

# APPENDIX 8

## 6.5 Code Assessment of Options

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To: SGA – Florence Roche Elementary Team

Date: December 13, 2019

cc:

From: Bob Carasitti

BFA No.: SGA 19-003

Subject: Florence Roche Elementary – 342 Main Street, Groton – Evaluation of Alternatives Code Considerations

Based on documents provided, three alternatives are proposed:

- Option 2 – Renovation and Addition to the existing building.
- Option 3 – Construction of a New Building behind existing Florence Roche building (Site A).
- Option 4 – Construction of a New Building behind existing MS South (Site B).

## EVALUATION OF OPTION 2

The existing modular elements will be demolished, the remainder of the original building will be reused and renovated in phases, and at least one addition (3 story) will be constructed. A second addition is also possible but currently shown as a detached structure.



Assumed Approximate Area: 62,500 SF (renovation, no modulars)  
61,000 SF (new addition)  
123,500 SF (total)

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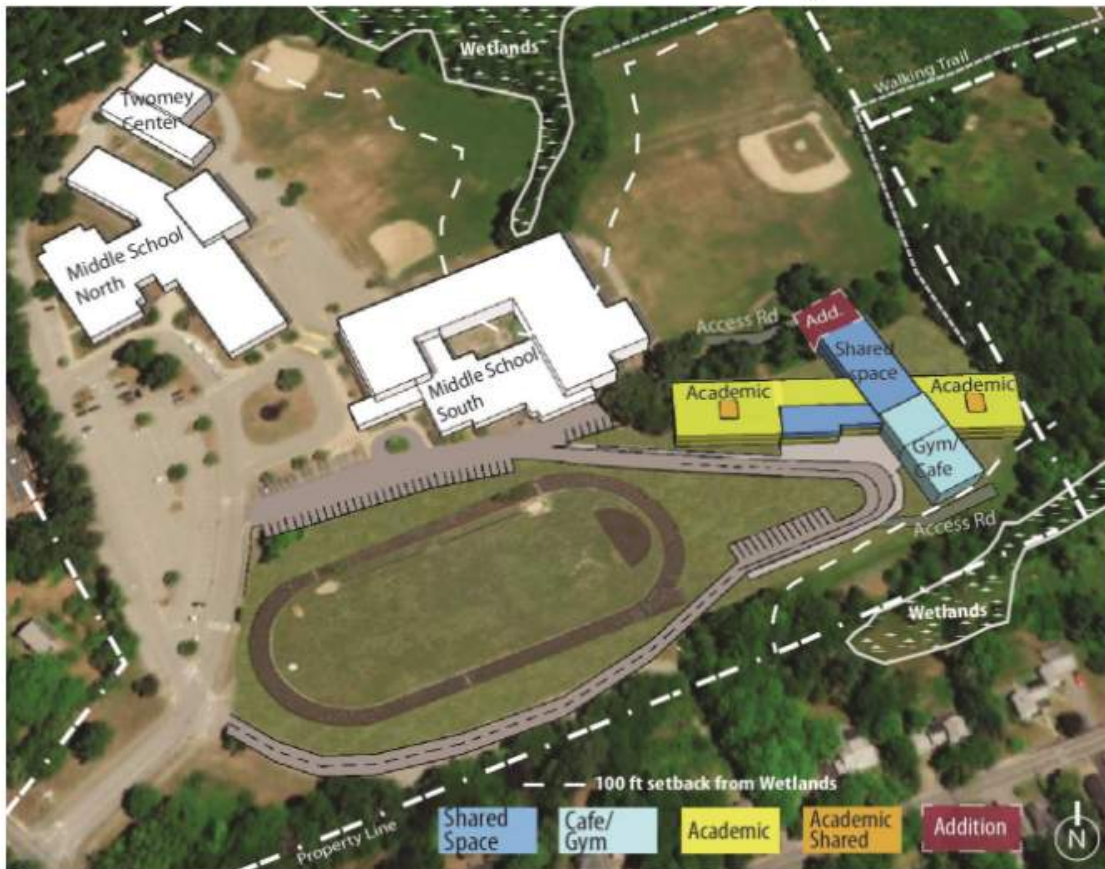
**Building, Fire & Access, Inc.**

**EVALUATION OF OPTIONS 3 & 4 - NEW BUILDING**

The new building (s) must meet all requirements for new construction from 780 CMR and 521 CMR.

# Option 3 (Site A)

## New Construction – Behind Existing FloRo



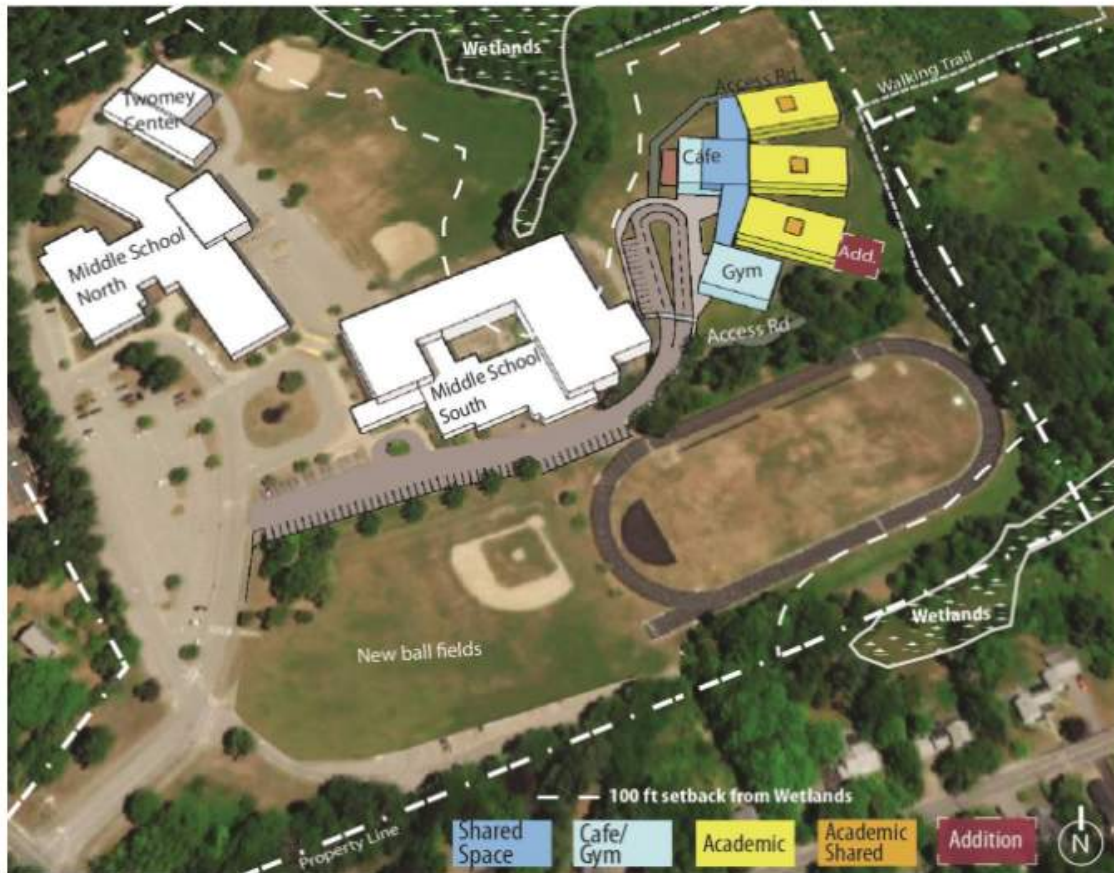
Assumed Approximate Area: 98,200 SF

The sites are sufficiently separate from the existing buildings to remain, that the exterior wall issues and opening limitations are far less problematic. Option 3 will have some considerations due to relationship to property lines while Option 4 appears to have no concerns to any opening objectives.

Both designs can be built without expensive fire walls, as a single construction type will be achievable. Ultimately the construction classification will depend on the height and areas.

# Option 4 (Site B)

## New Construction – Behind Existing MS South



Assumed Approximate Area: 98,200 SF

For buildings 3 stories or less and less than 45,000 gsf in footprint area (up to 135,000 gsf in aggregate over the 3 floors), Type IIB is possible without fire walls.

For buildings greater than 45,000 gsf in footprint area, a 2 hour fire wall will be required to achieve IIB Construction. Otherwise, Type IIA Construction (1 hour noncombustible) will be required.

For Option 4, a fire wall between the gym and the remainder of the building may have additional security value.

The greatest challenge to either option 3 or 4 is fire department vehicle access. All first-floor exterior walls are required to be within 250 feet of an access road and dead end roads cannot exceed 150 feet. The Options address this consideration, but specific evaluation is only possible with scaled plans.

From the code compliance perspective, Options 3 & 4 present inherently less challenging code compliance efforts.