

Andover High School SBC Meeting



August 8, 2023

HM
FH

HMFH ARCHITECTS

Work plan - SBC Meetings

Schedule may shift based on input from the committee and stakeholders.

[meetings w AHS administration & town facilities/departments]

[meetings w Andover Youth Services]

July 24 Community Forum

SBC – SD#3 - July 27

- building massing and layout design review
- discussion re: Adding sports field lighting

[meetings w AHS administration & town facilities/departments]

SBC – SD#4 - August 8 (Tuesday)

- site plan design review
- discussion re: artificial turf vs. natural turf
- discussion re: Adding plateau field
- discussion/decision re: Adding skate park scope
- VOTE on Adding sports field lighting for SD cost estimating

Process

Design - an iterative process of drawing ideas, seeking input, and evaluating and refining those ideas with frequent repetition

Information gathering:

- town and school departments: facilities, APD, AFD, school and district admin., etc.
- expert consultants



Concept - put ideas to paper/ refine with:

- expert consultants



Seek input

- town and school departments
- consultants and experts
- community
- school building committee



Update
and Repeat

← NEXT STEP

Site program

PARKING PROGRAM	Existing TOTAL	Proposed Parking
School Campus		
Middle School	121	126
High School		
Staff (Incl. HC & EV)	264	284
Visitors	9	9
Students	296	332
Officials parking	10	10
Delivery	2	6
SUBTOTAL PARKING ON HS/MS CAMPUS	698	767

Note: both existing and proposed include 74 student parking spaces at the Red Spring lot.

ATHLETIC PROGRAM	Existing	Proposed Program
Lovely stadium (track and turf field)	No Change	No Change
Two multipurpose full-sized competition synthetic turf fields	1 grass FB only	2
Softball field - grass	3	1
Baseball field - grass	2	1
Softball field - synthetic turf	0	1
Baseball field - synthetic turf	0	1
Tennis Courts	7	7
Plateau Field turf enlarge to competition size	1	1
Basketball	2.5	2.5
Skatepark	1	0

Note: one existing baseball field and one existing softball field are often wet and not usable.

Site circulation - existing



- Key traffic - 30 min window:
 - drop-off: 7:45 to 8:15, and
 - pick-up period: 2:45 to 3:15
- Queuing overlapping entry / exit points on Shawsheen Street
- Parent, student, staff, buses, and pedestrians all converge at two internal points
- From High School Drive, no HS break-off until convergence point
- Internal one-way parking flow forces drivers to particular driveways

DESIGN PRINCIPLES TO REDUCE TRAFFIC CONGESTION AND CONFLICTS

- **Place parking at the perimeter**
- **Provide two zones for arrival and dismissal**
- **Separate bus and car queuing**
- **Maximize queuing and circulation options**
- **Minimize need for enforcement**
- **Prioritize student pedestrian experience**

INITIAL FEEDBACK RECEIVED: WHAT'S WORKING? WHAT NEEDS IMPROVEMENT?

- **Focus on creating minimal need for enforcement**
- **Provide more separation between bus and car movement**
- **Shorten and simplify Moraine bus circulation**
- **Expand length of car pick up at West Middle School**

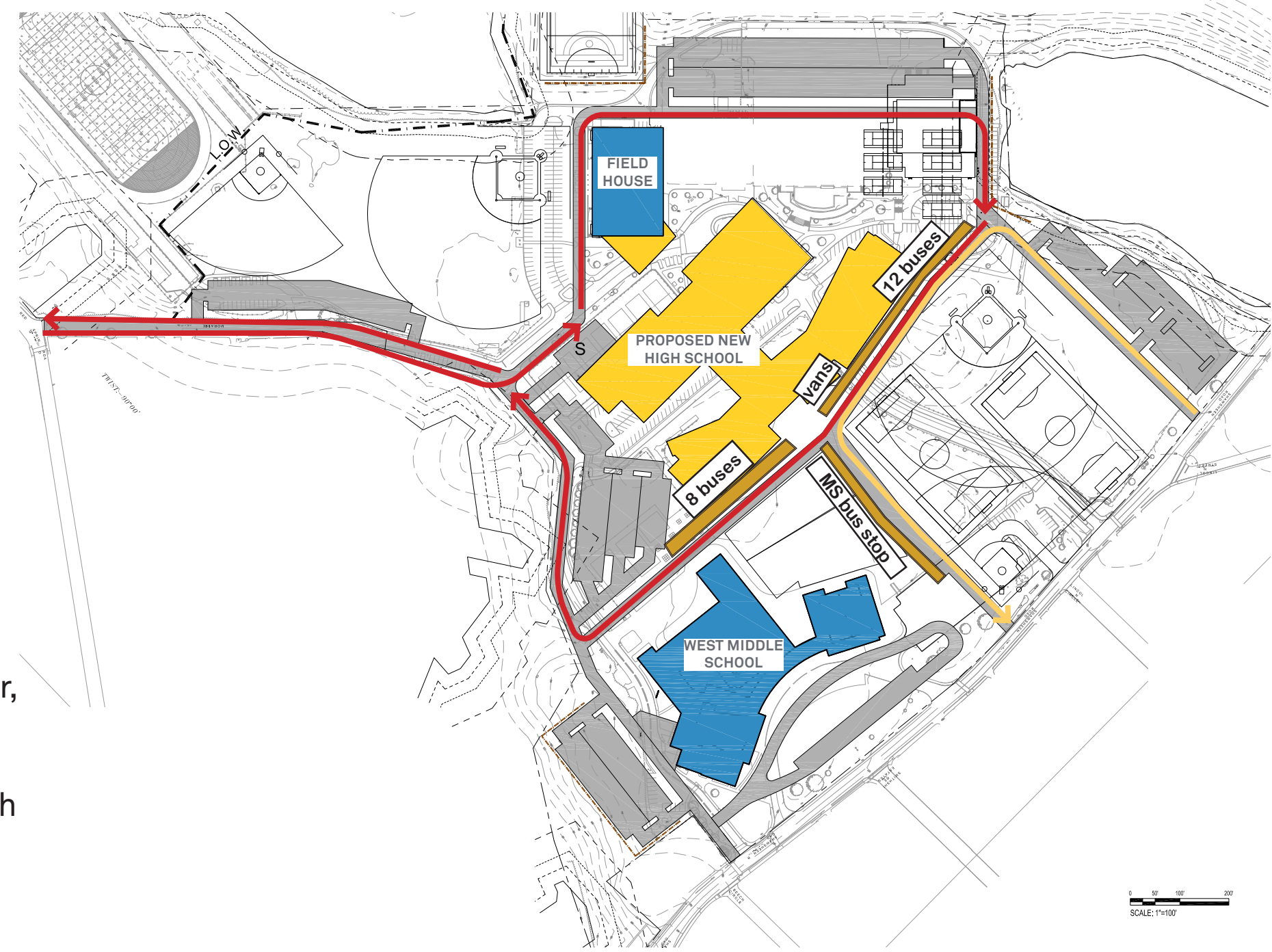
CIRCULATION PLAN Bus Circulation - Option 1 (DRAFT)

Morning drop-off and afternoon pick-up.

- Shawsheen bus
- Moraine bus

Option 1 and 2 change the circulation, not the road layout, and are not mutually exclusive. With this layout, the school can choose to utilize one, or the other, or both.

Circulation envelope wide enough for two-way traffic, sidewalks and separated bike lane.



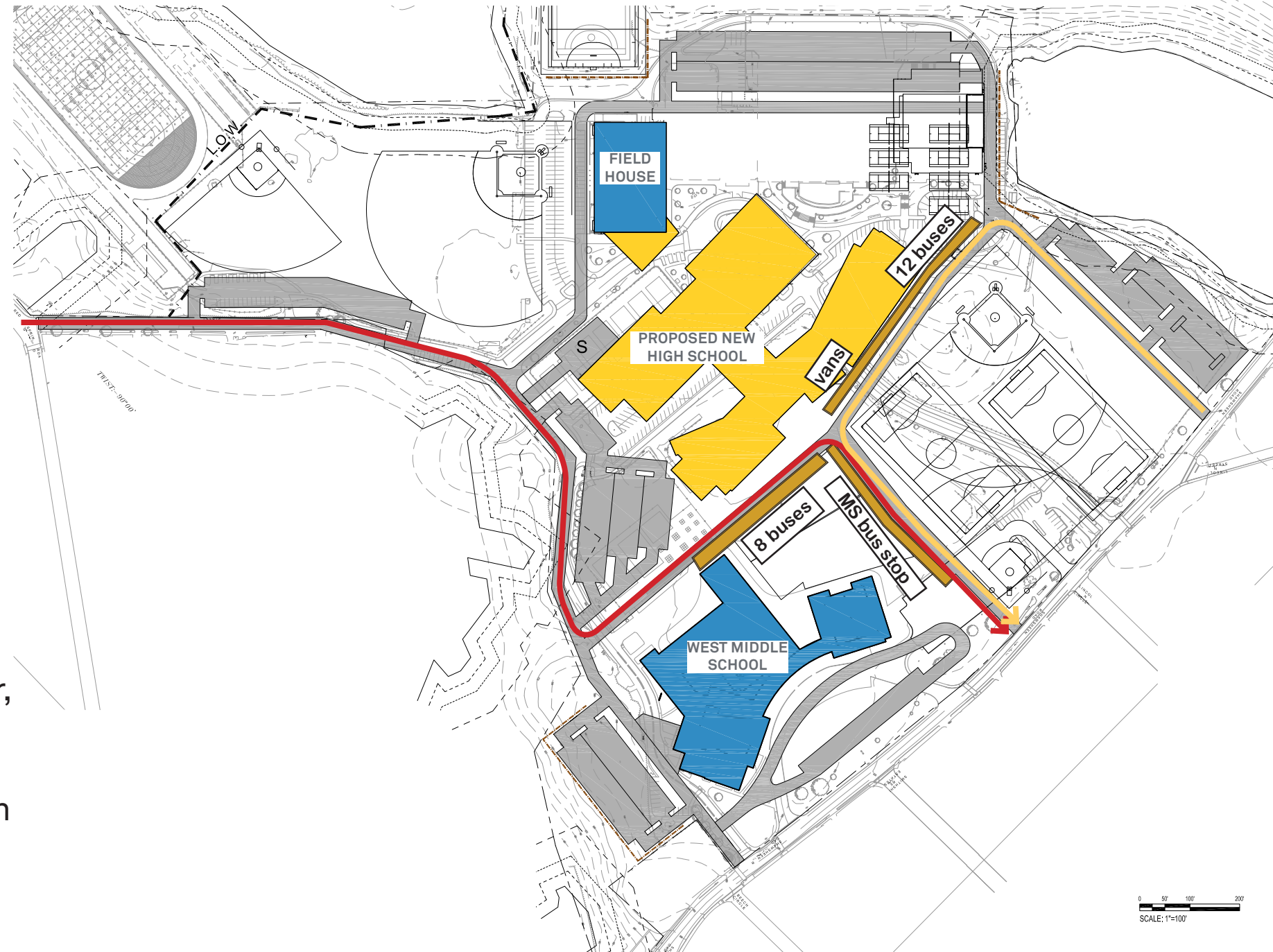
CIRCULATION PLAN Bus Circulation- Option 2 (DRAFT)

Morning Drop-off

- Shawsheen bus
- Moraine bus

Option 1 and 2 change the circulation, not the road layout, and are not mutually exclusive. With this layout, the school can choose to utilize one, or the other, or both.

Circulation envelope wide enough for two-way traffic, sidewalks and separated bike lane.



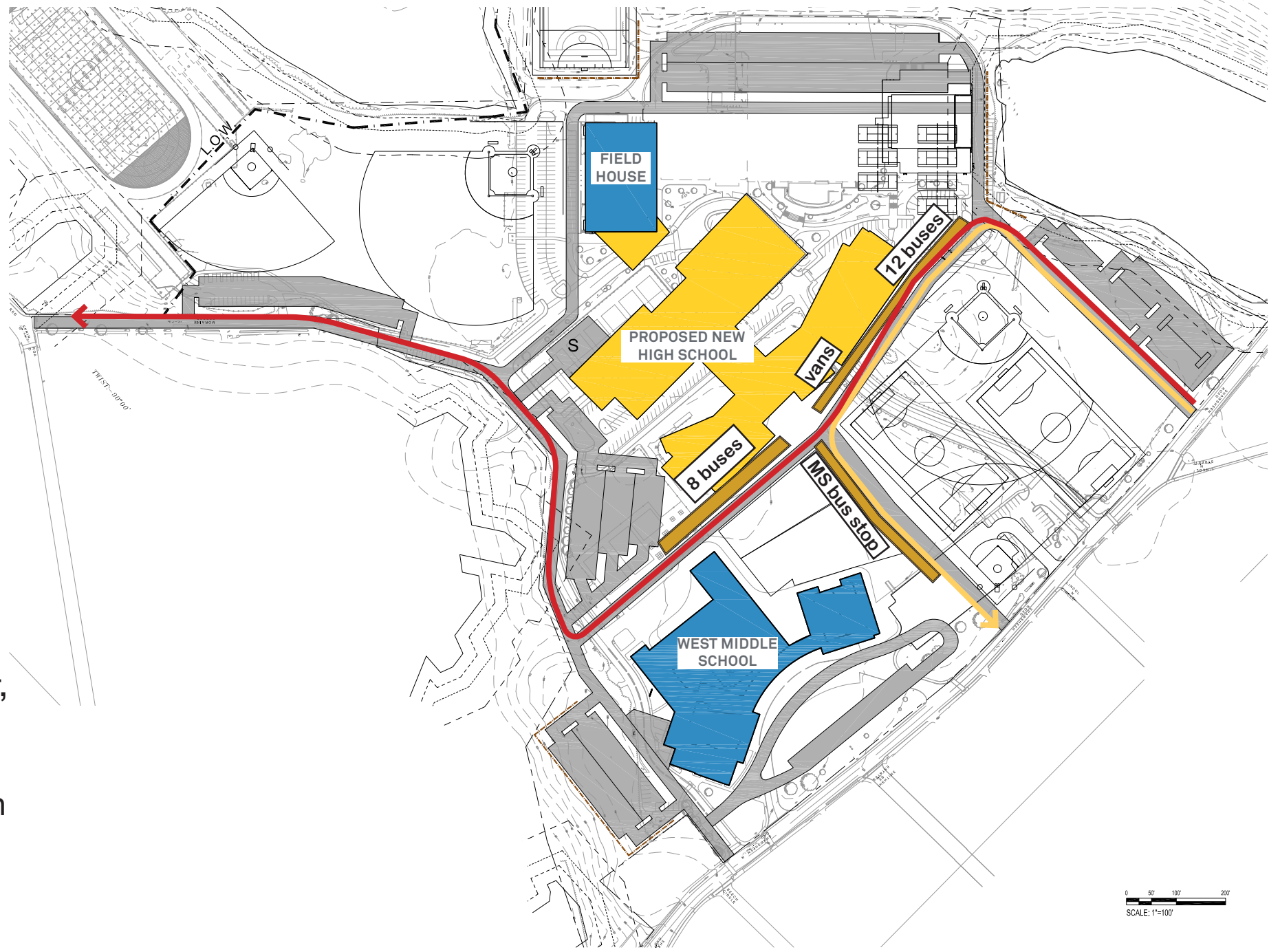
CIRCULATION PLAN Bus Circulation Option 2 (DRAFT)

Afternoon Pick-up

- Shawsheen bus
- Moraine bus

Option 1 and 2 change the circulation, not the road layout, and are not mutually exclusive. With this layout, the school can choose to utilize one, or the other, or both.

Circulation envelope wide enough for two-way traffic, sidewalks and separated bike lane.



CIRCULATION PLAN Car Circulation- High School (DRAFT)

Morning drop-off, and
afternoon pick-up

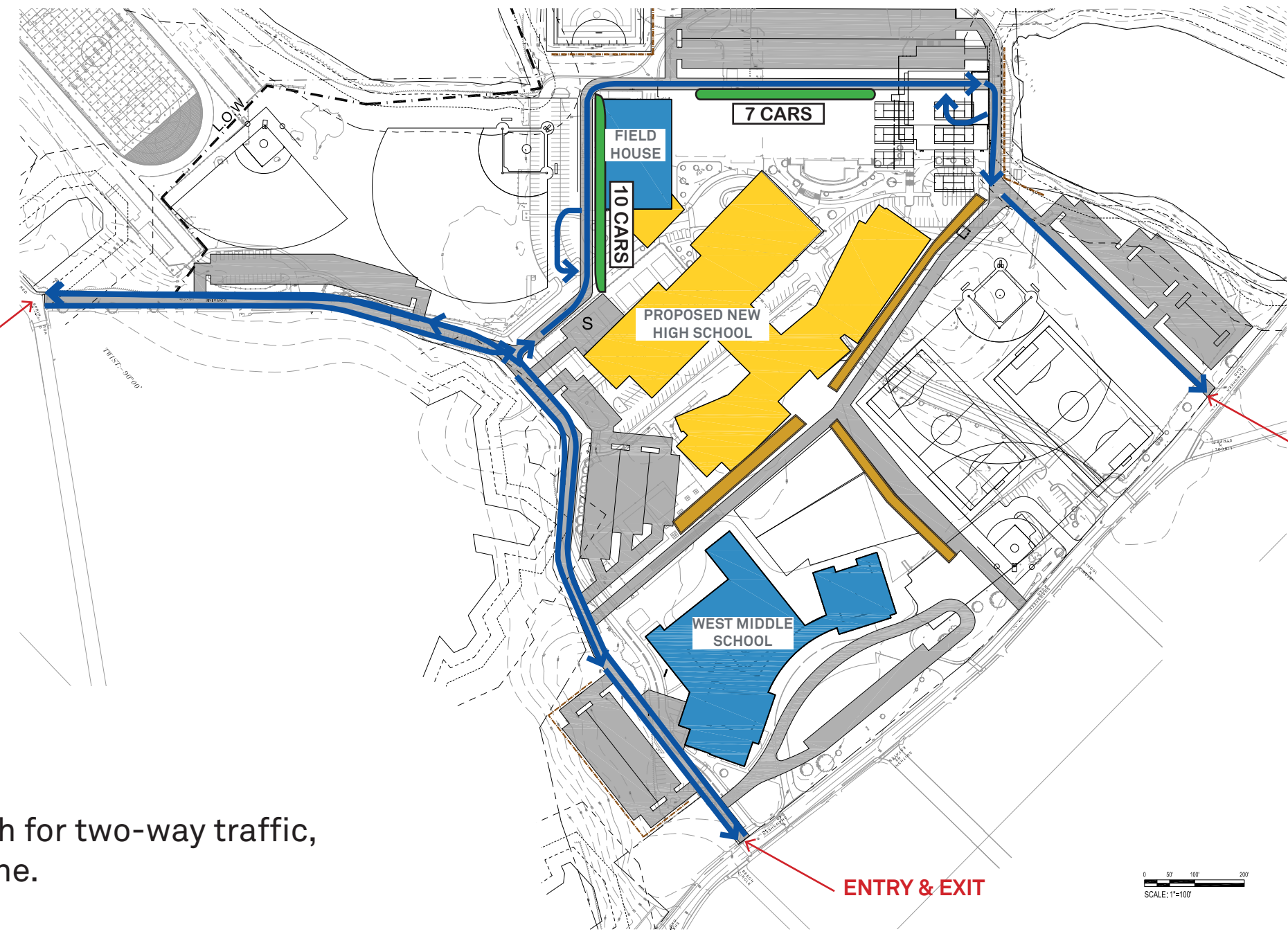
→ Car circulation
from Moraine and
Shawsheen

ENTRY & EXIT

EXIT

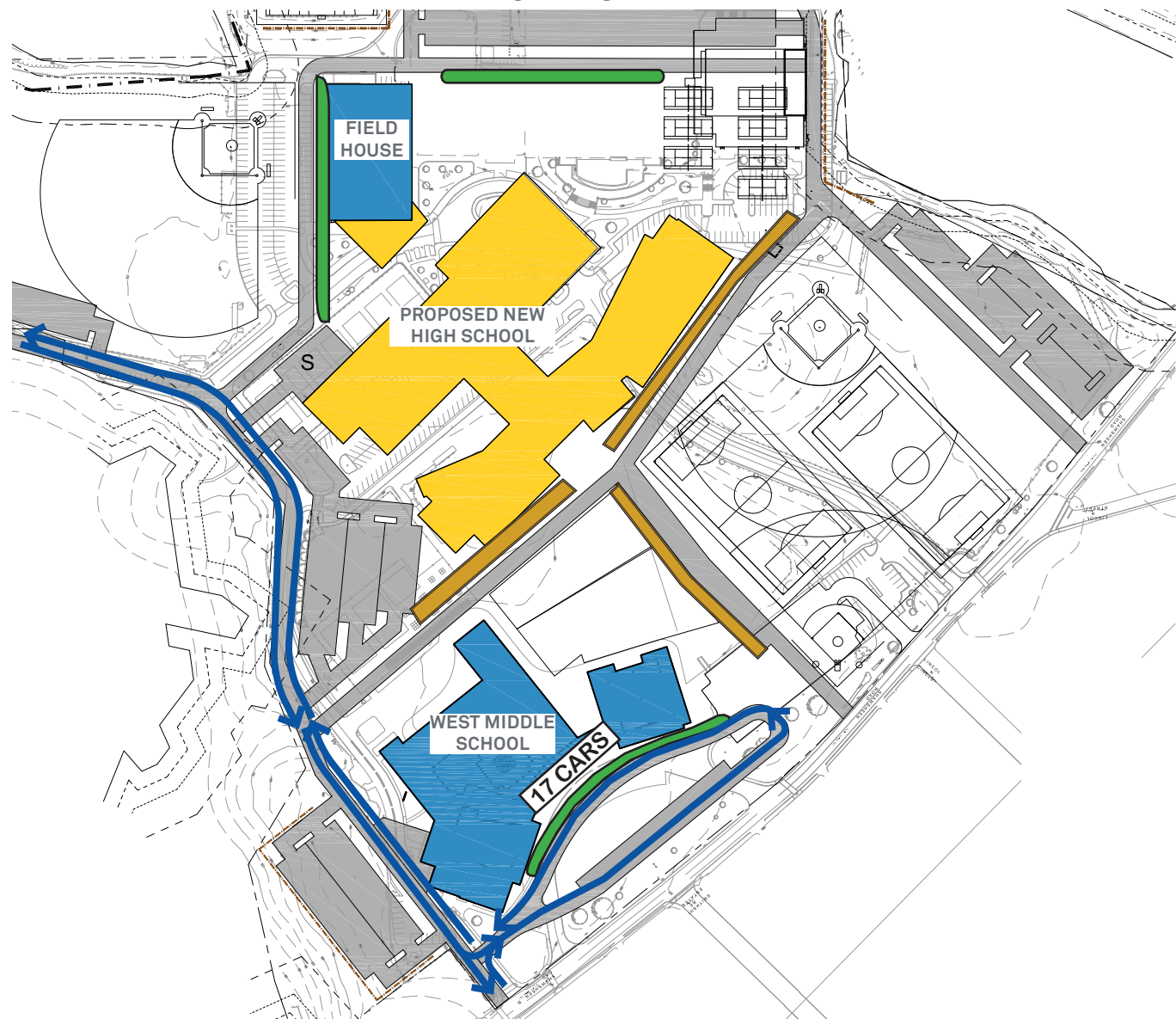
ENTRY & EXIT

Circulation envelope wide enough for two-way traffic,
sidewalks and separated bike lane.

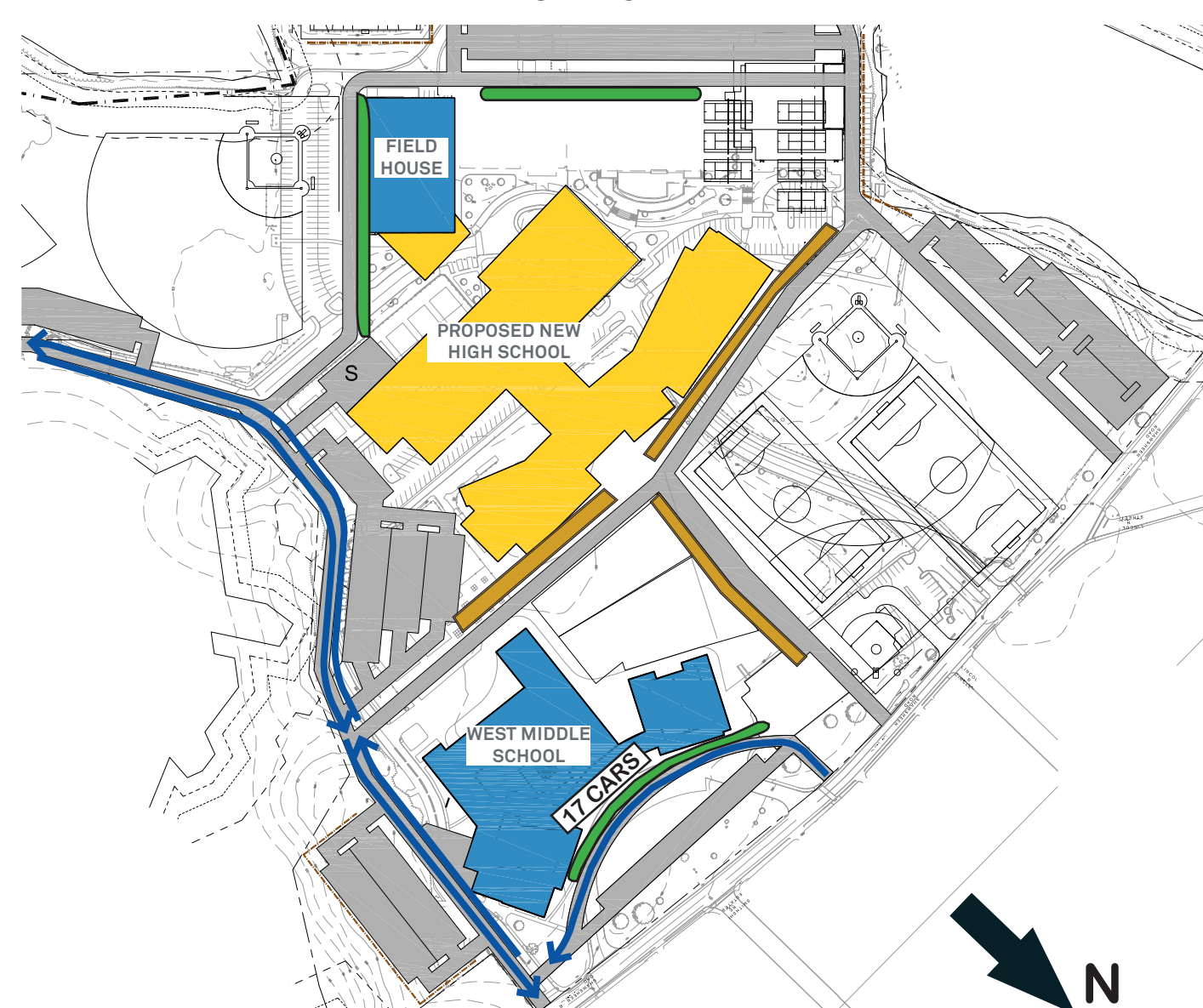


CIRCULATION PLAN Car Circulation-Middle School (DRAFT)

OPTION 1



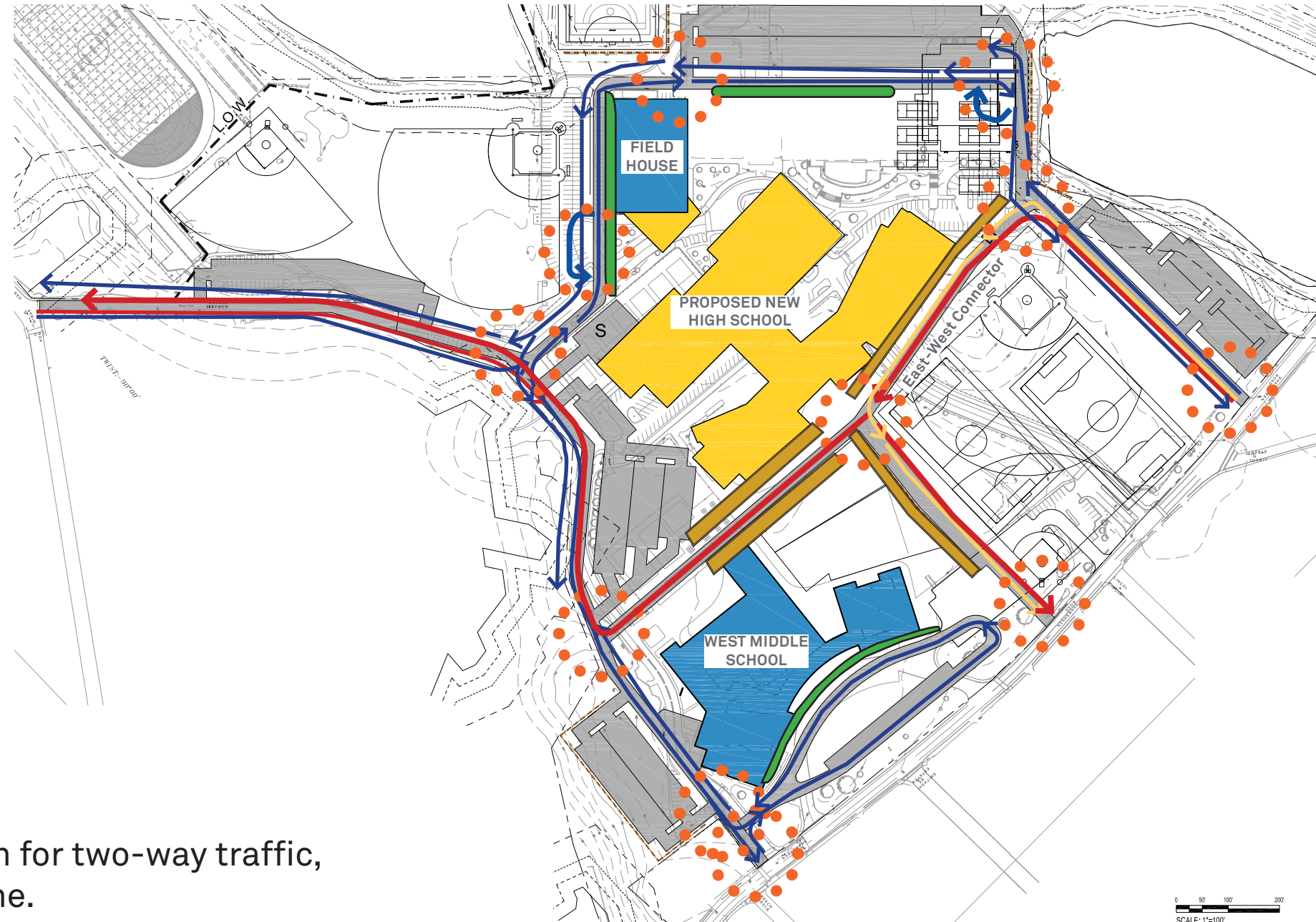
OPTION 2



Circulation envelope wide enough for two-way traffic, sidewalks and separated bike lane.

CIRCULATION PLAN Traffic Management (DRAFT)

- Raised tables to be provided at all intersections for traffic calming and to prioritize pedestrian crossing.
- Access to east/west connector shall be limited to buses only during drop-off/pick-up.
- Signage, compliance, and management will be required.



 Areas of further study/
development

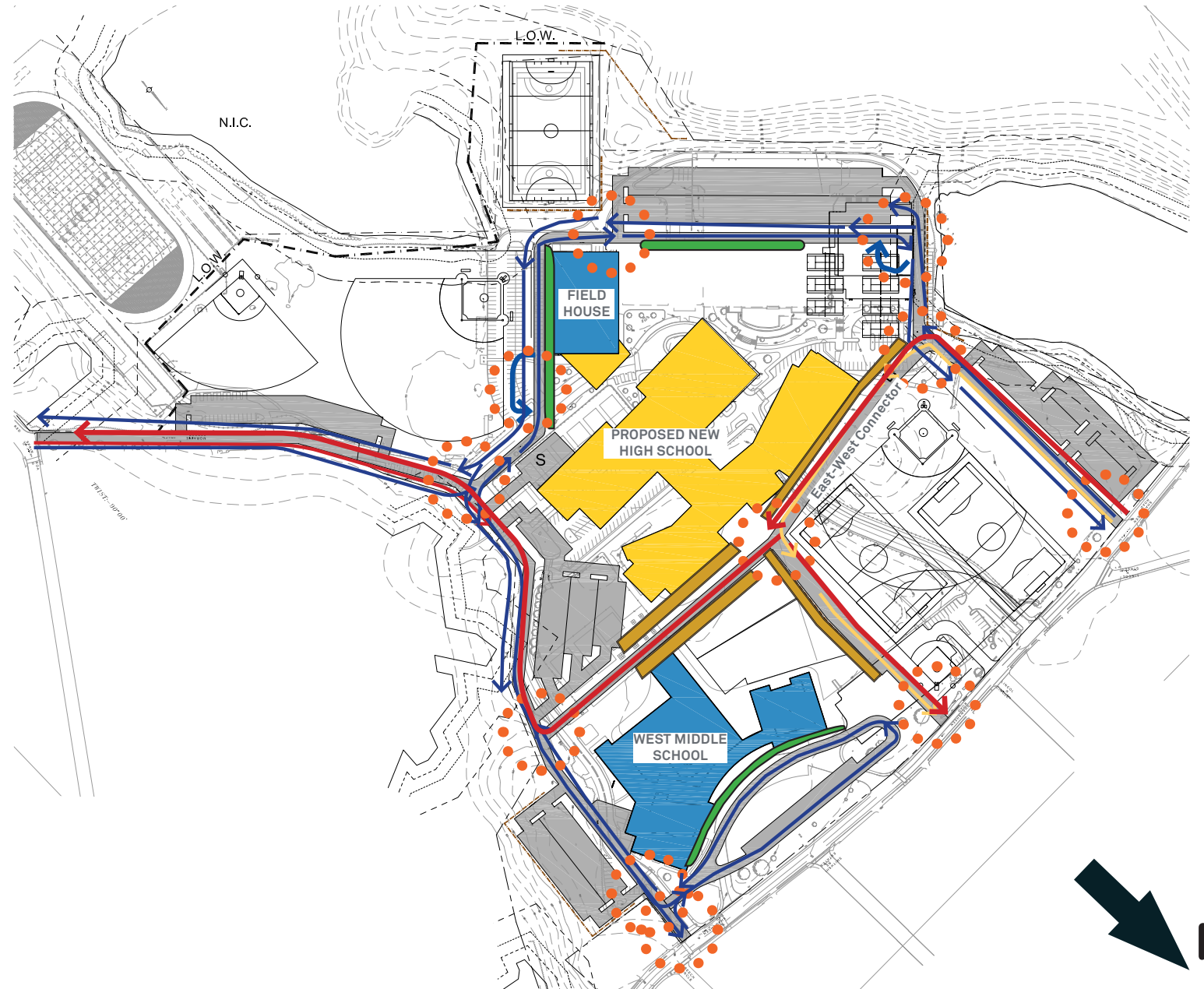
Circulation envelope wide enough for two-way traffic, sidewalks and separated bike lane.

CIRCULATION PLAN (DRAFT)

EXISTING SITE CIRCULATION



DRAFT PROPOSED SITE CIRCULATION



Next steps

Design - an iterative process of drawing ideas, seeking input, and evaluating and refining those ideas with frequent repetition

Evaluate and refine site circulation concepts with:

- landscape architect - Arcadis
- traffic consultant - T.E.C.
- civil engineer - Samiotes



Develop, revise, and refine based on feedback, while incorporating:

- pedestrian access
- bike and e-bike access
- grading
- planting (concept then detail)
- site amenities (score boards, bike storage, etc)
- detailed field design
- signage
- materials
- parking layout (accessible, EV, staff, student, etc.)

← **NEXT STEPS**

Seek input (repeat)

- town and school departments
- consultants and experts
- community
- school building committee



Andover - field utilization - fall

- Natural turf in lieu of artificial
- Plateau field
- Sports lighting

Sport	Age & # of Teams	Season	# of fields used	Hours/Week	Season	Hours/Season
Football	High School: 3 teams	Fall	1.5 practice fields (grass) <i>Freshman practice on a 1/2 field</i> <i>V and JV share a field</i> 1 game field Turf	5 Practices/week/team 10 Hrs/week/team 1-2 games/week/team <i>*20 games hosting in 23</i>	14 weeks	420 Practice Hours 40 Game Hours 40 Turf Total 420 Grass Total
Soccer: Boys and Girls	High School: 6 teams	Fall	4 practice Grass <i>Boys and girls Fr share a field</i> <i>Girls JV and V share a field</i> <i>Boys soccer practices off campus</i> 2 game fields Turf and Grass	18 Practices/week 36 Practice Hours/week 2-3 Games/week <i>*67 games hosting in 23</i>	10 weeks	360 Practice Hours 134 Game Hours 88 Turf Hours 46 Grass Hours 88 Turf Total 406 Grass Total
Field Hockey	High School: 3 teams	Fall	2 practice Turf & Grass 2 game Turf & Grass	Turf 8 Practices/week Grass 4 Practices/week Turf 16 Practice Hours/week Grass 8 Practice Hours/week 2-3 games/week <i>*28 games hosting in 23</i>	10 weeks	80 Turf Practices 160 Turf Hours 40 Grass Practices 80 Grass Hours 20 Turf games 40 Turf Hours 8 grass games 16 Grass Hours 200 Turf Total 96 Grass Total

Cross Country: Boys and Girls	High School: 2 teams	Fall	Uses extra space on grass for practice training. Meets: track and course	8 Practice Hours/week 2 Meet Hours <i>*2 Host Meets - Course combines field perimeter and track</i>	10 weeks	80 Grass Hours 4 Grass Hours 84 Grass Total
Band	High School: 1 Marching Band	Fall	1 practice (grass) 1/2 field	6 Grass Hours/week	10 weeks	60 Grass Total
Phys Ed	High School	Fall	Plateau, Turf and grass practice field	35 Hours/week	12 weeks	420 Total
Phys Ed	Middle School	Fall	1 Grass field	35 Hours/week	12 weeks	420 Total
<p>328 Total Turf Hours 1,066 Total Grass Hours Plus 840 Hours for Physical Education use on West, Practice, Plateau and Turf field</p>						
<p>All events calculated at 2 hours (realistically 3 hours for a game) Not counting State tournament practices and games Boys Soccer to practice on campus All games and practices 2 hours in length Band practice 3 hours in length 7 Fall Games Rescheduled or Cancelled 21 Spring Games Rescheduled or Cancelled <i>*Does not count practices canceled or moved to rental/indoor facilities*</i></p>						

Andover - field utilization - spring

Sport	Age & # of Teams	Season	# of fields used	Hours/Week	Season	Hours/Season
Baseball	High School: 3 Teams	Spring	2 practice (grass) 2 game (grass) *use the same field for practice and games	18 Practice Hours/week 34 Hosted games in 23 (3 hours/game) *9 rescheduled events	10 weeks	180 Practice Hours 102 Game Hours
Softball	High School: 2 Teams	Spring	2 practice (grass) 2 game (grass) *use the same field for practice and games	12 Practice Hours/week 24 Hosted games in 23 (3 hours/game) *11 rescheduled events	10 weeks	120 Practice Hours 72 Game Hours
Lacrosse: Boys and Girls	High School: 4 Teams	Spring	3 practice Girls: turf/grass Boys: turf/grass <i>*Plateau is used for JV practices and Girls JVB games</i> <i>*woodhill is used for practices and Boys JVB games</i>	48 Practice Hours/week 37 Hosted games in 23 1 canceled event	10 weeks	480 Practice Hours 74 Game Hours
Track and Field *includes unified track	High School: 2 Teams - 235 total student/athletes	Spring	Practice and meets Track and turf <i>*only track and only turf field in town</i>	48 Practice Hours/week 6 Hosted meets in 23 *MVC Championships and Boosters Meet - Longer events 5 hours	10 weeks	480 Practice Hours 26 Meet Hours
Phys Ed	High School	Fall, Spring	Plateau, Turf and grass practice field	35 Hours/week	12 weeks	420 Total
Phys Ed	Middle School	Fall, Spring	1 Grass field	35 Hours/week	12 weeks	420 Total
<p>Aumais and West are used exclusively for Baseball Practice field used for Softball and Track and Field throwing events Baseball and Softball games estimated to 3 hours Track meets are 4 hours in length All other events estimated to 2 hours Track and Lacrosse (Boys and Girls) use the Stadium facility - practices, meets and games</p>						

Potential scope add - Sports lighting

Sports Lighting - add \$5,086,000

Discussion - July 27, 2023

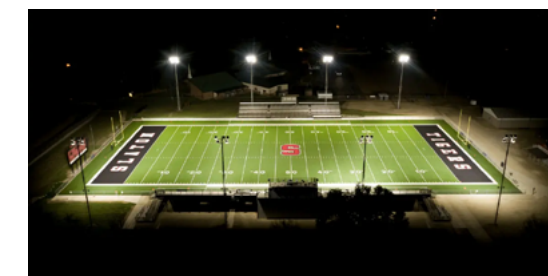
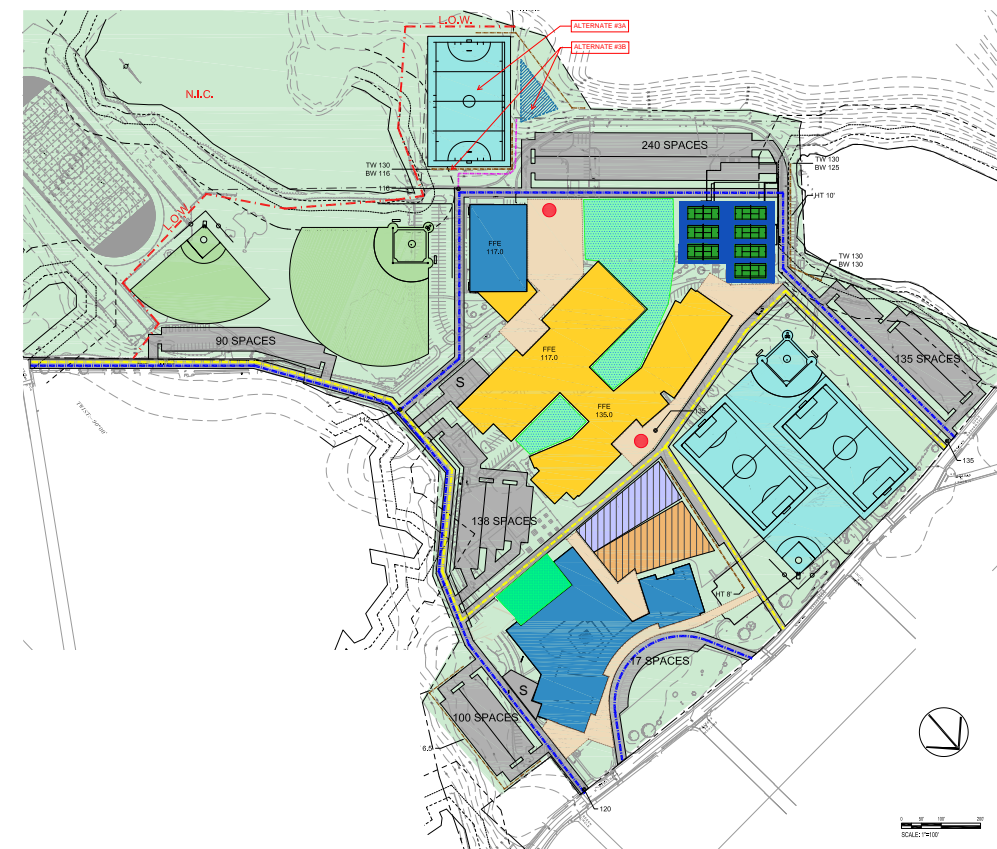
Vote - August 8, 2023

Sports lighting is not included in the base project (lighting at Lovely Field will remain). Sports lighting can extend the usable hours of the athletic facilities particularly in the shoulder seasons (early spring, late fall). Operational regulations can limit the hours of use.

Included in the cost is lighting the overlapping multipurpose fields along Shawsheen Road, and the competition baseball and softball fields.

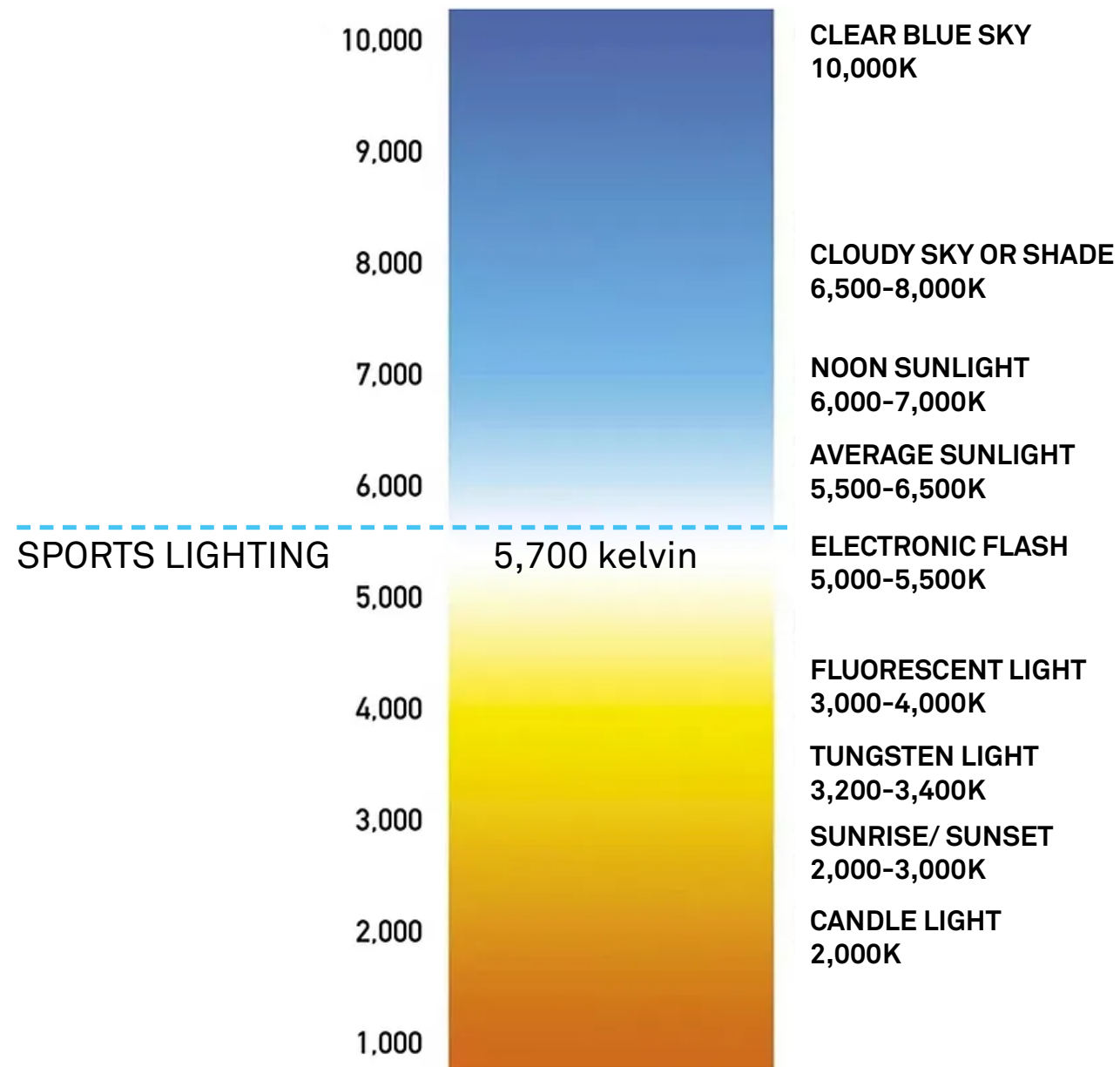
Considerations include:

- impact to neighbors - light cut off and dark sky requirements will be met. Photometric calculations will confirm that no light is directed beyond the limits of the site. Reflected light, views of lit fields, and extended use will have impact.
- operational hours and extended field utilization - regulations can control and limit the hours of use.
- potential environmental impact
- cost - reduced scope options include:
 - lighting specific fields only (allow approximately \$1,700,000/field)
 - providing conduit and cabling for future installation (allow approximately \$125,000/field)



Potential scope add - Sports lighting

Color temperature



CANDLE LIGHT
2,000K

SUNRISE/ SUNSET
2,000-3,000K

TUNGSTEN LIGHT
3,200-3,400K

FLUORESCENT LIGHT
3,000-4,000K

ELECTRONIC FLASH
5,000-5,500K

AVERAGE SUNLIGHT
5,500-6,500K

NOON SUNLIGHT
6,000-7,000K

CLOUDY SKY OR SHADE
6,500-8,000K

Potential scope add - Skate park

Skate park - add \$4,710,000

Discussion - August 8, 2023

If not added to the project, the existing skate park will be removed to allow for necessary flexibility for the site program. The town is reviewing current utilization and considering if the skate park could be replaced in another location.

Considerations:

- Current utilization
- Safety and supervision
- Cost



Potential scope add - Plateau field

Plateau field - add \$2,435,000

Discussion - August 8, 2023

Vote - August 24, 2023

Expansion of plateau field to allow for a full athletic multi-purpose practice field will be explored. This includes earthwork and retaining structures to expand the existing field and provide stepped viewing area.

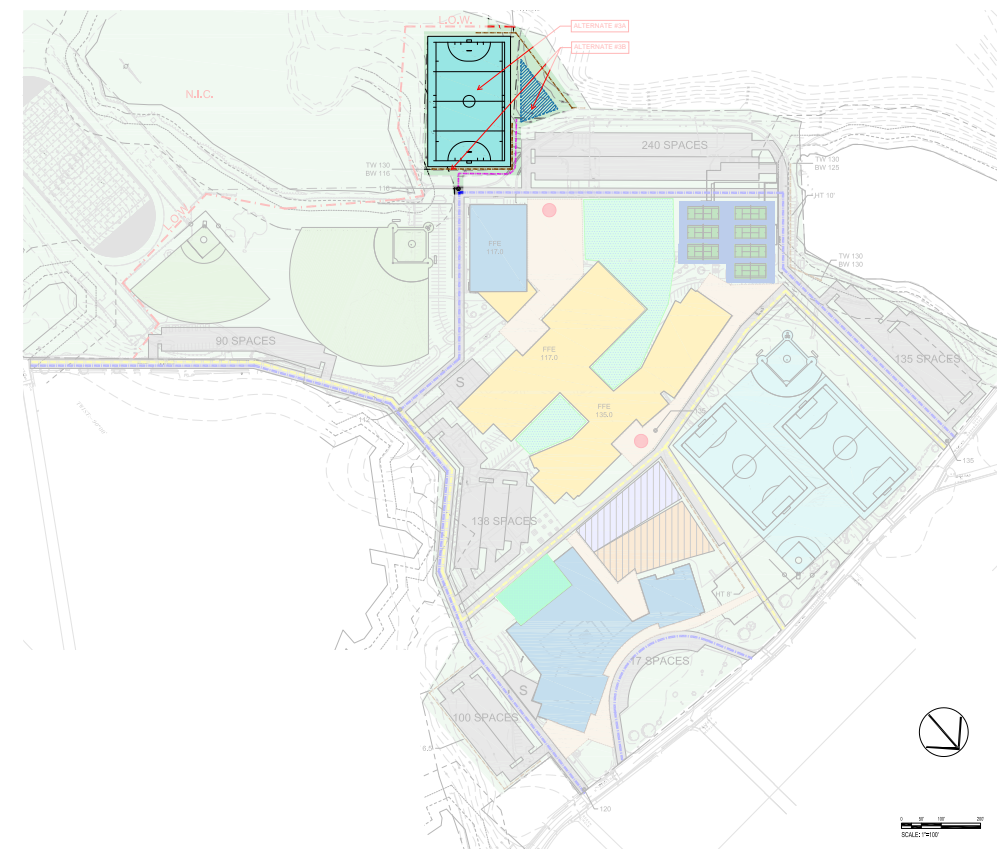
Artificial turf and sports lighting (each discussed elsewhere) could extend the utility of the field.

Cost breakdown:

- add artificial turf ~\$1,935,000
- scope to expand field inc. retaining structures and sloped seating ~\$500,000

The base project includes ramping structure for an accessible route to the existing field.

Improvements to existing natural turf field, including earth work, site drainage, and soil improvements is **not** in the base project. This option to improve the existing natural field would save ~\$540,000 from the costs above.



Potential savings - artificial v natural turf

Natural turf in lieu of artificial - deduct \$1,500,000*

Discussion at SBC - SD #4 - August 8, 2023

Vote at SBC - SD #5 - August 24, 2023

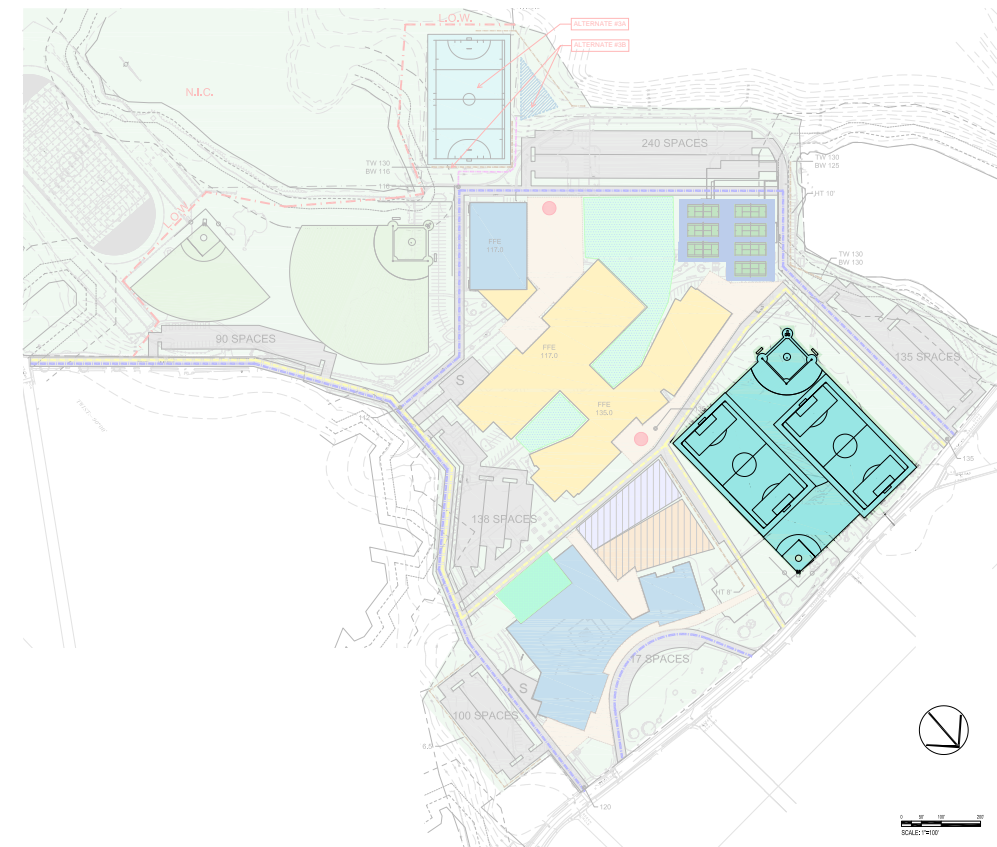
*Plateau field not included

Pros of natural turf:

- Lower initial cost
- Avoids PFAS from artificial turf systems

Cons of natural turf:

- Decrease in field utilization
- Needs rest periods to be maintained
- Higher maintenance costs
- Can not be used in certain conditions (i.e. after heavy rain)
- Requires irrigation
- Does not meet athletic director's program



Budget update and invoices

Total Project Budget	MSBA Cost Code	FS & SD Phase 1 Budget (Thru Sept. '23)	Billed to Date	% Complete (Phase 1)
Feasibility Study (FS) / Schematic Design (SD)				
OPM Feasibility Study / Schematic Design	0001-0000	\$ 399,889	\$ 278,735	69.7%
A&E Feasibility Study / Schematic Design	0002-0000	\$ 2,012,500	\$ 1,200,000	59.6%
Env. & Site	0003-0000	\$ 243,195	\$ 114,631	47.1%
Other	0004-0000	\$ 18,511	\$ 4,594	24.8%
Owner Contingency	0005-0000	\$ 64,325	\$ -	0.0%
TOTALS		\$ 2,738,420	\$ 1,597,961	58.4%

Matches Total Available Funds

SD Phase 2 Budget (Oct. '23 - March '24)	Total
\$ 125,111	\$ 525,000
\$ 902,500	\$ 2,915,000
\$ 57,980	\$ 301,175
\$ 64,825	\$ 83,336
\$ 149,584	\$ 213,909
\$ 1,300,000	\$ 4,038,420

*Targeting Special
Town Meeting in
September 2023 for
Approval of SD
Phase 2 Funds*

How people can get involved

COME TO A COMMITTEE MEETING

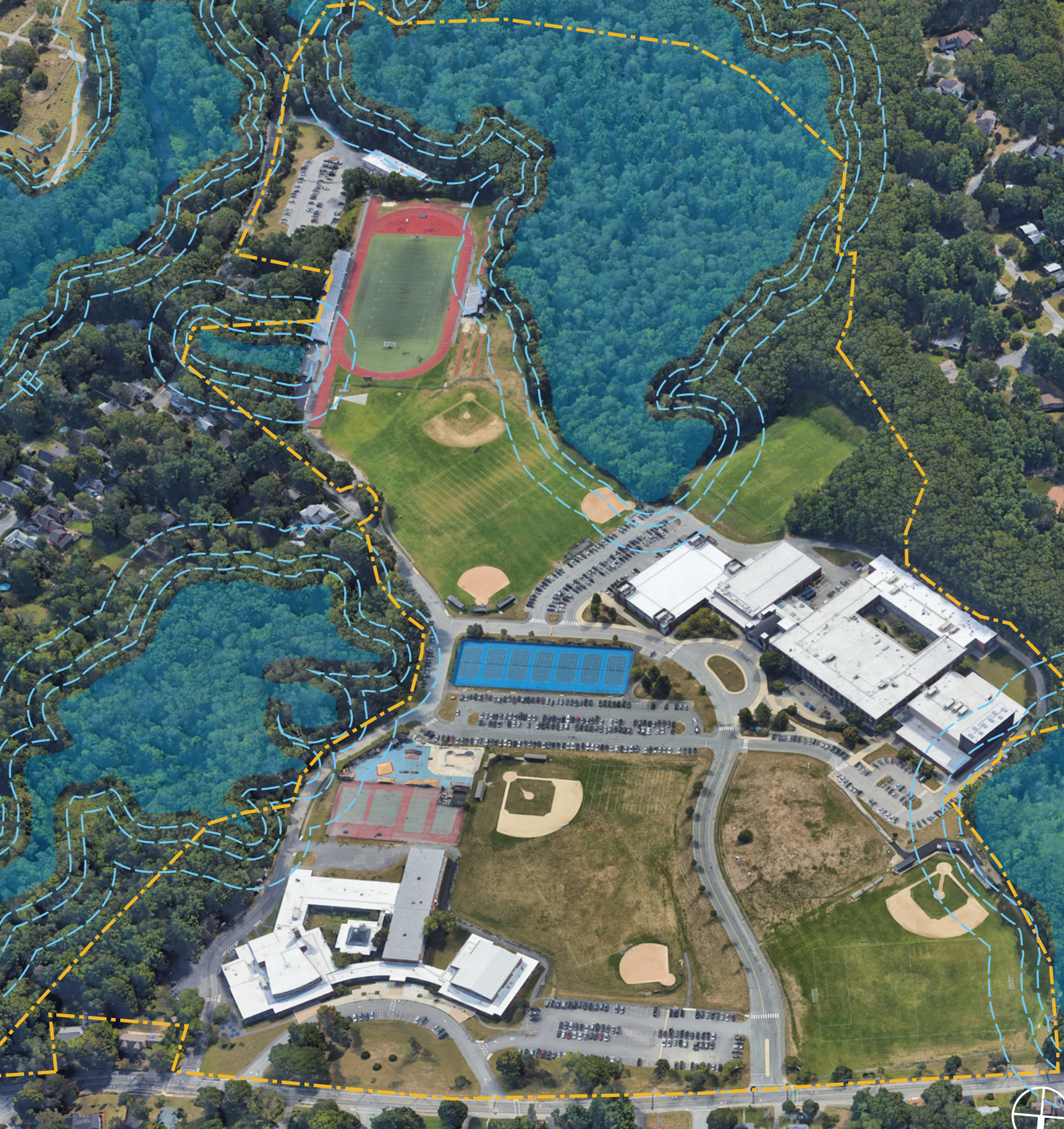
Web site: andoverhighbuildingproject.org

Email: andoverhighbuildingproject@andoverma.us

Facebook: www.facebook.com/AndoverHighBuildingProject

Watch past meetings at:

www.andovertv.org/andover-high-school-building-committee



THANK YOU



HM
FH

HMFH ARCHITECTS