



University of Nevada, Reno College of Engineering

Predesign Services
New Engineering Building



Process

To determine the needs for the new Engineering building, the design team conducted a series of workshops with representatives from each department in the College of Engineering. These departments included:

- **Civil and Environmental Engineering**
- **Chemical and Materials Engineering**
- **Computer Science and Engineering**
- **Electrical and Biomedical Engineering**
- **Mechanical Engineering**
- **Administration (Dean's Office)**

Each department provided a summary of their existing spaces, a list of any areas that could be relocated, and a list of anticipated space needs for the next ten years.

Priorities

The Executive Committee formed by the College of Engineering reviewed the space needs identified by the departments and determined a priority list for inclusion in the New Engineering Building. The priority list established is as follows:

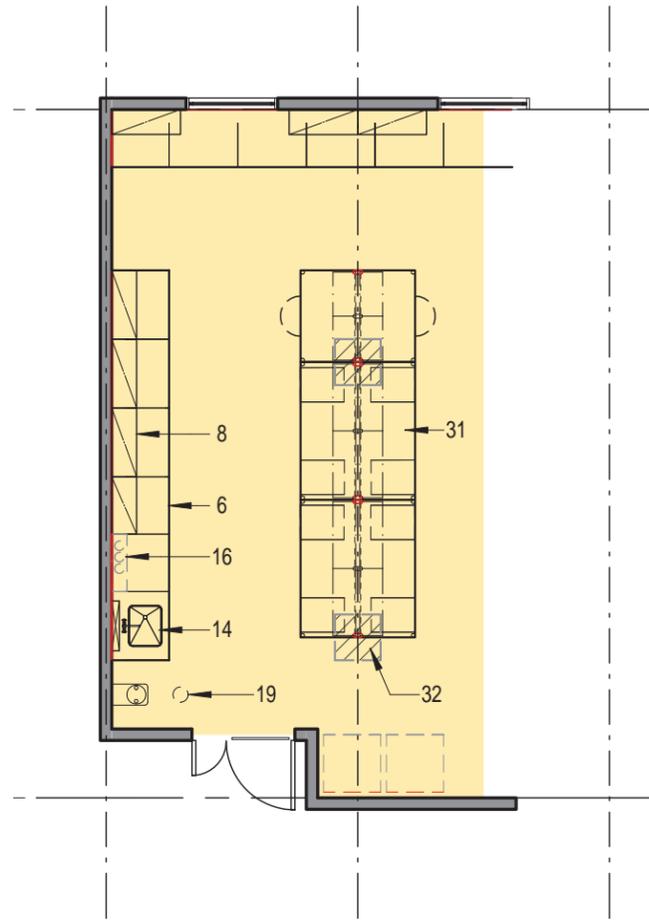
- **Research Laboratories**
- **Faculty Offices**
- **Graduate Student Workstations**
- **Clean Room**
- **Teaching Laboratories (undergraduate)**
- **Large Computer Lab**
- **Dean's Office**

The majority of the space needs for the New Engineering Building address facilities that are required but do not exist, or are anticipated growth for the College.

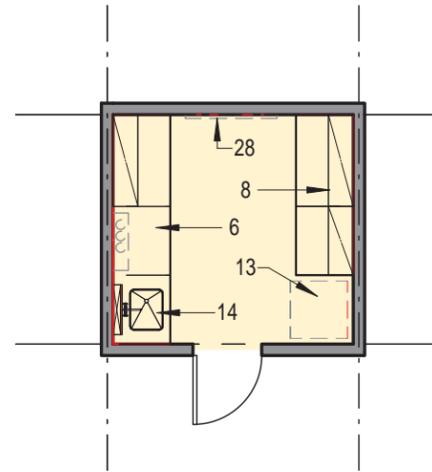
Building Program

Department	Faculty Office	Graduate Student Workstation	Research Laboratory	Shared Teaching Laboratory	Support Spaces	Total Area
Civil and Environmental Engineering	6				1	950
Chemical and Material Engineering	6	30	4		3	4,350
Computer Science and Engineering	6	30	17		3	10,850
Electrical and Biomedical Engineering	6	30	5		5	5,050
Mechanical Engineering	6	30	4		3	4,350
Dean's Office	20				4	3,740
Shared Teaching Resources				4	6	6,328
Shared Research Facilities (includes Cleanroom)		30	11		4	9,120
Food Service					13	3,160
Receiving and Storage					2	1,260
Subtotals	50	150	41	4	44	49,158
Net to Gross Ratio (57%)						37,084
Building Area Total						86,242

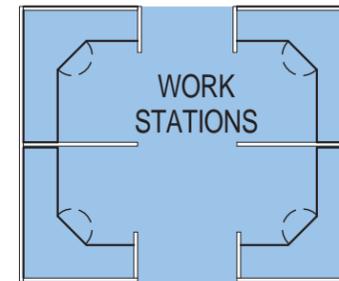
Building Program



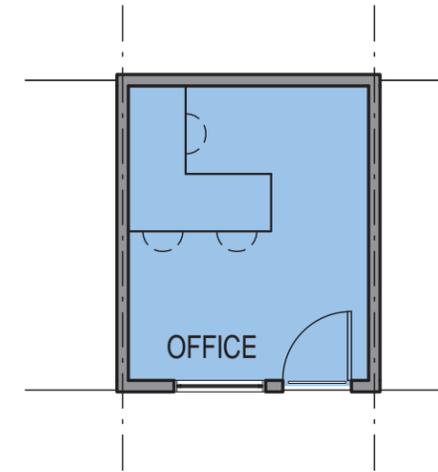
Laboratory - 500 sq. ft.



Lab Support - 100 sq. ft.



Grad Student Workstation - 60 sq. ft.
3-4 per Lab

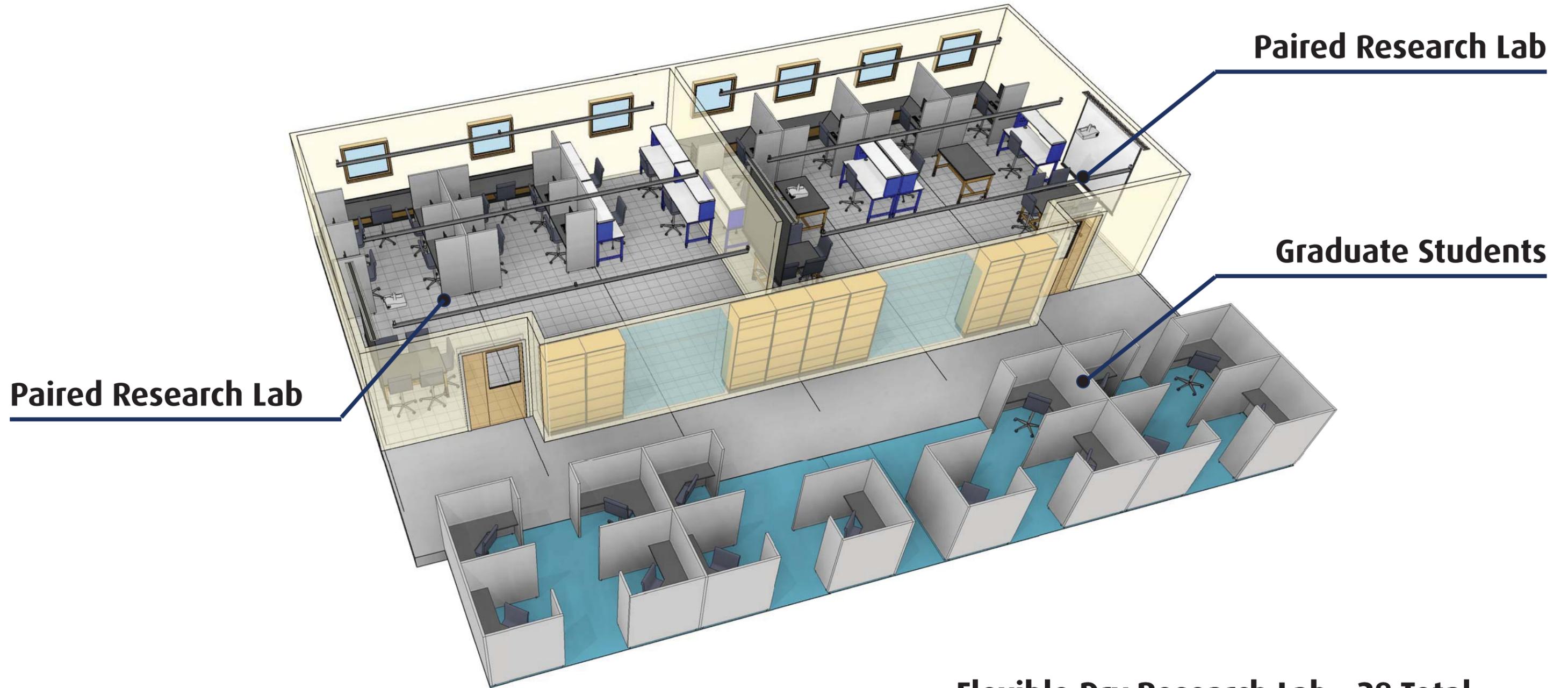


Faculty Office - 150 sq. ft.

Planning Diagrams



Building Program



Paired Research Lab

Graduate Students

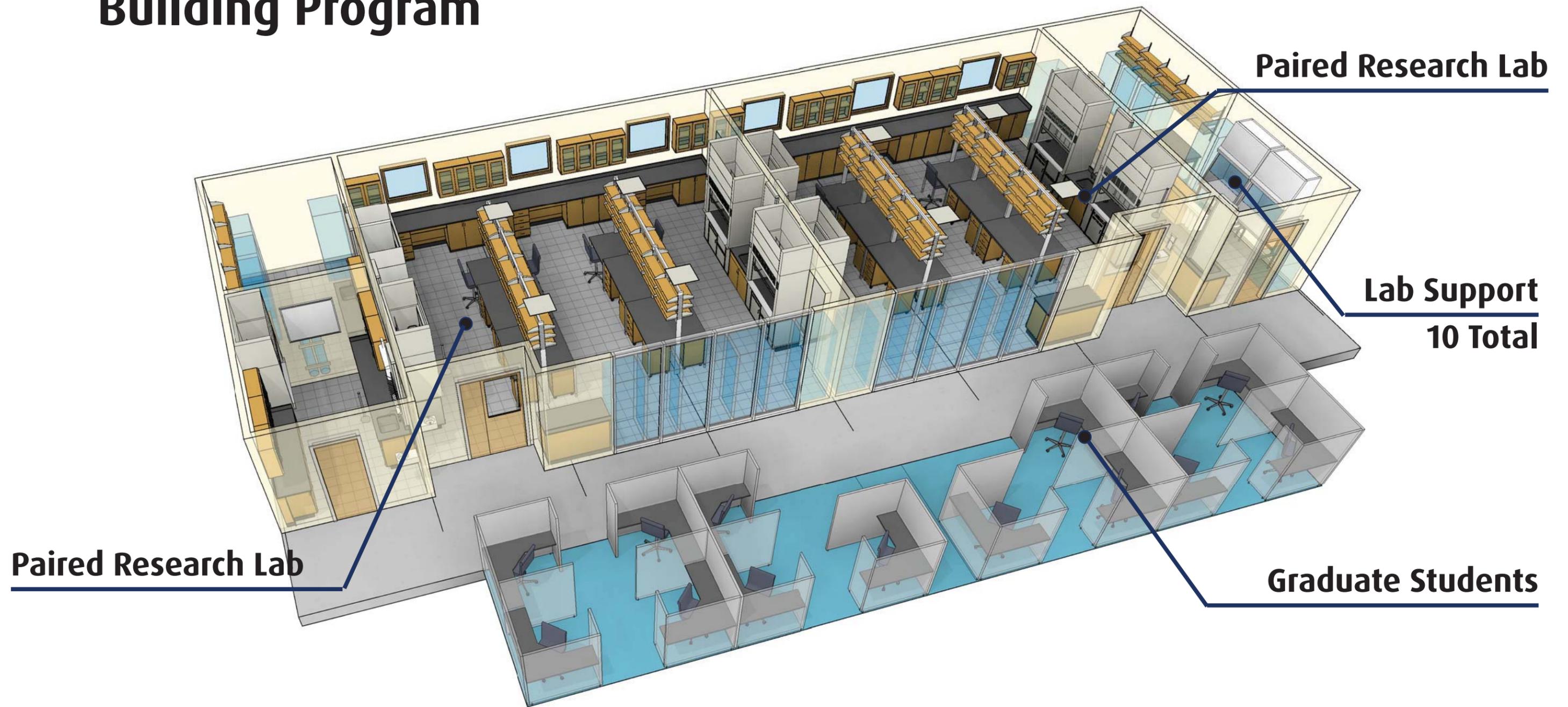
Paired Research Lab

Flexible Dry Research Lab - 28 Total



NEW ENGINEERING BUILDING

Building Program

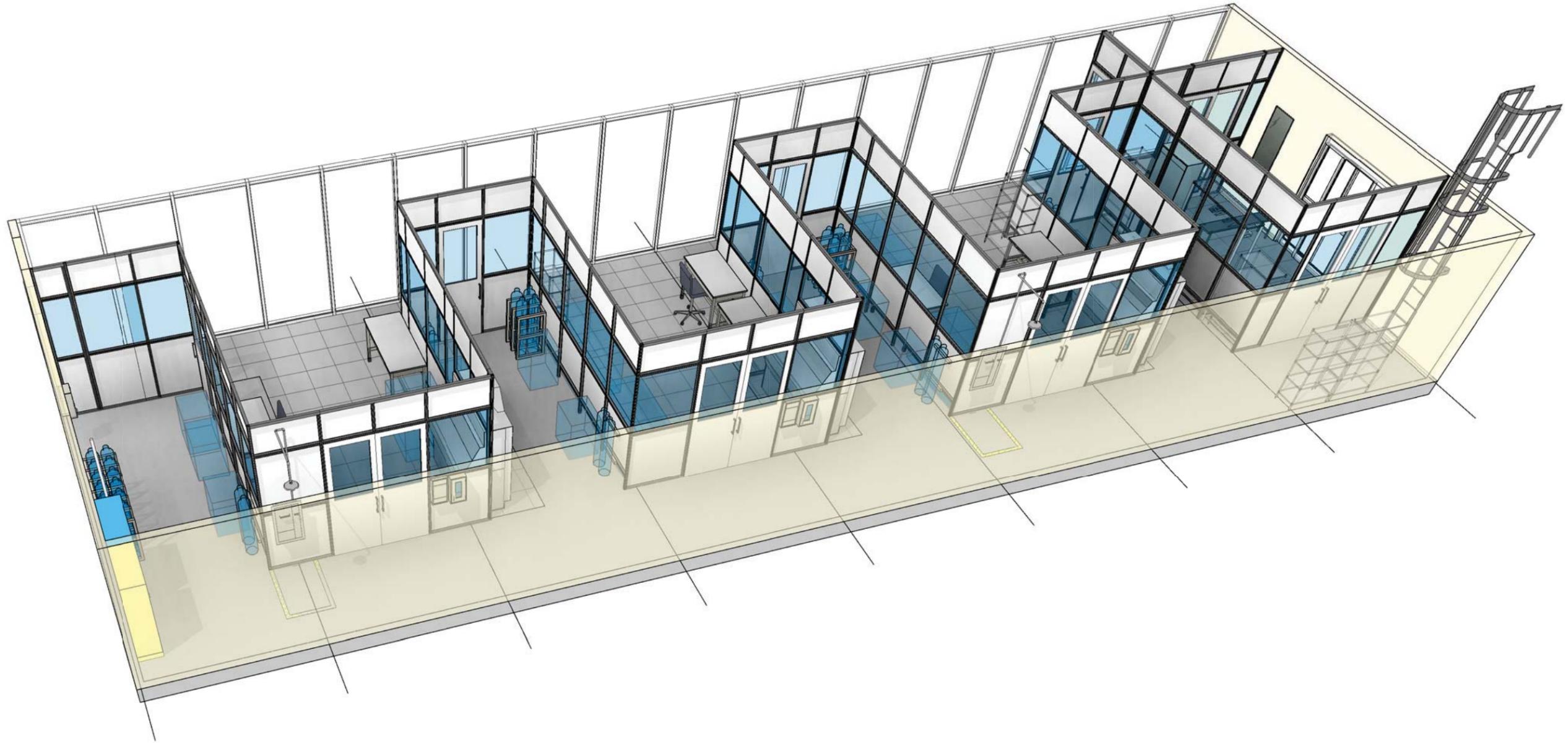


Flexible Wet Research Lab - 12 Total



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Building Program

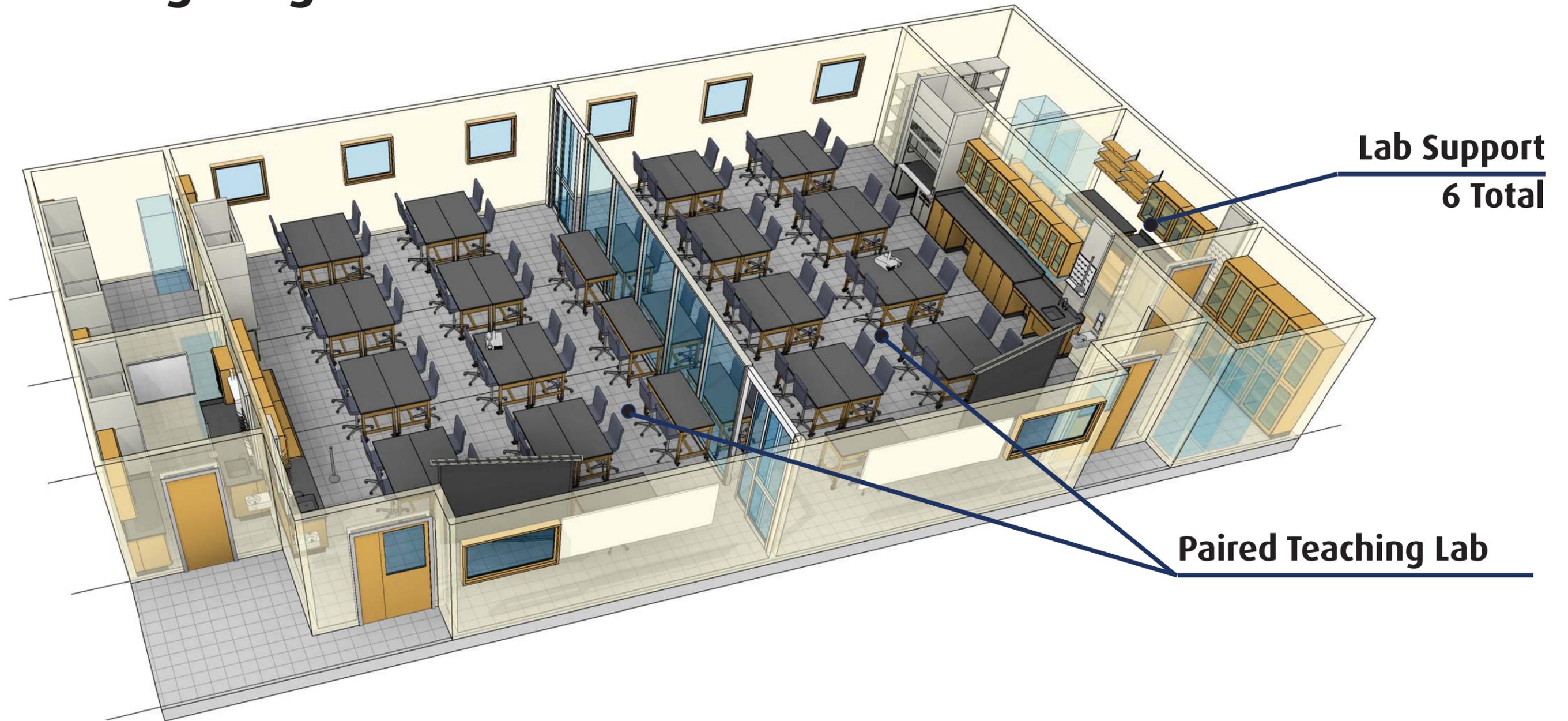


Clean Room - 1 total



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Building Program



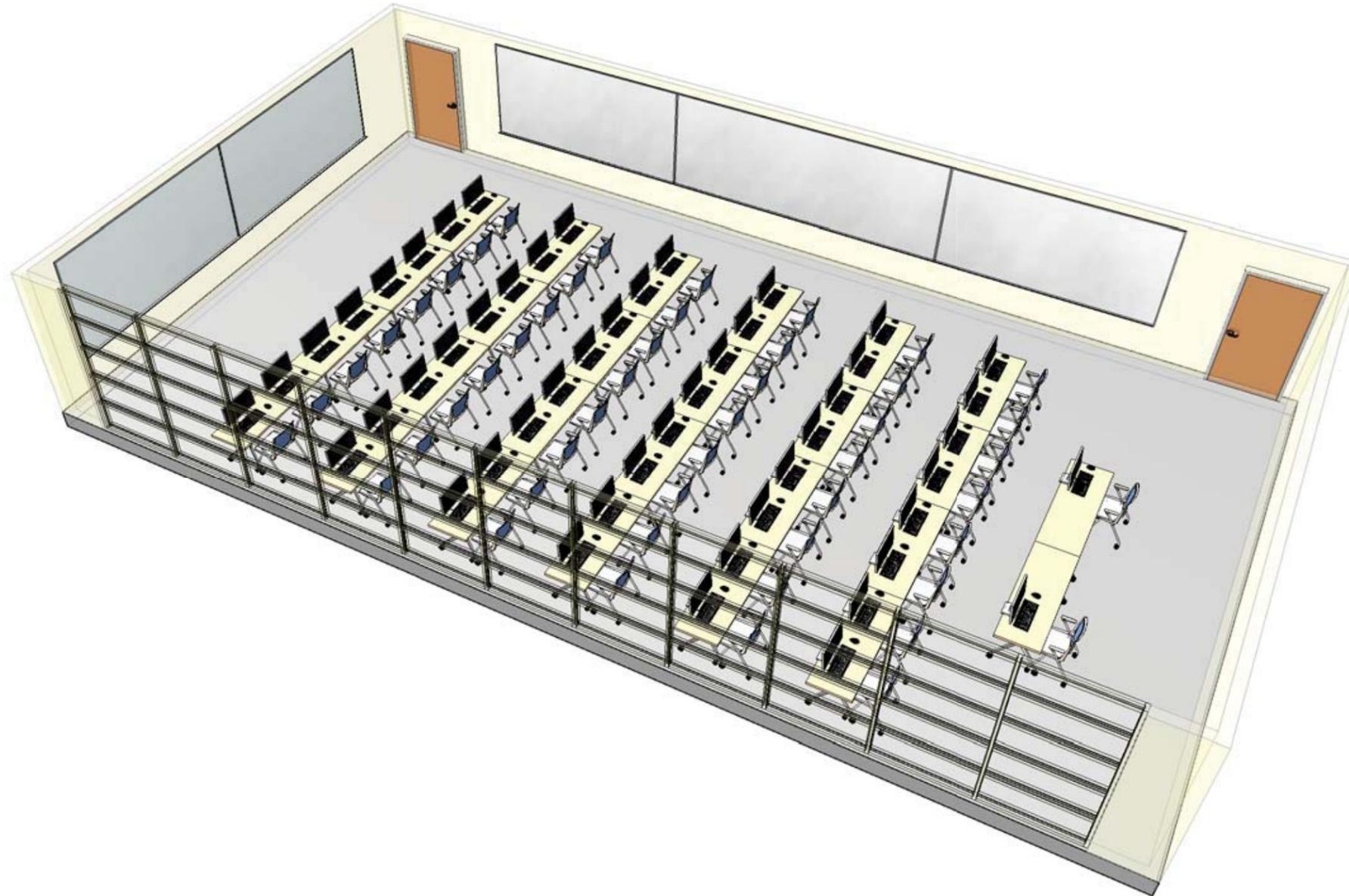
**Lab Support
6 Total**

Paired Teaching Lab

Teaching Lab (undergraduate) - 3 Total



Building Program



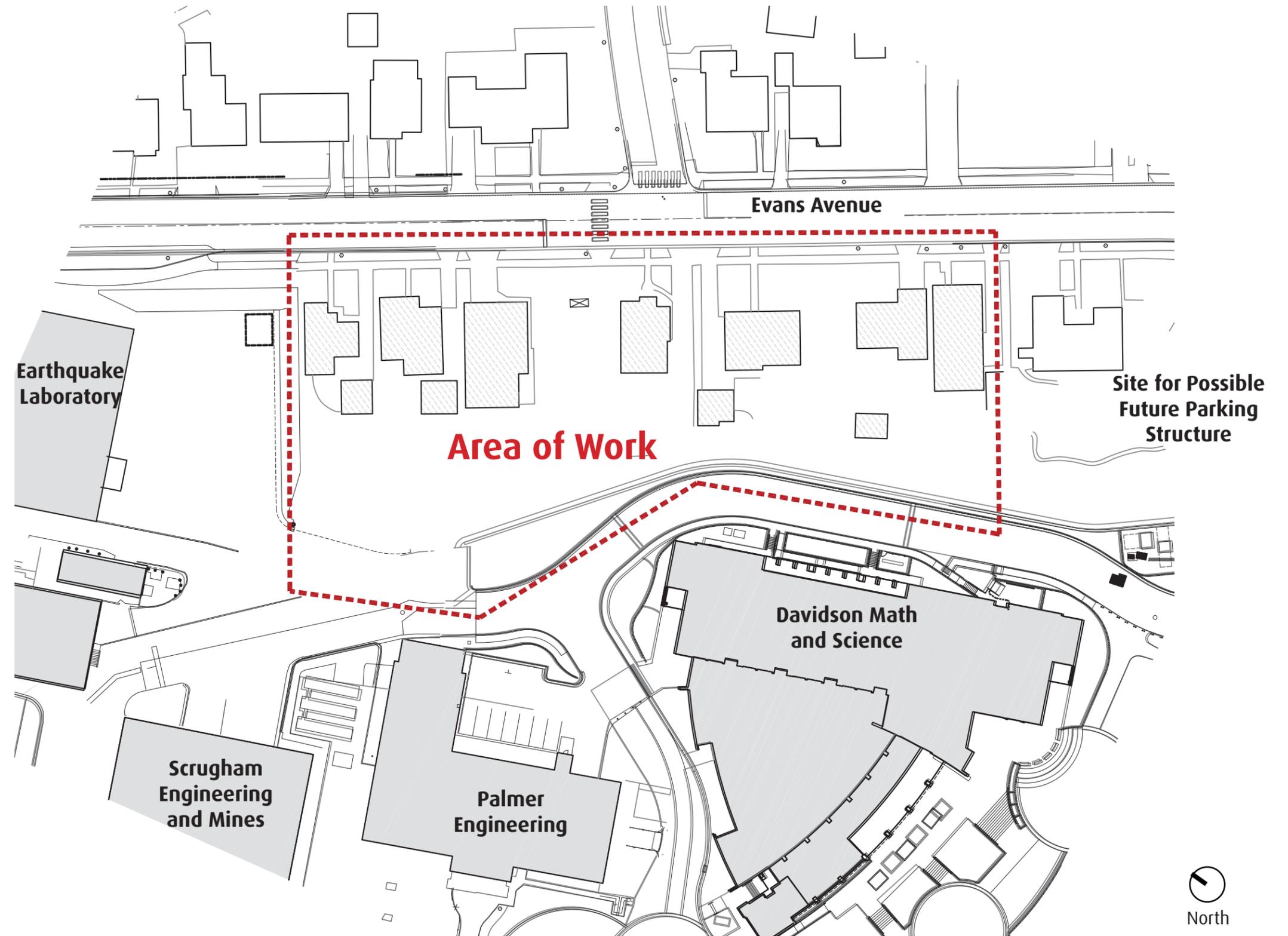
Large Computer Lab - 1 Total



Building Program

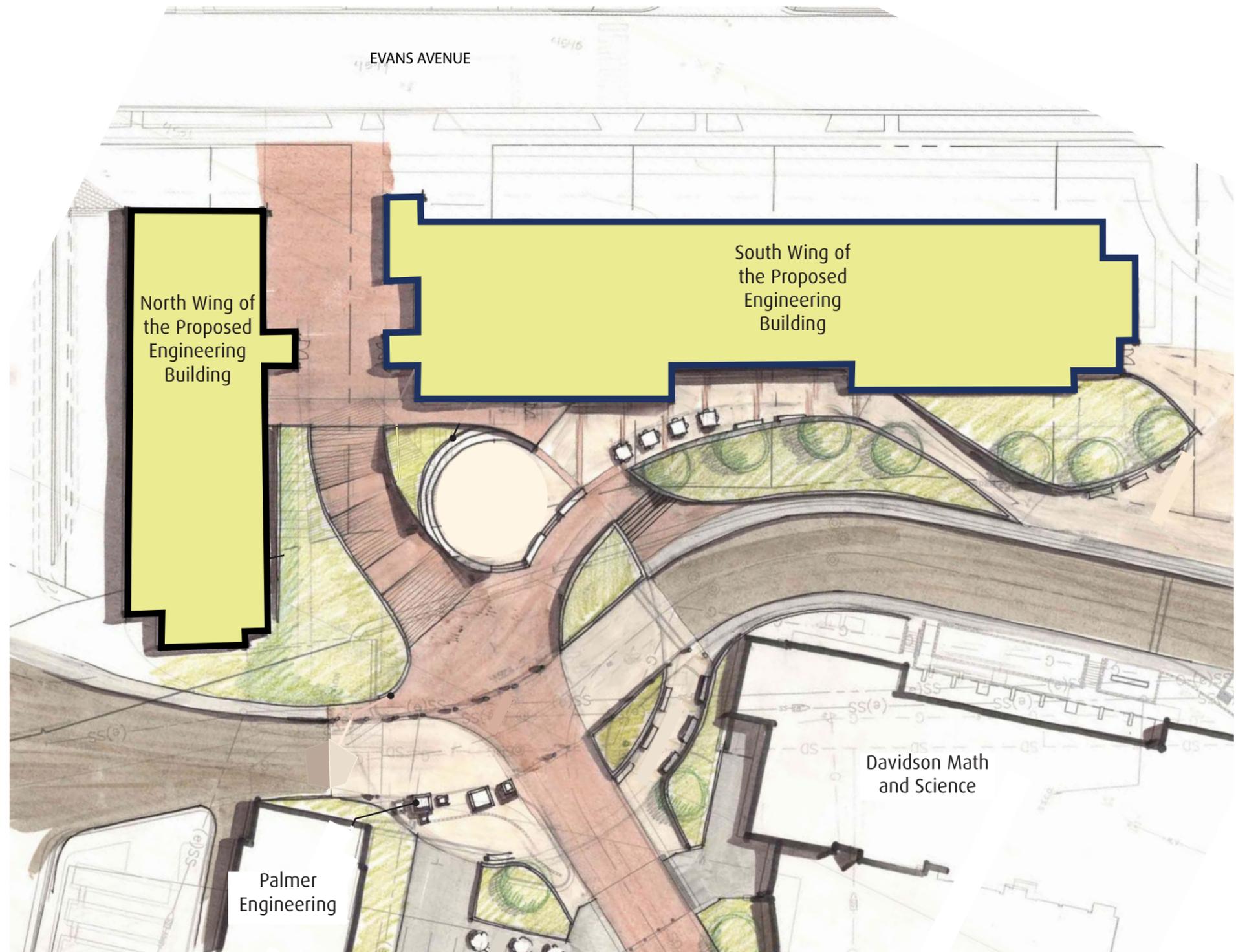
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Building Site

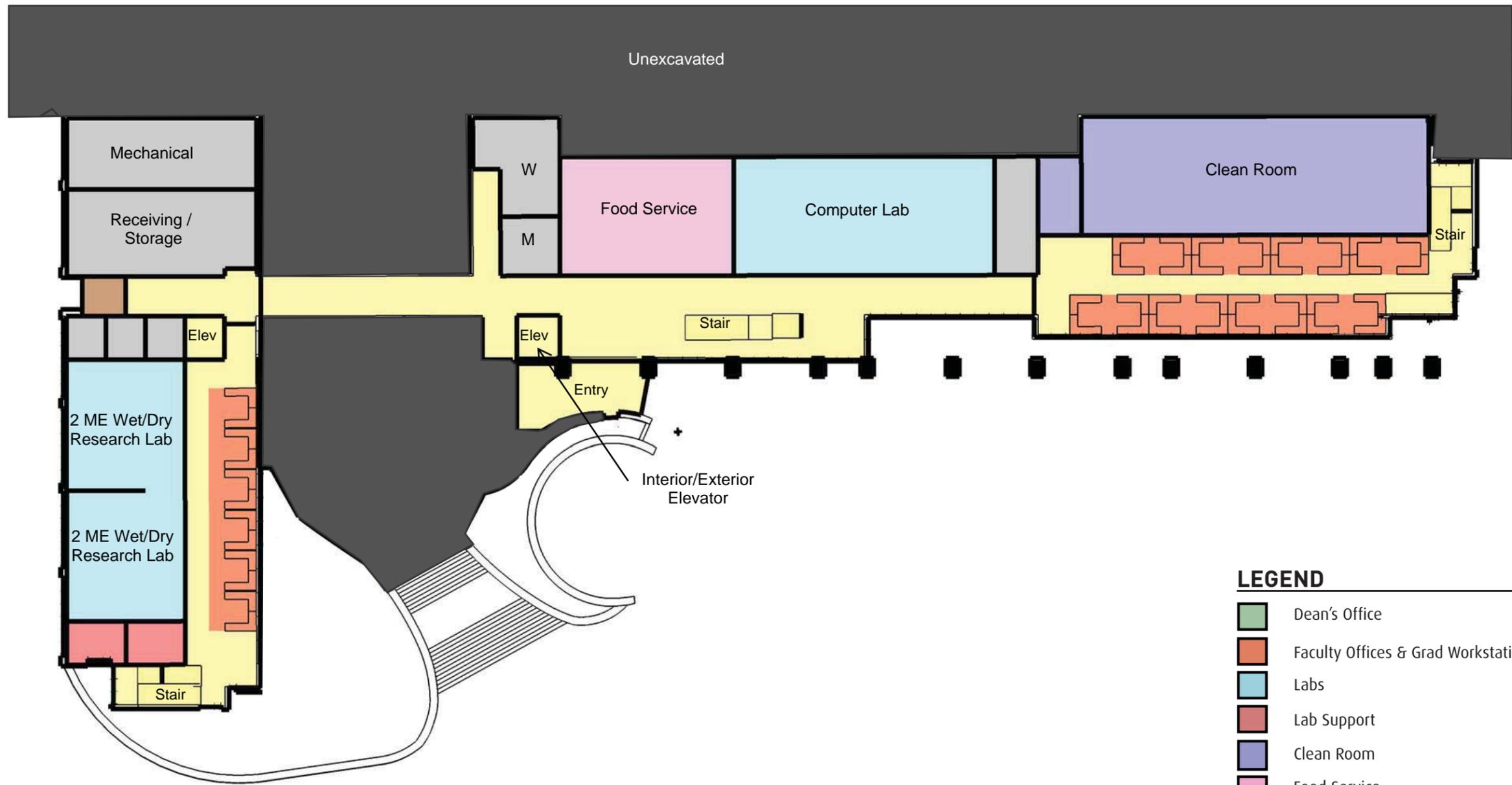


NEW ENGINEERING BUILDING

Site Plan



NEW ENGINEERING BUILDING



Floor Plan Blocking Diagram - First Level

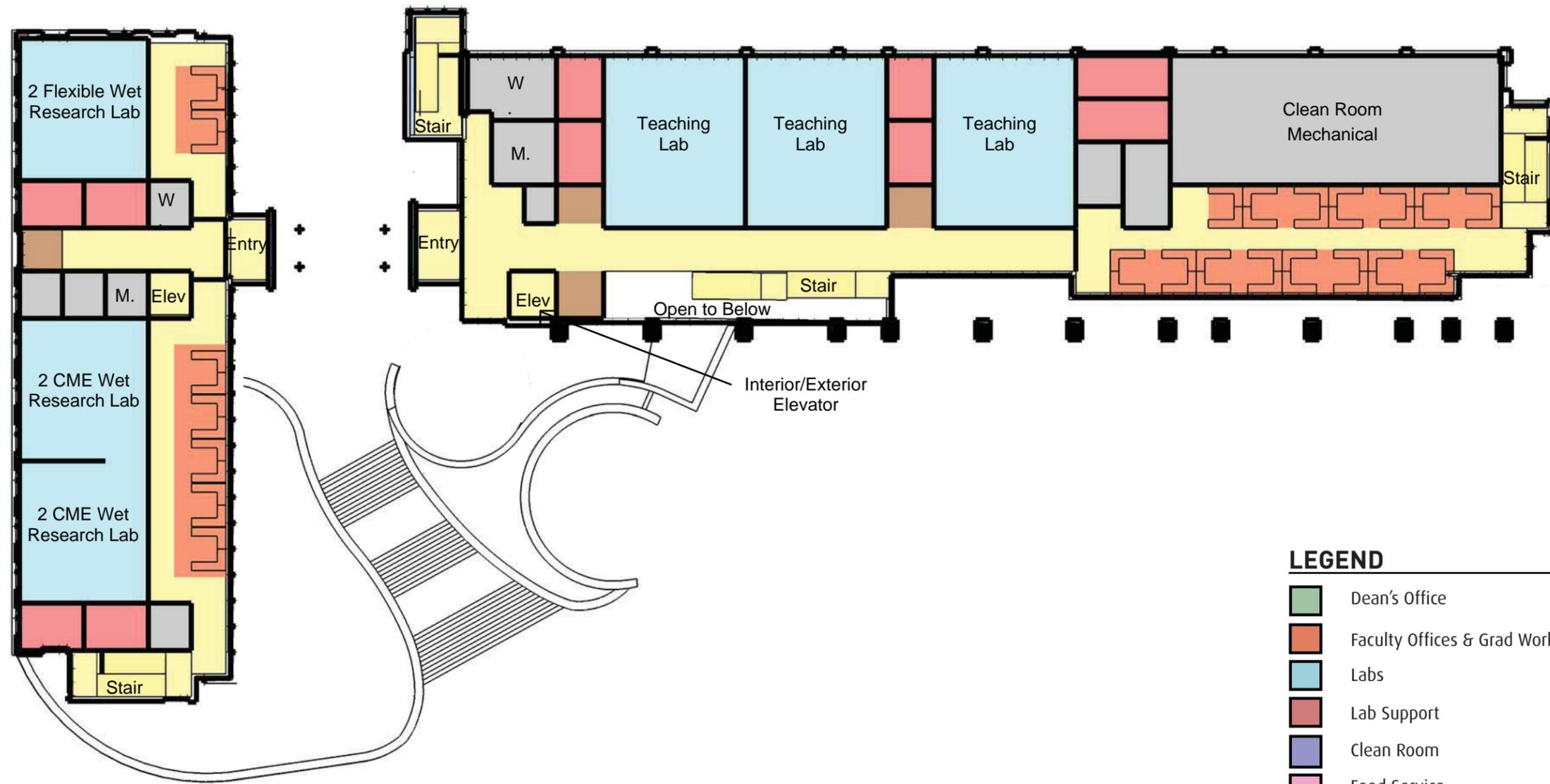


LEGEND

■	Dean's Office
■	Faculty Offices & Grad Workstations
■	Labs
■	Lab Support
■	Clean Room
■	Food Service
■	Restrooms & Building Resources
■	Building Circulation
■	Collaboration Space



Evans Avenue



Floor Plan Blocking Diagram - Second Level



LEGEND

- Dean's Office
- Faculty Offices & Grad Workstations
- Labs
- Lab Support
- Clean Room
- Food Service
- Restrooms & Building Resources
- Building Circulation
- Collaboration Space



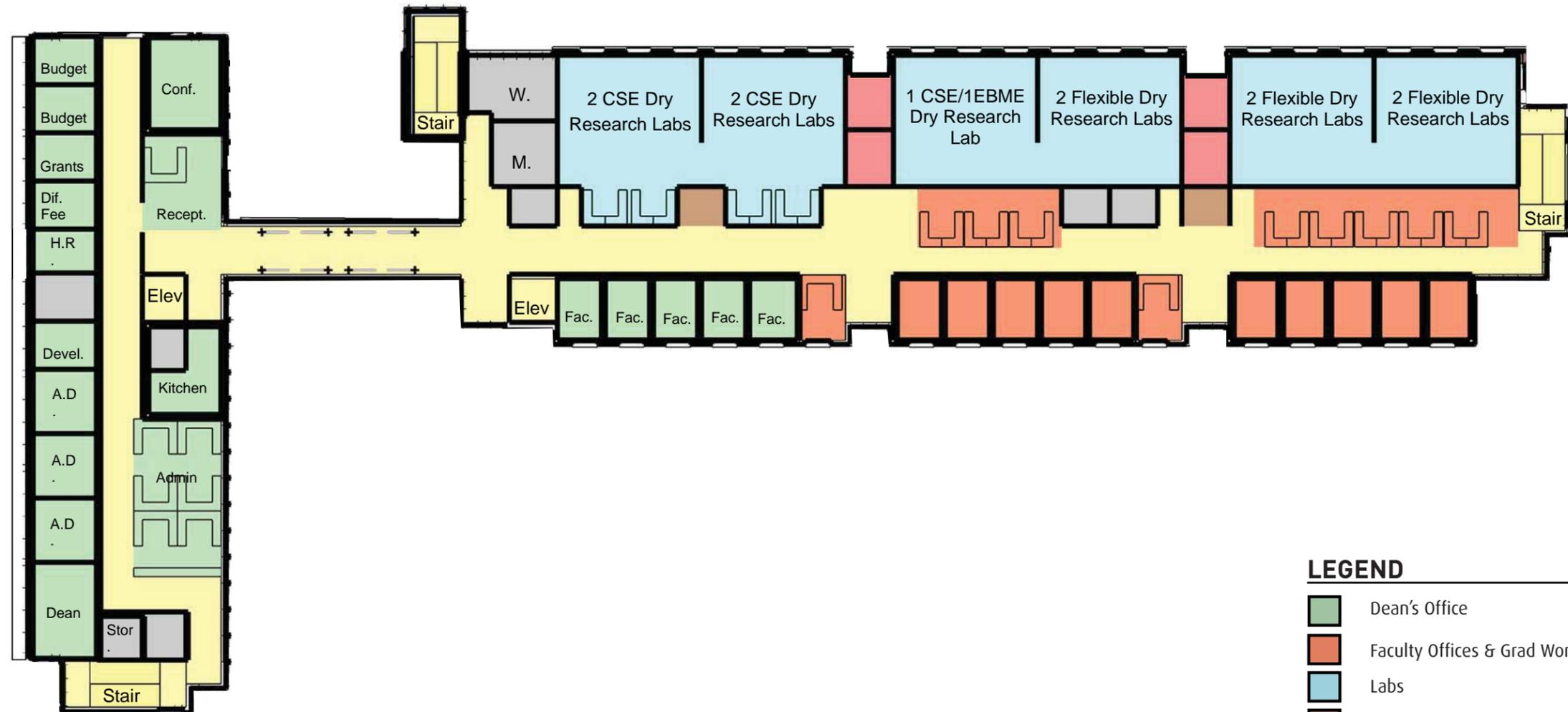
Floor Plan Blocking Diagram - Third Level



LEGEND

 Dean's Office
 Faculty Offices & Grad Workstations
 Labs
 Lab Support
 Clean Room
 Food Service
 Restrooms & Building Resources
 Building Circulation
 Collaboration Space





Floor Plan Blocking Diagram - Fourth Level



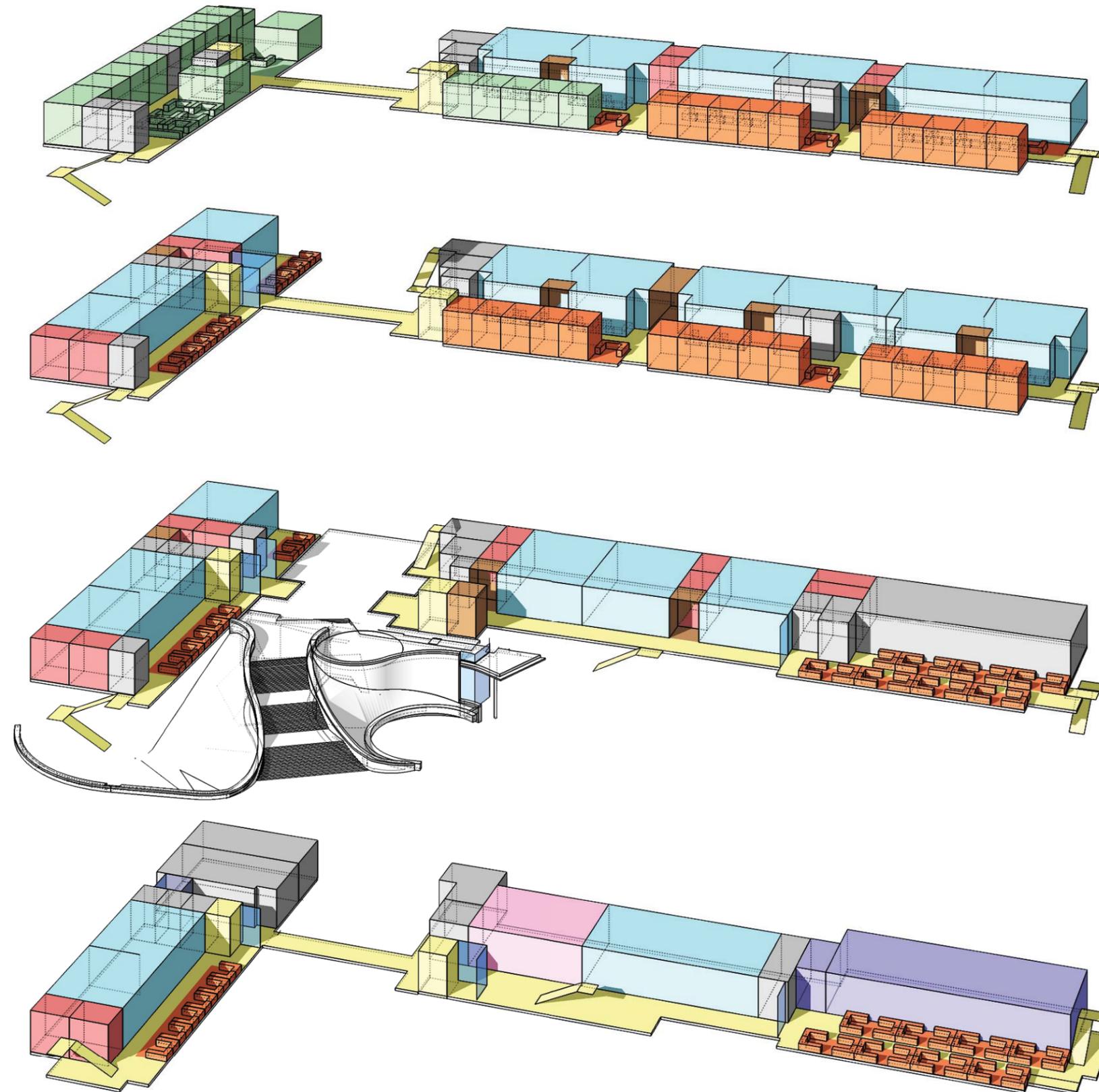
LEGEND

Green square	Dean's Office
Orange square	Faculty Offices & Grad Workstations
Light blue square	Labs
Red square	Lab Support
Purple square	Clean Room
Pink square	Food Service
Grey square	Restrooms & Building Resources
Yellow square	Building Circulation
Brown square	Collaboration Space



LEGEND

- Dean's Office
- Faculty Offices & Grad Workstations
- Labs
- Lab Support
- Clean Room
- Food Service
- Restrooms & Building Resources
- Building Circulation
- Collaboration Space



Fourth Floor
Level - 41 Feet
Deans Office and Administration
Faculty Offices
Research Labs

Third Floor
Level - 24 Feet
Faculty Offices
Research Labs

Second Floor
Level - 17 Feet
Entrance from Evans Street
Teaching Labs
Research Labs

First Floor
Level - 0 Feet
Entrance from Campus
Clean Room
Food Service
Computer Lab
Research Labs

NEW ENGINEERING BUILDING



Rendering - View from Northeast

NEW ENGINEERING BUILDING



Rendering - View from West between DMS and Palmer Engineering

NEW ENGINEERING BUILDING

Opinion of Probable Cost

Scope of Work	Area	Cost/SF	Total
Building Shell	87,000	\$213.96	\$18,614,384
Interiors	87,000	\$42.42	\$3,690,136
Equipment and Vertical Circulation	87,000	\$31.07	\$2,702,728
Mechanical and Electrical	87,000	\$155.72	\$13,547,986
Subtotal Construction Cost			\$38,555,234
General Conditions			\$2,698,866
Bonds and Insurance			\$742,574
General Contractor Fee			\$1,259,900
16% Design Contingency			\$6,921,052
Escalation to Mid 2018			\$9,507,894
Subtotal Building Construction Cost	87,000	\$686.04	\$59,685,520
Site Construction	60,000		\$2,245,225.00
General Conditions			\$157,166
Bonds and Insurance			\$43,243
General Contractor Fee			\$73,369
16% Design Contingency			\$403,040
Escalation to Mid 2018			\$553,683
Subtotal Site Construction Cost			\$3,475,726.24
Total Construction Cost	87,000	\$725.99	\$63,161,246.56

