



ENGINEERING SUCCESS **TOGETHER**

December 21, 2017

Town of Westwood
Planning Board
Town House
50 Main Street
Westwood, MA 02052-2009

Attn.: Ms. Abby McCabe, Town Planner

Re: Hawthorne at University Station Project Development Review

Dear Ms. McCabe:

BETA Group has completed a review of materials provided for the Pulte Homes of New England application to site a 100 unit condominium in Development Area B of the University Station development. This letter includes BETA's findings and recommendations with regard to compliance with the Town of Westwood bylaws, and general engineering practice.

BASIS OF REVIEW

BETA received the following items from the office of the Planning Board:

- Architectural Elevations, Elevation and Miscellaneous Plans dated October 9 through November 22, 2017
- Application Narrative for "Hawthorne" Development, dated December 1, 2017
- Site Development Plans by Bohler Engineering, dated November 27, 2017

INTRODUCTION

The proposed project is located within the Development Area B of the University Avenue Mixed Use District (UAMUD) and occupies a site located between the completed "Bridges" development and the recently approved Brigham and Women's development now under construction.

The site is also located in the Watershed Resources Protection Overlay District (WRPOD) however there are no wetland resource areas located within the limits of the development parcel.

The proposed project includes the construction of two new residential buildings, each four stories in height and containing 50 residential units. Within each Building, there will be 23 one-bedroom units and 27 two-bedroom units. There will not be any three bedroom units. Each Building will be located above a single level of covered parking for approximately 50 vehicles in each building (100 total). An additional 80 surface parking spaces are provided in an adjacent lot. There are an additional 8 parking spaces that are also designated for use by the Bridges facility.

The configuration of the overall development is consistent with approved Amended Master Plan for Development Area B. The site will have vehicular access to University Avenue via the Bridges driveway.

In addition to PDR approval, per section 9.7.4.5.4 of the Zoning Bylaw, Special Permit approval by the Planning Board is also required for the construction of additional residential units.

REVIEW CRITERIA

DESIGN AND PERFORMANCE STANDARDS – As specified in Section 9.8.11 of the Zoning Bylaw

Submission Requirements (§6.0) Rules and Regulations

- SR1. Provide name of proponent and property owner on the Cover Sheet. (§6.2.2).
- SR2. Provide imprint of the professional registration stamp of the person responsible for the preparation of each sheet. Certification is missing on General Layout Map and Partial Existing Conditions survey (§6.2.3).
- SR3. Provide existing conditions plan in sheet set that contains requirements shown in §6.5.1 through §6.5.6. In particular clarify why only partial survey detail was provided for the site.
- SR4. Cover sheet, General Plan and Existing condition plan should indicate limits of well head zone.
- SR5. Demolition plan should show all features of existing conditions plan per note SR3. Bearing and distance only partially shown. Either show for entire lot or not at all.
- SR6. Confirm that notes 6.6.16.1 through 6.6.16.5 have been included.

Building Design: (§9.7.11.1)

Dimensional Standards and Requirements (§9.7.7)

Minimum Lot Area: The current Application proposes a total development area of 2.7 acres and is in compliance with the minimum development area of 15,000 square feet.

Maximum Building Height: The current Application proposes a maximum height of approximately 53'-0", inclusive of all mechanical as shown. These proposed heights are in compliance with the maximum building height of 80'-0".

Building Design: (§9.7.11.1)

Massing: The buildings are simple rectangular buildings, mirror reflections of each other, across a landscaped courtyard. There is a lower grade entrance to the parking garage on the south facade. Building 1 is to the east of Building 2.

The façade is shown to have variations in parapet height and undulation in plan with the balconies, as well as variations in materials, creating an interesting relationship in what could otherwise be a long uninterrupted façade.

Residents will enter from the courtyard or via vehicular entrance through the garage.

Exterior Materials, Façade Treatments and Detailing:

Within the context of the proposed building design vocabulary, the four proposed elevations of the buildings are an interesting mix of materials and colors. The facade design includes an ashlar stone veneer at the perimeter of the ground level, along with a two-step fiber-cement rain-screen panel system above, punctuated intermittently by another level of the stone veneer. The rain-screen at the ground level is

articulated in a warm-toned panel, whereas the panels above are described with cooler, gray tones. Additionally, the large punched windows will provide good daylight to the residential interiors.

Architectural features such as the building entry points and the garage entry are clearly expressed. The building facade incorporates architectural detailing where the various materials meet, in order to break down the building mass and provide relief, layering and articulation to the façade. The four sides are treated similarly.

The application includes building elevations with visible material differences and a materials sheet with photos of the three primary exterior finishes. A stone veneer is at the parking level on the south façade, and wraps the lower level. The stone veneer alternates with rain-screen cladding with balconies and durable rain-screen cladding with white trim. This is similar and consistent with other stonework found elsewhere in the greater development.

Similarly, the scale and detailing of the rain-screen cladding appears to be consistent with other similar materials used in the development. The color palette of three tones (Gray Slate, Light Mist and Arctic White) of the rain-screen cladding, in concert with the white trim provides a familiar residential aesthetic. The Applicant should consider an alternative color scheme, with warmer tones, that will be more consistent with the overall color schemes of the University Station development.

The elevation would be improved if the downspouts below the scuppers along the top could be made straight, without the kink/bend, and in a darker color.

The exterior elevations would be improved based on the proposed recommendations as noted:

- B-1. Simplify the extent of the balcony railings
- B-2. Make the side wall enclosure at the balconies flush all the way up/down (without trim or overlapping balcony rails).
- B-3. Change or show the correct stair window placement in elevation and align these windows to the centerline of the front door/portico.
- B-4. Make the top fascia a darker color, more consistent with the tonal range of the stone base.
- B-5. Make the top parapet fascia consistent across the top; extend trim to extend the horizontal top fascia.
- B-6. Paint all downspouts to match the background field (not to match the trim).
- B-7. Increase the outward projection of the "white" bay windows, to increase the depth and articulation of the façade.
- B-8. Modify the window placement at the building entrances so that the stone veneer aligns across the face of the building.
- B-9. Employ localized symmetries and center windows, or provide mulled windows to center over doors.
- B-10. Organize the building façade into similar module elements.

Landscape Plan Sheet 9 indicates lawn and plantings at the top of the lawn. Pedestrian access from the Bridges driveway to the courtyard would enable increased pedestrian use of the building, reducing purely vehicular building access. A stair or ramp feature would improve and allow access from the building courtyard to the driveway.

Lighting Detail Sheet 11 illustrates a wall mounted fixture, but these are not shown in the elevations, and it is not clear how many there are, or how large they are in proportion to the building elevations.

The elevator appears on the black and white elevations but not on the rendered versions.

- B-11. A materials board with photos of proposed materials for reference has been provided. We suggest physical samples be provided to supplement these boards at the public review.
- B-12. Please clarify the extent to which the exterior of the building is to be lit. Will there be exterior building mounted lighting at each porch/balcony?
- B-13. Will there be any building mounted lighting for the Brigham and Women's overflow lot parking?
- B-14. Will there be building mounted exterior light fixtures at the garage entrances?
- B-15. Modify rendered elevations to show the elevator penthouse.
- B-16. Modify rendered elevation to show the scuppers without the kink.
- B-17. Key the materials to the elevations.
- B-18. Is there pedestrian access from Bridge Driveway to the courtyard?
- B-19. How will privacy be provided for ground floor units?
- B-20. Entry protection is not provided- will there be coverings or canopies or porticos at the entrances?

Rooftops:

The Application includes a roof plan, however there are no labels, and rooftop services are not shown. The intended color and material for the roofing should be indicated. Roof slope and drainage are indicated. The height of the parapet is identified on the building elevations.

- B-21. Update roof plan with notation of material and color for the roofing, also if there will be rooftop services, indicate them and clarify how they are screened.

Visual Mitigation and Screening of Infrastructural Elements. (§9.7.11.2)

A dumpster for recycling, screened with cedar fencing is set at the northeast corner of the parking lot. Transformers are located at the northern ends of the buildings with screening provided via plantings. A dumpster pad is located on the southerly end of each building with screening via planting. The proposed landscape plan was provided for the development and includes a narrow range of plant material. The majority of the plant species are not native nor drought tolerant. The following comments are noted:

- V-1. The slope at the southern end of the courtyard between the two buildings is shown to be a lawn at a 3:1 grade. Consider providing a pedestrian connection (ramp and stair) to a sidewalk along the north side of Bridges driveway for improved, more convenient connectivity.
- V-2. Consider use of terraced retaining walls, plantings, and lighting to enhance the walkway/slope.
- V-3. Clarify the building operation associated with the dumpster pads at the southerly end of the building. We suggest consideration be given to a screening design that may blend with the overall frontage design as compared to highlighting an intention to screen.
- V-4. Three Green Giant Arborvitae (TOG) are shown on the east side of Building 1 and the west side of Building 2. Confirm that these trees will not block windows when mature.
- V-5. Consider increasing planting at the following locations:
 - a. To help close off courtyard from the parking, add 2 deciduous trees in between the 2 proposed red maples at the north end of the common area at the parking lot.
 - b. At the west ends of the buildings and along the Bridges driveway.
 - c. Along the east side of Building 1.
 - d. On the north side of the transformer for Building 2.
- V-6. Consider adding an ornamental wall or fencing to separate the parking area and the courtyard.
- V-7. Functionality of the mountable curb and acceptability of planting at mountable curb between the

projects should be verified with the fire department.

- V-8. Clarify whether any form of irrigation is proposed (a note stating that all landscape areas shall be irrigated is on sheet 9 with a reference to details being on sheet 10, however sheet 10 is lighting).
- V-9. Consider adding varieties of ground covers and perennials for seasonal interest.
- V-10. Provide details for benches, bike parking, trash receptacles, pavers, stone edge, and pavilion.
- V-11. Provide details for planting of trees, shrubs, groundcovers, lawns (seed mixes), etc.
- V-12. The landscape narrative calls for the use of native and drought tolerant plant material. Only 3 of the 14 species shown are native to the northeast and only 6 of the 14 are drought tolerant.
- V-13. Consider grouping some of the benches in the courtyard together so that people can sit and talk in a group. Or consider moveable seating, tables, umbrellas, etc.
- V-14. Please clarify why an accessible space is shown at the recycling dumpster.
- V-15. The pavilion between the two buildings is shown on top of the proposed water line. Consider revising to avoid conflict.
- V-16. Previous Legacy development projects have implemented concrete curb and sidewalks. For consistency and longevity, concrete curbs (or granite) and concrete sidewalks instead of bituminous are recommended.
- V-17. The sidewalk along the easterly edge of building 1 is shown as 4.0 feet wide. A minimum of 5.0 feet, excluding the curb, is recommended.
- V-18. Indicate the height of the wall along the easterly edge of the parcel adjacent to the railroad track. Fencing, guardrail, walls and lighting are all proposed along a narrow strip. A critical section should be provided demonstrating all these elements can fit.

Utilities. (§9.7.11.3)

In accordance with this section, all proposed utilities are underground and water and sewer connections to the public systems are shown on the plans. Private utility connections including gas and electrical are also shown. Telephone and cable utilities are not shown.

- U1. Telephone and cable utilities are not shown. We recommend these utilities be included in the design plans.
- U2. Confirm that all hydrants and gate valves are in accordance with Town Standards.
- U3. For clarity we suggest moving the Stormceptor 450i detail on sheet 13 to sheet 15.
- U4. Confirm that garage areas will have floor drains connected to the proposed MDC gas traps.

Land Uses and Common Areas. (§9.7.11.4) and Public Gathering Areas(§9.7.11.13)

The Amended Master Plan includes approximately 1.5 acres of open green space that serves as a recreational element immediately abutting the proposed Hawthorne housing project on the westerly side. When constructed, the green space will serve to provide connectivity to the Oval and the Meadow to the south as well as linkage to Bridges driveway and the main retail portion of the development on the westerly side of University Avenue. With an appropriately designed accessible connection, the Hawthorne housing project can have direct access to the park

- LU-1. Clarify when the central open green space will be constructed relative to development of the Hawthorne Site.

Street Design. (§9.7.11.5)

The site is connected to University Avenue via a previously constructed access road (Bridges driveway) which intersects University Avenue at a signalized intersection. This is consistent with the Amended Master Development Plan.

Circulation, Traffic Impact & Public Street Access. (§9.7.11.6)

The submission complies with the requirements of Section 9.7.8.1-3, 5 Parking and Loading. Proposed parking supply includes 51 surface spaces in a lot to the north of the proposed buildings, 29 surface spaces to the east of the building along the MBTA ROW, and 100 subsurface spaces - 50 in a single level under each proposed building – for a total of 180 spaces. Parking supply does not include eight spaces along the MBTA ROW adjacent to Bridges driveway, which are designated for use by Bridges. A parking rate of 1.8 spaces per unit exceeds previous Master Plan residential components, and exceeds ITE industry standard rates for residential units.

Six accessible spaces are required based on AAB regulations for the proposed parking supply. Four are shown in the northern surface lot, one is shown in the eastern parking lane (adjacent to the dumpster). It is unclear if accessible spaces are provided in the subsurface parking area. One accessible space is marked van accessible, which is consistent with AAB regulations.

Walkways and crosswalks generally provide a continuous, accessible path to sidewalks and pedestrian paths previously constructed along Bridges driveway and approved through the Brigham PDR for the linear park. No sidewalk appears to be provided on the northerly side of Bridges driveway along the property frontage which may be confusing for pedestrians. For example an individual heading down the northerly side of Bridges driveway appears to need to direct themselves through the park or cross the Bridges driveway to access Building 1.

- PA-1. Clarify building entrance location, and confirm that an accessible path is maintained from accessible spaces to building entrance.
- PA-2. A sidewalk on the northerly side of the Bridges driveway should be considered.
- PA-3. Provide additional detail for the subsurface parking garage, including dimensions of parking stalls.
- PA-4. Clarify how an entering vehicle would access spaces 21, 22, 48, 49, 50 or 51 in the subsurface garage.
- PA-5. Clarify whether accessible spaces are provided in the garage. It appears that space #23 could be accessible, as it is located next to the elevator entry. Provide additional grading details for accessible pathway if this is the case.
- PA-6. Relocate the accessible space located at the northern end of the eastern parking aisle (by the dumpster). CMR 521.23.3.2 requires that accessible spaces serving a facility shall be on the shortest route to an accessible entrance.
- PA-7. Clarify intended use and accessibility details of the doorways leading the landscaped area between the two buildings.
- PA-8. Clarify locations of Bike racks. Confirm details are compliant with Town standards

Public Safety (§9.7.11.7)

The primary means of emergency access to the site is via Bridges driveway, which has signalized access to University Avenue.

- PS1. Regarding access to the adjacent Brigham development, confirm whether or not the fire department wants to take the opportunity to have access to the Brigham site via the easterly parking lot aisle before Phase II of the Brigham Site is completed. With regard to access, the raised curb detail shown on sheet 12 which separates the Hawthorne and Brigham developments appears to be abrupt and may be a concern to the fire department. Verify that access requirements and details are acceptable to the fire department.
- PS2. Provide documentation that the Fire Chief is in agreement with the general site layout and emergency access. Turning templates in accordance with Town fire department equipment should be provided.

Stormwater Management (§9.7.11.8)

Stormwater runoff from paved areas within the project area will be collected in deep sump catchbasins with hoods, routed through proprietary water quality units (Stormceptor), and will then be routed to one of two subsurface infiltration systems. The majority of flow from the site will be directed to the proposed on-site infiltration system, while a portion of the southeast parking lot and limited roof areas will be directed through the closed drainage system on Bridges driveway and will be carried to the subsurface infiltration system proposed within the linear park in the Approved Medical Office Building Enabling Package. The proposed methods for stormwater management are consistent with the Amended Master Plan and comply with the MassDEP Stormwater Management Standards. The proposed design will also recharge the first two inches of runoff from impervious surfaces and the provided recharge volume will exceed that required by MassDEP.

- SW1. In comparison to the Master Plan, a small portion of the site now drains to Bridges access drive. Confirm the closed drainage system on Bridges driveway has adequate capacity to handle the new flows from the project site.
- SW2. Depict all enabling infrastructure that is required for site drainage on the plans (i.e. drainage system connection from Bridges driveway to linear park infiltration system is not shown on sheet 6).
- SW3. Provide siltation barrier along the southerly property line.
- SW4. Revise “straw bales” to “straw wattles” at temporary soil stockpile depicted on sediment control plan to be consistent with details.
- SW5. Provide details for the cast in place floor depicted on the Typical Dog House Manhole detail.
- SW6. Clarify if the kor-n-seal boot depicted on the Typical Dog House Manhole detail is intended to be used for HDPE drainage pipe.

Outdoor Lighting. (§9.7.11.9)

A photometric plan was included in the submission. Fixture types and details have some consistency with fixtures used for the adjacent Bridges development but are not used in the same way. The listed average foot-candles is 1.56 fc which is below the design guideline of 4.0 fc for this project. Since this is a residential property, there may be an opportunity for consideration of a minimum 2.0 fc, however parking lot lighting should be adjusted to increase the minimum lighting levels and lower the Uniformity Ratio per the project design guidelines.

- L-1. The proposed parking lot lighting includes 11 single luminaire light poles and 10 lighted bollards. The light poles are 12' tall with the DSS decorative fixtures. The other parking lots have used a LSI type XSB or XPT LED fixture on the poles. This proposed style is different from other parking areas and should be verified to be acceptable to the Town.
- L-2. The calculations table provided indicates an average horizontal illuminance of 1.56 fc, with a uniformity ratio of 15.60. The agreed-upon values in the final Table 1 (4/5/2013) for parking areas include a minimum average illuminance of 4.0fc. The average of 1.56fc is too low for a parking area. It is recommended to provide more lighting to increase the average illuminance.
- L-3. The agreed-upon values in the final Table 1 (4/5/2013) for parking areas include a uniformity ratio of 4.0. This is the ratio of average to minimum foot-candles to minimize areas that are either too bright or too dark. It is recommended to revise the design to reduce to the uniformity ratio to closer to 4.0.
- L-4. The summary table on Sheet 10 lists the minimum illuminance in the parking lot as 0.1fc. There are areas that are shown as 0.0fc and therefore the calculation table does not appear to be consistent with the actual points shown on Sheet 10. Revised calculations should be submitted.
- L-5. No lighting plan was provided for covered parking. We anticipate lighting in those areas will be resolved during the building permit review.

Mixed Uses and Activities. (§9.7.11.10)

The proposed use for the site is consistent with the usage identified in the Amended Master Plan.

Energy Efficiency. (§9.7.11.11) and Sustainability. (§9.7.11.12)

The application outlines the various initiatives to be taken as part of this development. It is anticipated that design details of these commitments will be validated by the Building Commissioner as part of the building department code review.

Air Quality, Noise, Vibration, Etc. (§9.7.11.14)

No changes to air, noise, or vibration impacts established by the Master Plan are anticipated.

Construction Solid Waste Management. (§9.7.11.15)

It is anticipated that the requirements of this section of the Bylaw will be coordinated in the field by the Town's construction staff.

Water Quality. (§9.7.11.16)

The proposed stormwater management system is consistent with the practices approved as part of Amended Master Plan. Proposed stormwater infrastructure includes deep sump catch basins with hoods and proprietary water quality units (Stormceptor) to treat stormwater runoff prior to infiltration and discharge. In accordance with Section 9.7.5.2.6, all rooftop runoff will be directed to subsurface infiltration systems.

Spill Prevention and Response. (§9.7.11.17)

A draft operation and maintenance plan (O+M Plan) was not submitted as part of PDR submission. Given the nature of this particular development, bulk storage of hazardous materials is not anticipated. Submission and resolution of the O+M Plan could be completed prior to award of a building permit.

SPR-1) Provide information on any portion of the development that will have emergency back-up generators or will store any of the materials listed in Section 9.7.5.2.10.

Water Efficiency. (§9.7.11.18)

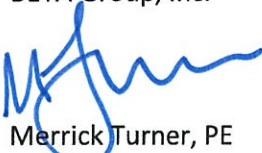
It is anticipated that design details of these commitments will be validated by the Building Commissioner and as part of the building department code review.

Signage. (§9.7.10)

A single ground mounted entry sign is proposed at the southwesterly corner of the site. Several small directional signs are indicated in the parking lot

- S-1. Clarify if other signage is proposed on or around the building. To what extent is directional signage proposed along University Avenue.
- S-2. A separate signage package indicating signage locations, size, content, materials and colors should be prepared for consideration by the Board

Very truly yours,
BETA Group, Inc.



Merrick Turner, PE
Senior Associate

cc: Abigail McCabe
Job No: 4410



SIMPLIFY THE BALCONY HARDRAIL, TYPICAL

FLUSH FULL HEIGHT SIDE WALL, TYP

CHANGE/SHOW STAIR WINDOWS ON DOOR CENTERLINE, TYP

DARKER TOP FASCIA, TO MATCH STONE BASE, TYPICAL

EXTEND HEAD TRIM ACROSS TOP FASCIA, TYP

PAINT DOWN SPOUTS TO MATCH SIDING, TYPICAL

INCREASE PROJECTION OF BAY WINDOWS, TYP

ADD FACE TRIM TO COMPLETE MODULE, TYPICAL

REDUCE HEIGHT OF STONEMWORK, TYP
MULLED WINDOWS ON DOOR CENTERLINE, TYP

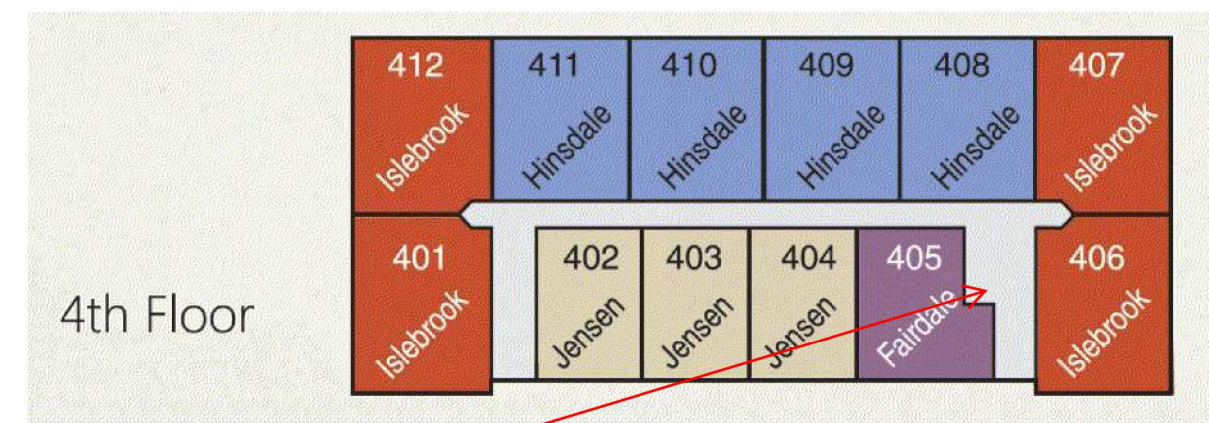
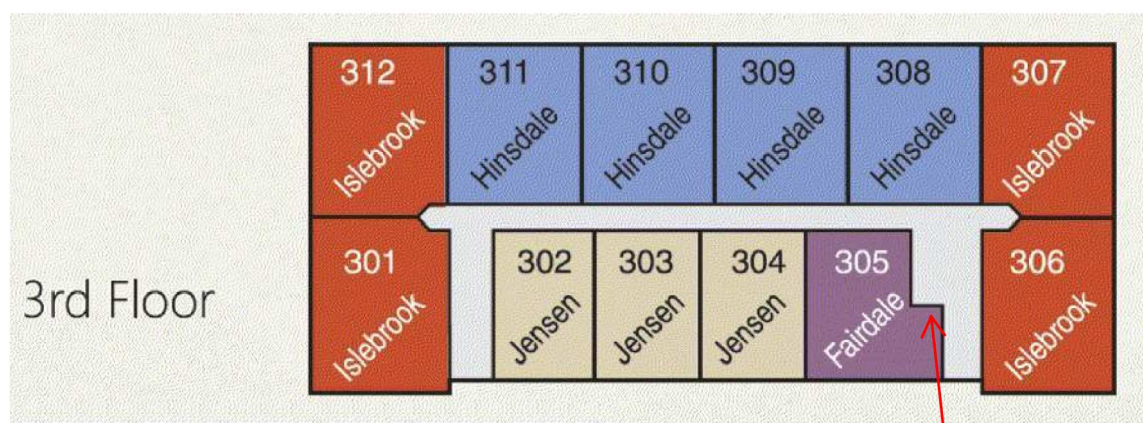
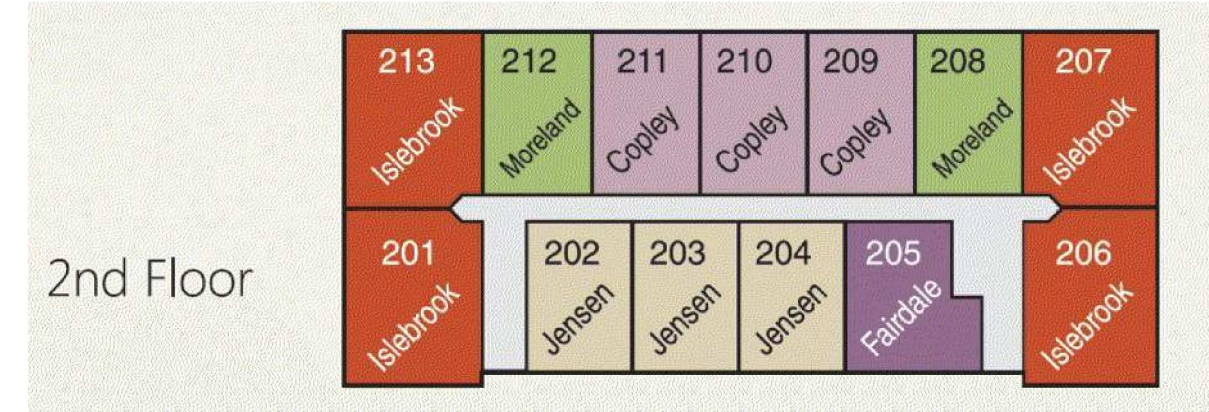
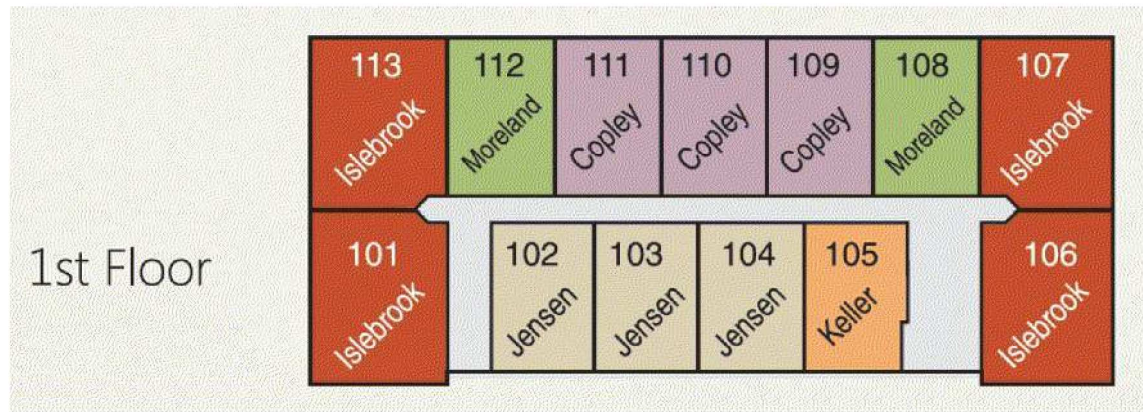
EXISTING

RECOMMENDED



Hawthorne at University Station

MARK-UP OF ELEVATIONS AND PLANS
 ARCHITECTURAL PEER REVIEW
 BETA-DSK-KDG
 18 December 2017



CLARIFY
 LOCATION
 OF STAIRS
 AND
 ELEVATOR

Floor Plans

UNIT MIX / BEDROOM SUMMARY PER BUILDING				
Unit Style	# Units / Bldg	# Bedrooms / Unit	# 1 Bedroom Units	#2 Bedroom Units
Keller	1	1	1	
Jensen	12	1	12	
Moreland	4	1	4	
Copley	6	1	6	
Fairdale	3	2		3
Hinsdale	8	2		8
Islebrook	16	2		16
Totals	50		23	27