

W. EDWARD BALMER SCHOOL

NORTHBRIDGE, MA
SCHEMATIC DESIGN

COMMUNITY FORUM #7

APRIL 23, 2018

SMMA

Project Management



NORTHBRIDGE
PUBLIC SCHOOLS




Massachusetts School Building Authority

Funding Affordable, Sustainable, and Efficient Schools in Partnership with Local Communities



DORE & WHITTIER
ARCHITECTS, INC.

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- 1. Introductions**
 - 2. Process and Schedule**
 - 3. Defining the Need**
 - 4. Design Options Evaluated**
 - 5. Project Cost Updates**
 - 6. Next Steps**
 - 7. Questions, Comments, Feedback**



INTRODUCTIONS

SCHOOL BUILDING COMMITTEE:

Joseph Strazzulla

Thomas Melia

Michael LeBrasseur

Adam Gaudette

Steven Gogolinski

Dr. Catherine Stickney

Melissa Walker

Steve Von Bargaen

Karlene Ross

Jill Healy

Kathleen Perry

Paul Bedigian

Jeffrey Tubbs

Peter L'Hommedieu

Jeff Lundquist

Andrew Chagnon

Spencer Pollock

Chair, School Building Committee

Member, Board of Selectmen

Chair, School Committee

Town Manager

Member, Finance Committee

Superintendent of Schools

School Business Manager

Director of Facilities & Operations

Principal, Balmer Elementary School

Principal, Northbridge Elementary School

Director of Pupil Personnel Services

Building, Planning, Construction Comm.

Community Member w/ Construction Experience

Community Member w/ Construction Experience

Community Member w/ Construction Experience

Community Member w/ Construction Experience

Parent Representative

study team

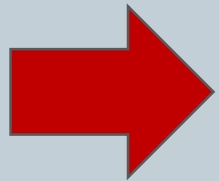


OWNER'S PROJECT MANAGER (OPM)

Symmes Maini & McKee Associates

DESIGNER (Architect) and its team of CONSULTANTS

Dore & Whittier Architects



CONSTRUCTION MANAGER (CM)

Fontaine Brothers, Inc.

PUBLIC SCHOOL CONSTRUCTION PARTNER

Massachusetts School Building Authority (MSBA)

study team



PROJECT NEED:

The W. Edward Balmer Elementary School is an aged facility requiring significant upkeep, expenditures which will not result in long-term educational benefits.

Northbridge residents voted to approve this Feasibility Study and seek a grant from the MSBA to address these conditions at its May 3, 2016 Special Town Meeting.





PROCESS AND SCHEDULE

MASSACHUSETTS SCHOOL BUILDING AUTHORITY (MSBA) PROCESS:

Partners with the District to support the design and construction of public school facilities that are:

- Educationally Appropriate
- Flexible
- Sustainable
- Cost-Effective

MSBA will fund 59.21% plus incentives of eligible project costs for an approved project if accepted by the voters of Northbridge.



FEASIBILITY STUDY PHASE SCOPE:

- Two grade configurations/enrollments/school sizes:
 - Grades 2-4 (510 students)
 - Grades PK-5 (1030 students)
- Conceptual design alternatives:
 - Renovation of existing (bring up to code)
 - Renovation/addition (like-new interiors)
 - New Construction

Devise several alternatives



Narrow from several to few

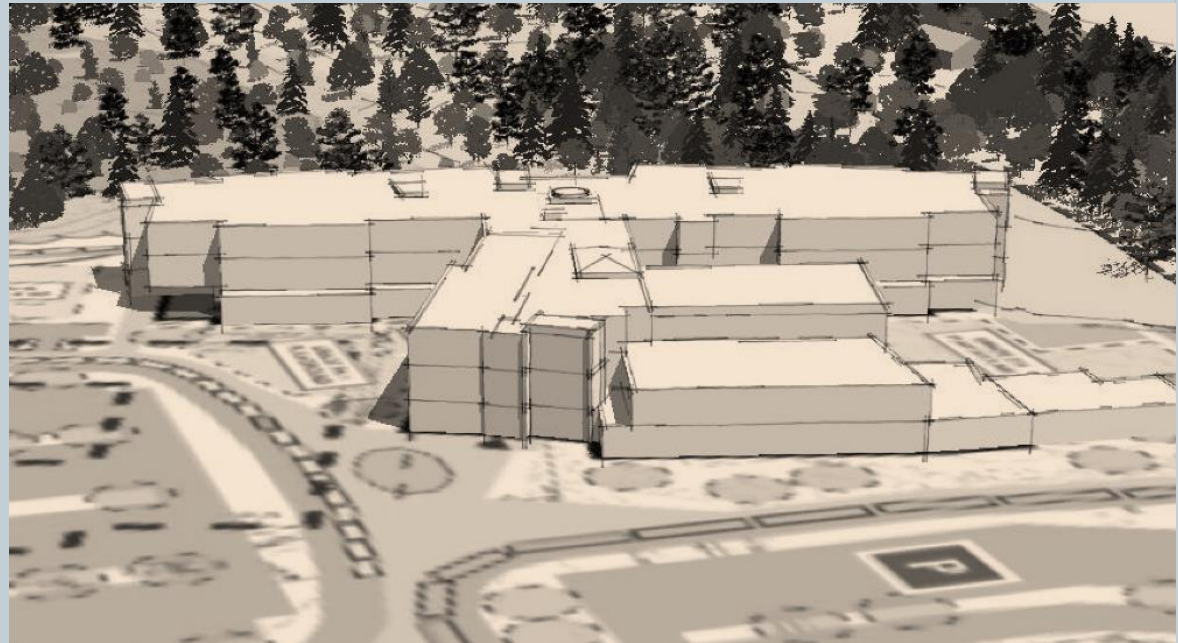


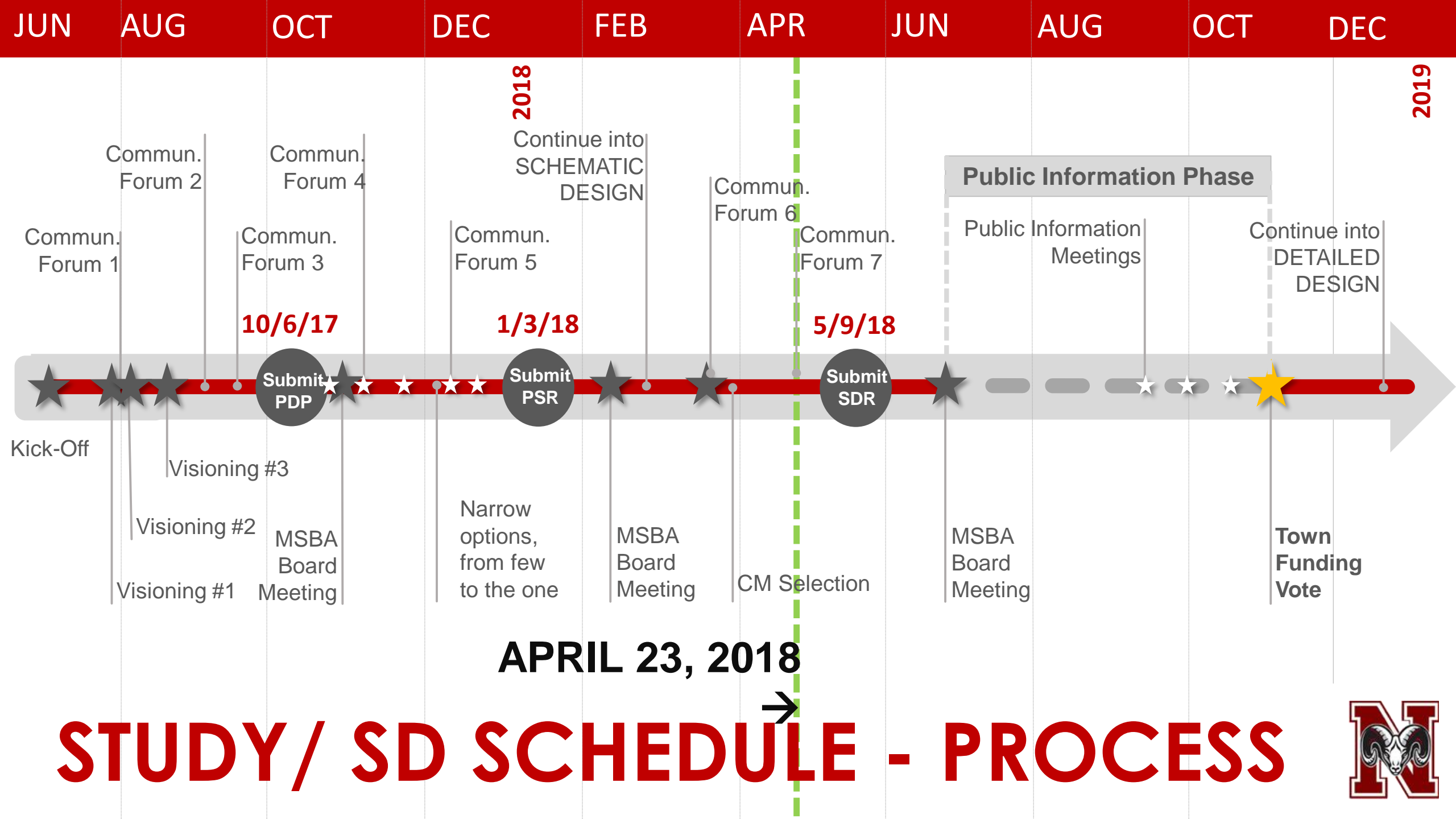
Narrow from few to one



SCHEMATIC DESIGN PHASE SCOPE:

- Preferred Alternative selected
- Develop design of this alternative:
 - Site/Civil/ Landscape
 - Architectural/ Code
 - Structural
 - Mechanical/Electrical
 - Plumbing/Fire Protection
 - Technology
 - Food Service
 - Safety and Security Planning
- Conceptual Cost Estimates
- Evaluate Budget
- Prepare for Project Funding Votes





COMMUNITY OUTREACH

Public Meetings, Town Board Updates, and Community Forums

- 23 School Building Committee meetings
- 7 Community Forums
- Town Board Presentations/Meetings
 - Finance Committee
 - School Committee
 - Safety Committee
 - Recreation Committee
 - Council on Aging
 - Board of Selectmen
 - Building Inspector

Community-Wide Surveys

- 2 web-based surveys with broad community participation

Televised School Building Committee Meetings and Community Forums

- Transparent process keeps the community informed

Project Website and Email

Project Website: <https://www.nps.org/sbc>
Project Email: SBC@nps.org





QUESTIONS?



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DEFINING THE NEED

DEFINING THE NEED

- Need a long-term solution to resolve deteriorating school buildings
- Provide educational spaces to meet MSBA standards
- Update the school to meet Educational Visioning Session goals
- Provide 21st century educational spaces
- Provide schools that are safe, code-compliant, and places Northbridge can be proud of.



BALMER: EXISTING PHYSICAL LIMITATIONS

Built 1968

Building Issues:

- Leaky Roof, Windows, Doors
- Little Insulation
- Missing/Inappropriate Spaces
- Size/Adjacency Mismatches
- Many spaces below size standard

MEP FP Issues:

- Original Mechanical/ Electrical/ Plumbing systems well beyond expected lifespan
- Low Efficiency
- No Sprinkler System
- Technology exposed to room



N.E.S. : EXISTING PHYSICAL LIMITATIONS

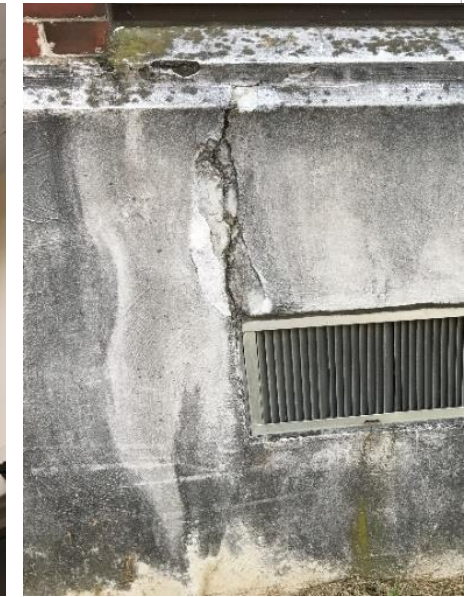
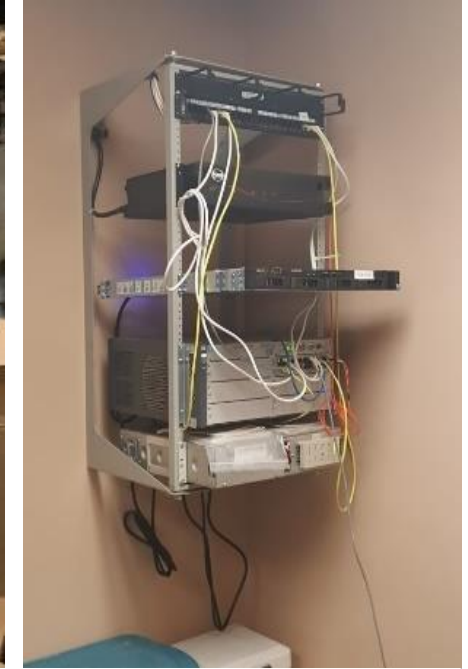
Built 1952/ 1983/ Modulares 2000

Architectural Issues

- Windows Drafty / Roof Leaky
- Exterior Walls/ Insulation
- Missing/Inappropriate Spaces
- Size/Adjacency Mismatches
- Many spaces below size standard

MEP FP Issues:

- Original Mechanical/ Electrical/ Plumbing systems well beyond expected lifespan
- Low Efficiency
- No Sprinkler System
- Technology exposed



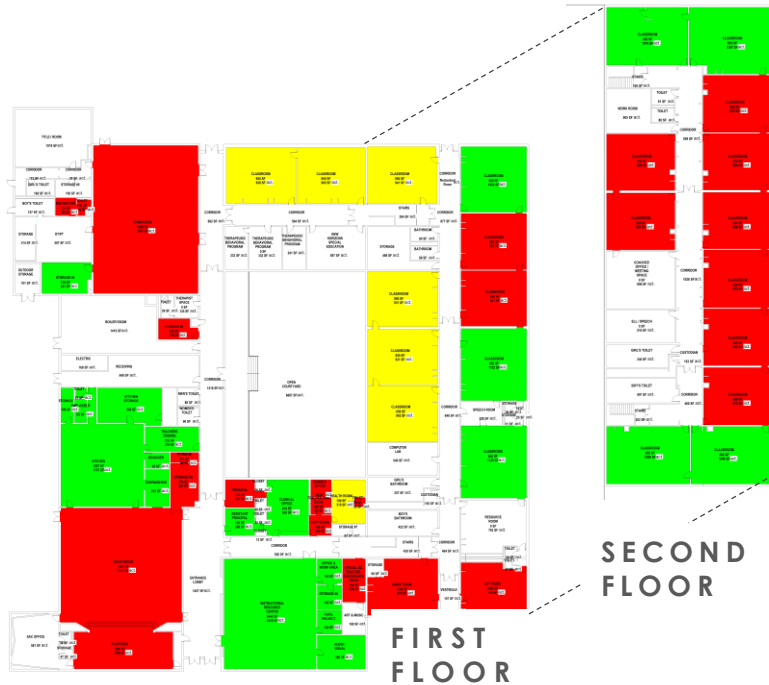
EXISTING EDUCATIONAL LIMITATIONS

MSBA SPACE NEEDS SUMMARY

- Between 90% & 110% MSBA Guideline
- Less Than 90% MSBA Guideline
- More Than 110% MSBA Guideline

Grade PK-5 Option (1030 enrollment):

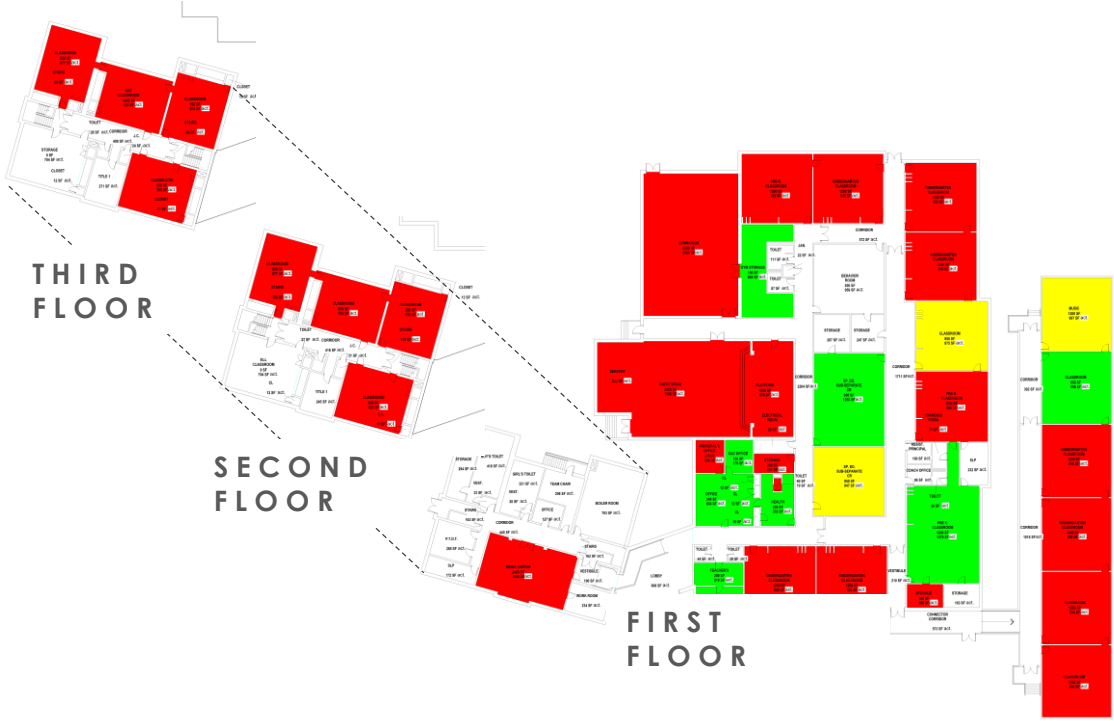
- Existing (Balmer + NES) 128,431 GSF
- Proposed (meets MSBA standard): 167,352 GSF
- Existing Balmer + NES space is 23% undersized



SECOND FLOOR

FIRST FLOOR

BALMER ELEMENTARY SCHOOL (1968)



THIRD FLOOR

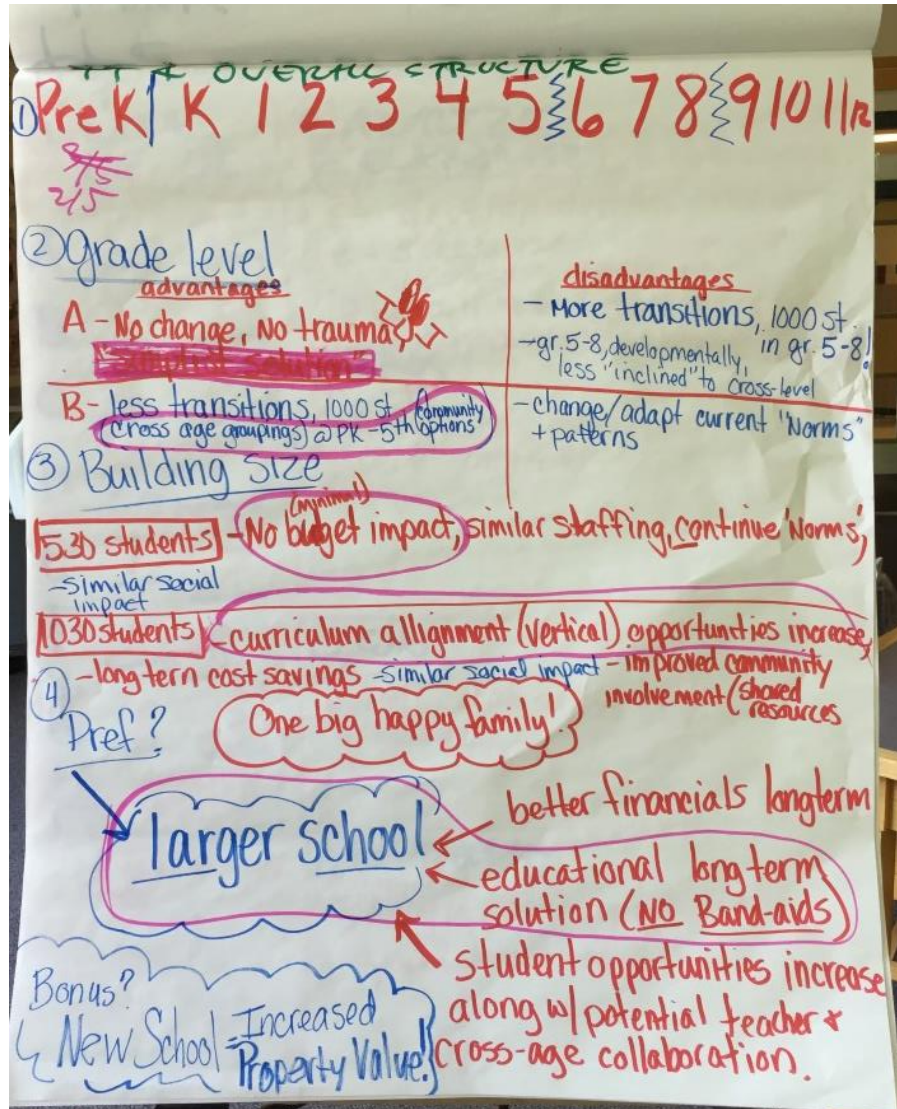
SECOND FLOOR

FIRST FLOOR

NORTHBRIDGE ELEMENTARY SCHOOL (1952/ 1983/ 2000 modulares)

VISIONING WORKSHOP FINDINGS AND TAKE-AWAYS

August 1: Visioning 2 “Educational Definition”



School Size: 1030 enrollment preferred

- “Fewer school building transitions”
- “Better curriculum alignment”
- “Long-term cost savings”
- “Why not fix two problems at once?”
- “Bonus: New or Rejuvenated School = Increased property values!”
- “Improved Community Involvement”
- “One big happy family”

define the need



APPROXIMATE COST TO TOWN

A SERIES (RENO ONLY)

A1
2 - 4
Balmer ES
\$32.7M

- RENOVATIONS TO EXISTING BUILDINGS

A2
PK-1st
NES
\$20.3M

- CODE AND DEFERRED MAINTENANCE UPGRADES
- NO EDUCATIONAL IMPROVEMENTS

\$ 53.0M total

NON-MSBA-
Reimbursed
Project(s)

B SERIES (GRADE 2-4)

B2
NEW/
REAR
\$40.5M

AFTER MSBA
REIMBURSEMENT

C SERIES (GRADE PK-5)

C3.1b
NEW/
REAR
\$55.3M

AFTER MSBA
REIMBURSEMENT

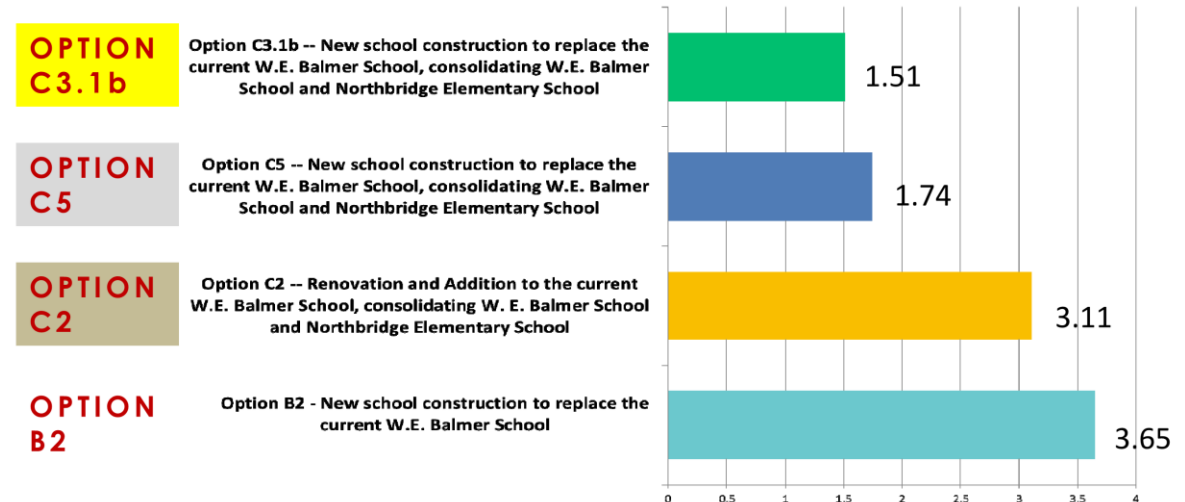
Estimated costs are preliminary and subject to change as the project is refined.

define the need



CONSOLIDATING TWO SCHOOLS

- **COST ADVANTAGE:** New PK-5 school close in cost to fixing up both old (with no educational improvements)
- **TIME ADVANTAGE:** one project, 5 years; versus two projects, 15+ years? Good borrowing rates now.
- **EDUCATIONALLY APPROPRIATE:** best curriculum alignment
- FREES UP N.E.S. SITE FOR OTHER TOWN USES
- PREFERRED OPTION IN TOWN-WIDE SURVEY



define the need





QUESTIONS?



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**SITE &
DESIGN**

**BUILDING
UPDATES**

UPDATE:

DELETED NORTH MAIN ACCESS DRIVE

Studied thoroughly.

Not needed for:

- Fire access
- Traffic
- Construction/
Phasing
- Pedestrian access
- Police don't
support

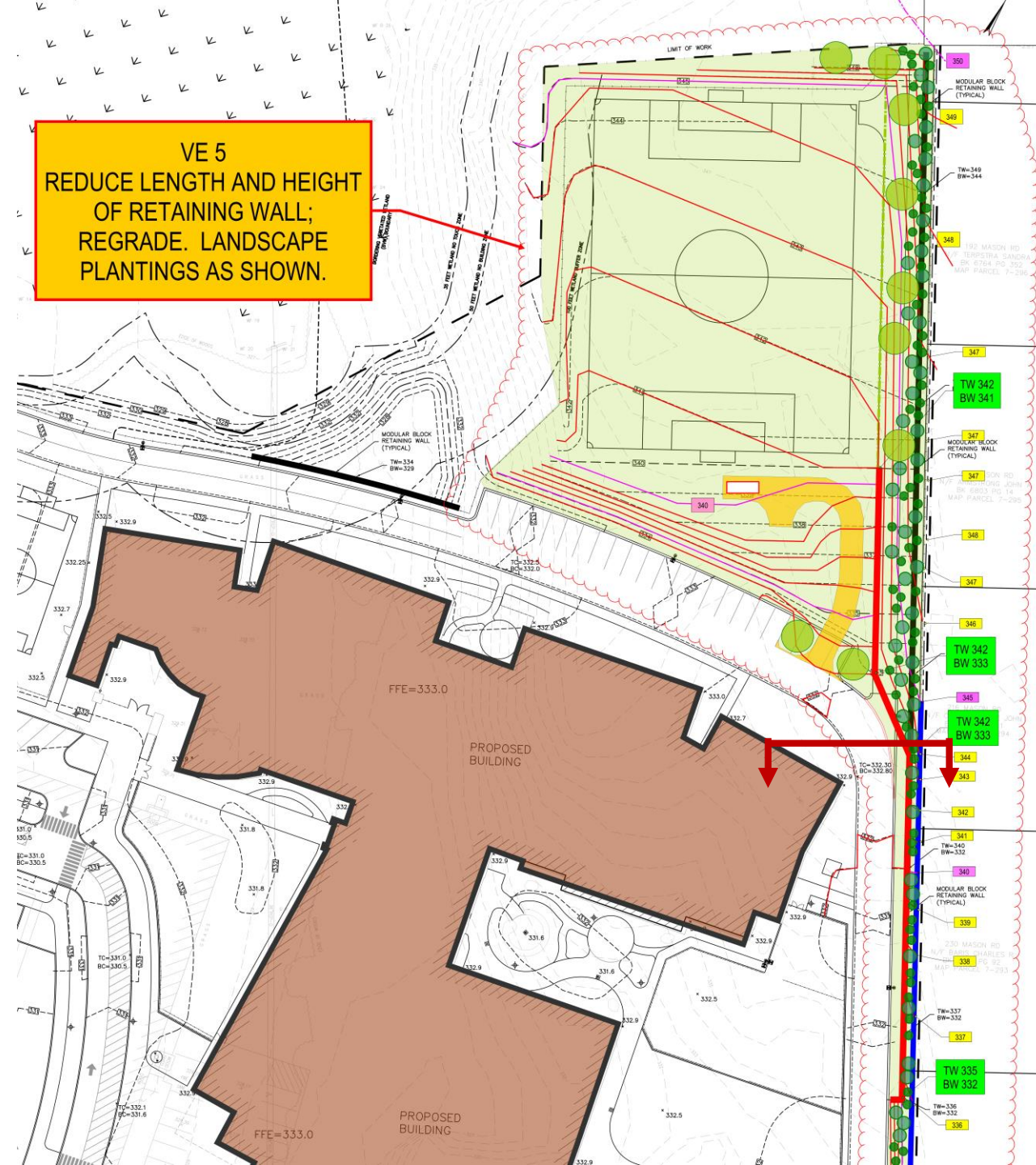


SITE PLANNING

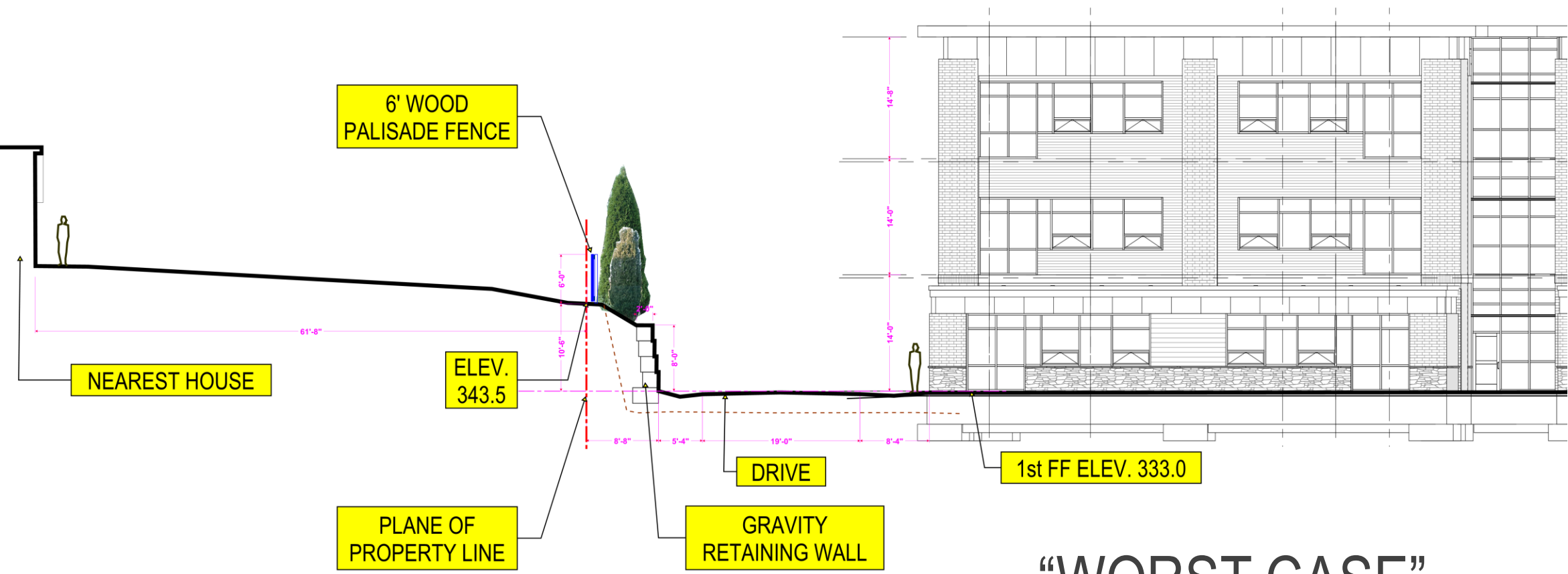


COST CONTROL: REDUCE RETAINING WALL LENGTH, IMPROVE BUFFER

- Revise emergency access road to north soccer field; move away from property line
- Reduce length of retaining wall and move away from property line. Regrade as shown.
- Landscape screen of cedar, juniper, and deciduous trees along boundary.
- Stockade fence (blue) at pinch point



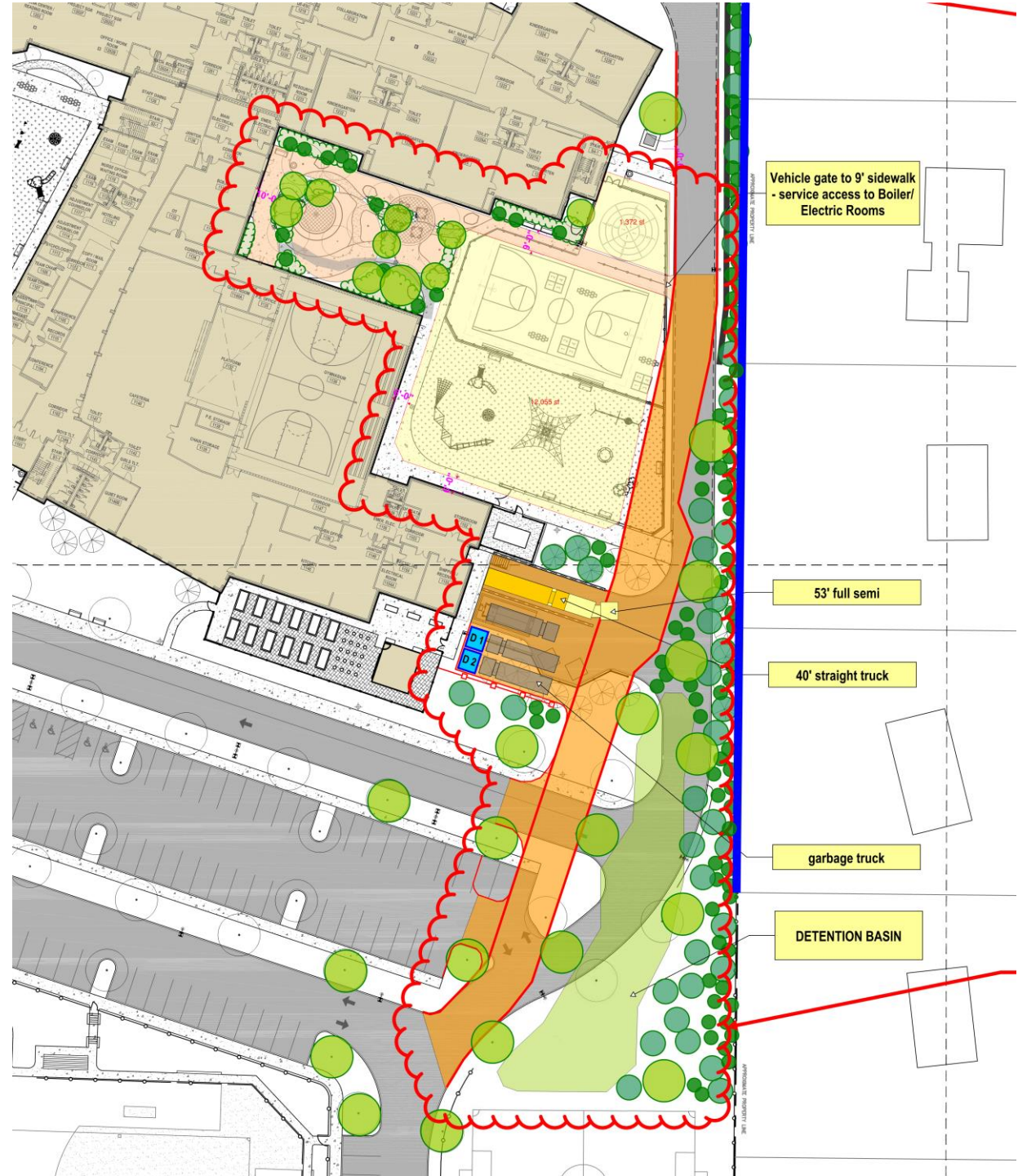
EAST PROPERTY LINE – SITE SECTION



“WORST CASE”

COST CONTROL: EAST DRIVE AND SITE REVISIONS

- Move access road away from property line – reduce pavement
- Reconfigure service yard
- Add landscape buffer materials (Cedar, Juniper, and deciduous trees)
- Reduce playground areas
- Simplify building access
- Lose (3) parking spaces
- Reconfigure bio-retention basin



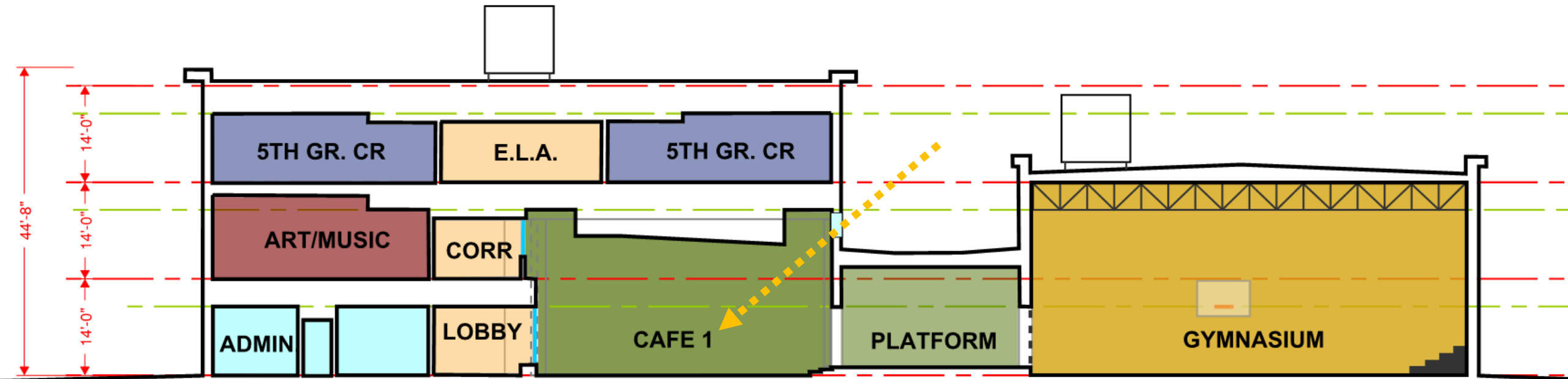
SITE PLANNING



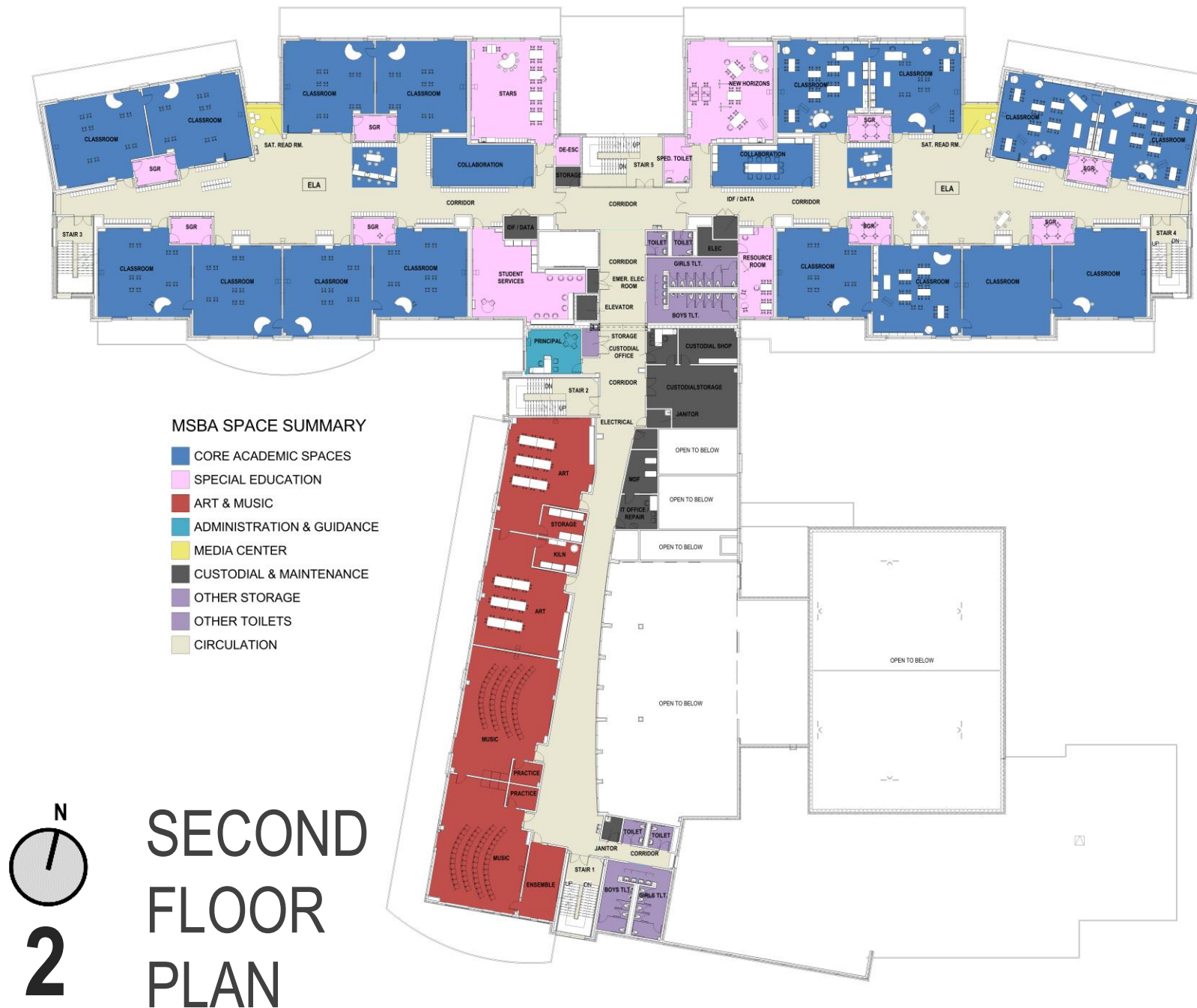


- Maker Space central to academic wing
- Public Circulation Spine
- Media Center with public access
- Cafeteria separated into two areas, each with “Quiet Room”
- Stage between Café 1 and Gym
- Service spaces in center of building

- Floors related through vertical spaces
- Dual utility of platform – Café/Gym
- Natural light & views into Café



BUILDING SECTION E-W THRU “PUBLIC” WING



- Extended Learning Areas: commons that link all classrooms into a tight-knit neighborhood
- Light well provides connection from stair hall to library
- Art/Music gallery overlooks Cafe1
- Service spaces central to building, 1st and 2nd levels



THIRD FLOOR PLAN

- Further simplified geometry
- Skylit central stair links all floors
- Principals' offices on second and third floors, central to academic areas – close to students



VIEW FROM SOUTHWEST SITE ENTRANCE



ENTRY VIEW FROM WEST PARKING LOT



ENTRY VIEW FROM SOUTHWEST

VIEW OF NORTH FACADE





AERIAL VIEW OF COURTYARD - EAST



QUESTIONS?



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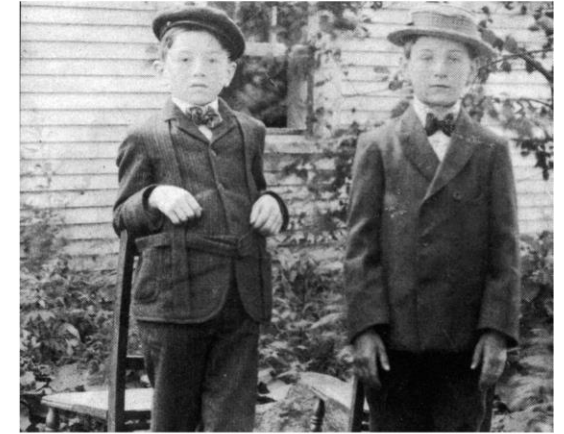
MANAGING THE CONSTRUCTION

FONTAINE BROS., INC.



COMPANY HISTORY | BACKGROUND

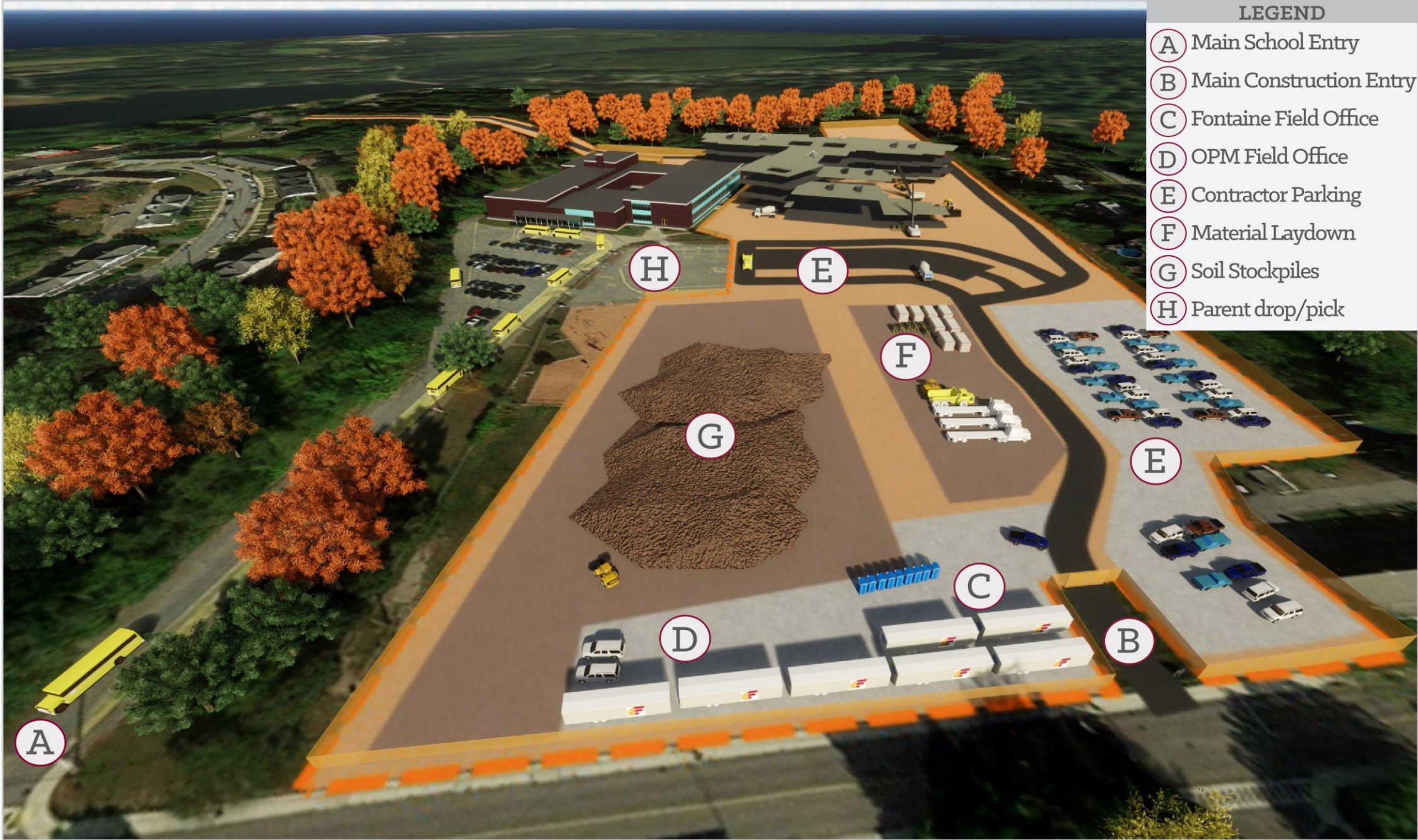
- FOUNDED IN **1933**
- **FAMILY** OWNED AND OPERATED
- **FOUR** GENERATIONS OF LEADERSHIP
- EXTENSIVE EXPERIENCE FROM BUILDING **35 ELEMENTARY SCHOOLS**
- BUILT **100+ PUBLIC SCHOOL** PROJECTS
- LONG-STANDING RELATIONSHIPS WITH **LOCAL SUBCONTRACTORS**
- **PRE-CONSTRUCTION SERVICES** WITH A BUILDERS PERSPECTIVE



Fontaine has been
awarded
35
ELEMENTARY SCHOOL
PROJECTS

pre-construction





LEGEND	
A	Main School Entry
B	Main Construction Entry
C	Fontaine Field Office
D	OPM Field Office
E	Contractor Parking
F	Material Laydown
G	Soil Stockpiles
H	Parent drop/pick



PROJECT SCHEDULE



ACTIVITY	2019												2020												2021											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Award Early Site 6 14 19																																				
Award Foundation & Structure 9 3 19																																				
Site Enabling 9 2 19 - 1 28 20																																				
Foundations 11 12 19 - 7 17 20																																				
Structure 2 14 20 - 9 21 20																																				
Envelope 5 1 20 - 2 8 21																																				
MEP Interiors 5 1 20 - 6 16 21																																				
Cx Turnover 5 1 21 – 7 1 21																																				
Phase 2 Demo/Site 7 1 21 - 12 21 21																																				



pre-construction





QUESTIONS?



DORE & WHITTIER
ARCHITECTS, INC.



WHITINSVILLE BANK BUILDING

PROJECT BUDGET UPDATE

SCHEMATIC DESIGN PHASE

ESTIMATED CONSTRUCTION COST COMPARISON

	PSR PHASE OPTION C3.1B (PM&C)	SD PHASE FONTAINE BROS. INC (CM)
AREA (GSF)	171,530	167,352
BUILDING	\$48,129,015	\$51,248,307
SITE WORK	\$6,935,201	\$9,415,335
MARK-UPS	\$26,388,980	\$18,829,020
TOTAL	\$81,453,196	\$79,492,662

Estimated costs are preliminary and subject to change as the project is refined.

PROJECT REIMBURSEMENT COMPARISON

	PSR SUBMISSION OPTION C3.1B (2/15/18)	SD SUBMISSION Fontaine Bros. CM (4/20/18)
TOTAL PROJECT COST	\$105,148,101	\$100,968,194
CONSTRUCTION COST	\$81,453,196	\$79,492,662
FEES, TESTING, UTILITIES, EXPENSES	\$14,491,181	\$12,409,046
FF&E, TECHNOLOGY	\$3,502,000	\$3,502,000
CONTINGENCIES	\$5,701,724	\$5,564,486
APPROXIMATE MSBA REIMBURSEMENT	\$49,959,378	\$47,564,269
APPROXIMATE COST TO THE TOWN	\$55,188,723	\$53,403,925

Estimated costs are preliminary and subject to change as the project is refined.

COST ESTIMATE



PROJECT COST BENCHMARKING

TOWN	AREA (GSF)	YEAR START CONSTRUCT'N	PROJECT COST	ESCALATION YEARS	APPROX. ESCALATION @ 3.5 YRS	ESCALATED TOTAL COST	ESCALATED TOTAL COST/SF
LUDLOW – CHAPIN ST. ES	106,250	5/1/2019	57,451,421	0.0	1.000	57,451,421	541
TAUNTON – MULCAHY ES	119,693	1/1/2019	64,971,831	0.5	1.018	66,108,838	552
IPSWICH – CHAPIN ES	123,700	3/1/2019	69,789,269	0.5	1.018	71,010,580	574
AMHERST – WILDWOOD ES	122,272	10/1/2017	67,207,225	2.0	1.070	71,911,731	588
NORTHBRIDGE – BALMER ES	167,352	8/1/2019	100,968,194	0.0	1.000	100,968,194	603
HARVARD – HILDRETH ES	81,836	1/1/2019	48,618,000	0.5	1.018	49,468,815	604
LEXINGTON – HASTINGS ES	110,000	6/1/2018	65,339,418	1.0	1.035	67,626,298	615
TISBURY ES	75,390	5/1/2019	46,567,962	0.0	1.000	46,567,962	618
MILLIS – CLYDE BROWN ES	89,852	2/1/2018	53,365,857	1.5	1.053	56,167,564	625
MARLBOROUGH – RICHER ES	108,730	3/1/2019	67,525,253	0.5	1.018	68,706,945	632
NEEDHAM – HILLSIDE ES	90,702	6/1/2018	57,862,414	1.0	1.035	59,887,599	660

COST ESTIMATE



PROJECT ESTIMATED TAX IMPACT

COST ESTIMATE



Northbridge Share

Rate

Term (years)

Yearly Payment - 20 yr Average

Average Home Value

Annual Tax Increase Average Home - 20 yr Avg.

Annual Tax Increase per \$1,000 Valuation

Impact Average Home-20 Years

Updated SD Estimate per CM Option C3.1b Grade PK-5 New Construction 20 YEAR TERM			Updated SD Estimate per CM Option C3.1b Grade PK-5 New Construction 30 YEAR TERM		
\$53,403,925	\$53,403,925	\$53,403,925	\$53,403,925	\$53,403,925	\$53,403,925
3.00%	4.00%	5.00%	3.00%	4.00%	5.00%
20	20	20	30	30	30
\$ 3,511,308	\$ 3,791,679	\$ 4,072,049	\$ 2,607,892	\$ 2,883,812	\$ 3,159,732
\$ 301,000	\$ 301,000	\$ 301,000	\$ 301,000	\$ 301,000	\$ 301,000
\$ 648.34	\$ 700.11	\$ 751.88	\$ 481.53	\$ 532.48	\$ 583.42
\$ 2.1540	\$ 2.3260	\$ 2.4980	\$ 1.6000	\$ 1.7690	\$ 1.9380
\$ 12,967	\$ 14,002	\$ 15,038	\$ 14,446	\$ 15,974	\$ 17,503

Assumptions: Tax rate based on Fiscal 2018 assessed valuation and AVERAGE house value of \$301,000

Yearly impact will change based upon subsequent year tax rates and valuations



QUESTIONS?



DORE & WHITTIER
ARCHITECTS, INC.

NEXT STEPS

- **May 9, 2018 - Submit Schematic Design (SD) documents to MSBA**
- **June 27, 2018 – MSBA board meeting to approve project to bring to voters**
- **August 2018 – Community Forum #8**
- **September 2018 – Community Forum #9**
- **October 2018 – Community Forum #10**
- **October/November 2018 – Town Funding Vote and Debt Exclusion Vote**

COMMUNITY RESOURCES

Project Website:

<https://www.nps.org/sbc>

Project Email:

SBC@nps.org





Thank you for your attention!
Questions? Comments?

