



REPORT FOR
SOPHMORE HOUSING PROJECT
PREPARED FOR THE OHIO STATE UNIVESITY

INTRODUCTION

There is a new effort on the part of universities, including The Ohio State University, to better understand how their campus presence affects adjacent neighborhoods (Campus Partners, 2009; Cortes, 2004; Dixon, 2005; Gumprecht, 2003). Besides affecting the atmosphere, public services, and amenities of college towns, universities and their undergraduate populations can affect area housing (Blackwell et al., 2002; Cortes, 2004). Undergraduates in particular can exert negative externalities upon area neighborhoods as they are often highly mobile, unmarried, unemployed and renters; prior research suggests that unmarried renter populations will be rather poor at housing upkeep, potentially decreasing housing values and increasing social disorder (Galster, 1987).

Interestingly, Cortes's (2004) research suggests that a lack of available on-campus housing can cause an increase in low-level rental housing stock in local neighborhoods, which in turn leads landlords to cut maintenance to decrease their operating costs. However, an increase in on-campus housing can decrease the demand for low-level housing, helping to preserve university area rents. Additionally, housing values around both public and private universities tend to be elevated compared to the regional pricing trends.

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The Ohio State University (OSU) is planning to implement an on-campus housing requirement for all sophomores in 2014. The goal of the second-year on-campus residency requirement is to foster an integrated University milieu by encouraging participation and interaction between students, faculty, and staff. Understanding the current effects OSU has upon its university district is useful for projecting how this policy change might affect university-area neighborhoods. Specifically, it would be useful to understand the larger interactions between current housing trends for students and OSU's policy regarding on-campus housing expansion.

This report analyzes areas with large student populations, considering where these areas are within the university district, sampling what the neighborhood characteristics are, and deconstructing the off campus housing costs in the University district to better understand the current rental market.

DATA ANALYSIS AND COLLECTION

We obtained data on the location of students from University Registrar. These data included addresses for approximately 150,000 students, both living on and off campus. We used these data to map the location of off-campus undergraduate, graduate and professional students. We had three years of data and so we averaged the number of students over the three-year period. In this report, we focus on the location of off-campus undergraduates.

Of this data roughly 40% was able to be geocoded, followed by significant data cleaning to limit students to the greater campus area to gain insights into the real locations students live.

CAMPUS POLITICAL BOUNDARIES

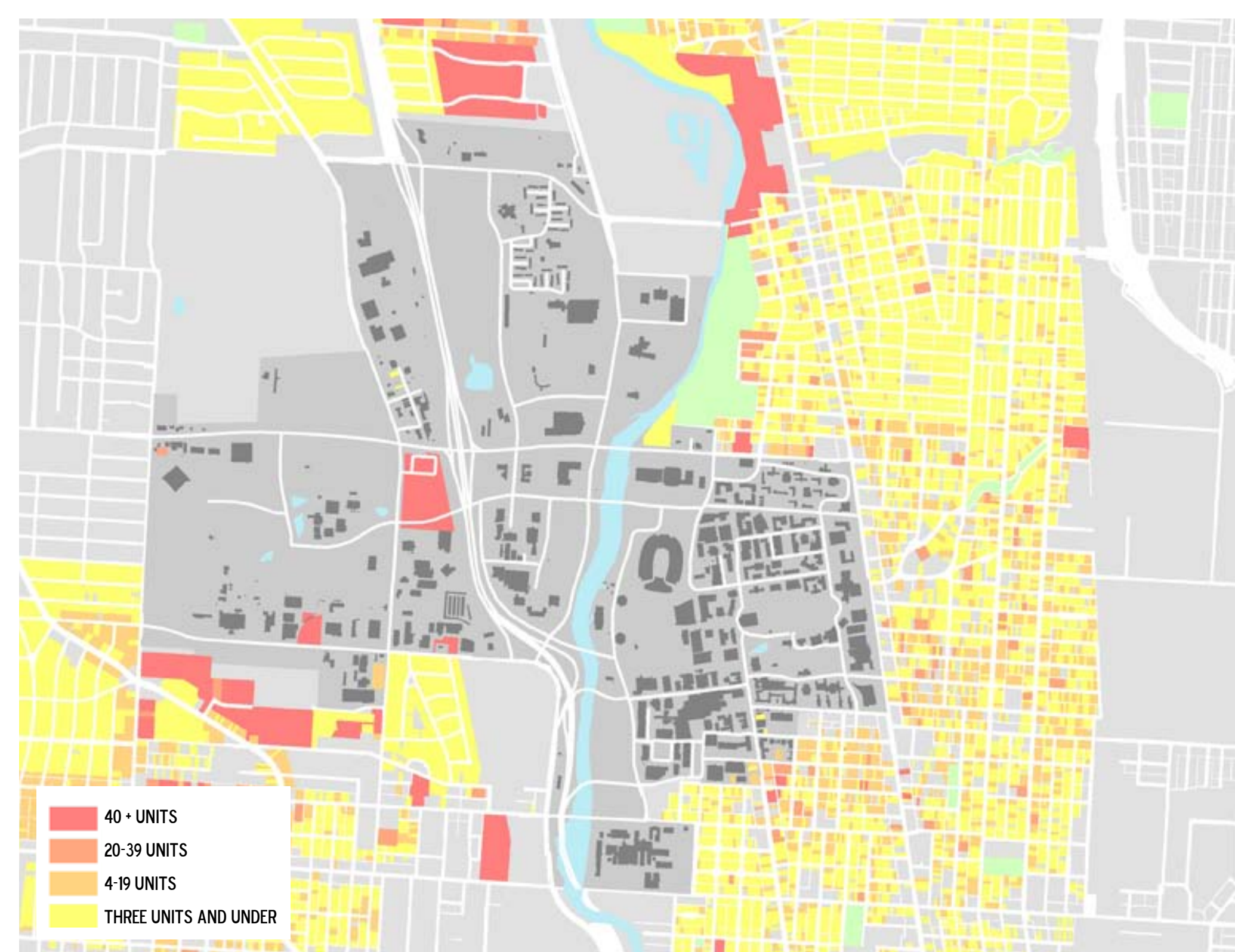
The campus area is defined by two primary political boundaries. The areas in dark grey is what GoogleMaps has identified as the campus area, while the lighter green is the political jurisdiction of the University District. The University district is divided into four zones and is currently undergoing reapportionment as this report is being written.

The darker green line is what the city of Columbus has identified as the University District neighborhood. The neighborhoods bordering the University District to the south are Weinland Park, the Short North, Victorian Village and The Circles. To the north neighborhoods such as Clintonville and Olde North Columbus are also home to many students.



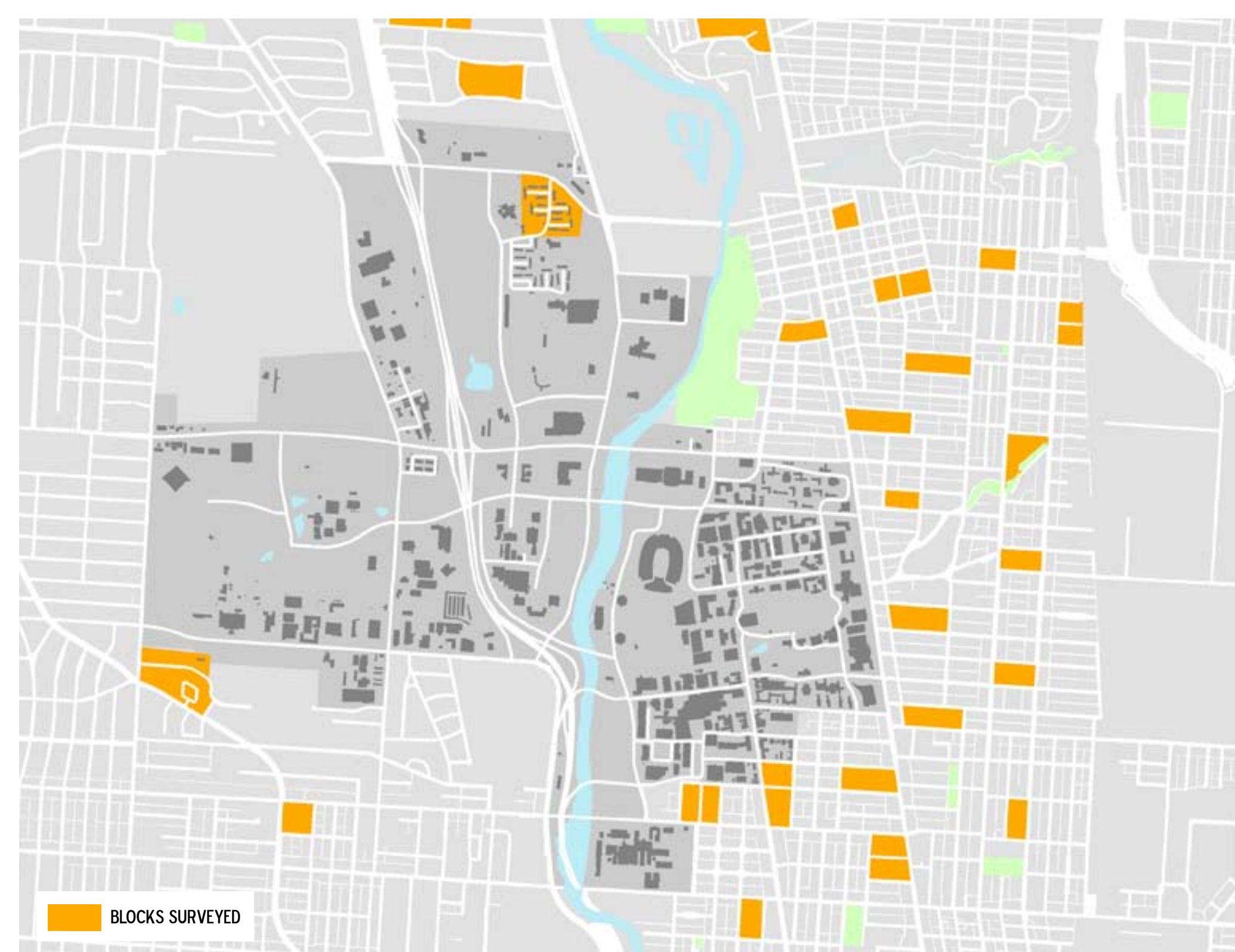
RESIDENTIAL LAND USE NEAR CAMPUS

The land uses around campus are varied. The majority of the higher density multi-unit buildings are located along high street and on the southern side of campus. The housing stock in these areas tend to be built between 1920 to 1970 - with many of the multi-unit facilities being newer. The older single family homes are oftentimes home to a number of students that sign joint leases and live together.



CAMPUS STUDY AREA

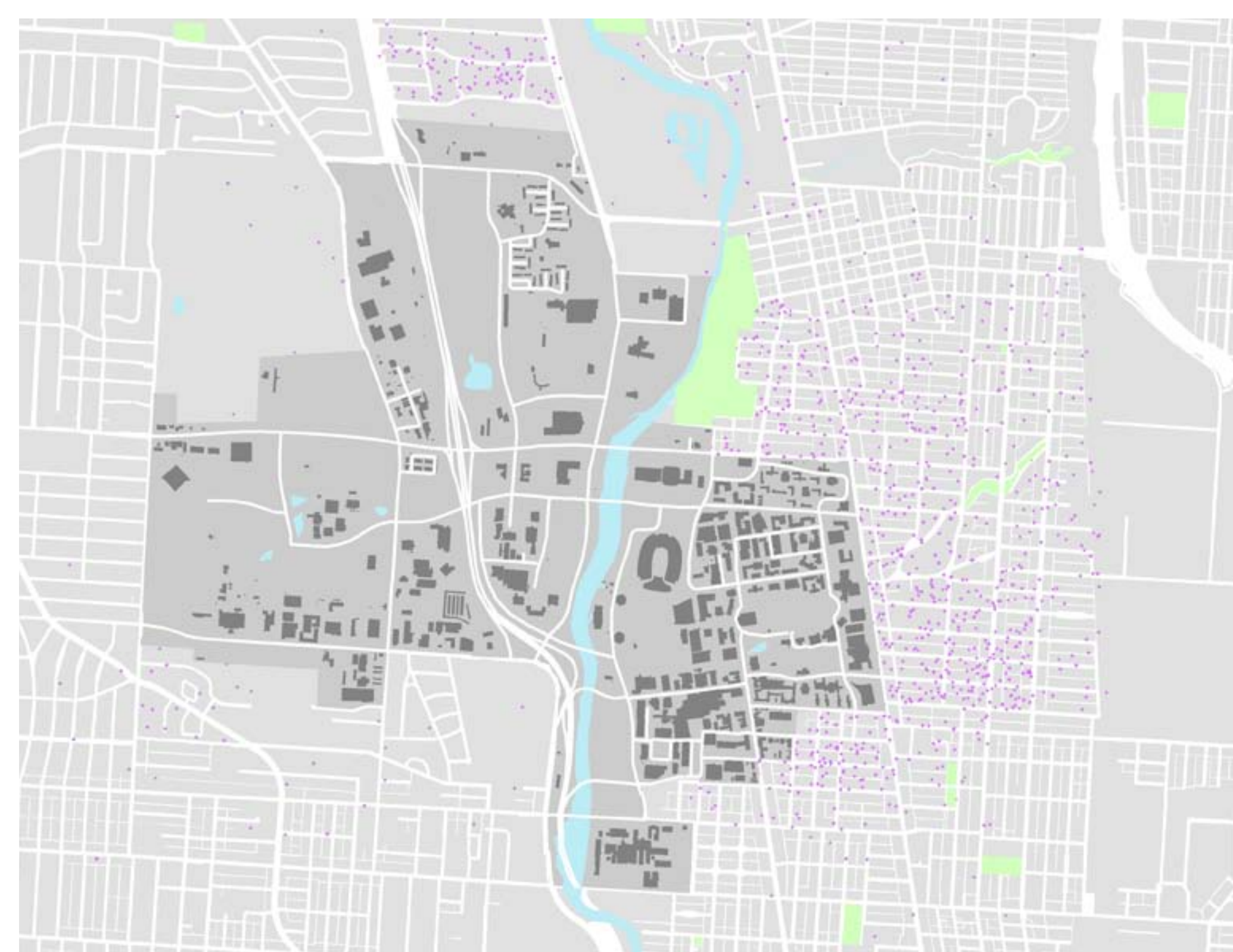
The campus study area was developed by taking a density of approximately 100 students per square mile and then selecting blocks in the area that would be stratified, yet surveyable to gain insight into the general housing characteristics and class make up of each of these blocks.



SOPHMORE RANDOM DOT DENSITY

After extracting the counts of sophmore in a given block this was then extrapolated to a yearly average and then represented visually as a random dot density map. These are no the physical location of sophmomes, and each dot represents 5 sophmores.

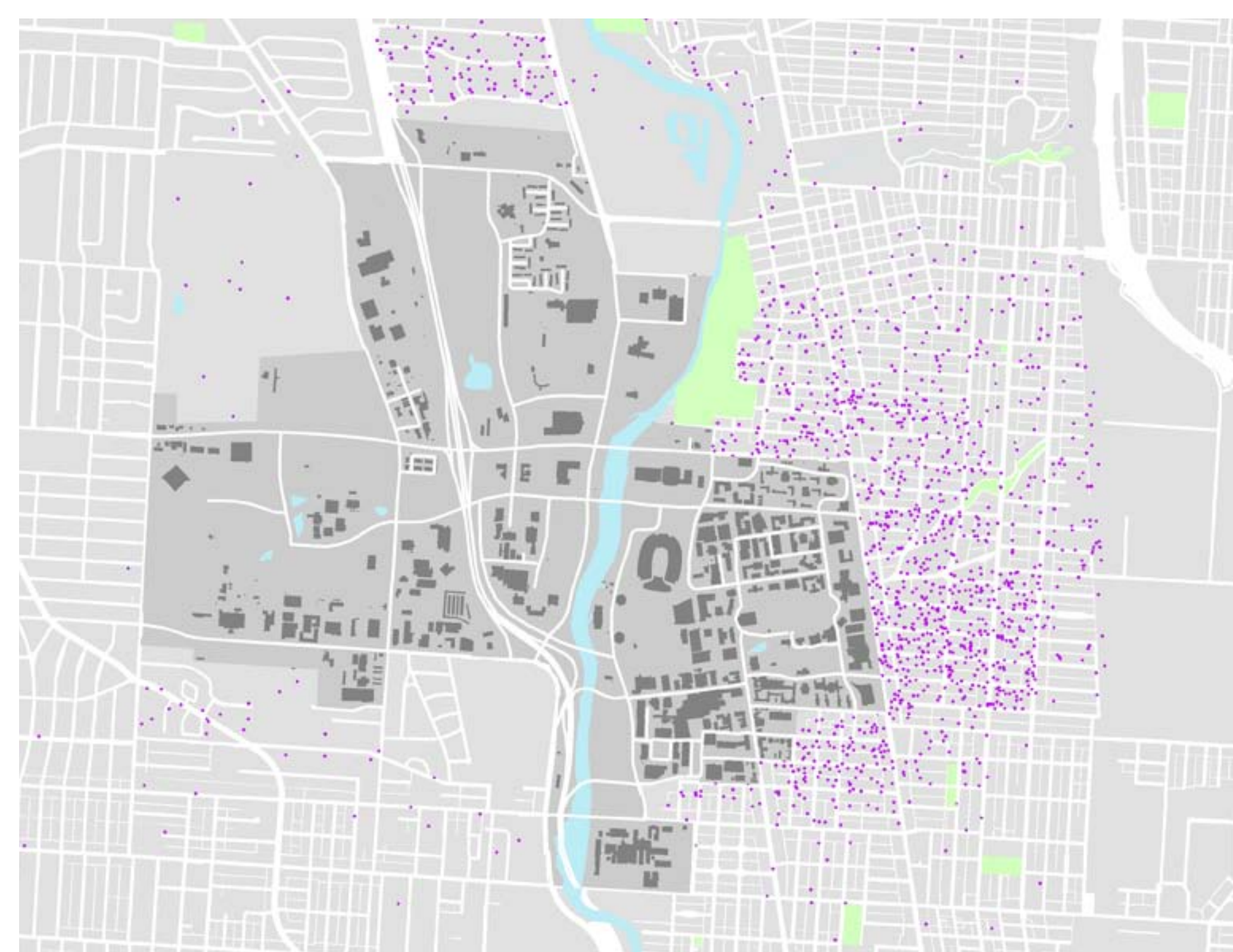
Sophomores tend to live across the street from the Ohio Union and live in relatively uniform distribution around the center of campus, The Oval. There are some that live further north in the areas of University Village, however the bulk of sophomores live in the areas that are close to campus.



JUNIOR RANDOM DOT DENSITY

After extracting the counts of juniors in a given block this was then extrapolated to a yearly average and then represented visually as a random dot density map. These are not the physical location of juniors, and each dot represents 5 juniors.

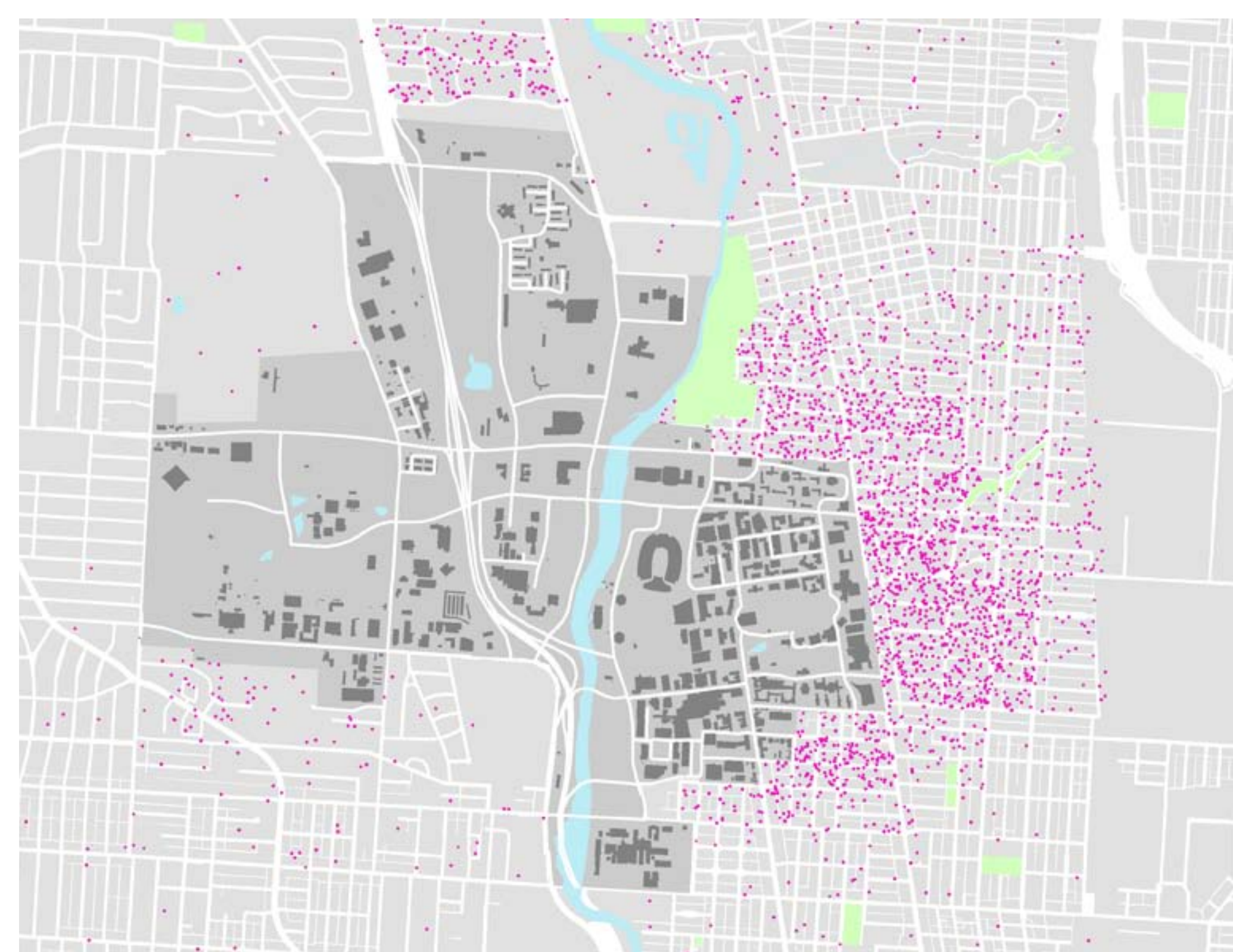
The majority of students that are juniors live on the east side of High Street, however one noticeable difference between the Sophomore dot density map and the junior density map is that there tends to be more juniors living further north. This is because this real estate is generally less expensive than their campus counterparts. These also tend to be smaller single family homes.



SENIOR RANDOM DOT DENSITY

After extracting the counts of seniors in a given block this was then extrapolated to a yearly average and then represented visually as a random dot density map. These are not the physical location of seniors, and each dot represents 5 seniors.

The majority of students that are seniors live on the east side of High Street, and similar to juniors, there are more seniors living further north, and on the southern side of campus, in the Victorian Village and The Circles neighborhoods.





DETAILED ANALYSIS BLOCK 14

This block is bordered by Summit Street, Iuka Avenue, E. Northwood Avenue, and N. Fourth Street. It is generally in good condition in both the cleanliness and physical characteristics of infrastructure and building inventory. The streets, curbs, and gutters, were in good working order with few cracks or holes. While there was no presence of bicycle facilities, the sidewalks were complete and in good condition. The block was heavily wooded, primarily due to the presence of Iuka Park located in the center.

This park has benches and is classified as a passive park. Generally, the interior homes of the block, facing Iuka Park, were in excellent condition with unique architectural appeal and high quality building materials.



DETAILED ANALYSIS BLOCK 16

This block is bordered by Summit Street, E. 17th Avenue, N. 4th Street, and E. 18th Avenue. It has more trash than other blocks we observed and some of the buildings were in disrepair with both broken windows and broken architectural features. Additionally, the buildings in this block were similar in appearance, most possessing poor architectural detailing.

While the buildings were in fair condition, the streets were in good condition with few cracks or holes in the curbs and pavement. There were no bicycle facilities, yet the pedestrian crosswalks were stripped and most intersections had signals. This block also had a variety of commercial uses, including a laundromat and gas station.





DETAILED ANALYSIS BLOCK 17

This block encompasses the area of East 15th Avenue and East 14th Avenue between Indianola Avenue and N Pearl St. Both East 15th Avenue and East 14th Avenue are one-way residential streets, with on-street parking, and no bike amenities (bike lanes or sharrows). The block is comprised of detached single-family units that house fraternities or sororities; duplex housing; and multifamily housing with less than five stories. The majority of the houses on the block have porches or large stoops.

The porches and large stoops provide areas where residents can socialize with one another. This may account for the alcohol bottles, cigarettes, and trash that are in some of the front yards and in the gutters. Although none of the housing on the block have negative attributes such as: boarded or broken windows, broken fixtures, or lacks visible structural integrity, the majority of the housing is not of the higher quality that is seen in the housing stock in near-by neighborhoods such as Victorian Village, Italian Village, and Clintonville.

The only housing units in block 17 that appear to be higher quality are the majority of the fraternity and sorority houses. Some of these detached single units are restored or well-maintained historical structures, with interesting fixtures (lights, doorknobs, etc.), and sculptures.



DETAILED ANALYSIS BLOCK 19

This block is bounded by 11th Avenue to the south, N. Pearl Street to the west, Indianola Avenue to the east, and Chittenden Avenue to the north. The block primarily features multifamily housing units, such as duplexes and single building multi-unit housing fewer than 5 stories. The block sits behind the Gateway development, which features food, entertainment, and shopping facilities. Overall, the block is well maintained.

The residential units were free of any major defects, and there were no boarded up buildings or obvious signs of vandalism. There were some instances of graffiti, but they were small and not extremely noticeable. The area's streets are well taken care of, and there were no abandoned items lining them. Several areas featured bike racks, and sharrows are on high street.

Trash and litter is abundant in the area, however. Most duplex-type housing had trash in the yards, and there was trash lining the streets, but not on the sidewalks. The apartment buildings had fewer instances of trash.



DETAILED ANALYSIS RENTAL DATA

The research team collected data on rental properties within the university district from listing in OSU's Office of Student Life, Neighborhood Services and Collaboration and Off Campus and Commuter Student Engagement Departments. These data were matched with where current sophomores are living in the off-campus neighborhood. In total, we examined rental data on 864 distinct units






We identified that the average rent is \$433 per person for the entire university district. With a total of about 4,500 sophomores living in the off-campus neighborhood, we estimate that sophomore population pays approximately \$1.9 million each month, totaling a little over \$23 million yearly. This wand monthly basis.

We examined the relationship between price and the distance from a campus border. The monthly per-person price for units within two blocks of a campus border is \$488.89. Between three and four blocks away, the average price drops to \$424.75. Between five and six blocks away, the price drops to \$402.65. Between seven or eight blocks away the average price hits a low of \$392.61. These averages demonstrate that there is a sharp drop in price between units one to two blocks away and units three or four blocks away, with a drop of \$62.14. Beyond this, the averages show that there is a ~\$20 drop for every additional two blocks one moves away from campus. This decrease in price differs depending on the direction north, south, east and west of the campus. This is shown in the following maps.



LOCATIONS OF APARTMENTS
SURVEYED

ZONES OF RENTAL UNITS NEAR CAMPUS

-  ZONE 1: HIGH COST
-  ZONE 2: MODERATELY HIGH COST
-  ZONE 3: MODERATE COST
-  ZONE 4: MODERATELY LOW COST
-  ZONE 5: LOW COST

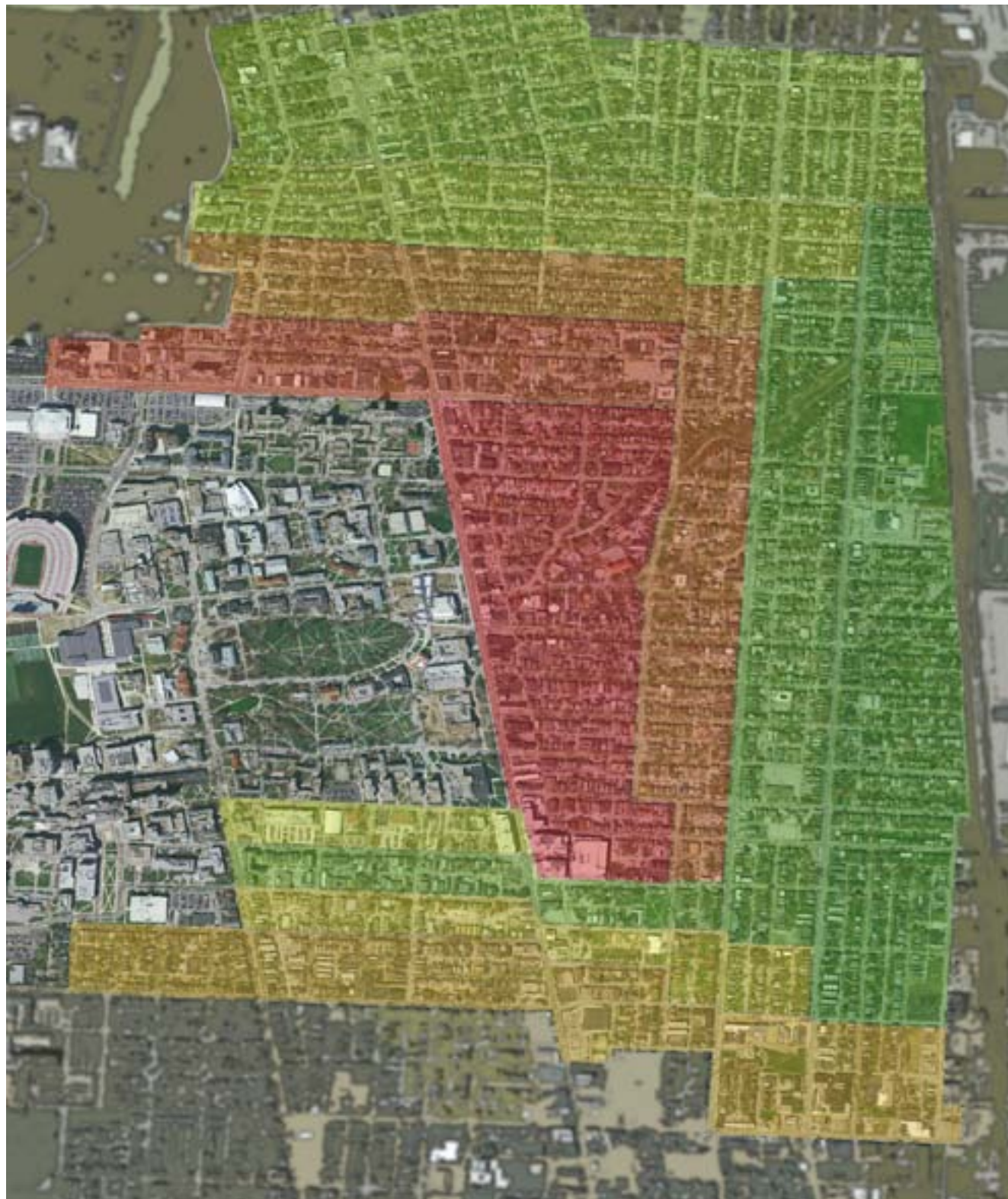
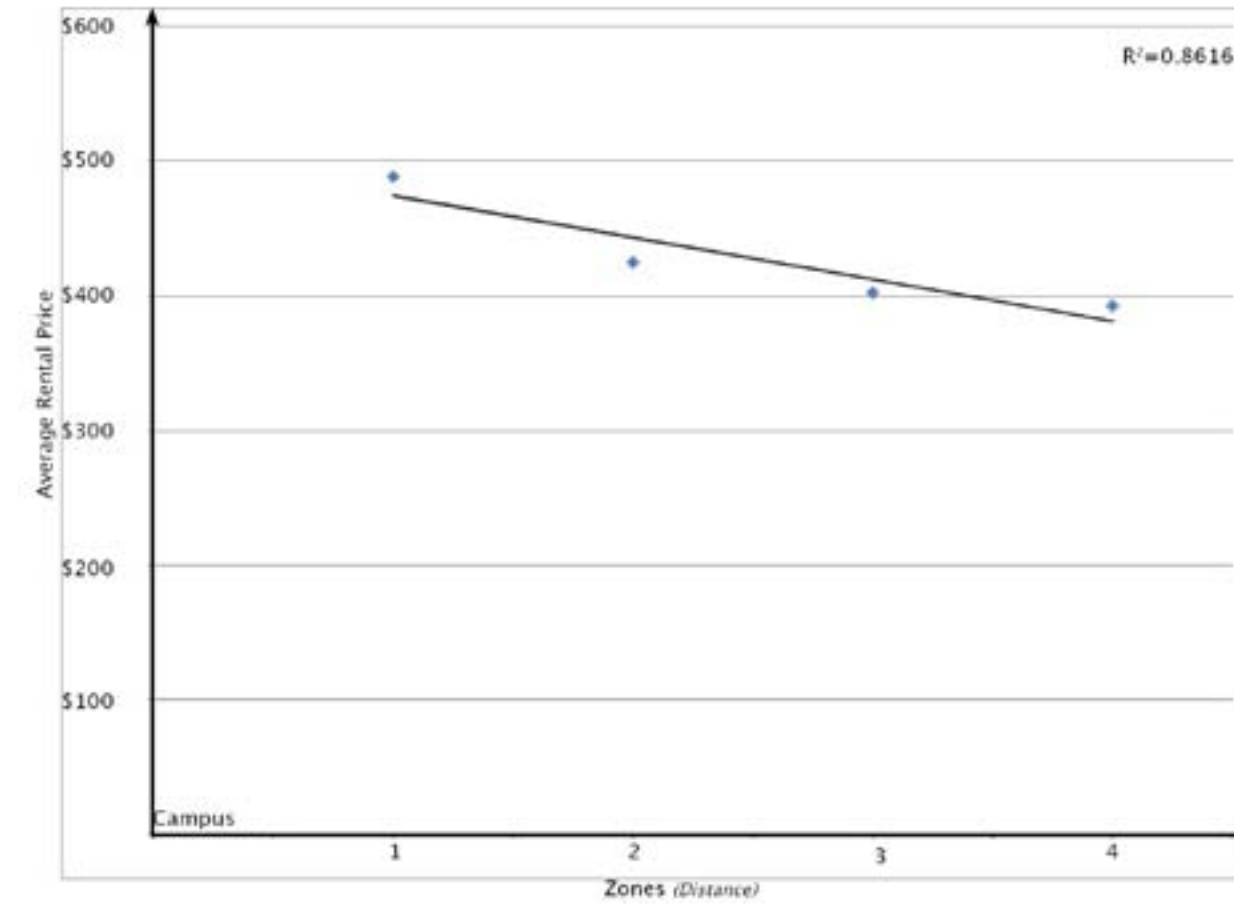


FIGURE 1: RENTAL COST OVER DISTANCE FROM CAMPUS



We also examined the relationship between rent and the appraised value of the land and buildings with residential land uses. We aggregated the rent and appraised value data to census block groups. Using a simple correlation, we identified the relationship between land value and building value. We did find a strong correlation between these two variables as indicated by the R-squared of 0.78.

FIGURE 2: CORRELATION BETWEEN BUILDING VALUE AND RENTAL PRICE

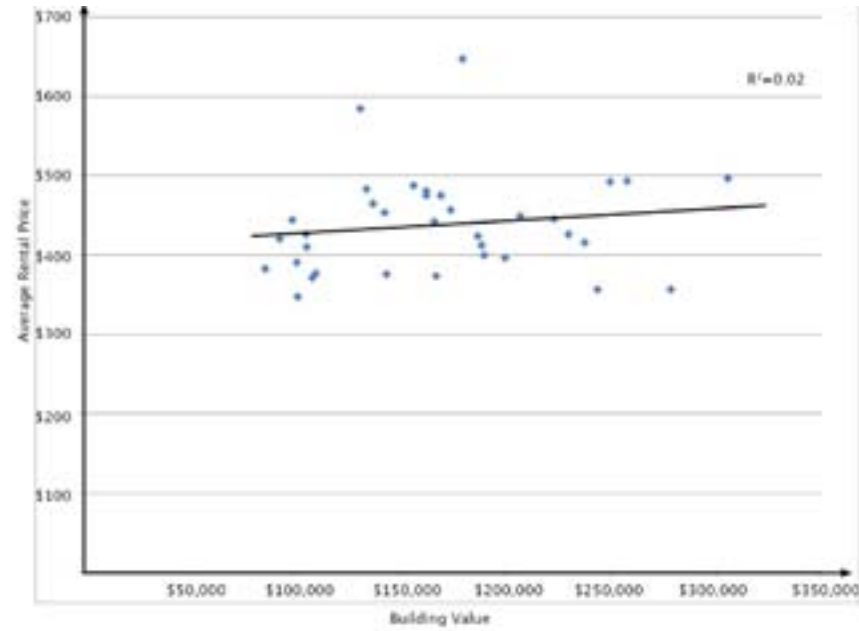
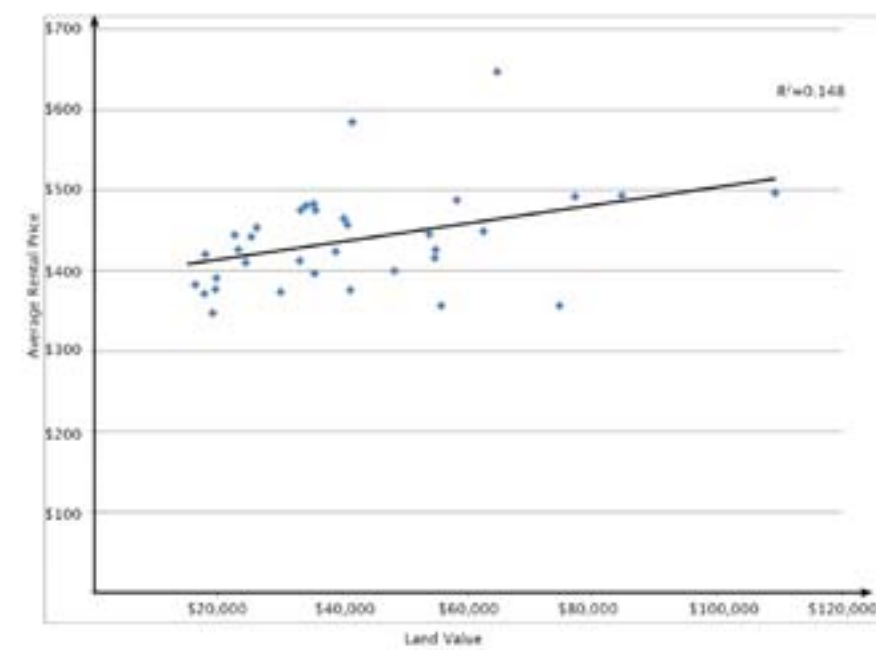


FIGURE 3: CORRELATION BETWEEN BUILDING VALUE AND RENTAL PRICE



Using a similar method, we compared the rent and appraised values. The first calculation examines the correlation between rent and land value. This suggests that the higher the rent the higher the land value, although there is a weak correlation as indicated by a R-squared value of 0.14. Even weaker though is the relationship between building value and rent. There is nearly no relationship between the average rent a student is pays and the average home value in each block.

Our analysis of the rental data suggests 1) that students living closer to campus often pay higher rent than those living further away; and 2) students are paying rent that does not necessarily reflect the housing stock quality as measured by the building value.

CONCLUSION

Our results from this study suggest that sophomores live close to campus and pay elevated rent. They live in walkable and connected neighborhoods, typically of mixed or sometimes low quality housing and neighborhoods.

In future work, we aim to conduct a series of focus groups to determine student housing and neighborhood preferences. We hope to determine the willingness of senior undergraduate and graduate students to live closer to the university campus once sophomores are living on-campus.

