

PATRICK HENRY SCHOOL
FEASIBILITY STUDY - MAY 6, 2015



TABLE OF CONTENTS

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| | |
|--|----|
| 01. Executive Summary | 3 |
| 02. Existing Site and Building Analysis..... | 4 |
| 03. Architectural Program..... | 9 |
| 04. Masterplan Options | |
| 04.1 Design Principles..... | 15 |
| 04.2 New Building Option 1A | 16 |
| 04.2 New Building Option 1B | 24 |
| 04.3 New Building Option 2 | 28 |
| 04.5 Renovation & Addition Option..... | 36 |
| 05. Proposed Building Systems | 44 |
| 06. Project Cost..... | 50 |
| 07. Comparison & Next Steps..... | 52 |
| 08. Appendix (See Separate Cover) | |
| 08.1 Existing Facility Condition Assessment | |
| A. Architectural | |
| B. Structural | |
| C. Civil Site Survey | |
| D. Geotechnical Survey | |
| E. MEP and Fire Protection | |
| 08.2 Cost Estimate Report | |
| 08.3 Meeting Minutes | |



01 EXECUTIVE SUMMARY

INTRODUCTION

Patrick Henry is an 86,437 sf Pre-K through 5th grade elementary school on a 13 acre site. 9,400 sf of the school is currently shared spaced used as a Recreation Center. This feasibility study evaluates transforming the school into a 130,000 sf **state of the art, green building** for grades Pre-K through 8th grade, along with a new Recreation Center, which is described in a separate report.

Sorg Architects met with community and stakeholders 17 times to gather information about the project, leading to development of the architectural program. The program has been used to develop four masterplan options.

MASTERPLAN OPTIONS

New Building Option 1A places the school at the corner of N Latham St. and Taney Ave., anchoring the corner. The building is surrounded by open green space, creating a buffer between the neighbors on N Latham St. and making a welcoming entrance on Taney Ave. The multipurpose field is placed on the east side of the site, framed by the Recreation Center in the rear. This option keeps approximately 75% of the existing building in use during construction.

New Building Option 1B has similar building layouts as 1A, but the school is positioned further from N Latham St., within the footprint of the existing building. The multipurpose field is on the western edge of the site, placing a large open space near these neighbors. Both Option 1A and 1B feature an innovative building massing with an expansive outdoor learning area.

New Building Option 2 sets the three story wing of the school away from North Latham Street creating a wide open plaza at the corner of North Latham Street and Taney Ave. The outdoor multi-purpose field is adjacent to Taney Ave, over the footprint of the existing school. This field creates a dramatic forecourt for the school building allowing for open space adjacent to both of the neighboring street frontages. The Recreation Center will be located in the northeast corner of the site. This option locates the new building around the existing school so that the entire building can remain occupied during construction.

Renovation & Addition Option includes renovation of majority of the existing school with a new addition to meet the space requirements. A new 3-story addition is constructed along Taney Ave., giving a new face to the school. Existing modular classrooms are removed and an atrium, housing large-group spaces, is constructed in its place. The multipurpose field is placed adjacent to N Latham St.

CONSTRAINTS

This project is influenced by several constraints and/or:

- Keeping as much of the existing school in operation during construction as possible to minimize the need for swing space
- Respecting the smaller-scale residential context
- Zoning and other regulatory requirements
- Budget

This project will meet the City of Alexandria Zoning Regulations. The site is in zone R12, which permits schools as matter of right. Compliance with yards, setbacks, FAR and height restrictions is feasible. A special use permit may be required for a reduction of the parking requirement, for usage of a greater allowed FAR for schools, for the height of the proposed building, or for the inclusion of the Recreation Center in an R12 zone.

CONCLUSION

All options fit comfortably on the site. Each option has different costs, advantages and disadvantages, which are discussed in this report. The costs for the school range from \$37-41 million depending on the option. All designs minimize the impact to the surrounding neighborhood and present a 130,000 SF high-performance **21st century school**.



02.1 EXISTING SITE ANALYSIS | SITE OVERVIEW



SITE ZONING

The existing school, parking lot, play areas, athletic fields and tennis courts are located in a **R12 zone**, adjacent to a wooded area at the north end of the site, which is a Public Open Space zone, a separate parcel of land. The area surrounding the site consists of several residential zones of varying density. Schools are permitted in Zone R12 as of right per 3-203, as a noncommercial use supporting the residential neighborhood. Indoor and outdoor recreational facilities designed to serve the neighborhood is also permitted per Special Uses (section 3-203, 6-105)

LOT REQUIREMENTS (SECTION 3-205)

Proposed designs comply with all lot requirements as follows:

| | R12 Zone | Existing | Proposed |
|-------------------|-----------|----------------------|-----------|
| Minimum Lot Size | 12,000 sf | 568,841 SF, complies | No change |
| Minimum Lot Width | 95 ft | 333.44 ft, complies | No change |
| Lot Frontage | 45 ft | 333.44 ft, complies | No change |

BULK AND OPEN SPACE REGULATIONS (SECTION 3-206, 6-106, 7-2100)

Proposed designs comply with all bulk and open space requirements as follows:

| | R12 Zone |
|-----------------|--|
| Front Yard | 35 ft minimum |
| Side Yard | 2 yards w/ a setback ratio of 1:1 and a min. size of 25 ft |
| Rear Yard | Setback ratio of 1:1 and a min. size of 25 ft |
| Special Setback | n/a |
| Landscaping | n/a |
| FAR | 0.30 |
| Height | 40 ft max for school use, 60 ft max with a SUP |



02.1 EXISTING SITE ANALYSIS | SITE FEATURES

Rising topography towards north of the site



- Fields are not available for use by the community during school hours
- Bus loop cuts off field from the school



Small-scale residential homes along N Latham St.



Underutilized tennis court located on a hill



Outdoor play areas are not age-specific and are too close to the vehicular loop.



- Buses, cars, and service vehicles share a single drive/parking lot
- No kiss & ride or Pre-K drop-off
- Unsafe and inefficient vehicular circulation



02.2 EXISTING BUILDING ANALYSIS | BUILDING OVERVIEW

BUILDING SUMMARY

- Originally built in 1953
- 86,437 SF, one-story building
- Houses 600 students (Pre-K to 5th Grade)
- Four separate classroom wings, modular classrooms constructed in 2011

BUILDING EGRESS

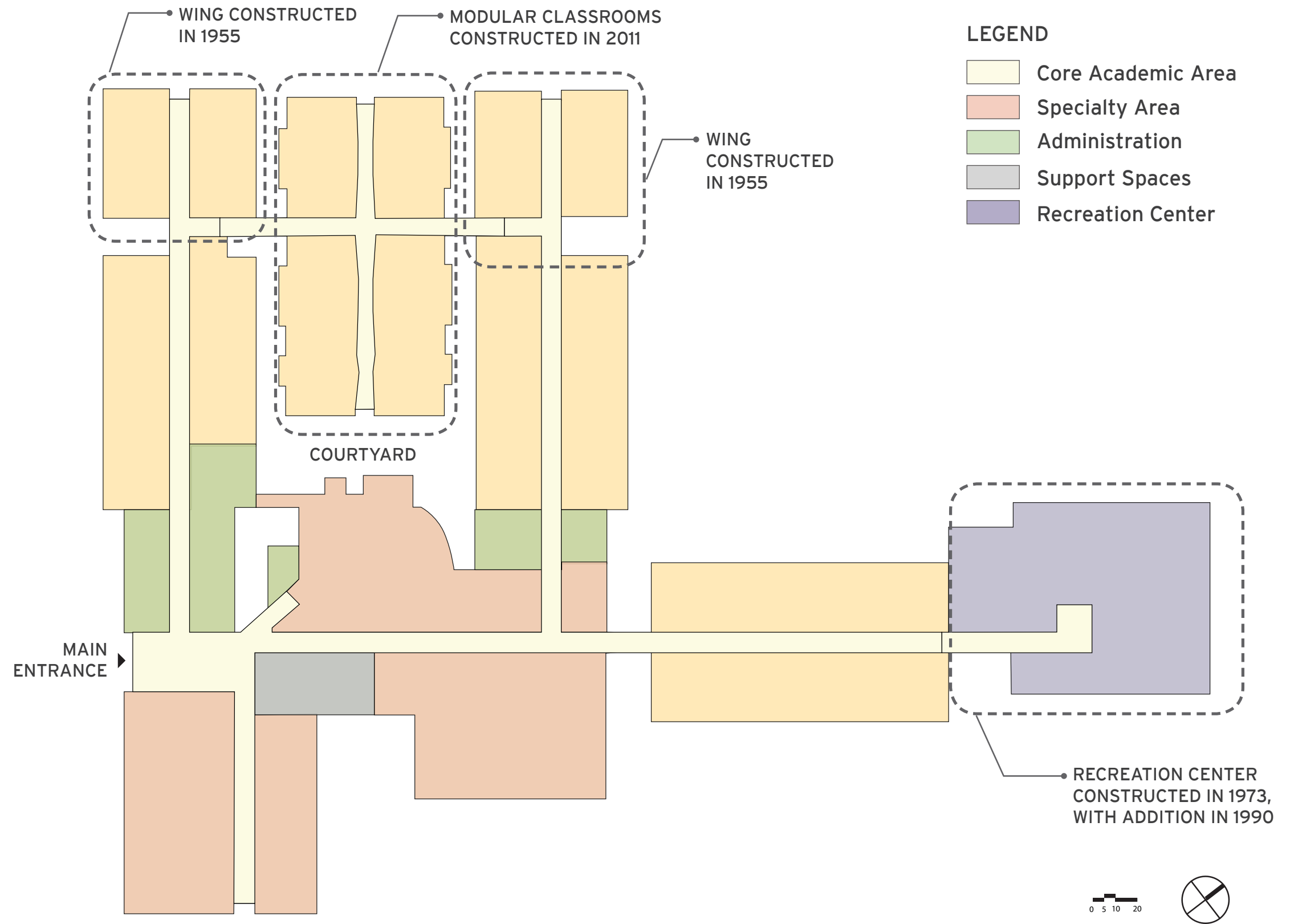
Renovation/Addition of the existing building requires the following improvements to building egress issues:

- Add secondary means of egress in large Specialty Areas such as the library
- Eliminate dead-end corridors and provide clear exit paths
- Eliminate exit paths through an enclosed courtyard

BUILDING ACCESSIBILITY

The existing building is accessible through the main entrance which has a ramp. All corridors provide an accessible route. However, the building requires the following accessibility upgrades:

- Revise the bathrooms throughout to include the required clearances and fixtures.
- Doors to all classrooms except in the modular wing to be revised to provide the required clearances.
- A portion of the seating in the Auditorium is to be removed in order to allow for the installation of new accessible seating areas.



02.2 EXISTING BUILDING ANALYSIS | ARCHITECTURAL DEFICIENCIES



MAIN ENTRANCE



LOBBY



TYPICAL CORRIDOR



TYPICAL CLASSROOM

PROGRAM

- No flexible use education spaces (ELA's)
- No distributed resource rooms for pull-out
- No science labs, no Technology Education Classroom
- Lactation room needed
- Instrument Storage, Furniture Storage, and other Storage rooms needed

SPACE

- Classrooms are too small for project-based learning
- Classrooms lack storage
- Health suite too small
- Only one music room (Program calls for Band, Orchestra, Choral)
- Kitchen too small

ADJACENCIES

- To function as a PreK-8 School, the layout should be in clusters by grade level with support spaces distributed rather than centralized

LAYOUT

- Monotonous long corridors have institutional feel
- Bathrooms too centralized, far from classrooms
- Special Ed is centralized
- Assistant Principal Office is with Main Office rather than decentralized
- Modular classrooms have long route to shared spaces
- Modular classrooms have poor natural light

COMMUNITY USE

- Auditorium & Cafeteria function primarily for school use, not set up for community access
- Boiler room is front and center, it would be better to put a community use space near lobby

OPERATIONAL

- Limited visibility from Main Office into Lobby
- Main entrance not convenient to drop-off by bus or car
- Courtyards are a security concern
- Kitchen and Custodial Areas are shared



02.2 EXISTING BUILDING ANALYSIS | STRUCTURAL & MEP

STRUCTURAL

The structural system consists of:

- Slab on grade, steel columns, and steel roof joists, supported by a foundation of concrete piers on spread footings, with CMU walls for lateral bracing
- The modular addition has a one-story prefabricated system, supported by a continuous wall footing and concrete piers on spread footings

The following deterioration was observed due to water infiltration:

- Rusting of structural steel
- Cracking masonry
- Deterioration, efflorescence and staining of exterior concrete
- Poor foundation drainage conditions

MECHANICAL

The existing mechanical systems are 15 years old and not functioning well.

- Consists of roof top DX packaged units, split system DX units, air cooled heat pumps, and cabinet heaters
- Inefficient and near the end of their serviceable life
- Outdated, does not meet current code

ELECTRICAL

The electrical distribution system is from 2011 and is 2500A, 120/208V, 3phase, 4wire switchboard with new utility meter.

- There is no generator
- Light fixtures for egress are provided with battery backup, not current technology
- Lighting fixtures are fluorescent and have reached the end of their serviceable life
- There is no centralized lighting control system

PLUMBING

Plumbing systems are original except for a domestic water heater, installed in 2011.

- Fixtures are inefficient
- Fixtures do not meet LEED requirements



DETERIORATION OF EXPOSED COLUMN



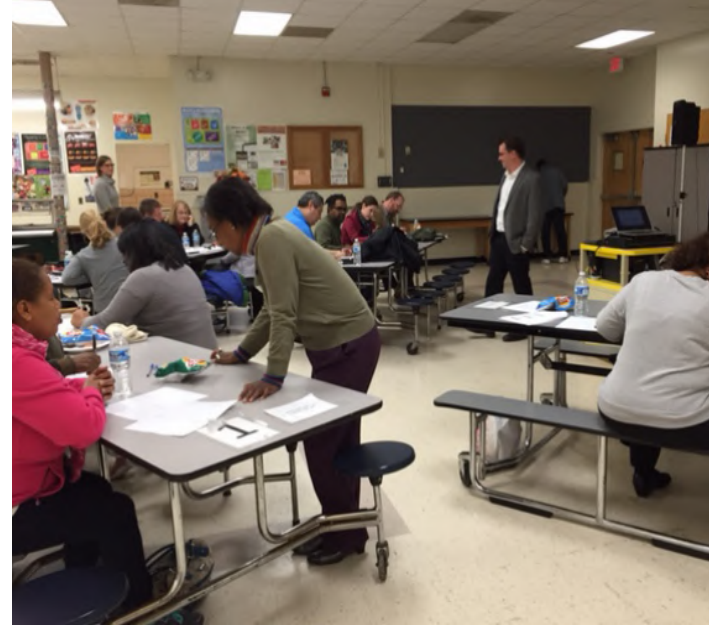
PONDING WATER AT FOUNDATION

FIRE PROTECTION

Building is currently not sprinklered. Renovation/Addition of the existing building would require installation of sprinkler system throughout the building.



03.1 COMMUNITY AND STAKEHOLDER INVOLVEMENT



ARCHITECTURAL PROGRAM SUMMARY

Input from 17 meetings has been used to develop the detailed architecture program:

COMMUNITY PROGRAM MEETING

- Priorities for School and Recreation
- Site Utilization, Site Access, Public Spaces
- Biggest themes: “when the children are happy” “families playing together”

STAKEHOLDER PROGRAM MEETING

- ACPS Key Personnel

CITY AND ACPS CORE GROUP MEETINGS

- City, ACPS Personnel and School Board Members

RECREATION PROGRAM MEETING

- Alexandria Parks, Recreation & Cultural Activities

CURRICULUM MEETINGS

- Early Childhood
- Core Academic
- Social Studies
- Math
- Science
- Language Arts
- Music
- Art
- Physical Education
- Special Education
- Media Center
- Food Service
- ELL
- Transportation



03.2 SITE PROGRAM

SITE PROGRAM

The site program includes parking, a Pre-K drop off area, age-appropriate playgrounds, and a bus loop.

CAR PARKING

Car parking is based on 2 staff members per classroom, for 35 classrooms, and 1 parking space per 200 sf of indoor recreation space, based on the initial number of 25,000 sf for the recreation center. Bus parking is based on information provided from ACPS.

| | |
|---------------------------|-------------------|
| School Car Parking Spaces | 70 |
| Recreation Parking Spaces | 120 |
| Total | 190 spaces |

We propose a special use permit to reduce this requirement.

BUS PARKING

Based on ACPS input, the site will provide a bus loop separate from car traffic with a dedicated entrance and exit.

| | |
|---------------------------|----------|
| School Bus Parking Spaces | 12 buses |
|---------------------------|----------|

PLAY AREAS

The project includes age-specific play areas for multiple age groups per community input.

- 1 Early Childhood Playground
- 1 Elementary Grade Playground
- 1 Open Recess Area

FIELDS

The following fields are included based on RPCA direction:

- 1 Grass Multipurpose Field
- 1 Turf Multipurpose Indoor Field
- 1 Paved Multipurpose court

This is compatible with the City of Alexandria master plan for Athletic Fields.

DETAILED PROGRAM

| Space | # Spaces | SF/space | Gross SF | Comments |
|--------------------------------------|----------|----------|----------|---|
| Site Amenities | | | | |
| Long-Term Parking (teachers & staff) | 90 | | | Separate from Visitor Parking & Bus area |
| Short-Term Parking (visitor) | 100 | | | School use during the day, Rec during the evening |
| Kiss & Ride | 1 | - | - | adjacent to short term parking |
| Bus drop-off | 1 | - | - | 12 buses, Separate vehicular & bus traffic, Separate large buses from special buses, 450' long |
| Pre-K drop off | 1 | - | - | Parents park in short-term parking and walk children in |
| Playground - Early Childhood | 1 | 4,200 | 4,200 | 75 sf/child min, near early childhood classrooms, maintain community access during school hours |
| Playground - Elementary grades | 1 | 4,200 | 4,200 | 75 sf/child min, near elementary grades |
| Recess area | 1 | 5,000 | 5,000 | |
| Service Entrance/Loading dock | 1 | - | - | Adjacent to kitchen receiving and general receiving, away from prevailing winds |
| Playing Fields | 2 | 66,150 | 132,300 | Multipurpose field 315' x 210', maintain community access during school hours |
| Outdoor Learning Space - 25 students | 1 | 900 | 900 | |
| Turf court 80' x 53' | 1 | 4,240 | 4,240 | Shared with Rec, maintain community access during school hours |
| Paved court 80' x 53' | 1 | 4,240 | 4,240 | Shared with Rec, maintain community access during school hours |
| Multipurpose field, grass, 315'x210' | 1 | 66,150 | 66,150 | Shared with Rec, maintain community access during school hours |
| Looped track or trail | 1 | - | - | Shared with Rec, measured distance posted on signs |
| Public Art | 1 | - | - | Incorporate into site plan |



03.3 SCHOOL PROGRAM | SUMMARY

PROPOSED SCHOOL PROGRAM

The proposed program for the school increases the student capacity to 800 students and will include students in grades Pre-Kindergarten through Eighth Grade. A recently developed ACPS Education Specification for Pre-K through Eighth Grade schools has formed the basis for the proposed Patrick Henry School program, as has the recently completed Jefferson-Houston School. Based on the additional students and grade levels, the projected size of the School is **129,885 SF**, revealing a current deficit of more than 50,000 SF.

The architectural program compiled all this information to create a customized program specifically for Patrick Henry School.

The program includes the following:

- Academic Pre-K - 1st Grade with ELA (Extended Learning Area)
- Academic 2-5th Grade with ELA
- Academic 6-8th Grade with ELA
- Specialty Classrooms (World Language, Science, CTE/Technology, Art, Music)
- Special Education
- Guidance / Student Support
- Media Center
- Administration
- Welcome Center
- School-Based Health Center
- Student Dining & Cafeteria
- Maintenance & Custodial

Unique to the ACPS model are **Extended Learning Areas** (ELA's). The program envisions the school as a collection of neighborhoods arranged around ELA's by grade level. There is one ELA for each cluster.

The architectural program is designed to support the **innovative curricular methodology** described in the ACPS Educational Specifications:

- Personalized learning to accommodate individual student needs based on a variety of learning styles
- Customized learning environments, including solo, small group, and large group learning spaces
- Project based learning
- Special Education spaces throughout the school
- Hands-on learning with modern technology
- Flexible teaching styles: team teaching, thematic instruction, and flexible departmental organization
- Teacher training, wellness, and preparation accommodations
- The school as the social, health, and wellness center for the community
- Integrate nature and sustainability into the daily life of the school



03.3 SCHOOL PROGRAM | DETAILED PROGRAM

| Space | Staff | Students | # Spaces | SF/space | Gross SF | SF/Person | Adjacency | | | Ground Floor | View | | Light Exception | Public Access | Acoustical | | Privacy Level | | | Foot Traffic | | Additional Requirements |
|--|-------|----------|----------|----------|---------------|-----------|--------------------------|------------------------------|-------------------------------|--------------|------|---|-----------------|---------------|------------|--------|---------------|----------|--------|--------------|-----|---|
| | | | | | | | Visual (interior window) | Circulation (hallway access) | Function (Direct access door) | | P | Y | | | Quiet | Medium | Distant | Indirect | Direct | Intersection | End | |
| Core Academic Area: Pre-K - 1st | | | | | | | | | | | | | | | | | | | | | | |
| Pre-K Classroom w/ toilet | 2 | 18 | 8 | 1,200 | 9,600 | 60 | | Outdoor Play | | • | | Y | | | • | | • | | | | | with toilet, food prep area w/ sink, art sink |
| Kindergarten Classroom w/ toilet | 2 | 20 | 4 | 1,200 | 4,800 | 55 | | Outdoor Play | | • | | Y | | | • | | • | | | | | with toilet, sink in classroom |
| Grade 1 Classroom w/ toilet | 1 | 24 | 3 | 900 | 2,700 | 36 | | | | | | Y | | | • | | • | | | | | with toilet, sink in classroom |
| ELA | 4 | 75 | 1 | 1,500 | 1,500 | 19 | | | | | | | | | • | | • | | • | | | Pod clustered around this space, sanitary materials, eating area, sink |
| ELA Storage | 2 | 0 | 1 | 250 | 250 | 125 | | | | | | | | | | | • | | | | | |
| Resource Room | 2 | 6 | 1 | 250 | 250 | 31 | | | | | | | | | | | • | | | | | |
| Prof. Learning Team Area | 8 | 0 | 1 | 600 | 600 | 75 | | | | | | | | | | | • | | | | | adjacent to ELA |
| Student Restroom | 0 | 2 | 2 | 200 | 400 | 100 | | | | | | | | | | | | | | | | |
| Staff Restroom | 1 | 0 | 1 | 40 | 40 | 40 | | | | | | | | | | | | | | | | |
| | | | | | 20,140 | | | | | | | | | | | | | | | | | |
| Core Academic Area: Grades 2-5 | | | | | | | | | | | | | | | | | | | | | | |
| Grade 2 Classroom w/ toilet | 1 | 24 | 3 | 900 | 2,700 | 36 | | | | | | Y | | | • | | • | | | | | with toilet, sink in classroom, lockable storage |
| Grade 3 Classroom | 1 | 24 | 3 | 900 | 2,700 | 36 | | | | | | Y | | | • | | • | | | | | sink in classroom, lockable storage |
| Grade 4 Classroom | 1 | 24 | 3 | 900 | 2,700 | 36 | | | | | | Y | | | • | | • | | | | | sink in classroom, lockable storage |
| Grade 5 Classroom | 1 | 28 | 2 | 900 | 1,800 | 31 | | | | | | Y | | | • | | • | | | | | sink in classroom, lockable storage |
| ELA | 4 | 75 | 1 | 1,500 | 1,500 | 19 | | | | | | | | | • | | • | | • | | | Pod clustered around this space, sanitary materials, eating area, sink |
| ELA Storage | 2 | 0 | 1 | 250 | 250 | 125 | | | | | | | | | | | • | | | | | |
| Resource Room | 2 | 6 | 1 | 250 | 250 | 31 | | | | | | | | | | | • | | | | | |
| Prof. Learning Team Area | 8 | 0 | 1 | 600 | 600 | 75 | | | | | | | | | | | • | | | | | With kitchenette |
| Student Restroom | 0 | 2 | 2 | 200 | 400 | 100 | | Staff Restroom | | | | | | | | | | | | | | |
| Staff Restroom | 1 | 0 | 1 | 40 | 40 | 40 | | | | | | | | | | | | | | | | |
| | | | | | 12,940 | | | | | | | | | | | | | | | | | |
| Core Academic Area: Grades 6-8 | | | | | | | | | | | | | | | | | | | | | | |
| Grade 6 Classroom | 1 | 28 | 2 | 900 | 1,800 | 31 | | | | | | Y | | | • | | • | | | | | lockable storage |
| Grade 7 Classroom | 1 | 28 | 2 | 900 | 1,800 | 31 | | | | | | Y | | | • | | • | | | | | lockable storage |
| Grade 8 Classroom | 1 | 28 | 2 | 900 | 1,800 | 31 | | | | | | Y | | | • | | • | | | | | lockable storage |
| Grade 6-8 Flexible Classroom | 1 | 28 | 2 | 900 | 1,800 | | | | | | | | | | | | | | | | | |
| Language Classroom | 2 | 25 | 1 | 900 | 900 | 33 | | | | | | Y | | | • | | • | | | | | lockable storage |
| Science Lab | 1 | 28 | 2 | 1,200 | 2,400 | 41 | | | | | | Y | | | • | | • | | | | | eye wash or shower, pull down or floor outlets, mobile demonstration table, kidney tables |
| ELA | 4 | 75 | 1 | 1,500 | 1,500 | 19 | | | | | | | | | • | | • | | • | | | Pod clustered around this space, sanitary materials, eating area, sink |
| ELA Storage | 2 | 0 | 1 | 250 | 250 | 125 | | | | | | | | | | | • | | | | | |
| Resource Room | 2 | 6 | 1 | 250 | 250 | 31 | | | | | | | | | | | • | | | | | |
| Prof. Learning Team Area | 8 | 0 | 1 | 600 | 600 | 75 | | | | | | | | | | | • | | | | | |
| Student Restroom | 0 | 2 | 2 | 200 | 400 | 100 | | ELA | | | | | | | | | | | | | | |
| Staff Restroom | 1 | 0 | 1 | 40 | 40 | 40 | | | | | | | | | | | | | | | | with restroom & kitchenette |
| | | | | | 13,540 | | | | | | | | | | | | | | | | | |
| Special Education Services | | | | | | | | | | | | | | | | | | | | | | |
| Special Education | 2 | 20 | 3 | 950 | 2,850 | 43 | | | | | | Y | | | • | | • | | | | | with toilet, calming area away from window near Pre-K |
| Sensory Room | 2 | 10 | 1 | 900 | 900 | 75 | | | | | | | | | • | | | | | | | |
| OT/PT Room | 1 | 4 | 1 | 900 | 900 | 180 | | | | | | | | | | | | | | | | |
| Speech Room | 1 | 4 | 1 | 200 | 200 | 40 | | | | | | | | | • | | | | | | | |
| | | | | | 4,850 | | | | | | | | | | | | | | | | | |
| Media Center | | | | | | | | | | | | | | | | | | | | | | |
| Reading/Listening/Viewing Room | 5 | 60 | 1 | 2,700 | 2,700 | 42 | | | | | | P | | | • | | • | | • | | | Circulation desk sight lines to entire space, different zones, 2-4 computers, 5-8 individual pods, Community use after-hours (exterior access, lockable zones, restroom access) |
| Media Workroom | 2 | 0 | 1 | 200 | 200 | 100 | | | | | | | | | | | • | | • | | | |
| Office | 2 | 0 | 1 | 70 | 70 | 35 | | | | | | | | | | | | | • | | | |
| Prof. Resource Space | 6 | 0 | 1 | 200 | 200 | 33 | | | | | | | | | | | | | • | | | |
| Media Production/TV Studio | 2 | 6 | 1 | 350 | 350 | 44 | | | | | | | | | | | | | • | | | |
| Technology Storage/Charge Room | 1 | 0 | 1 | 150 | 150 | 150 | | | | | | | | | | | | | • | | | |
| Break-out Room | 8 | 0 | 2 | 150 | 300 | 19 | | | | | | | | | | | | | • | | | |
| | | | | | 3,970 | | | | | | | | | | | | | | | | | |



03.3 PROPOSED SCHOOL PROGRAM | DETAILED PROGRAM

| Space | Staff | Students | # Spaces | SF/space | Gross SF | SF/ Person | Adjacency | | | Ground Floor | View | | Light Exception | Public Access | Acoustical | | Privacy Level | | | Foot Traffic | | Additional Requirements |
|------------------------------------|-------|----------|----------|----------|---------------|------------|--------------------------|------------------------------|-------------------------------|--------------|------|---|-----------------|---------------|------------|--------|---------------|----------|--------|--------------|-----|--|
| | | | | | | | Visual (interior window) | Circulation (hallway access) | Function (Direct access door) | | P | Y | | | Quiet | Medium | Distant | Indirect | Direct | Intersection | End | |
| Specialty Areas | | | | | | | | | | | | | | | | | | | | | | |
| Art Classroom | 4 | 25 | 2 | 1,000 | 2,000 | 34 | | | Art Storage | | | | | | • | | • | | | | | provide in-space storage for 2D and 3D materials |
| Shared Art Storage | 2 | 0 | 1 | 200 | 200 | 100 | | | Art/Art Stor | | | | | | | | • | | | | | |
| Kiln Room | 2 | 0 | 1 | 50 | 50 | 25 | | | | | | | | | | | | | | | | |
| Choral Music Room | 1 | 25 | 1 | 1,200 | 1,200 | 46 | | | | | | | | • | | | • | | | | | |
| Orchestra Room | 1 | 25 | 1 | 1,400 | 1,400 | 54 | | | | | | | | | | | | | | | | |
| Music Storage | 2 | 0 | 1 | 100 | 100 | 50 | | | | | | N | | | | | | | | | | |
| Band Room | 1 | 25 | 1 | 1,400 | 1,400 | 54 | | | | | | | | | | | | | | | | |
| Black Box Theater | 1 | 160 | 1 | 2,400 | 2,400 | 15 | | | | | | | | • | | | • | • | | | | Community use after-hours (exterior access, lockable zones, restroom access) |
| Instrument Storage | 2 | 0 | 1 | 400 | 400 | 200 | | | Black Box | | | | | | | | | | | | | |
| Black Box Theater Stor. | 2 | 0 | 1 | 200 | 200 | 100 | | | | | | | | | | | | | | | | |
| CTE/Greenovation Lab | 2 | 25 | 2 | 1,000 | 2,000 | 37 | | | | | | | | | • | | | • | | | | Alternate use as foreign language classroom |
| | | | | | 11,350 | | | | | | | | | | | | | | | | | |
| Physical Education | | | | | | | | | | | | | | | | | | | | | | |
| Gymnasium | 3 | 800 | 1 | 7,400 | 7,400 | 9 | | | Locker Rm | • | | | | | • | | | • | • | | | Community use after-hours (exterior access, lockable zones, restroom access) |
| Multipurpose Room | 2 | 50 | 1 | 2,500 | 2,500 | 48 | | | Bathrooms | | | | | | • | | | • | | | | Community use after-hours (exterior access, lockable zones, restroom access) |
| Multipurpose Room Stor. | 2 | 0 | 1 | 200 | 200 | 100 | | | | | | | | | | | | | | | | |
| Locker Room/Restroom | 1 | 25 | 2 | 700 | 1,400 | 27 | | | | | | | | | | | | | | | | |
| School Gym Storage | 2 | 0 | 1 | 300 | 300 | 150 | | | | | | | | | | | | | | | | |
| Bike Storage | 0 | 0 | 1 | 400 | 400 | - | | | | | | | | | | | | | | | | for 25 bikes |
| Community Partners Storage | 2 | 0 | 1 | 200 | 200 | 100 | | | | | | | | | | | | | | | | |
| PE Office | 2 | 0 | 2 | 100 | 200 | 50 | | | | | | | | | • | | | | | | | |
| Teacher Restroom/Shower | 1 | 0 | 2 | 70 | 140 | 70 | | Gym | | | | | | | | | | • | | | | |
| Seating Storage | 2 | 0 | 1 | 600 | 600 | 300 | | | | | | | | | | | | | | | | Flexible space for folding chairs or other seating |
| Outdoor Equipment Storage | 1 | 0 | 1 | 400 | 400 | 400 | | | | | | | | | | | | | | | | Shared with Recreation Center |
| | | | | | 13,740 | | | | | | | | | | | | | | | | | |
| Administration Distribution | | | | | | | | | | | | | | | | | | | | | | |
| Main Office Suite | | | | | | | | | | | | | | | | | | | | | | |
| Principal's Office w/ Bathroom | 5 | 0 | 1 | 180 | 180 | 36 | | | | | | | | | • | | • | | | | | |
| Conference Room | 15 | 0 | 1 | 220 | 220 | 15 | | | Secretary | | | | | | • | • | | | | | | |
| Student Record Storage & Safe | 2 | 0 | 1 | 200 | 200 | 100 | | | Secretary | | | | | | • | | | | | | | |
| Administrative Assistant/Reception | 2 | 0 | 2 | 100 | 200 | 50 | | | | | | | | | | | | | | | | |
| | | | | | 800 | | | | | | | | | | | | | | | | | |
| School Support Area | | | | | | | | | | | | | | | | | | | | | | |
| Guidance/Itinerant Staff Office | 2 | 0 | 3 | 130 | 390 | 65 | | | | | | | | | • | | • | | | | | |
| Social Worker office | 4 | 0 | 1 | 150 | 150 | 38 | | | | | | | | | • | | • | | | | | |
| Psychologist Office + Testing | 4 | 0 | 1 | 200 | 200 | 50 | | | | | | | | | • | | • | | | | | |
| Student Services Conference Room | 10 | 0 | 1 | 200 | 200 | 20 | | | | | | | | | | | | | | | | |
| Teacher Workroom/Copy/Mail | 8 | 0 | 1 | 250 | 250 | 31 | | | Secretary | | | | | | | | | | | | | |
| Supply Storage | 2 | 0 | 1 | 100 | 100 | 50 | | | | | | | | | | | | | | | | |
| Itinerant Staff Office | 2 | 0 | 1 | 100 | 100 | 50 | | | | | | | | | | | | | | | | |
| | | | | | 1,390 | | | | | | | | | | | | | | | | | |
| Lobby/Welcome Center | | | | | | | | | | | | | | | | | | | | | | |
| Welcome Center/Lobby | 20 | 0 | 1 | 1,200 | 1,200 | 60 | | | Parent Res | Bathrooms | • | | | Y | | | | • | • | | | Clearly identify main building entrance and secondary community entrances |
| Secretary & Reception Area | 8 | 0 | 1 | 900 | 900 | 113 | | | Lobby | | • | | | Y | | | | • | | | | |
| Parent Resource Center | 6 | 0 | 1 | 200 | 200 | 33 | | | PTA storage | Lobby | | | | | | | | | | | | |
| PTO Storage | 2 | 0 | 1 | 75 | 75 | 38 | | | PTA storage | Lobby | | | | | | | | | | | | with kitchenette |
| | | | | | 2,375 | | | | | | | | | | | | | | | | | |
| Dispersed Throughout School | | | | | | | | | | | | | | | | | | | | | | |
| Assistant Principal's Office | 2 | 0 | 2 | 150 | 300 | 75 | | | ELA | | | | | | • | | | | | | | locate in core academic areas |
| Outside Program Storage | 1 | 0 | 1 | 150 | 150 | 150 | | | | | | | | | | | | | | | | |
| Book Storage | 2 | 0 | 1 | 400 | 400 | 200 | | | | | | | | | | | | | | | | |
| Staff Bathroom | 4 | 0 | 2 | 200 | 400 | 50 | | | | | | | | | | | | | | | | |
| Lactation Room | 2 | 0 | 1 | 100 | 100 | 50 | | | Admin Area | | | | | | | | | • | • | | | |
| | | | | | 1,350 | | | | | | | | | | | | | | | | | |



03.3 PROPOSED SCHOOL PROGRAM I DETAILED PROGRAM

| Space | Staff | Students | # Spaces | SF/space | Gross SF | SF/ Person | Adjacency | | | Ground Floor | View | | Light Exception | Public Access | Acoustical | | Privacy Level | | | Foot Traffic | | Additional Requirements |
|--|-------|----------|----------|----------|----------------|------------|--------------------------|------------------------------|-------------------------------|--------------|------|---|-----------------|---------------|------------|--------|---------------|----------|--------|--------------|-----|--|
| | | | | | | | Visual (interior window) | Circulation (hallway access) | Function (Direct access door) | | P | Y | | | Quiet | Medium | Distant | Indirect | Direct | Intersection | End | |
| School-Based Health Center | | | | | | | | | | | | | | | | | | | | | | |
| Waiting Area | 4 | 0 | 1 | 50 | 50 | 13 | | Special Ed | | | | | | | | • | | • | | | | Vision testing requires 22ft long. Waiting area not visible from corridor. Plentiful natural light and gentle colors. with storage |
| Exam Room | 2 | 0 | 1 | 80 | 80 | 40 | | | | | | | | | | • | | • | | | | |
| Dental/Medical Room | 2 | 1 | 1 | 100 | 100 | 33 | | | | | | | | | | • | | • | | | | |
| Rest Area/ Cot Room | 3 | 0 | 1 | 80 | 80 | 27 | | | | | | | | | | | | • | | | | |
| Restroom | 1 | 0 | 1 | 60 | 60 | 60 | | Sp Ed Classrm | | | | | | | | | | • | | | | |
| Storage/Records | 1 | 0 | 1 | 50 | 50 | 50 | | | | | | N | | | | | | • | | | | |
| | | | | | 420 | | | | | | | | | | | | | | | | | |
| Student Dining & Food Service | | | | | | | | | | | | | | | | | | | | | | |
| Student Dining | 0 | 80 | 1 | 1,000 | 1,000 | 13 | | | | | | | | | | • | | • | | • | | Small space; most students served in ELA spaces. Hydration Station. Trash removal separate from kitchen. two serving lines, efficient traffic flow |
| Serving Area | 10 | 0 | 1 | 800 | 800 | 80 | | | | | | | | | | | | • | | | | |
| Kitchen | 8 | 0 | 1 | 1,000 | 1,000 | 125 | | | | | | | | | | | | • | | | | |
| Ware Washing | 1 | 0 | 1 | 100 | 100 | 100 | | | | | | | | | | | | • | | | | |
| Walk-in Cooler | 1 | 0 | 1 | 100 | 100 | 100 | | | | | | N | | | | | | • | | | | |
| Walk-in Freezer | 1 | 0 | 1 | 100 | 100 | 100 | | | | | | N | | | | | | • | | | | |
| Dry Storage | 1 | 0 | 1 | 250 | 250 | 250 | | | | | | N | | | | | | • | | | | |
| Staff Locker/Toilet | 8 | 0 | 1 | 200 | 200 | 25 | | | | | | | | | | | | • | | | | |
| Manager's Office | 2 | 0 | 1 | 120 | 120 | 60 | | | | | | | | | | | | • | | | | |
| Before/After School Program Stor. | 1 | 0 | 1 | 200 | 200 | 200 | | | | | | N | | | | | | • | | | | |
| Kitchen Receiving | 1 | 0 | 1 | 300 | 300 | 300 | | Dry Storage, Loading Dock | | • | | | | | | | | | | | | |
| Chair/Table Storage | 1 | 0 | 1 | 400 | 400 | 400 | | | | | | N | | | | | | | | | | |
| | | | | | 4,570 | | | | | | | | | | | | | | | | | |
| Maintenance & Custodial Services | | | | | | | | | | | | | | | | | | | | | | |
| Receiving | 3 | 0 | 1 | 500 | 500 | 167 | | Loading Dock | | • | | | | | | | | • | | | • | |
| Loading Dock | 2 | 0 | 1 | 200 | 200 | 100 | | | | | | | | | | | | • | | | • | |
| Supply & Equipment Storage | 2 | 0 | 1 | 250 | 250 | 125 | | Loading Dock | | | | N | | | | | | • | | | • | |
| Workshop | 1 | 0 | 1 | 200 | 200 | 200 | | | | | | | | | | | | • | | | • | |
| Custodial Office | 1 | 0 | 1 | 100 | 100 | 100 | | Workshop | | • | | | | | | | | • | | | • | |
| Janitor's Closet | 1 | 0 | 3 | 30 | 90 | 30 | | | | | | N | | | | | | • | | | • | one per floor, if multi-story |
| | | | | | 1,340 | | | | | | | | | | | | | | | | | |
| Subtotal - Program Area | | | | | 92,775 | | | | | | | | | | | | | | | | | |
| Building Operations (10% of program area) | | | | | 9,278 | | | | | | | | | | | | | | | | | |
| Mechanical | | | | | | | | | | | | | | | | | | | | | | |
| Electrical | | | | | | | | | | | | | | | | | | | | | | |
| Other Equipment | | | | | | | | | | | | | | | | | | | | | | |
| IT/Server | | | | | | | | | | | | | | | | | | | | | | |
| Circulation (30% of program area) | | | | | 27,833 | | | | | | | | | | | | | | | | | |
| Total Net Area | | | | | 129,885 | | | | | | | | | | | | | | | | | |
| Recreation Center | | | | | 43,608 | | | | | | | | | | | | | | | | | |
| Total Net Area | | | | | 173,493 | | | | | | | | | | | | | | | | | |

Notes:
Yellow highlight denotes shared space with Rec Center



04.1 DESIGN PRINCIPLES

DESIGN PRINCIPLES

The concept for Patrick Henry stems from the physical site and **community context**. The natural setting is a pastoral clearing in a wooded plateau, framed by a densely forested slope to the north. Within the **green surroundings** lies a vibrant community, with Patrick Henry as its social focal point. The School and Recreation Center will serve as a **catalyst for the community**. A place to grow, learn, develop, refresh and recharge. Patrick Henry is a place that gives life to its surroundings, both physically and socially.

URBAN DESIGN

Several **urban design principles** motivate the presented design options:

- Primary access to the site is through Taney Ave., a major circulation corridor
- Vehicular access is distributed to avoid congestion at a single point of entry per comment by Planning & Zoning
- Parking is located away from the corner of N. Latham St. and Taney Ave. per comment by Planning & Zoning
- Pedestrian circulation is clearly defined
- Buildings are arranged to maximize use of outdoor public space

CONTEXTUAL DESIGN

The design responds to the **presence of neighbors** along N Latham St. and Taney Ave.

- Scaling the building appropriately in size
- Positioning the building a comfortable distance away from the street
- Building massing is 2-3 story high volumes, in two blocks, rather than one large mass
- Recreation Center is considered in relation to street visibility, site access, and adjacency to the School
- Open space on the site is maximized

INTERIOR

For the School, the **interior layout** follows a similar organization in all options.

- Youngest grades are placed on the ground floor, with older students above
- Multipurpose spaces for community use are positioned for ease of access from the exterior and Recreation Center
- Spaces requiring service access are placed in a functional location and shielded from view
- Clear, efficient circulation

GREEN BUILDING

Patrick Henry will serve as a sustainable model for the community. The building will be designed to **LEED Silver**, involving these strategies:

- Renewable Energy Generation
- Green Roofs
- Energy Efficient Mechanical Systems
- Recycled, Renewable & Regional Materials
- Stormwater Management
- Thermal Comfort
- Enhanced Indoor Air Quality
- Superior Daylight & Views
- Construction Waste Management
- Building Systems Commissioning
- Reduced Water Use

The designs promote occupant **health, and comfort and enjoyment** through these features:

- Building design that interacts with nature
- Outdoor learning spaces and balconies



04.2 NEW BUILDING OPTION 1A | SITE ORGANIZATION

SITE ORGANIZATION

The school is placed at the corner of Taney Ave. and N Latham St.

- This allows 75% of the existing building to be occupied during construction
- Multipurpose field goes over existing building, becomes fore court for Recreation Center
- Bus loop is on Taney Ave.
- School is set back from N Latham St.
- Low, 2-story massing along N Latham St., 3-story massing along Taney Ave.

PROS & CONS

PROS

- School massing activates corner of N Latham St. and Taney Ave.
- Plentiful open space on site
- Multipurpose field acts as a forecourt and central play area, balancing building volumes
- 2-story volume along N Latham St. is sensitive to neighbors
- 3-story along Taney Ave. activates street frontage, while remaining at a comfortable distance away from Taney Ave.
- Large volume of Recreation Center in back of site
- Sheltered play area large enough for multiple age groups
- Recreation Center is visible from Taney Ave.

CONS

- Moving Recreation Center to back of site cuts up contiguous green space
- Swing space needed for 25% of existing building



04.2 NEW BUILDING OPTION 1A | PROPOSED SITE PLAN



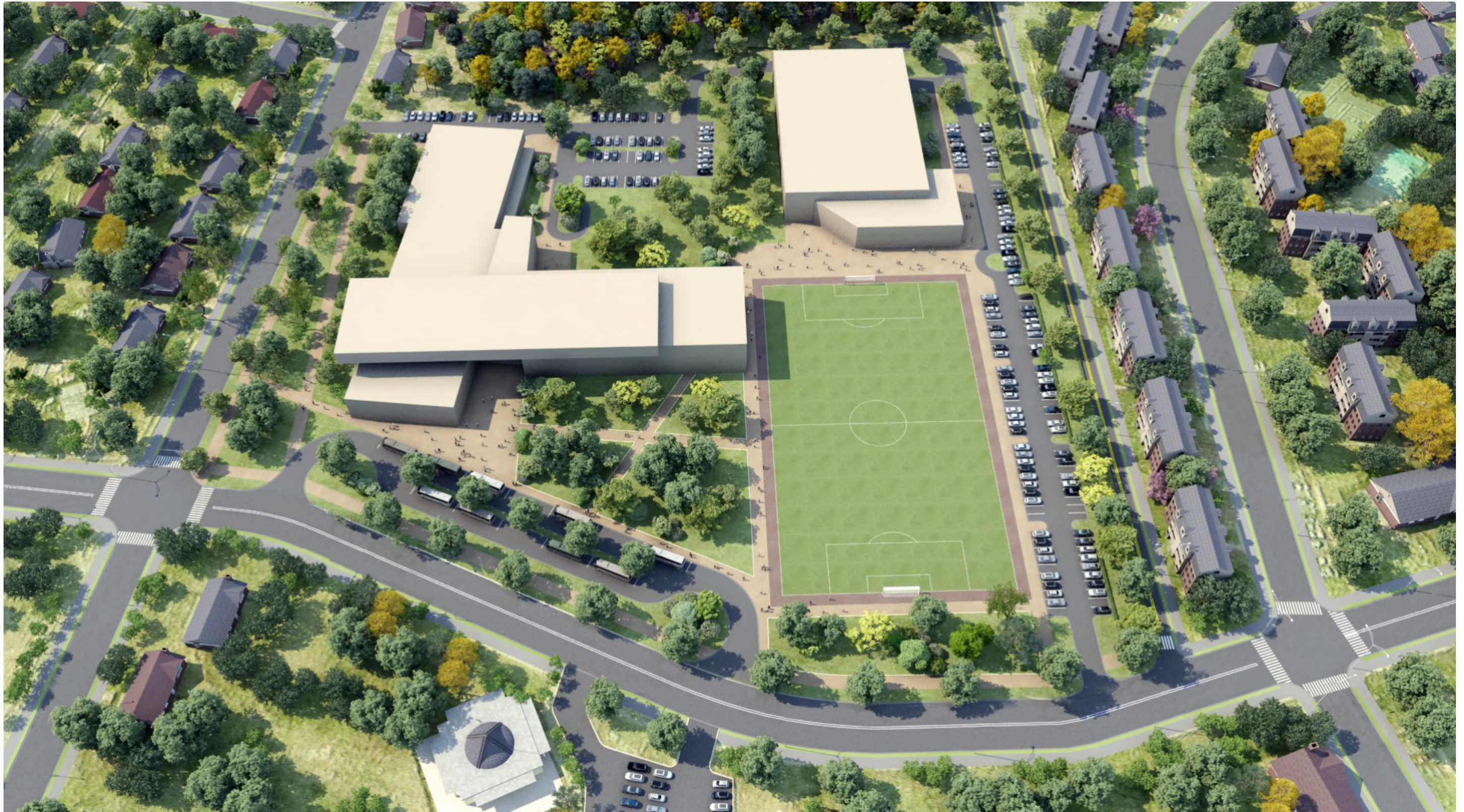
EXISTING RECREATION CENTER TO BE DEMOLISHED BEFORE CONSTRUCTION

NORTH ACADEMIC WING OF THE EXISTING SCHOOL TO BE DEMOLISHED BEFORE CONSTRUCTION

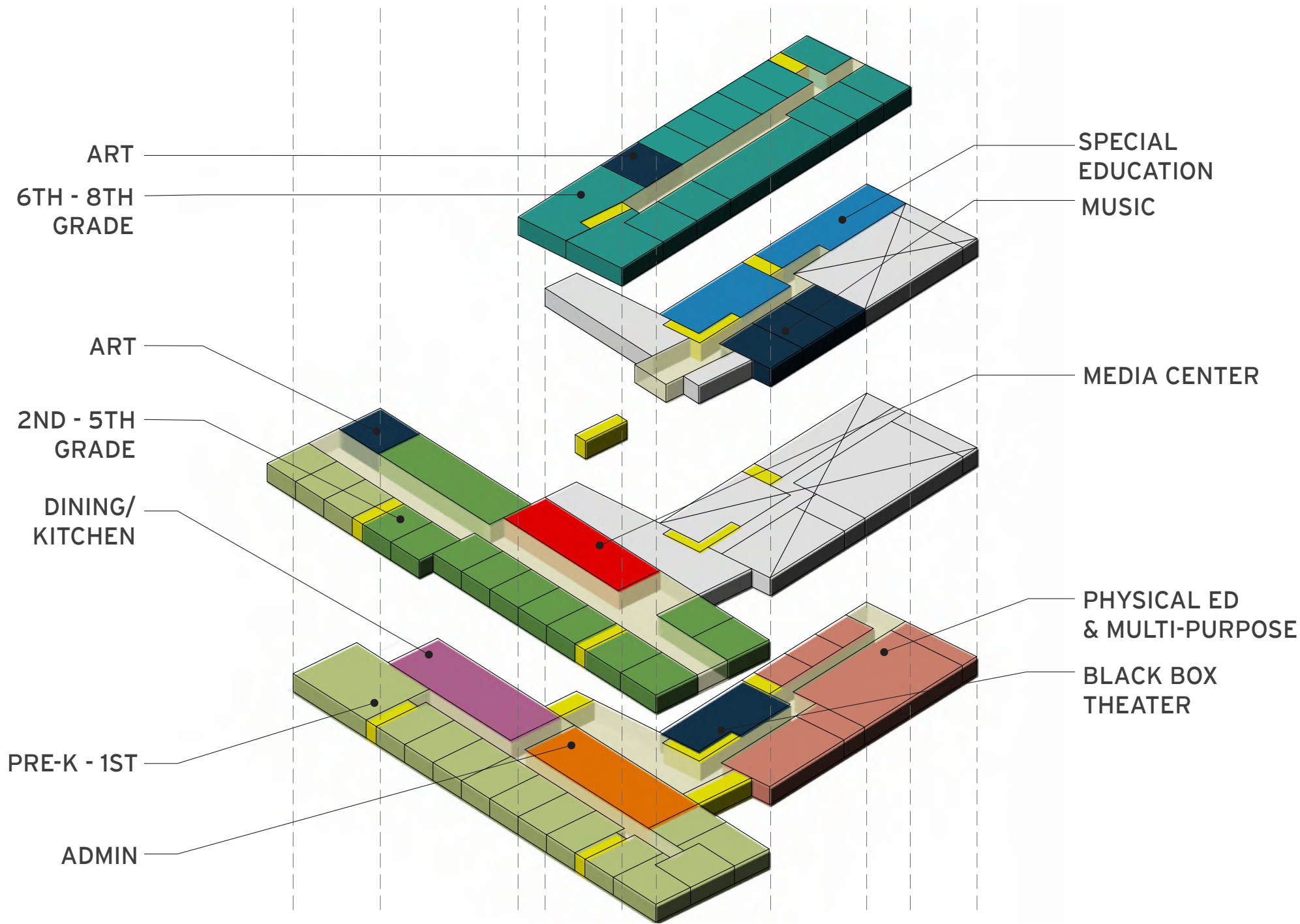
LOCATION OF THE EXISTING SCHOOL



04.2 NEW BUILDING OPTION 1A | SITE RENDERING



04.2 NEW BUILDING OPTION 1A | STACKING DIAGRAM



BUILDING ORGANIZATION

This design pushes the boundaries of school design, using an occupiable roof deck to create a large outdoor learning space:

- Green roof of 2-story volume can be used for a gathering space, projects, fresh air, and recreation
- 3-story volume above creates a dramatic, engaging corner and provides shade

The ground floor layout facilitates security:

- Access to Pre-K, Administration, Community use spaces
- Administration has visual control of both entrances, corridors, Early Childhood wing, & community use spaces

Half of the L-shape contains community use spaces that can be closed off from the rest of the school during special events:

- Gymnasium, close to the Recreation Center
- Black Box Theatre
- Multipurpose Room

The second floor contains:

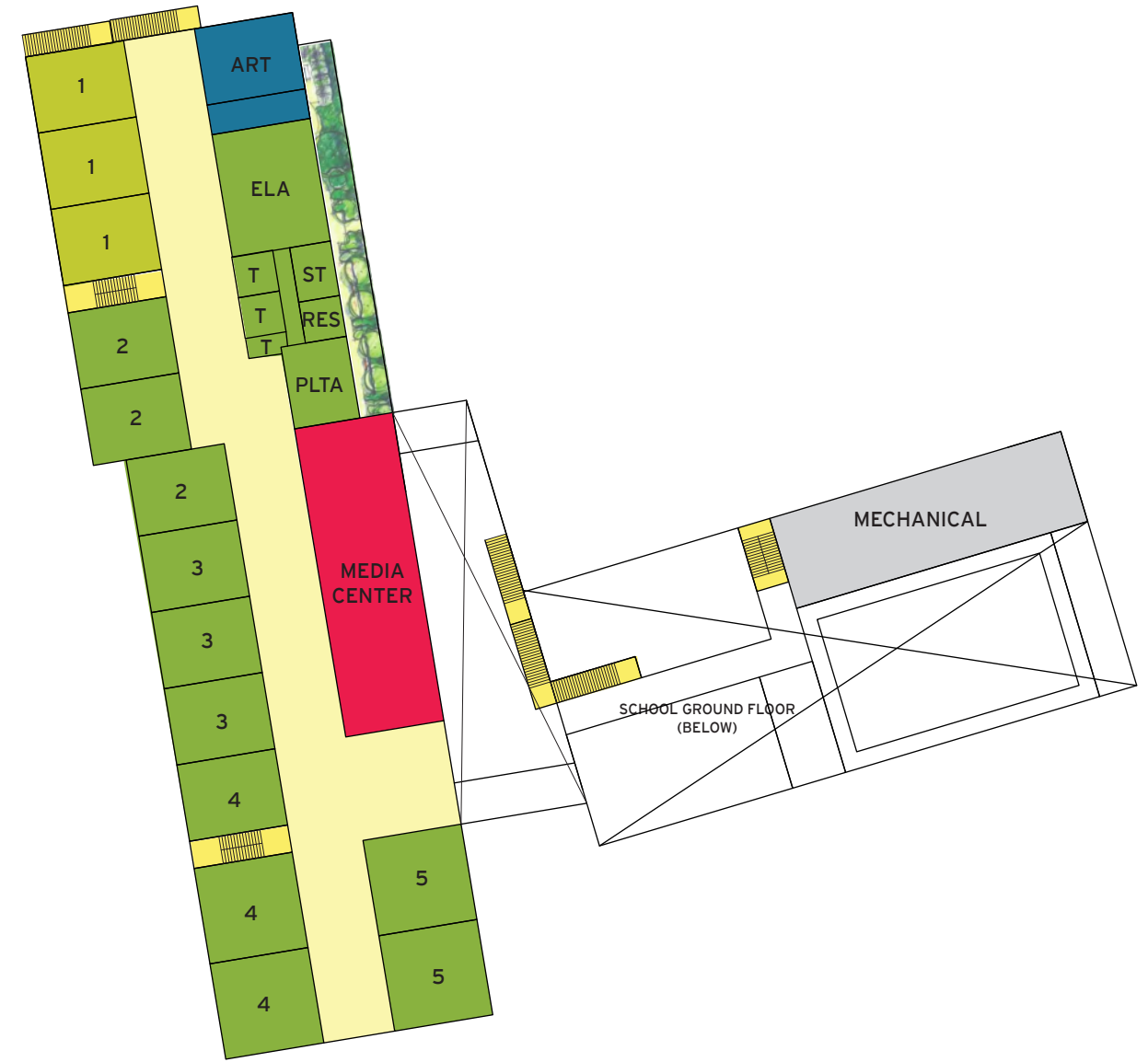
- Grade 2-5 classrooms with a southeast exposure, ideal for daylight
- Media Center overlooking atrium, separated acoustically, connected visually
- ELA and Art rooms with balconies

The third and fourth floor contain:

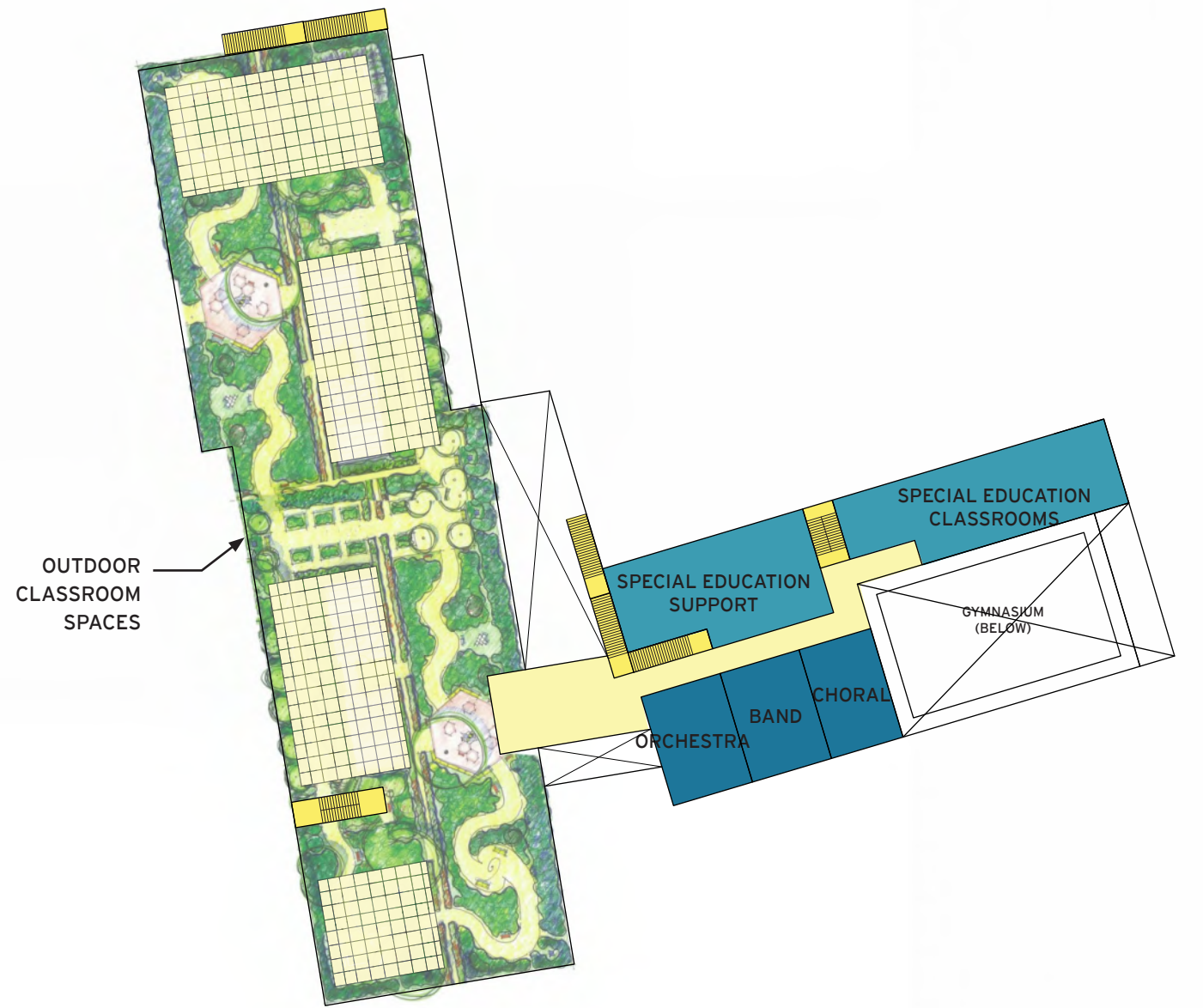
- Grades 6-8 classrooms, distant from other grades
- Special Education
- Music



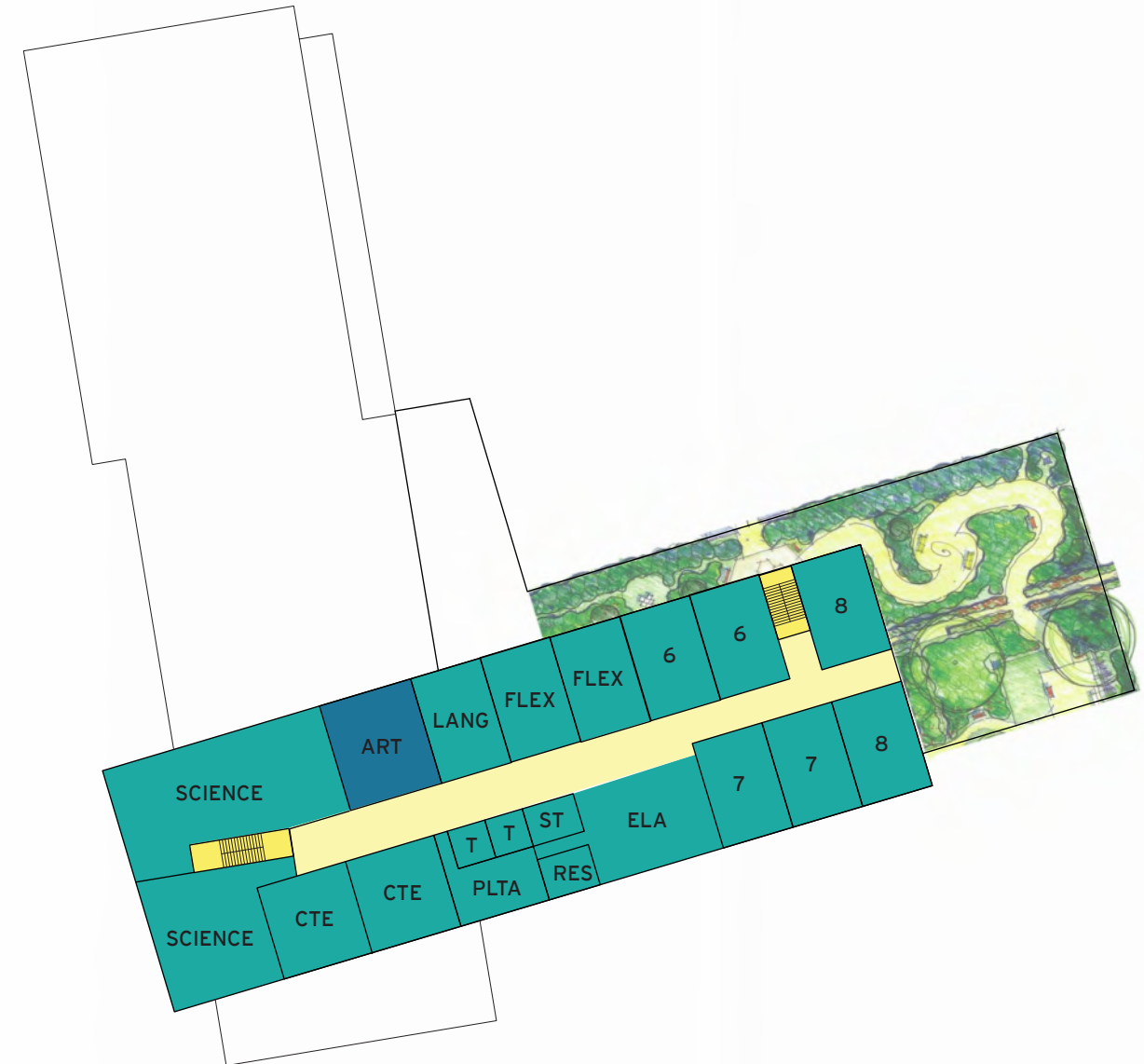
04.2 NEW BUILDING OPTION 1A | PROPOSED FLOOR PLANS



04.2 NEW BUILDING OPTION 1A | PROPOSED FLOOR PLANS



SECOND FLOOR EAST WING PLAN 
 0 20 40 80 (ft)

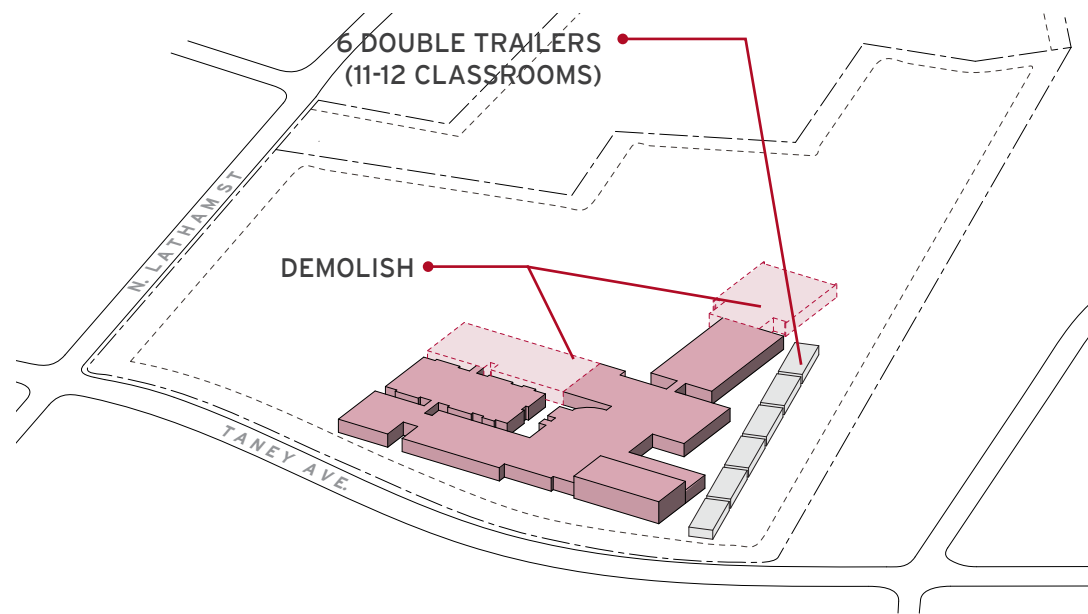


THIRD FLOOR EAST WING PLAN 
 0 20 40 80 (ft)



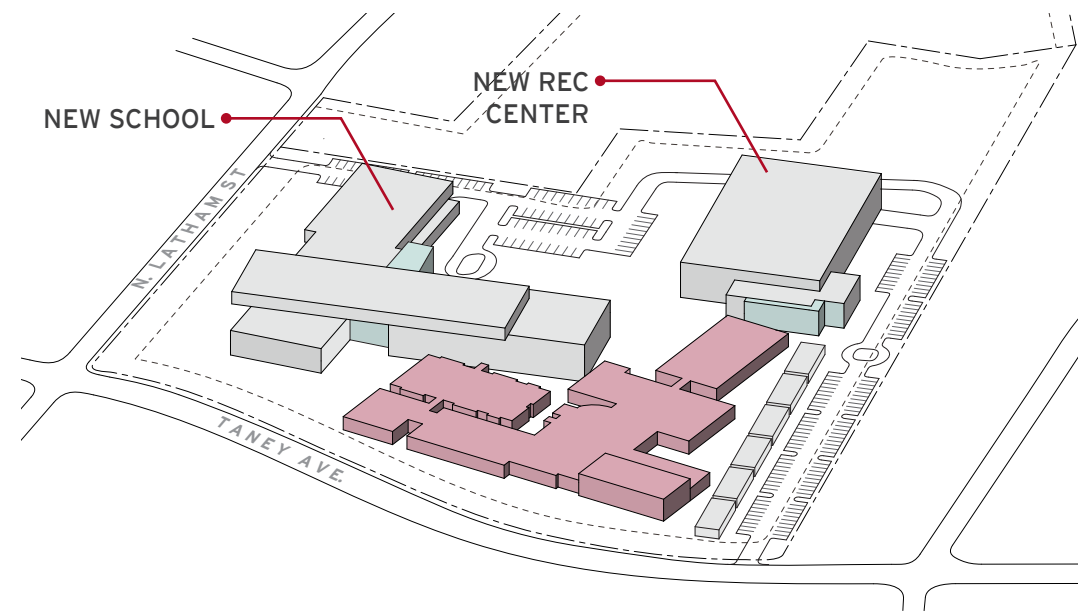
04.2 NEW BUILDING OPTION 1A | PHASING

APPROXIMATELY 15 MONTH SCHOOL CONSTRUCTION DURATION



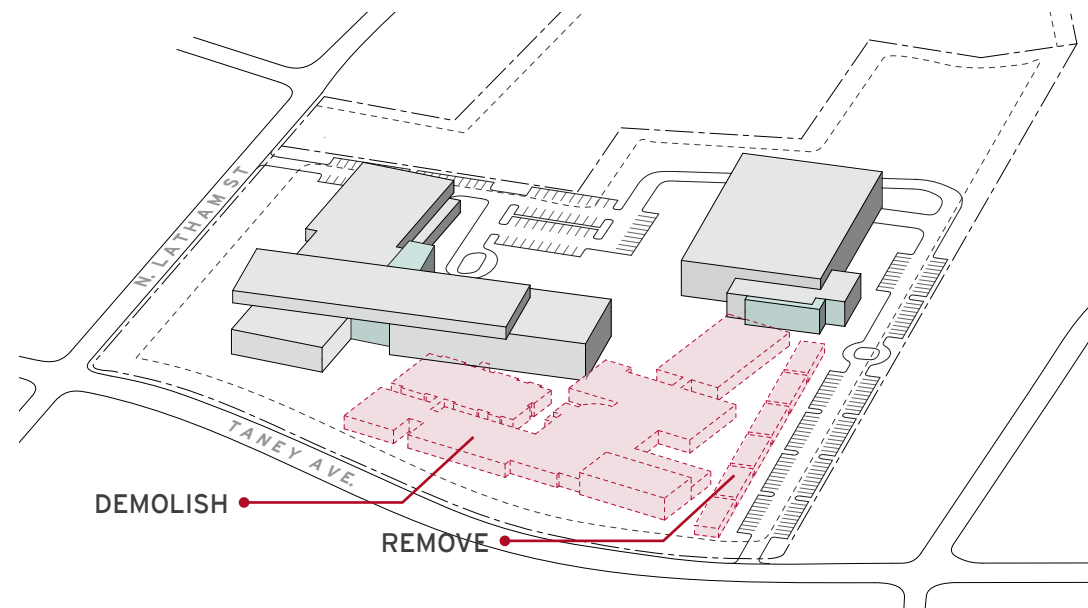
PHASE I

- IA Construct 6 temporary double trailers
- IB Move portion of the School into trailers
- IC Demolish existing Recreation Center and north academic wing of the existing School
- ID Site prep for new buildings



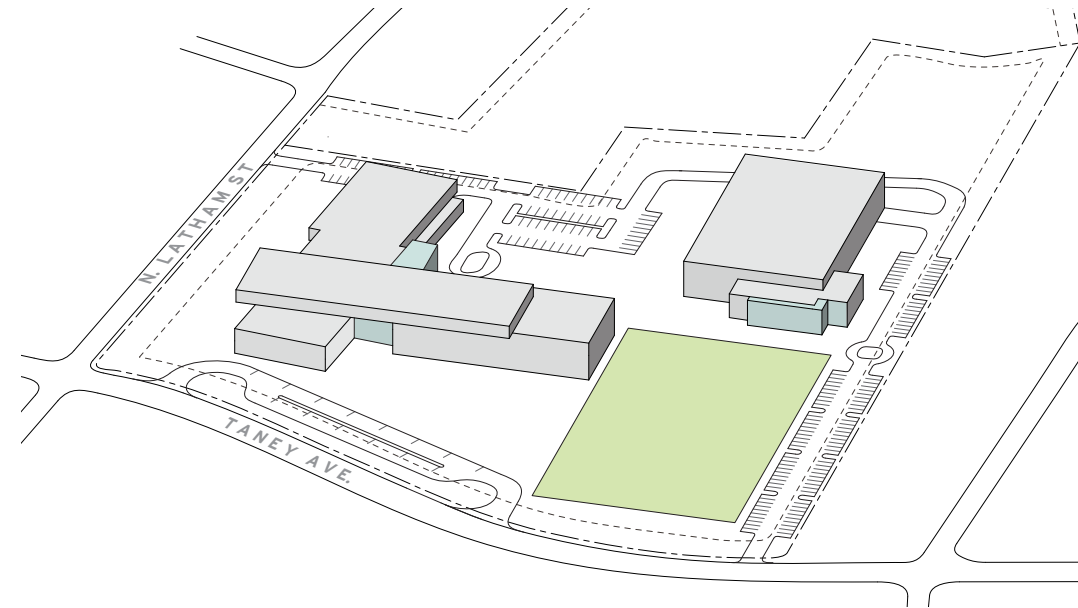
PHASE II

- IIA Construct new School, Rec Center and parking
- IIB Move School from trailers and existing building into the new building



PHASE III

- IIIA Demolish existing building
- IIIB Remove temporary trailers



PHASE IV

- IV Construct outdoor multipurpose field and bus loop



04.2 NEW BUILDING OPTION 1A



04.3 NEW BUILDING OPTION 1B | SITE ORGANIZATION

SITE ORGANIZATION

This option takes the School building configurations of Option 1A and places it on the east side of the site, where the existing school is currently located.

- Multipurpose field on the corner of Taney Ave and N Latham St.
- This option gives the most space between the single-family homes on N Latham St. and the school
- Interior layout of Option 1A has been replicated
- Community use spaces are in the wing closer to the Recreation Center

PROS & CONS

PROS

- Plentiful open space between N Latham St. houses and the new School, very sensitive to neighbors
- Parking on N Latham St. is smaller than other parking lot, less traffic on N Latham St.
- Unique, large outdoor learning space
- Plentiful open space on site
- Large volume of Recreation Center in back of site
- Play areas large enough for multiple age groups
- Two-story massing along Taney Ave. - sensitive to neighbors on Taney Ave.

CONS

- Play areas are near parking
- View of Recreation Center is blocked by school from Taney Ave
- Requires demolishing all of the existing building before construction, needs the most swing space of all options
- 3-story volume in center of site cuts site into two halves
- Bus loop driveway and one of the parking entrances are close together
- Bus drop off alongside Taney Ave. is less friendly for pedestrians



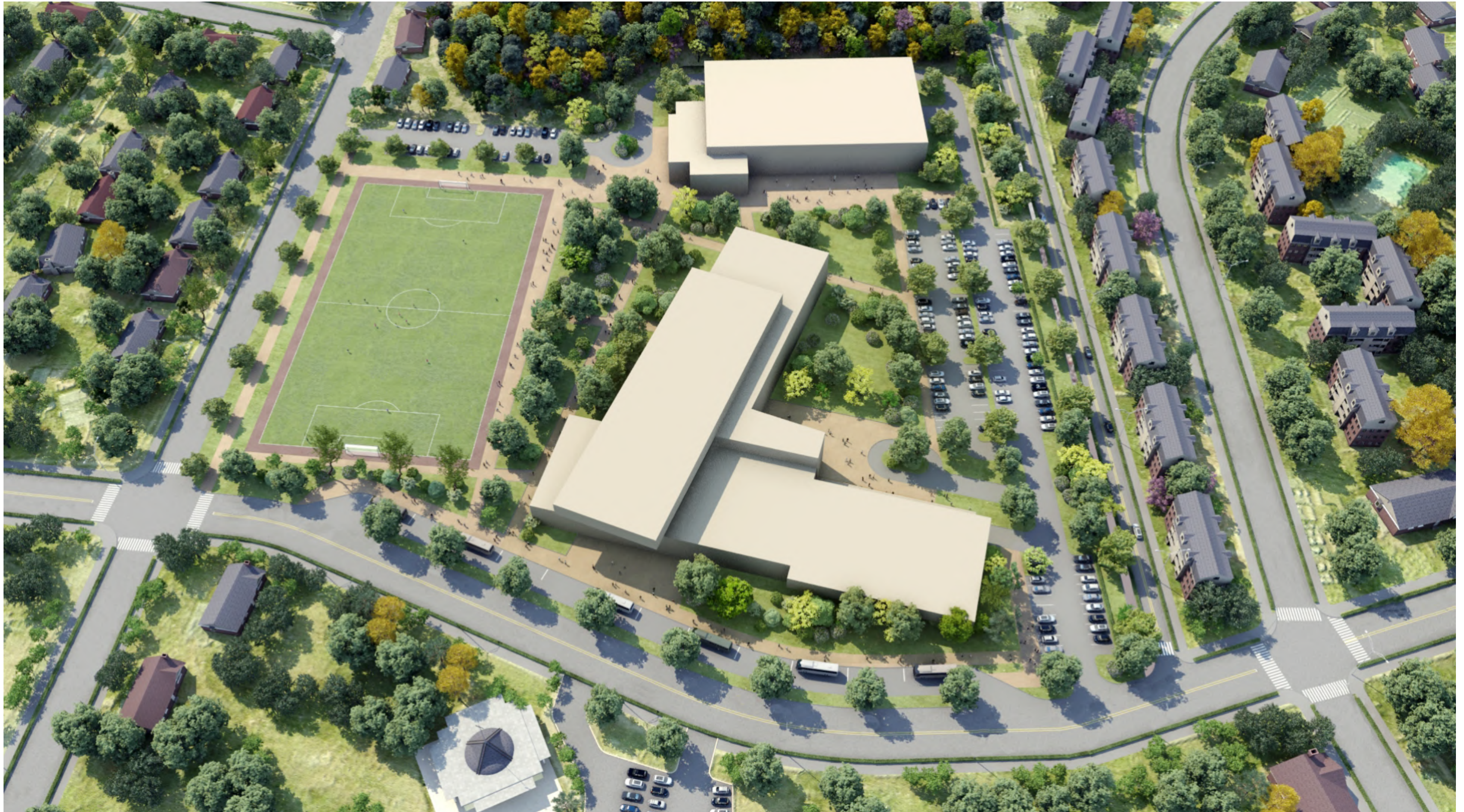
04.3 NEW BUILDING OPTION 1B | PROPOSED SITE PLAN



EXISTING SCHOOL TO BE DEMOLISHED BEFORE CONSTRUCTION

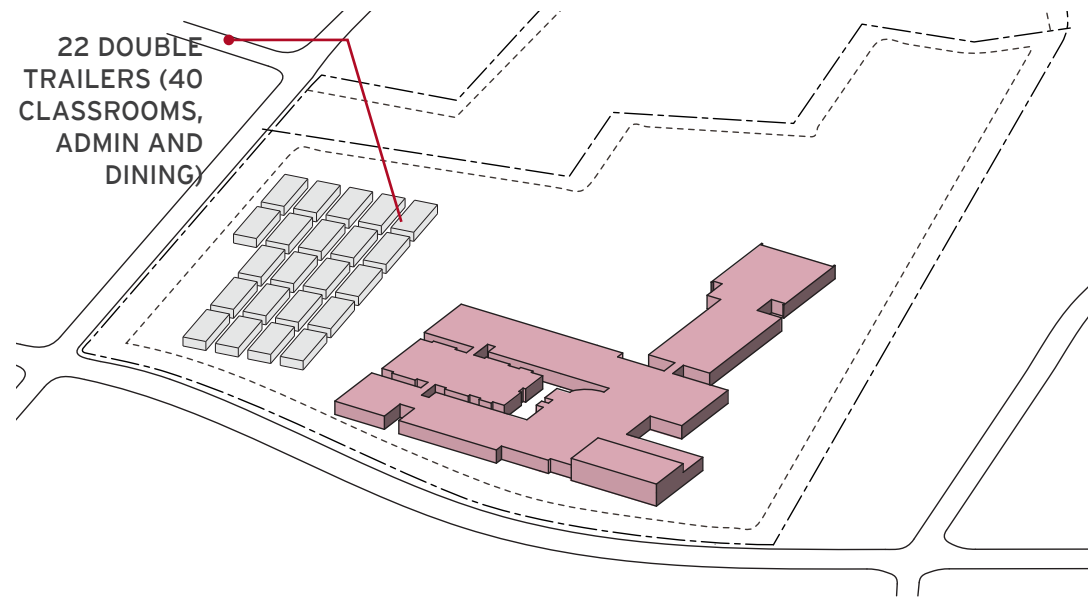


04.3 NEW BUILDING OPTION 1B | SITE RENDERING



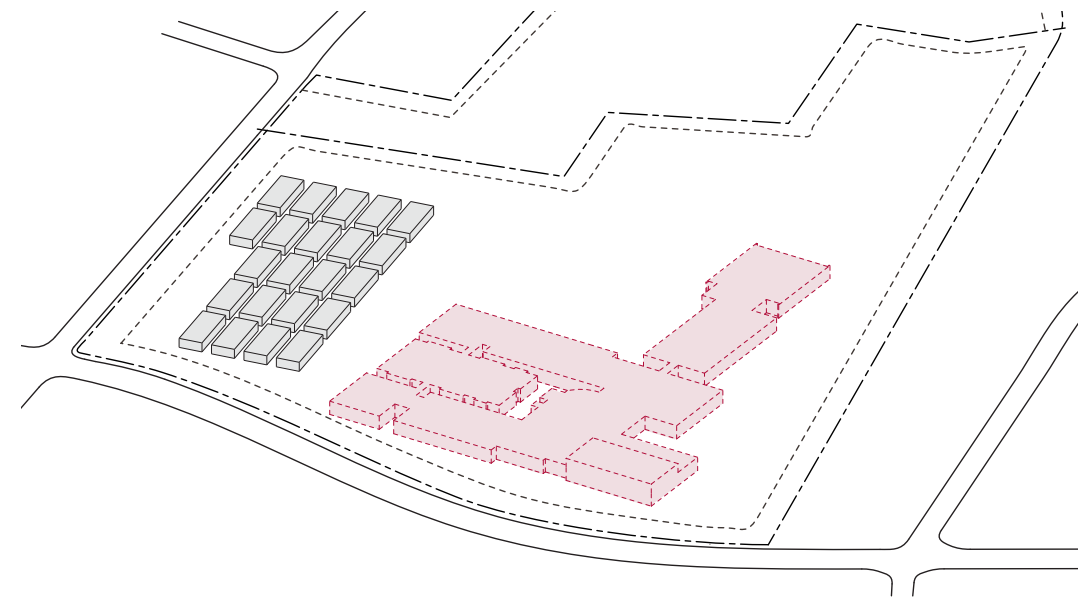
04.3 NEW BUILDING OPTION 1B | PHASING

APPROXIMATELY 18 MONTH SCHOOL CONSTRUCTION DURATION



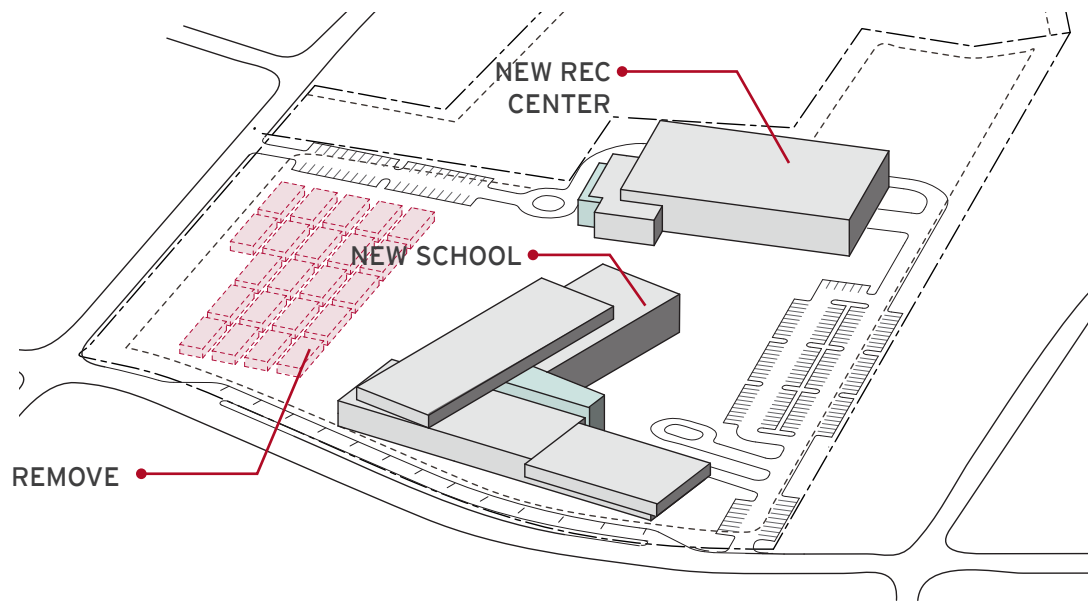
PHASE I

- IA Construct 22 temporary double trailers
- IB Move entire School into trailers



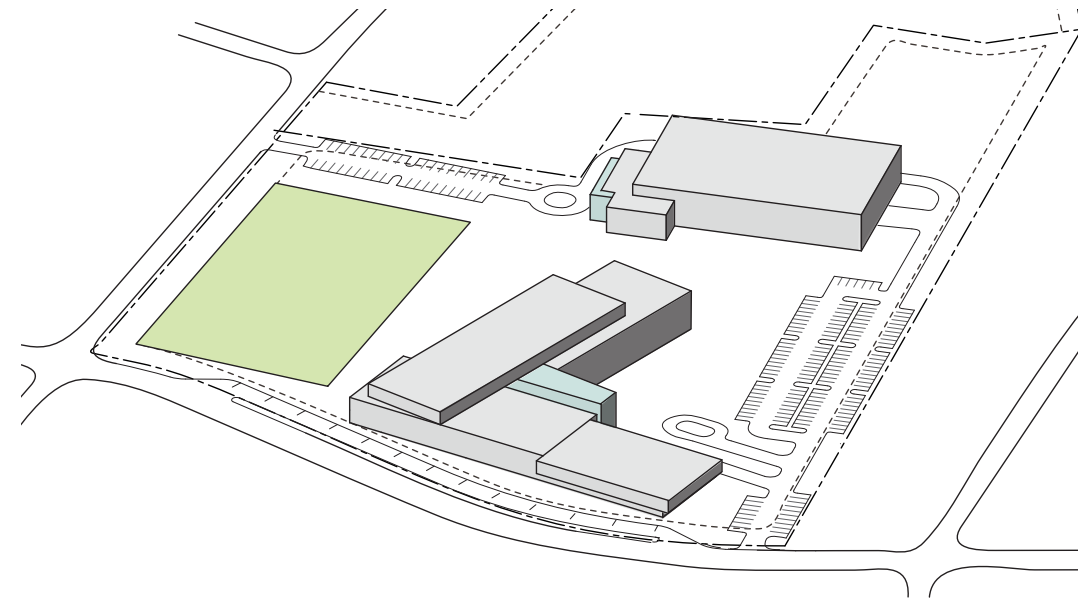
PHASE II

- IIA Demolish existing school and Recreation Center
- IIB Site prep for new building



PHASE III

- IIIA Construct new School and Rec Center
- IIIB Construct parking and bus loop
- IIIC Move entire School from trailers into the new building



PHASE IV

- IV Construct multipurpose field and complete other site work



04.4 NEW BUILDING OPTION 2 | SITE ORGANIZATION

SITE ORGANIZATION

This scheme allows most of the existing building to remain in operation during construction, with only the gymnasium wing being demolished prior to construction of the new School.

- Multipurpose field is placed along Taney Ave., generating an active green space
- 3-story volume parallel to, but set back from N Latham St.
- 2-story volume parallel to Taney Ave.
- The buildings are a backdrop surrounding the active green
- Parking is divided into two lots, on the far edges of the site
- Bus loop is parallel to Taney Ave., off of the street
- Service access is from the rear of each parking lot

PROS & CONS

PROS

- Greatest possible portion of existing building remains operational during construction
- Compact building massing frees up green space on site
- Perspective view of building set back from street
- Outdoor Learning Space on 3rd floor
- Green space along North Latham Street allows for community usage and retains a sense of open space.
- Sheltered play areas large enough for multiple age groups

CONS

- 3-story building massing adjacent to N Latham St.
- Building volume disconnects program spaces into two blocks



04.4 NEW BUILDING OPTION 2 | PROPOSED SITE PLAN



EXISTING RECREATION CENTER TO BE DEMOLISHED BEFORE CONSTRUCTION

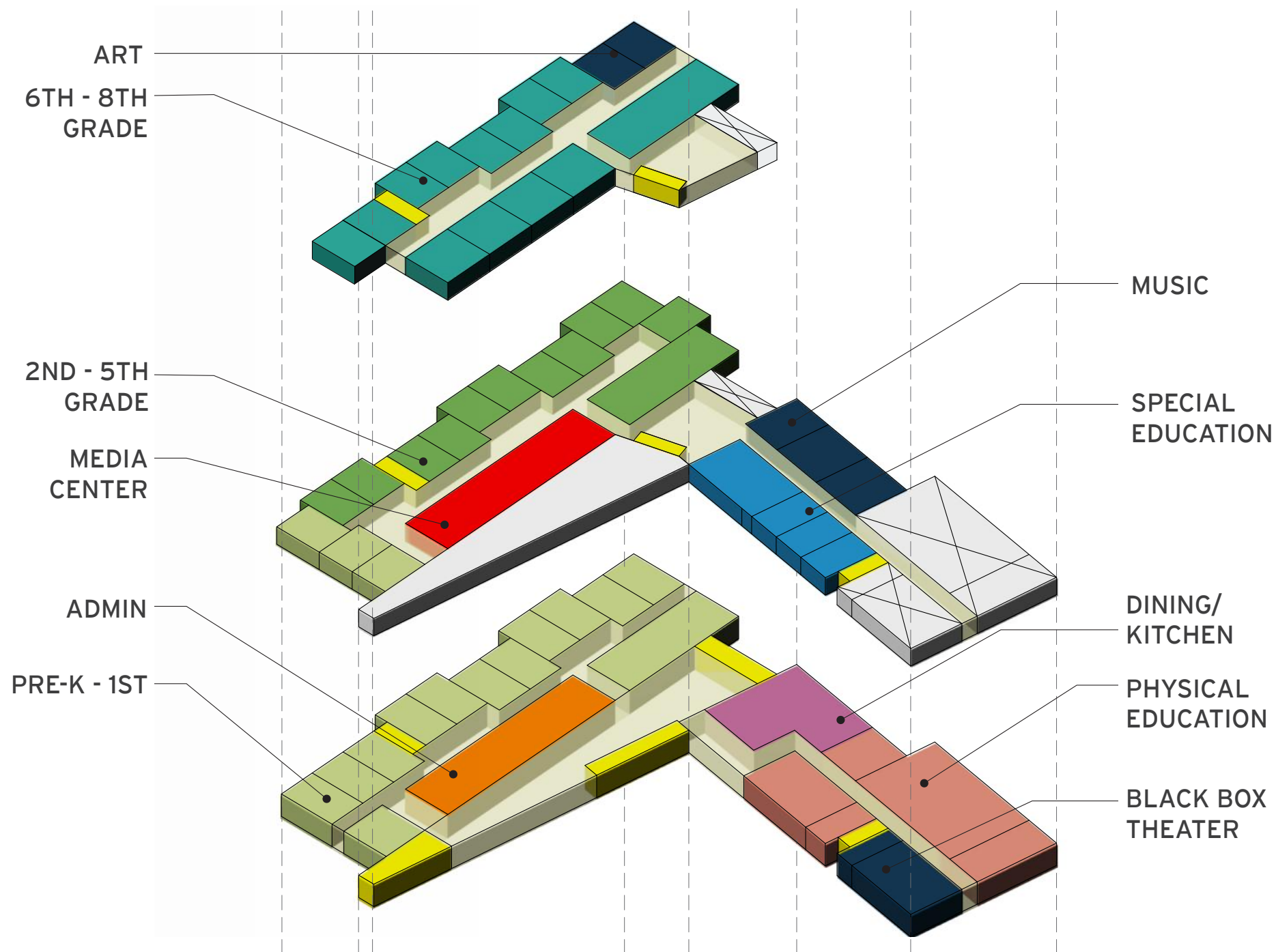
LOCATION OF THE EXISTING SCHOOL



04.4 NEW BUILDING OPTION 2 | SITE RENDERING



04.4 NEW BUILDING OPTION 2 | STACKING DIAGRAM



BUILDING ORGANIZATION

The two volumes of the School provide different programs:

- Wing parallel to N Latham St. is academic
- Wing parallel to Taney Ave contains large group spaces and special education
- Multipurpose spaces can be closed off from the school during special events
- The gymnasium is located close to the Recreation Center
- A two-story atrium connects the two wings
- The roof of the atrium is an outdoor learning space
- Security and operational features of the design are optimized in the same way as Option 1A
- Cafeteria is in the wing closer to the Recreation Center, facilitating community use after-hours

This option features an innovative classroom arrangement:

- Classrooms are located with a southeast facing exposure
- ELA's are placed on the corner, making them a special place
- Corridor with break-out niches define groupings of classrooms
- Pairs of classrooms are shifted horizontally, creating green balconies on the second and third floors

The second floor contains:

- Music
- Special Education overlooks active green forecourt
- Media Center overlooks first floor lobby

The third floor contains:

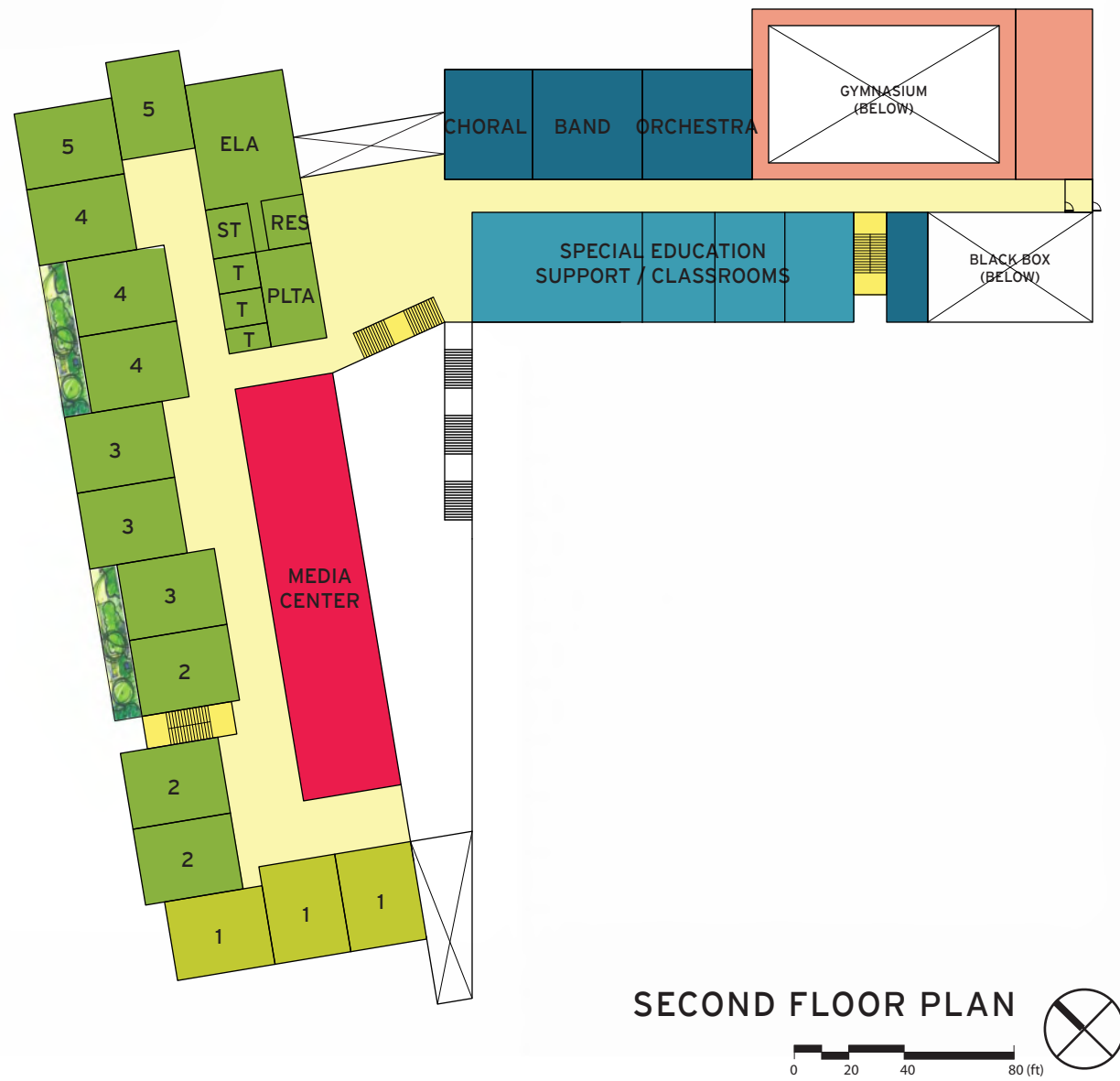
- Upper grades classrooms
- Specialty classrooms have direct access to the Outdoor Learning Space



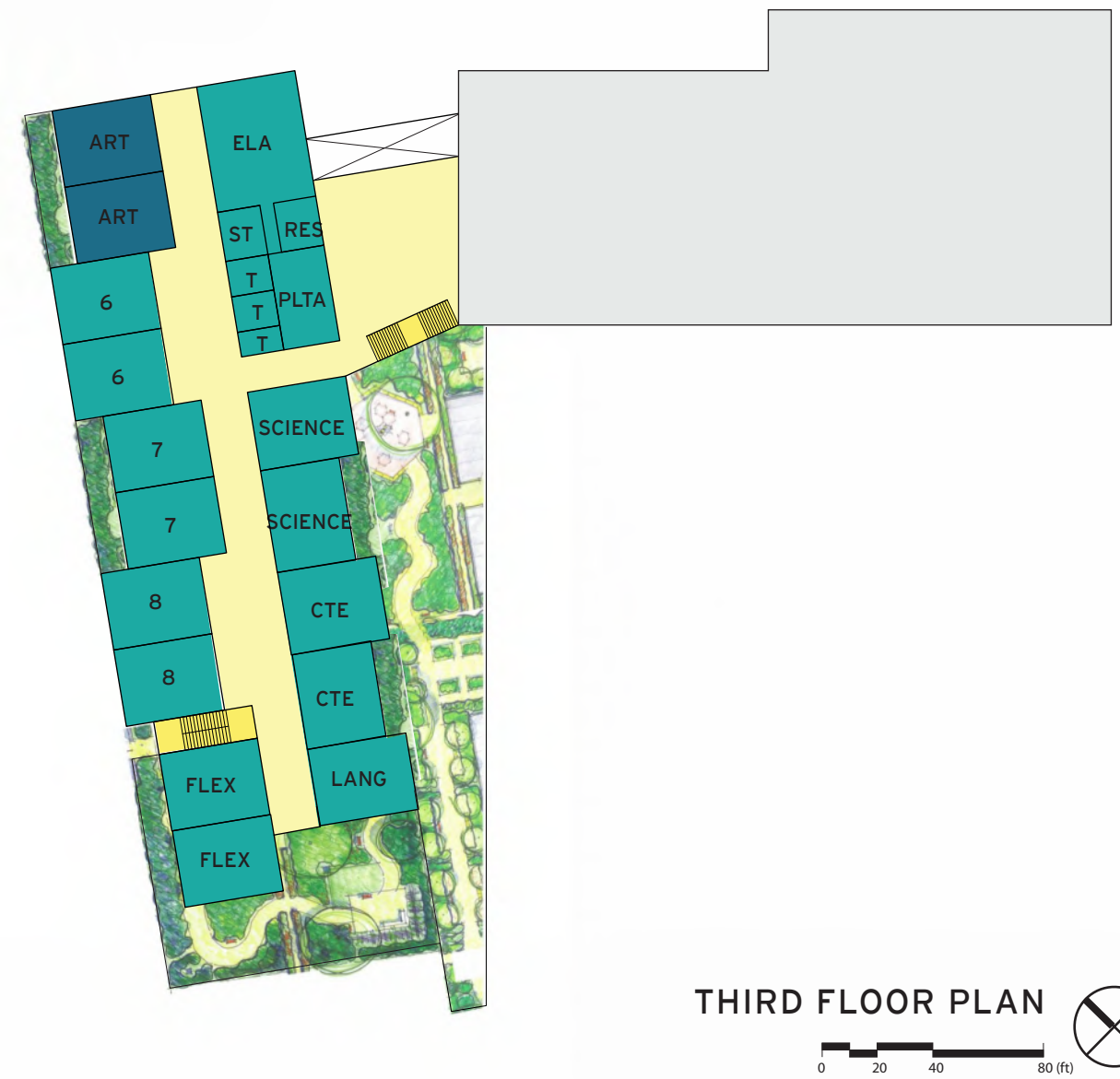
04.4 NEW BUILDING OPTION 2 | PROPOSED FLOOR PLANS



04.4 NEW BUILDING OPTION 2 | PROPOSED FLOOR PLANS



SECOND FLOOR PLAN

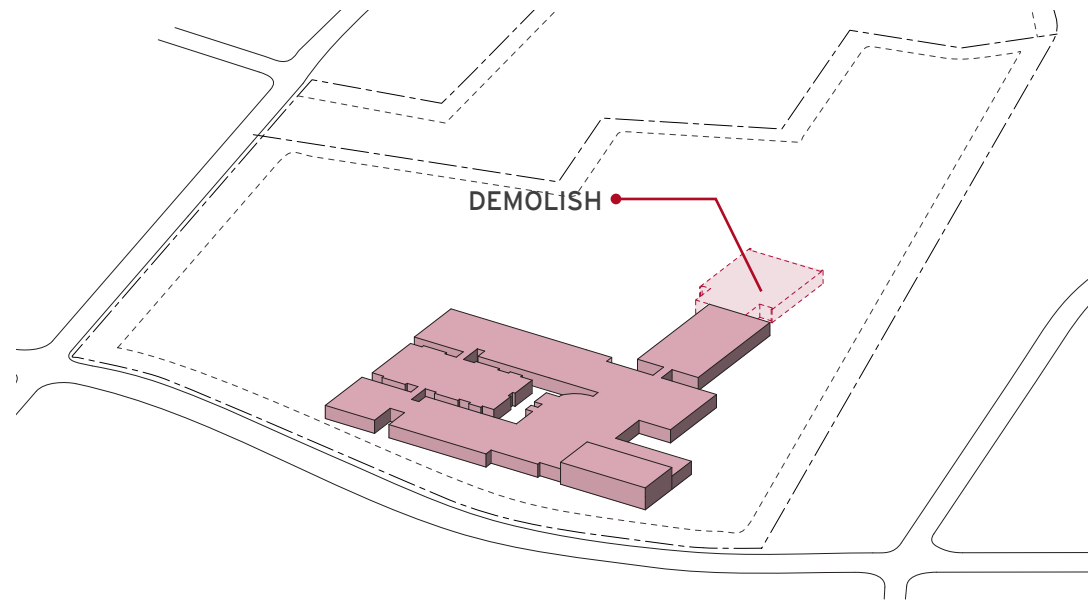


THIRD FLOOR PLAN



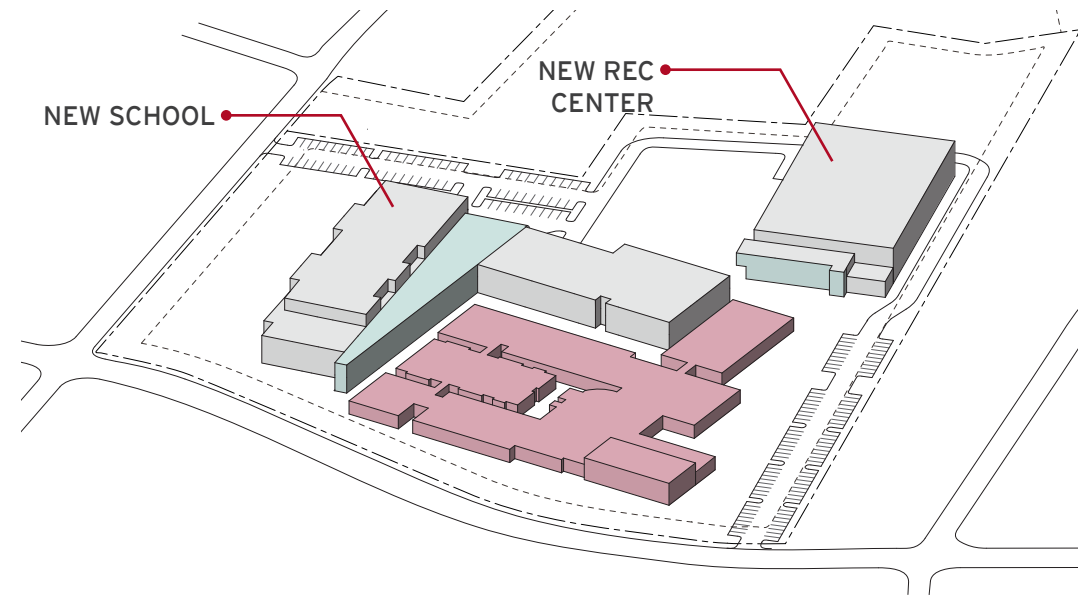
04.4 NEW BUILDING OPTION 2 | PHASING

APPROXIMATELY 15 MONTH SCHOOL CONSTRUCTION DURATION



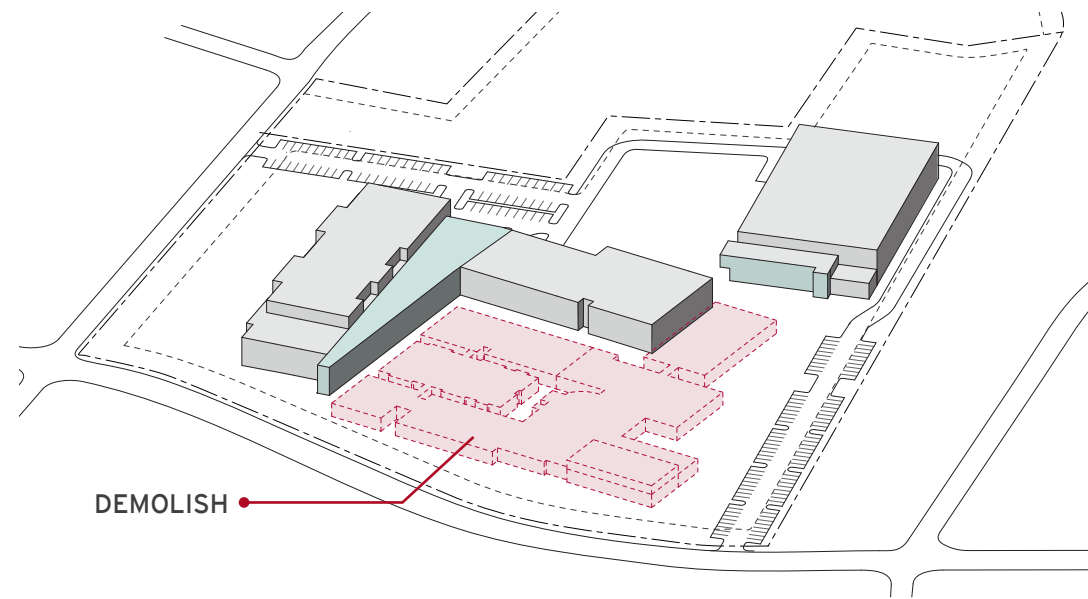
PHASE I

- IA Demolish existing Recreation Center
- IB Site prep for new buildings



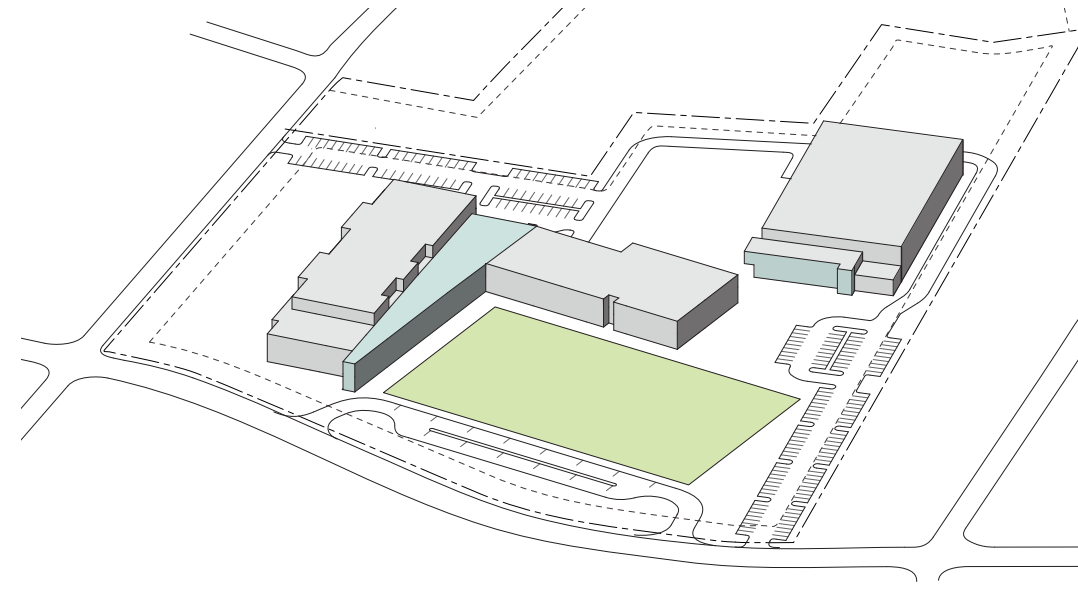
PHASE II

- IIA Construct new School, Rec Center, and parking
- IIB Move entire School into new building



PHASE III

- III Demolish existing building



PHASE IV

- IV Construct bus loop and outdoor multipurpose field



04.4 NEW BUILDING OPTION 2



04.5 RENOVATION & ADDITION OPTION | SITE ORGANIZATION

SITE ORGANIZATION

The renovation scheme prioritizes which portions of the existing building to keep.

- Mechanical room is conserved to maintain building systems during construction
- Auditorium and cafeteria remain because they are unique spaces
- The wing of the school closest to Taney Ave. is demolished
- A new 3-story addition wraps the front of the school, enhancing the street frontage
- The form of the addition follows the curve of Taney Ave.
- Modular classrooms are removed and an atrium is constructed in its place
- Multipurpose field is on the corner of N Latham St. and Taney Ave.
- Parking is split up into two areas, one in the same place as the existing parking lot, modified to add a Kiss and Ride, the other in the rear behind the Recreation Center
- Bus loop runs parallel to Taney Ave, off of the street

PROS & CONS

PROS

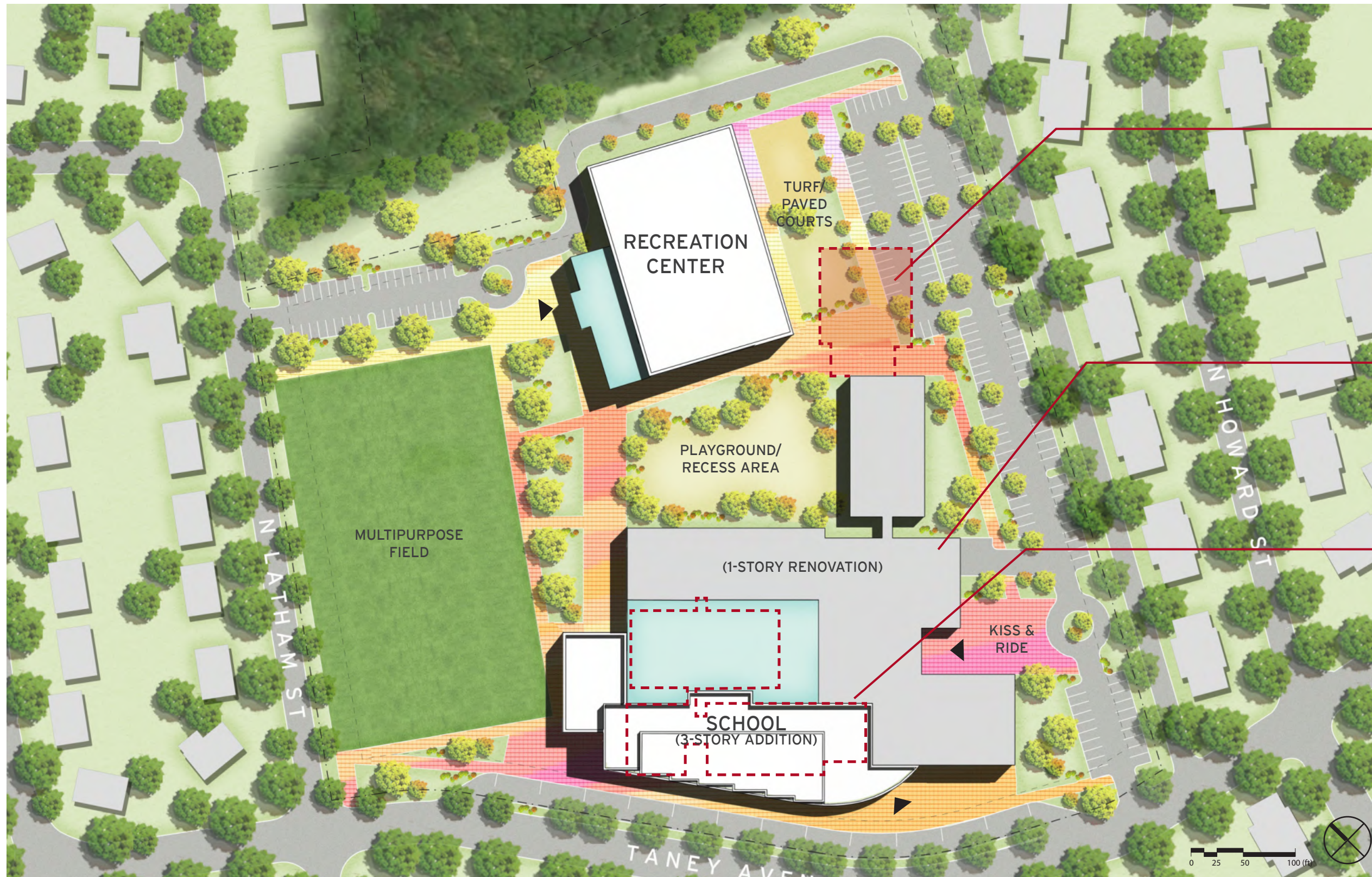
- New face to school along Taney Ave
- Recreation Center & School each have own presence to community
- Most building volume positioned along Taney Ave
- Sheltered play area large enough for multiple age groups

CONS

- Requires swing space during renovation of existing building
- Large building footprint, less open space on site
- Bus drop off alongside Taney Ave. is less friendly for pedestrians
- Recreation Center is less visible from Taney Ave.
- Longest construction duration
- Shorter building lifespan



04.5 RENOVATION & ADDITION OPTION | PROPOSED SITE PLAN



EXISTING RECREATION CENTER TO BE DEMOLISHED BEFORE CONSTRUCTION

EXISTING SCHOOL TO BE RENOVATED

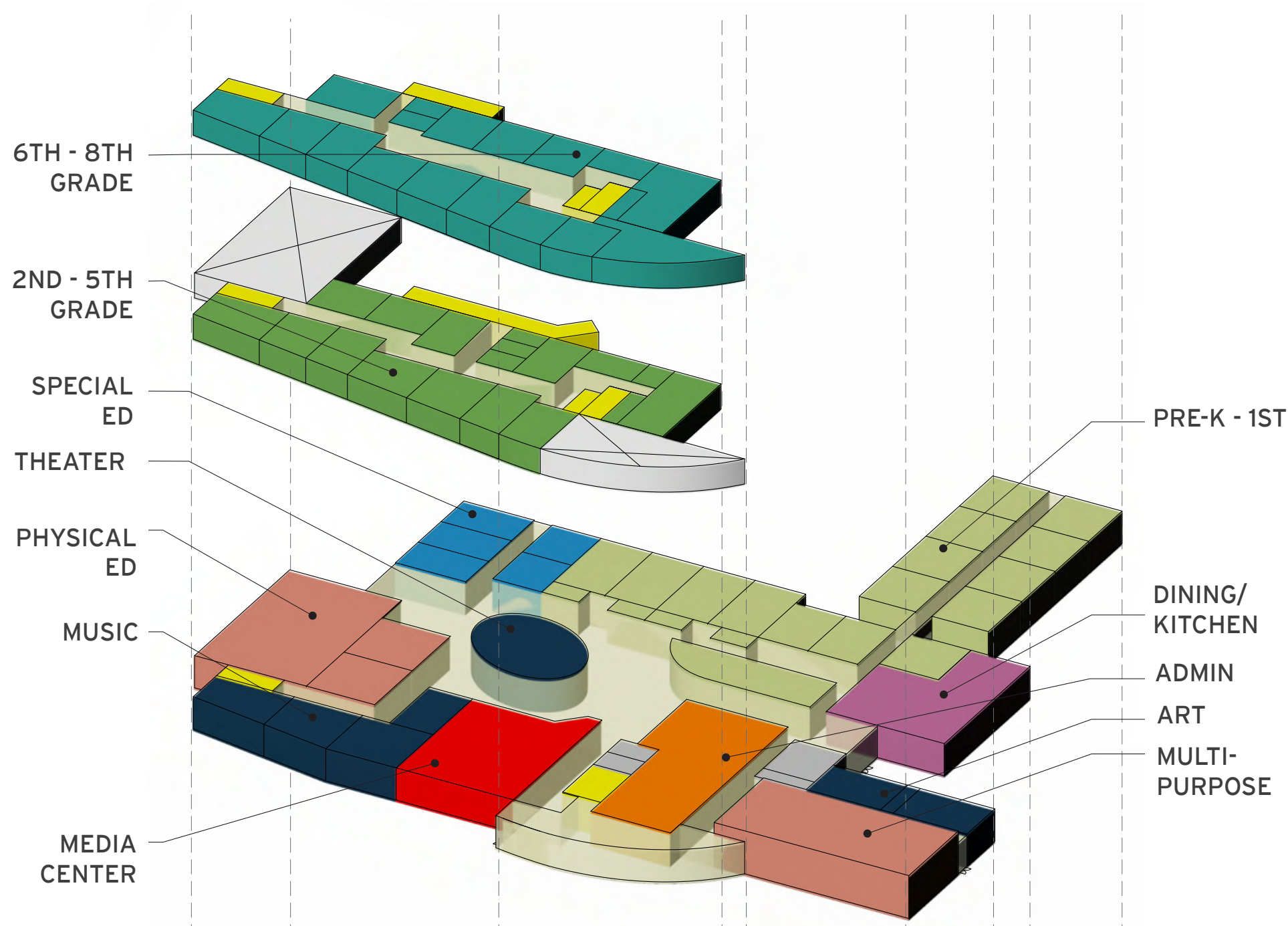
SOUTH ACADEMIC WING OF THE EXISTING SCHOOL TO BE DEMOLISHED BEFORE CONSTRUCTION



04.5 RENOVATION & ADDITION OPTION | SITE RENDERING



04.5 RENOVATION & ADDITION OPTION | STACKING DIAGRAM



BUILDING ORGANIZATION

This option places large group spaces on the ground floor for community access and academic spaces in a 3-story addition along Taney Ave.

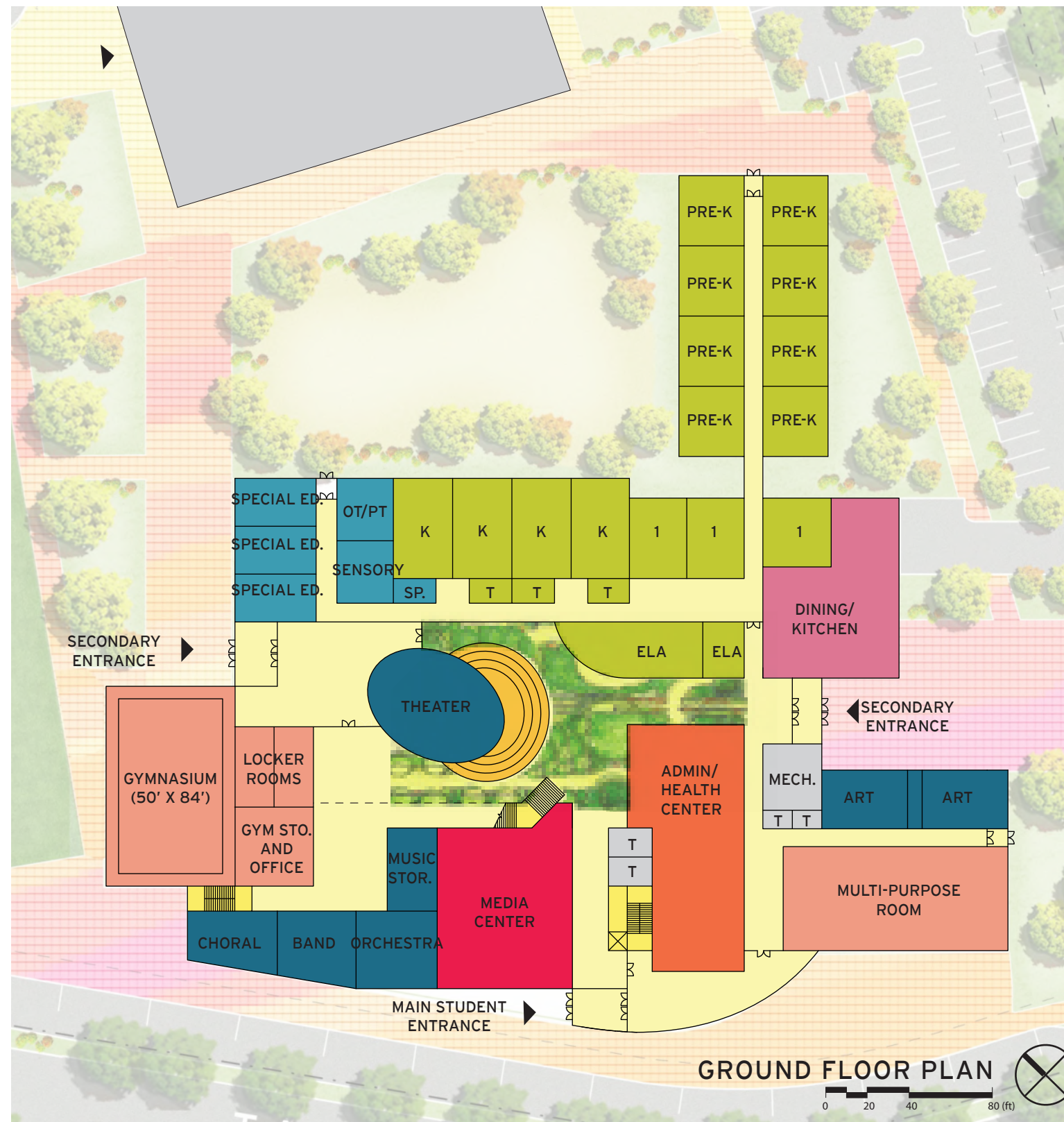
- Atrium serves as a centralizing force in the plan, surrounded by rooms opening up into it
- Black box theater is a freestanding element within the atrium space
- Secure separation of the gymnasium and theatre from the rest of the first floor
- Early childhood wing is adjacent to the play fields
- Art rooms are located near the multipurpose room, offering opportunities for gallery displays

The upper floors house academic areas, with older grades on the third floor.

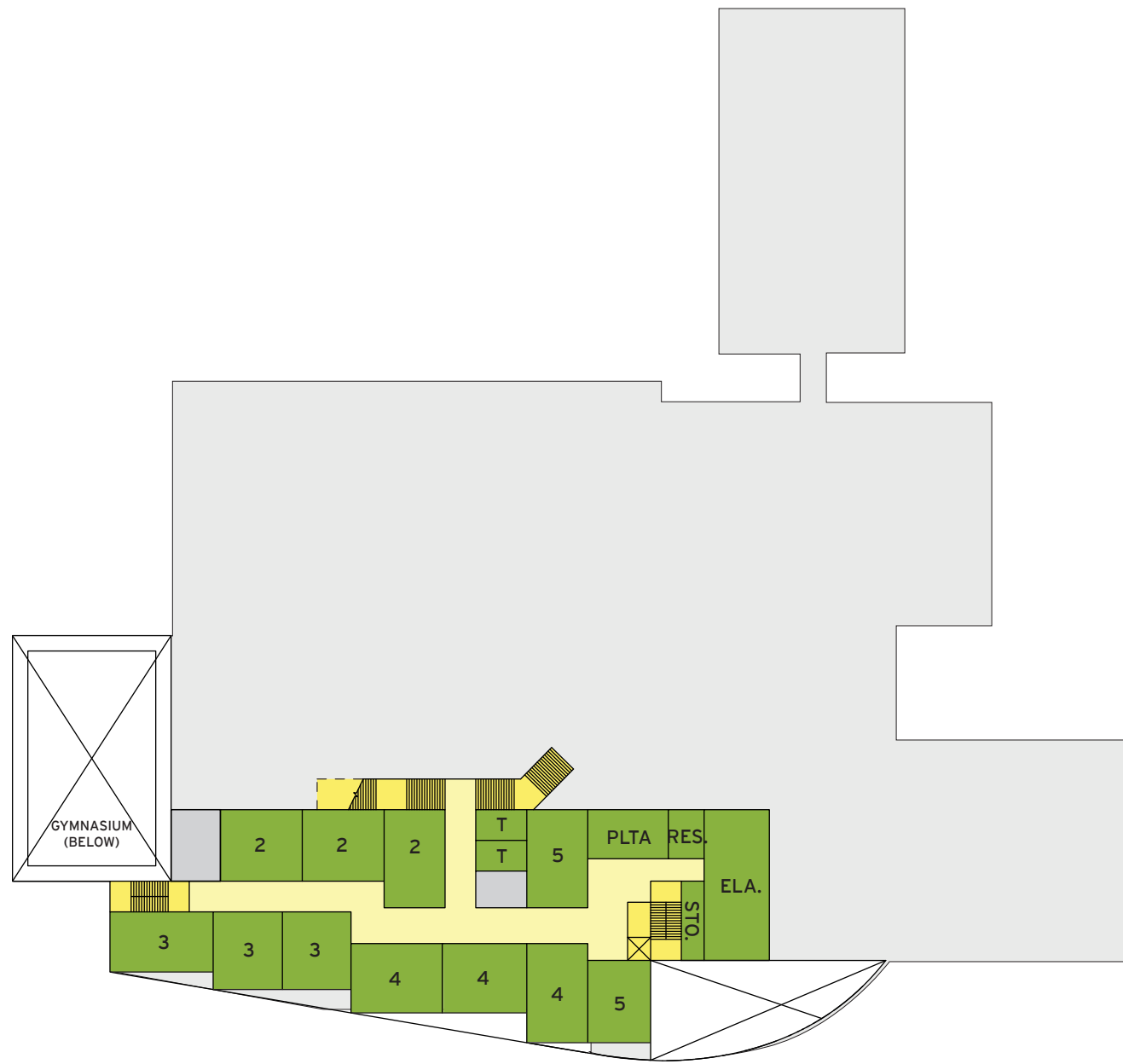
- Variations in the organization of classrooms creates a winding corridor allowing for clusters of classrooms.
- Corridor widens toward the specialty rooms on the east end of the addition, opening up to the ELA with a wide view
- The roof of the gym is an outdoor learning space accessed from the third floor.
- Specialty classrooms are positioned to take advantage of the architecture
- Science Lab and Language are directly over the main entrance on the curving portion of the façade
- CTE classroom faces the Outdoor Learning Space




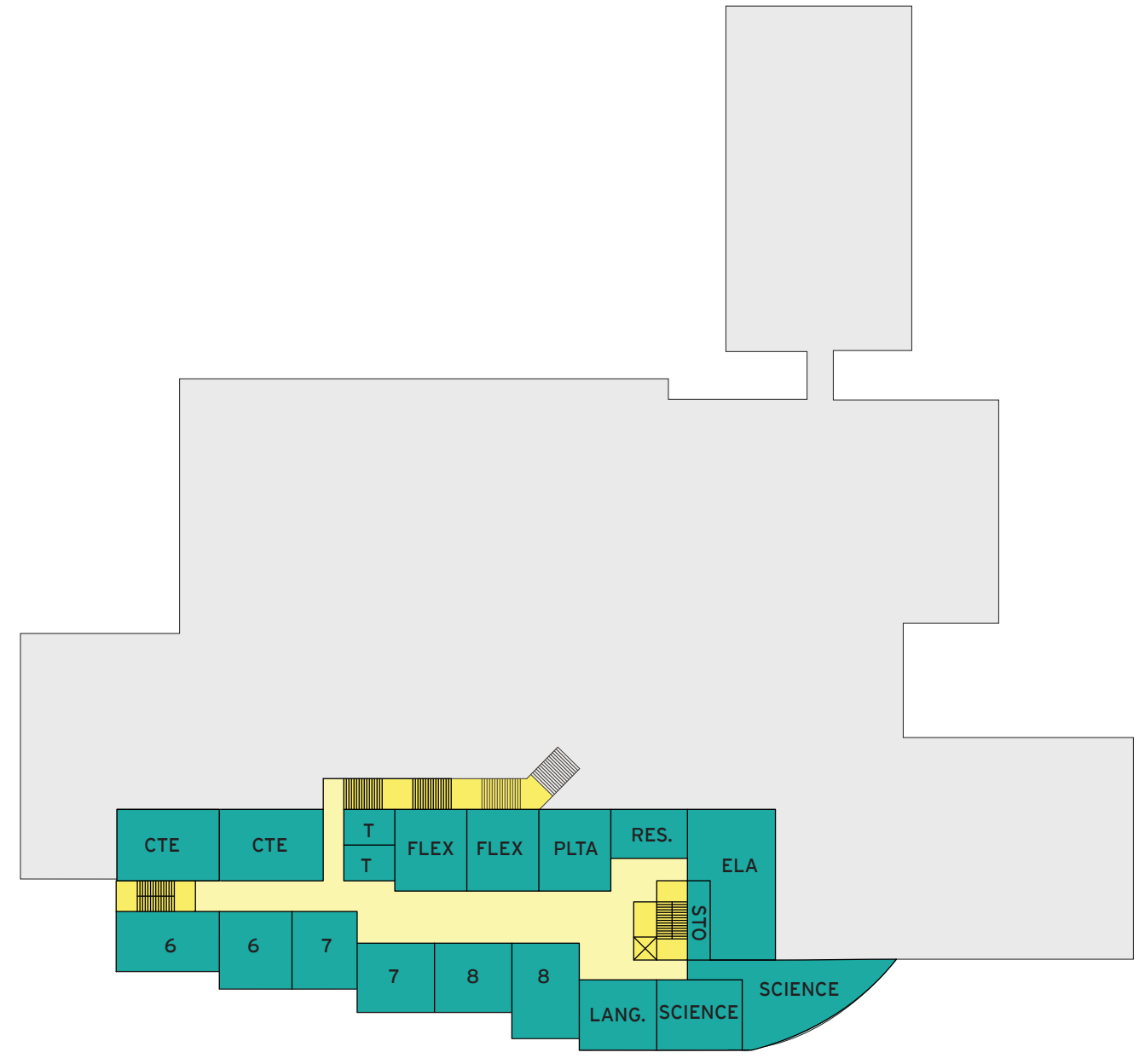
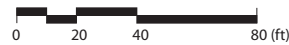
04.5 RENOVATION & ADDITION OPTION | PROPOSED FLOOR PLANS



04.5 RENOVATION & ADDITION OPTION | PROPOSED FLOOR PLANS



SECOND FLOOR PLAN 

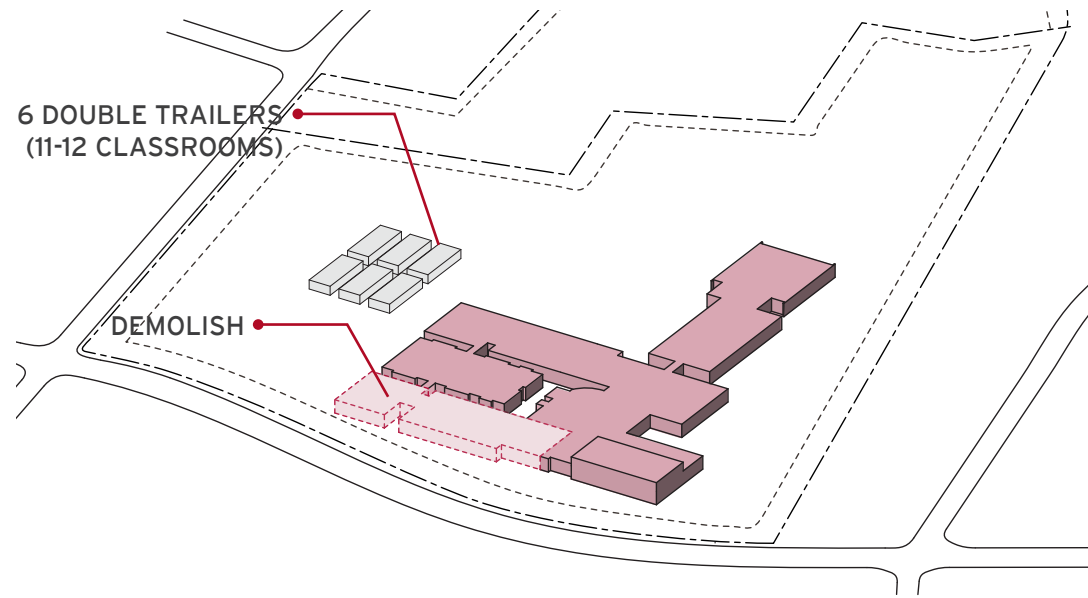


THIRD FLOOR PLAN 



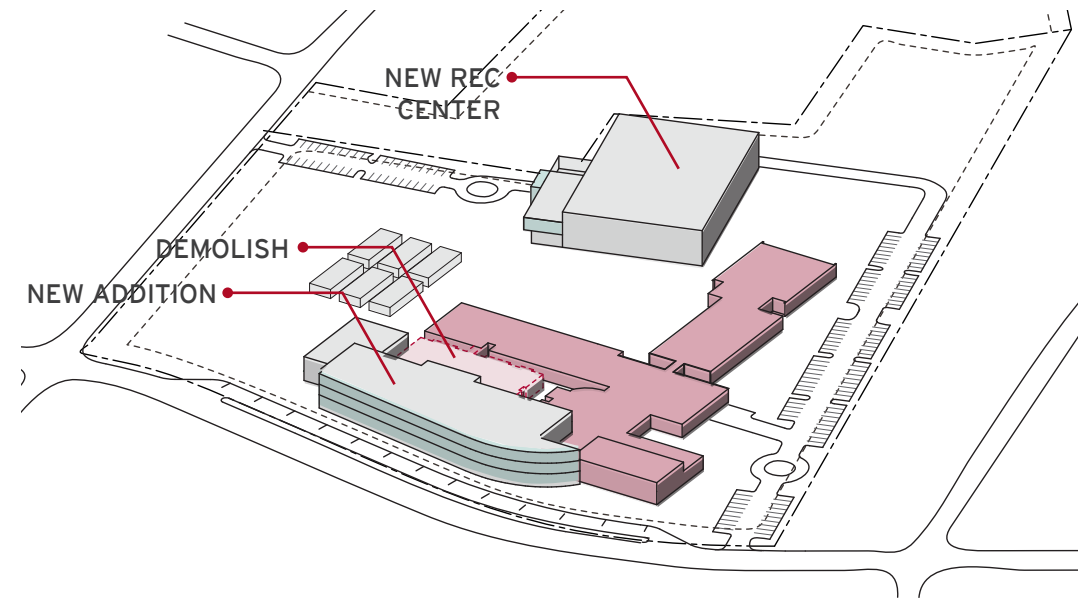
04.5 RENOVATION & ADDITION OPTION | PHASING

APPROXIMATELY 24 MONTH SCHOOL CONSTRUCTION DURATION



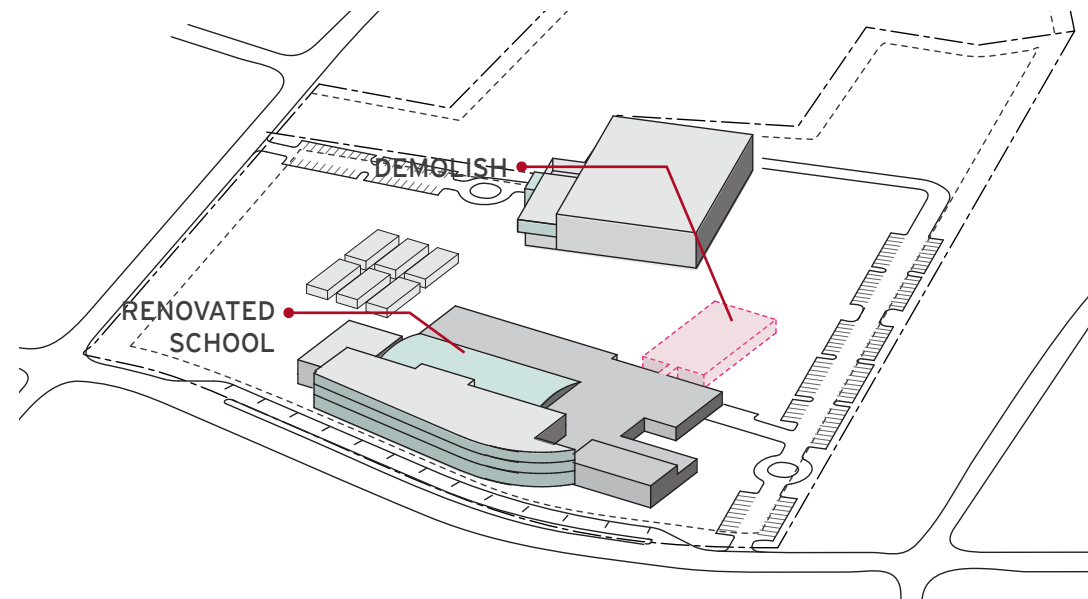
PHASE I

- IA Construct 6 temporary double trailers
- IIB Move south wing of School into trailers
- IIC Demolish south wing of existing School



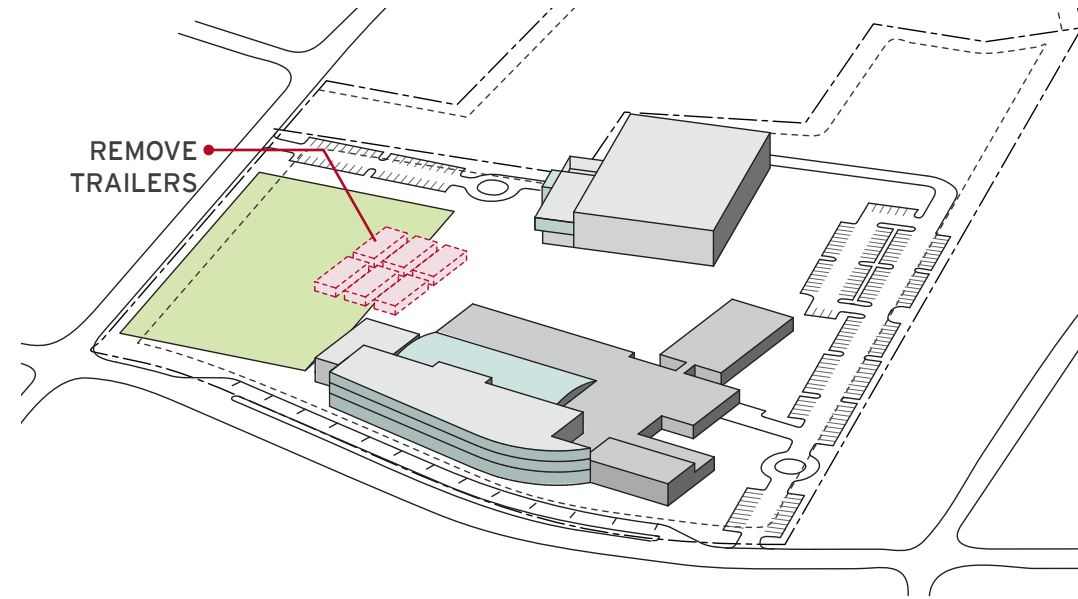
PHASE II

- IIA Construct School addition, Rec Center, bus loop, and parking
- IIB Move School from existing building to new addition, demolish existing atrium



PHASE III

- III Demolish existing gym, renovate existing School and construct atrium



PHASE IV

- IV Remove trailers, construct multipurpose field



04.5 RENOVATION & ADDITION OPTION



05.1 PROPOSED STORMWATER STRATEGIES

INTRODUCTION

The completed project will include stormwater mitigation practices as needed to meet code requirements for stormwater quality and quantity as defined in the **2014 City Ordinance**.

WATER QUALITY

- Storage requirements will range from 11,470 cf to 12,808 cf.
- Green roofs on school buildings
- Bio-retention areas
- Dry swale
- Permeable pavers
- Rainwater harvesting for use in irrigation
- Possible outdoor classrooms integrating stormwater management techniques

WATER QUANTITY

- Prevent erosion and flooding
- Existing outfall from site will be sufficient in new design
- Bio-retention areas and swales
- Underground stormwater facilities



05.2 PROPOSED STRUCTURAL SYSTEM

INTRODUCTION

Under the Renovation & Addition Option, new structural framing will be installed where required to meet current codes. The New Building Options will include an efficient system designed to meet the needs of the building and current codes.

NEW BUILDING OPTIONS

- Foundations - shallow spread footings
- Ground floor - slab on grade
- Structural steel columns with wide flange girders
- Elevated slabs - normal weight concrete over metal decks
- Roof structure - normal weight concrete over metal deck designed to support occupied roof
- Moment and braced frames for lateral bracing
- Exterior walls- cold-formed steel framing

RENOVATION / ADDITION OPTION

- Foundation at existing portions to remain are sufficient
- New foundation - shallow spread footings
- Addition ground floor slab - slab on grade
- New framing required at penetrations in existing elements
- Addition elevated slabs - normal weight concrete over metal deck
- Proposed construction type - IIA for addition
- Addition roof structure - normal weight concrete over metal deck designed to support green roof
- Steel frames for lateral bracing
- Addition exterior walls - cold-formed steel framing



05.3 PROPOSED MEP AND FIRE PROTECTION SYSTEMS

MECHANICAL SYSTEM

INTRODUCTION

Both the New Building and Renovation/Addition Options will feature **state-of-the-art HVAC** systems throughout.

NEW BUILDING HVAC SYSTEMS

- Variable air flow variable speed compressors
- DX rooftop packaged cooling with natural gas heat
- Water-cooled chillers with natural gas boilers
- Water source heat pumps with geothermal ground source piping

RENOVATION/ADDITION HVAC SYSTEMS

- DX rooftop packaged cooling with natural gas heat
- Local zone terminals throughout
- Existing ductwork to remain where possible
- CO2 sensors to control outdoor air

ELECTRICAL SYSTEM

The electrical service to the building was upgraded in 2011 and is sufficient for the planned building. Some of the new electrical components will include:

- Complete lightning protection system
- LED lights throughout
- New lighting control system including occupancy sensors and time clocks
- Daylight harvesting where appropriate
- New fire alarm system for new or renovation option

PLUMBING SYSTEM

New plumbing fixtures to preserve resources and reduce energy

- Low flow fixtures
- High efficiency water heaters
- Domestic hot water circulation loops

FIRE PROTECTION SYSTEM

Both the New Building and Renovation/Addition Options will be equipped with a new fire protection system to meet current code. Some features include:

- Automatic sprinkler system throughout
- Sprinkler fire pump if necessary
- New fire detection and monitoring system



05.4 PROPOSED SUSTAINABILITY STRATEGIES

INTRODUCTION

The new or renovated Patrick Henry School is envisioned to be a high performance sustainable building. Integrated design will be used throughout the process to create an exemplary green building with a reduction in energy consumption of 30% - 40%. The building will be **LEED Silver** minimum.

ENVELOPE

- Increased insulation
- Reflective or green roof
- Balanced ratio of windows to walls
- High performance glazing
- External shading

ENERGY USAGE

- LED lights
- Daylight and occupancy sensors
- Energy-efficient equipment

HVAC EFFICIENCY

- Occupancy or CO2 sensors to regulate ventilation
- High efficient energy recovery equipment

SITE SUSTAINABILITY OPTIONS

- Ground source heat pumps



05.4 PROPOSED SUSTAINABILITY STRATEGIES

LEED CERTIFICATION

Two schemes were evaluated to determine the preliminary LEED scorecards for the project:

1. Renovation/Expansion
2. New Construction

Both schemes will use the LEED 2009 for K-12 School Projects rating system. Scheme 1 performs slightly better with earning LEED credits since the building structure reuse credits are available, and it should be easier to achieve energy reductions and points with the energy model. Under both schemes, however, more information will be needed to move credits from the 'maybe' categories into either a 'yes' or a 'no'. These are early conservative estimates which need to be confirmed as we get further into the design stages.

SAMPLE LEED SCORECARD FOR MAJOR RENOVATION/EXPANSION

| 7 17 0 Sustainable Sites | | | Possible Points: 24 | 10 8 1 Indoor Environmental Quality | | | Possible Points: 19 |
|-------------------------------|---|---|--|-------------------------------------|---|---|---|
| Y | ? | N | | Y | | | |
| Y | | | Prereq 1 Construction Activity Pollution Prevention | Y | | | Prereq 1 Minimum Indoor Air Quality Performance |
| Y | | | Prereq 2 Environmental Site Assessment | Y | | | Prereq 2 Environmental Tobacco Smoke (ETS) Control |
| 1 | | | Credit 1 Site Selection | Y | | | Prereq 3 Minimum Acoustical Performance |
| | 4 | | Credit 2 Development Density and Community Connectivity | 1 | | | Credit 1 Outdoor Air Delivery Monitoring |
| | 1 | | Credit 3 Brownfield Redevelopment | | | 1 | Credit 2 Increased Ventilation |
| | 4 | | Credit 4.1 Alternative Transportation—Public Transportation Access | 1 | | | Credit 3.1 Construction IAQ Management Plan—During Construction |
| 1 | | | Credit 4.2 Alternative Transportation—Bicycle Storage and Changing Rooms | 1 | | | Credit 3.2 Construction IAQ Management Plan—Before Occupancy |
| 2 | | | Credit 4.3 Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles | 4 | | | Credit 4 Low-Emitting Materials—Adhesives and Sealants |
| | 2 | | Credit 4.4 Alternative Transportation—Parking Capacity | | 1 | | Credit 5 Indoor Chemical and Pollutant Source Control |
| | 1 | | Credit 5.1 Site Development—Protect or Restore Habitat | 1 | | | Credit 6.1 Controllability of Systems—Lighting |
| | 1 | | Credit 5.2 Site Development—Maximize Open Space | 1 | 1 | | Credit 6.2 Controllability of Systems—Thermal Comfort |
| | 1 | | Credit 6.1 Stormwater Design—Quantity Control | 1 | | | Credit 7.1 Thermal Comfort—Design |
| 1 | | | Credit 6.2 Stormwater Design—Quality Control | 1 | | | Credit 7.2 Thermal Comfort—Verification |
| 1 | | | Credit 7.1 Heat Island Effect—Non-roof | | 3 | | Credit 8.1 Daylight and Views—Daylight |
| 1 | | | Credit 7.2 Heat Island Effect—Roof | | 1 | | Credit 8.2 Daylight and Views—Views |
| | 1 | | Credit 8 Light Pollution Reduction | 1 | | | Credit 9 Enhanced Acoustical Performance |
| | 1 | | Credit 9 Site Master Plan | | 1 | | Credit 10 Mold Prevention |
| | 1 | | Credit 10 Joint Use of Facilities | | | | |
| 5 6 0 Water Efficiency | | | Possible Points: 11 | 6 0 0 Innovation and Design Process | | | Possible Points: 6 |
| Y | | | Prereq 1 Water Use Reduction—20% Reduction | 1 | | | Credit 1.1 Innovation in Design: Green Cleaning Program |
| 2 | 2 | | Credit 1 Water Efficient Landscaping | 1 | | | Credit 1.2 Innovation in Design: Education and Outreach |
| | 2 | | Credit 2 Innovative Wastewater Technologies | 1 | | | Credit 1.3 Innovation in Design: Exemplary Performance, TBD |
| 2 | 2 | | Credit 3 Water Use Reduction | 1 | | | Credit 1.4 Innovation in Design: Exemplary Performance, TBD |
| 1 | | | Credit 4 Process Water Use Reduction | 1 | | | Credit 1.5 Innovation in Design: Exemplary Performance, TBD |
| | | | | 1 | | | Credit 2 LEED Accredited Professional |
| 17 16 0 Energy and Atmosphere | | | Possible Points: 33 | 4 0 0 Regional Priority Credits | | | Possible Points: 4 |
| Y | | | Prereq 1 Fundamental Commissioning of Building Energy Systems | 1 | | | Credit 1.1 Regional Priority: EAc1 |
| Y | | | Prereq 2 Minimum Energy Performance | 1 | | | Credit 1.2 Regional Priority: EAc2 |
| Y | | | Prereq 3 Fundamental Refrigerant Management | 1 | | | Credit 1.3 Regional Priority: MRC1.1 |
| 12 | 7 | | Credit 1 Optimize Energy Performance | 1 | | | Credit 1.4 Regional Priority: SSC5.1 |
| | 7 | | Credit 2 On-Site Renewable Energy | | | | |
| 2 | | | Credit 3 Enhanced Commissioning | | | | |
| 1 | | | Credit 4 Enhanced Refrigerant Management | | | | |
| 2 | | | Credit 5 Measurement and Verification | | | | |
| | 2 | | Credit 6 Green Power | | | | |
| 5 5 3 Materials and Resources | | | Possible Points: 13 | 54 52 4 Total | | | Possible Points: 110 |
| Y | | | Prereq 1 Storage and Collection of Recyclables | | | | Certified 40 to 49 points |
| | 1 | 1 | Credit 1.1 Building Reuse—Maintain Existing Walls, Floors, and Roof | | | | Silver 50 to 59 points |
| | 1 | | Credit 1.2 Building Reuse—Maintain 50% of Interior Non-Structural Elements | | | | Gold 60 to 79 points |
| 1 | 1 | | Credit 2 Construction Waste Management | | | | Platinum 80 to 110 |
| | | 2 | Credit 3 Materials Reuse | | | | |
| 2 | | | Credit 4 Recycled Content | | | | |
| 1 | 1 | | Credit 5 Regional Materials | | | | |
| | 1 | | Credit 6 Rapidly Renewable Materials | | | | |
| 1 | | | Credit 7 Certified Wood | | | | |



05.4 PROPOSED SUSTAINABILITY STRATEGIES



SAMPLE LEED SCORECARD FOR NEW CONSTRUCTION

| 7 | 17 | 0 | Sustainable Sites | | Possible Points: | 24 |
|---|----|---|-------------------|---|------------------|----|
| Y | ? | N | | | | |
| Y | | | Prereq 1 | Construction Activity Pollution Prevention | | |
| Y | | | Prereq 2 | Environmental Site Assessment | | |
| 1 | | | Credit 1 | Site Selection | 1 | |
| | 4 | | Credit 2 | Development Density and Community Connectivity | 4 | |
| | 1 | | Credit 3 | Brownfield Redevelopment | 1 | |
| | 4 | | Credit 4.1 | Alternative Transportation—Public Transportation Access | 4 | |
| 1 | | | Credit 4.2 | Alternative Transportation—Bicycle Storage and Changing Rooms | 1 | |
| 2 | | | Credit 4.3 | Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles | 2 | |
| | 2 | | Credit 4.4 | Alternative Transportation—Parking Capacity | 2 | |
| | 1 | | Credit 5.1 | Site Development—Protect or Restore Habitat | 1 | |
| | 1 | | Credit 5.2 | Site Development—Maximize Open Space | 1 | |
| | 1 | | Credit 6.1 | Stormwater Design—Quantity Control | 1 | |
| 1 | | | Credit 6.2 | Stormwater Design—Quality Control | 1 | |
| 1 | | | Credit 7.1 | Heat Island Effect—Non-roof | 1 | |
| 1 | | | Credit 7.2 | Heat Island Effect—Roof | 1 | |
| | 1 | | Credit 8 | Light Pollution Reduction | 1 | |
| | 1 | | Credit 9 | Site Master Plan | 1 | |
| | 1 | | Credit 10 | Joint Use of Facilities | 1 | |

| 5 | 6 | 0 | Water Efficiency | | Possible Points: | 11 |
|---|---|---|------------------|------------------------------------|------------------|----|
| Y | | | Prereq 1 | Water Use Reduction—20% Reduction | | |
| 2 | 2 | | Credit 1 | Water Efficient Landscaping | 2 to 4 | |
| | 2 | | Credit 2 | Innovative Wastewater Technologies | 2 | |
| 2 | 2 | | Credit 3 | Water Use Reduction | 2 to 4 | |
| 1 | | | Credit 4 | Process Water Use Reduction | 1 | |

| 10 | 23 | 0 | Energy and Atmosphere | | Possible Points: | 33 |
|----|----|---|-----------------------|--|------------------|----|
| Y | | | Prereq 1 | Fundamental Commissioning of Building Energy Systems | | |
| Y | | | Prereq 2 | Minimum Energy Performance | | |
| Y | | | Prereq 3 | Fundamental Refrigerant Management | | |
| 5 | 14 | | Credit 1 | Optimize Energy Performance | 1 to 19 | |
| | 7 | | Credit 2 | On-Site Renewable Energy | 1 to 7 | |
| 2 | | | Credit 3 | Enhanced Commissioning | 2 | |
| 1 | | | Credit 4 | Enhanced Refrigerant Management | 1 | |
| 2 | | | Credit 5 | Measurement and Verification | 2 | |
| | 2 | | Credit 6 | Green Power | 2 | |

| 5 | 3 | 5 | Materials and Resources | | Possible Points: | 13 |
|---|---|---|-------------------------|---|------------------|----|
| Y | | | Prereq 1 | Storage and Collection of Recyclables | | 0 |
| | | 2 | Credit 1.1 | Building Reuse—Maintain Existing Walls, Floors, and Roof | 1 to 2 | |
| | | 1 | Credit 1.2 | Building Reuse—Maintain 50% of Interior Non-Structural Elements | 1 | |
| 1 | 1 | | Credit 2 | Construction Waste Management | 1 to 2 | |
| | | 2 | Credit 3 | Materials Reuse | 1 to 2 | |
| 2 | | | Credit 4 | Recycled Content | 1 to 2 | |
| 1 | 1 | | Credit 5 | Regional Materials | 1 to 2 | |
| | 1 | | Credit 6 | Rapidly Renewable Materials | 1 | |
| 1 | | | Credit 7 | Certified Wood | 1 | |

| 10 | 8 | 1 | Indoor Environmental Quality | | Possible Points: | 19 |
|----|---|---|------------------------------|--|------------------|----|
| Y | | | Prereq 1 | Minimum Indoor Air Quality Performance | | |
| Y | | | Prereq 2 | Environmental Tobacco Smoke (ETS) Control | | |
| Y | | | Prereq 3 | Minimum Acoustical Performance | | |
| 1 | | | Credit 1 | Outdoor Air Delivery Monitoring | 1 | |
| | | 1 | Credit 2 | Increased Ventilation | 1 | |
| 1 | | | Credit 3.1 | Construction IAQ Management Plan—During Construction | 1 | |
| 1 | | | Credit 3.2 | Construction IAQ Management Plan—Before Occupancy | 1 | |
| 4 | | | Credit 4 | Low-Emitting Materials—Adhesives and Sealants | 1 to 4 | |
| | 1 | | Credit 5 | Indoor Chemical and Pollutant Source Control | 1 | |
| 1 | | | Credit 6.1 | Controllability of Systems—Lighting | 1 | |
| | 1 | | Credit 6.2 | Controllability of Systems—Thermal Comfort | 1 | |
| 1 | | | Credit 7.1 | Thermal Comfort—Design | 1 | |
| 1 | | | Credit 7.2 | Thermal Comfort—Verification | 1 | |
| | 3 | | Credit 8.1 | Daylight and Views—Daylight | 1 to 3 | |
| | 1 | | Credit 8.2 | Daylight and Views—Views | 1 | |
| | 1 | | Credit 9 | Enhanced Acoustical Performance | 1 | |
| | 1 | | Credit 10 | Mold Prevention | 1 | |

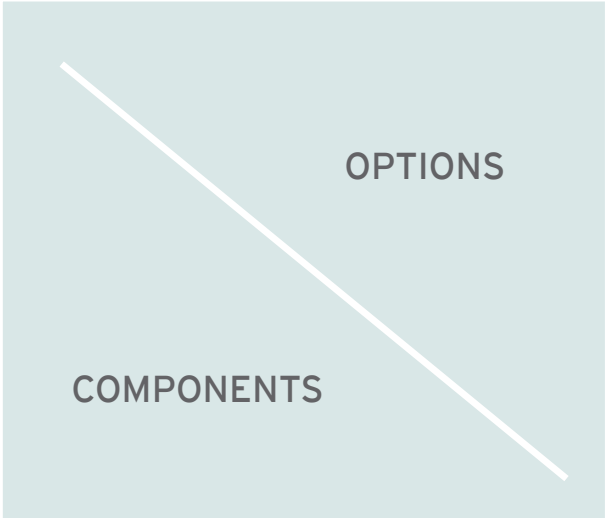




| 6 | 0 | 0 | Innovation and Design Process | | Possible Points: | 6 |
|---|---|---|-------------------------------|--|------------------|---|
| 1 | | | Credit 1.1 | Innovation in Design: Green Cleaning Program | 1 | |
| 1 | | | Credit 1.2 | Innovation in Design: Education and Outreach | 1 | |
| 1 | | | Credit 1.3 | Innovation in Design: Exemplary Performance, TBD | 1 | |
| 1 | | | Credit 1.4 | Innovation in Design: Exemplary Performance, TBD | 1 | |
| 1 | | | Credit 1.5 | Innovation in Design: Exemplary Performance, TBD | 1 | |
| 1 | | | Credit 2 | LEED Accredited Professional | 1 | |

| 0 | 4 | 0 | Regional Priority Credits | | Possible Points: | 4 |
|---|---|---|---------------------------|---------------------------|------------------|---|
| | 1 | | Credit 1.1 | Regional Priority: EAc1 | 1 | |
| | 1 | | Credit 1.2 | Regional Priority: EAc2 | 1 | |
| | 1 | | Credit 1.3 | Regional Priority: SSc6.1 | 1 | |
| | 1 | | Credit 1.4 | Regional Priority: SSc5.1 | 1 | |

| 43 | 61 | 6 | Total | | Possible Points: | 110 |
|--|----|---|-------|--|------------------|-----|
| Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110 | | | | | | |



06.1 PROJECT COST SUMMARY

|  |  NEW BUILDING OPTION 1A |  NEW BUILDING OPTION 1B |  NEW BUILDING OPTION 2 |  RENOVATION + ADDITION |
|---|--|---|--|--|
| BUILDING | \$ 34,101,142 | \$ 34,101,142 | \$ 33,880,962 | \$ 32,838,571 |
| BUILDING DEMOLITION | \$ 518,130 | \$ 518,130 | \$ 518,130 | \$ 238,673 |
| SWING COST | \$ 511,517 | \$ 3,011,517 | \$ 0 | \$ 492,579 |
| SITework | \$ 3,883,725 | \$ 3,883,725 | \$ 3,883,725 | \$ 3,883,725 |
| OUTDOOR MULTI-PURPOSE FIELD | \$ 224,200 | \$ 224,200 | \$ 224,200 | \$ 224,200 |
| TOTAL COST | \$ 39,238,714 | \$ 41,738,714 | \$ 38,507,017 | \$ 37,677,748 |



06.2 PROJECT LIFE CYCLE COST

| | INITIAL COST | YEARLY UTILITY COST | MAINTENANCE COST | LCCA |
|---|--------------|---------------------|------------------|---------------|
| DX ROOFTOP PACKAGED UNITS | \$ 5,855,850 | \$ 98,807 | \$ 45,000 | \$ 8,370,928 |
| CHILLERS AND BOILER PACKAGE | \$ 6,084,000 | \$ 85,311 | \$ 60,000 | \$ 7,683,312 |
| WATER SOURCE HEAT PUMPS WITH GEOTHERMAL | \$ 7,605,000 | \$ 59,694 | \$ 52,000 | \$ 10,099,783 |

*Life cycle cost is limited to evaluation of mechanical systems only and does not include life cycle analysis of the existing structure.




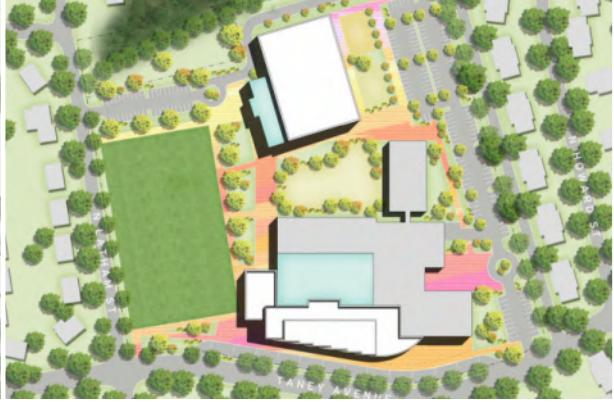
RECOMMENDATIONS

Space differences in regards to each option may play a role in selection. For the DX Rooftop Packaged units, this option requires the least amount of space within the building. Equipment is located on the roof, ductwork is distributed through the school and terminal boxes are located above the ceiling. The chiller/boiler package will require a central mechanical room, and mechanical rooms to house Air Handling Units. Terminal boxes and ductwork will be located above the ceilings. For the Water Source Heat Pump option, the heat pumps will be located above the ceiling with the ductwork. There will be a small mechanical room housing the pumps and piping manifolds.

The Life Cycle Cost Analysis (LCCA) provides valuable economic data to make an educated recommendation for the HVAC systems. The recommendation for the system is based on sustainability objectives, first costs, and operating costs. Based on the LCCA, Arup views the DX Rooftop Packaged Units as the most economical, sustainable, and overall best package from a value standpoint. This system will provide the required zoning, the best temperature reset, and also provide the energy usage and savings for the school. If high efficient DX Roof Top Units are selected with energy recovery, step down capacity reduction and variable speed fans, these units will provide reliable and dependable systems for the facility.



7.1 COMPARISON OF MASTERPLAN OPTIONS

| <div style="text-align: center;">OPTIONS</div> <div style="text-align: center;">REQUIREMENTS</div> |  |  |  |  |
|--|---|---|---|---|
| | NEW BUILDING OPTION 1A | NEW BUILDING OPTION 1B | NEW BUILDING OPTION 2 | RENOVATION + ADDITION |
| MEETS SCHOOL PROGRAM | ✓ | ✓ | ✓ | ✓ |
| MEETS SITE PROGRAM | ✓ | ✓ | ✓ | ✓ |
| SITE ORGANIZATION | New school building built around the existing school building. Field located on the site of the existing school | Field located along N Latham St., new school built on the site of the existing school | New school building built around the existing school building. Field located on the site of the existing school | Field placed along N Latham St. Existing school building renovated. New addition built along Taney Ave. |
| BUILDING ORGANIZATION | 2-story wing built along N Latham St. 3-story wing built along Taney Ave. | 2-story wing built along Taney Ave. 3-story wing in the center of the site | 3-story wing built along N. Latham St. 2-story wing built facing Taney Ave. | 3-story new addition built along Taney Ave. |
| CONSTRUCTION | Requires swing space for 11 classrooms during construction | Requires swing space for 40 classrooms + admin + dining area during construction | None required | Requires swing space for 11 classrooms during construction and longest duration |
| BUS/PARKING | Accommodates 12 buses and 190 cars. Separate bus loop within the site | Accommodates 12 buses and 190 cars. Lay-by lane on Taney Ave. for buses | Accommodates 12 buses and 190 cars. Separate bus loop within the site | Accommodates 12 buses and 190 cars. Lay-by lane on Taney Ave. for buses |
| GREEN SPACE | Large open green area along N Latham St. and Taney Ave. | Large open green area in the center of the school | Large open green area along N Latham St. | Smaller open green area |
| TOTAL COST | \$ 39,238,714 | \$ 41,738,714 | \$ 38,507,017 | \$ 37,677,748 |



7.2 NEXT STEPS

Each of the four options included in this report include advantages and disadvantages related to various parts of the design including the site planning, building massing and proportions, interior building configurations, etc. As the design progresses into the next phase, it will be important to review all of these options to identify those aspects of the designs that can be incorporated into whichever version of the building is ultimately designed and built. This will allow for valuable knowledge and experience that has been accumulated during this process to inform the final design leading to the best possible school design.

Of the four options that have been studied, New Building Option 2 is the preferred option. Under this scheme the school building will be located entirely outside the footprint of the existing. This means that the new building can be built without relocating any of the students during construction. This layout also places the new school building at the greatest distance from the small scale residential North Latham Street, limiting the impact of the building on these residents. This proposed option includes a number of elements that make it the preferred design amongst the four that have been developed.

Site Planning

- Places the building at the furthest distance from North Latham Street while not affecting the existing building.
- Maintains a green open space along both North Latham Street and Taney Ave.
- The location of the new multi-purpose field adjacent to the multifamily units creates a buffer for the school building.
- The bus loop and the majority of the site parking is located directly off of Taney Ave. while a smaller parking area to be used by the recreation center is located off of North Latham Street.
- The location of the recreation center in relation to the school allows for it to be visible from both North Latham Street and Taney Ave.

Building Features

- Larger shared building functions are located in the wing that runs parallel to Taney Ave., closest to the proposed recreation center. This allows for these functions to be isolated from the rest of the school to allow for afterhours access.
- Setbacks in the building massing create terraces that can become outdoor learning areas.



- The lower grade levels are located at the ground floor providing direct access to outdoor play areas.
- The eighth grade classrooms are located at the upper levels of the building where they can be isolated from the rest of the school.

Construction Factors

- The plan as proposed is consistent with the CIP budget.
- This plan will allow for the existing building to remain operational throughout construction.
- By eliminating the need for trailers during the construction period this portion of the budget can be used to produce the best possible school building.
- With a similar cost to the renovation/addition option, the creation of a new school will create a state of the art facility with a longer life span than the renovation of the existing building.

