



SASAKI

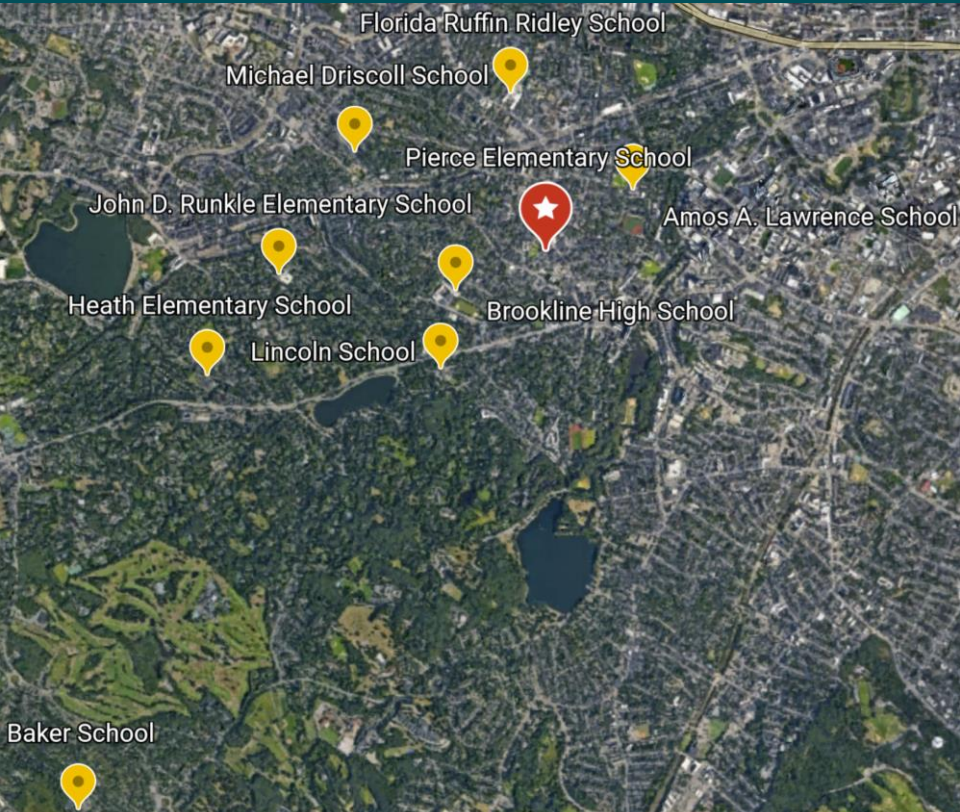
# John R. Pierce School

Town of Brookline



## Facilities Assessment Subcommittee

# Project Location and Goals



## Creative spaces that allow visible learning →

There are programming adjacencies in the new design that encourage visible learning.

## Support for teaming and collaboration →

The new design creates wings for the grade bands Pre-K to 2, 3 to 5, and 6 to 8. Grade bands include shared spaces for teachers and students beyond the classroom spaces.

## Outdoor learning →

The existing Pierce School has a robust gardening program that is tied to the science program. The new design includes garden areas that are easily accessible to the classes that will use them.

## Minimize transition times →

The new design considers the movement of students through the building and includes circulation paths that minimize transition times and maximize learning time.

## Flexible spaces →

Room and wing layouts allow for flexibility in functionality on a day to day basis as well as on a long term basis.

### SITE/BUILDING

- 725 students, Grade K-8, plus 48 Pre-K students
- New construction approximately 140,425 GSF (without garage)
- Addition/Renovation approximately 35,018 GSF (without garage)

### FEATURES / GOALS

- Fossil Fuel Free Design
- Community use and access
- Safer connection between school and playground across School Street

# Educational Program

Room Type	MSBS Guidelines	PSR Space Summary	PSR v MSBA Delta	MSBA Template Deviations
Core Academic Spaces	32,930 NSF	51,823 NSF	+18,893 NSF	<ul style="list-style-type: none"> <li>(3) Pre-K Classrooms w/ Toilets (1,200 NSF)</li> <li>(3) General Classrooms, 1-6 &amp; 7-8 (915 NSF &amp; 865 NSF)</li> <li>(3) World Language Classrooms (850 NSF)</li> <li>(1) Health Classroom (865 NSF)</li> <li>(1) 6<sup>th</sup> Grade Science Classrooms (1,440 NSF)</li> <li>(9) Project Areas (250 NSF)</li> <li>(6) Small Group Rooms (240 NSF)</li> <li>(4) ELL Classrooms &amp; Testing Space (430 NSF &amp; 100 NSF)</li> </ul>
Special Education	9,060 NSF	5,763 NSF	-3,297 NSF	<ul style="list-style-type: none"> <li>(12) less Self-Contained Special Ed. (1,200 NSF)</li> <li>(4) less Resource Rooms (1,500 NSF &amp; 500 NSF)</li> <li>Additional Special Ed. Program Support Spaces (total 4,938 NSF)</li> <li>(1) OT/PT Room (825 NSF)</li> </ul>
Art & Music	8,050 NSF	10,331 NSF	+2,281 NSF	<ul style="list-style-type: none"> <li>(1) additional Flexible Performance Space (3,427 NSF)</li> </ul>
Vocational & Technology	1,440 NSF	2,490 NSF	+1,050 NSF	<ul style="list-style-type: none"> <li>(1) additional Tech Classroom - Fab Lab (940 NSF)</li> <li>(1) additional Tech Shop - Maker Space (1,550 NSF)</li> </ul>
Health & Physical Education	8,322 NSF	11,602 NSF	+3,280 NSF	<ul style="list-style-type: none"> <li>(2) less Locker Rooms (1,000 NSF)</li> <li>(1) Small Gym (2,381 NSF)</li> </ul>
Media Center	4,070 NSF	4,070 NSF	-	
Dining & Food Service	9,785 NSF	9,785 NSF	-	
Medical	610 NSF	729 NSF	+119 NSF	<ul style="list-style-type: none"> <li>(1) additional Isolation Room (100 NSF)</li> </ul>
Administration & Guidance	3,169 NSF	6,641 NSF	+3,472 NSF	<ul style="list-style-type: none"> <li>(8) additional Program Support Offices (150 NSF)</li> <li>(2) additional Assistant Principal's Offices (150 NSF)</li> <li>(2) additional Teacher's Work Rooms (450 NSF)</li> <li>(3) additional Small Conference Rooms (260 NSF)</li> <li>(3) additional Specialist Collaborative Workspace (272 NSF)</li> </ul>
Custodial & Maintenance	2,297 NSF	2,322 NSF	+25 NSF	
Other		1,328 NSF	+1,328 NSF	<ul style="list-style-type: none"> <li>(1) additional Extended Day Office &amp; Storage (315 NSF &amp; 377 NSF)</li> <li>(1) additional PTO Office (375 NSF)</li> <li>(2) additional Staff Showers (100 NSF)</li> </ul>
<b>TOTAL BUILDING NET FLOOR AREA</b>	<b>79,773 NSF</b>	<b>106,885 NSF</b>	<b>+27,152 NSF</b>	
<b>TOTAL BUILDING GROSS FLOOR AREA</b>	<b>119,599 GSF</b>	<b>174,443 GSF</b>	<b>+55,842 GSF</b>	
<b>TOTAL GROSS FLOOR AREA W/ GARAGE</b>		<b>252,363 GSF</b>	<b>+135,764 GSF</b>	

# Community Outreach

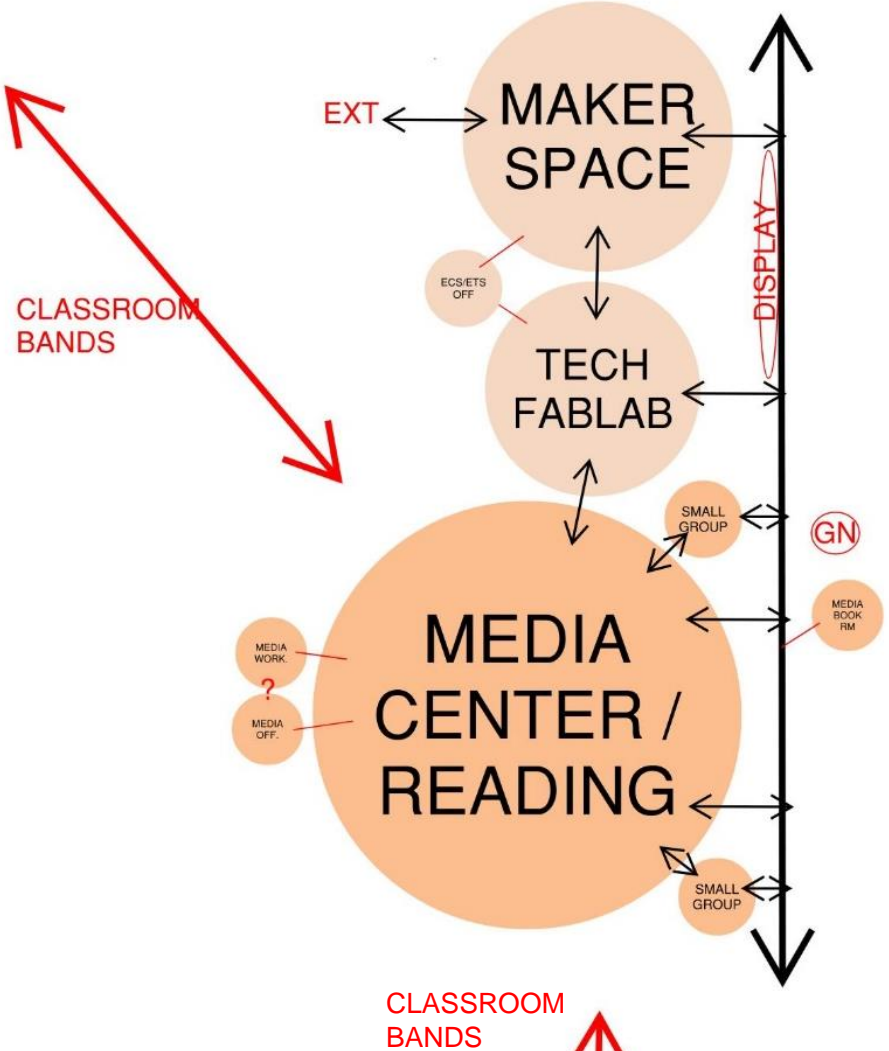
Activity	Dates
<b>John R. Pierce School Building Committee (SBC) Meeting</b>	
Public Meetings held once or twice a month (15 total)	April 2020 – December 2021
<b>Educational Visioning Workshops</b>	
Sessions with District, Educators, Parents and Students (4 total)	February – March 2021
<b>John R. Pierce School Visioning Workshop</b>	
Interactive presentation to Pierce Faculty and Staff	March 23, 2021
<b>Community Visioning Workshop</b>	
Interactive public presentation	March 2, 2021
<b>Community Forum #1 – Civic Campus</b>	
Interactive public presentation	March 15, 2021
<b>Community Forum #2 - Sustainability</b>	
Discussion with District, TMSBC Members, TMS Faculty and Consultant Team	March 18, 2021
<b>Community Forum #3 – Options Review</b>	
Interactive public presentation	October 25, 2021

# Pierce School Today

- Brookline Village (precinct of Town buildings)
- 2.5 acre site
- 842 K-8 current / 725 students pre K-8 proposed
- All parking below building
- Playground = city park
- Pick-up/drop-off offsite
- Steep topography



# Programming - Media Center as Hub of School and Grade Bands

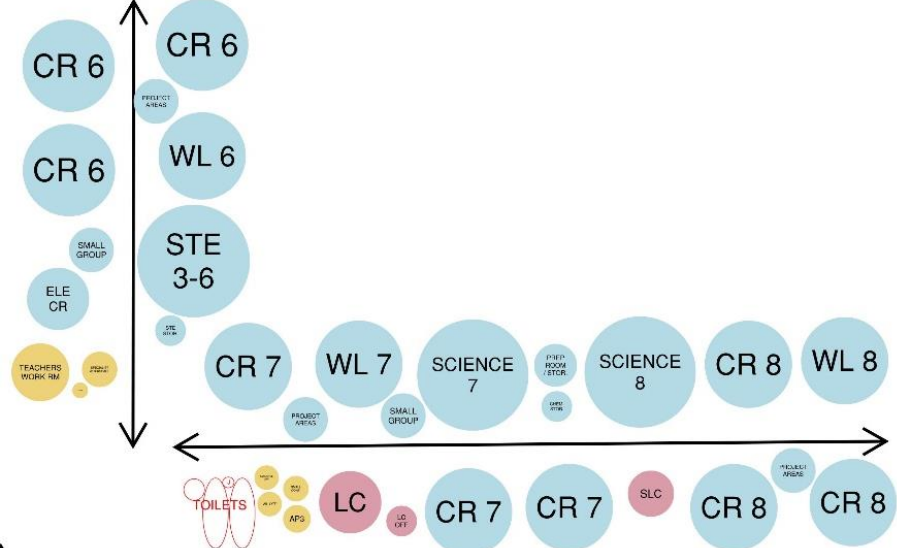


CLASSROOM BANDS

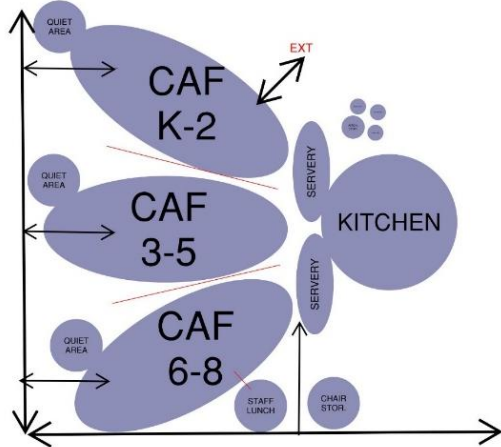
MS CLASSROOM BAND CLOSEST

CLASSROOM BANDS

Media Center

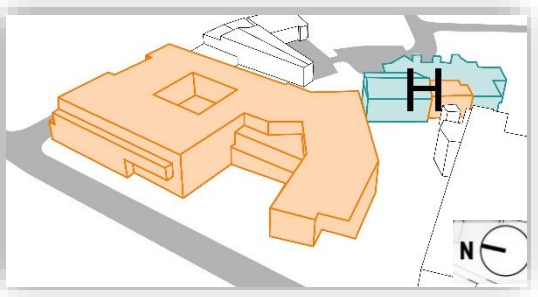


Sample Grade Band (Pre-K to 2, 3 to 5, 6 to 8)



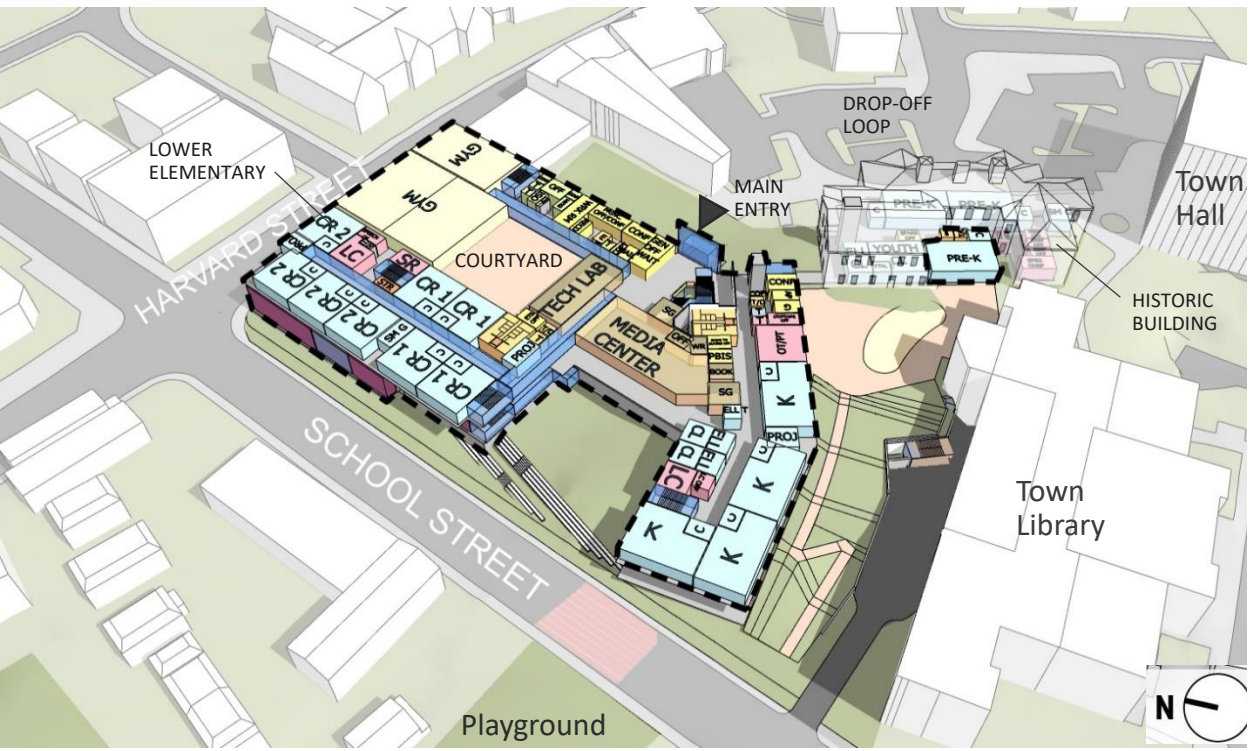
Dining and Food Service

# Massing and Program Relationships

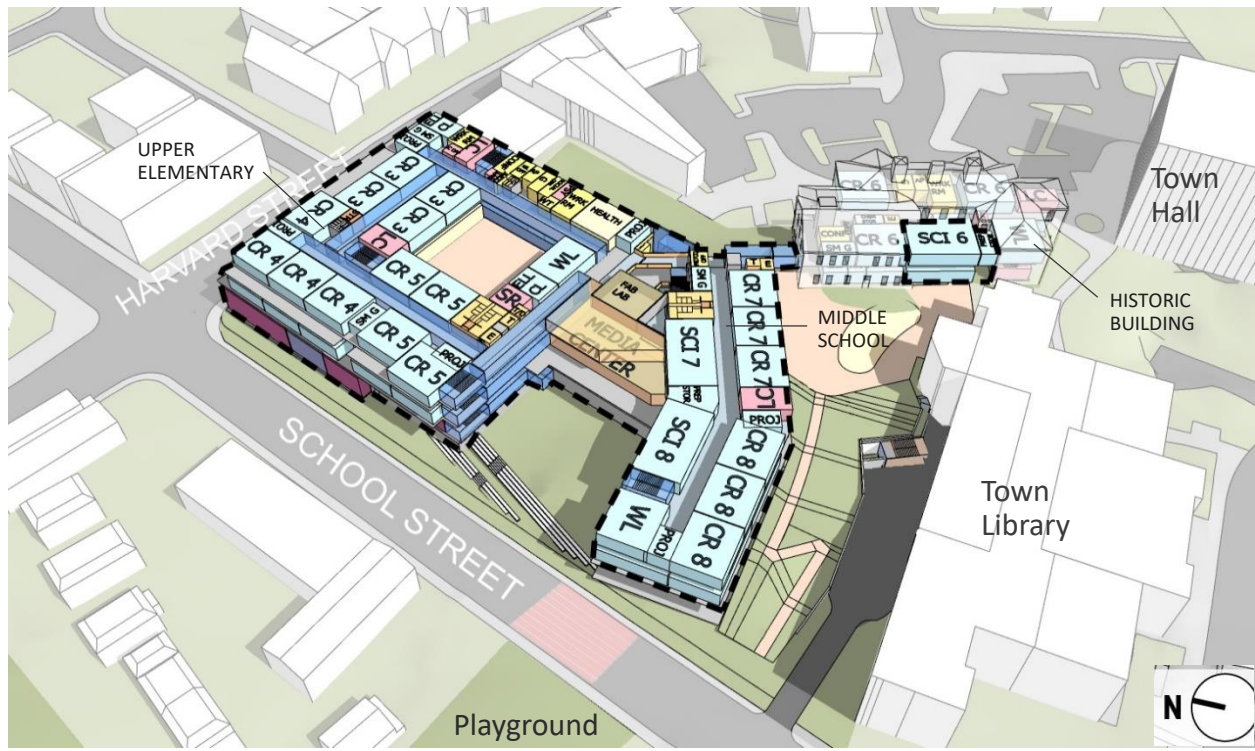


**LEGEND**

1. CORE ACADEMIC
2. SPECIAL EDUCATION
3. ART & MUSIC
4. VOCATIONS & TECHNOLOGY
5. HEALTH & PHYSICAL EDUCATION
6. MEDIA CENTER
7. DINING & FOOD SERVICE
8. MEDICAL
9. ADMINISTRATION & GUIDANCE
10. CUSTODIAL & MAINTENANCE
11. OTHER
12. PARKING INCLUDED
13. PARKING EXCLUDED
14. NON-PROGRAMMED SPACE



Level 2



Level 3

# Building Plans – Level 3



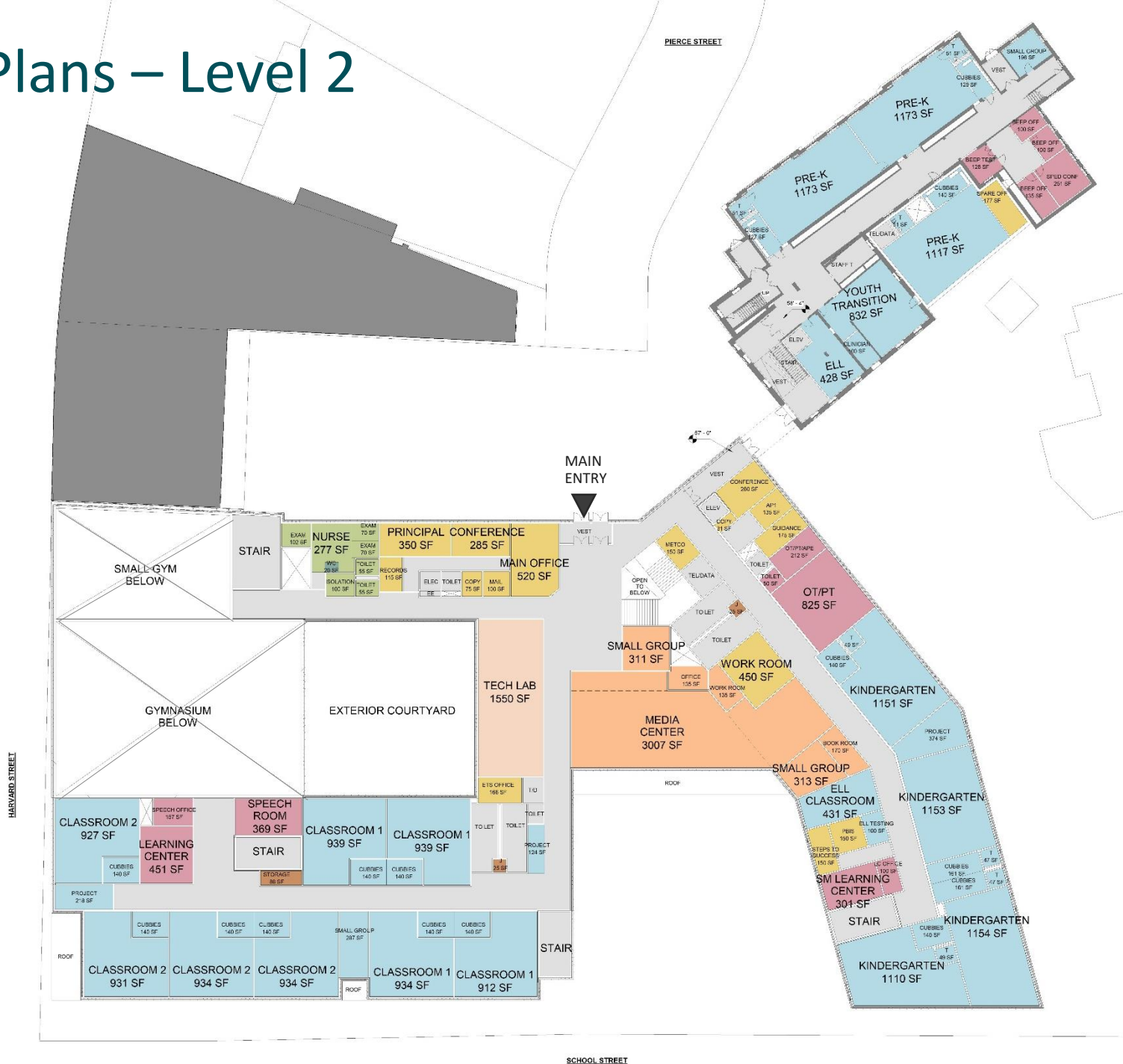
## LEGEND

- 1. CORE ACADEMIC
- 2. SPECIAL EDUCATION
- 3. ART & MUSIC
- 4. VOCATIONS & TECHNOLOGY
- 5. HEALTH & PHYSICAL EDUCATION
- 6. MEDIA CENTER
- 7. DINING & FOOD SERVICE
- 8. MEDICAL
- 9. ADMINISTRATION & GUIDANCE
- 10. CUSTODIAL & MAINTENANCE
- 11. OTHER
- 12. PARKING INCLUDED
- 13. PARKING EXCLUDED
- 14. NON-PROGRAMMED SPACE





# Building Plans – Level 2

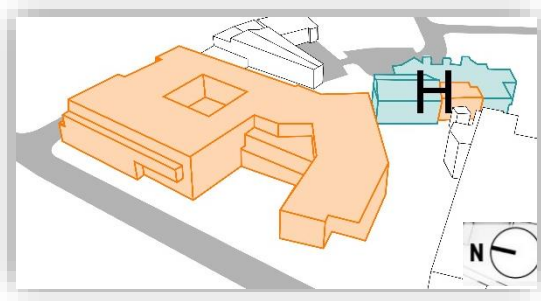


## LEGEND

- 1. CORE ACADEMIC
- 2. SPECIAL EDUCATION
- 3. ART & MUSIC
- 4. VOCATIONS & TECHNOLOGY
- 5. HEALTH & PHYSICAL EDUCATION
- 6. MEDIA CENTER
- 7. DINING & FOOD SERVICE
- 8. MEDICAL
- 9. ADMINISTRATION & GUIDANCE
- 10. CUSTODIAL & MAINTENANCE
- 11. OTHER
- 12. PARKING INCLUDED
- 13. PARKING EXCLUDED
- 14. NON-PROGRAMED SPACE

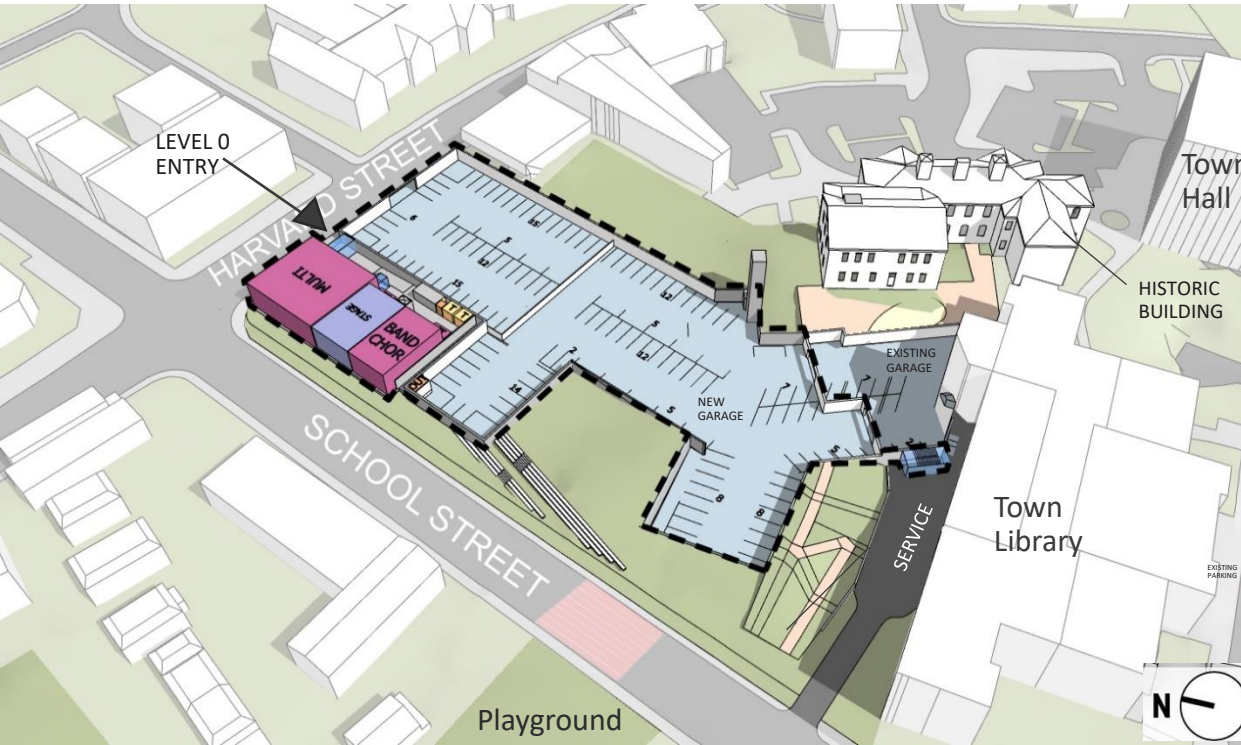


# Massing and Program Relationships

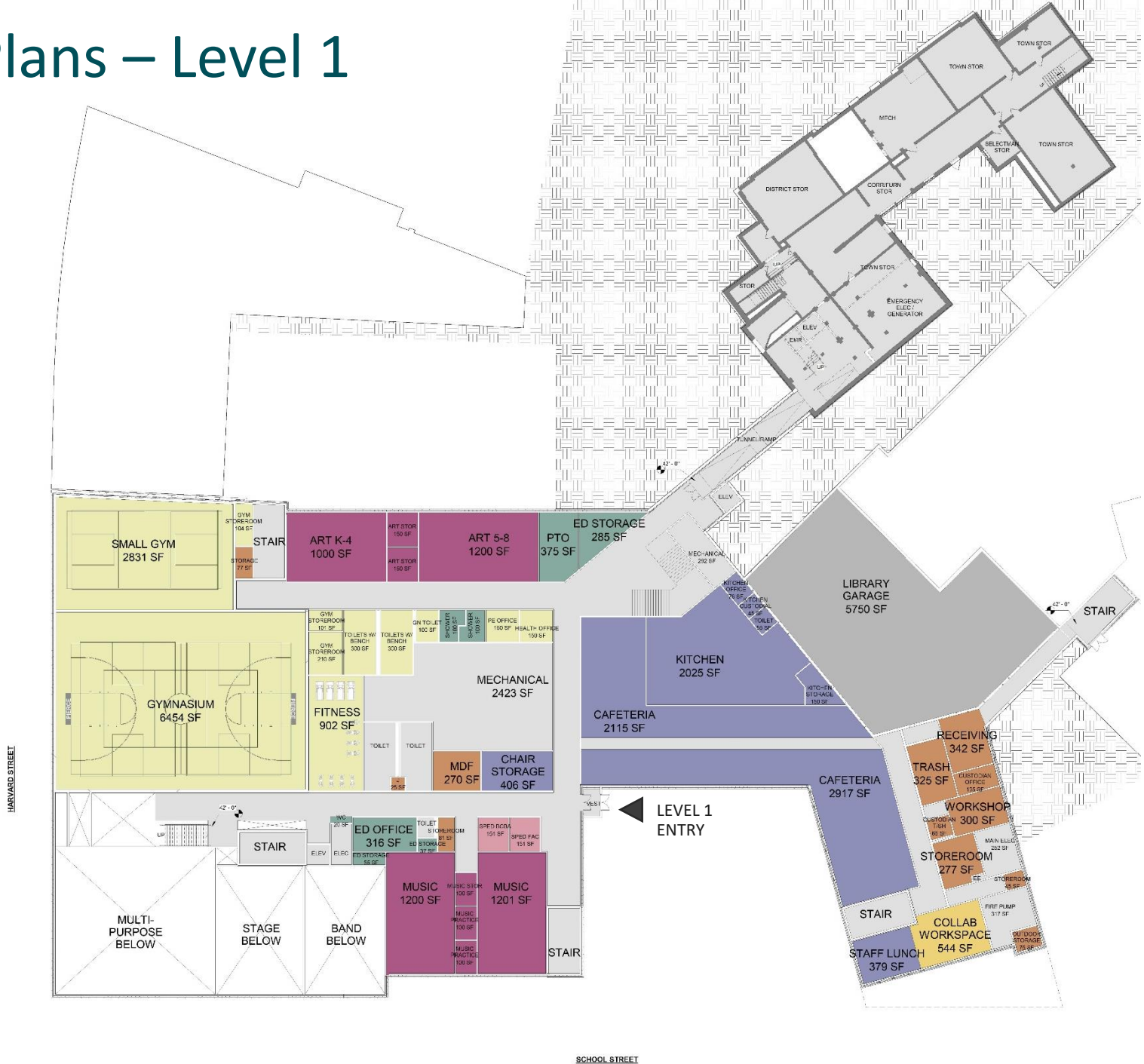


## LEGEND

- 1. CORE ACADEMIC
- 2. SPECIAL EDUCATION
- 3. ART & MUSIC
- 4. VOCATIONS & TECHNOLOGY
- 5. HEALTH & PHYSICAL EDUCATION
- 6. MEDIA CENTER
- 7. DINING & FOOD SERVICE
- 8. MEDICAL
- 9. ADMINISTRATION & GUIDANCE
- 10. CUSTODIAL & MAINTENANCE
- 11. OTHER
- 12. PARKING INCLUDED
- 13. PARKING EXCLUDED
- 14. NON PROGRAMMED SPACE



# Building Plans – Level 1

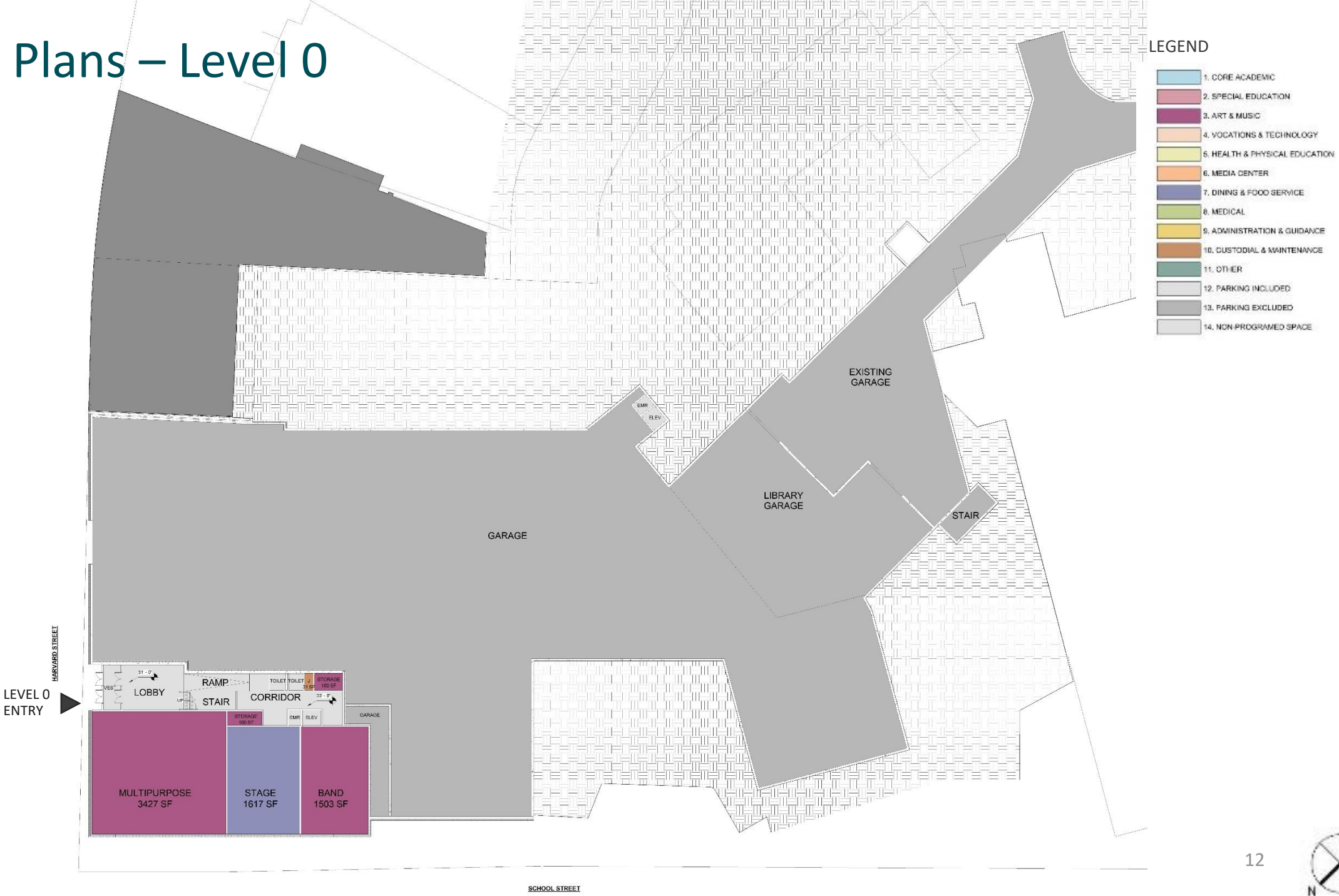


**LEGEND**

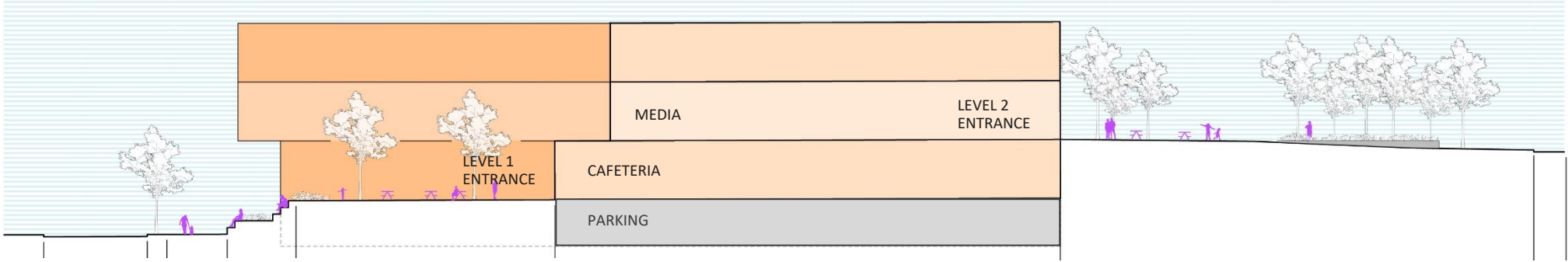
- 1. CORE ACADEMIC
- 2. SPECIAL EDUCATION
- 3. ART & MUSIC
- 4. VOCATIONS & TECHNOLOGY
- 5. HEALTH & PHYSICAL EDUCATION
- 6. MEDIA CENTER
- 7. DINING & FOOD SERVICE
- 8. MEDICAL
- 9. ADMINISTRATION & GUIDANCE
- 10. CUSTODIAL & MAINTENANCE
- 11. OTHER
- 12. PARKING INCLUDED
- 13. PARKING EXCLUDED
- 14. NON-PROGRAMMED SPACE



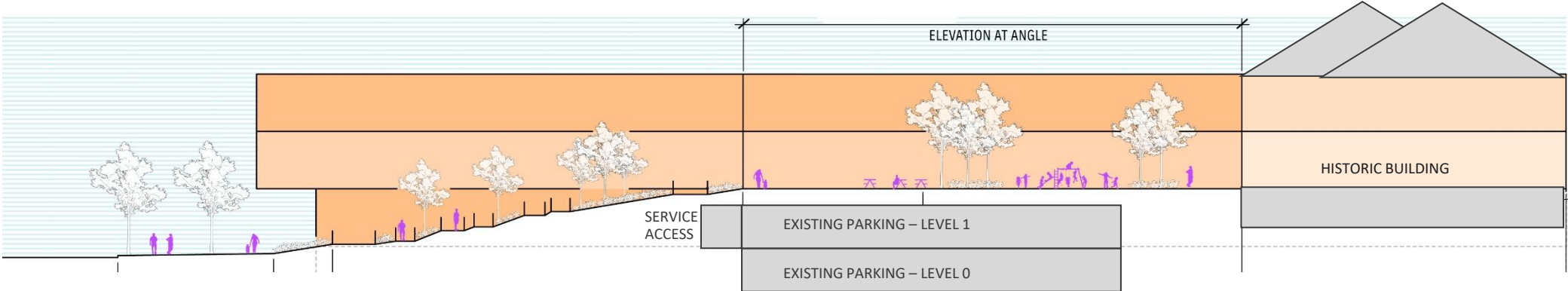
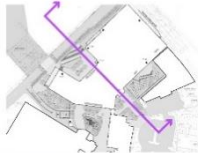
# Building Plans – Level 0



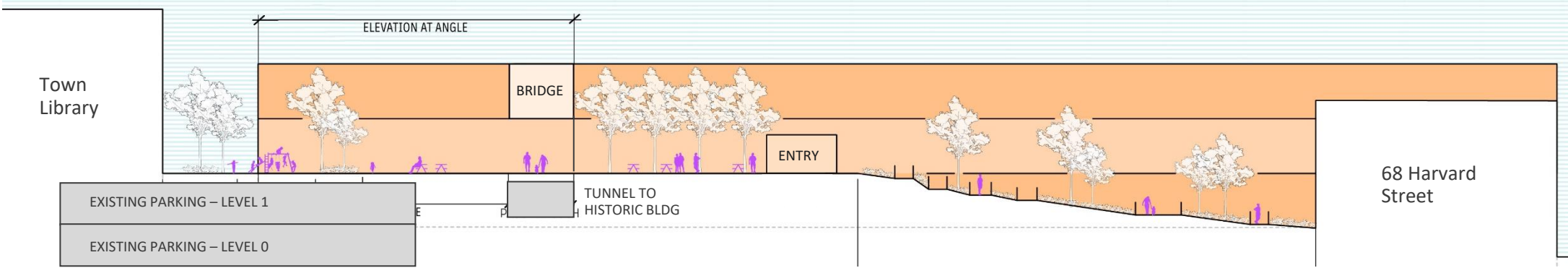
# Site Sections



West – East at Proposed Building



West – East at Historic Building



South – North at Historic Building



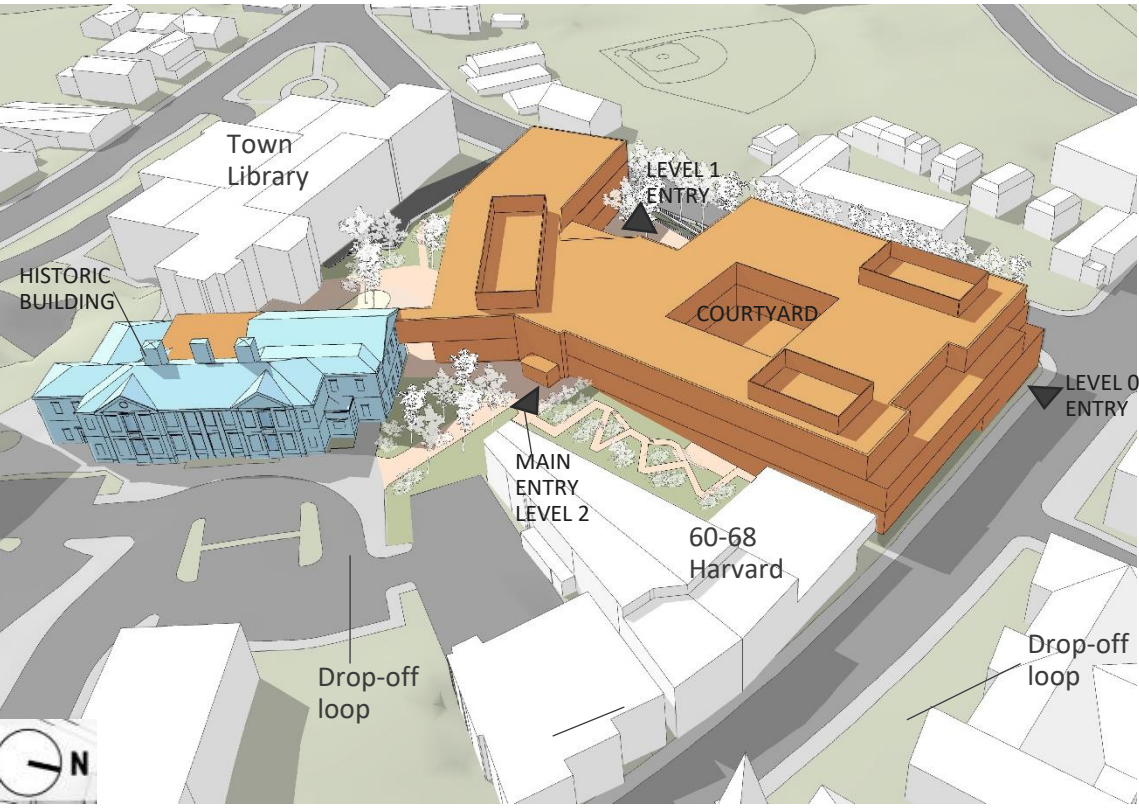
# Massing and Potential Expansion



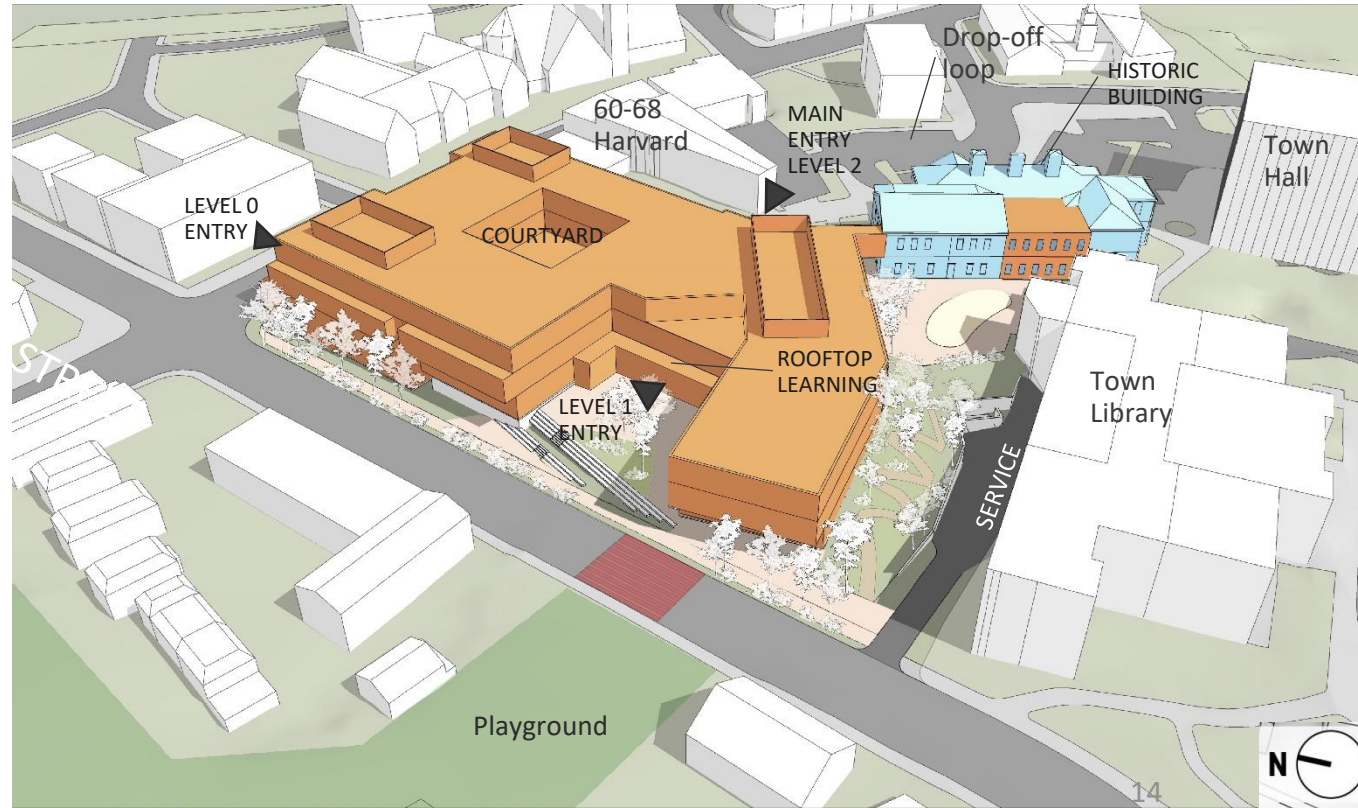
FUTURE ADDITION – LOOKING WEST



FUTURE ADDITION – LOOKING EAST



BASE CONFIGURATION – LOOKING WEST



BASE CONFIGURATION – LOOKING EAST

# Program and Site

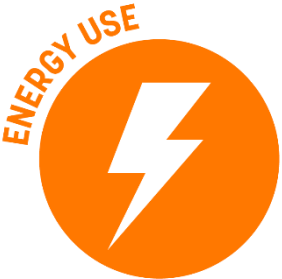


Site Program



Site Plan

# Sustainability Strategies



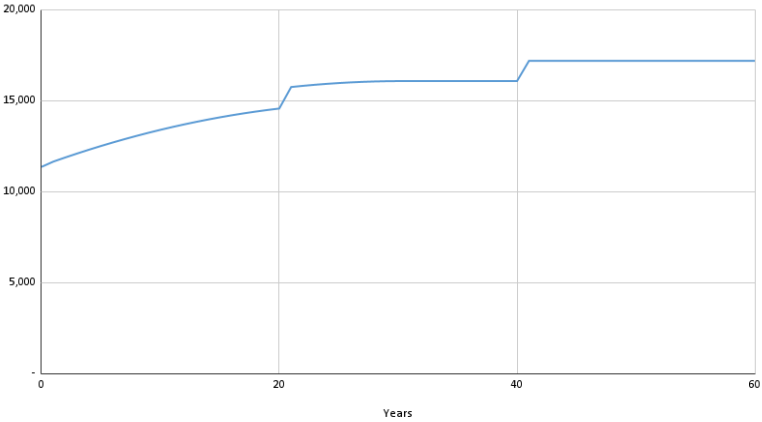
**Electrification of building systems**  
**Minimizing loads -envelope, WWR, insulation > code**  
**Minimizing loads -systems, efficiency, geothermal**  
**Maximizing PV, then offsite renewable purchasing**



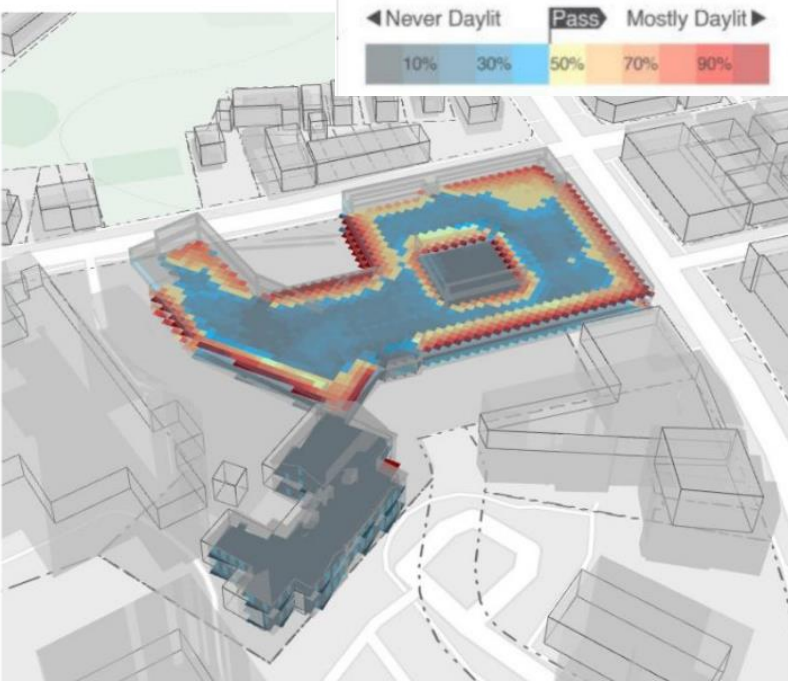
**Maximizing daylighting and orientation**  
**Indoor Air Quality, ventilation/filtration, healthy materials**  
**Sustainable transportation, non-car transportation**  
**Design for outdoor learning and play**



**Reuse of existing historic elements**  
**Low-carbon materials for structure, envelope, interiors**  
**Landscape carbon sequestration and reinvestment**



**Total Carbon Emissions**  
Operational and Embodied



Daylight Analysis



# Sustainability Strategies

**EUI (Energy Use Intensity) 19**  
Including geothermal,  
(not PV)

**ROOF SOLAR PV**  
60% of roof area min

**HIGH PERFORMANCE ENVELOPE**  
Optimizing daylight  
Optimizing window-wall ratio  
Optimizing insulation

**HISTORIC BUILDING**  
Preserve existing  
embodied carbon

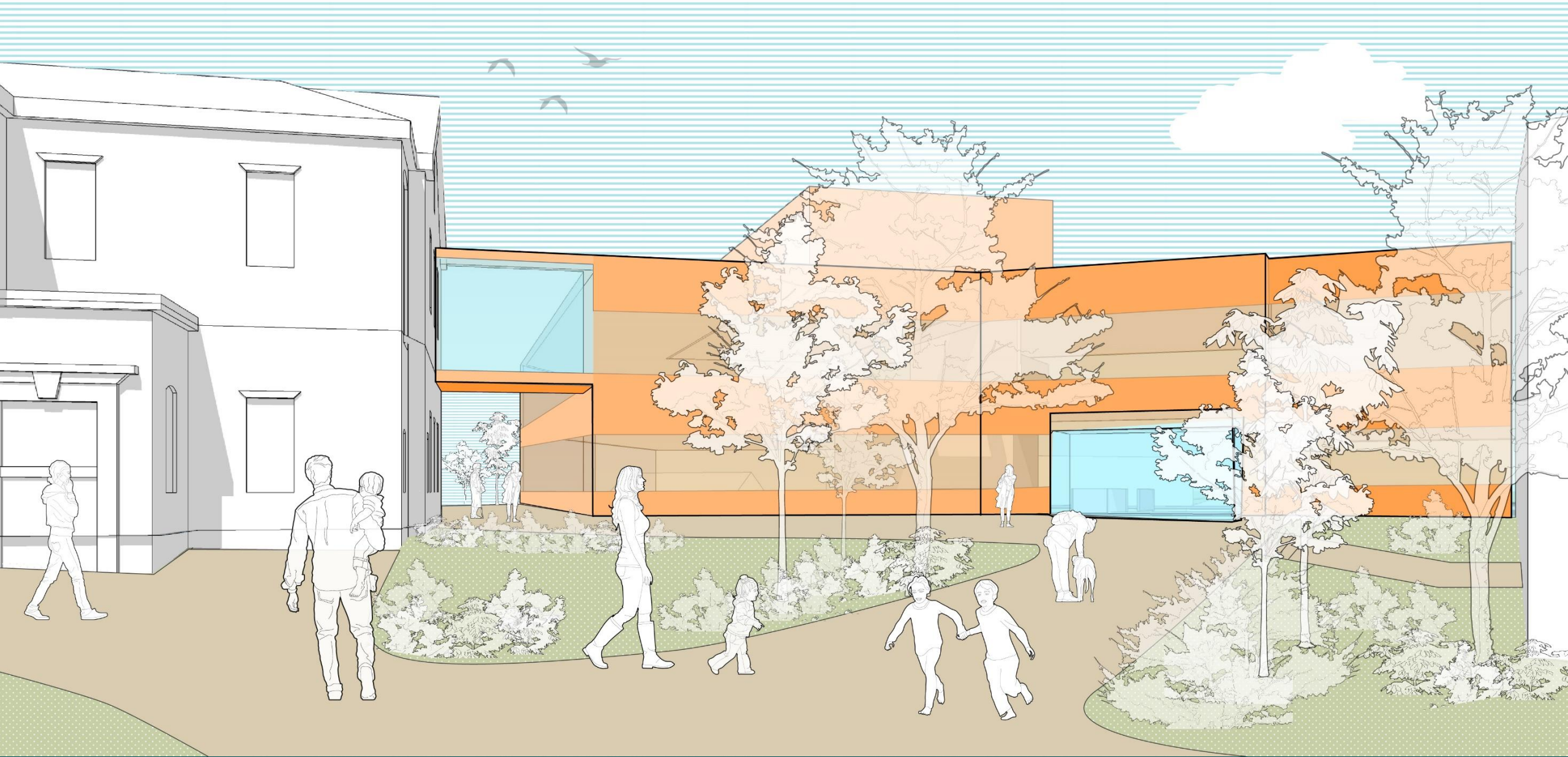
**OVERHANG  
SHADING AND PV**  
South, SE, SW,  
possible PV

**ROOF GARDEN**  
Courtyard



# Preliminary Design Pricing Table

Option (Description)	Total Gross Square Feet	Square Feet of Renovated Space (\$*/SF)	Square Feet of New Construction (\$*/SF)	Site, Building Takedown, Haz Mat Etc. (\$*)	Estimated Total Construction** (\$*)	Estimated Total Project Costs (\$)
<b>Option R - Code Upgrade</b> <i>Garage Reno Only:</i> <i>78,277sf / \$3,592,349*</i>	226,072 sf	226,072 sf \$ 352.86 \$/sf	- sf \$ - \$/sf	\$ 6,727,467	\$ 86,498,489 \$ 382.61 \$/sf	\$ 137,696,498
<b>Option 1 - Add / Reno</b> <i>Garage Reno: 66,004sf / \$4,080,384*</i> <i>New Garage: 27,387sf / \$5,281,263*</i>	301,445 sf	178,294 sf \$ 363.51 /sf	123,151 sf \$522.29 \$/sf	\$ 14,439,070	\$ 143,572,028 \$ 476.28 \$/sf	\$ 210,499,587
<b>Option 2b - Add / Reno</b> <i>Garage Reno: 48,893sf / \$3,022,566*</i> <i>New Garage: 32,378sf / \$6,243,779*</i>	298,825 sf	128,294 sf \$ 304.78 /sf	170,531 sf \$540.49 \$/sf	\$ 16,060,900	\$ 147,332,597 \$ 493.04 \$/sf	\$ 215,618,699
<b>Option 3b-H*** - Add / Reno</b> <i>Garage Reno: 24,646sf / \$1,523,622*</i> <i>New Garage: 47,228sf / \$8,340,771*</i>	255,363 sf	55,122 sf \$ 329.39 /sf	200,241 sf \$ 569.86 \$/sf	\$ 18,251,936	\$ 150,518,572 \$ 589.43 \$/sf	\$ 220,000,000
<b>Option 3b - New Construction</b> <i>Garage Reno: 25,911sf / \$1,601,825*</i> <i>New Garage: 46,912sf / \$9,071,778*</i>	203,181 sf	25,911 sf \$ 156.43 /sf	177,270 sf \$ 663.75 \$/sf	17,553,680	\$ 139,269,845 \$ 685.45 \$/sf	\$ 219,966,521



Thank you!

# PSR Options Comparable / Probable Total Project Budget

Student Enrollment Pre-K - 8: 773 Students	Option 2B	Option 3B	Option 3B-H	Option R	Option 1
Renovation - Existing 1970s Building	\$ 15,630,992	\$ -	\$ -	\$ 39,931,099	\$ 29,967,336
Renovation - Existing Historic Building	\$ 7,800,383	\$ -	\$ 10,837,267	\$ 7,792,977	\$ 9,676,016
Renovation - Existing Parking Garage	\$ 2,174,508	\$ 1,152,392	\$ 1,096,131	\$ 2,584,424	\$ 2,935,528
Disconnecting from Historic Building	\$ -	\$ 1,500,000	\$ -	\$ -	\$ -
New Construction - School Building	\$ 49,868,515	\$ 65,190,199	\$ 63,644,431	\$ -	\$ 33,058,183
New Construction - Connector Bridge to Historic	\$ 900,000	\$ -	\$ -	\$ -	\$ -
New Construction - Parking Garage	\$ 4,491,927	\$ 6,526,459	\$ 6,000,555	\$ -	\$ 3,799,470
Demolition - Building	\$ 1,093,213	\$ 1,700,314	\$ 1,700,314	\$ -	\$ 514,823
Demolition - Garage	\$ 293,840	\$ 523,510	\$ 536,310	\$ -	\$ 122,730
Demolition - Structural Slab	\$ 448,726	\$ 678,315	\$ 678,315	\$ -	\$ 101,442
HAZMAT Removal Allowance - Existing Buildings	\$ 2,720,580	\$ 2,345,260	\$ 2,650,580	\$ 2,650,580	\$ 2,650,580
HAZMAT Removal Allowance - Existing Garage	\$ 1,047,786	\$ 1,047,786	\$ 1,173,240	\$ 939,324	\$ 1,047,786
Sitework	\$ 5,950,459	\$ 6,333,362	\$ 6,392,130	\$ 1,250,000	\$ 5,950,459
PV Panels (800KW)	\$ 2,640,000	\$ 2,640,000	\$ 2,640,000	\$ -	\$ 2,640,000
HVAC Option 2 - Ground Source Heat Pump Chiller	\$ 4,233,044	\$ 3,981,014	\$ 4,130,265	\$ -	\$ 4,217,635
<b>TOTAL CONSTRUCTION COSTS</b>	<b>\$ 99,293,972</b>	<b>\$ 93,618,609</b>	<b>\$ 101,479,536</b>	<b>\$ 55,148,404</b>	<b>\$ 96,681,986</b>
Design & Estimating Contingency	\$ 14,259,139	\$ 13,445,640	\$ 14,602,391	\$ 8,272,261	\$ 13,869,639
General Conditions (32 mos)	\$ 5,840,000	\$ 5,840,000	\$ 5,840,000	\$ 5,482,131	\$ 5,840,000
General Requirements	\$ 3,805,242	\$ 3,592,181	\$ 3,893,941	\$ 2,279,175	\$ 3,702,275
Insurances + Bonds	\$ 3,897,370	\$ 3,667,679	\$ 3,973,583	\$ 2,355,046	\$ 3,770,940
CM Fee (Overhead & Profit)	\$ 3,439,600	\$ 3,250,981	\$ 3,517,639	\$ 2,080,286	\$ 3,348,059
CM GMP Contingency	\$ 3,584,122	\$ 3,393,719	\$ 3,678,277	\$ 2,099,423	\$ 3,503,938
Escalation	\$ 13,213,152	\$ 12,461,037	\$ 13,533,205	\$ 8,781,764	\$ 12,855,191
<b>TOTAL ESTIMATED COSTS</b>	<b>\$ 147,332,597</b>	<b>\$ 139,269,845</b>	<b>\$ 150,518,571</b>	<b>\$ 86,498,489</b>	<b>\$ 143,572,028</b>
Soft Costs Calculated at 22%	\$ 32,943,569	\$ 31,140,737	\$ 32,745,639	\$ 19,341,062	\$ 32,102,705
TOB Project Management Costs	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000
Feasibility Study Cost	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000
Relocation Costs	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000	\$ 25,000,000
Roadway Rework	\$ 3,356,947	\$ 3,356,947	\$ 3,356,946	\$ 3,356,947	\$ 3,356,947
<b>TOTAL ESTIMATED PROJECT COSTS</b>	<b>\$ 212,133,112</b>	<b>\$ 202,267,529</b>	<b>\$ 215,121,156</b>	<b>\$ 137,696,498</b>	<b>\$ 207,531,680</b>
HVAC Option 3 - VRF System	\$ (3,561,646)	\$ (3,264,848)	\$ (3,508,908)	\$ -	\$ (3,666,125)
Mass Timber	\$ 3,485,587	\$ 5,198,992	\$ 4,878,845	\$ -	\$ 2,967,907
<b>TOTAL ESTIMATED PROJECT COSTS W/ ALTERNATES**</b>	<b>\$ 215,618,699</b>	<b>\$ 207,466,521</b>	<b>\$ 220,000,000</b>	<b>\$ 137,696,498</b>	<b>\$ 210,499,587</b>

\* Does not include cost to disconnect from Historic Building

\*\*HVAC Option 3 not carried in this cost, only one HVAC option can be chosen

Alternate Use Reno	Historic Bldg \$
Construction Costs	\$ 10,000,000
Project Soft Costs	\$ 2,500,000
<b>Estimated Project Cost</b>	<b>\$ 12,500,000</b>
<b>Cost of 3B + Historic Building Reno</b>	<b>\$ 219,966,521</b>

## Sustainability:

- Geothermal Wells
- PV Panels
- Mass Timber Elements
- Fossil Fuel Free

## Garage:

- Replace Existing Underground Parking
- Renovate Connection to Existing to Remain Portion of Garage

## School Street Crossing:

- Community Pushing for Alterations at School Street for Safer Crossing to Playground

## Relocation Costs:

- Carrying the Conservative Cost as Town Negotiates Swing Space

## Historic Building Considered in Decision:

- Cost to Renovate Outside of Project Considered in Option 3B

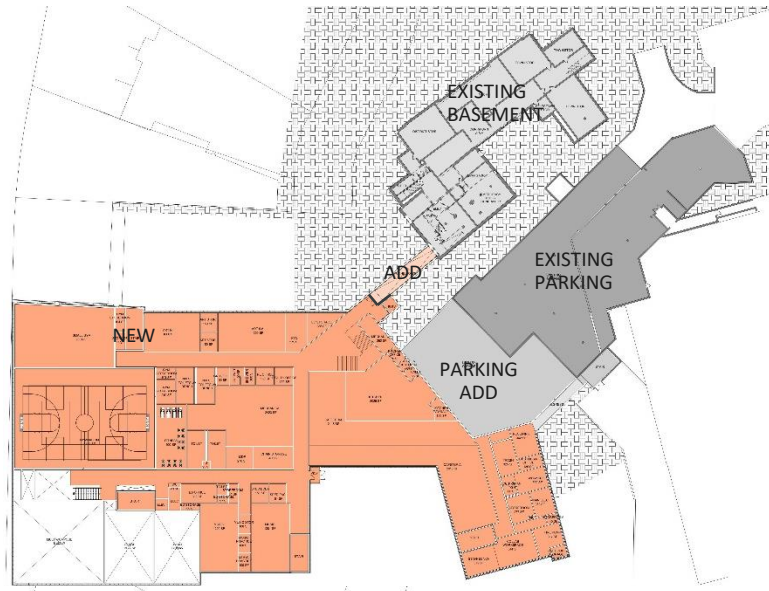
# New vs. Add/Reno Areas



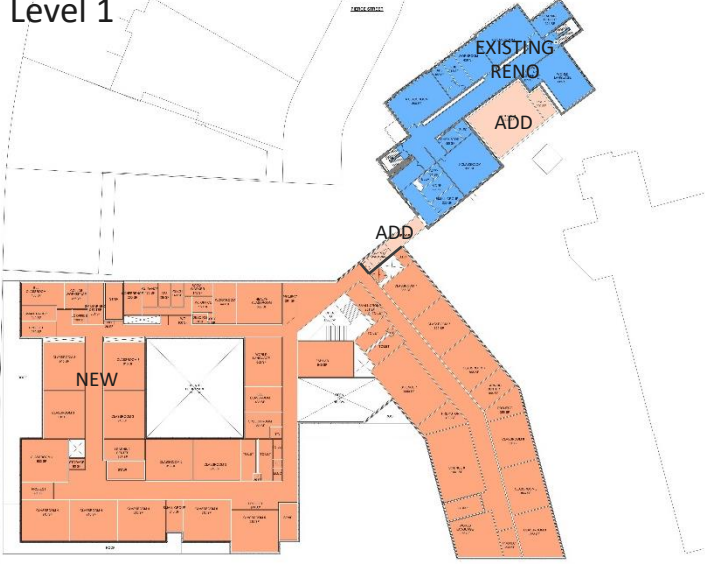
Level 0



Level 2



Level 1



Level 3

