

3.3.3 FINAL EVALUATION OF ALTERNATIVES

C. Preliminary Design Options

7. Option C.2 New
Construction on Chandler
Magnet School Site with
Added Land
 - a. Narrative
 - b. Site Plan
 - c. Floor Plans
 - d. Massing

SUMMARY: This New Construction Option is based on a new building located on the 525 Chandler Street site. This 22 Acre site is owned by the Worcester Public School district and contains the existing Chandler Magnet School building, a practice field and softball field. The school currently has an enrollment of approximately 500 students, which includes the district’s elementary dual language and bilingual programs.

BUILDING ORGANIZATION:

The building in Option C.2 is organized into four levels, with a large central atrium connecting the main entrance with the Gymnasium, Cafeteria, Auditorium and Media Center, located one floor above the main entrance. The building is built into the existing topography of the site, providing grade access at the main entrance, and a secondary entrance at the rear of the site, providing convenient access to parking and the athletic fields from the gymnasium and cafeteria. Organization and separation of the academic wings is intuitive and organized with the desired adjacencies. Separation of the academic spaces from the community use spaces would occur at the corridors accessing the large central lobby.

OPTION ANALYSIS:

Proposed SF areas for this option are approximately as follows:

- **New Construction** = 420,000 GSF
- **Demolition (existing building)** = 102,000 GSF

ABILITY TO MEET BUILDING PROGRAM:

This New Construction Option satisfies most if not all Educational Program/Space Summary objectives. While the majority of teaching spaces have access to natural daylight and views, the terracing of the building into the existing site does result in some interior classrooms, primarily Chapter 74 labs and computer labs.

ACQUISITION ISSUES:

The Chandler Magnet Street site is owned by Worcester Public Schools; however, the restrictive parcel shape of this property requires the acquisition of neighboring land in order to appropriately address the educational program. This option proposes land acquisition from adjacent parcels owned by Worcester State Foundation Real Estate LLC, and rear land acquisition from May Street Residences.

COMPARATIVE STAFF AND STUDENT IMPACT:

Because a new building can be constructed on a site entirely separate from the existing Doherty Memorial High School building, the New Construction on Alternate Site options will have the least impact to Doherty students than on any option on the existing site, and all without the need for “swing space”. The biggest impacts include the following:

- Loss of existing building and site features unique to the alternate site (in this case, the existing Chandler Magnet School building). The district has advised that since there is no facility that can accommodate the full Chandler Magnet School population. Without a capital plan for replacement of the school, the option to develop the site for the replacement high school is not viable.

ABILITY TO MEET SITE ATHLETICS PROGRAM

While the proposed athletic fields would not fully meet the program, this option provides comparatively more athletic fields than the other options. The site plan for this option includes a football/soccer/field hockey field, a softball field and a practice field.

CENTRAL TO DISTRICT/QUADRANT:

The Chandler Magnet School site is geographically central to the quadrant.

SITE DEVELOPMENT COSTS:

The Soils test from the original construction, and record information indicate heavy glacial till, and assumed ledge or boulders. Fields and building would have average development issues and related costs with some retaining walls and slope mitigation anticipated.

TRAFFIC IMPACTS & ACCESS:

This option would include several curb cuts along Chandler Street and May Street, as well as a potential access to Moore Avenue. Initial studies of traffic data indicate that constructing the new Doherty Memorial High School on this site would result in significant vehicular and pedestrian congestion at the Chandler Street and May Street intersection. Refer to Section 3.3.3.D.1 for an updated traffic analysis. Should this option be selected, further studies would be required to determine mitigating measures required to address. The team has discussed with the district and budgets were suggested for potential measures that are to be considered with their overall reviews of the options.

BUS & PARENT VEHICULAR CIRCULATION & PARKING:

Bus and parent circulation are separated in this option and the desired number of surface parking spaces are provided. This site has the additional benefit of access to multiple streets, including May

Street, Moore Avenue and Chandler street, reducing on-site traffic conflicts. Refer to the Civil Basis of Design Narrative.

CONSTRUCTION SCHEDULE IMPACT:

One advantage of New Construction on an Alternative site is that it doesn't have the limitations, in terms of work area, as any option on the existing school site. The entire site is free for development. More workers can be productive because there is a greater area to work in. Consequently, the duration of the project can be less than a project which has numerous phases, relocations, and temporary support facilities. There will be more efficiency realized when compared against building on an active school site.

ADJACENT USES & NEIGHBORHOOD IMPACT:

The Chandler Magnet School was originally designed as a middle school 1953. The Worcester State University (WSU) campus is located across Chandler Street, and the areas to the north and east of the site are dense residential neighborhoods. The adjacency to WSU presents opportunities for mutually beneficial educational programs. Landscape or grading buffers could be established to minimize the impact to the neighboring parcels. The hours of operation and enrollment for the Doherty Memorial High School would also increase significantly from that of the existing elementary school, the impact of which would need to be evaluated further if selected as the preferred solution.

UTILITIES & DEVELOPMENT ISSUES:

Existing 10" sanitary pipes and 30"-42" storm drain mains traverse the site in multiple locations (refer to the site plan and the Civil Narrative.) These conduits would need to be re-laid around the building. Otherwise, utilities are available and development is comparable to the other sites.

ADDITIONAL CITY COSTS (NOT ELIGIBLE FOR MSBA REIMBURSEMENT):

If this option was selected as the preferred solution, it is anticipated the City would utilize the Eminent Domain process to acquire the added land indicated on the site plan. The cost of the added land is estimated at \$1,575,000.

There will also be some grant repayment costs associated with the MSBA Accelerated Repair window replacement work that was completed in 2013-2014 (\$2.8 M total grant).

At project completion, the existing Doherty school facility would be vacant, and the City would need to fund the required next steps to either renovate or demolish the existing Doherty High School building. The approximate budget for demolition of the existing building and associated site work is \$5 million.

Additional City costs would be required for relocation of the existing Chandler Magnet School students within the District if space became available. Without an existing facility for relocation, the District would face significant lease and/or construction costs; no factors for this work are included in the additional costs section. Improvements for traffic management and pedestrian crosswalks are included in the budget. Optional costs may include the purchase of the Abbott Street rear land adjacent to Foley Stadium to improve access and add parking and athletic facilities.

The total added city costs for this Option would range between \$9–12 Million. Refer to Section 3.3.3.D.3 Offsite improvements for more information.

NEW CONSTRUCTION SCOPE OF WORK:**Site:**

Provide full site accessibility to comply with 521 CMR including:

- Provide an accessible route, via new sidewalks ramps, and curb cuts, from Highland Street
- Refer to Civil and Traffic Basis of Design narratives in Section 3.3.3.D.1.

Building Exterior/Interior:

- Refer to the Architectural Basis of Design Narrative in Section 3.3.3.D.1.

Sustainability / Net Zero Energy Goal:

- Provide infrastructure required for sustainable building project, and net zero energy goals
- The City / School Facilities departments have developed a list of preferred systems and equipment choices that are maintainable, durable and efficient, and updates their list with newer equipment as systems come on the market.
- A design charrette will be scheduled early in the design process to solicit input and priorities in an effort to determine the best strategies for this project. The Sustainable Design consultant and MEP consultants will attend and present new energy saving strategies for consideration.
- One approach used in the past that would be continued on this project are to maximize the R value of the building envelope, including components such as windows and doors.
- Refer to the MEP narratives for additional information.

Fixtures, Furnishings & Equipment (FF&E)/Technology:

- Provide new FF&E throughout including furnishings, equipment, maintenance items, etc.
- Provide new Technology throughout including student/teacher computers, mobile device charging carts, interactive projectors, servers, etc.

Hazardous Materials:

- Abate entire existing building prior to demolition
- Provide radon mitigation system at Lower Level slab-on-grade areas

Structural:

- Refer to the Structural Basis of Design narrative in Section 3.3.3.D.1.

Fire Protection:

- Refer to the Fire Protection Basis of Design narrative in Section 3.3.3.D.1.

Plumbing:

- Refer to the HVAC/Plumbing Basis of Design narrative in Section 3.3.3.D.1.

HVAC:

- Refer to the HVAC/Plumbing Basis of Design narrative in Section 3.3.3.D.1.

Electrical:

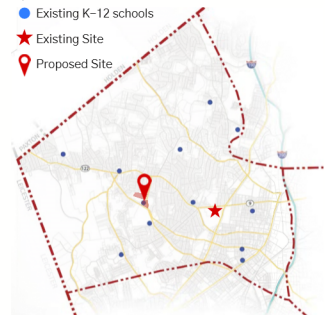
- Refer to the Electrical Basis of Design narrative in Section 3.3.3.D.1.

Food Services:

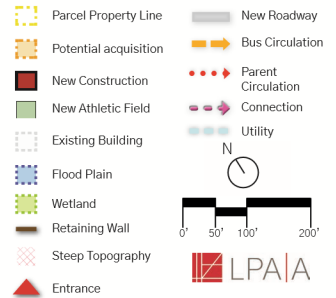
- Refer to the Food Service Basis of Design narrative in Section 3.3.3.D.1.

- NOTES:**
- Tiered site with steep topography
 - Limiting parcel shape
 - Multiple access points
 - Existing Chandler Magnet school; 1950's school building
 - WSU Adjacency

QUADRANT KEY PLAN:



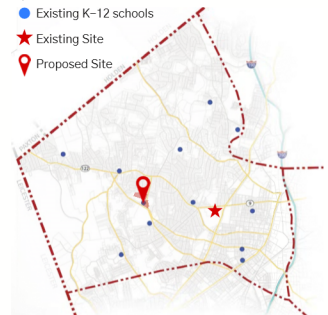
LEGEND:



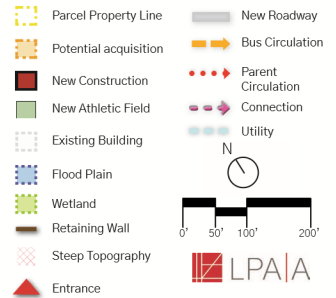
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 WITH ADDED LAND
 b. Site Plan

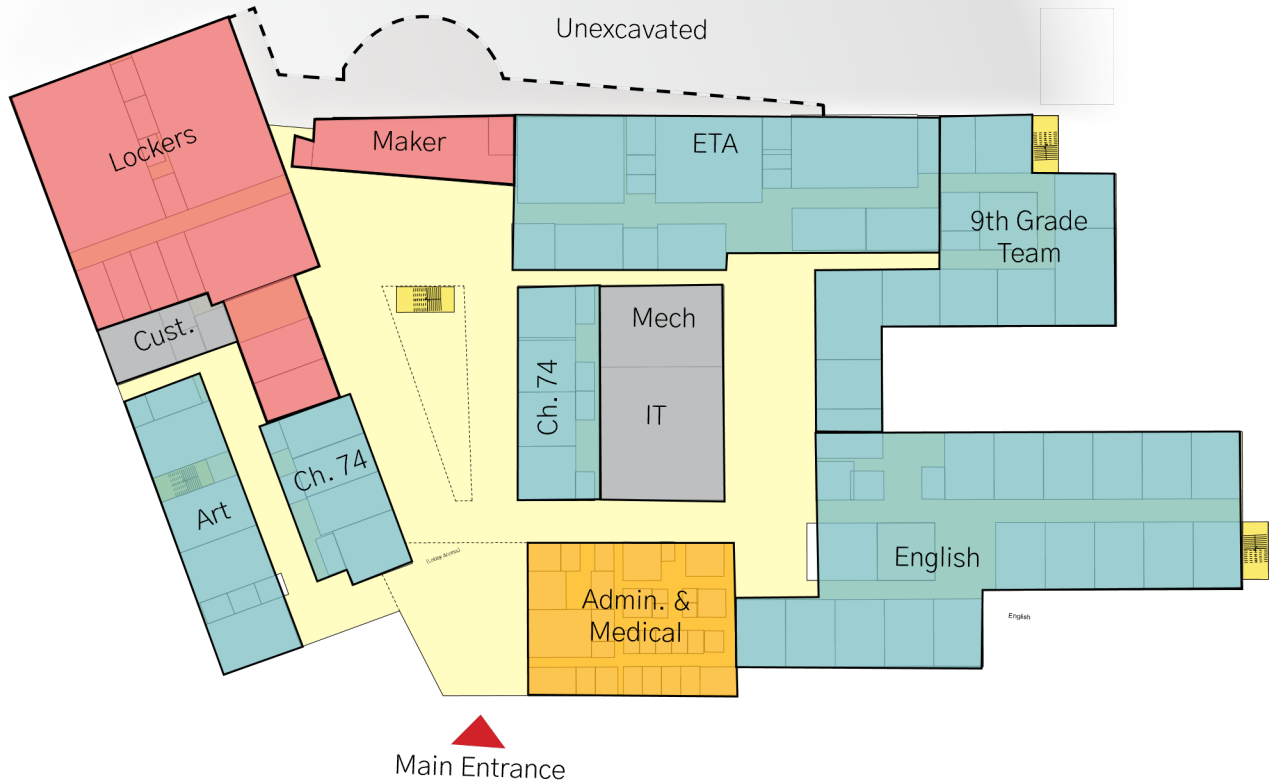
- NOTES:**
- Land acquisition from Worcester State University LLC and abutters
 - Chandler Magnet School closed; programs relocated
 - Least impacts to Doherty Students
 - Traffic & neighborhood impacts

QUADRANT KEY PLAN:



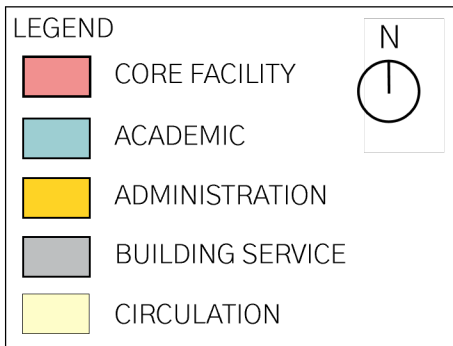
LEGEND:





FIRST FLOOR

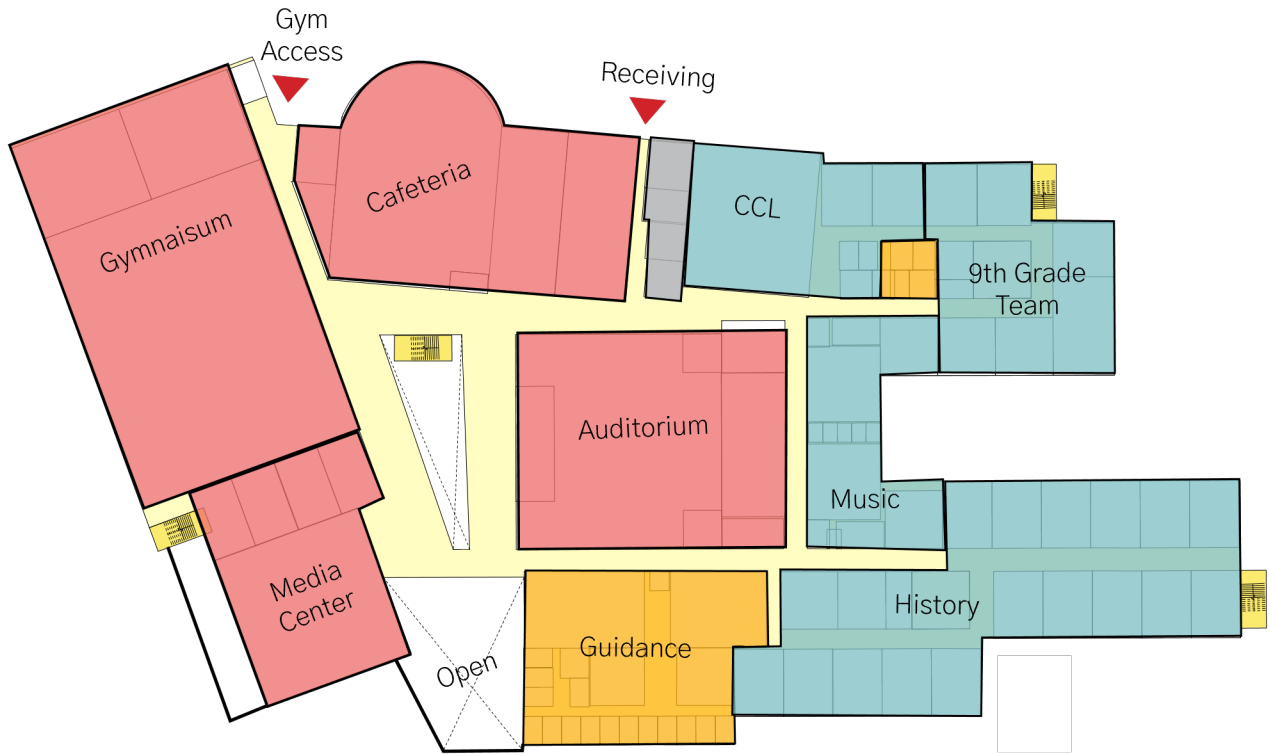
1"=100'



Doherty Memorial High School

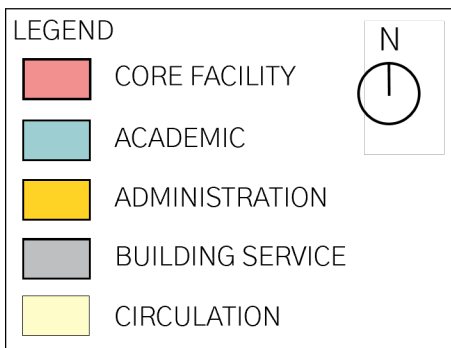
299 Highland Street, Worcester MA





SECOND FLOOR

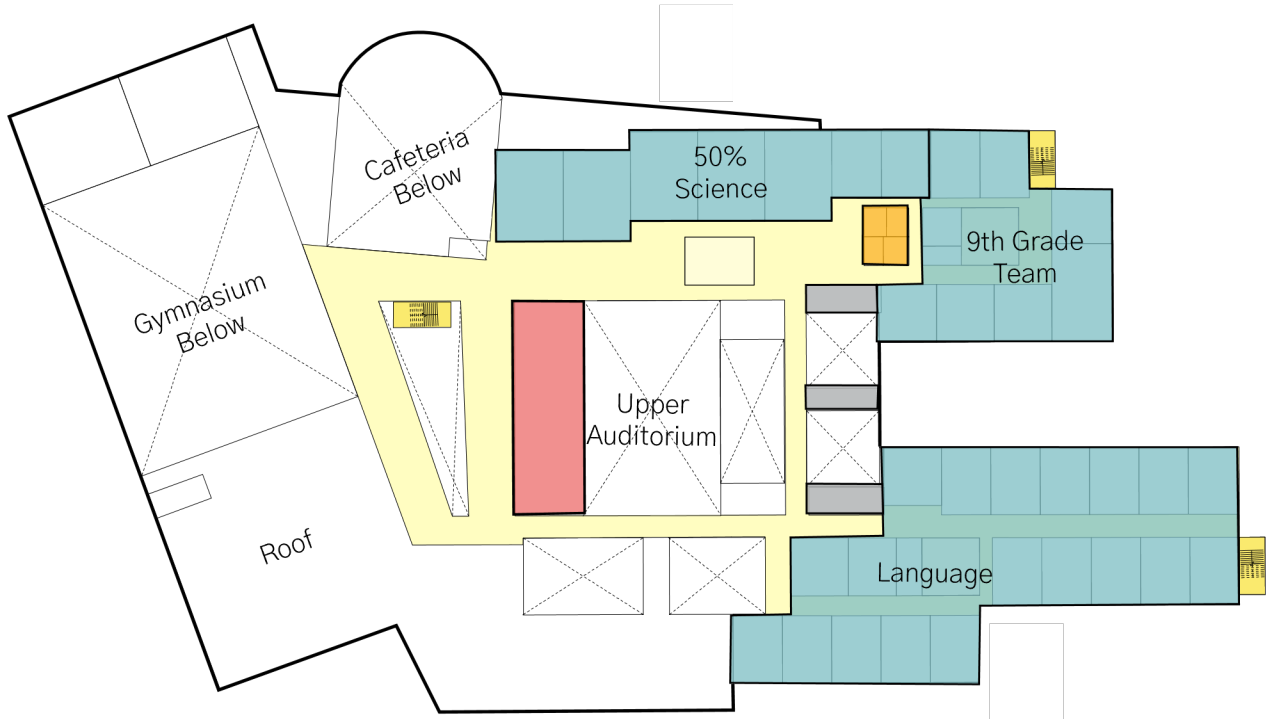
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Doherty Memorial High School

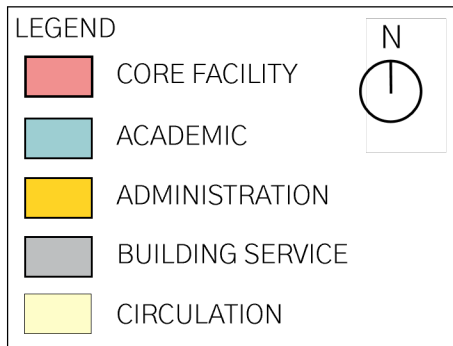
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THIRD FLOOR

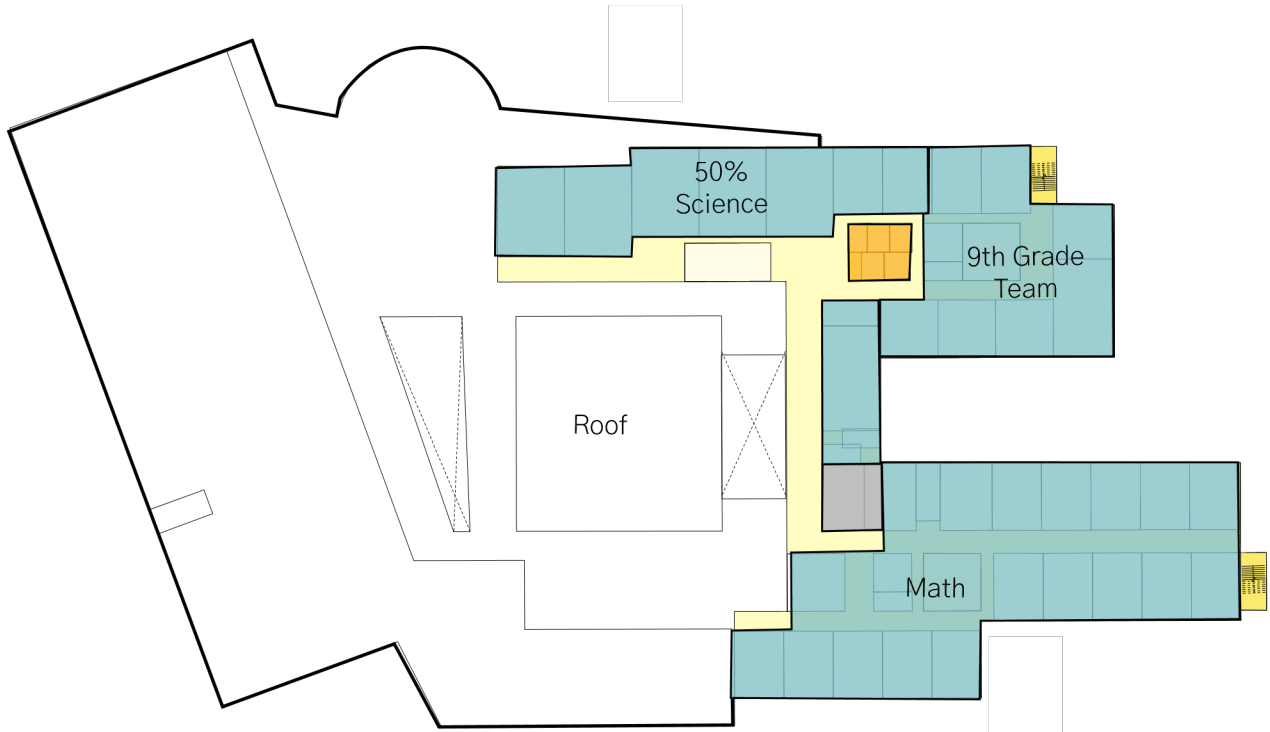
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Doherty Memorial High School

299 Highland Street, Worcester MA











FOURTH FLOOR

1"=100'

LEGEND

	CORE FACILITY
	ACADEMIC
	ADMINISTRATION
	BUILDING SERVICE
	CIRCULATION

N



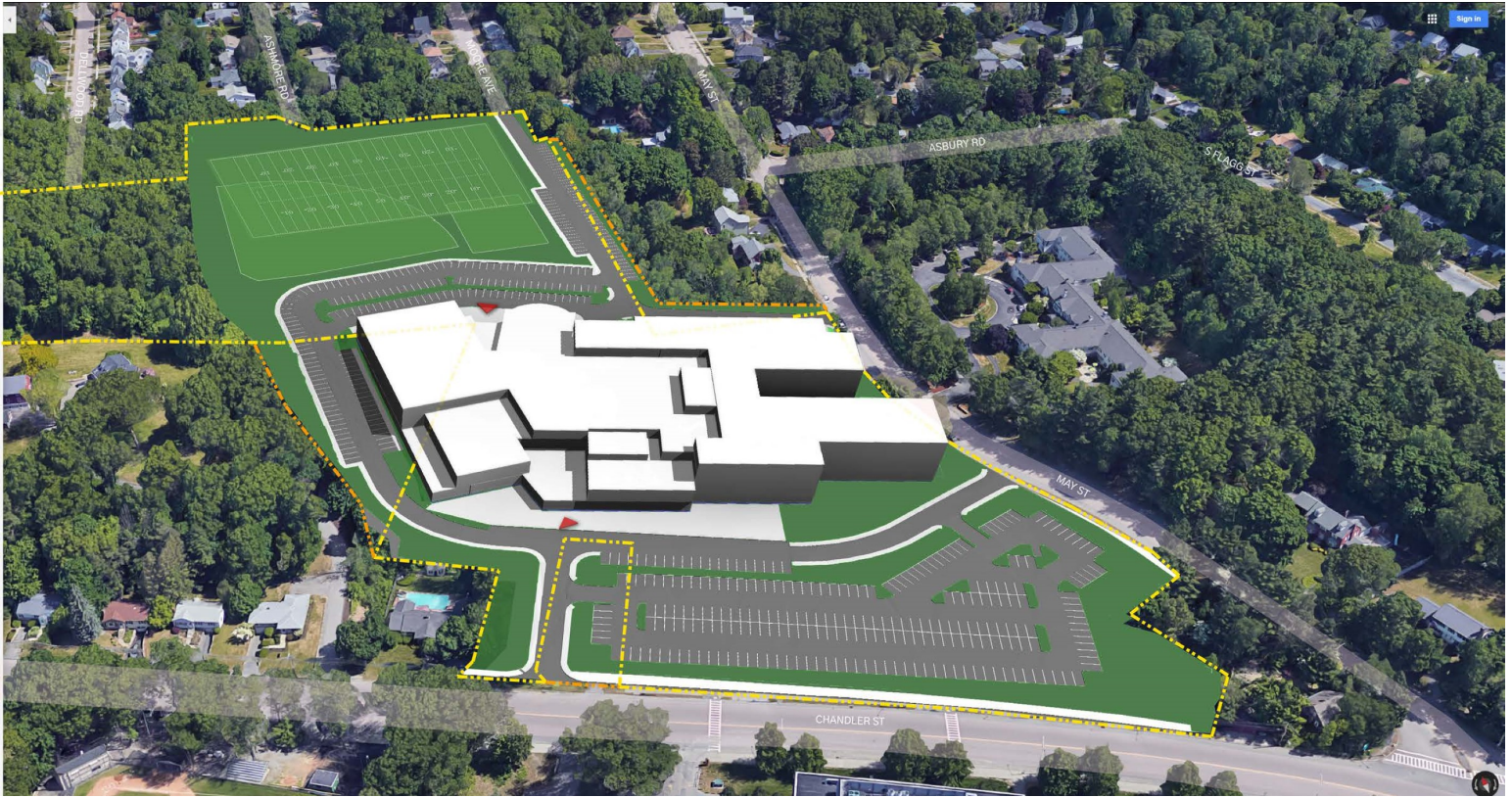
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FEASIBILITY STUDY

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