



Massachusetts School
Building Authority



OBJECTIVE OF THE PDP:

DETERMINE WHICH OPTIONS ARE RECOMMENDED FOR FURTHER STUDY

OPTIONS FOR FURTHER STUDY **MUST** INCLUDE:

- **CODE UPGRADE**
- **ADDITION RENOVATION**
- **NEW CONSTRUCTION ON EXISTING SITE**

OPTIONS FOR FURTHER STUDY **MAY** INCLUDE:

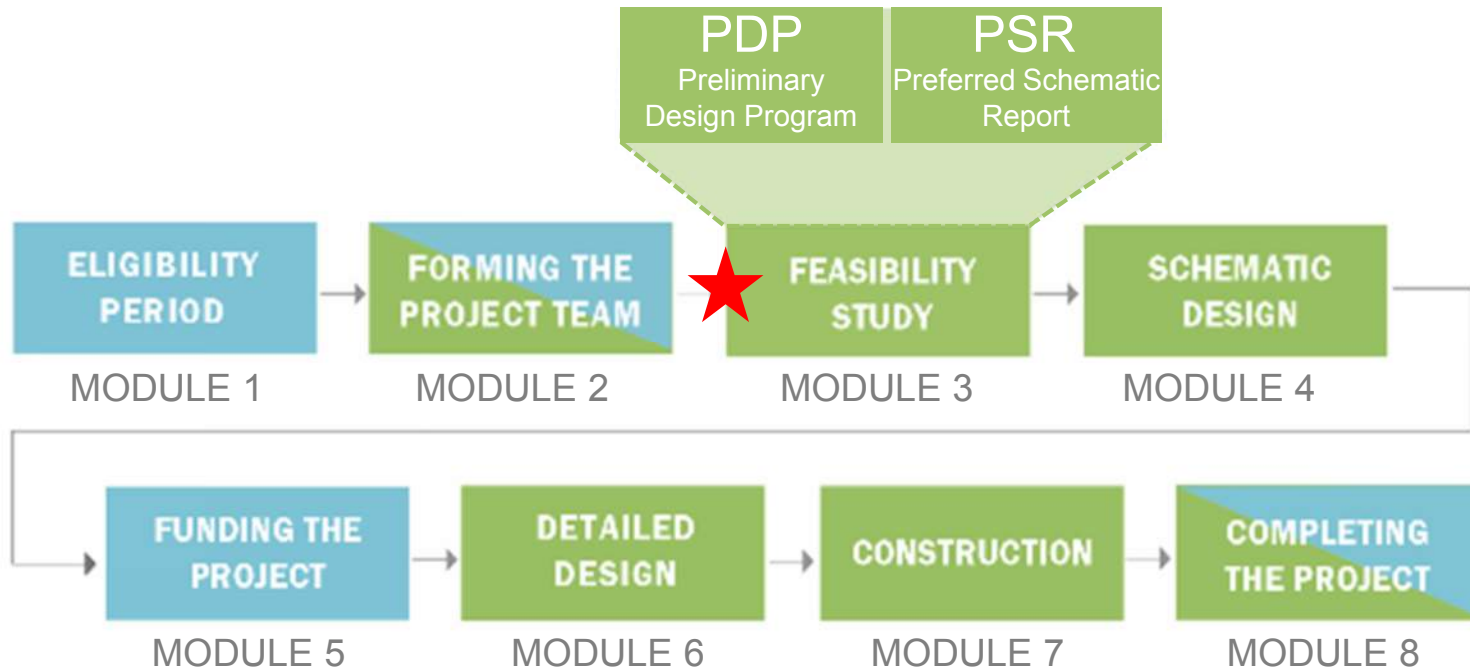
- **NEW CONSTRUCTION ON ALTERNATE SITE(S)**

MSBA Building Process

Steps primarily for:

Districts

Construction Professionals



★ CURRENT PROJECT STATUS

SBC Vote to Submit
PDP to MSBA:
Sept. 2019



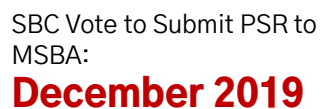
SBC Vote to Submit
PDP to MSBA:
Sept. 2019



MSBA Vote



SBC Vote to Submit
SD Package to MSBA:
July 2020

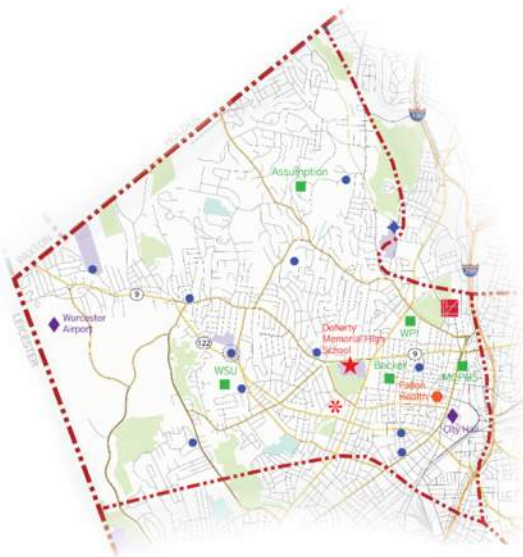


MSBA Vote

Building |
Occupancy:
Fall 2024

PDP TASKS

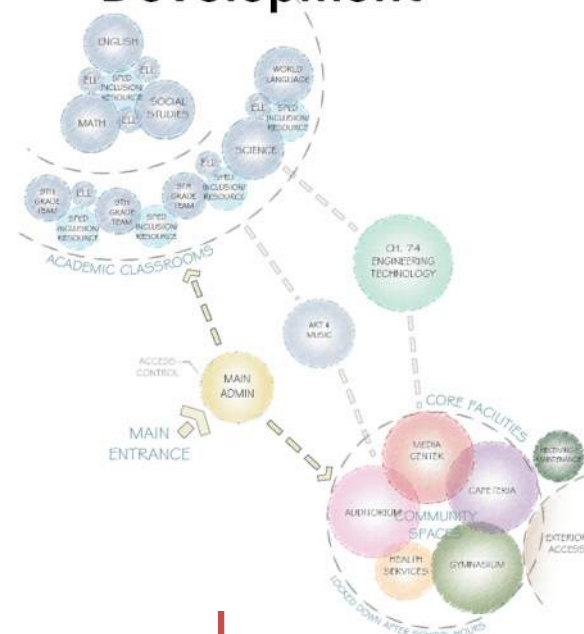
Alternate Site Evaluation



Evaluation of Existing Building & Site

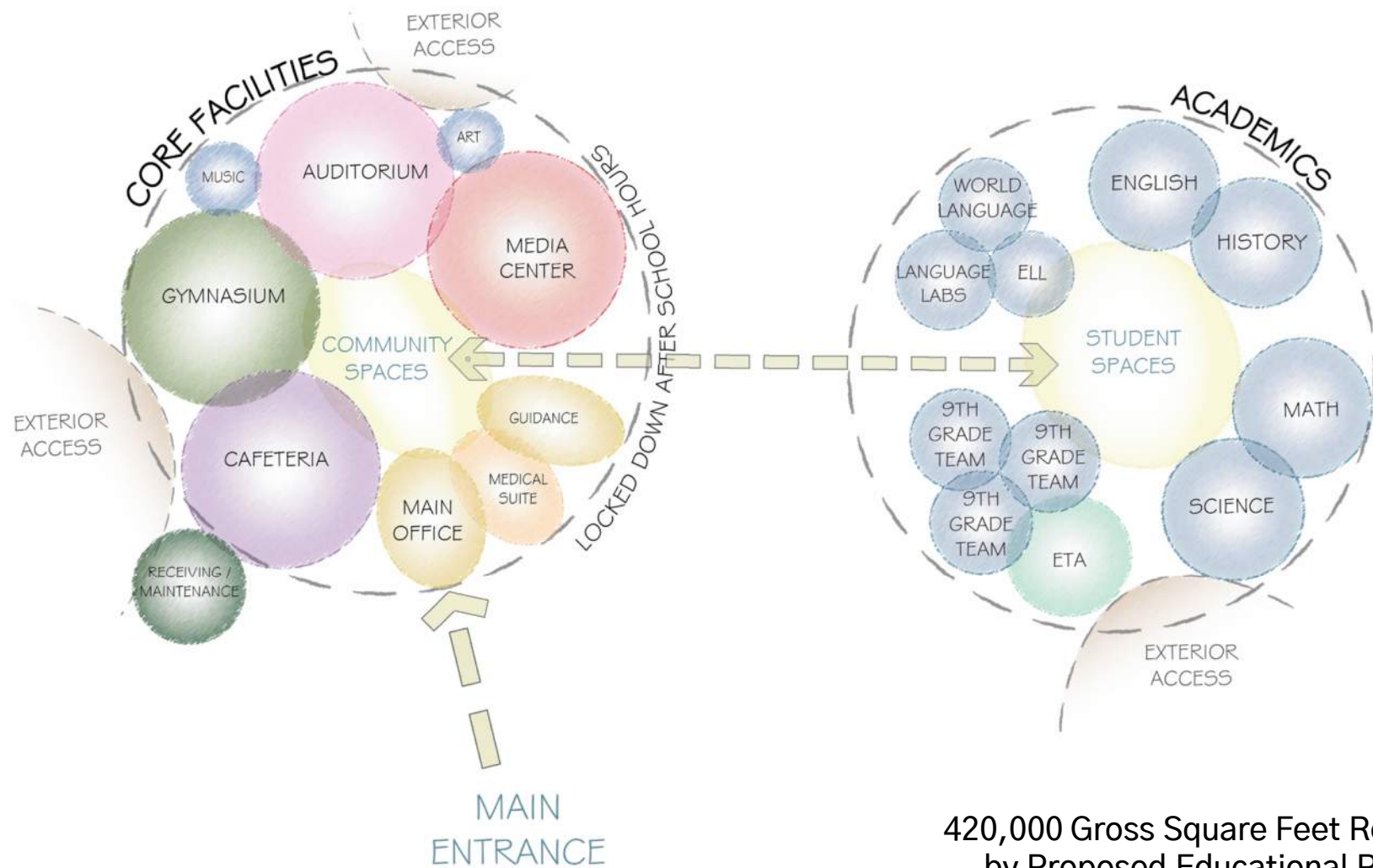


Program Development



RECOMMENDATION OF OPTIONS FOR FURTHER STUDY

BUBBLE DIAGRAMS

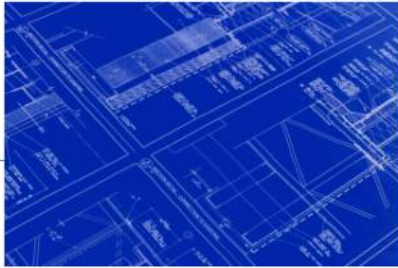


420,000 Gross Square Feet Required
by Proposed Educational Program

PROPOSED CHAPTER 74 PROGRAMS:

The Central MA
Regional Workforce
Blueprint

2018-2022



March, 2018



ENGINEERING & TECHNOLOGY ACADEMY

Enrollment: 400 Students (Existing to be expanded)

MARKETING MANAGEMENT & FINANCE

Enrollment: 200 Students

PROGRAMMING & WEB DEVELOPMENT

Enrollment: 200 Students

CONSTRUCTION CRAFT LABORER

Enrollment: 150 Students

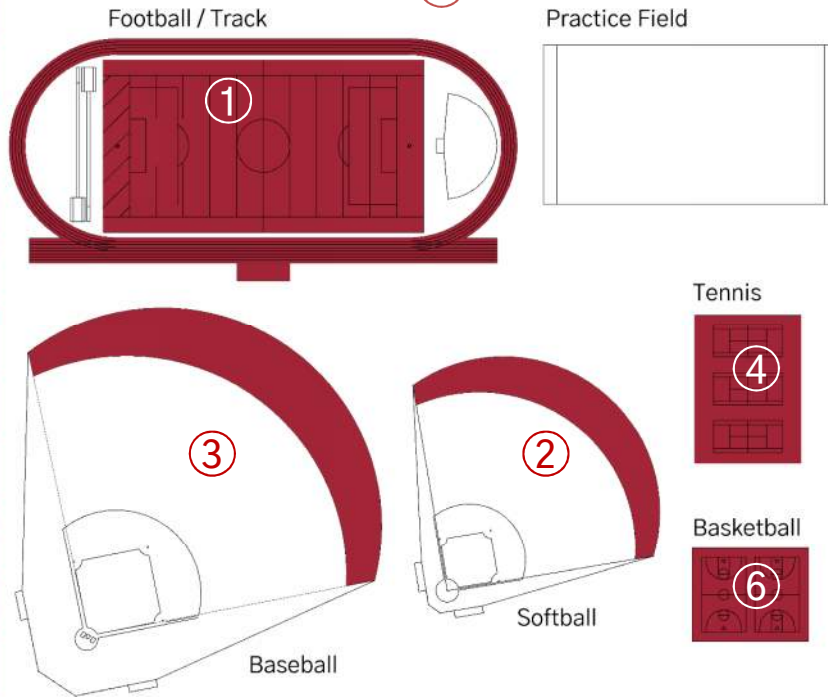
WORCESTER
PUBLIC SCHOOLS



13 ACRES REQUIRED

13 ACRES REQUIRED

ATHLETIC FIELDS



PARKING

180 Staff Parking



Kitchen Loading



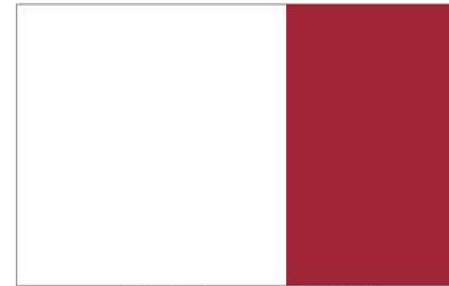
250 Visitor and Student Parking



General Receiving



BUILDING FOOTPRINT



Existing Footprint: 96,500 SF
Proposed Footprint : +/- 160,000 SF

CIRCULATION

8-10 Large Buses
(separate loop)



6 SPED Buses
(separate loop)



Queue for 50 Parent Drop-off
cars (separate from Buses)



ORDER OF PRIORITY

LEGEND



ADDITIONAL SITE FEATURE REQUIRED BY EDUCATIONAL PROGRAM



EXISTING SITE FEATURE



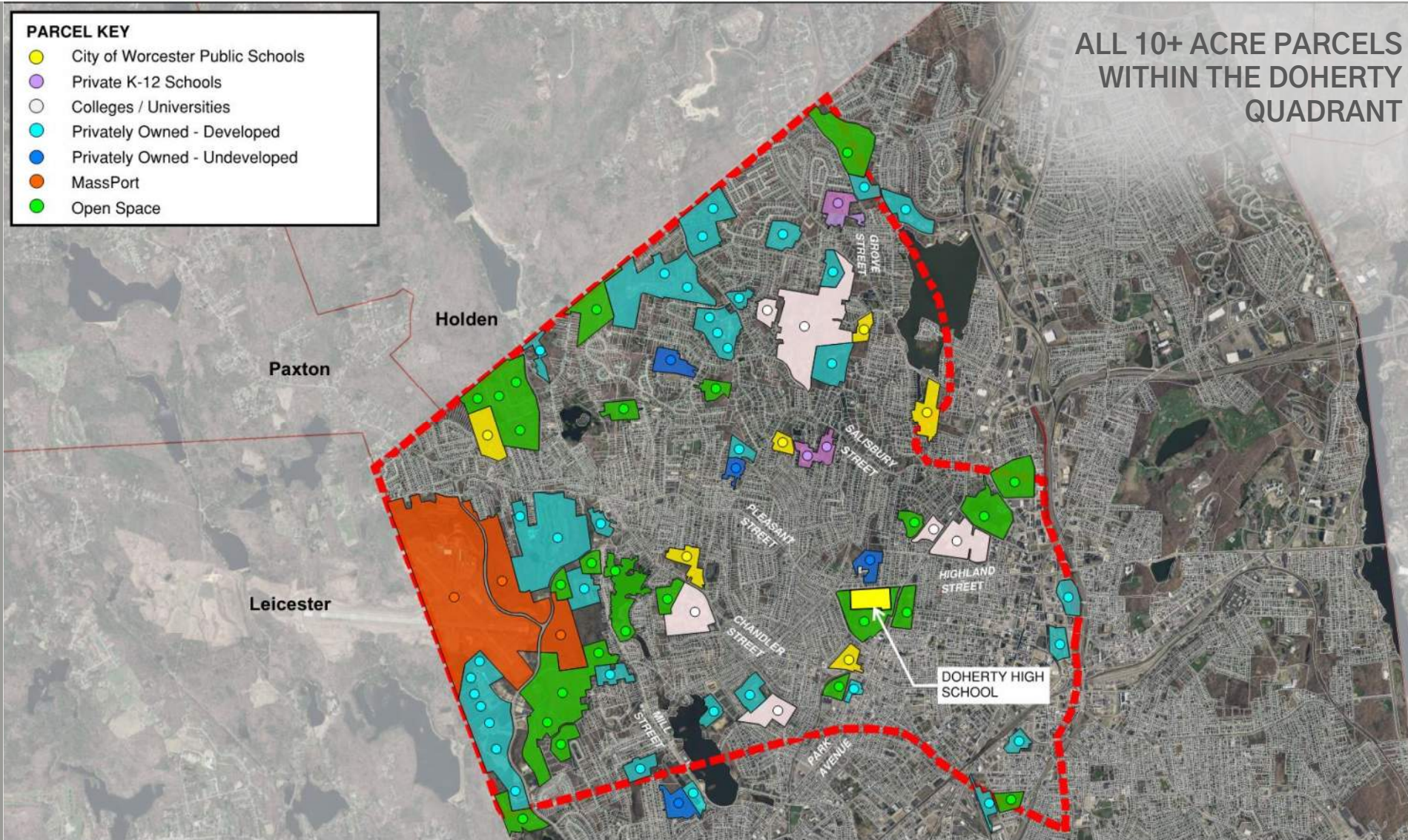
TOTAL SITE FEATURES REQUIRED BY EDUCATIONAL PROGRAM

PHASE I SITE SELECTION PROCESS

PARCEL KEY

- City of Worcester Public Schools
- Private K-12 Schools
- Colleges / Universities
- Privately Owned - Developed
- Privately Owned - Undeveloped
- MassPort
- Open Space

ALL 10+ ACRE PARCELS
WITHIN THE DOHERTY
QUADRANT



PHASE I SITE SELECTION PROCESS

PARCEL KEY

- City of Worcester Public Schools
- Private K-12 Schools
- Colleges / Universities
- Privately Owned - Developed
- Privately Owned - Undeveloped
- MassPort
- Open Space

ELIMINATED PARK LAND,
PREVIOUSLY DEVELOPED,
AND PROHIBITIVE
OWNERSHIP



DOHERTY SITE

TOTAL: 20 ACRES
DEVELOPED: 12.3 ACRES



EXISTING DOHERTY SITE

- Established location
- Steep topography
- Abutted by park land
- Highland Street access only

REGIONAL KEY PLAN:

Existing K-12 schools
Existing Site
Proposed Site



ID:

- | | |
|-----------------------|--------------------|
| Parcel Property Line | New Roadway |
| Potential acquisition | Bus Circulation |
| New Construction | Parent Circulation |
| New Athletic Field | Connection |
| Existing Building | |
| Flood Plain | |
| Retaining Wall | |
| Steep Topography | |

DOHERTY SITE: CODE UPGRADE

TOTAL: 20 ACRES
DEVELOPED: 12.3 ACRES



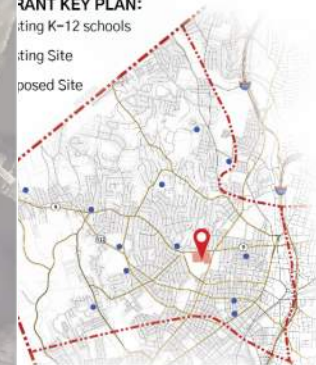
DOHERTY SITE: CODE UPGRADE

NOTES:

- Systems replacements
- Energy upgrades
- Accessibility
- Window Replacement
- Phased occupied renovations including modular classrooms
- Does not meet educational program

GRANT KEY PLAN:

Existing K-12 schools
Existing Site
Proposed Site



ID:

Parcel Property Line	New Roadway
Potential acquisition	Bus Circulation
New Construction	Parent Circulation
New Athletic Field	Connection
Existing Building	
Flood Plain	
Retaining Wall	
steep Topography	

DOHERTY SITE ADD / RENO

TOTAL: 20 ACRES
DEVELOPED: 15.4 ACRES



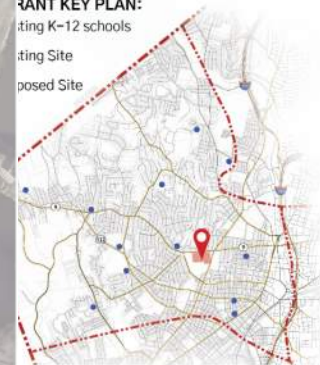
DOHERTY SITE: ADD/RENO

NOTES:

- Greatest disruption to staff and students
- Extended schedule to 2025
- Compromised educational program

GRANT KEY PLAN:

Existing K-12 schools
Existing Site
Proposed Site



ID:

Parcel Property Line	New Roadway
Potential acquisition	Bus Circulation
New Construction	Parent Circulation
New Athletic Field	Connection
Existing Building	
Flood Plain	
Retaining Wall	
steep Topography	



A. DOHERTY TO FOLEY STADIUM



EXISTING DOHERTY SITE

S:

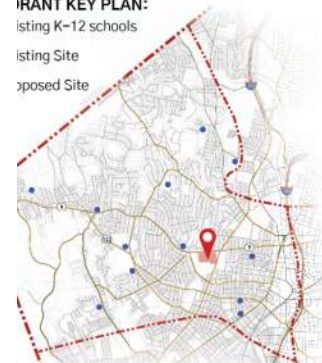
- Potential to develop pedestrian access to Foley Stadium

TRANSIT KEY PLAN:

Existing K-12 schools

Existing Site

Proposed Site



Legend:

- Parcel Property Line
- Potential acquisition
- New Construction
- New Athletic Field
- Existing Building
- Flood Plain
- Retaining Wall
- Steep Topography
- New Roadway
- Bus Circulation
- Parent Circulation
- Connection



A.1 DOHERTY SITE

TOTAL: 20 ACRES
DEVELOPED: 15.4 ACRES



A.1 DOHERTY SITE

NOTES:

- No Land Acquisition
- Adequate Staff Parking
- Premium \$\$\$ Parking beneath fields (or option for no student parking)

QUADRANT KEY PLAN:



LEGEND:

Parcel Property Line	New Roadway
Potential acquisition	Bus Circulation
New Construction	Parent Circulation
New Athletic Field	Connection
Existing Building	
Flood Plain	
Retaining Wall	
Steep Topography	



LPA|A

TOTAL: 20 ACRES
DEVELOPED: 15.4 ACRES

20 ACRES

A.1 DOHERTY SITE: PHASE I

NOTES:

- Pave around existing building to maximize parking
- No practice fields available



QUADRANT KEY PLAN:

- Existing K-12 schools
- ★ Existing Site
- 📍 Proposed Site



LEGEND:

- | | |
|-----------------------|--------------------|
| Parcel Property Line | New Roadway |
| Potential acquisition | Bus Circulation |
| New Construction | Parent Circulation |
| New Athletic Field | Connection |
| Existing Building | |
| Flood Plain | |
| Retaining Wall | |
| Steep Topography | |



A.1 DOHERTY SITE

TOTAL: 20 ACRES
DEVELOPED: 15.4 ACRES



A.1 DOHERTY SITE : PHASE II

NOTES:

- Demolition of existing building
- Construction of roads for bus circulation
- Occupancy of new building

QUADRANT KEY PLAN:



LEGEND:

	Parcel Property Line		New Roadway
	Potential acquisition		Bus Circulation
	New Construction		Parent Circulation
	New Athletic Field		Connection
	Existing Building		
	Flood Plain		
	Retaining Wall		
	Steep Topography		



A.1 DOHERTY SITE



A.1 DOHERTY SITE : PHASE III

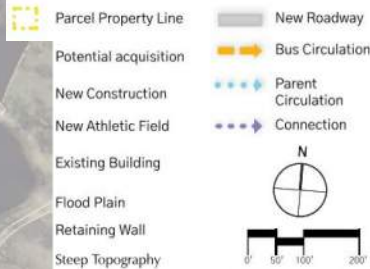
NOTES:

- Extended schedule for completion of site work and athletic fields above parking

QUADRANT KEY PLAN:



LEGEND:



B.1 FOLEY STADIUM SITE



EXISTING FOLEY STADIUM SITE

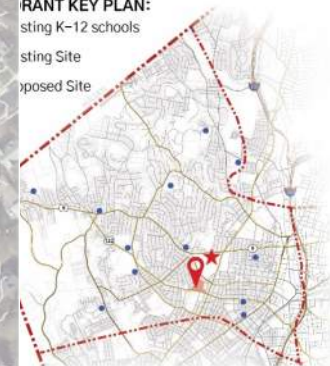
- Flat, developed site
- Unsuitable soil conditions
- Beaver Brook culvert
- Beaver Brook Park, not regulation size fields
- Recently refurbished Foley Stadium is heavily used by the district and community

REGIONAL KEY PLAN:

existing K-12 schools

existing Site

proposed Site



LEGEND:

- Parcel Property Line
- Potential acquisition
- New Construction
- New Athletic Field
- Existing Building
- Flood Plain
- Retaining Wall
- Steep Topography
- New Roadway
- Bus Circulation
- Parent Circulation
- Connection



1.

ASSESSOR: 12.2 ACRES
GIS TAKEOFF: 14 ACRES

12 ACRES

FOLEY STADIUM SITE

S:

- District owned parcel, optional land acquisition
- Adequate Staff Parking
- Limited Student Parking (Option for parking on acquired land, joint use of Beaver Brook parking, or a parking garage.

GRANT KEY PLAN:

isting K-12 schools

sting Site

Proposed Site

ND:

Parcel Property Line

Potential acquisition

New Construction


New Athletic Field

Existing Building

Flood Plain

Retaining Wall

Steep Topography

 New Roadway

➡ Bus Circulation

- Parent Circulation

Connection



C. CHANDLER MAGNET SITE

21.4 ACRES

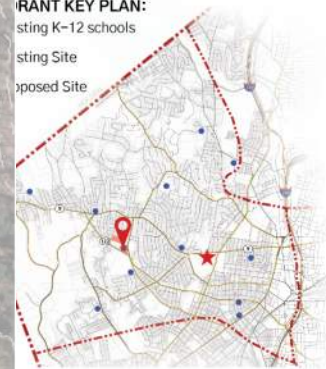


(EXISTING CHANDLER MAGNET SITE)
S:

- Tiered site
- Steep topography
- Limiting parcel shape
- Multiple access points
- Existing 1950's school building
- WSU Adjacency

PARANT KEY PLAN:

isting K-12 schools
isting Site
oposed Site



ND:

- | | |
|-----------------------|------------------------|
| Parcel Property Line | — New Roadway |
| Potential acquisition | — Bus Circulation |
| New Construction | ••• Parent Circulation |
| New Athletic Field | --- Connection |
| Existing Building | |
| Flood Plain | |
| Retaining Wall | |
| Steep Topography | |



C.1 CHANDLER MAGNET SITE



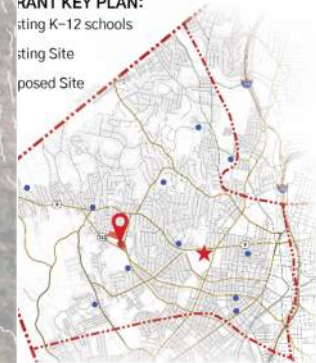
HANDLER MAGNET SITE

is:

- No Land Acquisition
- Adequate Staff Parking
- Adequate Student Parking
- Compromised building organization
- Limited athletic fields
- Difficult access to upper fields

RANT KEY PLAN:

isting K-12 schools
isting Site
posed Site



ID:

- | | |
|-----------------------|------------------------|
| Parcel Property Line | — New Roadway |
| Potential acquisition | — Bus Circulation |
| New Construction | ••• Parent Circulation |
| New Athletic Field | --- Connection |
| Existing Building | |
| Flood Plain | |
| Retaining Wall | |
| steep Topography | |



C.2 CHANDLER MAGNET SITE



HANDLER MAGNET SITE + LAND

- Land Acquisition from Worcester State University LLC & abutters
- Adequate Staff Parking
- Adequate Student Parking
- Most efficient development
- Least impact to Doherty Students

PLAN KEY PLAN:



D:

- | | |
|-----------------------|--------------------|
| Parcel Property Line | New Roadway |
| Potential acquisition | Bus Circulation |
| New Construction | Parent Circulation |
| New Athletic Field | Connection |
| Existing Building | |
| Flood Plain | |
| Retaining Wall | |
| Steep Topography | |
- N

ALTERNATIVE SITE RANKING MATRIX

WEIGHT (1-5)

Assumptions:
1. Assumed no swing space is available.
2. See notes below for unique aspects of each site.

CRITERIA

DOHERTY

FOLEY STADIUM

CHANDLER MAGNET

CHANDLER MAGNET
WITH ADDED LAND

A.1

B.1

C.1

C.2

5

ABILITY TO MEET BUILDING PROGRAM

5

5

2

5

5

ACQUISITION ISSUES, NEGOTIATION & EXPANSION

5

2

4

2

5

COMPARATIVE STAFF & STUDENT IMPACT

2

1

4

4

4

ABILITY TO MEET SITE ATHLETICS PROGRAM

3

1

2

3

4

CENTRAL TO DISTRICT/QUADRANT

5

4

4

4

3

SITE DEVELOPMENT COSTS (Earth moving, soils, retaining walls, parking stuctures)

3

2

3

3

3

TRAFFIC IMPACTS & ACCESS

3

3

3

3

3

BUS & PARENT VEHICULAR CIRCULATION & PARKING

2

3

2

3

3

CONSTRUCTION SCHEDULE IMPACT

3

4

5

5

1

ADJACENT USES & NEIGHBORHOOD IMPACT

4

4

3

3

1

UTILITIES & DEVELOPMENT ISSUES

3

1

3

3

WEIGHTED SCORE

132

101

119

131

DOHERTY SITE

CODE UPGRADE



ADDITIONS & RENOVATIONS



A.1 NEW CONSTRUCTION AT DOHERTY SITE



ALTERNATIVE SITES

B.1 NEW CONSTRUCTION AT FOLEY STADIUM SITE



C.1 NEW CONSTRUCTION AT THE CHANDLER SCHOOL SITE



C.2 NEW CONSTRUCTION AT THE CHANDLER SCHOOL SITE + LAND



DOHERTY SITE

CODE UPGRADE

168,000 FT²

\$482 – \$494

COST PER SQUARE FOOT

\$81 – \$83 MILLION

CONSTRUCTION BUDGET

\$101– \$104 MILLION

PROJECT BUDGET

ADDITIONS & RENOVATIONS

420,000 FT²

\$548 – \$552

COST PER SQUARE FOOT

\$230 – \$232 MILLION

CONSTRUCTION BUDGET

\$287– \$290 MILLION

PROJECT BUDGET

A.1 NEW CONSTRUCTION AT DOHERTY SITE

420,000 FT²

\$576 – \$581

COST PER SQUARE FOOT

\$242 – \$244 MILLION

CONSTRUCTION BUDGET

\$302– \$305 MILLION

PROJECT BUDGET

ALTERNATIVE SITES * LAND ACQUISITION COSTS NOT INCLUDED

B.1 NEW CONSTRUCTION AT FOLEY STADIUM SITE

420,000 FT²

\$571 – \$576

COST PER SQUARE FOOT

\$240 – \$242 MILLION

CONSTRUCTION BUDGET

*** \$300– \$302 MILLION**

PROJECT BUDGET

C.1 NEW CONSTRUCTION AT THE CHANDLER SCHOOL SITE

420,000 FT²

\$529 – \$533

COST PER SQUARE FOOT

\$222 – \$224 MILLION

CONSTRUCTION BUDGET

\$277– \$280 MILLION

PROJECT BUDGET

C.2 NEW CONSTRUCTION AT THE CHANDLER SCHOOL SITE + LAND

420,000 FT²

\$529 – \$533

COST PER SQUARE FOOT

\$222 – \$224 MILLION

CONSTRUCTION BUDGET

*** \$277– \$280 MILLION**

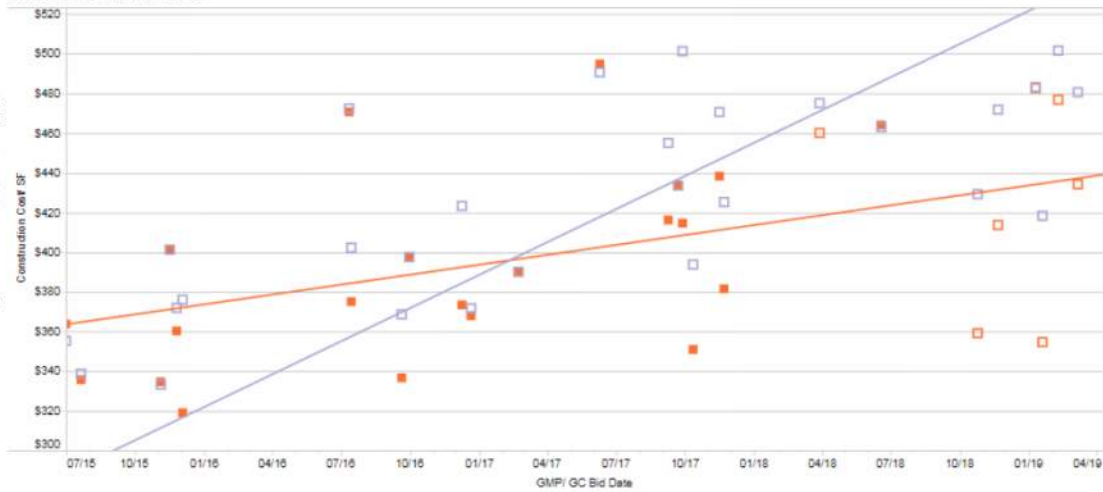
PROJECT BUDGET

Capital Planning Data & Information: School Construction Costs

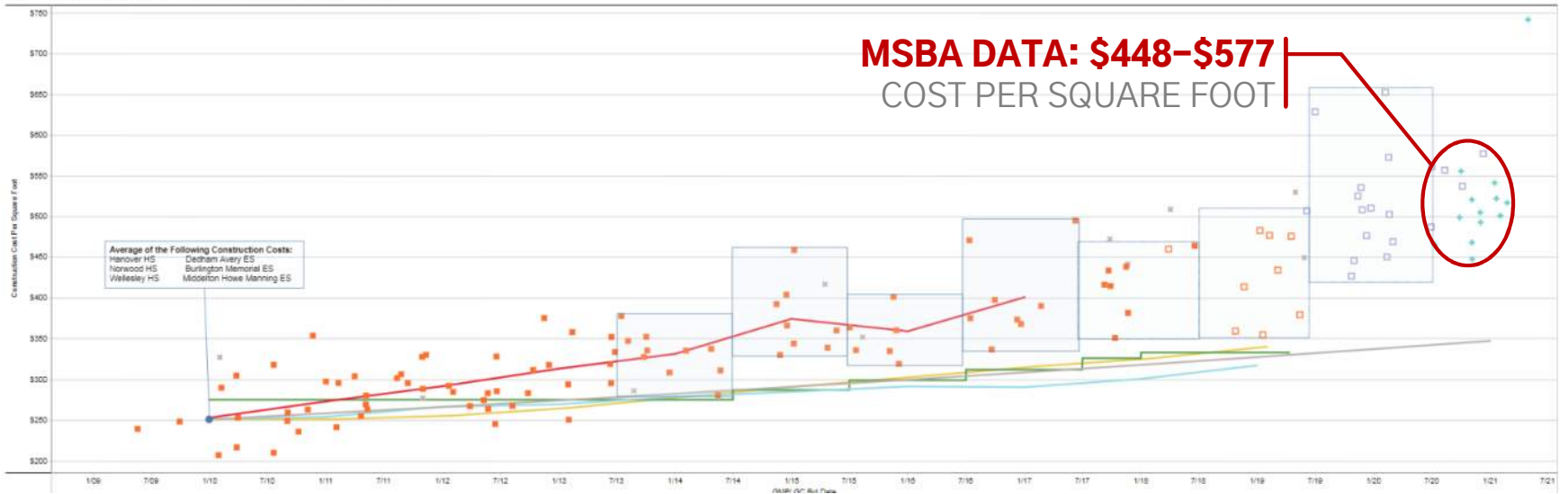
This chart includes construction costs for new construction projects as bid from FY 09 to date, as well as construction cost estimates at preferred schematic and at schematic design for projects recently approved by the Board and expected to bid in the future. Additionally, the chart provides an inset with a closer look comparing the schematic design estimates to the bids received for FY 16 to date. Common economic indicators are included at the bottom of the chart.

To filter the data specific to a Contractor, Designer, and/or OPM, use the filters on the right to uncheck the boxes next to the categories you do not want shown. To uncheck all of the names, uncheck the box next to "All". Please note, for the common economic indicators lines to show, the "Null" box must remain checked. These filters act as "AND" filters when used in combination. (Ex: checking a contractor and a designer will filter to only those projects that had both that contractor and that designer.)

Construction Costs, Bid vs. SD



School Construction Costs Compared to Common Economic Indicators



* LAND ACQUISITION COSTS NOT INCLUDED

	MATRIX SCORE	CONSTRUCTION COST (MILLIONS)	PROJECT COST (MILLIONS)
CODE UPGRADE		\$81-83	\$101-104
ADDITION RENOVATION		\$230-232	\$287-290
NEW CONSTRUCTION AT DOHERTY SITE	132	\$242-244	\$302-305
NEW CONSTRUCTION AT FOLEY STADIUM SITE	101	\$240-242	\$300-302 *
NEW CONSTRUCTION AT CHANDLER MAGNET SITE	119	\$222-224	\$277-280
NEW CONSTRUCTION AT CHANDLER MAGNET SITE + LAND	131	\$222-224	\$277-280 *

DOHERTY SITE

CODE UPGRADE



ADDITIONS & RENOVATIONS



A.1 NEW CONSTRUCTION AT DOHERTY SITE



ALTERNATIVE SITES

B.1 NEW CONSTRUCTION AT FOLEY STADIUM SITE



C.1 NEW CONSTRUCTION AT THE CHANDLER SCHOOL SITE



C.2 NEW CONSTRUCTION AT THE CHANDLER SCHOOL SITE + LAND





Massachusetts School
Building Authority





Massachusetts School
Building Authority



Additional Comments/Questions?

www.lpaa.com/get-in-touch