Northeast Metro Tech

Building Committee

DRA

August 13, 2020

Agenda

Northeast Metropolitan Regional Vocational High School

- SBC Vote to Approve Prior Minutes
- OPM Update/MSBA Reimbursement Overview
- Designer PDP Submittal Review
  - Education Plan Status
  - Existing Conditions Assessment
  - Preliminary Conceptual Options
  - Preliminary Evaluation Matrix
- SBC Votes
  - Approve Recommended Options for Further Study
  - Vote to Eliminate 1250 Student Enrollment Option
  - Authorize PMA/DRA to Submit PDP to MSBA

Key Project Milestones

Northeast Metropolitan Regional Vocational High School

✓ MSBA Module 2 *Forming the Team*	MSBA Module 3 *Feasibility Study*	MSBA Module 4 *Schematic Design*	MSBA Module 5 *Funding the Project*
AUGUST 2019 OPM Selection	**JANUARY 2020** Begin Feasibility Study	**JANUARY 2021** Begin Schematic Design	**LATE DECEMBER 2021** Local funding approval deadline
JANUARY 2020 Designer Selection	**AUGUST 2020** SC approves Ed. Plan SBC approves PDP Submit PDP to MSBA	**JUNE 2021** SBC approves SD/DESE design package Submit SD/DESE to MSBA	
	DEC. 2020 or JAN. 2021 SBC approves PSR	**JULY 2021** MSBA FAS Meeting	
	JANUARY 2021 Submit PSR to MSBA MSBA FAS Meeting	**AUGUST 2021** MSBA BOD approves project scope & budget	
	FEBRUARY 2021 MSBA BOD approves PSR		

Acronym glossary

BOD – Board of Directors (MSBA)
DESE – Massachusetts Department of Elementary & Secondary Education
Ed. Plan – Educational Plan
FAS – Facilities Assessment Subcommittee
ISS – Initial Space Summary
MSBA – Mass. School Building Authority
OPM – Owner's Project Manager
PDP – Preliminary Design Program
PSR – Preferred Schematic Report
SBC – School Building Committee
SC – School Committee
SD – Schematic Design

Updated 8.13.2020

MSBA Reimbursement

Northeast Metropolitan Regional Vocational High School

The MSBA provides percentage reimbursement on **eligible** project costs.

Per the MSBA: *Reimbursement rates for MSBA approved, eligible school construction and renovation projects are calculated pursuant to a formula that is established in Massachusetts General Law, Chapter 70B section 10 (M.G.L. c. 70B § 10)*

Base Rate (31% for all districts)
+ Three Socioeconomic Factors
+ Incentive Points (0 % – 18%)

= MSBA Reimbursement Rate

https://www.massschoolbuildings.org/sites/default/files/edit-contentfiles/Documents/Guidelines_Policies/Reimbursement-Rate-Calculation-UPDATE.pdf

MSBA Reimbursement Rate

Northeast Metropolitan Regional Vocational High School

The District's current, preliminary reimbursement rate is 63.34%.

Base Rate = 31.0%
Income Factor = 7.58%
Property Wealth Factor = 17.68%
Poverty Factor = 7.08%

= 63.34%

There are ongoing discussions with the MSBA.
Rate does not include incentive points, as these have not yet been determined.
Final rate is locked in at Project Scope & Budget approval, targeted for August 2021

Ineligible Project Costs

Northeast Metropolitan Regional Vocational High School

- (a) Any costs for an Approved Project in excess of the Total Facilities Grant.
- (b) Financing costs.
- (c) All costs associated with credit rating services, legal services related to the issuance of any indebtedness, and financial consulting services.
- (d) The cost of legal services.
- (e) The provision of any direct or indirect municipal services.
- (f) Any funds expended by the Eligible Applicant prior to the execution of a PFA.
- (g) All costs associated with site acquisition.
- (h) Unsupported or inadequately supported project costs, as determined by the Authority.
- (i) Maintenance or service contracts and warranties.
- (j) Duplicate costs or costs unrelated to the project.
- (k) The lease, purchase or rental of storage space, storage facilities, storage trailers, or storage containers.
- (l) Costs that are normal operating and maintenance costs of the school district
- (n) Penalties, processing fees, catalogue fees, sales tax, memberships, and subscriptions.
- (o) The costs of local building permits, inspection fees, and any other such fees.
- (p) Athletic equipment
- (q) All costs associated with the purchase, lease, improvement, or maintenance of modular units.
- (r) All costs associated with the swing spaces used for the housing of students.
- (s) All costs associated with the transportation of students.
- (t) All costs associated with the purchase, lease or use of any vehicle,
- (u) The costs of any supplies related to the Assisted Facility.
- (v) All costs associated with the demolition of buildings, unless such costs are deemed by the Authority in writing prior to said demolition, to be the most cost effective option.
- (w) All costs associated with utilities.
- (x) All costs associated with cell phone purchase or service.
- (y) Dedication, ceremonial or celebratory costs.
- (z) The Authority reserves it right to disallow any costs associated with any change order that deviates from the scope of the project, as determined by the Authority pursuant to the Project Scope and Budget Agreement.
- (aa) Any costs determined by the Authority to be ineligible pursuant to M.G.L. c. 70B, St. 2004, c. 208, 963 CMR 2.00, the MSBA Audit Guidelines, or any other policy, rule, or guideline of the Authority.

MSBA Cost Caps

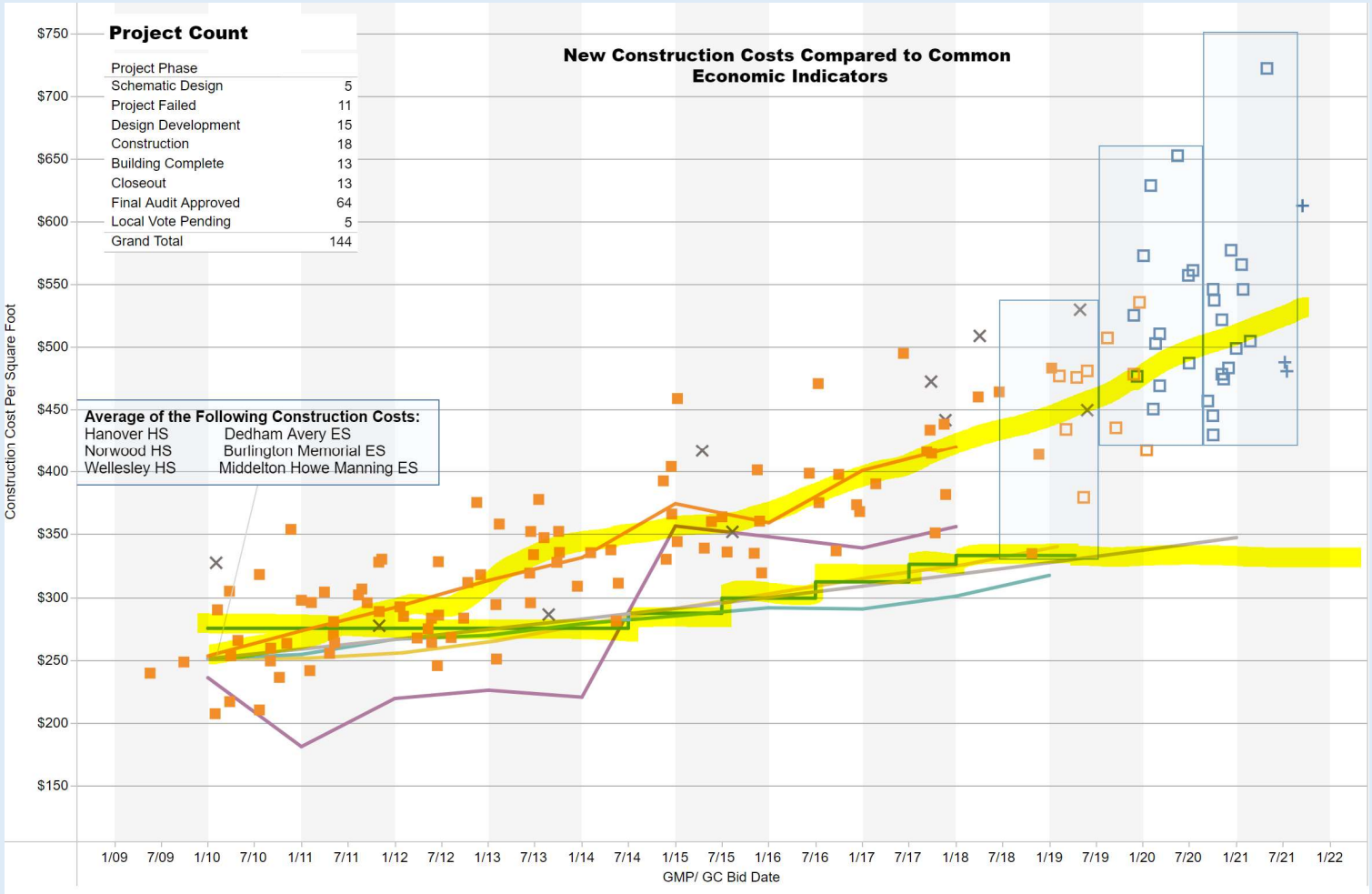
Northeast Metropolitan Regional Vocational High School

The MSBA funding assistance program includes various cost caps that are applied **before the reimbursement rate** is taken into effect, including:

- Construction costs exceeding $333/eligible SF will not be reimbursed.
  - (Eligible SF determined based off of Initial Space Summary, based off of # students)
  - Note: MSBA may increase this at future board meetings prior to August 2021.
- FFE&T costs over $2400/student will not be reimbursed.
  - Enrollment options are 1250-1722 students, so the cap ranges from $3M – $4.133M.
- Soft costs may not exceed 20% of Construction Costs.
- Costs related to site work may not exceed 8% of Direct Building Construction Costs.
- Costs related to OPM Basic Services may not exceed 3.5% of Construction Costs.
- Costs related to Designer Basic Services may not exceed 10% of Construction Costs.

MSBA Caps Construction Costs @ $333/sf

Northeast Metropolitan Regional Vocational High School



Note: MSBA reimburses percentage of $333/SF

Average cost/SF

Gap is increasing over time

Current cap ($333/SF)

MSBA Reimbursement Rate

Northeast Metropolitan Regional Vocational High School

Maximum Grant, Project Example

Example: Somerville High School Project

- Estimated Total Project Cost: $255,982,704
- Reimbursement Rate: *75.29%*
- Maximum MSBA Grant: $123,963,307
- **"Effective" Reimbursement rate: *48.4%*** *(if all budgeted costs are incurred and eligibility maintained)*

MSBA Submittal

Northeast Metropolitan Regional Vocational High School

Preliminary Design Program

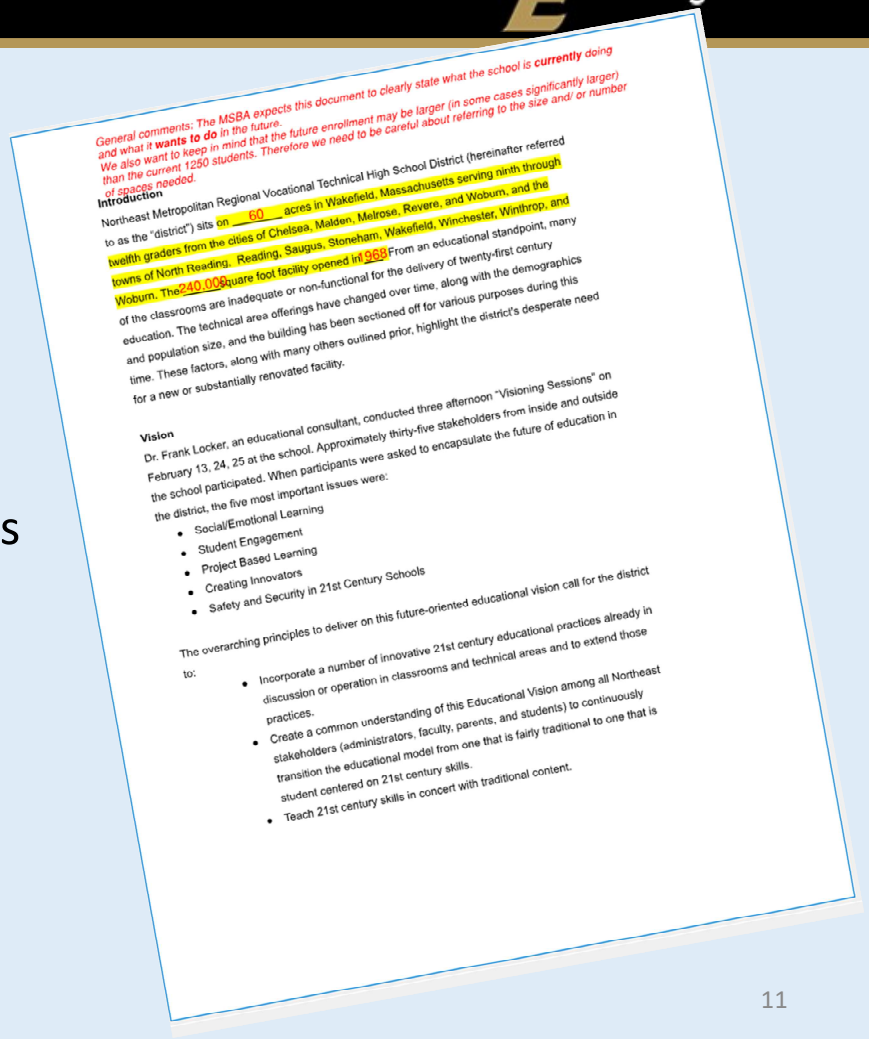
- Introduction
  - Overview, Schedule
- Education Plan
  - Initial Space Summaries (5 different enrollments)
- Existing Conditions Assessment
- Preliminary Conceptual Options
  - Preliminary Evaluation Matrix
- Appendix

Education Plan

Northeast Metropolitan Regional Vocational High School

Highlights

- Flexibility for different learning styles including Project-Based Learning
- 21st Century Learning Environments
- Small Learning Communities with Career Clusters
- Shops in proximity to Academic classrooms
- Safety & secure access, especially for public access shops
- Increase from 16 to 19 Career Tech programs



*General comments: The MSBA expects this document to clearly state what the school is **currently** doing and what it **wants to do** in the future.*
We also want to keep in mind that the future enrollment may be larger (in some cases significantly larger) than the current 1250 students. Therefore we need to be careful about referring to the size and/ or number of spaces needed.

Introduction

Northeast Metropolitan Regional Vocational Technical High School District (hereinafter referred to as the "district") sits on ___60___ acres in Wakefield, Massachusetts serving ninth through twelfth graders from the cities of Chelsea, Malden, Melrose, Revere, and Woburn, and the towns of North Reading, Reading, Saugus, Stoneham, Wakefield, Winchester, Winthrop, and Woburn. The240,005square foot facility opened in1968From an educational standpoint, many of the classrooms are inadequate or non-functional for the delivery of twenty-first century education. The technical area offerings have changed over time, along with the demographics and population size, and the building has been sectioned off for various purposes during this time. These factors, along with many others outlined prior, highlight the district's desperate need for a new or substantially renovated facility.

Vision

Dr. Frank Locker, an educational consultant, conducted three afternoon "Visioning Sessions" on February 13, 24, 25 at the school. Approximately thirty-five stakeholders from inside and outside the school participated. When participants were asked to encapsulate the future of education in the district, the five most important issues were:

- Social/Emotional Learning
- Student Engagement
- Project Based Learning
- Creating Innovators
- Safety and Security in 21st Century Schools

The overarching principles to deliver on this future-oriented educational vision call for the district to:

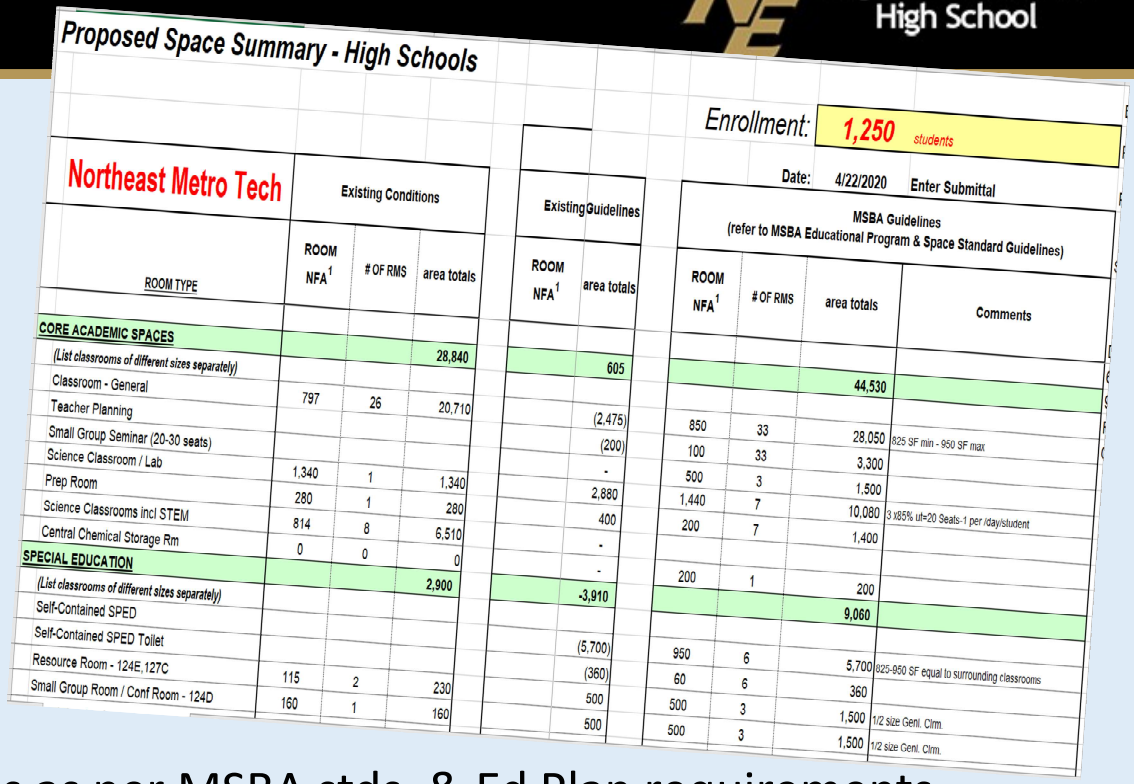
- Incorporate a number of innovative 21st century educational practices already in discussion or operation in classrooms and technical areas and to extend those practices.
- Create a common understanding of this Educational Vision among all Northeast stakeholders (administrators, faculty, parents, and students) to continuously transition the educational model from one that is fairly traditional to one that is student centered on 21st century skills.
- Teach 21st century skills in concert with traditional content.

Space Summaries

Northeast Metropolitan Regional Vocational High School

Enrollments:

1250 students (current)	*315,000 sf*
1400 students	*343,000 sf*
1600 students	*383,000 sf*
1660 students	*393,000 sf*
1722 students	*404,000 sf*



Proposed Space Summary - High Schools

Enrollment: 1,250 students

Date: 4/22/2020 Enter Submittal

Northeast Metro Tech	Existing Conditions			Existing Guidelines		MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
CORE ACADEMIC SPACES			28,840		605			44,530	
(List classrooms of different sizes separately)									
Classroom - General	797	26	20,710		(2,475)	850	33	28,050	825 SF min - 950 SF max
Teacher Planning					(200)	100	33	3,300	
Small Group Seminar (20-30 seats)					-	500	3	1,500	
Science Classroom / Lab	1,340	1	1,340		2,880	1,440	7	10,080	3 x85% ut=20 Seats-1 per /day/student
Prep Room	280	1	280		400	200	7	1,400	
Science Classrooms incl STEM	814	8	6,510		-				
Central Chemical Storage Rm	0	0	0		-	200	1	200	
SPECIAL EDUCATION			2,900		-3,910			9,060	
(List classrooms of different sizes separately)									
Self-Contained SPED					(5,700)	950	6	5,700	825-950 SF equal to surrounding classrooms
Self-Contained SPED Toilet					(360)	60	6	360	
Resource Room - 124E,127C	115	2	230		500	500	3	1,500	1/2 size Genl. Clrm.
Small Group Room / Conf Room - 124D	160	1	160		500	500	3	1,500	1/2 size Genl. Clrm.

Highlights:

Classroom, Science Labs- Sizes & Quantities as per MSBA stds. & Ed Plan requirements
750 seat Auditorium (vs. Cafetorium)
12,000 sf Gymansium (vs. 8,100 sf); no Pool
Cafeteria sized for 3 seatings
50% larger Library/ Media Center (4,500+ vs. 3,000 sf)

Matrix of Options

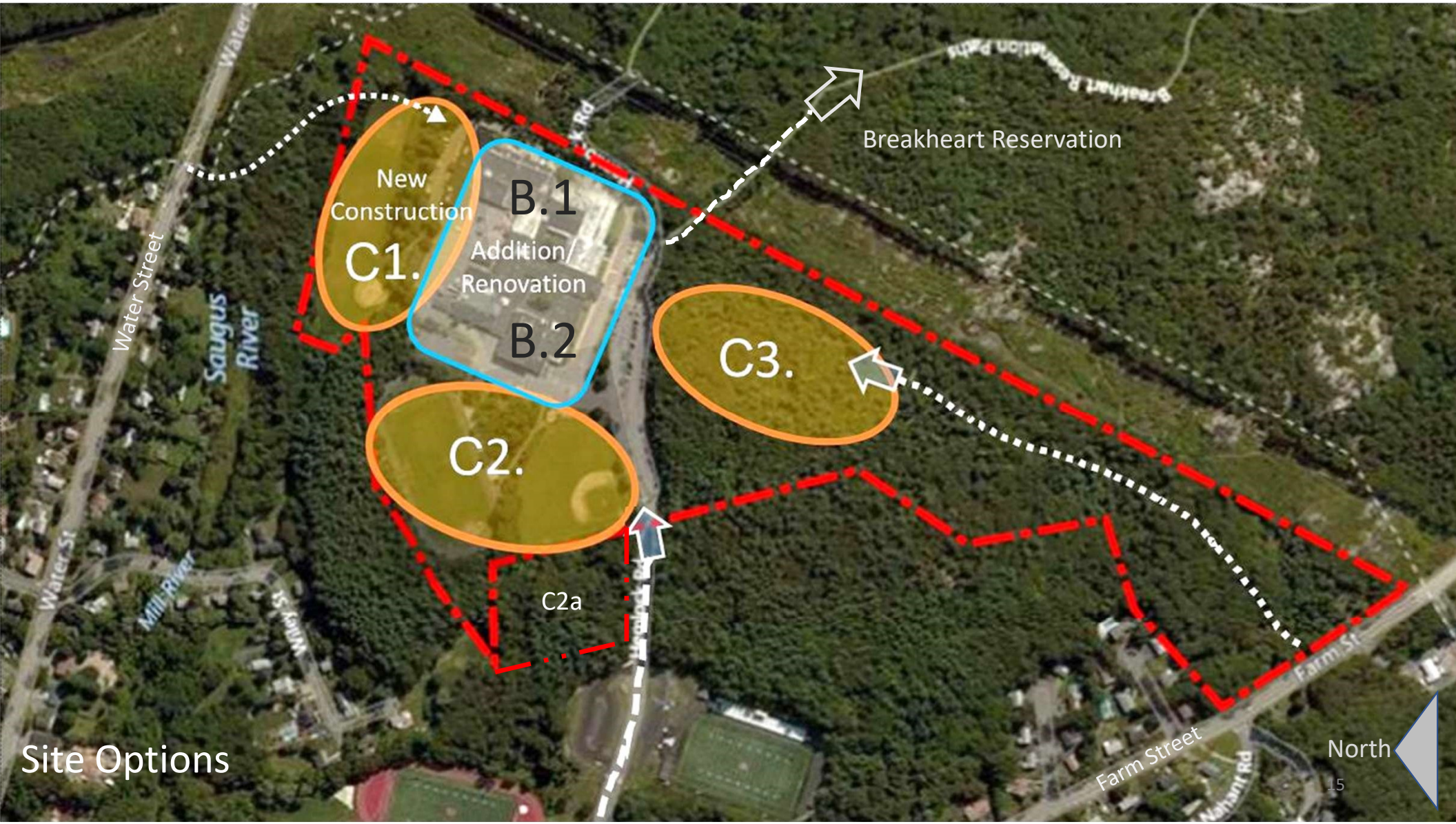
Northeast Metro Tech

Matrix of Options DRAFT

Updated:
DRAFT 7.22.2020

Families of Options:			Families of Conceptual Options							
			A	B		C			D	
		MSBA Required	Renovation	Add/Reno		New Construction On-Site			New Construction Off-Site	
Enrollment		Base Repair	A.1	B.1	B.2	C.1	C.2.1	C.3.1	C.2.A	?D.1?
a.	1,250 Students	doesn't address any educational deficiencies	X	B.1a	B.2a	C.1a	C.2.1a	C.3.1a	~~C.2.Aa~~	~~D.1a~~
b.	1,400 Students	X	X	B.1b	B.2b	C.1b	C.2.1b	C.3.1b	~~C.2.Ab~~	~~D.1b~~
c.	1,600 Students	X	X	~~B.1c~~	B.2c	C.1c	C.2.1c	C.3.1c	~~C.2.Ac~~	~~D.1c~~
d.	1,660 Students	X	X	~~B.1d~~	B.2d	C.1d	C.2.1d	C.3.1d	~~C.2.Ad~~	~~D.1d~~
e.	1,722 Students	X	X	~~B.1e~~	B.2e	C.1e	C.2.1e	C.3.1e	~~C.2.Ae~~	~~D.1e~~


Breakheart Reservation
Water Street
Saugus River
Mill River
Wakefield HS
Farm Street
Hemlock Rd
Woodville School
Old Nahant Rd
Pheasantwood Dr
Reynolds Rd
North



Site Options

Option

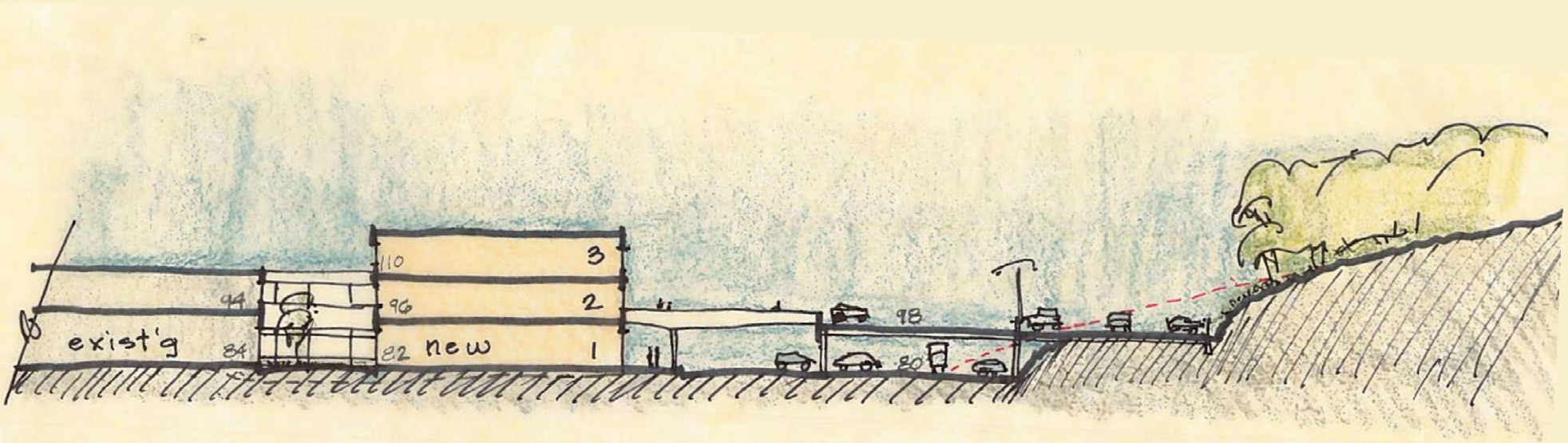
B.1

First Floor Plan

Main Entrance

Option

B.1

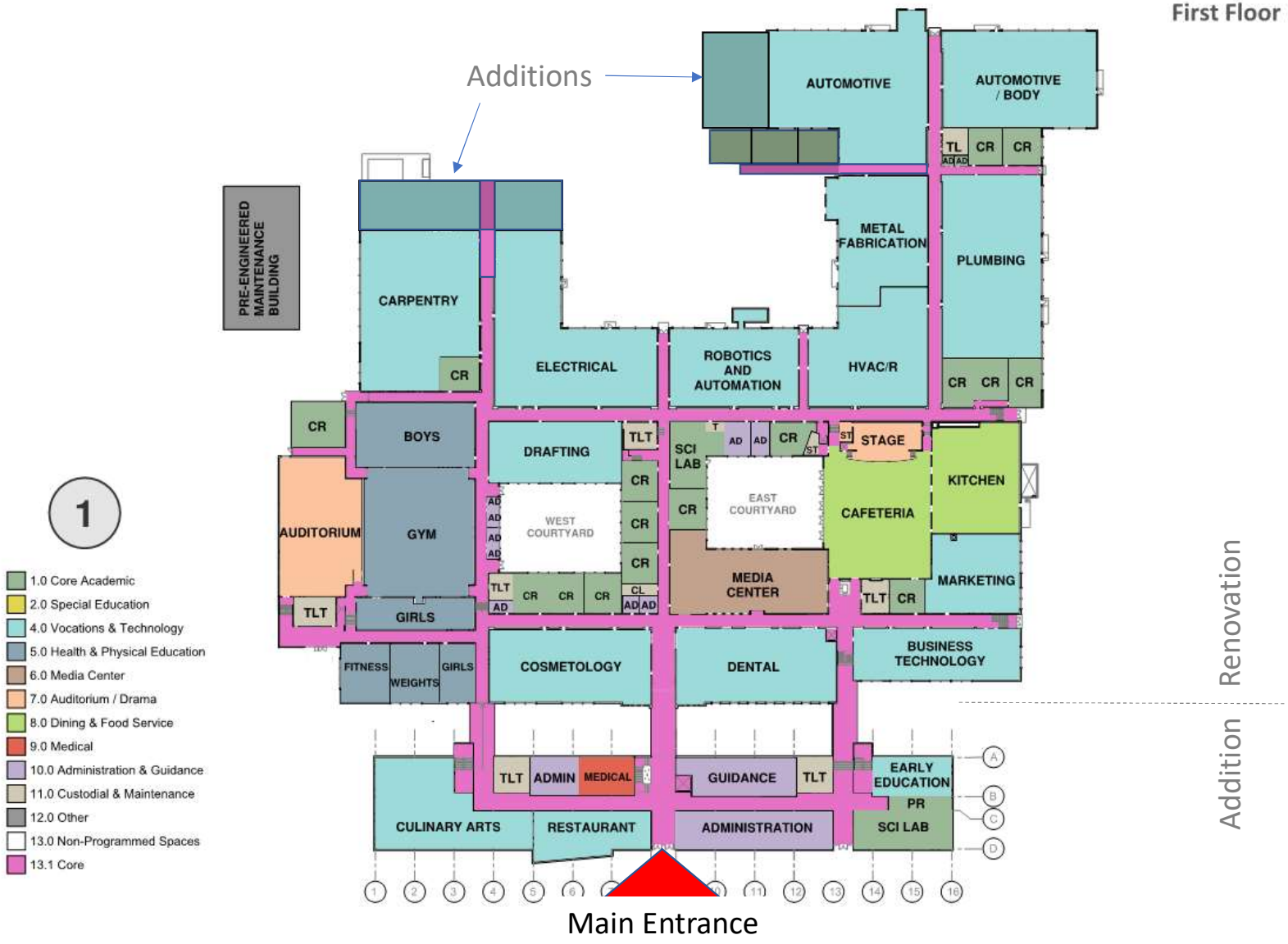


Site Section

Option

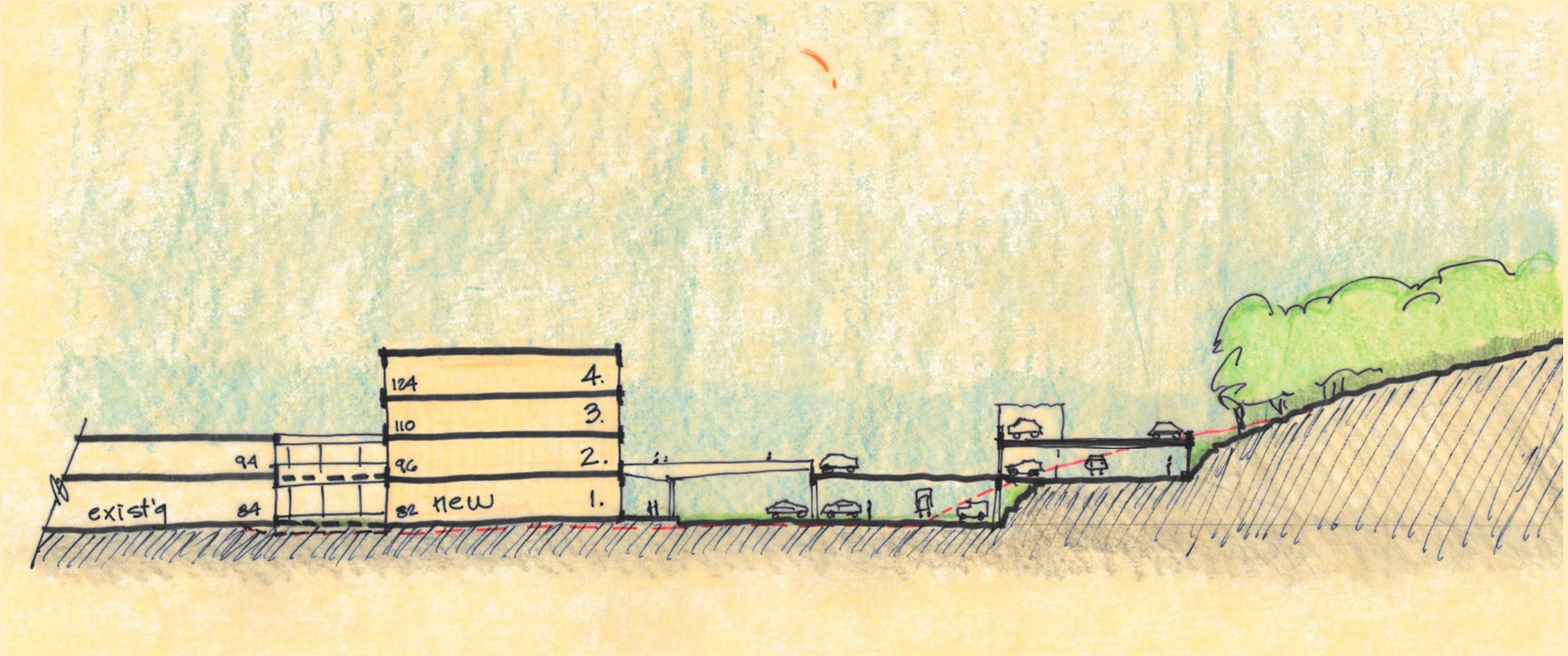
B.2

First Floor Plan



Option

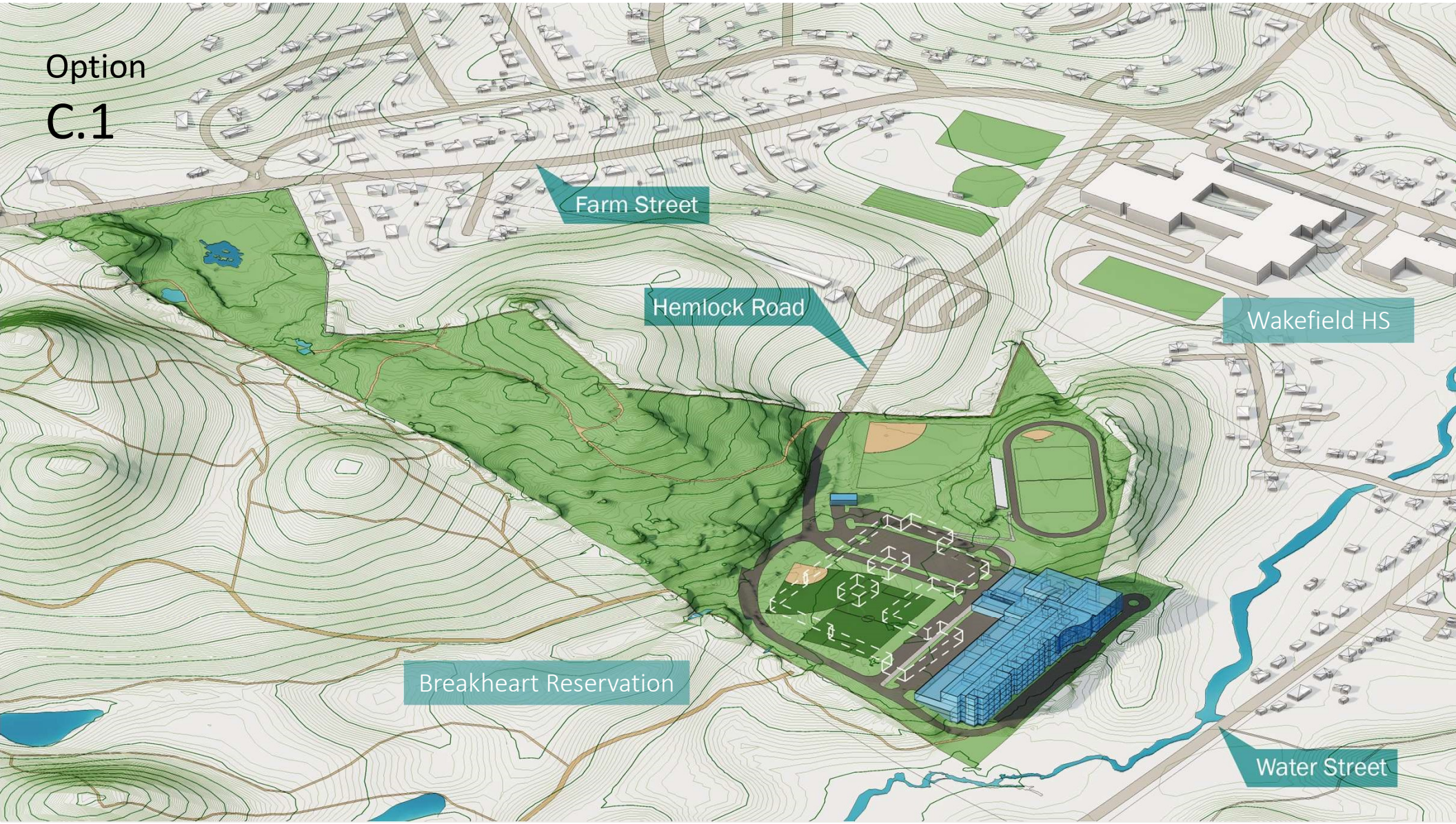
B.2



Site Section

Option

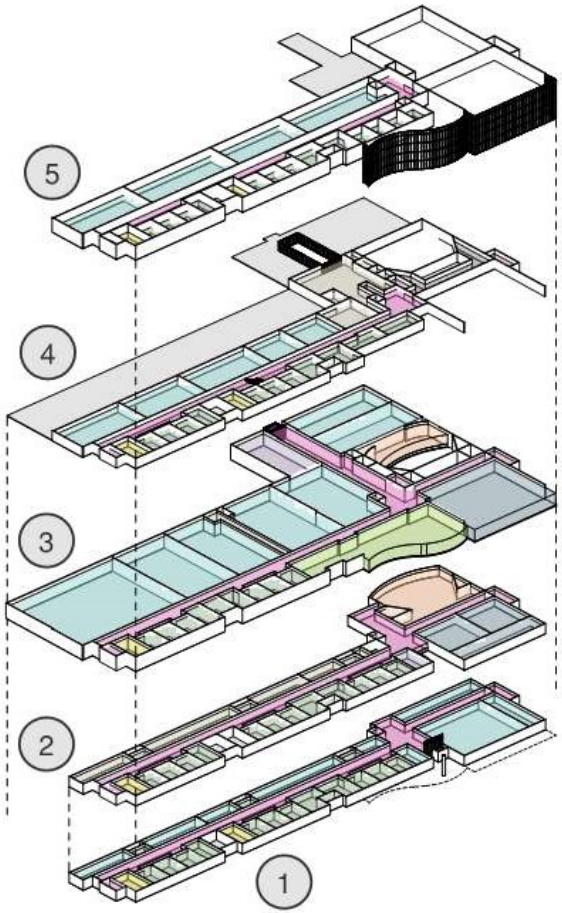
C.1


Farm Street
Hemlock Road
Wakefield HS
Breakheart Reservation
Water Street


Option
C.1
Water Street

Option

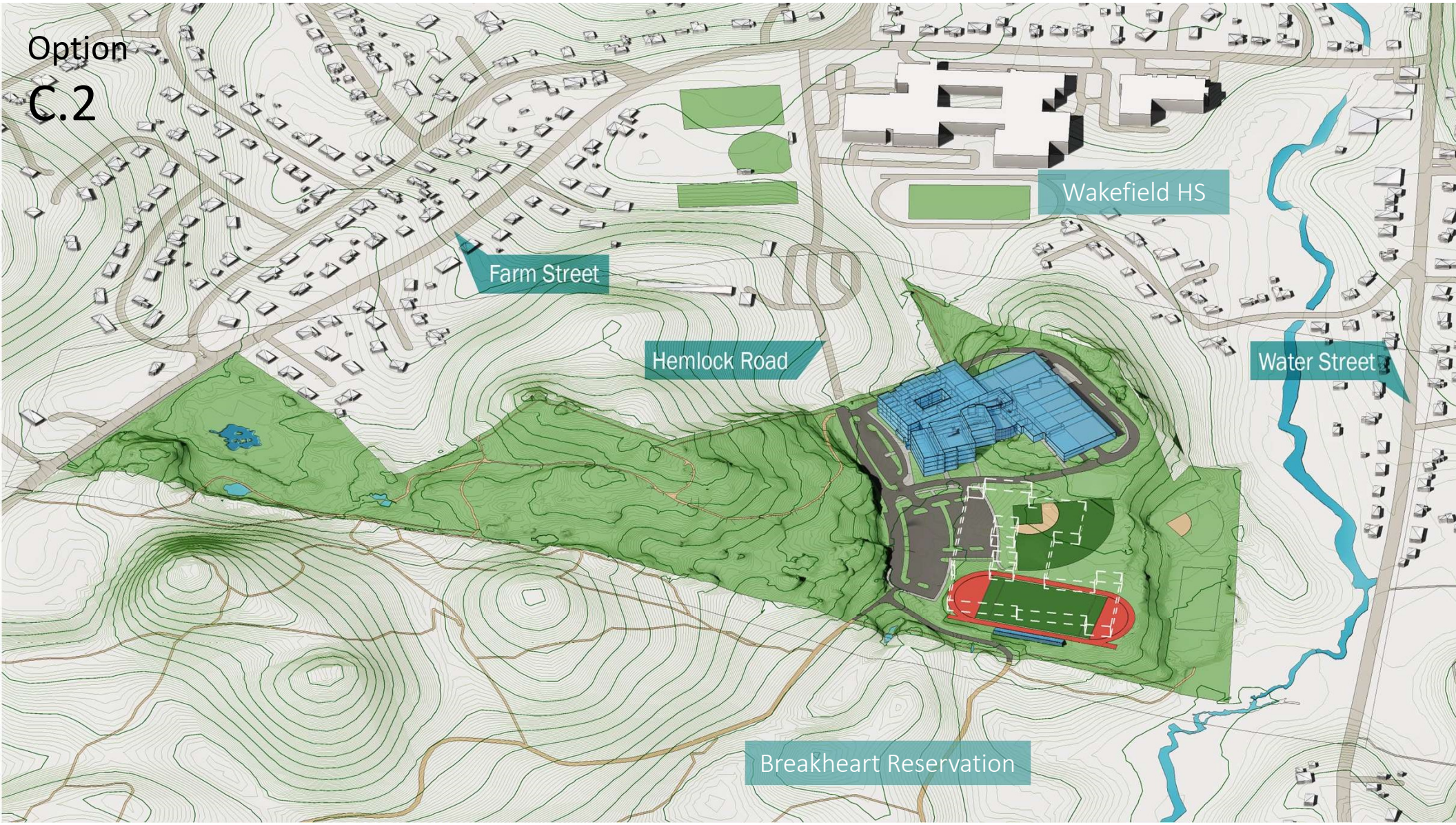
C.1


5
4
3
2
1


GYMNASIUM
CAFETERIA
CR
CR
CR
SCI LAB
TEACHERS
CR
CR
CR
SPED
COLLAB
COLLAB
Stair
Stair
Stair
ELECTRICAL
HVAC/R
PLUMBING
CARPENTRY
AUTOMOTIVE/BODY
BALCONY
RCVG
COSMETOLOGY
CULINARY
ADMIN
VEST
Main
Entrance
3
1.0 Core Academic
2.0 Special Education
4.0 Vocations & Technology
5.0 Health & Physical Education
6.0 Media Center
7.0 Auditorium / Drama
8.0 Dining & Food Service
9.0 Medical
10.0 Administration & Guidance
11.0 Custodial & Maintenance
12.0 Other
13.0 Non-Programmed Spaces
13.1 Core

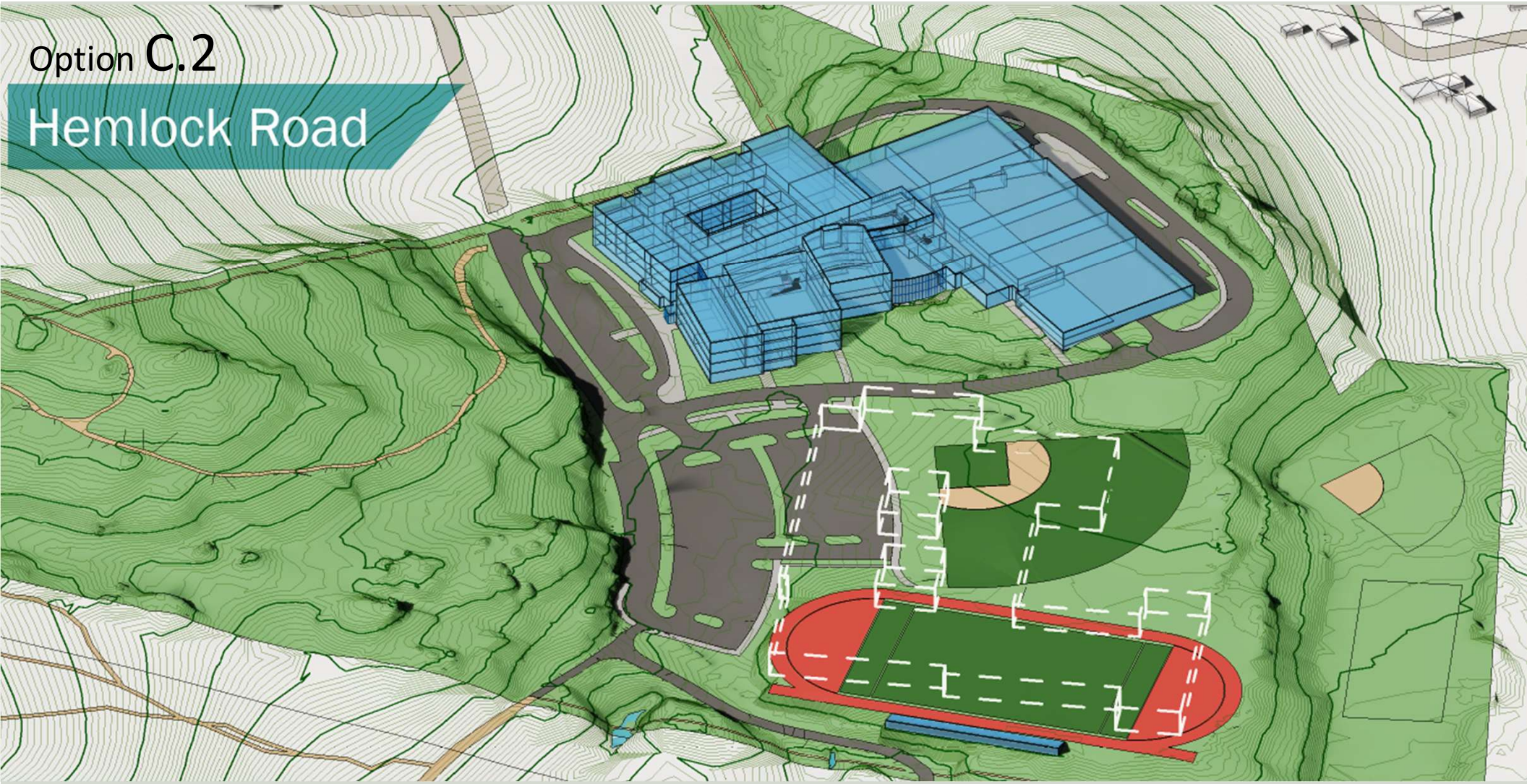
Option

C.2


Wakefield HS
Farm Street
Hemlock Road
Water Street
Breakheart Reservation

Option C.2

Hemlock Road



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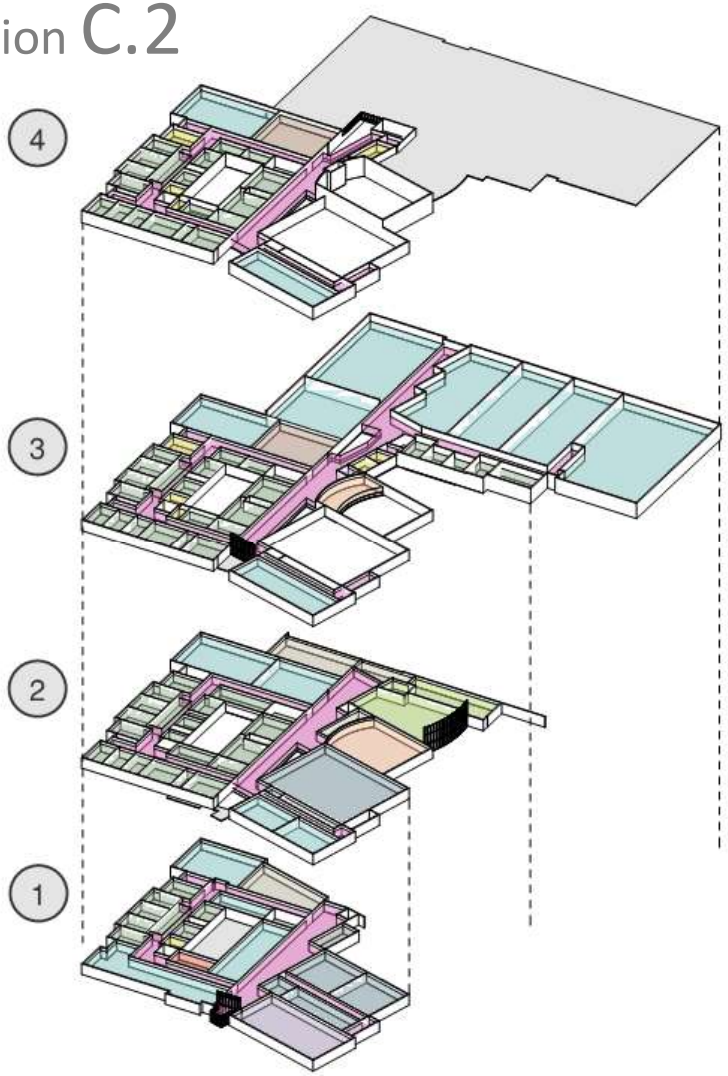
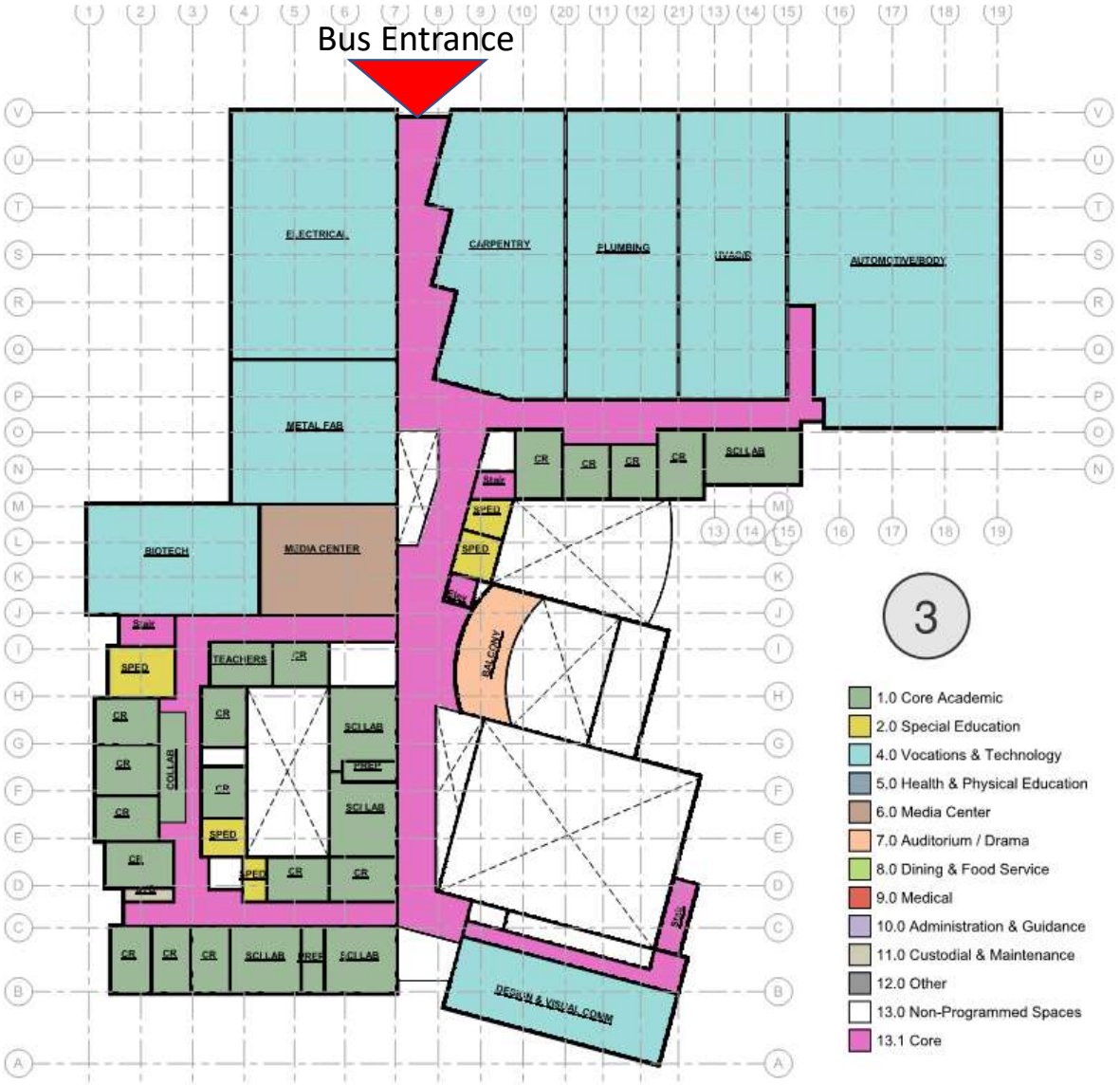

4
3
2
1


Bus Entrance
ELECTRICAL
CARPENTRY
PLUMBING
HVAC/R
AUTOMOTIVE/BODY
METAL FAB
BIOTECH
MEDIA CENTER
TEACHERS
SPED
SCI LAB
COLLAB
BALCONY
DESIGN & VISUAL COMM
3
1.0 Core Academic
2.0 Special Education
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9.0 Medical
10.0 Administration & Guidance
11.0 Custodial & Maintenance
12.0 Other
13.0 Non-Programmed Spaces
13.1 Core

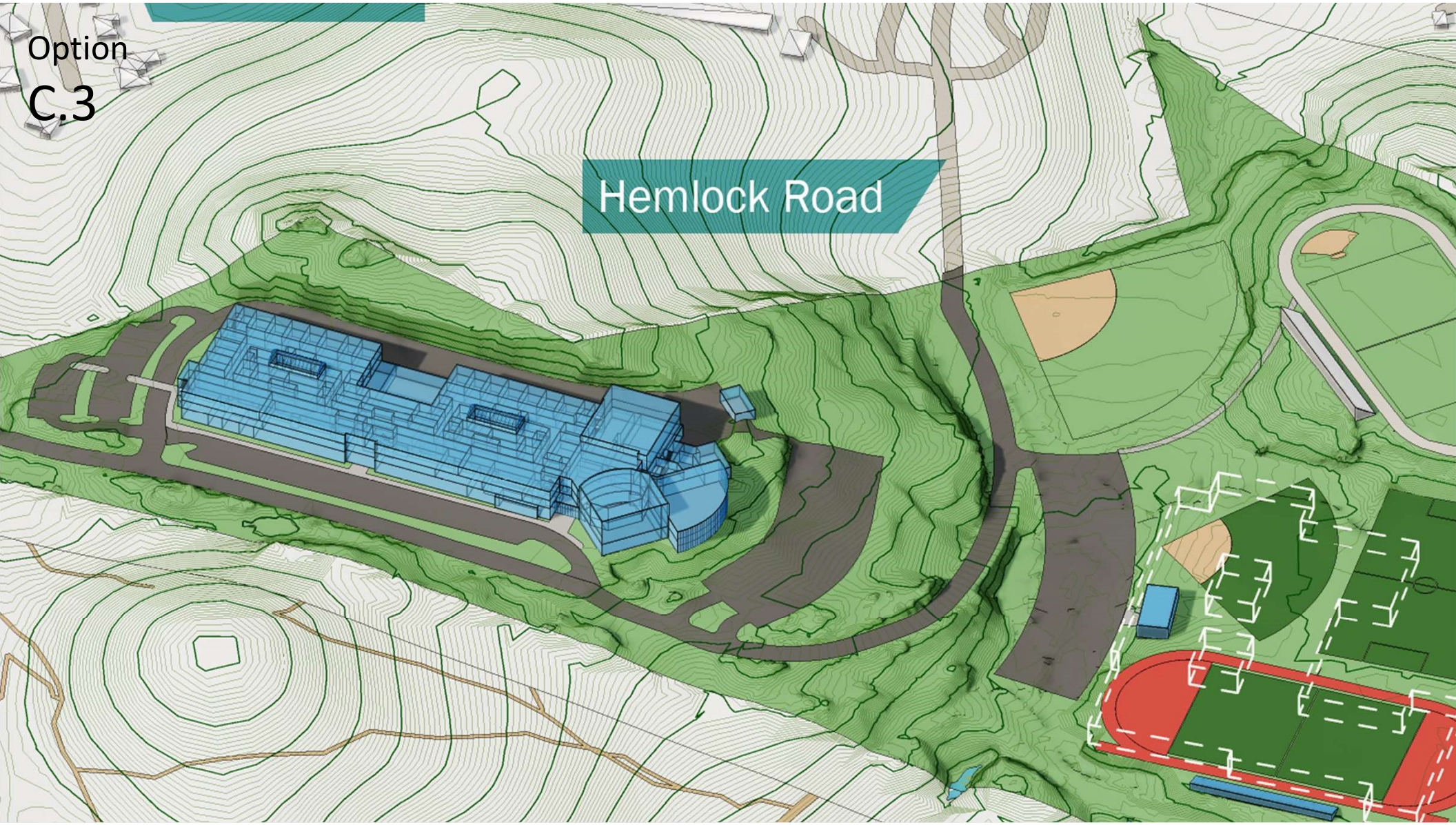
Option

C.3

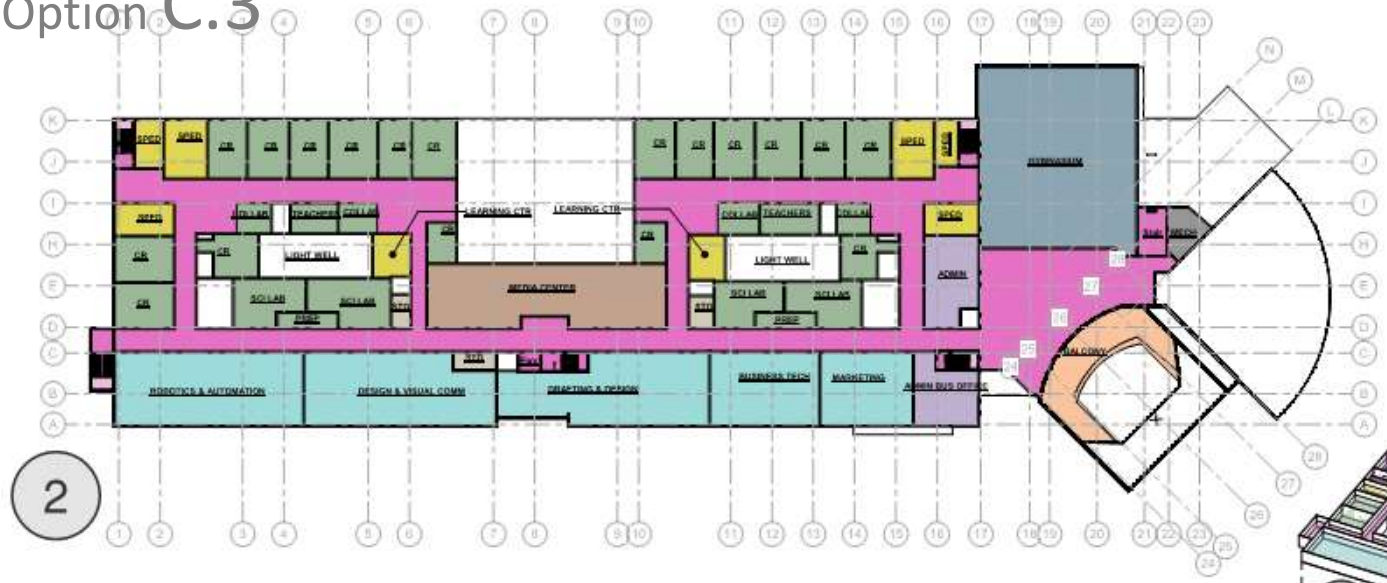

Wakefield HS
Farm Street
Hemlock Road
Breakheart Reservation
Water Street

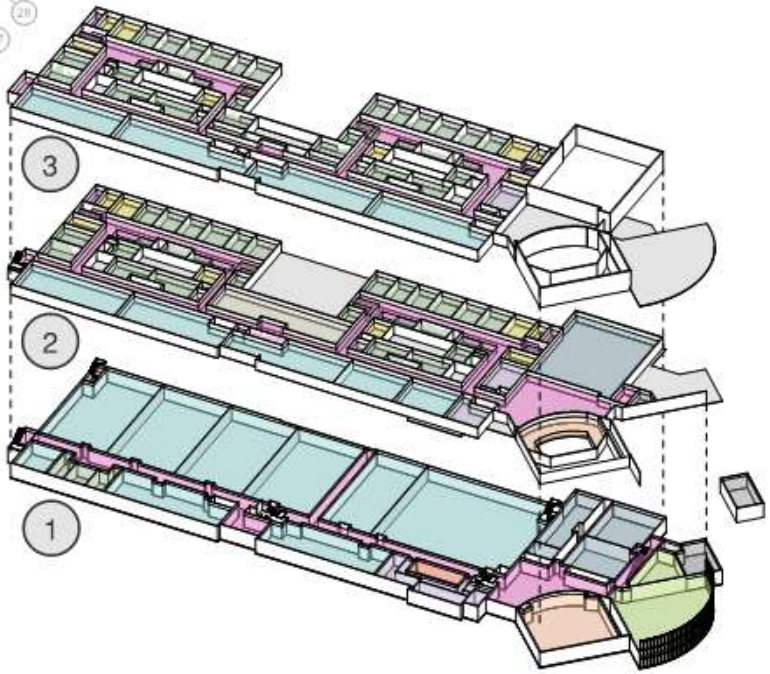
Option

C.3



Option C.3





- 1.0 Core Academic
- 2.0 Special Education
- 4.0 Vocations & Technology
- 5.0 Health & Physical Education
- 6.0 Media Center
- 7.0 Auditorium / Drama
- 8.0 Dining & Food Service
- 9.0 Medical
- 10.0 Administration & Guidance
- 11.0 Custodial & Maintenance
- 12.0 Other
- 13.0 Non-Programmed Spaces
- 13.1 Core

Summary of Costs

Cost Summary of Options

DRAFT

Updated: DRAFT 8.12.2020

Families of Options:				A	B				C					
			MSBA Required	Renovation	Add/Reno				New Construction On-Site					
Enrollment			Base Repair	A.1	B.1		B.2		C.1		C.2		C.3	
					Range of Costs		Range of Costs		Range of Costs		Range of Costs		Range of Costs	
					low	high	low	high	low	high	low	high	low	high
a.	1,250 Students	Construction Cost	$94.9 M	X	$150 - $183 M		$151 - $184 M		$168 - $197 M		$171 - $201 M		$175 - $202 M	
		PROJECT COST	$115 M		$195 - $247 M		$196 - $249 M		$210 - $256 M		$214 - $261 M		$218 - $263 M	
b.	1,400 Students	Construction Cost		X	$166 - $203 M		$167 - $204 M		$183 - $215 M		$186 - $219 M		$190 - $220 M	
		PROJECT COST			$216 - $275 M		$217 - $276 M		$229 - $279 M		$233 - $284 M		$237 - $286 M	
c.	1,600 Students	Construction Cost		X			$191 - $233 M		$204 - $239 M		$208 - $244 M		$211 - $245 M	
		PROJECT COST					$248 - $315 M		$255 - $311 M		$260 - $317 M		$264 - $319 M	
d.	1,660 Students	Construction Cost		X			$197 - $240 M				$213 - $250 M		$217 - $251 M	
		PROJECT COST					$256 - $324 M				$267 - $326 M		$271 - $327 M	
e.	1,722 Students	Construction Cost		X			$203 - $248 M				$219 - $257 M		$223 - $258 M	
		PROJECT COST					$264 - $335 M				$$274 - $335 M		$278 - $336 M	

Preliminary Evaluation of Options

Preliminary Evaluation Matrix - Northeast Metro Tech - Concept Options - **WORKING DRAFT**

Updated: 6/22/2020

Evaluation Criteria	MSBA Required	Renovation	Add/ R	no Options	New Construction Options		
	Base Repair / Code Renovation	A	B.1	B.2	C.1	C.2	C.3
Construction Duration:	multiple years	multiple years	3+ years	3+ years	2+ years	2+ years	2+ years
Ed Plan Accomodation Compliance w/ Vision	doesn't address any educational deficiencies	not large enough to address space needs	difficult to accommodate Ed Plan; no Small Learning Communities; poor adjacencies of shops to academic spaces	difficult to accommodate Ed Plan; no Small Learning Communities; poor adjacencies of shops to academic spaces	good Ed Plan conformance; good adjacencies of CTE and academic spaces; no expansion potential; cannot accommodate highest enrollment	fair Ed Plan conformance with Small Learning Communities; uneven distribution of CTE shops; some flexibility and expansion potential	best Ed Plan conformance with Small Learning Communities, adjacencies & project spaces; some flexibility; limited expansion potential
Project Cost Reimbursable Cost Temporary Costs Long-term Value			high temporary costs; structrure parking required; slightly higher reimbursement for renovation	high temporary costs; structrured parking required; slightly higher reimbursement for renovation	temporary sewer relocation required; tall retaining walls required;	high sitework costa	highest blasting & site development (roadwork, utilities) costs; highest long-term value
Disruption Impact on Students Construction Duration Phasing			phased construction adjacent to occupancy; long construction schedule; requires temporary parking	phased construction adjacent to occupancy; long construction schedule; requires temporary parking	some impact to adjacent occupancy; service and utility interruptions	minimal impact to adjacent occupancy; loss of athletic fields during construction; shortest building construction schedule	virtually no impact to existing occupancy; significant sitework requires early construction packages
Flexibility Enrollment Accommodation Expansion Potential			limited flexibility; limited expansion potential; doesn't accommodate higher enrollments	limited flexibility; limited expansion potential; can accommodate higher enrollments	limited flexibility; limited expansion potential; can't accommodate highest enrollments	some flexibility; limited expansion potential; can accommodate higher enrollments	good flexibility; limited expansion potential; can accommodate higher enrollments
Operating Costs Maintenance			most renovation areas will have limited envelope improvements; not all existing utilities will be replaced with new; parking garage has limited longevity	most renovation areas will have limited envelope improvements; not all existing utilities will be replaced with new; parking garage has limited longevity	all new construction & MEP systems; good solar orientation, good thermal envelope	all new construction & MEP systems; good thermal envelope	all new construction & MEP systems; best thermal envelope/ compact foortprint
Site Access Safety & Security Circulation			existing car & bus separation an service access; limited parking b event entrance; limited separation of Breakheart traffic	existing car & bus separation; limited parking by event entrance; reduced service access; limited separation of Breakheart traffic	good car & bus separation; parking divides fields; convenenient visitor parking, good service access; limited separation from Breakheart traffic	good car & bus separation; convenenient visitor parking, good service access; limited separation from Breakheart traffic	new primary access road; good car & bus separation; good separation from Breakheart traffic
Final Site layout Site amenities			all existing fields to be reconstructed within limited area; less than desirable accessibility to fields	all existing fields to be reconstructed within limited area; less than desirable accessibility to fields	New multi-purpose/soccer field, new softball field; renovated track, football, baseball fields. Some accessibility issues remain to upper fields	New track, football, & baseball fields; renovated softball & practice fields. Some accessibility issues remain to lower fields	All new and expanded athletic fields; accessibility from school is less than ideal
Totals							

Legend

- 5 — positive / most advantageous
- 4
- 3 — neutral
- 2
- 1 — negative / least advantageous

Northeast Metro Tech

Building Committee

Thank You!

DRA

August 13, 2020