



West Houston Shopping Mall Renewal and Redevelopment

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1. Executive Summary

This project aims to analyze the reasons behind the success and failure of malls in the greater West Houston region, taking into account the unique economic, socio-cultural, and political conditions of the area. The focus is identifying ways to repurpose, renew, or redevelop underperforming malls to provide higher value to the community and economy based on evidence from Houston's environment and examples from other regions with similar conditions.

Our analysis highlights the issue of the once-revered, iconic American shopping mall being left behind in favor of new development, leaving potentially valuable locations in a state of limbo or abandonment. This is most evident in the case of several West and Greater Houston malls, where some have successfully attracted investment and customers while others have faced decline and failure. We examine failed shopping malls in other metropolitan areas similar to West Houston that have been renewed and/or redeveloped and how their case studies can be applied in the context of Houston. Our recommendations specify three main proposals possible for declining Houston shopping malls with solid evidence to support their probability of success, as well as their robust economic and community benefits.

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Introduction and Background

The West Houston Association (WHA) is a non-profit organization whose mission is to continuously improve the quality of life in Greater West Houston. As the area continues to experience significant population and job growth, the WHA recognizes the importance of identifying and addressing community needs, particularly in infrastructure, economic development, education, and the environment.

One specific challenge facing the community is the decline of box store malls, which have struggled to compete with online retailers and other shopping centers. Many of these malls are now struggling to attract tenants and foot traffic, which can lead to a decline in surrounding property values and an increase in criminal activity. The WHA recognizes the importance of revitalizing these malls in a way that benefits the community and provides a sense of place.

Revitalizing box store malls is a complex task. It requires a careful analysis of community needs and an understanding of what is missing. For example, does the community need more schools, hospitals, or affordable housing? How can we best use this space to address those needs and enhance community stability and accessibility, and do it equitably?

Moreover, it's essential to take steps to occupy or use vacant spaces to increase foot traffic and create a sense of vibrancy in the community. By building up a community around an inherently nostalgic facet of their daily lives, we can create a space that is not just a shopping center but a community hub.

Mall repurposing has become an increasingly popular trend in recent years, with many malls being transformed into churches, medical centers, and schools. Companies like Google and Rackspace have acquired malls for office spaces, while other malls have diversified into event spaces, arts incubators, and unique attractions like indoor surfing. These examples demonstrate

the potential for box store malls to be repurposed in creative and innovative ways that benefit the community.

This report will analyze the challenges faced by five underperforming malls in Greater West Houston: Almeda Mall, Greenspoint Mall, Harwin Outlet Mall, PlazAmericas, and West Oaks Mall. While Northwest Mall and Westwood Mall were identified as properties within the WHA's portfolio, we will not delve into those two as the former has plans to be repurposed and the latter has already transformed. Our focus is to provide insights into the issues faced by the malls mentioned above and propose actionable recommendations for their revitalization, ultimately benefiting the community.

The following sections will present our findings and recommendations for each mall. We hope that our recommendations will inspire creative and innovative approaches to revitalizing box store malls in Greater West Houston and help to create a sense of vibrancy and community in the area.

Findings

At the outset of our project, the West Houston Association tasked us with evaluating a diverse array of underperforming and prosperous malls within their portfolio. To gain a comprehensive understanding of the current state of these properties, our team undertook a combination of brief on-site visits and rigorous qualitative analyses supplemented by extensive online research. While the majority of our findings were derived from online resources, we also conducted site visits to each of the main five malls that can be repurposed - West Oaks Mall, PlazAmericas, Harwin Outlet Mall, Greenspoint Mall, and Almeda Mall. Our findings were

consistent across all venues, as we observed a marked decline in foot traffic that had taken a toll on each mall's overall performance.

While the malls were experiencing this notable decrease in patronage, we simultaneously observed a thriving ecosystem of nearby businesses that appeared to be operating successfully, with a steady stream of customers flowing in and out of their doors. Recognizing the potential significance of this contrast, we made it a top priority to conduct an in-depth investigation into the root causes of these divergent outcomes to identify actionable insights that could help reverse the negative trend afflicting the WHA's mall properties.

In our review of the WHA's mall properties, we first commenced with an assessment of West Oaks Mall. Although the facilities were not in disrepair, West Oaks Mall has been adversely affected by the proliferation of malls and nearby stores, including the thriving First Colony Mall and Katy Mills Mall (Doe, 2022). Furthermore, with only one major store, "The Outlet," keeping it afloat, West Oaks Mall lacks the diversified tenant mix that is critical to attracting and retaining foot traffic (Rajagopal, 2009). A closer examination of search results further compounds this issue, with the first website that appears when searching for "[West Oaks Mall](#)" being a Wikipedia page detailing recent store closures. Other results include a website titled "What's left of West Oaks Mall," along with multiple review sites featuring prominently negative reviews. By contrast, searches for WHA-designated profitable malls like [First Colony Mall](#) and [Katy Mills Mall](#) lead to official, well-designed websites showcasing mall directories and well-rated review sites. Given the ubiquitous nature of online reviews, West Oaks Mall's negative search results may contribute to its declining performance. Ultimately, we have determined that West Oaks Mall's underperformance may be attributed to its proximity to

profitable malls like First Colony Mall and Katy Mills Mall, which feature notable tenants in stark contrast to West Oaks, and its negative search results.

Upon reviewing PlazAmericas, we identified a common issue in many of the malls under evaluation, namely the oversaturation of malls and nearby stores. This was especially apparent with PlazAmericas, as it faces stiff competition from the profitable First Colony Mall, which is located nearby. Although the mall's facilities were found to be in good condition, its main challenge lies in the fact that it does not have any prominent brand names or recognizable stores, except for Burlington and Journeys (Mall Houston, n.d.). In contrast, PlazAmericas' nearby competitors have well-known brand names that attract customers and motivate them to travel to their locations. This lack of brand power and presence may contribute to PlazAmericas' struggling foot traffic.

During our evaluation of Harwin Outlet Mall, we found a recurring issue among several malls under assessment. Harwin Outlet Mall has many unknown boutique shops, making it challenging to attract customers seeking recognizable brand names. Additionally, the mall's online [search results](#) are less than satisfactory, as no official website exists. Instead, the search results primarily feature review sites with 3.5-4 star ratings, which may not provide adequate information for potential customers. Moreover, the absence of a comprehensive store directory may deter potential visitors who wish to understand what the mall offers before visiting. This lack of clear and complete information about the mall may contribute to its struggle with foot traffic.

Upon our review of Greenspoint Mall, we found that while it houses major chain stores, there are underlying problems with the facility itself that may be driving people away. We observed some deterioration throughout the mall, which could contribute to the decrease in foot

traffic. However, the mall's challenges are not just limited to its facilities, as Greenspoint Mall is a victim of poor city planning. The lack of its own police department until the 90s made the area unattractive for living and visiting (Doe, 2022). This has decreased foot traffic at the mall, which has persisted until today. Furthermore, similar to West Oaks Mall, a search for "[Greenspoint Mall](#)" brings up a Wikipedia page detailing recent store closures, along with reviews averaging 2-3 stars and a website entitled "What killed Greenspoint?" Thus, we believe that a lack of a positive online presence and an official mall site and directory may deter potential mall-goers.

After evaluating Almeda Mall, we have determined that the mall is comparatively in better condition than other underperforming malls in the surrounding area. We have observed that the mall's website is well-designed, and the mall has an average rating of 3.5-4 stars on various online review platforms. However, our assessment has revealed some signs of deterioration in the mall's facilities, which could be improved. The primary challenge faced by the mall is the negative perception associated with the area due to its association with illicit activities. Recent reports by ABC have documented incidents of robbery in the area as recently as late March of this year, which have raised concerns among visitors and employees (Almeda Mall employee..., 2023). Moreover, in 2017, the area ranked second on the list of Houston's biggest crime spots (Eisenbaum & Adler). These incidents have likely contributed to the mall's low attendance, as visitors may not feel safe or comfortable in the area.

Concerning the current status of Northwest Mall and Westwood Mall, Our findings indicate that Northwest Mall has plans to be transformed into a high-speed rail terminal, which is expected to be built from Houston to Dallas (Houstonia Magazine, 2020). This repurposing is an innovative solution that is aligned with the city's infrastructure needs and the trend towards sustainable transportation. On the other hand, Westwood Mall has already been successfully









repurposed into the Altierrus Career College, which provides vocational training to students in various fields. In addition to the college, a BMW dealership and the Center for Children and Women Southwest are also tenants at the mall, showcasing the potential for successful mixed-use development. Both of these examples demonstrate the possibilities for successful repurposing of struggling malls.

As part of our comprehensive evaluation process, we also turned to Green Street Advisors, a highly regarded company in North America and Europe that provides comprehensive rating evaluations of various commercial real estate geographies and property sectors. Using several key metrics, including human capital, school ratings, crime rates, unemployment rates, walkability, population density, housing, and fiscal health, Green Street Advisors assigns desirability index ratings to each property. According to their evaluations, West Oaks Mall currently has a grade of D- due to the absence of active anchors. PlazAmericas received a solid D rating with reviewers noting that it was "half vacant." The highest-rated mall was Harwin Outlet Mall, with a barely-passing C- score. Greenspoint received a score of D- with similar citations as West Oaks. Alameda Mall received an F rating, and Northwest Mall also received a failing grade.

To comprehend why malls have been struggling to remain profitable while other businesses continue to flourish, we must understand the current market dynamics. Over the past few years, malls have been facing intense competition from online retailers such as Amazon, who offer a seamless and hassle-free shopping experience. This has led to a drastic shift in consumer behavior as they increasingly prefer the convenience and accessibility of online shopping over the traditional brick-and-mortar retail experience (Charm et al. 2020). This shift is compounded by the popularity of fast fashion, which has further disrupted the retail industry by driving a trend toward low-priced, fashionable items that can be purchased with ease online.

The onset of the COVID-19 pandemic has further compounded the challenges faced by malls. The pandemic's impact on the retail industry has been significant, with brick-and-mortar stores experiencing a substantial reduction in foot traffic and sales. Many malls were forced to shut down temporarily to comply with government mandates and social distancing measures, which have severely impacted their bottom line. Even with the reopening of malls, many consumers remain reluctant to visit crowded places, leading to a further reduction in attendance.

Through our initial research, it became clear that a strategic approach was necessary to address the decline of West Houston area malls. We then proceeded with a comprehensive analysis of repurposing ideas. To accomplish this, we first gathered information about the surrounding area, focusing on attractions and businesses within a 1-3 mile radius of the malls. Our research revealed a vast array of notable attractions and facilities, which we compiled into a comprehensive list (Appendix A). We then highlighted the most frequently occurring attractions in the graph below. Our findings indicate that every mall featured a diverse range of residential and commercial attractions in close proximity, including hotels, apartment complexes, automotive shops and dealerships, family attractions such as arcades and athletic complexes, libraries, government buildings, retirement and disability living centers, nature and dog parks, and banquet halls and event centers.

MALLS								
West Oaks Mall	✓			✓			✓	
Greenspoint Mall	✓				✓	✓		
PlazAmericas	✓	✓	✓	✓		✓		✓
Harwin Outlets		✓	✓					✓
Alameda Mall		✓	✓	✓			✓	✓
Northwest Mall	✓	✓	✓		✓			

Recommendations

Our team has narrowed down our recommendations for repurposing failing malls to three viable options. The first two recommendations involve repurposing the malls into schools or medical facilities, catering towards the needs of individuals and communities in the West Houston area. This is a promising strategy due to the fact that malls are typically situated in easily accessible locations that serve growing populations (Wong, 2017). In particular, West Houston has experienced a surge in population growth, with a high demand for educational institutions to accommodate the baby boom and a growing need for medical facilities to serve the aging population (Spillette, 2022). The third recommendation of repurposing the malls into warehouses caters towards corporations with fast and easy access to growing populations. All three of our recommendations are designed to add value to the community without introducing any additional facilities in the immediate vicinity of the malls, with the exception of two church-affiliated private schools. Past research has indicated that people appreciate the diversity that these institutions bring to their communities (Rajagopal, 2009).

Schools

Background and Precedent

Due to the COVID-19 pandemic and recent chemical contaminations, there has been an urgent move to transition retail spaces and malls into school buildings. These urgent transitions have provided a unique precedent for renovating malls into schools.

Need, Feasibility, and Implementation

According to Chron.com, the average Houston Independent School District (HISD) class size is 30% larger than the state average. In addition, one in every five HISD classrooms exceeded the class-size cap in 2016 (Houston Chronicle). Now, this issue is worsening and class sizes are growing despite the recent decline in HISD enrollment. According to the Houston Chronicle, HISD is needing to petition for more class-size cap waivers where average class sizes include 24-25 students compared to the 15 students in regular classes. Evidently, growing class sizes in HISD are an issue.

Not only do large class sizes negatively affect the students in the classes, but they also exacerbate teacher shortages that exist. According to an MSEA poll, educators are leaving classrooms over large class sizes. This poll found that 61% of teachers would be more likely to stay in the teaching profession if class sizes could be lowered. More staggering, 90% of educators said that having the ability to lower class sizes would greatly improve their working conditions.

Now more than ever, teacher needs ought to be addressed. In HISD, specifically, there are large staffing shortages with 880 current teacher vacancies. This large amount of vacancies has led to HISD filling spots with uncertified substitute teachers. ABC 13 Houston reports how there are now investigations on HISD's practices given that more than 20,000 students are getting

taught in classes led by uncertified teachers. In the Houston area overall, there were 2,200 teacher vacancies in 2022 (KHOU Houston). These staffing shortages, as previously mentioned, could be alleviated by smaller class sizes and better working conditions for teachers. In order to ensure smaller class sizes, more classrooms ought to be created. Additional school buildings, in this regard, would be helpful.

While HISD is currently struggling, given the recent Texas Education Association (TEA) takeover, we recommend that the West Houston Association looks to private school transformations for the most feasible step forward. HISD has the greatest need and potential for additional school buildings through mall renovation, but the current status of the district may not make the timing opportune.

Case Studies

There are three nameable case studies that discuss the feasibility and benefits of transforming malls into school buildings. These case studies range from early childhood learning centers to community colleges, providing a broad range of optionality for implementation.

Early Childhood Learning Center

The North Kansas City Schools' new Early Education Center is the output of a mall transformation project. Formerly, the Early Education Center was once a 112,000 square-foot mall that housed name brand stores.

After \$24 million, the mall transformed into a facility that now welcomes preschool aged children for classes and programming. Around \$19.6 million was used to renovate the space whereas the remaining funds was utilized for furniture, programming expenses, and decorations. The main construction expenses resulted in a final cost of \$175 per square foot as stated by Robyn O'Roark, senior architect for the DLR Group (the lead architecture firm in this project).

Funding came from a local bond approved by voters, and was supplemented by state and federal support.

The construction process was accelerated because the mall already had the structure in place. As a result of this expedited process, the entire community has already been able to start reaping the benefits from the Early Education Center.

High School

Business Insider reports on how Seven Days Vermont spent \$3.5 million to renovate a 150,000 square-foot former Macy's/mall facility into a high school building. After toxic chemicals were found in the Seven Days Vermont school, the district needed a quick way to transition classes to an outside location. With an efficient mall-to-school transition and a comparatively low spend, Seven Days Vermont now had an additional functioning high school on their hands.

Dozens of classrooms were established in the transition through the use of temporary dividers. A library and a physical education space as well as other rooms for specific learning were created.

Students and teachers of the school noted that while sometimes noise levels can be high and travel from classroom to classroom, the solution is overall effective. They enjoy class and some mall features that stuck around post-construction (such as the escalator) are positively received.

Community College

The Highland Mall in Austin transitioned into another Austin Community College campus. This case study explicitly shows the vast range for how mall renovations can be

approached. This renovation in particular was a significantly large project (as it served a community college) and was also significantly more expensive.

According to KUT.org, ACC Highland has several unique features post-renovation such as a skills lab for nursing programs, a kitchen for culinary classes, and a television studio for film students.

The 415,000 square-foot building began hosting classes in 2021 according to the Austin American Statesman. The chancellor of ACC, Richard Rhodes, states that the facility is now used for workforce development of Central Texas students. Current students and staff note on how the transformation is a special place for the community. ACC Board of Trustees Chair, Nan McRaven, specifically mentions that the project was a total success.

Moving forward from the \$152.8 million project, ACC continues to expand through additional transformations. The full campus will be 1.2 million square feet.

Economic and Community Impact

The Atlantic reports on the direct correlation between better schools and better local economies. By improving schools and districts (through additional buildings which inevitably lowers class sizes and improves teacher satisfaction), better economic growth can be achieved.

In addition, by keeping some successful retail stores within these school buildings could lead to easier opportunities for current students to attain after-school jobs. This would lead to a significant community impact for students and their families who rely on student jobs.

Medical Facility

Background and Precedent

Our second recommendation for repurposing failing malls is to transform them into healthcare facilities. Despite Houston's well-known medical center, there is still a significant need for medical facilities, particularly in the growing West Houston area. These medical malls can house full-service medical centers or leased spaces for outpatient healthcare services alongside retail spaces, providing convenience for patients and an opportunity for healthcare providers to reach a wider audience. Research conducted by professors at Georgia Tech revealed that 32 enclosed malls nationwide already have healthcare services within their footprint, with a third developed during or after the COVID-19 pandemic (Farmer, 2022).

The demographics of the West Houston area indicate a pressing need for accessible healthcare facilities due to the growing population. Recent census data shows that the largest age groups in the area are individuals between the ages of 35-44 and 45-65 (or more) years old (Spillette et al. 2022). As routine medical visits are more likely for these age groups, the construction of medical malls in the region could attract more healthcare providers to the area and increase access to medical care for the local population. Medical malls can also attract patients from surrounding areas seeking specialty care or treatments that may not be available in their own communities (Elrod, 2017). This underscores the potential of repurposing failing stores within shopping malls into healthcare facilities, which can house full medical centers or leased spaces for outpatient healthcare services alongside retail spaces.

Case Studies

In this section, we will examine two established medical malls to illustrate the success of this repurposing strategy. The WK Portico and Hickory Hollow Medical malls serve as prime

examples of how medical facilities can transform struggling malls into thriving healthcare centers.

The WK Portico Medical Mall

The Willis-Knighton Health System, owners and financiers of the WK Portico Medical Mall, have a history of successfully transforming dying facilities into profitable medical centers, such as a former country club and gulf oil service station (Elrod, 2017). The WK Health System opted to create specialized medical offices in former store locations, offering services such as orthopedic care, podiatrists, family care, and rehabilitation centers. With outpatient healthcare centers on the rise, it's no surprise they decided that would be a sound choice (LaPointe 2019). The food court was retained, generating additional income and serving as a waiting area for patients. In total, the acquisition and renovations by the Willis-Knighton Health System cost \$13 million, compared to the estimated cost of new construction at \$41 million (Elrod, 2017). This resulted in a cost savings of \$28 million.

One Hundred Oaks and Hickory Hollow

In a similar fashion, Vanderbilt University Medical Center (VUMC) has successfully repurposed two struggling malls, One Hundred Oaks and Hickory Hollow, into thriving medical facilities (Howser, 2022). One Hundred Oaks, with its unconventional two-story mall structure, is now a mixed-use space with the bottom floor serving as retail space and the upper floor dedicated to medical clinics and administrative offices for VUMC. This unique design allows retail giants like PetSmart and Kirkland's to cater to waiting patients, creating a welcoming and convenient environment for patients and visitors alike. In a similar vein, Hickory Hollow Mall has also been purchased by VUMC, and the healthcare system intends to transform the mall into a state-of-the-art medical center, following the successful blueprint of One Hundred Oaks

(Howser, 2022). The repurposing of these dying malls into thriving medical centers has revitalized the surrounding communities, and the cost savings of repurposing over new construction has been significant. For instance, VUMC spent \$15 million acquiring and renovating one floor of One Hundred Oaks, while the purchase of Hickory Hollow Mall cost \$24 million (City of Nashville Mayor's Office, 2022). The costs of remodeling and construction in both cases was and will be covered by VUMC.

In the realm of hospital and emergency medical clinics, there is a third example to consider beyond outpatient services. EwingCole, a prominent architecture firm, has developed a theoretical blueprint for a large-scale medical facility that could potentially be implemented in repurposed mall spaces (EwingCole, 2020). These blueprints, created at the height of the COVID-19 pandemic in 2020, have generated interest due to their innovative design (Appendix B). In this design, larger department store spaces can be transformed into open rooms for patient care, while smaller stores can support specific isolation cases or clinical support functions (EwingCole, 2020). This compartmentalized approach allows for the development of staff-only back-of-house areas, and the use of individual storefront entrances can be reserved for higher acuity patients entering from the outside or as staff-only or materials-only portals equipped with full PPE. Moreover, existing food courts can offer kitchens, prep areas, equipment, and refrigeration that can be easily repurposed for staff break rooms capable of supporting dozens, if not hundreds of individuals simultaneously. These spaces can be retrofitted with modular partition systems to create individual spaces where staff can isolate from one another, thus mitigating the spread of infection.

Need, Feasibility, and Implementation

The implementation of a medical mall in the West Houston area has the potential to generate several positive impacts, including increased productivity, job creation, and improved healthcare access. However, there are also negative impacts to consider, such as potential traffic and noise pollution.

One of the main benefits of repurposing a failing mall into a medical mall is its location. The nearby businesses and establishments seem to be relatively unaffected by the gradual transition to online shopping, while the malls are the only ones suffering from the failure of brick and mortar retail, especially following the COVID-19 pandemic (Charm et al. 2020). Establishing a medical mall could help increase the productivity of these areas. Malls are also typically built in easily accessible locations for residents, making them a convenient location for a medical center (Wong, 2017). Another benefit is the economic impact on the surrounding community. Establishing a healthcare facility or multiple private practices will create new jobs in the healthcare field in these areas (Elrod, 2017). With healthcare comes the necessity for maintenance, food court staff, and other supporting roles, thereby increasing economic growth.

As indicated by data from the WHA, West Houston's population is expected to grow by nearly 300 thousand by 2030, with a corresponding increase in the aging population. This demographic trend highlights the need for expanded healthcare services in the area. The largest age group in the area, 35-44 and 45-65 year olds, are at an age where routine medical visits become more necessary, further emphasizing the need for additional medical services (Spillette et al. 2022). To meet this growing demand, a greater number of physicians should be made available in the area. Additionally, the healthcare market has experienced significant growth in outpatient facilities due to advancements in medical technologies, patient preferences, and

financial incentives, as reported by LaPointe (2019). By establishing a medical mall in West Houston, the growing population will have access to high-quality healthcare services and outpatient facilities, ultimately improving the overall health and well-being of the community.

However, there are also a few negative impacts to consider. For example, if more people are coming to the area, there will likely be an increased amount of traffic. More traffic can create noise pollution, which can be an annoyance for nearby residents. Fortunately, except for a few apartments and hotels, there are not many residential areas near these malls, so noise pollution or traffic may not negatively affect them as much.

Cost is one of the most critical factors to consider when repurposing West Houston malls into healthcare facilities. Our research and case studies suggest that a takeover by a local health system like Memorial Hermann, HCA Houston Healthcare, or Houston Methodist would be necessary to establish a medical mall in Houston. As such, partnerships with healthcare providers will be crucial to make this a reality.

Partnering with healthcare providers offers several notable advantages. Foremost among these is the transfer of potential redevelopment costs to the healthcare systems in the event of mall purchase or leasing of spaces to physicians, as noted by Elrod (2017). Such an arrangement would provide a welcome relief from financial burdens for all project stakeholders. In addition, the matter of costs associated with opening new hospital spaces is of considerable interest to potential partners. Based on estimates from 2013, the initial capital cost of establishing a hospital space is around \$600 to \$800 per square foot, with average annual operating costs ranging from \$15 to \$20 per square foot depending on the space allocated (Durham, 2013). Given the substantial time elapsed since these estimates were formulated, it is reasonable to assume that the

actual costs have risen significantly. Nonetheless, partnering with healthcare providers would translate into lower operating expenses compared to the cost of constructing a new facility.

Moreover, Houston's absence of zoning regulations means that there will be no tax implications for local residents, and there should not be any tax impact on surrounding communities. This factor is an additional advantage that would positively impact the project's feasibility.

Considering these factors, it is clear that partnerships with healthcare providers will play a critical role in the establishment of a medical mall in West Houston. With potential redevelopment costs being absorbed by the healthcare systems and the absence of tax implications for local residents and surrounding communities, this project is both financially and operationally feasible.

Mall Specificities

After careful consideration of the available malls in the West Houston area, we would not recommend West Oaks Mall for repurposing as a medical mall. The mall's proximity to the Shell Technology Center, even though it does not use harmful materials, has caused concerns among older demographics. Negative reviews on online platforms such as Google and Yelp have fueled conspiracy theories about cancer risks, making it imprudent to establish a medical mall in this area, especially for catering to aging populations.

However, we have identified four other suitable options for the establishment of a medical mall. These malls include Greenspoint Mall, Almeda Mall, PlazAmericas, and Harwin Outlets. These locations are ideal for implementing full-scale hospitals or emergency medical clinics, similar to the blueprints created by EwingCole (2020). Moreover, they are also well-suited for private physicians' offices, similar to the successful models implemented at the

WK Portico Mall and the One Hundred Oaks Mall. Harwin Outlets, with its smaller size in comparison to the other options, stands out as a particularly attractive location for an outpatient medical mall.

It is important to note that repurposing these malls into medical facilities will not result in the loss of current tenants. On the contrary, the influx of new medical tenants will attract a new clientele, generating additional revenue for the mall owners and revitalizing the surrounding community.

Warehouse and Logistics Facilities

Background and Precedent

The COVID-19 pandemic has had a significant impact on Amazon's retail business, as well as the ecommerce industry as a whole. While people around the world stayed home due to lockdowns and social distancing measures, online shopping experienced a rapid surge in demand. As one of the world's largest online retailers, Amazon has been well-positioned to meet this increased demand, resulting in accelerated growth in its retail business. Amazon has seen an unprecedented increase in sales and customer engagement during the pandemic, as consumers turned to online shopping for their everyday needs, including groceries, household items, and other essential goods (NBC, 2022).

To further capitalize on the surge in demand and ensure efficient order fulfillment, Amazon has been converting shopping malls into distribution centers. Between 2016 and 2019, the company converted around 25 shopping malls into fulfillment centers to strategically position its inventory closer to urban centers and improve its delivery capabilities. This move has allowed

Amazon to optimize its supply chain, reduce shipping times, and enhance the overall customer experience.

Amazon is not the only retailer that has adapted to the changing landscape of retail during the pandemic. Other major retailers like Target and Walmart have also transformed some of their physical store spaces into mini fulfillment centers. These retailers have recognized the need to expand their online fulfillment capabilities and leverage their existing store network to meet the growing demand for ecommerce. By utilizing their stores as fulfillment centers, Target and Walmart have been able to leverage their brick-and-mortar presence to offer a seamless omnichannel shopping experience to their customers, providing options for in-store pickup, curbside pickup, and same-day delivery.

Additionally, the pandemic has also had an impact on the real estate and industrial development sectors. As the retail landscape shifts towards ecommerce, there has been a decrease in housing, office, and retail development, while industrial development has been on the rise. The demand for industrial spaces, such as warehouses, distribution centers, and fulfillment centers, has increased significantly as online retailers, including Amazon, expand their logistics networks to meet the surge in e-commerce demand. This has led to a shift in the focus of real estate and industrial development towards meeting the warehousing and fulfillment needs of the ecommerce industry.

Major retailers and distributors, such as Macy's, Ferguson Enterprises, Target, Ross Stores Inc., Floor & Décor, and Lowe's, have either added or are in the process of adding large distribution centers in Houston. These companies are strategically expanding their warehousing and distribution capabilities in the region to meet the growing demand for ecommerce fulfillment and logistics services. This highlights the increasing importance of Houston as a hub for

industrial development and distribution operations, driven by the accelerated demand for ecommerce and the changing retail landscape.

Need, Feasibility, and Implementation

According to JLL (Jones Lang LaSalle, one of the Big Four Global Commercial Real Estate firms), Port Houston has experienced a significant increase of cargo tonnage in recent years. In 2021, Port Houston saw a 15% increase in tonnage, and by August 2022, there was a 24% increase compared to the previous year. This surge in cargo indicates the growing demand for goods being imported and exported through the port, driven in part by the increased ecommerce activity. Port Houston has also witnessed a rise in demand for refrigerated cargo which has led to the opening of new cold-storage facilities near the Port. For instance, Maersk (a global shipping company), is opening its first-ever cold-storage facility in Houston, and other companies such as Custom Goods CES and Blackline Cold Storage have also established new cold-storage facilities in the vicinity. This trend indicates the growing demand for specialized warehousing and logistics solutions to support the transportation and storage of perishable goods, including food and pharmaceuticals.

In addition to the amount and types of cargo passing through Port Houston, industrial development and leasing has steadily increased. [CBRE](#) (Coldwell Banker Richard Ellis Group, Inc., another Big Four Commercial Real Estate firm), found that in the second quarter of 2022, Houston recorded 7.8 million square feet of positive absorption (a commercial real estate term for the net amount of space constructed, occupied, vacated, and/or demolished within a given period of time). Additionally, Houston's real estate market found that the vacancy rate of industrial space decreased for a fourth consecutive quarter, reaching just 4.4% in 2022's second quarter.

Recognizing the need to support the growing cargo movement and accommodate the evolving requirements of the ecommerce industry, Port Houston has announced significant investments in infrastructure improvements. The port is investing \$700 million in upgrades and enhancements to improve the efficiency and capacity of its cargo handling facilities, including warehouses and distribution centers. These investments are aimed at positioning Port Houston as a competitive hub for ecommerce logistics and supply chain operations.

All of this information raises many important questions in order to understand whether there is a need for further industrial repurposing and development, and what the scope of it will look like in the coming years. First, where is all of this cargo coming from? Is it related to the enormous cargo backlog on the west coast (namely the ports of Los Angeles and Long Beach), which was part of the massive supply chain delays during the COVID-19 pandemic? What does all of this cargo comprise of? Given that a vast amount of the cargo that Port Houston imports and exports are crude oil and petroleum products, do everyday consumer goods bare any responsibility for the rise in cargo tonnage? And does all this recent growth signal continuous growth in the future? Or, is it simply a short-term adjustment in light of recent (past three years) events?

The answers to all of these questions are not perfectly clear, but a lot of the evidence shows that these massive booms in cargo shipment and industrial development are not simply coincidental. First, according to a November 2022 [LA Business Journal Article](#) titled “Port Congestion Finally Clears Up”, cargo ships arriving from Asia have intentionally avoided west coast ports because of the fear of additional backlogs, as well as labor negotiation issues at the ports themselves. The article points out, however, that despite clearing through pandemic-era logjams, data from November 2022 showed that the Port of LA still achieved its second highest

volume year in 2022. This is clear evidence that recent growth in cargo tonnage at Port Houston is not solely caused by the excess volume from the west coast, and that it has high potential to continue in the near future.

Next, evidence strongly suggests that consumer goods *are* in fact a large contributor to the influx of Houston's cargo. Many retailers have started opening retail locations and distribution centers in the Houston area for the first time within the past few years. [According to JLL](#), these retailers leased over 11.1 million square feet of space in from 2021 through June 2022, compared to just 3.4 million square feet in the same amount of time 2018-2019. Three companies occupying the largest amounts of space include Custom Goods, Chewy.com, and Living Spaces, all of which are consumer goods retailers. Additionally, Walmart has opened a new 1 million-square-foot distribution center in Baytown, Amazon has increased to 20 facilities in Greater Houston, and overall companies increased their industrial space by 32 million square feet in a 12 month period from September 2021 through September 2022. This amount of growth is unprecedented, but is it sustainable? Most likely, it will not stay at this level. However, a decrease to a yearly industrial expansion of 20 million square feet (from 32 million) would still be twice that of pre-COVID-19 pandemic levels. This is concrete evidence that companies are not just expanding to make up for lack of coverage in fulfillment areas, but rather they are looking to capitalize on Houston's growing economy and consumer market. High demand of industrial space has pushed up list prices of rents by 10% in the second quarter of 2022 (compared to the same period a year earlier), and 15% higher for newly constructed facilities. Not only is the demand growing, but the profitability is as well.

Houston is the second fastest-growing major metro area in the United States, where its largest population increase has occurred within the past six years, [according to a recent census](#)

[analysis](#). Between July 2021 and July 2022, the nine-county Houston metro area, which includes The Woodlands and Sugar Land, added 125,000 residents to its population. The region's population now stands at 7.34 million, according to an analysis of U.S. Census data conducted by the Greater Houston Partnership. Hundreds of thousands of new residents signals more consumer market growth, which means greater expansion of distribution capabilities.

In the scope of this project, we are unable to confirm statistical significance of certain trends due to the lack of public data available to us, but in a professional consulting report, a deeper analysis of this situation could certainly be possible.

Almeda Mall

Underperforming and deteriorating, Almeda Mall is uniquely positioned to benefit from repurposing into a warehouse-style fulfillment center. Almeda Mall is located in a densely populated area with good transportation infrastructure, including proximity to major highways and airports. This could provide a strategic advantage for a distribution center, as it would allow for efficient transportation of goods to and from the facility, potentially reducing transportation costs and delivery times.

Almeda Mall already has existing infrastructure that could be repurposed for a distribution center, such as a large retail space, parking facilities, and utility connections. This could potentially save time and money in constructing a new facility from scratch. The size and layout of a mall, with its large floor area and multiple levels, could provide ample space for warehousing, sorting, and distribution activities. The existing retail space could be converted into storage areas for inventory, while other areas could be repurposed for order fulfillment, packing, and shipping operations.

Repurposing Almeda Mall into a distribution center could potentially create new job opportunities for the local community. Distribution centers typically require a workforce for various roles, including warehouse workers, order pickers, packers, truck drivers, and administrative staff, which could contribute to employment opportunities in the area. A functional distribution center could potentially bring economic benefits to the local community and the region as a whole. It could generate tax revenue for the local government, spur economic development, and contribute to the growth of the logistics and e-commerce sectors in the area.

Repurposing a mall into a distribution center could also be seen as an example of adaptive reuse, which can be an environmentally sustainable approach to repurposing existing buildings rather than constructing new ones. This could potentially reduce the environmental impact of new construction and contribute to sustainability goals.

Almeda Mall is also situated in one of the fastest-growing industrial sectors of Greater Houston's commercial real estate submarkets. The southeast Houston sector currently leads all submarkets, with 7.6 million square feet, or 23% of the market-wide construction total underway, due to the increased shipping activity at the Port of Houston. Population increases combined with elevated shipping activity through the Port of Houston have stimulated growth in both e-commerce and consumer products. This is further evidence that makes it an ideal piece of property for repurposement.

Case Studies

Case Study 1: Cortana Mall, Baton Rouge, Louisiana

Retail giant Amazon replaced the failing Cortana Mall in Baton Rouge with a new \$200 million, 3.8 million-square-foot fulfillment center. According to records from the East Baton Rouge Clerk of Court, the Cortana Mall property was purchased by Amazon early in 2021 for

approximately \$17 million. Greater than 1,000 employees will be employed within the facility, where they will earn a minimum of \$15 an hour plus benefits (current minimum wage in Texas is the federal \$7.25 per hour). The center is expected to be fully operational by Mid-2024.

According to an economic impact analysis by Louisiana Economic Development, the project will generate nearly \$26 million in tax revenue and funnel \$2.9 billion into the economy over the next two decades. The center's employees will pick, pack, and ship smaller household items, aided by the latest robotics technology. Amazon employees will receive comprehensive benefits on their first day, including full medical, dental, and vision insurance, and 401(k) savings with a 50% company match. The center is expected to generate over 1,100 indirect, spin-off jobs and support at least 800 construction jobs during its development. The fulfillment center is one of several properties Amazon is developing in south Louisiana, including a sortation center in Port Allen and a distribution warehouse in Slidell.

Case Study 2: East Town Mall, Knoxville, Tennessee

The East Town Mall in Knoxville, Tennessee, which had struggled to attract customers for years, is currently being redeveloped into a massive Amazon fulfillment center. The 95-acre site, which had been home to the mall since the 1980s, was purchased by Amazon in late 2019.

Demolition of the mall began in early 2020, and construction of the new facility is underway. The site will be transformed into a 3.6 million-square-foot distribution center, with state-of-the-art equipment and technology to ensure speedy and accurate order fulfillment. The facility is expected to be operational by the end of 2024.

The redevelopment of the East Town Mall into an Amazon fulfillment center is expected to bring significant economic benefits to the Knoxville area. The facility is projected to generate millions of dollars in revenue for local businesses and provide a much-needed boost to the

region's job market. In addition to the 1,000 jobs that will be created at the fulfillment center, the project is expected to support hundreds of additional jobs in the surrounding area.

Amazon has made significant investments in Tennessee in recent years, including a new fulfillment center in Memphis and a massive distribution hub in Nashville. The company has also established partnerships with local colleges and universities to provide training and education programs for workers.

Economic and Community Impact

By converting Almeda or an alternative shopping mall into a warehouse/logistics facility, there is the strong possibility to create and replace thousands of new jobs. This would include both direct jobs related to the operation of the distribution center, such as warehouse workers, delivery drivers, and administrative staff, as well as indirect jobs, such as those created in the supply chain and local businesses that support the operation of the distribution center. This influx of new jobs can provide a significant boost to the local economy, with increased spending and consumer confidence.

Companies interested in purchasing the land for the distribution center would be responsible for the redevelopment costs, rather than the local government or taxpayers. This could help to attract companies to the area and encourage investment in the local economy. This is extremely significant when we consider to economic success of a repurposing project. The absence of Houston's zoning laws would not increase the tax burden of surrounding communities, and increased industrial space could even result in higher tax revenue for the city, county, and/or community.

With more Amazon (or similar/equivalent) coverage, the experience and access for ecommerce customers could be significantly improved. Customers in the local area would have

access to a wider range of products, faster delivery times, and potentially lower prices due to increased competition. This might sound like a small community benefit, but would certainly be one of the most noticeably-felt differences in the everyday lives of community members.

A distribution center could also have the potential to provide additional community benefits, such as partnerships with local organizations and charities and potential education and training programs for employees. Additionally, large distributors like Amazon are now transforming their infrastructure to be carbon-neutral in the future. A sustainably-run distribution center could have a positive impact on the local environment by reducing transportation-related emissions and waste.

This proposal stands out as the more financially sound and economically driven option. While the economic benefits of this proposal are consequential, the other two proposals may provide higher community benefit. It is important to carefully weigh both the economic and social impacts of each proposal to determine which option would best serve the needs of the community as a whole, and make decisions based on the specific community at hand.

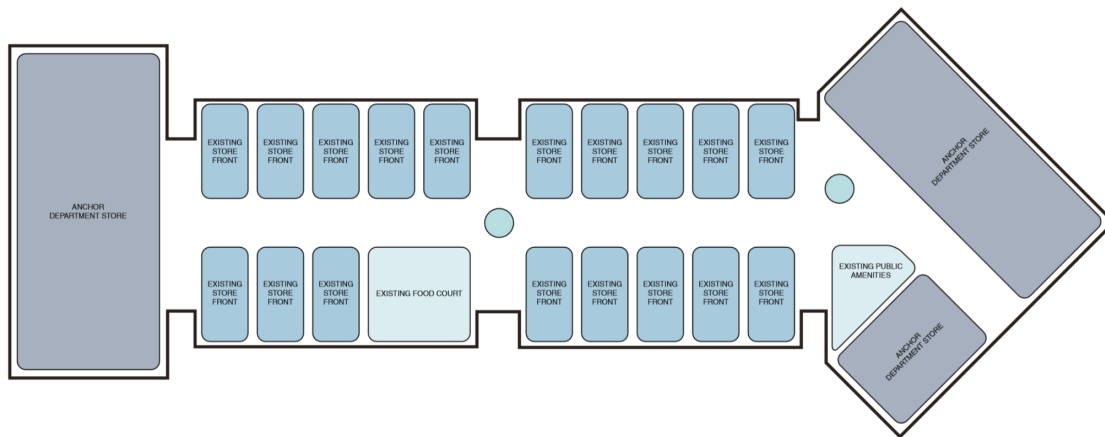
2. Appendices

Appendix A: Comprehensive Residential and Commercial Attractions

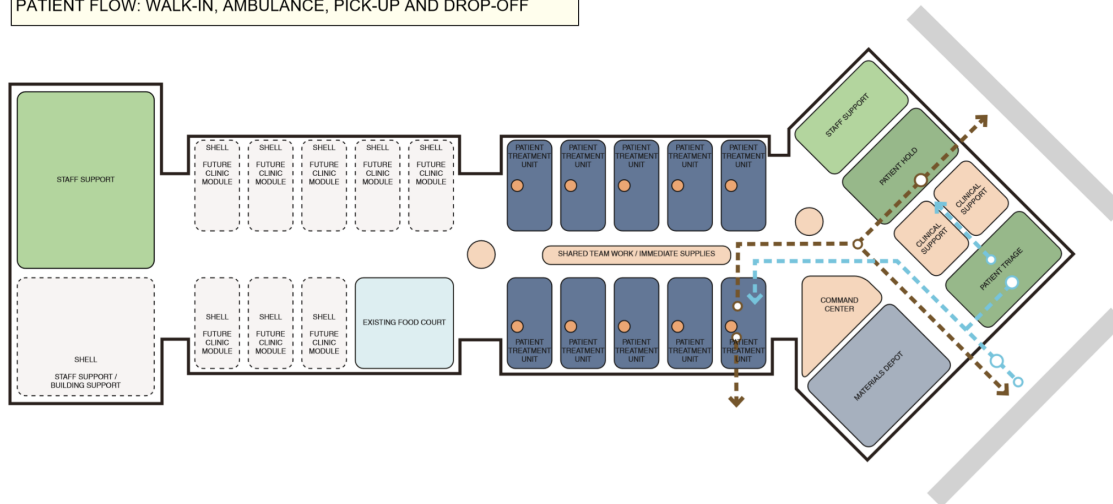
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Appendix B: EwingCole Medical Mall Blueprints

EXISTING SHOPPING MALL CONCOURSE



PATIENT FLOW: WALK-IN, AMBULANCE, PICK-UP AND DROP-OFF



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