PLANNING SUBMISSION
WEST SIDE ELEMENTARY SCHOOL
CITY OF GROTON

2019 08 08

Revised 2019 08 15

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WEST SIDE ELEMENTARY SCHOOL
CITY OF GROTON

2019 08 08
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TABLE OF CONTENTS

(Items in **bold** have been updated/added since the 2019 08 08 original submission)

LIST OF DRAWINGS

L-505 SITE DETAILS
A-100 OVERALL FLOOR PLAN
A-101 LEVEL 1 FLOOR PLAN
A-102a LEVEL 2 PARTIAL FLOOR PLAN
A-102b LEVEL 2 PARTIAL FLOOR PLAN
A-102c LEVEL 2 PARTIAL FLOOR PLAN
A-103 LEVEL 3 FLOOR PLAN
A-110 OVERALL ROOF PLAN
A-201 EXTERIOR ELEVATIONS
A-202 EXTERIOR ELEVATIONS
A-203 EXTERIOR ELEVATIONS
A-204 EXTERIOR ELEVATIONS
A-901 EXTERIOR AERIAL VIEWS
ES-100 ELECTRICAL SITE PLAN
ES-101 ELECTRICAL PHOTOMETRICS, PART A
ES-102 ELECTRICAL PHOTOMETRICS, PART B

PERKINS EASTMAN

8/6/2019
Revised 8/15/2019

Dennis Goderre
City of Groton
295 Meriden St., Groton, CT

Re:
West Side Elementary School
74451.00
Subject: Site Plan and Special Permit Application

Dear *Dennis*:

As you are aware, the community and State of Connecticut have approved the construction of a new Elementary School on the site of the existing West Side Middle School. This new elementary school will be built in part while the existing Middle School is still in session, and therefore is sited on the portion of the parcel not currently occupied by the existing Middle School.

We believe that the proposed purpose of the application, to build a modern Elementary School in place of the existing middle school, which has been located on this parcel since 1956, is consistent with the spirit of the Zoning Regulations. Located in the R5.2 Zone, the parcel is permitted to house a Public School subject to Special Permit Approval and Site Plan Approval, as provided by 3.2.D.

The proposed project seeks to improve site drainage and storm water treatment, and will provide a very similar use to what currently exists on this parcel. The number of students being served by the proposed existing West Side Middle School will be comparable to the capacity of the proposed Elementary school, which will replace the Middle School entirely. Since design standards, code and other regulations are much stricter than when the Middle School was built, we can safely affirm that the proposed school will be a better neighbor than the existing school, with new landscaping, full cut-off exterior lighting, strictly controlled acoustics, well-considered drop-off and pickup for buses and cars, recreational fields for the community, and a handsome building. It is worth noting that the extent of the building visible from the street will appear smaller than the current building, owing to a more compact footprint and using the steep slope to hide the building, and will in fact be somewhat smaller in square footage as well.

The proposed school is consistent with the recommendations of the current Plan of Conservation and Development, which notes that the school system, maintained by the Town of Groton, has closed some schools and consolidated others in order to address declining enrollment, and which also notes that the school facilities play in important role in providing City residents recreational facilities.

This project has been brought before the City Inland Wetlands Conservation Commission, and was approved on 8/6/2019. It has also received a variance for

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Boston
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building height from the Zoning Board of appeals on 7/23/2019 – please see application in this transmittal. Engineering reports have been provided to the City agencies, and can be provided to this Commission upon request.

You will note that we are including some information provided by O&G, the construction managers for this project, related to phasing plans, sequence of construction, and cut/fill calculations.

Thank you for your comments of 8/9/2019. We have attached our responses to these items, and many of the drawings and documents we are resubmitting today on 8/16/2019 reflect your comments. We are still working on a few items, though, and will forward them to your attention when complete.

Please contact us if you have any questions, and we look forward to your commissions' review and comments.

Sincerely,
Joe Banks, AIA, LEED AP, Senior Associate

PERKINS EASTMAN

MEMO

Perkins Eastman
Architects DPC

Date	8/15/2019	
Project Name	West Side Elementary School	
Project Number	74451.00	
Subject	Planning Narrative, Application SP 475/SPM 464	
From	Joe Banks	j.banks@perkinseastman.com
	T: 203-251-7423	F: Fax Number
To	Dennis Goderre	
	City of Groton	
	T: 860-446-4169	F: Fax Number
	goderred@cityofgroton-ct.gov	VIA: VIA

Mr Goderre,

Per section Form A and 9.4D of the Zoning Regulations, we are providing a structured narrative to help guide the review of this proposed project. While other portion of the documents submitted address these issues, we are consolidating and summarizing them here.

Describe the nature of use(s) and associated activities. Be as detailed as possible.

RESPONSE: As you are aware, the community and State of Connecticut have approved the construction of a new Elementary School for 604 Students on the site of the existing West Side Middle School. This new elementary school will be built in part while the existing Middle School is still in session, and therefore is sited on the portion of the parcel not currently occupied by the existing Middle School.

We believe that the proposed purpose of the application, to build a modern Elementary School in place of the existing middle school, which has been located on this parcel since 1956, is consistent with the spirit of the Zoning Regulations. Located in the R5.2 Zone, the parcel is permitted to house a Public School subject to Special Permit Approval and Site Plan Approval, as provided by 3.2.D.

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Describe all natural resources including but not limited to inland wetlands, flood areas and coastal resources as defined in C.G.S. Section 22a-93

RESPONSE: The School site contains wetlands, and an upland review area, as shown on the submitted site plan documents, and as described in the Inland Wetlands submission and Engineering report.

Methods, timing, schedule, sequence of construction and staging

RESPONSE: The project is intended to be constructed in phases, beginning while the current Middle School is still in operation for several months. At the end of the school year, the construction team will demolish the existing Middle School and continue to finish the Elementary School, parking and access areas, and other site elements. Please see submitted phasing and construction plans.

SF of existing and proposed buildings; Number of stories of buildings/additions

REPSONSE: Existing single story building is approximately 97,000 SF, while the proposed building is under 80,000 SF. The new building is 3 stories high, but recessed into the grade, so it will appear much shorter from most viewing points. Please see submitted ZBA variance.

Number of employees

RESPONSE: Approximately 85 employees.

Description of utilities

RESPONSE: Electrical, teldata, domestic water, storm, sewer and gas utilities are all currently available at the existing site, and will be reconfigured for the new building.

Number of parcels upon which improvements are proposed

RESPONSE: Only the single parcel is being improved.

Quantity of parking required and proposed and itemized by principal use

RESPONSE: 147 parking spaces are being provided, for use of staff, student's families, and visitors to the school. No guidance is available in the current City regulations regarding the appropriate number of spaces, so the Town of Groton BOE have provided a rationale for the number of spaces provided. Specifically, the number of spaces has been deemed adequate based on the maximum anticipated occupancy of the largest assembly space, assuming one vehicle for every 5 occupants Please see attached Responses to comments, Parking Memo, and Traffic reports for more details.

Hours of operation

RESPONSE: Normal hours are considered to be 8:55 am to 3:30 pm, 10 months of the year. Staff and community may use the facility and grounds outside of those core school hours.

Number of residential units

RESPONSE: No residential units

In considering an application for a Special Permit, the Commission shall evaluate the application with respect to the following factors, except that the Commission may determine that some factors may not be applicable to certain types of applications:

Zoning Purposes *Whether the proposed use or activity is consistent with the purposes of the Regulations.*

RESPONSE: The proposed use is consistent with the purposes in the Zoning Regulations as a use allowed by Special Permit and Site plan review (3.2.D.)

Environmental Protection and Conservation *Whether appropriate consideration has been given to the protection, preservation, and/or enhancement of natural, scenic, historic, or unique resources including, where appropriate, the use of conservation restrictions to protect and permanently preserve natural, scenic, historic, or unique features which enhance the character and environment of the area.*

RESPONSE: The proposed project seeks to improve site drainage and storm water treatment, and will provide a very similar use to what currently exists on this parcel. The number of students being served by the proposed existing West Side Middle School will be comparable to the capacity of the proposed Elementary school, which will replace the Middle School entirely. The existing wetlands and natural areas will be preserved, and the plan has been approved by the Inland Wetlands Commission.

Overall Neighborhood Compatibility *Whether the proposed use will have a detrimental effect on neighboring properties or the development of the district.*

RESPONSE: The number of students being served by the proposed existing West Side Middle School will be comparable to the capacity of the proposed Elementary school, which will replace the Middle School entirely. Since design standards, code and other regulations are much stricter than when the Middle School was built, we can safely affirm that the proposed school will be a better neighbor than the existing school, with new landscaping, full cut-off exterior lighting, strictly controlled acoustics, well-considered drop-off and pickup for buses and cars, recreational fields for the community, and a handsome building. It is worth noting that the extent of the building visible from the street will appear smaller than the current building, owing to a more compact footprint and using the steep slope to hide the building, and will in fact be somewhat smaller in square footage as well.

Suitable Location For Use *Whether the nature and intensity of the operations involved with the use or resulting from the proposed use and the location of the site are such that the use will be in harmony with the appropriate and orderly development in the district in which it is located.*

RESPONSE: The proposed use is consistent with its current use, in both nature and intensity.

5. ***Appropriate Improvements*** *Whether design elements of the proposed development (such as location, type, size and height of buildings and other structures, parking, access, landscaping, screening, lighting, signage, etc.) will be suitable in relation to the site characteristics, the style of other buildings in the immediate area, and the existing and desirable future character of the neighborhood in which the use is located.*

RESPONSE: The proposed new Elementary School is sited on the current parking area of the existing Middle School, since the Middle School will have to remain in use while the Elementary School is being constructed. Given that restriction, the height and configuration of the building has been designed to minimize the scale of the visible portions of the building, to keep parking, vehicular and pedestrian traffic off the adjacent streets, and to provide community use of interior and exterior spaces. As mentioned earlier, site lighting and landscaping are designed to give pleasant screening and illumination to the building and site as needed, but not to interfere with adjacent properties in any way.

Suitable Transportation Conditions *Whether the streets and other rights-of-way are or will be of such size, condition and capacity (width, grade, alignment and visibility) to adequately accommodate the traffic to be generated by the particular proposed use and not create traffic problems.*

RESPONSE: Per the attached traffic study, the streets in the area around the proposed Elementary School can accommodate the anticipated traffic, without any decrease in the level of service. At the request of the City Planner, traffic counts will be measured again in the Fall of 2019, and any changes in the assumptions and analyses of the traffic report will be duly shared with him.

Adequate Public Utilities and Services *Whether the provisions for water supply, sewage disposal, storm water drainage, and emergency access conform to accepted engineering practices, comply with all standards of the appropriate regulatory authorities, and will not unduly burden the capacity of such facilities.*

RESPONSE: Please see Engineering report, shared separately with the City Planner, and attached water letter. We confirm that water supply, sewage and storm water drainage, and emergency access are adequate, and have been discussed with City authorities during the design process.

Long Term Viability *Whether adequate provision has been made for the sustained maintenance of the proposed development (structures, streets, and other improvements).*

RESPONSE: The Town of Groton BOE will maintain the proposed facility, as they do for the current school

Nuisance Avoidance *Whether the use, configuration, design and/or hours of operation are appropriate in order to control noise, light, odors, parking visibility, unsightly appearance, erosion, water contamination and storm-water runoff on the site and in relation to the surrounding area.*

RESPONSE: This building and the site improvements as designed conform to State and local zoning, building and fire codes, as well as best-practice design to be the best neighbor possible. We believe the neighbors and community will notice improvements in the parking, vehicular circulation, site drainage, acoustics, and water quality as a result of this project, and will enjoy access to a beautiful 21st Century school.

Plan of Conservation and Development *Whether the proposed use or activity is in accordance with or facilitates achievement of one or more of the goals, objectives,*

policies, and recommendations of the Plan of Conservation and Development, as amended.

RESPONSE: The proposed school is consistent with the recommendations of the current Plan of Conservation and Development, which notes that the school system, maintained by the Town of Groton, has closed some schools and consolidated others in order to address declining enrollment, and which also notes that the school facilities play in important role in providing City residents recreational facilities.

Mitigation *Whether adequate provisions have been made to moderate or mitigate neighborhood impacts by limiting the intensity of use of the property (including, without limitation, such considerations as the area devoted to the use, the number of people involved in the use, the number of events or activities proposed, the hours of operation, etc.) or by modifying the location or configuration of the proposed use.*

RESPONSE: This project seeks to minimize negative impacts of pollution, erosion, noise and disruption to its neighbors, but also seeks to provide amenities for the neighborhood and community. Beyond providing a modern educational facility and helping to restructure the school system to provide economical maintenance of these facilities, the project will provide high-quality recreational fields, indoor meeting and sports facilities for the City's residents. Vehicular access to the site has been carefully planned to minimize impacts on the neighborhood.

This project has been brought before the City Inland Wetlands Conservation Commission, and was approved on 8/6/2019. It has also received a variance for building height from the Zoning Board of appeals on 7/23/2019 – please see application in this transmittal.

Please contact us if you have any questions, and we look forward to your commissions' review and comments.

Sincerely,
Joe Banks, AIA, LEED AP, Senior Associate

cc: Rick Norris, Arcadis, Milone and McBroom, Richter and Cegan, DTC

PERKINS EASTMAN

MEMO

Perkins Eastman
Architects DPC

Date	8/14/2019	
Project Name	West Side Elementary School	
Project Number	74451.00	
Subject	Responses to Planning Comments, Application SP 475/SPM 464	
From	Joe Banks	j.banks@perkinseastman.com
	T: 203-251-7423	F: Fax Number
To	Dennis Goderre	
	City of Groton	
	T: 860-446-4169	F: Fax Number
	goderred@cityofgroton-ct.gov	VIA: VIA

Mr Goderre,

Please see below our responses to your initial comments. While most of them are addressed either by response or the resubmitted documents you receive today, a few are still in progress, as noted below..

Application Material

1. All future plans at each submission shall be signed and sealed by the respective professional responsible for their preparation.

   RESPONSE: All resubmitted plans are properly signed and sealed.

2. Provide a detailed Special Permit Narrative that corresponds to each item in Section 9.4.D. This is the foundation of the Commission's decision on a Special Permit. This may be revised later based upon comments and subsequent revisions.

   RESPONSE: We have provided the Special Permit Narrative structured per 9.4.D as discussed.

3. Provide a detail project narrative. While there are components of the narrative scattered within the application material, it is imperative a single narrative is

provided. It is the narrative that outlines the framework of the permit that would be issued if the application is approved. Page 1 of Form A outlines some of the items that may be relevant. As noted on the Form A, the list is the de minimis requested. The more detail the better as it will reduce potential issues post permitting and at time of CO/Site compliance request.

RESPONSE: We have consolidated the narrative information of the submission in detail.

Construction and Earthwork

4. Earthwork calculations appear to be from prior to the change in grading to respond to the unsuitable material. Does the discovery of unsuitable material change these calculations?

   RESPONSE: We have provided a revised Cut/Fill analysis.

5. It is understood the applicant is working to solidify temporary parking during construction with Pfizer or Washington Park being two options. It is ideal to have this resolved while the hearing is open. Will contractors also be parking in the temporary lot?

   RESPONSE: The Town and District are working to provide off-site school staff parking for those spaces being displaced by the construction, during the timeframe from the start of construction to the end of the school year. Contractors and site workers will not be parking off-site. The Contractor will reserve space for parking on-site within the construction area depicted on the phasing plans during the construction. A more formal plan will be provided once an agreement is made between The Town and Pfizer.

6. Applicant is encouraged to gather an understanding of Electric Boats construction schedule, construction traffic routes and deliveries. Construction of both projects will overlap with the potential for serious conflicts of deliveries and traffic volumes, particularly concrete deliveries and oversize loads. Provide a sense of how West Side's CM will coordinate. The City will gladly facilitate a meeting between parties if necessary.

   RESPONSE: The Construction manager would appreciate a meeting with the EB project to coordinate schedules.

7. The timeline in the narrative does not match the timelines provided in the graphics. Which is correct?

   RESPONSE: Revised Construction Sequence Narrative has been provided.

8. There is no narrative for Phase C but a graphic is provided.

   RESPONSE: Revised Construction Sequence Narrative will be provided.

9. Phase B of the narrative states that demolition of the existing school will occur during this phase. Yet there is no discussion in the detailed sequence of when it will occur.

   RESPONSE: Revised Construction Sequence Narrative has been provided.

10. Provide a grading plan for how the access road will be constructed. Include necessary ES and temporary drainage measures as required. This is on a steep slope. How long will it be in place?

    RESPONSE: Revised Construction Sequence Narrative has been provided to indicate proposed duration of access drive down to field.

11. What are the days and hours of construction?

    RESPONSE: 7 am -5:30 pm on weekdays, 8 am 5:30 pm on Saturdays, no exterior work on Sundays

12. Describe the delivery schedule? For instance, how many concrete trucks per day and for what duration, including months? Deliveries of structural fill?

    RESPONSE: Construction traffic, including deliveries, will be restricted while school is in session to avoid buses/parent drop-off and pickup times (typically this is a 1-hour to 1-1/2 hour duration during each morning and afternoon of the school day). For deliveries occurring outside of these time restrictions, we can anticipate 10-20 concrete trucks on a given day that has footing and foundation pours. Due to the extent of structural fill required for this site, there will be times when 20-30 trucks will be delivering structural fill over the course of the day, this will occur infrequently, but throughout the duration of construction due to the phasing of the sitework and areas that require structural fill.

13. Describe the demolition process for the existing school?

    RESPONSE: Building will be abated, then mechanically disassembled and removed from site. Some masonry/concrete may be crushed for suitable reuse on or off site.

14. Has an environmental study been completed for the school and is remediation required? If so, for what materials and how will it be completed?

    RESPONE: Phase I and II Environmental Site Assessments of the property have been conducted by a Licensed Environmental Professional. One area of concern (the former Underground Storage Tank area) warranted action, consisting of the removal and closure of the Underground Storage Tank. The tank was removed in July 2019, and confirmatory soil sampling will be completed in the near future to formally close the area. Further remediation of this area will be completed during the next phase of site work, if sampling indicates that it is required. No further investigation or other remediation is warranted at the site, based on the LEP's assessments.

Regarding building materials management during demolition, a Hazardous Building Materials Investigation was also conducted on the existing Middle School building. The findings will be incorporated into the demolition plan and construction bid documents to ensure that the building materials are removed, handled, and disposed of appropriately

Stormwater Management

15. The SWM is for Cutler Elementary school, not West Side. Provide the correct SWM report.

    RESPONSE: Correct report has been provided 2019 08 12.

Lighting

16. Proposed light fixtures are 25'. Plans must be revised to 18' maximum per section 7.6. This may impact site plans which require coordination with lighting fixture locations, such as utilizes, drainage and landscaping. Provide revised drawings for all impacted plans. Note all lighting requirements in this section 7.6.

    RESPONSE: Revised and coordinated site lighting documents have been provided.

Parking and Traffic

17. What is the parking ratio used to reach the Average and 85th percentile 'Anticipated Parking Demand'?

    RESPONSE: Per Number Students: avg 0.13 & 85th 0.20. Per Number Staff: avg 0.95 & 85th 1.64.

18. Provide the noted ITE generation rates, citing date of reference.

    RESPONSE: Source: Parking Generation Manual, 5th Ed. ITE Jan.2019

19. Elaborate on your 'knowledge of current mode choice'. What are they and how did you come to the conclusion? The mode choice was based on extrapolation of the ITE trip generation data.

    RESPONSE: In the morning, the difference between the inbound and outbound traffic is considered staff inbound traps and the remaining round trips a considered parent drop-off. A similar rational is used for dismissal. Of course, the ITE data reflects all school data and each school in unique. In this case we expect less than average pick-up/drop-off because of existing characteristics and its location. Today, as a middle school, the morning drop-off is around 55-60 cars during the peak hour and in the afternoon around 30-35 parent pick-ups. Consequently, the estimate of 170 morning drop-offs and 75 afternoon pick-ups, derived from the ITE data, we feel is conservative.

20. What are the overall assembly space occupancies and how will activities be scheduled? What is the largest one time assembly anticipated? What type of

assemblies may occur and at what time of day? Will parking be accommodated for these assemblies and would evening/daytime events (i.e. talent shows, performances, etc.) be the actual peak, not 'just before dismissal'?

RESPONSE: The largest assembly space is the gymnasium, which is not designed with fixed seating., with walking aisles and perimeter space (4-5' wide) is approximately 444 (if we lay chairs out in the court space = 3,108 sf, and apply an occupant space of 7 sf/occupant). The Parking Standards from the American Planning Association, for elementary school educational facilities, lists "1 space for every 5 seats in principal assembly room". This comes to 89 spaces for a gymnasium assembly (at 5:1, or 111 at more conservative 4:1).

21. The parking review notes 603 students. The TIS references 606. Please reconcile.

    RESPONSE: Per State grant, 604 students are planned for West Side. The parking letter and traffic analysis results and findings would be unchanged, based on this small discrepancy
    .

22. The Parking demand correspondence notes 147 parking spaces will be adequate. Only 122 spaces are provided on the site design. Please clarify.

    RESPONSE: Parent drop off spaces parallel to Brandegee Avenue are counted in the total. The parking provided is 122 spaces in the parking lots and 25 on the pick-up/drop-off lane, totaling 147 spaces.

23. A design for on street improvements to accommodate the turning lanes shall be provided. This includes all new striping and signage. Demonstrate all sight lines can be achieved, vertically and horizontally. If improvements on street are required as discussed in the TIS, show said improvements, including any necessary easements. This was discussed and emphasized during the pre-application discussions with staff.

    RESPONSE: A sightline plan and profile is being prepared and will be forwarded to the City shorty. The Signs and Pavement Marking Plan (C-103) has been revised to incorporate off site recommendations and is included in the resubmission package of 2019 08 15.

24. Traffic counts were collected during the winter months. As a coastal community, traffic counts from the more 'seasonal' time of year may be more appropriate. Thus, it is suggested counts be taken following the Labor Day holiday to confirm the appropriateness of February counts.

    RESPONSE: New traffic counts will be scheduled for the second week of September. The traffic schematics will be updated, and new capacity analyses will be conducted. We will report on those finding as soon as available.

25. Does the traffic report take into account the recently approved Electric Boat South Yard Assembly Building? Their OSTA permit was approved in July 2019.

RESPONSE: This was addressed in our report and reconfirmed through review of the OSTA permit that no EB South Yard Assembly Building traffic will travel past the school.

Landscape Materials/Layout Plan

26. The front parking area notes 100 parking spaces (5 HC Spaces). It is presumed the 100 is the total and includes the 5 HC spaces. However the actual total is 104 spaces.

    RESPONSE: Revised Plans have been provided.

27. There are no dimensions noting the width of any parking space. There are no dimensions on any of the HC Parking Spaces.

    RESPONSE: Revised Plans have been provided

28. Show turning movements of fire apparatus throughout rear drive and front drop off.

    RESPONSE: This will be provided, but have been reviewed with the Fire Department.

29. If parking along bus drop off is envisioned for off hour activities, fire access requires minimum 20' clear travel lane. Confirm parallel parking will not interfere with fire apparatus turning movements to enter and exit site.

    RESPONSE: No parking is anticipated at the bus drop off.

30. The lower parking spaces are dimensioned as 22' from curb to drive aisle but no depth dimension for the stalls themselves.

    RESPONSE: Revised Plans have provided

31. Plan references pavement marking on civil plans. No pavement markings are provided on any civil drawings. Provide a pavement marking and signage plan (on and off site).

    RESPONSE: A revised Sign and Pavement marking plan (C-103) is included.

SHPO Correspondence

32. Describe the significance of the archeological site noted in the SHPO email correspondence. Where is it located? Will it be impacted? The correspondence is open ended.

    RESPONSE: Archeologist has been retained, and a Phase 1A evaluation of the site is in progress. Final report will be provided to planning when available.

PERKINS EASTMAN

cc: Rick Norris, Arcadis, Milone and McBroom, Richter and Cegan, DTC

Attachments:None

Application No.: _____

City of Groton, CT
Department of Planning & Economic Development

Form 1 - Planning and Zoning Application

Submit all applications and fees in person at the
*Building and Zoning Department, 295 Meridian St, Groton, CT 06340 M-F between **8:00AM – 4:00PM**.*

For more information please visit us at the above address or call to schedule an appointment:
City Planner: 860-446-4169, Dennis Goderre, ASLA, AICP CUD

Important Considerations

Eight copes of applications requiring Planning and Zoning Commission or City Planner review shall be submitted three (3) weeks in advance of a regularly scheduled meeting date. See the Planning and Zoning webpage for schedules. PDF of all application material shall accompany the submission and all fees paid at time of application.

SEE APPENDIX A OF THE ZONING REGULATIONS FOR SITE PLAN FORMAT SUBMISSION REQUIREMENTS.

The application will be received[1] at the next regularly scheduled meeting that follows the date of submission. If a public hearing is not required and depending upon the nature of the application, the Commission may or may not review the application at the meeting the application is received. If a public hearing is required, the earliest the hearing will occur is the next regularly scheduled meeting after the date of receipt. See Section 9.0 Administrative Provision of the Zoning Regulations for specific procedural requirements.

NOTE: Prior to filing an application a Pre-application meeting is recommended as outlined in Section 9.1 of the Zoning Regulations.

Application Type

Select all application(s) required and attach the completed form(s) as referenced:

- ☐ Zoning Permit (Form A)
- ☑ Site Plan (Form A & Zoning Table)
- ☐ Site Plan: Major Mod. (Form A & Zoning Table)
- ☑ Special Permit (Form A)
- ☐ Coastal Area Management (Form A & B)
- ☐ Floodplain Development (Form A & C)
- ☐ Subdivision/Lot Line Revision (Form D)
- ☐ Lot Combination (Form D)
- ☐ Zoning Amendment (Map) (Form E)
- ☐ Zoning Amendment (Text) (Form E)
- ☐ Subdivision – Major Mod.

[1] CGS 8-7d (c) 'date of receipt' is "…the day of the next regularly scheduled meeting of such commission, board or agency, immediately following the day of submission to such commission, board or agency or its agent of such petition, application, request or appeal or thirty-five days after such submission, whichever is sooner."

Application No.: _____

Property Information

Property Address[2]:
250 Brandgee Avenue, Groton, CT

Property Size: 40 Acres 1,742,420 SF In flood zone: Yes[3] ☐ No ☒ In CAM Zone: Yes[4] ☐ No ☒

Zoning District(s): R 5.2

Parcel ID 168816840839 E Information can be obtained at http://maps.groton-ct.gov/apps/GrotonViewer/

If more than one property is part of the project, separate application forms and fees must be submitted for each property.

Property Owner Information

Name(s): Town of Groton

Street Address: 45 Fort Hill Road

City: Groton State: CT Zip Code: 06340

Phone: 860-446-5974 Mobile: _____ Email: rnorris@groton-ct.gov

Stormwater Management Design

Does the stormwater management plan meet the requirements of Section 7.7.C? Yes ☒ No ☐ (See note below)

If no, what section(s) of the regulations are you requesting relief by Special Permit? _____

Explain (below or attach separate sheets):

Note: A stormwater management report with supporting calculations must be provided and signed and sealed by the design engineer licensed in the State of Connecticut. If the plan conforms to Section 7.7, a separate letter from the engineer of record shall be provided specifically stating that plan conforms to the requirements of Section 7.7.C

[2] Address shall correspond to the address identified on the Assessors Property Information http://maps.groton-ct.gov/apps/GrotonViewer/
[3] If within a Flood Protection Overlay Zone Form C must accompany this application. See Section 5.3 FP Overlay Zone
[4] If in a CAM area Form B must accompany this application. See Section 5.2 CAM Zone

Application No.: _____

Applicant Information

Note: Designer/representative/architect/engineer is NOT the applicant (see Agent contact information below).

[X] Please check if Applicant is the same as Property Owner

Name: _____ Company: _____

Address: _____ City: _____ State: _____ Zip Code: _____

Phone: _____ Mobile: _____ Email: _____

Agent/Primary Point of Contact (may be designer/representative/architect/engineer)

Name: Joe Banks Company: Perkins Eastman Architects

Address: 677 Washington Blvd City: Stamford State: CT Zip Code: 06901

Phone: 203-251-7423 Mobile: 203-435-6513 Email: j.banks@perkinseastman.com

Signatures (all owners)

By signing below I acknowledge the following;

1. This entire application must be completed, signed, and submitted with the required fee(s) and map(s) prepared in accordance with the applicable regulations or the application may be deemed incomplete or denied;
2. This application constitutes the property owner's permission for the commission or its staff to enter the property for the purpose of inspection;
3. The applicant agrees to pay all additional fees and/or address such costs deemed necessary by the Department of Planning and Economic Development as described in the City Fee Ordinance #169; and
4. That the information provided herein and any supplemental information that may be provided in support of the application is accurate to the best of my knowledge and truthfully represents the information it is intended to support, including but not limited to, property descriptions, use descriptions, calculations, and methods and means of construction.

Applicant: _____ Date: 8/8/19

Printed Name: Rick J. Norris - Town of Groton

Agent: _____ Date: 8/8/2019

Printed Name: Joe Banks - Perkins Eastman Architects

Property Owner (1): _____ Date: 8/9/2019

Printed Name: Gary J. Schneider - Town of Groton

Property Owner (2): _____ Date: _____

Printed Name: _____

If held in a Trust, name of Trust: _____

Application No.: _____

City of Groton
Department of Planning & Economic Development

Form A: Zoning Permit, Site Plan and Special Permit

Refer to Section 9 Administrative Provisions of the Zoning Regulations for all application procedures in addition to those listed upon this form.

The Form A - Zoning Table must be attached to this form.

District

Zoning District(s): 1. R5.2 _____ 2. _____

Proposed Use

List the Principal Use(s) you are requesting permits for (See applicable district regulation):

1. Public Elementary School
2. _____
3. _____
4. _____

List the Accessory Use(s) you are requesting permits for (See applicable district regulation):

1. _____
2. _____
3. _____
4. _____

Project Narrative

On the following page describe the proposed project, being as detailed as possible. The Project narrative helps to establish the use(s) listed above for which the permit will be issued. At minimum, it shall include the following information:

a. Describe the nature of use(s) and associated activities. Be as detailed as possible.
b. Describe all natural resources including but not limited to inland wetlands, flood areas and coastal resources as defined in C.G.S. Section 22a-93
c. Methods, timing, schedule, sequence of construction and staging
d. SF of existing and proposed buildings; Number of stories of buildings/additions
e. Number of employees
f. Description of utilities
g. Number of parcels upon which improvements are proposed
h. Quantity of parking required and proposed and itemized by principal use
i. Hours of operation
j. Number of residential units
k. For mixed use, breakdown by SF of each use and number of residential units
l. *For Special Permits, provide a separate narrative explaining how the application addresses each Special Permit Criteria explained in Section 9.4.D. The narrative shall be organized by each of the eleven listed criteria.*

Application No.: _____

Project Narrative (see instructions on previous page)

See attached narrative and other documentation.

_____ (attach additional pages if required)

City of Groton, CT
Department of Planning & Economic Development

Form A - Zoning Table

NOTE: Attach this form to the end of Form A Application and provide upon submitted site plan.

Item		Required	Proposed
Lot Area		5,000/DU	40 acres
Lot Width		50 ft	915 feet.
Front Yard Setback (Min)		25 ft	25 feet
Front Yard Setback (Max)		N/A	25 feet
Side Yard Setback N/S		4 ft	4 feet
Side Yard Setback E/W		4 ft	4 feet
Rear Yard Setback		25 ft	over 100 feet
Building Coverage		25%	3%
Building Height		35 ft	52'-1" from adjacent grade -- see ZBA variance
Building Width		N/A	N/A
Total Impervious Coverage		N/A	235,591 sq ft
Existing Impervious Coverage		N/A	176,607 sq ft
Parking Provided (mixed uses complete below)		N/A	118
Use 1:			
Use 2:			
Use 3:			

City of Groton, CT
Department of Planning & Economic Development

Form A - Zoning Table

NOTE: Attach this form to the end of Form A Application and provide upon submitted site plan.

Item		Required	Proposed
Lot Area		5,000/DU	40 acres
Lot Width		50 ft	915 feet.
Front Yard Setback (Min)		25 ft	25 feet
Front Yard Setback (Max)		N/A	25 feet
Side Yard Setback N/S		4 ft	4 feet
Side Yard Setback E/W		4 ft	4 feet
Rear Yard Setback		25 ft	over 100 feet
Building Coverage		25%	3%
Building Height		35 ft	52'-1" from adjacent grade -- see ZBA variance
Building Width		N/A	N/A
Total Impervious Coverage		N/A	235,591 sq ft
Existing Impervious Coverage		N/A	176,607 sq ft
Parking Provided (mixed uses complete below)		N/A	118
Use 1:			
Use 2:			
Use 3:			

MILONE & MACBROOM

June 25, 2019

Mr. Joe Costa, Principal
Perkins Eastman
422 Summer Street
Stamford, CT 06901

RE: West Side Elementary School
Groton, Connecticut
MMI #1777-38-04

Dear Mr. Costa:

As requested, we have prepared this letter to quantify anticipated parking demands for the proposed West Side Elementary School. Our evaluation included review of data in our files, industry data from the Institute of Transportation Engineers (ITE), and our knowledge of current mode choice for students at West Side Middle School.

ITE provides parking generation rates for elementary schools based on both the number of students and the number of staff members. In Table 1, we summarize parking demand estimates from ITE for both average conditions and 85th percentile conditions.

TABLE 1

Variable	Anticipated Parking Demand
Students (603)	
Average	**79**
85th Percentile	**121**
Staff (85)	
Average	**81**
85th Percentile	**140**

As shown, ITE estimates that, on average, a school with the student/staff profile of West Side School would have a demand of around 80 parked vehicles. The more conservative 85th percentile data would suggest a demand of 120 to 140 parked vehicles. Note that the ITE data may not include parents that park and pick up in undesignated spaces.

Data in our files from other school projects we have worked on would suggest peak parking demand to occur just before dismissal and be a combination of staff demands and the demand of parents/guardians picking up students. For West Side Elementary School, this results in a demand of 167 spaces. Note however that the West Side Middle School had a particularly low parent/guardian parking rate for a middle school, and we would expect a similar lower rate for the elementary school. Consequently, the 167-space demand is likely on the conservatively high side.

Currently, the plan calls for 147 spaces including pickup/drop-off spaces. Based on the industry standard data and our anticipation that this school will be on the low end of the parent pickup/drop-off spectrum, we believe the 147 spaces will be adequate.

If you have any questions, please do not hesitate to call.

Very truly yours,

MILONE & MACBROOM, INC.

David G. Sullivan, PE, Associate
Manager of Traffic and Transportation Planning

1777-38-04-jn2419-ltr.docx

Traffic Impact Study

West Side Elementary School
Groton, Connecticut
August 6, 2019

Prepared for:
Mr. Joseph Costa, Principal
Perkins Eastman
422 Summer Street
Stamford, Connecticut 06901

MMI #1777-39-04

Prepared by:
MILONE & MACBROOM, INC.
99 Realty Drive
Cheshire, Connecticut 06410
(203) 271-1773
www.mminc.com

MILONE & MACBROOM
ENGINEERING | PLANNING | LANDSCAPE ARCHITECTURE | ENVIRONMENTAL SCIENCE

MILONE & MACBROOM

August 6, 2019

Mr. Joseph Costa, Principal
Perkins Eastman
422 Summer Street
Stamford, CT 06901

RE: Traffic Impact Study
Proposed West Side Elementary School
250 Brandegee Avenue
Groton, Connecticut
MMI #1777-39-04

Dear Mr. Costa:

At your request, Milone & MacBroom, Inc. (MMI) has prepared this study to evaluate the traffic-related implications associated with the redevelopment of the existing West Side Middle School site to be used as an elementary school. Figure 1 shows the proposed location of the West Side School at 250 Brandegee Avenue in Groton, Connecticut, as well as the surrounding area. Based on discussions with the Town of Groton, it is expected that 606 students will be enrolled at the new West Side Elementary School.

The work comprising the study consisted of several tasks including field reconnaissance efforts, data collection and review of current traffic volumes and roadway conditions, estimation of future traffic conditions associated with the expected enrollment, and assessment of traffic operations at the new school.

Existing Roadways and Site Environs

The proposed West Side Elementary School will be located on the same site as the existing West Side Middle School at 250 Brandegee Avenue in Groton, Connecticut. Brandegee Avenue, Hynes Avenue, and Morse Avenue in the vicinity of the site are all two-lane roads with one travel lane in each direction. The southerly West Side School driveway is entrance only and is directly across from Morse Avenue. The intersection of Brandegee Avenue, Morse Avenue, and the southerly West Side School driveway is controlled by a stop sign on Morse Avenue and the northbound approach on Brandegee Avenue. The northerly West Side School driveway is full access and is directly across from Hynes Avenue. The intersection of Brandegee Avenue, Hynes Avenue, and the northerly West Side School driveway is controlled by a stop sign on all four approaches. Land uses in the vicinity of the proposed school site are primarily residential.

Vehicular Crash History

Information on traffic accident statistics for Brandegee Avenue in the vicinity of West Side School was obtained from the University of Connecticut's (UConn) Connecticut Crash Data Repository for the 3-year period, December 3, 2015, to December 2, 2018. In this time period, three rear-end collisions occurred.

Two of them resulted in no apparent injuries, and one was recorded as a possible injury. No accident patterns or unusual trends appear to be present in the accident history at this location.

Existing Traffic Volumes

Manual observations at the study intersections were conducted on Wednesday, February 6, 2019, from 7:00 a.m. to 9:00 a.m. and from 2:00 p.m. to 4:00 p.m. to capture peak traffic associated with school activities. The following intersections were counted during these times:

- Brandegee Avenue at Hynes Avenue and the northerly West Side Middle School driveway
- Brandegee Avenue at Morse Avenue and the southerly West Side Middle School driveway

Based on the count data, the weekday morning peak hour occurred from 7:00 a.m. to 8:00 a.m., and the weekday afternoon peak hour occurred from 2:15 p.m. to 3:15 p.m. Figures 2 and 3 illustrate the existing traffic volumes for the weekday morning arrival and weekday afternoon dismissal peak hours, respectively.

Proposed Development and Access

The existing West Side Middle School building will be razed and replaced with a new school building to be known as West Side Elementary School. Access to the site will be available via three new driveways. The southernmost driveway will be full access, approximately 150 feet south of Morse Avenue, and it will be primarily used by buses, staff, and visitors as well as for access to the rear of the building. The middle driveway will be entrance only, directly across from Morse Avenue, and will be used for pickup/drop-off activity. The northerly site driveway will be full access approximately 300 feet north of Hynes Avenue. It will provide access to the service area and will also serve as the exit for the pickup/drop-off area. As part of this development, dedicated left-turn lanes will be striped along Brandegee Avenue for southbound left turns into the middle and southerly driveways.

Visibility was reviewed from the point of view of a motorist about to egress each driveway. Motorists exiting the driveways will have visibility in both directions that meets the Connecticut Department of Transportation (CTDOT) guidelines for speeds of 30 miles per hour on Brandegee Avenue. Based on field observations, the sight lines from each of the three proposed driveways are currently clear.

Anticipated School Traffic Volumes

Based on discussions with the Town of Groton, it is expected that 606 students will be enrolled at the new West Side Elementary School. Peak-hour vehicle trips that will be generated by the proposed elementary school were then estimated by applying the anticipated student enrollment to statistical data contained in the Institute of Transportation Engineers' (ITE) *Trip Generation* publication. Based on ITE data, it is estimated that the proposed elementary school will generate approximately 400 new total vehicle trips (215 enter and 185 exit) during the morning arrival peak hour and approximately 205 total vehicle trips (90 enter and 115 exit) during the afternoon dismissal peak hour. This is a mix of trips made by parents/guardians, staff, and buses. These estimates are summarized in Table 1. Based on our field observations of the existing West Side Middle School, it appears that most students take the bus or walk to school. We therefore feel that this trip generation estimate based on ITE data is conservative, particularly for pickup/drop-off traffic.

TABLE 1
Trip Generation Summary

Land Use	Size	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour of School		
		Enter	Exit	Total	Enter	Exit	Total
Elementary School	**606 Students**	**215**	**185**	**400**	**90**	**115**	**205**
Pickup/Drop-off trips		170	170	340	75	75	150
Bus trips*		15	15	30	15	15	30
Staff trips		30	0	30	0	25	25

*Based on discussions with the Town of Groton, there are expected to be 14 buses at West Side Elementary School. For simplicity, we have assumed 15 buses.

The distribution of the new vehicular site-generated traffic through the study area has been estimated based on existing travel patterns. In general, approximately 70 percent of traffic will be oriented to/from the north via Brandegee Avenue, 15 percent to/from the south via Brandegee Avenue, 10 percent to/from the west via Hynes Avenue, and 5 percent also to/from west via Morse Avenue. Figures 4 and 5 show the anticipated new site traffic volumes, broken down by pickup/drop-off, bus, and staff trips, applied to this distribution for the weekday morning and afternoon peak hours, respectively.

Future Roadway Traffic Volumes

In order to assess the impact of the new elementary school, roadway traffic within the study area was developed without and with the newly generated site traffic volumes. For the purposes of this study, a horizon year of 2021 was used to project future traffic volumes.

The background traffic scenario is reflective of future 2021 conditions before the new elementary school is completed and was estimated by removing the existing middle school traffic and then expanding the existing peak-hour roadway traffic volumes by 0.4 percent per year as recommended by CTDOT, which reflects slight growth in roadway traffic in the recent past and continuing into the near future. Our correspondence with CTDOT finds there are no new developments proposed in the area that are expected to generate a significant number of trips in the vicinity of the proposed West Side Elementary School. We were informed by the Town of Groton that there is a proposed expansion to the Electric Boat site, but we feel that this development would not generate significant traffic in the vicinity of the study area. The estimated background (no-build) peak-hour traffic volumes are shown in Figures 6 and 7. Figures 8 and 9 illustrate the future combined (build) peak-hour volumes, which are the combination of the background traffic and the future projected school trips.

Roadway Capacity Analysis

The future combined traffic scenario was evaluated by means of the *Synchro* software package, which uses the methodologies of the *Highway Capacity Manual*. Levels of service (LOS) were determined for the critical movements at each intersection, which are qualitative measures of efficiency of operations in terms of delay and inconvenience to motorists. The levels are expressed with letter designations of A through F. LOS A represents little or no vehicle delay. LOS F reflects an intersection or movement that is over capacity and where long delays can be expected. Table 2 summarizes the results of the capacity analysis.

TABLE 2
Capacity Analysis Summary – Future Combined Conditions

Intersection/Movement	Levels of Service	
	Weekday Morning Peak Hour	Weekday Afternoon Peak Hour
Brandegee Avenue at West Side Elementary School North Driveway (SSSC)		
Westbound Approach	C	B
Southbound Left	A	A
Brandegee Avenue at Hynes Ave (AWSC)		
Eastbound Approach	B	A
Northbound Approach	B	B
Southbound Approach	F	B
Brandegee Avenue at West Side Elementary School Middle Driveway and Morse Avenue (SSSC)		
Westbound Approach	D	B
Northbound Left	A	A
Southbound Left	A	A
Brandegee Avenue at West Side Elementary School South Driveway (SSSC)		
Westbound Approach	B	B
Southbound Left	A	A

SSSC – Side Street Stop Control
AWSC – All-Way-Stop Control

As can be seen, motorists making the critical movements at the site driveways will experience LOS D or better under future combined conditions. At the intersection of Brandegee Avenue at Hynes Avenue, under all-way-stop control, the southbound approach is expected to operate at LOS F during the weekday morning peak hour. Therefore, we tested the scenario to remove the stop bars on Brandegee Avenue to analyze this intersection with side street stop signs only. As shown in Table 3, under side street stop control, motorists making the critical movements at this intersection are expected to experience LOS C or better.

TABLE 3
Capacity Analysis Summary –
Brandegee Avenue at Hynes Avenue
with Side Street Stop Control instead of All-Way-Stop Control

Intersection/Movement	Levels of Service	
	Weekday Morning Peak Hour	Weekday Afternoon Peak Hour
Brandegee Avenue at Hynes Avenue (SSSC)		
Eastbound Approach	C	B
Northbound Left	A	A

Summary and Recommendations

This study was conducted to assess the transportation implications of the proposed West Side Elementary School. To determine a profile of existing conditions, detailed field reconnaissance and data assembly efforts were undertaken. New traffic generated by the expected enrollment was estimated, and roadway capacity analyses were performed for future conditions at and near the proposed school. Analysis of the addition of new traffic associated with the new elementary school finds that motorists at the site driveways are expected to experience LOS D or better under future combined conditions. Southbound traffic at the intersection of Brandegee Avenue at Hynes Avenue would operate at LOS F under combined condition, and we therefore recommend that side street stop control be considered at this intersection to improve operations. We additionally recommend that dedicated left-turn lanes be striped along Brandegee Avenue for southbound left turns into the middle and southerly new school driveways.

We hope this report is useful to you and the Town of Groton. If you have any questions or need anything further, please do not hesitate to contact me.

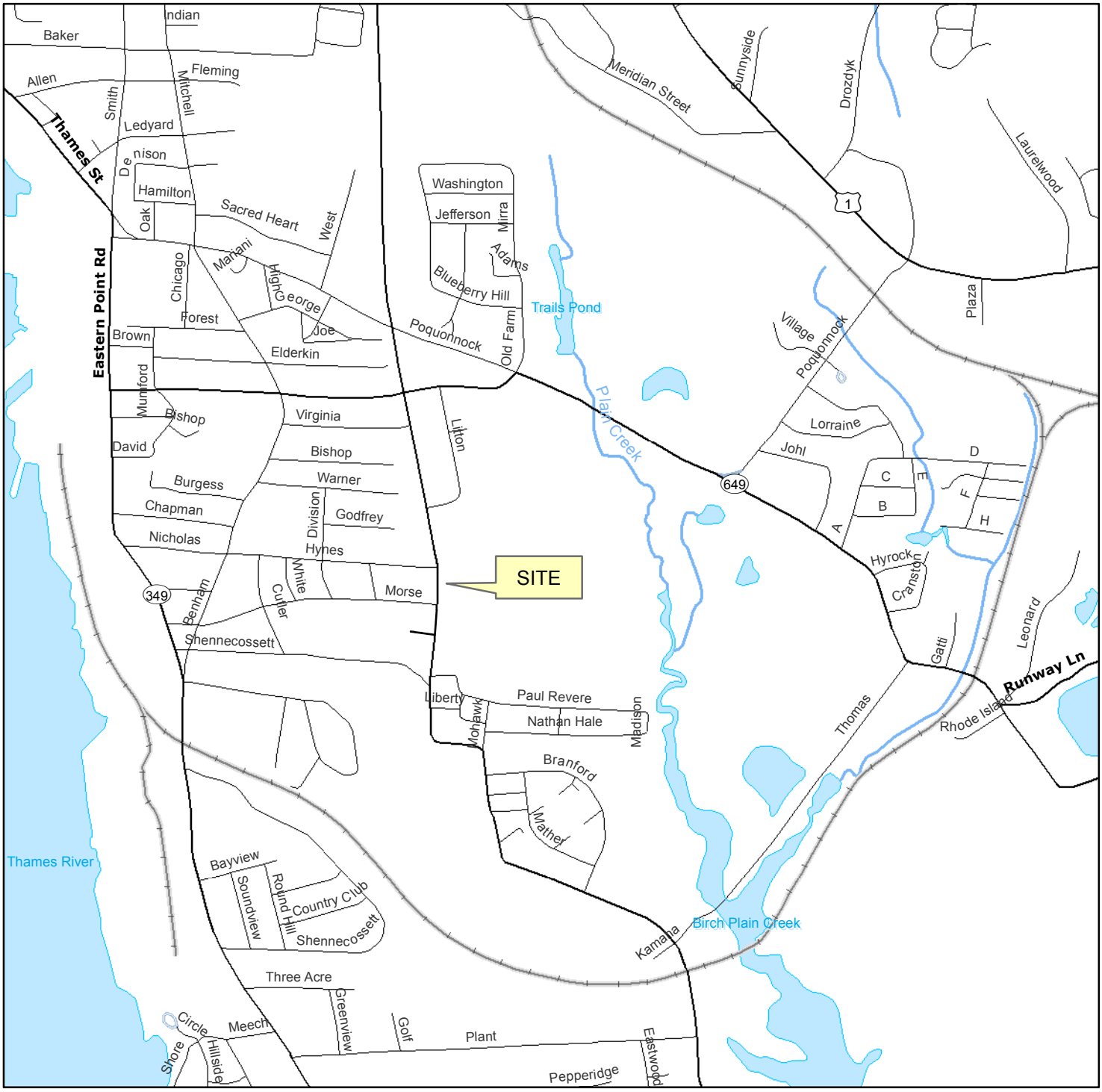
Very truly yours,

MILONE & MACBROOM, INC.

David G. Sullivan, PE, Associate
Manager of Traffic and Transportation Planning

Enclosures

1777-39-04-au619-ltr.doc



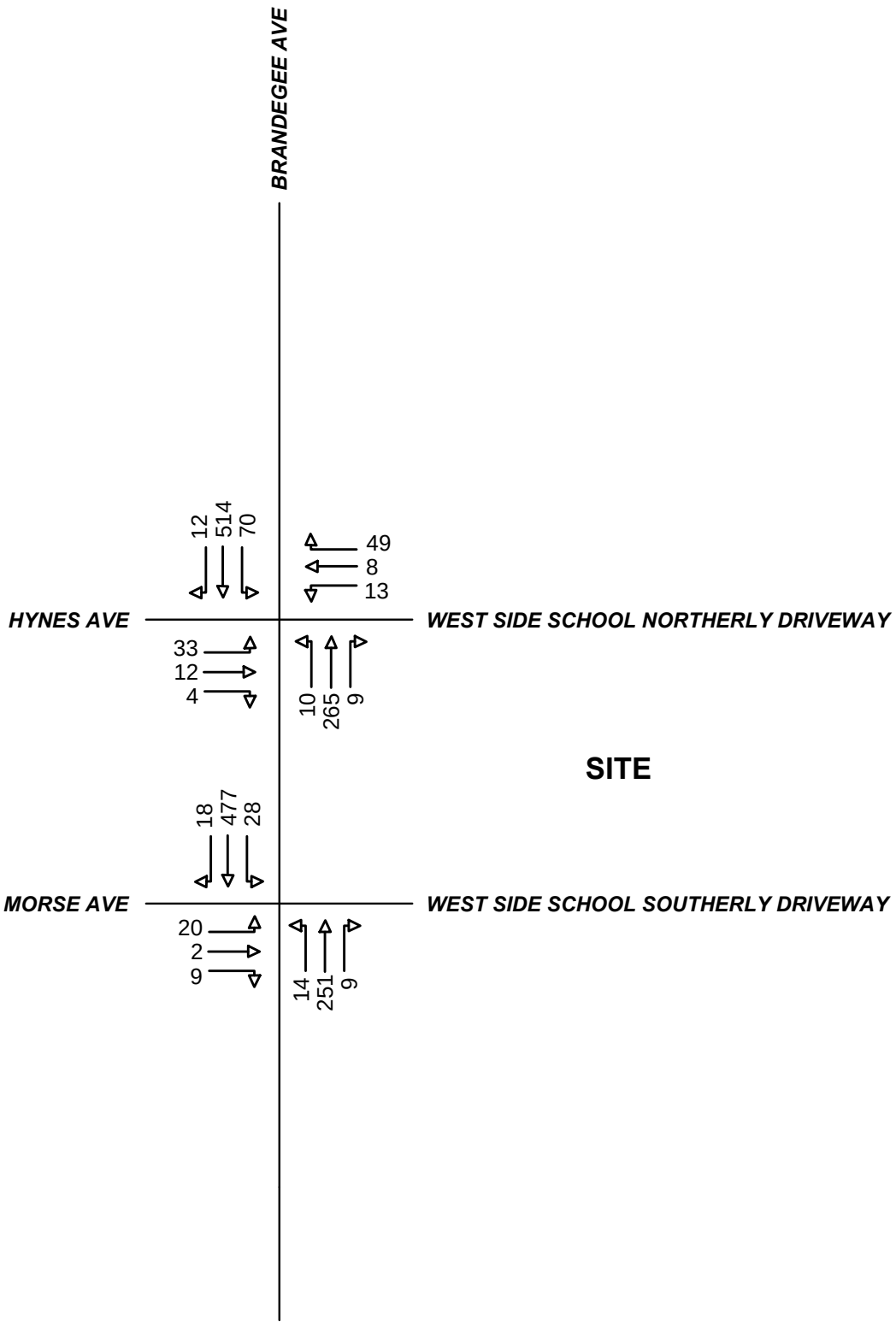
0 500 1,000 2,000 Feet

N

SITE LOCATION
Proposed West Side Elementary School
Groton, Connecticut

MILONE & MACBROOM

FIGURE 1



EXISTING 2019 TRAFFIC VOLUMES

WEEKDAY MORNING PEAK HOUR (7:00 A.M. - 8:00 A.M.)

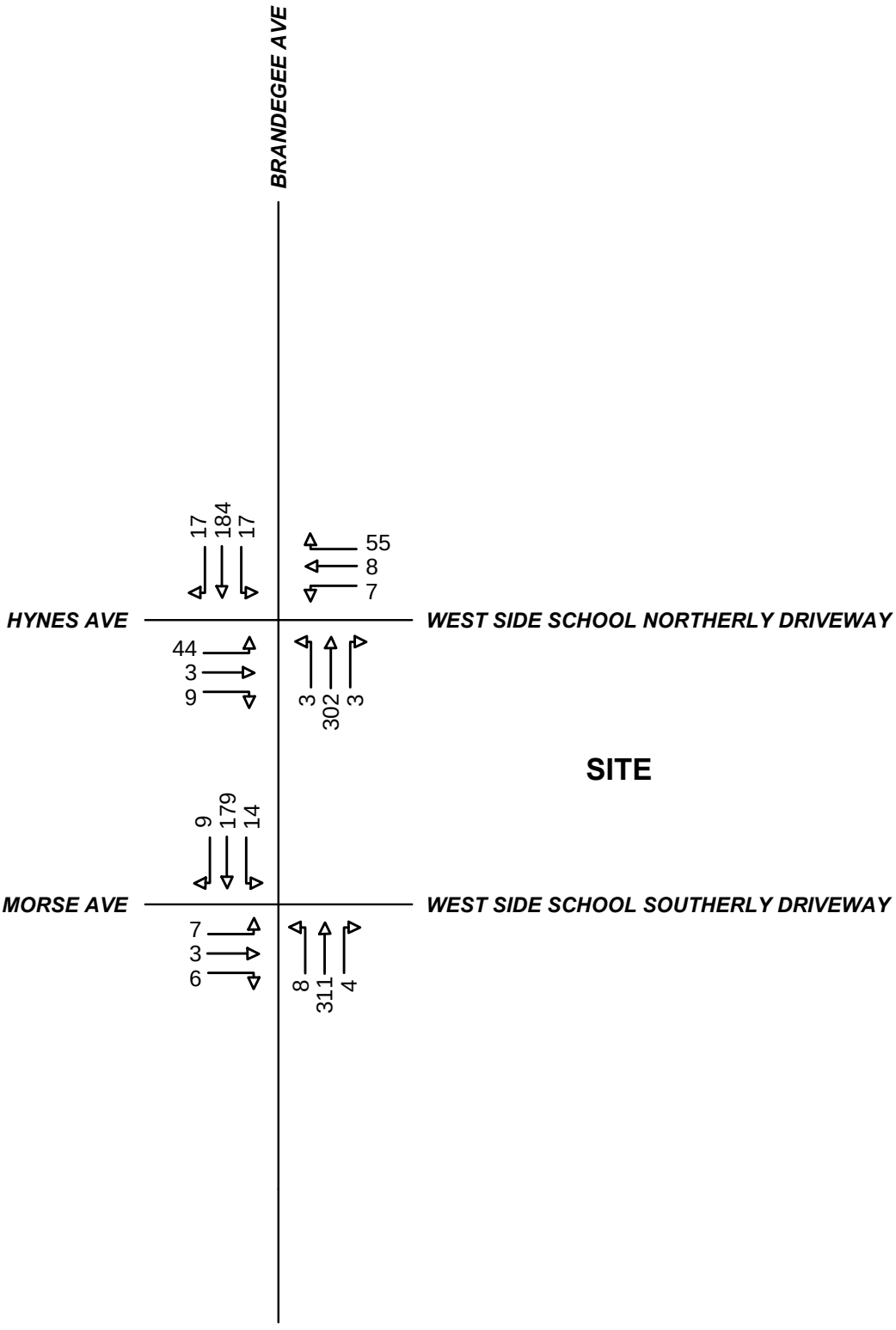
Proposed West Side Elementary School
Groton, Connecticut

N

SCHEMATIC

MILONE & MACBROOM, Inc.

FIGURE 2



EXISTING 2019 TRAFFIC VOLUMES

WEEKDAY AFTERNOON PEAK HOUR (2:15 P.M. - 3:15 P.M.)

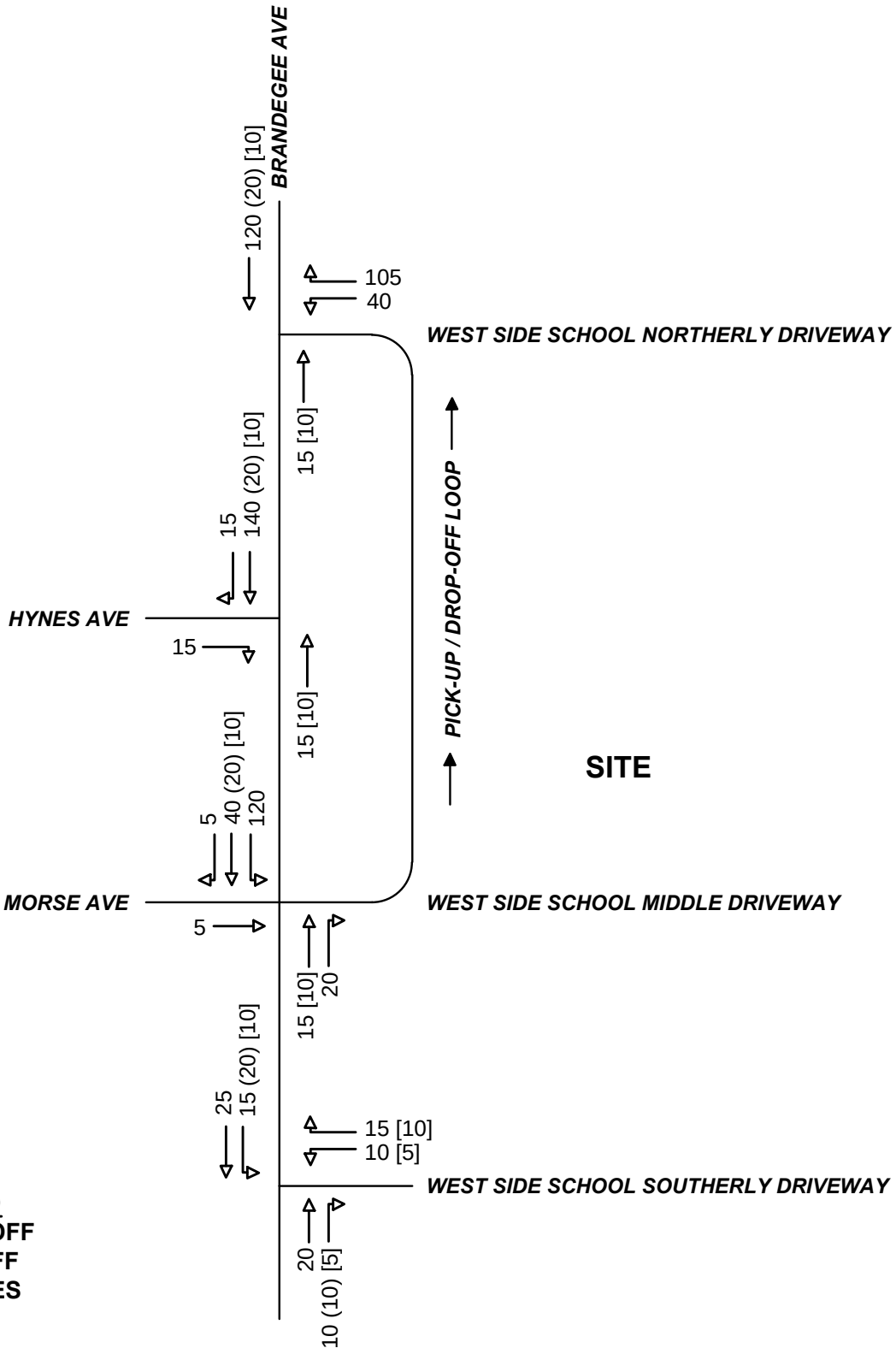
Proposed West Side Elementary School
Groton, Connecticut

N

SCHEMATIC

MILONE & MACBROOM, Inc.

FIGURE 3



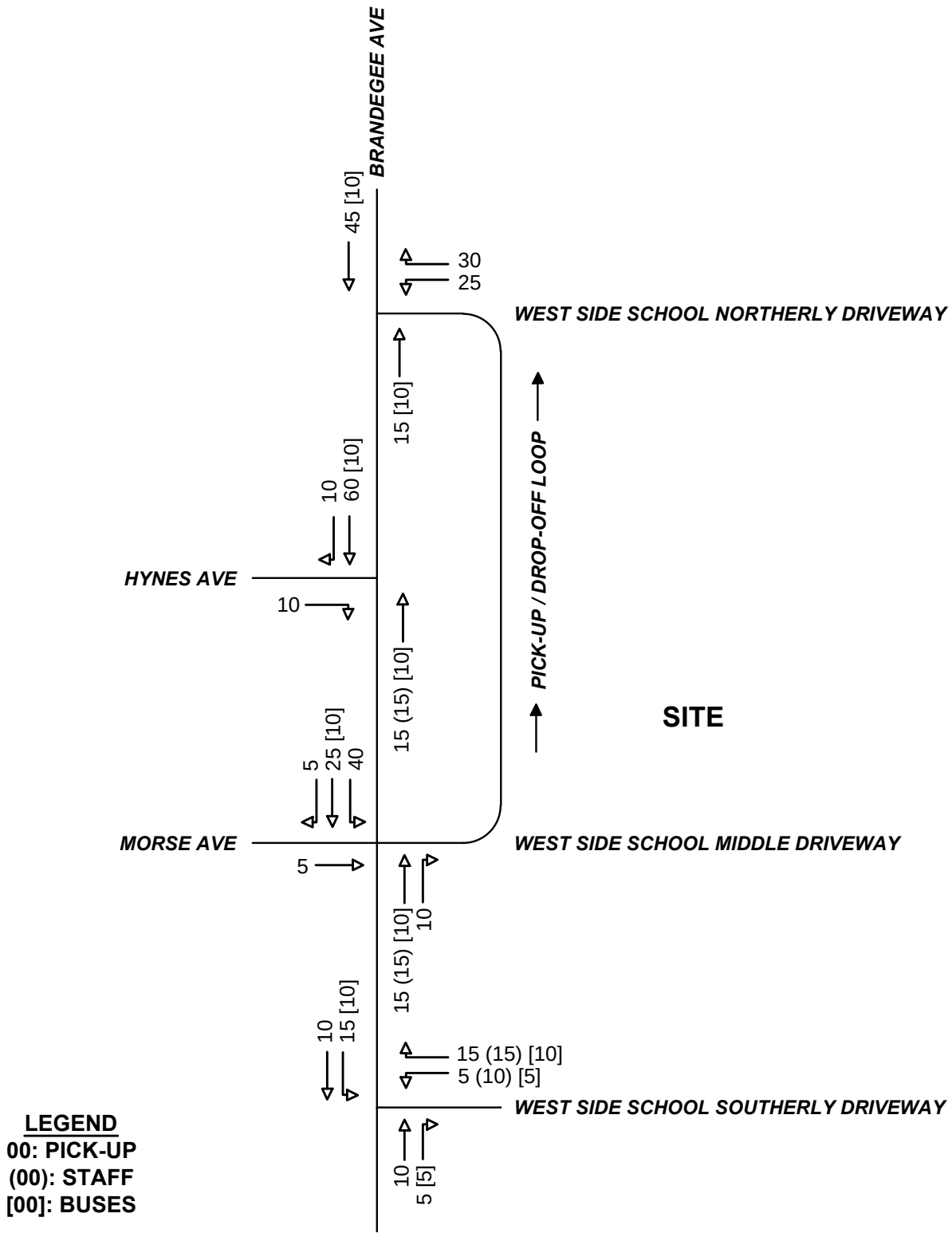
ANTICIPATED SITE-GENERATED TRAFFIC VOLUMES

WEEKDAY MORNING PEAK HOUR

Proposed West Side Elementary School
Groton, Connecticut

MILONE & MACBROOM, Inc.

FIGURE 4

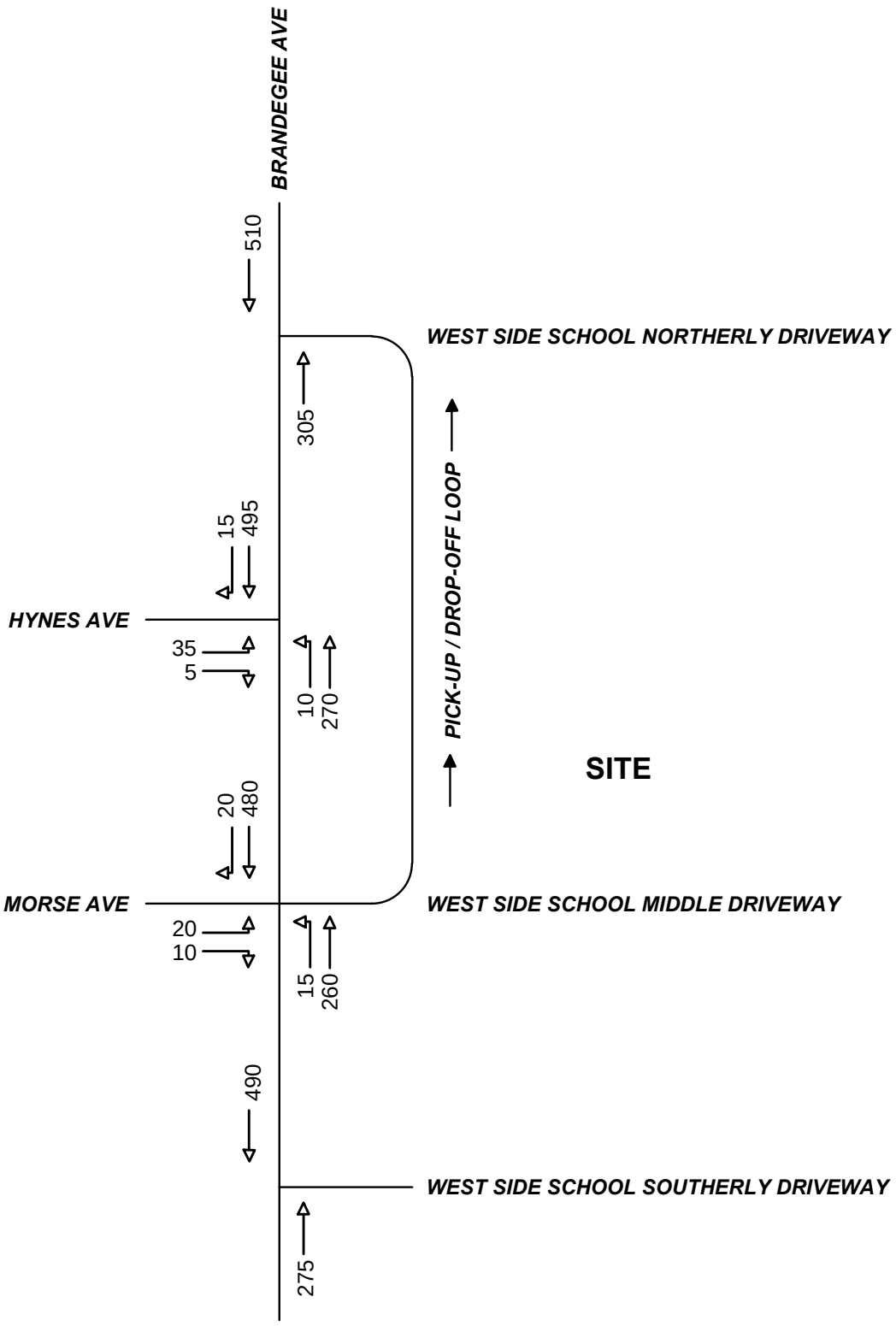


ANTICIPATED SITE-GENERATED TRAFFIC VOLUMES
WEEKDAY AFTERNOON PEAK HOUR

Proposed West Side Elementary School
Groton, Connecticut

MILONE & MACBROOM, Inc.

FIGURE 5



2021 FUTURE BACKGROUND (NO BUILD) TRAFFIC VOLUMES
WEEKDAY MORNING PEAK HOUR

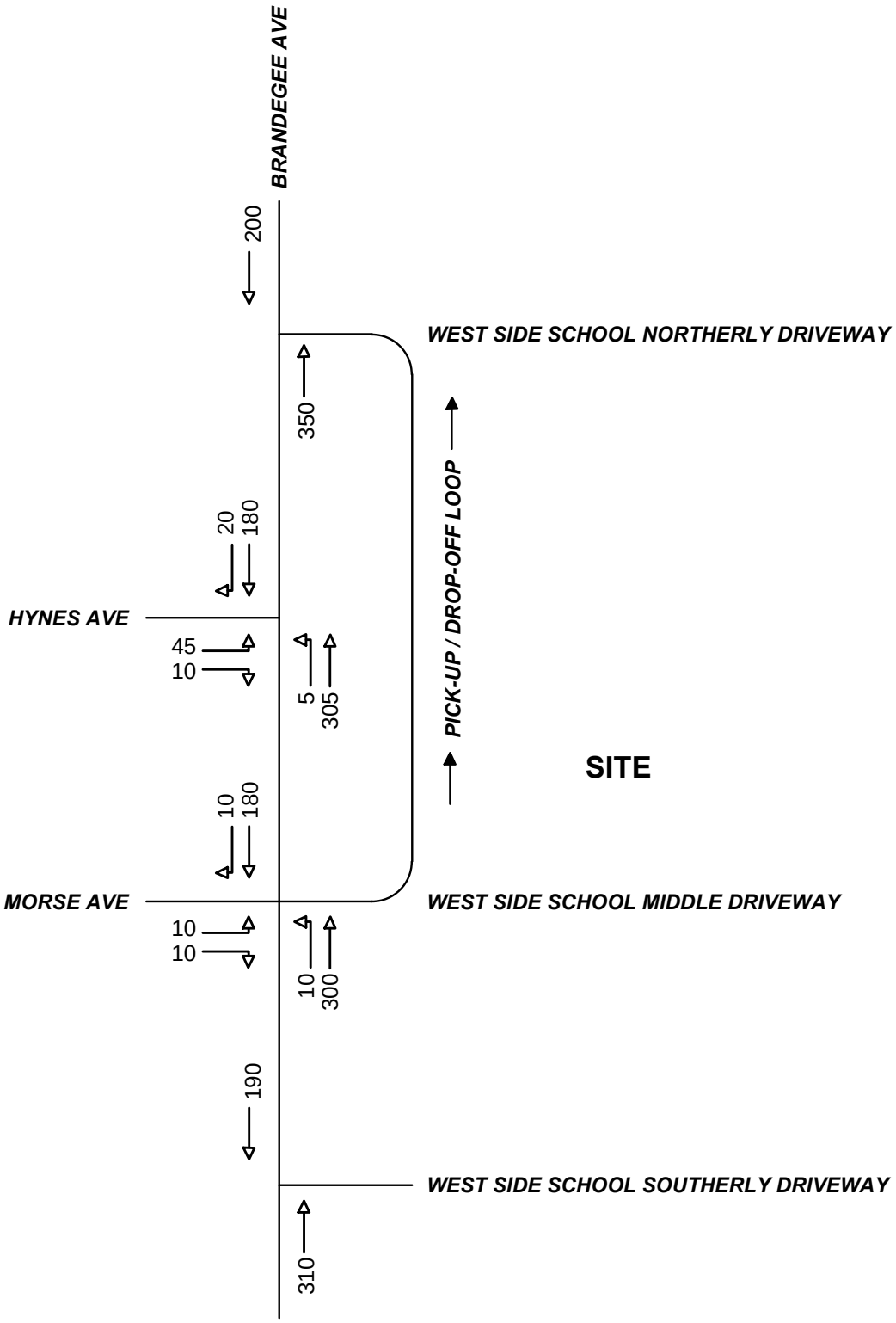
Proposed West Side Elementary School
Groton, Connecticut

N

SCHEMATIC

MILONE & MACBROOM, Inc.

FIGURE 6



2021 FUTURE BACKGROUND (NO BUILD) TRAFFIC VOLUMES
WEEKDAY AFTERNOON PEAK HOUR

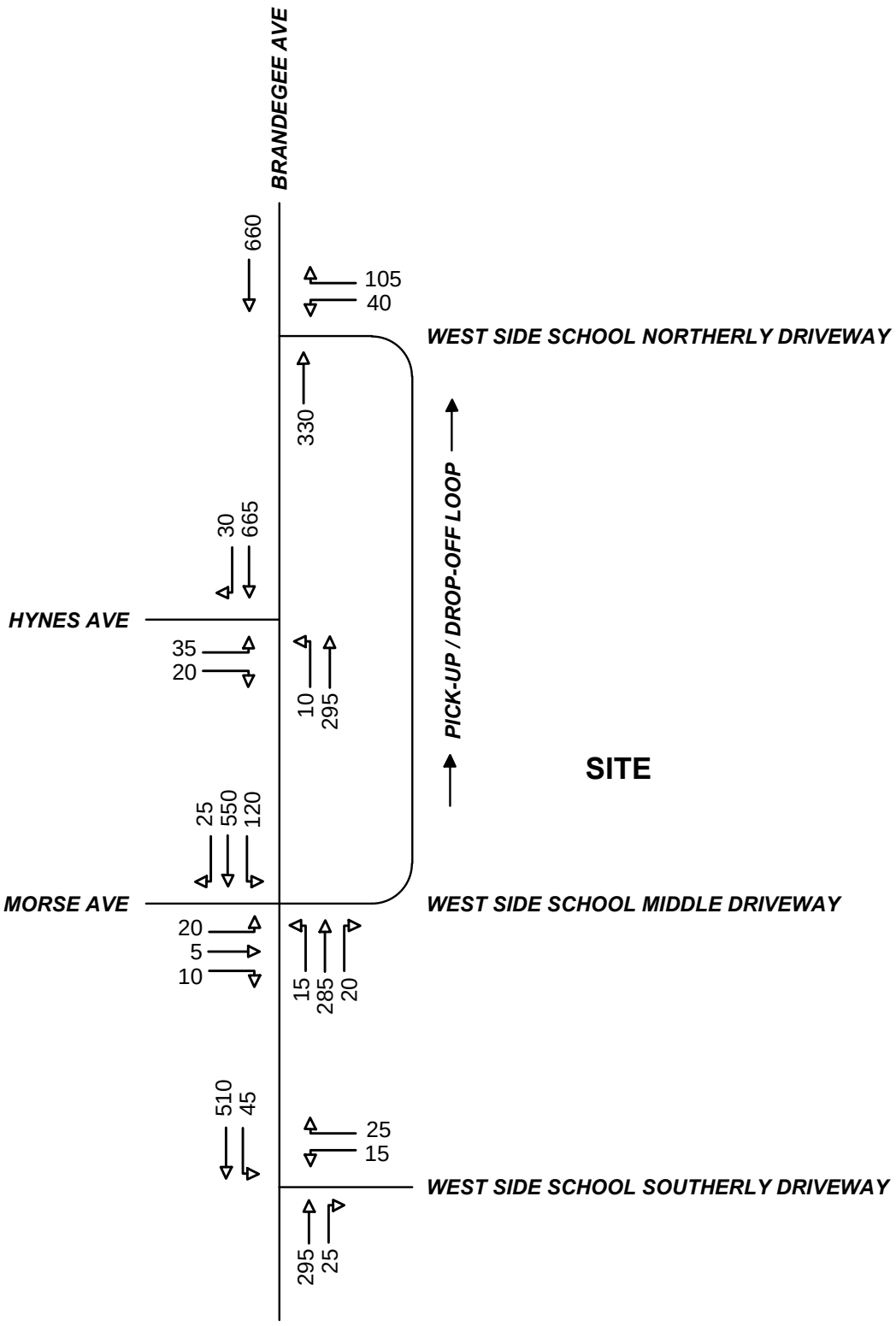
Proposed West Side Elementary School
Groton, Connecticut

N

SCHEMATIC

MILONE & MACBROOM, Inc.

FIGURE 7



2021 FUTURE COMBINED (BUILD) TRAFFIC VOLUMES
WEEKDAY MORNING PEAK HOUR

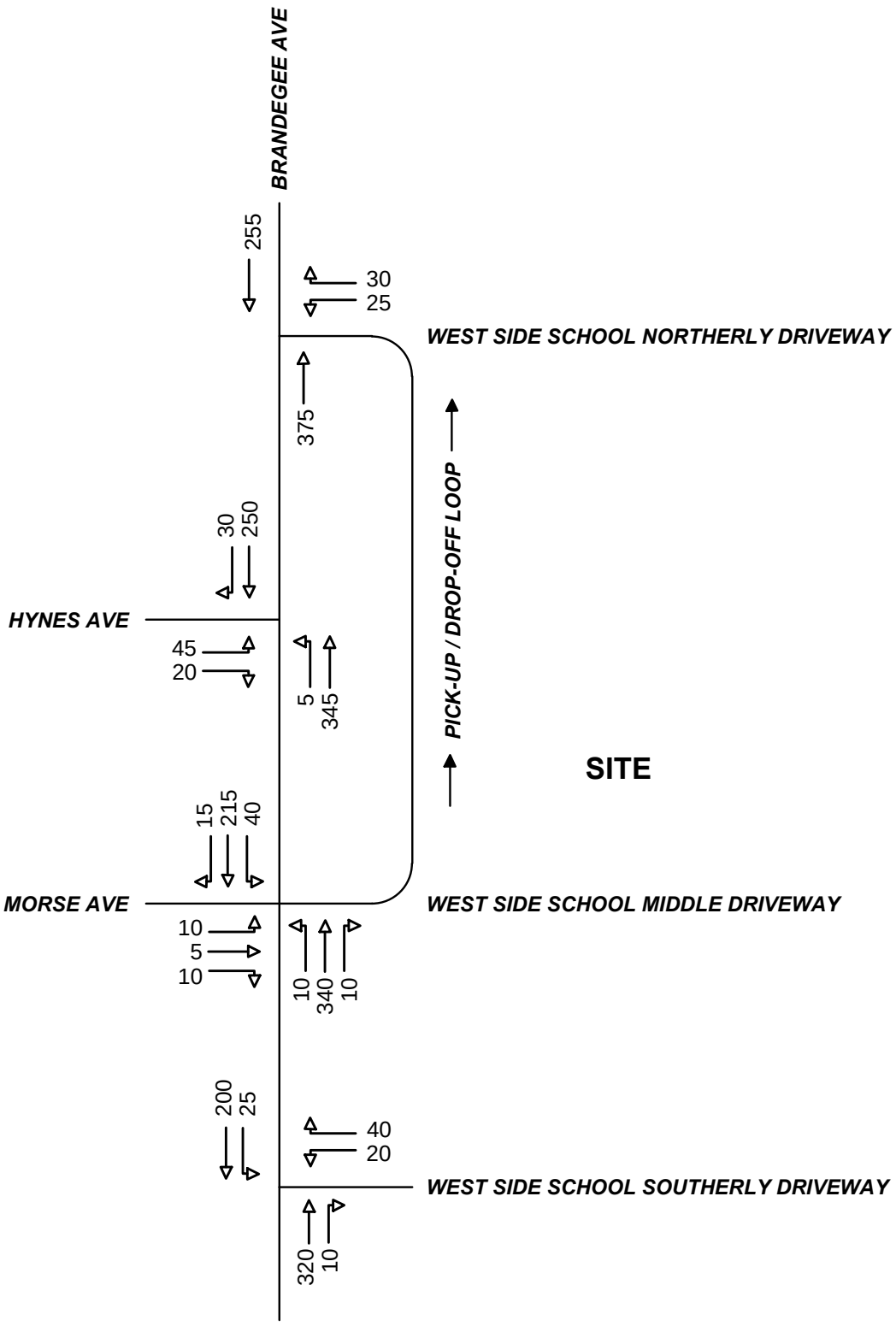
Proposed West Side Elementary School
Groton, Connecticut

N

SCHEMATIC

MILONE & MACBROOM, Inc.

FIGURE 8



2021 FUTURE COMBINED (BUILD) TRAFFIC VOLUMES
WEEKDAY AFTERNOON PEAK HOUR

Proposed West Side Elementary School
Groton, Connecticut

N

SCHEMATIC

MILONE & MACBROOM, Inc.

FIGURE 9

APPENDIX

LEVEL OF SERVICE
FOR
UNSIGNALIZED INTERSECTIONS
ALL-WAY STOP-CONTROL (AWSC)

The criteria for AWSC intersections have different threshold values than do those for signalized intersections primarily because drivers expect different levels of performance from distinct types of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an AWSC intersection. Thus a higher level of control delay is acceptable at a signalized intersection for the same LOS. The level-of-service criteria are given below.

LEVEL-OF SERVICE CRITERIA FOR AWSC INTERSECTIONS	
LOS[1]	**CONTROL DELAY (s/veh)**
A	**≤ 10**
B	**> 10 AND ≤ 15**
C	**> 15 AND ≤ 25**
D	**> 25 AND ≤ 35**
E	**> 35 AND ≤ 50**
F	**> 50**

[1] For approaches and intersection-wide assessment, LOS is defined solely by control delay.

Note: LOS F is assigned to a movement if the volume-to-capacity ratio exceeds 1.0, regardless of the control delay.

Reference: Highway Capacity Manual Version 6.0, Transportation Research Board, 2016.

LEVEL OF SERVICE
FOR TWO-WAY
STOP SIGN CONTROLLED INTERSECTIONS

The level of service for a TWSC (two-way stop controlled) intersection is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. LOS criteria are given in the Table**.** LOS criteria are given below:

LEVEL-OF SERVICE CRITERIA FOR AWSC INTERSECTIONS	
LOS[1]	**CONTROL DELAY (s/veh)**
A	**≤ 10**
B	**> 10 AND ≤ 15**
C	**> 15 AND ≤ 25**
D	**> 25 AND ≤ 35**
E	**> 35 AND ≤ 50**
F	**> 50**

Note: LOS criteria apply to each lane on a given approach and to each approach on the minor street.
LOS is not calculated for major-street approaches or for the intersection as a whole.
LOS F is assigned to a movement if the volume-to-capacity ratio exceeds 1.0, regardless of the control delay

Reference: Highway Capacity Manual Version 6.0, Transportation Research Board, 2016.

HCS7 Two-Way Stop-Control Report

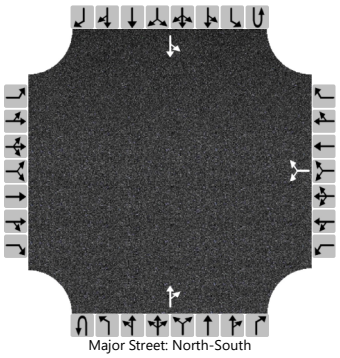
General Information

Analyst	WKF
Agency/Co.	Milone & MacBroom, Inc.
Date Performed	7/25/2019
Analysis Year	2019
Time Analyzed	Combined AM
Intersection Orientation	North-South
Project Description	West Side Elementary School

Site Information

Intersection	Brandegee at North Dwy
Jurisdiction	Groton
East/West Street	School North Driveway
North/South Street	Brandegee Ave
Peak Hour Factor	0.90
Analysis Time Period (hrs)	1.00

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						40		105			330	0		0	660	
Percent Heavy Vehicles (%)						2		2						2		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.42		6.22						4.12		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.52		3.32						2.22		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							161							0		
Capacity, c (veh/h)							446							1192		
v/c Ratio							0.36							0.00		
95% Queue Length, Q_{95} (veh)							1.7							0.0		
Control Delay (s/veh)							17.6							8.0		
Level of Service (LOS)							C							A		
Approach Delay (s/veh)						17.6								0.0		
Approach LOS						C										

HCS7 All-Way Stop Control Report

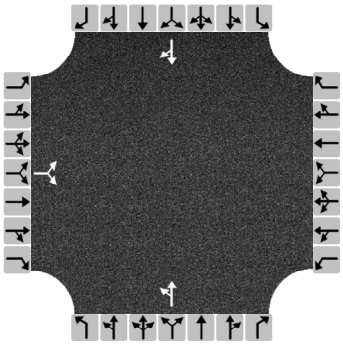
General Information

Analyst	WKF
Agency/Co.	Milone & MacBroom, Inc.
Date Performed	07/25/2019
Analysis Year	2019
Analysis Time Period (hrs)	1.00
Time Analyzed	Combined AM
Project Description	West Side Elementary School

Site Information

Intersection	Brandegee at Hynes Ave
Jurisdiction	Groton
East/West Street	Hynes Ave
North/South Street	Brandegee Ave
Peak Hour Factor	0.90

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	35		20				10	295			665	30
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LR						LT			TR		
Flow Rate, v (veh/h)	61						339			772		
Percent Heavy Vehicles	2						2			2		

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20						3.20			3.20		
Initial Degree of Utilization, x	0.054						0.301			0.686		
Final Departure Headway, hd (s)	6.30						4.98			4.52		
Final Degree of Utilization, x	0.107						0.469			0.969		
Move-Up Time, m (s)	2.0						2.0			2.0		
Service Time, ts (s)	4.30						2.98			2.52		

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	61						339			772		
Capacity	572						722			797		
95% Queue Length, Q_{95} (veh)	0.4						2.6			28.4		
Control Delay (s/veh)	10.1						12.4			72.8		
Level of Service, LOS	B						B			F		
Approach Delay (s/veh)	10.1						12.4			72.8		
Approach LOS	B						B			F		
Intersection Delay, s/veh | LOS	52.1						F					

HCS7 Two-Way Stop-Control Report

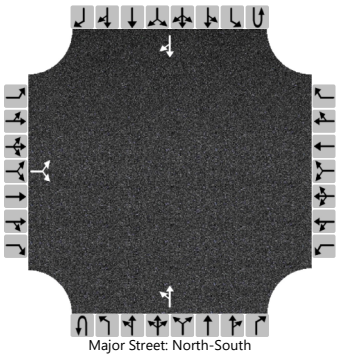
General Information

Analyst	WKF
Agency/Co.	Milone & MacBroom, Inc.
Date Performed	7/25/2019
Analysis Year	2019
Time Analyzed	Combined AM
Intersection Orientation	North-South
Project Description	West Side Elementary School

Site Information

Intersection	Brandegee at Hynes Ave
Jurisdiction	Groton
East/West Street	Hynes Ave
North/South Street	Brandegee Ave
Peak Hour Factor	0.90
Analysis Time Period (hrs)	1.00

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		35		20						10	295				665	30
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			61							11						
Capacity, c (veh/h)			273							843						
v/c Ratio			0.22							0.01						
95% Queue Length, Q_{95} (veh)			0.9							0.0						
Control Delay (s/veh)			22.0							9.3						
Level of Service (LOS)			C							A						
Approach Delay (s/veh)		22.0								0.5						
Approach LOS		C														

HCS7 Two-Way Stop-Control Report

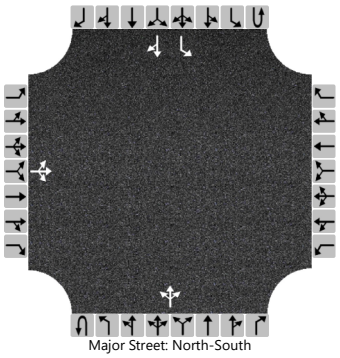
General Information

Analyst	WKF
Agency/Co.	Milone & MacBroom, Inc.
Date Performed	7/25/2019
Analysis Year	2019
Time Analyzed	Combined AM
Intersection Orientation	North-South
Project Description	West Side Elementary School

Site Information

Intersection	Brandegee at Middle Drive
Jurisdiction	Groton
East/West Street	Morse Ave / Middle Dwy
North/South Street	Brandegee Ave
Peak Hour Factor	0.90
Analysis Time Period (hrs)	1.00

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	1	1	0
Configuration			LTR								LTR			L		TR
Volume (veh/h)		20	5	10						15	285	20		120	550	25
Percent Heavy Vehicles (%)		2	2	2						2				2		
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2						4.1				4.1		
Critical Headway (sec)		7.12	6.52	6.22						4.12				4.12		
Base Follow-Up Headway (sec)		3.5	4.0	3.3						2.2				2.2		
Follow-Up Headway (sec)		3.52	4.02	3.32						2.22				2.22		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			39							17				133		
Capacity, c (veh/h)			172							945				1220		
v/c Ratio			0.23							0.02				0.11		
95% Queue Length, Q_{95} (veh)			0.9							0.1				0.4		
Control Delay (s/veh)			32.0							8.9				8.3		
Level of Service (LOS)			D							A				A		
Approach Delay (s/veh)		32.0								0.6				1.4		
Approach LOS		D														

HCS7 Two-Way Stop-Control Report

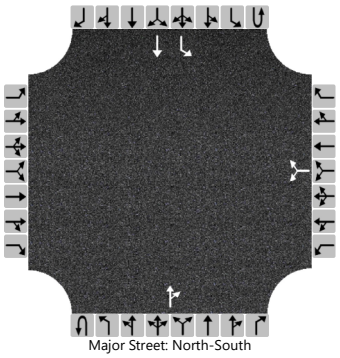
General Information

Analyst	WKF
Agency/Co.	Milone & MacBroom, Inc.
Date Performed	7/25/2019
Analysis Year	2019
Time Analyzed	Combined AM
Intersection Orientation	North-South
Project Description	West Side Elementary School

Site Information

Intersection	Brandegee at South Dwy
Jurisdiction	Groton
East/West Street	School South Driveway
North/South Street	Brandegee Ave
Peak Hour Factor	0.90
Analysis Time Period (hrs)	1.00

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	1	1	0
Configuration							LR					TR		L	T	
Volume (veh/h)						15		25			295	25		45	510	
Percent Heavy Vehicles (%)						2		2						2		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.42		6.22						4.12		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.52		3.32						2.22		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							44							50		
Capacity, c (veh/h)							424							1203		
v/c Ratio							0.10							0.04		
95% Queue Length, Q_{95} (veh)							0.4							0.1		
Control Delay (s/veh)							14.5							8.1		
Level of Service (LOS)							B							A		
Approach Delay (s/veh)						14.5								0.7		
Approach LOS						B										

HCS7 Two-Way Stop-Control Report

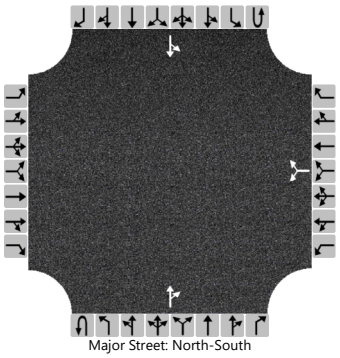
General Information

Analyst	WKF
Agency/Co.	Milone & MacBroom, Inc.
Date Performed	7/25/2019
Analysis Year	2019
Time Analyzed	Combined PM
Intersection Orientation	North-South
Project Description	West Side Elementary School

Site Information

Intersection	Brandegee at North Dwy
Jurisdiction	Groton
East/West Street	School North Driveway
North/South Street	Brandegee Ave
Peak Hour Factor	0.90
Analysis Time Period (hrs)	1.00

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						30		25			375	0		0	255	
Percent Heavy Vehicles (%)						2		2						2		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.42		6.22						4.12		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.52		3.32						2.22		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							61							0		
Capacity, c (veh/h)							485							1142		
v/c Ratio							0.13							0.00		
95% Queue Length, Q_{95} (veh)							0.4							0.0		
Control Delay (s/veh)							13.5							8.2		
Level of Service (LOS)							B							A		
Approach Delay (s/veh)						13.5								0.0		
Approach LOS						B										

HCS7 All-Way Stop Control Report

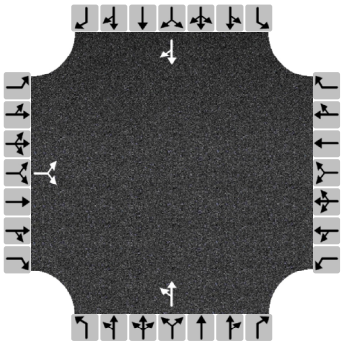
General Information

Analyst	WKF
Agency/Co.	Milone & MacBroom, Inc.
Date Performed	07/25/2019
Analysis Year	2019
Analysis Time Period (hrs)	1.00
Time Analyzed	Combined PM
Project Description	West Side Elementary School

Site Information

Intersection	Brandegee at Hynes Ave
Jurisdiction	Groton
East/West Street	Hynes Ave
North/South Street	Brandegee Ave
Peak Hour Factor	0.90

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	45		20				5	345			250	30
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LR						LT			TR		
Flow Rate, v (veh/h)	72						389			311		
Percent Heavy Vehicles	2						2			2		

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20						3.20			3.20		
Initial Degree of Utilization, x	0.064						0.346			0.277		
Final Departure Headway, hd (s)	5.44						4.49			4.50		
Final Degree of Utilization, x	0.109						0.485			0.389		
Move-Up Time, m (s)	2.0						2.0			2.0		
Service Time, ts (s)	3.44						2.49			2.50		

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	72						389			311		
Capacity	662						802			800		
95% Queue Length, Q_{95} (veh)	0.4						2.8			1.9		
Control Delay (s/veh)	9.1						11.7			10.4		
Level of Service, LOS	A						B			B		
Approach Delay (s/veh)	9.1						11.7			10.4		
Approach LOS	A						B			B		
Intersection Delay, s/veh | LOS	10.9						B					

HCS7 Two-Way Stop-Control Report

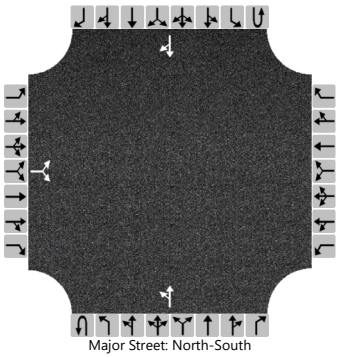
General Information

Analyst	WKF
Agency/Co.	Milone & MacBroom, Inc.
Date Performed	7/25/2019
Analysis Year	2019
Time Analyzed	Combined PM
Intersection Orientation	North-South
Project Description	West Side Elementary School

Site Information

Intersection	Brandegee at Hynes Ave
Jurisdiction	Groton
East/West Street	Hynes Ave
North/South Street	Brandegee Ave
Peak Hour Factor	0.90
Analysis Time Period (hrs)	1.00

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		45		20						5	345				250	30
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			72							6						
Capacity, c (veh/h)			475							1249						
v/c Ratio			0.15							0.00						
95% Queue Length, Q_{95} (veh)			0.5							0.0						
Control Delay (s/veh)			13.9							7.9						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		13.9								0.2						
Approach LOS		B														

HCS7 Two-Way Stop-Control Report

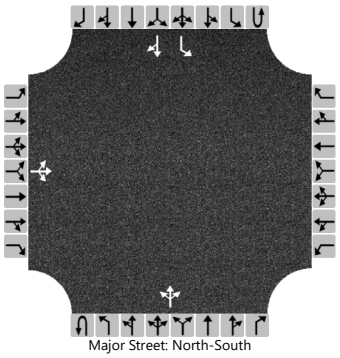
General Information

Analyst	WKF
Agency/Co.	Milone & MacBroom, Inc.
Date Performed	7/25/2019
Analysis Year	2019
Time Analyzed	Combined PM
Intersection Orientation	North-South
Project Description	West Side Elementary School

Site Information

Intersection	Brandegee at Middle Drive
Jurisdiction	Groton
East/West Street	Morse Ave / Middle Dwy
North/South Street	Brandegee Ave
Peak Hour Factor	0.90
Analysis Time Period (hrs)	1.00

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	1	1	0
Configuration			LTR								LTR			L		TR
Volume (veh/h)		10	5	10						10	340	10		40	215	15
Percent Heavy Vehicles (%)		2	2	2						2				2		
Proportion Time Blocked																
Percent Grade (%)			0													
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2						4.1				4.1		
Critical Headway (sec)		7.12	6.52	6.22						4.12				4.12		
Base Follow-Up Headway (sec)		3.5	4.0	3.3						2.2				2.2		
Follow-Up Headway (sec)		3.52	4.02	3.32						2.22				2.22		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			28							11				44		
Capacity, c (veh/h)			421							1309				1170		
v/c Ratio			0.07							0.01				0.04		
95% Queue Length, Q_{95} (veh)			0.2							0.0				0.1		
Control Delay (s/veh)			14.1							7.8				8.2		
Level of Service (LOS)			B							A				A		
Approach Delay (s/veh)		14.1								0.3				1.2		
Approach LOS		B														

HCS7 Two-Way Stop-Control Report

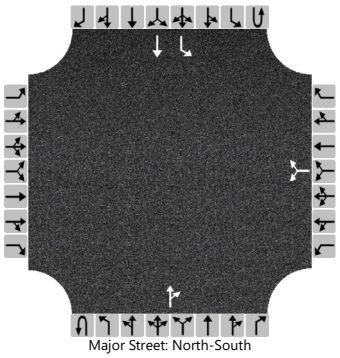
General Information

Analyst	WKF
Agency/Co.	Milone & MacBroom, Inc.
Date Performed	7/25/2019
Analysis Year	2019
Time Analyzed	Combined PM
Intersection Orientation	North-South
Project Description	West Side Elementary School

Site Information

Intersection	Brandegee at South Dwy
Jurisdiction	Groton
East/West Street	School South Driveway
North/South Street	Brandegee Ave
Peak Hour Factor	0.90
Analysis Time Period (hrs)	1.00

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	1	1	0
Configuration							LR					TR		L	T	
Volume (veh/h)						20		40			320	10		25	200	
Percent Heavy Vehicles (%)						2		2						2		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.42		6.22						4.12		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.52		3.32						2.22		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							67							28		
Capacity, c (veh/h)							571							1192		
v/c Ratio							0.12							0.02		
95% Queue Length, Q_{95} (veh)							0.4							0.1		
Control Delay (s/veh)							12.1							8.1		
Level of Service (LOS)							B							A		
Approach Delay (s/veh)					12.1								0.9			
Approach LOS					B											

MILONE & MACBROOM

May 28, 2019

Mr. Dennis Goderre, ASLA, AICP CUD
City Planner
City of Groton
Department of Planning & Economic Development
295 Meridian Street
Groton, CT 06340

RE: Westside Elementary School
Groton, Connecticut
MMI #1777-39

Dear Mr. Goderre:

It is my professional opinion that the proposed stormwater management plan for the above-referenced project conforms to the requirements of Section 7.7.C of the City of Groton's Zoning Regulations effective December 1, 2016, recently amended to April 3, 2019. The attached engineering report includes the Water Quality Volume (WQV) and Water Quality Flow (WQF) calculations per Section 7.4 of the Connecticut Department of Energy & Environmental Protection *Stormwater Quality Manual* and the Groundwater Recharge Volume (GRV) computations per Section 7.5 of the *Stormwater Quality Manual*. The engineering report also includes the results of the hydrologic and hydraulic models demonstrating Peak Flow Control for the 10-year, 25-year, and 100-year storm events and hydraulic conveyances of the 25-year storm event per Section 7.6 of the *Stormwater Quality Manual*.

Very truly yours,

MILONE & MACBROOM, INC.

Thomas J. Daly, PE, Vice President
Senior Project Manager, Civil Engineering

Attachments

cc: Joe Banks, Perkins Eastman

1777-39-m2819-ltr

TRANSMITTAL LETTER

ARCADIS Design & Consultancy for natural and built assets

RECEIVED

JUN 2 8 2019

CITY OF GROTON CONNECTICUT
ZONING AND BUILDING DEPARTMENT

To:
Carlton Smith
City of Groton

From:
Curt Whipple
Arcadis (on behalf of Town of Groton)

Arcadis U.S., Inc.
213 Court Street
Suite 700
Middletown
Connecticut 06457
Tel 860 503 1500
Fax 860 503 1520

Copies:

Date:
June 28, 2019

Subject:
West Side School – Application to ZBA

Arcadis Project No.: HDGROTON.0001 (State No.: 059-0189 N)

We are sending you:

☒ **Attached** ☐ **Under Separate Cover Via _____ the Following Items:**

☐ Shop Drawings ☒ Plans ☐ Specifications ☐ Change Order
☐ Prints ☐ Samples ☐ Copy of Letter ☐ Reports
☒ Other: Application to Zoning Board of Appeals, and attachments

Copies	Date	Drawing No.	Rev.	Description	Action*
16	6/28/19			Application Cover Memo – Perkins Eastman	FA
16	6/28/19			Application to Zoning Board of Appeals	
16	6/28/19	L-103		Annotated Grading Plan with Elevations	
16	6/28/19	A-901		Annotated 3-D Rendering with Elevations	
16	6/28/19			List of Abutting Property Owners	

Action*
☐ A Approved
☐ AN Approved As Noted
☐ AS As Requested
☐ Other:
☐ CR Correct and Resubmit
☐ F File
☒ FA For Approval
☐ Resubmit _____ Copies
☐ Return _____ Copies
☐ Review and Comment

Mailing Method
☐ U.S. Postal Service 1st Class ☒ Courier/Hand Delivery ☐ FedEx Priority Overnight ☐ FedEx 2-Day Delivery
☐ Certified/Registered Mail ☐ United Parcel Service (UPS) ☐ FedEx Standard Overnight ☐ FedEx Economy
☐ Other:

PERKINS EASTMAN

MEMO

Perkins Eastman
Architects DPC

Date	6/28/2019	
Project Name	West Side ES	
Project Number	74451.00	
Subject	ZBA Variance application	
From	Joe Banks	j.banks@perkinseastman.com
	T: 203-435-6513	F: Fax Number
To	Carlton Smith	
	295 Meridian Street, Groton, CT	
	T: 860.446.4104	F: Fax Number
	smithc@cityofgroton-ct.gov	VIA: VIA

Mr. Smith,

Please see attached documentation, supporting our request for a variance from the City of Groton related to the height of the proposed West Side Elementary School. MR Goderre advised obtaining a variance, or a consensus from the ZBA that no variance is needed, based on the height restriction in zone R.5.2, of 35'. As noted in our diagrams, the building does not exceed this elevation when measured as noted by the definitions in 2.2, measured to average grade of the road, but does exceed 35' measured to adjacent grades. We respectfully request relief from this requirement, or a determination that no variance is required.

Thanks,
Joe Banks

cc:

Attachments:

THE CITY OF GROTON
CONNECTICUT

APPLICATION TO ZONING BOARD OF APPEALS

ZBA #_____ DATE: June 28, 2019

APPLICANT: Town of Groton (contact Rick Norris) PHONE NO: 860-446-5974

ADDRESS: 134 Groton Long Point Rd CITY: Groton ST: CT

OWNER: Town of Groton (contact Rick Norris) PHONE NO: 860-446-5974

LOCATION OF PROPERTY 250 Brandegee Ave, Groton, CT 06340
ZONE DESIGNATION R52 MAP 168816 BLOCK _____ LOT 0839

PRESENT USE OF PROPERTY: West Side Middle School

This applicant respectfully requests a Hearing on the following:

- ☐ 1. There is an error in the order, requirement, or decision of the Zoning Official.
- ☒ 2. The applicant seeks a variance from the requirements of the Zoning Regulations.
- ☐ 3. This is a matter upon which the Zoning Board of Appeals is required to pass on by specific terms of the Zoning Regulations.
- ☐ 4. This hearing is required by State Statute.

The order or decision appealed from, and list the appropriate Section of the Zoning Regulations. (Attach a copy of the Zoning Official's order or decision if issued in writing)

We request relief from the requirements of 3.4.D. which states the max height of a building in the R 5.2 zone as 35'.

The applicant requests the Board to take the following action:

Approve the building height of this school as depicted on the attached figures.

This application will not be complete unless the following items accompany the application:

[X] A check in the amount of $325.00, plus $60.00 for the DEP, made payable to the **CITY OF GROTON.**

[X] Sixteen (16) copies of the plot plan and application.

[X] Abutting property owners list signed by Applicant

NOTE: **Any statements, dimensions, or accompanying sketches must be strictly adhered to unless a variance conditions / changes such statements or dimensions that were submitted.**

Additional comments: (A brief statement in your own words on why this relief is needed)

While the actual building height is below 35' when calculated via 2.2, which is defined as the elevation from the average street facade grade, the average grade of the the building height to adjacent grade is higher than 35' on the rear classroom wing, and Mr. Goderre recommends that the ZBA evaluates the proposed elevations of the buildings.

DATE 6/28/19 PROPERTY OWNER Ruth Morris

DATE 6/28/19 APPLICANT Ruth Morris

DATE _____

Received by ZONING BOARD OF APPEALS

TO THE ZONING BOARD OF APPEALS ON THE MATTER INVOLVING PROPERTY

OWNED BY: Town of Groton

OWNERS ADDRESS: 134 Groton Long Point Rd, Groton, CT

LOCATED AT: 250 Brandegee MAP_____ BLOCK_____ LOT_____

ABUTTING PROPERTY OWNERS

NAME AND ADDRESS	MAP	BLOCK	LOT
Please see the attached list of Abutting Property Owners			

SIGNED: _____ DATE: 6/28/19
(Applicant's Signature)

(Information for this form can be obtained at the Town of Groton, Tax Assessor's Office, 45 Fort Hill Road, Groton, CT 06340)

West Side School
Abutting Property Owners
June 12, 2019

Number	Street	PIN	Owner	Mailing Address	Type	
180	Brandegee	168811753436	Miller, Paul G. & Debra J.	180 Brandegee Ave Groton, CT 06340	Residential	immediately adjacent properties
214	Litton Ave	168811754409	Pearsall, Phadealia	214 Litton Ave Groton, CT 06340	Residential	
208	Litton Ave	168811754540	Llanos, Carmen A. & Negron, Mildred	208 Litton Ave Groton, CT 06340	Residential	
42	Litton Ave	168812765095	Litton Apartments LLC	40 Broad St, Suite 604, New York, NY 10004	Residential Apartments	
0	Litton Ave	168812758981 E	Town of Groton	45 Fort Hill Rd Groton, CT 06340	Exempt	
0	Poquonnock Rd	168812856575 E	Town of Groton	45 Fort Hill Rd Groton, CT 06340	Exempt	
0	High Rock Rd	169809050131 E	Town of Groton (Birch Plain Creek)	45 Fort Hill Rd Groton, CT 06340	Exempt	
0	Brandegee	168816847113	Birch Plain Properties LLC	140 Fisherville Ln Westport, MA 02790	Vacant	
300	Brandegee	168816749104	Avery Heights Limited PTSHP C/O SHP Management	7 Thomas Dr Cumberland Foreside, ME 04110	Apartments	
0	Morse Ave	168815742564	BVH & Associates	183 Shewville Rd Mystic, CT 06355	Vacant	across ROW/Brandegee
253	Brandegee	168815742776	Albee, John & Virga, Joseph P. Jr.	12 Partridge Ln Derry, NH 03038	Residential Multi-Family	
245	Brandegee	168815742866	Karsydney LLC	1159 Orlo Dr McLean, VA 22102	Residential Multi-Family	
183	Hynes Ave	168815742964	Yu Qian	227 Thurber Ave Attleboro, MA 02703	Residential Multi-Family	
183	Brandegee	168811752203	Shoreline Acquisition Group LLC	7 Buck Hill Rd Old Saybrook, CT 06475	Residential	

Property information obtained from Town of Groton GIS Viewer (online system)

EXISTING FIELDS TO REMAIN

WOODED SLOPE

DETENTION BASIN

NEW SCHOOL BUILDING LOWER LEVEL

NEW SCHOOL BUILDING MAIN LEVEL

T.O. BEAM ELEV = 150'-1"
DELTA TO ROAD = 23'-1"
ELEV FROM ADJACENT GRADE = 52'-1"

T.O. BEAM ELEV = 150'-1"
DELTA TO ROAD = 23'-1"
ELEV FROM ADJACENT GRADE = 45'-1"

T.O. BEAM ELEV = 150'-1"
DELTA TO ROAD = 23'-1"
ELEV FROM ADJACENT GRADE = 41'-1"

T.O. BEAM ELEV = 150'-1"
DELTA TO ROAD = 23'-1"
ELEV FROM ADJACENT GRADE = 44'-7"

T.O. BEAM ELEV = 136'-0"
DELTA TO ROAD = 9
ELEV FROM ADJACENT GRADE = 15'-0"

T.O. BEAM ELEV = 144'-7"
DELTA TO ROAD = 17'-7"
ELEV FROM ADJACENT GRADE = 24'-7"

T.O. BEAM ELEV = 142'-2 1/4"
DELTA TO ROAD = 15'-2 1/4"
ELEV FROM ADJACENT GRADE = 21'-2 1/4"

BRANDEGEE AVENUE

AVERAGE ELEVATION OF ROAD = 127

N.T.S.

LEGEND

TS	TOP OF STEP	FC	FLUSH CURB	(+)	EXISTING GRADE
BS	BOTTOM OF STEP	TW	TOP OF WALL	FFE	FINISHED FLOOR ELEVATION
TR	TOP OF RAMP	BW	BOTTOM OF WALL		FLUSH CONDITION
BR	BOTTOM OF RAMP	LP	LOW POINT		
TC	TOP OF CURB	HP	HIGH POINT		
BC	BOTTOM OF CURB	TF	TOP OF FRAME		

NO.	DATE	ISSUE

LANDSCAPE ARCHITECT
Richter & Cegan Inc.
8B CANAL COURT P.O. BOX 567
AVON, CT 06001 PHONE: 860-678-0669

SEAL

SCALE: 1" = 30' - 0"

PERKINS EASTMAN
422 Summer Street
Stamford, CT 06901
T. +1 203 251 7400
F. +1 203 251 7474

PROJECT TITLE:
West Side School

PROJECT No:

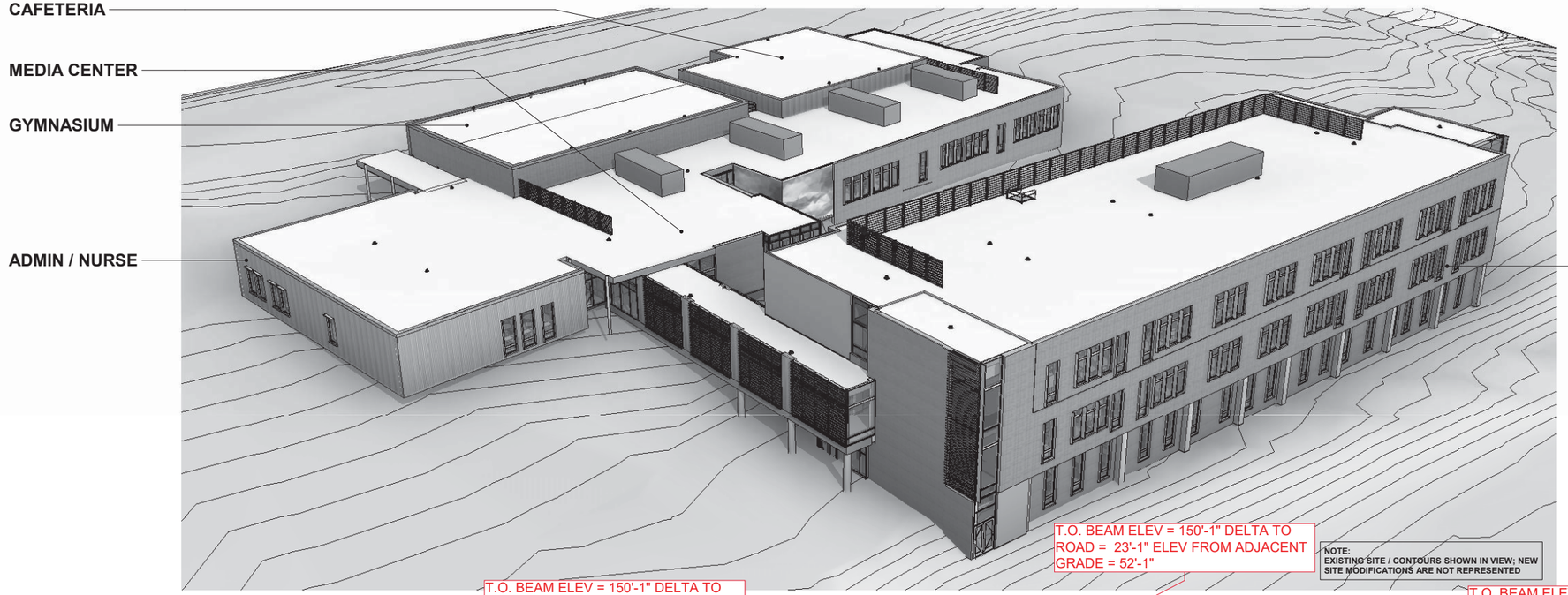
DRAWING TITLE:
LANDSCAPE GRADING PLAN

L-103

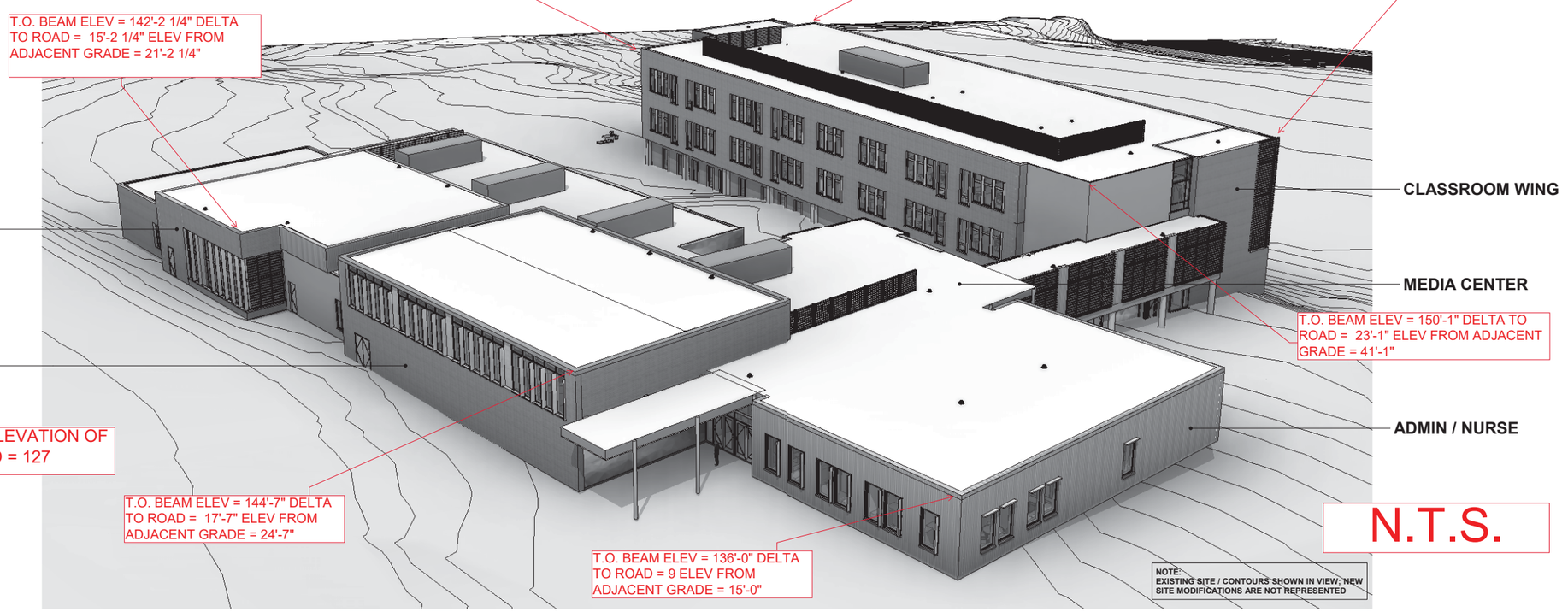
DESIGN DEVELOPMENT PRICING SET

MAY 31, 2019

Z:\2018\017-WEST\3\DESIDEV\Main\18017L-103.dwg 05/31/2019 1:51:44 PM GNicoll



2 3D_AERIAL VIEW 2



1 3D_AERIAL VIEW 1

FOR REFERENCE ONLY

C:\REVIT LOCAL\74451_GROTON-WESTSIDE_ARCH_NEW-REDESIGN OPTION 1_LI.Giamundo.rvt
5/31/2019 6:23:14 PM

NO.	DATE	ISSUE

SEAL

KEY PLAN

PERKINS EASTMAN
677 Washington Blvd, Suite 101
Stamford, CT 06901
T. +1 203 251 7400
F. +1 203 251 7474

Owner:
City of Groton
Town Hall Annex 134 Groton Long Point Road
Groton, CT 06340 860.572.2100

Construction Manager:
O & G Industries
112 Wall Street
Torrington, CT 06790 860.489.9261

Owner's Representative:
Arcadis
207 Main Street, Suite 200
Hartford, CT 06106 860.906.1577

Civil / Site:
Milone & MacBroom
99 Realty Drive
Chesire, CT 06410 203.271.1773

Landscape:
Richter & Cegan
Avon Park North P.O. Box 567, 8B Canal Court,
Avon, CT 06001 860.678.0669

Structural:
BVH Integrated Services
206 West Newberry Road
Bloomfield, CT 06002 860.286.9171

Mechanical, Electrical, Plumbing & Fire Protection:
Diversified Technology Consultants
2321 Whitney Avenue, Suite 301
Hamden, CT 06518 203.239.4200

Technology and Security
D'Agostino & Associates
1266 E. Main Street
Stamford, CT 06902 203.539.6164

Food Service:
Foodservice Facilities International
137 Elm Place
New Canaan, CT 06840 203.972.1605

Acoustical Consultant:
Acentech
33 Moulton Street
Cambridge, MA 02138 617.499.8000

Sustainability Consultant:
Atelier Ten
798 Chapel Street
New Haven, CT 06510 203.777.1400

PROJECT TITLE:

WEST SIDE ELEMENTARY SCHOOL

250 Brandagee Ave
Groton, CT 06340

PROJECT No: 74451

DRAWING TITLE:

EXTERIOR AERIAL VIEWS

SCALE:

A-901

DESIGN DEVELOPMENT PRICING SET

MAY 31, 2019

CITY OF GROTON
BUILDING & ZONING DEPARTMENT
295 Meridian Street, Groton, CT 06340
(860) 446-4104

Name Curtis Whipple / Arcadis Date 6/28/19

Re: 250 Brandegee Ave

	APPLICATION FEE		TOTAL	
	BUILDING	BUILDING PERMITS	$	
		ELECTRIC PERMITS		
		HVAC PERMITS		
		PLUMBING PERMITS		
		PLAN REVIEW		
		DEMOLITION		
		CO/RH INSPECTIONS		
	PLANNING	SPECIAL PERMIT		
		SITE PLAN		
		SUBDIVISION		
	~~COASTAL SITE PLAN~~ DEEP		60	00
	ZONING BOARD OF APPEALS			
	HISTORIC DISTRICT			
	HEALTH DEPARTMENT	VENDOR		
		ESTABLISHMENT		
	PUBLICATIONS			
	PHOTO COPIES			
	MISC			
Signature DPatrick		TOTAL REC'D	$ 60	00

025813

WEST SIDE ELEMENTARY SCHOOL, GROTON, CT.
SEQUENCE OF CONSTRUCTION
August 13, 2019

SITEWORK PHASE A – THREE-STORY BUILDING FOUNDATION AND STRIP EXISTING PLAYING FIELD (ANTICIPATED TIMELINE - APRIL 13, 2020 THROUGH MAY 15, 2020):

1. LIMITS OF CONSTRUCTION TO BE STAKED IN THE FIELD PRIOR TO THE START OF CONSTRUCTION.
2. SET-UP PERIMETER EROSION CONTROLS FOR THIS PHASE OF CONSTRUCTION.
3. INITIATE WEEKLY EROSION CONTROL INSPECTIONS AND MONITORING PER CT DEEP CONSTRUCTION STORMWATER GENERAL PERMIT REGISTRATION.
4. INSTALL PERIMETER TEMPORARY FENCING AND GATES.
5. CONSTRUCT CONSTRUCTION TEMPORARY ACCESS ROAD TO WORK AREA. TEMPORARY ACCESS ROAD WILL REMAIN IN PLACE FOR APPROXIMATELY ONE YEAR.
6. INSTALL TEMPORARY SEDIMENT TRAP(S) FOR THIS PHASE.
7. MOBILIZE CONSTRUCTION MANAGER'S OFFICE TRAILER TO THE SITE AND CONNECT TEMPORARY UTILITY SERVICES.
8. STRIP TOPSOIL AT BUILDING FOOTPRINT, AT EXISTING PLAYING FIELD AND ALONG CONSTRUCTION ACCESS ROAD. TOPSOIL IS TO BE STOCKPILED IN DESIGNATED AREAS.
9. REMOVE UNSUITABLE SOILS AT BUILDING FOOTPRINT AND BEGIN EXCAVATION FOR BUILDING FOUNDATION. BEGIN CONCRETE WORK FOR FOOTINGS AND FOUNDATION WALLS.

SITEWORK PHASE B – CONTINUE CONSTRUCTION OF THREE-STORY BUILDING FOUNDATION AND START OF SINGLE-STORY BUILDING FOUNDATION (ANTICIPATED TIMELINE - MAY 15, 2020 UNTIL END OF 2019/2020 SCHOOL YEAR):

1. SET-UP PERIMETER EROSION CONTROLS FOR THIS PHASE OF CONSTRUCTION.
2. CONTINUE WEEKLY EROSION CONTROL INSPECTIONS AND MONITORING PER CT DEEP CONSTRUCTION STORMWATER GENERAL PERMIT REGISTRATION.
3. RELOCATE PERIMETER TEMPORARY FENCING AND GATES.

SITEWORK PHASE C – CONTINUE CONSTRUCTION OF SINGLE-STORY BUILDING FOUNDATION, DEMOLISH EXISTING SCHOOL BUILDING AND CONSTRUCT NEW PARKING AREAS AND DRIVES (ANTICIPATED TIMELINE - JULY 2020 THROUGH PROJECT COMPLETION IN 2021):

1. SET-UP PERIMETER EROSION CONTROLS FOR THIS PHASE OF CONSTRUCTION.
2. INSTALL PERIMETER TEMPORARY FENCING AND LOCKED GATES TO SECURE CONSTRUCTION ENTRANCES FROM BRANDEGEE AVENUE.
3. INSTALL TEMPORARY SEDIMENT TRAP(S) FOR THIS PHASE.
4. STRIP EXISTING PAVEMENTS AND REMOVE UNSUITABLE SOILS AT BUILDING FOOTPRINT. STAKE OUT BUILDING FOOTPRINT AND BEGIN EXCAVATION FOR BUILDING FOUNDATION. BEGIN CONCRETE WORK FOR FOOTINGS AND FOUNDATION WALLS.
5. AT CONSTRUCTION STAGING AREA - PLACE FILTER FABRIC OVER SUBSOIL AND COVER WITH 6-INCHES OF CRUSHED STONE. THE STONE IS TO BE MAINTAINED UNTIL SUCH TIME IT NEEDS TO BE REMOVED TO RECONSTRUCT PLAYING FIELD.
6. AFTER THE OWNER MOVES OUT OF THE EXISTING BUILDING (ANTICIPATED JULY 2020), COMMENCE WITH ABATEMENT OPERATIONS. AFTER ABATEMENT IS COMPLETE (ANTICIPATED LATE FALL 2020), DEMOLISH EXISTING WEST SIDE MIDDLE SCHOOL BUILDING.
7. BEGIN MASS EXCAVATION OF DETENTION BASIN AND FORMATION OF EMBANKMENTS. CONSTRUCT BASIN AND INSTALL OUTLET STRUCTURES DIRECTING SURFACE RUNOFF TO BASIN. THE BOTTOM OF THE BASIN SHALL BE UNDER EXCAVATED BY 12" TO 18" TO BE UTILIZED AS SEDIMENT BASIN DURING CONSTRUCTION.
8. ONCE FOUNDATION WALLS ARE UP AND THE BUILDING FOOTPRINT IS PERMANENTLY STABILIZED, BEGIN INSTALLING UNDERGROUND UTILITIES FOR THE BUILDING IN CONJUNCTION WITH CONSTRUCTING THE BUILDING.
9. CONTINUE CONSTRUCTION OF BUILDING AND INSTALLATION OF UNDERGROUND UTILITIES.
10. INSTALL REMAINING UTILITIES UNDER AND AROUND PARKING LOTS AND DRIVES. PLACE BINDER COURSE OF PAVEMENT AS BASE COURSE IS BROUGHT UP TO GRADE.
11. PREPARE SUBGRADE OF DRIVEWAYS AND PLACE BITUMINOUS BINDER COURSE.
12. REMOVE CONSTRUCTION STAGING AND LAYDOWN AREA TO BEGIN FIELD RECONSTRUCTION. RENOVATE SOILS AND DECOMPACT AS NEEDED TO ACCOMMODATE FIELD CONSTRUCTION.
13. COMPLETE FIELD AND ALL SITE IMPROVEMENTS.

14. PLACE PERMANENT SEEDING AT AREAS DISTURBED DUE TO CONSTRUCTION AND INSTALL PLANTINGS

15. CLEAN STORM DRAINAGE SYSTEM OF ALL SEDIMENT AND DEBRIS. RAKE OUT AND FINISH GRADE BOTTOM OF STORMWATER BASIN. COMPLETE ALL PLANTINGS AND PERMANENT STABILIZATION OF STORMWATER MANAGEMENT BASIN AND OUTLET SPLASH PAD, SPILLWAY AND LEVEL SPREADER.

16. REMOVE ALL TEMPORARY PERIMTER FENCING AND TEMPROARY SEDIMENTATION AND SOIL EROSION CONTROL MEASURES.

17. CLEAN AND SWEEP ALL PAVED SURFACES TO PREPARE FOR FINAL PAVING.

18. PLACE FINAL COURSE OF BITUMINOUS PAVEMENT AT DRIVES AND PARKING LOTS.

19. INSTALL ALL PAVEMENT MARKINGS, SIGNAGE, SITE LIGHTING, AND SITE FURNISHINGS.

20. CLOSE OUT PROJECT AND FILE NOTICE OF TERMINATION FORM TO CLOSE CT DEEP STORMWATER GENERAL PERMIT REGISTRATION.

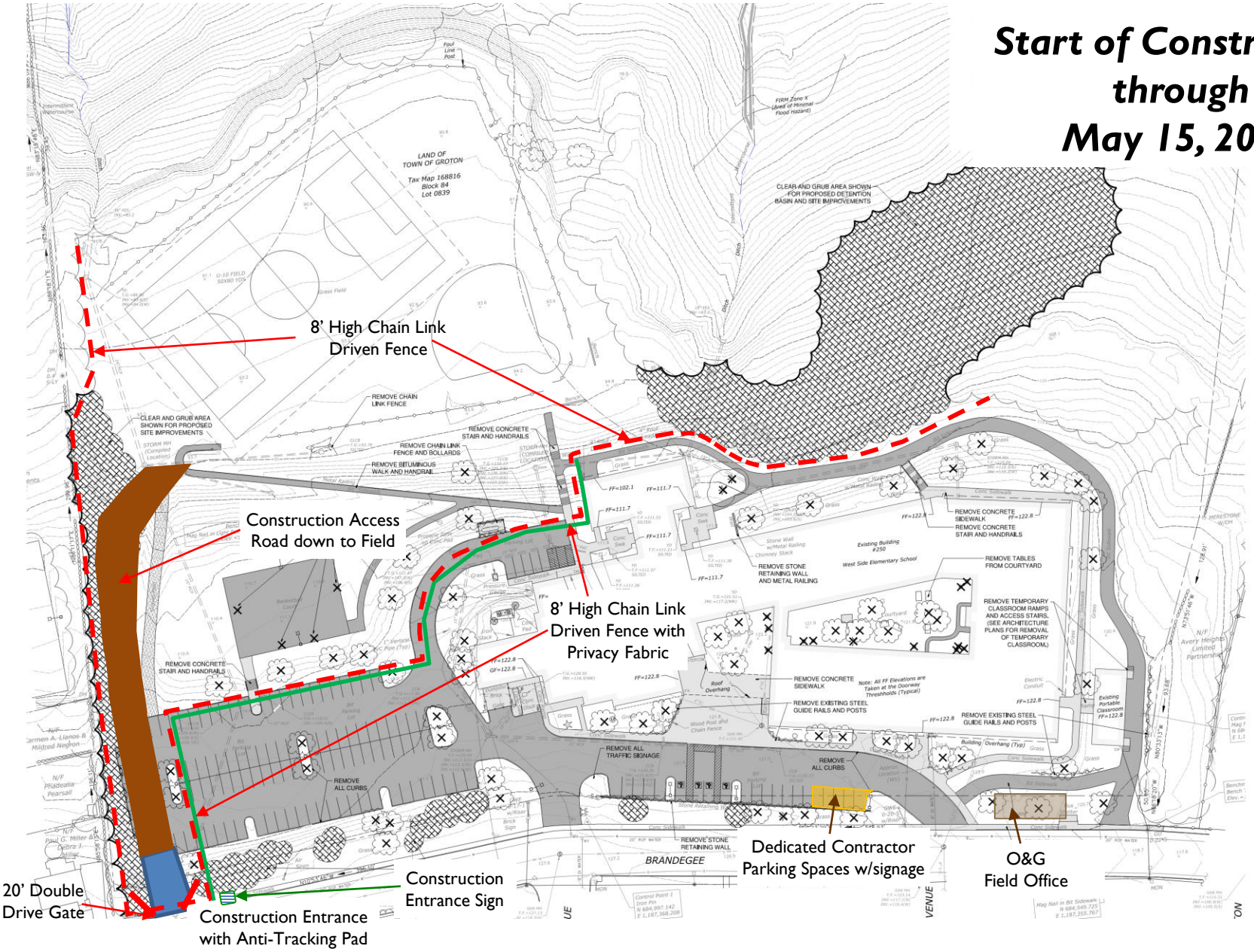
Building Confidence

Site Logistics Plan – Phase A

West Side Elementary School, Groton, CT

August 13, 2019

Start of Construction through May 15, 2020



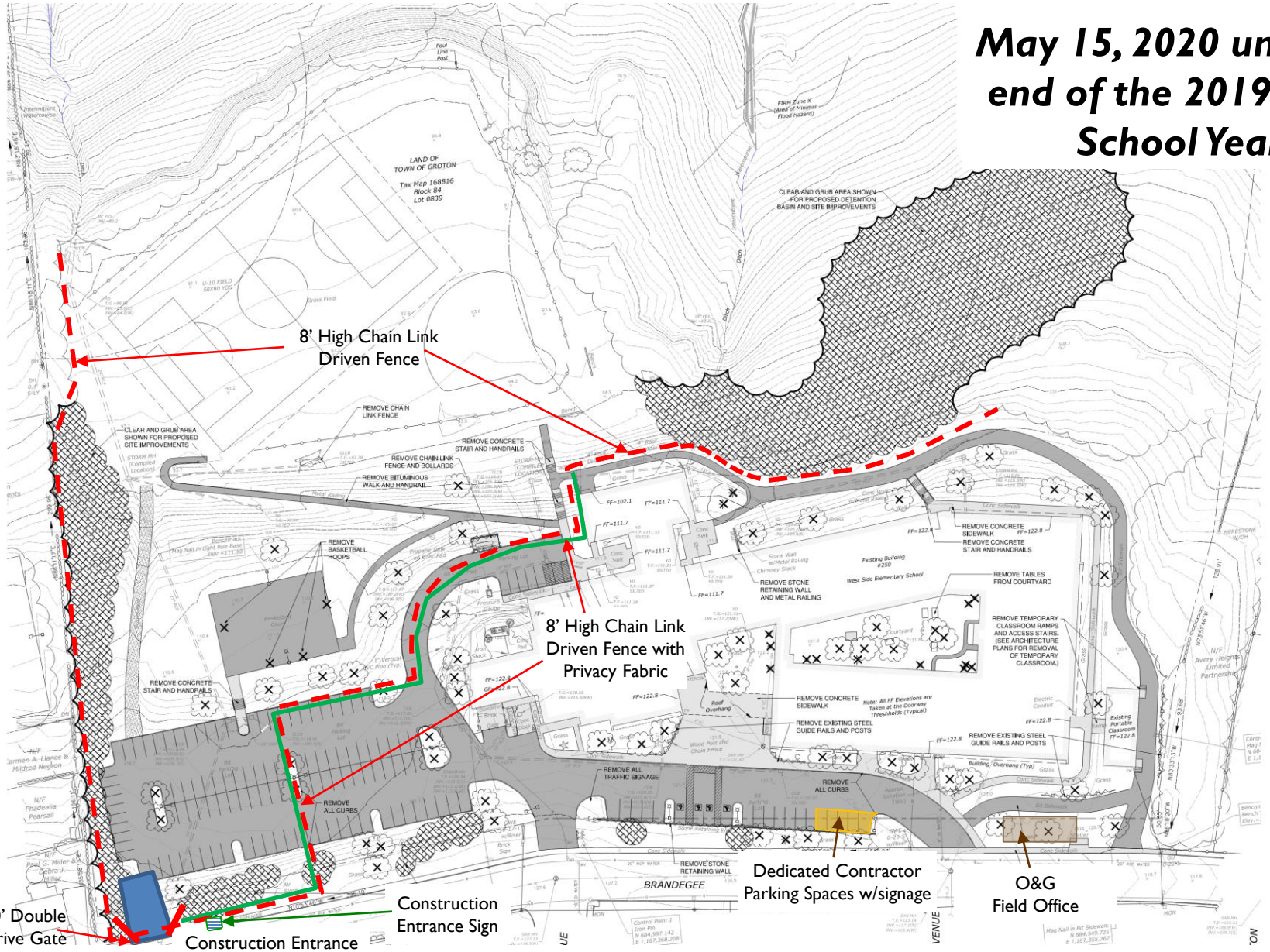
Building Confidence

Site Logistics Plan – Phase B

West Side Elementary School, Groton, CT

July 19, 2019

May 15, 2020 until the end of the 2019/2020 School Year



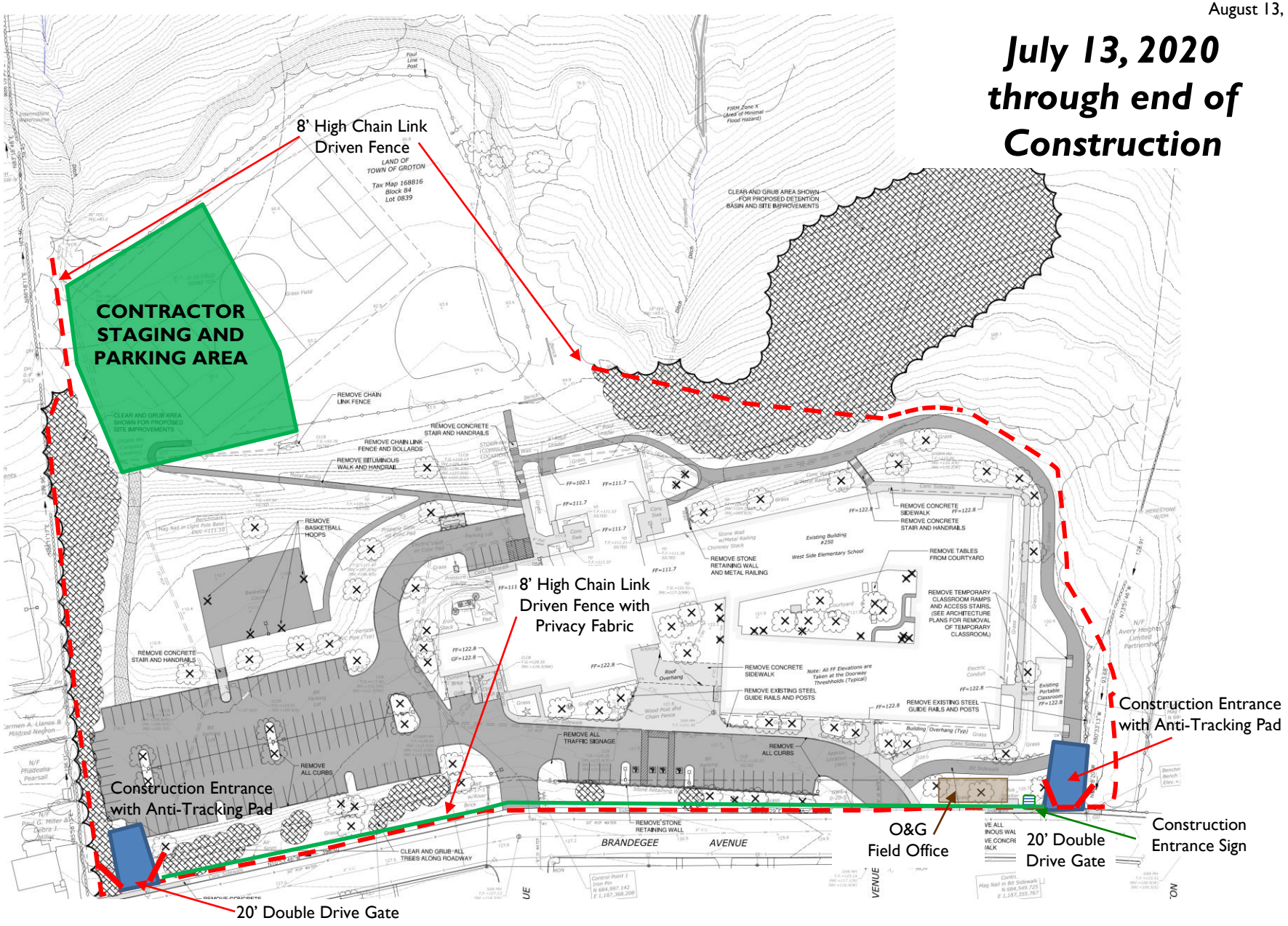
Building Confidence

Site Logistics Plan – Phase C

West Side Elementary School, Groton, CT

August 13, 2019

July 13, 2020 through end of Construction



Job: Westside Elementary DD Alt1
Units: Ft-CY
Wed Jul 10, 2019 08:44:37 Page 1

Revised August 13, 2019

Volume Report
Subgrade vs. Stripped

	Total	Area Cut	Area Fill	OnGrade	Volume Cut	Volume Fill	Comp/Ratio Cut	Comp/Ratio Fill	Compact Cut	Compact Fill	Export -Import	Change Per .1 Ft
Building	27,420	4,877	21,796	747	227	2,204	1.00	1.00	227	2,204	-1,977	102
Building	15,425	13,590	1,574	261	1,740	56	1.00	1.00	1,740	56	1,684	57
Building Sub:	**42,845**	**18,467**	**23,370**	**1,008**	**1,967**	**2,260**			**1,967**	**2,260**	**-293**	**159**
Field For Fill	100,094	0	99,758	336	0	13,935	1.00	1.00	0	13,935	-13,935	371
Pavement	115,323	88,627	25,412	1,284	10,792	3,393	1.00	1.00	10,792	3,393	7,399	427
Play Area	25,738	11,936	13,782	20	749	3,320	1.00	1.00	749	3,320	-2,571	95
Topsoil	207,207	126,466	62,977	17,764	16,095	6,082	1.00	1.00	16,095	6,082	10,013	767
Topsoil	1,003	0	1,003	0	0	68	1.00	1.00	0	68	-68	4
Topsoil	5,722	4,505	1,096	121	284	26	1.00	1.00	284	26	258	21
Topsoil	2,832	2,822	9	1	371	2	1.00	1.00	371	2	369	10
Topsoil	656	656	0	0	86	0	1.00	1.00	86	0	86	2
Topsoil	298	295	0	3	24	0	1.00	1.00	24	0	24	1
Topsoil	298	294	0	4	8	0	1.00	1.00	8	0	8	1
Topsoil	3,558	3,558	0	0	311	0	1.00	1.00	311	0	311	13
Topsoil Sub:	**221,574**	**138,596**	**65,085**	**17,893**	**17,179**	**6,178**			**17,179**	**6,178**	**11,001**	**819**
Regions Total	**505,574**	**257,626**	**227,407**	**20,541**	**30,687**	**29,086**			**30,687**	**29,086**	**1,601**	**1,871**

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

June 13, 2019

Megan B. Raymond
Milone & MacBroom inc
195 Church St
New Haven CT 06510
mraymond@mminc.com

Project: Redevelopment of West Side Middle School, 250 Brandegee Avenue, in Groton, CT
NDDB Determination No.: 201907190

Dear Ms. Raymond,

I have reviewed Natural Diversity Database (NDDB) maps and files regarding the area of work provided for the proposed redevelopment of West Side Middle School in the upland portions of 250 Brandegee Avenue in Groton, Connecticut. I do not anticipate negative impacts to State-listed species (RCSA Sec. 26-306) resulting from your proposed activity at the site based upon the information contained within the NDDB. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits. This determination is good for two years. Please re-submit a new NDDB Request for Review if the scope of work changes or if work has not begun on this project by June 13, 2021.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey, cooperating units of DEEP, landowners, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the NDDB should not be substitutes for on-site surveys necessary for a thorough environmental impact assessment. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the database as it becomes available.

Please contact me if you have further questions at (860) 424-3378, or karen.zyko@ct.gov . Thank you for consulting the Natural Diversity Database.

Sincerely,

Karen Zyko
Environmental Analyst

Joe Banks

From: Levine, Todd <Todd.Levine@ct.gov>
Sent: Thursday, June 6, 2019 4:33 PM
To: Joe Banks; Labadia, Catherine
Cc: Whipple, Curtis; Butkus, John; Norris, Rick
Subject: RE: Groton ES: Cutler and West Side
Attachments: 2019 Environmental Review Process Template Letter.docx; ProjectNotificationForm_2019.pdf

Hi Joe,
Please find attached our project notification form and instructions. Based on our discussion, you said the local contact noted that one of the sites may be archeologically sensitive and they are interested in preemptively doing a phase 1a archeological survey to help the process. You also noted that there may be tribal interest in the site. Cathy, meet Joe. Joe, meet Cathy Labadia, our staff archeologist. She can guide you on all things archeological for the State.
Thanks,
~T~

Todd Levine
Historian
State Historic Preservation Office
Dept. of Economic & Community Development
State of Connecticut
450 Columbus Blvd., Suite 5
Hartford, CT 06103
O: 860-500-2337

Connecticut
still revolutionary

Get all the SHPO news and events! Sign up for our monthly newsletter.

Follow us on:

From: Joe Banks [mailto:j.banks@perkinseastman.com]
Sent: Thursday, June 6, 2019 2:51 PM
To: Levine, Todd <Todd.Levine@ct.gov>
Cc: Whipple, Curtis <Curtis.Whipple@arcadis.com>; Butkus, John <John.Butkus@arcadis.com>; Norris, Rick <RNorris@groton-ct.gov>
Subject: Re: Groton ES: Cutler and West Side

Sounds good, I'll give you a call.

Sent from my T-Mobile 4G LTE Device

-------- Original message --------
From: "Levine, Todd" <Todd.Levine@ct.gov>
Date: 6/6/19 1:55 PM (GMT-05:00)
To: Joe Banks <j.banks@perkinseastman.com>
Cc: "Whipple, Curtis" <Curtis.Whipple@arcadis.com>, "Butkus, John" <John.Butkus@arcadis.com>, "Norris, Rick" <RNorris@groton-ct.gov>
Subject: RE: Groton ES: Cutler and West Side

Hi Joe,
How about 4 today?
~T~

Todd Levine
Historian
State Historic Preservation Office
Dept. of Economic & Community Development
State of Connecticut
450 Columbus Blvd., Suite 5
Hartford, CT 06103
O: 860-500-2337

Connecticut
still revolutionary

Get all the SHPO news and events! Sign up for our monthly newsletter.

Follow us on:

From: Joe Banks [mailto:j.banks@perkinseastman.com]
Sent: Tuesday, June 4, 2019 4:13 PM
To: Levine, Todd <Todd.Levine@ct.gov>
Cc: Whipple, Curtis <Curtis.Whipple@arcadis.com>; Butkus, John <John.Butkus@arcadis.com>; Norris, Rick <RNorris@groton-ct.gov>
Subject: Groton ES: Cutler and West Side

Todd, let me know when I can catch up with you about determining the need for archeological investigation at two school sites in Groton? Not sure what the process is now that SHPO approval is on the DAS checklist for approval to bid.

Thanks,

Joe Banks, AIA, LEED AP
Senior Associate

PERKINS EASTMAN
677 Washington Boulevard, Suite 101 | Stamford, CT 06901 | US
T. +1 203 251 7423
M. +1 203 435 6513
E. j.banks@perkinseastman.com

www.perkinseastman.com

WE MOVED!
Please note our new office address.

This message is sent by Perkins Eastman Architects DPC, and/or its Affiliates, and is intended exclusively for the persons to whom it is addressed. This communication may contain information that is privileged or confidential. If you are not the named addressee, you are not authorized to read, print, retain, copy, or disseminate any part of this message.

MILONE & MACBROOM

June 7, 2019

Mr. Carlton Smith
Town of Groton
295 Meridian Street
Groton, CT 06340

RE: Proposed West Side Elementary School
250 Brandegee Avenue
Groton, Connecticut
MMI #1777-39

Dear Mr. Smith:

Based upon our professional opinion, we offer the following certifications per the Groton Wetland Regulations:

- No portion of the property on which the regulated activity is proposed is located within 500 feet of the boundary of an adjoining municipality, except for the Town of Groton;
- No traffic attributable to the completed project on the site will use streets within the adjoining municipality to enter or exit the site;
- No sewer or water drainage from the project site will flow through and impact the sewage or drainage system within the adjoining municipality; or
- No water runoff from the improved site will impact streets or other municipal or private property within the adjoining municipality.

Very truly yours,

MILONE & MACBROOM, INC.

Thomas J. Daly, PE, Vice President
Senior Project Manager, Civil Engineering

cc: Mr. Joe Banks, Perkins Eastman
Mr. Rick Norris, Town of Groton

1777-39-jn719-ltr