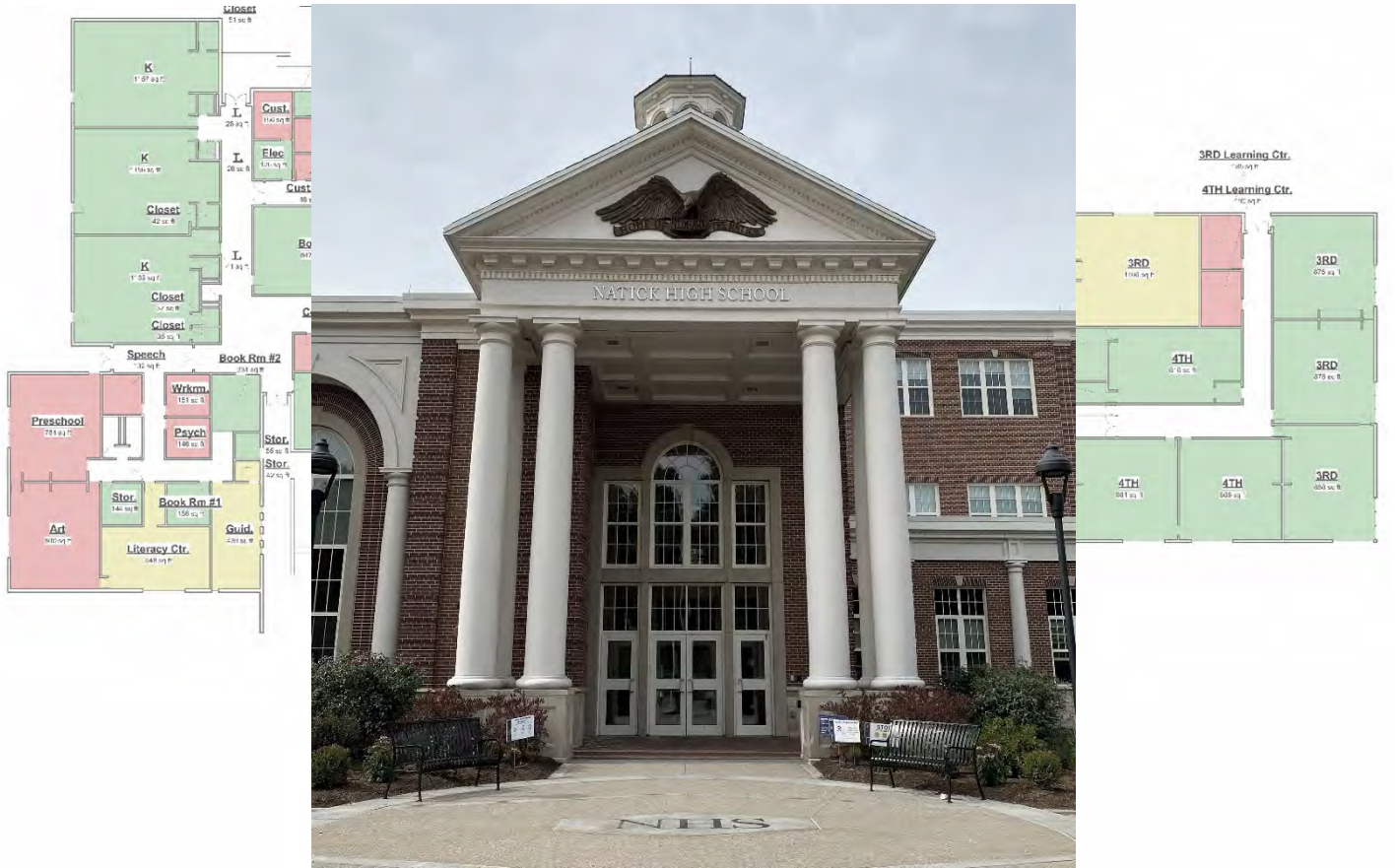


Natick Public Schools Space Use & Utilization Study



DRAFT FOR REVIEW & COMMENT December 17, 2020

Prepared for:

Natick Public Schools
13 East Central Street
Natick, MA



**Natick Public Schools
Space Use & Utilization Study**

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1. Introduction

Project Name and Address:

Space Use & Utilization Study
Natick Public Schools
13 East Central Street, Natick, MA

Project Team:

Town of Natick – Public Schools

Dr. Anna Nolin – Superintendent of Schools
Dr. Peter Gray – Asst. Superintendent of Schools for Finance

Johnson Elementary School
Jordan Hoffman, Principal

Bennett-Hemenway Elementary School
Karen Ghilani, Principal

Memorial Elementary School
Susan Balboni, Principal

Brown Elementary School
Aidan McCann, Principal

Lilja Elementary School
Stefani Wasik, Principal

Wilson Middle School
Teresa Carney, Principal
Niall Carney, Vice Principal

Kennedy Middle School
Andrew Zitoli, Principal

Natick High School
Brian Harrigan, Principal
Zachary Galvin, Vice Principal

Town of Natick – Facilities Department

Kevin Coxall – Facilities Director

Architect – TBA Architects, Inc.

Justin Humphreys, AIA, Principal (compiled report)
William Alloway
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Natick Public Schools
Space Use & Utilization Study
December 17, 2020 DRAFT for REVIEW & DISCUSSION

TBA Architects, Inc.
43 Bradford St. Suite 300
Concord, MA 01742
781-893-5828

Site Visits:

7/22/19 – TBA and GEM Consulting met with Dr. Gray and Bryan LeBlanc to review enrollment projections methodology by GEM Consulting.

11/19/19 – TBA was granted access to Natick's collection of building drawings and gathered available plans.

11/25/19 – TBA and GEM Consulting met with Dr. Nolin and Dr. Gray to review enrollment projections by GEM Consulting. TBA proposed an alternate refocusing of the study and reviewed the process for information gathering and analysis.

2/11/20 – TBA staff met with Johnson Elementary Principal Hoffman to discuss space needs based on existing and anticipated enrollment and space needs. TBA staff toured the building interior to observe the existing space use and circulation and visually confirm the layout. Notes were taken on existing layout; photographs were taken of existing conditions.

2/13/20 – TBA staff met with Bennett-Hemenway Elementary Principal Ghilani to discuss space needs based on existing and anticipated enrollment and space needs. TBA staff toured the building interior to observe the existing space use and circulation and visually confirm the layout. Notes were taken on existing layout; photographs were taken of existing conditions.

2/13/20 – TBA staff met with Memorial Elementary Principal Balboni to discuss space needs based on existing and anticipated enrollment and space needs. TBA staff toured the building interior to observe the existing space use and circulation and visually confirm the layout. Notes were taken on existing layout; photographs were taken of existing conditions.

3/10/20 – TBA staff met with Brown Elementary Principal McCann to discuss space needs based on existing and anticipated enrollment and space needs. TBA staff toured the building interior to observe the existing space use and circulation and visually confirm the layout. Notes were taken on existing layout; photographs were taken of existing conditions.

3/12/20 – TBA staff met with Wilson Middle Principal Carney and Vice Principal Carney to discuss space needs based on existing and anticipated enrollment and space needs. TBA staff toured the building interior to observe the existing space use and circulation and visually confirm the layout. Notes were taken on existing layout; photographs were taken of existing conditions.

2/14/20 and 3/13/20 – Scheduled but unsuccessful attempts to meet with Lilja Elementary Principal Welch.

9/24/20 – TBA staff met with Lilja Elementary Principal Wasik and staff to discuss space needs based on existing and anticipated enrollment and space needs. TBA staff toured the building interior to observe the

existing space use and circulation and visually confirm the layout. Notes were taken on existing layout; photographs were taken of existing conditions.

9/24/20 – TBA staff met with Natick High School Principal Harrigan and Vice Principal Galvin to discuss space needs based on existing and anticipated enrollment and space needs. TBA staff toured the building interior to observe the existing space use and circulation and visually confirm the layout. Notes were taken on existing layout; photographs were taken of existing conditions.

9/29/20 – TBA staff met via teleconference with Memorial Elementary Principal Balboni to review space use and utilization diagrams and confirm documentation from the initial visit.

9/30/20 – TBA staff met via teleconference with Bennett-Hemenway Elementary Principal Ghilani to review space use and utilization diagrams and confirm documentation from the initial visit.

10/2/20 – TBA staff met via teleconference with Brown Elementary Principal McCann to review space use and utilization diagrams and confirm documentation from the initial visit.

10/5/20 – TBA staff met via teleconference with Johnson Elementary Principal Hoffman to review space use and utilization diagrams and confirm documentation from the initial visit.

11/9/20 – TBA staff met via teleconference with Lilja Elementary Principal Wasik to review space use and utilization diagrams and confirm documentation from the initial visit.

11/9/20 – TBA staff met via teleconference with Natick High School Principal Harrigan and Vice Principal Galvin to review space use and utilization diagrams and confirm documentation from the initial visit.

TBA has collected and is reviewing construction and as-built documents for the schools. Collected documents have been scanned and electronic copies will be provided to the Town of Natick. Other documents include actual enrollment numbers for years 2009 to 2019 and NESDEC enrollment projections for years 2009 to 2019.

Thank you to all the staff and administration for your patience and assistance during our visits.

2. Executive Summary

Processes and Descriptions

TBA Architects was retained by the Town of Natick Public Schools to study the existing eight public schools (5 elementary, 2 middle, 1 high) studied as to their capacity, current space use and current and future space needs. Integral to this is to study is to review the enrollment projections, enrollment history and trends for each school as well as the district. Our worked ultimately included study of:

- Natick High School,
- Wilson Middle School
- Johnson Elementary School
- Bennett-Hemenway Elementary School
- Memorial Elementary School
- Brown Elementary School
- Lilja Elementary School

(Kennedy Middle School is currently under construction and the old building slated for demolition as part of that scope. We understand the new building to be designed under the MSBA grant program for 1,000 students.)

While the scope of this study does not include plans for construction, we may identify areas of possible reconfiguration and/or expansion should the building(s) require planning to remedy identified deficiencies and address space needs required to provide program appropriate spaces and plan for future district needs.

TBA has reviewed and analyzed historical, current and future enrollment projections to provide a summary of past trends, identify possible causes for past enrollment fluctuations that could be used for anticipating future impact on the schools from development and/or changing demographics. We also performed a space use analysis; program review; space utilization and adequacy analysis for each of the seven schools. This report is intended to serve as the basis for the development of future use plans.

Findings

All five elementary schools are vastly different in their size, enrollment, architecture, spatial layout, siting and approach. However, they display very similar characteristics in the way services are delivered, classrooms arrangement, and utilization. We looked at the existing space use, site use, internal circulation and class transition times, and space utilization by both area and time.

The elementary schools were constructed between 1949 and 2000 with further additions to some as late as 2016; Johnson being the oldest with the fewest modifications and Bennett-Hemenway being the newest full build and Lilja and Brown having the most recent expansion and renovation. These changes appear to have kept pace with the majority of the needs of the schools. It is unknown to us as to how the planning

was done for these changes. Our review of the enrollment vs. the projections of the past ten to 12 years show that the actual enrollment went up while the projections indicated a decline. We don't however have projections by school so there may have been some indications that certain schools would require renovation or expansion.

We find the following trends and commonalities for the elementary schools:

1. Sites all have constraints, though very localized and individual, that require careful consideration of movement and offer little room for change that is not whole-system redevelopment. Being neighborhood schools, all but one originated in a time when most students walked to school. As a result the sites have been adapted to accommodate busses and a great many cars. Often the playgrounds are distant from the cafeterias or require crossing driveways. Some schools have adjusted the drop-off and pick-up routines as part of reopening in the age of COVID-19 and report that the changes may remain as they have found some efficiencies. When possible we provide diagrams of both pre and post COVID systems.
2. The schools are well choreographed for the full day by staff managing students through various before and after school programs; drop off and pick up of students via bus, van, car, and walking; and throughout the key transition points of lunch, recess, and specials. Diagrams are provided showing the before and after school, and lunch and recess movements.
 - a. Johnson sits in a dense residential area surrounded by small streets. It has the smallest enrollment and the majority of students walk or are brought by car and walked to the door by adults. Vehicles are only allowed on the site at specific times and travel a narrow one-way driveway. There is only one bus that drops students off at the street. Grades enter and exit at specific doors. Entrance to the school grounds is from three sides.
 - b. Bennett-Hemenway has a mix of students arriving by all modes of transportation. There are separate loops for bus and car drop-off and pickup and walkers enter and exit at different doors. The full perimeter of the building is used, students are accompanied to and from the doors and queued up by grades to then travel to and from classrooms. Entrance to the school grounds is from all sides with two different vehicular entrances.
 - c. Memorial students are predominantly brought to and from the school by car and bus. Depending on the time of day cars either line up outside the main entrance and loop or travel around the building to enter directly into specialized rooms. Busses utilize the same driveway but line up along the building. All vehicles enter the site at the one Eliot St. entrance. Very few students walk and those that do enter from the same direction.
 - d. Brown students arrive primarily by bus and by car. There are some that walk from the neighborhoods closest to the school. The main entrance drive is currently under construction and will be completed when the new Kennedy Middle School is finished. Drop off via car and bus are from this direction. Car drop off also takes place in a small pull off area along Hartford St. These two approaches are at opposite ends of the building. Three sides of the building and multiple doorways are used for entrance and exit.

- e. Lilja students arrive by multiple modes of transportation. Two sides of the building and multiple doorways are used for entrance and exit. Car drop off is via the parking lot on Oak St. and requires staff to monitor a crossing point of the entrance line and cars exiting. Busses drop students off at the Bacon Street loop along the main entrance side of the building. Several student walk to school, most along Bacon Street where crossing guards monitor the intersections and sidewalks.
3. The schools are at or above capacity based both on observation and on comparison with the guidelines from the Massachusetts School Building Authority. On this third point we see many of the same situations at each school.
 - a. Classrooms at most elementary schools are either less than 95% the size recommended by MSBA or have a few classrooms meeting the standard. All schools exceed the number of classrooms because the K-4 model with one extra section differs from the MSBA model.

	Actual	MSBA	Actual	MSBA	
Ben-Hem	30	24	28,996	24,300	2 Pre-K
Brown	25	21	26,172	21,200	
Johson	11	10	9,473	10,250	
Memorial	21	18	19,946	18,100	1 Pre-K
Lilja	21	19	18,078	19,300	1 Pre-K
Wilson Middle	46	43	41,696	44,820	Incl. science
High School	61	69	62,192	77,410	Incl. science

- b. Classrooms are used all available periods of the day that are not spent in the art, music, gym, media center. They are adequately utilized as the time without students is dedicated to teacher planning.
- c. Almost all spaces not originally intended for learning have been repurposed to provide learning for individuals or small groups; or have been made into offices.
- d. Corridors are being used for pull-out learning, evaluation, and break spaces; in some cases as storage spaces.
- e. Special Education space differ with the MSBA recommendations. And the amount of space differs at each school. This is because services are delivered differently than the what the model appears to be built upon. Most schools (except Lilja) have at best 75% of the recommended area. This is because services are delivered in classrooms with separate spaces needed for pullout and small group work. As such most dedicated special education space is provided in the form of small rooms for small group work, offices, and learning centers that often are grade specific.
- f. Storage spaces are at a premium, either too few or insufficiently sized. The small amount of storage space at each school has led to using corridors and the periphery of other spaces for materials. At Johnson and Lilja where sizable storage rooms exist they are located inconveniently and are not easily accessible.

Johnson Elementary School is 58% of Total Building Net Floor Area (NFA) per MSBA Standard for a 232 student elementary school. This puts the current building as a whole severely undersized, or in our red category. Half of the classrooms are adequately sized, though below the standard. The remaining classrooms and all other spaces are undersized and overutilized. One room functions as the gymnasium, cafeteria and auditorium and library is smaller than a modern kindergarten classroom. The building is not accessible. The gross square footage is only 71% of the MSBA standards.

Bennett Hemenway Elementary School is 97% of Total Building Net Floor Area (NFA) per MSBA Standard for a 550 student elementary school. This puts the current building as adequately sized and utilized, or in our green category. Classrooms are adequately sized. The cafeteria and gymnasium are undersized but managed by scheduling that differs from that assumed by the standard. Most deficiencies are in the storage area provided. The gross square footage is 102% of the MSBA standards mostly attributed to the amount of corridor space and building form.

Memorial Elementary School is 88% of Total Building Net Floor Area (NFA) per MSBA Standard for a 400 student elementary school. This puts the current building as inadequately sized at just under our threshold, or in our red category. Classrooms are adequately sized. The cafeteria and gymnasium are undersized but managed by scheduling that differs from that assumed by the standard. Most deficiencies are in the storage area and repurposing of flexible space into classrooms. The gross square footage is 89% of the MSBA standards mostly attributed to the amount of corridor space and building form.

Brown Elementary School is 97% of Total Building Net Floor Area (NFA) per MSBA Standard for a 489 student elementary school. This puts the current building as adequately sized, or in our green category. Classrooms are a mix of adequately and undersized however there are four more than the standard anticipates. The cafeteria and gymnasium are undersized but managed by scheduling that differs from that assumed by the standard. Special education space is undersized mostly due to a different service model than anticipated by the standard. The gross square footage is 89% of the MSBA standards.

Lilja Elementary School is 87% of Total Building Net Floor Area (NFA) per MSBA Standard for a 431 student elementary school. This puts the current building as inadequately sized, or in our red category. Classrooms are a mix of adequately and undersized. The cafeteria and gymnasium are undersized but managed by scheduling that differs from that assumed by the standard. Special education space is undersized mostly due to a different service model than anticipated by the standard. The gross square footage is 82% of the MSBA standards.

Wilson Middle School is 96% of Total Building Net Floor Area (NFA) per MSBA Standard for a 942 student middle school. This puts the current building as a whole adequately sized, or in our green category. Most of the spaces are adequately sized and there are a few classrooms of swing space. Undersized spaces such as the cafeteria and technology are managed by scheduling differing from that assumed by the standard. A full sized auditorium is included which is not part of the MSBA model. The gross square footage is 93% of the MSBA standards but much of that space is in the circulation space - corridors, stairs, elevators – due to the building geometry and it being two storeys.

Natick High School is 89% of Total Building Net Floor Area (NFA) per MSBA Standard for a 1,600 student high school. This puts the current building as a whole is inadequately sized, or in our red category. The analysis shows that due to individual room size and to scheduling, much of the general education space is over-utilized. Like the elementary schools the site is overprogrammed and is carefully choreographed to allow for the various modes of drop-off and pick-up along with students driving themselves. Timing and location of preschool drop off and access is also part of the calculus.

NHS contains 44 general purpose classrooms, 12 science lab classrooms, and five classrooms for the North Star Alternative High School program (four of which are half sized rooms). The school operates on an inclusion model of special education services delivery reducing the area dedicated solely to SPED to well below MSBA standard. The North Star also accounts for some of classrooms area that might typically have been included in the special education category. Most rooms are programmed up to 100% of the time. Natick High School is short 11 classrooms and two science classrooms in order to get the enrollment per classroom down to the MSBA standard of 23.

Considerations & Recommendations

- All schools have thoughtful, site and building specific, systems in place for providing services from before school hours to after school hours. Improvements to the site, parking, playgrounds and access that respond to how the day works would be beneficial to time-on-task and userfriendliness.
- Johnson School is undersized and over programmed, and in need of a great deal of work to bring up to current codes and standards.
- Natick High School is undersized and overcrowded. It houses a couple of district-wide programs that take up the equivalent of at least nine classrooms.
- The population of the high school is projected to continue to grow to up to 1800 by the school 2022 year.
- The preschool is housed at Natick High, Memorial, Bennett Hemenway, and Lilja schools. Preschool services occupy a total of nine classrooms and at the high school an office suite.
- Memorial School is slightly undersized with a few classrooms that are overutilized. The configuration of the building and the site will accommodate additions and renovations that easily solve the current constraints.
- Our analysis prompted a few scenarios to assist in future planning. These could be considered independently or in combination(s).
 - o Scenario 1: Incremental additions and renovations to all schools to restore converted spaces and flexibility. This should be mated with a comprehensive maintenance and capital improvement plan that allows planning for submissions to MSBA's accelerated repair program for systems improvements and possibly the core program depending on the size of renovations. Small renovations can be done outside of the MSBA offering the district more flexibility in time and cost.
 - o Scenario 2: To alleviate the pressing need at the high school, move the preschool out into another building. If space is available to lease, then this could be done in time for the

enrollment increase. Further space can be reclaimed if the district-wide IT program is relocated. New space for that department would need to be found. This scenario should be paired with Scenario 1.

- o Scenario 3: Building on Scenario 2, if the preschool were to move out then plan and construct a new early childhood center that could accommodate the preschool classrooms for the whole district. This would free up space at other elementary schools and reduce the work needed to keep them functioning acceptably. Further consideration could be given to relocating some of the kindergarten classrooms into an early childhood center, making a larger single project and fewer scattered projects. Currently the MSBA won't consider funding for a preschool only facility but will for a combined pre-K and K early education building.
- o Scenario 4: The Johnson School requires a great deal of work and money to bring up to date and keep pace with other facilities. The scope would require relocation of staff and students and would have considerable cost – likely \$3-5 million for accessibility and systems upgrades alone and several million more to tackle the space needs. Replacement of the school with a new of adequate size and functionality, along with site improvements would cost around \$35 million and take 7-9 years. This would be a scope that would fall under the MSBA's core program.
- o Scenario 5: Expand and renovate the Memorial School to accommodate the redistribution of students across the district. This would improve the Memorial, taking advantage of a site with capacity, a building that has not been renovated or expanded but is easily expanded, and allow for consideration of changes to the number of elementary schools. Reducing the number of schools, expanding one and redistricting could alleviate the need to expand other elementary schools.

3. Existing Building Analysis

About the Use & Utilization Study

In commissioning this study, the goals of the Natick Public Schools were to establish capacity, existing space use and utilization and compare existing conditions to projected enrollment. A thorough look at space use and efficiency is necessary for understanding the current facilities and planning for the future. We endeavor to establish where the buildings are used efficiently and where deficiencies reside and need to be addressed. Regardless of whether space is able to be found within the existing buildings or not, if the process reveals that space is not available for all needs then it supports the need for space reconfiguration or addition.

This use and utilization study provides analysis of how space is allocated, how the space is used and identifies where changes to program or process can be planned for. Utilization metrics include both time and space: the actual percentage of time a room is in use *and* the space allocation for the intended use. The Massachusetts School Building Authority recommendations as to space allotment for use types were used as the basis for spatial utilization analysis. The number of periods a week a space or room was used by the schools' inhabitants as a percentage of periods available during the school week is the basis for time utilization analysis.

These two measures occasionally reveal a room that is both over utilized as to time and underutilized as to space. An example of this type of space is when a room is simultaneously oversized by MSBA standards, but is utilized almost constantly. Where underutilization exists, this condition may offer space planning opportunities for more efficient reconfiguration.

The study presents space allocation analysis in a spreadsheet for the school with side-by-side comparisons with the MSBA standard for K-4 schools, middle schools and high school adjusted for the configurations found in Natick. The spreadsheet analysis is broken down into groupings determined by the MSBA with the following areas represented:

- Core Academic Areas (general, science, and faculty spaces are separated at middle & high school)
- Special Education
- Art and Music
- Vocations and Technology
- Health and Physical Education
- Media Center
- Auditorium/Drama
- Dining & Food Service
- Medical
- Administration and Guidance
- Custodial and Maintenance

- Other
- Unprogrammed Spaces

These areas for each school are indicated on plan drawings with a color code legend for each grouping. Core academic areas (classrooms) are further defined by an overlay hatch indicating grade level. These functional plans were developed to give an overview as to the plan organization and functional adjacencies of the school.

A second set of plans for the school depict the utilization of each room by a simple color coding of green, red and yellow.

Green - Rooms with the color green are rooms utilized fully for time (approximately 75 to 95 % of the time for their intended use) and/or within 90 to 105% of their recommended MSBA size.

Red - Rooms depicted in red are undersized by MSBA standards or have additional uses outside of the intended use which interfere with the efficient use of the space.

Yellow - Rooms illustrated in yellow are underutilized either by time or space allocation.

We also look at how the population moves in, out and around the school at major transition points throughout the day. Circulation diagrams show use of spaces before school, after school, lunch and recess transition times indicating starting, paths and ending points.

Space Utilization Analysis by school

The following pages include analysis of the schools with observations followed by existing space summary spreadsheets, existing space use plans, and utilization plans for each school. Analysis is organized by topic following those listed in the MSBA spreadsheet to allow reference for details on specific spaces.

Following the existing use analysis are initial space mining possibilities and areas for expansion. Potential for efficiencies have been found and may be undertaken on their own or in conjunction with one of the options for expansion. The possibilities discussed can be studied further in the next phase along with one or more of the options.

Natick High School

Natick High School is 89% of Total Building Net Floor Area (NFA) per MSBA Standard for a 1,600 student high school. This puts the current building as a whole is inadequately sized, or in our red category. The analysis shows that due to individual room size and to scheduling, much of the general education space is over-utilized and in the red category. Some specialized spaces are adequate while others are overutilized or undersized; administration spaces adequate as well. The gross square footage is 101% of the MSBA standards but much of that space is in the circulation space - corridors, stairs, elevators – due to the building geometry and it being three storeys.

By the numbers: enrollment is about 1,600 students and there are approximately 200 staff. Based on MSBA standards the school should be 185,985 net square feet and with a grossing factor of 1.39 should be 259,200 gross square feet. As-built it is just under 89% of the recommended size at 165,857 net square feet and a total of 260,512 gross square feet (a 1.57 grossing factor).

Natick High School							
Proposed Student Capacity / Enrollment	1,600						
	As-built		Utilization		MSBA Model		
MSBA Category	# of Rms	Area Totals	Assessment	% of Model Area	# of Rms	Area Totals	Delta
CORE ACADEMIC SPACES	91	63,903	Over Utilized	83%	143	77,410	(13,507)
SPECIAL EDUCATION	34	8,830	Over Utilized	55%	32	16,110	(7,280)
ART & MUSIC	10	7,125	Over Utilized	86%	16	8,275	(1,150)
VOCATIONS & TECHNOLOGY	11	7,689	Over Utilized	48%	10	16,000	(8,312)
HEALTH & PHYSICAL EDUCATION	26	26,732	Under Utilized	106%	7	25,160	1,572
MEDIA CENTER	4	8,315	Over Utilized	84%	1	9,900	(1,585)
AUDITORIUM / DRAMA	7	13,879	Under Utilized	133%	6	10,400	3,479
DINING & FOOD SERVICE	12	11,194	Over Utilized	88%	5	12,700	(1,506)
MEDICAL	9	1,055	Over Utilized	75%	13	1,410	(355)
ADMINISTRATION & GUIDANCE	24	4,854	Over Utilized	84%	24	5,795	(941)
CUSTODIAL & MAINTENANCE	9	2,580	Over Utilized	91%	7	2,825	(245)
OTHER	16	9,701				-	
Total Building Net Floor Area (NFA)		165,857	Over Utilized	89%		185,985	(20,129)
NON-PROGRAMMED SPACES	84	52,517					
Total Building Gross Floor Area (GFA)2		260,512	Appropriate	101%		259,200	1,312
Grossing factor (GFA/NFA)		1.57				1.39	

The School is comprised of two connected masses, one donut shaped of three storeys surrounding a courtyard (primarily used for circulation) and the other a single storey linked by a circular corridor system and four stair towers. The three storey block contains the main entrance, main office and administration area, auditorium and associated theatre arts spaces, alternative high school classrooms, preschool, and TV studio, and library at the first level; classrooms, technology studios, faculty offices, and district wide IT offices at the second level; and classrooms and faculty offices at the third level. Science classrooms are on the second and third levels. The single storey (double height) block contains the cafeteria and gymnasium. The district-wide IT offices occupy about 2,000 sf on the second floor. District-wide preschool classrooms and associated office and workspaces occupy a wing of the first floor with its own entrance in an area of about 7,400 sf. As a multilevel school, the high school has two elevator towers – one at the south end of the main corridor block and the other at the north end by the main entrance.

Natick High School contains 44 general purpose classrooms, 12 science lab classrooms, and five classrooms for the North Star Alternative High School program (four of which are half sized rooms). The school operates on an inclusion model of special education services delivery reducing the area dedicated solely to SPED to well below MSBA standard. The North Star also accounts for some of classrooms area that might typically have been included in the special education category. General classrooms range in size from 773 nsf to 1030 nsf, with the vast majority being around 850 sf on average (the MSBA guideline area), for a total of 54,520 nsf. When compared to MSBA standard, the school has both less area and fewer classrooms than would be allocated. The difference is accounted for in the total population that the school was designed for, which was reported to us as 1,000. The current school is almost entirely overutilized in both area and over-programmed usage. There are 1,300 lockers provided and they are not used given the time and distance to travel between classes. Only the auditorium/drama space is over the standard. Though the number of special education spaces is in line with the standard, there is a greater number of small group and office spaces which matches the delivery model but the overall area dedicated is still too small. There is approximately 16% less administrative spaces than the standard. The Natick High School model of education departments, deans of students and vice principals and principal appears to be similar to the model the standard is built upon.

The MSBA standard is for classrooms with a population of 23 students at 35 square feet per student, with an additional 100 square feet for a teacher if no separate faculty space is provided (NHS has separate faculty space), and the room utilized 85% of the time. Overall the high school has classrooms of adequate size (according to MSBA standards of 850 sf). They are currently overutilized. Natick has class sizes of up to 30 students that works for the rooms sizes available (in addition to being better for teaching). The rooms are programmed up to 100% of the time. Natick High School is short 11 classrooms and two science classrooms in order to get the enrollment per classroom down to the MSBA standard of 23.

Core Academic Areas

There are 44 classrooms dedicated to core academic use and an additional 12 science classrooms and labs. The North Start Alternative High School has one full sized classroom and four half sized classrooms. The total area of these classrooms is 54,520 nsf or 82% of the area recommended by the Massachusetts School Building Authority (MSBA) guideline of 66,910 nsf at 850 square feet per classroom. The guidelines add an additional 100 nsf of teachers' workspace to be allocated to faculty offices. NHS teachers work spaces are divided up by department and make up two faculty offices, one on each of the second and third floor with a total area of 5,420 nsf, short of the 5,500 sf recommended. Guidelines set aside some 35 square feet per student in core classrooms, so NHS classrooms are sized for 22 to 27 students. At the 30 student occupancy many rooms are at, 27 to 30 sf is allocated per student – still above the code required 20 nsf per occupant.

All of the classrooms are fully utilized with either class in session or teacher preparatory use. The actual utilization of these classrooms is thus at the maximum possible with current scheduling. Classrooms are used between 86% and 100% of the possible blocks. We have not fully analyzed the schedule received from NHS, but plan to coordinate with administration there to run some utilization reports.

NHS is short of 11 general education classrooms and two science classrooms. The population of the preschool and the classrooms dedicated to that program are not included in this core classroom analysis.

Special Education

Natick High School has 33 rooms and just over 8,800 nsf dedicated to special education; one more room than the standard but only 55% of the 16,110 nsf recommended. The MSBA recommended area is based on substantially separate service delivery model. Interviews with the Vice Principal indicate that the facilities provided are utilized regularly according to their current inclusion method of servicing their students. The spaces range in size, most below the 500 nsf recommended and far fewer full sized classroom spaces. Spaces provided are for small groups, office space, and some for the school's Life Skills program. The main deficiency in the spaces, either quantity or quality discussed was the way the entrance to the courtyard bifurcated the special education office suite. This interrupts the connection between staff and students as this is a primary cut through the campus for those not wanting to circumnavigate the building to switch classes.

None of the observed spaces used for special education were in internal or awkward spaces. While there are clusters of SPED space that could be converted to general education classrooms, it would mean relocating the SPED to other areas within the mix of general education, especially given the inclusion model.

Art and Music

Facilities for art and music are inadequate for the current enrollment and schedule. Each program does have its own dedicated space(s) but the total area of the two programs is about 86% of the recommended MSBA area. The art rooms are almost the 1200 nsf per room recommended which is based on MSBA guideline of one period per day per 25% of the students and three separate spaces totaling 3,600 square feet. Art workroom and kiln space is sufficient equal to the guidelines. The art rooms are dedicated to the program and are located in center of the building along the central courtyard.

The total area dedicated to Music is below the standard, with total square footages 82% of those recommended. The quantity of some rooms is deficient. Band is 86% and chorus 122% of the 1,500 nsf each recommended; the music storage room is about half of the 500 nsf recommended. MSBA also recommends 7 rooms, each 75 nsf, for practice. Only three were observed.

An additional art room is needed and either an additional music room or expansion of the existing music rooms. One practice room has been repurposed as a copy room; returning this would still leave a three room shortage.

Technology

MSBA recommends 16,000 nsf of vocation and technology space for a school this size. It does not state what those classrooms are beyond five classrooms of 1,200 nsf and five classrooms of 2,000 nsf. NHS has seven classrooms dedicated to various digital arts and computer programming programs totaling 7,689 nsf. There is one robotics technology lab of just over 2,100 sf. Total area is 48% of the recommendation.

Although the total number of classrooms and total area is below the standard, the school does not report any lack of this program space. Each is outfitting with updated technology. As each room is adequately sized and they are located adjacent to similar uses, they do not present as easily reconfigured, unless the program needs were to change.

Health and Physical Education

Total area and quantity of rooms dedicated to PE is slightly above MSBA standards. Total area is 26,732 sf, is within rounding error of the 25,160 recommended for a high school of this population. There are two areas in one long space (four basketball court's worth of area) of 17,846 square feet, 149% the size recommended by MSBA. NHS also has a fitness center that is 17% larger than MSBA standard. Gym storage rooms total only 77% of the standard. Locker space undersized at only 38% the size recommended, but does have separate locker rooms for visiting and home teams. There are more director's offices, almost double that included by the MSBA. There is also a jogging track on the upper level of the gymnasium. This allows the space to operate similarly to a field house. The track is open to the community before and after school hours.

There is adequate space dedicated to health and PE at NHS in total, but the locker and storage space are well undersized when compared with the MSBA standard.

Media Center

The total media center space below the recommended area of 9,900 nsf. MSBA programs a media center / reading room and computer lab with no specific sizes per space. At 6,836 sf the reading room is only 69% the size recommended. There are stacks, reading and working areas and a central circulation desk. There is a conference room and library office and workroom at the back of the library. An online learning center is located on the third floor. We include this here as it seems to suit the recommendation for a computer lab.

The room is well appointed but very inflexible. It was expressed that the ability to configure the space to suit ever changing needs would be welcome.

Dining & Food Service

The cafeteria is 88% the standard size for a school population of 1,600. The primary kitchen is 89% of the size recommended. Total area dedicated to dining services is 1,500 sf smaller than the 12,700 sf determined by MSBA formulas. There are five serving lines serving four lunch seatings, each with 400 students. MSBA standard is three seatings and allocates 15 square feet per occupant (same as MA code would require). Based on that, the cafeteria could hold up to 486 occupants. This requires only two doors and the space is served by three. The cafeteria is used for other meetings and equipped for presentations as well.

The cafeteria is not large enough to handle three equal seatings given the current population. If more time was needed in the schedule as a way of alleviating pressure on academic scheduling more dining space is needed.

Stage / Auditorium

An auditorium and stage with fixed seating at 10,133 sf is at the front of the building. It has an entrance directly across the main corridor allowing access from the exterior and the corridor system has been designed to allow access to restrooms without needing to travel through the school. In total there is 13,879 sf of space between the fixed seating auditorium, 2,076 sf stage, associated storage and work areas. It is 133% the amount of space recommended by MSBA.

Medical

The medical suite is inadequate to the number of students at 75% of MSBA guidelines overall and with configuration not matching the standard. One waiting area is oversized but four interview rooms and four examination/resting rooms are missing. MSBA recommends 1,410 sf and NHS has 1,055 sf.

The suite is hemmed in on all sides. Meeting the standard would require an additional 400 square feet and reconfiguration of the existing to satisfy other requirements. Expansion would require relocation to another area or taking over an adjacent classroom (already in short supply).

Administration and Guidance

The aggregate area dedicated to administrative and guidance areas of the school is adequate at 84% of guideline requirements. The spaces are clustered along the main corridor with the main office adjacent to the entry and the guidance suite down the hall across from the library. The main office has more spaces than the model to accommodate the deans' offices and secretary space but each room individually is undersized. Principals' secretaries and waiting areas are all part of an open office area and taken together are adequate. The principal's office is undersized by about a third as is one of the vice principal's offices. One workspace is in the main office suite while two other copy rooms have been placed in repurposed rooms elsewhere.

Teacher's workrooms are included in this category and we include the central space from each faculty office suite. This is part of what makes the administration and guidance category suit the standard.

The guidance suite is well undersized and underserved. There is only 72% of the programmed 1,200 sf provided. It is one office short of the standard and each room is undersized.

Like the medical suite, the main office and the guidance offices are hemmed in on all sides. The guidance office would need to be relocated or take over an adjacent classroom to expand. Reallocating the teachers' workspaces to faculty offices would make faculty space adequate, but undersize the administration area provided – either way there is insufficient space for staff within the overcrowded school.

Custodial and Maintenance

The custodial areas are approximately 9% smaller than the MSBA standard. All but one of the spaces recommended for this category are present and vary between large and smaller than the recommendation. Most of the spaces are at the north end of the single storey block adjacent to the parking lots. Spaces are all clustered and adjacent to the cafeteria and auditorium allowing ease of cleanup and maintenance.

Other

Two district-wide programs / departments currently use space in the high school and are entirely outside of the spaces and areas in the MSBA standard. Additionally, they are located in between and use spaces that could be used for core academic space.

District-wide information technology currently uses three rooms totaling over 2,000 nsf. There are exterior windows in the two smaller spaces. All spaces are contiguous and could be reconfigured into two classrooms and some small group or office space.

The second district program is the preschool housed in five classrooms and five other spaces on the first floor of the south wing. The preschool suite totals just over 7,400 nsf. All classrooms are designed for preschool use with toilets, closets and kitchen spaces; actual class space is around 850 sf each. As the preschool operates independently there is an administration office and nurse's office attached. Some high school students participate in early childcare courses making use of the space the same as they do at the remote preschool classrooms.

Consideration should be given to relocating one or both of these programs. The space made available to the school for academic use is already adjacent to and comparably sized to other spaces. At least 80% of the area in each block could be converted to classrooms with moderate modification. Further programming would be needed to determine the best use for these areas. Further, each of these programs is essential to the school districts' functioning, so new space would need to be found and built out. Pros and cons need to be considered, but these two areas present most readily as options for expansion within the existing perimeter of the high school.

Other

Distributed throughout the building are several small rooms for mechanical, plumbing and electrical utilities; closets and storerooms for custodial services; and book/educational materials storage. These total about 11,000 sf and are part of the grossing factor. Their individual small and scattered nature make reclaiming difficult and would lead to storage of items in inappropriate places.

Existing Conditions Photographs



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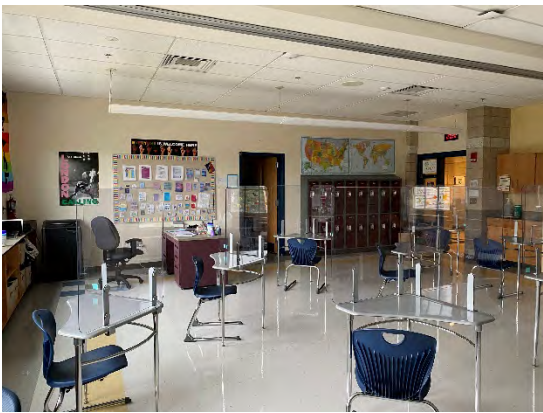
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Wilson Middle School

Wilson Middle School is 96% of Total Building Net Floor Area (NFA) per MSBA Standard for a 942 student middle school. This puts the current building as a whole adequately sized, or in our green category. Most of the spaces are adequately sized and there are a few classrooms of swing space. Undersized spaces such as the cafeteria and technology are managed by scheduling differing from that assumed by the standard. A full sized auditorium is included which is not part of the MSBA model. The gross square footage is 93% of the MSBA standards but much of that space is in the circulation space - corridors, stairs, elevators – due to the building geometry and it being two storeys.

Wilson Middle School							
Proposed Student Capacity / Enrollment	942						
	As-built		Utilization		MSBA Model		
MSBA Category	# of Rms	Area Totals	Assessment	% of Model Area	# of Rms	Area Totals	Delta
CORE ACADEMIC SPACES	53	43,652	Appropriate	97%	54	44,820	(1,168)
SPECIAL EDUCATION	13	6,432	Over Utilized	61%	21	10,570	(4,138)
ART & MUSIC	8	5,923	Under Utilized	123%	8	4,800	1,123
VOCATIONS & TECHNOLOGY	2	1,926	Over Utilized	30%	4	6,400	(4,474)
HEALTH & PHYSICAL EDUCATION	6	10,709	Under Utilized	127%	5	8,400	2,309
MEDIA CENTER	3	6,307	Under Utilized	109%	1	5,797	511
DINING & FOOD SERVICE	9	7,069	Over Utilized	70%	4	10,156	(3,087)
STAGE/AUDITORIUM	4	6,867	Under Utilized	429%	1	1,600	5,267
MEDICAL	6	757	Under Utilized	107%	6	710	47
ADMINISTRATION & GUIDANCE	21	3,901	Appropriate	100%	18	3,892	9
CUSTODIAL & MAINTENANCE	5	1,439	Over Utilized	60%	7	2,417	(978)
OTHER	1	361	NA			-	
Total Building Net Floor Area (NFA)		95,343	Appropriate	96%		99,562	(4,219)
NON-PROGRAMMED SPACES	41	33,181					
Total Building Gross Floor Area (GFA)2		140,190	Appropriate	93%		150,720	(10,530)
Grossing factor (GFA/NFA)		1.47				1.51	

Approaching Wilson one is presented with an 18th century English castle. There is a grandiosity to the exterior and interior alike. The building is arranged in a donut shape enclosing a courtyard. Rooms are along a double loaded corridor circumnavigating the courtyard on all four sides at the first floor and in an "L" along at the second floor. The double height spaces of the first floor are clustered along the other "L" and have no second floor. Three staircases, one in the entry rotunda, connect the two floors. The arts are important to this population as evidenced by the inclusion of an auditorium and the large mural painted on the building facing the auditorium entrance.

Enrollment is between 910 and 942 students (a bit over 200 per grade) and there are approximately 90 staff. Based on MSBA standards the school should be 99,562 net square feet and with a grossing factor of 1.51 should be 150,720 gross square feet. As-built it is almost 96% of the recommended size at 95,343 net square feet and a total of 140,190 gross square feet (a 1.47 grossing factor). It appears that the district made a decision to include certain programmatic elements at this school that the standard does not anticipate; this being the reason the net floor areas are so close despite MSBA programmed areas being smaller than the standard.

Natick middle schools service grades 5 through 8. Wilson is organized by teams – five in 5th grade, two full and one half team in 6th grade, two teams in 7th grade and three teams in 8th grade. Grades are organized in their own wings and are kept together as cohorts with each wing containing classrooms for each subject. Specials, except the library, are located on the first floor. Circulation through building is to keep the grades separate. Entry and exit of rooms is carefully choreographed and timed. Students enter at doors by grade and use only designated stairwells and corridors to limit overlapping by more than two grades.

Concerns about the site were expressed. Parking is a problem between when staff are trying to access the parking lot as cars are queued up for drop-off or pick-up. Parking is also limited and the staff have taken to parking along the fire access lane around the rear of the building. This is necessary at performances as well. There is also a limited amount of space for students between building and parking and for crossing to field.

We have not confirmed this information gathered in our first meeting with the school representatives. Doing so may change the way we have allocated space and our discussion of utilization.

Core Academic Areas

Most classrooms at Wilson Middle School are located on the first and second floor of the B and C wings with 5th and 6th grades on the first floor and 7th and 8th on the second floor. Each grade is clustered and has 11 or 12 classrooms accommodating all subjects except the specials. In total, the school has 38 general classrooms, four more than the MSBA standard; and eight science classrooms (two per grade), one less than the MSBA standard. The additional four classrooms are accounted for in each grade having a large group instruction room. All classrooms are within 90% of the maximum end of the guideline classroom size of 950 sf. The MSBA gives a range of 850 sf to 950 sf for middle school general classrooms based on 23 students maximum and an 85% utilization rate (assuming 30 periods per week). Science classrooms are approximately 1,000 sf or 85% of the standard. The prep rooms are oversized at almost 300 sf per two classrooms or double the area anticipated. There are a few classrooms currently unprogrammed and used as swing space.

Special Education

Wilson contains 13 dedicated special education spaces, mostly in the form of learning centers by grade compared to the 21 spaces recommended by MSBA; the total area provided is 60% of the recommendation. This discrepancy is explained by the difference in service delivery model. The MSBA standard assumes a substantially separate model and plans for full sized classrooms, seven in the case of Wilson, along with five resource rooms and two small group rooms. Natick schools operate on an inclusion model with most instruction via push-in and occasional pull-out instruction. As such, smaller learning centers servicing each grade and specialized services are provided via offices and small group work areas. Further, Natick provides staff and office spaces for psychologists and behavior counselors that are not anticipated by the standard. In Wilson some of these are clustered in the student service center.

Wilson has approximately 200 student who receive special education services.

Certain spaces are undersized or overutilized in comparison to the standard's small group rooms, but the function is different and therefore not entirely telling of whether space is deficient or satisfactory. Our observation is that there is a variety of spaces for individual, small group and whole group work that are scattered around the building. Services are provided in rooms close by general classrooms.

Art and Music

Spaces for both art and music programs are adequate or over sized currently. Taken together there is 23% more space than the MSBA standard. This is mostly accounted for in the band and music rooms.

Art classrooms are adequately sized at 1,100 and 1,200 sf or just under 97% of the recommended area. There is only one kiln room and the guidelines call for two. There is one art room per floor.

Band and music practice space is well served with 75% and 37% more space than the guidelines. Music is clustered in the A-wing on the first floor across from the auditorium.

Technology

MSBA sizes technology space assuming 25% of the student enrollment will use the rooms five times per week and in Wilson the model is four classrooms totaling 6,400 sf. Wilson has two classrooms, a Tech Education and a Tech Shop totaling 1,926 sf or 30% of the standard. The rooms are well equipped. The shop is offered to 6th through 8th grade students.

A data center has been created from part of the library on the second floor. Perhaps this is part of the Technology program?

Health and Physical Education

Wilson has a gym, locker rooms with showers, health instructors' offices with showers and a gym storage room. All spaces dedicated to health and PE total 10,709 sf, 27% more than the standard. All individual spaces are oversized when compared with the standard. MSBA guidelines would have a single 6,000 sf gymnasium and the Wilson has 7,795 sf, large enough to have two full sized basketball courts for gym. There are collapsible bleachers at one wall. Locker rooms are over 1,100 sf each, 12% better than the standard.

Media Center

Located on the second floor in the northwest corner adjacent to the rotunda, the library has a commanding view of the entrance drive and grounds. It is comprised of stack areas, reading spaces, a circulation desk and has recently been subdivided to create a data (computer) center and a flex space (to accommodate student group meetings and activities). The media center is 6,307 sf, 8% more than the guideline of 5,797 sf. The METCO office is in the southwest corner of the media center with no independent access.

Dining & Food Service

Wilson's cafeteria, at 4,467 sf is only 63% of MSBA's recommended size for the school's population. MSBA assumes a maximum of two seatings and requires the size to accommodate at least 1/2 of student population at a time. There are four seatings, one per grade, thereby keeping the occupancy below the maximum of 298 we calculate by the current code. Both the building code and MSBA use the same 15 sf/person to determine the area required. The schedule accommodates the four seatings, each being about 24 minutes. Timing is done to try to cap the number of students in the cafeteria at 120 students. When students are finished eating they are allowed to take a movement break, called Lunch Laps, around the building until their next period begins. Parents volunteer to monitor students while outside.

The kitchen is undersized at 75% of the standard, or only 1,676 sf. It does back up to the custodial and maintenance area giving easy access to the loading dock. Likewise kitchen storage is undersized at 86% of the standard, or only 442 sf.

Stage / Auditorium

The MSBA model does not provide for a separate auditorium or stage at the middle school level. It does provide for a 1,500 sf band room which has already been accounted for under art and music. Natick made a decision to include this program and large area. An auditorium and stage with fixed seating for 400 is located on the first floor A-wing. It has independent access from the exterior and the corridor system has been designed to allow access to restrooms and the courtyard without needing to travel through the school. In total there is 6,867 sf of space between the fixed seating auditorium, 1,400 sf stage and some associated storage areas.

Medical

The medical suite is appropriately sized and has at least one of each space called for in the standard. It is located adjacent to the main office and entry rotunda with independent access directly to the corridor. At 755 sf total, it is 6% larger than the standard, has a nurse's office/waiting area, toilet room, storage, and one exam rooms. The guidelines call for 4 exam rooms. The waiting room is oversized by 132% and performs some of the functions of the exam room.

Administration and Guidance

Administration and guidance space is clustered at the northwest corner of the building adjacent to the main entrance. Both the quantity of rooms and types, and area dedicated to each department is adequate. Total area for both is 3,901 sf or 100% of the standard. While the two are situated next to each other and staff can access each directly, the guidance office is down an "L" shaped corridor around the corner. This can make it feel remote for some and feel protected and more confidential for others. The guidance office is called the Student Service center and has seven offices and a reception/waiting area. The main office has

direct access to the rotunda to welcome visitors and monitor students coming and going. There are two assistant principals which aligns with the standard for this many students.

The model calls for a single conference room at 350 sf. Wilson has five conference rooms totaling 685 sf. This is appropriate to the team teaching model where the staff need to plan together. It is also more appropriate to the needs of schools everywhere as there is often a request for more conference space.

Custodial and Maintenance

District-wide the custodial and maintenance spaces are shy of both the area and types of spaces recommended by the guidelines. Wilson has just under 60% of the area recommended at 1,439 sf. There is no dedicated recycling room and one room functions as the storeroom, general supply and receiving room. There is a custodian's office at 195 sf.

Other

A few spaces fall into the other category until we can confirm with the school representatives. One is an IT room located in the library – we need to confirm whether this is for the school or a districtwide staff member. The other three are classroom sized spaces which our notes say are used as swing space for small group and pull out instruction currently. These are likely occupied during the COVID-19 pandemic to allow more distance between students.

Non-Programmed Spaces

Distributed throughout the building are several small rooms for mechanical, plumbing and electrical utilities; toilet rooms (required); closets and storerooms for custodial services; and book/educational materials storage. These total about 4,000 sf and are part of the grossing factor. Their individual small and scattered nature make reclaiming difficult and would lead to storage of items in inappropriate places. It is likely that some of the storage spaces would be repurposed in the future if the enrollment of Wilson goes over a 1000.

Existing Conditions Photographs



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Johnson Elementary School

Johnson Elementary School is 58% of Total Building Net Floor Area (NFA) per MSBA Standard for a 232 student elementary school. This puts the current building as a whole severely undersized, or in our red category. Half of the classrooms are adequately sized, though below the standard. The remaining classrooms and all other spaces are undersized and overutilized. One room functions as the gymnasium, cafeteria and auditorium and library is smaller than a modern kindergarten classroom. The building is not accessible. The gross square footage is only 71% of the MSBA standards.

Johnson Elementary School							
Proposed Student Capacity / Enrollment	232						
	As-built		Utilization		MSBA Model		
MSBA Category	# Rms	Area Totals	Assessment	% of Model Area	# of Rms	Area Totals	Delta
CORE ACADEMIC SPACES	11	9,473	Appropriate	92%	10	10,250	(777)
SPECIAL EDUCATION	6	1,665	Over Utilized	55%	6	3,020	(1,355)
ART & MUSIC	2	1,714	Over Utilized	69%	5	2,500	(786)
HEALTH & PHYSICAL EDUCATION	1	2,068	Over Utilized	33%	3	6,300	(4,232)
MEDIA CENTER	2	1,189	Over Utilized	59%	1	2,020	(831)
DINING & FOOD SERVICE	4	611	Over Utilized	13%	5	4,740	(4,129)
MEDICAL	2	162	Over Utilized	40%	3	410	(248)
ADMINISTRATION & GUIDANCE	7	1,043	Over Utilized	52%	11	2,015	(972)
CUSTODIAL & MAINTENANCE	1	1,447	Over Utilized	76%	7	1,900	(453)
OTHER		-				-	
Total Building Net Floor Area (NFA)		19,372	Over Utilized	58%		33,155	(13,783)
NON-PROGRAMMED SPACES	20	8,048					
Total Building Gross Floor Area (GFA)2		29,593	Over Utilized	71%		41,760	(12,167)
Grossing factor (GFA/NFA)		1.53				1.26	

Johnson Elementary School is configured in a very classical form with three wings, two of which reach out to greet users as they enter through the central doorway. It is raised a few steps at all entrances. From the front the building appears to be a single storey and have a true neighborhood scale. The main entrance is flanked symmetrically by offices and learning spaces as you enter and a corridor on the left leading to the library and to the right leading to the gymnasium/cafeteria/auditorium (cafegymatorium). Straight ahead is the 11-classroom wing which is two levels, each a half level up or down from the main entrance. The classroom wing is a single double loaded corridor with classrooms on the first floor (upper) and a mix of classrooms, utility spaces, and specialist learning spaces on the ground floor (lower level). The stairwell and exit at the far end are split level as well.

All classrooms have a long window wall providing natural light and ventilation and are equipped with storage closets, cubby spaces, and teaching walls. There is a warm feeling and they are reported as being sufficient in size despite being smaller than the modern classroom.

Most noticeable is the way every available space has been utilized; either by repurposing or by doubling or tripling up uses. The corridors are overprogrammed and inappropriately used for storage. In particular the first floor corridor is lined with storage and every available corner has been made to work for individual and small group activities.

Enrollment is about 232 students and there are approximately 26.5 staff. Based on MSBA standards the school should be 33,155 net square feet and with a grossing factor of 1.26 should be 41,760 gross square feet. As-built it is 58% of the recommended size at 19,372 net square feet and a total of 29,593 gross square feet (a 1.53 grossing factor).

The Johnson is very undersized and is singular among Natick elementary schools in its size, configuration, approach and site use. It is a true neighborhood school and has a warm feeling. That quality can be maintained but would require considerable work and time to provide the school with modern amenities and with full accessibility. The scope of work to make the building accessible, right size spaces, and modernize its systems would include rebuilding all entrances, widening of doorways, installation of an elevator, replacement of the library, replacement of the gymnasium with separate cafeteria and gymnasium and additions to the classroom wing to add special education, office, and storage space. The cost of this work would be in the range of \$400 to \$600 per square foot in today's dollars and would involve temporary relocation of the students during construction. Additionally, the cost and area of this work would trigger the need to bring the entire building up to current code, altering all existing spaces to improve energy performance and meet current structural design standards.

Core Academic Areas

Johnson's 232 students require 10 classrooms, three kindergarten with toilets at 1,200 sf each and seven grade 1-4 classrooms at 950 sf each. Classrooms are sized assuming 23 students at 35 sf per student plus 100 sf for the teacher. Natick's limits are around 22 for grades 1-4 so the MSBA model is a fair comparison. Johnson has 11 classrooms, 3 K which are 71% of the model and without bathrooms and 8 grades 1-4, all of which are about 90% of the model. The total classroom area is about 92% of the standard. These would all be undersized were the districts class size limit not around 22 students.

All classrooms have good proportions and access to natural light and ventilation. They were designed for a different educational model than is currently practiced but classrooms feel comfortable arranged for small group work and instruction. Though some ability to have more than one staff member working with students means some work is pulled into corridors.

Special Education

As would be expected in a school constructed in 1949, special education space is not only underserved, it is located in spaces that have been converted from other storage and other educational spaces and is accessed through other spaces. Total special education space provided is 55% of the guidelines and all but one space is undersized. This is also often because the guidelines are built upon a model of pull out or substantially separate special education programs. Services are delivered via push-in and occasional pull-out instruction and as such does not require full sized separate classrooms. When asked it was reported that the needs of the students are being met with the several smaller dedicated spaces provided and within the core classrooms. However, spaces are frequently shuffled to accommodate those needs. An

additional three to four learning centers and two to three offices are needed to serve the delivery model best.

The model does not anticipate school psychologists and adjustment counselors which are frequently needed and provided. In the case of Johnson, office spaces have been found by subdividing other spaces and are counted as part of the total existing area. Offices are also shared by staff working on different days.

Art and Music

Art and Music share a single 857 sf classroom. If each classroom were afforded their own room of this size the art room would be 86% of the recommended size and the music room 71% of the recommended size. Further there is no separate storage room for either program, nor a kiln space for the art room. The classroom was designed as a general education classroom and as such has no acoustic properties suiting a music room not the lighting and work surfaces needed for an art room.

Together the school has only 34% of the space recommended by MSBA. The model also assumes two sessions of each special per week.

Each program should be given their own space and appropriately sized and designed for its activities.

Health and Physical Education

The Johnson Elementary is served by a single 'cafegymatorium'. One room of 2,068 sf serves as a gym, cafeteria, and auditorium. The MSBA model sets the minimum size of a gymnasium at 6,000 sf making the one at Johnson 34% of the recommended size. There is no separate storage room or instructor's office. Additionally, the dining tables are stored at the periphery of the room making the available space barely the size of a basketball court. Each class has two gym sessions per week accomplished by having the room utilized 100% of the time.

The single shared room is inadequate for the needs of the school. A very careful coordination of schedule and group size limitation allow the school to make use of it. It is not accessible from any entrance. By code about 343 people could be seated in rows if the room were completely clear.

Media Center

The library and reading room are undersized and over utilized at 59% the size recommended by MSBA. It has been refurbished and made to work with a small stack area, a reading/story time area and small circulation desk. While it is one of the largest rooms in the school and has a very cozy/welcoming feel to it, it is smaller than a modern kindergarten classroom. There is a very small storage room but no librarian office.

Before and after school the library is used for queuing of students for the bus and occasionally by the before and after school program, ASAP.

Dining & Food Service

As discussed under Health and Physical Education, the same room functions as the gym and cafeteria. As a cafeteria, the room can seat 160 people at a time. As MSBA uses the same occupancy ratio as the building code and anticipates two lunch seatings this room is adequately sized. However, in order to accommodate the schedule around gym and other specials there are five seatings of 30 minutes each, but with 15 minute overlaps in transition.

Meals are prepared at the high school and are only warmed and served on site from a room that is less than 9% the recommendation. The model is built upon a full-service kitchen.

Table storage uses about 325 sf of the room when tables are folded. No separate room is available to store tables nor is the corridor due to several steps just outside the door.

At a minimum space needs to be added for storage and staff office space to make full use of the large room. Ideally either a new gymnasium or cafeteria should be added.

Medical

The MSBA guidelines call for a medical suite to have an office and waiting room, and examination room, and a dedicated toilet room all totalling 410 sf in a school with Johnson's enrollment. The Johnson has a single room of 134 sf and a small storage room. There is no separate exam room or toilet room. It is 40% the size required.

Administration and Guidance

This category includes all general office space, principal's office, conference space and teacher's work areas (copy, records, assembly). At under 52% of the required area, the Johnson school is severely underserved as all provided spaces are undersized and overprogrammed and many spaces like the copy room, dedicated conference room, records room, and guidance office spaces are non-existent. Offices are shared; accessed through other spaces; or made out of a corner of a larger space.

The principal's office is used for conference and is only 52% of the recommended size. The general office combines waiting and two administrative assistants in one room. The only toilet room provided is in the principal's office which she makes available to staff.

Custodial and Maintenance

Despite the boiler room taking up 1,013 sf of space on the ground level it provides little storage space and is also the custodian's office and workshop. There is a separate storage area below the gymnasium with 1,447 sf of storage space for all manner of items. It is accessed via stairway from the interior and exterior. It is difficult to retrieve items and in an inconvenient location.

Custodial and maintenance space is at a premium with only 76% of the design standard. Several small storage closets are scattered around the school providing some nearby storage of paper goods and

educational materials, but in total, they do not provide enough. Storage of educational materials is primarily along the first floor corridor on shelving and cabinets mixed with small breakout areas.

The receiving area is behind the gym/cafeteria and accessed via several steps. There is no loading dock or ramp available and the areaway available isn't conducive to trucks.

Other

Because of the age of the building the boiler rooms take up a great deal of space in proportion to the size of the school and are located in areas that would be more useful as educational spaces. Storage rooms are quite small and scattered which suited an older educational model. There are many toilet rooms, none of them accessible and half of them in a place that is not utilized regularly.

A great deal of work is needed to bring the spaces up to current code and standards and to integrate them into a modern school layout. Incremental changes to these types of space won't yield the most efficient layout or location.

Existing Conditions Photographs



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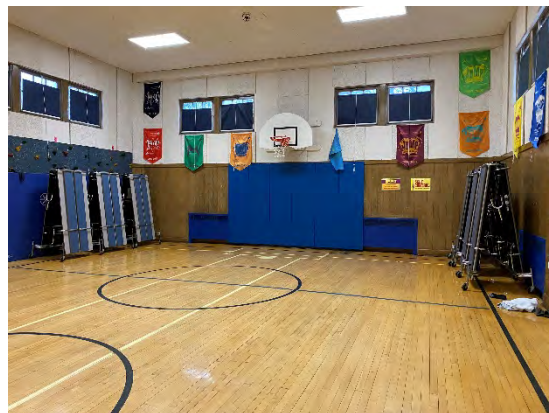
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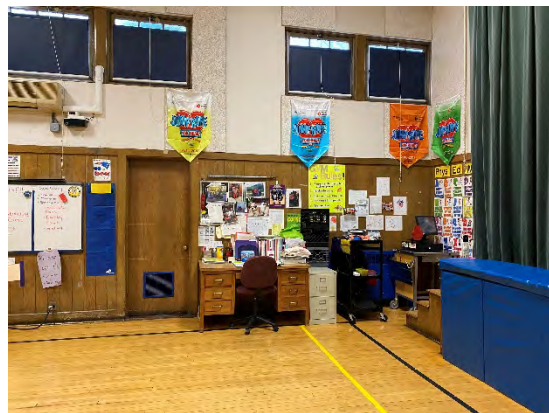
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Bennett-Hemenway Elementary School

Bennett Hemenway Elementary School is 97% of Total Building Net Floor Area (NFA) per MSBA Standard for a 550 student elementary school. This puts the current building as adequately sized and utilized, or in our green category. Classrooms are adequately sized. The cafeteria and gymnasium are undersized but managed by scheduling that differs from that assumed by the standard. Most deficiencies are in the storage area provided. The gross square footage is 102% of the MSBA standards mostly attributed to the amount of corridor space and building form.

Bennett Hemenway Elementary School							
Proposed Student Capacity / Enrollment	550						
	As-built		Utilization		MSBA Model		
MSBA Category	# of Rms	Area Totals	Assessment	% of Model Area	# of Rms	Area Totals	Delta
CORE ACADEMIC SPACES	32	28,996	Under Utilized	119%	24	24,300	4,696
SPECIAL EDUCATION	21	6,107	Appropriate	101%	12	6,040	67
ART & MUSIC	5	2,430	Over Utilized	64%	9	3,800	(1,370)
HEALTH & PHYSICAL EDUCATION	5	4,531	Over Utilized	72%	2	6,300	(1,769)
MEDIA CENTER	1	2,853	Appropriate	91%	1	3,145	(292)
DINING & FOOD SERVICE	7	5,856	Over Utilized	77%	5	7,596	(1,740)
MEDICAL	4	645	Appropriate	106%	5	610	35
ADMINISTRATION & GUIDANCE	8	2,723	Under Utilized	113%	12	2,415	308
CUSTODIAL & MAINTENANCE	3	192	Over Utilized	9%	7	2,150	(1,958)
OTHER	1	98				-	
Total Building Net Floor Area (NFA)		54,431	Appropriate	97%		56,356	(1,925)
NON-PROGRAMMED SPACES	24	23,546					
Total Building Gross Floor Area (GFA) ²		84,399	Appropriate	102%		82,958	1,441
Grossing factor (GFA/NFA)		1.55				1.47	

Bennett Hemenway Elementary School serves grades pre-K through 4. It is one of five elementary schools in the district and the latest new elementary construction. Ben-Hem also houses two pre-K classrooms. Pre-K programs exist at several schools across the district as one or two classroom pods. Enrollment is around 550 students, making it the most populous elementary school.

Three components make up Ben-Hem requiring a great deal of corridor space to link them. Two parts: a single storey east massing made up of specialized spaces administration and maintenance, a two storey arched "L" shaped mass containing all of the classroom space on single loaded corridors are linked at their north and south ends creating a courtyard in between. The third element, a single storey connecting corridor running at an angle east-west between the two bifurcates the courtyard in two. The building is surrounded on all sides by neighborhood which complicates a "back-of-house". This layout makes some sense in plan, but actually creates a school that is stretched out and spaces that feel distant from one another.

The entire building is 54,430 net square feet putting it at 96% of the MSBA standard. Gross square footage makes is 113% the size of the standard (94,088 sf as built versus 82,958 sf in the standard) mostly due to the large amount of circulation space, much of which is single loaded or bordered by exterior space. The grossing factor is 1.72 while the recommended factor per MSBA is 1.42.

Core Academic Areas

Bennett-Hemenway was built in 2000 so it would be expected that most spaces align with the current MSBA standards. The current MSBA guidelines anticipate 18 students in a kindergarten classroom and 23 in grades 1-4 classrooms. Pre-K guidelines exist for size, but not number of rooms as they are only part of an MSBA project if included as part of a larger program. Ben-Hem is one of three schools in the district that houses a pre-K program (Lilja and the high school being the other two). Based on the 550 students enrolled, MSBA recommends 24 classrooms; six kindergarten and 18 grades 1-4 assuming four to five sections per grade. Ben-Hem contains 30 classrooms: four pre-K, five kindergarten, and 23 grades 1-4. There are five to six sections per grades K-4 and two pre-K classrooms.

Classrooms are organized in blocks by grade running along the south and east curving corridors on two floors. They are all appropriately sized at between 95% and 105% of the recommended size. Pre-K classrooms and kindergarten classrooms have dedicated toilet rooms aligning with the standard. Currently two of the designed pre-K classrooms are used by third grade making them oversized and underutilized. Third grade had six sections when we performed our interviews and tour.

All of the classrooms are designed with storage, casework, and windows in a manner that easily facilitates whole group and small group or individual instruction.

Special Education

Just as at other schools in the district the delivery model for special education services is a mix of push-in and pull-out instruction. There are no substantially separate classrooms but there are specialized spaces for behavioral needs and ASD students. Each grade has learning center space all of which are at the size of a classroom or total greater than the small group rooms recommended by the MSBA model. Two learning center spaces have been created out of corridor space and is not fully enclosed space.

Several office spaces are provided for behavior specialists, psychologists and speech/language pathologists. All of these spaces are needed to deliver services as required by students. However, they do not exist in the MSBA model. They make up 35% of the total special education space in the school. Each office is within industry standards for single person offices, but some small for working with students or small groups. Removing these spaces puts the school below the 6,000 sf recommended by MSBA showing that the total amount of learning center space falls short of what the school could benefit from.

Art and Music

Ben-Hem has one art classroom and one music classroom, each of which falls within the adequate size for an individual room. However, the guidelines call for two art rooms, each with a storage and kiln room. Overall space dedicated to art and music is 64% of the standard.

The art room is designed as such with storage and a kiln room and appropriate work surfaces. It is remote from most classrooms in the east corridor, being at the far end of the south corridor.

The music room is design with acoustic separation, risers for ensembles and storage for instruments. It is within 3% of the recommended size. Two adjacent rooms were originally designed as practice rooms and have been repurposed to the ASAP office and a swing administration space.

Health and Physical Education

Ben-Hem has a single dedicated gymnasium that is 3,830 sf. The MSBA model sets the minimum size of a gymnasium at 6,000 sf making the existing room 64% of the recommended size. Two gym periods per week per class is built into the guidelines and the size recommended is to accommodate two sections at a time. Grades 1 through 4 students do have gym twice per week and kindergarten once per week with two gym classes running simultaneously for three days per week with two instructors. One gym instructor is shared for two days with the Brown School.

An office for the gym instructor is provided but without a shower. As a single office space it is appropriately sized for one person by industry standards but undersized by MSBA guidelines and for two people.

Storage is sufficient with three rooms all over the 150 sf recommendation.

Media Center

The library is 91% of the recommended size at 2,853 sf. There are stacks, a reading area and circulation desk. Kindergarten has library twice per week while the rest have it once per week. Even though it is undersized a portion has been taken over for a faculty work area which is where small group instruction takes place as well as faculty meetings. Half walls have been constructed to separate this area from the remaining library. One special education office is accessed only by passing through the library.

Dining & Food Service

MSBA recommends a cafeteria sized to accommodate half the student population at a time, allowing for a maximum of two lunch seatings. This model is not practiced at any of the Natick Public Schools. Ben-Hem has five seatings, one per grade for a half an hour each. The cafeteria is sized at 3,651 sf or 88% of the recommendation. By code it will seat 243 people at 15 sf per occupant. This would allow for lunch to be served in three seatings if desired.

The cafeteria also functions as the auditorium. There is a stage of 745 sf which is about 75% of the recommendation. It is not used regularly for performances, but the 4th grade band does practice there on Friday mornings. Otherwise, it is used by the after school program, ASAP.

Ben-Hem is the only elementary school to have a full service kitchen with meals prepared and served on site. For a school this size the current MSBA standard would have a kitchen almost three times the size of the existing 655 sf.

The space is also used before and after school for the ASAP program, BOKS program and for breakfast. It's adjacency to the main entrance make it ideal for a multi-function space that can be in service beyond the regular school day.

Medical

The medical suite is right on the standard area at 645 sf with dedicated nurse's office and waiting room, examination room, and toilet room. Only one exam/resting room is provided while the standard calls for three. The nurse's office is twice the size of the standard and serves some of the function of the resting room.

Administration and Guidance

As with the medical suite, the administration area provided is very close to the recommendation. It is 113% the size recommended at 2,723 sf overall. Space is allocated differently than the standard with multiple uses taking place in the general office/waiting room instead of several separate offices and the teachers' work room (sandwiched between the cafeteria and teachers' break room and accessed in the far north corridor or by passing through two other spaces) and being sized larger than the MSBA model.

The school's enrollment triggers the need for an assistant principal's office (and position) per the MSBA standard and Ben-Hem has provided that.

Conference space, while provided, is undersized by 14% and there is only one dedicated room. The guidelines indicate two should be provided and the experience of the school is that there is a need for more.

Spaces all appear to function well. Access to the teachers' workroom and breakroom could be improved and made more convenient as it is remote from the classrooms.

Custodial and Maintenance

Storage spaces are plentiful in number, scattered throughout the school, but are insufficient in size both taken individually and as a whole. Total area of all storage, maintenance and custodial spaces is 1,160 sf which is half of what the standard recommends. Of that about 300 sf is in storage lining corridors or in a shed installed in the south courtyard.

The custodian's office is 62% of the recommendation and there is no workroom or recycling room. The receiving is done adjacent to the gym and visible from the front of the building and there is no loading dock.

Other

There are no spaces in this category not described in other sections.

Existing Conditions Photographs



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Memorial Elementary School

Memorial Elementary School is 88% of Total Building Net Floor Area (NFA) per MSBA Standard for a 400 student elementary school. This puts the current building as inadequately sized at just under our threshold, or in our red category. Classrooms are adequately sized. The cafeteria and gymnasium are undersized but managed by scheduling that differs from that assumed by the standard. Most deficiencies are in the storage area and repurposing of flexible space into classrooms. The gross square footage is 89% of the MSBA standards mostly attributed to the amount of corridor space and building form.

Memorial Elementary School							
Proposed Student Capacity / Enrollment	403						
	As-built		Utilization		MSBA Model		
MSBA Category	# of Rms	Area Totals	Assessment	% of Model Area	# of Rms	Area Totals	Delta
CORE ACADEMIC SPACES	21	19,946	Under Utilized	110%	18	18,100	1,846
SPECIAL EDUCATION	10	2,803	Over Utilized	62%	9	4,530	(1,727)
ART & MUSIC	2	2,489	Appropriate	97%	6	2,575	(86)
HEALTH & PHYSICAL EDUCATION	4	4,324	Over Utilized	69%		6,300	(1,976)
MEDIA CENTER	1	1,565	Over Utilized	63%	1	2,484	(919)
DINING & FOOD SERVICE	5	5,018	Over Utilized	80%	5	6,261	(1,243)
MEDICAL	2	427	Over Utilized	84%	4	510	(83)
ADMINISTRATION & GUIDANCE	9	2,391	Under Utilized	113%	11	2,118	273
CUSTODIAL & MAINTENANCE	5	478	Over Utilized	24%	7	2,003	(1,525)
OTHER		-				-	
Total Building Net Floor Area (NFA)		39,441	Over Utilized	88%		44,880	(5,439)
NON-PROGRAMMED SPACES	26	17,024					
Total Building Gross Floor Area (GFA)2		59,971	Over Utilized	89%		67,697	(7,726)
Grossing factor (GFA/NFA)		1.52				1.51	

Memorial Elementary School is located on the south side of town in a bucolic setting that the staff make use of as part of their teaching. Most of the students arrive by bus or car. Enrollment is about 403 students and there are approximately 60 staff. Based on MSBA standards the school should be 44,880 net square feet and with a grossing factor of 1.51 should be 67, 697 gross square feet. As-built it is 88% of the recommended size at 39,441 net square feet and a total of 59,971 gross square feet (a 1.52 grossing factor).

There are 21 classrooms arranged in pods and organized with the specialized spaces and others in a sort of village. The pods feel like neighborhoods connected by streets and linked by a central square (lobby and main entrance). The exterior materials become the interior materials and the corridors step and slope like a landscape adding the feeling of an indoor village. The modifications made over the years have made more separate enclosed spaces and defined corridors. As a result it is less easy to find your way or discern where you are in the building. But, the plan is clear and does allow for an orderly and understandable arrangement of classroom pods and associated support spaces. Additions to the school can be easily done to expand capacity and restore the flexibility the school once had.

Support spaces such as learning centers, specialist offices, specials (gym, library, cafeteria), and storage are all undersized and are the primary reason for the whole building being undersized. Classrooms are on the whole appropriately sized and equipped.

Core Academic Areas

Memorial Elementary is comprised of 21 classrooms: four sections of each grade K-4 and one preschool. With an enrollment of 403 the MSBA model would require 18 classrooms all at the K-4 level; it does not provide for a pre-K classroom. Total classroom area is only 110% of the guidelines as most of the grades 1-4 classrooms are below the guideline per classroom by 8% to 12%. MSBA recommends 1,200 SF per Kindergarten classroom and 950 SF per classroom for Grades 1-4 with 23 students per classroom. The Kindergarten classrooms are appropriately sized and all but one have a dedicated bathroom.

The preschool classroom is only 65% of the standard and the bathroom is adjacent, but not in the room. It is located at the west end of the building and can be accessed independent of the main entrance to the building.

Classrooms are organized roughly in pods by grade; Kindergarten in the westernmost corridor and off the main lobby, then moving east the first grade, second grade and third grade pods. Fourth grade is scattered between second and third grade. There are three internal classrooms, one in each of grades K, 2 and 4. As there are four sections per grade and the school was rigidly designed, it is not conducive to getting all classrooms on an outside wall.

Special Education

Natick's model at the elementary schools is to provide a learning center for each grade. At Memorial there are three learning centers and a literacy center. There are no self-contained special education rooms as anticipated in the MSBA model (three at 950 sf) as the delivery method in Natick is for targeted push-in and pull-out instruction. So, while the total number of rooms provided for special education is in line with the standard the total area is only 62% the size recommended at 2,803 sf. The layout of the school is suited to having a learning center of classroom size per pod, but those spaces have been used as core classrooms. Grades K-2 share a space that is classroom sized and the others have small group rooms of under 200 sf. On a per grade basis, each has about half the amount of recommended space in a small group room.

Art and Music

Taken together, the art and music programs have 2,489 sf or 96% of the MSBA standard. Separately, the art room is 20% too small at 800 sf and the music room is 40% too large at 1,689 sf. However, neither have dedicated storage rooms and there is no kiln room. The music room is also internal with no exterior views. There are no practice or ensemble rooms provided, though it was not expressed that this is needed.

Health and Physical Education

Memorial's gymnasium is 4,017 sf. The MSBA model sets the minimum size of a gymnasium at 6,000 sf making the existing room about 70% of the recommended size. Two gym periods per week per class is built into the guidelines and the size recommended is to accommodate two sections at a time. Grades 1 through 4 students do have gym twice per week and kindergarten once per week with two gym classes

running simultaneously on Tuesdays with two instructors. One gym instructor is shared for with the Johnson School.

No office is provided for the gym instructor. One of 150 sf is recommended in the guidelines MSBA guidelines for a single instructor.

Storage is sufficient with three rooms totaling 307 sf or twice the recommendation.

Media Center

At 1,565 sf with a storage room, the library is only 63% of the MSBA recommendation. Being located adjacent to the main lobby would make it ideal for after hours use, however it is elevated a few feet above the lobby and accessed via a corridor and a second grade classroom. It is used after school hours as part of the ASAP program. Framingham State hosts grad school classes occasionally in this space.

Dining & Food Service

MSBA recommends a cafeteria sized to accommodate half the student population at a time, allowing for a maximum of two lunch seatings. Memorial has five seatings, one per grade for a half an hour each and some overlap between grades. The cafeteria is 3,078 sf, right in line with the recommendation. By code it will seat 205 people at 15 sf per occupant. This would allow for lunch to potentially be served in two seatings. This would require significant change in schedule and staffing to accomplish.

The cafeteria was originally designed to also be an auditorium. The stage area has been converted to a workroom and is not available for performance.

Memorial's kitchen is 1,372 sf and only 80% of the MSBA standard. The standard is based on a full service cooking kitchen. Meals are prepared, cooked, and served here. The serving line is in the cafeteria through windows to the kitchen. Entrance and egress for classes transition is organized with one set of doors for in and one for out at the opposite end. The staff lunch room is double the MSBA standard at 422 sf.

The space is also used before and after school for breakfast and the ASAP program. There is an exit/entrance directly to the north side which allows for drop off in the morning and pickup in the afternoon. ASAP enters this room directly. Professional development days are held in this room for four of the schools staff once per month.

Medical

The medical suite is located in the school's main office and accessed through the reception/general office area. It is undersized at 427 sf or only 84% of the recommended area. There is an oversized single nurse's office and waiting room as well as a small toilet room (not ADA accessible) but no separate examination/resting room. The standard would have a smaller waiting room and two examination rooms. Consideration should be given to creating independent access to the room while maintaining connection with the main office.

Administration and Guidance

Overall, the administration area provided is very close to the recommendation. It is 113% the size recommended at 2,391 sf in total. Space is allocated differently than the standard with multiple uses taking place in the general office/waiting room instead of several separate offices and one of the teachers' work room and being sized larger than the MSBA model. The teacher's workroom however is in what was formerly the stage in the cafeteria.

Conference space is adequately sized at 252 sf though there is only one dedicated room. While the guidelines indicate only one should be provided and the experience of the school is that there is a need for more.

Guidance space is oversized at 439 sf or almost 300% the recommendation. However, the standard appears to anticipate a single person's office and the current room houses two staff and meeting space.

Custodial and Maintenance

Despite having almost all of the custodial and maintenance spaces listed in the MSBA guidelines, each is severely undersized at anywhere from 10% to 66% of the recommended size. In total the custodian's office, workshop, storage, trash room and receiving/supply area total 478 sf or 24% of the recommended 2,000 sf.

Maintenance areas are clustered with the boiler and other utility rooms and back up to the kitchen area. This makes for efficient deliveries and cleanup.

There are several other dedicated storage rooms that total about 1,100 sf scattered around the school including book rooms, educational material storage rooms, and various custodial closets. Adding these spaces to the total still leaves storage space short of what is needed.

Other

There are no spaces in this category not described in other sections.

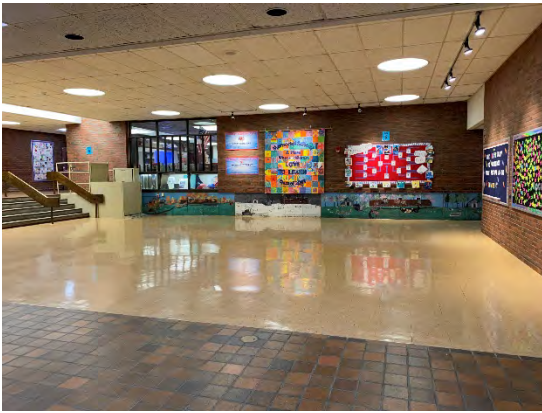
Existing Conditions Photographs



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Brown Elementary School

Brown Elementary School is 97% of Total Building Net Floor Area (NFA) per MSBA Standard for a 489 student elementary school. This puts the current building as adequately sized, or in our green category. Classrooms are a mix of adequately and undersized however there are four more than the standard anticipates. The cafeteria and gymnasium are undersized but managed by scheduling that differs from that assumed by the standard. Special education space is undersized mostly due to a different service model than anticipated by the standard. The gross square footage is 89% of the MSBA standards.

Brown Elementary School							
Proposed Student Capacity / Enrollment	489						
	As-built		Utilization		MSBA Model		
MSBA Category	# of Rms	Area Totals	Assessment	% of Model Area	# of Rms	Area Totals	Delta
CORE ACADEMIC SPACES	25	26,172	Under Utilized	123%	21	21,200	4,972
SPECIAL EDUCATION	12	4,414	Over Utilized	80%	11	5,540	(1,126)
ART & MUSIC	3	2,985	Under Utilized	116%	6	2,575	410
HEALTH & PHYSICAL EDUCATION	3	4,985	Over Utilized	68%	3	7,300	(2,315)
MEDIA CENTER	2	2,378	Over Utilized	83%	1	2,871	(493)
DINING & FOOD SERVICE	7	4,440	Over Utilized	73%	4	6,042	(1,602)
MEDICAL	3	552	Under Utilized	108%	4	510	42
ADMINISTRATION & GUIDANCE	9	2,494	Under Utilized	106%	12	2,354	140
CUSTODIAL & MAINTENANCE		365	Over Utilized	17%		2,089	(1,724)
OTHER		-				-	
Total Building Net Floor Area (NFA)		48,785	Appropriate	97%		50,480	(1,695)
NON-PROGRAMMED SPACES	20	18,234					
Total Building Gross Floor Area (GFA)2		71,797	Appropriate	93%		77,238	(5,441)
Grossing factor (GFA/NFA)		1.47				1.53	

Brown Elementary School is located in the northwest of town, close to Rte 9 and adjacent to the Kennedy Middle School. The current construction on the Kennedy has changed and will continue to change the site surrounding the Brown. Driveways approach the entrance on the south side of the building and a drive loop continues around the building for busses and into an adjacent neighborhood.

The school was originally the twin of the Lilja School. Over the years changing demographics and different site conditions have lead to additions and renovations that disguise their beginning except for the original entrance and cafeteria/gymnasium areas. Though looking quite different now, both have reoriented their entrances to the opposite side; both have courtyards; and both have six classroom modular additions.

Brown is laid out in a series of double loaded corridor wings that extend from a terraced lobby. Upon entry corridors go left, right, and straight. A loop is made to the right around a courtyard; and off that the most recent addition, a permanent modular wing. The sprawling wings can make parts of the school feel distant from the main office and from the specialized spaces (gym, library, cafeteria, art, music). Corridors are airy and the one looping the courtyard has nice views. There are 25 classrooms arranged by grade clustered in wings.

Enrollment is about 489 students and there are approximately 80 staff. Based on MSBA standards the school should be 50,480 net square feet and with a grossing factor of 1.53 should be 77,238 gross square

feet. As-built it is almost 97% of the recommended size at 48,785 net square feet and a total of 77,109 gross square feet (a 1.58 grossing factor).

The site around the school is tight but has potential. Only portions are currently is not considered integral to the school and students' education. Consideration should be given to linking spaces to the outdoors as almost every room has a view and natural daylight. Playground spaces should be linked well and easily accessible to minimize travel time and maximize safety.

Core Academic Areas

Brown Elementary School is a 25-classroom school with five Kindergarten rooms and four grade 1 and grade 2 classrooms and five grade 3 and grade 4 classrooms. There are no preschool classrooms. With an enrollment of 489 students the MSBA model would have five Kindergarten classrooms and 16 grades 1 to 4 classrooms (four sections per grade). Grades are clustered in wings with only one Kindergarten room not being adjacent to the other four.

MSBA recommends 1,200 SF per Kindergarten classroom and 950 SF per classroom for Grades 1-4 with 23 students per classroom. Natick has a cap of roughly 22 students per classroom which would mean that rooms at least 90% of the standard would be sized on a unit basis within the standard. By MSBA standards, the majority of Brown's classrooms are all oversized with only grade 1 below the standard at about 775 sf each (82% of the standard). Kindergarten classrooms range from 1,000 sf (one room without a toilet room attached) to 1,400 sf and classrooms for grades 2-4 range from 904 SF to 1,387 with most around 1,000 SF. The classrooms on the whole are generous and work for a variety of teaching models.

First grade classrooms are located in a modular structure that appears to be built as a permanent addition with foundations and a fully enclosed connector and restrooms.

Special Education

Although 12 spaces are provided to the 11 recommended by MSBA, the total area provided is 80% of the recommendation. This is primarily due to the difference in service delivery model. The MSBA standard assumes a substantially separate model and plans for full sized classrooms, one per grade level, along with a few small group instruction rooms. Brown, like the other Natick elementary schools operate on an inclusion model with most instruction via push-in and occasional pull-out instruction. As such, smaller learning centers servicing each grade and specialized services are provided via offices and small group work areas. Further, Natick provides staff and office spaces for psychologists and behavior counselors that are not anticipated by the standard.

Certain spaces are undersized or overutilized in comparison to the standard's small group rooms, but the function is different and therefore not entirely telling of whether space is deficient or satisfactory. Our observation is that there is a variety of spaces for individual, small group and whole group work that are scattered around the building. Services can be provided close by classrooms.

Art and Music

Art is provided in a dedicated classroom of 1,344 sf which is 34% above the recommended size. There is also an attached art storage room that is smaller than the standard, though there is no kiln provided.

Similarly the music room is a dedicated room of 1,392 sf which is 28% larger than the standard. Instrument and general storage are in the room and are undersized for the program at the Brown School. The staff have organized and stored things efficiently to allow for maximum use of the classroom area. There are no practice/ensemble rooms where the guidelines recommend three totaling 225 sf.

Taken together the space provided for these programs is 116% of the recommendation at 2,985 sf.

Health and Physical Education

The gymnasium at Brown is 4,372 SF, only 73% of MSBA's recommendation of 6,000 SF minimum. The recommended size of the gym assumes each class having gym twice per week. Lilja students have gym twice per week which is accommodated by having two instructors and two classes simultaneously. It was not reported that the current size of the gym presents any difficulties with delivering services. The gym instructor does not have a dedicated office or shower area as is recommended. Storage is combined with the office and at 233 sf is only 77% the size needed for both uses.

Brown's gymnasium also functions as the auditorium with a stage of 380 sf attached. At only 38% of the guideline, it is too small. However, it does back up to the music room allowing for use of the music room as a backstage and prep area for performances. The synergy is good but does not overcome the small size. The gym can seat 625 people in rows of chairs at 7 sf/occupant per building code.

The gymnasium is also used for before and after school programs. The BOKS program occupies the room in the morning and the YMCA Tobin student line up for the bus in the afternoon. The location adjacent to the main entrance and its own entrance to the pick-up and drop-off lane make it an ideal space for use outside of school hours.

Media Center

At 2,378 sf the media center is 83% of the recommended area of 2,871 sf. There are stacks, a reading/storytime corner and circulation desk. A small library storage room is provided; its location and size seem like it was once the library office.

Other spaces are accessed through the library including the school psychologist's office and the ASAP office. Needing to access these through the library makes them feel like they were placed where space was available and is not a benefit to either the their occupants or the library's.

Dining & Food Service

Brown's Cafeteria, at 2,836 SF is only 77% of MSBA's recommended size for the school's population. MSBA assumes a maximum of two seatings and requires the size to accommodate at least 1/2 of student

population at a time. There are five seatings, one per grade, thereby keeping the occupancy below the maximum of 189 we calculate by the current code. Both the building code and MSBA use the same 15 sf/person to determine the area required. The schedule accommodates the five seatings, but the room would allow as few as three seatings with appropriate furnishings.

The cafeteria was originally a combined gymnasium and cafeteria, so the room has no outside view and is lit from a high clerestory. Acoustics are managed by walls covered in tectum. And the room is distant from both the outdoor playspaces and the gymnasium. We note this as recess follows lunch is has students travelling the length of the building several times a day.

Medical

The medical suite contains all spaces recommended by the MSBA standard – a nurses office and waiting room, an examination/resting room and a dedicated toilet room. The guideline is for two exam/resting rooms and Brown only has one. Still, the total area is 8% larger than the standard at 552 sf. Access is independent of any other space and it is located adjacent to the lobby, main office, and gym.

Administration and Guidance

Most of the administration and guidance areas are clustered around the main lobby. The guidance office and assistant principal are independent offices outside of the main office. The remainder of the spaces, general office, principal's office, conference room, and teachers work room are all in one block. Taken together the total space dedicated to administration and guidance is only 140 sf more than the guideline at 2,494 sf. Multiple uses are within the general office, including the principal's secretary, which is why it's slightly oversized; the principal's office is 40% larger than the guideline containing both a dedicated toilet room and closet; the conference room is 50% larger than the standard, but suits the team sizes that often meet in it; and there is a assistant principal's office (required with Brown's enrollment) that is 221 sf or 184% the size in the guidelines. The guidance office is sized appropriately as a single room substituting for two 150 sf rooms in the guidelines.

Efficiencies could be found within the contiguous spaces to right size and some and create more separate spaces. However those that are not contiguous would be more difficult to split without looking at adjacencies or relocation of program.

Custodial and Maintenance

Much like the other schools, dedicated custodial and maintenance space is severely undersized. At 365 sf of custodian office space and storage space it is only 17% of the recommended 2,089 sf. There are storage closets in various locations as well as book and educational material storage totaling another 1,884 sf but these are not of the type the MSBA standard is listing. These spaces are necessary to store materials directly related to educating students. Space needs to be made available to store paper goods, cleaning and repair materials. The standard does not anticipate using mechanical areas, which is often the case when maintenance areas are lost.

Existing Conditions Photographs



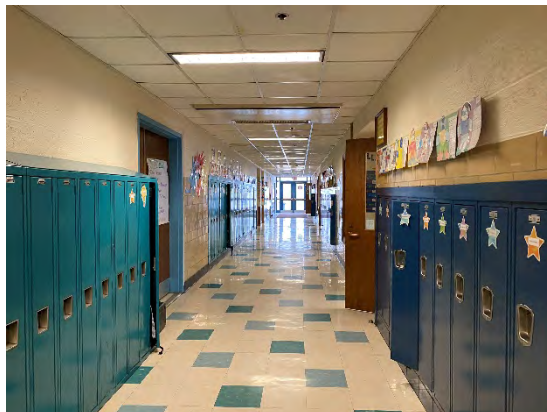
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Lilja Elementary School

Lilja Elementary School is 87% of Total Building Net Floor Area (NFA) per MSBA Standard for a 431 student elementary school. This puts the current building as inadequately sized, or in our red category. Classrooms are a mix of adequately and undersized. The cafeteria and gymnasium are undersized but managed by scheduling that differs from that assumed by the standard. Special education space is undersized mostly due to a different service model than anticipated by the standard. The gross square footage is 82% of the MSBA standards.

Lilja Elementary School							
Proposed Student Capacity / Enrollment	431						
	As-built		Utilization		MSBA Model		
MSBA Category	# of Rms	Area Totals	Assessment	% of Model Area	# of Rms	Area Totals	Delta
CORE ACADEMIC SPACES	21	18,078	Appropriate	94%	19	19,300	(1,222)
SPECIAL EDUCATION	12	6,739	Under Utilized	149%	9	4,530	2,209
ART & MUSIC	3	2,404	Appropriate	93%		2,575	(171)
HEALTH & PHYSICAL EDUCATION	3	4,743	Over Utilized	75%	3	6,300	(1,557)
MEDIA CENTER	5	2,505	Appropriate	96%	1	2,610	(105)
DINING & FOOD SERVICE	7	3,852	Over Utilized	59%	5	6,515	(2,663)
MEDICAL	3	543	Under Utilized	106%	4	510	33
ADMINISTRATION & GUIDANCE	5	1,500	Over Utilized	70%		2,146	(646)
CUSTODIAL & MAINTENANCE	2	246	Over Utilized	12%	7	2,031	(1,785)
OTHER		-				-	
Total Building Net Floor Area (NFA)		40,610	Over Utilized	87%		46,516	(5,906)
NON-PROGRAMMED SPACES		12,617					
Total Building Gross Floor Area (GFA) ²		57,882	Over Utilized	82%		70,993	(13,111)
Grossing factor (GFA/NFA)		1.43				1.53	

Lilja Elementary School is laid out in a donut with four double loaded corridors enclosing an outdoor courtyard. There are two spur corridors, one at the northwest of the building leading to the cafeteria and the other at the southwest comprised of six modular classrooms. Each wing contains roughly one grade level and a series of specialized rooms. The special education space is distributed throughout the school with a resource room dedicated to each grade adjacent to core classrooms. Originally facing Oak Street, the entrance from the main parking lot is still used for drop-off and pick-up. The cafeteria is adjacent to this entrance. The main entrance facing Bacon Street is for bus drop off and visitors and enters into an airy lobby with the main office, gymnasium and library directly connected. Navigating the school is easy and the corridors are well lit having access to the exterior via the courtyard and doors at the end of each.

Enrollment is about 431 students and there are approximately 60 staff. Based on MSBA standards the school should be 46,516 net square feet and with a grossing factor of 1.53 should be 70,993 gross square feet. As-built it is 87% of the recommended size at 40,610 net square feet and a total of 57,882 gross square feet (a 1.43 grossing factor).

The net floor area is 87% of the MSBA guidelines with the deficiency primarily in the gym, cafeteria, custodial, and administration space. While the total square footage of classrooms is adequate, this is achieved by having two more than the MSBA standard as all classroom are under the 950 to 1,200 sf

recommended. Gross building area is only 81% of the design guideline which suggests a more efficient building and a further deficiency in toilet rooms and storage space.

Many parents drive their children to school and pick them up. The entrance and exit for the car loop is the same point of connection to the main road. This condition creates a bottleneck as well as a dangerous area since traffic is flowing in crossing directions at the same place.

The entrance for visitors is confusing. The main parking lot does not face the main entrance and there are very few spaces near the Bacon Street entrance. Visitors driving to the school are not directed to the main entrance with visitor parking. Furthermore, after a visitor parks in the main parking lot (not the visitor lot), there is no signage directing visitors to the main office. Visitors must walk to the other side of the building to find the main entrance.

Core Academic Areas

Lilja houses two Pre- K classes, five classes of first grade, four classes per grade of grades one, two and four, and three third grade classes. Within these classrooms, there are two combined first and second grade classrooms and two combined third and fourth grade classrooms. This is the only school with the combined grade model within the district (students are with the same group and same teacher for two consecutive grades).

MSBA recommends 1,200 SF per Kindergarten classroom and 950 SF per classroom for Grades 1-4 with 23 students per classroom. By MSBA standards, Lilja's classrooms are all undersized: kindergarten classrooms range are around 1,140 sf and classrooms for grades 1-4 range from 821 SF to 899 SF. Though the classrooms are small in square footage, there are more classrooms at Lilja than are recommended, so the number of students per classroom falls under 23 and feels spacious enough by its users.

Six of the classrooms are in a modular structure which appears to be constructed in a permanent manner with foundations and enclosed connecting corridor. The size of these rooms needs to be checked as they appear to be well below the standard by plans but appear more appropriate in person.

Special Education

Based on a school of 431 students, MSBA recommends three Special Education classrooms of approximately 950 SF each. (Equal to surrounding classrooms is the minimum guideline.) Additionally, two resource rooms and one small group ready room, all of 500SF, are recommended. Lilja's Special Education areas exceed the spaces recommended by MSBA in total for its student population. There is more space for small group work areas and a room dedicated to English Language Learners. Additionally, two OT/PT rooms are in service at Lilja.

Spaces appear to be equally distributed around the school with easy access by each grade within a wing. There was no expression of additional need but the space use was necessary to deliver services to students.

Art and Music

Lilja's Art room of 1,073 SF satisfies MSBA's recommendation of 1,000 SF. However, missing from the recommended art spaces is a workroom for the teacher and a kiln room. A storage closet is provided.

The music classroom of 1,194 SF satisfies MSBA's recommendation of 1,200 SF. However, missing from the recommended music spaces is an ensemble room, and small practice rooms.

Practice rooms are often underutilized when provided and become offices. However, these are necessary if the school has a cohort with strong interest in music.

Health and Physical Education

Lilja's Gymnasium of 4,554 SF is only 76% of MSBA's recommendation of 6,000 SF. The recommended size of the gym assumes each class having gym twice per week. Lilja students have gym twice per week which is accommodated by having two instructors and two classes simultaneously on two days per week. It was not reported that the current size of the gym presents any difficulties with delivering services. The gym instructor does not have a dedicated office or shower area as is recommended. Storage appears to be adequate.

The gym is of sufficient size to accommodate the full school population in rows of chairs. Current code would allow 650 occupants in chairs.

Space is needed for the instructor separate from the gymnasium itself. It should be adjacent and connected to the gym. Showers are not often utilized at the elementary level so consideration of providing one may involve other agreements the district may have with staff.

Media Center

Lilja's media center, story-telling room and associated storage rooms all total 96% of the MSBA recommended area. The guidelines don't state how the area is to be allocated so we take all spaces in their totality. MSBA's recommendation of 2,610 SF is based on the student population. The model assumes a traditional model more of stacks and reading areas than today's current media centers.

Our interviews didn't reveal any concerns with library's size or configuration.

Dining & Food Service

Lilja's Cafeteria, at 2,355 SF is only 73% of MSBA's recommended size for the school's population. MSBA assumes a maximum of two seatings and requires the size to accommodate at least 1/2 of student population at a time. The Lilja has five seatings, one per grade, thereby keeping the occupancy below the maximum of 157 we calculate by the current code. Both the building code and MSBA use the same 15 sf/person to determine the area required. The schedule accommodates the five seatings and allows all but one group to have recess immediately following.

The cafeteria was originally the gymnasium and cafeteria so the room has no outside view and is lit from a high clerestory. Acoustics are managed by walls covered in tectum. And, the room is distant from both the outdoor playspaces and the gymnasium. We note this as recess follows lunch is has students travelling the length of the building several times a day.

Medical

The MSBA recommends three types of spaces in the Medical Area: a nurse's office/waiting room, an examination/resting room and a dedicated toilet. Lilja's medical area has each of these types of spaces. They vary from the recommendations only in size. The office and waiting area is slightly larger than recommended and the exam room is slightly smaller than recommended. Overall, the medical area is appropriate.

Administration and Guidance

The administration office at Lilja is severely undersized. The general waiting room is 76% of the MSBA recommended size. The principal's office is only 54% of the recommendation. This area is lacking a conference room, and a supervisory room according to MSBA.

Workspace is along the internal corridor to the administration office and requires work along a counter with little space for both passage and work.

The guidance office is one oversized office which skews the numbers further as it belies the shortage of administration space overall.

The teachers' workroom and breakroom are not in this area but are across the lobby it the fourth grade corridor. Both rooms are oversized according to MSBA.

It was not reported that the existing spaces are a concern, however the lack of a conference room should be addressed. Conferences currently take place in any available free space.

Custodial and Maintenance

Description of conditions and comparison to MSBA standards

The custodian's office and toilet is generous for MSBA standard. However, this department is severely underserved at only 12% of the recommended area and lacking several spaces including a custodial closet in each wing of the school, a workshop, a receiving and general supply room, a recycling room, and a storeroom. One large below grade storeroom provides for all manner of storage. It is accessed only from the exterior of the building under the grade 3-4 wing.

Storage spaces are often converted to educational spaces, which accomplishes the most pressing need for educating students. Often that loss of dedicated storage space gives way to items being stored inefficiently and in readily visible places.

Other

Lilja has accommodated the growth in student population by adding more classrooms to the school and separating the gymnasium from the cafeteria in two expansions. Additionally, the special education spaces have expanded within the building to serve not only the growing population but also a wider diversity of educational needs than is planned for the MSBA. Despite having accommodated school population growth at the level of the building in these important ways, the school building remains undersized in its cafeteria, gymnasium, art and music rooms and lacks space to deliver these educational opportunities in a contemporary manner.

Existing Conditions Photographs



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6. Diagrams by School

Existing Space Use

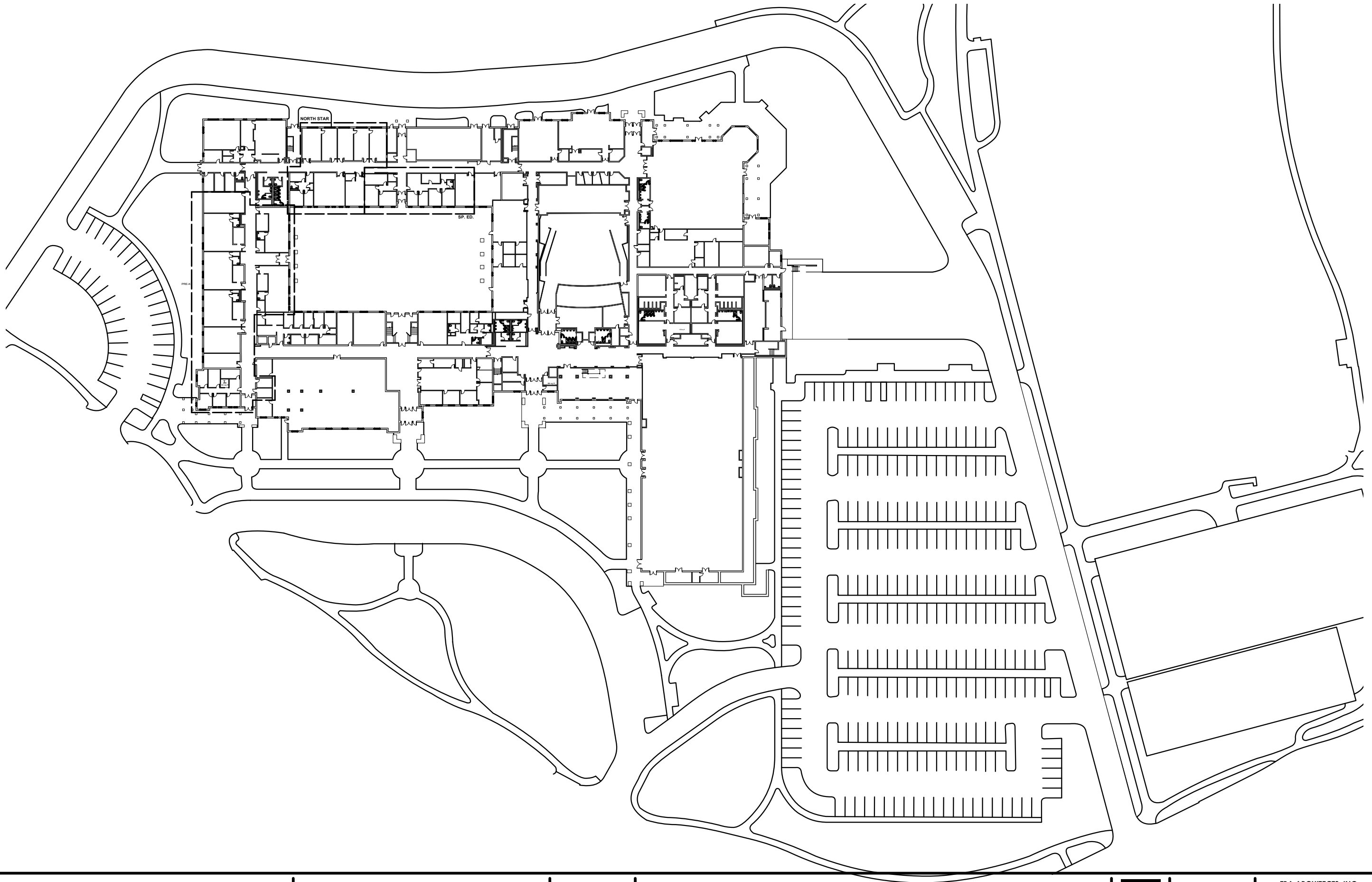
Space Utilization

Site Plan Space Use

Before School Circulation & Programs

After School Circulation

Recess and Lunch Transitions



New Natick High School

15 West Street, Natick, MA 01760

NHS-1.0

Site Plan



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SPACE LEGEND

Pre-K	PERFORMING ARTS	FINE ARTS	GYM	CAFETERIA	ADMINISTRATION	STORAGE
GUIDANCE	SPED	WORKSPACE	NURSE	MEDIA CENTER	M E P	CUSTODIAN
SHARED/ GENERAL	ENGLISH	SOCIAL STUDIES	HEALTH	MATH	LANGUAGE	SCIENCE
OTHER						



OVER UTILIZED

APPROPRIATE

UNDERUTILIZED

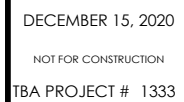
INAPPROPRIATE



15 West Street, Natick, MA 01760

NHS-1.4

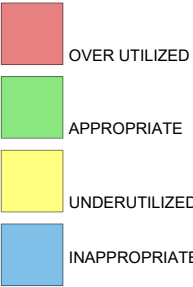
First Floor Plan Space Utilization



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SPACE LEGEND



OVER UTILIZED

APPROPRIATE

UNDERUTILIZED

INAPPROPRIATE

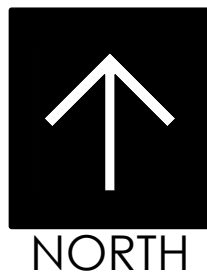
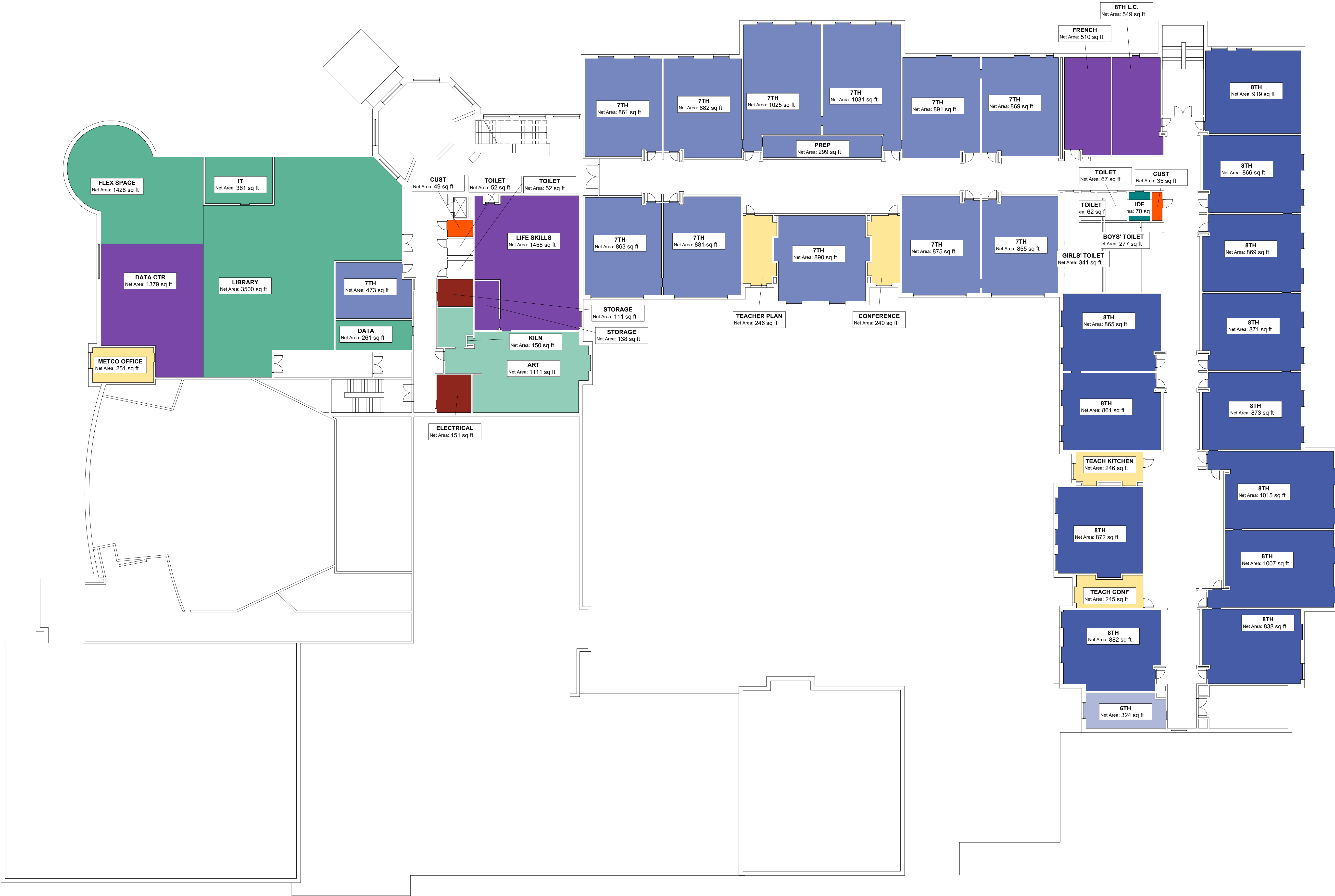


	RESTROOMS
	STORAGE
	ADMINISTRATION
	DINING/ FOOD SERVICE
	MEDIA
	ART & MUSIC
	HEALTH & PE
	CLASSROOM-GRADE 5ARTEN
	CLASSROOM-GRADE 6
	CLASSROOM-GRADE 7 &2
	CLASSROOM-GRADE 8
	WORKROOMI-GRADE 3
	SPECIAL ED.I-GRADE 4
	TECH/SHOPVI-GRADE 5
	CUSTODIANI-GRADE 6
	MEP3SSROOM-GRADE 7
	CLASSROOM-GRADE 8
	WORKROOM
	SPECIAL ED.
	TECH/SHOP

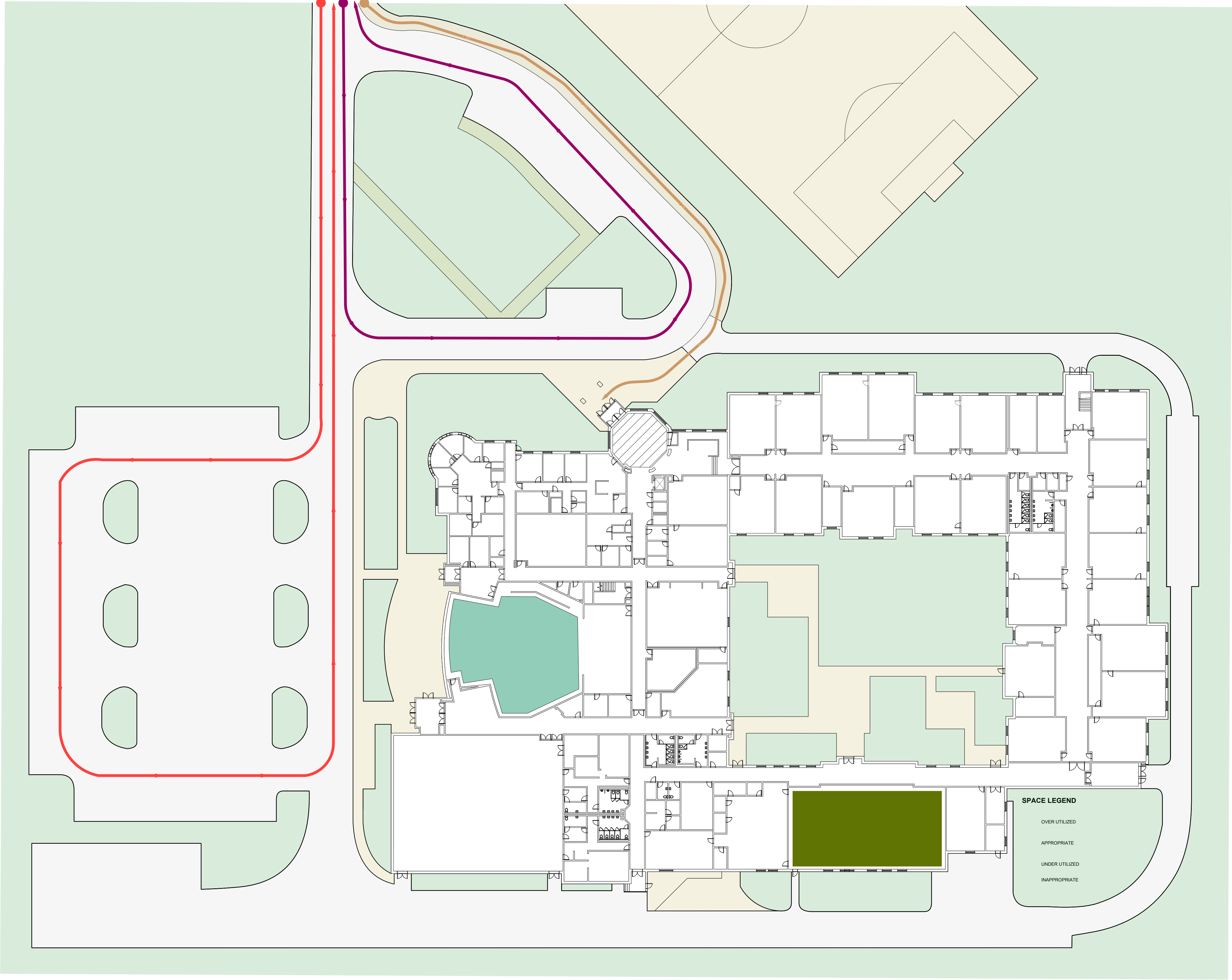


SPACE LEGEND

- RESTROOMS
- STORAGE
- ADMINISTRATION
- DINING/ FOOD SERVICE
- MEDIA
- ART & MUSIC
- HEALTH & PE
- CLASSROOM-GRADE 5/ARTEN
- CLASSROOM-GRADE 6
- CLASSROOM-GRADE 7 & 2
- CLASSROOM-GRADE 8
- WORKROOM-GRADE 3
- SPECIAL ED.I-GRADE 4
- TECH/SHOP-I-GRADE 5
- CUSTODIANA-GRADE 6
- MEPSSROOM-GRADE 7
- CLASSROOM-GRADE 8
- WORKROOM
- SPECIAL ED.
- TECH/SHOP



BEFORE SCHOOL		
EARLY RISERS	7:15AM	
BREAKFAST	7:30-7:45AM	
6TH & 7TH	7:35AM	
5TH	7:35AM	
DOORS OPEN	7:00 AM	
CLASS BEGINS	7:50 AM	
CARS	BUSES	WALKERS



SPACE LEGEND

OVER UTILIZED

APPROPRIATE

UNDER UTILIZED

INAPPROPRIATE

WILSON MIDDLE SCHOOL

22 Rutledge Road
Natick, MA 01760

D-3.0

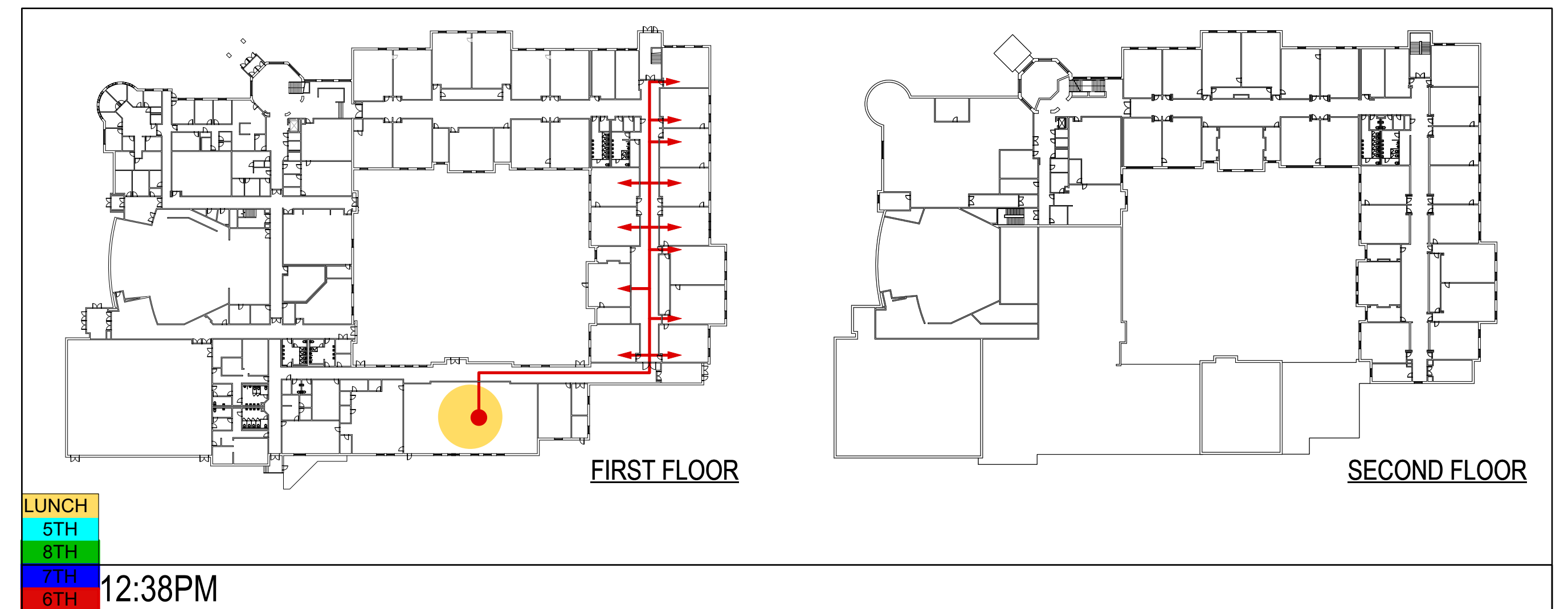
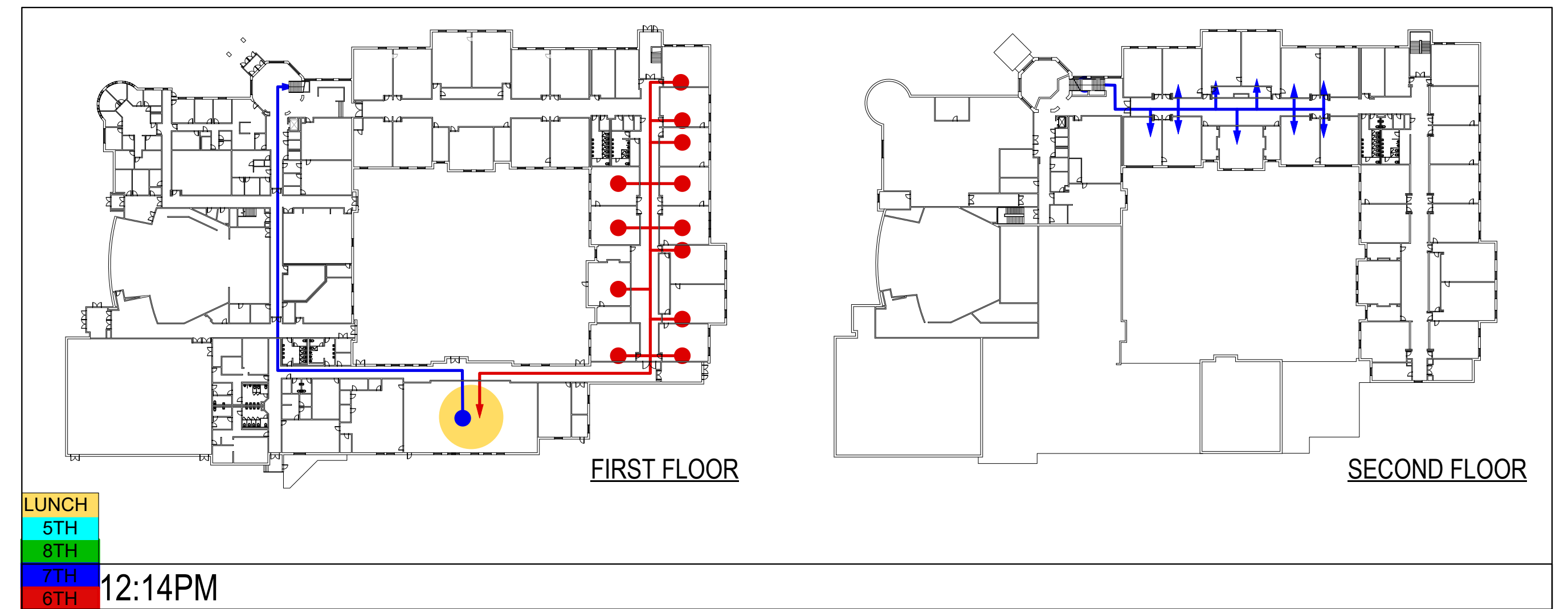
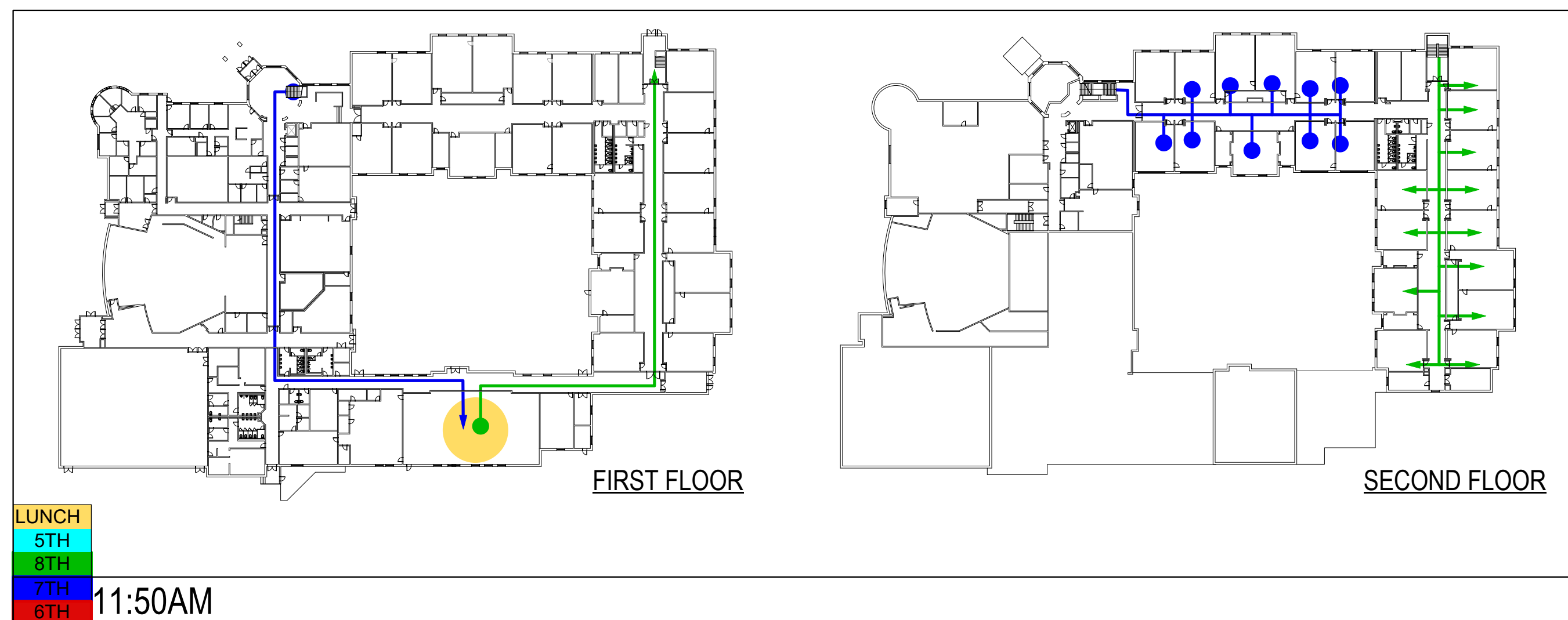
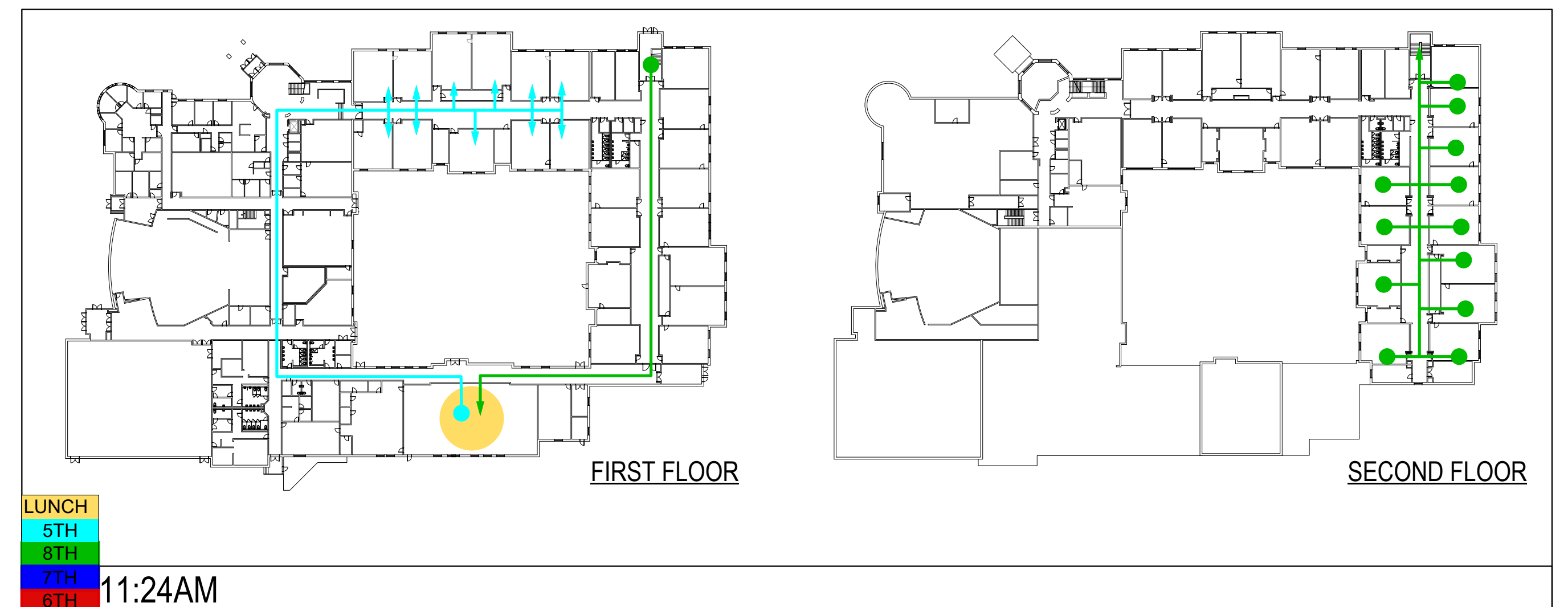
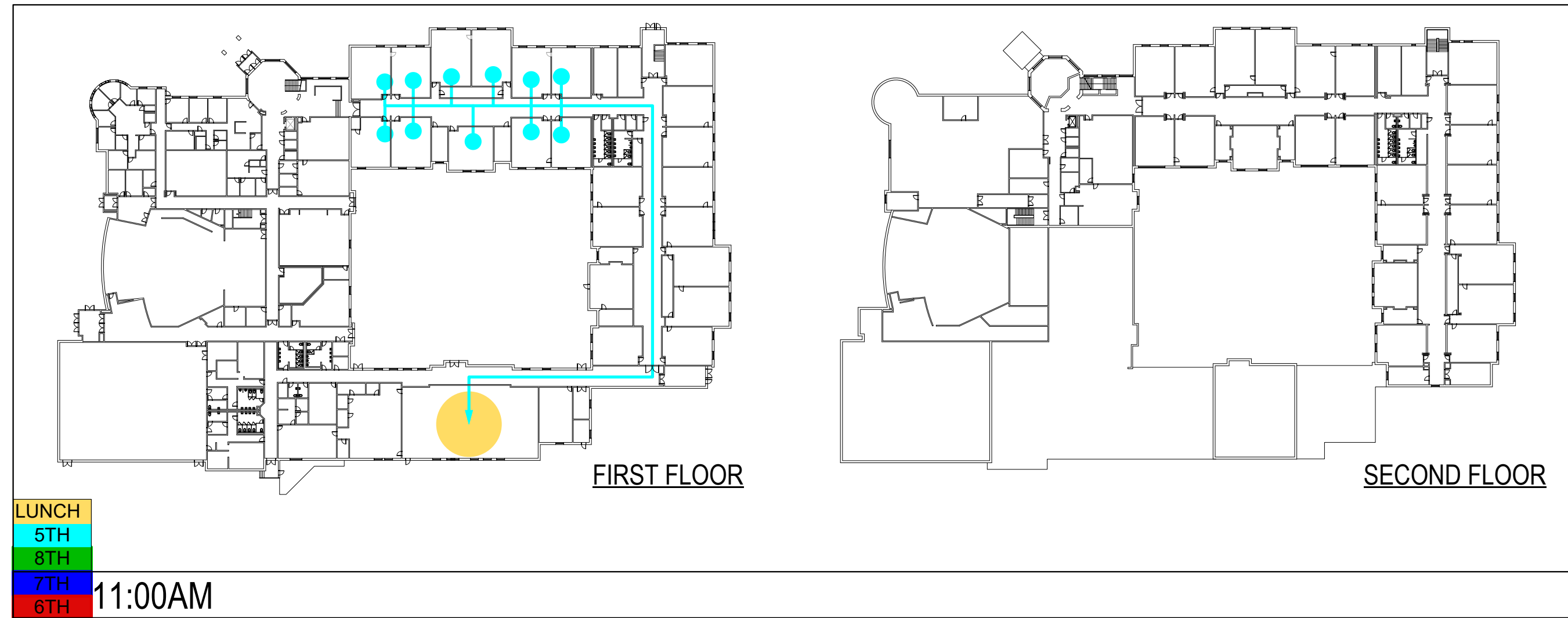
Before school



DEC, 15th, 2020
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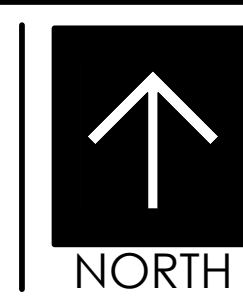
GRADE	5TH	8TH	7TH	6TH
LUNCH	11:00AM	11:24AM	11:50PM	12:14PM

WILSON MIDDLE SCHOOL

22 Rutledge Road
Natick, MA 01760

D-4.0

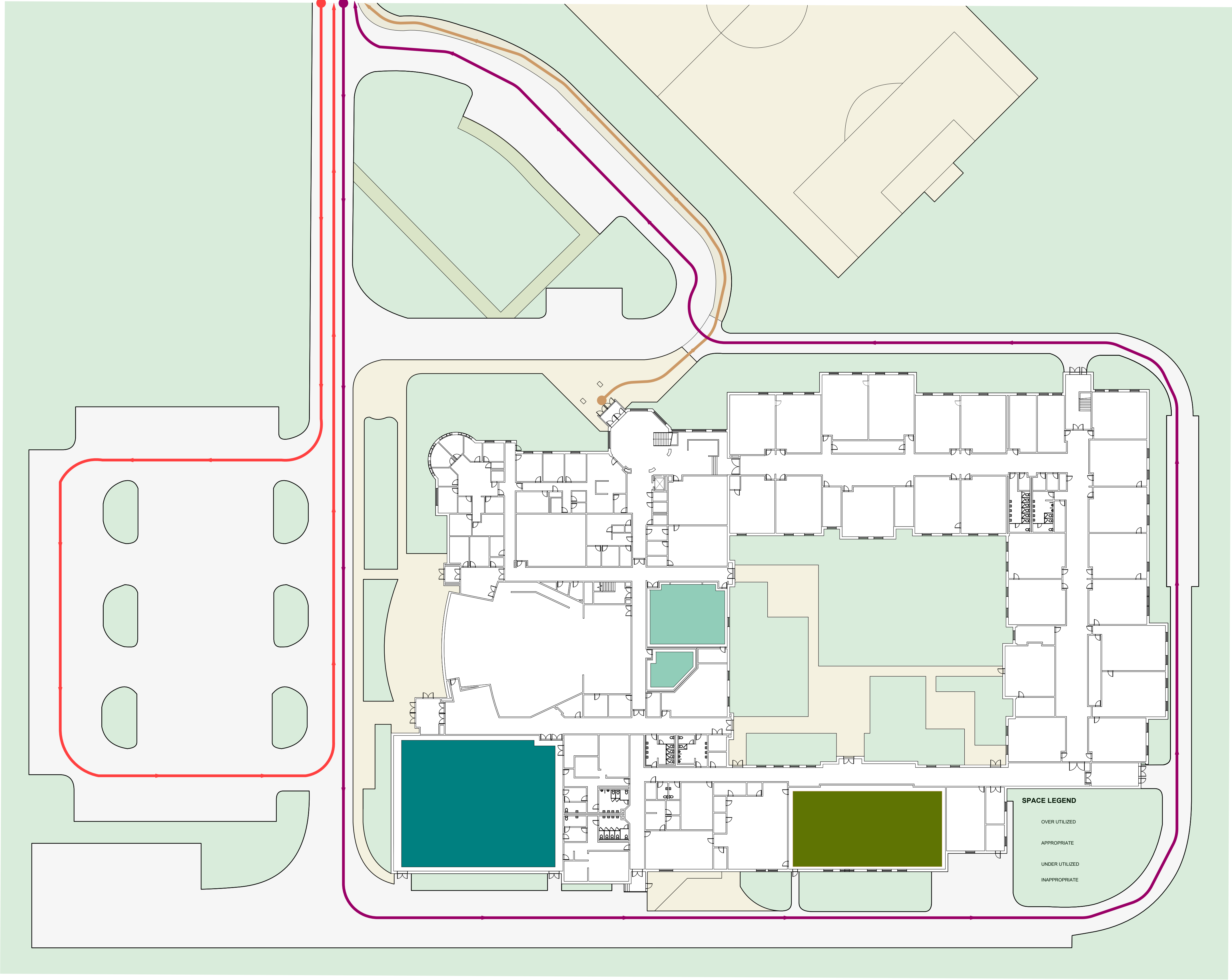
Lunch Circulation



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AFTER SCHOOL		
MUSIC LESSON	2:00-6:00PM	
ASAP		
JAZZ & POPS BAND	4:00-6:00PM	
TOWN PROGRAMS	6:00PM-	
CLASS ENDS	2:05PM	
CARS	BUSES	WALKERS

WILSON MIDDLE SCHOOL

22 Rutledge Road
Natick, MA 01760

D-5.0

After school



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OVER UTILIZED

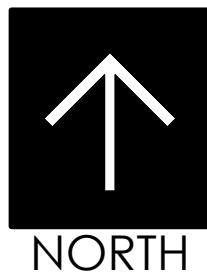
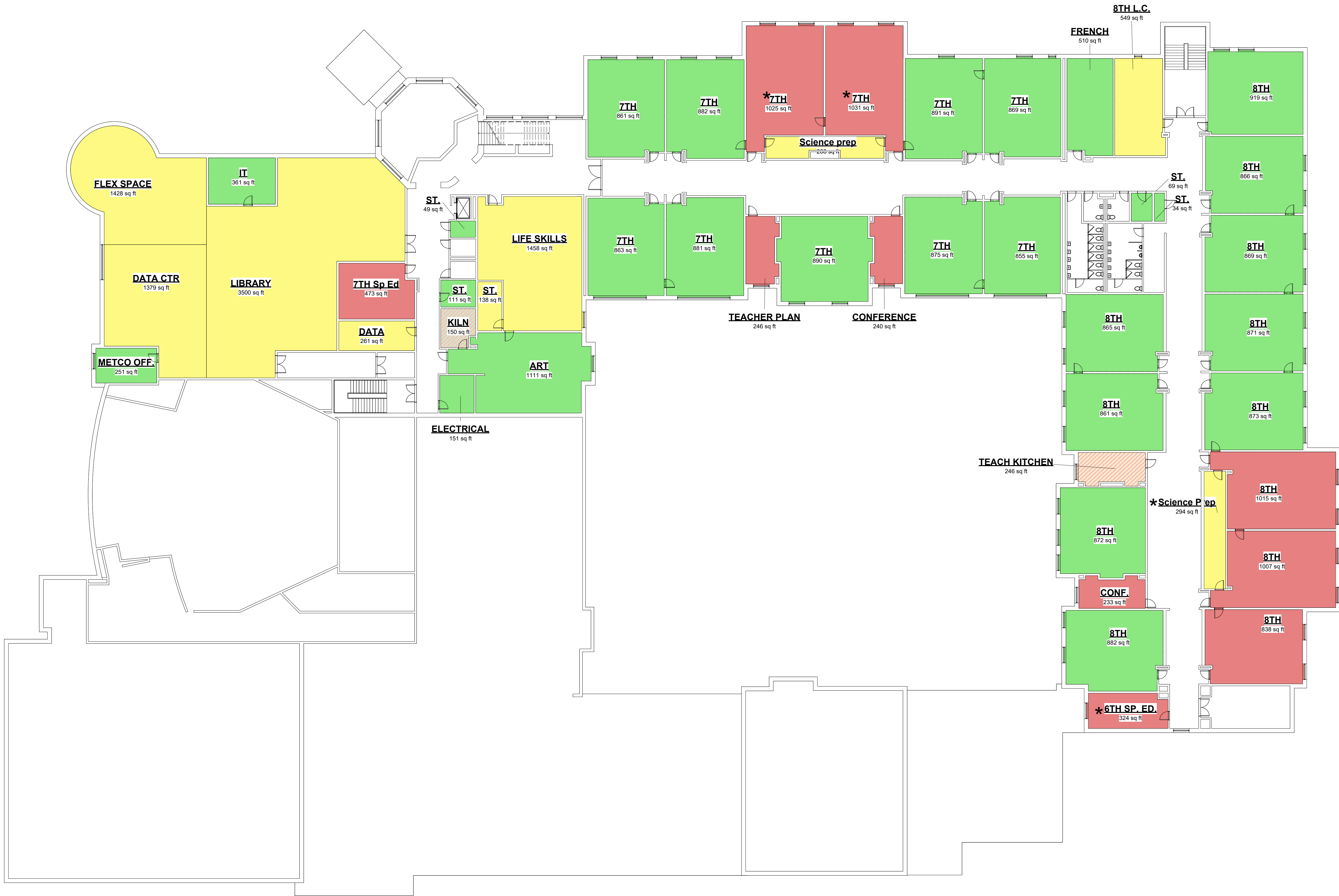
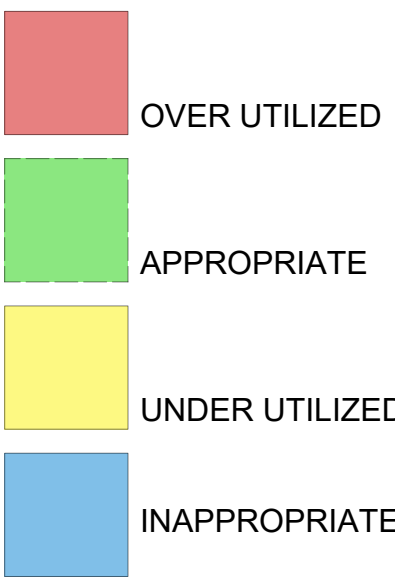
APPROPRIATE

UNDER UTILIZED

INAPPROPRIATE



SPACE LEGEND



SPACE LEGEND

RESTROOMS

STORAGE

ADMINISTRATION

DINING/ FOOD SERVICE

MEDIA

ART & MUSIC

HEALTH & PE

CLASSROOM-KINDERGARTEN

CLASSROOM-GRADE 1

CLASSROOM-GRADE 1 & 2

CLASSROOM-GRADE 2

CLASSROOM-GRADE 3

CLASSROOM-GRADE 4

CLASSROOM-GRADE 5

WORKROOM

SPECIAL ED.

*

TO BE CONFIRMED



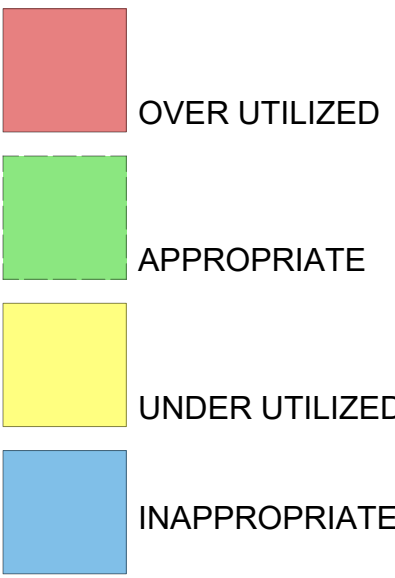
First Floor

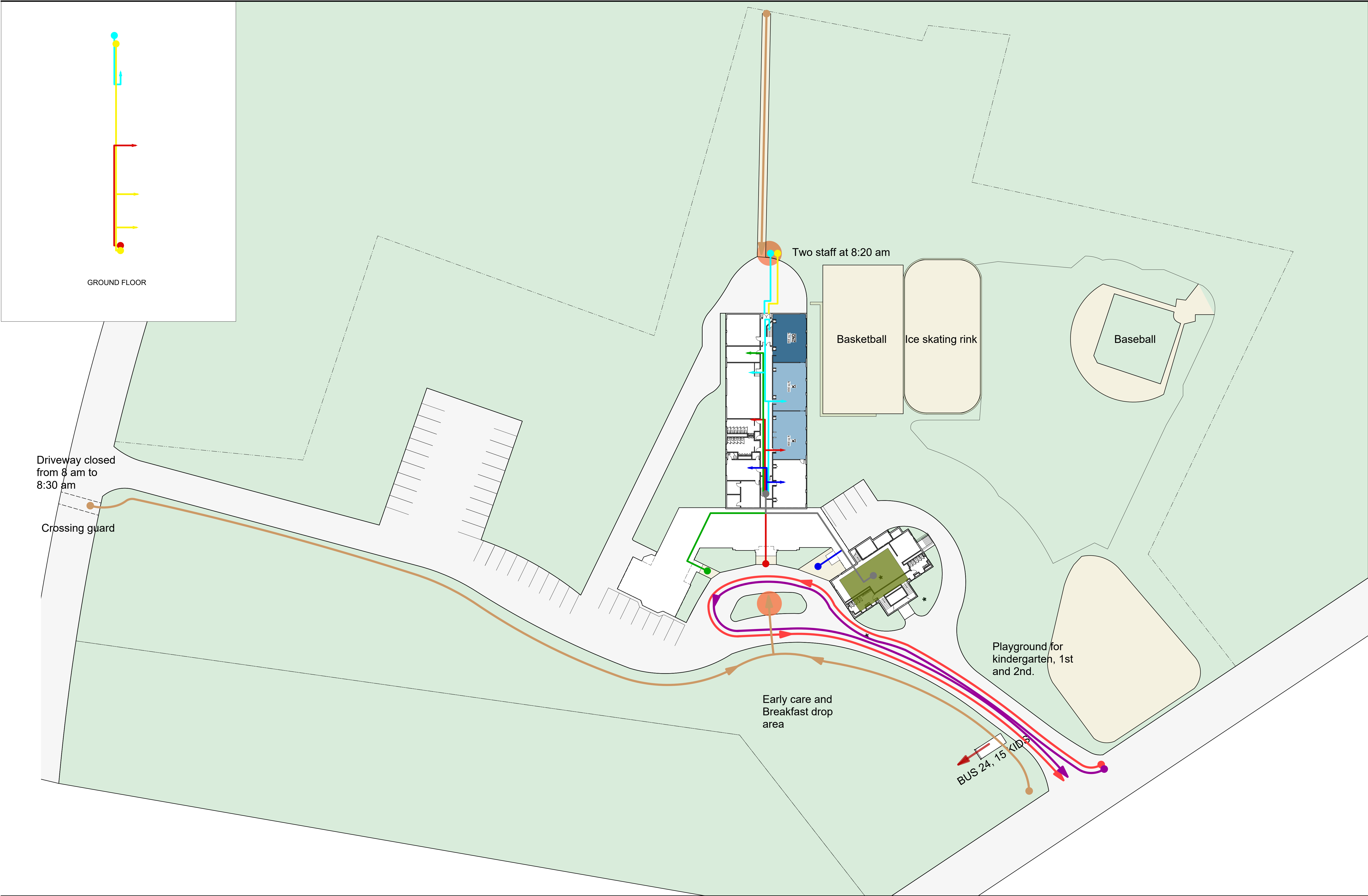


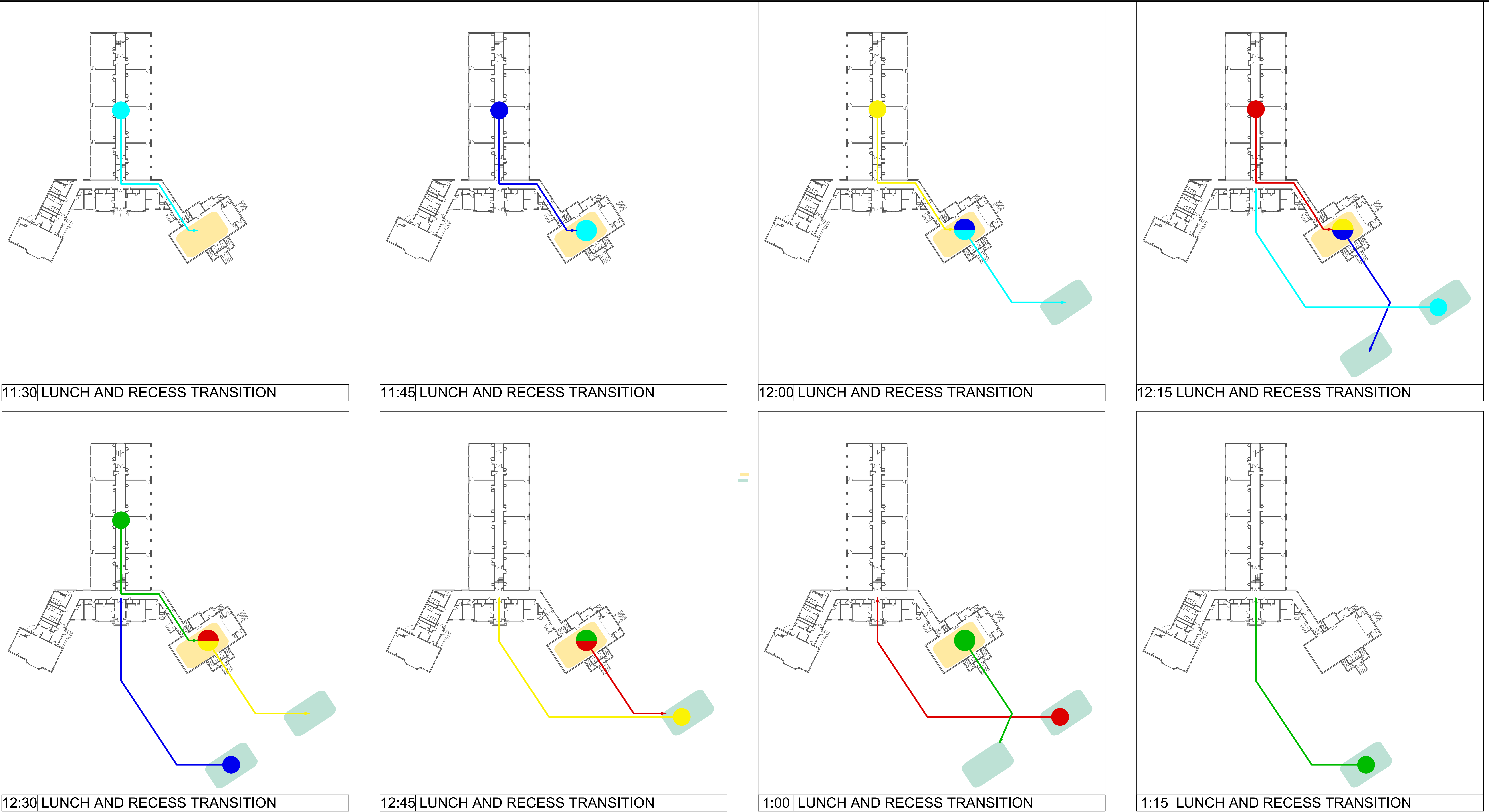
Ground Floor

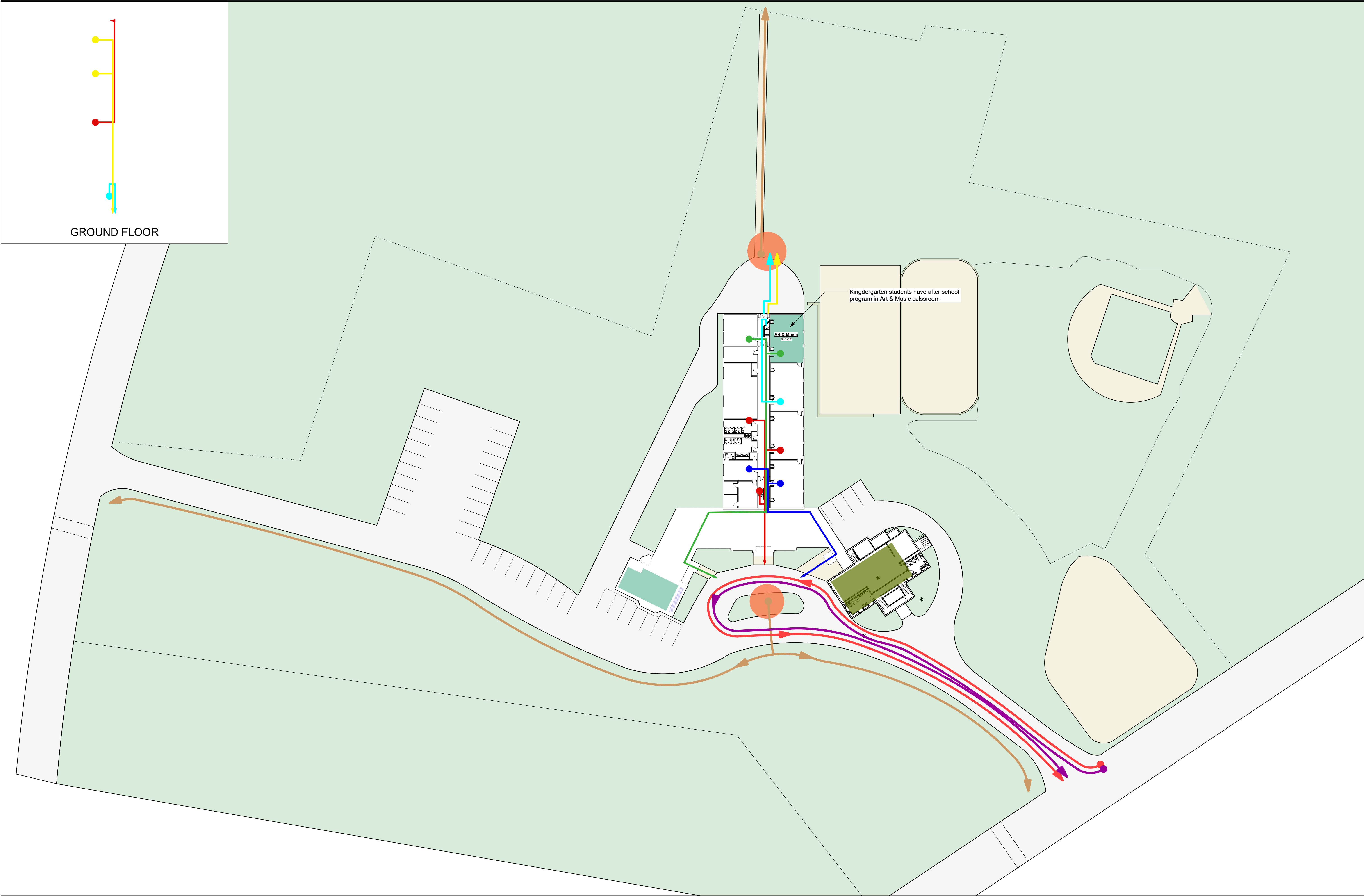


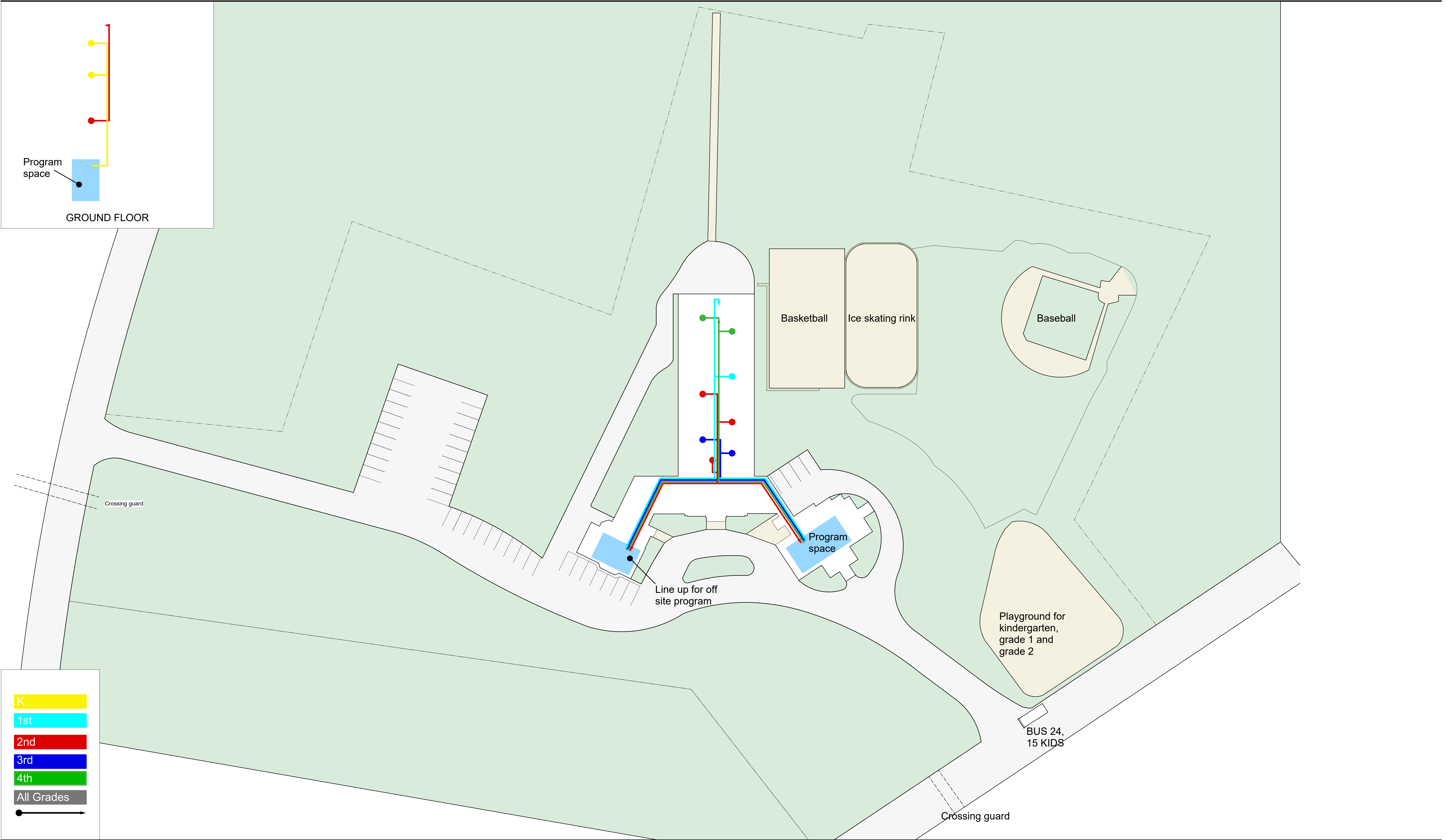
SPACE LEGEND











Johnson Elementary

99 S Main St.
Natick, MA 01760

A-1.0

After Program



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SPACE LEGEND

- RESTROOMS
- STORAGE
- ADMINISTRATION
- DINING/ FOOD SERVICE
- MEDIA
- HEALTH & PE
- SPECIAL ED.
- CLASSROOM-KINDERGARTEN
- CLASSROOM-GRADE 1
- CLASSROOM-GRADE 3
- *

 TO BE CONFIRMED



Bennett Hemenway
Elementary

22 E Evergreen Rd.
Natick, MA 01760

BH-1.0

First Floor Space Use

DEC, 15th, 2020
NOT FOR CONSTRUCTION
TBA PROJECT # 1333

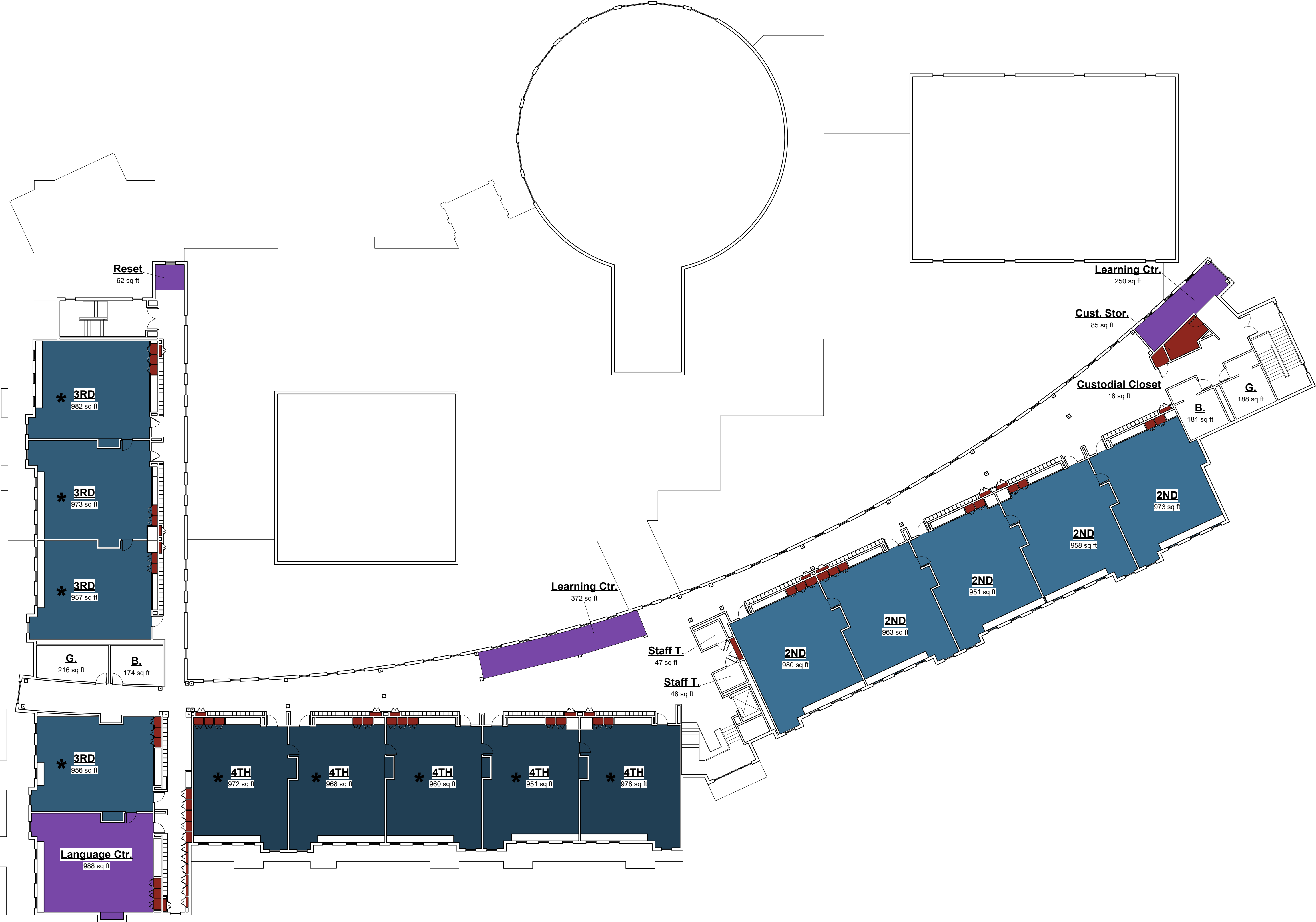
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SPACE LEGEND

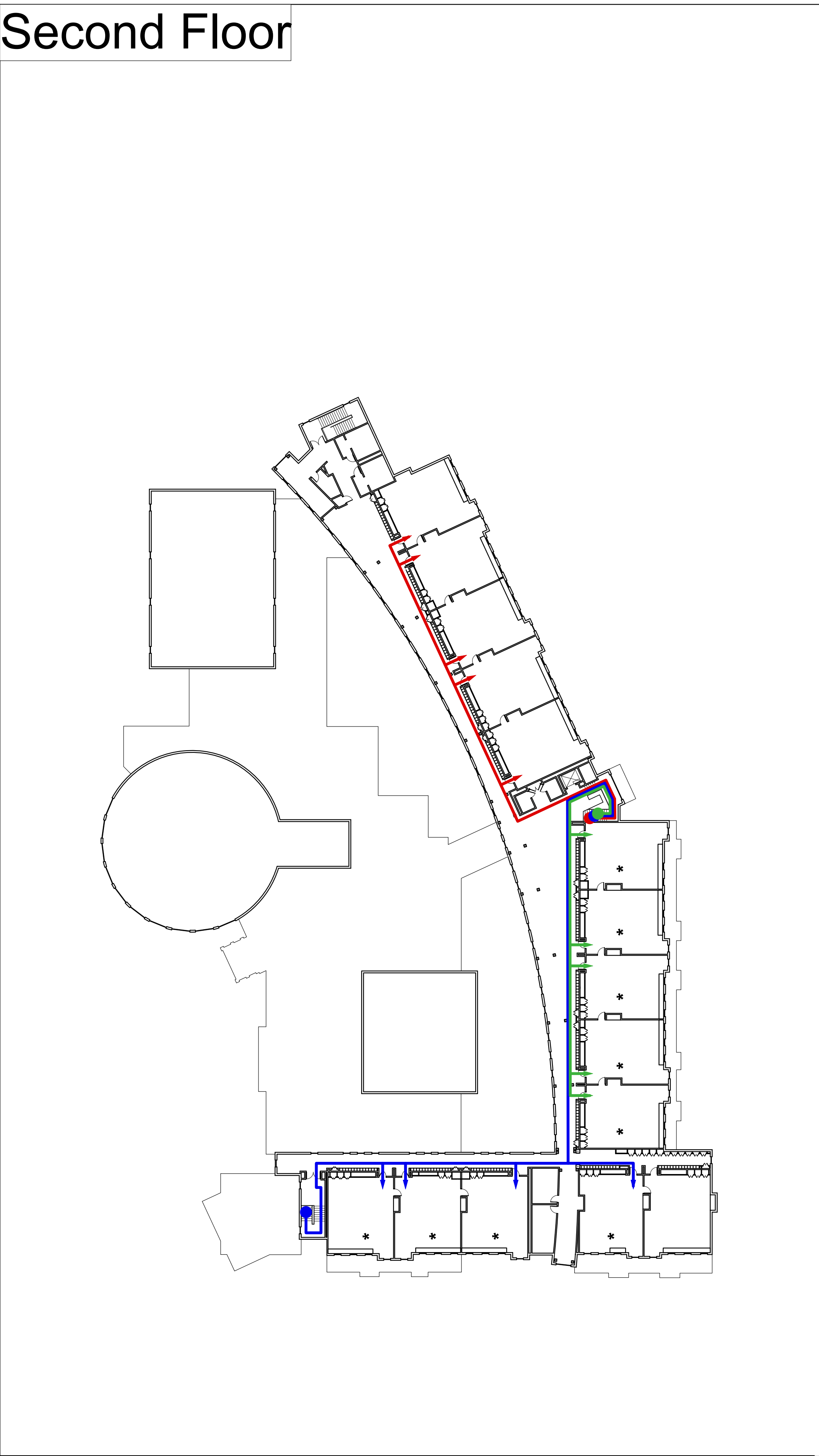
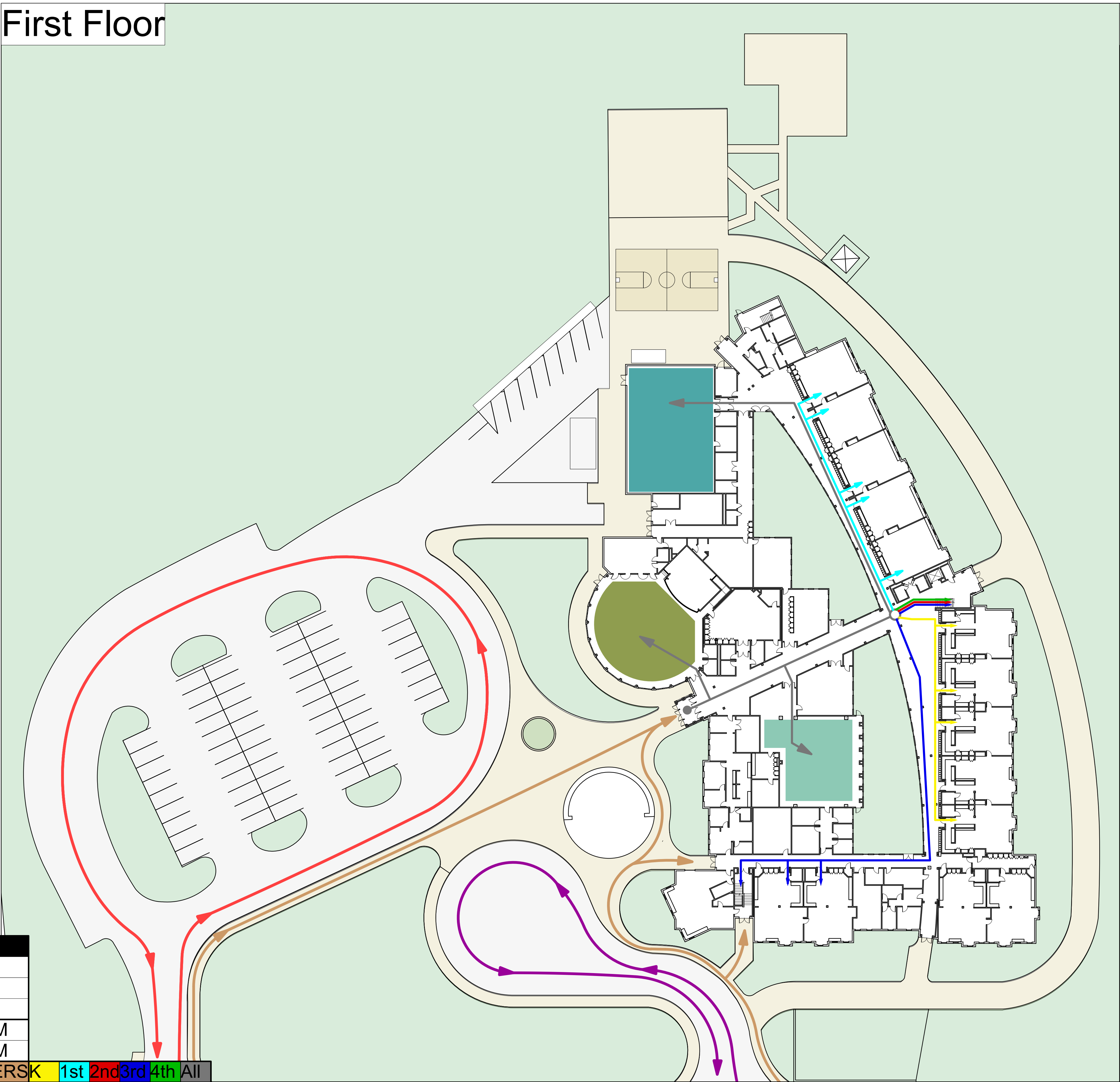
- RESTROOMS
- STORAGE
- ADMINISTRATION
- DINING/ FOOD SERVICE
- MEDIA
- HEALTH & PE
- SPECIAL ED.
- CLASSROOM-KINDERGARTEN
- CLASSROOM-GRADE 1
- CLASSROOM-GRADE 3
- *

TO BE CONFIRMED



First Floor

Second Floor



BEFORE SCHOOL	
BREAKFAST	TBD
GYM	TBD
LIBRARY	TBD
DOORS OPEN	8:20AM
CLASS BEGINS	8:30AM
CARS	BUSES
WALKERS	K
	1st
	2nd
	3rd
	4th
	All

Bennett Hemenway
Elementary

22 E Evergreen Rd.
Natick, MA 01760

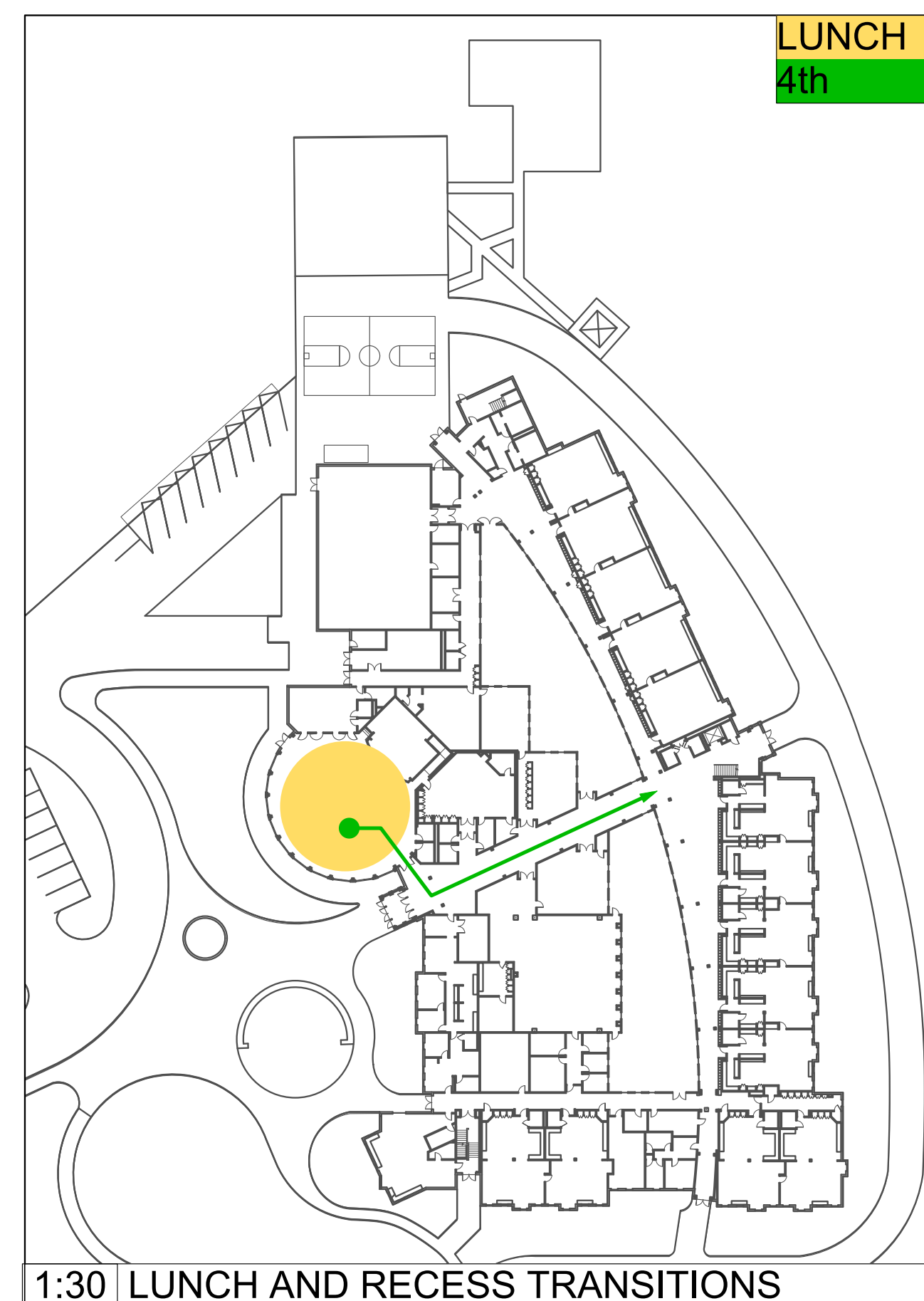
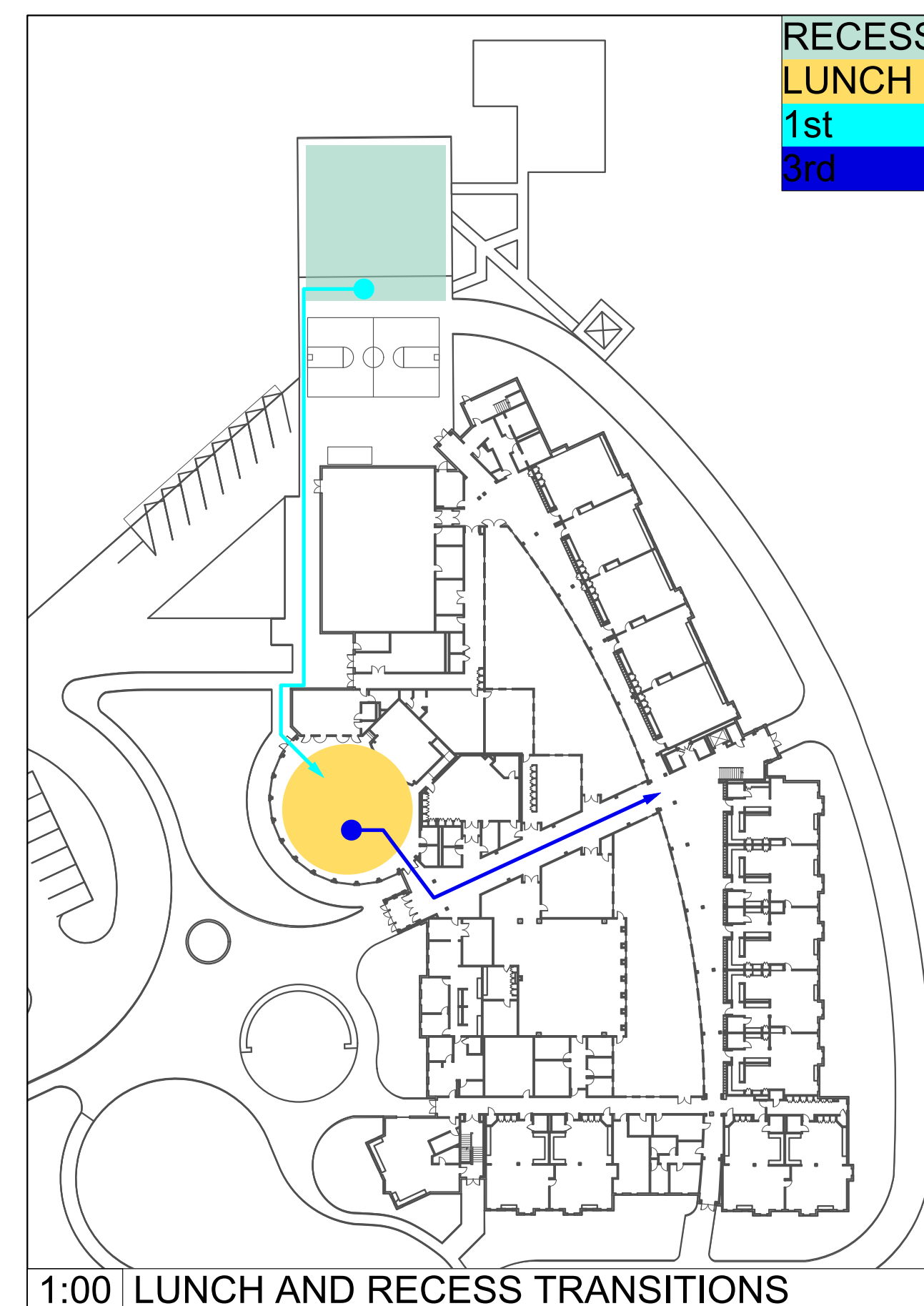
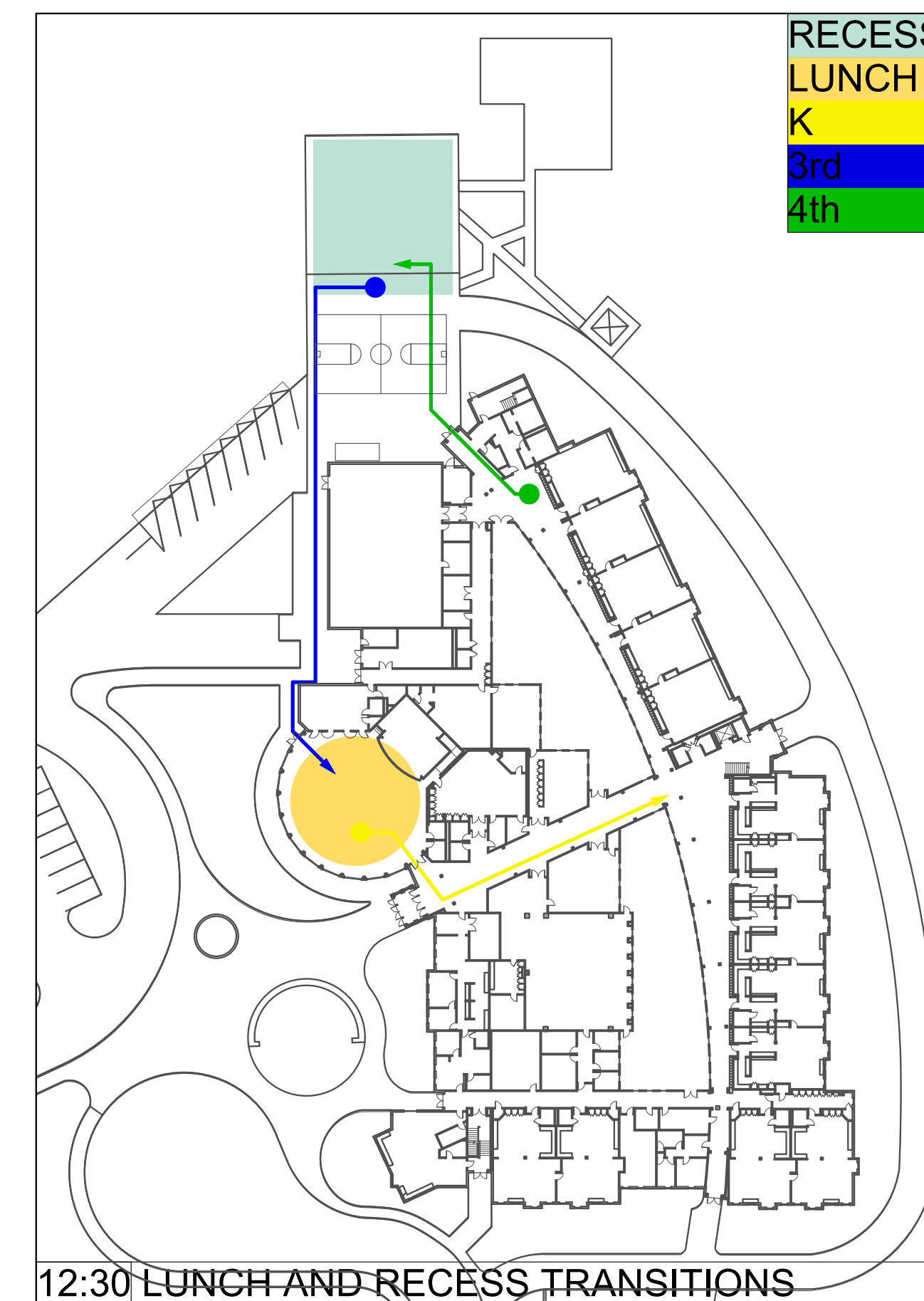
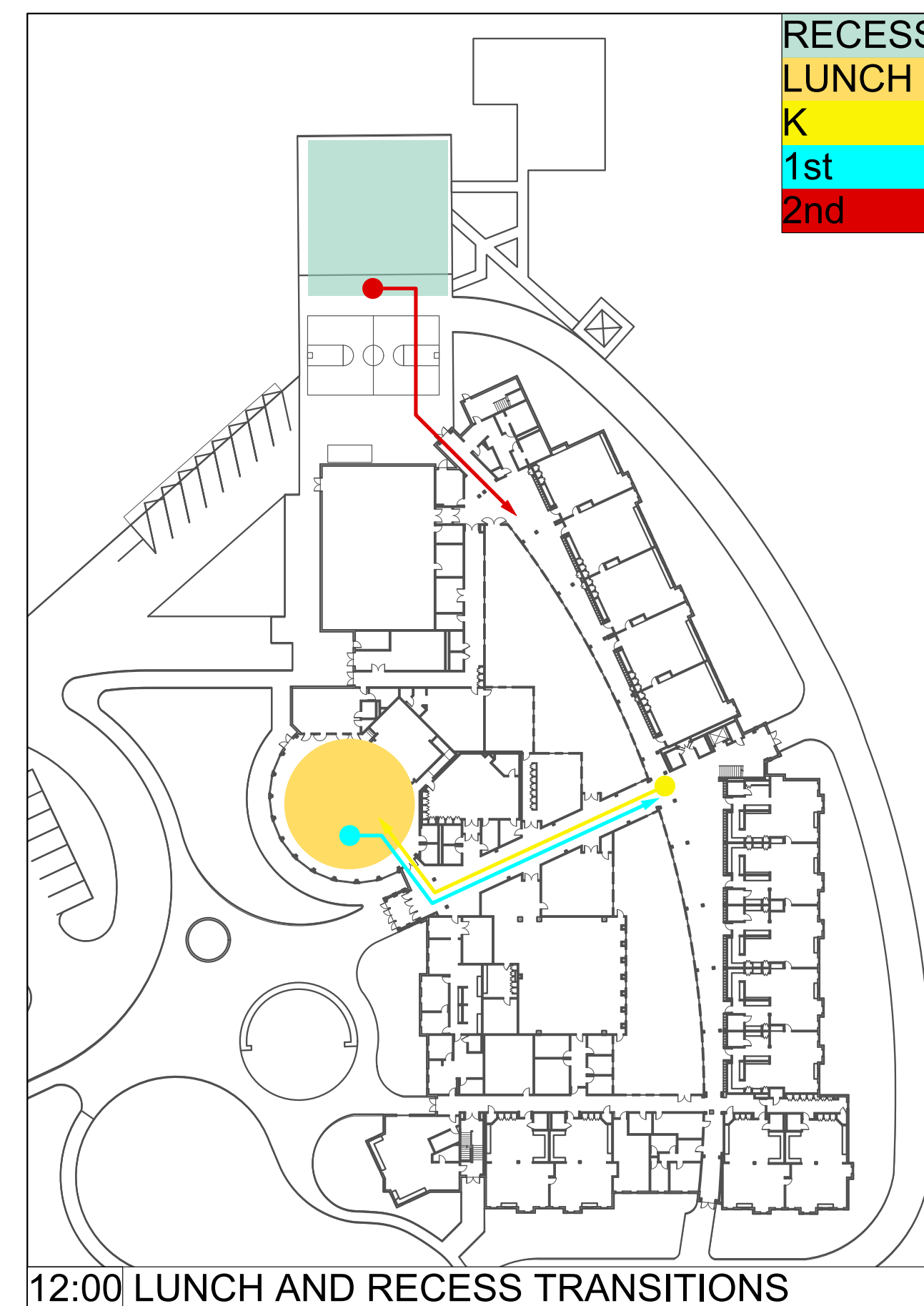
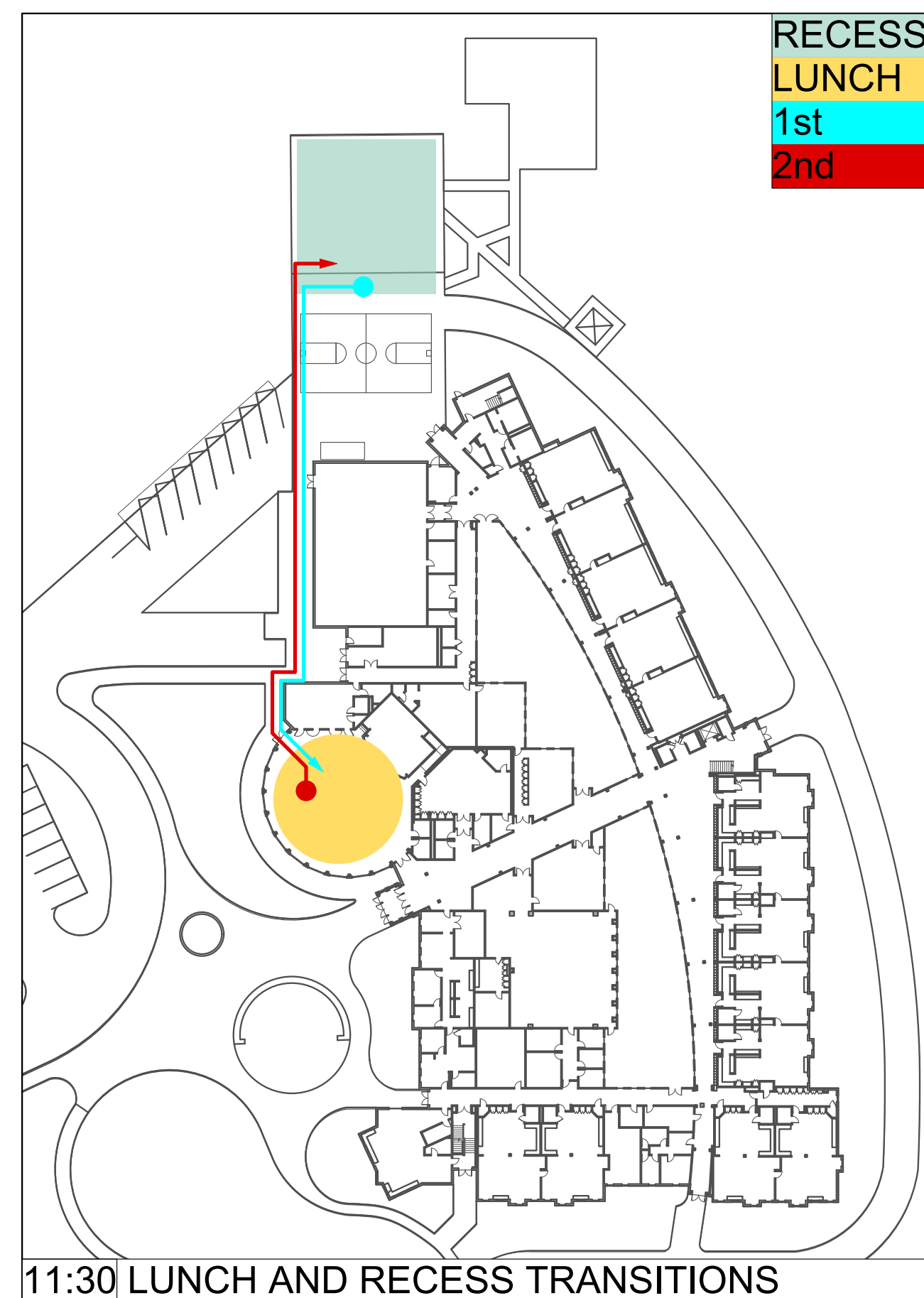
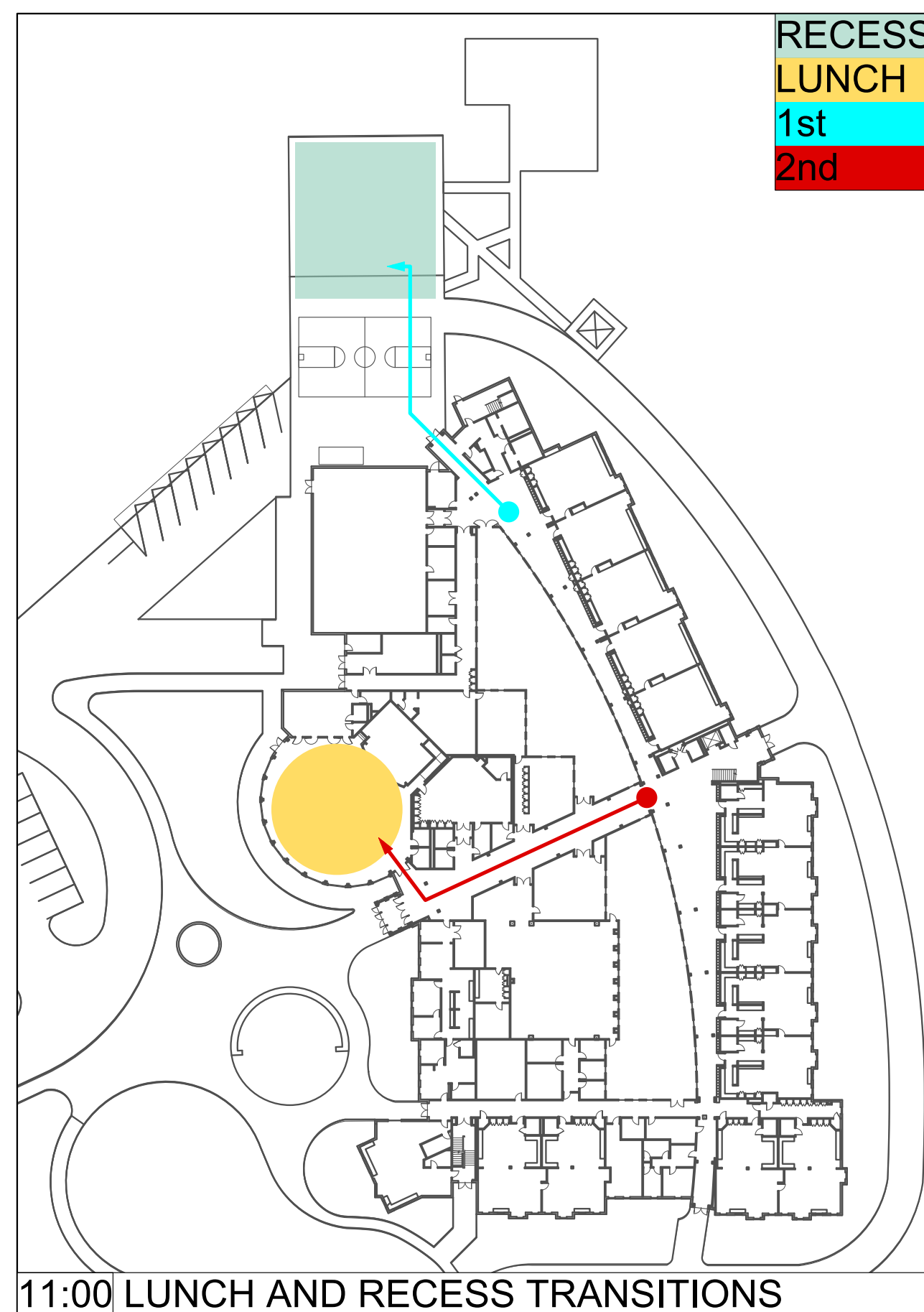
BH-1.3

Before School

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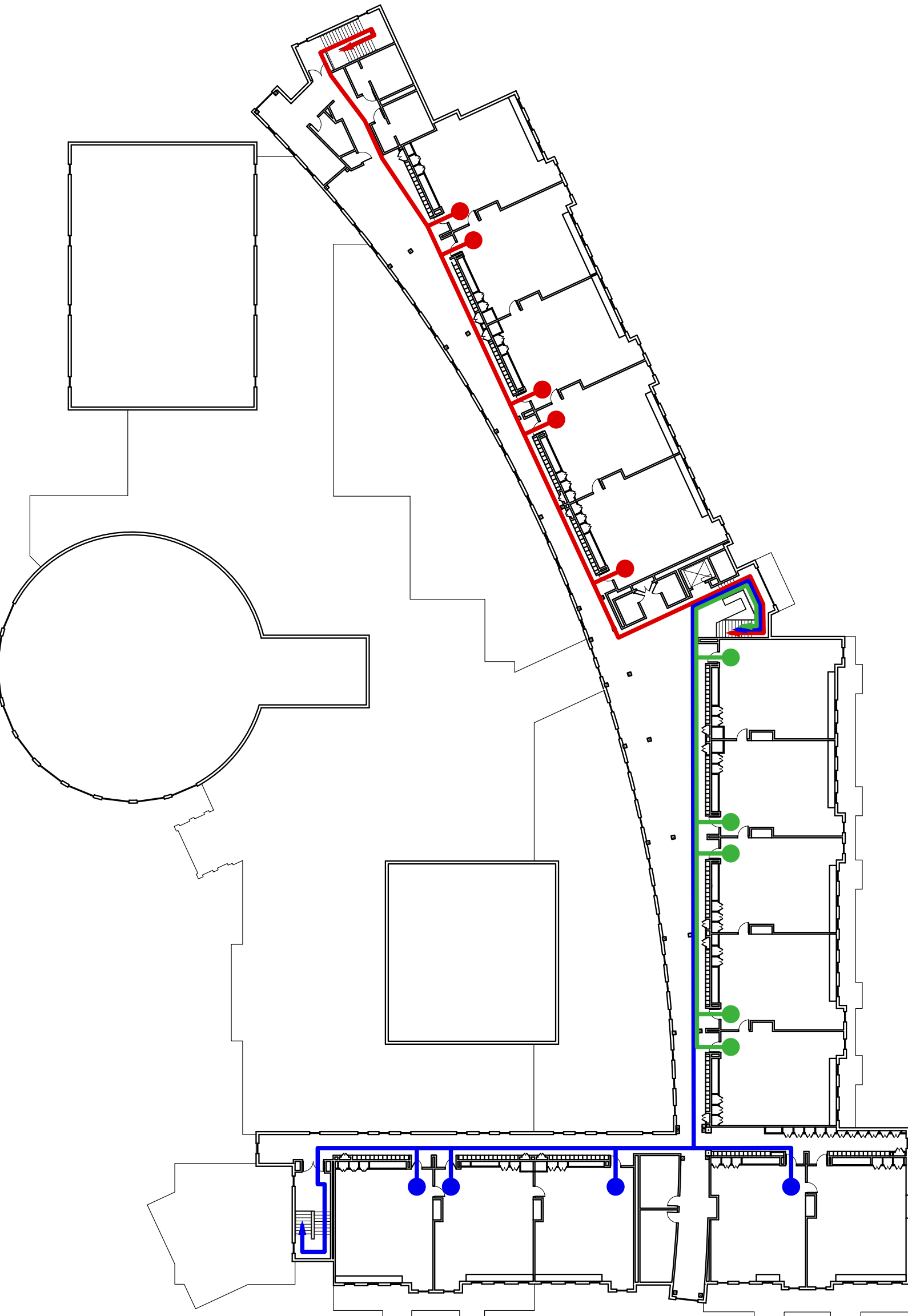
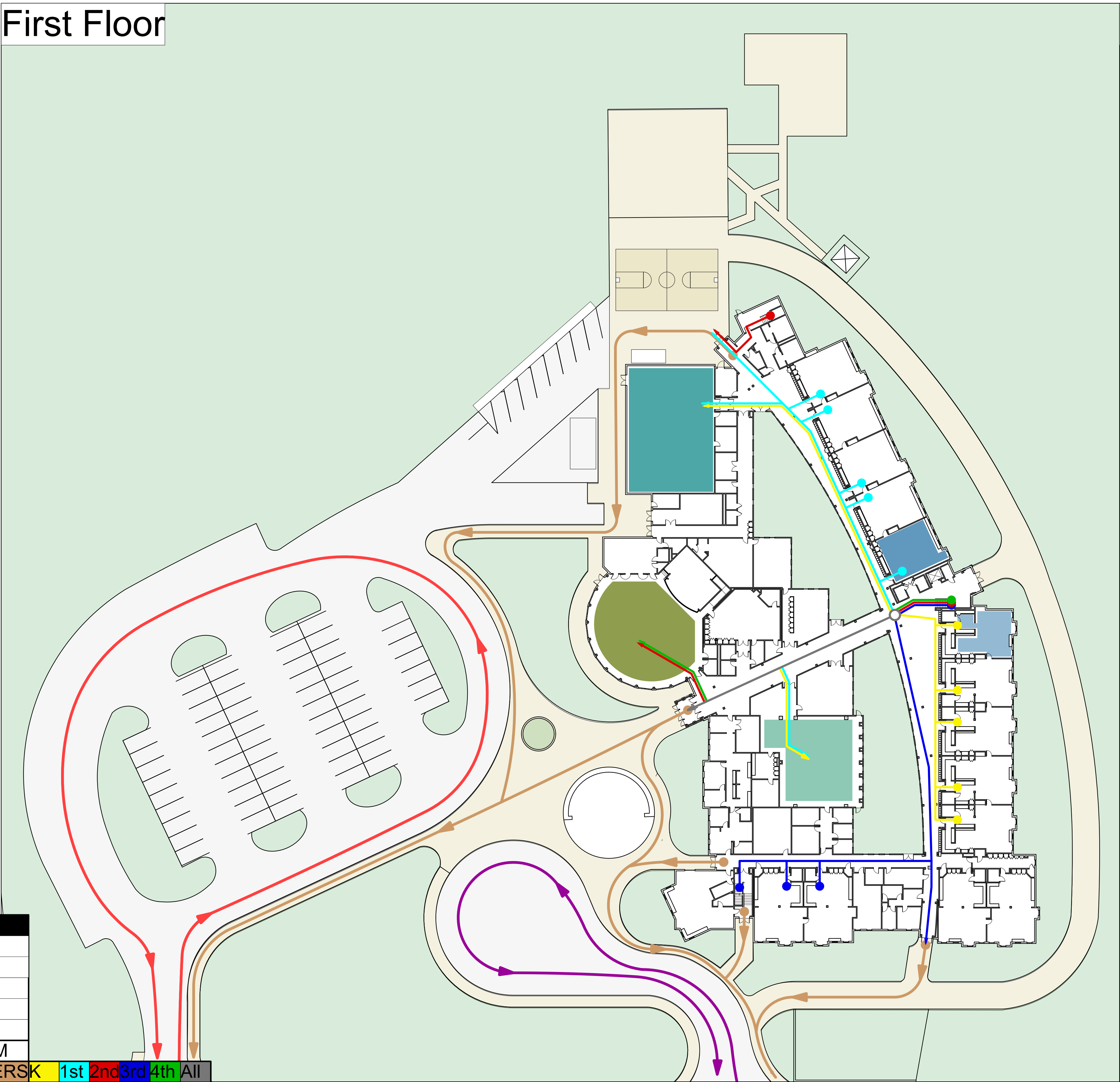




GRADE	2ND	1ST	K	3RD	4TH
LUNCH	11:00AM	11:30AM	12:00PM	12:30PM	1:00PM
RECESS	11:30PM	11:00PM	NA	12:00AM	12:30PM
CLASS	12:00PM	12:00PM	NA	1:00AM	1:30PM

First Floor

Second Floor



AFTER SCHOOL		
K	TBD	
1ST GRADE	TBD	
BREAKFAST	TBD	
GYM	TBD	
LIBRARY	TBD	
CLASS ENDS	2:50PM	
CARS	BUSES	WALKERS
K	1st	2nd
3rd	4th	All

Bennett Hemenway
Elementary

22 E Evergreen Rd.
Natick, MA 01760

BH-1.5

After School

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All Grades

Bennett Hemenway
Elementary

22 E Evergreen Rd.
Natick, MA 01760

BH-1.2

Early Before School Program

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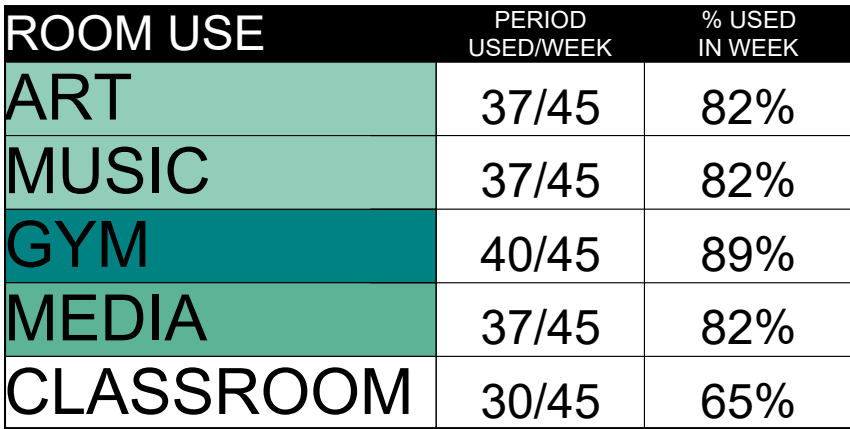


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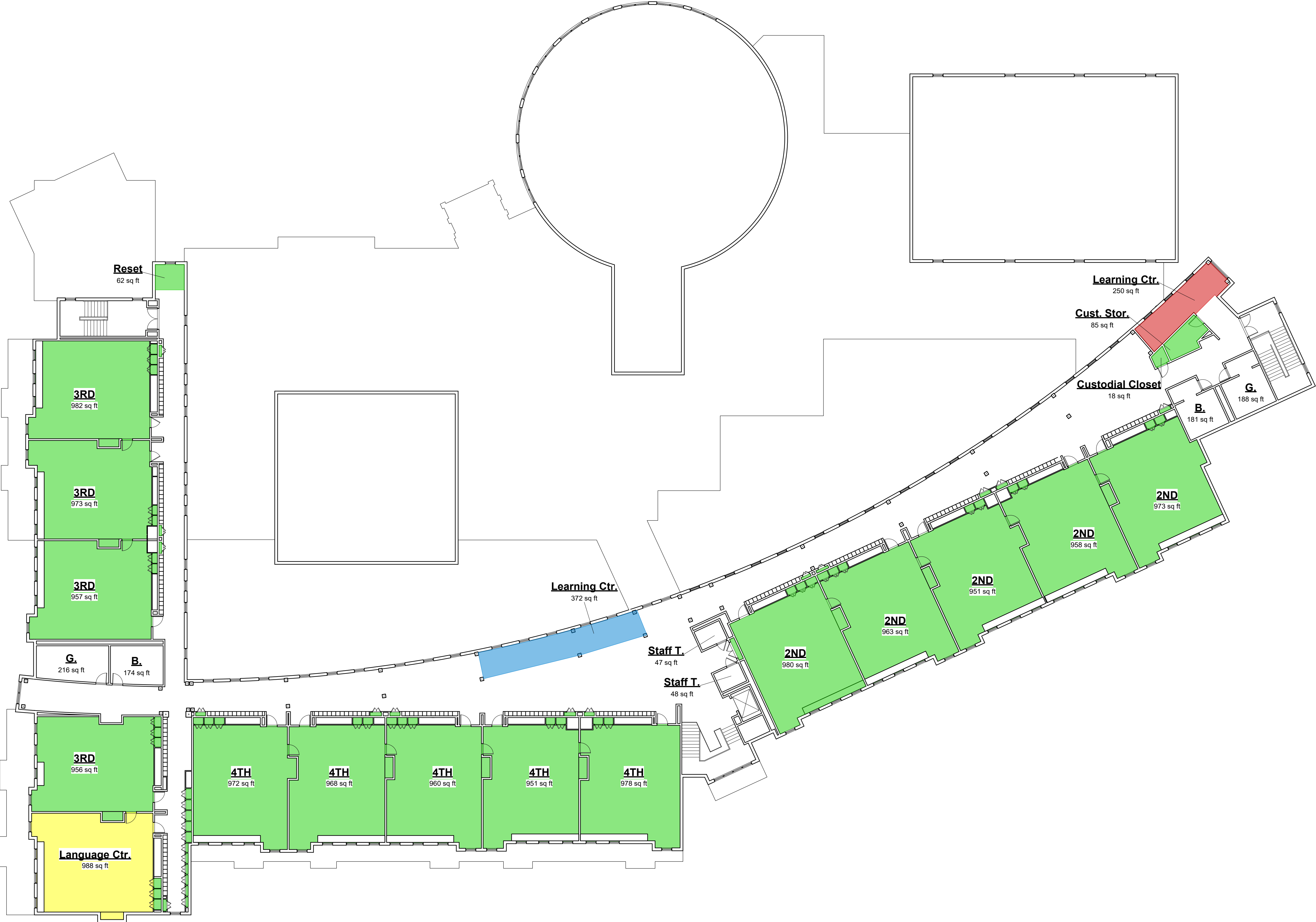
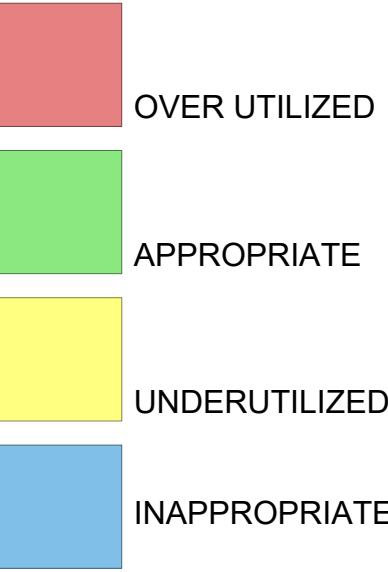
APPROPRIATE

UNDERUTILIZED

INAPPROPRIATE



SPACE LEGEND



ROOM USE	PERIOD USED/WEEK	% USED IN WEEK
ART	37/45	82%
MUSIC	37/45	82%
GYM	40/45	89%
MEDIA	37/45	82%
CLASSROOM	30/45	65%

Bennett Hemenway
Elementary

22 E Evergreen Rd.
Natick, MA 01760

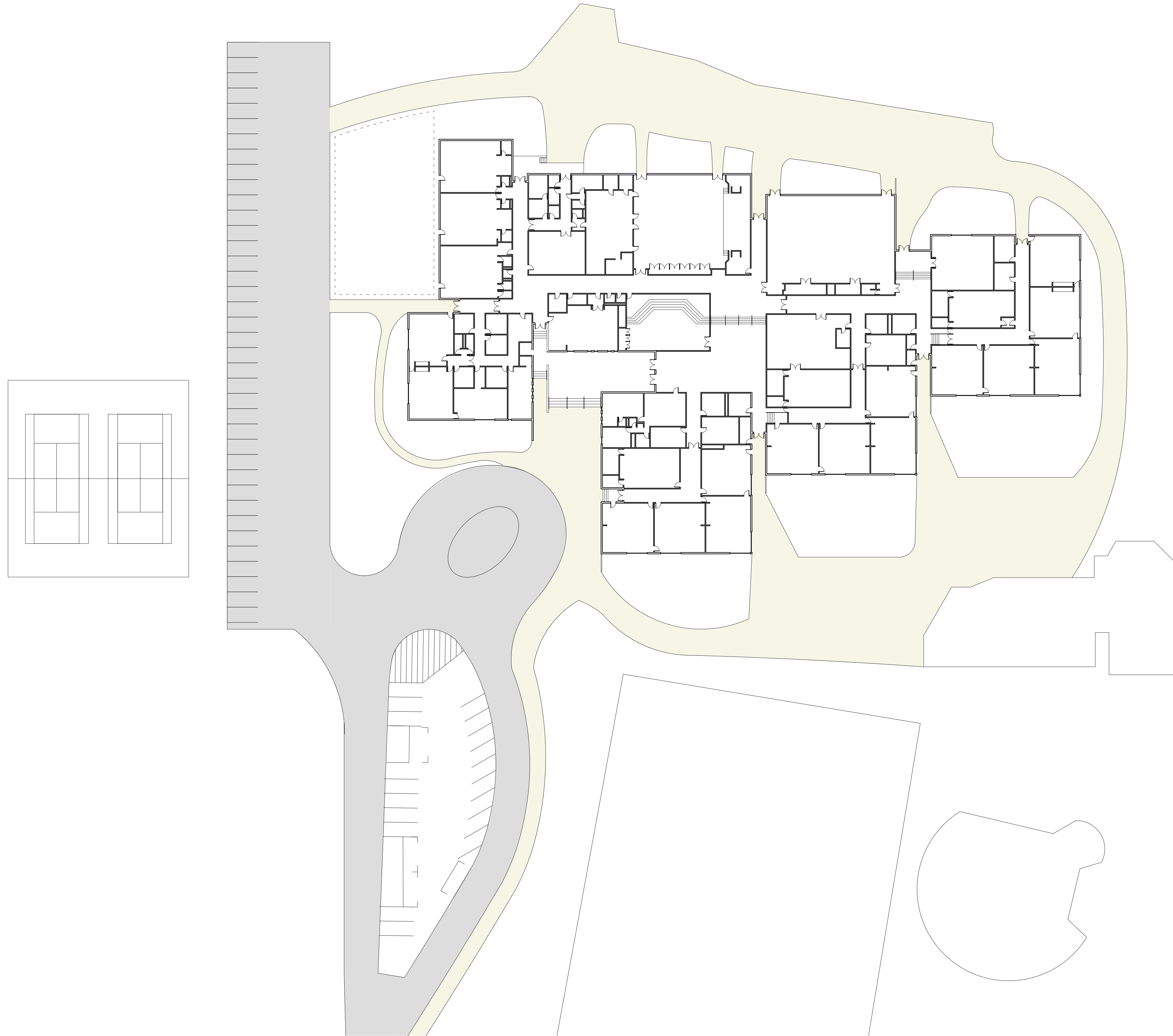
BH-1.7

Second Floor Space Utilization

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Memorial Elementary

107 Eliot St,
Natick, MA 01760

M-1.0

Site Plan



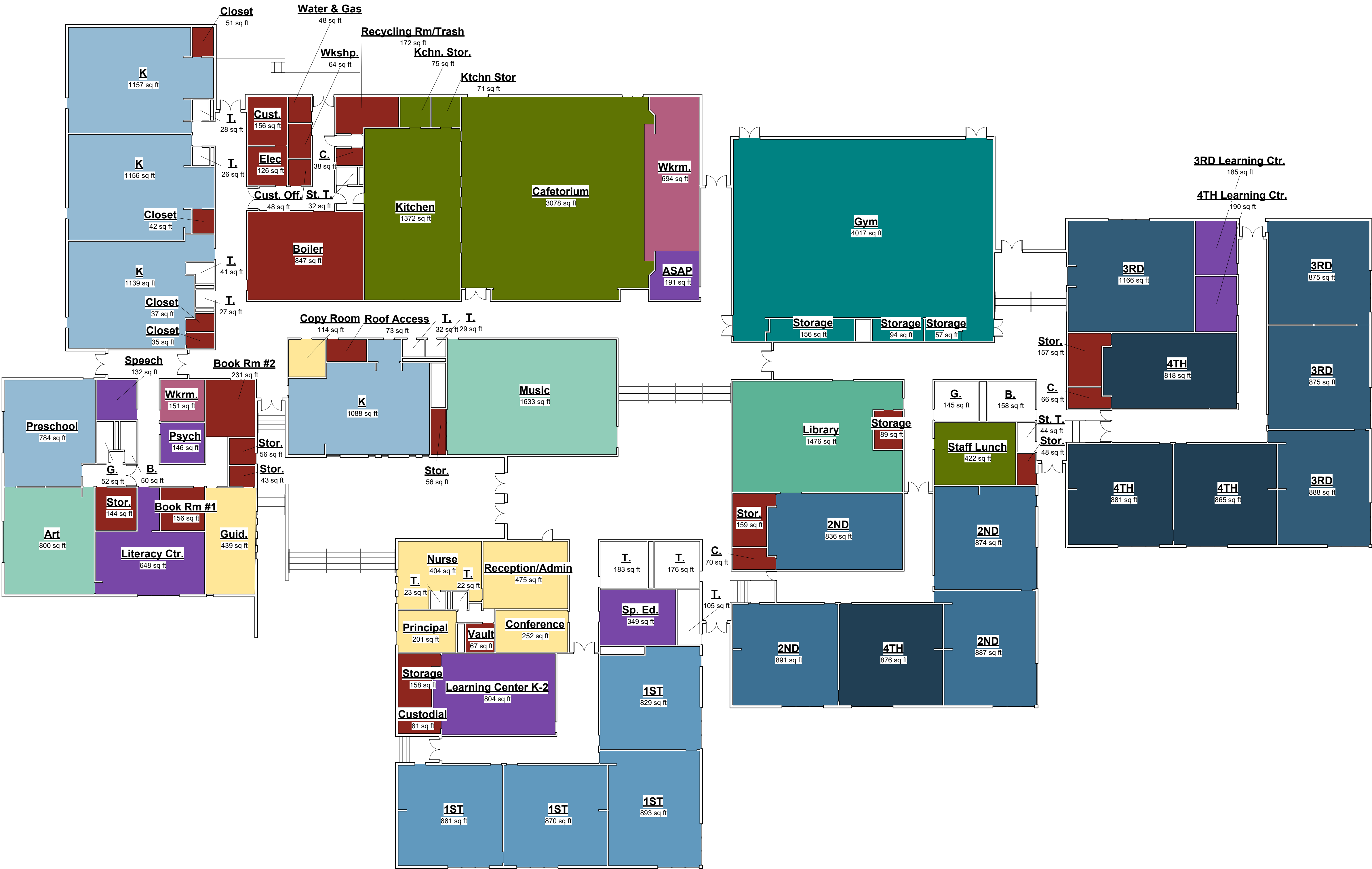
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SPACE LEGEND

- RESTROOMS
- STORAGE
- ADMINISTRATION
- DINING/ FOOD SERVICE
- MEDIA
- ART & MUSIC
- HEALTH & PE
- CLASSROOM-KINDERGARTEN
- CLASSROOM-GRADE 1
- CLASSROOM-GRADE 2
- CLASSROOM-GRADE 3
- CLASSROOM-GRADE 4
- WORKROOM
- SPECIAL ED.





BEFORE SCHOOL	
EARLY RISERS	7:00AM
DOORS OPEN	8:20AM
CLASS BEGINS	8:30AM
CARS	BUSES
WALKERS	K 1st 2nd 3rd 4th All

Memorial Elementary

107 Eliot St,
Natick, MA 01760

M-1.2

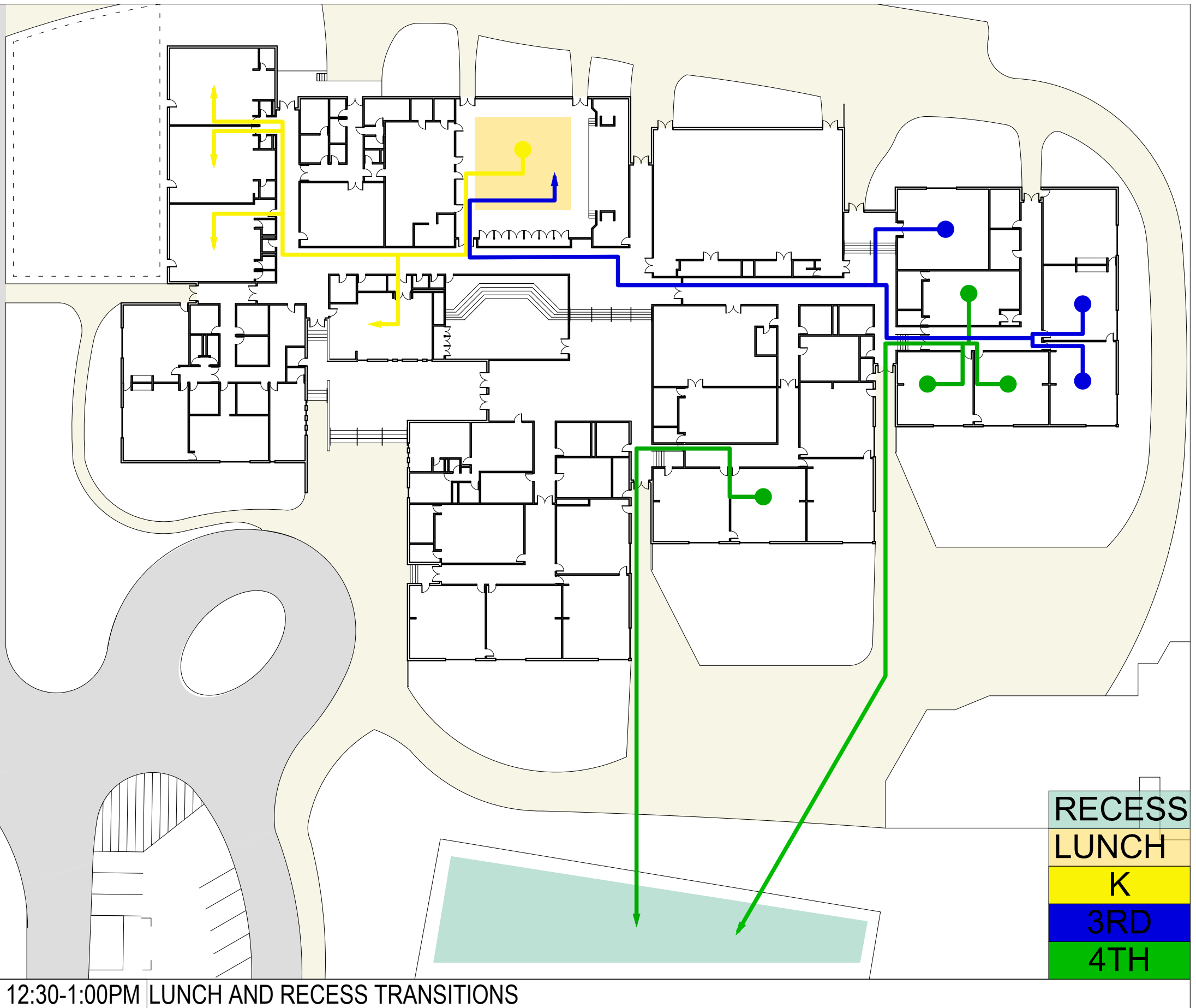
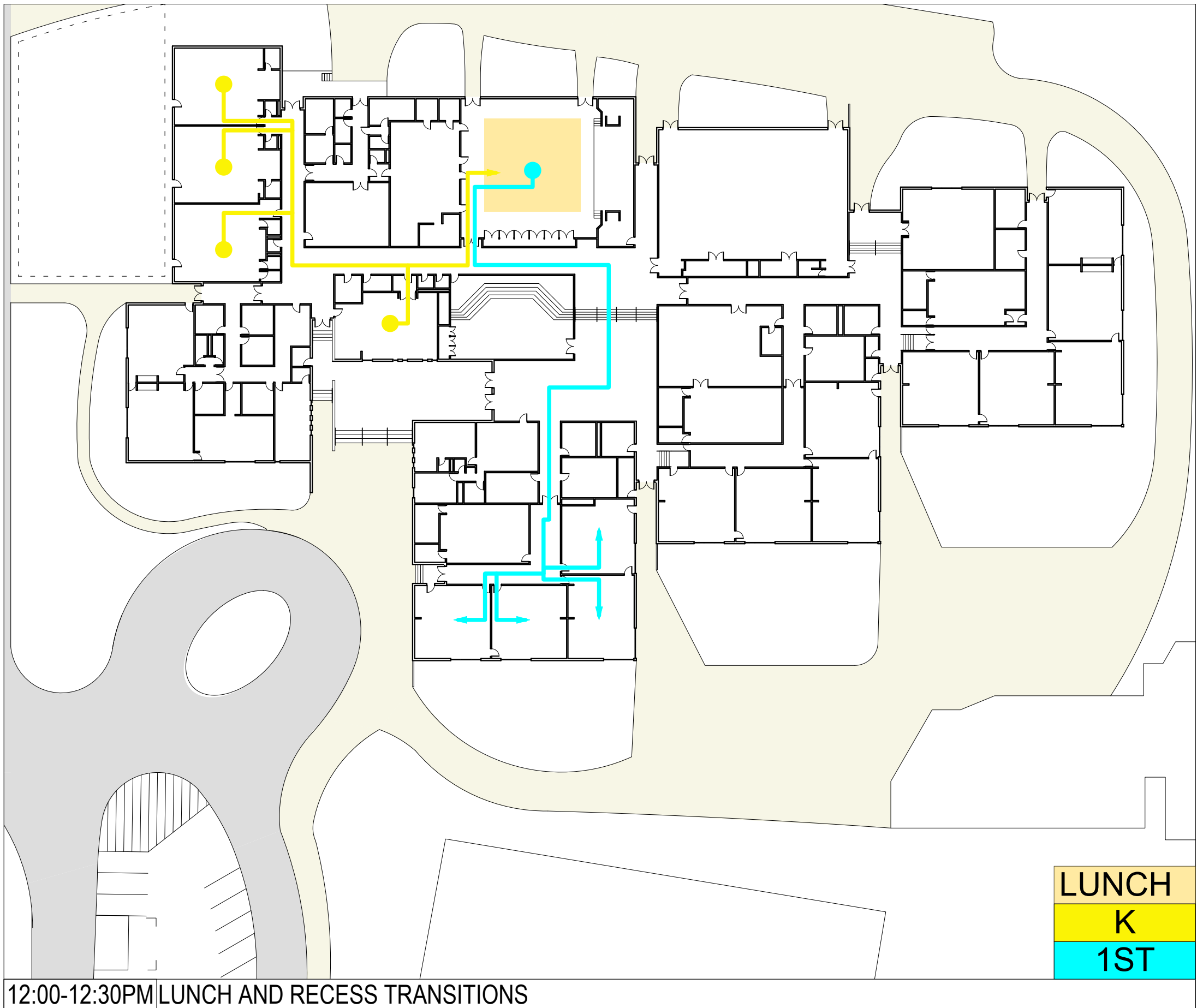
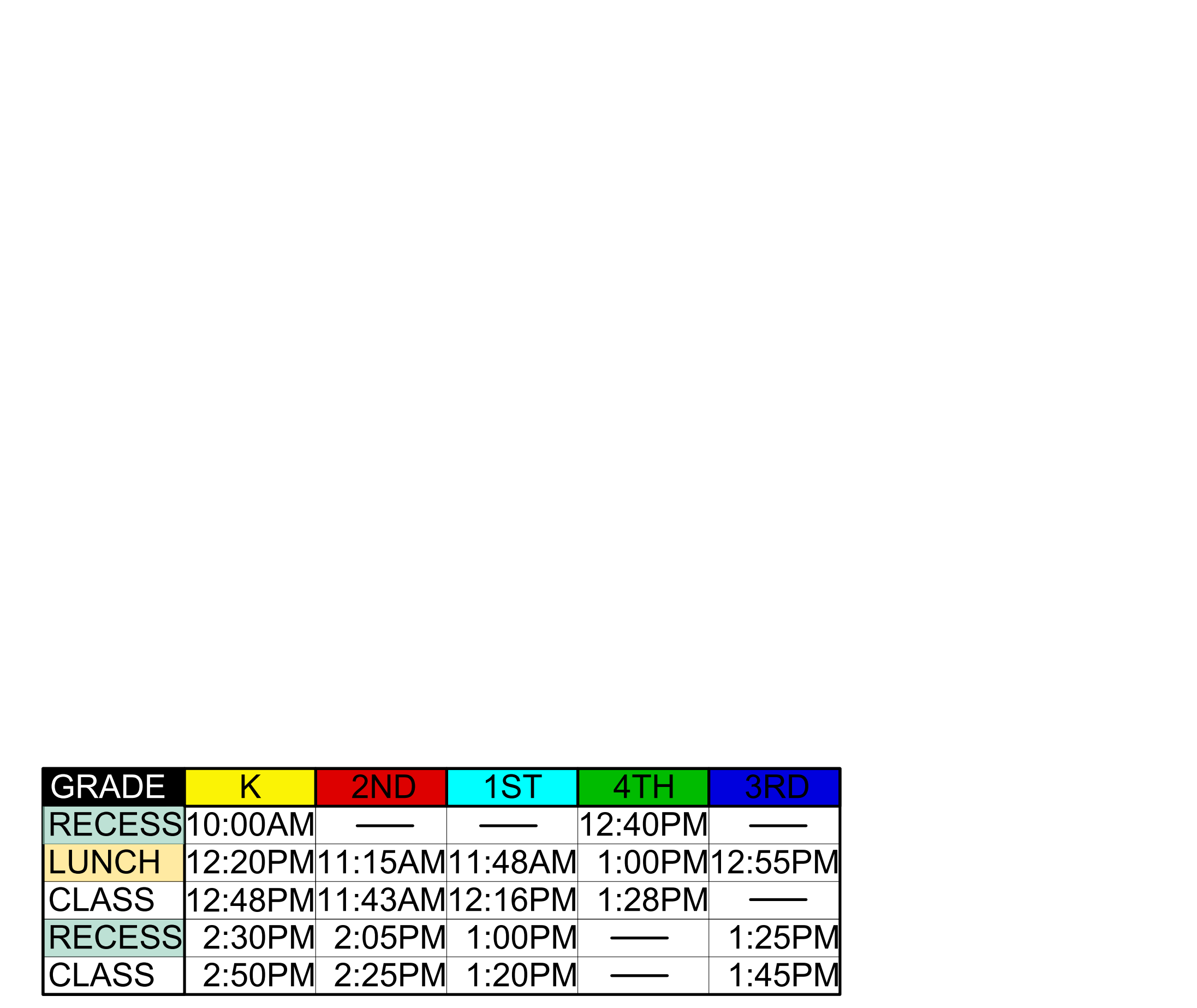
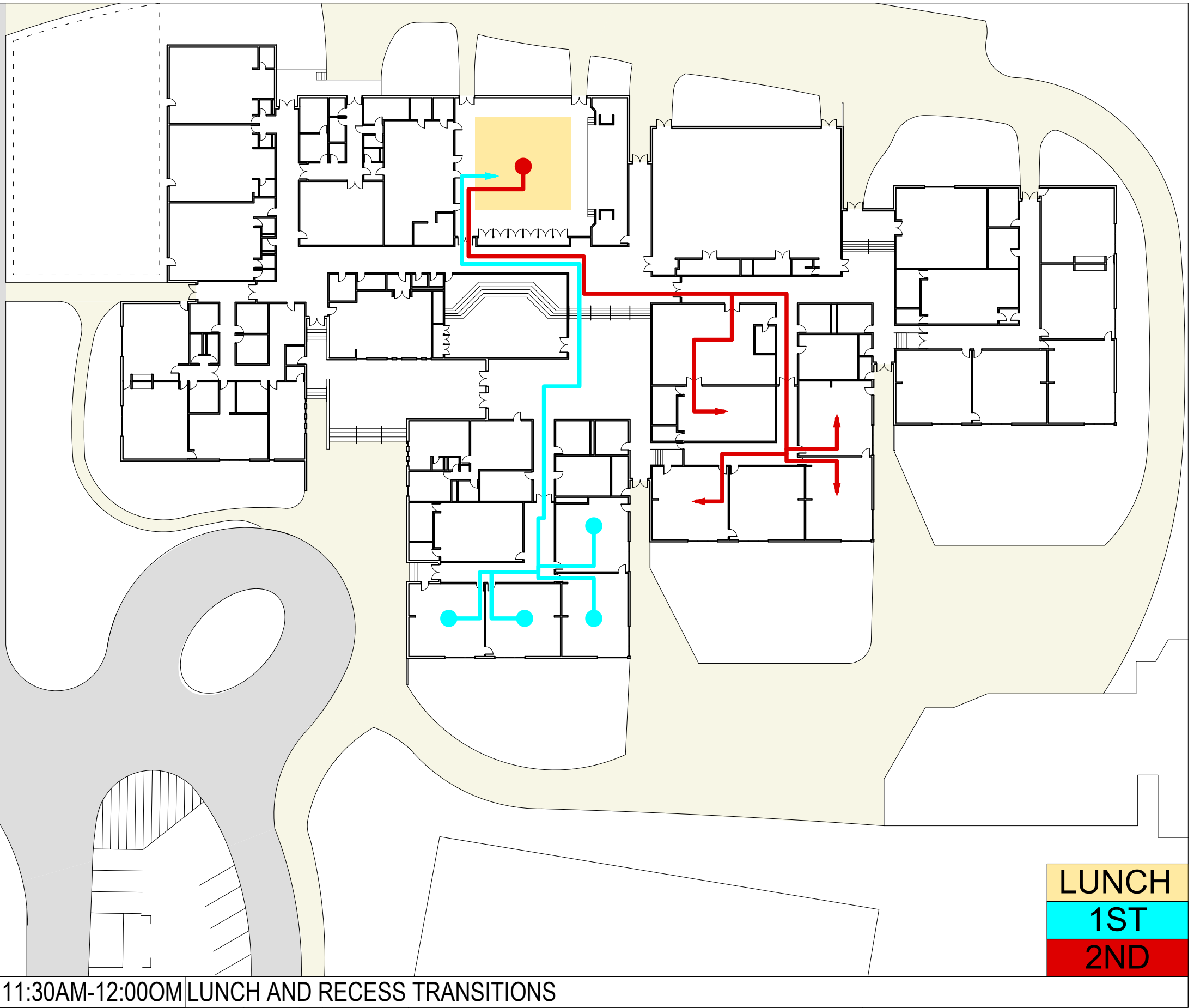
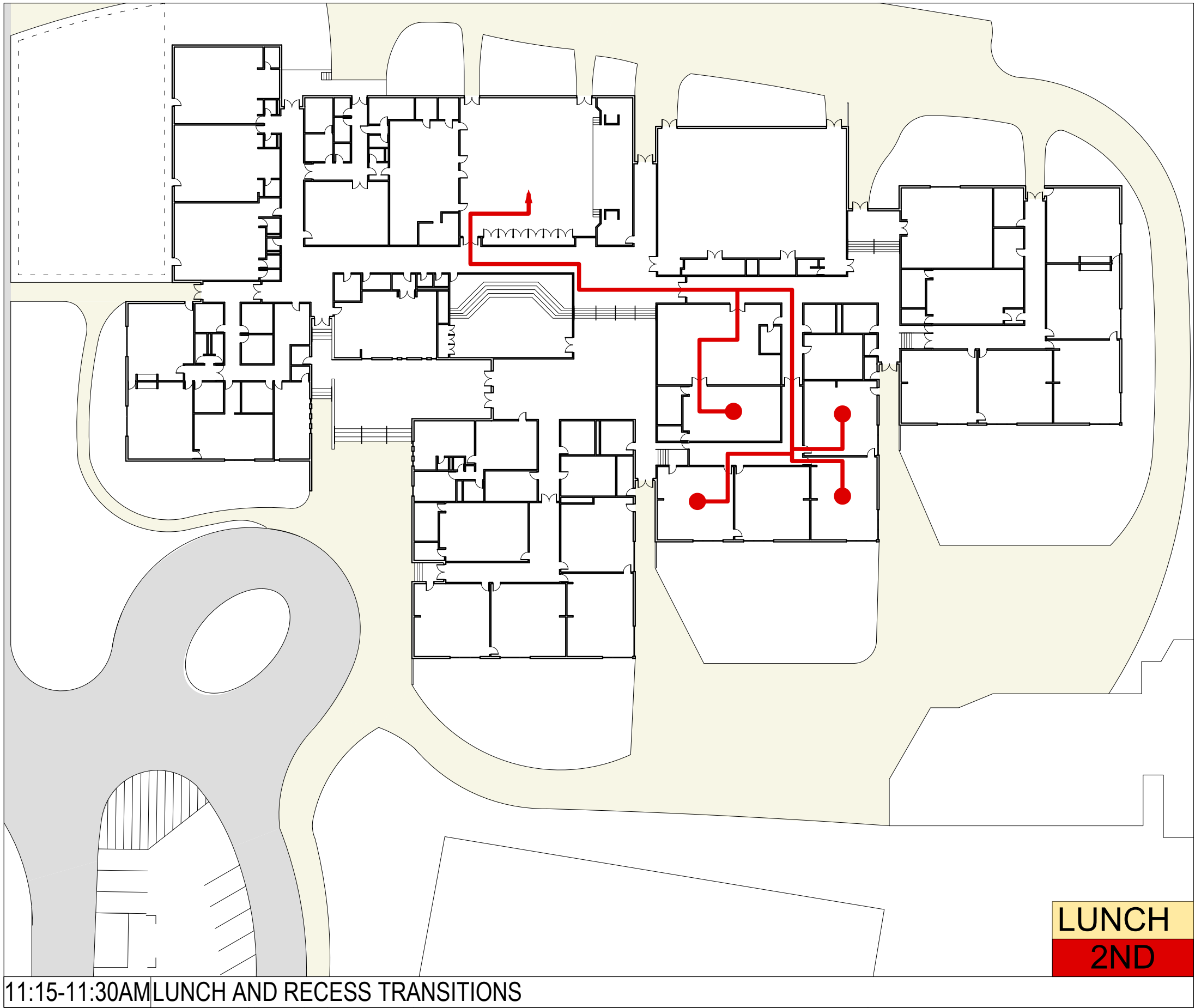
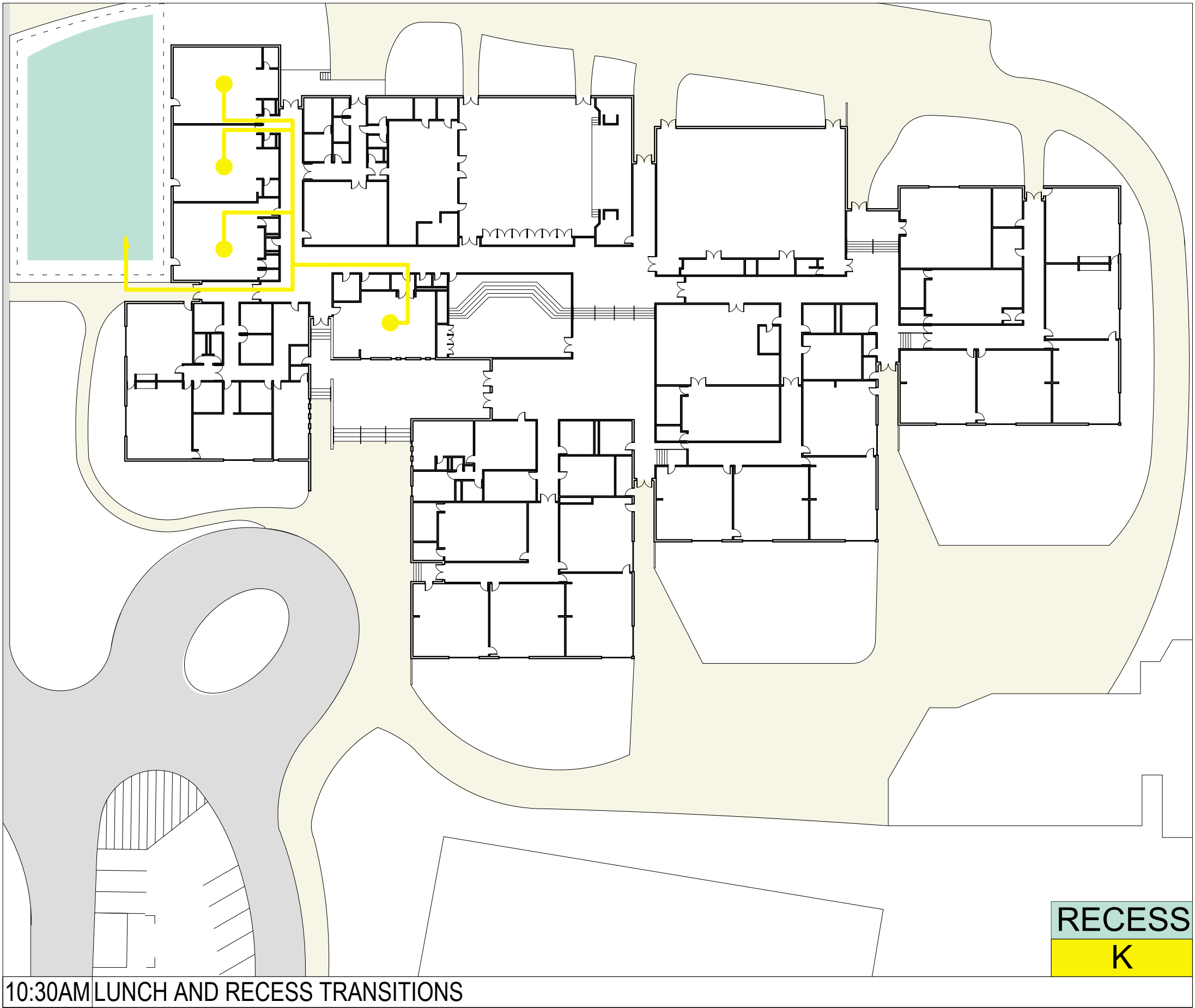
Before School

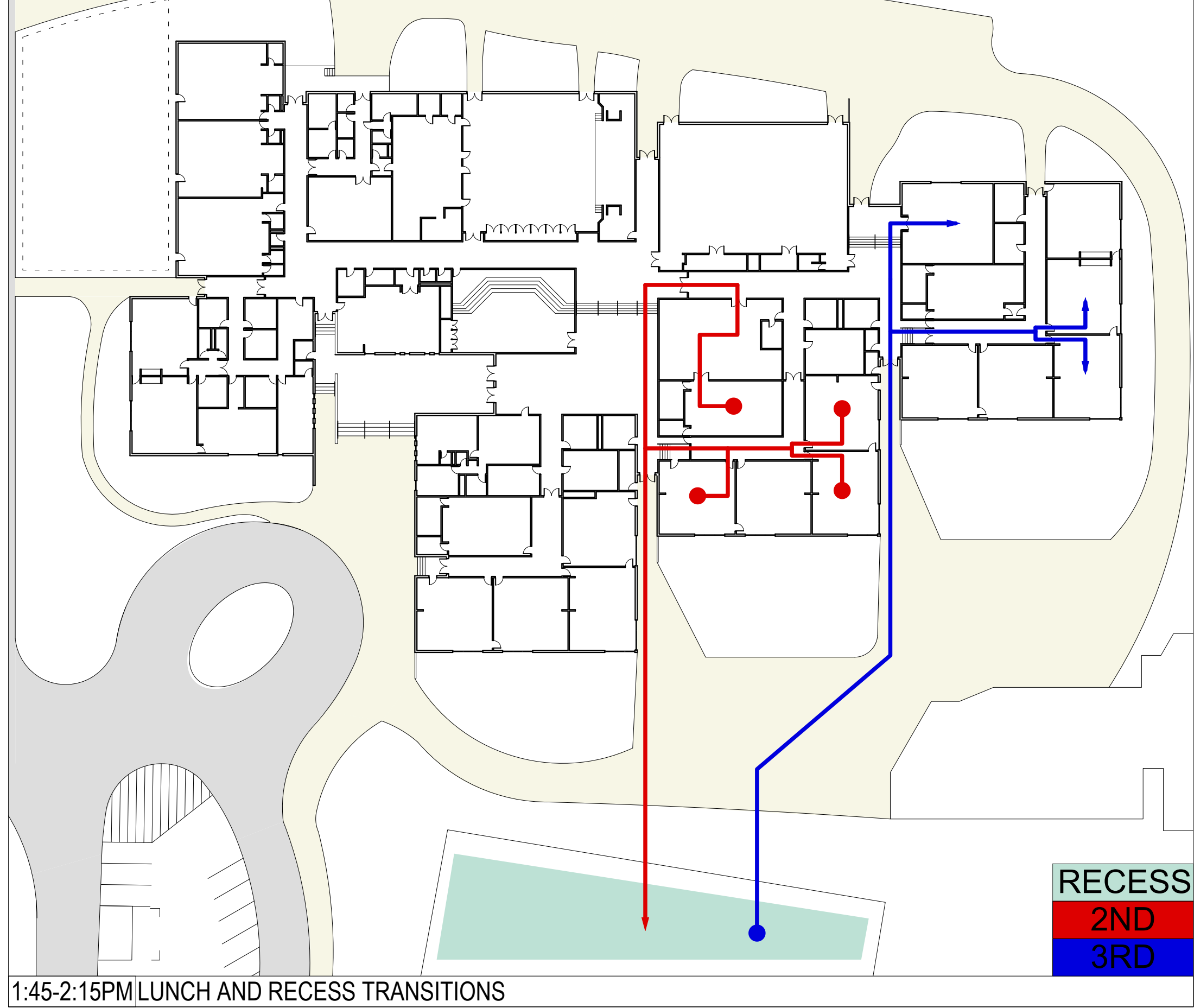
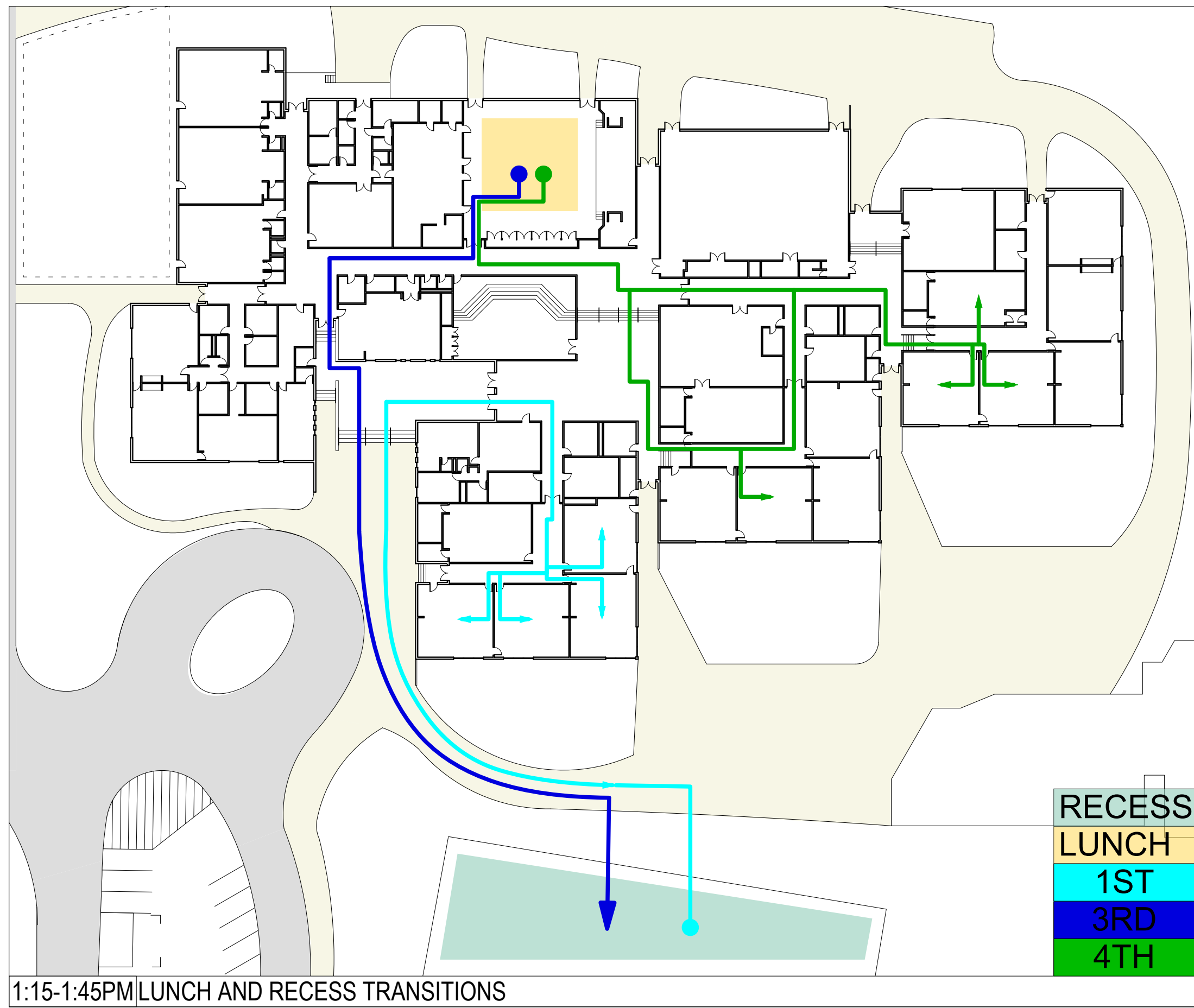
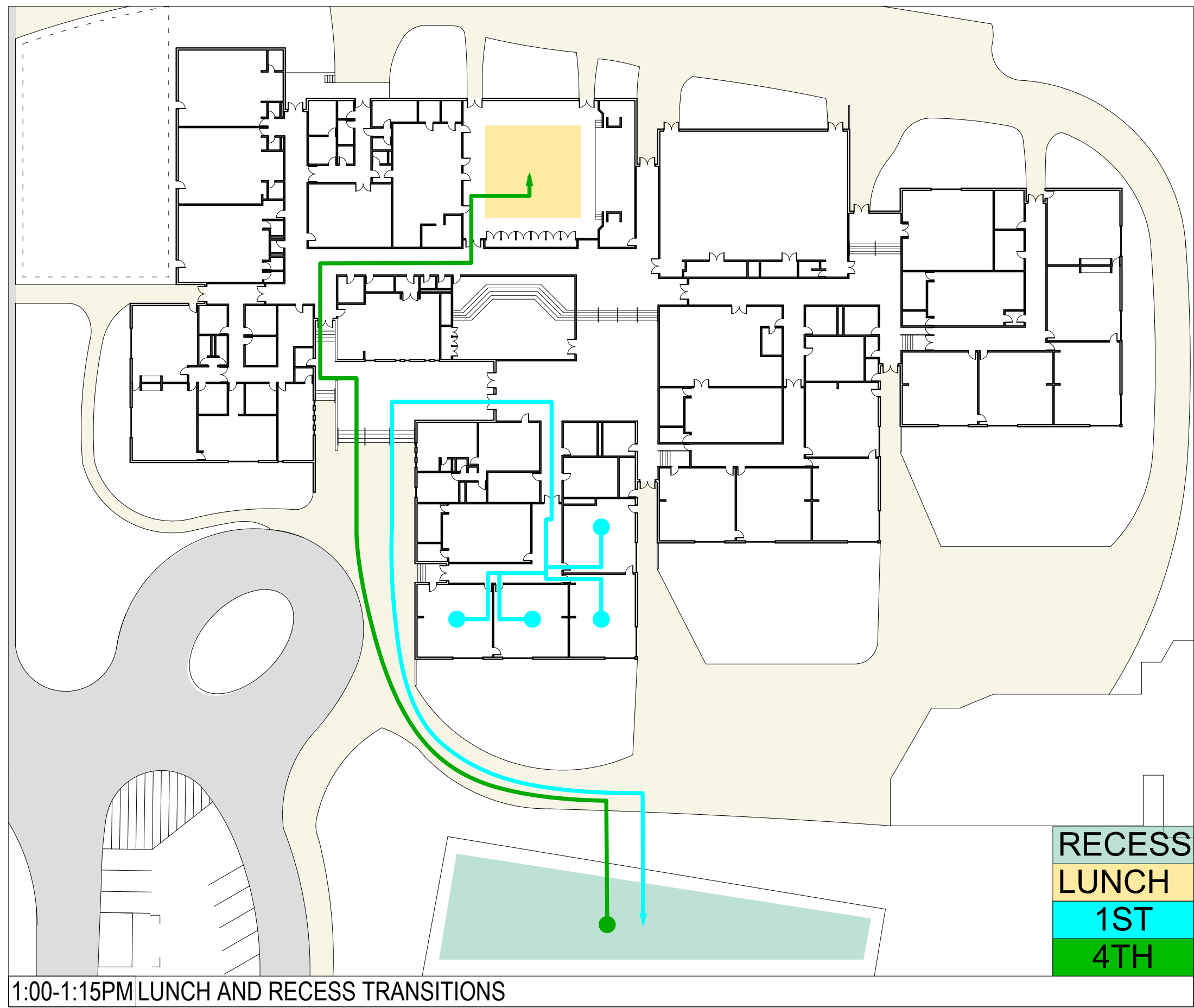


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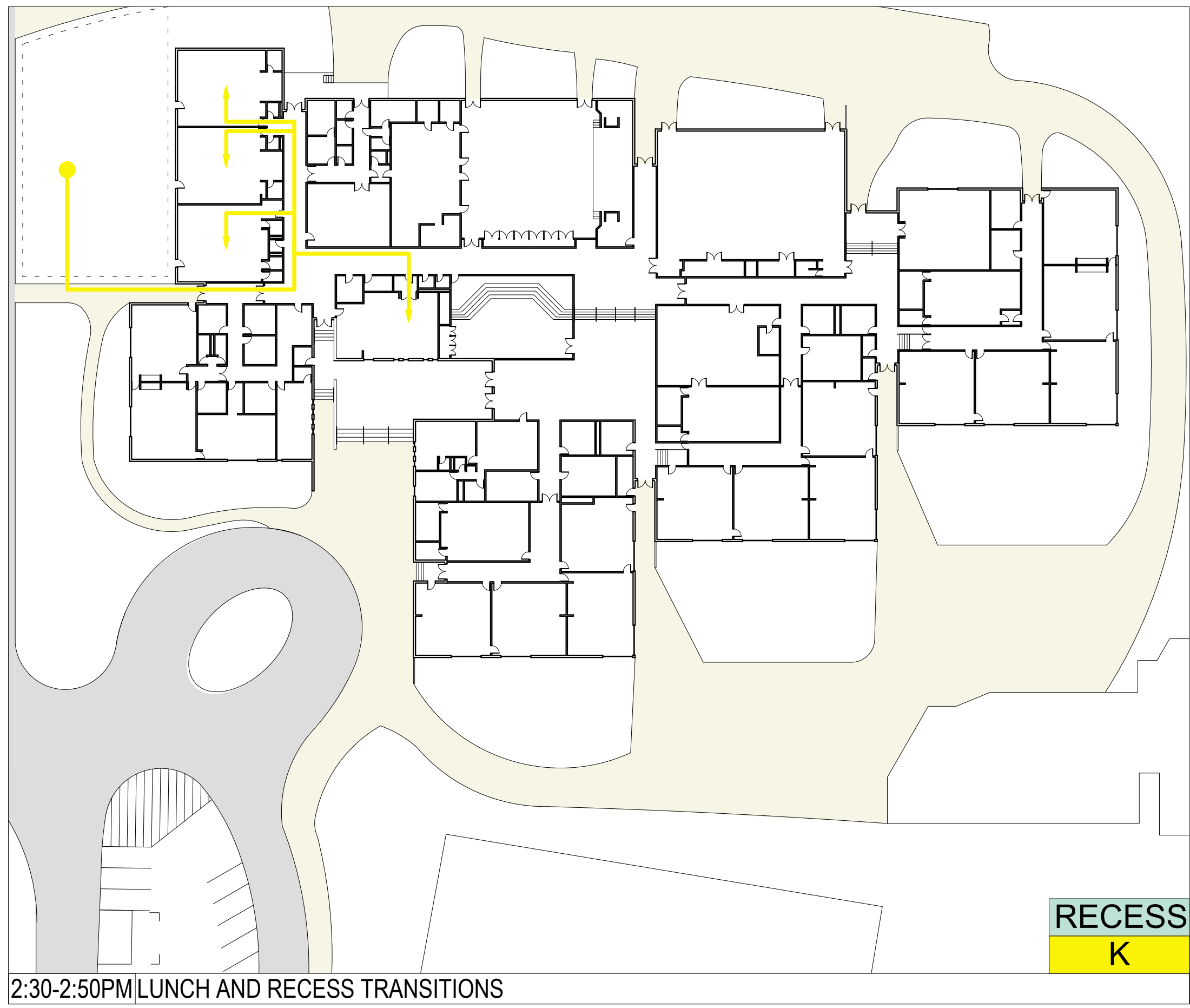
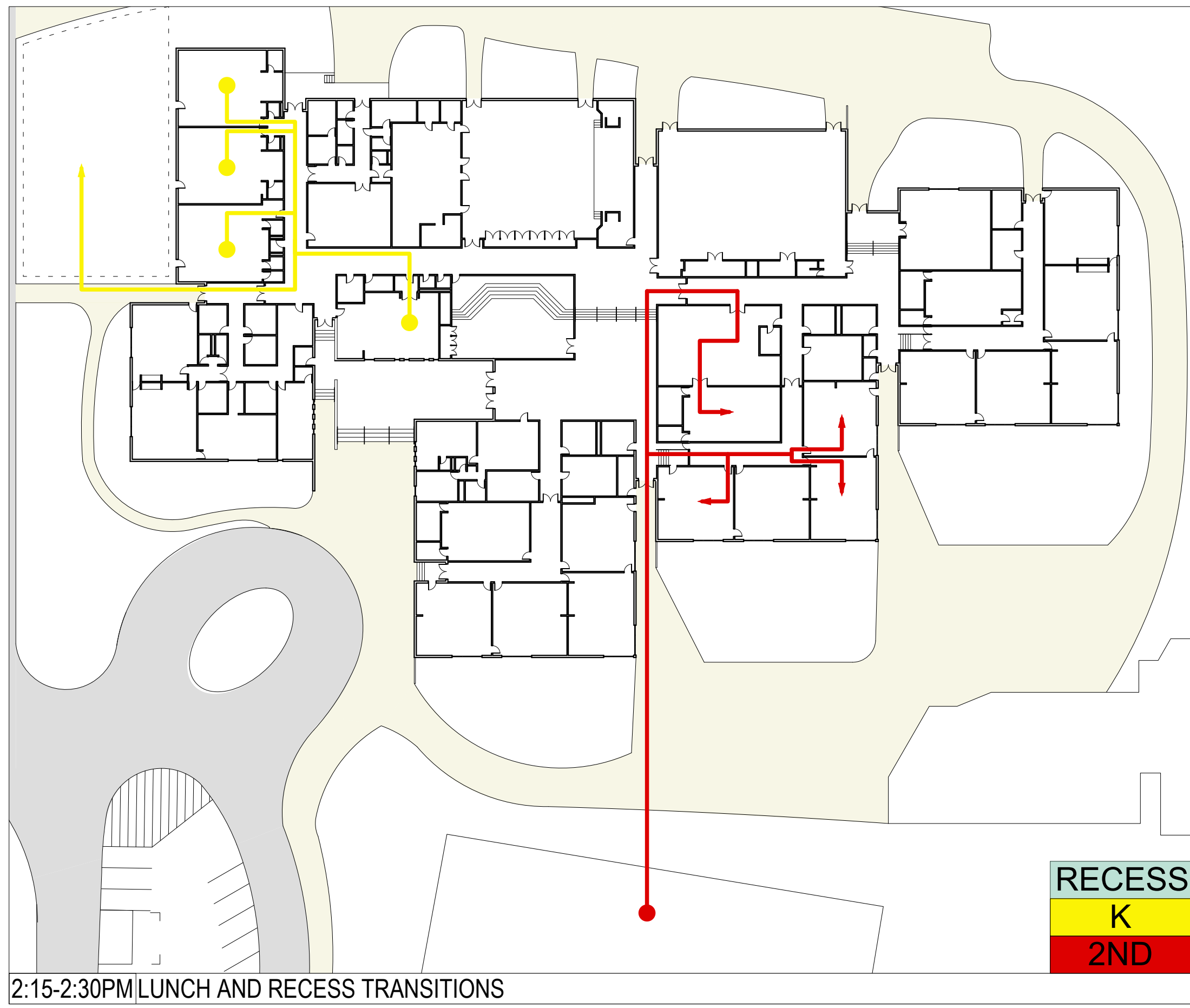
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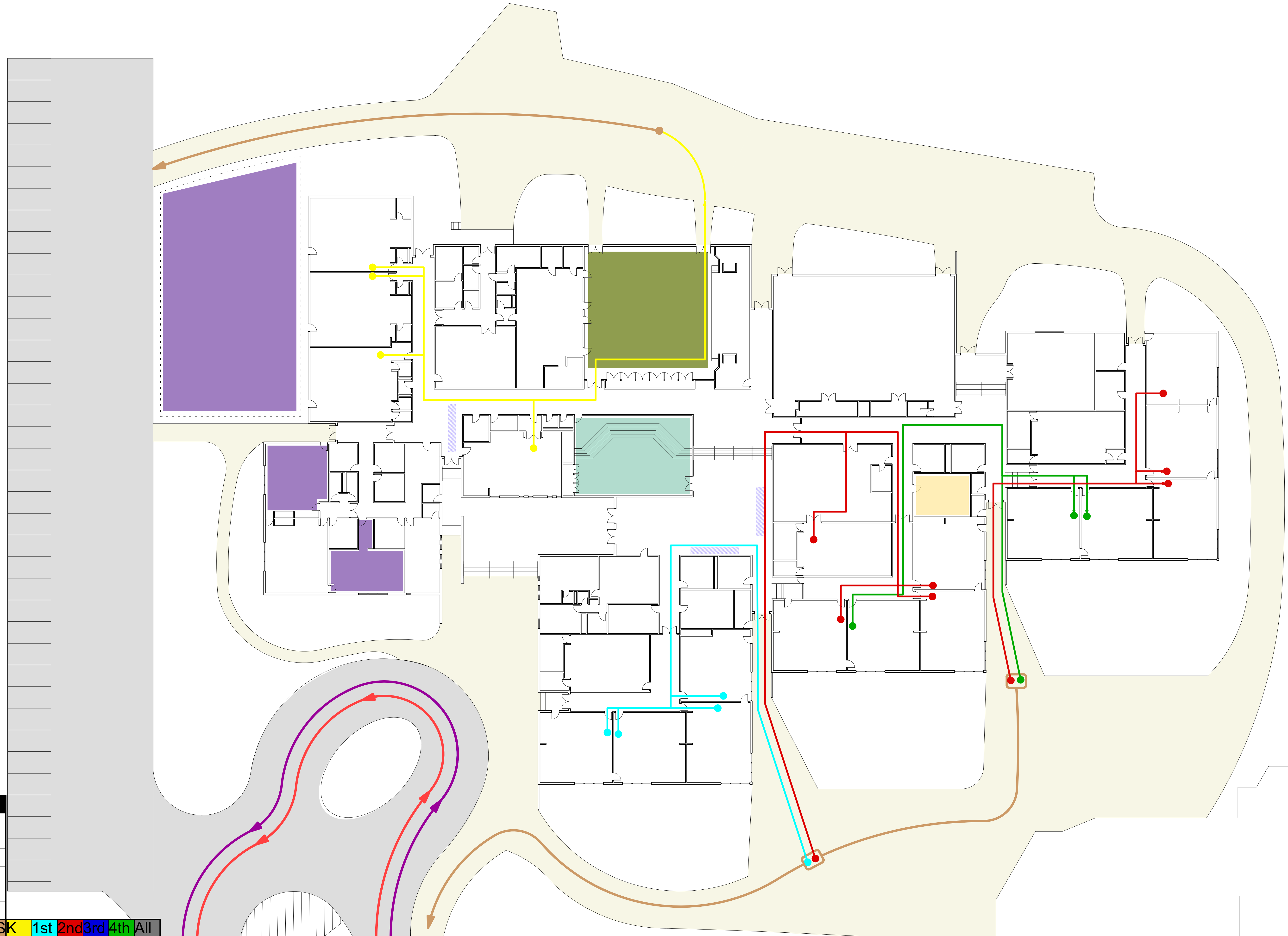






GRADE	K	2ND	1ST	4TH	3RD
RECESS	10:00AM	—	—	12:40PM	—
LUNCH	12:20PM	11:15AM	11:48AM	1:00PM	12:55PM
CLASS	12:48PM	11:43AM	12:16PM	1:28PM	—
RECESS	2:30PM	2:05PM	1:00PM	—	1:25PM
CLASS	2:50PM	2:25PM	1:20PM	—	1:45PM





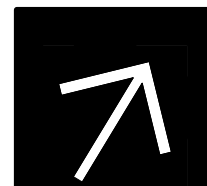
AFTER SCHOOL	
ASAP 1-4	TBD
MUSIC	TBD
TEST KITCHEN	TBD
K PROGRAM	TBD
LINE UP	TBD
CLASS ENDS	2:50PM
CARS	BUSES
WALKERS	K 1st 2nd 3rd 4th All

Memorial Elementary

107 Eliot St,
Natick, MA 01760

M-1.5

After School



NORTH

DEC, 15th, 2020

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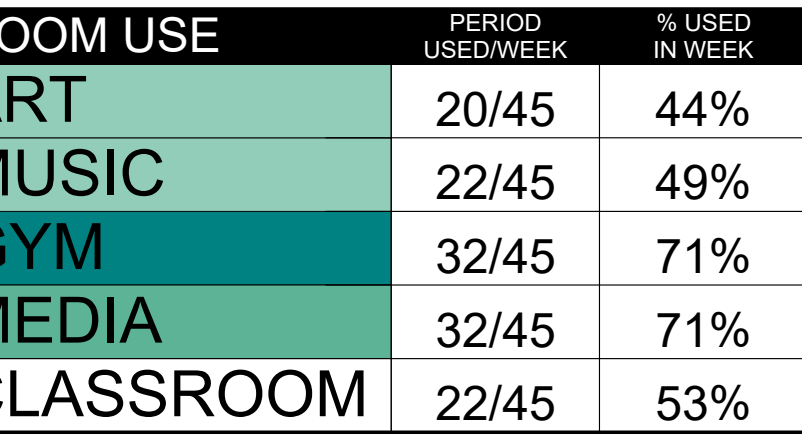


OVER UTILIZED

APPROPRIATE

UNDER UTILIZED

INAPPROPRIATE

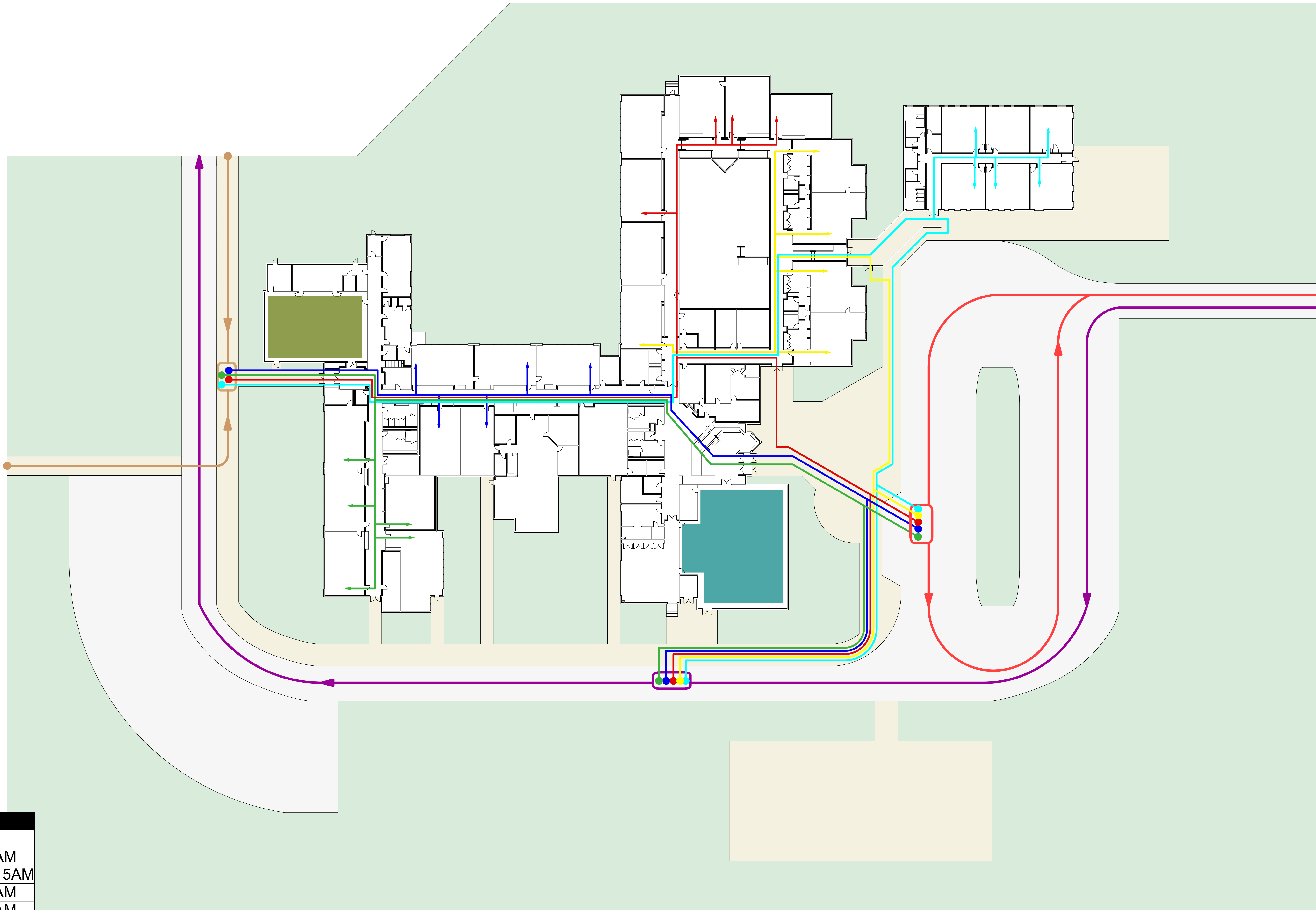


SPACE LEGEND

- RESTROOMS
- STORAGE
- ADMINISTRATION
- DINING/ FOOD SERVICE
- MEDIA
- ART & MUSIC
- HEALTH & PE
- CLASSROOM-KINDERGARTEN
- CLASSROOM-GRADE 1
- CLASSROOM-GRADE 2
- CLASSROOM-GRADE 3
- CLASSROOM-GRADE 4
- SPECIAL ED.
- WORKROOM
- *

TO BE CONFIRMED





BEFORE SCHOOL	
ASAP	
BREAKFAST	7:00AM
BOKS	7:30-8:15AM
DOORS OPEN	8:20AM
CLASS BEGINS	8:30AM
CARS	BUSES
WALKERS	K 1st 2nd 3rd 4th All

Brown Elementary School

1 Jean Burke Dr, Natick,
MA 01760

B-1.1

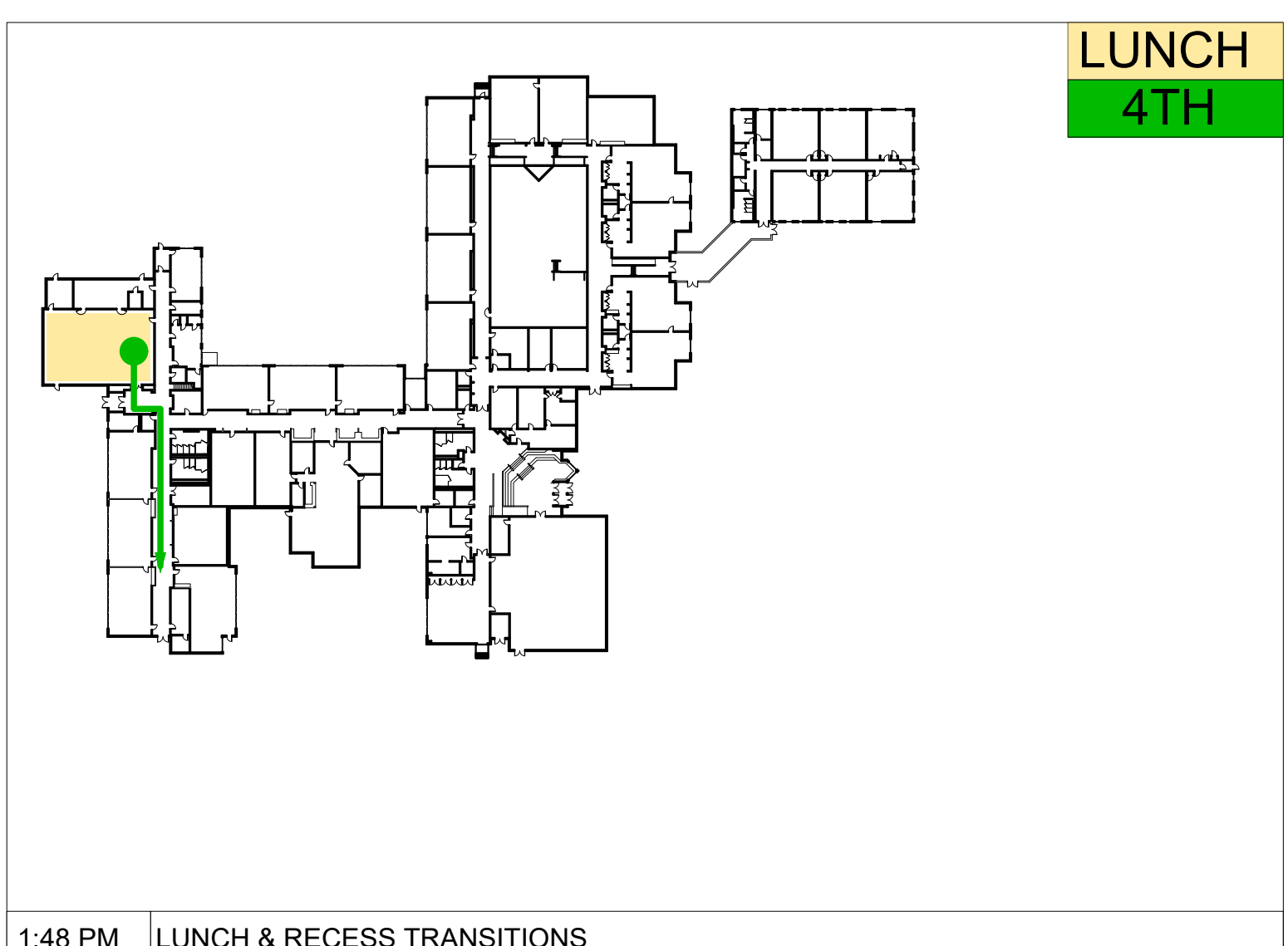
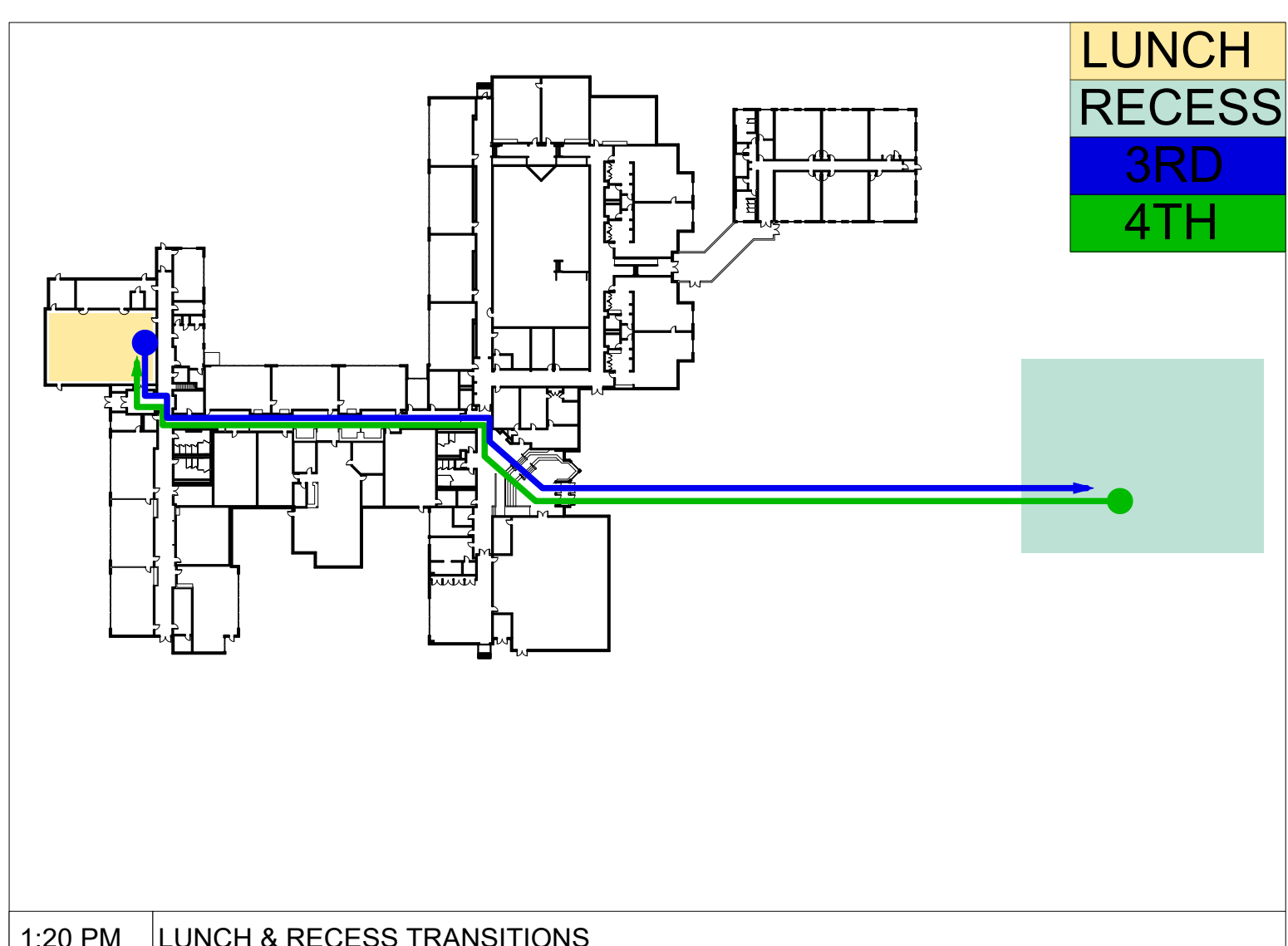
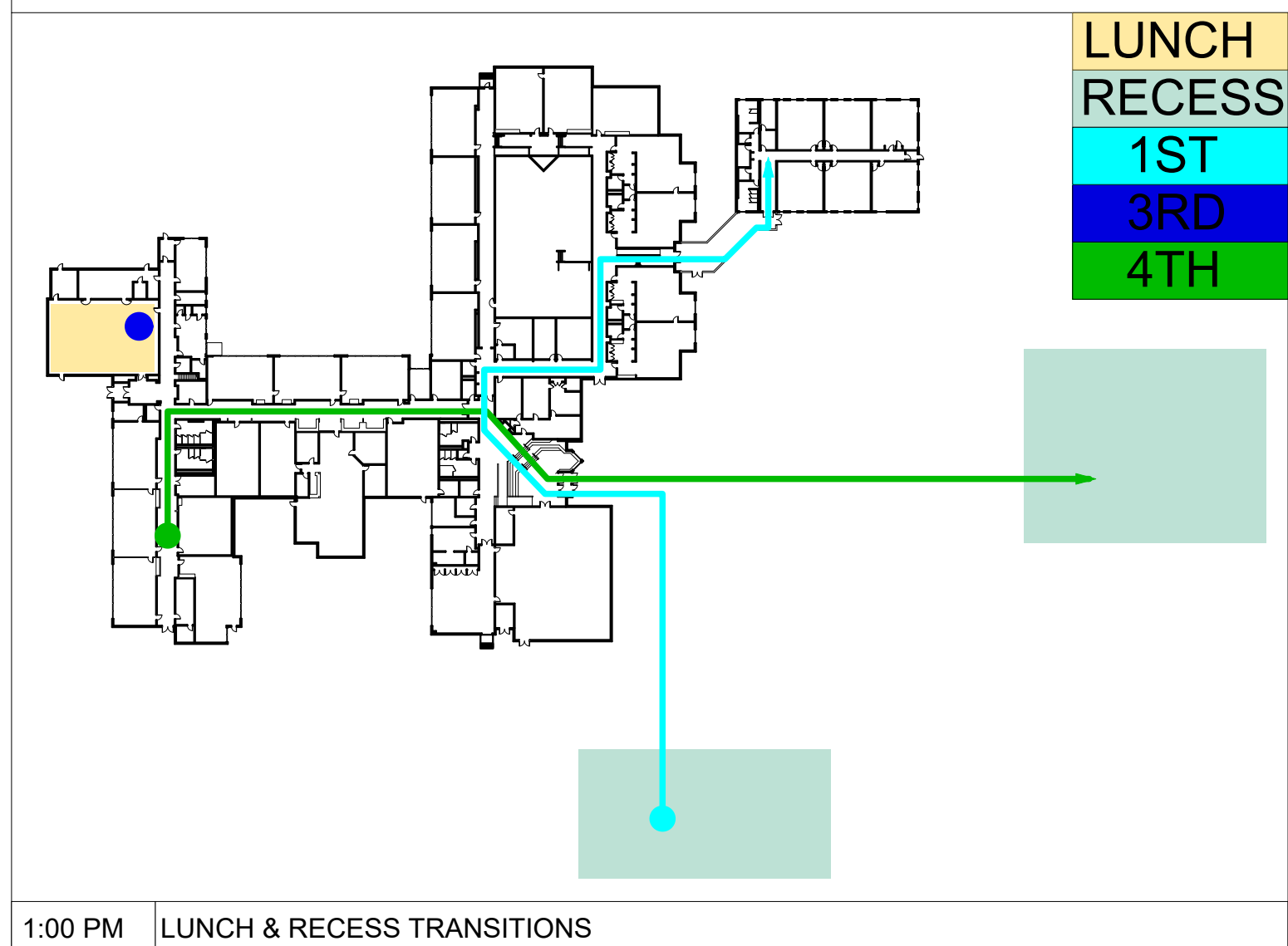
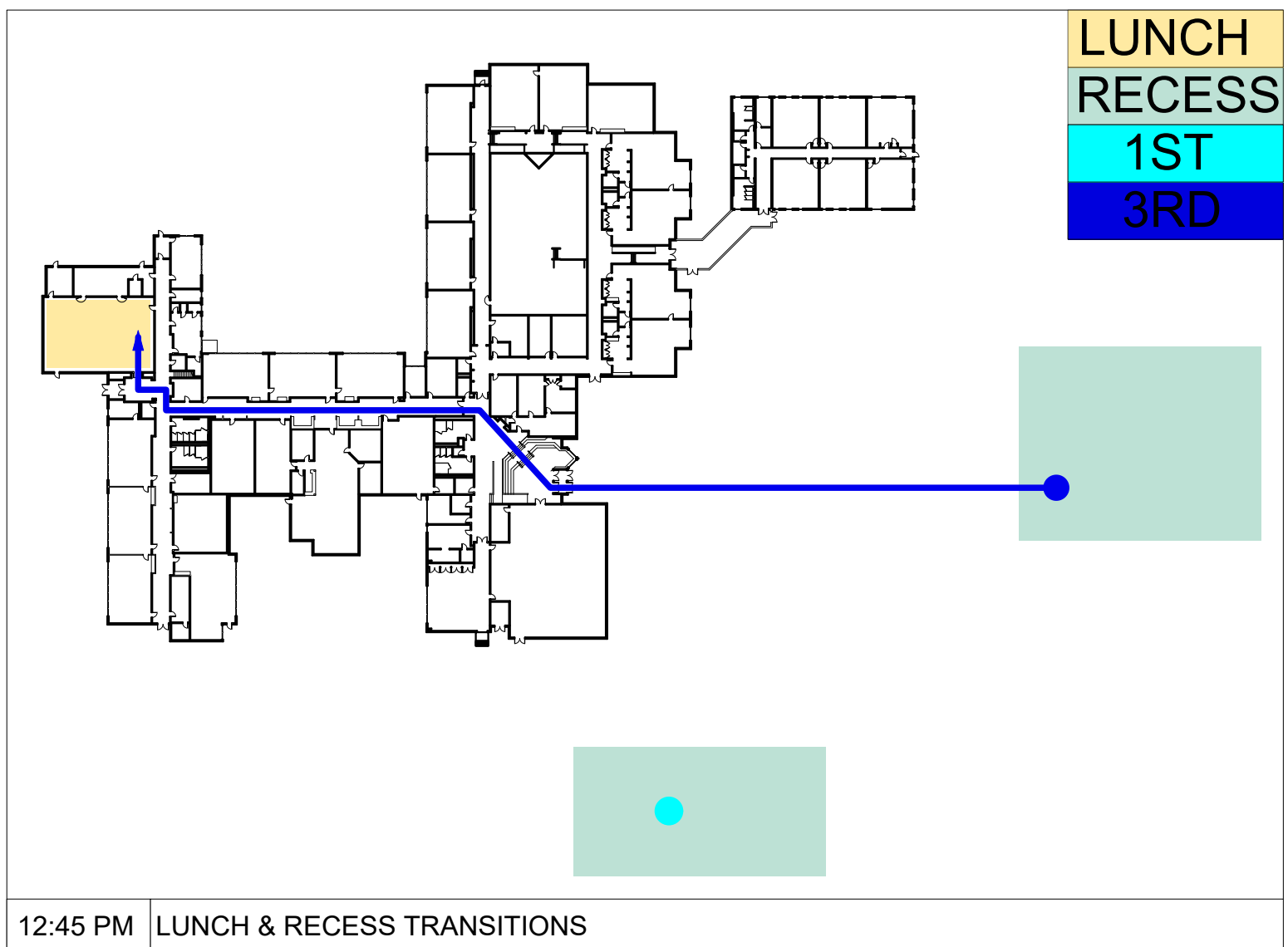
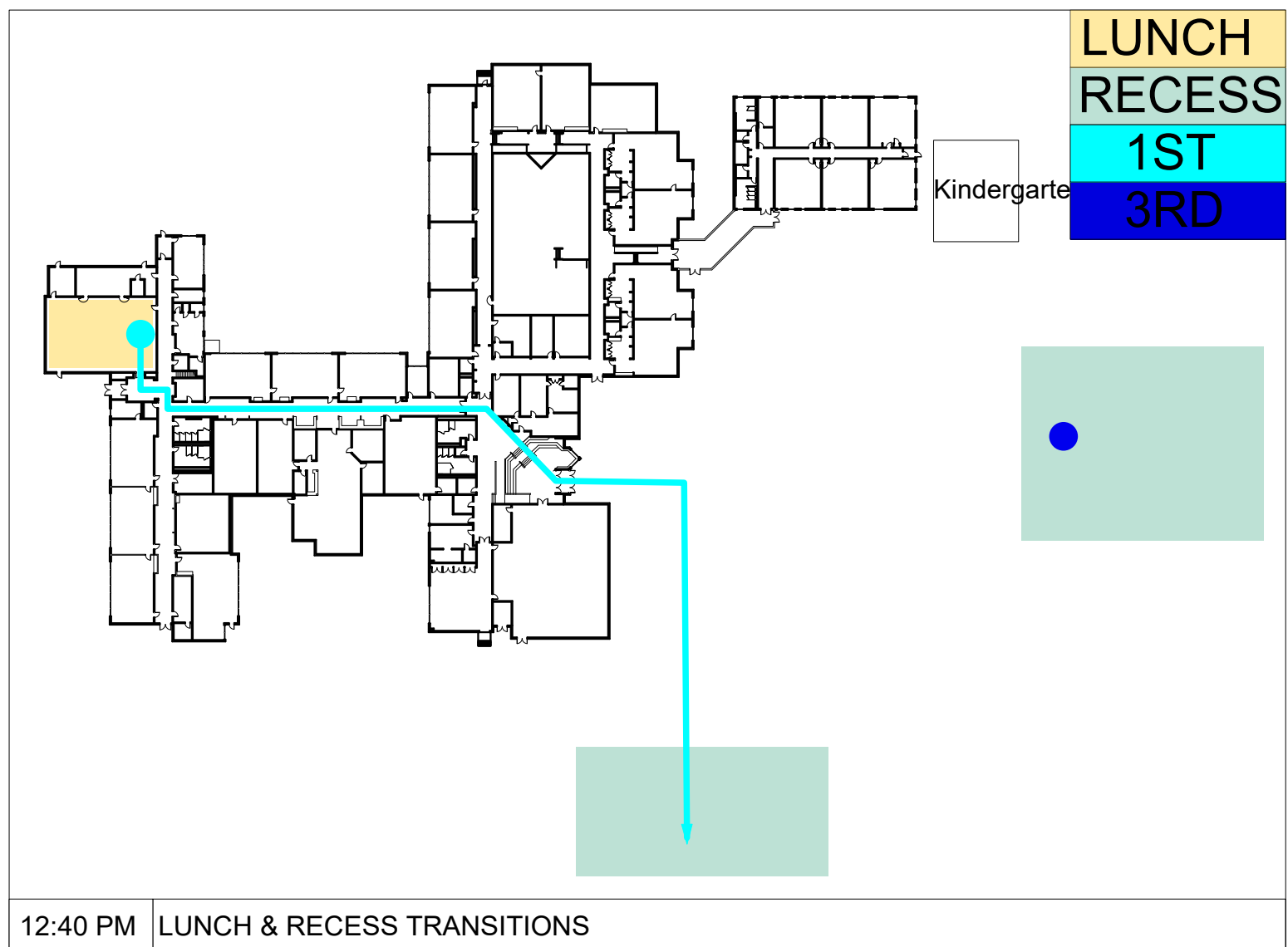
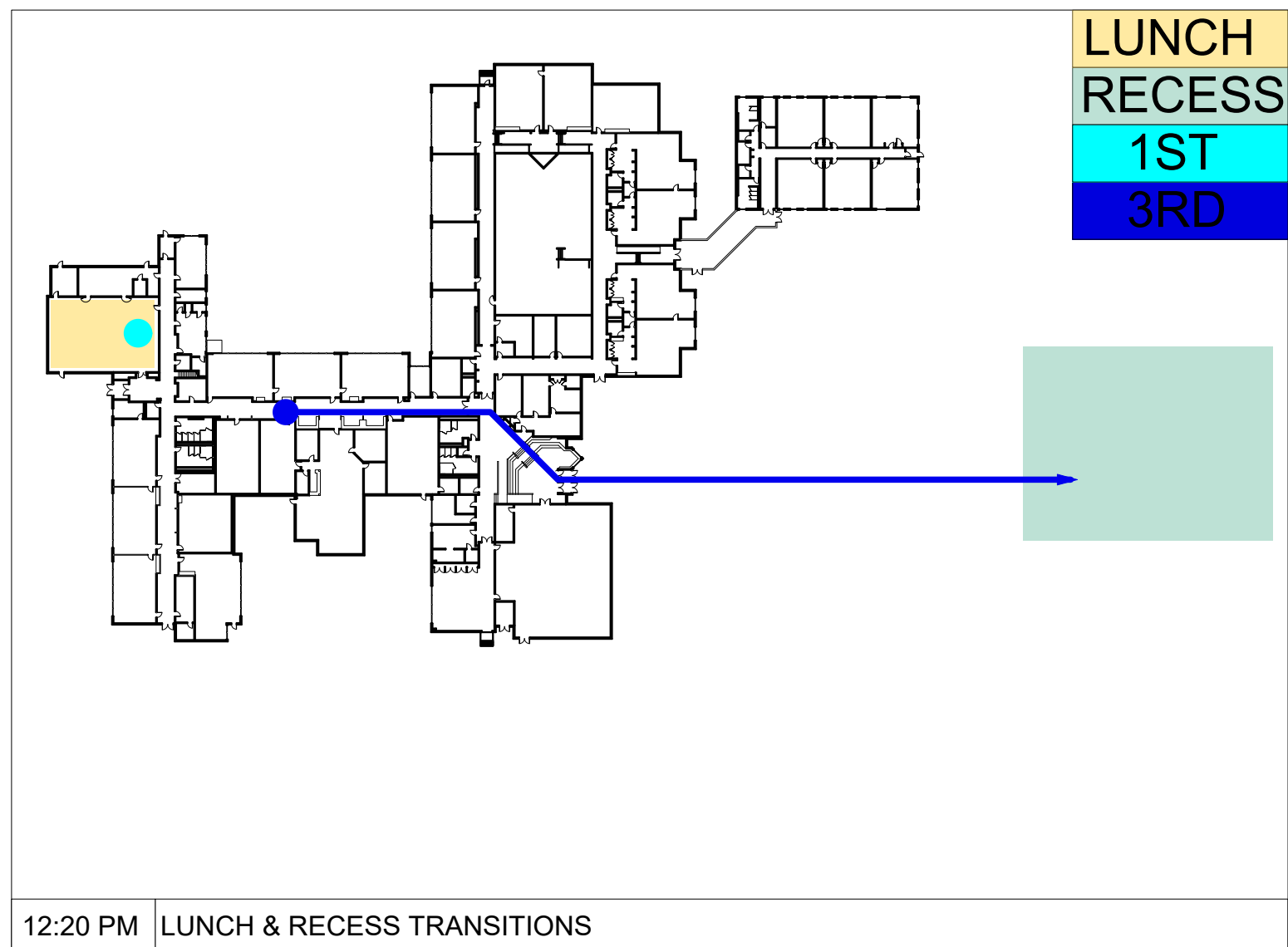
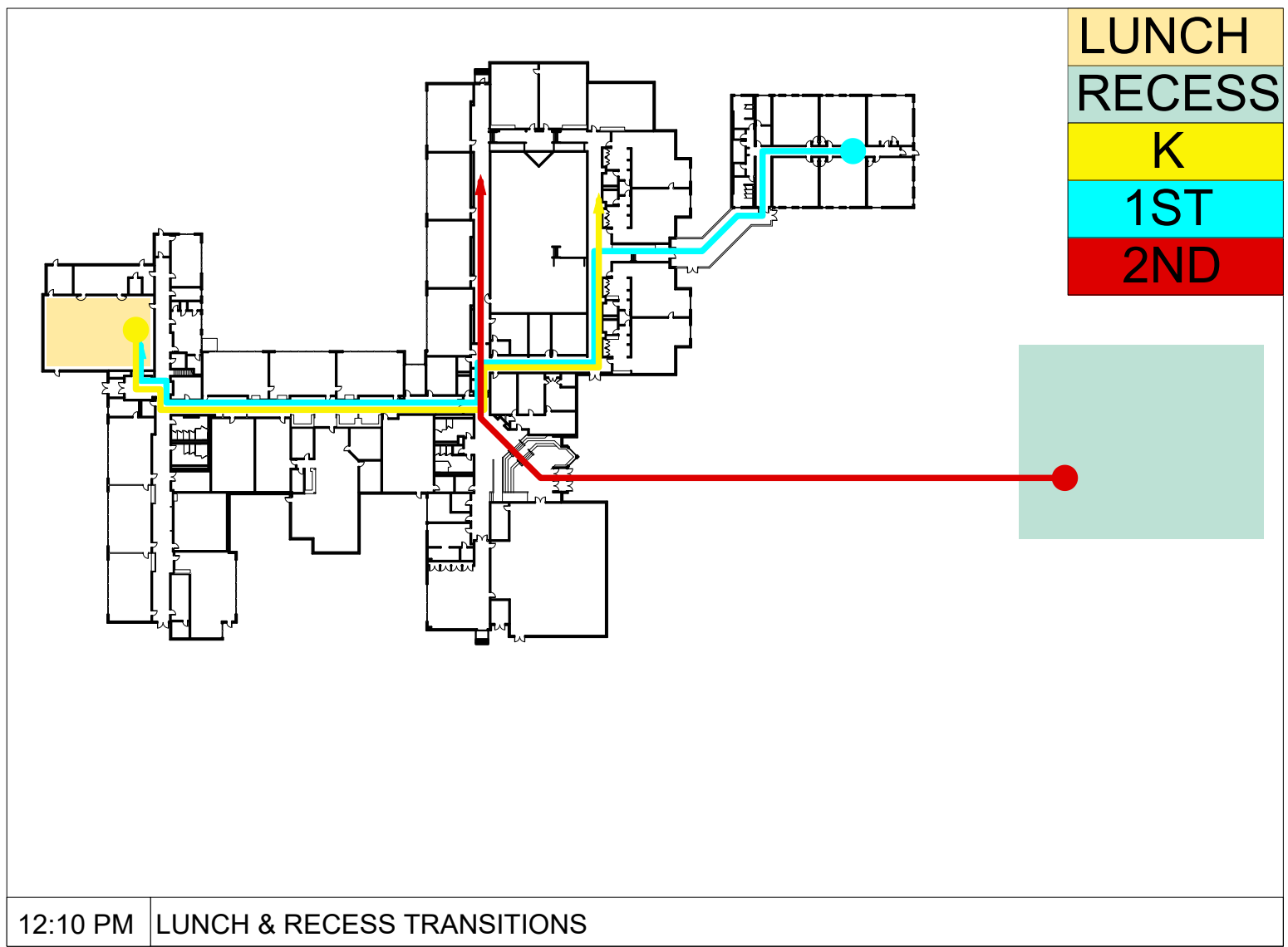
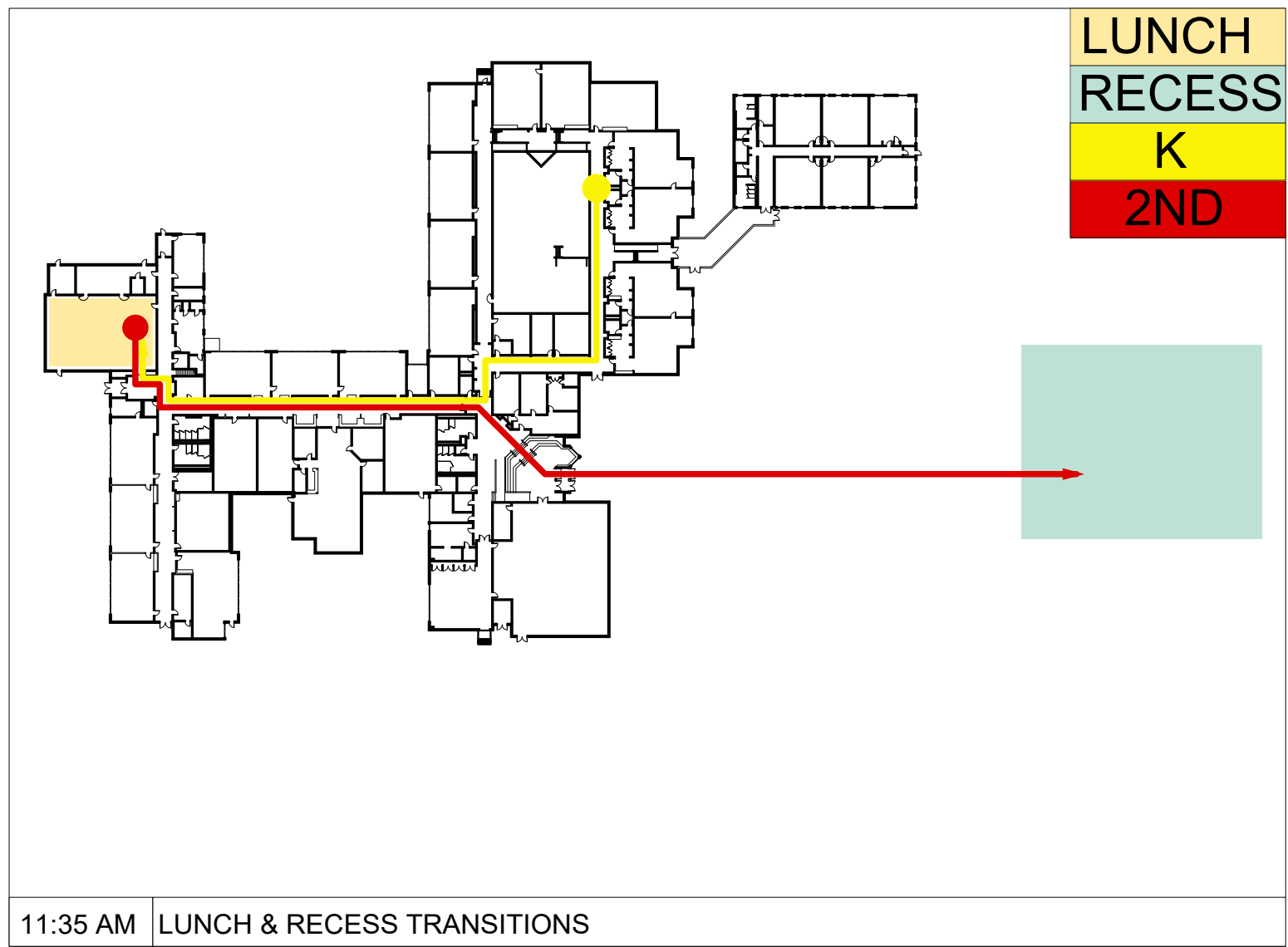
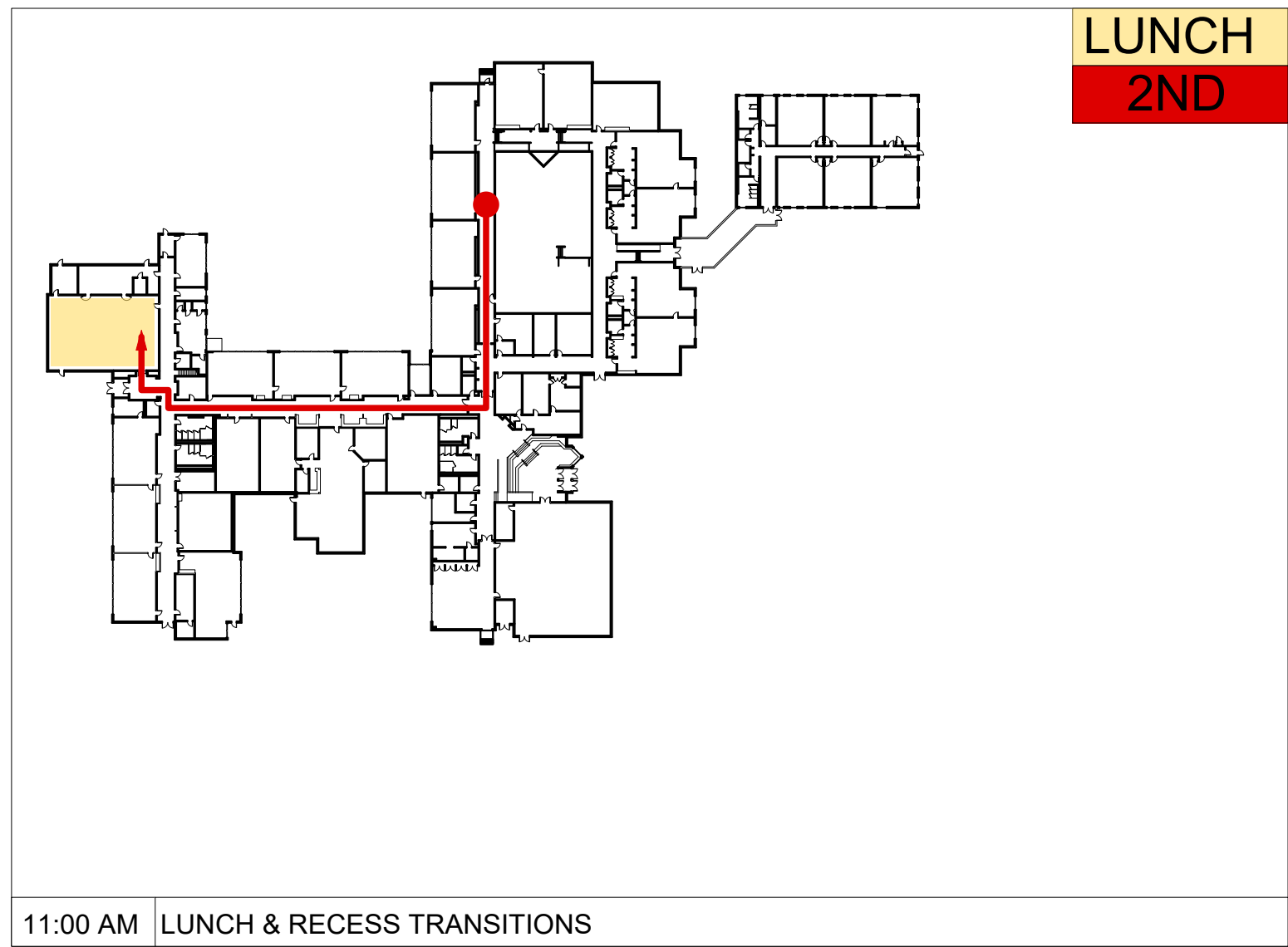
Before school



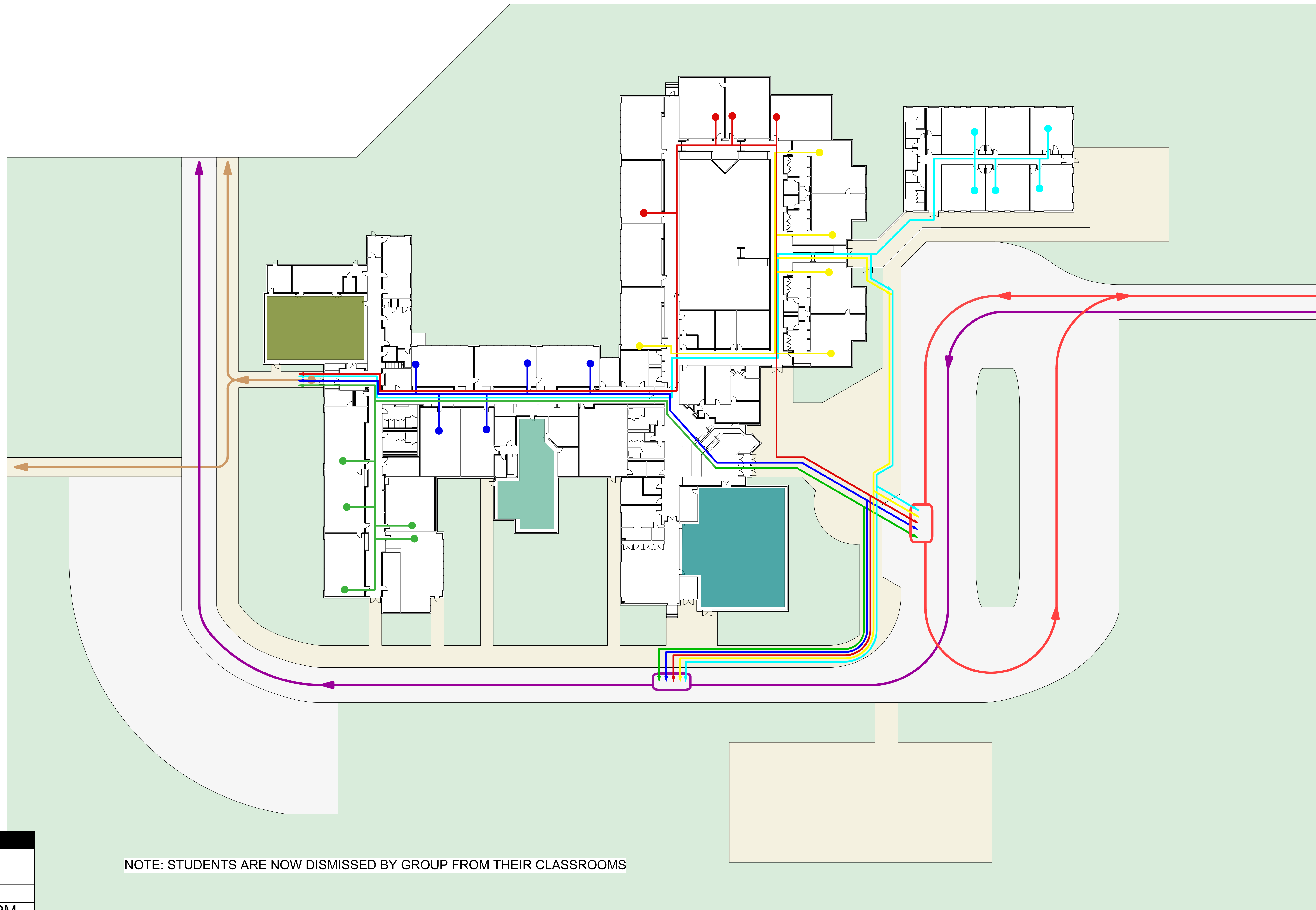
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GRADE	2ND	K	1ST	3RD	4TH
LUNCH	11:00AM	11:35AM	12:10PM	12:45PM	1:20PM
RECESS	11:35AM		12:40PM	12:20PM	1:00PM
CLASS	12:00PM		1:20PM	12:40PM	1:48PM

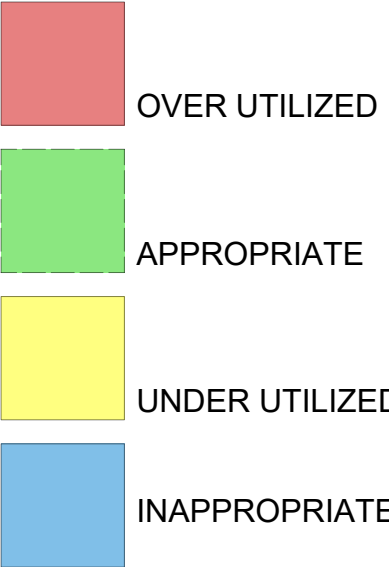


AFTER SCHOOL	
YMCA	TBD
ASAP	TBD
ASAP/GRADE	TBD
CLASS ENDS	2:50PM
CARS	BUSES
WALKERS	K 1st 2nd 3rd 4th All

NOTE: STUDENTS ARE NOW DISMISSED BY GROUP FROM THEIR CLASSROOMS



SPACE LEGEND



SPACE LEGEND

RESTROOMS

STORAGE

ADMINISTRATION

DINING/ FOOD SERVICE

MEDIA

ART/MUSIC

HEALTH & PE

SPECIAL ED.

CLASSROOM-PRE K

CLASSROOM-KINDERGARTEN

CLASSROOM-GRADE 1

CLASSROOM-GRADE 1&2

CLASSROOM-GRADE 2

CLASSROOM-GRADE 3

CLASSROOM-GRADE 3&4

CLASSROOM-GRADE 4



0 2' 4' 8' 16'

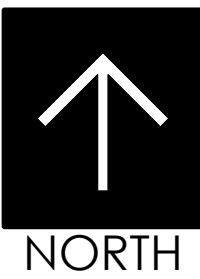
1/16" = 1' on original

LILJA ELEMENTARY

41 BACON ST
NATICK, MA 01760

L-1.0

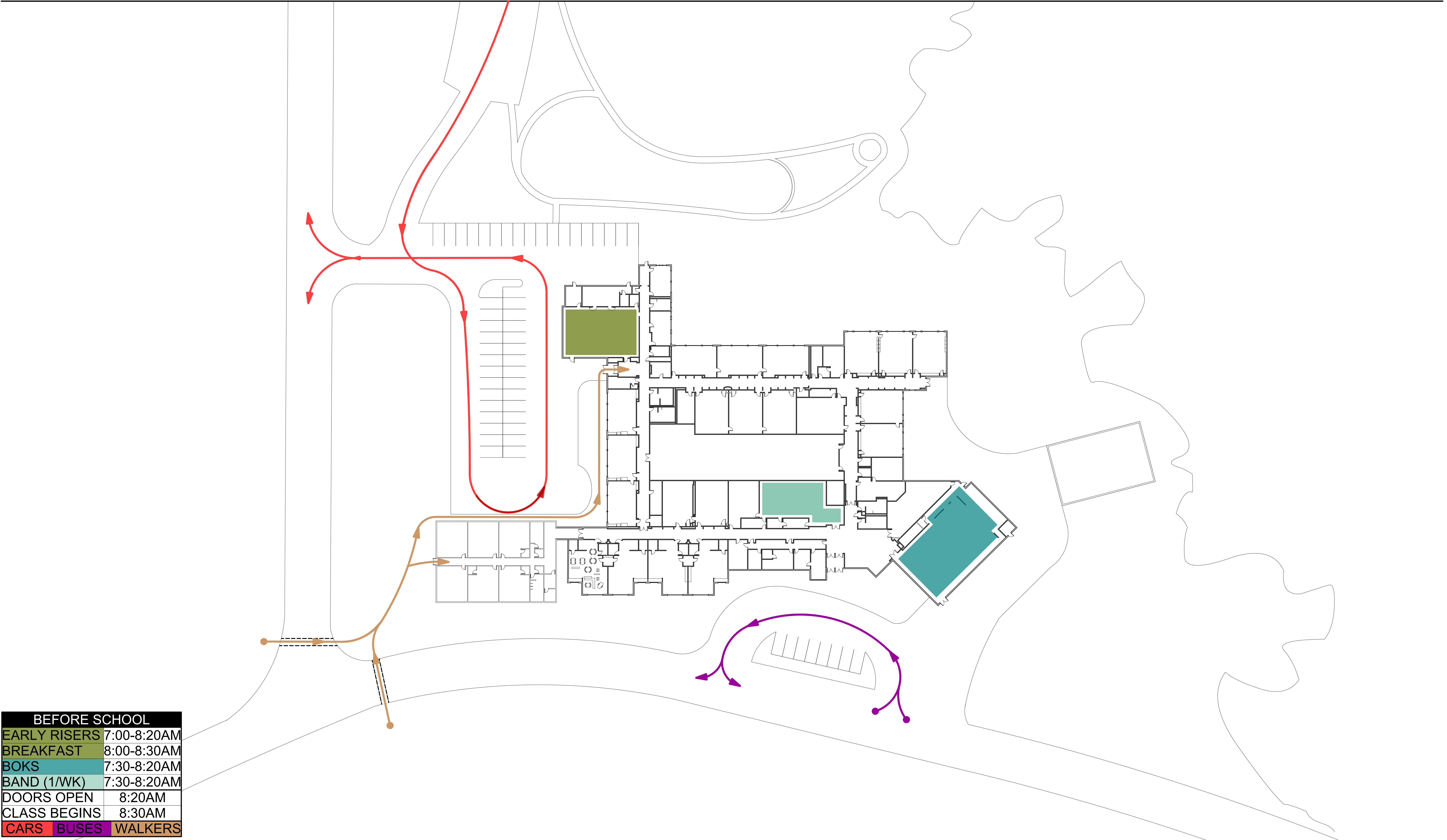
Space Use



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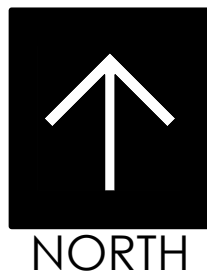


LILJA ELEMENTARY

41 BACON ST
NATICK, MA 01760

L-2.0

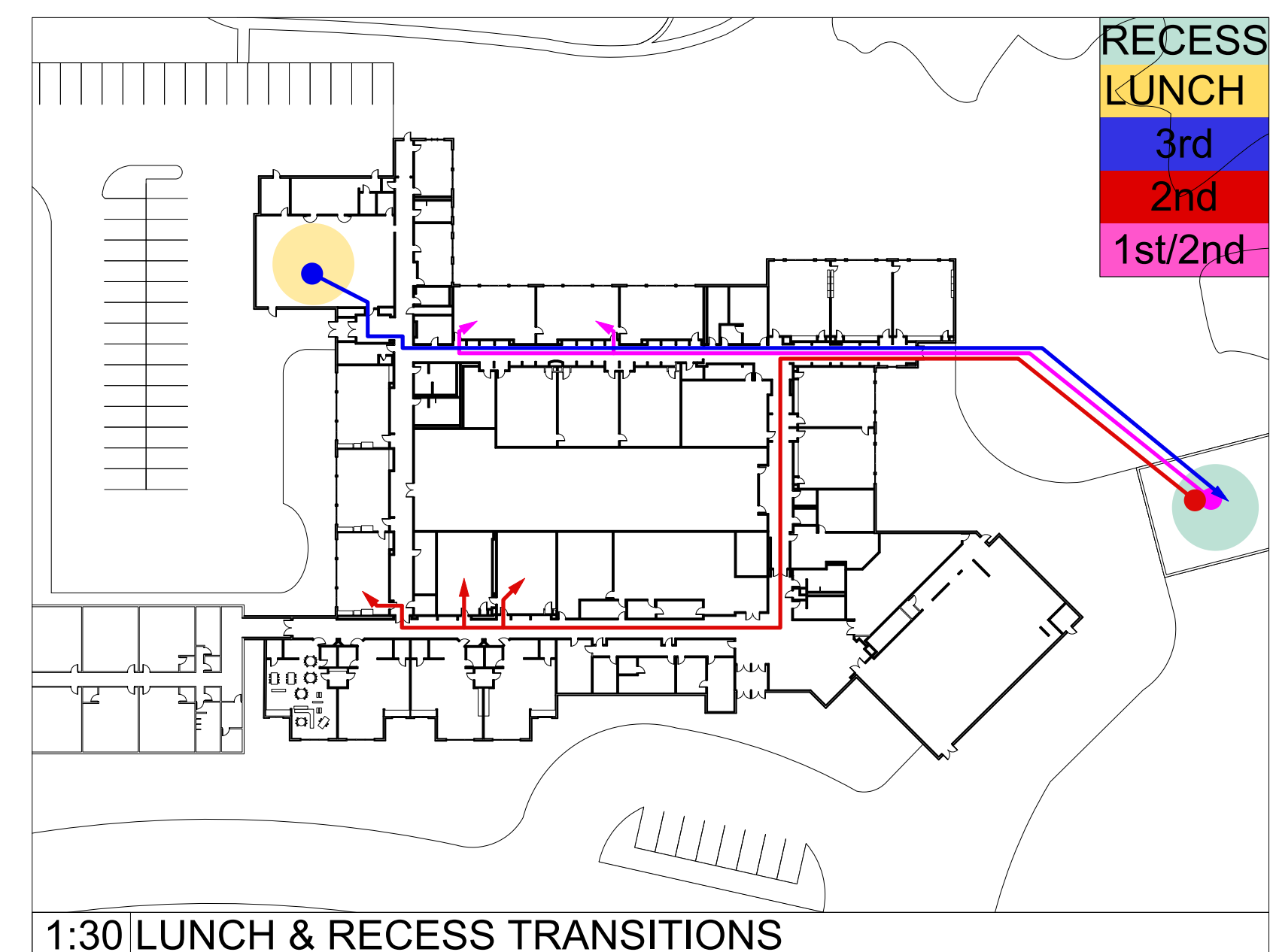
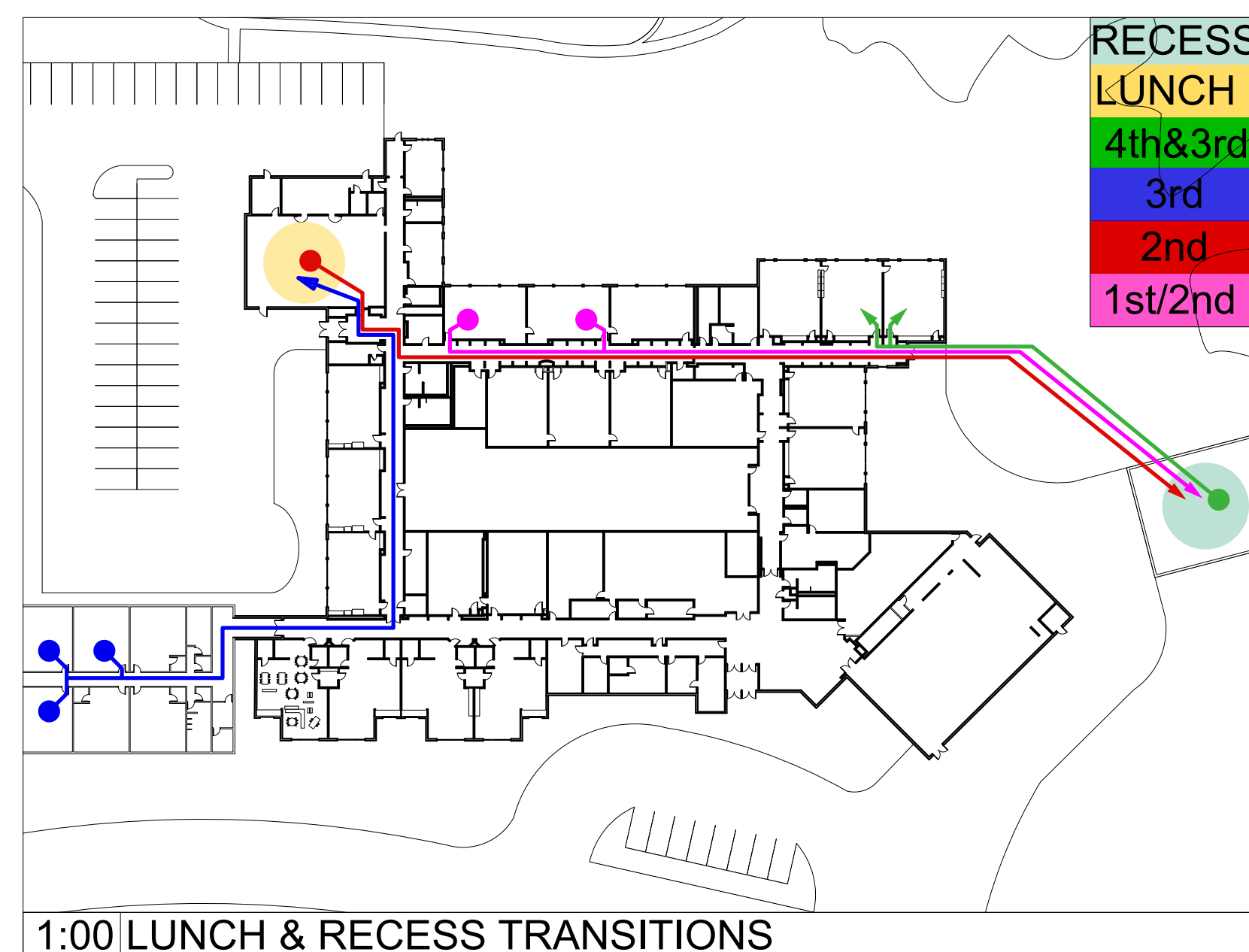
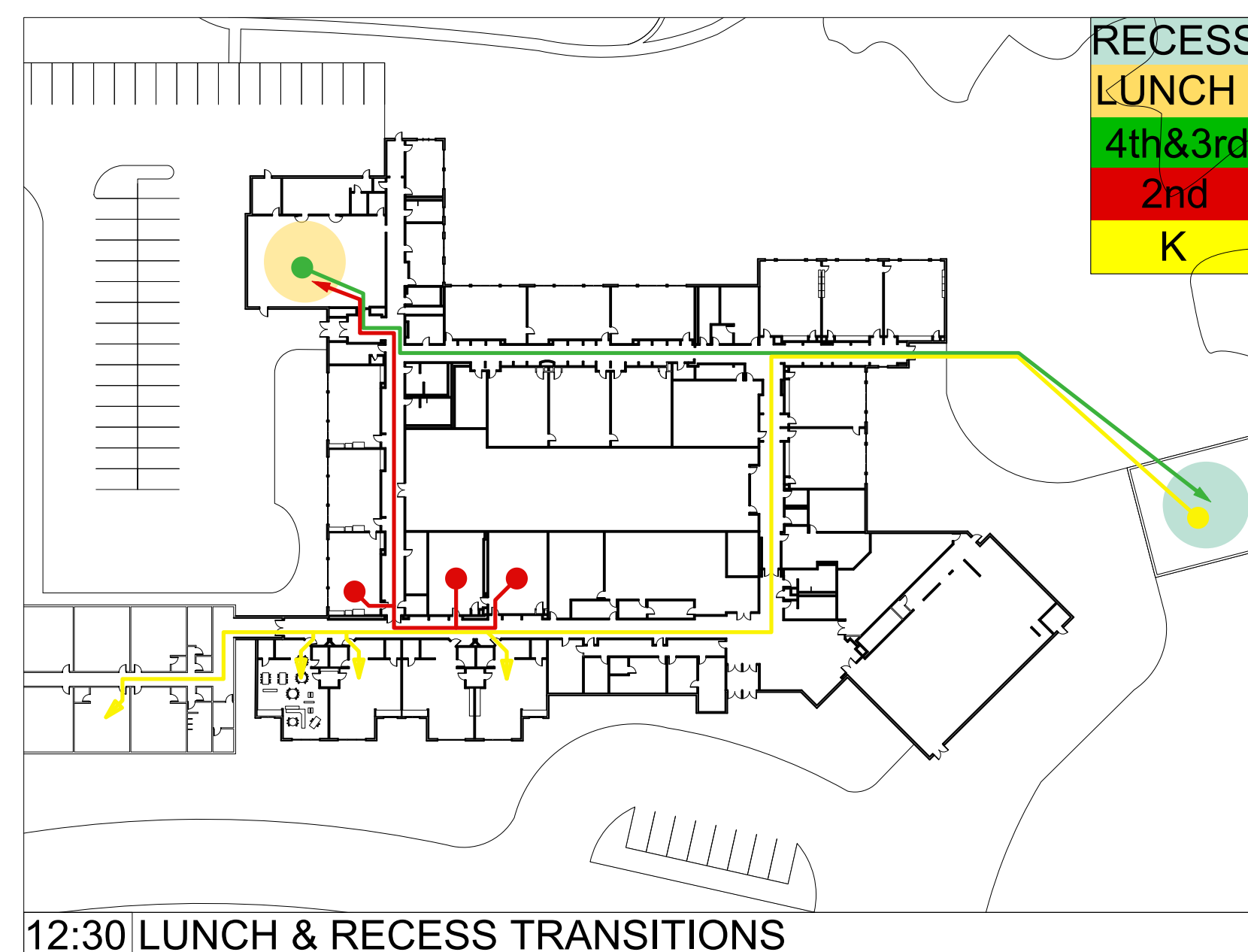
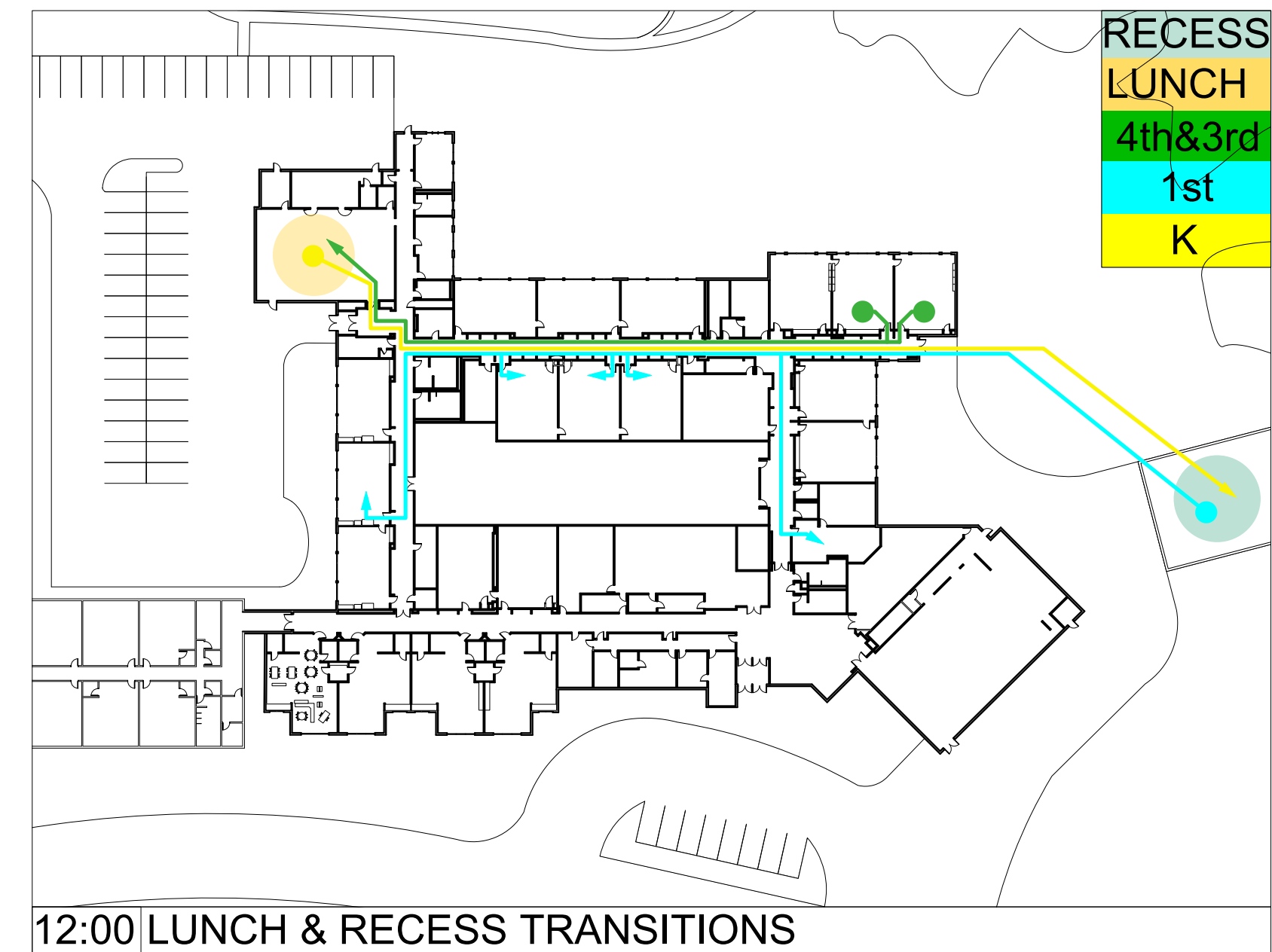
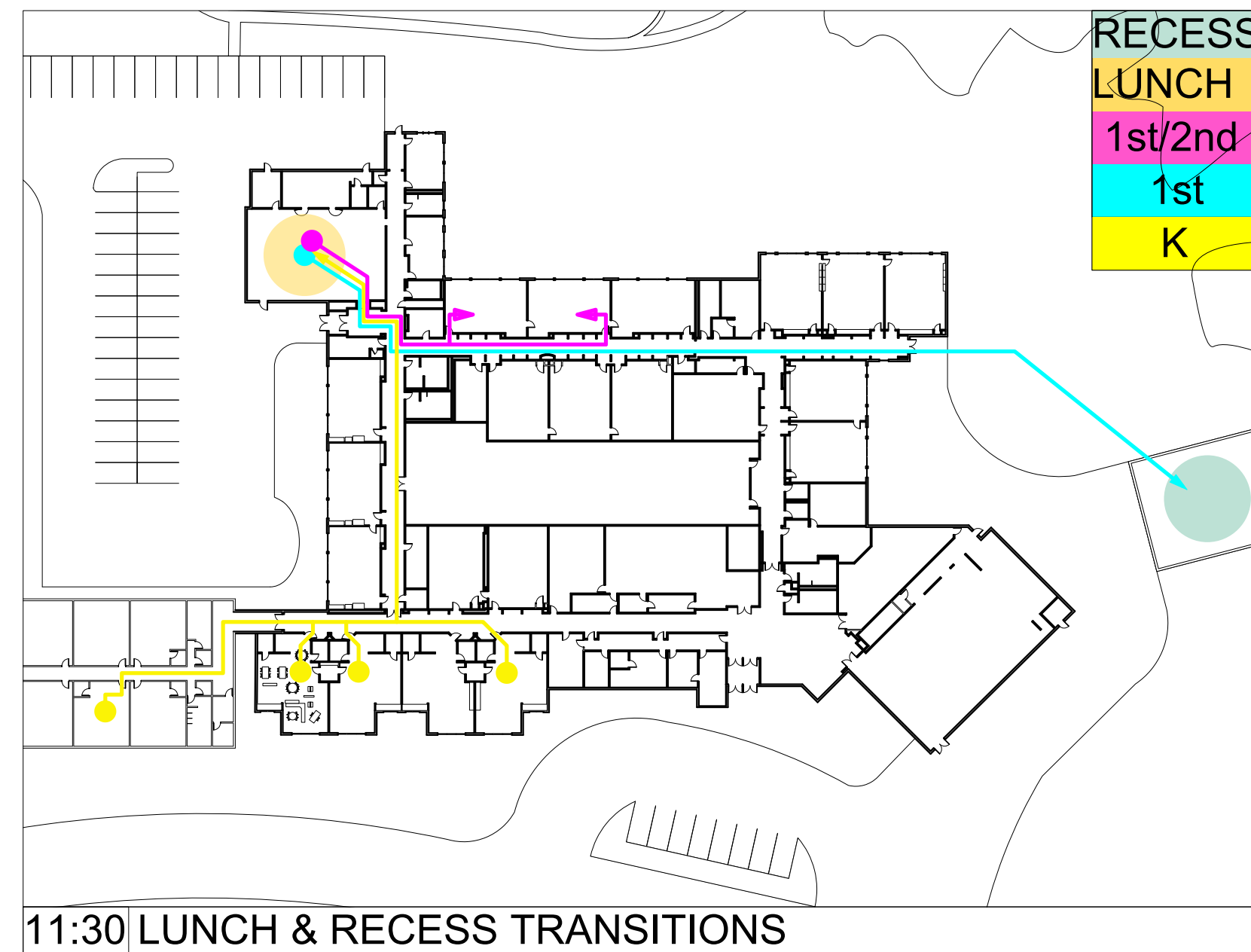
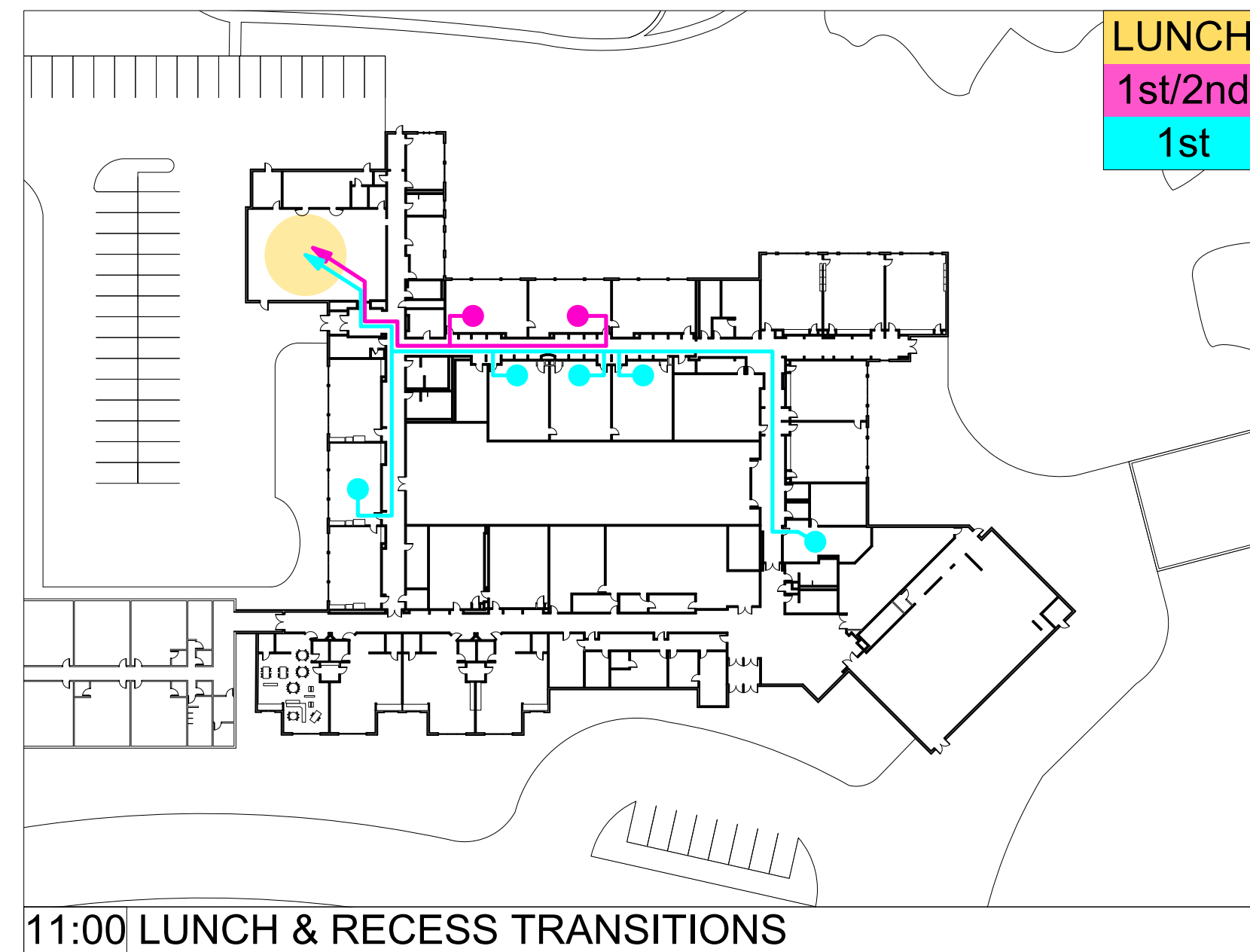
Before School



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	K	1st	1st / 2nd	2nd	3rd	4th&3rd/4th
LUNCH	11:30	11:00	11:00	12:30	1:00	12:00
RECESS	12:00	11:30	1:00	1:00	1:30	12:30

LILJA ELEMENTARY

41 BACON ST
NATICK, MA 01760

L-3.0

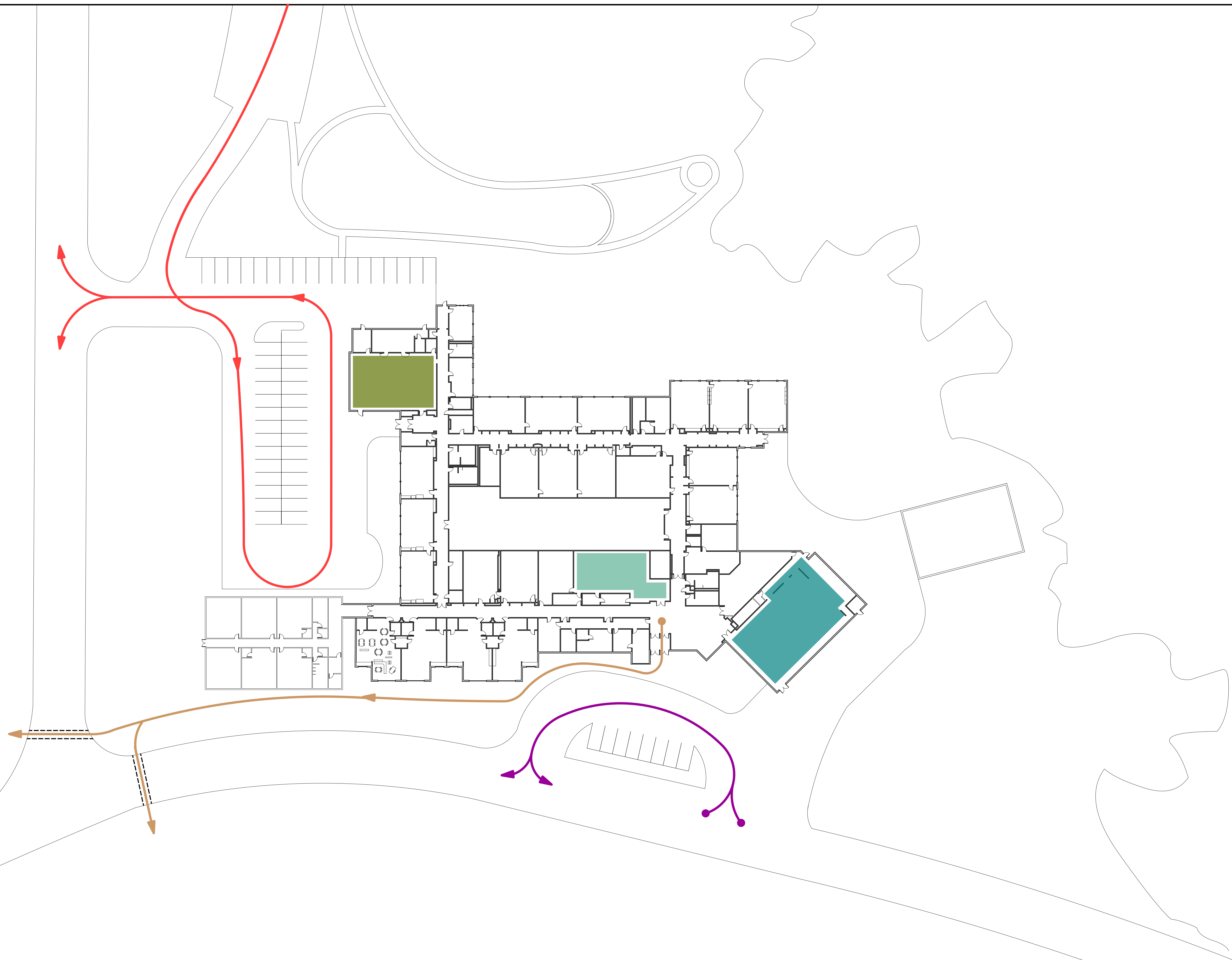
Lunch & Recess



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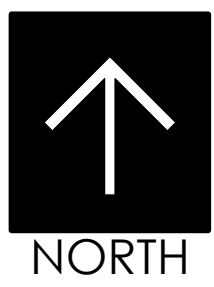
AFTER SCHOOL	
ASAP 1-4	2:55-6:00PM
ASAP K	
CLASS ENDS	2:50PM
CARS	BUSES
WALKERS	

LILJA ELEMENTARY

41 BACON ST
NATICK, MA 01760

L-4.0

After School

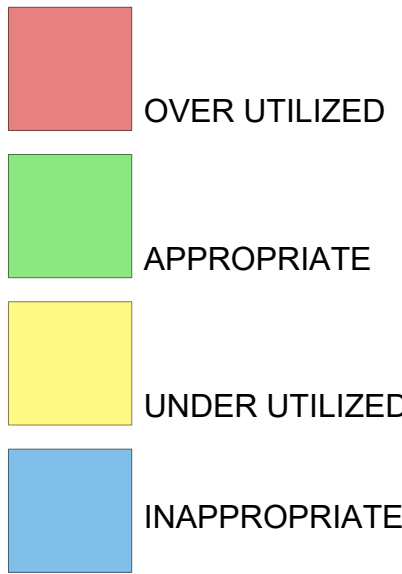


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SPACE LEGEND



ROOM USE	PERIOD USED/WEEK	% USED IN WEEK
ART	28/50	56%
MUSIC	33/50	66%
GYM	40/50	80%
MEDIA	36/50	72%
CLASSROOM	30/50	60%



1/16" = 1' on original

LILJA ELEMENTARY

41 BACON ST
NATICK, MA 01760

L-5.0

Space Utilization



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7. Appendix

School Schedules

Proposed Space Summary - High Schools

Date: 12/17/2020 Preliminary Design Program

NATICK HIGH SCHOOL		Existing Conditions				MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM TYPE	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	Comments
CORE ACADEMIC SPACES		91	63,903	Over Utilized	82.55%		143	77,410	
(List classrooms of different sizes separately)									
Classroom - General		45	37,824	Over Utilized	80.91%	850	55	46,750	825 SF min - 950 SF max
Health Classroom @ 1st Floor	854	1	854	Appropriate	100.47%				
Health Classroom @ 1st Floor	773	1	773	Appropriate	90.94%				
English Classroom @ 2nd Floor	835	1	835	Appropriate	98.24%				
English Classroom @ 2nd Floor	850	2	1,700	Appropriate	100.00%				
English Classroom @ 2nd Floor	845	1	845	Appropriate	99.41%				
English Classroom @ 2nd Floor	831	1	831	Appropriate	97.76%				
English Classroom @ 2nd Floor	837	1	837	Appropriate	98.47%				
English Classroom @ 2nd Floor	843	1	843	Appropriate	99.18%				
English Classroom @ 2nd Floor	859	1	859	Appropriate	101.06%				
English Classroom @ 2nd Floor	839	1	839	Appropriate	98.71%				
English Classroom @ 2nd Floor	856	1	856	Appropriate	100.71%				
English Classroom @ 2nd Floor	889	1	889	Appropriate	104.59%				
Language Classroom @ 2nd Floor	845	1	845	Appropriate	99.41%				
Language Classroom @ 2nd Floor	848	1	848	Appropriate	99.76%				
Language Classroom @ 2nd Floor	837	1	837	Appropriate	98.47%				
Language Classroom @ 2nd Floor	841	1	841	Appropriate	98.94%				
Language Classroom @ 2nd Floor	850	1	850	Appropriate	100.00%				
Language Classroom @ 2nd Floor	842	1	842	Appropriate	99.06%				
Language Classroom @ 2nd Floor	854	1	854	Appropriate	100.47%				
Language Classroom @ 2nd Floor	1,030	1	1,030	Under Utilized	121.18%				
Language Classroom @ 2nd Floor	824	1	824	Appropriate	96.94%				
Math Classroom @ 3rd Floor	831	2	1,662	Appropriate	97.76%				
Math Classroom @ 3rd Floor	833	1	833	Appropriate	98.00%				
Math Classroom @ 3rd Floor	835	2	1,670	Appropriate	98.24%				
Math Classroom @ 3rd Floor	822	1	822	Appropriate	96.71%				
Math Classroom @ 3rd Floor	826	2	1,652	Appropriate	97.18%				
Math Classroom @ 3rd Floor	832	2	1,664	Appropriate	97.88%				
Math Classroom @ 3rd Floor	825	1	825	Appropriate	97.06%				
Math Classroom @ 3rd Floor	847	1	847	Appropriate	99.65%				
Social Studies Classroom @ 1st Floor	790	1	790	Appropriate	92.94%				
Social Studies Classroom @ 3rd Floor	848	1	848	Appropriate	99.76%				
Social Studies Classroom @ 3rd Floor	833	1	833	Appropriate	98.00%				
Social Studies Classroom @ 3rd Floor	869	1	869	Under Utilized	102.24%				
Social Studies Classroom @ 3rd Floor	825	1	825	Appropriate	97.06%				
Social Studies Classroom @ 3rd Floor	824	1	824	Appropriate	96.94%				
Social Studies Classroom @ 3rd Floor	828	1	828	Appropriate	97.41%				
Social Studies Classroom @ 3rd Floor	836	1	836	Appropriate	98.35%				
Social Studies Classroom @ 3rd Floor	844	1	844	Appropriate	99.29%				
Social Studies Classroom @ 3rd Floor	841	1	841	Appropriate	98.94%				
Social Studies Classroom @ 3rd Floor	779	1	779	Appropriate	91.65%				
Teacher Planning		19	5,420	Over Utilized	98.55%	100	55	5,500	
Alternative Director Office @ 1st Floor	180	1	180	Under Utilized	180.00%				
Art Office @ 1st Floor	203	1	203	Under Utilized	203.00%				
Art Director's Office @ 1st Floor	154	1	154	Under Utilized	154.00%				
Chorus Office @ 1st Floor	100	1	100	Appropriate	100.00%				
Music Office @ 1st Floor	135	1	135	Under Utilized	135.00%				
TV Office @ 1st Floor	186	1	186	Under Utilized	186.00%				
FCS Director Office @ 1st Floor	178	1	178	Under Utilized	178.00%				
FCS Director Admin. @ 1st Floor	143	1	143	Under Utilized	143.00%				
FCS Director Conf. @ 1st Floor	179	1	179	Under Utilized	179.00%				
English Conference @ 2nd Floor	333	1	333	Under Utilized	333.00%				
English Chair Office @ 2nd Floor	141	1	141	Under Utilized	141.00%				
Science Chair Office @ 2nd Floor	134	1	134	Under Utilized	134.00%				
Language Chair Office @ 2nd Floor	137	1	137	Under Utilized	137.00%				
Language Conference @ 2nd Floor	253	1	253	Under Utilized	253.00%				
Math Conference @ 3rd Floor	355	1	355	Under Utilized	355.00%				
Math Chair Office @ 3rd Floor	137	1	137	Under Utilized	137.00%				
Social Studies Office @ 3rd Floor	136	1	136	Under Utilized	136.00%				
Social Studies Conference @ 3rd Floor	253	1	253	Under Utilized	253.00%				
Science Conference @ 3rd Floor	257	1	257	Under Utilized	257.00%				
Teacher's Workroom @ 3rd Floor	905	1	905	Under Utilized	113.13%				
Teacher's Workroom @ 3rd Floor	921	1	921	Under Utilized	115.13%				
Small Group Seminar (20-30 seats) @ 2nd	1,365	1	1,365	Over Utilized	68.25%	500	4	2,000	
Science Classroom / Lab		12	14,082	Over Utilized	69.85%	1,440	14	20,160	3 x85% ut=20 Seats-1 per /day/student
Biology Room @ 2nd Floor	1,170	1	1,170	Over Utilized	83.57%				
Biology Room @ 2nd Floor	1,208	1	1,208	Over Utilized	86.29%				
Biology Room @ 3rd Floor	1,218	1	1,218	Over Utilized	87.00%				
Biology Room @ 3rd Floor	1,169	1	1,169	Over Utilized	83.50%				
Physics/Biology Room @ 2nd Floor	1,156	1	1,156	Over Utilized	82.57%				
Physics Room @ 2nd Floor	1,165	1	1,165	Over Utilized	83.21%				
Physics Room @ 2nd Floor	1,167	1	1,167	Over Utilized	83.36%				
Physics Room @ 2nd Floor	1,164	1	1,164	Over Utilized	83.14%				
Chemistry Room @ 3rd Floor	1,173	1	1,173	Over Utilized	83.79%				
Chemistry Room @ 3rd Floor	1,165	1	1,165	Over Utilized	83.21%				
Chemistry Room @ 3rd Floor	1,143	1	1,143	Over Utilized	81.64%				
Chemistry/Biology Room @ 3rd Floor	1,184	1	1,184	Over Utilized	84.57%				
Prep Room		6	1,693	Over Utilized	60.46%	200	14	2,800	
Physics/Biology Prep 2nd Floor	298	1	298	Under Utilized	149.00%				
Biology Prep @ 2nd Floor	326	1	326	Under Utilized	163.00%				
Physics Prep @ 2nd Floor	270	1	270	Under Utilized	135.00%				
Biology Prep @ 3rd Floor	267	1	267	Under Utilized	133.50%				
Chemisty/Biology Prep @ 3rd Floor	271	1	271	Under Utilized	135.50%				
Chemistry Prep @ 3rd Floor	261	1	261	Under Utilized	130.50%				
Central Chemical Storage Rm @3rd Floor	424	1	424	Under Utilized	212.00%	200	1	200	
Alternative Classrooms		5	2,614	NA	3.20% of total				
General Classroom	844	1	844	Appropriate	99.29%				825-950 SF equal to surrounding classrooms
History Classroom	403	1	403	Over Utilized	47.41%				
Math Classroom	409	1	409	Over Utilized	48.12%				

Proposed Space Summary - High Schools

Date: 12/17/2020 Preliminary Design Program

NATICK HIGH SCHOOL						MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
Existing Conditions									
ROOM TYPE	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	Comments
English Classroom	451	1	451	Over Utilized	53.06%				
Science Classroom	507	1	507	Over Utilized	36.21%				
Other		2	481	NA	0.64% of total				
Greenhouse Area @ 2nd Floor Science Room	233	1	233	Appropriate	NA				
Greenhouse Area @ 3rd Floor Science Room	248	1	248	Appropriate	NA				
SPECIAL EDUCATION		34	8,830	Over Utilized	54.81%		32	16,110	
<i>(List classrooms of different sizes separately)</i>									
Self-Contained SPED		2	1,686	Over Utilized	16.13%	950	11	10,450	825-950 SF equal to surrounding classrooms
Life Skills w/ toilet @ 2nd Floor	841	1	841	Over Utilized	88.53%				
Life Skills w/ toilet @ 3rd Floor	845	1	845	Over Utilized	88.95%				
Self-Contained SPED Toilet		2	104	Over Utilized	15.76%	60	11	660	
Life Skills Toilet @ 2nd Floor	58	1	58	Appropriate	96.67%				
Life Skills Toilet @ 3rd Floor	46	1	46	Over Utilized	76.67%				
Resource Room		6	2,604	Under Utilized	104.16%	500	5	2,500	1/2 size Genl. Cirm.
Learning Center @ 2nd Floor	493	1	493	Appropriate	98.60%				
Learning Center @ 3rd Floor	407	1	407	Over Utilized	81.40%				
Learning Center @ 3rd Floor	396	1	396	Over Utilized	79.20%				
Learning Center @ 3rd Floor	495	1	495	Appropriate	99.00%				
Learning Center @ 3rd Floor	403	1	403	Over Utilized	80.60%				
Learning Center @ 3rd Floor	410	1	410	Over Utilized	82.00%				
Small Group Room		1	186	Over Utilized	7.44%	500	5	2,500	1/2 size Genl. Cirm.
Speech @ 1st Floor	186	1	186	Over Utilized	37.20%				
Other		23	4,250	Appropriate	22.53% of total				
Speech Testing @ 1st Floor	118	1	118	Appropriate	NA				
Testing Room @ 1st Floor	80	1	80	Appropriate	NA				
Social Worker @ 1st Floor	131	1	131	Appropriate	NA				
Psychologist @ 1st Floor	186	1	186	Appropriate	NA				
Psychologist @ 3rd Floor	98	1	98	Appropriate	NA				
Metco @ 1st Floor	494	1	494	Appropriate	NA				
Metco Office @ 1st Floor	144	1	144	Appropriate	NA				
Metco Office @ 3rd Floor	179	1	179	Appropriate	NA				
Metco Staff Room @ 3rd Floor	185	1	185	Appropriate	NA				
Conference Room @ 1st Floor	209	1	209	Appropriate	NA				
Tele Conference @ 1st Floor	55	1	55	Appropriate	NA				
Department Head Office @ 1st Floor	236	1	236	Appropriate	NA				
Chair Office @ 1st Floor	217	1	217	Appropriate	NA				
File Room @ 1st Floor	83	1	83	Appropriate	NA				
Workroom @ 1st Floor	151	1	151	Appropriate	NA				
Waiting Area @ 1st Floor	118	1	118	Appropriate	NA				
Office @ 1st Floor	146	1	146	Appropriate	NA				
Office @ 1st Floor	156	1	156	Appropriate	NA				
Compass Room @ 3rd Floor	402	1	402	Appropriate	NA				
Compass Room @ 3rd Floor w/ time out	477	1	477	Appropriate	NA				
FCS Speech	148	1	148	Appropriate	NA				
Alternative Time Out	114	1	114	Appropriate	NA				
Alternative Social Worker	123	1	123	Appropriate	NA				
ART & MUSIC		10	7,125	Over Utilized	86.10%		16	8,275	
Art Classroom - 25 seats		2	2,397	Over Utilized	66.58%	1,200	3	3,600	Assumed use - 25% Population - 5 times/week
Art Room @ 1st Floor	1,254	1	1,254	Appropriate	104.50%				
Ceramics	1,143	1	1,143	Appropriate	95.25%				
Art Workroom w/ Storage & kiln		4	448	Over Utilized	99.56%	150	3	450	
Kiln Room	108	1	108	Over Utilized	72.00%				
Storage Room	112	2	224	Over Utilized	74.67%				
Storage Room	116	1	116	Over Utilized	77.33%				
Band - 50 - 100 seats	1,825	1	1,825	Under Utilized	121.67%	1,500	1	1,500	Assumed use - 25% Population - 5 times/week
Chorus - 50 - 100 seats	1,296	1	1,296	Over Utilized	86.40%	1,500	1	1,500	
Ensemble		None	0	None	0.00%	200	1	200	
Music Practice		3	225	Over Utilized	42.86%	75	7	525	
Practice Room	77	1	77	Appropriate	102.67%				
Practice Room	78	1	78	Appropriate	104.00%				
Practice Room	70	1	70	Over Utilized	93.33%				
Music Storage	280	1	280	Over Utilized	56.00%	500	1	500	
Other		1	654	NA	7.50% of total				
MIDI Lab	654	1	654	Appropriate	NA				
VOCATIONS & TECHNOLOGY		11	7,689	Over Utilized	48.05%		10	16,000	
Tech Cirm. - (E.G. Drafting, Business)		7	5,193	Over Utilized	86.54%	1,200	5	6,000	Assumed use - 50% Population - 5 times/week
Alternative Computer Lab w/ storage	486	1	486	Over Utilized	40.50%				
Web Design/Digital Photo/Animation w/ Recording Room	1,063	1	1,063	Over Utilized	88.58%				
A+ Certification Microsoft Office w/ shared storage	942	1	942	Appropriate	78.50%				
Apple Certification Lab w/ shared storage	1,228	1	1,228	Appropriate	102.29%				
TV Studio and Control Room w Recording Rooms and office	1,324	Multiple	1,324	Appropriate	110.33%				
TV/Video Production	150	1	150	Over Utilized	12.50%				
Tech Shop - (E.G. Consumer, Wood)		2	2,163	Over Utilized	21.63%	2,000	5	10,000	Assumed use - 50% Population - 5 times/week
Technology Shop/Robotics Lab	2,060	1	2,060	Appropriate	103.00%				
Robotics Lab Storage	103	1	103	NA	5.15%				
Other		2	333	NA	2% of total				
TV Office	186	1	186	Appropriate	NA				
TV Equipment	147	1	147	Appropriate	NA				
HEALTH & PHYSICAL EDUCATION		26	26,732	Under Utilized	106.25%		7	25,160	
Gymnasium		2	17,846	Under Utilized	148.72%	12,000	1	12,000	
Gymnasium	8,939	1	8,939	Over Utilized	74.49%				
Multi-purpose Room	8,907	1	8,907	Over Utilized	74.23%				
PE Alternatives		3	3,523	Under Utilized	117.43%	3,000	1	3,000	

Proposed Space Summary - High Schools

Date: 12/17/2020 Preliminary Design Program

NATICK HIGH SCHOOL						MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM TYPE	Existing Conditions								
	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	Comments
Fitness @ 1st floor	2,188	1	2,188	Over Utilized	72.93%				
Fitness @ 2nd floor	1,078	1	1,078	Over Utilized	35.93%				
Training	257	1	257	Over Utilized	8.57%				
Gym Storeroom		None	0	None	0.00%				
Locker Rooms - Boys / Girls w/ Toilets		10	3,366	Over Utilized	37.57%	8,960	1	8,960	5.6 sf/student total
Girls' Lockers	479	2	958	Over Utilized	10.69%				
Girls' Shower	212	1	212	Over Utilized	2.37%				
Girls' Bathroom	209	1	209	Over Utilized	2.33%				
Girls' Changing Room	129	1	129	Over Utilized	1.44%				
Boys' Lockers	478	2	956	Over Utilized	10.67%				
Boys' Shower	207	1	207	Over Utilized	2.31%				
Boys' Bathroom	209	1	209	Over Utilized	2.33%				
Boys' Changing Room	486	1	486	Over Utilized	5.42%				
Phys. Ed. Storage	388	1	388	Over Utilized	77.60%	500	1	500	
Athletic Director's Office		3	455	Under Utilized	303.33%	150	1	150	
Athletic Director's Office	163	1	163	Appropriate	108.67%				
Athletic Director Admin.	145	1	145	Appropriate	96.67%				
P.E. Director	147	1	147	Appropriate	98.00%				
Health Instructor's Office w/ Shower & Toilet		7	1,154	Under Utilized	461.60%	250	1	250	
P.E. Office	203	2	405	Over Utilized	81.00%				
P.E. Teachers' Room	236	1	236	Over Utilized	94.40%				
Staff Shower w/ toilet	94	2	188	Over Utilized	75.20%				
Staff Lockers	163	2	325	Over Utilized	65.00%				
MEDIA CENTER		4	8,315	Over Utilized	83.99%		1	9,900	
Media Center / Reading Room		1	6,836	Over Utilized	69.05%	9,900	1	9,900	
Library/Media Center	6,836	1	6,836	Over Utilized	69.05%				
Computer Lab		1	998	NA	10% of total				
Online Learning Center	998	1	998	Appropriate	NA				
Other		2	481	NA	4.62% of total				
Professional Library & Conference	240	1	240	Appropriate	NA				
Library Office and Workroom	241	1	241	Appropriate	NA				
AUDITORIUM / DRAMA		7	13,879	Under Utilized	133.45%		6	10,400	
Auditorium		2	10,133	Under Utilized	135.11%	7,500	1	7,500	2/3 Enrollment @ 10 SF/Seat - 750 seats MAX
Auditorium @ 1st Floor	6,737	1	6,737	Over Utilized	89.83%				
Auditorium @ 2nd Floor	3,396	1	3,396	Over Utilized	45.28%				
Stage	2,076	1	2,076	Under Utilized	129.75%	1,600	1	1,600	
Auditorium Storage	864	1	864	Under Utilized	172.80%	500	1	500	
Make-up / Dressing Rooms		None	0	None	0.00%	300	2	600	
Controls / Lighting / Projection	181	1	181	Appropriate	90.50%	200	1	200	
Other		2	806	NA	7.36% of total				
Drama Painting	291	1	291	Appropriate	NA				
Drama Building	515	1	515	Appropriate	NA				
DINING & FOOD SERVICE		12	11,194	Over Utilized	88.14%		5	12,700	
Cafeteria / Student Lounge / Break-out	7,297	1	7,297	Appropriate	91.21%	8,000	1	8,000	3 seatings - 15SF per seat
Chair / Table Storage	210	2	210	Over Utilized	38.18%	550	1	550	
Scramble Serving Area	547	1	547	Over Utilized	91.17%	600	1	600	
Kitchen		7	2,585	Over Utilized	89.14%	2,900	1	2,900	1600 SF for first 300 + 1 SF/student Add'l
Kitchen	1,030	1	1,030	Over Utilized	35.52%				
Kitchen Service	547	1	547	Under Utilized	18.86%				
Freezer	295	1	295	Over Utilized	10.17%				
Freezer	483	1	483	Over Utilized	16.66%				
Kitchen Office	115	1	115	Over Utilized	3.97%				
Kitchen Office	49	1	49	Over Utilized	1.69%				
Kitchen Lockers	66	1	66	Over Utilized	2.28%				
Staff Lunch Room	555	1	555	Over Utilized	85.38%	650	1	650	20 SF/Occupant
MEDICAL		9	1,055	Over Utilized	74.82%		13	1,410	
Medical Suite Toilet		3	119	Under Utilized	198.33%	60	1	60	
Toilet	41	1	41	Over Utilized	68.33%				
Toilet	39	2	78	Over Utilized	65.00%				
Nurses' Office / Waiting Room		3	598	Under Utilized	239.20%	250	1	250	
Waiting w/ storage	374	1	374	Under Utilized	149.60%				
Office	144	1	144	Over Utilized	57.60%				
Office	80	1	80	Over Utilized	32.00%				
Interview Room		None	0	Over Utilized	0.00%	100	4	400	
Examination Room / Resting		3	338	Over Utilized	48.29%	100	7	700	
Rest	119	1	119	Under Utilized	119.00%				
Rest	123	1	123	Under Utilized	123.00%				
Exam	96	1	96	Appropriate	96.00%				
ADMINISTRATION & GUIDANCE		24	4,854	Over Utilized	83.76%		24	5,795	
General Office / Waiting Room / Toilet	474	1	474	Over Utilized	59.25%	800	1	800	
Teachers' Mail and Time Room	112	1	112	Under Utilized	112.00%	100	1	100	
Duplicating Room	79	2	158	Over Utilized	79.00%	200	1	200	
Records Room		None	0	Over Utilized	0.00%	200	1	200	
Principal's Office w/ Conference Area	281	1	281	Over Utilized	74.93%	375	1	375	
Principal's Secretary / Waiting	672	1	672	Under Utilized	537.60%	125	1	125	
Assistant Principal's Office - AP1 (Vice)	202	1	202	Under Utilized	134.67%	150	1	150	
Assistant Principal's Office - AP2 (Vice)	197	1	197	Over Utilized	65.67%	150	2	300	
Supervisory / Spare Office		3	560	Under Utilized	466.67%	120	1	120	
Dean	154	1	154	Under Utilized	128.33%				
Dean	145	1	145	Under Utilized	120.83%				
Secretary	261	1	261	Under Utilized	217.50%				
Conference Room	424	1	424	Appropriate	94.22%	450	1	450	
Guidance Office		7	865	Over Utilized	72.08%	150	8	1,200	
Guidance Office	154	1	154	Appropriate	102.67%				
Guidance Office	127	1	127	Over Utilized	84.67%				
Guidance Office	120	1	120	Over Utilized	80.00%				

Proposed Space Summary - High Schools

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NATICK HIGH SCHOOL						MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM TYPE	Existing Conditions								
	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	Comments
Guidance Office	105	1	105	Over Utilized	70.00%				
Guidance Office	111	1	111	Over Utilized	74.00%				
Guidance Office	125	1	125	Over Utilized	83.33%				
Guidance Office	123	1	123	Over Utilized	82.00%				
Guidance Waiting Room		2	193	Under Utilized	193.00%	100	1	100	
Guidance Conference Room	142	1	142	Under Utilized	142.00%				
Guidance Toilet	51	1	51	NA	51.00%				
Guidance Storeroom	28	1	28	Over Utilized	28.00%	100	1	100	
Guidance Closet	28	1	28	Over Utilized	28.00%				
Career Center w/ copy	531	1	531	Appropriate	96.55%	550	1	550	
Records Room		None	0	None	0.00%	225	1	225	
Teachers' Work Room		1	157	Over Utilized	19.63%	800	1	800	
Teacher's Workroom @ 1st Floor	157	1	157	Over Utilized	19.63%				
CUSTODIAL & MAINTENANCE		9	2,580	Over Utilized	91.33%		7	2,825	
Custodian's Office (w/ shower)	147	2	147	Appropriate	98.00%	150	1	150	
Workshop (combined w/ storeroom)	970	1	970	Over Utilized	84.35%	250	1	250	
Custodian's Storage	412	1	412	Under Utilized	109.87%	375	1	375	
Recycling Room / Trash		None	0	Over Utilized	0.00%	400	1	400	
Receiving and General Supply	658	1	658	Under Utilized	119.64%	550	1	550	
Storeroom (combined w/ workroom)	970	1	970	Over Utilized	84.35%	900	1	900	
Network / Telecom Room @ 2nd Floor	226	1	226	Under Utilized	113.00%	200	1	200	
Other		2	167	NA	5.63% of total				
Custodian shower and toilet	167	2	167	Appropriate	NA				
OTHER		16	9,701					0	
Other (specify)		4	1,185						
School Store @ 1st Floor	238	1	238						
Tickets	181	1	181						
RSO	63	1	63						
Networks MDF/UPS	703	1	703						
Distict Tech		3	1,974						
District Tech Administration @ 2nd Floor	1,605	1	1,605	Inappropriate	NA				
District Tech Office @ 2nd Floor	143	1	143	Inappropriate	NA				
District Tech Conference Room @ 2nd Floor	226	1	226	Inappropriate	NA				
Pre-K		9	6,542						
Pre-K Class w/ toilet and storage	1,196	1	1,196	Inappropriate					
Pre-K Class w/ toilet and storage	1,191	1	1,191	Inappropriate					
Pre-K Class w/ toilet and storage	1,150	1	1,150	Inappropriate					
Child Development w/ toilet and kitchen	1,102	1	1,102	Inappropriate					
Child Development w/ toilet	1,111	1	1,111	Inappropriate					
ACID Tank	71	1	71	Inappropriate					
Pre-K Pull Out	419	1	419	Inappropriate					
Pre-K Nurse	152	1	152	Inappropriate					
Pre-K Psychologist	150	1	150	Inappropriate					
Total Building Net Floor Area (NFA)			165,857	Over Utilized	89.18%			185,985	
Proposed Student Capacity / Enrollment								1,600	162
NON-PROGRAMMED SPACES		84	52,517						
Other Occupied Rooms (list separately)		2	424						Non-Programmed space areas are required to be included in the following submittals:
Teacher Kitchen & Copier @ 2nd Floor	211	1	211						Schematic Design Submittal
Teacher Kitchen & Copier @ 3rd Floor	213	1	213						Design Development Submittal
Unoccupied MEP/FP Spaces		19	3,939						60% Construction Documents
Mechanical Room @ 1st Floor	1,864	1	1,864						90% Construction Documents
Elev. Equipment @ 1st Floor	43	1	43						Final Construction Documents
Water Service @ 1st Floor	189	1	189						
Main Electric @ 1st Floor	457	1	457						
Emergency Electric @ 1st Floor	53	1	53						
Electric Closet @ Custodial Office	53	1	53						
Electric Closet @ TV Studio	71	1	71						
Electric Closet @ Library	120	1	120						
Electric Closet @ Art Room	180	1	180						
Electric Closet @ Gym	109	1	109						
Electric Closet @ 2nd Floor	71	2	142						
Electric Closet @ Physics	74	2	148						
Emergency Electric Closet @ 2nd Floor	20	1	20						
Electric Closet @ 2nd Floor	158	1	158						
Electric Closet @ 3rd Floor	184	1	184						
Electric Closet @ 3rd Floor	74	2	148						
Unoccupied Closets, Supply Rooms & Storage		32	3,295						
Book/Copy Room @ 2nd Floor	215	1	215						
Book/Copy Room @ 3rd Floor	135	1	135						
Academic Storage @ 2nd Floor	118	1	118						
English Storage @ 2nd Floor	133	1	133						
Language Storage @ 2nd Floor	159	1	159						
Math Storage @ 3rd Floor	133	1	133						
Science Storage @ 3rd Floor	95	1	95						
Social Studies Storage @ 3rd Floor	113	1	113						
IDF Storage Closet @ 2nd Floor	143	1	143						
IDF Storage Closet @ 3rd Floor	257	1	257						
Custodial Closet @ 1st Floor Sp.Ed.	63	1	63						
Custodial Closet @ Gym	65	1	65						
Custodial Closet @ 2nd Floor	58	1	58						
Custodial Closet @ 2nd Floor	75	1	75						
Custodial Closet @ 2nd Floor	88	1	88						
Custodial Closet @ 3rd Floor	82	1	82						
Custodial Closet @ 3rd Floor	73	1	73						
Storage Closet @ TV Studio	147	1	147						

Proposed Space Summary - High Schools

Date: 12/17/2020 Preliminary Design Program

NATICK HIGH SCHOOL						MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM TYPE	Existing Conditions			Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	Comments
	ROOM NFA ¹	# OF RMS	area totals						
Storage Closet @ 1st Floor Sp. Ed.	87	1	87						
Storage Closet @ Alternative Classrooms	56	1	56						
Storage Closet @ Library	121	1	121						
Storage Closet @ Changing rooms	18	2	36						
Storage Closet @ 1st floor Fitness	89	1	89						
Storage Closet @ Gym	52	1	52						
Storage Closet @ School Store	62	1	62						
Storage Closet @ P.E. Director	62	1	62						
Storage Closet @ 2nd Floor	65	1	65						
Storage Closet @ 3rd Floor	47	1	47						
Storage Closet @ 3rd Floor	50	1	50						
Storage Closet @ 3rd Floor	58	1	58						
District Tech Storage Room	358	1	358	Inappropriate					
Toilet Rooms		31	3,442						
Toilet @ TV Studio	51	1	51						
Toilet @ FCS	53	1	53						
Toilet @ alternative classrooms	44	1	44						
Staff Toilet Room @ TV Studio	51	2	102						
Staff Toilet Room @ Art Room	53	2	106						
Staff Toilet Room @ 2nd Floor	54	2	108						
Staff Toilet Room @ 2nd Floor	50	2	100						
Staff Toilet Room @ 3rd Floor	51	2	102						
Staff Toilet Room @ 3rd Floor	54	2	108						
Boys' Room @ TV Studio	136	1	136						
Girls' Room @ TV Studio	233	1	233						
Boys' Room @ Cafeteria	163	1	163						
Girls' Room @ Cafeteria	216	1	216						
Boys' Room @ Art Room	144	1	144						
Girls' Room @ Art Room	145	1	145						
Boys' Room @ Auditorium	167	1	167						
Girls' Room @ Auditorium	170	1	170						
Boys' Room @ 2nd Floor	142	1	142						
Girls' Room @ 2nd Floor	145	1	145						
Boys' Room @ 2nd Floor	140	1	140						
Girls' Room @ 2nd Floor	226	1	226						
Boys' Room @ 3rd Floor	139	1	139						
Girls' Room @ 3rd Floor	217	1	217						
Boys' Room @ 3rd Floor	143	1	143						
Girls' Room @ 3rd Floor	142	1	142						
Circulation (corridors, stairs, ramps & elevators)			41,417						
Remaining³			42,139						
Total Building Gross Floor Area (GFA)²			260,512	Appropriate	100.51%			259,200	
Grossing factor (GFA/NFA)			1.57					1.39	

¹ Individual Room Net Floor Area (NFA) Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including such spaces

² Total Building Gross Floor Area (GFA) Includes the entire building gross square footage measured from the outside face of exterior walls

³ Remaining Includes exterior walls, interior partitions, chases, and other areas not listed above. Do not calculate this area, it is assumed to equal the difference between the Total Building Gross Floor Area and the Total Building Net Floor Area

Architect Certification

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best of my knowledge and

Name of Architect Firm: _____

Name of Principal Architect: _____

Signature of Principal Architect: _____

Date: _____

Proposed Space Summary - Middle Schools

Date: Enter Date Enter Submittal

ROOM TYPE	Existing Conditions					MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	Comments
WILSON MIDDLE SCHOOL									
CORE ACADEMIC SPACES		53	43,652	Appropriate	97.39%		54	44,820	
<i>(List classrooms of different sizes separately)</i>									
Classroom - General		40	34,137	Under Utilized	105.69%	950	34	32,300	850 SF min - 950 SF max
5th Grade	910	1	910	Appropriate	95.79%				
5th Grade	877	1	877	Appropriate	92.32%				
5th Grade w/ storage	864	1	864	Over Utilized	90.95%				
5th Grade	879	1	879	Appropriate	92.53%				
5th Grade	867	2	1,734	Appropriate	91.26%				
5th Grade	869	1	869	Appropriate	91.47%				
5th Grade	876	1	876	Appropriate	92.21%				
5th Grade	863	1	863	Appropriate	90.84%				
6th Grade	866	1	866	Appropriate	91.16%				
6th Grade	872	1	872	Appropriate	91.79%				
6th Grade	865	1	865	Appropriate	91.05%				
6th Grade	882	1	882	Appropriate	92.84%				
6th Grade	886	1	886	Appropriate	93.26%				
6th Grade	881	1	881	Appropriate	92.74%				
6th Grade	875	1	875	Appropriate	92.11%				
6th Grade	884	1	884	Appropriate	93.05%				
6th Grade	852	1	852	Appropriate	89.68%				
6th Grade	839	1	839	Over Utilized	88.32%				
7th Grade	473	1	473	Over Utilized	49.79%				
7th Grade	861	1	861	Appropriate	90.63%				
7th Grade	882	1	882	Appropriate	92.84%				
7th Grade	863	1	863	Appropriate	90.84%				
7th Grade	881	1	881	Appropriate	92.74%				
7th Grade	890	1	890	Appropriate	93.68%				
7th Grade	891	1	891	Appropriate	93.79%				
7th Grade	869	1	869	Appropriate	91.47%				
7th Grade	875	1	875	Appropriate	92.11%				
7th Grade	855	1	855	Appropriate	90.00%				
8th Grade	865	1	865	Appropriate	91.05%				
8th Grade	861	1	861	Appropriate	90.63%				
8th Grade	872	1	872	Appropriate	91.79%				
8th Grade	882	1	882	Appropriate	92.84%				
8th Grade	919	1	919	Appropriate	96.74%				
8th Grade	866	1	866	Appropriate	91.16%				
8th Grade	869	1	869	Appropriate	91.47%				
8th Grade	871	1	871	Appropriate	91.68%				
8th Grade	873	1	873	Appropriate	91.89%				
8th Grade	838	1	838	Over Utilized	88.21%				
Health	507	1	507	Over Utilized	53.37%				
Small Group Seminar (20-30 seats) / Resource		None	0	None	0.00%	500	2	1,000	
Science Classroom / Lab		8	8,105	Over Utilized	75.05%	1,200	9	10,800	1 period / day / student
5th Grade	1,002	1	1,002	Appropriate	83.50%				
5th Grade	990	1	990	Appropriate	82.50%				
6th Grade	1,014	1	1,014	Over Utilized	84.50%				
6th Grade	1,021	1	1,021	Over Utilized	85.08%				
7th Grade	1,025	1	1,025	Under Utilized	107.89%				
7th Grade	1,031	1	1,031	Under Utilized	108.53%				
8th Grade	1,015	1	1,015	Over Utilized	84.58%				
8th Grade	1,007	1	1,007	Over Utilized	83.92%				
Prep Room		5	1,410	Under Utilized	195.83%	80	9	720	
Science Prep @ 1st Floor	293	1	293	Under Utilized	366.25%				
Science Prep @ 1st Floor	299	1	299	Under Utilized	373.75%				
Science Prep @ 1st Floor	254	1	254	Under Utilized	317.50%				
Science Prep @ 2nd Floor*	296	1	296	Under Utilized	370.00%				
Science Prep @ 2nd Floor*	268	1	268	Under Utilized	335.00%				
SPECIAL EDUCATION		13	6,432	Over Utilized	60.85%		21	10,570	
<i>(List classrooms of different sizes separately)</i>									
Self-Contained SPED		5	3,748	Over Utilized	56.36%	950	7	6,650	850-950 SF equal to surrounding classrooms
Life Skills w/ storage	1,596	1	1,596	Under Utilized	168.00%				
5th Grade Sp. Ed.	508	1	508	Over Utilized	53.47%				
Sp. Ed. @ 6th grade	847	1	847	Over Utilized	89.16%				
6th Grade Sp. Ed.	324	1	324	Over Utilized	34.11%				
7th Grade Sp. Ed.	473	1	473	Over Utilized	49.79%				
Self-Contained SPED Toilet		None	0	Over Utilized	0.00%	60	7	420	
Resource Room		2	793	Over Utilized	31.72%	500	5	2,500	1/2 size Genl. Clrm.
Learning Center @ 1st Floor	535	1	535	Under Utilized	107.00%				
Learning Center @ 1st Floor	258	1	258	Over Utilized	51.60%				
Small Group Room / Reading		4	1,437	Under Utilized	143.70%	500	2	1,000	1/2 size Genl. Clrm.
OT/PT	193	1	193	Over Utilized	38.60%				
SL	185	1	185	Over Utilized	37.00%				
8th Grade Learning Center	549	1	549	Under Utilized	109.80%				
French	510	1	510	Appropriate	102.00%				
Other		2	454	NA	4.30% of total				
METCO Office	251	1	251	Appropriate	NA				
Sp. Ed. Conference	203	1	203	Appropriate	NA				

Proposed Space Summary - Middle Schools

Date: Enter Date Enter Submittal									
WILSON MIDDLE SCHOOL		Existing Conditions			MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)				
ROOM TYPE	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	Comments
ART & MUSIC		8	5,923	Under Utilized	123.40%		8	4,800	
Art Classroom		2	2,319	Appropriate	96.63%	1,200	2	2,400	assumed use - 50% population 2 times / week
Art Room @ 1st Floor	1,208	1	1,208	Appropriate	100.67%				
Art Room @ 2nd Floor	1,111	1	1,111	Appropriate	92.58%				
Art Workroom w/ Storage & kiln		1	150	Over Utilized	50.00%	150	2	300	
Kiln Room @ 2nd Floor	150	1	150	Appropriate	100.00%				
Band / Chorus - 100 seats		2	2,633	Under Utilized	175.53%	1,500	1	1,500	assumed use - 50% population 2 times / week
Band	1,723	1	1,723	Under Utilized	114.87%				
Chorus	910	1	910	Over Utilized	60.67%				
Music Practice / Ensemble	571	3	821	Under Utilized	136.83%	200	3	600	
Music Room	571	1	571	Under Utilized	285.50%				
Practice Room	140	1	140	Over Utilized	70.00%				
Practice Room	110	1	110	Over Utilized	55.00%				
VOCATIONS & TECHNOLOGY		2	1,926	Over Utilized	30.09%		4	6,400	
Tech Cirm. - (E.G. Drafting, Business)		1	953	Over Utilized	39.71%	1,200	2	2,400	Assumed use - 25% Population - 5 times/week
Tech Ed.	953	1	953	Over Utilized	79.42%				
Tech Shop - (E.G. Consumer, Wood)		1	973	Over Utilized	24.33%	2,000	2	4,000	Assumed use - 25% Population - 5 times/week
Shop Room w/ storage	973	1	973	Over Utilized	48.65%				
HEALTH & PHYSICAL EDUCATION		6	10,709	Under Utilized	127.49%		5	8,400	
Gymnasium	7,795	1	7,795	Under Utilized	129.92%	6,000	1	6,000	
Gym Storeroom	284	1	284	Under Utilized	189.33%	150	1	150	
Health Instructor's Office w/ Shower & Toilet		2	375	Under Utilized	150.00%	250	1	250	
Office w/ toilet	185	1	185	Over Utilized	74.00%				
Office w/ toilet	190	1	190	Over Utilized	76.00%				
Locker Rooms - Boys / Girls w/ Toilets		2	2,255	Under Utilized	112.75%	1,000	2	2,000	
Locker Room w/ toilets	1,143	1	1,143	Under Utilized	114.30%				
Locker Room w/ toilets	1,112	1	1,112	Under Utilized	111.20%				
MEDIA CENTER		3	6,307	Under Utilized	108.81%		1	5,797	
Media Center / Reading Room		3	6,307	Under Utilized	108.81%	5,797	1	5,797	
Library	3,500	1	3,500	Over Utilized	60.38%				
Flex Space	1,428	1	1,428	Over Utilized	24.64%				
Data Center	1,379	1	1,379	Over Utilized	23.79%				
DINING & FOOD SERVICE		9	7,069	Over Utilized	69.60%		4	10,156	
Cafetorium / Dining	4,467	1	4,467	Over Utilized	63.23%	7,065	1	7,065	2 seatings - 155F per seat
Chair / Table / Equipment Storage		5	442	Over Utilized	86.03%	514	1	514	
Kitchen Storage	62	1	62	Over Utilized	12.07%				
Kitchen Storage	138	1	138	Over Utilized	26.86%				
Kitchen Storage	65	1	65	Over Utilized	12.65%				
Kitchen Storage	82	1	82	Over Utilized	15.96%				
Kitchen Storage	95	1	95	Over Utilized	18.49%				
Kitchen	1,676	1	1,676	Over Utilized	74.75%	2,242	1	2,242	1600 SF for first 300 + 1 SF/student Add'l
Staff Lunch Room		2	484	Under Utilized	144.26%	336	1	336	20 SF/occupant
Breakroom @ 1st Floor	238	1	238	Over Utilized	70.94%				
Teacher Kitchen @ 2nd Floor	246	1	246	Over Utilized	73.32%				
STAGE/AUDITORIUM		4	6,867	Under Utilized	429.19%		1	1,600	
Stage	1,412	1	1,412	Over Utilized	88.25%	1,600	1	1,600	
Auditorium	5,110	1	5,110	Appropriate	NA				
Storage	179	1	179	Appropriate	NA				
Trials	166	1	166	Appropriate	NA				
MEDICAL		6	757	Under Utilized	106.62%		6	710	
Medical Suite Toilet	79	1	79	Under Utilized	131.67%	60	1	60	
Nurses' Office / Waiting Room		4	581	Under Utilized	232.40%	250	1	250	
Nurse / Waiting Room	420	1	420	Under Utilized	168.00%				
Office	118	1	118	Over Utilized	47.20%				
Storage Closet	28	1	28	Over Utilized	11.20%				
Storage Closet	15	1	15	Over Utilized	6.00%				
Examination Room / Resting		1	97	Over Utilized	24.25%	100	4	400	
Exam	97	1	97	Appropriate	97.00%				
ADMINISTRATION & GUIDANCE		21	3,901	Appropriate	100.23%		18	3,892	
General Office / Waiting Room / Toilet		2	484	Over Utilized	84.76%	571	1	571	
General Office / Waiting Room	429	1	429	Over Utilized	75.13%				
Toilet	55	1	55	Over Utilized	9.63%				
Teachers' Mail and Time Room	76	1	76	Over Utilized	76.00%	100	1	100	
Duplicating Room		None	0	Over Utilized	0.00%	200	1	200	
Records Room		None	0	Over Utilized	0.00%	200	1	200	
Principal's Office w/ Conference Area	248	1	248	Over Utilized	66.13%	375	1	375	
Principal's Secretary / Waiting		None	0	Over Utilized	0.00%	125	1	125	
Assistant Principal's Office - AP1	201	1	201	Under Utilized	134.00%	150	1	150	
Assistant Principal's Office - AP2	205	1	205	Under Utilized	136.67%	150	1	150	
Supervisory / Spare Office		None	0	Over Utilized	0.00%	150	1	150	

Proposed Space Summary - Middle Schools

						Date: Enter Date		Enter Submittal	
WILSON MIDDLE SCHOOL	Existing Conditions					MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM TYPE	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	Comments
Conference Room		4	685	Under Utilized	195.71%	350	1	350	
Conference Room @ 1st Floor	232	1	232	Over Utilized	66.29%				
Conference Room @ 1st Floor	162	1	162	Over Utilized	46.29%				
Conference Room @ 1st Floor	50	1	50	Over Utilized	14.29%				
Conference Room @ 2nd Floor	240	1	240	Over Utilized	68.57%				
Conference Room @ 2nd Floor	233	1	233	Over Utilized	66.57%				
Guidance Office		8	991	Under Utilized	132.13%	150	5	750	
Office #1	102	1	102	Over Utilized	68.00%				
Office #2	74	1	74	Over Utilized	49.33%				
Office #3	171	1	171	Under Utilized	114.00%				
Office #4	123	1	123	Over Utilized	82.00%				
Office #5	134	1	134	Over Utilized	89.33%				
Office #6	134	1	134	Over Utilized	89.33%				
Office #7	122	1	122	Over Utilized	81.33%				
Office #8	131	1	131	Over Utilized	87.33%				
Guidance Waiting Room w/ toilet and storage	619	1	619	Under Utilized	619.00%	100	1	100	
Guidance Storeroom		None	0	Over Utilized	0.00%	50	1	50	
Teachers' Work Room		2	392	Over Utilized	63.12%	621	1	621	
Teacher Planning	246	1	246	Over Utilized	39.61%				
Workroom Area	146	1	146	Over Utilized	23.51%				
CUSTODIAL & MAINTENANCE		5	1,439	Over Utilized	59.54%		7	2,417	
Custodian's Office	195	1	195	Under Utilized	130.00%	150	1	150	
Custodian's Workshop		None	0	Over Utilized	0.00%	250	1	250	
Custodian's Storage	64	2	128	Over Utilized	34.13%	375	1	375	
Recycling Room / Trash		None	0	Over Utilized	0.00%	400	1	400	
Receiving and General Supply		None	0	Over Utilized	0.00%	414	1	414	
Storeroom	855	1	855	Under Utilized	136.10%	628	1	628	
Network / Telecom Room @ Library	261	1	261	Under Utilized	130.50%	200	1	200	
OTHER		1	361	NA				0	
Other (specify)		1	361	Appropriate	NA				
IT Office @ Library	361	1	361	Appropriate	NA				
Total Building Net Floor Area (NFA)			95,343	Appropriate	95.76%			99,562	
Proposed Student Capacity / Enrollment								942	
NON-PROGRAMMED SPACES		41	33,181						
Other Occupied Rooms (list separately)									Non-Programmed space areas are required to be included in the following submittals:
None									Schematic Design Submittal
Unoccupied MEP/FP Spaces		3	1,153						Schematic Design Submittal
Sprinkler	169	1	169						Schematic Design Submittal
Mechanical	833	1	833						Design Development Submittal
Electrical Closet @ Library	151	1	151						60% Construction Documents
Unoccupied Closets, Supply Rooms & Storage Rooms		22	1,425						90% Construction Documents
Storage @ Cafeteria	236	1	236						Final Construction Documents
Storage @ 1st Floor art room	92	1	92						
Storage @ 1st Floor art room	40	1	40						
Storage @ general office	22	1	22						
Storage @ general office	49	1	49						
Storage @ tech. ed.	44	1	44						
Storage @ 5th Grade	59	1	59						
Storage @ 5th Grade	68	1	68						
Storage @ 5th Grade	58	1	58						
Storage @ 5th Grade	39	1	39						
Storage @ 5th Grade	115	1	115						
Storage @ custodial office	61	1	61						
Storage @ health room	87	1	87						
Storage @ chorus	100	1	100						
Storage @ chorus corridor	25	1	25	Inappropriate					
Storage @ band corridor	47	1	47	Inappropriate					
Storage @ auditorium	139	1	139	Inappropriate					
Storage @ auditorium	43	1	43	Inappropriate					
Storage @ auditorium	74	1	74	Inappropriate					
Storage @ Life Skills Room	111	1	111	Inappropriate					
Storage @ Life Skills Room	49	1	49	Inappropriate					
Storage @ 7th grade	69	1	69	Inappropriate					
Storage @ 7th grade	34	1	34	Inappropriate					
Toilet Rooms		16	2,537						
Toilet @ tech. ed.	49	1	49						
Toilet @ tech. ed.	47	1	47						
Toilet @ custodial office	60	1	60						
Toilet @ custodial office	64	1	64						
Toilet @ Life Skills Room	51	2	102						
Toilet @ 7th grade	61	2	122						
Toilet @ 7th grade	66	2	132						
Girls' Room @ 5th Grade	332	1	332						
Boys' Room @ 5th Grade	279	1	279						
Girls' Room @ Health Room	300	1	300						
Boys' Room @ Health Room	288	1	288						
Girls' Room @ 7th Grade	341	1	341						
Boys' Room @ 7th Grade	421	1	421						

Proposed Space Summary - Middle Schools

WILSON MIDDLE SCHOOL		Existing Conditions			Date: Enter Date Enter Submittal				
					MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)				
ROOM TYPE	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	Comments
Circulation (corridors, stairs, ramps & elevators)			28,066						
Remaining ³			11,666						
Total Building Gross Floor Area (GFA) ²			140,190	Appropriate	93.01%			150,720	
Grossing factor (GFA/NFA)			1.47					1.51	

¹ Individual Room Net Floor Area (NFA) Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including such spaces as

² Total Building Gross Floor Area (GFA) Includes the entire building gross square footage measured from the outside face of exterior walls

³ Remaining Includes exterior walls, interior partitions, chases, and other areas not listed above. Do not calculate this area, it is assumed to equal the difference between the Total Building Gross Floor Area and the sum of the other areas listed above.

Architect Certification I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best of my knowledge and belief. Name of Architect Firm: _____ Name of Principal Architect: _____ Signature of Principal Architect: _____ Date: _____

Proposed Space Summary- Elementary Schools

Date: 12/15/2020 Preliminary Design Program

JOHNSON ELEMENTARY	Existing Conditions					MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	Comments
CORE ACADEMIC SPACES		11	9,473	Appropriate	92.42%		10	10,250	
<i>(List classrooms of different sizes separately)</i>									
Pre-Kindergarten w/ toilet	NA	NA	NA	NA	NA	1,200		-	1,100 SF min - 1,300 SF max
Kindergarten w/ toilet		3	2,572	Over Utilized	71.44%	1,200	3	3,600	1,100 SF min - 1,300 SF max
K Classroom w/o toilet	856	1	856	Over Utilized	71.33%				
K Classroom w/o toilet	858	2	1,716	Over Utilized	71.50%				
General Classrooms - Grade 1-4		8	6,901	Appropriate	103.77%	950	7	6,650	900 SF min - 1,000 SF max
1st Grade	856	1	856	Appropriate	90.11%				
1st Grade	866	1	866	Appropriate	91.16%				
2nd Grade	856	1	856	Appropriate	90.11%				
2nd Grade	864	1	864	Appropriate	90.95%				
3rd Grade	861	1	861	Appropriate	90.63%				
3rd Grade	870	1	870	Appropriate	91.58%				
4th Grade	863	1	863	Appropriate	90.84%				
4th Grade	865	1	865	Appropriate	91.05%				
SPECIAL EDUCATION		6	1,665	Over Utilized	55.13%		6	3,020	
<i>(List rooms of different sizes separately)</i>									
Self-Contained SPED		None	0	None	0.00%	950	2	1,900	900-1,300 SF equal to surrounding classrooms
Self-Contained SPED - toilet		None	0	None	0.00%	60	2	120	
Resource Room		4	1,472			500	1	500	1/2 size Genl. Clm.
Lit. Center	290	1	290	Over Utilized	58.00%				
Math Intervention	574	1	574	Under Utilized	114.80%				
Learning Center w/ storage	349	1	349	Over Utilized	69.80%				
Learning Center	259	1	259	Over Utilized	51.80%				
Small Group Room / Reading		2	193	Over Utilized	38.60%	500	1	500	1/2 size Genl. Clm.
Language Center	97	1	97	Over Utilized	19.40%				
Psychologist	96	1	96	Over Utilized	19.20%				
ART & MUSIC		2	1,714	Over Utilized	68.56%		5	2,500	
Art Classroom - 25 seats	857	1	857	Over Utilized	85.70%	1,000	1	1,000	assumed schedule 2 times / week / student
Art & Music Room (Shared)	857	1	857	Over Utilized	85.70%				
Art Workroom w/ Storage & kiln		None	0	None	0.00%	150	1	150	
Music Classroom / Large Group - 25-50 seats	857	1	857	Over Utilized	71.42%	1,200	1	1,200	assumed schedule 2 times / week / student
Art & Music Room (Shared)	857	1	857	Over Utilized	71.42%				
Music Practice / Ensemble		None	0	None	0.00%	75	2	150	
HEALTH & PHYSICAL EDUCATION		1	2,068	Over Utilized	32.83%		3	6,300	
Gymnasium / Cafeteria (Shared)	2,068	1	2,068	Over Utilized	34.47%	6,000	1	6,000	6000 SF Min. Size
Gym Storeroom		None	0	None	0.00%	150	1	150	
Health Instructor's Office w/ Shower & Toilet		None	0	None	0.00%	150	1	150	
MEDIA CENTER		2	1,189	Over Utilized	58.86%		1	2,020	
Media Center / Reading Room		2	1,189	Over Utilized	58.86%	2,020	1	2,020	
Library	1,145	1	1,145	Over Utilized	56.68%				
Library Storage Room	44	1	44	Over Utilized	2.18%				
DINING & FOOD SERVICE		4	611	Over Utilized	12.89%		5	4,740	
<i>(Shared spaces not included in area totals)</i>									
Cafeteria / Dining (Shared w/ Gym)	2,068	NA	2,068	Under Utilized	118.85%	1,740	1	1,740	2 seatings - 155F per seat
Stage (Shared)	218	1	218	Over Utilized	21.80%	1,000	1	1,000	
Chair / Table / Equipment Storage (Shared)		NA	325			200	1	200	
Designated Table Storage Area	325	NA	325	Inappropriate	32.50%				
Kitchen		2	233			1,600	1	1,600	1600 SF for first 300 + 1 SF/student Add'l
Kitchen	137	1	137	Over Utilized	8.56%				
Kitchen Storage	96	1	96	Over Utilized	6.00%				
Teacher's Lounge	378	1	378	Under Utilized	189.00%	200	1	200	20 SF/Occupant
MEDICAL		2	162	Over Utilized	39.51%		3	410	
Medical Suite Toilet		None	0	None	0.00%	60	1	60	
Nurses' Office / Waiting Room		2	162	None	64.80%	250	1	250	
Nurse	28	1	134	Over Utilized	53.60%				
Nurse's Storage	134	1	28	Over Utilized	11.20%				
Examination Room / Resting		None	0	None	0.00%	100	1	100	
ADMINISTRATION & GUIDANCE		7	1,043	Over Utilized	51.76%		11	2,015	
General Office / Waiting Room / Toilet		2	334	Under Utilized	111.33%	300	1	300	
Admin. Office	305	1	305	Appropriate	101.67%				
Admin Storage	29	1	29	Appropriate	9.67%				
Teachers' Mail and Time Room		None	0	None	0.00%	100	1	100	
Duplicating Room		None	0	None	0.00%	150	1	150	
Records Room		None	0	None	0.00%	110	1	110	
Principal's Office w/ Conference Area		2	194	Over Utilized	51.73%	375	1	375	
Principal's Office	184	1	184	Over Utilized	49.07%				
Principal's Storage	10	1	10	Over Utilized	2.67%				
Principal's Secretary / Waiting		None	0	None	0.00%	125	1	125	
Assistant Principal's Office		None	0	None	0.00%	120	0	-	
Supervisory / Spare Office	68	1	68	Over Utilized	56.67%	120	1	120	
Conference Room	168	1	168	Over Utilized	67.20%	250	1	250	
Guidance Office		None	0	None	0.00%	150	1	150	
Guidance Storeroom		None	0	None	0.00%	35	1	35	
Teachers' Work Room	279	1	279	Appropriate	93.00%	300	1	300	

Proposed Space Summary- Elementary Schools

Date: 12/15/2020 Preliminary Design Program

JOHNSON ELEMENTARY						MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
Existing Conditions									
ROOM TYPE	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	Comments
CUSTODIAL & MAINTENANCE		1	1,447	Over Utilized	76.16%		7	1,900	
Custodian's Office		None	0	None	0.00%	150	1	150	
Custodian's Workshop		None	0	None	0.00%	375	1	375	
Custodian's Storage		1	1,447	Under Utilized	385.87%	375	1	375	
Boiler/Storage	1,447	1	1,447	Under Utilized	385.87%				
Recycling Room / Trash		None	0	None	0.00%	400	1	400	
Receiving and General Supply		None	0	None	0.00%	200	1	200	
Storeroom		None	0	None	0.00%	200	1	200	
Network / Telecom Room		None	0	None	0.00%	200	1	200	
OTHER			0					0	
Other (specify)									
None									
Total Building Net Floor Area (NFA)			19,372	Over Utilized	58.43%			33,155	
Proposed Student Capacity / Enrollment								232	
NON-PROGRAMMED SPACES		20	8,048						
Other Occupied Rooms (list separately)									Non-Programmed space areas are required to be included in the following submittals:
None									Schematic Design Submittal
Unoccupied MEP/FP Spaces		1	1,013						Design Development Submittal
Boiler Room	1013	1	1,013						60% Construction Documents
Unoccupied Closets, Supply Rooms & Storage Rooms		10	288						90% Construction Documents
Custodial Supply Room @ Kindergarten	24	1	24						Final Construction Documents
Custodial Supply Room @ Kindergarten	28	1	28						
Storage @ Restrooms	21	1	21						
Storage @ Boys' Room	23	1	23						
Storage @ Conference Room	17	1	17						
Storage @ Admin.	29	1	29						
Storage @ Learning Center	24	1	24						
Storage @ Learning Center	20	1	20						
Storage @ Stage	51	2	102						
Storage in Corridor	133	NA	133	Inappropriate					
Toilet Rooms		9	1,499						
Girls' Room @ Kindergarten	255	1	255						
Boys' Room @ Kindergarten	283	1	283						
Girls' Room @ Boiler/Storage	143	1	143						
Boys' Room @ Boiler/Storage	205	1	205						
Girls' Room @ Library	226	1	226						
Boys' Room @ Library	216	1	216						
Toilet @ Principal	30	1	30						
Staff Toilet @ Teachers' Lounge	97	1	97						
Toilet @ Learning Center	44	1	44						
Circulation (corridors, stairs, ramps & elevators)		NA	5,248						
Remaining ³			2,173						
Total Building Gross Floor Area (GFA)⁴			29,593	Over Utilized	70.86%			41,760	
Grossing factor (GFA/NFA)			1.53					1.26	

¹ Individual Room Net Floor Area (NFA) Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including suc

² Total Building Gross Floor Area (GFA) Includes the entire building gross square footage measured from the outside face of exterior walls

³ Remaining Includes exterior walls, interior partitions, chases, and other areas not listed above. Do not calculate this area, it is assumed to equal the difference between the Total Bu

Architect Certification

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best

Name of Architect Firm: _____

Name of Principal Architect: _____

Signature of Principal Architect: _____

Date: _____

Proposed Space Summary- Elementary Schools

Date: 12/15/2020 Preliminary Design Program

BENNETT HEMENWAY						MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM TYPE	Existing Conditions								
	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	Comments
CORE ACADEMIC SPACES		32	28,996	Under Utilized	119.33%		24	24,300	
<i>(List classrooms of different sizes separately)</i>									
Pre-Kindergarten w/ toilet		4	2,353	NA	NA	1,200		-	1,100 SF min - 1,300 SF max
Pre-K Classroom w/ toilet and storage	1158	1	1,158	Appropriate	96.50%				
Observation Room	20	1	20	NA	1.67%				
Pre-K Classroom w/ toilet and storage	1155	1	1,155	Appropriate	96.25%				
Observation Room	20	1	20	NA	1.67%				
Kindergarten w/ toilet		5	5,665	Over Utilized	78.68%	1,200	6	7,200	1,100 SF min - 1,300 SF max
Kindergarten w/ toilet and storage	1,133	1	1,133	Appropriate	94.42%				
Kindergarten w/ toilet and storage	1,135	1	1,135	Appropriate	94.58%				
Kindergarten w/ toilet and storage	1,115	1	1,115	Appropriate	92.92%				
Kindergarten w/ toilet and storage	1,144	1	1,144	Appropriate	95.33%				
Kindergarten w/ toilet and storage	1,138	1	1,138	Appropriate	94.83%				
General Classrooms - Grade 1-4		23	20,978	Under Utilized	122.68%	950	18	17,100	900 SF min - 1,000 SF max
1st Grade w/ storage	980	1	980	Appropriate	103.16%				
1st Grade w/ storage	965	1	965	Appropriate	101.58%				
1st Grade w/ storage	965	1	965	Appropriate	101.58%				
1st Grade w/ storage	971	1	971	Appropriate	102.21%				
1st Grade w/ storage	982	1	982	Appropriate	103.37%				
2nd Grade w/ storage	962	1	962	Appropriate	101.26%				
2nd Grade w/ storage	980	1	980	Appropriate	103.16%				
2nd Grade w/ storage	997	1	997	Appropriate	104.95%				
2nd Grade w/ storage	969	1	969	Appropriate	102.00%				
2nd Grade w/ storage	985	1	985	Appropriate	103.68%				
3rd Grade w/ storage	974	1	974	Appropriate	102.53%				
3rd Grade w/ storage	966	1	966	Appropriate	101.68%				
3rd Grade w/ storage	981	1	981	Appropriate	103.26%				
3rd Grade w/ storage	1,000	1	1,000	Appropriate	105.26%				
3rd Grade w/ toilet and storage	1,193	1	1,193	Under Utilized	125.58%				
Observation Room	20	1	20	NA	2.11%				
3rd Grade w/ toilet and storage	1,167	1	1,167	Under Utilized	122.84%				
Observation Room	20	1	20	NA	2.11%				
4th Grade w/ storage	990	1	990	Appropriate	104.21%				
4th Grade w/ storage	963	1	963	Appropriate	101.37%				
4th Grade w/ storage	978	1	978	Appropriate	102.95%				
4th Grade w/ storage	980	1	980	Appropriate	103.16%				
4th Grade w/ storage	990	1	990	Appropriate	104.21%				
SPECIAL EDUCATION		21	6,107	Appropriate	101.11%		12	6,040	
<i>(List rooms of different sizes separately)</i>									
Self-Contained SPED		None	0	None	0.00%	950	4	3,800	900-1,300 SF equal to surrounding classrooms
Self-Contained SPED - toilet		None	0	None	0.00%	60	4	240	
Resource Room		5	3,361	Under Utilized	224.07%	500	3	1,500	1/2 size Genl. Clrm.
Learning Center K-2	800	1	800	Under Utilized	160.00%				
Learning Center 3-4 w/ closet	951	1	951	Under Utilized	190.20%				
Learning Center (2nd Fl.)	250	1	250	Over Utilized	50.00%				
Learning Center Area (2nd Fl.)	372	1	372	Inappropriate	74.40%				
Language Center (2nd Floor)	988	1	988	Under Utilized	197.60%				
Small Group Room / Reading		4	1,378	Under Utilized	275.60%	500	1	500	1/2 size Genl. Clrm.
Literacy Specialist Room	459	1	459	Appropriate	91.80%				
Special Education Room	145	1	145	Over Utilized	29.00%				
Special Education Room	174	1	174	Over Utilized	34.80%				
OT/PT	600	1	600	Under Utilized	120.00%				
Other		12	1,368	Appropriate	34.93% of total				
Sp. Ed. Coordinator w/ storage	233	2	233	Appropriate	NA				
Office - Behavior Specialist	181	1	181	Appropriate	NA				
Office - Behavior Specialist w/ closet	117	1	117	Appropriate	NA				
Reset Room w/ closet	99	1	99	Appropriate	NA				
Reset Room	101	1	101	Appropriate	NA				
Reset Area (2nd Fl.)	62	1	62	Appropriate	NA				
Psychologist Office	103	1	103	Appropriate	NA				
Psychologist Office	99	1	99	Appropriate	NA				
Speech/Language Office	97	1	97	Appropriate	NA				
Speech/Language Office	165	1	165	Appropriate	NA				
ASAP Office	111	1	111	Appropriate	NA				
ART & MUSIC		5	2,430	Over Utilized	63.95%		9	3,800	
Art Classroom - 25 seats	1,105	1	1,105	Over Utilized	55.25%	1,000	2	2,000	assumed schedule 2 times / week / student
Art Workroom w/ Storage & kiln	2	158	158	Over Utilized	52.67%	150	2	300	
Storage Room	88	1	88	Over Utilized	58.67%				
Kiln Room	70	1	70	Over Utilized	46.67%				
Music Classroom / Large Group - 25-50 seats	2	1,167	1,167	Appropriate	97.25%	1,200	1	1,200	assumed schedule 2 times / week / student
Music Room	1,015	1	1,015	Over Utilized	84.58%				
Storage Room	101	1	101	Over Utilized	8.42%				
Storage Closets	51	NA	51	Over Utilized	4.25%				
Music Practice / Ensemble		None	0	None	0.00%	75	4	300	

Proposed Space Summary- Elementary Schools

Date: 12/15/2020 Preliminary Design Program

BENNETT HEMENWAY						MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM TYPE	Existing Conditions								Comments
	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	
HEALTH & PHYSICAL EDUCATION		5	4,531	Over Utilized	71.92%		2	6,300	
Gymnasium	3,830	1	3,830	Over Utilized	63.83%	6,000	1	6,000	6000 SF Min. Size
Gym Storeroom		3	595	Under Utilized	396.67%	150	1	150	
Gym Storage	186	1	186	Under Utilized	124.00%				
Gym Storage in Corridor	202	1	202	Under Utilized	134.67%				
Gym Storage w/ exterior access	207	1	207	Under Utilized	138.00%				
Health Instructor's Office w/ Shower & Toilet		1	106	Over Utilized	70.67%	150	1	150	
Office w/o shower	106	1	106	Over Utilized	70.67%				
MEDIA CENTER		1	2,853	Appropriate	90.72%		1	3,145	
Media Center / Reading Room (Library)	2,853	1	2,853	Appropriate	90.72%	3,145	1	3,145	
DINING & FOOD SERVICE		7	5,856	Over Utilized	77.10%		5	7,596	
Cafeteria / Dining	3,651	1	3,651	Over Utilized	88.51%	4,125	1	4,125	2 seatings - 15SF per seat
Stage	745	1	745	Over Utilized	74.50%	1,000	1	1,000	
Chair / Table / Equipment Storage	112	2	112	Over Utilized	29.22%	383	1	383	
Kitchen		2	705	Over Utilized	38.11%	1,850	1	1,850	1600 SF for first 300 + 1 SF/student Add'l
Kitchen	655	1	655	Over Utilized	35.41%				
Office	50	1	50	Over Utilized	2.70%				
Staff Lunch Room	643	1	643	Under Utilized	270.74%	238	1	238	20 SF/Occupant
MEDICAL		4	645	Appropriate	105.74%		5	610	
Medical Suite Toilet	46	1	46	Over Utilized	76.67%	60	1	60	
Nurses' Office / Waiting Room	478	2	478	Under Utilized	191.20%	250	1	250	
Examination Room / Resting	121	1	121	Over Utilized	40.33%	100	3	300	
ADMINISTRATION & GUIDANCE		8	2,723	Under Utilized	112.75%		12	2,415	
General Office / Waiting Room / Toilet	828	1	828	Under Utilized	194.82%	425	1	425	
Teachers' Mail and Time Room		None	0	None	0.00%	100	1	100	
Duplicating Room		None	0	None	0.00%	150	1	150	
Records Room		None	0	None	0.00%	110	1	110	
Principal's Office w/ Conference Area	204	1	204	Over Utilized	54.40%	375	1	375	
Principal's Secretary / Waiting	226	1	226	Under Utilized	180.80%	125	1	125	
Assistant Principal's Office	125	1	125	Appropriate	104.17%	120	0	-	
Supervisory / Spare Office		None	0	None	0.00%	120	1	120	
Conference Room	291	1	291	Under Utilized	116.40%	250	1	250	
Guidance Office	260	1	260	Over Utilized	86.67%	150	2	300	
Guidance Storeroom		None	0	None	0.00%	35	1	35	
Teachers' Work Room (w/ storage)	789	2	789	Under Utilized	185.65%	425	1	425	
CUSTODIAL & MAINTENANCE		3	192	Over Utilized	8.93%		7	2,150	
Custodian's Office	93	1	93	Over Utilized	62.00%	150	1	150	
Custodian's Workshop		None	0	None	0.00%	375	1	375	
Custodian's Storage		2	99	Over Utilized	26.40%	375	1	375	
Storage Closet	18	1	18	Over Utilized	4.80%				
Storage Closet	81	1	81	Under Utilized	21.60%				
Recycling Room / Trash		None	0	None	0.00%	400	1	400	
Receiving and General Supply	135	1	135	Over Utilized	47.66%	283	1	283	
Storeroom		None	0	None	0.00%	367	1	367	
Network / Telecom Room (@ Library)	253	1	253	Under Utilized	126.50%	200	1	200	
OTHER		1	98					0	
Other (specify)		1	98	Appropriate					
Nursing Room	98	1	98	Appropriate					
Total Building Net Floor Area (NFA)			54,431	Appropriate	96.58%			56,356	
Proposed Student Capacity / Enrollment								550	

Proposed Space Summary- Elementary Schools

Date: 12/15/2020 Preliminary Design Program

BENNETT HEMENWAY		Existing Conditions				MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM TYPE	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	Comments
NON-PROGRAMMED SPACES		24	23,546						
Other Occupied Rooms (list separately)									Non-Programmed space areas are required to be included in the following submittals:
None									Schematic Design Submittal
Unoccupied MEP/FP Spaces		4	914						Design Development Submittal
Boiler Room	595	1	595						60% Construction Documents
Electrical Room	241	1	241						90% Construction Documents
Elevator Mechanical Room	41	1	41						Final Construction Documents
Elevator	37	1	37						
Unoccupied Closets, Supply Rooms & Storage Rooms		4	578						
Storage Closet @ Kindergarten	25	1	25	Inappropriate					
Corridor Storage @ Kindergarten	75	NA	75	Inappropriate					
Corridor Storage @ Gym	88	NA	88	Inappropriate					
Storage Shed @ Courtyard	111	1	111	Inappropriate					
Custodial Supply Closet @ 2nd Floor	85	1	85						
Custodial Supply Closet @ 2nd Floor	18	1	18						
Corridor Storage Closets @ 1st Floor	90	NA	90						
Corridor Storage Closets @ 2nd Floor	86	NA	86						
Toilet Rooms		16	1,710						
Girls 1st Floor (Gym Side)	186	1	186						
Boys 1st Floor (Gym Side)	176	1	176						
Girls 2nd Floor (Gym Side)	188	1	188						
Boys 2nd Floor (Gym Side)	181	1	181						
Girls (2nd Fl near 3rd Grade)	216	1	216						
Boys (2nd Fl near 3rd Grade)	174	1	174						
Staff Toilet (near Gym)	53	1	53						
Staff Toilet (near Gym)	58	1	58						
Toilet Room Girls 1st Floor (Cafeteria)	74	1	74						
Toilet Room Boys 1st Floor (Cafeteria)	65	1	65						
Staff Toilet 1st Floor (near Elevator)	47	1	47						
Staff Toilet 1st Floor (near Elevator)	48	1	48						
Toilet Room 2nd Floor (near Elevator)	47	1	47						
Toilet Room 2nd Floor (near Elevator)	48	1	48						
Toilet Room (near Music Room)	74	1	74						
Toilet Room (near Music Room)	75	1	75						
Circulation (corridors, stairs, ramps & elevators)			20,344						
Remaining³			6,422						
Total Building Gross Floor Area (GFA)²			84,399	Appropriate	101.74%			82,958	
Grossing factor (GFA/NFA)			1.55056861					1.47	

¹ Individual Room Net Floor Area (NFA) Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including su

² Total Building Gross Floor Area (GFA) Includes the entire building gross square footage measured from the outside face of exterior walls

³ Remaining Includes exterior walls, interior partitions, chases, and other areas not listed above. Do not calculate this area, it is assumed to equal the difference between the Total B

Architect Certification

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best

Name of Architect Firm: _____

Name of Principal Architect: _____

Signature of Principal Architect: _____

Date: _____

Proposed Space Summary- Elementary Schools

Date: 12/14/2020

Preliminary Design Program

MEMORIAL ELEMENTARY						MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM TYPE	Existing Conditions								
	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	Comments
CORE ACADEMIC SPACES		21	19,946	Under Utilized	110.20%		18	18,100	
<i>(List classrooms of different sizes separately)</i>									
Pre-Kindergarten w/ toilet		1	784	NA	NA	1,200		-	1,100 SF min - 1,300 SF max
Preschool Classroom w/ adjacent toilet	784	1	784	Over Utilized	65.33%				
Kindergarten w/ toilet		4	4,800	Appropriate	100.00%	1,200	4	4,800	1,100 SF min - 1,300 SF max
K Classroom w/ closet & adjacent toilet	1,236	1	1,236	Appropriate	103.00%				
K Classroom w/ closet & adjacent toilet	1,224	1	1,224	Appropriate	102.00%				
K Classroom w/ toilet & w/ closet	1,252	1	1,252	Appropriate	104.33%				
K Classroom w/o toilet	1,088	1	1,088	Appropriate	90.67%				
General Classrooms - Grade 1-4		16	14,362	Under Utilized	107.98%	950	14	13,300	900 SF min - 1,000 SF max
1st Grade	881	1	881	Appropriate	92.74%				
1st Grade	870	1	870	Appropriate	91.58%				
1st Grade	893	1	893	Appropriate	94.00%				
1st Grade	829	1	829	Over Utilized	87.26%				
2nd Grade	891	1	891	Appropriate	93.79%				
2nd Grade	887	1	887	Appropriate	93.37%				
2nd Grade	874	1	874	Appropriate	92.00%				
2nd Grade w/ storage	836	1	836	Over Utilized	88.00%				
3rd Grade	888	1	888	Appropriate	93.47%				
3rd Grade	875	2	1,750	Appropriate	92.11%				
3rd Grade	1,166	1	1,166	Under Utilized	122.74%				
4th Grade w/ storage	975	1	975	Appropriate	102.63%				
4th Grade	865	1	865	Appropriate	91.05%				
4th Grade	881	1	881	Appropriate	92.74%				
4th Grade	876	1	876	Appropriate	92.21%				
SPECIAL EDUCATION		10	2,803	Over Utilized	61.88%		9	4,530	
<i>(List rooms of different sizes separately)</i>									
Self-Contained SPED		1	349	Over Utilized	12.25%	950	3	2,850	900-1,300 SF equal to surrounding classrooms
Sp. Ed. Classroom	349	1	349	Over Utilized	36.74%				
Self-Contained SPED - Toilet		None	0	None	0.00%	60	3	180	
Resource Room		4	1,985	Under Utilized	198.50%	500	2	1,000	1/2 size Genl. Clm.
K-2 Learning Center w/ storage	962	1	962	Under Utilized	192.40%				
3rd Grade Learning Center	185	1	185	Over Utilized	37.00%				
4th Grade Learning Center	190	1	190	Over Utilized	38.00%				
Literacy Center	648	1	648	Under Utilized	129.60%				
Small Group Room / Reading		4	278	Over Utilized	55.60%	500	1	500	1/2 size Genl. Clm.
Speech/Language	132	1	132	Over Utilized	26.40%				
Psychologist	146	1	146	Over Utilized	29.20%				
Other		1	191	Appropriate	NA				
ASAP	191	1	191	Appropriate	NA				
ART & MUSIC		2	2,489	Appropriate	96.66%		6	2,575	
Art Classroom - 25 seats	800	1	800	Over Utilized	80.00%	1,000	1	1,000	assumed schedule 2 times / week / student
Art Workroom w/ Storage & kiln		None	0	None	0.00%	150	1	150	
Music Classroom / Large Group - 25-50 seats	1,689	1	1,689	Under Utilized	140.75%	1,200	1	1,200	assumed schedule 2 times / week / student
Music Practice / Ensemble		None	0	None	0.00%	75	3	225	
HEALTH & PHYSICAL EDUCATION		4	4,324	Over Utilized	68.63%			6,300	
Gymnasium	4,017	1	4,017	Over Utilized	66.95%	6,000	1	6,000	6000 SF Min. Size
Gym Storeroom		3	307	Under Utilized	204.67%	150	1	150	
Storage Closet	57	1	57	Over Utilized	38.00%				
Storage Closet	94	1	94	Over Utilized	62.67%				
Storage Closet	156	1	156	Appropriate	104.00%				
Health Instructor's Office w/ Shower & Toilet		None	0	None	0.00%	150	1	150	
MEDIA CENTER		1	1,565	Over Utilized	63.02%		1	2,484	
Media Center / Reading Room		1	1,565	Over Utilized	63.02%	2,484	1	2,484	
Library w/ storage	1,565	1	1,565	Over Utilized	63.02%				
DINING & FOOD SERVICE		5	5,018	Over Utilized	80.15%		5	6,261	
Cafeteria / Dining		1	3,078	Appropriate	101.84%	3,023	1	3,023	2 seatings - 155F per seat
Cafetorium	3,078	1	3,078	Appropriate	101.84%				
Stage		None	0	None	0.00%	1,000	1	1,000	
Chair / Table / Equipment Storage		None	0	None	0.00%	334	1	334	
Kitchen		3	1,518	Over Utilized	89.14%	1,703	1	1,703	1600 SF for first 300 + 1 SF/student Add'l
Kitchen	1,372	1	1,372	Over Utilized	80.56%				
Storage	146	2	146	Over Utilized	8.57%				
Staff Lunch Room	422	1	422	Under Utilized	210.21%	201	1	201	20 SF/Occupant
MEDICAL		2	427	Over Utilized	83.73%		4	510	
Medical Suite Toilet	23	1	23	Over Utilized	38.33%	60	1	60	
Nurses' Office / Waiting Room	404	1	404	Under Utilized	161.60%	250	1	250	
Examination Room / Resting		None	0	None	0.00%	100	2	200	

Proposed Space Summary- Elementary Schools

Date: 12/14/2020

Preliminary Design Program

MEMORIAL ELEMENTARY						MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM TYPE	Existing Conditions								Comments
	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	
ADMINISTRATION & GUIDANCE		9	2,391	Under Utilized	112.89%		11	2,118	
General Office / Waiting Room / Toilet		2	497	Under Utilized	141.39%	352	1	352	
Reception / Admin.	475	1	475	Under Utilized	135.14%				
Toilet	22	1	22	NA	NA				
Teachers' Mail and Time Room		None	0	None	0.00%	100	1	100	
Duplicating (Copy) Room	114	1	114	Over Utilized	76.00%	150	1	150	
Records Room		None	0	None	0.00%	110	1	110	
Principal's Office w/ Conference Area	201	1	201	Over Utilized	53.60%	375	1	375	
Principal's Secretary / Waiting		None	0	None	0.00%	125	1	125	
Assistant Principal's Office		None	0	None	NA	120	0	-	
Supervisory / Spare Office		None	0	None	0.00%	120	1	120	
Conference Room	252	1	252	Appropriate	100.80%	250	1	250	
Guidance Office	439	1	439	Under Utilized	292.67%	150	1	150	
Guidance Storeroom	43	1	43	Under Utilized	122.86%	35	1	35	
Teachers' Work Room		2	845	Under Utilized	240.40%	352	1	352	
#1	151	1	151	Over Utilized	42.96%				
#2	694	1	694	Under Utilized	197.44%				
CUSTODIAL & MAINTENANCE		5	478	Over Utilized	23.86%		7	2,003	
Custodian's Office	48	1	48	Over Utilized	32.00%	150	1	150	
Custodian's Workshop	64	1	64	Over Utilized	17.07%	375	1	375	
Custodian's Storage	38	1	38	Over Utilized	10.13%	375	1	375	
Recycling Room / Trash	172	1	172	Over Utilized	43.00%	400	1	400	
Receiving and General Supply	156	1	156	Over Utilized	66.58%	234	1	234	
Storeroom		None	0	None	0.00%	269	1	269	
Network / Telecom Room		None	0	None	0.00%	200	1	200	
OTHER			0					0	
Other (specify)									
None									
Total Building Net Floor Area (NFA)			39,441	Over Utilized	87.88%			44,880	
Proposed Student Capacity / Enrollment								403	
NON-PROGRAMMED SPACES		26	17,024						
Other Occupied Rooms (list separately)									Non-Programmed space areas are required to be included in the following submittals:
None									Schematic Design Submittal
Unoccupied MEP/FP Spaces		3	1,021						Design Development Submittal
Boiler Room	847	1	847						60% Construction Documents
Electric Room	126	1	126						90% Construction Documents
Water & Gas	48	1	48						Final Construction Documents
Unoccupied Closets, Supply Rooms & Storage Rooms		11	1,122						
Book Room #1	156	1	156						
Book Room #2	231	1	231						
Storage @ Literary Center	144	1	144						
Storage @ Book Room #2	56	1	56						
Storage @ Library	159	1	159						
Storage @ Staff Lunchroom	48	1	48						
Custodial Supply Rm. @ K-2 Learning Cnt.	48	1	48						
Custodial Supply Rm. @ 2nd Grade	70	1	70						
Custodial Supply Rm. @ 4th Grade	66	1	66						
Roof Access	77	1	77						
Vault	67	1	67						
Toilet Rooms		12	1,043						
Girls' Room @ Library	145	1	145						
Boys' Room @ Library	158	1	158						
Girls' Room @ Preschool	55	1	55						
Boys' Room @ Preschool	57	1	57						
Toilet @ Kindergarten	27	1	27						
Toilet @ Sp. Ed. Classroom	105	1	105						
Toilet @ Sp. Ed. Classroom	176	1	176						
Toilet @ Sp. Ed. Classroom	183	1	183						
Toilet @ Music Room	32	1	32						
Toilet @ Music Room	29	1	29						
Staff Toilet @ Kitchen	32	1	32						
Staff Toilet @ Staff Lunchroom	44	1	44						
Circulation (corridors, stairs, ramps & elevators)	13,838	NA	13,838						
Remaining³		NA	3,506						

Proposed Space Summary- Elementary Schools

Date: 12/14/2020

Preliminary Design Program

MEMORIAL ELEMENTARY	Existing Conditions					MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	Comments
Total Building Gross Floor Area (GFA) ²			59,971	Over Utilized	88.59%			67,697	
Grossing factor (GFA/NFA)			1.52					1.51	

¹ **Individual Room Net Floor Area (NFA)** Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including suc

² **Total Building Gross Floor Area (GFA)** Includes the entire building gross square footage measured from the outside face of exterior walls

³ **Remaining** Includes exterior walls, interior partitions, chases, and other areas not listed above. Do not calculate this area, it is assumed to equal the difference between the Total Bu

Architect Certification

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best

Name of Architect Firm: _____

Name of Principal Architect: _____

Signature of Principal Architect: _____

Date: _____

Proposed Space Summary- Elementary Schools

Date: 12/15/2020 Preliminary Design Program

BROWN ELEMENTARY				Existing Conditions		MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM TYPE	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	Comments
CORE ACADEMIC SPACES		25	26,172	Under Utilized	123.45%		21	21,200	
(List classrooms of different sizes separately)									
Pre-Kindergarten w/ toilet		None	0	None	NA	1,200		-	1,100 SF min - 1,300 SF max
Kindergarten w/ toilet		5	6,519	Under Utilized	108.65%	1,200	5	6,000	1,100 SF min - 1,300 SF max
Kindergarten Classroom w/ toilet	1,395	1	1,395	Under Utilized	116.25%				
Kindergarten Classroom w/ toilet	1,346	1	1,346	Under Utilized	112.17%				
Kindergarten Classroom w/ toilet	1,363	1	1,363	Under Utilized	113.58%				
Kindergarten Classroom w/ toilet	1,401	1	1,401	Under Utilized	116.75%				
Kindergarten Classroom w/o toilet	1,014	1	1,014	Over Utilized	84.50%				
General Classrooms - Grade 1-4		20	19,653	Under Utilized	129.30%	950	16	15,200	900 SF min - 1,000 SF max
Grade 1	776	2	1,552	Over Utilized	81.68%				
Grade 1	778	1	778	Over Utilized	81.89%				
Grade 1	773	1	773	Over Utilized	81.37%				
Grade 1	774	1	774	Over Utilized	81.47%				
Grade 2	1,068	1	1,068	Under Utilized	112.42%				
Grade 2	1,065	2	2,130	Under Utilized	112.11%				
Grade 2	1,022	1	1,022	Under Utilized	107.58%				
Grade 2	994	1	994	Appropriate	104.63%				
Grade 3	1,033	1	1,033	Under Utilized	108.74%				
Grade 3	1,024	1	1,024	Under Utilized	107.79%				
Grade 3	1,014	1	1,014	Under Utilized	106.74%				
Grade 3	904	1	904	Appropriate	95.16%				
Grade 3	1,090	1	1,090	Under Utilized	114.74%				
Grade 4	1,011	1	1,011	Under Utilized	106.42%				
Grade 4	1,014	1	1,014	Under Utilized	106.74%				
Grade 4	1,027	1	1,027	Under Utilized	108.11%				
Grade 4	1,058	1	1,058	Under Utilized	111.37%				
Grade 4	1,387	1	1,387	Under Utilized	146.00%				
SPECIAL EDUCATION		12	4,414	Over Utilized	79.68%		11	5,540	
(List rooms of different sizes separately)									
Self-Contained SPED		1	1,015	Over Utilized	26.71%	950	4	3,800	900-1,300 SF equal to surrounding classrooms
Sp. Ed. Classroom	1015	1	1,015	Under Utilized	106.84%				
Self-Contained SPED - toilet		None	0	None	0.00%	60	4	240	
Resource Room		4	2,051	Under Utilized	205.10%	500	2	1,000	1/2 size Genl. Clrm.
English Language Learning	546	1	546	Under Utilized	109.20%				
English Language Learning	393	1	393	Over Utilized	78.60%				
Learning Center K-2	779	1	779	Under Utilized	155.80%				
Learning Center 3-4	333	1	333	Over Utilized	66.60%				
Small Group Room / Reading		4	1,066	Under Utilized	213.20%	500	1	500	1/2 size Genl. Clrm.
Literacy Specialist Room	308	1	308	Over Utilized	61.60%				
Reset Room	92	1	92	Over Utilized	18.40%				
Psychologist Office	240	1	240	Over Utilized	48.00%				
OT/PT	426	1	426	Over Utilized	85.20%				
Other		3	282	NA	NA				
ASAP Office	235	1	235	Appropriate	47.00%				
ASAP Office Storage Closet @ T. Lounge	27	1	27	Appropriate	NA				
PTO Storage Closet @ T. Lounge	20	1	20	Appropriate	NA				
ART & MUSIC		3	2,985	Under Utilized	115.92%		6	2,575	
Art Classroom - 25 seats	1,344	1	1,344	Under Utilized	134.40%	1,000	1	1,000	assumed schedule 2 times / week / student
Art Workroom w/ Storage	110	1	110	Under Utilized	73.33%	150	1	150	
Music Classroom / Large Group - 25-50 seats		1	1,531	Under Utilized	127.58%	1,200	1	1,200	assumed schedule 2 times / week / student
Music Room	1,392	1	1,392	Under Utilized	278.40%				
Music Room Storage	71	NA	71	NA	14.20%				
Music Storage Closet	68	NA	68	NA	13.60%				
Music Practice / Ensemble		None	0	None	0.00%	75	3	225	
HEALTH & PHYSICAL EDUCATION		3	4,985	Over Utilized	68.29%		3	7,300	
Gymnasium	4,372	1	4,372	Over Utilized	72.87%	6,000	1	6,000	6000 SF Min. Size
Gym Storeroom (Combined w/ Office)	233	1	233	Over Utilized	77.67%	150	1	150	
Health Instructor's Office w/ Shower & Toilet		None	0	Over Utilized	0.00%	150	1	150	
Stage	380	1	380	Over Utilized	38.00%	1,000	1	1,000	
MEDIA CENTER		2	2,378	Over Utilized	82.84%		1	2,871	
Media Center / Reading Room	2,277	2	2,378	Over Utilized	82.84%	2,871	1	2,871	
Library	2,277	1	2,277	Over Utilized	79.32%				
Library Storage	101	1	101	Over Utilized	3.52%				
DINING & FOOD SERVICE		7	4,440	Over Utilized	73.49%		4	6,042	
Cafeteria / Dining	2,836	1	2,836	Over Utilized	77.33%	3,668	1	3,668	2 seatings - 155F per seat
Chair / Table / Equipment Storage	259	1	259	Over Utilized	71.36%	363	1	363	
Kitchen		2	790	Over Utilized	44.16%	1,789	1	1,789	1600 SF for first 300 + 1 SF/student Add'l
Kitchen	717	1	717	Over Utilized	40.08%				
Kitchen Office	73	1	73	Over Utilized	4.08%				
Staff Lunch Room		3	555	Under Utilized	249.72%	222	1	222	20 SF/Occupant
Teachers' Lounge	429	1	429	Under Utilized	193.03%				
Staff Toilet	42	1	42	NA	18.90%				
Staff Toilet	84	1	84	NA	37.80%				

Proposed Space Summary- Elementary Schools

Date: 12/15/2020 Preliminary Design Program

BROWN ELEMENTARY						MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM TYPE	Existing Conditions								Comments
	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	
MEDICAL		3	552	Under Utilized	108.24%		4	510	
Medical Suite Toilet	59	1	59	Appropriate	98.33%	60	1	60	
Nurses' Office / Waiting Room	353	1	353	Under Utilized	141.20%	250	1	250	
Examination Room / Resting	140	1	140	Over Utilized	70.00%	100	2	200	
ADMINISTRATION & GUIDANCE		9	2,494	Under Utilized	105.95%		12	2,354	
General Office / Waiting Room	435	1	435	Under Utilized	110.27%	395	1	395	
Teachers' Mail and Time Room		None	0	None	0.00%	100	1	100	
Duplicating Room		None	0	None	0.00%	150	1	150	
Records Room		None	0	None	0.00%	110	1	110	
Principal's Office w/ Conference Area		3	528	Under Utilized	140.80%	375	1	375	
Principal's Office	439	1	439	Under Utilized	117.07%				
Principal's Toilet	68	1	68	Under Utilized	18.13%				
Storage Closet	21	1	21	Under Utilized	5.60%				
Principal's Secretary / Waiting		None	0	None	0.00%	125	1	125	
Assistant Principal's Office	221	1	221	Under Utilized	184.17%	120	0		
Supervisory / Spare Office w/ storage	265	1	265	Under Utilized	220.83%	120	1	120	
Conference Room	374	1	374	Under Utilized	149.60%	250	1	250	
Guidance Office	297	1	297	Appropriate	99.00%	150	2	300	
Guidance Storeroom		None	0	None	0.00%	35	1	35	
Teachers' Work Room	374	1	374	Appropriate	94.80%	395	1	395	
CUSTODIAL & MAINTENANCE			365	Over Utilized	17.47%			2,089	
Custodian's Office	180	1	180	Under Utilized	120.00%	150	1	150	
Custodian's Workshop		None	0	None	0.00%	375	1	375	
Custodian's Storage		2	185	Over Utilized	49.33%	375	1	375	
Custodian's Storage @ Cafeteria	80	1	80	Over Utilized	21.33%				
Custodian's Storage @ 4th Grade	105	1	105	Over Utilized	28.00%				
Recycling Room / Trash						400	1	400	
Receiving and General Supply						263	1	263	
Storeroom						326	1	326	
Network / Telecom Room						200	1	200	
OTHER			0					0	
Other (specify)									
None									
Total Building Net Floor Area (NFA)			48,785	Appropriate	96.64%			50,480	
Proposed Student Capacity / Enrollment								489	
NON-PROGRAMMED SPACES		20	18,234						
Other Occupied Rooms (list separately)									Non-Programmed space areas are required to be included in the following submittals: Schematic Design Submittal Design Development Submittal 60% Construction Documents 90% Construction Documents Final Construction Documents
None									
Unoccupied MEP/FP Spaces		2	352						
Electric Closet	229	1	229						
Utility Closet	123	1	123						
Unoccupied Closets, Supply Rooms & Storage Rooms		10	1,884						
Book Room	494	1	494						
K-1 Storage	272	1	272						
3-4 Storage	298	1	298						
3-4 Storage	298	1	298						
Storage Closet @ Cafeteria	134	1	134						
Storage Closet @ main entrance	105	1	105						
Storage Closet @ main entrance	89	1	89						
Storage @ 1st	41	1	41						
Storage @ 1st	101	1	101						
Storage @ 1st	52	1	52						
Toilet Rooms		8	1,722						
Girls' Room @ 1st	210	1	210						
Boys' Room @ 1st	229	1	229						
Girls' Room @ main entrance	289	1	289						
Boys' Room @ main entrance	282	1	282						
Girls' Room @ 3rd/4th	299	1	299						
Boys' Room @ 3rd/4th	272	1	272						
Toilet @ main entrance	67	1	67						
Toilet @ main entrance	74	1	74						
Circulation (corridors, stairs, ramps & elevators)		NA	14,276						
Remaining²			4,778						

Proposed Space Summary- Elementary Schools

Date: 12/15/2020 Preliminary Design Program

BROWN ELEMENTARY		Existing Conditions			MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)				
ROOM TYPE	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	Comments
Total Building Gross Floor Area (GFA) ²			71,797	Appropriate	92.96%			77,238	
Grossing factor (GFA/NFA)			1.471702368					1.53	

¹ Individual Room Net Floor Area (NFA) Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including su

² Total Building Gross Floor Area (GFA) Includes the entire building gross square footage measured from the outside face of exterior walls

³ Remaining Includes exterior walls, interior partitions, chases, and other areas not listed above. Do not calculate this area, it is assumed to equal the difference between the Total B

Architect Certification

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best

Name of Architect Firm: _____

Name of Principal Architect: _____

Signature of Principal Architect: _____

Date: _____

Proposed Space Summary- Elementary Schools

Date: 12/14/2020 Preliminary Design Program

LILJA ELEMENTARY						MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM TYPE	Existing Conditions								
	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	Comments
CORE ACADEMIC SPACES		21	18,078	Appropriate	93.67%		19	19,300	
<i>(List classrooms of different sizes separately)</i>									
Pre-Kindergarten w/ toilet		2	1,336	NA	NA	1,200		-	1,100 SF min - 1,300 SF max
Pre-Kindergarten w/ toilet	668	2	1,336	Over Utilized	55.67%				
Kindergarten w/ toilet		4	4,091	Over Utilized	68.18%	1,200	5	6,000	1,100 SF min - 1,300 SF max
Kindergarten w/ toilet	668	1	668	Over Utilized	55.67%				
Kindergarten w/ toilet and storage	1,137	1	1,137	Appropriate	94.75%				
Kindergarten w/ toilet and storage	1,143	1	1,143	Appropriate	95.25%				
Kindergarten w/ toilet and storage	1,143	1	1,143	Appropriate	95.25%				
General Classrooms - Grade 1-4		15	12,651	Over Utilized	95.12%	950	14	13,300	900 SF min - 1,000 SF max
1st Grade	821	1	821	Over Utilized	86.42%				
1st Grade	884	1	884	Appropriate	93.05%				
1st Grade	877	1	877	Appropriate	92.32%				
1st & 2nd Grade	837	1	837	Over Utilized	88.11%				
1st & 2nd Grade	843	1	843	Over Utilized	88.74%				
2nd Grade	820	1	820	Over Utilized	86.32%				
2nd Grade	848	1	848	Over Utilized	89.26%				
2nd Grade	898	1	898	Appropriate	94.53%				
3rd Grade @ Modular	673	2	1,346	Over Utilized	70.84%				
3rd & 4th Grade	899	1	899	Appropriate	94.63%				
3rd & 4th Grade	894	1	894	Appropriate	94.11%				
4th Grade	896	2	1,792	Appropriate	94.32%				
4th Grade	892	1	892	Appropriate	93.89%				
SPECIAL EDUCATION		12	6,739	Under Utilized	148.76%		9	4,530	
<i>(List rooms of different sizes separately)</i>									
Self-Contained SPED		3	2,584	Appropriate	90.67%	950	3	2,850	900-1,300 SF equal to surrounding classrooms
Sp. Ed. Classroom w/ toilet and stor. (@K)	1,089	1	1,089	Under Utilized	114.63%				
Sp. Ed. Classroom (@1st Grade)	822	1	822	Over Utilized	86.53%				
3rd Grade Sp. Ed. Classroom (@Mods)	673	1	673	Over Utilized	70.84%				
Self-Contained SPED - toilet		1	66	Over Utilized	36.67%	60	3	180	
Located in Sp. Ed. Clsrm @ K	66	1	66	Under Utilized	110.00%				
Resource Room		1	853	Over Utilized	85.30%	500	2	1,000	1/2 size Genl. Clm.
Learning Center (@ 1st Grade)	853	1	853	Under Utilized	170.60%				
Small Group Room / Reading		3	2,083	Under Utilized	416.60%	500	1	500	1/2 size Genl. Clm.
Literacy Specialist (beside library)	775	1	775	Under Utilized	155.00%				
Literacy Specialist (@cafeteria wing)	430	1	430	Over Utilized	86.00%				
ELL	878	1	878	Under Utilized	175.60%				
Other		4	1,153	NA	25.45% of total				
Psychologist	350	1	350	Appropriate	NA				
Sp. Ed. Coordinator	189	1	189	Appropriate	NA				
OT/PT	255	1	255	Appropriate	NA				
OT/PT	359	1	359	Appropriate	NA				
ART & MUSIC		3	2,404	Appropriate	93.36%			2,575	
Art Classroom - 25 seats	1,073	1	1,073	Under Utilized	107.30%	1,000	1	1,000	assumed schedule 2 times / week / student
Art Workroom w/ Storage & kiln		1	137	Appropriate	91.33%	150	1	150	
Art Storage Closet	137	1	137	Appropriate	91.33%				
Music Classroom / Large Group - 25-50 seats	1,194	1	1,194	Appropriate	99.50%	1,200	1	1,200	assumed schedule 2 times / week / student
Music Practice / Ensemble		None	0	None	0.00%	75	3	225	
HEALTH & PHYSICAL EDUCATION		3	4,743	Over Utilized	75.29%		3	6,300	
Gymnasium	4,554	1	4,554	Over Utilized	75.90%	6,000	1	6,000	6000 SF Min. Size
Gym Storeroom		2	189	Under Utilized	126.00%	150	1	150	
Gym Storeroom	155	1	155	Appropriate	103.33%				
Gym Storeroom	34	1	34	Over Utilized	22.67%				
Health Instructor's Office w/ Shower & Toilet		None	0	None	0.00%	150	1	150	
MEDIA CENTER		5	2,505	Appropriate	96.00%		1	2,610	
Media Center / Reading Room		5	2,505	Appropriate	96.00%	2,610	1	2,610	
Library	1,834	1	1,834	Over Utilized	70.28%				
Story Telling Room	263	1	263	Over Utilized	10.08%				
Storage Room	156	2	312	Over Utilized	11.96%				
Storage Room	96	1	96	Over Utilized	3.68%				
DINING & FOOD SERVICE		7	3,852	Over Utilized	59.13%		5	6,515	
Cafeteria / Dining	2,355	1	2,355	Over Utilized	72.85%	3,233	1	3,233	2 seatings - 155F per seat
Stage (Included in Gymnasium)		None	0	Over Utilized	0.00%	1,000	1	1,000	
Chair / Table / Equipment Storage	198	1	198	Over Utilized	57.62%	344	1	344	
Kitchen		4	855	Over Utilized	49.39%	1,731	1	1,731	1600 SF for first 300 + 1 SF/student Add'l
Kitchen	521	1	521	Over Utilized	30.10%				
Kitchen storage	66	1	66	Over Utilized	3.81%				
Kitchen storage	70	1	70	Over Utilized	4.04%				
Kitchen storage	198	1	198	Over Utilized	11.44%				
Staff Lunch Room	444	1	444	Under Utilized	213.72%	208	1	208	20 SF/occupant
MEDICAL		3	543	Under Utilized	106.47%		4	510	
Medical Suite Toilet	60	1	60	Appropriate	100.00%	60	1	60	
Nurses' Office / Waiting Room	318	1	318	Under Utilized	127.20%	250	1	250	
Examination Room / Resting	165	1	165	Over Utilized	82.50%	100	2	200	

Proposed Space Summary- Elementary Schools

Date: 12/14/2020 Preliminary Design Program

LILJA ELEMENTARY						MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
Existing Conditions									
ROOM TYPE	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	Comments
ADMINISTRATION & GUIDANCE		5	1,500	Over Utilized	69.90%			2,146	
General Office / Waiting Room / Toilet	278	1	278	Over Utilized	76.06%	366	1	366	
Teachers' Mail and Time Room		None	0	None	0.00%	100	1	100	
Duplicating Room		2	666	Under Utilized	444.00%	150	1	150	
Copy Room	565	1	565	Under Utilized	376.67%				
Copy Room (@Modular)	101	1	101	Over Utilized	67.33%				
Records Room		None	0	None	0.00%	110	1	110	
Principal's Office w/ Conference Area	202	1	202	Over Utilized	53.87%	375	1	375	
Principal's Secretary / Waiting		None	0	None	0.00%	125	1	125	
Assistant Principal's Office		None	0	None	0.00%	120	0	-	
Supervisory / Spare Office		None	0	None	0.00%	120	1	120	
Conference Room		None	0	None	0.00%	250	1	250	
Guidance Office	354	1	354	Under Utilized	236.00%	150	1	150	
Guidance Storeroom		None	0	None	0.00%	35	1	35	
Teachers' Work Room		None	0	None	0.00%	366	1	366	
CUSTODIAL & MAINTENANCE		2	246	Over Utilized	12.11%		7	2,031	
Custodian's Office (w/ toilet)	214	1	214	Under Utilized	142.67%	150	1	150	
Custodian's Workshop		None	0	None	0.00%	375	1	375	
Custodian's Storage	32	1	32	Over Utilized	8.53%	375	1	375	
Recycling Room / Trash		None	0	None	0.00%	400	1	400	
Receiving and General Supply		None	0	None	0.00%	244	1	244	
Storeroom		None	0	None	0.00%	287	1	287	
Network / Telecom Room		None	0	None	0.00%	200	1	200	
OTHER			0					0	
Other (specify)									
None									
Total Building Net Floor Area (NFA)			40,610	Over Utilized	87.30%			46,516	
Proposed Student Capacity / Enrollment								431	
NON-PROGRAMMED SPACES			12,617						
Other Occupied Rooms (list separately)									Non-Programmed space areas are required to be included in the following submittals:
None									
Unoccupied MEP/FP Spaces		3	336						
Boiler Room @ 2nd Grade	81	1	81						Schematic Design Submittal
Boiler Room @ 1st & 2nd Grade	193	1	193						Design Development Submittal
Equipment Storage	62	1	62						60% Construction Documents
Unoccupied Closets, Supply Rooms & Storage Rooms		4	588						90% Construction Documents
Book Room (@cafeteria wing)	401	1	401						Final Construction Documents
Custodian Supply Closet @ Modular	40	1	40						
Storage Closet @ Modular Copy Room	91	1	91						
Storage Closet @ Boiler Room	56	1	56						
Toilet Rooms		12	1,866						
Toilet Room 1st Floor (@OTPT)	77	1	77						
Girls' Room (@Cafeteria)	245	1	245						
Boys' Room (@Cafeteria)	230	1	230						
W. Staff Toilet (@Cafeteria)	120	1	120						
M. Staff Toilet (@Cafeteria)	152	1	152						
Girls' Room 1st Floor (@Music)	211	1	211						
Boys' Room 1st Floor (@Music)	219	1	219						
Staff Toilet (@Breakroom)	68	1	68						
Staff Toilet (@Breakroom)	69	1	69						
Boys' Room (@Modular)	227	1	227						
Girls' Room (@Modular)	204	1	204						
Toilet Room (@Modular)	44	1	44						
Circulation (corridors, stairs, ramps & elevators)			9,827						
Remaining			4,655						

Proposed Space Summary- Elementary Schools

Date: 12/14/2020 Preliminary Design Program

LILJA ELEMENTARY		Existing Conditions			MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)				
ROOM TYPE	ROOM NFA ¹	# OF RMS	area totals	Utilization Assessment	Percentage of Recommended Square Footage	ROOM NFA ¹	# OF RMS	area totals	Comments
Total Building Gross Floor Area (GFA) ²			57,882	Over Utilized	81.53%			70,993	
Grossing factor (GFA/NFA)			1.425313962					1.53	

¹ **Individual Room Net Floor Area (NFA)** Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including suc

² **Total Building Gross Floor Area (GFA)** Includes the entire building gross square footage measured from the outside face of exterior walls

³ **Remaining** Includes exterior walls, interior partitions, chases, and other areas not listed above. Do not calculate this area, it is assumed to equal the difference between the Total Bu

Architect Certification

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best

Name of Architect Firm: _____

Name of Principal Architect: _____

Signature of Principal Architect: _____

Date: _____

Space Needs Study Questionnaire

Date:

School:

Interviewee:

Requested Documents:

1. Daily Schedule – arrival through dismissal 7:50-2:05
2. Plan of building with room #'s, grade and teacher assignments (correspond with schedule).

Questions:

1. Can you describe your special education services and spaces?
 - a. In addition to 504 and IEP, are there any sub-separate or specific needs programs?
 - b. How are services delivered?
 - c. What rooms are used?
2. Do staff, either SPED or admin or guidance have or need offices in addition to workspace or classroom space?
3. Walk through a school day:
 - a. Drop off locations and logistics? Walkers – Parent Drop Off – Busses
 - b. Before School Programs?
 - c. Movement between classrooms and specials
 - d. Lunch and Recess
 - i. How many seatings? What order? Direct to recess or classroom?
 - ii. Food prepared or delivered?
 - iii. How many recesses?
 - e. Dismissal and Pick-up locations and logistics?
 - f. After School Programs?
4. Specials – Art, Music, Gym, Library.
 - a. How many times per week?
 - b. Any unique?
5. Shared staff?
6. Other groups using the school?
7. What are your perceived needs?
 - a. Additional staff?
 - b. Additional or reconfigured spaces?