

Whitman Middle School

Community Forum #5 // September 28, 2023

Agenda

// Project History // Massachusetts Middle Schools by Comparison // The Whitman Middle School Project Overview

O Whitman-Hanson Regional School District // Colliers Project Leaders // Ai3 Architects, LLC





The WMS Project: A Collaborative Effort

Professional Team

Owner's Project Manager (OPM)

Colliers Project Leaders

A. Michael Carroll **Alisa Santos**

Designer

Ai3 Architects, LLC **Troy Randall Julie Rivera**





Project Leaders

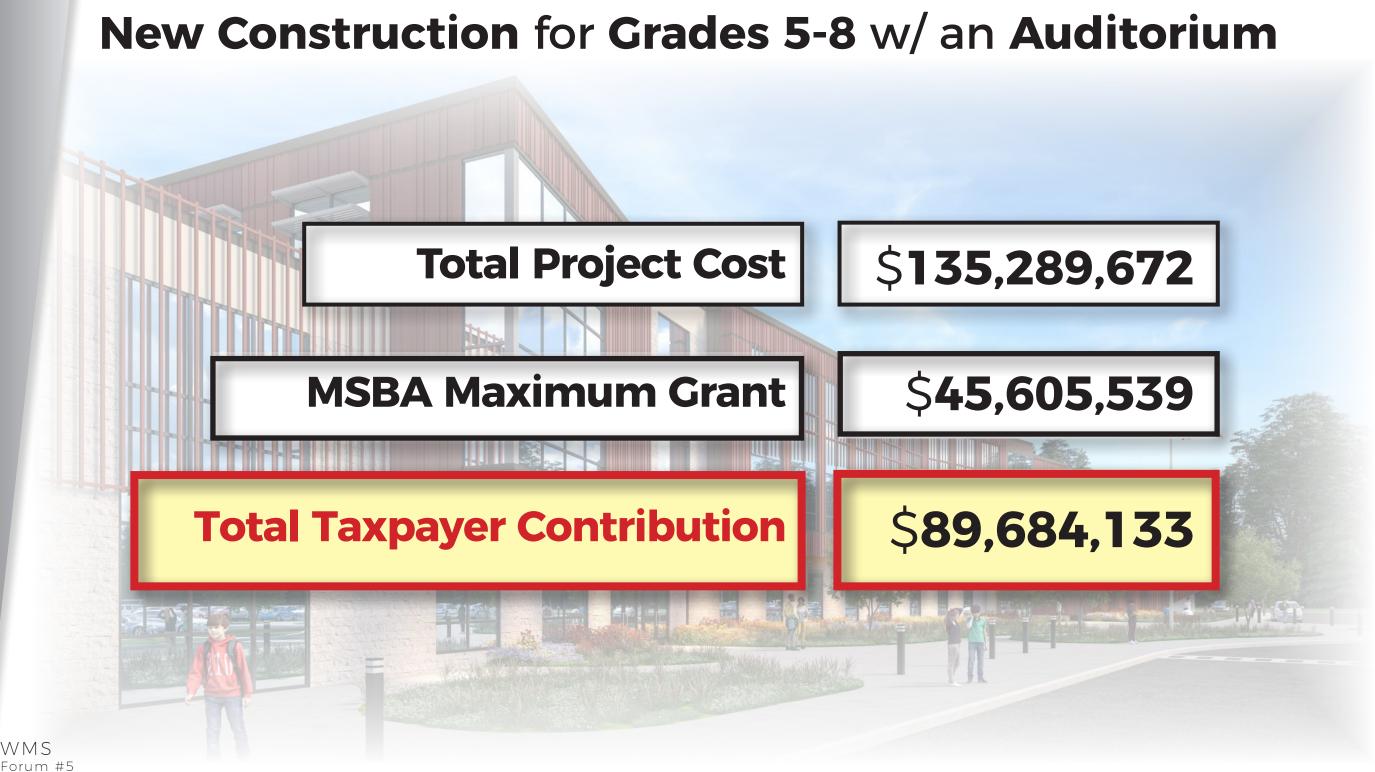
School Building Committee

Frederick Small, Chair Kathleen Ottina, Vice Chair Jeffrey Szymaniak, Superintendent George Ferro, Asst. Superintendent Brandon Frost, WMS Principal Mary Beth Carter **Robert Curran Don Esson Justin Evans** Josh MacNeil **Rich Pulkinen Crystal Regan Christopher Scriven Beth Stafford** John Stanbrook

Beth Stafford, Chair Christopher Scriven, Vice Chair **Steven Bois Michelle Bourgelas Dawn Byers Stephen Cloutman Glen DiGravio David Forth Hillary Kniffen Frederick Small**

School Committee





Project History

WMS Project History

2019

WHRSD Submits SO

(Statement of Interest) April 8, 2019

- // Accepted into the **Core Program**
- // Invited into MSBA's Feasibility Study & Schematic Design modules
- // SOI Approved December 11, 2019 Invitation into **Eligibility Period**

MSBA Module 2-3 Feasibility Study May 2022

2022

- // Existing conditions assessments
- // Site analysis & investigation
- // Edu. Visioning & Programming w/ staff, admin, and students
- // Conceptual cost projections

2023

MSBA Module 4 Schematic Design

March 2023

5-8 New Construction Project

Approved By:

// School Committee

// School Building Committee

61 SOI's submitted in 2019

SOI's invited into MSBA Program

8% of Core Program applicants accepted in 2019

3 Different Options **Evaluated**

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Independent Cost **Estimates** August 2023

Prepared By:

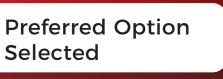
// PM&C // A.M. Fogarty

Est. Total Project Cost:



Est. Town Share:

\$**89,684,133**



Overview of Reports & Documentation

Over the past 16 ← months

The Town of Whitman and its professional team have been completing a comprehensive Feasibility Study & Schematic Design with VERY SPECIFIC guidance from the Massachusetts School Building Authority (MSBA)

Over 15,500 Collective Hours

Analysis, investigation, reporting, planning, meetings, design, discussion, ⁷and educational visioning & brainstorming discussions

Over 2,100 Pages of Reports & Documentation

- // Haz-Mat Inspection & Report
- // Phase 1 Environmental Site
- Assessment (ESA)
- // Plumbing Evaluation
- // Fire Protection Evaluation
- // Electrical Evaluation
- // Heating & Ventilation Evaluation
- // Technology Systems Evaluation
- // Structural Evaluation

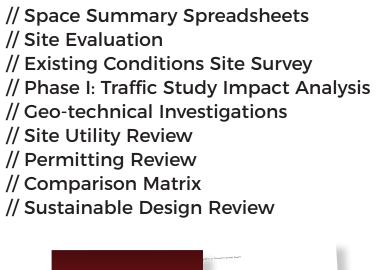
- // Educational Program Analysis
- // Educational Visioning Program
- // Building Evaluation
 - / Accessibility Review
 - / Energy Code Review
 - / Building Code Review
 - / Historical Analysis
 - / Department of Elementary & Secondary **Education (DESE) Review**

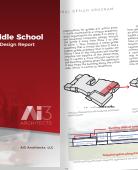
- // Site Evaluation

- // Site Utility Review
- // Permitting Review
- // Comparison Matrix

Whitman Middle School

Feasibility Study Reports & Schematic Design Report

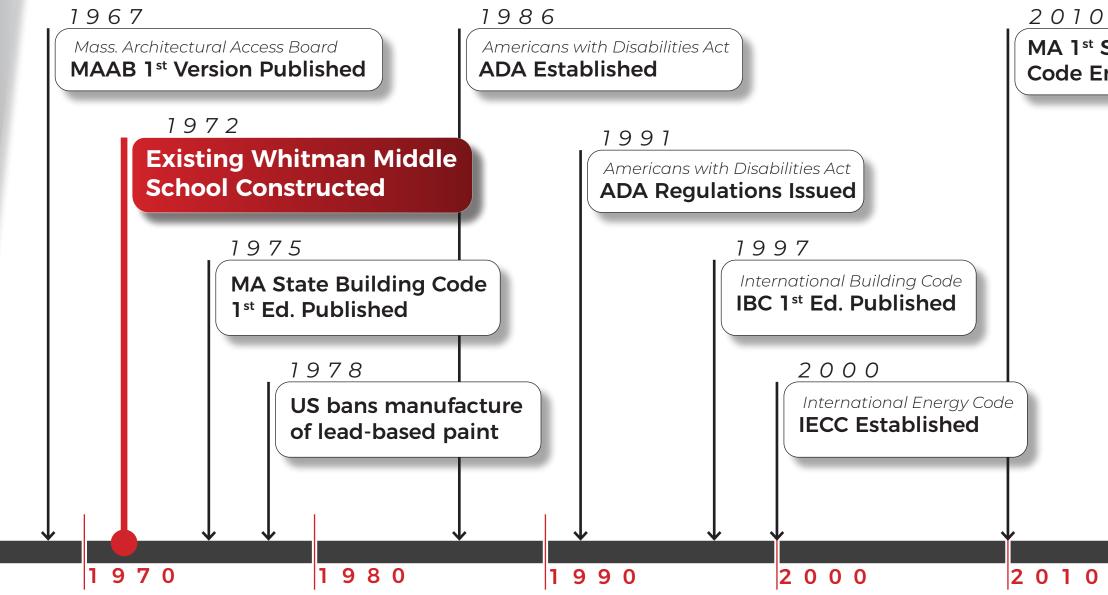




Project History

Evolution of Building Codes & Regulations

Throughout the life of the existing Whitman Middle School



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MA 1st Stretch Energy **Code Enacted**



PRESENT



Snapshot of Existing WMS Building Deficiencies

**Refer to the PDP and PSR Reports for full building evaluations

EDUCATIONAL:

- // Undersized general education classrooms not conducive to learning, with outdated finishes, cabinets, lighting, doors, and acoustical treatments:
- // Undersized Student Commons/Dining
- // Lack of Special Education Space
- // Lack of small group work, study, and testing areas
- // Lack of educational space for team teaching and collaboration
- // Lack of integrated hands-on project labs
- // Lack of collaborative learning spaces
- // Lack of natural daylighting in select classrooms
- // Poor and/or ineffective acoustics
- // Currently utilizing undersized hallways for one-on-one teaching space
- // Science labs do not meet state educational standards and quidelines
- // Inadequate storage space

CODE COMPLIANCE:

- // Non-compliant Toilet Rooms All bathrooms need complete reconstruction due to non-compliant conditions (entry doors too narrow - 24" wide, no handicap toilet stalls, no handicap urinals, no handicap sinks or accessories, no handicap floor maneuvering clearances/turning radius, etc.)
- // Total plumbing fixture counts do not meet state plumbing regulations

- // Non-compliant egress stairs (landing size, handrails, projections, doors adjacent to and directly off stairway); requires a complete reconstruction of stair and entry doors and rooms
- // Occupied spaces (classrooms and offices) currently provide a single entrance within an egress stairway.
- // One-hour fire separation assembly required between use groups E (educational) and A-3 (Assembly - Café and Gym)
- // Inadequate quantity and location of fire extinguishers throughout the building
- // No accessible seating in assembly spaces (Gymnasium, Auditorium, Lecture Hall, etc.)
- // Non-compliant drinking fountains
- // Non-compliant door hardware and classroom entries
- // Non-compliant gymnasium locker rooms and showers
- // Significant seismic and structural strengthening required for any major renovation.
- // Electrical panels in classrooms and corridors non-complaint.
- // One-hour fire separation assembly required between Boiler room and adjacent electrical room.
- // Occupied spaces without natural daylighting (780 CMR 1205)
- // Occupied spaces without natural ventilation (780 CMR 1203.4)
- // Non-Compliant science classroom and office sinks (521 CMR -MAAB Accessibility)
- // Protruding objects in the path of egress
- // Non-complaint classroom entry doors (521-CMR MAAB Accessibility)
- // Non-compliant head-height ductless ceiling mounted unit ventilators

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Snapshot of Existing WMS Building Deficiencies

**Refer to the PDP and PSR Reports for full building evaluations

- // Non-compliant door hardware (knob-style hardware in offices, storage, toilet rooms, etc)
- // Non-compliant code required building signage.

BUILDING SYSTEMS DEFICIENCIES:

- // Boilers, unit ventilators, exhaust fans, rooftop air handling units, water service, plumbing fixtures, sanitary, waste, and vent piping have all outlived their serviceable life expectancy and should be replaced.
- // Heating systems, plumbing systems (including bathrooms), electrical systems, life safety/fire alarm systems, and windows beyond their useful life, resulting in frequent repairs, uneven heating and the greater threat of shutdown;
- // Lack of properly sized, secured and air-conditioned technology rooms
- // Electrical circuits for kitchen equipment under hoods are not protected by shunt trip circuit breakers.
- // The existing emergency generator is natural gas fired National Electrical Code requires an uninterruptable fuel source.
- // Loads in the emergency panelboards and standby panelboards are mixed and not properly separated.
- // Lack of FA strobes in toilet rooms and locker rooms
- // Non-compliant Fire Alarm system (strobes with voice evacuation required throughout the building)
- // Existing interior and exterior fluorescent lighting in poor condition.
- // Non-compliant building lighting switching (does not meet IECC)

- // Non-compliant electrical receptacles (not tamper resistant per National Electrical Code)
- // Undersized kitchen equipment hood.
- // Existing water service is not protected by a backflow preventer.
- // Master clock system is problematic and replacement parts are frequently not available.

EXTERIOR ENVELOPE:

- // The existing exterior envelope does not meet state energy code requirements
- // No insulation in the existing exterior wall assembly
- // Concrete foundation cracking and spalling
- // Exterior masonry cracking due to the lack of construction control joints and expansion joints
- // Water infiltration behind existing masonry walls has caused cracking in numerous locations resulting from freeze-thaw
- // Rusting and movement of existing steel lintels have compromised the existing masonry wall in numerous locations
- // Water infiltration resulting from deteriorated wall/roof flashings, roof membrane seams, failed sealant, and standing water
- // Standing water on existing membrane roof ineffective roof slope to drain locations
- // Exterior Masonry mortar joints deteriorating, requiring repointing
- // History of mold in the gymnasium roofing system and library media center building system shafts
- // Rusting evident at exterior steel lintels supporting masonry openings

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water and the

Inefficient drop-off/pick-up queuing Existing Whitman Middle School Site

SCHOOL BUS

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Existing WMS Area Deficiencies

As compared to MSBA Guidelines



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WMS

Forum #5

SIZE COMPARISON LEGEND

>5% Less than MSBA Guidelines

<5% Greater than MSBA Guidelines

Acceptable per MSBA Guidelines

Circulation

Space Accounted in Grossing Factor

Not included in MSBA Guidelines



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Regular roof leaks and water damage *Existing Whitman Middle School Building*

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Undersized dining facility w/ degrading finishes *Existing Whitman Middle School Building*

PROTEIN TO



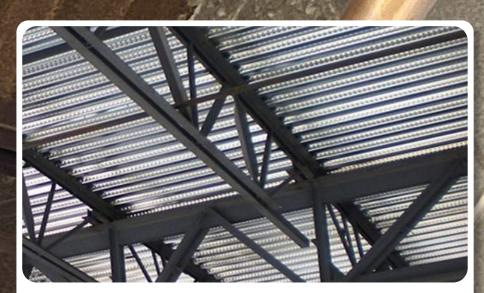
Excess humidity requiring additional maintenance Existing Whitman Middle School Building





Non-compliant locker rooms, toilets, and fixtures Existing Whitman Middle School Building





Rust at bottom of floor deck w/ history of mold Existing Whitman Middle School Building

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Floor deck without rust for comparison

M.E.P. systems have outlived their serviceable life Existing Whitman Middle School Building

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Compromised exterior masonry & thermal integrity Existing Whitman Middle School Building





HE-TO- INCLUSION STATE

ALC: REAL



Compromised roof seams w/ water ponding Existing Whitman Middle School Building



Massachusetts Middle Schools by Comparison

School (Year Built)	MA Location	Population (2022 Census)	Median House- hold Income (2021 dollars)
Chapman Middle School (2022)	Weymouth	57,410	\$91,592
Kennedy Middle School (2020)	Natick	36,272	\$122,914
Beverly Middle School (2018)	Beverly	42,235	\$89,882
Abington Middle/High School (2018)	Abington	16,965	\$113,155
Gates Middle School (2017)	Scituate	19,190	\$129,132
West Bridgewater Middle/High School (2016)	West Bridgewater	7,625	\$111,964
East Bridgewater Middle/High School (2013)	East Bridgewater	14,338	\$110,842
John W. Rogers Middle School (2013) & Jefferson Elementary School (2023)	Rockland	17,609	\$90,315
Hanson Middle School (1998)	Hanson	10,587	\$112,315
Whitman Middle School	Whitman	15,259	\$94,919



High-Performing Classroom

1000 C 16 mm

Natick, MA

Kennedy Middle School

Small Group

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Beverly Middle School Beverly, MA

Break-out Spaces

Scituate, MA

Bie

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HAN DE LE

Gates Middle School



The Basic Parts of a Hydroponic System

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Kennedy Middle School Natick, MA

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lands-on Learning

Natick, MA

Kennedy Middle School

COLLABORATION AND TECHNOLOGY LAB





S.T.E.M. Exploration

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Chapman Middle School Weymouth, MA

Music/Art Exploration

East Bridgewater, MA

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(TR)

East Bridgewater Middle High School



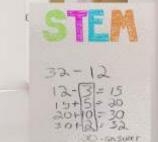


Abington, MA

Abington Co-located Middle High School

Student Common Space





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Phelps Elementary School Rockland, MA

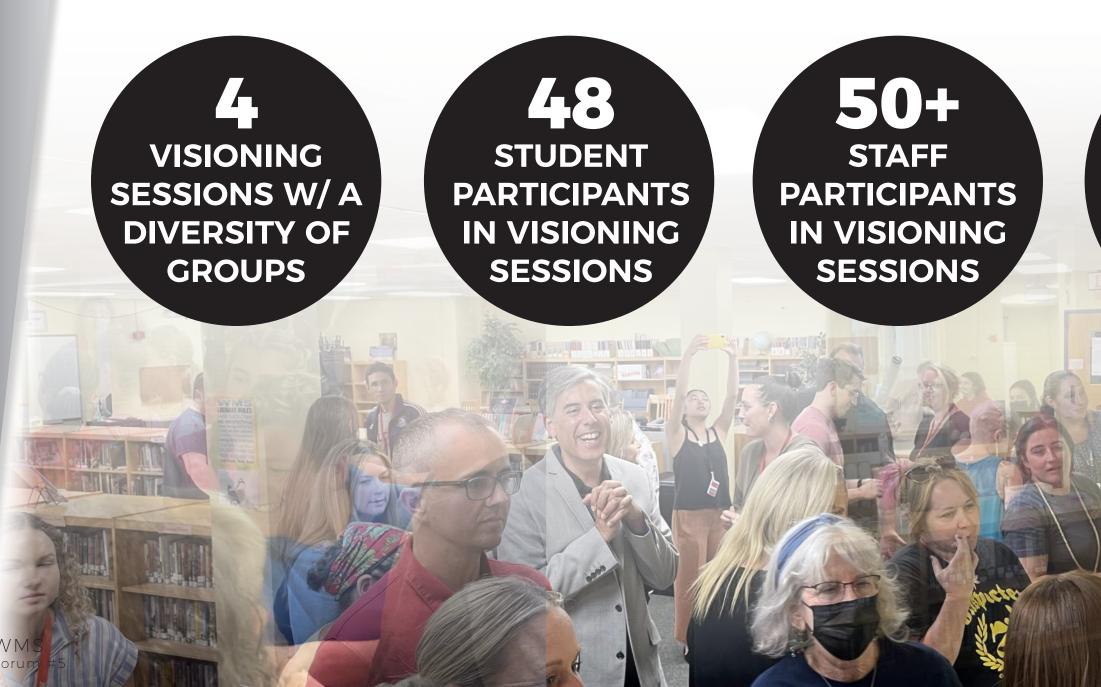
The Whitman Middle School Project Overview

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Student & Staff Involvement by the Numbers

Since May 2022 (16 months), focused discussions have included...





ROUNDS OF EDUCATIONAL PROGRAMMING W/ STAFF

Broader Community Involvement

Since May 2022 (16 months), focused discussions have included...



6 PUBLIC / COMMUNITY FORUMS

Preliminary Evaluation of Options

What's included per option:

Code Upgrade/Base Repair Addition/Renovation **Option 1 Options 2, 3, 6, 7** Includes: Includes: // Code & Systems Upgrades // Code Upgrades // Systems Repairs // Exterior & Interior Repairs // Exterior Repairs // Limited reconfiguring of the // Interior Repairs existing building // Building addition(s) for added **Excludes**: teaching space // NO site work (except code) // Can only address 21st Century // NO new/renovated play fields Learning in some spaces // NO increase to Building Size (additions) // NO educational upgrades // Many of the existing // NO ability to meet Net Zero deficiencies will remain (layout, corridor widths, adjacencies that aren't ideal) **NOT AN OPTION**

Includes:

- // Appropriately sized building for student enrollment // Spaces designed for 21st
- - **Century Learning**
- // Building layout that supports staff in delivering 21st Century
- - Learning
- // Code compliant
- // Modern, efficient building
- systems
- // Opportunities for sustainable design and/or net-zero energy

Option 9B

New Construction

Options 4, 5, 8, 9



NOT AN OPTION: Code Upgrade/Base Repair - Option

Option 1 is NOT a fiscally responsible, educationally appropriate, long-term solution

Code Upgrade/Base Repair

Only Code Required Upgrades to the existing Middle School

DOES NOT ADDRESS:

- // Educational Space Deficiencies
- // Poor natural daylighting or indoor environmental quality
- // Poor existing organization
- // Existing site storm water drainage issues
- // Deficiencies in site amenities, outdoor edu. space, & playfields

EXTENDS:

- // Educational disruption during construction
- // Phased-occupied construction timeline

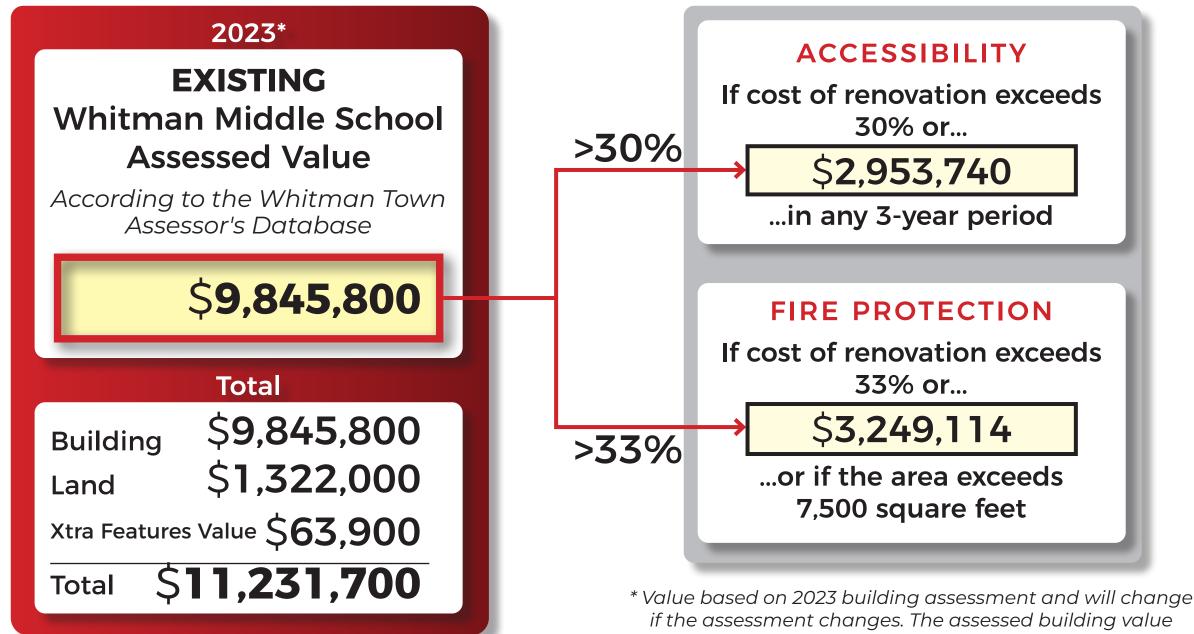


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Compliance Thresholds

Triggers of the Massachusetts Architectural Access Board (MAAB) & State Fire Code



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is used for the compliance thresholds in the following examples since the "full and fair cash value" is unknown.

Example Base Repair Scenarios

Either ONE of these scenarios will trigger a compliance threshold

Roof Replacement

Involves:

// Masonry	\$50,000
// Rough Carpentry	\$150,000
// Waterproof/Sealants	\$75,000
// Roofing/Flashing	\$3,287,000
// Walkway Pads/Ladders	\$45,000
// Acoustical Ceilings	\$20,000
// Plumbing	\$50,000
// HVAC	\$100,000
// Electrical/Telecom.	\$100,000
// General Conditions	\$825,000
// Soft Costs	\$1,090,000
(phasing, escalation, fees,	

permitting, admin. costs, testing, technology, and contingency)

\$5-6 million

HVAC Replacement

Involves:

// Demo & Haz-Mat Removal

// Concrete & Masonry

// Steel, Framing, Misc. Metals

- // Rough Carpentry
- // Waterproof/Sealants
- // Acoustical Ceilings & Paint
- // Plumbing

// HVAC

- // Electrical/Telecom.
- // General Conditions
- // Soft Costs

(phasing, escalation, fees, permitting, admin. costs, testing, technology, and contingency)

\$15.5-16.5 million

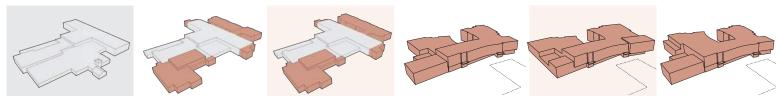
to make all repairs necessary for accessibility, \$60+ million fire protection, and code compliance

\$1,300,000 \$80.000 \$225.000 \$25,000 \$25.000 \$450.000 \$950.000 \$6,900,000 \$1,000,000 \$2,250,000 \$2.975.000



An Evaluation Matrix to Determine the Project

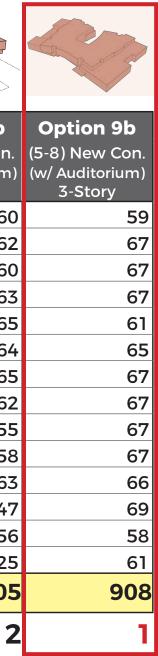
In January 2023, the School Building Committee Selected Option 9b



	Option 1	Option 3a	Option 7a	Option 4b	Option 5b	Option 8b
School Building Committee	Code Upgrade/	(6-8) Add/Reno	(5-8) Add/Reno	(6-8) New Con.	(6-8) New Con.	(5-8) New Con
(SBC) Member Responses	Base Repair ONLY	(w/ Auditorium) 2-Story	(w/ Auditorium) 2-Story	(NO Auditorium) 3-Story	(w/ Auditorium) 3-Story	(NO Auditorium 3-Story
SBC Member 01	30	32	32	61	60	60
SBC Member 02	25	27	27	54	56	62
SBC Member 03	25	27	27	54	57	60
SBC Member 04	25	27	27	61	62	63
SBC Member 05	32	33	33	65	60	65
SBC Member 06	30	39	45	68	66	64
SBC Member 07	28	41	41	61	64	65
SBC Member 08	25	28	29	54	56	62
SBC Member 09	25	26	26	54	58	55
SBC Member 10	25	27	27	53	57	58
SBC Member 11	25	27	27	53	57	63
SBC Member 12	23	23	23	46	46	47
SBC Member 13	41	57	57	56	58	56
SBC Member 14	23	69	67	64	46	25
Total Score	382	483	488	804	803	80!
Rank	7	6	5	3	4	

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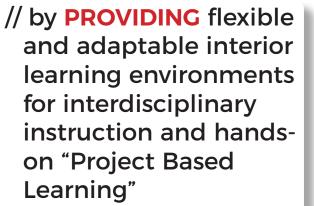


Meets the **Educational Program of** the School District

Benefits of a new Whitman Middle School







// Appropriately-Sized General Classrooms w/ Group Areas // Integrated Special Education // S.T.E.A.M. Exploration Spaces // Outdoor Learning Areas

// by CREATING an environment for a positive, inclusive, and diverse learning culture that accommodates all student needs

// Improved campus visibility, circulation & building access // Collaborative areas of difference sizes // Updated security systems



// by **STRENGTHENING** the partnerships between students, educators, subjects, student services, other district schools and the larger community

// Open campus layout with 4 new athletic fields & other outdoor plazas/amenities // Distributed parking // Auditorium, Dining, & Gym

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// by **CONNECTING** to the outdoors directly, visually, educationally,

efficiently, and environmentally

// Indoor/outdoor connections. especially to adjacent wetlands // Low energy-use-intensity // Energy saving systems/controls // Natural & recycled materials

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Academic & Extracurricular Opportunities

Made more available to Whitman's students



Existing Whitman Middle School Site

Current building location divides the site in half

Wetlands

Town Fields

School Multi-Use Fields (typically damp)

In-to the and

Existing School

Parking

Visitor Main Entry Parking

New Residential Development

4 (

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Town Soccer Field

Soccer Field

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Site Access

Site Use Opportunities

An open campus to improve safety, academic use, and community use



Community Site Use Opportunities & Resources



Resolution to Bus & Vehicular Drop-off/ **Pick-up Challenges**

Improvement to parking adjacent to play field and building



Increased & Distributed Parking

Current = 159 spaces Proposed = 180 spaces

Parent Drop-off/ **Pick-up**

Plus, improvements to pedestrian & bicycle circulation on site

Community Site Use Opportunities & Resources

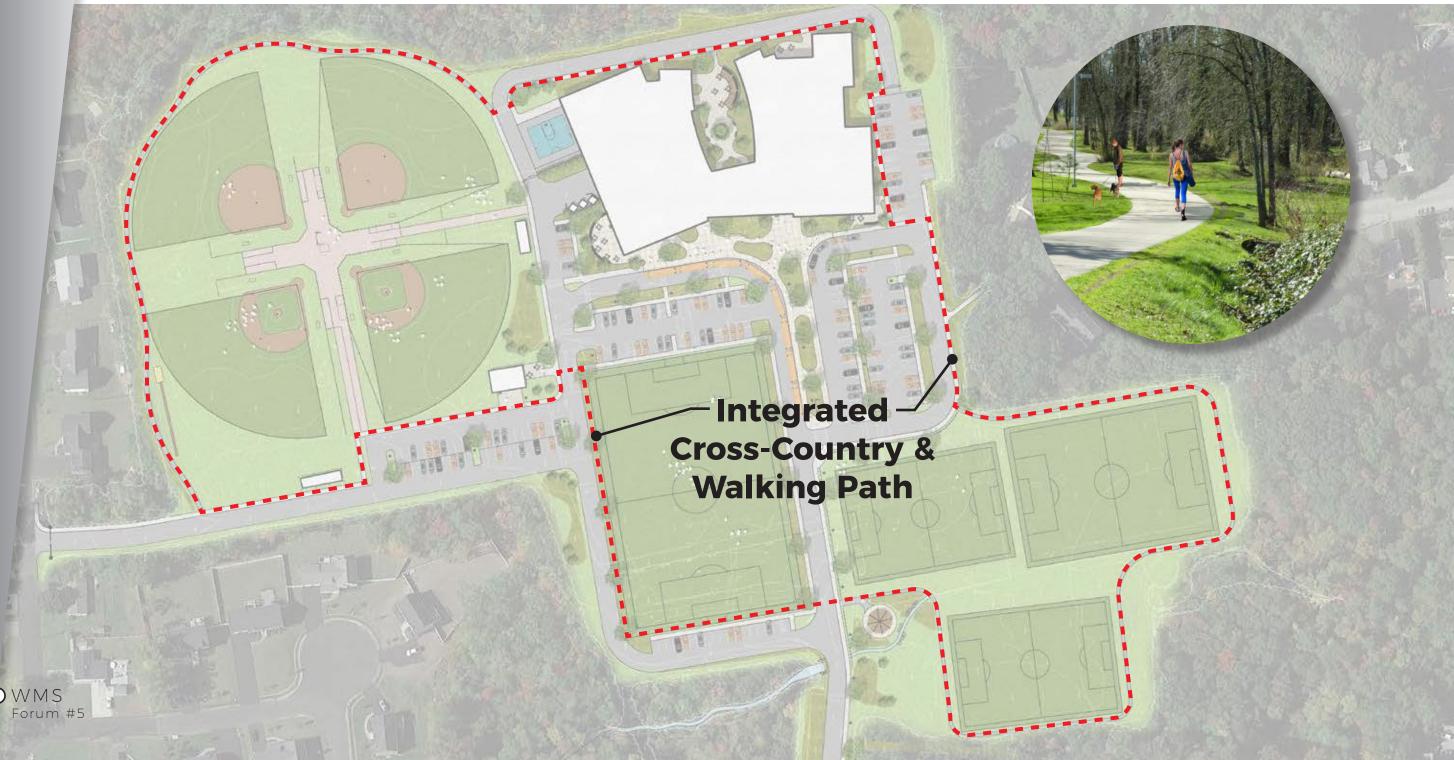
Town Softball Town **Baseball** Town Soccer **4** Replicated **Athletic Play Fields** Included in the current budget with minimal impact WMS to existing Town-Owned fields Forum #5





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Community Site Use Opportunities & Resources



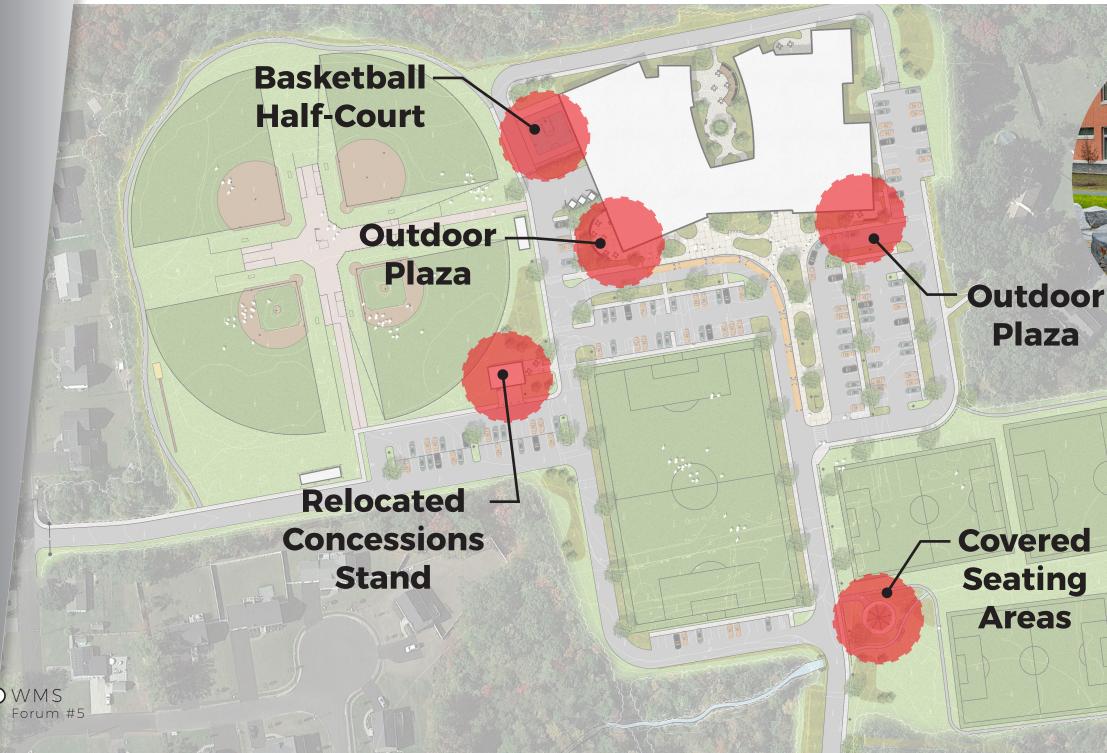


Community Site Use Opportunities & Resources

The WMS

Project Overview

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optional solar

canopies



Commitment to a Net Zero & Low EUI Building (EUI of 25 or less) \$2.00/sf Incentive* = **\$277,208** + \$1.50/sf Post Occ. Bonus* = \$207,906

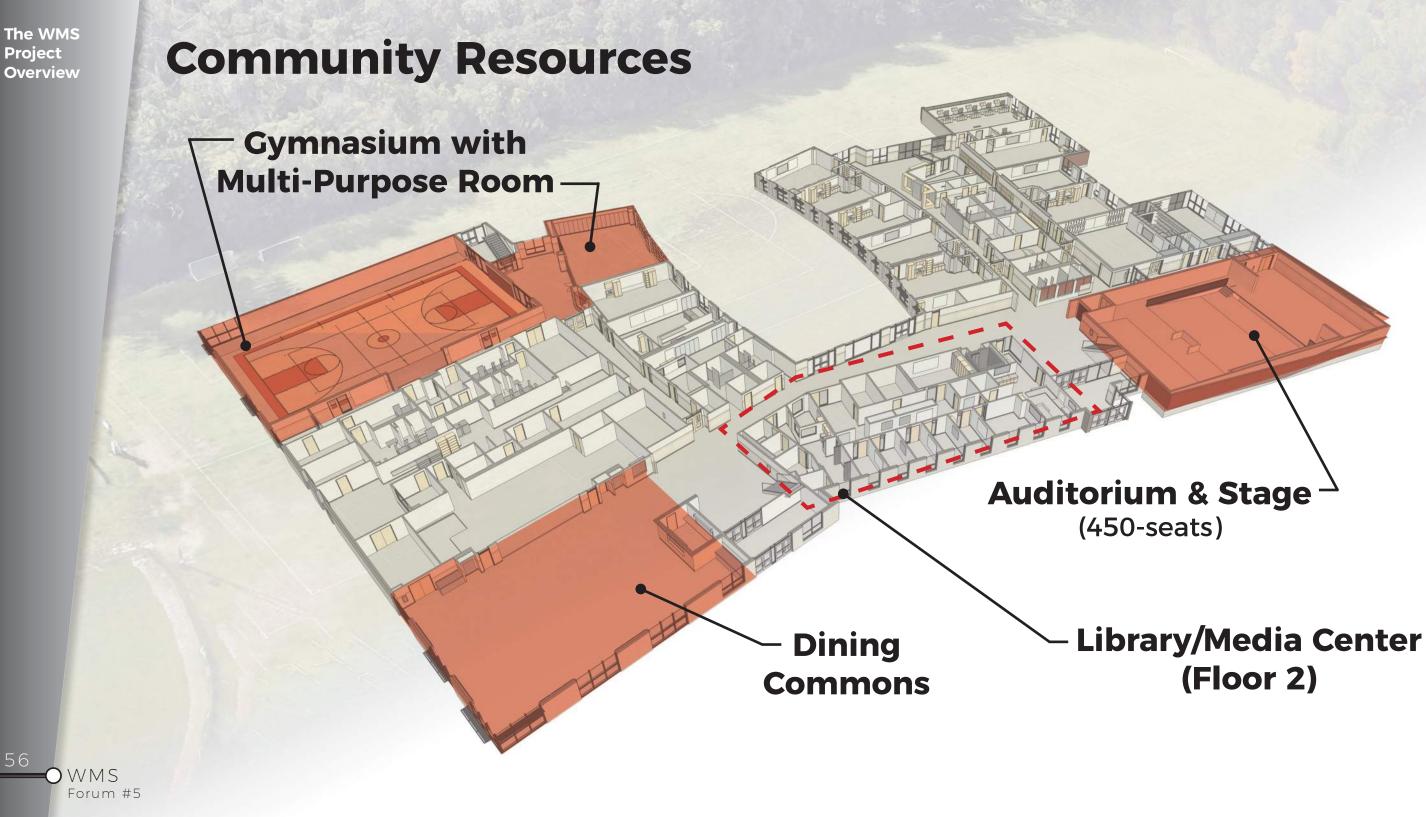






Outdoor Learning Areas

Restores Natural **Features**



Exterior Rendering

Front Approach from Northeast Corner



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The WMS

Project Overview

Exterior Rendering Front Approach from Southeast Corner

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Interior Rendering

"Main Street"



Interior Rendering

Academic Neighborhood

The WMS

Project Overview



Interior Rendering

450-seat Auditorium

The WMS

Project Overview



Cost-Conscious Design Approach

Remaining mindful of the financial impact to the Whitman taxpayers

New Building Design

- // New Construction option less expensive than addition/ renovation option
- // New Construction option has shorter duration than addition/ renovation option
- // Designing sustainably and energy efficiently to receive an additional 4.00% reimbursement from MSBA and to meet LEED Certification req's
- // Strategic positioning of new building for **least impact** to existing Town-owned fields

New Building Systems

- // Mirrored/ similar wings creates an efficient floor plan that allows for the replication of systems
- // Decentralized mechanical systems allow for easier maintenance and replacement
- // 3-story design is **less expensive** than 1 or 2-story design
- // Enrolled in an **energy efficiency** incentive program with local utility company for rebates upon completion

- from MSBA

Operation/Maintenance

// Established a Building Maintenance Program for an additional 1.57% reimbursement

// Use of cost-effective, long lasting, durable, recyclable, and low maintenance materials both inside and outside the building

// Strategic positioning of new building for optimal solar orientation to reduce thermal loads and operating costs



New Construction for **Grades 5-8** w/ an **Auditorium**

Total Project Cost

MSBA Maximum Grant

Total Taxpayer Contribution

Bond Length **30** years

Interest Rate 5.50 %

Avg. Increase per Home (Average over Bond Length)

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\$**135,289,672** \$**45,605,539**

\$**89,684,133**

Average Assessed Home Value \$420,530

\$1,494 (First Year)

\$**1,017.53 /yr** \$84.79 /month

\$**594** (Last Year)

Upcoming Critical Milestones

The success of the project will depend on...

Project needs to pass BOTH VOTES to proceed

Town Meeting MONDAY

VOTE #1

SATURDAY NOV 4, 2023 **VOTE #2**

WMS Forum #5

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OCT. 30, 2023

→ Voted "YES"

Debt Exclusion

NOV. 4, 2023 VOTE #2

FALL 2027

NEW Whitman Middle School Opening

Current 1st - 4th graders will be the first to attend the new middle school

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What does a "YES" vote mean?



Whitman will enter into MSBA Module 6: Project Scope and Budget Phase

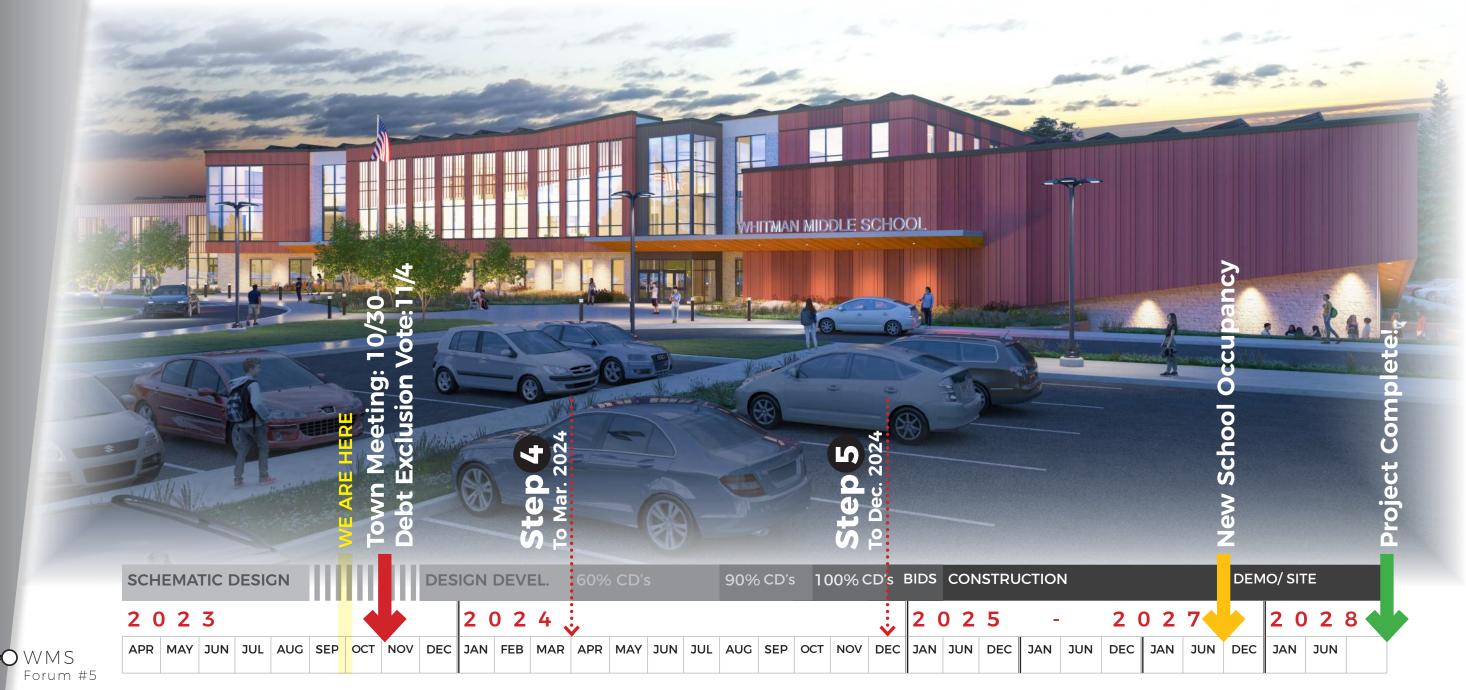
The Design Team will proceed with Design Development and Construction Documents

The Project will go out to Bid and will enter into the Construction Phase Moving Forward

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The New Whitman Middle School

Substantial Completion in the Fall of 2027



Moving Forward

What does a "NO" vote mean?

Town Meeting

OCT. 30, 2023 VOTE #1

Voted "NO"

The Town has <u>120 days</u> from the MSBA Board Vote to pass the project (both Town votes by March 2024)

Whitman will forfeit the opportunity to receive a max grant of \$45.6 million in state aid offered by the MSBA

Debt Exclusion

NOV. 4, 2023 VOTE #2

Whitman will be required to withdraw from the MSBA Grant Program

WHRSD will have to submit another Statement of Interest (SOI) and receive an invitation into the Eligibility Period Phase If eligible, Whitman will enter into the Feasibility Study again

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MSBA will not reimburse for a 2nd feasibility study

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WMS

Forum #5



Comparison of Base Repair vs. New Construction

The benefits of New Construction go beyond financial considerations

Base Repair

THIS IS NOT AN OPTION

- // **DOES NOT** include comprehensive renovation work - upgrades are only to meet code
- // DOES NOT make improvements to meet the needs of the Educational Program
- // DOES NOT change the Grade Configuration (remains 6-8)
- // DOES NOT add necessary space for **Special Education programs**
- // **DOES NOT** create parity between district middle schools
- // DOES NOT provide academic and extracurricular opportunities for the 5th graders that aren't available at the elementary school level

New Construction

Creates a campus of academic, social, & community resources

// Whitman has a new energy efficient & code compliant school for the next 50+ years





/ Meets the needs of the **Educational Program** & fulfills curriculum standards/guidelines



- // Meets the needs of the **Special Education** Program
- // Includes Grade 5 to create parity between district middle schools
- // Includes the oversized Gym & Multi-purpose Room





// Allows for participation in rebates & incentive programs related to energy efficiency

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// Reduces operating costs

// Improves traffic flows on site

// Includes 4 new athletic fields, concessions stand, & half-size basketball court

// Grants 5th graders new academic & extracurricular opportunities

// Includes natural walking path for community use

// Includes outdoor learning areas & community plazas

...and more!

Video Series Available

Series A - The Existing Conditions

- **VIDEO 1** Educational Deficiencies
- **VIDEO 2** Unit Ventilators
- **VIDEO 3** Base Repairs & Code Upgrades

Series B - The New Construction Project

- **VIDEO 4** Schematic Options
- **VIDEO 5** Grade Configuration & Benefits to the Elementary Schools

VIDEO 6 - Design, Benefits, & Sustainability

Series C - Approving the Project VIDEO 7 - Funding & Financial Impact

VIDEO 8 - Preparing for the Vote





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Upcoming Events

Dates & Content



WMS Forum #5

Critical Milestones



DEBT EXCLUSION VOTE SATURDAY NOV 4, 2023





Thank you

www.wmsproject.org Whitman Middle School



O Whitman-Hanson Regional School District // Colliers Project Leaders // Ai3 Architects, LLC

ARCHITECTS