SLAM

Operations Planning Toolkit for Safe-Distance Learning at Independent Schools

SLAM

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For 44 years of professional architectural practice, SLAM's Education Studio has assessed, planned, programmed and designed numerous PreK-12 schools. We have extensive, national experience in the design of educational facilities at all levels, from pre-schools and secondary through colleges and universities. We bring innovations and applications learned from each type of learning environment to every school project, offering a unique breadth of experience to our clients.

SLAM believes in creating a culture – internally and with our clients – that is safe, sustainable, fun, and gives back in times of need! We believe in wellness and mindfulness, in diversity of perspectives and the value of collaboration. We believe in listening. Innovation flows when ideas are shared. We are committed to sustainable processes and durable and long-lasting ideas. We believe in enhancing our clients' vision and values, in the hope that, together, we will create places that celebrate your culture and complement your achievements. We succeed when you succeed.

We hope you will consider our toolkit as a complimentary resource for you in creating an operations planning process that will help day and boarding students, faculty, and staff return to school this fall!

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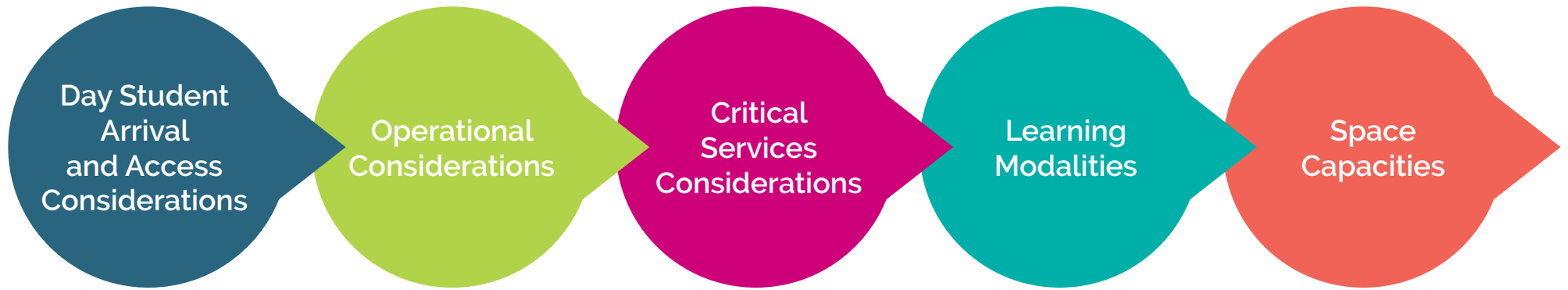319 354.4700

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Operational Considerations

Critical Services Considerations

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Day Student Arrival and Access Considerations

Bus Transportation Considerations

- Siblings sit together

- Seating every other seat, or every two seats

- Number the seats and dismiss by seat number (front to back, and back to front)

- Increased disinfecting procedures

?

Will schools stagger opening times for each division to accommodate social-distanced busing for day students?

Day Student Arrival and Access Considerations

Drop-Off and Departure Considerations

- Identify appropriate traffic flow and patterns for all vehicles;
  - Buses, parents, deliveries, etc.

- Organize increased numbers of drop-off and departure vehicles approaching, queuing and leaving campus;
  - Separation of arrival paths (vehicles vs. pedestrians)
  - Secure Drop-Off while limiting access

- Define student travel path to homeroom/classroom to minimize the congregation of large groups

- Define student travel path and gathering for end of day departures (bus groups, individuals with parent pick up, etc.)

?

Will schools create new drop-off locations to spread out students?

© viralvideouk.com

Day Student Arrival and Access Considerations

Outdoor Play Areas Considerations

- Ballfields open for competition play? Spectator requirements?

- Hard-top courts open for group play?

- Play structures?

- Open space play?

- Can campus space(s) be utilized for outdoor learning? (Environmental Science, Art. etc.)

?

How will afternoon care affect outdoor spaces?

Operational Considerations

Outdoor Learning Spaces

- Maximize student interaction with their natural environment, including fresh air and tempered natural light.

- Studies show a dramatic increase to students critical thinking when doubling their intake of fresh air.

- Consider adding a Wellness Pavilion to leverage the outdoor learning experience, with benefits beyond the current pandemic.

?

Can learning be brought outside into nature where students and teachers can interact while safe-distanced from one another?

Wellness Pavilion

Operational Considerations

Outdoor Learning Spaces

Multiple purposes/configurations possible:

- Events
- Outdoor classroom
- Dining
- Music practice
- Physical education
- Debates
- Meditation

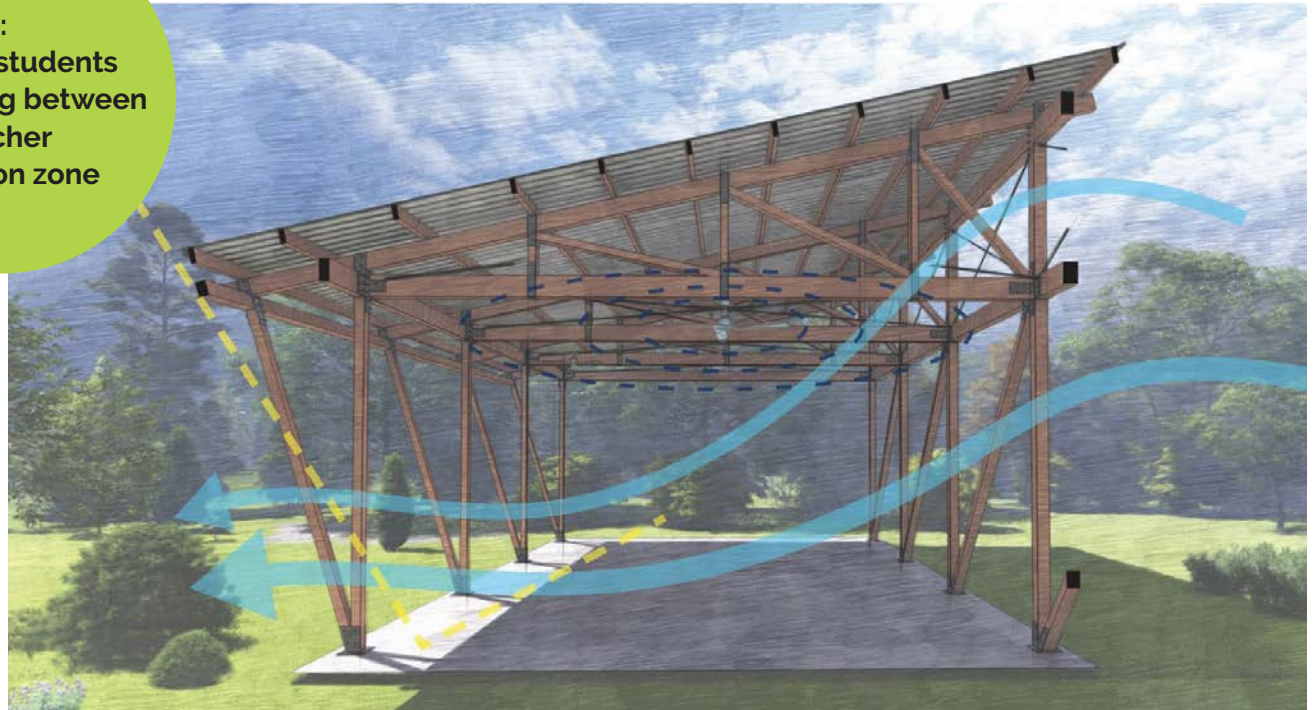**Seating Layouts at Wellness Pavilion**
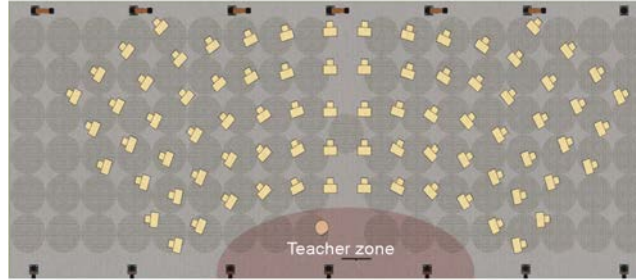
Gathering or Classroom
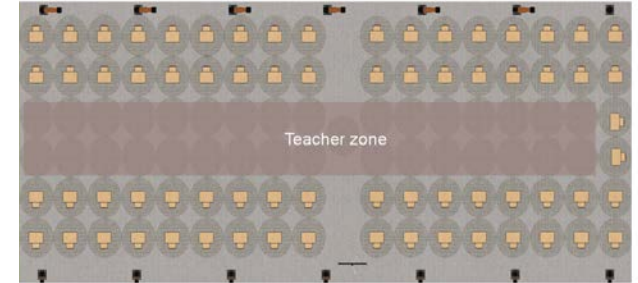
Dining

**Capacity:
70 - 100 students
7' spacing between
plus teacher
circulation zone**

Section at Wellness Pavilion

Operational Considerations

Who is allowed back to school (students, faculty and staff)?

- Testing per day student household? How often?

- Testing for boarding students? How often?

- Provide temperature taking stations?
  - At a single entry point?
  - At multiple entry points?

- What PPE is required for students, faculty, and staff?
  - Masks
  - Face shields
  - Gloves

?

What graphic building materials can be used to support social distancing?
- *floor patterns*
- *wall graphics*
- *window mullions*

Operational Considerations

Required Supplies

- Food (including non-perishable)

- Paper goods, toilet paper, paper towel, etc.

- Hand Sanitizer, soap

- Custodial Cleaning Supplies

- Technology hardware, software, updates, replacements and components

?

Should schools begin to stockpile some of these items? Where will that inventory be stored?

What additional custodial hours and budget are required?

Operational Considerations

Fire and Safety Drills

- Identify traffic flow patterns

- Identify student gathering areas

- Review bus drill procedures

- Review lockdown drill procedures

?

Do we forgo safe-distancing protocols during emergency drills? (except for masks and face shields)

Operational Considerations

HVAC Considerations

- Airflow

- Filtration

- Space Pressurization (ventilation)

?

What modifications can be made for each systems type? What are the cost impacts of each? (energy use vs. first cost)

Do operable windows help?

Operational Considerations

Restrooms

- Capacity / scheduling

- Cleaning

- Keeping bathrooms supplied with soap and paper goods

- Implement bathroom supervisors

- Install touch-less fixtures

- Remove room doors if appropriate
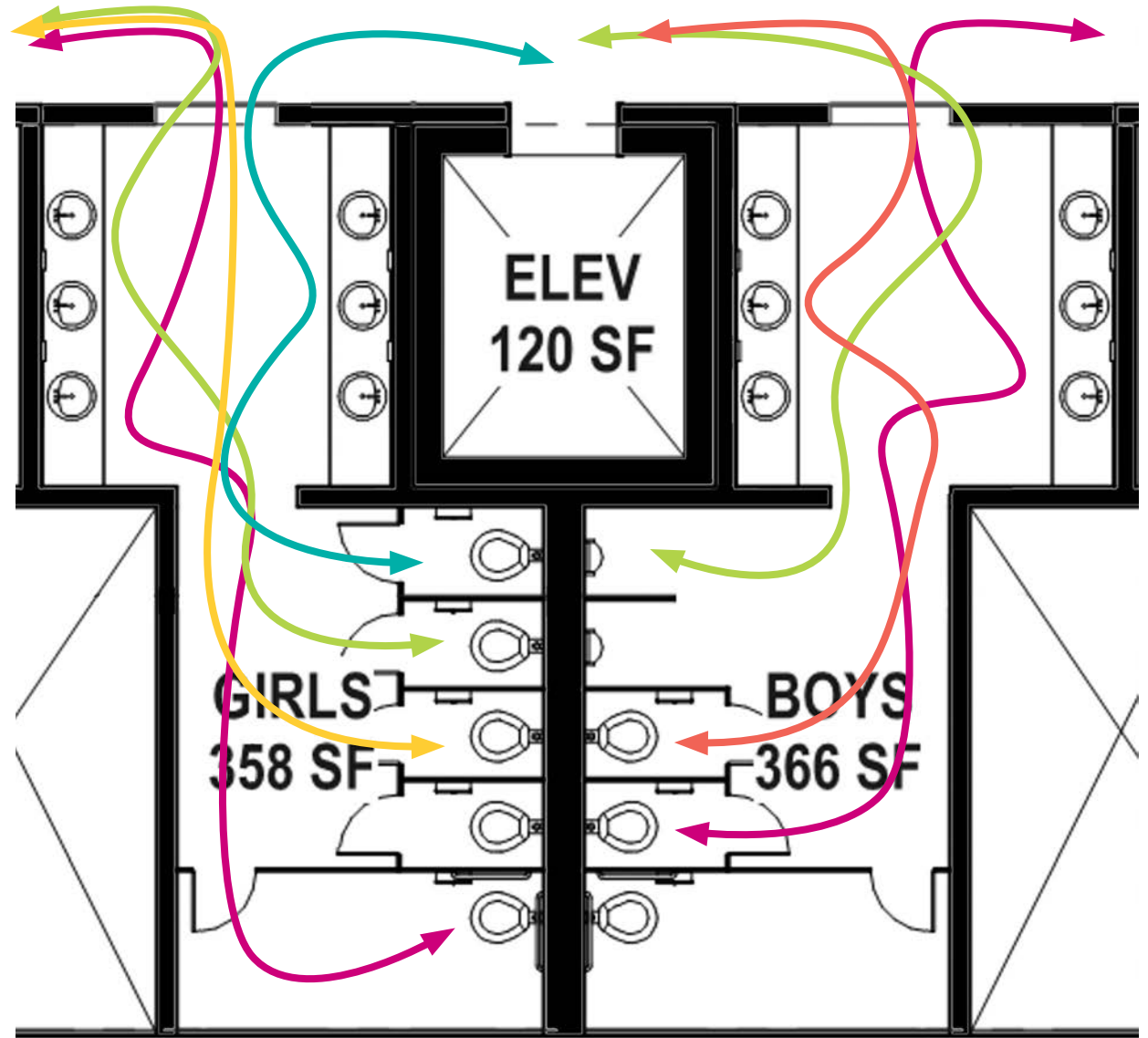
Operational
Considerations

School Circulation

- Implement a staggered in-school schedule per grade; minimize the number of students in the halls at a time;

- Identify a deliberate, one-way traffic pattern through halls and stairs;

- Minimize floor to floor circulation between classes

- Teachers circulate to different classrooms; students remain in designated cohort/classroom;

?

Should students have access to in-corridor lockers? How will that access be scheduled?

THANK YOU FOR PRACTICING
SOCIAL DISTANCING

PLEASE KEEP SIX FEET FROM THE GUEST IN FRONT OF YOU.

Critical Services Considerations

Health Services:

- Identify an 'isolation room' for students that exhibit signs of the virus;
  - Access to private toilet room
  - Observation from the outside room
  - No carpet, blinds or curtains on inside of room
  - Hand-wash sink or hand sanitizer just outside room
  - Minimal contents in room for ease of cleaning
- Locate a first aid location for treating every day cuts and scrapes and medicine distribution; access to a sink is required; (locate away from isolation room)

Staff Workstations:

- Locate all staff workstations at least 6ft away from each other;
- Provide transparent panels in locations where direct conversations take place (receptionist, librarian, nurse, etc.);

Critical Services Considerations

Food Service

- Continue 'grab and go' and in-person meal services

- Do pick-up locations change seasonally?

- Lower School meals:

  - Delivered to and eat in classroom; dedicated trash brought to classroom, removed and discarded after lunchtime or…

  - Boxed meals picked up by students

- Middle & High School meals:

  - Additional lunch waves with student furniture spaced apart or seats labeled with 6ft spacing;

  - Delivered to and eaten in classrooms; dedicated trash brought to classroom, removed and discarded after lunchtime or…

  - Boxed meals picked up by students

?

Are dividers between students during meals required? Will this help capacity and avoid additional lunch waves?

Critical Services Considerations

Emergency Use Shelter Services

- Weather shelter

- Bathroom and shower facilities

- Meal services

- Warming/Cooling stations

- Charging stations

?

How do we address a major storm at boarding schools that results in a power loss while also practicing social distancing?

Learning Modalities

As you consider options for learning delivery methods, it is important to remember that students learn differently and addressing these learning modalities will ideally be retained to the extent possible.

Visual Learner

- Learns by seeing, may think in pictures.
- Needs to see body language & facial expressions.
- Sits close to visual displays & demonstrations

Auditory Learner

- Learns by hearing. Can recollect information in sounds.
- Lectures & discussions.
- Listens to tone of voice, pitch and speed of speech

Kinesthetic Learner

- Learns by feeling and experiencing.
- Active, hands-on approach
- Needs activity and exploration to learn.

Learning Modalities

Visual Learner

- Takes notes, translates to graphics & reorganizes information

- Learns well Virtually and in Lectures with visual aids or demonstrations

- Notices details

- Likes quiet, passive surroundings for study
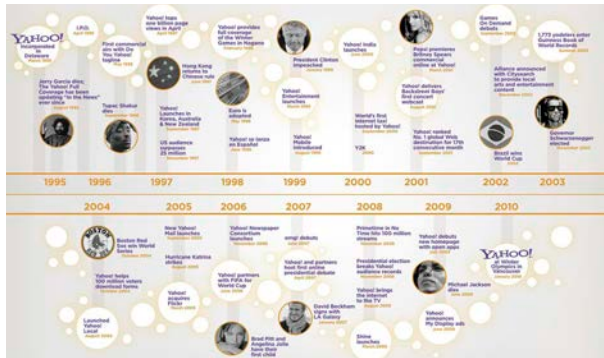
Timelines, Facts, Lists

Tables and Charts

Color Coding

Online Learning

Post-its

Note Taking

Learning Modalities

Auditory Learner

- Has strong oral communication skills

- Prefers to hear and discuss content than read it

- Reads & speaks slowly; explains content well;

- Likes quiet, passive surroundings for study

- Likes studying in a group

Studying with Music

Discussions

PLEASE	**P**	PARENTHESIS
EXCUSE	**E**	EXPONENT
MY	**M**	MULTIPLICATION
DEAR	**D**	DIVISION
AUNT	**A**	ADDITION
SALLY	**S**	SUBTRACTION

Mnemonics

Podcasts

Studying in Groups

Presentations

Learning Modalities

Kinesthetic Learner

- Remembers by recalling experiences

- Prefers to demonstrate instead of verbally explaining it

- Likes to use a hands-on approach to learn new content

- Like lab/hands-on classes

- Likes studying in a group

Practicing

Role Playing

Discussions

Studying in Groups

Pacing While Studying

Simulated Activities

Space Capacities

Education Delivery Methods

Planning for reentry to school for all grades has different implications depending on the educational requirements, technology capacity and facility size. This toolkit has been developed as a guide **to determine the capacity of school facilities** during safe-distancing, as re-entry to in-person learning begins again.

During a time when learning in-person is encouraged but providing the right amount of space is challenging, perhaps taking the students outside to learn may be an alternative. Is this an option for classroom discussion, role-play scenarios, independent reading or project-based learning?

A variety of education delivery methods were considered when developing the metrics and diagrams included in this study. A few are illustrated here:

Another option? - Lower Schools coming to campus and Upper Schools staying on line?

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
A: In-Person	B: In-Person	A: In-Person	B: In-Person	A: In-Person
B: Online	A: Online	B: Online	A: Online	B: Online

Day On, Day In / Week On, Week In

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
A: Morning	B: Morning	A: Morning	B: Morning	A: Morning
B: Afternoon	A: Afternoon	B: Afternoon	A: Afternoon	B: Afternoon

Revolving Shifts
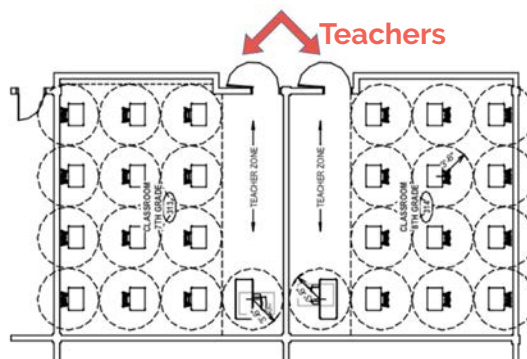
No Class Change

In-Person Learning
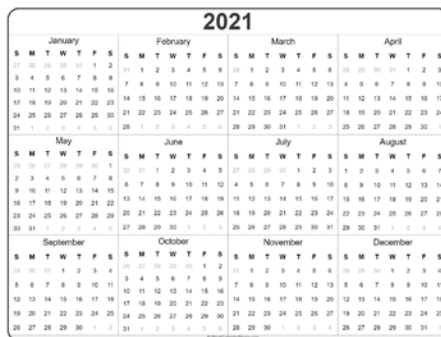
Year Round Learning

Full Online Learning

Space Capacities

Determining Classroom Seating Capacities

The development of the options for each space type utilized a 7ft diameter circle to illustrate the social distancing recommended by government agencies.

These studies yielded an average capacity per room size and a net square foot (NSF) per Student planning metric for each space size. Dividing each room area by the provided NSF per Student will establish an estimated capacity for the room.
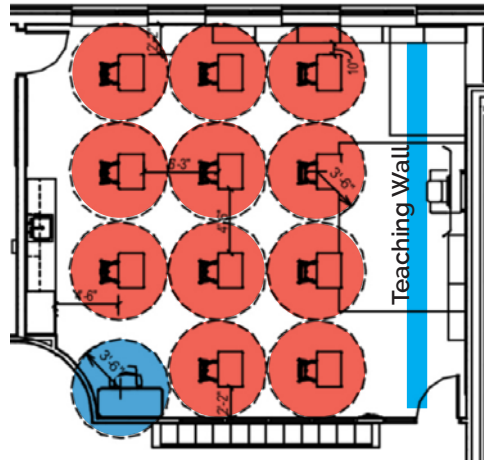
A 7ft diameter circle was used in this study to accommodate 'wiggle room' literally and physically when measuring for young learners.

REMOVED / UNUSED FURNITURE

!

To move 11 students safely distanced down a hallway - approximately 60 feet of hallway is needed!

11 students = 60 feet
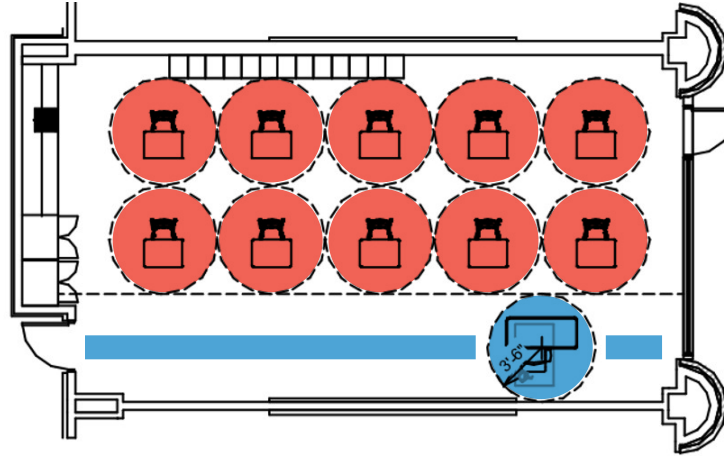
● Teacher Station w/7' Clearance

● Student Station w/7' Clearance
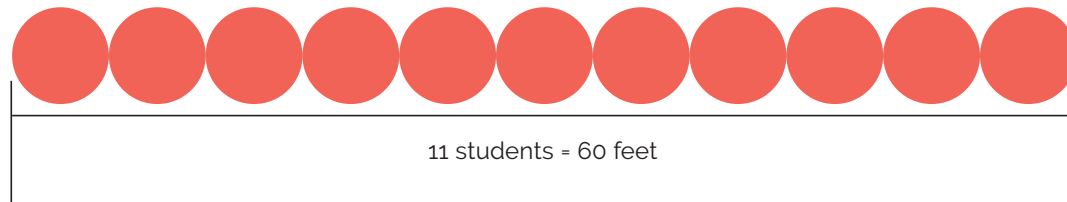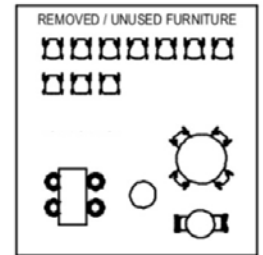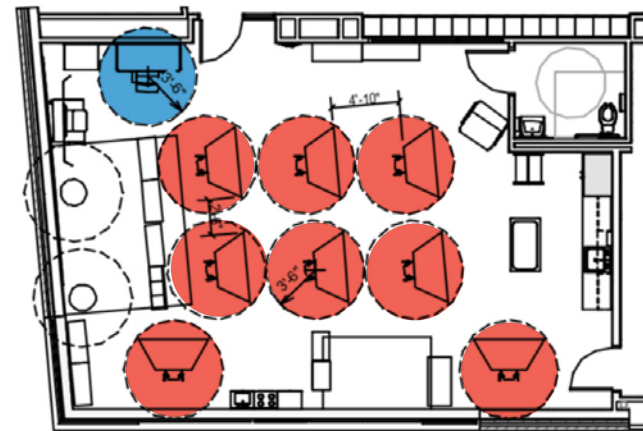
Space Capacities

Determining Classroom Seating Capacities

The seat capacity for safe-distanced learning seems to be determined by the size and, in some cases, the room layout. Our study tested 7'-0" diameter spacing in old and new facilities. The findings are:

Classroom Size	New Capacity	NSF / Seat
300-399 NSF	6	60.6
400-499 NSF	5-6	76.4
500-599 NSF	8-9	65.0
600-699 NSF	8-9	77.1
700-799 NSF	10-12	68.7
800-899 NSF	10-12	75.0
900-999 NSF	11-12	79.8

Safe Distanced Learning: by Room Area

legend: room area · NSF/ seat · student capacity

| 300-399 NSF Avg: 60.6 NSF/seat 6 seats per room | 400-499 NSF Avg: 76.4 NSF/seat 5-6 seats per | 500-599 NSF Avg: 65.0 NSF/seat 8-9 seats per | 600-699 NSF Avg: 77.1 NSF/seat 8-9 seats per | 700-799 NSF Avg: 68.7 NSF/seat 10-12 seats per | 800-899 NSF Avg: 75.0 NSF/seat 10-12 seats per room | 900-999 NSF Avg: 79.8 NSF/seat 11-12 seats per |
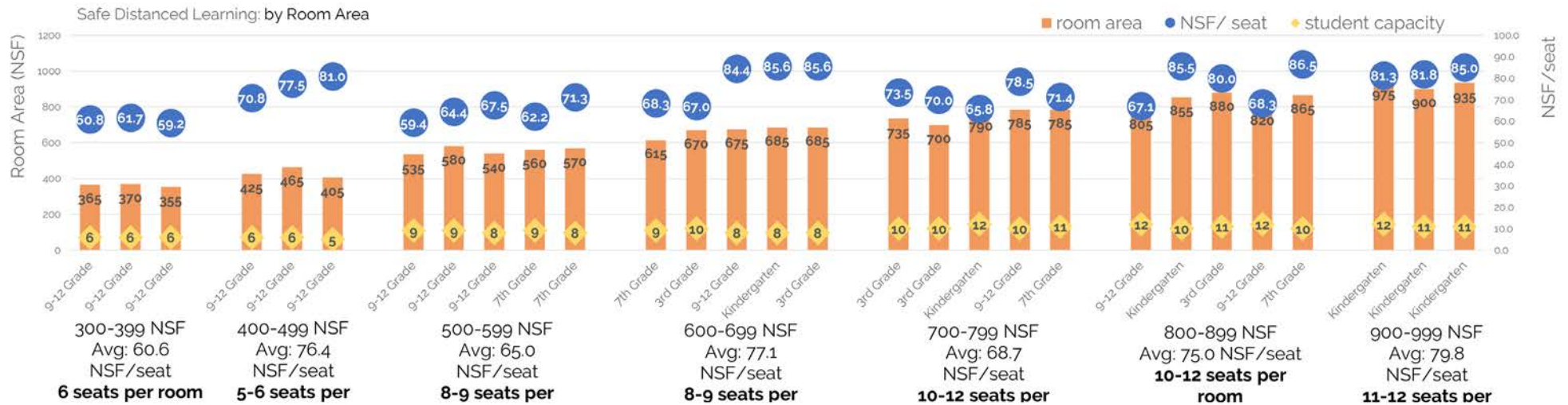
Space Capacities

Classroom Anomalies: Kindergarten

Kindergarten classrooms do not use traditional student desk and chair stations. For this study, these classrooms were spaced using common stations found in a kindergarten room while maintaining other supplemental furniture such as bookshelves, carpet area, water station, etc.

REMOVED / UNUSED FURNITURE
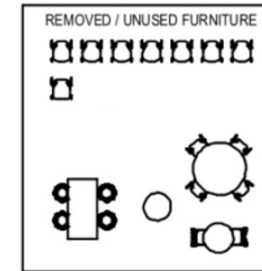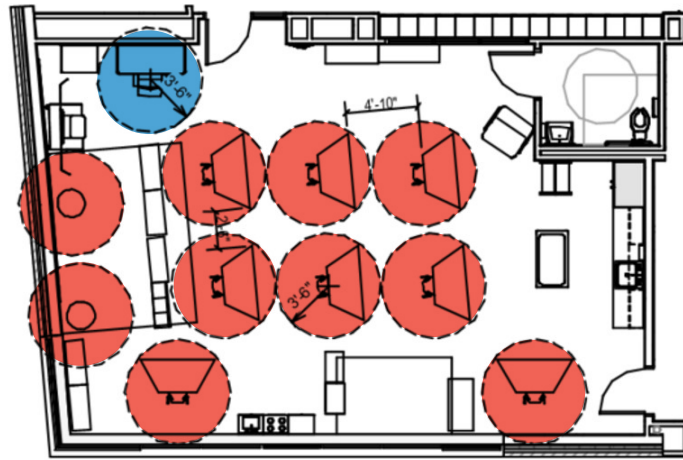
Room Area:
949 NSF

**Capacity:
10 stations
1 teacher**

94.9 NSF per station

REMOVED / UNUSED FURNITURE
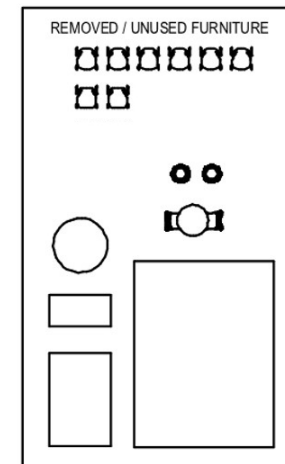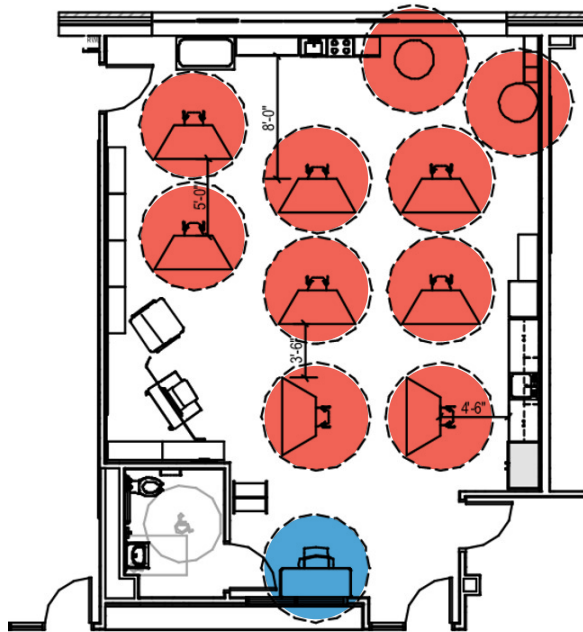
Room Area:
898 NSF

**Capacity:
10 stations
1 teacher**

89.8 NSF per station

Teacher Station w/7' Clearance

Student Station w/7' Clearance

Space Capacities

Classroom Anomalies:
Cabinetry and Door Access

Rooms with full walls of cabinetry and sinks, will yield less student stations as a clear circulation path will need to be maintained to provide access to the cabinetry and sinks. Clear circulation space at any door will need to be maintained as well.
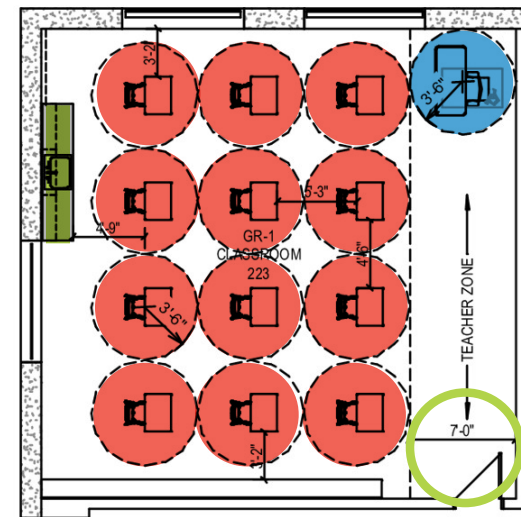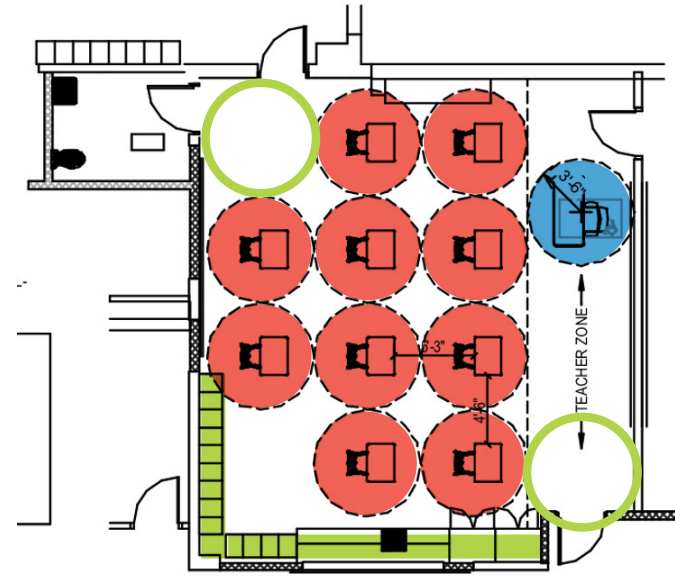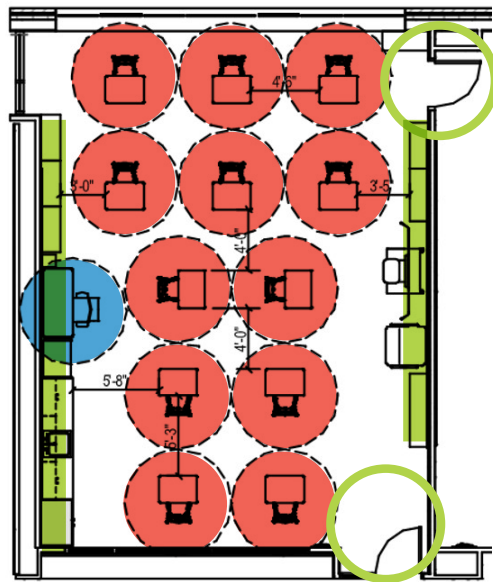
● Teacher Station w/7' Clearance
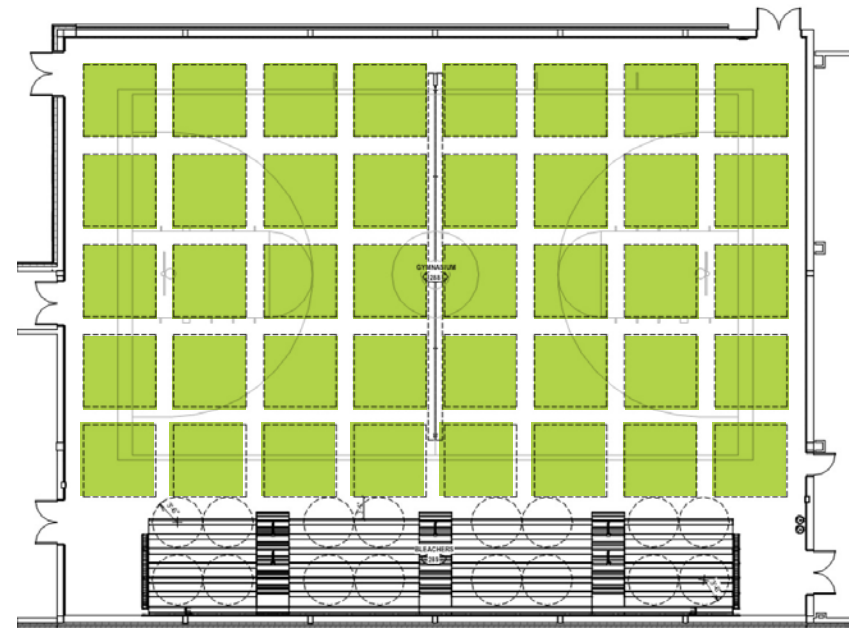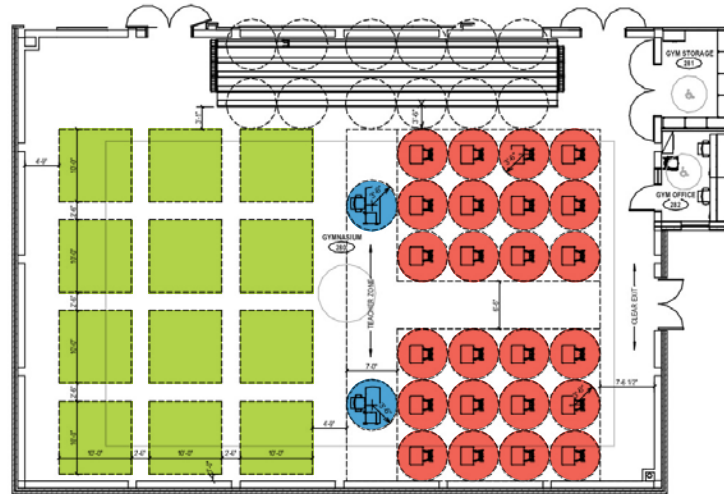
● Student Station w/7' Clearance

○ Clearance at Cabinetry and Doors

Space Capacities

Classroom Anomalies: Narrow Proportions

Rooms with very narrow proportions will yield less 7'-0" diameter student stations since a longer teacher zone will be kept clear for the instructor to walk along the long teaching wall.

🔵 Teacher Station w/7' Clearance

🔴 Student Station w/7' Clearance

🟦 Teacher Zone

Space Capacities

Science Labs (fixed lab stations)

Maximize seating locations with alternative station types including the fixed stations.
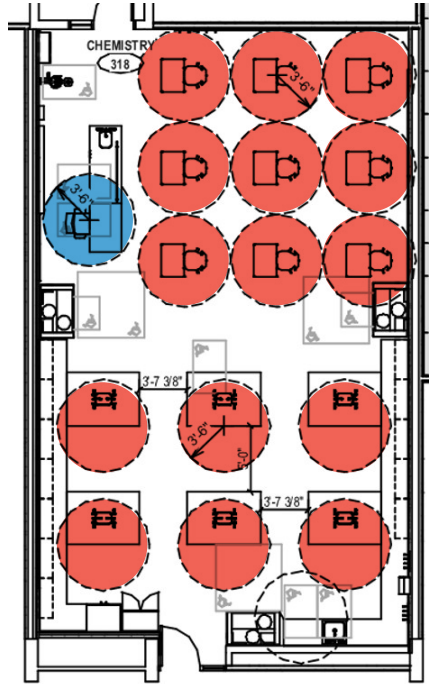
15 Stations
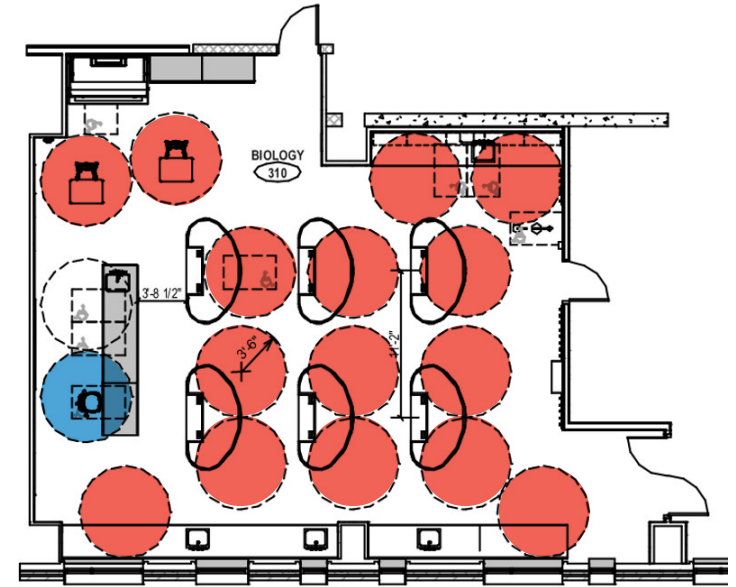
15 Stations

🔵 Teacher Station w/7' Clearance

🔴 Student Station w/7' Clearance

Space Capacities

Community Space Analysis: Gymnasia

10'x10' Individual Activity Zones can be used for yoga, Mindfulness, stretching, etc.
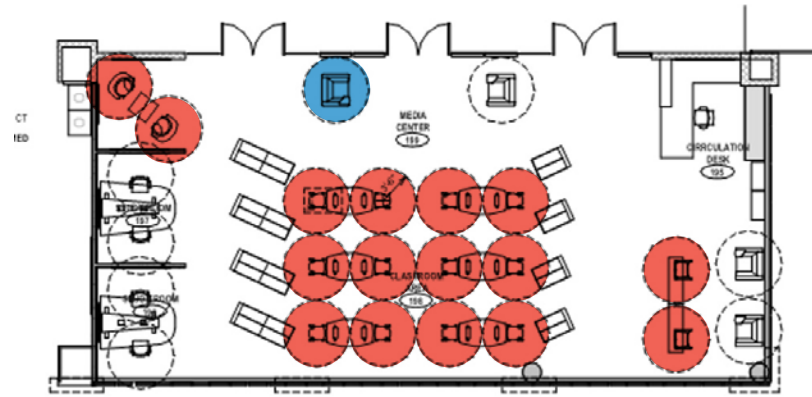
Classroom set up can be organized for testing or an alternative learning environment.

● Teacher Station w/7' Clearance

● Student Station w/7' Clearance
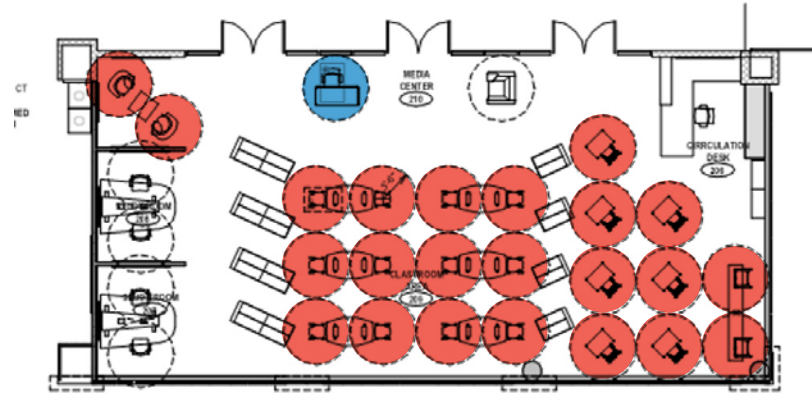
■ 10' x 10' Activity Zones

Space Capacities
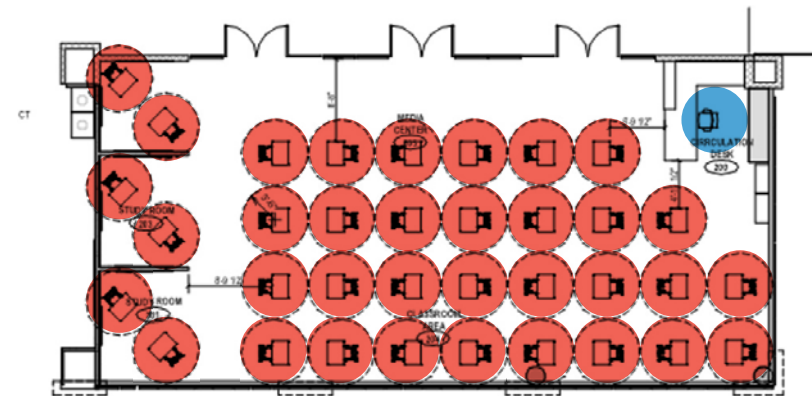
Community Space Analysis: Library / Media Center

Original

Study and Soft-seating Layout

Alternate 1

Add classroom desks to create an additional learning environment.

Alternate 2

Replace all library furniture with classroom desks.

● Teacher Station w/7' Clearance

● Student Station w/7' Clearance

Space Capacities

Determining Building Capacity: Middle School Case Study

In the floor plans, at right, furniture is shown as typically planned for engaged, in-person learning. This school has 16 classrooms in grades 6th through 8th. **These 16 instructional spaces have a seating capacity of 256 seats to accommodate 192 students.** In addition to general instruction, the facility provides shared spaces included makerspace, computer lab, and project space as well as a dedicated academic support center. Together with informal small group learning areas, these supplemental spaces total 7 with a seating capacity of 108 to provide flexibility in scheduling their use.

After applying the Safe-Distanced Metrics from page 20, the new capacities yield 110 seats in the same 16 classrooms and 46 seats in the shared spaces and other academic support spaces. **The new safe-distanced capacity for the building is 156 across 23 individual spaces for the same enrollment of 192.** So supplemental classroom space or some form of modification of the educational delivery method will be required to accommodate the full enrollment.
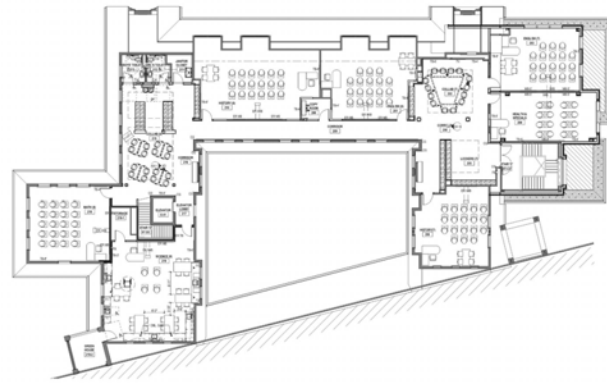
Upper Level
7 Classrooms

Main Level
6 Classrooms
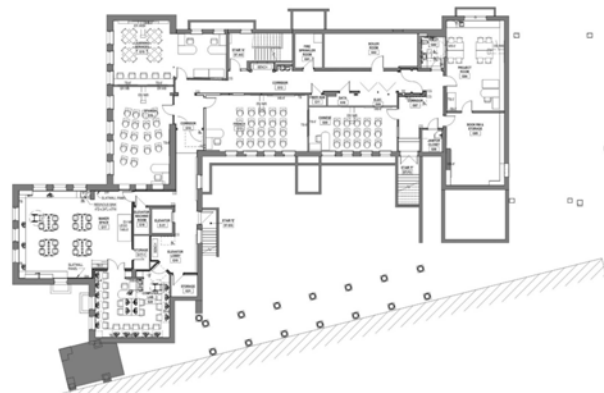
Lower Level
3 Classrooms

Space Capacities

**Determining Building Capacity:
Middle School Case Study**

	# of Spaces	Seat Capacity	School Enrollment
Originial Capacity Plan			
General Classrooms (6th-8th)	16	256	192
Shared/Academic Support Spaces	7	108	
Original Totals	23	364	
Safe-Distanced Capacity Plan			
General Classrooms (6th-8th)	16	110	192
Shared/Academic Support Spaces	7	46	
Safe-Distanced Totals	23	156	
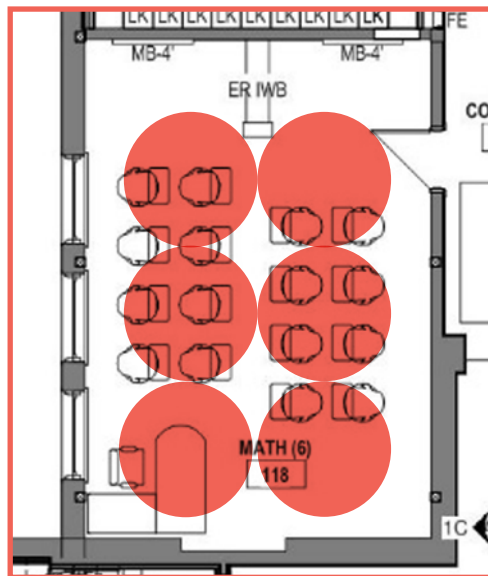
Grade 6 Classroom
Room Area:
450 sf

Original Capacity:
16 seats

Safe-Distanced Metric (from page 20):
76.4 NSF per seat

Safe-Distanced Capacity:
6 seats