



Andover High School Building Committee



June 14, 2023

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 PMA Consultants
Est. 1971

Agenda

- ❑ Cost savings analysis of lowering design enrollment from 1,900 to 1,800
- ❑ MSBA baseline space program comparison
- ❑ MSBA partnership scenarios – time & project cost impact
- ❑ Impact of postponing the project

Agenda

Cost savings analysis of lowering design enrollment from 1,900 to 1,800

MSBA baseline space program comparison

MSBA partnership scenarios – time & project cost impact

Impact of postponing the project

Space & cost saving to reduce enrollment

<u>ROOM TYPE</u>	proposed
Enrollment	1900
CORE ACADEMIC SPACES	97,500
SPECIAL EDUCATION	25,665
ART & MUSIC	15,250
VOCATIONS & TECHNOLOGY	18,720
HEALTH & PHYSICAL EDUCATION	30,600
MEDIA CENTER	11,475
AUDITORIUM / DRAMA	20,000
DINING & FOOD SERVICE	17,350
MEDICAL	1,720
ADMINISTRATION & GUIDANCE	8,658
CUSTODIAL & MAINTENANCE	3,500
OTHER	3,270
Sub- Total New Building Net Floor Area (NFA)	253,708
FIELD HOUSE	32,300
Sub- Total Net Floor Area (NFA)	286,008

MSBA Guidelines		Delta from MSBA Guideline for 1900 to 1800	Delta common spaces to accommodate 1900
1,900	1,800		
90,880	86,390	4,490	4,490
19,130	17,120	2,010	0*
9,775	8,350	1,425	1,425
18,720	18,720	0	0
26,840	26,280	560	0*
11,775	11,150	625	0*
10,400	10,400	0	0
14,650	14,000	650	0*
1,510	1,510	0	0
6,658	6,370	288	288
3,050	2,975	75	75
0	0	0	0
213,388	203,265	10,123	6,278

Notes:

Special Education is district dependant and will not decrease by total enrollment

P.E. spaces planned for 1900

Media Center planned for 1900

Dining planned for 1900

The net-square-foot savings of 6,278 SF equates to a gross-square-footage of 9,417 SF. At \$810/SF (our base project cost/ per SF), the approximate cost increase is \$7,625,000 construction cost, or less than \$10M project cost.

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Draft program - recent revisions to Net SF

Net Floor Area for the base program is shown below. This chart does not include Collins Center/ Auditorium and Field House. It also does not include gross area, for corridors, bathrooms, storage, and service spaces.

The total project Gross Square Feet is **441,902**.

ANDOVER HIGH SCHOOL	Proposed 1.11.2023	Basis of estimate 3.10.2023	Recent Reduction	MSBA Guidelines
CORE ACADEMIC SPACES	104,270	99,720	97,500	90,880
SPECIAL EDUCATION	29,840	27,190	25,665	19,130
ART & MUSIC	19,175	17,450	15,250	9,775
CAREER & TECHNOLOGY	19,175	19,200	18,720	18,720
HEALTH & PHYSICAL EDUCATION	35,400	34,990	30,600	26,840
MEDIA CENTER	11,775	11,775	11,475	11,775
AUDITORIUM / DRAMA	20,000	20,000	20,000	10,400
DINING & FOOD SERVICE	18,700	18,700	17,350	14,650
MEDICAL	1,720	1,720	1,720	1,510
ADMINISTRATION & GUIDANCE	8,658	8,658	8,658	6,658
CUSTODIAL & MAINTENANCE	3,800	3,800	3,500	3,050
OTHER - Andover TV	2,970	2,970	3,270	0
FIELD HOUSE W/ ADDITION	32,300	32,300	32,300	0
SUB-TOTAL HIGH SCHOOL (including Auditorium & Field House)	307,783	298,473	286,008	213,388

Draft program - Proposed vs. MSBA Net SF

ANDOVER HIGH SCHOOL	Proposed	MSBA Guidelines	Delta
CORE ACADEMIC SPACES	97,500	90,880	6,620
SPECIAL EDUCATION	25,665	19,130	6,535
ART & MUSIC	15,250	9,775	5,475
CAREER & TECHNOLOGY	18,720	18,720	0
HEALTH & PHYSICAL EDUCATION	30,600	26,840	3,760
MEDIA CENTER	11,475	11,775	-300
AUDITORIUM / DRAMA	20,000	10,400	9,600
DINING & FOOD SERVICE	17,350	14,650	2,700
MEDICAL	1,720	1,510	210
ADMINISTRATION & GUIDANCE	8,658	6,658	2,000
CUSTODIAL & MAINTENANCE	3,500	3,050	450
OTHER - Andover TV	3,270	0	3,270
SUB-TOTAL HIGH SCHOOL (not including Field House)	253,708	213,388	30,720
Field House	32,300	0	32,300
TOTAL HIGH SCHOOL - New - Campus 2 w Aud.	286,008	213,388	72,620

Note, of the overage:
 ~ 45% is Field House
 ~ 13% is Auditorium
 ~ 4.5% is Andover TV

Draft program - Proposed vs. MSBA Net SF

ANDOVER HIGH SCHOOL	Proposed	MSBA Guidelines	Delta
CORE ACADEMIC SPACES	97,500	90,880	6,620

Proposed Core Academic space exceeds the MSBA Space Summary template in order to be responsive to current programming. The additional square footage includes:

- three (3) larger than typical classrooms for program flexibility
- seven (7) program coordinators offices (for existing staff)
- three (3) science classrooms and prep rooms (to meet the program offerings)
- four (4) science storage spaces

Draft program - Proposed vs. MSBA Net SF

ANDOVER HIGH SCHOOL	Proposed	MSBA Guidelines	Delta
SPECIAL EDUCATION	25,740	19,130	6,610

Proposed Special Education space exceeds MSBA Space Summary template to be responsive to current programming, including:

- Bridge Program
- Excel Program
- Life Skills Program
- Vocational Program
- Sail Program
- Tier 3 Program
- Transitions Program
- Special Education classrooms
- Special Education offices - coordinator, social workers, speech & language pathologists, reading specialists
- Unified PE space

District specific Special Education programs are reviewed/approved by Department of Elementary and Secondary Education at the end of Schematic Design. MSBA participates in all space increases from their guidelines that have been approved by DESE.

Draft program - Proposed vs. MSBA Net SF

ANDOVER HIGH SCHOOL	Proposed	MSBA Guidelines	Delta
ART & MUSIC	15,250	9,775	5,475

Proposed Art & Music space exceeds MSBA Space Summary template in order to be responsive to current programming. The additional square footage includes:

- two (2) art classroom/storage (to match the existing)
- a larger band room (larger than MSBA by 500 SF, and smaller than existing by 660 SF)
- a Black Box Theater/Studio Classroom at 2,500 SF

ANDOVER HIGH SCHOOL	Proposed	MSBA Guidelines	Delta
CAREER & TECHNOLOGY	18,720	18,720	0

Proposed Career and Technology space meets the MSBA Space Summary guideline.

ANDOVER HIGH SCHOOL	Proposed	MSBA Guidelines	Delta
HEALTH & PHYSICAL EDUCATION	30,650	26,840	3,810

Proposed Health & Physical Education space exceeds MSBA Space Summary template in order to be responsive to current programming. The additional square footage includes:

- team rooms
- training/equipment room
- PE Instructor's offices/showers
- coach/referee rooms/showers
- office for AD, Assist. AD and conferencing
- office for PE coordinator

Draft program - Proposed vs. MSBA Net SF

ANDOVER HIGH SCHOOL	Proposed	MSBA Guidelines	Delta
MEDIA CENTER	11,475	11,775	-300

Proposed Media Center space is slightly under the MSBA Space Summary template.

ANDOVER HIGH SCHOOL	Proposed	MSBA Guidelines	Delta
AUDITORIUM / DRAMA	20,000	10,400	9,600

The proposed Auditorium/Drama space exceeds the MSBA Space Summary template. The additional square footage includes:

- larger auditorium (either as exists or for 1,000 seats, MSBA guideline is for 750 seats)
- larger stage (either as exists or as required for current programming)
- additional cast dressing rooms and green rooms (as required for current programming)
- scene shop (either as exists or as required for current programming)
- Director's Office
- Ticket Office

Draft program - Proposed vs. MSBA Net SF

ANDOVER HIGH SCHOOL	Proposed	MSBA Guidelines	Delta
DINING & FOOD SERVICE	17,350	14,650	2,700

Proposed Dining & Food Service space exceeds the MSBA Space Summary template. The additional square footage includes:

- larger kitchen by 650 SF (this is smaller than existing by 1,560 SF)
- larger servery by 1,900 SF (required to meet the districts goals and improve existing conditions)
- district freezer storage

ANDOVER HIGH SCHOOL	Proposed	MSBA Guidelines	Delta
MEDICAL	1,720	1,510	210

Proposed Medical space exceeds the MSBA Space Summary template. The additional square footage includes:

- mothers' room
- medical storage

Draft program - Proposed vs. MSBA Net SF

ANDOVER HIGH SCHOOL	Proposed	MSBA Guidelines	Delta
ADMINISTRATION & GUIDANCE	8,658	6,658	2,000

Proposed Administration & Guidance space exceeds the MSBA Space Summary template.

The additional square footage includes:

- seven (7) guidance offices (for a total of 17 offices to serve the students)
- one (1) career counselor's office
- one (1) student support space

ANDOVER HIGH SCHOOL	Proposed	MSBA Guidelines	Delta
CUSTODIAL & MAINTENANCE	3,500	3,050	450

Proposed Custodial & Maintenance space exceeds the MSBA Space Summary template. The additional square footage includes:

- additional storage (for Senior Safari, Town voting equipment, etc.)

ANDOVER HIGH SCHOOL	Proposed	MSBA Guidelines	Delta
OTHER - Andover TV	3,270	0	3,270

Proposed Other space is intended for programs outside of the MSBA Space Summary template. The additional square footage includes space for Andover TV.

Draft program - Proposed vs. MSBA Net SF

ANDOVER HIGH SCHOOL	Proposed	MSBA Guidelines	Delta
Field House	32,300	0	32,300

The existing Field House and proposed additions are entirely outside of the MSBA Space Summary template. The MSBA does not include space for field houses.

Agenda

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Earliest MSBA Scenarios: Rough Order Magnitude (ROM) Local Share Analysis

- The project team has utilized the updated MSBA total project budget & maximum grant calculation spreadsheet to forecast a range of MSBA reimbursement scenarios for what is believed to be the earliest the Town would be accepted by MSBA.
- Including time for West El closeout, SOI application, Eligibility Period, Project Team Selection, and Feasibility Study & Schematic Design, the project team forecasts the earliest delay of final completion as 7-years (2037 vs. 2030).
- This is a high-level exercise meant to provide a rough order of magnitude for comparison purposes only. Concise accuracy is impossible given the 7-year delay and various associated cost-related and MSBA-related assumptions. **Revised 6.30.23: Information to be used as a component of the Town's greater financial modeling analysis. Does not include borrowing costs, bond rating considerations, considerations of other Town debt, or the time value of money.**
- ~~Does not include borrowing costs, bond rating considerations, or considerations of other Town debt.~~
- Similar analyses with alternate MSBA acceptance timeframes are provided in the last slide.

Earliest MSBA Scenarios: ROM Local Share Analysis

	Current Project (Completed 2030)	Best Case MSBA Project (Completed 2037)
Estimated Construction Cost	\$372,660,000	\$490,600,000
Estimated Total Project Cost	\$480,850,000	\$633,000,000
Estimated MSBA Reimbursement	-	\$83.3M – \$122.7M
Estimated Local Share of Costs*	\$480,850,000	\$510,300,000 – \$549,700,000

~~*High level ROM. Does not include borrowing costs, bond rating considerations, or considerations of other Town debt.~~

Revised 6.30.23: *Information to be used as a component of the Town's greater financial modeling analysis. Does not include borrowing costs, bond rating considerations, considerations of other Town debt, or the time value of money.

- Various assumptions related to the following were considered:
 - Timing of MSBA acceptance
 - Project scope, construction cost escalation, and associated total project cost
 - Changes to MSBA reimbursement policies
 - MSBA design enrollment and impacts to the size of the building / what costs MSBA considers eligible for reimbursement
 - Andover's future MSBA reimbursement rate

Best Case: "High Range" Scenario

	TOWN-FUNDED GMP IN 2025 New Building 2028 Completed 2030	MSBA-ASSISTANCE (HIGH RANGE) GMP IN 2032 New Building 2035 Completed 2037	
Construction Cost			Risk Level
# Students	1900	1900	High
Total GSF	460261	460261	Low
Assumed Construction Escalation Rate	Varies (decreases)	4% / annum	Medium
Constr Cost per SF	\$810	\$1,066	
Construction Cost	\$372,655,000	\$490,594,382	Low
Soft Cost	\$108,192,000	\$142,433,048	
Total Project Cost at Bid Date	\$480,847,000	\$633,027,430	
MSBA Reimbursement			Risk Level
Eligible GSF		351518	Medium
Assumed MSBA Escalation Rate		2% / annum	Medium
Assumed MSBA Cons. Cost per SF Cap* (NIC Eligible Demo & Abatement)		\$516	
Eligible Construction Cost		\$192,870,239	
Eligible Soft Cost & Contingency		\$74,994,234	
Total Eligible Project Cost		\$267,864,473	
Reimbursement Rate		45.85%	Medium
Maximum Grant		\$122,731,000	
Effective Reimbursement Rate		19.4%	
Cost to Andover	\$480,847,000	\$510,296,430	

PLEASE NOTE
THIS SCENARIO IS UNREALISTIC – PLEASE SEE THE NEXT SLIDE

Best Case: "High Range" Scenario

	TOWN-FUNDED GMP IN 2025 New Building 2028 Completed 2030	MSBA-ASSISTANCE (HIGH RANGE) GMP IN 2032 New Building 2035 Completed 2037	<u>General Assumptions</u>	<u>Risk Level</u>	<u>Impact</u>
			AHS is accepted into MSBA program immediately after WestEI close out	High	Additional delay increases construction costs and disparity in MSBA reimb. vs. actual costs continues to widen
			Utilized base estimate - likely to change with SD Design decisions		Changes will result in revised cost figures for all three scenarios
			Assumes New Campus 2 w/aud. option approved by Select Board		Changes will result in revised cost figures for all three scenarios
Construction Cost			<u>Assumptions in the Construction Cost</u>	<u>Risk Level</u>	<u>Impact</u>
# Students	1900	1900	High range: MSBA agrees with district enrollment projections	High	Negotiation with MSBA will define number of students for which MSBA reimbursement will apply If Andover elects to use a higher design enrollment, Town covers cost directly
Total GSF	460261	460261	Assume all scenarios use current GSF (though likely to continue decreasing)	Low	Changes will result in revised (lower) cost figures for all three scenarios
Assumed Construction Escalation Rate	Varies (decreases)	4% / annum	Current estimate tapers escalation over time	Medium	Higher/lower rate of increase will result in higher/lower cost.
Constr Cost per SF	\$810	\$1,066	Both MSBA estimates assume construction costs increase at rate of 4% annually		
Construction Cost	\$372,655,000	\$490,594,382			
Soft Cost	\$108,192,000	\$142,433,048	Assumes soft costs scale with construction costs proportionally.	Low	Changes will result in revised cost figures for all three scenarios
Total Project Cost at Bid Date	\$480,847,000	\$633,027,430			
MSBA Reimbursement			<u>Assumptions in the Reimbursement Amount</u>	<u>Risk Level</u>	<u>Impact</u>
Eligible GSF		351518	High range: MSBA agrees w/ 1900 enrollment; forgives some space over template	Medium	Impacts maximum grant amount
Assumed MSBA Escalation Rate		2% / annum	High range: MSBA per-square-foot reimbursement cap increases at 2% per year	Medium	Impacts maximum grant amount
Assumed MSBA Cons. Cost per SF Cap* (NIC Eligible Demo & Abatement)		\$516	(Tied to MSBA escalation rate above)		
Eligible Construction Cost		\$192,870,239	(Tied to MSBA escalation rate and eligible GSF above)		
Eligible Soft Cost & Contingency		\$74,994,234	(Tied to MSBA escalation rate and eligible GSF above)		
Total Eligible Project Cost		\$267,864,473	(Tied to MSBA escalation rate and eligible GSF above)		
Reimbursement Rate		45.85%	High range: Assume same rate as West EI project	Medium	Impacts maximum grant amount
Maximum Grant		\$122,731,000	(Tied to MSBA escalation rate, eligible GSF, and Andover reimb % above)		
Effective Reimbursement Rate		19.4%	(Tied to MSBA escalation rate, eligible GSF, and Andover reimb % above)		
Cost to Andover	\$480,847,000	\$510,296,430			

Best Case: "Low Range" Scenario

	TOWN-FUNDED GMP IN 2025 New Building 2028 Completed 2030	MSBA-ASSISTANCE (LOW RANGE) GMP IN 2032 New Building 2035 Completed 2037	
Construction Cost			Risk Level
# Students	1900	1550	Medium
Total GSF	460261	460261	Low
Assumed Construction Escalation Rate	Varies (decreases)	4% / annum	Medium
Constr Cost per SF	\$810	\$1,066	
Construction Cost	\$372,655,000	\$490,594,382	Low
Soft Cost	\$108,192,000	\$142,433,048	
Total Project Cost at Bid Date	\$480,847,000	\$633,027,430	
MSBA Reimbursement			Risk Level
Eligible GSF		286995	Medium
Assumed MSBA Escalation Rate		0%	Low
Assumed MSBA Cons. Cost per SF Cap* (NIC Eligible Demo & Abatement)		\$432	
Eligible Construction Cost		\$135,140,944	
Eligible Soft Cost & Contingency		\$73,554,234	
Total Eligible Project Cost		\$208,695,178	Medium
Reimbursement Rate		40.0%	
Maximum Grant		\$83,343,000	
Effective Reimbursement Rate		13.2%	
Cost to Andover	\$480,847,000	\$549,684,430	

PLEASE NOTE
THIS SCENARIO IS
ALSO UNLIKELY –
PLEASE SEE THE
NEXT SLIDE.

Best Case: "Low Range" Scenario

	TOWN-FUNDED GMP IN 2025 New Building 2028 Completed 2030	MSBA-ASSISTANCE (LOW RANGE) GMP IN 2032 New Building 2035 Completed 2037	General Assumptions	Risk Level	Impact
			AHS is accepted into MSBA program immediately after WestEI close out	High	Additional delay increases construction costs and disparity in MSBA reimb. vs. actual costs
			Utilized base estimate - likely to change with SD Design decisions		Changes will result in revised cost figures for all three scenarios
			Assumes New Campus 2 w/aud. option approved by Select Board		Changes will result in revised cost figures for all three scenarios
Construction Cost			Assumptions in the Construction Cost	Risk Level	Impact
# Students	1900	1550	Worst-potential case, from West EI MSBA Enrollment Study	Medium	Negotiation with MSBA will define number of students for which MSBA reimbursement will apply If Andover elects to use a higher design enrollment, Town covers cost directly
Total GSF	460261	460261	Assume all scenarios use current GSF (though likely to continue decreasing)	Low	Changes will result in revised (lower) cost figures for all three scenarios
Assumed Construction Escalation Rate	Varies (decreases)	4% / annum	Current estimate tapers escalation over time		
Constr Cost per SF	\$810	\$1,066	Both MSBA estimates assume construction costs increase at rate of 4% annually	Medium	Higher/lower rate of increase will result in higher/lower cost.
Construction Cost	\$372,655,000	\$490,594,382			
Soft Cost	\$108,192,000	\$142,433,048	Assumes soft costs scale with construction costs proportionally.	Low	Changes will result in revised cost figures for all three scenarios
Total Project Cost at Bid Date	\$480,847,000	\$633,027,430			
MSBA Reimbursement			Assumptions in the Reimbursement Amount	Risk Level	Impact
Eligible GSF		286995	Assumes design does not change with lower MSBA design enrollment	Medium	Impacts maximum grant amount
Assumed MSBA Escalation Rate		0%	MSBA per-square-foot reimbursement cap does not increase	Low	Impacts maximum grant amount
Assumed MSBA Cons. Cost per SF Cap* (NIC Eligible Demo & Abatement)		\$432	(Tied to MSBA escalation rate above)		
Eligible Construction Cost		\$135,140,944	(Tied to MSBA escalation rate and eligible GSF above)		
Eligible Soft Cost & Contingency		\$73,554,234	(Tied to MSBA escalation rate and eligible GSF above)		
Total Eligible Project Cost		\$208,695,178	(Tied to MSBA escalation rate and eligible GSF above)		
Reimbursement Rate		40.0%	Assume Town's rate continues to trend downward (property values increase, etc.)	Medium	Impacts maximum grant amount
Maximum Grant		\$83,343,000	(Tied to MSBA escalation rate, eligible GSF, and Andover reimb % above)		
Effective Reimbursement Rate		13.2%	(Tied to MSBA escalation rate, eligible GSF, and Andover reimb % above)		
Cost to Andover	\$480,847,000	\$549,684,430			

Other MSBA Scenarios: ROM Local Share Analysis

- The updated analysis below reflects three additional MSBA scenarios beyond the best case MSBA project:
 - MSBA Scenario #2: 3-year delay to MSBA acceptance
 - MSBA Scenario #3: 6-year delay to MSBA acceptance
 - MSBA Scenario #4: 9-year delay to MSBA acceptance

Previously reviewed

	Previously reviewed		MSBA Scenario #2	MSBA Scenario #3	MSBA Scenario #4
	Current Project (Completed 2030)	MSBA Scenario #1 Best Case MSBA Project (Accepted Late 2027) (Completed 2037)	MSBA Project (Accepted Late 2030) (Completed 2040)	MSBA Project (Accepted Late 2033) (Completed 2043)	MSBA Project (Accepted Late 2036) (Completed 2046)
Est. Construction Cost	\$372,660,000	\$490,600,000	\$551,850,000	\$620,750,000	\$698,250,000
Est. Total Project Cost	\$480,850,000	\$633,000,000	\$709,700,000	\$797,700,000	\$896,600,000
Est. Max. MSBA Grant	-	\$83.3M – \$122.7M	\$96.1M – \$130.0M	\$97.2M – \$138.7M	\$98.4M – \$148.0M
Estimated Local Share*	\$480,850,000	\$510.3M – \$549.7M	\$579.7M – \$613.6M	\$659.0M – \$700.5M	\$748.6M – \$798.2M

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