GOOD DESIGN IS GOOD BUSINESS:

AN ANALYSIS IN MIXED-USE ARCHITECTURE

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ABSTRACT

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Over the past several decades, a buzz-word has surfaced in the related fields of architecture, finance, and their intersection in the commercial real estate industry – "mixed-use." Although this may seem like a new form of urban design, it can be traced back hundreds of years to the walled cities of medieval Europe. As centuries of urban development, decay, and redevelopment have played out, influential voices have been calling for an abandonment of single-use urban design and a return to a mix of uses. While mixed-use can be defined as simply as a development than contains three or more revenue-generating components on the same site, it is far more nuanced than that. A successful mixed-use development relies on cooperation between architects, developers, government officials, and community stakeholders. Additionally, it requires adherence to particular processes – engagement, scaling, and anticipation – and principles – place, equity, and detail – to be successful, both from an architectural and financial perspective.

Reflecting the interdisciplinary nature of this thesis, a section will address the challenges and benefits that come with financing mixed-use developments and some of their unique financial features. These include high barriers to entry for smaller firms, a large required flexibility in project planning and debt structuring, a higher risk and return profile compared to single-use assets, and diversification and operational benefits.

As it pertains to the architectural nature of this thesis, field research and observations for analytical discussion will be conducted at four award-winning, mixed-use developments: City Point in Brooklyn, NY, CityCenterDC in Washington, DC, CityCentre in Houston, TX, and Union Station in Denver, CO. These case studies will be analyzed along the processes and principles previously mentioned to determine what makes a successful mixed-use development.

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Part One

A Background in Mixed-Use

INTRODUCTION

I'm standing on a balcony twenty stories above the traffic crawling along First Avenue, enjoying a crisp new fall air. Directly in front of me lies an unobstructed view westward of Manhattan. From this perch, I can observe the incredible urban landscape that unfolds block after block in three directions. The raw energy of civilization, crammed and condensed into twenty-three square miles. For the curious urban planner, this presents a spectacular mosaic of busy sidewalks, gridlocked streets, soaring buildings, and a patchwork of urban oases. Remarkably, three out of every one-hundred Americans calls this place home.¹ While on a less-dense scale, this is repeated dozens of times across the United States, as 81% of the population call urban environments home.² This provides a stark contrast to a century ago, when only 28% of Americans lived in urban areas.³

Looking towards the future, two things seem clear. First, the built environment, propelled by the architects and developers behind it, is increasingly designed to last, with sustainability as a priority. And second, the percentage of urban dwellers will continue to rise, as the United States experiences structural shifts towards a service-oriented economy. With these factors at play, it is critical that key stakeholders – architects, real estate developers, and users of urban spaces – be cognizant of the backdrop they build for the lives of future generations.

¹ United States Census 2010. www.census.gov/2010census/data/. Accessed 14 Nov. 2017.

² Ibid.

³ U.S Department of Commerce, U.S. Census Bureau. *Demographic Trends in the 20th Century*: Census 2000 Special Reports. By Frank Hobbs and Nicole Stoops, Nov. 2002, www.census.gov/prod/2002pubs/censr-4.pdf. Accessed 14 Nov. 2017.

But why would the average person care about understanding how cities function, if they don't have an interest in urban design? Well, as Geoffrey West puts it, "cities are the crucible of civilization," and provide a framework for humanity's innovation, creativity, and intellectual pursuits.⁴ So, to understand how best a city can function is crucially important to our civilization's future. Surprisingly, a key component to a better urban future can be traced back hundreds of years to the Middle Ages.

As most American tourists realize on their first visit to Europe, there's a noticeable difference in these urban landscapes when compared to American cities. This difference dates back to Europe's beginnings as a series of medieval villages, which were dense, highly walkable, walled off, and characterized by mixed-use construction. Through hundreds of years of urban development, decay, renewal, and redevelopment, this dense fabric of mixed-use buildings has prevailed in modern European cities like London or Prague. To many Americans unaccustomed to this setting, it provides a refreshing and rewarding experience. The vibrancy of life that mixed-use architecture allows is usually preferable in many circumstances over the vast, single-use sprawl of modern-day America. However, over the past few decades, a movement promoting the benefits of mixed-use and increasing its frequency in the built environment has been gaining popularity.

Although architects and real estate developers appear to be in agreement over the benefits of this method of urban design, which group is responsible for championing it? A central exploration of this thesis is the professional relationship that the architectural and real estate development communities share through their separate roles in creating and improving the built environment. While architects and developers can have different interests, credentials, and ways of thinking, the two groups tend to think of many issues in the same ways. One such issue that has

⁴ West, Geoffrey. "The Surprising Math of Cities and Corporations." TEDGlobal 2011, July 2011. Speech.

dominated the early twenty-first century has been the increasing desirability of mixed-use design. Through referencing some of the twentieth-century's most influential critics and proponents of mixed-use architecture, this thesis will promote the merits – both architectural and financial in nature – of mixed-use urban design through several, modern-day case studies.

CHAPTER 1: HISTORICAL BACKGROUND



Figure 1 – Trajan's Market features the same components as modern, mixed-use developments. (Khan Academy)

Pre-Modernism

While the modern manifestation of mixed-use projects might appear to be a new idea, people have found increased value in mixed-use spaces for millennia. One of the earliest and most famous examples of this concept is Rome's Trajan's Market, built in 110 A.D. The space combined three crucial components of modern-day, mixed-use design – public space (a place to meet), apartments (a place to live), and retail space (a place to shop) – for the first time in recorded history. Two thousand years later, these same basic human needs remain. This market, thought to be the oldest shopping center in the world, also housed the administrative offices of Emperor Trajan, as well as public space for common Romans to congregate and socialize. In all, a lively scene would have been the backdrop in the second century, with concerts, taverns, grocers, imperial staff,

apartment dwellers, and visitors all interacting together, much as they do today in a modern metropolis – only on a very condensed scale.

In order to answer the driving questions outlined previously, it is critical to examine the relevant literature about the built environment and its innovation over the past half-century. A major question that needs to be resolved is, who espoused this utopian form of architecture first? Was it the design firms that had the vision, the development firms that had the expertise and capital, or was it the intellectual theorists who debated the merits of the best form and function of urban spaces? This chapter attempts to answer this question by looking at some examples of each of these perspectives from the past century and apply them to twenty-first century case studies.

To understand how the American urban landscape became typified by single-use design, let's return to the imagery of the medieval European village. Typically found on a hilltop or along



Figure 2 - Dubrovnik, Croatia is an excellent example of a walled city. (Touropia)

the shoreline, these cities developed on sites that constrained the length of their fortifying wall, which became costlier and more time-consuming to build as circumference grew. As self-contained communities, population growth was restricted to within the wall's confines. Over time, this resulted in denser, more mixed-use cities that served as the backbone for European growth and global dominance during the subsequent centuries. As colonialism spread to the New World's shores, European immigrants replicated this form of urban planning in the early cities of the Thirteen Colonies, and mixed-use remained the dominant method of development for several centuries.

Some American cities that developed prior to the advent of the automobile still display this vibrancy. A prime example of this can be found in New York's beginnings south of Wall Street.



Figure 3 - Colonial New York's northern boundary at Wall Street (Wikipedia)

The original community of New Amsterdam grew from just 300 citizens into the Western Hemisphere's largest city by 1830.⁵ This rapid population growth led to dangerous living conditions and required local governments to begin mandating the separation of spatial uses. As such, New York became the first city to implement zoning restrictions in 1916.

Modernism

Ten years after their creation, zoning ordinances were supported by the courts and ruled constitutional under the United States Supreme Court's 1926 decision in *Village of Euclid, Ohio v. Ambler Realty Co.* This precedent cemented Euclidean zoning as the de facto framework for the majority of American cities going forward. These early zoning restrictions had two goals in mind. First, they aimed to avoid overcrowding and health, fire, and safety hazards. And second, they aimed to prevent a mixture of land uses that could cause future problems.⁶

While the widespread adoption of zoning laws across American cities was necessary and positive in many regards, it has also led to the overwhelming presence of single-use spaces over the past century of urban development. Many zoning ordinances, such as floor-to-area ratios and air rights, directly improve the quality of life in urban environments; they provide adequate sunlight to reach pedestrian sidewalks or preserve access to clean air. On the other hand, one of zoning's primary objectives is to segregate uses of space that are considered incompatible.⁷ This segregation of uses is the aspect of zoning that has gone too far over the past century, creating an

⁵ "New York City." *History.com*, A+E Networks, 2010, www.history.com/topics/new-york-city. Accessed 30 Nov. 2017.

⁶ Elliot, Donald L. "Euclidean Zoning." *A Brief History of Zoning. A Better Way to Zone: Ten Principles to Create More Livable Cities*, Island Press, 2008, pp. 9-15.

⁷ "Zoning." *Wikipedia*, en.wikipedia.org/wiki/Zoning. Accessed 1 Dec. 2017.

urban landscape of such distinct uses that, when viewed as a whole, are arguably incompatible with one another.

Influential Voices

One of the most ardent supporters of an urban environment characterized by a mix of uses was Jane Jacobs. Growing up in Scranton, Pennsylvania during the early part of the twentieth century, she later moved to the lively West Village of New York City in 1934. There she was employed as a writer for *Architectural Form*, which "gave her a privileged perch for observing the fiasco of post-war 'urban renewal' and all its evil consequences."⁸ The books she would write would first challenge the urban planning and architectural establishment and later become an essential part of the curriculum.

Jacobs's first book, *The Death and Life of Great American Cities*, written in 1961, is widely considered to be one of the most influential books in urban planning. Over the course of two years of detailed observations from her Eighth Street apartment in the West Village, Jacobs produced a strong critique of 1950s urban planning policy, which had taken root across the post-war United States. She placed responsibility for the decline of cities across the country on these modernist planning practices and proposed a renewed faith in the power of organic urban growth and vitality.

For reference, modernist urban planning was at the time espoused by the famous twentieth century architect Charles-Édouard Jeanneret – universally known as Le Corbusier. He, like countless other famous architects, was determined to promote better living conditions for the residents of crowded, modern cities. However, his plans were frequently too radical to be widely

⁸ Kunstler, Jim. "An Interview with Jane Jacobs, Godmother of the American City." *Metropolis Magazine*, Mar. 2001, www.metropolismag.com/cities/jane-jacobs-godmother-of-the-american-city/. Accessed 10 May 2017.





Figure 4 – La Ville Radieuse (ArchDaily)

Figure 5 - Stuyvesant Town (Ivanhoé Cambridge)

accepted in his native Europe. This resulted in much of modernist urban planning theory becoming widespread in America.

One of his most radical plans was *Ville Contemporaine*, which later evolved into *La Ville Radieuse*, or the radiant city. His plan, entitled *Plan Voisin*, was to raze what is now Le Marais on Paris's Right Bank and replace it with sixty-story cruciform towers for commercial space, with radiating residential buildings dispersed amongst park space. While this type of urban renewal was thankfully opposed in Paris, public housing builders across America adopted some of his theory for their own projects.

An example of this can still be seen today: Stuyvesant Town in Manhattan's East Village, only a short walk from Jacobs's vibrant community. The difference seen from a pedestrian scale is staggering. Whereas Jacobs's neighborhood had a vibrancy of life that could only be provided by a variety of uses on the same block, Stuyvesant Town is a spaced out, residential compound that lacks all the characteristics so beloved by New Yorkers in Manhattan's other neighborhoods. And this tragic trend of single-use, utopian design would continue to expand across the United States over the next several decades. Along with Le Corbusier, Robert Moses, New York's city planner during the mid-twentieth century, believed in rational solutions to the increasing complexity and density in urban spaces. In the mid-twentieth century, Jacobs and Moses became intellectual opponents in the fight to save much of what is now considered to be the most prime urban space in New York from widespread urban renewal. Jacobs's anti-modernist approach to urban planning focused on prioritizing the human users of the space and having complex – and at times chaotic – communities full of life. The urban renewal projects that were popular in her time completely disregarded this complexity of the built environment, she argued. This lack of complexity along with the continual separation of uses – commercial, residential, and industrial – were two of the main causes of the destruction of urban vitality in American cities during the mid-twentieth century. These modern, American cities were the complete opposite of their European counterparts, defined by their heterogeneous and diverse mix of uses.

As Jacobs noticed the decline of American cities, she promoted four generators of this urban diversity. First, a mix of primary spatial uses activates the streetscape throughout the day. She argued that streets that brought commercial users during the day and residential users in the evening created greater safety than segregated uses. Second, short blocks allow for greater numbers of pedestrians than long blocks. Longer blocks constrict the social and economic opportunities in communities. Third, the built environment should be a collection of buildings of different ages and states of repair. This allows a variety of residents and businesses to coexist in proximity to one another. And fourth, urban diversity is created through a higher density than found in suburban environments. A concentration of residents, as well as commercial users, is essential in fostering urban vitality. An exploration into the evolution of mixed-use development also requires an understanding of how society interacts with the built environment. One of the most influential experts on this topic was William "Holly" Whyte, who wrote about sociology and urbanism. Two of his most important literary works in this field from the latter half of the twentieth century were *The Social Life of Small Urban Spaces* and *City: Rediscovering the Center*. While both were written after Jacobs and Koolhaas published their respective books, Whyte served as a mentor to both of them and others in developing the movement of New Urbanism.

In 1970, Holly Whyte took to the streets of Manhattan to begin an anthropological, observational study of the island's concrete jungle and its inhabitants. In total, Whyte and a small team observed sixteen plazas, three parks, and many informal recreational areas. Their goal was to determine how some urban spaces provide functionality for their users while others don't. Moreover, Whyte was interested as a sociologist in uncovering what the practical implications could be for living better lives in our modern, urban environments. His work unearths the intricate nature of society's relationship with the urban experience and aims to increase public awareness of the built environment that we all inhabit.

Whyte discovered that urban parks – no matter the size – were an integral component for promoting human interaction with the modern city. Large, small, verdant, or paved, these urban spaces provide places for people to meet and mingle, as well as stimulate connectivity between the various single-use components of the site.⁹ Whyte's findings highlight an essential feature of all mixed-use properties and illustrates why they have proven to so popular.

While these voices were influential in promoting a resurgence in mixed-use, architects have seen the value in an interconnected design of mixed-use spaces for a long time. A great example

⁹ Whyte, William H. The Social Life of Small Urban Spaces. The Conservation Foundation, 1980.

of this is the architecture firm Kohn Pedersen Fox (KPF). They have been designing mixed-use properties for almost three decades, with their first in 1989: 900 North Michigan Avenue. The project, located on Chicago's "Magnificent Mile," was one of the first in the area to have a varied, vertical program of uses. It successfully combines the uses of retail, hotel, office, multifamily, and transportation all under one roof. KPF saw this as a pivotal point for the development community, realizing this type of product could claim higher prices and demand just because it filled a previously unknown void in the market.¹⁰

The value of each floor benefitted from the common desire among tenants and residents alike for a street front that invited the city in. It offered proof to the development industry that different uses, like architectural elements themselves, could be brought together to form a new kind of synergy, with a combined effect greater than the sum of its parts.¹¹

This experience has paid off for KPF, as they have developed countless mixed-use properties around the world and are now the lead architecture firm for Hudson Yards in New York, the largest private real estate development ever undertaken in the United States. Once completed, the 28-acre property in the heart of Manhattan will act in some ways as a completely new city, with over eleven million new square feet of mixed-use construction. However, unlike the urban renewal projects of the past century, this project coexists in mixed-use harmony with its urban surroundings. As KPF puts it, "Hudson Yards will be defined by the humanistic design approach to seamlessly blending infrastructure with architectural designs."¹² Lying above an active train

¹⁰ "Under One Roof: The Evolution of the Mixed-Use Building." Kohn Pedersen Fox, www.kpf.com/stories/mixed-use.

¹¹ Ibid.

¹² Ibid.

yard for nearby Pennsylvania Station, transportation, retail, office, hotel, multifamily, education, and public spaces will all come together in the most complex, mixed-use development since Rockefeller Center.

Rem Koolhaas detailed the development of Rockefeller Center and its innovative urban design in his book *Delirious New York: A Retroactive Manifesto for Manhattan*. Written in 1978, Koolhaas looked back over the past several centuries of development that turned Manhattan into the modern metropolis of today. In particular, he describes the intense planning and theoretical thinking that went behind creating Rockefeller Center, which was a revolutionary development for its time. Koolhaas highlights the collaboration required to achieve successful urban spaces by saying, "architects, builders, engineers, real estate experts, financiers, lawyers – all have contributed something from their experience and even from their imagination."¹³ Rockefeller Center, a massive project to this day, was the result of not just one perspective or world-view but from many. A variety of talents came together to form a masterpiece in urban design. As Jane Jacobs saw the best urban design as an organic form based on community, Koolhaas writes that "the strength of Manhattan is that all architecture is "by committee" and that the committee is Manhattan's inhabitants themselves."¹⁴

So it seems, that tracing the history of mixed-use design shows that no one group is primarily responsible for its modern-day popularity. The trend of mixed-use developments materializing across the country over the past few decades was not caused by one well capitalized developer, or one radical architect, or even one brash theorist. Rather, it has been well received, popularized, and promoted *by committee*.

¹³ Koolhaas, Rem. Delirious New York: A Retroactive Manifesto for Manhattan. Monacelli Press, 1997.

¹⁴ Ibid.

CHAPTER 2: FINANCING MIXED-USE DEVELOPMENTS

Introduction

While extensive debate has taken place over the best methods of urban design and the merits of mixed-use developments, much less has been written about how they are financed. Due to their size and complexity, financing of mixed-use developments is relatively unique compared to typical single-use projects. Compared to single-use developments, mixed-use projects have higher front-end costs, higher required flexibility, and highly structured financing.

High Barriers to Entry

As with any real estate development, the early stages of a project begin with a feasibility study. These studies focus on market analysis of current supply and existing demand for new space, ultimately determining the appropriate program of uses for the site. And most relevant to this section of analysis, developers must also consider the availability of capital to finance the project. When undergoing the feasibility analysis of a potential project, soft costs, such as architectural fees, environmental studies, and legal fees, are typically financed by the project's equity source.¹⁵ In most cases, this will be the master developer who sourced the deal. Since front-end costs increase as project size and complexity grows, the typical mixed-use development can have very high front-end costs attached to it, often involving millions of dollars.¹⁶ This large required up-front equity investment serves as a significant barrier to entry; thus, only the largest developers

¹⁵ Soft costs are defined as any cost unrelated to direct construction.

¹⁶ Schwanke, Dean. "Structuring the Financing." *Mixed-Use Development Handbook*, Urban Land Institute, p. 115. Community Builders Handbook Series.

with sufficient cash on their balance sheets are able to undertake these costs. Furthermore, many potential projects never make it past the feasibility stage, resulting in a lost investment that could damage the financial stability of smaller developers.

Involvement of Smaller Firms

Two ways in which smaller firms are able to compete with larger developers on mixed-use projects is through public involvement in the site or the creation of a joint venture agreement. Large tracts of land in urban areas are often controlled by public entities, which can encourage public investment in new development. Frequently, committees funded by government agencies are organized to develop a feasibility analysis and strategy for the site, and these costs are undertaken by the government. In these cases, smaller private developers are able to spearhead the project with a lower, going-in financial commitment. While there still may be significant front-end costs associated with a public-private partnership, joint venture agreements between multiple developers are frequently used to diversify the large risk associated with mixed-use developments.

Flexibility

Along with significant front-end costs, another priority when financing mixed-use developments is the need for flexibility at multiple stages. Architects must keep the project's design plan flexible as market dynamics change over a phased construction timeline. Developers must also evaluate the flexibility of a project's ownership structure and financing. In economic terms, a flexible design plan provides options to the developer, which are very valuable when considering future uncertainty in business plans.

Equity, or ownership, in a project determines ultimate control over decision making and strategy in a project. However, due to the size of many mixed-use developments, equity from

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multiple sources must be brought in to finance a deal. This could take several forms, including: selling off a portion of the site to a separate developer, establishing a joint venture partnership, pairing phased construction with different equity sources, or partnering with public sources of capital. While all of these methods of equity structuring can provide financing, a greater number of capital sources creates more owners with possibly different visions for the project. With large mixed-use developments, limiting the influence of additional equity partners is crucial to maintain flexibility, a valuable optionality in project planning execution.

Debt Financing

Flexibility is also important for the debt portion of the capital stack. Debt structuring for a mixed-use development often features a long maturity. Due to the lengthy construction timeline, therefore, it is important to consider the interest rate environment when sourcing debt capital. In a rising rate environment, it is ideal to secure fixed-rate loans that secure a cheaper cost of capital for the project. Conversely, in an environment of lowering interest rates, it is ideal to secure floating rate loans, which will feature decreasing interest payments through the life of the loan. If fixed rate debt is the only option available to borrowers, it is often preferable to structure the loan with a shorter term in a lowering rate environment. A shorter term enables the borrower to possibly refinance sooner in favor of cheaper capital in the future.

Structuring the financing of a mixed-use development is more nuanced than simply hedging interest rate exposure, however. While many large single-use developments can take several years to construct and stabilize, mixed-use often has a decade-long, phased timeline. To finance such a long schedule of cash flows, developers will typically use a combination of permanent and construction loans.

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For the average mixed-use development, permanent financing is the first to be secured. Typically, there will be several permanent loans, each collateralized with a corresponding use in the project like office, hotel, or residential. While this method of debt financing helps developers better align their cash flows, using multiple sources of financing can easily complicate a project by straining project cooperation. Once permanent financing has been secured for the individual portions of the project, lenders are more receptive to originating a construction loan for the entire project. Perhaps the oddest feature of mixed-use developments, however, is that this method is only used about a third of the time, according to an industry survey organized by ULI. The survey found that about 26% of mixed-use developments were financed with multiple sources for each component, while 33% financed the entire project with one source of debt.¹⁷ This variance in debt strategies comes from the wide variety of forms mixed-use developments can take and demonstrates their increased complexity in execution.

Return on Investment

Another characteristic of mixed-use developments is that they typically have higher required rates of return for investors than single-use projects of comparable size. Mixed-use is typically perceived as riskier, and initial suppliers will charge a higher cost of capital as compensation for the perceived extra risk. A 2000 study by the Zell-Lurie Real Estate Center at the Wharton School of the University of Pennsylvania found that "multiple uses add a layer of complexity that many financiers [find] difficult to evaluate for a variety of reasons."¹⁸ The study notes that this risk premium does differ when evaluating suburban versus urban in-fill

¹⁷ Ibid., 116.

¹⁸ Gyourko, Joseph, and Witold Rybczynski. *Financing New Urbanism Projects: Obstacles and Solutions*. Zell/Lurie Real Estate Center The Wharton School University of Pennsylvania, 21 Mar. 2000.

developments. In urban settings, where density has already been accepted by the market, mixeduse is much more likely to be successful. However, in more suburban settings, where infrastructure to accommodate higher density is needed, mixed-use is seen as a riskier development choice. Ultimately, these higher required rates of return force developers to try and generate positive cash flows early on in a project, which is difficult in large and complex developments. In the same study, debt and equity financiers agreed that no mixed-use project would be financially viable under a fifteen percent return.¹⁹ Furthermore, high required rates of return come with higher discount rates when valuing a project into the future. Higher discount rates favor present cash flows over future cash flows, which discourage investors in long-term mixed-use projects further.

Developers have a few ways to work around the dilemma of generating cash flow early on in a project. First, they can partner with equity investors who are more patient than typical private equity sources. For example, pension funds or endowments have longer term investment horizons given their source of capital needs for current cash flow. And second, developers can plan a carefully phased strategy to reduce the overall project's timeline into shorter, more attractive durations. This ultimately favors developers that have prior experience in successfully executing large projects.

Diversification

The rise in popularity of mixed-use developments is a controversial topic in the commercial real estate industry, as there are both pros and cons associated with them. Contrary to the perspective of a developer, many financial institutions see mixed-use projects as more secure real estate investments. This comes from the diversification benefit of signing leases for different asset

¹⁹ Ibid, 5.

types at the same property. This creates the opportunity for alternate cash flows to mitigate the risk of a downturn demand of another component of the mixed-use development. This diversification is amplified even further when a mixed-use development is an investment in a larger real estate portfolio of single-use assets. In other words, a mixed-use asset can achieve returns similar to comparable single-use assets, but with a lower standard deviation, resulting is less portfolio risk.

Optionality

Another benefit of mixed-use projects previously mentioned briefly is that they represent an optionality that is rare in real estate investing. In the typical single-use investment, for example, once a decision has been made for the best use of the site, that decision is permanent. A site with a shopping center on it cannot be transformed into apartments or office space in the event of a downturn in the retail sector, for example. If a developer is uncertain about future market trends, they might leave an otherwise valuable site vacant in order to maximize their returns in the future. This suggests, as the 1985 paper entitled "Urban Land Prices Under Uncertainty" explains, that "land is more valuable as a potential site for development in the future than it is as an actual site for constructing any particular building at the present time."²⁰ As option theory discusses, there is an intrinsic value to options in real estate development. Projects with more options, such as a vacant lot or otherwise undeveloped parcels, are worth more than projects with less options, such as an unleased office building on the same lot. Since mixed-use developments are typically phased over many years, parcels of larger site can be set aside for future development, creating a set of real options that can be best utilized as future demand trends become more apparent.

²⁰ Titman, Sheridan. "Urban Land Prices Under Uncertainty." *The American Economic Review*, vol. 75, no. 3, June 1985, pp. 505-14. JSTOR. Accessed 29 Nov. 2017.

Operating Benefits

On a more nuanced level, mixed-use developments have operational benefits that make them attractive investments. The vast majority of architecture firms and real estate developers see the value in sustainable design and set it as a priority in new projects. While a more environmentally conscious industry is partially responsible for this shift, more likely is the fact that LEED or Energy Star certified buildings have been shown to achieve higher risk-adjusted returns.²¹ This conclusion is based on research that shows environmentally certified buildings achieve both higher rental rates and sales prices when compared to non-environmentally certified buildings in the same submarkets. Furthermore, the cause of these results can be attributed to additional user benefits, lower holding costs for investors, and lower risk premia.²² It is important to note, however, that higher property returns are a result of better operating margins during the investment's hold period and not from the property's residual sales price. In other words, higher lease rates and higher occupancies that are attainable at mixed-use developments achieve better net operating income margins and boost investor returns. Higher balance sheet values that investors place on these investments should be analytically sourced back to healthier income statements at the property level. As the future of development trends to environmental certifications being commonplace, it is likely that these investment benefits will diminish.

Public-Private Partnerships

A final financial benefit to mixed-use developments is that they frequently feature some amount of public involvement, which decreases the uncertainty in a project's success. Many equity

²¹ Fuerst, Franz, and Patrick McAllister. "Green Noise or Green Value? Measuring the Effects of Environmental Certification on Office Values." *Real Estate Economics*, vol. 39, 2011, pp. 45-69.

and debt sources in commercial real estate are still unfamiliar with mixed-use developments and sometimes have difficulties in underwriting their more nuanced risk. Yet in many cases, a mixed-use development's inception starts with a public entity. Some municipal governments own large tracts of urban blight and see potential redevelopment as a positive benefit for their city. Thus, local officials are often inclined to provide financial assistance to promote the development of a mix of uses on the site. This can take a variety of forms, including land write-downs, issuance of municipal bonds, and creation of public improvements. In return for these incentives, public entities will often require a strict program of uses for the site or the inclusion of a public space and affordable housing in the plan. For these reasons, many financial institutions see mixed-use developments with a public partnership aspect as more secure real estate investments.

Conclusion

For all the benefits of designing and implementing a mix of uses for a development, there are also certain drawbacks. Primarily, the perceived complexity of the projects leads capital suppliers to demand a high risk premium and higher cost of capital. Additionally, due to their size and complexity it is difficult to find financial institutions that will agree to be the sole lender. Beyond the financial drawbacks, forces beyond the development team's control often complicate mixed-use projects. Frequently, future development requires a site to be rezoned from single-use to multi-use. This regulatory risk of rezoning can take years to resolve itself, which often dissuades developers from an otherwise profitable project. Additionally, developers have to plan for a wide variety of market changes that are always out of their control. Because mixed-use developments take years to complete, construction and the subsequent investment duration will often span market cycles. Component parts, such as apartments or office space, are subject to market and financial trends that can quickly change on both a local and national level. Many times, though, the

advantages to developing a mix of uses on the same site outweigh the disadvantages, and the unique value opportunity that mixed-use sites present has led to a dramatic rise in their prevalence over the past few decades. As operational difficulties are diminished in the future with more experienced developers, the diversification benefits and increased lease rates of a mixed-use project for investors should be realized.

Part Two

Case Studies

INTRODUCTION

Having presented the relevant history, past proponents of mixed-use theory, and its financial characteristics, it would be helpful to apply this background to some modern-day examples. Thus, the following four chapters will be devoted to an analysis of four mixed-use developments that have been built within the past two decades. These case studies represent the best of the today's mixed-use design, winning awards from local governments and industry organizations. Perhaps, their success is most notable, however, in the fact that they are constantly evolving, as additional components around their peripheries are built to satisfy the growing demand for these types of spaces.

In the hopes of arriving at a meaningful, qualitative analysis, choosing four developments to study was a sufficient sample size to identify commonalties and differences. Qualifications for consideration were being located within the United States for equality of legal and financial frameworks, being geographically dispersed from one another, and being located in urban areas, as opposed to rural environments.

In order to keep my observations consistent for each development, I originally only visited the sites on weekends. This ensured that the different spatial uses were equally represented in my findings. However, some locations did require a second visit on weekdays to gauge the activity from substantial office components. In observing the form, function, and integration of uses of these mixed-use developments, I divided my observations into the following, broad groupings: economic vitality, user concentration, modes of transportation, user demographics, and architectural design.

My critical analysis of each of the four developments is organized into two parts. To begin, I evaluate the ideal *process* architects and developers should implement to achieve a successful mixed-use development. This process is broken down into three components. First, project leadership should begin the lengthy development process by thoughtfully analyzing the site, its context in the larger urban framework, and *engage* the community. Second, architects and developers must *scale* the project from the perspective of the entire city, the neighborhood, and pedestrians. And third, a mixed-use development must *anticipate* both the short and long-term implications of its design. In the short-term, a phased construction needs to be carefully developed to ensure a consistent user experience. And in the long-term, unforeseen future needs or uses need be addressed.

The second half of each case study's analysis will revolve around the three main *principles* that successful mixed-use developments should display. First, a mixed-use development must reinforce its sense of *place* by reflecting upon the site's heritage and building a foundation for the future. Second, a mixed-use development must be founded upon *equality* between existing and new community members, transportation methods, and different uses of space. And third, a mixed-use development must reflect a strong attention to *detail* across multiple scales. By applying these principles and processes, architects and developers can create financially successful, vibrant, and impactful mixed-use developments in almost any urban setting.²³

²³ The breakdown of these six areas of analysis is based off of the New York City Department of City Planning's Urban Design Principles for Planning in New York City.

Chapter 3

City Point – Brooklyn, NY

"Is a city the result of design intentions, or of market forces, or a bit of both?" – **Witold Rybczynski**

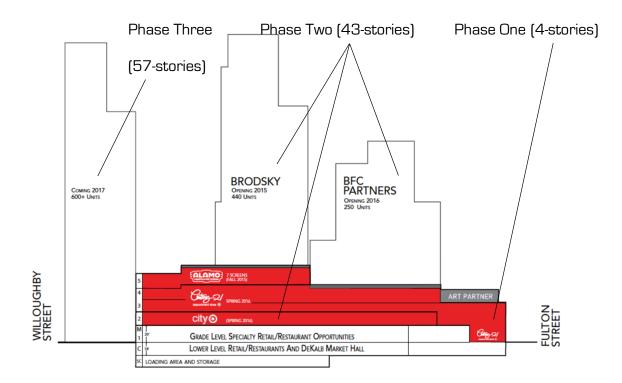


Figure 5 - City Point Stacking Plan (Brownstoner)

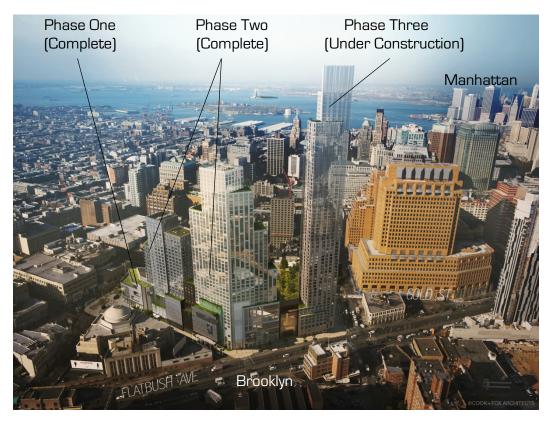


Figure 6 – City Point Rendering (ArchDaily)



Figure 7 - A whirlwind of commotion surrounds Albee Square, with virtually no interface with City Point

Introduction

I found an empty, green chair from which to take in my first impressions of Brooklyn. The alternative – a concrete retaining wall lined with armrests – was not nearly as inviting, which resulted in an overcrowding of chairs in the middle of Albee Square. The name alone leads one to imagine an urban oasis, lined with Brooklyn's signature brownstones. Instead, Albee Square is more reminiscent of London's Piccadilly Circus, characterized by a confluence of traffic and commercial advertisements encircling the small space. But, to some degree, this is the real New York. Excluding Manhattan, the remaining four boroughs are home to 81% of New York's population, and much of that dense, urban fabric has the same unfiltered authenticity.²⁴

²⁴ "Current and Projected Populations." *NYC Department of Planning*, July 2016, www1.nyc.gov/site/planning/data-maps/nyc-population/current-future-populations.page. Accessed 1 Dec. 2017.

From my vantage point, I can also sense the winds of change, however. DeKalb Avenue, on Albee Square's north side, has been turned into a pedestrian-only street to provide access to City Point, the gleaming new development that brought me here. Underneath it's shadow, panhandlers look on as two Mercedes G-Wagens speed through the intersection of Bond and Fulton Streets. Evident gentrification is beginning to sweep through Downtown Brooklyn, as this middle-class melting pot begins to change with City Point at the epicenter.

Engagement

For a mixed-use development to be successful, both architects and developers must work together to conduct a thoughtful examination of the existing site, its community, and external forces at play. In the case of City Point, this began with BFC Partners sourcing of the deal. With their corporate office located just across the street from Albee Square Mall, the firm had an intimate knowledge of the site and the neighborhood's local dynamics. Partnering with Washington Square Partners, they leveraged this existing knowledge base to negotiate ground lease terms and tax incentive packages with the City to achieve maximum financial returns.

A major component to studying the existing site was the 2004 Downtown Brooklyn Redevelopment Plan.²⁵ The plan, unanimously passed by the New York City Council, indicated key ways to shape the future of this community. By incorporating many of these goals, such as an increased mix of uses and affordable housing, the development teams of City Point gained the favor of local officials early on. Successfully engaging the local community has received praise from the New York City Economic Development Corporation, which has described City Point as

²⁵ "Downtown Brooklyn." *New York City Economic Development Corporation*, www.nycedc.com/program/downtown-brooklyn. Accessed 2 Dec. 2017.

"a sustainable mixed-use development which will support the growth of Downtown Brooklyn and enhance the community."²⁶

Additionally, the developers behind City Point have uniquely related it back to its contextual site. Through inspiration of the previous Albee Theater and later Albee Square Mall, developers created continuity with the current Alamo Drafthouse Cinema and multiple retail tenants. However, they have done so in a way that diversifies the risk of a single-use space and leverages the benefits of a mix of uses.

Scaling

A successful mixed-use development should be viewed in a citywide, neighborhood, and pedestrian perspective. From New York City's lens, City Point has succeeded through its "Excellence in Design" awards from Mayor Michael Bloomberg in 2012 and 2013. From Downtown Brooklyn's perspective, the neighborhood has been transformed. What used to be an underutilized site, has now achieved the goals outlined by local officials. The effect City Point has had on the community is best described by Tucker Reed, president of the Downtown Brooklyn Partnership; "Honestly, the first time I got a glimpse of these plans, I got a little emotional. It's just a marker of how far Brooklyn has come."²⁷

However, the most important perspective for City Point is at the pedestrian level. From street level, all the noise of redevelopment legislation or affordable housing is irrelevant. Does City Point successfully create a dynamic and sustainable street life? Does it have ample green

²⁶ "City Point." *New York City Economic Development Corporation*, 12 Sept. 2016, www.nycedc.com/project/city-point. Accessed 2 Dec. 2017.

²⁷ Chabin, Matt A.V. "73-Story Tower Would Be Brooklyn's Tallest by Far." *The New York Times*, 17 Feb. 2016, www.nytimes.com/2016/02/18/nyregion/developers-plan-supertall-1066-foot-tower-brooklyn.html. Accessed 2 Dec. 2017.

space, natural light, and safety? From this perspective, I tend to think that City Point is unsuccessful – at least right now. Confusing entrances, pedestrians sharing the roadway with cars due to construction, and a lack of interaction between interior and exterior spaces along the sidewalk lead City Point to feel detached from the vibrant community right across the street. And, no amount of the "BKLYN BORN" marketing campaign can fix these physical flaws.

Anticipation

With so many equity stakeholders, executing a singular strategy for the site could have been an issue. However, the joint-partnership structure dictated that ownership was divided along the lines of the separate residential components. In August 2017, The Brodsky Organization purchased Acadia Realty Trust and Washington Square Partners' majority shares for \$100 million.²⁸ This move simplifies the ownership structure to three equity partners, and demonstrates Brodsky's long-term commitment to the project. Furthermore, this financing structure has allowed those who wish to exit the project the ability to do so, while providing the benefit of continuous ownership into the future.

One short-term goal that might not be reconcilable in the long-term is the large amount of the project devoted to retail space. As e-commerce trends continue to shift market share to online retailers, what will this 750,000 square-foot space look like in the coming decades? And, more importantly, what will prevent it from having the same fate as the Albee Square Mall? The large amount of current retail vacancy, combined with the future space under construction, is a cause for concern. While leasing agents might be holding out for the best possible tenants, an already

²⁸ Putzier, Konrad. "Brodsky Buys Stake in City Point Tower." *The Real Deal*, 4 Aug. 2017, therealdeal.com/2017/08/04/brodsky-buys-stake-in-city-point-tower/. Accessed 2 Dec. 2017.



Figure 8 – Ground floor retail is a dead zone, discouraging visitors from the development established project like City Point becomes uninviting to visitors with such little ground floor foot traffic. This issue is also strange considering a review of the 2004 rezoning initiative in Downtown Brooklyn. The report, compiled a decade later, reinforces that one of the primary objectives was to enhance available office space in the submarket, in order to compete with jobs being relocated from Manhattan to Jersey City. A mixed-use environment would provide a sustainable foundation of residential, office, and retail uses to encourage office growth. However, Brooklyn Borough President Eric Adams indicates his concern for the direction redevelopment has taken in the report:

Unfortunately, much of the premise for the rezoning has not been met, namely making Downtown Brooklyn a 21st Century business and commercial district, and Downtown Brooklyn is bearing a burden of unanticipated new residential development without a comparable level of infrastructure to sustainably support a growing 24-hour community.²⁹

A mix of uses alone is not sufficient. Rather, it needs to be the optimal mix of uses to achieve the desired results. This reflects a lack of deep consideration of future implications during the design process. If tenanting the remaining retail space continues to fail, renovating the spaces to office would enhance the project significantly.

Place

Out of the four case studies, City Point by far has the most historical identity. The 125,000 square-foot parcel's history dates back to the Albee Theater, built in 1925. Its ornate Beaux-Arts interior served as the backdrop to vaudeville shows and later motion pictures, until Downtown Brooklyn's shopping district entered a decline. In 1978, the theater was replaced by the Albee Square Mall in an attempt to increase economic activity.³⁰ After several decades of disrepair and



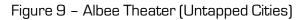




Figure 10 - Albee Square Mall (Untapped Cities)

²⁹ A Decade Later in Downtown Brooklyn: A Review of the 2004 Rezoning. City of Brooklyn, www.brooklynusa.org/wp-content/uploads/2016/02/ Downtown-Brooklyn-2004 Rezoning_Final.pdf. Accessed 2 Dec. 2017.

³⁰ Li, Nancy. "Vintage Photos: Downtown Brooklyn's Albee Theater." *Untapped Cities*, 25 Nov. 2013, untappedcities.com/2013/11/25/vintage-photos-downtown-brooklyns-albee-theater/. Accessed 2 Dec. 2017.

decreasing sales, the process of urban renewal was repeated with the completion of City Point's first phase in 2012.

Like its surrounding neighborhood, City Point was the result of a collective effort from a number of firms. Designed by the architecture firms Cook + Fox, Kohn Pedersen Fox, and SLCE, City Point took years of planning to bring to fruition. Unlike some of the other case studies, City Point has been developed as a joint partnership between a multitude of equity partners: majority owners – Acadia Realty Trust and Washington Square Partners – and minority owners – BFC Partners, The Brodsky Organization, Curbcut Urban Partners, and Extell.

While City Point makes a valiant attempt to create a sense of identity, the development seems to lack discernable character. Nondescript signage and exterior massing could place these buildings in any of New York's boroughs. This wastes an important opportunity to visually tie the new development to the existing community. Architects attempted to draw parallels to neighboring historic structures by cladding the retail base in pale grey terracotta, but the execution doesn't negate the modern architecture's departure from traditional structures in Downtown Brooklyn. The result is a soaring metal and glass structure that appears foreign.

The development team seems aware, however, of the importance of sense of place in terms of their marketing campaign, entitled "BKLYN BORN." While the effectiveness of the campaign should only be considered after the completion of Phase III, it seems to be aimed at the wrong demographic. For instance, the users of City Point's food hall – DeKalb Market – don't appear to overlap with the users of restaurants right across the street. This is less true with the users of City Point's current retail tenants: City Target, Century 21, and Trader Joe's. These appear to be more synonymous with the current retailers of the Fulton Street Mall, which has been known throughout Brooklyn for its bargain shopping for decades.

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Figure 11 - Striking, modern architecture fails to ingrain itself in its contextual environment

Public space, another important element to achieving a strong sense of place in a mixeduse development, could be improved at City Point. The existing Albee Square alone is not sufficient outdoor space for the community. Thankfully, a new one-acre park, Willoughby Square, is being planned with public funds available from the Downtown Brooklyn Redevelopment Plan.³¹ Directly across from City Point, the park is what "New York City officials consider Brooklyn's answer to Bryant Park in Midtown Manhattan."³² It will provide a physical link to office buildings to the north, feature North America's second-largest automated parking garage underground, and

³¹ "Willoughby Square." *New York City Economic Development Corporation*, 12 Sept. 2016, www.nycedc.com/project/willoughby-square. Accessed 2 Dec. 2017.

³² Satow, Julie. "Buried Garage to Help Pay for New Park in Brooklyn." *The New York Times*, 9 July 2013, www.nytimes.com/2013/07/10/realestate/commercial/underground-garage-to-help-pay-for-new-park-in-brooklyn.html?ref=nyregion. Accessed 2 Dec. 2017.

commemorate the immediate area's Abolitionist ties to the Underground Railroad. While not physically a part of City Point, this park will embrace and build upon the area's unique history.



Figure 12 – Rendering of Willoughby Square (New York City Economic Development Corporation)

A final component of successfully creating a sense place is the presence of iconic buildings. While I believe most architecture critics would agree that City Point's design isn't groundbreaking, it benefits from neighboring a separate project that contains an architectural gem – The Dime & Savings Bank of Brooklyn. Built in 1906 in the Classical Revival style, it is currently being preserved and repurposed by JDS Group and Chetrit Group as a mixed-use, 73-story tower named 9 DeKalb Avenue.³³ Michael Stern, founder of JDS Group, says he wants "this project to encapsulate everything that is great about Brooklyn's past and everything that is great about

³³ Chabin, Matt A.V. "73-Story Tower Would Be Brooklyn's Tallest by Far." *The New York Times*, 17 Feb. 2016, www.nytimes.com/2016/02/18/nyregion/developers-plan-supertall-1066-foot-tower-brooklyn.html. Accessed 2 Dec. 2017.

Brooklyn's future.³⁴ By incorporating this landmark building into its base, 9 DeKalb Avenue is preserving local heritage and solidifying a sense of place that can be traced back over a century.

Equity

In a city like New York, where the public and private spaces are in such close contact, equitable design of a large mixed-use development is crucial to its success. While City Point addresses several concerns of equitable design well, there are areas that could be improved upon. For example, affordable housing is critical component that often pits developers against local government agencies. City Point addresses this criterion directly by devoting 80% of 7 DeKalb's 250 units to being rent-stabilized.³⁵ The other two residential towers – City Tower and Brooklyn Point – are all market-rate units.³⁶ Thus, only 18% of the 1,140 new apartments that this rapidly growing neighborhood will receive will have any affordable housing attributes. Further, those apartments are a form of affordable housing known as "rent-stabilized," as opposed to "rent-controlled." The major difference between the two is that rent-stabilized apartments are able to raise rent once tenants vacate, based on a growth rate determined by New York State's Rent Guidelines Boards.³⁷ Typically, this special treatment is reserved for buildings built between 1947-1974; but, City Point's unique tax exemptions also grant its units rent stabilization. This hardly compares to the much more tenant-friendly, rent-controlled units, which only raise rent when a

³⁴ Ibid.

³⁵ Putzier, Konrad. "Brodsky Buys Stake in City Point Tower." *The Real Deal*, 4 Aug. 2017, therealdeal.com/2017/08/04/brodsky-buys-stake-in-city-point-tower/. Accessed 2 Dec. 2017.

³⁶ Salinger, Tobias. "Developers Show 2020 Vision at City Point." *Commercial Observer*, 3 Dec. 2014, commercialobserver.com/2014/12/developers-show-2020-vision-at-city-point/. Accessed 2 Dec. 2017.

³⁷ "How Does Rent Stabilization Differ From Rent Control?" *Griffin Alexander*, 16 Sept. 2016, www.lawgapc.com/blog/how-does-rent-stabilization-differ-from-rent-control/. Accessed 2 Dec. 2017.

tenant terminates their lease. Additionally, the misleading marketing of affordable housing is worsened by the fact that 100% of the rent-stabilized units are sequestered to 7 DeKalb, which in numerous ways is inferior to both other residential towers. While these affordable housing units are far superior to existing ones in the immediate area, a more equitable way of creating affordable housing options in a community would be to separate the units across the multiple residential towers.

While the affordable housing is already fixed at this point in the project, increasing pedestrian and bike accessibility would promote greater equality amongst methods of transport in the development. With thirteen subway lines within a half-mile and a dedicated station built within City Point, the site is arguably one of the most accessible location in Brooklyn. As an anecdote, I took the subway from Manhattan on my first visit and was easily there in fifteen minutes. I did

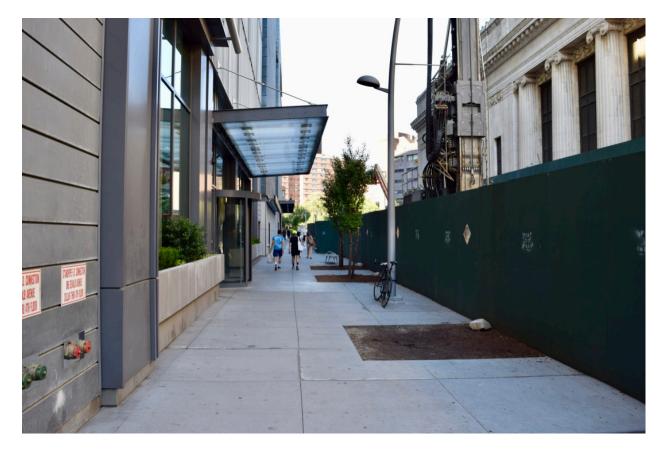


Figure 13 – Pedestrian and bicycle access could be improved at the site.

notice a discernable difference, however, in the clean, new station within City Point and the outdated, run-down station a few blocks away on Flatbush Avenue. This contrast highlights the fact that new developments in an area don't always equitably distribute their improvements across an entire community.

Although there are no bike racks or lanes surrounding City Point, I did notice a decent amount of bike traffic. However, a more important issue is pedestrian access, as it is the most frequently used mode of transport in New York. In order to engage community users, City Point needs to increase the ease of access for pedestrians. Besides the grand entrance on Flatbush Avenue, all other entrances are hard to locate from the sidewalk. Widened pathways along Fleet Street and Albee Square West would help improve pedestrian flow from the Fulton Mall through City Point and on towards Flatbush Avenue. Because of these issues, I don't believe City Point has sufficiently achieved its goal of creating "a hub of neighborhood services and connector for the full diversity of the community that would anchor the flourishing of Downtown Brooklyn."³⁸ Hopefully, with the completion of Phase III's retail component and tenanting of the remaining spaces, walkability and ease of access will be improved.

One positive result from the creation of City Point has been providing an increased selection of healthy food options for the surrounding community. This consists of Trader Joe's and the DeKalb Market, both of which are below-grade. The market has enjoyed success dating back to winning an award for design excellence from the City of New York in 2012, when only a small, 50,000 square-foot parcel of City Point had been completed.³⁹ At the time, this space provided

³⁸ "City Point." Cook Fox, 10 Oct. 2010, www.cookfox.com/project.php?id=City-Point. Accessed 2 Dec. 2017.

³⁹ Awards for Excellence in Design. 24 July 2012, www1.nyc.gov/assets/ designcommission/downloads/pdf/design-awards-program-30.pdf. Accessed 2 Dec. 2017.

healthy meal options in an otherwise empty lot, while construction took place. Now completed, DeKalb Market contains 40 food vendors across 36,000 square-feet. It also contains the first Katz's Deli outside outside of Manhattan and will be opening a new 7,500 square-foot entertainment space soon. More importantly, however, is the fact that this food hall replaces the previous food court that existed in the Albee Square Mall. The nuanced difference is that food halls offer local artisan restaurants, compared to the fast food chains of a typical food court. This provides a variety of healthy options to locals as fast-casual dining becomes more popular. To put it into perspective, in 2016, there were only around 100 food halls in the US, but they are predicted to exceed 200 by 2019.⁴⁰



Figure 14 - DeKalb Market (The New York Times)

⁴⁰ *Food Halls of America*. Cushman & Wakefield, 2016, www.retailstrategies.com/wpcontent/uploads/2016/12/CW-Retail-Food-Halls-Report-web.pdf.

Food halls are far from novel ideas, however. Originating in Europe, their economic success is due to their ability to keep consumers there for a longer duration and less about the number of consumers on-site. Where their link to modern, mixed-use developments lies is in their ability to draw users of the food hall to other parts of the project, such as office workers or apartment dwellers. From my observations, however, I didn't notice any lunchtime patrons of the food hall venture upstairs to the Target or back to their apartment within City Point. Rather, the busy hours in the market were mostly due to students or workers coming from several blocks away.

As typical with many trends in commercial real estate, food hall incorporation has accelerated dramatically in the past few years. Similarly, North American Properties is also converting the food court in their Atlanta mixed-use project, Colony Square, into a food hall. For Mark Toro, the developer behind the project, "it's less about bringing people onto the property to drive retail and more about being a place where people can come and commune."⁴¹ As these food halls increase in popularity across the country, there seems to be a recipe for success: local and regional chefs, incorporation of a bar, and outdoor seating with nighttime entertainment. The last element is where City Point misses the mark, as there is no interaction between the streetscape and the project's busiest component underground. Had the DeKalb Market been located on City Point's ground floor, outwardly facing Albee Square, I believe it would have had a transformational effect on the economic vitality for the rest of the development.

Detail

When building 1.8 million square-feet of brand-new retail, office, multifamily, and entertainment space, it is critical that the development team maintains an attention to detail in both

⁴¹ Gose, Joe. "The Food Court Matures Into the Food Hall." *The New York Times*, 12 Sept. 2017, Business Day sec., www.nytimes.com/2017/09/12/business/food-hall-development.html. Accessed 2 Dec. 2017.

small and large scale. One primary impact of a strong attention to detail is architectural consistency can be achieved in a broad scope down to the smallest details. This consistency rewards the user of the space with a specific and uniform experience no matter which element of the mixed-uses they are in. Unfortunately, City Point feels more like a collection of disparate sections that share the same site. Through numerous materials used on the exterior of the buildings, a visitor's eye is overwhelmed as they approach from each side. This design could be aimed at creating a "city within a city" look to the project, but it comes off as confusing for a mixed-use development of this scale.

Detail is also important when a mixed-use development's construction timeline is phased, as certain parts are operating while others are unfinished. To claim Phase I and II are already open was presumptive for two reasons. First, much of the retail space on the ground floor – the most valuable and highly trafficked portion – is still vacant. This creates a quiet, almost unnerving atmosphere for a physical space that has been open for several years. And second, important elements of the existing spaces such as pedestrian pathways and restrooms are either under construction or nonexistent so far. Seating, while somewhat trivial, is also an important element to detail's overall impact on a development. In both interior and exterior settings, it was evident that the amount, availability, and comfort of seating options was an afterthought. This reflects on the development team's implementation of the business strategy, rather than the architects vision for the spaces. The food hall felt cramped and was difficult to find a space to sit, while along the sidewalks there was an absence of benches – an element every successful public space necessitates.

Conclusion

City Point has served as the catalyst for developing new spaces that would've seemed foreign in Brooklyn only a decade ago. In this context, it should be deemed a successful mixed-

use development. It replaced large-scale urban blight with affordable housing, a multitude of retail and healthy dining, and has spurred the development of new green-space. No single-use project of this scale could have had a comparable impact on the community. Overall, City Point has made a net positive impact on Downtown Brooklyn and helped achieve the City's goals for the community, but its bland architecture and user base don't properly reflect its neighborhood enough to create a lasting sense of place.



Figure 15 - City Point's soaring architecture

Chapter 4

CityCenterDC - Washington, DC

"Good design is no more expensive than bad." – Sir Allen Lane

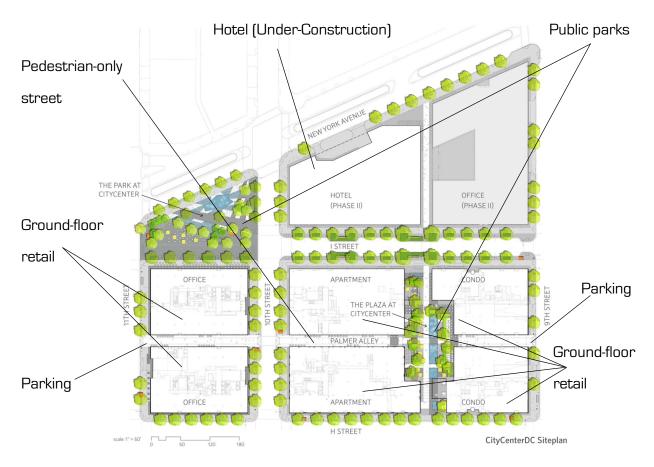


Figure 16 - CityCenterDC Site Plan (Gustafson Guthrie Nichol)



Figure 17 – CityCenterDC Aerial Rendering (Design Boom)

Introduction

Downtown Washington, DC is much like a shallow, urban canyon. Uniform-height buildings shade the pedestrian friendly boulevards below, which provided much appreciated relief from the stifling heat during my visit on a Saturday in July. The city's urban core – removed from the epicenter of the federal government – is a cluster of dense, well maintained offices, apartments, and upscale retailers. As I made my way through this winding neighborhood, the sound of trickling water emerged. Pedestrians, curious as to its source, followed the sound as well. Turning a corner, a series of wet pavers that cross the sidewalk appeared. This gently flowing, urban creek led passersby through a mesmerizing LED arch and into the welcoming, central plaza of CityCenterDC.



Figure 18 – An LED arch serves as CityCenterDC's main gateway.

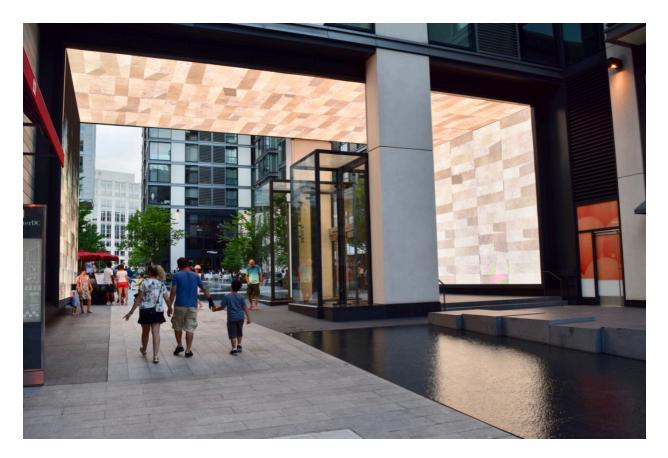


Figure 19 - The gateway's screen provides a tranquil backdrop to the interior plaza.

Engagement

If you had walked through Downtown DC in the late 1990s, a starkly different image would have characterized the streets surrounding CityCenterDC's present-day site. Instead of expensive retail and office spaces along well maintained sidewalks, the area's 120 blocks were home to some 70 blocks of surface parking and 50 blocks of vacant or decrepit buildings.⁴² As the new millennium approached, city officials recognized the decline Washington DC's urban core had experienced over the past fifty years and set out to change it.

⁴² Widdicombe, Gerry. "The Fall and Rise of Downtown D.C." *The Urbanist*, no. 488, Jan. 2010. *San Francisco Bay Area Planning and Urban Research Association*, www.spur.org/publications/urbanist-article/2010-01-10/fall-and-rise-downtown-dc. Accessed 3 Dec. 2017.

This began with a Business Improvement Districts Act passed in 1996 "to help rejuvenate neighborhoods and spur economic development."⁴³ Subsequently, the Downtown Business Improvement District was created. While several large projects such as the Verzion Center were built to spur growth, the Downtown Action Agenda set primary goals outlined by the City and Downtown business owners for the future. CityCenterDC's inception can be traced back to this plan, which aimed to "build a critical mass of economic activity in order to be self-sustaining."⁴⁴ As a result of this, more than \$10 billion in private real estate development has taken place in Downtown DC since 2000, which has brought strong population and job growth back with it.⁴⁵

Aware of the City's ongoing initiatives to revitalize downtown, Hines submitted a proposal for the CityCenterDC site and was chosen as lead developer in 2003. Reiterating the importance of maintaining an open dialogue with involved parties, Hines attributes their winning of the deal because of their "international experience with large mixed-use projects...and willingness to engage in a partnership with the city and community stakeholders."⁴⁶ It is obvious that the City believed Hines could develop an impactful and lasting mixed-use development on the site that would build upon the past progress in Downtown DC and stabilize it for future growth.

Throughout the eight years of planning that preceded construction beginning in 2011, a strong partnership existed between Hines and the City. For example, Hines chose not to maximize

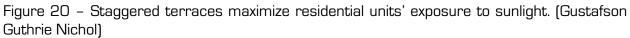
⁴³ Ibid.

⁴⁴ "Downtown Action Agenda." *DC Office of Planning*, planning.dc.gov/page/downtown-action-agenda. Accessed 3 Dec. 2017.

⁴⁵ Widdicombe, Gerry. "The Fall and Rise of Downtown D.C." *The Urbanist*, no. 488, Jan. 2010. *San Francisco Bay Area Planning and Urban Research Association*, www.spur.org/publications/urbanist-article/2010-01-10/fall-and-rise-downtown-dc. Accessed 3 Dec. 2017.

⁴⁶ Riker, Howard. "CityCenterDC - A New Focal Point for Downtown Washington, D.C." *Development Magazine*, Summer 2013. NAIOP, www.naiop.org/en/Magazine/2013/Summer-2013/Development-Ownership/CityCenterDC-A-New-Focal-Point-for-Downtown-Washington-DC.aspx. Accessed 3 Dec. 2017.





density in the site in order to increase the value of the spaces it was creating. The developer also agreed to build all of Phase I simultaneously, to create a subterranean level for parking and loading docks that don't impede the streetscape. By eliminating a back of the building for mechanical purposes, Hines committed to creating a pedestrian friendly development, another major goal of the city.



Figure 21 - CityCenterDC is perfectly scaled at both the pedestrian and neighborhood levels.

Scaling

CityCenterDC reveals itself to users across multiple scales, a sign of a successful mixeduse development. First from a citywide scale, CityCenterDC has made a name for itself in Washington DC as one of the most luxurious addresses in the city. Through high-end retailers occupying its ground-floor spaces, it has reclaimed the local shopping importance that Downtown DC once had with prestigious department stores like Garfinckel's and Woodward & Lothrop.⁴⁷ Today, CityCenterDC provides ample competition to the wealthy suburban options in DC. Countless times through my observations, I noticed visitors to CityCenterDC who had clearly

⁴⁷ Widdicombe, Gerry. "The Fall and Rise of Downtown D.C." *The Urbanist*, no. 488, Jan. 2010. *San Francisco Bay Area Planning and Urban Research Association*, www.spur.org/publications/urbanist-article/2010-01-10/fall-and-rise-downtown-dc. Accessed 3 Dec. 2017.

chosen to come here from all over Washington DC to spend their day. Well dressed groups of girls continuously would take photos in front outdoor artwork or the pedestrian passageways, marketing CityCenterDC to their social media followers as a destination to see and be seen.

Second, CityCenterDC is scaled appropriately to its surrounding neighborhood through both form and function. In terms of form, the development is in keeping with the surrounding structures of Downtown DC with subdued design elements. From the public streets that surround it, CityCenterDC's buildings blend in perfectly with the various residential and office buildings. However, facing the interior plaza, the buildings break the mold revealing a terraced design that maximizes daylight and visual interest. In terms of function, the developer reinstated a street grid on the site, which had been previously missing when it was home to Washington Convention Center. This allows more neighborhood access to the site and directs foot and automobile traffic



Figure 22 - Activated, pedestrian-only streetscapes direct visitors to CityCenterDC's plaza.

through it. The project also adds new functionality to the neighborhood through the creation of two new public spaces: The Park at CityCenter and The Plaza at CityCenter. These spaces are focal points of human activity and provide much needed open space in this urban environment.

From a pedestrian perspective, CityCenterDC is scaled appropriately. Along exterior streets, first-floor retail spaces give way to cantilevered balconies for higher-floor apartments. While none of Downtown DC's buildings are particularly tall compared to other major American cities downtowns, this scales the sidewalks down to emphasize activity occurring at the ground level. Other areas of CityCenterDC, like the central plaza, have public art displays and water features to engage a user's experience with the space.

A point of critique here lies with the type and availability of seating, however. While there are a small number of aluminum chairs and tables in the two public spaces, they are limited in



Figure 23 - Seating could be improved in both public parks at CityCenterDC.

number. This could be by design, in order to increase revenue by encouraging visitors to sit outside at one of the many restaurants bordering the plaza. Moreover, there are many stone ledges that encircle the plaza are stone, yet they have no backs, which make them uncomfortable and awkward to sit on. As a revenue-generating development, this design choice is understandable, but it highlights a theme at CityCenterDC. Good design is concentrated in the highest revenuegenerating locations of the project. As you move from the sidewalks surrounding the project to the pedestrian walkways and private residential components, humanistic qualities of design increase as the user becomes more permanently attached to the site. With more seating and better options, the public spaces at CityCenterDC could bring in more visitors to the whole development. But, driving larger numbers of visitors to the site is obviously not as important and cost-effective as getting a few to stay for a much longer period of time.

Anticipation

Unlike its predecessor, CityCenterDC has been designed with a long-term perspective. The fact that an 800,000 square-foot convention center's useful life to the City was only twenty years, demonstrates the failed urban design practices of the twentieth century in Washington. CityCenterDC, however, involved nearly a decade of intensive planning to ensure that it meets the short-term need of supplying new space to the market, while meeting the long-term demand driving need of Downtown DC. As with most large, mixed-use developments, CityCenterDC's phased construction timeline, which is still being implemented, provides financial risk mitigation and ensures that the original vision for the entire project can be executed successfully.

One of the most successful ways the architects and developers behind CityCenterDC anticipated future spatial needs was their significant and thoughtfully planned public spaces. The

Park at CityCenter, in the development's northwest corner, is especially interesting. The space, currently underutilized, represents a clear, long-term plan for CityCenterDC as a whole. It's special in that the majority of this triangular park actually borders adjacent properties, where it is directly raising the value of competing office and retail space. By facing these buildings, instead of turning its back to them, CityCenterDC invites additional visitors across wide New York Avenue and perhaps dine or shop while they are passing through. Spaces like these create the kind of urban oases that are so enjoyable it's difficult to leave.

Place

Spanning three entire city blocks downtown, CityCenterDC feels almost more like a city within a city than the center of DC, as its name suggests. As one of the largest urban developments of the last decade, the site encompasses 2.5 million square-feet of office, residential, retail, and hotel space spread out across 10 acres.⁴⁸ The sheer size of project is broken down well, although, by several pedestrian alleyways that funnel users of the space off the city's grid and onto CityCenterDC's property.

While CityCenterDC achieves a well curated sense of place, the development doesn't necessarily reflect any authentic heritage of its location. This is not necessarily a fault of the developer, however, as the location was economically challenged historically and has very little residual character from past centuries. Unlike a few blocks to the south or west, CityCenterDC's site has little relation with the federal government's agencies or museums. Thus, the teams behind CityCenterDC were tasked with creating a new identity for the development.

⁴⁸ Riker, Howard. "CityCenterDC - A New Focal Point for Downtown Washington, D.C." *Development Magazine*, Summer 2013. NAIOP, www.naiop.org/en/Magazine/2013/Summer-2013/Development-Ownership/CityCenterDC-A-New-Focal-Point-for-Downtown-Washington-DC.aspx. Accessed 3 Dec. 2017.

Opened in 1983, the site was previously home to the Washington Convention Center for twenty years. As part of the City's effort to improve Downtown, it was replaced in 2003 by the new Walter E. Washington Convention Center two blocks to the north. The site then functioned as a municipal parking lot until construction began on CityCenterDC's Phase I in 2011. In just a few years, however, critics were already hailing the project as Washington DC's Rockefeller Center.⁴⁹ On a smaller scale of course, CityCenterDC in fact has created a modern-day version of the New York icon, which has maintained its valuable sense of place for decades. Only time will tell whether CityCenterDC has the ability to establish a similar lasting authenticity.

Equity

While CityCenterDC embodies extravagant luxury in multiple ways, equitable design was implemented in several features like affordable housing. Committed to building the community, CityCenterDC set aside 20% of the development's apartments as affordable housing. Washington DC residents making between 60-80% of the city's median income qualify for application. And, these units are equitably distributed between studios to two bedrooms with the same design standards as the market rate units. The lack of additional revenue that these units forego is offset by the fact that CityCenterDC is bolstering the creation of a real community, one that is self-sustaining by its variety of income levels.

The problem that arises from this affordable housing is that it isn't complemented in other portions of the development. For example, residents who earn 60% of the median income might find Salvatore Ferragamo or Hermès well out of their price range. The same could be said about

⁴⁹ Pristin, Terry. "Blocks From the President, Developers Plan Big." *The New York Times*, 21 June 2011, Commercial Real Estate sec., www.nytimes.com/2011/06/22/realestate/commercial/ washingtons-citycenterdc-project-is-finally-under-way.html. Accessed 3 Dec. 2017.

many of the restaurant choices. So while it is in the developer's best interest to maximize rental profits, affordable housing tenants might visit retailers further away from CityCenterDC and minimize the benefits of mixed-use interaction.

Detail

A fierce attention to detail is what sets CityCenterDC above many mixed-use developments being constructed across the United States today. At every angle, details in both small and large scope create an exceptional user experience and remind visitors that thoughtful architects and developers were behind each decision to go above and beyond what was required. Strong details can be found in every category: exterior massing, thermal patterns, construction materials, noise control, and signage.



Figure 24 - Detailed exterior massing gives CityCenterDC's exterior visual interest .

Take the central plaza's water feature for example, as every good mixed-use development has one. Some architects might design a fountain or reflecting pool to provide white noise and create visual interest. CityCenterDC goes beyond this by captivating an ever-changing audience of all ages with a series of four large, stone pavers made out of the same material as the rest of the plaza. Water emerges at the top runs end, makes its way down the pavers no more than a centimeter off the ground, and then disappears at the bottom end into a collector to then be recycled again. The entire process is so seamless that it would be easy to miss, if it were not for the two pavers that feature water geysers. A favorite among the youngest patrons at CityCenterDC, these bursts of water shoot upwards at varying heights. During my time in the plaza, I witnessed a young girl playing in the water feature. At first, her parents looked on from the terrace of Fig & Olive, an upscale Mediterranean restaurant. However, as time went on she convinced some older girls to



Figure 25 - Visitors of all ages flock to the plaza's engaging water feature.

come join her, cooling off by the water. After a while, the girls' giggling was enough to attract an older woman, who quickly took off her shoes and joined them all. This is what Jane Jacobs had in mind when she emphasized how important presence of children was in public spaces.⁵⁰ It goes beyond just an upscale dining backdrop and activates it to bring the entire community together.

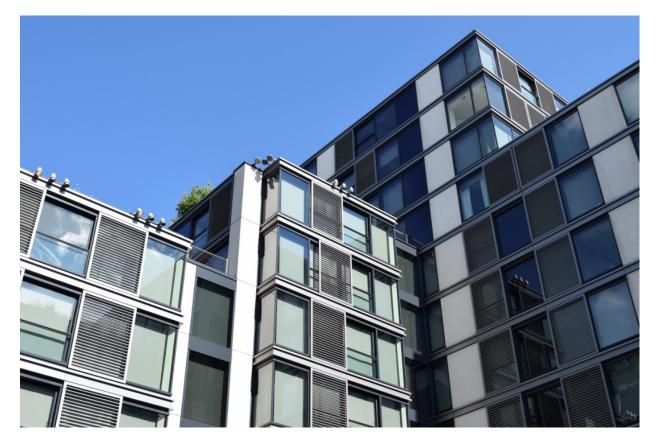


Figure 26 – Terraced floor counts allow for sunlight to reach the inner depths of the plaza.

Conclusion

As I pondered the cohesive and successful mix of uses that CityCenterDC had to offer, I looked up to find another detailed creation. The interior plaza's structures come together in such a way that create a viewing frame, much like a James Turrell piece, from which to watch the clouds pass by overhead. While the developers and architects behind CityCenterDC didn't have much to

⁵⁰ Jacobs, *The Death and Life of Great American Cities*, 74-88.

work with in the way of the site's heritage or limited residential population in the community, they have succeeded in creating both from scratch. When all phases are complete, CityCenterDC will function much as a self-sustaining city, with office workers, hotel guests, shoppers, diners, and residents all coexisting together and enjoying a taste of the good life.

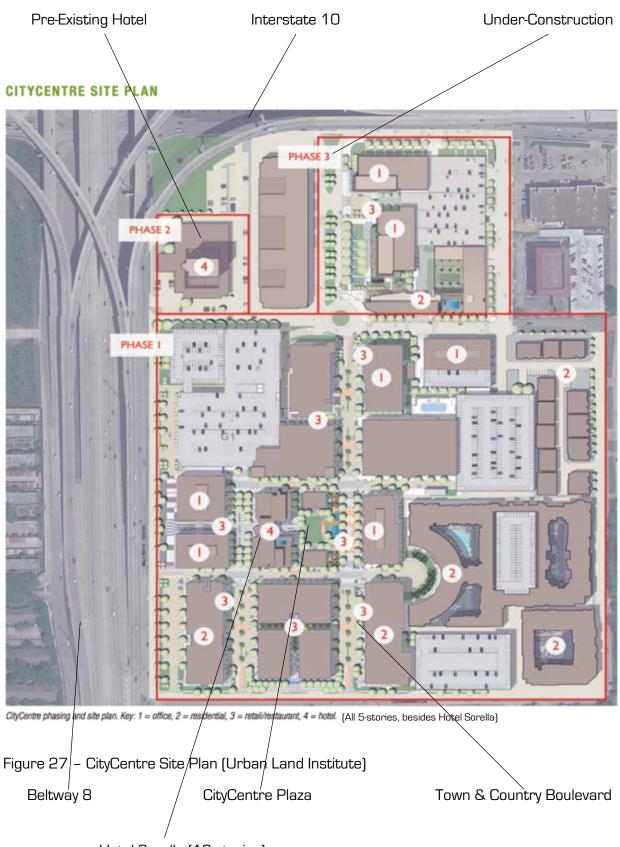
CityCenterDC can also be credited with revitalizing an entire neighborhood. Whereas Downtown DC used to be the site of widespread urban decay and home to only 3,000 people, the number of apartments has now doubled to more than 6,000. This is well on the way to achieving the City's goal of close to 13,000 apartments in Downtown and made CityCenterDC a prominent example of neighborhood revitalization. This hasn't gone unnoticed in Washington, however, as over four million square-feet of mixed-use space is currently under construction across five properties inside the Beltway.⁵¹

⁵¹ Goldchain, Michelle. "D.C.'s 10 Largest Developments Under Construction Right Now." *Curbed Washington DC*, 21 Feb. 2017, dc.curbed.com/maps/biggest-developments-construction-washington-dc. Accessed 3 Dec. 2017.

Chapter 5

CityCentre - Houston, TX

"It is far easier, simpler to create spaces that work for people than those that do not – and a tremendous difference it can make to the life of a city." – Holly Whyte



Hotel Sorella (12-stories)



Figure 28 – CityCentre is a distinctively urban environment, compared to its suburban, singleuse surroundings (Urban Land Institute)

Introduction

Like almost every visitor to CityCentre, I arrived one hot and muggy Saturday in May by car. Unlike New York and Washington DC, public transportation or walking on foot are virtually unheard of here. Rather, Houston is a city completely dominated by and designed around the use of cars. As I wound through curves along Memorial Drive towards CityCentre, another commercial development appeared through a gap in the pine trees. Signs along the road pronounced the arrival of Memorial Green, coincidentally built by the same local developer as CityCentre – Midway. The new mixed-use project, like CityCentre, is located in an area that has been historically characterized by very separated uses of space. Clearly, Houstonians enjoy the refreshing form of

mixed-use urban design and there is strong demand for additional developments. Before even arriving at CityCentre, tangible evidence of its success can be seen replicated across Houston.

Growing up in Houston, I was familiar with CityCentre, as well as the developer Midway. However, upon visiting the site through an analytical lens, I realized just how popular and successful it is. Even on a hot summer day, hoards of visitors converged upon CityCentre. Some were there to celebrate a special occasion. Some were there to meet up with friends and leisurely shop. And, some were simply there to people watch and enjoy the buzz of activity taking place around them.

Engagement

CityCentre's derives its success partially from an ideal site for mixed-use development, but also from a strong engagement of key stakeholders. Located over thirteen miles away from Downtown Houston, CityCentre is much more suburban than the other three case studies, which are all within three miles of from their respective central business districts. However, this location proves to be strategic, as it leverages one of Houston's greatest economic drivers – highways. A city built on the automobile as a primary mode of transportation, Houston's metropolitan population of almost seven million rely on the city's extensive network of highways to get from point to point. CityCentre's position at the intersection of Interstate 10 and Beltway 8, two of the city's largest highways, makes it one of the most visible locations and accessible locations in the city. Understanding how to best utilize the visibility along these frontages and providing ease of access was crucial in a city so reliant on cars.



Figure 29 - CityCentre is almost completely accessible by car, while being pedestrian-friendly.

CityCentre's roughly 37-acre site was previously home to Town & Country Mall. At the time of its sale to Midway, the mall was less than a quarter occupied, with only a few small tenants remaining.⁵² Built in 1983 with over one million square-feet of space spread across three floors, the indoor mall never seemed to reach its full, intended potential of local retail mecca. Originally, Town & Country Mall was built to replace the aging, nearby Memorial City Mall. However, this plan backfired, with most of retail tenants moving to a newly-renovated Memorial City Mall near the end of the twentieth century.

So, how did Memorial City Mall succeed in eliminating its competitor? Among other factors, the renovations created a sense of place and a diversity of activities that Town & Country

⁵² Sarnoff, Nancy, and Anjali Athavaley. "Town and Country Mall to Be Demolished." *Houston Chronicle*, 3 June 2004.

Mall simply couldn't offer its tenants or customers. Renovations added public spaces such as an indoor skating rink, carousel, and movie theater that appealed to the area's family demographic. Today, Memorial City Mall is one of the highest-grossing malls in the Houston area and has spurred growth in office, multifamily, and medical buildings immediately surrounding it.

Town & Country Mall could still be in existence today, if it had not followed the archetype set out by Austrian architect Victor Gruen, considered the father of the modern shopping mall. Ironically a socialist, Gruen's design philosophy led to the proliferation of these "churches of communism," as he put it, with big-name anchor department stores that were intended to drive consumer demand to the smaller tenants in between.⁵³ As Town & Country Mall avoiding adapting to a greater mix of uses, retail tenants relocated to the more desirable Memorial City Mall. Thus in 2004, Town & Country Mall was sold to Midway and razed within a month.

With approximately 37 acres cleared, Midway had a clean slate in which to design a mixeduse development built for the twenty-first century. A smart move early on was to keep the preexisting parking structures and incorporate them into the new plan for CityCentre, which decreased hard construction costs significantly. The roughly square site also provided easy optionality for planning new interior streets and platting the site to a smaller scale.

Unlike the other three case studies, CityCentre's inception didn't include any involvement or initiatives from local public entities. Rather, CityCentre is the result of completely private interests and their plan for the site. Only after developing a set program of uses for the site, did Midway select Gensler as the lead planner and architect along with Kirksey for landscape architecture.⁵⁴ However, this engagement went beyond what most developers agree to. Midway

⁵³ How Malls Work." Hosted by Charles Bryant and Josh Clark. *Stuff You Should Know*, 5 Jan. 2017.

⁵⁴ CityCentre. ULI Case Studies, casestudies.uli.org/citycentre-houston/#planning. Accessed 3 Dec. 2017.

brought several Gensler architects in-house. Lee Cisneros, one of the architects brought on by Midway, notes that, "the [developer's] role as part of the design team is critical. The design needs a clear goal."⁵⁵ Through combining various expertise, Midway and Gensler were able to successfully create "a place where you did not have to get in your car every time you wanted to make a change in venue," a distinguishing feature of mixed-use is in this market.⁵⁶ As a result, CityCentre is a model for successful collaboration between private partners without the need for an overarching public vision for the project.

Scaling

For such a large mixed-use development, CityCentre does a good job of scaling the project from citywide, neighborhood, and pedestrian perspectives. From a citywide perspective, CityCentre creates a dense urban node that draws visitors from far distances. Reflecting the New Urbanism movement, CityCentre creates a town square surrounded by new hotel, office, education, retail, and residential space. What was previously a large tract of urban blight has now brought economic vitality to the area. Additionally, observed car traffic from highway entrances to CityCentre was usually higher than from the local road, Town & Country Boulevard. This indicates that most visitors travel several miles from other parts of Houston to reach CityCentre.

From a neighborhood scale, CityCentre positioned itself as a central part of the local community. Beyond providing much needed retail, residential, and office space, it has given locals a place to feel at home. While the development's central plaza serves as a place for people of all backgrounds to come together, each group tended to find its own area of special interest at

⁵⁵ Ibid.

⁵⁶ Ibid.

CityCentre. Young teenagers on group dates tended to hang out closer to Studio Movie Grill. In fact, I even witnessed a young man ask out a girl on a blind date. CityCentre has become such a fixture in the local area that young people just instinctively gravitate to it on the weekends. In addition to teenagers, older, single adults tended to concentrate themselves by Lifetime Fitness and the various wine bars and restaurants along Town & Country Boulevard. And as dinner approached, the western half of CityCentre got significantly busier as business travelers from Hotel Sorella and middle-aged adults converged on the strip of steakhouses and fine dining along Sorella Court. In the words of Midway's CEO Mark Brinsden, CityCentre has become "the living room for the community where people come and hang out."⁵⁷



Figure 30 - CityCentre Plaza acts as a neighborhood gathering spot for families and local events

⁵⁷ Ibid.

From a pedestrian scale, CityCentre is engaging and dynamic. After spending some time walking through all parts of the project, I kept wanting to return to the central plaza. This was where the largest concentration of people tended to be throughout the day. There wasn't any planned entertainment like a band or a live movie, rather the energy from the concentration of people all enjoying their afternoon was what made it entertaining. Young children played soccer together on the open green space, gangs of stroller-wheeling moms looked on, an elderly couple eating frozen yogurt was parked under the wide shade of an oak tree, and Mazda salesmen were demonstrating their newest minivan to interested families. The element of a shared human experience in this town square makes CityCentre inviting and enjoyable on a much smaller scale.

Anticipation

As a finished product, CityCentre is a meticulously planned, self-contained community of higher density than its immediate surroundings. With few urban spaces like it in Houston, it has easily become one of the most successful mixed-use developments in the country and currently is being replicated across the Houston area. However, such a large project required years of planning. The previous failure of Town & Country Mall on the same site educated the developer to rethink how retail space should be built. Rather than saturating the site with it, retailers have been successful operating at CityCentre due to the alternative office, hotel, and residential spaces incorporated into the project. Desired retail tenants in a growing age of e-commerce, such as gyms and movie theaters, were drawn to CityCentre's mixed-use atmosphere, which drives more revenue than the average shopping center. One problem with undertaking such a large project is the uncertainty of how to best implement the development plan. For example, Midway analyzed

over 100 different design scenarios for the site before deciding how to move forward.⁵⁸ While the executed plan blends well with the suburban context of the site, I believe higher density would have had a positive effect in creating a more permanent community. This has the potential to be resolved, as Midway is in the early stages of construction on Phase III of CityCentre.



Figure 31 – Phase III needs improved integration with under-utilized parts of the current site. This space will include denser office and retail space than in Phase I, but currently the two sites seem disjointed. The space between the two phases, along Town & Country Lane, is devoid of human activity. However, this does not seem like an afterthought, considering it is fully landscaped with wide sidewalks. Rather, this highlights one of the potential problems with large mixed-use developments. As huge phases are completed, the most central portions tend to lease-up fastest,

⁵⁸ Ibid.

neglecting pockets of retail and office on the outlying areas. As subsequent phases are constructed, continuity throughout the whole project can prove difficult to achieve.

Place

CityCentre establishes a strong identity and sense of place in the local community, yet it lacks other elements of strong place-making like a sense of authenticity and the presence of iconic buildings. While CityCentre is situated in a higher-income submarket of Houston, it attracts visitors from a wide demographic spectrum. The development pitches its identity as an upscale mixed-use development, but it seems to be more of a middle ground between the previous two case studies. It is evident that many of City Centre's visitors are attracted here because of the sense of place it provides. Many seemingly wander around the project and are not there to expressly shop at a particular retailer. While there were some shoppers, it was quieter than one would expect on a Saturday afternoon.

The more time I spent at CityCentre, its true sense of place became more obvious; it serves a venue for the local community to celebrate special occasions. For example, a large family passed me by at one point. They were all dressed up, ushering a young girl with leftover birthday cake back to their car in the garage. Clearly, they had chosen to celebrate their special occasion here and deemed CityCentre a worthy backdrop for the event. This repeated itself later in the afternoon, when a young man walked down the sidewalk in his college graduation mortarboard. Following him were a group of his friends, again headed to a special celebration with CityCentre being the venue of choice.

While these users could have chosen to go to any of Houston's many nice restaurants worthy of such events, they chose to come to CityCentre. The atmosphere that Midway has

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carefully curated draws users who crave a dense, urban energy that isn't easily replicated in America's large suburban areas. Here, in a mixed-use development, you can stroll around before or after your dinner and people watch, shop, or grab some ice cream to sit and chat some more. In essence, CityCentre provides its users the same services that can be found countless other places; however, CityCentre has successfully created an identity with intangible value.

Where CityCentre excels in creating an identity and strong sense of place, it lacks in authenticity. Midway aimed to create an authentic and permanent design by using several architecture firms for the multitude of buildings at CityCentre.

The use of different architects created a variety of building looks that add an authentic character to the development. The developers and designers sought to create a timeless design that would enhance long-term value. The buildings generally use modern designs with varying materials and architectural treatments.⁵⁹

I disagree with the assertion that CityCentre has an authentic character. A majority of the restaurants and retailers at the development are chains that could be found anywhere across the country. An attempt to create "timeless design" instead results in a bland and uninteresting mix of muted browns, greys, and whites, which blend in with the suburban surroundings. Good urban design contains memorable and iconic buildings, but subtlety defines CityCentre's architecture. Materials like smooth stone and brushed metals created a relaxed atmosphere, which doesn't demand any overwhelming attention. Arguably, the only memorable part of CityCentre that adds valuable character to Houston's urban landscape is the central plaza. This space is unique among other public gathering places in the area and sets the atmosphere for the whole development.

⁵⁹ Ibid.



Figure 32 - Subdued architecture sets the tone for the relaxed environment at CityCentre.

Equity

Perhaps more than any other of the case studies, CityCentre displays equitable design through the demographic diversity of its users. While Houston is one of the most diverse cites in the United States, this diversity is frequently separated in distinct communities. However, at CityCentre, people of different races, backgrounds, ages, and income levels coexist and interact throughout the development. While many of the restaurants or retailers are upscale, a large number of people at CityCentre are not even interested in shopping. Rather, they seem to see value in just being immersed in CityCentre's environment. It's plausible that many patrons come to CityCentre for special occasions to splurge on a meal or nice purchase for an experience that they can't get elsewhere. Unlike City Center in Washington DC, this development embraces the public and makes luxury seem more attainable – even if for only a few hours.

An area of equitable design where CityCentre is lacking is in its balance of transportation methods. As Houston almost completely depends on cars, it's important to review how they integrate into a denser, more pedestrian-oriented environment like CityCentre. Surprisingly, the interior streets of CityCentre are characterized by heavier traffic than on the surrounding streets. This creates a more stressful environment for pedestrians as they navigate through stalling cars. While CityCentre's parking garages are arranged on the outer edges of the development, finding a parking spot proved to be a challenge. This leads many visitors to drive onto the site in hopes of finding street-side parking or to pick someone up. Potentially blocking portions of Town & Country Boulevard to pedestrian-only traffic could help deter vehicles from entering the site.

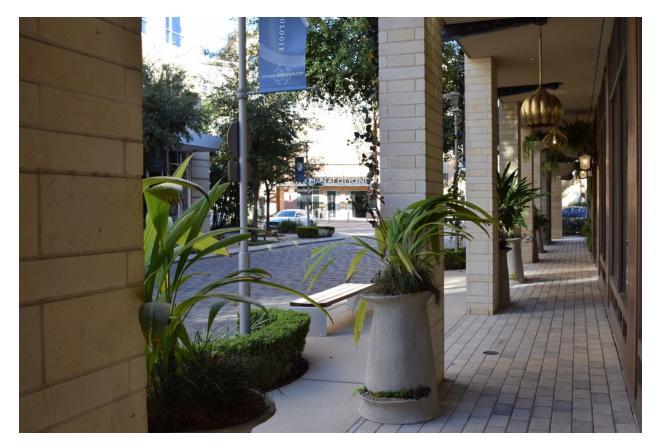


Figure 33 - CityCentre balances car and pedestrian traffic by pavers that seamlessly transition.

Being a pedestrian-oriented and walking friendly development, I was surprised by the difficulty of accessing CityCentre on foot from outside its confines. For example, sidewalks are absent from the northern and southern entrances. This leaves pedestrians trying to safely navigate getting back to their cars, while sharing the road with traffic. Such a large design flaw is surprising in such an otherwise meticulously planned out development. Perhaps the design team did this intentionally, in order to keep users inside CityCentre from wandering next door to competing retail, office, or residential areas. Contrasting with this design flaw, Midway made a contentious decision to blur the distinction between sidewalk and street. They did this by making the two elements level with one another and paved with the same bricks. While counterintuitive, this actually causes drivers to be more aware of their surroundings and reduce their speed. Thus, pedestrians and automobiles coexist – for the most part – in CityCentre's urban core.

Detail

Details, while seemingly trivial, are what set apart average from great urban spaces. In the case of CityCentre, extensive planning created a successful program of uses but overlooked the finesse of smaller details. This is predominately evident in the landscape architecture and pedestrian pathways.

Landscape architecture firm Kirksey clearly put a lot of thought into their plans for CityCentre. Fairly mature oak trees line the main Town & Country Boulevard, providing ample shade for the large number of pedestrians congregating there. Adjacent to this, the outdoor plaza features a depressed lawn covered in turf that is perfect for kids playing soccer. The space is surrounded on three sides by crape myrtles, which thrive in the humid Houston climate. However, an overlooked feature of landscape architecture in this space is the placid, raised water fountain that divides the central plaza from Town & Country Boulevard. To the analytical eye, it seems to have been put there out of an obligation to clearly identify the different implied spatial uses. Unfortunately, this is an area of lost potential. An interactive water feature, much like that of Union Station's or City Center's would have been much more successful considering how many children there are playing in this area.

Additionally, pedestrian walkways beyond CityCentre's main thoroughfare seem to be an afterthought. Along Town & Country Boulevard, pedestrians meander at a slower pace, window shopping from large walkways along the street. These wide, covered walkways were smartly designed to provide additional shade both to shoppers and the storefronts, most of which had inviting, open doors at their entrances. Due to the hot climate, this is rarely seen in Texas and



Figure 34 - A multitude of smaller pathways lead to quiet, shaded seating areas.

speaks to the cohesive nature of the project. Beyond this main thoroughfare, however, significantly narrower sidewalks make it difficult and even irritating at times to pass slower pedestrians. These pathways seem to be crammed in between the separate buildings and let in little natural light, creating an unpleasant pedestrian experience.

Conclusion

In a marketing video that plays on Midway's website, the firm describes "a remarkable destination [as] the right mix, plus a great public gathering place."⁶⁰ For the most part, this vision is well executed. CityCentre offers a huge variety of activities and one of the most memorable and enjoyable public spaces in Houston. However, I think CityCentre also fufills a desire of many Houstonians to live a less vehicle-bound life. While the vast majority of visitors must take a car or bus to get to the development, once there, it's possible to accomplish numerous activities that otherwise would have taken several trips to various locations. You can get dinner, drinks, and go to a movie, or you can attend a conference, have lunch, and go to the spa.

During field research, I repeatedly observed visitors opting to park at the more distant parking garages instead of curbside parking on many of the interior streets. At first, this seemed odd for a city so used to driving door-to-door. But perhaps, this is in essence the appeal of a place defined by its mix of uses, like CityCentre. Users can come feel free to come visit without a set purpose and just enjoy the unusual and unique urban environment.

⁶⁰ Midway. midwaycompanies.com/. Accessed 3 Dec. 2017.

Chapter 6

Union Station – Denver, CO

"The way people use a place mirrors expectations." - Holly Whyte

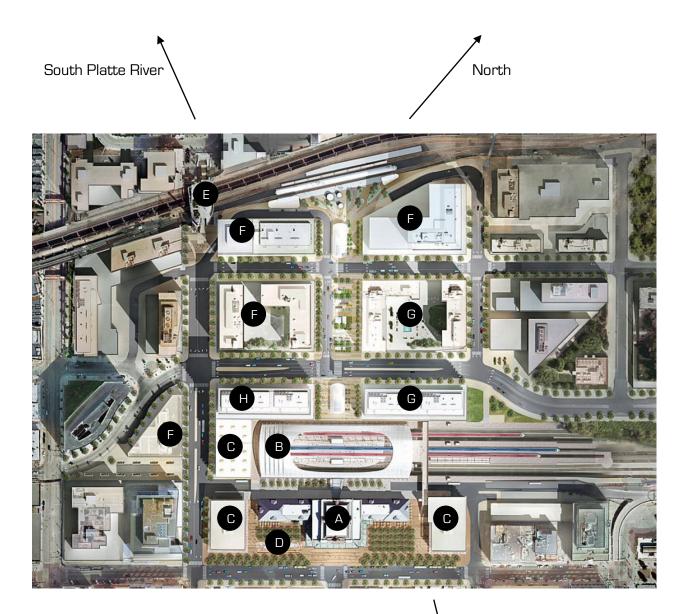


Figure 35 – Union Station Site Plan (Urban Land Institute)

Key

- A Union Station Terminal
- B Train Platform
- C Five-story office buildings, with ground-floor retail
- D Wynkoop Plaza
- E Millennium Bridge
- F Ten-story office
- G Multifamily
- H Hotel

Downtown Denver



Figure 36 - The 1914 Beaux-Arts train terminal has been adaptively reused for hotel and retail

Introduction

Typical of many summer afternoons in the mountains, my first visit to Denver's Union Station was met by a torrential downpour. As I took shelter inside the train station's vast waiting hall, with its vaulted ceiling and huge chandeliers, I wondered how the whole development could operate successfully during Colorado's long winter. No doubt, heavy snowfall discourages a cohesive mix of uses, as many of the differing spaces are located in separate buildings that require a walk outdoors. Yet, even during this driving rain, hearty locals could be found weathering the storm. A couple checked out of the Crawford Hotel desk in the lobby and headed outside to a waiting train bound for the airport. A group of friends gathered around a shuffleboard table by the bar, enjoying their Saturday afternoon. And, residents from nearby apartments arranged themselves under the terrace awnings of Mercantile for lunch. Clearly, the frontier spirit is still alive and well in twenty-first century Denver, noticeable both in the people and the physical spaces they inhabit.

Engagement

In mixed-use developments, careful site examination and consideration of the existing community is imperative. Early on, developers understood this as they developed the original 19-acre site at Union Station.

Perhaps no other project in Denver's history has been more collaborative, beginning with a 98-member advisory committee. East West Partners worked with private investors, public agencies, and the citizens of Denver to create a project that today everyone can claim responsibility for, and be proud to call their own.⁶¹

Developers emphasized community engagement from the outset in development planning. Through site analysis had already been conducted previously, before East West Partners and Continuum teamed up on the development. In 2004, the Denver Union Station Master Plan was created by "an unprecedented collaboration among four public agencies – the City and County of Denver, the Colorado Department of Transportation, the Denver Regional Council of Governments, and the Regional Transportation District."⁶² This document outlines in detail a revitalization strategy for Union Station and its immediate surroundings through a public-private partnership. Concurrent with the 2004 plan, City Council rezoned the site as "Transit Mixed-Use"

⁶¹ "Union Station Neighborhood." *East West Partners*, ewpartners.com/story/union-station-neighborhood/. Accessed 3 Dec. 2017.

⁶² Marsella, Clarence W., et al., compilers. *Denver Union Station Master Plan.* Sept. 2004.

along with a historical landmark designation. From the outset, the City and local agencies in charge of Union Station's redevelopment understood the need for a cohesive mix of uses to support the project's overall success.

While the plan "establishes a baseline of standards, design concepts, and site programming against which any future modifications must be evaluated," much of the participatory planning process was spearheaded by the developers Mark Falcone and Mark Smith.⁶³ In a Colorado Biz Magazine article, both heads of their respective development firms were awarded the CEO of the Year distinction because of their "collaboration and teamwork that characterized [Union Station] from the outset."⁶⁴ The article notes that, "they both have a very great sense of building community and building place. Sometimes they see things that nobody can see. They can envision things 15 to 20 years out."⁶⁵ Both residents of Denver, the developers were intimately familiar with the site's strengths and weaknesses. This local knowledge leveraged with the commitment to making a lasting impact in the community has contributed greatly to Union Station's success.

Scaling

Union Station exemplifies good urban design at the three scales architects and developers must focus on when creating a mixed-use environment. First, Union Station successfully establishes itself in the citywide context. As a major revitalization project, it has drawn international attention to Denver through countless awards. Additionally, it physically connects

⁶³ Bogle, Mary, et al. *Equitable Development Planning and Urban Park Space*. Urban Institute, July 2016, www.urban.org/sites/default/files/publication/82881/2000874-equitable-development-planning-and-urban-park-space_0.pdf. Accessed 3 Dec. 2017.

⁶⁴ Romig, Suzie. "CEOs of the Year 2014." *ColoradoBiz Magazine*, 1 Dec. 2014, www.cobizmag.com/Articles/CEOs-of-the-Year-2014/. Accessed 3 Dec. 2017.

disparate parts of the city together through its integration of intermodal transportation options. Union Station has also redefined what many Denver residents would consider to be the downtown, by shifting the center of gravity westward towards LoDo. This is evident through the second scale of urban design at the neighborhood level. Union Station's development has completely redefined the LoDo neighborhood, making it one of the most desirable places to live, work, and play. Also by restoring Union Station's architectural features, the development ties newer buildings to the historical landmarks that define the LoDo neighborhood. The sense of place created from the character of these structures is also reflected on the third scale, at the pedestrian level. While none of Union Station's buildings are taller than 250 feet, human scale on sidewalks and pathways throughout the development is maintained. This critical component to the urban landscape ensures that ground floor space in dense environments, such as Downtown Denver, is fully activated. The



Figure 37 - An activated streetscape promotes an engaging experience at the pedestrian level

2004 development plan makes this a priority by promoting the "visibility of pedestrian-oriented activities at ground level" and providing "human scale through change, contrast, and intricacy of facade form, color, and material where lower floors of buildings face public streets and spaces."⁶⁶ As Union Station continues to create future demand for denser construction in the immediate area, new projects go through an architectural design review to ensure scale is maintained at all three levels of urban design.



Figure 38 - Union Station created an entire neighborhood from previous industrial blight.

Anticipation

As mentioned previously, developers of Union Station had to execute a vision for an enormous site that spanned over a decade. This required engaging highly regarded architects

⁶⁶ Marsella, Clarence W., et al., compilers. *Denver Union Station Master Plan*. Sept. 2004.

like SOM and Tryba Architects, engaging all community stakeholders, and the ability to be the "producer, director, and scriptwriter" for the mixed-use development.⁶⁷ The result of this anticipation of what the city of Denver needed has resulted in a dramatic change in the site; "only a handful of years ago the Union Station area was a distressed, vacant canvas – a true waste of space and opportunity. Today it is alive and well, a thriving community where people long to visit and to stay."⁶⁸ This transformation of an original 19-acre parcel laid the groundwork for future development across the whole 40-plus acre area.

Evidence of thoughtful consideration and anticipation of future needs is found in the thorough evaluation of over 40 alternative uses for the site in the Denver Union Station Master Plan. Most of these alternatives focused on the placement and combination of transportation options at the site. While this might seem like an unnecessary part of the planning process, the interconnected transportation options at Union Station constitute the most important use at the site.

This is paired with a strong commitment to sustainable design. Not only do a majority of the development's buildings LEED certified, but the entire Union Station project has received the LEED Neighborhood Development distinction.⁶⁹ This commitment to environmentally conscious development goes beyond LEED designations, however. Throughout the site, there is a large presence of natural lighting, water conservation, and locally sourced construction materials.

⁶⁷ Romig, Suzie. "CEOs of the Year 2014." *ColoradoBiz Magazine*, 1 Dec. 2014, www.cobizmag.com/Articles/CEOs-of-the-Year-2014/. Accessed 3 Dec. 2017.

⁶⁸ "The Coloradan." *East West Partners*, ewpartners.com/story/the-coloradan/. Accessed 3 Dec. 2017.

⁶⁹ Denver Union Station. Urban Land Institute, casestudies.uli.org/denver-union-station/. Accessed 3 Dec. 2017. ULI Case Studies.



Figure 39 - Union Station's waiting hall serves as a unifying space for the development. (ULI)

Place

A successfully strong sense of place is more difficult to achieve for mixed-use development than equitable design or an attention to detail. However, Union Station implements this principle of good urban design better than any of the other three case studies. The architects and developers behind its creation do this by addressing the site's past, incorporating iconic architecture, and creating vibrant public space.

First, a site must authentically relate to its past. In mixed-use design, the new purpose and structures of a site must build upon and reflect the preexisting history and context of the neighborhood. In the case of Union Station, this is Lower Downtown's industrial and mercantile history during Denver's rapid growth in the late nineteenth and early twentieth centuries. By 1880, Denver was a burgeoning, frontier city home to 35,000 people.⁷⁰ Rapid economic and population

⁷⁰ Census of Population and Housing, 1880. United States Census Bureau, www.census.gov/prod/www/decennial.html. Accessed 3 Dec. 2017.

growth was largely attributed to the northern rail link to the transcontinental railroad in Cheyenne. This secured the city's position as the center of regional commerce, as Colorado was admitted to the Union as the 38th state. At the same time, the first Union Station was opening at it's present site at 17th and Wynkoop Streets. The station was built to consolidate and improve operations from four existing stations. This station and one subsequently built in 1894 eventually were torn down to make way for the present-day Beaux-Arts structure, which opened its doors in 1914. Originally host to presidents and royalty, the station began to decline as competition grew from automobiles and airplanes. By 1980, passenger traffic had declined from 80 to just two trains per day.⁷¹ This legacy has been resurrected, however, with today's rail station, which hosts over 200,000 passengers per day.⁷² This is comprised of both Amtrak service to national destinations and light rail service to the majority of the Denver area. By creating a multimodal transportation hub, developers overcame the threats to train travel's decline. Today, Union Station has a wide-variety of transportation options that support the mix of uses present at the site, including passenger and light rail, regional and commercial buses, and automobiles.

The second contribution to place-making is the site's incorporation of iconic buildings. For Union Station, this means more than the renovated station itself. Without the underlying urban fabric surrounding it, there would be a much weaker sense of place. For context, Union Station is situated roughly on the west end of historic Lower Downtown, more commonly referred to as LoDo. A submarket of Downtown Denver, the area is home to a rich history. The city's origins at Larimer Square lie a few blocks south, while a surge of high-density development characterizes The Commons a few blocks north. Low-rise, industrial warehouses that previously supplied the

⁷¹ "Facts: Current, Historical and Fun." *RTD FasTracks*, Regional Transportation District of Denver, www.rtd-fastracks.com/dus_14.

⁷² Ibid.

neighboring rail yards, have since been renovated for commercial, retail, and residential uses. This change was spurred by the Lower Downtown Historic District being created in 1988, which was a response to more than 20% of the neighborhood's historic buildings being demolished to make way for office parking.⁷³ At the time, preservationists argued that LoDo represented the Rocky Mountains single largest concentration of historic buildings and provided the only discernable difference to the urban centers of other large American cities. As described by Denver city planning director Jennifer Moulton, "Everything else we've built in the last 20 years looks like it could have been built anywhere. We have no identity other than Lower Downtown."⁷⁴ Some city officials, like mayoral aide Tom Gougeon, even argued that the sense of place created by Lower Downtown was more important to Denver's economy than a new convention center or airport.⁷⁵ Obviously, none of the site's new structures are historic besides the actual station, but the office and retail spaces surrounding it are aesthetically designed to complement buildings that were built centuries ago. Structures massed in rich red brick, stone, iron, and glass reflect the historically preserved buildings across the street. By protecting historic structures and renovating them for modern uses, an authentic character surrounds the Union Station site and promotes a strong sense of place.

And third, a mixed-use site must provide vibrant public space to draw visitors and locals alike to the development. For Union Station, this meant the creation of Wynkoop Plaza, a quarteracre space surrounded on two sides by the station and one side by an office building with ground floor retail. As with the other case studies with successful public spaces, I found myself wanting

⁷³ McMahon, Edward T. "From Skid Row to LoDo: Historic Preservation's Role in Denver's Revitalization." *Urban Land Magazine*, 11 Oct. 2012, urbanland.uli.org/development-business/from-skid-row-to-lodo-historic-preservation-s-role-in-denver-s-revitalization/. Accessed 3 Dec. 2017.

⁷⁴ Ibid.

to spend the most time here during my visits, and the locals seemed to agree. The plaza was significantly busier than any of the other project's street fronts. The scene was the perfect recipe needed to create a vibrant street life. Children played in the dancing water feature, restaurant patrons preferred to dine al fresco, and at least a dozen people were content just sitting in the shade to take it all in. This image provides a stark contrast to what was a blighted, dangerous, and desolate space only three decades ago. And while the developer might have been inclined to build a revenue-generating space instead, a successful public space contributes significantly to the economic viability of the mix of uses on site. As is noted in the Urban Land Institute's handbook on the subject, "good urban design encourages connection to the surrounding neighborhoods and



Figure 40 – Wynkoop Plaza establishes itself as the town square of LoDo.

establishes civic spaces intended to bring together people from all parts of the community."⁷⁶ Union Station's public space perhaps even goes beyond this guideline by reinforcing the development's central role in the community. As one of the only public spaces in LoDo, it acts as the foundation that has allowed the entire neighborhood to flourish.

Equity

Equitable urban design is essential to mixed-use developments, as they only succeed when a variety of competing interests are given the opportunity to coexist. Analyzing whether a project was planned equitably is often simpler than determining the same about the development outcome. Furthermore, "evaluations that do exist tend to focus on process; they examine the steps taken to include community voices in planning...Best practices for equitable development are likewise process oriented."⁷⁷ So in order to determine if Union Station has resulted in equitable design, it's best to look at tangible outcomes from the development.

The first outcome has been an increase in connectivity between once fragmented neighborhoods. Through a series of bridges, pedestrians can now walk all the way from Downtown along the 16th Street Pedestrian Mall and cross the railroad tracks, South Platte River, and Interstate 25 to the Highland neighborhood. What was once an impassable series of obstacles that separated neighboring communities now has a fluid means of accessibility. The most notable of these bridges, Millennium Bridge won both the AIA Urban Design Merit Award and Gold for

⁷⁶ Goldstein, Doris S. "Retooling the Common-Interest Community." *A Legal Guide: Urban and Sustainable Development for Planners, Developers, and Architects*, by Daniel K. Sloane and Doris S. Goldstein, Wiley, 2008, p. 179.

⁷⁷ Bogle, Mary, et al. *Equitable Development Planning and Urban Park Space*. Urban Institute, July 2016, www.urban.org/sites/default/files/publication/82881/2000874-equitable-development-planning-and-urban-park-space_0.pdf. Accessed 3 Dec. 2017.

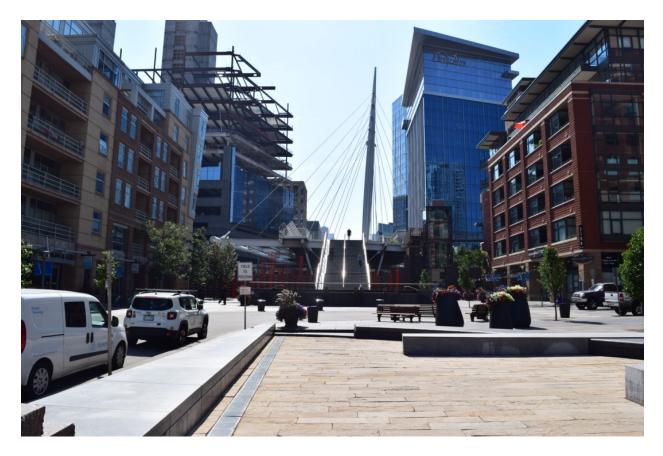


Figure 41 – Awarding winning, Millennium Bridge connects LoDo and The Commons. Engineering Excellence Award.⁷⁸ Connecting the predominantly residential areas to the west with commercial and retail-focused blocks to the east, the bridge is the world's first cable-stayed bridge using post-tension structural construction.⁷⁹ Equality was central in its design, as careful consideration was made to make the bridge handicap and biker accessible.

Equitable design can also be determined through the presence of affordable housing. This is especially important in the case of Union Station, where the original parcel of development has served as the impetus for a wide swath of development in recent years. As demand for living around Union Station increases, market forces naturally push rents upward as supply dwindles.

⁷⁸ "Connecting Communities." *East West Partners*, ewpartners.com/story/connecting-communities/. Accessed 3 Dec. 2017.

⁷⁹ Ibid.

While this is prevalent in the majority of apartment units in Union Station, East-West Partners has committed to setting aside 10% of The Coloradan's units for incorporation into Denver's affordable housing program.⁸⁰ This is in compliance with the city's Inclusionary Housing Ordinance, which promotes equality of housing opportunity in new developments.⁸¹ As a testament to the character of Union Station, additional development parcels have continued this trend. For example, Ashley Union Station, developed by Integral Group, has set aside 70% of their units as affordable.⁸² This provides more of Denver's residents greater equality in access to jobs, safety, and transportation.

Detail

Architects and developers who practice an attention to detail when planning a mixed-use development ensure the success of the project long-term. In Union Station, the incredible attention to detail for such a large project is evident. Details on both a small and large scale create a cohesive atmosphere that connects with Union Station's strong sense of place and equitable design.

Small-scale details are plentiful throughout the site. In some cases, the details are obvious to most users of the space. Instead of using nondescript brick or stone to cover the outdoor public spaces, the design team chose rich, red, granite pavers that echo to the proportion and texture of the station's exterior massing. Wynkoop Plaza displays a large rectangular series of splash pads.

⁸⁰ "The Coloradan." *East West Partners*, ewpartners.com/story/the-coloradan/. Accessed 3 Dec. 2017.

⁸¹ "Denver Inclusionary Housing Ordinance." *City and County of Denver*, Denver Office of Economic Development, Oct. 2015, www.denvergov.org/content/dam/denvergov/Portals/690/Housing/FINAL%20IHO%20Interim% 20Report%20100115.pdf. Accessed 3 Dec. 2017.

⁸² Boyd, Shaun. "New Affordable Housing Project Coming To Heart Of Downtown." *CBS Denver*, 17 Dec. 2015, denver.cbslocal.com/2015/12/17/new-affordable-housing-project-coming-to-heart-of-downtown/. Accessed 3 Dec. 2017.

These were immensely popular with children and their parents, as they chased the dancing water across the space. However, the plaza also hosts many outdoor events like concerts and farmer's markets. A typical water feature would prevent this space from having dual uses; however, the design team engineered the water to flow from deep beneath the pavers, so it could be shut off. Kristopher Takács, an architect for the project says that "part of [the] design process included test-fitting such functions to prove that the public space could be much more than an interactive fountain alone."⁸³

However, many details are subtler. Take the Millennium Bridge, for example. Opened in 2002, the bridge represents an engineering feat designed by Ove, Arup & Partners. Innovation as the world's first cable-stayed post-tension bridge has won the project numerous awards; however, the finer details are also noteworthy. The entire bridge was designed around the user's experience, as the built environment should be. Simpler engineering techniques were sacrificed in order to provide fewer stairs for pedestrians traversing the 130-foot rail yard. Furthermore, these steps were thoughtfully designed to the same width as the Spanish Steps in Rome.⁸⁴ This level of detail subtly ties the bridge's name back to a previous innovation in urban design. Reflecting the future-oriented aim of this bridge, the stairs' sides also display subtle divots for bike access that are repeated across Union Station.

Large-scale details are less intricate and more abstract in nature. At first glance, the openair train hall, designed by SOM, is reminiscent of Denver International Airport's terminal at the opposite end of the line. It's white, layered canvas is a stark contrast to the Beaux-Arts detailing

 ⁸³ Walker, Alissa. "Splash Pads Are the New Public Pools." *Curbed*, 25 Aug. 2016,
www.curbed.com/2016/8/25/12613140/summer-swimming-pool-fountains-splash-pads-cities. Accessed 3 Dec. 2017.

⁸⁴ "Connecting Communities." *East West Partners*, ewpartners.com/story/connecting-communities/. Accessed 3 Dec. 2017.

of the train station but provides an attractive juxtaposition between old and new. Upon closer inspection, the undulating nature of the center portion was designed purposefully. Obviously, the purpose of the roof is to protect passengers transferring from the train to the platform from inclement weather and sunlight. However, this functional element would hide the train station's desirable form from a majority of viewpoints at Union Station. Through the unusual shape of the structure, views were able to be maintained without sacrificing functionality. Thus, a strong component to Union Station's sense of place was enhanced through thoughtful attention to detail.



Figure 42 – Innovative design and attention to detail maintains views of Union Station from almost any perspective, while providing shade and cover to passengers on the platform.

Conclusion

Union Station provides a great case study for not only mixed-use architecture, but also successful urban renewal projects, innovative transportation design, and public-private partnerships. The design and development teams behind the project carefully maintained Union Station's unique sense of place, while paying attention to detail across scales. By thoughtfully planning such a large urban development and anticipating the future needs of Denver, Continuum and East West Partners have established "an expandable design that is capable of growing in-step with the neighborhood, city, and region."⁸⁵ What was once a decaying train yard lacking all its previous importance has now been restored and redesigned into a functional, urban landscape that has redefined Denver as both historic and forward-looking.

⁸⁵ Denver Union Station. Urban Land Institute, casestudies.uli.org/denver-union-station/. Accessed 3 Dec. 2017. ULI Case Studies.

CHAPTER 7: CONCLUSIONS

By design, this thesis has been inherently limited in both scale and scope. Field research conducted at case study sites was primarily on Saturdays during the summer, excluding a few additional week-day visits. Thus, there lacks sufficient observations and analysis on how these sites maintain their success during the colder months or during the work-week. Additionally, the sample size of mixed-use developments is obviously too small to make generalizations across all mixed-use properties, both in the United States and abroad. A less qualitative and analytical project could have accommodated a much larger sample size of mixed-use projects around the country.

But, four developments was the perfect number to achieve diversity in region, developer, and architects necessary to prove some general, salient truths about mixed-use developments in comparison to single-use development. Union Station, for example, confirms Jane Jacobs's assertion that the most sustainable urban planning is not rigidly master-planned, but occurs somewhat organically. In Denver, a few blocks of well executed, mixed-use design have led to the rapid construction of an entirely new neighborhood. Or City Point, which has shown that a mix of uses and lease types diversifies the financial risks that come with Brooklyn's new and uncertain market. Or CityCentre, which shows that a deep site engagement lets you know the exact mix of uses a community wants in a development. And also in CityCenterDC, which demonstrates that radical architecture isn't necessary to focus on the important details that make a space so memorable and humanistic in its design.

With the rise of twentieth-century technology, such as automobiles and the internet, dispersion of human activity has rapidly expanded from a condensed, urban environment to thousands of square miles of suburbia. The source of this dispersion can be attributed to a multitude of factors, including post-war economics, modern urban planning, real estate development trends,

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and architectural fads. However, humans are innately a social species that crave human interaction in their daily activities, so it's no surprise that mixed-use design has experienced a resurgence from the perspective of designers, developers, and users of properties.

I believe this trend will continue, far into the foreseeable future. Mixed-use has many beneficial applications for the twenty-first century and beyond. In order to maximize its potential, appropriate urban environments across the United States should be rezoned into form-based codes, which emphasize the physical form of structures, over the more trivial distinction of spatial uses. This would lead to a decline in the segregation of uses and promote predictable patterns of organic, mixed-use growth across urban America. Additionally, as e-commerce reduces the need to shop in-person, retail space within mixed-use developments will increase in value. The atmosphere of leisurely shopping found in mixed-use developments is distinctively different than the obligatory trip to a shopping center. In the future, mixed-use developments will become home to a higher percentage of retail space as these trends continue. And finally, mixed-use's greatest future application will be in combatting the huge swaths of urban sprawl that exist today. This is not saying that in the future, the vast majority of Americans will desire to move to apartments in a mixed-use environment. That is antithetical to America's identity, but the popularity of mixed-use developments has the potential to be used to create suburban nodes of density across many large cities. A prime example of this can already be seen in CityCentre, more than fourteen miles away from Downtown Houston. This is in comparison to the remaining three case studies, which are all within two miles of their central business districts and represent successful ways to regenerate previous, urban decay.

In conclusion, this thesis was written out of a cross-disciplinary curiosity for the built environment that we all live in and a desire to understand and improve upon it. As modern cities

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continue to grow in population and global importance, mixed-use building strategies must be at the forefront of every architect, real estate developer, and government official's mind. It will act as a crucial tool to densifying our urban spaces in a humanistic approach that will ensure the success of cities in the future. This topic is relevant and important to anyone that calls an urban environment home, as all our cities are designed, in the end, by committee.

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