Walkability, Amenities, and Housing Choice in Downtown Madison

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Abstract
High-Rise apartments are a quintessential living option for residents in major cities and downtown areas. Two important aspects of high-rise apartments are the amenities that are offered and how walkable the area surrounding the apartment complex is. This study examines the Madison high-rise real estate market and investigates four high-rise apartment complexes: Hub Madison, Lucky Apartments, Galaxie Apartments, and The Constellation. The study analyzes what has led to the increase of high-rises in the Madison area, whether the amenities that are provided by developers align with what resident’s desire, and walkability throughout Madison. Research consisted of surveyed data of the four apartment complexes as well as interviews with key real estate and marketing executives. The research group calculated walk scores for the four apartment complexes, compared them to resident perceptions of walkability and walkscore.com scores and found a high degree of perceptual alignment. In addition, results suggest that personal amenities are more important than community amenities to housing choice, developers are aware of what amenities residents desire and use, and that the rental preferences of the millennial generation have enabled high-rise development.

(1.0) Introduction:
Anyone who visits Madison can tell stories of the unique city sandwiched between two lakes with a skyline dominated by the capital. The capital can be seen from virtually anywhere in Madison and is particularly striking when walking up Madison’s famous pedestrian mall, State Street. State Street, which was converted into a two-lane limited access road in 1974, is a defining feature of downtown Madison and is one reason Madison is nationally touted as a walkable city. Limiting use to bikes, busses, and service vehicles allowed the city to increase sidewalk width and encourage public interaction. Today you can find hundreds of people
walking up and down State Street engaging in numerous activities. However, it is the walkability of State Street and the various retail shops, recreation spaces, and other conveniences located in the surrounding area that make downtown Madison a desirable place to live. In recent years, the desire to live downtown has catalyzed the development of numerous luxury high-rise apartment complexes. For better or worse, the physical structures themselves along with the residents living in them are changing the Madison landscape.

High-rise developments over the past ten years have been increasing in size and density and are driven by a number of factors. Madison’s identity is deeply connected with the University of Wisconsin-Madison. As a college town, Madison has a potential school year population fluctuation of roughly 43,000 students. A market for rental housing has always existed in the city, in addition, lifestyle changes and an increase of healthcare technology and insurance companies within the region have caused the market to become increasingly profitable. The rental rates in Madison have been higher than the Wisconsin and national averages since 2005 (Department of Numbers). Epic Systems, a private healthcare software provider, is the second largest employer in Dane county, behind UW-Madison. Epic employs roughly 10,000 people, of which almost 70 percent are renters (City of Madison Housing Survey 2014, 11). The desire of some of these young professionals to live in downtown Madison has spurred apartment construction. In downtown Madison, less than 33 percent of residents own homes (HUD CPD Maps). This culmination of factors dropped Madison’s vacancy rate to 1.66 percent in 2015 (Department of Numbers). Extremely low vacancy rates and high demand create an environment in which suppliers can thrive. The lack of other housing options forces renters to pay higher prices than desired. The mean gross rent in Madison increased 4.71
percent in 2015, dwarfing the U.S. inflation rate which has hovered around one percent for the past few years (Department of Numbers). The widespread increase in rental rates and high-rise apartment complexes throughout Madison warrants further investigation. Throughout this article the authors will examine the factors contributing to housing choice, specifically looking at the effect amenities and walkability have on apartment choice.

(1.1) Research Question:

We will analyze the factors influencing housing choice in downtown Madison. Specifically looking at the recent influx of high-rise development. We will interview prominent apartment owners/developers and survey students and other residents to determine how important building amenities and walkability are to renters and developers in downtown Madison. Additionally, we will compare walkability levels across Madison with the perceptions that residents and developers have about walkability. Our primary questions of concern will be as follows: What has contributed to the increased development of high-rise apartments? What are the most influential factors affecting development decision and where to locate? Do the amenities offered by developers align with the residents’ desires? Is there perceptual alignment between residents, developers, and the research group’s calculations, in terms of walkability?

(2.0) Site Setting

The buildings we will be focusing on are Lucky Apartments, Hub Madison, Galaxie Apartments, and The Constellation. Due to the general importance of UW-Madison to the community as well as the influx of young professionals and development in Madison we have
carefully selected four apartment complexes to study. All the apartments are located in downtown Madison. We chose to focus specifically on downtown Madison because 67 percent of downtown residents are renters and downtown is where the largest concentration of high-rise development has occurred (City of Madison Housing Survey 2014, 16). The four apartments were selected due to their comparable rental prices and age. Two of the complexes are located on campus and two are off campus. This choice was made so that we could compare on campus residents (Hub & Lucky) who tend to be students with off campus residents (Galaxie & Constellation) who tend to be young professionals and empty nesters. We will investigate the development of the apartments and the amenities being offered by the complexes and compare them to the amenities residents’ desire.

The Hub is a luxury high-rise apartment complex located on the 500 block of State Street. It is packed with all the amenities one could want and then some. They include a rooftop pool, golf simulator, sand volleyball court, fitness center, and so much more. For a list of all the amenities offered by the Hub and the other apartments we examine, see appendix A or B. The Hub is one of the two case studies within a block of the UW-Madison campus. The Hub differs from the other two buildings we have studied in that it is owned by a national housing company, EdR, which specializes in near-campus housing. We will show how development strategies differ between national companies such as EdR, when compared to Madison development companies.

Lucky Apartments are located on the corner of Johnson and Lake Street in downtown Madison. The complex is owned by Steve Brown and was built in 2008 making it the oldest of the four complexes in our analysis. Steve Brown owns many buildings around the Madison area
including houses for rent, small apartment complexes, and large high-rise apartments. Lucky features a newly designed deck area with outdoor grills, a hot tub, and a turf recreational area. It offers a few amenities that the other three complexes do not, such as 24-hour staff willing to help with just about anything. Another thing that makes this apartment complex unique is the accessibility residents have to services and businesses located within the same building including Fresh Market grocery store, Anytime Fitness, University Health Services, Walgreens pharmacy, and Aveda Institute. However, overall the apartment includes fewer amenities than the other three buildings we are focusing on. This difference helps create a comprehensive picture of what Madison residents value most.

Galaxie and Constellation are two other complexes in our study and are located a significant distance from campus. The complexes are both located on East Washington Avenue, about six blocks from the state capital. The two apartments are combined throughout this article because they are similar in design and demographics. Additionally, both complexes were developed by Gebhardt Developments and are owned by Otto Gebhardt. Galaxie, like Lucky apartments, has other businesses within the building including Festival Foods, a grocery store. Located off campus, the geographic location of Galaxie and Constellation allowed us to compare amenity choice and walkability between different locations and among different demographic groups.

The combination of the four sites described above provided information about both on and off campus development and consumer desired amenities. They also provided different walkability ratings that were compared. We chose these four apartment complexes as case studies because they are all relatively new buildings, all built within the last ten years. They are
also comparable in price, but all offer different amenities within and around the buildings. Furthermore, some members of our research group live in Lucky and the Hub and we have networked connections to Otto Gebhardt. This contributed to the decision of which apartments to study as it allowed data collection to be feasible within a semester time frame. Surveying residents allowed us to obtain what residents value most about the buildings and how they feel about the general walkability aspects that we were less able to infer from observation, including relative safety of areas and aesthetic appeal. Throughout this article we will be taking a close look at Hub, Lucky, and the off-campus Galaxy and Constellation apartments in Madison.

(3.0) Literature Review

(3.1) Walkability

Walkability is a term that explains how easy and welcoming an area is to walk. There are many definitions of walkability. For example, Pivo and Fisher define walkability “as the degree to which an area within walking distance of a property encourages walking trips from the property to other destinations” and San Diego’s Master Plan refers to it as “a mixture of physical and perceptual elements that make up the built environment that are conducive to walking” (2011, 186; JB&F Consulting 2010, 6). These definitions show that walkability has to do with the features of an area that are within a walkable distance. Walkability has many definitions which lead to numerous ways of calculating walkability. Overall, there are three main benefits that come from a walkable area; health, environmental, and economic.
In a college town health is extremely important, sitting in classroom all day and studying does not leave students with much time to be active or healthy. One of the ways that an area with good walkability is beneficial for the community is through health benefits. If an area is highly walkable people will be more likely to take advantage of that benefit and walk around, which makes people more active and subsequently healthier. Studies have found that neighborhoods classified as walkable (using walkability benchmark tools) have higher levels of incidental walking and a lower incidence of obesity (Frank et al. 2007, 307). The health benefits associated with walkability is further stated by Gilderbloom and his colleagues: “those living in less walkable areas are more likely to have shorter lives” indicating that health is positively correlated with walkability (2015, 22). Walkable environments give residents an opportunity to live a healthier lifestyle making them a desirable place to live.

Walkability has benefits beyond encouraging people to be healthier, one of which is the positive impact walkable spaces have on the environment. Highly walkable environments are generally the product of high density development. Because of this “walkable environments will counteract the negative effects of urban sprawl” and have the potential to prevent greenfield development (Sohn, Vernez, & Lee 2012, 115). Additionally, people enjoy walking around areas with trees and green spaces, and not in areas littered with garbage that contain polluted air. Walkability leads to positive environmental changes, because a community that wants to encourage walkability will likely incorporate trees and bushes into their urban designs, creating environmentally friendly areas. Furthermore, in areas with higher walkability there will be less cars and in turn reduced CO2 emissions. Walkable environments have the potential to
“alleviate traffic congestion, air pollution, and the destruction of natural environments”
creating a pleasant environment to live in (Paumier 2004, 54).

An important factor in our study is the economic effects of walkability because one of the main aspects that differentiates these luxury apartments from other housing in Madison is their higher rents. Many studies have been done that use econometric regression to determine the effect walkability has on housing values. The majority of statistical work that has been done on walkability uses OLS regression. A walkability study done in Louisville, KY “found that walkability is statistically significant in predicting an increase in neighborhood housing values,” contributing to the scores of literatures that associate walkable neighborhoods with higher housing prices (Gilderbloom, Riggs & Meares 2015, 22). In addition to impacting housing values there are significant consumer cost savings associated with walkable environments. If someone can walk to restaurants, grocery stores, work, and recreation venues they have little need for a car. Households in “automobile-dependent communities devote 50% more money to transportation,” the money that is saved in walkable communities can be reinvested in the local economy or put towards housing costs (JB&F Consulting 2010, 7). Additionally, while walking around, residents are more likely to stop at restaurants, corner stores or galleries; this creates numerous job opportunities that would not be available in auto-oriented communities. According to a case study in Baltimore, pedestrian and bicycle infrastructure projects created approximately seven to fourteen jobs per one million dollars of spending, whereas road infrastructure projects created approximately seven jobs per one million dollars of spending (Garrett-Peltier 2010, 1). The income earned by these workers will likely be spent within the community, benefiting the economy as a hole. Our four case studies are all considered luxury
apartments and have high rents relative to other apartments across Madison. We have measured the walkability of the areas surrounding the apartment complexes, using four selected factors of walkability, to confirm the positive correlation between housing prices and walkability.

Since there are many aspects of walkability and many definitions we wanted to look at how walkability affects students in Madison, Wisconsin in particular. We calculated our own walk score with elements that are specialized to Madison and its’ residents. Some of these elements include the importance of being close to different parts of campus and/or state street. In order to calculate a walk score for the buildings in our study we looked at four factors: (1) proximity & accessibility, (2) safety, (3) ease of use, and (4) pleasant aesthetics & design.

Proximity and accessibility are arguably the most important things to consider when determining how walkable an area is. Proximity is simply a measure of how close various amenities are from a certain location. If a location is truly walkable then there will numerous facilities within a relatively small walking distance. It is important to consider how many parks, green spaces, restaurants, bars, retail stores, concert halls, entertainment spaces, offices, schools, hospitals, and other services are within five and twenty minute walking distances. It has been found that “people who reside close to parks and open spaces are approximately two to three times more likely to take a walk within a two-day period than their counterparts” who have no parks near their home (Bashir 2013, 32). How we calculated proximity and accessibility will be explained further in the methods section.

Safety is another factor that has a high impact on whether someone walks and is a top priority for students. There are many factors that contribute to the safety of an area. Lighting
plays a big role; the presence of sufficient street lighting enables activity after the sun has set. Another thing that comes into play is crime. Both actual crime rates and perceived crime can either discourage or encourage the use of public space. Having lots of people walking increases the number of “eyes on the street” and has been found to decrease crime rates (Jacobs, 1961). Surrounding buildings that are built in a way in which the street can be seen from inside, either through glass/windows or balconies/patios, “encourage[s] people walking by enhancing the perception of safety from crime” and is an important aspect to examine when calculating walkability (Zuniga-Teran et al. 2017, 64). Safety is a concern to all students especially since college is many students first time in a new area away from home and will be examined further later in this article.

Ease of use measures how easy it is for someone to walk from one destination to another. If it is a nuisance to walk to a desired amenity, residents are more likely to drive or avoid leaving their house. When analyzing ease of use it is necessary to consider, sidewalk size and length, street width, barriers, and continuity. A pedestrian’s ability to cross streets will impact their decision to walk. Sidewalks that intersect major roads with no crosswalks or large multi-lane roads are examples of barriers. A continuous journey with multiple, direct, short routes to different destinations can substantially increase the incentive to walk. Studies have found that “block length and perceived walking distance are directly proportional to each other;” even when the total distance is the same, a block split in half leads to the perception of a shorter walk (Singh 2015, 651). We looked at block lengths and how the blocks are connected in order to calculate ease of use.
The final factor that affects walkability is the design and aesthetics of the Madison area. Many spaces have the physical features that are required for a walkable environment, “however, it is not only the existence of an accessible environment that makes pedestrians use it... making it attractive plays a fundamental role” (Moura et al. 2015, 1). People are not going to walk in areas they do not find pleasant. Unfortunately, this is the most subjective of all the categories and the hardest to measure. Some pedestrians may find graffiti art visually appealing while others view it in a negative light and see it as a sign of crime. The subjectivity of pleasant aesthetics motivated us to survey residents to see if they found the area in which they live visually pleasing.

(3.2) Amenities

Amenities are any feature that provides comfort, convenience, or pleasure. Due to the nature of the recent hike in development of high-rise buildings in Madison, amenities are now considered a necessity. Residents and developers associate quality and amenities synonymously. There is an inherent expectation for there to be top notch amenity bundles or packages included in high-rise renting options. All four high-rise apartment complexes that we analyzed in this study are considered luxurious apartments and market their amenities heavily.

We focused heavily on these amenities throughout our research. Amenities were split into two categories: community and personal, as defined above. Our main aim was to deduce in what order the tenants rank the importance of these amenities in their apartment choosing process. Additionally, what amenities developers and apartment owners deem important. We were able to gather this information by distributing a Qualtrics survey which is further
described in the methods section. Amenities were split into two categories: community and personal. Personal amenities are amenities that are only included within individual apartment units. They include features such as in-unit washer/dryer, appliances, smart technology, WiFi, and furnishings. Community amenities are features such as pools, gyms, yoga studios, community patios, parking, roommate matching, mail service, security services, and on-site maintenance. These amenities can be enjoyed by anyone who lives in the apartment building.

(4.0) Methods

In order to answer the questions of interest we have designed and implemented surveys of both on and off campus residents. A general survey was distributed via social media, email, and canvassing to gain a reasonable sample size. The general survey was only sent to residents that live on or near the UW-Madison campus. The majority of the respondents were residents of Lucky and the Hub. A separate survey was distributed to Constellation and Galaxie residents via an email from their management company.

We have also calculated walkability scores for each of the locations in our study. These scores are numerical values ranging from one to five. One being the least walkable and five being the most. A second score was calculated from the likert scale values from survey results. This score will give an idea of the residents’ perceptions of walkability around the building they have chosen to live in.

Lastly, interviews have been conducted with real estate advisors and developers with experience in Madison. Participants include Todd Carpenter and David Haviland of Baker Tilly LLP, as well as Otto Gebhardt of Gebhardt Development. Through these interviews we were
able to gain insight on the complicated workings of real estate development decision making in and around Madison as well as what experienced individuals think about the rise in high-rise development in Madison.

(4.0) Methods

(4.1) Interview Methods

We have conducted two interviews with three participants. First Todd Carpenter and David Haviland at Baker Tilly LLP, Madison. Todd has been with Baker Tilly (formerly Verchow Krause) for twenty years. He is a partner at the firm and the leader of the real estate and construction practice. Todd’s experience in the real estate business expends far beyond Madison, Wisconsin, giving him a comprehensive view of development in multiple cities. David Haviland is the leader of the multifamily market study practice at Baker Tilly, Madison. David has more than fifteen years of experience conducting real estate market studies. David helped us gain more insight into the factors that go into decision making and the kinds of studies developers need to see before making decisions.

The second interview we have conducted was with Otto Gebhardt of Gebhardt Development. Otto owns both off-campus locations we have chosen to look at. He has worked in real estate development for most of his life and owns many properties in Madison, Wisconsin. Otto was able to give insight into workings of the Madison real estate development community as well as some personal preferences about things he likes to include in his buildings. He was able to tell us how developers evaluate walkability and what he thinks is
driving the increase in renters in Madison. Otto was also able to connect the residents in his buildings with us through the distribution of a survey.

(4.2) Survey Methods

The research group designed a survey that was distributed to on and off campus residents. Half of the questions on the survey were aimed towards finding out what residents’ value most in an apartment complex and the other half was designed to allow the group to calculate a walk score of the residents’ perception of walkability around each of the buildings. Likert scale questions were used to establish a resident walk score. For explanation, there is a positive statement pertaining to one of the four factors we have decided to evaluate. For example, one of our survey questions was, “How safe do you feel in the area where you live?” Then there were five options: extremely safe, safe, neither safe nor unsafe, unsafe, or extremely unsafe. Each of those values is equated to a numerical score (extremely safe (5), safe (4), neither safe nor unsafe (3), unsafe (2), or extremely unsafe (1)). This survey allows for comparison between the research group’s calculated walkscore and developer insights.

Survey questions are as follows:

1. Where do you live?

   This question informs of the type of dwelling and optional name of complex.

2. What was more important in your housing decision?
   a. Personal amenities (pool, gym, lounge, patio, etc.)
   b. Community amenities (in unit washer/dryer, cable/wifi, modern appliances, etc.)
3. In general, what personal amenities would you be most willing to pay extra for? Rank them from 1 to 7, 1 being least willing to pay extra and 7 most willing to pay extra.
   a. WiFi
   b. Views
   c. Balcony
   d. Furnished living quarters
   e. Cable TV
   f. Modern Appliances
   g. In unit washer/dryer

4. In general, what community amenities would you be most willing to pay extra for? Rank them from 1 to 7, 1 being least willing to pay extra and 7 most willing to pay extra.
   a. Fitness center
   b. Outdoor grill area
   c. Lounge
   d. Study room
   e. Swimming pool
   f. Spa/hot tub
   g. 24-hour staff

5. My current living situation offers value for the money I pay
   a. Strongly agree
   b. Agree
   c. Neither agree or disagree
   d. Disagree
   e. Strongly disagree

6. Is it easy to walk 5 minutes in all directions from your residence? (keeping in mind crossing streets, traffic, parked cars, etc.)
   a. Strongly agree
   b. Agree
   c. Neither agree nor disagree
   d. Disagree
   e. Strongly disagree

7. The areas surrounding your residence are visually appealing.
   a. Strongly agree
   b. Agree
   c. Neither agree nor disagree
   d. Disagree
   e. Strongly disagree

8. How frequently do you walk to these locations? (restaurants, concerts, supermarkets, parks or recreation facilities, health clinics, retail stores, etc.)
a. Extremely frequently (more than once a day)
b. Frequently (once a day)
c. Occasionally (a few times a week)
d. Infrequently (once a week)
e. Very infrequently (less than once a week)

9. How safe do you feel in the area where you live?
   a. Very safe
   b. Safe
   c. Neither safe nor unsafe
   d. Unsafe
   e. Extremely Unsafe

10. What is your primary means of transport in Madison?
    a. Walking
    b. Bicycle
    c. Walking
    d. Motorcycle
    e. Moped
    f. Bus
    g. Taxi
    h. Uber/Lyft

Explanation of Questions:

    Question two gave us insight to whether personal or communities were more important
to residents housing choice. The following two questions showed us, of the listed amenities,
which ones are specifically valued most by residents and how the values compare across
different locations with different renter bases. The seven amenities were chosen because all of
them are offered by at least one of the four apartment complexes in this study. Question five
was chosen to gauge whether residents believe their rents are at an appropriate level for what
they get with the apartments they live in. Questions six through nine allowed the group to
assign numerical scores to the four categories that have been chosen to give a comprehensive
walk score calculation based on the perception of residents living in the buildings the survey
was distributed to. Question ten revealed just how much residents depend on walking, which
gave us clues as to why they may have answered questions aimed at our walkability score calculation in the way they have. The last question, not included below, featured a map of Madison and asked residents to click on the area they most prefer to walk. A heat map was generated to show where residents walked most. From the map the research group was able to tell where residents go most on foot. This gives an idea of what areas are most important to be accessible by foot.

(4.3) Interview Methods

We have conducted two interviews with three participants. First Todd Carpenter and David Haviland at Baker Tilly LLP, Madison. Todd has been with Baker Tilly (formerly Verchow Krause) for twenty years. He is a partner at the firm and the leader of the real estate and construction practice. Todd’s experience in the real estate business expends far beyond Madison, Wisconsin, giving him a comprehensive view of development in multiple cities. David Haviland is the leader of the multifamily market study practice at Baker Tilly, Madison. David has more than fifteen years of experience conducting real estate market studies. David helped us gain more insight into the factors that go into decision making and the kinds of studies developers need to see before making decisions.

The second interview we have conducted was with Otto Gebhardt of Gebhardt Development. Otto owns both off-campus locations we have chosen to look at. He has worked in real estate development for most of his life and owns many properties in Madison, Wisconsin. Otto was able to give insight into workings of the Madison real estate development community as well as some personal preferences about things he likes to include in his
buildings. He was able to tell us how developers evaluate walkability and what he thinks is driving the increase in renters in Madison. Otto was also able to connect the residents in his buildings with us through the distribution of a survey.

(4.4) Walkability Score Methods

The research group has calculated walkability scores for all of the apartments chosen as case studies. The group has selected four categories on which the areas are ranked on a scale of one to five. One being the lowest, or least walkable, rating and five being the highest and most walkable rating. The four factors the areas have been scored on are safety, proximity and accessibility, ease of use, and pleasant athletic and design. These are the four factors the group determined would give the most complete picture of walkability in the areas chosen to look at. Why and how the research group calculated the walk scores for each location is explained further in the walkability results section. As you can see in Figure 1 downtown Madison is considered a very walkable area. The walk scores calculated by the research group aimed to confirm that statement and further explore what makes the Madison area walkable.
Figure 1: This figure is a walkability map of Madison, WI which indicates walkability from green to red, with green being best and red being worst. This map is from the WalkScore.com.

(5.0) Results & Analysis

(5.1) Interview Results

In the interviews conducted with Todd Carpenter and David Haviland of Baker Tilly LLP, and Otto Gebhardt of Gebhardt Development the research group was able to gain insight into the interpersonal workings of the real estate development community as well as the more technical aspect of how development decisions are made. Questions asked in the interviews and the transcript for the Baker Tilly Interview can be seen in appendix D.

Common themes of the two interviews include the characteristics of the Madison real estate community and restrictions, Madison’s unique demographic, and a common agreement about amenities residents most use and how they affect renter decisions. In reference to the real estate community in Madison, all three interviewees expressed that it has historically been
difficult for non-local companies to gain foothold in the Madison market. The restrictions imposed on who can develop and what can be developed in Madison and who has to approve the projects isn’t something national level developers want to deal with. Developers who are familiar with Madison residents and the culture of the city, like Mr. Gebhardt, are far more willing and able to accommodate these restrictions and need for approval. That said, there has been a recent influx of national level companies building on and around the UW-Madison campus. In both interviews the group addressed this, to find out that those companies had sold their projects after completion. Further emphasizing the common theme that national companies do not seek a foothold in Madison’s housing development market.

The next point stressed by all interviewees was the unique demographic Madison offers. The millennial generation that attends UW-Madison, and works in the relatively large healthcare technology industry (brought to Madison by Epic) makes up a huge part of the downtown Madison population. For the purpose of this study, the group discussed that the Millennial generation would be broadly defined as people between the ages of twenty and thirty-four. In the eyes of the interviewees, the millennial generation has a different view of renting than previous generations who preferred to buy homes outside of the city center. This means that they do not see renting as a negative, they see it as a means to flexibility and in turn mobility. It was touched on in each interview that the 2008 crash could have something to do with this generations reluctance to buy homes as opposed to renting. They may have seen family members struggle in the heat of the crash.

The last of the most common themes in both interviews was the understanding of how different amenities affect housing choice and which are used by the residents. At Baker Tilly,
they mentioned the term “sizzle factor” pertaining to amenities they don’t feel get used within apartment complexes. These amenities have the effect of making perspective residents excited about the building before they sign, but they prove to not use those amenities once they live in the building. Amenities mentioned that have this effect are pools and hot tubs. Carpenter and Gebhardt expressed that they would be reluctant to put one of these amenities in the apartments they develop due to the lack of use of these amenities. Ideally, amenities would have a low cost to the developer but high utilitarian value to the renter. Carpenter mentioned the addition of lockers in common bar areas that would allow residents to keep their own beverages in the common area, but in a way, that only they would have access. This specific amenity was modeled after similar designs seen in larger cities like Chicago, IL. They have a low installment and maintenance cost and don’t take up a lot of space, so they efficiently use space to maximize value.

Unique to the interview with Carpenter and Haviland the group was able to learn more about the intricacies of market studies. The decisions of developers are often not linked to personal belief in an area, but simply to the numbers. Good market projections lead to development of an area. In this respect, Madison has seen a rise in apartment development due to simple rise in demand attracting interest in ventures to develop more. Carpenter and Haviland said that developers will continue to build until they have overbuilt and only then will the process slow down.

Unique to the interview with Gebhardt was a focus on creating communities that are always active. Where there isn’t a point in the day where the area is not in use. This idea lends to the development of mixed use complexes that offer spaces for daytime office work, an
entertainment nightlife, and access to necessities like grocery stores and retail spaces. He stressed the shift from a system of development where people prefer to live outside of the central business district to a system where people prefer to live in close proximity to the central business district as well as entertainment centers. The shift could be connected to the change in demographic of Madison that was mentioned above.

(5.2) Amenity Survey Results

As discussed in our methods section our surveys were split into two sections relating to, amenities and walkability, then separately distributed to on campus residents and off campus residents. Refer to the methods section for information on why we chose to ask specific survey questions. The responses to the question: “What was more important to your housing decision, community or personal amenities?” showed that residents overwhelming chose personal amenities over community amenities, 95 percent of campus residents and 93 percent of Galaxie and Constellation residents chose personal amenities as being more important to their housing choice. This is interesting because the buildings heavily advertise community amenities. The Hub in particular, emphasizes their rooftop pool, fitness center, and lounges. However, the survey results show that residents think about personal amenities first when considering where to live.

The responses to the questions: “In general, what community amenities would you be most willing to pay extra for?” and “In general, what personal amenities would you be most willing to pay extra for?” are displayed on the dot charts in Figures 2 - 5. The survey asked respondents to rank seven amenities based off their willingness to pay extra for those
amenities. Only the top three ranks were included in the dot charts. In the dot charts the blue dots represent the percentage of people that would pay extra for that amenity first, red represents the second ranking and orange represents the third ranking (Figure 2, 3, 4 & 5).

![Figure 2: Community Amenities Residents On Campus Are Most Willing to Pay Extra For Dot Chart](image)
Figure 3: Community Amenities Galaxie and Constellation Residents Are Most Willing to Pay Extra For

Galaxie and Constellation residents as well as campus residents ranked the fitness center as the community amenity they would most be willing to pay extra for, with 37.5 percent of Galaxie and Constellation residents ranking it first and 53.5 percent of campus residents ranking it first (Figure 2 & 3). The importance of fitness centers to residents was expressed in our interviews with developers, showing that developers do know what amenities residents use.

Figure 2 and 3 also display evidence of the “sizzle factor” that our interviewees mentioned. Galaxie and Constellation residents seem to be more willing to pay extra for a swimming pool than the residents on campus, 22 percent compared to 4 percent (Figure 2 & 3). This was unexpected because many on campus housing options have pools. This could be because of the “sizzle factor” since some campus residents, for example the Hub, have a pool.
and the residents know that they do not use it and might not be willing to pay extra for it given the choice. However, Galaxie and Constellation residents who do not have a pool, are intrigued by idea of having one.

When considering personal amenities, residents were most willing to pay extra for an in-unit washer and dryer, 63.6 percent for campus residents and 36.4 percent for Galaxie and Constellation residents (Figure 4 & 5). Again, this aligns with the developers we interviewed who said that the in-unit washer and dryer was a crucial personal amenity.

**Figure 4: Personal Amenities Residents On Campus Are Most Willing to Pay Extra For Dot Chart**

*Percentage of Respondents Who Selected Amenity X*

*Figure 4: Personal Amenities Residents On Campus Are Most Willing to Pay Extra For Dot Chart*
(5.3) Walkability Survey Results

In our survey we asked residents what their favorite place to walk where. Based on their collective responses we generated the heat maps below (Figure 6 & 7). The red color indicates a higher amount of people clicking in that area and the purple area is a lower number of clicks. Galaxie and Constellation residents’ favorite areas to walk were mainly in downtown Madison with a high concentration in the area surrounding Capital Square and State Street (Figure 6). Neither Galaxie nor Constellation are located downtown, which is considered a hub of activities, so it is understandable why areas surrounding State Street and the Capital would be considered of interest or attractive to them. However, there were some people that selected Tenney Park which could be attributed to the fact that Galaxie and Constellation allow pets
resulting in a large amount of pet owners living in Galaxie and Constellation. Therefore, pet owners might enjoy venturing to nearby parks to exercise their pet.

Campus residents, which includes residents from Hub and Lucky, selected a wider area on the map (Figure 7). There was not a consensus or similarity in trend in terms of areas that are majorly favored or considered a favorite place to walk. We observed that many people chose State Street as their favorite area to walk, not necessarily the Capital like the Galaxie and Constellation residents. We learned that campus residents chose walking as their primary mode of transport from our survey (Figure 8). Since many campus residents are college students it would make sense for walking to be their main mode of transport because they would spend most of their time on campus. Also since walking doesn’t seem like a hassle to them they are more likely to explore nearby areas therefore their walking decisions are likely to be based on personal preferences and needs and not just based of areas that are considered popular.
Figure 6: Galaxie and Constellation Residents Favorite Areas to Walk Heat Map

Figure 7: Hub and Lucky (campus) Residents Favorite Areas to Walk Heat Map
In our survey we asked residents at what point walking becomes inconvenient. Based on their collective responses we found out that for Galaxie and Constellation residents it takes 27 minutes before walking becomes inconvenient. While, for campus residents it takes 19 minutes (Figures 8 and 9). These results are aligned and are congruent with our previous findings. Based on the area that these building is located these responses make sense. Since Lucky and Hub are more centrally located it is an inherent expectation that the most desired location such as restaurants & bars, entertainment areas, grocery and such would be nearby and within a mile or less. On the contrary Galaxie and Constellation are located near East Washington Avenue therefore walking to get to downtown is relatively longer which adequately explains the extra 7 minutes residents are willing to walk. One interesting thing to notice here is that despite private vehicles being Galaxie and Constellation resident’s primary choice of transportation (figure 11) they were willing to walk further than the Campus residents.

*Figure 8: 19 minute walk radius from the Hub (courtesy of Walkscore.com).*
In our survey we asked residents what their primary mode of transportation was. Based on the responses we created pie charts to visualize the data (Figure 10 and 11). For Lucky and the Hub the primary mode was walking, followed by private vehicle, and a nearly equal division for bicycle, moped, bus and lastly Uber. As we have already established, campus residents mainly consist of college students so it is expected that walking is their main way to get to places. Also the location of the apartment warrants that campus building are minutes within their location. When it came to Galaxie and Constellation residents their primary mode of transportation was private vehicle, followed by walking, which is congruent with our findings. Firstly, the location of the building ensures that private vehicle to be almost a necessity. Secondly, apart from Festival Foods or a few pricey restaurants most of the clusters of entertainment areas are further than a mile. Finally, demographic wise, Galaxie and Constellation residents consist mainly of young professionals and empty nesters who have jobs located throughout the Madison area that are only accessible by cars.
Interview Results:

In the interviews conducted with Todd Carpenter and David Haviland of Baker Tilly LLP, and Otto Gebhardt of Gebhardt Development the research group was able to gain insight into the interpersonal workings of the real estate development community as well as the more technical aspect of how development decisions are made. Questions asked in the interview can be seen in appendix D and appendix E.

Common themes of the two interviews include the characteristics of the Madison real estate community and restrictions, Madison’s unique demographic, and a common agreement about amenities residents most use and how they affect renter decisions. In reference to the real estate community in Madison, all three interviewees expressed that it has historically been difficult for non-local companies to gain foothold in the Madison market. The restrictions imposed on who can develop and what can be developed in Madison and who has to approve
the projects isn’t something national level developers want to deal with. Developers who are familiar with Madison residents and the culture of the city, like Mr. Gebhardt, are far more willing and able to accommodate these restrictions and need for approval. That said, there has been a recent influx of national level companies building on and around the UW-Madison campus. In both interviews the group addressed this, to find out that those companies had sold their projects after completion. Further emphasizing the common theme that national companies do not seek a foothold in Madison’s housing development market.

The next point stressed by all interviewees was the unique demographic Madison offers. The millennial generation that attends UW-Madison, and works in the relatively large health network software industry (brought to Madison by Epic) makes up a huge part of the downtown Madison population. For the purpose of this study, the group discussed that the Millennial generation would be broadly defined as people between the ages of twenty and thirty four. In the eyes of the interviewees, the millennial generation has a different view of renting than previous generations who preferred to buy homes outside of the city center. This means that they do not see renting as a negative, they see it as a means to flexibility and in turn mobility. It was touched on in each interview that the 2008 crash could have something to do with this generations reluctance to buy homes as opposed to renting. They may have seen family members struggle in the heat of the crash.

The last of the most common themes in both interviews was the understanding of how different amenities affect housing choice and which are used by the residents. At Baker Tilly, they mentioned the term “sizzle factor” pertaining to amenities they don’t feel get used within apartment complexes. These amenities have the effect of making perspective residents excited
about the building before they sign, but they prove to not use those amenities once they live in
the building. Amenities mentioned that have this effect are pools and hot tubs. Carpenter and
Gebhard expressed that they would be reluctant to put one of these on a development due to
the lack of use of these amenities. Ideally, amenities would have a low cost to the developer
but high utilitarian value to the renter. Carpenter mentioned the addition of lockers in common
bar areas that would allow residents to keep their own beverages in the common area, but in a
way, that only they would have access. This specific amenity was modeled after similar designs
seen in larger cities like Chicago, IL. They have a low installment and maintenance cost and
don’t take up a lot of space, so they efficiently use space to maximize value.

Unique to the interview with Carpenter and Haviland the group was able to learn more
about the intricacies of market studies. That often the decisions of developers are not linked to
personal belief in an area, but simply to the numbers. Good market projections lead to
development of an area. In this respect, Madison has seen a rise in apartment development
due to simple rise in demand attracting interest in ventures to develop more. Carpenter and
Haviland said that developers will continue to build until they have overbuilt and only then will
the process slow down.

Unique to the interview with Gebhardt was a focus on creating communities that are
always active. Where there isn’t a point in the day where the area is not in use. This idea lends
to the development of mixed use complexes that offer spaces for daytime office work, an
entertainment nightlife, and access to necessities like grocery stores and retail spaces. He
stressed the shift from a system of development where people prefer to live outside of the
central business district to a system where people prefer to live in close proximity to the central
business district as well as entertainment centers. The shift could be connected to the change in demographic of Madison that was mentioned above.

(5.4) Walkability Scores

We created a grid allocating points for the walk score as discussed in our methods. Our four components are safety, ease of use, proximity & accessibility and design & aesthetics. We made most of our walkability calculations using a 5-minute walk radius and took notes by hand as we explored the areas surrounding the four apartments.

To calculate the score for safety we looked at lighting, density of people and crime rates. We walked around the areas of Lucky, the Hub, and Galaxie & Constellation from 5 to 9 pm while it was dark out, we did this, so we could get an accurate gauge of lighting in the areas and assess it fairly. To quantify the density of people we counted people on sidewalks around where we were walking. Less people were considered negative and more people are considered positive. Crime was one of the factors that we calculated from online sources. From Trulia, we found that crime spread from all directions, but has consistently originated at the Capital. The annual reported crimes in Madison per 100,000 people is 3,079 incidents, with 50 being rape and 184 being assault, the national average is 40 and 248 respectively (Madison, WI Crime 2016). These are two aspects of crime that are particularly important to consider when walking on a college campus. We gave positive points for brightness, consistency and density of the streetlights, and deducted points if the lighting was too dim or inconsistently.

We calculated the ease of use by looking at barriers, sidewalk width, and street width. We were able to make these calculations by making observations on our walk. In terms of barriers we deducted points for dumpsters and trash on the sidewalk, cars/bikes parked on the
sidewalk, and inter street crossing that were hindered due to the rush of traffic. We awarded positive points for lack of or low barriers to walking. For size and width, we gave positive points for at least 7 feet width of street that allowed two people to walk side-by-side with ease. For consistency, points were deducted if the sidewalks were cracked, were disheveled, or too narrow. We also took into account how long it took to cross streets. If it talks too long to cross some walkers become discouraged and avoid the area.

In order to calculate proximity and accessibility we looked at the number of restaurants, concerts venues, supermarkets, restaurants & bars, parks or recreation facilities, health clinics, work, and retail stores within a 5-minute and 20-minute walking distance. We awarded positive points if there were more than 10 restaurants or bars within 5-20 minute. Furthermore, we scored higher points for grocery options within 5 minutes range, because most people are not willing to walk twenty minutes with heavy grocery bags. We deducted points if useful areas that are sought after by residents are too spread out or far away.

Lastly, we calculated the design and aesthetics portion by looking at parks, trees, statues and fountains in an area. We awarded positive points if there were nice features like open space and parks that are pet friendly. We deducted points if there was construction, abandoned buildings, or power plants nearby. The key idea is whether the resident would have a pleasant experience walking to the nearest building.

From our walkability analysis, we calculated that Hub has the best walkability score, of 4.25, while Lucky had a somewhat similar score of 4.05, and finally Galaxie had a score of 3.95. As expected these apartments had many similarities and even had overlapping areas within the 20-minute range. Some unique things that we observed from our field research is that the
streets around Galaxie were very poorly lit. Besides the main street E Washington, there was only one light per street on average, which emitted a soft yellow glow. Despite this, there were almost 30-40 people engaging in recreational walking around the area. However, the lack of lighting was very apparent as the majority of walkers carried flashlights or wore head lighting even when going for a casual stroll. People did not seem to completely rule out walking because of the lighting, but had to adapt to their environment. It is likely that only people who get great value from walking were the ones that were out. Another observation was that there were a lot of new construction, namely new mixed-use complexes near Galaxie. Additionally, there were numerous abandoned buildings that had broken windows (Figure 12), which decreased the pleasantness of the walk. The finished construction and possible redevelopment of the abandoned buildings could make the area more walkable in the future. Besides lighting, the biggest negative of the Galaxie area was E Washington. The street was very busy, and cars did not seem to watch out for pedestrians, whereas cars were more careful around the campus residents. It also took longer to cross E Washington than the light allowed making it impossible for elderly or disabled residents to cross (Figure 13).
**Figure 12:** Evidence of an unsafe neighborhood with abandoned building (Photo by Thorbjorn Wil)

**Figure 13:** Example of barrier to walking (photo taken by Thorbjorn Will)
One observation consistent in all the three key areas was how the road crossing was designed, which seemed inconvenient for people walking. While walking in the Hub/Lucky areas there were plentiful amounts of lighting. The Langdon and Kohl Center areas weren’t extremely bright, but allowed enough light to see. The city and university clearly pay more attention to the State Street/Library Mall areas as they were extensively lit up with Christmas lights. The bright holiday ambiance in combination with the plethora of restaurants, shops, green spaces, and entertainment venues nearby made the areas very walkable. A summary of the observations we made while calculating our walk scores can be found in Appendix C.

(5.4) Walk Score Comparison:

We compared our walkability scores to walk scores from walkscore.com and responses gathered from our resident surveys (figure 11). Walkscore.com was chosen for comparison because it is how Gebhardt Developments (the developer for Galaxie and Constellation)
assesses the walkability of different areas. For the most part our walk scores were aligned with both the resident surveys and the walkscores.com scores.

Here is a further breakdown of the scores and ranking. During our walkability calculation process and field research period we also managed to capture some of the result. In our calculation we scored Hub and Lucky higher and our rationale behind it was that it was located on or near State Street (Figure 14) which is an area that scored or rated high in terms of safety because of consistent placement of bright and clear lighting. Also, aesthetic wise this was generally considered very pleasant and there were not many barriers to walking. Most of the sidewalks were well developed, two people can walk side by side walk easily.

The reason we scored Galaxie and Constellation a bit lower is attributed mainly to the fact that points were deducted for ease of use. In terms of ease of use we looked at the size of the sidewalk and other barriers that made walking difficult for people. E Washington Avenue (Figure 13) has multiple cross sections and is a six-lane road with a median. This makes crossing especially problematic for older people and people with disabilities. However, we also acknowledge the fact that primarily walking is not a necessity for residents here as they chose private vehicles as their first choice for getting to places.
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<th>Scores from Walkscore.com</th>
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<td>Galaxie &amp; Constellation</td>
<td>3.86</td>
<td>3.48</td>
<td>91 -&gt; 4.55</td>
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*Figure 15: Walk Score Comparison Table*

(6.0) Discussion

The downtown Madison landscape has changed dramatically as a result of the development of high-rise apartments. Due to the stability of the student population in Madison, the increase in apartment development has previously been attributed to heightened demand from large employers, such as Epic and American Family Insurance, entering the region. The new luxury high-rise complexes offer differing community amenities and personal amenities. Lucky, Hub Madison, The Constellation, and Galaxie apartments all have higher rental prices than other housing options in the Madison area. It has been observed that walkability is positively correlated with housing values, leading the researchers of this study to expect walkable environments surrounding the high-rises. After conducting research and analyzing data a number of interesting results have been found.

This study has identified that a primary factor contributing to the increased development of high-rises complexes in Madison has been the demographics of the renter
bases. The importance of the changing preferences of the millennial generation was stressed as the most important factor by both developers that were interviewed. As opposed to previous generations, millennials do not have a negative social perception associated with renting and have a desire to live in the heart of the city. The preference of renters to live in walkable mixed-use environments close to public spaces and entertainment districts has encouraged developers to locate in downtown Madison. Resident desire to be close to everything has led Otto Gebhardt to embark on the project of building a vibrant neighborhood on E Washington Ave. In an area that was previously empty, Otto saw the opportunity to take advantage of changing preferences. This has resulted in the construction of two high-rise apartments, Galaxie and Constellation. In an attempt to “activate the street” and create a walkable environment, Otto included a grocery store, coffee shops, restaurants, office space, retail space, and hid the apartment parking complex in the center of the development so that the exterior area remained visually appealing (Gebhardt, Interview 29 November 2017). Additionally, Gebhardt Development is in the process of constructing a mixed-use complex directly across the street from Galaxie that will include office space, retail space, and a large concert hall. Otto has likely noticed that the E Washington location is not as walkable as the other locations observed in this study. The researchers rated the area as the least walkable of the studied locations (3.48) and this was backed up by the lowest level of resident perceived walkability (3.86). Although the area is still walkable, it is not as developed as the State Street/University Avenue areas, where Lucky and the Hub are located. The superiority of those environments is further backed up by Figure 6, that shows that Galaxie & Constellation residents overwhelmingly selected State Street and the Capital square as their favorite places to walk. Nevertheless, the developments
currently occurring in the area have the potential to increase the walkability of the E Washington area. In the meantime, Galaxie & Constellation residents need to travel farther to access the recreation spaces and restaurants that central downtown brings. The location of the apartments seems to play a role in how long residents are willing to walk. Survey responses showed that off campus residents were willing to walk seven minutes longer on average before it became an inconvenience. Initially, this was hard to understand because the primary mode of transportation is a private vehicle for off campus residents and walking for on campus residents. Therefore, it would be safe to assume that those who rely on walking daily would be willing to walk farther distances. However, we have attributed off campus residents’ willingness to walk on the fact they are required to travel further to access desired spaces, while on campus residents who have grown accustomed to having everything within a twenty-minute walking distance are inconvenienced at any point further.

The role amenities play in housing and development choice was a primary concern throughout this study. The amount of community amenities that are included in apartment complexes has risen within the last ten years. This leads one to believe that community amenities are becoming increasingly important to residents. This hypothesis was not supported by the results of this study as over 93 percent of both on and off campus residents selected personal amenities as more influential to their housing decision. However, due to the fact that the personal amenities that are offered across high-rise complexes are relatively consistent, community amenities still play a role in housing choice. This was most evident when looking at how “sizzle factor” amenities affected choices. Some developers include “sizzle factor” amenities such as pools, hot tubs, or recording studios in their complexes to entice renters to
sign (Haviland, Interview 13 November 2017). Although intriguing concepts these amenities often go unused. The answers to the survey question, what community amenities would you be most willing to pay extra for, provides evidence for this theory. 22 percent of Galaxie and Constellation residents ranked a pool first on the willingness to pay scale, while only 4 percent of campus residents ranked the pool first. We have attributed this to the fact that a large percentage of on campus respondents live in the Hub, which has a pool. These residents have access to a pool and realize they don’t use it, but Galaxie & Constellation residents, who don’t have a pool, are intrigued by the idea. We have also discovered that the fact that the Hub has a pool and offers the most community amenities out of the for complexes in the study results from the ownership of the building. The Hub was developed by EdR a national developer that specializes in campus developments. EdR has many similar high-rises throughout the country and has adopted a standard building model. This allows them to save money because they do not have to hire design consultants or do research on what amenities to include in each development. The scope of the development company and the cost savings associated with standardization, allows EdR to include more amenities in their buildings. This is contrasted by local developers, such as Otto Gebhardt, who include only the amenities he knows the residents will use. Both the advisors at Baker Tilly and Otto Gebhardt stressed the two most important amenities to include in an apartment complex are a fitness center and an in-unit washer/dryer. These statements were supported by our survey results which reveal that those were the amenities that both on campus and off campus residents were most willing to pay extra for.
Overall, our findings suggest that personal amenities are more important to residents than community amenities and the increasing amount of community amenities being offered in apartments is mainly a product of market competition. National development companies have the ability to include more amenity options, while local developers try and keep up, but mainly include the amenities the know residents use. Additionally, walkability is one of the most important factors to consider when deciding where to build a high-rise apartment and where to live.

(7.0) Limitations and Future Research

Some of our limitations include the time of season, time constraints, and accessibility to data. Weather was a limitation because people are willing to walk varying distances and at varying frequencies based on the weather. Our walkability results are therefore a product of the season in which we conducted our research. If studied further, we would like to analyze the correlations between walkability and weather. Another limitation is the amount of time we had to conduct our research. All the research for this study was conducted over the course of one semester. This forced us to only look at a select number of buildings and residents. If we were able to do this project on a larger scale we would aim to interview more apartment developers and survey more residents of different demographic groups, to see if our results are representative of the Madison population, as a whole. Even though we were able to send out an email survey to residents at Galaxie and Constellation we had to canvas the Hub and Lucky. If we had better accessibility to these buildings, we would have been able to get more responses from the residents and have more accurate data. Something else that we would like to do is to compare Madison to other cities. Some areas we would look at are Austin, Texas and
Minneapolis, Minnesota. Both cities have a large university and a big influx of millennials. We are interested in seeing what developers have decided to build and where. We are also interested to see what residents in that area find important and how high-rise buildings have affected these cities landscapes.

(8.0) Conclusion

We have found that there are many aspects that have led to the rise of the high-rise developments in Madison. The one most prevalent one for our project was the changing rental preferences of the millennial generation. These demographic changes are integral to the opportunities developers have had to grow Madison. Renting no longer holds a negative social perception and there is a high demand for walkable environments. These spaces are dense, mixed-use developments, that allow residents to be located close to public amenities and entertainment spaces. People want to walk in areas that are beautiful, where they feel safe, are easy to walk in, and have many stores and other features around them. We observed from our survey results that residents from Galaxie and Constellation traveled further to walk around the capital because of these aspects. Living in a walkable area is certainly important to residents. Because of this it is a main priority for developers as well. Both developers that were interviewed stated that walkability is a key aspect of the real estate process and something they consider when deciding where to locate. Gebhardt Developments has even attempted to create a walkable environment on E Washington instead of simply building in one.

We have also found that personal amenities are more important to housing choice than community amenities. However, community amenities still play a role. The two amenities
developers expressed as the most important were fitness centers and in-unit washer/dryers. Our survey results showed that these were the amenities that Residents were most willing to pay extra for. Additionally, we found that some developers include amenities strictly to draw renters in, even though they know they will not be heavily utilized. Finally, we have concluded that there is a high degree of perceptual alignment between residents, developers, and our own calculations, in regard to walkability. There is a consensus that downtown Madison is indeed a walkable environment that people want to live near. Among other factors the walkability of downtown Madison has contributed to the development of high-rise apartments and will continue to be a trademark of the city for decades to come.
(9.0) Acknowledgements

We would like to thank the following people for providing us with advice and helping us conduct our research. Firstly, thanks to all of our survey respondents. Secondly, a special thanks to Otto Gebhardt and his team from Gebhardt Development for their development insight about Constellation and Galaxie as well as for giving us access the email lists of the apartments to distribute our survey. Also, want to thank Todd A. Carpenter, David Haviland and their team from Baker Tilly for sharing their findings with us and letting us interview them. Finally, we would like to thank Bill Gartner for guiding us through every step of our research project.
(10.0) Bibliography


Paumier, Cyril B. *Creating a vibrant city center: urban design and regeneration principles.*


## Appendix A:

### High-Rise Apartment Amenities Checklist

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<tr>
<th>Community Amenities</th>
<th>Lucky</th>
<th>Hub</th>
<th>Galaxie</th>
<th>Constellation</th>
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</tr>
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</tr>
<tr>
<td>Walk-in Shower</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual Leases</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct TV / Cable</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50' Smart TV</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disability Access</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>
Appendix B:

High-Rise Apartments Personal and Community Amenity List

Hub:

<table>
<thead>
<tr>
<th>Public</th>
<th>Personal</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Rooftop Pool ft. Sundeck &amp; Lounge Chairs</td>
<td>● Fully Equipped Kitchens</td>
</tr>
<tr>
<td>● Cabanas</td>
<td>● Fully Furnished Units</td>
</tr>
<tr>
<td>● Sand Volleyball Court</td>
<td>● Private Bathrooms</td>
</tr>
<tr>
<td>● Grilling Area with Seating</td>
<td>● Private Bedrooms</td>
</tr>
<tr>
<td>● Outdoor Courtyard</td>
<td>● Quartz Countertops</td>
</tr>
<tr>
<td>● Clubhouse</td>
<td>● Walk-in Showers</td>
</tr>
<tr>
<td>● Arcade Games</td>
<td>● Private Washer and Dryer</td>
</tr>
<tr>
<td>● Billiards and Foosball</td>
<td>● Individual Leases</td>
</tr>
<tr>
<td>● Media Room Lounge</td>
<td>● Modern Furniture Package</td>
</tr>
<tr>
<td>● Recording Studio</td>
<td>● 50&quot; Smart TV</td>
</tr>
<tr>
<td>● Golf Simulator</td>
<td>● HD Cable with DirecTV</td>
</tr>
<tr>
<td>● Executive Business Center with Macs’, PCs’ and Free Black and White Printing Services</td>
<td>● Study Room</td>
</tr>
<tr>
<td>● Study Room</td>
<td>● Fitness Center</td>
</tr>
<tr>
<td>● Fitness Center</td>
<td>● Yoga Studio</td>
</tr>
<tr>
<td>● Yoga Studio</td>
<td>● Sauna</td>
</tr>
<tr>
<td>● Sauna</td>
<td>● Spa Area with Cool Tub and Hot Tub</td>
</tr>
<tr>
<td>● Spa Area with Cool Tub and Hot Tub</td>
<td>● Seasonal Ice Skating Rink</td>
</tr>
<tr>
<td>● Seasonal Ice Skating Rink</td>
<td>● Secure Bike Storage</td>
</tr>
<tr>
<td>● Secure Bike Storage</td>
<td>● Private Parking in Garage* with Car Washing Station</td>
</tr>
<tr>
<td>● Private Parking in Garage* with Car Washing Station</td>
<td>● Limited/Controlled Access Building</td>
</tr>
<tr>
<td>● Limited/Controlled Access Building</td>
<td>● Free Tanning</td>
</tr>
<tr>
<td>● Free Tanning</td>
<td>● Free Community Wide Wi-Fi</td>
</tr>
<tr>
<td>● Free Community Wide Wi-Fi</td>
<td>● 24-Hour Emergency Maintenance</td>
</tr>
<tr>
<td>● 24-Hour Emergency Maintenance</td>
<td>● On-Site Professional Management Team</td>
</tr>
<tr>
<td>● On-Site Professional Management Team</td>
<td>● Exciting Resident Events</td>
</tr>
<tr>
<td>● Exciting Resident Events</td>
<td>● Steps Away from Campus &amp; State Street</td>
</tr>
</tbody>
</table>

Galaxie:

<table>
<thead>
<tr>
<th>Public</th>
<th>Personal</th>
</tr>
</thead>
</table>

---

55
- Festival Foods Grocery Store on 1st floor
- Secure key entry with intercom linked to cell phone
- Pet-friendly. Cats and Dogs of all sizes welcome
- Resident-only state-of-the-art fitness center
- Community Patio overlooking Breese Stevens Field (games, concerts, etc.)
- Free WIFI community area
- Ticket pre-sale to Breese Stevens concerts, events, etc.
- Resident events and neighborhood perks

**Extras**
- Monthly pet fee ($25/dog, $15/cat)
- Covered parking ($65 – $115 per month)
- Apartment WIFI, cable & electrical

- 14 stories of window views
- 3,000 sq. ft. outdoor terrace with gas grills
- Luxury penthouse with gourmet kitchen
- Unobstructed horizon view in 1 of 3 directions
- Beautiful views of both lakes and the Capitol
- Floor-to-ceiling window views and natural light
- Contemporary stainless-steel refrigerator, stove, dishwasher & fixtures
- Granite countertops
- In-unit washer/dryer
- Spacious living rooms and high ceilings
- Utilities (except electricity)
- Option of choosing a multi-level unit

---

**Lucky:**

<table>
<thead>
<tr>
<th>Public</th>
<th>Personal</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Fresh Madison grocery store on 1st floor</td>
<td>• Different upgrades available</td>
</tr>
<tr>
<td>• Business Offices</td>
<td>• Balconies (some apartments)</td>
</tr>
<tr>
<td>• Mac’s, printers, scanners, faxing machines and copiers</td>
<td>• City views</td>
</tr>
<tr>
<td>• Laundry on every floor</td>
<td>• Full appliance package (including microwave oven, stove, dishwasher, refrigerator and garbage disposal)</td>
</tr>
<tr>
<td>• Study Rooms</td>
<td>• Furniture package (includes designer couches, slipper chairs and side tables)</td>
</tr>
<tr>
<td>• Hot Tub</td>
<td>• Bedroom safes (extra fee)</td>
</tr>
<tr>
<td>• 24X7 Emergency Maintenance Staff, Concierge service</td>
<td>• Carpeting, full beds, locking doors with key access and sound deadening technology to reduce noise in the bedrooms</td>
</tr>
<tr>
<td>• Floor fish bowl</td>
<td>• Programmable thermostats</td>
</tr>
<tr>
<td>• Wifi</td>
<td>• 9-foot ceilings</td>
</tr>
<tr>
<td>• Penthouse sundeck</td>
<td></td>
</tr>
<tr>
<td>• 4th floor rooftop green garden terrace</td>
<td></td>
</tr>
</tbody>
</table>
- Parking is available for an extra fee

**Constellation:**

<table>
<thead>
<tr>
<th>Public</th>
<th>Personal</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Festival Foods Grocery Store next door</td>
<td>• 12 stories of ‘wow’ (window views)</td>
</tr>
<tr>
<td>• Mixed use Property</td>
<td>• Luxury penthouse with gourmet kitchen</td>
</tr>
<tr>
<td>• Private Entrance to building</td>
<td>• Unobstructed horizon view in 1 of 3 directions</td>
</tr>
<tr>
<td>• 4th floor community terrace overlooking the Capitol</td>
<td>• Beautiful views of downtown, lakes and the Capitol</td>
</tr>
<tr>
<td>• Pet-friendly. Cats and Dogs of all sizes welcome</td>
<td>• Floor-to-ceiling window views and natural light</td>
</tr>
<tr>
<td>• Resident-only state-of-the-art fitness center</td>
<td>• Contemporary stainless-steel appliances</td>
</tr>
<tr>
<td>• Community Patio overlooking Breese Stevens Field (games, concerts, etc.)</td>
<td>• Granite countertops</td>
</tr>
<tr>
<td>• Free WIFI community area</td>
<td>• In-unit washer/dryer</td>
</tr>
<tr>
<td>• Smoke Free Zone</td>
<td>• Spacious living rooms and high ceilings</td>
</tr>
<tr>
<td>• Ticket pre-sale to Breese Stevens concerts, events, etc.</td>
<td>• Utilities (except electricity)</td>
</tr>
<tr>
<td>• Resident events and neighborhood perks</td>
<td></td>
</tr>
</tbody>
</table>

**Extras**

- Monthly pet fee ($15/cat)
- Structured parking seconds from your door ($65 – $115 per month)
- Apartment WIFI, cable & electrical
- Under 10-minutes’ walk to: Restaurants, bars, clubs and shops of Mifflin Street, State Street, King Street, Johnson Street
- Across the street from High Noon Saloon, Brass Ring and Brink Lounge.
- Under 10-minute drive to: The Airport. Willy Street Coop,

**Jenifer Street Market, Copps, Capitol Centre Foods and Madison Fresh Market.**
Appendix C: Survey Questions

Where do you live?
- Small apartment complex (less than 4 apartments)
- Large apartment complex (more than 4 apartments)
- Luxury apartment complex (ex: The Hub, Galaxie, Lucky etc.)
- Single family house
- Mobile home
- Sorority/Fraternity house
- Student housing
- Other

What was more important to your housing decision?
- Community amenities (pool, gym, lounge, patio, etc.)
- Personal amenities (in-unit washer/dryer, cable/WiFi, modern appliances, etc.)

In general, what personal amenities would you be most willing to pay extra for? (Rank from 1-7, 1 = most willing)
- In-unit washer/dryer
- Modern appliances
- Cable TV
- Furnished living quarters
- WiFi
- Views
- Balcony

In general, what community amenities would you be most willing to pay extra for? (Rank from 1-7, 1 = most willing)
- Fitness center
- Outdoor grill area
- Lounge
- Study room
- Swimming pool
- Spa/Hot tub
- 24 hour staff

It is easy to walk for 5 minutes in all directions from your residence (Keep in mind crossing streets, navigating traffic, parked cars, fire hydrants and signs in your way).
- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
The area surrounding your residence is visually appealing:

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

How frequently do you walk to these locations? (restaurants, concerts, supermarkets, bars, parks or recreation facilities, health clinics, work, retail stores, etc.)

- Extremely frequently (more than once a day)
- Frequently (once a day)
- Occasionally (a few times a week)
- Infrequently (once a week)
- Very infrequently (less than once a week)

How safe do you feel in the area where you live?

- Extremely safe
- Safe
- Neither safe nor unsafe
- Unsafe
- Extremely unsafe

What is your primary means of transport in Madison?

- Walking
- Bicycle
- Private vehicle (car/truck)
- Motorcycle
- Moped
- Bus
- Taxi
- Uber/Lyft

My current living situation offers value for the money I pay:

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

At what distance does walking become inconvenient for you? (Answer in miles: 1 mile = 20 minutes walking, .5 miles = 10 minutes walking, .25 miles = 5 minutes walking)
Click on the area where you live:

Click on your favorite area to walk in Madison:
Appendix D:
Baker Tilly Interview Transcript

Q1 - There has been an influx of high-rise development over the past 10 years in Madison. Despite this, Madison’s vacancy rate has hovered around 2.5% and has only recently shown signs of increasing. The factors that typically affect the housing market are...(below). We would like to talk about them one at a time with respect to their relative importance and how they have impacted the Madison market.

Are there any other factors that are specifically relevant to Madison?

Government Subsidies and Policies - Government subsidies and policies have not been too influential on the increase in high-rise apartments in downtown Madison. The main incentive that governments offer is Tax Increment Financing (TIFs), but those are relatively standard across different areas and are not directly responsible to the high-rise influx.

Demographics - David and Todd believe this is the most important factor behind Madison’s developments.

The market behavior of millennials is different than that of previous generations. For the purposes of market study, the most influential age group (and how Baker Tilly loosely defines millennials) is roughly 20-34 years old. This group are the ones renting apartments and the ones that have seen the largest population growth. Millennials:

- Prefer urban environments
- Distance to amenities matters
- Walkability matters
- Distance to work is important, but not as crucial a factor
Millennials are renting because they have more financial concerns (also average student debt is increasing David “around 30k or something”). Additionally, renting is no longer seen as a negative (as it was by previous generations) but now a positive (perceptions have changed). Partly due to the fact that renting allows millennials to be mobile (“renting is flexible”), millennials are much more likely to jump from job to job once a better opportunity arises and renting allows them to do this. The number of single women has also increased and these apartment complexes offer them the things they desire (security, location, proximity...).

**Interest Rates** - Interest rates have not been the direct cause of any increased demand for apartments (IRs are also low for homeowners). If anything, they have simply allowed developers to build “while the iron is hot” (low IR), which is why we have seen so many complexes go up recently.

**Q2** - (The so-called natural vacancy rate, the rate of occupancy at which rents will neither rise or fall, is typically around 5%). Are there any particular factors that would cause the natural vacancy rate to rise in Madison or is 2.5% vacancy the new normal?

Vacancy rates are “point in time estimates”. How friendly/comfortable developers are with vacancy rates plays a big role in what they will be. Some developers are willing to tolerate higher vacancy rates in order to try and push rental prices and get the most out of renters; others aren’t. A 7% vacancy rate is the industry standard that developers use to secure debt (what they tell the banks their projections say so they can get loans). Todd, “we’re in an unusual situation in Madison right now.” In general, developers will build and build until there is an excess, they are “creatures of habit.” Both David and Todd say there is no way 2.5% will become the new normal. Developers simply won’t let it become the new normal, they will continue to push rents up or increase supply to a point where it returns to the 5% level, which is an arbitrary vacancy rate.
Q3- How do you determine what factors are most important to perspective residents in Madison. Do you conduct surveys or use other tactics?

Mainly just talk with developers and look at what the market tells them. Also conduct surveys (online and telephone). Generally, people want all the amenities for nothing (no price increase). Apartment owners have revealed the most used amenity is a fitness center, followed by an outdoor grill/patio area. Everything else is mainly for show, “sizzle factor” in order to get the residents to sign, but lots of amenities generally don’t end up being used. Madison complexes have tried to imitate Chicago (one example is Domain’s “booze lockers” where people have lockers for their drinks on the top floor bar/general area, allowing them to not carry things up back and forth and just relax and enjoy the views). What furnishings are valued by individual residents really depends on the student/renter. However, everyone seems to want a washer/dryer in their apartment or at least. Baker Tilly continues to demand that the developers they advise include in-unit washers/dryers, even when the developers are reluctant.

Q4- Compared to private (in-unit) amenities, why has there been a rise in the number of public amenities offered in apartment complexes in recent years?

The rise is mainly just to keep up with the previous guy. Developers want to stay relevant in the market. Demographics also play a role, millennials are willing to give up size not location, they want access to desirable amenities “they’re going to live where they want to live.” This works for developers, because decreasing unit sizes allow them to make much more money because they can fit more units into their buildings.

Q5- Has the increase been induced by demand or is it primarily due to competition between apartments?
Both, seen a similar trend in single family housing where people are willing to give up size in order to be close to desirable features and in walkable locations.

**Q6-** How do you determine the price/ft\(^2\) value of community amenities such as rooftop pools, gyms, 24 staff/maintenance in apartments in downtown Madison?

All the projections are done using cash flow models. Putting a price value on amenities is really hard, especially because most of them are just for the “sizzle factor.” Everything is related to the market and the pricing of other complexes. A lot of times it’s based on the material/building costs that arise when new amenities are added. Aggregated values go into the financial models and then rent prices are determined. One exception is the fitness center because you can look at how much a membership would cost elsewhere and price accordingly.

**Q7-** Does this calculation change when considering personal amenities?

No, not really “the price is what it is.” What furnishings are valued by residents and what dollar amount they value them at really depends on the student/renter. However, everyone wants washer/dryer, again David strongly advises developers to include them.

**Q8-** Companies such as EdR (Hub) and American Campus Communities (James) offer similar amenities in all their buildings throughout the country. What are the advantages and disadvantages of amenity standardization? Are locally owned real estate management and development companies better positioned to offer place-specific amenities?

Most likely driven by costs. Building the same or similar models around the country allows the companies to save money. They don’t have to hire new design teams every time they make a new building. Additionally, they already know how their management will be structured and where to get their inputs.
Q9- What are the similarities and differences between the housing markets in each of these cities (Austin, Minneapolis, and Madison)?

Similarities: EdR is targeting similar demographic groups in each case. All of the locations are large college campuses. Baker Tilly has observed that the areas that have high percentages of young professionals (20-25%), are the places with the most growth. EdR and others know their market “it’s what they’re comfortable with.”

Madison specifically, has a good development community and has stayed ahead of the demand. Which is a reason you have only recently see national companies come into the market, the existing community has kept the national companies out. However, Madison is a highly political market. You need local knowledge and connections to navigate it (“everybody’s got an opinion”). A lot of developers have told David and Todd that there is no way they’re developing in Madison, “It’s a nightmare.”

Q10- How do developers/property owners determine which aspects of a building to advertise? For example, why does Galaxie highlight its proximity to Camp Randall while the Hub and Lucky do not, even though they are located closer?

They know their challenges and what they’re good at. Developers want to highlight every possible thing, so even if Camp Randall is only important to 10% of the residents, they'll still mention it. Other things tend to be common knowledge (i.e. Lucky is in a walkable area), so developers/owners might try and highlight things that people don’t think about right away.

Q11- In Madison, how important is developing in a walkable location? Does this change when looking at other rental markets?
Important, discussed a lot of the reasons why already. Land prices will be higher in walkable locations, but you can generally charge more. Residents save on other things (car not needed...) so are willing to pay more. EX: rents are still high in the Hillsdale area of Madison, where there has been a lot of development. Partly due to the rebuild of the mall area that is now much more walkable.

**Q12- How would you calculate the walkability of a potential area (Walk Score?)?**

Yes, they look at Walk Score but also simply make general guidelines about whether or not an area seems walkable. The main aspect the focus on is proximity. Galaxie owner saw the location was not near any grocery stores so decided to include Festival Foods.

**Q13- What determines where development occurs?**

Developers develop anywhere they can. Sometimes it’s simply where’s easiest. Recently TOD has become a big player.

**Q14- Given the choice where would you chose to develop a high-rise apartment complex in Madison and what would it include?**

If their financial model shows positive numbers, they will develop. “All comes back to the financial model.” “Every project needs to stand on its own.” It’s really important to feel strongly about your numbers and do your homework. However, David would probably not develop in downtown Madison because he thinks it’s reaching a market saturation point.
Appendix E:

Interview Questions for Otto Gebhardt

1. Tell us a little bit about yourself and your core responsibilities as the owner of Galaxie.

2. There has been an influx of high-rise development over the past 10 years in Madison. Despite this, Madison’s vacancy rate has hovered around 2.5% and has only recently shown signs of increasing. The factors that typically affect the housing market are...(below). We would like to talk about them one at a time with respect to their relative importance and how they have impacted the Madison market. Are there any other factors that are specifically relevant to Madison?

   - government policies & subsidies
   - demographics
   - employment opportunities
   - interest rates
   - quality of life factors

3. When choosing a site for a new development, what are the top 3 things you search for?

4. Why did you choose to locate on Madison’s East Isthmus instead of choosing an area closer to State St./The Capital?

5. Who makes up your renter base at Galaxie?

6. What building amenities do you market to prospective residents most heavily and why? Do you feel there are limitations to what you can market?

7. Which amenities do you think residents value the most? Which ones are actually used?

8. Why has there been a rise in the number of community amenities offered by apartment complexes in the last 10 years?
9. How important is a walkable location to your developments? How did you calculate the walkability of East Washington and what were its strengths and weaknesses? Do you only think about proximity, or do you consider safety, ease of use, pleasant aesthetics?

10. How much space for parking do you account for when building in Madison? Do you expect all your residents to have a car?

11. There is a lot of construction currently taking place surrounding Galaxie, has this impacted your occupancy in any way? Is there a specific vacancy rate at which decide to lower prices?

12. Can you talk about your choice to develop the Cosmos project and why you have moved away from high-rise apartments?

13. Do you think there will be continued development on East Washington? What will this development look like?
Appendix F:

Walkability Observations/Calculations

Hub:

<table>
<thead>
<tr>
<th>The HUB</th>
<th>Score:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>4</td>
</tr>
<tr>
<td>Lighting</td>
<td></td>
</tr>
<tr>
<td>• There were around 5 lights on each block, with more lights closer to state street and campus</td>
<td>5</td>
</tr>
<tr>
<td>• There were block signs with numbers and lights on State St</td>
<td></td>
</tr>
<tr>
<td>• The Capital is brightly lit</td>
<td></td>
</tr>
<tr>
<td>• Lights coming from many of the storefronts</td>
<td></td>
</tr>
<tr>
<td>Density of People</td>
<td>4</td>
</tr>
<tr>
<td>• There were many college students, adults and families walking around</td>
<td></td>
</tr>
<tr>
<td>• Many homeless people around the Hub</td>
<td></td>
</tr>
<tr>
<td>Crime</td>
<td>3</td>
</tr>
<tr>
<td>• Approximately 1,976 incidents in the area from May 24th to November 20th, 2017 (¾ mile)</td>
<td></td>
</tr>
<tr>
<td>• Specifically, 84 violent, 716 were property related, and 1176 were related to quality of life.</td>
<td></td>
</tr>
<tr>
<td>Ease of Use</td>
<td>4</td>
</tr>
<tr>
<td>Barriers</td>
<td>3</td>
</tr>
<tr>
<td>• There are buses and cars on the sidewalks in some areas on campus</td>
<td></td>
</tr>
<tr>
<td>• There are many bike racks and mopeds parked on the sidewalks</td>
<td></td>
</tr>
<tr>
<td>• The sidewalks are old and cracked</td>
<td></td>
</tr>
<tr>
<td>• There were dumpsters on the sides of the sidewalks</td>
<td></td>
</tr>
<tr>
<td>Street Width</td>
<td>5</td>
</tr>
<tr>
<td>• The sidewalks are wide, with a width up to 7 feet</td>
<td></td>
</tr>
<tr>
<td>Proximity &amp; Accessibility</td>
<td>5</td>
</tr>
<tr>
<td>5 minutes</td>
<td>5</td>
</tr>
<tr>
<td>• Just feet away from state street which has dozens of bars, restaurants and stores</td>
<td></td>
</tr>
<tr>
<td>• A couple blocks from campus</td>
<td></td>
</tr>
<tr>
<td>• Alumni park and Memorial Union</td>
<td></td>
</tr>
</tbody>
</table>
- 10 or more restaurants
- 10 or more bars
- 4 grocery or convenience stores

20 minutes
- The Capital
- The other end of campus
- Lake Monona
- 30 or more restaurants
- 20 or more bars
- 10 grocery or convenience stores

<table>
<thead>
<tr>
<th>Design &amp; Aesthetics</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Impressions</td>
<td>4</td>
</tr>
</tbody>
</table>
| - There are trees and decorative lights for the holidays
| - There are stop lights that tell you when to cross with sound
| - There are many benches and parks that people can sit around
| - There are many bike paths
| - It was more trash around than the other areas

<table>
<thead>
<tr>
<th>Cumulative Score</th>
<th>4.25/5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Score</td>
<td>17/20</td>
</tr>
</tbody>
</table>

**Lucky:**

<table>
<thead>
<tr>
<th>Lucky</th>
<th>Score: 3.7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td></td>
</tr>
</tbody>
</table>
| Lighting       | - There were around 5 lights on each block, with more lights closer to state street and campus
|                | - The campus is well lit
|                | - There were lights coming from many of the buildings |
| Density of People | - Many students, a younger crowd because of the proximity to campus and student housing
<p>|                | - There are homeless people if you walk a little further away towards State St. |
|                | 3          |</p>
<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
</table>
| Crime              | - 1,683 incidents in the area from May 24th to November 20th, 2017 (¼ mile)  
                     - 63 were violent, 633 were property related and 987 were about quality of life.                                                                                                                                                                                                 | 3     |
| Ease of Use        |                                                                                                                                                                                                                                                                                                                                              | 3.5   |
| Barriers           | - There are buses and cars on the sidewalks in some areas on campus  
                     - There are many bike racks and mopeds parked on the sidewalks  
                     - The sidewalks are old and cracked  
                     - There were dumpsters on the sides of the sidewalks                                                                                                                                                                                                                      | 3     |
| Street Width       | - The sidewalks are very wide, some more than 7 feet.                                                                                                                                                                                                                           | 4     |
| Proximity & Accessibility | - Across the street from campus  
                               - A yoga studio, supermarket and study center in the building  
                               - 2 blocks from State St. which has cluster restaurants, bars and stores  
                               - 10 or more restaurants within walking distance  
                               - 10 bars within walking distance                                                                                                                                                                                                                                           | 5     |
| 5 minutes          | - The Capital  
                               - The other end of campus  
                               - Lake Monona  
                               - 30 or more restaurants within walking distance  
                               - 20 or more bars within walking distance                                                                                                                                                                                                                                   | 5     |
| Design & Aesthetics|                                                                                                                                                                                                                                                                                                                                              | 4     |
| General Impressions| - There are trees and decorative lights for the holidays  
                               - There are stop lights that tell you when to cross with sound  
                               - There are many benches and parks that people can sit around  
                               - There are many bike paths                                                                                                                                                                                                                                                 | 4     |
| Cumulative Score   |                                                                                                                                                                                                                                                                                                                                              | 16.2/20 |
| Overall Score | 4.05/5 |

Galaxie and Constellation:

<table>
<thead>
<tr>
<th>Galaxie/Constellation Apartments</th>
<th>Score=2.7</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Safety</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Lighting</strong></td>
<td></td>
</tr>
<tr>
<td>• Some areas have one street light per block</td>
<td>2</td>
</tr>
<tr>
<td>• There is discrepancy in the numbers of street light per block (west Washington Street has 3-4 light per block compared to the other streets surrounding Galaxie)</td>
<td></td>
</tr>
<tr>
<td>• Lights are not very bright and are have a weak yellow glow</td>
<td></td>
</tr>
<tr>
<td><strong>Density of People</strong></td>
<td></td>
</tr>
<tr>
<td>• We saw a 5-6 people running, 4-5 people doing their grocery shopping and a couple of people walking leisurely</td>
<td>2</td>
</tr>
<tr>
<td>• Overall 30 people or so observed, not very vibrant</td>
<td></td>
</tr>
<tr>
<td>• Runner friendly, and pet friendly</td>
<td></td>
</tr>
<tr>
<td><strong>Crime</strong></td>
<td></td>
</tr>
<tr>
<td>• 494 incidents in the area from May 24th to November 20th, 2017 (¼ mile)</td>
<td>4</td>
</tr>
<tr>
<td>• 11 of those incidents were violent, 216 of them were property related and 267 were related to the quality of life.</td>
<td></td>
</tr>
<tr>
<td><strong>Ease of Use</strong></td>
<td>3.5</td>
</tr>
<tr>
<td><strong>Barriers</strong></td>
<td></td>
</tr>
<tr>
<td>• Sidewalks are clear and easy to walk</td>
<td>3</td>
</tr>
<tr>
<td>• Two people can easily walk</td>
<td></td>
</tr>
<tr>
<td>• Two people can easily fit</td>
<td></td>
</tr>
<tr>
<td>• Washington street is the biggest barrier because of traffic and car crossings</td>
<td></td>
</tr>
<tr>
<td><strong>Street Width</strong></td>
<td></td>
</tr>
<tr>
<td>• 2 people can walk side by side</td>
<td>4</td>
</tr>
<tr>
<td><strong>Proximity &amp; Accessibility</strong></td>
<td>4.25</td>
</tr>
<tr>
<td><strong>5 minutes</strong></td>
<td></td>
</tr>
<tr>
<td>• Festival foods (grocery store) located just next to the building</td>
<td>4.5</td>
</tr>
</tbody>
</table>
- Breese Stevens Field
- 1-3 bars
- Associate bank and credit union nearby
- Fitness centers and yoga, boxing options
- 1 open park
- Dental care
- Lyric Apartments
- High-end restaurant (Sujeo) on same street
- Coffee shops (Cargo coffee shop on same street)
- About five restaurants
- About seven bars
- One grocery store (in the building)

<table>
<thead>
<tr>
<th>20 minutes</th>
<th>Willy Street Co-op</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capital</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Metro Transit System building</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jiffy Blue</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Auto services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Car wash</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Antique design store</td>
<td></td>
</tr>
<tr>
<td></td>
<td>More than 30 restaurants</td>
<td></td>
</tr>
<tr>
<td></td>
<td>More than 20 bars</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Two grocery stores</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Design &amp; Aesthetics</th>
<th>3.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Impressions</td>
<td>3.5</td>
</tr>
</tbody>
</table>

- Park. walkable for pets and other actives
- Bike racks
- Power plants
- Bench sitting area next to Breese Stevens sidewalks
- Few abandoned buildings within the vicinity (broken glasses, few graffiti)
- Lots of restaurants relocating (recurring theme)

<table>
<thead>
<tr>
<th>Cumulative Score</th>
<th>3.49/5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Score</td>
<td>13.95/20</td>
</tr>
</tbody>
</table>
Appendix G:

Privacy Statement

Privacy Policy and Informed Consent
Geography Undergraduate Colloquium, University of Wisconsin - Madison

Researchers: Sadia Majid (smajid@wisc.edu), Sydney Carpenter (smcarpenter@wisc.edu), Thorbjorn Will (tmwill@wisc.edu), and, Gabriella Barrett (gbarrett2@wisc.edu).

We are geography majors at the UW-Madison working on our senior thesis project and are interested in examining the factors that affect housing choice in downtown Madison. We hope to conduct a semi-structured interview with you in order to learn what amenities developers focus on when building and marketing high-rise apartment complexes. Additionally, how important walkability is to apartment developers/owners. If you consent to the interview, we will meet you at a place of your choosing and send you all our pre-written questions in advance. Although we may ask you additional questions during the conversation, your participation is always voluntary – you may skip any question or exit the interview at any time.

You are cordially invited to attend a free public symposium on Tuesday evening, 12 December 2017, at 2241 Chamberlain Hall on the UW-Madison campus, where we will present the results of our research. Our paper will be archived at the Minds@UW website, which is password protected. Our paper will be available to researchers for non-profit scholarly and educational purposes only. We are happy to send you a digital copy of our paper upon request. By signing this form, you give your permission to the researchers listed above to use the documentary materials listed below in their senior
project. By giving your permission, you do not give up copyright or any performance rights that you hold. By signing this form, both the participants and the researchers acknowledge that they understand the goals of this research and agree to the terms above.

If you have any comments, questions, or concerns about this project, please contact Dr. William Gustav Gartner, 115D Science Hall, Department of Geography, UW-Madison, 550 N Park St, Madison, WI 53706. Phone: (608) 890-3816. Email: wgartner@wisc.edu