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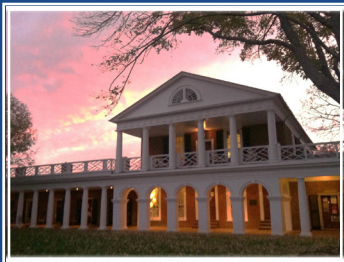
STUDENT HOUSING ANALYSIS STUDY

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# UNIVERSITY OF VIRGINIA

PHASE I BRIEFING MEMO

MAY 2013





## **PREFACE & PROJECT INTRODUCTION**

Brailsford & Dunlavy (“B&D” or the “Project Team”) was engaged by the University of Virginia (the “University” or “UVA”) in November 2012 to begin working on a Student Housing Analysis Study (the “Study”). The first phase of the Study focused on assessing the current on- and off-Grounds housing available to students. B&D used detailed market research, a comprehensive survey instrument, and predictive analytics methodologies to understand the extent to which latent demand exists for on-Grounds housing.

This document provides a summary of the Phase I findings. The goal of Phase I was to provide key project stakeholders with updated student living preferences and demand projections for housing as the University completes its on-going planning process. The findings contained herein represent B&D’s professional opinions based upon assumptions and conditions detailed in this report. B&D conducted research using both primary and secondary information sources that are deemed to be reliable, but whose accuracy cannot be guaranteed.

Throughout the project, Julia Monteith, Senior Land Use Planner with the Office of the Architect, was B&D’s primary contact and facilitated communication and coordination with University administrators and students. B&D would like to acknowledge Ms. Monteith’s support and thank her for her efforts.

The Project Team would also like to acknowledge the support, cooperation, and effort of University community personnel who contributed to the completion of this analysis, with special recognition to the following members of the Steering Committee:

- David Neuman, Architect for the University, Office of the Architect
- Gay Perez, Associate Dean of Students/Executive Director, Housing & Residence Life
- Bill Palmer, GIS Planner, Office of the Architect
- Christina Morrell, Associate Vice President for Student Affairs
- Phil Trella, Assistant Vice President for Graduate Studies
- Andy Petters, Assistant Dean of Students, First-Year Areas

The analysis detailed herein for Phase I of the Student Housing Analysis Study was produced by the following individuals from Brailsford & Dunlavy:

- Brad Noyes, Senior Vice President, Project Executive
- Wilson Jones, Assistant Project Manager



## PHASE I WORK PLAN

Along with assistance and cooperation from key project stakeholders, B&D addressed the following components of the Phase I planning initiative to ensure that University objectives were being met:

- *Project Initiation & Administrator Interviews:* B&D toured on-Grounds housing facilities and reviewed previously completed assessments to understand the physical condition and relationships between respective buildings. Floor plans for the residence halls were reviewed to understand the current offerings and help ascertain enhancement and expansion possibilities. B&D also conducted administrator interviews to understand existing policies and objectives relating to the University's on-Grounds housing system. The administrators also discussed how the University's culture and mission related to this planning effort.
- *Preliminary Analysis:* A preliminary demographic analysis was conducted in an effort to define and size the primary student market. B&D also performed a supply and demand reconciliation of the University's existing housing, as well as a brief analysis of parameters for financial feasibility of renovations or new development. Preliminary off-Grounds market research was also completed prior to the project kickoff.
- *Students Focus Groups:* B&D led focus group sessions during two separate trips to Grounds with undergraduate and graduate students to assess the general student sentiment about University Housing. The findings were then used to evaluate preferences, demand, amenity expectations, costs, and other critical issues that were included in the comprehensive survey instrument. Additionally, focus group participants identified housing facilities located in the off-Grounds market that the Project Team examined to better understand existing competition from non-University facilities.
- *Off-Grounds Market Analysis:* The off-Grounds market analysis included both primary and secondary research to understand market conditions, as well as supplemental research on the Charlottesville private housing market provided by the University. The analysis evaluated local off-Grounds offerings, trends, and future plans for local development. The information helped inform the unit types and rental rates tested in the student survey.
- *Competitive Context Analysis:* B&D analyzed housing offerings at select peer institutions regionally and nationally to provide context for the Phase I findings and recommendations. This peer benchmarking analysis compared the University's on-Grounds housing and capture rates for undergraduate and graduate students with those seen at the targeted peer institutions. Capture rates reflect the percentages of select students that reside in a specific area or market. For example, the number of first-year students living on Grounds divided by the total first-year population results in the University's on-Grounds capture rate for first-year students in that particular academic year.
- *Survey Implementation:* B&D worked closely with the Steering Committee to develop and implement an Internet-based survey that tested the demand for on-Grounds housing. The survey allowed the Project Team to analyze and understand housing cost sensitivities among the primary target population groups. The statistically-valid survey informed a proprietary Demand Based Programming ("DBP") analysis.

- *Housing Demand Analysis:* The predictive analytics component of Phase I utilized B&D's proprietary methodology and national benchmarks to determine the projected demand for each type of unit configuration based on student survey responses. The process translated data series based on student preferences into projected demand for on-Grounds housing by sub-demographic population.
- *Demand Reconciliation with Existing Housing Supply:* The Project Team utilized the existing conditions analysis in conjunction with the DBP model to reconcile space supply and demand. This reconciliation to existing facilities allowed B&D, under direction of the Steering Committee, to begin outlining opportunities for future on-Grounds housing.
- *Triangulation Exercise:* Per the request of the Steering Committee, B&D completed a triangulation exercise that examined student satisfaction levels based on class level, location of residence hall, and age of residence hall. The results will be used on an on-going basis to evaluate potential sites for future housing and/or renovations.

It is B&D's hope that the Phase I findings can serve as a foundation for future in-depth analyses given key strategic decisions currently under consideration by the University. The following sections outline the key findings of Phase I of the Student Housing Analysis Study. Please see the appendices included herein for additional information.

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- A. One-Way Survey Results
- B. Demand Summary
- C. Final Phase I Findings Presentation
- D. Demand Analysis Presentation
- E. Student Survey Presentation





## PHASE I EXECUTIVE SUMMARY

### Planning Outcomes

Brailsford & Dunlavy's approach to student housing planning integrates market analyses, end-user input, demand projections, and financial analyses into a comprehensive process in which users and client decision-makers are involved at every step. Per the recommendation of the University, the Project Team interviewed select representatives from Housing & Residence Life, Student Affairs, Academic Affairs, and other key on-Grounds groups. Participants discussed their individual thoughts regarding University Housing, the on-Grounds experience, and today's UVA students. The conversations also touched on the on-going strategic planning process taking place at the University.

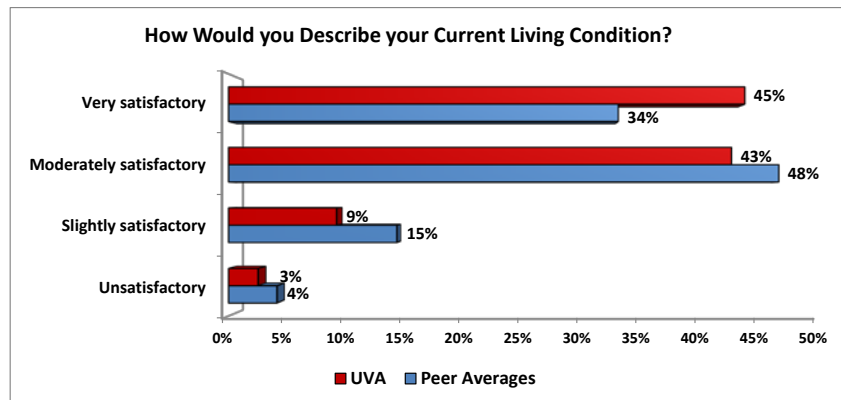
These administrator interviews were synthesized into targeted outcomes and key questions that the Student Housing Analysis Study should address in order to be successful. Those outcomes and questions included the following:

- What are B&D's key observations about the current on- and off-Grounds housing paradigm at the University? Members of the Committee indicated that these observations could include, but are not limited to, the following aspects of housing at UVA:
  - Students satisfaction levels
  - Effectiveness of residential colleges
  - On- and off-Grounds housing supply
- Does latent demand exist for on-Grounds housing? Specifically, the Study should quantify demand for and assess any opportunities related to the following specific UVA sub-populations:
  - Second-year undergraduate students
  - Third- and fourth-year undergraduate students
  - First-year graduate students
- Do UVA's on- and off-Grounds "neighborhoods" impact housing demand and resident satisfaction? The Committee recommended the use of a triangulation exercise that overlays the following comparative variables:
  - Proximity to Grounds
  - Class level
  - Satisfaction levels by neighborhood and housing type
  - Geocoding and University Housing data

### Phase I Key Findings

#### **UVA's Housing Paradigm**

A recurring theme during the focus groups with undergraduate and graduate students was the satisfaction with their current living conditions. Students living on and off Grounds expressed how much they enjoyed living in Charlottesville while attending UVA. These feelings of satisfaction were supported by the student survey. Approximately 88% of survey respondents indicated that they are moderately satisfied or very satisfied with their current living conditions. These satisfaction levels were equally strong for students living on and off Grounds. Additionally, the number of very satisfied students at UVA (45%) is measurably higher than seen at select peer institutions (34%) as shown in Exhibit 1.1.



*Exhibit 1.1 – Current Housing Satisfaction Levels*

Focus group participants and survey respondents indicated that they wish to continue living in on-Grounds housing; however, the supply of non-traditional units (suite- and apartment-style housing options) at UVA is inadequate to satisfy the preferred living preferences for third- and fourth-year students. These students desire greater independence, private bedrooms, and in-unit kitchens that are found in the competitive off-Grounds private housing market. Off-Grounds housing options are relatively affordable and many are located within walking distance of Grounds, which is the preferred method of access for UVA students traveling to class. Survey respondents indicated that location of housing was more of an influential factor when determining where to live than the total cost of rent and utilities, which isn't often seen in competitive rental markets such as Charlottesville.

Additionally, stakeholders inquired about the topic of graduate housing offerings at UVA and how they compared to programs at select peer institutions. As shown below in Exhibit 1.2, the University currently provides 400 beds for its 6,454 graduate students, resulting in a capture rate of approximately 6%. The average capture rate for graduate students identified in this competitive context analysis was more than double the current UVA capture for this specific sub-population. While UVA does not specifically market graduate student housing options, students indicated during the focus group exercise that several of the select peer institutions analyzed below marketed housing options to them during their graduate school application process.

Institution	Total Grads	On-campus Grad Beds	Grad On-campus Housing Capture
Cal Berkeley	10,257	1,300	12.7%
Columbia	19,672	1,640	8.3%
Cornell	7,163	1,182	16.5%
Duke	8,107	250	3.1%
Emory	6,580	0	0.0%
Harvard	13,804	418	3.0%
Michigan	12,714	1,361	10.7%
MIT	6,686	2,419	36.2%
Northwestern	8,108	960	11.8%
Penn	11,092	700	6.3%
Stanford	8,871	4,950	55.8%
UCLA	12,004	1,472	12.3%
UNC	3,290	120	3.6%
University of Chicago	6,928	1,300	18.8%
University of Texas	12,000	639	5.3%
Yale	6,526	1,063	16.3%
<b>Averages</b>	<b>9,613</b>	<b>1,236</b>	<b>13.8%</b>
<b>University of Virginia</b>	<b>6,454</b>	<b>400</b>	<b>6.2%</b>

*Exhibit 1.2 – Graduate Housing Competitive Context*

## Demand for On-Grounds Housing

The University currently captures 99% of first-year students in on-Grounds housing. Retention of second-year students on Grounds is fairly strong, with 42% of these students remaining in University-sponsored housing. However, the University currently accommodates only 15% of third-year students, 12% of fourth-year students, and 6% of graduate students on Grounds. This trend demonstrates the drop in on-Grounds housing capture as students progress toward graduation.

The market research and B&D's proprietary Demand-Based Programming model indicate that latent demand exists for on-Grounds housing. As shown in Exhibit 1.3, the University currently has net demand for an additional 4,512 beds on Grounds. Graduate student demand accounts for 59.2% of the total net demand. Third- and fourth-year undergraduate students make up 40.5% of the total net demand for additional on-Grounds housing.

Enrollment Classification	Enrolled Population	Current Capture Rate	Current Occupancy	Maximum Potential Demand	Potential Capture Rate	Net Demand by Classification	Percentage of Total Net Demand
1st Year Undergraduate	3,443	99%	3,398	3,398	99%	0	0.0%
2nd Year Undergraduate	3,575	42%	1,502	1,517	42%	15	0.3%
3rd Year Undergraduate	3,683	15%	550	1,410	38%	860	19.1%
4th Year Undergraduate	3,787	12%	443	1,408	37%	965	21.4%
Graduate	6,454	6%	400	3,072	48%	2,672	59.2%
<b>TOTAL</b>	<b>20,942</b>	<b>30%</b>	<b>6,293</b>	<b>10,805</b>	<b>52%</b>	<b>4,512</b>	<b>100.0%</b>
EXISTING BED COUNT				6,293			
NET DEMAND (SURPLUS/(DEFICIT))				(4,512)			

*Exhibit 1.3 – UVA Housing Capture Rates & Latent Demand*

The University is currently satisfying demand for first- and second-year students. The University has an opportunity to address the latent demand shown above in Exhibit 1.3 from third- and fourth-year undergraduate students, as well as graduate students. Addressing the deficit of desired on-Grounds beds could reduce this latent demand and increase the number of students residing on Grounds as they matriculate at UVA. The DBP model indicates that providing the preferred housing types in desirable locations on Grounds to these specific sub-populations could have the following effect on capture rates for each group:

- The capture rate for third-year undergraduate students could increase from 15% to as much as 38% with the addition of up to 860 new on-Grounds beds to satisfy unmet demand. These students prefer high-density, apartment-style housing with private bedrooms and shared common areas.
- The capture rate for fourth-year undergraduate students could increase from 12% to as much as 37% with the addition of up to 965 new on-Grounds beds to satisfy unmet demand. These students prefer high-density, apartment-style housing with private bedrooms. High-density, apartment-style housing is typically built in three- and four-bedroom configurations that result in more efficient square foot per student bed ratios.
- The capture rate for graduate students could increase from 6% to as much as 48% with the addition of up to 2,672 new on-Grounds beds to satisfy unmet demand. UVA graduate students indicated that they prefer studio and one-bedroom, apartment-style housing with private bedrooms.

## Triangulation Analysis

The Committee's request for a triangulation analysis that compared multiple housing variables determined that proximity is connected to student experience. Survey respondents were asked to indicate how satisfied they were with their current living conditions. B&D then took this information and cross-tabbed it with the current on- and off-Grounds housing locations for each respondent. The analysis determined that students living on Grounds were most satisfied in the McCormick Road and Alderman Road housing areas. Students living off Grounds are most satisfied near Rugby Road and The Corner. A correlation was seen between off-Grounds student satisfaction levels and distance from Grounds, as shown below in Exhibit 1.4.

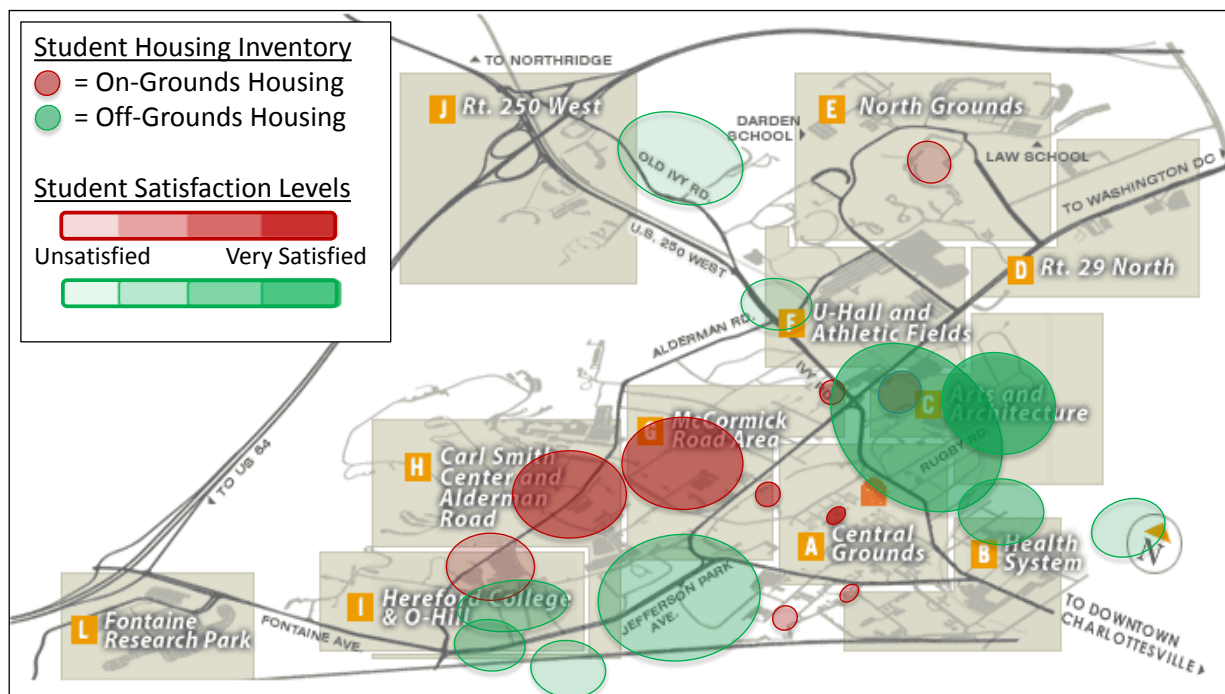


Exhibit 1.4 – Student Housing Satisfaction Triangulation Mapping Exercise

The results of the triangulation analysis are explained in greater detail beginning on page 35, including a separate map for on- and off-Grounds residents.

## Phase I Outcomes & Opportunities

Based on the analysis documented herein, the University has several options resulting from the Phase I findings.

- Enhance the second-year experience by reallocating existing on-Grounds apartments and developing new high-density apartments to serve this specific sub-population.
  - Opportunities:
    - Continue and satisfy the on-Grounds experience for second-years.
    - Satisfies demand for independent living with private bedrooms & kitchen.
    - Could also increase capture rates for third- and fourth-year students.

- Challenges:
  - The DBP model indicates that the University is currently meeting second-year student demand using \$500+ price filter. A price filter is applied in order to mitigate the risk of overstating demand from students currently paying less than a certain amount for housing off Grounds. B&D’s experience nationally has shown that a majority of these students chose their current living situation due to affordability; therefore, these students are often unlikely to leave their current housing in favor of more expensive options either on or off Grounds.
- Increase the on-Grounds capture rates for third-year and fourth-year undergraduate students by developing new, high-density apartments.
  - Opportunities:
    - Extends the on-Grounds housing experience to meet latent third- and fourth-year student demand.
    - Provides additional student housing proximate to Grounds community that remains consistent with the UVA student experience.
  - Challenges:
    - Balancing cost of construction and University design standards, specifically on-Grounds standards.
- Increase the capture rate for graduate students by developing new, studio and one-bedroom, private apartment housing.
  - Opportunities:
    - Provide graduate students with the same community and experience as undergrads, thus increasing their connection to Grounds and the University.
    - Increase on-Grounds housing options to close the gap with other top-tier graduate programs and peer institutions.
  - Challenges:
    - Financial feasibility at desired studio and one-bedroom, apartment-style configuration can be challenging.

### Next Steps

Phase II of the Student Housing Analysis Study will tie into the University’s current strategic planning process. Options will be presented to the University prior to selecting the recommended approach for completing the Study. The University’s on-going strategic planning process has been identified as a priority in order to continue with Phase II of the Housing Study.



## STUDENT HOUSING ANALYSIS

### On-Grounds Housing

The University has emphasized the integration of academic pursuits and the student living experience since its founding in 1819. This integration of the academic and residential experiences on Grounds continues to strengthen UVA's case as one of the top public institutions in the country. Thomas Jefferson's "Academical Village" concept promoted living, learning, and socializing opportunities that helped define central Grounds. The Lawn and Range pavilions were designed to promote community and bring students out to the heart of the University – the Academical Village. The pavilions have capacity for 104 total students. These unique housing opportunities reserved for select fourth-year undergraduate students and graduate students still remain the most highly-desired housing options on Grounds today due to their central location and historical significance.

The development of meaningful student communities still remains the central focus of the Office of Housing & Residence Life at UVA. All incoming, first-year undergraduate students are required to live on Grounds. The mission of Housing & Residence Life is as follows:

*"Housing & Residence Life, in conjunction with the Office of the Dean of Students and the Office of Business Operations, works collaboratively to create inclusive, welcoming communities where residents are empowered to engage their potential as scholars and leaders through self-governance and participation in their residential community."*

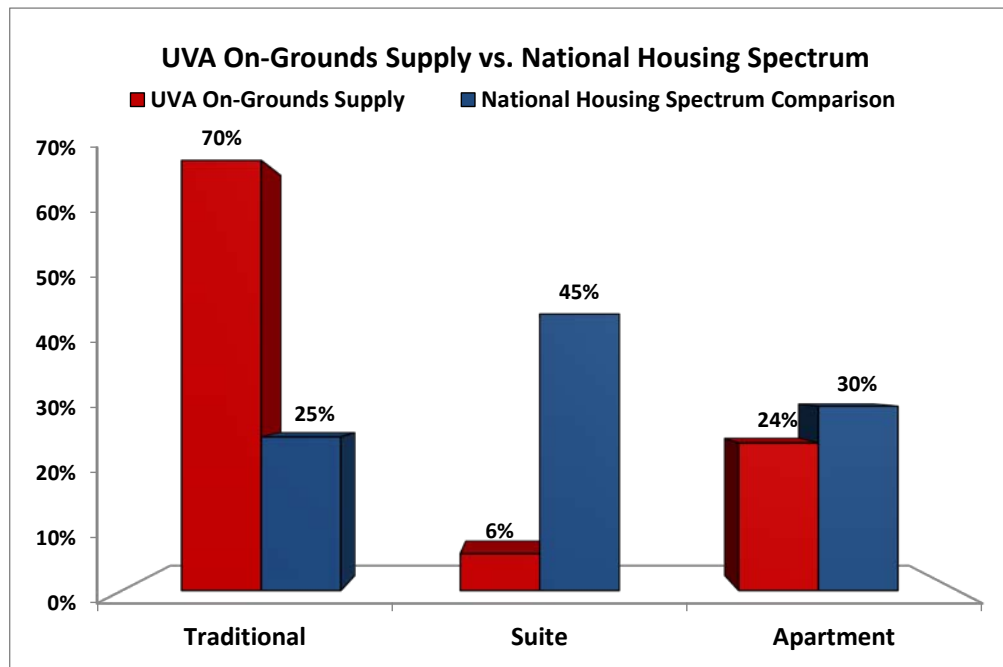
Housing & Residence Life plays an important role in the development of UVA students due to the focus on creating strong residential communities. The University has one of the strongest first-year housing programs in the country, which is exemplified by the fact that 99% of all first-year students live on Grounds. The second-year capture rate remains strong, but as Exhibit 2.1 demonstrates, the University captures fewer students as they matriculate through their undergraduate studies. Additionally, as the Project Team will address herein, the University is currently capturing a small number of the graduate student population living in the off-Grounds Charlottesville market.

Enrollment Classification	Enrolled Population	Current Capture Rate	Current Occupancy
1st Year Undergraduate	3,443	99%	3,398
2nd Year Undergraduate	3,575	42%	1,502
3rd Year Undergraduate	3,683	15%	550
4th Year Undergraduate	3,787	12%	443
Graduate	6,454	6%	400
<b>TOTAL</b>	<b>20,942</b>	<b>30%</b>	<b>6,293</b>

*Exhibit 2.1 – On-Grounds Capture Rates*

Overall, the University currently captures approximately 30% of all undergraduate and graduate students in the 6,300 beds offered on Grounds. Excluding graduate students, the capture rate for undergraduate students in on-Grounds housing is approximately 41%. As demonstrated in Exhibit 2.2, the on-Grounds supply is heavily weighted with traditional-style units when compared to national housing averages. These double-occupancy rooms with shared hall bathrooms promote a strong sense of community that is a critical part of the first-year experience at UVA. The University offers fewer suite-style and apartment units on Grounds. These suites and apartments are mainly reserved for upper-

division students that desire greater privacy and independence as they progress through their student experience at UVA.



*Exhibit 2.2 – UVA Housing Supply Comparison*

The total on-Grounds housing inventory is spread across fifty-five different facilities ranging from residence halls to themed houses, all of which are operated by Housing & Residence Life. The University offers three residential colleges, five language houses, and a transfer-student community in this inventory.

Overall, the University does an excellent job of providing a strong on-Grounds housing experience; however, the off-Grounds market is successfully housing a large portion of University students due to the lack of on-Grounds supply given the total enrollment of approximately 21,000 students. The off-Grounds market is highly competitive and provides affordable housing options to students in desirable locations with private bedroom configurations. Despite the popularity of off-Grounds housing, should it be determined to align with strategic goals, the University has the opportunity to capture unmet demand for on-Grounds housing from upper-division and graduate students.

### Off-Grounds Housing

The purpose of the off-Grounds market analysis was to identify the nature of the private rental housing market, allowing B&D to compare the off-Grounds and on-Grounds housing options available to UVA students. B&D analyzed forty-five properties that were commonly regarded as student accommodations located in close proximity to Grounds through community tours, conversations with students, previously completed analyses, and general market research. The number of these student-focused properties has increased over the past decade due to zoning changes in neighborhoods near Grounds that have allowed for increased development of desired high-density apartment housing. Specific criteria such as rental rates, unit types, and available amenities were analyzed to better



understand why some students chose off-Grounds properties over University-sponsored housing on Grounds.

B&D identified six separate off-Grounds districts located in direct proximity to Grounds where student-focused housing was found to be prevalent. An analysis of monthly rental rates for the forty-five properties located in the six districts was conducted to calculate the average cost of living for students in the private market. As shown in Exhibit 2.3, the average monthly rent for a student living off Grounds is approximately \$617 per month excluding utilities. Focus groups and intercept interviews with students living off Grounds revealed that students pay between \$55 and \$110 per month in utilities in addition to their individual rental costs. By combining average off-Grounds rental rates and estimated utility costs per month, B&D is able to estimate that the average UVA student living off Grounds pays approximately \$700 per month in total rental costs.

Off-Grounds District	Studio		1BR		2BR		3BR		4BR+		Averages per District	
<i>Metrics per Occupant</i>	Monthly Rent (\$)	SF per Bed	Monthly Rent (\$)	SF per Bed	Monthly Rent (\$)	SF per Bed	Monthly Rent (\$)	SF per Bed	Monthly Rent (\$)	SF per Bed	Monthly Rent (\$)	SF per Bed
Corner / 14th Street Area	\$658	362	\$947	690	\$542	457	\$553	450	\$750	377	<b>\$690</b>	<b>467</b>
Wertland	\$729	-	\$725	640	\$567	506	-	326	\$550	421	<b>\$643</b>	<b>473</b>
University Circle	-	-	\$695	525	\$608	655	\$590	577	-	-	<b>\$631</b>	<b>586</b>
Brandon Ave / JPA	\$676	345	\$727	464	\$478	376	\$511	357	\$595	413	<b>\$597</b>	<b>391</b>
Arlington Blvd.	-	-	\$755	630	\$428	430	-	-	\$529	-	<b>\$571</b>	<b>530</b>
Ivy Road	-	-	\$804	609	\$592	489	\$443	425	\$437	379	<b>\$569</b>	<b>475</b>
Averages per Unit Type	<b>\$688</b>	<b>353</b>	<b>\$775</b>	<b>593</b>	<b>\$536</b>	<b>485</b>	<b>\$524</b>	<b>427</b>	<b>\$572</b>	<b>397</b>	<b>\$617</b>	<b>487</b>

Exhibit 2.3 – Off-Grounds Housing Rental Rates

The average cost of living in the private market is slightly higher than the cost of living on Grounds in University-sponsored housing. The average cost of on-Grounds housing for the 2012-13 academic year was approximately \$623 per month for a nine-month lease compared to approximately \$700 per month in the off Grounds market. Nationally, B&D typically finds that the average cost of living off campus in markets surrounding flagship institutions is typically lower than the cost of institutional-sponsored, on-campus housing.

Standard leases in the private market typically have a twelve-month term, which further increases the cost of living off Grounds. While the private market offers benefits such as increased privacy, in-unit kitchens, fewer regulations, and a sense of independent living, on-Grounds housing offers proximity to University resources and direct student community.

Students at most flagship institutions are typically accustomed to a wide variety of amenities offered in the private market; however, B&D found that this is not the case in Charlottesville. Luxury amenities such as on-site fitness centers and swimming pools were not found in the off-Grounds properties evaluated as part of this analysis. Developers do not need to compete over amenities because location is the primary driver for student housing selection. Location and other student living preferences will be discussed in greater detail in the survey analysis section.

There are many housing alternatives available to UVA students who desire to live off Grounds. Properties consider students a key target market and begin marketing properties to students as far as ten months in advance for the next academic year. The demand for properties in the most desirable locations enables this level of competition to take place.

While many upper-division students indicated a desire to continue living in University-sponsored housing during B&D's focus group sessions, the limited on-Grounds housing supply and attractive options in direct proximity to Grounds lead second-year, third-year, and fourth-year students into private-market housing. The University has accepted the off-Grounds market as supplemental housing for upper-division students due to the focus on the first-year experience and the large off-Grounds market; however, the University has an opportunity to address latent housing demand from upper-division and graduate students. The University will need to focus on providing the desired unit-types and amenities at an affordable price point if it chooses to address latent demand for these specific sub-populations.

## STUDENT FOCUS GROUPS

Student focus groups are intended to engage a variety of students in dynamic conversation about their experiences at the University. The focus group discussions were intended to yield qualitative data, reveal hidden sensitivities, and raise issues not previously considered by the University, rather than provide rigid, statistically reliable responses from a demographically representative sample of the population. During two separate trips to Charlottesville for focus groups with students, B&D gained an enhanced understanding of student concerns and obtained pertinent information that was used as a guide while developing the comprehensive student survey to inform demand forecasting.

The focus groups were organized by the University and held in various locations on Grounds, including Newcomb Hall, Varsity Hall, and Kent House. The interactive discussions were led by moderators from B&D whose role was to guide the conversations to address issues pertaining to varied aspects of current and future on-Grounds housing. The moderators introduced a series of questions, intentionally open-ended in nature, to engage the participants in conversation. Participants in each session were very vocal, and the interaction with students proved informative and productive.

### Summary of Findings

The focus groups were comprised of a variety of student participants representing on- and off-Grounds residents, multiple class levels, and a broad range of viewpoints, experiences, and opinions. B&D made two trips to Grounds in order to achieve greater student participation from first-year and graduate students. Students had a positive perception of the on-Grounds living experience, especially during their first year, citing the strength of the first-year housing program as a defining component of their time at UVA. Despite the positive feelings towards on-Grounds housing, most students agreed that first-year living arrangements did not factor into their decision to attend UVA. That decision was based on the strong academic reputation of the University, and not on the condition of on-Grounds housing. Students agreed that the newly built residence halls were nice, but continually referenced the strong sense of community found in the “old dorms” located in the McCormick Road Residence Area as the “epitome of the first-year experience at UVA.”

All participants agreed that all first-year students should remain in the traditional-style double occupancy rooms like those found in the McCormick Road Residence Area, noting that the often frustrating lack of personal space is actually the key driver for individual and community development. Students agreed that being near Grounds played a significant role in their housing choices as they grew older, often more so than the cost of living off Grounds. In general, most participants agreed that additional housing was needed on or directly proximate to Grounds to accommodate demand from upper-division students who wish to continue receiving the benefits of living on Grounds. The following sections highlight the key themes of the student focus groups, including responses regarding on-grounds housing, the “first-year experience,” the off-grounds housing market, housing preferences, desirable on-grounds locations, and existing housing for graduates.

### Why Did You Choose UVA?

A primary objective of the project kickoff was to gain a better understanding of the type of student that currently attends the University. This was identified as an important driver for this analysis after reviewing the demographic information provided by the University prior to talking with students. The focus group sessions confirmed that students attend UVA not only for the experience, but to capitalize

on the University's strong national academic reputation. Focus group participants, particularly first-year students, said that the age of housing shown during tours of Grounds before they came to UVA did not impact their decision to attend. Graduate students also agreed that on-Grounds housing played no part in their decision, with one student revealing that she did not realize there was a University-sponsored housing option for students continuing their education at UVA.

All students, particularly in-state undergraduates, stated that they appreciated the value of their education and the "places that a UVA degree" could take them. The focus on education was evident when one student said, "I don't care where I live as long as it's close to class. I'm here to study and would honestly rather not worry about housing. Living anywhere on Grounds is fine with me." The majority of the other first-year students participating in that particular focus group agreed. Several undergraduate students in other sessions also demonstrated their prioritization of academics over housing and other topics that were discussed.

### On-Grounds Housing

Student housing on Grounds has always been a strategic focus of the Institution. Focus group participants reinforced that by describing how important their experiences in the residence halls were to their personal development while at UVA. Students repeatedly expressed how much they enjoyed their experiences as first years. Upper-division students who had moved off Grounds reminisced about the days when "no one closed their doors and we all knew everyone." The interaction among participants immediately increased and became more personal as stories were exchanged, connections were made, and similar experiences were shared.

Participants referred to the "old dorms" in the McCormick Road Residence Area as the "centers of first-year community." While the lack of personal space in these halls is a potential drawback, everyone agreed that you "dealt with it because you were all in the same boat as first years." Leaving the windows open year round, not closing your door, and spending a lot of time outside your room were consistent themes that emerged during our conversations with students. These seemingly unappealing characteristics of older on-Grounds housing are tolerated because of the convenient location and proximity to things students care about – class, dining, and central Grounds.

Focus group participants did not hide their strong opinions toward Copeley and Faulkner, which were heavily influenced by each facility's distance from Grounds and lack of walkability. Students identified The Lawn as the ideal place to live on Grounds, but recognized that there are a limited number of spots given strong demand and competition from fourth-year students. Upper-division students repeatedly expressed their desires to live in the apartment-style units in Bice and Lambeth; however, they said that the lengthy application process and the fear of missing out on off-Grounds housing if they were not selected pushed them away from Grounds.

The recent construction and updates to the "new housing and O-Hill" were seen as positive by nearly all students, particularly upper-division students who have seen the updated rooms. However, some first-year students living in Gooch/Dillard and the recently built residence halls such as Balz-Dobie said they wished they were living in the older traditional halls. These students said they felt like they were missing out on "critical parts of the first-year experience" that their friends living in the "old dorms" constantly talked about. Participants explained these "critical parts" as various aspects of the perceived sense of community that first-year students experience in the smaller, older residence halls. This sense of community is partially the result of the identity that each of the "old dorms" has developed over

time. Additional factors such as hall layout, residence life programming activities, and various hall traditions also help create the perception that a stronger sense of community exists in the “old dorms.”

### The First-Year Experience

Students had strong feelings when B&D moderators asked about the “first-year experience.” One student from Kent Hall said, “I can’t imagine living anywhere else. Our entire hall is a family and I feel so lucky to have met so many great people from all over in only the first few months here. I love it.” Upon hearing this, another first-year student living in Gooch tersely responded, “This is what I’m missing out on. I have made great friends but don’t have the same type of interaction because I only know the eight girls in my suite. I wish I lived in old dorms.” The responses exemplify the strength of the University’s first-year housing program and the impact that it has on participants. The sense of community and development that comes during this time of transition for students entering a dynamic environment like Charlottesville is critical to the overall experience while at UVA.

Those students who seemed to enjoy the experience the most spoke highly of their Residence Advisors (“RAs”) from first year. A few students complained that their RAs were never around, but most participants indicated that these student leaders promoted hall interacting with events such as group dinners, movie nights, and even baking cookies during exams for the residents. Several first-year students indicated that they wanted to be RAs because of their experience, but some had reservations because of the perceived length of the application process. According to students, RAs are not selected until midway through the spring semester, which creates uncertainty for students wishing to live off Grounds if not selected for the program.

### Off-Grounds Housing Options & Selection Process

Students unanimously agreed that location is the number one factor considered when determining where to live off Grounds. While the ideal location may differ depending on personal interests, the fact that participants prioritized location over the cost of living shows that there is not a great deal of price variance in the market. This perception typically indicates that the cost of living in University-sponsored housing is considered affordable. Based on previous experience, B&D finds that students at flagship institutions are typically aware of the cost differences between University-sponsored housing and independent rental offerings located in off-campus markets. Surprisingly, focus group participants could not provide a consistent answer as to the more affordable option in Charlottesville when comparing on- and off-Grounds housing. This could be seen as a strategic advantage for Housing & Residence Life when marketing on-Grounds options to upper-division students.

The sessions also revealed that a majority of first-year participants did not know much about off-Grounds housing options available to them by the end of their first semester. Based on input from students and B&D’s off-Grounds market research, rental properties in the most desirable locations are marketed as far as a year in advance. Demand for rental houses and popular apartment units near The Corner and Brandon Avenue begin leasing as early as October for the following academic year. There is pressure on first-year students to quickly decide where they will live as second years, sometimes as soon as the end of their first semester on Grounds. As one first-year student expressed, “I didn’t even have time to figure out who my best friends were before I had to decide where I was going to live next August, and it was only my second month here.” While Housing & Residence Life has made recent adjustments to the application process, the final report will present additional student input and ideas to the University for consideration.

### Graduate Housing

The graduate student participants raised several issues they had with the perceived lack of University-sponsored housing for their programs. Several participants indicated that they were completely unaware that options even existed for graduate students prior to arriving in Charlottesville. One student said that graduate housing was marketed to her by other programs where she applied at comparable institutions, which is consistent with B&D's competitive context findings shown below in Exhibit 3.1. The select peer institutions had an average capture rate of approximately 13.8% for graduate students, which is more than double the current UVA graduate student capture rate of 6.2%. The same focus group participant felt that new on-Grounds housing options could be a strong selling point for graduate students trying to decide on a particular institution. The demand section enclosed herein will analyze graduate living preferences and quantify projected demand from this potential target market.

Institution	Total Grads	On-campus Grad Beds	Grad On-campus Housing Capture
Cal Berkeley	10,257	1,300	12.7%
Columbia	19,672	1,640	8.3%
Cornell	7,163	1,182	16.5%
Duke	8,107	250	3.1%
Emory	6,580	0	0.0%
Harvard	13,804	418	3.0%
Michigan	12,714	1,361	10.7%
MIT	6,686	2,419	36.2%
Northwestern	8,108	960	11.8%
Penn	11,092	700	6.3%
Stanford	8,871	4,950	55.8%
UCLA	12,004	1,472	12.3%
UNC	3,290	120	3.6%
University of Chicago	6,928	1,300	18.8%
University of Texas	12,000	639	5.3%
Yale	6,526	1,063	16.3%
<b>Averages</b>	<b>9,613</b>	<b>1,236</b>	<b>13.8%</b>
<b>University of Virginia</b>	<b>6,454</b>	<b>400</b>	<b>6.2%</b>

*Exhibit 3.1 – Graduate Housing Competitive Context*

The majority of graduate focus group participants agreed that a “lack of a graduate community” leads some students to feel disconnected from the University. One graduate student said, “I’m much more likely to give back to my undergrad institution because I felt like I belonged there – I had a sense of pride and connectivity to the campus and to my fellow students.” This theme of isolation among graduate students prevailed through conversations with B&D. Some students blamed graduate programs being smaller in size than typical undergraduate classes, while others highlighted the social pressures of Charlottesville and the smaller minority population among graduate students at UVA.

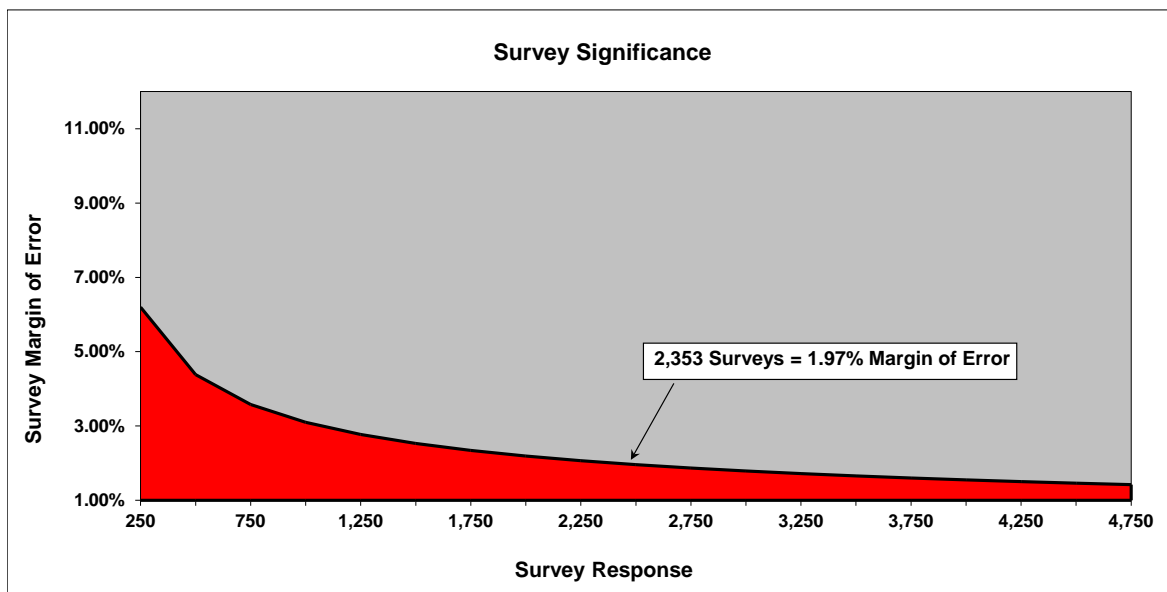
The only graduate students that felt truly integrated into the UVA experience were those who had lived or currently resided on The Range. Range students spoke about the sense of community, social events, and constant interaction that happened among the fifty or so students living there each year. The sense of community they spoke about was similar to undergraduate students describing their experiences. Graduate students living off Grounds, especially those in the first year or two of their respective programs, seemed interested in an option like this for their time in Charlottesville. One student suggested that a graduate community would “promote idea sharing and collaboration, which is what grad school should be all about in my opinion.”

## STUDENT SURVEY RESULTS

B&D conducted a web-based survey that tested the housing preferences of UVA students. Data collected through the survey formed the basis for B&D’s recommendations of the types and amount of housing demanded by today’s UVA students.

Survey questions were designed to assess current housing preferences and configurations, price sensitivities, unit type preferences, and other housing selection criteria. Response options were structured to maximize information regarding the projection of desirable facility characteristics and demand for on-Grounds housing options. Demographic questions allowed the responses to be sorted to identify discrepancies in demand results.

The survey was sent to a select sample of approximately 9,000 students. UVA students completed 2,353 electronic surveys. The response rate of 26.1% resulted in a 1.97% margin of error at a 95% confidence interval, which passes B&D’s statistical validity test. A copy of the student survey instrument, including response frequencies, is included in this document as an exhibit.



*Exhibit 4.1 – Student Survey Significance & Margin of Error*

A total of 2,505 survey responses were received, with 2,353 respondents completing the entire assessment. In addition to the statistically-valid survey response, B&D found that the survey sample accurately represented the UVA population. Female respondents and full-time students were overrepresented by 3.6% and 1.9%, respectively, as compared to UVA’s actual student demographics. Overrepresentation by these two sub-groups is typically seen by B&D and is adjusted for in the Demand Based Programming analysis. Adjustments were also made for the overrepresentation of Asian and White students, as well as the underrepresentation of non-resident alien students. Please note that some students chose not to answer the race/ethnicity question or selected other, thus the survey total is slightly below the 2,353 total completed responses received.

DEMOGRAPHIC CATEGORY		SURVEY			DEMOGRAPHICS			SURVEY %
		COUNT	TOTAL	%	COUNT	TOTAL	%	- DEMO. %
Gender								
	Female	1,329	2,359	56.3%	11,117	21,095	52.7%	3.6%
	Male	1,030	2,359	43.7%	9,978	21,095	47.3%	(3.6%)
Race / Ethnicity								
	African American	121	2,206	5.5%	1,220	21,095	5.8%	(0.3%)
	American Indian or Alaska Native	5	2,206	0.2%	30	21,095	0.1%	0.1%
	Asian	459	2,206	20.8%	2,220	21,095	10.5%	10.3%
	Hispanic	80	2,206	3.6%	1,059	21,095	5.0%	(1.4%)
	Multi-Race	73	2,206	3.3%	703	21,095	3.3%	(0.0%)
	Native Hawaiian or Other Pacific Islander	2	2,206	0.1%	9	21,095	0.0%	0.0%
	Non-Resident Alien	18	2,206	0.8%	1,907	21,095	9.0%	(8.2%)
	Race and Ethnicity Unknown	3	2,206	0.1%	1,226	21,095	5.8%	(5.7%)
	White	1,445	2,206	65.5%	12,721	21,095	60.3%	5.2%
Classification								
	1st Year Undergraduate	583	2,505	23.3%	3,443	21,095	16.3%	7.0%
	2nd Year Undergraduate	517	2,505	20.6%	3,575	21,095	16.9%	3.7%
	3rd Year Undergraduate	363	2,505	14.5%	3,683	21,095	17.5%	(3.0%)
	4th Year Undergraduate	361	2,505	14.4%	3,787	21,095	18.0%	(3.5%)
	Graduate (Business)	105	2,505	4.2%	816	21,095	3.9%	0.3%
	Graduate (Law)	119	2,505	4.8%	1,128	21,095	5.3%	(0.6%)
	Graduate (Medical)	81	2,505	3.2%	614	21,095	2.9%	0.3%
	Graduate (Other)	357	2,505	14.3%	3,896	21,095	18.5%	(4.2%)
	Other	19	2,505	0.8%	153	21,095	0.7%	0.0%
Enrollment Status								
	Full-time	2,421	2,492	97.2%	20,093	21,095	95.3%	1.9%
	Part-time	71	2,492	2.8%	1,002	21,095	4.7%	(1.9%)

Exhibit 4.2 – Student Survey Demographic Comparison

Student survey results indicate that 55% of respondents currently live on Grounds, while 45% of respondents currently live off Grounds. The 55% of survey respondents who live on Grounds is higher than the 30% of students currently captured by Housing & Residence Life in University-sponsored housing. This indicated that a high percentage of on-Grounds students took the survey, which B&D typically sees at flagship institutions nationally.

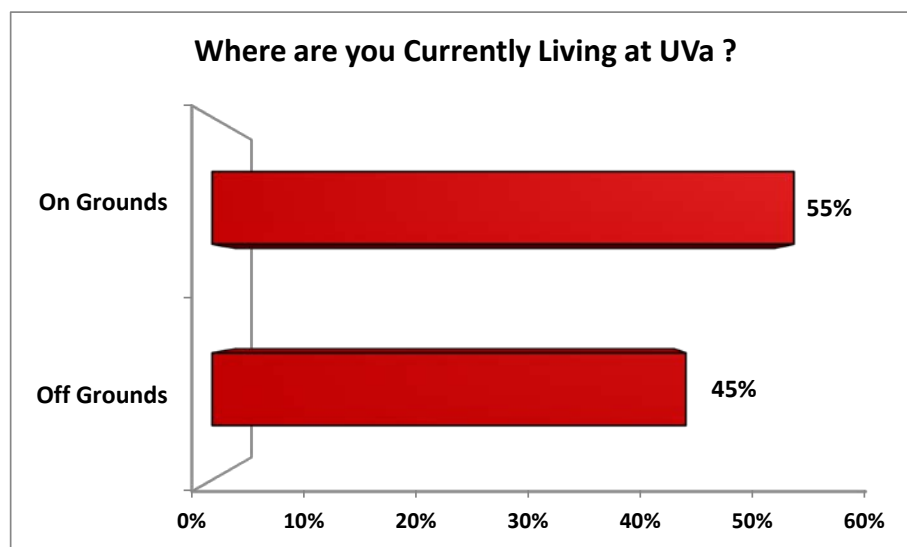
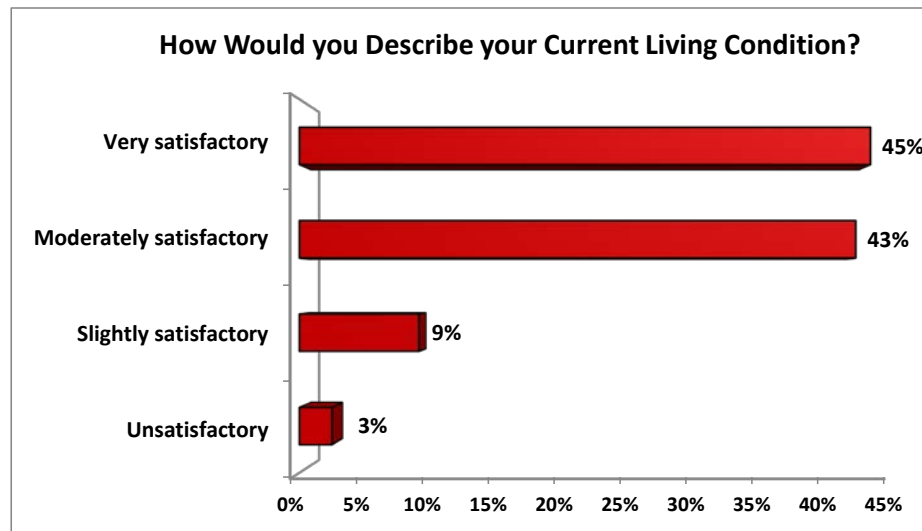


Exhibit 4.3 – Respondents Living On Grounds vs. Off Grounds

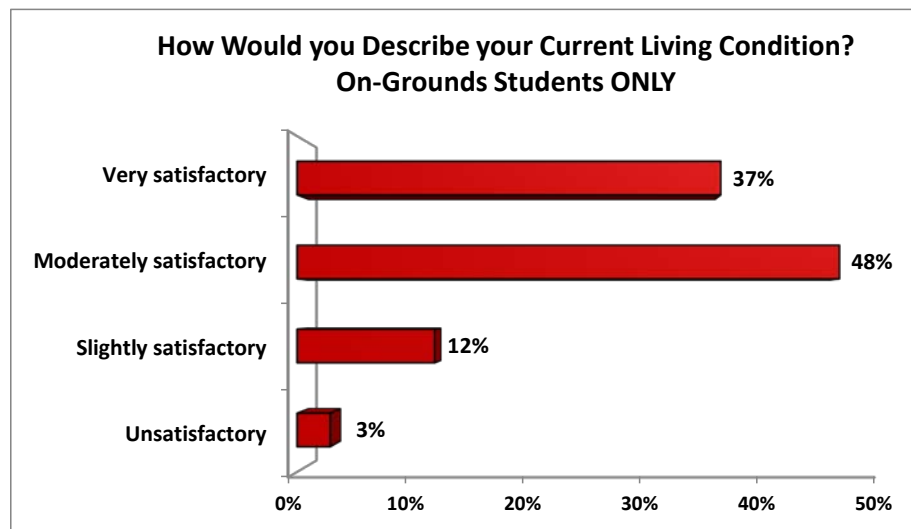


All respondents were asked to describe how satisfied they were with their current living conditions. Nearly 90% of all respondents indicated that they were very to moderately satisfied with their current housing, which is higher than B&D typically sees, particularly with the very satisfied students.



*Exhibit 4.4 – Satisfaction with Living Conditions (all respondents)*

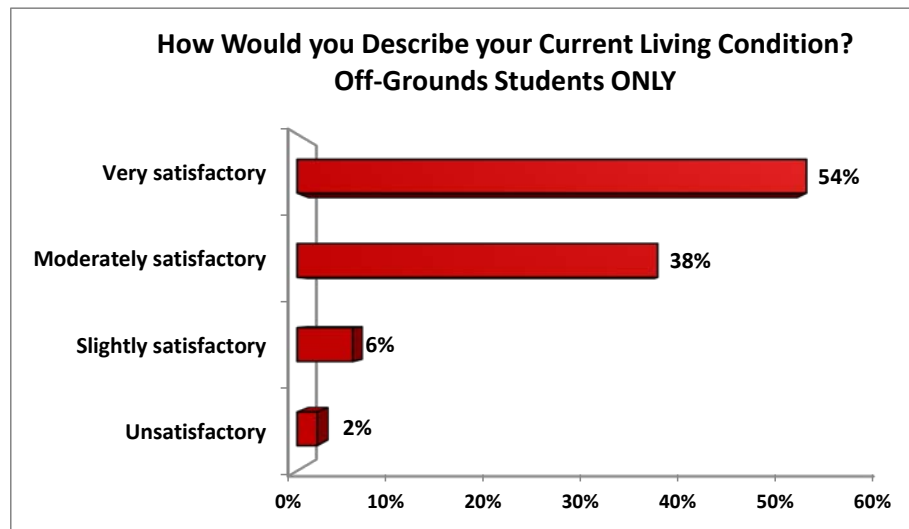
Survey respondents who lived on Grounds for the 2012-13 academic year were still highly satisfied with their current living conditions. B&D usually sees a slight drop in satisfaction levels for students living in institution-sponsored housing by the end of the year as they tire of their current housing. This national trend did not appear to impact UVA students, with nearly 85% remaining at least moderately satisfied.



*Exhibit 4.5 – Satisfaction with Living Conditions (on Grounds only)*

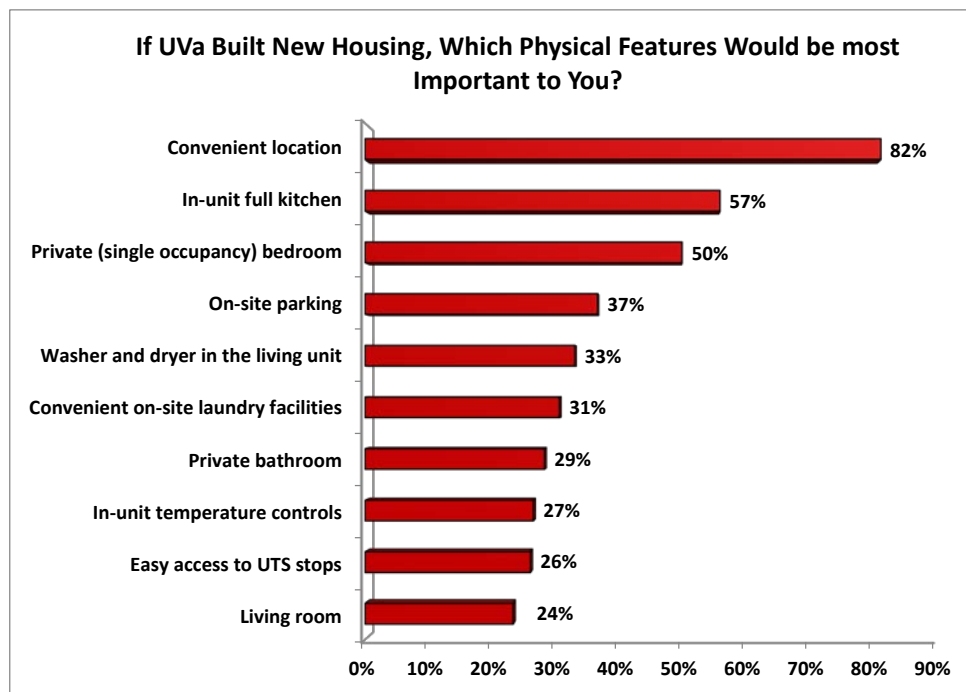
As shown in Exhibit 4.6, respondents currently living off Grounds indicated slightly higher levels of satisfaction, with approximately 92% indicating that they were moderately satisfied to very satisfied with their current living condition. The 54% of respondents who indicated high levels of satisfaction speaks to the strength of the off-Grounds market in Charlottesville. Relatively affordable housing

options in desirable locations such as The Corner are available and preferred by students who wish to live off Grounds.



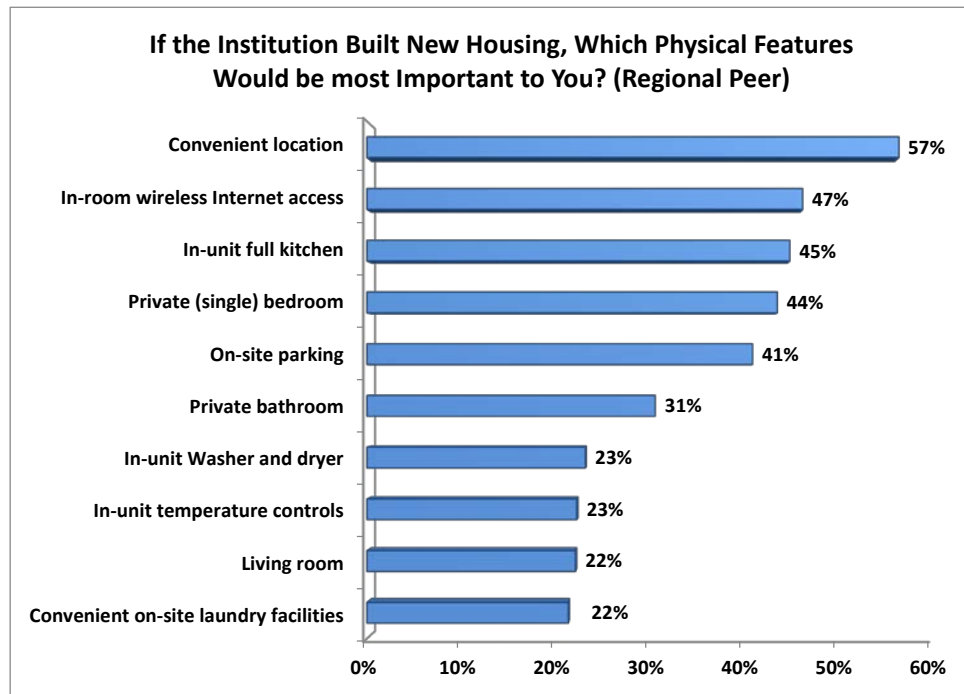
*Exhibit 4.6 – Satisfaction with Living Conditions (off Grounds only)*

Students were asked to indicate which features would be most important if the University built new housing. Eighty-two (82%) percent of UVA students responded that convenient location would be an important factor. The second most important factor was an in-unit full kitchen, which was preferred by 57% of respondents. A gap of 25% is not typically seen in B&D's work with housing master plans. This demonstrates the importance of location to UVA students and supports student claims that walking is the preferred method of transportation to and from Grounds. The availability of a private bedroom was the third most desired feature as indicated by respondents.



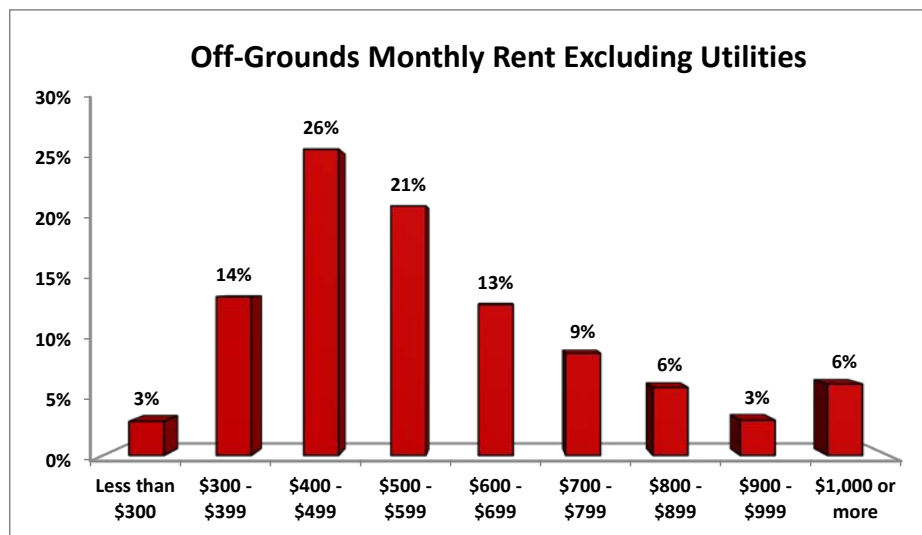
*Exhibit 4.7 – Important Physical Features for New Housing (UVA)*

B&D compared UVA student preferences from the survey with results for the same questions asked of students at an anonymous regional peer institution. As shown in Exhibit 4.8, students at the peer institution also ranked convenient location as their most important factor if the University were to build new housing; however, only 57% of respondents indicated that it was the top choice compared to 82% of UVA students who made the same choice. This provides further evidence for the importance of location to UVA students.



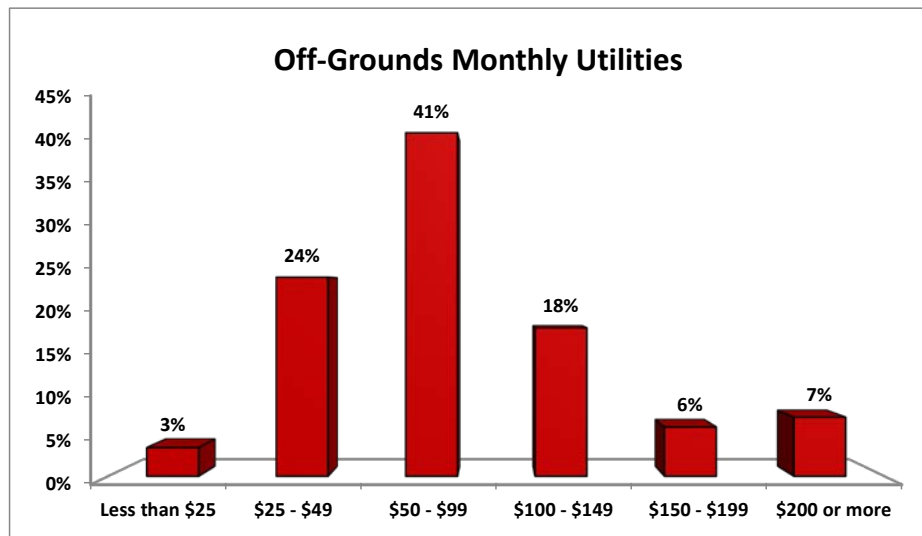
*Exhibit 4.8 – Important Physical Features for New Housing (UNC, peer comparison)*

The survey asked students how much they pay in monthly rent to gauge the cost of living off Grounds in the Charlottesville rental market. Approximately 47% of the population spends between \$400 and \$599 per month on rent.



*Exhibit 4.9 – Off-Grounds Monthly Rent*

The survey also asked how much students pay in monthly utility costs. Slightly more than two-thirds (68%) of survey respondents indicated paying less than \$100 per month in utilities.



*Exhibit 4.10 – Off-Grounds Monthly Utilities*

Overall, the survey results indicate that UVA students are satisfied with current on- and off-Grounds housing offerings. The satisfaction levels are higher than B&D typically sees at many of its flagship clients across the country. These strong results are supported by what the Project Team heard during our focus group sessions with students. Additionally, the survey highlighted the importance of location to UVA students when compared to a select regional peer institution. Students clearly expressed that the location of future on-Grounds housing will have a direct impact on the demand for that unit. The desired balance of location and cost will likely need to be reanalyzed prior to any future housing developments given the affordable housing options available off Grounds. Price tolerance and demand for the specific units tested in the student survey are analyzed in the following demand analysis section.

## DEMAND BASED PROGRAMMING

B&D developed a housing demand model to project the specific quantity of demand for the unit types tested in the student survey. The Demand Based Programming (“DBP”) model projects demand under the assumption that housing offerings match the characteristics of the units presented to respondents in the survey. The model derives the demand figures based on responses from the survey as well as enrollment numbers provided by the University. These figures may be reanalyzed in the future, if necessary, to reflect deviations in the projected enrollment.

### Capture Rates

The DBP model allowed B&D to project housing demand for each class level. Capture rates reflect the percentages of students in the target market who indicated their intention to live in the proposed units. For example, the number of first-year undergraduate students included in the target market and interested in living in the proposed units divided by the first-year undergraduate student enrolled population results in the capture rate for the current academic year. The University Housing capture rates are shown below in Exhibit 5.1.

Enrollment Classification	Enrolled Population	Current Capture Rate	Current Occupancy
1st Year Undergraduate	3,443	99%	3,398
2nd Year Undergraduate	3,575	42%	1,502
3rd Year Undergraduate	3,683	15%	550
4th Year Undergraduate	3,787	12%	443
Graduate	6,454	6%	400
<b>TOTAL</b>	<b>20,942</b>	<b>30%</b>	<b>6,293</b>

*Exhibit 5.1 – On-Grounds Capture Rates*

These capture rates are then applied to the full-time enrollment figures for each class, which generates the total projected demand. Finally, the projected demand is multiplied by weight factors to ensure a demographic balance between the survey respondents and the entire target market population.

### Target Market / Demand Filters

B&D tested the demand for location, price points, and unit types for on-Grounds housing. To ensure accuracy in demand projections, B&D filtered the demand to only include students who would be viable residents in any new student housing projects built by the University. In order to be considered for the target market, students had to meet all of the following conditions:

- Undergraduate Students
  - Full-time undergraduate students only
  - Age 18-24
  - Single without children
  - Currently living on Grounds, OR living off Grounds and paying \$500+ per month in rent
- Graduate Students
  - Full-time undergraduate students only
  - Age 18-29
  - Single without children
  - Currently living on Grounds, OR living off Grounds and paying \$500+ per month in rent

Additionally, B&D used a proprietary Occupancy Coverage Ratio (“OCR”) concept to ensure accurate demand projections. OCR measures the market risk of a given unit type. A 1.00:1.00 ratio means that 100% occupancy can be achieved but that new competition or a modest decrease in enrollment will likely lead to immediate vacancy problems. Higher occupancy ratios are associated with stable occupancy performance; however, occupancy ratios that are too high mean that there are significant housing shortages, which could deter students from enrolling or persisting at the University. The following table demonstrates the baseline OCR assumptions.

Housing Type	Minimum	Conservative	Detrimental
Traditional	1.05:1	1.15:1	1.25:1
Suite	1.10:1	1.20:1	1.35:1
Super-Suite	1.15:1	1.20:1	1.35:1
Apartment	1.15:1	1.30:1	1.50:1

*Exhibit 5.2 – B&D Baseline OCR Assumptions*

The OCRs that were selected for this analysis allow for conservative demand projections due to established off-Grounds Housing market and large portion of students currently living off Grounds due to supply limitations on Grounds.

Traditional Single	Traditional Double	Pod Single	Pod Double	Semi-Suite Single	Semi-Suite Double	2BR / 1BA Suite Single	2BR / 1BA Suite Double	1BR / 1BA Apartment Single	2BR / 1BA Apartment Single	3BR / 2BA Apartment Single	4BR / 2BA Apartment Single
1.10x	1.10x	1.10x	1.10x	1.15x	1.15x	1.20x	1.20x	1.30x	1.30x	1.30x	1.30x

*Exhibit 5.3 – UVA OCRs*

### Tested Units & Price Points

B&D provided a detailed description of the proposed units and rental rates (expressed in 2012-13 dollars) in the student survey. First-year students saw all non-apartment unit types, while upper-division students saw all units tested. Graduate students only saw apartment-style units. The price point for each unit was as follows:

Unit Type	Occupancy	First-Year Students		Upper-Division Students		Graduate Students	
		Tested Monthly Rate	Tested Semester Rate	Tested Monthly Rate	Tested Semester Rate	Tested Monthly Rate	Tested Semester Rate
Traditional	Single	\$566	\$2,545	\$650	\$2,924	-	-
Traditional	Double	\$566	\$2,545	\$608	\$2,738	-	-
Pod	Single	\$566	\$2,545	\$650	\$2,924	-	-
Pod	Double	\$566	\$2,545	\$608	\$2,738	-	-
Semi-Suite	Single	\$566	\$2,545	\$676	\$3,041	-	-
Semi-Suite	Double	\$566	\$2,545	\$633	\$2,848	-	-
2BR / 1BA Suite	Single	\$566	\$2,545	\$703	\$3,163	-	-
2BR / 1BA Suite	Double	\$566	\$2,545	\$658	\$2,962	-	-
1BR / 1BA Apartment	Single	-	-	\$771	\$3,470	\$771	\$3,470
2BR / 1BA Apartment	Single	-	-	\$740	\$3,331	\$740	\$3,331
3BR / 2BA Apartment	Single	-	-	\$711	\$3,198	\$711	\$3,198
4BR / 2BA Apartment	Single	-	-	\$682	\$3,070	\$682	\$3,070

*Exhibit 5.4 – Tested Survey Units & Price Points by Class & Student Type*

## Demand Projections

As previously mentioned, the demand shown herein represents the survey results extrapolated over the University's Fall 2012 enrollment figures and discounted by both the target market filters and the selected OCR filters outlined herein. The results indicate demand for approximately 10,805 on-Grounds beds to accommodate both undergraduate and graduate students. The demand distribution by student type, class level, and maximum potential capture rates are displayed in the charts below.

### Undergraduate Students

Exhibit 5.5 shows projected demand for undergraduate students only based on the DBP analysis documented herein. The maximum potential demand for undergraduate students is 7,733 on-Grounds beds. The current on-Grounds existing supply for undergraduate students is approximately 5,893 beds. Therefore, the University could satisfy unmet demand from undergraduate students desiring to live on Grounds with the addition of approximately 1,840 new beds.

Enrollment Classification	Enrollment	Capture Rate	Maximum Potential Demand
1st Year Undergraduate	3,443	99%	3,398
2nd Year Undergraduate	3,575	42%	1,517
3rd Year Undergraduate	3,683	38%	1,410
4th Year Undergraduate	3,787	37%	1,408
<b>TOTAL</b>	<b>14,488</b>	<b>53%</b>	<b>7,733</b>
EXISTING BED COUNT			5,893
NET DEMAND (SURPLUS/(DEFICIT))			(1,840)

*Exhibit 5.5 – DBP Summary for Undergraduate Students*

Based on B&D's predictive analytics, the largest opportunity for the University to satisfy unmet undergraduate student demand comes from third- and fourth-year students who desire to remain in on-Grounds housing. These students currently move off Grounds due to the lack of apartment-style units offered by University Housing. There are approximately 993 third- and fourth-year students currently living on Grounds, resulting in an average capture rate of approximately 13.5% for these classes. The University could increase this average capture for third- and fourth-year students to as much as 37.5% if student living preferences for these targeted sub-populations were met.

As shown in Exhibit 5.6, third- and fourth-year students desire high-density apartment units in single occupancy configuration. Approximately 33% of third- and fourth-year student survey respondents indicated their desire to live in a four-bedroom, two-bathroom apartment with single occupancy beds at the tested price point of \$682 per month. This demonstrates the desire for upper-division students to continue living with roommates but in a private bedroom configuration. The second most popular unit with third- and fourth-year students was the traditional, single occupancy unit. B&D believes that the demand for this unit was influenced by the popularity of The Lawn. Additionally, the traditional single occupancy unit was the most affordable option presented in a private-bedroom configuration.

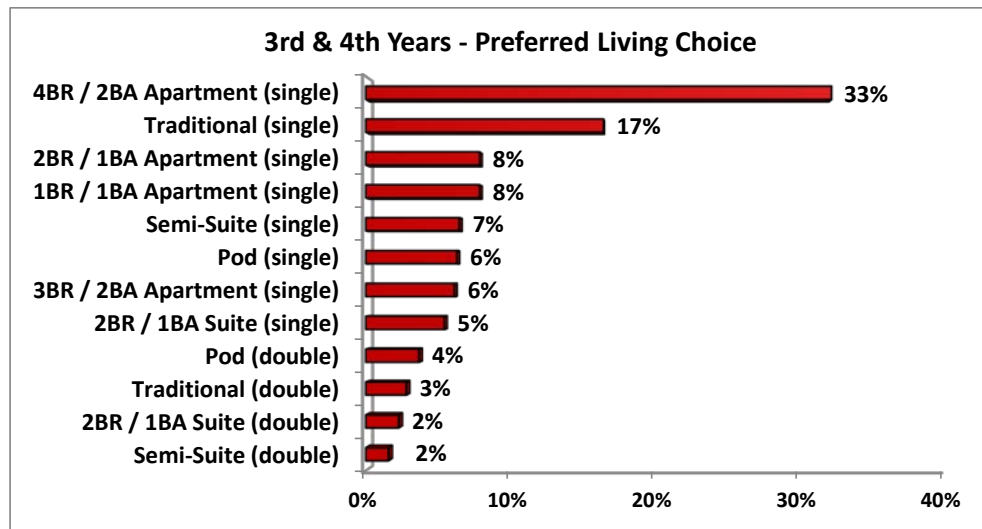


Exhibit 5.6 – Preferred Living Choices for Third- & Fourth-Year Students

### Graduate Students

Exhibit 5.7 shows projected demand for graduate students only based on the DBP analysis documented herein. The maximum potential demand for graduate students is 3,072 on-Grounds beds. The current on-Grounds existing supply for graduate students is approximately 400 beds (located at The Range, Copeley, and University Gardens). Therefore, the University could satisfy unmet demand from graduate students desiring to live on Grounds with the addition of approximately 2,672 new beds.

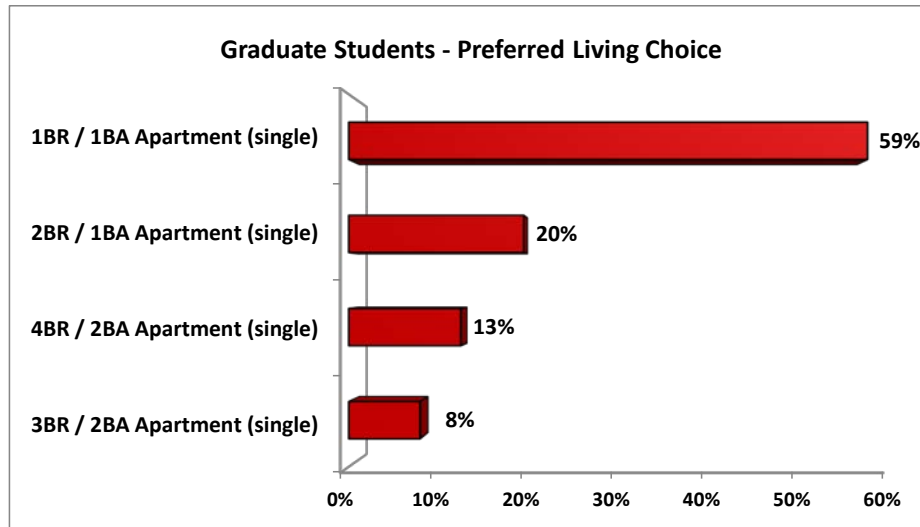
Enrollment Classification	Enrollment	Capture Rate	Maximum Potential Demand
Graduate	6,454	48%	3,072
<b>TOTAL</b>	<b>6,454</b>	<b>48%</b>	<b>3,072</b>
EXISTING BED COUNT			400
NET DEMAND (SURPLUS/(DEFICIT))			(2,672)

Exhibit 5.7 – DBP Summary for Graduate Students

Based on B&D's predictive analytics, the housing demands of the graduate student population are largely unmet by the University. Graduate students currently live off Grounds if they are unable to secure housing on The Range. The off-Grounds market has ample apartment units with single occupancy beds or houses that graduate students can rent at an affordable cost. There are approximately 400 graduate students currently living on Grounds, resulting in an average capture rate of approximately 6% for this specific sub-population. The University could increase their graduate student capture rate to as much as 48% if living preferences for these students were met.

As shown in Exhibit 5.8, graduate students overwhelmingly desire studio and one-bedroom apartment units in single occupancy configuration. Approximately 59% of graduate respondents indicated their desire to live in a single-occupancy, one-bedroom apartment at the tested price point of \$771 per month. A majority of graduate students today are demanding greater privacy without roommates. This is supported by the predictive analytics findings from this analysis.





*Exhibit 5.8 – Preferred Living Choices for Third- & Fourth-Year Students*

### Demand Summary

The greatest opportunity to increase capture rate comes from third-year students, fourth-year students, and graduate students who desire on-Grounds housing accommodations. The predictive analytics indicate that the University could build 4,472 additional on-Grounds beds for these specific sub-populations and satisfy demand based on current enrollment levels. Phase II of the Study will analyze the capital cost implications of any potential development scenarios that tie into the University's strategic planning effort. Based on the demand model, these scenarios could include high-density housing to satisfy demand from third- and fourth-year students and studio-style, apartment housing to satisfy demand from graduate students.



## TRIANGULATION EXERCISE

B&D completed a triangulation exercise at the request of the University that examined student satisfaction levels based on class level, location of housing, and several other identifying factors. The goal of this particular analysis is to provide the University with a student living preference tool that will aid key decision makers as future sites for housing are evaluated.

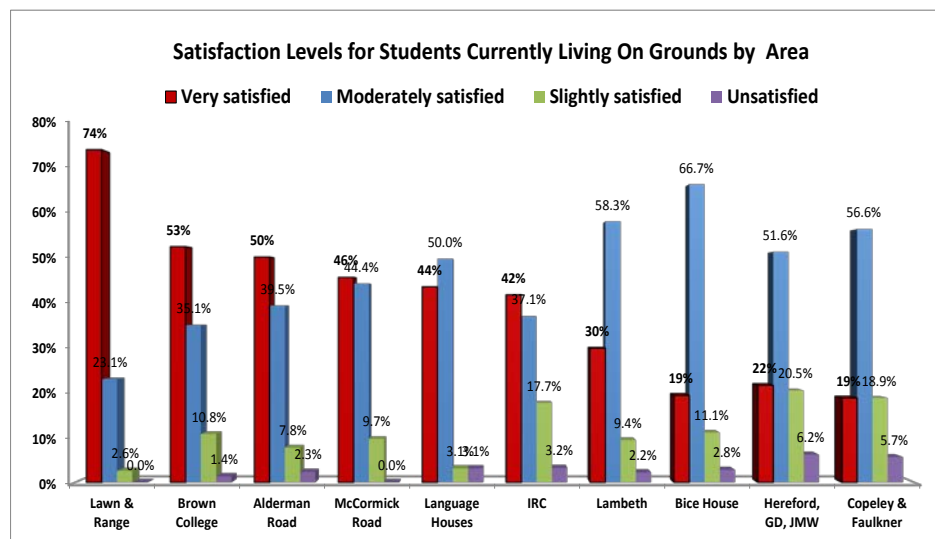
The Project Team performed the following analyses in order to provide the level of transparency for on- and off-Grounds housing desired by the Steering Committee:

- Analyzing students by year and by location
- Understanding where certain types of students currently reside
- Comparing satisfaction levels by location
- Identifying desirability of specific halls and residence areas
- Cross referencing with the University’s geocoding analysis & housing data

### On-Grounds Housing Triangulation

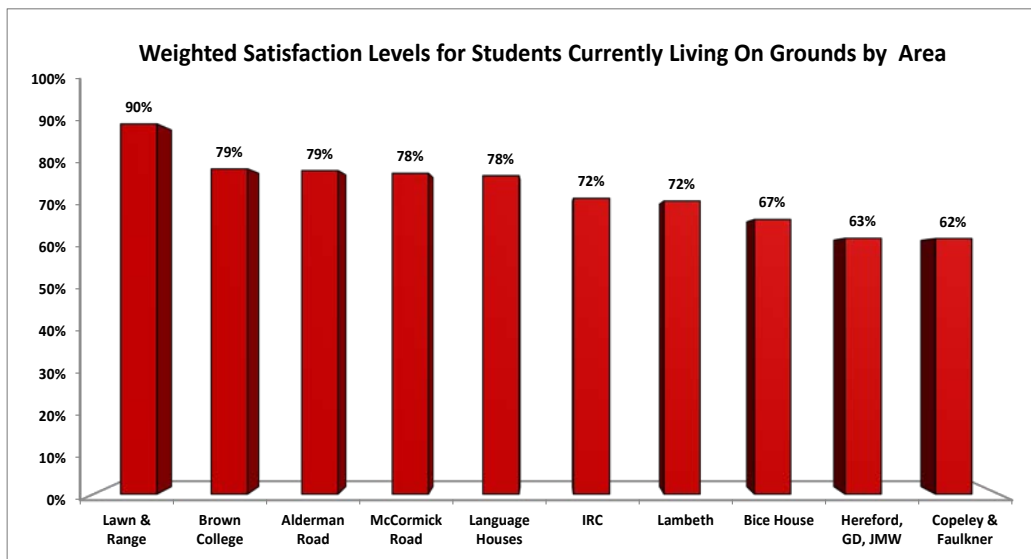
Exhibit 6.1 analyzes satisfaction levels for students currently living on Grounds by specific areas determined by the University and tested in the student survey. The satisfaction levels range from very satisfied to unsatisfied. Survey respondents were asked to indicate how satisfied they were with their current living conditions. The Project Team took this information and cross-tabbed it with the current on-Grounds housing locations for each respondent.

The Lawn and the Range were the most popular on-Grounds housing areas for undergraduate and graduate students. Brown College, Alderman Road, and McCormick Road also had a majority of students who were very to moderately satisfied with their current living conditions. Residents of the Language Houses and IRC also indicated that they were fairly satisfied with their housing. The data shows an inflection point for Lambeth and Bice House where more students indicate they are moderately satisfied with the facilities. The less than satisfactory feelings towards the Hereford, Gooch Dillard, Johnson/Weedon/Malone, Copeley, and Faulkner residence halls are made clear by residents.



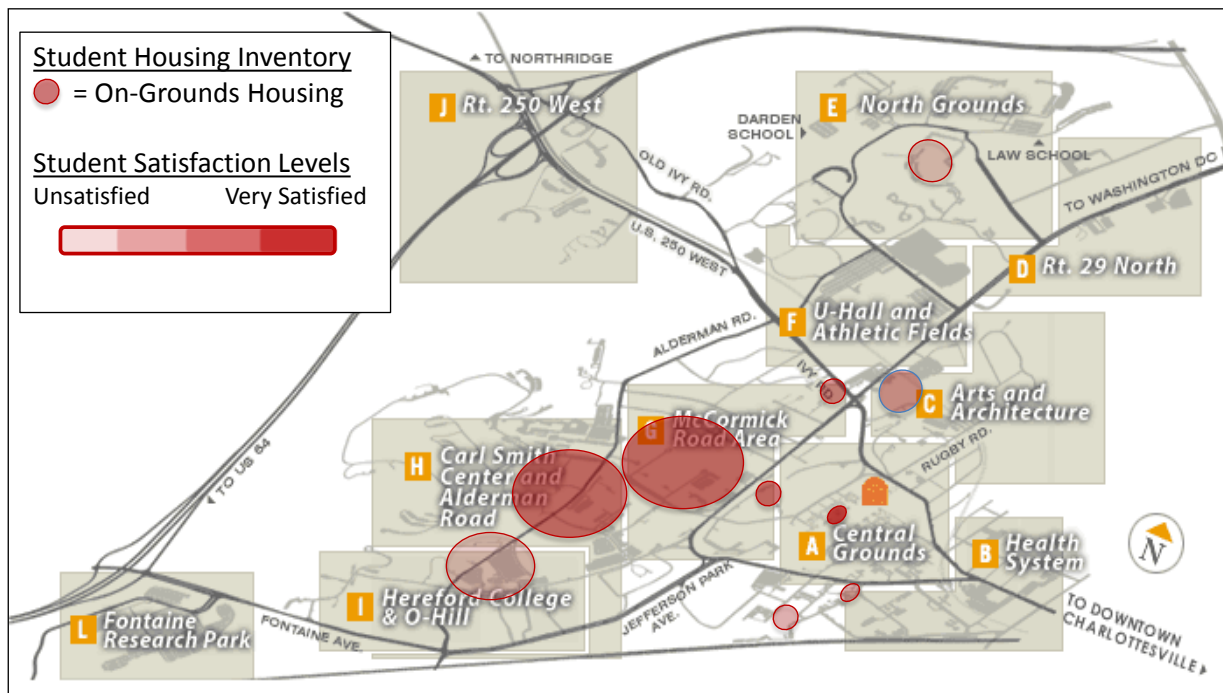
*Exhibit 6.1 – Satisfaction Levels by On-Grounds Living Area*

The levels of satisfaction tested in the survey were blended using a weighted-average approach to all responses for each on-Grounds living area. As shown in Exhibit 6.2, residents on the Lawn and in the Range displayed the highest satisfaction levels based on their responses, while residents of Copeley and Faulkner indicated their dissatisfaction with those housing facilities.



*Exhibit 6.2 – Weighted Average Satisfaction Levels by On-Grounds Living Area*

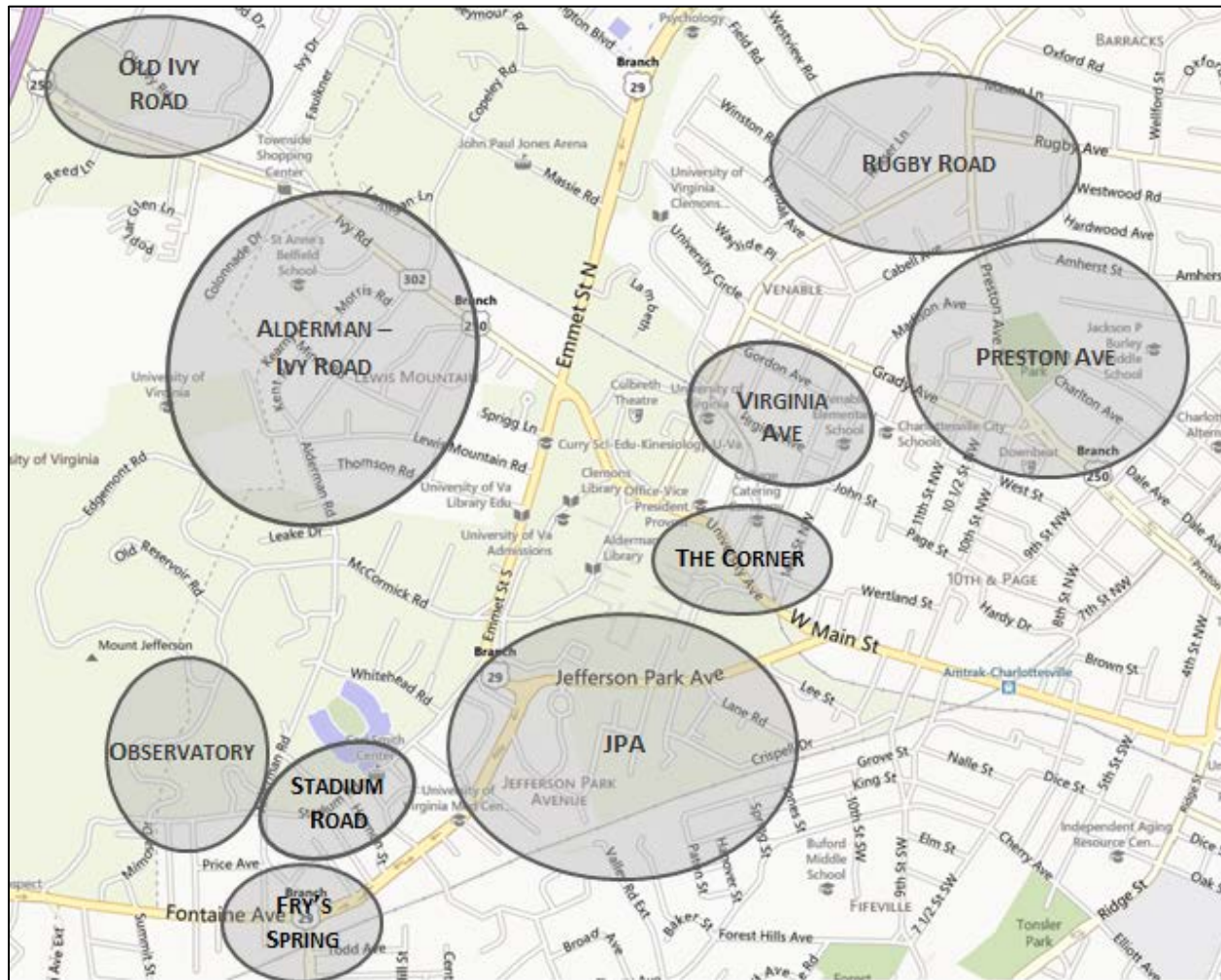
Exhibit 6.3 synthesizes the on-Grounds housing data and shows the satisfaction levels overlaid on a map of Grounds. As you can see, students are most satisfied with housing located on Central Grounds (fourth-year and graduate housing) and in the McCormick Road and Alderman Road areas (first-year housing). Housing located in the O-Hill area and on North Grounds received the lowest satisfaction ratings based on student survey responses.



*Exhibit 6.3 – Triangulation Map of On-Grounds Living Areas*

### Off-Grounds Housing Triangulation

B&D tested satisfaction levels for UVA students currently living off Grounds by specific areas or neighborhoods that were tested in the survey at the request of the University. The areas and neighborhoods that were tested included: Alderman-Ivy Road, Fry's Spring, JPA, Observatory, Old Ivy Road, Preston Avenue, Rugby Road, Stadium Road, The Corner, and Virginia Avenue. All areas are shown in Exhibit 6.4.



*Exhibit 6.4 –Off-Grounds Living Areas Tested in the Student Survey*

Exhibit 6.5 analyzes satisfaction levels for students currently living off Grounds by specific areas or neighborhoods that were tested in the student survey at the request of the University. As with the on-Grounds housing options, the satisfaction levels presented to respondents ranged from very satisfied to unsatisfied. Student survey respondents were asked to indicate how satisfied they were with their current living conditions in the off-Grounds market. The Project Team analyzed the responses and cross-tabbed the results with the respective off-Grounds areas for each respondent.

Rugby Road and the Corner were the two most popular off-Grounds housing areas for undergraduate and graduate students. Over 60% of respondents currently living in the Preston Avenue area also indicated that they were very satisfied with their current living conditions. Approximately half of all

respondents who lived in the Stadium Road, Observatory, JPA, Fry's Spring, and Old Ivy Road areas indicated that they were very satisfied with their current living conditions. Less than satisfactory reviews were given by respondents living off Grounds in the Virginia Avenue and Alderman/Ivy Road areas.

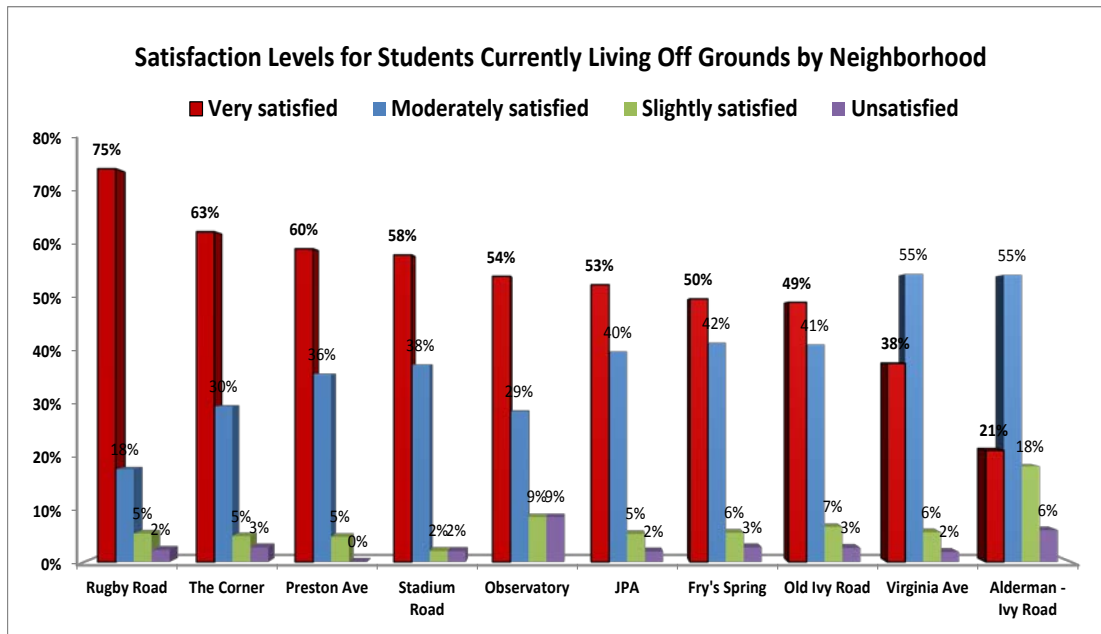


Exhibit 6.5 – Satisfaction Levels by Off-Grounds Living Area

The levels of satisfaction tested in the survey were blended using a weighted-average approach to all responses for each of the ten off-Grounds living areas specified by the University. The results shown in Exhibit 6.4 are similar to the satisfaction levels presented in Exhibit 6.6 for each off-Grounds area; however, several residents of the Observatory neighborhood indicated that they were unsatisfied with their current living conditions, which lowered the weighted-average of respondents.

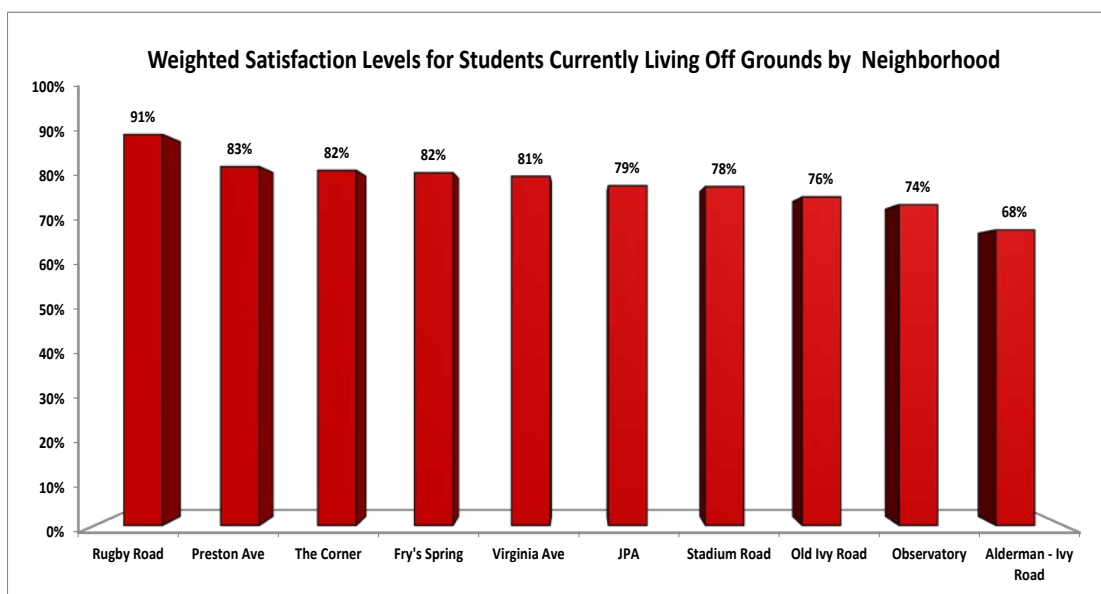


Exhibit 6.6 – Weighted Average Satisfaction Levels by Off-Grounds Living Area



Exhibit 6.7 synthesizes the off-Grounds housing data and shows the satisfaction levels overlaid on a map of Grounds and the surrounding neighborhoods. Students indicated that they are most satisfied with housing located in close proximity to Central Grounds such as Rugby Road and the Corner. Off-Grounds housing districts that were furthest from Central Grounds received the lowest satisfaction ratings based on student survey responses.

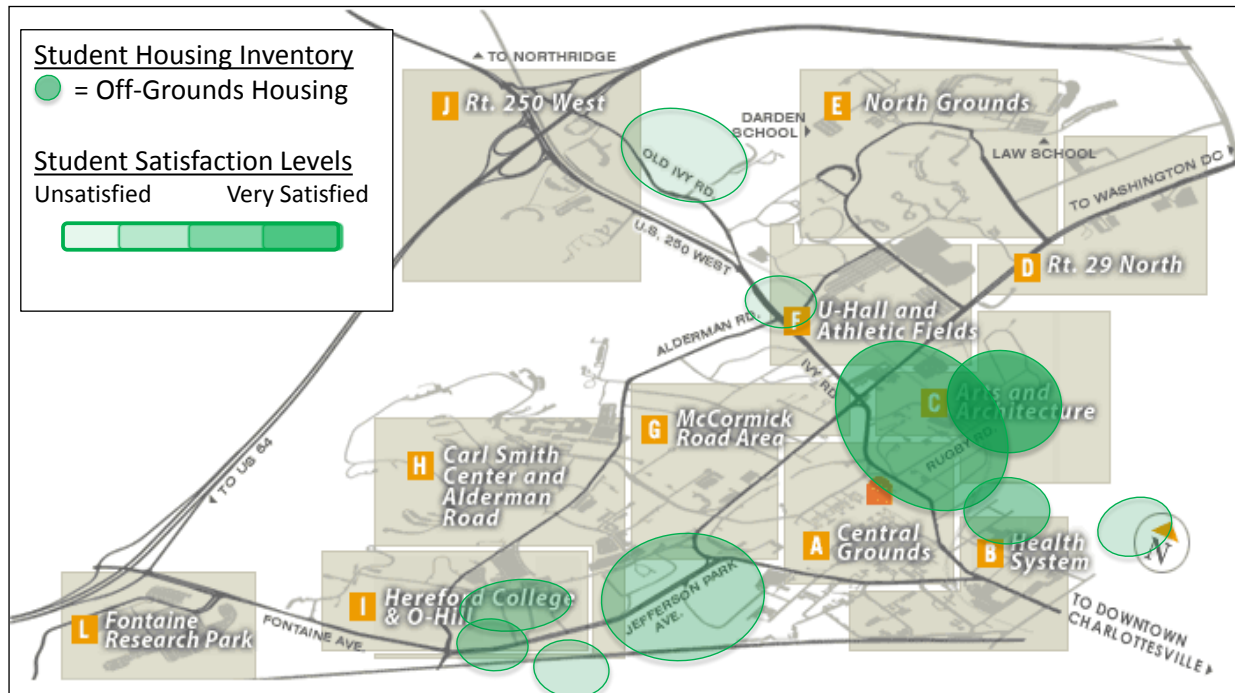


Exhibit 6.7 – Triangulation Map of Off-Grounds Living Areas

### Triangulation Summary

The Committee's request for a triangulation analysis comparing multiple housing variables determined that proximity is connected to student experience. Satisfaction levels differed for respondents when compared with the current on-Grounds housing locations for each respondent. The analysis determined that students living on Grounds were most satisfied in the McCormick Road and Alderman Road housing areas. A correlation was also seen between the satisfaction levels of students living in the private market and the distance of each area from Grounds. Students living off Grounds indicated that they are most satisfied near Rugby Road and The Corner.

### Phase I Conclusion & Next Steps

This concludes Phase I of the Student Housing Analysis Study documentation. It is B&D's hope that the findings detailed herein serve as a foundation for future in-depth analyses to benefit Housing & Residence Life. The University's on-going strategic planning process has been identified as a priority in order to continue with Phase II of the Housing Study. Phase II of the Student Housing Analysis Study will tie into the strategic planning outcomes and options will be presented to the University prior to selecting the recommended approach for completing the Study. Please see the appendices included herein for additional information.