

CornellEngineering

Facilities Master Plan Overview

CPC

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Director of Facilities - COE

October 17, 2017

AGENDA

Vision

Key Goals / Questions Asked

Implementation

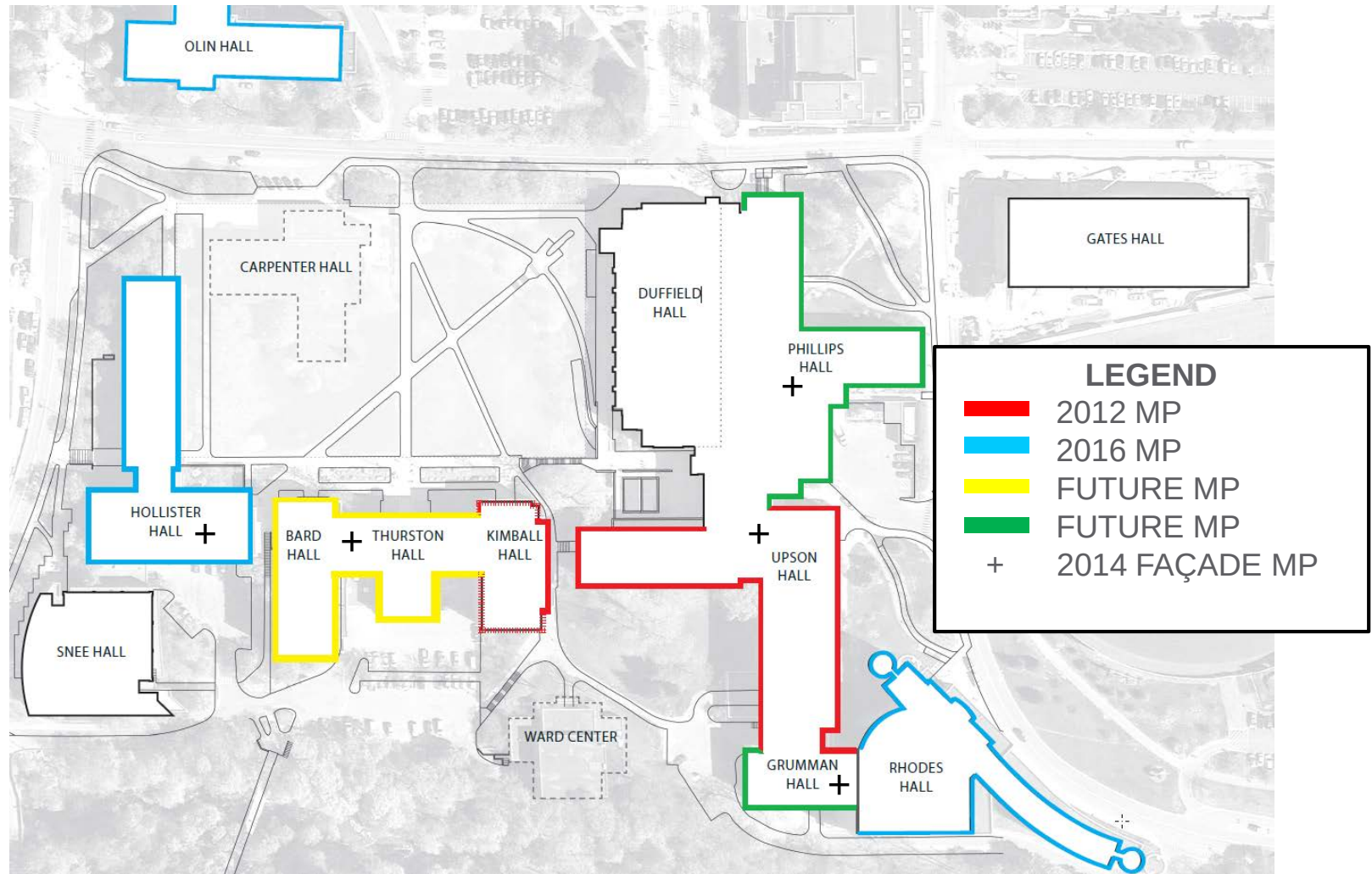
Engineering Quad

Hollister

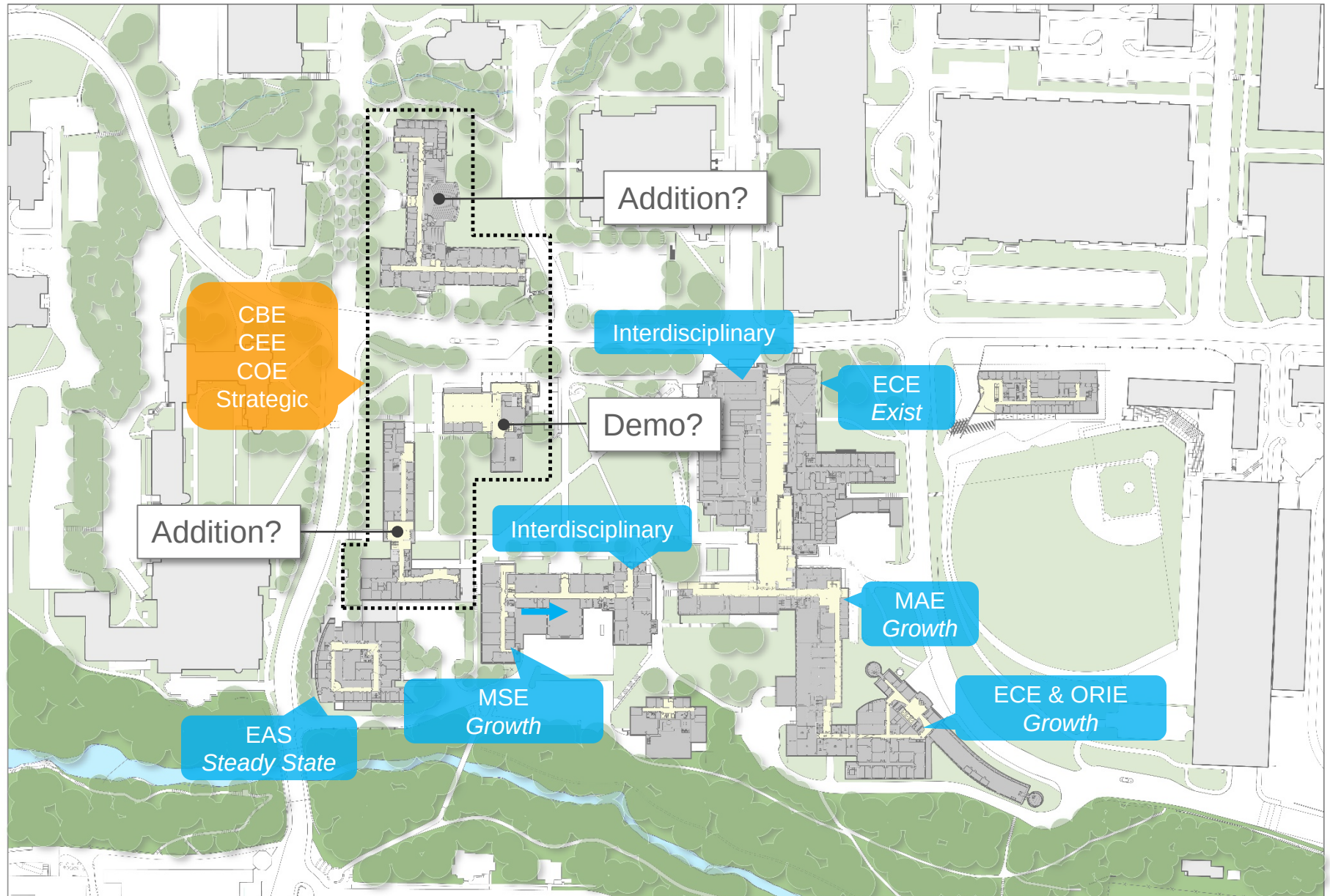
Olin

Q&A

ENGINEERING QUAD MASTER PLANS



COLLEGE OF ENGINEERING



CORNELL MASTER PLAN - KEY QUESTIONS / DRIVERS

1. UPSON IMPACTS

- a) How will **vacated space be reprogrammed** to meet needs?
- b) Rhodes 1-4 for **ECE and ORIE**, and College in General?

2. OLIN LAB SHORTFALL

- a) Can the wet lab need be **confirmed**?
- b) **.How much wet lab** space will be required; **when and how** will it be provided?

3. HOLLISTER RENOVATION

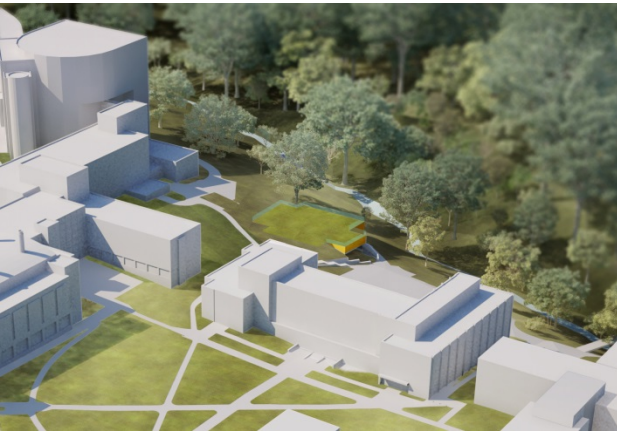
- a) How would a **reprogrammed** Hollister Hall be best utilized by the College?
- b) During construction, **where would occupants be housed**?
- c) How can the Hydraulics lab and other **recent lab renovations be preserved** during construction?
- d) Can the demolition of the existing **Carpenter Hall** be used to reduce deferred maintenance and underperforming space, as land for a possible addition to Hollister, and as additional green space?

CORNELL MASTER PLAN - KEY QUESTIONS / DRIVERS

4. WARD HALL DEMOLITION

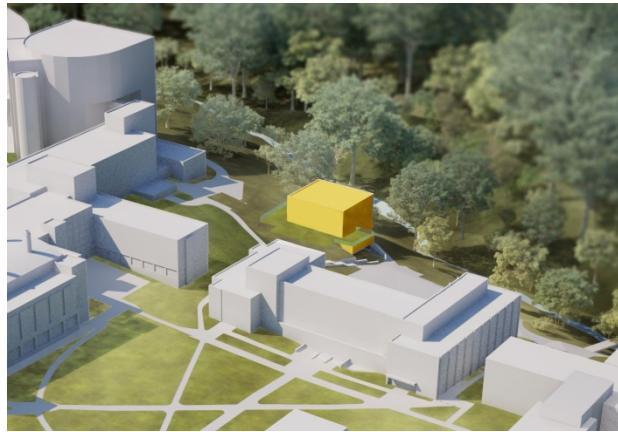
- a) Could this building be demolished and the basement renovated to **provide inexpensive storage and increased green space**?

OPTION 1



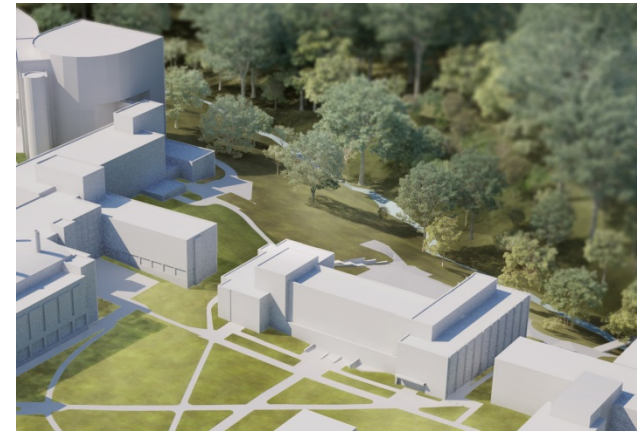
Maintain Storage

OPTION 1 ALT



Maintain Storage + High Roof

RECOMMENDED
OPTION 2 DEMO



Full Demo

CORNELL MASTER PLAN - KEY QUESTIONS / DRIVERS

5. HIGH VOLTAGE LAB

- a) What is the **future program and best use for the High Voltage Lab** (demolition, swing space, student teams, external reuse, etc.).

Full Demolition



RECOMMENDED HYBRID 1 & 2



Brand New



Option 1

- Remove Extraneous Buildings L
- Landscape Improvements
- Paint Exterior White Areas + New Entry
- Interior Improvements, finishes & interior MEP

Option 2

- Option 1 + ...
- Exterior Upgrades
- Upgrade MEP Infrastructure

Option 3

- Option 1 + 2 + ...
- Extensive Exterior Upgrades

Option 4

- Option 1 + 2 + 3 + ...
- Full Exterior Upgrade + Renovation

STRATEGIC PLAN | VISION

Campus Concerns

- Conformance with **Campus Master Plan**
- Enhance Cornell **Campus**
- Address COE **Maintenance Backlog**
- **Improve Building Energy Use**
- **Maximize Funding Opportunities**

College of Engineering

- Support COE Vision of **Top 3**
- Enhance **Student Experience**
- Support COE **Faculty Research**
(leadership in Advanced Materials and Data; emerging in Bioengineering and Energy)



COLLEGE OF
ENGINEERING
FRONT DOOR

NEW LANDSCAPE
CONNECTION
WITH GORGE

HIVE

NEW COE
ADMIN
HEART

FLEXIBLE
RESEARCH
ENGINE

NEW
ENGINEERING
QUAD

BREATHE
NEW LIFE

VISION

PROGRAM

- Minimal Additional Square Footage
- Significant Upgrade to All Space Typologies

Renovated and New Space by Department

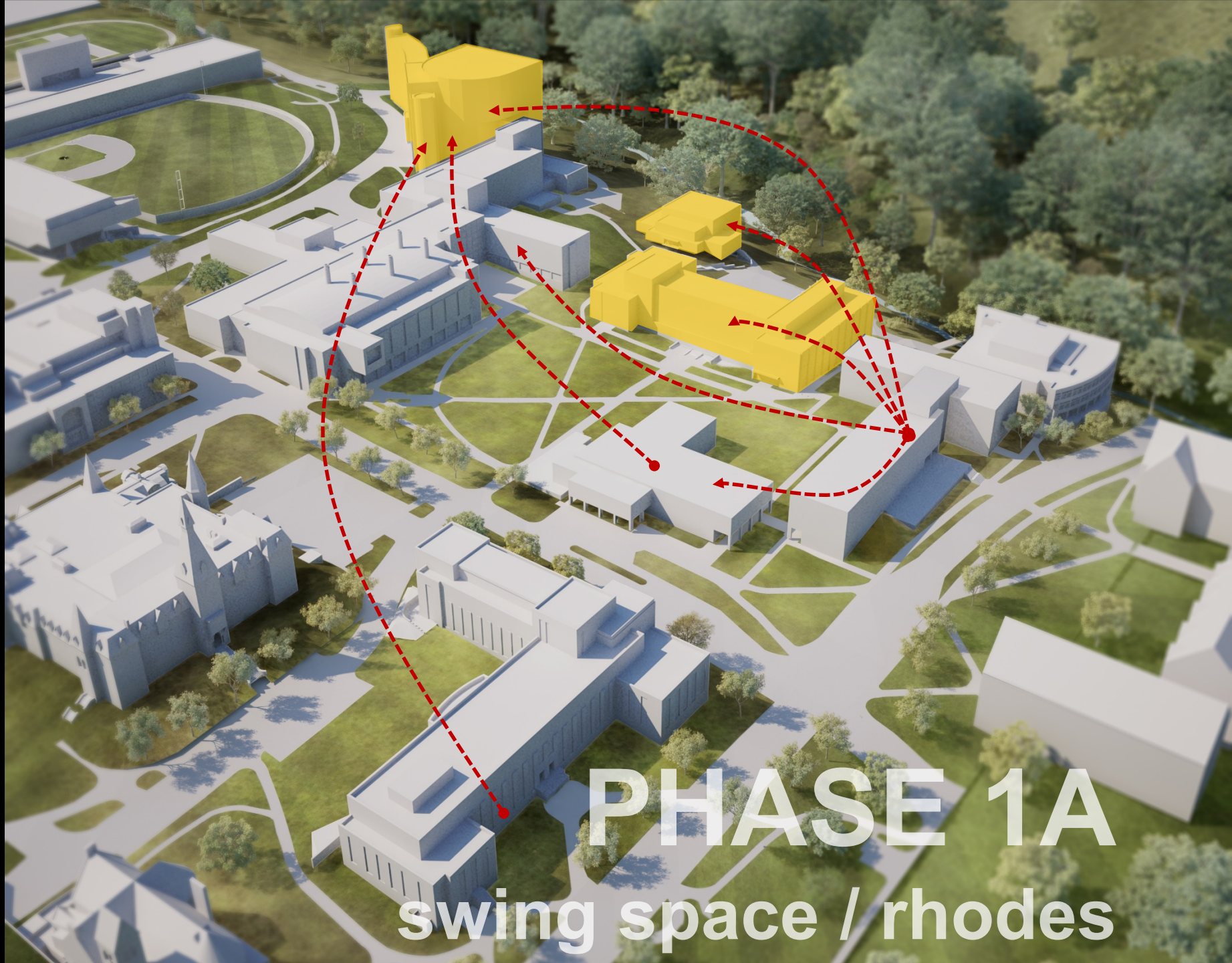
	Research	Office	Teaching	Lounge/Study	Total
CBE	49,150	7,200	7,800	5,300	69,450
CEE	34,175	8,340	11,160	4,450	58,125
COE	13,000	0	0	0	13,000
ECE	9,500	1,020	1,000	0	11,520
MSE	3,873	880	1,800	800	7,353
ORIE	1,200	4,360	3,280	1,300	10,140
SE	1,100	640	3,000	0	4,740
Admin	17,750	0	0	16,100	33,850
	129,748	22,440	28,040	27,950	208,178

NASF Change by Space Typology

SPACE TYPE	EXISTING NASF (A)	NEW NASF (B)	DIFFERENCE NASF (B-A)	% CHANGE (B/A)	
RESEARCH	465,677	479,379	13,702	3%	Includes wet labs, hybrid labs, computational labs, specialty labs, researcher workstations, and associated data and storage.
OFFICE	197,996	181,466	-16,530	-8%	Includes faculty and staff offices, office support, and conference rooms.
TEACHING	132,687	144,854	12,167	9%	Includes teaching labs, classrooms, lecture rooms, seminars, and student project rooms.
LOUNGE/ STUDY	42,480	44,009	1,529	4%	Includes library, student study areas, building lounges, dining areas.
TOTAL	838,840	849,708	10,868	1%	



IMPLEMENTATION

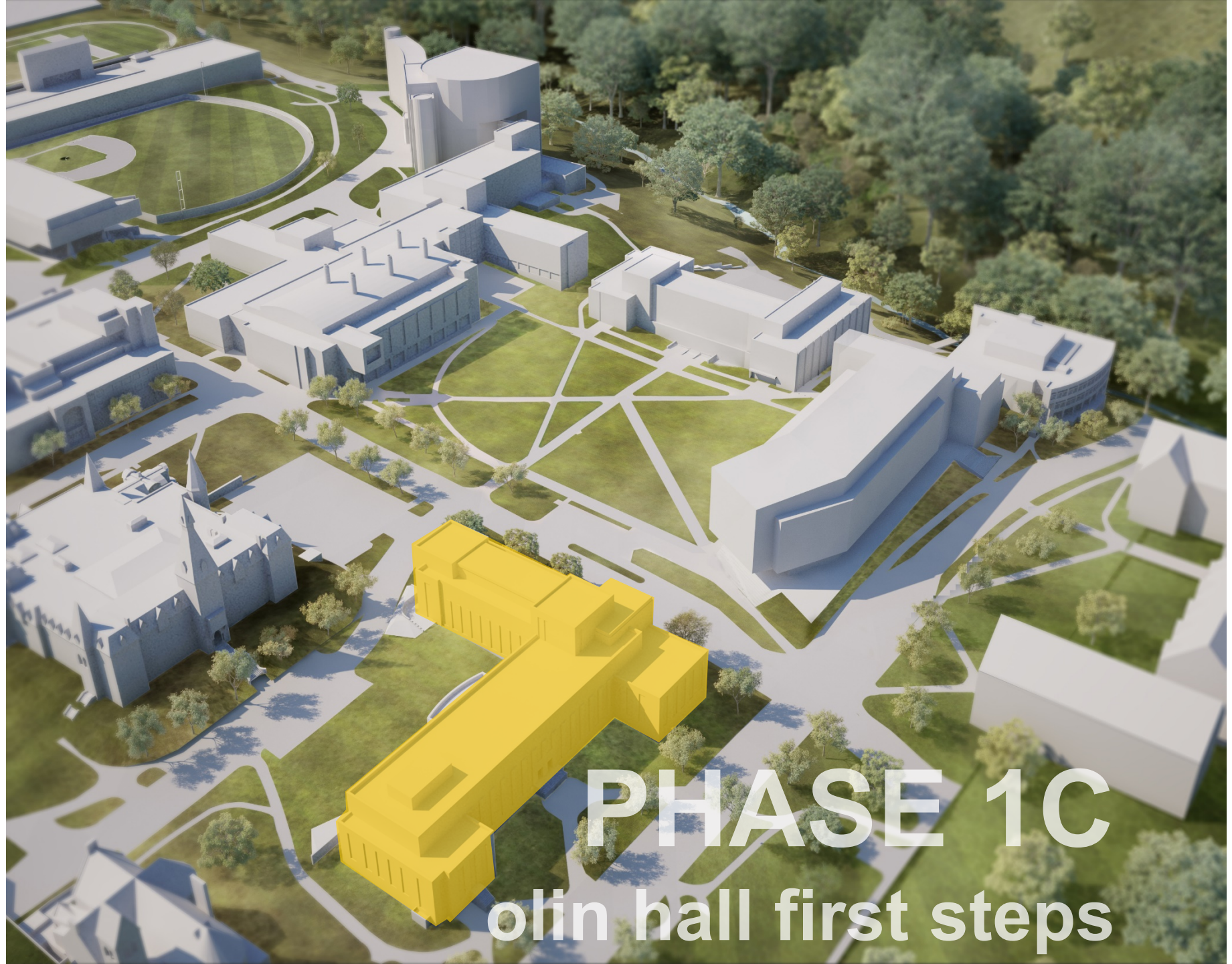


PHASE 1A
swing space / rhodes

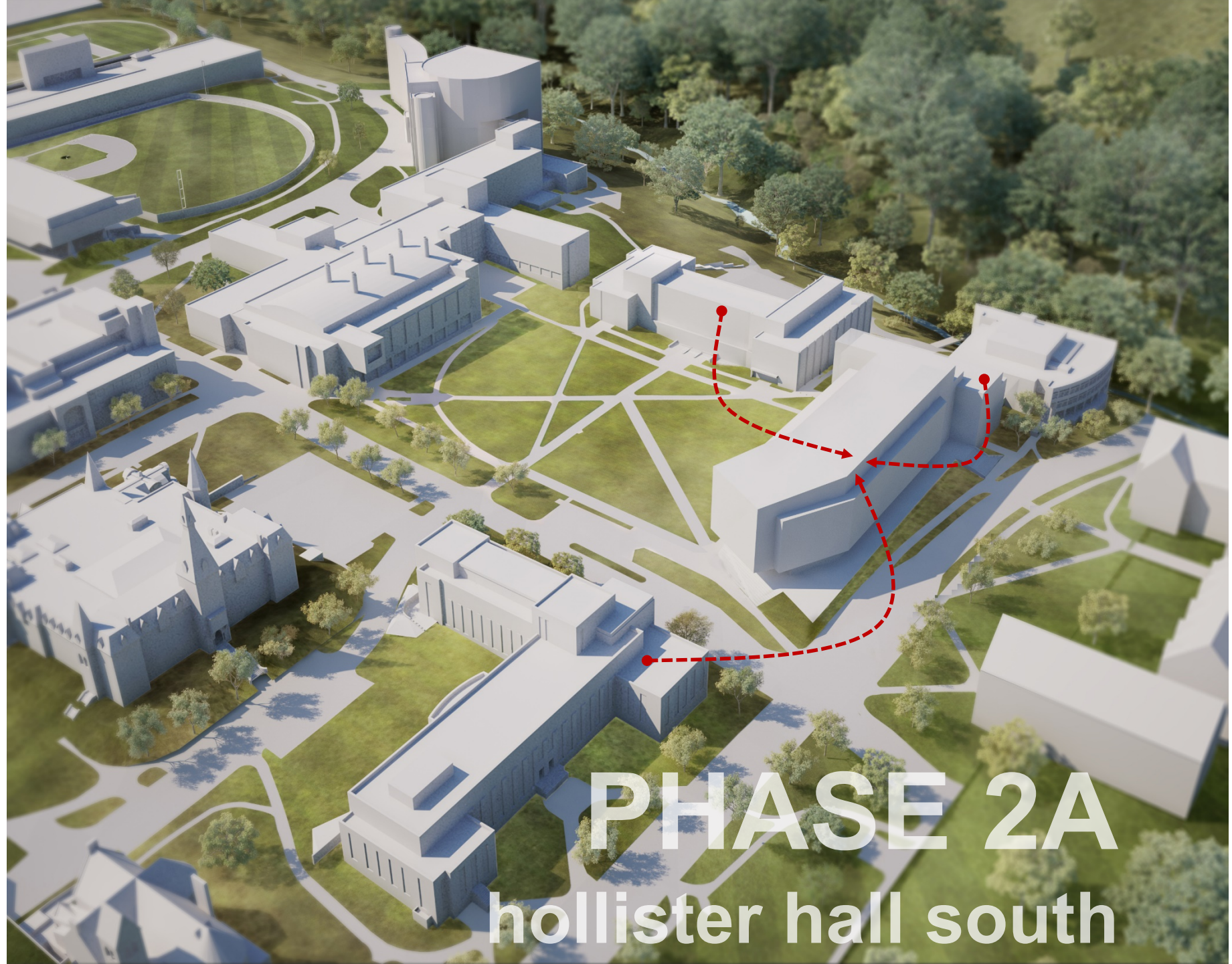


PHASE 1B

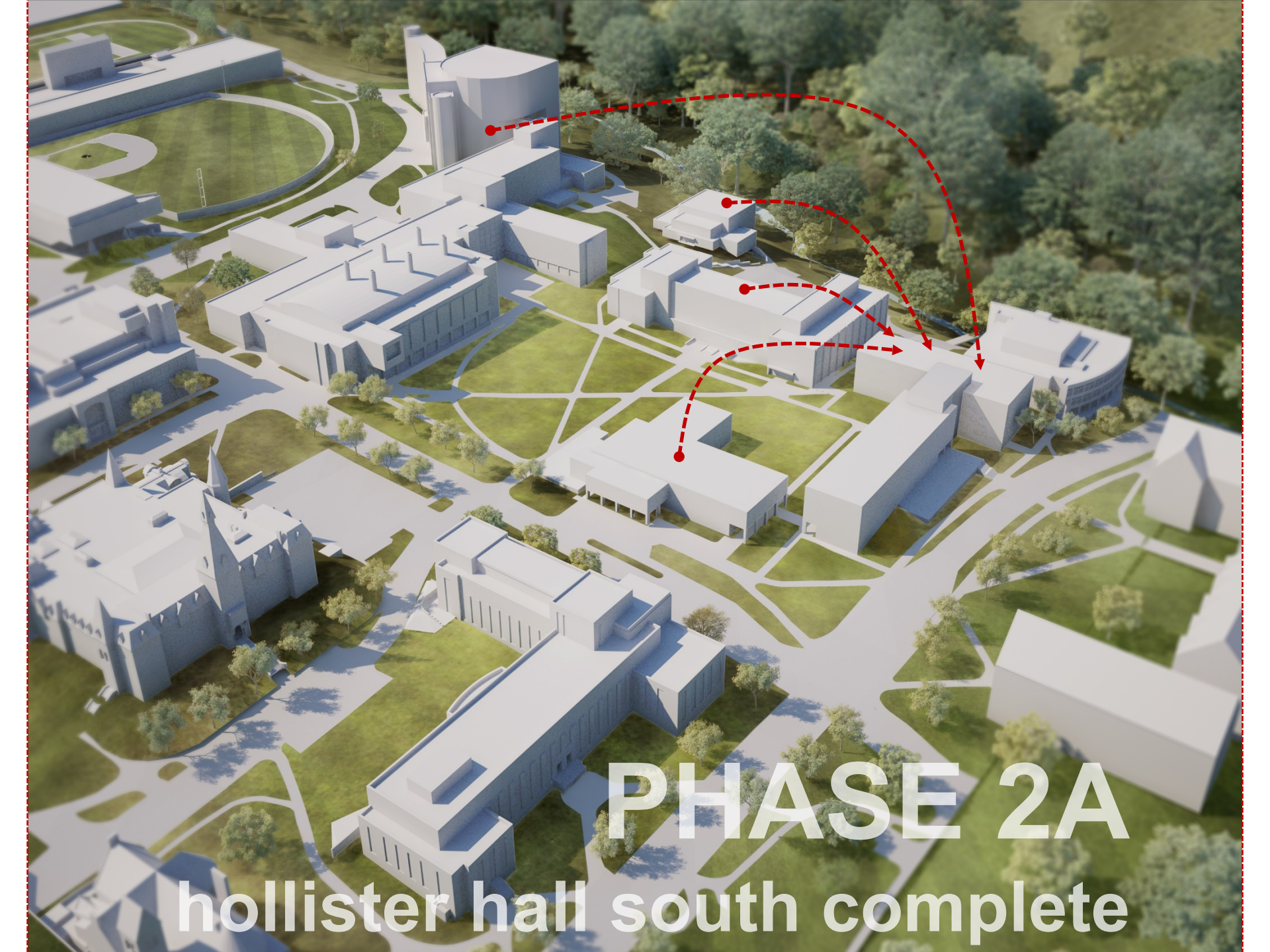
hollister hall north



PHASE 1C
olin hall first steps



PHASE 2A
hollister hall south



PHASE 2A
hollister hall south complete



PHASE 2B
olin hall



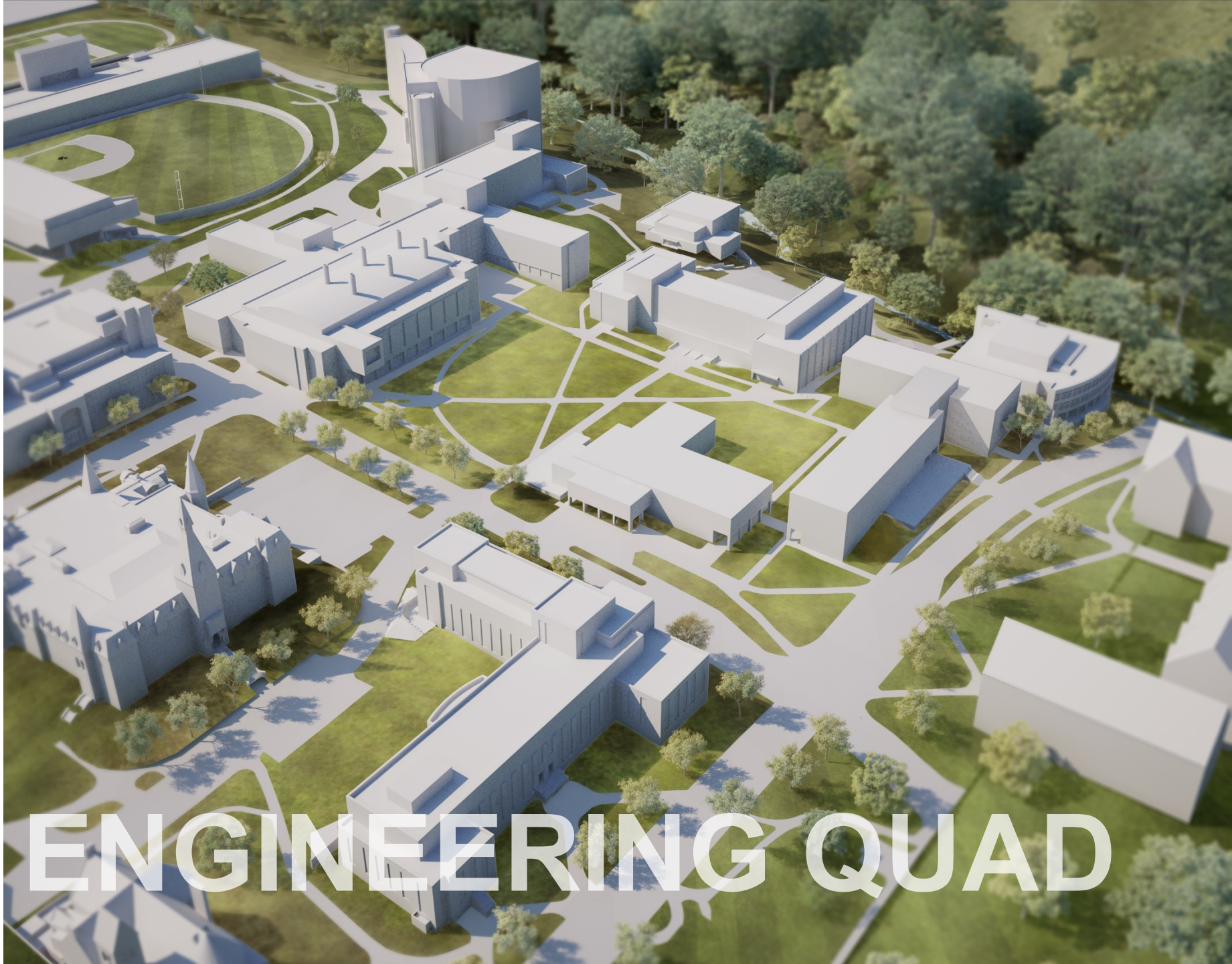
PHASE 3A

Ward Demo / HVL Reno
putting it all back together

An aerial architectural rendering of a university campus. The scene features several large, modern academic buildings with flat roofs and rectangular forms, interspersed with green lawns and mature trees. A prominent yellow building is highlighted in the upper left quadrant. In the lower left, there is a traditional stone building with a large, multi-towered spire. A baseball field is visible in the top left corner. The overall layout shows a mix of old and new architecture. The text 'PHASE 3B' and 'rhodes final occupants' is overlaid in the bottom right corner.

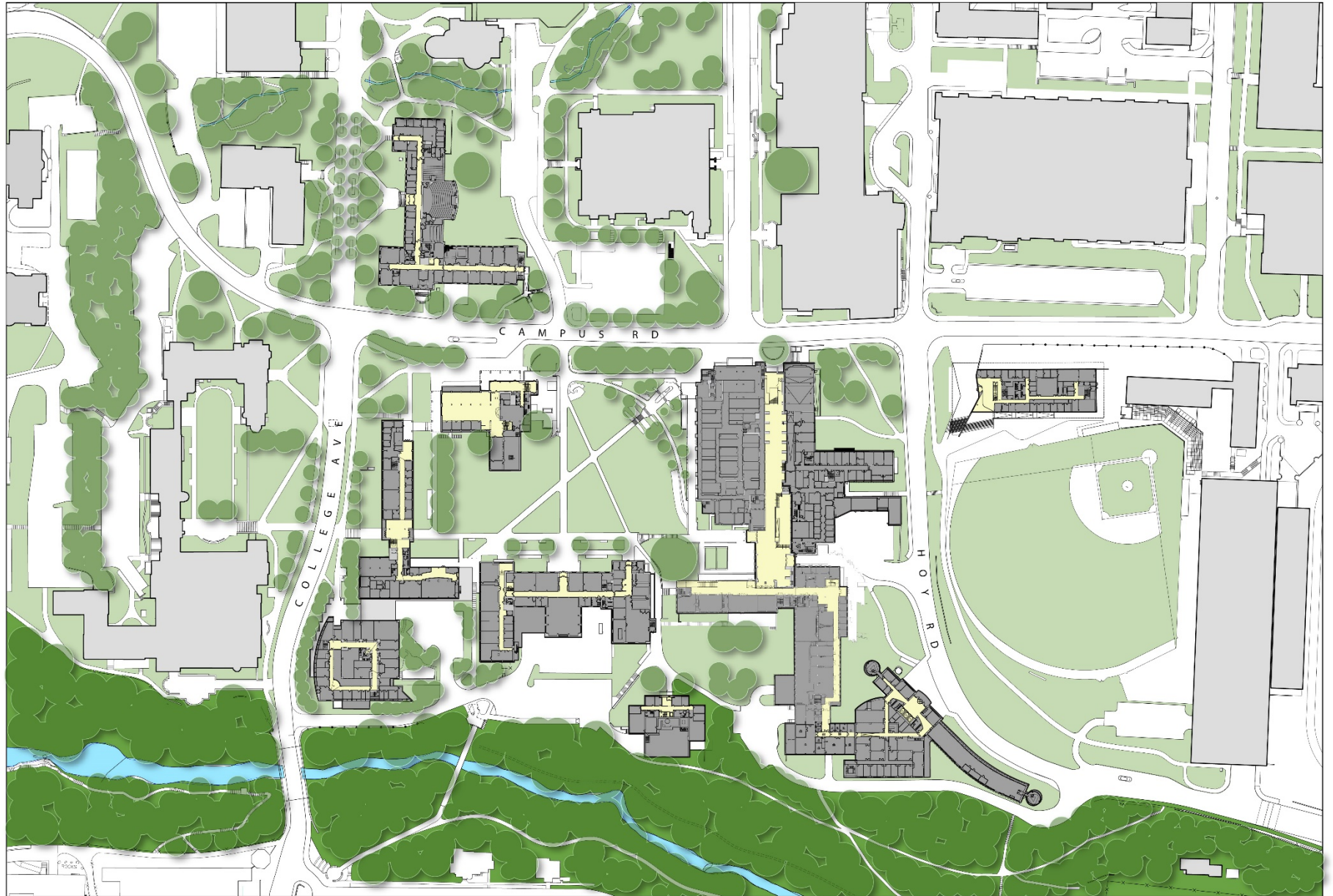
PHASE 3B
rhodes final occupants



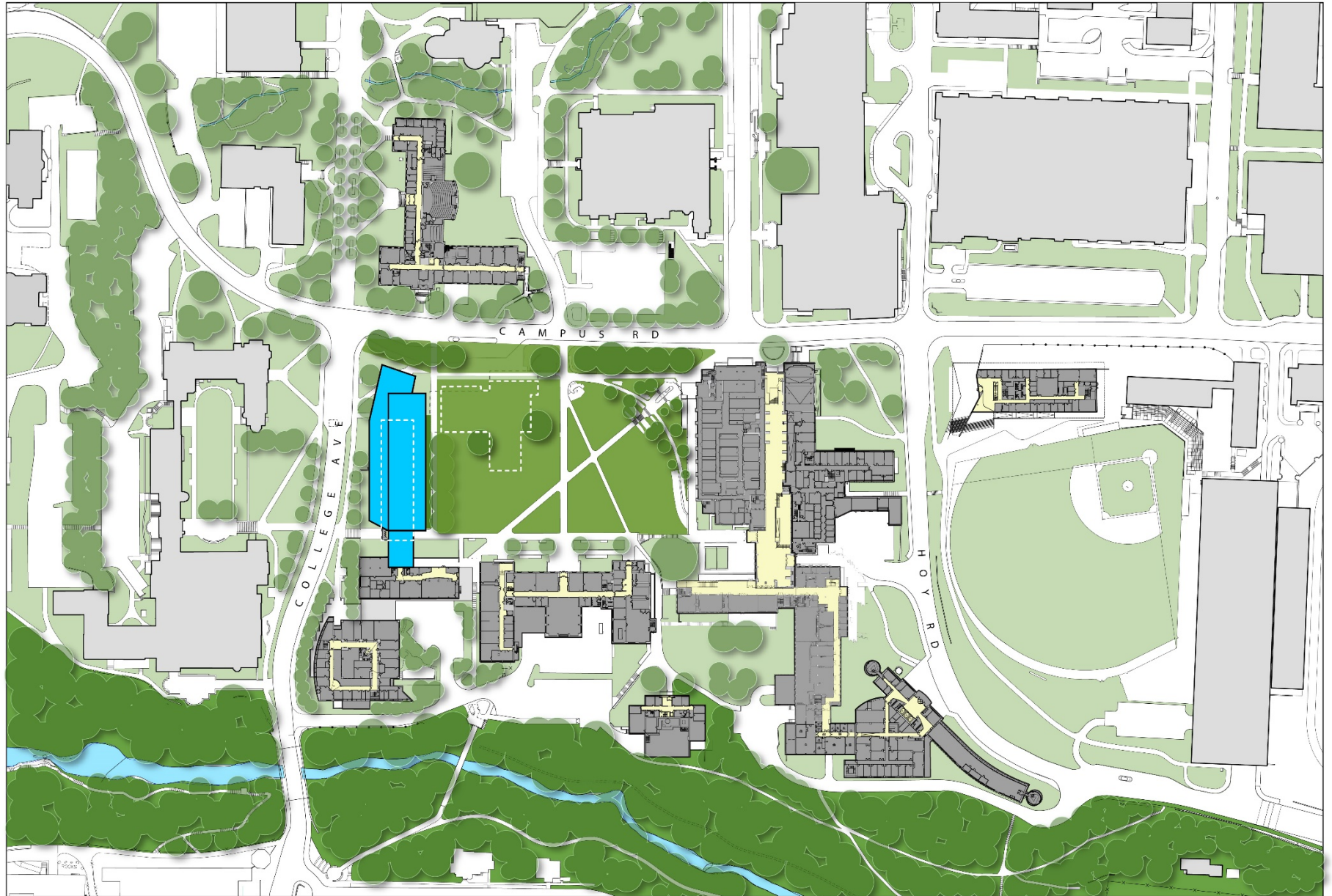


ENGINEERING QUAD

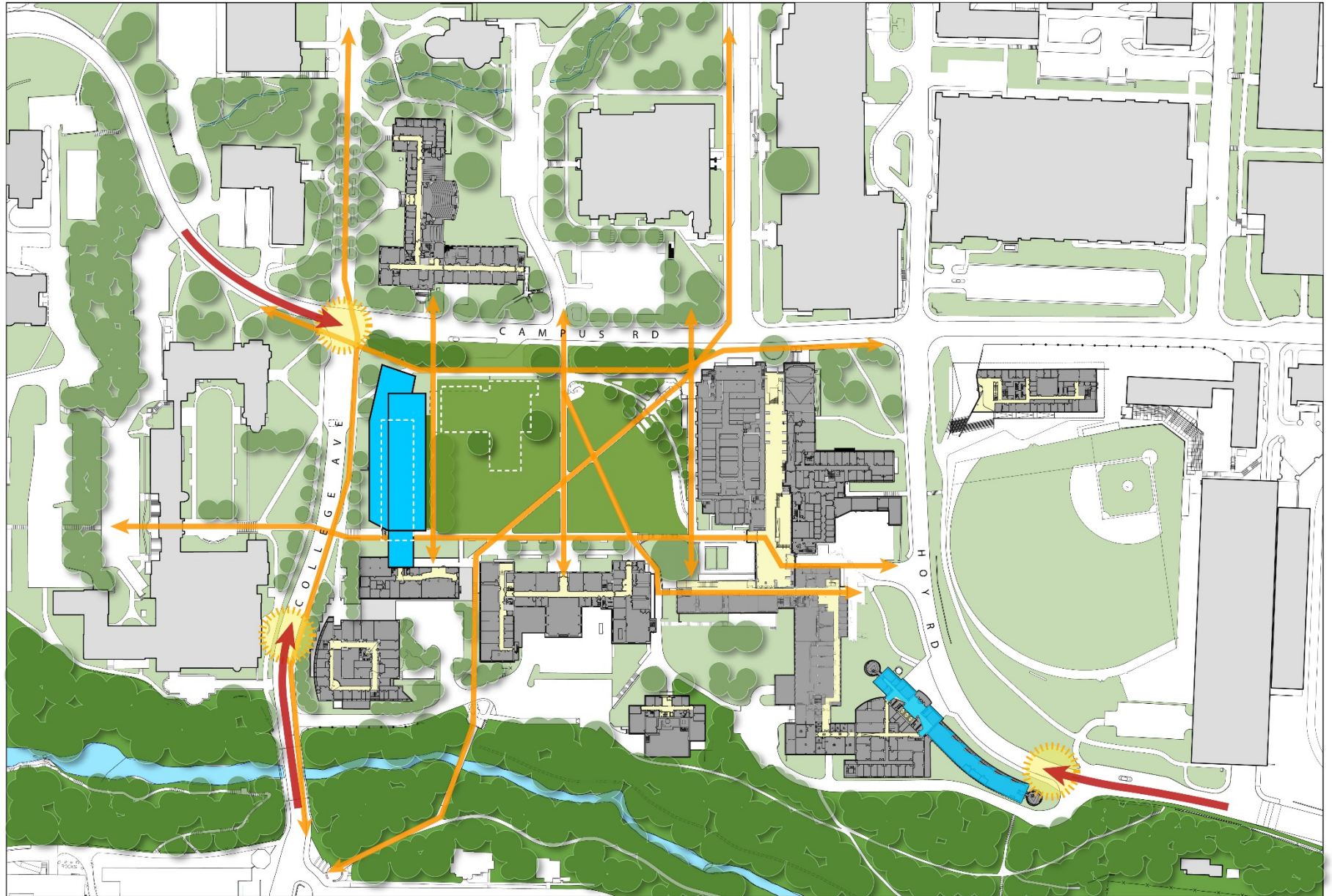
COLLEGE OF ENGINEERING CAMPUS GATEWAY



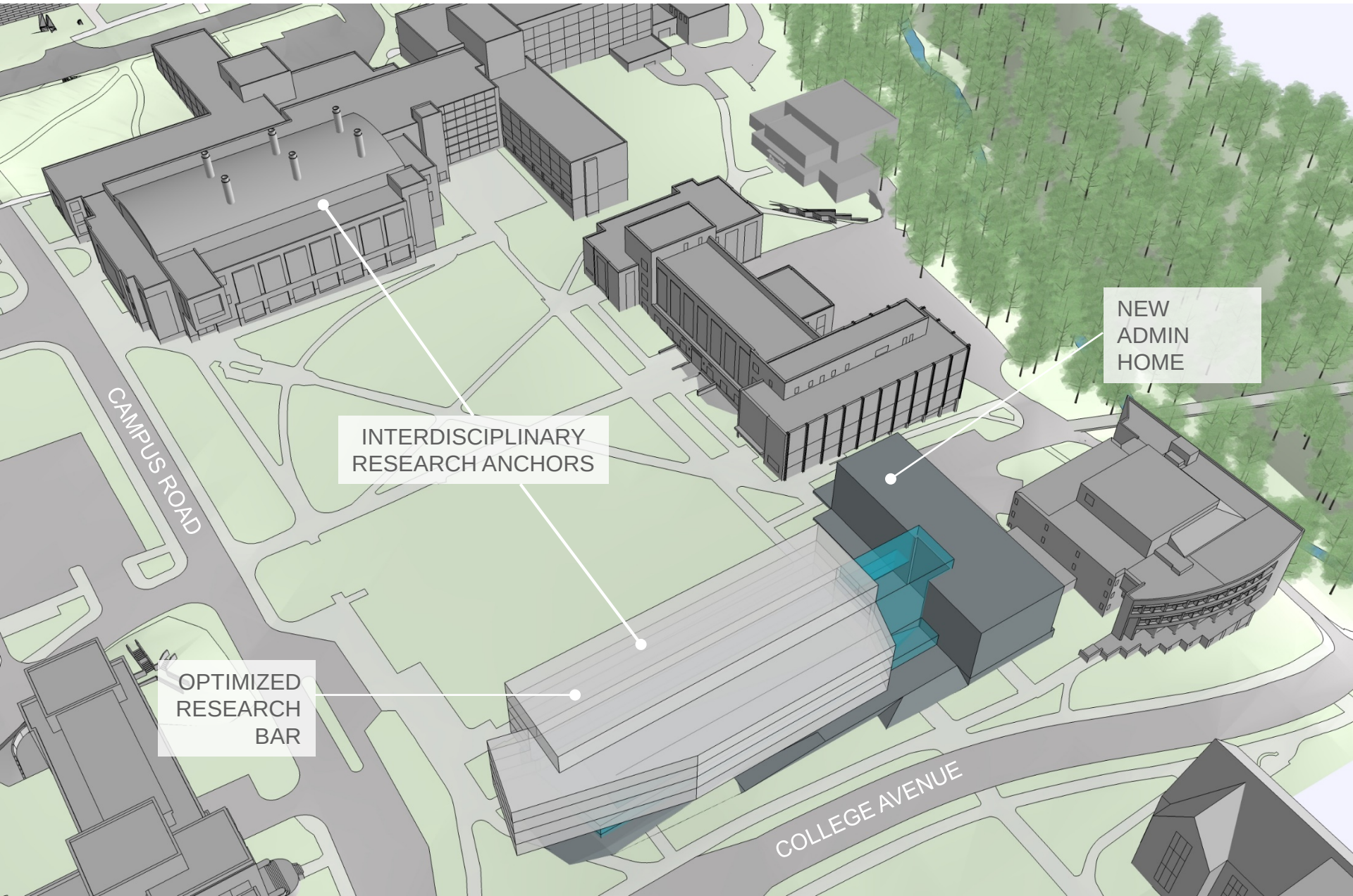
COLLEGE OF ENGINEERING CAMPUS GATEWAY



COLLEGE OF ENGINEERING CAMPUS GATEWAY



MASSING CONCEPT

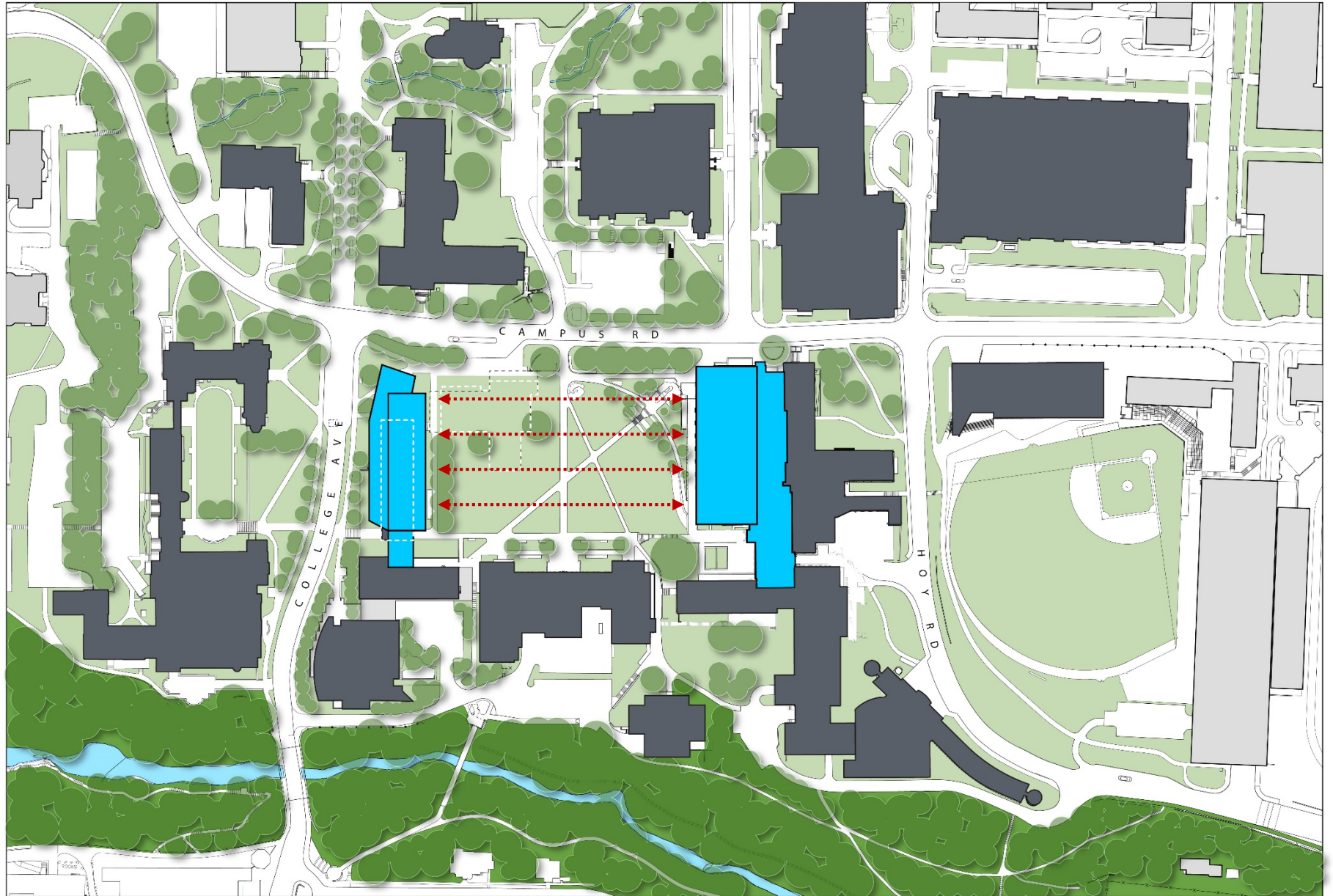


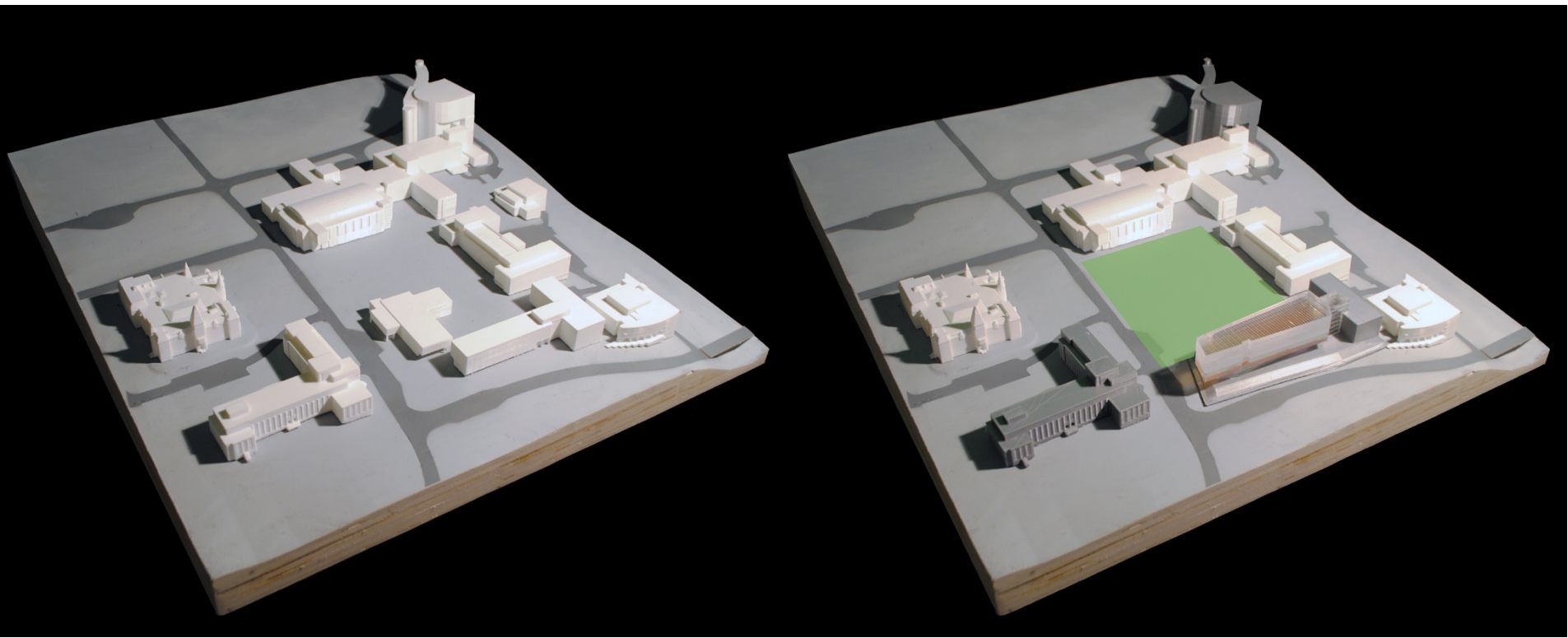
PEW ENGINEERING QUAD

HIGH TECHNOLOGY BOOKENDS



HOLLISTER NEW NORTH WING

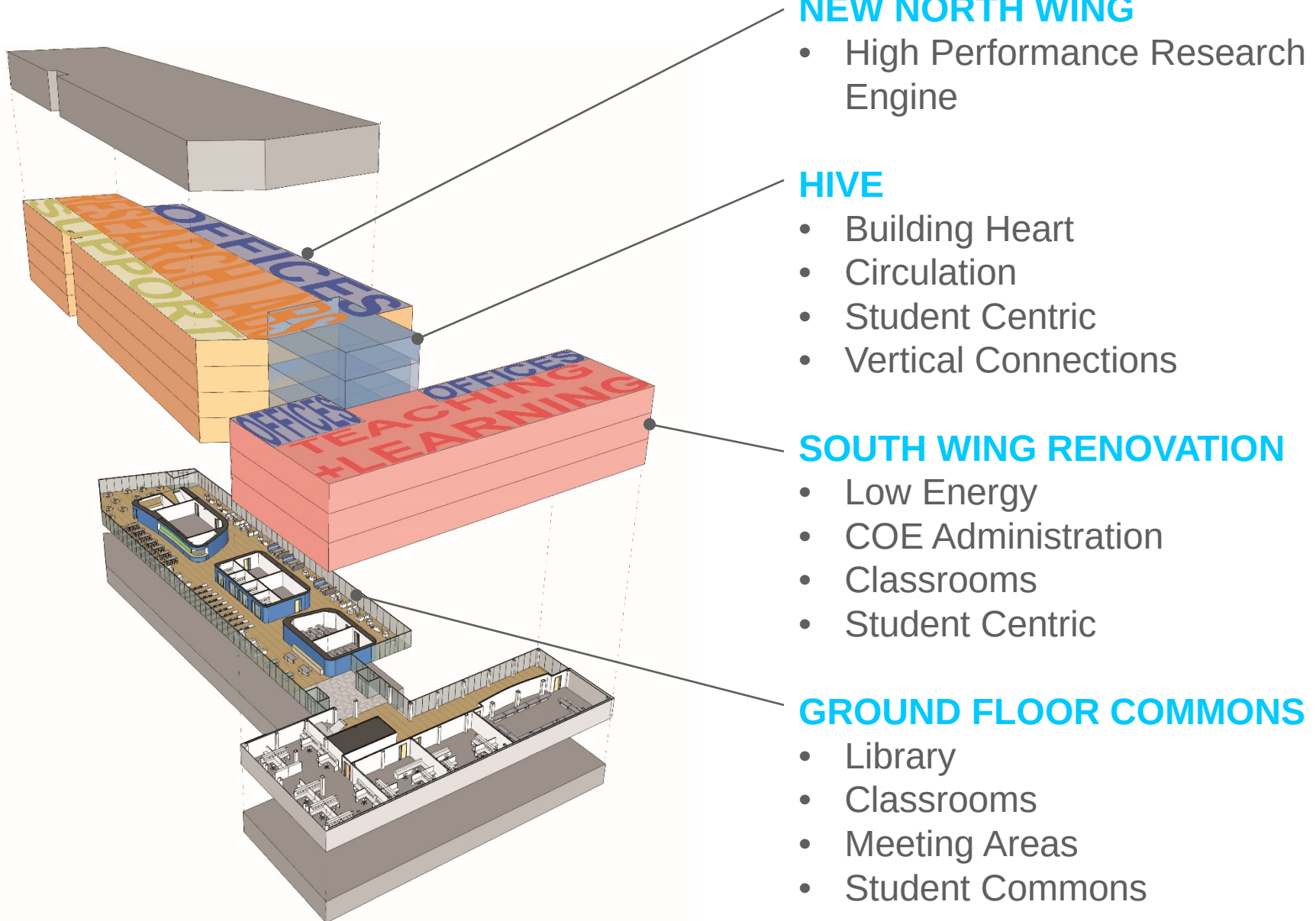






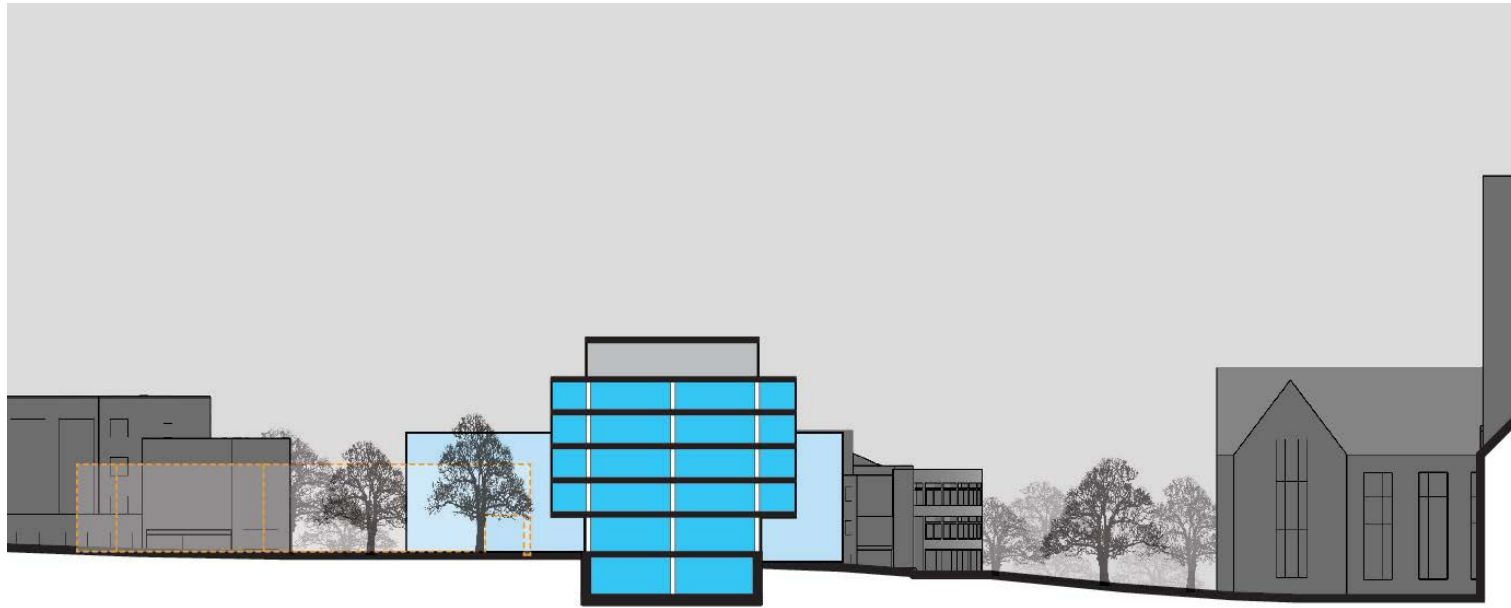
hollister hall
PHASES 1B AND 2B

IMPACT | FLEXIBLE RESEARCH ENGINE & COE HEART



REPLACE NORTH WING

- REQUIRES FULL DEMOLITION OF NORTH WING
- OPPORTUNITIES TO RIGHT SIZE FLOOR ELEVATIONS AT KEY FLOORS
- FLEXIBILITY IN SITING & MASSING TO IMPROVE STREET EDGE RELATIONSHIP
- OPTIMIZED STRUCTURE FOR RESEARCH
- OPTIMIZED PENTHOUSE AND MECHANICAL FEEDING
- OPPORTUNITIES TO ADD FLOORS
- CAN USE SLOPE TO ADVANTAGE ACROSS SECTION TO CONNECT LB, L1, L2



Section Looking South

CAMPUS SCALE



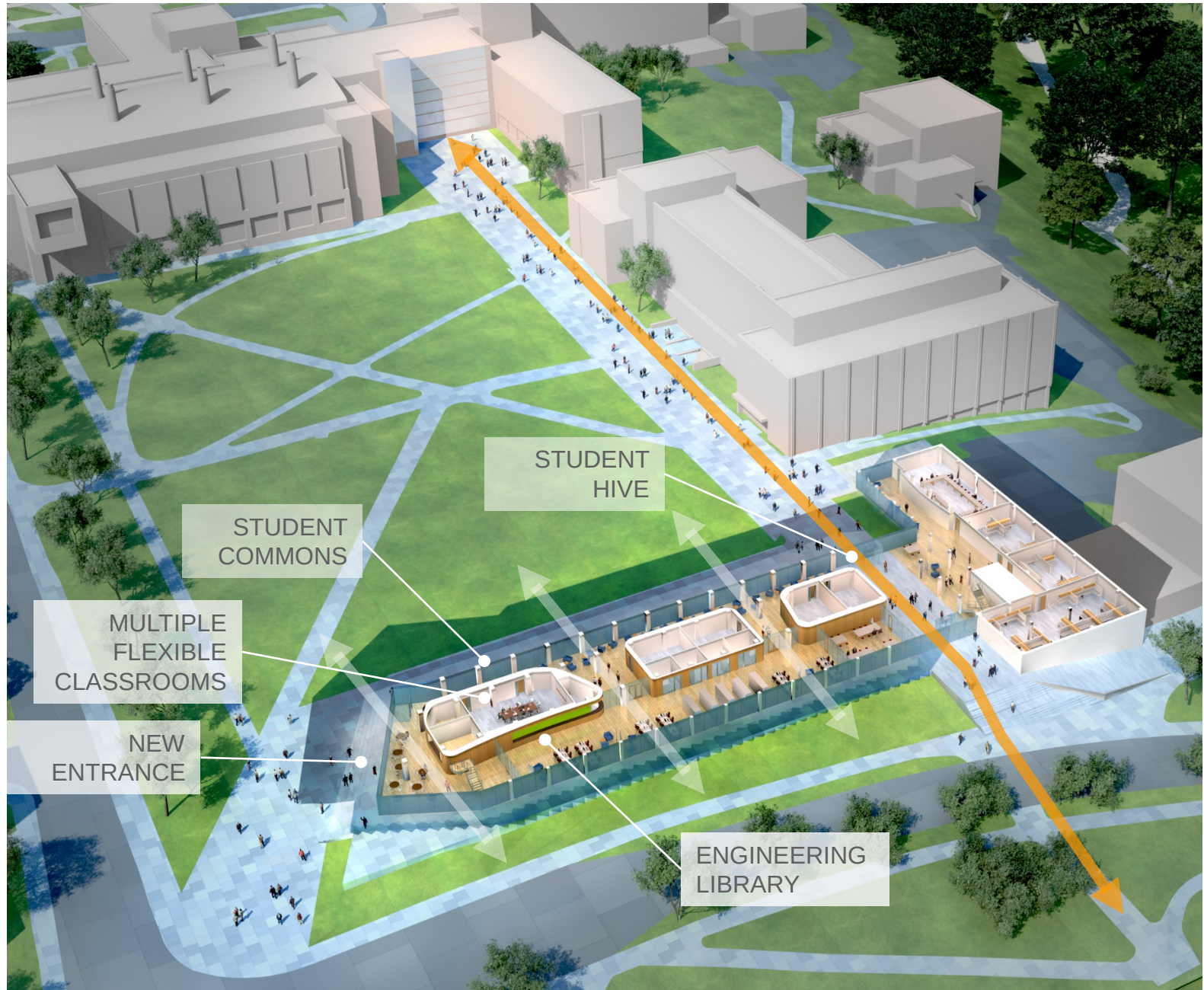


GATEWAY

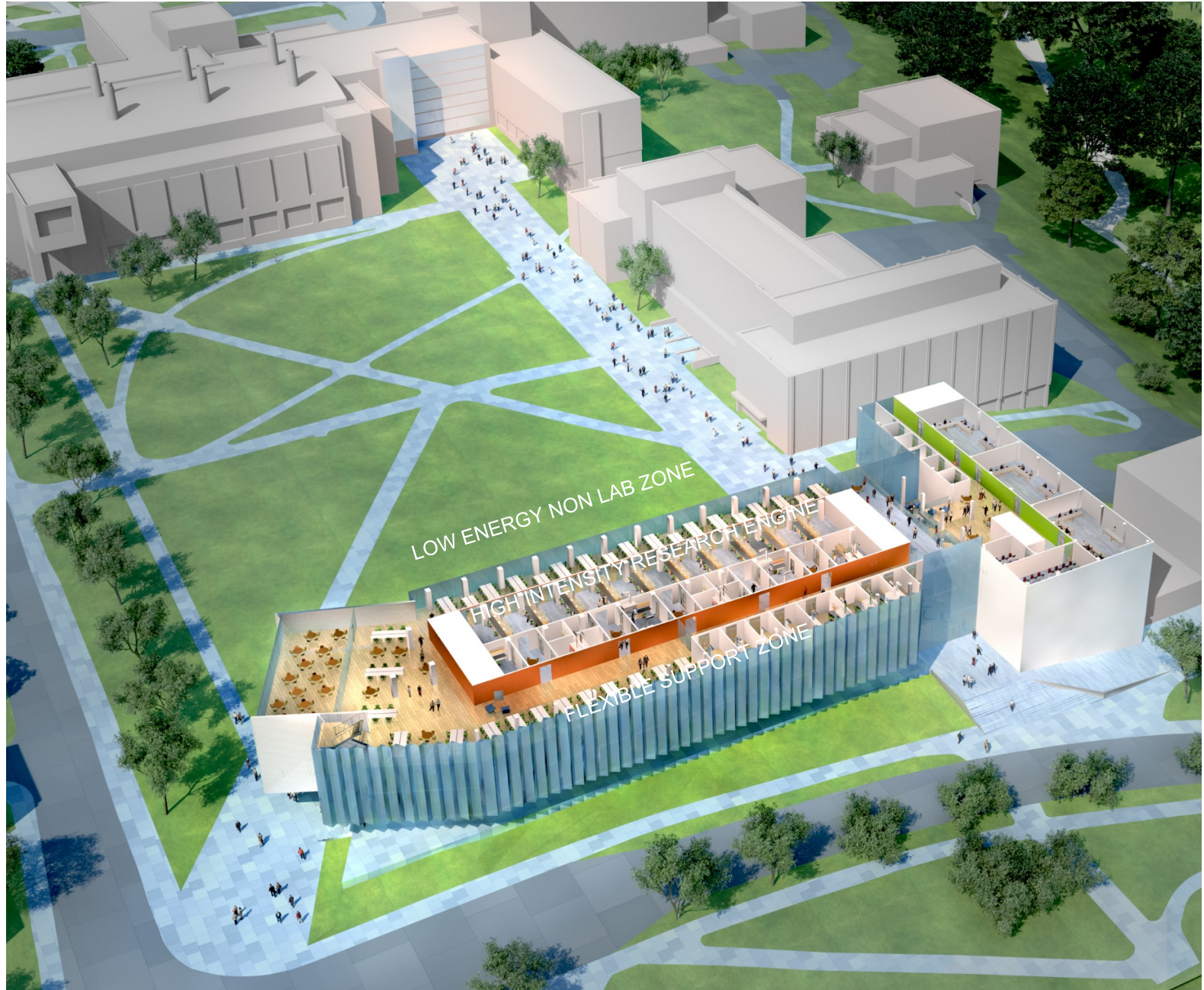


STUDENT HIVE

GROUND FLOOR STUDENT COMMONS



FLEXIBLE RESEARCH ENGINE



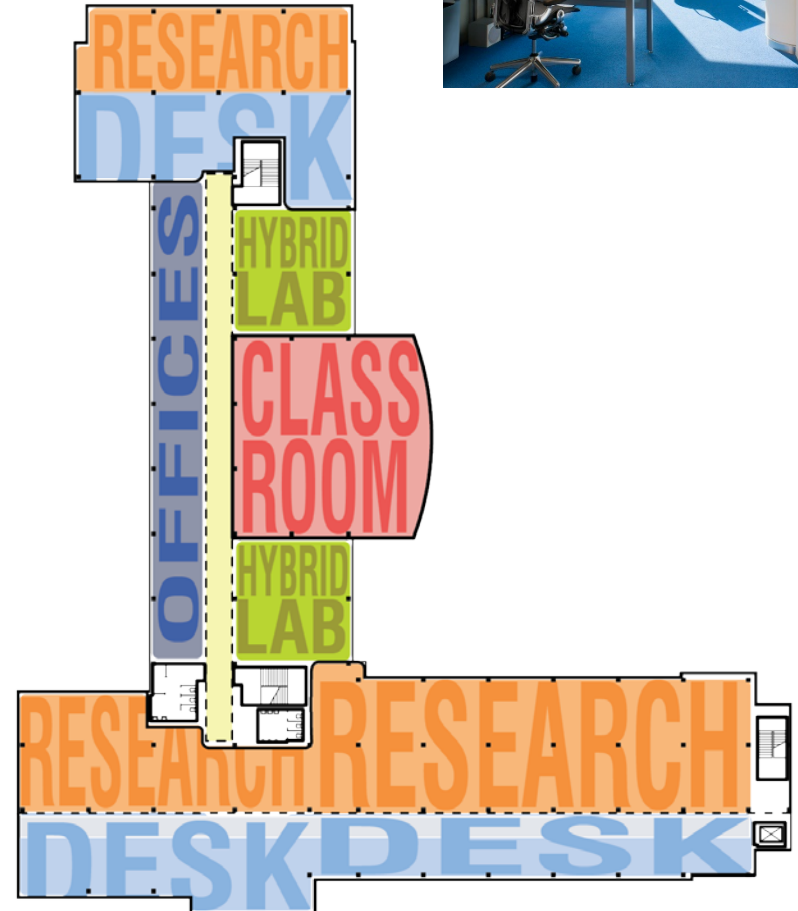




olin hall
PHASE 1C AND 2B

OLIN HALL | BREATHE NEW LIFE

- Extension of Research to West
- Southern Research Bar
- Requires Significant Swing Space
- Relocate Existing Non Lab Functions on Level 2 and 3 to Level 1
- Expand Research Area on Level 2 and 3



OTHER COMPONENTS

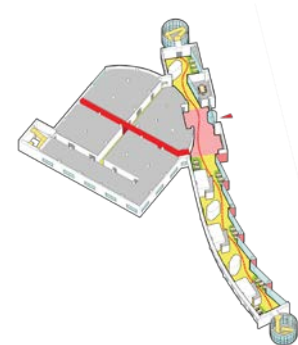
WARD HALL DEMOLITION



HIGH VOLT RENOVATION



RHODES GATEWAY & BACKFILL



CONSIDERATIONS FOR THIS COMMITTEE

- Land use ideas for Ward site post demo
- Ideas for quad revitalization/reconfiguration
- Gateway considerations at College Ave & Hoy Rd, respectively

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Vision

**Key Goals / Questions
Asked**

Implementation

Engineering Quad

Hollister

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Q&A

