

THE CASE FOR HIGH-RISE  
RENO VS. DEMO

# Taking Housing Renovation to New Heights

PRESENTED BY:

CLEMSON  *home*

BOUDREAUX + LITTLE  
DIVERSIFIED ARCHITECTURAL CONSULTING

Campus  
Home. 23  
*live!*  
acuho-i  
CONFERENCE & EXPO

# Land Acknowledgement

**We acknowledge that the main campus of Clemson University occupies the traditional and ancestral land of the Cherokee People. Clemson's main campus is built on land seized through US military and diplomatic incursions culminating in the Treaty of Dewitt's Corner in 1777. It is also land on which people enslaved by the Pickens, Clemson, and Calhoun families lived and worked, and that was transformed into the campus of Clemson University through convict labor.**

**We make this acknowledgement to remember the histories of violence that anticipate our residence there, to recognize Indigenous and Black claims to life and land, and to recenter those claims as we commit to better ways of caring for each other and for that land.**

# Presenters



**Kathy Hobgood**  
Associate VP  
Auxiliary Enterprises



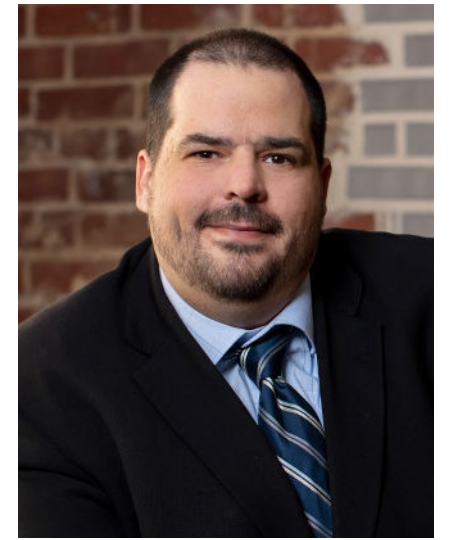
**Donnie Lloyd**  
Director of Operations and  
Planning



**Thomas Carlson-Reddig,**  
AIA, LEED AP  
Community Practice Leader



**Heather Mitchell, AIA,**  
LEED AP  
President | Architect



**Justin Abrams, AIA**  
Architect

**Clemson University  
Clemson, SC**



**Founded 1889  
Land Grant Mission**

**22,566  
Undergraduate  
Students**



**5,900  
Graduate  
Students**

**27 Residence Halls  
On Campus**



**4 Apartment  
Communities**

**3 Dining  
Halls**



**24 Retail  
Locations**

**7,883  
Beds**





**POLL:**

**Who here has the oldest  
high-rise?**

Byrnes Hall

1970

Lever Hall

1968

Manning Hall

1967

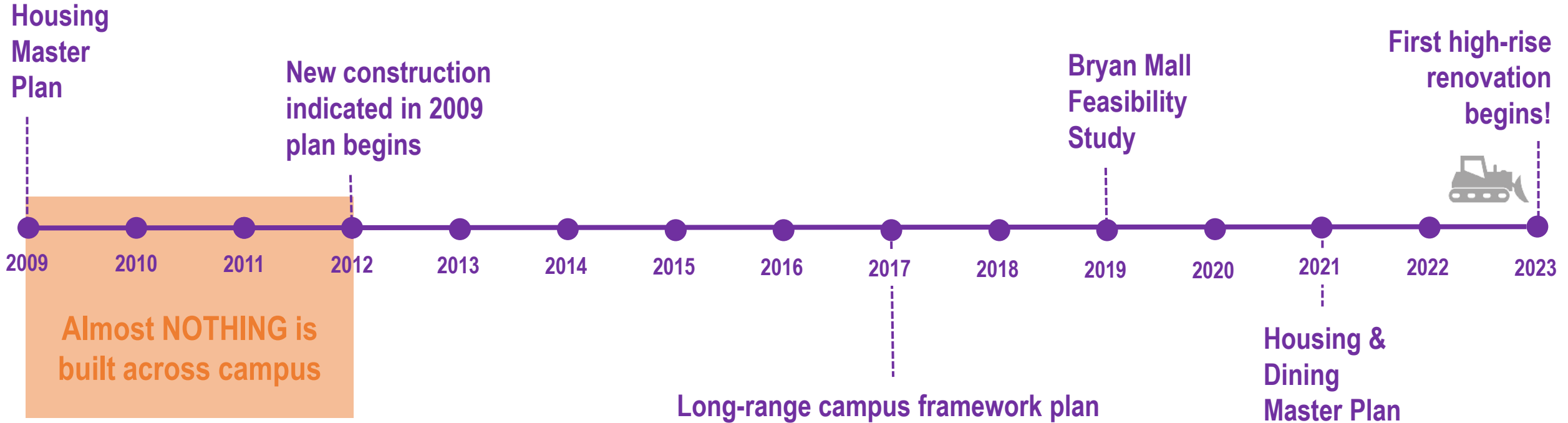








# Housing Master Plan Phases



# Key decisions in the renovate vs remodel debate

## COST

- Demolition
- Cost – New Construction
- Cost – Renovation projects

## BIGGER PICTURE

- Overall inventory balance
- Rent rates and cost of attendance
- Sustainability metrics



# Low-rise decision

## RENOVATION

114,000 SF

\$17,394,092

(2021 Dollars)



## DEMO & NEW CONSTRUCTION

112,693 SF

\$35,949,049

(2021 Dollars)

# High-rise Decision

## RENOVATION

**\$96 million**

(Cost Estimate Pre-Covid)



## DEMO & NEW CONSTRUCTION

**\$7.1 million**

(Demo Only)

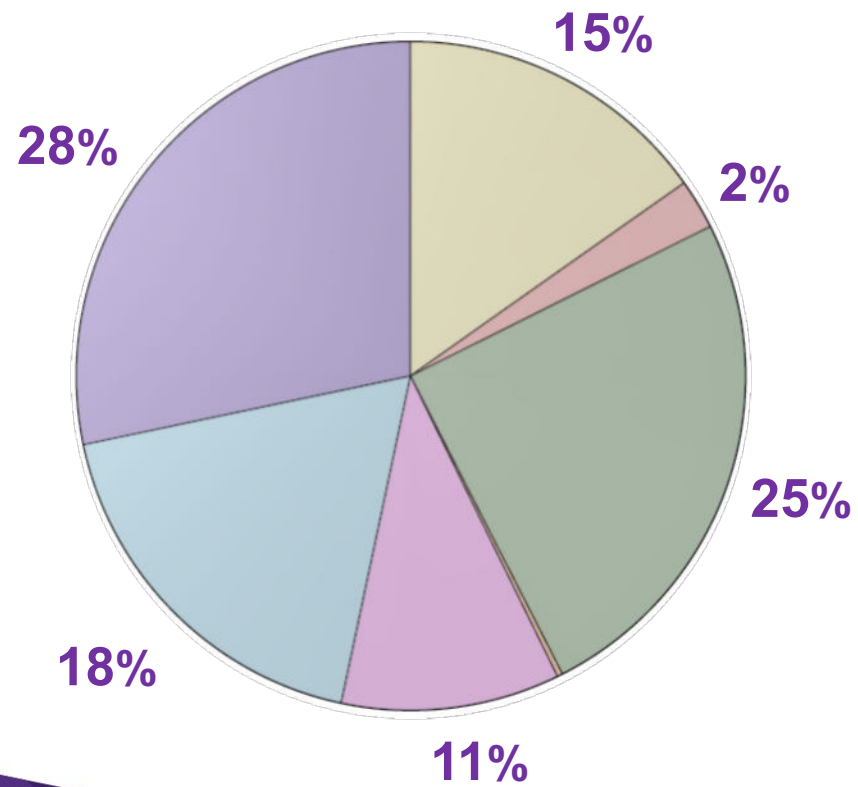
**\$225 million**

(New Construction)

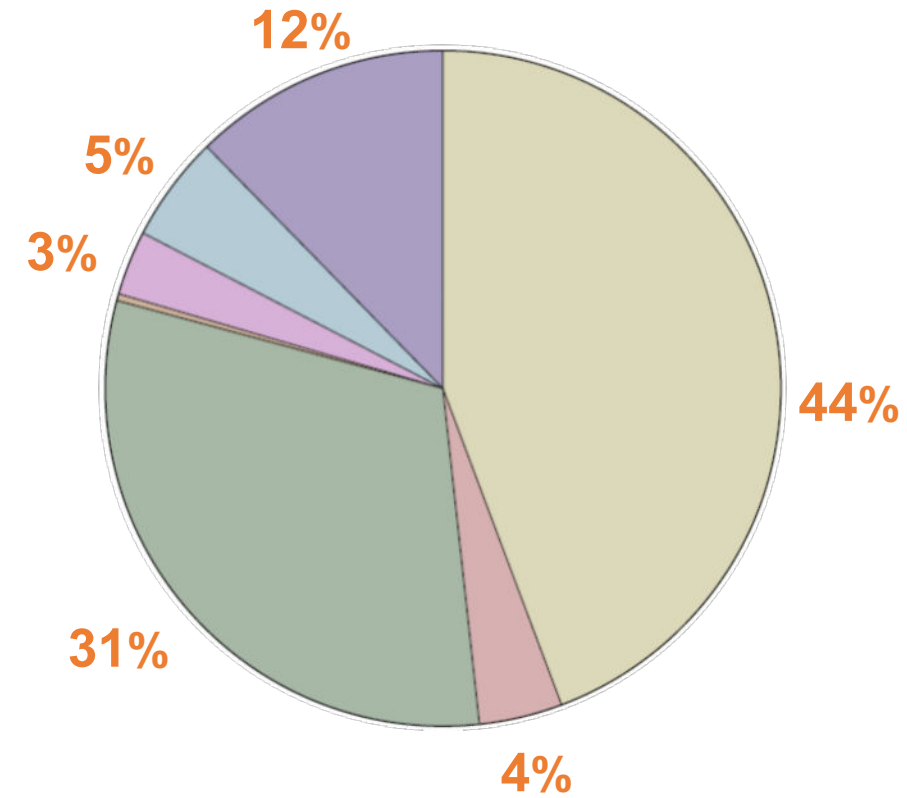
# High-rise Decision

## Embodied Carbon Impact

### RENOVATION



### NEW CONSTRUCTION



#### Divisions

- 03 - Concrete
- 04 - Masonry
- 05 - Metals
- 06 - Wood/Plastics/Composites
- 07 - Thermal and Moisture Protection
- 08 - Openings and Glazing
- 09 - Finishes

# High-rise Decision

## Embodied Carbon Impact

### RENOVATION

**795** Metric Tons of CO<sub>2</sub>

794,900 kgCO<sub>2</sub>eg

#### Equivalent to:

- 2,038,021 miles driven in 1 year
- 100 homes energy use for 1 year
- Carbon sequestered by 948 acres of US forest in one year or 142,200 mature trees, plus soils.



### DEMO & NEW CONSTRUCTION

**2877** Metric Tons of CO<sub>2</sub>

2,876,695 kgCO<sub>2</sub>eg

#### Equivalent to:

- 7,375,330 miles driven in 1 year
- 363 homes energy use for 1 year
- Carbon sequestered by 3431 acres of US forest in one year or 514,650 mature trees, plus soils.

# High-rise Decision

Embodied Carbon Impact

72% EMBODIED CARBON REDUCTION

2082

Metric Tons of  
CO2

5,337,309

Miles Driven  
Annually

262

Homes

2483

Acres

372450

Mature Trees





BEFORE



AFTER



BEFORE



AFTER



UNIVERSITY OF  
**GEORGIA**



**Brumby Hall**  
Renovated 2020



**Russell Hall**  
Renovated 2018

**Creswell Hall**  
Feasibility study 2020



**+ Oglethorpe Hall**  
Feasibility study 2021



BEFORE



AFTER



BEFORE



**WISCONSIN**  
UNIVERSITY OF WISCONSIN-MADISON



AFTER



BEFORE



AFTER



BEFORE



THE OHIO STATE UNIVERSITY



AFTER



BEFORE



AFTER

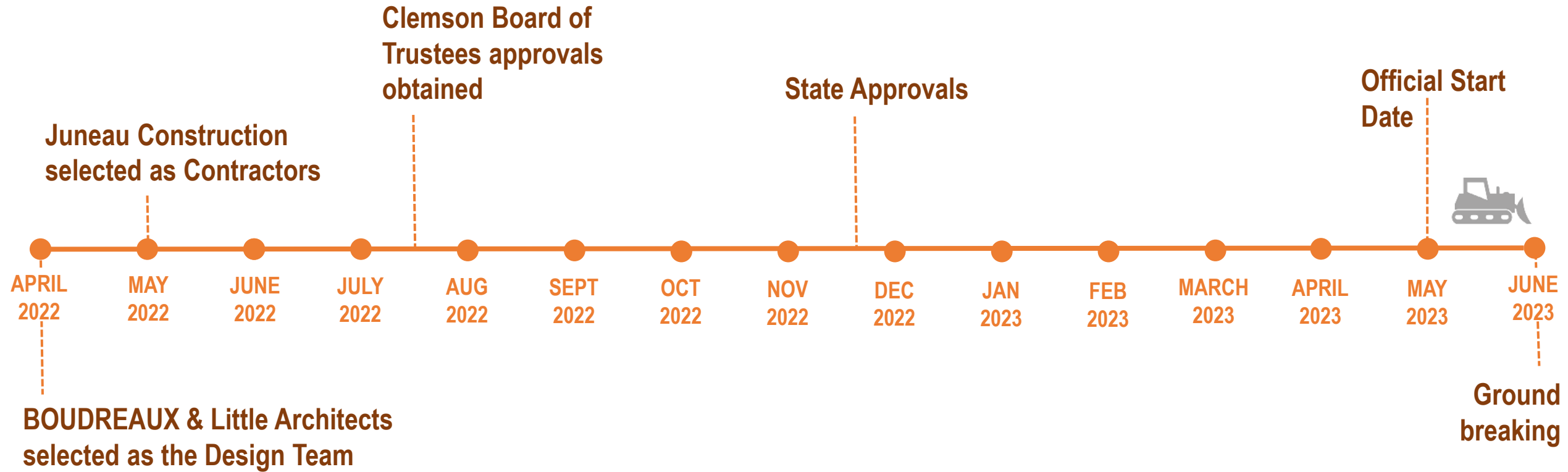




**POLL:**

**Who has the highest  
high-rise?**

# Planning Thus Far



# Early Visioning



# Early Visioning



# Early Visioning



# Visioning Sessions

## MUST HAVES (ALL INF./UTILITIES)

- REFER TO LIST
- ELECT.
- ENHANCE TECH — FOR STREAMING / TELECONFERENCE GAMING
- NEW WAPS BEING ADDED NOW
- NEED TO LOOK AT ALL STAFF APTS (LEVER)
  - DOESN'T HAVE TO BE ON 1ST FLOOR
- BATHROOMS
- STUDY ROOMS
- MORE PACKAGE LOCKERS UNDER COVER
- IMP. OF LIGHT QUALITY/EFFIC.
- WATER FILLING ST.
- EXT. LIGHTING
- IMPROVE BIKE STORAGE
- ATMS GO AWAY / MOVE ??
- ELEVATORS - TBD THYEN COOK



## WOULD BE NICE

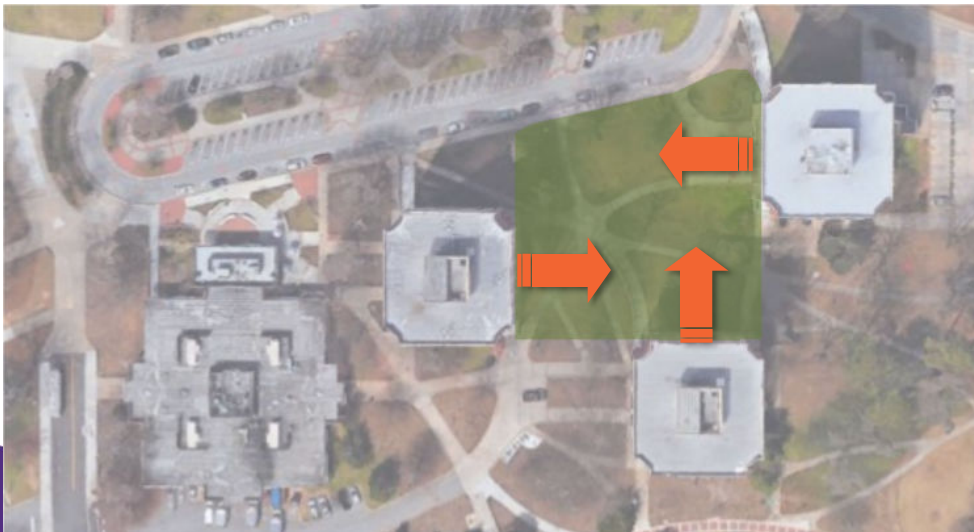
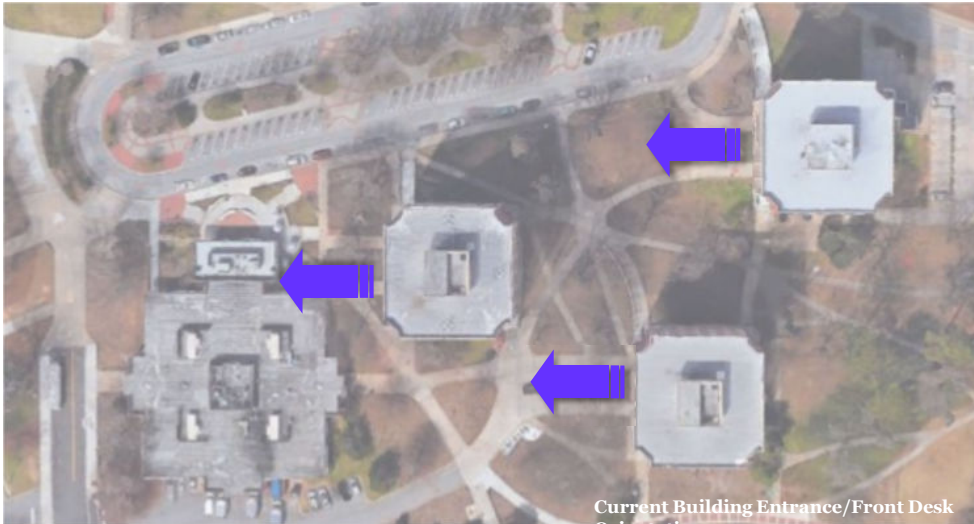
- ALL BEDROOMS ADA COMPLAINT (UNLESS REQUIRED)
- EXIT SIGNS THAT 'CAN'T' BE DAMAGED
- SEE NOTES, CONDUIT BUILT IN FOR FUTURE CARD READER INFRAST.
- LOBBIES FACING QUAD
- 1 GEN./BUDS
- SPACE FOR WHOLE FLOOR TO COME TOGETHER
- EXTERIOR FACADE

## WOULD LOVE IT, BUT... DREAMWORLD

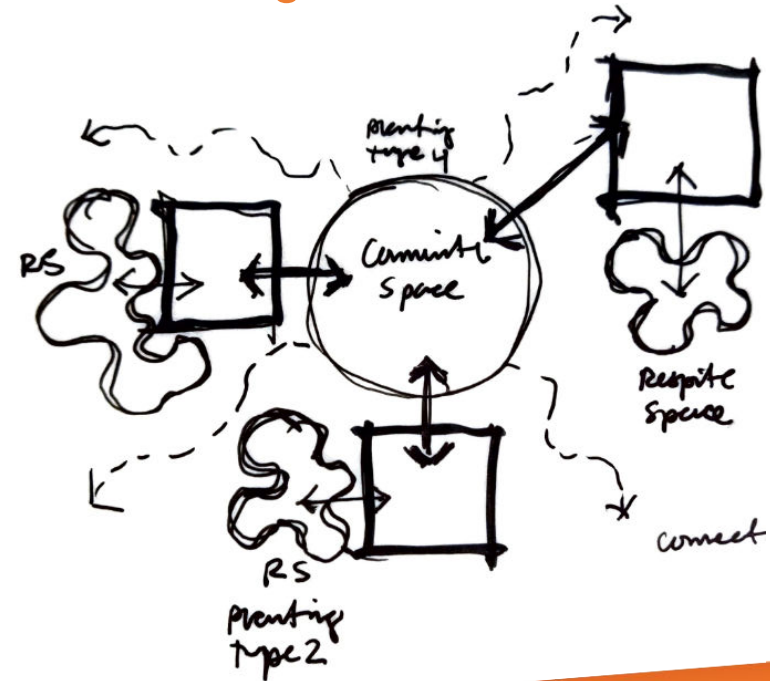
- HAMMOCKS
- SEE NOTES - OUTDOOR FURN
- TRANKA GOING TO MAULDIN > maybe go to Manning 200¢  
Basic pay box
- EXT. LOUNGE

1. All entrances from central quad
2. Expand building area into patio areas
3. More natural light
4. Variety of adaptable & flexible spaces
5. Stronger indoor/outdoor connection

# Visioning Sessions



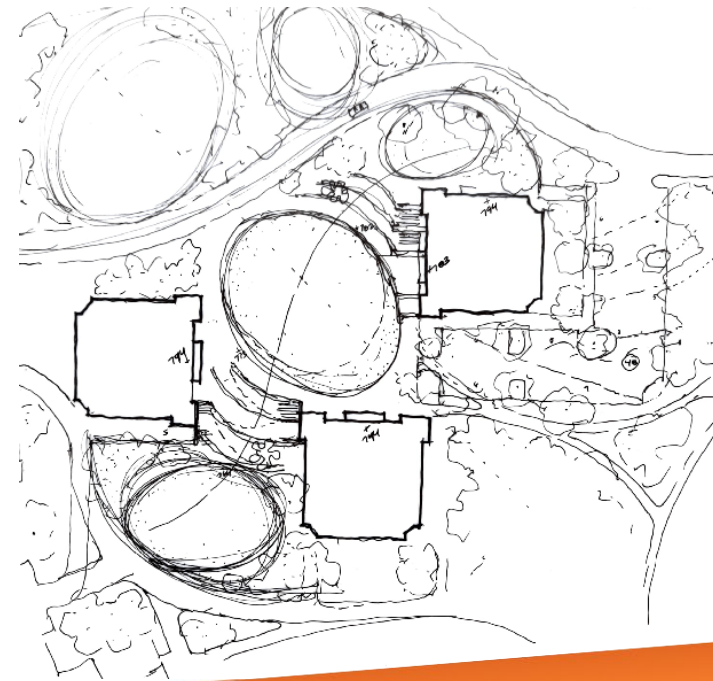
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# Visioning Sessions



1. All entrances from central quad
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**POLL:**  
**Who lived in a high-rise?**



# Existing Building Analysis

## Residence Rooms

2-bed units arranged in quads

## Restrooms

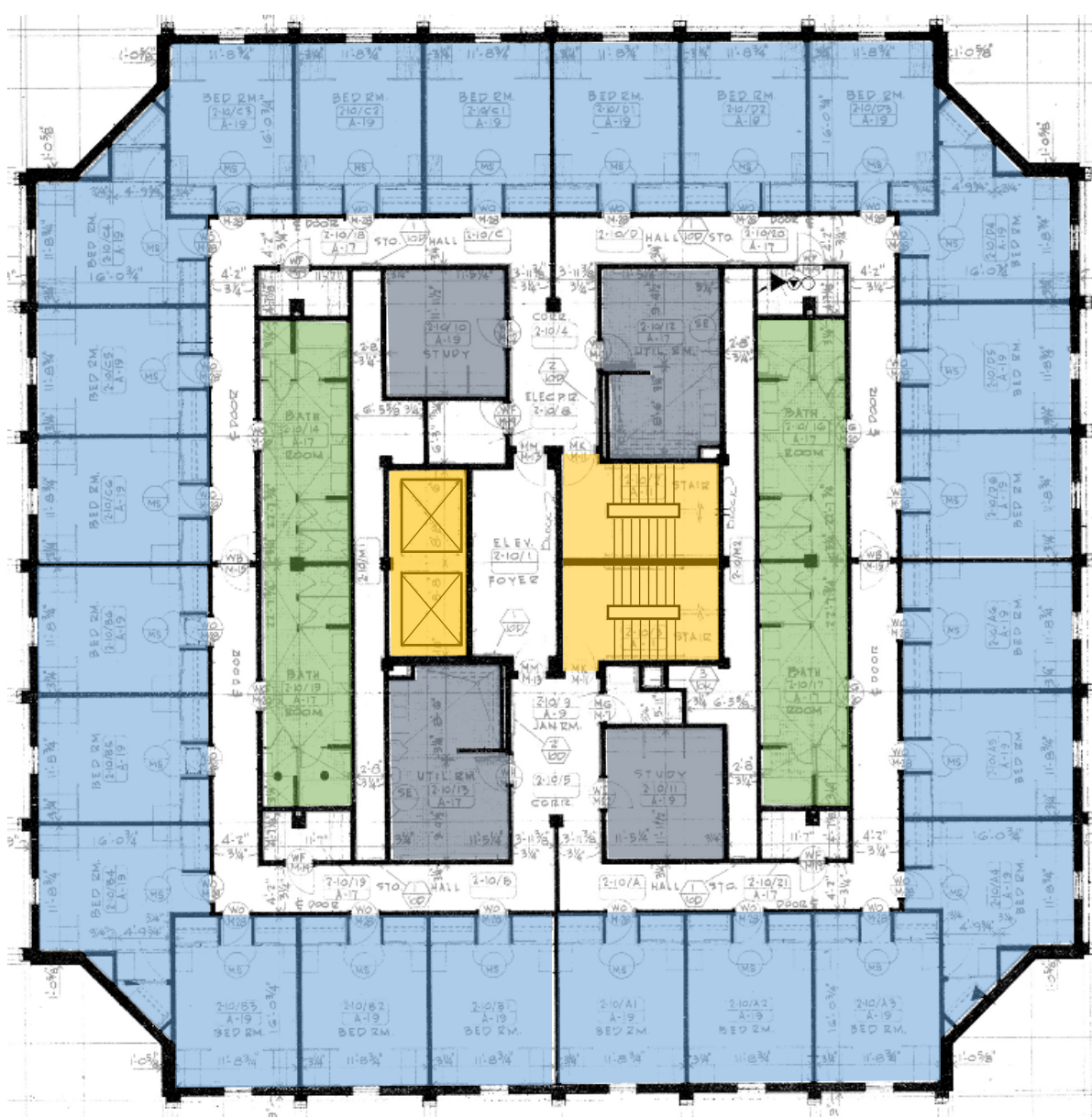
dated hall restrooms with shower and toilet stalls

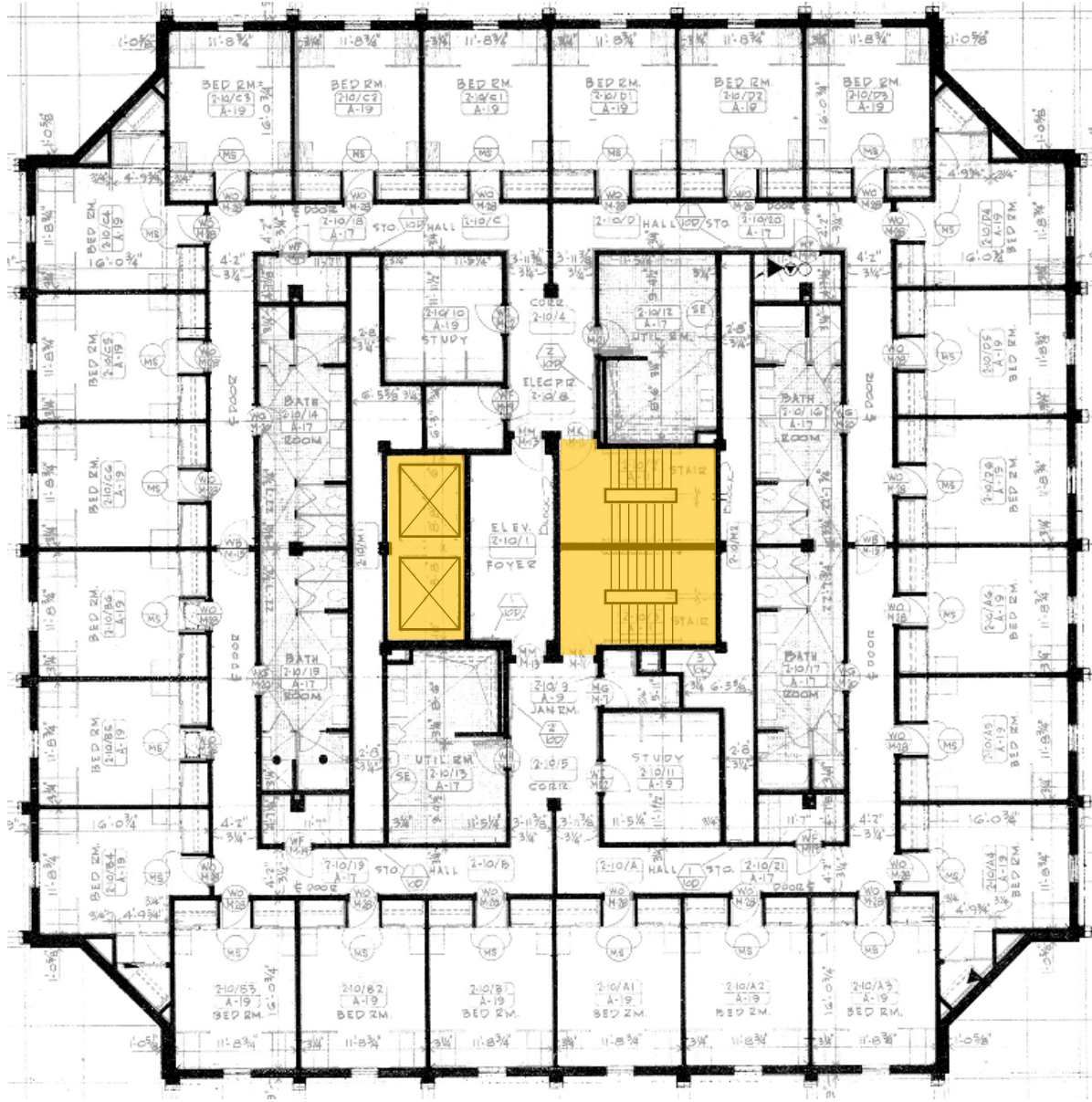
## Study / Utility Rooms

taken over for overflow or storage

## Core

## Service / Circulation





# Building Deficiencies

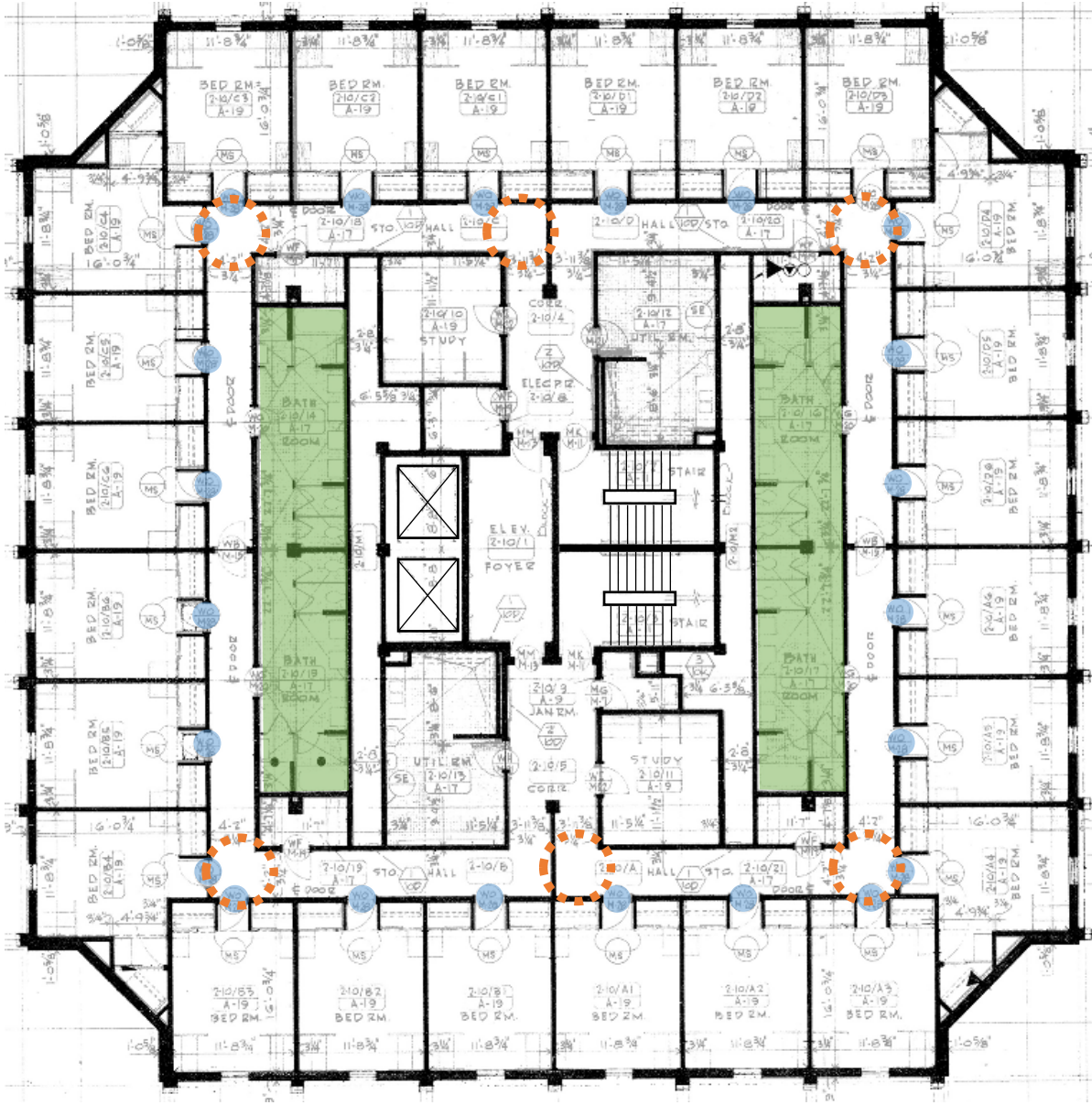
## Code Issues

### Stairs

- Too close together and too steep without proper guardrails

### Elevators

- Can't accommodate stretcher



# Building Deficiencies

## Accessibility Issues

### Unit Entrances

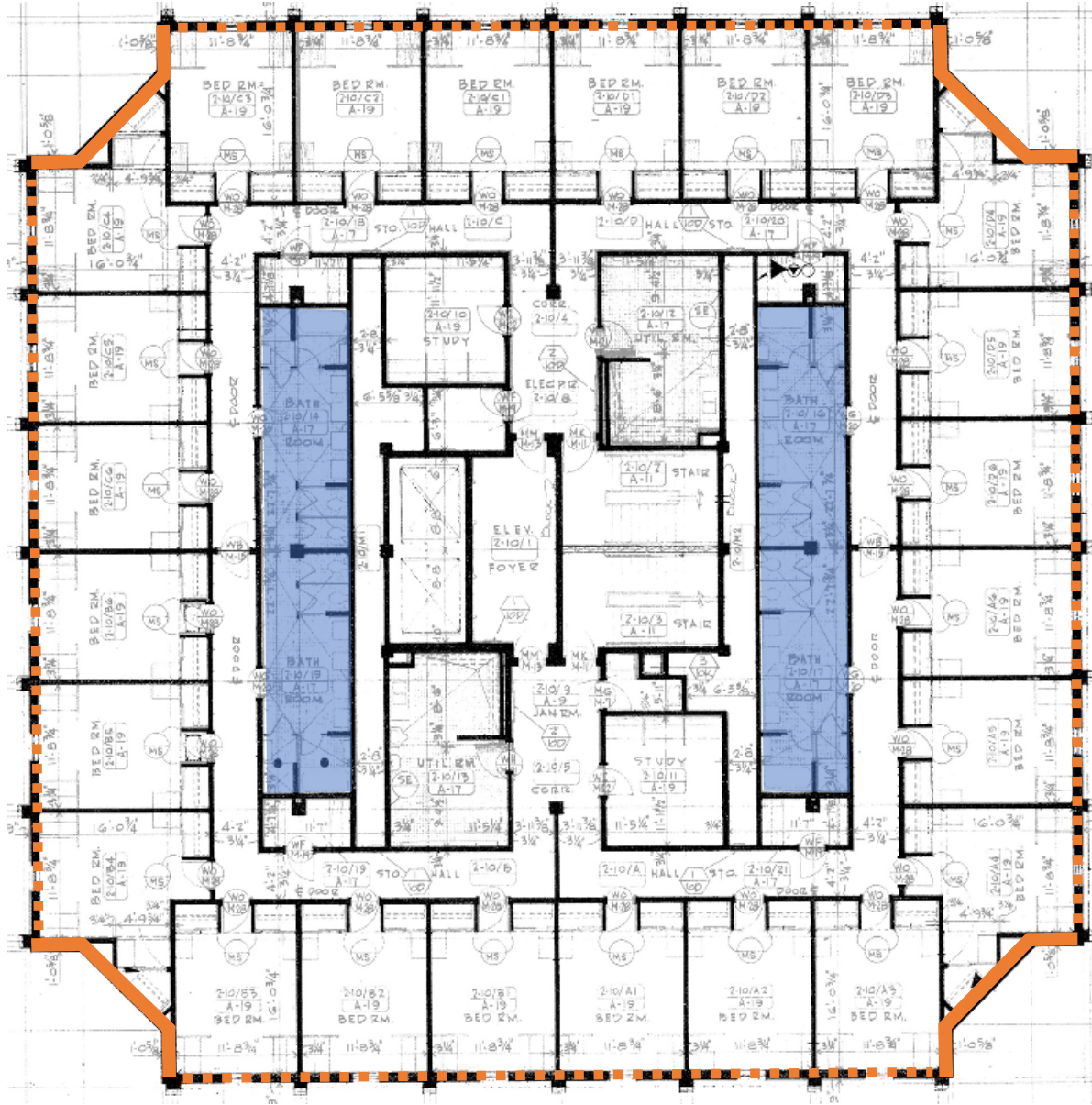
- 2'-8" doors with no clearance

### Corridors

- 4' wide with no turn area

### Restrooms

- No accessible toilet or bath stalls
- Thick set tile to high for wheelchair accessible threshold into room



# Building Deficiencies

## Systems / Construction Issues

### Exterior Envelope

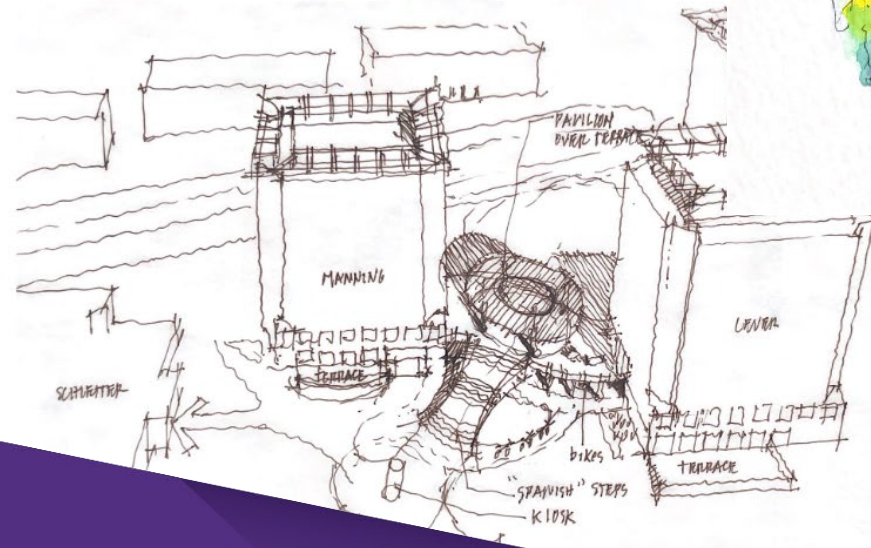
- Water infiltration at chamfered corner masonry walls
- Little or no insulation in exterior walls with un-insulated glass windows

### Plumbing

- Widespread pinhole leaks in 50-year-old piping.
- Excessive maintenance effort to keep building occupiable.

### Mechanical

- Units well past service life



\$ \$ \$



# Design Drivers



Community & Place



Central Quad Entries



Study Spaces



Connection to  
Outdoors



Flexibility



A New Fresh Look



Professional  
Apartments



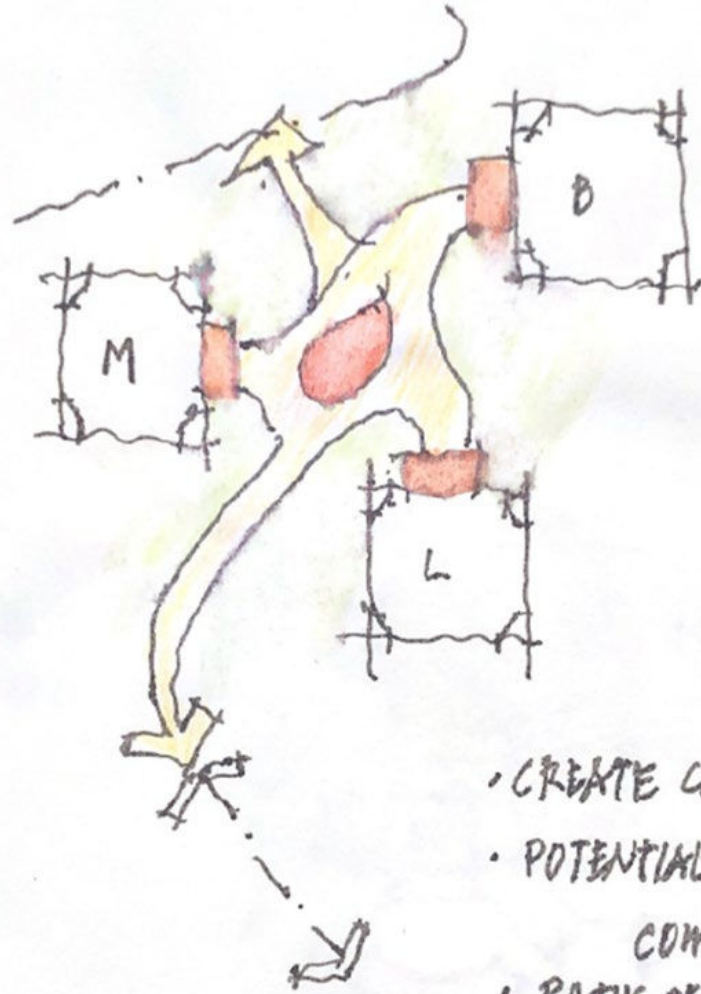
Campus Consistency



Green Globes



# 1ST YEAR EXPERIENCE






- CREATE CONNECTIONS
- POTENTIAL CENTRAL COMMONS
- PATHS OF LEAST RESISTANCE

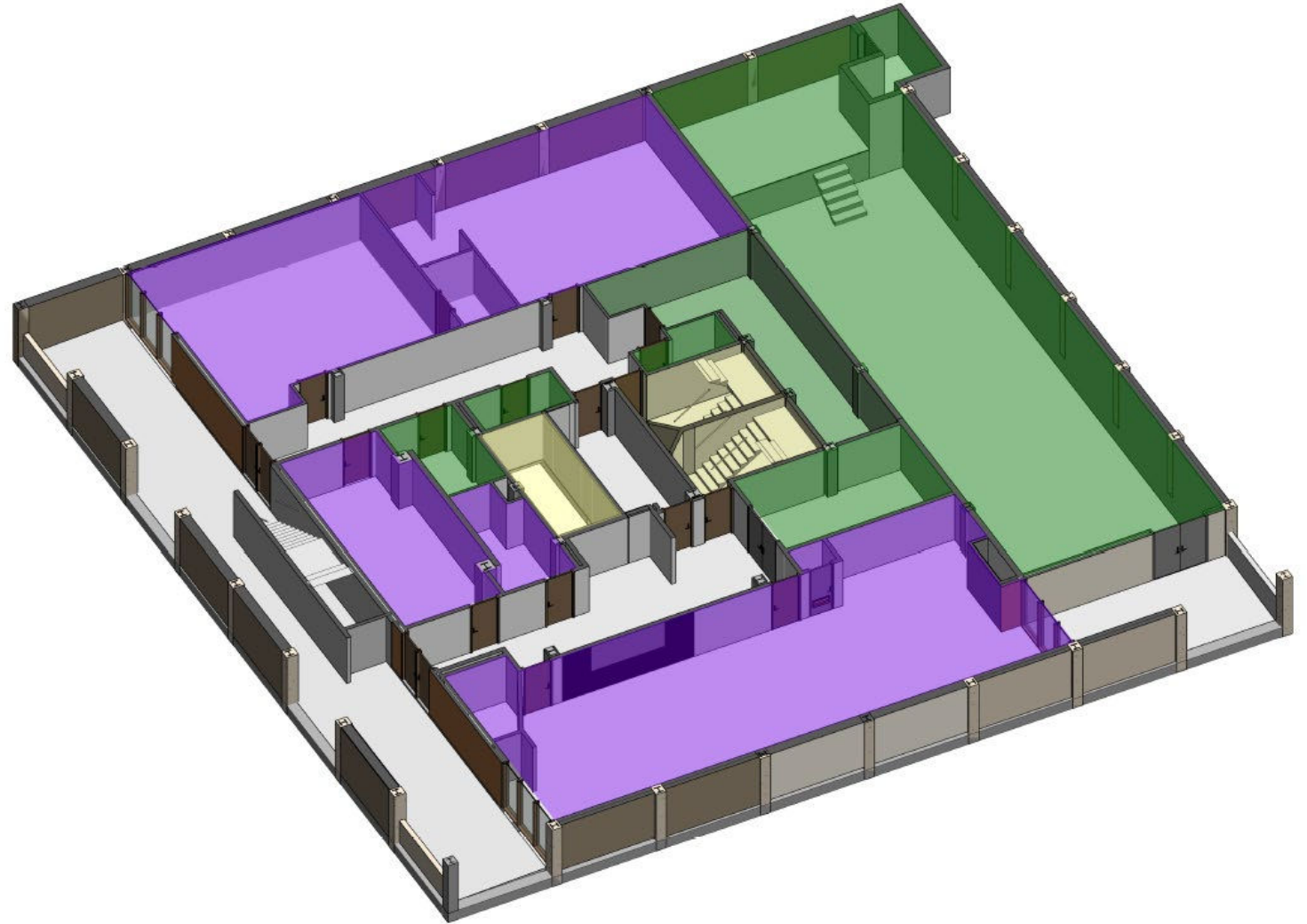
# Byrnes Hall: Existing Conditions



BYRNES HALL




# Existing Ground Level

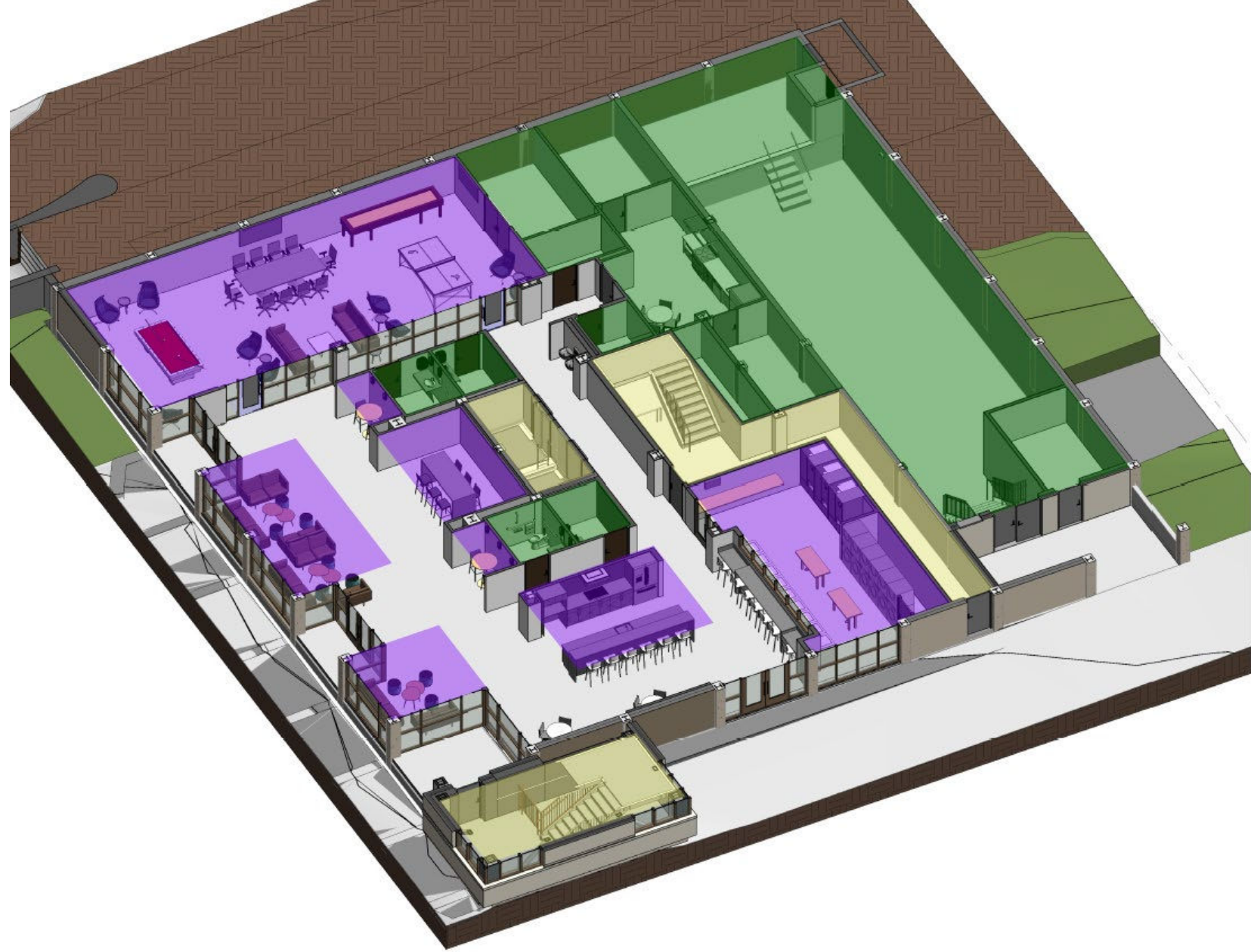
-  - Social Space
-  - Systems & Core
-  - Vertical Circulation



BYRNES HALL

# New Ground Level

-  - Social Space
-  - Systems & Core
-  - Vertical Circulation









**BEFORE**

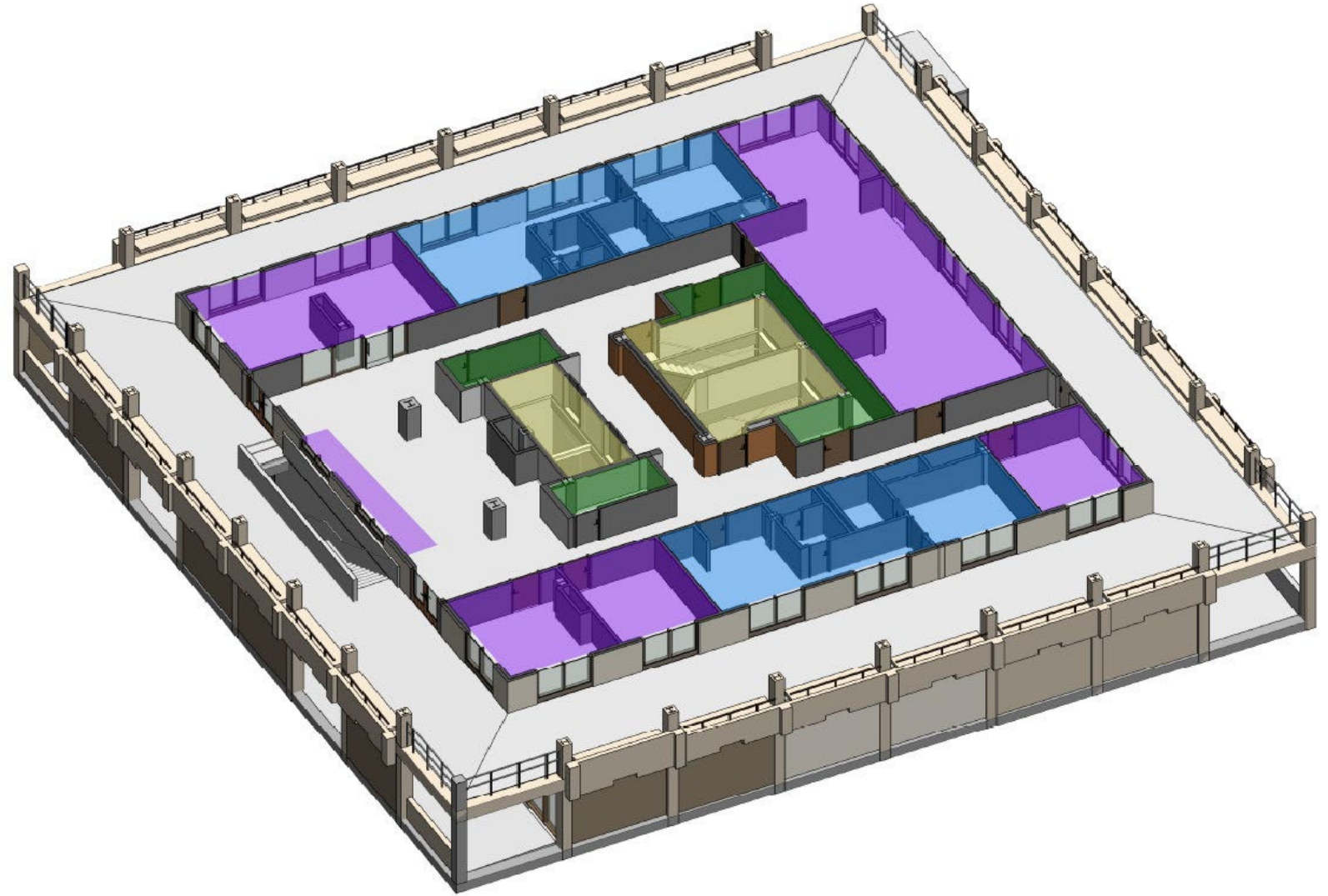


**CURRENT RENDERING**

BYRNES HALL





# Existing Level 01

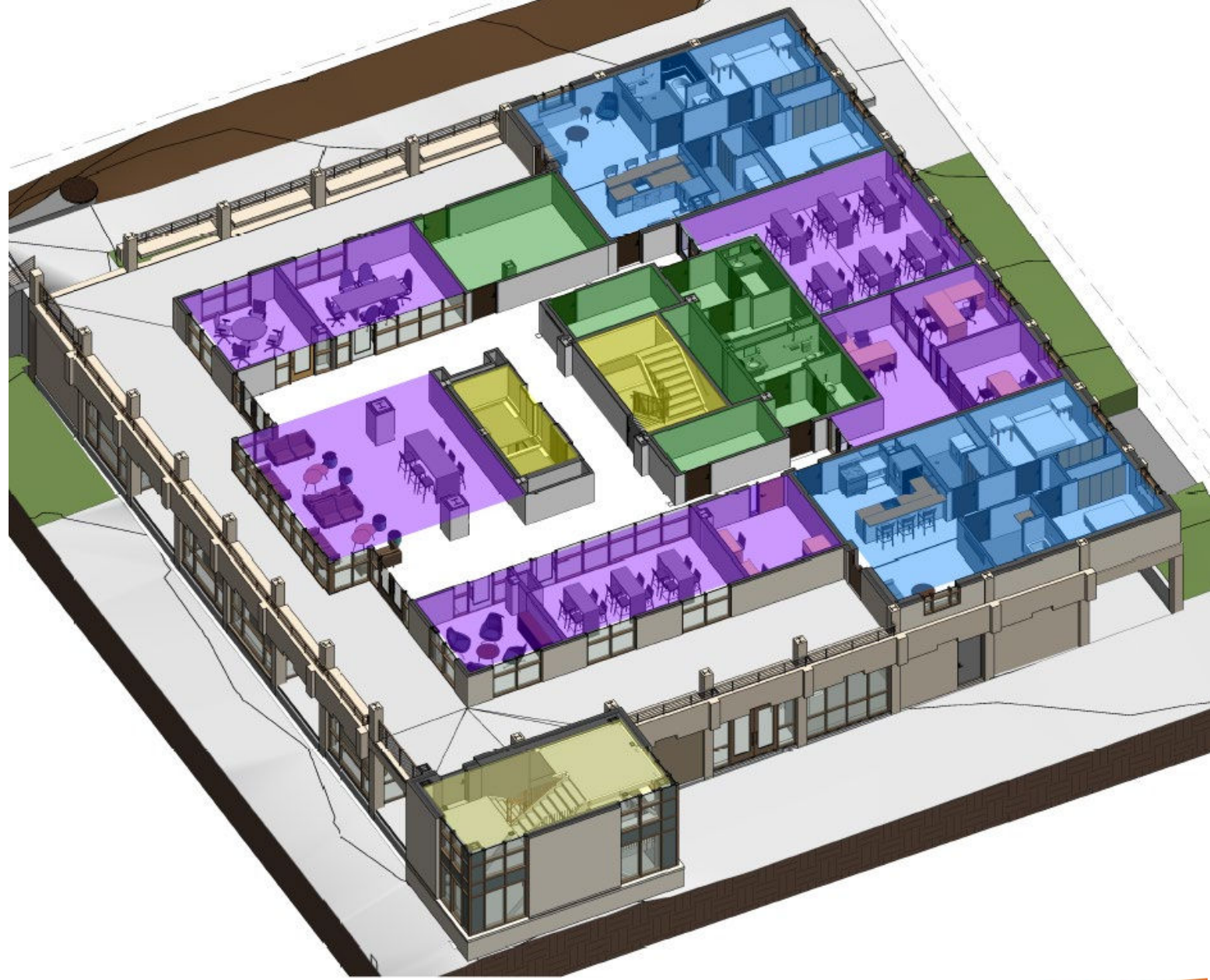
-  - Social Space
-  - Systems & Core
-  - Vertical Circulation
-  - Staff Apartments



BYRNES HALL

# New Level 01

-  - Social Space
-  - Systems & Core
-  - Vertical Circulation
-  - Staff Apartments





**BEFORE**







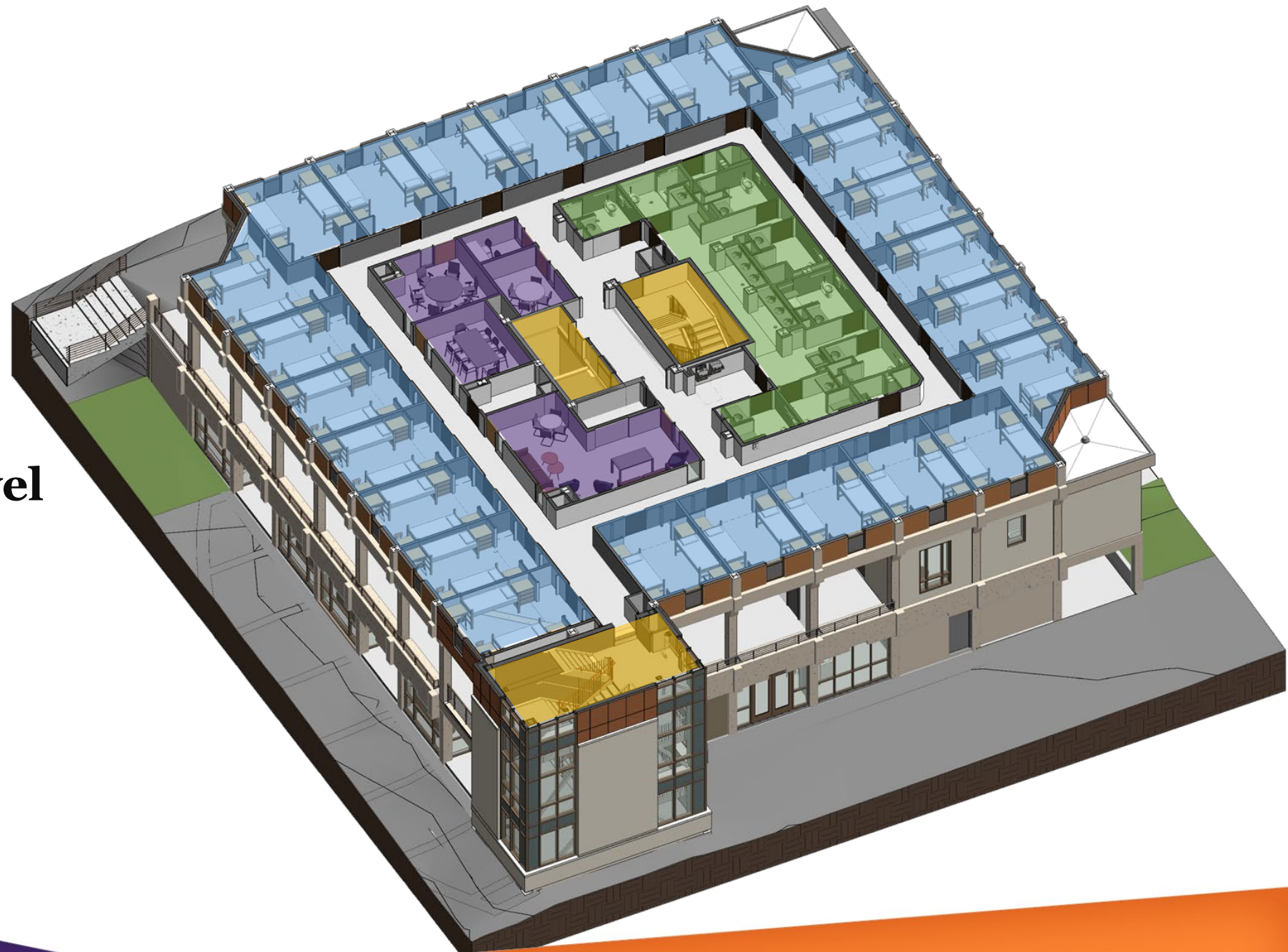
**CURRENT RENDERING**



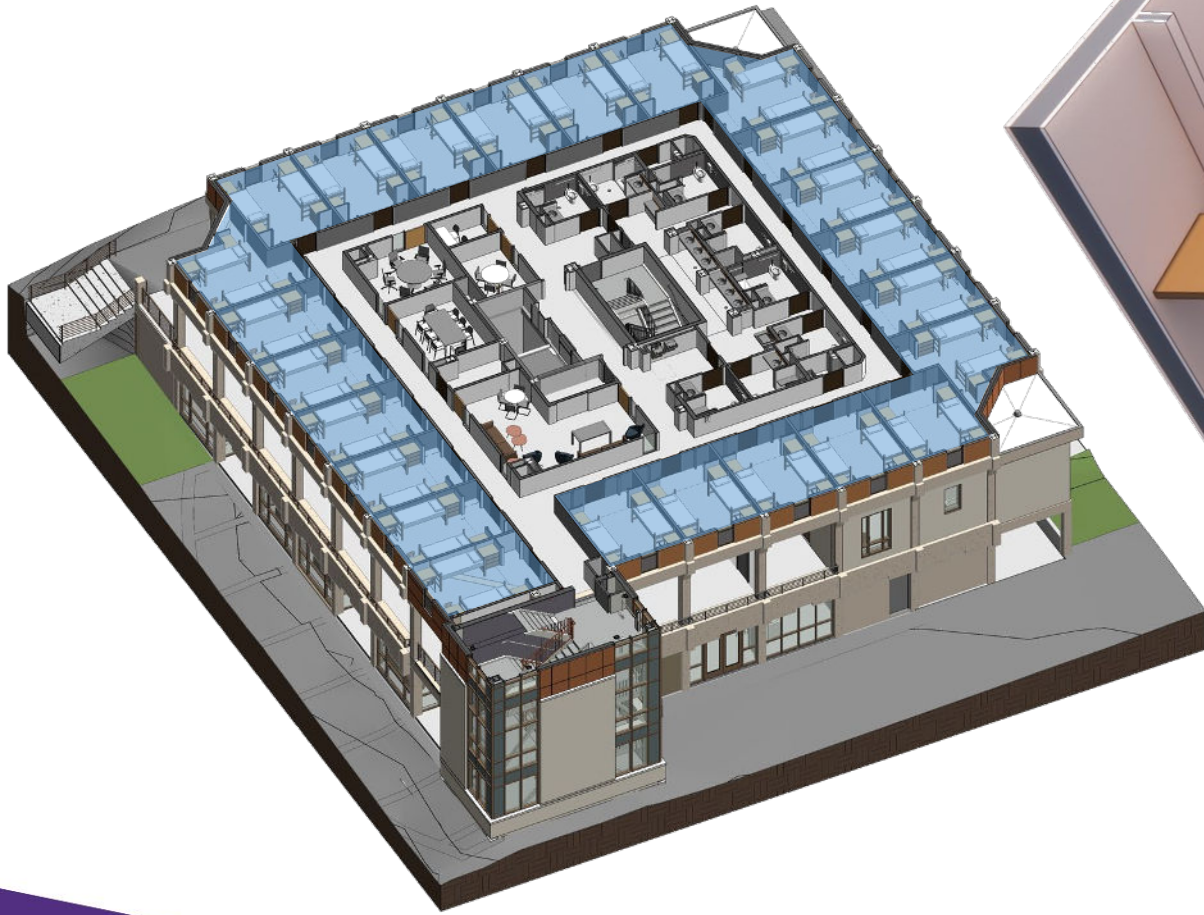
BYRNES HALL

## New Typical Residential Level

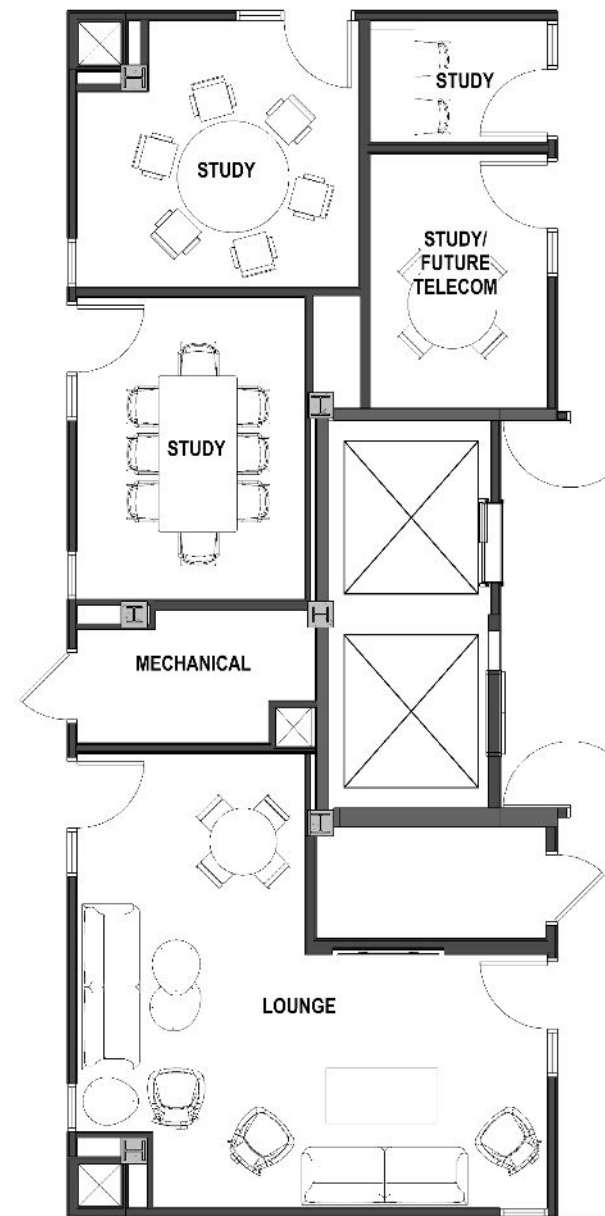
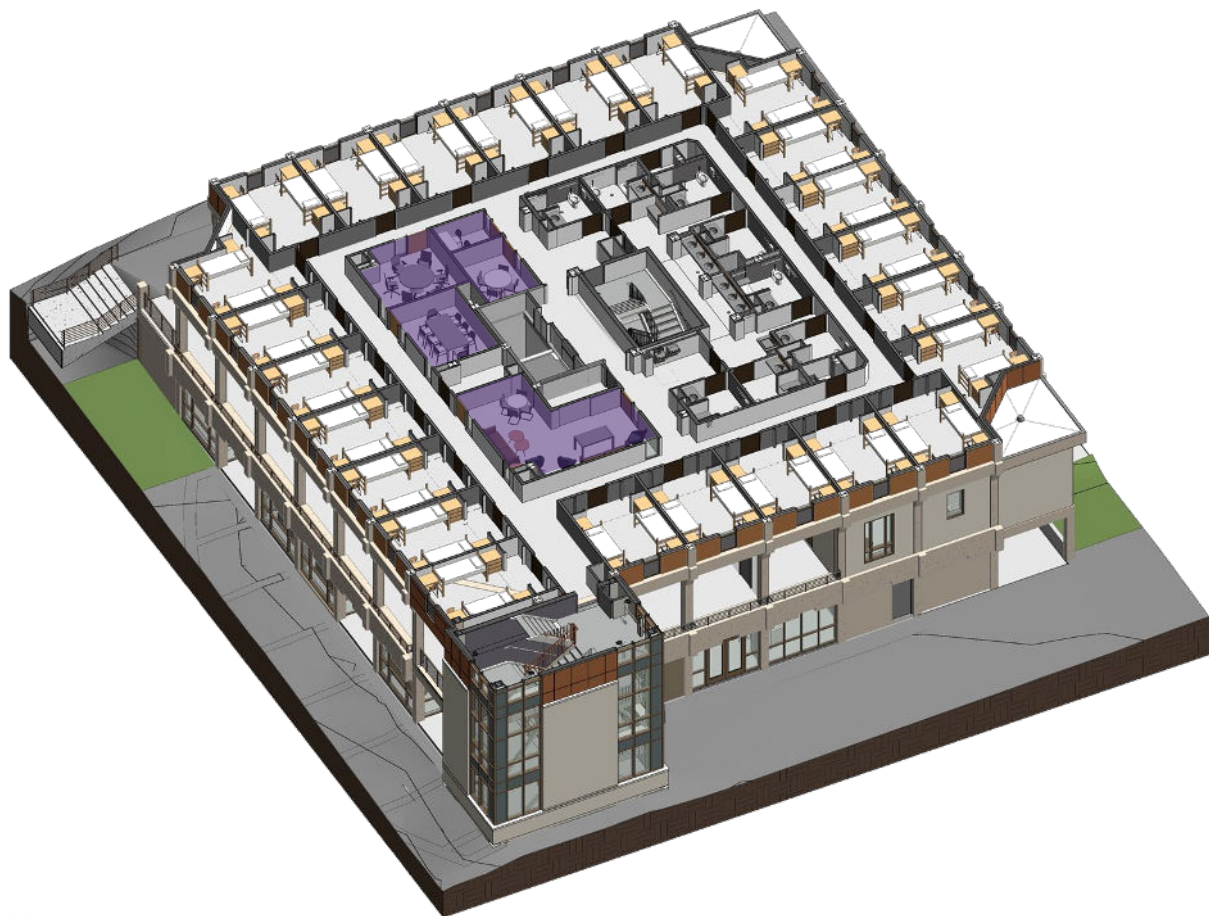
-  - Social Space
-  - Systems & Core
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-  - Staff Apartments



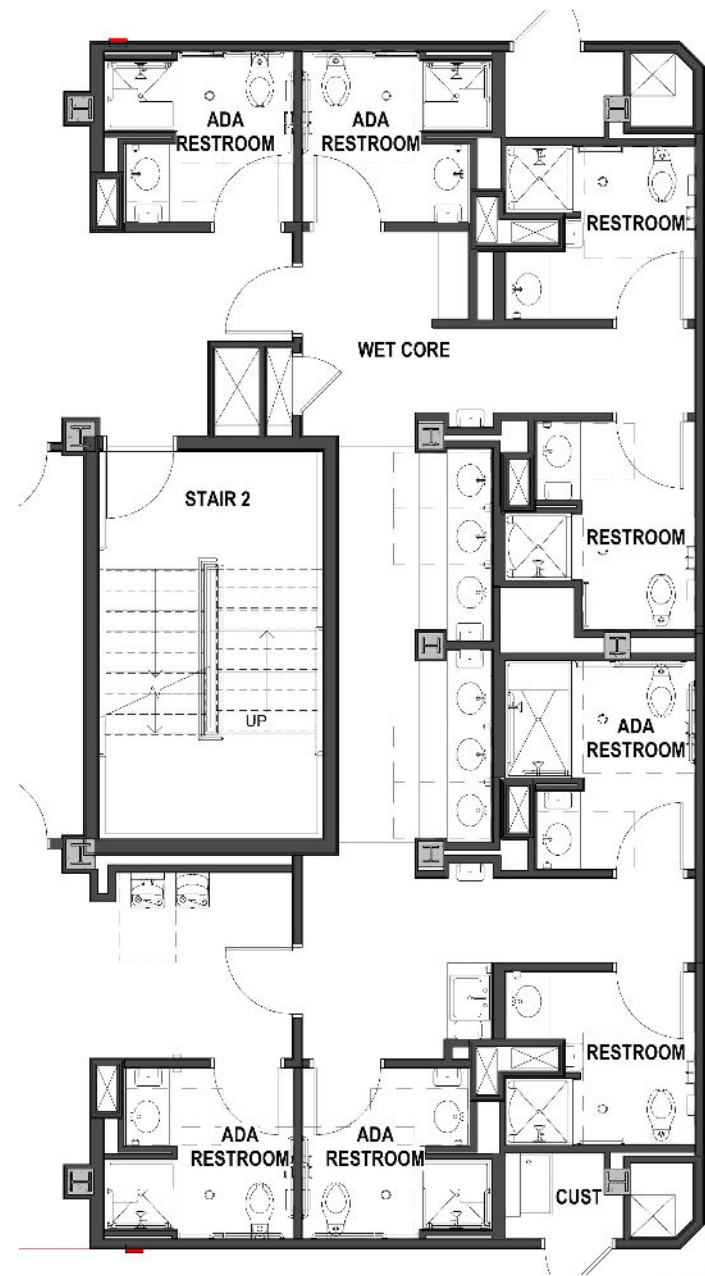
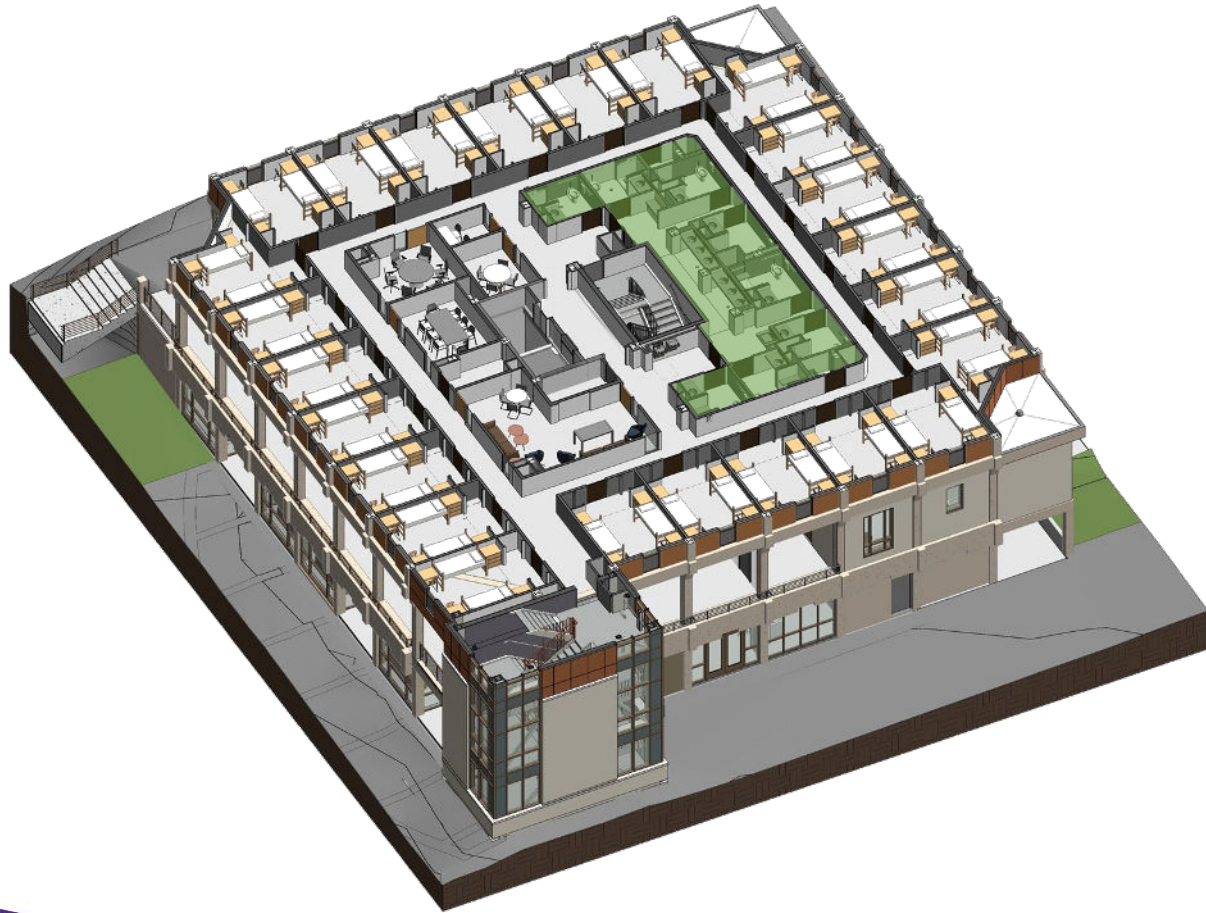
# Residential Rooms



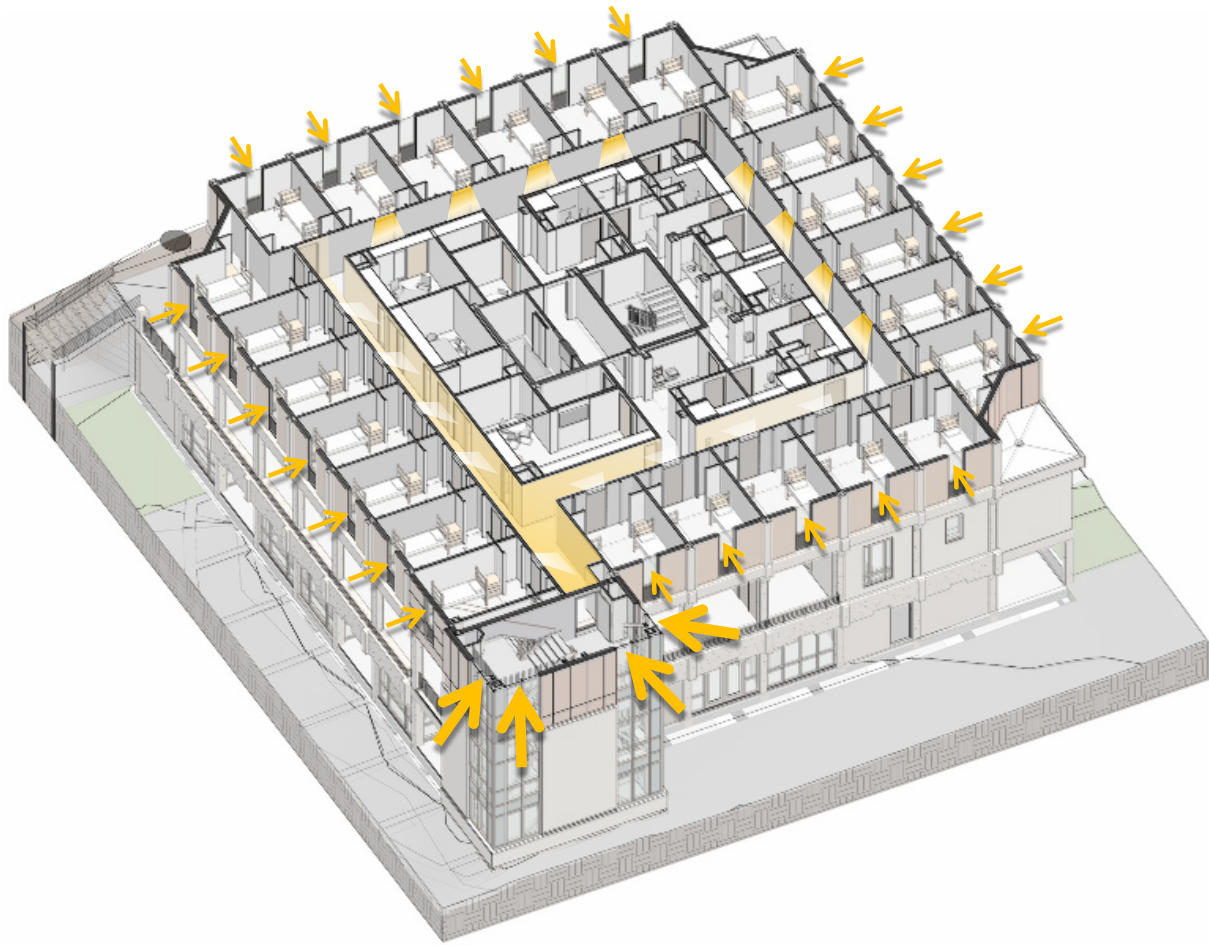
# Study / Social Spaces



# “Wet Core” Restrooms



# Natural Light

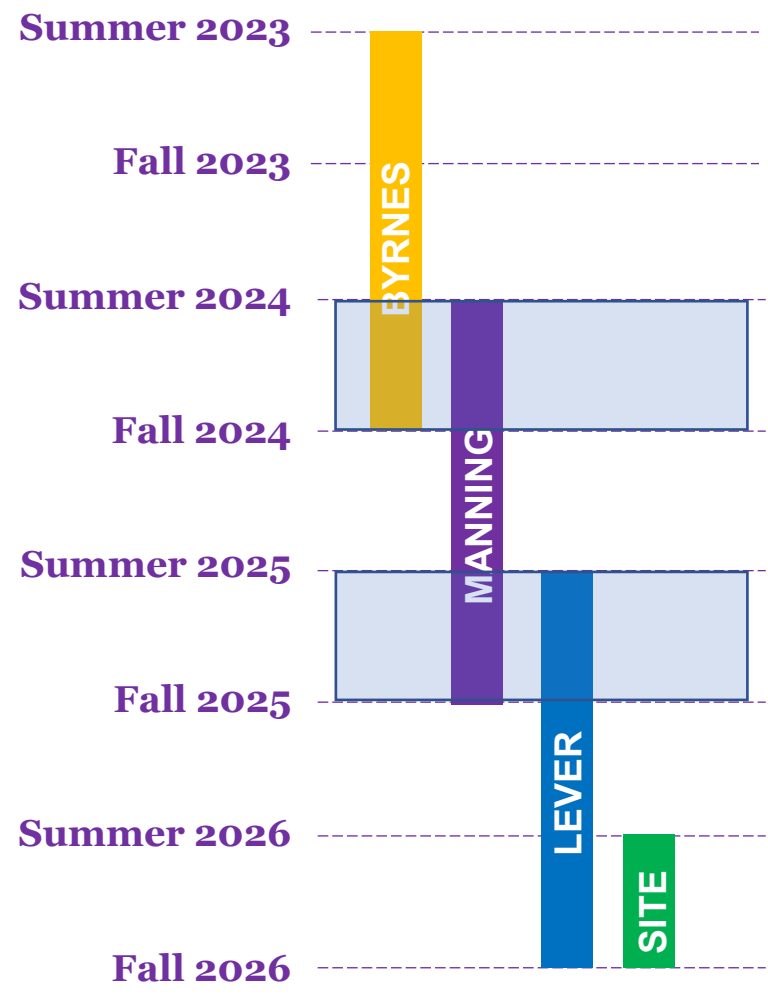


**POLL:**

**Who has a high-rise  
renovation project in  
progress or in your  
upcoming plan?**

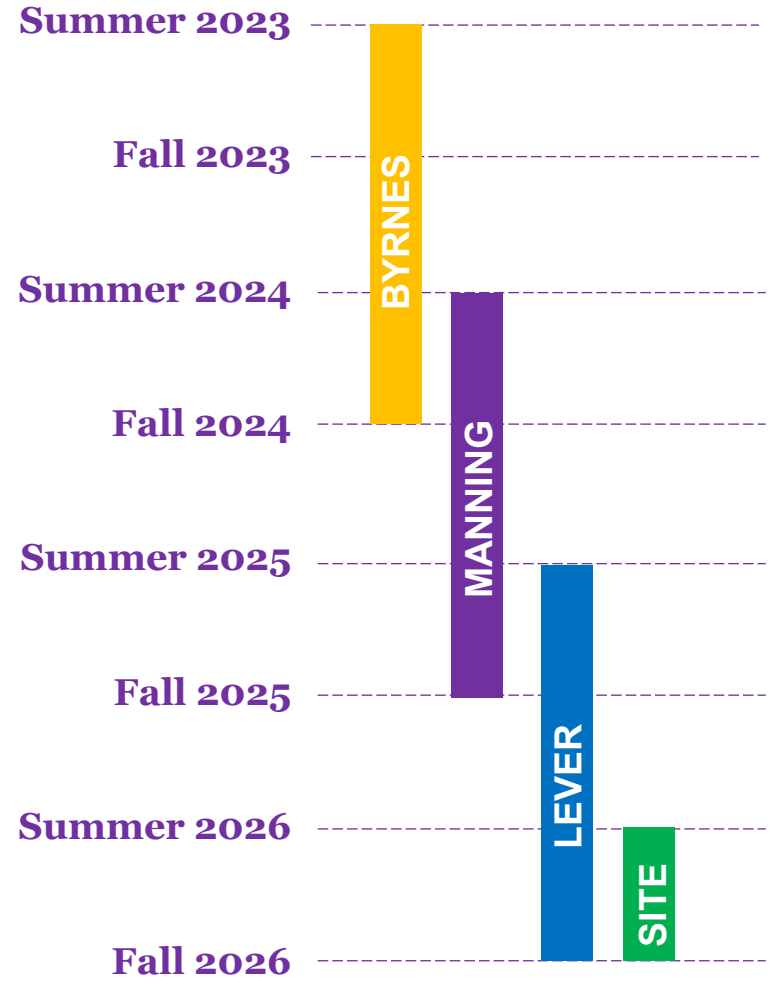
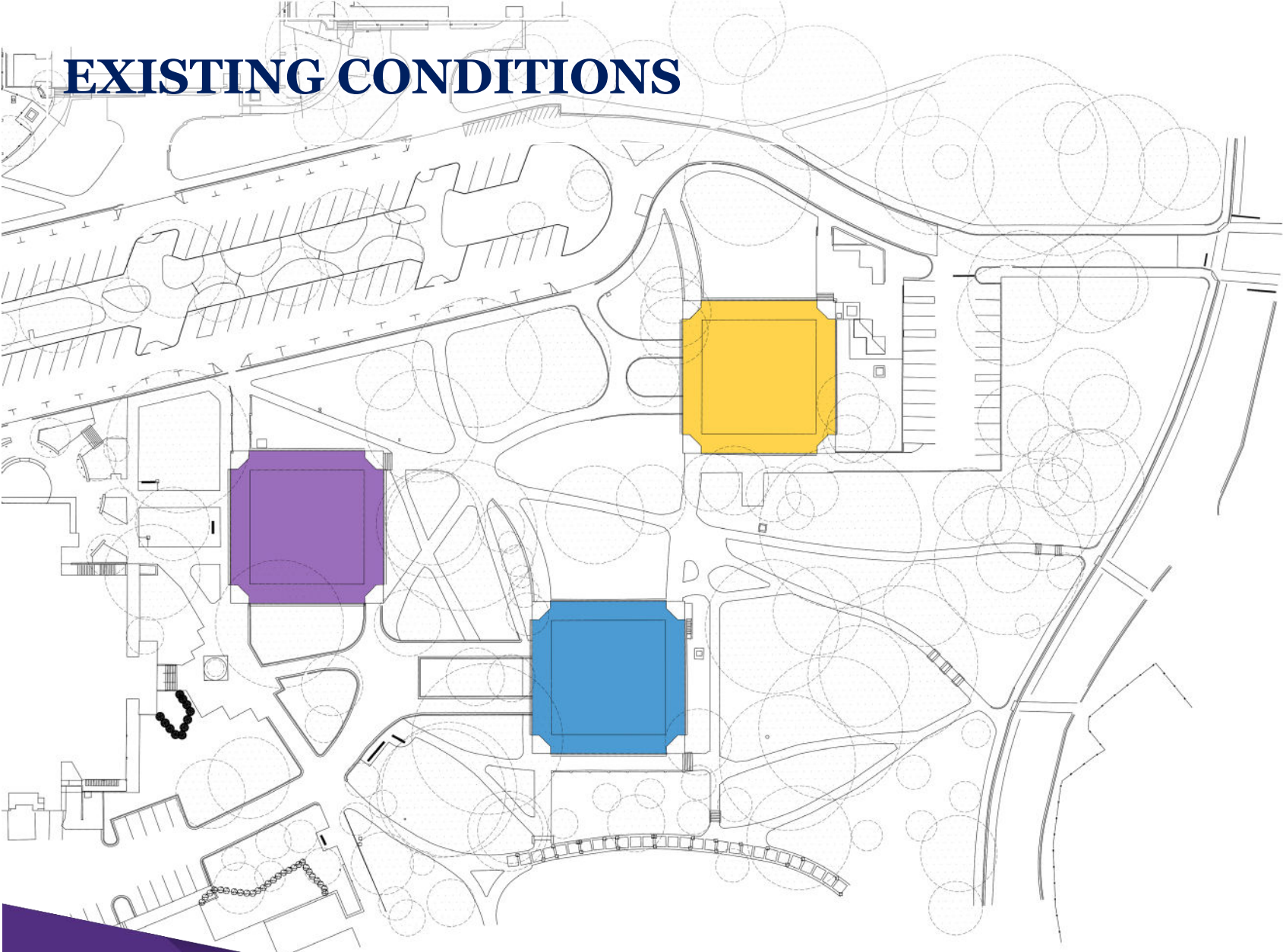
# Project Delivery Method

- Typical for SC – Design, Bid, Build
- High Rise Renovations – CM@Risk
  - Pros:
    - Works Well for Complex Projects
    - Costs/Schedules Develop w/Design Team
    - Team Approach (Owner selects Designer(s) and CM)
  - Cons:
    - Potential for Conflicts w/ Designer(s)
    - Owner Needs Above Average Experience Managing Projects/Contracts

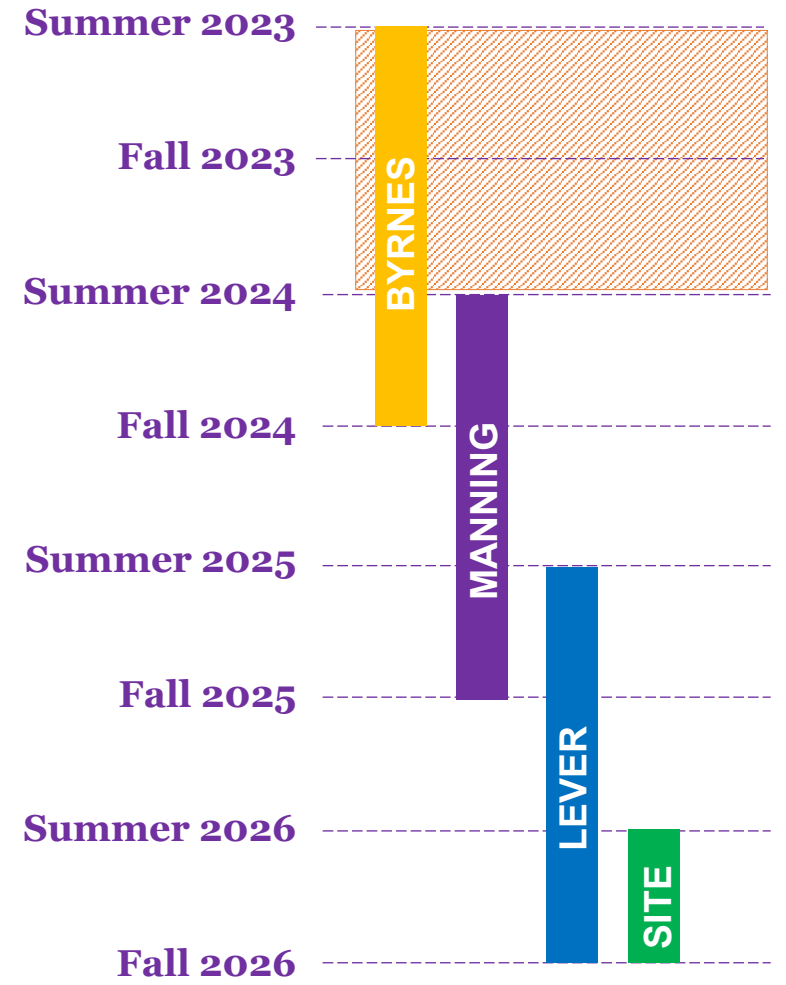
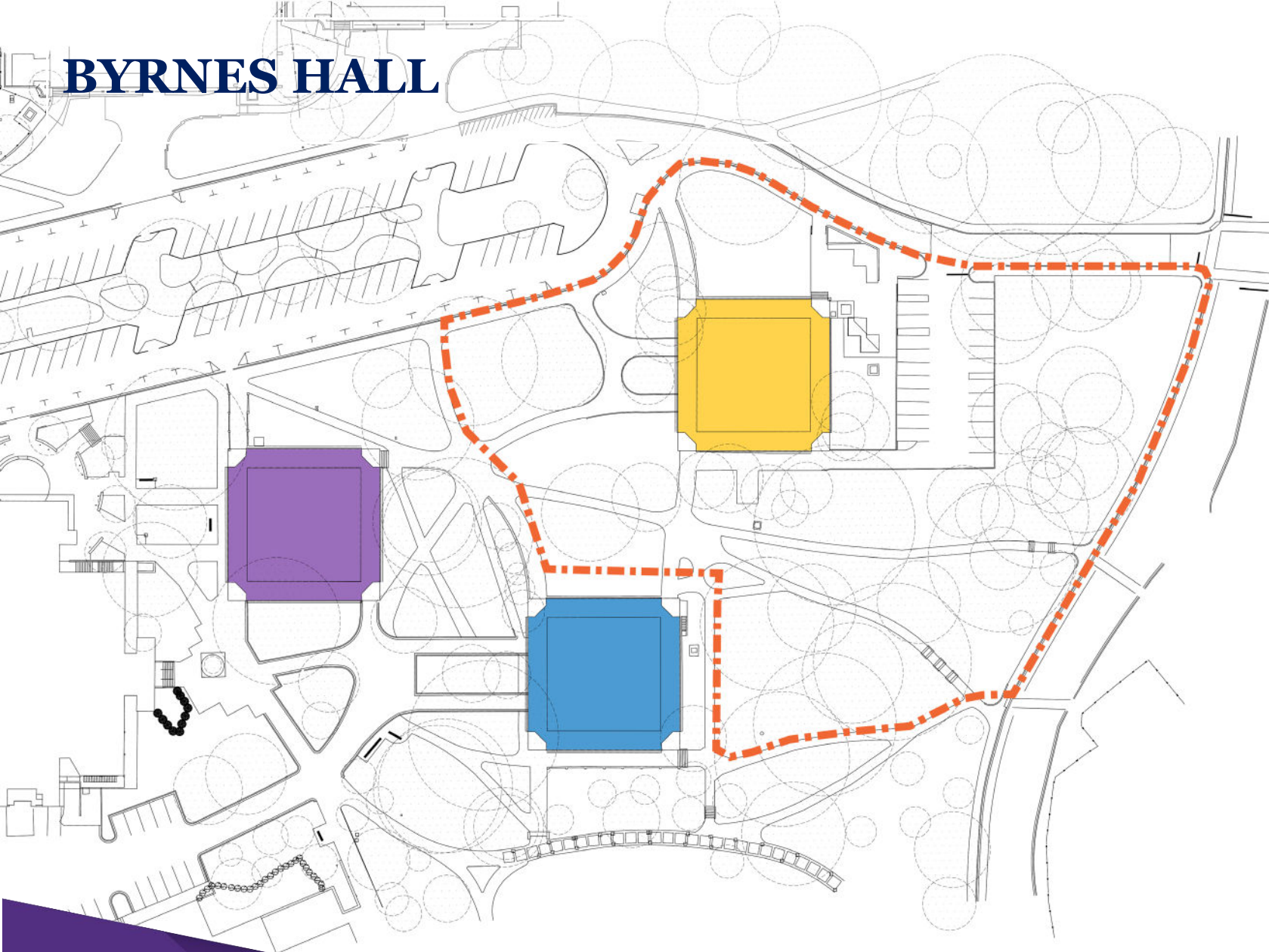




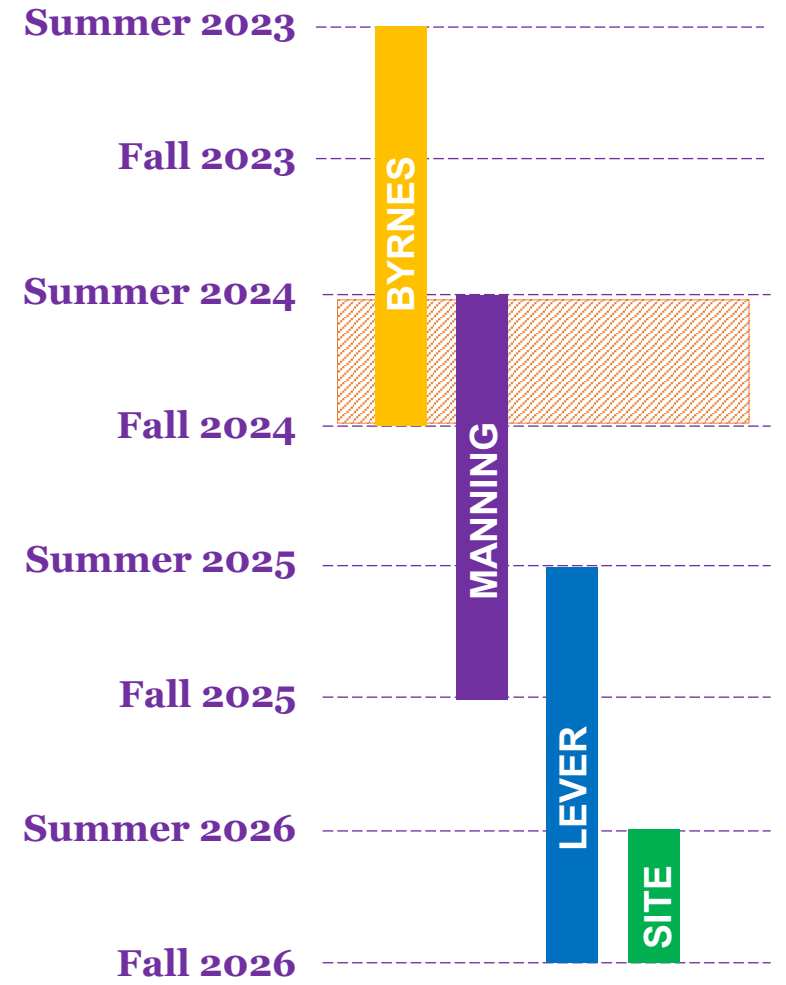
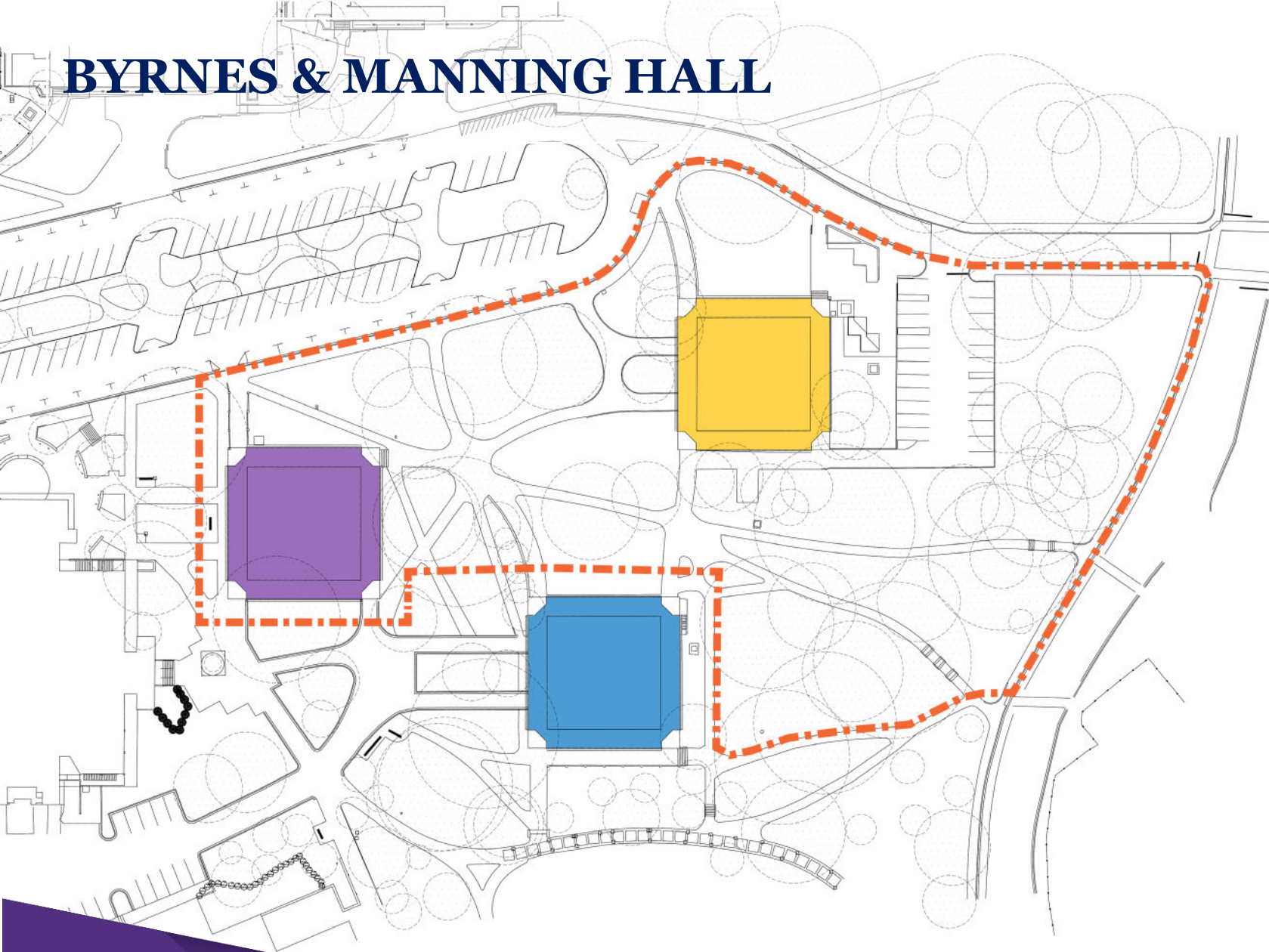
# EXISTING CONDITIONS



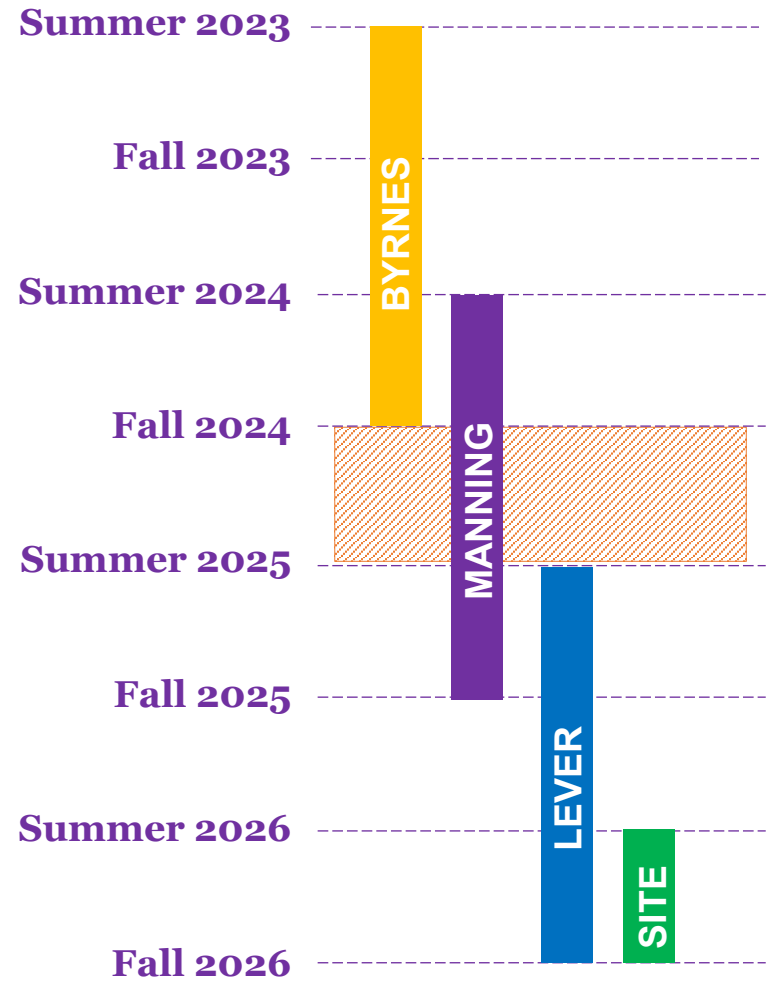
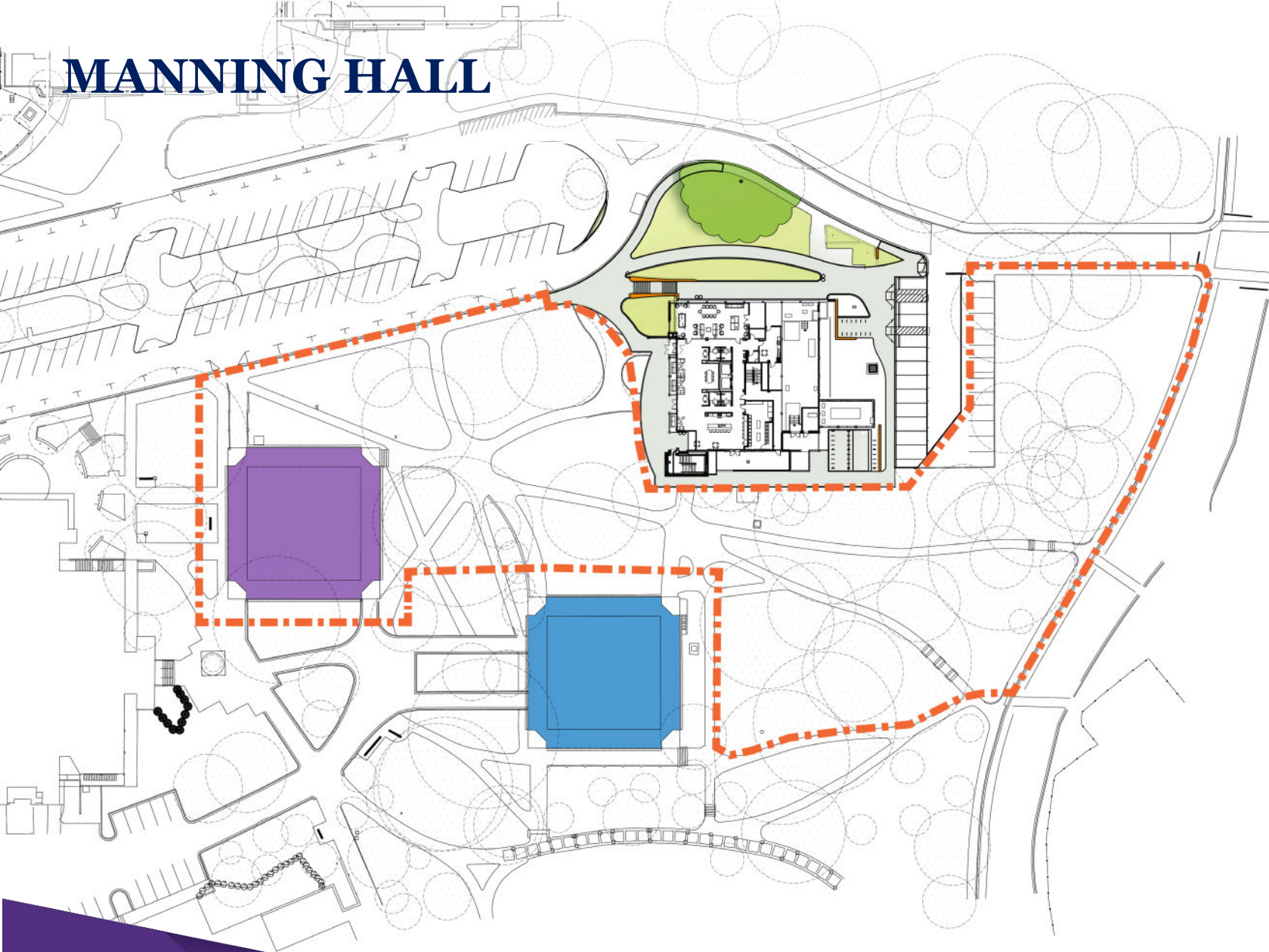
# BYRNES HALL



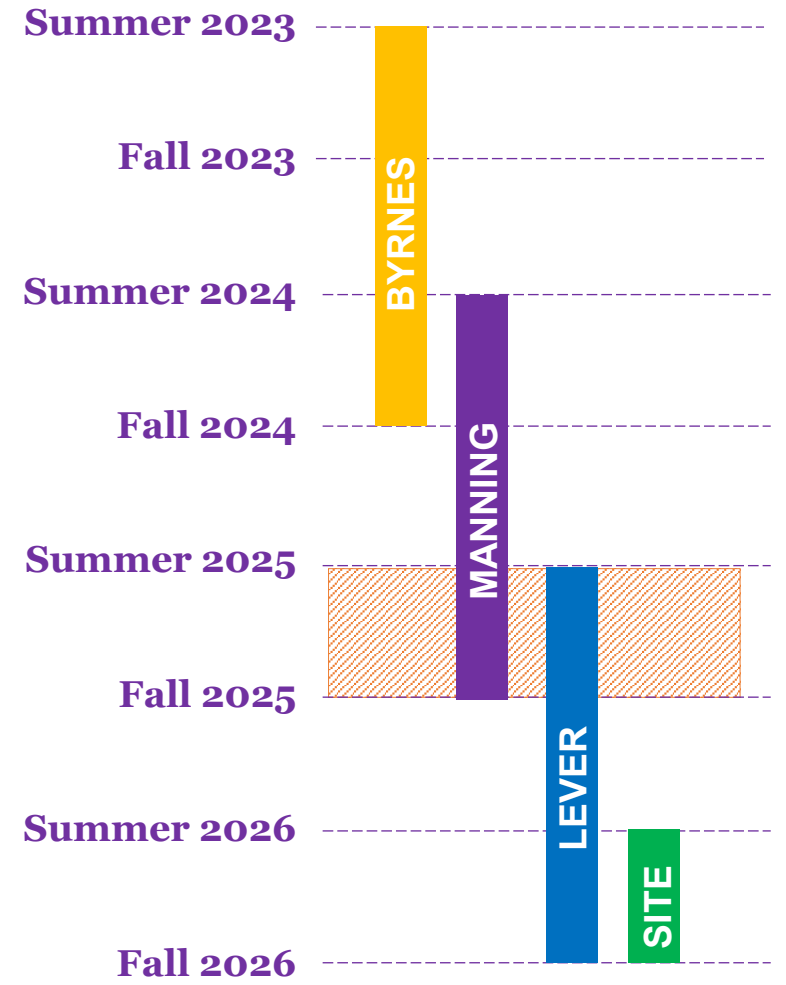
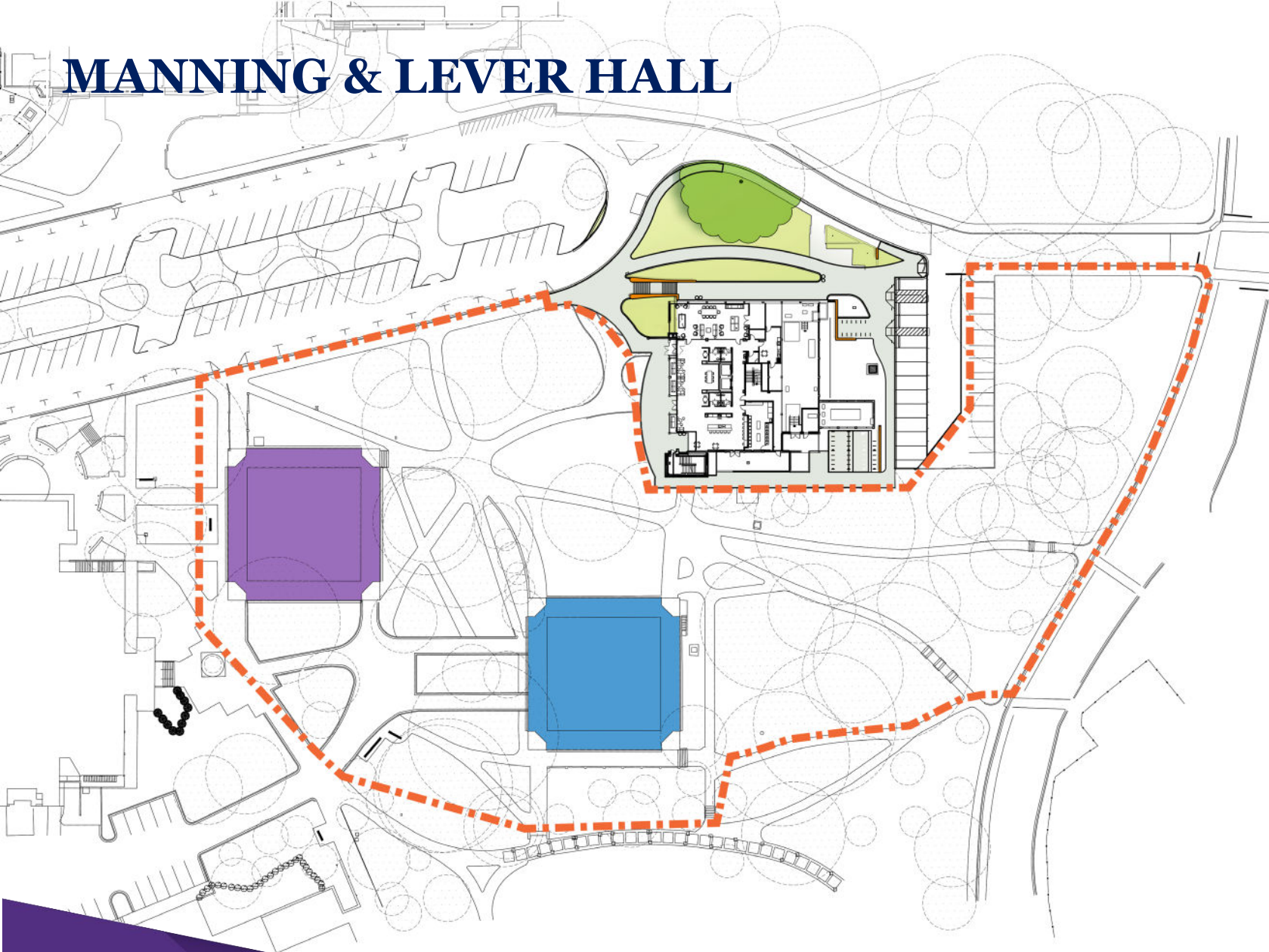
# BYRNES & MANNING HALL



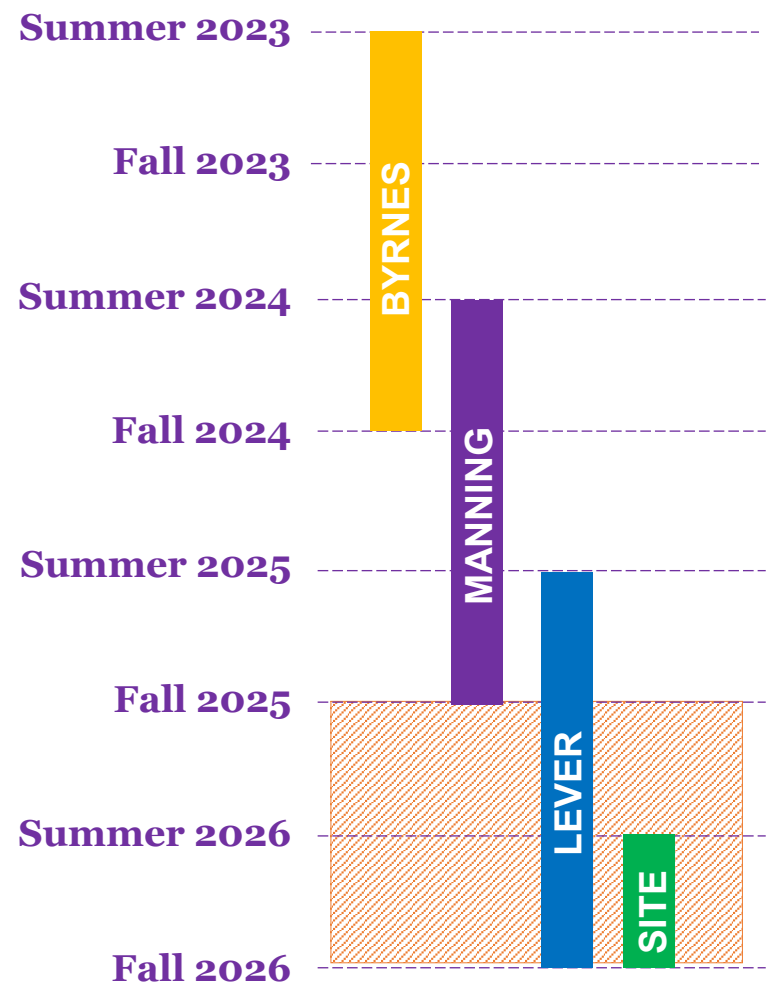
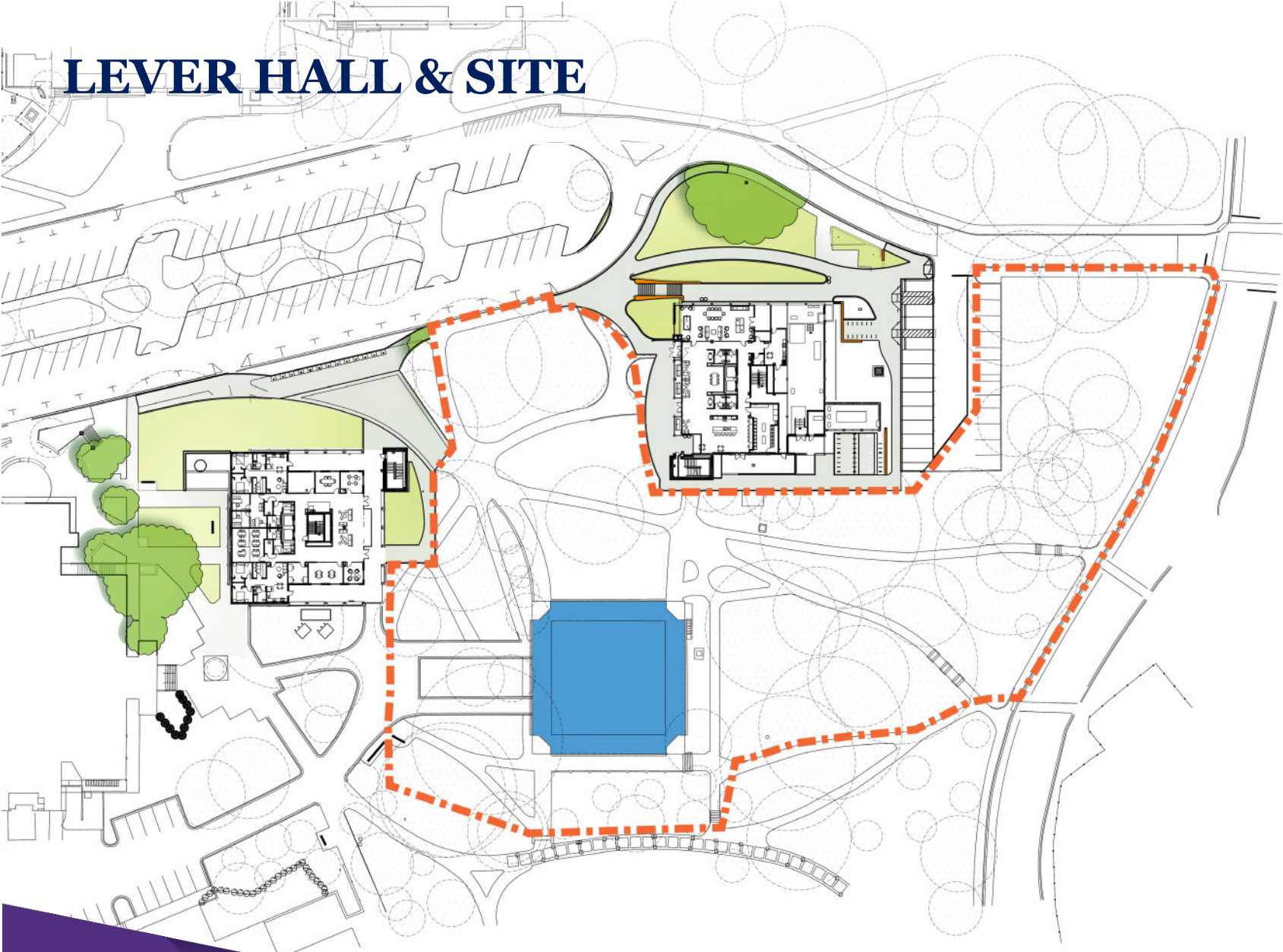
# MANNING HALL



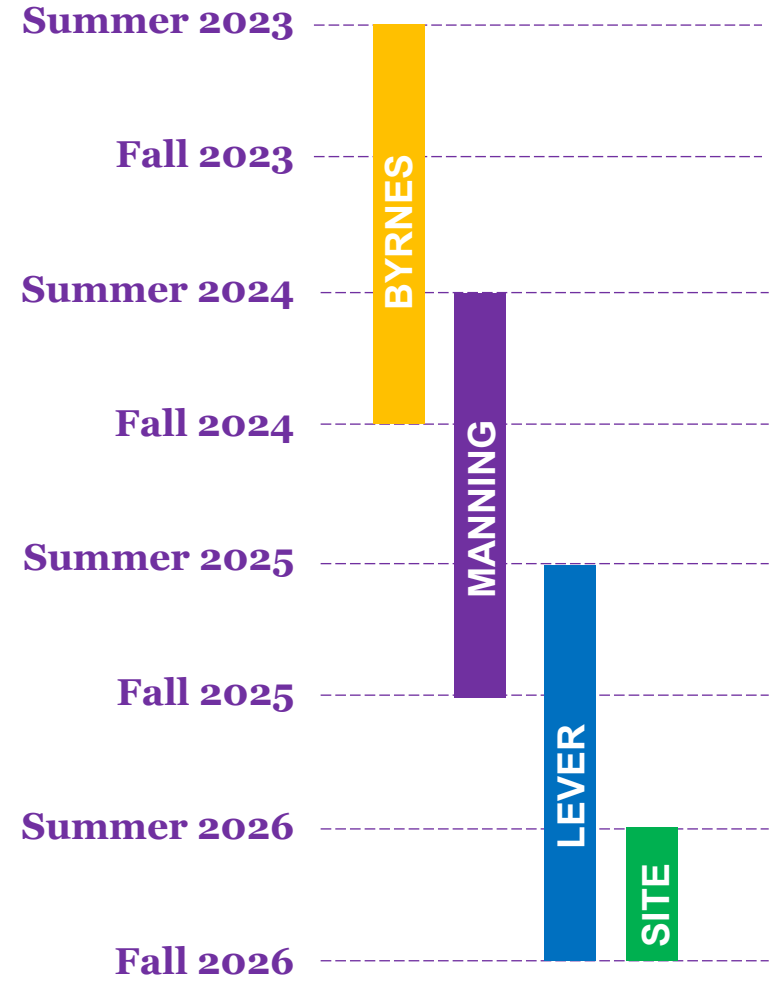
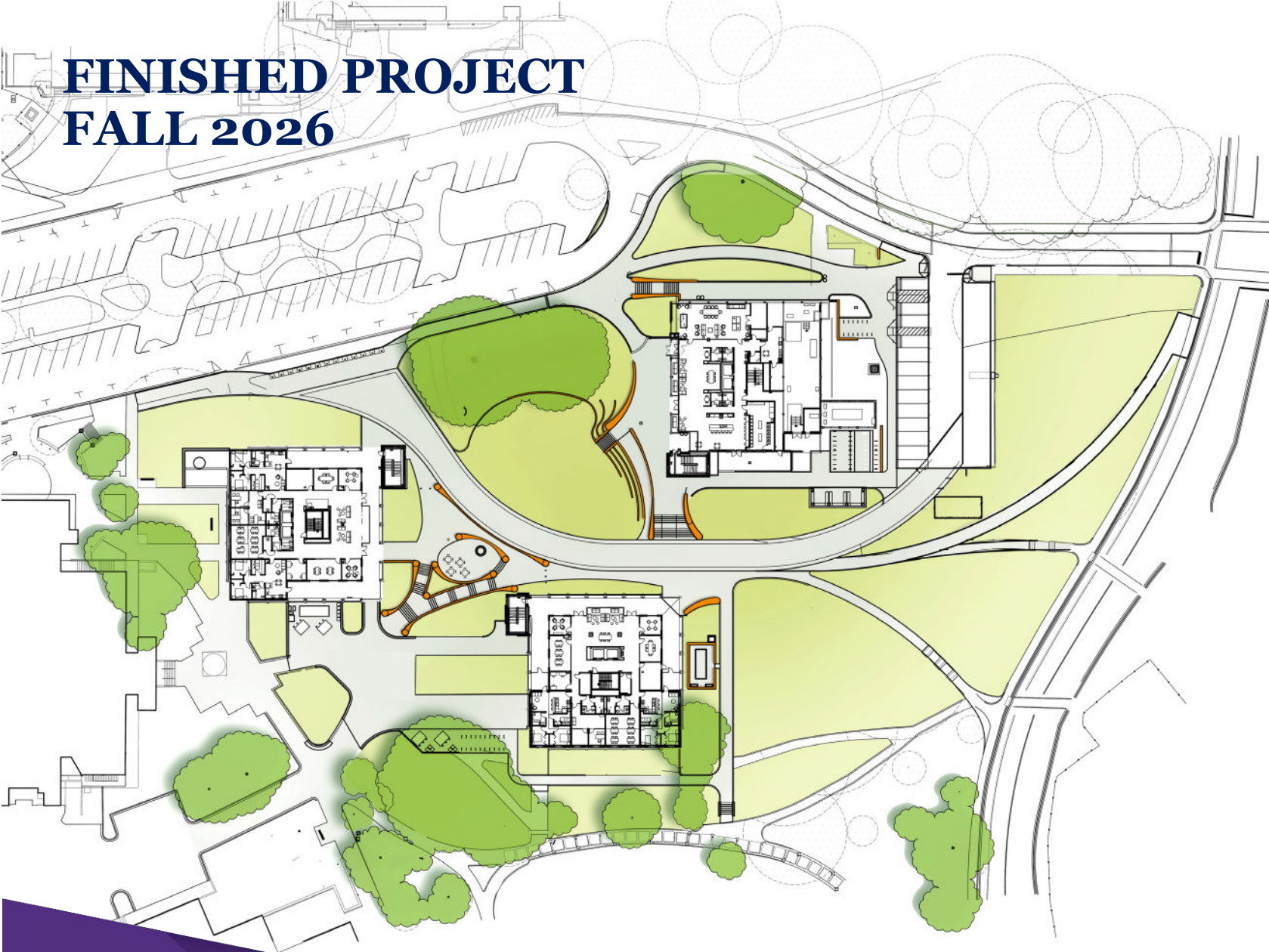
# MANNING & LEVER HALL



# LEVER HALL & SITE



# FINISHED PROJECT FALL 2026











Questions?

**Campus  
Home.23**  
*live!*  
acuho-i  
CONFERENCE & EXPO



**Campus  
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**Thomas Carlson-Reddig** - [thomas.reddig@littleonline.com](mailto:thomas.reddig@littleonline.com)

**Heather Mitchell** - [hmitchell@boudreauxgroup.com](mailto:hmitchell@boudreauxgroup.com)

**Justin Abrams** - [jabrams@boudreauxgroup.com](mailto:jabrams@boudreauxgroup.com)



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