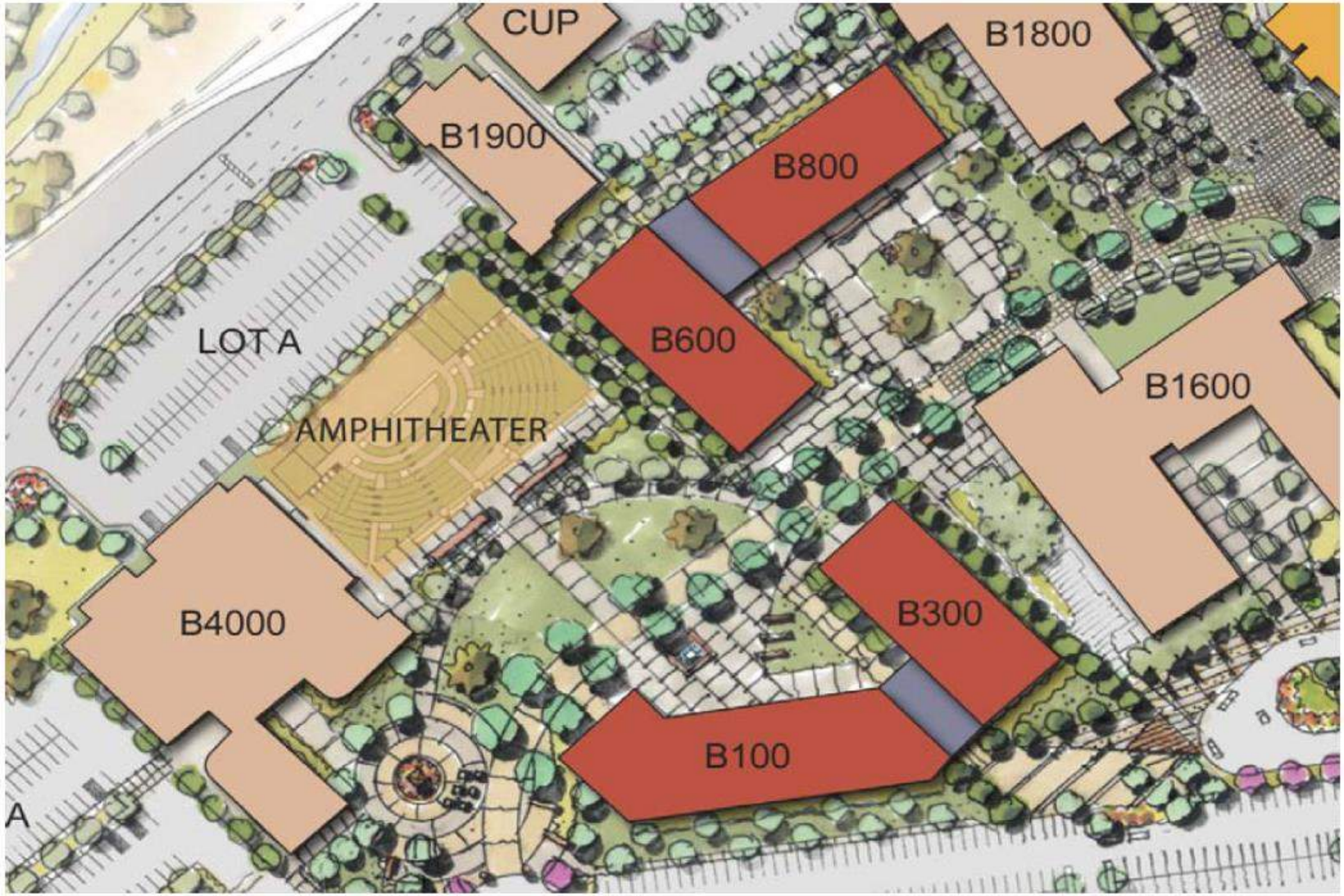

CUP
B1800
B1900
B800
LOT A
B600
B1600
AMPHITHEATER
B4000
B300
B100
A

Agenda

1. Process
2. Schedule
3. Site
4. Relocation & Swing Space – Relocation of B200 & B300
5. Building 100
6. Computer Labs
7. Smart Classrooms

Process

1. Space Allocation Meeting

2. Visual Communications & Photography Meeting & Tours

3. Facilities Committee Meeting

4. Associated Students

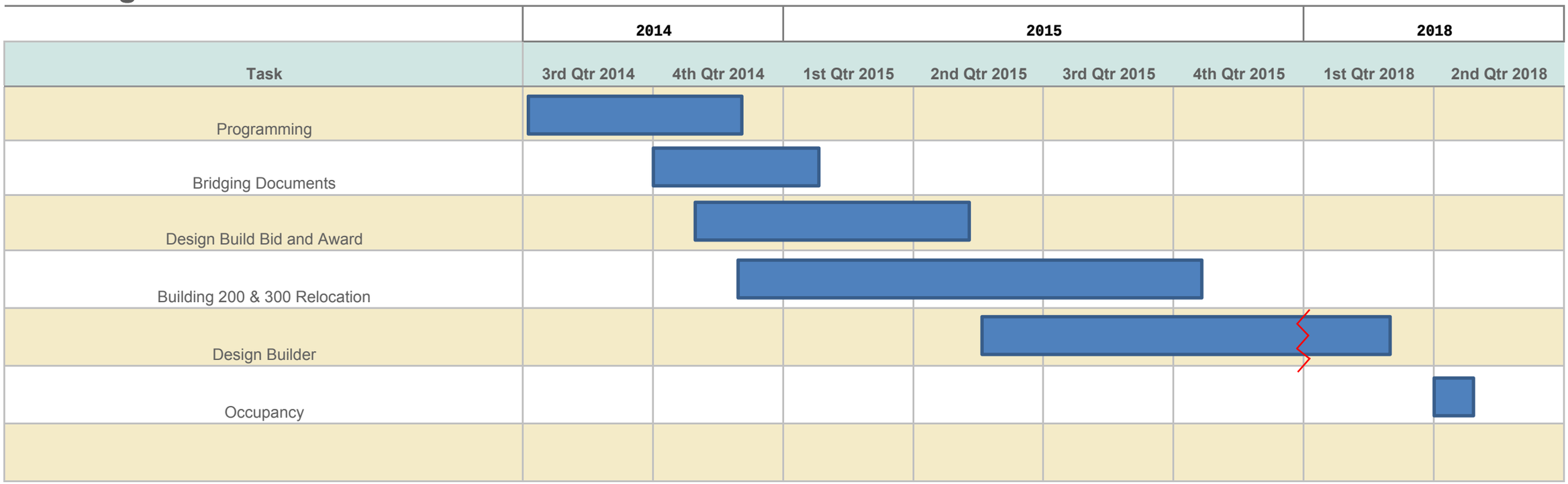
5. Maintenance & Operations Design Meeting

6. Town Hall

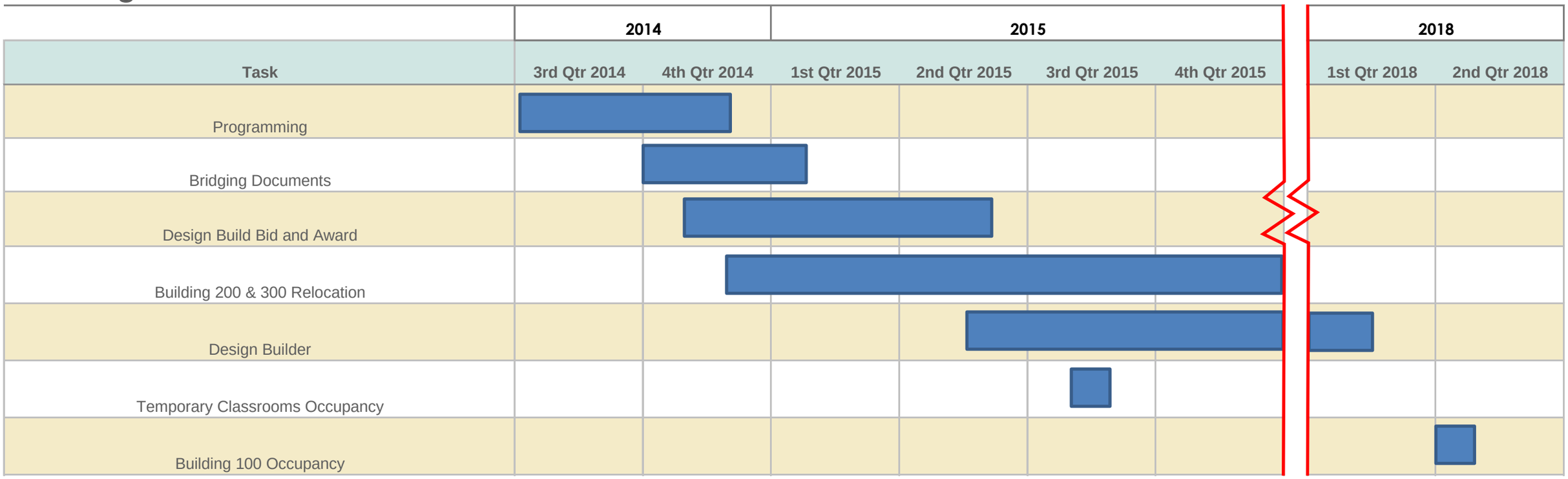
Process

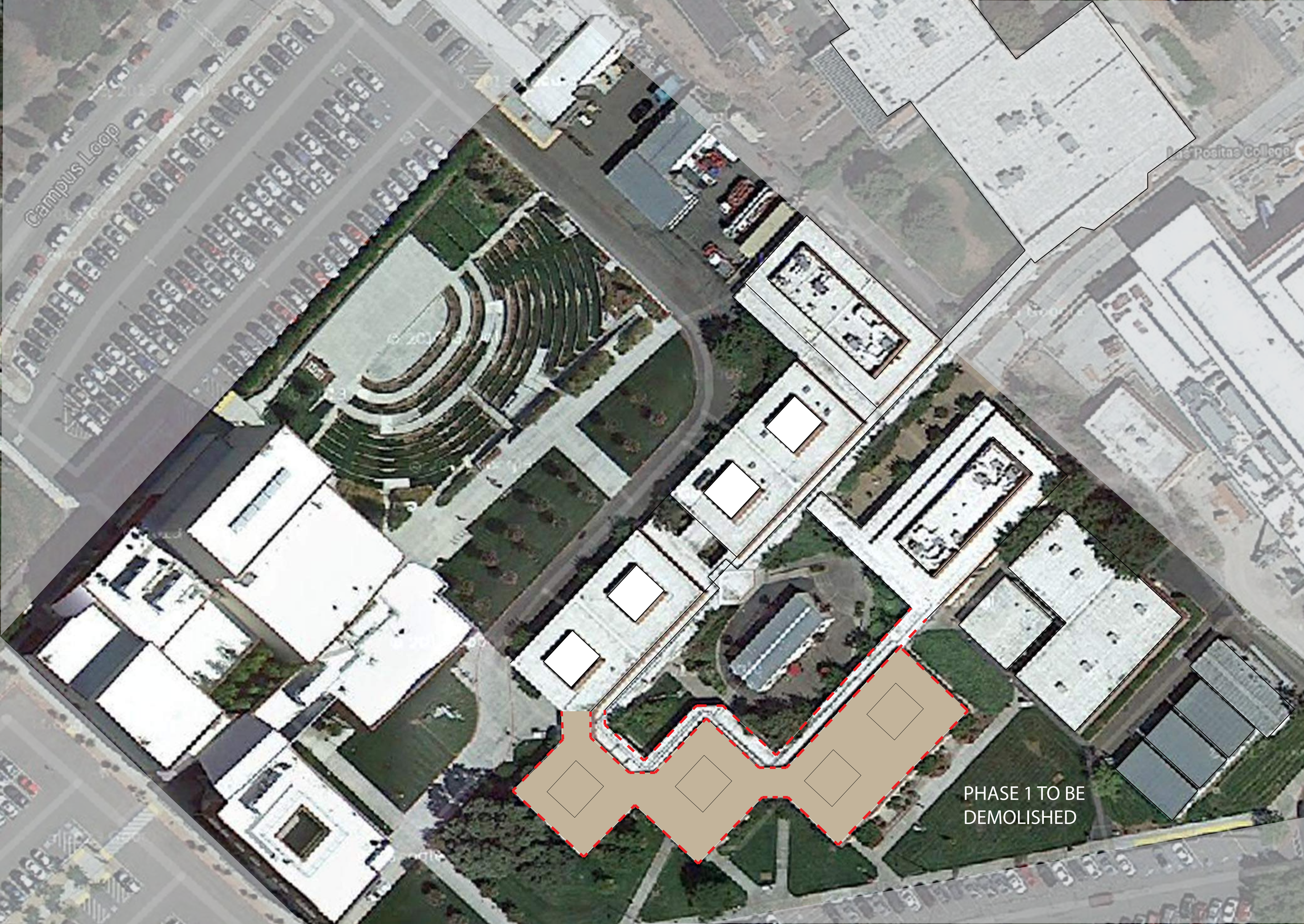
1. Space Allocation Meeting
2. Visual Communications & Photography Meeting & Tours
3. Facilities Committee Meeting
4. Associated Students
5. Maintenance & Operations Design Meeting
6. Town Hall
7. Bridging Documents
8. Design Build Team Selection

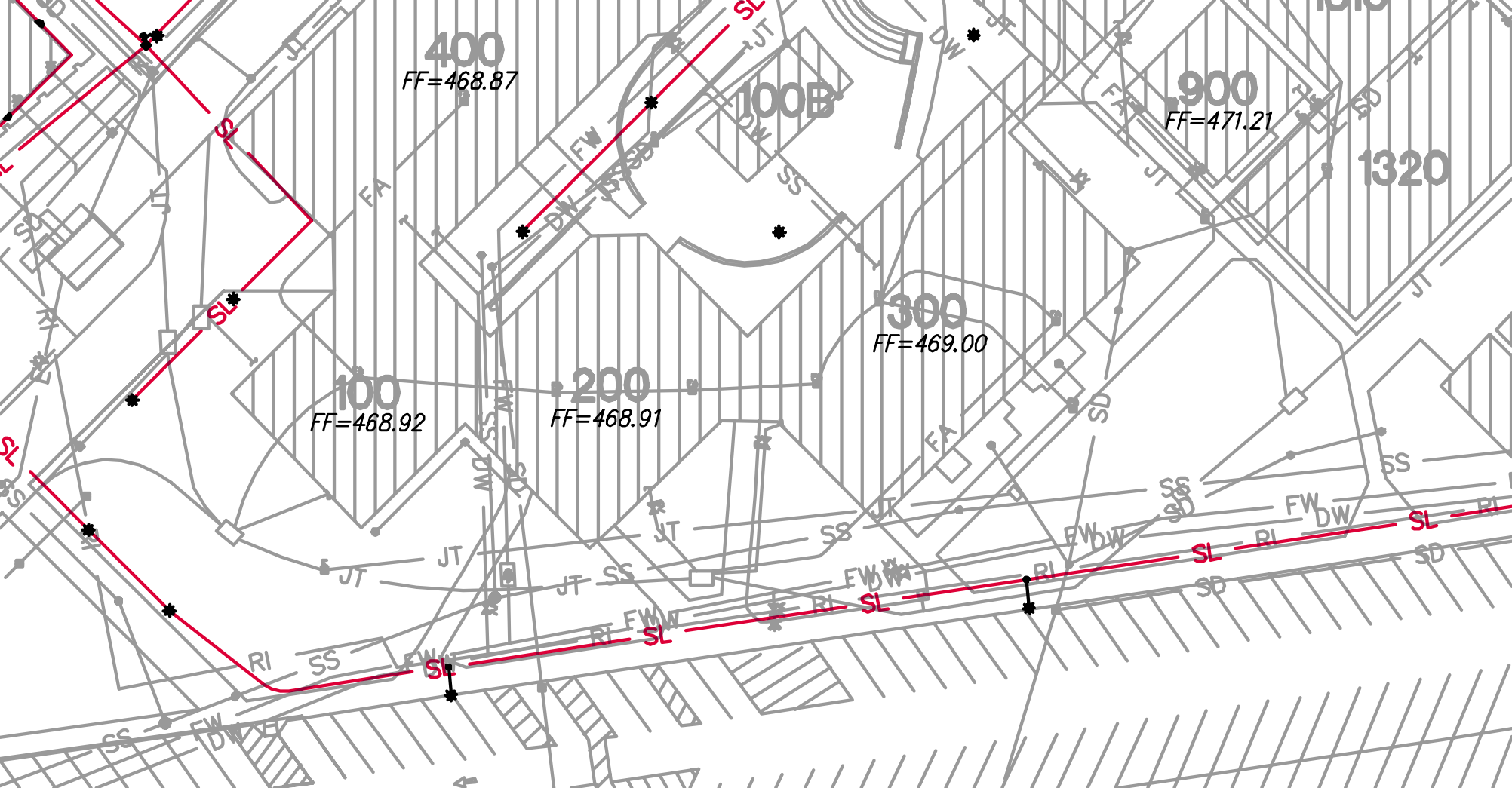
Building 100 Schedule



Building 100 Schedule




Campus Loop
Las Positas College
PHASE 1 TO BE
DEMOLISHED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100
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200
FF=468.91
SL
JT
SS
FW
DW
SD
FA
RI

LAS POSITAS SITE PLAN

LPC PORTABLES & NEW CLASSROOM LOCATION

LAS POSITAS SITE PLAN

LPC PORTABLES & NEW CLASSROOM LOCATION

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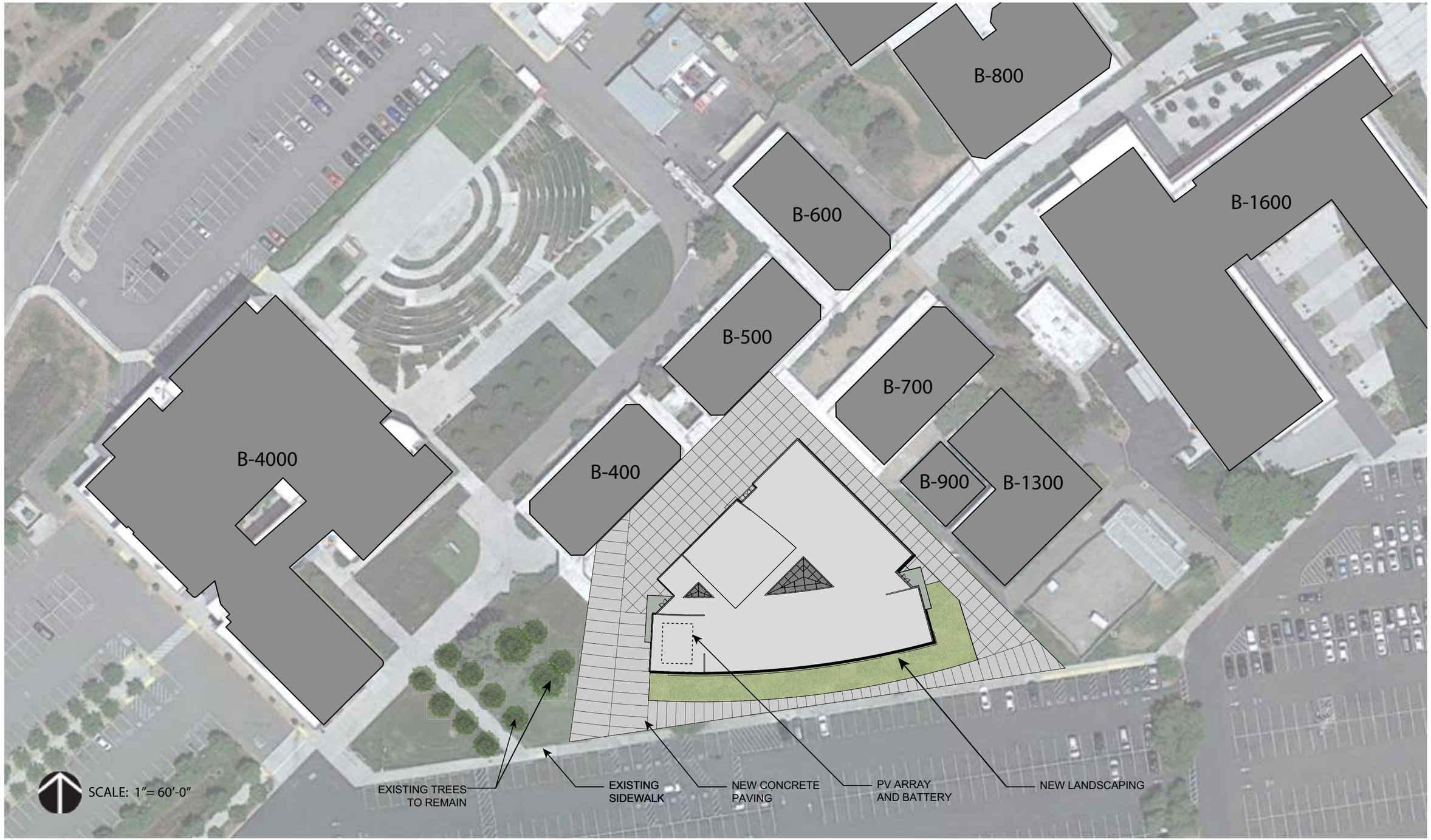
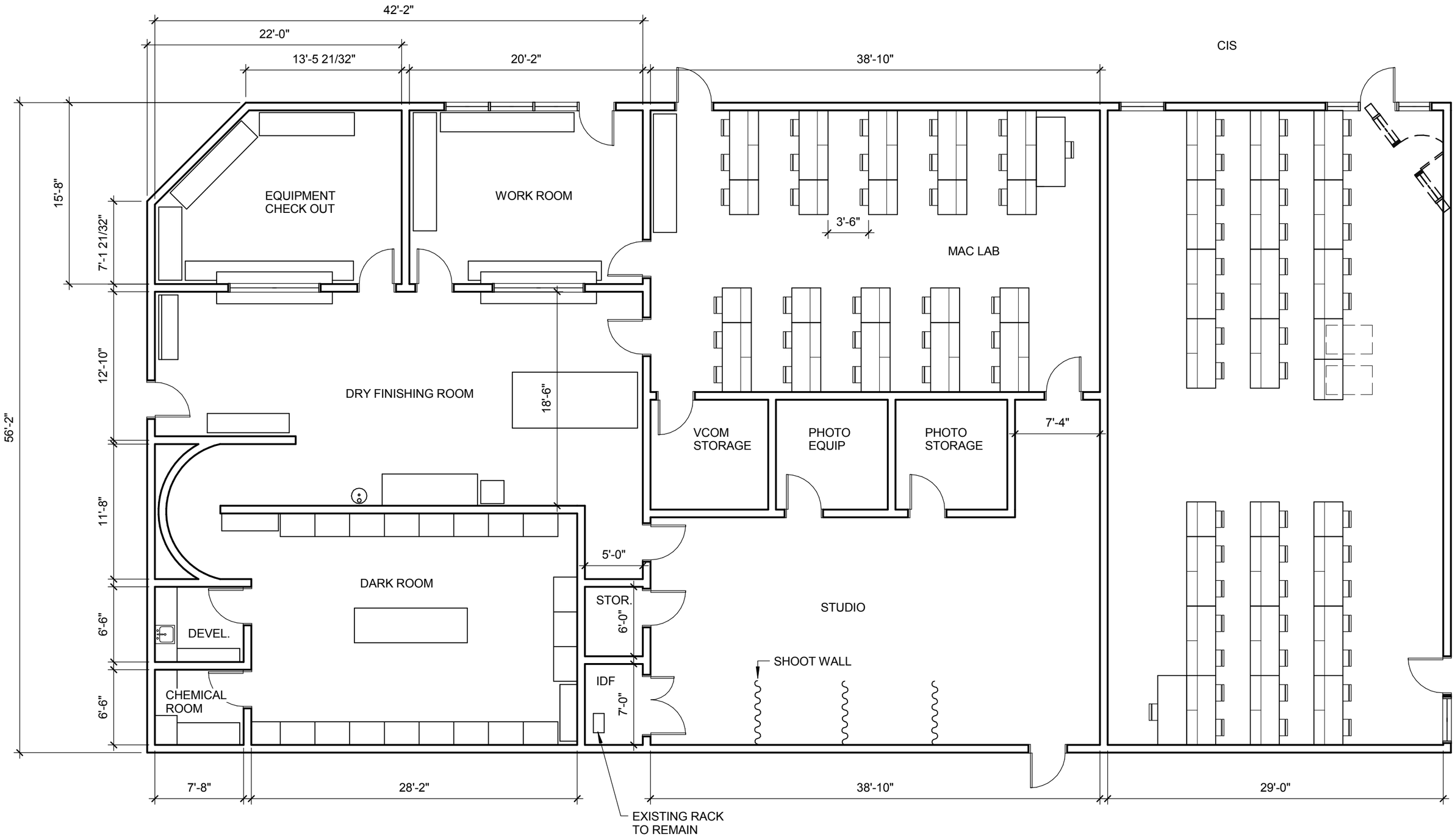


BASE BID - SITE PLAN WITH ROOF PLAN

LPC NEW CLASSROOM BUILDING

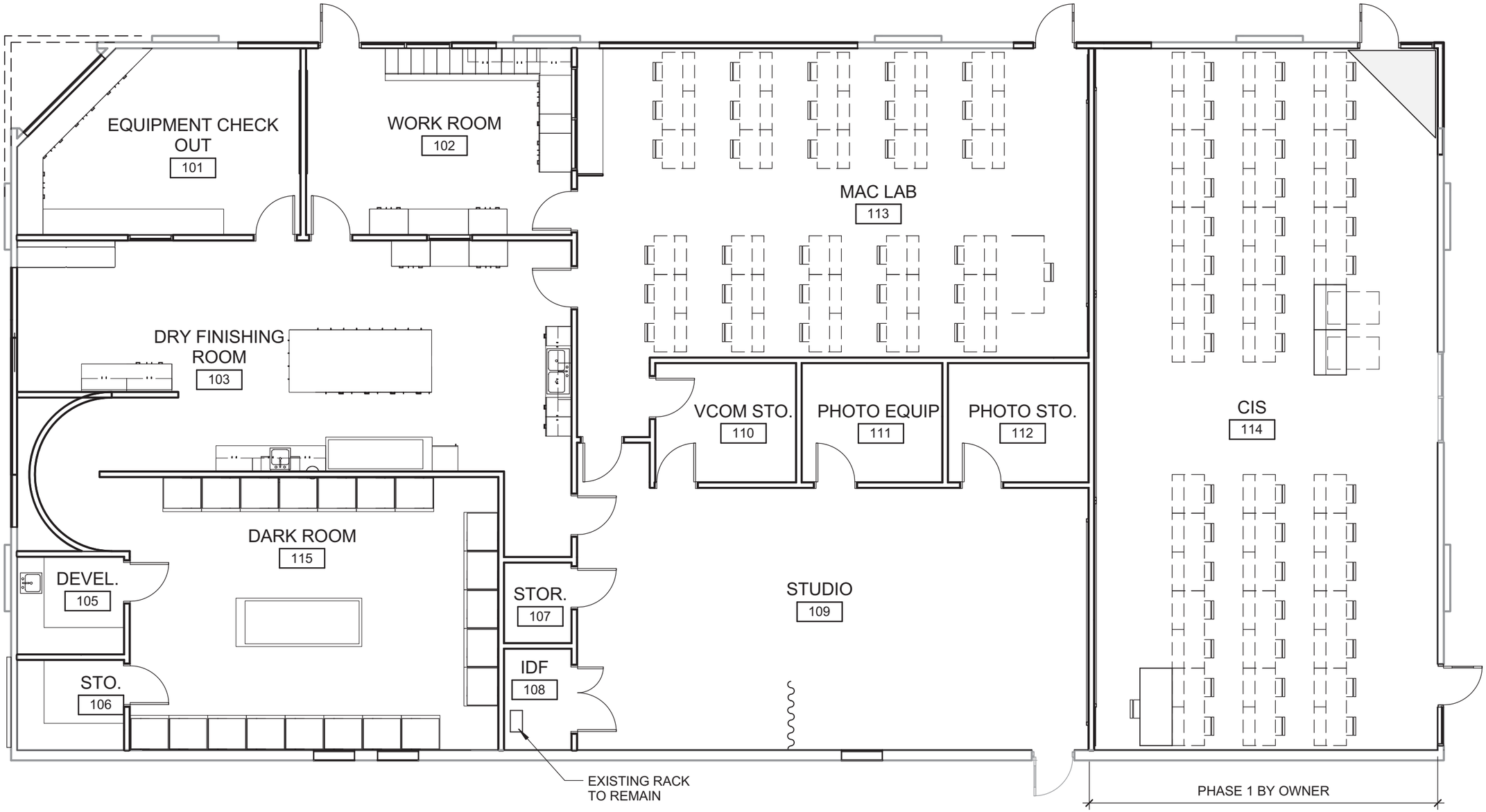
LIONAKIS



Building 700

Las Positas Community College

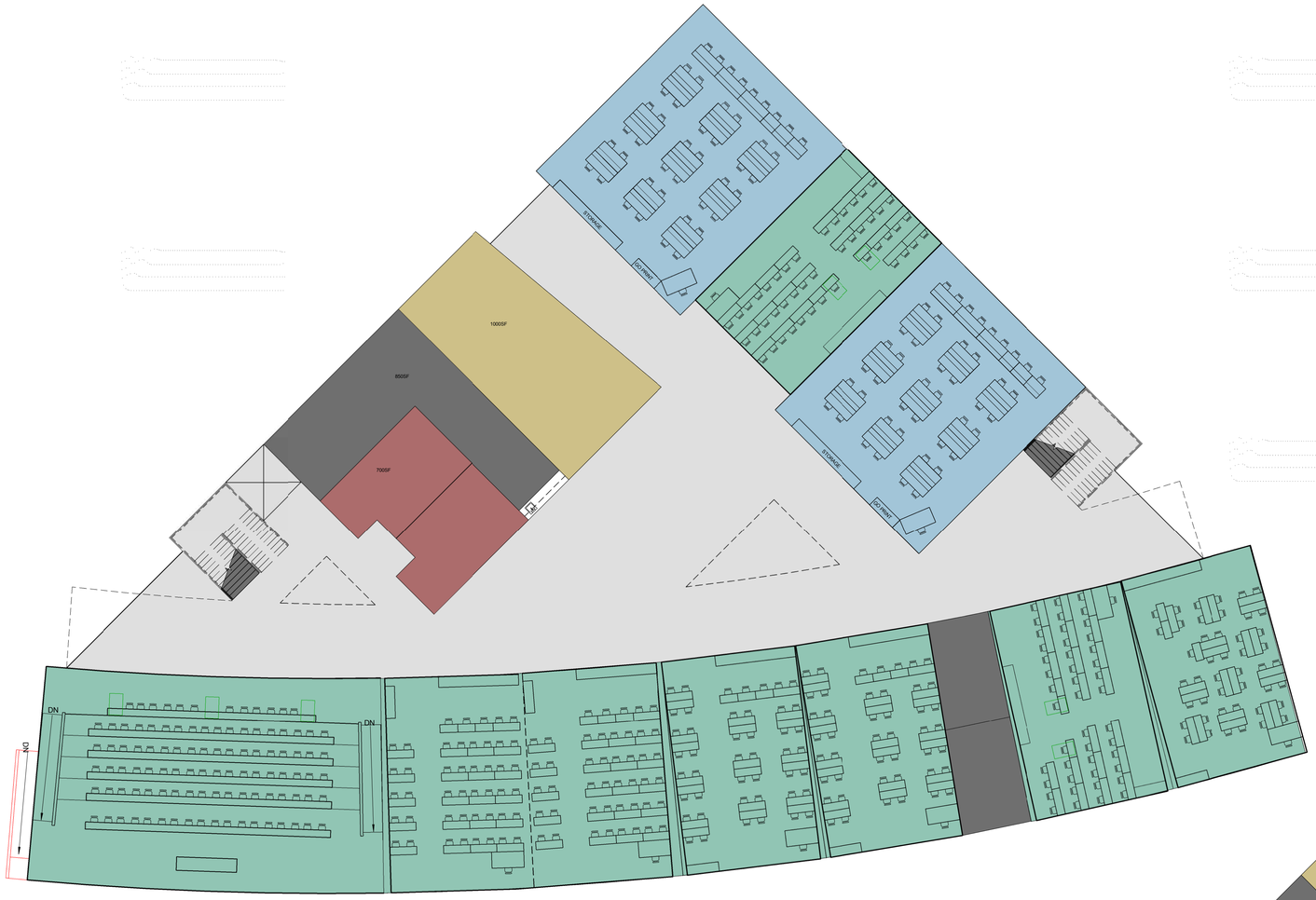
LIONAKIS



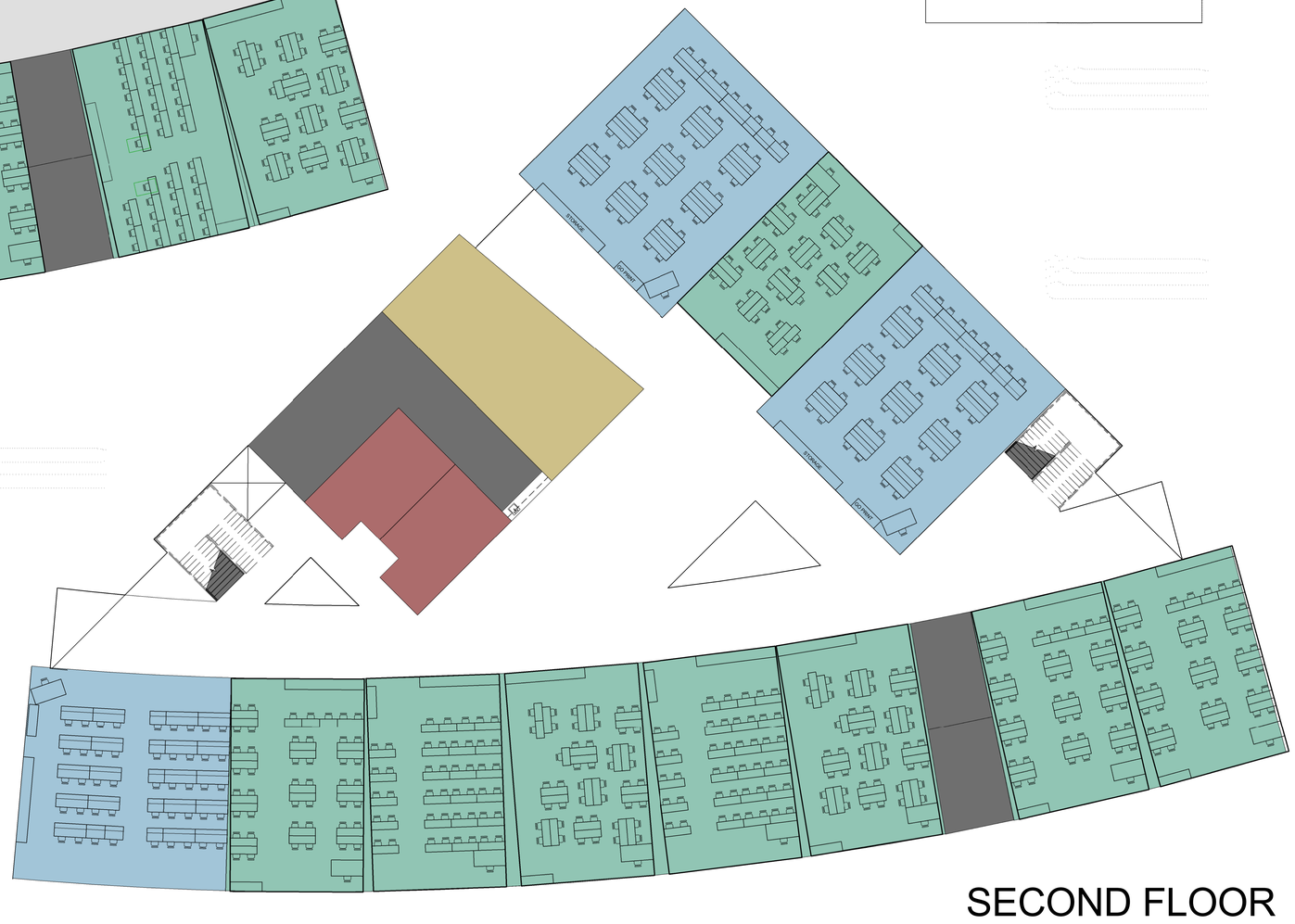
BUILDING 700 RENOVATION - FLOOR PLAN

BUILDING 700 RENOVATION

LIONAKIS



FIRST FLOOR



SECOND FLOOR

LEGEND

- LABORATORY
- LECTURE
- SERVICE
- STUDENT/ FACULTY SUPPORT
- RESTROOM
- STUDY AREA

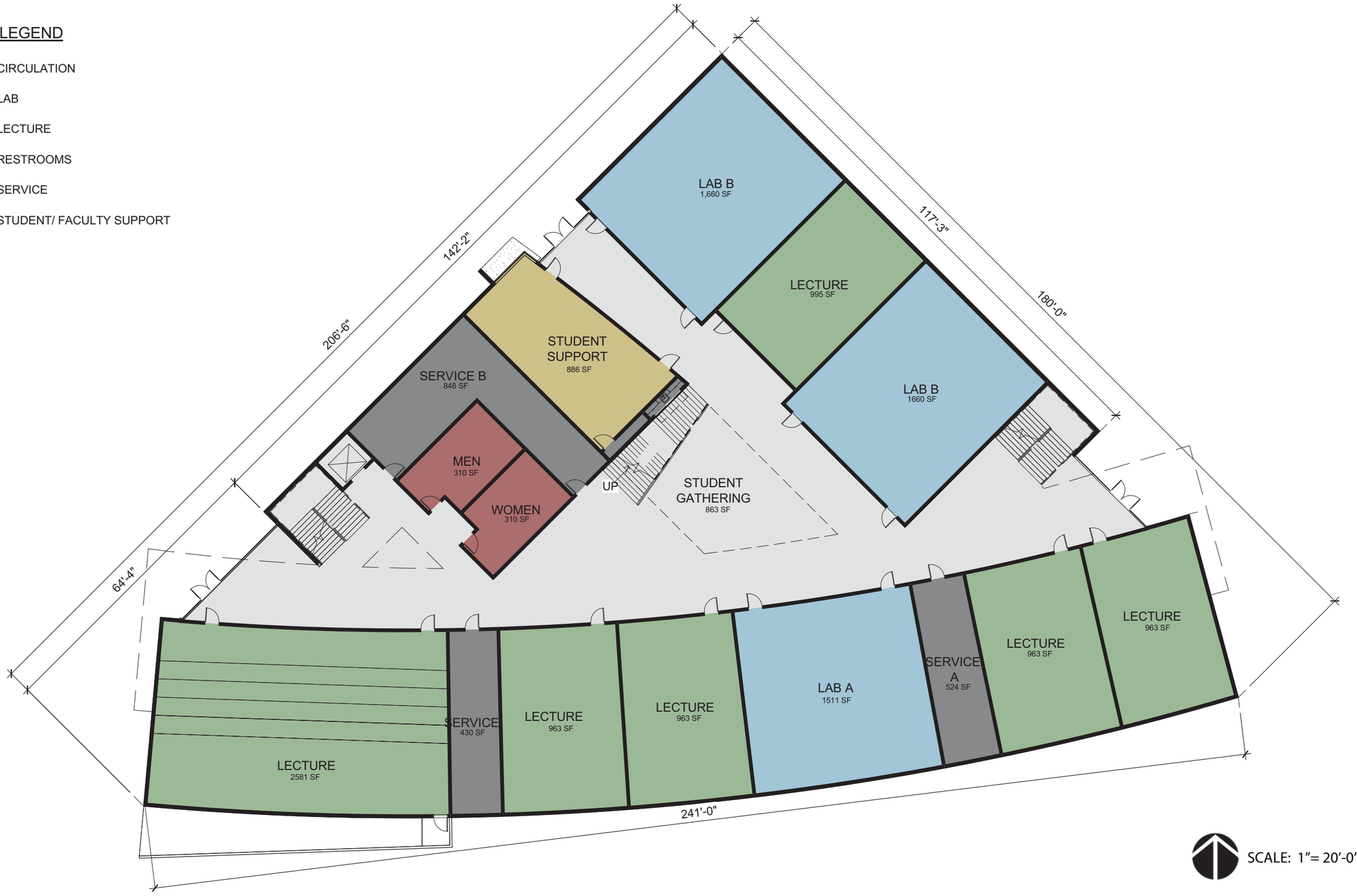
FLOOR PLANS

LPC NEW CLASSROOM BUILDING

LIONAKIS

ROOM LEGEND

- CIRCULATION
- LAB
- LECTURE
- RESTROOMS
- SERVICE
- STUDENT/ FACULTY SUPPORT



SCALE: 1"= 20'-0"

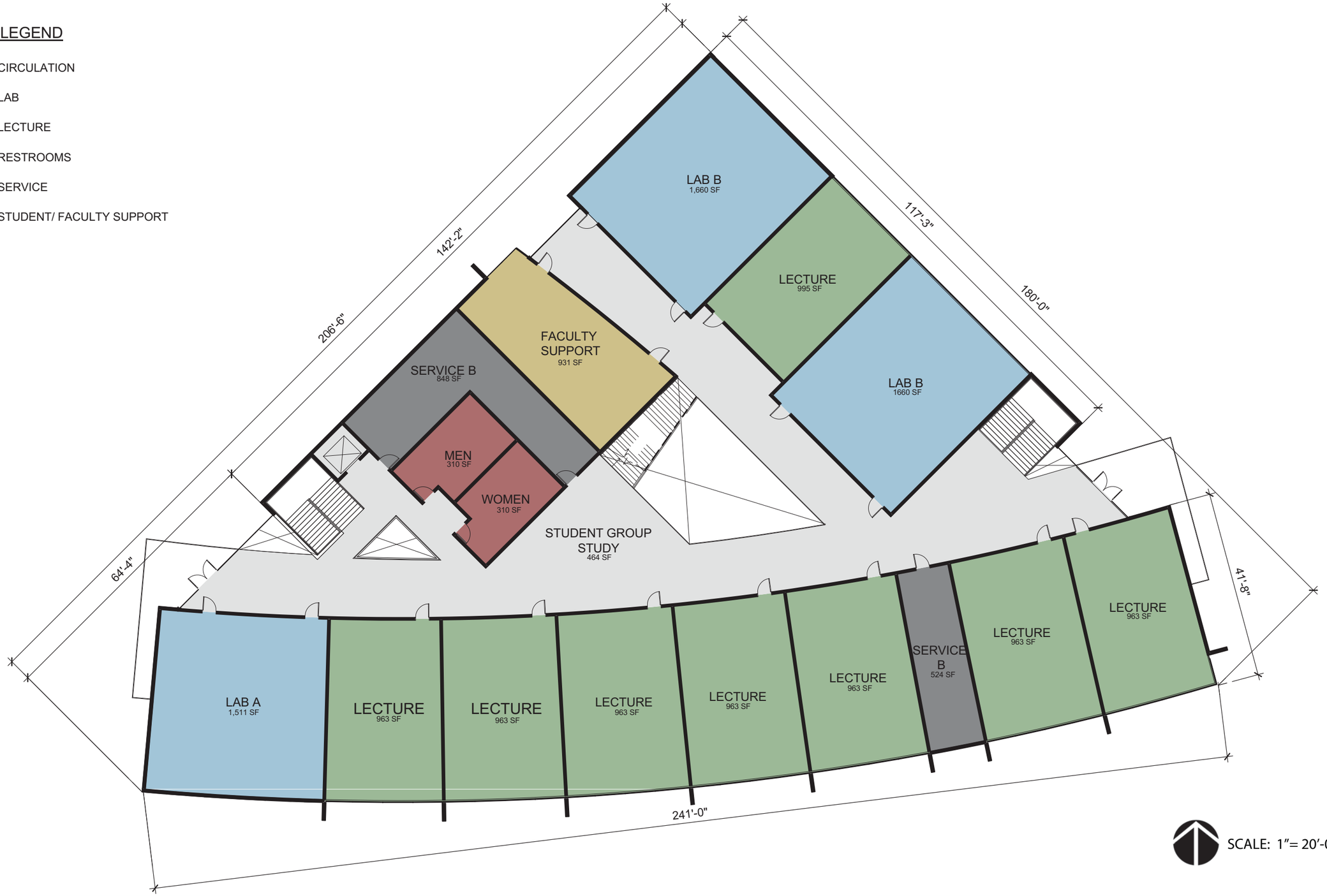
CHALLENGE PLAN - FIRST FLOOR PLAN

LPC NEW CLASSROOM BUILDING

LIONAKIS

ROOM LEGEND

- CIRCULATION
- LAB
- LECTURE
- RESTROOMS
- SERVICE
- STUDENT/ FACULTY SUPPORT



SCALE: 1"= 20'-0"

CHALLENGE PLAN - SECOND FLOOR PLAN

LPC NEW CLASSROOM BUILDING

LIONAKIS

ROOM LEGEND

- CIRCULATION
- LAB
- LECTURE
- RESTROOMS
- SERVICE
- STUDENT/ FACULTY SUPPORT

SCALE: 1"= 20'-0"

BASE BID - FIRST FLOOR PLAN

LPC NEW CLASSROOM BUILDING

LIONAKIS

ROOM LEGEND

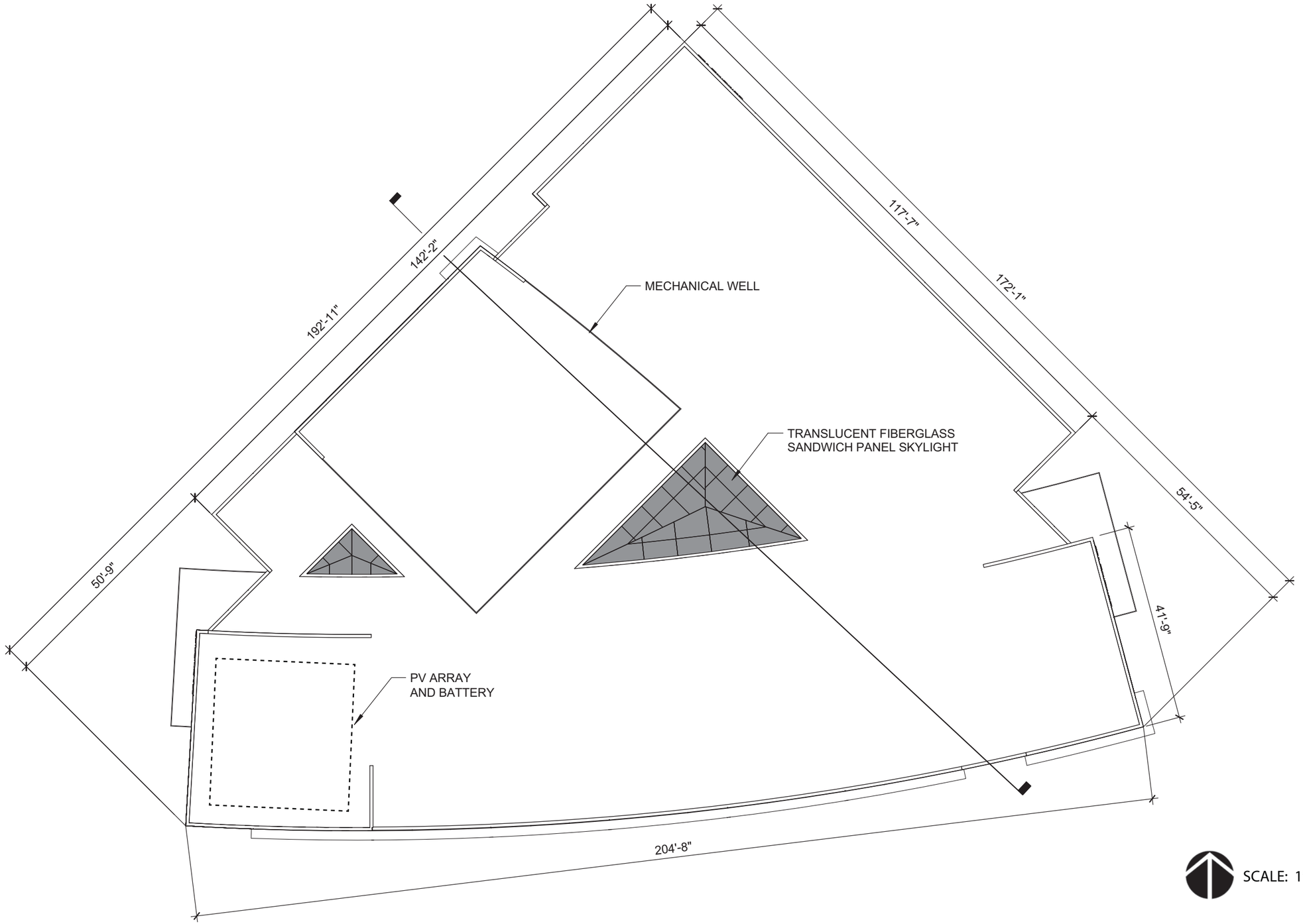
- CIRCULATION
- LAB
- LECTURE
- RESTROOMS
- SERVICE
- STUDENT/ FACULTY SUPPORT

SCALE: 1"= 20'-0"

BASE BID - SECOND FLOOR PLAN

LPC NEW CLASSROOM BUILDING

LIONAKIS

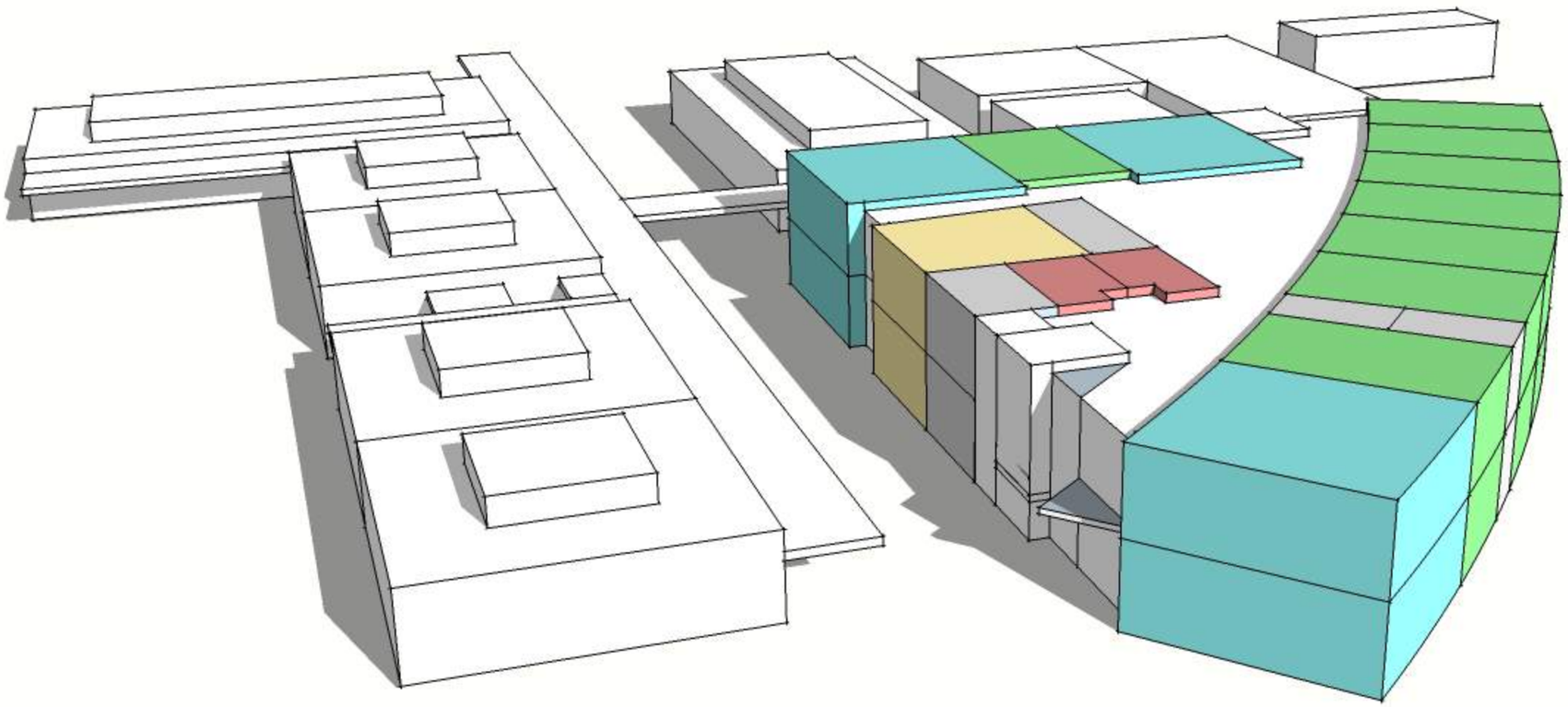


SCALE: 1″= 20′-0″

BASE BID - ROOF PLAN

LPC NEW CLASSROOM BUILDING

LIONAKIS



BASE BID - NORTH WEST PERSPECTIVE

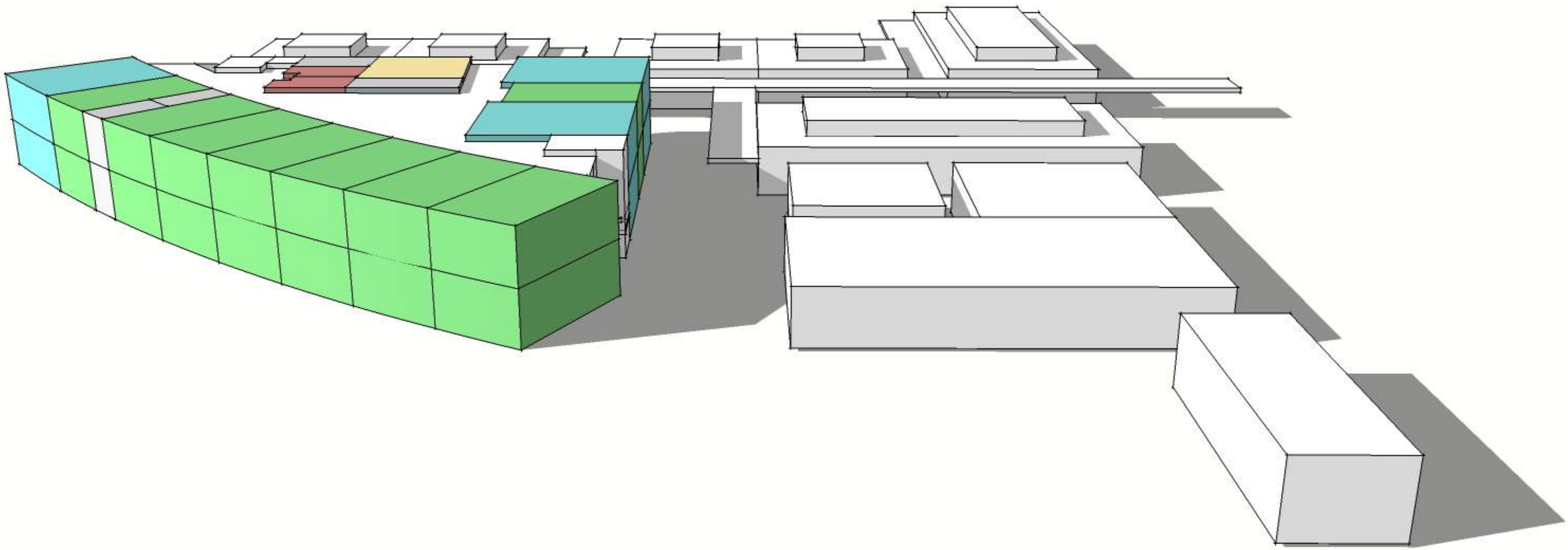
LPC NEW CLASSROOM BUILDING

LIONAKIS

BASE BID - SOUTH WEST PERSPECTIVE

LPC NEW CLASSROOM BUILDING

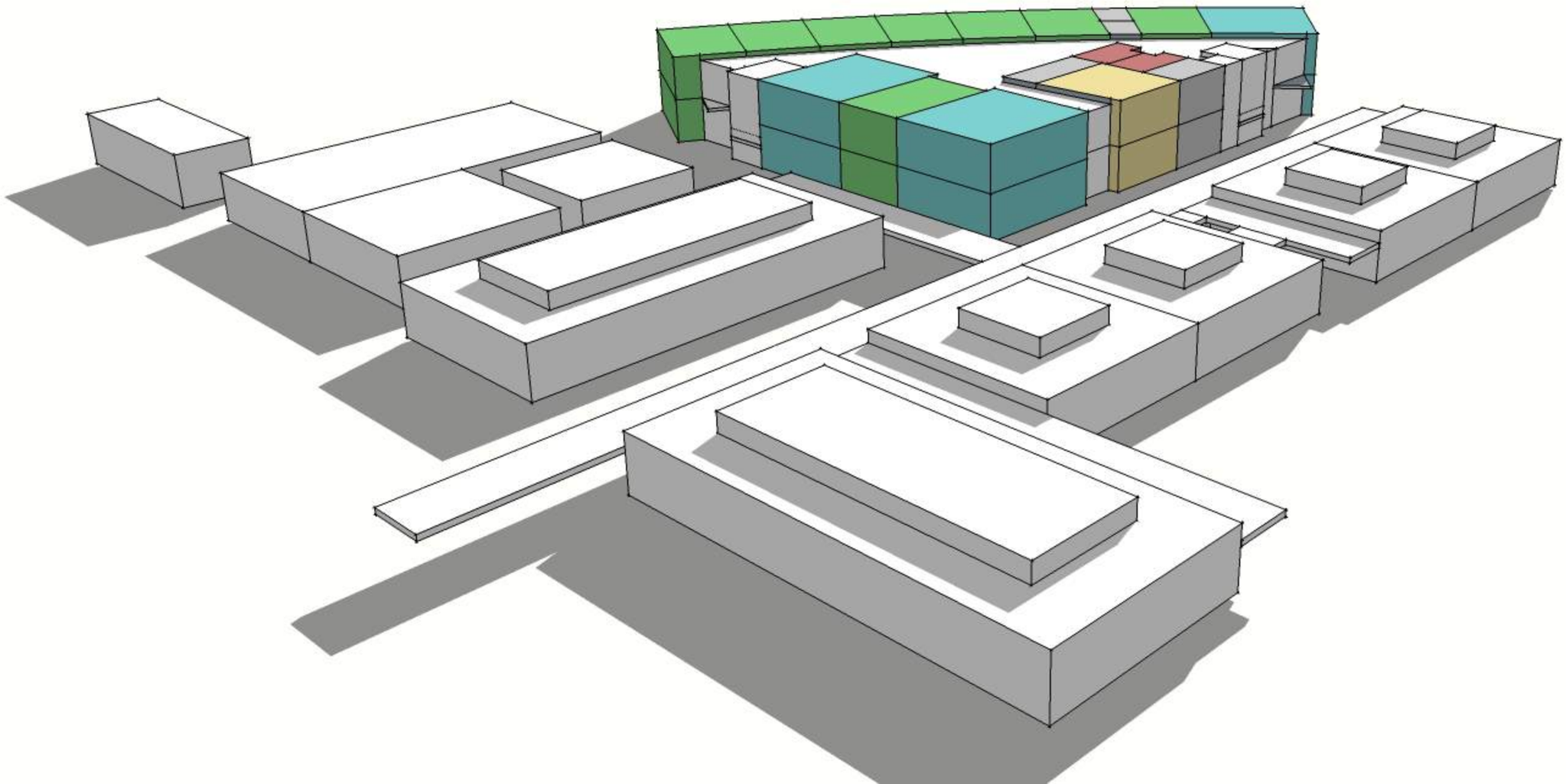
LIONAKIS



BASE BID - SOUTH EAST PERSPECTIVE

LPC NEW CLASSROOM BUILDING

LIONÄKIS



BASE BID - NORTH EAST PERSPECTIVE

LPC NEW CLASSROOM BUILDING

LIONAKIS

CIVIL

BASIS OF CIVIL SITE IMPROVEMENT DESIGN NARRATIVE:

SITE DEMOLITION:

Building 100, 200, and 300 are to be removed for new construction. Architectural drawings and specifications will outline the specifics of building removal and reuse. Existing site demolition includes: trees, sidewalk, and pavement removal, as well as landscape clearing and grubbing, as necessary for the new construction. Utilities within the footprint of the proposed building will be relocated to outside the building footprint. Utilities that can be abandoned in place will be and others will be removed in their entirety. Utility relocations will be done so as to minimize interruptions to services to other campus facilities. To achieve LEED credits 2.1 and 2.2 a minimum of 75% of demolition and land-clearing waste is required to be recycled and/or salvaged.

SITEWORK:

The bridging documents incorporate an existing aerial topographic survey with field survey of the existing visible utilities. Some utilities may not be shown. It is the Contractor's responsibility to verify location of these existing utilities. Supplemental field survey may be required along the limits of the site improvements. A geotechnical investigation and report is prepared for the building and site improvements. Recommendations for over excavation and/or lime treatment are described in the geotechnical report. Recent fire flow testing (within 6 months) of the adjacent hydrants will be required prior to submittal to DSA.

ROADWAYS AND PARKING:

Existing roadways shall remain. There is no change to the existing parking. Existing parking spaces, which meet ADA requirements, are located along the parking lot frontage to the proposed building.

GRADING AND DRAINAGE:

Hardscape areas to be graded, as coordinated with the landscape, to meet ADA requirements and provide proper drainage. Softscape areas will be graded, as coordinated with the landscape architect, to utilize infiltration opportunities in order to reduce the amount of storm water runoff into the piping system.

STORMWATER MANAGEMENT:

The Design Build Entity shall review the College's storm water management program and ensure the new Academic Classroom storm water system complies with the requirements of the San Francisco Bay Regional Stormwater Plan by updating the Las Positas College Stormwater Management Plan. The District anticipates the requirement for 20,000 gallons of retention/detention.

STORMWATER CONTROL PLAN:

A site Erosion Control for proposed construction activities will be required to be provided by the Design Building Entity within the Construction Documents which utilizes best management practices. For post construction facility design, a Storm Water Control Plan should be included within the Construction Documents. The General Contractor shall prepare and update the Storm Water Pollution Prevention Plan to assure best practices during construction, including street sweeping, basin filters, sampling, and straw wattles at the limits of work.

Community Colleges are not required by the state to meet the C3 requirements, but are encouraged to implement the intent. If attempting LEED points, the stormwater approach is the same. By using the bioretention areas for drainage, the quantity and quality of storm water is improved drastically. These "non-structural" methods require little maintenance, only removing trash collected in the planted area.

UTILITIES:

STORMWATER:

Piping shall slope, as required by the existing system and surface grading, and maintain positive drainage. Minimum pipe size to be 6". Pipes between 6" and 12" to be PVC pipe, unless shallow within a drive area. Pipes 12" and larger to be RCP. Drains within landscape areas to be coordinated with the landscape architect. Drains within pedestrian hardscape areas to be heel proof catch basins or area drains. Drains within drive areas to be bicycle proof and traffic rated catch basins. Manholes will be provided as required.

SANITARY SEWER:

Sewer lines to meet code requirements. The slope and connection will be determined when the topography is available with size and elevation information of the utility system. Minimum pipe size for the connection to the new building is a 6" pipe at 2% slope.

WATER:

Fire and domestic water connections will connect to the campus mainline loop. A fire department connection will be required and located as directed by the Fire Marshal. The size of the connection will be coordinated with the Plumbing Engineer. Domestic water size and point of connection will also be coordinated with the Plumbing Engineer. At the current time, a 2" domestic water and 6" fire water services have been estimated.

<u>Gas:</u>

Gas lateral installation shall be per PG&E Greenbook requirements.

No natural gas usage anticipated.

<u>Telecom and Electrical:</u>

Refer to electrical and telecom sections for additional information.

<u>Hot and Chilled Water:</u>

Refer to the mechanical section for additional information.

LEED SILVER CERTIFICATION

The Las Positas Community College 100 Building will earn LEED Silver certification using the USGBC LEED v3/2009 New Construction rating system. A minimum of 50 points are needed to earn Silver certification. The following LEED checklist identifies 44 YES credits that should be achieved, as well as ample MAYBE credits allowing the Design Build team flexibility on how they will meet the LEED goal. The NO credits that have been identified are credits that are not available to the project or are not typically achievable on this type of project. Please note some of the special circumstances in each LEED category:

SUSTAINABLE SITES

Teams are to review site option as design progresses. No new parking is being added as part of this project, heat island effect booth roof and non roof are to be implemented. Remaining site credits are to be evaluated.

WATER EFFICIENCY

The landscape should be designed to minimize water use and maintenance while still meeting campus standards; reclaimed water is available and should be utilized for landscape irrigation. Inside the building low flow plumbing fixtures are to be utilized in combination with reclaimed water to minimize the use of potable water. Teams are encouraged to be creative with cost effective water saving measures both on the site and within the building.

ENERGY EFFICIENCY

A minimum of 30% energy saving over the LEED v3/2009 baseline and 10% better than Title 24 is expected. The team is encouraged to be creative with cost effective energy saving measures. The building envelope design and any passive energy saving strategies should be utilized to help reduce energy use. Teams should consider cost effective renewable systems and/or look at options to utilize the campus PV system to earn LEED points.

MATERIALS AND RESOURCES

Teams are to minimize the amount of construction waste going to landfill. Recycled and regional materials are to be used where cost effective. Teams to consider 95% Certified Wood as an innovation point.

INDOOR ENVIRONMENTAL QUALITY

This category offers many great opportunities for this project both in good sustainable design and construction strategies, but also in LEED points.

INNOVATION AND DESIGN PROCESS

Teams are encouraged to explore innovative ideas, earn exemplary performance points and review pilot credits to maximize points available from the Innovation and Design Process area. A LEED Accredited Professional with experience with similar LEED project is

LEED 2009 for New Construction and Major Renovations

Project Checklist

Project Name: LPC 100

Date: 02.03.15

Sustainable Sites — Possible Points: 26

Y	?	N			
Y			Prereq 1	Construction Activity Pollution Prevention	
1			Credit 1	Site Selection	1
	5		Credit 2	Development Density and Community Connectivity	5
	1		Credit 3	Brownfield Redevelopment	1
	6		Credit 4.1	Alternative Transportation—Public Transportation Access	6
	1		Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
	3		Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
2			Credit 4.4	Alternative Transportation—Parking Capacity	2
	1		Credit 5.1	Site Development—Protect or Restore Habitat	1
	1		Credit 5.2	Site Development—Maximize Open Space	1
	1		Credit 6.1	Stormwater Design—Quantity Control	1
	1		Credit 6.2	Stormwater Design—Quality Control	1
1			Credit 7.1	Heat Island Effect—Non-roof	1
1			Credit 7.2	Heat Island Effect—Roof	1
	1		Credit 8	Light Pollution Reduction	1

Water Efficiency — Possible Points: 10

Y	?	N			
Y			Prereq 1	Water Use Reduction—20% Reduction	
4			Credit 1	Water Efficient Landscaping	2 to 4
2			Credit 2	Innovative Wastewater Technologies	2
2	2		Credit 3	Water Use Reduction	2 to 4

Energy and Atmosphere — Possible Points: 35

Y	?	N			
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
10	9		Credit 1	Optimize Energy Performance	1 to 19
	7		Credit 2	On-Site Renewable Energy	1 to 7
	2		Credit 3	Enhanced Commissioning	2
2			Credit 4	Enhanced Refrigerant Management	2
1	2		Credit 5	Measurement and Verification	3
	2		Credit 6	Green Power	2

Materials and Resources — Possible Points: 14

Y	?	N			
Y			Prereq 1	Storage and Collection of Recyclables	
		3	Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3
		1	Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
2			Credit 2	Construction Waste Management	1 to 2
		2	Credit 3	Materials Reuse	1 to 2

Materials and Resources, Continued

Y	?	N			
2			Credit 4	Recycled Content	1 to 2
	2		Credit 5	Regional Materials	1 to 2
		1	Credit 6	Rapidly Renewable Materials	1
1			Credit 7	Certified Wood	1

Indoor Environmental Quality — Possible Points: 15

Y	?	N			
Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
1			Credit 1	Outdoor Air Delivery Monitoring	1
1			Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
1			Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
1			Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
	1		Credit 5	Indoor Chemical and Pollutant Source Control	1
1			Credit 6.1	Controllability of Systems—Lighting	1
1			Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1	Thermal Comfort—Design	1
1			Credit 7.2	Thermal Comfort—Verification	1
	1		Credit 8.1	Daylight and Views—Daylight	1
1			Credit 8.2	Daylight and Views—Views	1

Innovation and Design Process — Possible Points: 6

?	N			
1		Credit 1.1	Innovation in Design: Specific Title	1
1		Credit 1.2	Innovation in Design: Specific Title	1
1		Credit 1.3	Innovation in Design: Specific Title	1
1		Credit 1.4	Innovation in Design: Specific Title	1
1		Credit 1.5	Innovation in Design: Specific Title	1
		Credit 2	LEED Accredited Professional	1

Regional Priority Credits — Possible Points: 4

?	N			
1		Credit 1.1	Regional Priority: EAc2 1%	1
		Credit 1.2	Regional Priority: SSc7.1	1
1		Credit 1.3	Regional Priority: SSc4.1	1
1		Credit 1.4	Regional Priority: EQc8.1 (WEc2, WEc3 40%)	1

Total — Possible Points: 110

Y	?	N			
46	57	7		Total	

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

MEP

MECHANICAL, ELECTRICAL, AND PLUMBING

SCHEMATIC DESIGN - EXECUTIVE SUMMARY

The Las Positas College's new classroom building will be located in Livermore, California. The new site and design will support the campus's LEED Silver goal.

In pursuit of this goal, the first priority of the design team is to provide systems that give a transparent, welcoming, and open space with natural daylight and views, an excellent building envelope, healthy indoor air quality, plenty of natural ventilation with mechanical assist, passive cooling, active heating, energy efficient equipment, and active space cooling where required. Our second priority is to provide a design that allows for flexibility in schedules, staffing and courses. The design will showcase to the staff and community the importance of a responsible design and how this impacts our environment.

This narrative outlines options for mechanical, plumbing and electrical systems. All suggested systems will provide the school with an excellent and efficient indoor environment, regardless of the energy saving potential of the systems.

PART 1: HVAC SYSTEMS

1. DESIGN CRITERIA

Location

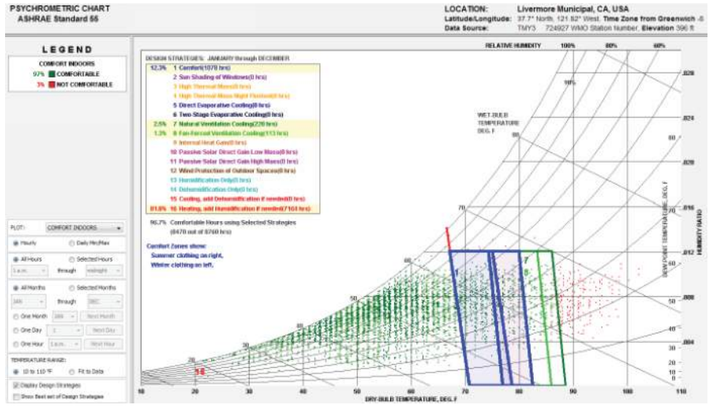
Livermore, CA

Outside Design Conditions

Temperature statistics based on the ASHRAE Data (0.4% cooling and 99% heating) for Livermore, CA:

- Summer: 99.0°F DB/67.8°F MCWB
- Winter: 33.5°F DB

The 0.4% design conditions may be exceeded for a number of hours per year (due to outside temperatures exceeding these design conditions). While designing to the 0.4% conditions by definition indicates that design set points will be exceeded during peak periods, typical design



often requires a minimal amount of over sizing so that control is always maintained. This results in small amounts of risk and results in significant first cost and operating cost savings.

Interior Design Conditions

The indoor environmental conditions in a given space are normally controlled to satisfy the requirements of the Thermal Environmental Conditions for Human Occupancy Standard 55-2013 using the Predicted Mean Vote model, developed and published by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) and ANSI. Designing to meet that Standard produces a design with industry accepted comfort conditions. ASHRAE 55 specifies conditions in which a specified fraction of the occupants will find the environment thermally acceptable. It takes into account air temperature, radiant temperature, air movement, air moisture content, metabolic rate, and clothing level.

Acoustics

Acoustical design criteria and recommendations, including vibration isolation, are determined by the Acoustical Consultant, and are included in the mechanical and plumbing design. Air distribution systems are selected with the following criteria.

Space Type	Diffuser Noise Criteria	Max Supply Air Branch Duct Velocity (fpm)	Max Return Air Branch Duct Velocity (fpm)
Office Space	30-35	425-500	500-600
Support Rooms	35-40	500-600	600-700
Lab/Lecture Rooms	30-35	425-500	500-600
Gathering/ Study	35-40	500-600	600-700
Toilet Rooms	40-50	600	700

Code Standards and References

2013 Title 24 California Code of Regulations:

Part 2 California Building Code

Part 3 California Electrical Code

Part 4 California Mechanical Code

Part 5 California Plumbing Code

Part 6 California Energy Code

Part 9 California Fire Code

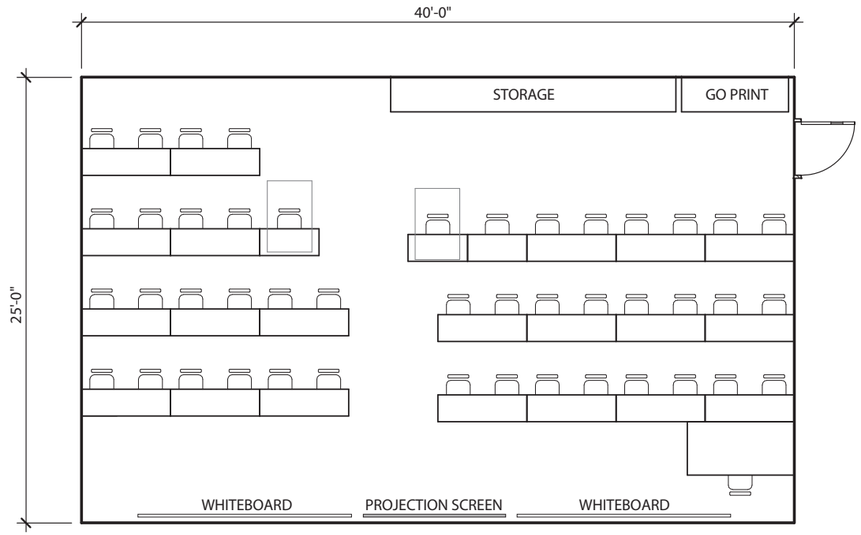
Part 11 California Green Building Standards Code

Part 11 California Green Building Standards Code Supplement

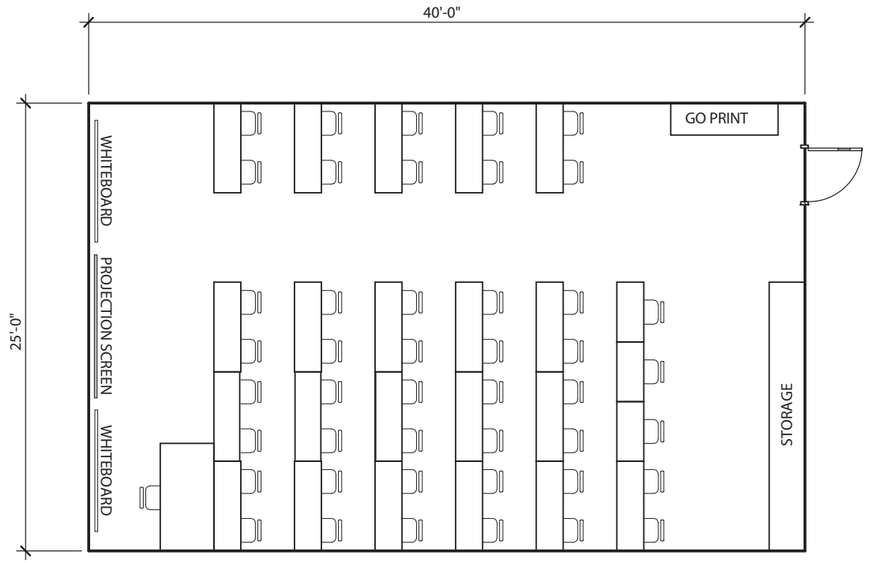
ASHRAE Standard 55-2013, Thermal Environmental Conditions, with provisions per LEED requirements

ASHRAE Standard 62.1-2010, Ventilation for Acceptable Indoor Air Quality, with provisions per LEED requirements

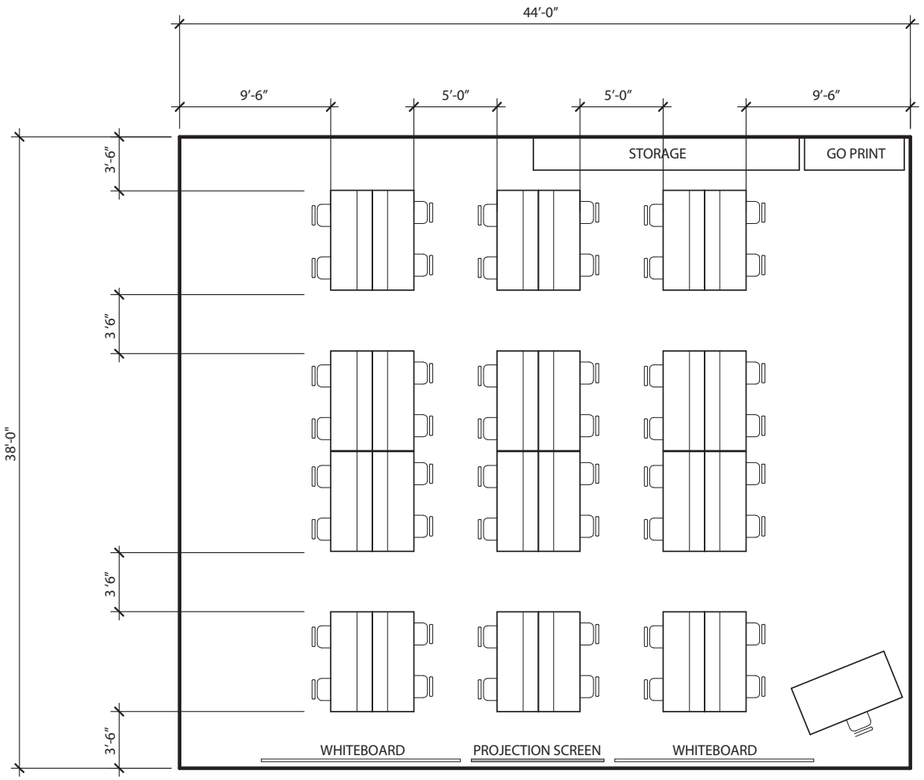
ASHRAE Standard 90.1-2007, Energy Standard for Buildings, with provisions per LEED requirements



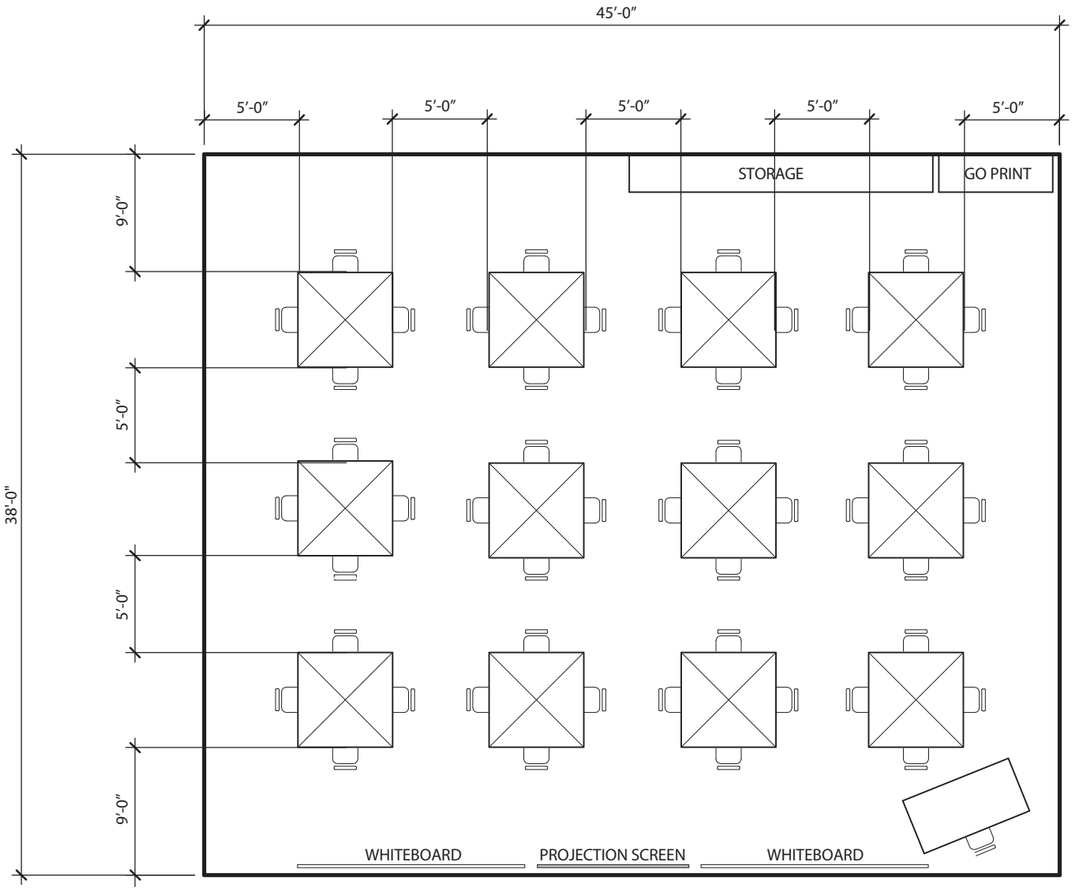
CLASSROOM C-0



CLASSROOM C-1



LAB C: 1672 FT²



LAB D: 1710FT²

ROOM DESCRIPTION AND REQUIREMENTS: STUDENT GROUP STUDY

Room Name: **Student Group Study- 2nd Floor**

Number Required: **1** Area/Room (ASF): **464**

General Requirements
This space will be used as a student break out study area as well as circulation to the lower level spaces. Provide three stairs, two at opposite ends of the classroom wings, a monumental stair at the central atrium area, and an elevator.

Adjacency Requirements
Access to all lower level spaces.

Technical Requirements
Finishes:
Walls: Gypsum Wallboard, painted egg-shell finish
Accent/ Feature Wall
Ceilings: Suspended Gypsum Board
Floors: Resilient flooring

Acoustics:
Interior Walls: STC 45 (min.) between adjacent rooms, floor to roof deck
Exterior Walls: OITC 28 (min.)
Exterior Glazing: OITC 28 (min.)
Exterior Doors: STC 35 (min.)
Reverberation time (RT) not to exceed 0.5 seconds
Ambient noise from mechanical and lighting equipment shall not exceed 32dBA

Lighting:
20 fc evenly distributed horizontally at 36" above floor. There is a preference for a combination of daylighting from windows and/pre-engineered skylights and LED light fixtures controlled by a light-level sensor. Control direct and reflected glare.

Plumbing:
No specific requirements.

Temperature and Ventilation:
Maintain temperatures between 70-75 degrees F. Ventilation and conditioning air shall be supplied by a thermostat-controlled VAV box. All systems to tie into the existing Central Plant.

Casework:
No specific requirements

Equipment:
No specific requirements

Vertical Circulation:
This space will require three stairs circulating to the first floor and an elevator.

ROOM DESCRIPTION AND REQUIREMENTS: FACULTY SUPPORT

Room Name: **Faculty Support- 2nd Floor**

Number Required: **1** Area/Room (ASF): **931**

General Requirements
A room used primarily by faculty as a break out room and for team interaction.

Adjacency Requirements
No specific requirements

Technical Requirements
Finishes:
Walls: Gypsum Wallboard, painted egg-shell finish
Ceilings: Suspended acoustical
Floors: Carpet tiles

Acoustics:
Interior Walls: STC 45 (min.) between adjacent rooms, floor to roof deck
Exterior Walls: OITC 28 (min.)
Exterior Glazing: OITC 28 (min.)
Exterior Doors: STC 35 (min.)
Reverberation time (RT) not to exceed 0.5 seconds
Ambient noise from mechanical and lighting equipment shall not exceed 32dBA

Lighting:
30 fc evenly distributed horizontally at 36" above floor. For an average classroom two rows of suspended linear LED fixtures provide task up-light for an even, computer monitor friendly diffuse light thorough out the classroom. Furthermore, a whiteboard asymmetrical fixture washes the teaching wall with high visibility light to provide a focal point for student during white board presentation. The entire system will have dual level switch control with an audiovisual dimming switch. At the entry door will be 3-way dimmer switches to turn on and off control at the door.

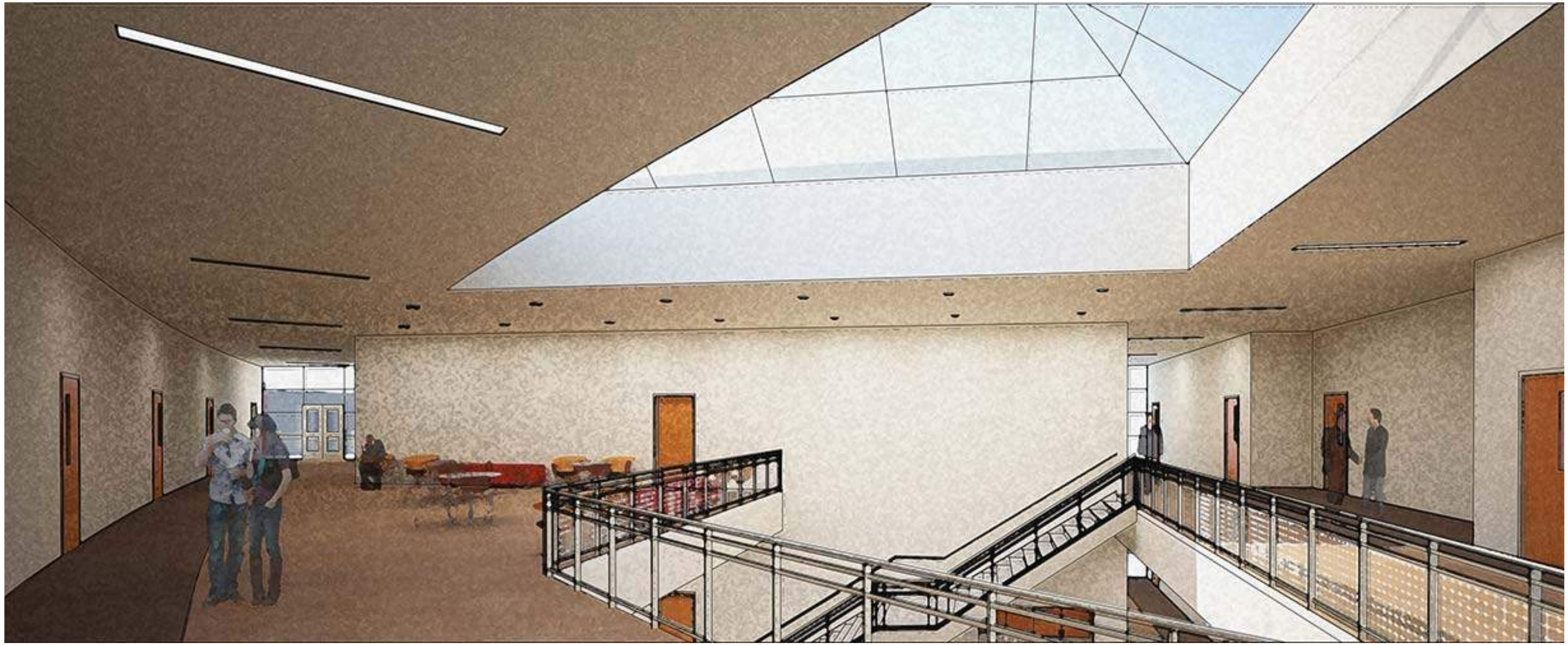
Plumbing:
No specific requirements.

Temperature and Ventilation:
Maintain temperatures between 70-75 degrees F. Ventilation and conditioning air shall be supplied by a thermostat controlled VAV box. When outdoor conditions are preferable, natural ventilation can be provided via operable windows. All systems tie into the Central Plant.

Casework:
No specific requirements

Equipment:
Motorized blinds
Whiteboards- 96 SF min.
Ceiling mounted digital projector
Projection screen

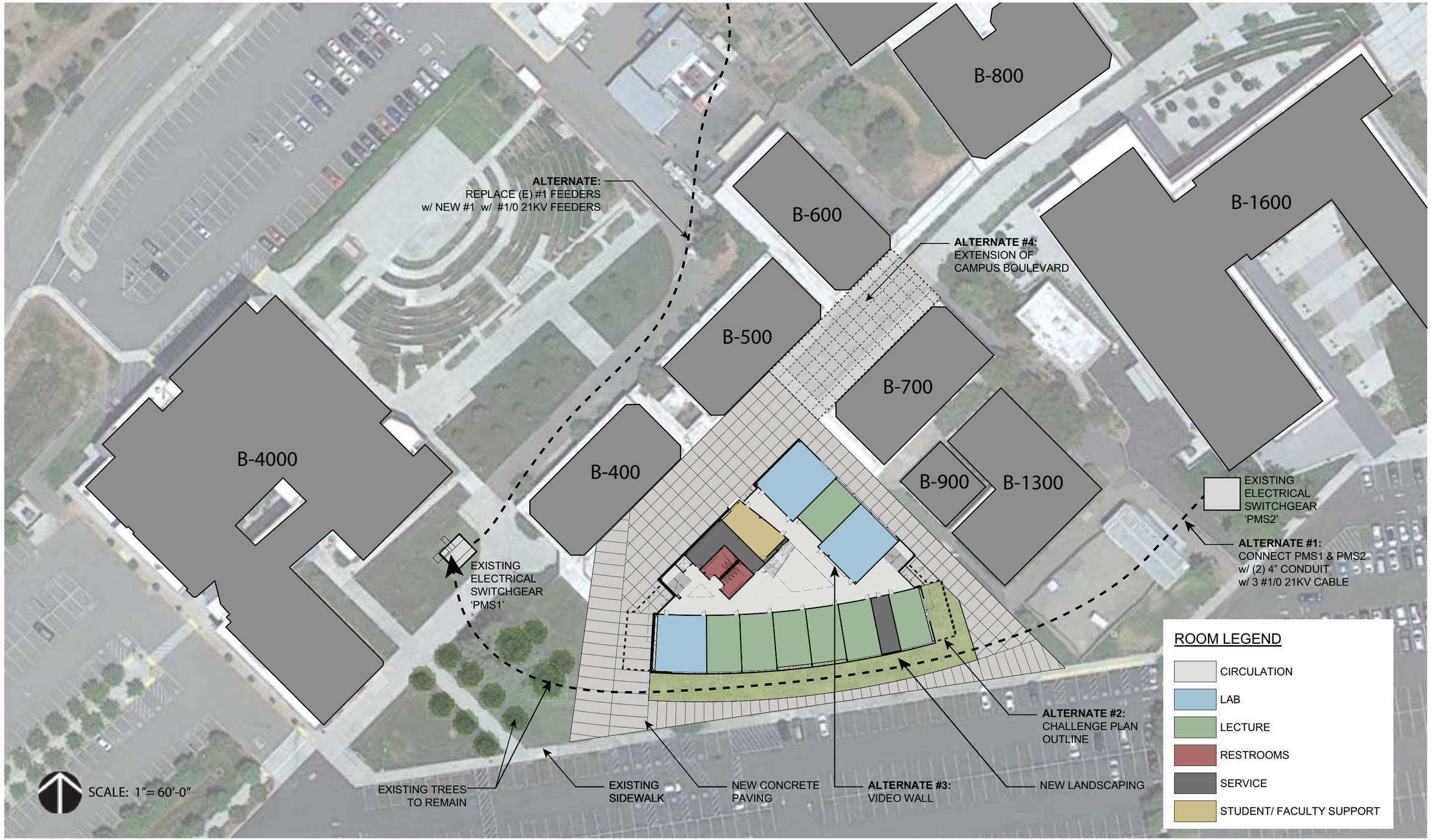
View Window:
Provide an 8" x 30" (min.) view light in the face of each door.



BASE BID - STUDENT GROUP STUDY

LPC NEW CLASSROOM BUILDING

LIONAKIS



BASE BID - SITE PLAN WITH ADDITIVE ALTERNATES

LPC NEW CLASSROOM BUILDING

LIONAKIS

relationships.

performance.

design.