



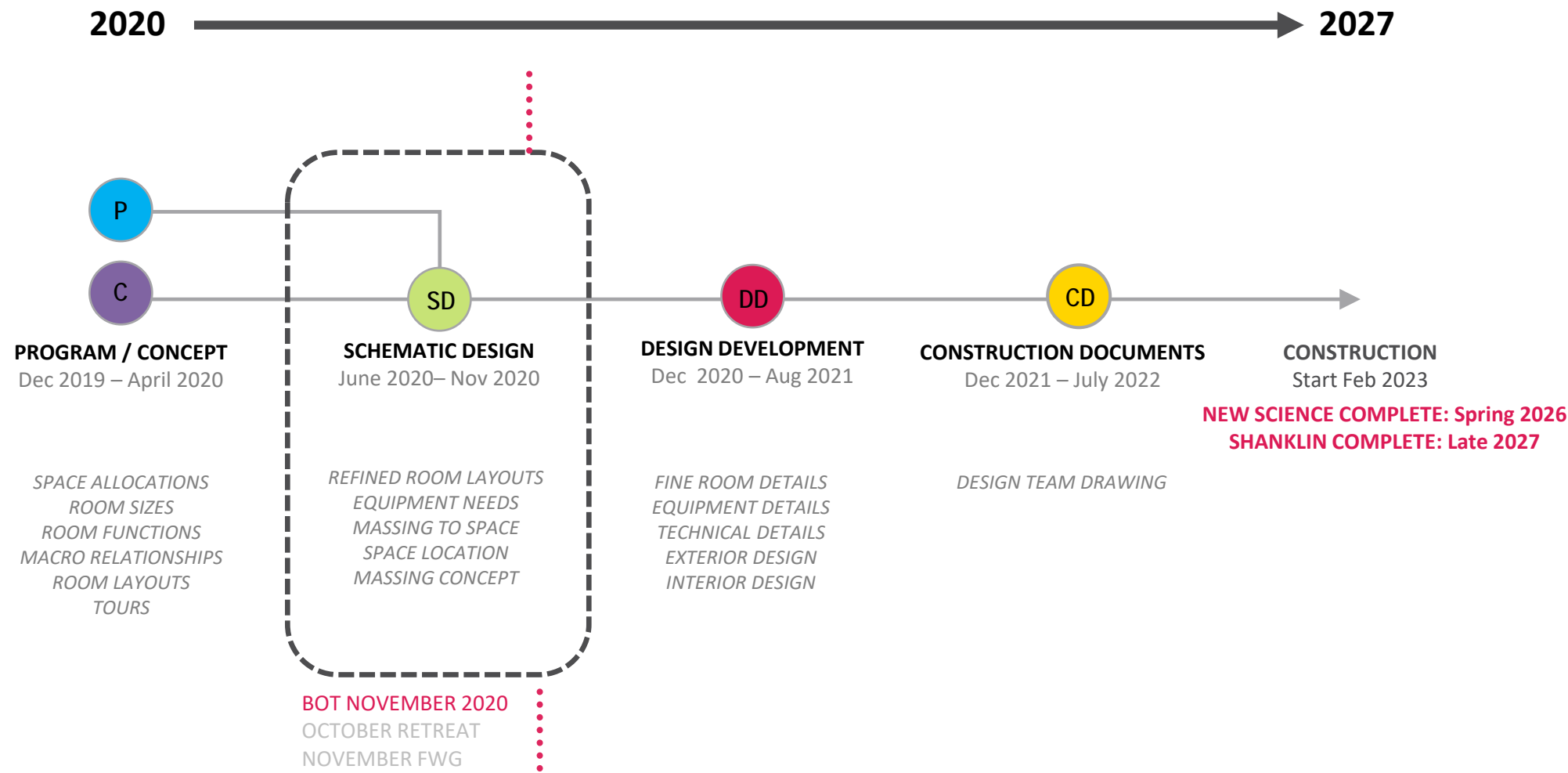
**WESLEYAN UNIVERSITY**

**NEW SCIENCE BUILDING – BOARD OF TRUSTEES**

November 20th 2020

**PAYETTE**

Pricing Update  
Equity Diversity & Inclusion (EDI) Outreach  
Exterior Progress  
Interior Progress



## Schematic Design

### Confirming

#### Project Cost

Confirm on budget

#### Location / Site

East of renovated Shanklin & Hall-Atwater demo

#### Program Spaces and Size

Chemistry, MB&B, Biology & COE

#### Who goes where

What floor and where on floor

#### Massing and Exterior Concept

Early exterior vision

#### Permitting

Reviewed general approach with City

## Design Development

### Where we're headed

#### Project Cost

Confirm on budget

#### Building Exterior

Finalize building shape & materials

#### Building Interior

Finalize room layouts, equipment & materials

#### Systems & Performance

Finalize MEP systems & energy strategies

#### Site

Refined site features and design

#### Permitting

Finalize Permitting approach with city

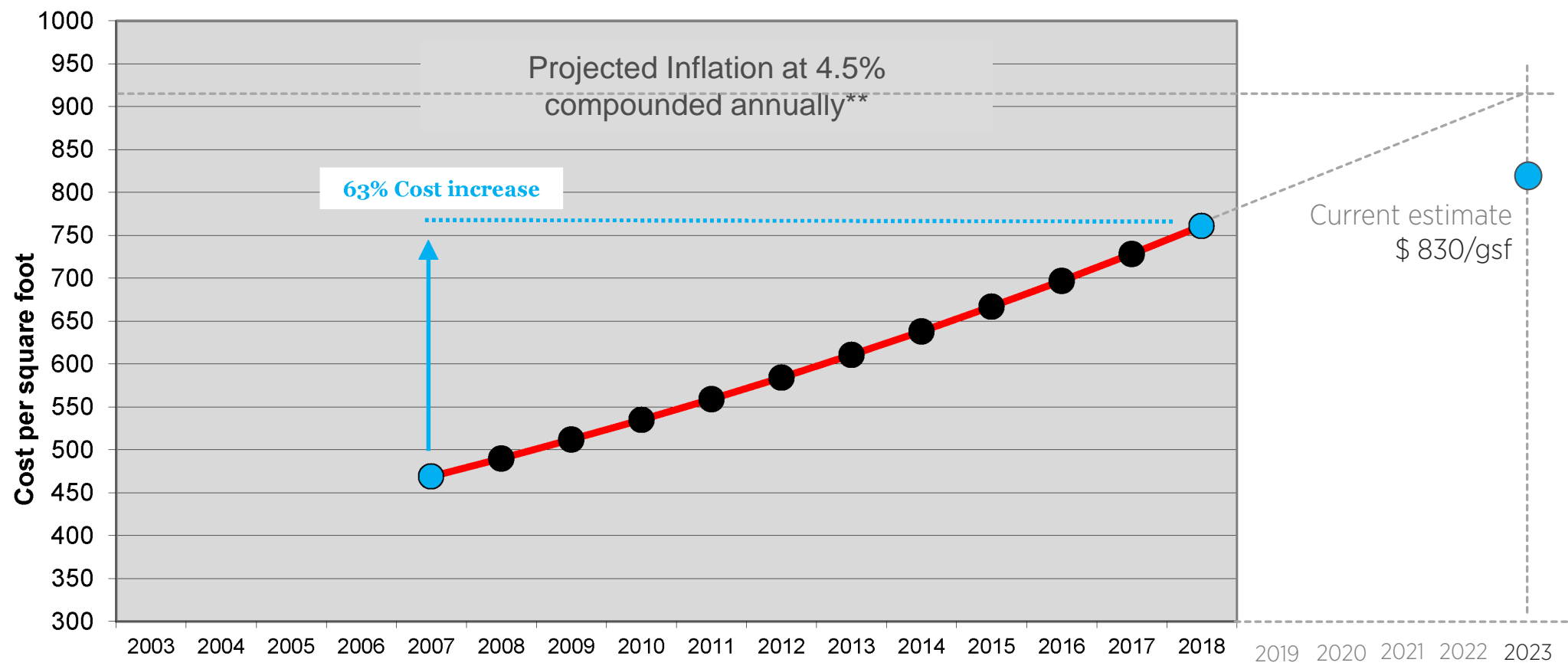


## Pricing Update

- Two independent estimates completed – within 1.5%
- Design documents “well beyond Schematic design”
- Construction Cost:                      \$ 183M | on budget
- Project Costs:                              \$ 255M | on budget
- Contingencies & Mobilization projects included
- Construction start 2023
  - 6.5% Total Construction Escalation (3% in 2021 & 2022, ½% in 2023)
  - 1.5% Total Soft Cost Escalation (½% in 2021, 2022 & 2023)
- **Project on budget\***

\*\$183M excludes tunnel to Exley (+\$2.1M)

Projections from 2007



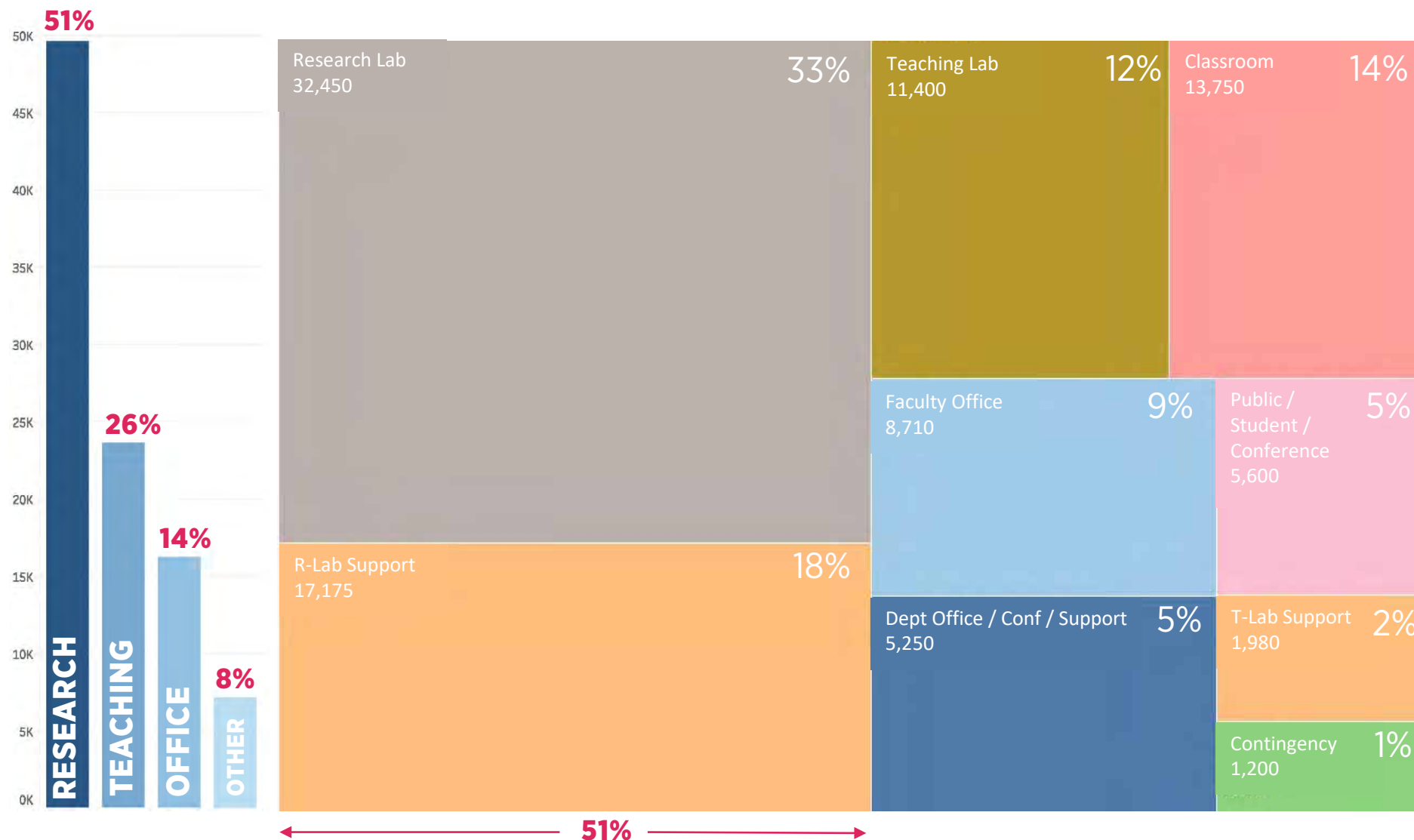
\*\$183M excludes tunnel to Exley (+\$2.1M)

\*\* Realized compounded construction industry inflation Average 2007-2020 = 4.92%

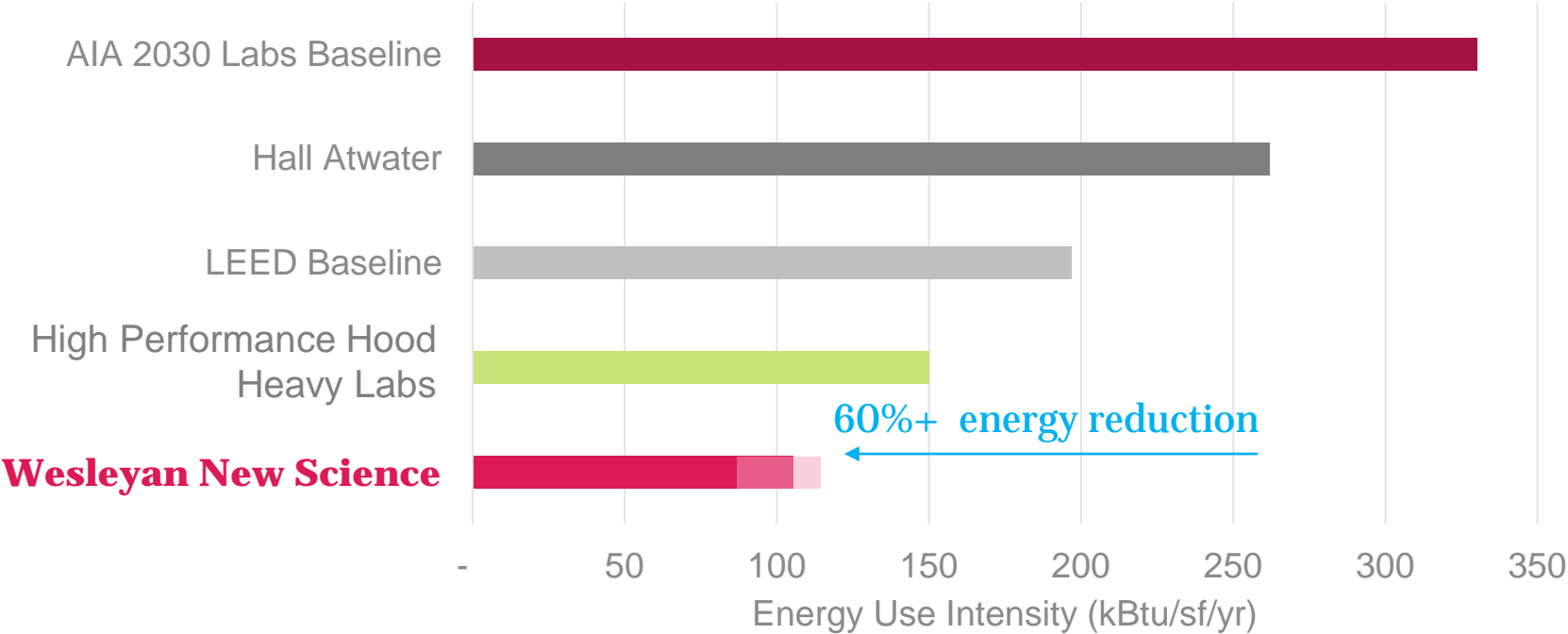
97,500 NSF  
185,000 GSF

Tracking 193,000 GSF  
(+ 4.2%)

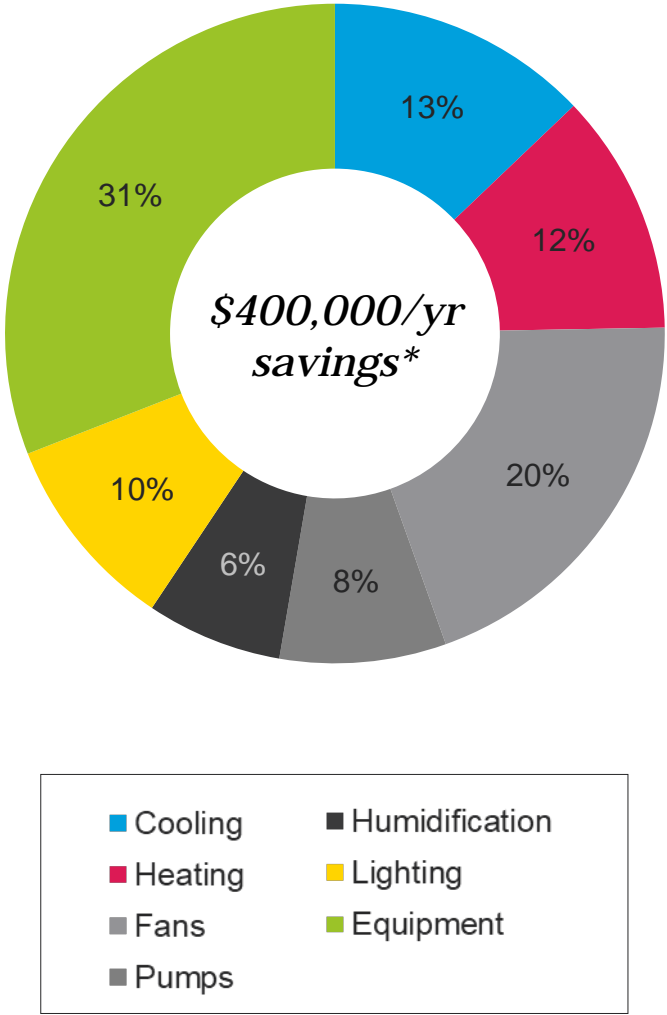
- **39 Research + support**
- **9 Teaching Labs.**
- **7 classrooms**
- **Vivarium + Greenhouse**
- **Adv. Instrumentation**
- **College of the Environment**



**Fantastic User engagement : Program on track : Over 130 meetings**



**NSB Predicted Energy Use (EUI) = +/- 105 kBtu/sf/yr**



\* Cost savings with respect to LEED Baseline

## ***Strategies for Covid response:***

1. *Reduced physical contact: touchless contact points (sinks, devices, dispensers)*
2. *Doors: Doorless restrooms (airport style)*
3. *Lecture capture and recording strategies for remote and hybrid learning*
4. *Increased air changes. (filters and air change rates robust)*
5. *Study decompression plans for (temporary) reduced capacity*

COVID-19 ongoing and still evolving – fluid | We have time to respond



Pricing Update

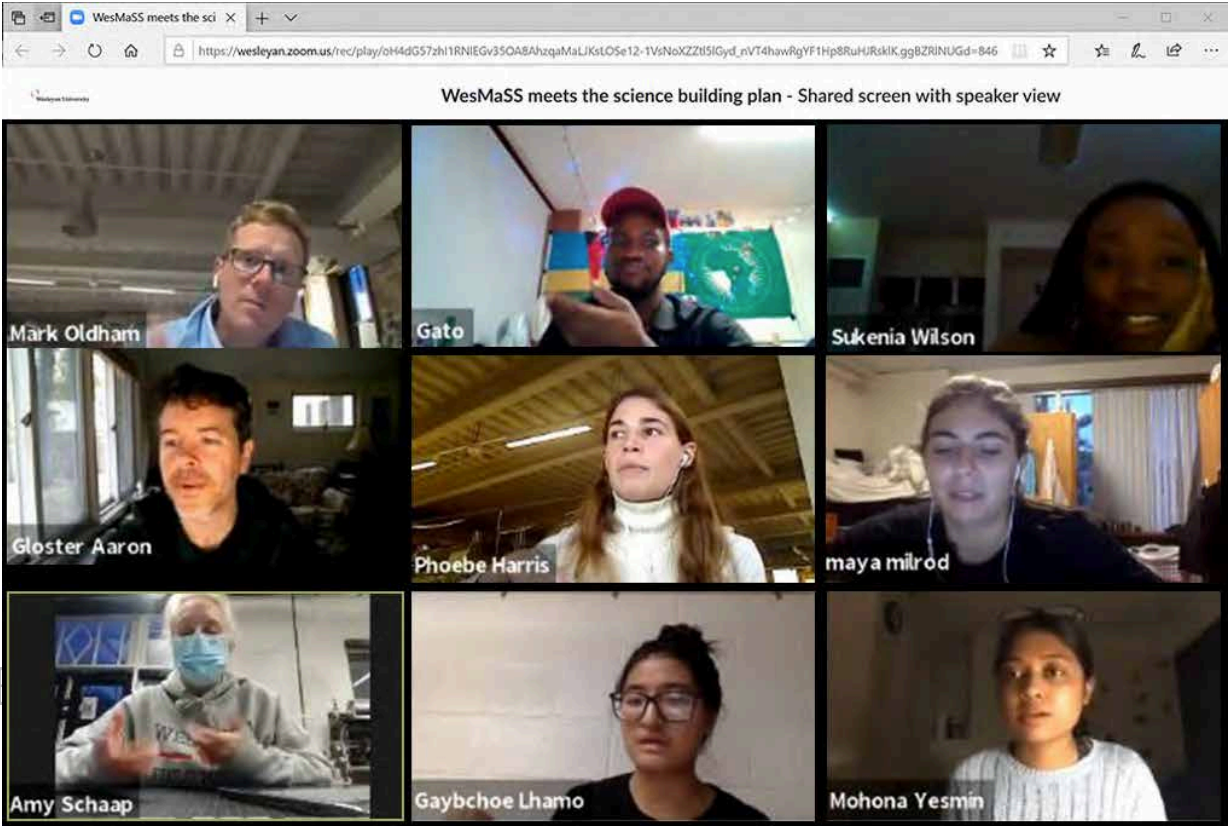
Equity Diversity & Inclusion (EDI) Outreach

Exterior Progress

Interior Progress

# Equity, Diversity & Inclusion (EDI) Outreach

- **WesMass\* Student Focus Group**
- **Office of Equity & Inclusion**
- **Office Academic Resources & Accessibility**
- **Bio, Chem, MB&B Undergrad Students**
- **Bio, Chem, MB&B Graduate Students**
- **STEM zone tutoring Focus Group**
- **WesWIS Women in Science**



\* Selective academic program designed to support students from traditionally underrepresented groups in mathematics and natural sciences.

# Key Questions

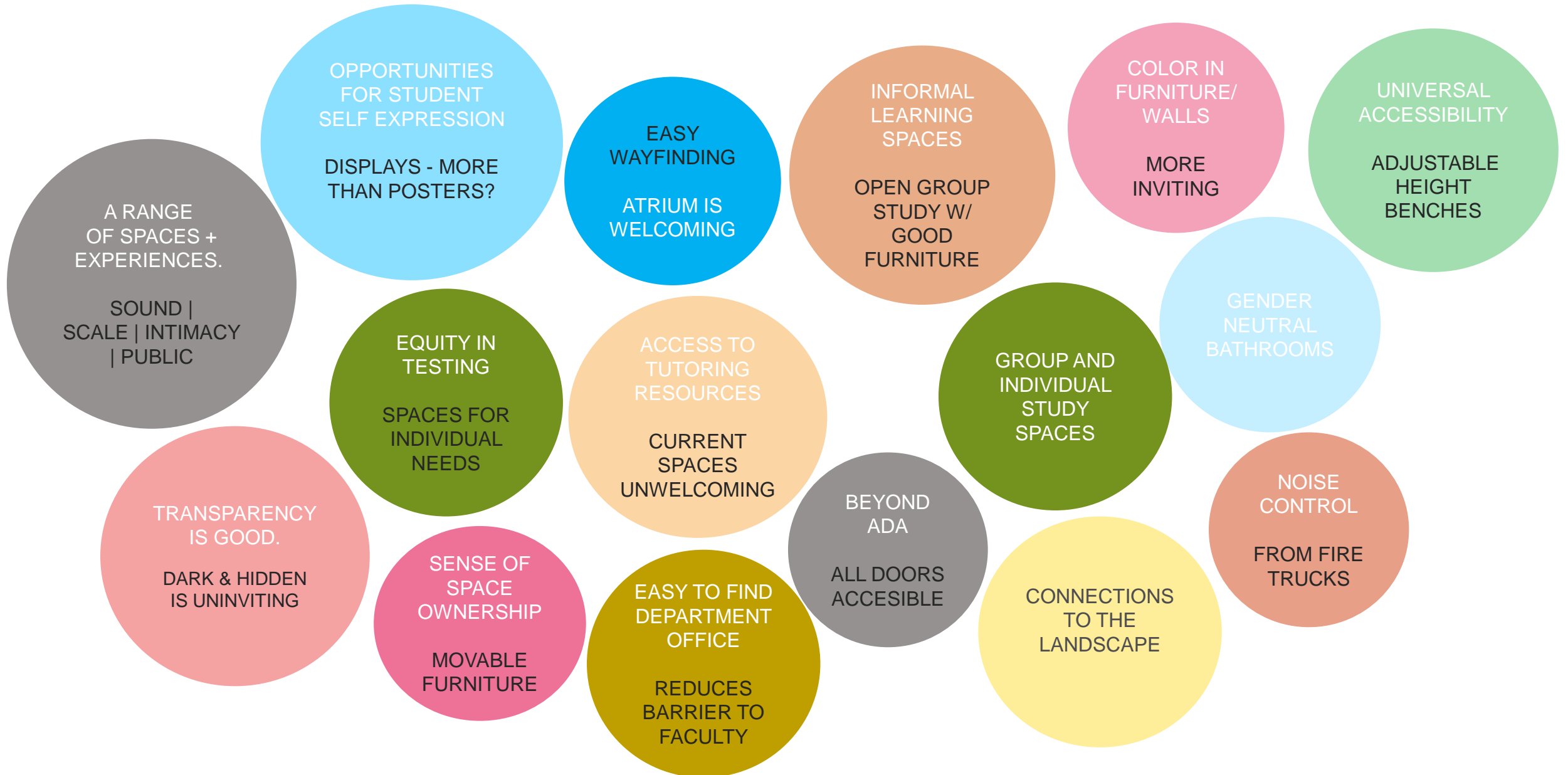
How might the building help **promote equity, inclusion, and invitation** to all?

What characteristics of the building can **convey welcome and accessibility**?

Do any **existing (science?) buildings hinder** a sense of equity and inclusion?

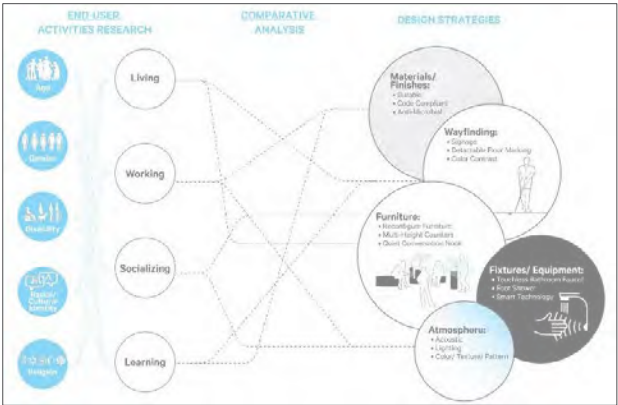
What of **your experiences** might help our design, equity & inclusion efforts

# Ingredients for promoting equity & inclusivity

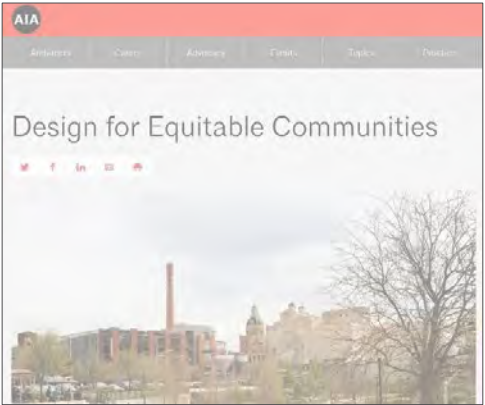


CURRENT THOUGHT LEADERSHIP ON EDI AND THE DESIGN PROCESS

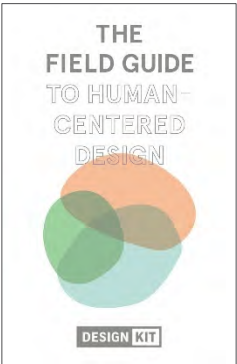
YALE UNIVERSITY - Joel Sanders MIXDesign



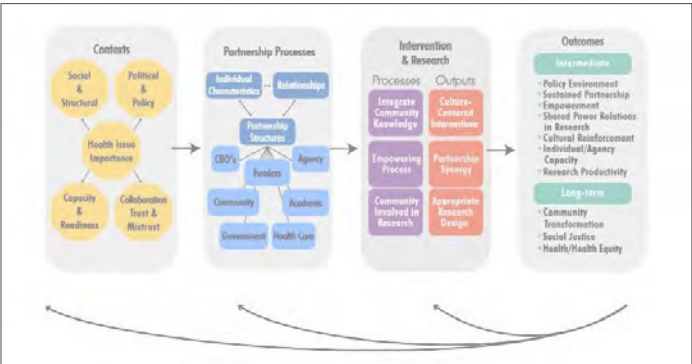
AIA - The Design for Equitable Communities



IDEO - Field Guide for Human Centered Design



ENGAGE FOR EQUITY - Community Based Participatory Research Model



LIVING BUILDING CHALLENGE - Equity Certification

TRAILBLAZER	1.1	1.2	1.3	1.4	1.5	1.6
Surface Carbon	Minimum 25% reduction of carbon footprint for building envelope and interior materials by 2025					25% reduction
Signage	Minimum 25% reduction of carbon footprint for building envelope and interior materials by 2025					25% reduction
Proportion	Minimum 25% reduction of carbon footprint for building envelope and interior materials by 2025					25% reduction
Health & Safety	Minimum 25% reduction of carbon footprint for building envelope and interior materials by 2025					25% reduction

EDI Design Thought Leadership





### Establish Community Partnerships

- WesMass\* Student Group
- Office of Equity & Inclusion
- Academic Resources & Accessibility
- Grad & Undergrad Student Groups
- STEM zone tutoring Focus Group
- WesWIS Women in Science



### Participatory Engagement

- Surveys
- Workshops
- Focus groups
- Collect Data & input
- Analyze the correlation between end users, activities and space

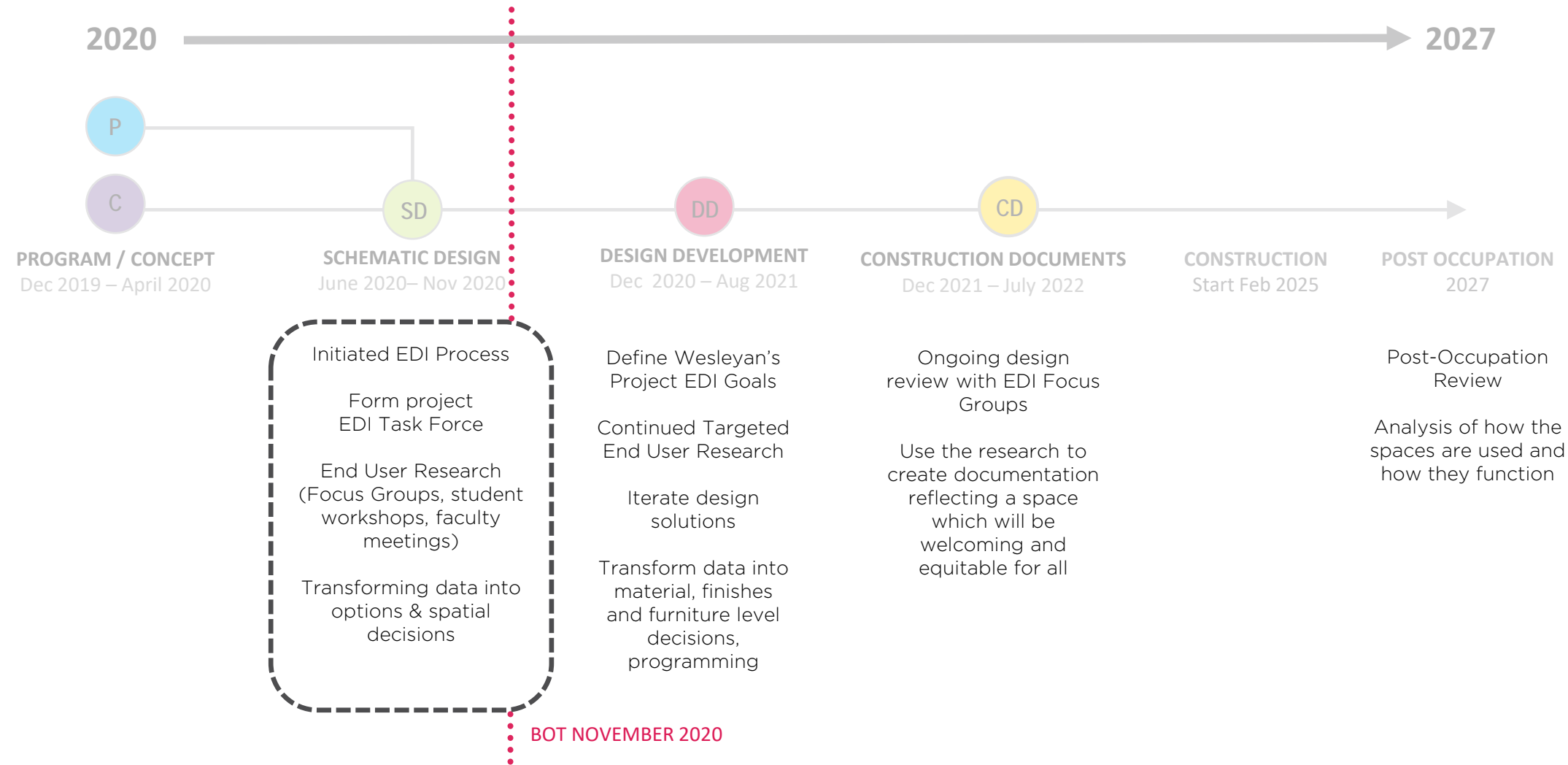


### Analyze to generate a matrix of design strategies at all phases of the project

- Building Massing and wayfinding during early design
- Lighting, furniture selection, finish choices programming, at Design Development



EDI WITHIN EVERY PHASE OF THE DESIGN PROCESS



## Equity & Inclusion Outreach

WesMaSS (Wesleyan Math and Science Scholars from URM)			Office of Equity & Inclusion			Office of Accessibility & Academic Resources		
Design Phase			Design Phase			Design Phase		
Clarity of Way Finding	SD	✓	Clarity of Way Finding	SD	✓	Clarity of Way Finding	SD	✓
Moveable Furniture	DD		Universal Accessibility	SD	✓	Universal Accessibility	SD	✓
Spaces for student groups	DD		Spaces for student self-expression	DD				
Range of study spaces	SD	✓	Range of study spaces	SD	✓	Spaces for different test taking needs	SD	✓
Writing surfaces on walls	DD							
Temperature Control	CD							
Cross programing to draw other majors to the building	PO		Central location for Department Headhouse	SD	✓	Central location for Department Headhouse	SD	✓

## OUR COMMITMENT TO DIVERSITY

### JUST Label Certified Firm – Level 2

- JUST is described as “a nutrition label for socially just and equitable organizations.”
- Certified process & tool for establishing a business operation’s best practices.

### Published Firm EDI Action Plan

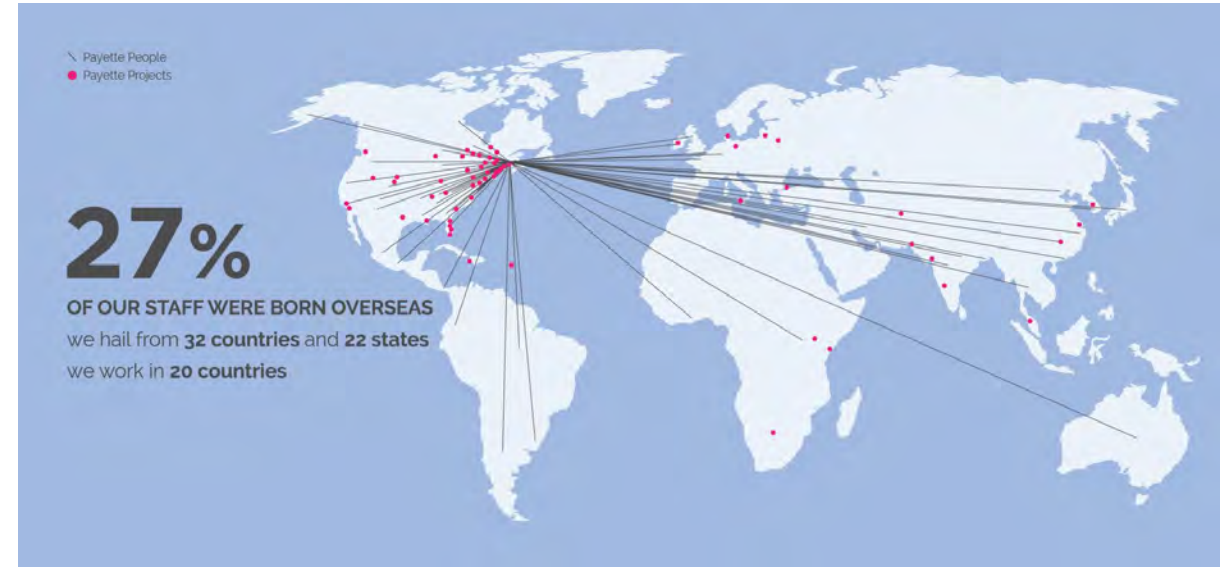
- Conducted firm-wide workshops on unconscious bias
- Annual review of project assignments to support more diverse project teams and opportunities
- Established core working hours to support flexible work schedules
- Firm representation to the AIA/SF Equity by Design Symposium & AIA Women’s Leadership Summit and

### Staff Diversity Commitment

- In the past 12 months 58% of our full-time hires have been women and 17% have been people of color.

### Hiring Process

- Active recruitment plan to build employment pipeline at Historically Black Colleges and Universities such as Howard University and Hampton University.



Currently, 22% of our staff are minorities and 41% are women.

### Pro Bono Community Design Services

- Fabricating COVID-19 response wash stations for economically depressed areas around Boston
- Maternity ward and neonatal care unit for a hospital in Haiti
- Host an annual Day of Service for under served non-profit organizations.



50%  
non-white



44%  
women



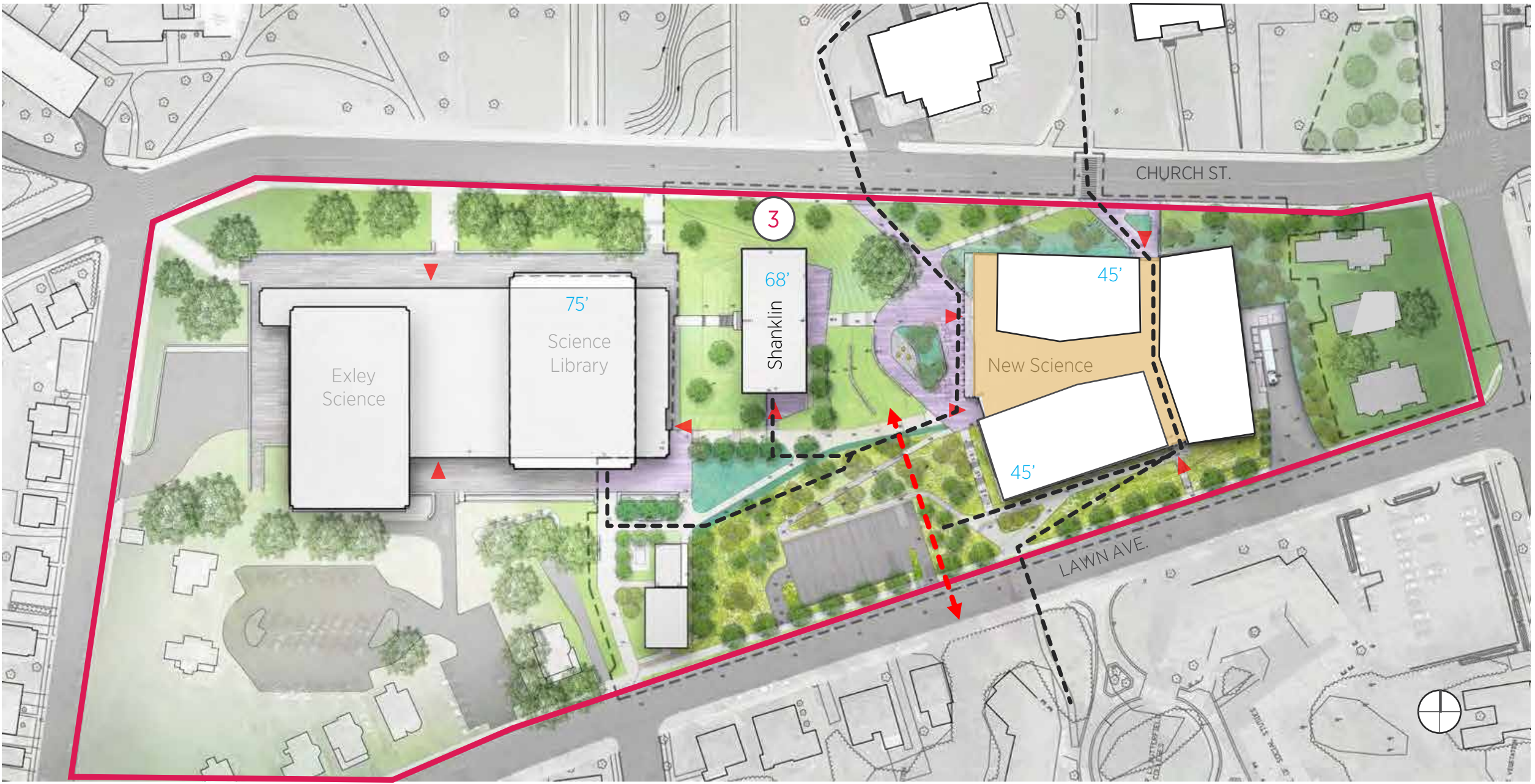


Pricing Update  
Equity & Inclusion Outreach  
Exterior Progress  
Interior Progress



**Site Concept | Connected Science Precinct**





**Site Concept | Accessible Connectivity**





**Beyond ADA** | An accessible science precinct (on a 35' hill)





**Unified Campus | Exley - Shanklin - New Science – Butterfield – College Row**



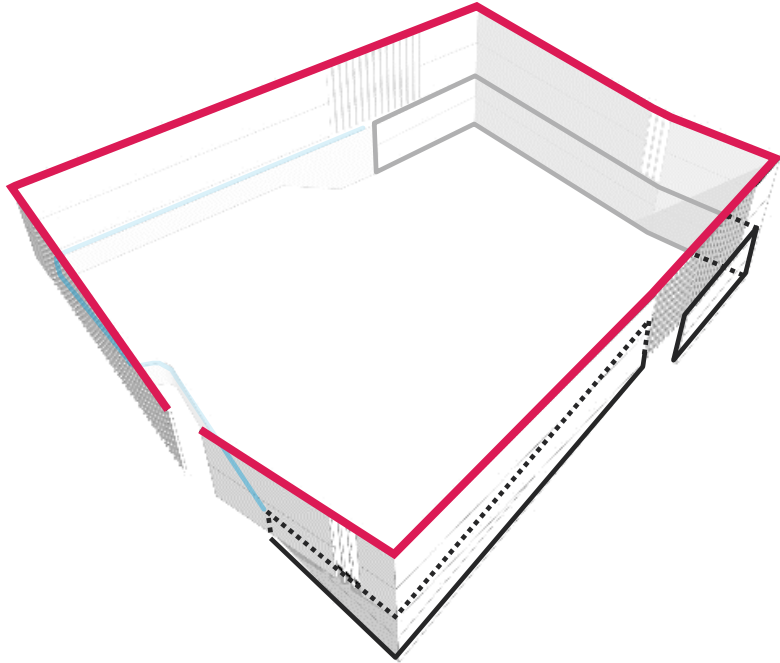


**Unified Campus | Exley—Shanklin—New Science**

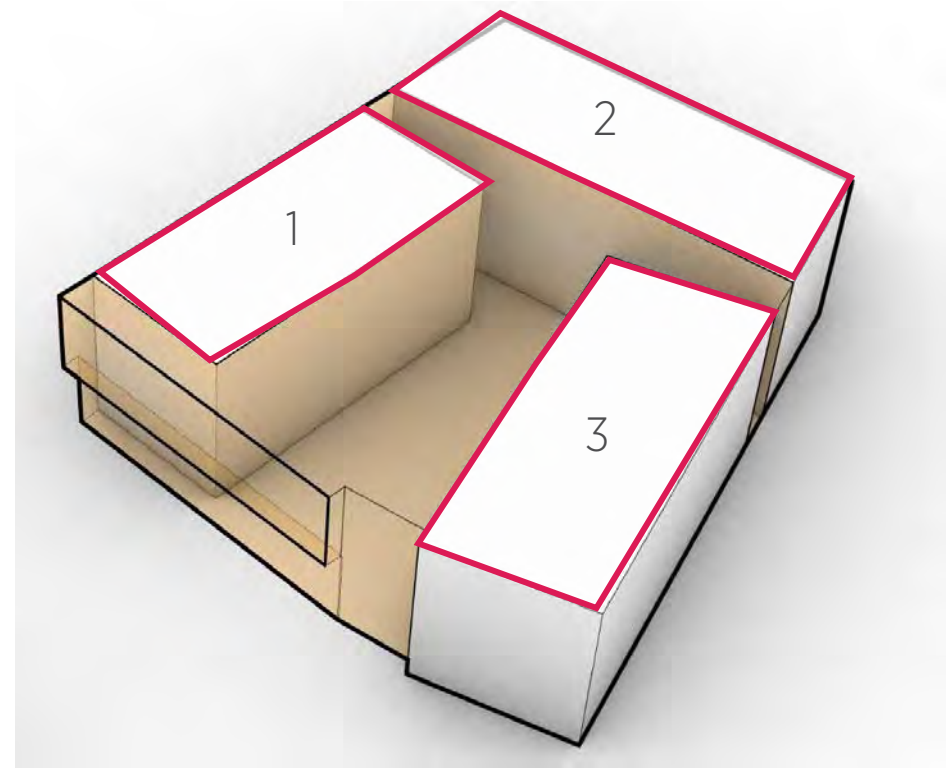




**Unified Campus | Exley—Shanklin—New Science**

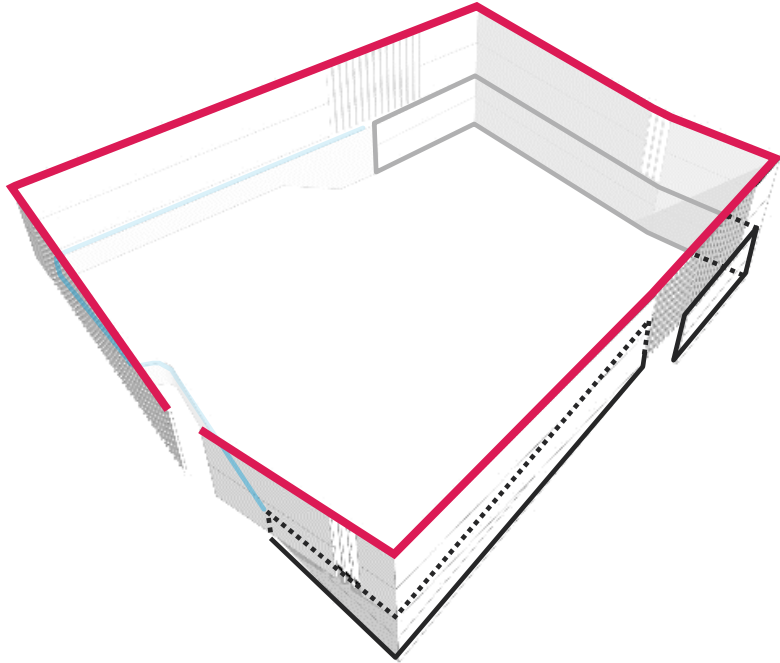


Unified wrapper

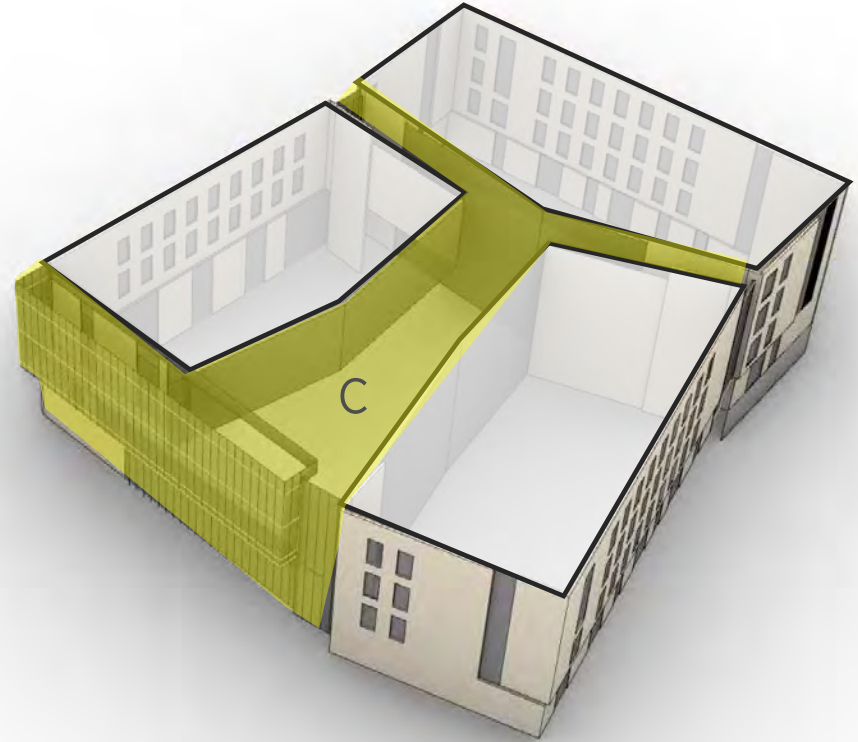


Expressed Clusters

## MASSING CONCEPT



Unified wrapper



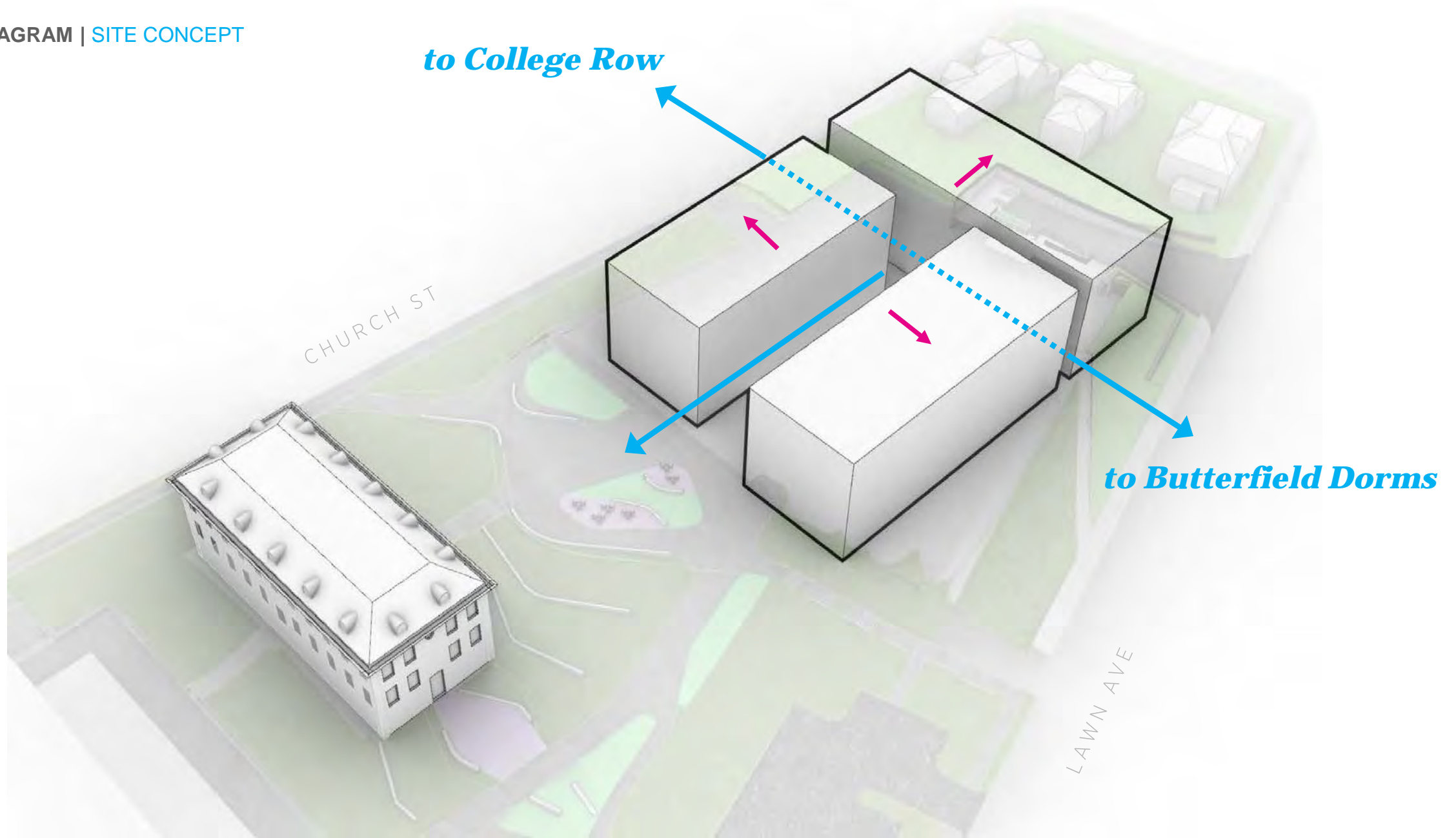
Expressed Clusters  
+  
Inviting Campus Commons

**Massing Diagram** | campus scaled

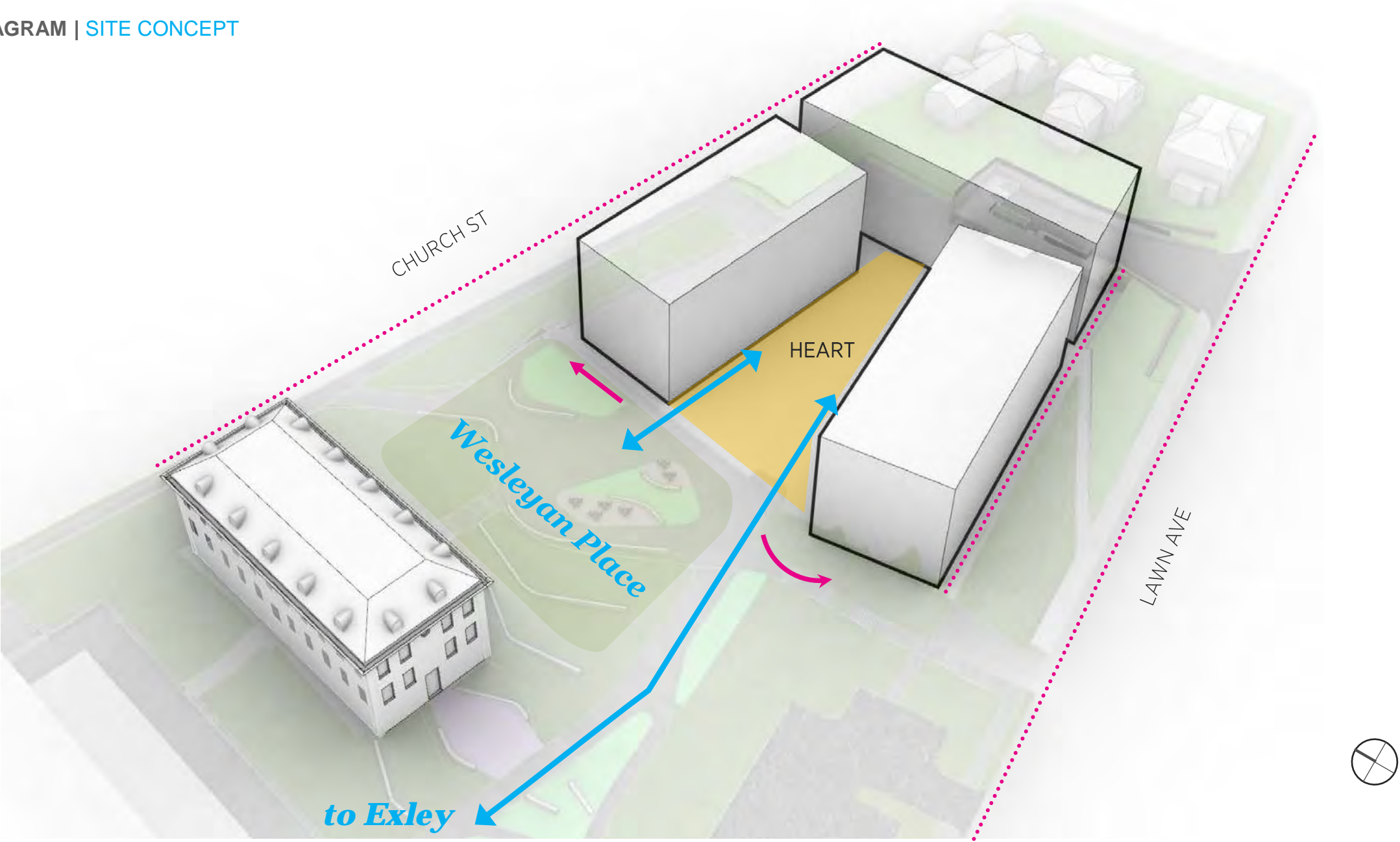




**Site Response | New Science Program**

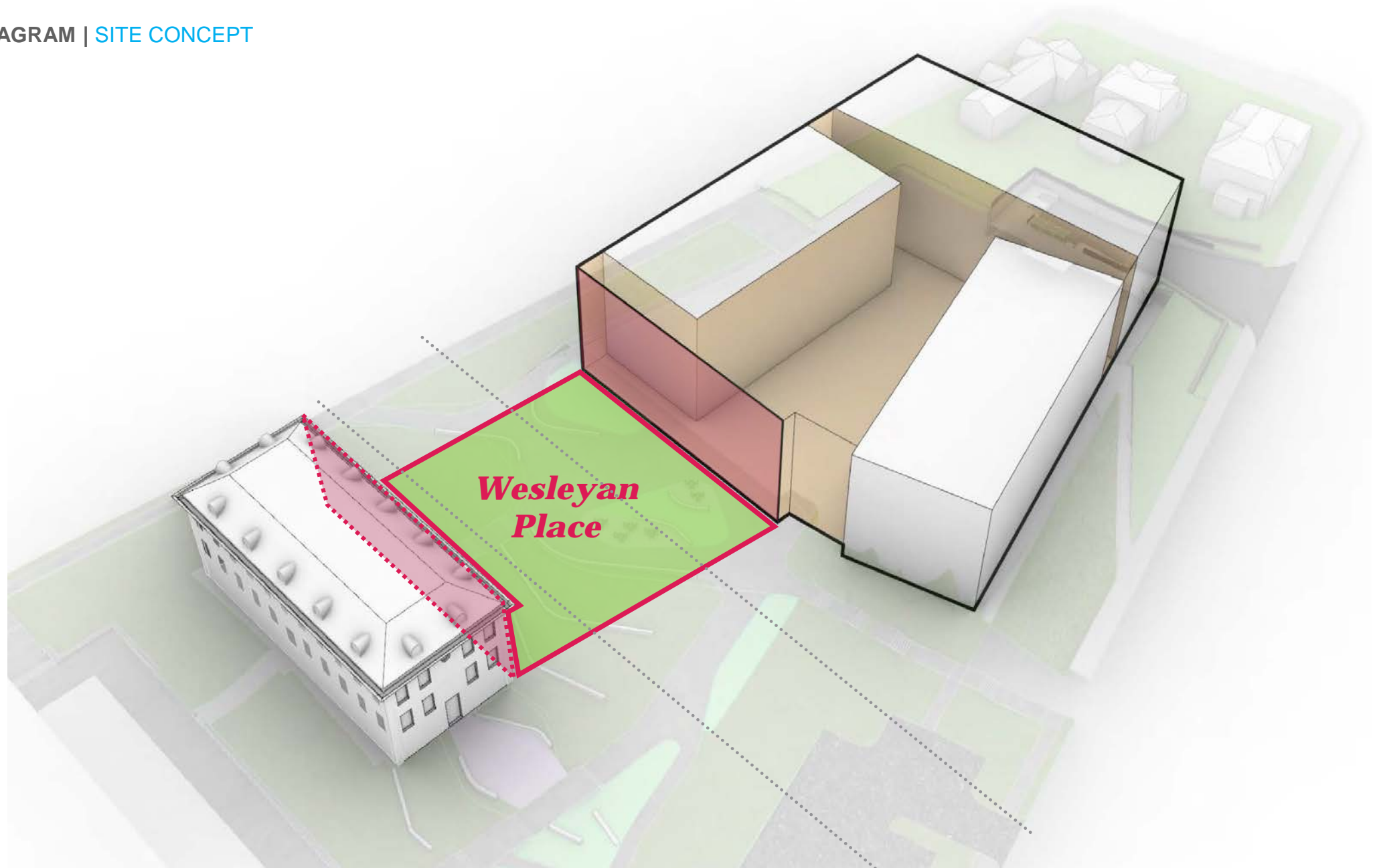


**Site Response | 3 campus scaled clusters**

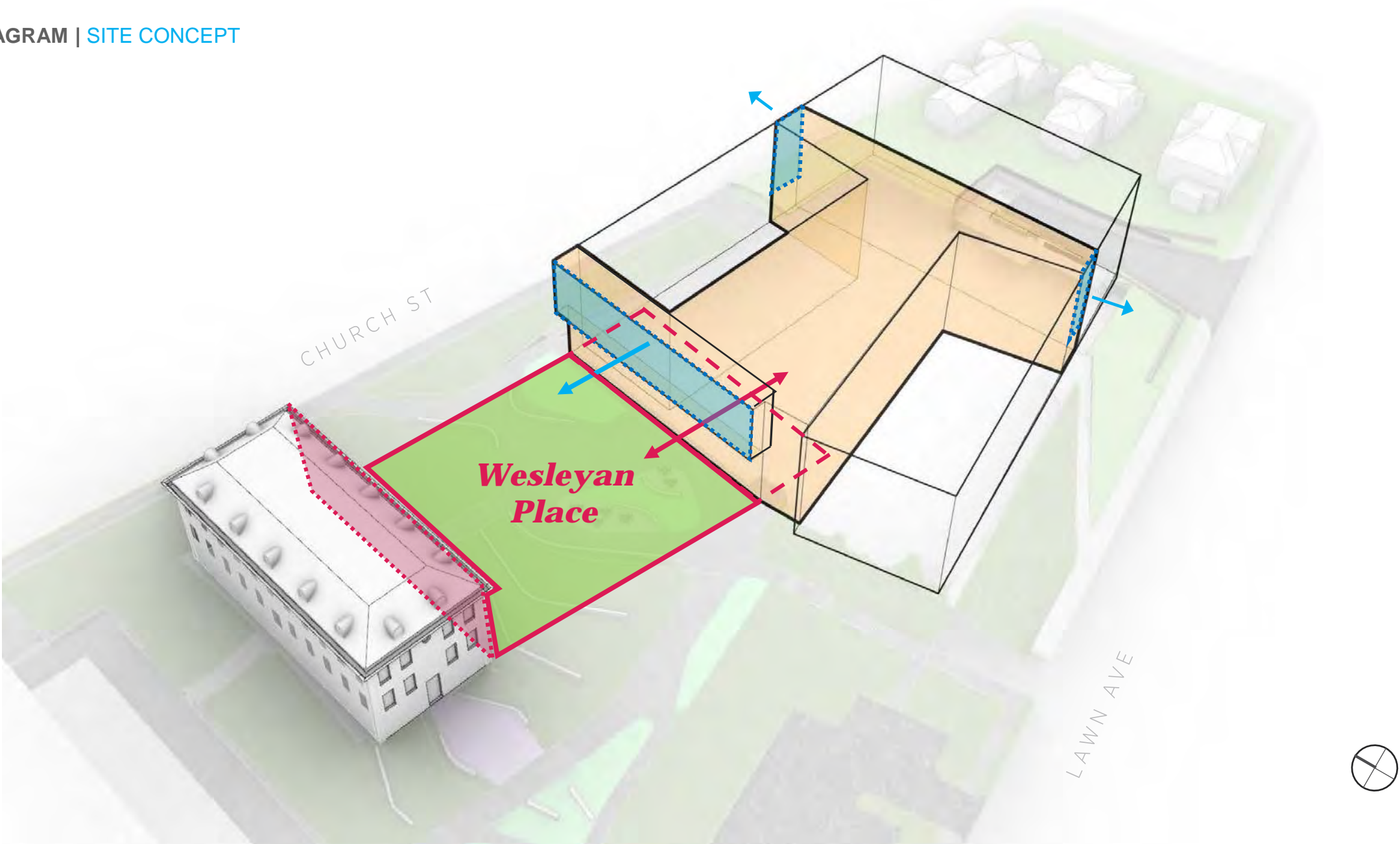


**Site Response** | Aligned to Lawn Ave – Inviting to Shanklin

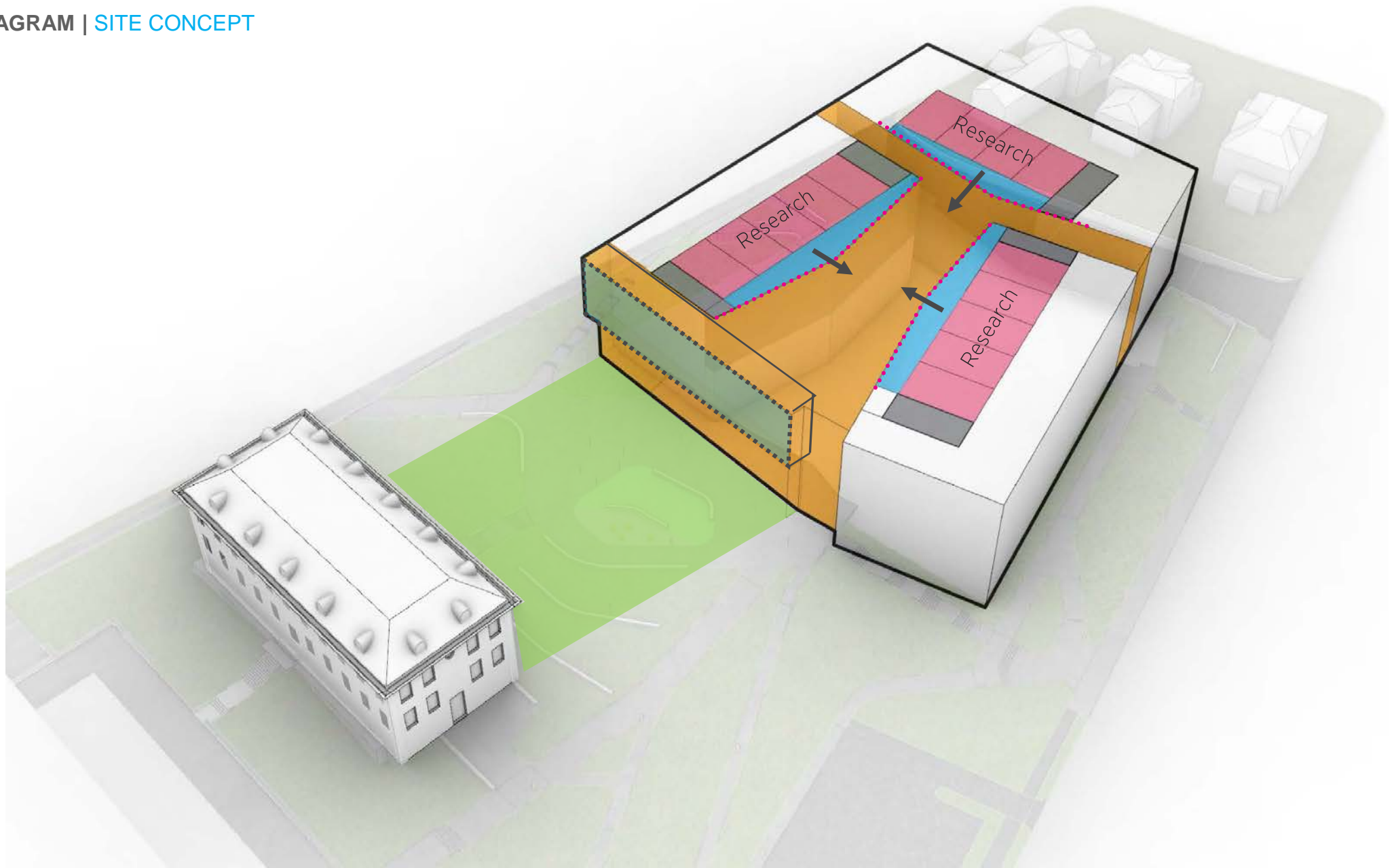




**Site Response | Wesleyan Place**

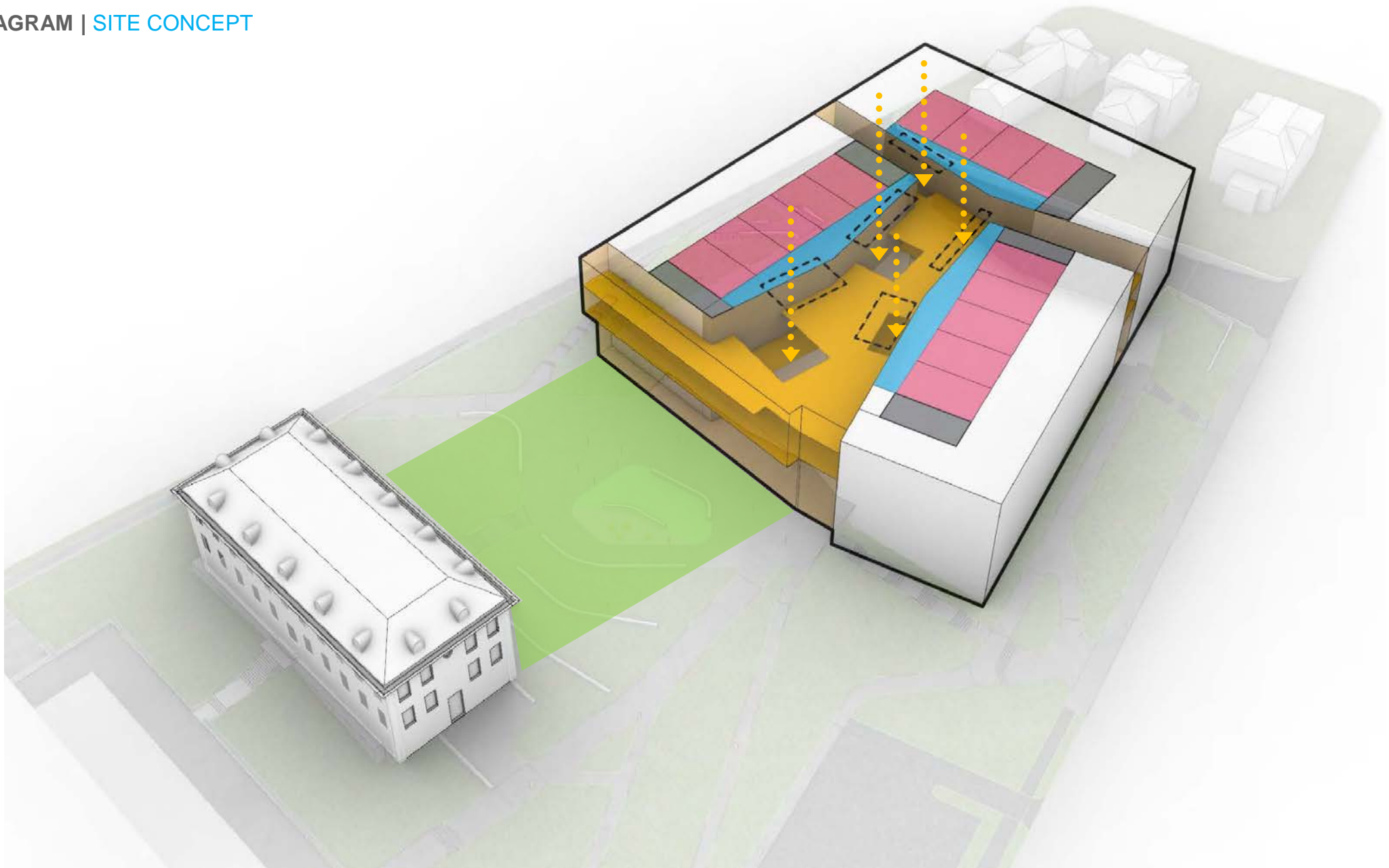


**Window to Science | Connecting Campus and Building**

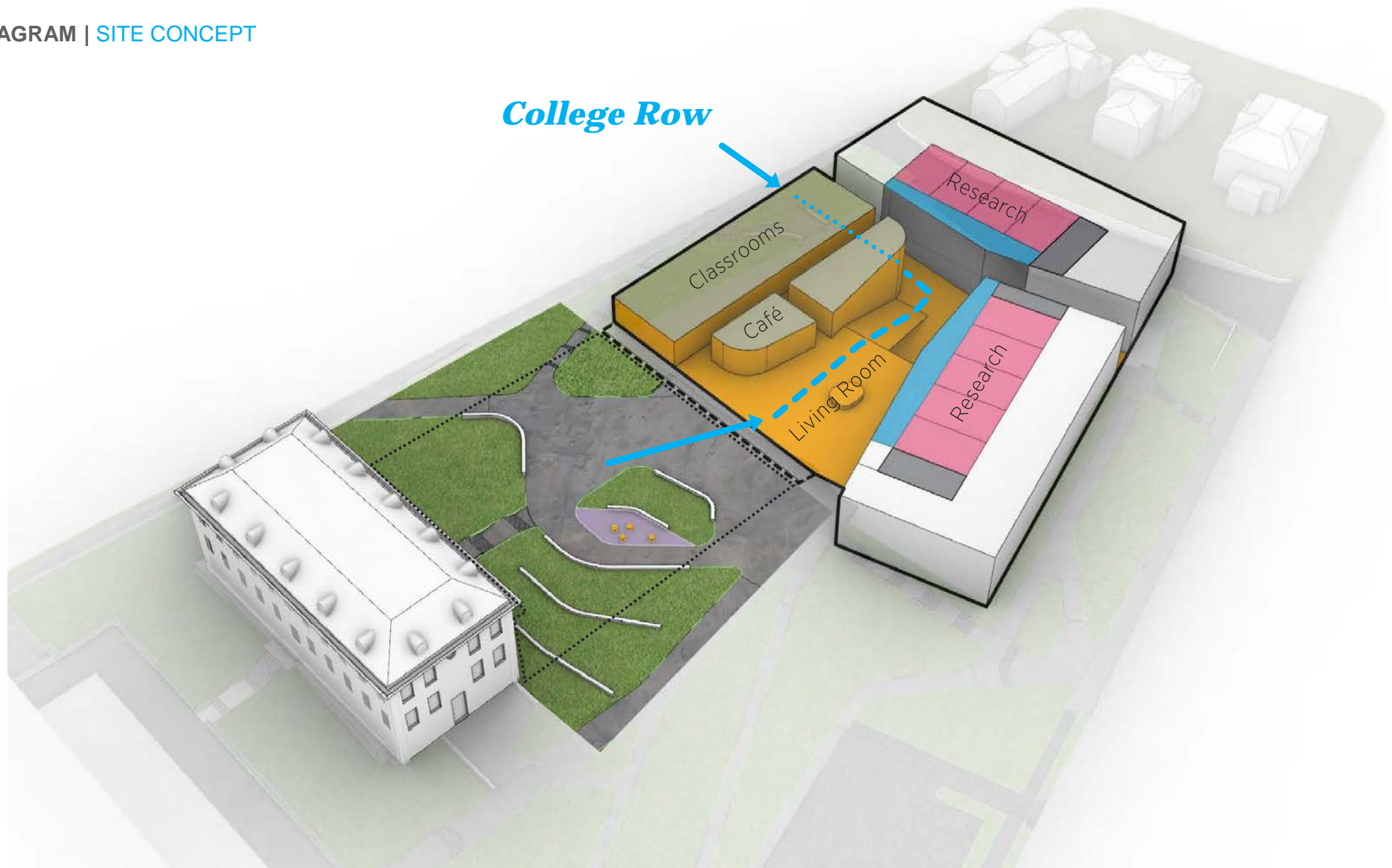


**Active Heart**| Science on display

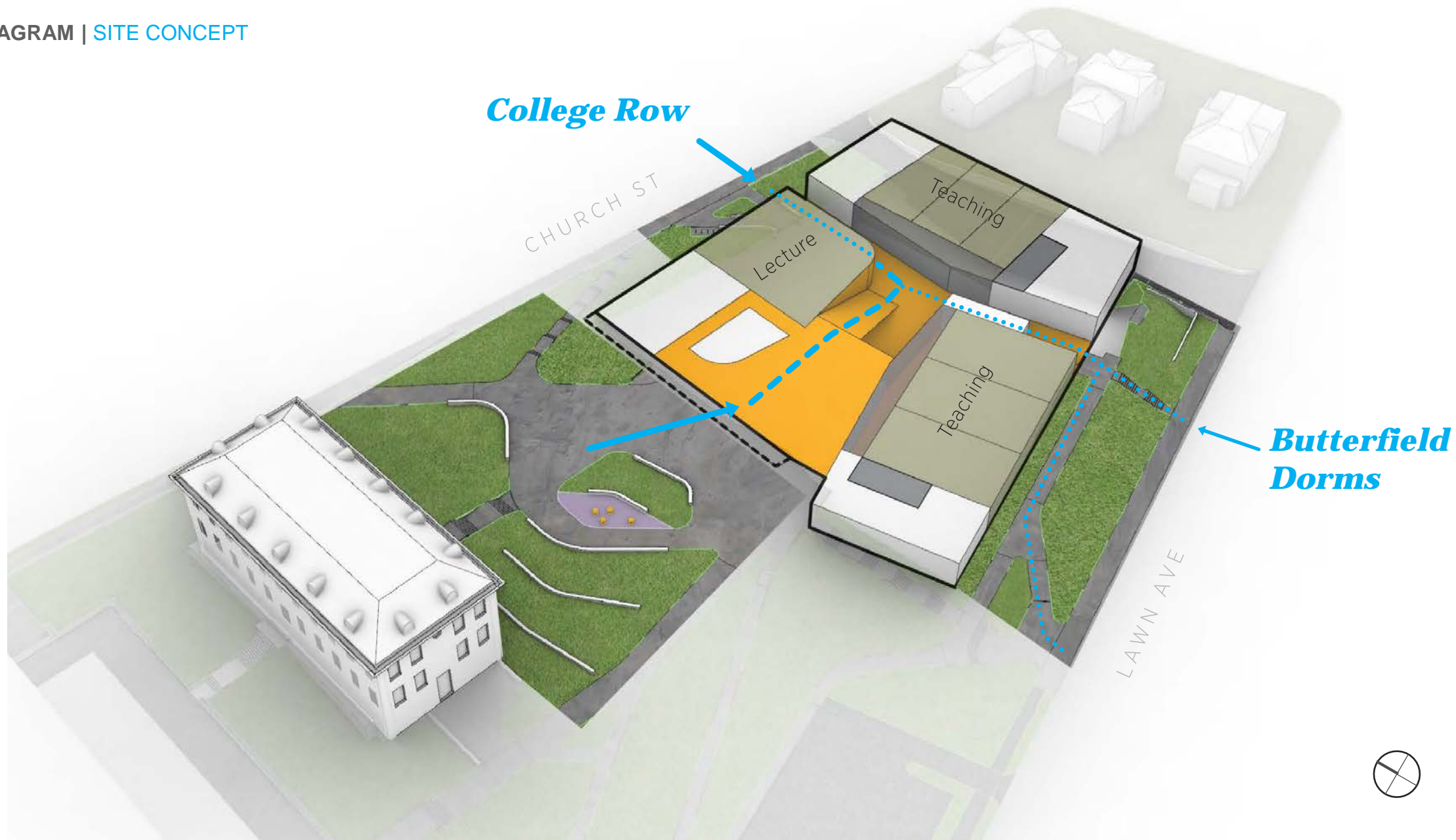




**Inviting Community|** Floor openings & skylights

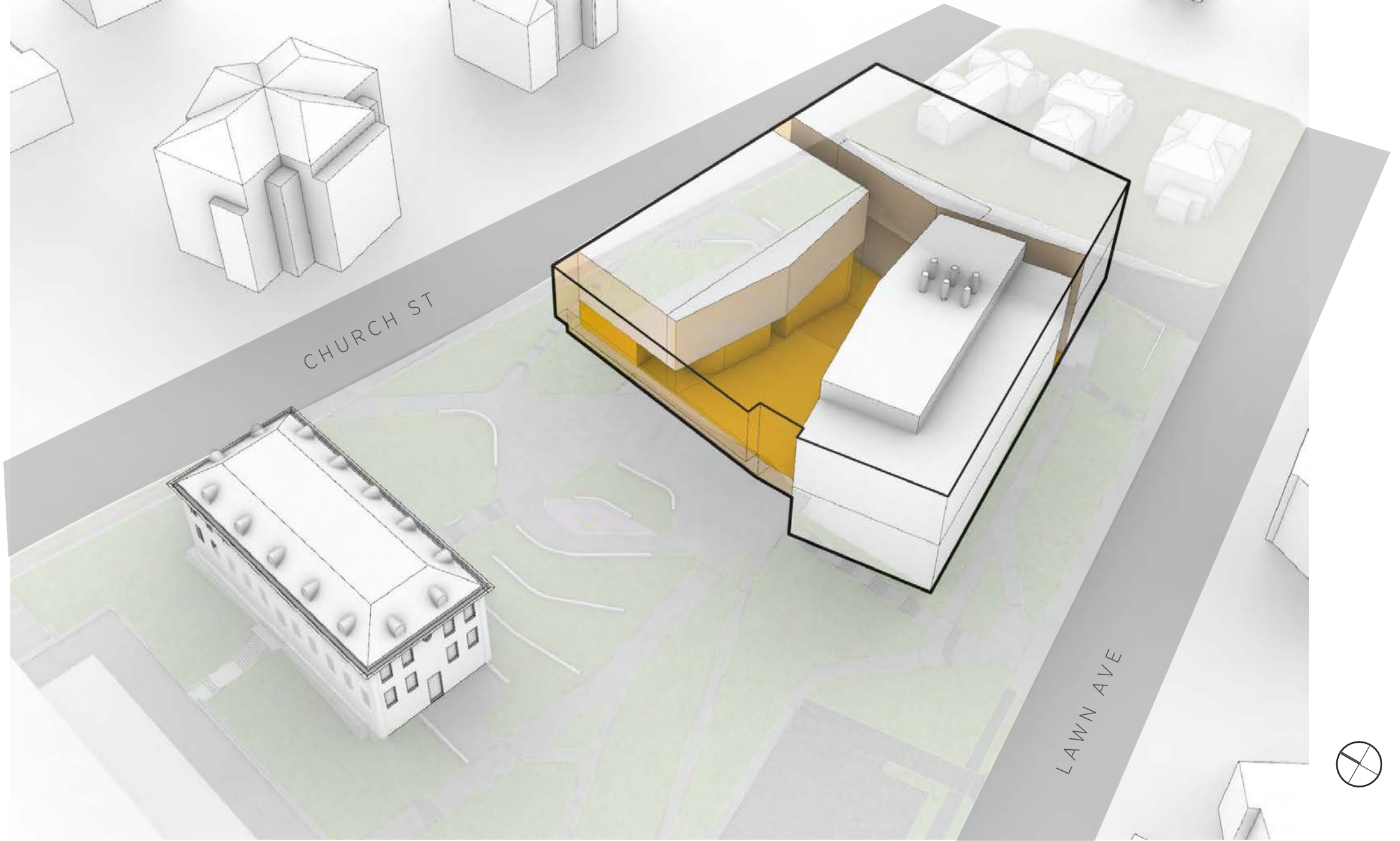


**Connected to Landscape | Living Room, Courtyard & Café at L2**



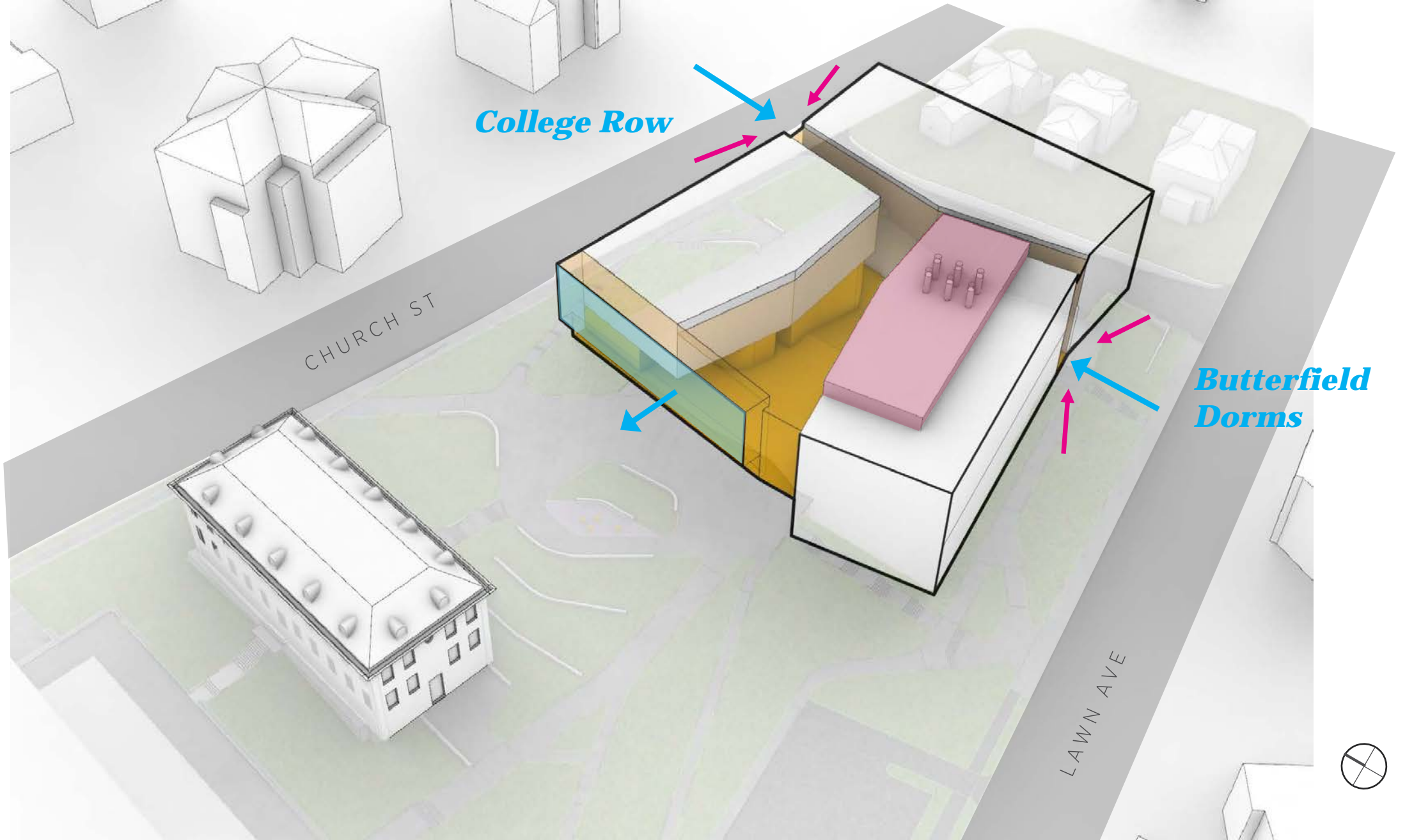
**Connected to Campus | Teaching at lower Floors**



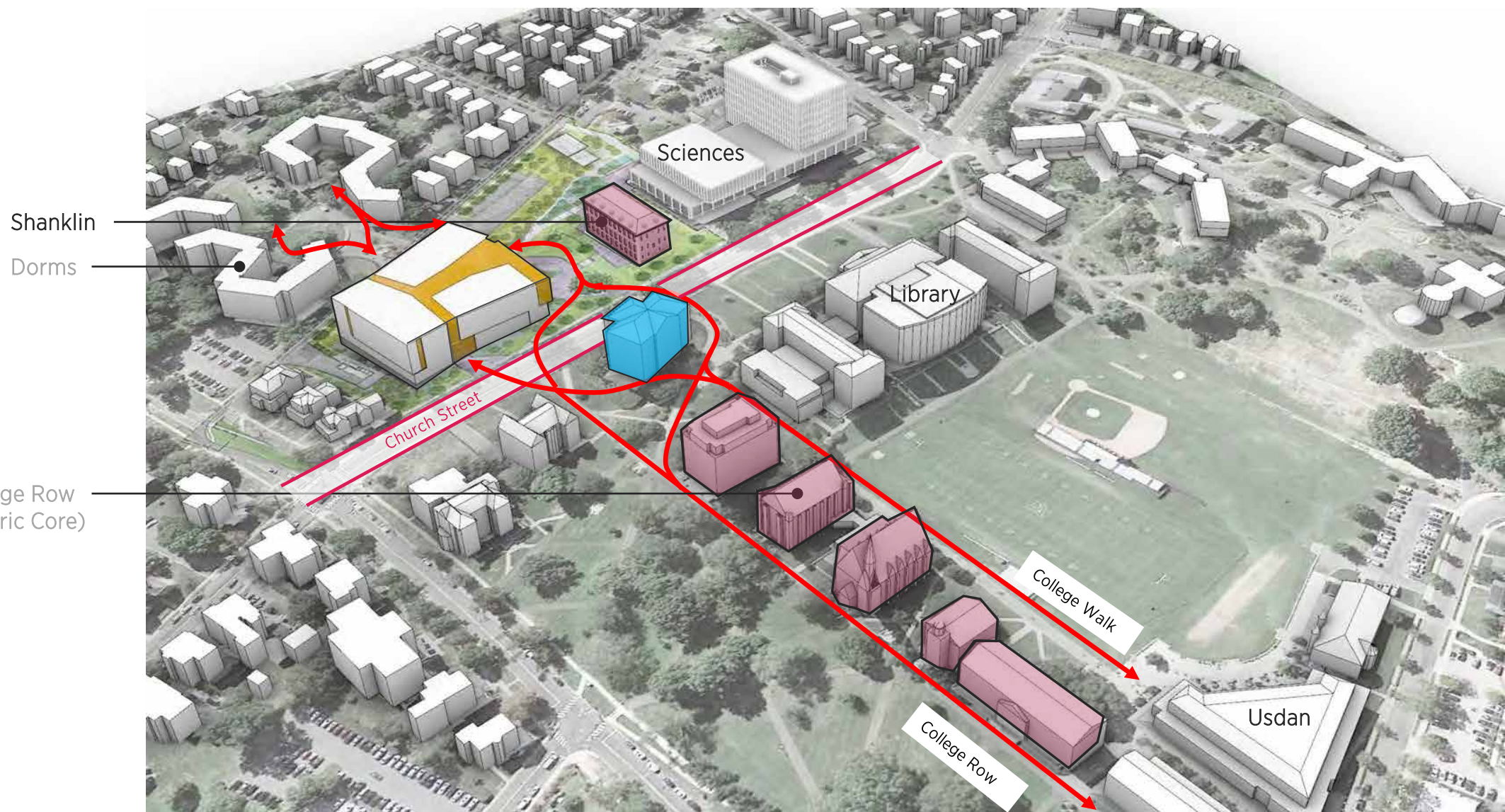


**Massing Perimeter | Express the clusters**





**Site Response | Articulate massing**



**Bridging Church Street** | Inviting and Connected to the core campus fabric



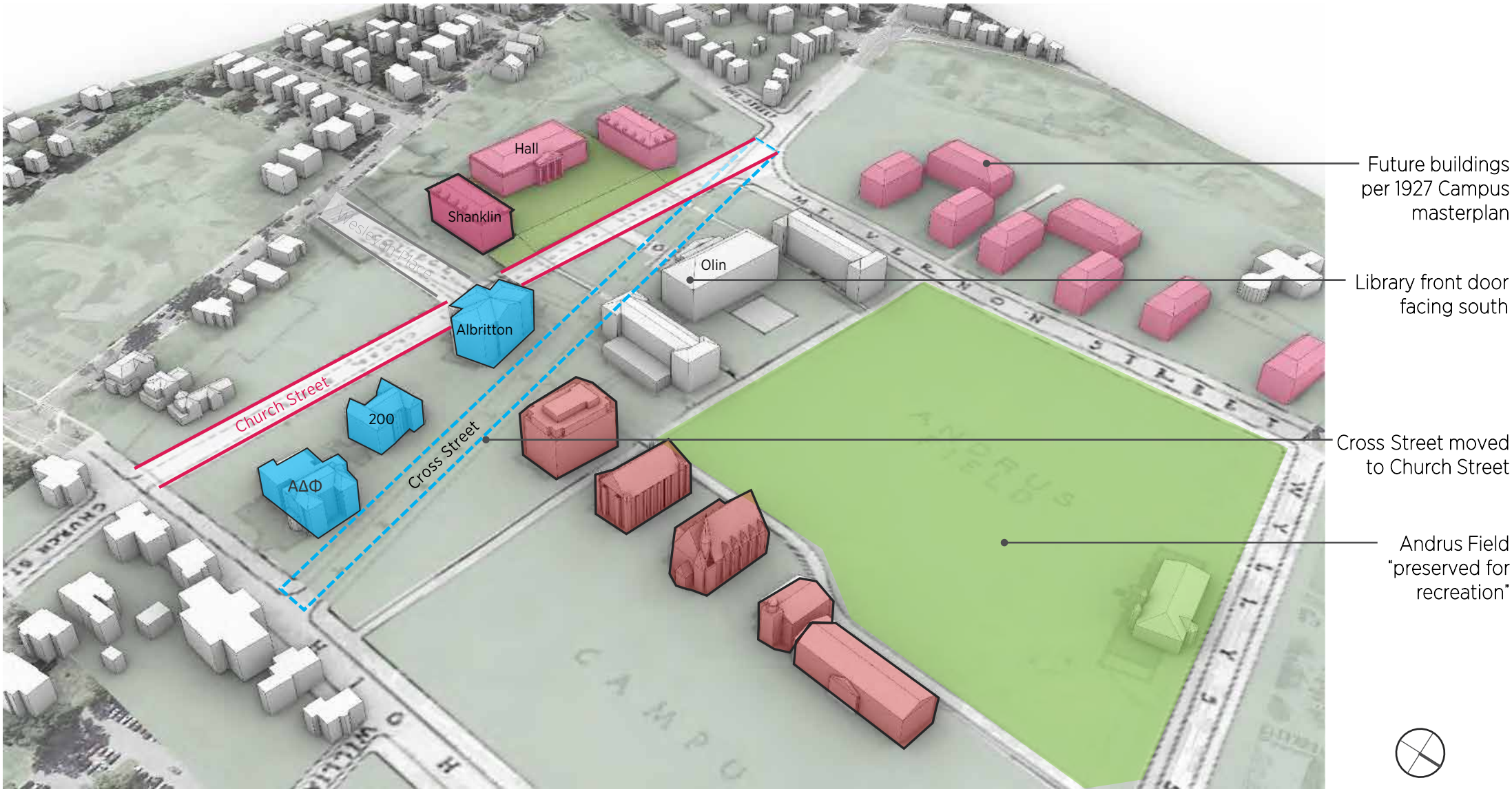


Library front door  
facing Campus

Future Buildings  
1913 Henry Bacon  
masterplan

1913 Henry Bacon Campus Plan

1913 Campus Plan : Internal Campus Quad



Future buildings  
per 1927 Campus  
masterplan

Library front door  
facing south

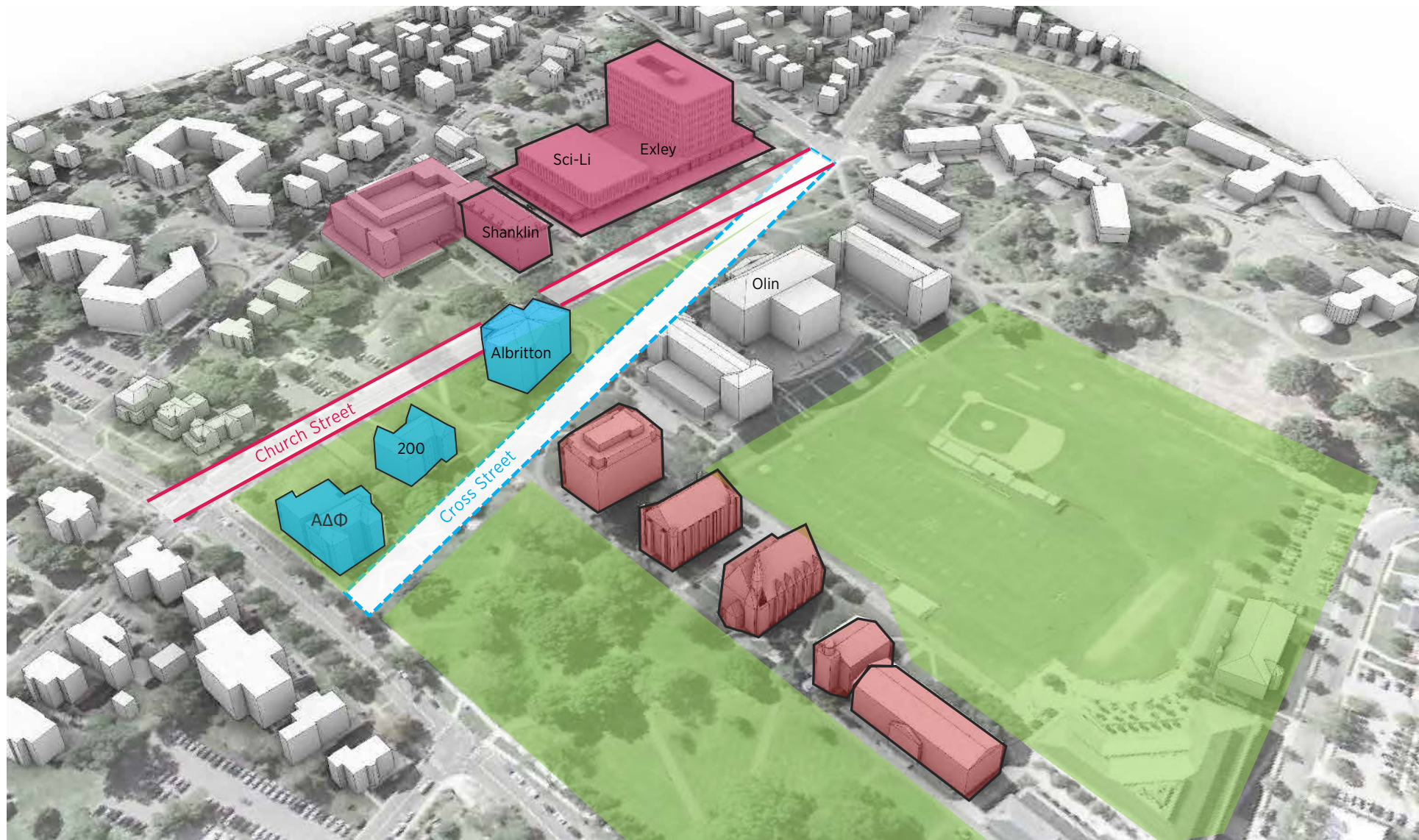
Cross Street moved  
to Church Street

Andrus Field  
"preserved for  
recreation"

1927 Johnson Campus Plan

1927 Masterplan Shift : Move (across) Church St





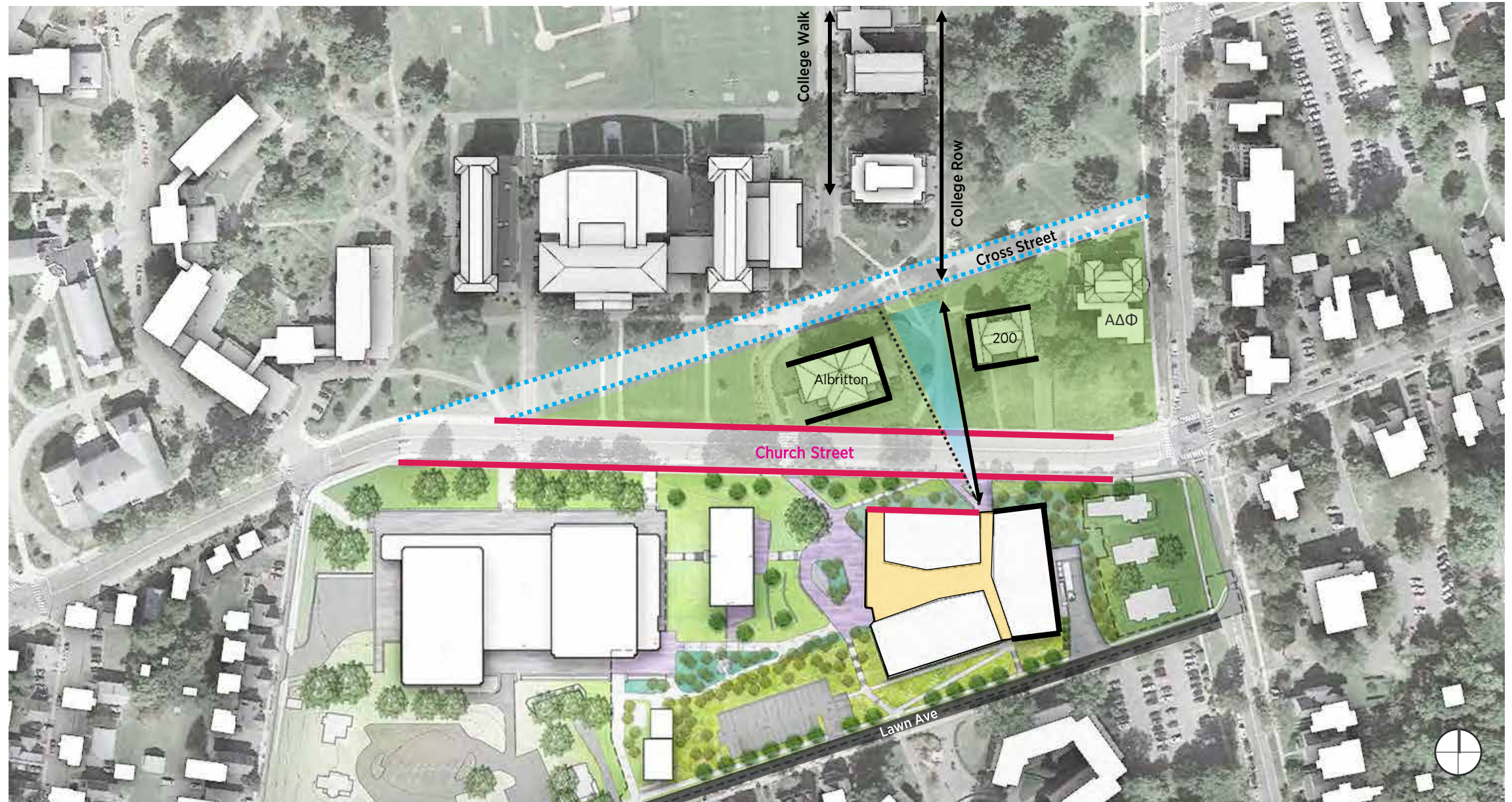
1970 Exley Science Center Complete

**Big Science / Olin Axis : College Row left behind**



## Imprint of Cross Street | Science massing response





**Imprint of Cross Street | Science massing response**

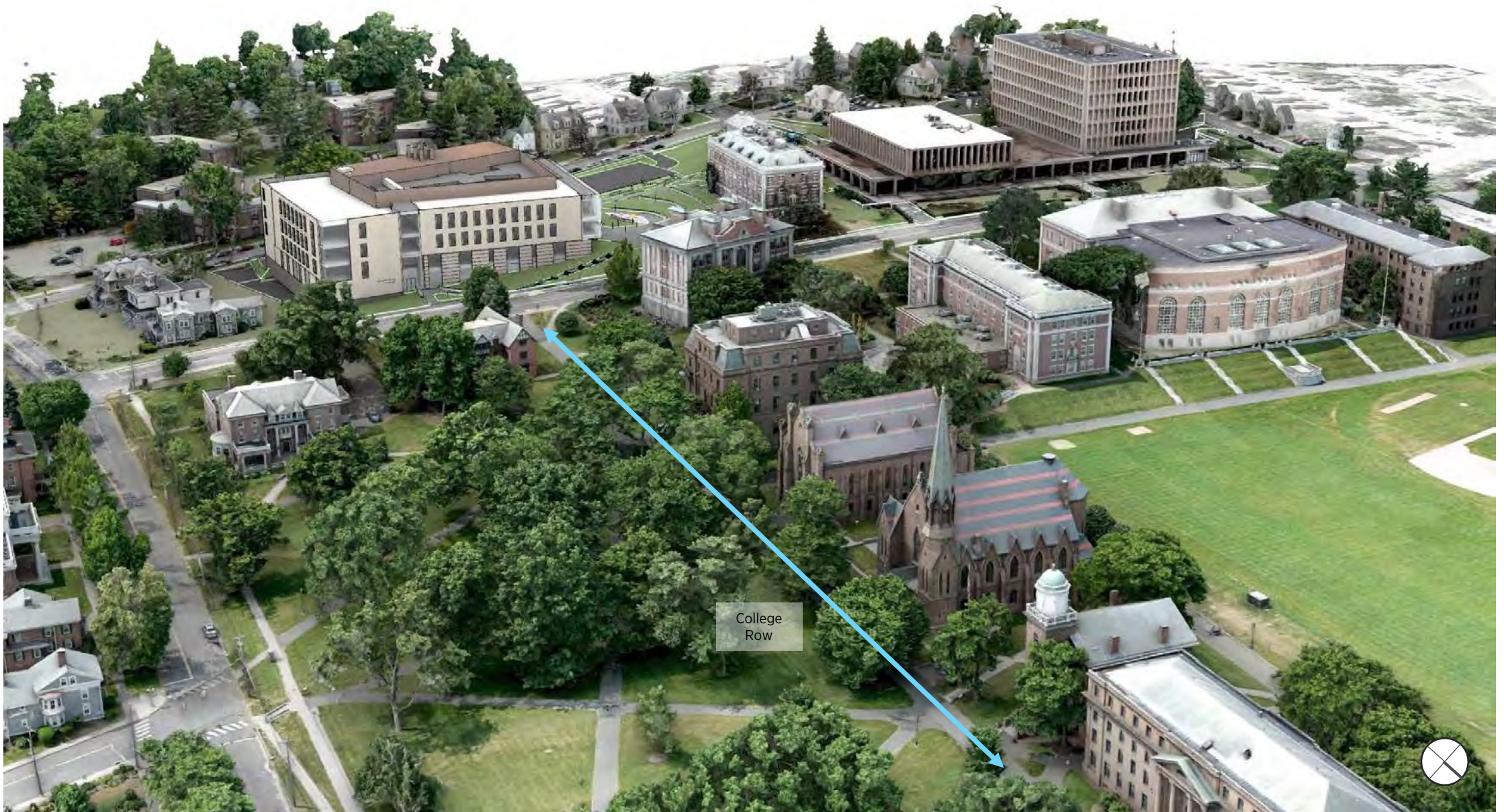




LAWN AVE

**Connected to campus fabric| Wesleyan Place & Exley**





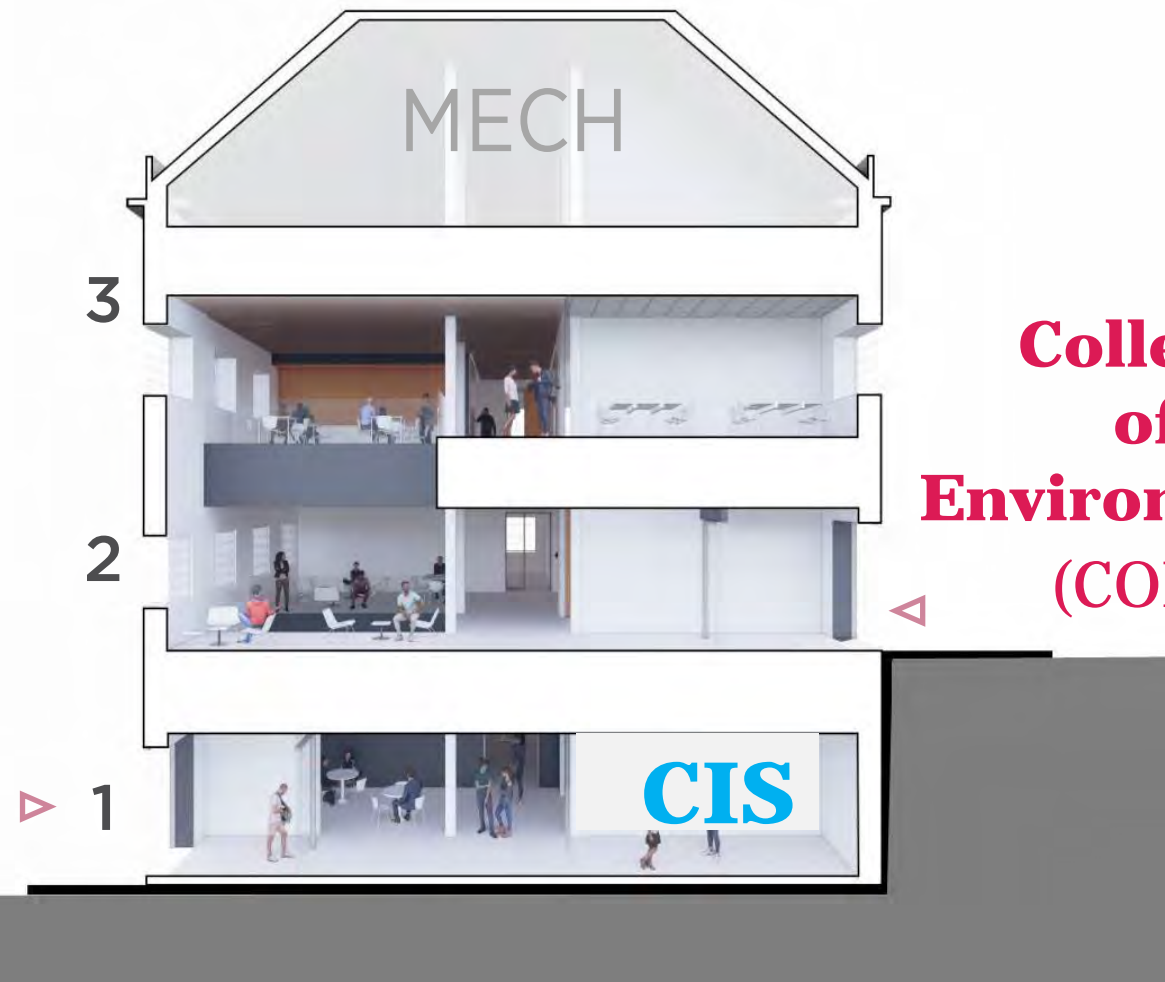
**Connected to campus fabric | Wesleyan Place & Exley**





**Connected to campus fabric | Wesleyan Place & Exley**





College  
of  
Environment  
(COE)



COE

CIS +  
meeting



## ***Exterior Views***



**Approach From Exley | LAST TIME**





**Approach From Exley | Shanklin & Wesleyan Place**





**From Shanklin front door | LAST TIME**



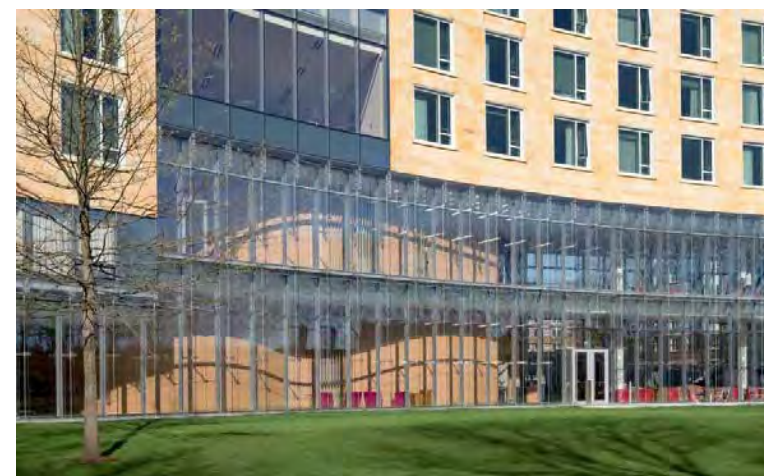


**From Shanklin | Wesleyan Place**





Cambridge Public Library



Harvard Business School

*Precedent examples of glass wall (not our project)*

**Double Skin Facade : High performance window to science**



*Precedent examples of glass wall (not our project)*



High tech window  
to science



Insulation in winter /  
heat vent in summer



Integrated sun shading



Hyper transparency

**Double Skin Facade : High performance window to science**





**View from science | Connecting back to campus**





**From Campus | LAST TIME**





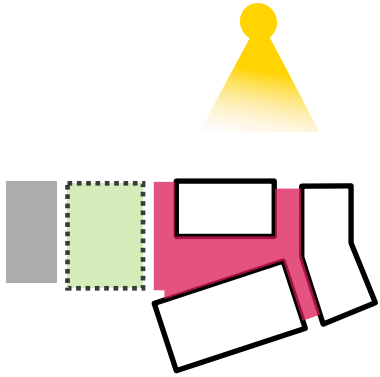
**From Campus** | Brownstone Base and additional Glazing at North West Corner





**From Campus** | Dusk view beacon facing Shanklin





**From College Row | LAST TIME**





**From College Row | Texture change on Levels 1 and 2**





**From College Row | Brownstone Base**





**From Lawn Ave | Wesleyan Place and campus to the north**





PREVIOUS – north east corner



REVISED – north east corner

**From High Street | View from (and to) Middletown**

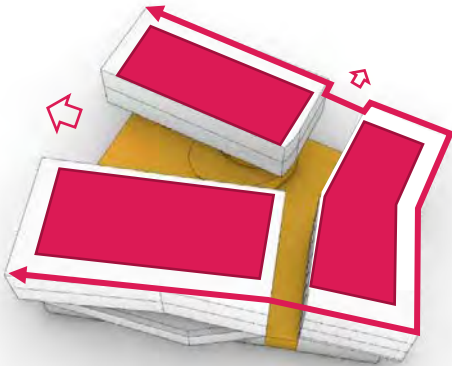




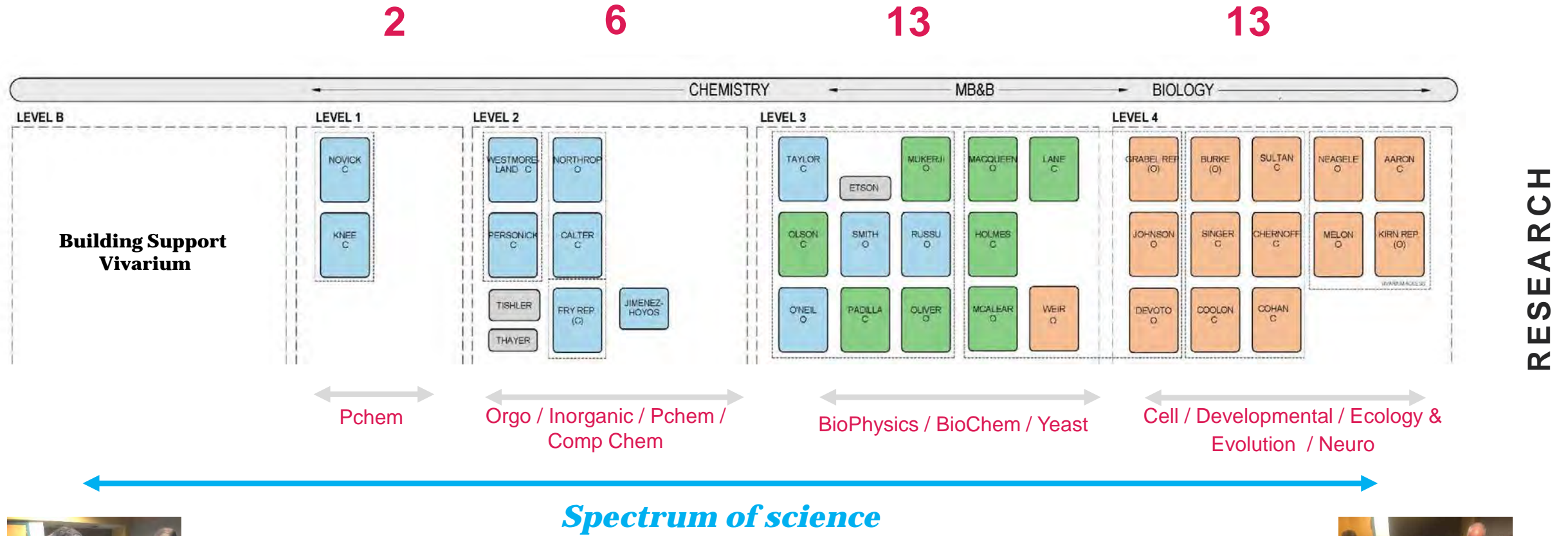
**From High Street | View from Middletown**



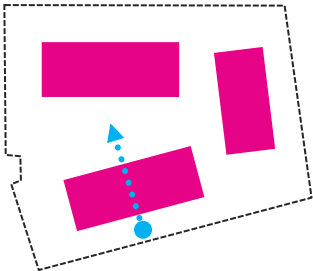
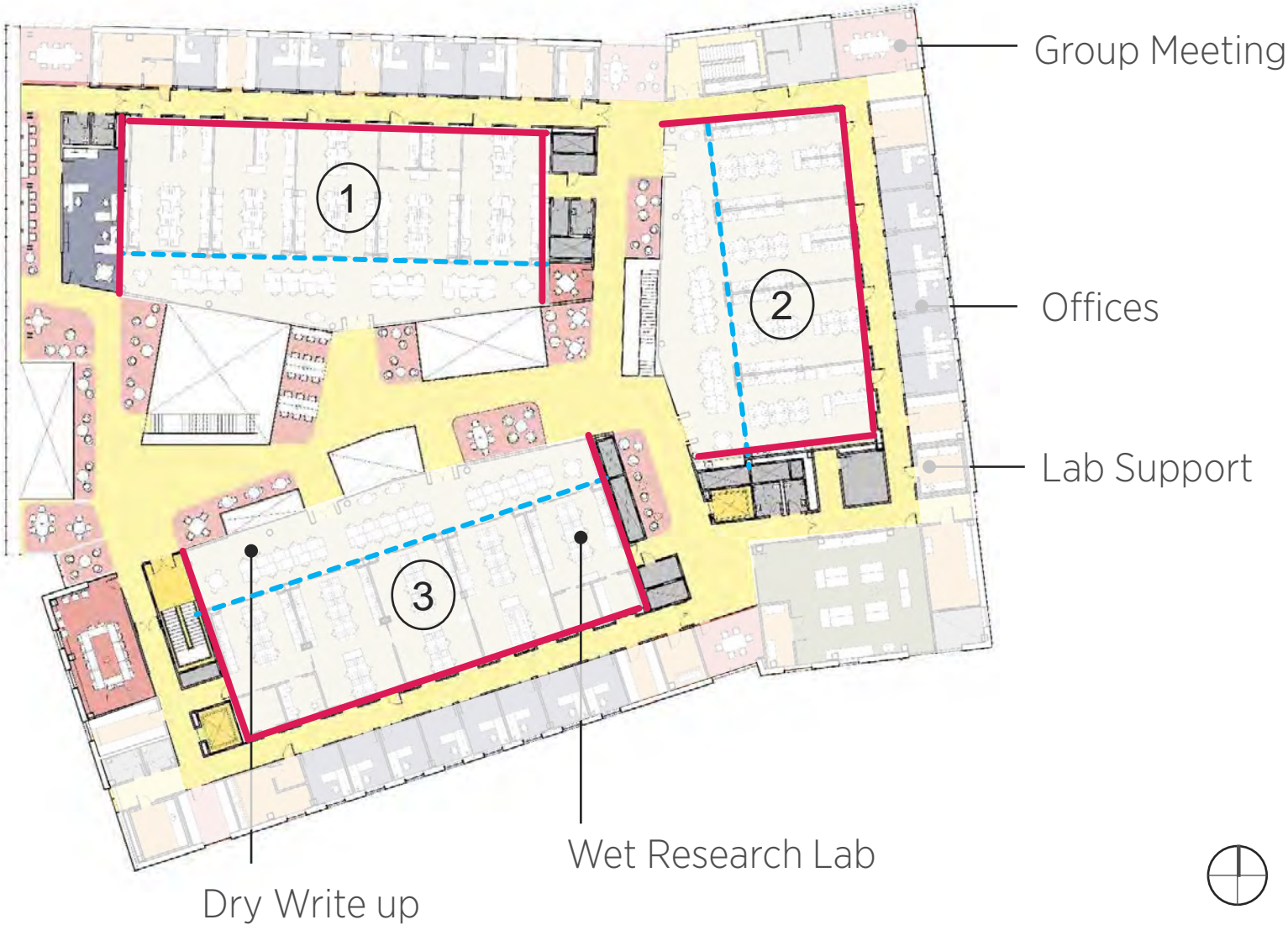
Pricing Update  
Equity & Inclusion Outreach  
Exterior Progress  
Interior Progress





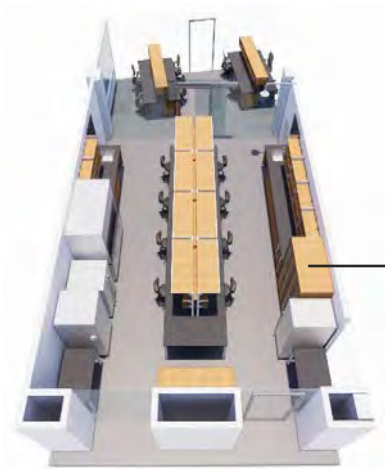


**Who goes where (and next to who) : Consensus across 36 faculty members!**



Research Lab Key Plan





36 individual labs



8 affinity based clusters



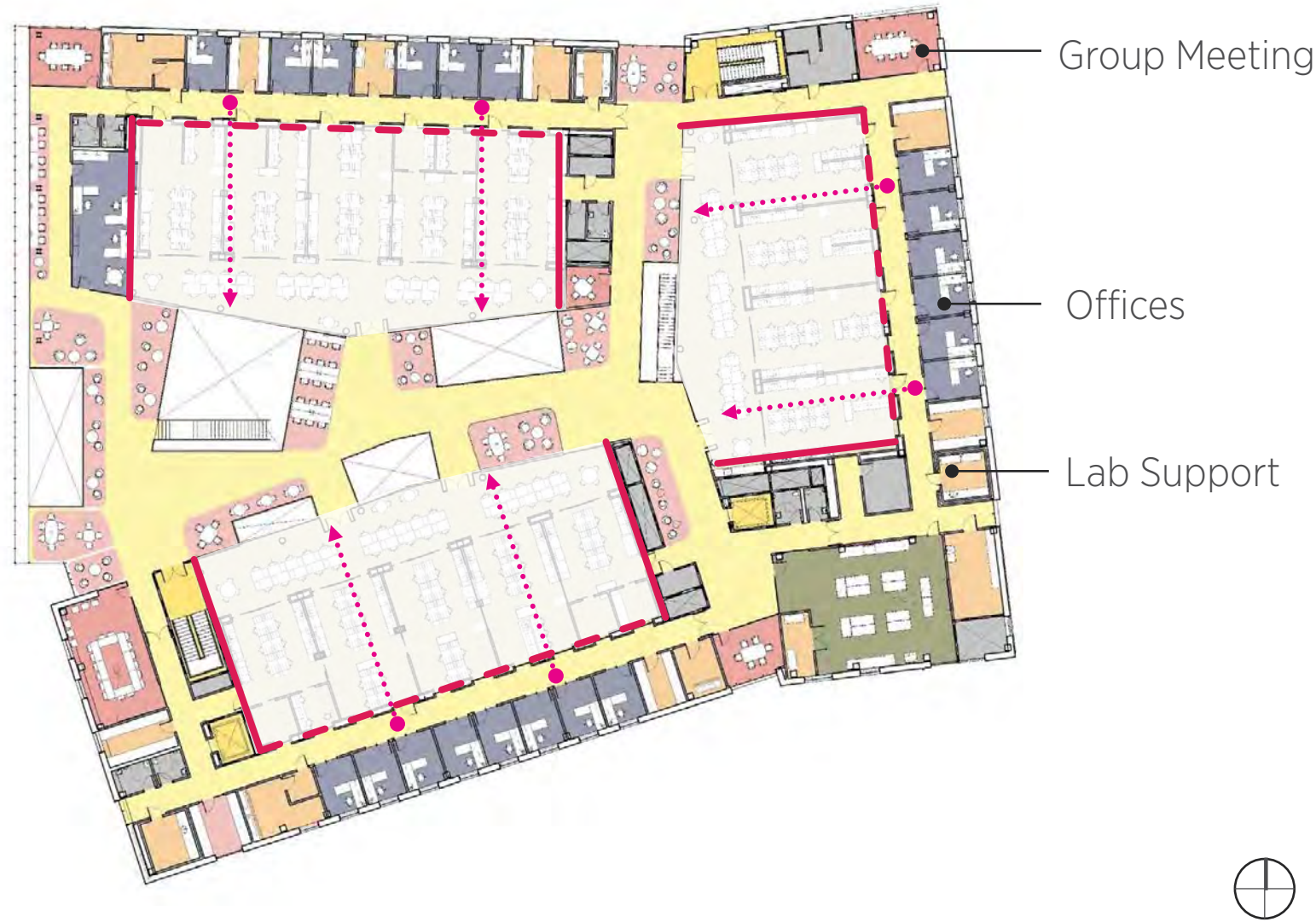
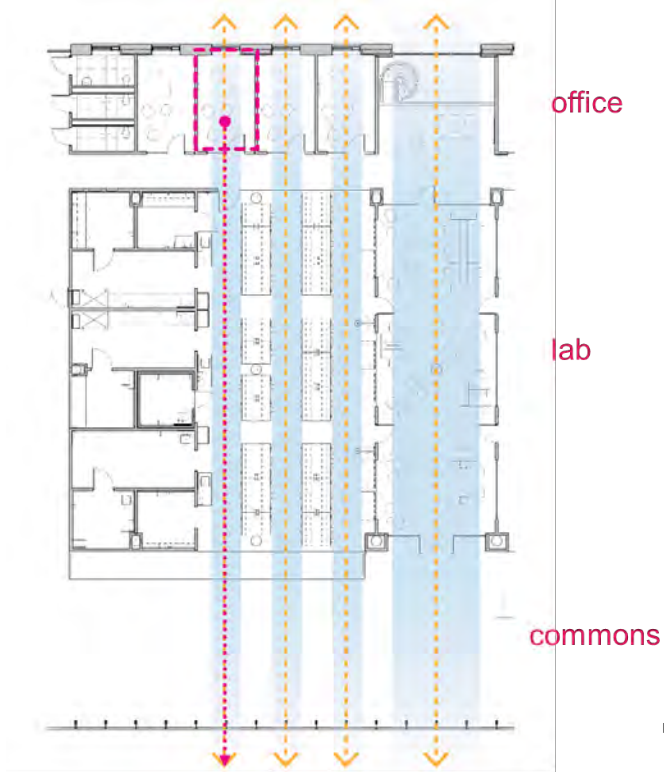
Shared Dry Lab  
(write up)

SPACE TYPE LEGEND

	ANIMAL FACILITY
	ASSEMBLY / CLASSROOM
	BUILDING SUPPORT
	CIRCULATION
	CONFERENCE / LOUNGE
	LAB
	LAB SUPPORT
	OFFICE
	TEACHING LAB
	VERTICAL CIRCULATION

**Lab neighborhoods** | affinity driven research clusters



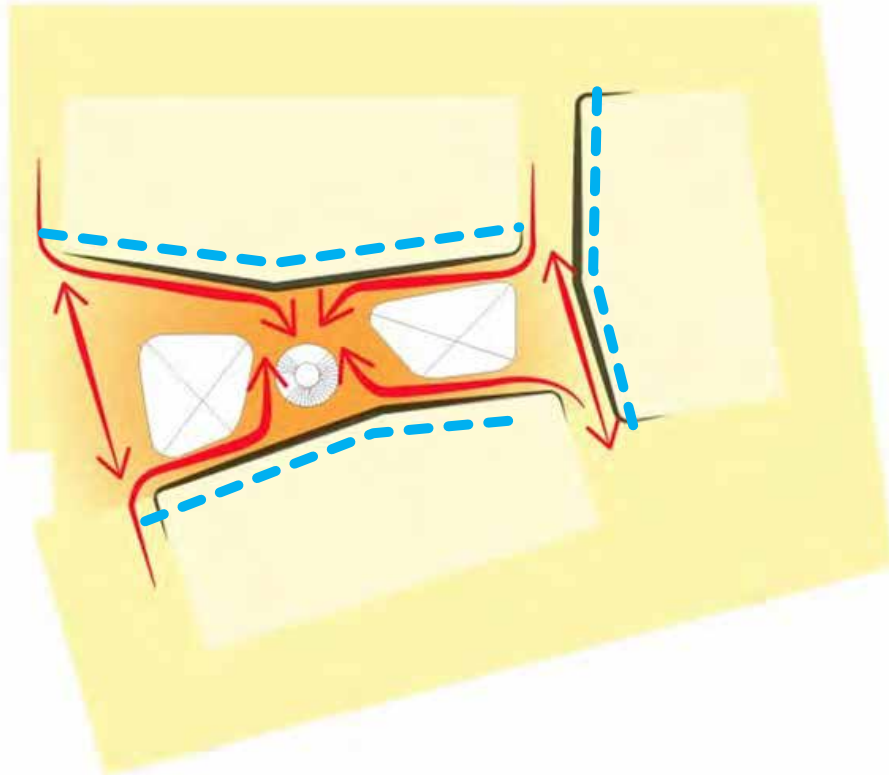


**Transparency & openness | Visual connections**



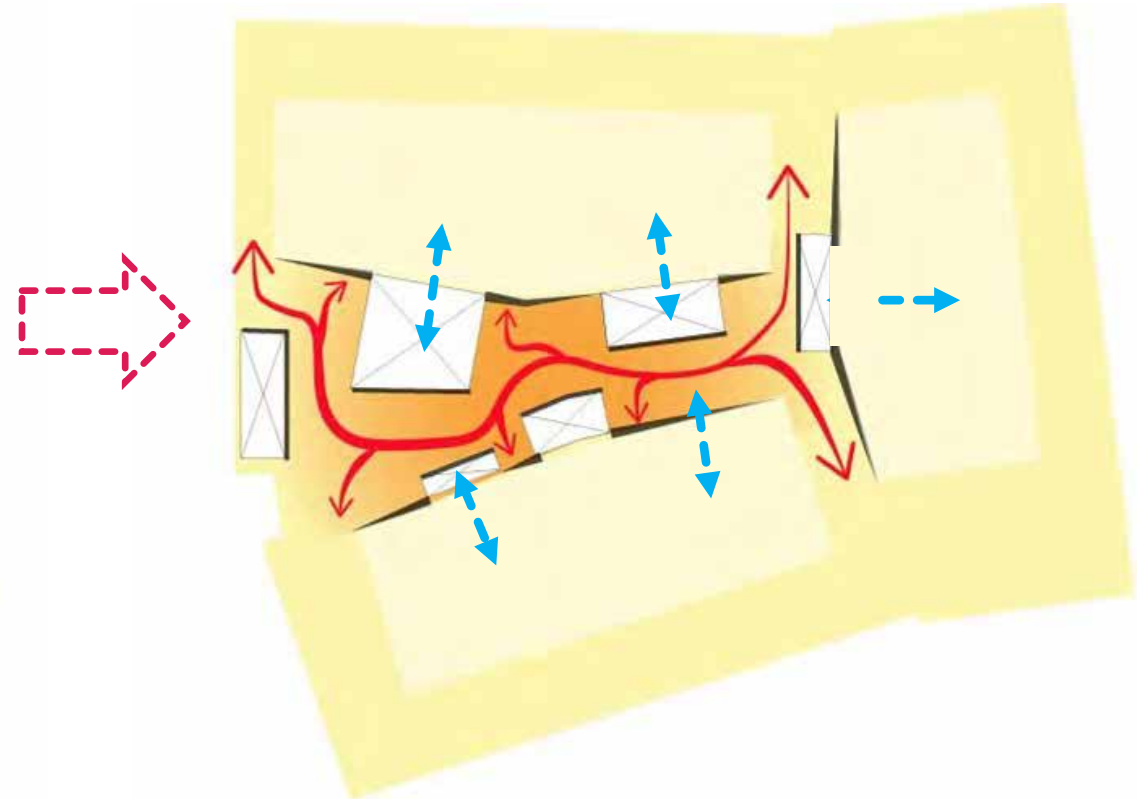
What we heard:

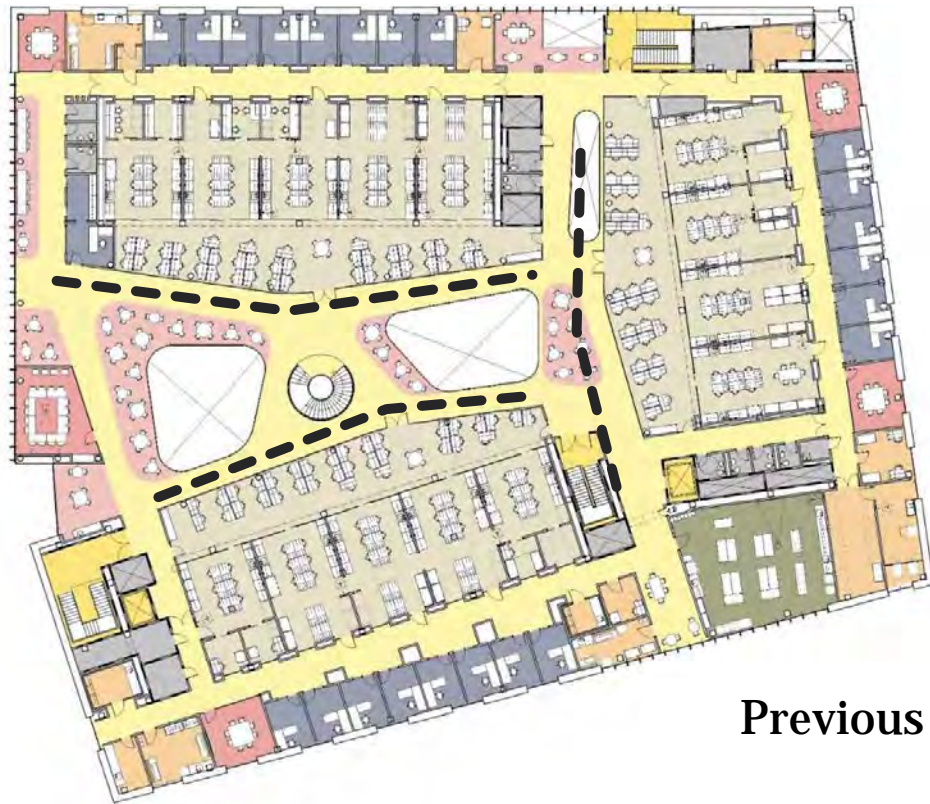
- Too much transparency. Felt exposed and on display
- Singular experience in atrium. Different types of spaces and scales needed “One size does not fit all”



What changed:

- One focal atrium event became a series of more intimate and varied spaces reflecting differences in the three clusters which reflect the site disposition





Previous

- Circulation at edges - Limited privacy for labs
- All glass walls
- Holes only in middle
- Singular experience in atrium



Revised

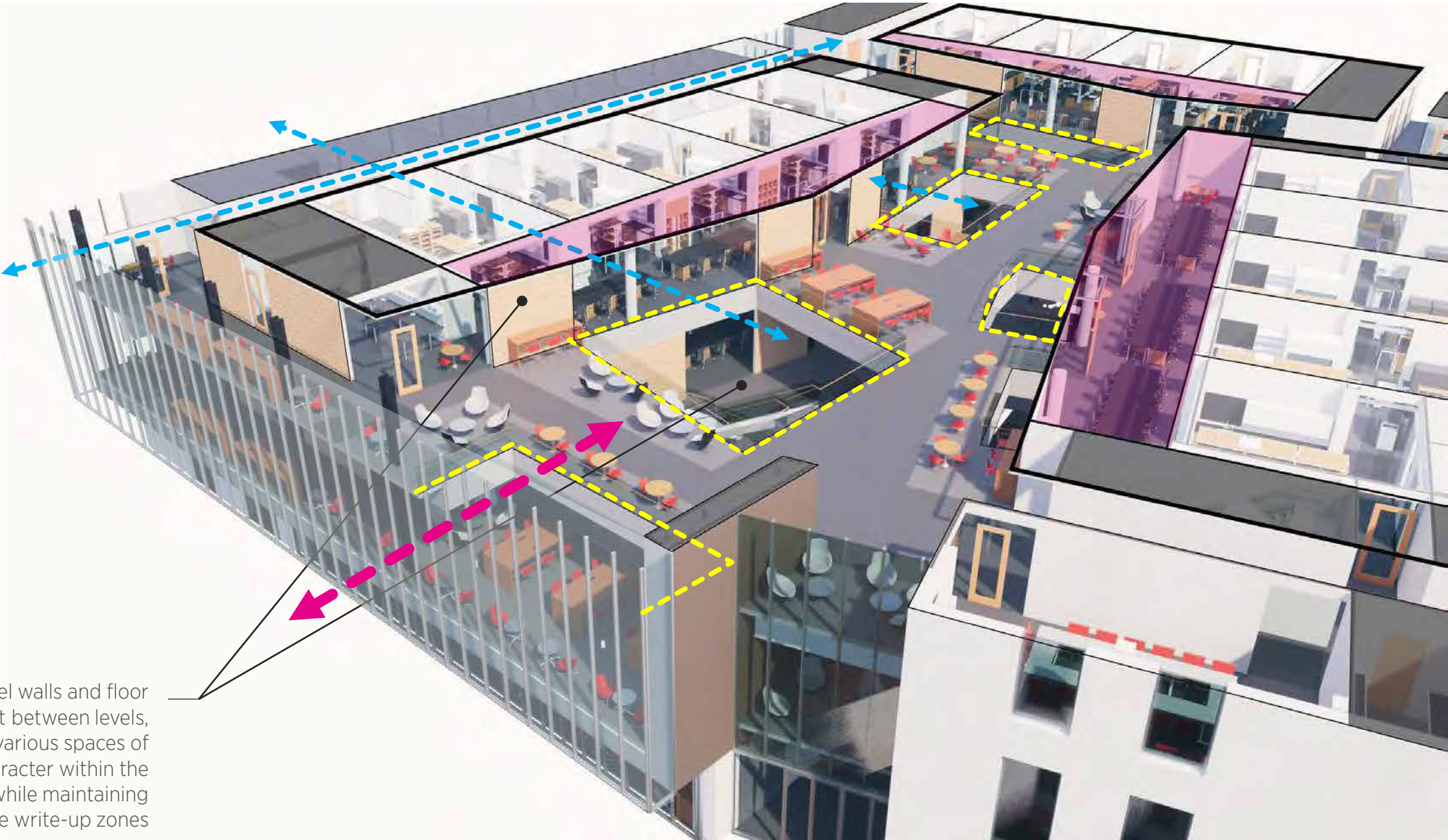
- Circulation in middle - increased privacy for labs
- Glass & Solid walls
- Variety of holes at edges - express clusters
- Varied experience in atrium





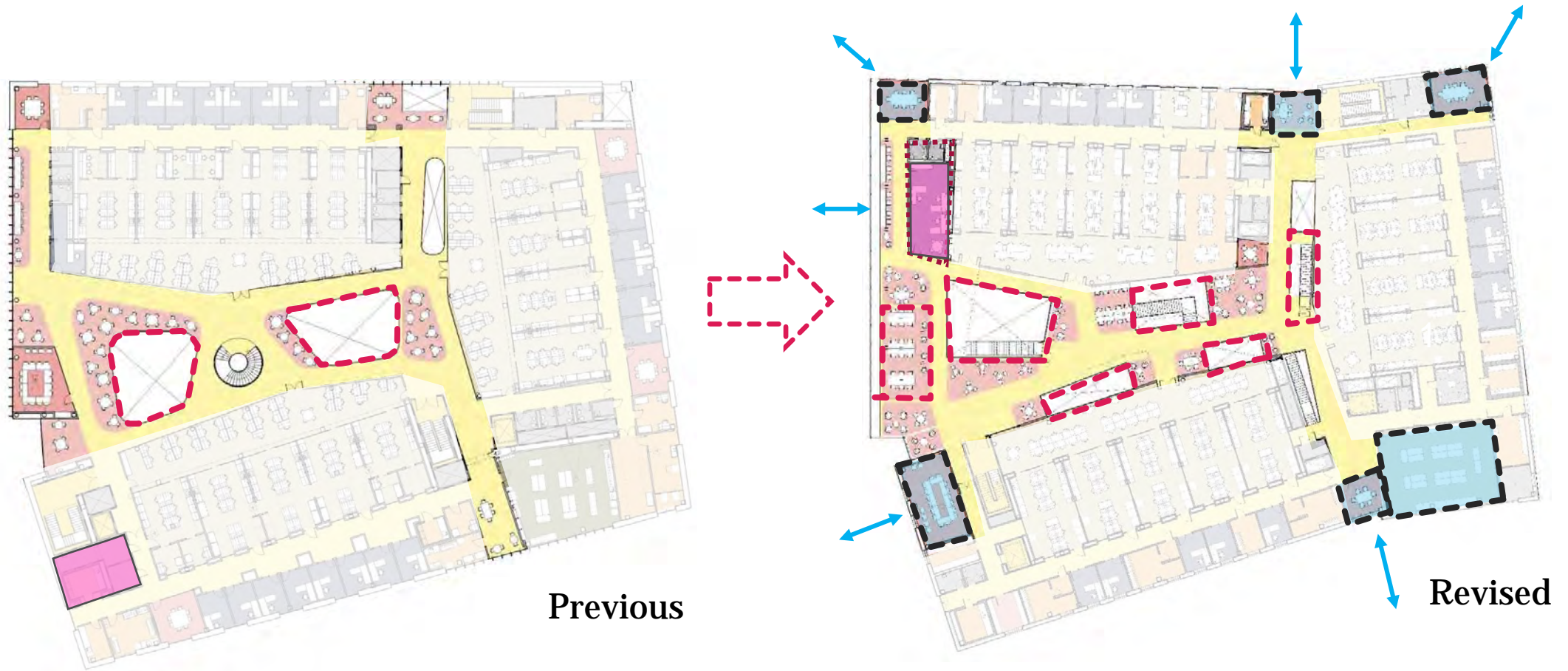
Wood panel walls and floor openings shift between levels, creating various spaces of unique character within the atrium while maintaining privacy in the write-up zones





Wood panel walls and floor openings shift between levels, creating various spaces of unique character within the atrium while maintaining privacy in the write-up zones



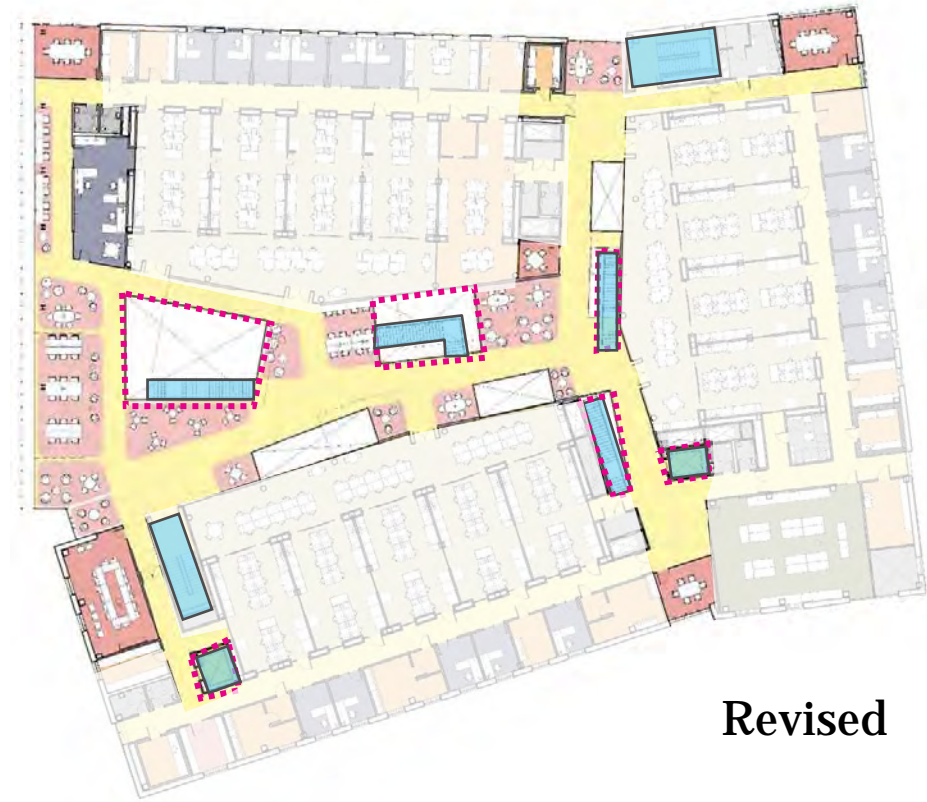
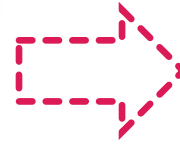


Use the benefits of one collective central space as **a way finding tool**. Accommodate feedback from EDI work sessions, by providing a **range of experiences** and with **scaled down the openings & spaces** in lieu of single centralized experience. Department head house moved to prime visible location as gateway for faculty access.

## Central Atrium and Way-Finding | Design Evolution



Previous

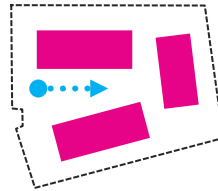


Revised

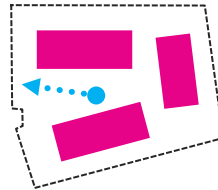
**Decentralized circulation sequence.** Dispersed network of stairs and elevators for seamless and more equitable circulation in lieu of a “main” path and remote elevators. The **multiple and paths approach** with minimized differentiation b/w accessible & non accessible routes **accommodate different needs** & respond to universal design principles of reduction in highlighting accessible routes as other\*.

## Uniform Circulation | Design Evolution



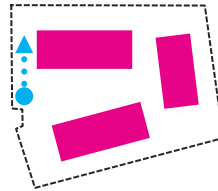


**Interior Concept | Level 3 view toward east**



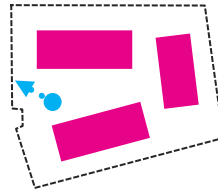
**Interior Concept | Level 3 view toward west**





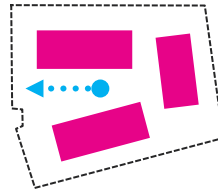
**Interior Concept | Level 3 view north along west façade**





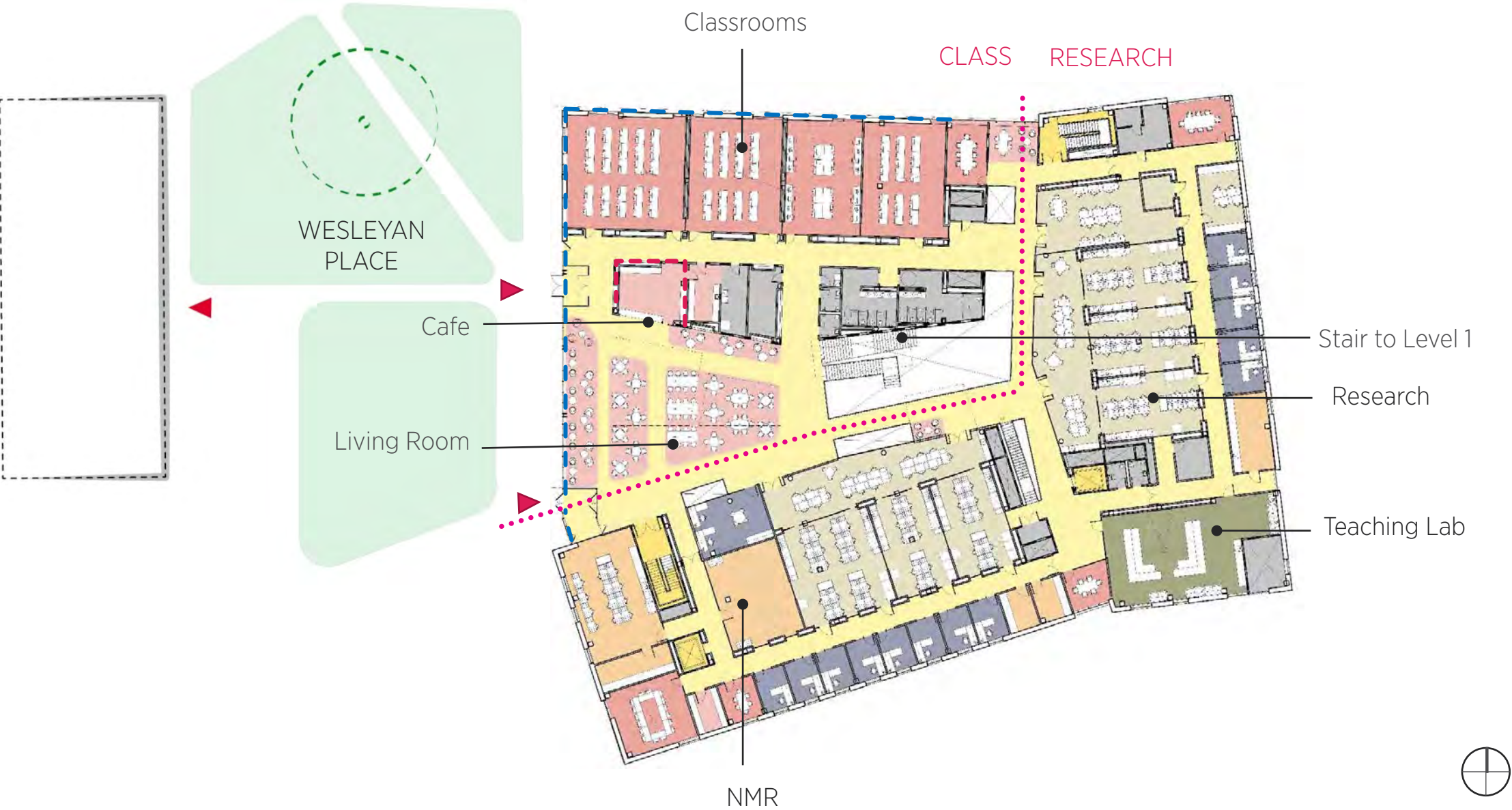
**Interior Concept** | Level 3 view onto Wesleyan place





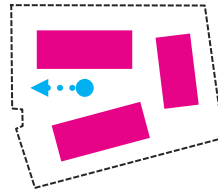
**Interior Concept | Level 4 view toward Shanklin**

PROGRAM STACKING | LEVEL 2

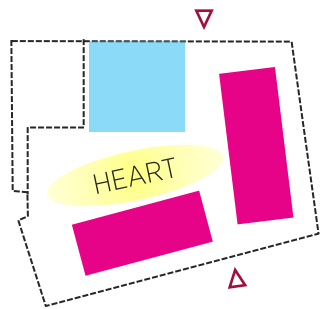
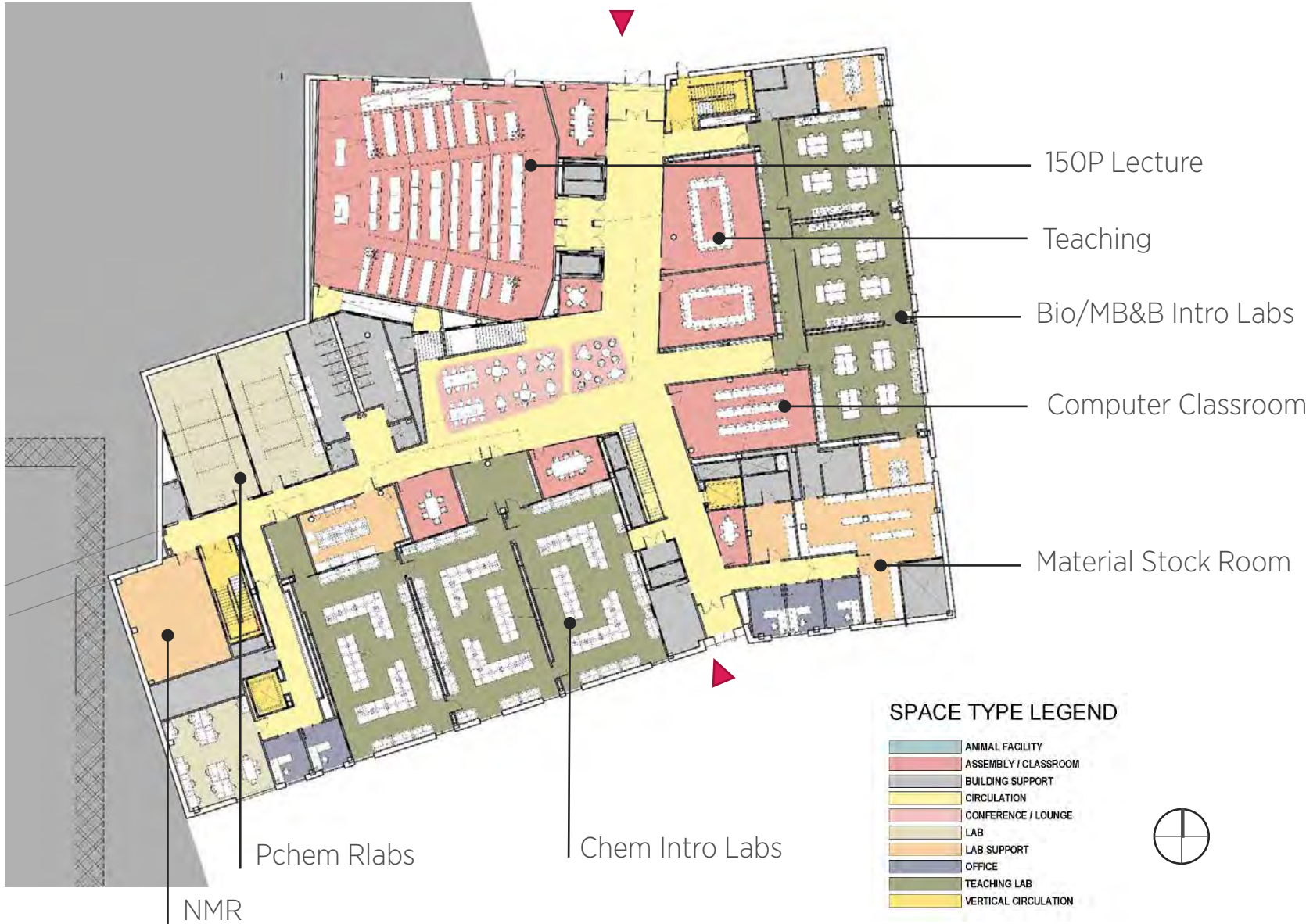


**Level 2 | Lobby, Classrooms & Research**





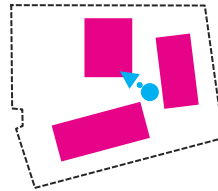
**Interior Concept | Level 2 view toward Wesleyan Place**



L1 Floor Key Plan

**Level 1 | Teaching Labs and Classrooms**





**Interior Concept | Level 1 Student Commons**

## ***Project Goals***

1. Provide flexible & cross disciplinary spaces – for Life Science research & teaching
2. Embrace Wesleyan's unique character – robust research & teaching in a Liberal Arts setting
3. Showcase inviting & accessible campus connections - across the science precinct and to campus
4. Restore Shanklin for COE - as a vibrant cross disciplinary hub
5. Ensure financial and resource prudence – high performance & on budget
6. Embrace Equity & Inclusion - in planning, process and outcomes



An architectural rendering of a modern building with a large glass facade and a courtyard. The building has a multi-story glass section on the left and a brick section on the right. The courtyard in front features a paved plaza, green lawns, and several trees. People are shown walking and sitting in the courtyard, suggesting a lively community space. The text "Thank you." is overlaid in the center of the image.

**Thank you.**