

ETSU HOUSING MASTER PLAN

ENGAGEMENT OVERVIEW

East Tennessee State University (“ETSU”) engaged Brailsford & Dunlavey (“B&D” or “Project Team”) to develop a Housing Master Plan. The Project Team analyzed on-campus housing demand and preliminarily evaluated residence hall physical conditions to develop a plan that aligns with the University’s strategic plan, maximizes market capture, and optimizes existing assets. The result yielded a strategy to leverage existing assets to increase housing capture with offerings that align with student’s demand preferences. The following summarizes the context and analysis that informed the plan’s recommendations.

INSTITUTIONAL CONTEXT

ETSU aims to increase enrollment to support the state-wide Drive to 55 initiative. ETSU has historically served populations living within close proximity to the Johnson City, Tennessee campus. Consistent with ETSU’s mission, the University continues to be committed to the “rich heritage of Southern Appalachia” by recruiting local students; however, it is actively expanding its recruitment area beyond to other in-state and out-of-state regions to meet enrollment goals. The university has strategically evolved its academic programs and campus facilities to attract a broader recruitment base. The Housing Master Plan is a framework for Housing and Residence Life to create a housing program that meets the housing needs of an evolving student body and guidance for future policies, such as a live-on policy, that reinforce ETSU’s broader strategic goals.

STUDENT BODY SUBMARKET GROUPS

ETSU and the Project Team defined the university’s student population into three submarket groups: Local students within the immediate county region, Tennessee students with permanent addresses beyond the immediate local area, and out-of-state students. The project team evaluated the submarkets’ motivations to attend ETSU and make housing decisions. The analysis determined that ETSU has the opportunity to expand its impact by serving the unique needs of these submarket groups.

Local Submarket

The local submarket consists of students with permanent addresses in the immediate counties within 45-mile radius surrounding Johnson City, Tennessee. These counties include Washington, Sullivan, Carter, Unicoi, Hawkins, and Greene. Total cost, proximity to permanent residence, and specific academic programs – especially those related to healthcare – influence local students’ decisions to attend ETSU. Cost of living is the primary decision driver for local students’ housing decisions. Due the proximity for

students' permanent addresses to ETSU, the availability of on-campus housing plays less of a role in their decision to attend ETSU.

The majority of local students live off campus with parents / spouses or in rented bedrooms / units with monthly rates averaging \$400.

Tennessee Submarket

The Tennessee submarket includes students with permanent addresses in Tennessee beyond the immediate county region. Cost and value influence Tennessee students' decision to attend ETSU; however, these students are also driven by the size and scale of the university and campus and the experience that it offers. The availability of housing at ETSU plays a more significant role in Tennessee students' decision to attend ETSU than their local peers. Many Tennessee freshmen are likely to choose to live in on-campus housing despite the availability of more affordable options in the off-campus market. These students noted convenience and the opportunity to meet friends and become involved in the campus community as reasons they chose to live in on-campus housing. However, after experiencing on-campus living, these students felt like the experience did not meet their expectations and they were likely to move off campus, many to other student-oriented market-rate options.

Tennessee students value the experience student housing can offer and are willing to pay between \$450 and \$500 per month per bed for a premium offering that provides elements such as impactful student programming and amenities (interior and exterior to the unit) focused on community development.

Out-of-State Submarket

The out-of-state submarket includes students with permanent addresses in states outside of Tennessee. Out-of-State student enrollment is driven by the value of ETSU and availability of competitive academic programs. The availability of housing and the experience it offers is important to out of state students. This submarket has the largest on-campus housing capture, especially from freshmen students.

Similar to Tennessee students, Out-of-State students value the experience student housing can offer and are willing to pay \$450 and \$500 per month per bed for a housing product that provides elements such as impactful student programming and amenities (interior and exterior to the unit) focused on community development.

HOUSING MASTER PLAN OVERVIEW

ETSU has the opportunity to provide a greater impact to students by aligning the existing housing assets with students' needs. A live-on policy will enable Housing and Residence Life to implement housing placement strategies that will place students in housing that not only aligns with their developmental needs but also responds directly to their demand preferences.

The submarket cohorts' characteristics align with two housing offerings – one that prioritizes affordability and one that prioritizes campus and residence hall experiences. Local students are most likely to make housing decisions based on affordability; therefore, this cohort will most likely be satisfied in affordable on-campus housing. Tennessee and Out-of-State students who are willing to pay a premium for amenities and experience will be most satisfied in experience-driven housing offerings.

Rental rates for on-campus housing should correspond to housing products. Housing that has more amenities and programs commands a rental rate starting between \$450 and \$500 per month per bed. This aligns with the experience driven market's affordability threshold. Affordable housing offerings should begin at \$400 per month per bed to meet the affordable market's demand requirements. The rental rate strategy section provides additional detail for a proposed change to ETSU's housing rates.

NEIGHBORHOOD CREATION

ETSU has invested significant resources in the football stadium, Culp Student Center, and the Dossett Dr. Promenade to create a campus environment that fosters activity. The experience driven market requires residence halls with scale to create community at multiple levels – unit, floor, building, and neighborhood. The scale and physical characteristics offered in Lunstford Hall, Lucille Clement Hall, and Carter Hall align with these experience driven demand traits. These halls are most aligned with demand preferences from Tennessee and Out-of-State freshmen.

Dossett Hall, Powell Hall, West Hall, and Stone Hall offer a basic-level experience that provides community and amenities exterior to the residence halls; therefore, these halls are optimized as affordable options for local freshmen students.

This placement begins to create a scale for a concentrated freshmen neighborhood that meets demand needs and positions the housing portfolio to improve the development continuum for upper division students in Governors, Centennial, Davis, and Buccaneer Ridge. The following diagram illustrates the housing paths and neighborhood creation.

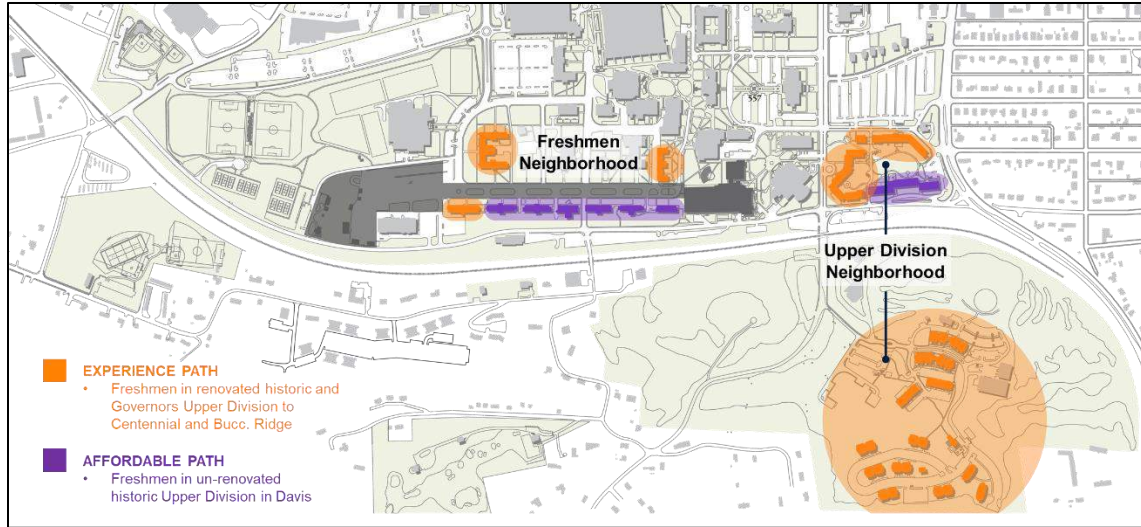


Figure 1 - Neighborhood Creation

RENTAL RATE STRATEGY

Currently rental rates vary across unit type, occupancy configuration, and building age. The table below summarizes the proposed rental rate adjustments to reflect the additional value students are willing to pay for an experience driven housing option. Rental rate increases must be implemented with building improvements. The additional financial capacity builds capacity for future reinvestment into the system's physical assets. It also enables ETSU to decrease rental rates at select residence halls to align with affordable demand needs.

		2018 / 2019 Academic Year		Proposed		Change
		Semester	Per Month	Semester	Per Month	
Experience	Lucille Clement Hall	\$1,868	\$415	\$2,043	\$454	9%
	Governors Hall	\$2,622	\$583	\$2,622	\$583	0%
	Luntsford Apartments	\$2,272	\$505	\$2,550	\$567	12%
	Centennial Hall	\$2,978	\$662	\$3,132	\$696	5%
	Buccaneer Ridge	\$3,217	\$715	\$3,217	\$715	0%
Affordable	Dossett Hall	\$0	\$0	\$1,804	\$401	N/A
	Stone Hall	\$1,982	\$440	\$1,982	\$440	0%
	Powell Hall	\$2,011	\$447	\$1,805	\$401	-10%
	Carter Hall	\$2,280	\$507	\$2,126	\$472	-7%
	West Hall	\$2,043	\$454	\$1,818	\$404	-11%
	Davis Apartments	\$2,205	\$490	\$2,190	\$487	-1%

Figure 2 - Rental Rate Adjustments

All rental rate changes should be confirmed through additional analyses specifically targeted to student's demand preferences and price sensitivities. Once rental rates are confirmed with the ETSU market, ETSU should phase rental rate changes in coordination with residence hall renovations.

Physical Housing Portfolio Improvements

B&D and Facility Systems Consultants, LLC (FSC) conducted facility tours to provide a cursory review of each residence hall's physical conditions. The team observed the existing conditions of the facility and developed reports that summarize recommended upgrades in relation to the residence halls' current conditions and improved space requirements¹. The reports identified cursory recommendations to system and physical improvements to maximize asset value.

ETSU can elevate the housing experience through targeted renovations in Lucille Clement, Luntsford, and Carter halls. The renovations in these buildings are driven by the experience-driven market demand. These residence halls currently provide the optimal capacity scale for a high impact community experience. In summary, the Project Team recommends the following renovations to improve the community experience:

Lucille Clement Hall

¹ Attachment B: Facility Reports

- ◆ Modernize building entrance to improve sightlines into community space
- ◆ Update existing community spaces with consistent design, new and contemporary furnishings
- ◆ Build additional community spaces into floors
- ◆ Update finishes including paint, ceiling, blinds, flooring, and casework
- ◆ To the extent practicable, incorporate code and accessibility updates, as well as asbestos abatement in areas receiving renovations.

Luntsford Apartments

- ◆ Modernize building entrance with improve sightlines into community space
- ◆ Update existing community spaces with consistent design, new and contemporary furnishings
- ◆ Build additional community spaces into floors
- ◆ Update finishes including paint, ceiling, blinds, flooring, and casework
- ◆ To the extent practicable, incorporate code and accessibility updates, as well as asbestos abatement in areas receiving renovations.

Carter Hall

- ◆ Modernize building entrance with improve sightlines into community space
- ◆ Update existing community spaces with consistent design, new and contemporary furnishings
- ◆ Build additional community spaces into floors
- ◆ Update finishes including paint, ceiling, blinds, flooring, and casework
- ◆ To the extent practicable, incorporate code and accessibility updates, as well as asbestos abatement in areas receiving renovations
- ◆ Upgrade and strengthen WiFi coverage

The Plan identifies Dossett, Stone, West, Powell, and Buccaneer Ridge Apartments as prioritized halls for deferred maintenance capital projects. ETSU should address annual, physical maintenance of Buccaneer Ridge Apartments, Davis Apartments, Centennial, and Governors. ETSU should define the scope and identify resources within the housing system's repair and replace fund balance to address these deferred

maintenance projects. The following diagram illustrates the overview of capital and maintenance projects with general budgets over time.

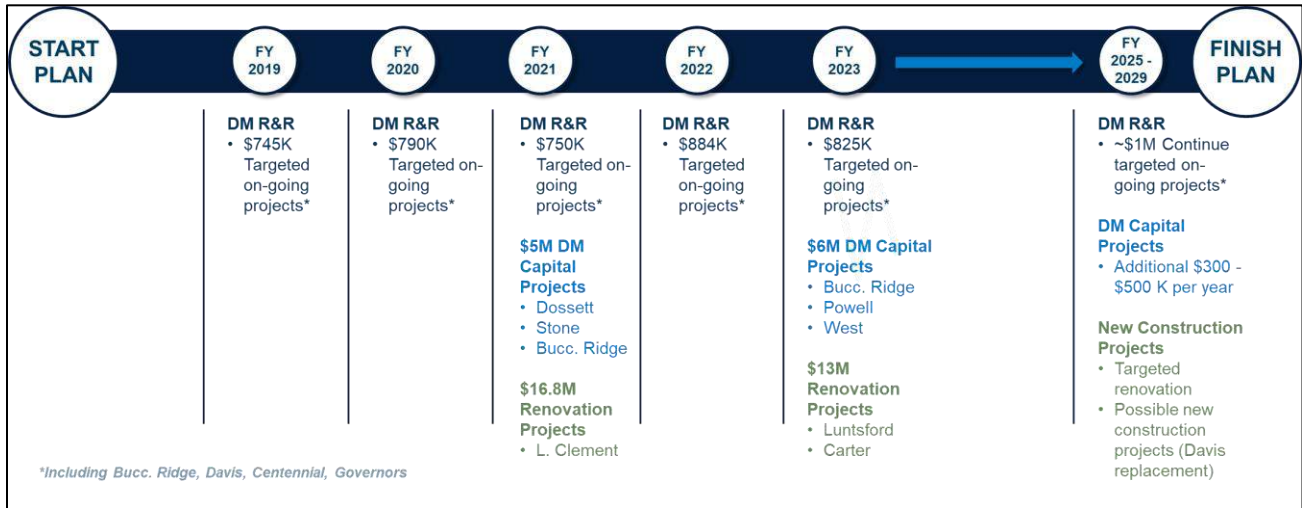


Figure 3 - Master Plan Capital & Maintenance Project Timeline

ETSU should develop an Action Plan that creates a guide for establishing portfolio-wide system and operations and maintenance standards, quantifying more detailed cost estimates for aligning the physical plan with new standards, and defining projects to address deferred maintenance needs. The facility reports in Attachment B: Facility Reports provide preliminary recommendations for physical improvements; ETSU should further define renovation terms through the Action Plan initiative.

NEXT STEPS

B&D recommends the following immediate actions to implement the Plan:

- ◆ ETSU should develop a detailed deferred maintenance Action Plan in alignment with available resources.
- ◆ ETSU should conduct a targeted analysis to understand specific student preferences to develop a program and plan for each hall that directly aligns with the characteristics that will elevate the value proposition for students. (e.g. room amenities, hall amenities, programs, furniture, etc.)
- ◆ ETSU should integrate the housing and dining master plans to ensure the implementation of new housing policies and assets benefits and maximizes overall ETSU strategic objectives.

ATTACHMENTS

ATTACHMENT A: PRESENTATIONS

- ◆ Housing Master Plan Overview – Revised September 2019
- ◆ Risk Profile Assessment – June 2019
- ◆ Concept Refinement – May 30, 2019
- ◆ Concept Refinement – May 8, 2019
- ◆ Initial Concepts – April 2019
- ◆ Project Kick Off – March 2019

ATTACHMENT B: FACILITY REPORTS

- ◆ Carter
- ◆ Dosset
- ◆ Lucile Clement
- ◆ Luntsford
- ◆ Stone



EAST TENNESSEE STATE
UNIVERSITY

East Tennessee State University

HOUSING MASTER PLAN

Spring 2019



BRAILSFORD & DUNLAVEY

Revised September 2019

Housing Master Plan

OVERVIEW

HOUSING MASTER PLAN STRATEGY

- Drive to ETSU strategic plan
- Maximize market capture
- Optimize existing assets

1

ETSU has the opportunity to expand its impact by serving the unique needs of ETSU's submarkets.

2

ETSU has the potential to provide a greater impact to the on-campus experience.

3

ETSU can maximize this opportunity through housing price adjustments and neighborhood creation that enhance the residential experience.

4

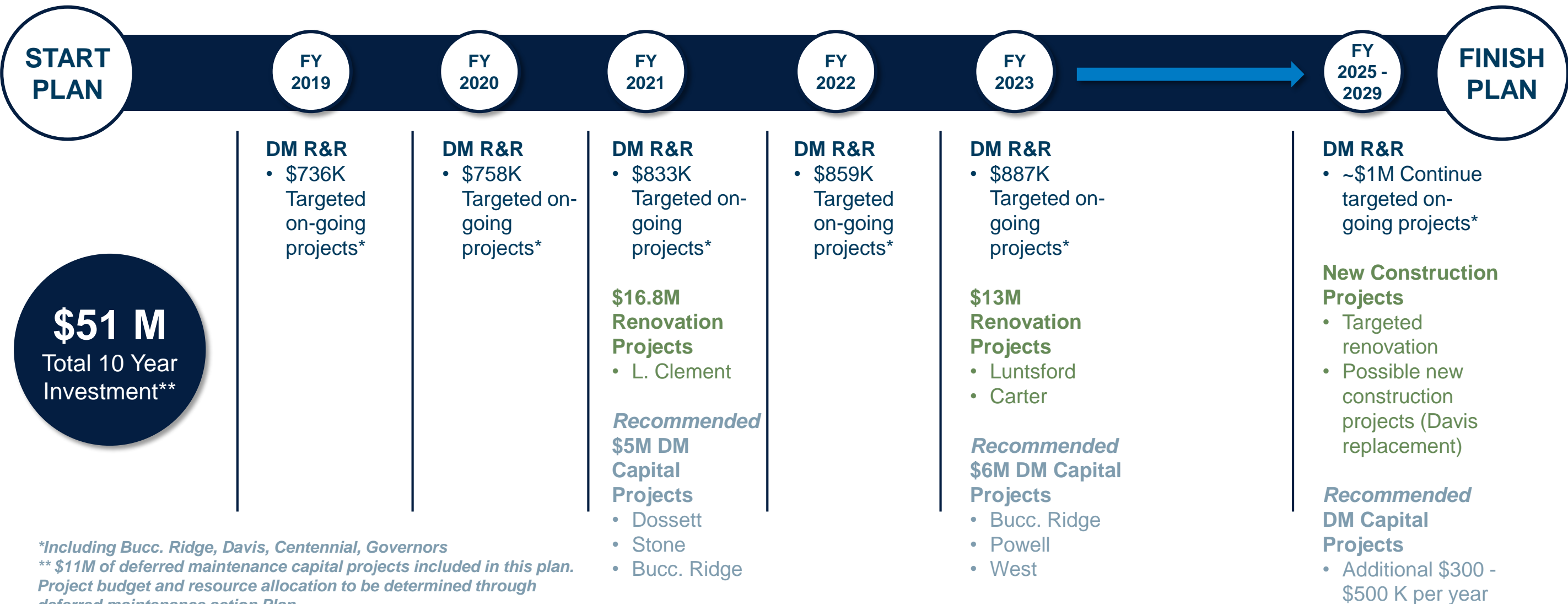
ETSU can elevate the experience while addressing deferred maintenance through targeted renovations.

5

ETSU has the ability to continuously reinvest in its housing portfolio with its increased financial capacity.

Housing Master Plan

INVESTMENT PLAN



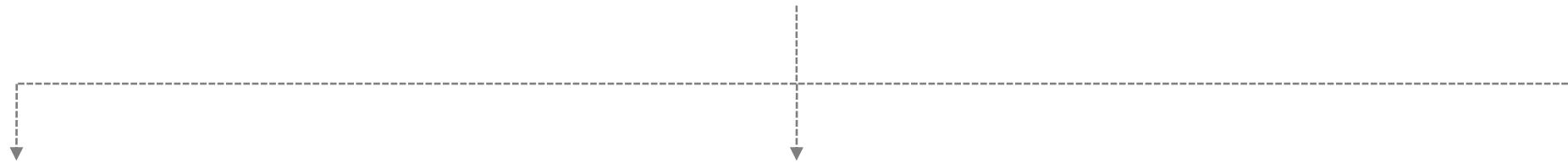
*Including Bucc. Ridge, Davis, Centennial, Governors

** \$11M of deferred maintenance capital projects included in this plan. Project budget and resource allocation to be determined through deferred maintenance action Plan.

1

ETSU has the opportunity to expand its impact by serving the unique needs of ETSU's submarkets.

ETSU SUBMARKETS & CHARACTERISTICS



Local Students

Proximity to permanent residence and affordable cost of attendance drives enrollment

Affordability drives housing decisions

Tennessee Students

Cost / value of ETSU, programs, and size and scale of campus and campus experience drive enrollment

Housing highly influential in decision to attend ETSU

Out of State Students

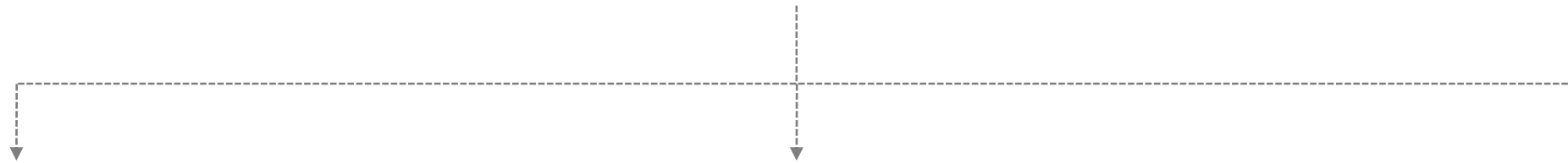
Cost / value of ETSU, and programs drive enrollment

Housing influential in decision to attend ETSU

1

ETSU has the opportunity to expand its impact by serving the unique needs of ETSU's submarkets.

ETSU SUBMARKETS



Local Students **Require:**

Affordable options

Tennessee Students **Require:**

Impactful student life programming

Amenities focused on community development

Neighborhood creation through targeted associations

Out of State Students **Require:**

Impactful student life programming

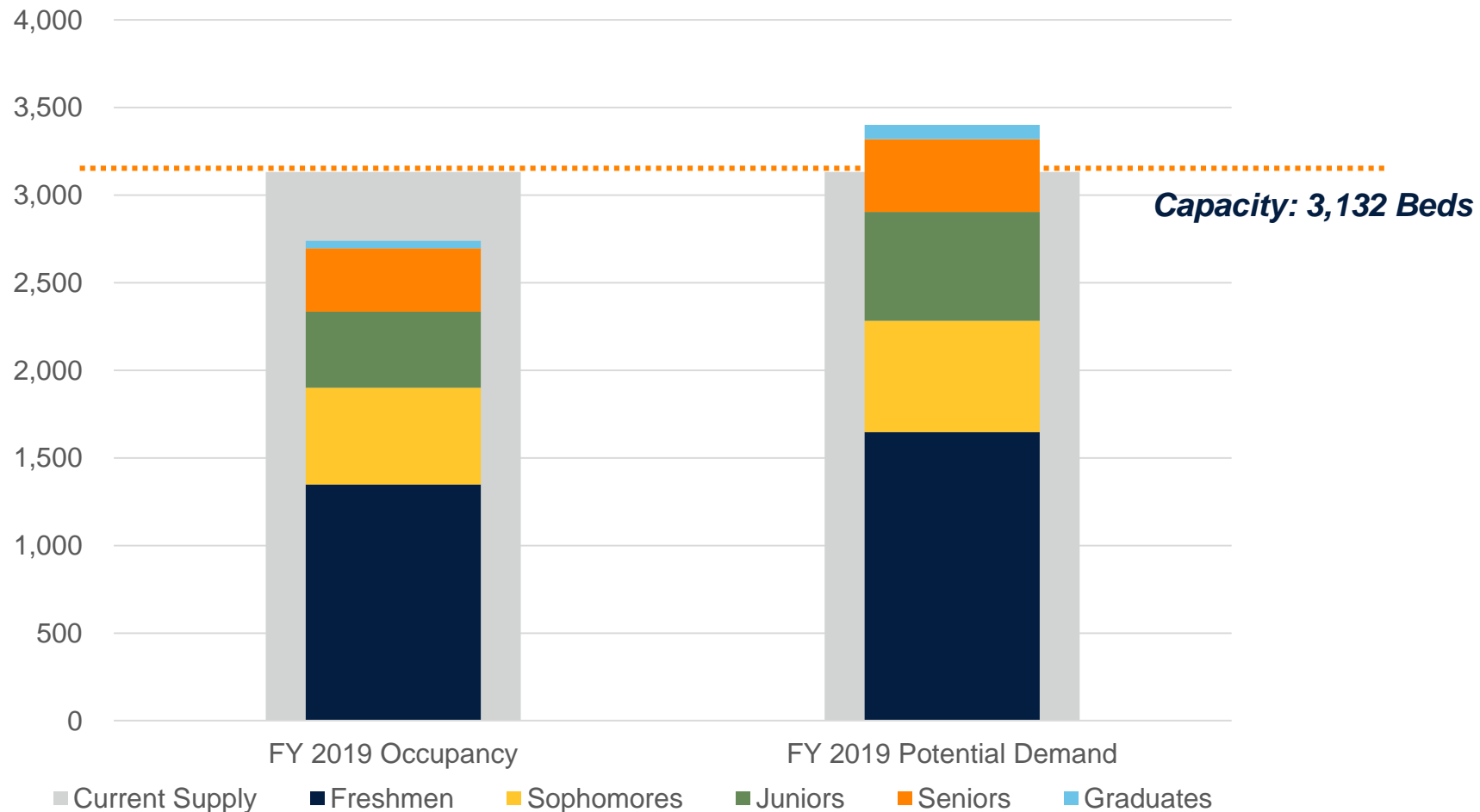
Amenities focused on community development

Neighborhood creation through targeted associations

Affordable options

2

ETSU has the potential to provide a greater impact to the on-campus experience.



662 Beds
Additional
Capture

Two distinct needs within uncaptured market

1. Affordable options
2. Experience that meets expectations of reasons that drew them to ETSU

2

ETSU has the potential to provide a greater impact to the on-campus experience.

Classification	2018 / 2019		Potential	
	Enrollment	Capture Rate	Capture Rate	Demand
First year	2,464	50%	63%	1,557
Sophomore	1,841	27%	33%	600
Junior	2,286	17%	26%	588
Senior	2,877	10%	14%	393
Graduate / Other	990	3%	8%	76
Total	10,458	21%	31%	3,214

CONSIDERATIONS

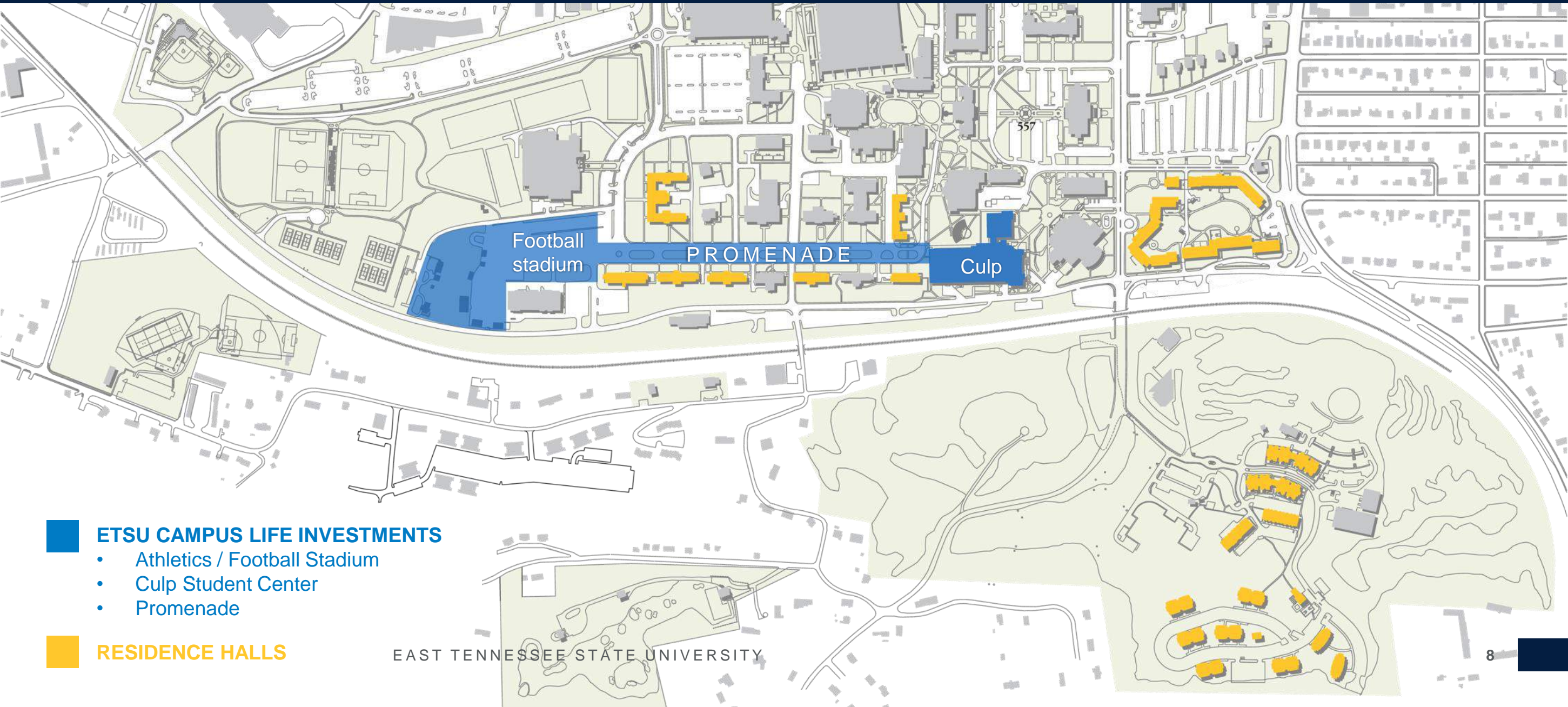
- Current inventory provides sufficient capacity for increased demand.
- ETSU may consider new development within the following conditions:
 - Development should accommodate demand from mission critical target market – Freshmen
 - ETSU should implement live-on requirement to mitigate occupancy risk

SCENARIOS

- Full time freshmen enrollment exceeds 3,500
- OR Combined Freshmen and Sophomore housing capture exceeds 3,500 (surpassing current housing inventory)

3

ETSU can maximize this opportunity through housing price adjustments and neighborhood creation that enhance the residential experience.



ETSU CAMPUS LIFE INVESTMENTS

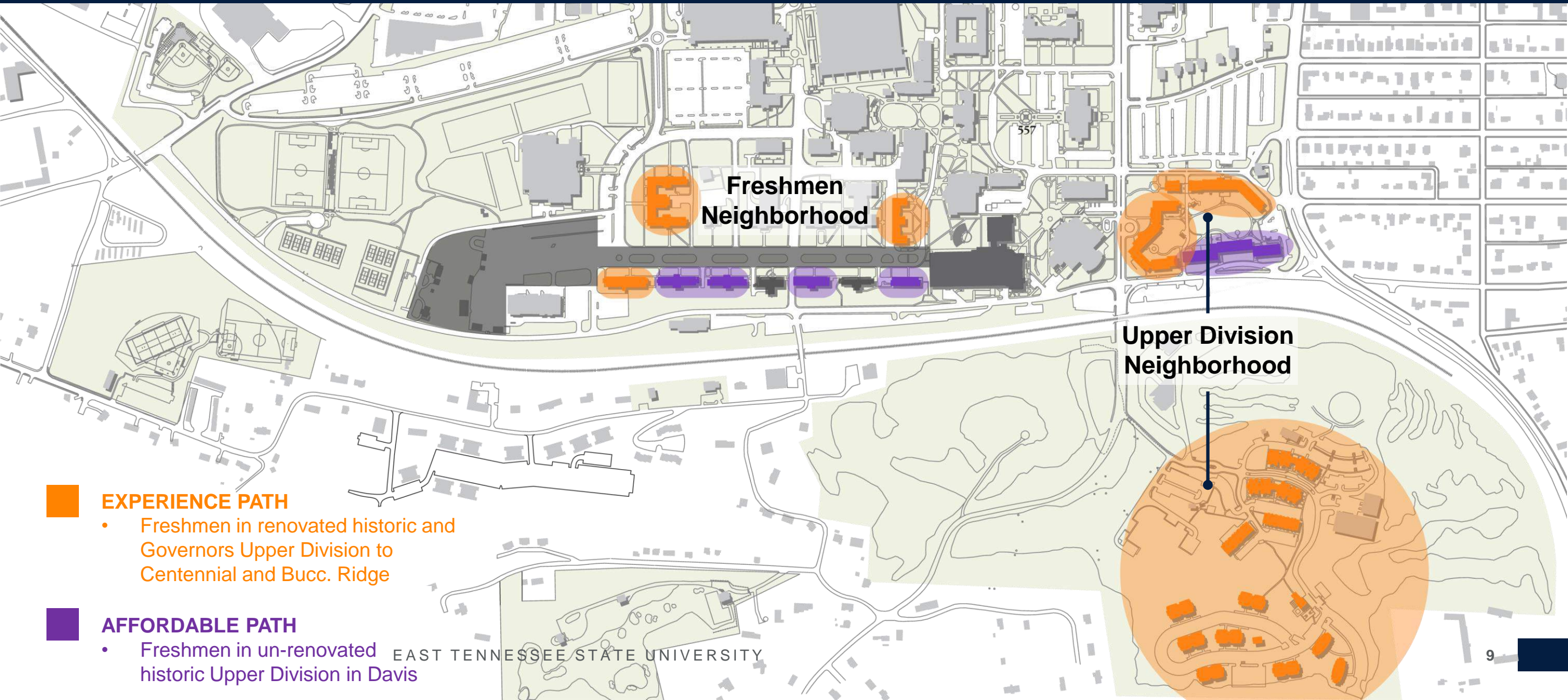
- Athletics / Football Stadium
- Culp Student Center
- Promenade

RESIDENCE HALLS

EAST TENNESSEE STATE UNIVERSITY

3

ETSU can maximize this opportunity through housing price adjustments and neighborhood creation that enhance the residential experience.



3

ETSU can maximize this opportunity through housing price adjustments and neighborhood creation that enhance the residential experience.

TO BE ALIGNED

Buildings:

Powell

Carter

Luntsford

Davis

West

Lucille Clement

Current Bed Capacity: 1,243

Current Demand: 0



EXPERIENCE ALIGNED

Buildings:

Governors

Centennial

Bucc. Ridge

Current Bed Capacity: 1,675

Current Demand: 2,484

AFFORDABILITY ALIGNED

Buildings:

Dossett (offline)

Stone

Current Bed Capacity: 214

Current Demand: 600

3

ETSU can maximize this opportunity through housing price adjustments and neighborhood creation that enhance the residential experience.

ETSU aligns portfolio with submarket demand



EXPERIENCE ALIGNED

Buildings:

- Governors*
- Centennial*
- Bucc. Ridge*
- L. Clement*
- Carter*
- Luntsford*

New Bed Capacity: 2,481
Demand with Policy: 2,614

AFFORDABILITY ALIGNED

Buildings:

- Dossett*
- Stone*
- Powell*
- West*
- Davis*

New Bed Capacity: 651
Demand with Policy: 600

3

ETSU can maximize this opportunity through housing price adjustments and neighborhood creation that enhance the residential experience.

	2018 / 2019 Academic Year		2019 / 2020 Academic Year		Proposed*		Change	
	Semester	Per Month	Semester	Per Month	Semester	Per Month		
Experience	Lucille Clement Hall	\$1,868	\$415	\$2,055	\$456	\$2,043	\$454	↓1%
	Governors Hall	\$2,622	\$583	\$2,699	\$599	\$2,622	\$583	↓3%
	Luntsford Apts	\$2,272	\$505	\$2,379	\$528	\$2,550	\$567	↑7%
	Centennial Hall	\$2,978	\$662	\$3,116	\$629	\$3,132	\$696	↑1%
	Bucc Ridge	\$3,217	\$715	\$3,512	\$780	\$3,217	\$715	↓8%

Affordable	Dossett Hall	N/A	N/A	N/A	N/A	\$1,804	\$401	N/A
	Stone Hall	\$1,982	\$440	\$2,055	\$456	\$1,982	\$440	↓4%
	Powell Hall	\$2,011	\$447	\$2,055	\$456	\$1,805	\$401	↓12%
	Carter Hall	\$2,280	\$507	\$2,292	\$509	\$2,126	\$472	↓7%
	West Hall	\$2,043	\$454	\$2,055	\$456	\$1,818	\$404	↓12%
	Davis Apts	\$2,205	\$490	\$2,215	\$492	\$2,190	\$487	↓1%

*Proposed rental rate changes were defined during the 2018 / 2019 Academic Year. Proposed rental rates represent recommended experience and affordability paths. Experience paths should represent rates that align with product value in housing portfolio and demand preferences. Affordability path rates should align with target market demand's affordability threshold. At the time of the analysis, affordability path rates between \$400 - \$500.

4

ETSU can elevate the experience while eliminating deferred maintenance through targeted renovations.

Renovation Project Overview

Scope: L. Clement (Renovation), Luntsford (Renovation), Carter (Renovation)

Project Costs: \$29.8 M (Two phases)

Required Rental Rate:

\$450 - \$550 / month

\$2,025 - \$2,475 / semester



Opportunities

- Renovation product captures experience-driven submarket
- Increased rental rate builds capacity for affordable options
- Address deferred maintenance while renovating buildings
- Projects over the summer would maximize revenue capacity

Assumes and relies on new housing policies to guide housing placement and increase market capture.

****Rental rates required for new construction are too high for increased market capture.***

4

ETSU can elevate the experience while eliminating deferred maintenance through targeted renovations.

P 1

L. Clement



Experience Bed Count:

472

Project Cost

\$16.8 M

Deferred Maintenance Eliminated:

\$3.4 M

P 2

Luntsford



Experience Bed Count:

186

Project Cost

\$7 M

Deferred Maintenance Eliminated:

\$1.9 M

P 2

Carter



Experience Bed Count:

146

Project Cost

\$5.7 M

Deferred Maintenance Eliminated:

\$900 K

\$29.8 M

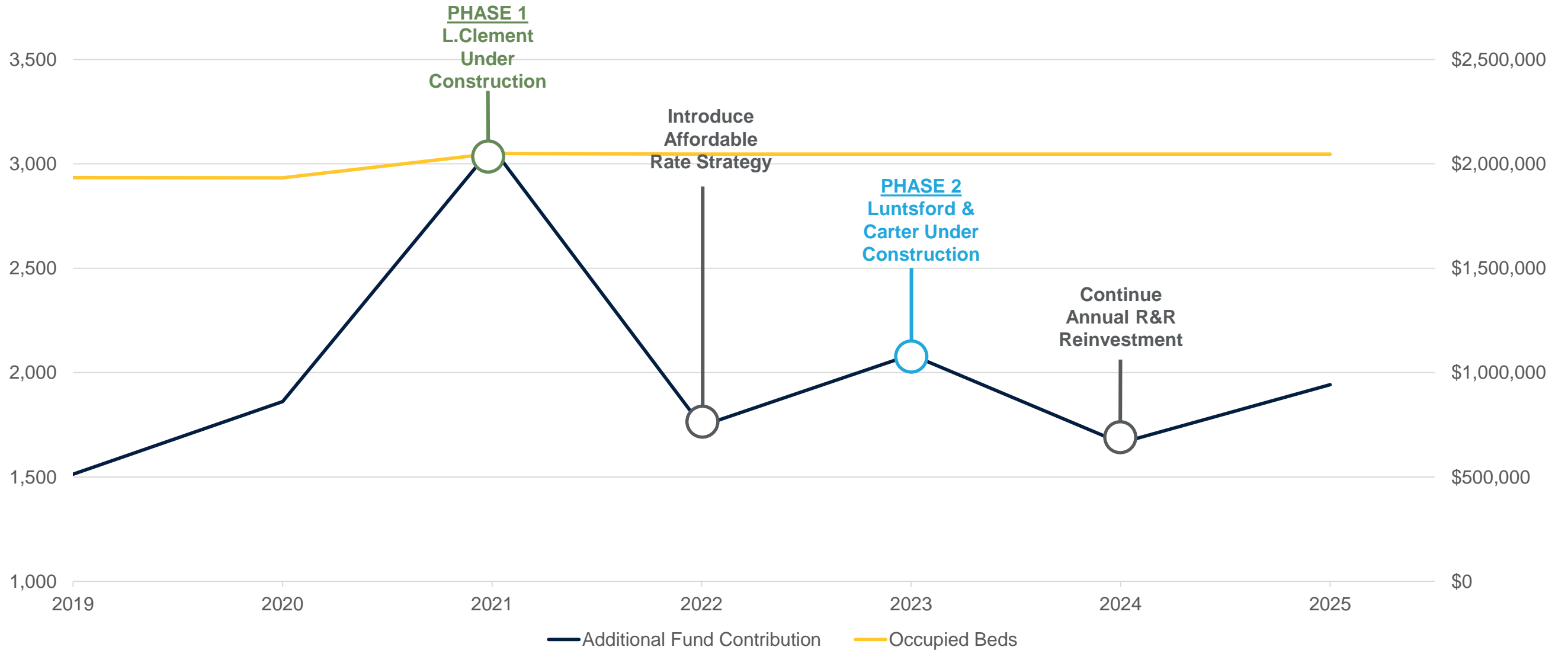
Total Capital Improvement

\$6.2M

Deferred Maintenance Eliminated

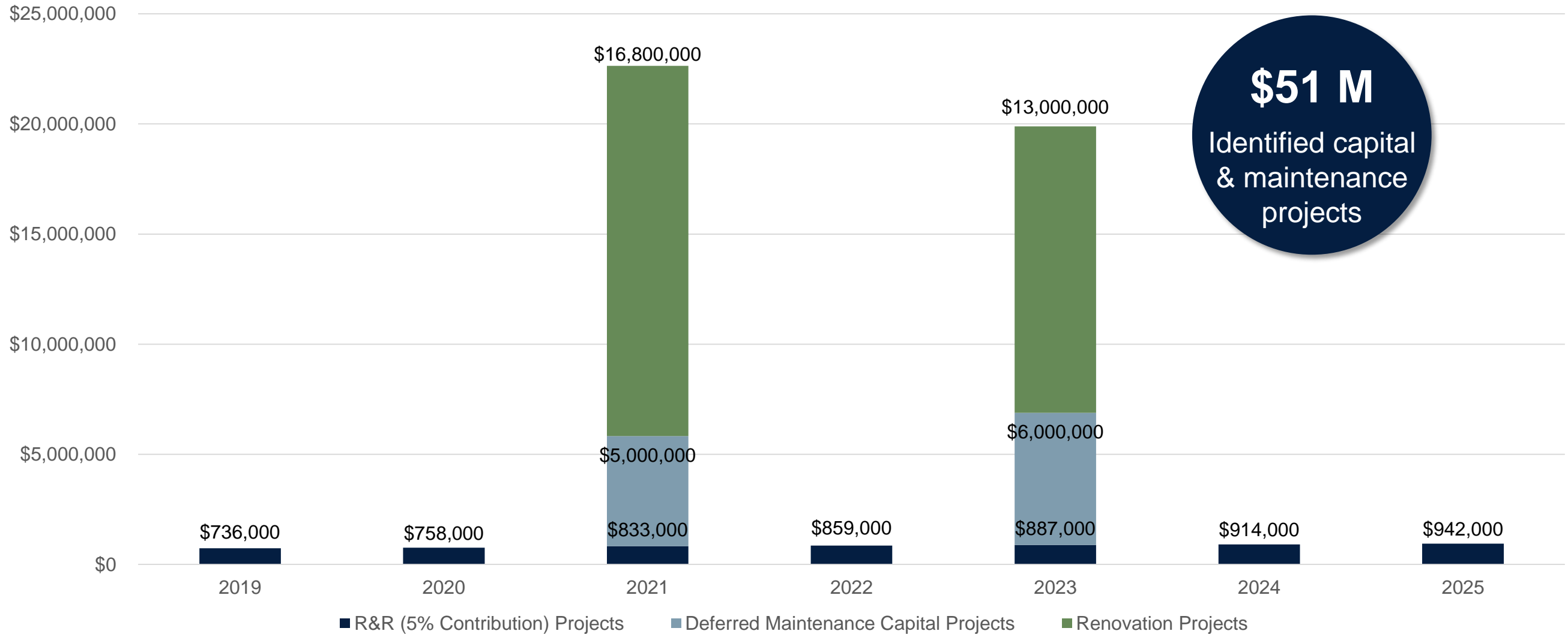
5

ETSU has the ability to continuously reinvest in its housing portfolio with its increased financial capacity.



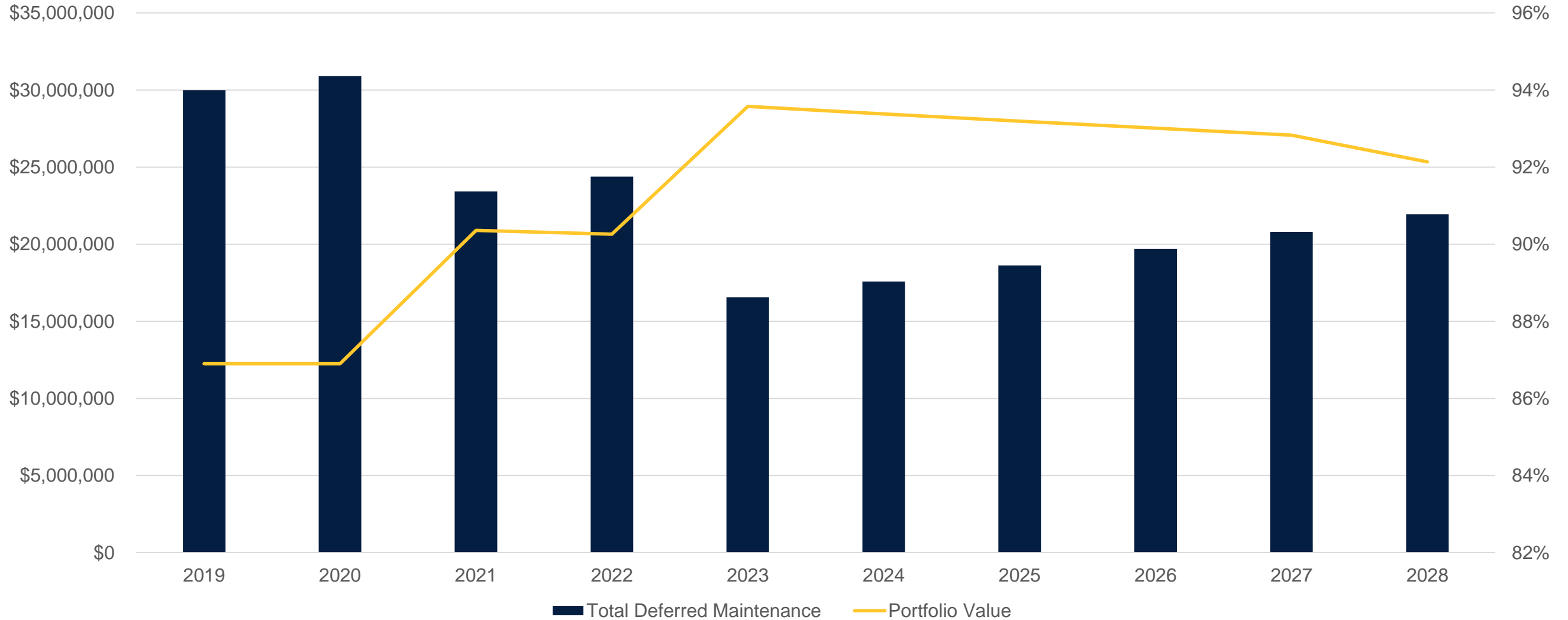
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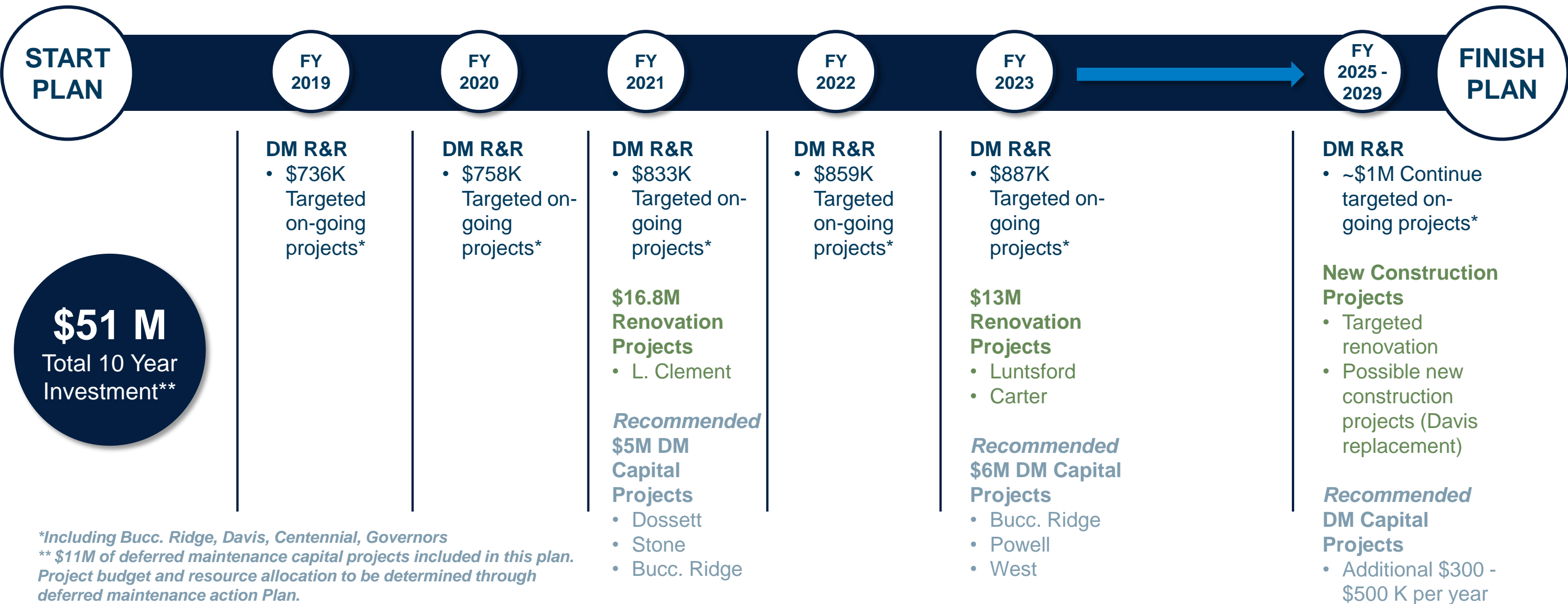
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*Including Bucc. Ridge, Davis, Centennial, Governors
 ** \$11M of deferred maintenance capital projects included in this plan.
 Project budget and resource allocation to be determined through deferred maintenance action Plan.

Case Study

OLD DOMINION UNIVERSITY

OVERVIEW:

- › B&D began advising ODU on its student housing program in 2001 with master plan updates in 2004 and 2012
- › ODU strategically sought to transform itself into a dynamic 24-7 campus
- › Execution of the student housing master plan was critical for creating a pedestrian-friendly, mixed-use campus environment

HIGHLIGHTED INITIATIVES:

- › Reinvestment in dated first year housing to align submarket needs with university program (Open in 2004)
- › Repurchased University Village, upper-division housing community, from third-party owner for improved alignment of development continuum within ODU portfolio (2006)
- › Subsequent \$51 M new housing development project focused on second year students (Two phases: 2006, 2007)
- › Additional, self-developed freshmen housing (Multiple phases: 2008 – 2009)



Next Steps

1

Develop detailed **deferred maintenance plan** in alignment with available resources

Refine budget projections and identify resources for system updates, repair and replace projects, and abatement.

2

Update market analysis to maximize value through **detailed programming, project definition and pricing strategy.**

Test project concepts, rental rates, unit and community amenities through updated survey analysis. Identify bed count, square footage, amenities, FF&E, etc.

3

Integrate activities into the **housing and dining strategy.**

Test market impact from new venues and policies in coordination with housing through a new survey.

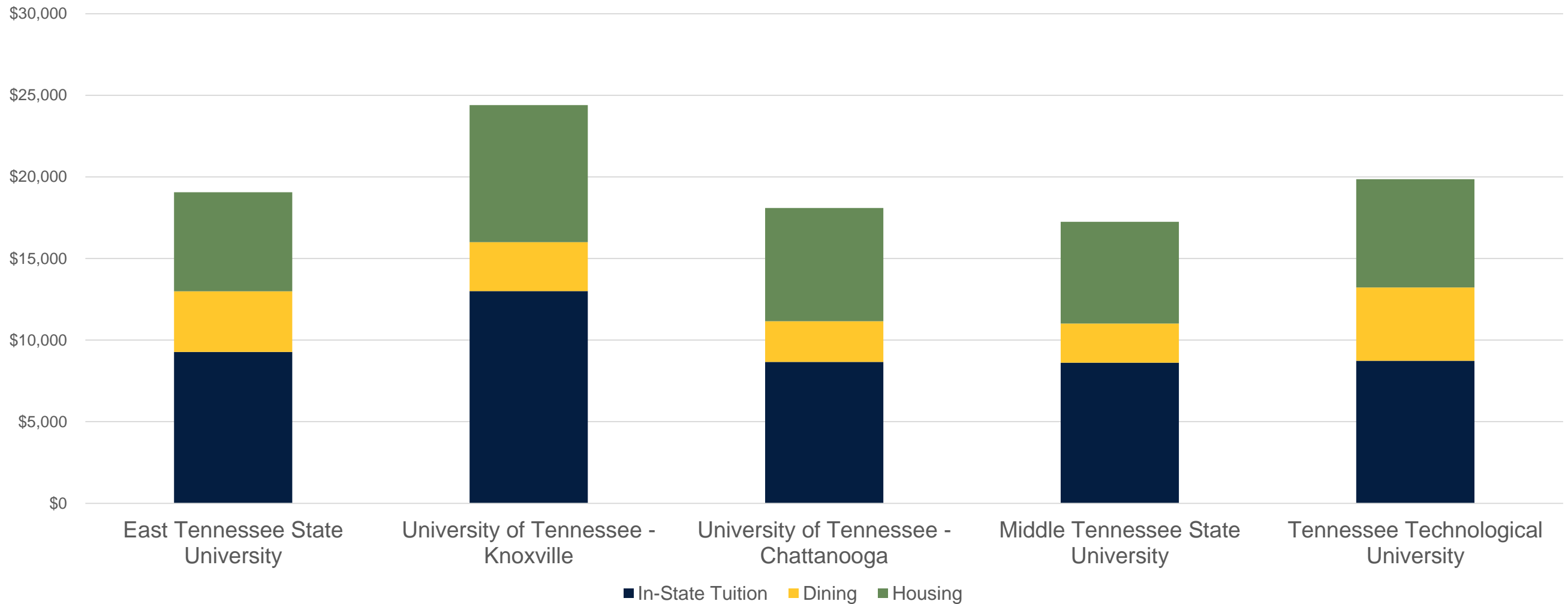
Resources



Benchmarking

COST OF ATTENDANCE AMONG PEER INSTITUTIONS

In State - Tuition + Room & Board
2018/2019 Academic Year



Benchmarking

POLICY AND PROGRAM COMPARISON

	Live on Requirement	Amenities, Programs, Initiatives	Dining Policies
East Tennessee State University	✘	LLCs	✓ *On campus students must purchase 7-day all access
University of Tennessee - Knoxville	✓ *First Year	LLCs Peer Mentor Program Ambassador Program	✓ First year students living on campus must participate in the 7-Day Access Dining Plan
University of Tennessee - Chattanooga	✓ *First Year – UTC assigns students to housing communities; 45 mile permanent address exemptions	Faculty in Residence	✓ First Year / Sophomore residents required to have meal plans. JR, SR + residential optional
Middle Tennessee State University	✘	LLCs	✓ First year requirement 5 or 7 day unlimited meal plan. JR + SR residential optional.
Tennessee Technological University	✓ *First Year; 45 mile permanent address exemptions	LLCs	✓ First Year Requirement



EAST TENNESSEE STATE UNIVERSITY

ETSU Housing Risk Profile Assessment

WORK SESSION



Agenda

- › Risk Transfer Structures Under Considerations
- › Phase 1 Project and System Scenarios
- › Financial Considerations
- › Next Steps

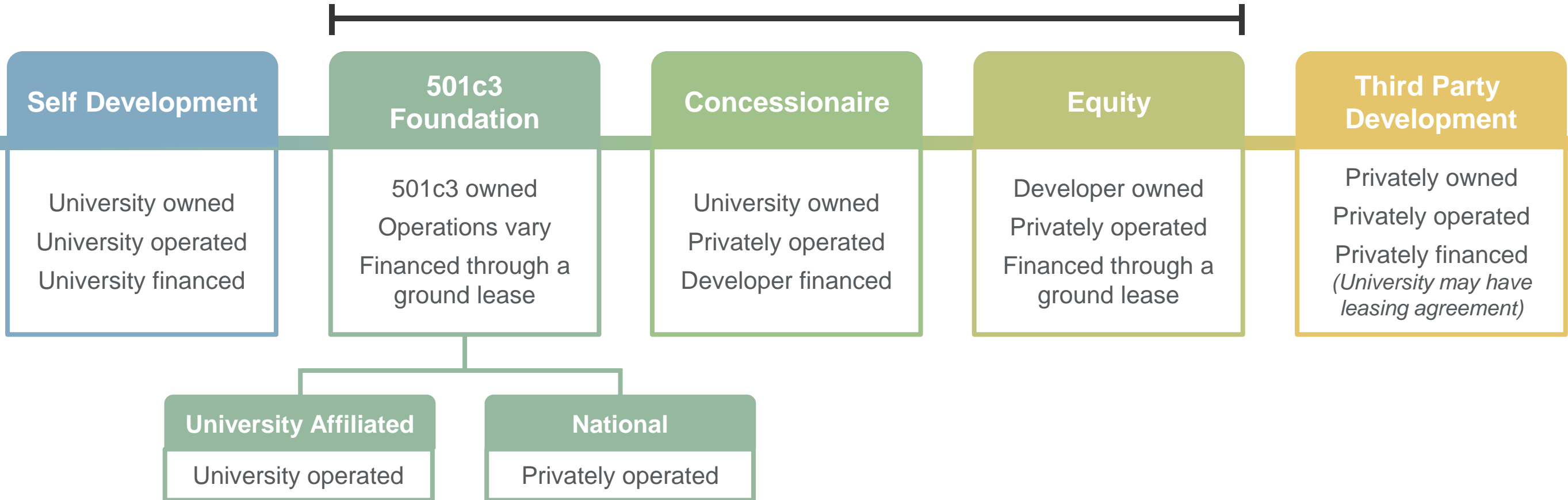
Risk Transfer Structures Under Consideration



Define Value of Risk

DEAL STRUCTURES

PUBLIC PRIVATE PARTNERSHIP DEAL STRUCTURES

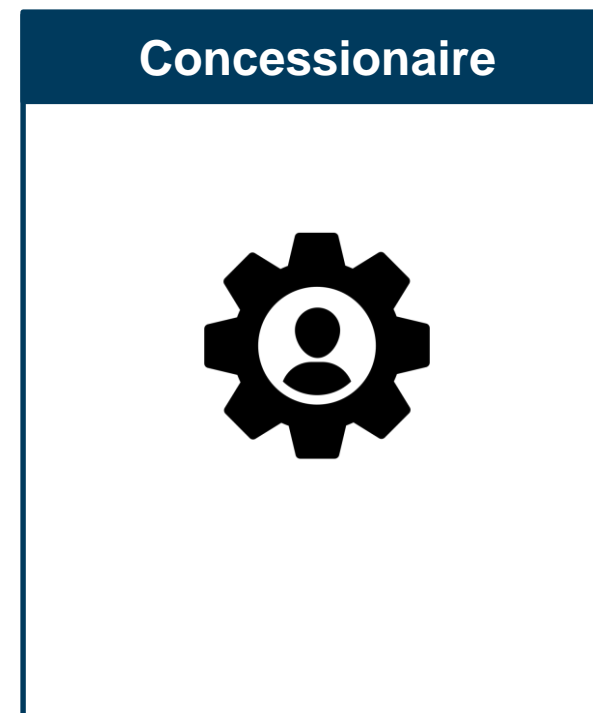
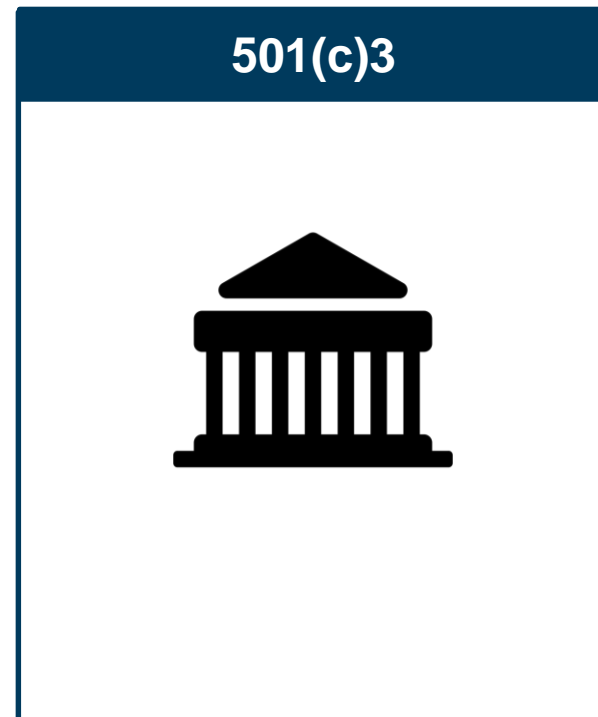
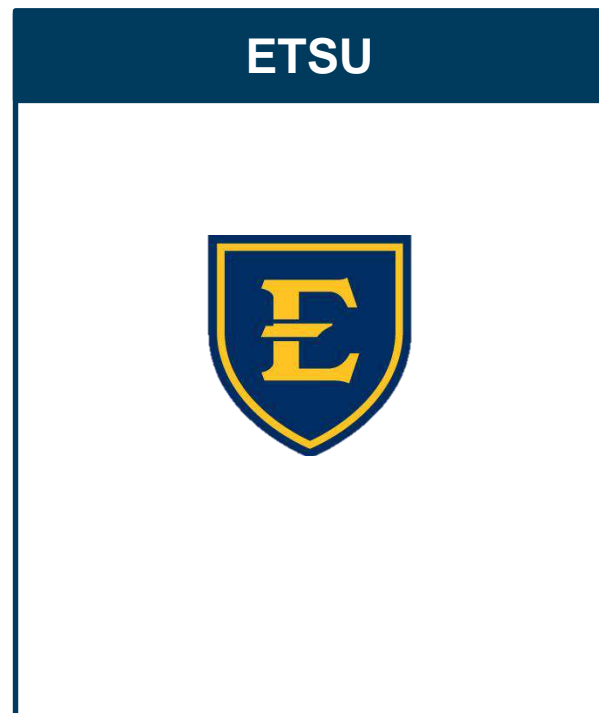


Scenarios

RISK

Scenario Category: Reviewing risk from two perspectives – Phase 1 projects and system-wide housing portfolio

Are there any existing assets within the system that ETSU would want to transfer risk in terms of the following categories:




Scenarios

RISK


Risk: Will identify risk impacted by the stated scenario. This risk can be transferred based on tolerance level.

Are there any existing assets within the system that ETSU would want to transfer risk in terms of the following categories:


ETSU



501(c)3



Concessionaire



Third Party / Equity



Scenarios

RISK


Scenario: Typical scenario within a project or a portfolio that ETSU would consider transferring risk.

Are there any existing assets within the system that ETSU would want to transfer risk in terms of the following categories:


ETSU



501(c)3



Concessionaire



Third Party / Equity



Scenarios

RISK


Are there any existing assets within the system that ETSU would want to transfer risk in terms of the following categories:

Structure Comparison: Compares party impacted by risk in the scenario under four structures.


ETSU



501(c)3



Concessionaire



Third Party / Equity



Phase 1 Project Scenarios




Phase 1 Project Scenario

OWNERSHIP


Who owns the physical assets of the phase 1 projects?

ETSU



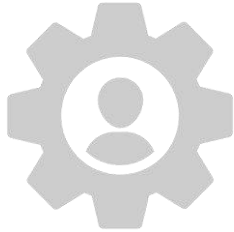
ETSU logo featuring a shield with a stylized 'E'.

501(c)3




Becomes owner and acquires financing based on stand-alone performance.

Concessionaire



Concessionaire structure not applicable for stand alone assets.

Third Party / Equity




Icon representing a handshake or agreement.

Phase 1 Project Scenario

SCHEDULE RISK


If the project is delivered later than covered by insurance and students cannot move in when planned, rental revenue is not generated. Who absorbs the debt service payment (current self-develop pro-forma projects \$2.7M annual debt service)?

ETSU



As owner responsible for debt service

501(c)3




*Debt Service Reserve Fund pays for debt service up front while **Project Cash** flow repays reserve fund instead of ETSU until replaced*

Concessionaire



Concessionaire structure not applicable for stand alone assets.

Third Party / Equity




Debt service paid by equity partner.

Phase 1 Project Scenario

BUDGET RISK


If the project is delivered \$1M over budget, who pays for the overage?

ETSU




As owner responsible for budget increases.

501(c)3




Foundation serves as funding instrument, ETSU still responsible for budget increases.

Concessionaire



Concessionaire structure not applicable for stand alone assets.

Third Party / Equity



Equity partner is responsible for budget increases. The overage becomes an additional equity infusion.

Phase 1 Project Scenario

FINANCING RISK

The project is anticipated to cost ~\$43M. Who is responsible for securing financing?

ETSU

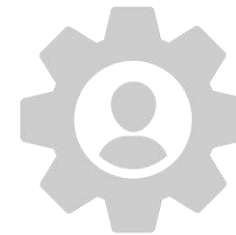


501(c)3



Becomes owner and acquires financing based on stand-alone performance.

Concessionaire



Concessionaire structure not applicable for stand alone assets.

Third Party / Equity




Becomes owner and acquires financing based on stand-alone performance.

Phase 1 Project Scenario

CREDIT IMPACT


If a positive credit impact is experienced due to the projected additional annual cash flows from the project, who will be impacted? If the project does not perform as planned and a negative credit impact is experienced, who will be impacted?

ETSU




*Positive impact
&
Negative impact*

501(c)3



*Moderately positive impact
&
Moderate negative impact*

Concessionaire



*Concessionaire structure not
applicable for stand alone
assets.*

Third Party / Equity



Negligible impact to ETSU

Phase 1 Project Scenario

DEBT CAPACITY IMPACT

The project is anticipated to cost ~\$43M. Whose debt capacity will be impacted?

ETSU



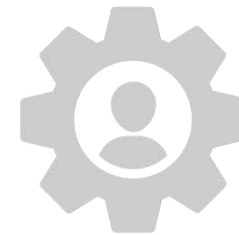
Potential for long-term positive impact to debt capacity due to additional revenue generation

501(c)3



Likely to be noted on ETSU balance sheet but limited direct impact to debt capacity; potential for long-term positive impact to debt capacity due to additional revenue generation

Concessionaire



Concessionaire structure not applicable for stand alone assets.

Third Party / Equity




Phase 1 Project Scenario

OCCUPANCY RISK

If the project has negative cash flow due to low occupancy for an extended period of time, who is responsible for occupancy to generate revenue?

ETSU



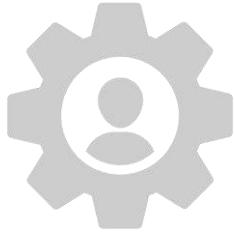
ETSU logo featuring a shield with a yellow border and a blue background, containing a yellow Greek letter epsilon (Ε).

501(c)3




Potentially would look to external market to fill beds as long as occupants meet 501(c)3 requirements.

Concessionaire



Concessionaire structure not applicable for stand alone assets.

Third Party / Equity




Potentially would look to external market to fill beds if required.

Phase 1 Project Scenario


ASSET MANAGEMENT RISK

If the project requires a \$1M investment in year 10 beyond what is available in the reserve fund, who pays for the investment?

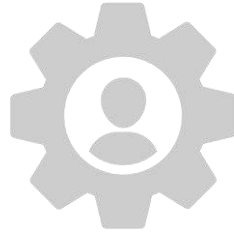
ETSU



501(c)3



Concessionaire



Concessionaire structure not applicable for stand alone assets.

Third Party / Equity




The investment would be considered an additional equity infusion.

Phase 1 Project Scenario


MAINTENANCE / CUSTODIAL RISK

If the project requires \$200k more in operating expenses than required for maintenance & custodial in the first year, who absorbs the additional \$200k?

ETSU

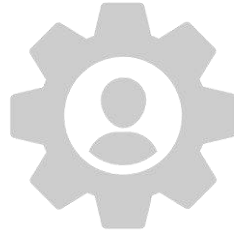


501(c)3



Through ground lease payment

Concessionaire



Concessionaire structure not applicable for stand alone assets.

Third Party / Equity



System Scenarios




System Scenarios

OWNERSHIP RISK


Who owns the physical assets within the housing system?

ETSU



ETSU owns real estate.

501(c)3



Non-profit entity owns real estate.

Concessionaire



ETSU owns real estate; ETSU procures concessionaire to operate.

Third Party / Equity




For-profit entity owns real estate.

System Scenarios

SCHEDULE RISK


For any future project within the system, if students cannot move in when planned, rental revenue is not generated. Who absorbs the debt service payment?

ETSU




As owner responsible for debt service

501(c)3




*Debt Service Reserve Fund pays for debt service up front while **Project Cash** flow repays reserve fund instead of ETSU until replaced*

Concessionaire



Third Party / Equity




Debt service paid by equity partner.

System Scenarios


DEBT CAPACITY IMPACT

The system has \$6.6 M amount of debt, who continues to hold debt?


ETSU



501(c)3



Concessionaire



Third Party / Equity




System Scenarios

CREDIT IMPACT


If a positive credit impact is experienced due to increased annual cash flows from the system, who will be impacted? If the system does not perform as planned and a negative credit impact is experienced, who will be impacted?

ETSU




*Positive impact
&
Negative impact*

501(c)3



*Moderately positive impact
&
Moderate negative impact*

Concessionaire



Third Party / Equity



Negligible impact to ETSU

System Operations Scenarios

OCCUPANCY RISK

If the system has negative cash flow due to low occupancy for an extended period of time who is responsible for occupancy to generate revenue?

ETSU

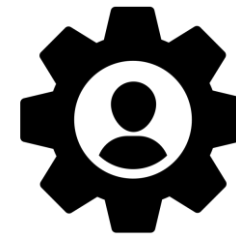


501(c)3



Potentially would look to external market to fill beds as long as occupants meet 501(c)3 requirements.

Concessionaire



Third Party / Equity



Private partner would potentially look to external market to fill beds if required.

System Operations Scenarios

ASSET MANAGEMENT

If the system requires a \$1 M investment in 2030, beyond what is available in the reserve fund, who pays for the investment?

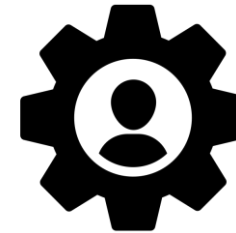
ETSU



501(c)3



Concessionaire



Third Party / Equity




Private partner would potentially look to external market to fill beds if required.

System Operations Scenarios

MAINTENANCE & CUSTODIAL


If the system requires \$200k more in operating expenses required for maintenance and custodial, who absorbs the additional \$200k?

ETSU



501(c)3

Likely




Through ground lease payment

Concessionaire



Third Party / Equity



Financial Considerations



Financing Considerations

DEVELOPMENT BUDGET IMPACT

What are the financing and ground lease terms associated with the various structures?

ETSU	
Ground Lease Term	N/A
Required DSCR	1.0
LTV Ratio	100%
Debt Term	30 yrs
Interest Rate	5%
Private Partner IRR	N/A

501(c)3	
Ground Lease Term	32 yrs
Required DSCR	1.2
LTV Ratio	100%
Debt Term	32 yrs
Interest Rate	5%
Private Partner IRR	N/A

Concessionaire	
Ground Lease Term	40 yrs
Required DSCR	1.3
LTV Ratio	100%
Debt Term	32 yrs
Interest Rate	5.35%
Private Partner IRR	N/A

Third Party / Equity	
Ground Lease Term	50 yrs
Required DSCR	N/A
LTV Ratio	50%
Debt Term	30 yrs
Interest Rate	5.5%
Private Partner IRR	10%

Financing Considerations

DEVELOPMENT BUDGET IMPACT

What are the development budget impacts of the various ownership structures?

ETSU		501(c)3		Concessionaire		Third Party / Equity	
Developer Fee	X	Developer Fee	4%	Developer Fee	5%	Developer Fee	2.5 %
Foundation Fee	X	Foundation Fee	1%	Foundation Fee	X	Foundation Fee	X
Cost of Issuance	0.5%	Cost of Issuance	2%	Cost of Issuance	1.5%	Cost of Issuance	X
Capitalized Interest	X	Capitalized Interest	1.5 yr	Capitalized Interest	1.5 yr	Capitalized Interest	X
Debt Service Reserves	X	Debt Service Reserves	1 yr	Debt Service Reserves	0 yr	Debt Service Reserves	X
Interest Rate	5 %	Interest Rate	4.75%	Interest Rate	5.35 %	Interest Rate	5.5%

Financing Considerations

ON-GOING FEE IMPACT

What are the ongoing fee impacts of the various structures?


ETSU		501(c)3		Concessionaire		Third Party / Equity	
Operator Fee	N/A	Operator Fee	3.5%	Operator Fee	3.5%	Operator Fee	3%
Foundation Fee	N/A	Foundation Fee	1.5%	Foundation Fee	N/A	Foundation Fee	0%

Financing Considerations

PROJECT CASH FLOW

Who will retain the annual project cash flow?

ETSU



501(c)3



ETSU retains through partnership structure after meeting all obligations.

Concessionaire



ETSU retains through partnership structure after meeting all obligations.

Third Party / Equity



Next Steps

- › Financing and Ownership Options
 - Risk management profile summary
 - Development of phasing and implementation strategies
- › Project Description Submission
- › Next Campus Visit
 - June 26 / 27 TBD



EAST TENNESSEE STATE
UNIVERSITY

East Tennessee State University

HOUSING MASTER PLAN

May 30, 2019



BRAILSFORD & DUNLAVEY

Housing Master Plan Overview

STRATEGY

DRIVE TO ETSU STRATEGIC PLAN

Every dollar spent in housing must attract and retain students through an elevated residential experience that is aligned with overarching campus goals.

MAXIMIZE MARKET CAPTURE

Increased market capture will build revenue capacity to enable ETSU to execute its purpose. This may be achieved through an elevated residential experience and market responsive rental rate strategy that strategically reduces select rental rates.

OPTIMIZING EXISTING ASSETS

ETSU must leverage existing assets to provide housing that aligns with the residential strategy while reducing the overall system-wide deferred maintenance needs.

Housing Master Plan Overview

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Drive to ETSU Strategic Plan

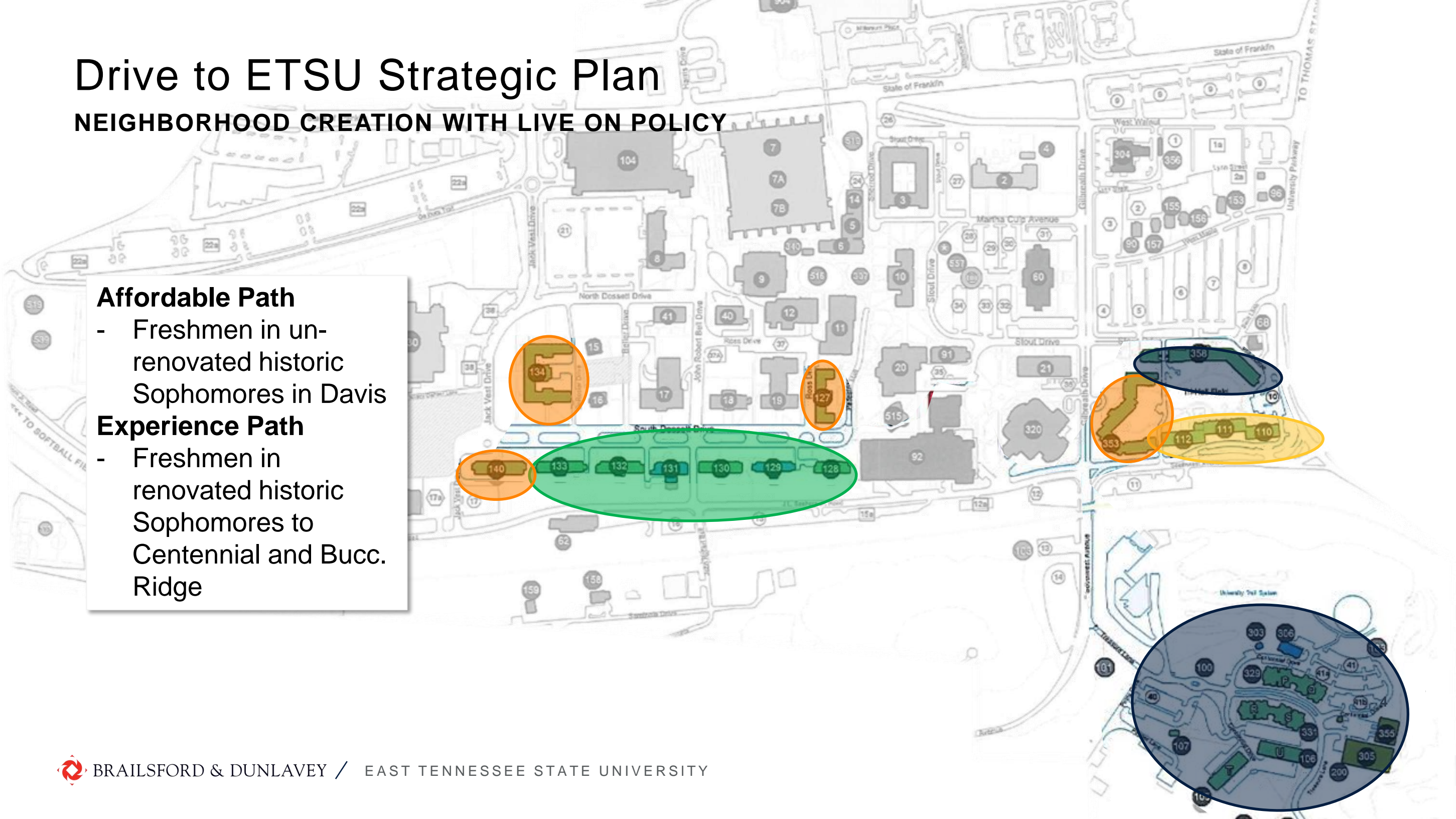
NEIGHBORHOOD CREATION WITH LIVE ON POLICY

Affordable Path

- Freshmen in un-renovated historic
- Sophomores in Davis

Experience Path

- Freshmen in renovated historic
- Sophomores to Centennial and Bucc. Ridge



Housing Master Plan Overview

STRATEGY

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Maximize Market Capture

SUPPLY & DEMAND RECONCILIATION THROUGH IMPROVED MARKET CAPTURE

	Current Condition	Targeted Condition
Non – Apartment Capacity		
Affordable	86	391
Moderate	797	0
Experience	542	1,162
Non – Apartment Demand		
Affordable	141	411
Moderate	0	0
Experience	606	1,280
Remaining Non - Apartment Demand		
Affordable	55	20
Moderate	(797)	0
Experience	64	118

	Current Condition	Targeted Condition
Apartment Capacity		
Affordable	0	260
Moderate	446	0
Experience	1,133	1,319
Apartment Demand		
Affordable	460	190
Moderate	0	0
Experience	1,697	1,333
Remaining Apartment Demand		
Affordable	460	(70)
Moderate	(446)	0
Experience	564	14

Housing Master Plan Overview

STRATEGY

DRIVE TO ETSU STRATEGIC PLAN

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OPTIMIZING EXISTING ASSETS

ETSU must leverage existing assets to provide housing that aligns with the residential strategy while reducing the overall system-wide deferred maintenance needs.

Optimize Existing Assets

SYSTEM FINANCIAL CAPACITY

- › Experience Driven Renovation projects:
 - Lucy
 - Luntsford
 - Carter
- › Affordable Driven Residence Halls with Deferred Maintenance Projects:
 - Dossett, Powell, West, Stone, and Davis
- › Anticipated Experience Driven Project Budget
 - Lucy: \$19.3M
 - Luntsford: \$6.7M
 - Carter: \$5.1M
 - Total: \$31.1M

If the experience driven renovation projects and rental rate strategy are in place by Fall 2021, the system would have a projected \$2.4M cash flow excluding new debt service. This produces \$36.8M in borrowing capacity.

Optimize Existing Assets

PHASING STRATEGY

OPTION 1

- **Phase 1:** Lucy, Luntsford, & Carter Renovation
- **Phase 2:** Deferred Maintenance

OPTION 2

- **Phase 1:** Deferred Maintenance
- **Phase 2:** Lucy, Luntsford, & Carter Renovation

OPTION 3

- **Phase 1:** Luntsford & Carter Renovation + Select Deferred Maintenance
- **Phase 2:** Lucy Renovation + Select Deferred Maintenance

OPTION 4

- **Phase 1:** Lucy Renovation + Select Deferred Maintenance
- **Phase 2:** Luntsford & Carter Renovation + Select Deferred Maintenance

Optimize Existing Assets

PHASING STRATEGY

OPTION 1

- **Phase 1:** Lucy, Luntsford, & Carter Renovation
- **Phase 2:** Deferred Maintenance



Opportunities

Create an elevated freshmen and honors experience as quickly as possible



Risks

Deferred maintenance postponed; system cannot support demand during construction year, system financials significantly challenged during construction year

Optimize Existing Assets

PHASING STRATEGY

OPTION 2

- **Phase 1:** Deferred Maintenance
- **Phase 2:** Lucy, Luntsford, & Carter Renovation



Opportunities

Address the physical challenges with the housing system faster



Risks

On-campus capture is not maximized immediately, straining the system financially and posing a risk to the implementation of the live-on policy

Optimize Existing Assets

PHASING STRATEGY

OPTION 3

- **Phase 1:** Luntsford & Carter Renovation + Select Deferred Maintenance
- **Phase 2:** Lucy Renovation + Select Deferred Maintenance



Opportunities

Create an honors experience faster



Risks

Not all deferred maintenance is addressed immediately; majority of improvements targeted for an elevated freshmen experience is delayed putting strain on live-on policy

Optimize Existing Assets

PHASING STRATEGY

OPTION 4

- **Phase 1:** Lucy Renovation + Select Deferred Maintenance
- **Phase 2:** Luntsford & Carter Renovation + Select Deferred Maintenance



Opportunities

Touch maximum number of beds to create a freshmen elevated experience as quickly as possible



Risks

Not all deferred maintenance is addressed immediately; honors experience is delayed

Optimize Existing Assets

PHASING STRATEGY

OPTION 1

- Phase 1: Lucy, Luntsford, & Carter Renovation
- Phase 2: Deferred Maintenance

OPTION 2

- Phase 1: Deferred Maintenance
- Phase 2: Lucy, Luntsford, & Carter Renovation

OPTION 3

- Phase 1: Luntsford & Carter Renovation + Select Deferred Maintenance
- Phase 2: Lucy Renovation + Select Deferred Maintenance

OPTION 4

- Phase 1: Lucy Renovation + Select Deferred Maintenance
- Phase 2: Luntsford & Carter Renovation + Select Deferred Maintenance

Optimize Existing Assets

PHASING STRATEGY

Phase 1

	FY 2019	FY 2020	FY 2021	FY 2022
Hall Status				
Dossett Hall	Offline	Offline	Online	Low R
Powell Hall	Online	Online	Online	Low R
Carter Hall	Online	Online	Online	Online
Luntsford Apts	Online	Online	Online	Online
West Hall	Online	Online	Online	Low R
Centennial Hall	Online	Online	Online	Med R
Davis Apts	Online	Online	Online	Low R
Governors Hall	Online	Online	Online	Online
Lucille Clement Hall	Online	Online	Construction	Med R
Stone Hall	Online	Online	Online	Online
Bucc. Ridge	Online	Online	Online	Online
New Apartments				
			+ \$5M deferred maintenance	
System Performance				
DSCR	1.08	1.19	1.04	1.10
CFADS	\$540,000	\$1,240,000	\$270,000	\$800,000
R&R Fund Balance				
R&R Contribution	\$750,000	\$790,000	\$750,000	\$880,000
Cumulative R&R Fund	\$750,000	\$1,540,000	\$2,290,000	\$3,170,000

Optimize Existing Assets

PHASING STRATEGY

	FY 2019	FY 2020	<i>Phase 1</i> FY 2021	FY 2022	<i>Phase 2</i> FY 2023	FY 2024	FY 2025
Hall Status							
Dossett Hall	Offline	Offline	Online	Low R	Low R	Low R	Low R
Powell Hall	Online	Online	Online	Low R	Low R	Low R	Low R
Carter Hall	Online	Online	Online	Online	Construction	Med R	Med R
Luntsford Apts	Online	Online	Online	Online	Construction	Med R	Med R
West Hall	Online	Online	Online	Low R	Low R	Low R	Low R
Centennial Hall	Online	Online	Online	Med R	Med R	Med R	Med R
Davis Apts	Online	Online	Online	Low R	Low R	Low R	Low R
Governors Hall	Online	Online	Online	Online	Online	Online	Online
Lucille Clement Hall	Online	Online	Construction	Med R	Med R	Med R	Med R
Stone Hall	Online	Online	Online	Online	Online	Online	Online
Bucc. Ridge	Online	Online	Online	Online	Online	Online	Online
New Apartments							
			+ \$5M deferred maintenance		+ \$6M deferred maintenance		
System Performance							
DSCR	1.08	1.19	1.04	1.10	1.00	1.09	1.12
CFADS	\$540,000	\$1,240,000	\$270,000	\$800,000	\$30,000	\$820,000	\$1,080,000
R&R Fund Balance							
R&R Contribution	\$750,000	\$790,000	\$750,000	\$880,000	\$820,000	\$940,000	\$970,000
Cumulative R&R Fund	\$750,000	\$1,540,000	\$2,290,000	\$3,170,000	\$3,990,000	\$4,930,000	\$5,890,000

Optimize Existing Assets

PHASING STRATEGY

	FY 2019	FY 2020	Phase 1 FY 2021	FY 2022	Phase 2 FY 2023	FY 2024	FY 2025
Hall Status							
Dossett Hall	Offline	Offline	Online	Low R	Low R	Low R	Low R
Powell Hall	Online	Online	Online	Low R	Low R	Low R	Low R
Carter Hall	Online	Online	Online	Online	Construction	Med R	Med R
Luntsford Apts	Online	Online	Online	Online	Construction	Med R	Med R
West Hall	Online	Online	Online	Low R	Low R	Low R	Low R
Centennial Hall	Online	Online	Online	Med R	Med R	Med R	Med R
Davis Apts	Online	Online	Online	Low R	Low R	Low R	Low R
Governors Hall	Online	Online	Online	Online	Online	Online	Online
Lucille Clement Hall	Online	Online	Construction	Med R	Med R	Med R	Med R
Stone Hall	Online	Online	Online	Online	Online	Online	Online
Bucc. Ridge	Online	Online	Online	Online	Online	Online	Online
New Apartments							
			+ \$5M deferred maintenance		+ \$6M deferred maintenance		
System Performance							
DSCR	1.08	1.19	1.04	1.10	1.00	1.09	1.12
CFADS	\$540,000	\$1,240,000	\$270,000	\$800,000	\$30,000	\$820,000	\$1,080,000
R&R Fund Balance							
R&R Contribution	\$750,000	\$790,000	\$750,000	\$880,000	\$820,000	\$940,000	\$970,000
Cumulative R&R Fund	\$750,000	\$1,540,000	\$2,290,000	\$3,170,000	\$3,990,000	\$4,930,000	\$5,890,000

- ❑ Drive to strategic plan
 - ✓ 806 beds elevated to a higher quality residential experience

- ❑ Maximize market capture
 - ✓ 793 beds adjusted to a lower affordable rental rate

- ❑ Optimize existing assets
 - ✓ 806 beds significantly renovated (incl. ~\$6M in deferred maintenance)
 - ✓ \$11M of deferred maintenance addressed through capital projects
 - ✓ \$4.9M contributed to R&R fund for additional deferred maintenance projects

Optimize Existing Assets

PHASING STRATEGY

	FY 2019	FY 2020	Phase 1 FY 2021	FY 2022	Phase 2 FY 2023	FY 2024	FY 2025	Future FY TBD
Hall Status								
Dossett Hall	Offline	Offline	Online	Low R	Low R	Low R	Low R	Low R
Powell Hall	Online	Online	Online	Low R	Low R	Low R	Low R	Low R
Carter Hall	Online	Online	Online	Online	Construction	Med R	Med R	Med R
Luntsford Apts	Online	Online	Online	Online	Construction	Med R	Med R	Med R
West Hall	Online	Online	Online	Low R	Low R	Low R	Low R	Low R
Centennial Hall	Online	Online	Online	Med R	Med R	Med R	Med R	Med R
Davis Apts	Online	Online	Online	Low R	Low R	Low R	Low R	Demo
Governors Hall	Online	Online	Online	Online	Online	Online	Online	Online
Lucille Clement Hall	Online	Online	Construction	Med R	Med R	Med R	Med R	Med R
Stone Hall	Online	Online	Online	Online	Online	Online	Online	Online
Bucc. Ridge	Online	Online	Online	Online	Online	Online	Online	Online
New Apartments								New
			+ \$5M deferred maintenance		+ \$6M deferred maintenance			
System Performance								
DSCR	1.08	1.19	1.04	1.10	1.00	1.09	1.12	
CFADS	\$540,000	\$1,240,000	\$270,000	\$800,000	\$30,000	\$820,000	\$1,080,000	
R&R Fund Balance								
R&R Contribution	\$750,000	\$790,000	\$750,000	\$880,000	\$820,000	\$940,000	\$970,000	
Cumulative R&R Fund	\$750,000	\$1,540,000	\$2,290,000	\$3,170,000	\$3,990,000	\$4,930,000	\$5,890,000	

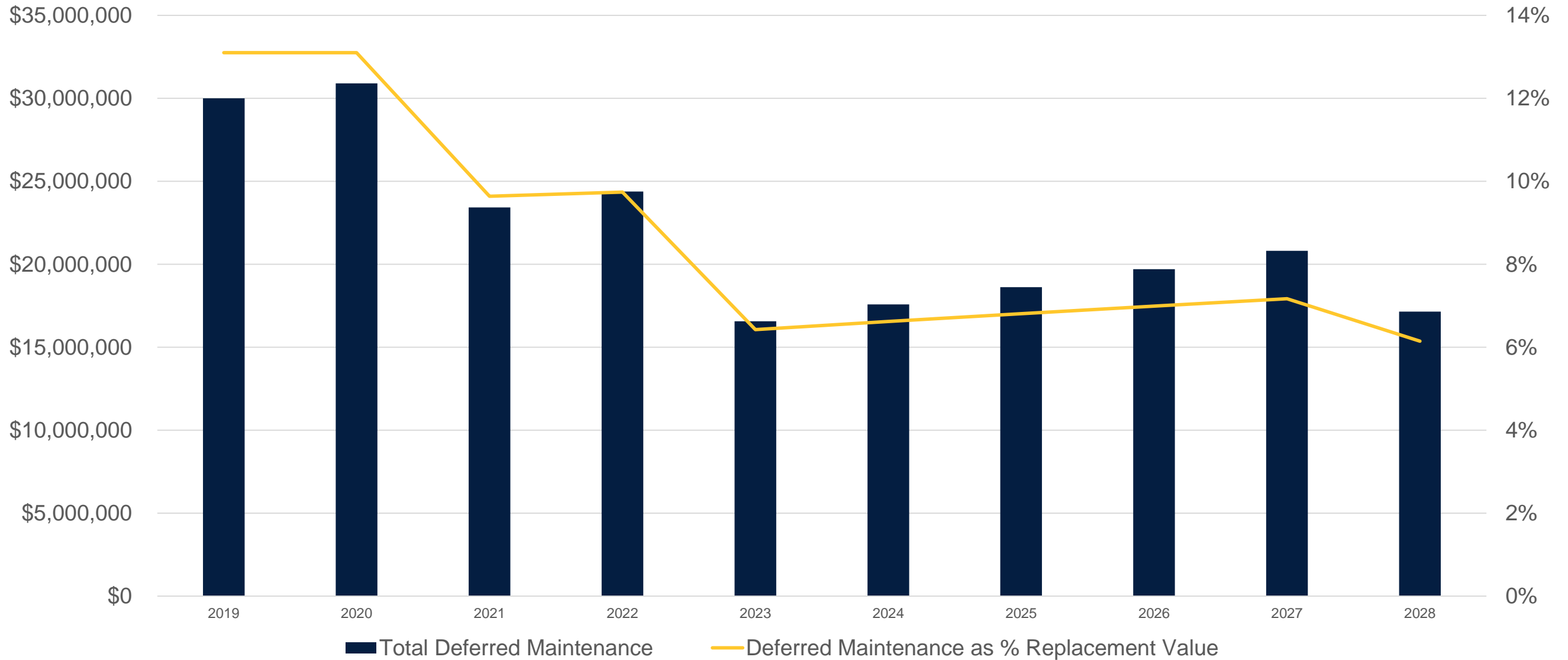
- ☐ Drive to strategic plan
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 - ✓ 793 beds adjusted to a lower affordable rental rate

- ☐ Optimize existing assets
 - ✓ 806 beds significantly renovated (incl. ~\$6M in deferred maintenance)
 - ✓ \$11M of deferred maintenance addressed through capital projects
 - ✓ \$4.9M contributed to R&R fund for additional deferred maintenance projects

Optimize Existing Assets

DEFERRED MAINTENANCE



Lucy Renovation Project

- › **Target market:** Experience driven / Policy capture
- › **Capacity:** 474 Traditional units
- › **Timeline:** Open Fall 2021
- › **Scope:** Abatement, modernized entries, updated and additional community space on each floor, updated finishes, electrical upgrades
- › **Budget:**
 - Hard Costs:
 - Finishes: \$50/GSF
 - Electrical: \$35/GSF
 - Abatement: \$40/GSF
 - Reconfiguration: \$10/GSF
 - Total Hard Costs: \$135/GSF
 - Total Project Budget: \$18.2M (assuming 85 / 15 hard to soft ratio) in current dollars
 - Total Project Budget at Project Year: \$19.3M (assuming 3% annual escalation)
- › **Financing Assumptions**
 - **Rate:** 5%
 - **Term:** 30 Years
 - **Annual Debt Obligation:** \$1.26 M

Luntsford Renovation Project

- › **Target market:** Experience driven / Policy capture
- › **Capacity:** 186 double efficiency apartments
- › **Timeline:** Open Fall 2024
- › **Scope:** Modernized entry, updated and additional community space on each floor, updated finishes, plumbing upgrades, consider closet and kitchenette reconfiguration
- › **Budget:**
 - Hard Costs:
 - Finishes: \$40/GSF
 - Electrical: \$30/GSF
 - Plumbing: \$20/GSF
 - Reconfiguration: \$15/GSF
 - Total Hard Costs: \$105/GSF
 - Total Project Budget: \$6.3M (assuming 85 / 15 hard to soft ratio) in current dollars
 - Total Project Budget at Project Year: \$7.1M (assuming 3% annual escalation)
- › **Financing Assumptions**
 - **Rate:** 5%
 - **Term:** 30 Years
 - **Annual Debt Obligation:** \$460k

Carter Renovation Project

- › **Target market:** Experience driven / Honors Experience
- › **Capacity:**
- › **Timeline:** Open Fall 2024
- › **Scope:** Modernized Entry with outdoor patio space, updated and additional community space on each floor, select abatement, select plumbing improvements, select electrical improvements, FF&E, technology upgrades.
- › **Budget:**
 - Hard Costs:
 - Finishes: \$10/GSF
 - Abatement: \$30/GSF
 - Plumbing: \$20/GSF
 - Electrical: \$15/GSF
 - Reconfiguration & Outdoor Improvements: \$15/GSF
 - FF&E: \$25/GSF
 - Total Hard Costs: \$115/GSF
 - Total Project Budget: \$5.1M (assuming 85 / 15 hard to soft ratio) in current dollars
 - Total Project Budget at Project Year: \$5.8M (assuming 3% annual escalation)
- › **Financing Assumptions**
 - **Rate:** 5%
 - **Term:** 30 Years
 - **Annual Debt Obligation:** \$375k

Addressing Deferred Maintenance Projects

FUNDING AND PHASING

	Phase 1	Phase 2	R&R Fund / Cash Flow	R&R As Needed Eventual Demo
Lucille Clement	✓			
Dossett	✓			
Stone	✓			
Carter		✓		
Luntsford		✓		
Powell		✓		
West		✓		
Centennial			✓	
Governors			✓	
Bucc Ridge	✓	✓	✓	
Davis				✓

Housing Master Plan Overview

STRATEGY

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OPTIMIZING EXISTING ASSETS

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Optimize Existing Assets

PHASING STRATEGY

	FY 2019	FY 2020	Phase 1 FY 2021	FY 2022	Phase 2 FY 2023	FY 2024	FY 2025	Future FY TBD
Hall Status								
Dossett Hall	Offline	Offline	Online	Low R	Low R	Low R	Low R	Low R
Powell Hall	Online	Online	Online	Low R	Low R	Low R	Low R	Low R
Carter Hall	Online	Online	Online	Online	Construction	Med R	Med R	Med R
Luntsford Apts	Online	Online	Online	Online	Construction	Med R	Med R	Med R
West Hall	Online	Online	Online	Low R	Low R	Low R	Low R	Low R
Centennial Hall	Online	Online	Online	Med R	Med R	Med R	Med R	Med R
Davis Apts	Online	Online	Online	Low R	Low R	Low R	Low R	Demo
Governors Hall	Online	Online	Online	Online	Online	Online	Online	Online
Lucille Clement Hall	Online	Online	Construction	Med R	Med R	Med R	Med R	Med R
Stone Hall	Online	Online	Online	Online	Online	Online	Online	Online
Bucc. Ridge	Online	Online	Online	Online	Online	Online	Online	Online
New Apartments								New
			+ \$5M deferred maintenance		+ \$6M deferred maintenance			
System Performance								
DSCR	1.08	1.19	1.04	1.10	1.00	1.09	1.12	
CFADS	\$540,000	\$1,240,000	\$270,000	\$800,000	\$30,000	\$820,000	\$1,080,000	
R&R Fund Balance								
R&R Contribution	\$750,000	\$790,000	\$750,000	\$880,000	\$820,000	\$940,000	\$970,000	
Cumulative R&R Fund	\$750,000	\$1,540,000	\$2,290,000	\$3,170,000	\$3,990,000	\$4,930,000	\$5,890,000	

- ❑ Drive to strategic plan
 - ✓ 806 beds elevated to a higher quality residential experience
- ❑ Maximize market capture
 - ✓ 793 beds adjusted to a lower affordable rental rate
- ❑ Optimize existing assets
 - ✓ 806 beds significantly renovated (incl. ~\$6M in deferred maintenance)
 - ✓ \$11M of deferred maintenance addressed through capital projects
 - ✓ \$4.9M contributed to R&R fund for additional deferred maintenance projects

Agenda

STANDARD BULLETS

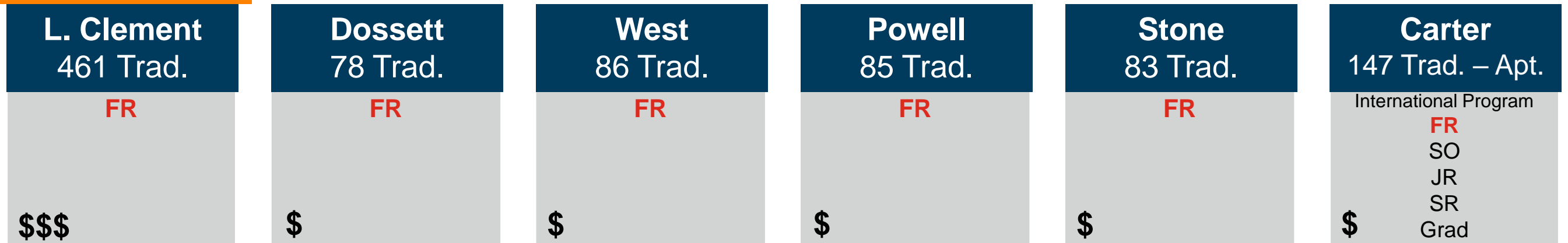
- › Refined concepts
 - Supply and demand
 - Phase 1 projects
 - Rental Rate Strategy
- › Benchmarking – peers / strategy
- › Next Steps

Concept Strategy

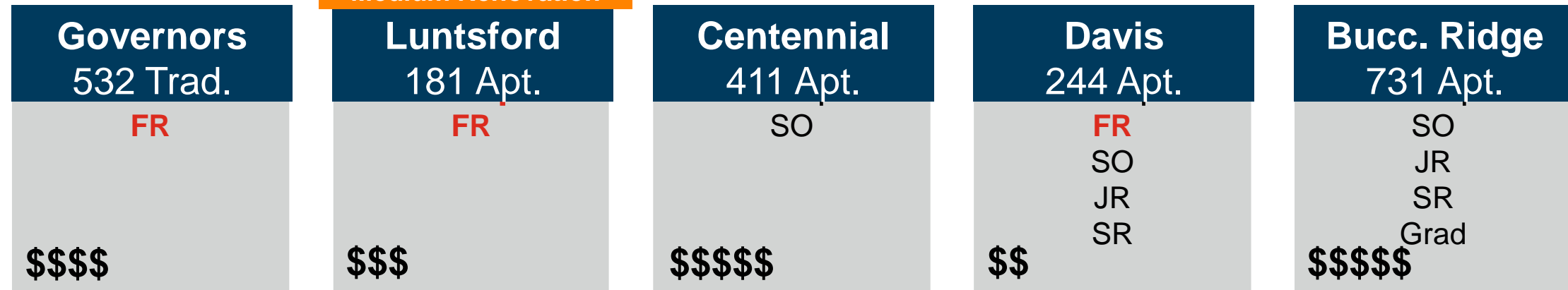
PHASE 1 RENOVATION

Intentional medium renovations in targeted historic residence halls to drive an elevated experience and capture additional students.

Medium Renovation



Medium Renovation



Concept Summary

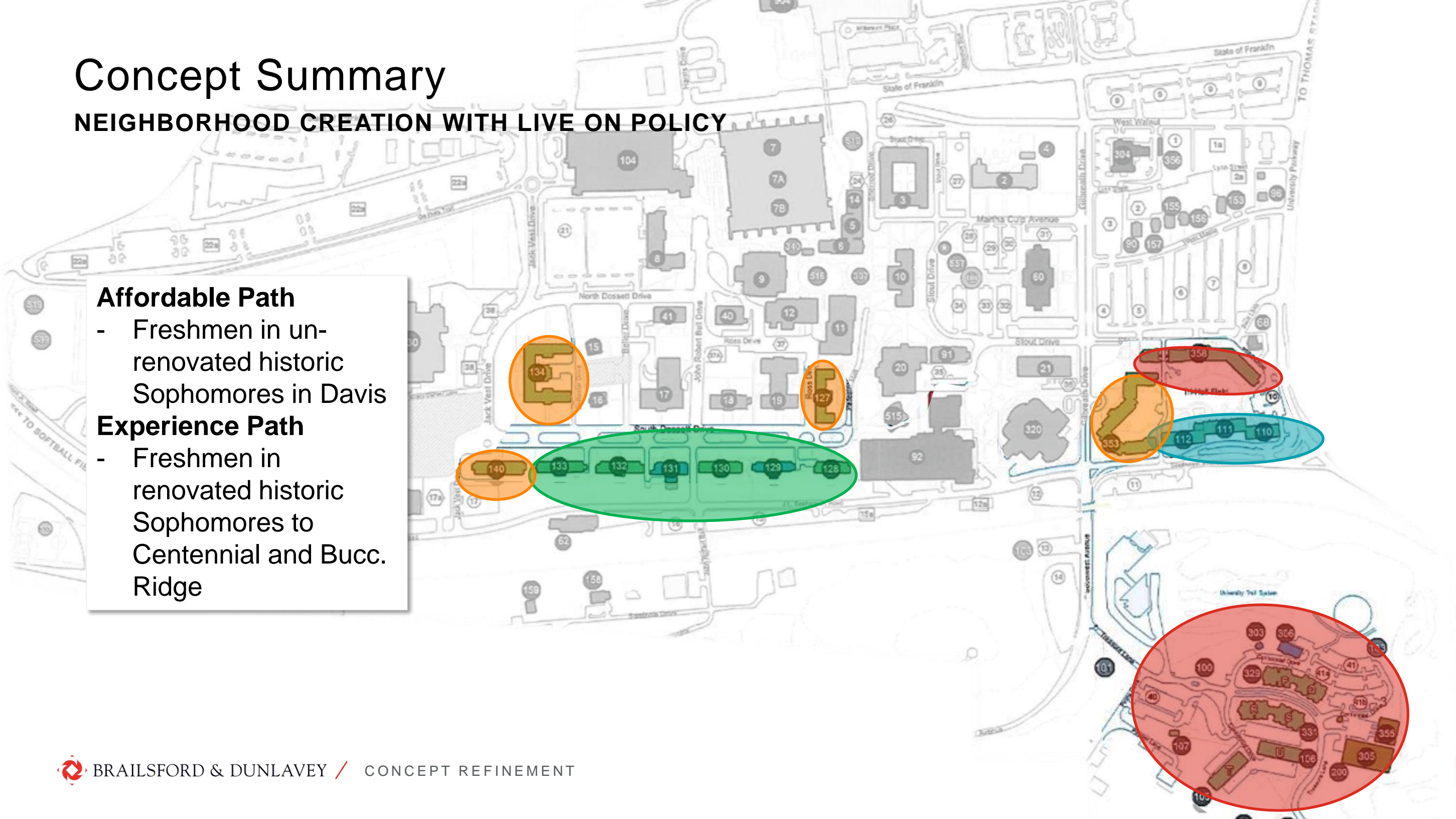
NEIGHBORHOOD CREATION WITH LIVE ON POLICY

Affordable Path

- Freshmen in un-renovated historic
- Sophomores in Davis

Experience Path

- Freshmen in renovated historic
- Sophomores to Centennial and Bucc. Ridge



Concept Summary

INITIAL PHASING OVERVIEW

	FY 2019	FY 2020	<i>Phase 1</i> FY 2021	FY 2022	FY 2023	FY 2024	<i>Phase 2</i> FY 2025
Hall Status							
Dossett Hall	Offline	Offline	Lower Rate	Lower Rate	Lower Rate	Lower Rate	Lower Rate
Powell Hall	Online	Online	Lower Rate	Lower Rate	Lower Rate	Lower Rate	Lower Rate
Carter Hall	Online	Online	Lower Rate	Lower Rate	Lower Rate	Lower Rate	Med. Reno
Luntsford Apts	Online	Online	Med. Reno	Med. Reno	Med. Reno	Med. Reno	Med. Reno
West Hall	Online	Online	Lower Rate	Lower Rate	Lower Rate	Lower Rate	Lower Rate
Centennial Hall	Online	Online	Increased Rate	Increased Rate	Increased Rate	Increased Rate	Increased Rate
Davis Apts	Online	Online	Lower Rate	Lower Rate	Lower Rate	Lower Rate	Lower Rate
Governors Hall	Online	Online	Online	Online	Online	Online	Online
Lucille Clement Hall	Online	Online	Med. Reno	Med. Reno	Med. Reno	Med. Reno	Med. Reno
Stone Hall	Online	Online	Online	Online	Online	Online	Online
Bucc. Ridge	Online	Online	Online	Online	Online	Online	Online

Concept Summary

NON APARTMENT

	FY 2019	FY 2020	<i>Phase 1</i> FY 2021	FY 2022	FY 2023	FY 2024	<i>Phase 2</i> FY 2025
<i>Non – Apartment Capacity</i>							
Affordable	86	86	391	391	391	391	391
Moderate	797	797	146	146	146	0	0
Experience	542	542	1,016	1,016	1,016	1,162	1,162
<i>Non – Apartment Demand</i>							
Affordable	141	141	414	414	414	414	141
Moderate	0	0	0	0	0	0	0
Experience	555	555	1,196	1,196	1,196	1,196	555
<i>Remaining Non-Apartment Demand</i>							
Affordable	55	55	23	23	23	23	23
Moderate	-797	-797	-146	-146	-146	0	0
Experience	13	13	180	180	180	34	34

Concept Summary

APARTMENT

	FY 2019	FY 2020	<i>Phase 1</i> FY 2021	FY 2022	FY 2023	FY 2024	<i>Phase 2</i> FY 2025
<i>Apartment Capacity</i>							
Affordable	0	0	260	260	260	260	260
Moderate	446	446	0	0	0	0	0
Experience	1,133	1,133	1,319	1,319	1,319	1,319	1,319
<i>Apartment Demand</i>							
Affordable	460	460	323	323	323	323	323
Moderate	0	0	0	0	0	0	0
Experience	1,697	1,697	1,493	1,493	1,493	1,493	1,493
<i>Remaining Apartment Demand</i>							
Affordable	460	460	63	63	63	63	63
Moderate	-446	-446	0	0	0	0	0
Experience	564	564	174	174	174	174	174

Concept Summary

RENTAL RATE STRATEGY

		Current		Proposed		Change
		Semester	Per Month	Semester	Per Month	
Non – Apartment	Dossett Hall	\$0	\$0	\$1,804	\$401	N/A
	Powell Hall	\$2,011	\$447	\$1,805	\$401	-10%
	Carter Hall	\$2,280	\$507	\$2,126	\$472	-7%
	West Hall	\$2,043	\$454	\$1,818	\$404	-11%
	Stone Hall	\$1,982	\$440	\$1,982	\$440	0%
	Lucille Clement Hall	\$1,868	\$415	\$2,043	\$454	9%
	Governors Hall	\$2,622	\$583	\$2,622	\$583	0%
Apartment	Davis Apts	\$2,205	\$490	\$2,190	\$487	-1%
	Luntsford Apts	\$2,272	\$505	\$2,550	\$567	12%
	Centennial Hall	\$2,978	\$662	\$3,132	\$696	5%
	Bucc Ridge	\$3,217	\$715	\$3,217	\$715	0%

Rate averages calculated as weighted average of rates offered per hall

Lucille Clement

- › **Target market:** Experience driven / Policy capture
- › **Capacity:** 474 Traditional units
- › **Scope / estimated budget**
 - **Start:** 2021
 - **Description:** Abatement, modernized entries, updated and additional community space on each floor, updated finishes
 - **Total Project Cost per SF:** \$213
 - **Estimated Project Cost:** \$26 M
- › **Financing Assumptions**
 - **Rate:** 5%
 - **Term:** 30 Years
 - **Annual Debt Obligation:** \$1.7 M
- › **Rental rate (Semester)**
 - **Current:** Single occupancy \$2,932; Double occupancy \$1,955
 - **Proposed:** Single occupancy \$2,932; Double occupancy \$2,025

Luntsford Apartment

- › **Target market:** Experience driven / Policy capture
- › **Capacity:** 186 Double efficiency apartments
- › **Scope / estimated budget**
 - **Start:** 2021
 - **Description:** Plumbing, finishes, modernized entry, updated and additional community spaces
 - **Total Project Cost per SF:** \$153
 - **Estimated Project Cost:** \$8.2 M
- › **Financing Assumptions**
 - **Rate:** 5%
 - **Term:** 30 Years
 - **Annual Debt Obligation:** \$537,000
- › **Rental rate (Semester)**
 - **Current:** Double occupancy \$2,260
 - **Proposed:** Double occupancy \$2,525

Concept Summary

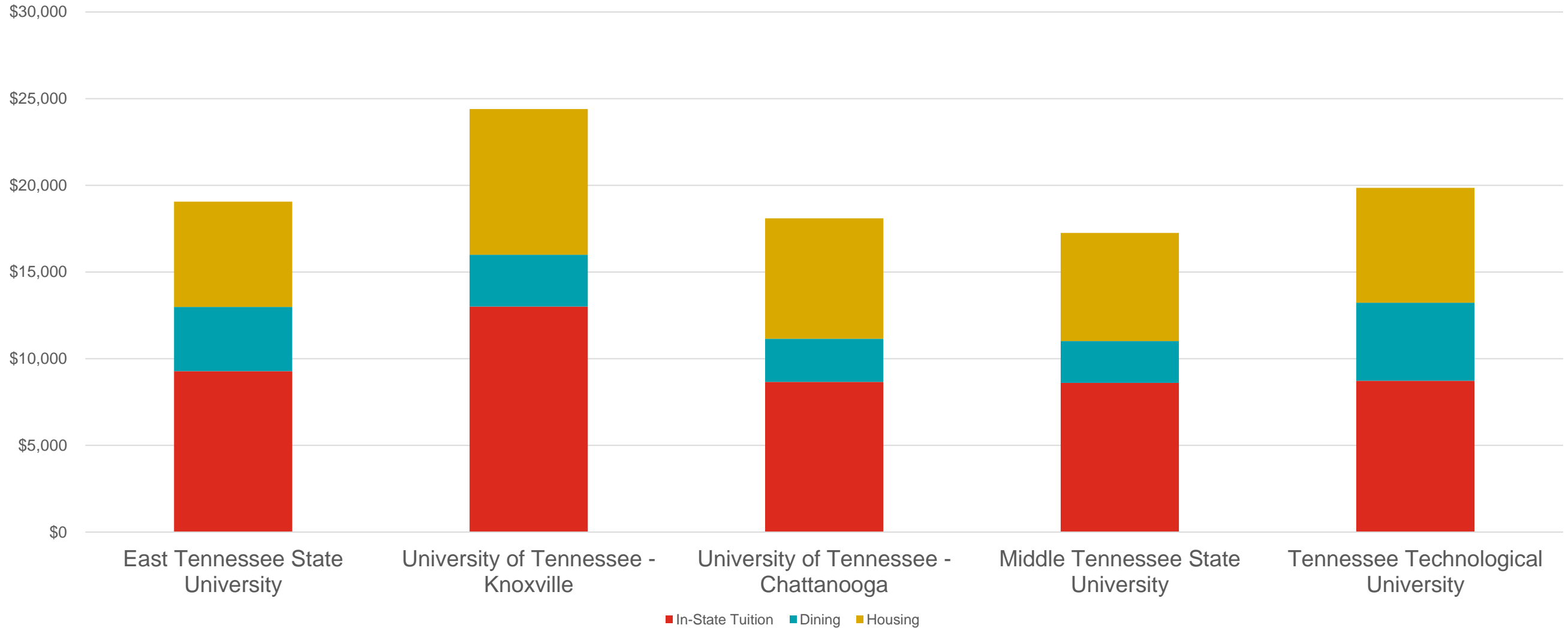
SYSTEM OVERVIEW

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Hall Status							
Dossett Hall	Offline	Offline	Lower Rate	Lower Rate	Lower Rate	Lower Rate	Lower Rate
Powell Hall	Online	Online	Lower Rate	Lower Rate	Lower Rate	Lower Rate	Lower Rate
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Lucille Clement Hall	Online	Online	Med. Reno	Med. Reno	Med. Reno	Med. Reno	Med. Reno
Stone Hall	Online	Online	Online	Online	Online	Online	Online
Bucc. Ridge	Online	Online	Online	Online	Online	Online	Online
System Performance							
Debt Service Coverage Ratio	1.08	1.19	1.33	1.03	1.13	1.17	1.20
CFADS / Fund Contribution	\$537,827	\$1,260,338	\$2,222,890	\$249,890	\$1,086,162	\$1,417,520	\$1,671,432

Benchmarking

COST OF ATTENDANCE AMONG PEER INSTITUTIONS

In State - Tuition + Room & Board per Year



Benchmarking

POLICY AND PROGRAM COMPARISON

	Live on Requirement	Amenities, Programs, Initiatives	Dining Policies
East Tennessee State University	✘	LLCs	✓ *On campus students must purchase 7-day all access
University of Tennessee - Knoxville	✓ *First Year	LLCs Peer Mentor Program Ambassador Program	✓ First year students living on campus must participate in the 7-Day Access Dining Plan
University of Tennessee - Chattanooga	✓ *First Year – UTC assigns students to housing communities; 45 mile permanent address exemptions	Faculty in Residence	✓ First Year / Sophomore residents required to have meal plans. JR, SR + residential optional
Middle Tennessee State University	✘	LLCs	✓ First year requirement 5 or 7 day unlimited meal plan. JR + SR residential optional.
Tennessee Technological University	✓ *First Year; 45 mile permanent address exemptions	LLCs	✓ First Year Requirement

Next Steps

- › Risk Profile Assessment – Proposed May 16 Meeting
- › Project Request Form Submission
- › Phase 1 Capital Project Reconciliation with Engineer's Assessment
- › Development Implementation Plan / Detailed Phasing Strategy
- › Visit #3

**Additional Considerations*

- *Deferred maintenance plan*
- *Integrated Housing and Dining Market Survey*



EAST TENNESSEE STATE
UNIVERSITY

ETSU Housing Master Plan

INITIAL CONCEPTS



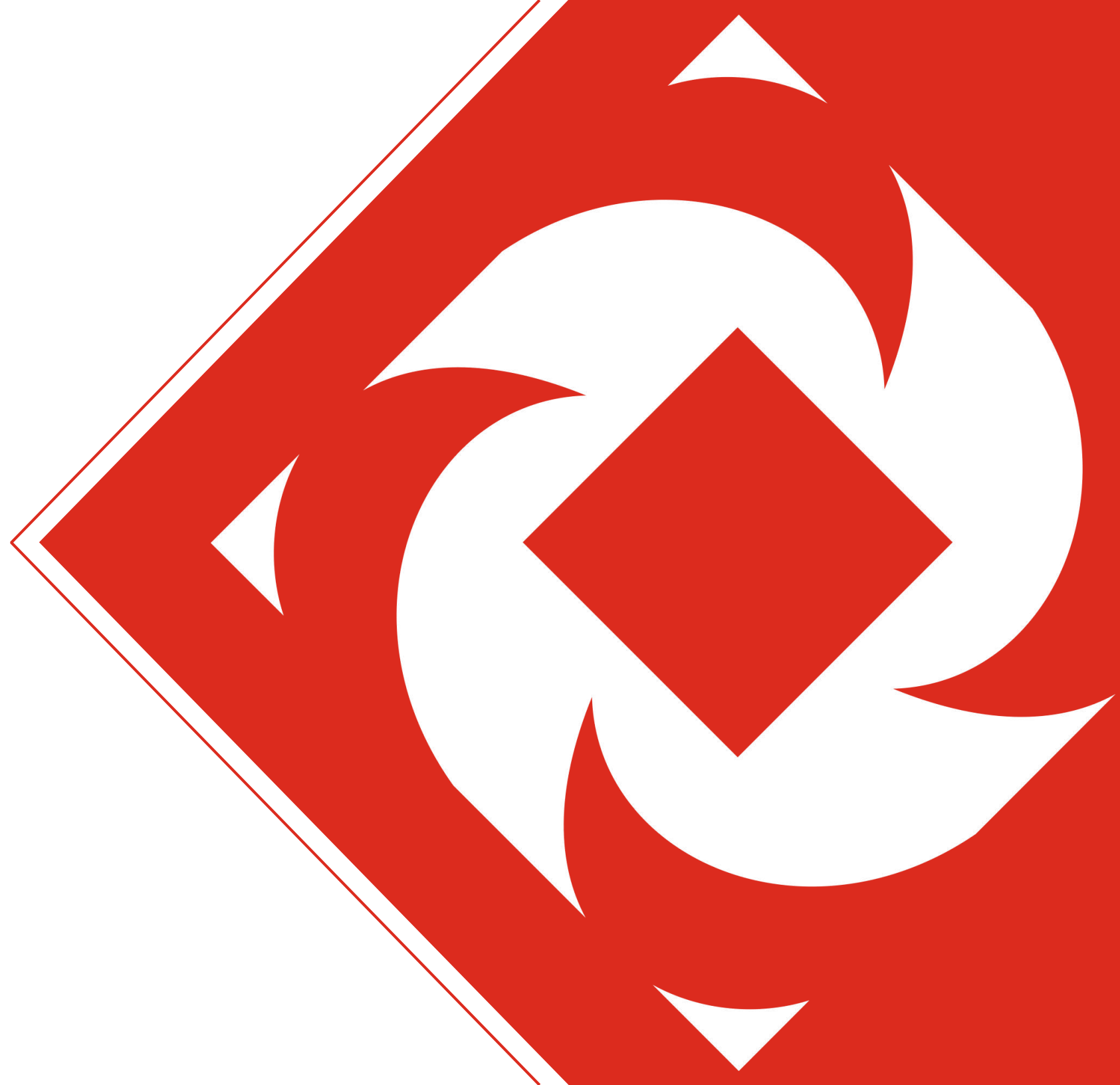
BRAILSFORD & DUNLAVEY

Agenda

- › Target Market Overview
 - Sub-demographic groups
 - Demand
 - Conditions to capture
 - Placement strategy
- › Current Facility Strategy
 - Financial performance
 - Physical program (occupancy, rental rates, etc.)
- › Master Plan Concept Options

Target Market

OVERVIEW



Target Market Recap

EXPAND MARKET CAPTURE

To maximize capacity we evaluated major sub-demographic groups currently comprising ETSU population to determine housing preferences and needs.

Local Students
Immediate county radius
Sullivan, Carter, Unicoi,
Hawkins, Greene,
Washington counties

Tennessee Students
In-state students outside
of immediate county
radius

Out of State Students
Non-Tennessee
addresses

Target Market Recap

EXPAND CAPTURE – LOCAL

	Current Capture	Current Occupancy	Potential Capture	Potential Occupancy	Affordability Capture	Affordability Occupancy
First year	21%	221	22%	224	27%	277
Sophomore	13%	114	13%	114	17%	142
Junior	8%	87	8%	87	9%	95
Senior	4%	51	4%	51	6%	84
Graduate / Other	1%	5	1%	5	1%	3
Total	10%	478	10%	481	13%	600

Anticipated Conditions to Satisfy

- Rental Rate \$400 / Month

Target Market Recap

EXPAND CAPTURE – LOCAL

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Graduate / Other	1%	5	1%	5	1%	3
Total	10%	478	10%	481	13%	600

Anticipated Conditions to Satisfy

- Rental Rate \$400 / Month

Placement Strategy

Freshmen → Un-renovated historic
 Sophomores + → Davis

Target Market Recap

EXPAND CAPTURE – OTHER TENNESSEE

	Current Capture	Current Occupancy	Potential Capture	Potential Occupancy	Live-On Requirement Capture	Live-On Requirement Occupancy
First year	73%	718	73%	718	84%	827
Sophomore	42%	304	50%	362	50%	362
Junior	27%	233	47%	408	47%	408
Senior	20%	192	22%	216	22%	216
Graduate / Other	4%	13	17%	51	17%	51
Total	38%	1,460	46%	1,754	49%	1,864

Anticipated Conditions to Capture

- High programming
- Amenities focused on community development
- Neighborhood creation through targeted associations

Anticipated Conditions to Satisfy

- Rental Rate \$450 - \$500 / Month

Target Market Recap

EXPAND CAPTURE – OTHER TENNESSEE

	Current Capture	Current Occupancy	Potential Capture	Potential Occupancy	Live-On Requirement Capture	Live-On Requirement Occupancy
First year	73%	718	73%	718	84%	827
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Placement Strategy

Freshmen → Un-renovated historic
Sophomores + → Davis

Placement Strategy

Freshmen → Renovated historic
Sophomores + → Centennial and Bucc. Ridge

Target Market Recap

EXPAND CAPTURE – OUT OF STATE

	Current Capture	Current Occupancy	Potential Capture	Potential Occupancy	Live-On Requirement Capture	Live-On Requirement Occupancy
First year	70%	317	96%	433	100%	453
Sophomore	37%	97	29%	75	29%	75
Junior	25%	85	19%	63	19%	63
Senior	19%	93	19%	92	19%	92
Graduate / Other	7%	22	15%	46	15%	46
Total	33%	614	38%	709	39%	729

Anticipated Conditions to Capture

- High programming
- Amenities focused on community development
- Neighborhood creation through targeted associations

Anticipated Conditions to Satisfy

- Rental Rate \$450 - \$500 / Month

Target Market Recap

EXPAND CAPTURE – OUT OF STATE

	Current Capture	Current Occupancy	Potential Capture	Potential Occupancy	Live-On Requirement Capture	Live-On Requirement Occupancy
First year	70%	317	96%	433	100%	453
Sophomore	37%	97	29%	75	29%	75
Junior	25%	85	19%	63	19%	63
Senior	19%	93	19%	92	19%	92
Graduate / Other	7%	22	15%	46	15%	46
Total	33%	614	38%	709	39%	729

Anticipated Conditions to Capture

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Anticipated Conditions to Satisfy

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Placement Strategy

Freshmen → Un-renovated historic
Sophomores + → Davis

Placement Strategy

Freshmen → Renovated historic
Sophomores + → Centennial and Bucc. Ridge

Meal Plan Impact

Meal Plan Phasing Strategy:

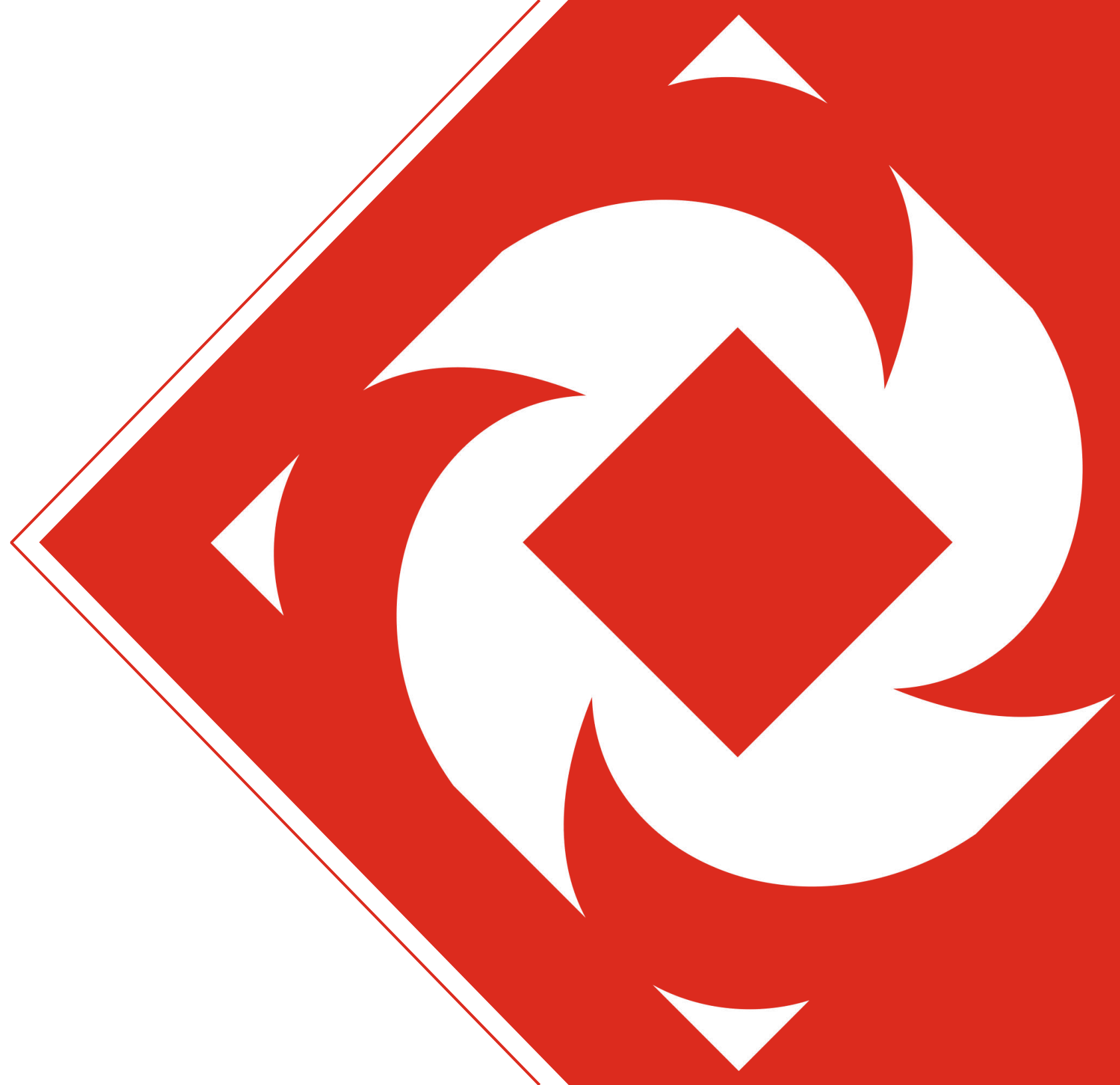
- Freshmen Class: 2015 to 2016 (data not available)
 - Sophomore Class: 2016 to 2017
 - Junior Class: 2017 to 2018
- Senior Class: 2018 to 2019 (data not yet available)

Occupancy by Class	<u>2016</u>		<u>2018</u>	
FR	1,641	64%	1,249	50%
SO	489	24%	480	25%
JR	333	14%	367	16%
SR	136	4%	361	12%
Grad	49	3%	49	4%

Occupancy remained stable / slightly increased indicating meal plan policy did not significantly impact overall housing capture

Dining policies and their potential impacts to housing should be reassessed following the full execution of the meal plan strategy and incorporated into a comprehensive housing and dining strategy

Current Facility Strategy



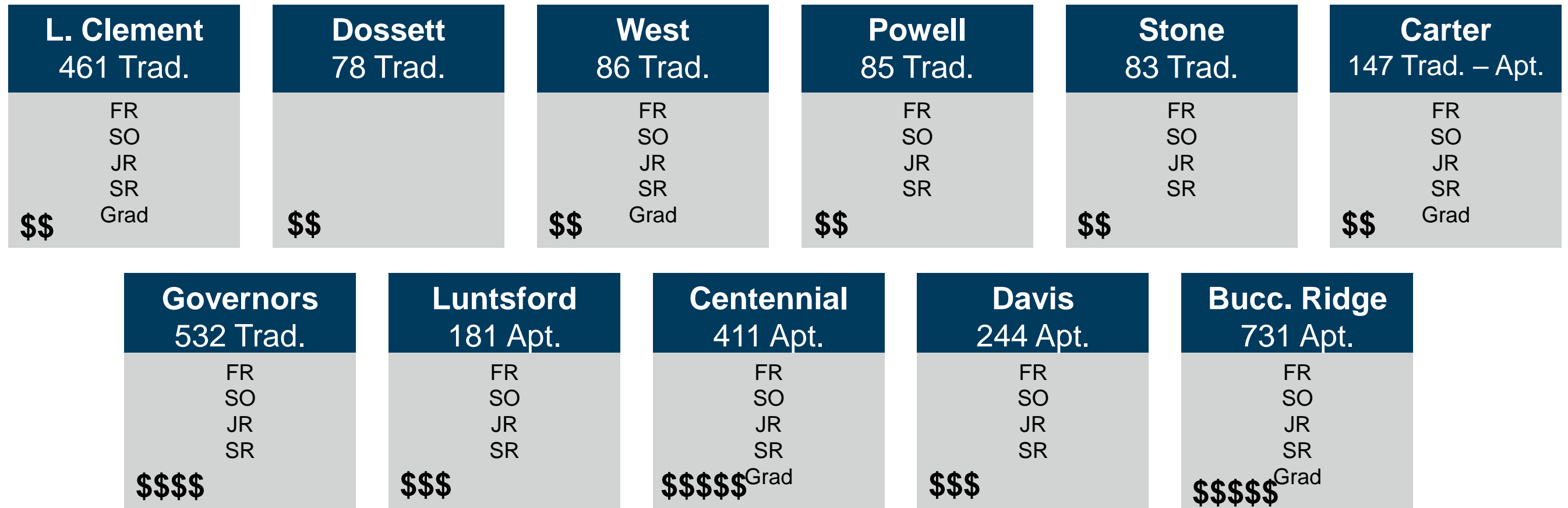
Priority Alignment

	Dossett	Powell	Carter	Luntsford	West	Centennial	Davis	Governors	L. Clement	Stone	Bucc. Ridge	System
Beds	78	85	147	181	86	411	244	532	461	83	731	3,039
Occupancy	0%	91%	88%	97%	88%	93%	96%	95%	93%	94%	79% - 100%	91%
SF / Bed	334	271	257	281	285	348	303	242	248	234	495	330
Average Rental Rate	\$2,444	\$2,606	\$3,053	\$3,390	\$2,606	\$3,128	\$3,500	\$3,855	\$2,444	\$2,533	\$2,820 - \$3,565	\$2,951
OpEx / Bed	\$3,427	\$3,036	\$2,530	\$2,528	\$3,089	\$2,567	\$2,504	\$2,025	\$2,079	\$2,891	\$1,715	\$2,243
CFADS*/ Bed	(\$4,772)	(\$3,367)	\$537	\$1,006	(\$1,042)	(\$2,531)	\$475	\$181	\$1,117	(\$772)	\$1,575	\$198

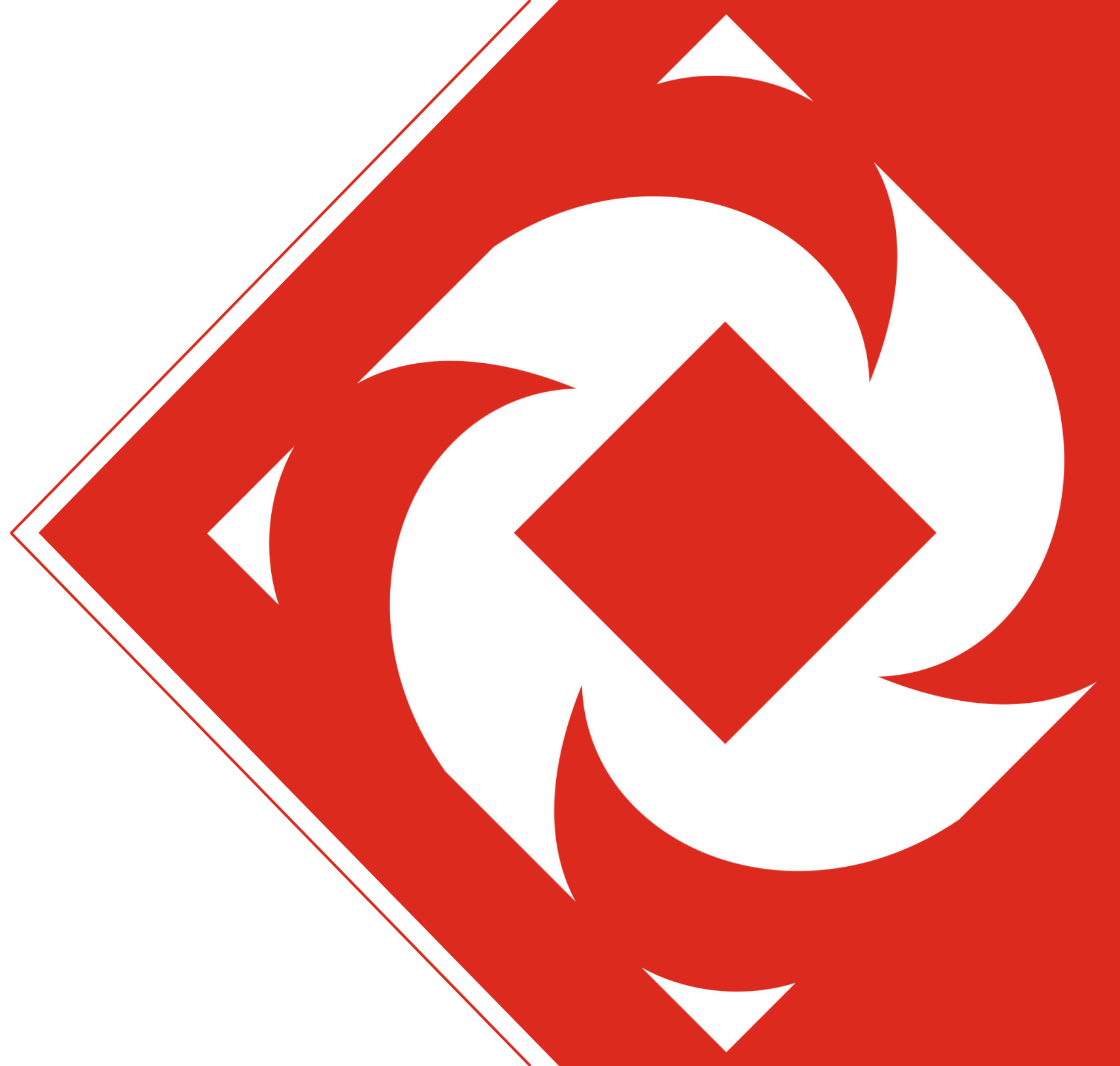
*CFADS represents cash flow beyond the 5% required R&R contribution

Existing

There is a gap between demand and current housing offerings



Master Plan Concept Options

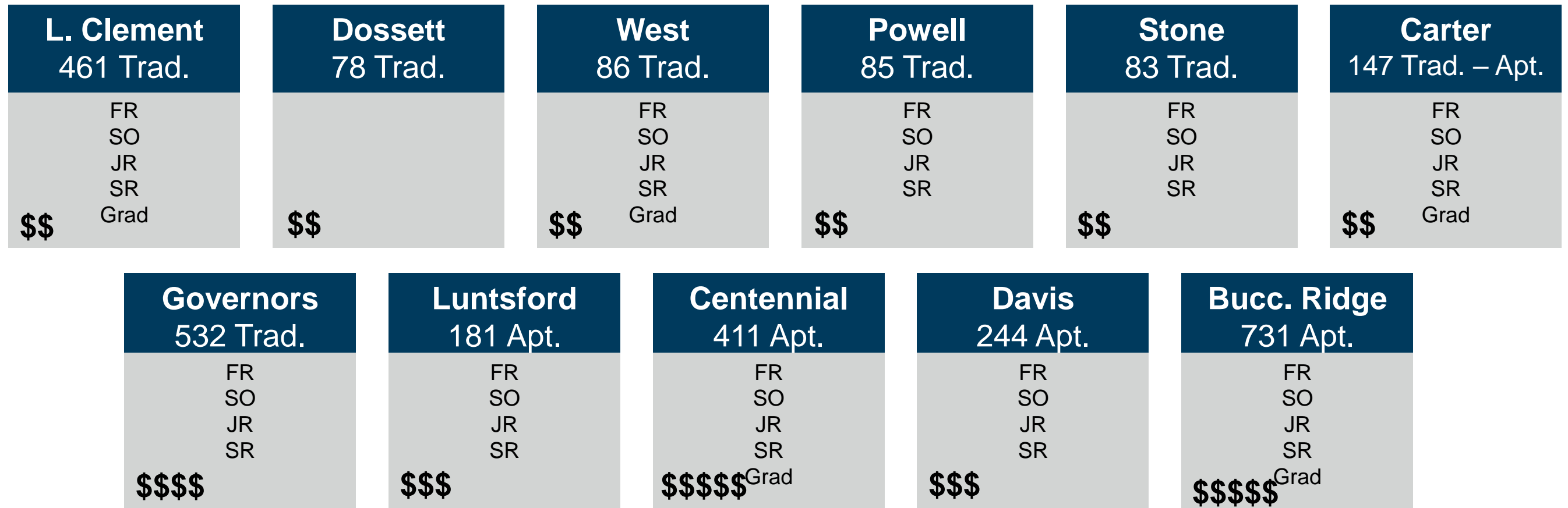


Concept Summary

- 1. Currently 260 beds available within housing inventory.**
- 2. Two distinct needs within uncaptured market**
 - 1. Affordable options** → lower rental rates at select properties
 - 2. Experience that meets expectations of reasons that drew them to ETSU** → increase rental rates at select properties in conjunction with a high quality experience and/or renovation project

Existing

There is a gap between demand and current housing offerings

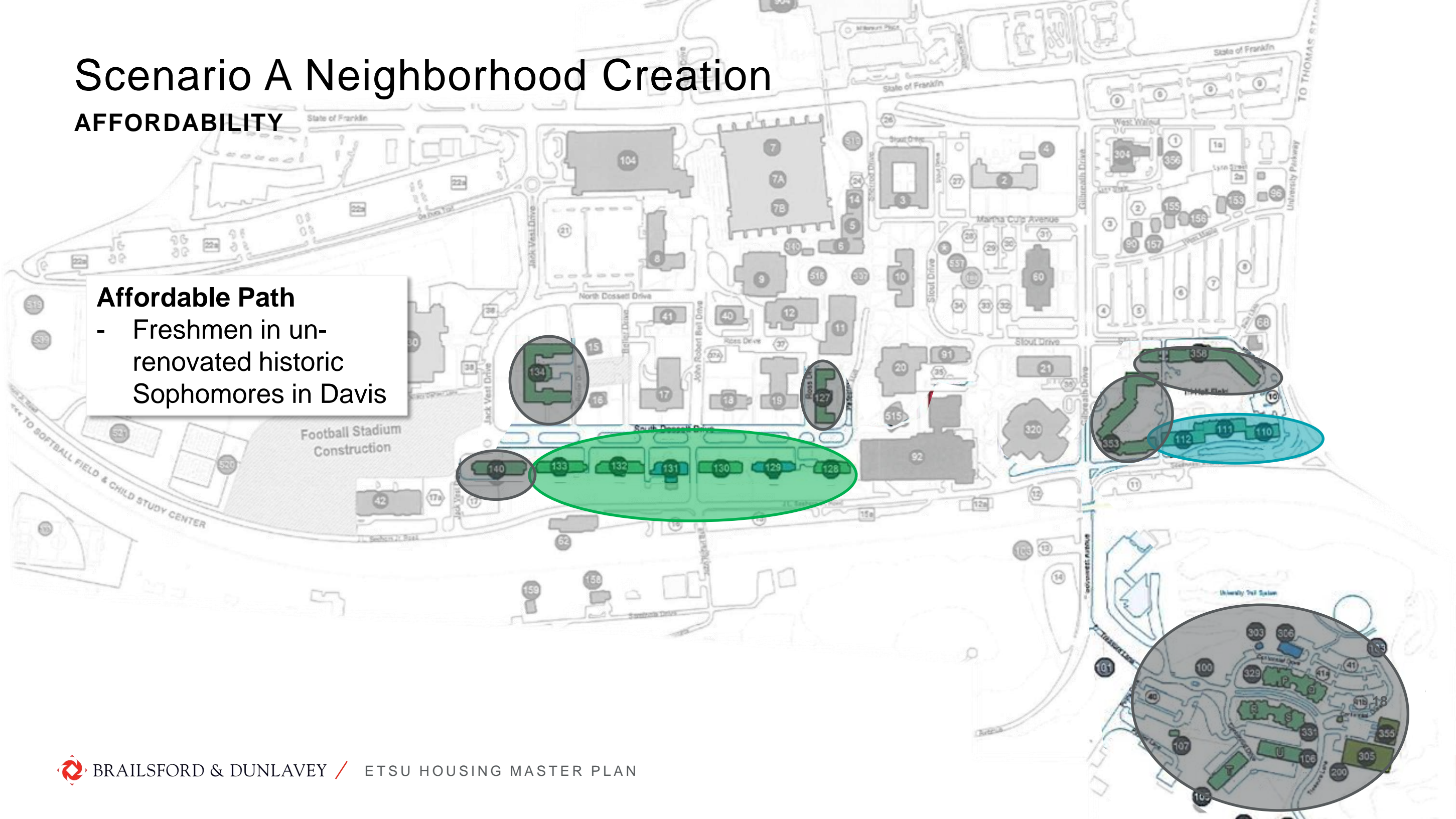


Scenario A Neighborhood Creation

AFFORDABILITY

Affordable Path

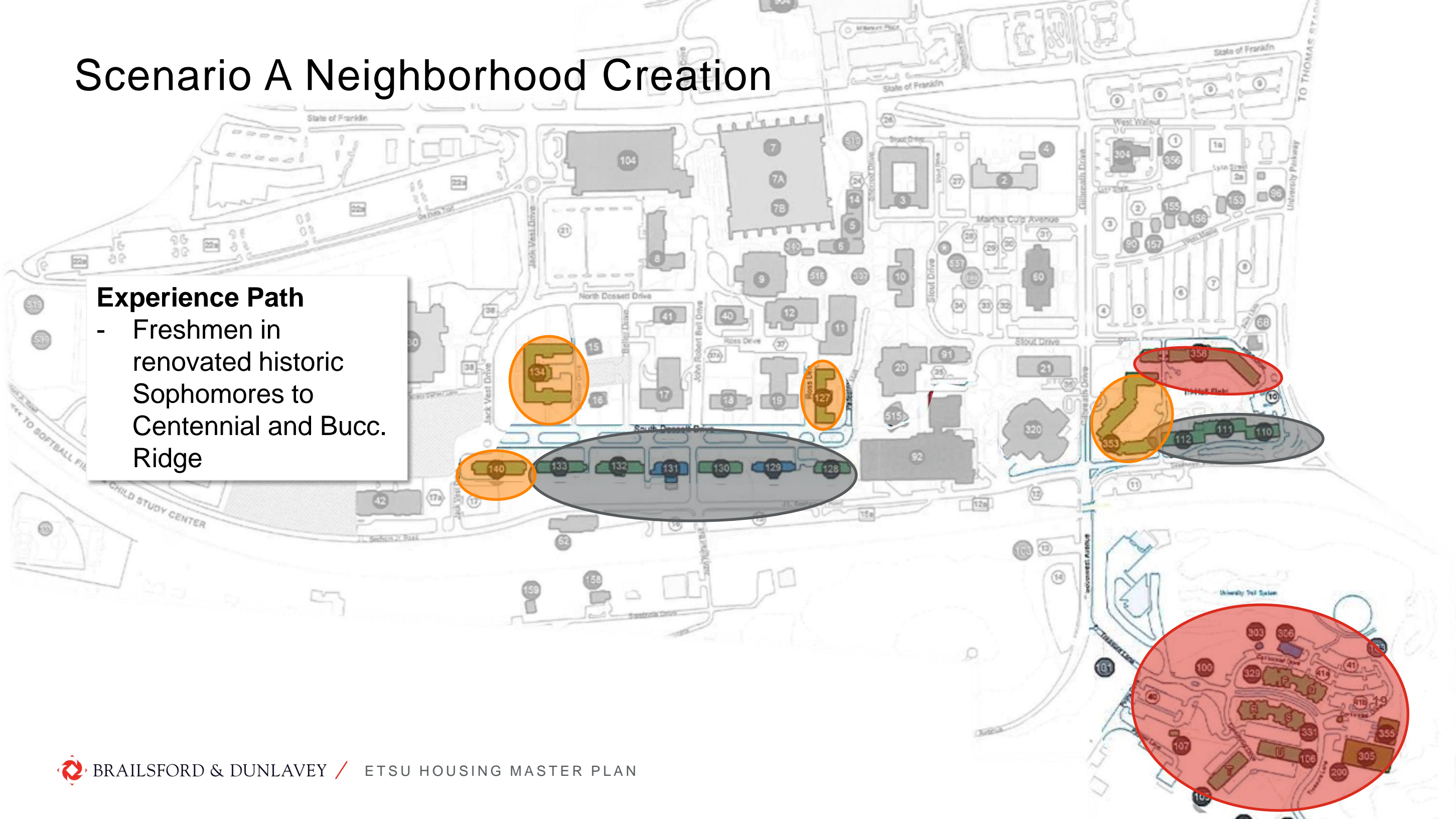
- Freshmen in un-renovated historic
- Sophomores in Davis



Scenario A Neighborhood Creation

Experience Path

- Freshmen in renovated historic
- Sophomores to Centennial and Bucc. Ridge



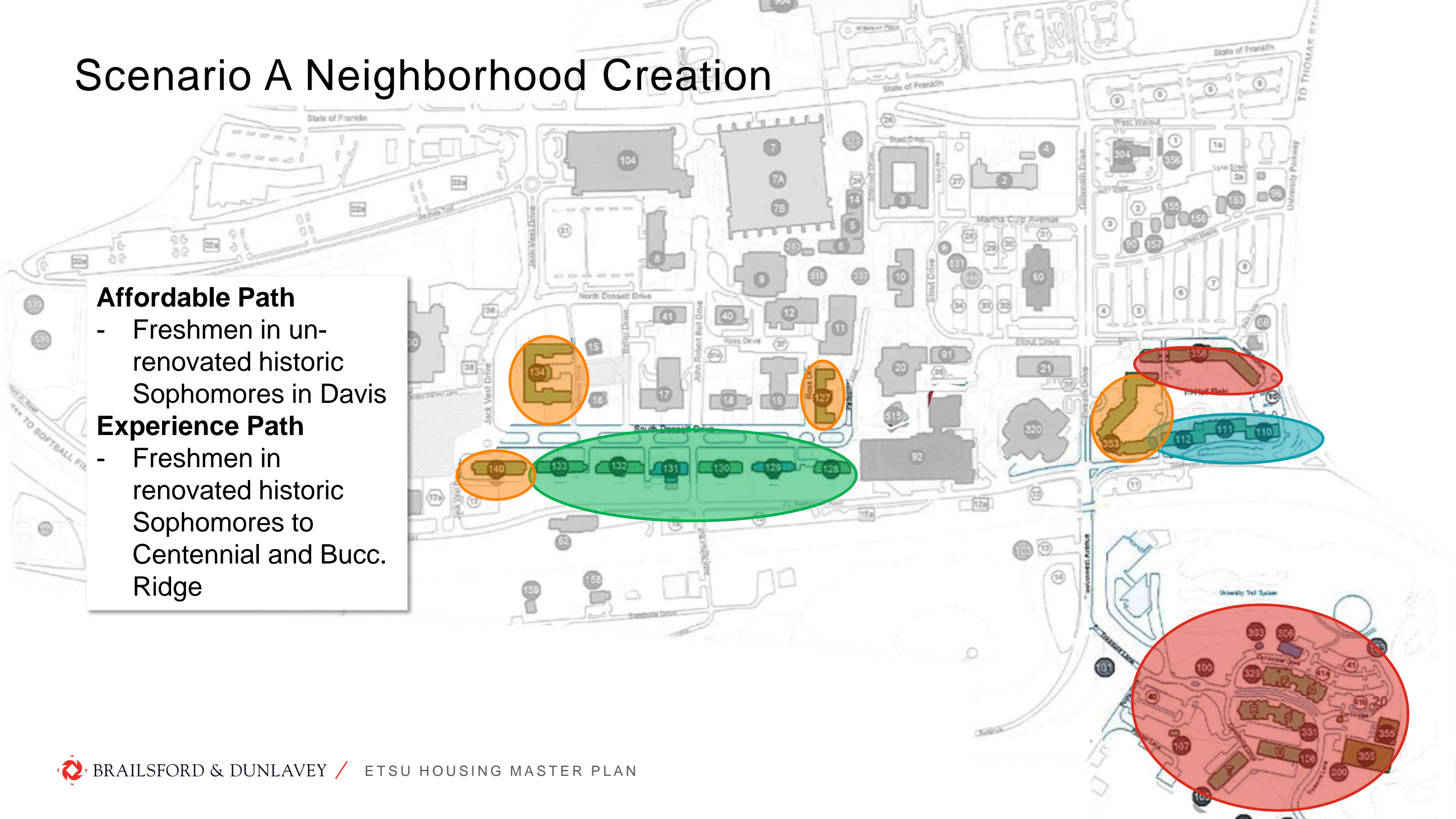
Scenario A Neighborhood Creation

Affordable Path

- Freshmen in un-renovated historic
- Sophomores in Davis

Experience Path

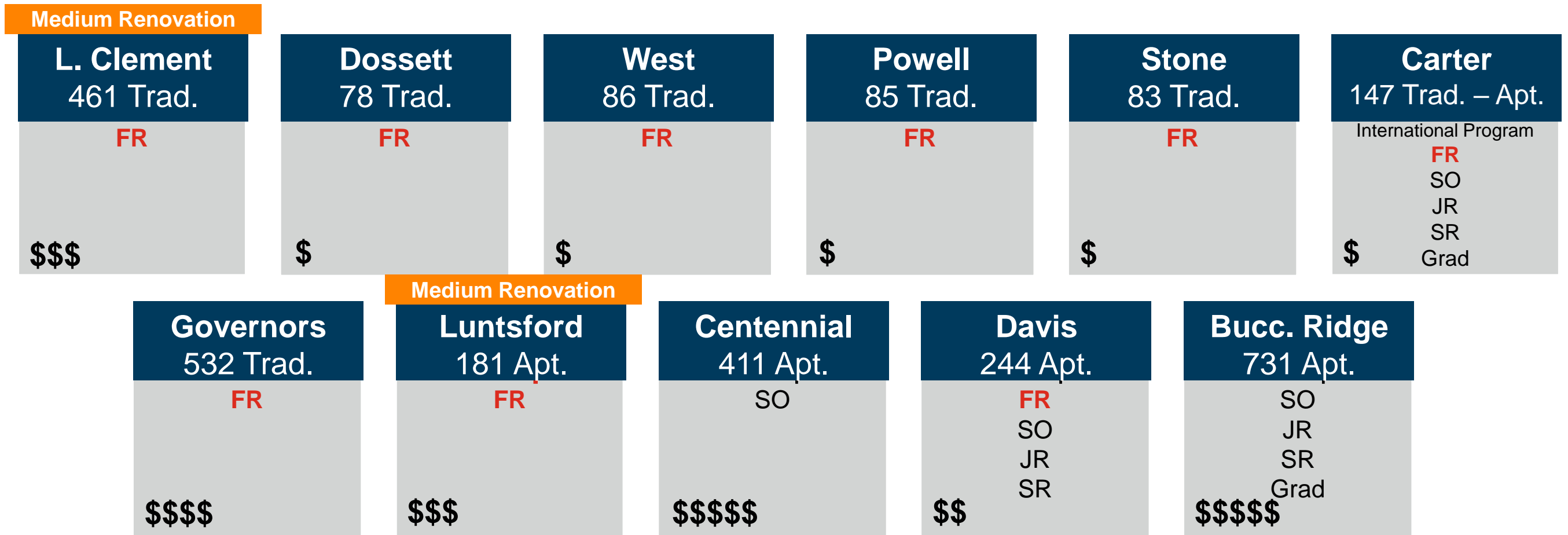
- Freshmen in renovated historic
- Sophomores to Centennial and Bucc. Ridge



Live-on Policy with Freshmen Assignment Strategy

PHASE 1 RENOVATION

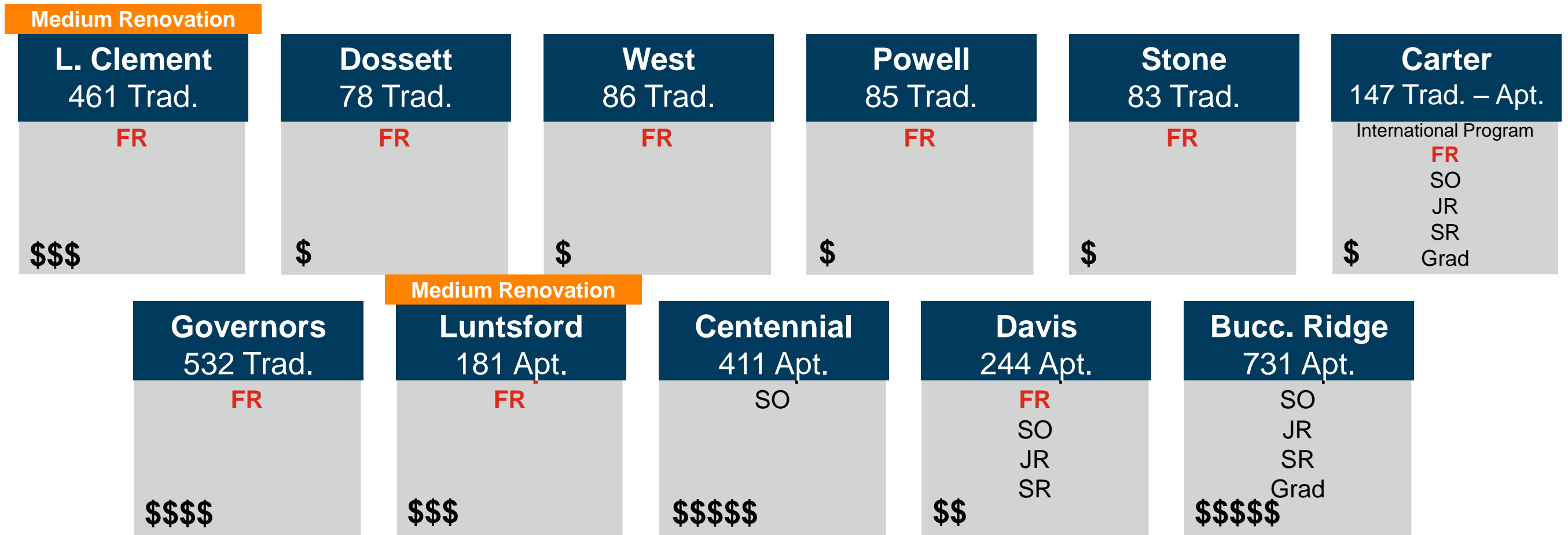
Intentional medium renovations in targeted historic residence halls to drive an elevated experience and capture additional students.



Live-on Policy with Freshmen Assignment Strategy

PHASE 1 RENOVATION

Intentional medium renovations in targeted historic residence halls to drive an elevated experience and capture additional students.



Next Steps

- › Prepare June project submission
 - Incorporate feedback and facility walk findings to refine concepts
- › Concept Refinement
 - Update project financial analysis with existing condition input
- › Updated committee engagement
 - Bi-weekly calls
 - Schedule steering committee video conference for detailed financial and risk profile discussion

East Tennessee State University

HOUSING MASTER PLAN

March 5 – 6, 2019



Agenda

HOUSING MASTER PLAN KICK OFF

- › B&D Introduction
- › Institutional framework
- › Scope & Schedule

Our purpose is to inspire and empower colleges & universities to **maximize the value of investments** that advance communities.

540+

Higher Ed Clients

600+

Student Housing Projects Nationwide

\$35B+

In Completed Projects

100+

P3 Development Advisory Projects

Empower our clients to make investments that maximize their mission



Student Housing



Workforce Housing



Unions



Food Service



Recreation



Academics



Health & Wellness



Athletics



Venues



Campus Edge



Retail



P3 Ventures

02

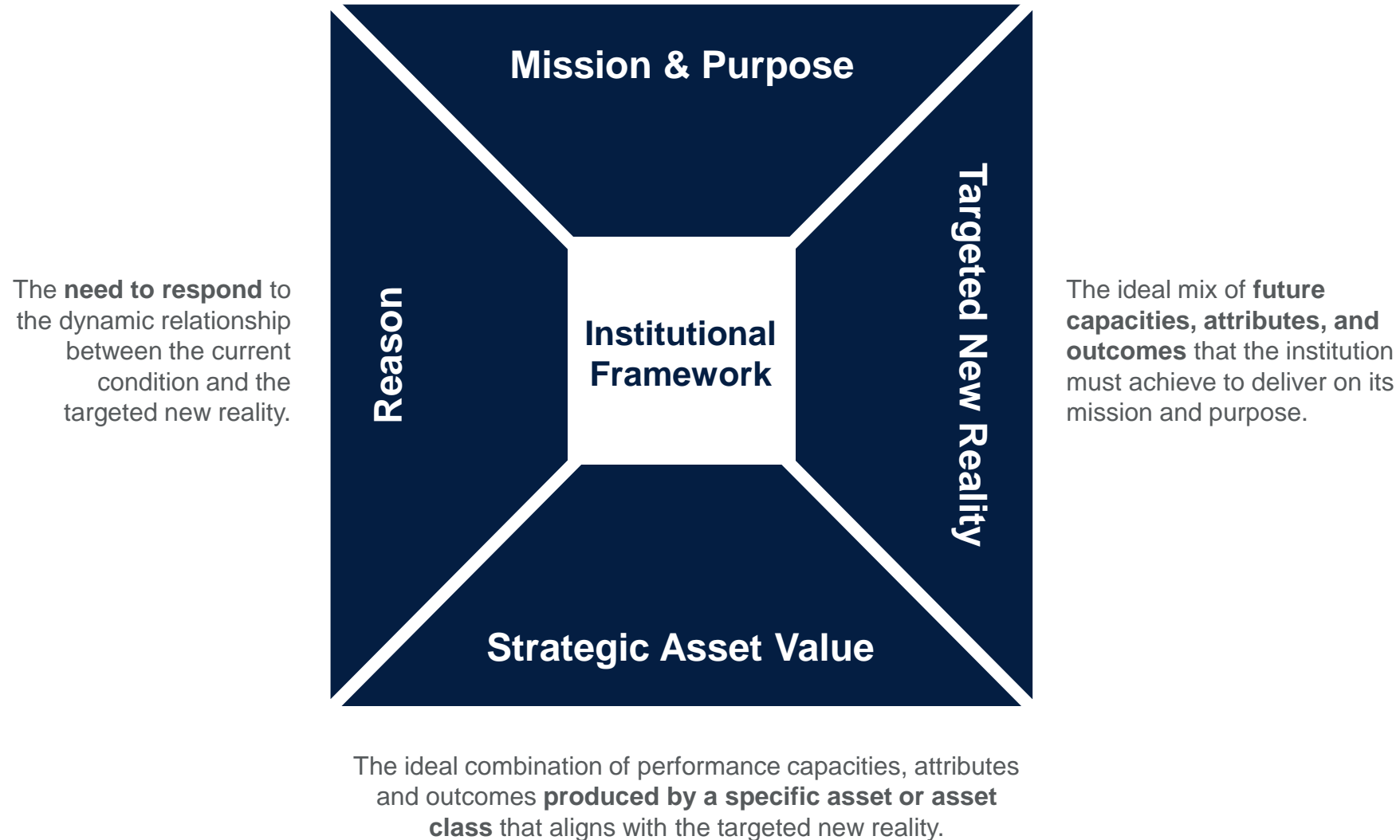
Institutional Framework



Institutional Framework

FOUNDATION FOR STRATEGY

The **difference ETSU must make** in the world and **for whom**.



Mission & Purpose

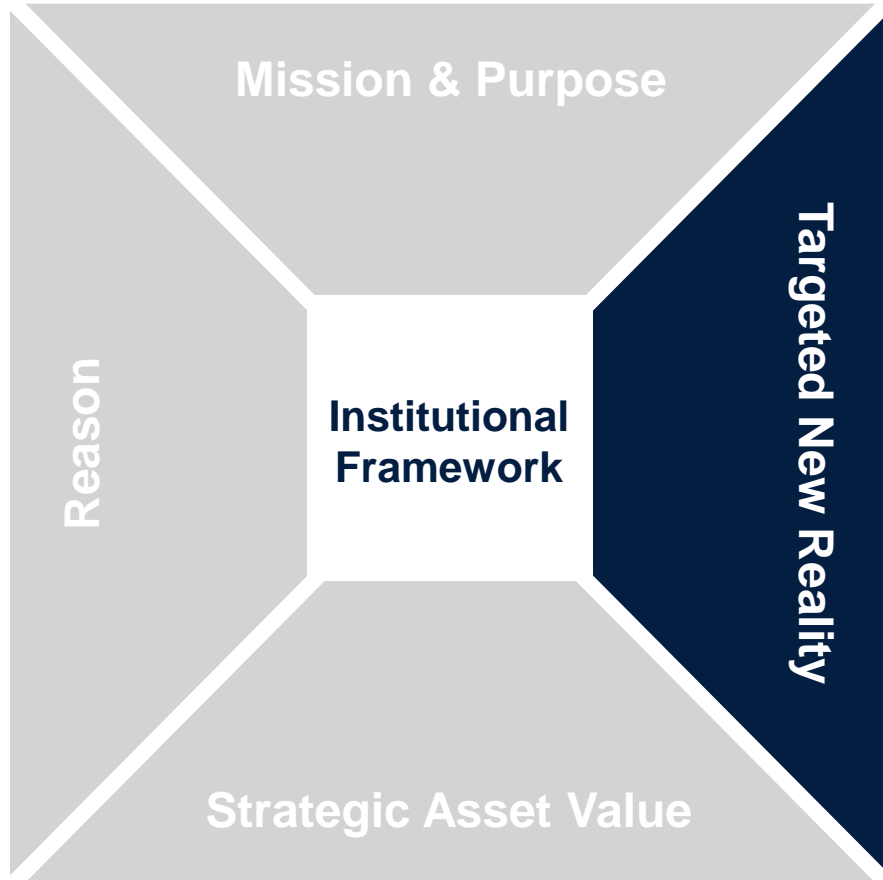
THE DIFFERENCE ETSU MUST MAKE IN THE WORLD AND FOR WHOM



Empower people of Tennessee and the region achieve their full potential

Targeted New Realty

CAPACITIES, ATTRIBUTES, AND OUTCOMES TO DELIVER ON MISSION & PURPOSE



Capacities

- Partnerships that enable real-world experience and establishes a connection with the local community (ex: health clinical)
- Education is accessible to students

Attributes

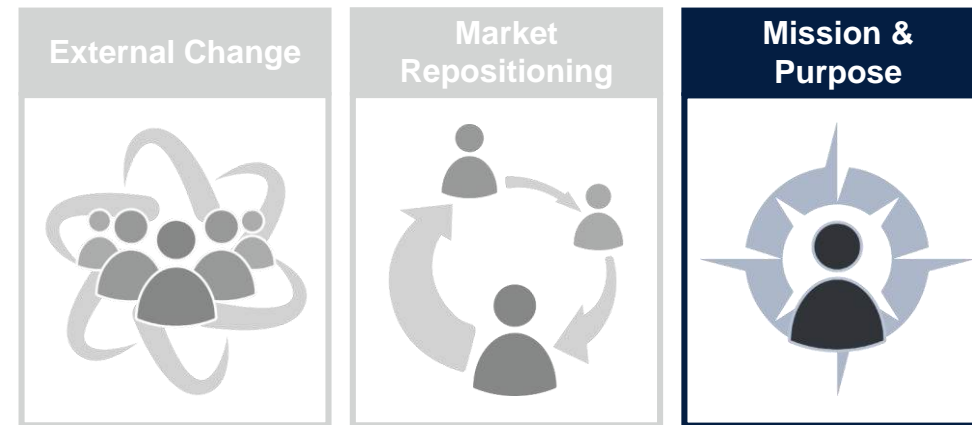
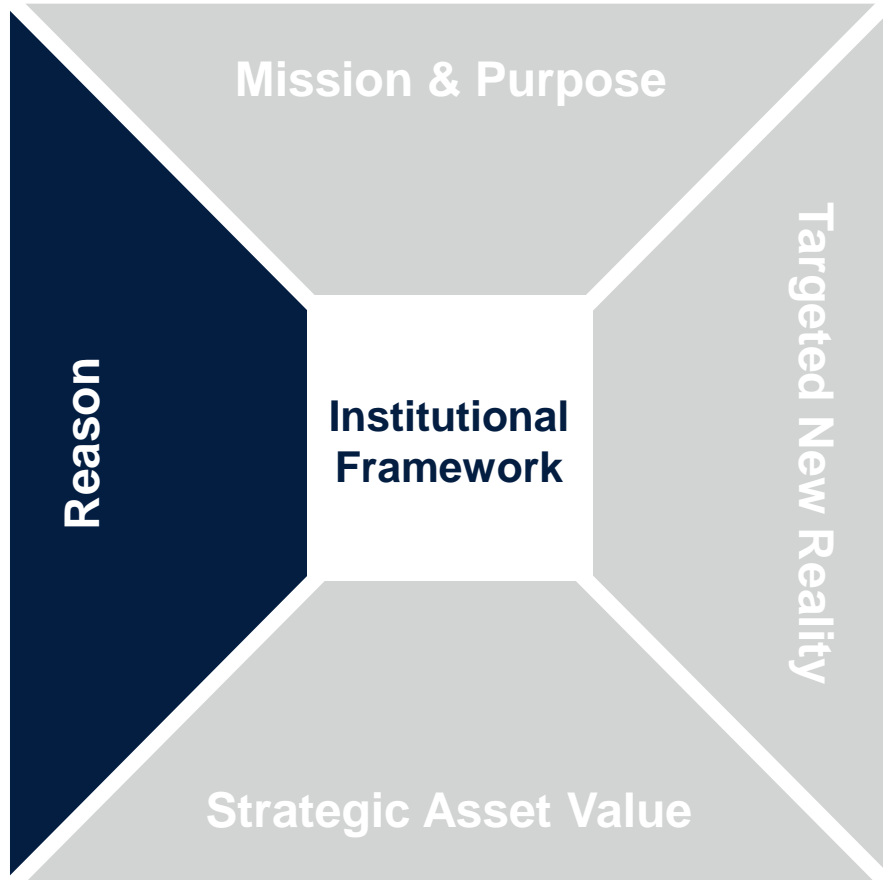
- Balanced liberal arts and professional preparation
- High touch
- Facilitates holistic and immersive college experience through connection to build community

Outcomes

- All ETSU students graduate with employable degrees and the ability to valuably contribute to local community

The Reason

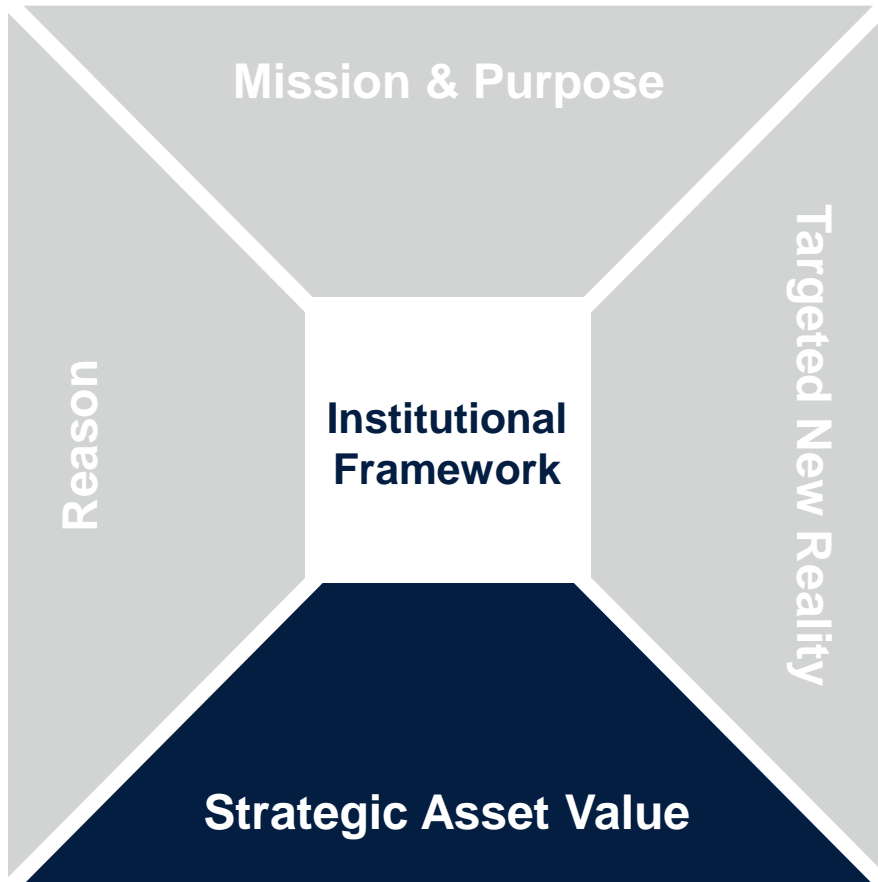
THE NEED TO RESPOND TO THE DYNAMIC BETWEEN CURRENT CONDITIONS AND TARGETED NEW REALITY



The catalyst for action to attain the ambitious targeted new reality is derived in ETSU's need to **empower people of Tennessee and the region achieve their full potential**

SAV

CAPACITIES, ATTRIBUTES AND OUTCOMES OF HOUSING THAT ALIGNS WITH THE TARGETED NEW REALITY



Housing Outcomes

1. The housing system must be positioned to enhance the ETSU experience and meet enrollment growth
 - *Housing will complement initiatives for providing a dynamic campus experience*
2. First-time freshmen represent the primary target market
 - *Will be served in units conducive to maximizing exposure to academic and social resources*
3. Housing must serve as a recruitment asset against cross-applicant institutions
 - *Should help ETSU expand its traditional service area without compromising its commitment to serving the region*
4. New projects must be financially self sufficient
 - *ETSU is willing to explore alternative financing structures (P3)*

Guiding Questions

CASE MAKING FOR HOUSING INVESTMENTS



Confirm housing's targeted future reality.



What are the target markets' physical and programmatic needs within ETSU's current reality?



How can physical and financial resources be optimized to effectively achieve vision?



How should enhancements be implemented to maximize the impact of investment? (e.i. Self-develop vs. P3)

04

Scope and Schedule



Planning Approach

HOUSING MASTER PLAN

1 Objectives & Initiatives

- ✓ Project Initiation
- ✓ Stakeholder meeting
- ✓ Assessment of Existing Facilities
- ✓ Competitive Context
- ✓ Space Needs Assessment
- ✓ Demand Assessment Update
- ✓ Existing System Financial Analysis
- ✓ Concept Development
- ✓ SAV Confirmation
- ✓ Concept Refinement
- ✓ Align New Development with Current Inventory
- ✓ Updated System-wide Financial Analysis
- ✓ Construction & Renovation Plan
- ✓ Phasing Strategy
- ✓ Project Delivery Schedule
- ✓ Risk Profile Development
- ✓ Delivery Structure Assessment
- ✓ Documentation & Decision Support

2 Priority Alignment

3 Delivery Strategy

Planning Approach

HOUSING MASTER PLAN

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ETSU Engagement

- Confirm housing's targeted future reality.
- What are the target markets' physical and programmatic needs within ETSU's current reality?

Planning Approach

HOUSING MASTER PLAN

1 Objectives & Initiatives

2 Priority Alignment

3 Delivery Strategy

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ETSU Engagement

- How can physical and financial resources be optimized to effectively achieve vision?

Planning Approach

HOUSING MASTER PLAN

1 Objectives & Initiatives

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- ✓ Documentation & Decision Support

2 Priority Alignment

3 Delivery Strategy

ETSU Engagement

- How should enhancements be implemented to maximize the impact of investment? (e.g. Self-develop vs. P3)

Next Steps

COMMITTEE ENGAGEMENT

- › Weekly calls with Kevin Varney (others as needed)
- › Concept Refinement Work Session (Early April)
- › Project Delivery Structure (Videoconference Late April / Early May)
- › Recommendations (Mid May)

FACILITY REPORTS



CARTER HALL EAST TENNESSEE STATE UNIVERSITY JOHNSON CITY, TENNESSEE

BACKGROUND

Facility Systems Consultants, LLC (FSC) and Brailsford & Dunlavey were retained by East Tennessee State University to provide a cursory review of the subject facility. The team observed the existing conditions of the facility on April 18, 2019. This report is a cursory review to recommend upgrades in relation to their current condition and improved space conditions.

OBSERVATIONS CONCERNING EXISTING CONDITIONS

FSC and B&D personnel visited the site on April 18, 2019. No destructive or live service testing evaluations were part of the scope of services. The following general observations were made:

ARCHITECTURAL & INTERIOR FEATURES EXISTING

- The building was constructed in 1911 and has received a comprehensive full renovation in the recent past.
- The finishes and fixtures are new.
- The windows have been replaced as new fixed windows.
- The floors structure has settled and has deflection in some areas, but this condition is common in buildings of this age and is not of immediate concern.
- The community room on the main floor is very large and can accommodate several groups and events. There are no community lounges or common areas on the floors above.
- Common kitchens and common laundry rooms alternate locations on the floors above
- The circulation through the building is not efficient or intuitive.
- A new roof has recently been installed, correcting the leaking issues Carter was experiencing.
- The locking mechanisms on the shared bathroom doors are a concern as students can and have been locked in their bathrooms from the outside.
- Plumbing fixtures have been replaced.

CONSIDERATIONS FOR ARCHITECTURAL IMPROVEMENTS

- The recent renovations have been comprehensive both in systems and finishes
- To promote and provide areas for community building:



- Consider options to rework the primary entrance to the building into Corridor 117 as it essentially enters directly into a narrow hallway with no lobby.
- Repurpose, open, and renovate areas on the upper resident floors to create more inviting and accommodating common rooms. Consider opening and utilizing the long narrow student rooms 229 and 329 as small common areas. These rooms are located directly across from the kitchen/laundry rooms.
- Replace current locking solution at shared toilet rooms between resident rooms which allow for student to not get locked into the bathrooms.
- To the extent practicable, incorporate code and accessibility updates, as well as asbestos abatement in areas receiving renovations.
- Purchase new and contemporary furnishings.
- Wifi coverage is often reported as insufficient, upgrades and strengthening of signal should be considered.

EXISTING SYSTEMS MECHANICAL

- The existing Heating and Cooling system for the buildings consists of 4-pipe fan coil units and a central station make up air unit. Units are good condition.
- Steam and steam condensate piping in mechanical room in poor condition.
- Maintenance staff indicated the building hydronic piping was in fair to poor condition.
- Plumbing fixtures in the rooms are in good condition. The fixtures in the common showers are in poor condition.
- Domestic water heating is provided through steam to hot water heat exchanger along with gas water heating backup. The gas water heaters are in good condition.
- Domestic water piping visible in mechanical room in poor condition. Maintenance personnel on site indicated the condition of the water and sanitary piping throughout was in poor condition.
- Building was fully sprinklered.

CONSIDERATIONS FOR MECHANICAL IMPROVEMENTS

- It is not recommended to replace or update the fan coil units or air handling equipment.
- Consider replacement of hydronic piping throughout.
- It is not recommended to replace any plumbing fixtures or water heaters in the building.
- Consider replacement of all domestic and sanitary sewer piping.

ELECTRICAL SYSTEMS EXISTING



- The existing building has an existing 1,200 ampere, three phase service at 208Y/120 Volts, 3-Phase, 4-Wire.
- The building has a 1,200 ampere exterior main breaker that feeds a 1200 ampere distribution panelboard installed as part of a power service upgrade in 2007 and is in good condition. The distribution panel serves major loads for the mechanical system and feeds the balance of the existing branch panels in the building. The facility does have an emergency power system (generator). Genset is Cummins equipment diesel fueled, installed around 2007, and is in good condition.
- Panelboards serving branch circuits are typically recessed in corridor walls and are a mixture of older (1989) and newer (2007) equipment.
- General lighting in corridors was by way of recessed lensed 2'x2' fluorescent fixtures with surface mounted fixtures in stairways and decorative surface mounted and pendant residential style fixtures at the lobbies and common areas.
- Dorm room lighting is typically surface mounted fluorescent 2'x2' Solid-side fixtures. Restroom fixtures consist of vanity wall brackets with surface fluorescent 1'x4' fixtures on the ceiling.
- The facility emergency lighting is served by the emergency power system powering standard corridor fixtures and exit signs on unswitched "night-light" circuits. Coverage appears adequate in most areas. Exterior exit doors do not appear to have emergency exit discharge lighting to the public way.
- Each dorm room typically has a 120V receptacles and over-head fluorescent lighting surface mounted. Dorm room circuits are not served by Arc-Fault (AFCI) breakers. GFCI protection is provided for most receptacles where within 6 feet of a sink.
- The branch circuit wiring is single conductor in conduit or wiremold. All units observed appear to have branch circuit wiring in good condition.
- The receptacle spacing in the living areas is generally code compliant. In general, the wiring devices (receptacles and switches) are in good condition. NEC code now requires that all receptacles in dwelling units be tamper resistant, which did not appear to be the case for most of the existing devices.
- The site lighting consists of recessed and wall mounted fixtures and decorative post top lanterns.
- Lighting controls for dorm units appear to be manual controls via switch. 2018 IECC requires occupancy sensors and vacancy style switches be required even within dwelling units.
- The facility is provided with CATV cabling originating from the main telecom demarcation point on the bottom floor. The cabling is then distributed out via a series of recessed wall cabinets and closets in the corridors with drops to each dorm room and several public area CATV locations in lobbies and gathering areas.
- It does not appear that individual voice phone drops are provided in each dorm room, but data cabling drops are provided along with WIFI access points in the corridors throughout the facility. Facility has an intercom which appears functional.



- The existing building security system is comprised of CBORD access control at exterior doors and IP based CCTV cameras throughout the corridors and common areas. These systems are monitored by Campus Security and appear to be in good working order.
- The main Fire Alarm Control Panel (FACP) is in the 1st floor front lobby near the R/A station. The fire alarm equipment in this building is Edwards Systems Technology Company equipment. The system appears to be in good working order and is addressable, voice-evac type. The building is sprinklered and the sprinkler system is monitored for flow and tamper by the FACP. Full smoke detector coverage is provided in the corridors. The smoke detectors in the dorm rooms are FACP system detectors with sounder bases providing local annunciation and supervisory monitoring by the system. Fire alarm mini-speaker units were present in each room, with speaker/strobe devices in accessible rooms. Speaker/strobe coverage in the corridors and common areas appeared adequate.
- Single-station smoke alarms are not installed in unit bedrooms, but the system detectors with sounder bases and supervisory monitoring are an acceptable substitute by code.

CONSIDERATIONS FOR ELECTRICAL IMPROVEMENTS

- Owner should consider checking all feeders within switchgear and panelboards for proper tightness.
- Owner should consider bringing AFCI protection up to current code requirements as well as correcting any missing or non-accessible and GFCI protection
- All branch circuits should be checked for proper tightness.
- The wiring devices should be considered by owner for replacement within any units selected for renovation due to age and not being tamper resistant.
- Replacement of interior building lighting with new LED type should be considered for any areas of significant renovation in the future. Depending upon the level of renovations, upgrade of lighting controls may be required.
- Replacement of decorative post top lanterns and building mounted lighting with LED type is suggested.
- CATV, Data drops, and WIFI access points should be considered for addition or replacement only within areas of significant renovation in the future.
- Access Control and CCTV devices should be considered for addition or replacement only within areas of significant renovation in the future.
- Owner should consider installing low frequency type speakers in standard units, and low frequency type speaker/strobes in ADA units.
- Owner should consider changing the dorm unit smoke detectors (with sounder base) to combination smoke and CO detectors if they are not currently that type already.



NEIL DOSSETT HALL EAST TENNESSEE STATE UNIVERSITY JOHNSON CITY, TENNESSEE

BACKGROUND

Facility Systems Consultants, LLC (FSC) and Brailsford & Dunlavey were retained by East Tennessee State University to provide a cursory review of the subject facility. The team observed the existing conditions of the facility on April 18, 2019. This report is a cursory review to recommend upgrades in relation to their current condition and improved space conditions.

EXECUTIVE SUMMARY

Dossett Hall is recommended to be utilize \$2MM of targeted reinvestment. As this facility is currently serving as a swing space, attention and consideration needs to be paid to the functional usage of this facility during the phase 1 planned implementation. Ideally, the building can remain occupied while renovations are occurring.

At 26,066 sf, a total project cost of approximately \$77/sf is available for renovations. B&D recommends an 80:20 split between construction and soft costs, which results in a construction cost of \$61.40/sf in construction costs. Given the substantial amount of asbestos in the building, areas that are renovated may also require abatement. This could limit the amount of system upgrades feasible. There are a few options to consider for this reinvestment initiative:

1. Address the HVAC systems and the abatement of the friable materials currently existing in the piping insulation, joints, and ceiling assembly. If the extent of the abatement is limited to the only the friable asbestos, costs may be able to be contained, however, the ceiling material will be the most costly to abate. B&D recommends consulting with an abatement professional to ascertain if abatement of the ceiling is mandatory, or if targeted abatement only where disturbances occur is acceptable and/or if there is an encapsulation option to consider. If a complete ceiling abatement and removal is not required, a replacement of the HVAC system is a viable option. If the ceilings must be abated this option is less feasible.
2. Replace specific HVAC units and reutilize existing distribution systems to not disturb asbestos containing materials (ACM's). Address plumbing leaks and degrading pipes, and address shower finishes throughout the facility. Basic finish upgrades could be managed within this budget within this scenario.
3. Upgrade all finishes throughout the facility inclusive of the abatement of all non-friable ACM's. The abatement of non-friable asbestos is significantly less than friable asbestos and has minimal effects on air quality. This would address a substantial amount of abatement, and allow for new floors, paint, and potentially upgrades of millwork and/or shower finishes. Upgrades could be staged and phased to allow for ongoing work while the building is kept occupied as swing space.



OBSERVATIONS CONCERNING EXISTING CONDITIONS

FSC and B&D personnel visited the site on April 18, 2019. No destructive or live service testing evaluations were part of the scope of services. The following general observances were made:

ARCHITECTURAL & INTERIOR FEATURES EXISTING

- The 26066 sf building was constructed in 1965 and believed to be partially renovated in 2008.
- Dossett is providing swing space and will increase swing space accommodations for future capital renovations taking place on campus.
- 2008 renovation included room flooring, HVAC systems, fixed replacement windows, and some flooring.
- The primary community room is directly off of the lobby. There is a kitchen on one upper floor, and a laundry on the other as the additional community areas.
- Popcorn ceiling finish remains and is believed to include asbestos. There is a general believe that there is asbestos in other elements of the building as well.
- There appears to be no supply air in the bathrooms
- The upper floors have no common/community lounge areas and the hallways standard narrow double-loaded, brick and concrete masonry unit corridors, with low ceilings.
- Resident rooms are standard size, have VCT flooring.
- Areas of the building are not up to current codes. For example, the staircase handrails and guards are lower than current codes.

CONSIDERATIONS FOR INTERIOR IMPROVEMENTS

- Abate asbestos as it is encountered.
- To promote and provide areas for community building:
 - Open the partition further to the large community rooms on the third and first floors to promote common social use, community building, and larger events.
 - Repurpose, open, and renovate areas on the upper resident floors to create more inviting and accommodating common rooms. Consider combining 2 resident rooms and removing the wall to the corridor to open the hall and provide areas with soft seating and other amenities.
- To the extent practicable, incorporate code and accessibility updates, as well as asbestos abatement in areas receiving renovations.
- To the extent practicable, when preparing for swing space accommodations, implement long term design solutions to remain after swing space is no longer required.
- Overall update on finishes. Inclusive of paint, ceiling, blinds, flooring, and casework. Consider block filling and/or furring brick and CMU walls.
- Purchase new and contemporary furnishings.



MECHANICAL SYSTEMS EXISTING

- The existing Heating and Cooling system for the building consists of a Variable Refrigerant Flow system. The units are in good condition but there have been consistent reports of excessive maintenance on the systems.
- Maintenance staff indicated issues with temperature and humidity control throughout.
- Steam and steam condensate piping in mechanical room in poor condition.
- Maintenance staff indicated the building hydronic piping was in fair to poor condition.
- Plumbing fixtures in the rooms are in good condition. The fixtures in the common showers are in poor condition.
- Domestic water heating is provided through steam to hot water heat exchanger along with gas water heating backup. The gas water heaters are in good condition.
- Domestic water piping visible in mechanical room in poor condition. Maintenance personnel on site indicated the condition of the water and sanitary piping throughout was in poor condition.
- Building was fully sprinklered.

CONSIDERATIONS FOR MECHANICAL IMPROVEMENTS

- It is recommended to replace existing HVAC system with a more reliable system in terms of maintenance needs and temperature/humidity control.
- It is not recommended to replace any plumbing fixtures or water heaters in the building.
- Consider replacement of all domestic and sanitary sewer piping.

ELECTRICAL SYSTEMS EXISTING

- The existing building has an existing 800 ampere three phase service at 208Y/120 Volts, 3-Phase, 4-Wire.
- The building has one 800 ampere exterior main breaker that feeds a distribution panelboard that was replaced in approximately 2005 and is in good condition. The distribution panel serves major loads for the mechanical system and feeds the balance of the new and existing branch panels in the building. The facility does not have an emergency power system (generator).
- Panelboards serving branch circuits are typically recessed in corridor walls and are a mixture of old and new equipment with new interiors in old cans in many cases.
- General lighting in corridors was by way of recessed mounted 2'x4' fluorescent wrap around fixtures with surface mounted fixtures in stairways and decorative surface mounted residential style fixtures at the main entry & lobby areas.



- Dorm room lighting is typically surface mounted fluorescent 1'x4' wrap-around fixtures. Restroom fixtures consist of vanity wall brackets with surface fluorescent 1'x4' fixtures on the ceiling.
- The facility emergency lighting is served by standard twin-head emergency lighting units with battery back-up. Exit signs and exit/emergency combination units also have battery back-up. Coverage appears adequate in most areas. Exterior exit doors do not have emergency exit discharge lighting to the public way.
- Each dorm room typically has a 120V receptacles and over-head fluorescent lighting surface mounted. Dorm room circuits are not served by Arc-Fault (AFCI) breakers. GFCI protection is provided for most receptacles where within 6 feet of a sink.
- The branch circuit wiring is single conductor in conduit or wiremold. All units observed appear to have branch circuit wiring in good condition.
- The receptacle spacing in the living areas is generally code compliant. In general, the wiring devices (receptacles and switches) are in good condition. NEC code now requires that all receptacles in dwelling units be tamper resistant, which did not appear to be the case for most of the existing devices.
- The site lighting consists of wall mounted fixtures and decorative post top lanterns.
- Lighting controls for dorm units appear to be manual controls via switch. 2018 IECC requires occupancy sensors and vacancy style switches be required even within dwelling units.
- The facility is provided with CATV cabling originating from the main telecom demarcation point on the bottom floor. The cabling is then distributed out via a series of recessed wall cabinets in the corridors with drops to each dorm room and several public area CATV locations in lobbies and gathering areas.
- It does not appear that individual voice phone drops are provided in each dorm room, but data cabling drops are provided along with WIFI access points in the corridors throughout the facility.
- The existing building security system is comprised of CBORD access control at exterior doors and IP based CCTV cameras throughout the corridors and common areas. These systems are monitored by Campus Security and appear to be in good working order.
- The main Fire Alarm Control Panel (FACP) is in the ground floor main IT closet. The system has a Remote Annunciator in the main lobby. The fire alarm equipment in this building is Edwards Systems Technology equipment. The system appears to be in good working order and is addressable type. The building is sprinklered and the sprinkler system is monitored for flow and tamper by the FACP. Full smoke detector coverage is provided in the corridors. The smoke detectors in the dorm rooms are FACP system detectors with sounder bases providing local annunciation and supervisory monitoring by the system. Fire alarm strobe only or mini-horn devices were not present in the units, and horn/strobe coverage in the corridors and common areas appeared adequate.
- Single-station smoke alarms are not installed in unit bedrooms, but the system detectors with sounder bases and supervisory monitoring are an acceptable substitute by code. Designated site/hearing impaired rooms were equipped with door bells and combinations strobe/chimes.



CONSIDERATIONS FOR ELECTRICAL IMPROVEMENTS

- Owner should consider checking all feeders within switchgear and panelboards for proper tightness.
- Some panelboards within the facility are original equipment from when 1st built, are past the manufacturer's recommended useful life, and should be considered for replacement by owner.
- Owner should consider bringing AFCI protection up to current code requirements as well as correcting any missing or non-accessible and GFCI protection
- All branch circuits should be checked for proper tightness.
- The wiring devices should be considered by owner for replacement within any units selected for renovation due to age and not being tamper resistant.
- Replacement of interior building lighting with new LED type should be considered for any areas of significant renovation in the future. Depending upon the level of renovations, upgrade of lighting controls may be required.
- Replacement of decorative post top lanterns and building mounted lighting with LED type is suggested.
- CATV, Data drops, and WIFI access points should be considered for addition or replacement only within areas of significant renovation in the future.
- Access Control and CCTV devices should be considered for addition or replacement only within areas of significant renovation in the future.
- Owner should consider installing low frequency type horns in standard units, and low frequency type horn/strobes in ADA units. Also, if a major renovation is undergone for this facility installation of Voice EVAC fire alarm notification should be considered to match current campus standard for new construction.
- Owner should consider changing the dorm unit smoke detectors (with sounder base) to combination smoke and CO detectors if they are not currently that type already.



**LUCILE CLEMENT HALL
EAST TENNESSEE STATE UNIVERSITY
JOHNSON CITY, TENNESSEE**

BACKGROUND

Facility Systems Consultants, LLC (FSC) and Brailsford & Dunlavey were retained by East Tennessee State University to provide a cursory review of the subject facility. The team observed the existing conditions of the facility on April 18, 2019. This report is a cursory review to recommend upgrades in relation to their current condition and improved space conditions.

OBSERVATIONS CONCERNING EXISTING CONDITIONS

FSC and B&D personnel visited the site on April 18, 2019. No destructive or live service testing evaluations were part of the scope of services. The following general observations were made:

ARCHITECTURAL & INTERIOR FEATURES EXISTING

- The building was constructed in 1967 and believed to be partially renovated in 2008 and again 3-4 years ago.
- Clements is providing swing space and will increase swing space accommodations for future capital renovations taking place on campus.
- 2008 renovation included room flooring, HVAC systems, fixed replacement windows, and carpeting in the hallway, more recent renovations included updates to the lobbies and entrances.
- The community room off of the lobby
- Popcorn ceiling finish remains and is believed to include asbestos. There is a general believe that there is asbestos in other elements of the building as well.
- The upper floors have no common/community areas and the hallways standard narrow double-loaded, concrete masonry unit corridors, with low acoustic ceiling tile.
- Resident rooms are standard size, have VCT flooring and built-in custom wood closets.
- Areas of the building are not up to current codes. For example, the staircase handrails and guards are lower than current codes.
- The University reports the scupper boxes are leaking.

CONSIDERATIONS FOR INTERIOR IMPROVEMENTS

- Repurpose or open the spaces currently configured as odd mirrored alcoves in the corridors.
- To promote and provide areas for community building:



- Provide more visibility through storefront walls, or open the partition further to the large community rooms on the third and first floors to promote common social use, community building, and larger events.
- Repurpose, open, and renovate areas on the upper resident floors to create more inviting and accommodating common rooms. Consider either utilizing the “game rooms” and/or combining 2 resident rooms and removing the wall to the corridor to open the hall and provide areas with soft seating and other amenities.
- Remove built-in wood closets which are a source of high maintenance needs and replace with new FF&E wardrobes or another custom built-in solutions.
- Repair scupper boxes which are leaking
- To the extent practicable, incorporate code and accessibility updates, as well as asbestos abatement in areas receiving renovations.
- To the extent practicable, when preparing for swing space accommodations, implement long term design solutions to remain after swing space is no longer required.
- Overall update on finishes. Inclusive of paint, ceiling, blinds, flooring, and casework. Consider block filling and/or furring CMU walls.
- Purchase new and contemporary furnishings.

MECHANICAL SYSTEMS EXISTING

- The existing Heating and Cooling system for the building consists of 4-pipe fan coil units and a central station make up air unit. Units are in good condition. Central systems replaced in approximately 2008-2009.
- Maintenance indicated issues with failing actuators in the control valves for the fan coil units.
- Maintenance staff indicated the building maintains temperature and have not had any major issues with the HVAC systems.
- Steam and steam condensate piping in mechanical room in poor condition.
- Maintenance staff indicated the building hydronic piping was in fair to poor condition.
- Plumbing fixtures are in good condition.
- Domestic water heating is provided through steam to hot water heat exchanger along with gas water heating backup. The gas water heaters are in good condition.
- Domestic water piping visible in mechanical room in poor condition. Maintenance personnel on site indicated the condition of the water and sanitary piping throughout was in poor condition.
- Building was fully sprinklered.

CONSIDERATIONS FOR MECHANICAL IMPROVEMENTS

- It is not recommended to replace or update the fan coil units or air handling equipment.
- It is not recommended to replace any plumbing fixtures or water heaters in the building.
- Consider replacement of all domestic and sanitary sewer piping.



ELECTRICAL SYSTEMS EXISTING

- The existing building has three power services based on campus distribution drawings. We only observed the main gear located nearest the old data center which is a 2000 ampere three phase service at 208Y/120 Volts, 3-Phase, 4-Wire.
- The building service observed has one 2000 ampere main breaker switchboard that was replaced in approximately 2005 and is in good condition. It is Eaton (Cutler-Hammer) brand equipment. A distribution panel serves major loads for the mechanical system. The facility does have an emergency power system (generator). Panelboards serving branch circuits are typically recessed in corridor walls and are a mixture of old and new equipment with new interiors in old cans in many cases.
- General lighting in corridors was by way of surface wall bracket fluorescent fixtures due to small clearance above ACT ceiling with surface mounted fixtures in stairways and decorative surface mounted residential style ceiling globes, pendant chandeliers, and wall sconces at the main entry & lobby areas.
- The facility emergency lighting is served by a mixture of regular building fixtures connected to the emergency power system and standard twin-head emergency lighting units with battery back-up. Exit signs and exit/emergency combination units also have a mixture of generator connections and battery back-up. Coverage appears adequate in most areas. Exterior exit doors do not have emergency exit discharge lighting to the public way.
- This facility has more standard dorm rooms without kitchenettes. Dorm rooms have 120V receptacles and over-head fluorescent lighting surface mounted. Dorm room circuits are not served by Arc-Fault (AFCI) breakers. GFCI protection is provided for most receptacles where within 6 feet of a sink.
- The branch circuit wiring is single conductor in conduit and wiremold. All units observed appear to have branch circuit wiring in good condition.
- The receptacle spacing in the living areas is generally code compliant. In general, the wiring devices (receptacles and switches) are in good condition. NEC code now requires that all receptacles in dwelling units be tamper resistant, which did not appear to be the case for most of the existing devices.
- The site lighting consists of wall mounted fixtures and decorative post top lanterns.
- Lighting controls for dwelling units appear to be manual controls via switch. 2018 IECC requires occupancy sensors and vacancy style switches be required even within dwelling units.
- The facility is provided with CATV cabling originating from the main telecom demarcation point on the bottom floor. The cabling is then distributed out via a series of recessed wall cabinets in the corridors with drops to each dorm room and several public area CATV locations in lobbies and gathering areas.
- It does not appear that individual voice phone drops are provided in each dorm room, but data cabling drops are provided along with WIFI access points in the corridors throughout the facility.
- The existing building security system is comprised of CBORD access control at exterior doors and IP based CCTV cameras throughout the corridors and common areas. These systems are monitored by Campus Security and appear to be in good working order.



- The main Fire Alarm Control Panel (FACP) is in the ground floor main IT closet. The system has a Remote Annunciator (RA) in each of the three main lobbies. The fire alarm equipment in this building is Simplex equipment. The system appears to be in good working order and is addressable type. The system may be voice/evac type, but that was unclear during the walk-through as no microphones were observed at the FACP or RA units. The building is sprinklered and the sprinkler system is monitored for flow and tamper by the FACP. Full smoke detector coverage is provided in the corridors. The smoke detectors in the dorm rooms are FACP system detectors with sounder bases providing local annunciation and supervisory monitoring by the system. Fire alarm strobe devices were present in the dorm units and horn/strobe coverage in the corridors and common areas appeared adequate.
- Single-station smoke alarms are not installed in unit bedrooms, but the system detectors with sounder bases and supervisory monitoring are an acceptable substitute by code.

CONSIDERATIONS FOR ELECTRICAL IMPROVEMENTS

- Owner should consider checking all feeders within switchgear and panelboards for proper tightness.
- Some panelboards within the facility are original equipment from when 1st built, are past the manufacturer's recommended useful life, and should be considered for replacement by owner.
- Owner should consider bringing AFCI protection up to current code requirements as well as correcting any missing or non-accessible and GFCI protection
- All branch circuits shall be checked for proper tightness.
- The wiring devices should be considered by owner for replacement within any units selected for renovation due to age and not being tamper resistant.
- Replacement of interior building lighting with new LED type should be considered for any areas of significant renovation in the future. Depending upon the level of renovations, upgrade of lighting controls may be required.
- Emergency lighting should be considered for conversion to all generator fed or all battery fed for consistency in maintenance in lieu of the current "mixed" condition.
- Replacement of decorative post top lanterns and building mounted lighting with LED type is suggested.
- CATV, Data drops, and WIFI access points should be considered for addition or replacement only within areas of significant renovation in the future.
- Access Control and CCTV devices should be considered for addition or replacement only within areas of significant renovation in the future.
- Owner should consider installing low frequency type speakers (horns) in standard units, and low frequency type speaker(horn)/strobes in ADA units. Also, if a major renovation is undergone for this facility installation of Voice EVAC fire alarm notification should be considered to match current campus standard for new construction (this may already be in place – unclear during walk-through).
- Owner should consider changing the dorm unit smoke detectors (with sounder base) to combination smoke and CO detectors if they are not currently that type already.



LUNTSFORD APARTMENTS EAST TENNESSEE STATE UNIVERSITY JOHNSON CITY, TENNESSEE

BACKGROUND

Facility Systems Consultants, LLC (FSC) and Brailsford & Dunlavey were retained by East Tennessee State University to provide a cursory review of the subject facility. The team observed the existing conditions of the facility on April 18, 2019. This report is a cursory review to recommend upgrades in relation to their current condition and improved space conditions.

OBSERVATIONS CONCERNING EXISTING CONDITIONS

FSC and B&D personnel visited the site on April 18, 2019. No destructive or live service testing evaluations were part of the scope of services. The following general observations were made:

ARCHITECTURAL & INTERIOR FEATURES EXISTING

- The building was constructed in 1973 and believed to be partially mechanical renovation in 2006.
- In general, the University does not receive many complaints or work orders for this building outside of plumbing leaks at the T-intersections servicing the back to back sinks.
- Plumbing fixtures have been replaced.
- The windows are generally operational though are not up to modern-day efficiency standards.
- The Lobby is small and has no sense of arrival or community.
- Ceilings are acoustic tile with fluorescent fixtures.
- Room casework includes kitchenette, with stove and refrigerator
- There are no known envelope issues reported.
- There are no areas for community on upper levels and only the closed-off, entrance-area common room for the facilities social gathering space.
- In general the rooms are large and the private bathrooms and kitchenettes provide a substantial amenity.
- B&D is unsure if any units fully comply with ADA requirements.
- The overall aesthetic of the entry, halls, and common area(s) is institutional, dark and constricted.

CONSIDERATIONS FOR INTERIOR IMPROVEMENTS

- To the extent practicable, incorporate code and accessibility updates, as well as asbestos abatement in areas receiving renovations.



- Overall update on finishes. Inclusive of paint, ceiling, blinds, flooring, and casework. Consider block filling and/or furring CMU walls.
- Purchase new and contemporary furnishings.
- To promote and provide areas for community building:
 - Remove walls and/or place a storefront partition between Lobby 230 and Social Room 225. Rework electrical and HVAC as required
 - Remove Office 231
 - Re-envision new lobby and community room to open the entry and to create an inviting social and community building space. Further consideration may include opening Social Room 225 into Corridor 211.
 - Repurpose, open, and renovate areas on the upper resident floors. Consider opening up rooms 208, 308, 408, and 508 to create a common and centralized social area on each floor of the res hall. This may require closing the elevator lobby off with a set of double doors on a magnetic hold-open to achieve adequate fire ratings. Add soft seating and social amenities.
 - Consider points of security further given the confined nature of the existing lobby.
- If considering double occupancy, a second closet will be required to be installed.
- If considering double occupancy freshman year students, consider removing the kitchenettes, and replacing the existing kitchen type sink with a new vanity, mirror, and lavatory outside of the private bathroom as a useful amenity.
- Update any plumbing fixtures as necessary.
- If necessary and not currently in place, provide adequate ADA/ANSI accessible accommodations.
- Replace existing windows with high quality replacement windows.
- Incorporate new exterior front entrance portico to match entrances of neighboring halls along the “spine.”

MECHANICAL SYSTEMS EXISTING

- The existing Heating and Cooling system for the buildings consists of 4-pipe fan coil units and a central station make up air unit. Units are in fair to good condition. Central systems replaced in approximately 2006.
- Maintenance staff indicated the building maintains temperature and have not had any major issues with the HVAC systems.
- Steam and steam condensate piping in mechanical room in poor condition.
- Maintenance staff indicated the building hydronic piping was in fair to poor condition.
- Plumbing fixtures are in good condition.
- Domestic water heating is provided through steam to hot water heat exchanger along with gas water heating backup. The gas water heaters are in good condition.
- Domestic water piping visible in mechanical room in poor condition. Maintenance personnel on site indicated the condition of the water and sanitary piping throughout was in poor condition.
- Building was fully sprinklered.



CONSIDERATIONS FOR MECHANICAL IMPROVEMENTS

- It is not recommended to replace or update the fan coil units or air handling equipment.
- Consider replacement of hydronic piping throughout.
- It is not recommended to replace any plumbing fixtures or water heaters in the building.
- Consider replacement of all domestic and sanitary sewer piping.

ELECTRICAL SYSTEMS EXISTING

- The existing building has an existing 2000 ampere three phase service at 208Y/120 Volts, 3-Phase, 4-Wire.
- The building has one 2000 ampere main breaker switchboard that was replaced in approximately 2005 and is in good condition. A distribution panel serves major loads for the mechanical system. The facility does not have an emergency power system (generator). Panelboards serving branch circuits are typically recessed in corridor walls and are a mixture of old and new equipment with new interiors in old cans in many cases.
- General lighting in corridors was by way of recessed 2'x4' fluorescent fixtures with surface mounted fixtures in stairways and decorative surface mounted residential style fixtures at the main entry & lobby areas.
- The facility emergency lighting is served by standard twin-head emergency lighting units with battery back-up. Exit signs and exit/emergency combination units also have battery back-up. Coverage appears adequate in most areas. Exterior exit doors have emergency exit discharge lighting to the public way.
- Each dorm room typically has a small kitchenette along with 120V receptacles and over-head fluorescent lighting both surface and recessed mounted. Dorm room circuits are not served by Arc-Fault (AFCI) breakers. GFCI protection is provided for most receptacles where within 6 feet of a sink.
- The branch circuit wiring is single conductor in conduit. All units observed appear to have branch circuit wiring in good condition.
- The receptacle spacing in the living areas is generally code compliant. In general, the wiring devices (receptacles and switches) are in good condition. NEC code now requires that all receptacles in dwelling units be tamper resistant, which did not appear to be the case for most of the existing devices.
- The site lighting consists of wall mounted fixtures and decorative post top lanterns.
- Lighting controls for dwelling units appear to be manual controls via switch. 2018 IECC requires occupancy sensors and vacancy style switches be required even within dwelling units.
- The facility is provided with CATV cabling originating from the main telecom demarcation point on the bottom floor. The cabling is then distributed out via a series of recessed wall cabinets in the corridors with drops to each dorm room and several public area CATV locations in lobbies and gathering areas.



- It does not appear that individual voice phone drops are provided in each dorm room, but data cabling drops are provided along with WIFI access points in the corridors throughout the facility.
- The existing building security system is comprised of CBORD access control at exterior doors and IP based CCTV cameras throughout the corridors and common areas. These systems are monitored by Campus Security and appear to be in good working order.
- The main Fire Alarm Control Panel (FACP) is in the ground floor main IT closet. The system has a Remote Annunciator in the main lobby. The fire alarm equipment in this building is Edwards Systems Technology equipment. The system appears to be in good working order and is addressable type. The building is sprinklered and the sprinkler system is monitored for flow and tamper by the FACP. Full smoke detector coverage is provided in the corridors. The smoke detectors in the dorm rooms are FACP system detectors with sounder bases providing local annunciation and supervisory monitoring by the system. Fire alarm horn/strobe devices were present in the units and horn/strobe coverage in the corridors and common areas appeared adequate.
- Single-station smoke alarms are not installed in unit bedrooms, but the system detectors with sounder bases and supervisory monitoring are an acceptable substitute by code.

CONSIDERATIONS FOR ELECTRICAL IMPROVEMENTS

- Owner should consider checking all feeders within switchgear and panelboards for proper tightness.
- Some panelboards within the facility are original equipment from when 1st built, are past the manufacturer's recommended useful life, and should be considered for replacement by owner.
- Owner should consider bringing AFCI protection up to current code requirements as well as correcting any missing or non-accessible and GFCI protection
- All branch circuits shall be checked for proper tightness.
- The wiring devices should be considered by owner for replacement within any units selected for renovation due to age and not being tamper resistant.
- Replacement of interior building lighting with new LED type should be considered for any areas of significant renovation in the future. Depending upon the level of renovations, upgrade of lighting controls may be required.
- Replacement of decorative post top lanterns and building mounted lighting with LED type is suggested.
- CATV, Data drops, and WIFI access points should be considered for addition or replacement only within areas of significant renovation in the future.
- Access Control and CCTV devices should be considered for addition or replacement only within areas of significant renovation in the future.
- Owner should consider installing low frequency type horns in standard units, and low frequency type horn/strobes in ADA units. Also, if a major renovation is undergone for this facility installation of Voice EVAC fire alarm notification should be considered to match current campus standard for new construction.
- Owner should consider changing the dorm unit smoke detectors (with sounder base) to combination smoke and CO detectors if they are not currently that type already.



**STONE HALL
EAST TENNESSEE STATE UNIVERSITY
JOHNSON CITY, TENNESSEE**

BACKGROUND

Facility Systems Consultants, LLC (FSC) and Brailsford & Dunlavey were retained by East Tennessee State University to provide a cursory review of the subject facility. The team observed the existing conditions of the facility on April 18, 2019. This report is a cursory review to recommend upgrades in relation to their current condition and improved space conditions.

EXECUTIVE SUMMARY

Stone Hall is recommended to be utilize \$1.5MM of targeted reinvestment. The location of this facility makes it an attractive selection due to its proximity to the newly renovated and expanded campus center. As it is currently occupied, the functional usage of this facility during the phase 1 planned implementation must be closely planned. Ideally, the building can remain occupied while renovations are occurring.

At 19,416 sf, Stone Hall is the smallest of the traditional residence halls (some Bucc Ridge buildings are smaller). The Phase I reinvestment funds allocated to this building for total project costs are approximately \$77/sf. B&D recommends an 80:20 split between construction and soft costs, which results in a construction cost of \$62/sf in construction costs. Given the substantial amount of asbestos in the building, areas that are renovated may also require abatement. This could limit the amount of system upgrades feasible. There are a few options to consider for this reinvestment initiative:

1. This building has not received any recent renovations and as such needs substantial work to align its condition with its sister facilities. Sealing up the building would be a first step by performing a window replacement. Large and visible gaps between the windows and the masonry can be seen in multiple locations. Installation of new, tight windows will improve HVAC conditions as well as the aesthetic. Additional cosmetic investment in the entry lobby and common area, inclusive of fixture replacement would round out this scope of work.
2. Address the HVAC systems and the abatement of the friable materials currently existing in the piping insulation, joints, and ceiling assembly. If the extent of the abatement is limited to the only the friable asbestos, costs may be able to be contained, however, the ceiling material will be the most costly to abate. B&D recommends consulting with an abatement professional to ascertain if abatement of the ceiling is mandatory, or if targeted abatement only where disturbances occur is acceptable and/or if there is an encapsulation option to consider. If a complete ceiling abatement and removal is not required, a replacement of the HVAC system is a viable option. If the ceilings must be abated this option is less feasible. Additionally, if this option is pursued over Option 1, the building will continue to not operate optimally, due to the condition of the windows and their inherent efficiency levels.



3. Replace specific HVAC units and reutilize existing distribution systems to not disturb asbestos containing materials (ACM's). Address plumbing leaks and degrading pipes, and address shower finishes throughout the facility. Basic and targeted finish upgrades (primarily at the entrance and lobby) could be managed within this budget within this scenario.

OBSERVATIONS CONCERNING EXISTING CONDITIONS

FSC and B&D personnel visited the site on April 18, 2019. No destructive or live service testing evaluations were part of the scope of services. The following general observances were made:

ARCHITECTURAL & INTERIOR FEATURES EXISTING

- The 19416 sf building was constructed in 1950 and is the second oldest residence hall on campus. There have been no recent renovations to the building, and many systems are believed to be original, inclusive of electrical, plumbing, HVAC, windows, and many finishes.
- The primary community room is directly off of the lobby and is essentially original, in dire need of an upgrade. There is a kitchen on the upper floors, and a laundry in the basement as the additional community areas.
- Asbestos ceilings remains and asbestos can be found throughout the building.
- The upper floors have no common/community lounge areas and the hallways standard narrow double-loaded corridors with low ceilings.
- Resident rooms are standard size, have VCT flooring, original fixtures, out of place countertops, sub-par closet spaces and general dated furnishings.
- Areas of the building are not up to current codes. For example, the staircase handrails and guards are lower than current codes.

CONSIDERATIONS FOR INTERIOR IMPROVEMENTS

- Abate asbestos as it is encountered.
- To promote and provide areas for community building:
 - Open the partition further to the large community room on the first floor to promote common social use, community building, and larger events.
 - Repurpose, open, and renovate areas on the upper resident floors to create more inviting and accommodating common rooms. Consider combining 2 resident rooms and removing the wall to the corridor to open the hall and provide areas with soft seating and other amenities.
- To the extent practicable, incorporate code and accessibility updates, as well as asbestos abatement in areas receiving renovations.
- Replace all lighting and plumbing fixtures with new fixtures.
- Remove built in countertops in resident rooms and rebuild closets to be more substantial or purchase wardrobes as a replacement to what is currently in place.



- The lobby is dark and very dated. This needs an upgrade and a modernization.
- The windows are original and are inefficient and leaking. Replacement windows are necessary to seal the building and provide a controlled environment to receive new HVAC systems.
- The building residence report Wifi and Hot Spot inconsistency and outages throughout the building.
- Overall update finishes. Inclusive of paint, ceiling, blinds, flooring, and casework. Consider block filling and/or furring brick and CMU walls.
- Purchase new and contemporary furnishings.

MECHANICAL SYSTEMS EXISTING

- The existing Heating and Cooling system for the building consists of a 2-pipe fan coil system. Maintenance staff changes over between the systems seasonally.
- Steam and steam condensate piping in mechanical room in poor condition.
- Maintenance staff indicated the building hydronic piping was in fair to poor condition.
- Plumbing fixtures in the rooms are in good condition. The fixtures in the common showers are in poor condition.
- Domestic water heating is provided through steam to hot water heat exchanger along with gas water heating backup. The gas water heaters are in good condition.
- Domestic water piping visible in mechanical room in poor condition. Maintenance personnel on site indicated the condition of the water and sanitary piping throughout was in poor condition.
- Building was fully sprinklered.

CONSIDERATIONS FOR MECHANICAL IMPROVEMENTS

- It is recommended to replace existing HVAC system with a more reliable system in terms of maintenance needs and temperature/humidity control.
- It is not recommended to replace any plumbing fixtures or water heaters in the building.
- Consider replacement of all domestic and sanitary sewer piping.

ELECTRICAL SYSTEMS EXISTING

- The existing building has an existing 800 ampere single phase service at 240/120 Volts, 1-Phase, 3-Wire.
- The building has one 800 ampere interior main breaker distribution panelboard that was replaced in approximately 1990 and is in fair condition. The distribution panel serves major loads for the mechanical system and feeds the balance of the new and existing



distribution and branch panels in the building. The facility does not have an emergency power system (generator).

- Panelboards serving branch circuits are typically recessed in corridor walls and are a mixture of old and new equipment with mostly old interiors and cans in most cases.
- General lighting in corridors was by way of recessed lensed 2'x2' fluorescent fixtures with surface mounted fixtures in stairways and decorative surface mounted residential style fixtures at the common areas.
- Dorm room lighting is typically surface mounted fluorescent 1'x4' wrap-around fixtures. Restroom fixtures consist of vanity wall brackets with surface fluorescent 1'x4' fixtures on the ceiling.
- The facility emergency lighting is served by standard twin-head emergency lighting units with battery back-up. Exit signs and exit/emergency combination units also have battery back-up. Coverage appears adequate in most areas. Exterior exit doors do not have emergency exit discharge lighting to the public way.
- Each dorm room typically has a 120V receptacles and over-head fluorescent lighting surface mounted. Dorm room circuits are not served by Arc-Fault (AFCI) breakers. GFCI protection is provided for most receptacles where within 6 feet of a sink.
- The branch circuit wiring is single conductor in conduit or wiremold. All units observed appear to have branch circuit wiring in good condition.
- The receptacle spacing in the living areas is generally code compliant. In general, the wiring devices (receptacles and switches) are in good condition. NEC code now requires that all receptacles in dwelling units be tamper resistant, which did not appear to be the case for most of the existing devices.
- The site lighting consists of recessed and wall mounted fixtures and decorative post top lanterns.
- Lighting controls for dorm units appear to be manual controls via switch. 2018 IECC requires occupancy sensors and vacancy style switches be required even within dwelling units.
- The facility is provided with CATV cabling originating from the main telecom demarcation point on the bottom floor. The cabling is then distributed out via a series of recessed wall cabinets and closets in the corridors with drops to each dorm room and several public area CATV locations in lobbies and gathering areas.
- It does not appear that individual voice phone drops are provided in each dorm room, but data cabling drops are provided along with WIFI access points in the corridors throughout the facility. Facility has an old intercom and clock system the functionality of which is unknown.
- The existing building security system is comprised of CBORD access control at exterior doors and IP based CCTV cameras throughout the corridors and common areas. These systems are monitored by Campus Security and appear to be in good working order.
- The main Fire Alarm Control Panel (FACP) is in the 2nd floor IT closet. The system has a Remote Annunciator in the main lobby. The fire alarm equipment in this building is Simplex Company equipment. The system appears to be in good working order and is addressable, voice-evac type. The building is sprinklered and the sprinkler system is monitored for flow and tamper by the FACP. Full smoke detector coverage is



provided in the corridors. The smoke detectors in the dorm rooms are FACP system detectors with sounder bases providing local annunciation and supervisory monitoring by the system. Fire alarm strobe only units were present in each room, but mini-speaker devices were not present in the units. Speaker/strobe coverage in the corridors and common areas appeared adequate.

- Single-station smoke alarms are not installed in unit bedrooms, but the system detectors with sounder bases and supervisory monitoring are an acceptable substitute by code.

CONSIDERATIONS FOR ELECTRICAL IMPROVEMENTS

- Owner should consider checking all feeders within switchgear and panelboards for proper tightness.
- If a significant renovation is undertaken the power system should likely be completely upgraded to 208Y120 Volt, 3-Phase, 4-wire service.
- Most panelboards within the facility are original equipment from when 1st built, are past the manufacturer's recommended useful life, and should be considered for replacement by owner.
- Owner should consider bringing AFCI protection up to current code requirements as well as correcting any missing or non-accessible and GFCI protection
- All branch circuits should be checked for proper tightness.
- The wiring devices should be considered by owner for replacement within any units selected for renovation due to age and not being tamper resistant.
- Replacement of interior building lighting with new LED type should be considered for any areas of significant renovation in the future. Depending upon the level of renovations, upgrade of lighting controls may be required.
- Replacement of decorative post top lanterns and building mounted lighting with LED type is suggested.
- CATV, Data drops, and WIFI access points should be considered for addition or replacement only within areas of significant renovation in the future.
- Access Control and CCTV devices should be considered for addition or replacement only within areas of significant renovation in the future.
- Owner should consider installing low frequency type speakers in standard units, and low frequency type speaker/strobes in ADA units.
- Owner should consider changing the dorm unit smoke detectors (with sounder base) to combination smoke and CO detectors if they are not currently that type already.