

ADAPTING YOUR SCHOOLS

IMPACT OF THE CDC'S COVID-19 GUIDANCE ON SCHOOL CAPACITY

STR Partners LLC • May 6, 2020

Reconfigured classrooms, staggered schedules, and a greater reliance on e-learning will characterize K-12 education across the country this fall. The CDC recommends several mitigation strategies for schools based on the rate of COVID-19 community transmission.¹ Herein, STR presents options for adapting your spaces to follow CDC interim guidance, assuming there will be minimal to moderate community transmission when the new school year begins.

With classroom reconfigurations, several challenges are posed. Social distancing requires 6 feet of separation between people, greatly reducing student capacity in all spaces. Average class sizes of 22 to 28 students will no longer fit in the standard classroom. The result is fewer students per classroom and fewer students under the instruction of one teacher. **So, how do you continue to teach the same number of students per class with fewer students per classroom?** Scheduling, e-learning, and increasing teaching staff are important considerations, as is the reimagining of your spaces. As architects, we focus on the latter:

Create More Instructional Spaces

Starting with a representative 30-foot-by-30-foot classroom, the diagrams on the following pages show how students' desks could be arranged to provide 6 feet between each person. While this allows for social distancing in the classrooms, it greatly reduces overall capacity. We offer three approaches to address your classroom space needs. Each approach should be considered along with either extending instructional periods for teachers or increasing teaching staff to accommodate all students.

- **Adaptive Reuse of Larger Spaces.** With reductions in classroom capacity, larger spaces such as the cafeteria, library, and gymnasium can be used to accommodate more students.
- **Use of Temporary Barriers.** Temporary screens or transparent barriers have been installed between desks in other countries; however, the efficacy of this method to prevent the spread of virus-containing droplets has not been widely studied and is not currently proposed as a possible mitigation strategy by the CDC.
- **Rent Temporary Classrooms.** Mobile classrooms could accommodate overflow of students once social distancing is implemented.
- **Build More Classrooms.** If space and budget permit, new classrooms can be renovated or constructed, increasing capacity for additional classes per grade level.

CDC INTERIM GUIDANCE FOR K-12 SCHOOLS*

When there is minimal to moderate community transmission:

- Increase space between desks
- Avoid mixing students in common areas
- Stagger arrival and/or dismissal times
- Reduce congestion
- Limit nonessential visitors
- Limit cross-school transfer for special programs

* Revised as of March 2020. Updates ongoing.



In a new report issued by the Office of the Governor JB Pritzker yesterday, schools will be allowed to reopen using mitigation practices when there is a sustained, low positivity rate (20% or lower) of infection for 14 days, no increase in admitted cases to the hospital for 28 days with at least 14% surge capacity, widely available testing, and effective and immediate contact tracing.² Until a vaccine or other highly effective pharmaceutical interventions are available, it is likely districts will need to prepare for varying degrees of intermittent suppression (schools closed with move to e-learning) and mitigation (schools open following IDPH and CDC social distancing and health/hygiene guidance) throughout the school year.

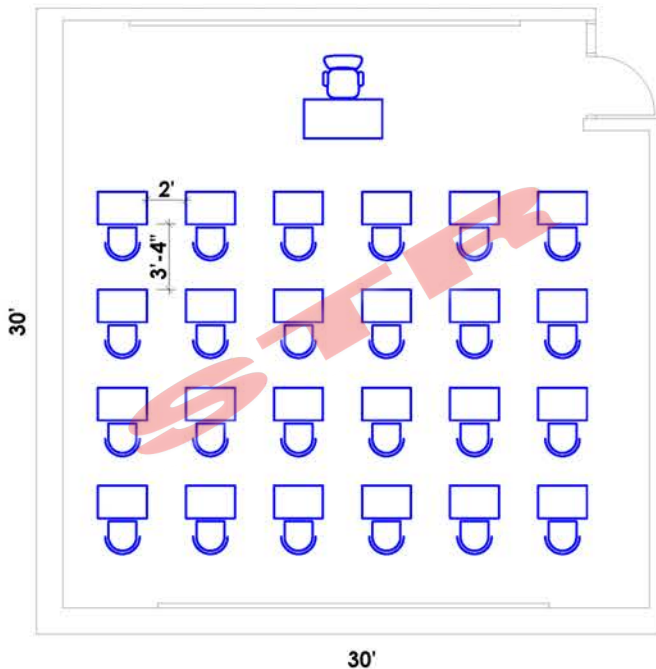
In a school setting, we know that mitigation practices could lead to "trade-offs between effectiveness and feasibility" (e.g. it is difficult to instruct younger children while maintaining social distance).³ STR will help make sure your students have access to the best possible learning environments while also protecting the health of your entire school population. We will keep you updated as new data is released, and as federal, state, and local governments revise guidelines.

GENERAL CLASSROOMS

INDIVIDUAL STUDY/TESTING

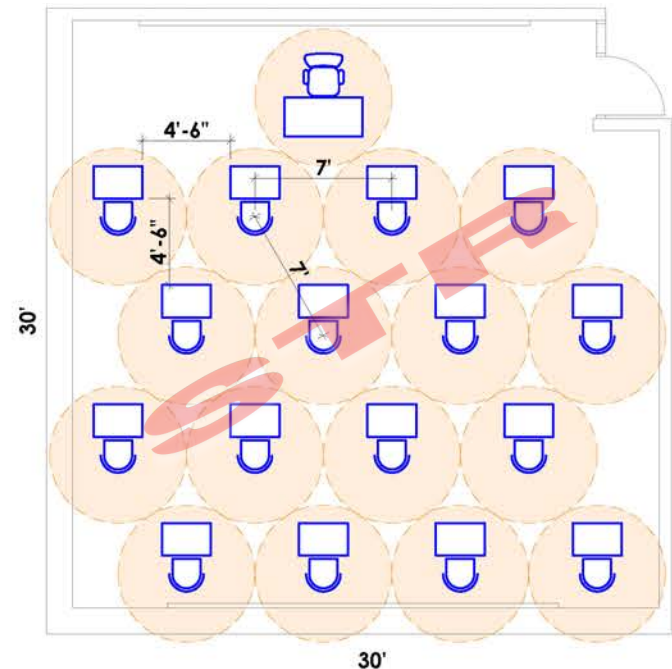
Before

(24 Students)



After

(16 Students with 7-foot O.C.)

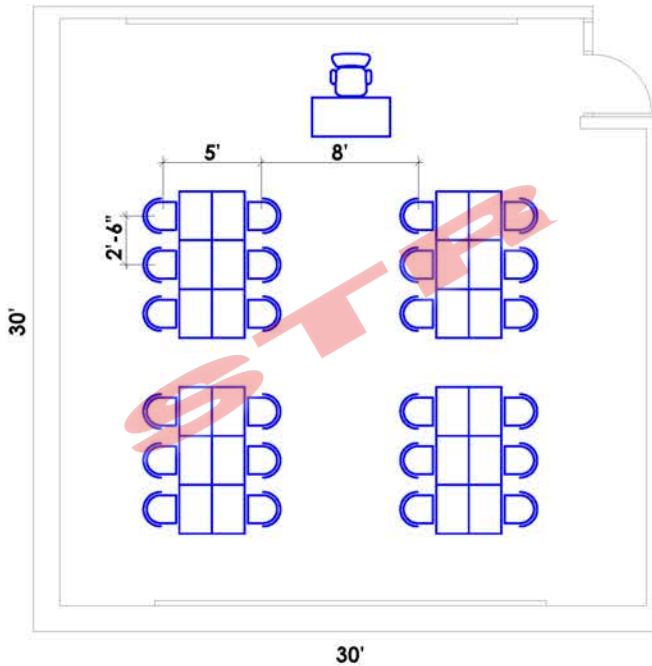


GENERAL CLASSROOMS

SMALL GROUP/TEAMING

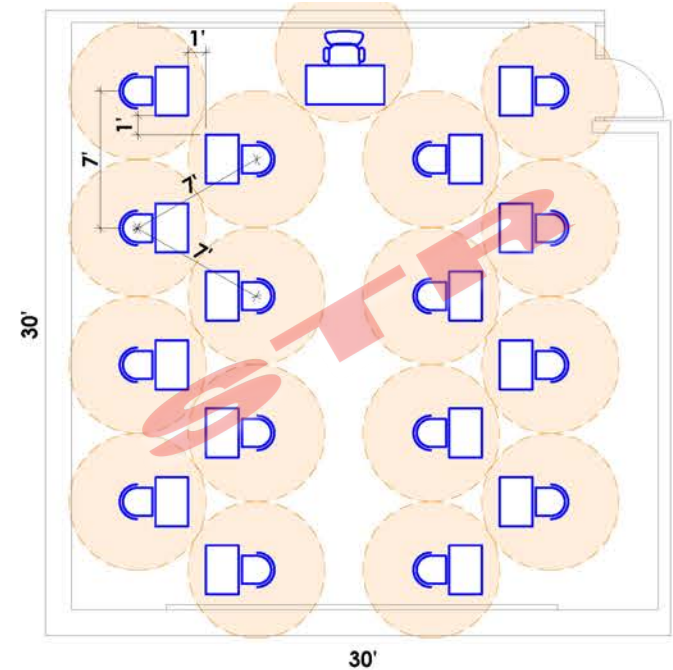
Before

(24 Students)



After

(16 Students with 7-foot O.C.)

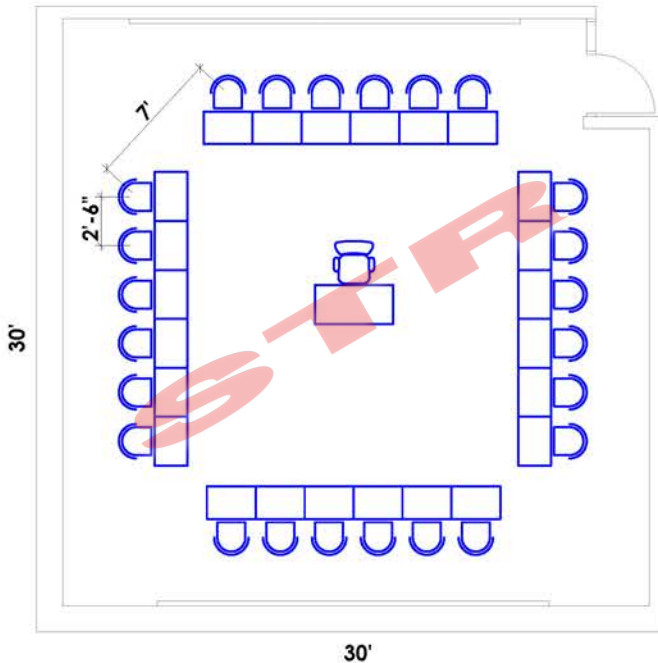


GENERAL CLASSROOMS

LARGE GROUP DISCUSSION

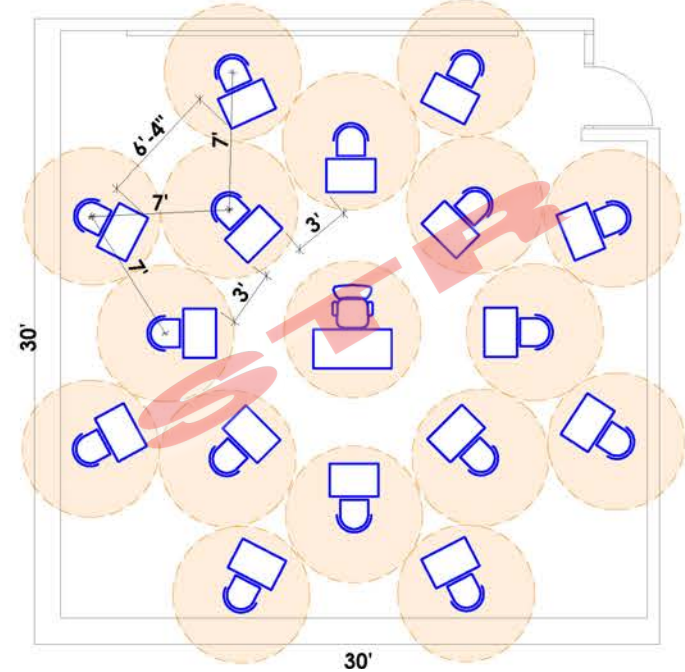
Before

(24 Students)



After

(16 Students with 7-foot O.C.)

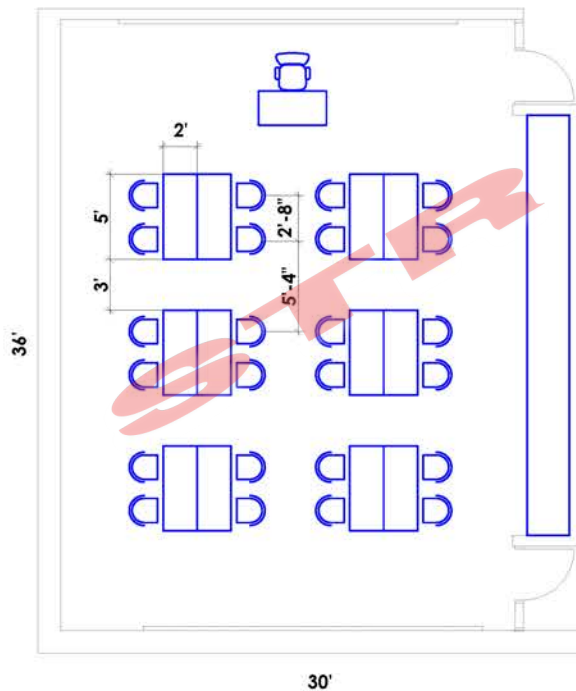


ART CLASSROOMS

LIBRARY/MULTIPURPOSE

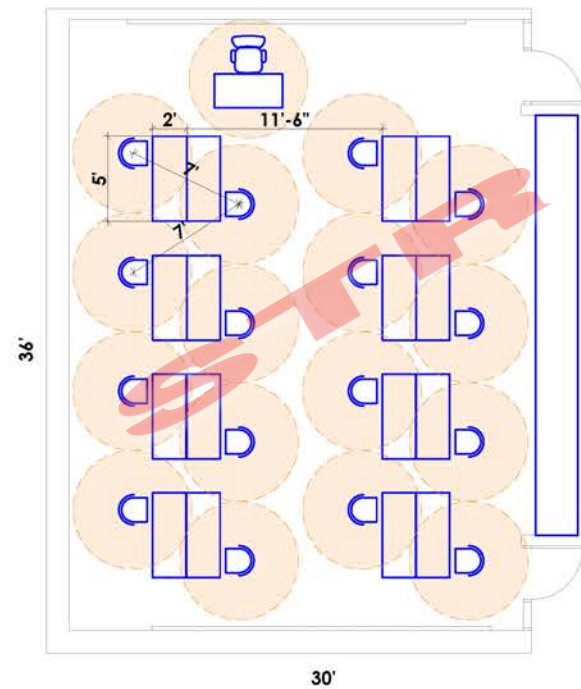
Before

(24 Students)



After

(16 Students with 7-foot O.C.)

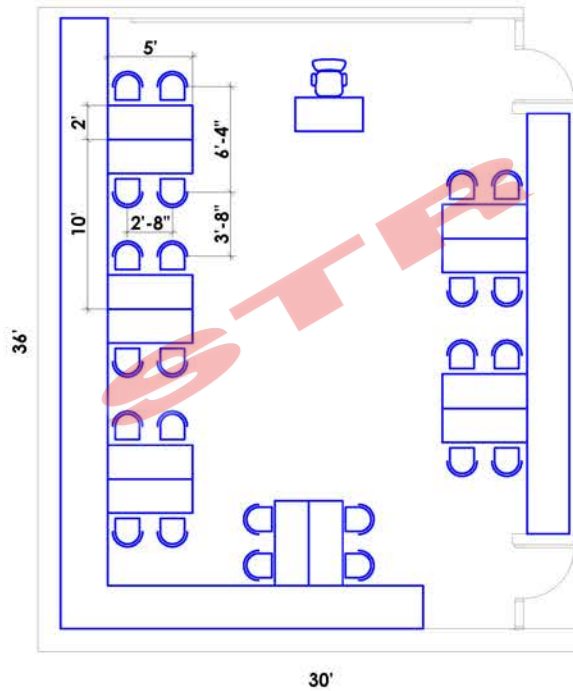




SCIENCE

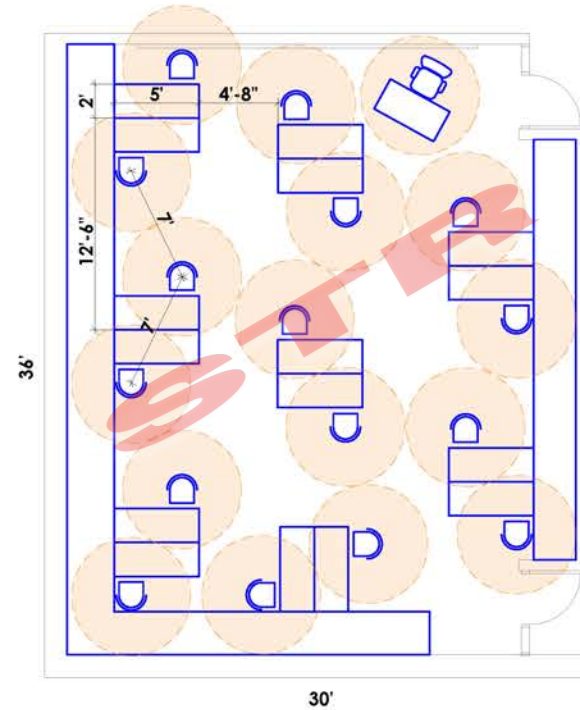
Before

(24 Students)



After

(16 Students with 7-foot O.C.)



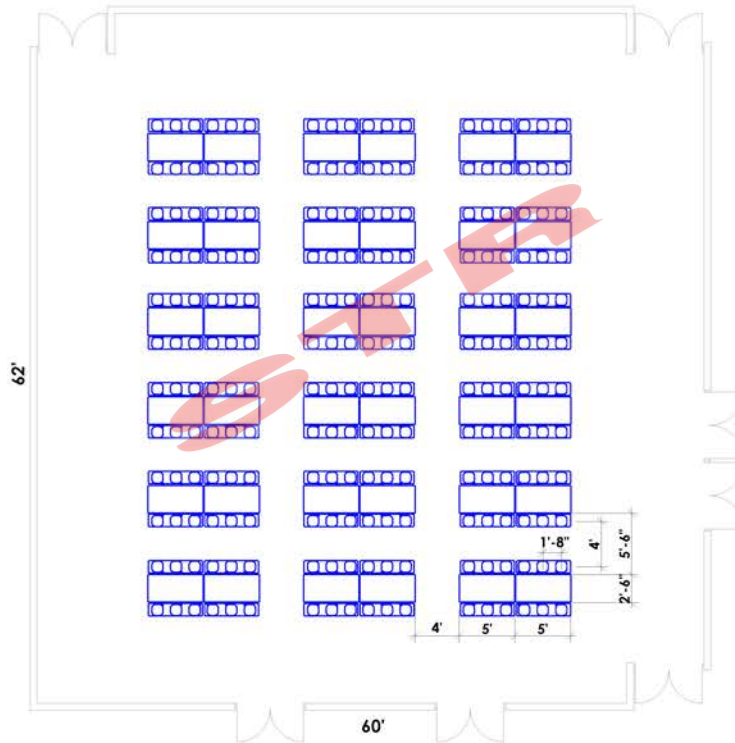


CAFETERIA

CAFETERIA – OPTION NO. 1

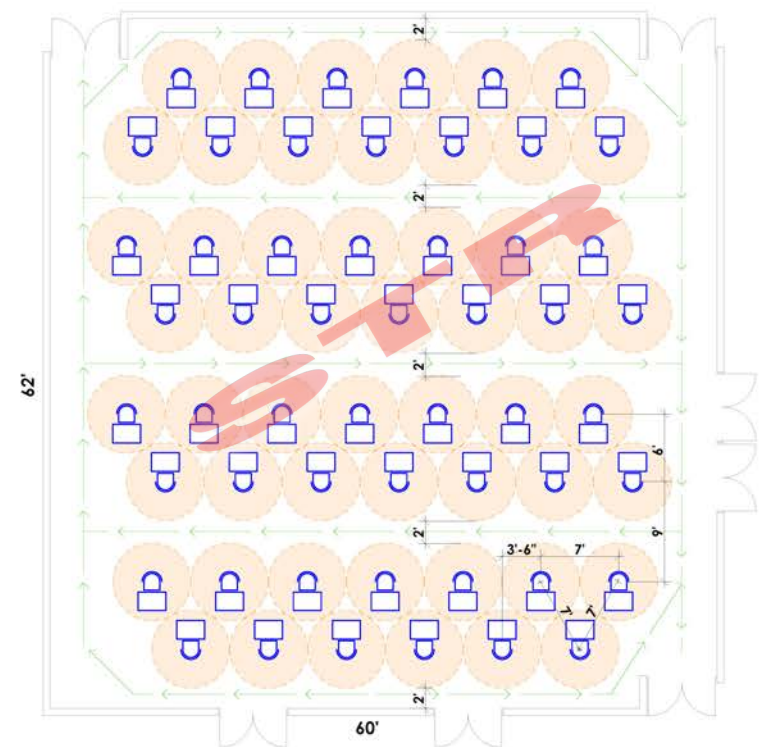
Before

(216 Students)



After

(54 Students with 7-foot O.C.)



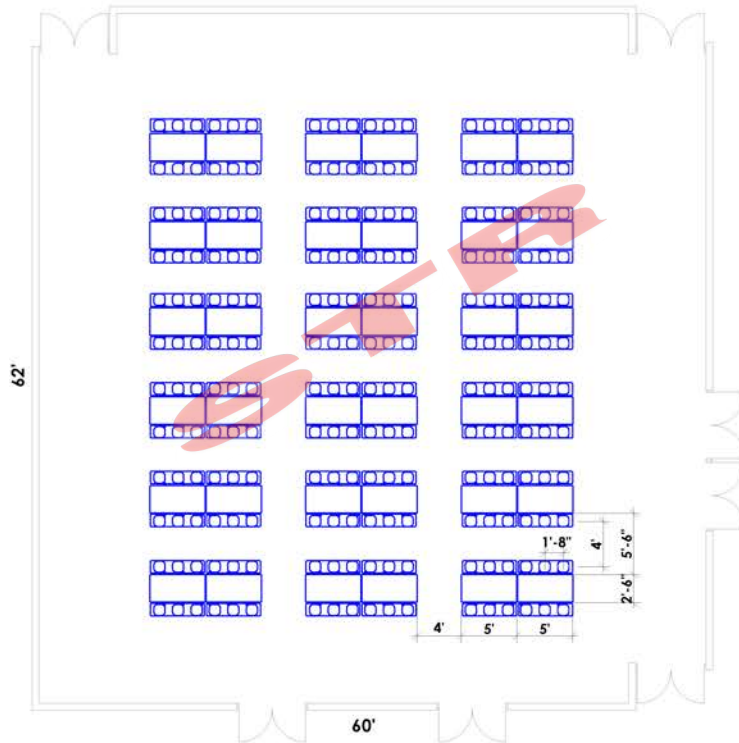


CAFETERIA

CAFETERIA – OPTION NO. 2

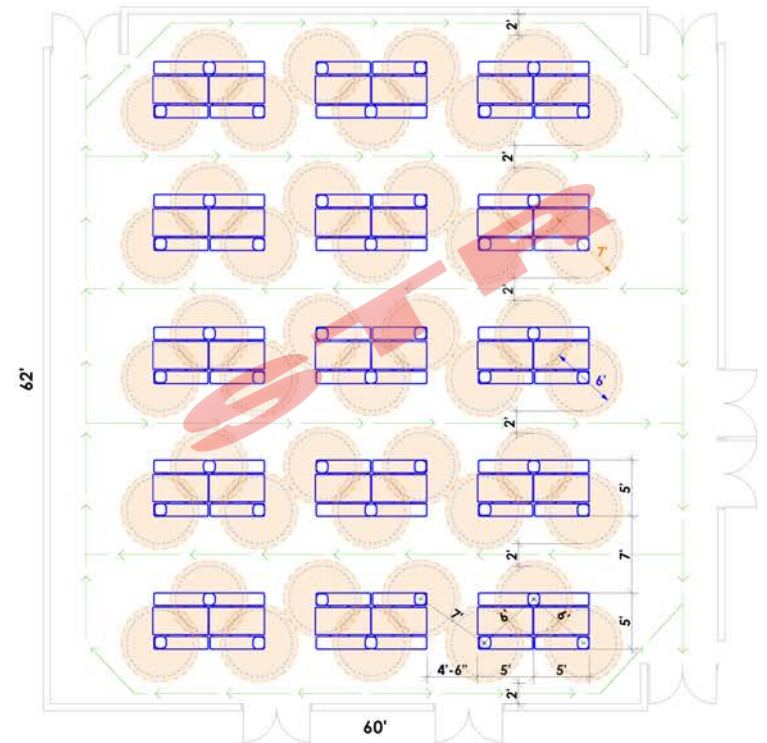
Before

(216 Students)



After

(45 Students with 6-foot O.C.)



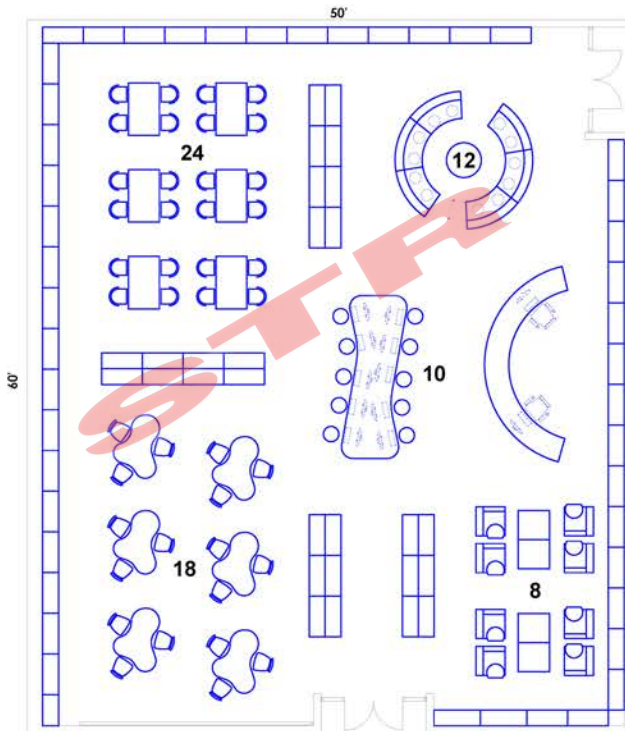


LIBRARY

LIBRARY/MULTIPURPOSE

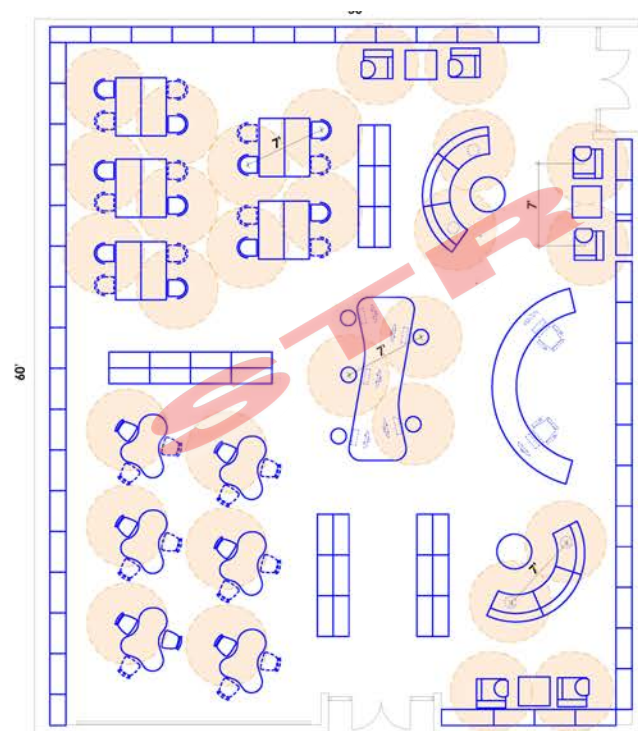
Before

(72 Students)



After

(29 Students with 7-foot O.C.)

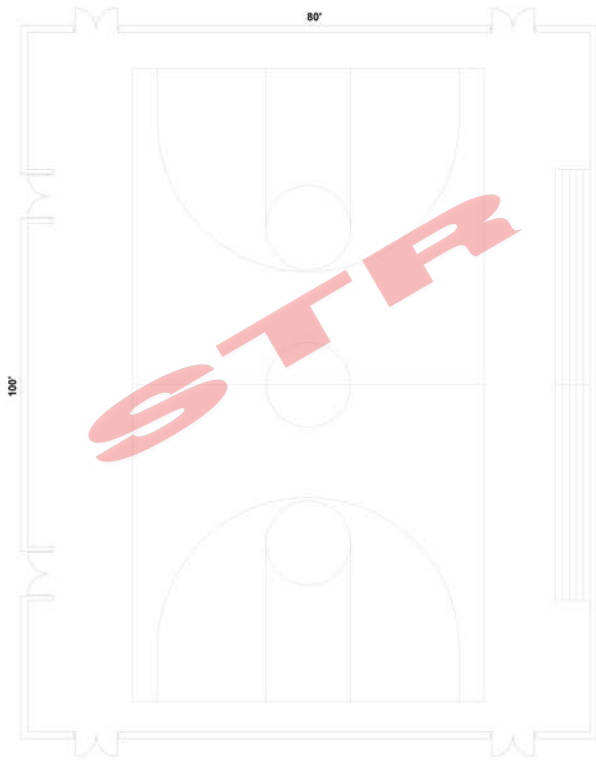


GYMNASIUM

GYMNASIUM

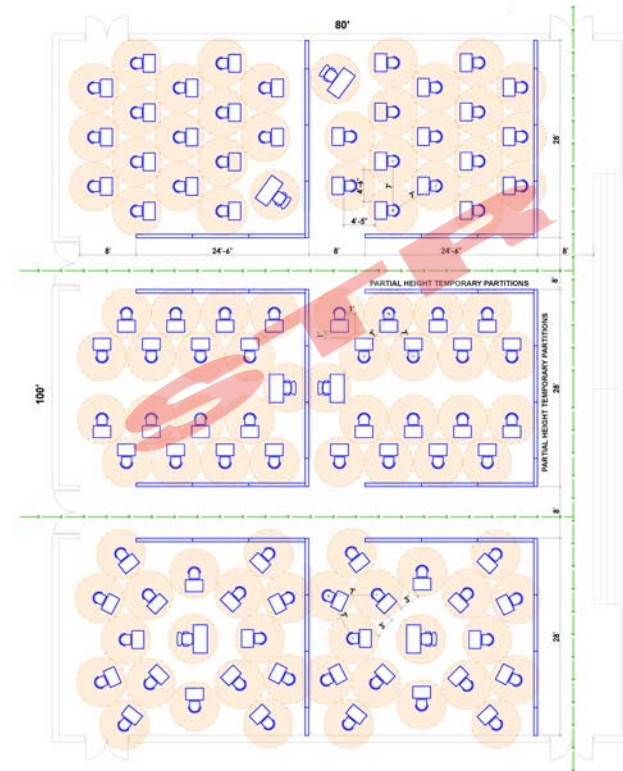
Before

(24 to 48 Students for P.E. Use)



After

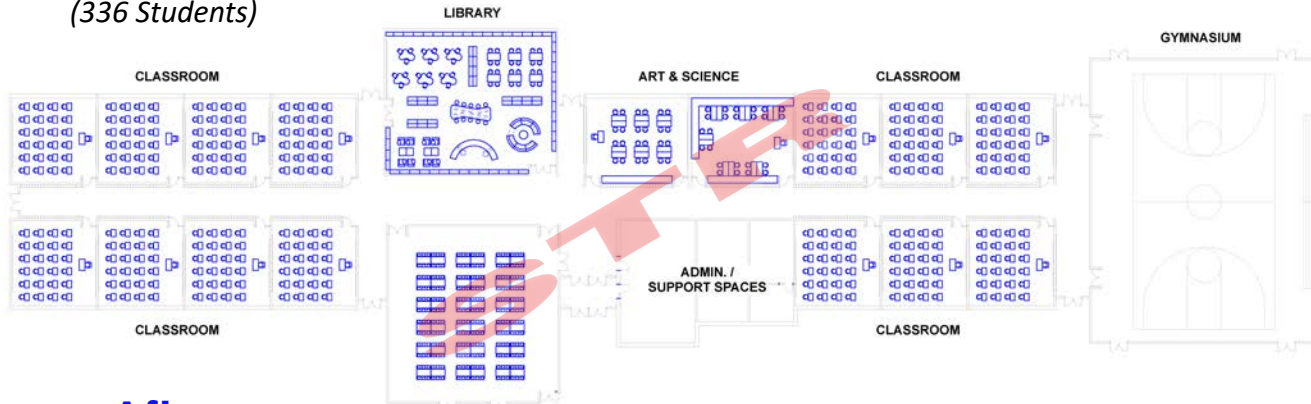
(16 x 6 = 96 Students for Temporary Classroom Use)



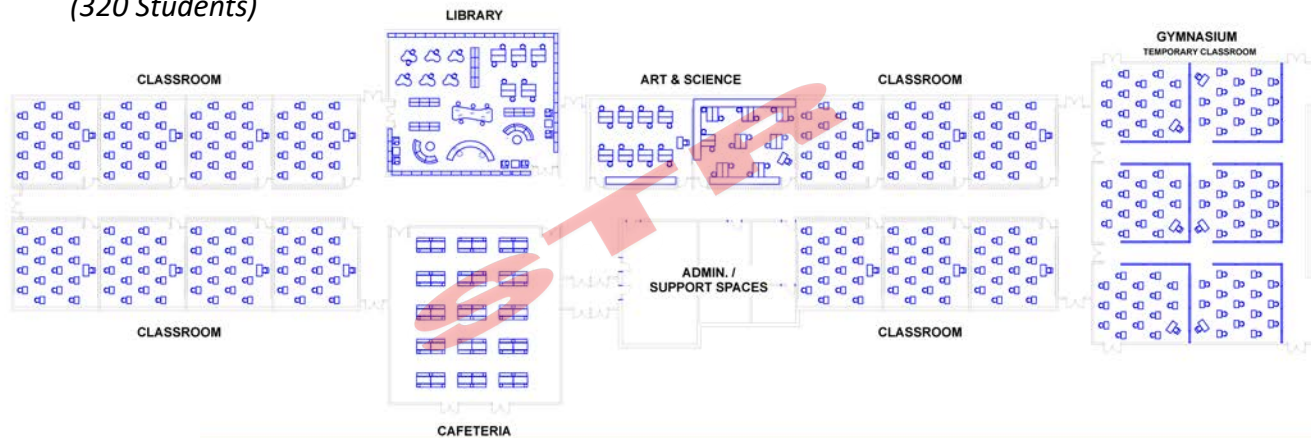
THE BIG PICTURE

CREATING MORE INSTRUCTIONAL SPACES

Before
(336 Students)



After
(320 Students)



References & Resources

REFERENCES

1. CDC Interim Guidance for Administrators of US K-12 Schools & Child Care Programs

<https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/guidance-for-schools.html>

2. Restore Illinois: A Public Health Approach to Safely Reopen Our State

<https://coronavirus.illinois.gov/sfc/servlet.shepherd/document/download/069t000000BadS0AAJ?operationContext=S1>

3. McKinsey & Company, “Safely back to school after coronavirus closures,” April 2020

<https://www.mckinsey.com/industries/social-sector/our-insights/safely-back-to-school-after-coronavirus-closures>

ADDITIONAL RESOURCES

IDPH Schools Guidance

<https://www.dph.illinois.gov/topics-services/diseases-and-conditions/diseases-a-z-list/coronavirus/schools-guidance>

Living (and Learning) with COVID-19: Best Practices for Reopening Schools

<https://spaces4learning.com/articles/2020/04/29/best-practices-for-reopening-schools.aspx?admgarea=acoustics>

Guidelines for Opening Up America Again

<https://www.whitehouse.gov/openingamerica/>