

**Sport-led Urban Development Strategies: An Analysis of Changes in Built Area,
Land Use Patterns, and Assessed Values Around 15 Major League Arenas**

By

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Abstract

The development of new major league sports facilities in the United States is increasingly tied to strategies for urban development within their host cities. Generally, these strategies seek to leverage the large audiences generated by sporting events to support new private investment in the immediate area, typically envisioned as a cluster of new housing, office, retail and “entertainment” land uses. Since many host cities participate financially in the provision of new facilities, these urban development benefits are an important part of the promise made to taxpayers as a return on their investment.

This study examines the case of major league arenas, and asks whether they are successful in generating new development in their immediate vicinity. My methodology is empirical, comparing the magnitude and nature of development before and after the arenas were opened. I examine development patterns around 15 major league arenas opened between 1990 and 2004, tracking development patterns in a quarter-mile radius around each venue over a 25-year period from 1990 to 2015. I follow three measures of change: 1) changes in the volume of built area (square feet), where a successful urban development outcome would indicate an increase in new construction and renovation activity, 2) changes in the land use composition of the area (land-use mix), where a successful urban development outcome would indicate a shift toward residential, commercial and retail uses, and away from industrial uses and vacant parcels, 3) changes in assessed value, where a successful urban development outcome would indicate increases in

market value (where assessments are based on market valuations) and increased property tax revenues.

The significance of this empirical approach is twofold. First, there are few studies that provide a quantitative analysis of these built environment changes for any type of development anchor, sport or otherwise, because it is only recently that GIS and other land data technologies are making the kind of inquiry presented here possible. Second, the comprehensive and systematic record of development presented here across 15 cases is itself a significant contribution. While it may be argued that these metrics cannot fully explain success in a complex urban system, they do explicitly address three of the most commonly stated goals accompanying urban development strategies.

My findings point to a mixed record of urban development changes around major league arenas. Eight of the 15 arena districts had successful urban development outcomes measured across all three metrics of success, whereas in the seven remaining cases there was a significant shortcoming on one or more metric, most typically on the land use metric where no significant shift in land use composition was evident. Importantly, the data show in almost all of the cases, there was a ten-year lag before any significant development arrived in the area, regardless of the distinct economic and political context. Thus host cities should be cautious in their estimation of the impact of arenas on development patterns in the immediate vicinity.

CHAPTER 1. INTRODUCTION

1.1 CITIES, ARENAS, AND URBAN DEVELOPMENT

Arenas used by major league teams in the United States and Canada are increasingly tied to specific strategies for urban development in their host cities; this is a phenomenon that different from what took place in the early 1990s and earlier. Generally, as undertaken by local governments, these strategies seek to leverage the large audiences generated by events to attract private investment in new residential and entertainment-oriented commercial land uses in the immediate area—forming what are now commonly referred to as sports districts. Since sport and entertainment activities are particularly appealing to young, affluent, and well-educated persons, proponents of these developments have found willing allies among urban development advocates hoping to woo these coveted demographics to live, work, and play in their cities.

Working together, these allies—teams, leagues, and host city officials—are finding common ground in a phenomenon labelled herein as “arena-led” development. I define this term to mean a strategy that targets the introduction of major league arena as a central ingredient of a strategy to create a new sport and entertainment district within the host city. Generally, but not always, the defining feature of these arena-led urban development strategies is a pledge of public subsidies for the development of the arena (including land acquisition and infrastructure

provision, as well as construction costs) in the hope of attracting new private investment in the immediate area. The new private investment is expected to foster redevelopment in the area, which can be measured in three primary ways:

- 1) increased private investment in the form of new construction and/or renovations,
- 2) changes in the land use mix that favor transition to higher property tax generation, typically a mix of residential and entertainment-oriented commercial uses, and
- 3) increased property assessments and other geographically-targeted tax revenues dependent on tax revenue streams.

While these physical benefits sit within a much broader set of benefits from redevelopment activities, my focus is on the physical aspects of redevelopment. The definition of “arena-led” development is specifically tied to a set of physical urban development outcomes: an increase in the volume of built area, desired changes in the land-use mix, and an increase in property values.

1.1.1 THE COST OF ARENA-LED STRATEGIES: PUBLIC SUBSIDIES FOR MAJOR LEAGUE ARENAS

Urban development strategies anchored by major league arenas are an increasingly important and controversial issue because of the magnitude of public investments involved. As of 2016, there were 60 major league teams playing in 50 arenas, located in 49 host cities across the US and Canada (Table 1).¹ In 2010, the average cost of a major league arena was

¹ There are two arenas in New York City: Madison Square Garden and Barclays Center.

approximately \$260 million, with an average public investment of 70% or \$182 million. Based on this figure, a quick estimate of the total cost of all arenas in-use in 2010 was approximately \$16 billion dollars, with just under \$11 billion supported by the public sector (Long, 2012). In 2018, the average cost of a major league arena in US was \$430 million, with an average public investment of 56%, or \$207 million. Given that facility costs have increased over the past decade, it is reasonable to anticipate that the amount of public funding in the current set of 50 arenas would be greater than \$11 billion. This is a significant public outlay, especially considering the fact that these major league arenas are largely operated to benefit private corporations that are extensions of the constituent teams.

Despite the high cost, almost every NBA and NHL host city has built a new arena since 1990, and in several cities, the venues were privately financed. Of the 50 currently in-use for major league play, 46 were built after 1990, representing a replacement rate of 92%—a much higher replacement rate than football stadiums and ballparks over the same period (Long, forthcoming).² Most of these host cities are large cities: 46 are among the 50 largest metro areas in the United States and Canada. Many are part of a formalized district planning initiative (such as the Edmonton Ice District and just recently Detroit’s Little Caesars Arena), or are part of a planning initiative that is underway, but not yet approved (e.g. the New York Islanders’ return to Nassau County, Long Island and the Belmont Park “arena village”). Taken together, these data make clear that the development and subsidy of arenas is an important and expensive issue facing cities that host major league teams.

² The exceptions are Madison Square Garden, built in 1968 and subsequently renovated; the Palace at Auburn Hills built in 1988 and the subject of frequent rumors that the Pistons will move to the new arena in downtown Detroit; the Bradley Center in Milwaukee built in 1988 and also the subject of imminent replacement rumors; and Oracle Arena in Oakland built in 1966 and soon to be replaced in 2019 by a new arena in San Francisco.

Table 1. Major league sports facilities currently in-use in US and Canada.

	MLB	NFL	NBA	NHL	Total*
Teams in league	30	32	30	30	122
Facilities used	30	31	29	30	90*
Joint-use	2	4	10	10	16
Privately-owned	4	6	13	12	16
Publicly-Owned	27	25	17	19	74
Part of a Plan	10	5	10	9	34
Plan-in-Process	3	3	1	4	11

* The “total” column is adjusted for the double-counting of joint-use facilities as appropriate.

Sources: Long (2012) and author’s database

1.1.2 THE BENEFITS OF ARENA-LED DEVELOPMENT: FOCUS ON ECONOMIC BENEFITS

Much of the controversy surrounding arena-led development strategies is focused on the benefits received by the public sector relative to its investment. The members of what has been described as growth coalition regimes advocate for public investment. There are other groups, however, who argue the cost to the public sector exceeds the tangible benefits.

While a simplification, those advocating for an investment by the public sector argue that venues are unique and are able to generate a critical mass of economic activity in a specific location. Attracting large groups of people in one location for a sporting event can be utilized, or “leveraged” to serve as a market for other ancillary land uses, typically restaurants, nightclubs, retail, and hotels and large residential developments. As these ancillary uses converge to take advantage of this market, a cluster is created that can, in turn, provide entertainment and lifestyle amenities even when the sports facility is closed and revenue streams for the local government. The cycle continues as affluent, well-educated young people and empty nesters may find living

in the local area appealing, and businesses looking to attract workers who fit the same profile may also choose to locate in that location.

Theoretically, this new economic activity, through both the construction and operating phases, should create new jobs, and spur multiple rounds of spending and capture of new tax revenues across the full spectrum of property, sales, excise, and income sources in a phenomenon known as the multiplier effect. Measurements of the extent of these new public revenues vary widely, since even the smallest changes in the multiplier itself can result in significant changes in the estimate of overall revenues. Moreover, there is a significant incentive for subsidy advocates to overestimate the amount of benefits as part of a public relations campaign to smooth passage of the public subsidy, particularly if a voter referendum is required as part of the approval process. Any witness to a major league subsidy debate can testify to the small industry of consultants willing to produce and endorse wildly spurious estimates of economic impacts—a phenomenon that extends beyond the case of major league sports to include many other large-scale public assembly activities from Coachella to the Hajj. The essential point to be made in any of these subsidy advocate studies is that the cost of the public subsidy will be paid back, often many times over, by the public benefits to be received over the life of the facility.

For their part, opponents of public investments in major league sports facilities have taken great measures to dismantle the promises made by advocates, dismissing the methodologies and arguing that the estimates produced by consultants are grossly overstated (Baade & Dye, 1996; Baade, 1996; Rosentraub & Swindell, 1991; Rosentraub, Swindell, et. al, 1994; Noll & Zimbalist, 1997; Rosentraub, 1997; Coates & Humphreys, 1999, Noll & Quirk, 1974). Among the errors noted in the consultant reports, these studies point to methodological

errors such as the substitution effect—where spending at the sport facility is treated as new to the economy, rather than simply existing disposable income that is allocated away from another consumption activity in the same location, such as a restaurant or theatre. Since most advocate studies ignore the substitution effect, they overstate the resulting impacts. Opponents also take issue with the multipliers chosen to estimate indirect spending effects, as well as the opportunity costs associated with reduced public capability for investment in traditional areas such as hospitals, schools, and infrastructure.

Despite the plethora of academic studies taking aim at subsidies for major league sport facilities, it appears that subsidy advocates are winning the debate. Despite years of research from high profile sports economists, public funding for major leagues has continued, and new facilities continue to be built, and subsidy levels are increasing (Zimbalist and Long, 2006). In response, other disciplines have sought to ask how their theories can contribute to our understanding of why cities continue to subsidize sport facilities despite overwhelming economic evidence that the costs vastly outweigh the benefits. Academics working in public policy and political science have taken aim at this gap between academic economists and the reality of continued investment from host cities, pointing to growth machine politics and special interest to explain outcomes (Rosentraub, 2007; Chapin, 2000; Rich, 2000; Euchner, 1993; Klobuchar, 1983). Others point to intangible factors to explain this gap, including benefits from being perceived as a “major league” city, the “civic pride” associated with winning teams and new facilities, and even the benefits of increased social cohesion among sports fans (Kanter, 1995; Noll and Zimbalist, 2007; Long 2012). These studies tend to be few in number, and tend to focus on single case studies, leaving many questions about broader trends unaddressed.

1.1.3 OTHER BENEFITS FROM ARENA-LED DEVELOPMENT: IMPACTS ON THE LOCAL AREA

Of particular importance to my research are the efforts of urban planning and urban policy scholars to unpack the specific set of urban development outcomes that play an increasing role in the promise and packaging of sport facility developments. While these studies are generally few in number, and are case studies in the methodological approach, there are many elements that when taken together, provide insights into my approach to this study. Rosentraub (2014, 2007) and Chapin (2005, 2000) offer case studies of several high profile single facilities and districts including: Arlington, Baltimore, Cleveland, Denver, Glendale, Indianapolis, Reading, San Diego and St. Louis. Euchner (1993) offers case studies of Baltimore Chicago, Los Angeles, and Klobuchar (1983) (now Senator Klobuchar, MN(D)) offers an in-depth study of the HH Humphrey Metrodome.

While these studies are discussed in more detail in Chapter 2 (Literature Review), it bears to mention here that these studies combine traditional economic benefits (e.g. tax revenues, employment gains, income gains, etc.) in a more specific and small-scale geography, as well as physical urban development benefits (e.g. number of new or renovated buildings, reduction in the vacancy rate, creation of new businesses, number of new housing units, etc.), and public policy nuances (e.g. level of government, role of quasi-public agencies, and voter referendum requirements, etc.). The methodological approach and factors consider tend to vary by author, and their disciplinary backgrounds.

1.1.4 A GAP IN THE LITERATURE: THE PHYSICAL DIMENSIONS OF ARENA-LED DEVELOPMENTS

Among these threads in the urban planning and policy discourses, my specific interest lies in the physical dimensions of redevelopment that occur in the wake of a new arena. In this

sense, the work of Rosentraub and Chapin, and their measures of what constitutes success, are most closely aligned to what is presented in this work. Building on their work, I argue that urban development outcomes play an important role in host city decisions to subsidize sport facilities. In particular, as stadiums, ballparks, and arenas are rolled into plans to create larger districts that draw from their activity, it is a strong signal that host cities are keen to leverage these facilities to activate or “lead” other aspects of the plan.

Certainly the early phasing of a facility project relative to the remaining (later) components of the plan is a key indication of the direction or sequence expected relationship, that x precedes y , thus the plan is “sports-led”. Of course, this relationship is theoretical, as others will point to this timing as evidence of a different phenomenon, where the plan serves as a Trojan horse for the construction of the facility, and once built there is little political accountability around the implementation of the remainder of the plan.

The gap in the literature that I have identified, and that guides the research in this dissertation, is the physical changes that occur around a new facility as a specific set of indicators of success, and thus to consider whether or not the presence of the sport facility leads to the desired changes in the area immediately around it. These changes are often operationalized by physical metrics such as x units of new housing, y new residents, z new businesses, a square feet of new construction, and b dollars of new investment.

My research proposition is physical changes near the facility are an important factor in determining the success of the public sector’s investment and that it is possible to measure the physical changes that occur in the vicinity of a new arena. It is possible to measure the number of new buildings, the changes in the land-use patterns, and the change in assessed value of property—as these are commonly expressed as goals of subsidizing either the facility alone, or

an entire sport district. It is also possible to use these measures to gauge success in meeting the objectives of a facility development (particularly if established *a priori*) over a given time horizon such as 20 to 30 years. Additionally, it is possible to use these physical metrics to compare outcomes across multiple host cities, to learn more about how and when these physical changes arrive. Given that arena-led development is a significant issue in major league host cities, and that there is very little research that guides the actions and expectations of host cities in this regard, my research on physical outcomes aims to be an important contribution to our understanding of this phenomenon.

1.2 RESEARCH PURPOSE AND QUESTIONS

The purpose of this study is to investigate the success of arena-led developments, where success is specifically measured by the extent of physical changes in the adjacent area. Many arena developments, whether stand-alone projects or part of a formal district plan, promise new private investment on adjacent properties through the payback or return on investment of upfront public subsidies in the arena, and/or in the land and infrastructure that support it. Moreover, arena projects often promise a particular kind of physical “success”, with new buildings and renovations, new uses—particularly those that appeal to the coveted young professional demographic, and new tax revenues that flow from the increased value of these properties once redeveloped.

1.2.1 RESEARCH QUESTIONS

To fulfill this research purpose, I have developed two sets of research questions. The first set addresses how success may be investigated through an empirical assessment of physical changes, and the second set seeks to explain why some host cities experience more “success” in fostering physical changes than others.

1.2.1.1 Set One: Empirical

- 1) Are arena-led urban development strategies successful in fostering physical changes in the immediate area?
- 2) What specific factors define “success” in fostering physical changes around an arena-led development?
- 3) What measures should be used to operationalize these physical success factors? What are the sources of data for these measures?

1.2.1.2 Set Two: Explanatory

- 4) What factors explain why some arena-led districts are more successful than others in fostering physical changes in the immediate area?
- 5) Specifically, how do planning and policy factors affect physical outcomes?
- 6) How do GIS-based data and analytic techniques advance our understanding of these factors, and their assessment?

1.2.2 RESEARCH DESIGN

As will be discussed in more detail in Chapter 2 (Literature Review) and Chapter 3 (Research Design), I have chosen three metrics to measure these promised changes: 1) changes

in the volume of built area, 2) changes in the land use mix, and 3) changes in assessed value. These changes will be measured across a “zone of influence” measuring a quarter-mile radius around the new arena, a measure borrowed from transportation planning, specifically the zone of influence used to evaluate public investments in transit-oriented development. Using GIS and other digital spatial data sources, I plan to measure these physical impacts across 15 arenas built in US cities between 1992 and 2005. This research will be the first of its kind, as a systematic examination of physical changes around arenas across a large number of host cities.

1.2.3 INTER-DISCIPLINARY APPROACH

As noted, my research was guided by work from the perspective of sport management (or sports business) and urban planning. These two disciplines are highly germane to the question of private and public aspects of large sports facility developments, as a result, reflects the interdisciplinary path I have followed in my graduate studies.

My use of these two disciplines to explain urban development outcomes in sports-led development (with insights into why some districts are more successful than others), is based in the understanding that the success of these developments varies. There are both synergies and tensions related to the two perspectives. For example, the goal of cities is to deflect a level of regional economic activity to its taxing boundaries. A team seeks to maximize profits. The misalignment of these goals may compromise the success of arena-led plans.

Successful arena-led strategies blend the interests of both team and a city in the context of their given market. This is not to suggest that all benefits and costs are spread equally across the two sets of interests. Rather it is intended to suggest that the most successful districts present benefits to both team and host cities. By understanding the profit maximizing behavior of teams,

in tandem with the urban development goals of cities, it is possible to increase the success of arena-led plans, and by extension, all classes of sports-led plans.

1.2.4 CHAPTER OUTLINE

This dissertation is organized into six chapters. This introductory chapter serves to provide an overview of the study, including the significance of the issue and its context in contemporary sport management and urban planning debates.

Chapter 2, “Literature Review” looks in detail at the existing scholarship that is relevant to this study, starting with guiding theory and ending with specific studies on sport-led development. In particular, I focus on the gap in the literature that exists in our understanding of the spatial effects of venues. I conclude with a discussion of how insights from this literature bear on the design and execution of this study.

Chapter 3, “Research Design” introduces and describes the approach to this study. I begin by describing my empirical approach and the rationale for this research design. I continue by describing the population of major league arenas, and how the sample of 15 facilities built between 1994 and 2004 was drawn from this grouping. I describe in detail the three metrics that I use to measure physical change before the facility was built, and for at least 10 years after it opened: 1) new construction and renovations, 2) changes in land use mix, and 3) changes in assessed value. I explain the data sources for these metrics, and the method of data collection for the period from 1990 to 2015. I describe how these metrics will be summarized and evaluated when comparing outcomes across host cities. I conclude with a discussion of the limitations of this approach.

Chapter Four, “Case Summaries: Snapshots of Physical Changes by Host City” frames a city’s early development trajectory and urban planning agenda and offers both a current and comprehensive overview of the urban composition in a quarter-mile of these professional sports facilities. The urban development trajectory of each city’s arena-district micro-area and the different plans that encompassed that particular geographic area are discussed at length. In this chapter, it is concluded that each city’s development trajectory is different, and dependent on political, economic and social forces influenced by the city’s history. Each summary briefly outlines the nuances of arena construction negotiations, the city’s comprehensive plans; the integration of professional sport venues in a city’s planning agenda, other notable major development projects built after the opening of the sport venues, and overall development findings that impact the arena-development success measures. Case summaries include descriptive statistics (total assessed value, land value, building value, improved value, tax rate, land composition, and acreage) for professional sports facilities, built between 1990 and 2015.

Chapter Five: “Concluding Remarks” provides a recap of the data collection process, the findings from the case summaries, and lessons learned from the overall analysis of the three interrelated metrics and their relation to arena-led development strategies and the urban development outcomes in arena-district micro-areas.

Appendix A provides tables and figures for the land-use composition, built volume, assessed value, and property taxes for the remaining seven of the fifteen cities.

Appendix B presents a sampling of land-use maps in 1990 and 2015 to demonstrate visually the changes in property-use before and after a facility opened within the arena-district micro-areas. Sample maps are included for Nashville, Cleveland, Dallas, Memphis, Miami, Oklahoma City, Denver, and Glendale (AZ).

CHAPTER 2. LITERATURE REVIEW

2.1 INTRODUCTION

This chapter situates sport-led development within the urban and economic development literature, and summarizes the existing literature on urban development outcomes around sport facilities, highlighting theoretical, empirical, and methodological insights from these studies. I also identify the gap in the literature as pertains to the spatial effects of arena-led urban development strategies; I position my study as a response to this gap.

As introduced in the preceding chapter, my research aims to investigate the success of arena-led developments, where success is specifically measured by the extent of physical changes in the adjacent area. The benefit to an investor city lies in the extent to which regional economic activity is deflected to the area over which it collects taxes. As a result, to fulfill this research purpose, my overarching research questions asks: Are arena-led urban development strategies successful in fostering physical changes in the immediate area?

My secondary research questions ask: What specific factors define “success” in fostering physical changes around an arena-led development? What measures should be used to operationalize these physical success factors? Moving to explaining variations in success across

host cities, I also ask: What factors explain why some arena-led districts are more successful than others in fostering physical changes in the immediate area?

In preparing to respond to these questions, this literature review is organized into three parts. First, I situate my research in the broader context of public investments in sport facilities, explaining how urban development outcomes are but one of a set of rationales that explain these choices made by government entities. Second, I highlight the role of urban development in these sport-led developments, specifically the desire to use sport facilities to attract new private investment in the form of new development, renovations, and attracting a land-use mix that includes residential alongside entertainment-oriented commercial and retail uses. Third, I introduce the theoretical frameworks that guide my inquiry, divided into theories used in sport management (traditionally drawn from economics including profit maximization and rent-seeking) and urban planning theories that explain the actions of local governments (public choice theory and regime theory).

2.2 PUBLIC INVESTMENTS IN SPORT FACILITIES³

As noted,—as well as counties and states—that host major league sports teams, the rationale for a public investment in a venue is to attract or retain a level of regional economic activity. The measurement of economic benefits traditionally focuses on the creation of new jobs and tax revenues, and is the subject of the majority of existing research investigating public subsidies for major league sports facilities. Urban development projects target benefits in the form of increased private investment in targeted geographic areas, increased private investment

³ The discussion in this section 2.2 is abridged from Long 2002; 2006; 2012, with permission

as measured by new construction and renovation, as well as desired changes in land use patterns and composition. Compared to the number of economic cost/benefit studies, there is comparatively little measurement of these impacts, since too many scholars have focused on regional effects without a focus on spatial impacts.

2.2.1 ECONOMIC DEVELOPMENT BENEFITS

Starting with economic benefits, there was an initial focus on regional impacts. Those were typically measured by looking at the number of jobs created, changes in a region's GDP, or the total revenues collected by the governments in the region. Many of first wave of studies focused on these changes relative to the scale of the public sector's investment. In summary, given the size of a team or the level of consumption of entertainment events it was unlikely that there would be any noticeable regional changes.

Job creation is measured in terms of temporary and permanent jobs, the number of temporary jobs created—by the construction of the facility, including the feasibility, design, and finance and approval processes—outnumber permanent jobs. Permanent jobs are those created by the ongoing operation of the facility, including high profile groups such as the athletes and front-office staff, as well as those working behind the scenes within the venue. Job creation is usually measured at the regional level as workers can easily commute to employment centers. The important issue is whether or not the jobs are new to the regional economy. If the city in which the venue is located collected an earnings tax then whether or not these are new or quality jobs, new revenues could be secured by the host city.

Tax revenues created by major league sports facilities produce direct and indirect taxes. Wages from jobs created by the construction and operation of the sports facility induce further

streams of tax revenues, primarily in the form of sales taxes paid by workers, the income earned by created jobs from additional spending in subsequent rounds on goods and services. Property taxes, for their part, are an important target of tax creation, but are rarely collected directly from the facilities themselves; the vast majority of facilities are exempted from paying property taxes.

Evaluating tax revenues also requires careful thinking about measures and interpretation. Similar to the issues associated with job creation, there are first nuances associated with the boundaries of tax origination and collection among the host municipality, the metropolitan region, the county, or the state. In the case of income taxes, for example, the taxes paid by athletes on their income is often paid in the their official state of residence, which is often different from the state in which their home sports facility is located. However, many cities have earnings taxes or special taxes on athletes and entertainers. Second is accounting for the “substitution” effect, whereby taxes are substituting for tax revenues that otherwise would have been collected from alternative entertainment activities, including restaurants, movie theatres, etc.; thus the amount of new tax revenues should be “net” of the substitution effect. This of course does not address the value of having the economic activity take place in one city relative to another. For example, the move of the Detroit Pistons from Auburn Hill to downtown Detroit generates no new tax revenues for the metropolitan statistical area (MSA). However, Detroit does gain and that might have value relative to political or equity concerns. Third is to consider the incidence of these taxes: income taxes are progressive, property taxes are mostly proportional, but sales and other consumption taxes tend to be regressive. That regressivity can be modulated if wealthier individual pay the tax, in that people with lower incomes pay a higher proportion of these costs. Incidence issues could also have a negative geographic implications if

residents in central cities pay a higher proportion of an investment while having proportionally lower incomes, thus bearing a geometrically disproportionate financial burden.

Finally, the evaluation of jobs and taxes created by major league venues should be considered through the lens of opportunity cost: Could the same amount of public investment have yielded more jobs and better jobs, or more tax revenues that are more evenly distributed, if spent on another type of program? For example, many economic studies compare economic benefits from venues to that of building affordable housing. Both construction and permanent jobs are created, albeit far fewer in the operating phase; and there is a multiplier effect, albeit at a lower rate. However, the broader benefits from affordable housing, including economic effects such as bolstering the supply of labor, and social effect of improving quality of life of residents, are in question. Ultimately, all public investments hinge on the question of opportunity cost, and this example--comparing sports facilities to affordable housing--demonstrates how traditional economic cost benefit analysis falls short as an evaluation tool or decision-making aid.

2.2.2 URBAN DEVELOPMENT BENEFITS

Urban development benefits are an important, and yet poorly understood, element of the venue investment debate. In many of the cases where cities enter into partnerships to build new major league venues, they do so with an express intent to revitalize targeted geographic areas, typically in central city locations where there are large swaths of vacant, underutilized, and often environmentally contaminated land located near major transportation infrastructure. These urban redevelopment objectives are more spatial/physical than the traditional economic “jobs and taxes” rhetoric, seeking physical changes such as new construction or renovation activity, changes in land use composition (e.g. from heavy industrial to mixed commercial/housing),

increased density and decreased vacancy rates. Ideally, these changes arrive through new private investment in the form of real estate development projects that attract and house new businesses and new residents, creating new sources of property tax revenue, while also bringing additional vitality to formerly underutilized areas of the city. In the master plans that typically accompany sports facility developments, the facilities themselves are often seen as anchors to large development initiatives, delivering a critical mass of consumers that will support the development of restaurants and nightclubs, and whose presence, in turn, makes the area more attractive for new residents and businesses, fostering more new construction, and hopefully, the cycle of redevelopment continues, in a physical “trickle down” effect or built environment multiplier effect.

These kinds of urban development benefits—changes in land use pattern, the amount of new private investment, changes in vacancy rates—while relatively easy to measure, can be very difficult to interpret. First, evaluating urban development impacts is often made a bit more difficult due to the fact that urban development impacts are in districts or sub-districts, whereas economic benefits can more easily be measured along the political and legal bounds of legal jurisdictions. Second is the issue of attribution, or cause and effect: in a case where an additional 2,000 housing units are built in the vicinity of a new facility over a 10-year period, it will never be clear that the rationale for building those units is tied to the construction of the facility alone. Third is the substitution effect, which in urban development diction is summarized as “development here, not there.” If market demand for new housing over a ten-year period is fixed, then new residential development near the sport facility effectively siphons demand from other locations in the region and perhaps in the city itself. Fourth, the evaluation of effects is skewed by the quirks of real estate development and property ownership. Increasingly, team

owners are directly involved in real estate deals adjacent to the facility, and in so doing, can control urban development impacts to favor their core businesses, which may or may not be a team.

2.2.3 PSYCHO-SOCIAL/INTANGIBLE DEVELOPMENT BENEFITS

The psycho-social benefits associated with major sports facilities that accrue to the general public are broadly categorized as city image, civic pride, and quality of life. Civic image translates to attracting new residents and business from other cities, and can be analyzed, as an example, by using business location preference surveys and determining the dollar value of “media mentions”. Civic pride is characterized by social cohesion, where the presence of a team provides an instrument for the formation of social capital and the expansion of social networks via the activity of following the team and league through in-stadium experiences, television broadcasts, and the sports pages of local newspapers. Social cohesion fomented by sports is very difficult to measure, but clearly exists, and is reported to be of particular importance to patterns of socialization among males. Finally, quality of life benefits imply that the presence of a major league sport team—and by extension a major league sports facility—improves the quality of life for residents and businesses, whether or not they consume its benefits directly.

2.3 THE URBAN DEVELOPMENT RATIONALE IN SPORT-LED DEVELOPMENT

Since the 1980s, central cities of large metropolitan areas have used large capital projects such as major league sport venues, museums, and convention centers to reignite interest in living and working “downtown.” In large part, this was a response to declining federal aid to cities,

declining population and a concomitant decline in tax revenues, as well as increasing demands for social services. While boutique retail and shopping malls were less successful in attracting residents and businesses back downtown, largely because these amenities were replicable in the suburbs, large capital projects such as convention centers, museums, and major league sports facilities were unique and thus forged a greater demand of their presence (Rosentraub, 2014).

In particular, due to the cartel-like structure of the four major sports leagues and the limited supply of franchises, facilities for these teams were cast as unicorns - a rare and highly desirable amenity. Cohesive redevelopment strategies used these large capital projects as anchors for further ancillary development such as new mixed-use residential and commercial development as well as encouraged larger corporations, business start-ups, and business incubators to relocate downtown. Simply put, capital projects such as sport venues were not only catalysts for the redevelopment of failing inner-cities, but also a mechanism to recentralize economic activity in and around the urban core.

Downtown city centers have had a turbulent history; formerly economic powerhouses and industrial centers of commerce, cities transitioned into blighted and crime-ridden areas attributable to the process suburbanization and economic and racial segregation. With the resurgence of new infrastructure and capital improvement projects as well as the rehabilitation and historical preservation of historical buildings illustrative of stories of the past, downtowns are entering into a new age of purpose and definition. Since the 1990s, professional sports facilities have been used by cities as a strategy to support downtown economic development agendas by creating more entertainment options, residential (single-family and mixed-housing) and commercial units, employment opportunities, and other land use development.

While sports facilities are perceived to promise great benefits to cities, studies have shown that these facilities produce very little to no economic impact and return on investment at the regional level (Baade & Dye, 1996; Baade, 1996; Rosentraub & Swindell, 1991; Rosentraub, Swindell, et. al, 1994; Noll & Zimbalist, 1997; Rosentraub, 1997; Coates & Humphreys, 1999; Noll, 1974). That past research, however, did not address the spatial effect of venues. Could a level of regional economic development be deflected back into central cities by hosting a venue (Rosentraub, 2014)?

The tangible and intangible benefits generated by professional sports facilities have often been evaluated on their individual impacts among host cities (Johnson, Whitehead, Mason, et. al, 2012). Stand-alone facilities surrounded by a sea of parking lots provides no impact or benefit to the city itself. Large capital projects such as professional sports facilities are both large investments for the team's owners as well as for the public sector. The benefits of the facility need to exceed the costs of the initial construction, maintenance, and operations of the facility in order for such a project to be considered a valuable investment worth considering (Fort, 2006).

It is important to view facility development in a broader context rather than as a single entity development project (Johnson, Whitehead, Mason, et. al, 2012). Rather, stadia and arena developments should be analyzed based on their contributions to overall urban development agendas and how these infrastructure projects facilitate and anchor ancillary development that would not have otherwise occurred.

Furthermore, this becomes a pertinent issue as to whether public money should be invested on such a project. Is it justified to invest public dollars in a facility to redevelop the central city? If venues are capable of anchoring further ancillary development thus creating a healthier and more prosperous downtown that no other large capital project can achieve, then

using public dollars to assist subsidizing such a construction can be both an economically efficient and a good investment (Rosentraub, 2014; Johnson, Whitehead, Mason, et. al, 2012). In the last twenty years, cities have been economically and socially impacted by tourism. Tourism has become a key component in the economic restructuring of cities, transitioning from manufacturing centers to centers for service and entertainment (Fainsten & Judd, 1999; Judd, Winter, Barnes, et. al, 2003). With both the rise in wealth and leisure time, tourism has added a profound economic presence in the ways cities have transformed. Cities as retail centers supply the expected luxury high-end retailers as well as boutique outlets and pop-up shops for emerging designers, these emerging designers add a sense of vibrancy and unpredictability. These trends and amenities are often concentrated around a larger capital project such as a convention center, stadium or arena, casino, or new hotels.

While in some cities these amenities have been organically created and formed an entertainment district, many other cities have purposefully integrated these entertainment options in their master planned developments as part of the city's overall redevelopment agenda. Planned developments are thus also used to establish tax increment financing (TIF) districts insulating the capture of the entertainment revenues produced. These entertainment districts serve failing city centers not only with a new tax base for young professionals who choose to move downtown due to the newly provided entertainment options, but also captures the spending occurring within the districts geographic boundaries. Dependent on how the TIF district is created, these revenues will only be used to improve infrastructure and services within the TIF boundaries. With the preconceived notion that inner-cities are laden with crime and considered as unsafe, entertainment districts can assist in re-establishing an area's reputation, attract new investments,

and facilitate the creation of an “urban culture that it in itself is a commodity” (Fainstein & Judd, 1999 p. 261)

There are three types of tourist cities: resort cities, tourist-historic cities, and converted cities (Fainstein&Judd, 1999). Cities utilizing teams as part of their redevelopment agendas can be considered as converted cities. It is arguable that while such large capital projects are designed to revitalize blighted downtown centers, much of the redevelopment that transpires, occurs within an insulated area often designated by a TIF or Enterprise/Empowerment zones. Simply put, sport facilities can be successful anchors for ancillary development such as residential or commercial real estate, retail, other entertainment options, etc. An immediate economic effect, however, may not occur right away and it is difficult to determine whether spillover effects will follow into the peripheral neighborhoods a few miles away from the sports stadium or arena development or the entertainment district at large.

Projects such as Coors Field (Denver), and the Gateway District (Cleveland) activated development projects in the vicinities of each of these facility projects, yet research is needed that looks at effects near the venue and throughout the targeted downtown area (Eisinger, 2000). Venues are development to establish a quasi-entertainment district, are built and designed for high-income earning young professionals and tourists and, in many instances, new renters and homeowners who resided in the area prior to the envelopment of new real estate ventures.

Pursuing this idea further, the development of these entertainment districts can alter the civic agenda and intentions concerning the revitalization process of the central city (Eisinger, 2000). Cities pursuing stadia and arena development as anchors to stimulate development throughout the rest of the city may face the creation of a divided city. A divided city is a consequence of fulfilling development plans that indulge the tastes of the high-earning young

professionals seeking an “elite urban playground” where they can live, work, and play while continuing to neglect those long-standing residents who are economically segregated lacking both economic opportunities and the availability of public services (Levine, 1987). However, in order to reverse the urban decline these long-standing residents are familiarized with, high-income households and residents need to be both attracted to live and work in the central city. Responding to this criticism it is useful to note that most cities require sport venues and districts to the building of new below market rate housing if new residential properties are also built. It is not unusual to find a requirement that 30 or 35 percent of all new residential development include below market rate units.

Stadia and arena development and subsequently entertainment districts are not just simply meant to redirect economic activity to the urban core. City property tax must also be generated (Rosentraub, 2014). Without a diverse population that includes a large proportion of wealthy individuals and households, cities cannot generate the appropriate tax revenues needed to revitalize downtown neighborhoods and continue to provide public services that are largely consumed by low-income residents. Yet, while waterfronts are beautified into walking promenades and old warehouses located in designated historic preservations zones are gutted and rehabilitated into luxury industrial lofts that are highly valuable and profitable real estate investments transforming neighborhoods, these are transitions that are advantageous for the middle and upper-class residents relocating to areas that now offer ample entertainment and nightlife options. Although public services can once again be supplemented for low-income residents by attracting an appropriate tax base, these residents will eventually be displaced as they begin to be priced-out of their neighborhood that has since become the new playground for

the young and wealthy professionals. That possibility is why below market rate commitments are part of most districts.

To revive central cities and their urban core, the entertainment districts must be linked to residences creating a sense of community and neighborhood atmosphere (Rosentraub, 2014). This is an alternative to Fainstein's premonition that converted cities would become tourist spaces "isolated from the ordinary fabric of daily life" (Fainstein & Judd, 1999 p. 266).

2.3.1 SPORT-LED DEVELOPMENT STRATEGIES DEPENDENCY ON LOCAL ECONOMIC CONDITIONS

Sport-led development has played a pivotal role in turning singular facility investments into substantial real estate interests. Quite a few professional sports facilities (Cleveland, Denver, Indianapolis, etc.) have generated both organic and planned ancillary real estate development. Sports anchored development has burgeoned as a strategy that many public elected officials have adopted in order to revitalize or develop their cities. Some examples include:

- 1) Illitch Holdings plans to privately invest at least \$200 million for new mixed-use developments around the Little Caesar's Arena (estimated at a total of \$650 million) in addition to investing millions of dollars in public infrastructure improvements such as lighting, sidewalks, greenspaces, etc. around the arena (District Detroit, 7/20/2014).
- 2) The Green Bay Packers announced in the summer of 2015 the master plan for the Titledown District, which will include a 10-acre public plaza, diverse programming, public art, a winter ice-rink, a ski hill, and regulation-sized football field and an additional 16-acres to be developed for commercial and retail as well as a substantial number of new residential units. The three tenants of the district will include Lodge

Kohler, Bellin Health Sports Medicine Clinic, and Hinterland Restaurant and Brewery (Packers.com, 8/20/2015). In 2018 it was announced that Microsoft would be the lead partner in Titledown Tech, a business incubator.

3) A new arena for the Edmonton Oilers opened in 2016, and by 2018 included millions of dollars of new downtown real estate development, a casino, and other entertainment options within the Ice District.

4) Surrounding the proposed site SunTrust Park in Cobb County, Atlanta, the Atlanta Braves new ballpark will be surrounded by ancillary development including the new headquarters for Cox Media Group Television (Tucker, 07/25/2015).

Every city has a unique development trajectory that is co-dependent on its particular political, economic, and social history. During the Reagan administration in the 1980s, both intergovernmental revenue and federal aid were cut, requiring local governments to conform to “fend for yourself” federalism agendas by creating and relying on their own economic bases and competing against other regional governments. These changes prompted cities to adopt more economic-development policies in order to maintain their communities’ fiscal health and to promote future city growth (Rubin & Rubin, 1987; Sharp, 1990).

Cities will adopt a variety of economic-development policies dependent on the conditions for which those communities are willing to embrace different policies. This variation is a result of the structure-versus-agency debate (Swanstrom, 1985; Wong, 1988; Kantor, 1988; Fleischmann, Green, & Kwong, 1992). The structure-versus-agency premise claims that a city’s adoption of certain economic-development policies is based on the local government’s political and economic structure (e.g., urban development shaped by economic and social conditions of

the region)⁴ and the involvement of political actors (e.g., pressuring for certain incentives and having political influence on local policy decisions). Extensive literature exists from Logan and Molotch (1987), aligning economic development with the growth machine theory; from Stone (1987), with urban regime theory; and from Mollenkopf (1983), with political entrepreneurs that promote economic growth through forming coalitions and expanding political influence to further the local policy agendas along with individual interests.

Cities are likely to adopt more economic-development policies if they are negatively impacted by demographic factors (population decline, rising unemployment levels, business relocation, and so on) and economic factors (effects of deindustrialization, underutilized land parcels, etc.) (Fleischmann, Green, & Kwong, 1992). Cities may also adopt more economic-development policies if they are in decline and pressured to spur new growth, have a high percentage of poverty and avoid redistributive programming, hold a mayor-council government in which private-sector authority is limited, or possess a specialized department (e.g., a downtown redevelopment authority) to oversee the distribution of these policies (Fleischmann, Green, & Kwong, 1992). Fleischmann, Green, and Kwong (1992) found that there was substantial variability in the number and type of economic-development strategies that cities supported.

Overall, cities that are more aggressive in adopting a number of economic-development policies are those that are in the process of slow growth, those that have formed development authorities to oversee the economic-development programs, and those that are wary of increases in property taxes. Furthermore, it was established that cities are impartial to the nine economic-

⁴ Cities are pressured to adopt certain economic-development policies as a result of local politicians seeking support for their own interests in serving additional terms in office or scenarios in which businesses and residents threaten to move because of the lack of adequate services provided by the city or increases in taxes.

development strategies⁵ identified in Fleischmann, Green, and Kwong's (1992) study and therefore use a variation of those strategies to stimulate the local economy.

Turning more specifically to sport-led development, there is only a small existing body of research. A number of cases have focused on professional sport facilities and their impact on adjacent real estate development activities, but very few have analyzed the trajectory of urban development changes at the parcel-data level since the construction of these venues. Among these studies, the most relevant to my research are studies by Chapin, Rosentraub, and Humphries.

Rosentraub (2007, 2012, 2014) has extensively examined professional sport facilities and their centrality to many downtown redevelopment efforts. Rosentraub (2014) advances the research on sport-led development research by assessing the financial and administrative implications professional sports facilities and how they contribute to surrounding neighborhoods and new and existing development projects. The cities found in Rosentraub's case studies all decided that investments in sports, entertainment, and cultural amenities should anchor revitalization efforts in their downtown core areas. In summarizing lessons that emerged from those cases, Rosentraub provides nine recommendations for other cities that are considering sports-led urban development strategies as part of their city redevelopment initiatives. Some of the more notable recommendations include:

- 1) *Provide advertising*: Adjacent properties to sports facilities should be properly marketed and leased to businesses as a potential opportunity for advertising and the generation of revenues – and lower tax dollars spent on the facilities – for the

⁵ Fleischmann, Green, and Kwong (1992) identified nine groups of economic development strategies. These include loans, financial incentives, activities to attract or retain business, revitalization projects, regulatory reform, developmental land management, historic preservation, aesthetic improvements, and improvements to facilities.

public sector. The value of public space should be leveraged and controlled in order to secure alternative revenues streams.

- 2) *Concentrate amenities and make detailed plans*: Concentrating a detailed revitalization plan is more feasible when it is in a tightly designed area, ensuring that all vacant land and buildings are in fact redeveloped within the district.
- 3) *Build neighborhoods not iconic architecture*: The scale of the facilities should be designed in such a way that it seamlessly fits into the surrounding neighborhood and does not become the tallest structure.
- 4) *Secure organizations needed to succeed as a broker city*: It may not be feasible to secure guaranteed investments, therefore many cities will have to use their own tax revenues to ensure that any other subsidies are strategic investments.

Chapin (1999) addressed the impact that professional sport facilities have on a local district's micro-area. Through his case-study research on Baltimore's Camden Yards, Cleveland's Gateway District, and Arlington's Ballpark District, Chapin expanded sport-facility research by providing one of the first urban-planning-oriented perspectives on micro-level development impacts. Chapin's work took a different path from that of other scholars who focused on regional impacts (Baade, 1996; Noll & Zimbalist, 1997; Rosentraub, 1997, 2000; Baade & Dye 1990; Coates & Humphreys, 2003; Siegfried & Zimbalist, 2006).

Chapin's study of Baltimore (1999) concluded that district redevelopment is not guaranteed through the massive investments in sport projects. While Camden Yards was a success on its own, it did not turn out to be the urban development catalyst. On the other hand, in his study on Cleveland – along with other examples such as San Diego and Columbus –sports

facilities played a role in catalyzing district redevelopment and resulted in the building of new hotels, retail businesses, and residences. The mixed success rate of the venues as catalysts for urban redevelopment, he notes, suggested the need for further research to identify particular project characteristics and planning processes and programs that may have been simultaneously enacted with the sport facilities that yielded such development benefits.

Humphreys (2016) focuses on the economic impact of facilities on nearby property values by examining the relationship between the opening of a venue and residential mortgages. Humphreys found that the opening of a professional facility was associated with a 20% increase in residential mortgage applications and that both property values and rents increase with closer proximity to the major league venues. Humphreys and Feng (2012) predicted that the opening of a new facility would both increase the demand for residential housing and residential property values. Using a hedonic housing price model and capturing property values within census block groups five miles of every major league sports facility, Humphreys and Zhou found that median house value is higher closer to these facilities and therefore such projects can be used to capitalize on residential real estate prices.

Aligned with Chapin's urban-planning outlook, Ahlfeldt and Maennig (2008) explore changes in land values and patterns of impact for two arenas situated in Berlin-Prenzlauer Berg, and Ahlfeldt and Kavestos (2012) found that in the case of London, property prices increased following the announcement of new stadium construction plans. Also, they found that changes in land value is consistent with changes in land-use composition, one factor in measuring urban development outcomes and measures of success in arena-led urban development strategies.

A gap in this former research is that success measures were not quantified, and variables used to define success were not comparatively measured in a comprehensive and systematic

manner. Furthermore, the success rates of these urban development initiatives were not differentiated among the facility typologies (arena, ballpark, and football stadium).

2.3.2 EXAMPLES OF “SUCCESS” AND “FAILURE” IN ARENA-LED DEVELOPMENT: CLEVELAND AND GLENDALE

Among the many cases of sport-led urban development, two arena-district cases effectively set up the contrast between “success” and “failure.” This includes the Historic Gateway District in Cleveland and the Westgate District in Glendale, Arizona. While the differences between the two outcomes are stark, these cases highlight the complexity of assessing urban development outcomes, particularly when making comparisons across cities, and across time.

The Cleveland Gateway District is widely considered to be an example of a “success” in sports-led urban development. The Gateway District was originally conceived of as part of Cleveland’s “Civic Vision 2000 Plan” which focused on improvements for both the downtown and surrounding neighborhoods by developing strategies to housing and office uses downtown, and to provide more entertainment opportunities (Keating & Krumholz, 1991). In that spirit, the plan targeted the 28-acre Central Market neighborhood as the site of two new venues, with the hope that new private development would follow and mark a new “gateway” to downtown Cleveland.

By 1990, the Central Market’s glory days were long past, and the area offered no housing, no hotel rooms, and only six restaurants. City leaders joined forces with the owners of the Cleveland Cavaliers (the Gund family) and the Cleveland Indians (then the Jacobs family,

followed by the Dolan family in 2000), with the result that the Gund Arena and Jacobs Field (now Progressive Field) opened in 1994.

Nearly three decades later in 2016, the Gateway Historic Redevelopment District (adjacent to the Gateway Economic Development Corporation's venues and a separate public corporation) was home to over 1,500 residents, six hotels, and over 60 restaurants, and is considered a prime example a successful sport-led urban development. When Jacobs/Progressive Field was constructed, the project cost \$276 million in 2016 dollars with the public paying approximately 48% public share of costs. The proposed hotel and mixed-use projects that have just been recently completed or currently in the construction pipeline for downtown Cleveland includes a 150-room Starwood Property located on the east bank of the Flats which is part of a greater \$500 million mixed-use residential complex. Furthermore, a 600-room Hilton Cleveland Downtown Hotel and convention center was completed in June 2016 and another \$272 million is spent on a 28-story tower project that is situated right next to the current Mall.

The Westgate Entertainment District in Glendale, Arizona is perhaps the most commonly used example of failed ambitions in sports-led urban development. In 2001, real estate developer Steve Ellman joined forces with the suburban city of Glendale to bring to fruition a vision for a 233-acre entertainment district anchored by a new arena for the NHL Coyotes.

Glendale, anxious to capitalize on the sports-led development trend, created the Glendale Sports and Entertainment District, and through it, offered substantial public funding for the new arena, and a football stadium, as well as for land acquisition and other infrastructure costs for the promised mall. In return, Ellman promised the usual windfall of jobs and taxes. Early warning signs appeared when Ellman was twice fined for not meeting performance obligations with regard to building the retail mall. As the US housing market began to show signs of collapse, it

became clear that little of the promised new development would materialize. Bankruptcies, finger-pointing, and rebranding as the Westgate Entertainment Zone followed, however Glendale has yet to fully recover from the financial burden of this plan. The NHL Coyotes, for their part, also suffered greatly as this development plan unraveled, being forced into bankruptcy in 2009, taken over by the NHL, and finally sold to the Renaissance Group in 2013. The Glendale district is a cautionary tale for team owners, developers, and city officials alike.

Comparing these two examples, the good news is that there are far fewer arena-led developments that would fall into the rather extraordinary circumstances faced by Glendale over the past decade. Those who follow sports facility development would likely suggest that there are many more arena development outcomes that fall somewhere in the spectrum between Cleveland and Glendale. Other “success” candidates might include Denver’s LoDo District and the area around the Boston Garden, as examples, with some representing formal district plans (Denver), while others are more stand-alone development projects created without a district in mind (Boston). However, much of these impressions—even amongst those who follow these issues—are based on informally gathered observations based on visits to the sites, following new feeds, and discussions among colleagues. What is missing from our understanding of these issues is a systematic and comprehensive analysis of the outcomes from these arena-led projects.

2.4 THEORETICAL FRAMEWORKS

The theories underlying my research can be divided into two main disciplinary orientations: sport management (or sports business) and urban planning, reflecting the interdisciplinary nature of my graduate studies. In simple terms, I use the perspective of professional teams as a proxy for sport management theories in this work, although by use of the

shorthand term “teams” I also infer that the perspective of leagues and other aspects of sports business are also included. In turn, I use the term “cities” as a proxy for the urban planning perspective, though again this is a form of shorthand, because there are often other levels of government, and other public interests that are implied as bundled within that term.

Generally, my use of these two disciplines to explain urban development outcomes in sport-led development, and why some districts are more successful than others, is based in the understanding that the success of these developments is not limited solely to one of these groups. Instead, there are both synergies and tensions between the two perspectives. For example, if the goal of cities is to create a cluster of restaurants around the arena, while the goal of teams is to maximize profits within the arena, the misalignment of these goals may compromise the success of arena-led plans. There is some anecdotal evidence that successful arena districts involve some degree of financial interest by teams in the ancillary development around the arena, thus allowing for both goals to be achieved. By better understanding both these tensions and synergies, it may be possible to improve the outcomes.

Yet successful arena-led plans blend the interests of both team and cities, in the context of a specific market. This is not to suggest that all benefits and costs are spread equally across the two sets of interests. Rather it is intended to suggest that the most successful arena-led districts present benefits to both team and host cities. By understanding the profit maximizing behavior of teams, in tandem with the urban development goals of cities, it is possible to increase the success of arena-led plans, and by extension, all classes of sports-led plans.

2.4.1 SPORT MANAGEMENT THEORIES

Sport management is an umbrella discipline, encompassing economics, finance, organizational behavior, leadership, and others to guide the research. My primary theoretical frame is profit-maximization as the primary goal of firms—by extension in this dissertation to the interests of teams, leagues, and the associated businesses involved in major league sports (Marshall 1897, 1890, and others). Viewed in this manner, the actions of teams are largely governed by the desire to earn profit, and their participation in arena-led development would also be guided by this principle. My secondary theoretical frame is the rent-seeking behavior of teams as they seek to influence the political process to gain increased revenues via public subsidies and preferential treatment (Tullock 1967; Krueger, 1974; and others). In this framework, the success of arena-led developments would be in part contingent on the ability of teams to extract rents by participating in the development plan.

Teams and their leagues have a particular set of interests in the context of arena-led developments. First, teams are motivated by the promise of a new facility and the latest innovations in revenue generation. The demand for luxury suites remains the best example of a design innovation that became a significant revenue generator, and was an important factor in the most recent replacement cycle for major league facilities. Second, teams are motivated by the possibility of public investments to build a new facility; since every public dollar means less expense for the team. Third, teams are motivated by involvement in plans for an entire arena-led district since these lead other lucrative investment opportunities that could exist with the team's owner. Fourth, teams are motivated by arena-led plans to play a high profile role in a project, and can leverage that involvement to gain influence and with the local business community, unions, and the media.

Despite these considerable advantages, the profit-maximizing behavior of teams may not always lend itself to the success of an arena-led development from the city's perspective. There may be a misalignment of goals if teams act in a manner that stifles the development potential of other properties in the district. Likewise, if cities enact policies that affect the revenues generated by teams (e.g. ticket surcharges, payments in lieu of property taxes, etc.) then tension ensues. A recent example of the latter is the regulation of hot dog carts in the vicinity of ballparks, pitting the interests of ballpark operators and teams against those of local street vendors. In fact, there is speculation among facility opponents that teams go to considerable lengths to influence arena-led developments such that the plan works in their favor. While this is a subject for future research, there is some evidence that teams are investing in real estate opportunities in the district beyond the traditional bounds of the facility itself. In one sense, this can be interpreted as an effort to protect their investment and position within the district, but it also speaks to the expanding influence of these districts in the business model of teams.

2.4.2 URBAN PLANNING THEORIES

Urban planning is also an umbrella discipline, bringing together economists, political scientists and historians to sit alongside urbanists and architects guiding research and practice pertaining to the growth and management of cities. My primary theoretical frame for explaining arena-led development is public choice theory, as applied to urban development in the 1980s by Peterson (1981). In the context of urban development, Peterson argued that governing regimes are subordinate to the overall economic principles that incentivize cities to compete with other cities to capture new private investment. This competition encourages politicians and business interests to favor new development projects, and tasking the planning process with ensuring the

provision of local infrastructures that support the needs of private actors in the name of economic development. My secondary theoretical frame is Logan and Molotch's growth machine theory (1987) as counter-argument to Peterson's public choice treatise. Growth machine theory is positioned to highlight the ascendance of public choice-led urban development theory, arguing that the development projects favored by politicians and business interests come at the expense of the general population, and vulnerable residents in particular. In this sense, the allied relationship between politicians and business interests fuels the growth machine, thus allowing it to overpower the weaker interests in the development process.

These theories are instructive in my effort to understand the success of arena-led urban development strategies. Public choice theory explains the allied interests of teams and host cities, while growth machine theory reminds us to think carefully about the incidence of costs and benefits. These theories are particularly important in the second stage of the research, where I examine factors that explain why some districts are more successful than others, because taken together, these theories help us to understand differing notions of "success". For team owners, "success" is measured in profitability and influence. For host cities, "success" is measured in the balance between accommodating the profitability of teams, with the needs of city residents, particularly those who bear a disproportionate share of the costs.

Given this theoretical backdrop, what does urban planning theory tell us about measuring "success"? Plans are the guiding forces for future urban development (Talen, 1996), yet there is wide variability in determining whether the implementation of a plan achieves prescribed "successful" outcomes or not.

Plans are conventionally described as a "set of instructions that detail both goals and the means for achieving those goals" (Nakamura & Smallwood, 1980: 31). Plans are differentiated

from one another based on scope, range, and specificity and vary by city and project. Plans both broadly describe visions and policy changes for entire cities and regions while also detailing action plans for specified central business districts or neighborhoods. However, in the case of major league sports facilities, there are very few comprehensive plans in the 1980s in which these facilities were even mentioned. As the popularity of public-private partnerships increased in the 1990s, cities assumed greater responsibility in financially supporting the attraction and retention of professional sports teams; this was achieved either through the construction or renovation of new and existing sports facilities.

Yet, based on preliminary research searching through several host city comprehensive plans, there is little mention of integrating professional sports facilities into the broader redevelopment strategy. While general plans often address land use, physical development, and infrastructure, it is surprising that sports facilities built in the 1990s are not distinctly mentioned; if not for the size and square footage of the facility and possibility of needing to acquire land. It is only recently that professional sports facilities are being included into city comprehensive plans and redevelopment strategies. As the partnership between the public sector and private developers and team owners are strengthened, RFPs are including not just development and financing strategies for the facility itself but development strategies to help the surrounding neighborhood.

Absent these traditional plans, I evaluate master developer agreements, reviewing whether terms for additional development sponsored by both private entities and the city were outlined in the documents. Furthermore, master developer agreements often discuss the different stakeholders involved in the facility development process. This can provide additional insight

into the negotiation process for such development, what kind of terms were made with the city and grassroots organizations, and financing mechanisms used to subsidize the facility.

As an example, the Barclays Center master developer agreement outlines terms negotiated between the Prospects Heights Neighborhood Development Council, the Empire State Development Corporation, and Forest City Ratner Corporation. The goal was to create a significant number of affordable housing units in the Atlantic Terminal Urban Renewal Area as a function of the Barclays Center: Pacific Park, which would consist of 17 new mixed-use and residential units. In addition to the proposed residential development, a community benefits agreement was also outlined for several community groups in the area proposing that 50% of all rental units would be set aside as affordable housing, that 10% of all rental units be set aside for senior housing, that 35% minority construction workers hired for the construction project, and also promised a health care center and some open space. Although what is proposed in master developer agreements may be very different from what is actually realized, these documents still provide a plan or roadmap for future development in an arena district.

Finally, tax increment financing (TIF) strategies are public financing mechanisms that subsidize redevelopment and community improvement projects by redirecting property tax revenues into a defined area that provides more assistance and funding to specific economic development or public improvement projects and initiatives. TIFs involve issuing bonds to finance public infrastructure, land acquisition, utility costs, and other public service improvements. TIFs are typically enacted for 20-25 years, which is aimed at matching the build out of the district site. Over the 25-year period, the increase in property values within the district will theoretically yield higher property tax revenues, and the increment in those taxes above the initial level would be used to pay off the bonds. TIFs are controversial, in part because they

present some financial risk if the planned development does not materialize, and also because the increasing property values is often associated with gentrification.

2.5 LESSONS FOR RESEARCH DESIGN

This literature review has identified a gap in the literature as pertains to the evaluation and assessment of arena-led, and sport-led, urban development strategies. First, I have made clear that there is a general lack of research on the topic of urban development impacts from sport-led strategies, as most of the research focuses on economic outcomes and political influence. Second, I have traced the small number of studies that make up the extant literature specific to sport-led development to highlight the methodologies that have been used to measure success. Third, I have described the theoretical frameworks that I will use to explain successes and failures, borrowing from both the sport management and urban planning disciplines. The results of these inquiries are integrated into the research methodology presented in the next chapter. As cities turn to sports and entertainment districts as key element of their urban strategy, this research will provide a better understanding of this trend and its impacts using a systematic and comprehensive approach to measuring and interpreting these outcomes.

CHAPTER 3. RESEARCH DESIGN

3.1 INTRODUCTION

This chapter describes the methodological approach undertaken to measure the physical changes around major league arenas in a set of selected host cities. This is an empirical or observation-based analysis across several host cities, or “cases”. I have chosen three metrics to measure these changes: 1) changes in the volume of built area, 2) changes in the land use mix, and 3) changes in assessed value. These changes will be measured across a “zone of influence” measuring a quarter-mile radius around the new arena, a measure borrowed from transportation planning, specifically the zone of influence used to evaluate public investments in transit-oriented development. Using GIS and other digital spatial data sources, I plan to measure these physical impacts across 15 arenas built in US cities between 1994 and 2005, with the development impacts measured prior the facility opening in 1990, and then again 25 years later in 2015. This research will be the first of its kind, as a systematic examination of physical changes around arenas across a large number of host cities.

3.2 RESEARCH APPROACH

3.2.1 HYBRID COMPARATIVE CASE STUDY ANALYSIS

My approach is a hybrid comparative case study, using empirical quantitative data. The case study research approach is a detailed empirical examination of a phenomenon, through either single or multiple examples, to create new theoretical constructs. The purpose of case studies is not only to provide a purely descriptive narration of an example, but also to attempt to generalize the narrative toward a theoretical development; as Eckstein (1975) notes, “Case studies are an alternative means to the end of testing theories.” Furthermore, single case studies are just as valuable as multiple case study research. The data or evidence collected and insights formed are linked and transferrable to other cases that help further support theory development (Ragin, 1992).

There are many misconceptions about case studies as a research strategy. Flyvbjerg (2006) outlines five misunderstandings concerning the nature of case study research. Two are especially resonant with the research approach taken for this particular study. The first misconception is that “one cannot generalize on the basis of an individual case and therefore cannot contribute to scientific development” (Flyvbjerg, 2006, p. 221). Yet Eckstein (1975) argues that case studies are capable of predicting theories, and he offers broader generalizations in support of theory-based research; case studies are therefore just as useful in testing theory as other methods and thus should not be underestimated. Furthermore, case studies are valuable in all aspects of the theory-building process (Eckstein, 1976). Understanding the underlying issues of a given problem or situation can be facilitated by a strategic selection of cases (Ragin, 1992; Rosch, 1978); such cases can be extreme cases, critical cases, maximum variation cases, or paradigmatic cases (Flyvbjerg, 2006; see p. 230 for his summary of these case descriptions).

Relevant to the present research study, the sample was systematically selected based on two conditions: that chosen cities had venues deriving from the arena typology, host to NBA and NHL teams; and that cities had professional sports venues opened between 1990 and 2004. These cities were confirmed under specific conditions in order to observe a 20-year development cycle or period, but they also represent what Flyvbjerg defines as critical cases. Critical cases are cases that are able to provide a detailed narrative that provides a full contextual scope of an issue and relates it back to the broader theoretical issue at hand while simultaneously moving the scientific research forward. In other words, to find common trends among cases to further support a theory, it follows that “if it is valid for this case, it is valid for all (or many) cases” (Flyvbjerg, 2006, p. 230). If a number of urban development outcomes are similar across a few cases in relation to the arena-led development strategy, then the similarities must be true both for these 15 cases and for other cities with professional sports venues.

The second misunderstanding in terms of case study research that Flyvbjerg addresses is that “it is often difficult to summarize and develop general propositions and theories on the basis of specific case studies” (2006, p. 221). In this study’s sample, the details and context of each case are unique. Indeed, the political, economic, social, and historical context particular to each metropolitan area influences the city’s urban fabric and subsequently its development trajectory. To reiterate, a city may use a variety of economic-development strategies to strengthen and grow its local economy; the type, number, or even combination of strategies used is dependent on the conditions of the community.

The unifying condition in studying these cities is that they all have a local government that has contributed public funds toward arena construction.⁶ Arena construction has then led to a number of substantial changes—both economic and physical—to the urban fabric. Thus, the systematic selection of sample cities, the common thread of the arena-district micro-area, and the summarization of each case analysis together contribute to the “cumulative knowledge” (Flyvbjerg, 2006, p. 241) of the theory surrounding sports-led urban development initiatives; as the sample size increases, broad theoretical development compares favorably with large sample size research. This research study combines the use of case studies with a comprehensive parcel-level dataset to provide further knowledge regarding the success of arena-led development strategies.

Building theory behind the use of arena-led development strategies for downtown revitalization involves applying multiple cases to create a new theoretical construct through empirical evidence and a variety of data sources (Eisenhardt, 1989; Yin, 1994). Specific to this study, the data sources include assessment records, property characteristic cards, comprehensive annual financial reports (CAFRs) of all cities in the sample between 1990 and 2015, in addition to city urban planning documents and comprehensive planning reports.

This leads to the use of case studies as a means to identify patterns of relationships within and across cases and to bridge qualitative evidence (along with quantitative data) and deductive research (Eisenhardt & Graebner, 2007), thereby developing a strong theoretical foundation. The overall strategy of this research study is designed around a mixed-method approach. Since there is limited research about sports-led urban development strategies, this study combines

⁶ In some cases, public funding had been provided as the professional sports venue had been perceived as an anchor for downtown redevelopment. In other scenarios, funding may have been tethered to fulfilling political agendas (e.g., paying for new arena construction in fear of team relocation or even fearing reelection losses).

theory building with a quantitative data analysis that uses data sources, such as parcel-level assessment records, to evaluate the success of arena-led development strategies. The challenge with adopting the theory-building-from-cases approach is case selection. Multiple cases were selected according to their robustness, generalizability, and testability, based on conditions that will be expanded on later.

In general, the findings from these multiple cases must display a robust replication logic (Yin, 1994; Eisenhardt & Graebner, 2007); that is, they must be replicable among other cases. The replicability of the case-study findings for the 15 cities in the sample is used to build the theory, while the richness of the data collection process, the data collected, and the presentation of evidence in tables, graphs, and appendixes (Eisenhardt & Graebner, 2007) supports the theory and the theoretical arguments.

3.2.1.1 Measuring success

The success of arena-led development strategies is measured by analyzing trends in the percentage change of land-use composition, built area, total assessed and market values,⁷ and property taxes. Table 2 summarizes the steps used to measure urban development outcomes in arena districts across 15 cities. Although success measures of arena-led development strategies are more clearly discussed in the research design section, these measures may in fact be different from a city's definition of success for the arena district.

The measures used to define success in this research design are standardized across all cities. However, it should be noted that in some cases, a city may have wished to focus on a

⁷ The issues and policies regarding tax abated and exempt properties are considered in the calculations of assessment and market values and property tax revenues. In some cases, tax abatement policies substantially impacted downtown development. For example, dependent on city policies, these vary on a case-by-case basis, only a portion of a tax abated property's assessment value and market value is recorded for property tax values.

particular policy agenda related to the professional sports venue. In such a scenario, the city could consider some urban development outcomes post arena construction a success if those outcomes fulfilled the city’s original plan, which may deviate from the success measures outlined in this research. A summary of the steps taken in the research design and data collection process are outlined in Table 2, with a summary of this series of steps reflected in the subsequent discussion.

Table 2. Stage One of the data collection process in mapping the urban development outcomes

Stage One: Mapping Urban Development Outcomes	
Step 1: Identify “success” criteria	<p>Absolute</p> <ul style="list-style-type: none"> • Build-out, land-use mix, assessed value per formal plan • Build-out, land-use mix, assessed value per arena district micro-area <p>Comparative</p> <ul style="list-style-type: none"> • Same four measures across all 15 sites; analyze compounding rates of change of these four measures over a 25-year period and at five-year intervals between 1990 and 2015.
Step 2: Sample selection	<ul style="list-style-type: none"> • <u>Population</u>: All major-league arenas currently in use (N = 50) • <u>Sample</u>: Venues built between 1990 and 2004 (n = 15)
Step 3: District boundary “rules”	<ul style="list-style-type: none"> • Use a standard extent of influence measure for all arena districts (quarter-mile radius) • Note (1): Only a few cities in which arenas opened between 1990 and 1999 were part of a formal plan • Note (2): Cities with more than one professional sports venue located in the downtown area will have additional boundaries measured. This means that in some cases, the quarter-mile radius for one venue may overlap with the second venue, or the district boundaries are completely separate.

3.2.1.2 The study population

The population for the arena-led urban development outcome analysis includes all US-based NBA and NHL arenas that have opened between 1994 and 2004 and that are currently in

use. Arenas—a subset of all professional sport facilities—were chosen as the unit of analysis because at present, they are the most likely facility type for inclusion in a sports-led planning effort. This is because of their higher degree of compatibility with other land uses—a function of their high number of event days, small footprint, and higher likelihood of being in an urban location (and thus access to transit), among other factors. In addition, assessing urban development outcomes across different typologies (e.g., football stadiums, ballparks, and arenas) would create issues in case comparisons, since each facility type would need to be accounted for differently in terms of overall footprint, visitation, and overall urban development impacts.

The rationale for examining arenas built between 1990 and 2004 is threefold. First, urban development outcomes take time to materialize. It would be premature to evaluate the success of sports-led urban development initiatives for venues built after 2005 as this does not provide a sufficient lag to determine the impact of the new-construction build-out when the venue has been open for only a few years. In urban planning practice, it is more typical to evaluate the success of plans at 10-year and 20-year marks. Second, the data from the decennial census is available for 1990, 2000, and 2010. By choosing those facilities opened between 1990 and 2004, it is possible to bookend the evaluation with the 1990 and 2010 census data. Third, there are some shifts in planning for arenas that occur around 1990. Arenas built during the 1980s still followed the more suburban development model of being co-located with stadiums with large parking lots, whereas arenas built after 1990 were harbingers of the trend toward sports-led development as a strategy for underutilized sites in downtown locations. Thus, the restriction of the sample to 26 facilities opened between 1990 and 2004 serves my research questions well.

During the data collection process, assessment information for two of the four arenas built between 1990 and 1994—San Jose and Anaheim—was inaccessible because of the

prohibitive cost of accessing earlier files from archives and assessors' offices. Los Angeles was similarly eliminated from the study population because assessment records were limited to the period from 2006 to the present. The assessment and mapping division of Los Angeles County did not release earlier information, despite filing a Freedom of Information Act request. Parcel splits and consolidations occurred frequently in Los Angeles County as the downtown area has transformed dramatically over the last 25 years. Tracking former parcel identification numbers from what is available in 2006 without available parcel deeds would be impractical.

Furthermore, although data was collected for the remaining ten cities in the study population (St. Louis, Chicago, Philadelphia, Washington DC, Sunrise (FL), Indiana,⁸ Raleigh, Atlanta, Columbus, and San Antonio), given the scope of the dissertation, I decided to set these cities aside to keep the dissertation to a reasonable size. The remaining ten cases will be added in the future to complete the full list of arenas built between 1990 and 2004.

There are currently 50 major-league sport arenas currently in use, spread across 49 host cities (Table 3). The sample population for this dissertation study is limited to 15 arenas opened between 1992 and 2004 (Table 4). Three of the cities (Cleveland, Denver, and Phoenix) include arena-district boundary extensions past the quarter-mile radius to account for baseball facilities located within the extent of influence.

⁸ Assessment records for the city of Indianapolis are only accessible from 2002 to present (email correspondence, Indiana Department of Local Government Finance, 2017). A data analyst from the Indiana DLGF explained after contacting the Indianapolis Historical Society and the Indianapolis Historical Preservation Association that assessment records prior to 2002 had been destroyed. With the consolidation of the nine townships into one county, the county decided that it was not necessary to retain the old township records.

Table 3. Study sample's original list of arenas built between 1990 and 2004.

Obs.	Franchise	City	County	Facility	Open ed
11	Minnesota Timberwolves	Minneapolis	Hennepin County	NBA	1990
22	Utah Jazz	Salt Lake City	Salt Lake City	NBA	1991
43	Phoenix Suns	Phoenix	Maricopa County	NBA	1992
44	Mighty Ducks of Anaheim	Anaheim	Los Angeles County	NHL	1993
55	San Jose Sharks	San Jose	Santa Clara County	NHL	1993
66	Cleveland Cavaliers	Cleveland	Cuyahoga County	NBA	1994
77	St. Louis Blues	St. Louis	St. Louis County	NHL	1994
88	Chicago Bulls/Blackhawks	Chicago	Cook County	NBA/NHL	1994
99	Portland Trail Blazers	Portland	Multnomah County	NBA	1995
110	Boston Celtics/Bruins	Boston	Suffolk County	NBA/NHL	1995
111	Buffalo Sabres	Buffalo	Erie County	NHL	1996
112	Nashville Predators	Nashville	Davidson County	NHL	1996
113	Tampa Bay Lightning	Tampa Bay	Hillsborough County	NHL	1996
114	Philadelphia 76ers/Flyers	Philadelphia	Philadelphia County	NBA/NHL	1996
115	Washington Wizards/Capitols	Washington D.C.	District of Columbia	NBA/NHL	1997
116	Florida Panthers	Sunrise, FL	Broward County	NHL	1998
117	Indiana Pacers	Indianapolis	Marion County	NBA	1999
118	Carolina Hurricanes	Raleigh	Wake County	NHL	1999
119	Atlanta Hawks/Thrashers	Atlanta	Fulton County	NBA/NHL	1999
220	Denver Nuggets/Col. Avalanche	Denver	Denver County	NBA/NHL	1999
221	L.A. Lakers/Clippers/Kings	Los Angeles	Los Angeles County	NBA/NHL	1999
222	Miami Heat	Miami	Miami-Dade County	NBA	2000
223	Columbus Blue Jackets	Columbus	Franklin County	NHL	2000
224	Minnesota Wild	St. Paul	Ramsey County	NHL	2000
225	Dallas Mavericks/Stars	Dallas	Dallas County	NBA/NHL	2001
226	Oklahoma City Thunder	Oklahoma City	Oklahoma County	NBA	2002
227	San Antonio Spurs	San Antonio	Bexar County	NBA	2002
228	Houston Rockets	Houston	Harris County	NBA	2003
229	Phoenix Coyotes	Phoenix	Maricopa County	NHL	2003
330	Memphis Grizzlies	Memphis	Shelby County	NBA	2004

Table 4. List of observed arenas (n = 15) built between 1992 and 2004.

Obs.	Franchise	County	Facility	Opened
11	Phoenix Suns	Maricopa County	NBA	1992
22	Cleveland Cavaliers	Cuyahoga County	NBA	1994
33	Portland Trail Blazers	Multnomah County	NBA	1995
44	Boston Celtics/Bruins	Suffolk County	NBA/NHL	1995
55	Buffalo Sabres	Erie County	NHL	1996
66	Nashville Predators	Davidson County	NHL	1996
77	Tampa Bay Lightning	Hillsborough County	NHL	1996
88	Denver Nuggets/Col. Avalanche	Denver County	NBA/NHL	1999
99	Miami Heat	Miami-Dade County	NBA	2000
110	Minnesota Wild	Ramsey County	NHL	2000
111	Dallas Mavericks/Stars	Dallas County	NBA/NHL	2001
112	Oklahoma City Thunder	Oklahoma County	NBA	2002
113	Houston Rockets	Harris County	NBA	2003
114	Phoenix Coyotes	Maricopa County	NHL	2003
115	Memphis Grizzlies	Shelby County	NBA	2004

3.2.1.3 Arena-district micro-area “zone of influence”

One of the methodological challenges of evaluating the extent of influence that professional sport facilities have on urban development outcomes is determining what level of analysis should be used in analyzing the changes in land-use composition, total built volume, and property values (assessment values, market values, and property taxes). Chapin (1999) reveals in his three-case-study analysis of Cleveland’s Gateway District, Baltimore’s Camden Yards, and Arlington’s Ballpark District that it is a challenge to delineate areas in which impacts of a new professional sports facility are felt. Few public declarations of a city’s governmental bodies or official district boundaries (e.g., arts district, warehouse district, and so on, which may even have their own economic-development and planning board) are conducive to a sports venue’s “zone of

influence.” Cleveland’s Gateway District⁹ and Dallas’ Victory Park are cases in which official governmental district boundaries were established for a sports and entertainment district. Victory Park, for instance, was one of the first master-planned developments intentionally built around the American Airlines Center to create a mixed-use luxury and entertainment district.

Aside from the use of TIFs or CRAs, which have defined boundaries to capture a percentage of property tax revenues, official public declarations of district boundaries were ambiguous in the early 1990s. Chapin (1999) further notes that examining urban development outcomes at the neighborhood level can cause inconsistent results, since neighborhood boundaries are delineated along social and economic lines and are often not legally or administratively determined. There could also be development beyond that small area.

Due to the ambiguity of geographic boundaries for small areas such as neighborhoods or districts, few academic studies have examined the impact of professional sports facilities at a micro-level geographic area. Austrian and Rosentraub (2002) investigate employment changes in relation to Cleveland’s Gateway District at a geographic level that they characterized as a “micro-area.” The micro-area’s exact size and boundaries are not geographically defined, but rather refer to areas that are most impacted by activity generated by the professional sports facility. Furthermore, Chapin extends the definition of “micro-area” in his own study to be “the area surrounding the new project that is most impacted by crowds attending events at the facility and most impacted by the activity, both economic and social, generated by the [sports venue]” (Chapin, 1999, p. 126).

⁹ Cleveland’s Historic Gateway Corporation determined the boundaries of the Gateway District. The Gateway District was more of a venue operation authority while the Historic Gateway Corporation was more involved in the economic development of the particular area identified in downtown Cleveland.

The logic is that downtowns can be revitalized by combining sports venues with mixed-use developments in the form of hotels, residences, and retail businesses. As part of the arena-led development strategy, the presence of the arena stimulates the development of adjacent parcels. Furthermore, the way in which cities are financing venue construction is changing. Both cities and developers are capitalizing on transforming idle parking lots into revenue-producing properties (e.g., retail, residential, and office space) that are then capable of covering the costs of the new venue through a percentage of the parcel's property taxes. "It is the one-square mile effect, [in which] downtowns and midtowns possess an enormous amount of value in a relatively small geography" (Katz quoted by Schneider, 01/19/2018). Land values are capitalized by professional sports venues, suggesting that people are willing to pay more to be closer to the venue.

There is a growing body of research that examines the relationship between the presence of professional sports teams and facilities and nearby property values. Humphreys (2015) provides a valuable summary of the current literature (Tu, 2005; Dehring et al., 2007; Ahlfeldt & Maennig, 2009, 2010; Kavestos, 2012; Ahlfeldt & Kavestos, 2014) regarding the effects of a new sports facility on housing prices using data from before and after the opening of a facility. For example, Tu (2005) found a 13% increase in single-family housing values following the opening of FedEx Field (Washington DC). Additional factors, such as improved public infrastructure, may contribute to the price increases for residents living near the sports facility. FedEx Field is located in a low-income community in which there are limited financial resources. The state's financial support for stadium construction and public infrastructure improvements included \$70 million worth of physical upgrades, such as road improvements, that were needed by the community (Tu, 2005). Despite the NIMBY (not-in-my-backyard) concerns

related to the venue's presence, including traffic congestion, air and noise pollution, and loitering, overall results show that the closer housing properties are to a major league sports venue and its attractive amenity package, the more the property values increase. The impact of property values for parcels located more than two miles away is minimal (Tu, 2005).

Since the above studies focus exclusively on residential property values, the existing literature is still incomplete. The purpose of my research is to measure not simply housing property values but overall urban development outcomes, which will include commercial and exempt properties. The assessment of urban development outcomes must incorporate commercial properties (e.g., retail businesses, restaurants, hotels, and office space) in addition to accounting for the nuances of tax-abated and exempted properties. Propheter (2017) expands on the literature and estimates the impact of Brooklyn's Barclays Center¹⁰ on commercial rents. Using the net operating income (NOI) from assessment records from 2006 through 2015, he found that commercial rents are negatively related to the distance from the arena;¹¹ this suggests that businesses are willing to pay more in rent in order to be closer to the major league sports venue.

These studies measured the changes in residential property values and commercial rental values relative to the spatial distance from a major league sports venue. A standardized "zone of influence" or micro-area is needed to systematically assess overall urban development outcomes at the parcel level surrounding the major league sports venues across the 15 cities. One might

¹⁰ Barclays Center, developed by Forest City Ratner Companies, is part of a \$4.9 billion 22-acre urban complex called Atlantic Yards, now known as Pacific Park, which is touted to bring new residential units (30 % of which will be affordable housing units), commercial and retail space, and six acres of public space. The arena sits on top of one of the largest transit hubs in New York City (Plitt, 2016). Barclays Center was promoted by state and local policy makers as a project that would help revitalize the Atlantic Avenue-Flatbush Corridor into a business center.

¹¹ Propheter (2017) found that with every 1,000 feet of distance put between the commercial property and that of the Barclays Center, the NOI per square foot decreased by 3.7% (p. 2).

consider that an arena's "zone of influence" is consistent across all city cases given the capacity of the arena (normally 18,000 to 22,000 seats) and the arena's building footprint. Each arena district has a unique set of boundary conditions that are either determined by the natural environment (e.g., transportation corridors and open bodies water) or official local governmental boundaries (e.g., TIF districts and CRA zones). Issues in comparing arena districts that are different in size must be addressed. For example, the Historic Gateway District in Cleveland is approximately 28 acres in land area, whereas the Westgate Entertainment District in Glendale is approximately 233 acres. Indeed, it would be inaccurate to compare the total amount of new construction and other success measures without noting this important underlying characteristic.

The impact area used to measure urban development outcomes is characterized as the "zone of influence" or the "arena-district micro-area." For consistency, throughout the rest of this study, I will define the zone of influence as the arena district's micro-area. Based upon Chapin's case study analysis of Cleveland, Baltimore, and Arlington, I have resolved the boundary consistency issue by using a standardized definition of arena-district micro-area when comparing development changes across the 15 cities.

I considered several approaches when determining the optimal size of the arena-district micro-area. First, Baade and Dye (1988) determined that the important factors to be considered for the local-area development and that should be a part of arena-district micro-areas include transportation corridors, spread of parking, and the potential for increased development. Austrian and Rosentraub (1997) were the first to observe downtown sports development at the micro-level compared to the metropolitan area. They defined micro-areas as "the location as to where development occurs is as important to center cities as is the issue of whether or not development takes place" (1997, p. 553). Chapin (1999) expanded the idea of sports-led urban development at

the micro-area level by defining micro-areas as “arenas surrounding the new project that is most impacted by crowds attending event at the facility and most impacted by the activity, both economic and social, generated by the project” (1999, p. 126).

The variety of studies investigating the impact of major-league sport facilities on both residential and commercial property and rental values also defined distances in order to estimate the intensity of the spatial effect. For example, Tu (2005) used a 3-mile impact area around FedEx Field, Ahlfeldt and Maennig (2010) used a 1.5-mile radius to measure the impact of two sports complexes in downtown Berlin to improve neighborhood quality, Feng and Humphreys (2016) used an impact within a 1-mile radius in Columbus to measure willingness to pay and housing value changes, and Propheter (2017) used a 1-mile radius in Brooklyn to measure commercial properties and how rents are influenced by the distance from the Barclays Center. On average, these studies used a 1-mile radius to observe changes in property values.

To resolve the boundary consistency issue is to use a standard “zone of influence” for all cases. This study extends the concept of an arena-district micro-area by defining a specific radius for the micro-area to create a standard level of analysis for cross-city comparisons. Indeed, cities’ arena-district micro-areas will vary from the standard size allocated per this study based on local government boundaries or TIF districts. But for the purpose of this study, an arena-district micro-area is defined as a quarter-mile radius in which parcels were impacted by sports-anchored development. There are too few arenas in the mix that use an established boundary as part of a plan, declared government boundary, or listed in the local government’s policy objectives— thus not really worthwhile and will skew results. The key factor used to establish the quarter-mile radius was walkability—that is, how far one would be willing to walk to a luxury amenity, in this case a sport arena—as supported by research regarding pedestrians and park planning, retail

gravity models, and walking distance to public transit, among other factors. Per the field of transportation and public health, Yang and Diez-Roux (2012) found that the quarter-mile radius was often used as an acceptable walking distance across research studies¹². Although an individual's willingness to walk varies based on age, health, time availability, and the built environment (City Parks Blog, 2018), as part of public transport accessibility goals, the assumption is that walking distance to access public transport uses a quarter-mile or half-mile as distances in service planning (Daniels & Mulley, 2011). Furthermore, as local governmental units seek to produce typical guidelines for transit-oriented development, catchment areas for retail and service establishments were prescribed with walking distances of a quarter- to a half-mile, or a five- to eight-minute walk (Iacono, Krizek, El-Geneidy, 2008). New York Regional Plan Association study found that residents within a quarter-mile of a transit facility were five to seven times more likely to walk to a transit station than other passengers (Regional Plan Association, 1997). Willingness to walk further than this threshold, which would create a larger catchment area, has not yet been studied. There are certainly the same sets of issues in gravity models that part of a catchment area is not included in the model, yet it is used all the time (e.g., drive time of 30 minutes from a mall to determine the market, and so on).

In related work, a radius of a half-mile around each arena was tested but was found to be too large, largely because of the impact of city density on what is considered a reasonable distance to travel between two points, for example between one's residence and a transit hub or retail center. Aerial images of high-density cities, such as Brooklyn, determined that the substitutional effects of the urban development outcomes from a major sports venue would likely

¹² In determining the quarter-mile distance as an appropriate walking distance measure, it is important to note that it was not determined whether walking distances were altered based on the purpose of the trip and across different population groups (Yang & Diez-Roux, 2012).

not extend that far (although the quarter-mile radius also had challenges, such as the circular shape of the district not reflecting underlying conditions like barriers—natural or manmade—that impede development in given direction). Moreover, there are issues associated with the geography of census units and the fact that the radius approach often bisected census tracts, making data gathering more challenging (though there are some GIS-based (geographic information system) innovations available through MABLE/Geocorr2k from the Missouri Census Data Center that offers a solution to these kinds of problems) (Missouri Census Data Center, 2015).

With all factors considered, a quarter mile seemed the most appropriate radial dimension to define the arena-district micro-area. Such an area would comprise approximately 125 acres and would allow a suitable five-minute walking distance from the periphery to the center, a distance that could be used to remain consistent across all the cities. In some cases, another important boundary issue concerned the composition of the district. In three cases out of the 15 cities, an arena district also contains another large-scale public assembly facility, such as another sports venue (major league, college, minor league), a convention or congress center, or other retail or commercial centers. To capture the impacts of the two venues in the same vicinity, an additional quarter-mile radius was drawn around the second venue. In Cleveland's Gateway District, for instance, Progressive Field and Quicken Loans Arena are parcels that sit right next to each other, separated by a parking garage. Two quarter-mile radii were drawn around the two-centroid points of the venues, and the quarter-mile radii overlapped. The expansion of the arena-district micro-areas were used to measure whether an additional sports venue altered urban development outcomes. Utilizing GIS and conducting primary research at assessment offices, it was also a pragmatic choice to use the quarter-mile radius.

3.2.2 THE URBAN DEVELOPMENT OUTCOME MODEL¹³

Three measures are used to determine the success of arena-led urban development outcomes and whether arena-district micro-areas grow and develop at a faster rate than the city itself. The three main measures that are incorporated into this urban development outcome model include the compounding rate of change in (1) property values, (2) total built volume (new construction and renovation), and (3) diversity in land-use composition over a 25-year period. Subsequently, the sum of these three measures—adjusting property values (assessment and market values and property tax revenues) to 2015 dollars—is used to determine the compounding rate of change in development of outcomes between 1990 and 2015 relative to each city overall. This comprehensively captures a set of physical changes in sports districts and the overall success of arena-led urban development strategies.

Financial and land-use composition measures are discussed in detail, including their definitions, assumptions for predicting the overall urban development model, examples, and a list of data sources.

3.2.2.1 Success measure 1: Increased property values

An arena-led development is successful if it leads to increased arena-district micro-area property values. For cities, the promise of increased property values is a key objective of fiscally

¹³ There are several different ways to measure the success of urban development outcomes, and I specifically chose the three measures of success in the changes in property values, built volume, and land-use composition. These three variables are not by any means a comprehensive way to measure success in urban development outcomes, particularly in the urban planning discipline. Other factors that should be considered include the percentage of affordable housing units or below-market rate housing developments offered, racial diversity, fulfillment of terms agreed upon in community benefit agreements, to name a few. For this dissertation I focused on the three metrics above, however, in future urban planning research, other variables should be considered to provide a more comprehensive perspective on the relative success of arena-led development strategies.

oriented urban-planning strategies since these values are the basis for property tax assessments. Compounding rates of change in property values are assembled through the assessment data records for each district before and after the arena was built. Adjustments may need to be made for differences in assessment and valuation techniques across cities. For the purposes of comparison across the cities, a district with an increase in total valuation of \$200 million is more successful than a district with a \$50 million change in total valuation over the same time period. Of course, exceptions are considered for cities that have specific tax abatement and exemption policies.

Cleveland, for instance, assesses all properties, regardless of whether or not they are exempt. The inclusion of exempt properties' assessment values inflates the total assessment values generated in the city while keeping the property tax revenues low and realistic (again here you have to deal with the earnings tax issue and tie it to what is discussed in the case study) Additionally, the city of Cleveland also possesses tax abatement policies in which there is a temporary elimination of 100% of the increase in real estate property tax that results from improvements on eligible residential and commercial projects. During the length of the abatement, typically 15 years at 100% of the dollar amount, the property's assessment value is recorded as the property value prior to any improvements completed before the 15-year period lapses. Although the Cuyahoga County Appraiser's Office lists the full market and assessment value of the property, only the assessed value before improvements is used to determine the parcels' property tax payments. Assessment values for exempt properties in Houston and Dallas, on the other hand, are not provided at all. This subsequently demonstrates a lower total assessment value for the cities and may not be entirely accurate per the building inventory in the city.

3.2.2.1.1 Property values: Assessment information

Real property assessment is the process of establishing a dollar value for a particular property for property tax purposes. Property taxes help pay for local public services such as fire and police protection, parks and recreation facilities, water sewage and sanitation, and public schools and community colleges. To ensure that the tax burden placed on local residents is both accurate and distributed fairly across the jurisdiction, local governments assess city and county property values every one to three years, a process known as a mass appraisal.

Assessed value is evaluated by overall quality of the property. This includes comparable property values, square footage, home features (construction type, age, etc.), and market conditions. Additionally, assessed value is calculated differently depending on property usage—residential, industrial, commercial, agricultural, vacant land, and so on. While there are similar basic procedures for calculating assessed value, each tax district may conduct their calculations differently. For example, in some jurisdictions, assessed value is determined by the market value, and in other jurisdictions, the assessed value is calculated by multiplying the market value by a pre-determined assessment rate. Assessment rates between 1990 and 2015 are provided in Table 5. Moreover, these assessed values, typically lower than the appraisal’s market value, can range from 10% to 100% of a property’s fair-market value.

Assessment rates differ widely across states and from city to city, therefore creating challenges when comparing these values. Property assessment data is used to record the changes in land use and profitability of development, thereby observing how property taxes and development costs affect urban development. Fiscal instruments, such as assessment values and development costs, both change and impact the way in which land is developed (e.g., density) and the mix of land use. While the method for which assessment data is both collected and

calculated is variable by jurisdiction, it is important to note that within a jurisdiction, properties are assessed uniformly and consistently; the same application of policies and standards are used to determine real estate quality and desirability. Each parcel located in the defined study area of a particular city is assessed both uniformly and consistently. It is, however, much more difficult to compare the rate of change of assessment values across the 25 US cities in the study population. Since assessment data differs substantially by jurisdiction in how the data was collected and analyzed, finding any sort of useful or intelligible results summarizing and comparing percent change in assessment values across the different cities is a challenge. While a compounding rate of change for each of the three measures is feasible within a city, conducting such an analysis across jurisdictions can produce muddled results.

Table 5. City assessment ratios by land-use category, 1990–2015, (t = 15)

CITY	YEAR	LAND TYPE	ASSESSMENT RATIOS					
			1990	1995	2000	2005	2010	2015
PHOENIX	1992	COMMERCIAL				0.25	0.18	0.18
		RESIDENTIAL				0.10	0.10	0.10
		INDUSTRIAL				0.25	0.18	0.18
		AGRICULTURAL				0.16	0.15	0.15
		VACANT				0.16	0.15	0.15
		PARKING				0.25	0.18	0.18
CLEVELAND	1994	ALL PROPERTIES	0.35	0.35	0.35	0.35	0.35	0.35
PORTLAND	1995	ALL PROPERTIES	0.1	0.1	(+) 3% OF PRIOR YEAR	(+) 3% OF PRIOR YEAR	(+) 3% OF PRIOR YEAR	(+) 3% OF PRIOR YEAR
BOSTON	1995		-	-	-	-	-	-
BUFFALO	1996	ALL PROPERTIES	1	1	1	1	0.88	0.72
NASHVILLE	1996	COMMERCIAL	0.25	0.25	0.25	0.25	0.25	0.25
		RESIDENTIAL	0.4	0.4	0.4	0.4	0.4	0.4
		INDUSTRIAL	0.4	0.4	0.4	0.4	0.4	0.4
		UTILITY	0.55	0.55	0.55	0.55	0.55	0.55
		EXEMPT	0	0	0	0	0	0
TAMPA BAY	1996	ALL PROPERTIES	1	1	1	1	1	1
DENVER	1999	NON-RESIDENTIAL	0.29	0.29	0.29	0.29	0.29	0.29
		RESIDENTIAL	0.15	0.10	0.10	0.08	0.08	0.08
MIAMI	2000	ALL PROPERTIES	1	1	1	1	1	1
ST. PAUL	2000		-	-	-	-	-	-
DALLAS	2001	ALL PROPERTIES	1	1	1	1	1	1
OKLAHOMA CITY	2002	ALL PROPERTIES	0.11	0.11	0.11	0.11	0.11	0.11
HOUSTON	2003	ALL PROPERTIES	1	1	1	1	1	1
GLENDALE	2003	COMMERCIAL				0.25	0.18	0.18
		RESIDENTIAL				0.10	0.10	0.10

		INDUSTRIAL				0.25	0.18	0.18
		AGRICULTURAL				0.16	0.15	0.15
		VACANT				0.16	0.15	0.15
		PARKING				0.25	0.18	0.18
MEMPHIS	2004	COMMERCIAL	0.25	0.25	0.25	0.25	0.25	0.25
		RESIDENTIAL	0.4	0.4	0.4	0.4	0.4	0.4
		INDUSTRIAL	0.4	0.4	0.4	0.4	0.4	0.4
		UTILITY	0.55	0.55	0.55	0.55	0.55	0.55
		EXEMPT						

3.2.2.1.2 Property values: Appraisal methods

A property's assessed value largely depends on the city (or county, since in many places the assessments are done at the county level) assessment office's data-collection methods. There are three methods that assessment offices use to determine a property's value: the sales comparison approach, the cost approach, and the income capitalization approach. These three appraisal methods are used to estimate the value of a particular property at a specific point in time. Appraisal reports and property record cards are valuable to government agencies, investors, mortgage lenders, and businesses, not only by helping assess important real estate transaction decisions, but also by assisting in determining the growth management and urban development of a particular area.

The Sales Comparison Approach: The sales comparison approach, sometimes referred to as the market approach, estimates a property's value by comparing properties that have recently sold. These properties must be as similar to the subject property as possible in terms of property characteristics and available amenities, must have been sold in the last year, and must have been sold under comparable market conditions. However, since no two properties are exactly alike, adjustments are often made. Such adjustments may include the age and condition of the building, the date of the sale (e.g., the length of time between when the property was last appraised and the date of sale of comparable properties), location, physical features (lot size, construction, square footage, etc.), and terms and conditions of the sale (foreclosure, duress, etc.). The market value of a property will fall close in range based on the adjusted sales prices of the comparable properties.

The Cost Approach: The cost approach valuation method is typically used for properties that are either not sold often or are not income-producing properties. Such properties may include government buildings, hospitals, schools, and churches. The cost approach appraisal method estimates the value of properties that have been improved with the addition of one or more buildings. This method requires a separate estimated value for each of the buildings and that of the land, as well as depreciation. The cost approach valuation method is often used to estimate the value of land as if it were vacant and available for best and highest use; the cost of constructing new buildings or performing any site improvements; and the depreciation of the property due to deterioration or that of market conditions.

Based on the estimated construction costs and site improvements and accounting for depreciation, these estimated values are then summed to calculate the value of the entire improved property.

The Income Capitalization Approach: The income capitalization valuation method is used to estimate the value of income-producing properties that include apartment and condominium complexes, office buildings, shopping malls, etc. The valuation is based on the investors' required rate of return, or capitalization rate, and the property's net income. This valuation approach estimates the property's value in four ways: by estimating the property's gross income; by determining the losses in vacancy and rent to calculate the property's effective gross income; by calculating the annual net operating income; and by estimating the capitalization rate and applying the rate to the net operating income

3.2.2.1.3 Market value

Market value is defined as the price for which a property will bring in a competitive and open market transaction under all the conditions in which there is a fair sale and the buyer and owners are acting in each other's best interests. Simply put, it is the price that the buyer is willing to pay and the seller is willing to accept for a particular property.

3.2.2.1.4 Property taxes

Property taxes are an effective method for financing local public services and is the primary local tax that supplies the majority of local government revenue in 48 of the 50 states. The calculation of property tax revenue for a city and the property tax paid on a particular parcel begins with the city assessor's office, which calculates the total value of taxable property. In most cases, the taxable value of a property is the same as the property's assessed value. Some exceptions exist, such as in the city of Tampa, in which taxable property values are 15% of the parcel's assessment value. The tax rate for the year is then set at a level determined by the jurisdiction and multiplied by the taxable value, divided either by 100 or 1,000, depending on how the tax rate, or mill rate, is displayed. The calculation presented is the property tax owed on the property.

Table 6 provides the tax rates by land use for each city between 1990 and 2015. Tax rates vary based on land-use category. Commercial and industrial parcels typically have higher tax rates and therefore owe more taxes. Since local governments rely heavily on property tax revenues for the funding of public infrastructure improvements, schools, recreational services, and public services, land use plays a substantial role in the amount of property tax revenues generated and the overall urban development outcomes of a city. Parcels that are at their highest

and best use generate the highest levels of property taxes; therefore, it is an incentive of the city to ensure that all parcels are income-producing parcels rather than laying vacant.

Table 6. City Assessment Ratios by Land Use Category, 1990-2015 (t = 15)

CITY	1990	1995	2000	2005	2010	2015
PHOENIX	LPV: 9.4785 FCV: 4.0106	LPV: 13.1873 FCV: 5.3132	LPV: 11.4140 FCV: 5.7759	LPV: 9.6911 FCV: 4.5344	LPV: 7.9071 FCV: 4.1731	LPV: 12.3331 FCV: 5.9999
CLEVELAND	80.2 RESIDENTIAL CREDIT: 0.267388 COMMERCIAL CREDIT: 0.154158	80.40 RESIDENTIAL CREDIT: 0.361214 COMMERCIAL CREDIT: 0.208040	93.50 RESIDENTIAL CREDIT: 0.373593 COMMERCIAL CREDIT: 0.226175	102.60 920 REDUCTION RATE: 0.169755	102.7 920 REDUCTION RATE: 0.209934	119.73 920 REDUCTION RATE: 0.149309
PORTLAND	33.5048	31	20.95	19.89415	21.7815	23.6472
BOSTON	COMMERCIAL: 23.9 RESIDENTIAL: 8.45 INDUSTRIAL: 23.9 MIXED-USE: VALUE UNDER 2 MILLION: 80% COMMERCIAL & 20% RESIDENTIAL VALUE OVER 2 MILLION: 60% COMMERCIAL & 40% RESIDENTIAL	COMMERCIAL: 42.66 RESIDENTIAL: 13.86 INDUSTRIAL: 42.66 MIXED-USE: VALUE UNDER 2 MILLION: 80% COMMERCIAL & 20% RESIDENTIAL VALUE OVER 2 MILLION: 60% COMMERCIAL & 40% RESIDENTIAL	COMMERCIAL: 34.21 RESIDENTIAL: 13.15 INDUSTRIAL: 34.21 MIXED-USE: VALUE UNDER 2 MILLION: 80% COMMERCIAL & 20% RESIDENTIAL VALUE OVER 2 MILLION: 60% COMMERCIAL & 40% RESIDENTIAL	COMMERCIAL: 32.68 RESIDENTIAL: 10.73 INDUSTRIAL: 32.68	COMMERCIAL: 29.38 RESIDENTIAL: 11.88 INDUSTRIAL: 29.38	COMMERCIAL: 29.52 RESIDENTIAL: 12.11 INDUSTRIAL: 29.52
BUFFALO	TOTAL: 42.23 CITY TAX: 26.26 SCHOOL TAX: 15.97	TOTAL: 36.12 CITY TAX: 21.77 SCHOOL TAX: 14.35	TOTAL: 37.67089 CITY TAX: 19.869348 SCHOOL TAX: 17.801542	TOTAL: 37.40728 CITY TAX: 19.838094 SCHOOL TAX: 17.569182	TOTAL: 32.06205 CITY TAX: 16.442665 SCHOOL TAX: 15.619385	TOTAL: 26.99025 CITY TAX: 13.848783 SCHOOL TAX: 26.99025
NASHVILLE	TOTAL: 4.8 GSD: 3.48 USD: 1.12	TOTAL: 4.5 GSD: 3.38 USD: 1.12	TOTAL: 4.24 GSD: 3.29 USD: 0.95	TOTAL: 4.58 GSD: 3.84 USD: 0.74	TOTAL: 4.13 GSD: 3.56 USD: 0.57	TOTAL: 4.516 GSD: 3.924 USD: 0.592
TAMPA BAY	TOTAL: 26.5	TOTAL: 25.042 CITY: 6.54 COUNTY: 8.931	TOTAL: 23.855 CITY: 6.54 COUNTY: 8.454	TOTAL: 20.777 CITY: 5.733 COUNTY: 6.882	TOTAL: 20.37 CITY: 5.733 COUNTY: 6.784	TOTAL: 20.37 CITY: 5.733 COUNTY: 6.784

		SCHOOL: 9.071	SCHOOL: 8.361	SCHOOL: 7.692	SCHOOL: 7.353	SCHOOL: 7.353
DENVER	67.576	81.161	67.321	66.897 (2007)	66.591	78.127
MIAMI	31.7196	31.2275	27.884	25.9728	24.7081	22.7032
ST. PAUL	-	-	-	-	-	-
DALLAS	TOTAL: 2.11989	TOTAL: 2.628163	TOTAL: 2.720697	TOTAL: 2.98486	TOTAL: 2.658141	TOTAL: 2.7406
	CITY: 0.6297	CITY: 0.6722	CITY: 0.6675	CITY: 0.7417	CITY: 0.797	CITY: 0.797
	COUNTY: 0.39019	COUNTY: 0.47415	COUNTY: 0.505667	COUNTY: 0.5548	COUNTY: 0.62333	COUNTY: 0.66275
	SCHOOL: 1.1	SCHOOL: 1.481813	SCHOOL: 1.54753	SCHOOL: 1.68836	SCHOOL: 1.237811	SCHOOL: 1.282085
OKLAHOMA CITY	94.5	99.01	101.66	108.9	114.33	114.5
HOUSTON	2.215	2.733	2.904	2.988	2.65923	2.655164
GLENDALE	LPV: 8.6412	LPV: 9.4221	LPV: 8.3424	LPV: 7.7814	LPV: 5.6255	LPV: 8.5491
	FCV: 7.1579	FCV: 8.9663	FCV: 8.8652	FCV: 7.0801	FCV: 7.4576	FCV: 8.9011
MEMPHIS	2.88	3.16	3.54	4.04	4.02	4.37

3.2.2.1.5 Land value and building value

For appraisal purposes, land is defined as real property exclusive of improvements. Land surveys are used to determine land value. These surveys will determine the exact parameters and borders of the land plot and use items such as street frontage, topography, and the buildable land to determine the total land value. Furthermore, surveyors determine what the base cost is to improve a plot of land to a condition that can be built upon. Developable land parcels are typically assessed in two components. The first component is dependent on how the site conforms to a particular jurisdiction's zoning laws. The second is determining the amount of land that is in excess of the building site. Building value is based on the rentable square footage of a building. Building additions or attachments, such as garages or greenhouses, are not included in the assessed value of the building.

3.2.2.1.6 Improvement value

Improved value is defined as anything that is done to the land or building with the intention of improving its value. Such improvements can include, for example, additional buildings, fences, retaining walls, driveways, or pavements.

3.2.2.2 Success measure 2: Increase in total built area (square footage)

An arena-led district is successful if there is evidence of new construction (including renovations) over the study period. To test this criterion, I ask, What is the amount of new construction and renovation in the district? (this measure is net of the arena itself); and, How has the total volume of building changed between 1990 and 2010? This criterion is measured using the volume of new construction in square feet. The precise determination of "success" will be

assessed both in absolute terms and comparison terms. In absolute terms, the amount of new construction is measured relative to the full-build-out scenario for each district. For example, a district that is 50% fully built by 2010 is more successful than a district that is 25% built out. The percentage terms are used to normalize and control for differences in the size of districts, as appropriate. For other comparisons, there are measures of new construction in volume by square footage. For example, a district that has generated two million square feet of new construction is more successful than a district that has generated one million square feet.

3.2.2.2.1 Total built area

Total built area is a measurement of the rate of change in construction and renovation. While not all assessment cards, property characteristic records, and tax rolls differentiate between lot size (acreage) and the building size (square footage), there are instances in which this information is entirely eliminated. To calculate the compounding rate of change in total built volume, the ratio of new construction and renovation (e.g., the construction of a complete new structure or the addition to a pre-existing structure) for parcels located in the arena-district micro-area are calculated and compared to the construction and renovation ratio of the entire city. The purpose of this is to determine whether the entire city grew in total built volume or whether the construction and renovation trend is concentrated in the arena-district micro-area surrounding the professional sports facility.

3.2.2.3 Success measure 3: Achieving desired changes in land-use mix

An arena-led development is successful if it generates desired shifts in the land-use mix. Since many district sites are underutilized areas of cities, the baseline land-use mix in 1990 was typically characterized by having few buildings, few residents, high vacancy rates, and in some cases environmental contamination. As a result, we can expect that many districts will reveal a substantial change in the land-use mix. In absolute terms, “desired changes” can be measured only if there is a specific plan in place to serve as a reference. Absent such a plan, the comparison of land-use mix outcomes will be assessed relative to the full sample. For example, based on this analysis, it will be possible to discuss the snapshot of land-use mix in planned arena districts and the snapshot of the current land-use mix in the “average” district and thereby to chart which districts have more housing, which have more retail, and so forth.

3.2.2.3.1 Land-use composition

Land-use composition is reported in the city or county’s property characteristic records or annual tax rolls. Land-use mix is measured by the shift in property land use. My interest is in finding trends in the change in property land use concurrent with the rate of change in property assessment values. As cities and neighborhoods are pressured to grow and to spur more development, land-use composition tends to shift toward what is deemed as its highest (e.g., highest revenue-generating) and best use. For instance, as heavy industry and manufacturing factories became obsolete in downtown areas, zoning ordinances were changed to allow for different land uses, thereby providing more opportunities for the renovation of old warehouses into office buildings, residential condominiums, or even mixed-use properties.

The land-use composition counts, as displayed in the tables for each case study, are dependent on the number of parcels available for each land-use category. In determining land use by a parcel unit of analysis, one must be aware that a large infrastructure project may contain hundreds of individual parcels for one single building. For instance, the newer residential owner-occupied condominium buildings may have 300 parcels with the same property address. In such cases, each condominium is assessed individually. The reason for this is that condominiums are owner-occupied, which allows owners, with some restrictions, to make improvements to their living units. Based on the various improvements and additions made—square footage, number of bedrooms and bathrooms, location in the building, etc.—each condominium’s assessment value will vary. Moreover, there is the possibility of including commercial office space, ground floor retail and restaurant space, and even an underground parking garage in a building that might be primarily for residential use. Such a building is defined as mixed-use, but each retail space, office, etc., is given a separate parcel identification number. In such cases, if all the parcels have the same address, the multiple office parcels are counted as one unit of commercial land use. However, the final count of office parcels—a subcategory of commercial land use—is listed as the count of how many office parcels existed in the same building and had its own parcel identification number. The same is true for the multiple counts of retail and restaurant space allocated for one address.

Coupled with resolving the appropriate count for land-use categories by parcel-level data, mixed-use properties can be a bit of an anomaly. The city of Boston’s Assessing Office, for example, provides a designation “residential/commercial” or “commercial/residential” for mixed-use properties. These labels are dependent on which land use is the primary use of the property. For example, for the label “residential/commercial,” the first listed land use,

residential, is the primary use of the parcel. To be clear, mixed-use land use is the designation for each individual parcel. This should not be confused with the larger infrastructure developments that are mixed-use in nature but contain multiple parcels of different land uses. The mixed-use parcels therefore have a smaller overall land-use count compared to residential and commercial parcel counts.

3.3 ARENA-LED URBAN DEVELOPMENT OUTCOMES DATA SOURCES

3.3.1 PARCEL-LEVEL DATA

Parcel-level information was the first data element needed. I began the process of collecting cadastral (parcel) GIS files from individual city GIS, planning, or assessment websites. For cities that did not have these GIS shapefiles¹⁴ publicly available, I had two options. The first was to utilize the city assessor's online GIS tools that were often unable to capture the parcels located in a quarter-mile radius of the arena. In such instances, I had to manually select and individually identify each parcel. The second option was to take a screen capture of the parcel boundaries on the assessor's website, impose the screen capture into ArcMap, and again cross-reference with the assessor's website. Furthermore, parcel-level information embedded within the GIS shapefiles varied greatly city by city.

¹⁴ A shapefile is a format that can store geometric location and attribute information of geographic features (ESRI, 2018).

3.3.2 HISTORICAL PARCEL MAPS

Historical parcel maps were extremely valuable to have in order to track parcel subdivisions and consolidations across a 25-year period. Again, the accessibility to parcel maps from the 1990s was varied. Some cities contracted through REI (Real Estate Inventory) to create parcel map books and incorporate all assessment data onto microfilm, while other cities only maintained survey maps from the 1800s.

3.3.3 ASSESSMENT DATA

A measure of success is the summation of a city's property value, total built area, and land-use mix. Arena-led development outcome data is culled from a number of different city departments, including tax assessment and property appraisers, engineering, planning and economic development, land surveyors, city clerks and recorders, and city archives. Data used to compile the three measurements could largely be found listed on property assessment cards, annual tax rolls, or property deeds. All of the data collected for this research utilized primary records and resources and for the most part required visits to city offices to record data from the 1990s.

3.4 CALCULATING VARIATIONS IN URBAN DEVELOPMENT OUTCOMES

The key measure of the success in urban development for this study is the compounding rate of change in land-use composition, its linkage to the property assessment values between 1990 and 2015, and the ratio of the property assessment changes in the arena-district micro-area to that of the entire city. Each city case summary provides a line graph of the relative change in land-use composition for the arena-district micro-area. Additionally, graphs are presented for

compounding rates of change in property assessment values and property taxes between the arena-district micro-area and the city. Relative percentage differences between the arena district and city growth are also displayed. The aim of the study is to determine whether the arena-district micro-area had a compounding rate of change over the 25 years and in five-year increments between 1990 and 2015 that is higher than that of the city. If the compounding rate of change in the arena district is consistently higher than the city, then we know that the arena district, along with local governmental support, was successful in generating more arena-led urban development outcomes.

3.5 LIMITATIONS OF THE ARENA-LED URBAN DEVELOPMENT OUTCOME MODEL

While much of my data derive from primary sources accessed from city and county assessment, clerk and recording, and archives offices, there still remain limitations and flaws in what data are accessible and how the research is designed.

The standards for maintaining historical assessment data varies from state to state. Most cities are legally required to maintain the past seven years' assessment data on file, thus any information that is requested earlier than 2010 may not be directly accessible from the assessor's offices and must be located at the city and county recorders' or archives offices. Furthermore, city and county offices only began to digitize their information in 2005 or later. This means that there might be substantial variability in which assessment information prior to 2005 is organized and maintained. Some assessment and archives offices (e.g., Buffalo) house all historical assessment records in both paper format and microfiche in a distant warehouse. Other cities, such as Indianapolis, destroyed their assessment records prior to 2002 when the city consolidated from

nine townships to one county, believing that with the shift to a county level, the older records would be obsolete.

A second limitation has to do with the assessment data that I used to analyze the total value of development between 1990 and 2015. Assessing property is not an exact science, and valuation methods vary from city to city. Thus, using assessment data to analyze total change in development is inherently flawed. While transactional data may prove to be a better measurement of changes in property values, there is insufficient transactional data to capture when utilizing a small catchment area within a quarter mile radius.

Finally, to measure the change in total value of development between 1990 and 2015 within a particular jurisdiction, I plan to measure the order of magnitude of change in nominal numbers. However, to compare the change in development values across cities, these nominal numbers by city-to-city case must be transformed to constant data, or ratio of change, to compare “apples to apples.”

3.6 DATA COLLECTION PROCESS

The data collection process for this research study was organized in five phases. A summary of the steps in each phase is provided below in Table 7; this series of steps is reflected in the subsequent discussion. The data collection process marks Stage Two of this study’s research methodology.

Table 7. Stage Two: data collection process in mapping the urban development outcomes: Summary of data collection process, 2017.

Data Collection Phases	
Phase 1: Identify assessment sources and gather parcel identifiers using GIS.	Access GIS land use and parcel-level boundary shapefiles, also known as cadastral shapefiles. Research online data portals of local assessment, taxation, planning, and GIS-specific offices for required data. Identify availability (1990, 1995, 2000, 2005, 2010, and 2015) and accessibility of assessment and taxation data sources for each municipality.
Phase 2: Draw district boundary buffers using GIS.	Use a standard extent-of-influence measure for all districts (quarter-mile radius). Use the intersect and buffer tools in ArcGIS to select and extract all currently active parcels from most recent GIS files available (2015/2016). Compose data request letter requesting 1990, 1995, 2000, 2005, 2010, and 2015 parcel-level assessment and property characteristic information and send to 25 assessment offices via priority mail.
Phase 3: Conduct arena site visits and inventory microfilm assessment and taxation data.	Visit those cities for which the planning, assessment, and taxation offices were either unable to provide property assessment values and property cards for the five years requested or were unresponsive. The length of my stay in each city was determined by the number of parcels and years for which I needed to collect information from microfilm (e.g., 1990, 1995, 2000). Site visits to the arena and walking around the quarter-mile zone of influence provided another layer of validity-checking regarding correct land-use characterization and building composition.
Phase 4: Impute microfilm assessment data and index inactive parcels.	Impute assessment data from microfiche into excel spreadsheets. Index current active parcels to determine which parcels were consolidated/split/deactivated over the 20-year period. Trace “parent” parcels that were not present in each of the five-year intervals through legal descriptions, surveyor maps, deeds, clerical records, property sales information, verifying when particular parcels were split and/or consolidated.
Phase 5: Sum split and consolidated parcels; identify parcel repetitions to eliminate double counting.	Trace parent parcels from current active parcel list (2015) through the combination of legal description, surveyor maps, deeds, and sales information. For cases in which multiple inactive parent parcels made up the land area of a current active parcel, inactive parcels were summed. Cases in which current active parcels were split from larger land parcels suggest that more than one active parcel could have derived from the same parent parcel. In such cases, the current active parcels

	<p>are repetitions. Repeated parcels are eliminated from the dataset to avoid the double counting of land acreage and assessment values. Land acreage, building square footage, assessment values, market values, and property taxes are summed for each five-year interval to determine total amount of change in assessment value, built volume, and land acreage.</p> <p>Percentage total of land-use categories are tabulated for each five-year period, demonstrating change in built area and land use composition.</p>
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In the first three phases of this research, my goal was to create a record of urban development outcomes that was systematically and consistently measured across each of the 15 arena districts in the sample population.

3.6.1 DATA COLLECTION PROCESS

3.6.1.1 Phase 1: Gathering parcel identification numbers in zone of influence

In this first step of this research project, I surveyed city, county, and state websites for GIS open data portals and the earliest year for which assessment and property tax data were publicly made available online. Surveying assessor and planning department websites for open GIS data portals was imperative in accessing property parcel geographic boundaries and the linked property identifier.

3.6.1.2 Phase 2: Drawing GIS buffers to collate parcel identification numbers

In Phase 2, I used the GIS shapefiles acquired during Phase I to identify all parcels located in the arena-district micro-area (i.e., the quarter-mile radius). The shapefiles used are cadastral shapefiles that hold all 2015 parcel boundaries and parcel identification numbers by county. I then geocoded the addresses of the 25 arena facilities and then placed a point on the centroid of each arena facility. Next, I used the buffer tool in GIS to create a designated area

measured in units of distance around the centroid point or map feature. As explained earlier, this measured distance is a quarter-mile around the centroid. The quarter-mile buffer is simply a drawn boundary around the centroid of the arena. To extract and isolate the parcels desired from the overall parcel layer, I used the intersect tool to select the parcels featured within the quarter-mile buffer. The intersect output then became the new unit of observation for each city case study as it is its own layer of extracted information. These selected parcels each possess a parcel identification number. A parcel's identification number remains linked to the property, given that the property's geographic size or configuration is not altered. If a parcel is modified as a result of a split (a property parcel is split into two or more properties) or a consolidation (a multitude of properties are reconfigured into one large parcel), the original identification number becomes inactive, and new parcel identification numbers are distributed.

In cases where these shapefiles were not publicly available, I contacted individual GIS offices for access to these particular files. If there was an associated cost to the GIS files, I utilized the city- or county-maintained online interactive mapping platform¹⁵ to select the parcels that were located in the quarter-mile arena-district micro-area. Depending on the availability of advanced features on the interactive mapping platform—for example, the ability to select multiple parcels through a radius selection tool versus manually creating a boundary box and then selecting individual parcels one at a time—I compiled a complete list of parcels in a quarter-mile arena-district micro-area. The total number of parcels currently active in the zone of influence for each city varied substantially (see individual case summaries tables in Chapter 4 and Appendix A). Reasons for the variability in total number of parcels is attributed to parcel

¹⁵ Interactive mapping platforms vary from city to city. Some interactive mapping platforms are more user-friendly than others depending on the types of tools made available to the user. A tool as simple as the radius measurement tool to select a radius, highlight parcels in the radius, and extract to a csv file is not always available.

configuration or parcel size, density of the urban environment, and the number of splits or consolidations¹⁶ that may have occurred on several different occasions over the study period. Once I identified the total number of currently active parcels in each zone of influence, I mailed out data request letters to each of the 25 property assessment offices. The data request letters (see Appendix) included (1) a succinct summary of the purpose and goals of the research project; (2) a list of variables for six different time points (e.g., 1990, 1995, 2000, 2005, 2010, 2015), including but not limited to property assessment information (e.g., land value, building value, market value, and total assessed value) and property characteristic information (e.g., parcel number, property address, land-use code, year built, parcel acreage, building square footage, and legal description); and (3) a list of parcel identification numbers and addresses. I provided a curated list of parcel identification numbers rather than a general geographic area bounded by street blocks to ensure that the city and/or county assessment offices would be more willing to conduct search queries for historic parcel assessment values.

Of the 25-property assessment offices contacted, I obtained 2005, 2010, and 2015 assessment values from 19 cities without being charged a fee. That data, however, only included information for parcels specifically listed in the data request letters. The initial search queries and datasets provided by the assessing office did not consider splits and consolidations, therefore lot parcels that were listed in the 2015 worksheets were eliminated in 2005 and 2010. The reason for this is that at some point between 2005 and 2015, the property could have been listed as inactive due to a recent sale, parcel split, or parcel consolidation, and therefore the parcel identification number is inactive and will not show up on the assessor's internal database unless logs of splits and consolidations are carefully detailed.

¹⁶ Splits and consolidations can result from multiple changes in property sales and changes in ownership.

Three of the 25 cities—Anaheim, Los Angeles, and San Jose—were eliminated because of the high cost of obtaining the dated parcel information. Furthermore, it was not possible to travel to these city offices to track down inactive parcels on microfilm. Moreover, assessment data prior to 2005 in Minneapolis, Philadelphia, Raleigh, and Indianapolis were unobtainable from the property assessor, clerk (recorder), and archive offices, or on microfilm. Cities and counties have different data-retention standards and regulations. This means that data availability across cities and counties varies. For example, it is typical for most cities and counties to follow a five- to seven-year retention schedule. After seven years, the city is no longer legally required to retain these records. Some city and county offices will retain the outdated documents at an off-site storage location or turn them over to the county or state archives or local research libraries. In other cases, the documents are destroyed as the minimum retention time is complete. City and county offices only began digitizing their property records after 2005; therefore, documents earlier than 2005 are still in print format or microfilm. If the records were not already retained as microfilm, it is very likely that the records were destroyed because of limitations in local and state funding, available labor, or department priorities for eventual digitization of the records. Eleven of the cities I visited maintained 1990, 1995, and 2000 records on microfilm either in the assessor’s office or at an off-site archives department. Retention schedules for the cities in the sample population are available online, providing title and description for each government document, number of years required for retention, and the statute of retention.

3.6.1.3 Phase 3: Site visits

I traveled to 16 of the 25 cities in the study sample to collect the 1990, 1995, and 2000 assessment and property characteristic information from tax roll microfilm. I spent an average of four days in each city working in the assessment offices, scanning copies of the microfilm while

identifying which current 2015 parcels were missing from the microfilm files for 1990, 1995, and 2000. After each trip, I searched for the missing parcels' parent parcels in the city and county deeds and records.

Within those four days, I also conducted arena site visits. Site visits were intended to gather additional information that could be corroborated with findings from the other quantitative data collected. With respect to this study, the site visits were designed to strengthen the overall evaluation and quantitative components of the study, such as the changes in built area, land composition, and property values and their impact on urban development outcomes in arena districts. My intention for the site visits was to provide a development snapshot of the arena's presence within the arena district and community as a whole. During the site visits, I walked the city block grid within the quarter-mile radius and sometimes even an extension of the zone of influence, plotting on blank parcel maps whether the construction type per parcel coincided with the property and land use listed on the tax rolls. I also took notice of pedestrian and vehicle traffic, walkability, access to light rail or public transportation, density of restaurants, bars, and general retail. While certainly not a large component of the research study, I interviewed a few local government officials, property assessors, and economic development and planning officers about the impact the arenas had on their particular city's urban development initiatives. The discussions with local government employees¹⁷ provided context to the city's urban development motives,¹⁸ future land use planning, and the modifications to city tax policies. The triangulation

¹⁷ A large portion of the local government employees have lived and worked in their respective cities for more than a decade on average. Informal discussions provided an insider's perspective on the urban development changes in the area.

¹⁸ I had the opportunity to meet with the Tampa Bay City urban development manager, who manages four community redevelopment areas, including downtown and the Channelside District, where the Amalie Arena is located. I was given a walking tour of the downtown development areas and background on the city's engagement with public-private partnerships to further redevelop downtown Tampa Bay.

of the quantitative data, the site visits, and informal discussions with property assessors and planning department personnel assisted in presenting a more complete perspective of the urban development outcomes in each city's arena district

3.6.1.4 Phase 4: Indexing inactive parcels

Following each site visit, parcel assessment and market values and property characteristic information (situs address, ownership information, legal description, land acreage, building square footage, year built, property use, etc.) that derived from microfilm were manually inputted into Excel.¹⁹ I then assigned index numbers to the 2015 parcel dataset to determine which parcels were missing from the rest of the record. To reiterate, a missing parcel means that the parcel did not exist in the recorded year; this could mean that the 2015 parcel was part of a larger "parent" or original parcel.

Parent parcels were identified through the research of city and county archival records. City and county clerk's offices maintain a digital repository that retains documents such as deeds (warranty, grant, and quitclaim deeds), mortgages, municipal lien certificates, affidavits, and easements, in addition to plat and surveyor maps. I used property deeds and plat maps to trace the transfer of parent parcels. Deeds are legal documents in which the asset owner (the grantor) transfers ownership or title to another (the grantee). Within the contents of the deed, the legal description describes the property and parcel boundaries and is used for tax purposes to follow the transfer of land tracts. The assigned tax identification numbers are not appropriate points of

¹⁹ Due to the time intensity of manually inputting rows of property record and assessment value information in Excel, I explored the option of OCR (optical character recognition) software. Omnipage Pro PC is designed to repurpose information from PDF files or historical documents by converting text, graphics, and tables into editable word-processing and spreadsheet documents. However, due to the layout of the tax rolls and faded transparency of the documents, Omnipage Pro PC was unsuccessful in increasing efficiency in data imputation. Hence, I continued to manually input tax roll data into Excel.

reference to trace parent parcels since the identifier is not necessarily based on the legal definition of the plat. The legal description can appear as descriptions of lots and blocks, metes and bounds, or both. The meters and bounds descriptions are used to initially describe the boundaries of the property in a format that is most compatible with the work of public surveyors and engineers. The lot and block survey system identifies properties that are part of subdivisions and located in densely populated metropolitan and suburban areas. Subdivisions found on plat maps illustrate the blocks and lots that are assigned with numerical and alphabetical identifiers. It was not until cities began expanding that large tracts of farmland were sold off into smaller lots and a survey system was used to document the transfer of land using the lot and block system. In the creation of a subdivision map, blocks are rarely altered; however, lots can be consolidated or split based on the transfer of ownership or the selling off of lots. In order to trace the parent parcels, I consulted the lots and blocks listed in the deed's legal description with lots illustrated on the surveyor maps to identify whether they had been reconfigured by a split or consolidation. Changes in tax lot configuration are illustrated in Figure 1, in which the current active parcels (parcels outlined in blue) are overlaid on the Denver 2000 assessor map. Alterations to tax lots also subsequently means that their tax identification numbers²⁰ are altered as well. Figure 1 is simply one example of the maps that were consulted in the effort to detail parcel splits and consolidations and validate the changes in parcel legal description for each of the five years studied.

²⁰ As is customary for the other cities in the study population, parcel identification numbers include three important elements: the assessor's map number, the block number, and the parcel number. In the case of the city of Denver, the first five digits refer to the map number, the next two to three digits are assigned to the block number, and the remaining digits indicate the parcel number, which is composed of all the smaller lot numbers. In Figure 1, the numbers listed in the double circles designate block numbers, while the numbers in the single circles are parcel numbers. Numbers listed on the right side of each bounding box is the lot number. The line segments with the double arrows traversing across the multiple lots designate which lots comprise the active parcel.

Figure 1. An example of parcel splits and consolidation for the city of Denver, 2000-2010.



Source: City and County of Denver Assessment Office

3.6.1.5 Phase 5: Estimating land composition, assessed value, and property tax in arena districts

In each city’s dataset, parent parcels were identified for the inactive parcels indexed from the 2015 parcel population. Some inactive parcels have more than one parent parcel due to multiple splits and consolidations. The land square footage, building square footage, assessment values, and market values were summed to determine what would have constituted the 2015 tax parcel. The reason for the summation of the parent parcels and association under the 2015 tax identification number was to retain linkages with the current GIS parcel files for future mapping purposes.

Land mixture within the arena district was also determined by tracking changes in property use assigned by the city’s planning department. Statutory legal classifications are established for tax assessment purposes. Statutes include assessment ratios applicable to the legal

property use, which are used to determine the assessed value of the property that would then be subjected for ad valorem taxes.

Proponents for the use of professional sport facilities to spur downtown urban redevelopment claim that the mix of property use transitions from industrial and heavy manufacturing use to high density residential and commercial properties. As such, I created a record of property use between 1990 and 2015 to determine the percentage change in land-use mix. Percentage change in land-use mix is not only a visual measure of cities utilizing land for its highest and best use but also a measure that reveals trends in total assessment value for the arena district.

In creating the record of land-use mix in the arena district, I consolidated each city's specific land use codes²¹ into the major property categories: vacant land, residential, commercial, industrial, agricultural, mixed-use, parking, and exempt. Subcategories were prepared to determine the percentage of residential properties that were owner occupied (e.g., condominiums, single-family homes, and duplexes) and renter occupied (e.g., apartments) and the percentage of commercial properties that were office, hotel, retail (department store, grocery store, mini-mart, etc.), and restaurant. Commercial properties such as gas stations and auto repair shops that did not appropriately fit into commercial subcategories were instead included in the general commercial property count. Mixed-use properties are properties that have a combined land use of commercial and residential uses. This is often the case in which industrial warehouses are converted into mixed-use properties; bottom floors are typically reserved for retail or office space, while top floors are reserved for residential units. With respect to allocating

²¹ The property classification numeric code will vary city by city in terms of the code length. However, the first two digits will usually refer to the property's predominant use (e.g., commercial) while the last two digits more completely determine the specificity of the property's use (e.g., regional shopping center-enclosed mall).

assessment ratios for mixed-use properties, the cities in the sample population lack a pre-assigned assessment ratio. Instead, mixed-use property assessment values are determined by the ratio (in percentage) of a property's commercial and residential use. Percent allocation of the property use can be found in the property's deed. For instance, a property could be designated as 40% commercial and 60% residential. This means that 40% of the property's total market value is multiplied by the assessment ratio held by commercial properties while 60% of the total market value is multiplied by the residential assessment ratio. Exempt properties²² are properties that are exempt from paying ad valorem taxes. Parcels can qualify as exempt properties, yet their use corroborated with residential, commercial, mixed-use, parking, and vacant services. In these instances, the properties were counted as exempt properties in determining the percentage of land-use mix within the arena district area.

After redefining each parcel's property-use code to conform with the major categories defined for the research study, land-use composition from 1990 to 2015 was determined by calculating the total percentage of each property's uses by major category found within the arena district. The percentage of the land-use subcategories, specifically for commercial, residential, and exempt properties, was calculated by dividing the subcategory land use by the major land-use category rather than the total land-use composition within the arena district. Compounding rate of change for each land-use category was analyzed for each of the five time periods.

²² Some examples of exempt properties include government-owned properties, hospitals, charitable and religious institutions, and cemeteries.

3.7. SUMMARY

With the total percentage of land-use composition, the total values of assessment and market values, and the total values of property tax revenues for each five-year period for each city, the compounding rate of change can be calculated in five-year intervals and across the 25-year period to assess the total development trajectory of the arena district micro-area. Total city assessment values and property tax revenues were collected from the single-year Comprehensive Financial Annual Reports for each city. Compounding rates of changes between the arena-district micro-area and the city itself were graphed in order to determine whether the arena-district micro-area grew faster relative to the city. If the compounding rate changes are higher in the arena district, this suggests that new construction or renovations of property parcels transitioned from low-income-producing uses to high income-producing uses at a faster rate than that of the city. In that case, the arena-led development strategies, contingent on whether there were other policies in place, such as TIF financing, were successful in spurring new development. Parcel-level data analysis, simple descriptive statistics per city, and the urban-planning-focused case studies offer a balanced perspective of the success of arena-led urban development strategies for downtown revitalization.

CHAPTER 4. CASE SUMMARIES: SNAPSHOTS OF PHYSICAL CHANGES ACROSS EIGHT CITIES

4.1. INTRODUCTION

The purpose of Chapter 4 is to frame a city's early development trajectory and urban planning agenda and offers both a current and comprehensive overview of the urban composition in a quarter-mile of these professional sports facilities. The eight case summaries provided briefly outline the nuances of arena construction negotiations, the city's comprehensive plans; the integration of professional sport venues in a city's planning agenda, other notable major development projects built after the opening of the sport venues, and overall development findings that impact the arena-development success measures. Case summaries include descriptive statistics (total assessed value, land value, building value, improved value, tax rate, land composition, and acreage) for professional sports facilities, built between 1990 and 2015.

Within the data collection process across the three metrics for each of 15 districts, an effort was made to collect plans and construct detailed development histories. Each of those histories would constitute a paper itself. Rather than including all of those histories, eight are included in Chapter 4 to illustrate the rich depth compiled for each district that inform the conclusions.

However, the data tables for all of the cases not summarized are included in Appendix A. All of the data from the tables was used in answering the research questions that guided this study.

4.2. NASHVILLE: BRIDGESTONE ARENA

Table 8. Bridgestone Arena Rapid Notes

Arena Name	Bridgestone Arena
Owner	Sports Authority of Nashville and Davidson County
Year Opened	1996
Key Players/Organization	City of Nashville
TIF District	Capital Mall Redevelopment District
Total Cost of Venue (in 2018 \$)	\$237,120,000
Public Investment in Venue	\$237,120,000
Public Share of Total Venue Cost	100%

Source: Judith Grant Long, 2005

4.2.1 NEW ARENA NEGOTIATIONS

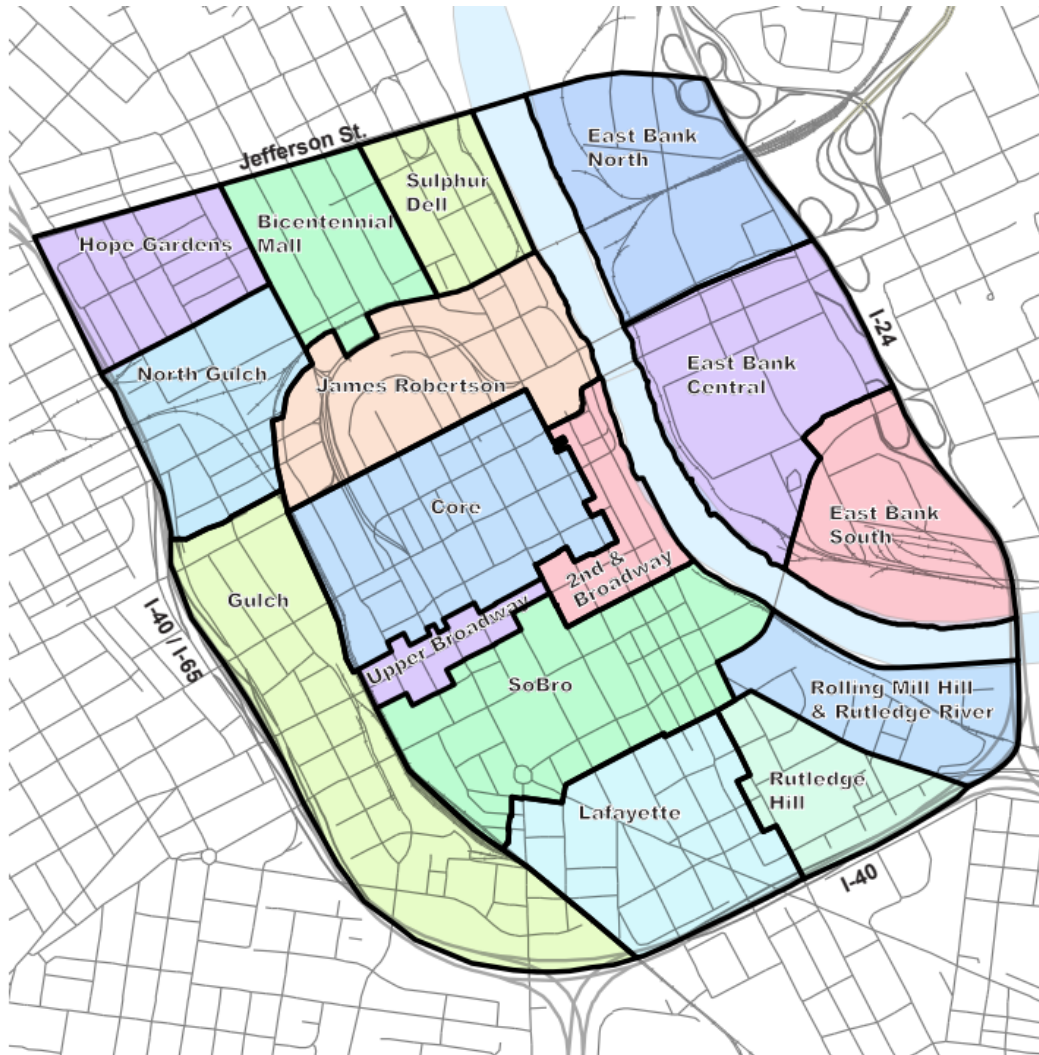
Bridgestone Arena, (formerly known as the Nashville Arena, the Gaylord Entertainment Center, and Sommet Center), was built as a catalyst for the redevelopment of Nashville’s downtown after the city’s loss of its core music business to nearby suburban Murfreesboro in the late 1980s and early 1990s. The city’s mayor, Phil Bredesen, who believed drastic measures were needed to ensure the success of the revitalization effort, envisioned an entertainment district that would include an arena, a stadium (Nissan Stadium), a symphony hall (Schermerhorn Symphony Center), and a country music hall of fame museum (Ammenheuser, 01/24/2016). These facilities, along with other collateral investments, were seen as essential for continued public support. Financed entirely through general obligation bonds, Bridgestone Arena, which opened in 1996, was the spark that ignited the downtown revitalization effort. It was constructed without having secured an anchor tenant; only in 1998 was Nashville granted an NHL expansion team.

4.2.2 SUBDISTRICT ANALYSIS

Downtown Nashville experienced a rise in public-private partnerships that played a fundamental role in Lower Broadway's revitalization. Since 2000, more than \$500 million has been invested in residential construction and an additional \$540 million for other developments (Nashville Downtown Code, 2010). Nashville's downtown development is concentrated in four neighborhoods: the Downtown Core, the Gulch, SoBro (South of Broadway), and Rolling Mill Hill. Even though the Gulch lies just beyond the boundaries identified for the purpose of this study, it is important to note that the Gulch neighborhood has experienced the most significant degree of change since 2005.²³ Much of SoBro had been occupied by warehouses, light-manufacturing industries, and surface parking lots that supported businesses north of Broadway. This research study's target area is the quarter-mile arena-district micro-area that has been established for the other case studies. The quarter-mile arena-district micro-area surrounding the Bridgestone Arena encompasses a large portion of Lower Broadway and SoBro. Lower Broadway is divided into multiple subdistricts. The subdistricts encompassed within the arena-district micro-area include the Downtown Core, James Robertson, Upper Broadway, Second Avenue and Broadway, and SoBro. Figure 2 illustrates the boundaries of the five subdistricts that are encompassed within the arena-district micro-area.

²³ The Gulch was composed of inactive rail lines that created underutilized properties and eventually separated the Gulch from the Downtown Core and the residential area located to the west.

Figure 2. NashvilleNext’s downtown community plan of Lower Broadway’s subdistricts



Source: Urban Design Associates, 2013.

The Downtown Core district is the epicenter of the central business district (CBD). A mixture of mid-rise and high-rise office buildings, parking structures, and surface parking lots consumes the area. With the increase in residential development came several new restaurants, art galleries, and two small grocery stores. Upper Broadway also encompasses the historic

district of downtown, which includes the Ryman Auditorium, Riverfront Park, and the new Cumberland River Greenway, a multi-use greenway that connects the surrounding neighborhoods and recreational areas.

The SoBro subdistrict, which has seen more overall development over the past 25 years than any other portion of the city, includes the Country Music Hall of Fame Park, the Bridgestone Arena, the Schermerhorn Symphony Center, and the new Music City Center Convention Center, the most notable building in the CBD, around which is a concentration of hotels. Although the Music City Center spurred the development of new restaurants, hotels, and residential structures, because of rising land costs, the area offers limited neighborhood retail options like local grocery stores, coffee shops, and affordable restaurants (Urban Design Associates, 2013). SoBro's strategic plan seeks to encourage mixed-use infill and the adaptive reuse of historic buildings (Urban Design Associates, 2013). The priority to connect SoBro to the Gulch neighborhood has spurred rapid development into the neighborhood that until recently had been dominated by railroad tracks and underutilized land parcels.

Second Avenue and Broadway forms the epicenter of what is now Nashville's entertainment district. Lower Broadway is bounded by Commerce Street to the north, Demonbreun Street to the south, Eighth Avenue to the west, and First Avenue and the Cumberland River to the east. In the 1980s and 1990s, Lower Broadway had completely deteriorated. Second Avenue, which stretches across three blocks, was populated with restored mixed-use Victorian warehouses used for storage and retail. Broadway connects four blocks and is the major artery through the center of downtown. Although Broadway is well-known for its small bars and country music venues, it was once referred to as Furniture Row and was characterized by such commercial stores as feed and grain shops and hardware stores. When the

Grand Ole Opry made the decision to relocate from the Ryman Auditorium to Opryland,²⁴ a newly built music theme park located outside of Nashville, Broadway devolved to an area ridden with crime and prostitution amid a collection of old country music record stores.

Nashville had long neglected Lower Broadway, and new legislation, amendments, and incentives were needed to encourage its revitalization. Only when historic preservationists initiated the first redevelopment efforts did the city become more involved in the redevelopment process (Sertell, 2005). Through the *Market and Design Study* for the Lower Broadway National Register District, the city recognized the area of Lower Broadway as an officially certified redevelopment district. With its National Register listing, the area's buildings became eligible for federal and historic tax credits (Metropolitan HP Zoning Overlay, 2007),²⁵ an incentive designed to help owners improve their properties. The Metropolitan Development and Housing Agency (MDHA) expanded and upgraded commercial and residential development and ensured that the needed infrastructure support was built. The MDHA also provided community development grants (CDGs) that provided loans to property owners for enhancing aging facades (Metropolitan HP Zoning Overlay, 2007). The *Lower Broadway Design Plan* provides specific architectural and urban-design guidelines for buildings to ensure that the storefronts are restored in such a way as to help revitalize the area, increase property values, and create a greater sense of community (Metropolitan HP Zoning Overlay, 2007).

²⁴ When downtown became notorious for crime and prostitutes, Nashville's Chamber of Commerce encouraged development in the city's suburbs. The combination of fans' reluctance to attend performances at the Ryman Auditorium, which was located in a dangerous neighborhood, and the costly renovations that the auditorium would require, ultimately forced the Gaylord Entertainment Corporation to relocate to Opryland.

²⁵ Through the Historic Tax Credit Program, the federal government offers 20% tax credit incentives to owners who rehabilitate their homes for income-producing purposes. The tax credit is applied to buildings certified by the National Register of Historic Places. For every dollar of tax credit received, income tax owed on the property is reduced by one dollar (Downtown Living Initiative, 2003, p. 16).

Although a portion of Second Avenue was listed in the National Register of Historic Places in the 1970s, no historical zoning existed in the Second Avenue area. Broadway, too, had limited zoning regulations (Johansson, 2010). However, during the redevelopment boom, Second Avenue lost much of its character when a number of buildings were demolished because of their status as “non-contributing” to the historic character of the area and to maximize return on rising property values. In an attempt to stabilize the area, preserve the area’s architecture, and retain the area’s original character, the mayor proposed a historic-zoning overlay to enforce demolition, rehabilitation, and redevelopment guidelines, despite the potential decline in property values that such regulations might imply.

In 1987, the Lower Broadway area was included in the Capital Mall Redevelopment District. Lower Broadway’s redevelopment projects benefitted from the inclusion in the Capital Mall Redevelopment District by leveraging the district’s tax increment financing, land assembly, and land control (Sertell, 2005). Redevelopment projects that received incentives from the district overlay included the convention center, an adjacent hotel, the \$320 million restoration of Ryman Auditorium, and the Music City Walk of Fame downtown park. The Rutledge Hill District covered the lower end of Broadway along the Cumberland River; in 1997, both sides of Broadway were included under the Capital Hill Redevelopment District.

4.2.3 MAJOR DEVELOPMENT PROJECTS

Table 9. Notable completed and proposed development projects in arena-district micro-area, 1990 to present

Development Name	Project Cost	Description
List of Lower Broadway Development Projects Completed in early 2000s		
Bridgestone Arena	\$237,120,000	<ul style="list-style-type: none"> An all-purpose arena that was built prior to an NHL expansion team as a catalyst for Nashville’s downtown redevelopment and reinventing Nashville’s image as Music City USA.
Schermerhorn Symphony Center	\$123,500,000	<ul style="list-style-type: none"> Construction on symphony hall began in 2003, and the hall opened in 2006. Symphony hall was built similarly to the arena to be an anchored development to encourage future retail and residential development throughout Lower Broadway.
List of Lower Broadway Development Projects Completed in mid 2000s		
Encore Condominiums	N/A	<ul style="list-style-type: none"> Encore Condominiums, located across the street from the Schermerhorn Symphony Center at the corner of Third Avenue and Demonbreun, broke ground in 2006. The building is a 20-story residential building with 333 condominium units and 18,000 square feet of retail and restaurant space on the ground level. Encore is one of three collaborations with Giarratana Development and Novare Group Holdings. Viridian Condominiums and the historic Bennie Dillion Building, which was converted into loft condominiums, were the other two residential projects.
Viridian Condominiums	N/A	<ul style="list-style-type: none"> Built in 2006, it is one of the first residential buildings in the area, with 305 condominium units. At the time the Viridian was completed, 85% of the building was sold. The developer, Giarratana, created the residential housing market in Nashville’s CBD when in the early 2000s, there were only 10 residential units for sale (Chamberlain, 06/21/2006).
The Pinnacle at Symphony Place	\$170,000,000	<ul style="list-style-type: none"> The Pinnacle is a 29-story office (520,000 square feet) and retail (23,000 square feet) building located adjacent to the Schermerhorn Symphony Center. Constructed began in 2007, and the project opened in 2010. The Pinnacle was one of the first office buildings constructed in Nashville in at least 15 years (Nashville Business Journal, 02/11/2010).
Music City Center	\$623,000,000	<ul style="list-style-type: none"> Developed by the Nashville’s Metropolitan Development and Housing Authority (MDHA), Music City Center is a convention complex that opened in 2013 and occupies over 2 million square feet.

Omni Hotel Nashville	\$270,000,000	<ul style="list-style-type: none"> • The Omni Hotel opened in 2010. • The Nashville Metropolitan Government provided \$103 million in tourist taxes to cover the hotel's construction costs over a 20-year period. • Additionally, \$25 million would come from TIFs and a partial abatement of 62% on the hotel's property taxes (Snyder, 12/14/2010).
List of Lower Broadway Development Projects Planned, 2015–18		
Ryman Auditorium Expansion	\$14,000,000	<ul style="list-style-type: none"> • The original Ryman Auditorium was first established as the Union Gospel Tabernacle in 1890. • The Grand Ole Opry was performed in the Ryman Auditorium until 1974, when the show moved to Opryland. Though the Ryman thwarted demolition, it did not host a performance for over 20 years. • The Ryman was revived in 1994, and in 2015, the theater was renovated and expanded to include retail space, a restaurant, and an area for a virtual tour.
Cambria Suites	\$50,000,000	<ul style="list-style-type: none"> • Opened in January of 2018, the Cambria Suites is a 190-story, 255-room hotel. • Located in the heart of SoBro, the hotel has a 2,800-square-foot music venue (True Music Room and Bar) that is located adjacent to the hotel lobby (Nashville Business Journal, 05/30/2018).
505 Church Street (the Cumberland Penthouse)	\$169,000,000	<ul style="list-style-type: none"> • Completed at the end of 2017, 505 Church Street is a 45-story, 543 mixed residential (condominium/apartment) development. The lower two-thirds of the building are apartments and short-term rental units (Sichko, 12/13/2017).
Bridgestone Americas HQ	\$200,000,000	<ul style="list-style-type: none"> • 30-story, 514,000-square-foot office tower that includes ground-level retail and more than 1,000 parking spaces. • Bridgestone Headquarters will be the fifth largest office tower in downtown and is the second-largest private employer in downtown Nashville (Sichko, 12/13/2017). • The building was completed in 2017.
The SoBro	\$90,000,000	<ul style="list-style-type: none"> • The building opened in late 2016 as a 32-story tower with 313 apartments.
The Diner Nashville	\$4,000,000	<ul style="list-style-type: none"> • Opened in 2017, Avenue Diner is a six-story 24-hour restaurant and bar
Embassy Suites/Hilton Curio Collection	\$160,000,000	<ul style="list-style-type: none"> • A proposed project for the Embassy Suites, a 506-room hotel and a 215-room Curio Hotel located across the street from Music City Center. • The development cost for the two-hotel project is more than \$160 million; land acquisition costs were \$20 million. The lot was formerly a 1.3-acre parking lot owned by First Baptist Church, which sold for \$353 per square foot, a record in SoBro (Sichko, 11/21/2016).
Tri-banded Marriott (SpringHill Suites, Residence Inn, AC Hotel)	\$137,000,000	<ul style="list-style-type: none"> • This hotel combines three hotel brand names within the building. • The hotel is 21-stories and has 470 rooms.

The Joseph Nashville	\$166,000,000	<ul style="list-style-type: none"> • Proposed 297-room, 21-story hotel that is currently under construction and due to be completed by 2020. • The developer, Pizzuti Co., bought the lot, located at the corner of Korean Veterans Boulevard and Fourth Avenue South, for \$7.25 million with the intent to build a hotel.
Holiday Inn & Suites	65,000,000	<ul style="list-style-type: none"> • 15-story, 230-room hotel that is currently under construction (Sichko, 06/15/2015). • Completion date for the hotel project is 2019.
One KVB	\$200,000,000	<ul style="list-style-type: none"> • Proposed 30-story, 475,000-square-foot office building with 20,000 square feet of retail and a 1,200-space parking garage on Korean Veterans Boulevard adjacent to Music City Center. • Close to \$10 million dollars were spent on land acquisition (Sichko, 01/24/2017). • The project is projected to be completed in 2019.
Nashville Yards	(+) \$1 billion	<ul style="list-style-type: none"> • Newly proposed mixed-use development replacing the Lifeway Christian Resources campus. The complex will cover more than 15 acres from Broadway to the west side of Church Street. • Within the Nashville Yards complex, AEG is planning to construct an entertainment district within itself, including a movie theater, bowling alley, concert venue, nightclub, and a boutique hotel. • Additionally, there will be an 18-story apartment building with 360 units; a 15-story, 470,000- square-foot office building; a 10-story, 225,000-square-foot office building; and potential residential towers (Snyder, 07/23/2018). • The 25-story Hyatt Regency will be the first building to be constructed as part of Nashville Yards and the third largest hotel in downtown Nashville, behind the Omni and the Renaissance Hotels.

4.2.4 DEVELOPMENT FINDINGS

The Ryman Auditorium and the Grand Ole Opry played influential roles not only in the transformation of country music but in Nashville's physical, economic, and cultural infrastructure. When the Grand Ole Opry departed for Opryland, Lower Broadway lost a key economic and social anchor. The loss of this iconic landmark and the activities associated with it promulgated blight and crime throughout Lower Broadway as businesses left.

Second Avenue was largely protected from urban renewal initiatives in the 1960s and 1970s.

Many of the historic Victorian homes were restored, and warehouses were left untouched.

Although most of Second Avenue remained intact, as development initiatives grew, a number of buildings were demolished to facilitate new construction. By impeding future demolitions, the historical overlay retarded reinvestments. The few investments that were made involved modest projects.

Development along Broadway had a different trajectory. While publicly financed redevelopment began in 1988 with the Nashville Convention Center, private-sector investment in Broadway and Second Avenue did not begin until the 1990s. The formation of the entertainment district began in 1993, when Gaylord Entertainment announced that the Ryman Auditorium would be renovated and reused (McCampbell, 1993). The Nashville Redevelopment Authority acquired land along Broadway across from the convention center, and the city partnered with the private sector to bring an expansion NHL team to Nashville. Both the arena and the convention center are located on Broadway, at the edge of the entertainment district, and are anchor developments that support the retail and restaurant activities along the entertainment corridor.

The transformation of the Broadway corridor from a blighted area to an entertainment center occurred in a relatively short time. Following the announcements of the arena and the convention center, the dilapidated structures along Broadway were renovated, and smaller retail and entertainment establishments were established. In addition to its local bars, music halls, and smaller retail shops, Lower Broadway commercialized its streetscape with venues such as Hard Rock Café and Planet Hollywood. With additional development, Demonbreun Street became “Music Mile,” and in 2013, the extension of the Korean Veterans Boulevard improved accessibility, connecting Lower Broadway to the Gulch (NashvilleNext, 2015). The renewal of Broadway as an entertainment district increased the economic activity along the street, creating a rent gap for properties located on Broadway and Second Avenue (Johansson, 2010).

Lower Broadway was redefined in the 1990s, when tourism and historic preservation initiatives established their presence in the area. In response to the infrastructure façade and public infrastructure improvements, downtown residential development increased. In 2003, a task force composed of the MDHA, the planning department, the Nashville Civic Design Center, and the Nashville Downtown Partnership published the *Nashville Downtown Living Initiative*, which evaluated the existing downtown housing market, assessed the demand for new residential housing, and reviewed local government incentives to encourage downtown residential development and attract more residents to the urban core (Nashville Downtown Living Initiative, 2003), which was burdened by limited housing stock. The *Downtown Living Initiative* was also designed to amplify the opportunities for new infill construction and the adaptive reuse of some of the older historic buildings within regulation of the historic-zoning overlay. The plan identified that within the 80-block area the early 2000s, 134 parcels were being used for surface parking lots in (Nashville Downtown Living Initiative, 2003, p. 8). This meant that

approximately 38 acres of land were underutilized within the urban core, demonstrating both the need and the opportunity to increase residential housing downtown. The target area identified by the *Downtown Living Initiative* extends beyond the Capital Mall Redevelopment District and the quarter-mile arena-district micro-area with which this study is concerned.

4.2.4.1 Land Use Composition

In the early 1990s, Lower Broadway, specifically the quarter-mile radius around the future Bridgestone Arena, was defined by commercial establishments, surface parking lots, and exempt properties. Exempt properties in Nashville expanded beyond institutional infrastructure, such as religious institutions and government buildings, to include exempt parking garages, office buildings, and vacant parcels. Table 11 provides a more specific breakdown of exempt-property uses by subcategory, as these reflect differences in the commercial subcategory count. Since some office buildings and parking garages have been designated as exempt properties, the percentage of parking in the arena-district micro-area may have a slight margin of error of between 1 and 2%. Table 10 provides a summary of the land-use composition in the arena-district micro-area between 1993 and 2013. Figure 2 also illustrates how property uses have changed over the last 25 years in response to the local government's redevelopment initiatives. As expected from Nashville's development history, residential properties were limited until 2005, when both the renter- and owner-occupied markets began to rise. From 1990 to 2005, only two small residential apartment properties were listed on the assessment records. In 2006, two large residential properties—Encore and the Veridian—were built in the arena-district micro-area. Residential properties had the largest compounding rate of change of 11.5% over the 25 years. Downtown has some of the highest occupancy rental rates in the Nashville region, with

occupancy in the SoBro neighborhood being 100% (Nashville Downtown Partnership, 2012). It is anticipated that additional renter-occupied buildings will be added by 2018.

On average, commercial properties account for approximately 36% of the arena-district micro-area's land-use composition. The commercial subcategories for office, retail, and restaurants have remained consistent over the last 25 years (refer to Table 10). Parking comprises 25% on average of the micro-area's land-use composition, making it the second largest land-use category. Exempt properties comprise 20% on average of the land-use composition in the arena-district micro-area.²⁶ The establishment of the Capital Mall Redevelopment District incentivized developers to invest in more projects downtown, which explains the increase in exempt parking garages and office buildings. Besides the decline in 2005, exempt properties remained fairly consistent across the remaining years. Industrial properties decreased from 2005 to 2013 as the warehouses were either renovated or demolished to vacate the land for new projects. Overall, the most significant changes in land-use composition occurred between 2005 and 2009, with a 500% increase in residential buildings and a 150% increase in hotel presence in Lower Broadway.

²⁶ In Nashville's case, exempt properties are composed parking structures, office buildings, and vacant properties that are simply non-revenue-generating property-tax parcels rather than government buildings, as illustrated in Table 3.

Figure 3. Percentage of land-use composition in the Nashville arena-district micro-area, 1990-2015.

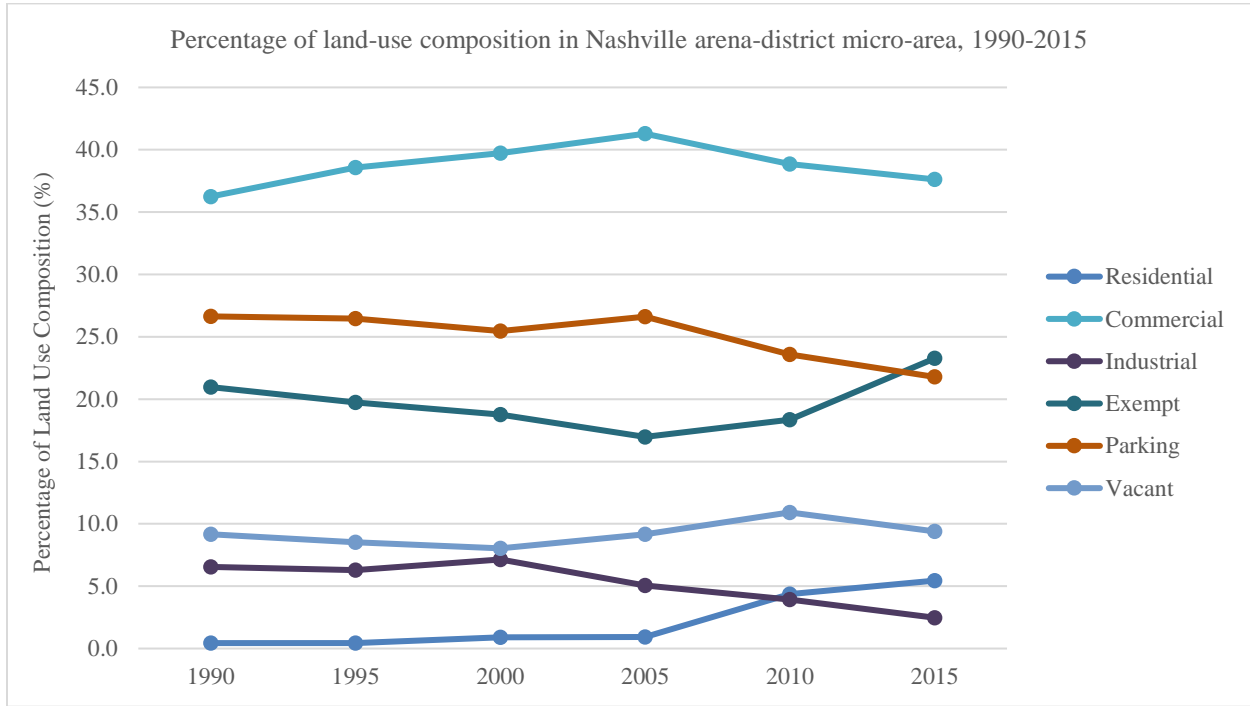


Table 10. City of Nashville arena-district micro-area land-use count, 1993-2013.

	1993		1997		2001		2005		2009		2013		1993-2013
	LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL	1	0.44	1	0.45	2	0.89	2	0.91	12	5.24	15	7.28	11.44
<i>RENTER- OCCUPIED</i>	<i>1</i>	<i>100.00</i>	<i>1</i>	<i>100.00</i>	<i>2</i>	<i>100.00</i>	<i>2</i>	<i>100.00</i>	<i>2</i>	<i>0.50</i>	<i>4</i>	<i>1.00</i>	<i>5.70</i>
<i>OWNER- OCCUPIED</i>	-	-	-	-	-	-	-	-	395	99.25	402	100.00	-
<i>TOTAL CONDOS</i>	-	-	-	-	-	-	-	-	390	-	390	-	-
COMMERCIAL	83	36.24	86	38.57	89	39.73	92	41.82	89	38.86	76	36.89	(0.35)
<i>OFFICE</i>	<i>15</i>	<i>18.07</i>	<i>14</i>	<i>16.28</i>	<i>14</i>	<i>15.73</i>	<i>14</i>	<i>15.22</i>	<i>15</i>	<i>17.58</i>	<i>16</i>	<i>20.51</i>	<i>0.26</i>
<i>RETAIL</i>	<i>25</i>	<i>30.12</i>	<i>26</i>	<i>30.23</i>	<i>25</i>	<i>28.09</i>	<i>27</i>	<i>29.35</i>	<i>22</i>	<i>24.18</i>	<i>22</i>	<i>28.21</i>	<i>(0.51)</i>
<i>RESTAURANT</i>	<i>33</i>	<i>39.76</i>	<i>33</i>	<i>38.37</i>	<i>33</i>	<i>37.08</i>	<i>33</i>	<i>35.87</i>	<i>33</i>	<i>36.26</i>	<i>33</i>	<i>41.03</i>	-
<i>HOTEL</i>	-	-	-	-	<i>1</i>	<i>1.12</i>	<i>2</i>	<i>2.17</i>	<i>3</i>	<i>3.30</i>	<i>5</i>	<i>6.41</i>	-
INDUSTRIAL	15	6.55	14	6.28	16	7.14	11	5.00	9	3.93	5	2.43	(4.30)
EXEMPT	48	20.96	44	19.73	42	18.75	37	16.82	42	18.34	47	22.82	(0.08)
PARKING	61	26.64	59	26.46	57	25.45	58	26.36	54	23.58	44	21.36	(1.30)
VACANT	21	9.17	19	8.52	18	8.04	20	9.09	25	10.92	19	9.22	(0.40)
MIXED-USE	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	229	100.00	223	0.16	224	100.00	218	100.00	229	100.00	206	100.00	(0.42)

Table 11. Exempt sub-category property parcel land-use composition and built volume, 1993-2013.

	1993		1997		2001		2005		2009		2013		1993-2013
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
EXEMPT PARCEL LAND USE COMPOSITION													
EXEMPT	48	20.96	44	19.73	42	18.75	37	16.97	42	18.34	47	22.82	(0.08)
OFFICE	4	8.33	4	9.09	4	9.52	4	10.81	4	9.52	4	8.51	-
RETAIL	-	-	-	-	1	2.38	-	-	-	-	-	-	-
HOTEL	-	-	-	-	-	-	-	-	-	-	1	2.13	-
VACANT	10	20.83	9	20.45	8	19.05	6	16.22	5	11.90	8	17.02	(0.89)
PARKING	8	16.67	8	18.18	8	19.05	7	18.92	9	21.43	8	17.02	-
EXEMPT PARCEL BUILT VOLUME													
EXEMPT	531,849	9.22	471,570	8.88	508,554	9.69	613,031	8.52	703,705	9.26	1,901,221	19.30	5.23
OFFICE	69,111	12.99	69,111	14.66	69,111	13.59	69,111	11.27	69,111	9.82	69,111	3.64	-
RETAIL	-	-	-	-	-	-	-	-	4,918	0.01	-	-	-
HOTEL	-	-	-	-	-	-	-	-	-	-	1,037,552	54.57	-
VACANT	-	-	-	-	-	-	-	-	-	-	-	-	-
PARKING	-	-	-	-	-	-	-	-	-	-	-	-	-

4.2.4.2 Built Volume

Since 1993, the arena-district micro-area had a compounding rate of change in built volume of 2%, with the total built volume increasing by 3.7 million square feet. Although residential and hotel land uses made up a minor portion of the total percentage in the micro-area's land-use composition, both categories had the greatest compounding rates of change in built volume. Table 12 provides a summary of changes in built volume by land-use composition. Since 2000, downtown had over \$500 million in capital investments dedicated to residential construction. Between 2005 and 2013, there was a 4% increase in building square footage in residential development, beginning with the opening of the Encore and Viridian complexes. Hotel development increased in built volume by 30%, including the single hotel property, the Omni Nashville Hotel, which was listed as an exempt property in 2013 (prior to 2001, the arena district did not have a single hotel property). Between 1993 and 2015, the built volume in exempt properties had a compounding rate of change of 5%, largely a result of the inclusion of four office buildings and the Omni Nashville Hotel. Eight parking structures were also exempt, although built-volume information for these structures was not available. The increase in residential and hotel development in the mid-2000s marked the arena-district micro-area and Lower Broadway's transition to a viable entertainment district.

Table 12. City of Nashville arena-district micro-area built volume count, 1993-2013.

	1993		1997		2001		2005		2010		2013		1993-2015
	BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL	128,471	2.23	128,471	2.42	128,471	2.45	533,822	7.42	697,146	8.37	1,376,455	13.97	9.95
RENTER- OCCUPIED	128,471	100	128,471	100.00	128,471	100.00	128,471	24.07	335,039	48.06	838,298	60.90	7.79
OWNER- OCCUPIED	-	-	-	-	-	-	405,351	75.93	362,107	51.94	538,157	39.10	-
TOTAL CONDOS	-	-	-	-	-	-	-	-	-	-	-	-	-
COMMERCIAL	3,721,323	64.55	3,335,286	62.80	3,646,964	69.50	4,646,982	64.66	5,648,845	67.78	5,256,143	53.35	1.39
OFFICE	1,393,285	37.44	1,390,697	41.70	1,378,079	37.79	1,378,079	29.59	1,327,257	26.99	1,963,535	37.36	1.38
RETAIL	252,930	6.80	257,930	7.73	234,493	6.43	222,870	4.78	259,078	5.27	214,131	4.07	(0.66)
RESTAURANT	370,522	9.96	366,652	10.99	338,443	9.28	342,313	7.35	347,359	7.06	364,622	6.94	(0.06)
HOTEL	-	-	-	-	304,105	8.34	799,822	17.17	1,202,949	21.30	1,426,807	27.15	-
INDUSTRIAL	514,612	8.93	505,777	9.52	94,125	1.79	529,770	7.37	480,895	5.77	449,048	4.56	(0.54)
EXEMPT	531,849	9.22	471,570	8.88	508,554	9.69	613,031	8.52	703,705	7.65	1,901,221	19.30	5.23
PARKING	869,172	15.08	869,172	16.37	869,172	16.56	869,172	12.08	869,172	10.43	869,172	8.82	-
VACANT	-	-	-	-	-	-	-	-	-	-	-	-	-
MIXED-USE	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	5,765,427	100.00	5,311,036	100.00	5,247,286	100.00	7,192,777	100.00	7,603,433	100.00	9,852,039	100.00	2.17

4.2.4.3 Assessment Values

Nashville assesses city and county properties every four years; as a result, the assessment years had to be slightly adjusted (1993–2013). To measure the impact of the presence of a major league sports facility on downtown redevelopment, this case summary focuses on urban development outcomes in years prior to the opening of a professional sports venue and then 10 to 15 years after the arena's opening. In an in-depth analysis of changes in property values and property use in Lower Broadway between 1975 and 1995, Sertell (2005) found that while the average property values were not drastically different between Lower Broadway and the rest of Nashville, the rate at which the property values shifted in Lower Broadway relative to the city indicates positive changes.²⁷

The assessed values are determined by multiplying the property's market value by the assessment ratio. Property class determines the assessment ratio. The assessed value for residential properties is 25% of the market value, while the assessed value for commercial and industrial properties is 40% of the market value. The total assessed value for the arena-district micro-area has a compounding rate of change of 9%, compared to Nashville's 2%. Figure 4 illustrates the compounding rate of change in assessment values within the arena-district's micro-area compared to the city of Nashville as a whole.

The greatest compounding rate of change for the arena-district micro-area occurred between 1993 and 1997 (28%), during which the market value of approximately \$965,000

²⁷ Sertell (2005) used Nashville city directories to document the shift in property values in Lower Broadway between 1975 and 1997. In the 1970s and 1980s, Lower Broadway was ridden with blight. Pawnshops, adult venues, and prostitution were prevalent throughout this area of downtown. In light of this, Sertell's conclusion that between 1975 and 1984, the rest of Nashville's property values increased almost 150 times that of the Lower Broadway makes sense. Between 1993 and 1997, Lower Broadways properties increased by 195% compared to Nashville's 36 percent (Sertell, 2005).

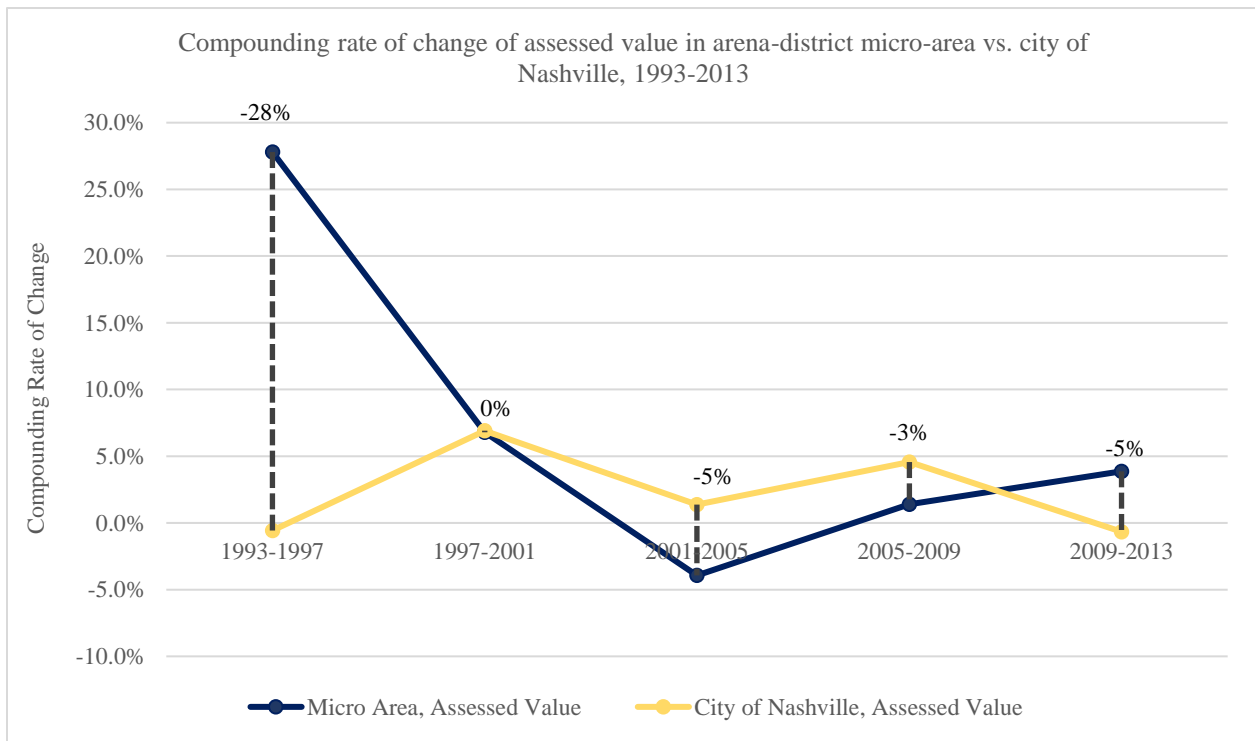
increased to \$16.3 million. In the years following, land value increased to \$19.7 million in 2001, \$9.7 million in 2005, and \$22 million in 2013. Other notable properties that contributed to the 28% compounding rate of change in assessment values between 1993 and 1997 include the Capital Mall Redevelopment commercial parcel, which increased from \$11.5 million in 1993 to \$105 million in 1997; Lot One at Nashville Place, the site of the Nashville Visitor's Center, which increased from a market value of \$28.4 million in 1993 to \$36.3 million in 2013; the AT&T office building, which increased from a market value of \$2.7 million in 1993 to \$5 million in 1997; and the former lot of the Music City Center Convention Center, which increased from a market value of \$2.2 million in 1993 to \$8.7 million in 1997. The assessed values of the micro-area had a compounding rate of change of 6.8%, which was similar to Nashville's compounding growth rate of change of 6.9%. In 2009, the Encore condominium complex opened, with a total market value of \$30.6 million; the Viridian Condominiums had a market value of approximately \$14 million. The Hilton Nashville Downtown had a market value of \$50 million in 2001 and increased to \$60.5 million by 2013. These new residential and hotel developments created a compounding growth rate of 5% for the micro area and a slow recovery process from the decrease in assessed values between 2001 and 2005.²⁸

Overall, the assessment compounding growth rates between the arena-district micro-area and that of Nashville do not vary considerably. It is clear that assessment values increased substantially between 1993 and 1997, when the city initiated a plan to redevelop Lower Broadway through larger public infrastructure projects. As land property values increased dramatically, land was speculated, and in anticipation of the implementation of the historic-

²⁸ One reason for the decrease during the 2001-2005 period is explained by the \$10 million loss in Bridgestone Arena's assessed value.

zoning overlays, historic buildings were demolished in order to capture the highest and best use of the land parcels. Between 2001 and 2009, assessment values of Lower Broadway grew at more or less the same rate as the rest of the city. Between 2009 and 2013, assessment values grew faster again with the construction of new residential and hotel developments. Lower Broadway, SoBro, and the Gulch were the fastest growing areas of downtown compared to the rest of the city. The growth in residential properties provided more opportunities to attract a localized resident population, which could then support the commercial businesses.

Figure 4. Compounding rate of change in assessed value in arena-district micro-area vs. city of Nashville, 1993-2013.



4.2.4.4 Property Taxes

In 1962, Nashville residents voted to create the first fully unified local government by consolidating the city and county government. The total city assessment, market, and property

tax values, listed in Table 15, are for the consolidated city and county government. By consolidating city and county government, no county tax rate was added to the city tax rate. Instead, the metropolitan government instituted a two-tiered system that distributes the tax burden and applies government services equally to both urban and rural parts of the county, including the Urban Services District (USD) and the General Services District (GSD), listed in Table 13. Properties in the USD pay a slightly higher tax than those in the GSD in order to pay for city services not undertaken in rural areas (Nashville.gov, 2018). Adopted in the 1960s, this tax system has not been able to match the city’s and the county’s rapid growth and urbanization.

Table 13. USD and GSD tax rates for Nashville and Davidson County, 1992-2015.

TAX RATES	TOTAL GSD RATE	TOTAL USD RATE	TOTAL
1992-1993	3.48	1.33	4.81
1996-1997	3.38	1.12	4.50
1999-2000	3.29	0.95	4.24
2004-2005	3.84	0.74	4.58
2008-2009	4.04	0.65	4.69
2009-2010	3.56	0.57	4.13
2012-2013	4.04	0.62	4.66
2014-2015	3.92	0.59	4.52

Source: Metropolitan Nashville and Davidson County Property Assessor

Property tax revenues are a reflection of the arena district’s assessment value. Property values increased in response to the announcements of the city’s redevelopment initiatives and the proposed construction of additional amenities. Since 2000, the population of downtown Nashville has grown over 209%, compared to population growth of 12 % for greater Nashville and 13% for the Nashville metropolitan statistical area (MSA; Nashville Downtown Partnership, 2012). Land speculation may have contributed to increases in property values between 1993 and 1997 (Figure 5). Following the early redevelopment initiatives and announcements and the first

rollout of public infrastructure projects, the arena-district micro-area's property tax values have compounding growth rates that are consistent with that of the metropolitan government of Nashville and Davidson County.

Throughout Lower Broadway, residential development has been in high demand. The 27 rental properties and 40-condominium properties make up 40% and 49% of the downtown housing mix, respectively (Nashville Downtown Partnership, 2012). Table 14 provides a snapshot of the price per square foot for condominiums within Lower Broadway. The prices per square foot of the Viridian and the Encore, the first residential complexes to be constructed in the micro-area (2006), are consistent with the ICON and Terrazzo condominium projects, located in the Gulch. The similar price-per-square-foot yields for these residential complexes reveals that the demand for residential development, both rental and owner-occupied units, was high in the central business district and in the neighboring districts in Nashville. Overall, while the assessment and property tax values spiked between 1993 and 1997, the compounding rate of change in assessment and property tax values evened out when residential, hotel, and office development began occurring in 2006.

Table 14. High-rise condominium price per square foot in downtown Nashville, 2008-2015.

Condominium	2008	2009	2010	2011	2012	2013	2014	2015
PPSF By Building								
Viridian (*)	\$317	\$275	\$258	\$262	\$287	\$306	360/\$398*	\$379
Encore (*)	\$319	\$243	\$256	\$242	\$294	\$361	\$381	\$396
ICON		\$303	\$305	\$280	\$358	\$383	\$409	\$452
Terrazzo		\$341	\$259	\$272	\$294	\$329	\$375	\$485
Average	\$319	\$295	\$294	\$274	\$325	\$361	\$395	\$420

Source: Nashville Downtown Partnership, Residential Report, July 2016

Figure 5. Compounding rate of change in property tax values in arena-district micro-area vs. city of Nashville, 1993-2013.

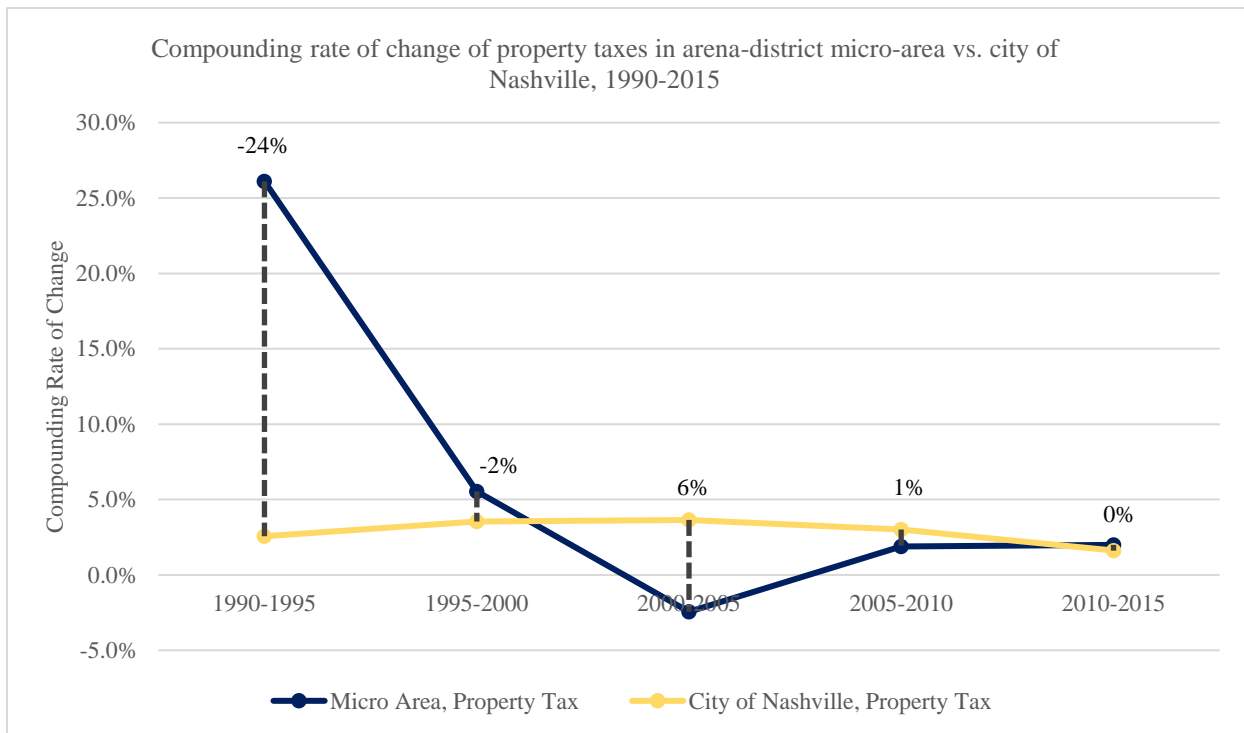


Table 15. Assessment, market, and property values in arena-district micro-area vs. city of Nashville, 1990-2015.

	1990	1995	2000	2005	2010	2015	1990-2015
BRIDGESTONE ARENA DISTRICT MICRO AREA							
LAND AREA (sf)	3,774,474	3,891,650	4,231,854	4,440,071	4,673,117	4,760,237	0.93
BUILT AREA/VOLUME (sf)	6,266,463	5,867,723	5,762,849	7,258,903	7,108,920	9,678,577	1.75
TOTAL ASSESSED VALUE	32,222,400	118,806,205	185,747,691	168,248,791	199,180,692	261,286,699	8.73
TOTAL ASSESSED VALUE (2015 \$)	53,033,232	180,811,062	251,261,053	205,573,131	220,396,803	266,606,344	6.67
ASSESSED LAND VALUE ASSESSED BUILDING + IMPROVEMENTS							
TOTAL MARKET VALUE	122,896,900	313,377,300	513,834,850	510,231,120	695,395,050	928,146,140	8.42
TOTAL MARKET VALUE (2015 \$)	202,269,845	476,928,646	695,064,820	623,420,878	769,466,379	947,042,655	6.37
TOTAL MARKET LAND VALUE	66,354,310	140,427,700	187,412,950	200,730,920	297,186,600	380,481,940	7.24
TOTAL MARKET BUILDING VALUE + IMPROVEMENTS	56,559,600	172,890,100	326,421,700	309,538,000	398,756,550	547,664,200	9.51
TOTAL TAX	1,549,897	5,346,279	7,875,702	7,705,795	9,341,574	11,178,518	8.22
TOTAL TAX (2015 \$)	2,550,898	8,136,498	10,653,469	9,415,249	10,336,610	11,406,106	6.17
CITY OF NASHVILLE							
TOTAL ASSESSED VALUE	23,350,052,307	24,554,554,540	38,576,009,345	45,746,447,359	63,157,226,914	66,270,673,259	4.26
TOTAL ASSESSED VALUE (2015 \$)	38,430,680,282	37,369,555,650	52,181,799,277	55,894,846,938	69,884,539,272	67,619,905,607	2.29
TOTAL MARKET VALUE	23,350,052,307	24,554,554,540	38,576,009,345	45,746,447,359	63,157,226,914	66,270,673,259	4.26
TOTAL MARKET VALUE (2015 \$)	38,430,680,282	37,369,555,650	52,181,799,277	55,894,846,938	69,884,539,272	67,619,905,607	2.29
TOTAL TAX	267,695,725	328,753,949	440,283,351	582,992,853	746,887,650	877,718,182	4.86
TOTAL TAX (2015 \$)	440,586,971	500,330,355	595,571,648	712,324,086	826,443,811	895,588,013	2.88

4.2.5 KEY FINDINGS

The analysis of the land-use composition, assessment values, and property tax values for the arena-district micro-area compared to Nashville's consolidated city and county government reveals that the arena was the catalyst for the redevelopment of Lower Broadway. Lower Broadway was intended to be an entertainment district, using the arena to leverage the success and activity downtown with new retail, restaurants, and night clubs, among other venues. Office buildings had already existed downtown, but residential and hotel establishments were absent from the urban fabric. Residential development began in the arena-district micro-area only in 2006. Since 2000, the downtown population has increased by over 200%, and only recently have developers have been unable to keep up with residential demand.

The arena-district micro-area is a success in demonstrating arena-led urban development strategies for urban downtown revitalization. Although the land-use composition was not altered tremendously—the area had already been dominated by commercial properties such as retail and restaurants—beginning in 2005, more residential and hotel infrastructure were added to the assessment rolls. The level of new construction, land speculation, and increases in property values with the announcement of the arena reflect the value of the venue to the rehabilitation of the image of Lower Broadway. Furthermore, from 2005–13, the arena district has had a compounding growth rate change in assessment values and property taxes with that was consistent with the consolidation of the government, which was growing tremendously as well.

4.3.1 BOSTON: TD GARDEN

Table 16. TD Garden Rapid Notes

Arena Name	TD Garden (formerly Fleet Center)
Owner	Boston Garden Development Corporation (BCDG)
Year Opened	1995
Key Players/Organization	Boston Redevelopment Authority; Downtown North Association; Boston Garden Development Corporation
TIF District	NULL
Total Cost of Venue	\$274,740,000
Public Investment in Venue	\$189,570,600
Public Share of Total Venue Cost	69%

Source: Judith Grant Long, 2005

The development of TD Garden, formerly known as the Fleet Center, was the centerpiece of the New Boston Garden Development Project. In conjunction with the decision to finance a replacement for the Old Boston Garden in 1980,²⁹ home to the Boston Celtics (NBA) and the Boston Bruins (NHL), the Boston Redevelopment Authority (BRA) supported the creation of the North Station Economic Development Area.³⁰ This area was invigorated with substantial private and public investments in the planned North Station area and the surrounding neighborhoods. Unlike Boston’s West End neighborhood, which underwent urban renewal efforts commissioned by the BRA,³¹ the North Station Development Area had been overlooked, despite its having

²⁹ The numerous proposals considered whether the 60-year-old arena built in 1928 should be renovated or demolished in order to build a new arena.

³⁰ The Boston Redevelopment Authority (BRA) petitioned to amend the Boston Zoning Code to include Article 39, which establishes zoning regulations for the North Station Economic Development Area. Article 39, Section 10, explains that no development plans can be approved unless they meet the following three conditions: (1) the plan conforms to the general plan for the city of Boston as a whole; (2) each proposed project is in accordance with the building and FAR regulations of the surrounding area; and (3) the development plan does not prove detrimental to the neighborhood, creating burdens on the public and to the public’s welfare.

³¹ The Massachusetts legislature created the BRA in 1957 to promote new investment and future development in downtown Boston. BRA oversaw the Boston Housing Authority’s development projects and eventually extended its supervision beyond public housing. The BRA’s first commissioned urban renewal project was in Boston’s West

several assets that made it a desirable location for an entertainment district, including the intersection of transportation assets and its location within walking distance of the Central Business District.

4.3.1 NEW ARENA NEGOTIATIONS

The original Boston Garden was developed as part of an expansion enterprise of New York's Madison Square Garden. The Massachusetts General Court passed legislation that expanded the legal powers of the Boston & Maine Railroad Company, allowing them to open the Boston Garden in 1928 above their North Station railroad holdings. By the 1970s, the arena had deteriorated, and its facilities had become inadequate for large-profile events. The frequent power outages and lack of air conditioning discomforted spectators and stifled player performance.

In 1972, a new arena was proposed for construction near South Station, but after years of inaction, the owner of the Celtics threatened in 1979 to build a new arena next to the Suffolk Downs Racetrack in East Boston. In 1981, the Bruins proposed a move to New Hampshire, a proposal that was rejected by the New Hampshire Legislature. In that same year, the BRA proposed that a new \$114 million (2018 dollars) arena be built behind the existing Boston Garden, with or without the Bruins collaboration. In response, Boston-based developer Rosalind Gorin submitted plans for a new arena as part of a proposed \$585 million complex in Boston's North End. The plan would include new retail, renter-occupied apartment blocks, and parking

End. The vision was to redevelop the area for commercial and retail space and add 2,200 units of new housing. However, the West End's urban renewal history was an example of acres of demolition and the displacement of thousands of residents, which splintered established neighborhoods.

spaces. Moreover, the proposal would require the city to seize the facility by eminent domain. The project would be financed through tax-exempt bonds secured through the establishment of the Massachusetts Convention Center Authority and by revenue generated by an increase in Boston's hotel tax from 5.7% to 8%. Gorin's proposal did not pass the state legislature. In 1985, the Dallas-based firm Lincoln Property Co. and the Boston Garden owner and Buffalo-based firm Delaware North Corporation proposed a \$360 million joint venture to renovate the Garden (at a cost of approximately \$17 million) and to build a twin tower hotel-office complex, which would include a 300-room hotel, a high-rise office building, and a 1,500-car parking garage, on the adjacent 3.5-acre lot owned by the BRA. This proposal was estimated to generate \$8 million annually in property taxes and \$8 million in linkage payments to the city.³² The BRA eventually rejected the proposal and requested a resubmission.

In 1989, Delaware North Corporation agreed to pay Boston \$20 million for the property rights in the North Station Area and to build a new arena behind the old Boston Garden. The new Boston Garden would be located above five levels of underground parking and rail lines. While the arena was estimated to cost \$280 million (2018 dollars), the entire cost of the project development was \$700 million dollars, which included the relocation of commuter and rapid transit lines; the construction of 2.3 million square feet of office, hotel, and retail space; 2,450 new underground parking spots; and the demolition of the existing Boston Garden. Arena construction was contingent upon the Massachusetts Bay Transportation Authority (MBTA) relocating the commuter and mass transit lines underground. Delayed by a poor economic climate, it was only in 1992 that the Delaware North Corporation publicly announced that three

³² Created in 1983, the Linkage Program charges a fee for all commercial and institutional development projects larger than 100,000 square feet, which are then used to fund and preserve housing units.

of the biggest banks in New England—Bank of Boston, Fleet Bank of Massachusetts, and Shawmut National Corporation—had jointly agreed to a loan of \$120 million to build the new arena. In 1993, the Massachusetts Legislature passed a bill, along with a few stipulations, to construct the new arena above the North Station rail line. While the new legislation did not include the previously negotiated \$3.5 million linkage payment, the Delaware North Corporation would be required to “administer, produce, promote, and sponsor no less than three charitable events per year at the New Boston Garden,” according to Chapter 15 in the 1993 Act of the Massachusetts Legislature.

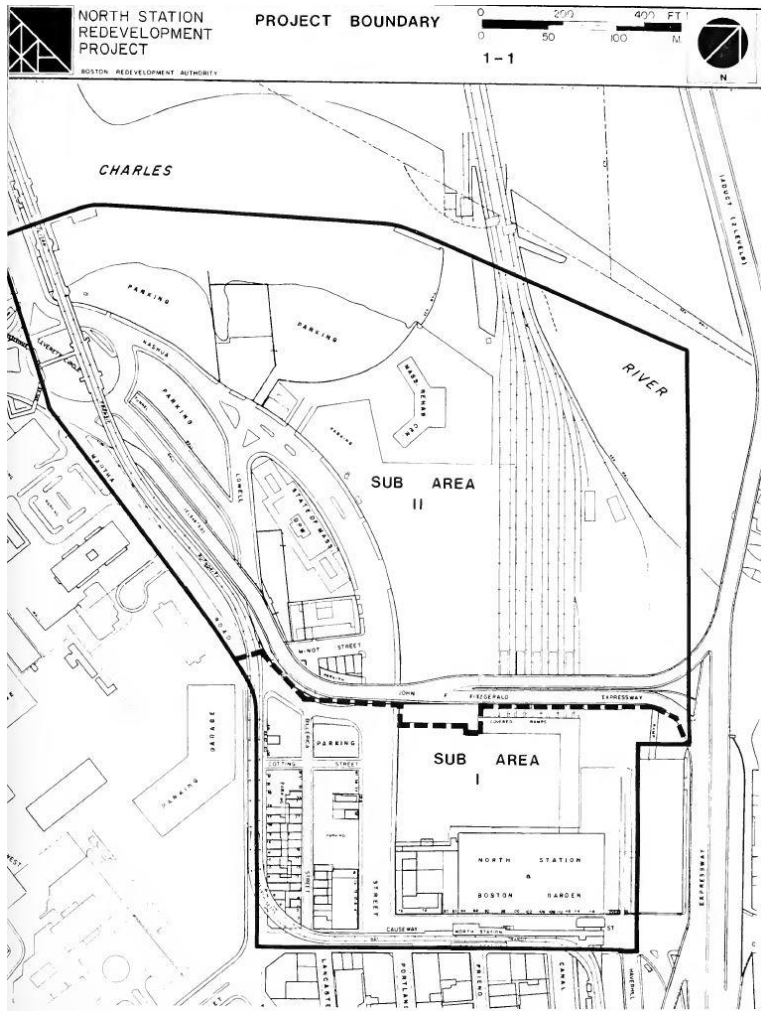
4.3.2 SUBDISTRICT ANALYSIS

The *North Station Urban Renewal Plan* was dedicated to redeveloping one of the last major underutilized areas in downtown Boston, which also encompasses the quarter-mile arena-district micro-area. The BRA recognized that the redevelopment of the blighted North Station Area and the substantial cost premiums associated with building the arena on air-rights parcels as opposed to at grade could not be accomplished simply with private investments. According to MGL’s Chapter 121A, local governments are allowed to suspend the normal rate of property tax collection for a particular property in order to encourage redevelopment. In 1992, the BRA’s vote for Chapter 121A approval was authorized to provide support for the North Station Urban Renewal Area Project, the first phase of the New Boston Garden Development, following with the second phase for the Nashua Street Residences project.

4.3.2.1 North Station Area

The *North Station Area Plan* is divided into two distinct areas: Sub-Area I and Sub-Area II, as illustrated in Figure 6. These two areas are bounded and separated by major arterial streets from the elevated ramp of the Southeast Expressway, which was eventually deconstructed and built underground; Causeway Street to the south, which is the boundary of the North Station Area and the Bulfinch Triangle; and Lomasney Way to the west, a boundary between North Station and the West End.

Figure 6. The North Station Redevelopment Project, project boundary, 1980.



Source: Boston North Station Area Plan, 1980

The *Urban Renewal Plan* objectives for Sub-Area I and Sub-Area II included the following:

- (1) Stimulate the development of commercial and office space, hotel, residential, and mixed-use use for a variety of income levels
 - a. Specifically in Sub-Area I, the preliminary plan was to include approximately 1,000,000 sf of office space, 200,000 sf of retail commercial space, and 1,500 parking spaces.

- b. In Sub-Area II, the objectives of the North Station Urban Renewal Plan were to incorporate a 350-room convention hotel, 1,100 units of mixed-income housing, and 2,200 parking spaces.

(2) Eliminate blighted infrastructure and transportation facilities

Plans included the demolition of the elevated MBTA Green Line in order to eliminate the blight it sparked in the North Station and West End neighborhoods.

- (3) Encourage construction that is of the highest and best use for both private and public development, thus increasing property tax revenue.

This meant providing a mixture of active uses, which was important to stimulate day and nighttime activities. Moreover, there was a lack of public open space in Sub-Area II. The majority of the parcels were taken over by large infrastructure such as the Motor Vehicle Registry Building or by parking spaces for the Massachusetts Rehabilitation Center and the Massachusetts General Hospital.

- (4) Prevent development that could be detrimental to the long-term development of the overall area and openly demonstrate the BRA's intention in revitalizing the North Station Area.

Sub-Area I and II qualified as urban project renewal areas. Sub-Area I was classified as both a substandard and a decaying area, which meant that at least 20% of the buildings in the area qualified for clearance and removal. Sub-Area II was categorized as both a substandard and a decadent area and a blighted open area. A blighted open area is an area in which no more than 30% of the area can be built upon and that therefore has stagnated. Based on the BRA's survey

of the project area, only 10% of Sub-Area II was built up and was largely dominated by tax-exempt or industrial-use properties.

The North Station Plan Urban Renewal Plan proposed the demolition of all existing residential, commercial, institutional, and industrial structures or buildings. Based on the exterior/building and environmental survey conducted in 1980, it was determined that 65% of structures in the North Station Area were substandard or decaying and were therefore detrimental to the health, welfare, and growth of the neighborhood. Table 17 provides a summary of parcels, number of buildings, and their blighted condition in Sub-Area I and Sub-Area II prior to structural demolition.

Table 17. List of parcels in Sub-Area I and II determined for demolition in Urban Renewal Plan

Parcel No.	Total No. of Buildings	Intermediate Defects	Major Defects	Blighted Conditions
Sub-Area I	36	10	8	9
Parcel 187	2	xxx	xxx	1
Parcel 167	1	xxx	xxx	1
Parcel 167A	19	6	4	2
Parcel 168	4	2	2	xxx
Parcel 168A	10	2	2	5
Sub-Area II	7	xxx	xxx	7
Parcel 187	4	xxx	xxx	4
Parcel 187A	3	xxx	xxx	3

Source: Boston North Station Area Plan, 1980

The 1980 North Station Redevelopment Plan called for the acquisition and consequent clearance of 43 structures across 50 acres. Residential properties account for less than 1% of the total project area; those residential properties that do exist are located near commercial and industrial properties and are thus deemed as low investment properties. Table 18 provides an itemization of land usage by percentage of acreage in the North Station Area.

Table 18. Percentage of land-usage by acreage in Sub-Area I and II.

Total Project Use	Acreage	Percentage
Vehicle Related	33.0	67.0
Arterial Streets	18.0	36.0
Parking Garages/Lots	15.0	30.0
Open Space	8.00	16.0
Occupied	8.59	17.0
Institutional/Exempt	6.65	14.0
Residential	0.40	0.5
Commercial	0.72	2.0
Mixed-Use	0.31	0.5
Industrial	0.50	1.0

Source: Boston North Station Area Plan, 1980

The main objective of the North Station proposal was to improve the North Station Area and stimulate new major investments through improved rapid-transit facilities and the construction of a major federal building and residential units. The North Station Area is an eligible development project under Chapter 121B of the Massachusetts General Laws, under which the BRA is given the authority to administer urban renewal plans throughout the city and to use tax abatements, eminent domain, and land disposition to foster future development. Furthermore, the BRA has the authority to extend the jurisdiction of Chapter 121B beyond the planned urban renewal projects and to pursue smaller-sized projects. In the case of the different arena proposals, the BRA's ownership of a few of the land parcels and influence in the overall North Station Urban Renewal Plan qualifies the area under Chapter 121B.

4.3.2.2 Bulfinch Triangle

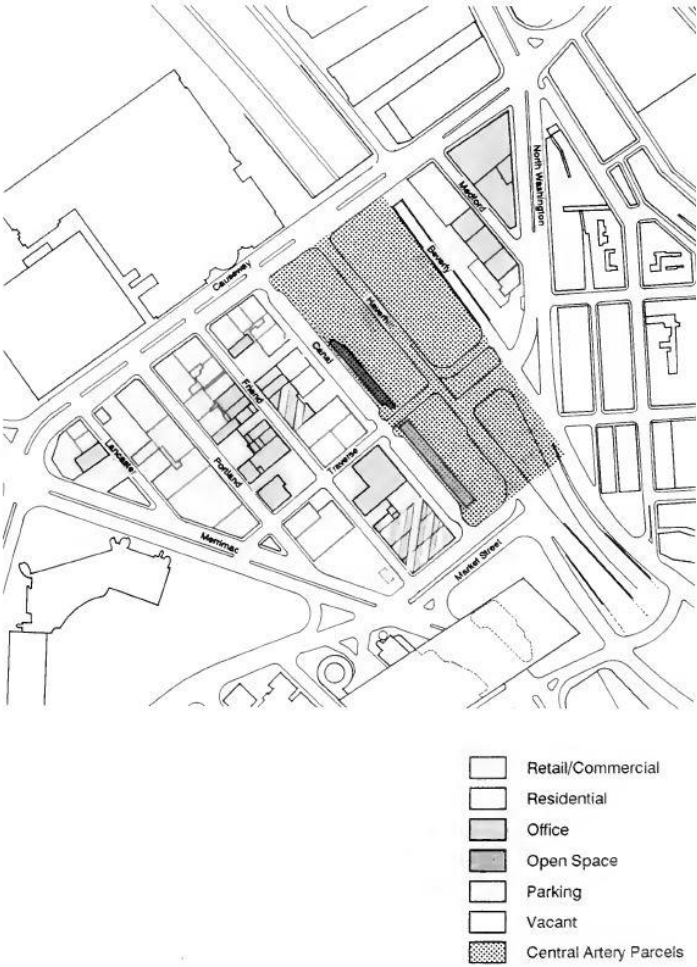
With the future development of the North Station Area underway in the mid-1980s, the BRA also designed a redevelopment plan for Bulfinch Triangle, a neighborhood just south of

North Station bounded by Causeway, Merrimac, and North Washington Street, part of the Downtown North and West End community. The area is well-known for its architectural design, with irregularly shaped parcels, small-scale residences five to six stories in height, and specific street patterns. Although the area prospered in the early 20th century with light manufacturing and storage above office, retail, and showroom space, the area declined in the mid-1950s (as did much of the city). The area further transformed in response to the demolition and urban renewal of the West End, a development process that encroached upon the project area's peripheries, and the elevated Fitzgerald Expressway, which severed the integrity of the Bulfinch Triangle neighborhood. Three blocks of established streets—approximately 630,000 square feet of built volume—were demolished between Canal, Haverhill, and Beverly Street for the Central Artery (illustrated in Figure 7). The North Station Area Plan addressed the importance of depressing the elevated MBTA Green and Orange Line, widening Lomasney Way, and eliminating other elevated arterial lines in order to improve the inadequate transportation facilities. The MBTA Green Line also ran directly through the Bulfinch Triangle until the highway was eventually depressed and moved underground. The construction of the tunnel was finished in 1995; the construction on the Central Artery began in 1991 and was eventually completed in 2004. The relocation of the MBTA lines created more availability for open space parcels, utilizing the Central Artery's air rights and the number of new parcels allocated for mixed-use development at a scale appropriate to the rest of the neighborhood.³³

³³ The Big Dig project, which eventually buried the highway running through Boston's downtown beginning at South Station and ending at the North Station terminal, created 22 new parcels as open land parcels on the highway's air rights. Two of these parcels, Parcel 1 and Parcel 2 (a cumulative area of 3 acres) are found in the Bulfinch Triangle. These parcels are zoned for commercial and residential use and are meant to knit together the historic neighborhood that had been severed by the Central Artery.

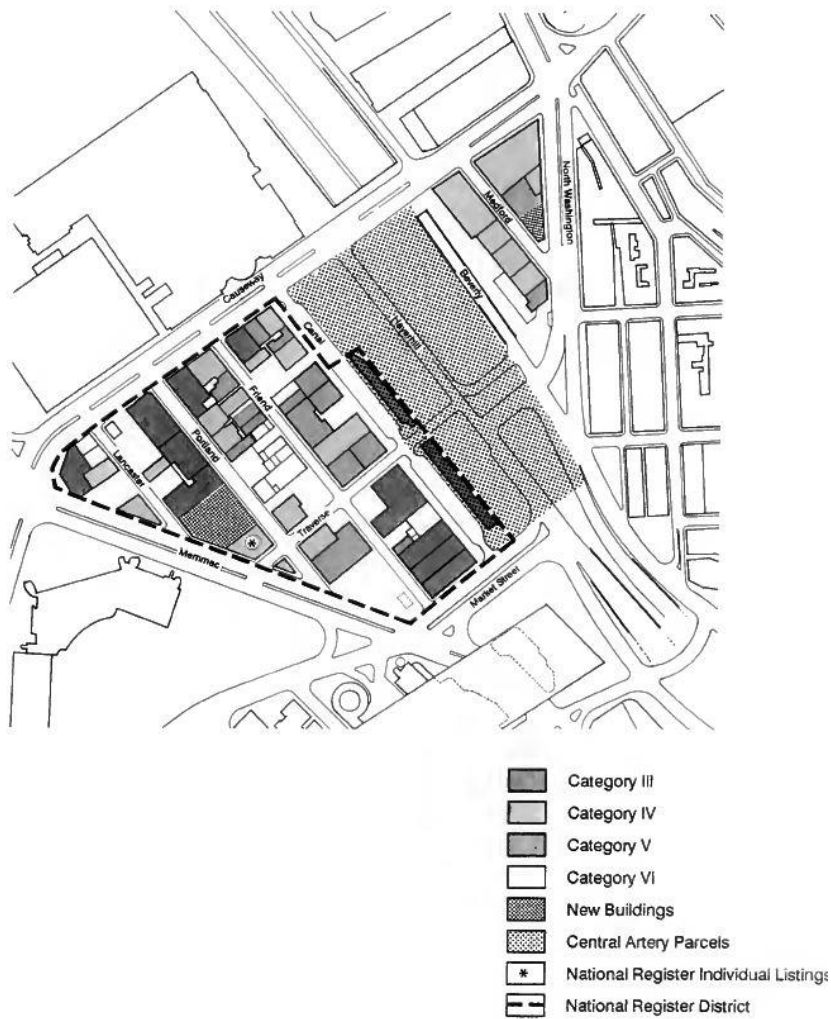
The purpose of the Bulfinch Triangle Plan is to restore the neighborhood's historic roots and tavern-like buildings by renovating the severed halves of the neighborhood and improving the pedestrian links between the North End, the West End, and the Government Center. Since most of the existing buildings in the Bulfinch Triangle were intact, the BRA's plan sought new development opportunities through the infill of small vacant parcels and renovation projects. This process had already begun in 1986, when 59 properties within the Bulfinch Triangle west of Canal Street (shown in Figure 8) were listed within the National Register District by virtue of their unique architecture and construction (the simple act of listing properties in the National Registry encourages rehabilitation or adaptive reuse of old properties). With more than \$100 million of private investment between 1983 and 1990, approximately 960,000 square feet of space was either renovated or reused.

Figure 7. Central Artery demolition for the Boston Redevelopment Authority's Bulfinch Triangle Plan, 1990.



Source: Boston North Station Area Plan, 1980

Figure 8. Parcels located within the National Register District, adopted from the BRA's Bulfinch Triangle Plan, 1990



Source: Boston North Station Area Plan, 1980

The conversion of these old warehouse buildings into mixed-use residential properties helped address the need for housing downtown. In 1987, the Boston Zoning Commission approved Article 27D, the Downtown Interim Planning Overlay District (IPOD), which permits downtown temporary zoning changes to ensure that each parcel's property remains economically competitive with the rest of the city, as was often not the case with the existing zoning

regulations. To encourage increased density of residential units in the area by utilizing the new air-rights parcels, Article 27D designated Bulfinch Triangle as a Restricted Growth Subdistrict and a Housing Priority Area. Since there is little demand for more construction in the area, the designation suggests that the area's historic identity and architectural character is established and must be well preserved in the future.

To accomplish these primary development goals, the Bulfinch Triangle Plan's objectives are to:

- (1) Create a lively neighborhood that can sustain activity levels for day and evening patrons and provides a balance of mixed-use development that includes housing, commercial, and ground- floor retail.
- (2) Increase the housing and commercial development on the newly created arterial air-rights parcels by 800,000 square feet.
- (3) Emulate the North Station Area Plan regarding the replacement of surface parking lots with mixed-use development and facilitate new construction of parking facilities.

The *Boston 2000 Plan* envisioned the restoration of the Bulfinch Triangle neighborhood, which would include a vibrant mix of residential, commercial, and hospitality uses. It was particularly important to the Bulfinch Triangle neighborhood that the future development plans attempt to restore the properties that had been lost in the wake of the aboveground transportation infrastructure.

4.3.3 MAJOR DEVELOPMENT PROJECTS

Following the BRA's support for the construction of a new professional sports arena, the creation of the North Station Economic Development Area, and the Bulfinch Triangle Plan for Growth in the early 1990s, a number of notable commercial and residential development projects opened in the 2000s. Projects that were forced into hiatus during the economic recession are now scheduled for completion between 2016 and 2020. Table 19 provides a summary of development projects that opened in the early and late 2000s and that have been approved by the BRA in just the last few years and are currently moving into the construction phase. The development projects in Table 19 coincide with the BRA's revitalization plans of the North Station and Bulfinch Triangle Area and the transformation into Boston's premier entertainment hub.

Table 19. Notable completed and proposed development projects in Boston’s arena-district micro-area, 1990 to present.

Development Name	Project Cost	Description
List of Downtown North/West End Development Projects Completed in early 2000s		
West End Residences	\$160,000,000	<ul style="list-style-type: none"> • Replaced surface parking lots.
126 Washington Street	\$8,000,000	<ul style="list-style-type: none"> • Residential renovation to a long-standing vacant building.
Massachusetts General Hospital	\$400,000,000	<ul style="list-style-type: none"> • Renovation to the Massachusetts General Hospital that includes new ambulatory care and in-patient facilities.
Avenir Project, Canal Street	\$130,000,000	<ul style="list-style-type: none"> • Residential development managed by Archstone Apartments providing 250 units of rental housing and ground floor retail and restaurant space.
Victor Project, Beverly Street	\$100,000,000	<ul style="list-style-type: none"> • Residential development managed by Simpson Housing providing 286 units of rental housing and ground floor retail and restaurant space.
List of Downtown North/West End Development Projects Completed in late 2000s		
Forecaster Building 121-127 Portland Street	\$45,000,000	<ul style="list-style-type: none"> • Modified from its original proposal in 2005, the renovation for the development includes 81 mixed-income for-sale condominium units, 2 commercial units, and 32 parking spaces. • An upgrade of an additional four stories (approximately 73,000 sf). • Thirteen percent of the total units (10 units) are proposed as affordable housing units. This exceeds the 10% affordable housing requirement established by the Mayor in 2000.
Lovejoy Wharf Building 131 Beverly Street	\$150,000,000	<ul style="list-style-type: none"> • Under Article 80 and Chapter 121A, the BRA approved the Lovejoy Wharf Redevelopment, a two-building project, in 2006. • The Lovejoy Wharf Project sits on 2.1 acres on the waterfront that were formerly used for surface parking and is part of the North Station Economic Development Area. This project will revitalize an entire block of the Boston waterfront, preserve historic buildings, and create a vibrant 24-hour mixed-used community that will transform an underutilized wharf into a fully activated open space. • It was proposed that 160 North Washington Street be renovated to include 250 new residential units and a mix of ground-level retail and restaurant uses, while an entirely new 10- to 14-story structure would be built at 131 Beverly Street; the existing building was described as unsafe and therefore demolished. • As a result of the economic recession and lawsuit, the plan proposed in 2006 never came to fruition. • In 2012, Beal Companies LLP and Related Companies LP acquired the project site. • 160 North Washington Street finished renovations in 2015 and became the new global headquarters for Converse, a subsidiary of Nike.

List of Downtown North/West End Development Projects Proposed and Begin Construction (2016–20)

<p>Nashua Street Residences, Avalon Bay Project</p>	<p>\$240,000,000</p>	<ul style="list-style-type: none"> • The Nashua Street Residences project, located within the North Station Urban Renewal Area and in the New Boston Garden Development Area, opened in 2016 as a 38-story tower adjacent to TD Garden. • The 1989 MOU agreement between the City, the BRA, and the Boston Garden Development Corporation (BGCD) approved the construction of a new arena on city-owned air rights behind the Old Boston Garden. • The Fleet Center opened in 1995 as the first commercial development project as part of the overall public and private development efforts outlined in the North Station Area Urban Renewal Plan. • The arena was built on top of the city-owned air rights, above the North Station rail lines, and MBTA’s underground parking garage. As part of the MOU, the second phase of the North Station Area project included developing 2 million square feet of property on the existing arena site and adjacent parcels. • In 2005, Nashua Street Residences, designated as a Chapter 121A project, was proposed as a 363 residential unit building that included 121 rental units (renter-occupied), 242 condominium units (owner-occupied), and 244 parking spaces. • Due to the collapse of the financial markets, the 2005 Nashua Street Residences Plan was put on hold; the proposed plans were later altered to be compatible with 2012 market conditions.³⁴
<p>Garden Garage 35 Lomansey Way</p>	<p>Permitted – Under Construction)</p>	<ul style="list-style-type: none"> • The BRA approved the original development plan for this site in 1972. The site is located within the Downtown Interim Planning Overlay District (IPOD), and the land development is governed by the 1957 West End Project Area. • Formerly serving as the parking garage for TD Garden patrons, the Garden Garage will be converted into a 44-story apartment complex that will hold approximately 500 apartments units and 850 underground parking spaces • The project is expected to open in 2021.
<p>The Hub On Causeway</p>	<p>(Permitted – Under Construction)</p>	<ul style="list-style-type: none"> • Proposed by the Boston Garden Development Corporation and the Boston Properties Limited Partnership, the project site, which will be constructed in three phases, is the final project of the public/private redevelopment efforts proposed by the BRA in the 1970s and 1980s for the North Station and Boston Garden Area.

³⁴ In 2012, AvalonBay Communities purchased the residential development from the Garden Corporation and changed the original inventory by increasing the residential unit count by 200 units, including both affordable and market-rate housing, and decreasing the number of parking spaces by 50.

		<ul style="list-style-type: none"> • The Hub on Causeway, at 80 Causeway Street, is a 2.8 acre parcel and was vacant and formerly used for surface parking. • Envisioned as a mixed-use development project of approximately 1,870,000 square feet of residential, hotel, office, and retail use. • Will also include the city’s largest grocery store, a movie theater, 10,000 square feet of outdoor recreational public space, and 175,000 square feet of “creative office space.” • Phase I construction broke ground in 2016 and will include 500 residential units, 200 hotel rooms, 600,000 square feet of commercial office space, and 800 parking spaces (under construction). • Phase II includes a 440-unit residential tower, and 260-unit micro-hotel (under construction). • Phase III includes a 21-story office tower (under construction). • In conjunction with the Nashua Street Residences project, the Hub on Causeway will complete the vision for the North Station Garden Area and create connections from the heart of the district to the surrounding neighborhoods, created a vibrant place to live, work, and play.
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Source: Downtown North Association (2012) List of Downtown North/West End Development Projects

Since the BRA's efforts to revitalize the overlooked North Station and Bulfinch Area in the 1980s and 1990s, major public and private projects have already completed, or will complete, the revitalization and redevelopment of the Downtown North and West End of Boston, creating a vibrant entertainment hub, with the TD Garden facility at its epicenter. Over the past ten years, more than 3,000 new residential units were constructed, 15% of which are affordable units. Four new hotels, ample office, retail, and restaurant space and the addition of a downtown grocery store have been critical in Boston's redevelopment initiatives.

4.3.4 DEVELOPMENT FINDINGS

The Boston Redevelopment Authority's urban renewal plans of the 1980s–1990s for the North Station Area and the Bulfinch Triangle, in conjunction with its negotiation of the construction of TD Garden, attracted private investment in a once-overlooked section in Boston. Furthermore, the forgiving of property tax liability that resulted from the awarding of Chapter 121A and 121B status to several projects motivated developers to pursue real estate investments. The BRA's *1980 Urban Renewal Plan* proposed the development of the North Station Area as a premier sport and entertainment district, inspiring residents to live, work, and play downtown.

4.3.4.1 Land Use Composition

The spread of land-use composition within the quarter-mile extent of influence surrounding TD Garden is consistent across the 25-year period. Across the five major land-use categories, there are no major outliers in which one land-use category overshadows the others. The concentration and percentage of land use by category in the arena's micro-area was

determined by parcel-level data from the City of Boston Assessing Department between 1990 to 2015. The total number of “active” parcels for each five-year time point determines percentage of land-use composition.

Table 20 summarizes the raw count for each of the main land-use categories and subcategories for residential and commercial properties. The table also includes the percentage share of the overall land usage in TD Garden’s micro-area. The total land-use count is based on the relative count of land use per property and address and not the total land-use count by parcel. The total number of parcels will increase substantially when the subcategory land-use counts are added to the total number of parcels.

For instance, in 1990, there were 62 residential parcels. This residential count includes both renter- and owner-occupied residential units. However, this count does not include the condominium parcel count. In 1990, the total condominium count was 1,004 units. As mentioned previously, condominiums on the same property parcel, while maintaining individual property identification numbers, are counted as one unit of residential land use; thus, the actual count of residential parcels in the micro-area is 1,068. Using the 1,068 residential parcel count would distort the percentage of residential properties relative to the six other land-use categories, thereby inflating the residential concentration within the arena’s micro-area. The total condominium count was eliminated from the percentage share. A similar tactic was administered with respect to the parking count, particularly those associated with condominium buildings. Coupled with resolving the appropriate count for land-use categories by parcel-level data, mixed-use properties are a bit of an anomaly. The City of Boston’s Assessing Office provides a designation “residential/commercial” or “commercial/residential” for mixed-use properties. These labels are dependent on which land use is the primary use of the property. For example,

for the label “residential/commercial,” the first listed land use (residential) indicates the primary use of the parcel. To be clear, mixed-use land use is the designation for each individual parcel. This should not be confused with the larger infrastructure developments that are mixed-use in nature but contain multiple parcels of different land uses. The mixed-use parcels therefore have a smaller overall land-use count compared to residential and commercial parcel counts.

Additionally, mixed-use parcels also have different assessment-rate designations compared to residential and commercial parcels, even though they may in theory be the same land use. Based on the raw count, the percentage of each land-use category provides a more realistic outlook on the diversity of land use within the TD Garden micro-area. Overall, residential parcels increased by 50% between 1990 and 2015, with an increase of 30 residential properties, including 130 new condominium units. The amount of properties designated as purely commercial decreased; meanwhile, the subcategories of the commercial properties (e.g., retail, restaurant, office, and hotel) increased. Office space accounted for over 60% of commercial properties. There was also a big boom in hotel construction, which increased four fold from 1990. The reason for the decrease in commercial parcels in this area, which was once a booming commercial and industrial area of the City of Boston, is that they have been redefined as residential or exempt properties. Because of the expansion of two hospitals and the conversions of properties formerly listed as commercial properties into government offices, there is a dramatic increase in the number of exempt parcels. The number of exempt properties also increased as a result of the demolition of the Central Artery and its relocation underground, which increased the total number of parcels in the arena micro-area. The demolition of the Central Artery created 22 new parcels and the ability to build on the air rights owned by the City of Boston and the MBTA. Illustrated in Figure 9, relative to the number of parcels present in the

micro-area, the land-use concentration by type seem quite stagnant with only the increase in exempt properties being a major shift in property use.

Figure 9. Percentage of land-use composition in Boston arena-district micro-area, 1990-2015.

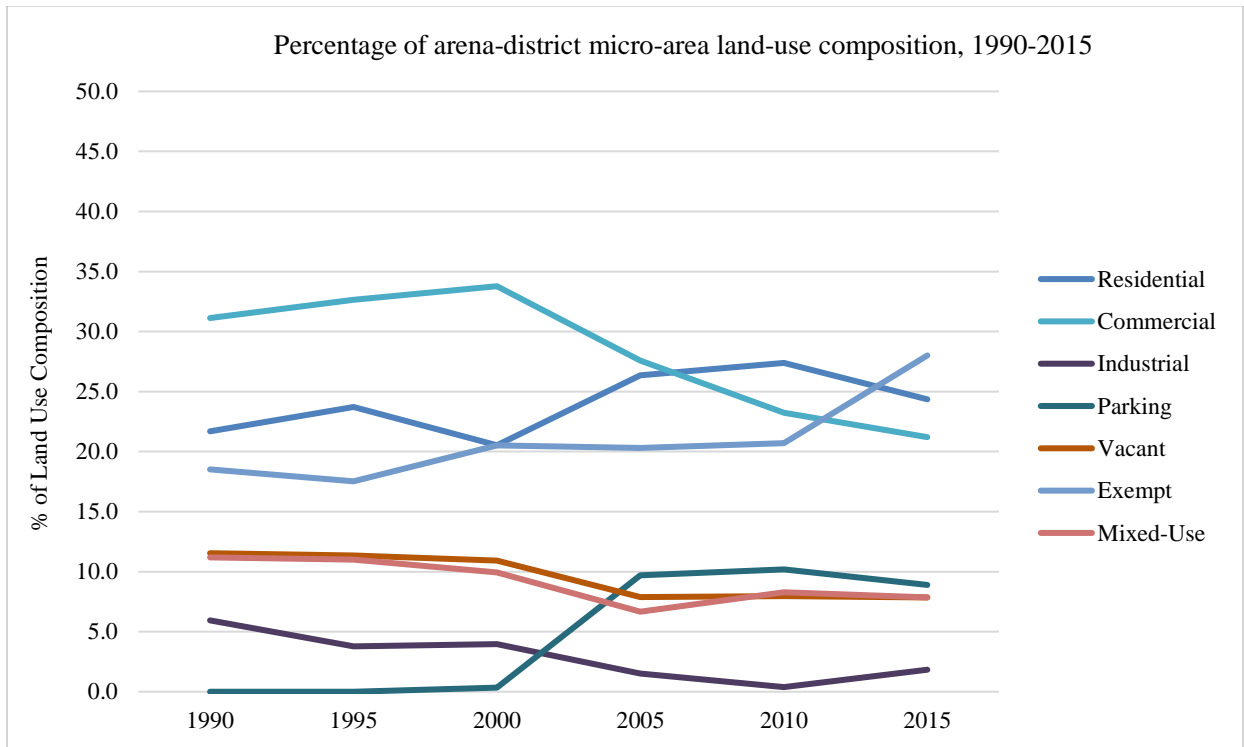


Table 20. City of Boston's arena-district micro-area land-use count, 1990-2015.

YEAR	1990		1995		2000		2005		2010		2015		1990-2015
	LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		% CHANGE
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	1990-2015
RESIDENTIAL	62	21.68	69	26.64	62	20.53	87	26.36	86	27.39	93	24.35	50.00
RENTER-OCCUPIED	24	2.28	35	3.32	27	2.55	33	2.79	28	2.34	36	2.99	50.00
OWNER-OCCUPIED	1,027	97.62	1,014	96.20	1,026	97.07	1,143	96.70	1,170	97.91	1,160	96.43	12.95
TOTAL CONDOS	1,004	95.44	999	94.78	1,003	94.89	1,118	0.00	1,136	0.00	1,137	0.00	13.25
COMMERCIAL	89	31.12	95	36.68	102	33.77	91	27.58	73	23.25	81	21.20	-8.99
RETAIL	-	0.00	1	0.74	1	0.72	12	10.34	9	7.83	11	9.02	-
RESTAURANT	-	0.00	-	0.00	-	0.00	15	12.93	14	12.17	13	10.66	-
OFFICE	42	33.07	47	34.81	44	31.65	73	62.93	80	69.57	78	63.93	85.71
HOTEL	-	0.00	-	0.00	-	0.00	4	3.45	4	3.48	4	3.28	-
INDUSTRIAL	17	5.94	11	4.25	12	3.97	5	1.52	7	0.39	7	1.83	-58.82
PARKING	-	0.00	-	0.00	1	0.33	32	9.70	32	10.19	34	8.90	-
VACANT	33	11.54	33	11.34	33	10.93	26	7.88	25	7.96	30	7.85	-9.09
EXEMPT	53	18.53	51	19.69	62	20.53	67	20.30	65	20.70	107	28.01	101.89
MIXED-USE	32	11.19	32	12.36	30	9.93	22	6.67	26	8.28	30	7.85	-6.25
TOTAL	286	100.00	259	100.00	302	100.00	330	100.00	314	100.00	382	100.00	33.57

4.3.4.2 Built Volume

Changes in built volume measures the level of new construction, renovation, or improvements that have occurred over the last 25 years. Unfortunately, assessment records did not include building square footage prior to 2003. Table 21 provides a summary of the percentage change in built volume from 2000 to 2015.

Since 2005, built volume in the TD Garden micro-area substantially changed, with a 50% increase between 2010 and 2015. While residential, commercial, mixed-use, and exempt properties made up the majority of built volume in the micro-area, at around 25%, industrial properties decreased by 60%. As expected, with the dwindling need of industrial warehouses and heavy manufacturing downtown, the built volume for industrial property use decreased and later transferred to the new conversions or renovations of residential, commercial, and exempt property use. The amount of new construction per residential properties increased by more than 40%, with the total building square footage for owner-occupied parcels substantially outpacing that of renter-occupied parcels between 2005 and 2010. However, between 2010 and 2015, the built volume for renter-occupied housing units increased as the BRA pushed their agenda to include more apartment building options. The Avenir Project on Canal Street and the Victor Project on Beverly Street are two good examples of development projects completed in the mid-2000s that increased the number of renter-occupied units.

Between 2005 and 2010, commercial properties increased by 1 million square feet. While the total number of office parcels increased between 1990 and 2015, the amount of office building square footage actually decreased by 10%. This can be attributed to two factors: during the economic recession, many of the projects that had been approved and permitted for

construction were put on hiatus or leases were transferred to different developers; and vacant buildings may have already been demolished, thus contributing to the fall in commercial stock. New construction is only noted during the next assessment cycle. Parcels with mixed-use property use increased close to 2.5 million square feet, a compounding growth rate of 30% between 2010 and 2015. The slight decrease in commercial built volume and the substantial increase in mixed-use infrastructure is related to the conversions of parcels that were once strictly commercial parcels and were dedicated to multi-story office spaces to mixed-use buildings with office or retail space on the ground floor and small apartment units on the second and third floor.

Table 21. City of Boston’s arena-district micro-area (TD Garden) built volume count, 2000-2015.

	1990		1995		2000		2005		2010		2015		2005-2015
	BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL	-	-	-	-	-	-	1,421,679	24.48	1,434,721	18.91	2,345,539	20.87	64.98
RENTER-OCCUPIED	-	-	-	-	-	-	216,851	15.25	221,528	15.44	1,275,057	54.36	487.99
OWNER-OCCUPIED	-	-	-	-	-	-	1,206,868	84.89	1,269,319	88.47	1,070,482	45.64	-11.30
COMMERCIAL	-	-	-	-	-	-	2,313,026	39.83	3,031,607	39.95	2,940,945	26.16	27.15
RETAIL	-	-	-	-	-	-	75,922	3.28	68,947	2.27	81,083	2.76	6.80
RESTAURANT	-	-	-	-	-	-	58,578	2.53	40,169	1.33	72,670	2.47	24.06
OFFICE	-	-	-	-	-	-	2,013,052	87.03	1,979,181	65.28	1,845,183	62.74	-8.34
HOTEL	-	-	-	-	-	-	153,412	6.63	165,160	5.45	165,160	5.62	7.66
INDUSTRIAL	-	-	-	-	-	-	60,665	1.04	33,595	0.44	25,170	0.22	-58.51
PARKING	-	-	-	-	-	-	451,858	7.78	445,682	5.87	594,615	5.29	31.59
VACANT	-	-	-	-	-	-	59,948	1.03	59,948	0.79	59,948	0.53	0.00
EXEMPT	-	-	-	-	-	-	1,397,403	24.06	2,002,889	26.39	2,288,346	20.36	63.76
MIXED-USE	-	-	-	-	-	-	103,342	1.78	580,228	7.65	2,986,386	26.57	2,789.81
TOTAL	-	-	-	-	-	-	5,754,776	100.00	7,588,670	100.00	11,240,949	100.00	95.33

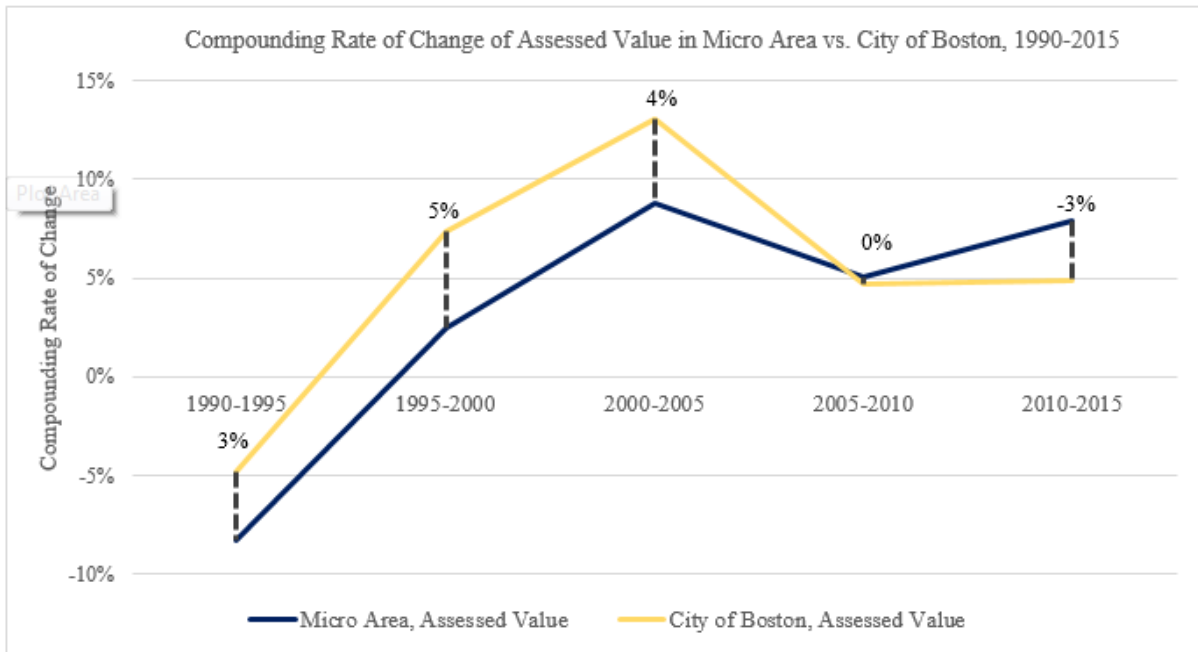
4.3.4.3 Assessed Value³⁵

Boston's assessment values are assessed at 100% of the market value. Figure 10 demonstrates that the TD Garden's micro-area compounding rate of change in assessment value is consistent with that of the City of Boston. Over 25 years, the arena's micro-area had a compounding growth rate of 30% compared to Boston's 49%. Yet in determining the compounded rate of change over five-year intervals, the growth in assessment values between the two areas trend similarly. The compounding rate of change in both the micro area and the city of Boston increased by 11% and 12%, respectively, between the five-year intervals 1990–1995 and 1995–2000. In the following five-years interval (2000–05), both the micro-area and the city increased by 6%. During the economic recession, the city of Boston was impacted more substantially than the micro-area, decreasing by 8% compared to the micro-area's 4%. Finally, between 2010 and 2015, the micro-area's compounding rate of change in assessment values increased by 3%, outpacing those values from the city of Boston, which were flat. While there is a 20% difference in the compounding assessment value growth rate between the city of Boston and the micro-area over the 25 years, when analyzing the compounding assessment value rate of change over five-year intervals, the micro-area actually grew at the same rate as the city of Boston, suggesting that the arena did not have a significant impact on the assessment values

³⁵ Prior to 2003, the City of Boston assessment records of land use was designated by the primary use of the parcel. For instance, a residential owner-occupied condominium development that contains underground parking may not have counted the parking spaces as separate parcels, as is the case with some of the newer residential condominiums units built after 2005. This means that in order to provide uniformity to the land-use count, parcels listed with a parking land use with the same address as a residential condominium were counted as a single unit of parking. The reason for this is that parking garages or surface parking lots were also counted as a single unit of parking. Mixed-use parcels also have a different land-use designation than properties that have a combination of commercial and residential uses.

found in the quarter-mile arena-district micro-area and did not accrue higher valuations faster than the rest of the city.

Figure 10. Compounding rate of change in assessed value in arena-district micro-area (TD Garden) vs. city of Boston, 1990-2015.



4.3.4.4 Property Tax

Table 22 provides a summary of assessment ratios by land-use category that are multiplied by the assessment value to determine a parcel’s property tax bill. Commercial and industrial properties generally pay higher property taxes than residential properties. Furthermore, the property tax generated for mixed-use properties is dependent on the percentage of the property that is commercial compared to residential. For these types of situations, the property’s deed will generally provide documentation as to what percentage of the building is allocated for commercial or residential use. Because of the unreliability of accessing property tax information prior to 2003 and the resultant difficulty in determining the percentage of commercial vs

residential use, the assessor's office recommended designating the percentage of commercial or residential use based on the total assessed value of the property. Table 22 indicates the mixed-use property percentage allocations for 1990, 1995, and 2000.

Property tax revenues increased exponentially over the last 25 years, both for the TD Garden arena-district micro-area and for Boston. Figure 11 illustrates the compounding rate of change in property tax for these two areas for every five years. Boston's property tax revenue generation, while increasing within each time point, grew at a consistent pace, decreasing only slightly, by 1% every ten years.

Property tax revenues as a whole also increased in the TD Garden micro-area, with the exception being between 1990 and 1995, when there was a slight decrease of 3%, or a loss of \$2 million in property tax revenue. The growth rates between 1995 and 2000, however, differed by 8% between the first and second five-year intervals, increasing by 3% between 2000 and 2005, 5% between 2005 and 2010, and 7% between 2010 and 2015. When comparing the rate of growth between the city of Boston and the TD micro-area, while there was a 9% difference between 1990 and 1995 across the two areas, in the following three five-year intervals, the growth rate difference was between only 1% and 2%. It was between 2010 and 2015 that the property tax rate of change in the TD Garden micro-area overtook that of the city of Boston. The assessment and property tax values for the TD Garden micro-area and the city of Boston both decreased in 1995 and 2005, which is consistent with the economic conditions impacting all cities during these two time points (see Table 23). The assessment and property tax values had a substantial rate of change in the TD Garden micro area between 1990 and 2000. This suggests that the BRA's urban renewal plans for the North Station Urban Renewal Area and that of the Bulfinch Triangle had a positive impact on new construction and renovation in the area. The

tapering of the growth rates between 2000 and 2010 closed the gap between the TD Garden micro-area and the city of Boston but demonstrates that the recession partially impacted the values for both areas. TD Garden opened in 1995. Therefore, it is expected that if the arena has had a positive effect on the area's development, the growth rate of change should have been higher than the 2% that was occurring in the rest of the city. It was only between 2010 and 2015 that the micro-area grew at a faster rate than the rest of the city. This is attributable to the opening of the Converse Headquarters and residential condominiums located at Lovejoy Wharf as well as the beginning of the three-phase construction plans for the Hub on Causeway project.

Table 22. City of Boston assessment ratios used to determine property tax values, 1990-2015.

1990	1995	2000	2005	2010	2015
COMMERCIAL: 23.9	COMMERCIAL: 42.66	COMMERCIAL: 34.21	COMMERCIAL: 32.68	COMMERCIAL: 29.38	COMMERCIAL: 29.52
RESIDENTIAL: 8.45	RESIDENTIAL: 13.86	RESIDENTIAL: 13.15	RESIDENTIAL: 10.73	RESIDENTIAL: 11.88	RESIDENTIAL: 12.11
INDUSTRIAL: 23.9	INDUSTRIAL: 42.66	INDUSTRIAL: 34.21	INDUSTRIAL: 32.68	INDUSTRIAL: 29.38	INDUSTRIAL: 29.52
MIXED-USE:	MIXED-USE:	MIXED-USE:			
VALUE UNDER 2 MILLION: <i>80% COMMERCIAL & 20% RESIDENTIAL</i>	VALUE UNDER 2 MILLION: <i>80% COMMERCIAL & 20% RESIDENTIAL</i>	VALUE UNDER 2 MILLION: <i>80% COMMERCIAL & 20% RESIDENTIAL</i>			
VALUE OVER 2 MILLION: <i>60% COMMERCIAL & 40% RESIDENTIAL</i>	VALUE OVER 2 MILLION: <i>60% COMMERCIAL & 40% RESIDENTIAL</i>	VALUE OVER 2 MILLION: <i>60% COMMERCIAL & 40% RESIDENTIAL</i>			

Figure 11. Compounding rate of change in property taxes in arena-district micro-area (TD Garden) vs. City of Boston, 1990–2015.

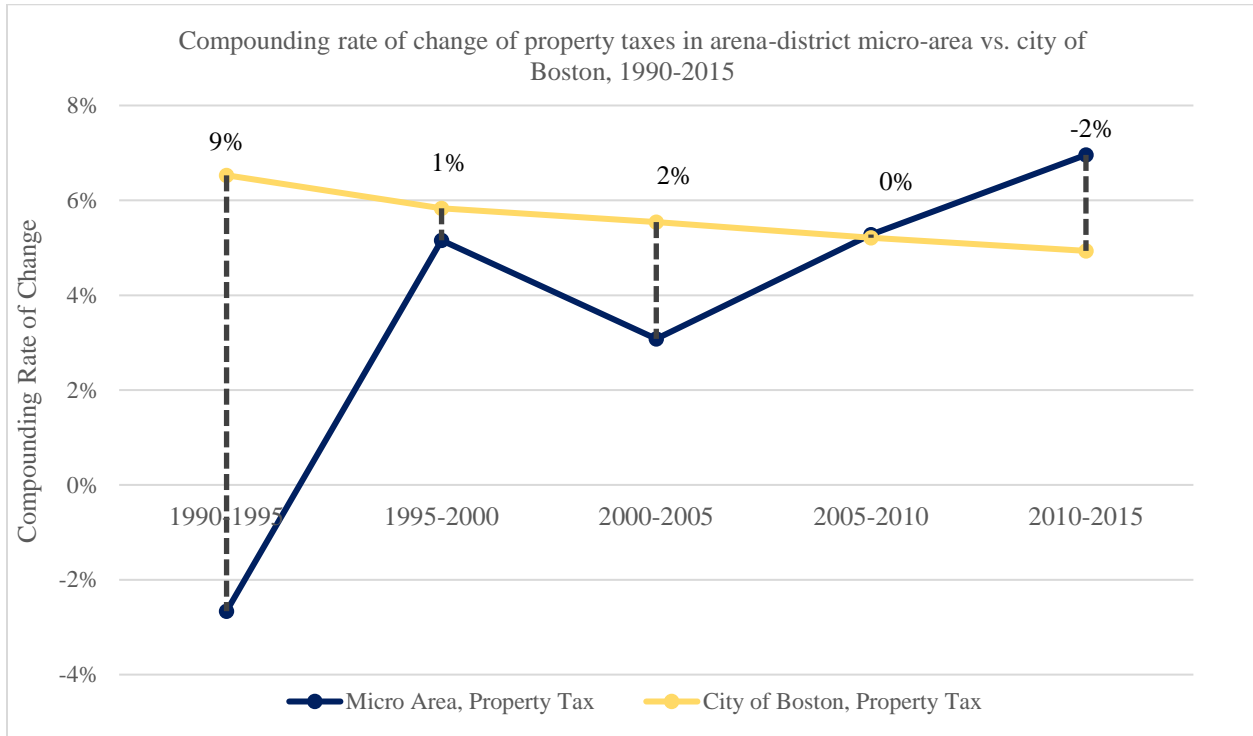


Table 23. City of Boston's arena-district micro-area assessment, market, and property tax values, 1990-2015.

	1990	1995	2000	2005	2010	2015
TD GARDEN MICROAREA						
LAND AREA (sf)	-	-	-	5,311,006	4,771,648	6,540,834
BUILT AREA/VOLUME (sf)	-	-	-	8,419,883	9,351,316	11,181,001
TOTAL ASSESSED VALUE	480,575,563	560,397,390	731,613,261	1,313,828,147	1,845,036,129	2,918,069,060
TOTAL ASSESSED VALUE (2015 \$)	888,236,254	907,028,095	1,022,845,237	1,558,771,757	1,994,760,315	2,918,069,060
ASSESSED LAND VALUE	-	-	-	300,112,265	431,510,851	928,536,914
ASSESSED BUILDING + IMPROVEMENTS	-	-	-	854,293,822	1,412,786,134	1,989,532,146
TOTAL MARKET VALUE	757,978,503	560,397,390	731,613,261	1,313,828,147	1,845,036,129	2,918,069,060
TOTAL MARKET VALUE (2015 \$)	1,400,953,436	907,028,095	1,022,845,237	1,558,771,757	1,994,760,315	2,918,069,060
TOTAL MARKET LAND VALUE	-	-	-	300,112,265	431,510,851	928,536,914
TOTAL MARKET BUILDING VALUE + IMPROVEMENTS	-	-	-	854,293,822	1,412,786,134	1,989,532,146
TOTAL TAX	4,416,006	7,691,389	11,448,083	15,697,197	22,279,831	33,718,662
TOTAL TAX (2015 \$)	8,161,998	12,448,855	16,005,201	18,623,704	24,087,834	33,718,662
CITY OF BOSTON						
TOTAL ASSESSED VALUE	33,673,223,044	26,279,577,775	37,497,445,000	69,253,529,000	87,256,532,000	110,736,862,000
TOTAL ASSESSED VALUE (2015 \$)	62,237,409,995	30,533,043,068	52,423,977,936	82,164,810,679	94,337,399,572	110,736,862,000
TOTAL MARKET VALUE	33,673,223,044	26,279,577,775	37,497,445,000	69,253,529,000	87,256,532,000	110,736,862,000
TOTAL MARKET VALUE (2015 \$)	62,237,409,995	30,533,043,068	52,423,977,936	82,164,810,679	94,337,399,572	110,736,862,000
TOTAL TAX	477,296,000	654,830,000	869,295,000	1,138,254,000	1,467,605,000	1,867,259,000
TOTAL TAX (2015 \$)	882,174,742	760,817,117	1,215,333,522	1,350,464,384	1,586,701,146	1,867,259,000

Note: Since 1995, Boston's assessed value was at 100% of the market value.

4.3.5 KEY FINDINGS

The arena-district micro-area is a success across the three measures: land-use composition, built volume, and assessed values. However, there was a lag in arena-led urban development outcomes since the opening of TD Garden. There is far more commercial activity within the arena-district micro-area, but it has not transformed into a successful sports and entertainment district.

TD Garden opened in 1995 and was a part of the North Station and Bulfinch Triangle urban renewal plans. Had the BRA not initiated Chapter 121A exempt status to incentivize real estate developers to rehabilitate the old industrial warehouses and incite new residential development, the TD Garden arena-district micro-area's assessment values and property tax revenues would not have grown at the rate they did in the early 1990s. Moreover, the TD Garden's presence seems to have generated an impact and become the centerpiece of the development effort between 2010 and 2015, long after TD Garden's opening. In 2010, the Hub on Causeway completed its first of three phases of construction. This large infrastructure project is the last remaining development project and will likely have the greatest transformative effect on the geographic area included in the quarter-mile arena-district micro-area into a sports and entertainment district, encouraging those to live, work, and play downtown.

4.4. CLEVELAND: PROGRESSIVE FIELD AND QUICKENS LOANS ARENA

Table 24. Progressive Field and Quicken Loans Arena Rapid Notes

Arena Name	Progressive Field (MLB, formerly Jacobs Field) Quicken Loans Arena (NBA)
Owner	Gateway Economic Development Corporation
Year Opened	1994
Key Players/Organization	Cuyahoga County, Gateway Economic Development Corporation
TIF District	NULL
Total Cost of Venue (in 2018 \$)	\$373,920,000
Public Investment in Venue	\$325,310,400
Public Share of Total Venue Cost	87%

Source: Judith Grant Long, 2005

The centerpieces of the Gateway Historical Redevelopment District, Progressive Field, formerly known as Jacobs Field, and Quicken Loans Arena (previously Gund Arena), played a large role in forging development plans throughout downtown Cleveland. However, the district created by Cleveland and Cuyahoga County had no authority for real estate development. That responsibility fell to other development districts.

Cleveland, similar to so many other Rust Belt cities during the 1950s, experienced population decline and job loss to the suburbs and other regions of the country. Its fate may have been charted in the early 20th century when it made the decision to sell water to suburban cities removing an incentive for suburban areas to be part of Cleveland. The post-World War II policies of the Federal government accelerated suburban development. The population of the entire region also shrank and declines have been constant since the 1950s across all of Northeast Ohio and the Cleveland-Elyria-Lorraine MSA.

The effect of Cleveland's decision regarding water and Federal incentives for suburban development (mortgage guarantees and the interstate system) contributed to the teetering of

Cleveland's finances in the 1970s. Mayor Kucinich advocated for the redistribution of resources throughout the neighborhood-level, but city resources were limited. The banks holding Cleveland's bonds wanted the city to sell its utilities to the private sector. When the Kucinich Administration refused to sell the utility the city could not pay its bills (Perloff, 9/17/2017).

George Voinovich, who supported public-private partnerships to foster development of the downtown area³⁶, eventually replaced Kucinich. His strategy was anchored by substantial property tax abatements. Beginning in the 1980s Cleveland began to shift its reliance to an earnings tax paid by those who work in the city. Today, Cleveland collects more than \$360 million from the earnings tax and less than \$28 million from its property taxes. Every mayor since Voinovich has implemented policies to increase the earnings taxes while abating the property taxes on residential development and new commercial properties.

4.4.1 NEW ARENA NEGOTIATIONS

Despite the major renovations made to the Cleveland Brown's stadium, Municipal Stadium, situated adjacent to Lake Erie, the Browns wanted to replace the 40-year old venue. Part of the city's effort to bid for the Olympic Games, the original stadium was built in 1932 on a landfill that extended into the lake. The stadium was financed through a \$2.5 million bond. Up

³⁶ In 1982, Voinovich supported the creation of Cleveland Tomorrow, renamed the Greater Cleveland Partnership in 2004, which encouraged corporations to revitalize the central business district and support projects that coincided with the city of Cleveland's economic development agenda. Originally meant to be a temporary organization commissioned to repair damages from the 1970s under the Kucinich administration and stimulate new urban redevelopment initiatives, Cleveland Tomorrow provided approximately \$2.8 million in funding towards projects listed in Cleveland's *Downtown Development Plan* and the *Citywide Plan for 2000*. Cleveland Tomorrow played a substantial role in the redevelopment of Playhouse Square and advocating for a new professional sports facility.

until the early 1990s, multipurpose facilities were popular and cost effective; after WWII³⁷, the Municipal Stadium permanently hosted both the Cleveland Browns (NFL) and the Cleveland Indians (MLB).

In 1984, Cuyahoga County proposed a 0.9 mill property tax increase for 25 years, put up for referendum, for the construction of a new stadium for both teams. Voters rejected the proposition (2:1). Despite the public's rejection, business leaders created the Greater Cleveland Domed Stadium Corporation (GCDSC). The GCDSC borrowed \$22 million from the banks and the state of Ohio (Miller & Wheeler, 1997) in order to acquire land from the former Central Market site and raze a number of buildings for a new stadium and adjacent parking lots. The old Central Market site was selected to serve as a gateway to the downtown area.

Over several years, the original domed stadium proposal shifted directions. With the change in ownership of the Cleveland Indians to the Jacobs family and the family's intent to relocate if a new facility were not built, the former Central Market site seemed more likely to house a baseball-only facility. The GCDSC subsequently was renamed the Gateway Economic Development Corporation, and after the election of Mike White, the GCDSC's agenda was to build a ballpark and an arena³⁸, persuading the Cleveland Cavaliers to return downtown.³⁹ The arena and ballpark's total cost was expected to be \$344 million (\$715 million in 2018 dollars). Chapin (1999) provides a detailed summary of the financial estimates and lease agreements for

³⁷ Sightline restrictions are one of the biggest flaws of multipurpose facilities in addition to other design limitations. In the 1990s, it became more common for teams to advocate for single-purpose facilities that were designed specifically to the sport's needs.

³⁸ 28 acres of land that had been previously acquired by the GCDSC was allocated for the baseball stadium, a basketball arena, parking facilities, and a possible hotel on an adjacent property parcel that the Indians and Cavaliers had purchased from the Gateway Economic Development Corporation.

³⁹ The Cleveland Cavaliers moved to a team-financed and owned arena in Richfield, a suburb of Cleveland in 1974, a period when many teams were relocating to the suburban areas across the United States. The arena was built in an underdeveloped location that failed to meet expected growth expectations.

the Gateway Project. The final cost of the Gateway Project was 35% more than the expected budget (\$780 million in 2018 dollars)⁴⁰. In 1990, Cuyahoga County attempted to secure the voters' approval for a financing plan for venues, for a second time. The proposal narrowly passed, with the inclusion of a 15-year excise tax on alcohol and cigarettes.

4.4.2 SUBDISTRICT ANALYSIS

Since the opening of Jacobs Field and the Gund Arena in 1994, the adjacent area has emerged as an entertainment district. Two notable case studies have previously assessed the urban development outcomes. Chapin focused on the area contained at the southern boundary by the intersection of Interstate 70, 77, and 90; East 9th Street on the eastern boundary, excluding the Playhouse Square; Tower City on the western boundary because of its pedestrian tunnels and walkways; and parcels located south of Euclid Avenue. Rosentraub and Austrian (1997) focused on a broader section of downtown. To remain consistent with the quarter-mile impact area measurement used for the other arena-district case summaries, Cleveland's quarter-mile impact area includes areas captured in Chapin's case study, but little of the area studied by Rosentraub and Austrian. The quarter-mile area includes the following downtown districts: Tower City, Euclid/Prospect, The Flats/Oxbow South, and Ontario/9th St Gateway. These downtown districts provide some historical context that have subsequently influenced the development outcomes in the arena-district micro-area.

⁴⁰ Since the project's design had changed quite substantially, a public-private funding package was required to finance the overall project and ancillary development

4.4.2.1 Tower City

The Tower City District is a 63-acre area located between Public Square and the Cuyahoga River. The area is bounded by Superior Avenue, Ontario Street, and the Cuyahoga River. While one of the smallest and most compact of the downtown districts located within the quarter-mile micro-area, the Tower City District is a vibrant mixed-use district and the centroid of public transportation due to the presence of the Cleveland Union Terminal. The Tower City District was a bustling retail area, but experienced disinvestment in the 1960s and 1970s. The Tower City District is best known for being the first and one of the largest mixed-use projects in the United States created by the Terminal Group. The project incorporated the iconic Terminal Tower office building, Cleveland Union Terminal, Stouffer Tower City Plaza Hotel, and the Landmark Office Towers. All of these buildings were constructed in the 1920s when more than 1,000 buildings were acquired and cleared to construct the iconic Terminal Tower, a business and transportation center (Petkovic, 07/9/2010; Western Reserves Public Media, 2003).

Tower City Center is the most robust development in the district. The mixed-use complex was developed by both renovating and reusing the historic Terminal Tower and ancillary buildings. Forest City Enterprises acquired the majority of the Tower City property and produced planning designs that converted abandoned spaces within the old railroad terminal and the dilapidated retail arcade into a new shopping center. These renovations were accomplished while preserving Terminal Tower, renovating the old post office into the Post Office Plaza Office Tower encouraging more office space, and providing a foundation for an additional luxury hotel development. Tower City Center was specifically built on the railroad terminal's air rights, while the entire complex sits on 34-acres. When the *2000 Civic Downtown Development Plan* was

published in 1989, the area had 2.1 million square feet of office space within the district's four existing office buildings. The development of the Tower City Center capitalized on existing infrastructure and was used as the first project to reinvigorate activity back in downtown.

4.4.2.2 Euclid/Prospect District

The boundaries of the Euclid/Prospect District consist of Superior and Euclid Avenue to the north, Huron Road to the south, Ontario Street to the west, and 8th Street to the east. Well-known for its historic architecture, the Euclid/Prospect District is the core retail district. The Arcade, one of the most iconic buildings in Cleveland, consists of two nine-story office towers and a glass-skylight retail atrium. The Euclid and Colonial Arcades, adjacent to the main Arcade, combine office and retail space and housed a number of Cleveland's notable department stores. East 4th Street is a popular pedestrian-only corridor lined with restaurants and bars that successfully creates a concentrated but vibrant atmosphere. Many of these buildings were developed with upper level office spaces that could be renovated or converted into mixed-use apartments.

4.4.2.3 The Flats Oxbow South

Flats Oxbow is a mixed-use area of industry, warehouses, and restaurant uses. The Cuyahoga River separates the north and south sections of the Flats, with only the southern section of the Flats included in the quarter-mile arena-district micro-area. The northern, more developed section of the Flats encompasses Whiskey Island, Columbus Road Peninsula on the east bank, and the Main Avenue Peninsula on the west bank. The area is undergoing immense

change, transitioning from an area formerly dominated by heavy manufacturing and industrial use, into a mixed-use district. The Northern Flats will still retain space for wholesale and distribution firms. There is limited residential development on Flats Oxbow North⁴¹, because of the uncertainty in the zoning and conversion process of industrial properties to non-industrial use. However, some notable projects include the Nautica project, a multi-phase development project, announced in the early 1990s that consisted of retail, entertainment, and recreational use facilities on a 25-acre site directly on the waterfront. In 2014, part of the *Cleveland Downtown Vision Plan*, the Flat East Bank project was proposed to further encourage the revitalization and development of the Flats Oxbow North. The first phase has completed including an office tower, hotel, and numerous restaurants and cafes. The second phase, currently under construction, will include apartment buildings, several parking structures, and a nightclub.

The majority of the area of the Flats Oxbow South, a 246-acre site that includes the West 3rd Street Peninsula on the east bank of the Cuyahoga River, falls within the boundaries of the quarter-mile arena-district micro-area. Compared to the Flats Oxbow North District, the Oxbow South⁴² has not experienced the same pressures to engage in redevelopment activities. Although residential development within the Flats Oxbow South District is limited, the Scranton Road Peninsula's Grove Court Condominiums spearheaded plans for future residential development⁴³.

⁴¹ When the *2000 Cleveland Civic Downtown Development Plan* was published in the early 1990s, the few residential developments that existed in Flat Oxbow North included: the Old River Bend Condominiums near the Old River Road Area as well as the public housing project, Lakeview Terrace, on the Main Avenue Peninsula.

⁴² The redevelopment efforts that targeted the Oxbow South in the early 1990s was on the western bank of the district known as Scranton Road Peninsula. In this area, the first residential development constructed, the Grove Court Condominiums, was used to encourage more residential use in an area that was underutilized and unlikely to continue with industrial uses.

⁴³ The West 3rd Street Peninsula is expected to retain most of its heavy industrial uses and was therefore not included in any residential redevelopment plans in the *Civic 2000 Downtown Plan*

There is a lot of potential for future development in Flats Oxbow South with the integration of public transit along the peninsulas and downtown Cleveland. This is in part due to the public access to the waterfront and the large presence of abandoned rail lines, bridges, and rights-of-ways that provides room for new construction.

4.4.2.4 Ontario/9th Street Gateway District

The Gateway Historical Redevelopment District (managed by a separate redevelopment agency) is an area bounded by Euclid Avenue to the north, Carnegie Street and the Inner Beltway to the south, Ontario Street to the west, and East 14th Street to the east. The Gateway Historical Redevelopment District is located at the intersection of three different interstates – the 71, 77, and 90. During the early 20th century, the area had been the site of two street markets, which contributed to the overall development of wholesale food and distribution firms and cold storage facilities throughout the district. Both public and private investors often overlooked the Gateway Historical Redevelopment District until the late 1980s when Cuyahoga County proposed the Central Market site for the future sport venues. Due to the close proximity to public rail transit, the intersection of three congested highways, and the future planned development for more parking structures, the Gateway District was determined as an ideal location to fulfill the downtown economic development promises and become a gateway for the rest of downtown's development strategies. Extensive redevelopment of the area did not begin until Dan Gilbert purchased the Cleveland Cavaliers in 2005 and the Marin Company decided to redevelop East Fourth Street in the late 1990s. Yet, this work did not fully begin until the early 2000s when Cleveland created the 4th Street TIF District.

4.4.3 MAJOR DEVELOPMENT PROJECTS

Table 25. Notable completed and proposed development projects in Cleveland’s arena-district micro-area, 1990 to present.

Development Name	Project Cost	Description
List of Downtown North/West End Development Projects Completed in early 2000s		
Euclid Block Apartments	\$160,000,000	<ul style="list-style-type: none"> • Replaced surface parking lots.
Residences at 668	\$8,000,000	<ul style="list-style-type: none"> • Longtime standing vacant building transformed into a residential condominium complex.
List of Downtown Development Projects Completed in late 2000s		
Park-Southworth Building	\$4,000,000	<ul style="list-style-type: none"> • The Southworth Building, located at 2013 Ontario, across from Tower City Center and the Cleveland Horseshoe Casino, plans to be converted into a 4-story mixed-use retail-residential development. Retail will be located on the ground floor, while the rest of the building will be dedicated to 18 luxury high-end apartments. • The building originally built in 1850, was largely vacant and unused since the 1970s.
Renovation of Schofield Building (Euclid-Ninth Tower)	\$50,000,000	<ul style="list-style-type: none"> • The Schofield Building is located at East Ninth Street and Euclid Ave, across from the vacant Ameritrust complex. Historic restoration of the 1902 building was projected for 2009. Due to the use of historic material, the building qualified for federal and state tax credits, however, restoration plans were held up due to the recession. • The Schofield Building is a mixed-use commercial building, with restaurant and retail on the ground floor, and has had tenants on the upper floors deriving from manufacturing companies, advertising firms, lawyers, bankers, etc. • In 2013, Kimpton Hotels and Restaurants was interested in transforming the Schofield Building into a 122-room hotel on the top floors and 52 luxury apartments beneath the hotel. • The Kimpton Schofield Hotel opened in 2016; luxury boutique hotel-apartments are in high demand from developers based on the downtown plans for the new convention center and casino. Several of these developments were proposed in the Flats, the Warehouse District, and in the Theater District, but no proposals have entered into the next stage of construction.
AmeriTrust Complex	\$170,000,000	<ul style="list-style-type: none"> • Built in 1971, the Ameritrust complex, now referred to as the “Nine” is located on the corner of Euclid Ave and E. 9th St. • The complex included five buildings, including two parking garages, the Cleveland Trust Building, and a 29-story office tower. Much of the complex has been vacant since 1991.

		<p>Cuyahoga County acquired the property in 2005 with the intent of transforming the space into the county headquarters, which eventually fell through.</p> <ul style="list-style-type: none"> • Geis Companies acquired the property in 2013 and used HUD 108 funding to complete the \$170 million renovation, which encouraged developers to rehabilitate other vacant historical buildings throughout downtown Cleveland. • 50% of the complex's residential units are affordable housing units. The price of the unit is based on the 80% of the area's median income.
East 4 th Street Corridor	\$110,000,000	<ul style="list-style-type: none"> • The East 4th Street corridor is the site of a \$110 million 600,000 square-foot mixed-use historic development composed of 1/3 retail space and 2/3rd residential. • MRN Ltd built 322 apartments above the existing retail. • The corridor is home to restaurants, bars, a bowling alley, coffee shops, a nightclub, and a bowling alley. • It took over seven years for family-owned and operated development corporation, MRN Ltd, to acquire 12 buildings and negotiate deals with more than 250 landowners who held titles to the properties on East 4th Street to pursue the development strategy of creating a neighborhood downtown in close proximity to the sports and entertainment facilities (Schnieder, NY Times, 2009).
List of Downtown Development Projects Planned, 2016-18		
May Company Building	\$12,000,000	<ul style="list-style-type: none"> • The May Company Building on Public Square, originally a high-end department store until 1993, has sat vacant until 2017 when Bedrock Detroit, a Dan Gilbert-owned company, acquired the property for \$12 million. • Plans for the building include converting the old department store into a residential property with 300 apartments and a parking garage.
Cleveland Athletic Club Building	\$56,000,000	<ul style="list-style-type: none"> • The former Cleveland Athletic Club building on Euclid Avenue is planned to be renovated into a primary residential but mixed-use property. • The building is proposed to have 160 apartments, 8,000 square feet of retail on the ground floor, and 8,000 square feet for commercial space. • The financing for the project derives from a \$29 million bank loan, three million dollars from a county-level tax-increment financing plan, five million dollars in preservation tax credits from the state of Ohio, and \$13 million in historic tax credits.
925 Euclid Avenue	\$300,000,000	<ul style="list-style-type: none"> • The former Huntington Bank Building located at East 9th and Euclid Ave, will transform into a mixed-use development with a 300-room hotel (Hotel Curio), 600 hotel-style apartments, 200,000 square feet of retail and 400,000 square feet of office space. • Originally built in 1924, this property was the second largest building in the world in terms of square footage, holding over 30 acres of floor space. Formerly the headquarters

		<p>for a major US bank, the building was purchased in 2015 with a 92% vacancy rate for \$22 million.</p> <ul style="list-style-type: none"> • Developer from Hudson Holdings received \$25 million in state tax credits in order to complete the mixed-use development project. \$270 million was invested to revitalize the building. Construction began in 2017.
nuCLEus	\$420,000,000	<ul style="list-style-type: none"> • nuCLEus is a mixed-use development located on a site between Huron Road and Prospect Avenue. • In 2014, development corporation, Stark Enterprises, acquired four parcels and properties that were poorly maintained and vacant envisioning a new \$420 million mixed-used development for the site. • The four acquired parcels included a surface parking lot at the intersection of East 4th Street and Prospect Avenue, a vacant and dilapidated retail structure, the Harold Building to the west of Prospect Avenue, and another parking garage. • It is expected that the 2 million square-foot development will include more 150,000 square feet in retail and restaurant space, 200,000-300,000 square feet of office space, 500 housing units (600,000 square feet of residential space, a 140,000 square-foot hotel, and a parking garage to hold 1,500 cars). • The building financing plan will include public and private investments. Stark Enterprises invested \$32 million to acquire the property, while the City of Cleveland has agreed to provide a TIF bond of \$18 million and two Vacant Property Initiative (VPI) loans for the demolition of existing structures and brownfield concerns on the former parcels. The project is expected to be completed in 2018.

4.4.4 DEVELOPMENT FINDINGS

The *Cleveland's 2000 Downtown Civic Development Plan* presented broad trends that affected the development of the downtown as a whole, but also addressed the city's current needs and support for new capital improvement opportunities. Since the 1980s, there was a significant push for reinvestment in the city. *The Development Guide to Cleveland's Historic Gateway Neighborhood* (2010) explains that reinvestment within the Gateway Historic Redevelopment District is due to the establishment of three national and local historic districts, which include the East 4th Street District (established in 1987), the Lower Prospect/Huron Road (established in 1993), and the Lower Euclid Avenue Historic District (established in 2002). The purpose of this study is to highlight whether the Gateway Historic Redevelopment District⁴⁴ and the development of Progressive Field and Quicken Loans Arena, influenced the urban development outcomes within the quarter-mile of the two venues. Since Progressive Field is located on the adjacent parcel to Quicken Loans Arena, assessment values were captured in two quarter-mile areas drawn around both venues. In addition to the Gateway Historic Redevelopment District, the two districts that were partially included in the arena-district micro-area include Tower City and the Flats Oxbow South.

⁴⁴ The Historic Gateway Corporation determined the boundaries of the Gateway District.

4.4.4.1 Land Use Composition

A substantial amount of reinvestment and redevelopment has occurred since the completion of the two professional sport facilities in 1994. As of 2010, 35 buildings were restored (Historic Gateway Neighborhood Corporation). Four new buildings were in the pre-construction phase, 13 buildings were converted into five hotels, and another 18 buildings were converted into 16 residential properties. This corroborates with the parcel-level data from the last 25 years.

The land-use composition within the quarter-mile arena-district micro-area illustrates a shift parallel to the *2000 Civic Downtown Development Plan's* goals and initiatives. Table 26 provides a summary of the land-use composition in the arena-district micro-area. Between 1990 and 2015, there was a 25% increase in the number of parcels within the arena-district micro-area. Land-use counts are complicated by parcel splits and consolidations. A number of floors in a building can account for multiple individual parcels. In the case of Cleveland, there was higher concentration of building renovations and interior improvements compared to new construction. Examples of these changes include the renovations to the Euclid/Prospect District's Tower City Center and Arcade. Commercial land-use count and built volume increased due to the expansion of Tower City's retail stores, the adjacent JACK Casino, the Renaissance and Ritz-Carlton Hotel, and office space occupying the former luxury department store, Higbee Building. These additional parcels are built above the railway station's air rights. In one case of many renovation projects, the conversions to Tower City Center resulted in changes in total parcel count within the quarter-mile radius. The Arcade, a National Register of Historic Places landmark located at East 4th Street, between Euclid and Superior Avenue, once offered shops, fine dining, and office

space in the two ten-story towers. Following the completion of the \$60 million renovation in 2001, the Arcade is now home to the Hyatt Regency Cleveland, which occupies three levels of the atrium, the two office towers, boutique retail, a food court, and fine dining found on the lower levels. Parcel splits and consolidations are good indicators for infrastructure changes and the renovation of buildings for mixed-use purposes. Although the Arcade was formerly a mixed-use building, and is also the case after renovations, the land use count will illustrate shifts in the commercial subcategories. For instance, Table 26 shows that while there is a loss in retail, there is an addition of hotels and office space.

The arena-district micro-area is largely dominated by commercial properties and parking. While the total percentage of commercial properties has actually decreased by 10% over the last 25 years, commercial use still accounted for over 30% of parcel land-use. Surface parking lots and parking garages remained fairly consistent in its downtown presence as it composed an additional 30% of Cleveland's land-use. 308 Euclid Avenue may be responsible for the fluctuation in the number of parking parcels between 2000 and 2015. Prior to 2000, 308 Euclid Avenue was listed as a single retail parcel. In 2005, the assessment records indicated that 15 parcel identification numbers were associated with 308 Euclid Avenue, in which all the parcels' land-uses were dedicated to parking. In 2010 and 2015, MRN Limited Partnership's 308 Euclid Avenue became a mixed-use building consisting of 12 office parcels, two parking garages, and one restaurant. 308 Euclid Avenue is a good example of the complications that can occur when tracing parcel splits and consolidations back to their original or associated land uses.

The total percentage of industrial use in the arena-district micro-area remains consistent across the 25-years, although land area devoted solely to light and general industrial use, such as the Warehouse District, continued to decline as a percentage of the downtown's total land-use. Industrial use increased by 29% as there was a slight increase in the number of parcels from 14 to 18 over the 25 years. However, this statistic can be misconstrued, as the increase in industrial parcels was simply due to land-use categorization and the number of parcel changes that occurred within one building. Between 1990 and 2015, there was no new construction of heavy industrial buildings.

Downtown Cleveland was the office, commercial, and government center of Northeast Ohio. There was, however, a focus on residential development in other parts of the greater downtown area, such as the Playhouse Square District (beyond the quarter-mile radius). Between 1990 and 2000, only one housing development existed within the arena-district micro-area. In 2005, the residential development count increased to four developments. It was not until 2010 and 2015, that more residential developments were constructed and increased to 20 and 24 residential buildings respectively⁴⁵. From 1990 to 2015, there was a 14% compounding rate of change in residential property development in the arena-district micro-area. When considering the total arena-district micro-area's land-use, residential properties only comprised approximately 10% of all the parcels listed in the arena-district in 2015. Institutional and exempt properties had a compounding rate of change of 8%. The increase in exempt properties is due to the split and consolidation of the Flats Oxbow South large railroad parcel into 18 smaller

⁴⁵ These numbers include the number of residential building development, not the number of condominium units inside the building

municipally owned parcels as well as the assemblage of multiple parcels for the arena and ballpark. Land parcels were consolidated and multiple buildings were demolished in order to assemble the land needed for the construction of the sports complex and the adjacent parking garages.

The *2000 Downtown Civic Plan*'s objectives and goals specifically sought to increase hotel and residential development. Furthermore, financed through historic tax credits, office and retail was expected to increase through the renovations of old industrial warehouses. The Downtown Cleveland was successful in accomplishing these goals. Yet, how much of the change in land-use composition is attributable to the construction of Progressive Field and Quicken Loans Arena?

Since the opening of the two major league venues and the establishment of the Gateway Historic Redevelopment District, construction began 10 years after the venues opened and accelerated in 2015. The Historic Gateway Neighborhood Corporation claimed that the two major league venues were the reason for the increase in historic building conversions. Figure 12 highlights how property uses have changed over the last 25-years in response to Cleveland's redevelopment initiatives. The Gateway Historical Redevelopment District is dominated by commercial properties and parking. Although the figure demonstrates a gradual decrease in commercial properties overall, office, hotels, and restaurants all increased in parcel count through parcel splits. As other districts throughout downtown Cleveland, particularly the Warehouse District, the area around Cleveland State University, and the Flats Oxbow North, were similarly undergoing change, it took almost 15 years for the Gateway Historic Redevelopment District to experience any substantial change in residential development. Table

26 provides a summary count of the land-use composition in the arena-district micro-area between 1990 and 2015.

Figure 12. Percentage of land-use composition in arena-district micro-area (Gateway District), 1990-2015

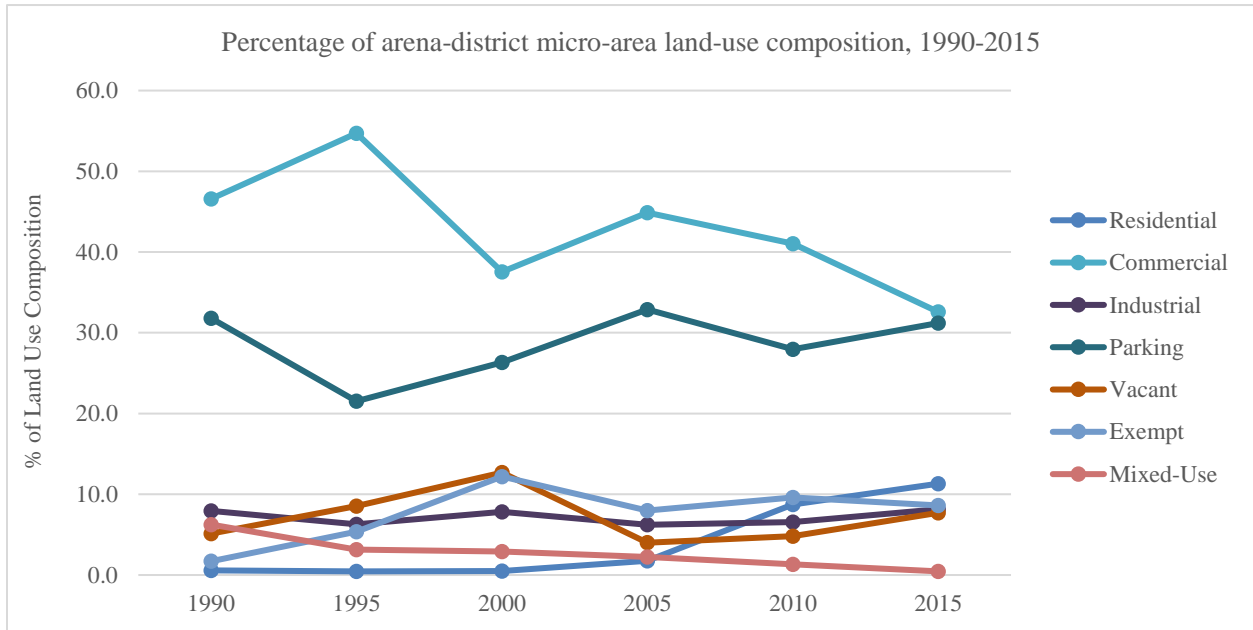


Table 26. City of Cleveland arena-district micro-area (Gateway District) land-use count, 1990-2015.

YEAR	1990		1995		2000		2005		2010		2015		1990-2015 BLDG SF % CHANGE
	LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	
RESIDENTIAL	1	0.57	1	0.45	1	0.49	4	1.78	20	8.73	25	11.31	13.74
<i>RENTER- OCCUPIED</i>	<i>1</i>	<i>100.00</i>	<i>1</i>	<i>100.00</i>	<i>6</i>	<i>100.00</i>	<i>9</i>	<i>13.85</i>	<i>33</i>	<i>34.74</i>	<i>32</i>	<i>33.33</i>	<i>14.92</i>
<i>OWNER- OCCUPIED</i>	-	-	-	-	-	-	56	86.15	59	62.11	61	62.89	0.00
<i>TOTAL CONDOS</i>	-	-	-	-	-	-	65		92		93		0.00
COMMERCIAL	82	46.59	122	54.71	77	37.56	99	44.00	94	41.05	72	32.58	-0.52
<i>OFFICE</i>	<i>22</i>	<i>26.83</i>	<i>28</i>	<i>22.95</i>	<i>32</i>	<i>33.48</i>	<i>27</i>	<i>20.45</i>	<i>61</i>	<i>52.63</i>	<i>61</i>	<i>52.59</i>	<i>4.16</i>
<i>RETAIL</i>	<i>33</i>	<i>40.24</i>	<i>28</i>	<i>22.95</i>	<i>34</i>	<i>35.57</i>	<i>50</i>	<i>37.88</i>	<i>20</i>	<i>17.54</i>	<i>20</i>	<i>17.39</i>	<i>-1.95</i>
<i>RESTAURANT</i>	<i>3</i>	<i>3.66</i>	<i>6</i>	<i>4.92</i>	<i>14</i>	<i>14.65</i>	<i>14</i>	<i>10.53</i>	<i>18</i>	<i>15.79</i>	<i>19</i>	<i>16.52</i>	<i>7.70</i>
<i>HOTEL</i>	<i>1</i>	<i>1.22</i>	-	<i>0.00</i>	<i>3</i>	<i>3.14</i>	<i>7</i>	<i>5.26</i>	<i>7</i>	<i>6.14</i>	<i>9</i>	<i>7.83</i>	<i>9.22</i>
INDUSTRIAL	14	7.95	14	6.28	16	7.80	14	6.22	15	6.55	18	8.14	1.01
PARKING	56	31.82	48	21.52	54	26.34	74	32.89	64	27.95	69	31.22	0.84
VACANT	9	5.11	19	8.52	26	12.68	9	4.00	11	4.80	17	7.69	2.58
EXEMPT	3	1.70	12	5.38	25	12.20	20	8.89	22	9.61	19	8.60	7.66
MIXED-USE	11	6.25	7	3.14	6	2.93	5	2.22	3	1.31	1	0.45	-9.15
TOTAL	176	100.00	223	100.00	205	100.00	225	100.00	229	100.00	221	100.00	0.91

4.4.4.2 Built Volume

Prior to 2000, building square footage was excluded from the Cleveland assessment records. This means the total built volume of existing buildings in the arena-district micro-area is unknown prior to the construction of the Gateway District. Since assessment values are determined by lot acreage and the building square footage, without the building square footage, verifying the accuracy of the assessment value for years 1990 and 1995, is challenging. Nevertheless, from the information that is available over the last 15 years, displayed in Table 27, the overall built volume in the arena-district micro-area increased from 4.5 million square feet to approximately 12 million square feet, a compounding rate of change of 4%. This again confirms that renovations and historical rehabilitation projects overshadowed new construction in both the arena-district micro-area and the City of Cleveland.

The presence of residential development began to increase in the arena-district micro-area between 2000 and 2015 in which the built volume increased by approximately 1.3 million square feet. Between 2005 and 2010, the built volume for residential parcels increased by one million square feet with an additional 200,000 square feet between 2010 and 2015. Cleveland's goal is to have 20,000 residents living downtown by 2020 in order to support the existing retail and office infrastructure, and to attract future amenities. Despite the late onset of residential construction since the opening of the Gateway Complex, residential units had the largest compounding rate of growth in built volume of 7% along with hotel development at a 13% compounding growth rate. By 2020, seventeen residential projects are slated for completion, five of which are currently under construction.

Between 2000 and 2015, commercial built volume increased by 4.3 million square feet with office and retail contributing 60% and 20% of the commercial built volume, respectively.

The Gateway Historic Neighborhood Corporation found that the area immediately around East 4th Street, Tower City, and Progressive Field and Quicken Loans Arena, had less office space compared to the early 1980s. The Downtown Cleveland Alliance estimated that with the use of Ohio Historic Preservation Tax Credit, downtown Cleveland converted 5.8 million square feet of commercial space into residential space from 2008-2015. The assemblage of land for the sport venues and consequent demolition of office buildings explains the reduction in office space.

Table 27. City of Cleveland's arena-district micro-area (Gateway District) built volume count, 2000-2015.

	1990		1995		2000		2005		2010		2015		2000-2015
	BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL					305,537	6.75	495,568	7.44	1,431,331	12.04	1,611,819	13.04	6.88
<i>RENTER- OCCUPIED</i>					377,156	123.44	495,568	100.00	1,077,770	75.30	1,296,264	80.42	5.06
<i>OWNER- OCCUPIED</i>					-	-	-	-	64,658	4.52	65,346	4.05	-
<i>TOTAL CONDOS</i>					-	-	-	-	-	-	-	-	-
COMMERCIAL					1,799,114	39.77	4,490,601	67.44	6,754,726	56.80	6,227,926	50.37	5.09
<i>OFFICE</i>					971,192	53.98	1,168,106	26.01	3,580,548	53.01	3,545,647	56.93	5.32
<i>RETAIL</i>					568,235	31.58	1,695,744	37.76	1,900,794	28.14	1,489,464	23.92	3.93
<i>RESTAURANT</i>					149,786	8.33	185,057	4.12	193,005	2.86	175,010	2.81	0.62
<i>HOTEL</i>					24,642	1.37	1,191,707	26.54	852,104	12.61	559,525	8.98	13.30
INDUSTRIAL					493,933	10.92	467,505	7.02	942,005	7.92	1,402,792	11.35	4.26
PARKING					900,443	19.91	803,403	12.07	1,459,806	12.28	2,179,328	17.63	3.60
VACANT					256,129	5.66	-	-	-	-	-	-	-100.00
EXEMPT					363,200	8.03	250,957	3.77	1,273,862	10.71	924,714	7.48	3.81
MIXED-USE					404,984	8.95	150,719	2.26	30,546	0.26	18,100	0.15	-11.69
TOTAL					4,523,340	100.00	6,658,753	100.00	11,892,276	100.00	12,364,679	100.00	4.10

4.3.4.2 Assessed Value

New development and changes in land-use composition has a direct impact on the parcel assessment values. Figure 13 illustrates the compounding rate of change in assessment values within the arena-district's micro-area compared to the city of Cleveland as a whole. The market value is multiplied by 35% to calculate the property assessed value. Over the last 25 years, the arena-district's micro-area had a compounding growth rate in assessment values of 4% compared to the 2% loss for the city. Between 1990 and 1995, the micro-area's assessment value compounding growth rate over the five years is 14%. The renovations of Tower City Center is largely responsible for the change in assessment values. In 2000, the assessment values within the micro-area reached its peak with a compounding growth rate of 16% between 1995 and 2000. Cleveland had a compounding growth rate of 1%. The arena-district micro-area had an 8% decrease, the largest decrease in the 25-year period in assessment valuations in 2005. Such properties were assessed prior to the economic recession, recovering back to the height of their assessment values in 2015. Cleveland also had its largest decrease in total assessed values between 2000 and 2005, a 4% decrease compared to the micro-area's 8% point decrease. Despite the plans for new office, retail, and housing infrastructure, the city of Cleveland does not display dramatic shifts in property assessment or market valuations across the 25-year period. The city, overall, displays slight shifts in compounding growth rates in assessment values in comparison to the micro area, which had on average 10% point fluctuations. Cleveland's assessment values decreased by 2% between 1990 and 1995, had a slight increase between 1995 and 2000 by 1%, and then continued to decrease in assessment values by 4% during 2005 and 2010 and 2010 and 2015. Accounting for the inflation to 2015 dollars, assessment and market values were both at their height in 1990, for both the arena-district micro-area and the city of Cleveland. The

compounding growth rate of assessment values in the micro area surpasses those from the city of Cleveland. The overall growth rate of change for assessment values is expected to be greater than the current listed in Table 30. The 2015 arena-district micro-area assessment values only recovered to 2000 values and the city's assessment values continued to decrease by 4%, despite an increase in completed and proposed residential projects in addition to the expansion of office and retail space in both locations. Cleveland's implementation of a property tax abatement program in 1987 as well as the recent economic conditions explains the assessment and market value trends displayed in Table 28 for both areas. The majority of properties within the city of Cleveland and throughout Cuyahoga County experienced a reduction in property value.

In 1987, Cleveland instituted a property tax abatement program for residential development in order to attract new investment downtown, reduce blight, and establish a stronger neighborhood atmosphere around the newly constructed downtown Gateway Complex and other entertainment amenities such as the JACK casino. Property tax abatements were used to lure developers downtown by offsetting high construction costs and lowering property prices for potential residents (Bier, 2001). New or renovated residential and office developments were constructed on vacant land or on lots where existing infrastructure was abandoned or underutilized. The majority of new residential developments or rehabilitation projects were subjected to tax abatements thus decreasing a larger percentage of the market value used to determine the parcel's property taxes. Table 29 provides the total amount of assessment and exempt value foregone from tax-abated parcels located in the quarter-mile arena-district micro-area. In 2015, \$38.6 million in assessment values and \$353.5 million in exempt property values were either foregone or went uncounted in calculating the total amount of property tax generated within the arena-district micro-area. Foregone property taxes from the exempt properties mainly derive

from Progressive Field, Quicken Loans Arena, the Greater Cleveland Rail Transit Association in Tower City Center, and railway parcels located in Flats Oxbow South. In 2015, there were 16 tax-abated properties, eight of which were residential developments. Of the total residential parcels, including condominiums, located in the arena-district micro-area, 70% of the parcels are tax-abated properties. The amount of revenue that is returned to the city and allocated towards public services is impeded due to the substantial amount of property tax foregone within the arena-district micro-area.

Figure 13. Compounding rate of change in assessed value in the arena-district micro-area (Gateway District) vs. city of Cleveland, 1990-2015.

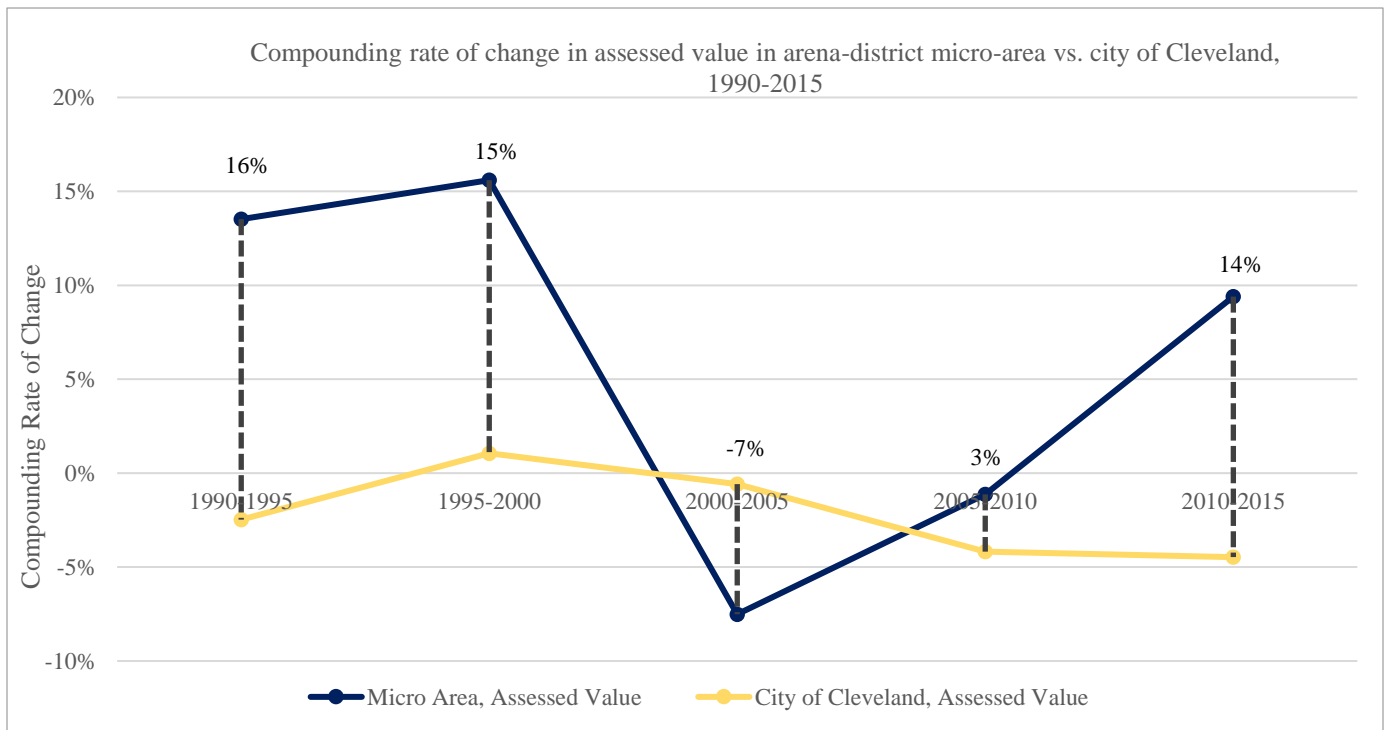


Table 28. Exempt and abatements values foregone in the arena-district micro-area (Gateway District), 2000-2015.

	2000	2005	2010	2015
Exempt Total Property Value	271,224,500	380,077,900	384,668,700	353,422,700
Exempt Land Value	31,514,500	31,836,400	32,334,000	21,474,100
Exempt Building Value	237,430,500	348,241,500	352,334,700	331,948,600
Abatement Total Property Value	-	16,322,400	29,634,200	38,642,800
Abatement Land Value	-	-	-	1,323,200
Abatement Building Value	-	16,322,400	29,634,200	37,319,600

4.4.4.3 Property Tax

Property tax information for this study was calculated using the tax rates listed in Table 29. The property tax formula listed below is a slightly different calculation compared to the standard calculation used for property taxes in the other city case summaries. Rather than simply multiplying the assessment value by the tax rate, Cleveland also includes a land-use credit rate. The taxable value is 35% of the market value. In Cuyahoga County, real property is reappraised every six years.

Property Tax

$$= (((\textit{assessed value})/1,000) * \textit{tax rate}) - (((\textit{assessed value})/1,000)) * \textit{tax rate}) * \textit{land use credit rate})$$

Tax reduction factors or specific tax credits are used to eliminate inflationary revenue growth that result from increases in property values during reappraisals. Tax reduction factors are applied to millage rates for real property. In 1990, voters approved a constitutional amendment that elected for separate reduction factors applied to two real property classes. Class One includes residential and agricultural property and Class Two includes all other real property.

From 1990-00, assessment values were multiplied by tax credits based on whether the parcel was a commercial, industrial, or residential property. This type of computation was used to shift the tax burden to property classes that were experiencing the greatest levels of inflation. The tax reduction credit is most well known as the HB 920 reduction tax rate. From 2005 to present, the 920 reduction rate is applied to each parcel which is then multiplied by the assessed value to calculate the amount of tax that is assigned to the property for that year. The tax credits are used to limit tax growth. Property taxes should not increase with the appreciation in property values simply due to inflation rates. To determine the appropriate tax rate used by each taxing jurisdiction, a public vote should be provided based on the area’s needs and availability of current public services. The tax credits are designed to maintain stable tax revenues when there are fluctuations in property values. This, however, freezes revenues for local governments when property values continue to inflate (Ohio County Commissioners, 2014).

Table 29. City of Cleveland tax rates and tax credits, 1990-2015.

Year	Tax Rate	Residential Credit	Commercial & Industrial Credit
1990	80.2	0.267388	0.154158
1995	80.4	0.361214	0.20804
2000	93.5	0.373593	0.226175
Effective Millage Rate			
2005	102.6	0.169755	
2010	102.7	0.209934	
2015	119.73	0.149309	

Property tax revenues within the arena-district’s micro-area grew at a compounding rate of 8% while the city of Cleveland had a depreciating compounding growth rate of 2%.

Cleveland’s property values plummeted overall due to the economic recession, which subsequently impacted the collection of property tax revenue. Figure 14 illustrates the property

tax compounding rate of change between the arena-district micro-area and the city of Cleveland. Cleveland's property tax revenue between 1990 and 2015 depreciated by 32%. Between 1990 and 1995, the property tax decreased by 11%, had a slight increase of 3% from 1995-00. Between 2000 and 2005, the city of Cleveland's overall property tax revenues decreased by 16% largely because of the depreciation in the city's property values overall. Since the assessment values plummeted between 2000 and 2010, it is not surprising the same occurred with the property tax values. While the arena-district's micro-area had a 33% compounding rate of change between 2010 and 2015, Cleveland's overall property tax revenues had a 3% compounding rate of depreciation.

In the arena-district's micro-area, there was a percentage change of 56% in property tax revenue (1990-95), followed by 14% (1995-00) and 36% (2000-05). Following the economic recession, the property tax revenues in the micro-area decreased by 7%. While the assessment values and property tax revenues within the arena-district micro-area compose only 2% of the city of Cleveland's assessment and tax revenues, the micro-area had a property tax compounding growth rate of 33% between 2010 and 2015 compared to the city of Cleveland, which had a depreciating growth rate of 36%. Figure 14 illustrates that the arena-district micro-area was impacted more substantially by a small number of new development projects than the city as a whole as it had a greater compounding rate of change in property taxes than the city of Cleveland. Some of the projects that have impacted the arena-district micro-area's property values, and accounted for a \$25 million difference in property values between 2010 and 2015 include:

- 1) In 2015, the property value of the Jack Casino parking garage with an attached skywalk increased from \$170,000 in 2010 to \$1.5 million in 2015.
- 2) Transformed into a new office building from originally a vacant commercial lot owned by the city of Cleveland's Port Authority the lots' property taxes increased to \$100,000 in 2015 from making no property tax payments in 2010.
- 3) Compared to 2010, a number of abated retail parcels and the addition of the parking garage located in Tower City Center accounted for \$3 million in property tax revenue in 2015.
- 4) The improvements and renovations to the Higbee Building at 100 Public Square increased the property's assessment value from \$11 million in 2010 to \$93 million in 2015. This generated an increase of \$2.4 million paid property taxes.
- 5) The parcels assembled for the 2-story office building for Sherwin William Development Corporation at 101 Prospect Ave accounted for the \$600,000 difference in property taxes.
- 6) The Amitel Colonial property at 530 Euclid Avenue had a \$100,000 property tax revenue difference between 2010 and 2015.

Figure 14. Compounding rate of change in property taxes in arena-district micro-area (Gateway District) vs. city of Cleveland, 1990-2015.

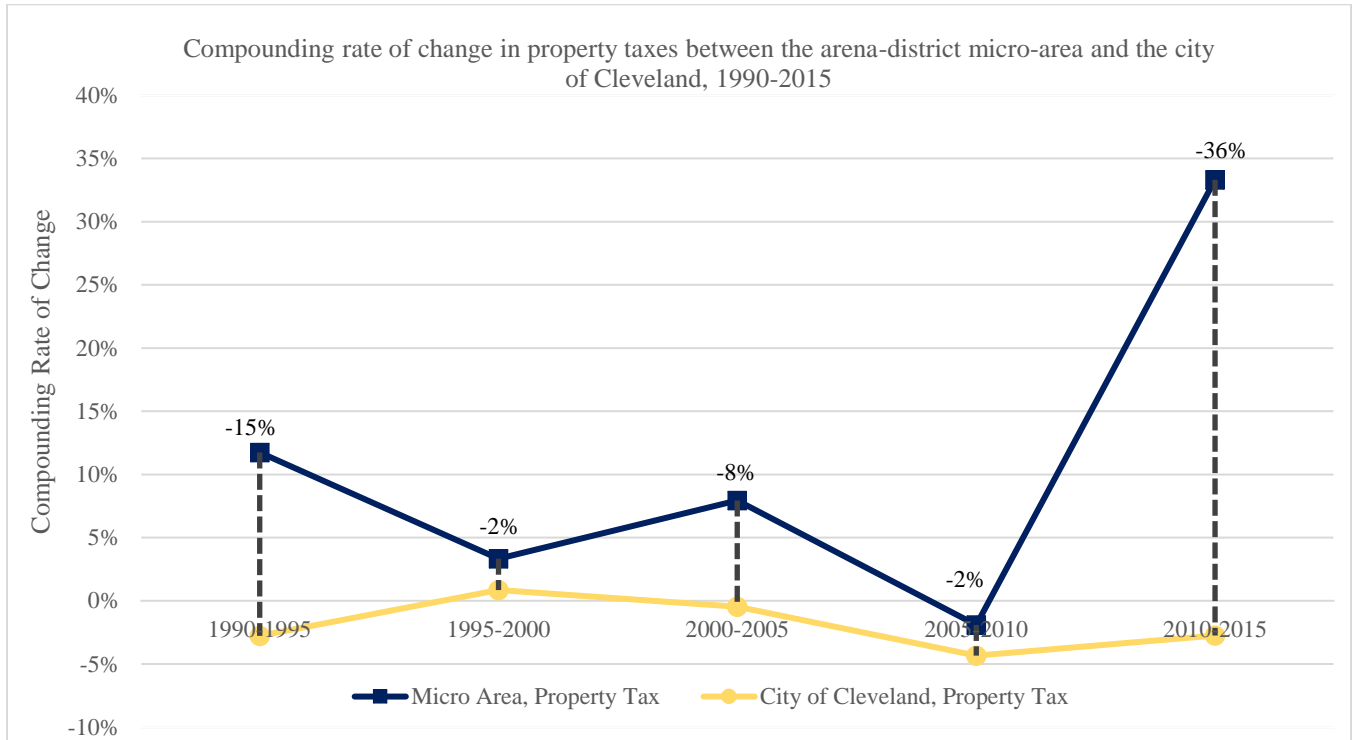


Table 30. City of Cleveland's arena-district micro-area assessment, market, and property tax values, 1990-2015.

	1990	1995	2000	2005	2010	2015	1990-2015
GATEWAY DISTRICT (PROGRESSIVE FIELD/QUICKEN LOANS MICROAREA)							
LAND AREA (sf)							
BUILT AREA/VOLUME (sf)							
TOTAL ASSESSED VALUE	45,101,518	92,552,075	174,183,660	142,551,115	148,262,310	228,924,220	6.71
TOTAL ASSESSED VALUE (2015 \$)	77,083,739	128,014,726	228,591,170	167,265,033	159,790,199	228,924,220	4.45
ASSESSED LAND VALUE	17,035,809	23,468,088	75,460,963	77,070,210	74,274,340	110,764,675	7.78
ASSESSED BUILDING + IMPROVEMENTS	30,898,595	70,572,313	102,692,923	65,481,115	73,987,970	118,159,545	5.51
TOTAL MARKET VALUE	128,861,480	264,434,500	497,667,600	407,288,900	423,606,600	654,069,200	6.71
TOTAL MARKET VALUE (2015 \$)	220,239,253	365,756,360	653,117,630	477,900,093	456,543,426	654,069,200	4.45
TOTAL MARKET LAND VALUE	48,673,740	67,051,680	215,602,750	220,200,600	212,212,400	316,470,500	7.78
TOTAL MARKET BUILDING VALUE + IMPROVEMENTS	88,281,700	201,672,980	293,408,350	187,088,900	211,394,200	337,598,700	5.51
TOTAL TAX	3,059,530	5,893,122	7,078,941	10,742,544	10,826,859	21,563,255	8.12
TOTAL TAX (2015 \$)	5,229,093	8,151,156	9,290,099	12,604,966	11,668,684	36,854,110	8.12
CITY OF CLEVELAND							
TOTAL ASSESSED VALUE	4,472,873,000	5,001,303,000	5,497,881,000	6,007,614,000	5,513,219,000	4,948,114,000	0.40
TOTAL ASSESSED VALUE (2015 \$)	7,644,658,810	6,917,622,263	7,215,182,616	7,049,148,032	5,941,888,317	4,948,114,000	-1.72
TOTAL MARKET VALUE	13,162,512,000	14,332,277,000	16,032,610,000	17,562,614,000	15,349,618,000	13,588,835,000	0.13
TOTAL MARKET VALUE (2015 \$)	22,496,259,859	19,823,889,584	21,040,507,962	20,607,426,827	16,543,096,848	13,588,835,000	-2.00
TOTAL TAX	55,402,174.00	61,161,211	66,686,339	73,187,031	66,729,327	64,338,822	0.60
TOTAL TAX (2015 \$)	94,688,742	84,595,985	87,516,284	85,875,393	71,917,732	64,338,822	-1.53

4.4.4 KEY FINDINGS

The arena-district micro-area is a success across the three measures: land-use composition, built volume, and assessed values. However, there was a lag in arena led urban development outcomes. The arena-district micro-area has transformed into a successful sport and entertainment district, but the sports complex itself may not have affected the urban development outcomes and infrastructure changes.

In the 1980s, the plans to build a sport and entertainment district in downtown Cleveland, unfolded. This was in response to Cleveland's administration, which at the time was in strong opposition of private investment and championed urban populism. The 28 acre-site for Progressive Field and Quicken Loans Arena was assembled in anticipation of building a sports complex that would become a symbol and gateway to the rest of downtown Cleveland. Opened in 1994, the Gateway Complex cost approximately \$375 million (2018 dollars). The public sector financed 87% of the two facilities. Downtown development in the Gateway Historic Redevelopment District would mostly likely not have occurred at the rate that it did without the construction of venues, tax exemptions, and the approval of tax abatements. In the 1980s and 1990s, the height of property assessment values and property taxes was actually higher than after the construction of Historic Gateway. This is because there was a greater concentration of office buildings in the area prior to vacating the land for the pre-construction phase of the two sport venues. Following the opening of Gateway, proposals were signed for the rehabilitation of several buildings downtown. Yet, new residential development was essentially non-existent until after the economic recession. Moreover, as quite a few larger development projects were

designated as tax abated property parcels, a large portion of the assessment values and property tax revenues went uncollected. Although the arena district was an overall success in urban development outcomes calculated across the three measures, since the new development occurred much later compared to when the Gateway Complex opened, the success of the arena-district micro-area may not be attributable to the professional sport facilities themselves.

4.5 TAMPA BAY: AMALIE ARENA

Table 31. Amalie Arena Rapid Notes

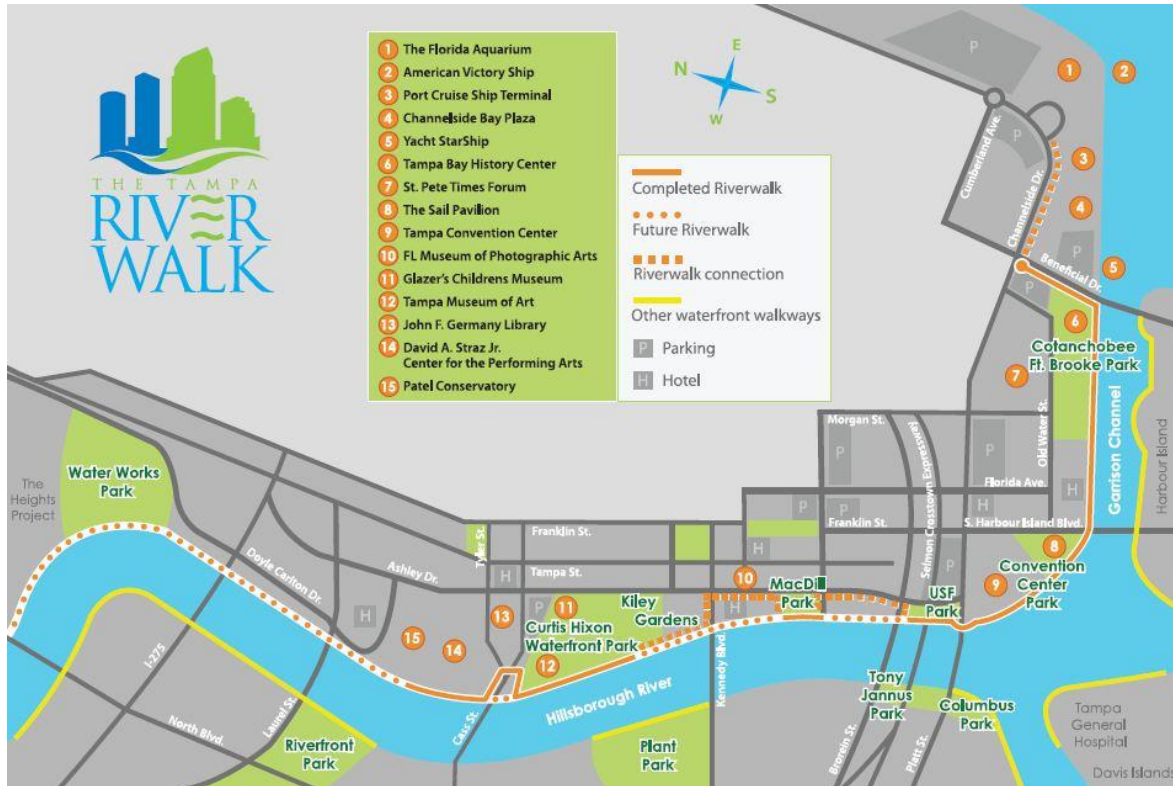
Arena Name	Amalie Arena
Owner	Strategic Property Partners
Year Opened	1996
Key Players/Organization	Hillsborough County; Tampa Bay Sports and Entertainment LLC
TIF District	Yes
Total Cost of Venue (in 2018 \$)	\$246,240,000
Public Investment in Venue	\$169,905,600
Public Share of Total Venue Cost	69%

Source: Judith Grant Long, 2005

Downtown Tampa was an industrial dead zone and had been in decline for decades. The waterfront remained uninviting and inaccessible from office buildings located in the downtown core, offering little open space throughout the city. In the early 1990s, the Tampa mayor acknowledged that the city “blocked the views, blocked the access, and did everything in reverse of what you want to do when you have a river or any amenity” (Danielson, 06/15/2017). Prior to the 1990s, few resources had been invested in creating safe pedestrian walkways, bike lanes, and public art displays, nor established a vibrant “after-work hours” culture. Moreover, Tampa lacked residential units and was limited in its retail offerings. In an effort to reinvent downtown, Hillsborough County and Tampa invested more than a half billion dollars in development projects. Along the waterfront, Tampa and Hillsborough County initiated several large-scale

development projects to begin the area's redevelopment process. This began with the Tampa Performing Arts Center located north of the Curtis Hixon Waterfront Park in 1987, followed by the Tampa Convention Center in 1990, then the Florida Aquarium on the edge of Channel District in 1994, the Amalie Arena (formerly the St. Pete Forum) in 1996, and the Tampa Bay History Center in 2009. Channelside Plaza and the enhancements to the cruise ship terminal and supporting retail ensued. The 2.5-mile Riverwalk slowly interconnected these public projects along with seven parks and a number of hotels and restaurants. The Riverwalk project was first initiated in the 1970s but was not a priority until the election of Mayor Iorio (Manning, 2006). By 2006, five of the 21 segments were completed, beginning with the Cotanchobee Fort Brooke Park, located behind the Amalie Arena. In 2016, all 21 of the public access segments were connected as displayed in Figure 15. While large public infrastructure projects, such as the Amalie Arena and the Riverwalk, were utilized as anchors for surrounding development, Tampa's comprehensive plans did not include the professional sport facility as part of the city's economic development agenda nor established a sports and entertainment district along the waterfront. It was only through private investment and foundation of Strategic Property Partners 20 years later, that an intentional urban development initiative and new urbanism movement occurred.

Figure 15. Tampa Downtown Riverwalk



Source: Downtown Riverwalk Association (2012)

4.5.1 NEW ARENA NEGOTIATIONS

In the late 1980s, the National Hockey League (NHL) announced that it would expand. It was originally proposed to build an arena near Tampa Stadium on land owned and operated by the Tampa Stadium Authority (TSA). The new franchise's owners chose to build a new arena south of downtown Tampa, on the border of Channel District. Arena construction broke ground in 1994 and the facility officially opened in 1996. Hillsborough County owns the Amalie Arena, formerly known as the Ice Palace (1996-02), later referred to as the St. Pete Times Forum (2002-12) and then the Tampa Bay Times Forum (2012-14). Although Hillsborough County owns the

arena, it leases the property to the TSA⁴⁶, who then in turn leases the arena back to the Tampa Bay Lightning, who operate the facility.

In 2010, former Fidelity Magellan hedge-fund manager, Jeff Vinik purchased the Tampa Bay Lightning for \$170 million⁴⁷. Vinik's purchase of the Tampa Lightning not only turned around a struggling franchise into Stanley Cup contenders, but his desire to integrate the professional sports franchise within the fabric of the Tampa community led to a \$3 billion redevelopment agenda for downtown Tampa.

4.5.2 SUBDISTRICT ANALYSIS

The Hillsborough County's *Imagine 2040 Comprehensive Plan* for Tampa (2016), and Tampa's *Downtown Vision and Action Plan* (2005) and *Community Redevelopment Plan* (1988) outline collaborative growth and economic development efforts to reinvent Tampa's troubled identity. Over the past 30 years, Tampa and Hillsborough County have invested a substantial amount of public money to transform the central business district. Several projects were integral in the efforts of re-inventing downtown Tampa's bleak city image. A residential condominium boom would bring new life to downtown and subsequently the influx of necessary amenities of retail options, restaurants, and grocery stores.

⁴⁶ In 1965, the TSA was created as an independent special district, designated under Chapter 65-2307, to develop and maintain sports and recreational facilities throughout the Tampa Bay region (Raymond James Financial, 2016)⁴⁶. The TSA manages the Raymond James Stadium, home of the Tampa Bay Buccaneers (NFL), the former Tampa Stadium, three city golf courses, George Steinbrenner Field (formerly Legends Field, the spring training facility for the New York Yankees), and formerly the Amalie Arena. The TSA's affiliation with and financing support from Tampa and Hillsborough County made it possible to complete these major capital construction projects. Subsequently, these sport and recreation-focused capital construction projects would further facilitate Tampa Bay's future economic development agenda.

⁴⁷ Two years prior to Vinik's purchasing the Tampa Bay Lightning, the team sold for \$220 million. Vinik was able to take advantage of an undervalued asset (Danielson, 2017).

When Vinik purchased the team in 2010, he not only gained control over the publicly owned arena but also ownership over two parking lots (approximately 5.5-acres) on either side of the arena. As soon as the team's competitiveness was secured, Vinik sought out key development opportunities to integrate the team with his community development efforts. Over the course of the next several years, Vinik continued to purchase multiple parcels surrounding the arena as they appeared on the market. Despite the residential development boom in the Channel District, little development took place near the Amalie Arena. Vinik recognized the ample development opportunities downtown along the Riverwalk, and continued his \$60 million parcel assemblage that amassed more than 50 contiguous acres. Since the mid-2000s, there has been a gradual transformation of downtown Tampa with a chain of new developments, some that have been recently completed, and others that are planned or under construction. This has brought new energy and activity to the area, but nowhere near the scale of private real estate investment that Vinik has recently proposed. Tampa's resurgence could potentially be realized through one of the most ambitious privately funded real estate projects to date. The formation of Strategic Property Partners, Vinik's new partnership with Cascade Investment, a private capital fund created by Microsoft founder, Bill Gates is set to underwrite Water Street Tampa, a \$3 billion multi-use development on 16-acres adjacent to Amalie Arena. The public sector would be responsible to redo the street grid.

In the mid-1980s and early-1990s, vacant properties and an unoccupied waterfront defined Tampa's downtown core, including the Channel District. The opening of the Tampa

Convention Center⁴⁸ in 1990 spurred new private investment in condominium projects and retail space. Tampa's city image as a place to live, work, and play was reinvented by the condominium boom in Channel District and the city's decision to leverage its premium real estate with access to undeveloped lots along the waterfront. In combination with other public development projects along the 2.5-mile Riverwalk, the Amalie Arena inadvertently assisted in the city's economic growth. That said, the Amalie Arena opened in 1996 and it was not until the Strategic Property Partners' unveiling of Water Street Tampa that any sizeable amount of new urban development occurred in the area surrounding the arena. For the purpose of this study, the quarter-mile arena district area includes a portion of the southwestern edge of Channel District while the newly announced Water Street District extends into other parts of the downtown area (and towards the Ybor neighborhood).

Prior to the Hillsborough County's *Imagine 2040 Comprehensive Plan* for Tampa (2016), the last adopted master plan for Downtown Tampa was in 1995. In the 1990s, a limited vision or comprehensive plan was developed for the downtown Tampa. Since then, various plans have targeted certain areas similar to the Channel District. Large public infrastructure projects, such as cultural venues and professional sports facilities, were built without a strategy that would facilitate a comprehensive community vision.

Over the past 25 years, Tampa has identified a number of opportunity areas where infill development is necessary. Redevelopment in such areas is dependent on market forces and public intervention. Since the mid-2000s, the city has been subject to a considerable amount of

⁴⁸ According to the City of Tampa Comprehensive Annual Report (1990), the construction of the Tampa Convention Center cost approximately \$275 million (in 2018 dollars), including land acquisition.

change and transition through two types of redevelopment strategies. In some areas, there is evidence of market-driven redevelopment that the city or county targeted as key sites (e.g., Channel District). In other areas, small revitalization efforts occurred parcel by parcel. Finally, in an unprecedented fashion, entire sections of downtown were proposed for residential development that were leveraged through ambitious private development efforts. Strategic Property Partners has been the strategic force behind the early planning stages of Water Street Tampa.

4.5.2.1 Downtown Core Area

Downtown Tampa began as an industrialized zone and in the 1980s experienced its first wave of office development. Although Water Street Tampa is yet to be constructed, the district will support the construction of the first new office buildings in the area since the early 1990s. The hospitality market was strengthened in the 1990s with the addition of the Tampa Convention Center and the need for new or renovated hotels. One important goal for the revitalization of downtown includes offering a greater variety of hotels at different price points to create greater linkages between the convention center and other public projects such as the Amalie Arena. Although the Tampa Performing Arts Center and the Amalie Arena contributed to the city's cultural and sport and entertainment sector, supplemental retail development was relatively weak. Harbour Island created a small retail and entertainment center that catered to the needs of island residents and tourists staying in nearby hotels. Opened in 2001, the Channelside Bay Plaza was the only major retail center located in the Channel District and in the downtown area. The outdoor shopping and restaurant plaza was designed as a space for the few local residents already living downtown, the tourists and convention visitors staying in the downtown hotels, and the

cruise ships docking at the Channel District terminal. The shopping plaza, however, was unsuccessful and many retail establishments were replaced by restaurants. In addition, the street grid and lack of safe pedestrian walkways created a sense of isolation. In 2014, Strategic Property Partners acquired the retail complex with a \$10 million bond payment to the port and by 2016, the Channelside Bay Plaza sat 70% vacant (Griffin, 09/20/2016). While redevelopment plans to raze the entire complex and replace it with new waterfront condos, restaurants, and a park on the current property parcel are further negotiated, Strategic Property Partners' plan is to engage the area with pop-up restaurants and stores on a temporary basis (Griffin, 09/20/2016).

4.5.2.2 Harbour Island

Harbour Island, formerly Seddon Island, lies south of the Garrison Channel. While separated from the arena, Harbour Island is included in the analysis because it lies within the quarter-mile radius of the arena-district micro-area and despite the natural water boundary, the area is still well connected. The Tampa Downtown Partnership launched a new shuttle service that offers free rides⁴⁹ anywhere within the downtown district, which spans from the northern end of Harbor Island to Interstate 275, and from the University of Tampa area to the Channel District (Dawson, 10/21/2016).

Once a transport and docking station for rail and sea transport, Beneficial Corporation envisioned a major land-use shift on Seddon Island from heavy manufacturing and industrial to

⁴⁹ The shuttle service operates similar to Uber or Lyft in which users request rides from certain locations and indicating the number people in their party. There are currently 12 electric shuttles that are in operation and will continue to operate based on funds from the Tampa Downtown Partnership, the City of Tampa, and the Florida Department of Transportation. (Dawson, 10/21/2016).

high-rises. Beneficial Corp's real estate subsidiary company, Harbour Island Inc., invested millions into the island's infrastructure. In 1985, a \$160 million festival-marketplace complex with Harbour Island Hotel; the One Harbour Place, an office tower; The Shops, a retail and restaurant center; and residential condominiums were proposed for the northern tip of Harbour Island. This complex would be a part of a \$1 billion joint venture between Harbour Island Inc. and Dallas-based company, Lincoln Property Co., to develop the 177-acre island. After enduring two economic recessions which tremendously impacted the real estate market at the time, Beneficial Corp. began subdividing the island into smaller parcels and selling them off to developers for houses, apartments, and condominium complexes. Trammel Crow built Island Walk Apartments, a 272-unit rental development, in 1991, and was one of the most successful real estate development projects on the island (Ossorio, 07/02/1991)⁵⁰. In 1998, with a stronger residential market downtown, Atlanta-based developer, Post Properties Inc., planned to develop a \$20 million apartment complex, Post Harbour Place, which includes, 210 apartments and townhomes, that caters to young professionals, business people, and empty-nesters who are able and willing to pay a premium for a more luxurious lifestyle⁵¹. Harbour Island began the residential development building boom, which preempted the infrastructure and land use changes in the Channel District.

⁵⁰ The sale of the Island Walk Apartments set a new record for Tampa; each unit sold approximately for \$100,000 (\$187,000 in 2018 dollars).

⁵¹ The strategy of Post Properties Inc. is to develop upscale apartment complexes in high-density areas where there is little competition. Harbour Island provides that type of environment and empty canvas to develop a number of new residential complexes (Gruss, 01/31/1997).

4.5.2.3 Channel District

The Channel District, located along the eastern edge of the central business district, is bounded by the Nuccio Parkway and Selmon Expressway to the north, the Ybor Channel to the east, Channelside Drive and the Channelside Bay Plaza along the Garrison Channel to the south, and the North and South Meridian Avenue to the west. Located along the Ybor and Garrison Channels, the district development has been influenced by the port's activity, and has become one of Tampa's emerging downtown neighborhoods. In analyzing the urban development impact and outcomes surrounding a quarter-mile radius of the Amalie Arena, a portion of the Channel District is included in the analysis.

Channel District was first developed in the 1920s for shipping and marine services. Similar to the rest of downtown Tampa, the area went into decline and remained inactive during the 1980s and 1990s. In 2002, Channelside was designated as a Community Redevelopment Area (CRA) in order to attract private investments including higher density residential and mixed-use projects. A TIF district was created to facilitate revitalization. The CRA will promote further construction of necessary public infrastructure and support public and private ventures within the emerging neighborhood. In 2005, Tampa created the *Strategic Action Plan* for the Channel District to target the needs of the area, provide the improvements needed for new infrastructure, maintain the momentum of development activity within the area, and recognize the development pattern of the area while ensuring that both private and public development design needs are met. Channel District has remained underutilized for over 20 years, but after its designation as CRA, the *Strategic Action Plan* forecasted that the residential developments would reshape the entire district and be supported by the public facilities such as the Port, the

Florida Aquarium, and the Amalie Arena. Since 2005, it was estimated that over the next 20 years, 12 million square feet of new development would be built.

In 2005, Channel District had the strongest real estate market of all the districts downtown. Residential development in the area was slow to penetrate the market in Channelside, however, the construction of the Florida Aquarium has helped anchor 12 residential developments that were under construction in the mid-2000s.

4.5.2.4 Water Street District

Tampa Bay Lightning owner, Jeff Vinik assembled more than 53 acres of land and envisioned a complete transformation of downtown Tampa. Water Street Tampa is expected to be a \$3 billion multiuse district that extends across 16 blocks around the downtown waterfront.

Water Street Tampa is located across from Harbour Island on Hillsborough Bay and the Garrison Channel. Since 2016, millions were invested in road, water, and sewage work in order to transform the street grid to incorporate more walkable and bikeable streets and create a more functional street network. Water Street Tampa is bounded by Channelside Drive, E. Cumberland Avenue, S. Meridian Ave, and S. Morgan Street. Old Water Street, which runs directly through the middle of the development area, will become the nucleus of the neighborhood brimmed with retail, restaurants, and open spaces. Seventeen buildings are proposed, ten are to be completed in the first development phase. Phase One of Water Street will begin in the summer of 2018 with 3.5 million square feet of construction costing over \$1.5 billion (Danielson, 2018). Some of the proposed projects include two new four-and-five-star hotels including the JW Marriott, more

than 2 million square feet of office space -- the first new office buildings that will be built in downtown Tampa in over 25 years, 3,500 new apartments and condominiums, and one million square feet of retail, restaurant, and entertainment space. Additionally, the \$164.7 million University of South Florida Morsani College of Medicine and Heart Institute will be built adjacent to the Amalie Arena along with an office building that will specialize in health-related businesses. The development of Water Street Tampa is projected to be completed by 2027.

4.5.3 MAJOR DEVELOPMENT PROJECTS

Table 32. Notable completed and proposed development projects in Tampa’s Amalie Arena district micro-area, 1990 to present.

Development Name	Project Cost	Description
List of Downtown Development Projects Completed in early 2000s		
Island Walk	\$59,200,0000	<ul style="list-style-type: none"> • Originally built as apartment buildings, Island Walk Apartments opened in 1991 with 272-units. • The condominium boom in downtown Tampa began in 2000 with the renovations of Island Walk and Island Place on Harbour Island from apartments into condominiums. • All 516 units within the two buildings were sold in less than two years.
ParkCrest (Harbour Island)	(not disclosed)	<ul style="list-style-type: none"> • ParkCrest, opened in 2005, is located along the Garrison Channel on Harbour Island. • Structure was originally planned as an apartment complex, however, with the condominium boom in the early 2000s, the developer, CKT Development Co., decided to focus on condominiums instead. The reasoning behind this was that at the time, apartment developers were unable to compete with condominium and townhome developers for the land prices. • The building is nine stories with 335 residents with approximately 41-49 units per floor. • As the rest of the country experienced a downward slump in the real estate market during the economic recession in the late 2000s, many of the condominium owners of ParkCrest foreclosed on their properties as they could no longer afford the monthly maintenance fees.
Post Harbour Place	(not disclosed)	<ul style="list-style-type: none"> • Post Harbour Place, located on Harbour Island, was built in 1998 as one of Tampa’s first residential properties. • In 2006, 206-apartments at Post Harbour Place were converted into condominiums through tax subsidies. The remaining 550 units will remain as apartments.
Harbour Island Grandview Apartments	\$27,000,000	<ul style="list-style-type: none"> • In 2001, Byrd Corp built Grandview, a 64-unit condominium complex on Harbour Island; 60% of the condominiums were pre-sold. • The apartments are located just along the Garrison Channel. The complex is walking distance to the Amalie Arena and the Florida Aquarium, and offers a special waterfront amenity of boat slips.
List of Downtown Development Projects Completed in late 2000s		

The Plaza at Channelside	\$200,000,000	<ul style="list-style-type: none"> • Opened in 2001, Channelside at Garrison Seaport, later renamed as the Plaza at Channelside was built as an entertainment complex that houses various retail tenants, restaurants, and a movie theater right along the waterfront. • In 2003, 3/4th of the complex was occupied, yet this did not last long. Over the last several years, the Plaza at Channelside was exposed to financial difficulties as the complex slowly lost restaurants and shops as tenants could no longer afford the rents and mortgages. • The complex fell into foreclosure until Jeff Vinik of Strategic Property Partners purchased the complex in 2015 in order to convert the parcel into a mixed-use lifestyle center. The plan is to demolish the current complex and convert the area into luxury residential units while also offering an ample amount of office and work space.
The Towers at Channelside	\$93,000,000	<ul style="list-style-type: none"> • Built between 2005 and 2007, the Towers of Channelside is a \$93 million, 260-unit project on North 12th Street just north of Channelside Drive. The complex is two 28-story towers and has four parking levels.
List of Downtown Development Projects Planned, 2016-18		
Water Street Tampa	\$3,000,000,000	<ul style="list-style-type: none"> • Water Street Tampa is a \$3 billion “wellness district” proposed by Strategic Property Partners that will include new residential, office, and medical development in downtown Tampa. • The first proposed residences (815 Water Street) will be part of a larger mixed-use project. This will include twin towers and a ground floor grocery store and will sit at Channelside Drive and Water Street at the entrance of the Tampa Riverwalk. • One of the towers will be a 26-story condominium tower while the other will be a 21-story rental tower. Both of these towers will share a green roof that will promote green infrastructure and sustainability. • 815 Water Street is the first residential development that has been proposed in downtown Tampa in more than a decade. It will be the first building of many to occupy the 53-acre Water Street Tampa district. • Projected to begin construction in 2018, the first tower is proposed to be completed by 2020.

4.5.4 DEVELOPMENT FINDINGS

The southwesterly portion of the Channel District, the northern tip of Harbour Island, and the southern tip of Tampa's central business district are captured in the Amalie Arena quarter-mile arena-district micro-area. While it was proposed that the arena would play a role in the redevelopment of downtown Tampa, until the largely privately financed Water Street District proposal in 2016, there was little immediate development in the quarter-mile surrounding the arena. The analysis for this research study captures the changes in land-use composition and assessment values six years prior to the opening of the Amalie Arena through 2015.

4.5.4.1 Land Use Composition

The 1983 *Community Redevelopment Plan for the Downtown Community Redevelopment Area* by the Community Redevelopment Agency outlines the need to coordinate and facilitate public and private redevelopment of portions of Tampa's central business district and provides a framework to guide development downtown generating a stronger commercial and residential base by 2000. While outdated, this plan verifies the type of redevelopment that was proposed for the two designated redevelopment areas in the CBD to be accomplished by the early 2000s, against the parcel-by-parcel land-use composition analysis conducted from assessment records between 1990 and 2015. Hillsborough County and Tampa have produced a few planning documents regarding redevelopment initiatives, however, none of these plans have been as comprehensive in detailing the development initiatives as outlined in the 1983 plan in the areas that are targeted in the arena-district micro-area over the past 20 years.

The Tampa City Council and the Community Redevelopment Agency declared that Areas I and II of the Tampa CBD, illustrated in Figure 16, are blighted cores areas; parcels are vacant and the properties are underutilized and thus, incapable of contributing to a vibrant city center and attracting an appropriate tax base. Downtown Tampa is therefore comprised of two CRAs. The initial non-core CRS was established in 1983, which is the area of downtown that is the focus of this study, along with the core-CRA established in 1988. If combined, the two CRAs encompass Tampa's entire CBD. The primary role of the established TIF was meant to cover the debt of the Tampa Convention Center. Factors that have contributed to blighted areas throughout the CBD resulted from:

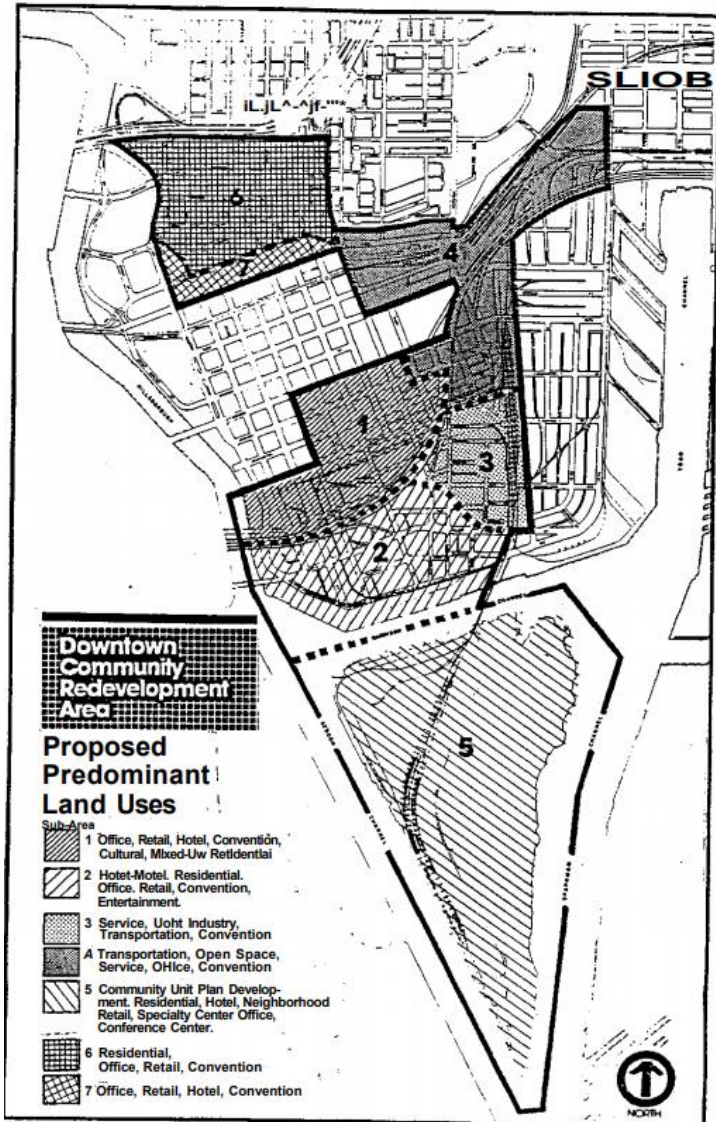
- 1) the lack of early comprehensive planning which culminated into a random mixture of land uses that failed to create a coherent urban design and community downtown,
 - 2) infrastructure that was not only old and deteriorated but also functionally antiquated,
 - 3) irregularly drawn parcels and thus have an inaccurate boundaries and overall lot sizes which has prevented any new development, and
 - 4) the limited upgrading of infrastructure such as water and sewage lines, sidewalks, etc.
- (Community Redevelopment Agency, 1983; p. 12).

The *Community Redevelopment Plan* aims to accomplish the following, but is not limited to:

- 1) eliminating blighted infrastructure and preventing furthering spread of blighted properties,
- 2) attracting public infrastructure to subsequently entice full-scale private development by 2000,

3) initiating redevelopment plans and actions that are consistent with the land use and development plans for Downtown Tampa (Community Redevelopment Agency, 1983; p. 10).

Figure 16. City of Tampa's Community Redevelopment Area (CRA) land-uses by subarea



Source: Tampa's Community Redevelopment Plan for the Downtown Community Redevelopment Area (1989)

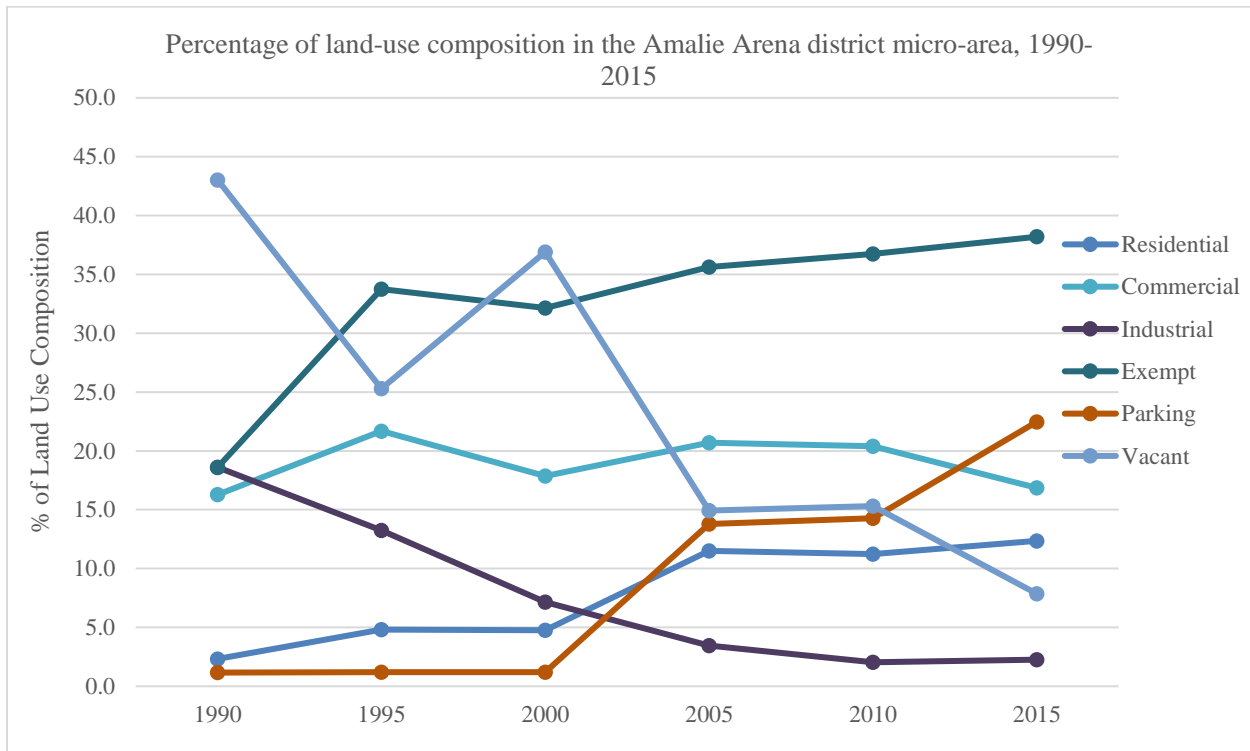
Areas I and II are split into seven subareas. I focus on Subareas II and V since they are located directly within the boundaries of the quarter-mile arena-district micro-area. Subarea II lies between the Garrison Channel and the Crosstown Expressway and is the area that has been announced as the site for Water Street Tampa. The main area of focus for development in Subarea II was the harbor front. The Community Redevelopment Agency sought low to moderate intensity development for the areas' hotel, office, entertainment, and residential land-uses that would tie the area together. Prior to the announcement of Water Street Tampa in 2016, residential properties were nonexistent in Subarea II, but the area was successful in incorporating entertainment uses with the addition of the Tampa Convention Center, hotels, and a few office spaces. The second initiative for Subarea II was to ensure public access along the Garrison Channel and the Hillsborough River, which was accomplished with the implementation of the Riverwalk in the early 2000s. Harbour Island comprises Subarea V. Harbour Island is primarily residential, along with hotel, commercial office space, retail specialty shops, and boat slips which are also defined as commercial properties.

With the population projections in the early 2000s, the City of Tampa expected that there was a need for higher residential density. The limited supply of commercial properties is better utilized and integrated into the downtown area. Contingent on private sector's willingness to invest and participate in Tampa's redevelopment plans, the city sought a mixture of medium and high density of residential development along the waterfront.

Between 1990 and 2015, the greatest changes in land-use have been in the increased concentration of parking garages, surface parking lots, and residential units while industrial and

heavy manufacturing infrastructure and vacant lots have decreased in parcels located within the Amalie Arena micro-area. Figure 17 provides a summary of the percentage change by land-use category over the last 25 years.

Figure 17. Percentage of land-use composition in the Amalie Arena district micro-area, 1990-2015.



Prior to the 1970s, a number of shipping companies and warehouse owners privately owned the Channel District. In the 1970s and 1980s, the area was stagnant. The Port Authority bought up the majority of the parcels in Channel District in order to further develop and attract cruise lines to port in the area (Channel District History, 2012). Only a small southwesterly portion of the Channelside District is captured within the quarter-mile Amalie Arena district micro-area. In 1990, 18% of the 86 parcels located in the arena-district micro-area were listed with industrial land uses. By 2015, only 2% of 89 parcels were industrial property uses. This

demonstrates Tampa and the Port Authority's encouragement of adaptive re-use of old warehouses. The decrease in industrial land-use encouraged a shift in the number of exempt properties. Although there was a 75% change in the exempt property count between 1990 and 1995, on average, the number of exempt parcels from 1995 to 2015 composed 35% of the land-use in Amalie Arena district micro-area. The 75% change between 1990 and 1995 illustrates the parcels' transition in ownership from the various warehouse owners, to the Port Authority, Tampa, and Hillsborough County. From 1990 to 2015, highway construction is related to the 3% compounding rate of change in exempt properties (Amen, 2016).

Similarly, vacant parcels composed approximately 45% of the total land-use in 1990⁵². By 2015, vacant parcels decreased to 7% of the total land-use. This was a 13% compounding rate of change in parking over the last 25 years. The stark decrease in vacant properties between 2005 and 2015 is due to the residential construction on Harbour Island. Between 1990 and 2015, there was a 7% compounding rate in residential land-use; the quarter-mile Amalie Arena district micro-area began with two residential parcels in 1990, which grew to four developments in 2000, and 11 in 2015. While the first condominiums for Island Place located on Harbour Island were completed in 1995, they were still designated as vacant residential properties since the assessment values for the condominiums were not recorded until the next assessment cycle. In 2000, the 244-condominiums at Island Place were included in the residential development count. From 2000 to 2005, a 32% change in the condominium count was a result of the completion of the Garrison A and Grandview A condominiums on Harbour Island. Finally, between 2005 and

⁵² Parcels that were designated as vacant commercial or vacant residential by the assessor's department are listed as vacant parcels in this study's analysis. This is because the intended commercial or residential infrastructure were incomplete by the listed assessment cycle. Therefore, the assessment record did not assess appropriately capture the finished construction until the following assessment cycle.

2010, another shift in the residential count occurred with a 137% change in the total number of condominiums due to the completion of the Towers at Channelside, the Post Apartment Homes, Parkcrest Harbour Island, and the expansion of Island Place. In the arena-district micro-area, commercial properties accounted for approximately 20% of the total land-use composition from 1990-15. Two hotels were built in the last 20 years, and the office infrastructure only increased by four office parcels by 2010. Despite the efforts outlined in development plans, the land-use composition changes in the Amalie Arena district micro-area are minor and do not necessarily reflect the expectation of new development or rehabilitation of infrastructure that is both consistent and reflects the adopted land-use and development plans for downtown Tampa.

Consistent with the city and county's agenda to redevelop Areas I and II, Table 33 shows that the percentage of industrial and vacant properties decreased substantially eliminating blighted and underutilized properties that are no longer compatible with the land-use mixture needed to create vibrant urban center. The percentage of residential and commercial properties relative to the total number of parcels in the arena district micro area, on the other hand, do not reflect the transformation that Tampa and Hillsborough County were hoping for in the last 25 years. Although the percentage of residential properties increased, compared to the rest of the land-use categories, residential property use consisted of 12% of the land-use composition in 2015. If all of the new residential properties in Channelside District were included, the residential concentration may be different. However, limited to the arena-district micro-area around the Amalie Arena, there is potential to increase the residential built volume since the waterfront can easily accommodate a number of new waterfront high-density condominiums. The proposed Water Street Tampa district development might finally be able to accomplish this goal. Public infrastructure such as the Amalie Arena, the Tampa Convention Center, and the

Florida Aquarium may have been catalysts for a resurgence in urban development downtown, but the assessment records do not necessarily reflect success. Due to access to the waterfront and affordable land values, private investors eventually developed Harbour Island. Furthermore, without Vinik and Strategic Property Partners' consolidation of parcels around the Amalie Arena, and investing approximately \$3 billion of private investment to develop Water Street Tampa, the land parcels excluding those along the waterfront that compose a portion of the Tampa Riverwalk could easily still be listed as vacant parcels.

Table 33. City of Tampa's Amalie Arena district micro-area land-use count, 1990-2015.

YEAR	1990		1995		2000		2005		2010		2015		1990-2015
	LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL	2	2.33	4	4.88	4	4.76	10	11.49	11	11.22	11	12.36	7.06
RENTER- OCCUPIED	-	-	-	-	-	-	-	-	4	0.51	3	0.38	-
OWNER- OCCUPIED	2	100.00	3	75.00	247	100.00	326	99.39	772	99.23	773	98.98	26.91
TOTAL CONDOS													
COMMERCIAL	14	16.28	17	20.73	15	17.86	18	20.69	20	20.41	15	16.87	0.28
OFFICE	6	42.86	7	41.18	6	40.00	8	46.91	10	50.00	5	22.73	(0.47)
RETAIL	2	14.29	3	17.65	1	6.67	1	5.86	2	10.50	1	4.55	(2.48)
RESTAURANT	1	7.14	2	11.76	3	20.00	2	11.73	2	10.50	1	4.55	0.26
HOTEL	1	7.14	1	5.88	1	6.67	2	11.73	3	15.75	3	13.64	4.76
INDUSTRIAL	16	18.60	11	13.41	6	7.14	3	3.45	2	2.04	2	2.25	(7.58)
EXEMPT	16	18.60	28	34.15	27	32.14	31	35.63	36	36.73	34	38.19	3.06
PARKING	1	1.16	1	1.22	2	2.38	12	13.79	14	14.29	20	22.47	12.73
VACANT	37	43.02	21	25.61	30	35.71	13	14.94	15	15.31	7	7.86	(6.44)
MIXED-USE													
TOTAL	86	100.00	82	100.00	84	100.00	87	100.00	98	100.00	89	100.00	0.14

4.5.4.2 Built Volume

Tampa Bay assessment records were inconsistent in documenting building square footage between 1990 and 2005. Heated living building square footage and total building square footage were recorded for residential properties. The difference between the two categories is that heated building square footage calculates the living areas of a structure while the total building square footage includes garages, basements, etc. in the total square footage count. Between 1990 and 2005, building square footage for the majority of industrial warehouses and commercial office properties were not recorded and therefore creates some inconsistencies. Based on the downtown Tampa's development context, it is clear that there were more industrial warehouses in the 1990s and therefore should have a relatively high building square footage. Downtown was also dominated by office buildings and no new office construction occurred in the last 25 years. It is reasonable to assume that on average, the building square footage for commercial properties is about 1.5 million square feet. At the height, in the arena-district micro-area industrial warehouses may have been 500,000 square feet or less.

In 1990, there were two single-family properties located directly north of Amalie Arena on Nebraska Avenue that accounted for the small residential building square footage. The first wave of residential development in 1995 occurred on Harbour Island. Over the next three five-year intervals, the construction and expansion of residential properties on Harbour Island and one development in Channelside District accounted for the increase in total built volume.

Between 1990 and 2015, commercial properties had a 5% compounding rate of change in built volume⁵³. The built volume for commercial office space is about 600,000 square feet as no new

⁵³ Please note, the building square footage is incomplete. Industrial warehouses and the majority of commercial office space were not recorded for parcels between 1990 and 2005. On average, it can be assumed that commercial

office buildings were constructed. Furthermore, the raw count for office parcels between 2000 and 2010 increased by four office parcels, which is not equally counted as if four new office buildings were construction. The increase in office parcels can be explained by the conversions of office space into retail, or simply office parcel expansions from subsequent changes in ownership. In 1990 and 1995, the retail building square footage is larger than in the most recent years because of the boutique retail center built on Harbor Island. The retail center on Harbour Island struggled financially and was later converted into a mixed-use development with offices and a hotel. The increase in hotel building square footage complements the raw hotel count. The Hilton Tampa Downtown Convention Center Hotel was the first hotel built in the arena-district micro-area located adjacent to the convention center. In 2005 and 2010, two other hotels followed, including the Tampa Marriott Waterside Hotel and Marina and the Westin Tampa on Harbor Island, respectively. The restaurant building square footage increased substantially in 1995 and 2000 due to a warehouse conversion in the Channel District.

As expected, between 1995 and 2015, the industrial warehouse building square footage had a 12% depreciation in the compounding rate of change with the city's transition away from underutilized or inappropriate land-uses in the downtown area. A large portion of the split parcels in Channel District that were formerly designated as industrial properties, were reclassified as exempt properties when taken over by the Port Authority, Hillsborough County, and the City of Tampa,

When the city, county, and the Port Authority bought up a large proportion of parcels in Channel District, the parcels supporting the cruise line terminals and industrial warehouses

properties overall had a total building square footage of 1.5 million as no new construction in office space occurred over the 25 years.

owned by the Port and parcels assembled for the Florida Aquarium are designated as exempt properties. The building square footage for vacant properties for years 1990, 1995, and 2000 include residential and commercial buildings that were in the final construction phase but listed as either vacant commercial or vacant residential property uses. The reasoning for this is that the buildings were not fully finished with the construction and therefore property use for assessment values were postponed until the next assessment cycle. As a result, these properties are listed as vacant. Between 2005 and 2015, vacant properties were no longer listed with built volumes and were consequently vacant lots without building assessment values.

Table 34. City of Tampa's Amalie Arena district micro-area built volume count, 1990-2015.

	1990		1995		2000		2005		2010		2015		1990-2015
	BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL	3,534	0.42	466,140	22.30	656,617	18.56	859,252	19.33	1,468,342	30.75	1,779,318	36.51	28.26
<i>RENTER-OCCUPIED</i>	-	-	-	-	-	-	-	-	364,227	74.99	659,611	37.07	-
<i>OWNER-OCCUPIED</i>	3,534	100.00	466,140	100.00	656,617	100.00	854,150	99.41	1,101,083	130.28	1,107,761	62.26	25.85
<i>TOTAL CONDOS</i>													
COMMERCIAL	543,097	64.68	1,023,393	0.49	959,527	27.12	1,649,432	37.11	1,913,013	40.06	1,748,458	35.88	4.79
<i>OFFICE</i>	2,880	0.53	274,052	26.78	249,684	26.02	643,485	39.01	679,450	35.52	488,334	27.93	22.79
<i>RETAIL</i>	169,230	31.16	307,389	30.04	112,388	11.71	10,278	0.62	14,684	0.77	6,640	0.38	(12.15)
<i>RESTAURANT</i>	950	0.17	15,550	1.52	32,944	3.43	10,490	0.64	10,490	0.55	3,200	0.18	4.98
<i>HOTEL</i>	370,037	68.13	371,530	36.30	371,530	38.72	933,760	56.61	1,208,389	63.17	1,208,389	69.11	4.85
INDUSTRIAL	-	-	181,191	8.67	79,904	2.26	60,644	1.36	5,984	0.13	7,214	0.15	(12.10)
EXEMPT	-	-	405,150	19.38	1,652,547	46.71	1,875,940	42.20	1,387,595	29.06	1,337,987	27.46	4.89
PARKING	-	-	-	-	-	-	-	-	-	-	-	-	-
VACANT	293,013	34.90	14,600	0.70	189,297	5.35	-	-	-	-	-	-	(100.00)
MIXED-USE	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	839,644	100.00	2,090,474	100.00	3,537,892	100.00	4,445,268	100.00	4,774,934	100.00	4,872,977	100.00	7.29

4.5.4.3 Assessed Values

Figure 18 illustrates the compounding rate of change in assessment values within the Amalie Arena district's micro-area compared to the city. Florida requires market value be used for assessment procedures, assessing at 100% of the market value⁵⁴. In some cases, however, adjustments can be made⁵⁵. In Hillsborough County, property is adjusted by 15% for all uses⁵⁶. Across the past 25 years, the arena district's micro-area had an assessment compounding growth rate of 3% compared to the 1% growth for Tampa. Between 1990 and 2005, the arena-district micro-area's assessment values doubled. Unlike other cities in which exempt properties are not assessed or subject to a tax abatement, Tampa's exempt public infrastructure projects are still assessed based on their market value. The Tampa Convention Center and the Amalie Arena, contributed to a sizable increase in assessed valuation, but property taxes are not paid. In 1995, the vacant arena parcel that at the time was under construction was valued at \$2.6 million. After the opening of the arena, the parcel was valued at \$25 million and \$45.8 million in 2000 and 2005, respectively. The parking lot adjacent to the arena had an assessed value of approximately \$590,000 in 1995 and increased to \$22 million in 2000, and \$42.5 million in 2005. The Tampa Convention Center was a vacant commercial lot in 1990 with an assessment value of \$992,000. In 1995, the parcel transitioned to exempt land use with an assessment value of \$71 million and

⁵⁴ The market value of each parcel is influenced by the local real estate market and sales comparables in addition to the property use, and improvements on site. The State of Florida estimates market value through the three traditional approaches: the cost approach, market approach, and income approach.

⁵⁵ Historically, there have been cases in which property appraisers were charged with unfairly assessing properties at levels less than 100% of the market value. In order to ensure that appraisers are reflecting the full market value of the property per taxing jurisdiction, the Department of Revenue assumes a 15% adjustment for the sales ratios and the uses the adjusted value to evaluate the fairness of the county's tax roll (Johnson, 03/11/2011).

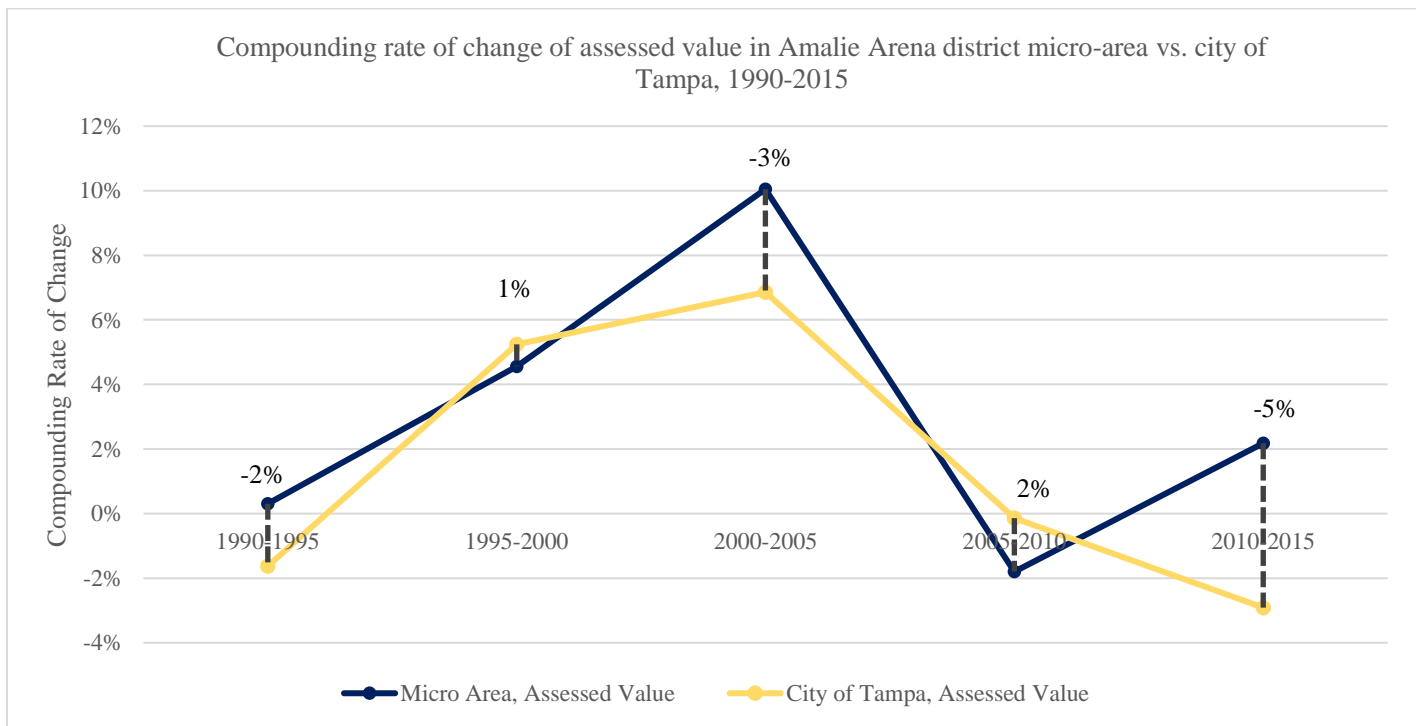
⁵⁶ Under Florida law, all residences with homestead exemptions, usually single-family residences, are limited to a three percent per year cap on assessment increases. The Save Our Homes Amendment began in 1995, or in the year after a property receives the homestead exemption.

at its height in 2005 was valued at \$81.6 million. Some other important development projects to note include the development of Harbour Island and the hotels and residential condominiums built on the island. In 1995, Harbour Island was assessed as one parcel at \$16.5 million. The island was eventually subdivided into smaller parcels, and sold to a number of different owners. As a result, the assessment value changed as the size of the lots changed. In 1995, the Island Place Condominiums was a vacant residential lot with an assessment value of \$12.2 million, in 2000, the residential development was assessed at approximately \$50 million. Its value fell to \$35 million in 2015. Other notable projects that contributed to the peak of assessment valuations in 2005 for the micro-area include the Post Harbour Island Apartments at \$30.8 million, the Wyndham Hotel at \$22.7 million, and the Towers at Channelside Condominiums, \$34 million dollars in 2010.

Overall, the compounding rate of change in parcel assessment values are not significantly different between the Amalie Arena district micro-area and that of Tampa. The percentage change in assessment and market values over the 25-year period in the arena district demonstrate a much greater change than compared to Tampa. For instance, between 1990 and 2015 the compounding rate of change in assessed and market value for the arena district is 3% and 4% respectively compared to the 1% change in assessed and market values throughout the entire city. Yet, in analyzing the compounding rate of change every five years, the differences in assessment values between the two areas shrank. Between 1990 and 1995, the arena-district micro-area had less than a 0.5% compounding growth in assessment value while Tampa depreciated by approximately 2%. Between 1995 and 2000, Tampa rebounded with a 5% compounding assessment growth rate compared to the 4.5% compounding assessment growth rate. Assessment values in the arena-district micro-area peaked in 2005. The arena-district's

compounding growth rate of change was 10% compared to 7% in Tampa. The Towers at Channelside might have also contributed to the growth rate and the transfer of ownership of two parcels to the Port Authority. In 2004, Channel District was established as a Community Redevelopment Area (CRA) and was the fastest growing in Hillsborough County. From 2004-10, there was a 785% change in taxable assessment values in the Channel District CRA (Annual Report, 2010; p. 6).

Figure 18. Compounding rate of change in assessed value in Amalie Arena district micro-area vs. city of Tampa, 1990-2015.



4.5.4.4 Property Taxes

In Florida, parcels are assessed at a 100% of their market value. From 1990 and 2015, parcels located within the Amalie Arena district’s micro-area and Tampa did not have a dramatic shift in the compounding growth rates in property tax revenues. The Amalie Arena district’s

micro-area had a compounding growth property tax rate of less than 0.5%. Tampa had an overall compounding growth property tax rate of 0.9%. Figure 19 illustrates the property tax compounding rate of change and the difference in property tax revenues collections for every five years between the arena district micro-area and Tampa. Tampa's property tax revenue between 1990 and 2015 reflects a 25% change, while the arena district micro-area had a 9% change. Between 1990 and 1995, the property tax for Tampa had a negative compounding rate of growth of 1%, increased by a compounding growth rate of 3% from 1995-00, and then experienced an upsurge with a compounding growth rate of 9% or a 55% change from 2000-05, during which was the city's peak for property tax revenue intake. Tampa implemented a number of CRAs throughout the city boundaries to incentivize private developers to spur new development. Hillsborough County has eight active CRAs that benefit from the growth in assessed property values or TIF funds in order to reinvest within the different CRA boundaries. These CRAs include Central Park, Channel District, Downtown, Drew Park, East Tampa, West Tampa, Tampa Heights Riverfront, and Ybor City I and Ybor City II. Table 35 presents the eight CRAs, the base year when the CRA was established, the total amount of taxable assessment values recorded during the base year, and the total taxable assessment values in 2015.

Table 35. The change in total taxable assessed value in 2010 and 2015 in Hillsborough County’s Community Redevelopment Areas (CRAs).

CRA	Establishment Year	Taxable Assessment Value in Establishment Year	Taxable Assessment Value in 2010	Taxable Assessment in 2015
Downtown Non-Core & Core Area	1983/1988	454,090,045	1,765,334,086	2,008,173,477
Ybor City I & II	1987/2002	59,123,090	181,268,977; 77,503,293	215,133,489
East Tampa	2003	492,472,827	853,954,177	548,194,743
Channel District	2003	39,869,871	352,848,596	413,855,683
Drew Park	2003	168,033,380	260,948,073	222,383,153
Central Park	2006	6,701,795	9,472,264	12,765,050
Tampa Heights	2005	8,464,415	24,029,000	15,965,183
Riverfront				
West Tampa	2015	274,629,731	xxx	274,629,731

Source: Annual Activity Report from the City of Tampa Community Redevelopment Agency to the Tampa City Council, 2005, 2010, 2015.

Between 1990 and 1995, the Amalie Arena district micro-area had a negative property tax compounding growth rate of 8%. From 1995 to 2000, the micro-area had another 2% decrease in the compounding growth rate. The rise in exempt properties, relative to the total concentration of property uses in the arena district, is the reason for the declining property taxes. In 1990, assessment records show that 16 exempt properties in the micro-area, which are all large public infrastructure projects, increased to 28 exempt properties by 1995. One example of this is the expansion of the Port Authority’s parking garage used to accommodate the cruise line industry and nearby entertainment venues such as the Amalie Arena. Since 2005, two parcels owned by the Port Authority had an immense increase in assessment value. Furthermore, since the Port Authority owns the parking garage, the two parcels are listed as exempt properties, and therefore do not contribute to the city’s property tax revenue. Between 2000 and 2005, the micro-area had a 15% compounding growth rate - or a 55% change - and reached its peak because of the number of new residential developments completed on Harbour Island and along the peripheries of the Channel District. Similar to Tampa, the micro-area also experienced a depreciation in property values and subsequently a decrease in the compounding growth of 2%

and 1% in 2005-2010 and 2010-2015, respectively. Table 36 provides lists the amount of the micro-area’s forgone taxes that are a result of the number of exempt properties found in the quarter-mile radius. The total amount of exemptions far surpass the amount of property tax collected within the arena district. In sum, between 1990 and 2005, the city had a greater compounding growth in property tax revenues relative to the micro-area.

Table 36. Total amount of exemptions from parcel sample size in the Amalie Arena district micro-area, 1990-2015.

Year	Total Exemptions
1990	9,653,576
1995	8,195,217
2000	103,334,685
2005	195,279,181
2010	99,718,539
2015	185,159,152

Figure 19. Compounding rate of change in property taxes in Amalie Arena district micro-area vs. city of Tampa, 1990-2015.

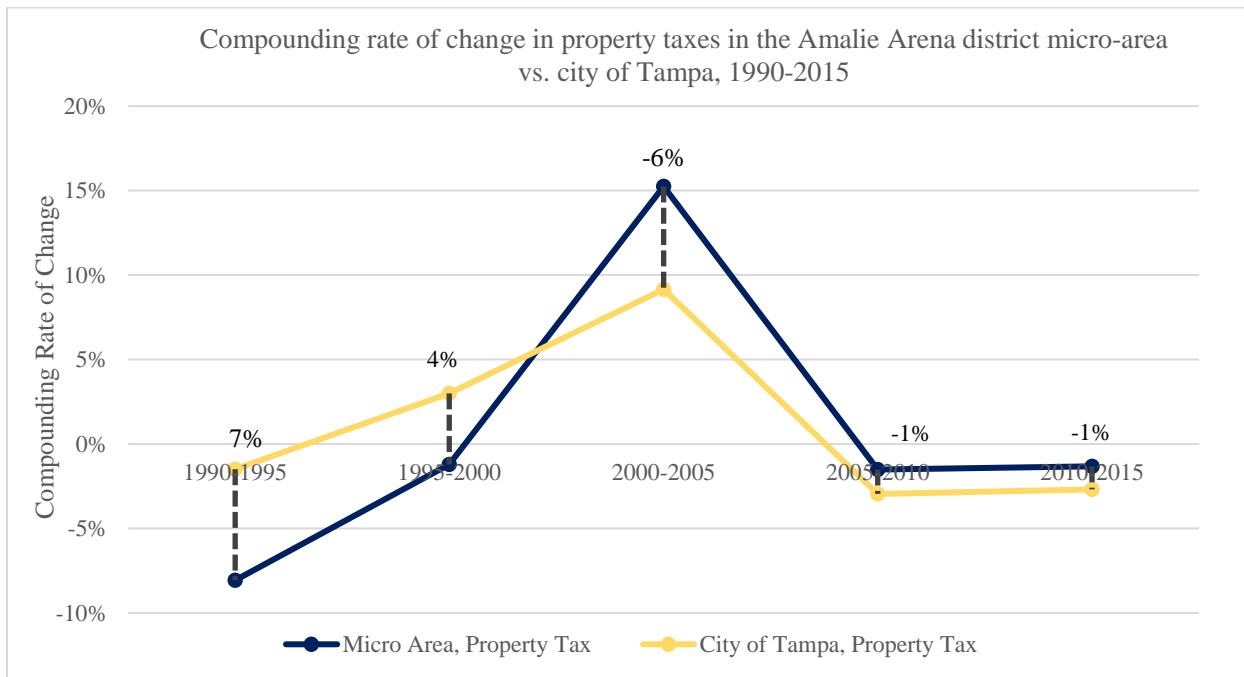


Table 37. Assessment, market, and property tax values in the Amalie Arena district micro-area vs. city of Tampa, 1990-2015.

	1990	1995	2000	2005	2010	2015	1990-2015
AMALIE ARENA DISTRICT MICRO AREA							
LAND AREA (sf)	11,103,018	14,555,097	23,450,499	4,439,358	3,932,313	3,738,730	(4.26)
BUILT AREA/VOLUME (sf)	839,644	3,161,738	2,788,308	4,481,759	4,774,934	4,872,977	7.29
TOTAL ASSESSED VALUE	179,157,412	211,223,450	296,535,994	553,492,609	580,461,062	706,930,917	5.64
TOTAL ASSESSED VALUE (2015 \$)	339,319,647	344,531,992	430,571,484	694,927,216	634,615,310	706,930,917	2.98
ASSESSED LAND VALUE	99,669,599	118,891,109	113,280,612	179,688,888	93,215,655	219,355,881	3.21
ASSESSED BUILDING + IMPROVEMENTS	79,308,238	92,107,484	169,787,407	390,547,162	472,791,802	587,980,114	8.34
TOTAL MARKET VALUE	179,157,412	211,223,450	300,927,659	561,052,981	593,931,187	810,077,234	6.22
TOTAL MARKET VALUE (2015 \$)	339,319,647	344,531,992	407,903,011	704,419,499	649,342,133	810,077,234	3.54
TOTAL MARKET LAND VALUE	99,669,599	118,891,109	113,280,612	179,688,888	93,215,655	219,355,881	3.21
TOTAL MARKET BUILDING VALUE + IMPROVEMENTS	79,308,238	92,107,484	169,787,407	390,547,162	472,791,802	587,980,114	8.34
TOTAL TAX	4,491,852	3,425,689	2,832,251	8,515,351	9,057,806	9,268,216	2.94
TOTAL TAX (2015 \$)	8,507,454	5,587,729	5,258,127	10,691,288	9,902,856	9,268,216	0.34
CITY OF TAMPA BAY							
TOTAL ASSESSED VALUE	8,924,006,000	9,544,867,000	13,841,329,000	22,302,375,000	25,431,727,000	23,984,839,000	4.03
TOTAL ASSESSED VALUE (2015 \$)	16,901,843,665	15,568,877,625	20,097,666,707	28,001,326,694	27,804,385,795	23,984,839,000	1.41
TOTAL MARKET VALUE	13,243,659,000	14,252,304,000	20,655,274,000	35,581,500,000	38,012,176,000	33,241,723,000	3.75
TOTAL MARKET VALUE (2015 \$)	25,083,158,165	23,247,298,977	29,991,542,907	44,673,681,872	41,558,530,666	33,241,723,000	1.13
TOTAL TAX	56,093,000	60,407,000	78,691,000	141,022,000	139,391,000	133,027,000	3.51
TOTAL TAX (2015 \$)	106,238,736	98,531,409	114,259,656	177,057,515	152,395,515	133,027,000	0.90

4.5.5 KEY FINDINGS

The arena-district micro-area is a success across the four measures: land-use composition, built volume, assessed values, and property taxes. The land-use diversity shifted to include more residential, hotel, and retail development. The arena-district micro-area had a significant increase in built volume, particularly in residential development on Harbour Island and parts of the growing Channel District. With the increase in residential and retail development, the assessment values and property tax values subsequently grew over 25 years. However, since the opening of the Amalie Arena, there has been a lag in arena-led urban development outcomes. The increase in development in the Channel District and the downtown core is more likely a result of the implementation of the CRA rather than the opening of the Amalie Arena in 1996. Furthermore, the immediate proposed development in the arena-district micro-area that will encompass the development plans for Water Street Tampa were only publicly released in 2016, just outside of the scope of this study's time frame. The Water Street development plan is bound to provide a sizable amount of change to the arena-district micro-area in the following years. It can be concluded that the arena was not part of a larger development plan for the revitalization of downtown Tampa. The arena presence did not cause a shift in urban development within the quarter-mile arena-district because of the inherent lag as verified by the assessment records.

4.6. DALLAS: AMERICAN AIRLINES CENTER

Table 38. American Airlines Center Rapid Notes

Arena Name	American Airlines Center
Owner	City of Dallas
Year Opened	2001
Key Players/Organization	Hillwood-Hicks Holdings; Hillwood Development Company; Center Operating Company LP
TIF District	Sports Arena TIF District
Total Cost of Venue (in 2018 \$)	640,680,000
Public Investment in Venue	237,051,600
Public Share of Total Venue Cost	37%

Source: Judith Grant Long, 2005

Victory Park was envisioned as a mixed-use entertainment district. Plans for the development included retail boutiques and outlets, restaurants, and luxury residential and office buildings. Two hotels were in the plans, the W Dallas Residences and the Mandarin Oriental Hotel, only one of which was eventually built.

The site selected for the arena and Victory Park is located near Oak Lawn and Uptown, two evolving upscale neighborhoods that at the time highlighted a strong market for new luxury high-rise hotels, residences, and office development. Oak Lawn and Uptown’s promising success in addition to the transformation of the Design District, gave developers of Victory Park confidence that a high-end development that catered to empty-nesters and tourists would succeed. Victory Park was an ambitious large-scale high-density project. In the beginning, it was difficult to believe that the vision for Victory Park would falter. Across the northern section of the Dallas city boundaries, renovations and new construction of residential high-rises, office buildings, and hotels was rampant. New transit-oriented development was encouraged along the Trinity River Corridor, and the warehouses found throughout the Design District were rehabilitated and transformed into art galleries, showrooms, and office space. The city was

growing and prospering, providing little indication that Victory Park's potential success would wane. Given the large number of cities in the region such as Fort Worth and Arlington, Victory Park's staggering success could be in part due to the number of competing areas offering a similar amenity package. Moreover, areas such as Uptown and Oak Lawn were exponentially growing with luxury real estate, which could have saturated the Victory Park and part of the Design District's targeted market. There was also the complicating factor of the extensive freeway system and the barriers it created. Based on what was initially envisioned for the master-planned development, Victory Park would require more construction to reach its full potential. In hindsight, Victory Park's retail development model and urban design both hindered the project's outcomes, coupled with the possibility that too many areas were built with similar products.

4.6.1 NEW ARENA NEGOTIATIONS

4.6.1.1 Reunion Arena

The Dallas Stars and the Mavericks played in Reunion Arena located on the southwestern side of Dallas' central business district, at the intersection of the Stemmons, Tom Landry, and RI Thornton freeways, prior to the construction of the American Airlines Center and the development of Victory Park. The renovated Union Station, the Reunion Tower, the Hyatt Regency Hotel, and the Reunion Arena define the Reunion District. These four landmarks were intended as urban development catalysts to reinvigorate development in an area that was largely dominated by railroad yards and industrial uses.

The city of Dallas acquired property and redefined major land uses in the area, most of which was underutilized land from the city's purchase of Union Station. In the 1970s, Robert Hunt's, son of oilman, HL Hunt, and John Scovell, later named president of real estate company,

Woodbine Development Corporation, each purchased cheap parcels of unimproved land in the Reunion District near Union Station. A Master Agreement had been proposed between the Hunt-Woodbine Development Corporation and the city of Dallas to engage in a land swap and sharing of costs to combine each party's parcels for a large-scale public-private development investment on top of 50-contiguous acres. This exchange and consolidation of the various land tracts supported the development of the city's 1974 Union Terminal and Reunion projects. The agreement between the city of Dallas and Hunt-Woodbine Corporation to redevelop what was essentially deemed an industrial wasteland, was one of the first public-private partnerships that served as blueprint for future urban development projects throughout the city. Although the partnership was promising for the revitalization of the Reunion District, the proposed projects were never completed on the remaining parcels under agreement. The Dallas Convention Center was renovated and a number of hotels were built in close proximity to the arena, while the Hunt-Woodbine Corporation parcels were left vacant. The city's vision to revitalize the Reunion District into an entertainment district was left lackluster.

Opened in 1980 and costing an estimated \$27 million (\$87.2 million in 2018 dollars), the Reunion Arena was home to the Dallas Mavericks (NBA) from 1980-01 and the Dallas Stars (NHL) from 1993-01. The two sports franchises relocated to the newly constructed American Airlines Center, located east of the Design District, bounded by the Stemmons Freeway. As the two teams moved to the American Airlines Center, the city of Dallas was still left financially responsible for the Reunion Arena. Vulnerable to the prospect of losing the city's two professional sports teams, the Dallas City Council determined that renovations to the arena were not feasible and a new arena was necessary (Dallas Observer, 1995). Despite the significant amount of debt still owed on the Reunion Arena and the city's other needs, funding for the

facility became a priority on the city's agenda (Dallas Observer, 1995). With the opening of the new arena, Reunion Arena had lost its major tenants and the right to host premier entertainment events. Within five years, the arena lost more than \$6 million in revenue (Williamson, 2003). In 2008, the Dallas City Council voted unanimously to demolish the facility and redevelop the property for higher-and-better usage; the facility was demolished in 2009.

The former arena site has significant redevelopment potential in residential, office, and retail development as it positioned in close proximity to a number of hotels and the newly expanded Dallas Convention Center. Since the Reunion District had the largest contiguous portion of vacant land within the Dallas CBD, in 2013 *the Downtown Dallas 360 Plan* focused on the Reunion/Union Station Area. The *Downtown Dallas 360 Plan* envisioned that the arena site and adjacent parcels would develop into a regional office hub with residential uses⁵⁷⁵⁸. City block development is contingent on development rights and potential tax increment financing schemes that will maximize the value of the land.

4.6.1.2 American Airlines Center and Victory Park

The City of Dallas feared that without building a new facility nor renovating the outdated Reunion Arena, the city's two professional sports teams, the Stars and the Mavericks, would relocate to the suburbs. In 1994, the Dallas City Council approved a \$55,000 feasibility study to determine a site and financing mechanisms for a potential new arena⁵⁹. In 1996, Ross Perot Jr.,

⁵⁷ As there was a lack of historical development within the district, to support increases in development intensity, the site will need basic infrastructure improvements such as storm water detention structures, connections to wastewater systems, electrical and gas lines, etc.

⁵⁸ The future development of the district will also encourage smaller urban blocks compared to the super block patterns that exist across much of the rest of the city.

⁵⁹ The establishment of a public-private partnership was recommended which would involve lease purchases and some form of tax financing rather than over extending the city's bond capacity. In 1994, the City of Dallas was

principal of Hillwood Development, purchased a 67% stake of \$125 million in the Mavericks franchise – a decision that was largely used to leverage his own real estate ventures. Contrary to popular belief that the Mavericks and Stars would be an anchor tenant for the arena, Perot “viewed the arena as the anchor tenant for a much larger [investment in real estate]” (Myerson, 1999; p. 4). In that same year, Tom Hicks purchased the Stars and both Perot and Hicks negotiated to purchase a one-third of each team in order to align the economic interests for both the teams, the new arena, and the ancillary real estate development of what would become Victory Park⁶⁰. In 1997, in a 12-2 vote the Dallas City Council approved to place the \$230 million arena deal up for referendum on the 1998 ballot and passed the Brimer Bill that authorized city funding for professional sports facilities and other large public infrastructure projects⁶¹. The arena proposal established that Dallas would commit \$125 million to build the arena, create a TIF district, increase the rental car (5%) and hotel tax (2%) and the city would contribute another \$12 million to cover the public’s share (Gillman, 1998). The Stars and the Mavericks would together contribute \$105 million for the arena construction, cover any cost overruns, agreed to a 30-year lease, and would pay \$3.4 million in annual rent (Gillman, 1997). The teams would retain all revenues. Arena opponents questioned whether the arena would spur downtown development, particularly because nearly no development occurred surrounding the Reunion Area despite city promises. Even with these concerns, voters narrowly approved the bill (50.65% to 49.35%).

already stretched to sell 100 million dollars in general obligation bonds for streets, sewers, etc., approved by voters in 1985 (Friend, 1994).

⁶⁰ This decision was before Mark Cuban bought a majority stake in the Dallas Mavericks from Ross Perot in 2000 for \$285 million.

⁶¹ The Brimer Bill, passed in 1997, allows the city to own, construction, and operate public facilities or in the case of professional sports facilities, negotiate terms with the teams directly. The bill also permits six different taxing mechanisms and property tax exemptions for a 30-year term on the lease.

The American Airlines Center opened in 2001 and was financed under the Arena Master Plan Agreement between Dallas and the Center Operating Company, a joint-venture between owners' Hicks (Dallas Stars) and Perot (Dallas Mavericks). Perot's ownership was simply used as leverage to launch his own development agenda and vision for a luxury mixed-use real estate development that would be joined by the American Airlines Center as its anchor. After securing the city's approval to move forward with the adjacent real estate development, in 2000, Perot sold a majority stake of the team to Mark Cuban for \$285 million.

In 1998, formerly host to a rail yard and toxic power plant, a 70% contaminated vacant site located just north of downtown's West End along Interstate-35, was selected for the new arena⁶² (Dallas Office of Economic Development, 2018) and ancillary real estate development. By 1999, Perot and other minority partners purchased land tracts from TU Electric and independent land owners to eventually consolidate land parcels into a 75-acre site that would become an ambitious \$3 billion mixed-use development project (e.g., luxury residential condominiums, office space, retail, including renovations of existing projects located within the West End.) known as Victory Park. Victory Park's initial construction phase began in 2004 and officially opened in 2006. It was designed to be a mixed-use urban development hub that would connect downtown Dallas with Uptown. Ultimately, Victory Park turned out to be an urban development failure. In 2012, the Sports Arena TIF District was amended and two additional sub-districts, West Dallas and the Riverfront Gateway, were added to the agreement.

⁶² Perot purchased 13 acres from TU Electric for the new arena and a parking garage and another 15 acres from two other landowners for more surface parking

4.6.2 SUBDISTRICT ANALYSIS

The quarter-mile arena district area incorporates Victory Park's Sports Arena TIF District and a portion of the Design District.

4.6.2.1 Stemmons Corridor-Design District

Victory Park is a small component of the Stemmons Corridor-Design District. Warehouses and industrial land-uses, similar to the site prior to the development of Victory Park, dominated the Design District. Issued in 2005, the *forwardDallas! Comprehensive Plan* targeted the Stemmons Corridor as an area for growth since it was undergoing a number of redevelopment projects and land-use changes, as a result of the development pressures from the new American Airlines Center. The Design District is home to more than 300 design businesses (e.g. furniture retailers, showroom hubs, art galleries, photography studios, etc.). Positioned between the Trinity River Corridor and Victory Park, the city of Dallas was interested in redeveloping the district to support its existing uses as an art and design hub while contributing to new residential construction. The Design District TIF District, established in 2006, was intended to transform the old Stemmons Industrial area into a mixed-use neighborhood. The area was filled with large tracts of vacant land, dilapidated structures, inadequate sidewalks, etc. The Planned Development District (PD 621) assisted with the redevelopment of a number of older industrial warehouses and office structures. Without new zoning regulations, new retail, housing, and residential development would not have been possible.

The revenues from the TIF district would finance public infrastructure improvements such as the DART light-rail system expansion, improvements in the accessibility to the Trinity River, and the increase in adjacent development along the Trinity Corridor. The first residential

project built in the Design District was the Trinity Lofts built in 2007, which included 90-units in addition to 28,000 square feet of galleries and showrooms. The Alexan Design District apartment and the Alta Design Complex, both completed in 2009 involved \$62 million of private investment (NCTCG, 2017). Since 2012, more than \$168 million in new investments have either been completed, underway, or planned. Furthermore, since 2006, there has been a 116% increase in overall tax revenues (Design District TIF District, 2006). The Design District has also been a part of an initiative to attract new mixed-use developments in the Trinity River corridor with recreational opportunities. Over the last 22 years, the Design District TIF development program advanced mixed-use development and promoted construction along the DART light-rail system and the Trinity River City of Dallas Department of Planning and Development, 2001).

4.6.2.1 Victory Park and Related TIF Increment Financing

In 1998, Dallas City Council authorized the establishment of TIF Reinvestment Zone Seven, the Sports Arena TIF District, to promote development or redevelopment within the reinvestment zone boundaries. A TIF district is commonly established in an area that is heavily concentrated with blighted parcels and properties that require an investment to ensure private development (Texas Tax Code, 2017).

In order to establish a reinvestment zone, city council must:

- 1) outline the geographic boundaries of the reinvestment zone or TIF district,
- 2) provide clear termination dates of when the financing mechanism will end (e.g. State of Texas statute does not have a time horizon, but the City of Dallas has an extension of 20-years), and

3) verify the “but for” clause which determines that “development or redevelopment would not occur solely through private investment in the reasonably foreseeable future” (Texas Tax Code, 2017).

Perot’s interest in acquiring the Mavericks in 1996 included a master-planned arena district, which was essentially, “a real estate play with a government subsidy” (Helman, 2013). His selection of the 75-acre heavily contaminated and blighted site north of the West End, along the Trinity Corridor, was sufficiently large enough for the planned district. TIF funds were not utilized for arena construction. Instead, the American Airlines Center was funded through the city’s increase in rental car and hotel taxes, and the remaining costs were split between the two teams. The Sports Arena TIF District was originally intended to reimburse the public improvements (e.g. road infrastructure, open plaza space, etc.) completed within the 75-acres. Sroka (2017) provides a powerful analysis of the Dallas Sports Arena TIF District, critically analyzing both the Texas TIF policies, those specific to the city of Dallas, and the legitimacy and need of the TIF for the development of Victory Park. Since there is a possibility that the TIF could be a factor for the increase in development in Victory Park and the surrounding areas as opposed to the American Airlines Center, it is relevant to determine whether the TIF may have increased the likelihood of new construction. The Sports Arena TIF District played an active role in the secondary phases of the development of Victory Park when the City of Dallas decided to amend the Sports Arena TIF District in 2012 by expanding the TIF’s boundaries, which had a subsequent impact to the neighboring blighted areas in the Design District.

Before the city would reimburse Victory Park third-party developer, Palladium Inc., for the street and public infrastructure improvement investments, subject to the Sport Arena TIF District stipulations, it was required that \$385 million worth of construction was completed. The

developers would be repaid for their investments in addition to 6% in interest (compounded semi-annually) in city property taxes generated from increases in land value (Brick, 2002). This pay-as-you-go financing scheme uses TIF funds to reimburse the developer for his investments; channels future investments back into the reinvestment zone, and shifts the risk to the developer. Perot's Hillwood Development Company was able to make upfront payments within the pay-as-you-go financing system to reinvest back into Victory Park. Since there were no contractual obligations and no development timeline instituted by the city, Hillwood Development Co. controlled all of the land and the pace of development in Victory Park (City of Dallas, 2017). Limited city intervention in pushing a development timeline became apparent during the Great Recession. The initial phases of development broke ground in 2003 despite the delays due to the political disputes over amendments to the original subsidy packages⁶³.

By 2008, \$1 billion of the total \$3 billion project development of Victory Park's initial construction phase had been completed. The completed projects involved in the initial phase of Victory Park included, the American Airlines Center (2001); 600,000 square feet of retail space; 900,000 square feet of office space; the W Dallas Victory Hotel and Residences (2006); four other residential projects such as the Terrace (2006), the Vista (2007), the Victory Plaza Buildings (2007), Cirque (2007); two parking garages owned and operated by the COC (Center Operating Company – the joint venture between the Stars and Mavericks); and a movie theater. The projects were estimated to cost a total of \$550 million (Dallas Office of Economic Development, 2017; Johnson, 2009; Brown, 1999). This first phase of construction generated a

⁶³ Post-arena construction, Perot and Hicks sought a more lucrative subsidy package from the city. They asked the city to sell new bonds worth \$83 million, which would create a debt service payment of \$175 million over 30 years (Brick, 2002). This plan was later revised for \$30 million in bond financing and paying for all street infrastructure upfront. These two propositions went unsupported by City Council.

3,500% increase in assessed value between 1998 and 2008. Prior to the Great Recession in 2008, the few ancillary projects that were successfully completed, generated millions of dollars in assessed value in a formerly blighted and particularly underdeveloped side of downtown Dallas. As the project turned insolvent in the late 2000s, future phases of Victory Park that included more office, retail, and residential components were put on hold. Victory Park was often left empty on non-event days as it predominantly offered luxury retail options that were unsuitable per market demands and the high-end residential did not achieve expected sales volumes. The ambitious real estate development was too large for the existing demand (Heid, 2012).

4.6.2.2 Victory Park and Related TIF Increment Financing

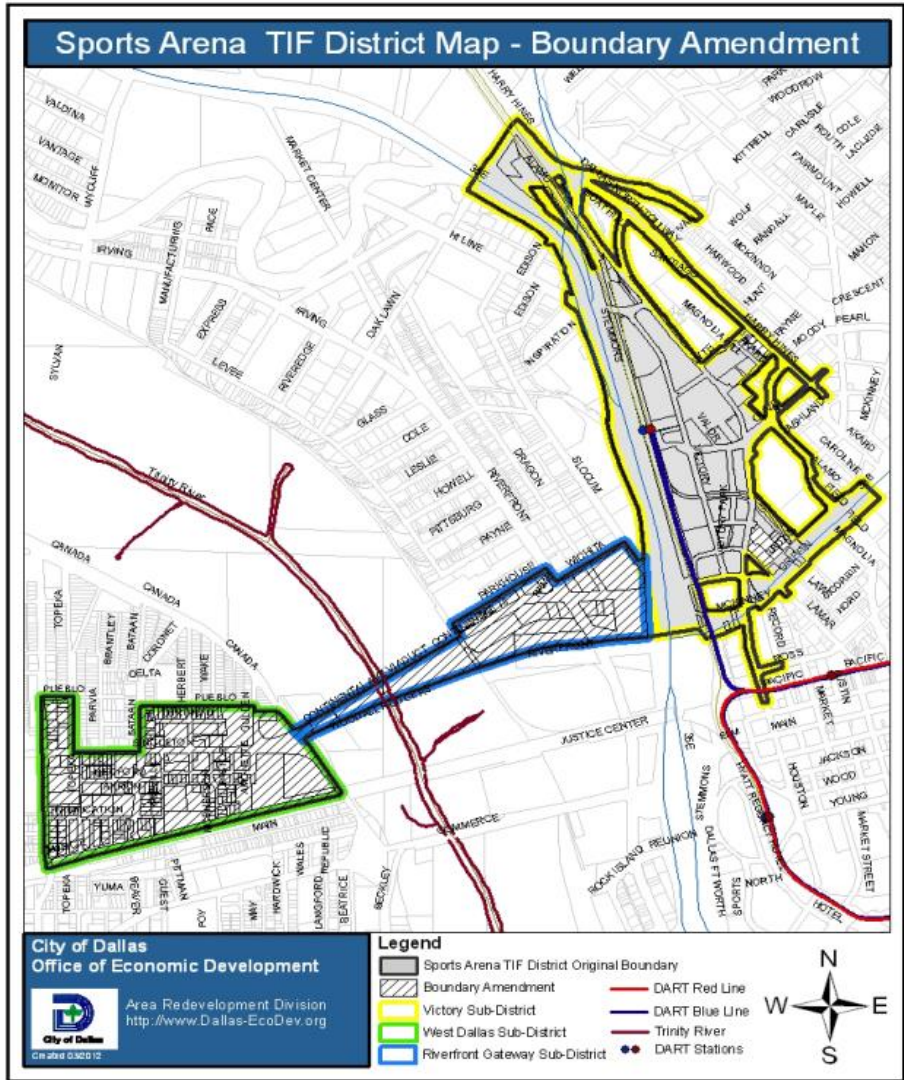
In 2012 the Sports Arena TIF District Agreement was amended under the guidance of property owners and Dallas City Council to extend its boundaries and include an additional two sub-districts: the Riverfront Gateway and the West Dallas Sub-Districts, illustrated in Figure 20. In areas that have little potential for private investment without public subsidies, sub-districts can be created from larger TIF districts. A percentage of the incremental values generated by the original TIF district are filtered into the sub-district until the area is either able to generate higher property values from an increase in construction or matches the expected valued capture prior to the termination of the TIF (Sroka, 2017, p. 210).

The Riverfront Gateway Sub-district is 33-acres and was incorporated as part of the TIF amendment to serve as a connector between West Dallas and Victory Park. Under Texas TIF laws, TIFs must be geographically contiguous. The Riverfront Gateway was established purely

as a corridor to funnel increment values from Victory Park into West Dallas⁶⁴. The West Dallas Sub-district extends across 89 acres and is a historically blighted and low-income neighborhood comprised of residential properties. West Dallas was included in the TIF amendment plan to facilitate the redevelopment in a neighborhood that was both heavily contaminated and where future investments would otherwise not occur without public funding. From the 10% of the total City and County increment revenue generated from the Victory Sub-district, revenues will be allocated to the West Dallas Sub-district. The anticipated increment value generated from the TIF would increase from approximately \$1,500 in 2012 to potentially \$4 million dollars by 2030 (a compounding annual growth rate of 55%). In addition to the TIF incremental value, the total property values amassed \$12 million in 2012 and is expected to increase to \$570 million by 2030, a 23% compounding growth rate. Under the new amendment, Victory Park's boundaries will also be extended to include an additional five acres of undeveloped land. TIF districts can either be extended for one addition cycle of ten years, or can be continually amended dependent on market conditions. The Victory Park Sub-district TIF term was extended by ten-years, ending in 2028, while 30-year terms were established for both the Riverfront Gateway and West Dallas Sub-districts.

⁶⁴ A new TIF district could be established for West Dallas, however, with limited interest from private developers in investing in the area, funneling a portion of incremental values from the Victory sub-district would increase assessed values at a faster rate.

Figure 20. Sports Arena TIF boundary amendment, 2012



Source: City of Dallas, Office of Economic Development, 2012

Perot’s initial plan for the 75-acres was to create a high-density, high-income development – this would include a mixture of 31 high and mid-rise buildings for office and residential (Schnurman, 2010). Dallas region was simply unable to support this type of density based on the other growing areas in the region. Between 2006 and 2008, six projects were completed, four residential developments and two that were a mixture of office and retail.

Compared to the residential rate in neighboring areas, the majority of condominium units in Victory Park had a listed price that was double the price per square footage (Schnurman, 2010). The scale of the development and the prices far surpassed the market comparables and left Victory Park empty and half-finished. Perot tried to create a high-rise and luxury lifestyle that was not well suited for the Dallas clientele who work in the nearby office towers nor those who would most likely attend games. There were also no plans nor obligations from the city of Dallas to provide affordable housing units in the future.

The TIF plan was specifically amended to attract 250,000 square feet of additional retail space, 3,000 additional residential units (a mixture of townhomes, multifamily, and condominium units), and improve recreational connections throughout the city with the increase in trails and open space systems such as the Katy Trail (City of Dallas, Office of Economic Development, 2017). Surface parking lots comprise one-third of the original land area within the Sport Arena TIF District. The parking rights agreements established in 1998 restricted future development. The agreements set up a minimum parking requirement of 3,000 spaces, 841 of which must be within 400 feet from the Arena (Office of Economic Development, 2012). Under the condition that there was an equal replacement ratio of comparable surface and structured parking available, existing surface parking could be replaced with alternative land uses. An amendment to the original TIF District was needed to resolve the parking issues and their restrictions on new development. In 2010, property values were still on the decline in Victory Park. Without the new TIF extension, the property values would continue to fall along with increasing residential vacancies.

While the American Airlines Center was intended to anchor development in Victory Park and vice-versa, development occurred before and immediately after the arena was constructed. It

cannot be denied that Victory Park's development occurred in relation to the arena construction, however, the complexities of including the TIF and other similar stimuluses that are associated with the arena development need to be separately analyzed in future research to determine whether or not foregone property taxes were offset by other property tax growth.

4.6.3 MAJOR DEVELOPMENT PROJECTS

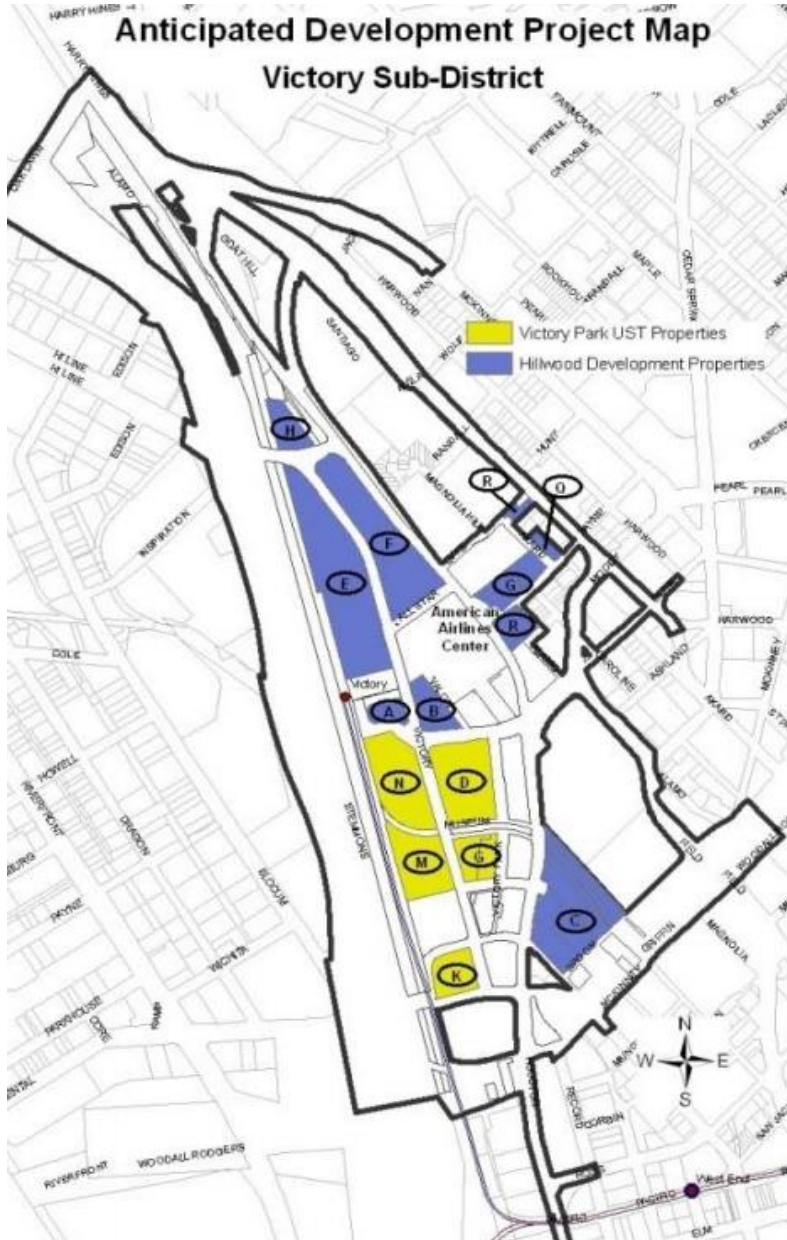
Table 39. Notable completed and proposed development projects in Dallas’ Victory Park arena-district micro-area, 1990 to present.

Development Name	Project Cost	Description
List of Victory Park Projects Completed in early 2000s		
Center Operating Company Parking Garage	\$3,816,450	<ul style="list-style-type: none"> • Under the Parking Rights Agreement created in 1998, the COC owned all of the parking garages and surface parking lots in Victory Park. • The COC constructs all the lots and operates all of the parking.
W Dallas Victory Hotel and Residences	\$157,870,540	<ul style="list-style-type: none"> • The W Dallas Victory Hotel and Residences did not utilize TIF funding at the time of its construction. • The building was completed in 2006 and has 145 condominiums, 42,500 square feet of retail.
List of Downtown Development Projects Completed in late 2000s (No TIF Investment)		
The Terrace	\$31,364,260	<ul style="list-style-type: none"> • Completed in 2006, the Terrace has 97 condominiums along with 24,000 square feet of retail.
The Vista	\$28,930,000	<ul style="list-style-type: none"> • Completed in 2006, the Vista is occupied by 127 apartments and 28,000 square feet of retail.
Victory Plaza Buildings	\$41,872,520	<ul style="list-style-type: none"> • Completed in 2007, the Victory Plaza Buildings contains 65,000 square feet of retail and 155,000 square feet of office space.
Cirque	\$74,000,000	<ul style="list-style-type: none"> • Completed in 2008, the development has 252 apartments and 11,000 square feet of retail.
One Victory Park	\$138,666,840	<ul style="list-style-type: none"> • Completed in 2008, the building holds 9,000 sf retail and is occupied by 430,000 square feet in office space.
The House by Starck & Yoo	\$86,233,950	<ul style="list-style-type: none"> • Completed in 2009, the development holds 150 condominiums with an additional 30,000 square feet in retail space.
List of Downtown Development Projects Planned, 2013-28		
Arpeggio Victory Park Apartments Hines Office Building Residential Blocks M & K	\$35,488,631	<ul style="list-style-type: none"> • Completed in 2014, the Arpeggio Victory Park Apartments is located on proposed residential Block N and houses 377 apartments. It is designed to be a luxury multifamily complex. • Recently announced, the Hines Office Building is proposed for residential Block M with an anticipated opening date of 2020.
Moda	\$50,101,650	<ul style="list-style-type: none"> • Completed in 2014, Moda was built on proposed residential Block O. The building is occupied by 263 apartments and 3,500 square feet of retail space.

SkyHouse Dallas	\$76,913,000	<ul style="list-style-type: none"> • Officially completed in 2015, the SkyHouse Dallas was built on proposed residential Block C; it houses 336 apartments and 5,000 square feet of retail.
KATY Station Hillwood Projects, Blocks E-H	\$185,000,000	<ul style="list-style-type: none"> • The KATY Station opened in 2018 and was built on the Hillwood-owned Block H parcels; it is a 461-residential building with 2,000 square feet of retail space. • Camden Victory Park, opened in 2016, is a 425-unit residential building built on the Hillwood-owned Block F. • Hillwood-owned Block E is still occupied by surface parking lots.
The Ascent Victory Place Retail Blocks D, G	\$55,397,540 \$50,237,940	<ul style="list-style-type: none"> • The Ascent was built on proposed Retail Block D and is a residential building with 302 units and 3,000 square feet of retail space. • Victory Place was built on proposed Retail Block G; it is also a residential building with 352 apartments and 8,250 square feet of retail space. • Construction on both of these properties began in 2014 and the towers were completed in 2017.
The 23 Dallas South Parking Garage Office Blocks D & G	\$80,000,000	<ul style="list-style-type: none"> • The 23 Dallas began construction in 2014 and will be completed at the end of 2018. The residential building sits on the proposed Office Block; it is a 285-unit apartment building with 20,000 sf of retail and a movie theater. • On Office Block D, sits the South Parking Garage. The South Parking Garage is valued at \$8 million and utilized close to \$13 million in TIF funding.
West Dallas Projects (Cypress at Trinity Groves)	\$361,070,000 (\$44,906,920)	<ul style="list-style-type: none"> • The West Dallas sub-district is primarily comprised of vacant heavy industrial land and warehousing, with a bit of retail. Interest in further developing this area has been slow. New development in West Dallas would not be likely without City intervention. • 10% of revenue generated in the Victory Sub-district will be dedicated to the development of West-Dallas • Trinity Groves was completed in 2015 at an estimated cost of \$16,500,000. Trinity Groves was intended to be the initial project that would spur future development along Singleton Boulevard. • In 2012, the Cypress at Trinity Groves Mixed Use Project was the only residential project in the District to receive TIF funding. 70% of the units were set aside for affordable housing. • The first phase of the project, projected to open in 2018, will include 34,200 square feet of retail, 349-multifamily units, and parking.

Notes: In the Victory Sub-district, seven of the 14 projects aimed to be completed by 2018, five-years after the extension of the TIF-term. In the West Dallas Sub-district, the goal is to have two of the 11 projects completed by 2018.

Figure 21. Blocks of anticipated development in the Victory Subdistrict



Note: Figure illustrates the blocks of anticipated new development owned by the Hillwood Development Company in Victory Park's Subdistrict.

Source: City of Dallas, Office of Economic Development

4.6.4 DEVELOPMENT FINDINGS

Uptown and Oaklawn were growing quickly with top market potential. Perot strategically consolidated 75 acres, north of the Dallas CBD for the impending master-planned arena district development. In the 1980s, 70% of the land was contaminated and required environmental remediation prior to new construction. In the first phase of building out Victory Park, only a few projects were completed in conjunction with the construction of the American Airlines Center. In 1998, the Dallas City Council enacted a special financing district, the Sports TIF Arena District. Limited to Hillwood-owned parcels, property taxes that are collected in Victory Park are redirected back into the district to continue financing new construction and to provide more financial assistance for public improvement projects such as new streets, sidewalks, lighting, etc. The Dallas City Council also approved another \$25 million to assist with environmental remediation. Between 1990 and 2000, little new development occurred in the area prior to the opening of the American Airlines Center in 2001. During this time, Perot's development company, Hillwood Development, was still in the process of consolidating contaminated and fallow land tracts and undergoing negotiations with the city of Dallas for more financial support. While new construction occurred from 2005-15, Victory Park's success and impact on the city of Dallas was limited. Victory Park and the arena spurred more than \$1 billion in new development within the arena-district micro-area. This added a substantial amount of taxable value that will continue to increase as tax dollars are redirected within the TIF boundaries. However, Victory Park was underperforming compared to Uptown and Oaklawn.

Although the economic recession hindered the construction process and negatively impacted Victory Park's tenants, the area was already in financial decline prior to 2008. The limited number of retail tenants created a challenging environment for many businesses to thrive

in Victory Park. As a result, retail and restaurants closed and future planned construction such as the highly anticipated Mandarin Hotel halted.

The American Airlines Center was a natural anchor to generate foot traffic along Victory Park Lane, the project's main street. In the original layout, Victory Park was designed to be a destination district that includes professional sports events and concerts, but also high-end shopping and dining. However, the district required a more diverse land-use and amenity package that would be attractive to clientele of multiple income levels. The analysis of Victory Park's land-use composition illustrates how each property use has transformed over the 25 years of relative to new construction. That said, although there is an overall increase in residential, commercial, and parking properties throughout the district, new construction does not mean that the buildings are financially solvent or that all residential condominiums are 80-100% occupied.

4.6.4.1. Land Use Composition

Over the last 25 years, Victory Park experienced its largest growth in residential development, with over a 750% change. Parking garages and surface parking cover 20 acres or 92% of the developable land (Office of Economic Development, 2012). There are approximately 12 land tracts dedicated to parking garages, which does not include the surface parking lots that were listed as commercial business personal properties (BPPs). Of these 12 parking garages, some are located on the same parcels as residential complexes as underground parking, or are located on their own parcel. In accordance with Victory Park's Parking Rights Agreement, surface parking may be displaced if it replaces existing parking with reasonably comparable surface or structured parking. More than 25 land tracts are committed to parking surface lots. Commercial properties had a percentage change of more than 250% between 1990 and 2015.

The majority of the commercial properties are surfacing parking lots listed as commercial BPPs and commercial improvements for public infrastructure improvements.

In 1990, 77% of all of the parcels in the area were vacant and 22% were listed as commercial improvements. Vacant parcels are a combination of vacant industrial and commercial properties. In the Dallas case study, commercial improvements are any improvements made to the parcel such as the surfacing of vacant tracts to convert into surface parking lots. Early property records were ambiguous as to whether the commercial improvement parcels served for parking purposes or other improvements. These could include public infrastructure improvements such as the implementation of new streetscapes, siting land for new residential development, and so on. For this reason, commercial improvement parcels are designated as commercial properties. In 1990, the land-use composition was similar to that of 1995. Commercial improvements and vacant parcels composed 26% and 70% of the quarter-mile district, respectively.

Although located within the TIF district boundaries, the two residential developments, Magnolia Hill and Magnolia Station, are not designated as TIF properties. In 2000, an additional two residential properties, the Monterey Plaza adjacent to Magnolia Hill and the North End Apartments complex parcel south of the American Airlines Center, both were located in the TIF boundaries, but not officially counted as part of the TIF district. The first phase of real estate development for Victory Park was under construction after the construction of the American Airlines Center. Between 2000 and 2005, the number of commercial parcels increased by 60%. Five office buildings were completed, two of which are located in the southern end of the Victory Park TIF District. Victory Dallas Residences was the first residential building completed in Victory Park and has mixed-use retail and office space on the ground floor. The office and

retail parcels are listed as business personal property (BPP) parcels. BPP parcels are listed as commercial properties; more granular property-use characterization, such as commercial sub-categories, are not provided. The W Dallas Hotel, also located within the Victory Dallas Residences, opened in 2006. The W Dallas Hotel was still under construction in 2005 and not included in the 2005 assessment roll.

Between 2005 and 2010, a 200% change occurred in residential property-use. Prior to the economic crash, ten residential buildings were constructed in a two-year period. Although a number of new residential buildings were completed between 2006 and 2008, the success of these buildings was minimal. The condominium prices were higher than market rate comparables and there were no options for affordable housing units. Since the high density and luxury retail and residential type of community that was envisioned for Victory Park, was not conducive to the Dallas market, condominium vacancy rates were high. Since 2008, the construction for the remaining planned residential properties was halted. In 2014 and 2015, two more residential properties, the Arpeggio Victory Park Apartments and Moda, were built bringing the residential property count to 17. Although from 1990 to 2015, residential properties increased by 750%, by 2015, residential properties only composed 9% of the total land-use composition in Victory Park. Between 2005 and 2015, commercial properties comprised, on average 30% of Victory Park's property use. The city of Dallas uses both account numbers and GIS identification numbers to classify property parcels. Several account numbers can be allocated to one GIS identifier, based on the property use and land tract. The count for commercial subcategories is determined by the property use assigned to the GIS identification number. This means there could be a number of account numbers attached to the GIS parcel that are uncounted. For example, the office building at 2501 Harwood Street, is counted as one commercial and one office property, even though

there are 38 commercial parcels located on the same land tract. In 2015, there were ten office parcels in which office space was the primary property use determined by the GIS identification number, not the account number. The sum of account numbers located on the ten parcels are not individually counted in the land-use composition percentages. The same holds for the retail and restaurant count, unless the primary parcel property use is one of the subcategories.

Relative to the other land-uses in Victory Park, the overall percentage of vacant parcels decreased from 75% in 1990 to 45% in 2015. Although the number of parcels increased substantially due to the splitting of large land tracts, the percentage decrease in vacant properties is evidence of new development prospects. Between 2005 and 2010, particularly in the two-year period between 2006 and 2008, residential properties increased the most. Yet, subsequent to the economic recession, residential development halted and has only picked up recently with the introduction of new investors and the TIF amendment extension in 2012. The first phase of construction for Victory Park was successful in increasing a high-density mixed-use development surrounding the arena. Although the first phase of construction occurred, a large percentage of new construction sat empty, and the rest of the Victory Park left undeveloped. In the late 2000s, Victory Park was concentrated by surface parking lots and vacant land tracts. Due to the poor performance in residential leases and office vacancies, the resale of entire buildings in the planned community future development was questionable. This was because there was little interest from external financiers to continue to develop Victory Park. Although Victory Park succeeded in spurring new development in its initial years, the master-planned development eventually flopped as it was ill-designed for the Dallas market. Table 40 provides a summary of Victory Park's land-use composition from 1990-2015.

Figure 22. Percentage of land-use composition in the arena-district micro-area (Victory Park), 1990-2015.

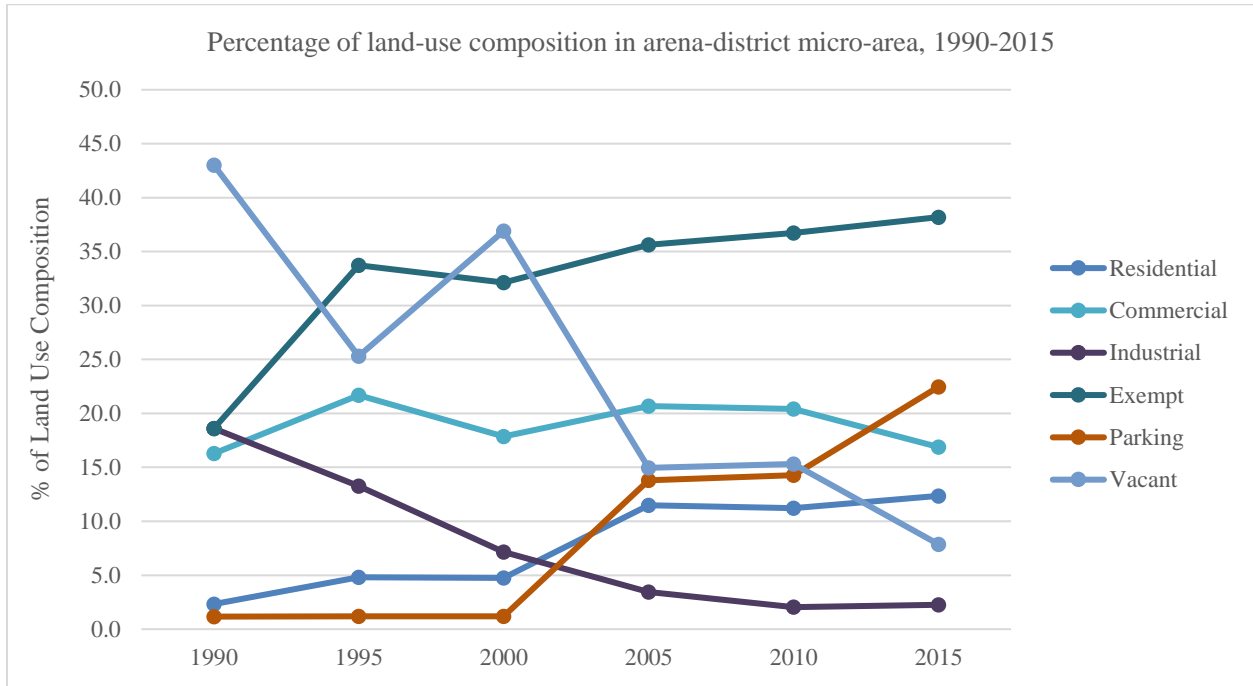


Table 40. City of Dallas's arena-district micro-area (Victory Park) land-use count, 1990-2015.

	1990		1995		2000		2005		2010		2015		1990-2015
	LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL	-	-	2	2.38	4	5.33	5	4.42	15	8.29	17	8.99	8.94
<i>RENTER- OCCUPIED</i>	-	-	2	100.00	3	13.64	3	3.66	10	2.12	7	1.79	5.14
<i>OWNER-OCCUPIED</i>	-	-	-	-	19	86.36	79	96.34	395	93.16	383	98.21	-
<i>TOTAL CONDOS</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
COMMERCIAL	17	21.79	22	26.19	22	29.33	33	29.20	55	30.39	63	33.33	5.38
<i>OFFICE</i>	-	-	-	-	-	-	5	5.81	8	3.33	10	2.54	7.18
<i>RETAIL</i>	-	-	-	-	-	-	1	0.01	6	2.50	8	2.03	23.11
<i>RESTAURANT</i>	-	-	-	-	-	-	2	2.33	3	1.25	2	0.01	-
<i>HOTEL</i>	-	-	-	-	-	-	-	-	1	0.42	1	0.25	-
INDUSTRIAL	-	-	-	-	-	-	-	-	5	2.76	4	0.02	-
EXEMPT	1	1.28	1	1.19	1	1.33	6	5.31	5	2.76	7	0.04	8.09
PARKING	-	-	-	-	-	0.00	2	0.02	11	6.08	12	6.35	-
VACANT	60	76.92	59	70.24	48	64.00	67	59.29	90	49.72	86	45.50	1.45
MIXED-USE	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	78	100.00	84	100.00	75	100.00	113	100.00	181	100.00	189	100.00	3.30

4.6.4.2 Built Volume

Prior to 2005, the city of Dallas assessment records did not include building square footage. The land area encompassed by Victory Park was either undeveloped or vacant. The level of new construction and changes in built volume in Victory Park is only realized after the construction of the American Airlines Center. Based on Victory Park's land-use composition, residential properties had the greatest change in built volume. The residential built volume had a compounding growth of 11% over the ten-year period; the Victory Park began with one building and grew to 17 new residential complexes by 2015. Victory Park residential development was largely a renters market compared to an owners market. Table 41 illustrates that there were approximately 400 owner-occupied units compared to roughly ten renter-occupied units, yet, the renter-occupied built volume is twice as large. Rental units are not assessed on an individual basis. This is the reason why there is a greater number of owner-occupied units, but the built volume is higher for renter-occupied buildings. The height of construction occurred in Victory Park between 2006 and 2008 when a number of new residential and office buildings opened. In 2010, close to 3 million square feet of new residential and 2 million square feet of commercial properties were built after the first phase of Victory Park completed. As more buildings that are residential were constructed, this in turn, increased the built volume of mixed-use properties (e.g. restaurant and retail). Of course, the built volume count for commercial subcategories are not completely accurate as some retail and restaurant property-uses were designated as non-specified commercial BPPs. Instead, the built volume is included in the main commercial built volume count.

Table 41. City of Dallas's arena-district micro-area (Victory Park) built volume count, 2005-2015

	1990		1995		2000		2005		2010		2015		2005-2015
	BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% Change
RESIDENTIAL							2,527,282	20.92	3,164,233	21.34	7,147,065	38.83	10.96
<i>RENTER-OCCUPIED</i>							2,309,276	91.37	2,447,262	77.34	6,385,427	89.34	10.71
<i>OWNER-OCCUPIED</i>							218,006	8.63	675,886	21.36	693,181	9.70	12.26
<i>TOTAL CONDOS</i>							-	-	-	-	-	-	-
COMMERCIAL							6,617,921	54.78	6,448,716	43.50	6,049,439	32.86	(0.89)
<i>OFFICE</i>							415,830	6.28	3,066,830	47.56	1,303,965	21.56	12.11
<i>RETAIL</i>							4,312	0.07	23,799	0.37	170,236	2.81	44.42
<i>RESTAURANT</i>							26,909	0.41	10,251	0.16	16,658	0.28	(4.68)
<i>HOTEL</i>							-	-	294,261	4.56	294,261	4.86	-
INDUSTRIAL							-	-	-	-	-	-	-
EXEMPT							180,000	1.49	180,000	1.21	180,000	0.98	-
PARKING							2,755,878	22.81	5,031,560	33.94	5,031,560	27.33	6.20
VACANT							-	-	-	-	-	-	-
MIXED-USE							-	-	-	-	-	-	-
TOTAL							12,081,081	100.00	14,824,509	100.00	18,408,064	100.00	4.30

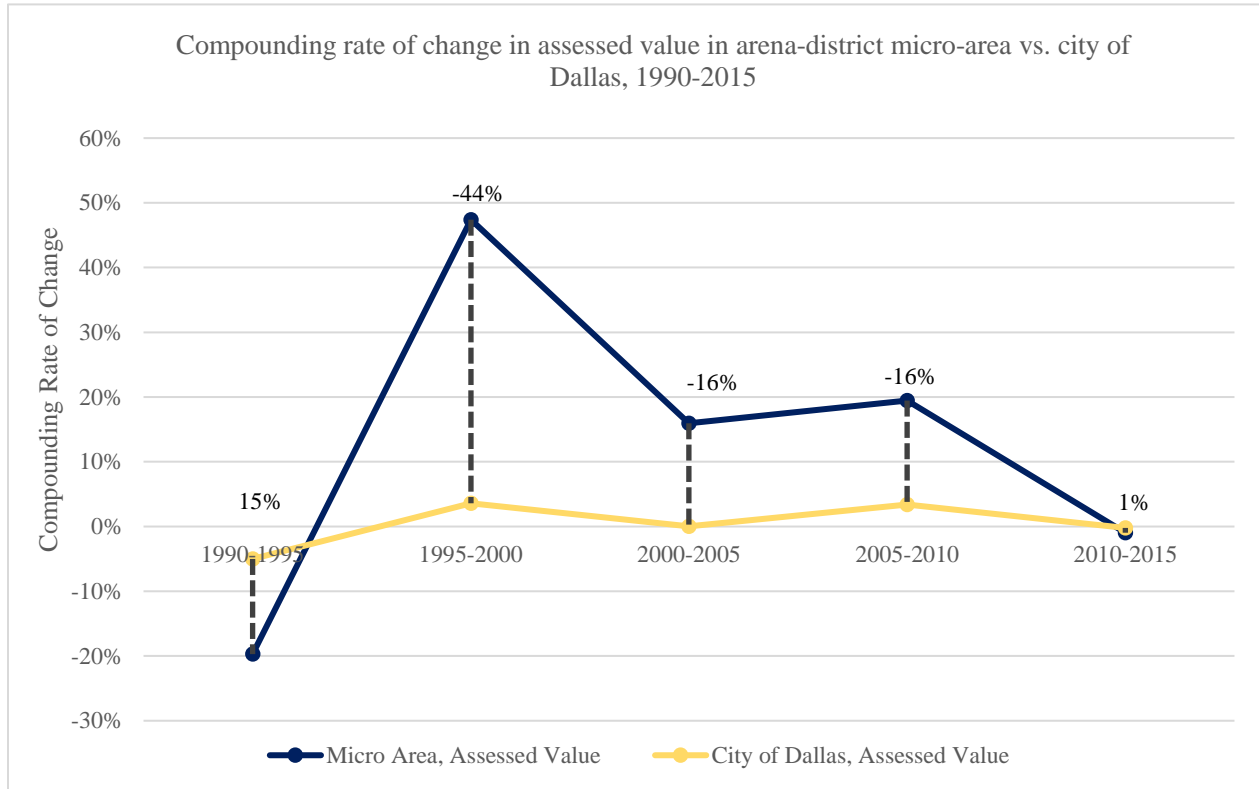
4.6.4.3 Assessed Value

In Texas, properties are appraised at 100% of the market value. Figure 23 illustrates the compounding rate of change in assessment values between these two areas. Over the 25-year period, Victory Park had a 10% compounding rate of change in assessment value compared to 0.5% in Dallas. Dallas' compounding rate of change in assessment values remained constant across the five, five-year intervals, with an overall percentage change of 8% across the 25 years. In 2005, the construction activity was approximately \$2.6 billion and by 2015, the annual value of construction permits increased to \$4.1 billion (CAFR, 2015). After the recession construction activity was amounted to \$3.2 billion, a 30% increase from 2010 to 2015. The increase in construction activity is a clear indicator of a resurgence of the city's economy. The total taxable value of property, including commercial BPPs, increased from \$67.6 billion in 2005 to \$87.3 in 2010, a 30% change in total taxable value of property. In 2015, the property tax value was \$93.1 billion, another increase of 6.6%. The increase in property values was in part due to the City of Dallas' primary economic development strategy, expanding the downtown through multi-modal transit (e.g. DART light rail) and the since there are 17 TIF districts throughout Dallas.

Victory Park's assessment values had a compounding rate of change in assessment values over a 25-year period of 10%. Between 1990 and 2000, the assessment values within Victory Park were low since 80% of the parcels were vacant industrial parcels undergoing environmental remediation. A dip in assessment values occurred in 1995 for both Victory Park and Dallas. Moreover, vacant parcels transitioned into commercial parcels, which explains a negative compounding growth rate of approximately 20%. After the opening of the American Airlines Center (the parcel was appraised even though exempt from property taxes), and the first phase of Victory Park (e.g. W Dallas Residences and the construction of two parking garages, along with

a number of surface parking lots) assessment values. In these five years, the majority of residential and office construction was completed. Refer to Table 39, which provides a list of notable construction projects in Victory Park. The reasons that Victory Park's overall assessment compounding growth rate is higher than that of the City of Dallas, is two-fold. Hillwood Development and other investment groups predominantly privately financed Victory Park. It was a planned development with a clear buildout trajectory. In just 15 years, excluding commercial and office properties, 12 new residential buildings were constructed in the quarter-mile area. Secondly, Perot envisioned that Victory Park would be comprised of high-end retail and luxury residential living. Affordable housing was absent without plans to modify the residential diversity. Compared to the rest of the City of Dallas, Victory Park is a high-density development of expensive retail and luxury condominiums, which far surpass the market value of other neighborhoods. .What is interesting to note, however, is the constant rate of assessment value growth in the city compared to the variability in Victory Park. The largest compounding rate of change in the arena-district micro-area in assessment values occurred between 1995 and 2000. Between 2000 and 2005, the compounding rate was 16% due to the construction of the arena, and the next five-year interval, was another increase of 20%. Victory Park experienced the greatest amount of construction between 2006 and 2008, which explains the 15 and 20% compounding growth rates in 2005 and 2010 assessment years. The Great Recession and the declining property values of the major development projects built between 2006 and 2008, explains the decrease in assessment values between 2010 and 2015. The property values have decreased because of half-leased residential buildings and a high percentage office vacancies.

Figure 23. Compounding rate of change in assessed value in arena-district micro-area (Victory Park) vs. city of Dallas, 1990-2015.



4.6.4.4 Property Taxes

A parcel’s taxable value determines the amount of property tax paid. Over 25 years, the compounding rate of change in property tax for Victory Park is 11%, compared to Dallas’ 1%. Victory Park’s property values had the greatest growth of 38% over the five-year period between 2005 and 2010 due to the 12 new residential developments, income-generating parking garages, and commercial business personal property parcels. As property values decreased during and after the Recession, the property tax values decreased as well. Since 2015, six big projects with long-term construction buildout timelines have been proposed. The resurgence in construction will subsequently increase the property tax values generated within Victory Park.

There is a wide gap in comparing the percentage differences in compounding between five-year interval property tax growth rates of the city of Dallas and Victory Park. Between 1995 and 2000, the 29% difference in property tax values is a reflection of an area’s transition from vacant industrial lots to the micro-area’s first two residential complexes. Although the American Airlines Center and the first phase of construction were completed between 2000-2005, the next largest gap in the compounding rate of change for property taxes occurred from 2005 and 2010. In this five-year interval, the rate of construction of properties valued above the market rate contributed to the 37% difference between Victory Park and the rest of the city.

Figure 24. Compounding rate of change in property taxes in arena-district micro-area (Victory Park) vs. city of Dallas 1990-2015.

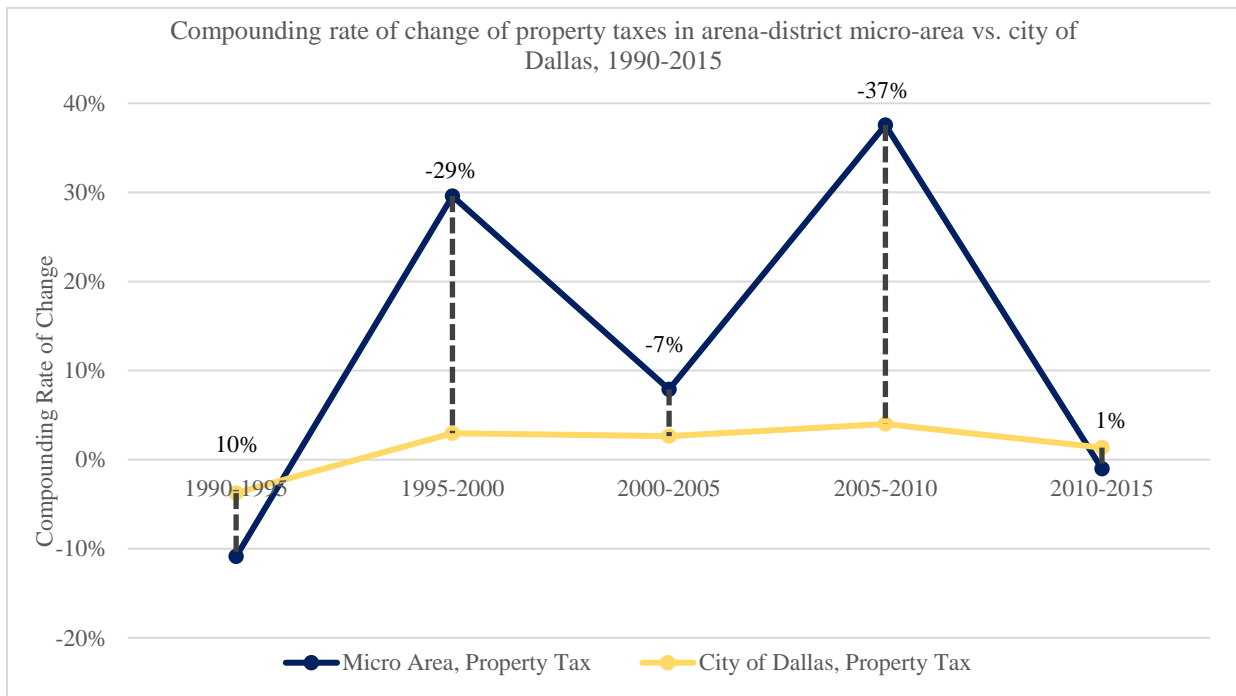


Table 42. Assessment, market, and property tax values in arena-district micro-area (Victory Park) vs. city of Dallas, 1990-2015.

	1990	1995	2000	2005	2010	2015	1990-2015
VICTORY PARK/AMERICAN AIRLINES ARENA DISTRICT MICRO AREA							
LAND AREA (sf)	2,192,544	1,627,451	5,092,083	6,090,670	7,058,273	7,643,742	5.12
BUILT AREA/VOLUME (sf)	-	-	-	10,063,094	13,541,266	15,647,636	-
TOTAL ASSESSED VALUE	50,739,920	20,397,210	161,326,740	379,043,860	1,005,699,010	1,395,991,210	14.18
TOTAL ASSESSED VALUE (2015 \$)	91,706,220	30,599,334	212,922,891	446,356,468	1,084,888,380	1,033,596,150	10.17
ASSESSED LAND VALUE	42,057,580	12,696,290	49,251,850	94,986,860	267,659,100	323,481,980	8.50
ASSESSED BUILDING + IMPROVEMENTS	8,682,340	7,740,040	112,074,890	284,057,000	745,001,880	1,072,509,230	21.25
TOTAL MARKET VALUE	50,739,920	20,397,210	147,919,121	379,043,860	1,005,699,010	1,395,991,210	14.18
TOTAL MARKET VALUE (2015 \$)	91,706,220	30,599,334	212,922,891	446,356,468	1,084,888,380	1,033,596,150	10.17
TOTAL MARKET LAND VALUE	42,057,580	12,696,290	49,251,850	94,986,860	267,659,100	323,481,980	8.50
TOTAL MARKET BUILDING VALUE + IMPROVEMENTS	8,682,340	7,740,040	112,074,890	284,057,000	745,001,880	1,072,509,230	21.25
TOTAL TAX	791,841	536,565	2,229,961	3,654,489	19,653,113	30,068,079	15.66
TOTAL TAX (2015 \$)	1,431,155	804,940	2,943,156	4,303,473	21,200,611	20,131,805	11.15
CITY OF DALLAS							
TOTAL ASSESSED VALUE	47,621,728,000	44,382,238,000	60,178,612,000	67,579,878,000	87,264,095,000	93,138,210,000	2.72
TOTAL ASSESSED VALUE (2015 \$)	86,070,468,153	66,581,014,391	79,425,171,727	79,581,069,112	94,135,324,478	93,138,210,000	0.32
TOTAL MARKET VALUE	47,621,728,000	44,382,238,000	60,178,612,000	67,579,878,000	87,264,095,000	93,138,210,000	2.72
TOTAL MARKET VALUE (2015 \$)	86,070,468,153	66,581,014,391	79,425,171,727	79,581,069,112	94,135,324,478	93,138,210,000	0.32
TOTAL TAX	286,181,000	285,041,000	375,377,000	479,723,000	637,304,000	735,913,000	3.85
TOTAL TAX (2015 \$)	517,237,271	427,610,679	495,431,544	564,914,740	687,485,716	735,913,000	1.42

4.6.5 KEY FINDINGS

Victory Park is an example of a catalytic project that utilized the American Airlines Center, as an entertainment anchor, to spur residential and office growth in an area that was largely concentrated by vacant industrial lots and warehousing. Victory Park emerged from a public-private partnership between the City and County of Dallas and the private development company, Hillwood Development. The City and County of Dallas contributed the majority of public funds to build the stadium, contingent that the Hillwood Development Corporation and other financiers would privately invest in the buildout of the mixed-use development. While questionable whether the TIF district was necessary given the private investment already funneled into the development, the city established the Sports Arena TIF District to fund the various public infrastructure improvements. The first phase of construction was successful; however, when the supply of the product overtook the demand, Victory Park flopped. Several new buildings went up for sale by the end of the 2000s, vacancy rates were high, and the overall design of the district failed due to limited pedestrian walkways fronting the retail shops. Overall, it is questionable whether Victory Park is a successful arena district. Indeed, the arena was built as part of a master-planned development. Ancillary development was planned in conjunction with the arena, not because of the arena. As land-use changes transformed from vacant industrial parcels to residential, office, retail, and parking, parcel assessment values and subsequently property taxes increased. Victory Park even had greater rates of change in these two aspects compared to the city at large. Although the area experienced peaks in construction, the product could not sell and the property values decreased. The financial burden also affected developers who were unable to cover the construction costs. The outcomes from the master-planned development failed to meet City expectations after predominantly funding the arena

construction and creating the Sports Arena TIF to assist with public infrastructure improvements. To rectify the financial failure of Victory Park and the Sports Arena TIF, the City of Dallas approved the expansion of the current TIF boundaries that would reinvest 10 percent of the TIF revenues generated in Victory Park into low-income and blighted areas of West Dallas and the Riverfront Corridor. Built in 2001, the American Airlines Center contributed to the master-planned development outcomes of Victory Park. However, inadvertently the biggest contribution the arena has had on urban development outcomes has been with the expansion of the TIF District, diverting funds into an area that otherwise would not have received similar investment opportunities.

Time will be a factor in determining whether Victory Park is a successful arena district overall in leading arena-led development strategies for urban redevelopment. While there were plenty of new construction and residential developments on the horizon, the economic climate and failure to achieve occupancy rates to feasibly pay off the upfront developer and construction fees, has left Victory Park reeling compared to neighboring areas of Uptown and Oak Lawn. Furthermore, the saturation of Dallas and the regional competition with Fort Worth and Arlington could have over-stressed Victory Park's the luxury development strategy. While the arena was successful in acting as an anchor for future development, the development itself never quite took off as planned, resulting in a questionable assessment of Victory Park's success as an arena district for this particular study.

4.7 HOUSTON: TOYOTA CENTER

Table 43. Toyota Center Rapid Notes

Arena Name	Toyota Center
Owner	City of Houston
Year Opened	2001
Key Players/Organization	City of Houston; Harris County' Downtown Redevelopment Authority/TIRZ; Houston First Corporation; Harris County-Houston Sports Authority
TIF District	Greater Houston No. 24 TIRZ
Total Cost of Venue (in 2018 \$)	\$283,860,000
Public Investment in Venue	\$283,860,000
Public Share of Total Venue Cost	100%

Source: Judith Grant Long, 2005

4.7.1 NEW ARENA NEGOTIATIONS

Opened in 1975, the Summit (known as the Compaq Center⁶⁵ from 1998-2003) was a major center for sport and entertainment events in Houston. From 1975 to 2003, the Summit was the home court for the Houston Rockets, Aeros (AHL), Comets (WNBA, now dissolved), and several arena football teams. In 1995, the Houston Rockets claimed that the venue economically obsolete as a result of the absence of luxury seating. The demand for a new arena took place at the same time Houston's other major professional teams were also seeking new venues. The Houston Astros (MLB) moved to Minute Maid Park built just due north of the Toyota Center, while the Houston Oilers (NFL), now the Tennessee Titans, moved to Nashville after failing to receive public funding for a new stadium. When the Houston Texans joined the NFL in 2002 as an expansion team, the reception of the franchise was predicated on a new stadium (NRG Stadium, formerly Reliant).

⁶⁵ In 1998, Houston's Summit Arena became the first sports venue to sell its naming rights (Hlavaty, 2017) when the venue's name changed to the Compaq Center.

The Houston Rockets sought legislation for the creation of an enterprise zone to generate enough incremental tax revenues to pay for a new arena; their initial effort failed. In 1995, the Texas Legislature voted to provide \$1 billion in subsidies for the state's major professional football, basketball, and ice hockey franchises over 30 years. Under this bill, cities could create enterprise zones, in which 80% of taxes collected within the maximum radius of 1.25-miles, are allocated to improving and building new venues. The bill also limited the total state subsidy to \$33 million annually for all major league sport venues. The subsidy would cover the construction of all the major sports facilities through sales, hotel occupancy, beverage, and use taxes. It was anticipated that \$20 million would derive from incremental tax revenues while the remaining \$13 million would come from existing tax revenues (Williams, 1995). While there was some criticism regarding the necessity of the new legislation, since the venues would create their own additional tax revenues, the bill was passed on a voice vote. In 1997, Governor George W. Bush signed the stadium bill into law, giving the city of Houston authority to build a new baseball stadium, a new arena for the Houston Rockets, and renovate the Astrodome. The Letter of Intent to build a baseball stadium downtown, stated that the venue would need to be constructed through a "county-wide sports authority or other non-profit organization." (HCHSA, 2018). The Harris County Houston Sports Authority (HCHSA) was created shortly after the new bill passed. The conditions under which the HCHSA can operate is two-fold.

First, to establish and operate a proposed professional sport venue, approval of county voters was necessary. Second, the Harris-County-Houston Sports Authority (HCHSA) would maintain the venues and be responsible for serving the debt⁶⁶. HCHSA was allowed to impose a

⁶⁶ The first project the HCHSA oversaw was the construction of Minute Maid Park in 2000. This was followed by the construction of NRG Stadium (formerly Reliant Stadium) in 2000, the Toyota Center and its adjacent parking garage in 2003, and finally the BBVA Compass Stadium for Houston's professional soccer team in 2012.

countywide 2% hotel occupancy tax and a 5% rental car tax in addition to generating tax revenues from surface parking lots and parking garages near the arena, and all sales taxes collected from on-site purchases.

Toyota Center's current site, adjacent to the George R. Brown Convention Center (GRBCC) was proposed by the city of Houston. The arena would be linked to the convention center and the proposed convention hotel so that the public funds generated from those two properties could be used to pay for the venue (Williams, 1995). As negotiations continued, complications with the Summit Arena lease terms arose.

In 1999, under the new stadium-financing bill, the HCHSA held a countywide referendum to impose new taxes for the new arena. Voters would be required to approve the split costs between the Houston Rockets ownership and the HCHSA, while the city would purchase the necessary land parcels⁶⁷ (Williams, 1999). The Houston City Council supported the bill, while voters rejected it, 54% to 46%. Without a new arena deal, the Rockets began to evaluate relocation advantages and disadvantages. Opponents of the arena deal were concerned with the 10% ticket tax and the idea that the revenues captured from within the arena would not be returned to the city. Furthermore, there was concern regarding the tax abatements offered for a proposed parking garage. A new financing plan was developed because of the relocation threat. The team would pay \$8.5 million annually in rent and the HCHSA with the hotel and car rental tax revenues would sell bonds to cover the arena's costs and would contribute \$1.5 million a year

⁶⁷ Reportedly, the Department of Convention and Entertainment Facilities Department has \$22 million in excess revenues generated from rents and hotel occupancy fees to spend on acquiring the downtown land. (Schwartz, 1999).

to offset operating costs (Berger, 2000). The Houston Rockets would control all of the arena's revenues and 95% of the naming rights. The city's investment would amass to \$60 million by purchasing land for the arena and building a parking garage. After intense negotiations, the Houston City Council agreed to cap its arena investment to \$20 million in an 11-4 vote. There were some stipulations within outlined in the agreement. First, the city would no longer pay for a parking garage. The city would receive \$200,000 a year for naming rights and a suite in the arena in order to host 20 fundraising events per year (Berger, 09/14/2000). In 2000, after months of negotiations and lobbying with the HCHSA, 66% of voters approved the arena deal. The decision was a landslide based on the controversial defeat the previous year. In 2001, arena construction began and in 2003, the Toyota Center officially opened. The Toyota Center was built below street level integrating the arena smoothly into the streetscape and maintaining an appropriate scale with the surrounding buildings. The total cost of the arena construction was \$235 million (\$327 million in 2018 dollars). Houston paid \$182 million (\$253 million in 2018 dollars) and the Houston Rockets contributed \$43 million (\$60 million in 2018 dollars) for arena enhancements (Lopez, 09/02/2003).

The Houston Rockets began playing in the new venue in 2003 and Houston leased the old Compaq Arena to a church. In 2001, the church signed a 30-year lease and invested \$95 million in renovating the venue. In 2010, the church offered to purchase the site for \$7.5 million; the city accepted the offer (Olson & Mendoza, 2010).

4.7.2 SUBDISTRICT ANALYSIS

Houston does not have a zoning code. The city adopted a laissez-faire economic and urban development policy and the private sector dominated the city's planning, development,

and policy-making decisions. Houston's local government participation was limited and constrained in initiating policy at the grassroots level (Vojnovic, 2003; Fisher, 1989; Feagin, 1998). Some academics characterize Houston as an "unplanned city" due to the city's lack of a formal planning and development department. It is a misconception, however, to characterize Houston as an "unplanned city" simply due to these factors. While the local government did not regulate land-use, it still provided basic public services and encouraged business growth. Indeed, Houston is described as anti-government, anti-regulation, anti-public planning; however, the idea that the city embraces "free enterprise" or "laissez-faire capitalism" does not suggest that there is a complete absence of government intervention in the city's economic growth (Fisher, 1989). That is not to say that Houston and its residents did not attempt to have their input heard in the city's urban policy. Given the laissez-faire capitalistic approach and the lack of civic input on urban policy and planning of the city, neighborhood-based civic clubs were created. In Houston, there are over 600 neighborhood civic clubs. Due to the lack of a zoning code, these city clubs were predominantly created to protect smaller neighborhoods from decreases in property values (Fisher, 1989). Houston's urban policy was designed for community civic groups to protect their own individual property interests. "Planning has always been done, until very recently, by the private, not the public, sector, or done by the public sector at the request and under the guidance of the private sector leadership" (Jones, 1977).

Business and private sector coalitions largely influenced the city's economic development growth. The Chamber of Commerce (CC) and the Houston Economic Development Council (HEDC) were two of Houston's core organizations that were part of the city's growth coalition. These two organizations played a role in bringing businesses together to carry out

development efforts and influenced the growth of the local economy. Over the last 15 years, however, Houston experienced a big shift in the city's planning and development. Notable large-scale downtown development projects and the rehabilitation of historic buildings were made possible through public investments and the increase in local government participation. To encourage urban revitalization in Houston's downtown core, the city supported public-private partnerships, encouraged public investment, and subsidized several projects (Qian, 2011; Vojnovic, 2003). Supporters of government regulation argue that the city's land-use policies led to Houston's sprawl (Lewyn, 2005). The city's extraterritorial jurisdiction policy allowed the city to annex neighboring subdivisions, which explains the city's growth expanding to 556 square miles (Fisher, 1989).

The city created 22 tax increment reinvestment zones (TIRZ) to target and redevelop certain neglected urban areas (Qian, 2011). Whereas the private sector and pro-growth development coalitions would undertake the redevelopment of certain blighted areas in the past, the public sector was now more involved in the land acquisition process, investments in public infrastructure, and the implementation of affordable housing, to name a few. Although Houston eschews zoning, the city has land development regulations that guide where new construction or renovations should occur. For example, the city reviews subdivision plats and variances for certain land development regulations such as limitations by block and lot size (Lewyn, 2005) while high and low density development is restricted to urban or suburban zones throughout the city. When a subdivision is first created, land-use and density is controlled by subdivision restrictions established by the developer (Peiser, 1981). Houston does not have any restrictions to mixing residential and commercial land-uses with the exception that residential units cannot be

located near major interstate highways or thoroughfares (Lewyn, 2005; Houston Texas Code, 1999). Restrictive covenants are created to separate residential from commercial uses.

There was little incentive for the growth coalition to improve policies and its larger development portfolio since the energy business dominated Houston's local economy. The Chamber of Commerce (CC) served as a quasi-governmental unit to oversee infrastructure improvements and better serve future planning. CC board members were political elites who facilitated growth for the "good business climate" (Schaffer, 1989; Feagin, 1985; Murray, 1980; Kaplan, 1983) which focused on low taxes and little government intervention on private sector development projects. Houston was strewn with mega-projects as developers leveraged the city's weak planning (and absent) zoning regulations. As land prices doubled or tripled over the course of just a few years, office and retail projects were built on a speculative basis (Schaffer, 1989). Since 1995, developers have undertaken revitalization efforts throughout the city's downtown and surrounding areas. In the first three years of the city's full-fledged revitalization efforts, construction was valued at more than \$3 billion per year (City of Houston, 2000); 60% of these renovations or new construction projects were concentrated on the southeastern side of Houston's downtown.

Houston's Toyota Center is located on the east side of downtown. The quarter-mile arena-district micro-area captures a portion of the east side's development trajectory for the last 25 years. The development of the east side of Downtown Houston is a result of the combination of both civic and business interests and public subsidies. Compared to the west side of Main

Street, lined with high-rise office buildings, the majority of land parcels were abandoned on the east.

Texas Eastern Corporation, a publicly traded natural gas company, was part of the rapidly growing sector of the energy industry that was successful in focusing on the expansion of the natural gas system and converting pipelines in order to transport natural gas (Castaneda & Pratt, 2018). However, as the energy business began to decline in the 1980s, the company eventually decided to diversify and spread the company's assets into liquefied natural gas, North Sea oil, and Houston real estate (Castaneda & Pratt, 2018). Texas Eastern Corporation purchased 32 contiguous blocks on the east side of downtown (Van Ness, 2012). Land acquisition required over 127 transactions in order to acquire 74 acres; the Texas Eastern Corporation owns 95% of the acquired parcels. In 1970, the Houston Center, a \$1.5 billion development, was conceptualized as a catalyst to redevelop the east side. The Houston Center was projected to become one of the largest private development projects, however, only a small portion of the envisioned project was eventually completed. After the first phase of construction was completed in 1989, the Houston Center encompassed 4.2 million square feet of office and retail space and one hotel with a 90% occupancy rate. The complex, however, never yielded the financial success that had been predicted. In conjunction with the development of the Houston Center, a new convention center was proposed and put up for referendum to be located on the underutilized land bordering the freeway and replace the outdated convention center. The referendum passed and five blocks of land were donated to the city of Houston for the George R. Brown Convention Center (GRBCC). The GRBCC opened in 1987.

Houston's downtown revitalization began with both the mixed-use Houston Center development and the GRBCC. However, the city's biggest wave of downtown revitalization occurred between 1995 and 2011. More than \$5.3 billion in public-private partnership development was completed on the east side of downtown (Van Ness, 2012). Major developments such as Minute Maid Park, the Houston Center, the GRBCC, the Toyota Center, Discovery Green, and many others transformed the east side of downtown Houston. In 2004, Houston produced the *Houston Downtown Development Framework*, which discussed the city's development progress from 1985 to 2004 and outlined the vision for Houston's development by 2025. The *Downtown Living Initiative* stimulated new residential construction throughout the downtown area. Houston's downtown core was a commercial success and served as a business hub with few entertainment venues; residential development was still limited. The first notable residential development in downtown was the renovation and conversion of the Rice Hotel⁶⁸ in 1997. The *Downtown Living Initiative* proposed 18 new residential projects. In 2015, *Plan Houston* was the city's very first general plan adopted by the Houston City Council that outlined 12 core strategies for achieving the city's overall vision and its economic development potential by 2036. The *GRBCC 2025 Master Plan* (2015) specifically outlined potential future public and private development opportunities surrounding the immediate areas around the convention center and Toyota Center, recently named as the Avenida Houston District, encompassed within the quarter-mile arena-district micro-area.

⁶⁸ The city of Houston contributed a \$5 million historic tax credit and \$7 million in incremental taxes for its subsequent conversion into a residential development. The total project was a \$32 million renovation into loft apartments (Williams, 1997; Schaffer, 1989).

Beginning in 1995, Downtown Houston experienced a substantial amount of development changes. The Main Street Market Square Redevelopment Authority (MSRA) and its tax increment reinvestment zone (TIRZ) had been established⁶⁹. The MSRA encompasses the development on both sides of the Main Street corridor and the Buffalo Bayou Redevelopment Project. Significant amounts of public investments were allocated to improving downtown infrastructure and the aesthetics by adding a number of new public parks and public art installations. Between 1995 and 2004, approximately \$873 million was allocated for public infrastructure improvements and \$1.3 million was for public facilities such as new theaters and professional sport facilities (Houston Downtown Development Framework, 2004). Over \$2.2 billion was invested in private commercial, residential, and non-profit projects. The primary goal of the *Downtown Development Framework* was to recreate Houston from a place of business, to a vibrant place of business, entertainment, residential, and civic life. Since the mid-1990s, the priority was to substantially increase the residential housing stock to maintain pace with the expanding population. The residential growth areas for high-rise residential were identified along the southwestern side of Main Street, the Theater District, the historic Market Square area, and the superblocks surrounding the GRBCC. The *2004 Development Framework* sought to encourage coordinated development of the superblock on the western side of the GRBCC. The announcement of Discovery Green, an open green space, adjacent to the GRBCC spurred new high-rise residential which has created a more communal and vibrant atmosphere within the Avenida de las Americas corridor.

⁶⁹ The Main Street/Market Square TIRZ was created in 1995 to stimulate residential development across nine blocks surrounding the Rice Hotel, the first residential development in downtown. In 1998, the TIRZ boundaries expanded to include the northern blocks of the CBD along the Buffalo Bayou to enhance connections between the eastern and western portions of the downtown. In 2005, new mixed-use retail and entertainment was included. Overall, the TIRZ was used to encourage new residential, retail, hotel, and commercial development (City of Houston, 2018).

Between 2004 and 2011, more than \$6 billion had been invested in the downtown area (Plan Downtown, 2011). In 2012, there was special focus in considering a potential public-private redevelopment program for the “Convention District” which partially falls within the quarter-mile arena-district micro-area boundaries for this study. The City of Houston has not formally designated boundaries for the “Convention District,” and there is no TIRZ designated specifically for the area immediately around the convention center. Rather the Greater Houston Reinvestment Zone 24 covers 193 acres. The *2025 GRBCC Master Plan* outlines the future development and success of the GRBCC that will only be realized by committing to long-term development strategies that extend beyond the convention center, including the new infrastructure along the Avenida de las Americas corridor.

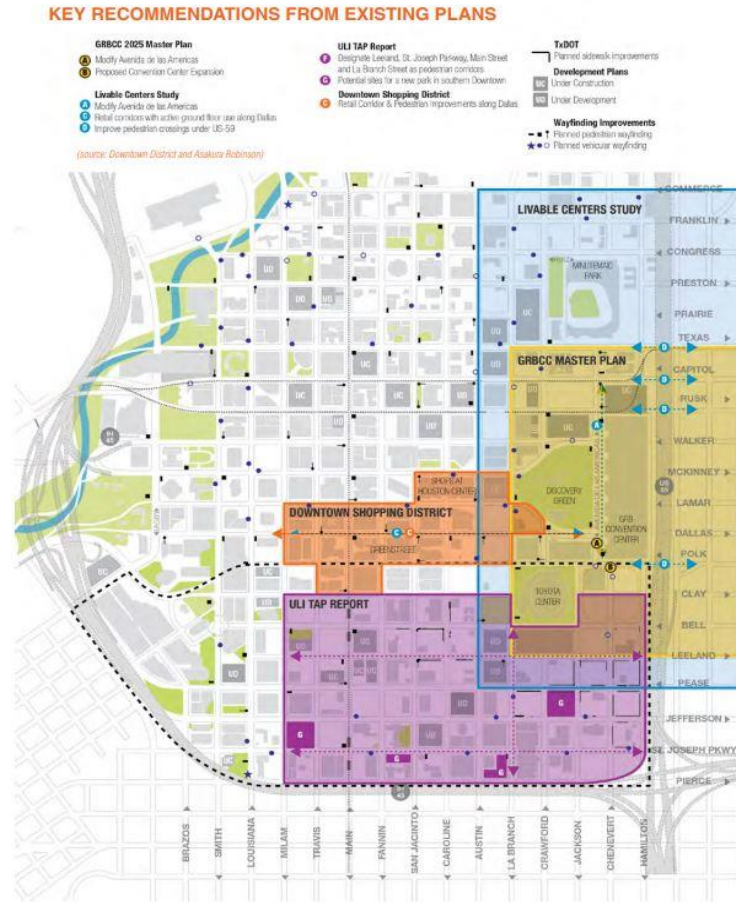
Currently, Houston has 27 active TIRZs including designations for the GRBCC and the three professional sports venues: NRG Stadium (Reliant Stadium), Minute Maid Park, and the Toyota Center all fall within the boundaries of Houston’s 24th “Greater Houston” TIRZ⁷⁰⁷¹. However, this TIRZ was not a function of the establishment of these major entertainment venues. Without formal government boundaries, the designation of the “Convention District” outlined in the *GRBCC 2025 Master Plan* is merely symbolic. Figure 25 provides a visual of the GRBCC district boundaries. Avenida Houston District is the newest “unofficially” demarcated district or

⁷⁰ The Houston City Council established the Greater Houston Reinvestment Zone No. 24, issued per Chapter 311 of the Texas Tax Code for the purposes of developing and redeveloping the areas surrounding the eastern end of Houston’s CBD and the area around NRG Stadium. The intent of the Greater Houston TIRZ is to establish a project and financing plan to facilitate the development and redevelopment of a 462-acre area (with approximately 1,280 parcels) that will attract new private investment. Of the 462 acres, 27% of parcels are vacant underdeveloped, former oil field properties that hinder the development for future housing or commercial uses. (City of Houston, 2012).

⁷¹ The Greater Houston No. 24 TIRZ is a contiguous irregular shaped geographic area but is bounded by the Old Spanish Trail, Alameda Genoa Road, Highway 288, Main Street, and the eastern section of the Houston CBD (City of Houston, 2012).

neighborhood surrounding the GRBCC. Avenida Houston grew out of the initial phase of Houston First Corp's *2025 GRBCC Master Plan*, in which the City of Houston spent more than \$1.5 billion to redevelop the area immediately surrounding the convention center, which encompasses the geographic area for the arena district.

Figure 25. The 2025 GRBCC Master Plan geographic boundaries



Source: (Houston First Corporation, 2012)

4.7.3 MAJOR DEVELOPMENT PROJECTS

Table 44. Notable completed and proposed development projects in Houston’s arena-district micro-area, 1990 to present.

Development Name	Project Cost	Description
List of City of Houston projects completed in early 2000s		
Minute Maid Park	\$286,000,000	<ul style="list-style-type: none"> • After the Houston Astros threatened to leave if a new venue was not provided by the city, a downtown was determined as a potential site for a new ballpark. With the passing of legislation at the state level, land was purchased on an old railway station site on the east side of downtown. • Compared to other sections of downtown, the east side was a suitable site as land prices were more economical. The price of land was \$11 per square foot compared to \$200 per square foot on the western side of Main Street. • The railroad station was converted into the Astros corporate offices. • The ballpark funding proposal was up for referendum in 1996 and was approved by voters 51% to 49%. This would lead to the creation of the Harris County-Houston Sports Authority in financing the new ballpark, which opened in 2000.
5 Houston Center	\$166,000,000	<ul style="list-style-type: none"> • GRBCC’s presence impacted the expansion of the downtown office market on the east-side of Main Street. • Completed in 2000, 5 Houston Center is a 28-story 577,000-square foot office building.
GRBCC Expansion and Hilton Americas-Houston	\$285,000,000	<ul style="list-style-type: none"> • GRBCC opened in 1987, however, the center had to be expanded with the demand for more space. • In 2003, 400,000 square feet of additional exhibition space and meeting rooms were added, which brought the total size of the GRBCC to 1.2 million square feet with approximately 850,000 square feet of exhibition space. • A 1,200-room conference center hotel, Hilton Americas-Houston, was also built using public subsidies. The public subsidies derived from bonds paid off by the hotel and sales taxes, and parking revenues. Construction also included a 1,600-space parking garage.
List of City of Houston projects completed in mid-2000s		
Discovery Green	\$112,000,000	<ul style="list-style-type: none"> • Discovery Green is an 11.8-acre park located adjacent to the GRBCC. • The site was originally intended to be part of the Houston Center expansion, however, city philanthropists encouraged mayor, Bill White, for the city to acquire the block and add it to property already owned by the city to create a permanent green space downtown. • The city purchased land for \$56 million, another small portion of land was a partial sale and partial donation, and then another portion of land was added with the closure of a street that ran straight through the land parcel.

		<ul style="list-style-type: none"> • Land acquisition was completed in 2004 and Discovery Green opened in 2008. • Park operational costs amount to approximately \$3.2 million a year. • Discovery Green was also a catalyst for the two larger developments that fall just short of the quarter-mile radius, One Park Place⁷² completed in 2008 and Hess Tower⁷³ completed in 2011.
Houston Pavilions	\$170,000,000	<ul style="list-style-type: none"> • Previously the site of three surface parking lots, Houston Pavilions opened in 2008, as a mixed-use retail, office development, and entertainment center that extends over three blocks. • The building is occupied by 305,000 square feet of retail and 200,000 square feet of office space • This project was financed through public subsidies and incentives. • Two retail spaces were built with \$600,000 and \$400,0000 worth of public infrastructure improvements (e.g., pedestrian walkways, sidewalks, streetscapes etc.) derived from the Houston Downtown Management District. • \$14.3 million was also provided through the Downtown Redevelopment Authority's Tax Incrementing Reinvestment Zone.
Embassy Suites	\$55,000,000	<ul style="list-style-type: none"> • The Embassy Suites is located adjacent to Discovery Green and the Hilton Americas Houston Hotel and next door to the GRBCC. There was a big need for more hotel development surrounding the GRBCC. • It is the first privately developed hotel built in Houston since 1986. • Property tax abatements and hotel occupancy tax rebates were negotiated in the area to encourage more downtown hotel development. • It was negotiated that for the first seven years, the developer will take home equal payments to the generated hotel occupancy tax in exchange that the Embassy Suites would reserve 70 percent of the total rooms for events at the convention center. • The 19-story 262-room hotel was completed in 2011.
List of City of Houston projects completed in late-2000s		

⁷² Land acquired between the Shops at Houston and Discovery Green was acquired for the future development of One Park Place shortly after plans for Discovery Park, the city's largest urban greenspace was announced. One Park Place is a 37-story 346-unit, apartment building and one of the first apartment buildings built in the downtown area in the last 40 years. Formerly a vacant plot of land, the property values increase dramatically with the apartment occupancy and the presence of the Discovery Green nearby (Van Ness, 2012).

⁷³ Similar to One Park Place, Hess Tower was also constructed after plans for Discovery Green were announced. Construction began in 2007 and the 29-story, 850,000 square foot building opened in 2010. The building sold in 2011 at \$442 million, the biggest sale of an office building in Houston history (Van Ness, 2012).

Marriott Marquis Houston Convention Center Hotel	\$370,000,000	<ul style="list-style-type: none"> • RIDA Development Corporation developed 29-story, 1,000-room convention center hotel opened in 2016. • The building has over 100,000 square feet of meeting space and plenty of luxury amenities including a lazy river.
Camden Downtown Phase I and II	N/A	Two phase construction project of two 21-story, 500-unit total residential development. The two buildings are estimated to be completed by 2020.

Note: In 2016, 48 new projects either were completed, under construction, or planned. A full list of public and private sector construction projects in Downtown Houston, built from 1995 to projects that are currently under construction is located on Houston Downtown Management District's website at https://www.downtownhouston.org/site_media/uploads/attachments/2018-03-28/Downtown_Development_Project_List_032218_1.pdf.

4.7.4 DEVELOPMENT FINDINGS

In 1995, Houston's first revitalization efforts began. However, it is only over the last few years that the surge of development in Houston's downtown core is noticeable. More than \$1.5 billion has been invested in new downtown construction projects that are already underway or on the verge of completion. Furthermore, \$3 billion has been invested in projects that are in the pre-development stage. One-third of these projects are strictly dedicated to residential development (Houston Downtown Management District, 2018). To support a vibrant 24-hour convention center district, the rise in residential, office, and retail development and the integration of urban parks such as Discovery Green have been anchors for Houston's downtown growth.

The Avenida Houston District and the Convention Center District do not contain official public declarations district boundaries. The Greater Houston No. 24 TIRZ, which does have an official district boundary and captures the majority of the eastern side of Houston's downtown. The Greater Houston TIRZ was also only enacted at the end of 2012, and therefore the surge of development that may have occurred because of the Toyota Center construction does not pertain to the TIRZ. The Toyota Center's quarter-mile arena-district micro-area partially encompasses most of the Convention Center District and the Avenida Houston District.

4.7.4.1 Land-Use Composition

Since 1995, the City of Houston has invested in the redevelopment efforts on the eastern side of downtown. Despite development elsewhere, the quarter-mile arena-district micro-area, surrounding the Toyota Center, only began to experience a spur in development between 2010

and 2015. Development initiatives in the Convention Center District included the Convention Center, three major league sports venues, and Discovery Green. Additionally, Houston is focusing its future development strategies on a smaller street-level scale to enhance these larger developments (ULI, 2012). There is significant market potential for residential development and hotels adjacent to the convention center to create a more vibrant downtown and 24-hour district. There is a lack of pedestrian interconnections between the major development projects that negatively affect street activity and retail consumption. Overall, downtown Houston would benefit from more hotel development complemented with residential development. An increase in parking garages would also support both the nearby convention center and future hotels and residences (ULI, 2012).

Over the last 25-years, the overall compounding rate of change among the different land-uses was quite insubstantial. Table 45 provides a summary of total land-use composition by category in Houston's Toyota Center's micro-area. The greatest changes occurred in the rise of residential and parking properties and the decrease in industrial properties. Each of these three categories had a positive and negative compounding rate of change of approximate of 5%. The lack of residential properties in the downtown area has posed a problem in spurring the rest of Houston's development. Without a strong residential base, it is more difficult to establish a vibrant and active "24/7" downtown and a convention center district as outlined in the *GBRCC 2025 Master Plan*. There are now three residential properties in the arena-district micro-area. These three properties include two apartment complexes at One Park Place and at 1416 Austin Street and the condominiums at 1111 Caroline Street. Two new residential buildings have been proposed within the arena-district micro-area; construction will only be completed by 2020. Between 1990 and 2010, vacant properties composed the largest percentage of property-use at an

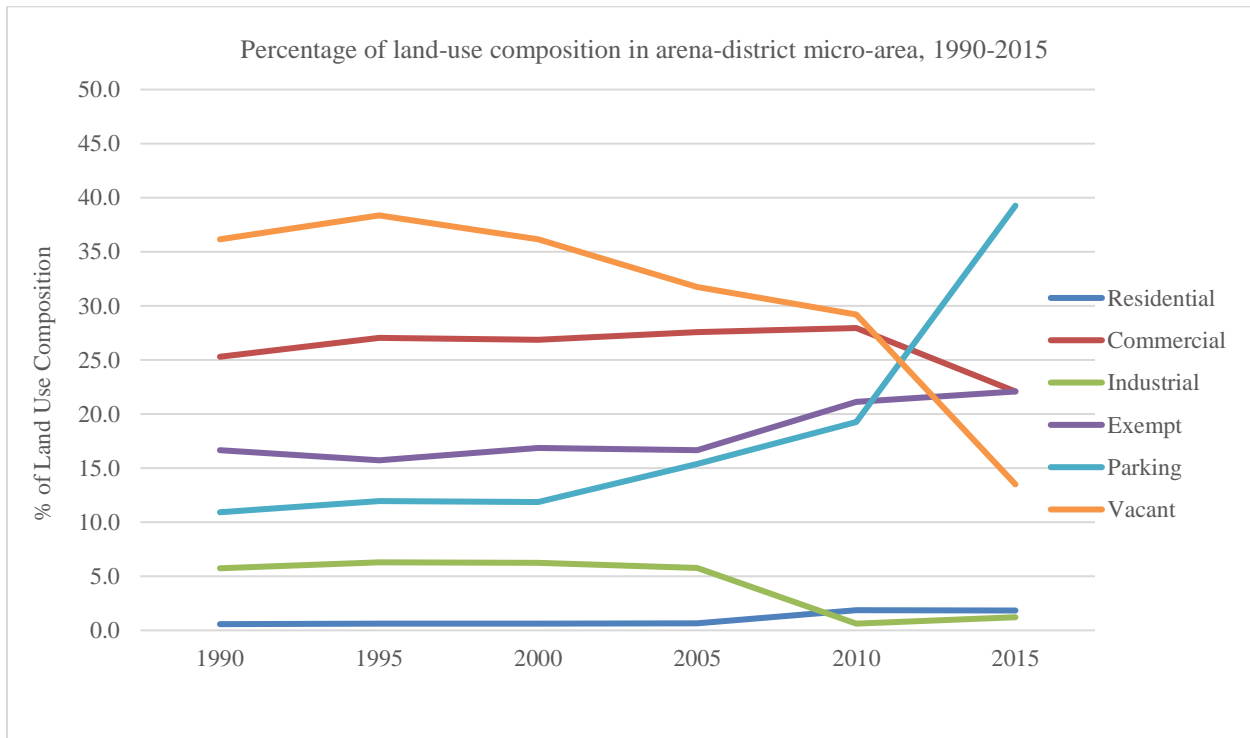
average 32%, in the arena-district micro-area. Some exempt parcels are listed as vacant exempt properties, but categorized as exempt properties and not vacant parcels. Exempt properties composed 16% of the land-use composition, a majority of which were vacant exempt parcels. The other exempt properties include two public parks, Discovery Green and Root Square, the St. Joseph Medical Center, and the South Texas College of Law Houston. Three to four separate parcel identifiers composed each of these exempt properties. The number of vacant properties decreased with the rise in surface parking lots and parking structures.

Between 2005 and 2015, the overall number of commercial parcels decreased by 20%. This decrease in total percentage of commercial properties does not necessarily mean that there was a decrease in commercial properties, particularly because the commercial built volume has had a compounding rate of change of 4% between 2000 and 2015. Instead, commercial property parcels could have been consolidated through land assembly and created a larger commercial parcel. For example, four commercial parcels compose the Houston Center. However, the Houston Center also contains multiple commercial business property parcels that constitute as the Shops in Houston Center that are not captured in the land use count. The decrease in commercial land parcels is also because of the decrease in retail parcels. For assessment purposes, the Houston Center and the GRBCC possess up to four parcel identification numbers that are based on historic lot configurations rather than individual commercial business property parcel identifications as some other cities use. Indeed, retail is integrated on the first floors of buildings like the Houston Center or in the GRBCC, these retail parcels have not been accounted for because they are listed under the assessment value of the larger development itself. Individual retail parcels, such as individual shops that were strewn throughout the city decreased, the lots were replaced with larger development projects such as the five hotels that were built between

2005 and 2015. Prior to 2005, commercial properties also consisted of a majority of full-service auto-garages and privately operated electrical companies. Since then, the number of individual commercial parcels has decreased and been replaced with a consolidation of commercial parcels and office and hotel development in which the commercial built volume increased by 4%.

Based on the ULI Houston Technical Panel’s recommendations and the goals outlined in the *GRBCC 2025 Master Plan*, private development is slowly shaping the arena-district micro-area into an entertainment district anchored by the GBRCC and Toyota Center. Based on how the downtown street grid is laid out and a low compounding rate of change of 4%, three new residential developments with two recently proposed developments, is a start. Surface parking lots and parking garages are also necessary in supporting further residential development and the five new hotels constructed since 2005.

Figure 26. Percentage of land-use composition in the Houston arena-district micro-area, 1990-2015.



4.7.4.2 Built Volume

The total built volume in Houston's arena-district micro-area grew at a compounding rate of change of approximately 3% over the last 15 years. Table 45 provides a summary of the built volume by land-use category for four year intervals and the compounding rate of change between 2000 and 2015. Building square footage was not recorded prior to 2000 on the assessment records. Although there are only three residential developments located in the arena-district micro-area, residential had a 22% compounding rate of change in the last 15 years. Commercial parcel built volume had a compounding rate of change of about 4%, with the largest increases in office and hotel development. Office development had its surge in development starting in 2005, while the hotel development seems to have begun after 2010 when the *GRBCC 2025 Master Plan* was published. Similarly, hotel built volume grew in 2015, as did the built volume for parking structures. This indicates that one or two parking garages were constructed in tandem with hotel construction.

Table 45. City of Houston's arena-district micro-area land-use count, 1990-2015.

YEAR	1990		1995		2000		2005		2010		2015		1990-2015
	LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL	1	0.57	1	0.63	1	0.63	1	0.64	3	1.86	3	1.84	4.49
<i>RENTER- OCCUPIED</i>	<i>1</i>	<i>0.57</i>	<i>1</i>	<i>0.63</i>	<i>1</i>	<i>100.00</i>	-	-	2	4.00	2	4.00	2.81
<i>OWNER- OCCUPIED</i>	-	-	-	-	-	-	47	100.00	47	94.00	47	94.00	-
<i>TOTAL CONDOS</i>	-	-	-	-	-	-	47	100.00	47	95.92	47	95.92	-
COMMERCIAL	44	25.29	43	27.04	43	26.88	43	27.56	45	27.95	36	22.09	(0.80)
<i>OFFICE</i>	9	5.17	9	5.66	9	20.93	9	20.93	8	17.78	8	4.91	(0.47)
<i>RETAIL</i>	11	6.32	11	6.92	11	25.58	10	23.26	8	17.78	6	3.68	(2.40)
<i>RESTAURANT</i>	1	0.57	1	0.63	1	2.33	1	2.33	2	4.44	2	1.23	2.81
<i>HOTEL</i>	-	-	-	-	-	-	2	4.65	3	6.67	5	3.07	-
INDUSTRIAL	9	5.75	10	6.29	10	6.25	9	5.77	1	0.62	2	1.23	(5.84)
EXEMPT	22	16.67	25	15.72	27	16.88	26	16.67	34	21.12	36	22.09	1.99
PARKING	19	10.92	19	11.95	19	11.88	24	15.38	31	19.25	64	39.26	4.98
VACANT	59	40.80	61	38.36	60	37.50	53	33.97	47	29.19	22	13.50	(3.87)
MIXED-USE	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	154	100.00	159	100.00	160	100.00	156	100.00	161	100.00	163	100.00	0.23

Table 46. Houston's arena-district micro-area built volume, 2000-2015.

	1990		1995		2000		2005		2010		2015		2000-2015
	BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL					4,292	0.13	70,660	1.80	701,132	14.03	701,132	9.22	22.61
<i>RENTER- OCCUPIED</i>					4,292	100.00	-	-	630,472	89.92	630,472	89.92	22.09
<i>OWNER- OCCUPIED</i>					-	-	70,660	100.00	70,660	10.08	70,660	10.08	-
<i>TOTAL CONDOS</i>					-	-	70,660	100.00	70,660	10.08	70,660	10.08	-
COMMERCIAL					1,936,117	58.30	2,997,577	76.53	3,588,543	71.82	4,863,072	63.92	3.75
<i>OFFICE</i>					101,417	5.24	132,425	4.42	1,136,442	31.67	1,174,951	24.16	10.30
<i>RETAIL</i>					148,140	7.65	145,332	4.85	104,715	2.92	185,974	3.82	0.91
<i>RESTAURANT</i>					5,170	0.27	5,170	0.17	18,470	0.51	18,470	0.38	5.23
<i>HOTEL</i>					-	-	581,475	19.40	847,285	23.61	2,053,488	42.23	-
INDUSTRIAL					146,068	4.40	134,212	3.43	19,500	0.39	47,876	0.63	(4.36)
EXEMPT					27,057	0.81	27,057	0.69	-	-	-	-	(100.00)
PARKING					629,970	18.97	687,240	17.55	687,240	13.75	1,996,320	26.24	4.72
VACANT					577,647	17.39	-	-	-	-	-	-	(100.00)
MIXED-USE					-	-	-	-	-	-	-	-	-
TOTAL					3,321,151	100.00	3,916,746	100.00	4,996,415	100.00	7,608,400	100.00	3.37

4.7.4.3 Assessed Value

Houston's properties are appraised at 100% of the market value. Figure 27 illustrates the compounding rate of change in assessment values between the arena-district micro-area and that of the City of Houston. The line markers in the graph indicate the difference in compounding rate of change between the micro area and Houston. The compounding rate of change of 12.6% in assessment values within the arena-district micro-area corroborates with the city's economic development initiatives by investing more on the eastern side of downtown. The rollout continues with an 11% compounding rate of change between 2000 and 2005 with the opening of the Toyota Center.

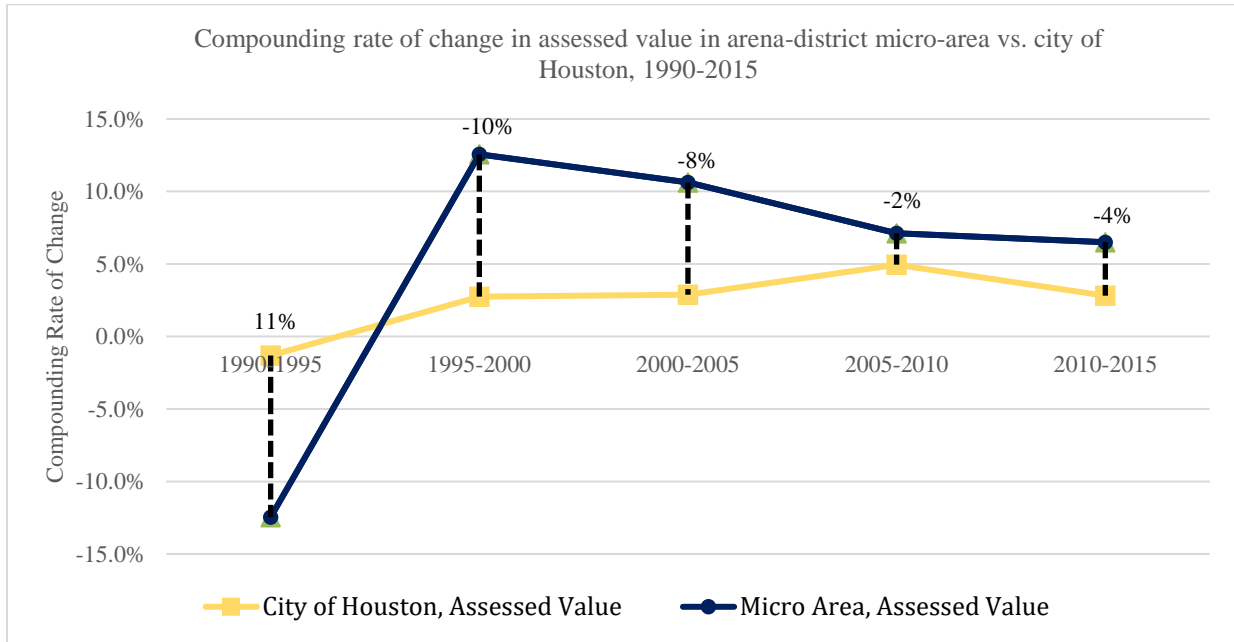
Over the course of the 25-year period, the arena-district micro-area's assessed values compounded annually at 5% compared to 2% in the city overall. Table 47 provides a summary of the assessment, market, and property tax values for the arena-district micro-area and the city of Houston. Houston maintained a constant rate of change in property assessment values. Interestingly, between 2005 and 2015, the Great Recession did not seem to affect the assessment values in Houston in the same way that other cities experienced. As seen in other case summaries, a national recession in 1995 caused real estate values to decrease. In addition to the property values decreasing, one parcel located in the micro-area in particular, AT&T Communication had built an operating site in the early 1990s. The property has an assessed value of over \$20 million, largely due to the improvements made to the property. In 1995, the total assessed value for the parcel was less than \$5 million. Assessed values in the micro-area had a percentage change of 99% compared to 1990. Houston assesses exempt properties, although they are not valued for tax purposes. The valuations are maintained in order value the adjacent properties correctly. Although land adjacent to a residential development is owned by Houston

and is exempt, that does not mean that the land is less valuable, and therefore it is still accounted for in the assessment records. Values of exempt properties in 1990 and 1995 were not distributed to the public due to accuracy issues. The predominant reason for the substantial shift in assessed value is between 1995 and 2000 is due to the inclusion of exempt values. Parcels dedicated to the Houston Southwest College of Law and the GRBCC are tax exempt, however, in order to assess the property value purposes, the parcels were assessed from 2000 onward. Additionally, the Houston Downtown Park Corporation and the City of Houston assembled land parcels to create Discovery Green. In 1995, the assessed value of the parcels assembled for the park amassed to \$2.8 million. In 2000, with the same number of parcels, the value of land increased to \$11.2 million. As the city core continued to redevelop, the demand for downtown properties increased, which subsequently caused an increase in property values as well. In 1999, the average property values increased by 7%, while the property values within the downtown inner-core increased by close to 11% (Bivin, 2000; Smith, 2000).

From 2005 to 2015, the assessment values within the arena-district micro-area steadily increased with the construction of the Shops at Houston Center, the number of new residential developments and hotels, and parking garages. The transition from vacant parcels or parcels used for surface parking lots to parking garages increased the assessment value quite profoundly, as each new parking structure was valued at over \$25 million. In 2012, the Greater Houston TIRZ was instituted. It is difficult to determine whether the TIF had an effect on assessment values by the 2015 assessment record. In general, based on the different urban planning documents created for the eastern side of Houston's downtown, the GRBCC was the anchor for development rather than the Toyota Center. Yet, the GRBCC was opened in 1987 and the Toyota Center opened in

2003. Office buildings were already downtown with no new construction within the micro-area, while residential and hotel developments only ascended with the release of the *GRBCC 2025 Master Plan*, with the purpose of spurring new private investment downtown to create a vibrant entertainment district. Although new development has taken place in the micro-area, this comes ten years after the opening of the arena. If the arena and the convention center had been a catalyst for new development, assessment and property values would have increased when the construction of the arena was announced and developers would have already occupied land to build the residential developments in conjunction with the arena development. The Toyota Center and the GRBCC are now amenities for the creation of an entertainment district, but it would be hard pressed to state that the arena was the catalyst for the development of the east side of Houston. Table 47 provides a summary of the assessed values and property taxes captured in the arena-district micro-area in relation to the City of Houston

Figure 27. Compounding rate of change in assessed value in arena-district micro-area vs. city of Houston 1990-2015.



4.7.4.4 Property Taxes

Over 25 years, the compounding rate of change in property tax for the arena-district micro-area is 3%, compared to Houston’s 2%. Figure 28 illustrates the compounding rate of change in the arena-district micro-area and the Houston for every five-year interval between 1990 and 2015. The graph also indicates the differences between the two observed areas. Houston’s property tax revenues are constant with an average compounding growth rate of 2%, and the greatest compounding growth rate occurring between 2005 and 2010. The arena-district micro-area’s highest compounding growth rate of 10% in property taxes between 2005 and 2010 and with another increase in compounding growth rate of 8% between 2010 and 2015 due to the new residential and hotel developments and income generating parking garages. Developments such as the GRBCC, the South Texas College of Law, Discovery Green, and various other

government owned parcels were exempt parcels and therefore not generating property taxes for the City of Houston. Property exemptions for these institutional properties amassed to \$341 million in 2005, \$390 million in 2010 and \$545 million in 2015. The city of Houston has a tax abatement program that was created to encourage new growth, development, and taxes. While the city of Cleveland's downtown relied heavily on tax abatements to incentivize private development downtown, the City of Houston has executed 15 tax abatement projects between 2004 and 2016⁷⁴. None of these projects are located within the arena-district micro-area nor the Greater Houston No. 24 TIRZ. The Houston City Council approved the expansion of the Downtown Living Initiative that doubled in the amount of new residential units that could receive tax breaks, amassing over \$75 million (Pulsinelli, 04/17/2014). Launched in 2012, the *Downtown Living Initiative*, offers developers \$15,000 for each unit built in a complex of 10 or more units. SkyHouse Houston was the first high rise apartment project to be awarded the subsidy, breaking ground in 2013. While the proposed Camden Downtown Apartments would be able to take advantage of this tax subsidy, the existing buildings captured in the arena-district micro-area were built prior to the announced change.

In all, as the parcel property values in the arena-district micro-area increased with the changes in land-use composition, the property tax values simultaneously increased overall. Table 47 provides a summary of the property taxes compared in the five-year intervals between 1990 and 2015 for both the arena district and the City of Houston.

⁷⁴ A list and description of the tax abatement projects in the City of Houston can be accessed here: http://www.houstontx.gov/ecodev/tax_abatements.html

Figure 28. Compounding rate of change in property taxes in arena-district micro-area vs. city of Houston 1990-2015.

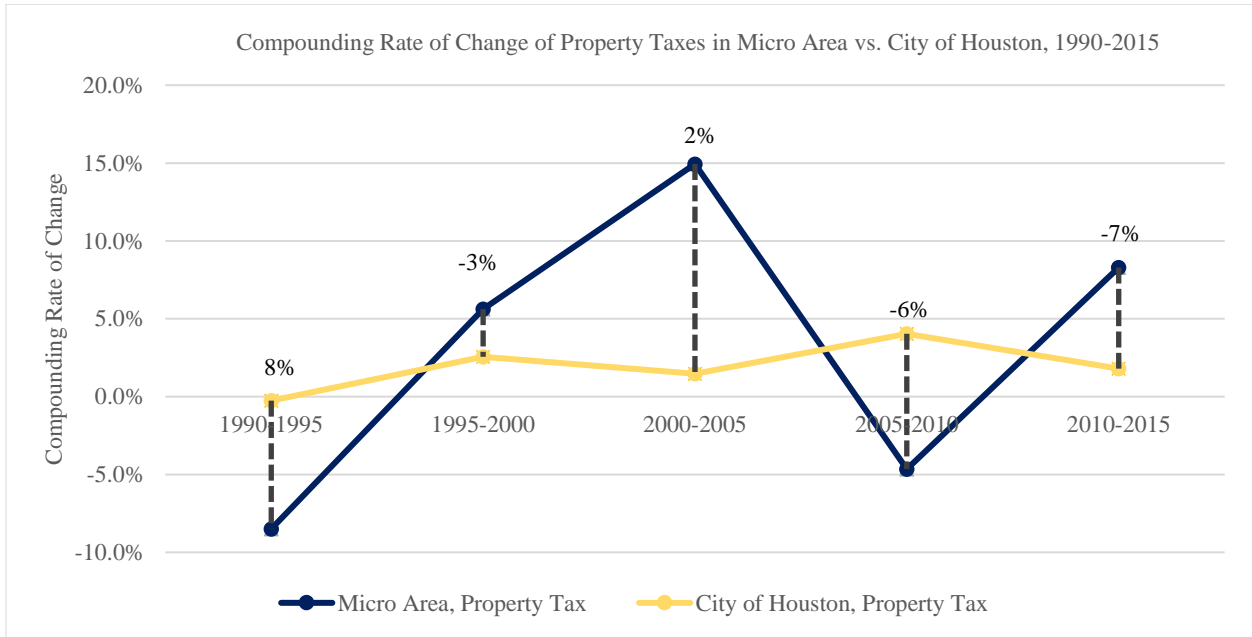


Table 47. Assessment, market, and property tax values in arena-district micro-area vs. city of Houston, 1990-2015.

	1990	1995	2000	2005	2010	2015	1990-2015
TOYOTA CENTER ARENA DISTRICT MICRO AREA							
LAND AREA (sf)	304,970	329,205	2,978,340	3,122,847	3,494,626	3,563,557	10.33
BUILT AREA/VOLUME (sf)	-	-	3,315,295	3,916,746	4,996,415	7,608,400	3.38
TOTAL ASSESSED VALUE	231,811,380	138,118,730	275,261,100	519,305,856	810,016,533	1,217,103,232	6.86
TOTAL ASSESSED VALUE (2015 \$)	409,493,073	210,476,939	380,294,095	630,025,058	888,722,948	1,217,103,232	4.45
ASSESSED LAND VALUE	104,121,760	65,656,220	100,183,890	146,884,323	360,024,119	597,407,804	7.24
ASSESSED BUILDING + IMPROVEMENTS	128,316,810	70,073,470	175,077,210	382,888,003	449,992,414	622,283,968	6.52
TOTAL MARKET VALUE	231,811,380	138,118,730	275,261,100	529,772,326	810,016,533	1,219,691,772	6.87
TOTAL MARKET VALUE (2015 \$)	409,493,073	210,476,939	380,294,095	642,723,044	888,722,948	1,219,691,772	4.46
TOTAL MARKET LAND VALUE	104,121,760	65,656,220	100,183,890	146,884,323	360,024,119	597,407,804	7.24
TOTAL MARKET BUILDING VALUE + IMPROVEMENTS	128,316,810	70,073,470	175,077,210	382,888,003	449,992,414	622,283,968	6.52
TOTAL TAX	5,053,354	3,758,183	5,447,159	6,072,430	10,835,349	17,710,752	5.14
TOTAL TAX (2015 \$)	8,926,711	5,727,036	7,525,664	7,367,109	11,888,181	17,710,752	2.78
CITY OF HOUSTON							
TOTAL ASSESSED VALUE	58,909,377,000	63,913,106,000	80,691,551,000	105,881,226,000	149,011,563,000	187,823,028,000	4.75
TOTAL ASSESSED VALUE (2015 \$)	104,062,974,848	97,396,167,304	111,481,500,217	128,455,754,589	163,490,484,570	187,823,028,000	2.39
TOTAL MARKET VALUE	58,909,377,000	63,913,106,000	80,691,551,000	105,881,226,000	149,011,563,000	187,823,028,000	4.75
TOTAL MARKET VALUE (2015 \$)	104,062,974,848	97,396,167,304	111,481,500,217	128,455,754,589	163,490,484,570	187,823,028,000	2.39
TOTAL TAX	379,137,000	433,863,000	542,777,000	664,831,000	895,779,000	1,074,070,000	4.25
TOTAL TAX (2015 \$)	669,742,681	661,156,936	749,887,609	806,577,058	982,818,647	1,074,070,000	1.91

4.7.5 KEY FINDINGS

Downtown Houston is emerging into more of an entertainment center where residents are willing to live, work, and play. Since 2003, there is a lag in the development initiatives when the Toyota Center first opened. Although it is beneficial that Houston launched different plans (*Downtown Living Initiative, the GRBCC 2025 Master Plan, Plan Houston, etc.*) for downtown development; Toyota Center, Minute Maid Park, and the GRBCC were operational for ten years without any new construction and developments taking place when the Toyota Center was first announced, during the arena's construction phase, and immediately following the opening of the venue. It is not possible to conclude that the Toyota Center was a catalyst. Without the convention center as the anchor tenant, the vision of creating an entertainment district may not have been feasible. The property values, assessment values, and total property tax all increased over the last 25-years in the arena-district micro-area, however, the compounding growth rates are not drastically different from those of Houston. Houston is undergoing a green-space renaissance, embarking on a \$220 million parks project, Bayou Greenways 2020, which will connect city parks through a 150-mile network of trails, bike paths, and greenspace throughout the city (Mock, 2016). This project along with the Discovery Green project in the downtown core have been catalysts for more residential development and the overall increase in property values.

4.8. MEMPHIS: THE FEDEX FORUM

Table 48. FedEx Forum Rapid Notes

Arena Name	FedEx Forum
Owner	City of Memphis
Year Opened	2004
Key Players/Organization	City of Memphis; Memphis and Shelby County Sports Authority Board
TIF District	South Central Business Improvement District Renewal Community
Total Cost of Venue (in 2018 \$)	\$351,120,000
Public Investment in Venue	\$351,120,000
Public Share of Total Venue Cost	100%

Source: Judith Grant Long (2005)

Over the last 20 years, Memphis has made substantial investments in its downtown revitalization efforts with the overall vision of transforming the central business district into a vibrant 24-hour entertainment, sports, and cultural hub that is recognizable as a tourist destination. The city has prioritized new residential and commercial development as well as the restoration of historical buildings. Long fragmented by race relations and the defined as a derelict and dangerous place, the completion of the FedEx Forum in 2000, the construction of new hotels, a performing art center, the National Civil Rights Museum, Peabody Place, a luxury retail center, have played a substantial role in redefining downtown Memphis. The city continues to fund projects and initiatives to improve downtown, such as the revitalization of the historic riverfront, Beale Street Landing, a \$27 million docking facility and open space area along the Mississippi River which is currently still under construction.

Since 1991, the Memphis physical environment has transformed with more than \$3.3 billion invested in development projects that either have been completed, planned, or currently

under construction (Downtown Memphis Commission, 2018). Furthermore, a substantial amount of investment has focused on sport and entertainment infrastructure, which led to a clearly delineated “sports and entertainment district” anchored by the former Peabody Place⁷⁵, the FedEx Forum, Beale Street, and the AutoZone Park (home to the AAA-baseball team, the Memphis Redbirds), and the Orpheum Theatre.

4.8.1 NEW ARENA NEGOTIATIONS

4.8.1.1 The Memphis Pyramid

Prior to the opening of the FedEx Forum in 2004, the Memphis Grizzlies temporarily played in the Pyramid, built in 1990 that had replaced the old Mid-South Coliseum, built in 1963. The \$68 million Pyramid of Memphis is located along the Mississippi River adjacent to Mud Island⁷⁶, underneath the Interstate-40 bypass, and near the Hernando do Soto Bridge. Inspired by Egypt’s Pyramid of Giza, the 32-story Pyramid of Memphis opened 1991. The structure included an arena for sports and concerts, a Hard Rock Café, a hall of fame for music, and an observation deck at the tip of the pyramid. Despite its sleek yet quirky design and prime

⁷⁵ Peabody Place covers eight city blocks and is composed of restored historic buildings, a 15-story office tower, an enclosed mall, luxury apartments, offices, restaurants, etc. Two million square feet are connected by skywalks and corridors (Silk & Amis, 2005). The Peabody Place development took years to plan and the first building was constructed in 1993. Although the mall was originally successful, the mall was unable to compete financially with the suburban areas, and officially closed by 2012. In 2016, ServiceMaster relocated its headquarters to Memphis, overtaking the former mall space that had been vacant for years.

⁷⁶ Between the 1950s and 1970s, the Downtown Memphis Airport had used a portion of Mud Island, prior to the island’s split due to the new highway and bridge infrastructure. Suburbanization and the lack of public infrastructure compelled residents to relocate from the downtown core to the suburbs. In the late 1960s, Mud Island Park had developed in order to attract more residents back downtown. In addition to the Mud Island Park, the peninsula was occupied by the Mississippi River Museum, an amphitheater, boat slips, etc. Future projects on the island include a new aquarium and an indoor and outdoor Eco Hub campus providing educational opportunities and research about eco-conversation (Memphis River Parks, 2018).

location⁷⁷ along the riverfront, the Pyramid underperformed to city expectations and became financially insolvent. Furthermore, the Pyramid's developer, Sidney Shlenker, failed to contribute his share of the project's cost and over 150,000 square feet of the interior space went unused (Barry, 2008). In the early 2000s, contingent on a new arena, the Vancouver Grizzlies agreed to move to Memphis.

Since the Pyramid did not comply with NBA regulations and it would have been too expensive to retrofit the building, the team played in the Pyramid for their first three years before moving to the FedEx Forum that in the meanwhile had been under construction. The \$250 million FedEx Forum eventually opened in 2004 in South Main area, a "transitional" section of downtown Memphis along the Beale Street Corridor (South Main Plan, 1987). Based on the contract between the city of Memphis and the Grizzlies, the Pyramid could not be used without the team's approval. As the teams, concerts, and other big events were booked at the Forum, the Pyramid was abandoned and a re-use committee was organized to determine the Pyramid's future. Since 2004, the Pyramid sat largely unused for 11 years. Several potential uses for the building were proposed, such as an aquarium, a mega-church, and an indoor theme park. In 2010, after five years of negotiations, the city and Bass Pro Shops, a retail outfitter focused on hunting and fishing, signed a 55-year lease term and in 2015, the Pyramid reopened as a mixed-use retail and hotel complex for Bass Pro Shop. Optimistic that the complex would anchor more development and redevelopment projects in the Pinch District, the north end of downtown, the city of Memphis invested \$30 million while the sales tax revenue in the surrounding area funded

⁷⁷ The Pyramid has played a key role in the development of the north end of Memphis and is located in close proximity to St. Jude Children's Research Hospital, the Cook Convention Center for Performing Arts, and is concentrated in a higher-income neighborhood relative to the rest of the city (Silk & Amis, 2005).

the rest of the Pyramid's renovations (Mercury News, 04/29/2015). On average, the Bass Pro Shop draws as many as three to four million visitors to Memphis every year.

4.8.1.2 The FedEx Forum

Host to the Memphis Grizzlies (NBA) and the University of Memphis (NCAA D. 1) basketball program, the FedEx Forum is a multi-purpose arena, built in the South Main area of downtown Memphis along the Beale Street corridor. Owned by the city of Memphis and operated by the team, the FedEx Forum opened in 2004, financed through \$250 million worth of public bonds issued by the New Memphis Arena Public Building Authority⁷⁸. The arena was the largest public works project in Memphis history⁷⁹ (Williams, 01/14/2004). In 1995, the Vancouver Grizzlies were part of the NBA's expansion into Canada. Following the 2000 season, the Vancouver Grizzlies moved to Memphis. In 2001, there were two proposed sites for the new arena, the first option was located on Union Avenue near the AutoZone Park and the second option was located south of Beale Street, near the Gibson Guitar Plant and Interstate-61. The second option, one block south of Beale Street, was eventually selected and it was anticipated that the FedEx Forum would be tied directly into the surrounding areas to create a vibrant sport and entertainment district and tourist destination. FedEx Forum was 100% publicly funded. The city raised funds for the arena through a 2% car rental tax and hotel tax, and the FedEx Forum negotiated a \$90 million 20-year naming rights agreement with the Memphis Grizzlies (Crouch, 2005).

⁷⁸ In addition to issuing bonds to construct the FedEx Forum, the Sports Authority's responsibility is to bring more sporting events to the city of Memphis that can potentially have an economic impact on the city and its local businesses (Williams, 01/14/2004).

⁷⁹ The FedEx Forum is considered one of the more successful projects in the history of the city as it involved minority-led and owned companies (Perl, 2006).in the construction and authorization process.

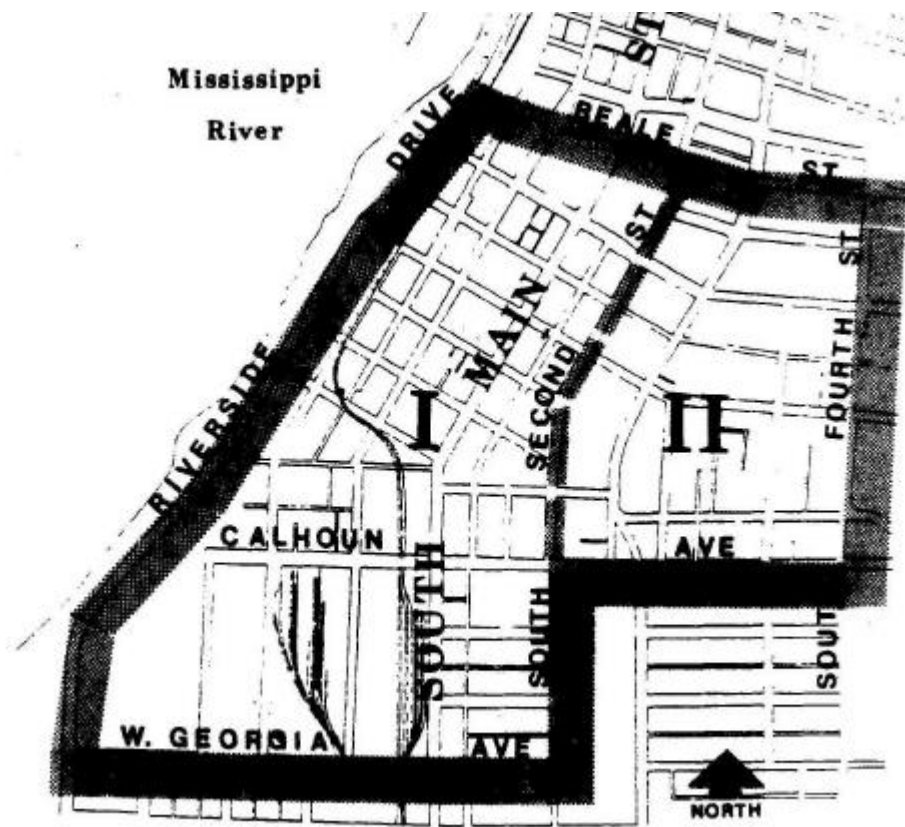
4.8.2 SUBDISTRICT ANALYSIS

Due to previous urban renewal projects, throughout the 1970s and 1980s, many of the parcels in the central business district were occupied by vacant land (Downtown Memphis, 1974). While the infrastructure along Main Street and Fourth Street was preserved, buildings throughout historic Beale Street were destroyed as part of the Beale Street Urban Renewal Project. Only 65 of 625 buildings were saved within the designated urban renewal area (Vance Neighborhood Community Forum, 2009). Following the aftermath of the Urban Renewal Program, the city published a number of comprehensive improvement and redevelopment plans to encourage new development in the downtown area. Prominent projects that grew out of the redevelopment plans include the Mid-America Mall, which connects the \$30 million Convention Center (\$160 million in 2018 dollars) with the main shopping district in the southern end of the downtown area. In addition to the mall, the other notable large-scale development initiative for the area includes the restoration of Beale Street. A result of a substantial amount of large-scale public and private investment, Beale Street was not only registered as a historic district on the National Register to preserve and restore the remaining historic buildings, but renovated the corridor for new restaurants, night clubs, and so on. Within the downtown's central business district, the area that are relevant to this research and are included in the arena-district micro-area analysis, include the South Main Area, which includes a smaller subsection known as the South Central Business Improvement District.

4.8.2.1 South Main Area

The South Main Area is located in the southwestern section of downtown Memphis. The area is comprised of over 320 acres and is bounded by the bluffs on the west, Fourth and Second Street on the east, Beale Street from the north, and Fourth and Second Street on the east, and Calhoun Avenue on the south. The South Main Area is divided into Sub-area I, the western section, and Sub-area II, the eastern section by Second Street. Sub-area I, formerly occupied by railroad yards, is largely concentrated by the South Bluffs Warehouse District. Figure 29 illustrates the divide of sub-areas I and II in the South Main Area. In the last 20 years, a portion of the Bluffs has transitioned into high-end residential complexes overlooking the Mississippi River and the Tom Lee Park. Sub-area II, which includes the arena-district micro-area, is downtown's "transitional" area with mixed commercial uses, large parcels of vacant land, and substandard housing, such as the Foote Homes public housing complex (South Main Area Plan, 1987). In 1982 and 1986, two historic districts, the South Main Historic District and the South Bluffs Warehouse District respectively, were listed in the National Register for Historic Places to ensure that through the redevelopment process of the South Main Area, this area's historic structures are preserved. The renovation and rehabilitation of buildings along South Main Street began with the conversion of industrial buildings into restaurants and offices first along the bluffs and then extended to Beale Street. The arena-district micro-area, located within the east sector of Sub-area II Zone C, was defined as a transition area for residential with mixed-use. In the early 1990s, 50% of Zone C was vacant land; this provided many opportunities for infill development (South Main Area Plan, 1987).

Figure 29. South Main Area Plan study boundaries by sub-areas I and II, 1987.



Source: South Main Area Plan (1987).

4.8.2.2 South Central Business Improvement District

The South Central Business Improvement District (SCBID) is bounded by the Mississippi River to the west, Madison Street to the north, E.H. Crump on the south, Danny Thomas to the east. Figure 30 provides a snapshot of the boundaries of the SCBID, borrowed from the 2003 comprehensive plan. The improvement district's boundaries are a slight extension from that of the South Main Area. As the city of Memphis continues to undergo downtown revitalization, developers have had an increased interest in the future of the South CBID. The goals of the SCBID Comprehensive Plan are to revitalize the area by both addressing and

mitigating incompatible and obsolete land uses and buildings to drive development forward, create a vibrant sports and entertainment district downtown, preserve historical and cultural assets, and encourage a strategy for future growth and redevelopment (SCBID, 2008). Notable landmarks and developments within the SCBID include Beale Street, Peabody Place, AutoZone Park, and the FedEx Forum. Beale Street serves as the connector between the sports and entertainment district and Peabody Place and the Mississippi riverfront. Peabody Place provides a renewed sense of downtown urban living and commerce serving as a mixed-residential and office complex, and the AutoZone Park and the FedEx Forum downtown have elevated the city to become a sport and tourist destination.

While new residential construction and the increase in public open and recreational space such as Tom Lee Park have spurred more development and an increase in residents moving to downtown along the riverfront and in the South Bluffs area, older industrial and commercial facilities, abandoned buildings, and vacant lots define much of the SCBID. The large percentage of vacant lots and buildings in the SCBID is a function of obsolescence (SBCID, 2008). The platting and zoning regulations of the area are incompatible with the need for new development. In addition to the obsolete industrial warehouses, the Foot Homes complex is another example of building infrastructure deemed insufficient, thus detracting from the highest and best property use for future development in the area. In 2015, the city of Memphis received \$30 million from the Department of Housing and Urban Development (HUD) through the Choice Neighborhoods Grant to finally demolish the crime-ridden Foote Homes complex, the first and largest public housing complex in the city of Memphis that was one of the last remnants of segregation-era

housing policies⁸⁰. The federal grant will provide a new beginning to the South City neighborhood, located just south of the FedEx Forum. Overall, the transformation of the Foote Homes into a 712 mixed-income apartment complex with retail and commercial space, which stretches across 880 acres, is estimated to cost \$210 million (Faber, 05/10/2017). Demolition was set to begin in 2016, but has been delayed to 2018.

As property market values depreciated due to poor infrastructure conditions, a substantial amount of public and private investment, such as the establishment of the Renewal Community and PILOT programs, is needed to stimulate reinvestment in the area. In 2002, 48 census tracts within the SCBID qualify for federal tax incentive and could potentially have a total impact of more than \$300 million dollars (SCBID, 2008) while PILOT (payments in lieu of taxes) are used to increase reinvestment in the renewal community designated tracts.

During the 1990s, 12 studies were published analyzing downtown residential development, retail potential and other business opportunities, streetscape and public infrastructure conditions, among other initiatives (SCBID, 2008). In 2008, Memphis allocated \$125 million over a five-year period to make public infrastructure improvements (SBCID, 2008).

⁸⁰ The Foote Homes, first opened in 1940, was one of several public housing complexes built in Memphis through the funding from one of the New Deal's agency, Public Works Administration. Following renovations to the complex in the 1990s, the future of Foote Homes was debated whether the public housing project should be demolished and residents dispersed throughout the community, or whether the complex should undergo immense improvements and renovations along with the South City community at large. In 2015, it was determined that the Foote Homes project would be demolished. The Memphis Housing Authority relocated the former residents of the Foote Homes project throughout the city who are connected with social workers from the HOPE Urban Strategies (Faber, 09/07/2017).

Figure 30. Boundaries of the South Central Business Improvement District.



Source: South Central Business Improvement District Comprehensive Plan (2003)

4.8.2.3. *Beale Street*

Located in the southern section of the CBID, Beale Street originated as a Freedman’s camp established during the Civil War; the area became the leading African American community in Memphis. Beale Street gained notoriety as an entertainment district and the home of blues music as musicians migrated from the Delta cotton plantations to Memphis, creating a space to preserve the historical legacy of African Americans who were confined to the lowest social class (Rushing, 2004). During the first half of the 20th century, Beale Street was concentrated with black-owned businesses, churches, and political and social organizations and identified as the “Harlem of the Lower South”, was characterized as a separate city from Memphis (Rushing, 2004). At that time, Memphis was a segregated city. In the last half of the

20th century, as Beale Street and other downtown areas suffered from suburbanization, many of the buildings along Beale Street and the riverfront were abandoned. Beale Street and communities south of where the FedEx Forum is now located, such as the Vance neighborhood were subjected to urban renewal, particularly neighborhoods concentrated with a predominantly African-American demographic. In conjunction with the growth of the interstate system and the housing demand, which pulled residents to the suburbs, city officials closed many of the pawnshops, bars, and nightclubs along Beale Street to reinvent the area's image. In doing so, much of the vibrancy and uniqueness of the area was lost (SCBID, 2008). It was not until the late 1970s when the Center City Commission and the Beale Street Development Corporation were founded that a greater amount of private investment was directed into the area. The City Center Commission provides payments-in-lieu-of-taxes and other financing options to redirect development downtown in underserved markets (SCBID, 2008). The Beale Street Development Corporation (BSDC) led the resurgence of Beale Street by focusing on the area's rich African American history, music, and culture. The city of Memphis acquired properties along three blocks of Beale Street. In the 1980s, a number of structures in the downtown were rehabilitated, including the reopening of some of the first clubs along Beale Street. The Peabody Hotel (renovated in 1981) and the Orpheum Theater (renovated in 1983) were also acquired, inspiring the construction of Peabody Place, the mixed-use retail, office, hotel development downtown. The BSDC was then commissioned to create an entertainment district. Its members defined the BSDC as the "cultural guardian of the district between Fourth and Second Street" (Dries, 01/16/2015) to protect the narrative, the historical context of Beale Street, and its black culture.

The BSDC received \$23 million (\$200 million in 2018 dollars) from the federal government to promote an inclusive and diverse vision for Beale Street's revitalization⁸¹.

4.8.2.4. Vance Neighborhood, South of the Forum District

In 2009, graduate students from the University of Memphis Urban Planning Graduate program held focus groups with local residents, business owners, church and other institutional leaders to create and implement a comprehensive revitalization plan for the future of the Vance neighborhood, an area located south of the FedEx Forum. The boundaries of the South of the Forum planning district include Beale Street to the north, East Street on the east, Crump Boulevard to the south, and Third Street to the west. Notable landmarks within the district include the FedEx Forum, the Clayborn Temple, Robert Church Park, and the First Baptist Church Beale. The Universal Life Insurance Building is also located within the Vance neighborhood, but falls slightly outside of the quarter-mile arena-district micro-area. The total area encompassed by the South of the Forum District is 615 acres and includes 1,153 parcels in 2010. According to the Vance Neighborhood Community Forum Preliminary Data Book created by the University of Memphis City and Regional Planning program, 431 of the 1,153 parcels, approximately 37% of the parcels, are vacant properties. Vacant properties make up the greatest percentage of the area's land-use composition, which demonstrates that the area is largely concentrated by underutilized parcels that do not adhere to their highest and best use. As a result, the property value potential is lower than expected in the area. Vacant properties had a high

⁸¹ Over the last two decades, the BSDC has been consumed in legal issues concerning the leasehold interest between the city, which owns the property on Beale Street and Performa Entertainment, a company that subleases the district from the BSDC. The Memphis mayor, Wharton Jr., has proposed to have a tourism authority oversee the Beale Street on behalf of the city while a separate management company is hired to manage the operations (Dries, 01/16/2015).

percentage of number of parcels, but based on the total acreage of the neighborhood, vacant parcels composed 14% of the total land area. Religious and government institutions composed 7% of the area's parcels that covered 21% of the neighborhood's total land area. Residential and commercial property-uses followed, composing 21% and 18% of the land area. Furthermore, the number of renter-occupied units were substantially disproportionate to owner-occupied units, even though between 1990 and 2000, the Vance neighborhood experienced a 29% decrease in total residential units. Overall, the high percentage of vacant parcels within the Vance neighborhood provides many opportunities for redevelopment and converting properties into higher and best uses, thus increasing property values to leverage further private investment.

4.8.3 MAJOR DEVELOPMENT PROJECTS

Table 49. Notable completed and proposed development projects in arena-district micro-area, 1990 to present

Development Name	Project Cost	Description
List of Development Projects Completed in early 2000s		
Renovations to the Memphis' Central Station	\$23,200,000	<ul style="list-style-type: none"> • While the Memphis Central Station is not located directly in the arena-district micro-area, it is a major anchor to the redevelopment of South Main Street. • Built in 1914, the Memphis Central Station was eventually abandoned in the late 1960s and experienced a steady decline in infrastructure. • Following the Memphis Area Transportation Authority's (MATA) acquisition of Central Station, the property underwent a \$23.2 million renovation to convert the transportation hub into a commercial and residential center. The federal government provided \$17 million, while the private sector provided the remaining contributions. • In 2016, Central Station and 17 adjacent acres are part of a new \$53 million development that will include a new hotel, movie theater, more commercial space, and 200 new apartments built at the south end of the property (Great American Stations, 2018).
AutoZone Park	\$114,000,000	<ul style="list-style-type: none"> • AutoZone Park is a minor league baseball stadium, home to the Memphis Redbirds, and an affiliate of the St. Louis Cardinals • The stadium construction broke ground in 1998, and the stadium opened in 2000. • The Memphis Redbirds are owned by a non-profit community foundation while the city of Memphis owns the stadium.
List Development Projects Completed in mid 2000s		
Westin Hotel	\$40,000,000	<ul style="list-style-type: none"> • In 2007, the 10-story, 203-room Westin Hotel opened up along Beale Street integrating with the rest of the streetscape.
List of Projects Planned, 2016–18		
Hilton Garden Inn Memphis Downtown	\$20,000,000	<ul style="list-style-type: none"> • Projected to open in fall of 2018, the 140-room Hilton Garden Inn is located on 1.7 acres. • The site is located on Union Avenue situated between the FedEx Forum and AutoZone Park
One Service Master Center	\$39,542,920	<ul style="list-style-type: none"> • Recently completed, the One Service Master Center occupies the former Peabody Place Mall, a four-story, 328,000 square-foot building.

		<ul style="list-style-type: none"> • ServiceMaster Global Holdings, a provider in residential and commercial services, moved its headquarters to Memphis • The project received \$1 million in commercial and development grants.
Holiday Inn Express	\$15,000,000	<ul style="list-style-type: none"> • Currently a 1.3-acre commercial parking lot, the site is planned for a new 150-room hotel, Holiday Inn Express.
The Inn at Beale Street	\$16,087,750	<ul style="list-style-type: none"> • Still in the planning phase with the approval of a PILOT grant, the Inn at Beale Street is projected to be a five-story 120-room hotel. • The Inn would replace a vacant building that was formerly a nightclub.
Vib Hotel	\$6,000,000	<ul style="list-style-type: none"> • Projected 101-room boutique hotel on Beale Street that is still in the planning process.
Forum Flats	\$16,000,000	<ul style="list-style-type: none"> • Forum Flats is currently under construction and is an affordable 205-unit apartment development that is located just south of the FedEx Forum. • The apartment complex contains four buildings and is located on a 4.25-acre parcel. • The project is financed using low-income tax credits.

4.8.4 DEVELOPMENT FINDINGS

In 1994, the Department of Housing and Urban Development (HUD) unveiled its Enterprise Zones and Empowerment Community initiatives in which public-private partnerships are formed to revitalize downtown city centers. These initiatives provide substantial federal tax incentives such as tax credits, tax deductions for business relocations, tax exempt private facility bonds, and so on (US Department of Health and Human Services cited in Silk & Andrews, 2008). The city of Memphis was designated as an enterprise community due to its high concentration of crime, poverty, urban blight, and low educational attainment (Silk & Andrews, 2008). In 2002, Memphis was subjected to more urban regeneration initiatives through public-private partnerships such as Memphis 2005, MPact Memphis, the City Center Commission, Memphis Tomorrow, and so on. The city of Memphis was also designated as a Renewal Community in order to reduce crime and facilitate more private investment downtown. One of the largest public investments included the \$2.3 billion downtown redevelopment of the “Sports and Entertainment District” anchored by the Peabody Place Mall, the FedEx Forum, the AutoZone Park, and Beale Street. The Orpheum Theatre and the Civil Rights Museum are also in some ways part of the Sports and Entertainment District, however, these two landmarks fall outside of the arena-district micro-area and are more suited as anchors for the redevelopment of South Main Street rather than tied to the sports district and the Vance neighborhood. The city of Memphis adopted the tagline “Come Downtown and Play” to further facilitate downtown redevelopment and reinvigorate the city’s image as a major league city.

4.8.4.1 Land-Use Composition

The *Framework Plan for Downtown Memphis* (1974) and the *South Central Business Improvement District Comprehensive Plan* (2003) analyze the market potential of downtown Memphis, consider the past and current social and economic conditions of the city, and acknowledge the need to make public and private development decisions in order to move the downtown development process forward. *The Framework Plan* guides development of the downtown area by recognizing the need for a stronger retail and office core to anchor the rest of the sport and entertainment district. Moreover, residential developments, which have been largely absent within the micro-area, are important in establishing a stronger sense of community in the downtown area by increasing the number of permanent residents living downtown to encourage more opportunities in entertainment, retail, and business development. While it is encouraged to expand different types of land-uses throughout the downtown, the *Framework Plan* promotes the consolidation of development to create more defined levels of activity throughout the downtown area. For example, Beale Street is defined as the entertainment corridor, concentrated with restaurants, bars, nightclubs, and so on; while limited in office and residential development.

Table 50 presents the raw count and percentage of land-use composition by parcel for the quarter-mile arena-district micro-area surrounding the FedEx Forum while Figure 31 illustrates the change in overall land-use composition in every 5-year interval between 1990 and 2015. Due to inconsistencies in the information displayed on the Shelby County assessment records, the land-use composition is limited to the major land-use categories. For instance, the sub-categories for commercial properties (e.g., office, retail, restaurant, and hotel) are not available. Since parking structures and parking surface lots are commercial properties, the percentage of parking

parcels is also not included in 1990. Moreover, the raw count for vacant properties is also zero in 1990. Indeed, the majority of the downtown area was plagued with abandoned and under-utilized land parcels. Since the assessment records were limited to major categories in 1990, the vacant parcels are listed as either commercial or industrial parcels based on the use of the property, even if the parcel is vacant. This explains why the 80-parcel raw count is high for the industrial-use category. The 80 parcel raw count suggests that the vacant properties were previously zoned for industrial use.

Between 1990 and 2015, the arena-district micro-area is heavily concentrated with commercial, industrial, and exempt parcels. A number of parcels are listed as exempt parcels even though based on their property-use, identify more with a commercial land-use. The reason for this is that the parcel is eligible for a tax incentive or tax credit of some kind. For example, from 2005 to 2015, a hotel (Peabody Place), an office building (African Methodist Episcopal Church) and three retail parcels (Peabody Place and two properties owned by the Memphis Municipal Corporation directly along the Beale Corridor) were listed under the exempt land-use category. Table 51 illustrates that although a number of parcels are exempt and therefore do not generate property tax revenue. The table also shows that seven vacant parcels, three parking structures, one restaurant, and an industrial parcel compose the remaining exempt property parcels that belong to commercial property-uses. Parcels located in the Vance neighborhood predominantly belong to religious institutions. Besides the physical places of worship, these religious institutions such as the Church of God in Christ had control over a large portion of general commercial properties, parking structures, and vacant lots within the area. Finally, the Memphis Housing Authority owned tracts of land along the Danny Thomas Boulevard including the Foote Homes Public Housing complex, also an exempt property, recently demolished in

2016. A block of vacant parcels that sits directly in front of the former site of the Foote Homes Public Housing complex on Dr. Martin Luther King Jr were originally listed as residential properties in 1990 and 1995, but were demolished in 2000. This explains the reduction in residential parcels between the two 10-year periods for 1990-2000 and 2005-2015. The FedEx Forum arena-district micro-area is defined as an area in transition, however, based on the land-use composition found in Table 50, the area is struggling to develop the large tracts of vacant land. A slight possibility for this is that because religious institutions and similar organizations control a large percentage of land parcels in the area, development could be inhibited based on who controls the land.

Overall, the raw count and compounding rate of change for each land-use categories decreased between 1990 and 2015. Over the 25 years, commercial parcels had a compounding rate of change of -2%, industrial parcels -7%, and residential parcels -3%. Exempt parcels remained constant over the same period. From 1990 to 2015, the compounding rate of change across the major land-use categories do not display substantial differences which suggest that even though the city intended the Beale Street corridor to be a promoter and anchor for the downtown area's major comeback, the area did not deliver to the expected results. The decrease in total number of parcels from the early 1990s to the late 2000s is due to land assembly, the consolidation of smaller property parcels into larger parcels. As the smaller parcel lots, which typically include multiple land-use categories were consolidated, the percentage in land-use composition was negatively impacted based on a smaller number of parcels in the raw count and therefore fewer consolidated parcels that were once composed of multiple land-uses.

Figure 31. Percentage of land-use composition in the Memphis arena-district micro-area, 1990-2015.

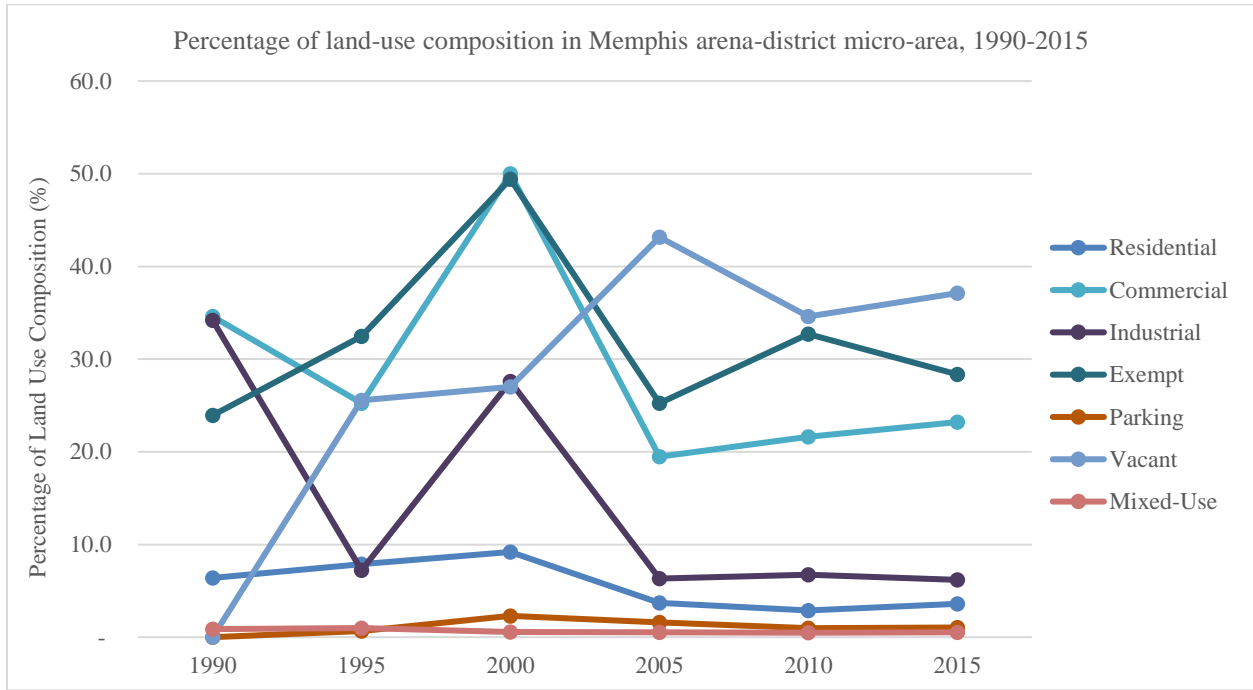


Table 50. City of Memphis arena-district micro-area land-use count, 1990-2015.

	1990		1995		2000		2005		2010		2015		1990-2015
	LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL	15	6.41	24	7.84	16	9.36	8	3.09	6	2.88	7	3.61	(3.00)
<i>RENTER- OCCUPIED</i>	-	-	13	54.17	-	-	3	37.50	2	33.33	3	42.86	(7.07)
<i>OWNER- OCCUPIED</i>	-	-	10	41.67	-	-	4	50.00	3	50.00	4	57.14	(4.48)
<i>TOTAL CONDOS</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
COMMERCIAL	81	34.62	78	25.49	88	51.46	56	21.62	45	21.63	45	23.20	(2.32)
<i>OFFICE</i>	-	-	4	5.13	-	-	1	1.79	3	6.67	3	6.67	(1.43)
<i>RETAIL</i>	-	-	25	32.05	-	-	6	10.71	6	13.33	6	13.33	(6.89)
<i>RESTAURANT</i>	-	-	1	1.28	-	-	5	8.93	4	8.89	4	8.89	7.18
<i>HOTEL</i>	-	-	5	6.41	-	-	3	5.36	3	6.67	3	6.67	(2.52)
INDUSTRIAL	80	34.19	22	7.19	44	25.73	25	9.65	14	6.73	12	6.19	(7.31)
EXEMPT	56	23.93	99	32.35	86	50.29	84	32.43	68	32.69	55	28.35	(0.07)
PARKING	-	-	2	0.65	-	-	3	1.16	2	0.96	2	1.03	-
VACANT	-	-	78	25.49	47	27.49	82	31.66	72	34.62	72	37.11	(0.40)
MIXED-USE	2	0.85	3	0.98	1	0.58	1	0.39	1	0.48	1	0.52	(2.73)
TOTAL	234	100.00	306	100.00	171	100.00	259	100.00	208	100.00	194	100.00	(0.75)

Table 51. Exempt sub-category property parcel land-use composition and built volume, 1995-2015.

	1990		1995		2000		2005		2010		2015		1995-2015
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
EXEMPT PARCEL LAND USE COMPOSITION													
EXEMPT			99	32.46			84	32.43	68	32.69	55	28.72	(2.25)
RENTER-OCCUPIED			-	-			1	1.19	1	1.47	1	1.79	-
OFFICE			1	1.01			1	1.19	1	1.47	1	1.79	-
RETAIL			7	7.07			3	3.57	3	4.41	3	5.36	(3.33)
RESTAURANT			2	2.02			2	2.38	4	5.88	4	7.14	2.81
HOTEL			-	-			1	1.19	1	1.47	1	1.79	-
VACANT			63	63.64			20	23.81	15	22.06	9	16.07	(7.49)
PARKING			-	-			3	15.00	3	4.41	3	5.36	-
INDUSTRIAL			1	1.01			3	3.53	3	4.41	3	5.36	-
MIXED-USE			1	1.01			-	-	-	-	-	-	-
EXEMPT PARCEL BUILT VOLUME													
EXEMPT			103,968	9.38			1,225,016	50.47	1,349,588	53.25	1,225,016	48.66	10.80
RENTER-OCCUPIED			-	-			-	-	-	-	-	-	-
OFFICE			8,324	8.01			7,358	0.60	7,358	0.55	7,358	0.60	(0.49)
RETAIL			15,372	14.79			18,856	1.54	18,856	1.40	18,856	1.54	0.82
RESTAURANT			24,087	23.17			43,163	3.52	43,163	3.20	43,163	3.52	2.36
HOTEL			-	-			526,043	42.94	526,043	38.98	526,043	42.94	-
VACANT			-	-			-	-	-	-	-	-	-
PARKING			-	-			572,406	46.73	572,406	42.41	572,406	46.73	-
INDUSTRIAL			-	-			177,682	13.17	177,682	13.17	177,682	13.17	-
MIXED-USE			-	-			-	-	-	-	-	-	-

4.8.4.2 Built volume

Since 1995, the arena-district micro-area had a compounding rate of change of 4% in built volume, with the total built volume increasing by 1.4 million square feet. Table 52 highlights the changes in built volume by land-use type. Between 1995 and 2015, residential parcels had a compounding rate of change of 8% in built volume. In 1995, the total recorded built square footage for the 15 residential parcels is approximately 24,000 square feet. This square footage count is based on two standing structures, while the rest of the parcels that were designated as residential parcels are in fact vacant properties but zoned for residential use. The 1995 records indicate the zoning and property-use as for these parcels is residential, while between 2005-15, the assessment records are more specific, detailing that the land is zoned for residential, but the lot is in fact vacant. This could explain why the residential count is higher in 1995, but a disconnect in the built volume count. These land-use inconsistencies were verified using historical LANDSTAT aerial images from the early 1990s. In 2015, the residential built volume increased by approximately 180,000 square feet due to the inclusion of an apartment complex that had actually been built in 2000. Between 2000 and 2010, the building square footage for the apartment complex was not available. In addition, the apartment complex was composed of 12 individual residential and vacant parcel lots that were then consolidated into one large land tract by 2015.

The compounding rate of change in commercial parcels was 3% with decreases in office and retail built volume. However, with the transformation of Beale Street, and the conversion of old buildings into nightclubs, bars, and restaurants, restaurants had a 16% compounding rate of change in built volume. There was a decrease in the hotel count, by one hotel unit, between 1995 and 2005-15, which was due to the demolition of a motel, which then transferred the parcel to

the vacant land-use count. One of the biggest issues with the diversity of land-use in the arena-district micro-area and for the city as a whole is the limited number of hotels. Although Memphis has a large number of hotels either being planned or under construction since 2016, over the last 25-years, Memphis failed to become a more reputable tourist and convention destination, despite building a convention center near the sports and entertainment district. Memphis was incapable of becoming a bigger convention destination because of the limited number of hotels. According to the Memphis Convention and Visitors Bureau, even though there has been a recent growth in number of hotels and the occupancy rates have increased as new developments are finishing construction or newly planned, the majority of the new hotels proposed will not be capable of supporting the convention center business; this is because most of the hotels proposed are “boutique and suburban-style hotels with limited services” (Commercial Appeal, 08/27/2018).

Exempt properties had the largest increase of 13% in the built volume compounding rate of change. The increase in built volume between 1995 and 2005-2015 was due to the resurgence of Beale Street and the concentration of its restaurant row, the transfer of the Peabody Hotel from a commercial hotel property to an exempt hotel parcel, the increase in parking structures adjacent to the FedEx Forum, and of course the construction of the FedEx Forum.

Despite some of these recent changes, based on the proposed development plans from various city comprehensive plans from the mid-2000s, and the evidence of the changes in built volume in the arena-district micro-area, overall, there has not been much new construction or growth within the city. While Beale Street was subject to urban renewal strategies, the buildings captured in the arena-district micro-area were saved and are listed under the National Register. Though the buildings along Beale Street were rehabilitated, the overall built volume in the area did not change substantially as existing buildings were more likely to be rehabilitated rather than

demolished for new construction. Furthermore, new development in the 2000s was largely concentrated in the South Bluffs, the southern section of the central business district, rather than in the transitional area, where the FedEx Forum is located. As determined in the *South Main Area Plan* (1987) and the study undertaken by the University of Memphis Planning Department, while the city foresees the creation of a strong sport and entertainment district anchored by Beale Street, the FedEx Forum, the AutoZone Park, and Peabody Place, the surrounding areas are still largely vacant or under control of several influential religious institutions which may possibly inhibit new development projects.

Table 52. City of Memphis arena-district micro-area built volume count, 1995-2015.

	1990		1995		2000		2005		2010		2015		1995-2015
	BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL			24,106	2.16	-	-	16,896	0.72	16,896	0.69	106,410	4.13	7.71
<i>RENTER-OCCUPIED</i>			-	-			7,728	45.74	7,728	45.74	97,242	91.38	-
<i>OWNER-OCCUPIED</i>			24,106	100.00			9,168	54.26	9,168	54.26	9,168	8.62	(4.72)
<i>TOTAL CONDOS</i>			-	-			-	0.00	-	0.00	-	0.00	-
COMMERCIAL			1,189,362	72.76	-	-	629,705	26.69	696,106	28.23	696,106	27.05	(2.64)
<i>OFFICE</i>			56,890	4.78			1,725	0.27	15,149	2.18	15,149	2.18	(6.40)
<i>RETAIL</i>			316,134	26.58			98,282	15.61	98,282	14.12	98,282	14.12	(5.67)
<i>RESTAURANT</i>			2,503	0.79			26,772	4.25	51,284	7.37	51,284	7.37	16.30
<i>HOTEL</i>			750,072	63.07			439,983	69.87	439,983	63.21	439,983	63.21	(2.63)
INDUSTRIAL			108,448	9.73	-	-	105,953	4.49	146,428	5.94	164,547	6.39	2.11
EXEMPT			110,048	9.87	-	-	1,349,588	57.21	1,349,588	54.73	1,349,588	52.44	13.35
PARKING			187,110	16.79	-	-	254,204	10.78	254,204	10.31	254,204	9.88	1.54
VACANT			6,549	0.59	-	-	-	-	-	-	-	-	(100.00)
MIXED-USE			15,024	1.35	-	-	2,830	0.12	2,830	0.11	2,830	0.11	(8.01)
TOTAL			1,114,604	100.00	-	-	2,359,176	100.00	2,466,052	100.00	2,573,685	100.00	4.27

4.8.4.3 Assessment Values

The city of Memphis applies assessment percentages to the appraised value of a property based on the parcel's property classification. Residential properties are assessed at 25% of the appraised value and commercial and industrial are assessed at 40% of the appraised value. The appraised or market values for exempt properties are included in the arena-district market value total as shown in Table 53, but exempt parcels are not assessed. Since the majority of the parcels in the arena-district micro-area are exempt parcels, there is large gap in the parcels' market values and the overall property tax generated within the arena-district. Over 25 years, the arena-district micro-area had a compounding growth rate of change in assessed value of 4.4%, while the city of Memphis had a compounding growth rate of change of 1.4% in assessed value. The market value compounding rate of change for the arena-district micro-area is 9%. While the compounding growth rate for the market value and the assessed value for the city of Memphis are relatively similar, the compounding growth rate for the market value is 5% higher than the assessed compounding growth rate. Figure 32 provides a five-year breakdown of assessment values from 1990 to 2015 including the differences in compounding growth rates of change between the micro-area and the city of Memphis. Figure 33 compares the differences in compounding growth rates of change in market value to the assessed value; the city compounding growth rate in market value is a proxy since the growth rates between the market and assessed value are similar. The overall growth rate of change in assessed values in the micro-area are not substantially different compared to the city of Memphis, however, as illustrated in Figure 32, the outlier in the assessment growth rate occurs between 1990 and 1995 in which there is a 23% difference in compounding growth rate in assessed values. This is a similar occurrence in the compounding rate of change in the micro-area's market value. To begin,

between 1990 and 1995 a number of land consolidations occurred that explains the large increase in assessed values. Land assemblage, particularly of vacant parcels, can immediately increase the value of the land parcel, especially in a transitional area where new development was encouraged. Furthermore, in the case of the land assemblies, a number of the parent parcels' assessment values were missing, which could also explain the lower assessment values in 1990. However, of the parcels that were on average consistent across the five-year intervals, the assessment values in 1995 were assessed almost 50% more than in 1990. Finally, the Memphis City Center Revenue Corporation, the Memphis Housing Authority, the Memphis Engraving Company, and several religious organizations, including the Church of God in Christ, the Pentecostal Temple of Church of God, the Thirteenth Episcopal District Church, the African Methodist Episcopal Church, and the Progressive Baptist Church, own the majority of parcels located in the arena-district micro-area. The majority of the parcels controlled by the organizations listed above are largely vacant and exempt. As long as these parcels are retained by religious organizations, and do not include the infrastructure pertaining to the actual place of worship, there is not a great likelihood that these parcels will be converted to their highest and best use, and instead will remain fallow.

From 2000 to 2015, the differences in the compounding rate of change in assessment values between the micro-area and the city were constant at 1%, which demonstrates that the rate of growth in the assessment values did not differentiate much between the two observed areas. In the micro-area, the compounding rate of change between 1995 and 2005 was minimal, increasing 4% from 1995-00 and 2% from 2000-05. In 2005, the arena-district micro-area's total assessment value was at its peak at approximately \$20 million. In the same year, the total market value for the arena-district micro-area was \$180 million. The market value is \$160 million more

than the assessed value due to the high percentage of exempt properties. Projects such as the FedEx Forum, the Peabody Hotel, the Double Tree Hotel, a large restaurant and nightclub on Beale Street contributed to the increase in market value as all of these establishments were built between 2000 and 2005. Following the recession in 2008, the micro-area's assessed and market values fell within the two five-year intervals in 2005-10 and 2010-15. These values still have yet to recover to the 2005 values. The assessed and market values in the city overall also decreased by a compounding growth rate of change of 1% and 3% in 2005-10 and 2010-15, respectively. In sum, while the assessed and market values had compounding growth rates in the arena-district micro-area of 4% and 9% respectively from 1990 to 2015, since the opening of the FedEx Forum, the level of new development has not increased faster than the city overall. Between 2005 and 2015, there was an increase in the number of vacant parcels, no large-scale residential developments were constructed (the residential parcels were primarily single-family residences that had existed prior to the 1990), the public housing complex near the FedEx Forum was demolished, and exempt parcels largely dominated the land-use composition within the arena-district micro-area. Although a number of hotel developments within the arena-district micro-area are under construction or have been proposed as detailed in Table 49, the low assessment values comparative to the other arena-district micro-areas in this research study, are relatively low due to the minimal development in arena's transitional areas.

Figure 32. Compounding rate of change in assessed value in arena-district micro-area (FedEx Forum) vs. city of Memphis, 1990-2015.

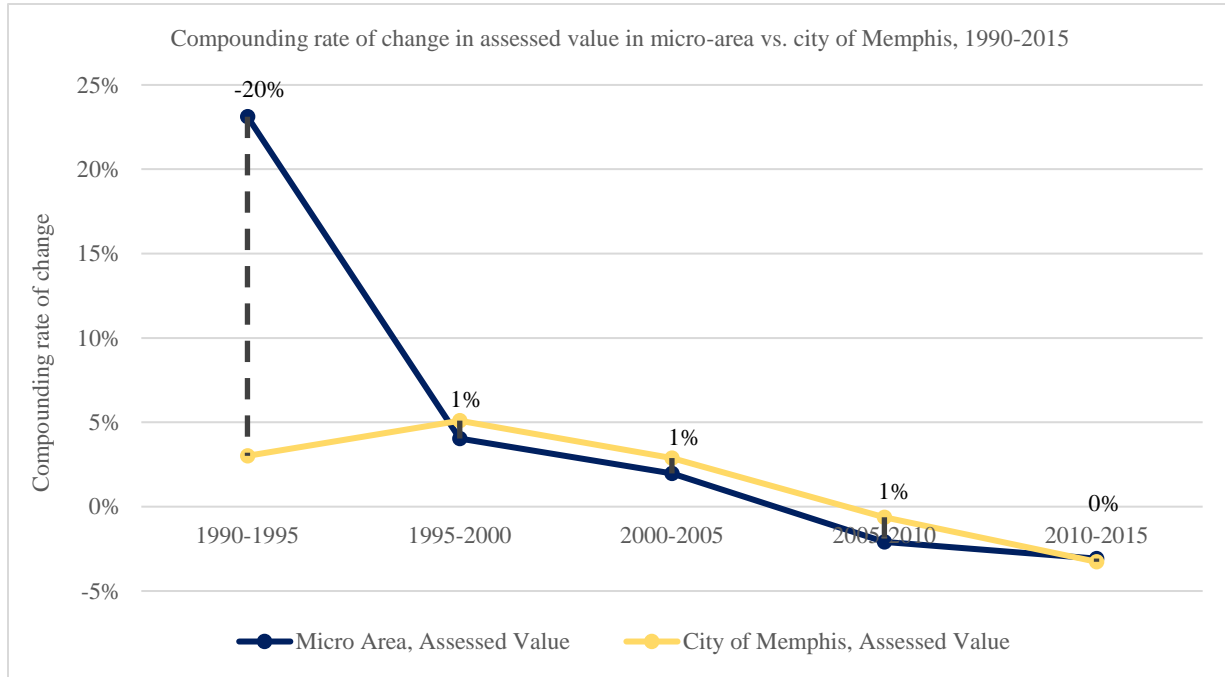
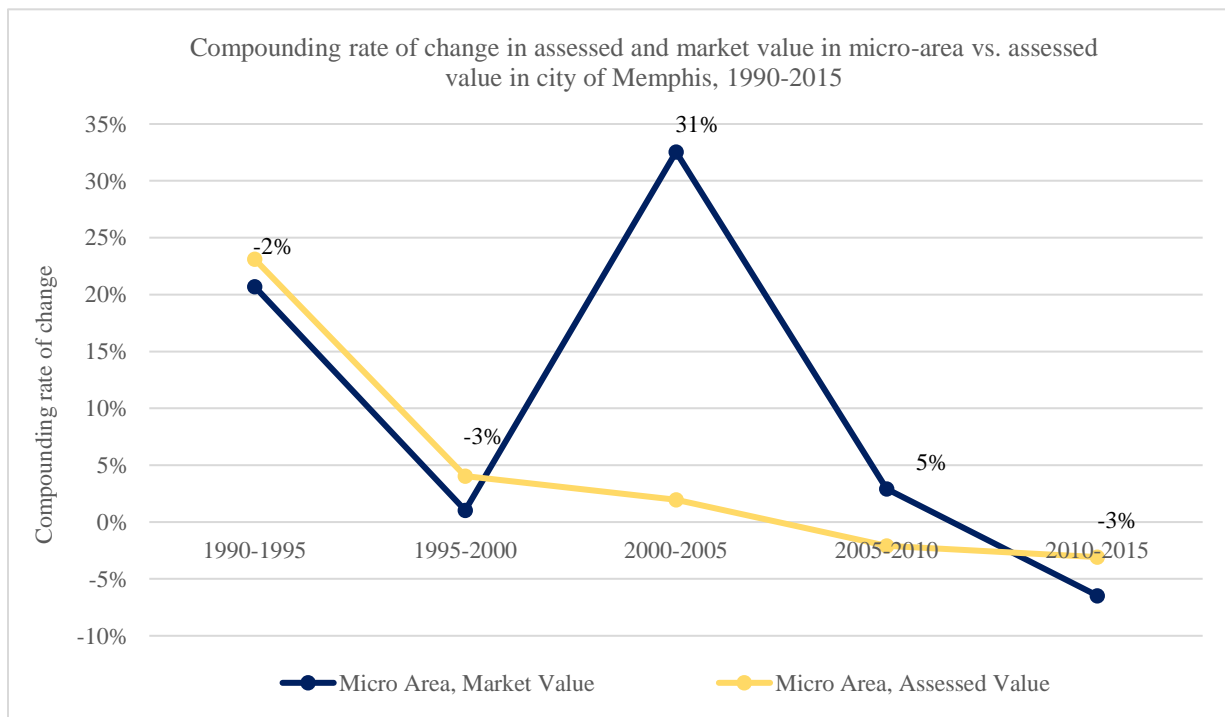


Figure 33. Compounding rate of change in market value in arena-district micro-area (FedEx Forum) vs. city of Memphis, 1990-2015.



4.8.4.4 Property Tax

Figure 34 illustrates the compounding rate of change in property tax between the arena-district micro-area and Memphis from 1990 to 2015. The arena-district micro-area has a compounding rate of change in property tax values of 5% compared to Memphis' 2%. The rate of change in property tax is a reflection of the changes in the assessment values. For example, between 1990 and 1995, the rate of change in assessment values was 23% in the micro-area, which relates to the 36% rate of change in property tax values for the same period. Compared to the assessment values within the city, however, the city's overall property tax revenue fluctuates and appears not to complement with the assessed values. Between 2005 and 2010, the city had a compounding rate of change of 19%. In 2006, the city experienced an overall increase in property tax revenues because of a tax rate increase. In 2011, the total property tax revenues decreased as a percentage of the total city and county revenues. The decrease in the property revenues was a result of the increase in the collection of sales and state tax as well as the transfer of property tax revenues into the city and county's debt service fund (City of Memphis CAFR, 2016). The increase in sales tax and transfer of general revenues into different funds explains the city's decrease in the property tax compounding rate of change between 2010 and 2015.

Despite the dramatic increase in property tax values between 1990 and 1995, which is a reflection of the assessment values in the micro-area, the property tax revenues generated after the opening of the arena in 2004, decreased. The compounding growth rate in the property taxes decreased by 2% and 1.5% between 2005-10 and 2010-15, respectively. The large concentration of exempt properties and the lack of large-scale residential and office development inhibited the generation of property taxes within the arena-district. The quarter-mile radius focuses on a small area of the Beale Street corridor. However, even if the entire corridor was included in the arena-

district micro-area to capture the changes in the assessed values and property tax revenues, Beale Street is concentrated with small-scale restaurants and nightclubs that could be considered a form of “cheap tourism.” Such establishments will not substantially increase the property values without adjacent up-scale residential or office development. A few parking structures are located adjacent to the FedEx Forum and considered part of the Beale Street corridor, yet do not generate property tax revenue for the city. The sport and entertainment district is located in an area of the city that lies within the boundaries of the community redevelopment designated area. This program provides tax credits and tax incentives for developers to invest within the South Main Area. The priority for the development of the sport and entertainment district is to include larger scale development projects that will generate higher property tax revenues. Since 2016, the development plans within the micro-area include an increase in hotel development and an affordable housing complex.

Figure 34. Compounding rate of change in property taxes in arena-district micro-area (FedEx Forum) vs. City of Memphis, 1990-2015.

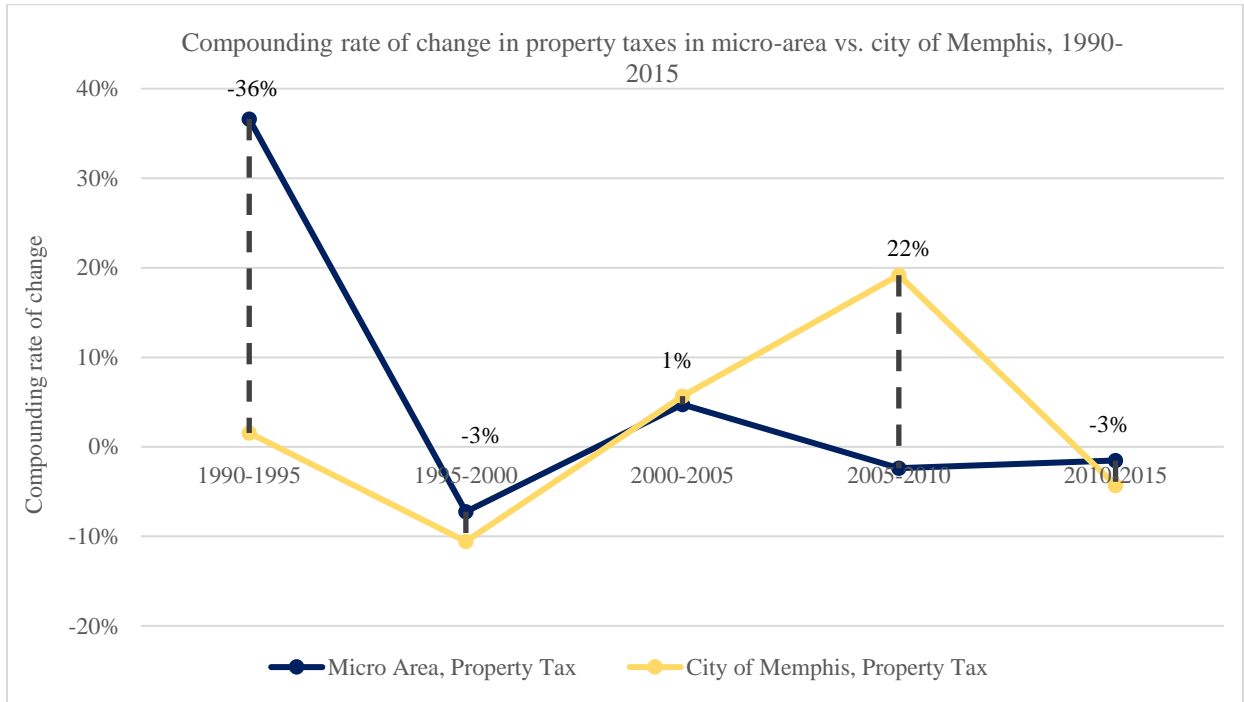


Table 53. City of Memphis's arena-district micro-area assessment, market, and property tax values, 1990-2015.

	1990	1995	2000	2005	2010	2015	1990-2015
FEDEX FORUM ARENA-DISTRICT MICRO-AREA							
LAND AREA (sf)	6,070,797	12,110,802	6,717,784	6,042,414	6,138,210	6,149,725	0.05
BUILT AREA/VOLUME (sf)	-	1,049,540	1,015,782	2,432,470	2,552,365	2,641,879	-
TOTAL ASSESSED VALUE	2,412,865	9,676,217	12,886,305	16,190,745	16,304,460	15,218,735	7.64
TOTAL ASSESSED VALUE (2015 \$)	5,206,456	14,726,226	17,943,079	19,782,503	17,794,355	15,218,735	4.38
ASSESSED LAND VALUE	1,195,678	1,563,448	-	5,415,555	5,744,410	5,770,425	6.50
ASSESSED BUILDING + IMPROVEMENTS	1,189,354	8,017,533	-	10,576,750	10,524,170	9,448,310	8.64
TOTAL MARKET VALUE	7,554,300	27,426,500	31,560,320	147,119,400	190,273,400	148,656,300	12.66
TOTAL MARKET VALUE (2015 \$)	16,300,594	41,740,367	43,945,051	179,756,392	207,660,501	148,656,300	9.24
TOTAL MARKET LAND VALUE	3,735,800	5,442,208	-	30,852,500	35,223,900	36,717,200	9.57
TOTAL MARKET BUILDING VALUE + IMPROVEMENTS	3,812,100	22,293,700	-	116,266,900	155,049,500	111,939,100	14.48
TOTAL TAX	91,206	615,336	461,616	663,094	657,776	665,059	8.27
TOTAL TAX (2015 \$)	196,804	936,479	642,761	810,195	717,883	665,059	4.99
CITY OF MEMPHIS							
TOTAL ASSESSED VALUE	3,667,945,311	6,035,036,113	8,456,107,673	11,108,643,960	12,053,353,530	11,142,251,428	4.54
TOTAL ASSESSED VALUE (2015 \$)	7,914,656,292	9,184,716,322	11,774,407,948	13,572,987,405	13,154,783,786	11,142,251,428	1.38
TOTAL MARKET VALUE	11,654,255,747	18,902,371,943	26,565,060,901	35,550,324,536	38,788,129,245	35,448,457,555	4.55
TOTAL MARKET VALUE (2015 \$)	25,147,438,348	28,767,503,768	36,989,579,167	43,436,814,512	42,332,571,795	35,448,457,555	1.38
TOTAL TAX	114,509,866	175,222,550	109,555,000	164,527,000	442,960,000	387,565,000	5.00
TOTAL TAX (2015 \$)	247,088,262	266,671,050	152,545,984	201,025,697	483,437,494	387,565,000	1.82

4.8.5 KEY FINDINGS

Memphis' FedEx Forum's arena-district micro-area is unsuccessful in terms of arena-led urban development outcomes studied across the three measures: land-use composition, built volume, and assessed and market values. A number of arena-district micro-areas explored in this research study had a lag in arena-led urban development outcomes since the opening of the various professional sport facilities. Yet, these micro-areas eventually experienced changes in the diversity of land-use composition, the transition of underutilized parcels to their highest and best uses based on zoning modifications, and increases in property values and assessed values. In the case of the FedEx Forum arena-district-micro-area, a large percentage of the parcels remains under-utilized and fails to exist at their highest and best use. Without the increase in large-scale residential and office development to complement the "low-end" tourism of Beale Street, the arena-district micro-area cannot develop further, yield higher assessment values, and generate more property tax for the city. While Beale Street underwent a series of transformations since the effects of urban renewal, prior to the opening of the FedEx Forum, the corridor had undergone some form of revitalization. The FedEx Forum was located in the southern end of the city of Memphis intended to be an anchor for the sport and entertainment district, which includes the Beale Street corridor and the AutoZone Park. Yet, since the opening of the arena, the property values and degree of development within the arena-district did not occur at a faster rate compared to the city as a whole. Since 2016, developers have begun to invest more within the transitional area as outlined in the *South Main Area Plan*, however, development over the last 25 years, and particularly since the arena's opening in 2004, the FedEx Forum failed in its arena-led development strategies within the quarter-mile radius.

4.9 PORTLAND: THE ROSE QUARTER

Table 54. Rose Garden Rapid Notes

Arena Name	Moda Center
Owner	Vulcan Inc.
Year Opened	1995
Key Players/Organization	Albina Vision Group, Portland Development Commission, City of Portland; Paul Allen; Vulcan Inc.
TIF District	N/A
Total Cost of Venue (in 2018 \$)	459,420,000
Public Investment in Venue	59,724,600
Public Share of Total Venue Cost	13%

Source: Judith Grant Long, 2005.

4.9.1 NEW ARENA NEGOTIATIONS

The Moda Center, formerly known as the Rose Garden, is the primary indoor sports arena for the Portland Trailblazers. The arena is currently owned by Vulcan Inc., a holding company owned by Paul Allen and managed by Anschutz Entertainment Group (AEG). In hopes of creating a more distinct entertainment district, positioned adjacent to the Oregon Convention Center, the Moda Center served as a potential anchor for the revitalization of the 538 acres encompassed in the Oregon Convention Center Urban Renewal Area which is bounded by the Willamette River on the west, the Interstate-84 on the south, 21st and 17th Avenues on the east and Schulyer and Multnomah Avenues to the north. In 1988, Portland City Council adopted the Oregon Convention Center Area Policies and Procedures Guide (Resolution 34497) which focused on bringing new industry and job creation in the area near the Convention Center to support more residential development in the area, create a transportation system that is regionally accessible, and to become an eastern anchor and gateway to Portland's central city.

Construction on the arena

Although the Moda Center was eventually built and a quasi-entertainment district was created incorporating the arena with the Memorial Coliseum, the Lloyd Center, and the Oregon Convention Center, through the assemblage of multiple blocks of land, creating superblocks, the anticipated development never materialized to the city's promises or expectations. A few different district plans have been proposed since the early 1990s to redevelop and transform the area into a gateway district for the rest of the central city, however, none of the proposed plans received enough political support or private capital to spur redevelopment in the area.

The Moda Center was opened in 1995 and cost approximately \$262 million to build. The arena construction was financed with the help from the City of Portland, private investment from Paul Allen, and \$155 million in bonds issues by local insurance companies.

4.9.2 SUBDISTRICT ANALYSIS

Predominately stimulated by private developers and their private for-profit initiatives, over the last decade several plans were proposed to redevelop the Rose Quarter and the Northeast end of Portland. In 2009, for example, *Imagine Jumptown* was proposed by the Trail Blazers to develop a mixed-use sports and entertainment district, similar to L.A. Live. The plans for Jumptown included a 7,000-seat arena, a sport museum, and facilities for amateur recreation. Moreover, Jumptown envisioned new buildings along the Willamette River waterfront, new residential neighborhoods north of Broadway on the Blanchard site, the location of the aging Portland Public Schools headquarters, and a mix of hotel and entertainment space (Libby, 2010). It even divided the district into sub-districts, the location of the two arenas called “the Yard” and the “Jump Street” which would consist of bars, restaurants, small shops, and so on leading up to Broadway. Figure 35 provides an aerial rendering of the proposed Jumptown site (Libby 2010).

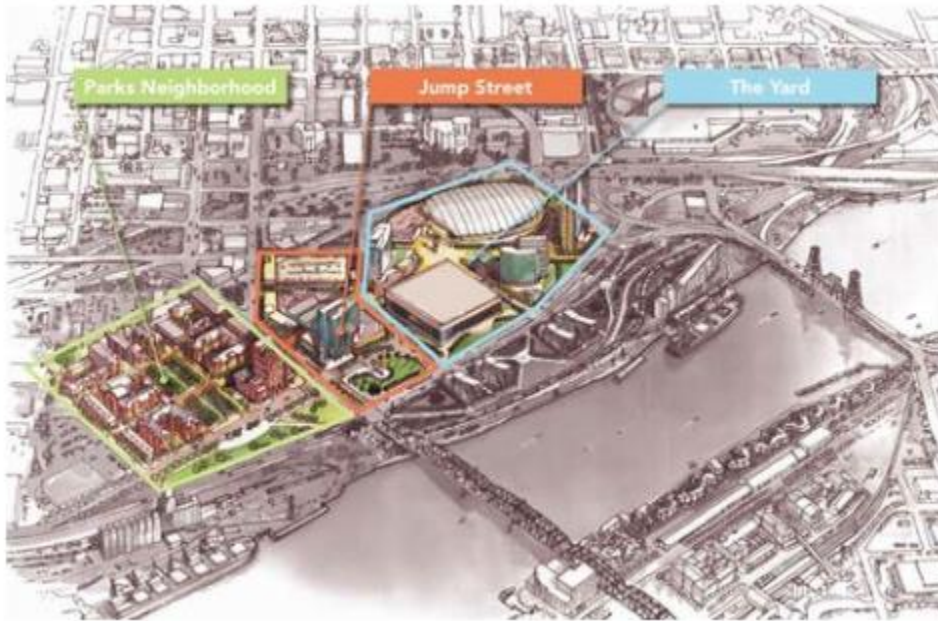
In 2012, the Rose Quarter District Plan, created by Michael McCulloch, a Portland-based architect, was produced for the Portland Development Commission (renamed to Prosper Portland) and supported by an advisory group composed of employees from Nike, Trail Blazers, and the like. The Rose Quarter District Plan's overall goals were to describe a vision for the whole district "the District of Sport" that would combine existing sports and entertainment facilities with mixed-use community amenities such as innovative retail space, indoor and outdoor venues, housing, etc. Furthermore, the Rose Quarter District Plan sought to leverage the success of the sports franchises, renovate the Veteran's Memorial Coliseum as a central focal point in the city, develop new connections with the Willamette River and the Lloyd District. The Rose Quarter District Plan eventually fell apart as Nike was unable to begin the development process. Figure 36 illustrates the proposed plan in the Rose Quarter District Plan. Most of these plans never came into fruition. McCulloch explains, "there's been plan after plan after plan for the [Rose Quarter], but the problem is architects can dream up all kinds of cool stuff, and they can draw all kinds of cool stuff. That's not a problem. Getting the political and economic forces to align, that the problem." (McCurdy, 2017). This proved to be particularly the problem with the Rose Quarter District Plan, causing it to fall apart. As a result, residents have grown skeptical of promises for change that are often unmet.

A fifty year vision and proposed in 2015, the Albina Community Plan, proposed in 2015, relies on community input and citizen participation to "acknowledge the city's history, acknowledge an entire community, generations of people who have been severed from the land that they made their home, and an initiative that aims to thrust the city forward in a more equitable way" (Anderson, 04/27/2018). Albina Community Plan is unique from more tradition development master plans since it is developed and funded through stakeholder support. The

Albina Vision Trust is not an official governmental entity, but rather a non-profit organization formed by a group of Portland stakeholders “who act as ‘curators’ for the district by raising money and awareness, providing programming, and determining how land will be allocated” (Lynes, 2018). Albina Community Plan also underscores the grassroots strategies rather than a top-to-bottom development strategy in recreating the Rose Quarter.

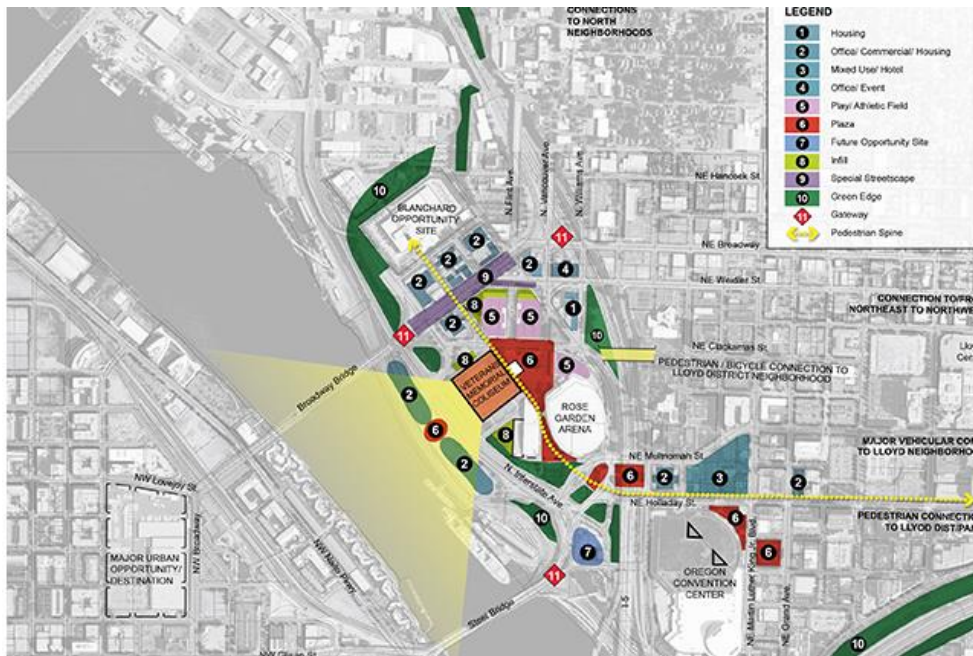
Portland’s arena-district micro-area is found at juncture of the Eliot/Albina neighborhood, the Lloyd District, and the Rose Quarter, which includes a number of undeveloped land tracts owned by the Trail Blazer’s owner Paul Allen, under his business development venture company, Vulcan. Formerly an African-American neighborhood, in the 1950s and 1960s and the onset of the urban renewal efforts, the Rose Quarter, including the Albina neighborhood, was transformed. The Rose Quarter was a thriving neighborhood where people lived, filled with homes, churches, and small family-owned retail stores. By the 1960s, due to the implementation of a number of urban renewal plans, a large percentage of the private residences were razed. The development of the Memorial Coliseum, the I-5 corridor, the Legacy Emanuel Hospital, and eventually the Moda Center took precedent over the preservation of housing and small businesses. The intent of the Albina Community Plan is create a multi-model transportation corridor and to reinvigorate an area that was ridden with lower property values and fewer amenities due to the past practices of red-lining. The redevelopment of the Rose Quarter encompasses an areas bounded by the Broadway Bridge and the Blanchard school site on the north, the Steel Bridge on the south, and the Lloyd District to the east.

Figure 35. Jumptown development proposal rendering, 2010



Source: Brian Libbey, 2010

Figure 36. Rose Quarter District Plan, 2012



Source: Friends of the Memorial Coliseum, 2012.

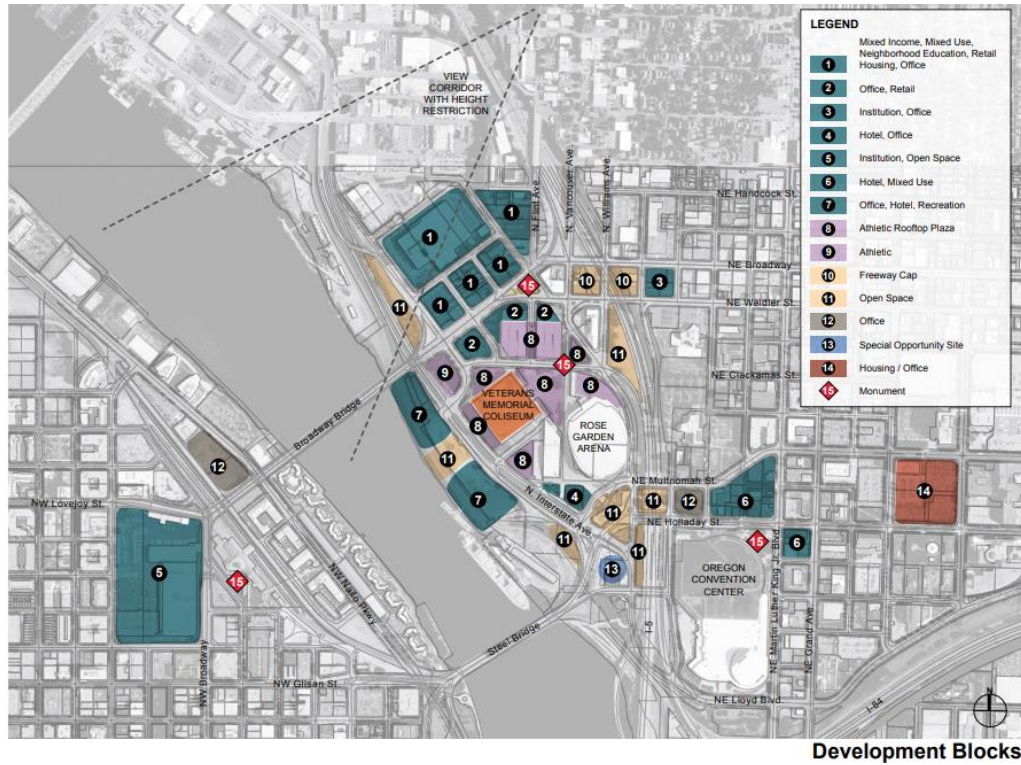
4.9.2.1 Rose Quarter

In 2010, the Portland Development Commission (PDC) began the process of creating a District Plan for the Rose Quarter to be integrated into the Central City's 2035 planning process. Given the presence of the Rose Quarter and its anchored developments, the Veteran's Memorial Coliseum (VMC) and the Moda Center (formerly the Rose Garden Arena), the future area development of the Rose Quarter is determined as a sports-focused district that combines existing sports and entertainment facilities with mixed-use development of office, retail, and housing. I-5 and the Willamette River on the west, the Oregon Convention Center on the east, the Blanchard development site to the north, and Sullivan's Gulch to the south are the Rose Quarter District Plan's borders. Although the Rose Quarter is located at a transportation corridor that has direct connections to the I-5, I-84, light rail transit, and major bus lines, the Rose Quarter itself is seemingly isolated. There are "boom and bust" levels of traffic in the area directly related to the game day and special events, yet, on non-game days, the area is uninhabited. There is a lack of development surrounding the Rose Quarter with little to no office or residential developments. Even surface parking lots and multi-story parking garages located north of the arena lie vacant on non-game days.

There are a number of blocks surrounding the Rose Quarter that are sites for future development and well-connected along the transportation corridor. Development Blocks No. 1, as labeled in Figure 3, are large mixed-use land tracts that currently serve as surface parking lots or are vacant. The vacant and under-utilized lots have the potential to be converted into mixed-use ground retail and residential developments. An example of one of the under-utilized land tracts for the area includes the Blanchard opportunity site located north of the Rose Garden,

which is currently occupied by the Portland School District headquarters. The school district headquarters will be relocated to an alternative site in order to upgrade the site to a more profitable, highest and best use. With the reconfiguration plans for the I-5, the Blanchard land tract will have increased transportation access and heightened redevelopment potential. The school site has the potential for mixed-use development and become an anchor for the revitalization of the Lower Albina neighborhood. Development Blocks No. 2 are the located along Broadway Street and are positioned to be the gateway to the Broadway Bridge. The Rose Quarter District Plan indicated these development blocks would be suitable for residential and office structures. The riverfront area just north of Sullivan's Gulch, where the heavy manufacturing plant is located, are several blocks of underdeveloped land tracts. Development Block No. 7 offers opportunities to engage with the Willamette River such as a combination of recreational facilities with a combination of institutional facilities, office, hotel, and so on. Finally, other notable development blocks for the Rose Quarter would include Development Block No. 8, located adjacent to the VMC. The Rose Quarter District Plan indicated that these blocks would serve well as athletic, entertainment, and parking facilities that aid a broader vision for the Rose Quarter.

Figure 37. Rose Quarter district plan development blocks, 2012



Source: Rose Quarter district plan development blocks, 2012

4.9.2.2 Albina Community Plan

The Albina Vision Trust is a new community effort to transform 94 acres within the Rose Quarter into a high density, mixed-use neighborhood. After several failed attempts in redeveloping the Rose Quarter, Albina’s Vision Trust imagines a socially diverse neighborhood that is affordable for all. The Albina Vision Trust is one of the latest (2017-2018) of the many proposed plans for the Albina neighborhood that dates back to the Portland Model Cities program from 1967 to 1975 (Albina Community Plan Process, 1990). Conceived by artists, community leaders, academics, businessmen, developers, and designers in 2015, the Albina Vision (2018) is a long-term plan that addresses how to redevelop the Rose Quarter. The plan specifically focuses on the Lower Albina area in Northeast Portland, formerly a thriving Black community that has transformed over the last 20 years due to gentrification, displacement, and

lack of affordability. Large scale projects such as the Memorial Coliseum (voter-supported) the I-5 freeway, and the Emanuel Hospital instigated involuntary displacement of residents and businesses. Lower Albina contains the last large vacant land tracts in Portland's downtown area with the potential for mixed-use development. Since the City of Portland, Portland Schools, and the Portland TrailBlazers own the majority of the land tracts in Lower Albina, the Albina Vision Trust group is hopeful that these groups and organizations are encouraged to adopt some of the plan's outlined policies and pushing development in the area forward. The Albina Vision Trust's objective is to redevelop the available 94-acres of the city with the implementation plan of 50 new streets, reconnecting the community with the Willamette River, in addition to promoting inclusionary housing and zoning.

In 1990, the Portland City Planning Commission developed the Albina Community Plan that proposed for the redevelopment of the inner North and inner Northeast portions of Portland. The 1990 plan was the first plan since the Model Cities program to provide a more comprehensive plan for the district and address a number of different planning issues. The plan's land-use objectives included the need to reconsider the zoning patterns for the Albina Community to create a better mixture of commercial, industrial, institutional, and residential uses in order to promote more job creation and provide opportunities for existing businesses to grow along transportation corridors near light-rail stations. Furthermore, there is a great need to increase home ownership, while also providing more opportunities for higher density housing developments (Albina Community Plan Process, 1990). Primarily designed to target land-use changes in high impact areas, the Albina Community Plan had a focus area of 13

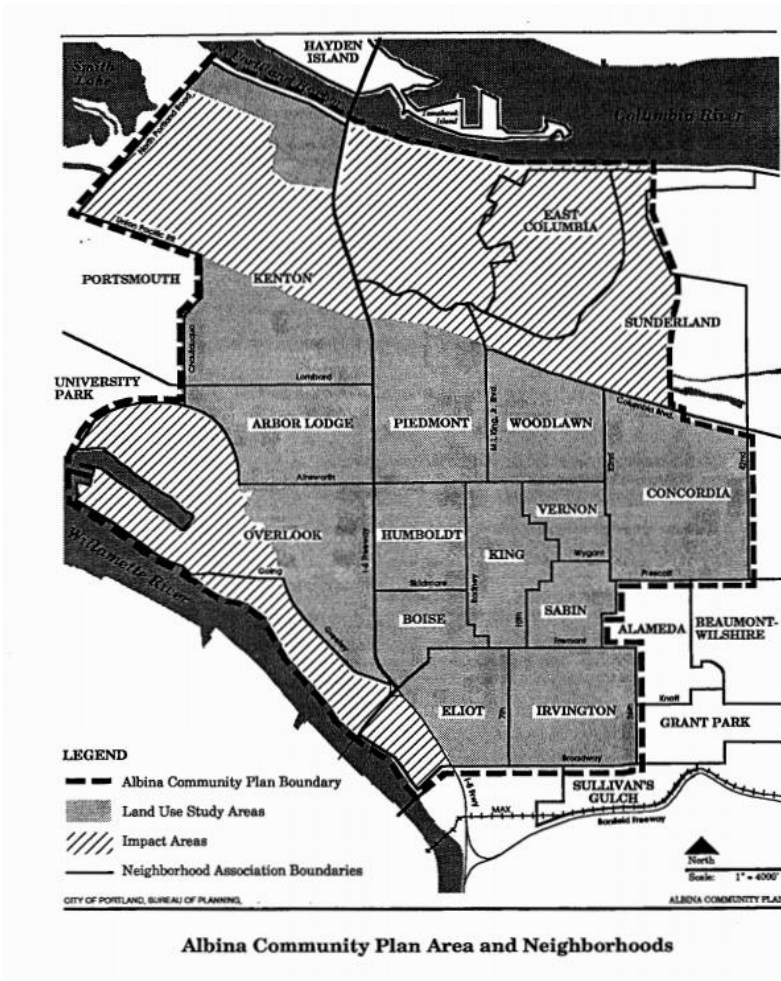
neighborhoods⁸² with boundaries, positioned from the south of Columbia Boulevard to Northeast Broadway, west along Chautauqua, Delaware, and Greeley, and east from 33rd Street to Prescott Street. Figure 38 illustrates the boundaries of the 1990 Albina Community Plan. The Moda Center and the Rose Quarter are located in the southern section of the Albina Community Plan boundaries. For the purpose of this study, I am interested in the land-use changes and redevelopment strategies found within the quarter-mile arena-district micro-area boundaries. The micro-area encompasses the Eliot neighborhood, the Convention Center Urban Renewal District, and portion of Sullivan’s Gulch, which falls just outside of the Albina Community boundaries.

Although millions of dollars of public and private investment have been funneled into the Albina Community which had drastic negative impacts from urban renewal in the 1960s and 1970s, the area continues to be impacted by disinvestment and declining property values. The neighborhood’s recovery has been slow due to former red-lining practices and the lack of issued mortgages to potential home-owners. These two instances caused a decrease in homeowners and instead increased rent prices, higher renter turnaround, and building vacancy. In the 1950s, it was determined that 60% of the housing units in the Albina neighborhood were sub-standard (Lynes, 2018). A coalition of African-American residents requested funds to rehabilitate the neighborhood, however were denied and the Portland Development Commission instead declared the area in a stage of “advanced blight” that required urban renewal. The city of Portland’s urban renewal efforts subsequently impacted the integrity of well-established African-American communities.

⁸² The 13 neighborhoods located within the Albina Community Plan are Kenton, Arbor Lodge, Overlook, Piedmont, Humboldt, Boise, Eliot, Woodlawn, Concordia, King, Vernon, Sabin, and Irvington.

The Portland Development Commission used enterprise zones in order to boost economic development initiatives, provide property tax incentives to encourage businesses to make capital investments in the area. The majority of the Albina Community Plan study area is encompassed by the North/Northeast Portland Enterprise Zone, which is one of 30 sites found within the state of Oregon’s enterprise program (Albina Community Plan Process, 1990).

Figure 38. Albina Community Plan Area and Neighborhood Plan Boundaries, 1990



Source: Albina Community Plan Process, City of Portland Bureau of Planning, May 1990

4.9.3 MAJOR DEVELOPMENT PROJECTS

Table 55. Notable completed and proposed development projects in arena-district micro-area, 1990 to present.

Development Name	Project Cost	Description
List of Projects Planned, 2016–18		
Blanchard Site Redevelopment (Portland Public School District)	N/A	<ul style="list-style-type: none"> • The Portland Public Schools’ Blanchard site and three adjacent parcels are located near the Rose Quarter in North Portland. • Given the potential of land assembly with the adjacent parcels and the location of the Blanchard site near the city’s core, makes the redevelopment of the parcel highly desirable to change the parcel’s zoning to its highest and best use. • Due to the location of the site, the Blanchard site will yield high-assessed values with zoning alterations. • Currently, the site’s land values are lower than that of the city’s downtown core and the office and residential developments located across the river, however, with similar locational advantages, the site’s assessed values will increase after the site’s redevelopment. • The site houses the Blanchard Education Service Center (BESC), which occupies over 8 acres of administrative offices, kitchen, food services, warehouses, distribution services, and maintenance functions.
Veterans Memorial Coliseum	\$30,000,000	<ul style="list-style-type: none"> • In 2016, Capstone Partners announced new vision for the renovation of Veteran’s Memorial Coliseum that would require \$100 million in public money. • The plan would transform the coliseum into a music venue along with adjacent mixed-use development and surface parking lots. • Multiple plans have been proposed over the years to redevelop the Rose Quarter, yet Portland mayors were unsuccessful on delivering on redevelopment promises. • Some plans proposed the demolition of the Coliseum to build a new baseball stadium, while others sought the renovation of the Coliseum partially paid by the city and that of the junior hockey team. • The Veterans Coliseum was built in 1960 and is a 12,000-seat arena that hosts the WHL Winterhawks (Junior Ice Hockey) and was the former home of the Portland Trailblazers (NBA). • The arena is listed on the National Register of Historic Places and the oldest structure located in the Rose Quarter.
Oregon Convention Center Renovation Project	\$27,000,000	<ul style="list-style-type: none"> • The OCC is owned by the Metro and managed by the Metro Exposition and Recreation Commission. • The renovation of the Oregon Convention Center (OCC) began in 2018 and is projected to open in 2020 along with the Hyatt Regency Portland. The renovations include the reconstruction of the front plaza, the TriMET light rail, and hotel.

4.9.4 DEVELOPMENT FINDINGS

In conjunction with the support from the Portland Development Commission, the purpose of the *1988 Convention Center Urban Renewal Plan* was to implement different types of activities that would eliminate existing blight, stimulate redevelopment of underutilized land, and engage in developing the designated area into a tourist living, shopping, and working type of environment (Portland City Council, 1989).

Section 100 of the Convention Center Urban Renewal Report found that of the 538 acres located within the convention center's urban renewal boundaries, 45% of the total area was devoted to arterial streets and interstates. An additional 4% of the land area was dedicated railroad property. Only 3% of the entire urban renewal area was vacant property that would serve as potential lots for new development initiatives. Furthermore, of the 427 existing buildings in the urban renewal area, which extends further than the quarter-mile radius for the arena-district micro-area, 71% of the buildings were designated as requiring "substantial rehabilitation and improved maintenance" (Portland City Council, 1989, p. 7) while 3% of the buildings were designated as extending beyond the possibilities of being economically viable for rehabilitation. With the use of tax abatements, *the Convention Center Urban Renewal Plan* encourages residential development in the Convention Center area through \$3 million made available to fund low interest loans and other financial incentives to spur new housing development. The area is already zoned for medium and high-density apartment complexes adjacent to zoned commercial centers which would allow for continued multi-family uses and provide more opportunities for those interested in living and working in mixed-use development areas.

4.9.4.1 Land-Use Composition

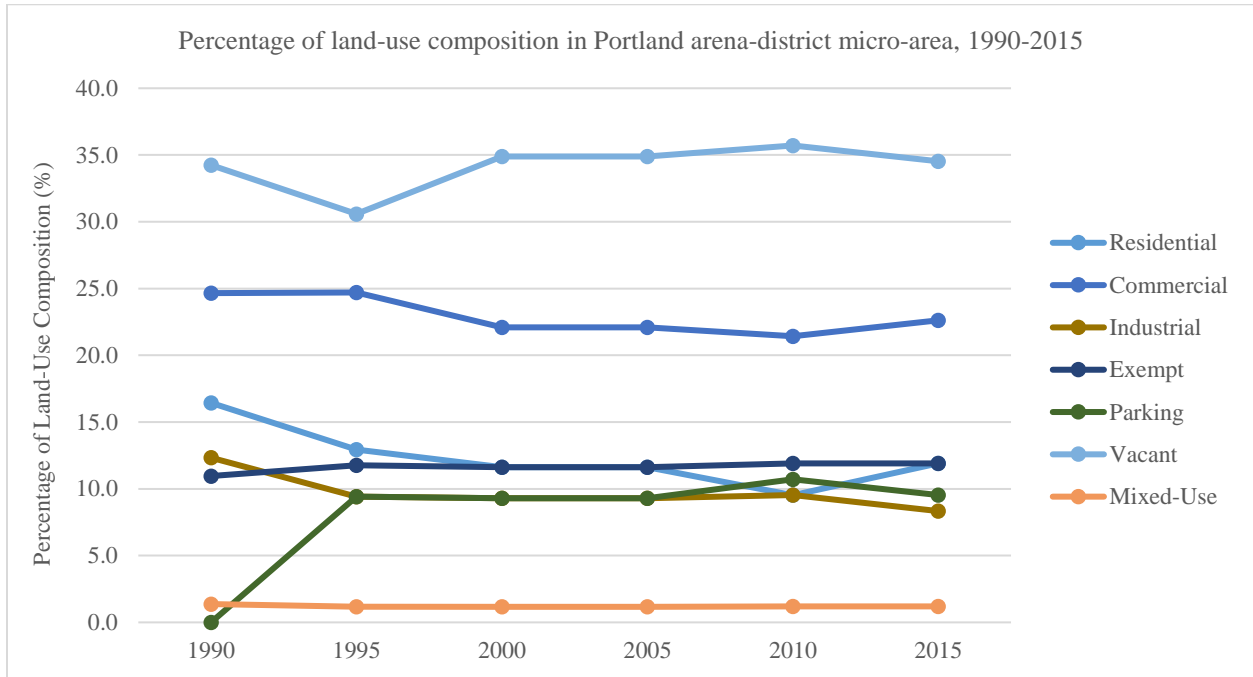
Overall, the land-use composition in the Moda Center's arena-district micro-area stayed stagnant over the last 25-years with limited new construction and increases across the different land-uses. This was simply because the different proposed arena district development plans lacked the financial support and political backing to spur any new types of larger residential projects. Furthermore, the Albina Community, located north of the Moda Center disintegrated as the predominantly minority area was severed through drastic urban renewal practices. Religious institutions are the remains of a once prominent and thriving neighborhood. As demonstrated in Figure 39 and Table 57, vacant parcels made up most of the land-use composition within the arena-district micro-area with a concentration of 30%. Commercial parcels made up approximately 20% of the land-uses between 1990 and 2015, with slight increases in office development. Exempt properties and industrial properties each composed approximately 9 to 12% of the land-uses in the arena-district micro-area, particularly because of the large land tracts found along the waterfront that were part of grainer refineries and other railroad uses.

The Rose Quarter is limited in its residential development availability and lacks any larger condominium complex as most of the buildings in the downtown area are built to low-scale. The overall rate of change was less than one percentage point. Of the available residential properties, most of the locations are small-scale residential townhomes that were converted from industrial lofts, or were single-family dwellings strewn throughout the city. Commercial properties stayed relatively the same, with a slight increase in the office presence by a compounding rate of 4% as office space was integrated in the Rose Quarter's development, which also included adding a hotel adjacent to the restaurants and team stores that encompass the area adjacent to the entrance to the arena. Parking structures and parking surface lots also

remained stagnant, as most of the parking is owned by the Portland School District. The school district's plot of land has remained in question for the last several years as it is positioned in a prime location in which the property values will increase exponentially once the land is redetermined for its highest and best uses.

Despite the number of different comprehensive plans that have been proposed for the redevelopment of the area surrounding the Moda Center and the Rose Quarter, beginning with the *Oregon Convention Center Urban Renewal Plan* in 1989 to the *Rose Quarter Urban Design Plan* in the mid-2000s, and the recently proposed *Albina Community Plan* in 2016, the arena-district micro-area continues to be surrounded by vacant parcels and surface parking lots. The assemblage of the land parcels owned by the Portland School District north of the Moda Center provides some insight as a new potential development site, however, the remaining land parcels have remained untouched without any indication of land assemblage or progress for new development.

Figure 39. Percentage of land-use composition in the Portland arena-district micro-area, 1990-2015.



4.9.4.2 Built Volume

Table 57 illustrated limited change in the land-use composition within the Rose Quarter arena-district micro-area from 1990 to 2015. The percentage concentration across the different land-use types remained largely the same over the 25-year period. Similarly, there were limited changes in the arena-district micro-area’s built volume from 1990-2015 which indicates that there was limited new construction or renovation to the existing buildings in the area. The *Oregon Convention Center Urban Renewal Plan* indicated that in the early 1990s, there were approximately 429 existing buildings found within the plan’s boundaries. While the arena-district micro-area contains a smaller land concentration within the urban renewal area boundaries, it is clear that the buildings that had been designated as blighted and deemed as being not economically viable for rehabilitation has neither been rehabilitated nor demolished. Over the 25-year period,

little changes have been made to the arena-district micro-area regarding the changes in built volume, which indicates that there was little incentive to invest in the area surrounding the Moda Center. Table 58 provides the raw numbers for the recorded built volume in the arena-district micro-area from 1990-2015. Industrial warehousing and heavy industry, including the grain silo along the waterfront composed approximately 20% of the arena-district micro-area's built volume. There are several parking garages that serve the Convention Center, the Moda Center, and Memorial Coliseum with 350,000 square feet of decked parking, which does not include the availability of surface parking lots. Although commercial parcels had a compounding rate of change of 3% from 1990 to 2015, office development increased by 8,000 square feet from between 2000 and 2005, contributing to the 16% compounding rate of change from 1990-2015.

Table 56. City of Portland arena-district micro-area land-use count, 1990-2015.

	1990		1995		2000		2005		2010		2015		1990-2015
	LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL	12	16.44	11	12.94	10	11.63	10	11.63	8	9.52	10	11.90	(0.73)
<i>RENTER-OCCUPIED</i>	5	41.67	7	63.64	6	60.00	6	60.00	3	37.50	5	50.00	-
<i>OWNER-OCCUPIED</i>	7	58.33	4	36.36	4	40.00	4	66.67	5	62.50	5	50.00	(1.34)
<i>TOTAL CONDOS</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
COMMERCIAL	18	24.66	21	24.71	19	22.09	19	22.09	18	21.43	19	22.62	0.22
<i>OFFICE</i>	2	11.11	2	9.52	4	21.05	4	21.05	4	22.22	5	26.32	3.73
<i>RETAIL</i>	6	33.33	3	14.29	3	15.79	3	15.79	3	16.67	3	15.79	(2.73)
<i>RESTAURANT</i>	1	5.56	1	4.76	-	-	-	-	-	-	-	-	(100.00)
<i>HOTEL</i>	5	27.78	3	14.29	3	15.79	3	15.79	3	16.67	3	15.79	(2.02)
INDUSTRIAL	9	12.33	8	9.41	8	9.30	8	9.30	8	9.52	7	8.33	(1.00)
EXEMPT	8	10.96	10	11.76	10	11.63	10	11.63	10	11.90	10	11.90	0.90
PARKING	-	-	8	9.41	8	9.30	8	9.30	9	10.71	8	9.52	-
VACANT	25	34.25	26	30.59	30	34.88	30	34.88	30	35.71	29	34.52	0.60
MIXED-USE	1	1.37	1	1.18	1	1.16	1	1.16	1	1.19	1	1.19	-
TOTAL	73	100.00	85	100.00	86	100.00	86	100.00	84	100.00	84	90.48	0.56

Table 57. City of Portland arena-district micro-area built volume count, 1990-2015.

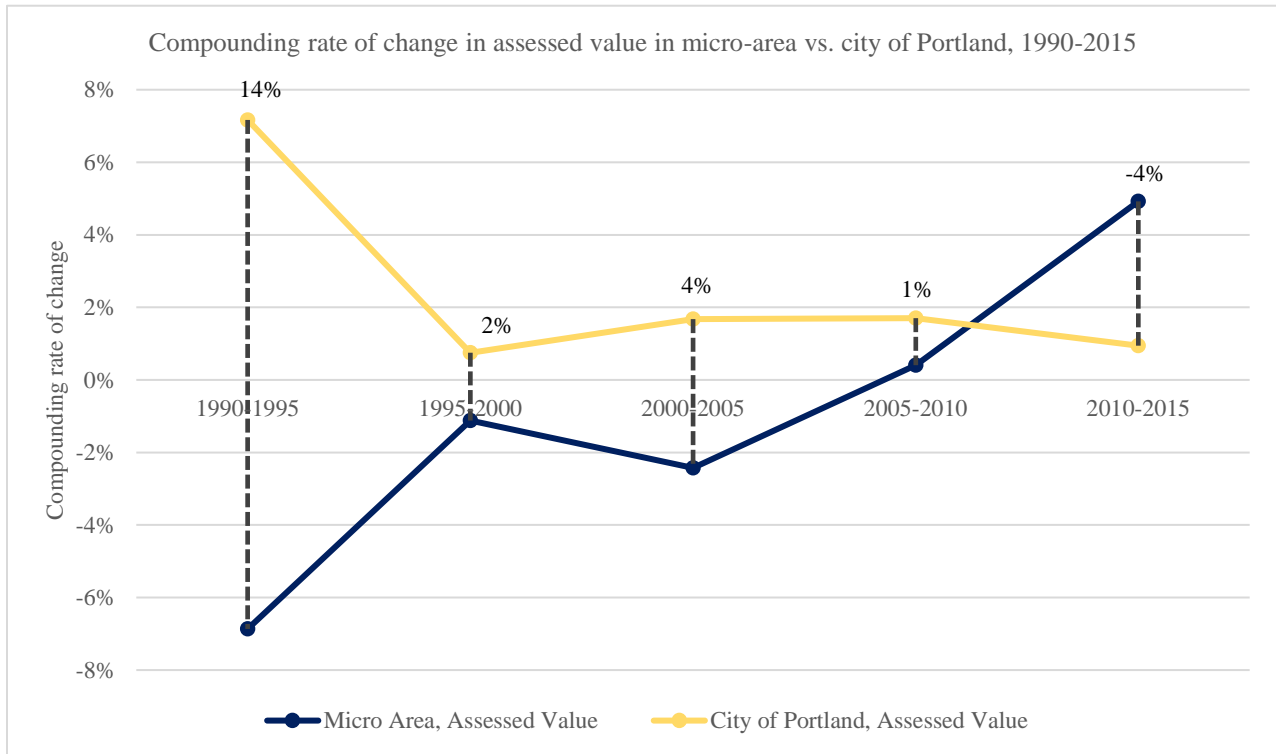
	1990		1995		2000		2005		2010		2015		1990-2015
	BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% Change
RESIDENTIAL	352,772	43.33	416,451	27.77	415,027	36.29	415,027	27.94	325,941	23.34	374,292	23.03	0.24
<i>RENTER- OCCUPIED</i>	<i>340,018</i>	<i>96</i>	<i>410,624</i>	<i>98.60</i>	<i>406,552</i>	<i>97.96</i>	<i>406,552</i>	<i>97.96</i>	<i>317,466</i>	<i>97.40</i>	<i>365,817</i>	<i>97.74</i>	<i>0.29</i>
<i>OWNER- OCCUPIED</i>	<i>12,754</i>	<i>4</i>	<i>5,827</i>	<i>1.40</i>	<i>8,475</i>	<i>2.04</i>	<i>8,475</i>	<i>2.04</i>	<i>8,475</i>	<i>2.60</i>	<i>8,475</i>	<i>2.26</i>	<i>(1.62)</i>
<i>TOTAL CONDOS</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
COMMERCIAL	243,452	29.90	280,572	18.71	272,956	23.87	272,956	18.37	272,956	19.55	458,606	28.21	2.57
<i>OFFICE</i>	<i>5,486</i>	<i>2.25</i>	<i>5,220</i>	<i>1.86</i>	<i>13,206</i>	<i>4.84</i>	<i>13,206</i>	<i>4.84</i>	<i>13,206</i>	<i>4.84</i>	<i>256,976</i>	<i>56.03</i>	<i>16.63</i>
<i>RETAIL</i>	<i>46,250</i>	<i>19.00</i>	<i>16,250</i>	<i>5.79</i>	<i>16,250</i>	<i>5.95</i>	<i>16,250</i>	<i>5.95</i>	<i>16,250</i>	<i>5.95</i>	<i>16,250</i>	<i>3.54</i>	<i>(4.10)</i>
<i>RESTAURANT</i>	<i>4,720</i>	<i>1.94</i>	<i>4,720</i>	<i>1.68</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>(100.00)</i>
<i>HOTEL</i>	<i>161,522</i>	<i>66.35</i>	<i>168,312</i>	<i>59.99</i>	<i>168,312</i>	<i>61.66</i>	<i>168,312</i>	<i>61.66</i>	<i>168,312</i>	<i>61.66</i>	<i>168,312</i>	<i>36.70</i>	<i>0.16</i>
INDUSTRIAL	159,837	19.63	453,738	30.25	453,738	39.68	453,738	30.54	453,738	32.49	448,738	27.61	4.22
EXEMPT	58,120	7.14	-	-	-	-	-	-	-	-	-	-	(100.00)
PARKING	-	-	347,263	23.15	-	-	342,000	23.02	342,000	24.49	342,000	21.04	-
VACANT	-	-	-	-	-	-	-	-	-	-	-	-	-
MIXED-USE	-	-	1,808	0.12	1,808	0.16	1,808	0.12	1,808	0.13	1,808	0.11	-
TOTAL	814,181	100.00	1,499,832	100.00	1,143,529	100.00	1,485,529	100.00	1,396,443	100.00	1,625,444	100.00	2.80

4.9.4.3 Assessed Value

The arena-district micro-area had an overall decrease in the compounding rate of change of 1% in assessed value between 1990 and 2015 as demonstrated in Figure 40. The total assessed value in the micro-area decreased by approximately \$40 million between 1990 and 1995, although there was an increase of 500,000 square feet of built volume during those 5-years. The market value between 1990-1995 illustrated a gain of approximately \$40 million dollars. The decreased in assessed value is an indication that there was a shift in land-use type in which the assessment ratio decreased the property's value for tax purposes while the market value experienced increases. Since 1995, the assessment values slowly increased illustrating changes of approximately 2% in assessed values from 1995-2000, 2000-2005, and 2005-2010, respectively. Between 2010-2015, the compounding rate of change in assessed value surpassed the compounding rate of change of the city. Since there were no large changes in built volume between 2010 and 2015 and shifts in land-use type, it is possible that the market value of the vacant properties increased exponentially with the potential for large area development due to the ongoing discussions focused in the *Albina Community Plan*.

Between 2005 and 2010, the assessed values in the micro-area increased by \$2 million and then from 2010-2015, the total assessed value in the area increased by \$20 million, demonstrating compounding rate of change of 4% compared to the city's slight decrease in compounding rate of change in assessed value. The City of Portland's assessed values were stagnant with 2% gains every five years between 1995 and 2010.

Figure 40. Compounding rate of change in assessed values in arena-district micro-area (Rose Garden) vs. city of Portland, 1990-2015.



4.9.4.4 Property Tax

Between 1990 and 2015, the compounding rate of change in property tax values for the arena-district micro-area was a decrease less than 1%, while the city had a compounding rate of change in property tax value of 2% demonstrated in Table 59. Both the micro-area and the city has decreases in total property tax values between 1990 and 1995 because of the tax law changes in the City of Portland. In 1995, it was amended that property tax was too high, and the percentage that each parcel is tax would be reduced to relieve owners of residential properties. The micro-area experienced more substantial increases in the compounding rate of change in property tax values between 2000 and 2015 as the market land value for the vacant properties increased substantially. The city’s accumulated property taxes remained constant after the changes in the property tax law.

Figure 41. Compounding rate of change in property taxes in arena-district micro-area (Rose Garden) vs. city of Portland, 1990-2015.

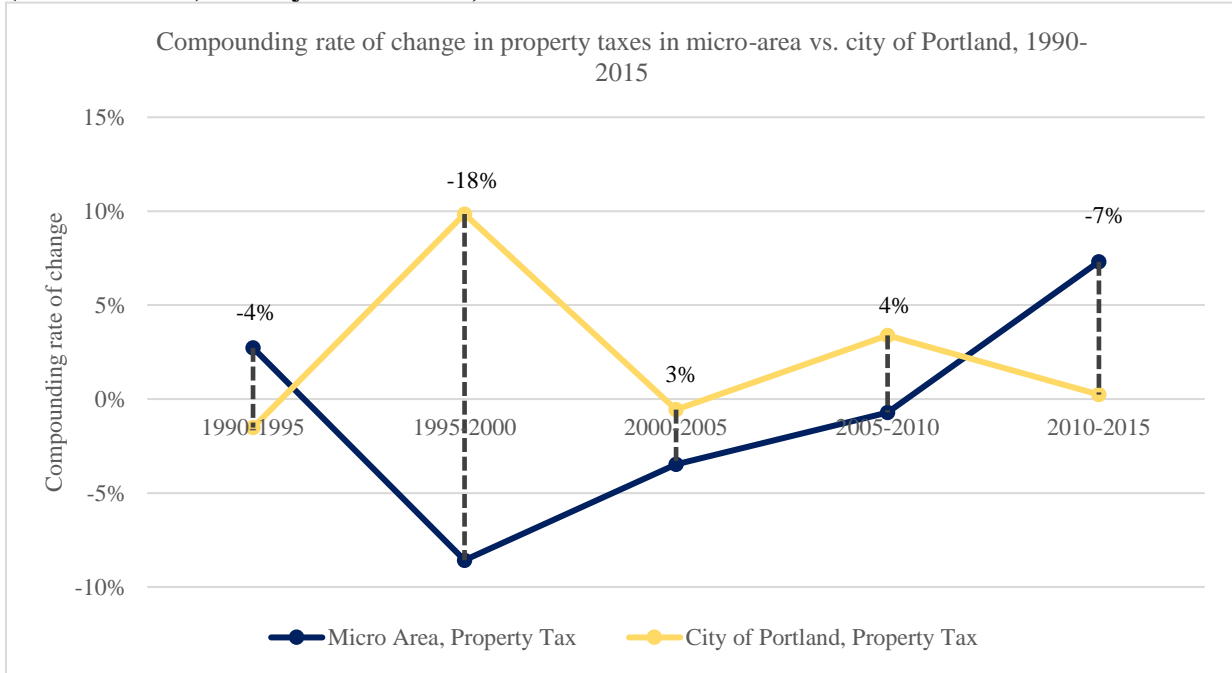


Table 58. City of Portland’s (Rose Garden) arena-district micro-area assessment, market, and property tax values, 1990-2015.

	1990	1995	2000	2005	2010	2015	1990-2015
ROSE GARDEN ARENA-DISTRICT MICRO-AREA							
LAND AREA (sf)	1,831,528	2,449,265	2,436,938	2,433,438	2,192,413	2,646,891	1.48
BUILT AREA/VOLUME (sf)	814,181	1,499,832	1,485,542	1,396,443	1,396,443	1,625,444	2.80
TOTAL ASSESSED VALUE	62,806,730	52,922,843	58,113,750	56,599,000	64,342,860	91,496,570	1.52
TOTAL ASSESSED VALUE (2015 \$)	120,382,852	84,355,281	79,723,576	70,514,846	71,959,307	91,496,570	(1.09)
ASSESSED LAND VALUE	12,672,000	35,854,723	-	-	-	-	(100.00)
ASSESSED BUILDING + IMPROVEMENTS	50,134,730	68,893,270	-	-	-	-	(100.00)
TOTAL MARKET VALUE	62,806,730	104,747,993	171,560,140	231,417,850	233,054,090	288,127,350	6.28
TOTAL MARKET VALUE (2015 \$)	120,382,852	166,960,917	235,355,453	288,315,943	260,641,365	288,127,350	3.55
TOTAL MARKET LAND VALUE	12,672,700	35,854,723	63,560,540	88,583,270	113,636,230	147,753,730	10.32
TOTAL MARKET BUILDING VALUE + IMPROVEMENTS	50,134,730	68,893,270	107,999,600	142,834,580	119,417,860	140,373,620	4.20
TOTAL TAX	1,192,394	1,640,608	1,217,483	1,123,009	1,206,416	1,920,206	1.92
TOTAL TAX (2015 \$)	2,285,484	2,615,014	1,670,209	1,399,120	1,349,222	1,920,206	(0.69)
CITY OF PORTLAND							
TOTAL ASSESSED VALUE	14,730,487,995	25,038,801,518	30,195,948,585	36,126,155,540	43,786,711,136	51,321,383,398	5.12
TOTAL ASSESSED VALUE (2015 \$)	28,234,206,150	39,910,084,482	41,424,430,814	45,008,397,558	48,969,868,612	51,321,383,398	2.42
TOTAL MARKET VALUE	14,730,487,995	25,038,801,518	42,945,730,222	58,806,347,394	89,022,110,363	92,618,335,901	7.63
TOTAL MARKET VALUE (2015 \$)	28,234,206,150	39,910,084,482	58,915,268,893	73,264,908,011	99,559,910,643	92,618,335,901	4.87
TOTAL TAX	145,100,435	161,657,188	300,432,168	321,585,788	423,295,282	479,007,449	4.89
TOTAL TAX (2015 \$)	278,116,760	257,670,161	412,149,051	400,653,233	473,401,948	479,007,449	2.20

4.9.5 KEY FINDINGS

The Portland arena-district micro-area illustrated relative weakness across the three measurements of success in land-use composition, built volume, and assessed value. Although the market value of the parcels increased as the area's potential for new development increased with the different development plans that had been proposed over the last 10-years, the assessed values remained low as the parcels were largely vacant parcels and not performing at their highest and best uses. While the area is certainly positioned as the next area for major redevelopment, which is illustrated in the increases in market value of the properties in the last five years, since the arena was built in 1995, little new development has materialized. The city has made reasonable efforts to redevelop the area with the different urban design proposals, however, with little private investment to support the city's vision, no new development has occurred despite the immense potential for the area. It can be therefore concluded that the Moda Center and the adjacent entertainment properties such as Memorial Coliseum, the Convention Center, and the Lloyd Center did not contribute to the redevelopment of the lower-end of the Albina Community that still experiences the negative impacts of urban renewal.

CHAPTER 5. CONCLUDING REMARKS

Cities continue to use sports-anchored development strategies as a means to further the city's economic development agenda to increase the city's competitiveness, quality of life measures, city image, and other economic and intangible benefits. Despite the numerous academic studies that have refuted the claims of significant economic impacts created by sport facilities, public funding for major league facilities continues, new facilities continue to be built, and subsidy levels are increasing (Zimbalist and Long, 2006). A few examples of the newly proposed arena-led sport development projects include San Francisco's Mission Rock (NBA)⁸³, Long Island's Belmont Arena (NHL)⁸⁴, the Milwaukee Bucks Fiserv Arena (NBA)⁸⁵, and the

⁸³ San Francisco's Mission Rock Development Project, the proposed new home for the Golden State Warrior's in the new Chase Arena, is envisioned to be a 3.6 million square feet mixed-use development that will consist of both residential and commercial buildings in addition to 8 acres of parks and open space. The development project will also incentivize the rehabilitation for the Pier 48. The 28-acres of current parking and storage will be transformed into a new neighborhood that includes 1,500 rental apartments as well as 1.6 million square feet of commercial space. The infrastructure is privately funded during the development stage and will be publicly-funded through various financing tools (City of San Francisco, 2017).

⁸⁴ In 2015, the Governor Cuomo supported a plan to relocate the New York Islanders from the Barclays Center in Brooklyn back to Long Island in order to spur the local economy while build a new arena for the New York Islanders on state-owned land while making improvements to Belmont Park, the historic horse-racing track. The New York arena partners, which includes the Scott Malkin Group, Sterling Equities, Oak View Group, and the Madison Square Garden Company have pledge to spend \$1 billion in private funds on the new arena in addition to agreeing to a 49-year lease on 36-acres for \$49 million (Hughes, 2018). The plan includes redeveloping 43-acres of land that previously served as underutilized parking spaces, 60,000 square foot arena, 435,000 square feet of retail space and restaurants, and a 193,000 square foot hotel. Construction is scheduled to begin in 2018 with an estimated timeline to completion in 2021.

⁸⁵ The Milwaukee Bucks broke ground on a new arena, the Fiserv Forum, in June 2016, and has just recently completed in the summer of 2018. The Bucks secured \$250 million in public funding for the project and the total cost of the arena development accrued to \$524 million (Davis, 2017). The arena is located in the center of

Sacramento Kings' Golden1 Center (NBA).⁸⁶ Professional sport facilities are among the most expensive infrastructure investments and expensive decisions city leaders can make (Mason, 2012). Despite the economic evidence, city leaders continue to bolster sport-led development projects as a strategy to revitalize downtown. Indeed, given the development footprint of these professional sport facilities, particularly arenas predominantly located downtown, can take up a large development footprint and as a result, can change the land-use composition of the downtown area. The location of a major league venue can impact future zoning and land-use decisions, traffic patterns, retail presence, and so on. Furthermore, Siegfried and Zimbalist suggest that only a “sports arena accompanied by a year-round business district or residential neighborhood will attract substantial investment.” (Siegfried & Zimbalist, 2000).

The current academic literature suggests that the “number of unsuccessful or questionable stadium and arena projects outnumber the success stories where such developments are held out as solutions to urban issues” (Mason, 2012; p. 166). Cities are actively integrating professional sport venues into broader urban development agendas to support ancillary development. However, there are some cases in which a major league venue is intended to be part of a larger sport-anchored development project or grander revitalization effort, but the promised, hoped for, or even assumed ancillary development may fail to materialize (Mason, 2012). This research

downtown, and promises to generate economic development throughout the downtown by beginning with providing residential and retail options adjacent to the arena.

⁸⁶ Sacramento Kings owner, Vivek Ranadive played an integral part in relocating the Sacramento Kings to downtown and convincing the Sacramento City Council to approve public financing to build a new arena. The facility opened with a final cost of \$558.2 million with \$223 contributed by the City of Sacramento. In addition to the construction of a new arena, there has been significant investment in the Downtown Commons. In 2017, the Downtown Sacramento Partnership and the Greater Sacramento Economic Council found that with the \$1 billion investment in the Golden1 Center and in the Downtown Commons, an addition \$1 billion in urban investment has occurred since 2015. Downtown property sales have accrued to \$885 million since the construction of the arena and 26 new ground floor retail businesses were created in the last year (Rishe, 2018).

study explores an alternative way in which cities should evaluate the success of arena projects and their impact on urban development.

Mason (2012) questions whether academics are asking the right questions when it comes to examining professional facilities and urban development. Indeed, cities invest in professional sport facilities for a variety reasons – economic development, community development, city branding, tourism, and so on. However, in comparing the success of one city’s arena-led urban development strategy to another, it is important to recognize that each city has its own unique elements. Historical trajectory, political and economic climate, city’s demographics, and combination of different amenities and land-uses all play a factor in ultimately influencing the success and failure of a sport-led development project. The determinants of the success and failure of a sport-led urban development strategy and its impact on real estate prices, property values, intangible benefits, and so on can truly only be determined by considering the context of a city. Mason (2012) continues to discuss that future research should explore ways in which sports-related infrastructure is integrated into other development projects and plans throughout the city and how major league venues complement other civic amenities and ultimately fits into the city’s overall development strategy. In respect to Mason’s call for action in moving towards a broader outlook on sport-related development strategies based on city context, this research study has made a contribution to the research field by creating an exhaustive data record of parcel-level property characteristic and assessment valuations in a quarter-mile radius around 15 major league arenas over a 25-year period. Furthermore, this study uses locational effects of a quarter-mile radius to determine the impact of sport-led urban development strategies on the changes in built area, land-use patterns, and assessed values around 15 major league arenas.

This research advances the sport-led development strategy discourse by analyzing the urban development outcomes over a 25-year period. First, as cities increasingly look to sports and entertainment districts as key element of their urban strategy, this research provides a better understanding of this trend and its impacts. Second, there is a gap in the existing literature that explains the rationale for public investment in major league sports facilities, and this research makes an important contribution by bringing the urban development perspective to bear on this discourse. Third, our understanding of what constitutes a “success” in sports-led development is largely based on informal observations. In response, this research presents an exhaustive 25-year data record of assessment valuations and property characteristics to measure and interpret these outcomes.

5.1 RECAP OF DATA COLLECTION PROCESS

Data collected in constructing the city case studies presented in Chapter 4, was used to generate an aggregate urban development record for all parcels located within a quarter-mile of each city’s arena district (the “micro-area”). These standardized records were then used to compare the success measures across each of the five-year intervals between 1990 and 2015.

In order to measure changes in land-use, assessment, market, and property tax values in each micro-area, identification numbers were collected for all parcels located in the quarter-mile radius. These parcel identifiers were then used to trace property information back to 1990. In many cases, parcel identifiers that were active in 2015, were not active in earlier years due to parcel splits and consolidations. Small parcels were consolidated into larger parcels as a result of land acquisition. Larger parcels were split into smaller parcels due to changes in ownership,

demolition of buildings, or renovations and conversions, thereby increasing the number of parcels listed for one property.

When a recent parcel identification number could not be matched with earlier assessment records, legal descriptions, surveyor maps and historical deeds were examined to trace the earlier parcel identification numbers. The property values of the parent parcels were summed together to generate, for prior years, values comparable to the active parcel value in 2015. After parent parcels were identified and summed together to compose a total number of active parcels for each five-year interval, all active parcels were then summed in order to determine the total assessment and property tax values within the micro area. Similarly, the land use composition for each parcel split was documented and included in the total percentage of land use categories and sub-categories.

5.2 RECAP OF CASE SUMMARY FINDINGS

Based on the 15-city case summaries, eight of 15 arena-district micro-areas⁸⁷ had successful urban development outcomes in the arena-district micro-areas based on the four success measures: the change in land-use diversity, the increase in built volume, the increase in assessed value, and the increase in property tax values. Seven of the 15 arena-district micro-areas⁸⁸ were unsuccessful in at least one of the success measures. These arena-district micro-areas were typically unsuccessful because the land-use composition was largely concentrated

⁸⁷ The eight cities that were reported as successful arena-district micro-areas include Boston, Cleveland, Tampa, Dallas, Nashville, Miami, Phoenix, and Denver.

⁸⁸ The seven cities reports to be unsuccessful in at least one of the four success measurements include Houston, Memphis, Oklahoma City, Buffalo, Portland, St. Paul, Glendale.

with parcels that were operating at less than their highest and best uses. Those micro-areas with more than 30% vacant parcels and

The success of these cities was attributed to increases in residential and commercial development (e.g. office, retail, restaurant, and hotel) along with decreases in industrial and vacant parcels. Examples of arena-district micro-areas that produced a compounding rate of change that was higher than the average in residential development included Cleveland, Dallas, Denver, Nashville, and Tampa. Increases in the parking category was deemed as a successful shift in land-use if the parcel transitioned from a vacant parcel or surface parking lot to a parking garage. Unless listed as an exempt property, parking garages will typically yield higher assessed values and property taxes compared to surfacing parking lots. Parking parcels are accounted as a successful measure if it has a built volume count, as these structures are more likely to be an income-generating structure. St. Paul, Dallas, Denver, and Houston had above average compounding rates of change in parking structures. Furthermore, arena-district micro-areas yield a successful measure in land-use composition when the industrial count decreases. The arena-district micro-areas in Tampa, Phoenix, Nashville, Oklahoma City, Memphis, Houston, Boston, and Denver produced higher compounding rates of change in the decrease in industrial use parcels, which suggests that the land-use composition shifted from a heavily industrial concentrated downtown area to one that is more integrated with land-uses that are more relevant for today. Professional sport facilities tend to be located in low-income areas with a high percentage of the resident population living below the poverty line (Huang & Humphreys, 2014) or in old heavily industrialized warehousing districts. The shift in land-use composition from high industrial uses in the early 1990s to more mixed-use, residential, and commercial properties indicates that the arena-district micro-area was successful in transitioning its land-use

composition to its highest and best use, and yields higher property values. Arena-districts that are located in low-income communities were typically impacted by long-term urban renewal efforts during the 1960s and 1970s, which still have profound effects on urban development today. Boston, Portland, and Memphis are examples of some cases in which urban renewal efforts had a profound impact on the development trajectory of the arena-district micro-area. Entire communities with predominantly minority populations were razed in order to implement large-scale infrastructure projects. In the process, the integrity of the communities were severed and large land tracts were left vacant. Throughout the 1990s and 2000s, a high percentage of parcels were allocated as vacant parcels or surface parking lots that yield low property values. With the onset of new development, beginning in 2005, the increase in mixed-use, residential, and commercial development caused the compounding rates of change in assessed values to be higher than the rest of the city because of the substantial change in development, yet begins to equalize by 2015 with the compounding rate of change in city-assessed values.

In sum, 50% of the case summaries in this 15-city sample study appeared to have successful urban development outcomes based on the three measures: land-use composition, built volume, and assessed value. Of these successful cases, development in the arena-district micro-area tended to lag. Based on the data record created at the parcel-level, uptake in development within the quarter-mile radius is visible approximately ten years after the opening of the major league arena. Since the study sample includes arenas built between 1992 and 2004, arenas built in the mid-1990s demonstrated more noticeable land-use changes beginning in 2005, while arenas built in the 2000s illustrated changes between 2010 and 2015. Within this development lag, residential development, particularly condominium construction, was the most

pronounced change that typically resulted in the increase in overall assessment values and property tax generation.

5.3 LESSONS LEARNED

All of the cities included in this studies have created an extensive planning process, influenced by state and federal policies, to guide the development process. City and county comprehensive plans are the guiding forces of urban development (Talen, 1996). Yet, there is wide variability in determining whether the implementation of a plan achieves definitive “successful” urban development outcomes. Plans contain a “set of instructions that detail both goals and the means for achieving those goals” (Nakamura & Smallwood, 1980, p. 31), and vary by city and project based on scope, range, and specificity. Plans both broadly describe city and regional vision and policy changes, while also providing detailed action plans for CBDs and surrounding neighborhoods.

The case summaries explored how city plans and policy decisions have influenced urban development outcomes in the micro-areas. In the case of major league facilities and their integration into the urban fabric, very few comprehensive plans in the 1980s and 1990s incorporated these venues as part of their overall development plans. Generally, city comprehensive plans address land use, physical development, and infrastructure improvement goals for the next five, ten, fifteen years. As the popularity of public-private partnerships increased in the 1990s, cities assumed greater responsibility in financially supporting the attraction and retention of professional sports teams; this was achieved either through the construction or renovation of new and existing sports facilities. As a result, major league venues have been included in city comprehensive plans and redevelopment strategies.

As public sector, private developers, and team owners partnerships have strengthened, request for proposals (RFPs) have come to include not only development and financing strategies for the facility itself, but also development strategies that will help reinvigorate future development of the surrounding infrastructure located in surrounding neighborhoods.

From this research study, it is clear that the three metrics (land-use composition, built volume, and assessed value) are interrelated and build upon one another to provide one key measurement of arena-led development outcomes. Across all 15 cases, there were significant development lags since the opening of the major league venues, which demonstrates that the arena may not have had a direct impact on the development outcomes. As there is a ten to 15 year development lag since the opening of the arena, it can be concluded that professional sports facilities may not have the direct impact on urban redevelopment as city officials and proponents of arena-led developments have promised. In summary, there might be an inflation of the sports facility's capability and presence in downtown urban redevelopment strategies. Finally, in cities where there was a presence of a single large landholder or private investor, (e.g. Perot's investment in Dallas' Victory Park and Vinik's investment in Water Street Tampa) development surrounding professional sport facilities was intentional and therefore illustrates greater changes in land-use composition, particularly in residential development. In this case, the success of arena-district micro-areas and the use of arena-led development strategies may be contingent on intentional private investment rather relying solely on the use of the public sector and the development of comprehensive plans. This analysis may provide a different perspective on the future of planning in which there a direct conflict in how our future cities are further developed. Is the success of downtown redevelopment surrounding professional sport facilities contingent on private investment and if so, how will private investors impact the future of city planning?

I believe the next steps in this research agenda is too compare all 25 cities and their arenas built between 1990 and 2004 to provide a larger sampling size. For the purpose of the dissertation, I focused on 9 case summaries while collecting data for 15 cities and their arena-district micro-areas. The remaining 10 arena-district micro-area case summaries will provide further insight on arena-led development strategies and their relative success in downtown revitalization.

Furthermore, by including more case summaries, I envision that the next step in this research would be to run a cross-sectional time-series analysis. This study would add to the research by exploring the spatial effects of venues on development and on whether the presence of a professional sport facility enables these local areas to develop or redevelop faster in comparison with the city overall, and fulfill city redevelopment agendas. The regression analysis would be used to determine

- (a) whether the presence of the arena had an impact on the growth rates for the micro area compared to the city as a whole.
- (b) whether the micro areas had a different growth rate in market, assessment, and property tax values compared to the city.

The cross-sectional regression model would determine if it is possible to produce a quantitative estimate of the impact of opening of an arena on assessment, market, and property tax values and provide another element in analyzing whether arena-led development strategies are good development tools for downtown revitalization. Another extension to the present study would be to collect data on a control group of cities that did not have a new arena. One difficulty in such a study would be to decide what the reference micro-area would be, since here it is defined by the presence of an arena. One approach would be to identify characteristics of the micro-areas in this study before the arena was built, and then match them in the control group of cities to generate

comparable micro-areas. The benefit of such a study is that it would facilitate a difference-in-difference analysis, so not just to measure the change in value of cities that built an arena, but also the difference between this change and the change in value of cities that did not build an arena.

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APPENDIX A. ADDITIONAL CASE SUMMARIES

A.1 MIAMI: AMERICAN AIRLINES ARENA

Table 59. American Airlines Arena Rapid Notes

Arena Name	American Airlines Arena
Owner	City of Miami
Year Opened	1995
Total Cost of Venue (in 2018 \$)	\$ 403,560,000
Public Investment in Venue	\$ 64,569,600
Public Share of Total Venue Cost	16%

Source: Judith Grant Long, 2005.

A.1.1 Land-Use Composition

Figure 42. Percentage of land-use composition in the Miami arena-district micro-area, 1990-2015.

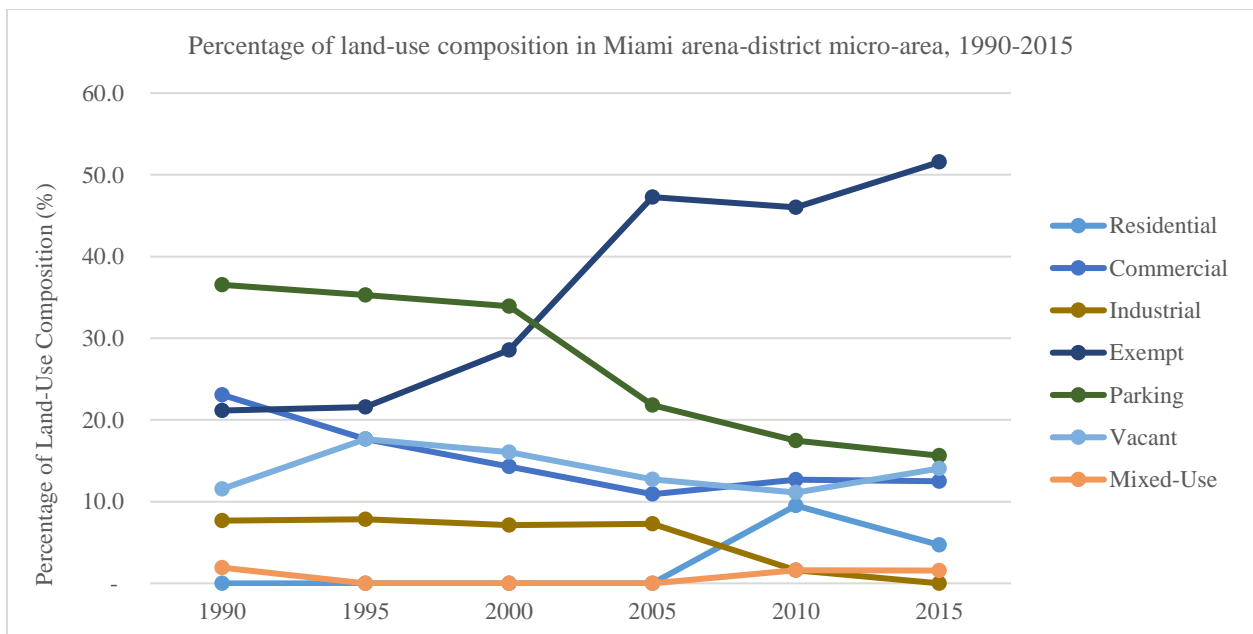


Table 60. City of Miami arena-district micro-area land-use count, 1990-20

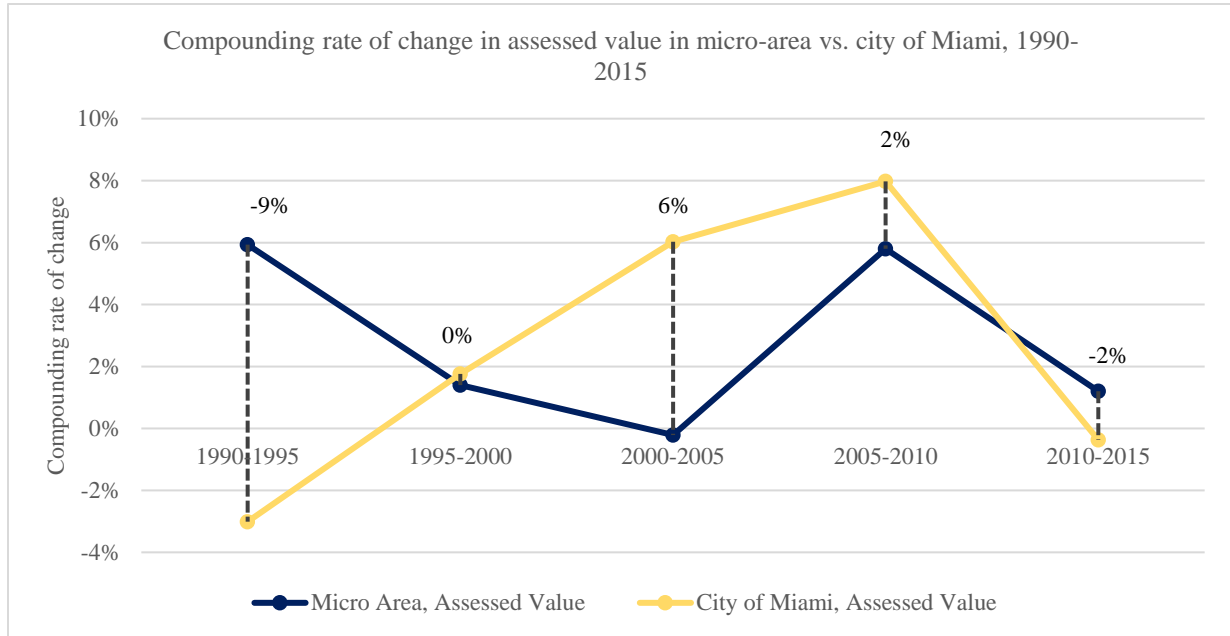
	1990		1995		2000		2005		2010		2015		1990-2015
	LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL	-	-	-	-	-	-	-	-	6	9.52	3	4.69	-
<i>RENTER- OCCUPIED</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>OWNER- OCCUPIED</i>	-	-	-	-	-	-	-	-	1,225	100.00	1,225	100.00	-
<i>TOTAL CONDOS</i>	-	-	-	-	-	-	-	-	1,225	-	1,225	-	-
COMMERCIAL	12	23.08	9	17.65	8	14.29	6	10.91	8	12.70	8	12.50	(1.61)
<i>OFFICE</i>	2	16.67	1	11.11	1	12.50	2	33.33	35	49.30	35	49.30	12.13
<i>RETAIL</i>	3	25.00	4	44.44	3	37.50	2	33.33	33	46.48	33	46.48	10.07
<i>RESTAURANT</i>	1	8.33	-	0.00	-	-	-	-	1	1.41	1	1.41	-
<i>HOTEL</i>	2	16.67	1	11.11	1	12.50	1	16.67	1	1.41	1	1.41	(2.73)
INDUSTRIAL	4	7.69	4	7.84	4	7.14	4	7.27	1	1.59	-	0.00	(100.00)
EXEMPT	11	21.15	11	21.57	16	28.57	26	47.27	29	46.03	33	51.56	4.49
PARKING	19	36.54	18	35.29	19	33.93	12	21.82	11	17.46	10	15.63	-
VACANT	6	11.54	9	17.65	9	16.07	7	12.73	7	11.11	9	14.06	1.64
MIXED-USE	1	1.92	-	-	-	-	-	-	1	1.59	1	1.56	-
TOTAL	52	100.00	51	100.00	56	100.00	55	100.00	63	100.00	64	100.00	0.83

Table 61. City of Miami arena-district micro-area built volume count, 1990-2015.

	1990		1995		2000		2005		2010		2015		1990-2015
	BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% Change
RESIDENTIAL	-	-	-	-	-	-	-	-	1,550,760	44.21	1,587,774	29.20	-
<i>RENTER- OCCUPIED</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>OWNER- OCCUPIED</i>	-	-	-	-	-	-	-	-	1,550,760	100.00	1,587,774	100.00	-
<i>TOTAL CONDOS</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
COMMERCIAL	66,125	18.49	625,816	54.95	598,829	53.03	569,673	31.37	617,730	17.61	925,432	17.02	11.13
<i>OFFICE</i>	-	-	-	-	82,948	13.85	91,781	16.11	71,885	11.64	73,409	7.93	-
<i>RETAIL</i>	-	-	-	-	349,805	58.41	343,153	60.24	356,966	57.79	399,265	43.14	-
<i>RESTAURANT</i>	-	-	-	-	-	-	-	-	54,140	8.76	54,140	5.85	-
<i>HOTEL</i>	-	-	-	-	127,739	21.33	127,739	22.42	127,739	20.68	127,739	13.80	-
INDUSTRIAL	-	-	52,941	4.65	52,941	4.69	55,538	3.06	4,819	0.14	-	-	-
EXEMPT	10,983	3.07	190,539	16.73	207,938	18.41	907,741	49.98	1,026,246	29.26	3,016,000	55.46	25.18
PARKING	280,562	78.44	269,580	23.67	269,580	23.87	269,579	14.84	269,579	7.69	-	-	-
VACANT	-	-	-	-	-	-	13,500	0.74	-	-	-	-	-
MIXED-USE	-	-	-	-	-	-	-	-	38,700	1.10	38,700	0.71	-
TOTAL	357,670	100.00	1,138,876	100.00	1,129,288	100.00	1,816,031	100.00	3,507,834	100.00	5,438,459	102.38	11.50

A.1.2 Assessed Value

Figure 43. Compounding rate of change in assessed values in arena-district micro-area vs. city of Miami, 1990-2015



A.1.3 Property Tax

Figure 44. Compounding rate of change in property taxes in arena-district micro-area vs. city of Miami, 1990-2015.

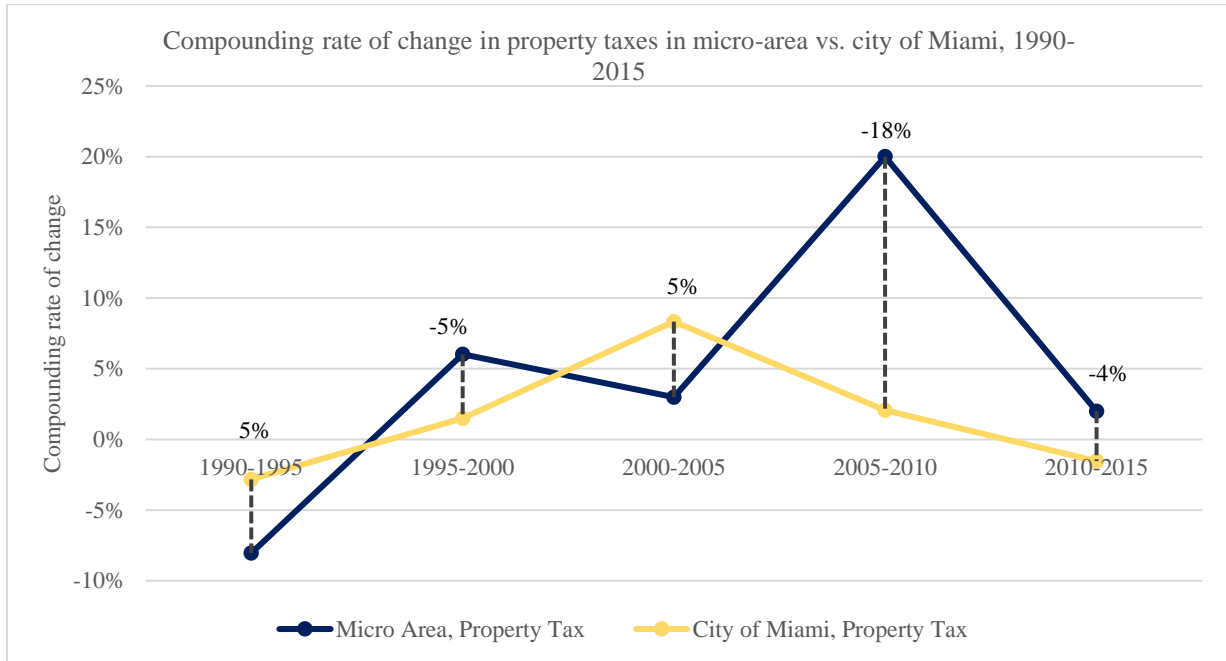


Table 62. City of Miami arena-district micro-area assessment, market, and property tax values, 1990-2015.

	1990	1995	2000	2005	2010	2015	1990-2015
AMERICAN AIRLINES ARENA-DISTRICT MICRO-AREA							
LAND AREA (sf)	4,992,753	5,093,481	5,016,379	5,009,857	6,047,884	7,206,201	1.48
BUILT AREA/VOLUME (sf)	357,670	1,138,876	1,129,288	1,816,031	3,507,834	5,541,844	11.59
TOTAL ASSESSED VALUE	405,374,895	629,009,994	759,868,047	870,525,349	1,324,753,556	1,547,566,286	5.50
TOTAL ASSESSED VALUE (2015 \$)	777,239,854	1,036,742,805	1,111,359,096	1,099,554,610	1,457,530,610	1,547,566,286	2.79
ASSESSED LAND VALUE	240,684,770	203,706,360	211,484,130	294,657,331	268,633,815	561,940,113	3.45
ASSESSED BUILDING + IMPROVEMENTS	22,720,300	36,150,089	149,836,764	185,852,849	187,606,820	202,777,309	9.15
TOTAL MARKET VALUE	405,374,895	629,009,994	151,414,985	870,525,349	1,325,449,560	1,850,618,345	6.26
TOTAL MARKET VALUE (2015 \$)	777,239,854	1,036,742,805	221,454,793	1,099,554,610	1,458,296,373	1,850,618,345	3.53
TOTAL MARKET LAND VALUE	240,684,770	203,706,360	211,484,130	294,657,331	268,633,815	561,940,113	3.45
TOTAL MARKET BUILDING VALUE + IMPROVEMENTS	22,720,300	36,150,089	149,836,764	185,852,849	187,606,820	202,777,309	9.15
TOTAL TAX	3,656,978	2,796,860	4,222,055	5,667,446	16,192,455	19,664,168	6.96
TOTAL TAX (2015 \$)	7,011,655	4,609,823	6,175,045	7,158,512	17,815,388	19,664,168	4.21
CITY OF MIAMI							
TOTAL ASSESSED VALUE	11,515,111,000	11,497,352,000	14,135,578,666	21,929,702,057	36,949,521,366	39,903,058,628	5.10
TOTAL ASSESSED VALUE (2015 \$)	22,078,336,145	18,950,091,541	20,674,252,566	27,699,256,558	40,652,888,363	39,903,058,628	2.40
TOTAL MARKET VALUE	11,515,111,000	15,339,834,878	18,857,553,034	32,133,104,422	52,146,883,603	54,280,943,197	6.40
TOTAL MARKET VALUE (2015 \$)	22,078,336,145	25,283,323,948	27,580,463,695	40,587,104,242	57,373,447,862	54,280,943,197	3.66
TOTAL TAX	98,366,000	99,178,000	120,426,167	208,091,814	264,548,387	269,303,313	4.11
TOTAL TAX (2015 \$)	188,600,667	163,466,525	176,131,523	262,839,346	291,063,474	269,303,313	1.44

A.2 OKLAHOMA CITY: CHESAPEAKE ARENA

Table 63. Chesapeake Energy Arena Rapid Notes

Arena Name	Chesapeake Energy Arena
Owner	Oklahoma City
Year Opened	1995
Total Cost of Venue (in 2018 \$)	\$ 271,320,000
Public Investment in Venue	\$ 271,320,000
Public Share of Total Venue Cost	100%

Source: Judith Grant Long, 2005.

A.2.1 Land-Use Composition

Figure 45. Percentage of land-use composition in the Oklahoma City arena-district micro-area, 1990-2015.

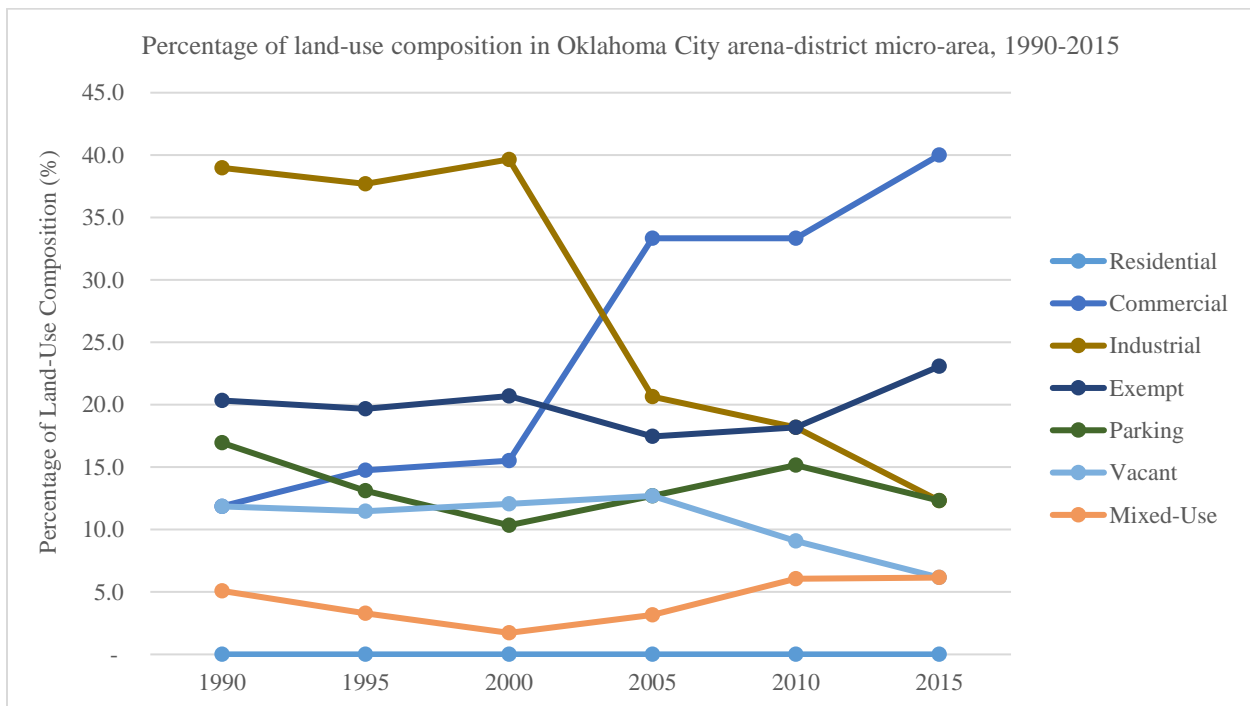


Table 64. Oklahoma City arena-district micro-area land-use count, 1990-2015.

	1990		1995		2000		2005		2010		2015		1990-2015
	LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>RENTER-OCCUPIED</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>OWNER-OCCUPIED</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>TOTAL CONDOS</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
COMMERCIAL	7	11.86	9	14.75	9	15.52	21	33.33	22	33.33	26	40.00	5.39
<i>OFFICE</i>	4	57.14	5	55.56	4	44.44	4	19.05	5	22.73	6	23.08	1.64
<i>RETAIL</i>	1	14.29	1	11.11	1	11.11	4	19.05	4	18.18	4	15.38	5.70
<i>RESTAURANT</i>	-	-	-	-	2	22.22	7	33.33	6	27.27	8	30.77	-
<i>HOTEL</i>	2	28.57	2	22.22	2	22.22	3	14.29	3	13.64	2	7.69	-
INDUSTRIAL	23	38.98	23	37.70	23	39.66	13	20.63	12	18.18	8	12.31	(4.14)
EXEMPT	12	20.34	12	19.67	12	20.69	11	17.46	12	18.18	15	23.08	0.90
PARKING	10	16.95	8	13.11	6	10.34	8	12.70	10	15.15	8	12.31	(0.89)
VACANT	7	11.86	7	11.48	7	12.07	8	12.70	6	9.09	4	6.15	(2.21)
MIXED-USE	3	5.08	2	3.28	1	1.72	2	3.17	4	6.06	4	6.15	1.16
TOTAL	59	100.00	61	100.00	58	100.00	63	100.00	66	100.00	65	100.00	0.39

A.2.2. Built Volume

Table 65. Oklahoma City arena-district micro-area built volume, 1990-2015.

	1990		1995		2000		2005		2010		2015		1995-2015
	BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL	-	-	-	-	-	-	-	-	-	-	-	-	-
RENTER- OCCUPIED	-	-	-	-	-	-	-	-	-	-	-	-	-
OWNER- OCCUPIED	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL CONDOS	-	-	-	-	-	-	-	-	-	-	-	-	-
COMMERCIAL	754,296	15.30	949,998	19.06	1,221,176	55.01	1,583,997	65.63	1,816,123	72.52	4,423,833	78.46	7.33
OFFICE	380,920	50.50	576,622	60.70	567,822	46.50	593,822	37.49	601,582	33.12	648,753	14.66	2.15
RETAIL	-	-	-	-	84,035	6.88	130,812	8.26	374,341	20.61	56,487	1.28	-
RESTAURANT	-	-	-	-	15,486	1.27	101,637	6.42	84,674	4.66	159,780	3.61	-
HOTEL	373,376	49.50	373,376	39.30	553,833	45.35	657,695	41.52	657,695	36.21	547,155	12.37	1.54
INDUSTRIAL	625,531	12.69	611,681	12.28	979,179	44.11	555,097	23.00	339,903	13.57	247,473	4.39	(3.64)
EXEMPT	2,790,096	56.60	2,790,096	55.99	-	-	-	-	59,666	2.38	68,892	1.22	(13.76)
PARKING	279,967	5.68	-	-	-	-	207,158	8.58	170,658	6.81	255,500	4.53	(0.37)
VACANT	480,021	9.74	564,286	11.32	-	-	2,550	0.11	-	-	-	-	(100.00)
MIXED-USE	90,480	1.84	67,080	1.35	19,422	0.87	64,680	2.68	117,865	4.71	642,481	11.40	8.16
TOTAL	4,929,911	100.00	4,983,141	100.00	2,219,777	100.00	2,413,482	100.00	2,504,215	100.00	5,638,179	100.00	0.54

A.2.3. Assessed Value

Figure 46. Compounding rate of change in assessed values in arena-district micro-area vs. Oklahoma City, 1990-2015.

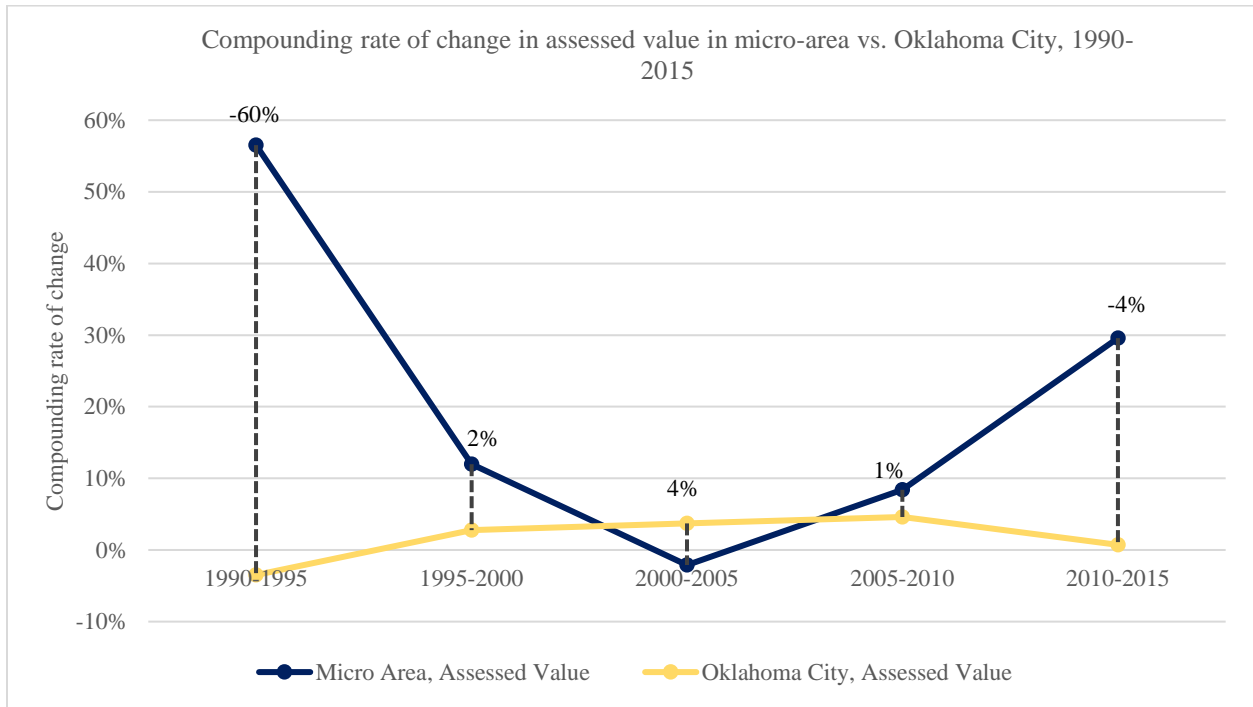
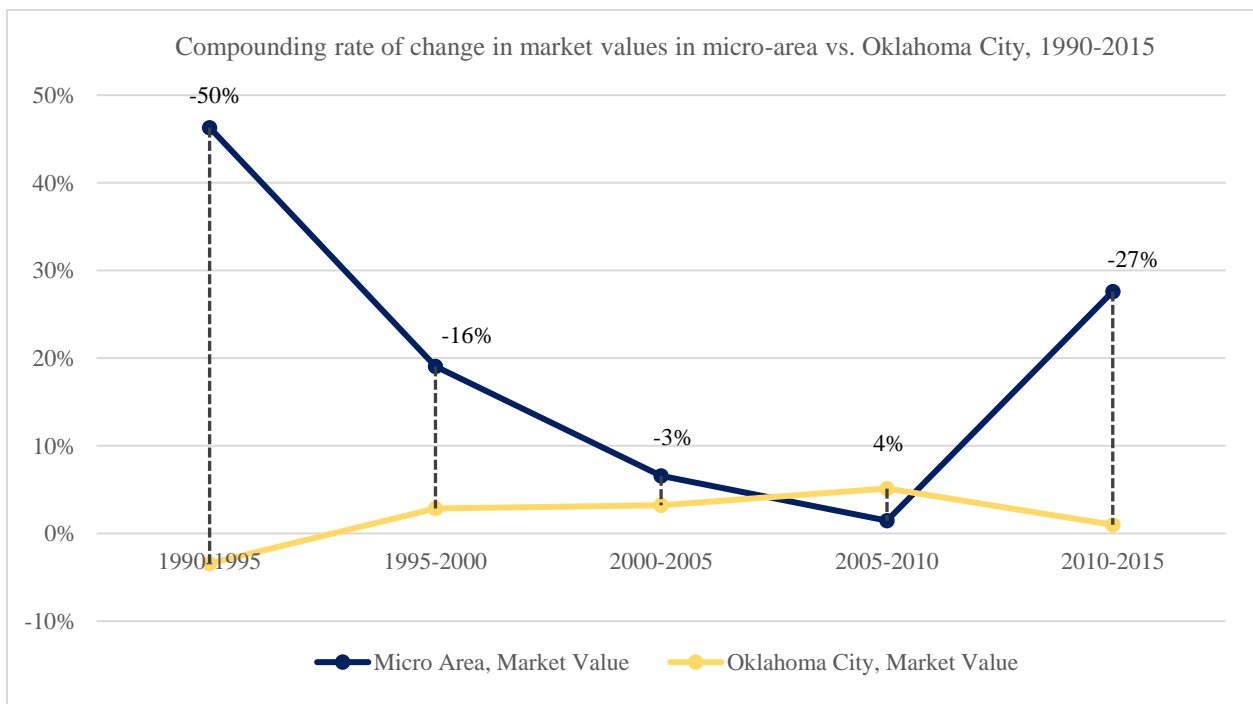


Figure 47. Compounding rate of change in market values in arena-district micro-area vs. Oklahoma City, 1990-2015



A.2.4 Property Tax

Figure 48. Compounding rate of change in assessed values in arena-district micro-area vs. Oklahoma City, 1990-2015.

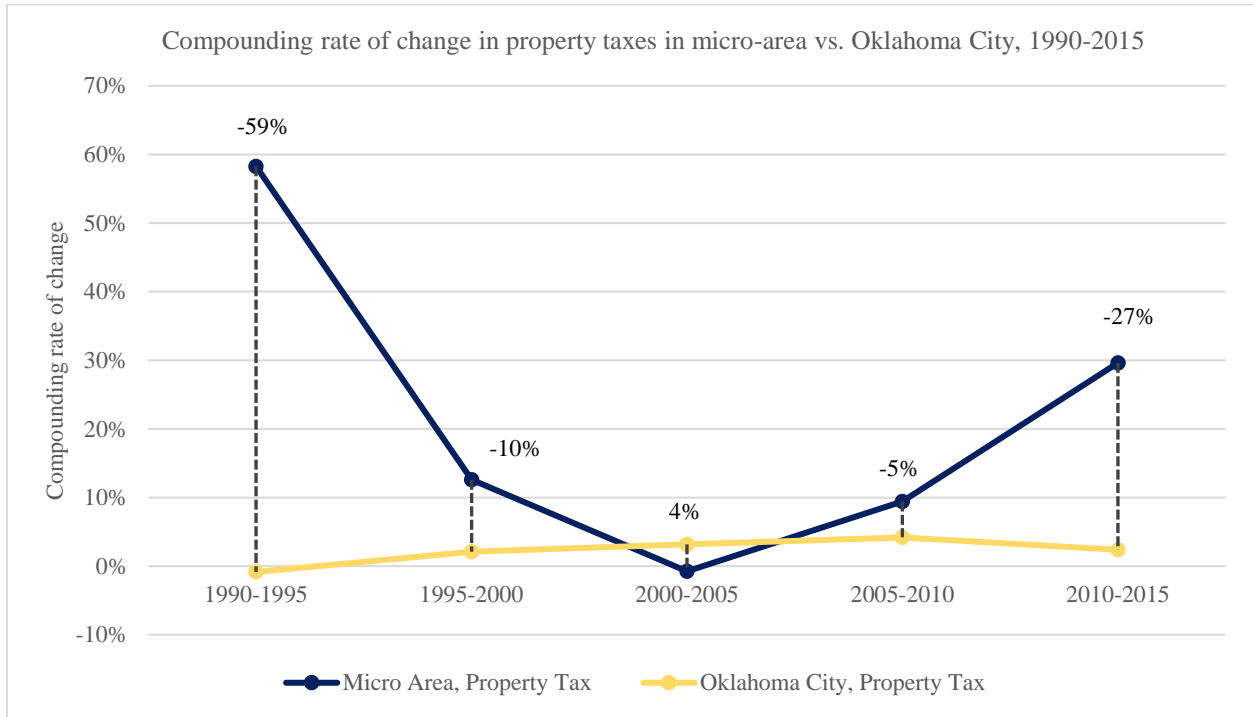


Table 66. Oklahoma City’s arena-district micro-area assessment, market, and property, 1990-2015.

	1990	1995	2000	2005	2010	2015	1990-2015
CHESAPEAKE ENERGY ARENA ARENA-DISTRICT MICRO-AREA							
LAND AREA (sf)	5,403,075	6,104,641	5,203,612	6,761,557	6,241,612	6,576,907	0.79
BUILT AREA/VOLUME (sf)	4,972,791	4,983,141	2,330,503	2,413,482	2,504,215	5,638,179	0.50
TOTAL ASSESSED VALUE	499,611	5,449,428	10,855,781	10,968,611	18,787,816	75,280,561	22.21
TOTAL ASSESSED VALUE (2015 \$)	926,334	8,701,486	15,330,898	13,781,940	20,612,637	75,280,561	19.23
ASSESSED LAND VALUE	-	-	-	-	-	-	-
ASSESSED BUILDING + IMPROVEMENTS	-	-	-	-	-	-	-
TOTAL MARKET VALUE	4,501,005	35,031,205	94,788,443	146,387,810	180,260,648	669,260,401	22.15
TOTAL MARKET VALUE (2015 \$)	8,345,366	55,936,794	133,863,418	183,934,684	197,768,985	669,260,401	19.17
TOTAL MARKET LAND VALUE	876,686	7,621,500	14,047,140	21,449,916	26,340,456	59,283,891	18.36
TOTAL MARKET BUILDING VALUE + IMPROVEMENTS	3,659,268	41,910,155	80,741,303	112,517,894	153,920,192	669,260,401	23.17
TOTAL TAX	46,788	539,548	1,103,599	1,194,482	2,148,011	8,619,624	23.20
TOTAL TAX (2015 \$)	86,750	861,534	1,558,539	1,500,853	2,356,643	8,619,624	20.20
OKLAHOMA CITY							
TOTAL ASSESSED VALUE	1,852,037,000	1,800,145,000	2,332,299,000	3,148,044,000	4,516,446,000	5,134,971,000	4.16
TOTAL ASSESSED VALUE (2015 \$)	3,433,883,351	2,874,418,397	3,293,750,857	3,955,482,904	4,955,118,876	5,134,971,000	1.62
TOTAL MARKET VALUE	15,515,601,000	15,133,753,000	19,708,011,000	25,936,521,000	38,143,742,000	43,956,071,000	4.25
TOTAL MARKET VALUE (2015 \$)	28,767,656,342	24,165,130,053	27,832,314,002	32,588,955,366	41,848,563,222	43,956,071,000	1.71
TOTAL TAX	24,923,000	27,717,000	34,805,000	45,780,000	64,343,000	79,371,000	4.74
TOTAL TAX (2015 \$)	46,210,024	44,257,687	49,152,788	57,522,070	70,592,500	79,371,000	2.19

A.3 BUFFALO: KEY BANK ARENA

Table 67. Key Bank Arena Rapid Notes.

Arena Name	Key Bank Arena
Owner	City of Buffalo
Year Opened	1996
Key Players/Organization	
TIF District	
Total Cost of Venue (in 2018 \$)	\$ 217,740,000
Public Investment in Venue	\$ 95,805,600
Public Share of Total Venue Cost	44%

Source: Judith Grant Long, 2005.

A.3.1 Land-Use Composition

Figure 49. Percentage of land-use composition in the Buffalo arena-district micro-area, 1990-2015.

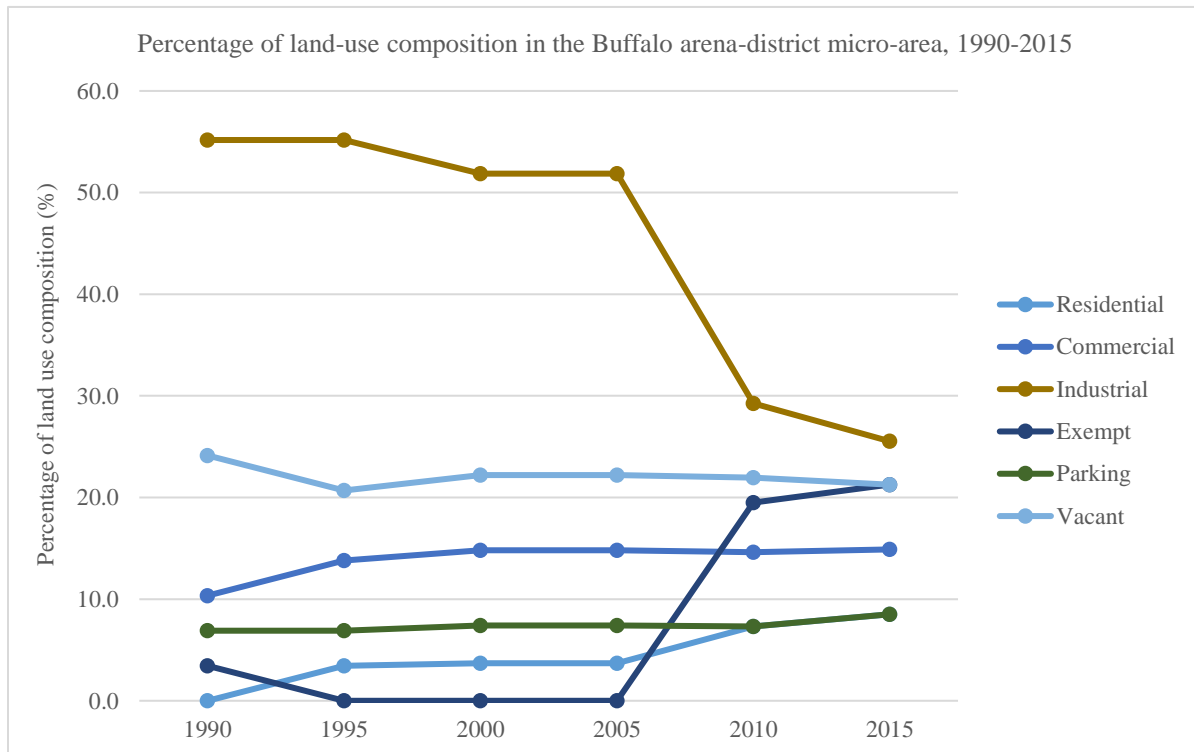


Table 68. Buffalo arena-district micro-area land-use count, 1990-2015.

	1990		1995		2000		2005		2010		2015		1990-2015
	LAND USE COUNT	%	LAND USE COUNT	%	LAND USE COUNT	%	LAND USE COUNT	%	LAND USE COUNT	%	LAND USE COUNT	%	LAND USE % CHANGE
RESIDENTIAL	-	-	1	3.45	1	3.70	1	3.70	3	7.32	4	8.51	-
<i>RENTER-OCCUPIED</i>	-	-	<i>1.00</i>	<i>100.00</i>	<i>1.00</i>	<i>100.00</i>	<i>1.00</i>	<i>100.00</i>	<i>1.00</i>	<i>33.33</i>	<i>1.00</i>	<i>25.00</i>	-
<i>OWNER-OCCUPIED</i>	-	-	-	-	-	-	-	-	<i>2.00</i>	<i>66.67</i>	<i>3.00</i>	<i>75.00</i>	-
<i>TOTAL CONDOS</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
COMMERCIAL	3	10.34	4	13.79	4	14.81	4	14.81	6	14.63	7	14.89	3.45
<i>OFFICE</i>	1	<i>33.33</i>	<i>1</i>	<i>25.00</i>	<i>1</i>	<i>25.00</i>	<i>1</i>	<i>25.00</i>	3	<i>50.00</i>	4	<i>57.14</i>	5.70
<i>RETAIL</i>	-	-	-	<i>0.00</i>	-	-	-	-	-	-	-	-	-
<i>RESTAURANT</i>	1	<i>33.33</i>	<i>1</i>	<i>25.00</i>	<i>1</i>	<i>25.00</i>	<i>1</i>	<i>25.00</i>	<i>1</i>	<i>16.67</i>	<i>1</i>	<i>14.29</i>	-
<i>HOTEL</i>	-	-	-	-	-	-	-	-	-	-	<i>1</i>	<i>14.29</i>	-
INDUSTRIAL	16	55.17	16	55.17	14	51.85	14	51.85	12	29.27	12	25.53	(1.14)
EXEMPT	1	3.45	-	-	-	-	-	-	8	19.51	10	21.28	9.65
PARKING	2	6.90	2	6.90	2	7.41	2	7.41	3	7.32	4	8.51	2.81
VACANT	7	24.14	6	20.69	6	22.22	6	22.22	9	21.95	10	21.28	1.44
MIXED-USE													
TOTAL	29	100.00	29	100.00	27	100.00	27	100.00	41	100.00	47	100.00	1.95

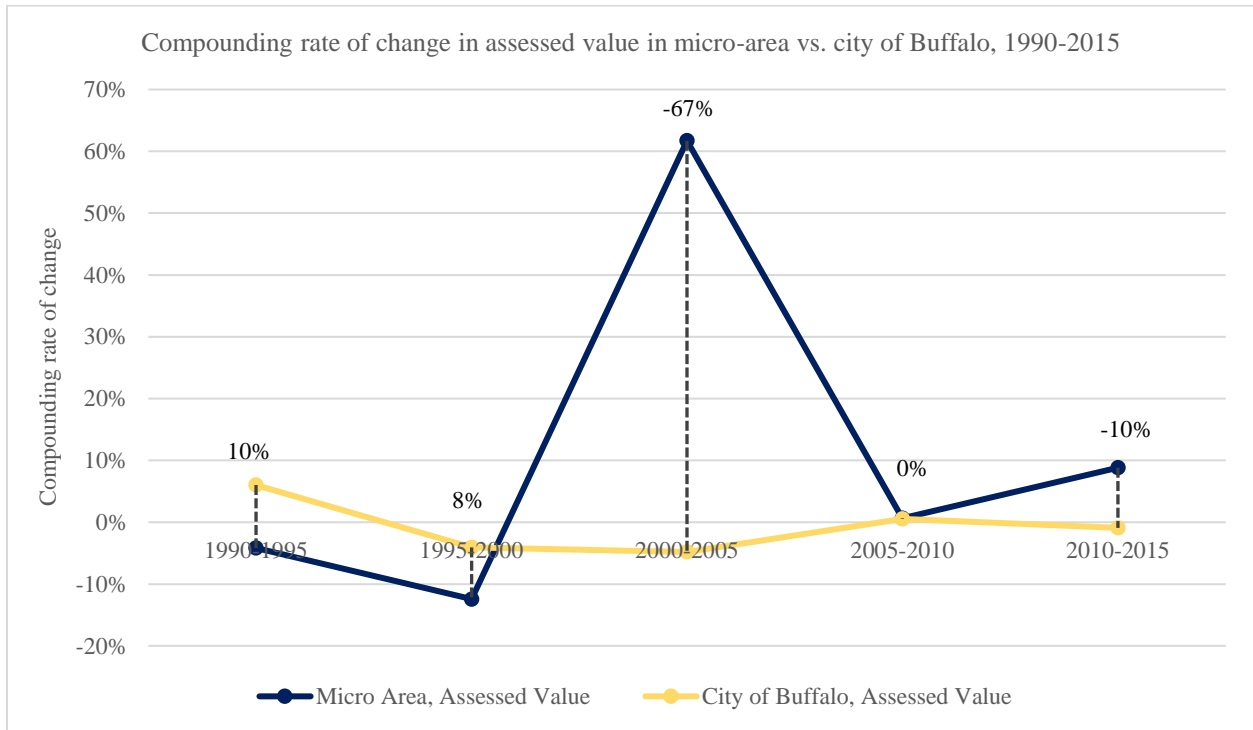
A.3.2 Built Volume

Table 69. Buffalo arena-district micro-area built volume, 1990-2015.

	1990		1995		2000		2005		2010		2015		1990-2015
	BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL	-	-	2,550	0.08	2,550	0.08	2,550	0.08	85,579	0.57	246,879	1.61	-
<i>RENTER- OCCUPIED</i>	-	-	2,550	100.00	2,550	100.00	2,550	100.00	2,550	2.98	2,550	1.03	-
<i>OWNER- OCCUPIED</i>	-	-	-	-	-	-	-	-	83,029	97.02	244,329	98.97	-
<i>TOTAL CONDOS</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
COMMERCIAL	315,546	9.96	315,546	9.96	315,546	10.08	315,546	10.08	350,106	2.34	735,107	4.80	3.44
<i>OFFICE</i>	306,746	97.21	306,746	97.21	306,746	97.21	306,746	97.21	341,306	97.49	570,319	77.58	2.51
<i>RETAIL</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>RESTAURANT</i>	8,200	2.60	8,200	2.60	8,200	2.60	8,200	2.60	8,200	2.34	8,200	1.12	-
<i>HOTEL</i>	-	-	-	-	-	-	-	-	-	-	155,988	21.22	-
INDUSTRIAL	2,757,809	87.03	2,757,809	87.03	2,718,269	86.87	2,718,269	86.87	2,657,500	17.74	2,657,500	17.37	(0.15)
EXEMPT	-	-	-	-	-	-	-	-	11,670,297	77.91	11,571,228	75.61	-
PARKING	92,778	2.93	92,778	2.93	92,778	2.96	92,778	2.96	-	-	-	-	(100.00)
VACANT	2,550	0.08	-	-	-	-	-	-	215,329.00	1.44	92,778.00	0.61	15.46
MIXED-USE													-
TOTAL	3,168,683	100.00	3,168,683	100.00	3,129,143	100.00	3,129,143	100.00	14,978,811	100.00	15,303,492	100.00	6.50

A.3.3 Assessed Value

Figure 50. Compounding rate of change in assessed values in arena-district micro-area vs. city of Buffalo, 1990-2015.



A.3.4 Property Taxes

Figure 51. Compounding rate of change in assessed values in arena-district micro-area vs. city of Buffalo, 1990-2015.

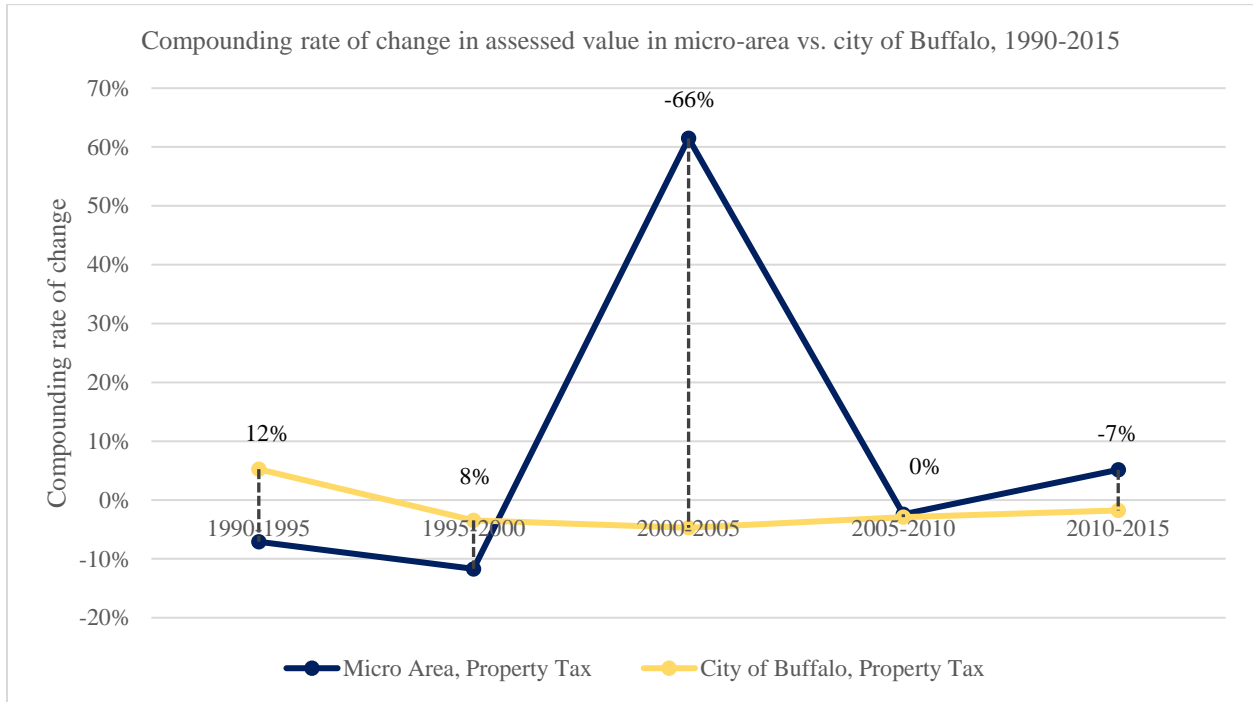


Table 70. City of Buffalo’s arena-district micro-area assessment, market, and property tax values, 1990-2015.

	1990	1995	2000	2005	2010	2015	1990-2015
KEYBANK ARENA (CANALSIDE) ARENA-DISTRICT MICRO-AREA							
LAND AREA (sf)	5,173,646	5,173,646	5,173,646	5,173,646	5,173,646	5,173,646	-
BUILT AREA/VOLUME (sf)	15,303,492	15,303,492	15,303,492	15,303,492	15,303,492	15,303,492	-
TOTAL ASSESSED VALUE	25,803,080	24,270,290	14,072,540	180,742,200	211,313,440	349,248,640	10.98
TOTAL ASSESSED VALUE (2015 \$)	48,105,391	38,897,419	20,030,938	221,472,285	228,743,437	349,248,640	8.25
ASSESSED LAND VALUE	2,575,270	5,087,410	4,930,510	7,373,570	24,502,170	30,055,770	10.33
ASSESSED BUILDING + IMPROVEMENTS	-	-	-	-	-	-	-
TOTAL MARKET VALUE	35,837,611	33,708,736	19,545,194	181,932,100	211,313,440	402,639,795	10.16
TOTAL MARKET VALUE (2015 \$)	66,813,043	54,024,193	27,820,748	222,930,328	228,743,437	402,639,795	7.45
TOTAL MARKET LAND VALUE							
TOTAL MARKET BUILDING VALUE + IMPROVEMENTS							
TOTAL TAX	10,896,641	8,766,429	5,301,251	67,610,734	67,751,421	94,263,064	9.01
TOTAL TAX (2015 \$)	20,314,907	14,049,748	7,545,833	82,846,749	73,339,835	94,263,064	6.33
CITY OF BUFFALO							
TOTAL ASSESSED VALUE	4,188,128,166	6,521,698,223	5,966,121,565	5,415,155,000	6,302,729,000	6,516,347,000	1.78
TOTAL ASSESSED VALUE (2015 \$)	7,808,042,452	10,452,171,324	8,492,213,473	6,635,455,095	6,822,603,883	6,516,347,000	(0.72)
TOTAL MARKET VALUE	5,141,330,918	7,459,336,867	5,243,098,308	5,604,591,000	6,722,274,000	6,905,105,000	1.19
TOTAL MARKET VALUE (2015 \$)	9,585,124,542	11,954,902,578	7,463,057,801	6,867,580,320	7,276,754,672	6,905,105,000	(1.30)
TOTAL TAX	99,102,000	148,781,000	140,617,000	128,382,000	125,431,000	124,242,000	0.91
TOTAL TAX (2015 \$)	184,758,582	238,447,786	200,155,087	157,312,763	135,777,062	124,242,000	(1.57)

A.4 ST. PAUL: XCEL ENERGY ARENA

Table 71. Xcel Energy Arena Rapid Notes.

Arena Name	Xcel Energy Arena
Owner	City of St. Paul
Year Opened	1996
Total Cost of Venue (in 2018 \$)	\$ 200,640,000
Public Investment in Venue	\$ 146,467,200
Public Share of Total Venue Cost	73%

Source: Judith Grant Long (2005)

A.4.1 Land-Use Composition

Figure 52. Percentage of land-use composition in the St. Paul arena-district micro-area, 1990-2015.

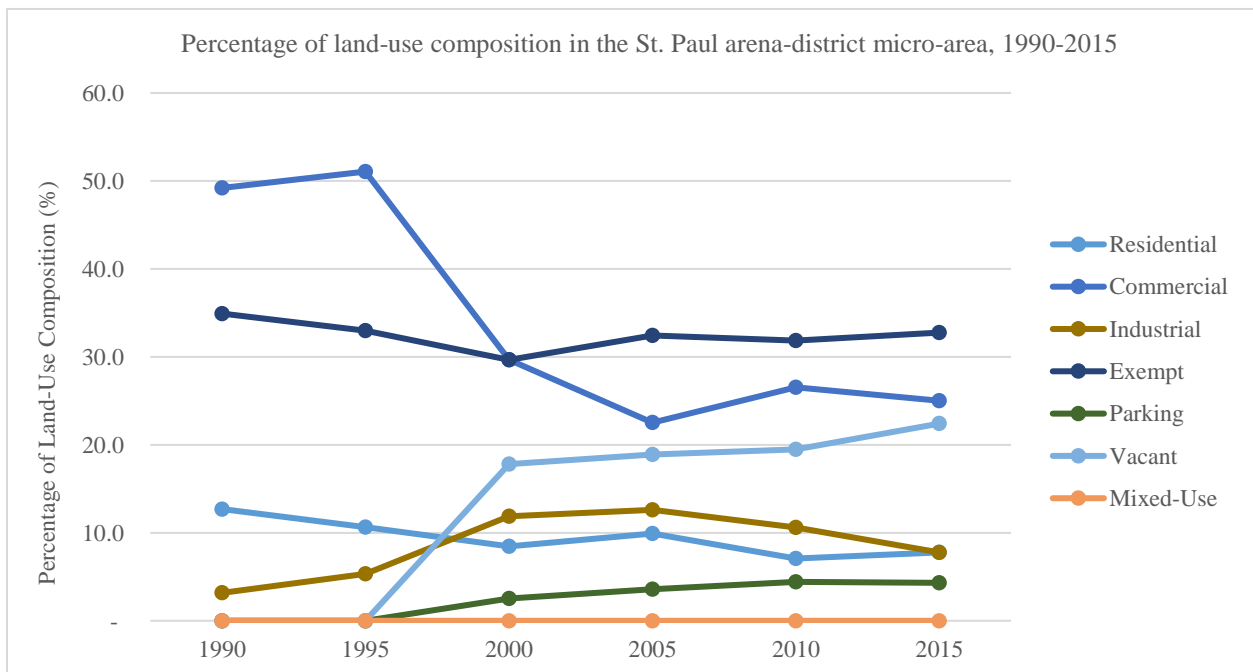


Table 72. City of St. Paul arena-district micro-area land-use count, 1990-2015.

	1990		1995		2000		2005		2010		2015		1990-2015
	LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE	LAND USE	
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL	16	12.70	10	10.64	10	8.47	11	9.91	8	7.08	9	7.76	(2.28)
<i>RENTER-OCCUPIED</i>	-	-	-	-	2	20.00	2	18.18	1	12.50	2	22.22	-
<i>OWNER-OCCUPIED</i>	-	-	-	-	7	70.00	8	72.73	7	87.50	6	66.67	-
<i>TOTAL CONDOS</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
COMMERCIAL	62	49.21	48	51.06	35	29.66	25	22.52	30	26.55	29	25.00	(2.99)
<i>OFFICE</i>	-	-	-	-	9	25.71	8	32.00	7	23.33	7	24.14	-
<i>RETAIL</i>	-	-	-	-	8	22.86	8	32.00	12	40.00	9	31.03	-
<i>RESTAURANT</i>	-	-	-	-	3	8.57	7	28.00	7	23.33	8	27.59	-
<i>HOTEL</i>	-	-	-	-	2	5.71	2	8.00	2	6.67	2	6.90	-
INDUSTRIAL	4	3.17	5	5.32	14	11.86	14	12.61	12	10.62	9	7.76	3.30
EXEMPT	44	34.92	31	32.98	35	29.66	36	32.43	36	31.86	38	32.76	(0.58)
PARKING	-	-	-	-	3	2.54	4	3.60	5	4.42	5	4.31	-
VACANT	-	-	-	-	21	17.80	21	18.92	22	19.47	26	22.41	-
MIXED-USE	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	126	100.00	94	100.00	118	100.00	111	100.00	113	100.00	116	100.00	(0.33)

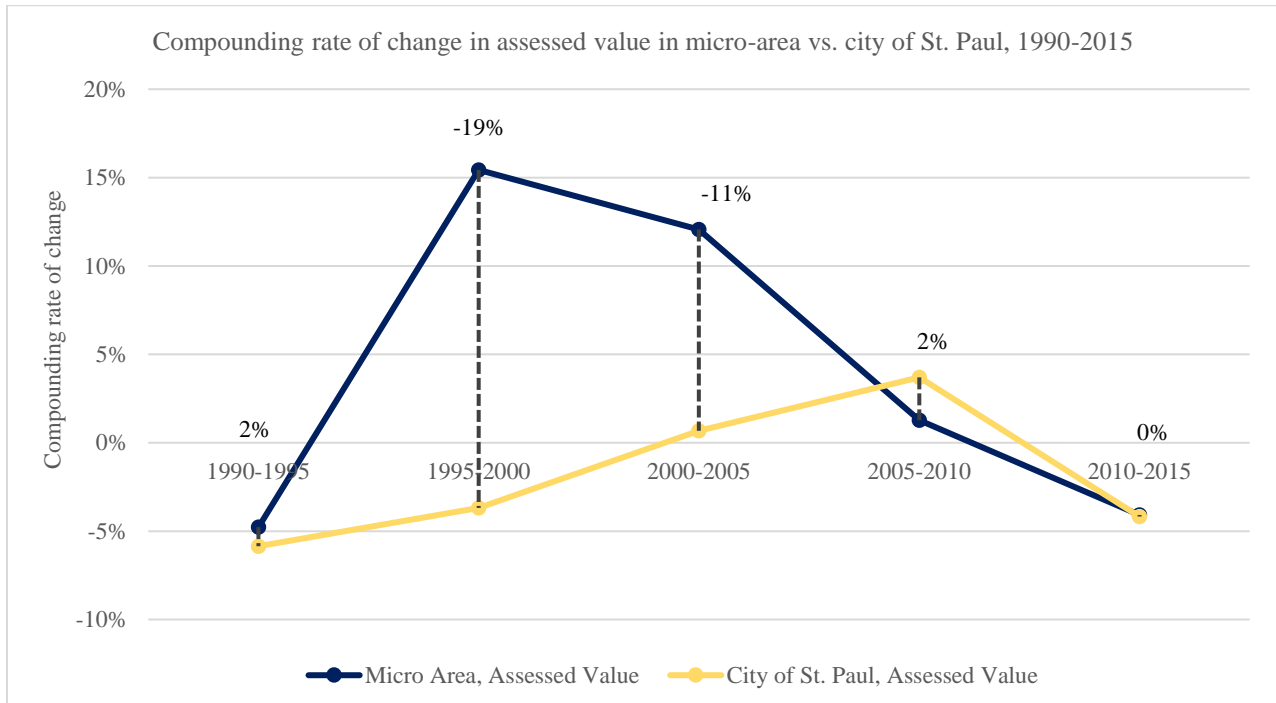
A.4.2 Built Volume

Table 73. City of St. Paul arena-district micro-area built volume count, 2000-2015.

	1990		1995		2000		2005		2010		2015		2000-2015
	BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL					49,560	0.97	100,993	1.18	27,348	0.30	152,671	1.72	7.79
RENTER- OCCUPIED					38,368	77.42	83,988	83.16	12,906	47.19	136,425	89.36	8.82
OWNER-OCCUPIED					13,076	26.38	15,244	15.09	14,442	52.81	15,206	9.96	1.01
TOTAL CONDOS					-	-	-	-	-	-	-	-	-
COMMERCIAL					3,828,201	74.55	3,617,232	42.11	3,877,321	42.71	3,736,679	42.04	(0.16)
OFFICE					2,908,913	75.99	2,925,847	80.89	2,888,789	74.50	2,893,584	77.44	(0.04)
RETAIL					73,924	1.93	103,778	2.87	258,055	6.66	69,346	1.86	(0.43)
RESTAURANT					20,478	0.53	66,998	1.85	41,528	1.07	121,627	3.25	12.61
HOTEL					187,622	4.90	290,305	8.03	290,305	7.49	290,305	7.77	2.95
INDUSTRIAL					157,863	3.07	285,296	3.32	241,212	2.66	196,510	2.21	1.47
EXEMPT					1,069,313	20.82	3,523,299	41.02	3,603,894	39.70	3,354,814	37.75	7.92
PARKING					30,314	0.59	1,062,436	12.37	1,327,442	14.62	1,335,056	15.02	28.70
VACANT					-	-	-	-	-	-	111,988	1.26	-
MIXED-USE					-	-	-	-	-	-	-	-	-
TOTAL					5,135,251	100.00	8,589,256	100.00	9,077,217	100.00	8,887,718	100.00	3.72

A.4.3 Assessed Value

Figure 53. Compounding rate of change in assessed values in arena-district micro-area vs. city of St. Paul, 1990-2015.



A.4.4 Property Tax

Figure 54. Compounding rate of change in property taxes in arena-district micro-area vs. city of St. Paul, 1990-2015.

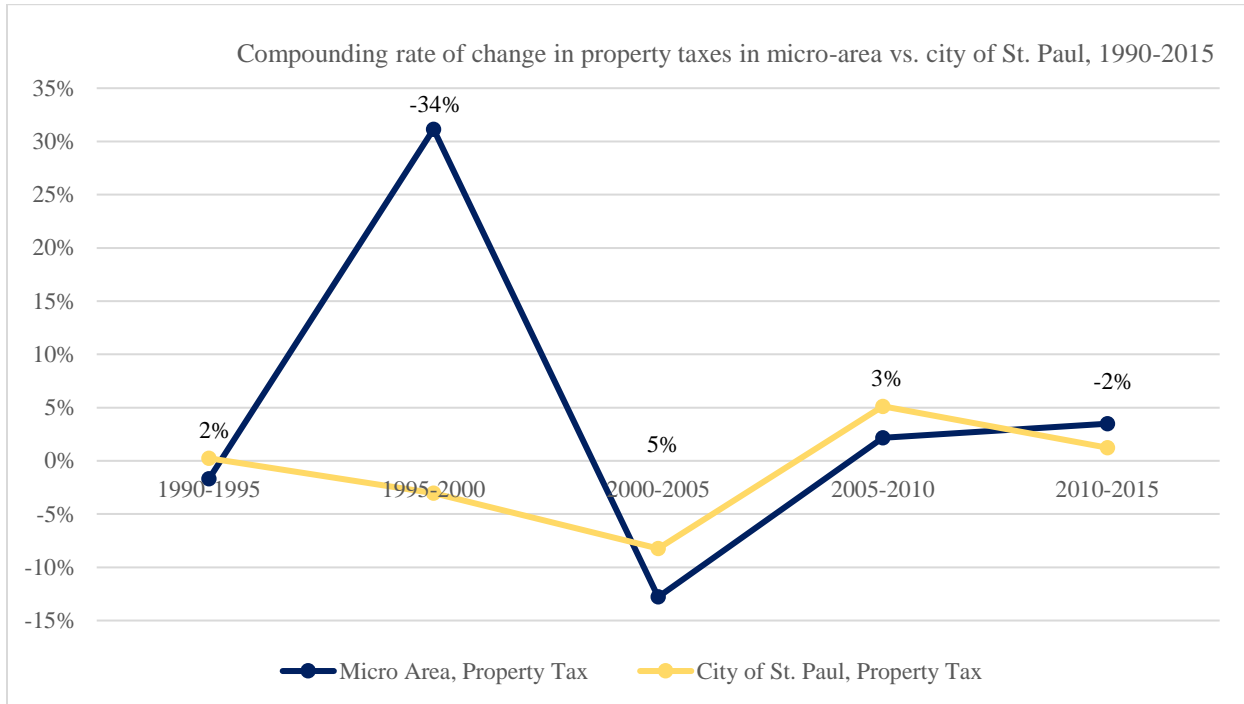


Table 74. City of St. Paul arena-district micro-area assessment, market, and property tax values, 1990-2015.

	1990	1995	2000	2005	2010	2015	1990-2015
XCEL ARENA-DISTRICT MICRO-AREA							
LAND AREA (sf)	-	-	2,002,736	2,067,070	2,354,871	2,535,893	-
BUILT AREA/VOLUME (sf)	-	-	5,348,143	8,789,551	9,114,977	8,887,718	-
TOTAL ASSESSED VALUE	175,931,800	159,427,000	378,093,800	758,646,320	886,549,900	783,450,700	6.16
TOTAL ASSESSED VALUE (2015 \$)	319,402,105	250,058,538	512,498,255	905,432,776	814,112,328	783,450,700	3.65
ASSESSED LAND VALUE							-
ASSESSED BUILDING + IMPROVEMENTS							-
TOTAL MARKET VALUE	175,931,800	159,427,000	378,093,800	758,646,320	886,549,900	783,450,700	6.16
TOTAL MARKET VALUE (2015 \$)	319,402,105	250,058,538	512,498,255	905,845,707	814,112,328	783,450,700	3.65
TOTAL MARKET LAND VALUE							-
TOTAL MARKET BUILDING VALUE + IMPROVEMENTS							-
TOTAL TAX	2,091,580	1,920,521	9,981,156	5,716,780	8,274,732	9,022,384	6.02
TOTAL TAX (2015 \$)	3,797,239	3,486,683	13,529,249	6,826,001	7,598,626	9,022,384	3.52
CITY OF ST. PAUL							
TOTAL ASSESSED VALUE	210,167,927	179,934,654	172,563,457	202,575,538	266,352,654	234,362,892	0.44
TOTAL ASSESSED VALUE (2015 \$)	381,557,389	282,224,445	233,906,165	241,881,067	290,052,012	234,362,892	(1.93)
TOTAL MARKET VALUE	7,848,000,214	7,864,569,652	9,169,403,301	19,629,226,000	21,509,656,800	18,530,456,300	3.50
TOTAL MARKET VALUE (2015 \$)	14,247,951,696	12,335,443,748	12,428,934,808	23,437,865,102	23,423,529,431	18,530,456,300	1.06
TOTAL TAX	71,308,686	83,489,564	82,769,002	61,138,759	86,060,440	99,614,529	1.35
TOTAL TAX (2015 \$)	129,460,077	130,951,961	112,191,655	73,001,451	93,717,871	99,614,529	(1.04)

A.5 DENVER “LODO” DISTRICT: PEPSI CENTER & COORS FIELD

Table 75. “LODO” Pepsi Center and Coors Field Rapid Notes

Arena Name	Pepsi Center (NBA) Coors Field (MLB)
Owner	City of Denver
Year Opened	1996
Key Players/Organization	City and County of Denver
TIF District	Downtown BID
Total Cost of Venue (in 2018 \$)	\$ 285,000,000
Public Investment in Venue	\$ 8,550,000
Public Share of Total Venue Cost	3%

Source: Judith Grant Long (2005)

A.5.1 Land-Use Composition

Figure 55. Percentage of land-use composition in the Denver “LODO” arena-district micro-area, 1990-2015.

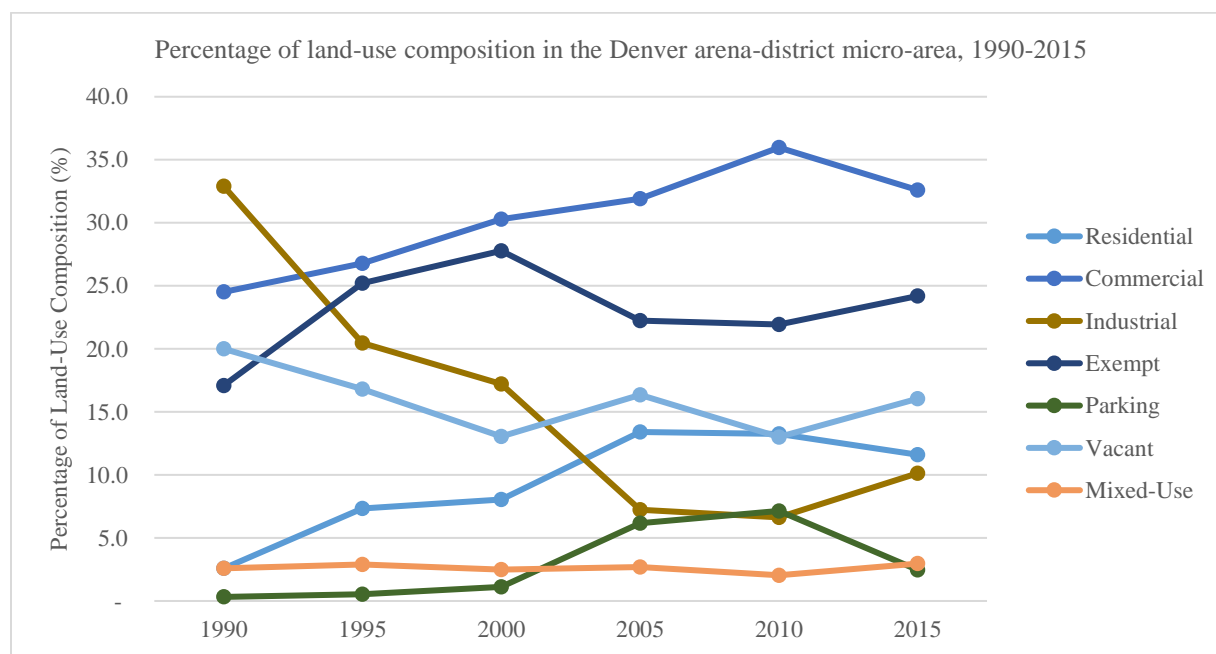


Table 76. City of Denver arena-district micro-area land-use count, 1990-2015

	1990		1995		2000		2005		2010		2015		1990-2015
	LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL	8	2.58	28	7.35	29	8.06	50	13.40	52	13.27	47	11.60	7.34
<i>RENTER-OCCUPIED</i>	7	87.50	19	67.86	14	48.28	7	0.88	8	0.77	10	0.97	1.44
<i>OWNER-OCCUPIED</i>	-	-	161	5.75	329	11.34	793	99.13	1,026	99.23	1,016	99.03	-
<i>TOTAL CONDOS</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
COMMERCIAL	76	24.52	102	26.77	109	30.28	119	31.90	141	35.97	132	32.59	2.23
<i>OFFICE</i>	12	15.79	33	32.35	40	36.70	62	39.49	76	43.68	94	57.67	8.58
<i>RETAIL</i>	24	31.58	22	21.57	18	16.51	27	17.20	26	14.94	18	11.04	(1.14)
<i>RESTAURANT</i>	13	17.11	20	19.61	36	33.03	33	21.02	35	20.11	32	19.63	3.67
<i>HOTEL</i>	2	2.63	2	1.96	-	-	-	-	-	-	1	0.61	(2.73)
INDUSTRIAL	102	32.90	78	20.47	62	17.22	27	7.24	26	6.63	41	10.12	(3.58)
EXEMPT	53	17.10	96	25.20	100	27.78	83	22.25	86	21.94	98	24.20	2.49
PARKING	1	0.32	2	0.52	4	1.11	23	6.17	28	7.14	10	2.47	9.65
VACANT	62	20.00	64	16.80	47	13.06	61	16.35	51	13.01	65	16.05	0.19
MIXED-USE	8	2.58	11	2.89	9	2.50	10	2.68	8	2.04	12	2.96	1.64
TOTAL	310	100.00	381	100.00	360	100.00	373	100.00	392	100.00	405	100.00	1.07

A.5.2 Built Volume

Table 77. City of Denver arena-district micro-area built volume count, 1990-2015.

	1990		1995		2000		2005		2010		2015		2000-2015
	BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% Change
RESIDENTIAL	49,504	0.01	503,051	12.23	552,122	8.79	2,066,594	35.83	2,393,850	32.51	2,117,745	33.24	16.21
<i>RENTER- OCCUPIED</i>	<i>49,504</i>	<i>100.00</i>	<i>157,842</i>	<i>31.38</i>	<i>65,437</i>	<i>11.85</i>	<i>681,939</i>	<i>33.00</i>	<i>921,137</i>	<i>38.48</i>	<i>625,894</i>	<i>29.55</i>	10.68
<i>OWNER- OCCUPIED</i>	-	-	<i>331,601</i>	<i>65.92</i>	<i>486,685</i>	<i>88.15</i>	<i>1,383,660</i>	<i>66.95</i>	<i>1,472,713</i>	<i>61.52</i>	<i>1,501,070</i>	<i>70.88</i>	-
<i>TOTAL CONDOS</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
COMMERCIAL	1,902,142	28.48	1,276,079	31.01	2,737,548	43.57	2,091,610	36.26	2,849,890	38.70	2,312,942	36.30	0.79
<i>OFFICE</i>	<i>266,776</i>	<i>14.03</i>	<i>500,000</i>	<i>39.18</i>	<i>1,178,177</i>	<i>43.04</i>	<i>1,062,198</i>	<i>50.78</i>	<i>1,523,151</i>	<i>53.45</i>	<i>1,125,090</i>	<i>48.64</i>	5.93
<i>RETAIL</i>	<i>750,662</i>	<i>39.46</i>	<i>456,725</i>	<i>35.79</i>	<i>430,391</i>	<i>15.72</i>	<i>859,390</i>	<i>41.09</i>	<i>904,656</i>	<i>31.74</i>	<i>246,340</i>	<i>10.65</i>	(4.36)
<i>RESTAURANT</i>	<i>61,169</i>	<i>3.22</i>	<i>221,421</i>	<i>17.35</i>	<i>432,294</i>	<i>15.79</i>	<i>208,165</i>	<i>9.95</i>	<i>204,725</i>	<i>7.18</i>	<i>309,961</i>	<i>13.40</i>	6.71
<i>HOTEL</i>	<i>60,571</i>	<i>3.18</i>	<i>51,770</i>	<i>4.06</i>	-	-	-	<i>0.00</i>	-	<i>0.00</i>	<i>98,469</i>	<i>4.26</i>	1.96
INDUSTRIAL	1,989,977	29.80	1,646,703	40.02	1,151,429	18.33	400,868	6.95	365,630	4.97	508,421	7.98	(5.31)
EXEMPT	531,849	7.96	531,849	12.92	1,673,498	26.63	822,930	14.27	1,084,449	14.73	1,112,557	17.46	3.00
PARKING	40,140	0.60	40,140	0.98	33,857	0.54	15,590	0.27	-	-	71,253	1.12	2.32
VACANT	392	0.01	38,220	0.93	90,180	1.44	-	-	-	-	-	-	(100.00)
MIXED-USE	26,061	0.39	57,298	1.39	44,475	0.71	370,021	6.42	670,297	9.10	248,239	3.90	9.43
TOTAL	6,678,683	100.00	4,114,911	100.00	6,283,109	100.00	5,767,613	1.00	7,364,116	100.00	6,371,157	100.00	(0.19)

A.5.3 Assessed Value

Figure 56. Compounding rate of change in assessed values in arena-district micro-area vs. city of Denver, 1990-2015.

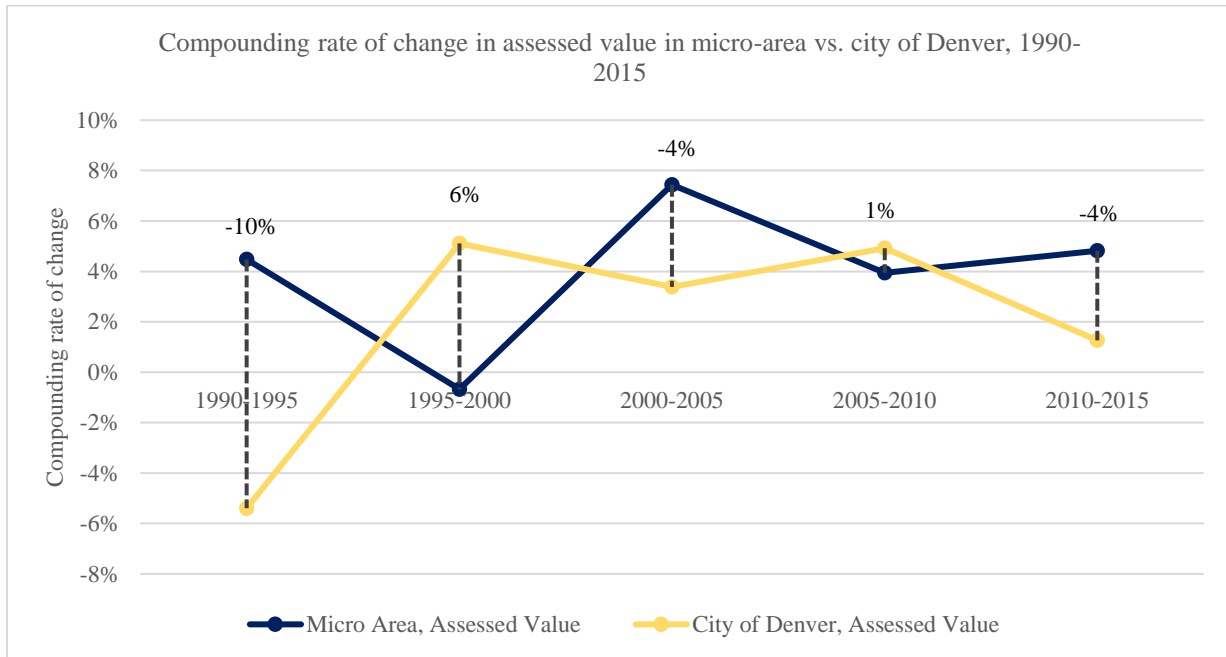
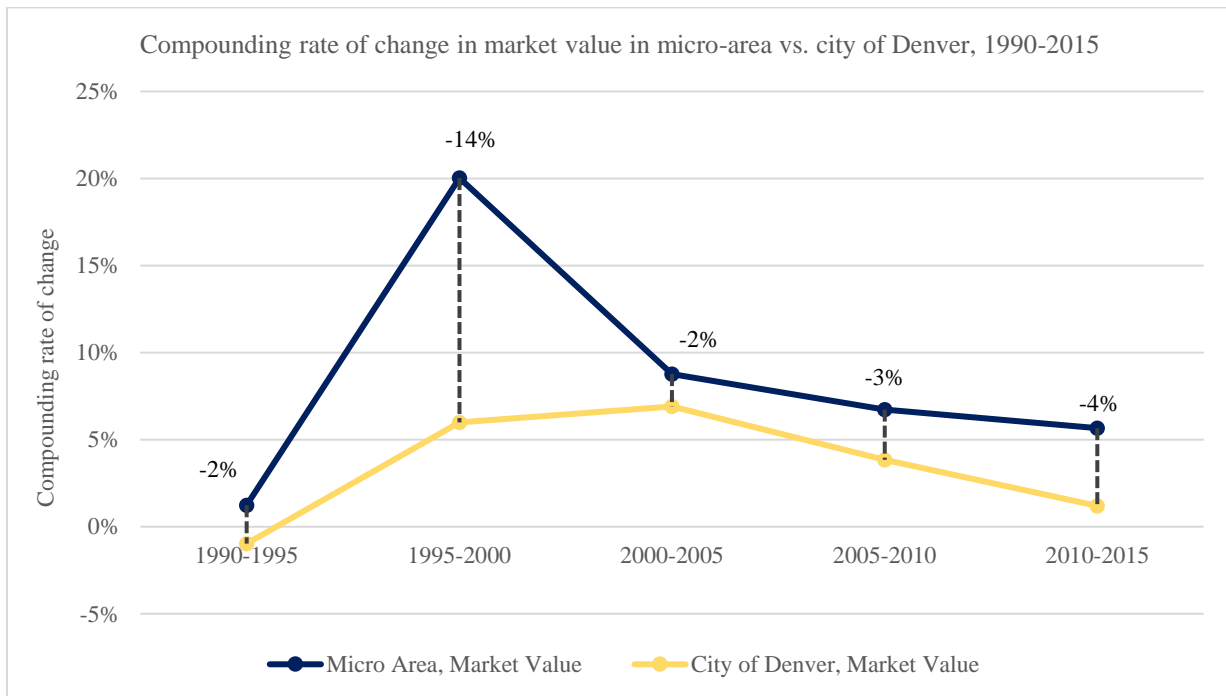


Figure 57. Compounding rate of change in market values in arena-district micro-area vs. city of Denver, 1990-2015.



A.5.4 Property Taxes

Figure 58. Compounding rate of change in property taxes in arena-district micro-area vs. city of Denver, 1990-2015.

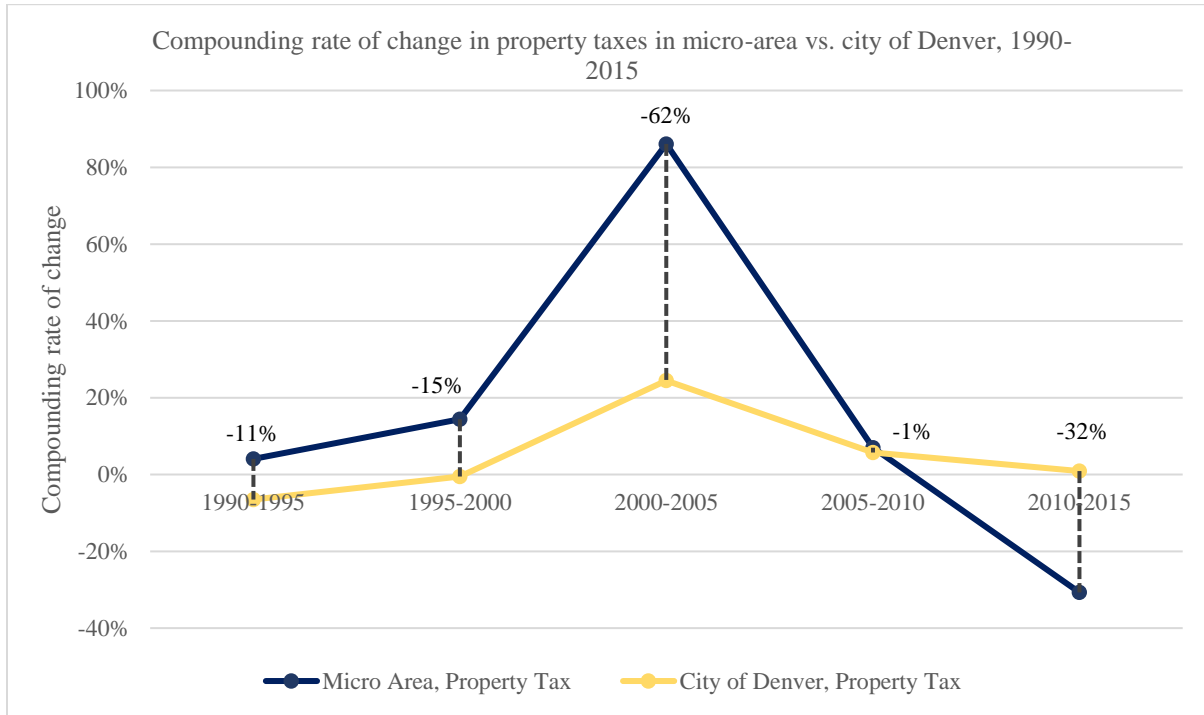


Table 78. City of Denver arena-district micro-area assessment, market, and property tax values, 1990-2015.

	1990	1995	2000	2005	2010	2015	1990-2015
LODO ARENA-DISTRICT MICRO-AREA							
LAND AREA (sf)	12,225,365	100,550,744	15,473,026	15,910,071	15,560,807	16,688,142	1.25
BUILT AREA/VOLUME (sf)	3,858,916	4,166,098	5,200,108	5,788,758	7,149,076	19,757,143	6.75
TOTAL ASSESSED VALUE	106,943,751	162,830,264	184,354,256	290,880,904	392,741,083	561,436,119	6.86
TOTAL ASSESSED VALUE (2015 \$)	212,286,442	264,216,599	255,445,600	365,681,028	443,658,571	561,436,119	3.97
ASSESSED LAND VALUE							-
ASSESSED BUILDING + IMPROVEMENTS							-
TOTAL MARKET VALUE	192,487,558	250,445,230	730,602,108	1,225,539,404	1,889,443,573	2,810,510,400	11.32
TOTAL MARKET VALUE (2015 \$)	382,093,375	406,385,062	1,012,339,491	1,540,687,279	2,134,403,230	2,810,510,400	8.31
TOTAL MARKET LAND VALUE	126,047,484	88,922,265	255,171,500	655,029,600	763,845,269	1,108,327,200	9.09
TOTAL MARKET BUILDING VALUE + IMPROVEMENTS	79,587,015	161,706,364	478,498,392	-	-	1,702,183,200	13.03
TOTAL TAX	1,852,675	2,760,323	6,330,665	155,705,520	243,109,227	43,863,320	13.49
TOTAL TAX (2015 \$)	3,677,614	4,479,040	8,771,919	195,745,248	274,627,476	43,863,320	10.42
CITY OF DENVER							
TOTAL ASSESSED VALUE	4,661,000,000	4,321,000,000	6,492,000,000	8,943,168,000	11,960,084,000	14,384,910,000	4.61
TOTAL ASSESSED VALUE (2015 \$)	9,252,219,934	7,011,472,549	8,995,468,129	10,623,578,240	13,510,666,468	14,384,910,000	1.78
TOTAL MARKET VALUE	22,140,000,000	25,797,000,000	40,422,000,000	65,842,159,000	83,581,295,000	100,203,607,000	6.23
TOTAL MARKET VALUE (2015 \$)	43,948,540,943	41,859,513,387	56,009,675,404	78,213,819,493	94,417,313,434	100,203,607,000	3.35
TOTAL TAX	61,398,000	53,643,000	61,087,000	212,778,000	295,381,000	349,176,000	7.20
TOTAL TAX (2015 \$)	121,876,807	87,043,838	84,643,586	252,758,724	333,676,099	349,176,000	4.30

A.6 PHOENIX: TALKING STICK ARENA

Table 79. Talking Stick Arena Rapid Notes

Arena Name	Talking Stick Arena
Owner	City of Phoenix
Year Opened	1992
Total Cost of Venue (in 2018 \$)	\$ 176,700,000
Public Investment in Venue	\$ 68,913,000
Public Share of Total Venue Cost	39%

Source: Judith Grant Long, 2005.

4.6.1 Land-Use Composition

Figure 59. Percentage of land-use composition in the Phoenix arena-district micro-area, 1990-2015.

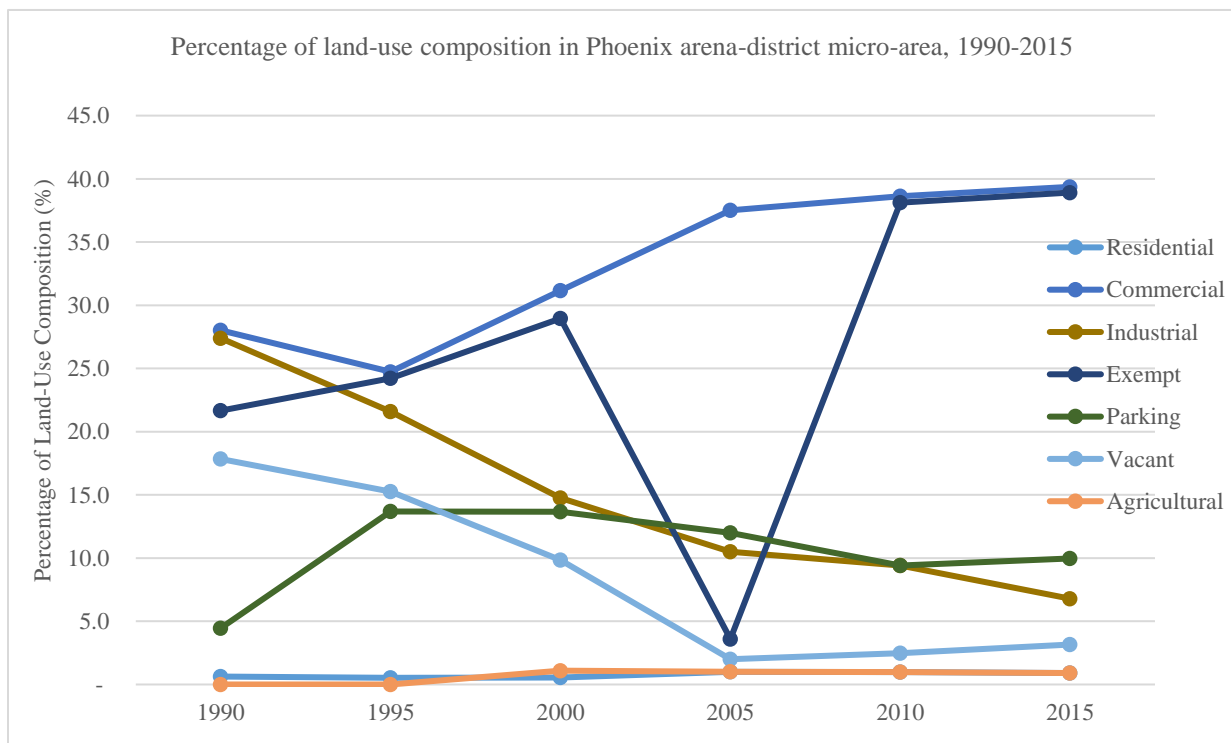


Table 80. City of Phoenix arena-district micro-area land-use count, 1990-2015.

	1990		1995		2000		2005		2010		2015		1990-2015
	LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL	1	0.64	1	0.53	1	0.55	2	1.00	2	0.99	2	0.90	2.81
<i>RENTER-OCCUPIED</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>OWNER-OCCUPIED</i>	-	-	1	100.00	1	100.00	32	16.00	196	100.00	196	100.00	-
<i>TOTAL CONDOS</i>	-	-	-	-	-	-	31	-	196	-	196	-	-
COMMERCIAL	44	28.03	47	24.74	57	31.15	75	37.50	78	38.61	89	39.37	2.86
<i>OFFICE</i>	4	9.09	3	6.38	3	5.26	3	4.00	7	8.97	9	1.03	3.30
<i>RETAIL</i>	7	15.91	5	10.64	7	12.28	2	2.67	4	5.13	7	8.05	-
<i>RESTAURANT</i>	2	4.55	3	6.38	6	10.53	10	13.33	10	12.82	6	6.90	4.49
<i>HOTEL</i>	1	2.27	1	2.13	1	1.75	1	1.13	2	2.56	1	1.15	-
INDUSTRIAL	43	27.39	41	21.58	27	14.75	21	10.50	19	9.41	15	6.79	(4.13)
EXEMPT	34	21.66	46	24.21	53	28.96	72	3.60	77	38.12	86	38.91	3.78
PARKING	7	4.46	26	13.68	25	13.66	24	12.00	19	9.41	22	9.95	4.69
VACANT	28	17.83	29	15.26	18	9.84	4	2.00	5	2.48	7	3.17	(5.39)
AGRICULTURAL	-	-	-	-	2	1.09	2.00	1.00	2	0.99	2	0.90	-
TOTAL	157	100.00	190	100.00	183	100.00	200	100.00	202	100.00	221	100.00	1.38

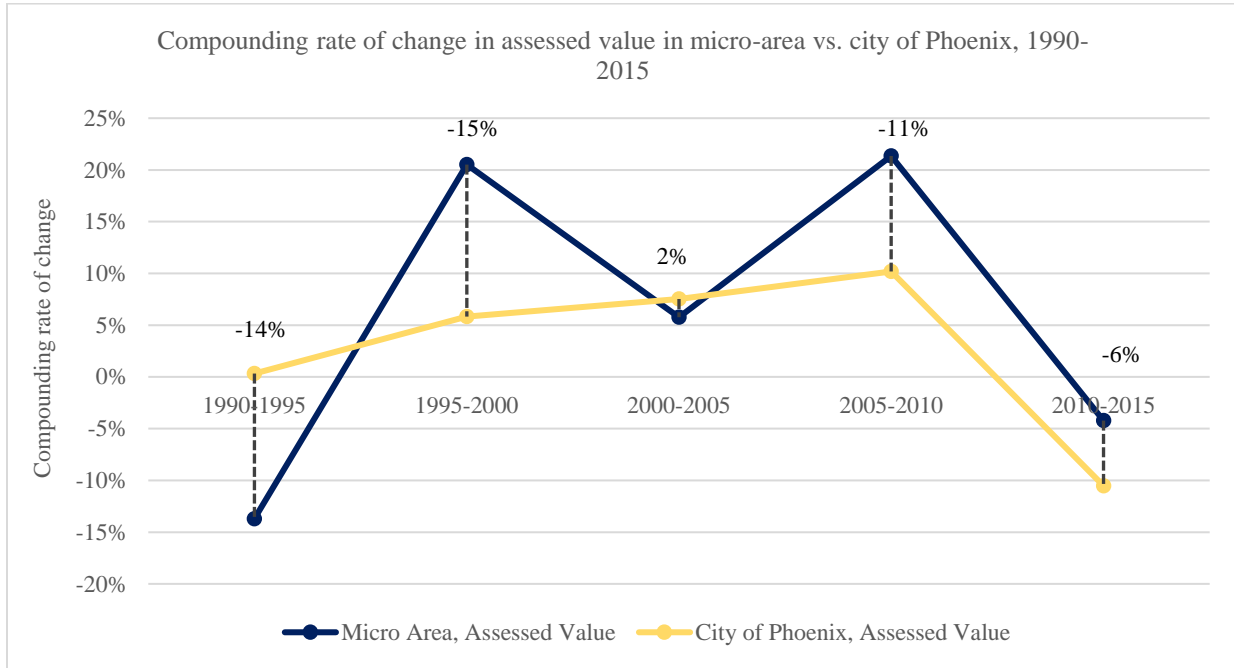
A.6.2 Built Volume

Table 81. City of Phoenix arena-district micro-area built volume count, 2000-2015.

	1990		1995		2000		2005		2010		2015		2000-2015
	BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF		BLDG SF
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% Change
RESIDENTIAL					-	-	-	-	247,868	3.08	246,541	2.54	-
<i>RENTER-OCCUPIED</i>					-	-	-	-	-	-	-	-	-
<i>OWNER-OCCUPIED</i>					-	-	-	-	247,868	100.00	246,541	100.00	-
<i>TOTAL CONDOS</i>					-	-	-	-	-	-	-	-	-
COMMERCIAL					301,040	8.77	314,008	7.17	342,211	4.25	521,032	5.36	3.72
<i>OFFICE</i>					168,314	55.91	189,158	60.24	171,768	50.19	368,076	70.64	5.35
<i>RETAIL</i>					65,553	21.78	4,138	1.32	5,498	1.61	5,498	1.06	(15.23)
<i>RESTAURANT</i>					47,072	15.64	100,611	32.04	128,717	37.61	128,717	24.70	6.94
<i>HOTEL</i>					10,180	3.38	10,180	3.24	10,180	2.97	10,180	1.95	-
INDUSTRIAL					342,376	9.97	345,424	7.88	387,497	4.81	317,472	3.27	(0.50)
EXEMPT					2,789,655	81.26	3,680,949	84.00	7,069,929	87.78	7,950,314	81.67	7.23
PARKING					-	-	-	-	6,298	0.08	678,095	6.98	-
VACANT					-	-	41,833	0.95	-	-	-	-	-
AGRICULTURAL					-	-	-	-	-	-	-	-	-
TOTAL					3,433,071	100.00	4,382,214	100.00	8,053,803	100.00	9,713,454	100.00	7.18

A.6.3 Assessed Value

Figure 60. Compounding rate of change in assessed values in arena-district micro-area vs. city of Phoenix, 1990-2015.



A.6.4 Property Tax

Figure 61. Compounding rate of change in property taxes in arena-district micro-area vs. city of Phoenix, 1990-2015.

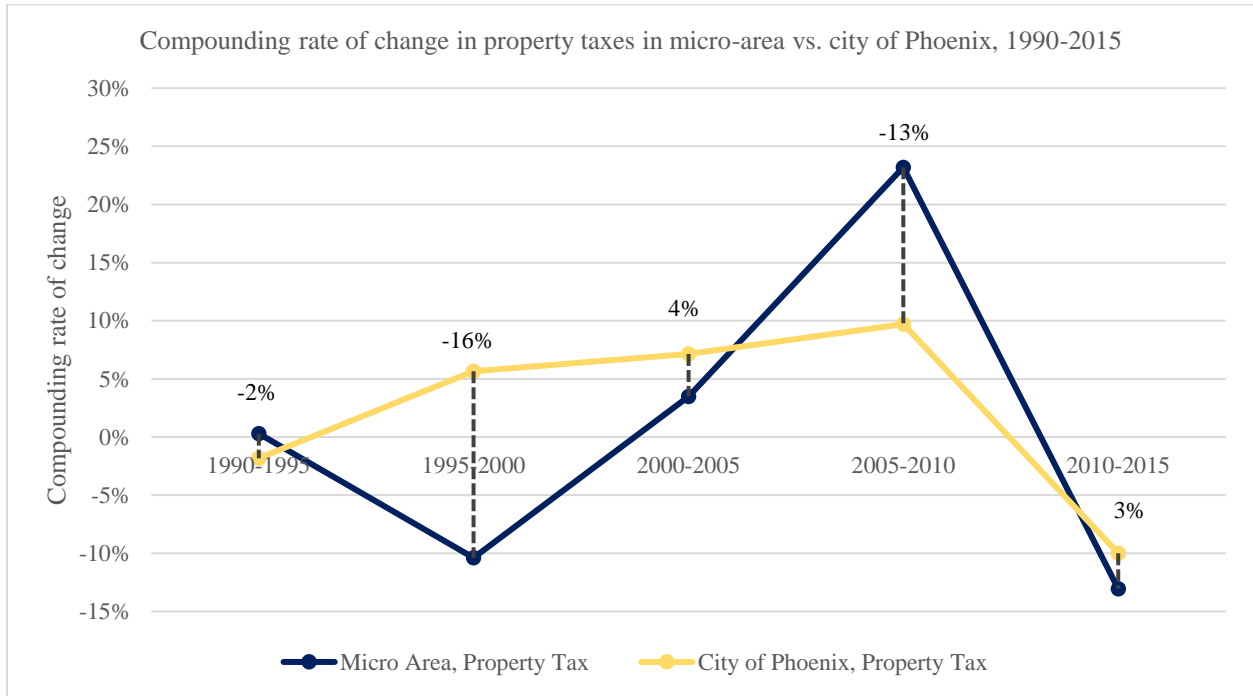


Table 82. City of Phoenix arena-district micro-area assessment, market, and property tax values, 1990-2015.

	1990	1995	2000	2005	2010	2015	1990-2015
TALKING STICK RESORT ARENA-DISTRICT MICRO-AREA							
LAND AREA (sf)	-	-	4,514,238	4,555,500	4,978,791	6,262,567	-
BUILT AREA/VOLUME (sf)	-	-	3,433,071	4,382,214	8,053,803	9,713,454	-
TOTAL ASSESSED VALUE	69,136,553	33,094,284	85,169,236	120,678,454	346,636,205	302,740,362	6.09
TOTAL ASSESSED VALUE (2015 \$)	88,507,923	42,366,971	107,739,925	142,651,293	375,345,905	302,740,362	5.04
ASSESSED LAND VALUE	26,674,786	14,406,972	11,896,796	10,096,999	127,517,864	33,387,774	0.90
ASSESSED BUILDING + IMPROVEMENTS	42,067,292	18,754,789	73,272,440	110,581,455	219,118,341	269,352,588	7.71
TOTAL MARKET VALUE	214,564,757	180,082,854	498,625,696	731,042,150	1,817,657,725	1,897,624,944	9.11
TOTAL MARKET VALUE (2015 \$)	274,683,656	230,540,269	630,766,433	864,117,754	1,968,202,900	1,897,624,944	8.04
TOTAL MARKET LAND VALUE	95,965,056	81,786,337	60,406,886	55,749,918	438,253,899	207,930,976	3.14
TOTAL MARKET BUILDING VALUE + IMPROVEMENTS	118,641,671	98,296,517	438,113,915	675,292,232	1,379,403,826	1,689,693,968	11.21
TOTAL TAX	980,615	994,742	575,205	739,761	2,292,264	1,233,596	0.92
TOTAL TAX (2015 \$)	1,255,373	1,273,459	736,372	874,455	2,482,118	1,233,596	(0.07)
CITY OF PHOENIX							
TOTAL ASSESSED VALUE	5,066,598,000	5,149,844,000	6,915,960,000	10,637,361,000	18,861,238,000	10,818,634,000	3.08
TOTAL ASSESSED VALUE (2015 \$)	6,486,208,094	6,592,778,790	8,748,757,740	12,574,185,760	20,423,395,904	11,714,673,518	2.39
TOTAL MARKET VALUE	38,423,459,000	37,083,765,000	51,170,109,000	83,439,807,000	169,320,058,000	106,487,248,000	4.16
TOTAL MARKET VALUE (2015 \$)	49,189,327,977	47,474,265,115	64,730,693,518	98,632,323,660	183,343,775,154	115,306,918,062	3.47
TOTAL TAX	99,827,000	91,005,000	121,231,000	183,308,000	318,039,000	187,809,000	2.56
TOTAL TAX (2015 \$)	127,797,527	116,503,691	153,358,413	216,684,274	344,380,173	203,364,040	1.88

A.7 GLENDALE (AZ): GILA RIVER ARENA

Table 83. Gila River Arena Rapid Notes

Arena Name	Gila River Arena
Owner	City of Glendale (AZ)
Year Opened	2001
Total Cost of Venue (in 2018 \$)	\$ 320,340,000
Public Investment in Venue	\$ 262,678,800
Public Share of Total Venue Cost	82%

Source: Judith Grant Long, 2005.

A.7.1 Land-Use Composition

Figure 62. Percentage of land-use composition in the Glendale (AZ) arena-district micro-area, 1990-2015.

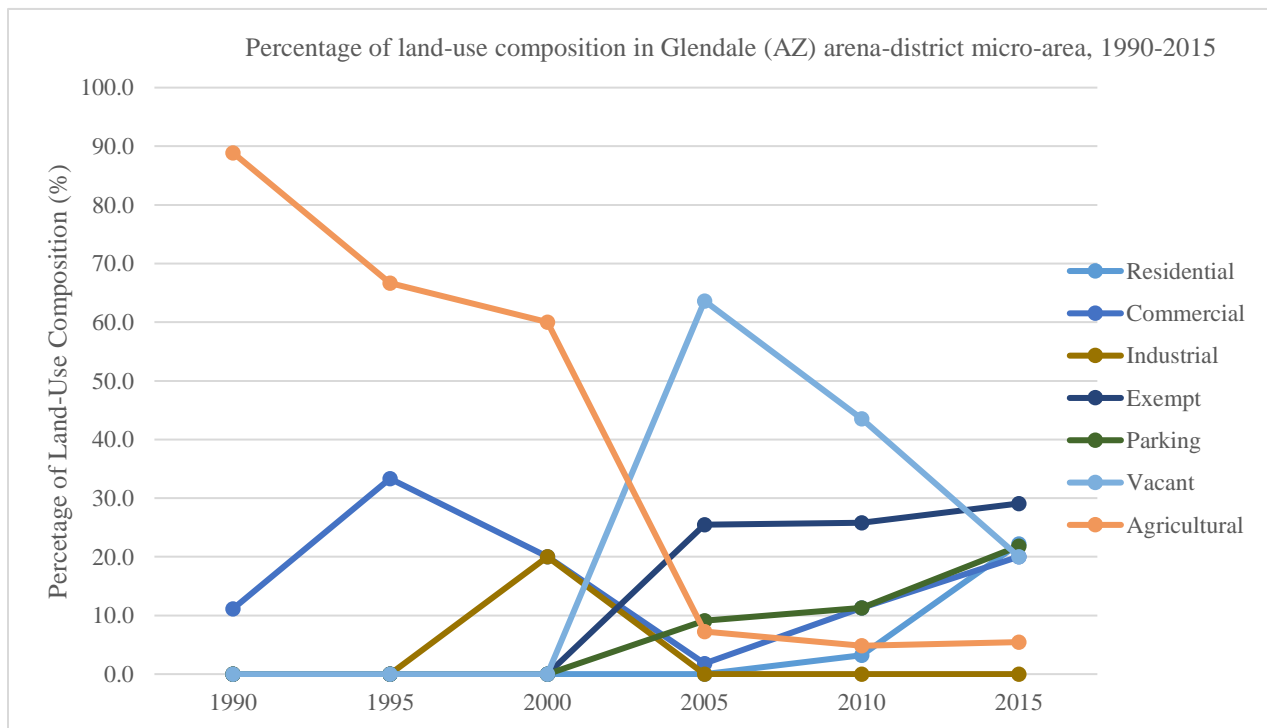
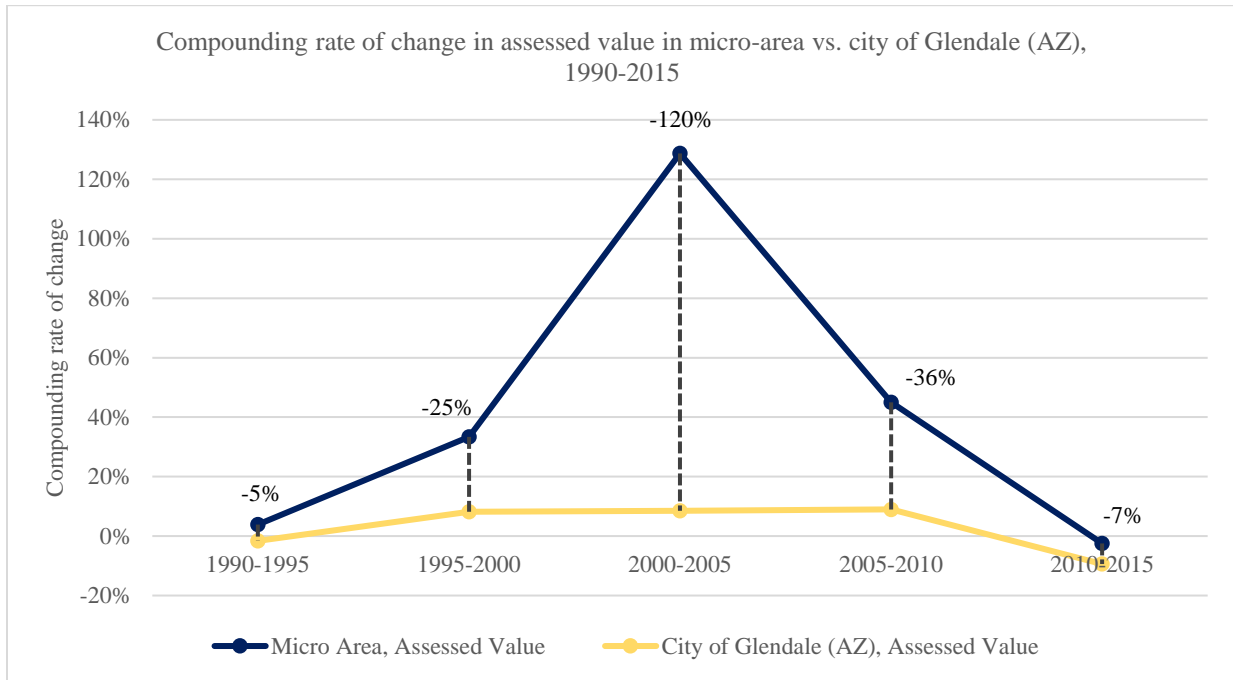


Table 84. City of Glendale (AZ) arena-district micro-area land-use count, 1990-2015.

	1990		1995		2000		2005		2010		2015		1990-2015
	LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE		LAND USE
	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	COUNT	%	% CHANGE
RESIDENTIAL	-	-	-	-	-	-	-	-	2	3.23	2	22.22	-
<i>RENTER- OCCUPIED</i>	-	-	-	-	-	-	-	-	1	0.94	1	0.94	-
<i>OWNER- OCCUPIED</i>	-	-	-	-	-	-	-	-	105	99.06	105	100.00	-
<i>TOTAL CONDOS</i>	-	-	-	-	-	-	-	-	105	100.00	105	100.00	-
COMMERCIAL	1	11.11	1	33.33	1	20.00	1	1.82	7	11.29	11	20.00	10.07
<i>OFFICE</i>	-	-	-	-	-	-	-	-	38	88.37	38	88.37	-
<i>RETAIL</i>	-	-	-	-	-	-	-	-	-	0.00	1	2.33	-
<i>RESTAURANT</i>	-	-	-	-	-	-	-	-	1	2.33	2	4.65	-
<i>HOTEL</i>	-	-	-	-	-	-	-	-	2	4.65	2	4.65	-
INDUSTRIAL	-	-	-	-	1	20.00	-	-	-	-	-	-	-
EXEMPT	-	-	-	-	-	-	14	25.45	16	25.81	16	29.09	-
PARKING	-	-	-	-	-	-	5	9.09	7	11.29	12	21.82	-
VACANT	-	-	-	-	-	-	35	63.64	27	43.55	11	20.00	-
AGRICULTURAL	8	88.89	2	66.67	3	60.00	4	7.27	3	4.84	3	5.45	(3.85)
TOTAL	9	100.00	3	100.00	5	100.00	55	100.00	62	100.00	55	100.00	7.51

A.7.2 Assessed Value

Figure 63. Compounding rate of change in assessed values in arena-district micro-area (Gila River Arena) vs. city of Glendale (AZ), 1990-2015.



A.7.3 Property Tax

Figure 64. Compounding rate of change in property taxes in arena-district micro-area (Gila River Arena) vs. city of Glendale (AZ), 1990-2015.

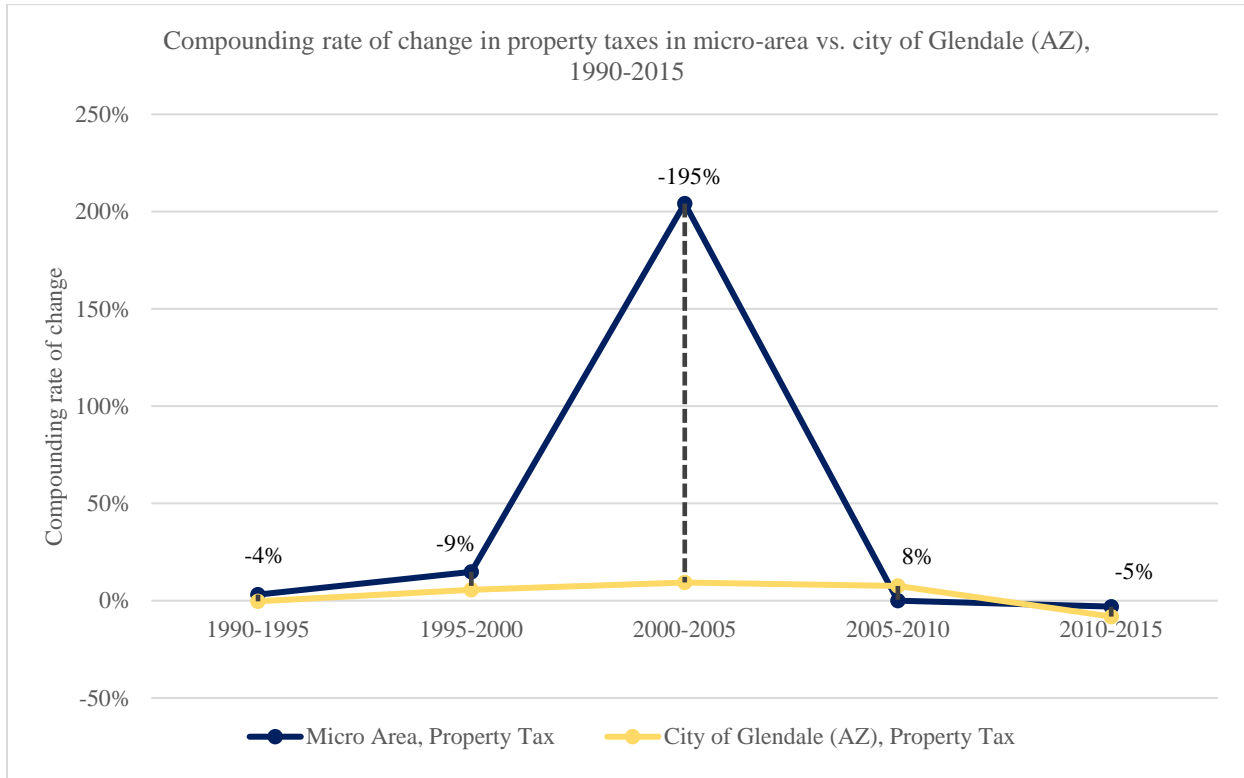


Table 85. City of Glendale’s (Gila River Arena) arena-district micro-area assessment, market, and property tax values, 1990-2015.

	1990	1995	2000	2005	2010	2015	1990-2015
GILA RIVER ARENA-DISTRICT MICRO-AREA							
LAND AREA (sf)	15,324,452	15,324,452	1,282,985	5,890,673	15,482,550	17,259,387	0.48
BUILT AREA/VOLUME (sf)	-	-	-	-	258,082	173,185	-
TOTAL ASSESSED VALUE	72,940	88,033	375,493	25,144,535	175,569,700	167,801,397	36.29
TOTAL ASSESSED VALUE (2015 \$)	93,377	112,699	475,002	29,722,791	190,111,036	167,801,397	34.95
ASSESSED LAND VALUE	61,830	69,185	332,484	2,891,532	20,960,100	9,674,440	22.40
ASSESSED BUILDING + IMPROVEMENTS	11,110	18,848	43,009	22,253,003	154,046,186	158,126,957	46.60
TOTAL MARKET VALUE	470,608	563,631	1,018,357	155,569,417	1,060,239,767	1,030,508,795	36.02
TOTAL MARKET VALUE (2015 \$)	602,468	721,555	1,288,232	183,895,117	1,148,052,769	1,030,508,795	34.69
TOTAL MARKET LAND VALUE	393,758	444,024	645,183	16,338,204	112,659,818	57,234,021	22.04
TOTAL MARKET BUILDING VALUE + IMPROVEMENTS	76,850	119,607	373,174	139,231,213	947,579,949	973,274,774	45.92
TOTAL TAX	8,320	9,732	19,682	181,456	5,987,559	5,556,507	29.71
TOTAL TAX (2015 \$)	10,652	12,459	24,897	6,483,471	6,483,471	5,556,507	28.44
CITY OF GLENDALE, AZ							
TOTAL ASSESSED VALUE	570,654,000	525,267,000	787,692,000	1,269,568,000	2,130,907,000	1,408,099,000	3.68
TOTAL ASSESSED VALUE (2015 \$)	730,545,544	672,441,561	996,438,164	1,500,727,847	2,307,396,646	1,408,099,000	2.66
TOTAL MARKET VALUE	3,937,166,000	4,321,468,000	6,526,885,000	11,296,734,000	20,635,557,000	12,452,875,000	4.71
TOTAL MARKET VALUE (2015 \$)	5,040,320,542	5,532,300,119	8,256,574,020	13,353,615,789	22,344,670,605	12,452,875,000	3.68
TOTAL TAX	9,806,030	9,650,095	12,794,779	21,386,000	33,749,000	23,881,000	3.62
TOTAL TAX (2015 \$)	12,553,582	12,353,955	16,185,522	25,279,911	36,544,218	23,881,000	2.61

APPENDIX B. EXAMPLES OF LAND-USE COMPOSITION MAPS, 1990-2015

This appendix provides a sample of map examples of different arena-district micro-areas and the changes in their land-use composition. Examples are provided for Nashville, Cleveland, Dallas, Memphis, Miami, Oklahoma City, Denver, and Glendale (AZ). For each of the eight city examples, a context map with subsidiary land-use maps for 1990 and 2015 are provided.

B.1 NASHVILLE CONTEXT AND LAND-USE MAP

Figure 65. Context map of Nashville and Davidson County including an inlay of Nashville's arena-district micro-area.

NASHVILLE, TN

BRIDGESTONE ARENA
NASHVILLE PREDATORS - NHL

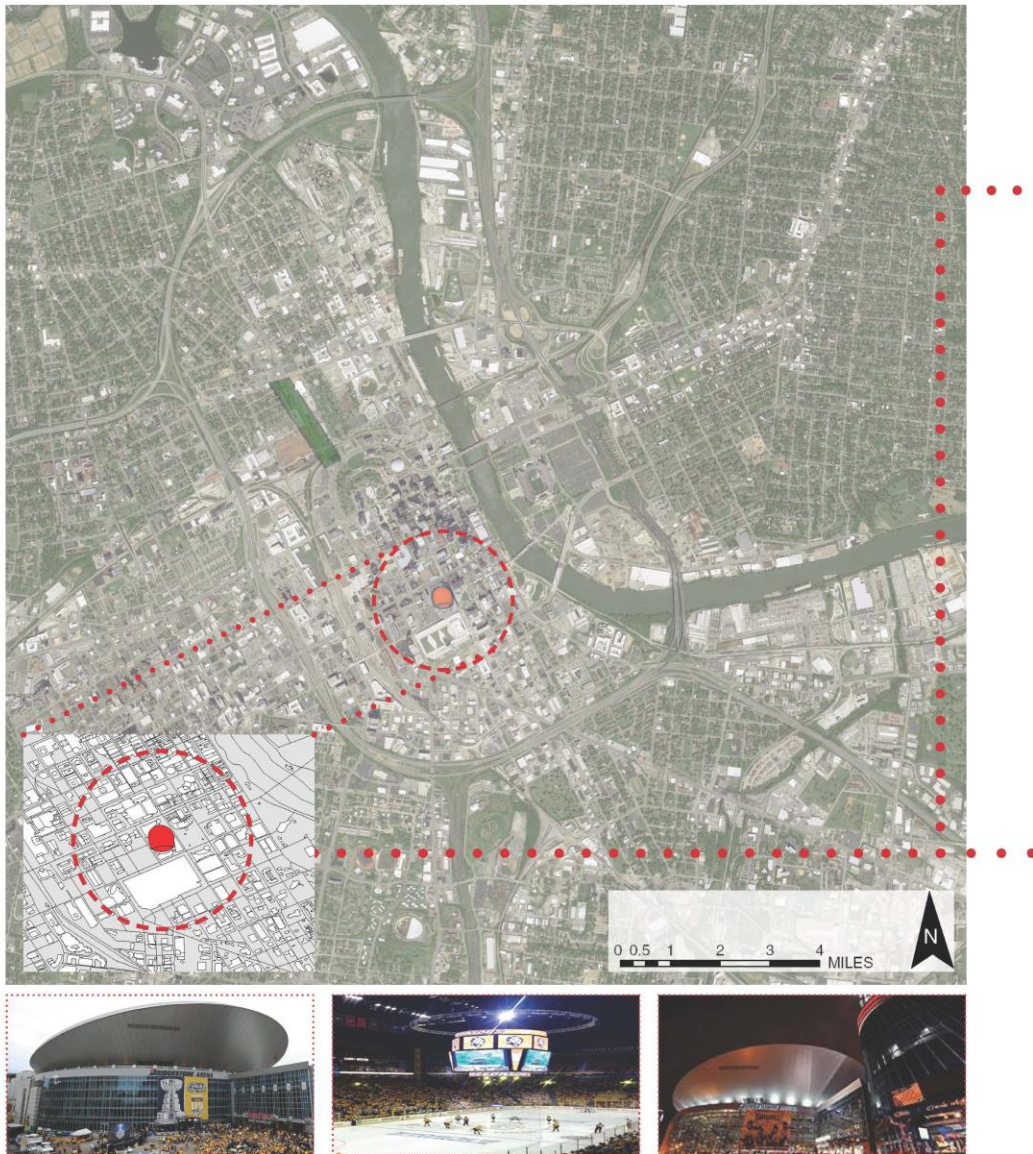
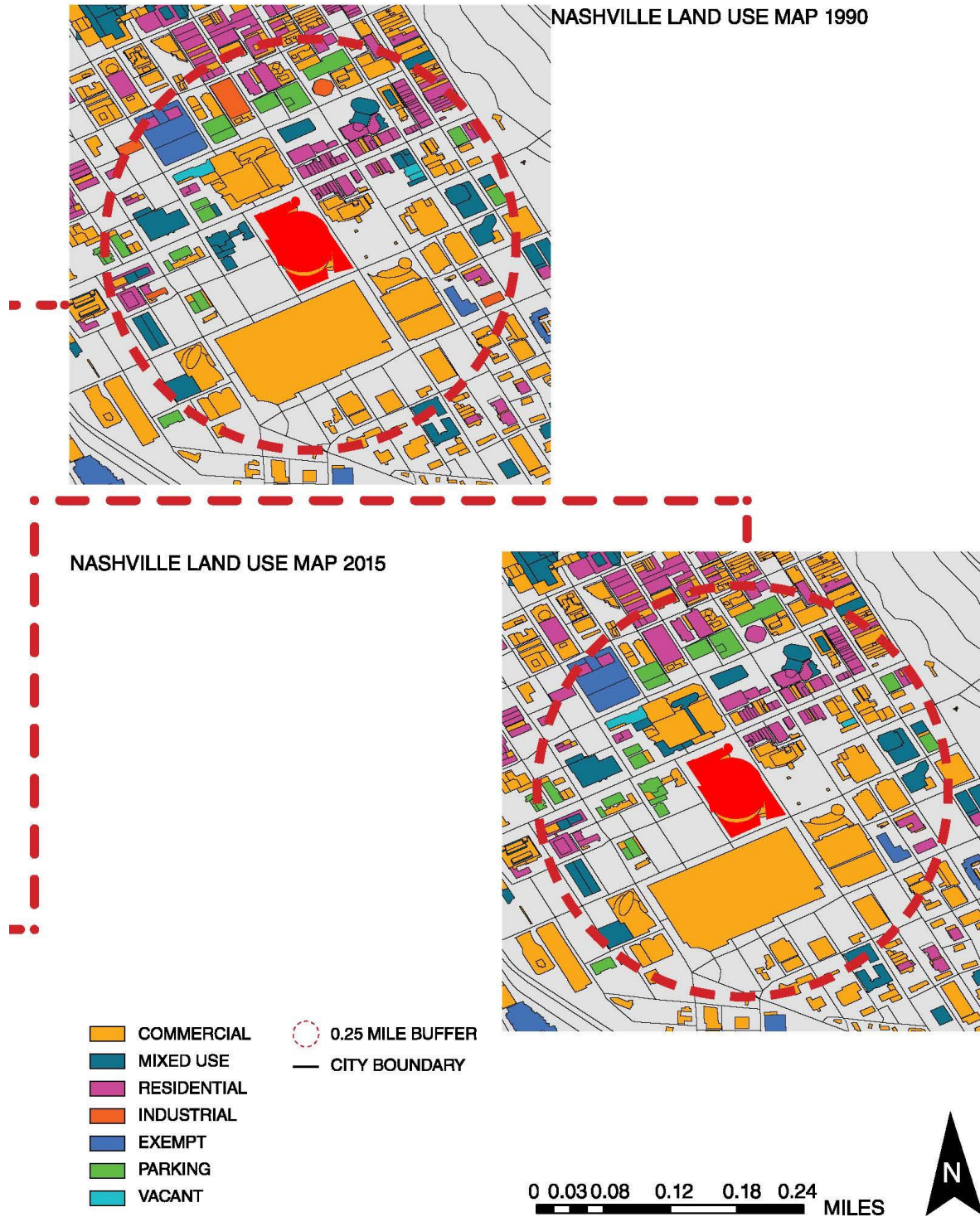


Figure 66. Nashville’s arena-district micro-area land-use composition map in 1990 and 2015.



B.2 CLEVELAND CONTEXT AND LAND-USE MAP

Figure 67. Context map of Cleveland and Cuyahoga County including an inlay of Cleveland's arena-district micro-area.

CLEVELAND, OH

QUICKEN LOANS ARENA
CLEVELAND CAVALIERS - NBA

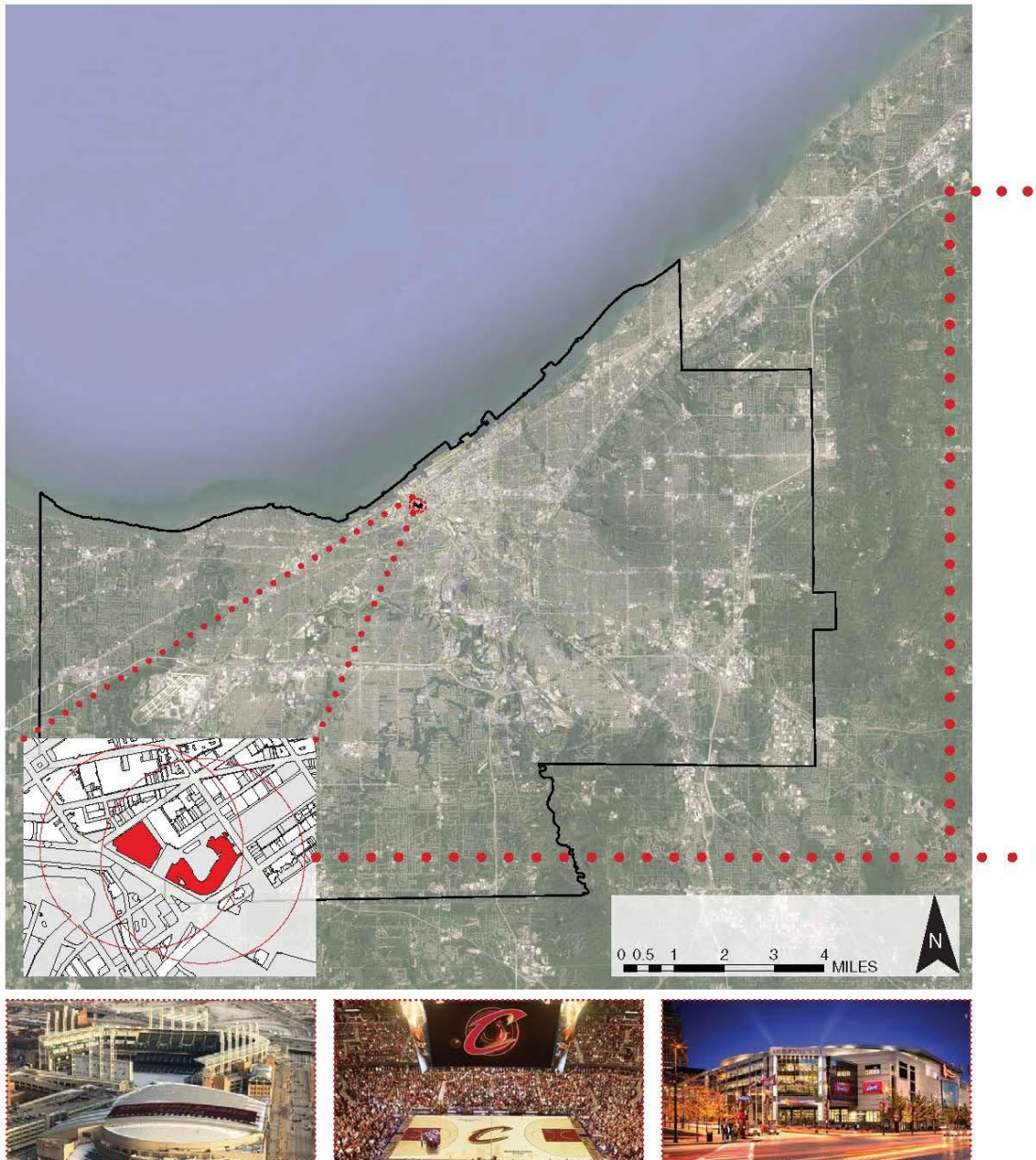
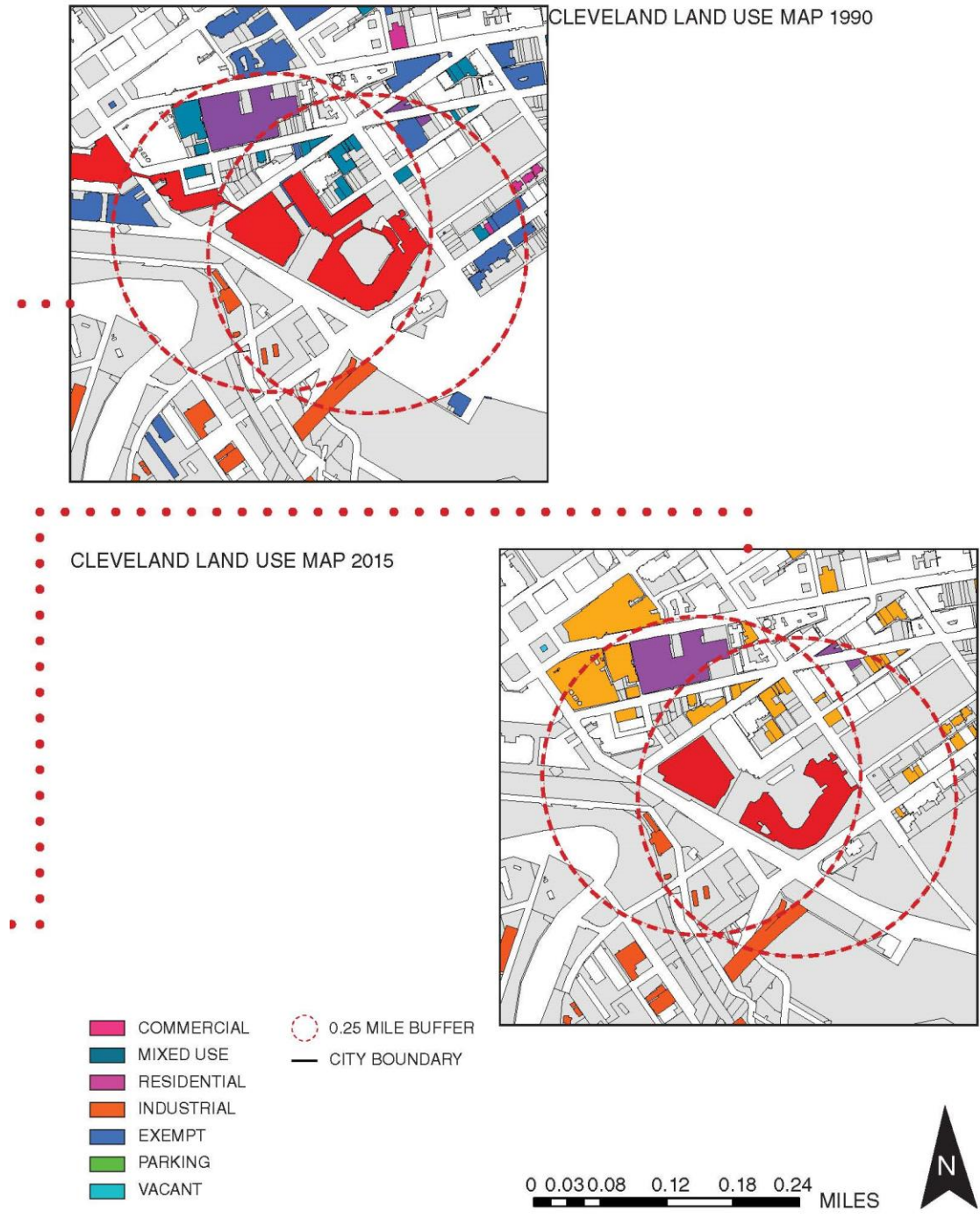


Figure 68. Cleveland's arena-district micro-area land-use composition map in 1990 and 2015.



B.3 DALLAS CONTEXT AND LAND-USE MAP

Figure 69. Context map of Dallas and Dallas County including an inlay of Dallas' arena-district micro-area.

DALLAS, TX

AMERICAN AIRLINES CENTER

DALLAS MAVERICKS/DALLAS STARS - NBA/NHL

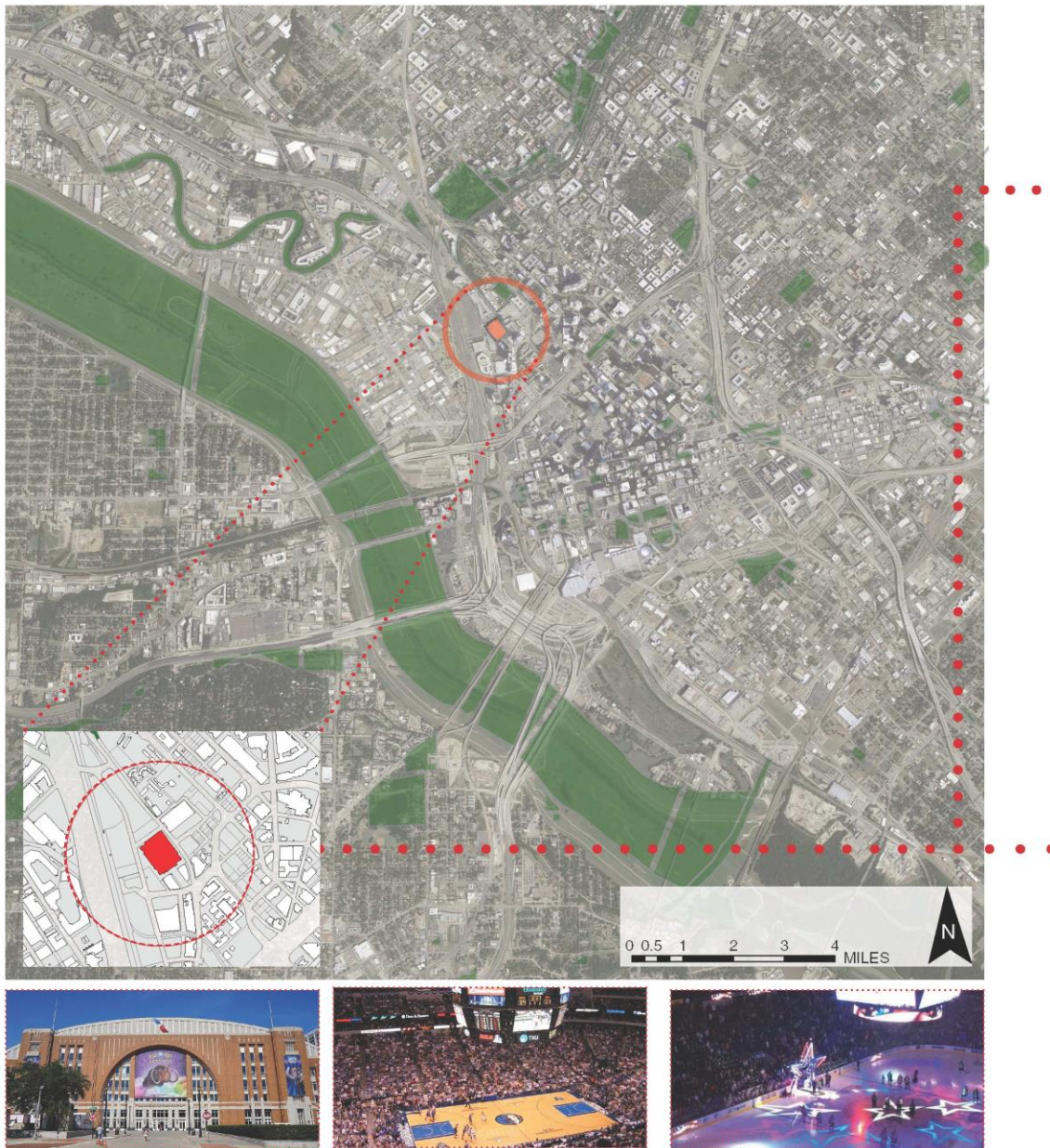
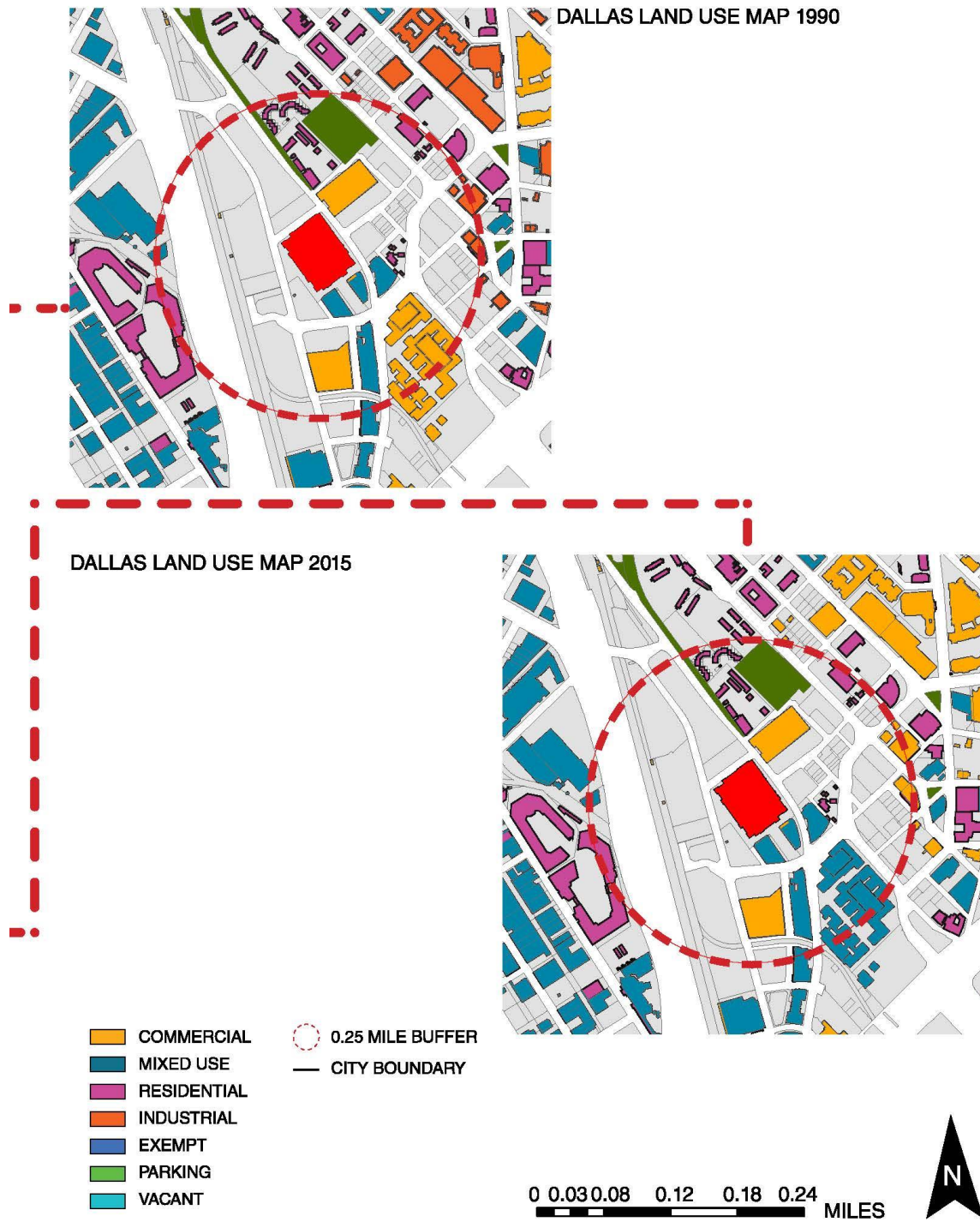


Figure 70. Dallas' arena-district micro-area land-use composition map in 1990 and 2015.



B.4 MEMPHIS CONTEXT AND LAND-USE MAP

Figure 71. Context map of Memphis and Shelby County including an inlay of Memphis' arena-district micro-area.

MEMPHIS, TN

FEDEX FORUM
MEMPHIS GRIZZLIES - NBA

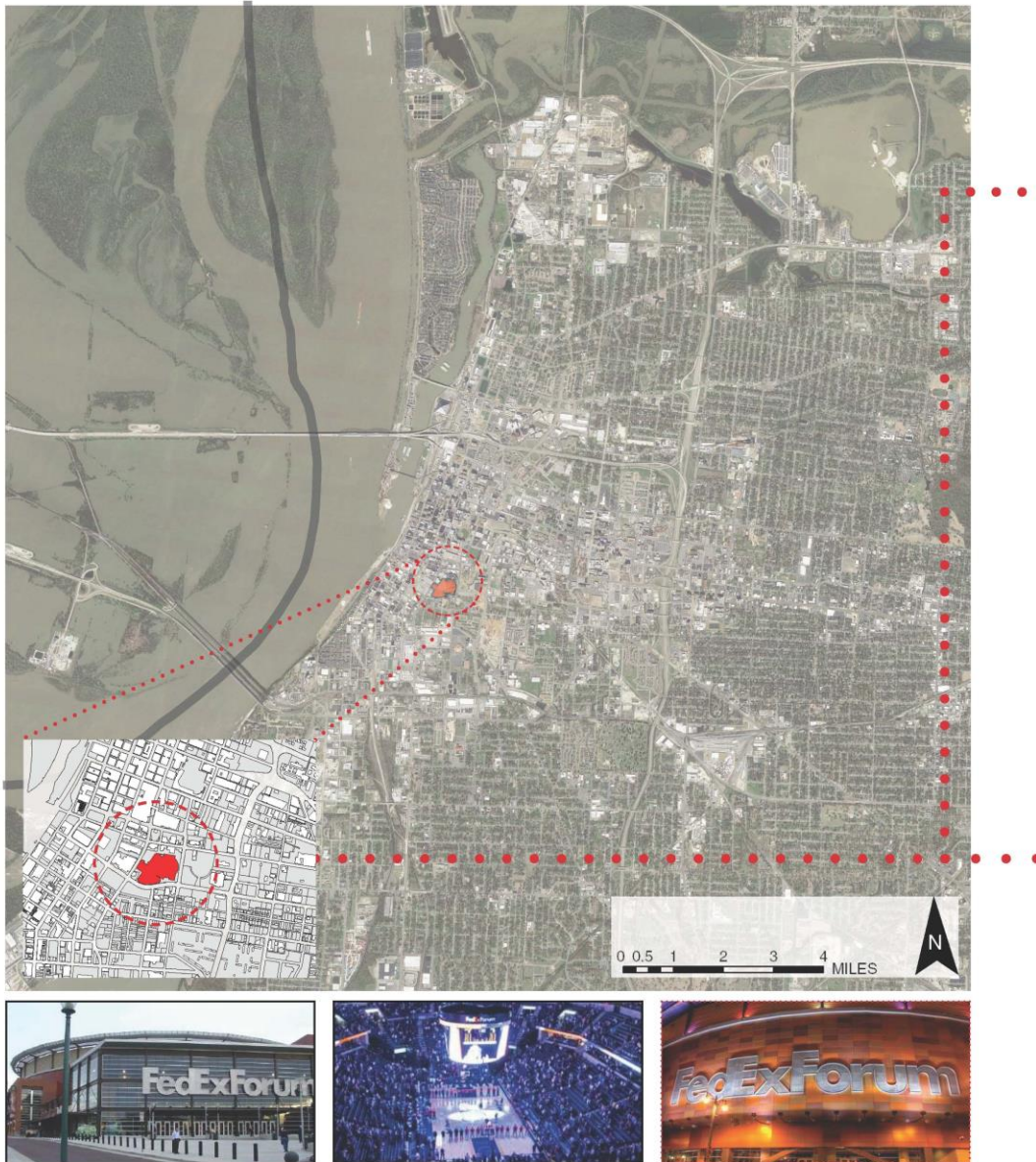
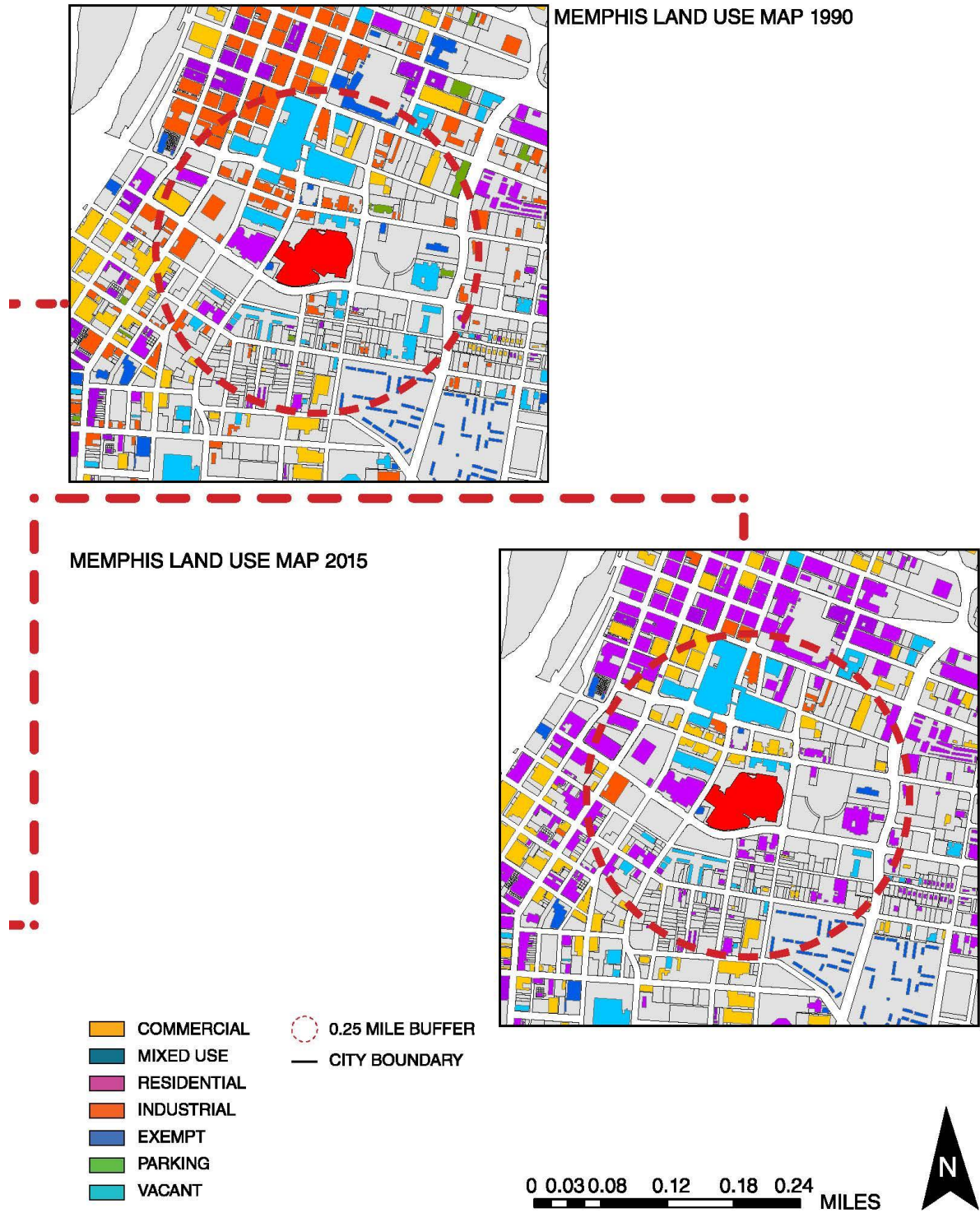


Figure 72. Memphis' arena-district micro-area land-use composition map in 1990 and 2015.



B.5 MIAMI CONTEXT AND LAND-USE MAP

Figure 73. Context map of Miami and Miami-Dade County including an inlay of Miami's arena-district micro-area.

MIAMI, FL

AMERICAN AIRLINES ARENA
MIAMI HEAT - NBA

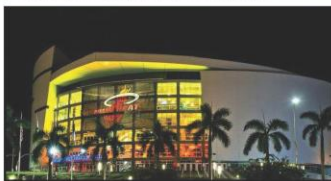
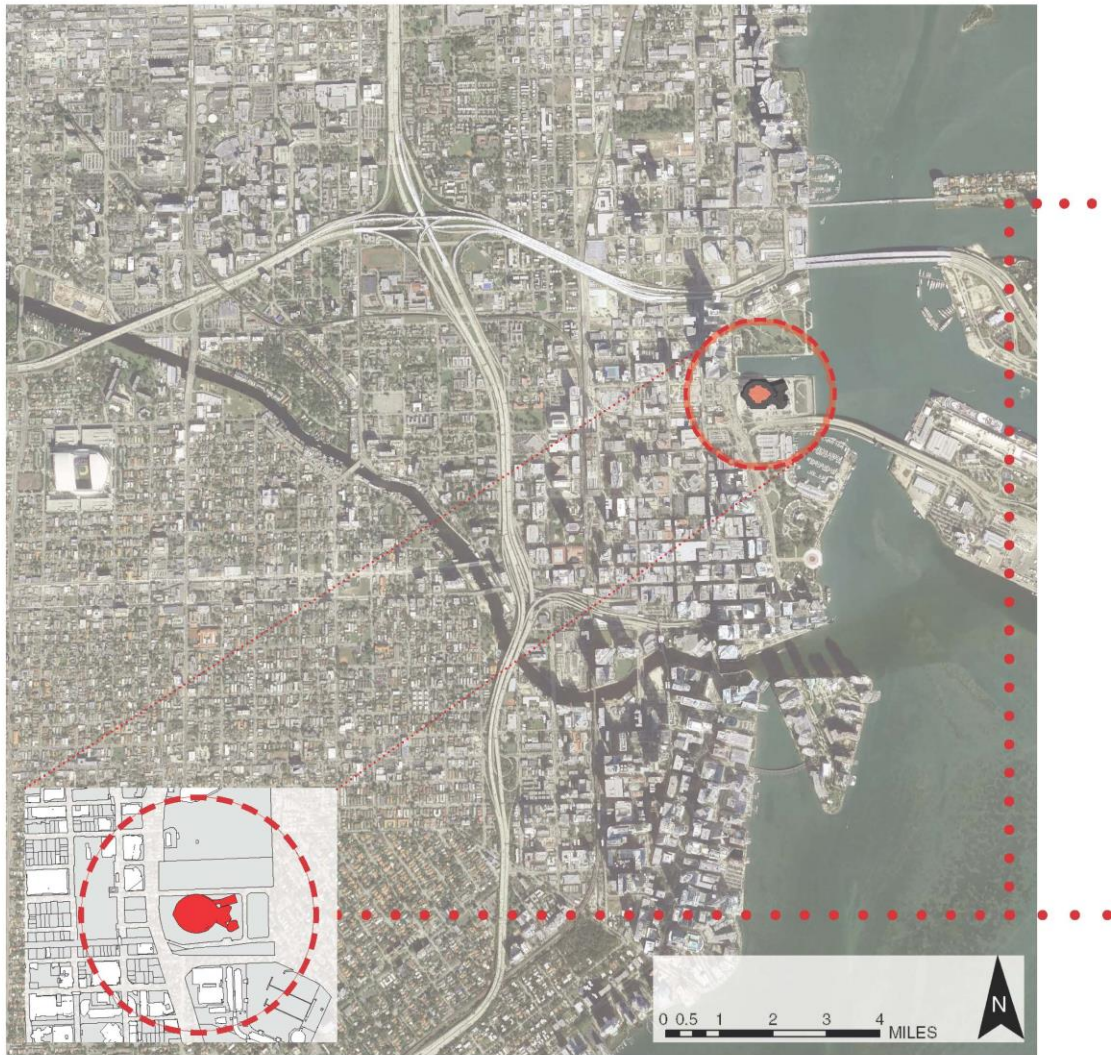


Figure 74. Miami's arena-district micro-area land-use composition map in 1990 and 2015.



B.6 OKLAHOMA CITY CONTEXT AND LAND-USE MAP

Figure 75. Context map of Oklahoma City and Oklahoma County including an inlay of Oklahoma City's arena-district micro-area.

OKLAHOMA CITY, OK

CHESAPEAKE ENERGY ARENA
OKLAHOMA CITY THUNDER - NBA

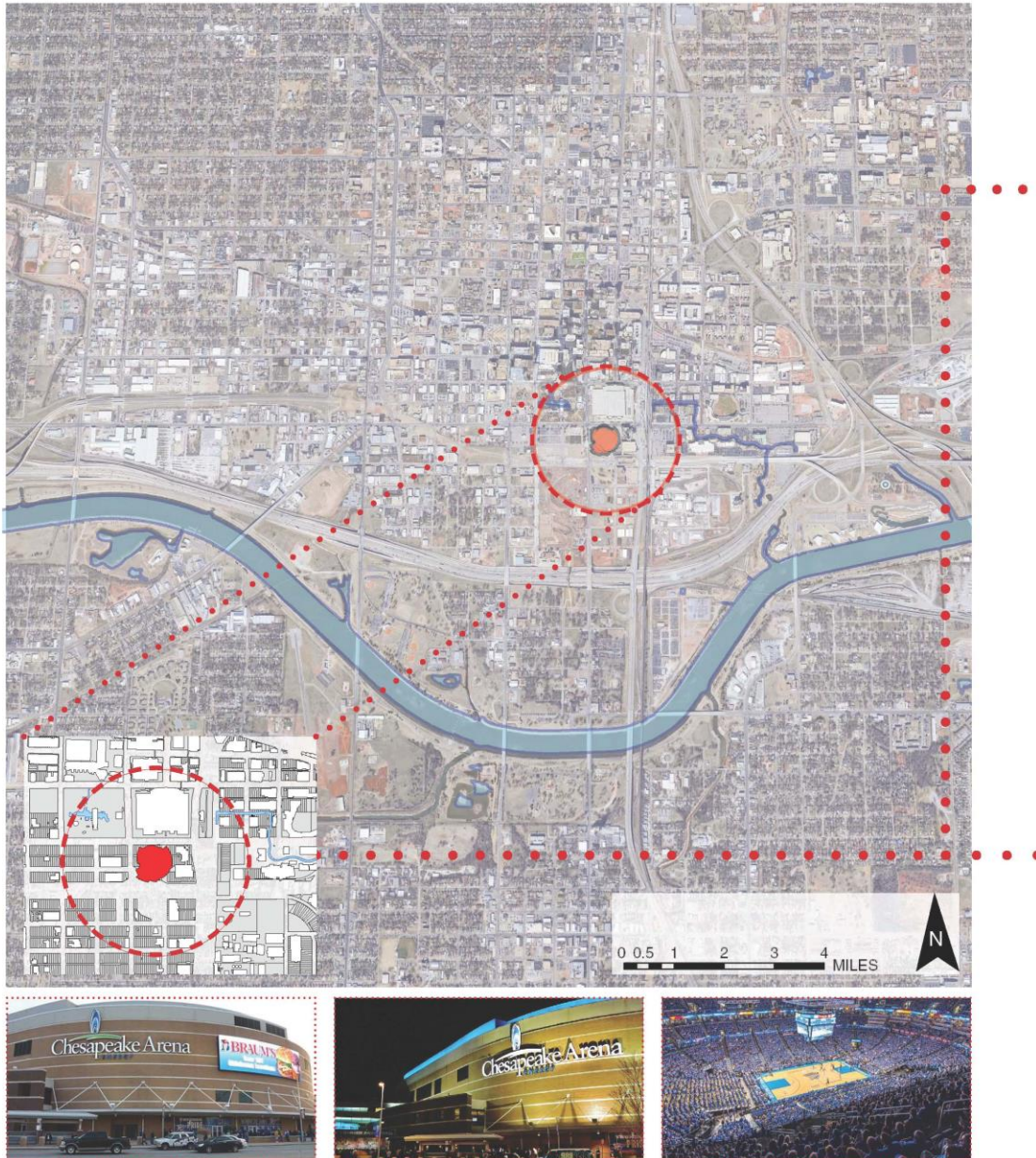
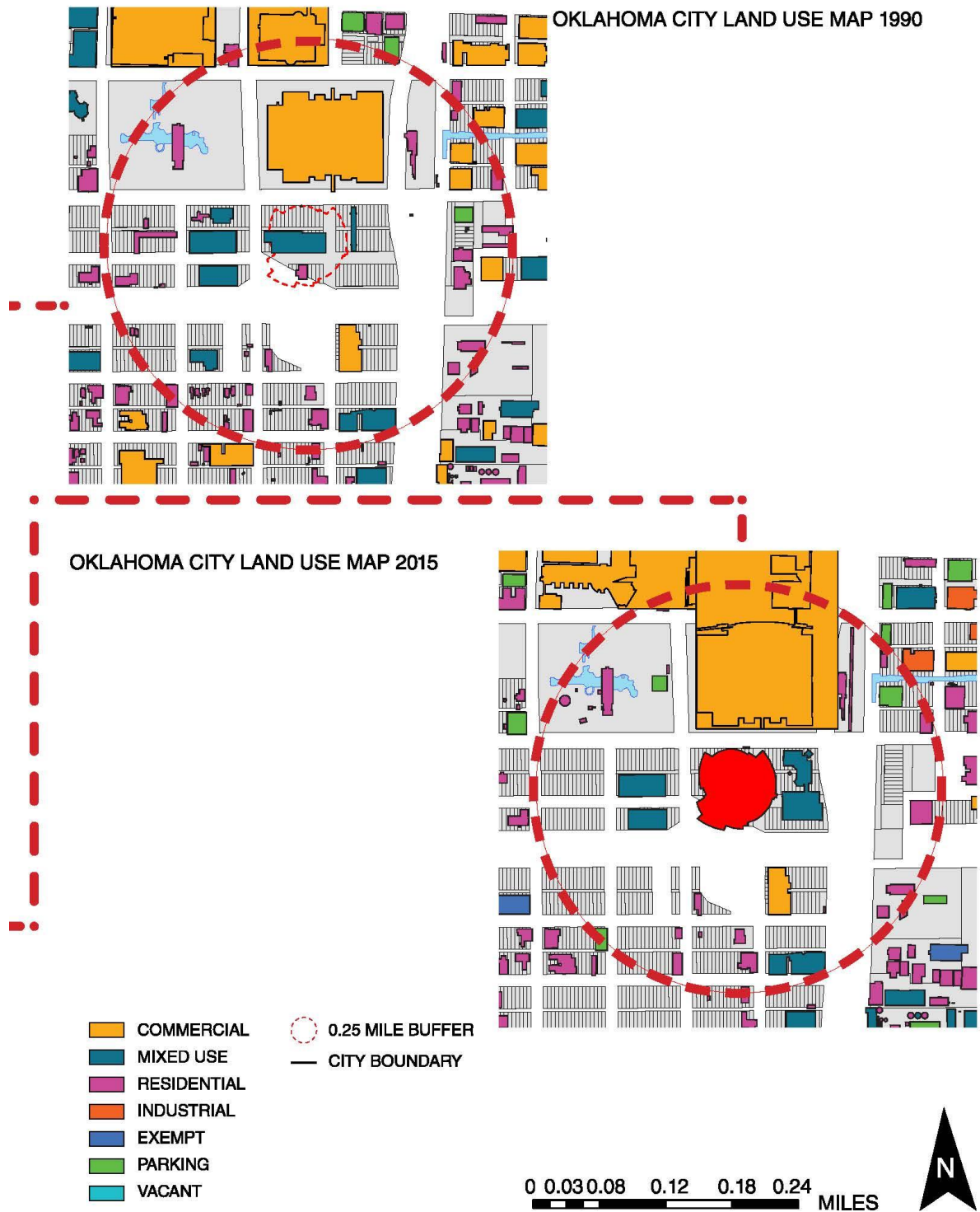


Figure 76. Oklahoma City's arena-district micro-area land-use composition map in 1990 and 2015.



B.7 DENVER CONTEXT AND LAND-USE MAP

Figure 77. Context map of Denver and Denver County including an inlay of Denver's arena-district micro-area.

DENVER, CO

PEPSI CENTER

DENVER NUGGETS/COLORADO AVALANCHE - NBA/NHL

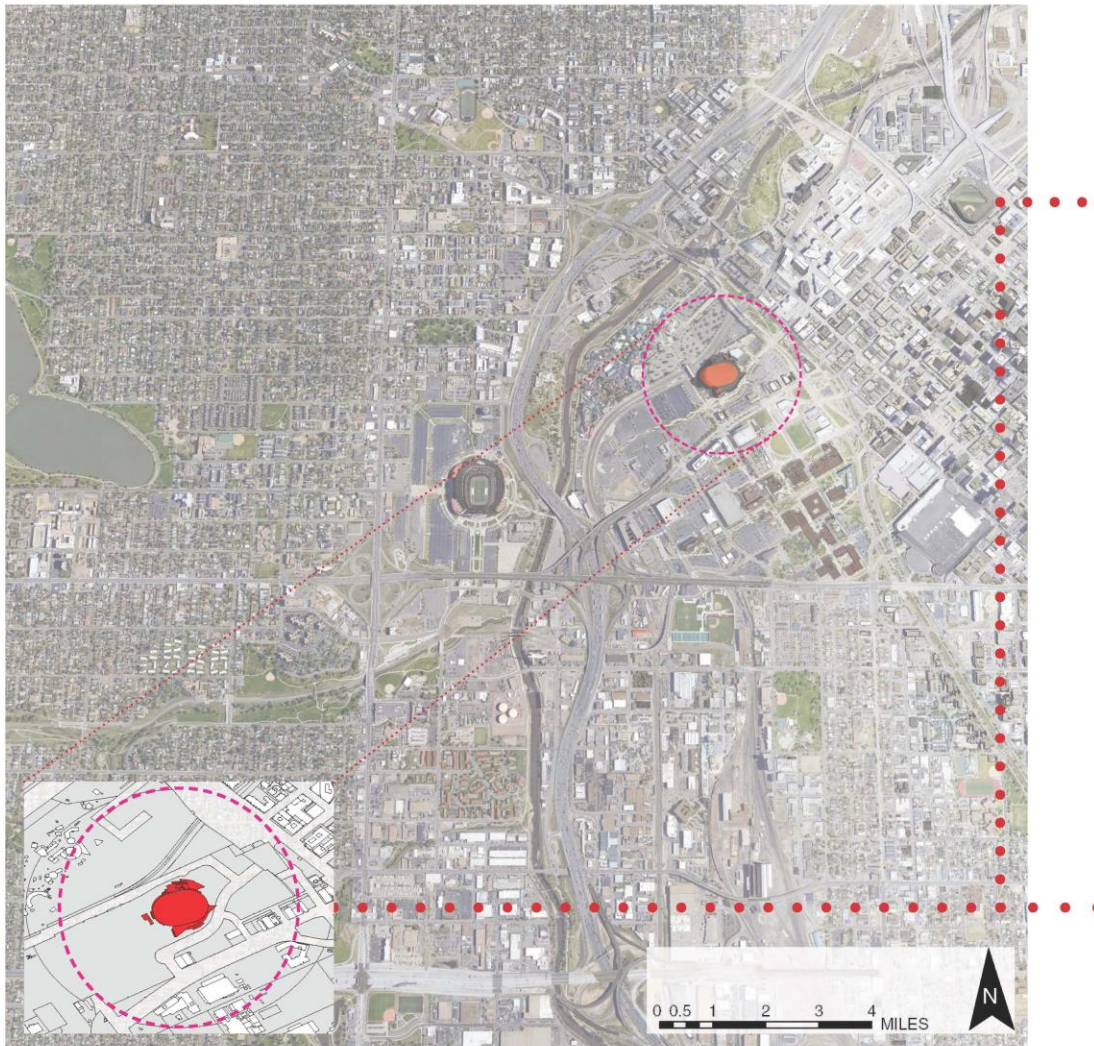
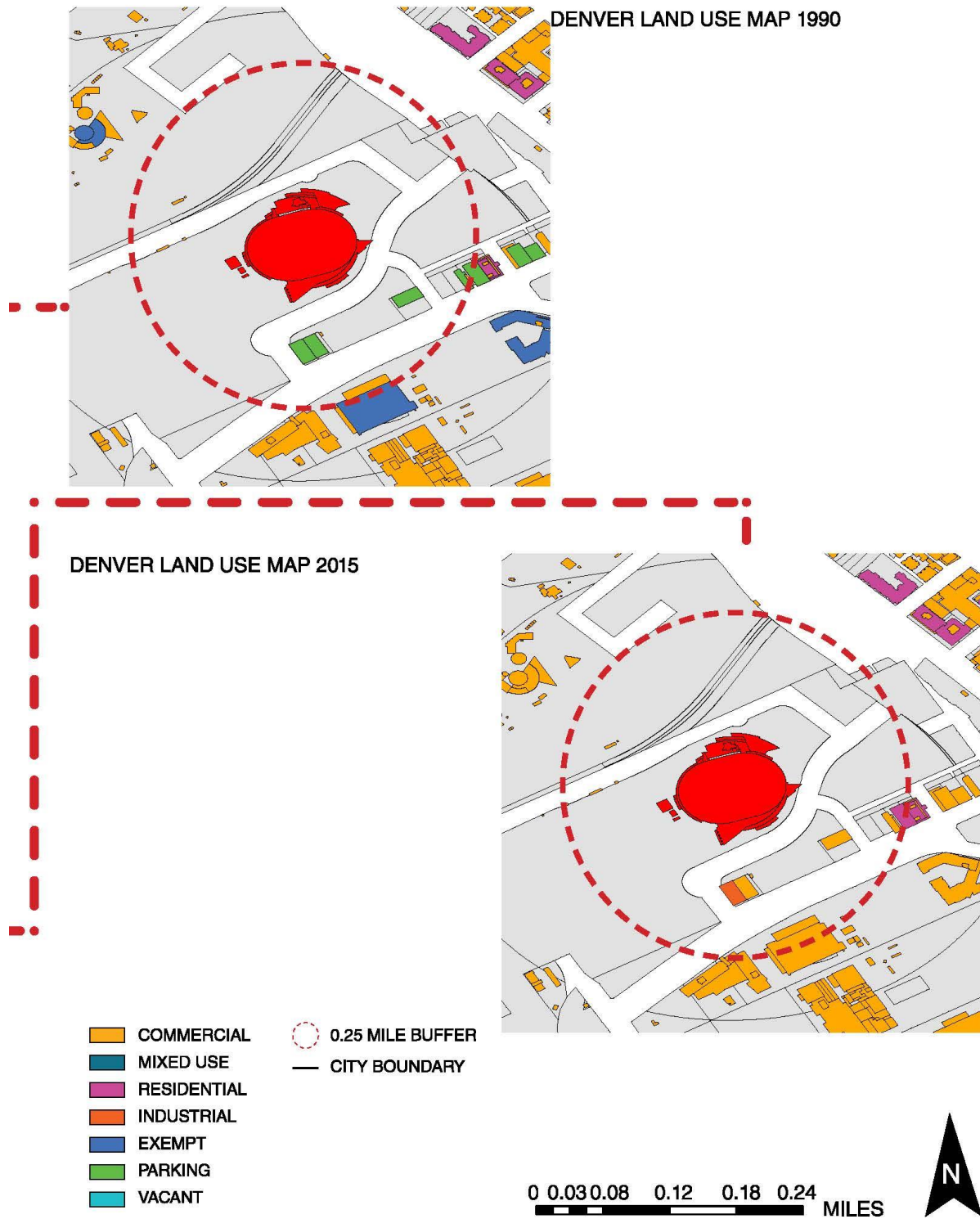


Figure 78. Denver's arena-district micro-area land-use composition map in 1990 and 2015.



B.8 GLENDALE (AZ) CONTEXT AND LAND-USE MAP

Figure 79. Context map of Glendale (AZ) including an inlay of Glendale's arena-district micro-area.

GLENDALE, AZ

GILA RIVER ARENA
PHOENIX COYOTES - NHL

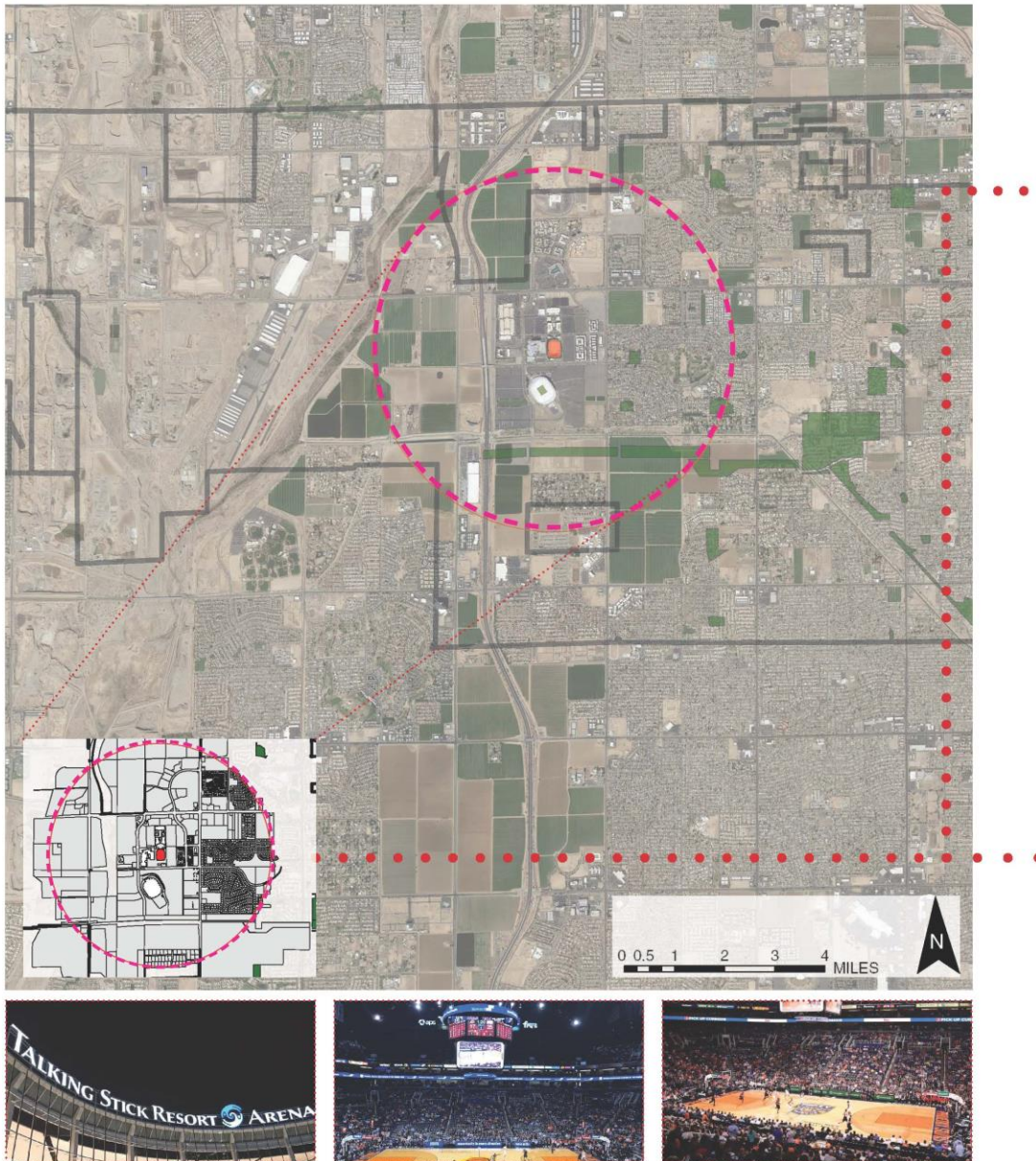


Figure 80. Glendale's arena-district micro-area land-use composition map in 1990 and 2015.

