

Copyright

by

Cody Jack Lantelme

2020

**The Report Committee for Cody Jack Lantelme
Certifies that this is the approved version of the following Report:**

**Measuring the Effects of Austin's Transit-Oriented Development
Zoning Districts through Multi-Family Property Analysis**

**APPROVED BY
SUPERVISING COMMITTEE:**

Jake Wegmann, Supervisor

Michael Oden

**Measuring the Effects of Austin's Transit-Oriented Development
Zoning Districts through Multi-Family Property Analysis**

by

Cody Jack Lantelme

Report

Presented to the Faculty of the Graduate School of

The University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degree of

Master of Science of Community and Regional Planning

The University of Texas at Austin

May 2020

Dedication

This report is dedicated to my teachers, co-workers, classmates, and most of all to Kathryn and my parents, who have supported me every step of the way. To Mom, Dad, and Kathryn, I love y'all and appreciate you understanding, and supporting me through the stresses of grad school. To my readers, who provided excellent feedback, I cannot begin to thank you enough. And finally, to the team of Charles, Camiel, and Erin at Capitol Market Research, who provided PR feedback, career advice, and most importantly, one of the best work environments I could have ever asked for.

Acknowledgements

This report would not have been possible without feedback, data, and advice from the folks over at Capitol Market Research, Charles, Camiel, and Erin. All of the data in the case study analysis sections were gathered as part of CMR's semi-annual update.

Abstract

Measuring the Effects of Austin’s Transit-Oriented Development Zoning Districts through Multi-Family Property Analysis

Cody Jack Lantelme, M.S.C.R.P.

The University of Texas at Austin, 2020

Supervisor: Jake Wegmann

Transit Oriented Development (TOD) has become a popular technique for cities that are seeking to supplement public transportation investments with dense developments that serve to improve tax assessment values and increase ridership. The literature on TOD provides considerable insights on TOD implementation and value capture techniques, as well as numerous case studies that show the effects of TOD projects in other major cities. The literature also reveals problems with TOD implementation and the tendency of planners to overestimate the ability of TOD zoning to spur dense development and increase property values. Based upon a review of the successes and limitations of TOD strategies, this report assesses multi-family apartment communities near each of the three TOD station area regulating plans for the Red Line Commuter Rail in Austin, Texas. Evaluation of the data on multi-family rental housing

indicates that there is not a significant rent or occupancy premium associated with newer properties near Red Line stations. In one of the three cases studied, older properties did benefit from the accessibility and infrastructure improvements associated with transit and TOD infrastructure improvements based on rent and rent per square foot premiums, although more research will be needed to determine whether this observation is coincidence or a trend. As transit infrastructure in Austin is improved, this study will provide a baseline for measuring the success of properties near stations. It is possible that transit infrastructure improvements will result in rent and occupancy premiums for station area properties in the future.

Table of Contents

List of Tables	x
List of Figures	xi
Chapter 1: Introduction	1
Chapter 2: TOD Lit Review.....	4
TOD Background and Concept.....	4
TOD Valuation and Value Capture	9
Takeaways and Discussion	11
Chapter 3: Transit, TOD, and the Austin Apartment Market in Context	15
Transit in Austin	15
TOD in Austin	17
The Austin Apartment Market and its Relation to Transit	19
Chapter 4: TOD Zone Case Study #1: Plaza Saltillo	22
Conclusions.....	28
Chapter 5: TOD Zone Case Study #2: MLK Station.....	29
Conclusions.....	35
Chapter 6: TOD Zone Case Study #3: Crestview Station.....	36
Conclusions.....	44
Chapter 7: Conclusions & Takeaways.....	45
REFERENCES.....	49

List of Tables

Table 1: Plaza Saltillo Station Area Plan Properties.....	24
Table 2: Plaza Saltillo Quarter Mile Buffer Properties.....	25
Table 3: MSA and East Submarket Stats	25
Table 4: Plaza Saltillo Comparable Properties	26
Table 5: MLK Station Area Plan Properties	31
Table 6: MLK Quarter Mile Buffer Properties	31
Table 7: MSA and East Submarket Data	32
Table 8: MLK Station Comparable Properties	33
Table 9: Crestview Station Properties.....	38
Table 10: Crestview Station Quarter Mile Buffer Properties	39
Table 11: MSA and North Central Submarket Data.....	39
Table 12: Crestview New Comparable Properties.....	41
Table 13: Crestview Older Comparable Properties	42

List of Figures

Red Line Base Map.....	16
Austin Study Areas Map.....	21
Plaza Saltillo Map.....	23
Comparable Property Map.....	27
MLK Station Map.....	30
MLK Comparable Property Map.....	34
Crestview Map.....	37
Crestview Comparable Property Map.....	43

Chapter 1: Introduction

This purpose of the research presented in this report is to gain an understanding of the state of transit-oriented development (TOD) in Austin, Texas in terms of potential multi-family rental and occupancy premiums near commuter rail stations. Apartment communities near rail stations are examined and measured in comparison to similar properties outside of station area planning zones in an effort to understand the potential effects that access to transit and other TOD-related amenities may have on the desirability of properties located there. Factors examined were rent, rent per square foot, average unit size, occupancy, number of units, and year of completion. Data for properties near commuter rail stations was then compared to Metropolitan Statistical Area (MSA) averages, submarket averages, and detailed comparable property averages. Proprietary data from the Austin firm Capitol Market Research was used for the study. All data for apartment properties was gathered in December of 2019 and January of 2020.

To better understand the context of planning measures related to TOD and public transportation, a literature review was conducted. The literature review outlines a brief history of TOD and the reasons for its widespread implementation. Next, the literature review discusses factors that make TOD and transit systems successful in terms of ridership and finances, and how development proximate to transit stations can increase ridership and ease the financial burden of cities to implementing and operating transit. Development that encourages successful public transportation is referred to as transit supportive development by Dunphy et al (2004) and is an important consideration for TOD planning measures (Dunphy, et al., 2004).

Next, several case studies from US cities, most notably Arlington, Virginia and Portland, Oregon, are examined. These case studies, among others, provide examples of successful implementation and operation of TOD planning policies.

The literature generally shows that property tax assessment values are usually higher near transit stations. There are many reasons for this value premium, usually attributable to improved transit accessibility and amenities and services near transit stations, as cities allow for increased density and make infrastructural improvements with an emphasis on walkability and place-making. However, value premiums are not consistent across cities, or even from station to station in the same city. Cities use these value premiums to finance infrastructure improvements and provide incentives to real estate developers to increase the likelihood that desirable development occurs near stations. Common methods for this are tax increment financing (TIF) and tax increment reinvestment zones (TIRZ). These value capture methods are discussed in greater detail in the next chapter.

The success of TOD in many cities has resulted in widespread implementation of TOD in cities like Austin, Texas, the subject of this report. However, many practitioners overestimate the ability of transit and TOD alone to spur desirable development at sufficient densities. Carlton (2018) warns that underlying real estate markets are important to consider when implementing TOD measures. Many planners see successful TOD and seek to save blighted areas or force infill development by prescribing TOD where there is no demand. While transit and TOD zoning do not necessarily beget density and new development, it is possible that dense development and real estate markets that can sustain high density could also support transit through ridership and property taxes. This point has salience for the young TOD market in Austin, as seen in the conclusions of the report later. In short, the commuter rail in Austin has not yet caused significant increases in rents, rents per square foot, or occupancies at any of the identified multi-family apartment communities located in or near station area planning zones, probably because the Red Line is a stand-alone rail transit line that offers limited improvements in transit accessibility for residents compared to other cities more extensive transit networks. However, it is possible that as transit in Austin expands, the rents near stations will increase more rapidly

than comparable properties that do not offer access to rail transit. This study provides a starting point to examine the continued demand for TOD in Austin into the next decade.

While there are no conclusive results showing sizable rent benefits for new development near transit stations, older apartment properties (built in the 1970s and 1980s) located near Crestview Station saw significant rent and rent per square foot benefits over older comparable properties not near the rail station. While the research is not exhaustive enough to make a strong claim, future research could build upon this finding to determine whether a trend exists. If so, it may be that older properties benefit more from infrastructural and accessibility improvements than their newer counterparts that have top of the line finishes and command “Class A” rents.

The remainder of this report provides background on TOD planning and best practices. It then examines the state of rail transit in Austin, focusing on the Red Line Commuter Rail. The Red Line has nine stations, three of which have station area and regulating plans. The three stations with regulating plans (Plaza Saltillo, MLK, and Crestview Stations) are examined as case studies to determine whether the planning measures implemented have resulted in increased rents or occupancies near stations that can be demonstrably attributed to the Red Line.

Chapter 2: TOD Lit Review

TOD BACKGROUND AND CONCEPT

The modern-day idea of transit-oriented development was popularized in 1993 by Peter Calthorpe in his book *The Next American Metropolis*. Calthorpe's work described several urban design, architecture, and planning methods that could be implemented to support changes in travel behavior, which support public transportation, and combat urban sprawl.

“The [TOD] concept is simple: moderate and high-density housing, along with complementary public uses, jobs, retail and services, are concentrated in mixed-use developments at strategic points along the regional transit system...With more people arriving at work or shopping areas without their cars, the size of parking lots can be limited. The end result of shifts away from auto usage would result in reduced energy consumption...[and sprawl].”

Calthorpe's work resonated with many city planning departments that were experiencing challenges with air quality and traffic congestion as a result of rampant urban sprawl. The new millennium subsequently revealed three trends in cities, as described by Dittmar and Ohland in 2004, that document a market for walkable, mixed-use urban development centered around transit stations that would provide increased access. These trends are as follows:

1. Resurgent investment in downtowns for the first time since the second World War –
“Urban centers are once again seen as attractive, lively places in which to live and work, and as hubs of intellectual and creative capacity.”
2. The continued growth and maturation of suburbs resulted in an increasing desire for these suburbs to become more like the adjacent cities, with increasingly diverse populations and economic opportunities. This shift resulted in growing pains as mature suburbs

struggled to diversify land uses, build revenues, mitigate traffic congestion, create walkable environments, and respond to their residents' desire for amenities in their towns. "In short, suburbs are increasingly being challenged to become more than bedroom communities."

3. Renewed interest in rail travel and investment – as cities continued to experience sprawl and gridlock, they began to explore other options to improve mobility. Many cities were competing for federal funding to get new projects off the ground and were trying to differentiate themselves from others who simply sought to expand highways (Dittmar, Belzer, & Autler, *An Introduction to Transit-Oriented Development*, 2004).

As cities sought to address the problems with sprawl, and specifically the car-centric nature of sprawl and the resulting congestion and environmental problems that accompany it, they began to explore ways to move away from dependence on the auto. The best way for cities to move away from cars is to build a rapid transit system for every corridor which is faster than the car traffic movement in that corridor, and to build centers where walking, biking, or short transit trips are the preferred means of reaching the public transit services. The competitive advantage of transit relative to the car depends on the speed of the transit system and the scale and frequency at which the system works, as well as the capacity and flexibility of the system and the "degree of spatial concentration of the activities" accessible by transit. If services or amenities are not accessible by transit, transit will not have a competitive advantage over automobile travel (Curtis, Renne, & Bertolini, 2009).

Following the principles above, many cities began to invest heavily in transit. However, the cost of gaining a single transit rider is quite high. For example, Dallas spent about \$67,000 for each new daily rider on the Dallas Area Rapid Transit (DART) line. Average costs vary by transit system, but in 2004 it was estimated that initial capital costs per new rider ranged from

\$22,000 to \$131,000 depending on ridership and time of completion (Dunphy, et al., 2004). To attempt reducing the high costs of transit, researchers began to explore ways to maximize transit efficiency by increasing access and reducing per rider costs. They noticed that development patterns around rail transit stations were not optimized for ridership, and that many stations were “surrounded by land uses that limit the potential property value advantages [of transit] – including commuter parking or industrial operations served by freight services that share the commuter-rail tracks.” (Dunphy, et al., 2004). Increased ridership is important because it allows transit agencies to rely on fares to cover a higher percentage of operating costs, rather than relying on taxes or assistance from other agencies. While all transit relies on some form of subsidy, increased fare collection through higher ridership eases this burden.

Dunphy et al go on to describe the best way for cities to support their transit investment through transit supportive development. “The prevalence in America of growth patterns that fail to support transit use means that investment in transit needs to be reinforced with development strategies aimed at building a compelling market for transit.” They noticed that transit use increased in denser communities with larger downtowns. Transit use also increases the closer people live to downtown. Finally, the better the transit service (the more convenient and frequent), the more people will use it. Dunphy et al describe these factors as the four D’s of transit supportive development:

- Distance
- Density
- Design
- Diversity

Dunphy et al go on to explain that in many cities the above factors do not obviously support certain transit investments, especially high capacity public transit. Especially in the Sun Belt cities that were built out in the automobile era, their sprawling development patterns mean that ridership is low, and stations are inaccessible by walking or biking to a large portion of the population. Transit supportive densities are usually only acquired through vertical mixed-use projects with a floor area ratio (FAR) of at least 1.0 and residential densities of at least 20 to 30 dwelling units per acre along the entire transit corridor (Dunphy, et al., 2004). Most Sun Belt cities do not have these types of densities, and so they rely on new infill redevelopment around transit stations to support ridership.

The competitive advantage of transit relative to the car depends on the speed of the transit system and the scale at which the system works. It also depends on the capacity and flexibility (the number of different route options and destination choices) of the system and the “degree of spatial concentration of the activities” that the transit system serves (Curtis, Renne, & Bertolini, 2009).

Many cities in the United States today have implemented zoning and infrastructure requirements that promotes some form of transit-oriented development. While not all cities who implement TOD are successful in gaining ridership through increased density, several case studies reveal the potential for TOD. One such example is in Arlington, Virginia, in the Washington, DC metropolitan area. The transit system and transit supportive development in Arlington encourage frequent ridership, leading Curtis, Renne, & Bertolini to tout the Arlington TOD strategy as a best practice case in the United States in 2009. Their opinion stems from research showing that every additional 100,000 square feet of office and retail space added near the transit stops along the transit corridor resulted in nearly 50 additional daily boardings. For

every 100 residential units added to the transit corridor, an additional 50 new daily boardings occurred (Curtis, Renne, & Bertolini, 2009).

Portland has also implemented a successful system, in which the transit agency works with developers to encourage “highest and best transit use” within the larger real estate market. The resulting development creates attractive and interesting mixed-use districts around stations, resulting in higher transit ridership relative to what would have occurred with more traditional development (Curtis, Renne, & Bertolini, 2009).

Successful TOD, according to a 2014 public transportation study by the US Government Accountability Office, is supported by several factors. Demand for real estate and available land for development (as opposed to costly and time-consuming parcel assemblage) must be linked with transit supportive local residents and a transit line that connects multiple destinations in an efficient way to produce the most desirable TOD outcomes. Chief among these factors is market demand, not just for TOD development, but for development in general (United States Government Accountability Office, 2014).

While TOD is often correlated with increased real estate value, the extent and reasons for which are outlined below, developing to support transit is complicated and often risky for developers. “The complexity of TOD projects can magnify the uncertainty and result in capital that is not only expensive, but also often very difficult to find.” (Parzen & Sigal, 2004). Cities can reduce this uncertainty by reducing roadblocks to development. Streamlined approval processes and public funding for infrastructure can encourage TOD when developers are choosing between sites for traditional development or sites within TOD zones.

TOD VALUATION AND VALUE CAPTURE

Value in TOD is generated by a mixture of market, land, and leadership. All three are necessary ingredients to a successful TOD. “The value premium in many TODs comes far more from the ‘place’ – the attractive, interesting district around the station – than from the transit system itself...Transit is an amenity, but it does not create the demand or drive the value.” Value in TOD, usually described as the assessed taxable value as determined by the municipality, comes from a mixture of density, amenity, mixture of uses, reduced parking, accessibility, and rental premiums that usually occur in dense areas with an emphasis on place-making. While many planning bodies envision transit as the driving force behind value, the reality is that value and place making are the driving forces behind transit ridership (Curtis, Renne, & Bertolini, 2009).

Transit-oriented development often results in value premiums. While the value premium differs from city to city (and within cities), compiling studies of Dallas, Los Angeles, Chicago, Portland, and Santa Clara County, show a value premium of 15 – 25% for properties located near stations over comparable properties more than a mile from the station (Curtis, Renne, & Bertolini, 2009). These increased values result in more tax dollars collected by municipalities that can, in turn, be used to help fund transit and TOD infrastructure and placemaking. However, these rent and land premiums are offset by the high cost of entitlements, design complexity, structured parking, public facilities, and community benefits (Curtis, Renne, & Bertolini, 2009).

Land values around transit tend to differ depending on the mode of transport. Light-rail and commuter rail have some value benefits, while the presence of fixed-route bus have a negligible effect (Dunphy, et al., 2004). These property value benefits only apply near station areas. Being near a track but not a station has a negative impact on property values, indicating a

negative nuisance effect that is only outweighed near stations where accessibility benefits are high (Dunphy, et al., 2004), (Smith & Gihring, 2006).

Transit also has the potential to influence value increases over time, but only for certain property types. A study of properties near the DART in Dallas from 1994 to 1998 showed a 32.1% increase in value for residential uses and a 24.7% increase for office, compared with control group increases of 19.5% and 11.5% over the same time, respectively. Over the same time, there was no significant impact from transit on retail and industrial property values (Weinstein & Clower, 2002).

A very comprehensive study of transit benefits and value capture in 2008 by Fogarty et al showed several benefits of transit – not only did transit have positive fiscal impacts (among which are increased property values and tax revenues), it also reduces congestion and traffic accidents, contributes to improved air quality, and provides social benefits for low-income communities. However, chief among the findings of this study was a compilation of value premiums associated with transit. These include:

- Single-Family: +2% - 32%
- Condominium: +2% - 18%
- Apartment: From +0% - 4%, up to 45%
- Office: From +9% - 120%
- Retail: From +1% - 167%

While cities can use these value premiums to support infrastructure (especially with instruments like tax increment financing), developers see value in transit for several reasons. First, transit is a desirable amenity, and can result in transit premiums for rent and sale prices in many cases.

Next, the introduction of transit is often accompanied with opportunities to develop properties that are newly perceived as valuable. Third, “proximity to transit can improve the likelihood that high-density development will be allowed, and make it easier to obtain development entitlements.” Finally, TOD can promote public/private partnerships that may result in subsidies for developers, making development more feasible (Fogarty, Eaton, Belzer, & Ohland, 2008).

TAKEAWAYS AND DISCUSSION

It is clear from the literature that access and proximity to quality transit infrastructure is often strongly correlated with increased property values. TOD can improve values in two ways. First, the “accessibility effect” allows homes and business greater access to city centers, jobs, and amenities. Second, TOD tends to lead to more productive and valuable development around transit stations through various means, such as increased density, enhanced infrastructure, and an emphasis on place-making (Garrett, 2004). Despite these findings, Garret concluded that “the general consensus from the academic literature and the findings presented in [his] report is that light rail is not a catalyst for economic development, but rather light rail can help guide economic development.” Indeed, Smith & Gihring in 2006 concluded “only if there is latent demand for proximity to transit are substantial increases in property values likely to occur.”

It is easy to see why TOD is attractive to city planners and, to a lesser extent, developers. TOD is a critical factor in solving problems faced by most large cities, including sprawl, traffic congestion, social inequality, and environmental issues. Getting people out of cars and onto public transportation by increasing density and encouraging infill development is surely a worthy cause for planners to pursue. However, problems with implementation and lackluster results have occurred. Why?

Promising though the literature may be for TOD, many studies fail to indicate the extent that transit alone increases value among the litany of other factors that go into real estate

development. For example, many station areas (including those in Austin, which are studied in detail later in this report) are upzoned for density, have reductions in parking requirements, and receive subsidies and fast track approvals and entitlements. A 2019 study by Freemark identified significant tax value increases for parcels that received a boost in allowable building sizes and relaxed parking requirements in Chicago, along with an increase in condo sale prices. The escalation of land prices after upzoning “[suggests] interest in future redevelopment at higher densities” as “land prices adjusted to the expanded ability to build...” Although it is not clear if Freemark’s parcels were considered TOD, it is clear that significant price premiums occurred shortly after upzoning, indicating a market for increased density. Can the price premium attributed to TOD in many cities actually be attributed to upzoning, or some other factor? The literature is unclear. However, it seems that if price premiums occur with upzoning that a market would be prime for TOD, as density is necessary for TOD. In this case, the underlying demand for density would likely contribute to the successful implementation of TOD, as latent demand for density exists even without the transit service and improved infrastructure. The resultant density would make transit service and TOD more likely to be successful, as the literature above shows an increase in ridership as densities increase.

According to Carlton in his 2019 article, many planning practitioners and real estate developers have been disappointed by the lack of positive effects stemming from TOD policies. The station areas are failing to produce the dense development that planners and developers had hoped for (Carlton, 2008). Many planners saw the results of the studies mentioned above and sought to save blighted areas by forcing TOD on them. Carlton’s report, in which he interviewed a large number of practitioners involved with TOD implementation, revealed that planners often did not take real estate development feasibility and market conditions into consideration when making TOD land use decisions, failing to optimize real estate development outcomes when

designing transit projects. Many of the planners interviewed think that transit stations “make development happen.” The literature suggests, and Carlton agrees, that this is not true.

In light of this literature review, especially when considering the last two paragraphs, it is clear that planning and development practice for TOD is largely dependent on underlying real estate market conditions. Transit infrastructure projects of significant magnitude, including TOD and proximate stations, should be viewed as an amenity to add to a market segment that already has an underlying demand for density. It is clear that transit and TOD zoning does not necessarily beget density and development, but it is possible that dense development could support transit through ridership and increased property taxes.

Finally, only one study could be found that compares rental rates for multi-family properties near transit stations to properties outside of the transit station influence. While taxable values are important metrics of value (especially for planners and economists planning for revenue generation), it is less evident how the end user of TOD values accessibility. The only study found using the same metrics used for this report (measures of rent and occupancy for multi-family properties) is from Benjamin & Sirmans in 1994, and shows that “distance from a metro station does not have a significant effect on occupancy, distance from a metro station is seen to have a significant effect on rent.” They found that “each one-tenth mile increase in distance from the station results in a decrease in rent per apartment unit of about 2.50%.” Studies using these metrics are useful for two reasons. First, they allow developers to understand a market much more effectively than taxable values. Developers that understand the effect of transit stations on rents and occupancies will be able to underwrite complex projects that they otherwise would not take the risk on. Understanding how end users value transit, and which users value density is key for developers. Second, cities that understand these metrics will gain a better understanding of who lives in TODs, what their preferences are, and what type of

amenities and developments they would prefer. Understanding property tax values does little to gain insight into who lives in a place and why, which is an important part of urban planning.

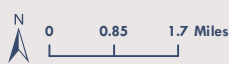
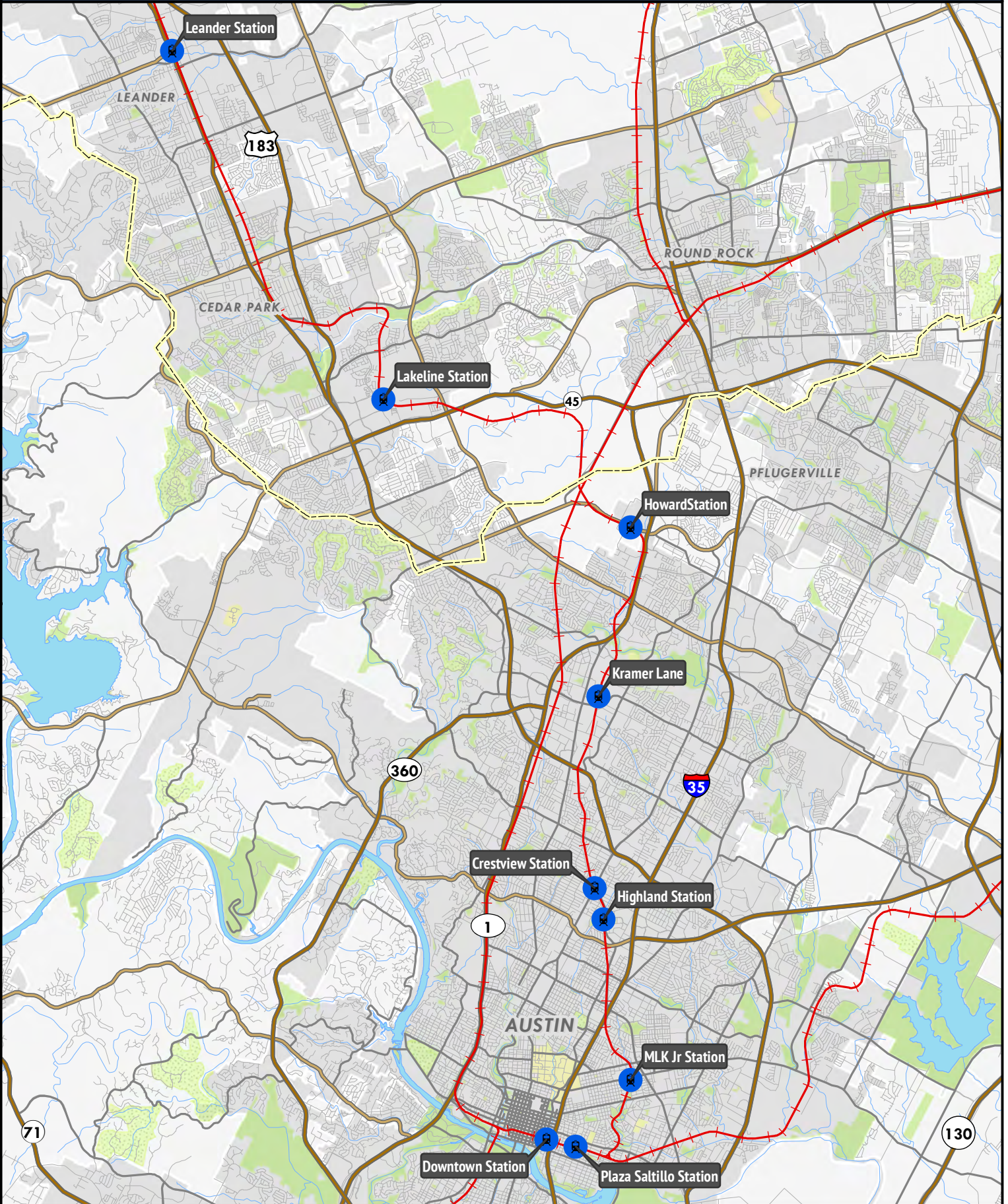
Chapter 3: Transit, TOD, and the Austin Apartment Market in Context

TRANSIT IN AUSTIN

Transit services in Austin have been provided by Capital Metro since 1985, when the transportation agency was established by referendum. Services have since expanded to include local and commuter bus service, commuter and freight rail service, University of Texas shuttles, and on-demand carpooling options. At the time of writing in March 2020, these services cover 544 square miles of land and serve over 1.3 million people in the Austin metro area. Capital Metro (CapMetro) provides service through 2,300 bus stops, 17 park & ride/transit centers, nine commuter rail stations along 32 miles of track between downtown and Leander, 26 MetroRapid (bus rapid transit services) station pairs, and 162 miles of freight rail track. CapMetro operates with nearly 100,000 average weekday boardings, equating to approximately 31.2 million annual boardings (Capital Metro, n.D.).

This report is focused on apartment projects near the CapMetro Red Line commuter rail stations. The Red Line was approved in 2004 as part of the CapMetro long range mass transit plan. Service was originally scheduled to start in March of 2009, but didn't actually start until March of 2010 (Austin Towers, 2010). There were 60,907 riders on the Red Line in January 2020, accounting for about 2.41% of all CapMetro boardings during the same time frame. The average weekday ridership for January 2020 was 2,763. Trains run from Leander to Downtown Austin and back throughout the day, usually arriving every 30 to 45 minutes at peak times. Off peak times may see departures up to an hour apart. The first weekday train leaves Leander at 5:48 am and arrives downtown at 6:49 am. The final train leaves downtown at 7:18 pm and arrives in Leander at 8:16 pm. There are nine total stations for the Red Line covering 32 miles of track (Capital Metro, n.D.). A map of the Red Line and its nine stations is shown below:

Austin MSA Commuter Rail Stations



TOD IN AUSTIN

Transit-Oriented Development in Austin was born in 2004, when the Austin City Council adopted a resolution for staff to begin planning for TOD in anticipation of the CapMetro MetroRail, which was approved the same year. In 2005, an official TOD ordinance was passed that created TOD districts around five future stations and one MetroRapid park and ride facility (City of Austin Planning and Development Review Urban Design Division). Today, TOD in Austin is comprised of three MetroRail stations with station area regulating plans. These plans are the Lamar Blvd/Justin Lane regulating plan around the Crestview station, the Martin Luther King Jr Blvd regulating plan at the MLK Station and the Plaza Saltillo regulating plan at Plaza Saltillo station (Capital Metro, n.D.). Each of these stations and their corresponding plans will be examined more closely in later chapters.

Capital Metro defines TOD as “an attractive, walkable, and sustainable development pattern around high-capacity transit that maximizes Capital Metro’s system ridership and offers Austin residents ample vibrant housing choices and convenient access to the City’s jobs, services and diverse amenities.” (Capital Metro, n.D.). The City of Austin, working closely with CapMetro, has its own similar definition. “Transit Oriented Development (TOD) is an intentional mixing of land use and transit through the creation of compact, walkable, mixed-use communities within walking distance of a transit stop or station.” (Capital Metro, n.D.) The following quote from the City of Austin, which is very similar to the prescriptions of TOD experts like Calthorpe, encapsulates the essence of TOD planning in Austin:

“The goal of a TOD is to bring together people, jobs, and services designed in such a way to make it efficient, safe, and convenient to travel on foot or by bicycle, transit, or car. TOD is an opportunity for Austin to carefully coordinate transit and development for the benefit of the entire City. As Austin looks ahead

over the next 20 years with the help of its comprehensive plan, 'Imagine Austin', Transit Oriented Development is one tool for growing as a compact and connected city and developing as an affordable and healthy community. The City of Austin is committed to creating transit-supportive communities by optimizing land use around high quality transit."

The City of Austin's TOD principles are as follows, summarized from the City of Austin website:

- Compact development with density sufficient to increase ridership within walking distance of stations
- Promote walkability without excluding people in vehicles
- Encourage active living and a sense of belonging and ownership
- Placemaking
- Variety of housing choices to promote diversity of residents
- Use of retail to draw customers
- Use of creative parking strategies so that parking does not dominate the design of new development
- Making TOD economically viable
- Realize that each development has a unique context

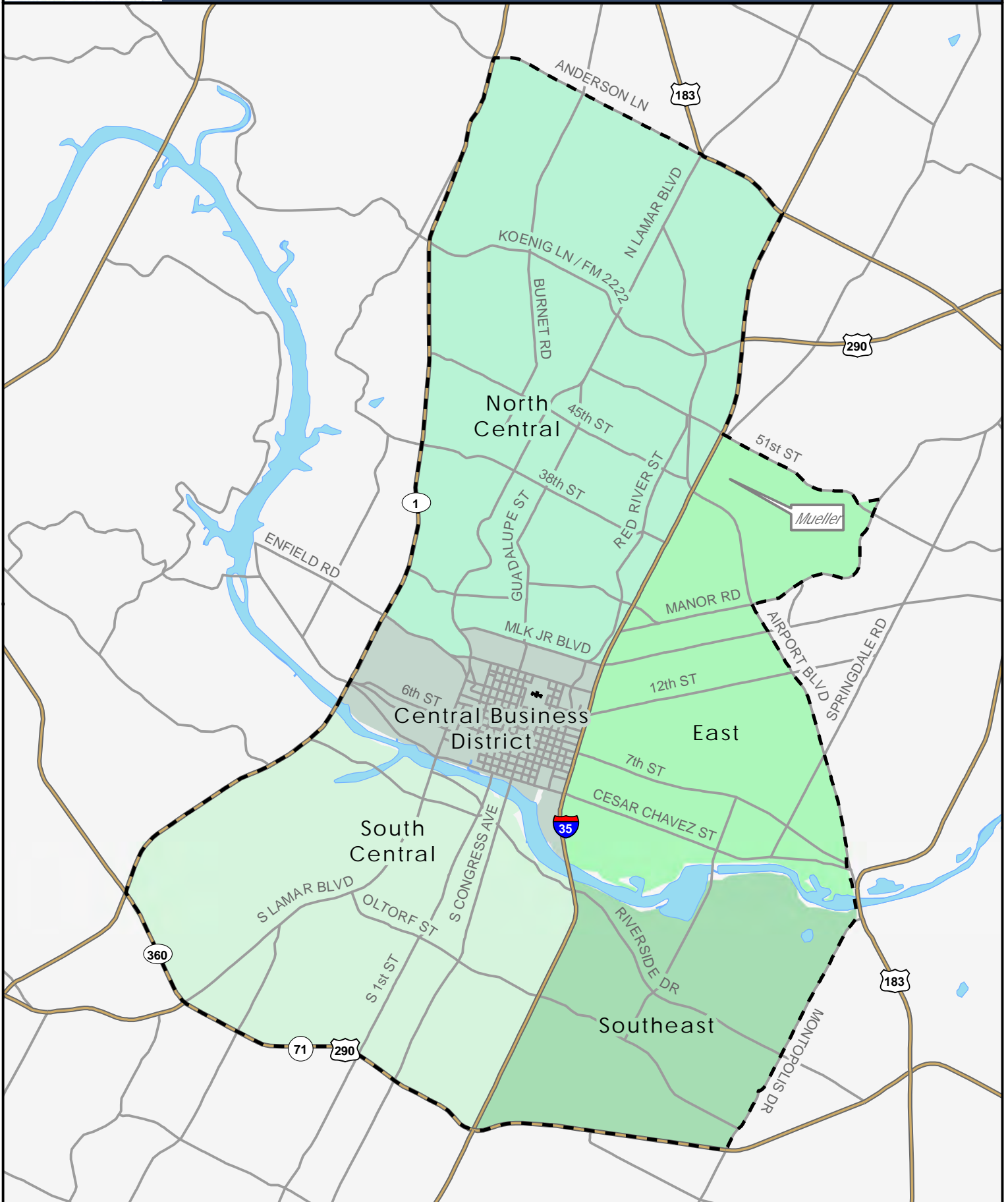
(City of Austin Planning and Development Review Urban Design Division, n.D.)

THE AUSTIN APARTMENT MARKET AND ITS RELATION TO TRANSIT

The remainder of this report will analyze multi-family properties near the three MetroRail stations and TOD zones in an effort to understand the effect of the Red Line on residents. Data was collected about apartment communities in an effort to understand what the Red Line means for TOD in Austin. Are rents and occupancies higher near stations and within areas that are regulated by TOD zoning? To answer these questions, proprietary data from Capitol Market Research is used to examine each apartment community in terms of rent, unit count, unit size, rent per square foot, year of completion, and occupancy in an effort to understand whether transit stations on the Red Line are correlated with rent or occupancy increases, and how proximity to transit may be influencing unit size and price.

However, it should be noted that TOD in Austin is fairly recent, especially in real estate terms. The Red Line has only been in operation since 2010, and is limited in its current scope of service. Access to employment centers and amenities is limited, as are service frequencies. However, service is gradually being improved through several projects that are underway at the time of writing to improve the quality of the Red Line. Notable among these projects are downtown station area improvements near the convention center, and a new station near the Domain that will provide access to a large employment center. It is possible that the effects of the Red Line are just beginning to be seen, and that ongoing accessibility and placemaking improvements will increase the desirability of the station areas, resulting in rent premiums in the future. The improvement of other transit lines in Austin may also result in value premiums near Red Line stations because of the overall improvement to the transportation network. If other new lines are added, the transit accessibility value of the Red Line will improve in turn. The results of this study will provide a benchmark for similar studies in the future, so that the effect and effectiveness of rail transit planning in Austin can be further analyzed at later dates.

Capitol Market Research (CMR) conducts real estate market research to provide several products to customers. These products include market surveys, feasibility reports, and highest and best use analysis, among others. CMR has broken the Austin market down into smaller areas, each of which have similar characteristics and geographies. These areas are mapped in detail below. For the purposes of this report, apartment communities near stations will be compared to apartments of several geographies. Comparisons will be based almost entirely on CMR's data and methods of analysis. Apartments near Red Line stations will be compared to their counterparts throughout the metropolitan area and their respective study areas.



Chapter 4: TOD Zone Case Study #1: Plaza Saltillo

The first case study performed is for the Plaza Saltillo Station, which is located on the MetroRail Red Line. The Plaza Saltillo station has both a station area plan (SAP) and a regulating plan. The SAP is a general outline that provides background information and makes recommendations. The regulating plan is more prescriptive and provides exact development standards that must be met. The regulating plan standards include six articles:

1. General Provisions
2. Land Use and Building Density
3. Circulation, Connectivity, and Streetscape
4. Site Development Standards
5. Building Design Standards
6. Definitions

(City of Austin, 2018)

This report takes a closer look at the multifamily communities within both the station area plan boundary and the quarter mile radius from Plaza Saltillo Station. These communities will be compared to averages from the City of Austin Metropolitan Area, the CMR “East” submarket, and similarly situated properties nearby of similar age that do not fall within the station area plan or the quarter mile radius from the station. The attributes of each community being examined are the year of completion (YOC), number of units, average unit size in square feet, average rent, average rent per square foot, and occupancy. Differences in these attributes across geographies will be discussed in an attempt to analyze the effectiveness and desirability of development located near the Red Line.

Austin Red Line Commuter Rail Plaza Saltillo Station



1/4 Mile Buffer

Saltillo Station Area Plan

- Property Within Station Area Plan
- Property Within 1/4 Mile Buffer

Attributes for multi-family developments within the station area plan and the quarter mile buffer area are shown below. For the six communities within the station area plan, there are a total of 1,895 units and the size of an average unit is 762 square feet. Average rent is \$1,788 for an average rent per square foot of \$2.38. Average occupancy is 92.5%, excluding the Residences at Saltillo, which was still in lease up as of December 2020 when the information was gathered by CMR. All four communities within the quarter mile buffer are also within the station area plan. These four properties have a smaller average size at 753 square feet and a lower average rent at \$1,777. They have a slightly higher rent per square foot (\$2.43) and a lower occupancy (91.4%). It should also be noted that 11.66% of the units within the station area plan boundary are considered affordable by the City of Austin. The characteristics of each property is shown in the tables below.

Table 1: Plaza Saltillo Station Area Plan Properties

Plaza Saltillo Station Area Plan								
Name	YOC	Units	Avg SF	Avg Rent	Rent/SF	Occ	Aff. Units	% Affordable
Residences at Saltillo*	2020	703	781	\$1,804	\$2.31	72.7%	40	5.69%
Corazon	2015	256	743	\$1,786	\$2.40	96.5%	32	12.50%
Candela	2019	119	826	\$2,135	\$2.59	95.8%	20	16.81%
The Indie	2018	138	411	\$1,314	\$3.20	80.4%	17	12.32%
The Arnold	2017	349	843	\$1,768	\$2.10	93.1%	70	20.06%
Eastside Station	2016	330	775	\$1,850	\$2.39	92.7%	42	12.73%
Total/Average		1895	762	\$1,788	\$2.38	92.5%	221	11.66%

Source: Capitol Market Research, Dec 2020 Apartment Survey

*Property still in lease-up

Table 2: Plaza Saltillo Quarter Mile Buffer Properties

Name	1/4 Mile Buffer					
	YOC	Units	Avg SF	Avg Rent	Rent/SF	Occ
Candela	2019	119	826	\$2,135	\$2.59	95.8%
The Indie	2018	138	411	\$1,314	\$3.20	80.4%
The Arnold	2017	349	843	\$1,768	\$2.10	93.1%
Eastside Station	2016	330	775	\$1,850	\$2.39	92.7%
Total/Average		936	753	\$1,777	\$2.43	91.4%

Source: Capitol Market Research, Dec 2020 Apartment Survey

*Property still in lease-up

This station area falls within the East submarket, as defined by CMR. Statistics for the MSA and for the East Market Area are shown below. It is clear that properties near the station have much higher rents than both the MSA and the East Market Area, likely due to the location near the central business district. Square footages near the station are also lower than the MSA by over 100 square feet, and lower than the East Market Area average by about 80 square feet. The smaller unit size is interesting, indicating either a consumer tolerance for units that are smaller or that have fewer bedrooms, or a lower household size than the MSA and submarket average. Occupancies are lower near the station than they are for the MSA but are higher than the East submarket. These comparisons are useful, but it must be noted that these statistics include all properties of any age. A closer look at comparable properties is required to understand how properties near the station compare to similar properties that are further from the station.

Table 3: MSA and East Submarket Stats

MSA Stats				
Properties	Avg SQFT	Avg Rent	Avg Rent/SQFT	Occ
974	886	\$1,363	\$1.54	93.2%

East				
Properties	Avg SQFT	Avg Rent	Avg Rent/SQFT	Occ
50	844	\$1,391	\$1.65	90.3%

Several comparable properties that did not fall near the station area were chosen in an attempt to understand whether properties near the station experience a rent or occupancy premium. These properties are newer and more closely reflect the development style of the station area and are shown in detail in the table below. The comparable properties actually have higher average rents than the station area and the quarter mile buffer properties at \$1,817. The unit size is slightly larger at 775 square feet, which results in an average rent per square foot of \$2.35, slightly lower than the properties proximate to the station. Occupancy is highest among these properties at 94.7%. These properties are listed and mapped below.

Table 4: Plaza Saltillo Comparable Properties

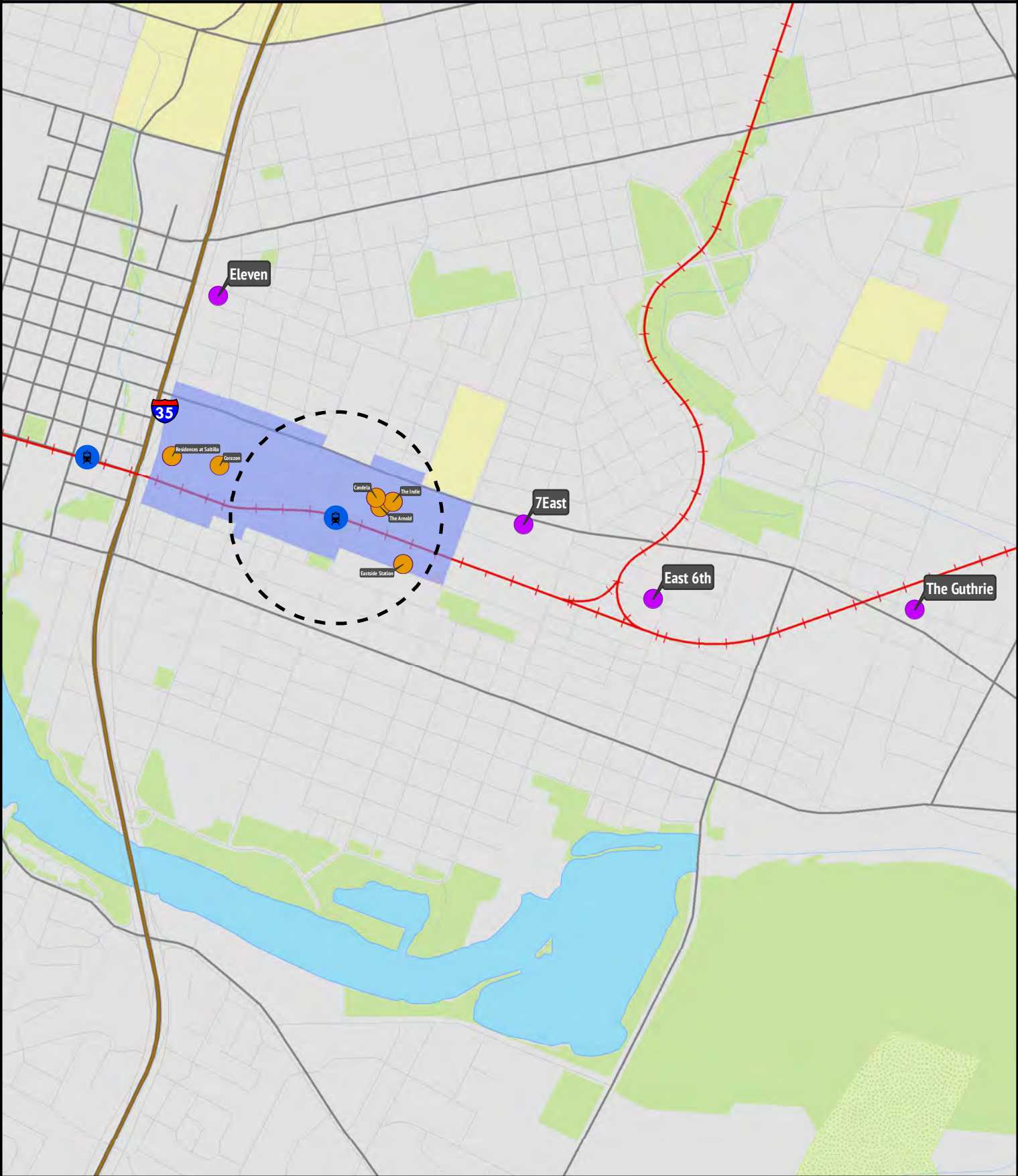
Name	Chosen Comps					
	YOC	Units	Avg SF	Avg Rent	Rent/SF	Occ
11	2014	257	793	\$1,951	\$2.46	92.6%
7East	2016	177	779	\$1,810	\$2.32	95.5%
East 6th	2018	206	813	\$1,786	\$2.20	93.2%
The Guthrie	2019	322	735	\$1,734	\$2.36	96.9%
Total/Average		241	775	\$1,817	\$2.35	94.7%

Source: Capitol Market Research, Dec 2020 Apartment Survey

*Property still in lease-up

Austin Red Line Commuter Rail

Plaza Saltillo Station Comparable Properties



-  Comparable Property
-  Property Within Station Area Plan
-  1/4 Mile Buffer
-  Property Within 1/4 Mile Buffer
-  Saltillo Station Area Plan

CONCLUSIONS

The data does not show any indication of premiums near the Plaza Saltillo Station. Rents are slightly higher per square foot than comparable properties outside of the TOD, but this may be an indication of the more central location closer to downtown than any value added by the transit or the higher density allowed under transit-oriented development regulations. The slight rent per square foot premium for TOD properties is likely attributable to the location close to downtown more than the transit, especially given that the comparable properties were generally further from downtown, although there is no proof for this as distance was not used as a control in this statistical analysis.

The average rents for the properties within the TOD station area planning boundary may also be artificially low due to affordability requirements imposed by the regulating plan. As shown in the tables above, 11.66% of the units within the station area plan boundary are considered affordable by the City of Austin, as outlined in the regulating plan for all TOD areas within the city. Controlling for these affordable units, which are not required outside of the regulating plan boundary, would show slightly higher average rents for properties near the station. Again, it is likely that the small rent premium is attributable to the desirable location of the properties more than the access to transit. From the Plaza Saltillo Station, the majority of destinations on the Red Line (aside from the Downtown/Convention Center Station) are further from the CBD and do not provide access to a large number of jobs or amenities.

Chapter 5: TOD Zone Case Study #2: MLK Station

The next case study performed is for the Martin Luther King, Jr. station. The MLK station has both a station area plan (SAP) and a regulating plan. The MLK SAP is very similar to the previously referenced Plaza Saltillo SAP, including the same six articles outlining planning standards for the station area (City of Austin, 2018).

This report takes a closer look at the multifamily communities within both the station area plan boundary and the quarter mile radius from the MLK Station. These communities will be compared to averages from the City of Austin Metropolitan Area, the CMR “East” submarket, and comparable properties located nearby and of similar age that do not fall within the station area plan or the quarter mile radius from the station. The attributes of each community being examined are the year of completion (YOC), number of units, average unit size in square feet, average rent, average rent per square foot, and occupancy. Differences in these attributes across geographies will be discussed in an attempt to analyze the effectiveness and desirability of development located near the Red Line.

Austin Red Line Commuter Rail

Martin Luther King Jr. Station



Date: March 2020

0 500 1,000 Feet

Path: C:\GIS\Projects\2020\Cody\MLK_station.mxd

- MLK Station Area Plan
- Property Within 1/4 Mile Buffer
- Property Within Station Area Plan
- 1/4 Mile Buffer

Attributes for multi-family developments within the station area plan and the quarter mile buffer area are shown below. It must be noted that “M” Station lies within the station area plan, but only offers Low Income Housing Tax Credit (LIHTC) affordable units and was not included in the analysis. For the two other communities within the station area plan, there is a total of 606 units with an average unit size of 793 square feet. Average rent is \$1,747 for an average rent per square foot of \$2.20. Average occupancy is 94.0%. Only two properties lie within a quarter mile of the station, both of which are also located within the SAP area (“M” Station and Platform). As noted above, “M” Station is not included in this analysis. Elan East lies within the SAP but not within a quarter mile of the station. The 355 units at Platform average 882 square feet and rent for \$1,807 per month (\$1.81 per square foot) and is 93.5% occupied. Details for these properties is shown in the tables below.

Table 5: MLK Station Area Plan Properties

MLK Station Area Plan						
Name	YOC	Units	Avg SF	Avg Rent	Rent/SF	Occ
Elan East	2014	251	741	\$1,662	\$2.24	94.8%
Platform	2017	355	830	\$1,807	\$2.18	93.5%
Total/Average		606	793	\$1,747	\$2.20	94.0%

Source: Capital Market Research, Dec 2020 Apartment Survey

Table 6: MLK Quarter Mile Buffer Properties

1/4 Mile Buffer						
Name	YOC	Units	Avg SF	Avg Rent	Rent/SF	Occ
Platform	2017	355	830	\$1,807	\$2.18	93.5%
Total/Average		355	830	\$1,807	\$2.18	93.5%

Source: Capital Market Research, Dec 2020 Apartment Survey

This station area falls within the East submarket, as defined by CMR. Statistics for the MSA and for the East Market Area are shown below. It is clear that properties near the station have much higher rents than both the MSA and the East Market Area, likely due to the desirable

location near the central business district and the University of Texas. Square footages near the station are similar to the MSA average, with the exception of Elan East, which has considerably smaller units. The same is true when comparing properties near the station with properties in the East submarket.

Occupancies are higher near the station than they are for the MSA and the East submarket. These general comparisons are useful, but it must be noted that these statistics include all properties of any age. A closer look at comparable properties is required to understand how properties near the station compare to similar properties that are further away from the station.

Table 7: MSA and East Submarket Data

MSA Stats				
Properties	Avg SQFT	Avg Rent	Avg Rent/SQFT	Occ
974	886	\$1,363	\$1.54	93.2%

East				
Properties	Avg SQFT	Avg Rent	Avg Rent/SQFT	Occ
50	844	\$1,391	\$1.65	90.3%

Several comparable properties that did not fall near the station area were chosen in an attempt to understand whether properties near the station experience a rent or occupancy premium. These properties are newer and more closely reflect the development style of the station area and are shown in detail in the table below. These properties are located in the Mueller development, which is well known in Austin for its emphasis on New Urbanist density and placemaking principles. The comparable properties in Mueller actually have higher average rents than the station area and the quarter mile buffer properties at \$1,844. The unit size is slightly larger at 897 square feet (which may explain the slightly higher average rents), resulting in an average rent per square foot of \$2.06, which is lower than the properties proximate to the

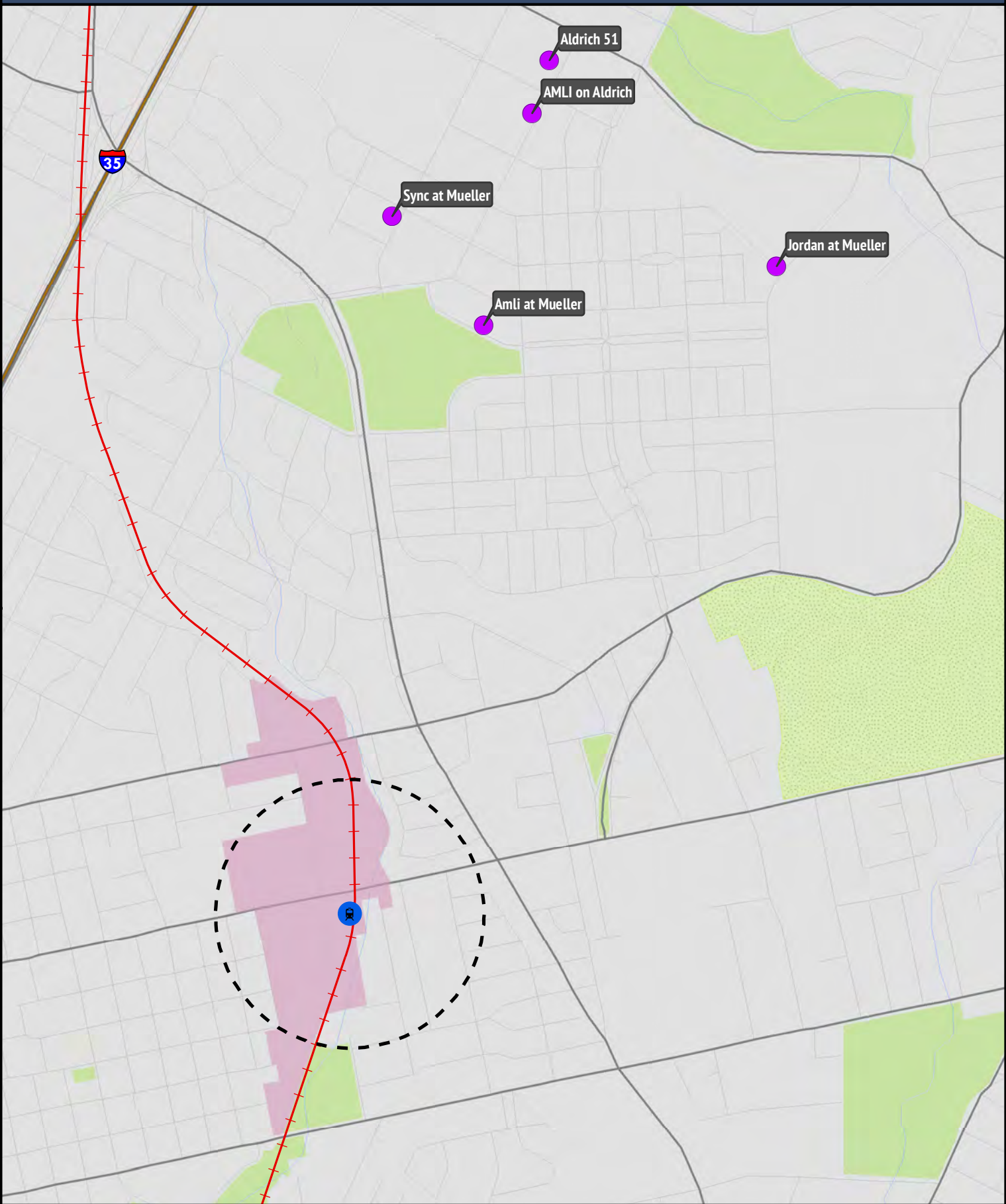
station. Occupancy is slightly lower than the quarter mile buffer and the SAP among these properties at 93.2%. The differences between station area properties and comparable properties in gross rent are offset by the difference in rent per square foot. While the comparable properties have higher rents per square foot on average, they also have larger unit sizes on average, resulting in lower rents per square foot. This leads to the conclusion that rents are generally comparable between station area properties and comparable properties in Mueller, despite Mueller’s lack of rail transit and the station area’s lack of desirable amenity. It is possible that infrastructure improvements in the station area could lead to rent premiums, as the station area properties will have the added amenity of transit.

Table 8: MLK Station Comparable Properties

Name	Chosen Comps					
	YOC	Units	Avg SF	Avg Rent	Rent/SF	Occ
AML on Aldrich	2018	318	935	\$1,898	\$2.03	92.5%
Sync at Mueller	2014	301	927	\$1,881	\$2.03	94.7%
AML at Mueller	2015	279	820	\$1,744	\$2.13	92.5%
Total/Average		898	897	\$1,844	\$2.06	93.2%

Source: Capitol Market Research, Dec 2020 Apartment Survey

Austin Red Line Commuter Rail Martin Luther King Jr. Station Comparable Properties



Date: March 2020
Path: C:\GIS\Projects\2020\Cody\MLK_comps.mxd

● Comparable Property
○ 1/4 Mile Buffer
■ MLK Station Area Plan

CONCLUSIONS

The data examined in and surrounding the MLK station do not show any indication of premiums near the MLK Station. Rents are slightly higher per square foot than comparable properties outside of the TOD when controlling for affordable units, but this is a result of the smaller average unit sizes, which tend to obtain higher rents per square foot. Average gross rents, even when controlling for affordable units, are lower than comparable properties.

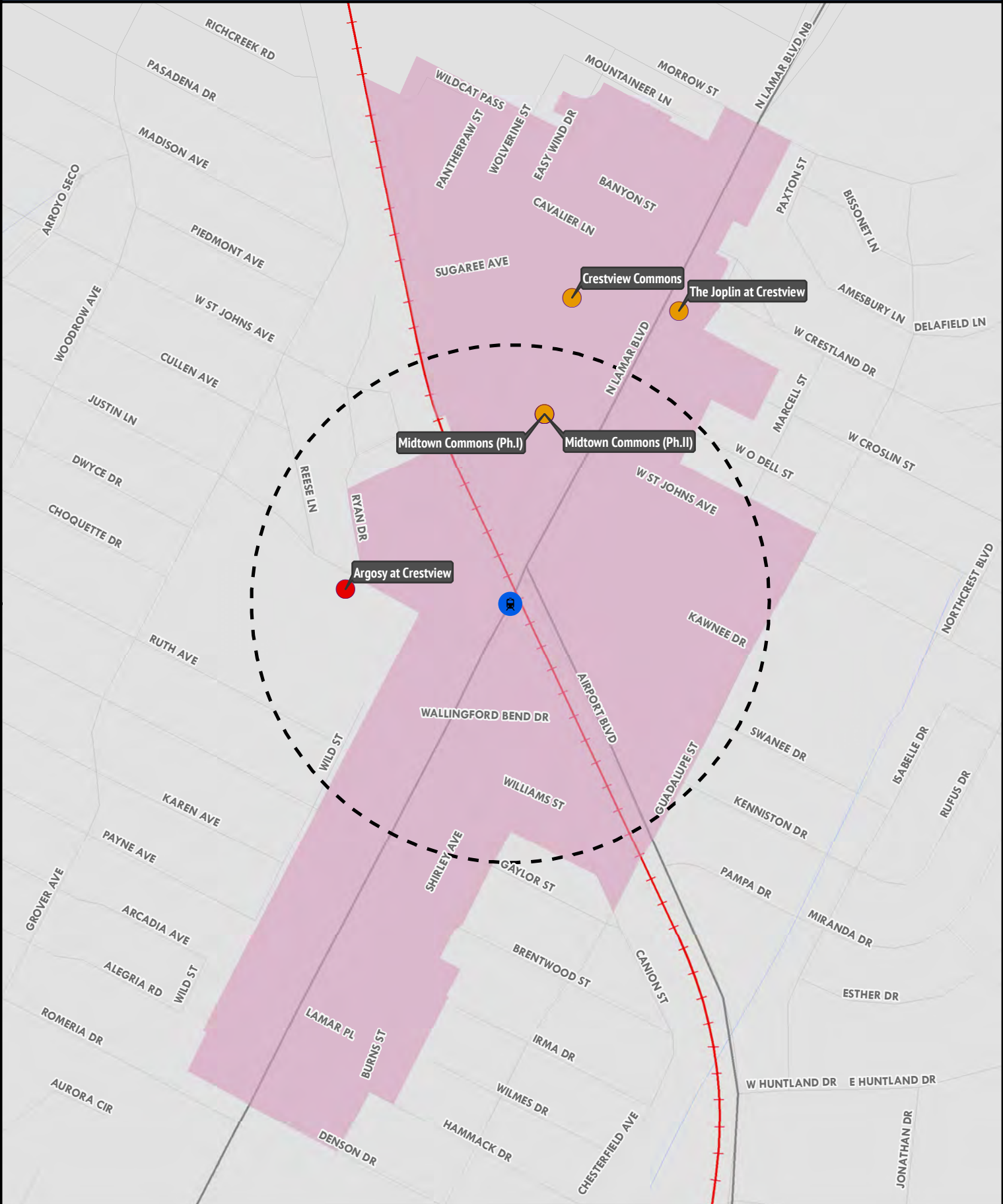
The choice of comparable properties in Mueller is one of necessity. Mueller is well known in Austin for its desirability and place-making principles and is not the ideal choice for comparison to MLK Jr. Station, which notably lacks many of these amenities. However, the East Austin market is mostly comprised of older apartment communities and LIHTC properties, which are not suitable for comparison to the newer market rate properties near the station. Many of the newer apartment communities in East Austin are in Mueller. The fact that station area properties are mostly comparable to properties in Mueller in terms of rent, rent per square foot, and occupancy bodes well for the desirability of the properties near the station. The lack of rent premium for station area properties mentioned earlier may actually be a rent premium that is shared between that station area properties (despite the less desirable location of MLK Jr. Station compared to the flourishing Mueller Development) and the comparable properties located in Mueller. The data examined above is rather inconclusive and can only serve as a starting point for future research. At the time of writing, however, the MLK Jr. Station properties are “keeping up” with the comparable properties in Mueller. Possible improvements to the Red Line in the future could allow this trend to continue, especially if the infrastructure and desirability of the station area continues to improve in turn.

Chapter 6: TOD Zone Case Study #3: Crestview Station

The next case study performed is for Crestview Station. Crestview Station has both a station area plan (SAP) and a regulating plan (The Lamar/Justin TOD). The Lamar/Justin SAP is very similar to the previously referenced Plaza Saltillo SAP and the MLK SAP, including the same six articles outlining planning standards for the station area (City of Austin, 2018).

This report takes a closer look at the multifamily communities within both the station area plan boundary and the quarter mile radius from Crestview Station. These communities will be compared to averages from the City of Austin Metropolitan Area, the CMR “North Central” submarket, and comparable properties located nearby that are of similar age that do not fall within the station area plan or the quarter mile radius from the station. The attributes examined are the same as those examined in the previous case studies.

Austin Red Line Commuter Rail Crestview Station (Lamar/Justin Station Area Plan)



Attributes for multi-family developments within the station area plan and the quarter mile buffer area are shown below. For the four communities within the station area plan, there are a total of 1052 units with an average unit size of 729 square feet. Average rent is \$1,392 with an average rent per square foot of \$1.90. It must be noted that The Joplin at Crestview was built in 1973 and has an average unit size of 500 square feet. The age and small unit size lead to an average rent that is well below average, but a rent per square foot that is higher than both phases of Midtown Commons, a much newer development with a wide range of amenities and unit finish upgrades. SAP properties are 92.9% occupied. Three properties lie within the quarter mile buffer. Among these properties, only Midtown Commons (both phases) lies within the SAP. Argosy at Crestview, built in 1985, is the only other apartment community located within the quarter mile buffer. These properties total 847 units averaging 734 square feet, with average rents of \$1,324 (\$1.80 per square foot). These rents and rents per square foot are lower than properties within the SAP. Occupancy in the quarter mile buffer is 93.3%, which is higher than the 92.9% occupancy of properties within the SAP. Details for SAP and quarter mile buffer properties are shown in the tables below.

Table 9: Crestview Station Properties

Name	Station Area Plan					
	YOC	Units	Avg SF	Avg Rent	Rent/SF	Occ
Crestview Commons	2018	353	779	\$1,645	\$2.11	91.5%
The Joplin at Crestview	1973	150	500	\$916	\$1.83	96.0%
Midtown Commons (Ph. 1)	2010	313	751	\$1,316	\$1.75	94.6%
Midtown Commons (Ph. 2)	2014	246	769	\$1,416	\$1.84	90.7%
Total/Average		1062	729	\$1,392	\$1.90	92.9%

Source: Capitol Market Research, Dec 2020 Apartment Survey

Table 10: Crestview Station Quarter Mile Buffer Properties

Name	1/4 Mile Buffer					
	YOC	Units	Avg SF	Avg Rent	Rent/SF	Occ
Argosy at Crestview	1985	288	685	\$1,253	\$1.83	94.1%
Midtown Commons (Ph. 1)	2010	313	751	\$1,316	\$1.75	94.6%
Midtown Commons (Ph. 2)	2014	246	769	\$1,416	\$1.84	90.7%
Total/Average		847	734	\$1,324	\$1.80	93.3%

Source: Capitol Market Research, Dec 2020 Apartment Survey

This station area falls within the North Central submarket, as defined by CMR. Statistics for the MSA and for the North Central Market Area are shown below. It is clear that properties near the station have much higher rents than both the MSA and the North Central Market Area, most likely due to the desirable location near the central business district and the University of Texas, as well as convenient access to IH-35 and Highway 183. Square footages near the station are significantly smaller than the MSA average, perhaps reflective of tenants that are comprised of young professionals and college students. The same is true when comparing properties near the station with properties in the North Central submarket, although the submarket is comprised of smaller unit sizes than the MSA, with an average unit size of 796 square feet, compared to the 886 square foot average of the MSA. Occupancies are very similar near the station when compared with the MSA and the North Central submarket. Detailed MSA and submarket statistics are shown in the tables below.

Table 11: MSA and North Central Submarket Data

MSA Stats				
Properties	Avg SQFT	Avg Rent	Avg Rent/SQFT	Occ
974	886	\$1,363	\$1.54	93.2%

North Central				
Properties	Avg SQFT	Avg Rent	Avg Rent/SQFT	Occ
122	796	\$1,204	\$1.51	93.6%

These broad comparisons are useful, but it must be noted that these statistics include all properties of any age. A closer look at comparable properties is required to understand how properties near the station compare to similarly situated properties that are further from the station.

Several comparable properties that were not located near the station area were chosen in an attempt to understand whether apartment communities near the station experience a rent or occupancy premium. These properties more closely reflect the development age and type found in the station area and are shown in detail in the table below. Separate comparable tables show newer properties that reflect the characteristics of Midtown Commons and Crestview Commons, and older properties that can be compared to Argosy at Crestview and The Joplin at Crestview. All comparable properties are mapped below. Newer comparable properties actually have higher average rents than newer station area and quarter mile buffer properties at \$1,508 (compared to \$1,459 near the station and in the SAP). The unit size is slightly larger at 780 square feet (compared to 766 square feet near the station), resulting in an average rent per square foot of \$1.93, slightly higher than the properties proximate to the station (\$1.90). Occupancy is also higher among the comparable properties than those in the quarter mile buffer and the SAP (93.7% compared to 92.3%). Examining the data shows that the station area properties are performing less well in almost every category, despite similarities in age and unit size, indicating that the Red Line at Crestview Station is not driving increases in rents or occupancies. Newer comparable properties are listed and mapped below.

Table 12: Crestview New Comparable Properties

Name	Chosen Comps - Newer Properties					
	YOC	Units	Avg SF	Avg Rent	Rent/SF	Occ
Marq on Burnet	2016	343	747	\$1,453	\$1.94	93.0%
Burnet Flats	2014	179	794	\$1,553	\$1.96	93.3%
AMLI 5350	2010	175	830	\$1,571	\$1.89	95.4%
Total/Average		232	780	\$1,508	\$1.93	93.7%

Source: Capitol Market Research, Dec 2020 Apartment Survey

Older comparable properties that reflect the characteristics of The Joplin at Crestview (1973) and Argosy at Crestview (1985) were chosen in an effort to determine whether existing apartments near Crestview Station benefited from the implementation of the Red Line. These older comparable properties have an average unit size of 681 square feet, compared to 592 square feet for the communities near the station. Average rent for the station properties is \$1,085, higher than the \$1,053 average for the comparable properties, despite the lower average square footage. Rent per square foot for the station properties is significantly higher (\$1.83 compared to \$1.56). Occupancies for both sets of apartment communities is similar (95.1% for station properties compared to 95.0% for comparable properties). This comparative data seems to indicate that older properties near the station have benefitted from the increased amenity and placemaking that has occurred alongside the Red Line and its associated station area. This is important to take note of as the city continues to expand its rail service. While further research is necessary to confirm that a pattern exists, it can be inferred from this data that older properties may have more to gain from infrastructure and accessibility improvements than do new developments that already have top of the line finishes which command “Class A” rents. The full set of older comparable properties is shown in the table below.

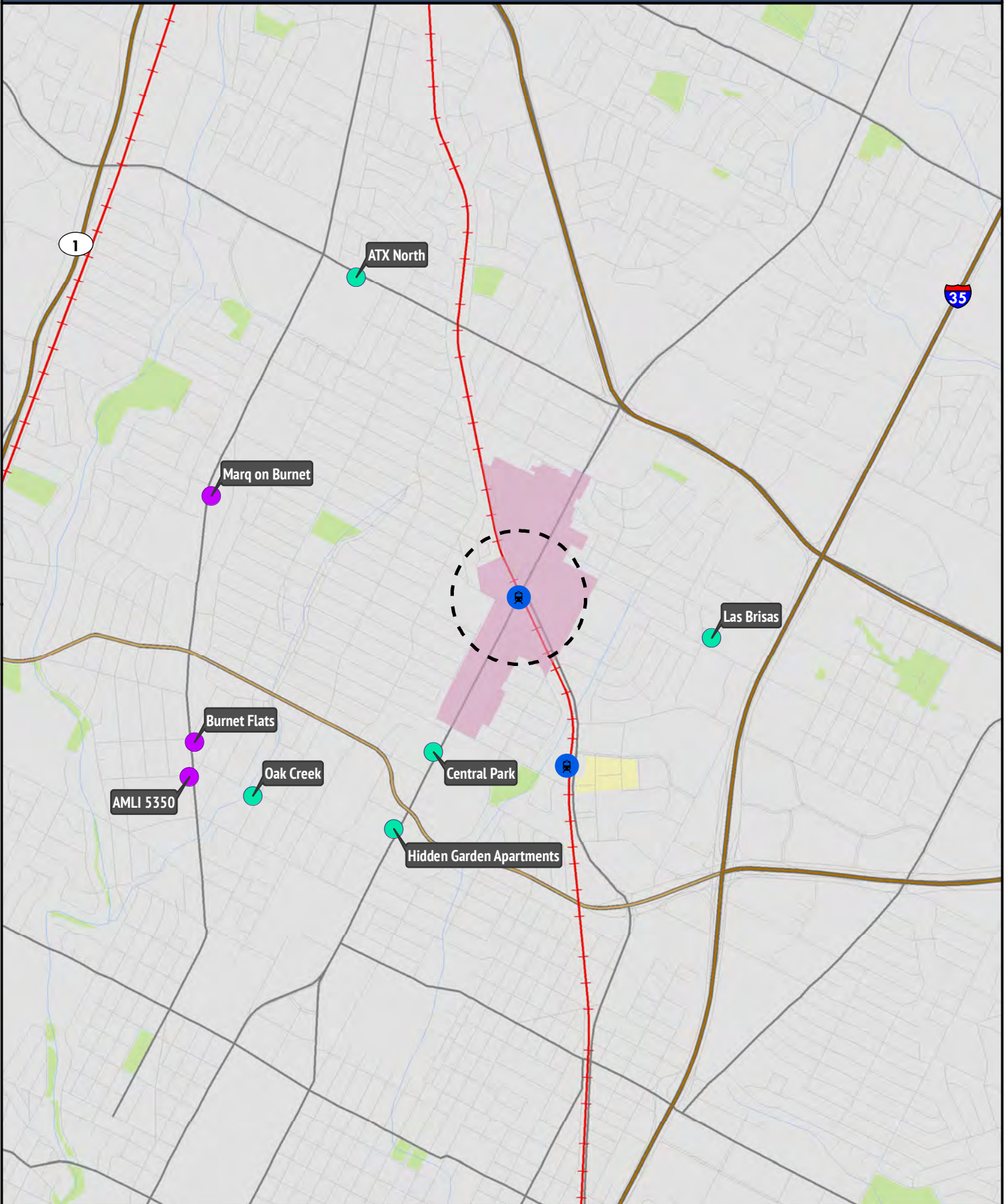
Table 13: Crestview Older Comparable Properties

Chosen Comps - Older Properties						
Name	YOC	Units	Avg SF	Avg Rent	Rent/SF	Occ
Hidden Garden	1972	70	766	\$1,054	\$1.38	95.7%
Central Park	1975	104	653	\$972	\$1.49	100.0%
ATX North	1982	104	653	\$1,133	\$1.74	89.4%
Total/Average		278	681	\$1,053	\$1.56	95.0%

Source: Capitol Market Research, Dec 2020 Apartment Survey

Austin Red Line Commuter Rail

Crestview Station Comparable Properties



Date: March 2020



Path: C:\GIS\Projects\2020\Cody\crestview_comps.mxd

- Older Comparable
- Newer Comparable
- 1/4 Mile Buffer
- Lamar/Justin SAP

CONCLUSIONS

The data does not show any indication of premiums for newer properties near Crestview Station. In fact, newer properties performed slightly worse than comparable properties further from the station. However, older properties near the station show significant increases in rents and rents per square foot over older comparable properties. This may indicate that older properties that experience increased amenity and accessibility could stand to benefit most from TOD provisions. However, more research is needed to determine whether this is a trend or just a coincidence.

Chapter 7: Conclusions & Takeaways

The purpose of this report is to bring a broad understanding of transit-oriented development into the context of three Austin Capital Metro Red Line commuter rail stations. The literature review revealed that public transportation is important for cities that wish to improve accessibility while limiting the effects of traffic congestion and urban sprawl. Peter Calthorpe popularized the modern-day idea of transit-oriented development in his 1993 book *The Next American Metropolis* as a method of land use that would support sustainable travel behaviors and combat urban sprawl. This work resonated with many cities that had problems with air pollution and traffic congestion. Dittmar and Ohland (2004) point out that TOD gained momentum in the 1990s and 2000s as investment in central cities began to increase for the first time since the Second World War, leading to increased demand for ways to access employment centers that did not require an automobile.

Following the spirit of combating urban sprawl, many cities began to invest heavily in public transportation. However, financing the implementation and operation of transit systems soon became a problem. Improving ridership is an important way to cover costs for transit agencies, as increased fare collection through high ridership lowers the amount of direct subsidy required to operate the transit (Dunphy, et al., 2004). Dunphy et al go on to describe transit supportive development, a strategy “aimed at building a compelling market for transit” and improving ridership. These factors are distance, density, design, and diversity, and are known as the four D’s of transit supportive development.

Cities support the necessary infrastructure for transit supportive development through several strategies, most notably through tax increment financing (TIF) and tax increment reinvestment zones (TIRZ) in which marginal increases in property tax assessment values go toward infrastructure improvements that make transit supportive development and TOD

financially feasible for developers and transit agencies, while increasing desirability, amenity, and ridership (Curtis, Renne, & Bertolini, 2009).

Properties located near transit stations usually have property value premiums. This is due to several factors, including improved accessibility, an emphasis on placemaking and increased density. Fogarty et al showed the value premiums associated with transit stations for several property types, each of which was positive to varying degrees.

Given the promise of TOD to increase tax values and improve ridership, many cities have turned to TOD to spur development. However, critics such as Carlton (2018) have pointed out that many planning practitioners and real estate developers have been disappointed by the lack of positive effects stemming from TOD policies. Station areas are failing to produce desired densities and ridership increases. Carlton points out that planners should take a careful look at the underlying real estate market when planning for TOD. Carlton points out that TOD zoning does not cause dense development – rather, dense development could possibly support transit through increased ridership and property tax assessments.

The next chapter examined the state of transit in Austin, Texas, specifically along the commuter rail Red Line. Service on the Red Line started in March of 2010. By January 2020, the average weekday ridership for the Red Line was 2,763 (not a significant amount). The Red Line has nine stations and covers 32 miles between Downtown Austin and Leander, a suburb. Three of the Red Line stations have regulating plans that were implemented in an effort to provide TOD to the City of Austin (Capital Metro, n.D.). At the time of writing, the Red Line is a standalone commuter rail service that provides limited access to a wider transit network, which explains the general lack of rent premiums for apartment communities near Red Line stations.

This report examined multi-family apartment communities located near the three Red Line stations with regulating plans (Plaza Saltillo, MLK, and Crestview stations). Data for

comparable properties not located near the stations was collected in an effort to determine the effect, if any, that the Red Line has on apartment rents and occupancies. After a close examination of the data, no clear conclusion can be reached showing rent or occupancy premiums near stations. Properties near Plaza Saltillo showed very high rents compared to the Austin Metropolitan Statistical Area (MSA) and East Submarket, but comparable properties nearby that were not near the station showed even higher rents and occupancies. The conclusion is that the desirable location near downtown drives the rents, not the access to the Red Line.

MLK Station saw similar results. Rents near the station were high compared to the MSA and the East Submarket, but comparable properties nearby had higher rents, even controlling for affordable units.

Properties near Crestview Station performed similarly to MLK and Plaza Saltillo. There was no clear rent premium for newer apartment communities near the station when observing comparable properties nearby. However, Crestview Station is the only station with older multifamily properties nearby. These older properties (built in the 1970s and 1980s) have rents that are higher than older comparable properties not located near the station, despite having a smaller average unit size. Rents per square foot are significantly higher for older properties near the station as well. This indicates that the older properties may have benefitted more from the improved access and infrastructure that the station area plan provided than their newer counterparts that have top of the line finishes commanding “Class A” rents. Although the results shown here are not exhaustive, future research showing the benefit of transit access and infrastructure improvements for older properties could provide valuable information for planning practitioners and real estate investors.

This report showed no clear rent or occupancy premiums for apartment communities located near commuter rail stations on the Red Line in Austin. There may be several reasons for

this, although quantifying every variable involved is impossible. First, the Red Line is very young in real estate terms. It is possible that the benefits are only beginning to emerge, and that increased development activity will continue to occur near the stations. This process may have been slow as the market for TOD emerged and developers ‘tested the waters’ near stations. Next, transit in Austin is mostly limited to bus service outside of the Red Line. The implementation of new rail lines and the continued improvement of the Red Line may lead to future premiums for properties near stations. These improvements may include improvements to frequency, expanded hours, and new station placement near major employment centers such as The Domain. While this study did not show a clear rent or occupancy premium for communities near stations, future analysis of the same properties may use this data as a baseline comparison. Rents for properties near stations may increase more quickly than non-station properties. As transit in Austin continues to improve and expand, it is possible that properties near stations will see benefits moving forward, similar to the older properties near Crestview Station. Using this data as a baseline, researchers may be able to determine the effectiveness of changes by measuring changes in rental rates or occupancies.

REFERENCES

- Amrock . (2018, May 24). *Apartment Premiums Dip Near San Francisco Mass Transit Hubs*. Retrieved from <https://www.amrock.com/apartment-premium-near-mass-transit-hubs-dips-san-francisco/>
- Ashby, M. D. (2013). *Market Feasibility Analysis of the Martin Luther King, Jr. Station Transit Oriented Development Zone*. Austin: The University of Texas at Austin.
- Austin Towers. (2010, January 27). *Downtown Rail Service to Start in March*. Retrieved from Towers.net: <https://austin.towers.net/downtown-rail-service-to-start-in-march/>
- Benjamin, J. D., & Sirmans, G. S. (1996). Mass Transportation, Apartment Rent and Property Values. *The Journal of Real Estate Research*, 1-8.
- Calthorpe, P., & Poticha, S. (1993). *The Next American Metropolis - Ecology, Community, and the American Dream*. Princeton Architectural Press.
- Capital Metro. (n.D.). *Fast Facts*. Retrieved from CapMetro.org: <https://capmetro.org/facts/>
- Capital Metro. (n.D.). *Plan Your Trip*. Retrieved from CapMetro.org: https://capmetro.org/uploadedFiles/New2016/Plan_Your_Trip/Destinations_Schedule_Book/system_map.pdf
- Capital Metro. (n.D.). *Route Performance*. Retrieved from CapMetro.org: <https://capmetro.org/routepformance/>
- Capital Metro. (n.D.). *Transit Oriented Development*. Retrieved from CapMetro.org: <https://www.capmetro.org/tod/>
- Carlton, I. (2008). *Transit Infrastructure Finance Through Station Location Auctions: A Discussion of Stakeholder Concerns Related to a Proposed Value Capture Mechanism*. Berkeley: UC Berkeley Institute of Urban and Regional Development.
- Carlton, I. (2019). Transit Planner's Transit-Oriented Development-Related Practices and Theories. *Journal of Planning Education and Research*, 39(4), 508-519.
- Cervero, R., & Duncan, M. (2001). *Transit's Value-Added: Effects of Light and Commuter Rail Services on Commercial Land Values*. Berkeley.
- Chae, Y. (2012). *The Impact of Light Rail Transit on Residential Value: Empirical Analysis of DART Green Line in Dallas* . Austin: The University of Texas at Austin.
- Chaudhari, P. A. (2019). *Performance-Based Transit-Oriented Developments: A Case of Austin, Texas*. Austin: The University of Texas at Austin.

- Chen, H., Rufolo, A., & Dueker, K. J. (1998). Measuring the Impact of Light Rail Systems on Single-Family Home Values: A Hedonic Approach with Geographic Information System Application. *Transportation Research Record*, 38-43.
- City of Austin. (2012, May 24). *Transit Oriented Development*. Retrieved from AustinTexas.gov: <https://www.austintexas.gov/department/transit-oriented-development>
- City of Austin. (2018, June 14). *Regulating Plan for the Plaza Saltillo TOD Station Area Plan*. Retrieved from AustinTexas.gov: <https://www.austintexas.gov/department/transit-oriented-development>
- City of Austin Planning and Development Review Urban Design Division. (n.D.). *Transit Oriented Development*. Retrieved from AustinTexas.gov: http://www.austintexas.gov/sites/default/files/files/Planning/Urban_Design/History_of_TOD2.pdf
- City of Austin Planning and Development Review Urban Design Division. (n.D.). *Transit Oriented Development*. Retrieved from AustinTexas.gov: http://www.austintexas.gov/sites/default/files/files/Planning/Urban_Design/Austin_s_TOD_Process1.pdf
- City of Austin Planning and Development Review Urban Design Division. (n.D.). *Transit Oriented Development*. Retrieved from AustinTexas.gov: <http://www.austintexas.gov/department/transit-oriented-development>
- Curtis, C., Renne, J. L., & Bertolini, L. (2009). *Transit Oriented Development: Making it Happen*. Bodmin, Cornwall: Ashgate.
- Dittmar, H., & Ohland, G. (2004). *The New Transit Town: Best Practices in Transit-Oriented Development*. Washington, DC: Island Press.
- Dittmar, H., Belzer, D., & Autler, G. (2004). An Introduction to Transit-Oriented Development. In H. Dittmar, & G. Ohland, *The New Transit Town: Best Practices in Transit-Oriented Development* (pp. 1-18). Washington DC: Island Press.
- Dunphy, R. T., Cervero, R., Dock, F. C., McAvey, M., Porter, D. R., & Swenson, C. J. (2004). *Developing Around Transit: Strategies and Solutions That Work*. Washington DC: ULI-the Urban Land Institute.
- Fogarty, N., Eaton, N., Belzer, D., & Ohland, G. (2008). *Capturing the Value of Transit*. Berkeley: Center for Transit-Oriented Development.
- Forkenbrock, D. J., Mathur, S. K., & Schweitzer, L. A. (2001). *Transportation Investment Policy and Urban Land Use Patterns*. Iowa City: University of Iowa Public Policy Center.
- Freemark, Y. (2019). Upzoning Chicago: Impacts of a Zoning Reform on Property Values and Housing Construction. *Urban Affairs Review*.

- Garrett, T. A. (2004). *Light Rail Transit in America: Policy Issues and Prospects for Economic Development*. St. Louis: Federal Reserve Bank of St. Louis.
- Hendricks, S. J. (2005). *Impact of Transit Oriented Development on Public Transportation Ridership*. Tampa: National Center for Transit Research.
- Landis, J., Guhathakurta, S., Huang, W., Zhang, M., Fukuji, B., & Sen, S. (1995). *Rail Transit Investments, Real Estate Values, and Land Use Change: A Comparative Analysis of Five California Rail Transit Systems*. Berkeley: UC Berkeley Institute of Urban and Regional Development.
- Partovi, L. N. (2013). *Creative Financing & Strategies for Mised-Income Transit Oriented Development in Dallas, Texas*. Austin: The University of Texas at Austin.
- Parzen, J., & Sigal, A. J. (2004). Financing Transit-Oriented Development. In H. D. Ohland, *The New Transit Town: Best Practices in Transit-Oriented Development* (pp. 83-113). Washington DC: Island Press.
- Ryan, S. (1999). Property Values and Transportation Facilities: Finding the Transportation-Land Use Connection. *Journal of Planning Literature*, 412-427.
- Savage, K. M. (2016). *Integrating High Speed Rail Systems into Urban Environments: A Comprehensive Evaluation*. Austin: University of Texas at Austin.
- Smith, J. J., & Gihring, T. A. (2006). Financing Transit Systems Through Value Capture. *American Journal of Economics and Sociology*.
- Tooley, S. E. (2010). *Innovative Transportation Finance: Value Capture Techniques Applied in the State of Texas*. Austin: University of Texas at Austin.
- United States Government Accountability Office. (2014). *Public Transportation: Multiple Factors Influence Extent of Transit-Oriented Development*. Government Accountability Office.
- University of Minnesota Center for Transportation Studies. (2009). *Value Capture for Transportation Finance: Report to the Minnesota Legislature*. Minneapolis: Center for Transportation Studies.
- Weinstein, B. L., & Clower, T. L. (2002). *An Assessment of the DART LRT on Taxable Property Valuations and Transit Oriented Development*. University of North Texas Center for Economic Development and Research.
- Wilke, J. A. (2006). *Achieving Transit Value Capture in the Suburbs: The Redevelopment of Greyfield Shopping Malls*. Austin: The University of Texas at Austin.
- Yu, H. (2015). *Transit Proximity effects : Capital MetroRail and its impact on land prices in Austin, Texas*. Austin: The University of Texas at Austin.
- Yu, H., Pang, H., & Zhang, M. (2017). Value-added effects of transit-oriented development: The impact of urban rail on commercial property values with consideration of spatial heterogeneity. *Papers in Regional Science*, 1375-1396.

- Yu, H., Pang, H., & Zhang, M. (2018). Value-added effects of transit-oriented development: The impact of urban rail on commercial property values with consideration of spatial heterogeneity. *Papers in Regional Science*, 1375-1396.
- Yu, H., Zhang, M., & Pang, H. (2017). Evaluation of Transit Proximity Effects on Residential Land Prices: an Empirical Study in Austin, Texas. *Transportation Planning and Technology*, 1-14.