Mindess School Building Project

Schematic Design Phase

Special Town Meeting

January 23, 2021

Compass Project Management

Ashland Public Schools

FLANSBURGH

Agenda

- Introductions
- Site Planning
- Building Organization and Floor Plans
- Sustainability
- Schedule Review
- Budget & Reimbursement Review
- Discussions and Questions

Building Committee Members

Michael Herbert	Town Manager
James Adams	Superintendent
Yolanda Greaves	Select Board
Paul Kendall	School Committee
Chris Mathieu	Director of Finance and Operations
Paul Carpenter	Director of IT
Ron Mortensen	Director of Facilities
Michael Caira	Assist. Superintendent
Claudia Bennett	Mindess Principal
Melissa Mercon Smith	Director Extended Day Program
Ed Hart	Finance Committee
Christopher Lee	Community Member
Nicholas DiGiovanni	Community Member
Ketan Joshi	Community Member
Tilak Subrahmanian	Community Member
Tim MacKay	Community Member
Michael Kane	Community Member

Project Team

Project Management

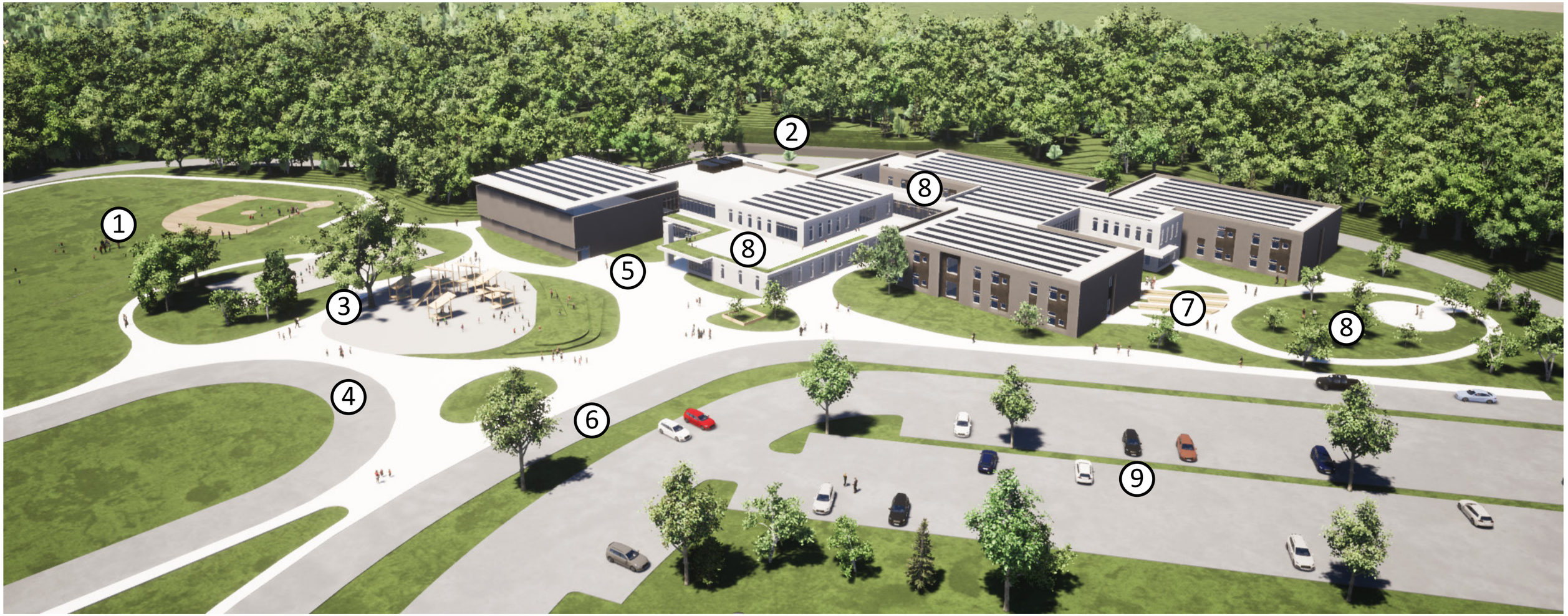
Jeff D'Amico	Compass Project Management
Mike Quinlan	Compass Project Management
Laureen Westman	Compass Project Management

Design Team

Kent Kovacs	Flansburgh Architects
Bill Beatrice	Flansburgh Architects
Chris Schaffner	The Green Engineer

Site Planning

Mindess Campus



1. Play Fields
2. Emergency/Service Road
3. Play Area
4. Bus Pick-up and Drop-off
5. Entry Plaza
6. Parent Pick-up and Drop-off
7. Garden Beds
8. Outdoor Learning
9. Parking

Site Plan

A. Neighborhood Response

- Dense buffer plantings and existing woodland between residential neighborhood and parking and school building
- Welcoming campus green along site's frontage on Concord Street

B. Community Play / Athletics

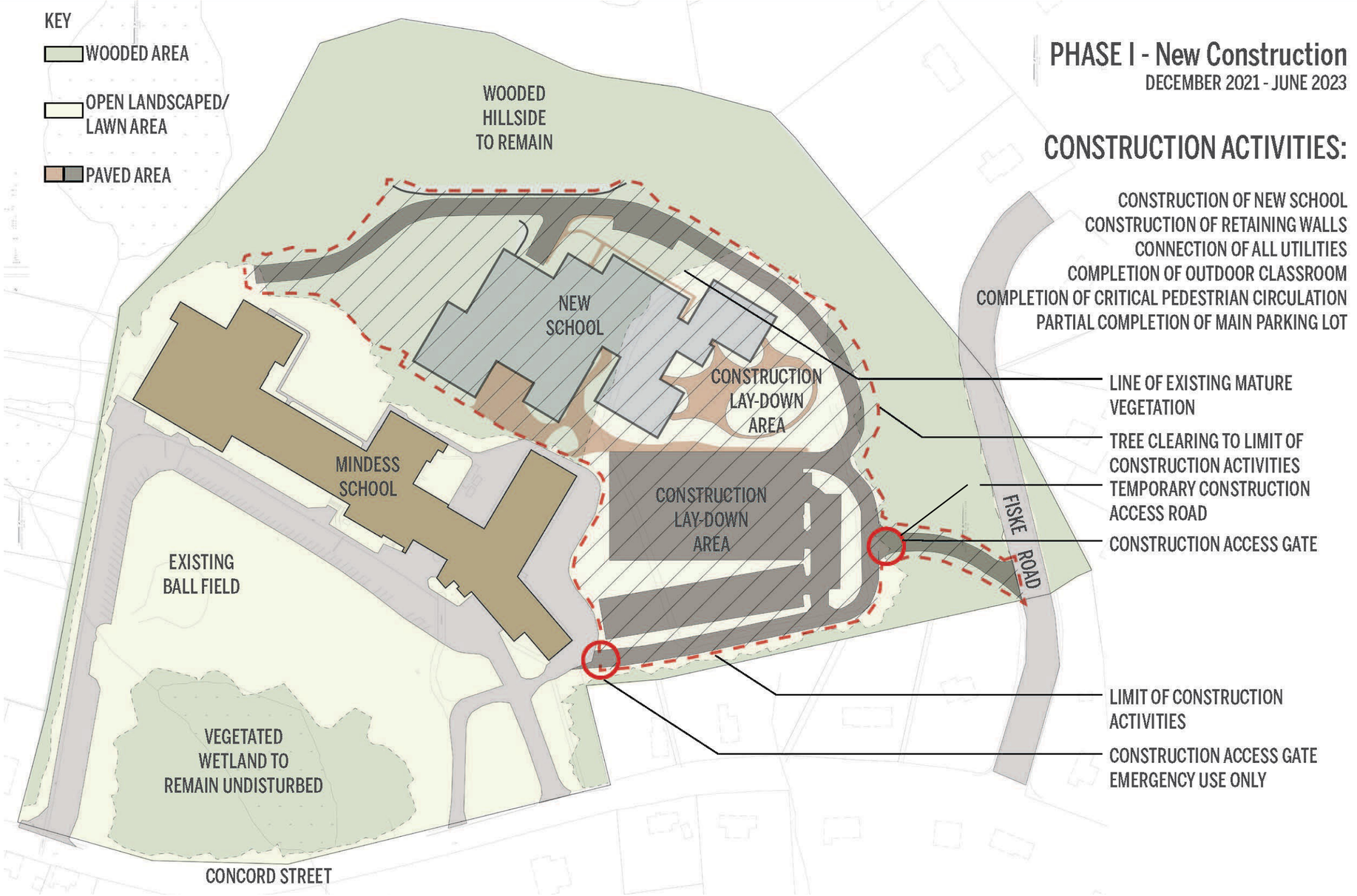
- Interior and exterior programming are linked - Play area and ball fields are located immediately adjacent to the gymnasium and the cafeteria
- Play area, ball fields, gymnasium and cafeteria are additional resources to the community during non-school hours.
- Heavy wooded area to far west between fields and neighboring residences.

C. Outdoor learning opportunities

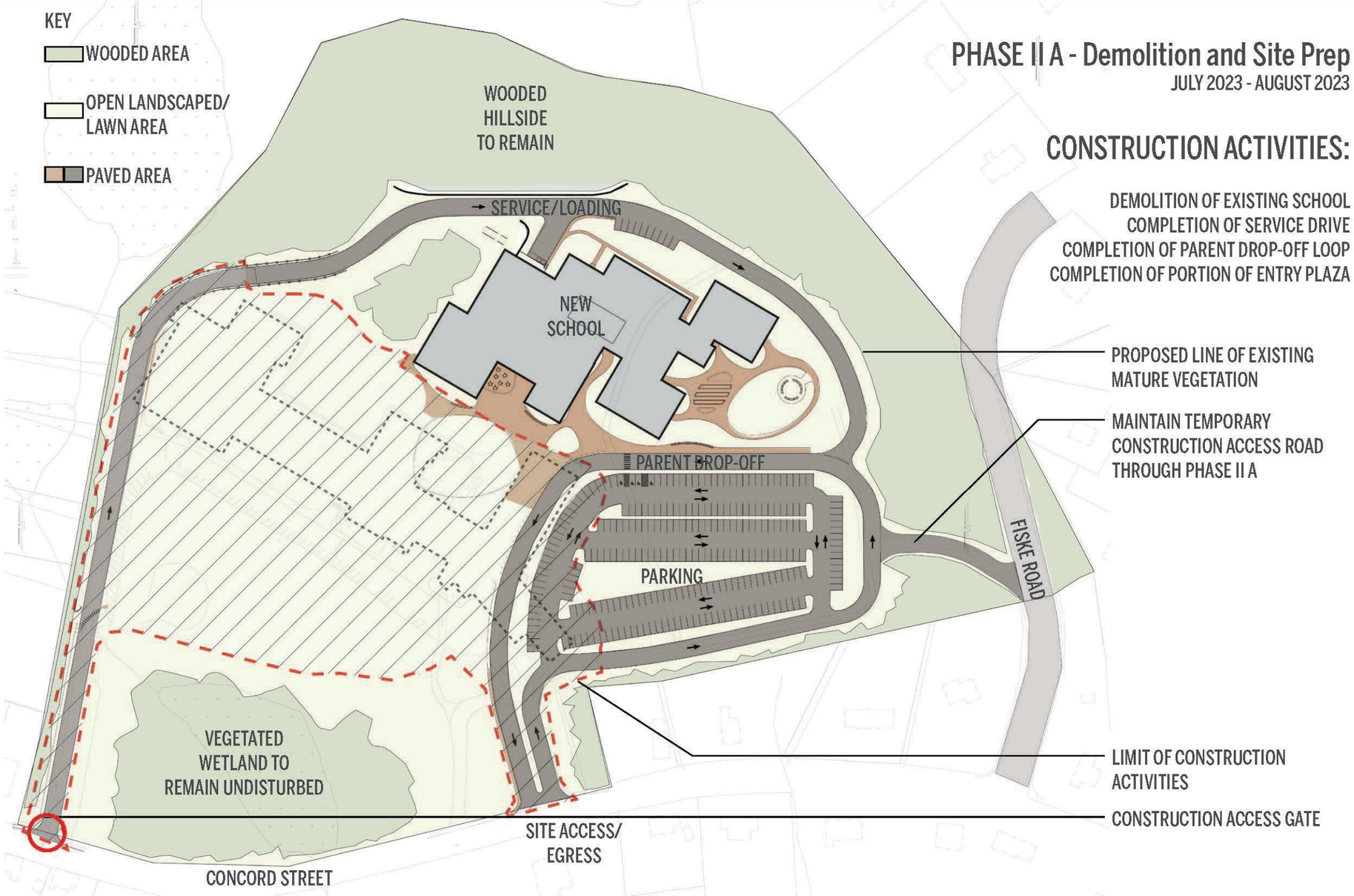
- Interior and exterior programming are linked - class-rooms, outdoor learning areas and gardens are located at the quiet, recessive portion of the site, pro-viding students with daily views of nature.
- Existing natural features such as wetlands, ledge out-croppings and mature woodlands provide students with unique learning experiences
- Mature woodland can provide community with areas for woodland trails and exercise paths

Existing Aerial Image

Phasing Plans



Phasing Plans



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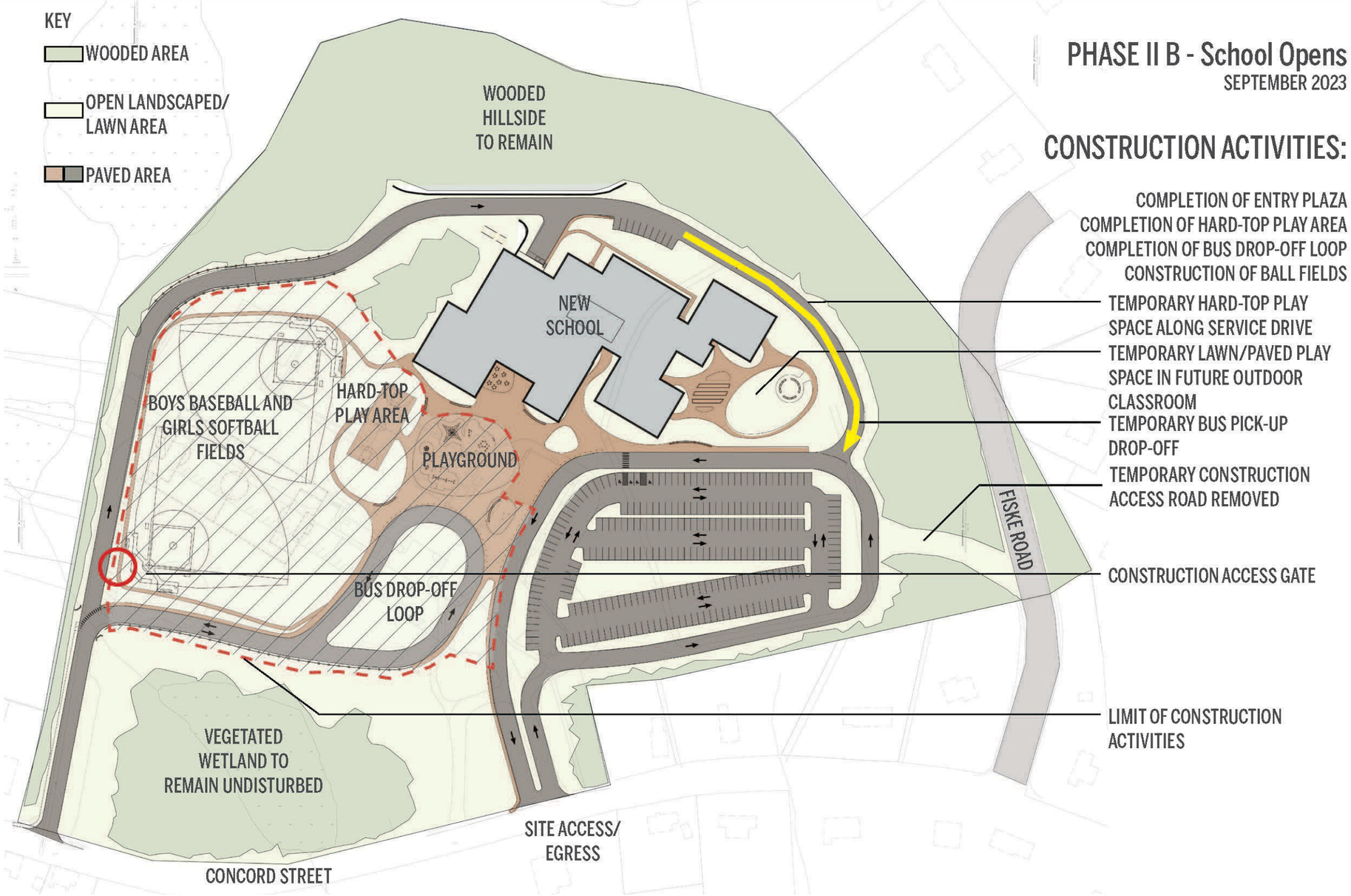

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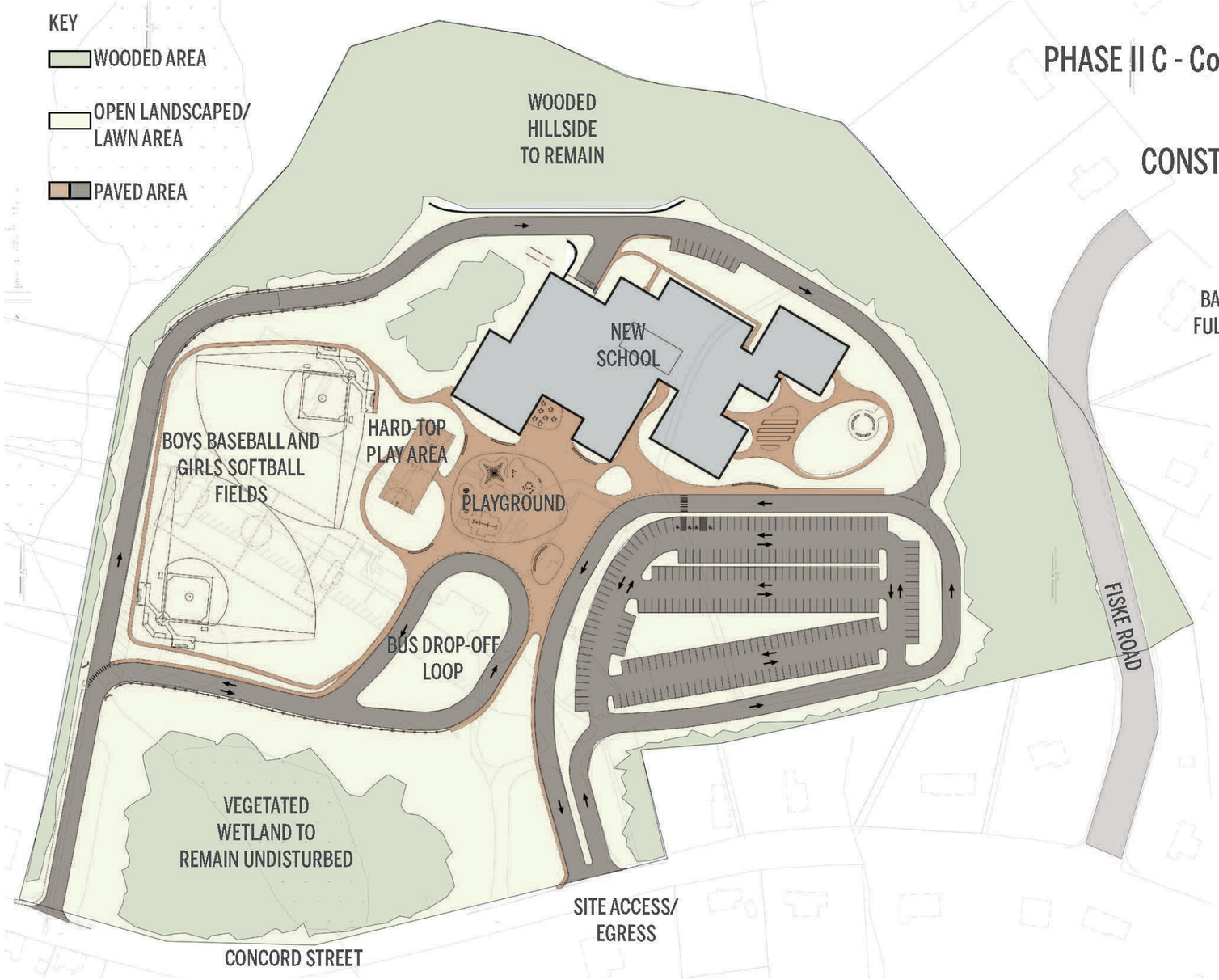


PHASE II C - Completion of Site Work

SEPTEMBER 2023-MAY 2024

CONSTRUCTION ACTIVITIES:

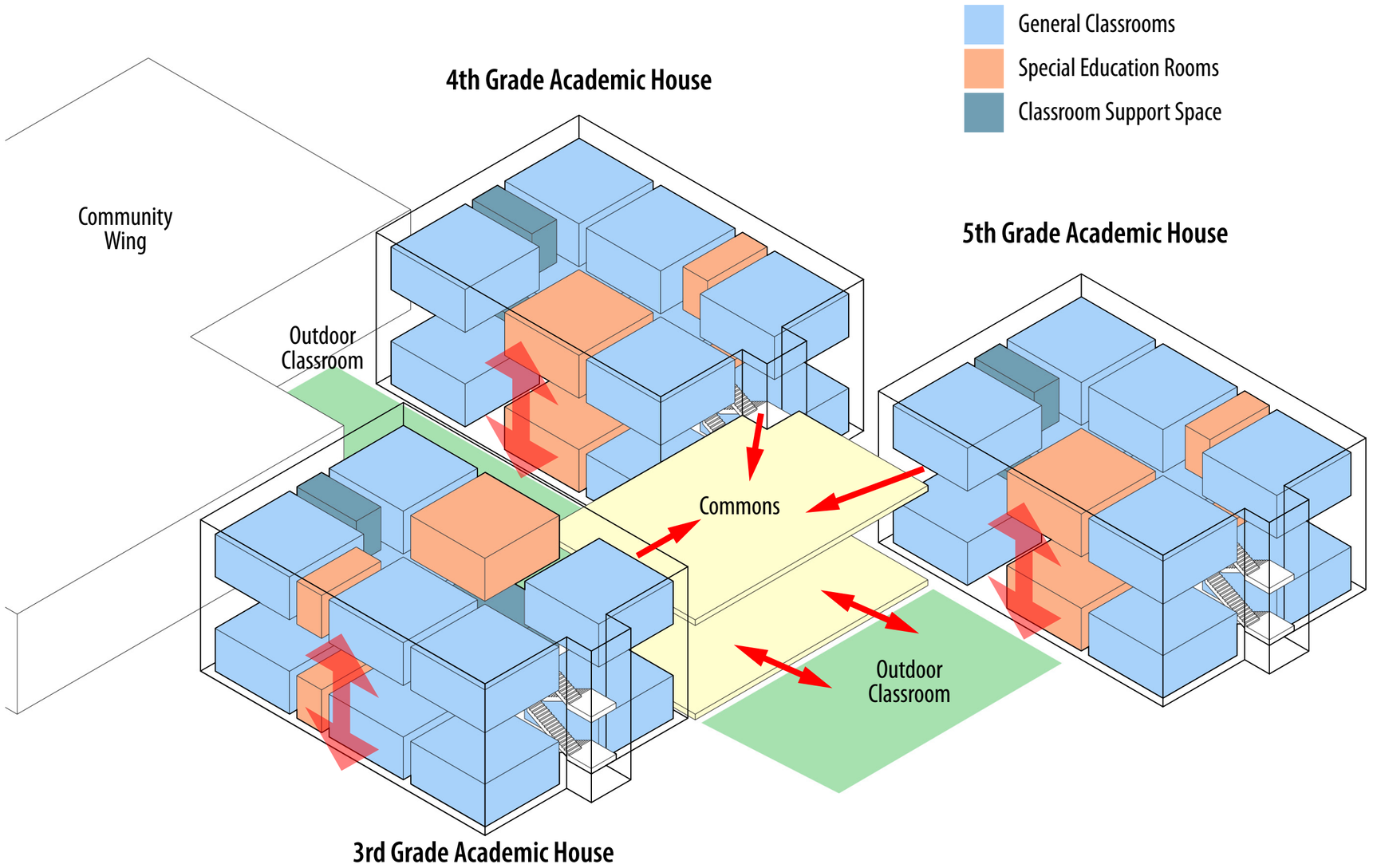
PLAYGROUNDS AND BUS LOOP AVAILABLE SPRING 2024

BALL FIELDS REQUIRE AT LEAST ONE FULL GROWING SEASON BEFORE USE

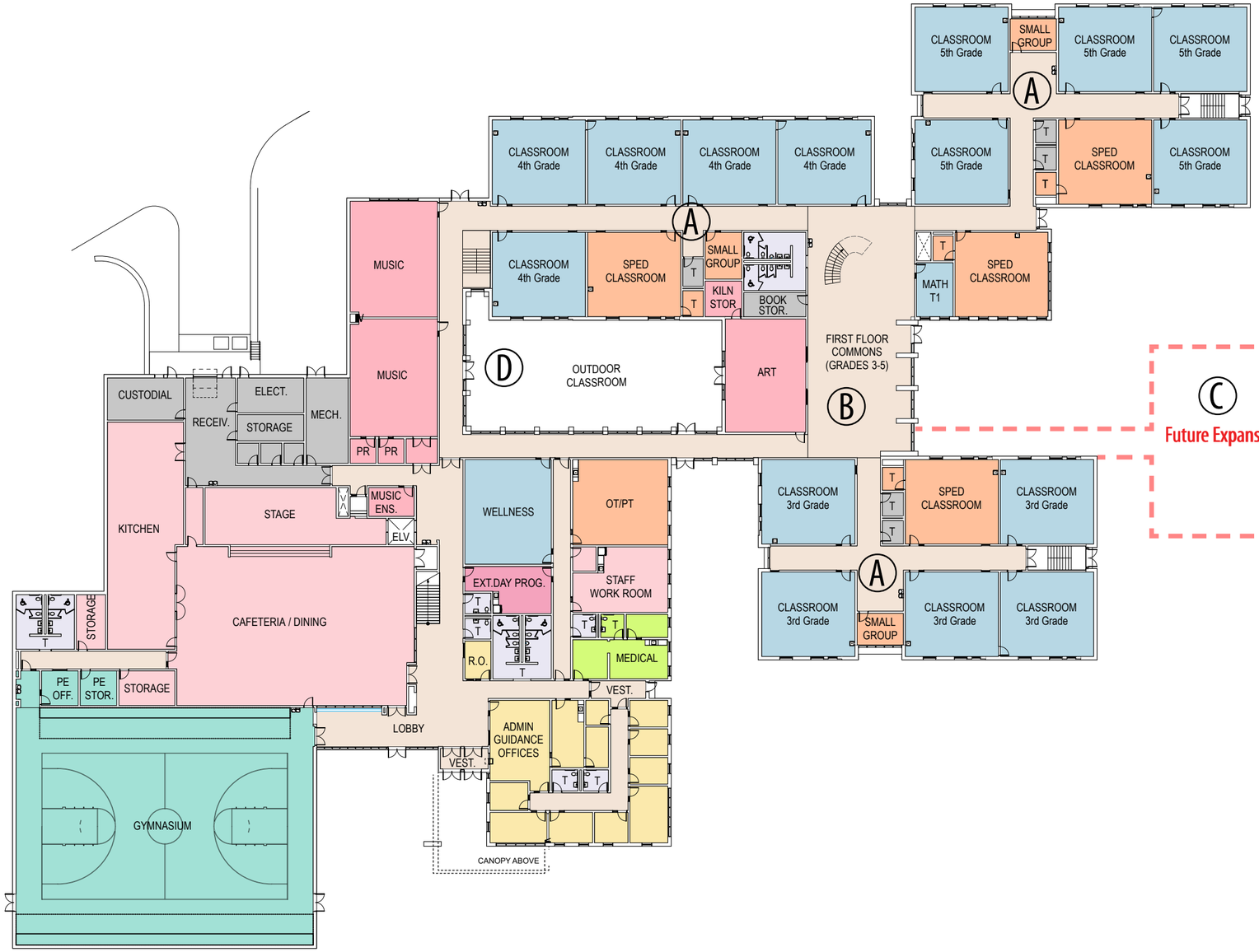
Building Organization and Floor Plans

Academic Houses

- Each academic house contains special education rooms, classroom support space, and 10 general classrooms with 5 rooms split between two floors.
- Academic houses group classrooms together taking away the need for long hallways.
- This provides more opportunity for outdoor connections (visual and physical) and increases interaction and collaboration opportunities between the academic houses



First Floor Plan



A. Three-Pod Configuration provides distinct grade level academies and an "all-school" experience by floor.

B. The commons provides access to the academic houses, enrichment spaces such as the arts and outdoor learning opportunities. This space is envisioned as an active hub supporting team collaboration, gatherings, and casual interactions.

C. The future expansion area provides room for the school to grow while staying within the framework of the new building.

D. The Outdoor Classroom provides natural daylight into the core of the school with visual and physical connections to the Arts, music, wellness and OT/PT. The space is envisioned as hardscape for ease of maintenance.

Second Floor Plan


LIBRARY

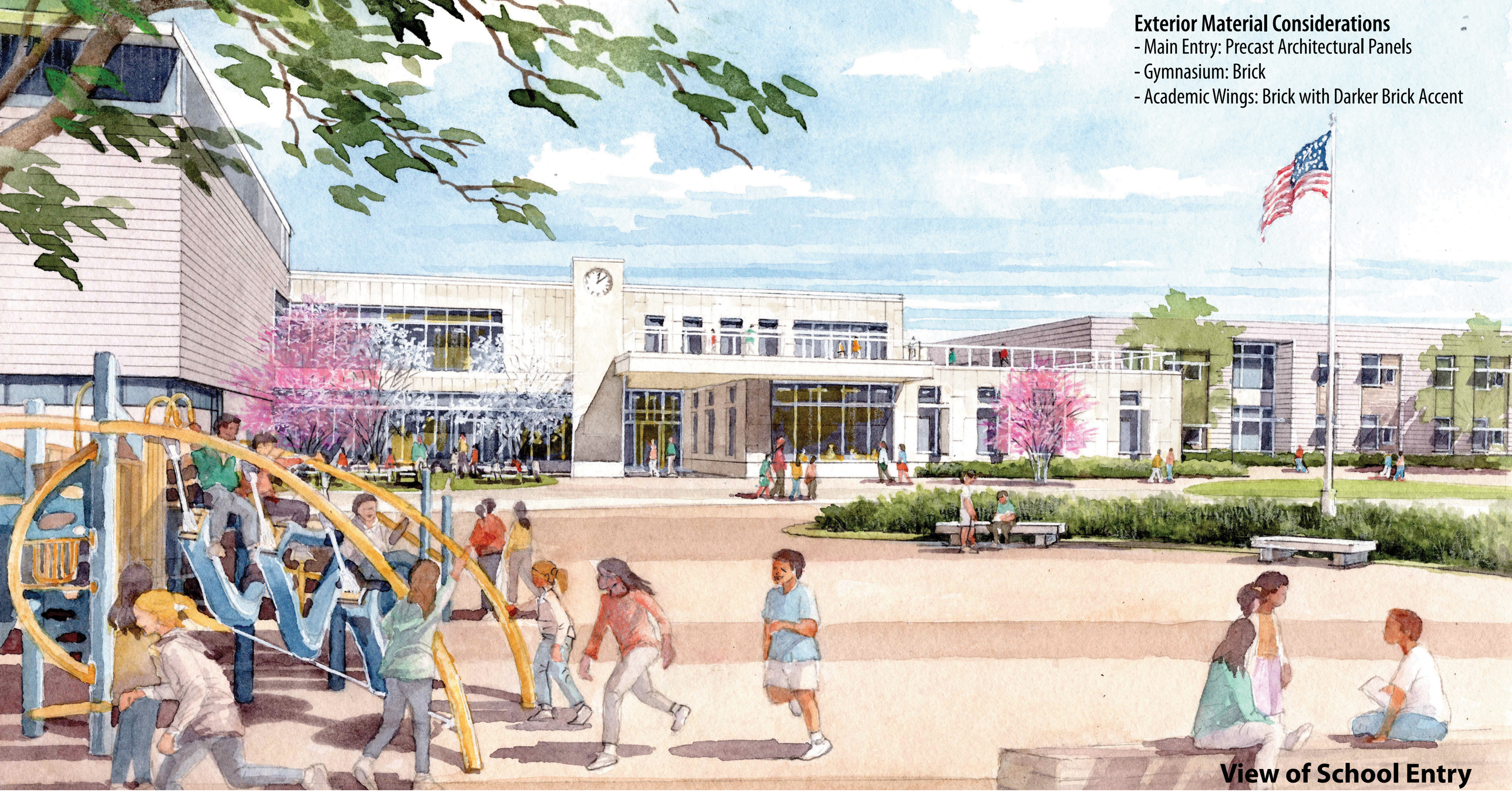

STEM/PROJECT ROOM


LEARNING SPACES

E. Tech Integration Lab adjacent to the commons.

F. Outdoor Learning area expands the learning environment to the exterior. This Outdoor learning area is accessed from the STEM and Media Center. It is southern facing to optimize solar exposure.

G. The Media Center and STEM/Project room are adjacent to one another and provide a space for quiet learning and creative exploration with natural southern light, direct outdoor access, and room to spread out.



Exterior Material Considerations
- Main Entry: Precast Architectural Panels
- Gymnasium: Brick
- Academic Wings: Brick with Darker Brick Accent

View of School Entry

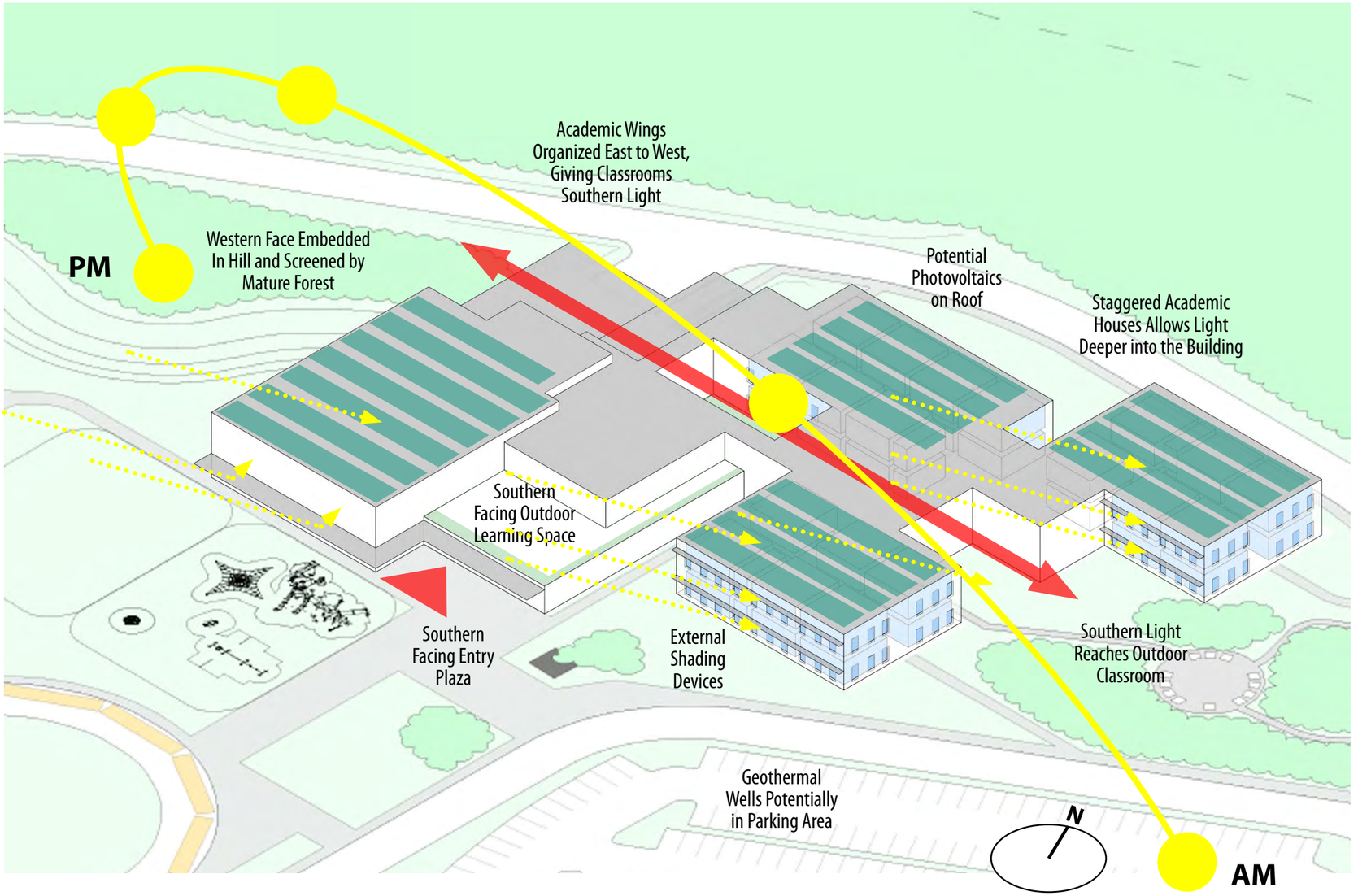
Exterior Material Considerations

- Enrichment Spaces: Precast Architectural Panels
- Open Commons: Glass with "Wood-Like" Accents
- Academic Wings: Brick with Darker Brick Accent

View of Academic Houses

Sustainability

Sustainable Design



Path to Net-Zero

Net-Zero Ready	Net-Zero
Super insulated slab, walls, and roof	Super Insulated slab, walls, and roof
Exterior Mounted Sun Shades	Exterior Mounted Sun Shades
HVAC Geothermal Option 42 Geothermal Wells	HVAC Geothermal Option 42 Geothermal Wells
Add Photovoltaic Panels (PV's) in future or offsite source	Roof Top Photovoltaic Panels (PV's)
	Parking Lot Canopy Photovoltaic Panels (PV's)

The project is currently tracking an EUI of 24.5 kBtu/sf/yr*

* EUI value will be updated as the project continues to be developed and refined.

* PV panels are not a component of the EUI calculations.

Sustainable Design - Building "Green"

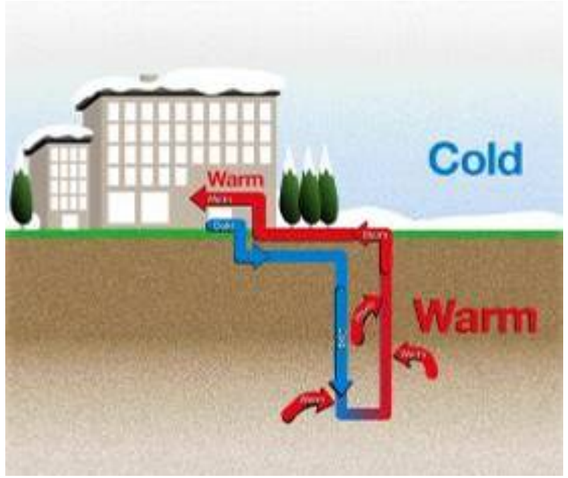
The New Mindess Will Be a "Green" Building

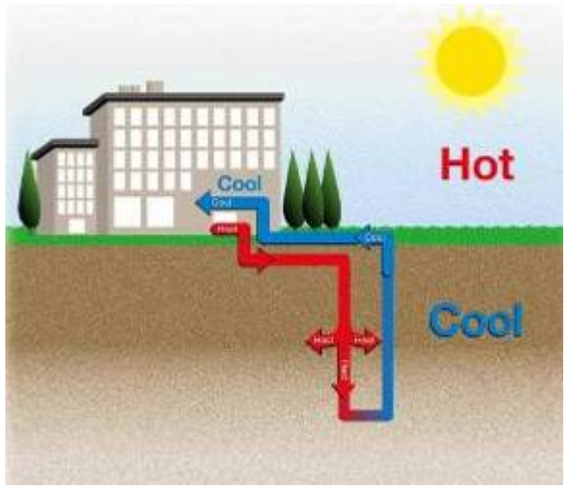
- Consistent with the resolution adopted at the November 20, 2019 Town Meeting, stating that Ashland will be net-zero by 2040, the new Mindess will be an efficient net-zero ready building.
- Estimated 26% more efficient than if built to typical MSBA specifications (LEED-S or NE-CHPS)
  - As designed modeled to have an energy use intensity (EUI) of 24.5 compared to 33.2
- Estimated 20% reduction in greenhouse gas emissions than typical MSBA projects
  - Ability to reach net-zero with the addition of solar panels

How?

- The building is designed so that sections of the building not in use can be closed to reduce energy usage
- The building envelope will be very efficient with increases insulation, triple-pane glazing, and sun shading to reduce solar heat gain. This reduces the amount of energy required to heat or cool the building.
- The project utilizes 42 geothermal wells and heat pumps as the primary method of heating and cooling. This reduces the dependency on natural gas, instead using electricity, reducing greenhouse gas emissions, and allowing nearly all the energy for the building to be sustainability produced.

* The investment in the building envelope and geothermal wells, shifting away from a dependency on natural gas, immediately lowers the building's greenhouse gas emissions and enables the site to become net-zero by adding renewable energy sources (solar) in the future.



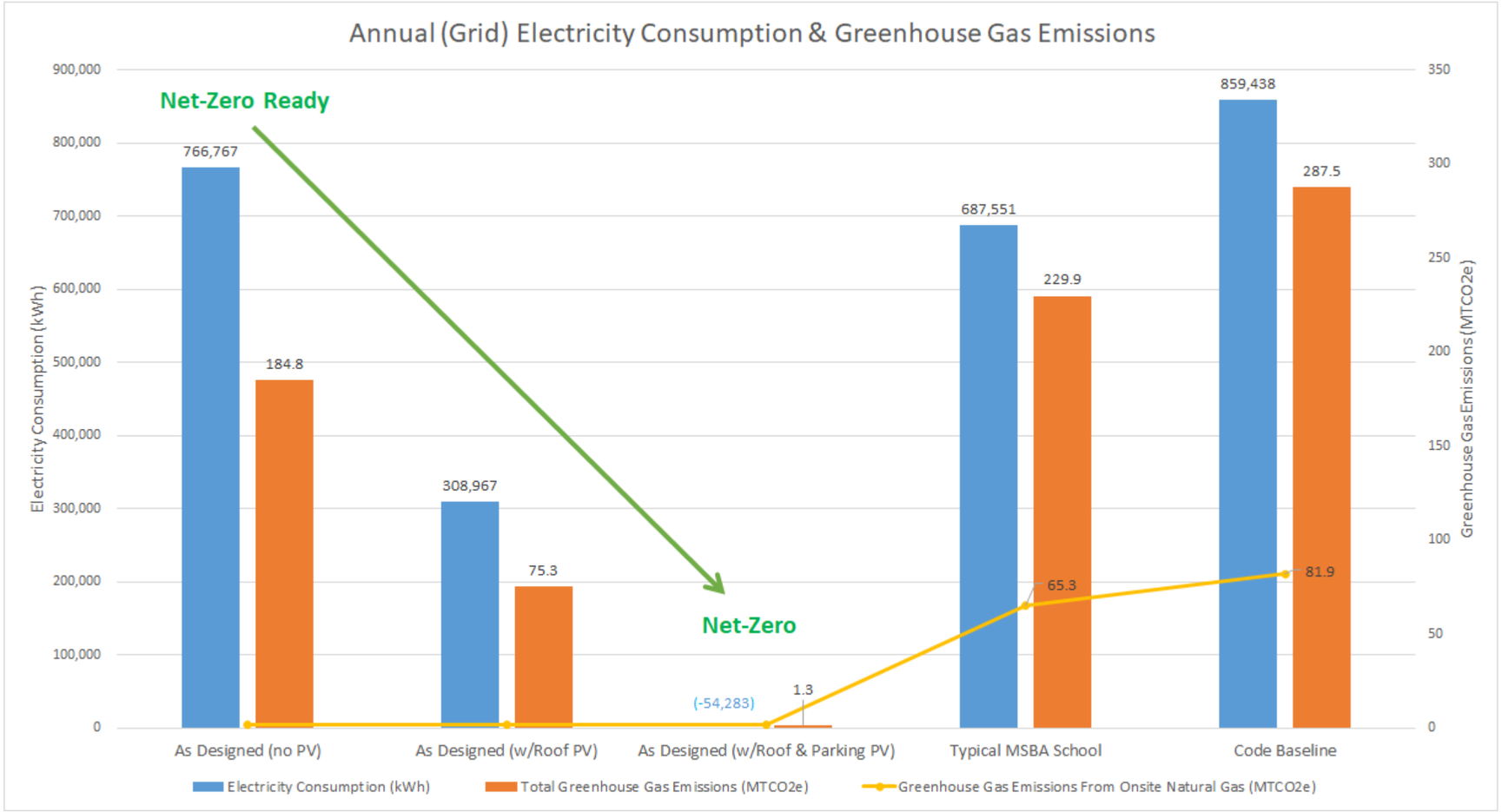


* Energy consumption based on modeling and estimates from the project's sustainability consultant using industry standards and best practices.

* Greenhouse gas emissions from natural gas consumption sourced from https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references.

* Emissions from grid supplied electricity is base on data from Engery Star emissions report (https://portfoliomanager.energystar.gov/pdf/reference/Emissions.pdf).

Sustainable Design - Energy and Emissions



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* Emissions from grid supplied electricity is base on data from Engery Star emissions report (https://portfoliomanager.energystar.gov/pdf/reference/Emissions.pdf).

* As designed, the new Mindess School would use an estimated 250 therms of natural gas for heating demands, compared to 12,348 for a typical MSBA LEED-S or NE-CHPS building, and 15,472 for current code baseline.
* The investment in the building envelope and geothermal wells, shifting away from a dependency on natural gas, immediately lowers the building's greenhouse gas emissions and enables the site to become net-zero by adding renewable energy sources (solar) in the future.

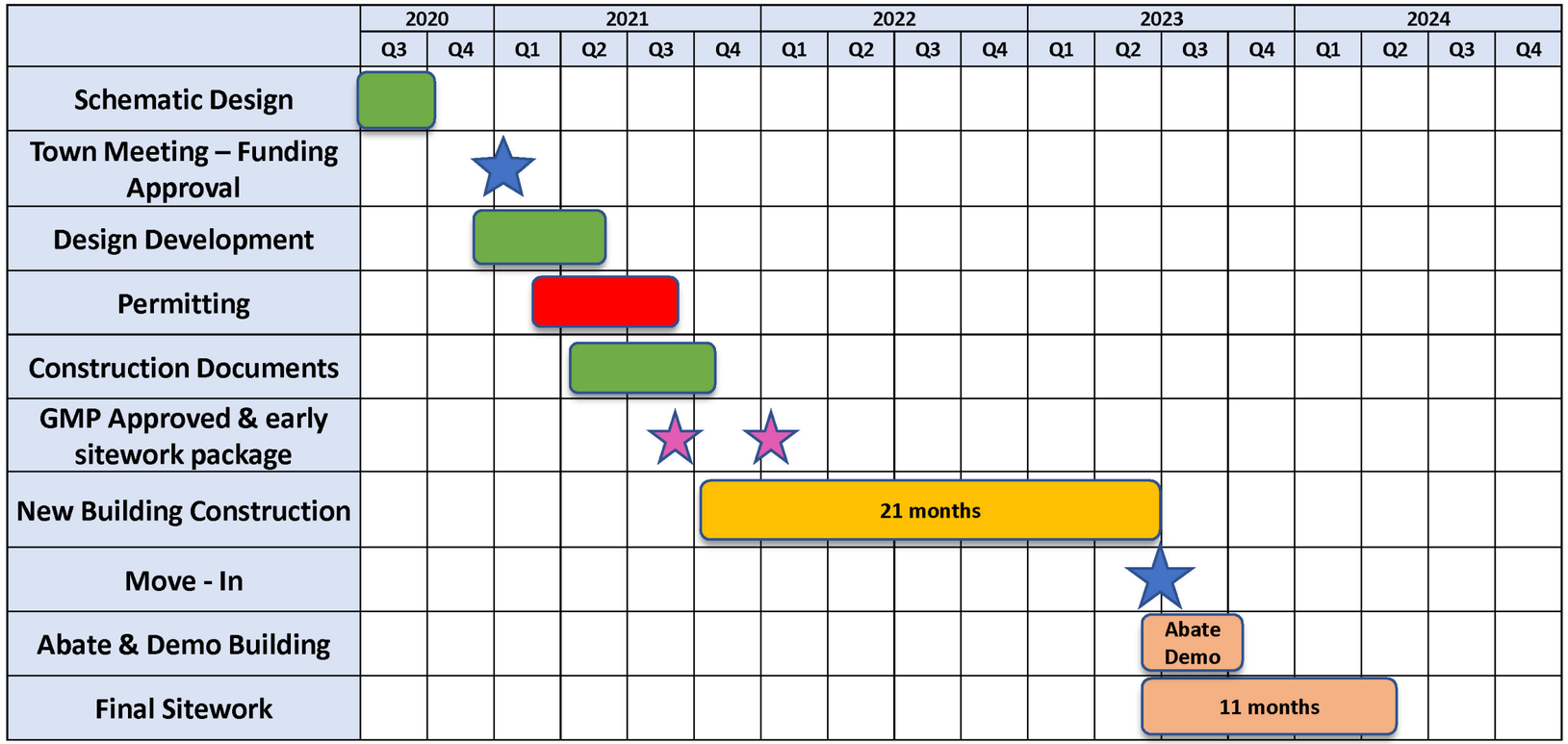
Exterior Animation

(Click Image for Animation)

Schedule Review

Schedule Review

New Mindess Elementary School Project
Complete Project Schedule



Key Project Milestone Dates

- Start Design Development mid- December 2020
- Finish Permitting and Design early fall 2021
- Break ground with site work October 2021
- Estimated school opening September 2023
- Complete Abatement & Demolition of current building October 2023
- Complete final site work May 2024

Funding Approval Process

- Wednesday, October 28, 2020 (Completed)
  - MSBA Board meeting
- January 23, 2021
  - Town Meeting vote to authorize borrowing for the project
  - 2/3 majority required to pass
- January 27, 2021
  - Town-wide election to vote on a Proposition 2½ debt exclusion
  - Simple majority required to pass

Budget & Reimbursement Review

What is the Total Project Budget?

Project Budget Summary

Description	Cost
Building Construction	$55,272,000
Site Construction	$12,453,000
Furniture, Equip. & Technology	$2,063,000
Design and Consultant Fees	$6,740,500
Project Management & Clerk of Works	$2,155,000
Other Administrative Costs	$1,139,500
Contingencies	$3,564,000
Project Budget – Fall 2020 Appropriation	**$83,387,000***
Total Project Budget	**$84,387,000**
MSBA Maximum Total Facilities Grant	**$26.2 - $27M****
* Does not include the previously funded $1.0 Million for the feasibility study	
** Reimbursement subject to actual expenditures, rate is 55.57% of eligible costs	

MSBA Reimbursement

Ashland's reimbursement percentage

- **Effective reimbursement rate for Project after exclusions and caps could be between 32 - 35% of the Total Project Budget**
- **The final effective reimbursement percentage is dependent on how much of the project budget is spent, bid results, ineligible changes, etc.**

Ashland's Project Specific Reimbursement Points

• Ashland's Base line reimbursement points	52.26%
• Incentive points for energy efficient schools	+ 2.00%
• Incentive points for maintenance score from MSBA	+ 1.31%
• **Reimbursement rate prior to exclusions**	**55.57%**

MSBA Reimbursement - Cost Caps / Exclusions

Costs that exceed the following caps are ineligible. Typical MSBA projects exceed caps.

- **Building costs exceeding $333/SF** (not updated in two years)
- **Site costs that exceed 8% of the building costs**
- **Furnishings and Technology Equipment that exceed $2,400/ student based on approved 635 student enrollment**
- **Soft Costs exceeding 20% of construction costs** (Project is Below)
- **OPM costs exceeding 3.5% of construction costs** (Project is Below)
- **Architect costs exceeding 10% of construction costs** (Project is Below)
- **Change Orders exceeding 1% of construction cost** (to be determined after construction)

Program impacts on budget

- Program Exclusions
  - 2,000 NSF Larger Gym to match existing (2,000 nsf x 1.49 grossing)
  - Extended day office 400 NSF (400 nsf x 1.49 grossing)
- Program absorbed into Grossing Factor
  - Additional bathrooms for Nurse suite
  - Mothers Room
- Previous Roof Replacement project at Mindess
  - MSBA will pro-rate cost recovery on remaining life of roof asset not fully realized.

Construction Estimate Cost Drivers

- Site Cost Factors
  - Site Acreage 16.6 ac.
  - Topography requiring retaining walls, soil cuts and fills
  - Roadway circulation and parking on site
  - Geothermal Well field
  - Replacing two baseball fields including irrigation
- Net Zero Ready Cost Factors
  - Ground Source Heat Pump Mechanical Systems
  - Increased envelope insulation above stretch code
  - Triple pane glazing to meet more stringent R-values
  - Added Plug load controls above code

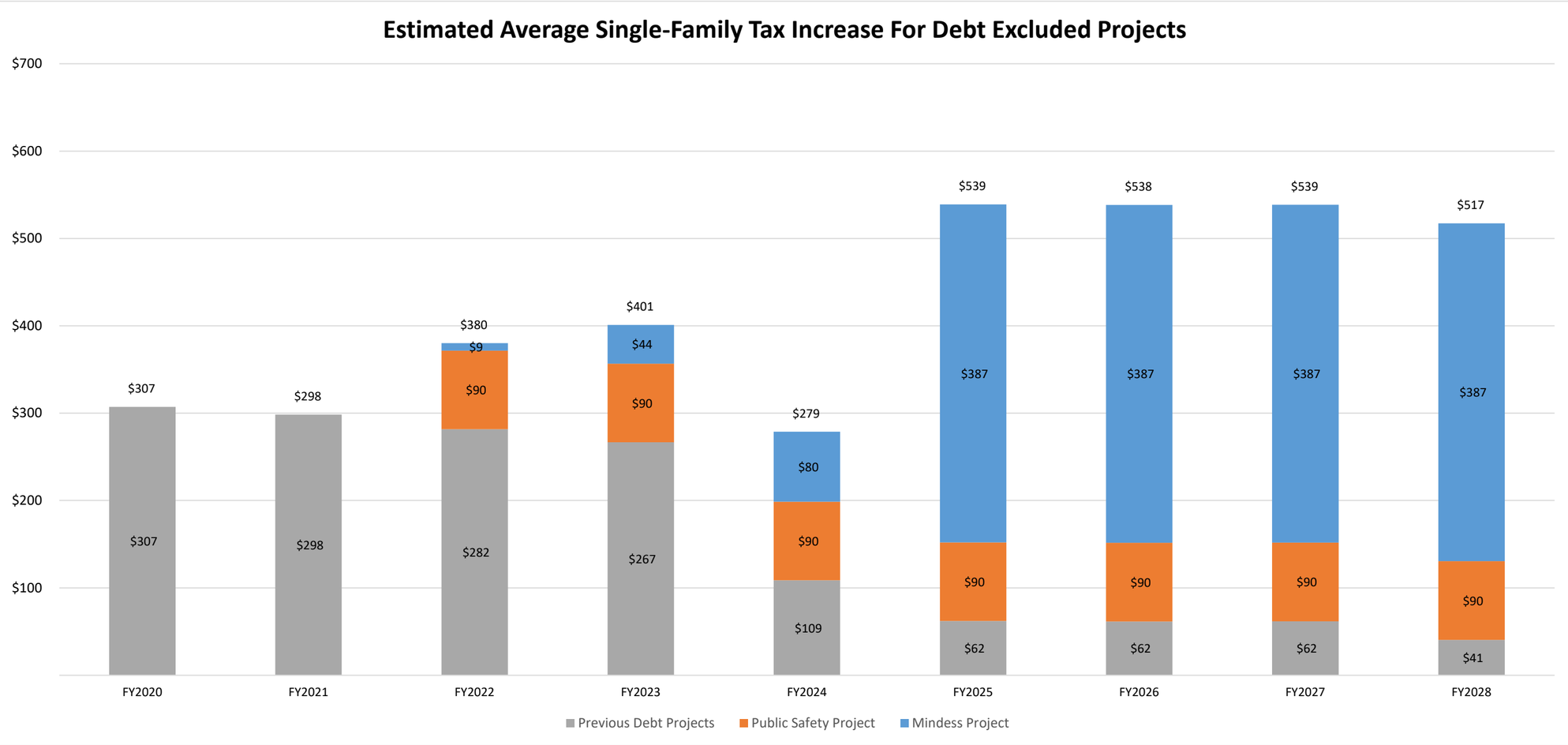
Budget & Reimbursement Detail by Category

Mindess School Building Project - Total Project Budget and Funding by Category

Category	Budget	Excluded	Eligible	MSBA	Effective Rate	Description
Feasibility Study (1)	$1,000,000	$0	$1,000,000	$555,700	55.57%	Funding for work through Schematic Design
Administrative (2)	$2,451,333	$161,323	$2,290,010	$1,272,559	51.91%	OPM and other administrative costs
Architectural/Engineering (2)	$6,802,500	$192,309	$6,610,191	$3,673,283	54.00%	Designer and sub-consultant costs
Construction (3)	$53,382,049	**$22,146,036**	$31,236,013	$17,357,852	32.52%	Building construction costs
Pre-Construction Services	$220,000	$0	$220,000	$122,254	55.57%	CMR pre-construction services
Site Work (4)	$12,452,834	**$9,461,688**	$2,991,146	$1,662,180	13.35%	Site costs, including grading, roads, fields, etc.
Demo/Abate (5)	$1,890,413	$251,750	$1,638,663	$910,605	48.17%	Costs to demolish and abate old building
Furniture, Fixtures, Equipment (6)	$1,079,500	$317,500	$762,000	$423,444	39.23%	Budgeted Per/Student at $1,700/student
Technology (6)	$984,250	$222,250	$762,000	$423,444	43.02%	Budgeted Per/Student at $1,550/student
Miscellaneous	$560,300	$120,300	$440,000	$244,508	43.64%	Miscellaneous costs (moving, recording, etc.)
MSBA Cost Recovery				($375,641)		For previous MSBA roof projects on Mindess
Project Subtotal	**$80,823,179**	$32,873,156	$47,950,023	**$26,270,187**	32.50%	Project Totals without contingencies
Construction Contingency	$2,912,000	$2,234,747	$677,253	$376,349	12.92%	For unforeseen construction challenges
Owner's Contingency	$651,821	$0	$651,821	$362,217	55.57%	For unforeseen changes to project scope
Total Maximum Project Budget	**$84,387,000**	$35,107,903	$49,279,097	**$27,008,753**	32.01%	Total Project Budget Items

(1) Feasibility Study funding previously approved by Town Meeting and ballot vote
(2) OPM & Desginer services pro-rated exclusion for gym space over MSBA tempate
(3) Construction costs are capped at $333/sf, typical MSBA projects far exceed cap
(4) Site costs are capped at %8 of construction costs, roughly covers building footprint, all other site costs exceed cap
(5) Hazardous material abatement are categorically excluded from reimbursement
(6) MSBA caps FFE and Technology participation at $1,200/student for each
* MSBA reimbursement for the Mindess School Building Project is %55.57

How Much Will My Taxes Go Up?



* Mindess project assumes interest-only borrowing in FY22 ($6m), FY23 ($25m), and FY24 ($25m) at %1, then 27-year bond of $56m at 2%
* Public Safety project assumes $30.9m 30-year bond at 2% with $750,000 of debt service offset from general fund and capital budgets
* Estimates are calculated using level debt service method

Estimated Net Tax Increase FY2021 to FY2025:	$241
Average Single-Family Home (Houses and Condos):	$427,163
Average Single-Family House:	$471,214
Average Single-Family Condo:	$342,978

Example Tax Impact Scenarios

	Average Condominium	Average Single Family House	New Construction Single Family House
Assessed Value (FY2020)	**$342,978**	**$471,214**	**$650,000**
Estimated Current (FY2021) Property Taxes	$5,710/year	$7,844/year	$10,821/year
Portion of Current Taxes for Previously Excluded Projects	$240/year	$329/year	$454/year
Public Safety Building Tax Impact[1]	$72/year	$99/year	$137/year
FY2025 Mindess Building Tax Impact[2]	$311/year	$427/year	$589/year
First Year Net Increase for New Building Projects[3]	**$66/year**	**$90/year**	**$125/year**
FY2025 Net Increase for New Building Projects[4]	**$193/year**	**$265/year**	**$366/year**

1 - Public Safety project assumes $30.9m 30-year bond at 2% with $750,000 of debt service offset from general fund and capital budgets
2 - Mindess project assumes interest-only borrowing in FY22 ($6m), FY23 ($25m), and FY24 ($25m) at %1, then 27-year bond of $56m at 2%
3 - Net Increase is based on current (FY2021) amount paid for excluded debt compared with FY2022, the first year of borrowing
4 - Net Increase is based on current (FY2021) amount paid for excluded debt compared with FY2025, when full project costs will be realized
* Estimates are calculated using level debt service method

Home Valuations Sourced From: http://epas.csc-ma.us/publicaccess/Pages/AllCommunitySearchParcel.aspx

Property Tax Questions

What is an excluded debt project and why are previous ones shown?

- A debt exclusion is a mechanism for borrowing money to pay for projects. If approved, the town temporarily increases the tax rate to collect the funds required for the payments of that debt. Because excluded debt is temporarily added to the normal base taxes, and is removed when the debt is paid, the graph shows all the excluded debt projects over time.

Why is the full tax impact of the Mindess project not realize until FY2025?

- The Town will only borrow the money required for each phase of the project. For instance, the money needed in during the 2021 calendar year will only be for design development and the start of site work. Also, the Town will be receiving re-imbursement from the MSBA throughout the project, which delays the need to borrow.

Why is the cost of the Public Safety project shown on the chart?

- The residents will be asked to vote on both projects at the same Town Meeting and on the same ballot. As both projects require debt exclusions and will go before the community at the same time, it is important to provide the community with a holistic view of the tax impacts.

How can I get the tax increase for my property?

Determine the Tax Increase for Your Property

- The Town will temporarily raise the tax rate in order to collect the funds needed to service the debt each year until debt is paid.
  - The incremental tax rate for the Mindess Project is estimated to be $0.9056
- Compute the tax for your property
  - Get the FY2020 assessed value of your home*, say $500,000
  - Divide the assessed value by $1,000 (tax rate is per $1,000 of value)
  - Multiply by $0.9056
  - Example: $500,000/$1,000 = 500 x $0.9056 = $453/year
  - The incremental tax rate for the Public Safety Building project is $0.2108, making the combined incremental tax rate for both projects $1.1164.

* FY2020 values can be found using the parcel search link from the Town Assessor's page: http://epas.csc-ma.us/publicaccess/Pages/AllCommunitySearchParcel.aspx

Why Now?

While the town is voting to fund the project now, the tax impact will be gradual, with the full impact expected in FY2025

- The estimated tax impact for the average tax bill is $9/year in FY2022, $44/year in FY2023, $80/year in FY2024, and finally $387/year in FY2025
- Over that same time, previous projects will be paid off, decreasing the net tax impact

Further delaying funding approval, even a few months, would push the opening of a new school back a full year.

- Site work, currently planned to begin in late 2021, would be pushed to spring 2022
- The demolition of the current school and completion of the front entrance, currently planned for the summer of 2023, would be delayed.

Delaying the project schedule is likely to increase the project costs

- Currently, the project bidding market is very favorable, which could yield significant project savings, but it is unlikely to stay that way
- Once the construction bidding market recovers, typical annual cost escalation of 3-5% would apply. The MSBA will not contribute additional costs for delays, it will be borne by the Town.

Through the MSBA grant process, the state has committed over $26 million to this project, and keeping the project on pace will secure that state funding. Any substantial delays to the project need to be approved by the MSBA board.

Discussion & Questions

For more information, visit **http://mindessschoolbuildingproject.ashland.k12.ma.us/**

Email questions to **buildingcommittee@ashland.k12.ma.us**

Facebook page: **https://www.facebook.com/MindessSchoolBuildingProject**