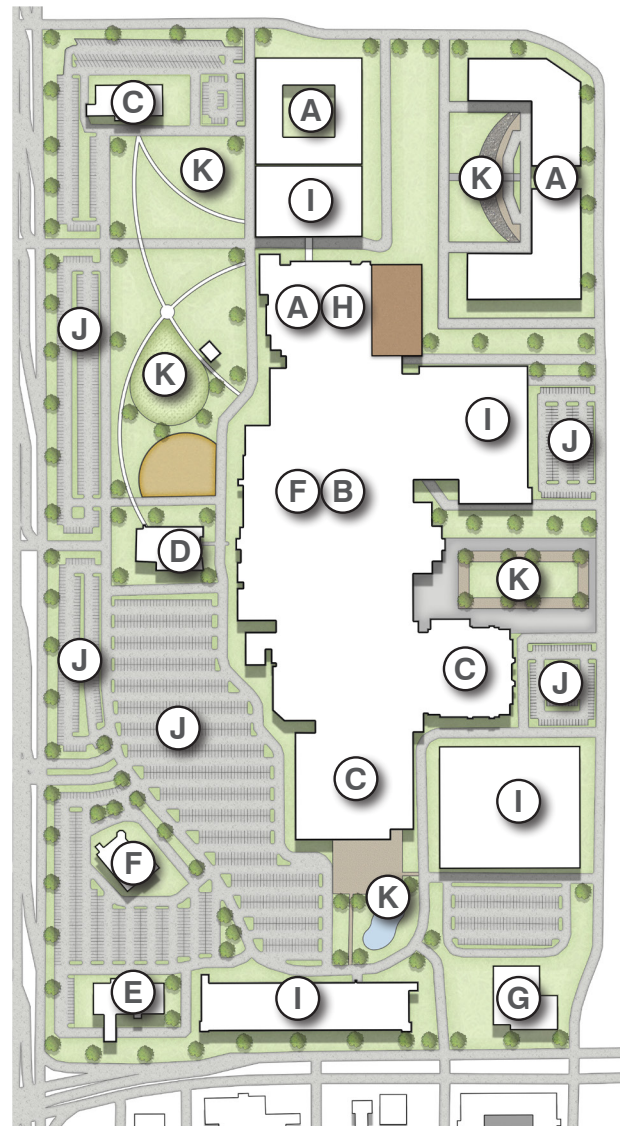


Figure 5.6 | Facelift Concept
(Author, 2022)

Site Information		Residential	
Site Acreage	86	Total Residential SF	944,123
Buildable Land Area	3,746,160 SF	Total DU	1,180
Gross Floor Area	3,852,909 SF	Total Residents	2,360
Floor Area Ratio	1.03%	Parking Stalls Needed	1,475
Parking		Commercial	
Total Stalls Needed	5,877	Total Commercial SF	1,412,764
Parking Stalls Provided	7,666	# of Employees	1,884
Surface Parking Stalls	2,327	Parking Stalls Needed	2,826
Structured Parking Stalls	5,339	Office	
		Total Office SF	788,083
		# of Employees	1,576
		Parking Stalls Needed	1,576

Table 5.1 | Facelift Specifications
(Author, 2022)

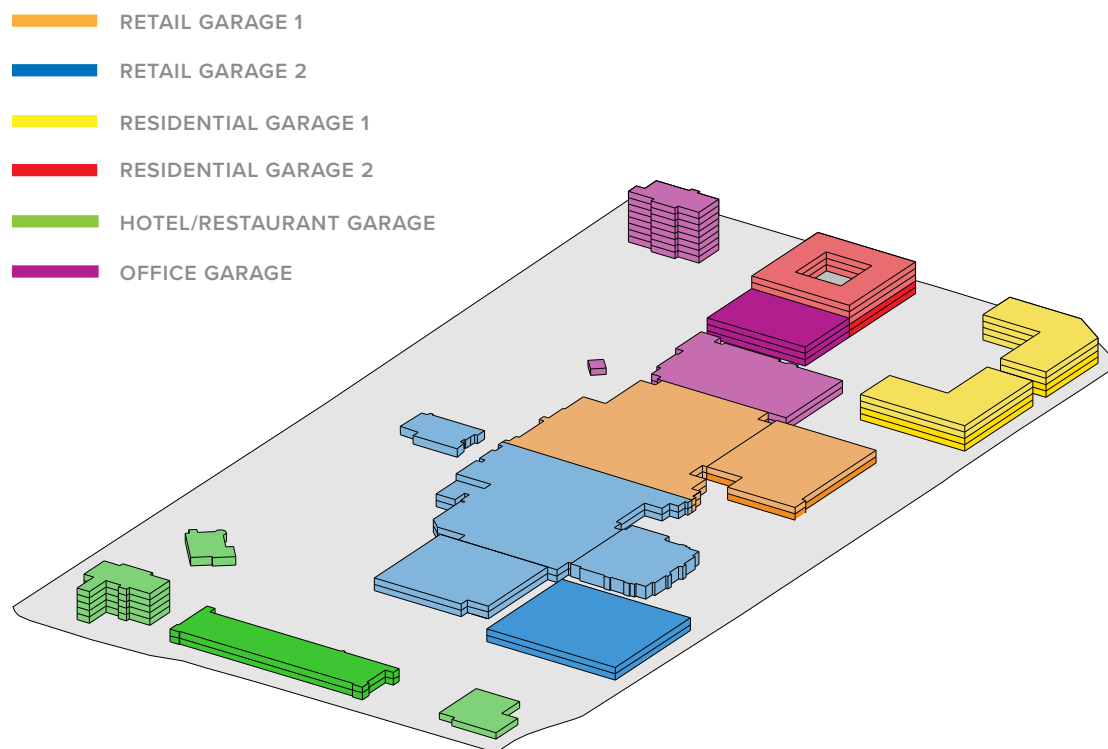


Figure 5.7 | Parking Garage Relationship to Buildings
(Author, 2022)

ADAPTIVE RE-USE DESIGN CONCEPT

Converting many of the prominent interior walls of the mall into exterior walls breaks apart the large, enclosed mall into smaller buildings. This strategy allows the pedestrians to feel more comfortable within the site by creating strong relationships between the buildings and their adjacent outdoor spaces, while also giving the pedestrians unobstructed sightlines across to better

orient themselves. Numerous multi-family residential and office buildings were added throughout the site, with shared parking on the first few levels. This allowed for the elimination of almost all surface parking spaces and replaced them with many different outdoor spaces such as two main greenway corridors, a public park, and an outdoor amphitheater.

LEGEND

- A. Multi-Family Residential
- B. Retail
- C. Office Building
- D. Health Club
- E. Grocery Store
- F. Restaurant Dining
- G. Hotel
- H. Civic Center
- I. Education Center
- J. Parking Garage
- K. Green Space/Plaza
- L. Entertainment
- M. Dog Park

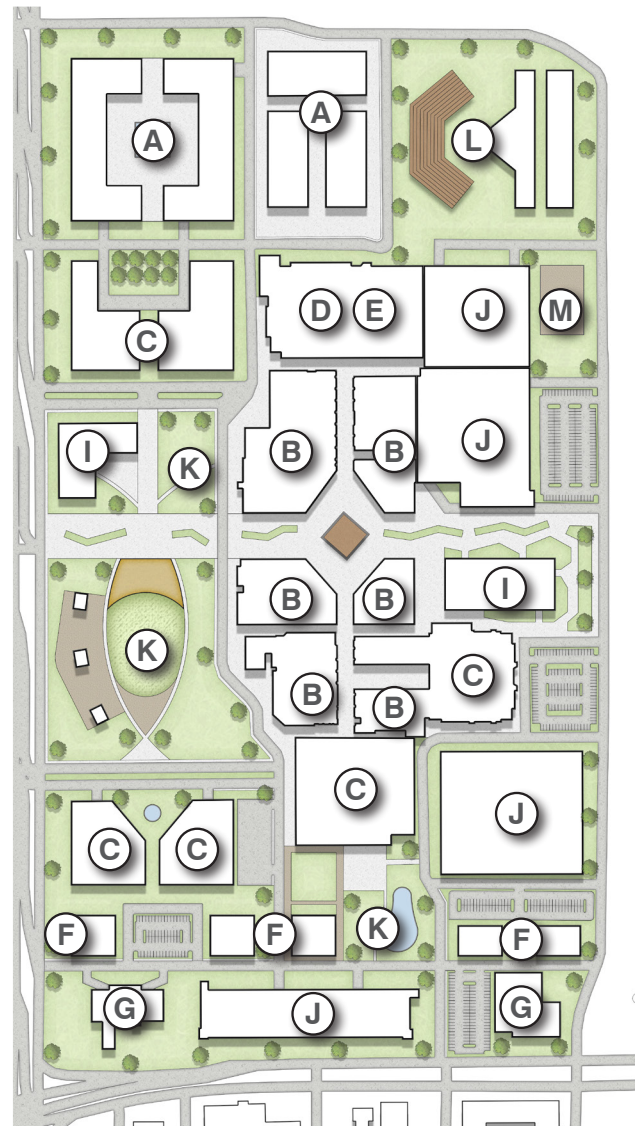


Figure 5.8 | Adaptive Reuse Concept
(Author, 2022)

Site Information		Residential	
Site Acreage	86	Total Residential SF	717,126
Buildable Land Area	3,746,160 SF	Total DU	896
Gross Floor Area	3,839,215 SF	Total Residents	1,793
Floor Area Ratio	1.02%	Parking Stalls Needed	1,121
Parking		Commercial	
Total Stalls Needed	5,351	Total Commercial SF	1,362,998
Parking Stalls Provided	6,271	# of Employees	1,817
Surface Parking Stalls	473	Parking Stalls Needed	2,726
Structured Parking Stalls	5,798	Office	
		Total Office SF	752,362
		# of Employees	1,505
		Parking Stalls Needed	1,505

Table 5.2 | Adaptive Reuse Specifications
(Author, 2022)

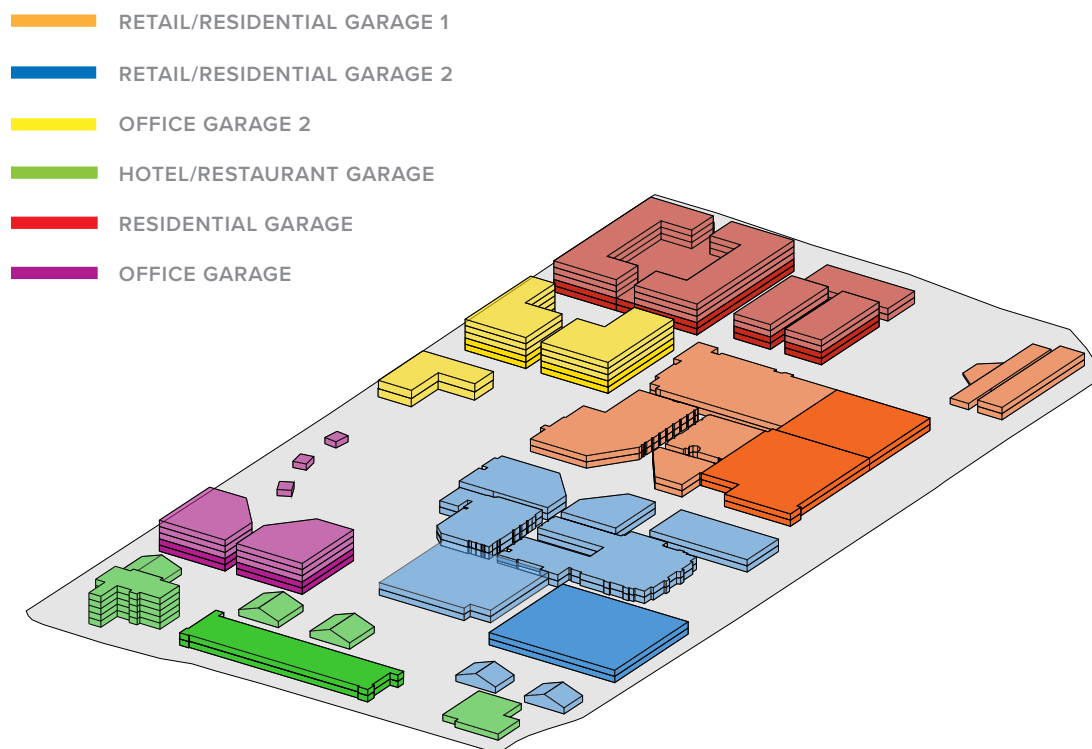


Figure 5.9 | Parking Garage Relationship to Buildings
(Author, 2022)

COMPLETE DEMOLITION DESIGN CONCEPT

Although the most expensive of the redevelopment strategies, demolishing and reconstructing everything on site presents the opportunity to reintegrate these underperforming and undervalued sites back into a prominent area of the city. This concept is a mixed-use community

that provides residential, office, retail, civic and hotel uses, surrounding an expansive public park in the middle of the site. Placing small pocket parks and green interventions in between indoor amenities allows the visitors to experience a variety of spaces, evoking new feelings each and every visit.

LEGEND

- A. Multi-Family Residential
- B. Retail
- C. Office Building
- D. Dining and Restaurant
- E. Hotel
- F. Civic Center
- G. Discovery Center
- H. Entertainment
- I. Parking Garage
- J. Park/Open Space
- K. Market/Plaza
- L. Playground

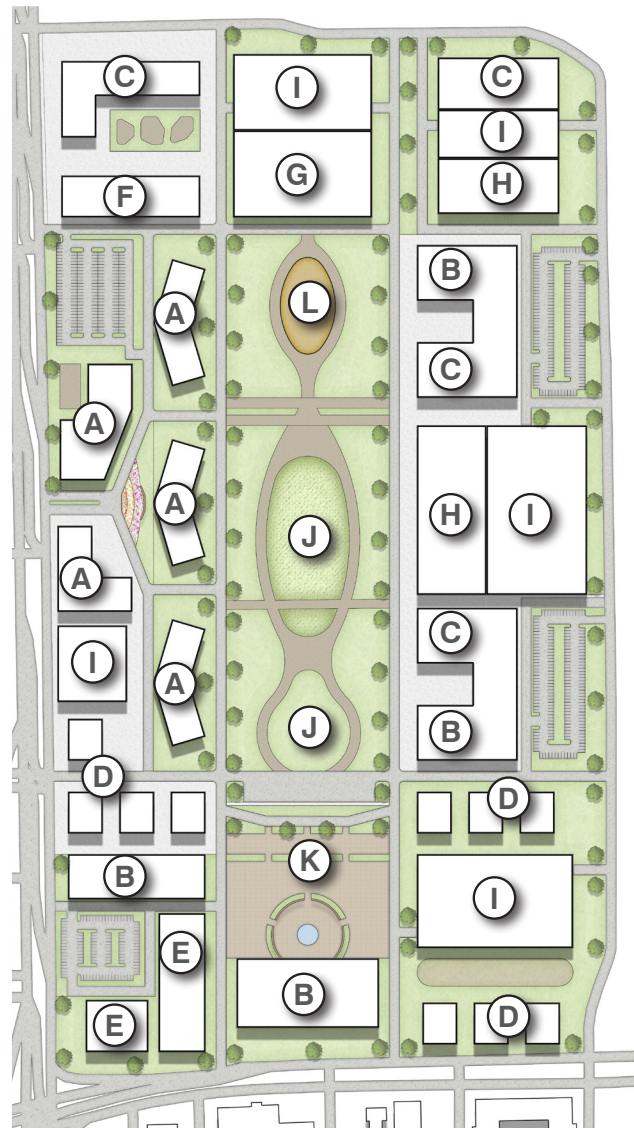


Figure 5.10 | Demolition Concept
(Author, 2022)

Site Information

Site Acreage	86
Buildable Land Area	3,746,160 SF
Gross Floor Area	3,544,522 SF
Floor Area Ratio	0.95%

Parking

Total Stalls Needed	5,175
Parking Stalls Provided	5,970
Surface Parking Stalls	651
Structured Parking Stalls	5,319

Residential

Total Residential SF	844,185
Total DU	1,055
Total Residents	2,110
Parking Stalls Needed	1,319

Commercial

Total Commercial SF	1,244,564
# of Employees	1,659
Parking Stalls Needed	2,489

Office

Total Office SF	683,372
# of Employees	1,367
Parking Stalls Needed	1,367

Table 5.3 | Demolition Specifications
(Author, 2022)

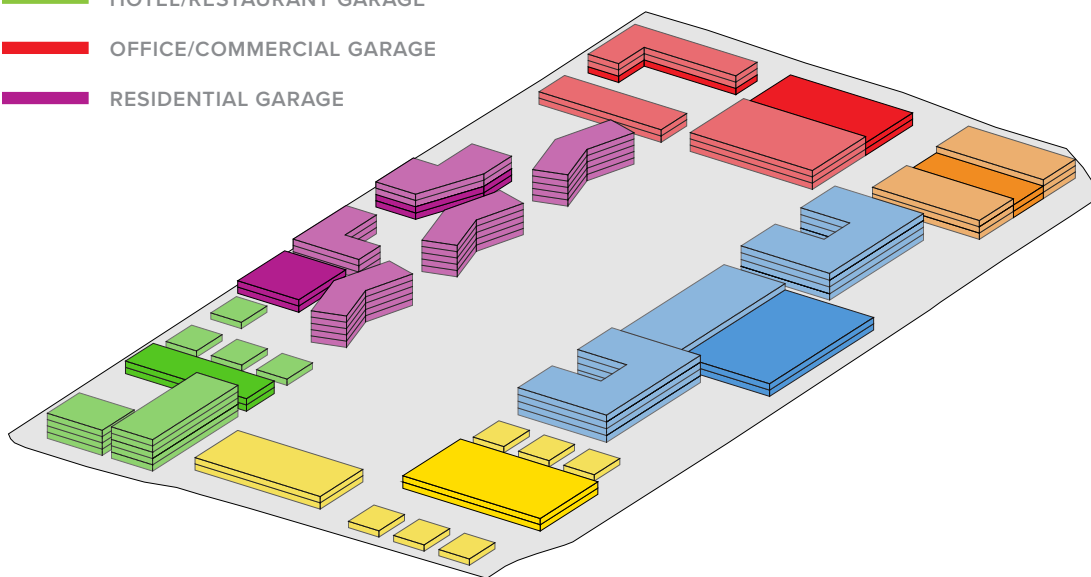


Figure 5.11 | Parking Garage Relationship to Buildings
(Author, 2022)

FACELIFT TYPOLOGY CONCEPT EVALUATION

The facelift concept plan revamps the existing site and infrastructure into a modern retail center that offers other land uses such as mixed-use residential and office buildings. Although using existing structures greatly reduces construction costs, the spatial organization and land uses generally stay the same, which

ultimately provides visitors with the same experiences and social interactions that were present in the old mall. Additional buildings were added around the perimeter of the site to block high trafficked areas as well as provide parking structures in order to transform the surface parking spaces into greenspace and parks.

ADAPTIVE REUSE TYPOLOGY CONCEPT EVALUATION

Using some of the existing mall structure, the adaptive reuse concept transforms the enclosed mall into a mixed-use pedestrian zone that aims to increase city revenue and reintegrate open spaces within the urban environment. Breaking apart the large mall into smaller buildings provides site

users with a more open-air pedestrian-friendly space that improves vehicular and pedestrian circulation patterns. Having smaller pockets of outdoor spaces near each building increases the potential for visitors to socialize and interact.

DEMOLITION TYPOLOGY CONCEPT EVALUATION

Completely clearing the existing site of all infrastructure, the demolition concept uses the blank canvas to create a new urbanist neighborhood that improves the lifestyle of surrounding community members. Demolishing the entire site will drastically increase construction costs and extend the timeframe to complete the project,

although this development strategy has a many long-term benefits that improves the overall community. With a blank site, the strategically placed buildings integrate well with the existing infrastructure, making the site easily accessible by vehicle, public transit, or other modes of transportation.

Economic: **60%** - Low Investment Return
 Recreation: **45%** - Small Interventions
 Outdoor: **25%** - Numerous Pocket Parks
 Ecological: **20%** - Pavement Dominated
 Social: **35%** - Some New Experiences
 Parking: **25%** - Majority Surface Parking
 Spatial Arrangement: **20%** - Congested Retail
 Circulation: **45%** - Indoor Corridor



Figure 5.12 | Facelift Evaluation
(Author, 2022)

Economic: **75%** - Increases City Revenue
 Recreation: **80%** - Complimentary Land Uses
 Outdoor: **60%** - Small Public Park
 Ecological: **70%** - Stormwater Infrastructure
 Social: **85%** - Multiple Nodes for Interaction
 Parking: **80%** - Surface to Structure Parking
 Spatial Arrangement: **90%** - Urban CBD
 Circulation: **70%** - Pedestrian Focused



Figure 5.13 | Adaptive Reuse Evaluation
(Author, 2022)

Economic: **40%** - High Development Costs
 Recreation: **65%** - Large Public Park
 Outdoor: **55%** - Pocket Parks Throughout
 Ecological: **65%** - Sufficient Open Space
 Social: **70%** - Provides New Interactions
 Parking: **65%** - Surface to Structure Parking
 Spatial Arrangement: **80%** - Border Infrastructure
 Circulation: **85%** - Vehicular Grid System



Figure 5.14 | Demolition Evaluation
(Author, 2022)

FINAL DEVELOPMENT PLAN

BACKGROUND

Using a mixed-use model, the redevelopment plan for Mayfair Mall aims to create a new sense of identity and community by seamlessly integrating a range of live-work-shop opportunities in a pedestrian dominated environment. Adaptively reconstructing many of the existing mall's structural support system, the once enclosed mall was repurposed into several smaller buildings, presenting more opportunities for indoor/outdoor relationships and social gathering spaces. Land uses and amenities offered within the site include multi-family residential, office space, retail shops, nature conservancy, hotel, health club, grocery store, and various dining options.

A 6.5-acre public park is also included in the proposed plan, offering sports and recreation activities, a children's playground, and a large open lawn that separates the heavily trafficked Mayfair Road from the core pedestrian spaces within the site. Many of the land uses and amenities that are proposed on site were driven by a brief market analysis of the area, confirming a consumer demand for specific tenants. Overall, the Mayfair Mall redevelopment plan aspires to revitalize the City of Wauwatosa by creating a new urbanist neighborhood on an undervalued parcel of land, with anticipation to influence other underperforming developments to follow suit.

Site Information		Residential	
Site Acreage	86	Total Residential SF	1,542,111
Buildable Land Area	3,746,160 SF	Total DU	1,928
Gross Floor Area	3,820,281 SF	Total Residents	3,855
Floor Area Ratio	1.02	Parking Stalls Needed	2,891
Parking		Commercial	
Total Stalls Needed	11,090	Total Commercial SF	1,363,720
Parking Stalls Provided	11,395	# of Employees	1,818
Surface Parking Stalls	595	Parking Stalls Needed	5,455
Structured Parking Stalls	10,800	Office	
		Total Office SF	914,450
		# of Employees	1,829
		Parking Stalls Needed	2,743

Table 5.4 | Final Development Plan Specifications
(Author, 2022)



Figure 5.15 | Final Development Plan
(Author, 2022)

LEGEND

- A. Multi-Family Residential
- B. Office Building
- C. Retail/Residential
- D. Discovery Center
- E. Retail

- F. Hotel
- G. Dining
- H. Civic Center
- I. Childcare/Boys & Girls Club
- J. Grocery Store
- K. Indoor/Outdoor Market
- L. Parking Garage

5. APPLICATION



Figure 5.16 | Park Aerial
(Author, 2022)



Figure 5.17 | Retail Core
(Author, 2022)



Figure 5.18 | Children's Nature Trail
(Author, 2022)



Figure 5.19 | Prominent Gathering Area
(Author, 2022)

PRO-FORMA SCENARIOS

BACKGROUND

Conducting pro-formas for a proposed redevelopment is one of the most important steps in the entire process, as this analysis determines whether the project is financially feasible. Along with the economic pro-forma scenario, this report investigated the environmental and social aspects of the proposal in order to better understand the land and market value

of the site. Characteristics examined include an estimated opinion of probable construction costs, vegetation and green space improvements, and various traits that promote social well-being across the site. The main purpose of conducting pro-forma scenarios should be to understand the past conditions of the site as well as accurately predict the future circumstances so that the most suitable design solution may be presented.

POTENTIAL QUESTIONS FOR PROFORMA SCENARIOS:

- Who will be occupying these spaces and for how long?
- Will tenants be owning or leasing space and for how much?
- Which uses are projected to be the most/least profitable?
- Which tenants will be liabilities in terms of revenue/attraction?
- Who are the stakeholders involved in the project?
- Which parties receive economic benefit from success of project?
- How valuable is the proposed design long-term?

ANALYSIS STRATEGY

Using the available online resources and literature, a brief analysis of the financial, environmental, and social aspects of the projective design were attempted to better comprehend the land value and overall impact on the community. Square footages for all building land uses, hardscapes, and landscapes were computed and applied to the cost per unit method in order to roughly calculate the assessed land

value. Similarly, the environmental analysis conducted a more thorough examination of the landscape amenity square footages as well as used online tools to calculate the estimated carbon footprint and carbon sequestration of the site. The social analysis of the projective design was performed by using the amenities and potential spaces in the proposal to subjectively rank characteristics that promote social well-being in site visitors.



Figure 5.20 | Aspects of Pro-Forma Analysis
(Author, 2022)

FINANCIAL ANALYSIS

The financial profitability data is arguably the most important aspect of the entire redevelopment project, as this ultimately determines if the development will be constructed or not. Without understanding every detailed expense that it takes to build a mixed-use project, the potential for a large net loss and failed project exponentially increases. Developing

a proforma scenario about the detailed design concept presents the strengths, weaknesses, opportunities, and threats of each design and gives a better understanding as to whether the concept is financially feasible. Based on the results of the proforma scenarios, if the proposed designs are not more profitable than the existing infrastructure, obviously the project should not continue.

Site Acquisition Cost		Hardscape Cost	
Original Mall Site	\$27 per SF	Asphalt (Roads)	24,355 LF / \$194,840
Office Development Cost		Concrete Paving (Sidewalks)	787,904 SF / \$4,727,424
Hard Costs	\$90 per SF	Decomposed Granite	129,892 SF / \$1,039,136
Total Development Cost	\$260 per SF	Playground Surfacing	5,759 SF / \$57,590
Apartment Development Cost		Landscape Cost	
Hard Costs	\$100 per SF	Canopy Trees	513 / \$256,500
Total Development Cost	\$150 per SF	Bermuda Sod	1,055,249 SF / \$633,149
Retail Development Cost		Amenities Cost	
Hard Costs	\$90 per SF	Shade Structure	\$250,000
Total Development Cost	\$260 per SF	Recreation Equipment	\$225,000
Total		Total	
Total Infrastructure Cost	\$670 per SF	Total Landscape Cost	\$7,383,639

Table 5.5 | Cost Estimation
(Author, 2022)

FINANCIAL ANALYSIS METHOD

With no previous education or experience in developing a financial pro-forma or construction cost estimate, accurate predictions and models were difficult to develop. For estimated building costs, expenses per square foot of each land use were taken from previously redeveloped malls in the area and averaged out. Although not completely accurate, these figures provided an approximate cost projection for all infrastructure

on site, helping determine whether the proposed plan is financially feasible. Construction costs for the main hardscape and landscape components on site were also calculated, multiplying the overall square footages of each material with recent industry standardized unit costs. Using the construction cost estimate and analyzing the additional elements of the site, a cost/return graphic was generated to show the approximated financial return value in the coming years.

0 YEARS

- Mall demolition and adaptive reuse implementation
- Low rate of return on investments



5 YEARS

- Residential and perimeter buildings to begin construction
- Low net sales with few stores open



10 YEARS

- Continued infrastructure demolition and implementation of existing mall
- Site begins to develop local appeal and full-time residents



15 YEARS

- Landscape and construction costs are finalized, continued maintenance
- Thriving mixed-use community that generates further expansion along Mayfair Rd.



Figure 5.21 | Economic Pro-Forma Analysis
(Author, 2022)

ENVIRONMENTAL ANALYSIS

The detriment that comes from major redevelopment projects such as suburban shopping malls can be immense, causing major issues down the road including flooding and most importantly community disapproval. Developers, planners, and designers are responsible for creating a more cohesive relationship between

public social spaces and the natural environment by building sustainable and environmentally integrated infrastructure. This analysis aims to quantify the green infrastructure and vegetative amenities in the proposed design by using online tools to calculate the carbon footprint and carbon sequestration, generating a ratio of the environmental offset.

Infrastructure Footprint	
Estimated Carbon Footprint	7,032 CO ₂ /YR
Carbon Sequestration	568,684 kg CO ₂

Greenspace Land Uses	
Public Park	288,763 SF
Discovery Nature Trail	2,104 LF
Pocket Parks	142,982 SF
Rain Gardens	47,850 SF

Vegetation Inventory	
Total Trees Planted	513
Bermuda Sod	1,055,249 SF
Bed Prep/Mulch	1,055,249 SF
Irrigation	1,055,249 SF

Table 5.6 | Environmental Impact
(Author, 2022)

ENVIRONMENTAL ANALYSIS METHOD

Square footages of all greenspace and landscape materials, as well as a vegetative inventory were generated to better understand the environmental impact and resilience of the proposed design. Although a detailed analysis of important environmental characteristics

such as runoff, green infrastructure, and pollutants were unable to be calculated, estimated carbon footprint and carbon sequestration numbers were however able to be generated using an online calculator. Being able to quantify and recognize how the landscape works across the site will ensure longevity and cohesiveness of the development.

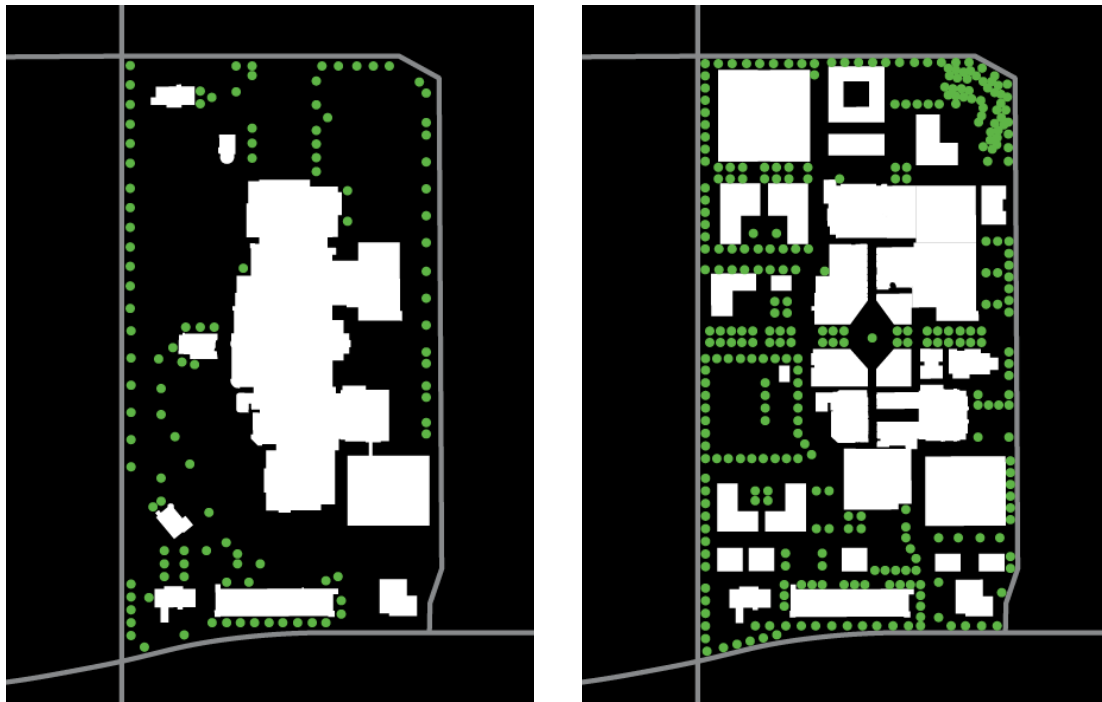


Figure 5.22 | Environmental Pro-Forma Analysis
(Author, 2022)

SOCIAL ANALYSIS

Assessing the potential for social interaction within the proposed design through various characteristics will provide a more accurate depiction of the health and well-being site visitors as well as the overall social impact on the community. Analysis of the social impact on site was conducted by evaluating the public spaces of the three major land uses on site, office, residential, and retail. Using a scale of 0 to 100, each land use will be evaluated based on the overall impact

of each characteristic, comparing the potential influence of each land use on site. Understanding the sociability of a design proposal is crucial in the longevity success of the development, as this measurement predicts the patterns and ways users will interact with each other. This analysis is often skewed or miscalculated, as the movements and actions of humans can often be unpredictable, especially in a new environment that is a palimpsest of the most impactful shopping center in the Milwaukee area.

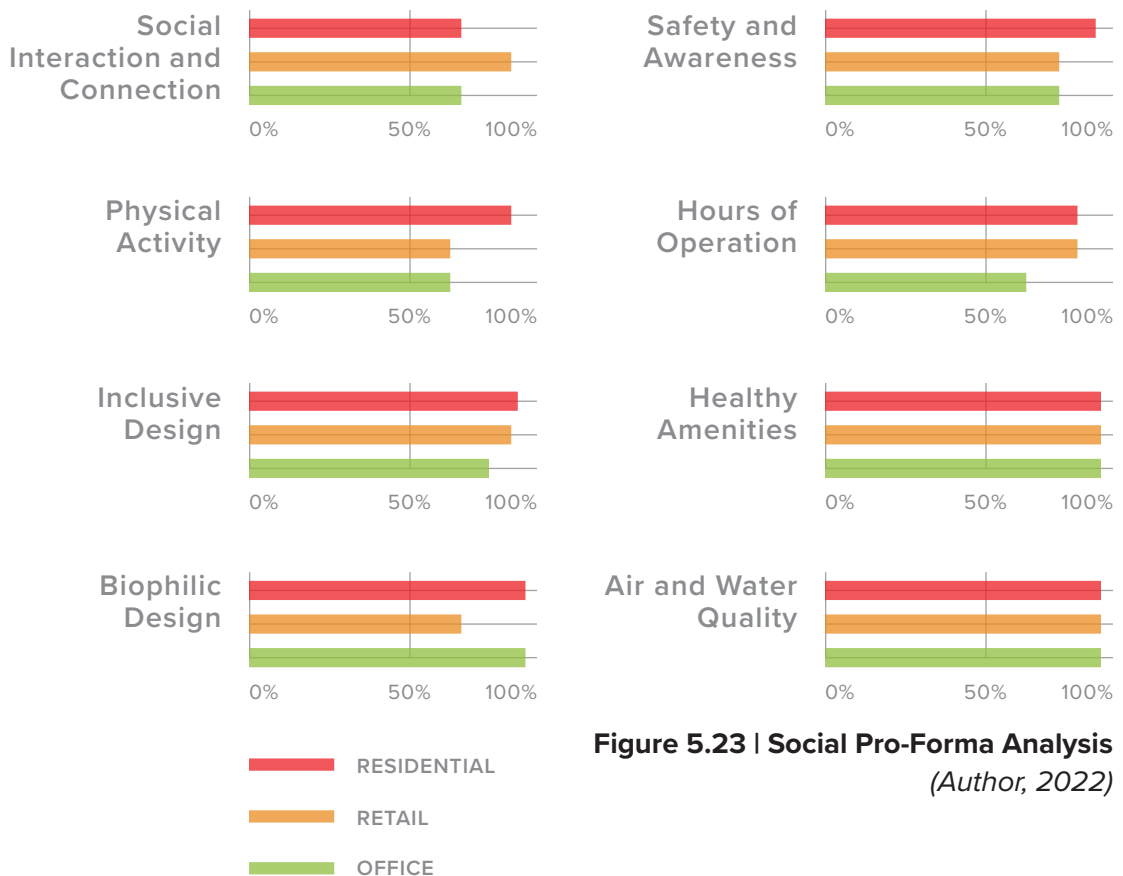


Figure 5.23 | Social Pro-Forma Analysis
 (Author, 2022)

SOCIAL ANALYSIS METHOD

Analyzing and quantifying the intangible elements of social gathering spaces and quality of conversations and experiences that have not happened yet is an extremely important, but difficult task. The process that was used to appraise the sociability of the proposed development included the separation of each major land use (residential, retail, office). From there, potential social spaces for each land use were calculated and subjectively scored based

on characteristics that are typically used to measure social value. Characteristics analyzed included social connection, physical activity, safety and awareness, biophilic design, hours of operation, healthy amenities, inclusive design, and air and water quality. A supporting aerial graphic of the proposed design was also created to help identify the major social spaces and potential areas of community connections that are offered on site.

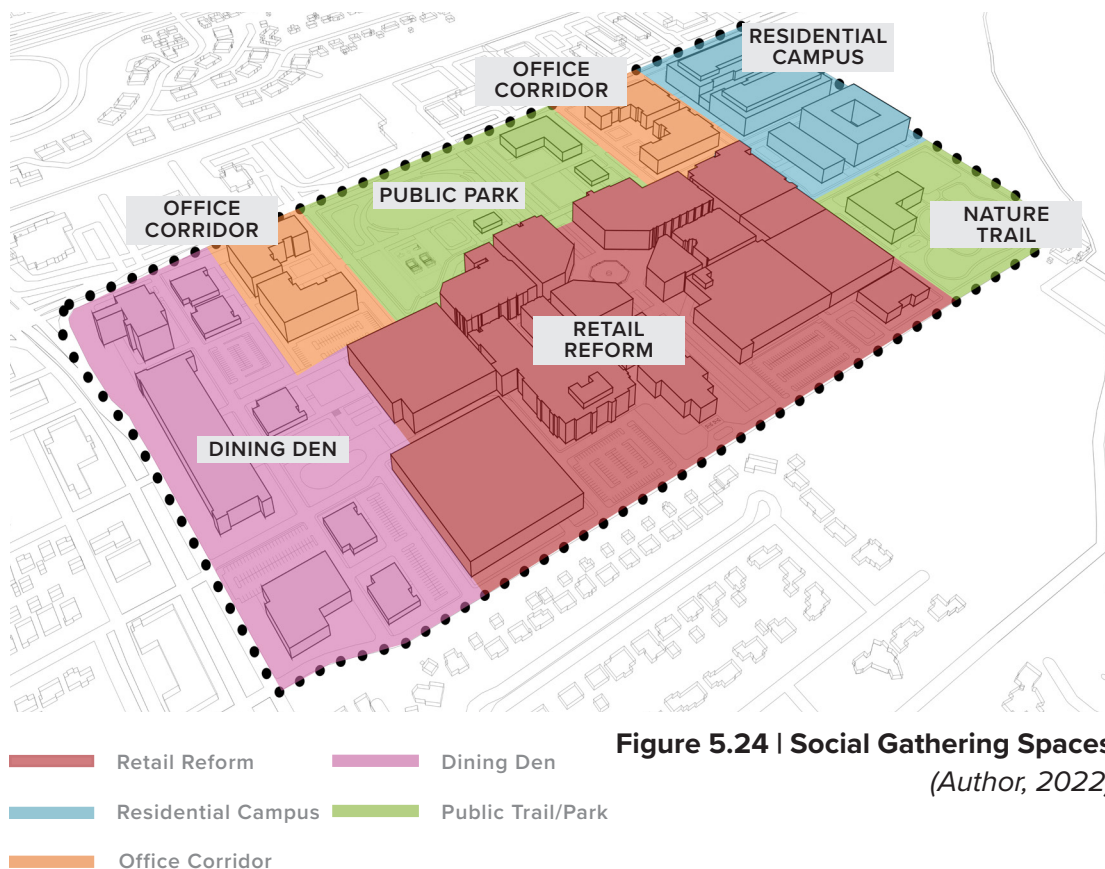


Figure 5.24 | Social Gathering Spaces
(Author, 2022)



Figure 5.25 | Axon of Final Plan
(Author, 2022)

Application Conclusion

Using all previous research involved in the redevelopment of underperforming shopping malls, three typology design concepts were created to help distinguish which redevelopment strategy (facelift, adaptive reuse, complete demolition) would be most feasible and beneficial for the community. The adaptive reuse concept was identified as the most viable option, and thus was further developed into the final projective design of the project. Developing a community asset of this magnitude was an incredible challenge, as there were countless aspects of the site that needed to be accounted for, most of which were outside my area of expertise. Generating financial, environmental, and social pro-forma scenarios was also a very difficult task without the necessary experience, but nonetheless, analyzing these elements are imperative to determining whether the proposal will be beneficial to all parties involved.



Figure 6.1 | Mayfair Mall
(Author, 2021)

06

CONCLUSION

The process of redeveloping a suburban shopping mall can be extremely lengthy and meticulous, but each and every aspect that is analyzed plays an important role in the creation of a final design that is both financially feasible and community changing. Although each underperforming mall presents its' own challenges based on the site context and regional market, this report was produced to showcase the many different characteristics that need to be analyzed in order to accurately develop a solution that is mutually beneficial for the developers as well as the community. The intention of this report is to provide a valuable resource to developers, planners, and designers that can be used as an example for their own specific site development challenges.

FUTURE RESEARCH

PROFESSIONAL RESEARCH

This specific topic was chosen to be researched due to its' current impact and relevance in the real estate development and planning professions, while also addressing a main concern of the public in recreating social gathering spaces in places of vibrancy. Although this report covered many aspects that relate to the redevelopment process, this information could be vastly built upon by future professionals, students, and other interested parties. Much of the information and analysis of this report was provided from a landscape architecture perspective, which creates the potential to expand on this specific research project using an interdisciplinary approach. Consulting professionals from various backgrounds relating to commercial redevelopment such as architects, planners, environmentalists, and developers will not only generate improved design solutions, but will also aid in the analysis and computation of financial, environmental, and social metrics.

As previously stated, this research report was organized and presented as a visioning exercise rather than a real development project for a plethora of reasons. Fortunately, creating a hypothetical development plan does not have the drastic consequences or deadlines that come with a real project, which provides opportunities to update and add any detail necessary to the report. In addition, design and real estate development professionals involved in the repositioning of underperforming shopping malls can reference this report during their design process. Although the redevelopment of Mayfair Mall may not be completely accurate and up to industry standards, professionals can still generate the positive and negative outcomes of this report to inform decisions on their own projects.

PERSONAL RESEARCH

The final products of the current research and report generated additional questions that could lead to additional personal research opportunities in the near future. The research conducted has provided extensive solutions through the lens of landscape architecture, but the outcomes presented have sprouted new career interests and goals relating to real estate development, urban land economics, and asset management. With much of this report providing a cursory analysis of the information,

there are vast amounts of opportunity to delve in and expand on every one of the topics. Specifically, the pro-forma scenarios need to be expanded upon by including financial balance sheets, tree preservation and mitigation requirements, and community engagement methods to gather sociability metrics. Understanding the impacts and outcomes of a design proposal is crucial in assessing the stability and success of the project, which is a topic and method that could be improved on within the design profession.

CONCLUDING REMARKS

PROJECT LIMITATIONS

There were many limitations that presented themselves throughout the duration of this report, but many of the restrictions were either due to professional time constraints or confidentiality of project and site information. Additional sections of this report were intended to be completed such as professional interviews regarding the direction of shopping mall redevelopment, detailed land and market values of the current Mayfair Mall, and more accurate projections of the financial, environmental, and social aspects of the projective design. Without proper education and experience in real estate and urban land economics, construction costs, assessed land values, many other economic characteristics that deal with commercial development were unable to be calculated accurately.

KEY CHALLENGES

One of the major obstacles that was faced during this report was the overall complexity and specialized expertise required to accurately complete all steps of the development process. To the degree possible, and within the time constraints of this project, input and review from development professionals and city officials were sought to help ensure that the projected designs are realistic and conform to development processes to be useful. With prior commitments and schedule limitations, many of the professionals that were intended to provide input were unable to contribute to the project, which restricted the design iteration and review process. Retrieving accurate and up to date information for the existing Mayfair Mall was also an obstacle throughout this report, as much of the data and financial reports were unable to be provided to the public. Not only was accessing the data a challenge, but determining the methods to analyze and present this data into informative graphics was also a major restriction on this report.

REFLECTION

The final outcomes of this research report were very unpredictable throughout most of the process, as this topic and research question raised issues that were outside of my scope of work and expertise. This was one of the primary reasons as to why the organization of this report was presented as more of a learning opportunity than a professionally reviewed document. Without proper education and experience in real estate and commercial redevelopment, the various topics were only able to be completed at a surface level detail.

During the initial stages of this report, the analyzation of information and design solutions seemed to be relatively straight forward, but as research continued and more of the development process was revealed, restrictions on the possibilities of the proposed mall design began to increase.

The feasibility study and site inventory and analysis sections primarily guided the solutions for the typology design concepts and overall development plan, but with more time and research dedicated to regional market and site analysis, a more profitable and beneficial design solution may have been produced.

This project has been a wonderful learning experience and has rapidly increased my knowledge and curiosity on the topic of redeveloping underperforming shopping malls into valuable community assets. One major takeaway of this project is realizing how detailed and time consuming the process for completing a project of this magnitude is. The completion of this project has taught me there is so much more to learn about commercial redevelopment, and I look forward to continuing my career in this profession.



Figure 7.1 | Mayfair Mall
(Author, 2021)

07

APPENDICES

APPENDIX A: GLOSSARY

ANCHOR TENANT

A major department store in a shopping mall that occupies the largest space, serves as the primary traffic generators, and has substantial economic strength.

BIG-BOX RETAIL

A large retail store in a no-frills building usually with a discount price policy. Such stores are typically situated at peripheral locations.

CATEGORY KILLER

A category killer is a sub-category of the power retail format that offers a superior selection of merchandise at highly competitive prices with very limited customer services.

COMMUNITY CENTER

General merchandise or convenience-oriented offerings. Wider range of apparel and other soft goods offerings than neighborhood centers. The center is usually configured in a straight line as a strip or may be laid out in an L or U shape, depending on the site and design.

DEVELOPMENT MARGIN

Development margin is new profit as a percentage of total development costs. While there can be many variations to this formula, this is the most common method.

DEPARTMENT STORE

Retail stores typically consisting of 50 employees or more, having sales of apparel and soft goods combined amounting to 20% or more of total sales. These stores must also sell groups of merchandise including household linens, dry goods, furniture, appliances, home furnishings, and electronics.

DIRECT COMPARISON

The direct comparison approach involves locating several comparable properties that have recently sold in the local market. The sales are then adjusted to provide an indication of value for the subject property.

DISCOUNTED CASH FLOW (DCF)

DCF is a valuation method used to estimate the value of an investment based on its expected future cash flows. DCF analysis attempts to figure out the value of an investment today, based on projections of how much money it will generate in the future.

DISCOUNT RATE

The interest rate used to convert future cash flows (both income and outgoings) to their present value (what it is worth today). The term “discount” does not refer to the meaning of the word, but to the requirement of discounting future cash flows by a particular rate of return to determine the present value.

ESCALATION

Changes in the cost or price of specific goods or services in a given economy over a period. (Alternative names: inflation, growth assumptions)

FACTORY OUTLET

Manufacturers’ and retailers’ outlet stores selling brand-name goods at a discount

FLOOR AREA RATIO (FAR)

The measurement of a building’s floor area in relation to the size of the lot/parcel that the building is located on. FAR is expressed as a decimal number and is derived by dividing the total area of the building by the total area of the parcel (building area ÷ lot area).

GREYFIELD MALL

Retail properties that require significant public and private-sector intervention to stem decline. These malls are developed sites that are economically and physically ripe for major re-development

GROSS PROFIT

A project’s revenue minus its cost. Gross profit is a project’s residual profit after selling a product or service and deducting the cost associated with its production and sale.

HIGHEST AND BEST USE

Valuation concept meaning the possible use of a property that would produce the highest market value. The use must be legally allowable, physically possible and financially feasible.

INTERNAL RATE OF RETURN (IRR)

A measure, expressed as a percentage return on the capital outlay, of the average annual return from the projected cash flows of an investment, or the actual return generated by the cash flows over the investment period where the net present value is equal to zero.

LEASE

A transfer of rights to the possession and enjoyment of property for a definite period of time.

LEASE PLAN

A detailed plan showing the size and configuration of each space located within the shopping center.

LIFESTYLE CENTERS

Upscale national-chain specialty stores with dining and entertainment in an outdoor setting.

MARKET VALUE

Market value is the price an asset would fetch in the marketplace, or the value that the investment community gives to a particular equity or business.

MERCHANDISING PLAN

An overall plan locating merchandise mix throughout the lease plan.

NEIGHBORHOOD CENTER

This center is designed to provide convenience shopping for the day-to-day needs of consumers in the immediate neighborhood.

NET PRESENT VALUE (NPV)

NPV is the difference between the present value of cash inflows and the present value of cash outflows over a period of time. NPV is used in capital budgeting and investment planning to analyze the profitability of a projected investment or project.

NET PROFIT

Net profit is calculated by subtracting a project's total expenses from total revenue, thus showing what the project has earned (or lost) in a given period of time.

POWER CENTER

Category-dominant anchors, including discount department stores, off-price stores, wholesale clubs, with only a few small tenants.

REGIONAL MALL

General merchandise or fashion-oriented offerings. Typically, enclosed with inward-facing stores connected by a common walkway. Parking surrounds the outside perimeter.

RESIDUAL LAND VALUE

The sum of money available for the purchase of land, calculated from the value of the completed development minus the costs of development (including profit).

SALES RATE

The velocity of sale, usually measured by units or lots per month.

SHOPPING CENTER

A group of retail, restaurants, and other commercial establishments that is planned, developed, owned, and managed as a single property.

STRIP/CONVENIENCE MALL

Attached row of stores or service outlets managed as a coherent retail entity, with on-site parking usually located in front of the stores. Open canopies may connect the storefronts, but a strip center does not have enclosed walkways linking the stores. A strip center may be configured in a straight line or have an “L” or “U” shape. A convenience center is among the smallest of the centers, whose tenants provide a narrow mix of goods and personal services to a very limited trade area.

SUPER-REGIONAL MALL

Similar in concept to regional malls but offering more variety and assortment.

THEME/FESTIVAL

Leisure, tourist, retail and service-oriented offerings with entertainment as a unifying theme. Often in urban areas, they may be adapted from older—sometimes historic—buildings, and part of a mixed-use project.

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APPENDIX C: IMAGES CITED

FIGURE 1.1 | MAYFAIR MALL

Studer, Brian. “Mayfair Mall.” Image. December 2021.

FIGURE 1.2 | PROCESS INTRODUCTION MAP

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FIGURE 2.1 | MAYFAIR MALL

Studer, Brian. “Mayfair Mall.” Image. December 2021.

FIGURE 2.2 | LITERATURE MAP

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FIGURE 2.3 | LITERATURE BUBBLE DIAGRAM

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FIGURE 2.4 | HISTORIC MAIN STREET

Studer, Brian. “Historic Main Street.” Image. February 2022.

FIGURE 2.5 | AUTOMOBILE ORIENTED ARRIVAL

Mattison, Ken. “Southridge Mall.” Image. 1970. Creative Commons.

FIGURE 2.6 | KANSAS CITY PLAZA

Studer, Brian. “Kansas City Plaza.” Image. March 2022.

FIGURE 2.7 | U.S DEPARTMENT STORE SALES

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FIGURE 2.8 | MALLS AS GATHERING SPACES

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FIGURE 2.9 | TYPICAL RETAIL FORM

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FIGURE 2.10 | ALTERNATE RETAIL FORM

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FIGURE 2.11 | TYPICAL TOWN CENTER FORM

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FIGURE 2.12 | ALTERNATE TOWN CENTER FORM

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FIGURE 2.13 | IN-STORE VS ONLINE SHOPPING

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FIGURE 3.1 | MAYFAIR MALL

Studer, Brian. “Mayfair Mall.” Image. December 2021.

FIGURE 3.2 | FACELIFT TYPOLOGY

Studer, Brian. “Facelift Typology.” Diagram. March 2022.

FIGURE 3.3 | ADAPTIVE REUSE TYPOLOGY

Studer, Brian. “Adaptive Reuse Typology.” Diagram. March 2022.

FIGURE 3.4 | COMPLETE DEMOLITION TYPOLOGY

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FIGURE 3.5 | KING OF PRUSSIA FIGURE GROUND

Studer, Brian. “King of Prussia Figure Ground.” Diagram. March 2022. Sourced and adapted from <https://cadmapper.com>

FIGURE 3.6 | HIGHLAND MALL FIGURE GROUND

Studer, Brian. “Highland Mall Figure Ground.” Diagram. March 2022. Sourced and adapted from <https://cadmapper.com>

FIGURE 3.7 | REDBIRD MALL FIGURE GROUND

Studer, Brian. “Redbird Mall Figure Ground.” Diagram. March 2022. Sourced and adapted from <https://cadmapper.com>

FIGURE 3.8 | WINTER PARK VILLAGE FIGURE GROUND

Studer, Brian. “Winter Park Village Figure Ground.” Diagram. March 2022. Sourced and adapted from <https://cadmapper.com>

FIGURE 3.9 | DALLAS MIDTOWN FIGURE GROUND

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FIGURE 3.10 | CITYCENTRE FIGURE GROUND

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FIGURE 3.11 | KING OF PRUSSIA RADIAL DIAGRAM

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FIGURE 3.12 | HIGHLAND MALL RADIAL DIAGRAM

Studer, Brian. “Radial Diagram.” Diagram. March 2022.

FIGURE 3.13 | REDBIRD MALL RADIAL DIAGRAM

Studer, Brian. “Radial Diagram.” Diagram. March 2022.

FIGURE 3.14 | WINTER PARK VILLAGE RADIAL DIAGRAM

Studer, Brian. “Radial Diagram.” Diagram. March 2022.

FIGURE 3.15 | DALLAS MIDTOWN RADIAL DIAGRAM

Studer, Brian. “Radial Diagram.” Diagram. March 2022.

FIGURE 3.16 | CITYCENTRE RADIAL DIAGRAM

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FIGURE 3.17 | WINTER PARK VILLAGE SITE BOUNDARY

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FIGURE 3.18 | WINTER PARK VILLAGE AMENITIES

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FIGURE 3.19 | CITYCENTRE SITE BOUNDARY

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FIGURE 3.20 | CITYCENTRE PLAZA

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FIGURE 4.1 | MAYFAIR MALL

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FIGURE 4.2 | SITE PROXIMITY

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FIGURE 4.3 | SITE PHOTO 1

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FIGURE 4.4 | SITE PHOTO 2

Studer, Brian. “Site Photo 2.” Image. December 2021.

FIGURE 4.5 | SITE PHOTO 3

Studer, Brian. “Site Photo 3.” Image. December 2021.

FIGURE 4.6 | SITE PHOTO 4

Studer, Brian. “Site Photo 4.” Image. December 2021.

FIGURE 4.7 | SITE PHOTO 5

Studer, Brian. “Site Photo 5.” Image. December 2021.

FIGURE 4.8 | SITE PHOTO 6

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FIGURE 4.9 | ASPECTS OF FEASIBILITY ANALYSIS

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FIGURE 4.10 | HISTORY OF MAYFAIR

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FIGURE 4.11 | MARKET VACANCY RATES

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FIGURE 4.12 | MARKET AVAILABILITY RATES

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FIGURE 4.13 | MAYFAIR AREA FIGURE GROUND

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FIGURE 4.14 | ADJACENT LAND USES

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FIGURE 4.15 | MCTS BUS ROUTES

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FIGURE 4.16 | TRANSIT EQUITY

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FIGURE 4.17 | CITY OF WAUWATOSA ZONING MAP

Milwaukee County LIO. “City of Wauwatosa Comprehensive Plan.” Map. 2008.

FIGURE 4.18 | SITE BOUNDARY

Studer, Brian. “Site Boundary.” Diagram. February 2022. Sourced and adapted from Google Earth Imagery. <http://earth.google.com/>.

FIGURE 4.19 | MAYFAIR MALL FIGURE GROUND

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FIGURE 4.20 | 1ST FLOOR LEASING MAP

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FIGURE 4.21 | 2ND FLOOR LEASING MAP

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FIGURE 4.22 | TRANSIT CONNECTIONS

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FIGURE 4.23 | TRAIL AND BIKE SYSTEMS

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FIGURE 4.24 | MENOMONEE RIVER FLOODPLAIN

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FIGURE 4.26 | UTILITY INFRASTRUCTURE

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FIGURE 4.27 | SOIL COMPOSITION

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FIGURE 5.1 | MAYFAIR MALL

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FIGURE 5.2 | TYPOLOGY PROCESS

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FIGURE 5.3 | FACELIFT FIGURE GROUND

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FIGURE 5.4 | ADAPTIVE REUSE FIGURE GROUND

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FIGURE 5.5 | DEMOLITION FIGURE GROUND

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FIGURE 5.6 | FACELIFT CONCEPT

Studer, Brian. “Facelift Concept.” Graphic. March 2022.

FIGURE 5.7 | PARKING GARAGE RELATIONSHIP TO BUILDINGS

Studer, Brian. “Parking Garage Relationship to Supported Buildings.” Graphic. March 2022.

FIGURE 5.8 | ADAPTIVE REUSE CONCEPT

Studer, Brian. “Adaptive Reuse Concept.” Graphic. March 2022.

FIGURE 5.9 | PARKING GARAGE RELATIONSHIP TO BUILDINGS

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FIGURE 5.10 | DEMOLITION CONCEPT

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FIGURE 5.11 | PARKING GARAGE RELATIONSHIP TO BUILDINGS

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FIGURE 5.12 | FACELIFT EVALUATION

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FIGURE 5.13 | ADAPTIVE REUSE EVALUATION

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FIGURE 5.14 | DEMOLITION EVALUATION

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FIGURE 5.15 | FINAL DEVELOPMENT PLAN

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FIGURE 5.16 | PARK AERIAL

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FIGURE 5.17 | RETAIL CORE

Studer, Brian. “Retail Core.” Graphic. March 2022.

FIGURE 5.18 | CHILDREN’S NATURE TRAIL

Studer, Brian. “Children’s Nature Trail.” Graphic. March 2022.

FIGURE 5.19 | PROMINENT GATHERING AREA

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FIGURE 5.21 | ECONOMIC PRO-FORMA ANALYSIS

Studer, Brian. “Economic Pro-Forma Analysis.” Graphic. March 2022.

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Studer, Brian. “Environmental Pro-Forma Analysis.” Graphic. March 2022.

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FIGURE 5.24 | SOCIAL GATHERING SPACES

Studer, Brian. “Social Gathering Spaces.” Graphic. March 2022.

FIGURE 5.25 | AXON OF FINAL PLAN

Studer, Brian. “Axon of Final Plan.” Graphic. March 2022.

FIGURE 6.1 | MAYFAIR MALL

Studer, Brian. “Mayfair Mall.” Image. December 2021.

FIGURE 7.1 | MAYFAIR MALL

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APPENDIX D: TABLES CITED

TABLE 2.1 | PRINCIPLES FOR CREATING NEW URBANIST NEIGHBORHOODS

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