TOWN OF CARMEL
PLANNING BOARD

60 McAlpin Avenue
Mahopac, New York 10541
Tel. (845) 628-1500 – Ext.190
www.ci.carmel.ny.us

PLANNING BOARD AGENDA
DECEMBER 9, 2021 – 7:00 P.M.

Revision #1

		TAX MAP #	PUB. HEARING	MAP DATE	COMMENTS
PUBLIC HEARING					
1.	Binns Family Trust – 5 Veschi Lane South	75.20-2-2	12/9/21	11/4/21	Public Hearing/Resolution
SITE PLAN					
2.	Hamlet at Carmel – Stoneleigh Ave, Carmel	66.-2-58		11/29/21	Amended Site Plan
SUBDIVISION					
3.	Western Bluff Subdivision – 350 West Shore Drive	66.14-1-20		11/8/21	3 Lot Subdivision
MISCELLANEOUS					
4.	Minutes – 10/27/21 & 11/18/21				

INSITE
ENGINEERING, SURVEYING &
LANDSCAPE ARCHITECTURE, P.C.

November 29, 2021

Town of Carmel Planning Board
60 McAlpin Avenue
Mahopac, New York 10541

RE: Amended Site Plan
The Hamlet at Carmel
TM# 66.-2-58

Dear Chairman Paeprer and Members of the Board:

Please find enclosed the following plans and documents in support of an application for an amended site plan approval for the above referenced project:

- Ten (10) sheet Amended Site Plan Set, dated November 29, 2021. (5 copies)
- SEQRA Environmental Assessment Form & Supplemental Studies (Expanded EAF), prepared by Tim Miller Associates, revised November 29, 2021 (11 copies)
- Draft Stormwater Facility Maintenance Agreement (11 copies)

The applicant seeks amended site plan approval for 150 units of multifamily housing development in accordance with Town Code §156-28.

In response to the comments received from Director of Code Enforcement, Michael Carnazza, dated October 14, 2021, we provide the following response:

1. Average grade calculations will be provided prior to Certificate of Occupancy.
2. The proposed project will have an adequate water supply. Connection will be made to Carmel Water District #2, which has more than adequate capacity to service the proposed project.

In response to the comments received from Town Planner, Patrick Cleary, dated October 14, 2021, we provide the following responses:

1. The Kearney Group will act as both developer and property manager for the affordable portion of the project. The tax credits that govern the rents are checked annually by NYS Housing and Community Renewal, Raymond James Tax Credit Funds, and the applicant's lender. The Kearney Group will coordinate all of the compliance and reporting requirements.
2. This comment is noted.
3. This comment is noted.
4. This comment is noted.
5. The Expanded EAF document has been updated to address comments received at the October and July Planning Board Planning Board meetings. It includes the fiscal analysis and traffic counts collected in September.
6. This comment is noted.
7. This comment is noted.

8. This comment is noted.

9. This comment is noted.

10. This comment is noted.

In response to the comments received from Town Engineer, Richard Franzetti, PE, dated October 13, 2021, we provide the following responses:

I. General Comments:

1. This comment is noted.

2. This comment is noted.

3. The existing onsite intermittent watercourses will be field verified with NYCDEP.

4. As previously noted, the project has a full SWPPP and related permit coverage under the NYSDEC General Permit for Construction Activities. A SWPPP Addendum has been submitted to the Town and will be submitted to NYCDEP for their review.

5. The updated traffic analysis is included with the enclosed Expanded EAF and will be forwarded to PCDH&F.

6. A Draft Stormwater Facility Maintenance Agreement is attached for review.

7. There are no proposed public improvements and therefore related bonds, and fees are not required.

II. Detailed Comments:

1. Grading and Utilities Plan – SP-3

   a. Rim and invert information will be provided with a future submission.

   b. Hydraulic calculations will be provided with a future submission.

   c. It is noted that water and sewer utilities are shown on Drawing SP-2, and electric is not typically shown as its design is controlled by NYSEG.

2. Erosion Control and Phasing Plan

   a. Rim and invert information will be provided with a future submission.

   b. A Full SWPPP has been prepared and accepted as noted above.

   c. The project phasing as shown on Drawing SP-4 includes distinct elements and a description for each phase. With this guidance, we do not see the need to show each phase on a separate sheet.

3. As previously noted, all roadways are proposed to be privately owned. The pavement cross sections have been revised as recommended.

4. All site details have been previously revised based on related comments.

Please place the project on the December 9, 2021 Planning Board agenda for a discussion with the Board, and to schedule the required public hearing.

Should you have any questions or comments regarding this information, please feel free to contact our office.

Very truly yours,

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

By: _____
Jeffrey J. Contelmo, PE
Senior Principal Engineer

JJC/adt/amk

Enclosures (all via email)

cc: Ken Kearney
Sean Kearney
Jon Dahlgren
Mario Salpepi
Charles Martabano, Esq.

Insite File No. 14211.100

The Hamlet at Carmel

Stormwater Facility Maintenance Agreement

Whereas, the Town of Carmel, 60 McAlpin Avenue, Mahopac, NY ("Municipality") and The Hamlet at Carmel Associates, LLC, 57 Route 6, Suite 207, Baldwin Place, NY ("Facility Owner") want to enter into an agreement to provide for the long-term maintenance and continuation of stormwater control measures approved by the Municipality for the The Hamlet at Carmel project, located at Stoneleigh Avenue, Carmel, NY, Tax Map ID 66-2-58.

Whereas, the Municipality and the Facility Owner desire that the stormwater control measures be built in accordance with the approved project plans and thereafter be maintained, cleaned, repaired, replaced and continued in perpetuity in order to ensure optimum performance of the components.

Therefore, the Municipality and the Facility Owner agree as follows:

1. This agreement inures to the benefit of the Municipality and binds the Facility Owner, its successors and assigns, to the maintenance provisions depicted in the approved project plans which are attached as Schedule A of this agreement.
2. The Facility Owner shall maintain, clean, repair, replace and continue the stormwater control measures depicted in Schedule A as necessary to ensure optimum performance of the measures to design specifications. The stormwater control measures shall include, but shall not be limited to, the following: stormwater management ponds, swales, culverts, and drainage structures.
3. The Facility Owner shall be responsible for all expenses related to the maintenance of the stormwater control measures and shall establish a means for the collection and distribution of expenses among parties for any

commonly owned facilities.

4. The Facility Owner shall provide for the periodic inspection of the stormwater control measures, not less than once in every five-year period, to determine the condition and integrity of the measures. Such inspection shall be performed by a professional engineer licensed by the State of New York. The inspecting engineer shall prepare and submit to the Municipality, within 30 days of the inspection, a written report of the findings, including recommendations for those actions necessary for the continuation of the stormwater control measures.

5. The Facility Owner shall not authorize, undertake or permit alteration, abandonment, modification or discontinuation of the stormwater control measures except in accordance with written approval of the Municipality.

6. The Facility Owner shall undertake necessary repairs and replacement of the stormwater control measures at the direction of the Municipality or in accordance with the recommendations of the inspecting engineer.

7. The Facility Owner shall provide to the Municipality, within 30 days of the date of this agreement, a security for the maintenance and continuation of the stormwater control measures in the form of a bond, letter of credit or escrow account.

8. This agreement shall be recorded in the Office of the County Clerk, County of Putnam together with the deed for the subject premises.

9. In the event that the Municipality determines that the Facility Owner has failed to construct or maintain the stormwater control measures in accordance with the project plan or has failed to undertake corrective action specified by the Municipality or by the inspecting engineer, the Municipality is authorized to undertake such steps as reasonably necessary for the preservation, continuation or maintenance of the stormwater control measures and to affix the expenses thereof as a lien against the property.

10. Nothing within this agreement shall be construed to impose any affirmative obligation or covenant of performance on the Municipality.

11. This agreement is effective on date of filing.

Facility Owner: The Hamlet at Carmel Associates, LLC .

Owner's Representative: Ken Kearney .

Representative Signature: _____.

ACKNOWLEDGEMENTS

STATE OF NEW YORK)
) ss.:
TOWN OF_____)

On this ____ day of _____, 20__, before me, personally came _____ to me known and known to me to be the person described in and who executed the foregoing instrument and he acknowledged to me that he executed the same.

_____
Notary Public

Town of Carmel: _____.

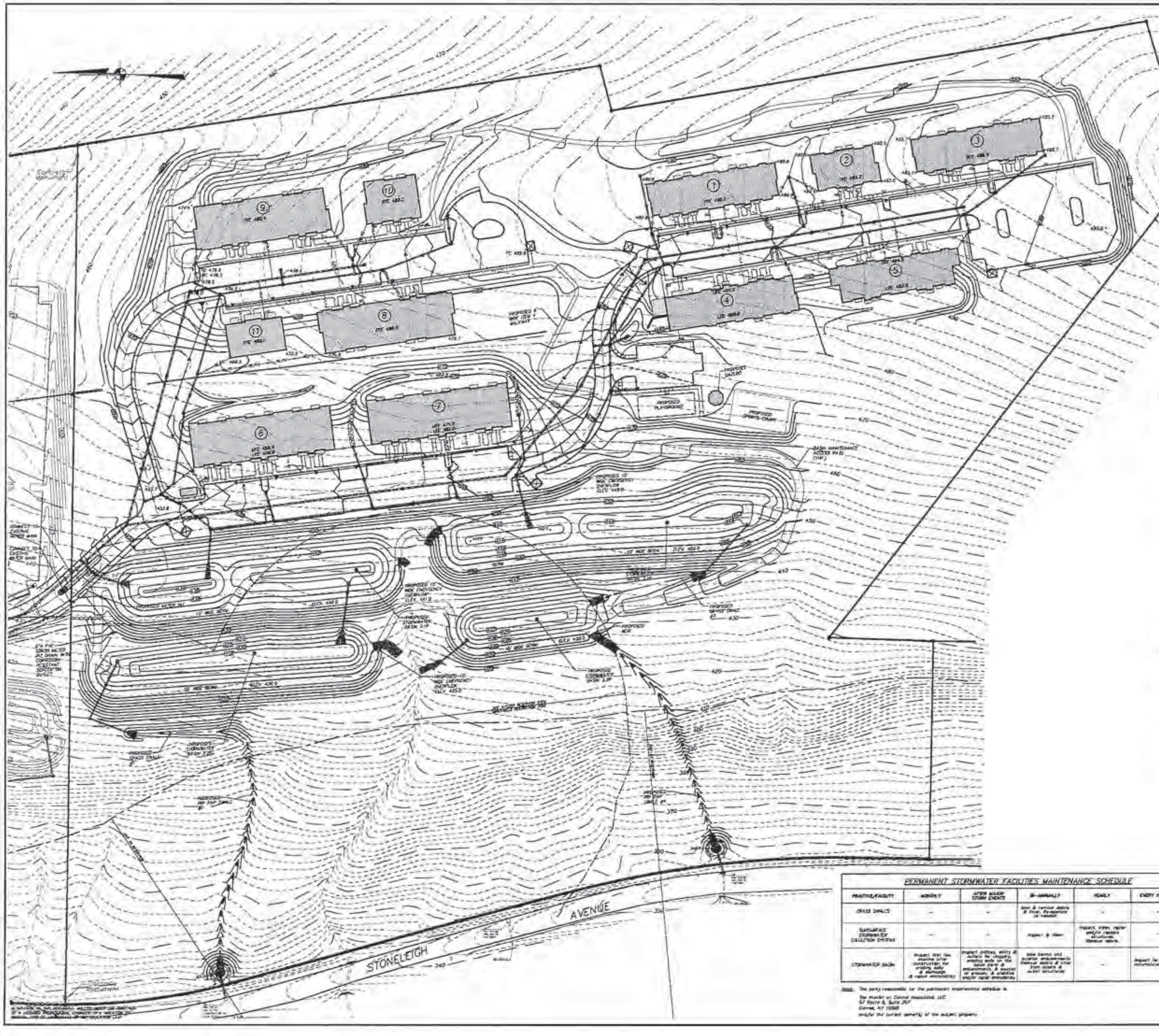
Representative Signature: _____.

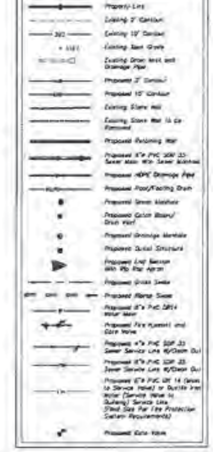
ACKNOWLEDGEMENTS

STATE OF NEW YORK)
) ss.:
TOWN OF _____)

On this ____ day of _____, 20__, before me, personally came _____ to me known and known to me to be the person described in and who executed the foregoing instrument and he acknowledged to me that he executed the same.

_____
Notary Public





SCHEDULE 'A'

REQUIRED POST-CONSTURCTION STORMWATER MANAGEMENT PRACTICE COMPONENTS:

1. Pursuant to the NYSDEC "SPDES General Permit for Stormwater Discharges from Construction Activity" (GP-0-25-001), all construction projects needing post-construction stormwater management practices shall prepare a SWPPP that shall include practices designed in conformance with the most current version of the technical standard, New York State Stormwater Management Design Manual ("Design Manual"). Where post-construction stormwater management practices are not designed in conformance with this technical standard, the owner or operator must demonstrate equivalence to the technical standard. The following list of SWPPP components is provided in accordance with Part III.B.2a-g and III.B.3:
   a. Identification of all post-construction stormwater management practices to be constructed as part of the project. This plan, and details/notes shown hereon serve to satisfy the SWPPP requirement.
   b. A site map/construction drawing(s) showing the specific location and size of each post-construction stormwater management practice. This plan, and details/notes shown hereon serve to satisfy this SWPPP requirement.
   c. The dimensions, material specifications and installation details for each post-construction stormwater management practice. This plan, and details/notes shown hereon serve to satisfy this SWPPP requirement.
   d. Identification of any elements of the design that are not in conformance with the Design Manual. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is equivalent to the technical standards. All post-construction stormwater management practices are in conformance with the Design Manual.
   e. A hydrologic and hydraulic analysis for all structural components of the stormwater management control system. The required analysis is provided in the report titled Stormwater Pollution Prevention Plan for The Putnam Community Foundation.
   f. A detailed summary (including calculations) of the sizing criteria that was used to design all post-construction stormwater management practices. [illegible]
   g. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. [illegible] The Permanent Stormwater Facilities Maintenance Schedule provided on these plans serves to satisfy this requirement.
2. Enhanced Phosphorus Removal Standards – Beginning on September 30, 2008, all construction projects [illegible]

General Notes:

1. Property boundary shown hereon taken from subdivision plat entitled "Boundary Line Adjustment Map prepared for Putnam Community Foundation and Putnam Hospital Center..." [illegible]
2. [illegible]
3. [illegible]
4. [illegible]

PERMANENT STORMWATER FACILITIES MAINTENANCE SCHEDULE

PRACTICE/FACILITY	MONTHLY	AFTER MAJOR STORM EVENTS	BI-ANNUALLY	YEARLY	EVERY 10 YEARS
GRASS SWALES	–	–	Mow & remove debris & litter. Revegetate as needed.	–	–
SUBSURFACE STORMWATER COLLECTION SYSTEMS	–	–	Inspect & clean	Inspect, clean, repair and/or replace structures. Remove debris.	–
STORMWATER BASIN	Inspect first few months after construction for eroding soils & drainage & repair immediately	Inspect orifices, inlets & outlets for clogging, eroding soils on the basin floor & embankments, & sources of erosion, & stabilize and/or repair immediately	Mow berms and exterior embankments. Remove debris & litter from basin & outlet structures	–	Inspect for & remove accumulated sediment

Note: The party responsible for the permanent maintenance schedule is:
The Hamlet at Carmel Associates, LLC
57 Route 6, Suite 207
Carmel, NY 10512
and/or the current owner(s) of the subject property.

NO.	DATE	REVISION	BY
4	11-23-21	GENERAL REVISION	[illegible]
3	[illegible]	GENERAL REVISION	[illegible]
1	7-19-21	GENERAL REVISION	[illegible]

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
THE HAMLET AT CARMEL
MULTI-FAMILY HOUSING DEVELOPMENT
STONELEIGH AVENUE, TOWN OF CARMEL, PUTNAM COUNTY, NEW YORK

DRAWING:
GRADING & UTILITIES PLAN

PROJECT NO.	14271.100	PROJECT MANAGER	J.J.C.	DRAWING NO.	SHEET
DATE	2-10-21	DRAWN BY	M.E.U.	SP-3	4 / 10
SCALE	1" = 30'	CHECKED BY	J.J.C.		

SEQRA ENVIRONMENTAL ASSESSMENT

SEQRA Full Environmental Assessment Form and Supplemental Studies

The Hamlet at Carmel
Site Plan Application

Town of Carmel
Putnam County, New York

Lead Agency:

TOWN OF CARMEL PLANNING BOARD
60 McAlpin Avenue
Mahopac, New York 10541
Contact: Rose Trombetta
(845) 628-1500 X190

Project Sponsor:

THE HAMLET AT CARMEL, LLC
57 Route 6, Suite 207
Baldwin Place, NY 10505
Contact: Ken Kearney
(845) 306-7705

Prepared by:

TIM MILLER ASSOCIATES, INC.
10 North Street
Cold Spring, New York 10516
Contact: Jon P. Dahlgren
(845) 265-4400

November 29, 2021

The Hamlet at Carmel
Site Plan Application

SEQRA ENVIRONMENTAL ASSESSMENT
SEQRA Full Environmental Assessment Form and Supplemental Studies

Table of Contents

List of Figures

List of Attachments

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: The Hamlet at Carmel		
Project Location (describe, and attach a general location map): Stoneleigh Avenue, Carmel, NY, Tax Map #66.-2-58 (see attached location map)		
Brief Description of Proposed Action (include purpose or need): The applicant proposes to develop a 150 unit mixed income/affordable and market rate residential community on a 35.3 acre property located on the east side of Stoneleigh Avenue in the Town of Carmel, New York. The project is referred to as "The Hamlet at Carmel". The development site adjoins the existing Putnam Hospital Center. A total of ten 2 to 2.5-story multifamily buildings would be constructed, as well as supporting driveways, parking and stormwater management facilities. The property is served by municipal water and sewer service. (see attached Project Description - Part 3)		
Name of Applicant/Sponsor: The Hamlet at Carmel Associates, LLC	Telephone: 845-306-7705 E-Mail: kkearney@kearneyrealtygroup.com	
Address: 57 Route 6 Suite 207		
City/PO: Baldwin Place	State: NY	Zip Code: 10505
Project Contact (if not same as sponsor; give name and title/role): Mr. Ken Kearney	Telephone: 845-306-7705 E-Mail: kkearney@kearneyrealtygroup.com	
Address: 57 Route 6 Suite 207		
City/PO: Baldwin Place	State: NY	Zip Code: 10505
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☐Yes ☐No		
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	Site Plan	Pending
c. City, Town or Village Zoning Board of Appeals ☐Yes ☐No		
d. Other local agencies ☐Yes ☐No		
e. County agencies ☑Yes ☐No	Putnam Co. Dept of Health, sewer - water connect Putnam Co. Highways Dept, Highway permit	Pending
f. Regional agencies ☑Yes ☐No	NYCDEP, SWPPP and sewer permit	Pending
g. State agencies ☑Yes ☐No	NYSDEC General SPDES Const. Permit, NYS Housing Fin. Agency, NYS Housing Trust Fund	Pending
h. Federal agencies ☐Yes ☐No		

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes ☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes ☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes ☑No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☑Yes ☐No

If Yes, identify the plan(s):

NYC Watershed Boundary

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
R - Residential

b. Is the use permitted or allowed by a special or conditional use permit? ☑ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? Carmel Central School District

b. What police or other public protection forces serve the project site?
Carmel Police Dept., Putnam County Sheriff's Dept., NY State Police

c. Which fire protection and emergency medical services serve the project site?
Carmel Fire Department

d. What parks serve the project site?
Putnam Trailway, Camarda Park, Muscoot River Rec. Area

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Residential

b. a. Total acreage of the site of the proposed action? 35.3 acres
b. Total acreage to be physically disturbed? 18.9 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 5.7 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)

ii. Is a cluster/conservation layout proposed? ☑ Yes ☐ No
iii. Number of lots proposed? 1
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☑ Yes ☐ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated 2
- Anticipated commencement date of phase 1 (including demolition) June month 2022 year
- Anticipated completion date of final phase June month 2026 year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? ☑ Yes ☐ No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				75
At completion of all phases				150

g. Does the proposed action include new non-residential construction (including expansions)? ☐ Yes ☑ No

If Yes,

i. Total number of structures _____

ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length

iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐ Yes ☑ No

If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐ Other specify:

_____

iii. If other than water, identify the type of impounded/contained liquids and their source.

_____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐ Yes ☑ No

If Yes:

i .What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

_____

_____

iv. Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☑ No

If yes, describe. _____

_____

v. What is the total area to be dredged or excavated? _____acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? ☐ Yes ☑ No

ix. Summarize site reclamation goals and plan: _____

_____

_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐ Yes ☑ No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____

_____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

_____

_____

_____

_____

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☐No

If Yes, describe: _____

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☐No

If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____

_____

- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

_____

c. Will the proposed action use, or create a new demand for water? ☑Yes ☐No

If Yes:

i. Total anticipated water usage/demand per day: 33,000 gallons/day (max day)

ii. Will the proposed action obtain water from an existing public water supply? ☑Yes ☐No

If Yes:

- Name of district or service area: Carmel Water District #2.
- Does the existing public water supply have capacity to serve the proposal? ☑Yes ☐No
- Is the project site in the existing district? ☐Yes ☑No
- Is expansion of the district needed? ☐Yes ☑No
- Do existing lines serve the project site? ☑Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☑No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: An Out of District Water Service Agreement was completed for the property in 2002.
- Source(s) of supply for the district: Municipal wells

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐Yes ☑No

If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

_____

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☑Yes ☐No

If Yes:

i. Total anticipated liquid waste generation per day: 33,000 gallons/day (max.day)

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): Sanitary wastewater

_____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑Yes ☐No

If Yes:

- Name of wastewater treatment plant to be used: Carmel SD#2 Wastewater Treatment Plant
- Name of district: CSD #8 - Stoneleigh Avenue, Putnam Hospital
- Does the existing wastewater treatment plant have capacity to serve the project? ☑Yes ☐No
- Is the project site in the existing district? ☐Yes ☑No
- Is expansion of the district needed? ☐Yes ☑No

- Do existing sewer lines serve the project site? ☑ Yes ☐ No
- Will a line extension within an existing district be necessary to serve the project? ☐ Yes ☑ No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: An Out of District Sewer Service Agreement was completed for the property in 2002.

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐ Yes ☑ No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☑ Yes ☐ No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or 5.7 acres (impervious surface)

_____ Square feet or 35.3 acres (parcel size)

ii. Describe types of new point sources. Roof drains, parking and driveway catch basins and piping

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

Stormwater will be directed to on-site stormwater managment facilities

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☐ Yes ☑ No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☑ Yes ☐ No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐ Yes ☑ No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐ Yes ☑ No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐ Yes ☐ No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

_____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

_____

_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend

☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

_____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

_____

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☐No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

_____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

_____

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 8:00 a.m. to 6:00 p.m.
- Saturday: 8:00 a.m. to 6:00 p.m.
- Sunday: none
- Holidays: none

ii. During Operations:

- Monday - Friday: 24 hrs
- Saturday: 24 hrs
- Sunday: 24 hrs
- Holidays: 24 hrs

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☑ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

Construction noise will occur during the hours permitted by the Town noise ordinance: 8:00 a.m. to 6:00 p.m. Monday through Saturday. Construction will involve a total 48 months in two phases.

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe: Existing trees will be removed in the area of development. A minimum 100 foot vegetated buffer will be maintained along the property lines.

n. Will the proposed action have outdoor lighting? ☑ Yes ☐ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

Lighting details have not been finalized. Safety levels of lighting will be provided at building entrances and parking areas and will be dark sky compliant.

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☑ Yes ☐ No

Describe: Existing trees will be removed in the area of development. A minimum 100 foot vegetated buffer will be maintained along the property lines.

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities: _____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☐ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: _____
- Operation: _____

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: _____
- Operation: _____

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☐ Industrial ☑ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)
☑ Forest ☐ Agriculture ☐ Aquatic ☑ Other (specify): Hospital

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces		5.7	+5.7
• Forested	35.3	16.4	-18.9
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)			
• Agricultural (includes active orchards, field, greenhouse etc.)			
• Surface water features (lakes, ponds, streams, rivers, etc.)			
• Wetlands (freshwater or tidal)			
• Non-vegetated (bare rock, earth or fill)			
• Other Describe: landscaping and stormwater managment		13.2	+13.2

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☑ No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☑ Yes ☐ No

If Yes,

i. Identify Facilities:

Putnam Community Hospital is adjacent to the development site.

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____

iii. Describe any development constraints due to the prior solid waste activities: _____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☑ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No

☐ Yes – Spills Incidents database Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____

_____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐ Yes ☑ No

If yes, provide DEC ID number(s): _____

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

_____

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☐ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? >5 feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site:

Paxton sandy loam - PnB, PnC, PnD	88 %
Charlton loam ChE	8 %
Charlton-Chatfield complex CrC	4 %

d. What is the average depth to the water table on the project site? Average: 1.5 to 2.5 feet

e. Drainage status of project site soils:
☑ Well Drained: 100 % of site
☐ Moderately Well Drained: _____% of site
☐ Poorly Drained _____% of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 40 % of site
☑ 10-15%: 30 % of site
☑ 15% or greater: 30 % of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐ Yes ☑ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☑ Yes ☐ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500-year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐ Yes ☑ No
If Yes:

i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site:

Grey Squirrel	American opposum	American Crow
Racoon	White-tail deer	
Skunk	Groundhog	

n. Does the project site contain a designated significant natural community? ☐ Yes ☑ No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☑ Yes ☐ No

If Yes:

i. Species and listing (endangered or threatened): Northern Long-eared Bat

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐ Yes ☑ No

If Yes:

i. Species and listing: _____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐ Yes ☑ No

If yes, give a brief description of how the proposed action may affect that use: _____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ☑ No

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☑ No

i. If Yes: acreage(s) on project site? _____

ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☑ No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☐Yes ☑No

If Yes:

i. Nature of historic/archaeological resource: ☐Archaeological Site ☐Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☐Yes ☑No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐Yes ☑No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☑Yes ☐No

If Yes:

i. Identify resource: Putnam Trailway, Camarda Park, Muscoot River Rec. Area

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): County and local parks

iii. Distance between project and resource: 1.8 miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐Yes ☑No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐Yes ☐No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name The Hamlet at Carmel Assoc. LLC Date 7.19.2021

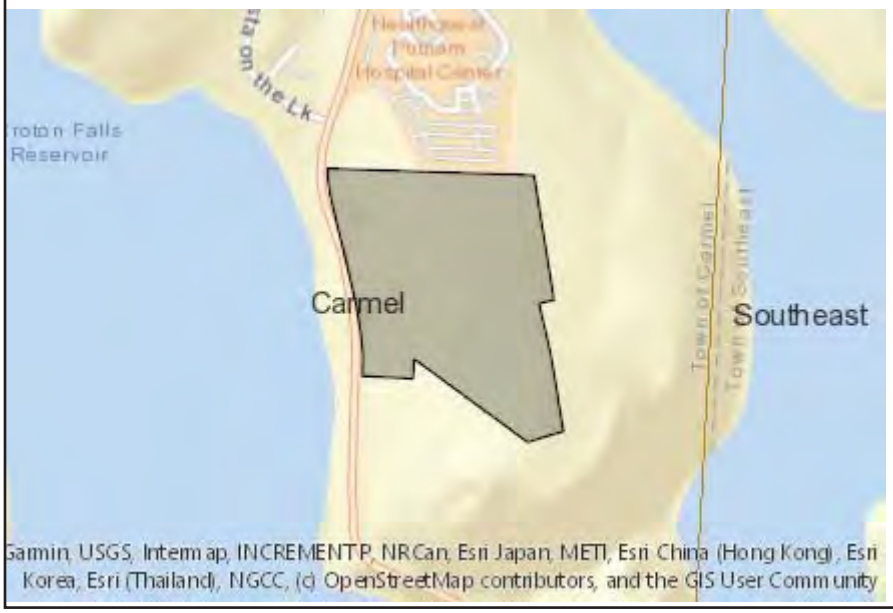
Signature _____ Title Planner for Applicant

Tim Miller Associates, Inc.

PRINT FORM

EAF Mapper Summary Report

Thursday, July 15, 2021 6:30 PM



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYC Watershed Boundary
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	No
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	No
E.2.k. [500 Year Floodplain]	No
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	Yes

E.2.o. [Endangered or Threatened Species - Name]	Northern Long-eared Bat
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	No
E.3.i. [Designated River Corridor]	No

2.1 INTRODUCTION

The Hamlet at Carmel Associates, LLC (the "Project Sponsor" or "Applicant"), proposes to develop a 150-unit mixed income/affordable and market rate residential community on a 35.3 acre site located on the east side of Stoneleigh Avenue in the Town of Carmel, Putnam County, New York. The project is referred to as "The Hamlet at Carmel". The development site adjoins the existing Putnam Hospital Center. The location of the site is shown on Figure 2.1-1 and an Aerial Photograph provided as Figure 2.1-2. The site is currently vacant wooded land and is served by public water and sewer service.

Project Background

A senior housing development was previously proposed for the subject property by the Putnam Community Foundation (PFC) as the applicant in the period of 2006 to 2008. That project was known as "The Putnam Community Foundation Senior Housing Project". This former project was the subject of a complete SEQRA coordinated review process, with the Town of Carmel Planning Board acting as lead agency. A SEQRA Findings Statement was adopted by the Town of Carmel Planning Board on December 17, 2008. The Finding Statement considered the relevant environmental impacts, and drew on the facts and conclusions of the Draft Environmental Impact Statement (DEIS) accepted by the Planning Board on August 17, 2007 and the Final Environmental Impact Statement (FEIS) accepted by the Planning Board on November 19, 2008. Due to the 2008 recession, the PFC Senior Housing Project was not developed.

The 2008 approved plan consisted of 120 senior rental housing units, including 48 units in two two-story buildings with basement level parking and 72 units in 18 single-story townhouse style buildings each containing four attached units. A separate community building and recreation area were included in the plan. The 2008 site plan is shown in Figure 2.1-3.

The 2008 site plan included a shared access driveway to Stoneleigh Avenue through the adjoining Putnam Community Hospital property. The access drive through the Putnam Community Hospital property was a plan modification made in response to public and agency comments during the review process. The revised access drive was located at the southern end of the hospital campus and avoided the introduction of impervious surface into New York City Department of Environmental Protection (NYCDEP) watercourse limiting distances. The access reduced impervious surface and disturbance and provided a safer single access instead of two separate driveways for the two facilities.

Project Location and Setting

The approximately 35.3 acres project site is located on the east side of Stoneleigh Avenue, directly south of the Putnam Community Hospital property. The site is currently vacant land and covered by woodlands and a small area of successional old field, and includes an intermittent watercourse. The project site is located on a peninsula of land surrounded by the Croton Falls Reservoir. It is situated on a hillside that slopes upward and to the east from Stoneleigh Avenue before leveling off near the eastern property boundary. The adjacent parcel to the west slopes back down to a point where it forms the shoreline of the Croton Reservoir.

The parcel occupies 0.3 percent of the 10,240 acre Croton Falls Reservoir Basin watershed in New York City's Croton Reservoir System. The western boundary of the project site parallels Stoneleigh Avenue and is approximately 300 feet from the Croton Falls Reservoir to the west.

The presence of stone walls on and bordering the project site indicates that it was likely used for agricultural purposes (pasture and/or cropland). There is no development on the site and no easily observed evidence that it contained structures in the past.

The project site is located within the Town of Carmel's R - Residential District. The property is located in a rural residential portion of the Town defined by the nearby Croton Falls Reservoir. Multifamily residential development and medical offices associated with the Putnam Hospital Center are located northwest of the site, across Stoneleigh Avenue.

Current Site Plan

The current Hamlet at Carmel residential plan includes 150 residential rental units, 75 at market rate and 75 mixed income/affordable units. A total of ten 2 to 2.5 story multi-family buildings would be constructed, five in the northern portion of the site and five in the southern portion of the site. The proposed location of internal driveways is essentially the same as in the 2008 site plan, although parking and residential building type and location have been modified. The current site plan is shown in Figure 2.1-4 and the attached Site Plan drawings.

In general, the current residential plan provides a reduced development footprint as compared to the 2008 site plan, since the multiple 4-unit single story buildings in the 2008 plan would be replaced by fewer 2-story buildings with 8 to 20 units, in the current plan. The 2008 site plan would have resulted in approximately 23.9 acres of disturbance and 6.3 acres of impervious surface, whereas the current plan would result in approximately 18.9 acres of disturbance and 5.7 acres of impervious surface, a substantial reduction. A 100-foot building setback from all property lines will be maintained, allowing for vegetated buffers along the eastern and southern property borders. This setback provision in the current site plan improves upon the 2008 plan that did not maintain such a setback.

The residential buildings, both mixed income/affordable and market rate will include a range of 1-bedroom, 2-bedroom and 3-bedroom units. The current plan includes a playground, sports court and gazebo, and a 4,000 s.f. recreational building located north of building 8 (see Site Plan drawings). Recreational and meeting space will also be provided in the residential buildings. A series of four stormwater management basins are proposed in the same locations as the 2008 site plan layout. Landscaping will be provided throughout the development, as shown in the attached Site Plan drawings.

Compliance with Zoning Code

The subject property is located in the R (Residential) Zoning District. From a land use perspective, the proposed action will be compatible with nearby development, which primarily consists of the Putnam Community Hospital, related medical offices and multi-family residential development northwest of the site. Nearby development is limited by the Croton Falls Reservoir.

The proposed residential development, as designed, meets the Town of Carmel Zoning Code bulk and area requirements for an R (Residential) Zoning district. Multi-family dwellings are allowed as of right in the Residential district. The Town of Carmel Planning Board recently granted an interpretation that Chapter 156-28 of the Town Code permits the development of non-age restricted multifamily developments in an R-zone. The use is permitted in the R district with lots that meet specific criteria, including a minimum lot size of 10.0 acres, required setbacks, and availability of municipal sewer and water, among others. The Zoning Code for multifamily development requires 2.0 parking spaces for each residence and the proposed plan

provides 300 total spaces including the required number of handicapped spaces Specific zoning requirements applicable to multi-family developments are provided in §156-28.

In 2018 the Town of Carmel Planning Board consultant, Mr. Pat Cleary, prepared a memorandum to the Planning Board explaining the need for multi-family housing in Carmel. The memorandum discussed the current zoning code and its limitations on multi-family housing in the Town. The demographics of the Town of Carmel were discussed including US Census data that shows slowing population growth, especially in the population of persons 35-55 years old, the group most likely to have children. The study discusses declining enrollments in the Mahopac and Carmel Central School Districts. These demographic changes support the need for multi-family housing in the Town, especially affordable housing. According to the memo:

> *The current residential zoning in Carmel is almost exclusively restricted to single family homes on three acre lots, which does not provide for an array of balanced housing opportunities, particularly entry level housing for young households and transitional housing for divorcees and others in transition.*

And,

> *The provision of multifamily housing can help to meet the Town's housing needs and alter the current demographic trends in the Town of Carmel and Putnam County of an aging population and increase in the number of younger people.*

The proposed multi-family residential development, with a mix of mixed income/affordable and market rate units would provide needed housing opportunities in an area of the Town where infrastructure and roadway networks are capable of handling such development. The development of a multi-family residential community on this property is appropriate, given that the environmental impacts have been thoroughly reviewed by the Town of Carmel Planning Board and involved and interested agencies in a coordinated SEQRA review process.

SEQRA Review

As described, a multi-family senior residential development was proposed for this property in the 2006 to 2008 period, and was known as “The Putnam Community Foundation Senior Housing Project”. The former project was the subject of a thorough SEQRA coordinated review process, with the Town of Carmel Planning Board acting as lead agency. A SEQRA Findings Statement was adopted by the Town of Carmel Planning Board on December 17, 2008. A copy of the Findings Statement is provided for reference in Attachment A.

The Findings Statement contemplated potential modifications to the approved site plan, stating:

> *“It is noted that the building locations, footprints, and square footage may be altered as the final plans are developed. If such modifications result in construction activity staying substantially within the same limits of disturbance set forth in this FEIS, with similar impervious surface areas, and no new significant adverse environmental impacts, no further environmental review will be required”.*

This Expanded Environmental Assessment Form (EAF) evaluates a focused scope of potential environmental impacts for the proposed The Hamlet at Carmel development, based upon discussions with the Town of Carmel Planning Board, as lead agency, and utilizing EAF guidance prepared by the NYSDEC.

The review and analysis in this Expanded EAF is provided to support an Amended Findings Statement for the proposed Hamlet at Carmel project, referencing the previous DEIS, FEIS and Findings Statement prepared for the PFC Senior Housing Project (2008).

The currently proposed site plan was reviewed and compared to the 2008 plan and the approved Findings Statement. The following are topics where potential environmental impacts may differ from the 2008 site plan and Findings Statement and therefore require additional review and analysis, including:

- Community Services and Fiscal (including school-age children)
- Transportation

The primary difference between the proposed Hamlet at Carmel development and the 2008 PFC Senior Housing Development relates to population and demographics. The PFC Senior Housing Development was 120 units of age-restricted rental units resulting in no school age children and generally lower population estimates. The Hamlet at Carmel development would provide 150 units of non-age restricted rental units, with a mix of market rate and mixed income/affordable rental rates. These demographic changes could affect the Carmel School District and other community services. These impacts are analyzed in the following sections of the Expanded EAF.

The increase in the number of units from 120 to 150 units for the current site plan increases the anticipated number of vehicle trips generated by the project. The change in building type between the 2008 plan and the current (single story four-unit vs. 2 to 2.5-story buildings with greater than 8 units), also affects project trip generation. Potential transportation impacts for the current plan are analyzed in Section 2.3.

Given the modification to the area of disturbance and impervious surface, the project specific Stormwater Pollution Protection Plan (SWPPP) has been amended by the project engineer. As indicated, the area of disturbance and impervious surface has been reduced as compared to the 2008 plan. In addition, the increase in the number of residential units would also result in an incremental increase in the demand for water and sewer services.

Wetlands and Watercourses

A review of the Findings for the original SEQRA process confirms that no wetlands were found on the site during the previous review. A wetland scientist from Tim Miller Associates re-visited the site on September 23, 2021 and confirmed that this is still the case. The regulated areas on site consist of a series of intermittent watercourses that drain the lower part of the property (primarily during rain events), carrying runoff from the higher elevations to the rock wall along Stoneleigh Avenue. This collected water then filters through the rock wall into the drainage system along Stoneleigh, crossing under the road in several locations and ultimately to the Croton Falls Reservoir. These watercourses have been mapped and confirmed by the New York City DEP. For the most part the channels are wide and poorly defined, but clearly carry flows during and immediately after storm events. No hydric soils or a dominance of hydrophytic vegetation were observed.

Visual Resources

A visual analysis was conducted for the 2008 site plan and is documented in the DEIS. The Findings Statement provided the following conclusions regarding potential visual impacts:

> *Construction of the project as proposed will remove some 25.3 acres of existing woods and successional field along the back (east) and central portions of the site and replace it with buildings, pavement, and new plantings, thus creating a change to the visual character of the site. The buildings will be situated on the east side and in the central portion of the property along and on the west side of the ridge between two lobes of the Croton Falls Reservoir. Stormwater detention basins will be site further down slope toward Stoneleigh Avenue and near the intersection of the access road with Stoneleigh Avenue.*
>
> *Given the orientation of the project site on the west side of a ridge, the lack of residences and other visual receptors in the immediate vicinity, the presence intervening woodland vegetation and the variability of the local topography, visibility of the site from local vantage points is notably limited. The potential viewshed of the project site, due to its higher topographic position in the landscape, includes West Shore Drive to the west and Lower Mine Road and Reservoir Road to the east, although the views are also obscured by existing trees. The most direct view to the site is from the Croton Falls Reservoir itself, which provides an open view across the water to the site from the east and west.*

The current site plan would result in the clearing of trees and residential development in generally the same area as the 2008 plan but with a smaller footprint (5.0 acres less disturbance) and greater preservation of existing trees at the edges of the development. The current plan would include 2 to 2.5 story multifamily buildings instead of the two-story cottage buildings proposed in the 2008 plan. Therefore, the height of building rooflines at the higher elevations of the property would be greater than the previous 2008 site plan. The DEIS and Findings Statement indicated the proposed building rooflines would be visible from certain vantage points in the vicinity of the site, but mostly softened or obscured by existing vegetation around the development. These conditions would remain with the current site plan.

Architectural plans for the current development have not yet been completed, but will be provided to the Planning Board upon completion.

This Expanded EAF is prepared in accordance with Section 8-0101 of the New York State Environmental Conservation Law and the regulations promulgated by the New York State Department of Environmental Conservation (NYSDEC) thereunder, which appear at 6NYCRR Part 617 (known as the New York State Environmental Quality Review Act, SEQRA).

This document includes the EAF form Parts 1, and supplemental information as Part 3. Part 1 of the EAF Form provides project details and its environmental setting. The Part 3 evaluations provided in this Expanded EAF provide background information, technical studies and analyses of the potential impact categories as may result from the development.

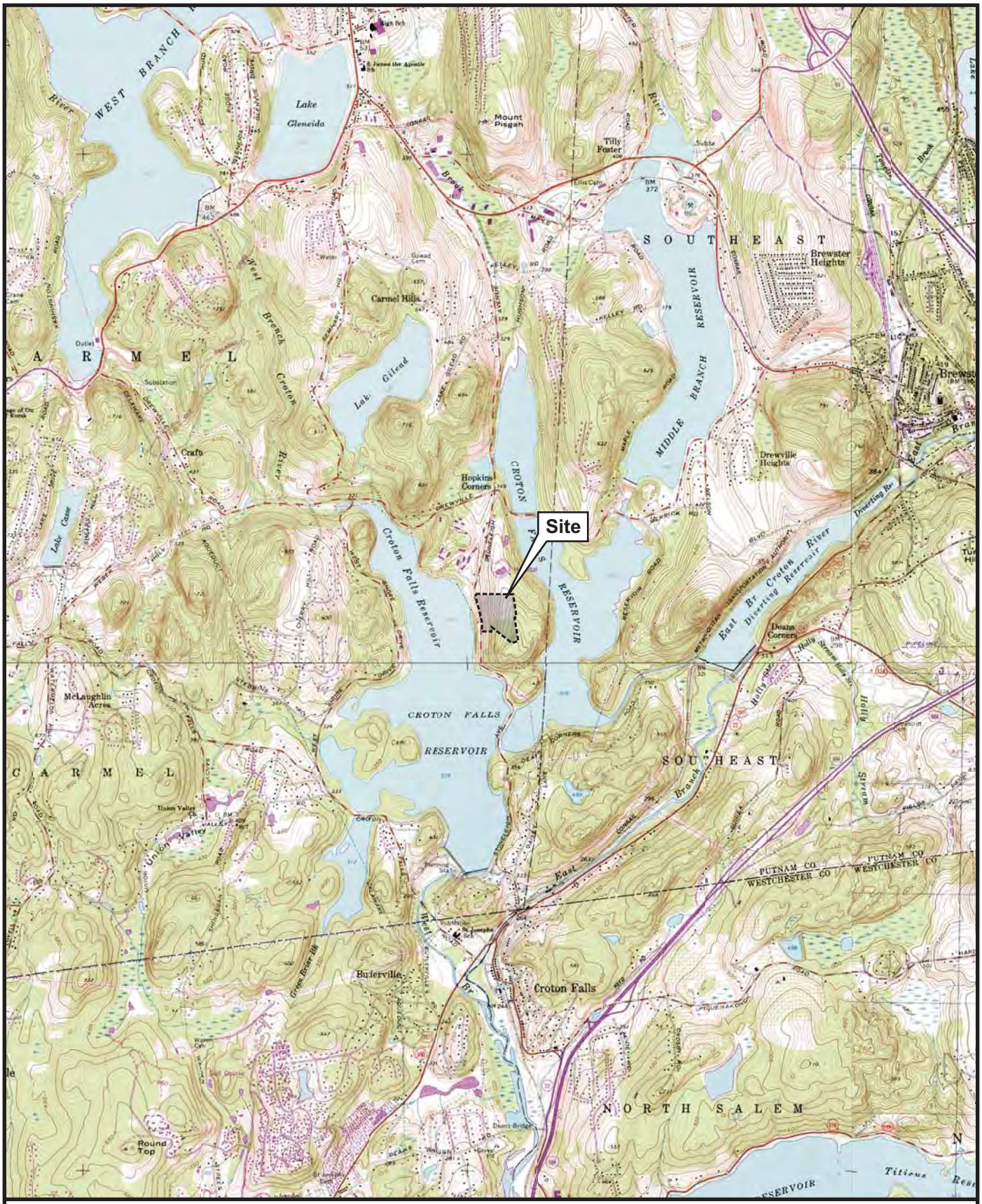
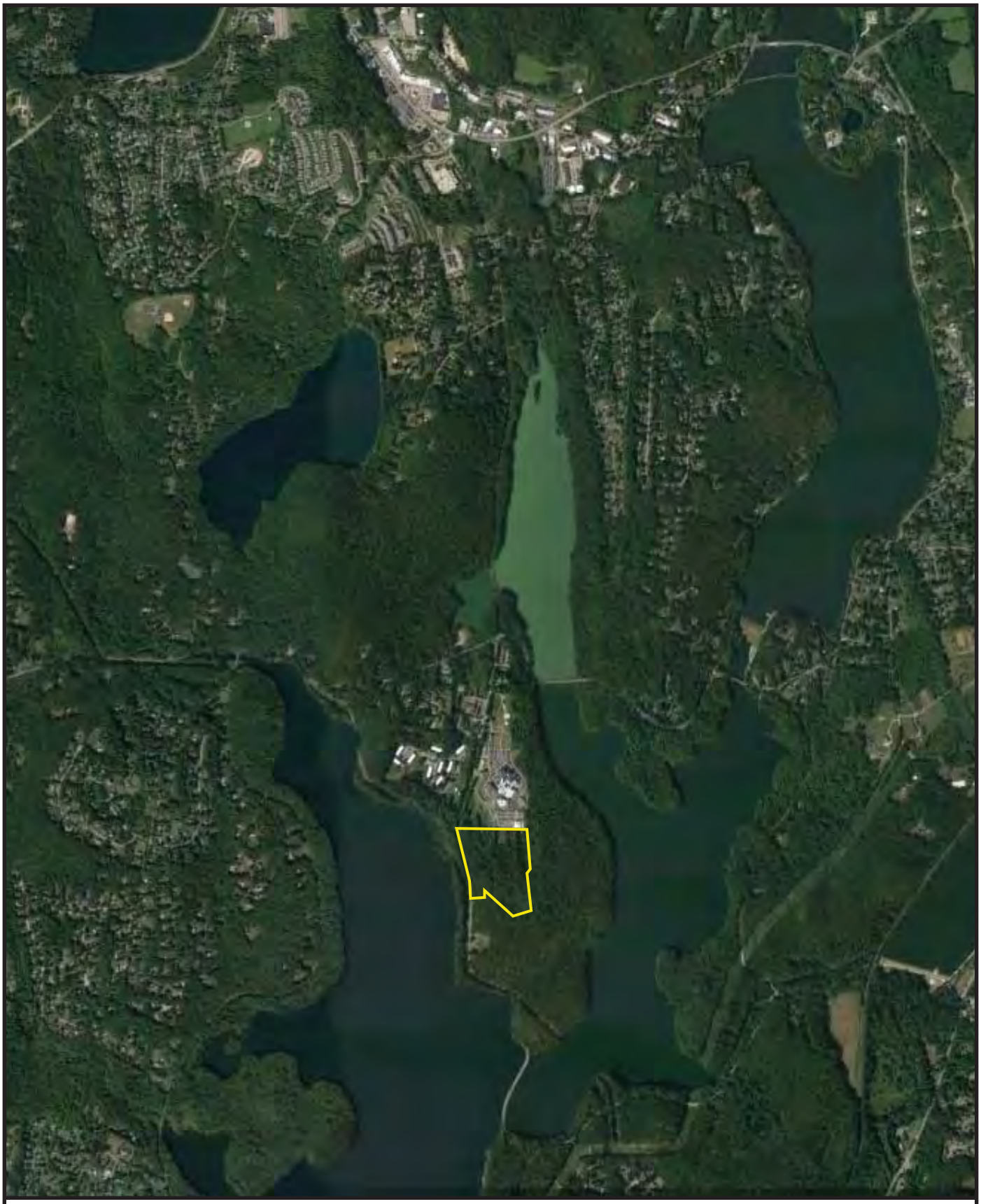


Figure 2.1-1: Location Map
The Hamlet at Carmel
Town of Carmel, Putnam County, New York
Source: USGS 7.5-minute Topographic Map, Lake Carmel Quad
Scale: 1" = 4,000'

File 06047 5/1/07
JS/06047

Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

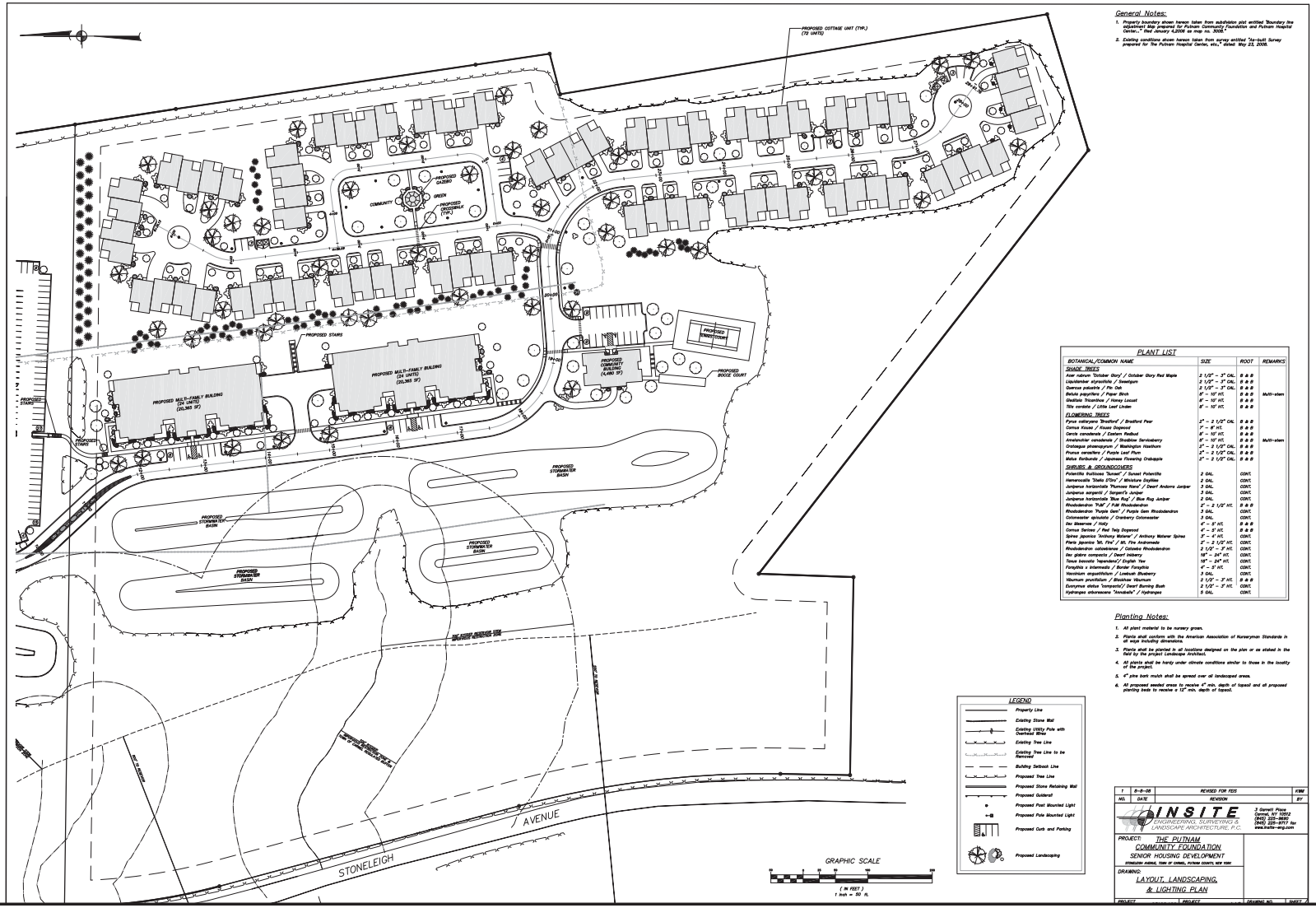


N
W E
S

Figure 2.1-2: Aerial Photograph
The Hamlet at Carmel
Town of Carmel, Putnam County, New York
Base Map: Google EarthPro
Approx. Scale: 1 inch = 2,185 feet

File 04031 08/08/05
JS:\04031\Fig 4.8-12.cdr

Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418



N E S W

Figure 2.1-3: 2008 PCF Senior Housing Development Site Plan
The Hamlet at Carmel
Town of Carmel, Putnam County, New York
Source: Insite Engineering, Surveying & Landscape Architecture, P.C,.2008
Scale: As Noted

File 2095 Fig XX TMA 10/11/02

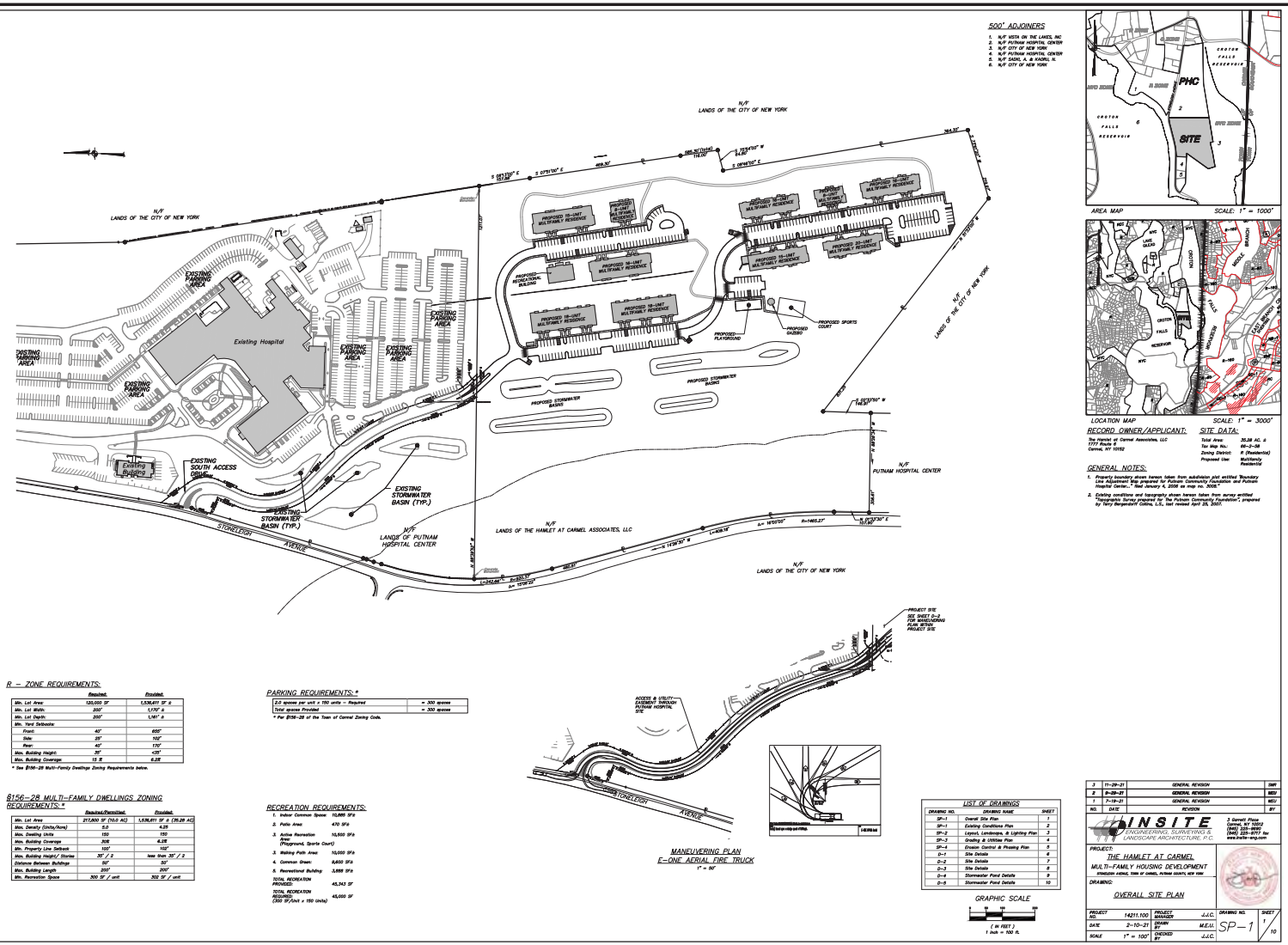


Figure 2.1-4: The Hamlet at Carmel Site Plan

The Hamlet at Carmel

Town of Carmel, Putnam County, New York

Source: Insite Engineering, Surveying & Landscape Architecture, P.C,.2021

Scale: As Noted

File 2095 Fig XX TMA 10/11/02

2.2 COMMUNITY SERVICES AND FISCAL

2.2.1 Demographic Resources

Existing Conditions

As discussed, The Project Sponsor proposes to develop a 150-unit mixed income/affordable and market rate residential community on a 35.2-acre site located on the east side of Stoneleigh Avenue in the Town of Carmel, Putnam County, New York. The project is known as "The Hamlet at Carmel". The development site adjoins the existing Putnam Hospital Center. The location of the site is shown on Figure 2-1. The site is currently vacant wooded land and is served by public water and sewer service.

Project Description

As illustrated in Figure 2-4, the Hamlet at Carmel residential plan includes 150 residential rental units, 75 at market rate and 75 mixed income/affordable units. A total of ten 2-story multi-family buildings would be constructed, five in the northern portion of the site and five in the southern portion of the site.

For the purpose of this analysis the market rate portion of the development is envisioned to include 21 one-bedroom units, 38 two-bedroom units and 16 three-bedroom units. These units are anticipated to rent for $2,100 to $3,100 monthly depending upon the number of bedrooms.

The mixed income/affordable component of the development is composed of 17 one-bedroom units, 40 two- bedroom units and 17 three-bedroom units plus one two-bedroom Superintendent unit. According to the NYS Housing and Community Renewal (HCR) funding guidelines the mixed income/affordable units are projected to rent for $639 to $2,661 depending upon number of bedrooms, unit size and affordability criteria. The majority of the mixed income/affordable units (76%) will rent for an average of approximately $1,550. These units will be affordable to residents whose income does not exceed 60% of the Area Median Income (AMI), based upon family size, as established by the Department of Housing and Urban Development (HUD) on an annual basis. A portion of the units (12%) will be affordable to residents whose income does not exceed 30% of the AMI, and an additional 12% will be affordable to residents whose income does not exceed 80 to 90% of the AMI.

Affordable Housing

Affordable housing is provided as a community benefit to provide housing for community service workers, i.e. fire, police, teachers, municipal workers etc. It also enables families starting out to remain in their community prior to purchasing a home and provides housing for others on a limited income.

Currently, HCR has a policy to allow for a preference for Essential workers on a number of the units. The applicant has requested 15% or 12 units have an occupancy preference for essential workers subject to HCR approval.

Eligibility must be established, and is typically based upon the Income Limit guidelines as published by the Housing and Urban Development (HUD) annually. Income Limits are based upon a percentage of the Area Median Income or AMI. In Putnam County, which is part of the

NY HUD Metro FMR Area, the 2021 AMI is $81,700. This area also considered to be an area of High Housing Cost which provides an adjustment from the income limit being a straight percentage of the AMI. The Income Limits also vary depending upon housing size, calculations are done based on a family size of four persons and adjusted up or down as needed.

Of the 75 units of affordable housing being proposed 57 of the units will be affordable to households whose income is 60% of the AMI, adjusted for High Housing Cost. The 2021 AMI for Putnam County is set at $81,700, thus a family of four that would be eligible for a unit restricted to a 60% AMI would have an income limit of about $69,000.

An additional 9 units will have income limits to be affordable to households whose income is between 80-90% AMI. These units will serve households with incomes up to approximately $99,000.

Demographic multipliers published by the Rutgers University Center for Urban Policy Research (CUPR) were used to project the future population of the proposed Hamlet at Carmel community. Population projections are based upon the geographic region, type of unit, number of bedrooms, and the anticipated rental value. Although there are other published demographic multipliers, the CUPR multipliers are more specific because they are calculated based upon the specifics of geographic location, bedroom count and unit type. The researchers, Burchell and Listoken are considered the experts in demographic projections and the CUPR multipliers are considered the standard in this field of study.

As shown in Table 2.2-1, based upon the nature of this development, the multipliers used to project the population are as follows; three-bedroom units house 3.81 persons per unit, two-bedroom units are 2.31 persons per unit and a one-bedroom unit is 1.67 persons per unit. By comparison, 2010 U.S. Census data indicate that the average household size for all housing types in the Town of Carmel is 2.70 persons.

As shown in Table 2.2-1, Based upon the CUPR residential multipliers, approximately 372 persons, including 46 school age children are projected to reside in the Hamlet at Carmel.

Table 2.2-1
Population Projections

Unit Type	Number of Units	Population Multiplier	Population	School Age Children Multiplier	School Age Population
Market Rate Units				PSAC	
1-BR	21	1.67	35	0.07	1
2-BR	38	2.31	88	0.16	6
3-BR	16	3.81	61	0.63	10
Market Rate Total	**75**	**--**	**184**	**--**	**18**
Mixed Income/Affordable Units				SAC	
1-BR	17	1.67	28	0.08	1
2-BR	40	2.31	93	0.23	9
3-BR	17	3.81	65	1.00	17
2-BR Superintendent Apartment	1	2.31	2	0.23	1
Mixed Income/Affordable Total	**75**	**--**	**188**	--	**28**
TOTAL	**150**		**372**		**46**

Source: Rutgers University Center for Urban Policy Research, June 2006. Table prepared by TMA, 2021.

2.2.2 Police, Fire and Emergency Services

Police Protection

Existing Conditions

The Carmel Police Department is a "full service" department and participates in many community crime prevention and awareness programs in addition to its normal law enforcement tasks. The department operates 24/7 and has 19 patrol cars, one boat and a canine patrol. The department consists of the patrol division, detective division, a records division, and a seasonal marine division. The Town of Carmel Police headquarters are located at Town Hall at 60 McAlpin Avenue just east of US Route 6 in Mahopac, New York, approximately 4 miles from the project site.

The full-service department presently consists of 35 sworn police officers and eight civilian employees.[1] The Putnam County Sheriff's Department also exhibits a regular presence in the area, as does the New York State Police and Metro-North Police. According to the department website, the Town of Carmel Police Department handled approximately 35,000 calls for service in each year for the past three years 2018, 2019 and 2020.

According to the US Census, the Town of Carmel 2010 population was 34,305 persons. ESRI demographic forecasts indicate this population declined to 34,113 persons by 2020. The current

[1]"History of the Police Department." Town of Carmel. Town of Carmel. July 15, 2021. Webpage: www. https://www.ci.carmel.ny.us/police-department/pages/history-of-the-department.

ratio of Town of Carmel police officers (35) to population (34,113) is within the ULI recommended standard of 1 officer to 1,000 persons. The typical response time of the police department, depending on the type of call, call volume, weather conditions and time of day, is from three to thirty minutes.

Sworn personnel are involved in various programs including Crime Prevention, Accident Investigation, STOP DWI, Commercial Vehicle Enforcement, Intelligence, Youth Court and the D.A.R.E. program.

Potential Impacts

The development of 150 housing units on the project site would create a demand for additional police services. Based on planning standards contained in the Development Impact Assessment Handbook published by the Urban Land Institute (ULI), two police personnel should be provided per 1,000 persons. Using this standard, the projected increase of 372 persons from the Hamlet at Carmel has the potential to increase police staffing needs by 0.75 police personnel. The demand for police services is the same for both market rate and mixed income/affordable residents.

As noted, the ratio of Town of Carmel police personnel to population is currently within the standard two police personnel per 1,000 residents suggested in the Development Impact Assessment Handbook. An increase of 372 persons to the 34,113 current population would result in a total population of 34,485 which would remain within the ULI recommended standard without any increase in personnel. Tax revenue generated by the Hamlet at Carmel would be available help to cover any additional expenses as necessary.

Fire Protection

Existing Conditions

The Carmel Fire Department is located at 94 Gleneida Avenue in the Town of Carmel, approximately four miles from the project site. The Department is a fully volunteer organization. Presently, there is a county wide Mutual Aid Agreement in place in Putnam County[2], which is a plan to allow assistance between all County Fire Departments. The Officer-in-Charge of the fire has the capability to request assistance whenever it is deemed necessary.

There are approximately 50 active members who serve the community by providing Fire, Rescue, Disaster Relief and Emergency Medical Services to anyone in need. The Carmel Fire Department is also dedicated to community service by supporting Scouting organizations of America, supporting other local charities and participating in fireman's parades throughout the region.

The Carmel Fire Department currently operates 3 engines, 1 tanker truck, 1 ladder truck, 2 light duty rescue vehicles, a gator, a rescue trailer and a marine safety vehicle, plus 2 Chiefs' vehicles. These units are staffed by the 50 active volunteer members who respond from a fire station at 94 Gleneida Ave. The station is approximately 4.0 miles (driving distance) from the subject site. The department typically responds to approximately 400 alarms annually. These

[2]Adam Stiebeling, Deputy Commissioner of Putnam County Bureau of Emergency Services.

alarms consist of structural fires, motor vehicle accidents (MVA's), automatic alarms, vehicle fires, mutual aid, and various other calls for assistance.

Potential Impacts

Calls for fire/medical emergencies from the proposed development would be routed through the emergency 911 system, where dispatchers would notify the Carmel Fire Department. Based upon location, response time to the project site is estimated to be approximately 5 minutes. All proposed buildings would be constructed and all operations would be permitted in accordance with the provisions of the State Fire Prevention Code. Buildings and operations of the development are subject to inspection by the Town Building Inspector. The adequacy of construction materials used, building design and material storage practices, fire flow rates, and water system capacity would be assessed by the Fire Department during the site plan approval process.

The existing Mutual Aid Agreement would ensure that additional fire-fighting and rescue resources are available to the Town of Carmel Fire Department, as required.

As noted above, the Proposed Action would potentially increase the Town's population by 372 persons. Based on planning standards contained in the Urban Land Institute's Development Impact Handbook, it is estimated that 1.65 fire personnel and 0.2 vehicles per 1,000 population is required to serve a new population. The anticipated increase in population of 372 persons could generate a demand for 0.6 additional fire personnel and less than 0.1 additional fire vehicles. The demand for fire protection services is the same for both market rate and mixed income/affordable residents.

The ULI multipliers assume no existing services, thus the actual demand on fire personnel and vehicles is expected to be insignificant.

Emergency Medical Services

Existing Conditions

The Carmel Volunteer Ambulance Corps provides emergency medical services to the site area. The Corps is a New York State-certified agency that provides basic life support ambulance service. The ambulance headquarters are located off at 6 Garrett Place, behind the Carmel Fire Department.

The Carmel Volunteer Ambulance Corps (CVAC) provides emergency ambulance service to the project area. The CVAC currently has 63 active members and typically responds to approximately 1,000 calls for service annually. Based upon these figures, annual average calls per capita equates to 0.03. According to the CVAC website, the corps currently operates 2 ambulances 31-7-1 and 31-7-2. The Corps also has a fully equipped first response vehicle. Each ambulance response is staffed by a crew chief who is a New York State Certified Emergency Medical Technician, and a driver. Most calls have a third crew member, who may or may not be an EMT. The EMT is in charge of patient care decisions, including which hospital the patient is transported to.

The primary hospital serving the project area is Putnam Hospital Center located on Stoneleigh Avenue in Carmel immediately north of the Project site. Putnam Hospital Center is a 164-bed

acute care hospital facility. Acute care is a branch of secondary health care where a patient receives active but short-term treatment for a severe injury or episode of illness, an urgent medical condition, or during recovery from surgery. In medical terms, care for acute health conditions is the opposite from chronic care, or longer-term care.

According to the Hospital website, the hospital offers innovative technologies, including robot-assisted surgery. The Hospitals specializes in advanced surgical services including orthopedics, spine and bariatric surgery. Other services include, stroke care, a blood management program, cardiac care, psychiatric care including a partial-hospitalization program, maternity care and outpatient physical rehabilitation.

Potential Impacts

Based on planning standards contained in the Development Impact Assessment Handbook published by the Urban Land Institute, 36.5 calls per 1,000 population per year would be the multiplier used to project the increase in Emergency Medical Service (EMS) calls for new development. Based upon the ULI multiplier, the projected 372 residents that are expected to reside at the Hamlet at Carmel could increase EMS calls by 14 annually. The demand for emergency medical services is the same for both market rate and mixed income/affordable residents.

The increase in population from the proposed development is not expected to impact the services or quality of service of the Carmel Volunteer Ambulance Corps. Additionally, the location of the project site, immediately south of the Putnam Hospital Center, and the incorporation of the proposed emergency access road between the development and the hospital is expected to help mitigate any potential impacts on the Ambulance Corps from the Proposed Action. Coordination with EMS providers would occur as individual site plans are reviewed. The Applicant would comply with any reasonable requirements imposed during that review.

The ULI multipliers assume no existing services, thus the actual demand on EMS personnel and vehicles is expected to be insignificant.

Hospital

Based on planning standards contained in the Development Impact Assessment Handbook, four (4.0) hospital beds should be provided per 1,000 persons. Based on this standard, the projected population increase associated with the proposed residential development has the potential to increase the need for beds in hospitals serving the Northern Westchester County area by less than 1.5 beds. This is not considered a significant impact.

2.2.3 Schools

Existing Conditions

The project site is served by the Carmel Central School District. The District includes three K-4 elementary schools, one middle school (grades 5, 6, 7 and 8), and one high school. The Carmel Central School District geographically includes the majority of the Town of Carmel, the Carmel Hamlet Area, portions of the Town of Philipstown and portions of the Town of Kent.

According to information provided by the School District[3], enrollments have been steadily decreasing for more than the past 10 years. A study entitled School Age Children, Carmel Central School District Student Enrollment, dated July 14, 2021, was prepared by Tim Miller Associates. The study documents the continued decline in student enrollment and identifies the available capacity to handle an increase in student enrollment.

As of October 2020, 3,979 students were enrolled in the District. Table 2.2-2 below summarizes the current 2020/2021 grade distributions and enrollments of the various schools within the District:

Table 2.2-2
Carmel Central School District (2020-2021 School Year)

School	Grades Served	2014 Enrollment
Kent Primary School	K-4	378
Kent Elementary School	K-4	372
Matthew Patterson Elementary School	K-4	476
George Fisher Middle School	5-8	1,194
Carmel High School	9-12	1,410
TOTAL		**3,979**

Carmel Central School District 2021.

Potential Impacts

As shown in Table 2.2-1, based upon demographic multipliers published by the Rutgers University Center for Urban Policy Research, approximately 46 students are projected to reside in the Hamlet at Carmel residential development. The addition of 46 students to a population of more than 3,900 students represents an increase of less than 1.2 percent. The Carmel CSD has availability in its existing infrastructure to accommodate this increase in student population.

The school budget for the 2021/2022 school year was defeated twice by the residents of the school district. The contingency budget for 2021-2022 school year for the Carmel Central School District totals $106,836,349. The portion of the budget to be raised through taxation is $74,686,091 - approximately 70 percent of the budget is met through the property tax levy.

This anticipated increase in student population will not have a significant impact on administrative or capital needs of the district. The School Age Children Enrollment Study referenced above, demonstrates the district's existing facilities have capacity to handle up to approximately 1,000 additional students.

An increase in residential development would result in an increase in the assessed valuation of the School District, which translates into additional school tax revenues. Since the infrastructure and staff resources are already in place, the costs for new students associated with multi-family housing would be minimal. It should also be noted that while market-rate multifamily housing would provide a significant increase in the districts assessed valuation, the ratio of students associated with multifamily housing is low compared to traditional single-family housing - and as such would not over-burden the schools.

[3] NYS Department of Education BEDS Enrollment Data for Central School District 2019/2020, July 2021.

A review of current school enrollment and school enrollment projections for the next 5 years are included in the School Enrollment Study included as Attachment B. This study indicates continuing declines for the Carmel School District by more than 30% compared to peak enrollments. This substantial declining enrollment trend has the potential to result in excess infrastructure, where the number of students is significantly lower than the enrollment capacity. The potential for the elimination of school clubs, sports teams and other extra-curricular activities will increase as enrollments continue to decline.

School District Costs Associated with the Proposed Project

The provision of affordable housing opportunities is a community benefit that meets the needs of community service workers, police, fire, teachers, nurses, municipal workers etc. It also meets the needs of young families starting out and seniors or others living on a limited income. A well-balanced community provides for the needs of a diversity in population. Currently, HCR has a policy to allow for a preference for Essential workers on a number of the units. The applicant has requested 15% or 12 units have an occupancy preference for essential workers subject to HCR approval.

Based upon the reduced rental or market value of an affordable unit, the assessed valuation and thus the taxes generated by the unit are reduced compared to market rate residential development. The Hamlet at Carmel has been designed to include affordable housing which may not pay the full burden of costs associated with development, and market rate development, which has been provided to increase the overall assessed valuation of the development as a whole, thereby mitigating the reduced taxes paid by the affordable housing.

As already discussed, the Carmel School District has sufficient infrastructure to accommodate the anticipated increase in student population. Any costs to the School District would be related specifically to instruction, which is referred to as marginal cost. District wide, instructional costs are estimated to total $68,169,209. Since 70 percent of the Budget is to be raised by the tax levy, the portion of the instructional costs to be raised by the tax levy are estimated to total $47,718,446[4].

With an enrollment of 3,979 students, the per-student marginal cost to be raised by the tax levy are calculated to be up to $11,993, ($47,718,446 / 3,979). This full cost is likely overstated given the small percentage of new students compared to the existing student population. Projected costs to the school district are likely to be approximately $275,000 to $550,000 annually based on an estimated 46 students that would reside in the community.

New construction within the School District will result in an increase in assessed valuation in the district, resulting in an increase in tax revenue to the School District. These funds may be used to off-set any increased costs as necessary.

At today's tax rates, the proposed Hamlet at Carmel would generate a total of $613,357 in annual property revenues to the school district. Thus, the overall impact on the district's budget is expected to be positive, generating between $60,000 and $325,000 in tax revenue ***after covering the cost*** of educating the students who reside at Hamlet at Carmel. The proposed residential development will generate $566,272 above current taxes.

[4]Carmel Central School District Adopted Contingency Budget 2021/2022. June 2021

Construction is projected to take 12 to 18 months which is likely to be spread over two school years. The increased student population is also expected to be distributed throughout the grade levels, resulting in an several new students per grade. The multi-year phasing and distribution of students will allow for an additional 46 students to be integrated to the local schools with minimal impact. Conversation with the Business Administrator for the Carmel Central School District indicated absorption of the new students should not present a capacity problem for the school district, particularly in light of the declining enrollment trend the district is experiencing.

2.2.3 Fiscal Resources

Current and Projected Assessed Value

The Hamlet at Carmel development site is contained on the Town of Carmel tax parcel 66.-2-58.

The current assessed value of the total project site is $1,804,900. According to a review of the 2021 tax bills for the subject parcel, the total annual property taxes generated by the project site and paid to the Town of Carmel are $8,773. The municipal taxes paid to Putnam County are $5,468. Thus, the total municipal taxes paid are $11,542 while the annual property taxes paid to the Carmel Central School District are $47,085.

Based upon the income value of the market rate townhouse units the market rate portion of the project, is valued at $16,230,995. Based upon the income value of the affordable residences, the value of the affordable rental apartments is estimated to be $7,280,681. Using the current 2021 equalization rate of 100 percent, the total Assessed Value of the project used for this analysis is $23,511,676.

Current and Projected Revenues

Table 2.2-2 compares the revenues generated currently by the property to the revenues to be generated after the Hamlet at Carmel development is complete. Revenues are based on 2021 municipal tax rates and the 2021-2022 tax rate for the Carmel Central School District.

According to the Town of Carmel annual budget, the Town's tax rate includes governmental services, Justice Court, Sewer and water capital expenses, refuse collection, street maintenance, public parking, lighting and parks & recreation.

As presented in Table 2.2-2, at today 's tax rates, annual revenues to the Town of Carmel would be approximately $261,349. The project-generated annual revenues to Putnam County would be approximately $71,234 annually.

Table 2.2-2 Current & Projected Taxes Generated by Hamlet at Carmel Development			
Taxing Authority	**Current Taxes ($)**	**Hamlet at Carmel Projected Taxes Total ($)**	**Net Increase Between Current & Projected Taxes ($)**
Total Putnam County	**$5,468**	**$71,234**	**$65,766**
Total Town of Carmel	**$11,542**	**$261,349**	**$249,807**
Total Municipal	**$17,010**	**$332,583**	**$315,573**
Carmel Central School District	**$47,085**	**$613,357**	**$566,272**
TOTAL	**$156,465**	**$945,940**	**$881,845**

Notes:
(1) Tax Rate per $1,000 of Assessed Valuation.
Municipal taxes are based upon Town of Carmel 2020/2021 Tax Rates.
Carmel Central School Taxes are for the 2021-2022 Contingency Budget.

As stated earlier, annual revenues to the Carmel Central School District would be approximately $613,357. The net *increase* between the current tax revenues generated by the site and paid to the School District and the total future project-generated revenues to the school district are projected to be approximately $566,272.

Table 2.2-2 also indicates the combined net increase in revenues to each jurisdiction, which in total is projected to be more than $800,000 annually.

Municipal Costs Associated with the Proposed Project

An approximate estimate of costs to the Town of Carmel associated with the Hamlet at Carmel development may be determined by obtaining a reasonable composite of current costs on a per capita basis and multiplying this amount by the anticipated population of the proposed project.

Through a review of the Town's operating budget, the amount of expenditures can be derived and, by dividing the population into the amount of expenditures, an estimate of per capita costs can be determined. To calculate the portion of the per capita cost which is paid for by property tax revenues (as opposed to other forms of income to the Village), the per capita cost is multiplied by the proportion that property tax revenue comprises of the overall income stream.

This generalized methodology estimates the overall costs. The incremental costs which would be applicable specifically to this project are anticipated to be substantially lower. Certain fixed costs would not actually be affected by an increase in population. For example, the Supervisor’s salary or the cost of running Town Hall are expenses that are paid by the Town’s Budget, but would not be expected to increase based on an increase in population. It is also noted that commercial and other land uses in the Town place demand on the various governmental services which contributes to the per capita costs being overstated. The majority of services provided by the Town would not be directly affected by an increase in population.

In this instance, the adopted 2021 municipal budget for the Town of Carmel amounts to $49,239,061. The total amount to be raised by taxes is $24,405,122. The tax levy represents 50 percent of the total municipal budget.

According to the US Census data, the 2010 estimated population for the Town is 34,305 persons. Dividing the budget to be raised by taxes by the population, results in an estimated impact to the Town budget of $561 per capita.

As described earlier, the proposed project would add approximately 372 persons to the population of the Town. Based on a per capita expenditure of $561, the additional costs to the Town of Carmel are projected to be up to approximately $208,708. As presented in Table 2.2-2, the revenues to the Town from the proposed Hamlet at Carmel Development would amount to a minimum of $52,641, thus, the project will result in a net benefit to the Town. The increase in tax revenue to the Town, upon completion of development is projected to increase by $249,807 compared to existing tax revenues.

Table 2.2-4 presents a summary of the conservatively anticipated revenues compared to an estimate of costs of the proposed Hamlet at Carmel development project. The combined net positive revenues, after considering the generalized costs to the Town and the School District is an annual amount of $113,978 to all taxing jurisdictions, while providing affordable housing for the community.

Table 2.2-4
Revenue & Cost Summary: Hamlet at Carmel

Jurisdiction	Projected Taxes ($)	Projected Costs ($)	Net Tax Revenue
Town of Carmel	$261,349	($208,708)	$52,641
Carmel Central Schools	$613,357	($552,020)	$61,337
Total	**$874,706**	**($760,728)**	**$113,978**

Source: Tim Miller Associates, Inc., 2021

2.2.5 Fiscal Benefits

The project will induce construction employment in the short term. In the long-term, the new resident population would introduce consumer demand for retail and service establishments located within the Town of Carmel, as well as the larger commercial area within the region.

Short Term Employment Opportunities

The construction value of the proposed project would total approximately $28 million. Construction of the project would require a commitment of person hours of labor, which can be viewed as beneficial to the community, the local economy, and the construction industry with respect to the generation of jobs. Based on labor hour estimates published by the Urban Land Institute, and accounting for secondary employment resulting from the construction, this project would generate 155 full time equivalent jobs in the various construction trades associated with this project.

It is anticipated that a number of construction workers would come from Putnam County and nearby counties in the region. These workers are expected to have a positive impact on existing local businesses that provide such services as food convenience shopping, gasoline, etc.

Local Economy Spending

Future residents would utilize retail, personal service, and other commercial uses located in the project vicinity. Businesses within the project vicinity, especially those located within the Town, would benefit from new resident expenditures. Approximately 30 percent of household income is typically spent on retail goods and services.

A household income ranging from $69,000 to $99,000 annually, would be required to afford renting the proposed affordable housing. Using a conservative household income of $69,000, it is estimated that 75 households would spend more than $1.5 million annually. A household income of approximately $125,000, would be required to afford renting the proposed market rate housing, thus the 75 market rate units would generate an additional $2.8 million in expenditures annually. When combined more than $4.3 million in sales can be expected. A substantial portion of these expenditures would be made at supermarkets, local convenience stores, apparel stores, restaurants and service businesses such as gas stations and hair salons in the area.

2.3 TRAFFIC AND TRANSPORTATION

Existing Conditions

The subject property has frontage on Stoneleigh Avenue (County Route 35) in the Town of Carmel. Stoneleigh Avenue, a two-lane road that runs generally north-south between US Route 202 and US Route 6, forms the western boundary of the subject property and Putnam Hospital Center (PHC) parcels. The subject site lies to the south of the intersection of Stoneleigh Avenue (CR 35) and Drewville Road (County Road 36), and approximately 2.2 miles north of the intersection of Daisy Lane (Stoneleigh Avenue officially changes to Daisy Lane at the Westchester/Putnam County Border and US Route 202 in Westchester County). The project entrance is approximately 2.2 miles south of US Route 6 which is a major east-west road and the location of local shopping centers. Figure 3.5-1 shows the local road network in the vicinity of the subject site.

The directional distribution is heavier southbound in the weekday morning peak and heavier northbound in the weekday afternoon peak along Stoneleigh Avenue. The reasons for this pattern include the traffic headed south to early morning commuter trains at the Croton Falls Station, to Interstate 684, and to Putnam Hospital Center. This movement is reverse in the p.m. peak hour.

The 2007 DEIS evaluated the operation of nearby intersections to ascertain potential impacts and to identify the mitigation measures required to offset those impacts resulting from the proposed development.

The Traffic Analysis evaluated three intersections:

1. Drewville Road (County Road 36) and Stoneleigh Avenue (County Road 35).
2. Putnam Hospital Center Main Entrance and Stoneleigh Avenue (CR 35).
3. Daisy Lane (Westchester County Road 137) and US Route 202.

The intersection analyses were performed for future conditions both with (Build) and without (No-Build) the project. Both future conditions factored in increased traffic volumes associated with background growth and other proposed developments. The No-Build condition is used as a baseline for comparisons with future conditions resulting from the proposed development.

Traffic counts were taken during February of 2007 to determine the existing level of traffic and the a.m. and p.m. peak hour of traffic volumes. Under existing conditions, all the study intersections performed at level of service D or higher. The 2007 traffic study found that when considering future growth, traffic volume increases would result in a decline in level of service for at least one movement at each intersection under the No-Build Condition. The traffic study found that the additional traffic from the 2008 modified project would not result in a decrease in the level of service of any movement from the No-Build to Build Condition.

Potential Impacts

The proposed Hamlet at Carmel differs from the 2008 PCF Senior Housing Development in that it would be non-age restricted and it would consist of 150 residential rental units, 30 more units than the 2008 plan. The number of vehicle trips generated by the Hamlet at Carmel

development will increase over the proposed 2008 project due to an increase in residential units and a change in the unit type.

Trip Generation

The trip generation rates for the 2008 plan are shown in Table 2.3-1, below.

Table 2.3-1
The Putnam Community Foundation Senior Housing Development
Trip Rate Summary

Land Uses {ITE Code}	Trip Rates			
	A.M. Weekday Peak Hour		P.M. Weekday Peak Hour	
	IN (Trips/ Unit)	OUT (Trips/ Unit)	IN (Trips/ Unit)	OUT (Trips/ Unit)
Residential Development				
120 Dwelling Units Senior Adult Housing Attached {252}	0.122	0.149	0.189	0.121

Trip Generation, Institute of Transportation Engineers, 7th edition, Washington, DC, 2003.

The vehicle trips estimated to enter and exit the 2008 Senior residential development are shown in Table 2.3-2, below.

Table 2.3-2
The Putnam Community Foundation Senior Housing Development
Trip Generation Summary

Land Uses	Trips					
	A.M. Weekday Peak Hour			P.M. Weekday Peak Hour		
	IN (Trips)	OUT (Trips)	Total Trips	IN (Trips)	OUT (Trips)	Total Trips
120 Dwelling Units Senior Adult Housing Attached	15	18	33	23	15	38

Trip Generation, Institute of Transportation Engineers, 7th edition, Washington, DC, 2003.

The trip generation rates for non-age restricted attached housing are higher than for senior attached housing, as shown in Table 2.3-3, below.

Table 2.3-3 The Hamlet at Carmel Trip Rate Summary				
	Trip Rates			
	A.M. Weekday Peak Hour		P.M. Weekday Peak Hour	
Land Uses {ITE Code}	IN (Trips/ Unit)	OUT (Trips/ Unit)	IN (Trips/ Unit)	OUT (Trips/ Unit)
Residential Development				
72 Dwelling Units Multifamily low rise {220}	0.112	0.373	0.386	0.226
78 Dwelling Units Multifamily midrise{221}	0.089	0.255	0.273	0.174
Trip Generation, Institute of Transportation Engineers, 10th edition, Washington, DC, 2017.				

The vehicle trips estimated to enter and exit the Hamlet at Carmel residential development are shown in Table 2.3-4, below.

Table 2.3-4 The Hamlet at Carmel Trip Generation Summary						
	Trips					
	A.M. Weekday Peak Hour			P.M. Weekday Peak Hour		
Land Uses	IN (Trips)	OUT (Trips)	Total Trips	IN (Trips)	OUT (Trips)	Total Trips
72 Dwelling Units Multifamily low rise {220}	8	27	35	28	16	44
78 Dwelling Units Multifamily mid rise {221}	6	18	24	21	14	35
Total 150 dwelling units	**14**	**45**	**59**	**49**	**30**	**79**
Trip Generation, Institute of Transportation Engineers, 10th edition, Washington, DC, 2017.						

The trip generation estimates indicate that the proposed development will result in a total of 59 trips in the peak A.M. hour and 79 trips in the peak P.M. hour.

The trip generation rates are determined by the Trip Generation Manuel (ITE, 10th edition, 2017). The residential trip generation rates do not consider bedrooms per unit, but rather building type. As shown in Table 3.4, the proposed development will have 72 units in multi-family low rise buildings (2-story) and 78 units in mid-rise buildings (2.5 story). The low-rise buildings have a slightly higher trip generation rate (trips per dwelling unit) than mid-rise buildings. The proposed building type is not expected to change, and therefore the related trip generation rates will not change.

The NYSDEC Environmental Assessment Form Handbooks provide thresholds to help determine if a substantial increase in traffic is likely to occur from a proposed activity. According to the Handbook, “It assumes that a project generating fewer than 100 peak hour vehicle trips per hour will not result in any significant increases in traffic.

Public Transportation

The project site is located on Route 1 of the Putnam County Area Rapid Transit (PART) bus system. The PART system operates and maintains a stop at the Putnam Hospital Center. Service at the stop is hourly Monday through Friday between 8:00 a.m. and 6:00 p.m. The Brewster rail station is also a stop on Route 1 of the PART system. Future residents at the Hamlet at Brewster may utilize the PART system or work at the Putnam Hospital Center, potentially reducing vehicle trips.

Impact of Covid-19

The 2020 Covid-19 pandemic has altered commuting and shopping patterns, potentially altering traffic patterns and timing long-term. Long-term trends related to the pandemic affecting remote working and resulting traffic conditions are being studied by planning and transportation professionals nationwide. Upwork, a large human resource marketplace completed a survey of over 1000 hiring managers in December of 2020[1]. At that time 41.8 percent of the workforce was still working remotely. The survey findings indicate that by 2025 remote workers will be approximately 22 percent of the workforce (36.2 million), as compared to 12 percent of the workforce (19.4 million) prior to the pandemic. This is an 87 percent increase from pre-pandemic to post-pandemic conditions. These estimates will vary by region, locality and type of work but the trend is towards increased remote work opportunities from pre-pandemic conditions. With such shifts in work and commuting habits, it is likely that less commuter trips will occur during peak traffic periods in the near future.

Existing Traffic Volumes

New York State Department of Transportation data indicates that traffic volumes on US Route 6 in the previous decade were stable or decreasing slightly before the 2020 Covid-19 pandemic as shown in Table 2.3-5.

Table 2.3-5
Average Annual Daily Traffic (AADT)

Links	AADT (Year)	
US Route 6 east of Stoneleigh Avenue (CR 35)	14470 (2011)	14379 (2017)
US Route 6 west of Stoneleigh Avenue (CR 35)	17498 (2015)	15657 (2018)

[1] New York State Department of Transportation Traffic Data Viewer July 2021.

The NYSDOT average annual daily traffic data provided above is for segments of roadway, as shown in Figure 2.3-2. US Route 6 is approximately 2.2 miles north of the project site, and is a major east-west two-lane highway. While average daily traffic on US Route 6 east of Stoneleigh Avenue declined 0.6 percent between 2001 and 2017, the daily traffic west of Stoneleigh Avenue declined 10 percent between 2015 through 2018. This data indicates that local traffic has not increased substantially in the past decade.

[1]https://www.businesswire.com/news/home/20201215005287/en/Upwork-Study-Finds-22-of-American-Workforce-Will-Be-Remote-by-2025

Traffic Counts

In order to confirm local existing traffic volumes, traffic counts were collected during peak hours in September 2021 at the intersection of Stoneleigh Avenue and Drewville Road. This intersection is located approximately 2,200 feet (0.41 miles) north of the proposed project entrance and captures northbound traffic traveling to and from the Putnam Community Hospital. The intersection traffic volumes are shown in Table 2.3-6, below.

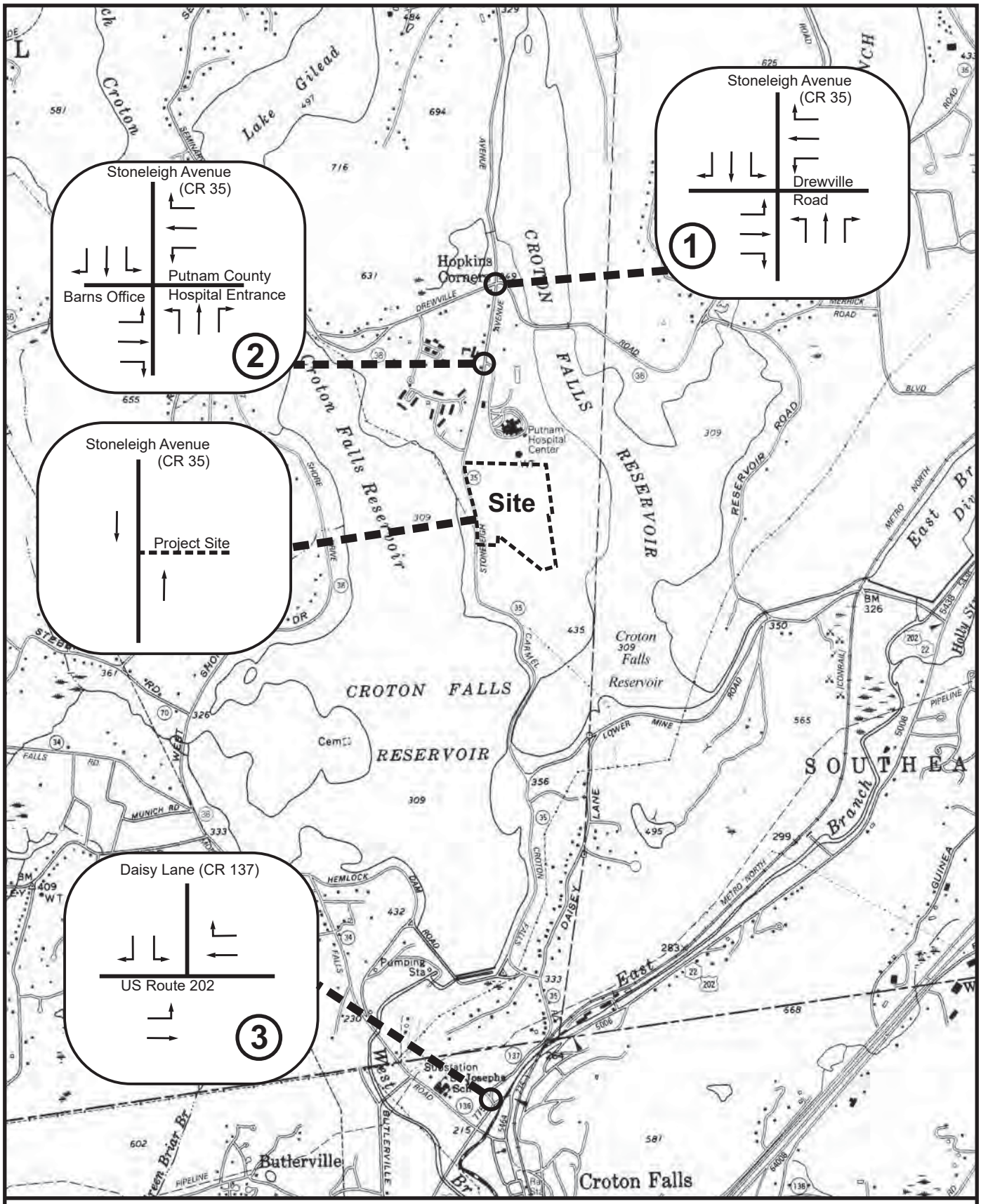
Table 2.3-6 provides a comparison between the current September 2021 traffic and the counts collected in February 2006 for the original traffic study. The morning peak traffic declined 10.1 percent and the afternoon peak traffic (5.00 to 6:00 p.m.) declined 13.2 percent over that 15 year period. The 3:30 to 4:30 p.m. period appears to be the current peak traffic period, although the volumes have remained relatively stable (a decline of 0.8 percent) since 2006. The decline of traffic during typical commuter periods and the stability of the 3:30 to 4:30 traffic volumes may be the result of declining longer distance commuter traffic and relatively stable traffic to and from the Hospital.

Table 2.3-6
Intersection Peak Hour Traffic
Stoneleigh Avenue and Drewville Road

	Intersection Peak Traffic		
Time of Day	**2006[1]**	**2021[2]**	**Percent Change**
7:45 to 8:45 am	1060	953	-10.1%
3:30 to 4:30 pm	1182	1173	-0.8%
5:00 to 6:00 pm	1191	1034	-13.2%

[1] February 2006 Count
[2] September 2021 Count

The Hamlet at Carmel will result in an increase in vehicle trips as compared to the estimated trips in the 2007 traffic study. That study found the intersection of Stoneleigh Avenue and Drewville Road operating at a level D or better at that time, and therefore was not an existing problem intersection. NYSDOT data and recent traffic counts at Stoneleigh Avenue and Drewville Road indicate stable or declining traffic volumes near the project site. The proposed Hamlet at Carmel development is not anticipated to result in any significant traffic impacts. Therefore, no mitigation in the form of roadway improvements is proposed.



N
W E
S

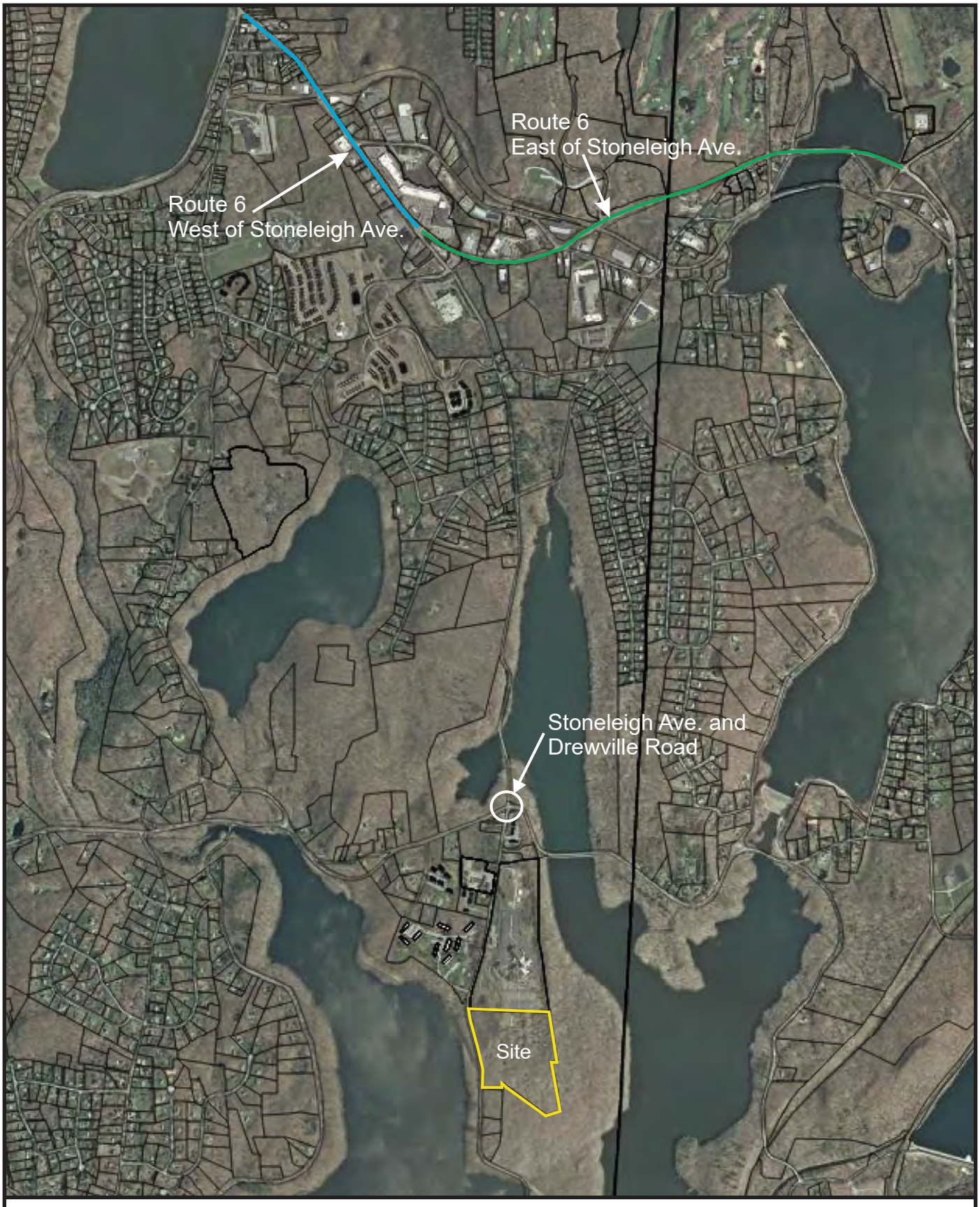
1 Intersection Number
see Section 3.5

Figure 2.3-1: Local Road Network

The Hamlet at Carmel
Town of Carmel, Putnam County, New York
Base Map: NYS DOT Planimetric Map, Lake Carmel Quad, 1997
Scale: 1 inch = 2000 feet

File 06047 4/13/07
TMAWP:\06047\Figures\

Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418



N
W E
S

Figure 2.3-2: Traffic Count Locations
The Hamlet at Carmel
Town of Carmel, Putnam County, New York
Base Map: Putnam County, NY GIS
Approx. Scale: 1 inch = 2,035 feet

File 04031 08/08/05
JS:\04031\Fig 4.8-12.cdr

Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

Attachment A

SEQRA Findings Statement -
PCF Senior Housing Dev. (2008)

PLANNING BOARD
Town Of Carmel ~ Town Hall
Mahopac, New York 10541
(845) 628 - 1500

LEAD AGENCY
SEQRA FINDINGS STATEMENT

Lead Agency:
TOWN OF CARMEL PLANNING BOARD
Carmel Town Hall
60 McAlpin Avenue
Mahopac, New York 10541
(845) 628-1500
Contact: Mr. Harold Gary, Chairman

December 17, 2008

TABLE OF CONTENTS

Title of Action: The Putnam Community Foundation, Stoneleigh Avenue, Senior Housing Development

SEQR Status: Type 1 Action

Description of Action: The proposed project consists of a mix of 120 senior residential rental units, housed in either multi-family, two story buildings or single family one story attached buildings. A total of seventy-two (72) single-family, attached, condo / townhouse-style rental units would be housed in eighteen (18) single story buildings each containing four units. Forty-eight (48) rental units would be housed in two, two story (with basement level parking), multi-family buildings each containing twenty-four (24) units. A Community Building would include meeting rooms, storage, administrative offices, a library, and a computer room. Recreational facilities proposed would include tennis and bocce courts.

Location of Action: The project is proposed on two parcels of land located along the east side of Stoneleigh Avenue in the Town of Carmel, Putnam County, New York encompassing approximately 78.4 acres. The first parcel is the Putnam Community Foundation (PCF) 35.2 ± acre parcel of vacant land designated as Town of Carmel Tax Map Parcel #66.-2-58. The second parcel is a 43.2 ± acre parcel of land containing the existing Putnam Hospital Center (PHC). The PHC parcel is designated as Town of Carmel Tax Map Parcel #66.-2-57.

Lead Agency: Town of Carmel Planning Board
Carmel Town Hall
60 McAlpin Avenue
Mahopac, New York 10541

Project Sponsor: The Putnam Community Foundation
2 Route 164, P.O. Box 573
Patterson, NY 12563

FEIS Accepted: November 19, 2008

1.0 INTRODUCTION

Pursuant to Section 8-0101 et seq. of the Environmental Conservation Law (SEQRA) and 6 N.Y.C.R.R. Part 617, the Planning Board of the Town of Carmel, as lead agency, makes this statement of findings for The Putnam Community Foundation, Stoneleigh Ave., Senior Housing Development. This Findings Statement considers the relevant environmental impacts, and draws upon the facts and conclusions of the Draft Environmental Impact Statement (the "DEIS") accepted by the Town of Carmel Planning Board (the Planning Board) on August 17, 2007, and the Final Environmental Impact Statement (the "FEIS") accepted by the Planning Board on November 19, 2008.

This Findings Statement attests to the fact that the Town of Carmel Planning Board, as Lead Agency, has complied with all of the applicable procedural requirements of Part 617 in reviewing this matter, including but not limited to:

- Coordinated designation of the Planning Board as Lead Agency;
- Issuance of a Positive Declaration by the Planning Board;
- Public Scoping Session and adoption of Scoping Document for the DEIS;
- Preparation of a DEIS by the Project Sponsor; Acceptance of the DEIS by the Planning Board; Filing of the DEIS and a Notice of Completion;
- Establishment of a Comment Period and the holding of a Public Hearing on the DEIS by the Planning Board;
- Consideration of written public comments from agencies and the public; and correspondence between the Applicant and the Involved and Interested Agencies as well as outside organizations;
- Preparation of a FEIS; submittal on August 12, 2008; and 3-month FEIS completeness review by the Planning Board as Lead Agency;
- Acceptance of the FEIS by the Planning Board on November 19, 2008;
- Filing of the FEIS and a Notice of Completion by the Planning Board;
- Establishment of a reasonable period for review of the FEIS by the public and involved agencies prior to adoption of a findings statement. Under SEQR, the required minimum FEIS review period is not less than 10 calendar days. The Notice of Completion for this FEIS was published in the Environmental Notice Bulletin on December 3, 2008 and the Notice along with a copy of the completed FEIS was distributed to all Interested and Involved Agencies on November 24, 2008.
- Preparation and adoption of this Findings Statement by the Planning Board.

This Findings Statement also attests to the fact that the Planning Board has given due consideration to the EIS prepared in conjunction with this action. Further, this Findings Statement contains the facts and conclusions in the EIS relied upon by the Planning Board to support its future decisions and indicate the social, economic and other essential factors and standards which will form the basis for its decisions.

2.0 DESCRIPTION OF THE PROPOSED ACTION

It is proposed to create 120 senior rental housing units on The Putnam Community Foundation property with an access driveway on the existing Putnam Hospital Center (PHC) property to provide access to both the hospital and the proposed senior housing development. The current proposed action involves other amenities and improvements as described in more detail below. It should be noted that the Putnam Community Foundation (PCF) and Putnam Hospital Center

(PHC) are in discussions for the PCF to obtain alternative access to the project site via the PHC property. This resulted in the modification to the project involving the development of a common access driveway, which would serve both the PHC and the subject project.

The common access drive is a modification of the original project, in response to public and agency comments on the DEIS, which was presented in the FEIS resulting from negotiations initiated by the PCF, as the project sponsor. As part of the current proposed action, the shared access would be located at the southern end of the hospital campus and outside of any New York City Department of Environmental Protection (NYCDEP)-identified watercourse limiting distances. In addition to avoiding the creation of impervious surfaces within the limiting distance of a watercourse, the common access would reduce potential land disturbance and erosion impacts attributed to access for both PCF and PHC; and create a safer single access (as compared to separate driveways for PHC and PCF) among other advantages. Not only does the shared access serve two separate uses, but it serves as mitigation to the potential impacts of the originally proposed PCF development (as presented in the DEIS).

If not for the initiative taken by PCF to address DEIS comments on the original proposal, the development of the PCF site would have resulted in a second separate access being constructed onto Stoneleigh Avenue to serve only the senior housing project. It should be noted that the additional parking proposed on the site of the existing hospital (PHC parcel) would have eventually been constructed by PHC to address the hospital's need independent of the development proposed by PCF. When compared to the scenario of two separate driveways for the PCF and PHC properties, the shared access in the modified PCF project reduces impervious surface coverage; enhances traffic safety along a length of road with multiple points of access; and prevents the visual impact of the clearing and road improvements that would be needed to create a separate new driveway. Additionally, this modification allowed the Planning Board and other agencies to consider the effects of adjacent uses in a coordinated environmental review process.

Another change to the project proposed in the DEIS is that the number of units in the two multi-family buildings (Buildings A and B) have been reduced from a total of 64 to 48. This modification was made to accommodate parking under the buildings, which reduces the impervious surface needed for parking; allows covered parking protected from the weather; and easy access to the building elevators. Additional project modifications are described below.

The Current Proposed Action

As set forth in the FEIS, it is proposed to create 120 senior rental housing units on The Putnam Community Foundation (PCF) parcel with an access driveway on the Putnam Hospital Center (PHC) lot to provide access to both the existing hospital and the proposed senior housing development. The Town of Carmel, and therefore the subject site, is located wholly within the watershed of the New York City water supply system.

The proposed project consists of a mix of 120 senior residential rental units, housed in either multi-family, two-story buildings or single family one story attached buildings. A separate community building and recreation area are included in the plan. The residential development will be located on the eastern and central portions of the property where the land is relatively level.

A total of 72 single-family, attached, condo/townhouse-style rental units would be housed in 18 single-story buildings situated along the eastern property line. All of these buildings would

contain four attached units. The units would house residences with two conceptual elevations, a single distinct floor plan with a variety of amenities. Each unit would include a patio or deck in the rear of the unit. The square footage of these units would be approximately 1,520 square feet.

Forty-eight rental units would be housed in two, two-story (with basement level parking), multi-family buildings located in the north central portion of the site. Buildings A and B would each contain 24 (in the FEIS) units with three unique floor plans and a variety of amenities. A common space is situated on the parking level; lounges are depicted on the second floor; while patios and lobbies are proposed for each floor of these buildings. Elevators would transport residents between floors. The square footage of these units would range from approximately 1,235 to 1,395 square feet.

A (in the FEIS) Community Building would be sited to the south of and across the proposed access road from Building B. Uses in this Building could include meeting rooms, storage, administrative offices, a library, and a computer room. The community building would include similar architectural features to those proposed for the dwelling units.

Recreational facilities proposed would include tennis and bocce courts. These uses would be located immediately to the east of the Community Building at the intersection of the internal roadways that provide access to the residences and would be accessible by sidewalk. A gazebo is proposed for the center of the Community Green to be located in the east central portion of the site.

The Proposed Action presented in this FEIS represents a substantial reduction in impacts from the original proposal of 240 housing units and a reduction of impacts when compared to the Proposed Action presented in the DEIS. This fifty percent reduction in the number of units when compared with the original proposal corresponds with reductions in impacts to the resources assessed in each of the categories that follow.

Comments received on the DEIS for the project expressed concerns with the location of the access drive with respect to the Croton Falls Reservoir and the land disturbance and potential erosion associated with the construction of the access drive. These concerns were expressed by the NYCDEP and other commenters. In response to these comments, the project sponsor reached out to the PHC to determine if an alternate access drive could be developed that would mitigate the concerns expressed. It was determined that the PHC had a need to develop a second entrance into their campus in order to provide redundant access and a more direct route between Stoneleigh Avenue and the emergency department for ambulances. The PCF and PHC are in discussions for the PCF to obtain alternative access to the project site via the PHC property via the development of a common access driveway, which would serve both the hospital and the subject project. The proposed common access drive would be located at the southern end of the hospital campus and outside of any New York City Department of Environmental Protection (NYCDEP) limiting distances. The construction of the common access driveway across PHC property would also involve less earthwork and related disturbance thereby reducing overall impacts.

Associated with the secondary hospital access drive would be a new parking lot on the PHC property. The parking lot would be located in the southern portion of the parcel between an existing field and the PHC southern property line. The proposed parking area would provide the PHC with an additional 163 parking spaces. This lot will provide the PHC with much needed parking to support the expanded facility.

It should be noted that, while the access road has been relocated as depicted in FEIS plan, the access drive presented on the DEIS plan is an environmentally feasible alternative as mitigation can be put in place to offset all impacts associated with its construction and the runoff from its surface post-development.

Recently Proposed Modifications to the Site Plan

Modified Project Layout

The current proposal, described in the FEIS, is 120 units with a total disturbance of approximately 25.3 acres between the two parcels (PCF and PHC). While the total disturbance is greater than the plan presented in the DEIS, the disturbance on the PCF parcel has been reduced. The increase in overall disturbance results from the additional parking proposed for the PHC parcel. It should be noted that the additional parking proposed on the site of the existing hospital (PHC parcel) would have eventually been constructed to address the hospital's need independent of the development proposed by PCF.

Total impervious surface area under the plan presented herein is 6.7 acres for the PCF parcel, a decrease of 0.2 from the DEIS plan, and 2.1 acres for the PHC parcel. The decrease in impervious surface on the PCF parcel from the plan presented in the DEIS is a result of the relocation of the access drive to eliminate all proposed impervious surfaces from the reservoir buffer zones (limiting distances). The decrease in impervious surface related to the PCF is a key mitigation related to these limiting distances and coordinated access also makes sense from the perspectives of good site planning, reducing the visual effects of development and vehicular access safety.

The impervious surface proposed on the PHC parcel is due to the additional parking and the access road. Unlike the previous plan, this proposal includes a relocated access road, parking below the multi-family, two story buildings that will house 48 units, reconfigured single-family attached residences, a Community Building with parking abutting the recreation area and revised stormwater management system.

The access road was originally proposed via an approximately 2,200-foot long internal road with a connection to Stoneleigh Avenue near the southwestern corner of the project site. This access road could have been built by PCF and operated with impact to the downstream receiving waters. As noted above, the hospital's need for parking would have resulted in the construction of the additional parking on the PHC property with or without the development of the proposed senior housing on the PCF parcel.

However, to address comments received on the original proposal, under the plan modified by PCF as the project sponsor, the access road is located roughly 2,000 feet to the north of the original proposed curb cut on Stoneleigh Avenue. The first 1,050 feet (approximately) of this roughly 2,100-foot main access road is sited on the PHC property as a result of coordination between PCF and representatives of the PHC. The PCF project engineer, in coordination with the hospital, has configured the access road to provide direct access to both the emergency room and the new hospital parking lots on the south end of the PHC property. The incoming and outgoing lanes are split for approximately 100 feet on either side of the property line between the PHC and PCF parcels. Plantings are proposed over roughly half this distance to enhance the entrance into the senior housing development.

If not for the initiative taken by PCF to address comments on the original proposal, the development of the PCF site would have resulted in a second separate access being constructed onto Stoneleigh Avenue to serve the senior housing. The shared access in the modified proposed action reduces impervious surface coverage; enhances traffic safety along a length of road with multiple points of access; and prevents the visual impact of the clearing that would be needed to construct a new driveway.

Another change to the project proposed in the DEIS is that the number of units in the two multi-family buildings (Buildings A and B) have been reduced from a total of 64 to 48. This modification was made to accommodate parking under the buildings, which reduces the impervious surface needed for parking; allows covered parking protected from the weather; and easy access to the building elevators.

Seventy-two single family residences are now proposed compared with 56 under the DEIS plan. The square footage of each of these units is now 1,520 square feet and all eighteen buildings now contain four units. These changes allow for all the single-family units to be built in a very similar configuration to the plan presented in the DEIS and over the same area meaning the disturbance remains the essentially same.

The Community Building has been relocated to a point south of and across the access road from the location originally presented in the DEIS. The new layout provides parking for both the Community Building and the recreation area; the latter was previously accessed by a walking trail only. All components of this community complex in the FEIS plan remain the same size as in the DEIS plan, therefore impacts remain the same.

It is noted that the building locations, footprints, and square footage may be altered as the final plans are developed. If such modifications result in construction activity staying substantially within the same limits of disturbance set forth in this FEIS, with similar impervious surface areas, and no new significant adverse environmental impacts, no further environmental review will be required.

Based on the Town regulations, the development is required to provide a minimum of 203 total spaces for the proposed senior housing development. This includes 1.5 spaces per dwelling unit (120 units) and 1.0 space per 200 square feet of Community Building (approximately 4,480 square feet) as per the Carmel Zoning Code. Handicapped spaces must be provided in accordance with Section 156-42A(9) of the Zoning Code. The Code requires that a minimum of two percent of the total number of parking spaces be designated for handicapped persons.

A total of 245 parking spaces are proposed for the project including: 72 indoor spaces and 72 outdoor spaces (in the driveway) for the condo/townhouse-style units; 54 indoor spaces and 16 outdoor spaces for the multi-family housing units (Buildings A and B); and 18 spaces for the Community Building. A total of 26 additional outdoor spaces would be available at various points along the drives serving the residential units. This provides an average of approximately 1.9 spaces per dwelling unit, excluding the parking set aside for the Community Building.

Contained in FEIS Appendix F and G, respectively, are revised versions of the Wastewater and Water Engineering Reports. Changes to the building layout between the plans presented in the DEIS and FEIS required adjustments to the length and location of the sewer and water lines, which are documented in the two reports.

3.0 STATEMENT OF FACTS AND BASIS FOR CONCLUSIONS

The following is a summary of the relevant areas of concern discussed in the Environmental Impact Statement (EIS), and the mitigation proposed. It is not intended to be a complete list of all adverse impacts discussed, or mitigation proposed in the EIS.

3.1 Soils and Topography

Potential Impacts

The Environmental Impact Statement identified the different soil types on the subject property, and discussed the potential activities that will occur in each different soil type; whether it will remain undisturbed, regraded, revegetated or covered by buildings or other types of impervious surface. Soils on the site were identified using the Soil Survey of Putnam and Westchester Counties. There are three types of soil on the site; Paxton, Charlton and Charlton-Chatfield. With development of the Proposed Action there will be approximately 25.3 acres of soil disturbed all of which will occur on Paxton soils. When complete, approximately 8.8 acres of the 78.4 acres making up the two sites, including 6.7 acres on the 35.2 acre PCF site, will be impervious surface. Roughly 17 acres will be re-vegetated with grass and landscaping and additional area will remain undisturbed, meaning more than one half of the PCF site will be vegetated upon completion of the project. Some subsurface investigations were conducted and verified depth to groundwater noted in the soil survey.

The EIS evaluated the potential impacts that the proposed action would have on the topography and slopes located on the project site. Potential impacts include erosion of slopes during construction, and long-term stability of the slopes after construction has been completed. Over 90 percent of the 35.2 acre PCF site that will be affected during construction will occur on slopes less than 15 percent in grade. PCF site disturbance on slopes greater than 25 percent is limited to less than one percent (0.3 acres); 1.9 acres (approximately four percent) of the PHC containing slopes greater than 25 percent will be disturbed. Due to the depth to bedrock on the project site, blasting is not anticipated

The relocation of the access road and modifications to the proposed layout were implemented into the design to reduce, to the greatest extent practicable, the potential environmental impacts associated with grading and impervious surfaces, to reduce construction costs, and to facilitate use of excavated materials within the project thereby avoiding or minimizing the need to import material to the property. As with all land development projects, the cut materials that are determined to be physically (geotechnically) unsuitable for use during development of the project site will be removed. The cut and fill required for the modified development plan shows that the site earthwork would result in approximately 58,000 cubic yards (cy) of cut and roughly 75,000 cy of fill resulting in approximately 17,000 cy of net import. As the project site planning progresses the Applicant will be encouraged to adjust grades to better balance the cuts and fills associated with the earthwork. In addition, the plan changes eliminate impacts to the Charlton and Charlton-Chatfield Complex soils.

Mitigation Proposed

The USDA identifies the affected soil as possessing potential limitations for development of roads, buildings and excavations due to their characteristics. Such limitations require planning and engineering considerations prior to development. The presence of these constraints does

not mean the land cannot be developed, rather that engineering methods to compensate for soil limitations, such as erosion controls, footing drains or other drainage improvements will be required. These soils are found throughout Putnam County and have successfully sustained development through the use of appropriate design and engineering practices. Soil limitations exist generally in most areas throughout Putnam County and engineering principals are used to develop designs and practices that offset the limitations. These limitations include building on rock, sand, wet soils, steep slopes, etc.

During construction, soils may be subject to increased erosion and sedimentation when the existing surface cover is disturbed during grading operations. In response to specific comments from NYCDEP and others, the development plan for the project was modified to reduce its area of impervious surface within the City regulated limiting distance. The plan was also revised to enhance the effectiveness of erosion control methods to be applied during construction and to improve water quality during and after construction.

An Erosion and Sediment Control Plan, which is an integral component of the Storm Water Pollution Prevention Plan (SWPPP), has been developed for the project to prevent erosion of soils exposed during construction. The proposed soil erosion control features would be installed in accordance with the New York State technical standards for controlling erosion and sediment (New York Standards and Specifications for Erosion and Sediment Control) specified in the New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) General Permits for Stormwater Discharges from Construction Activities (GP-0-08-001 and GP-93-06), and their supplements and appendices, and the Town Carmel Municipal Code. As the construction and development plans are refined during the site plan review phase conducted by the Planning Board and other agencies, the Erosion and Sediment Control Plan will also be refined and further developed.

As detailed in the project-specific SWPPP, construction of the project will be carefully phased, and sequenced, to further control erosion and sedimentation. As specified, the phasing plan will limit the area of exposed soil on the site to a maximum of five acres at any time. Detailed construction sequencing plans have been developed that significantly reduces the potential for erosion from the project sites during construction.

As required by the NYSDEC SPDES General Permit GP-0-08-001, inspections will be conducted by an independent qualified Professional retained by the Applicant to ensure that all erosion and sediment control practices are properly maintained and in good working order. These measures also would be monitored during construction by the NYCDEP, and by representatives of the Town paid for by inspection fees funded by the Applicant pursuant to the Town Code. Also, as require by the Town Code, the Applicant will provide to the Town of Carmel the required maintenance of erosion and sediment control measures and completion of site restoration. As such, the effectiveness of the stormwater facilities will be maintained long term.

Prior to construction, the proposed erosion and sediment control features would be installed according to the Erosion and Sediment Control Plan. As required, these features would be closely monitored, and maintained in effective condition, and left in place until permanent vegetative cover is established. All disturbances of steep slopes would be appropriately stabilized to minimize their erosion potential and ensure their long-term stability.

3.2 Terrestrial and Aquatic Resources

Potential Impacts

The project site consists of northern hardwood forest and successional old fields with no wetlands and five NYCDEP regulated intermittent watercourses. The forest and overgrown fields provide wildlife habitat for a number of common species, including deer, raccoon, opossum, chipmunk and gray squirrel among others. Bird species that selectively reside within smaller woodlands and successional fields would also be present. The woodlands on this site offer a number of cavities for cavity nesting birds and small mammals.

Records of federally or state-listed rare plant species, wildlife species, habitats or significant natural communities were identified for the site or adjacent properties in communication (see correspondence in Appendix B) with the NYSDEC NHP via letter and the United States Fish and Wildlife Service *(SFWS)* via their website. A State listed endangered orchid, large twayblade *(Liparis lilifolia)* was identified by the NHP as being historically present in the vicinity of but not on the project site. In addition, the Eastern small-footed bat (*Myotis leibii*) and a colony of the same were identified as occurring in the Town of Southeast. Later correspondence with the State no longer identified the bat in the vicinity of the subject properties.

No protected wildlife species were identified or observed during numerous field visits and surveys conducted on the project site.

The land subject to grading and development in the proposed project comprises approximately 25.3 acres, along the eastern boundary into the central portion of the PCF site along with the access road and new parking area on the south and along the southwest boundary of the PHC property. Of this area, approximately 16.5 acres on the PCF parcel are proposed to be revegetated and would be available after development as wildlife habitat, albeit altered from its existing condition. The existing vegetative cover and habitat on the balance of the PCF project site (approximately 17 acres) would not be disturbed by the project. These areas would continue to provide habitat for many typical woodland species, although the habitat value would be lessened by the presence of the senior housing development proximate to the remaining habitat.

The proposed construction of the site will alter and reduce wildlife habitat, and this reduction will result in the local loss or displacement of wildlife relying upon that habitat. Wildlife currently using habitat on the project site would relocate to areas with similar habitat off-site. Most wildlife movement from this site would be expected toward the south, east and west (beyond the reservoir) of the property. These areas offer similar habitat and are less densely developed than the areas to the north. There have been no recorded reports that nearby habitats are saturated to their carrying capacities from local, State or Federal agencies that would monitor these conditions, and areas of the site will remain available for local relocation of some individuals.

Many of the interior woodland bird species found on the project site are migratory. Therefore, they have always left the project site during certain times of the year. Most migratory species would adaptively seek other nearby or regionally available environments in response to alterations to on-site habitat. Most of these species would be expected to find alternative habitat in the existing undisturbed woodland areas located in close proximity to the site. The possible displacement of locally common species is not expected to have a regional impact on the population of these species.

After the project development is completed, the composition of the wildlife population on the project site would adjust to final site conditions. Species better able to adapt to open and landscaped environments (such as raccoons, opossum, woodchucks, mice and certain songbirds) would have a greater ability to populate the site in comparison to species that are less tolerant of human activity.

Mitigation Proposed

The most significant modification implemented by the Applicant to protect habitat and reduce overall impacts to vegetation and wildlife is the reduction in the size of the development proposed. The original plan for the site included the development of 240 units of senior rental housing. The current proposal cut the number of proposed units in half. This reduction in the number of units significantly reduces the amount of disturbance required to develop the site.

The proposed site plan minimizes the amount of vegetation to be removed while allowing for the scheduled program of temporary and permanent uses and the need for associated parking and infrastructure. The phased construction of the project is likely to result in the phased movement of wildlife from disturbed areas on the site to undisturbed areas on and off site.

All areas that are not proposed to be impervious surfaces would be re-vegetated, including the western slope of the site. Upon completion of the proposed development, approximately 28.5 acres of the site would be vegetated, combining existing vegetative communities and landscaped areas.

The developed areas of the project site would be landscaped, where possible, to maximize the available wildlife habitat and would employ native, non-invasive vegetation wherever possible. Many species of trees and shrubs chosen for the proposed landscaping would provide forage and nesting sites for birds, and or denning sites for small mammals, while the preserved habitat areas and re-vegetated open space areas would still be used by deer and other adaptive wildlife.

The intermittent watercourse corridors would not be impacted by this proposal. No activities are proposed within and immediately adjacent to the intermittent watercourse and therefore existing surrounding habitat would not be impacted with the exception of the placement of the proposed stormwater basins within roughly 50 feet of the east end of the watercourse. The Applicant is proposing a detailed erosion control and phasing plan to maintain the quality of water and moderate potential effects of stormwater runoff including water temperature. Also proposed is the preservation of the wooded riparian buffers along the intermittent watercourse. This preservation of the established tree canopy will ensure that the surface water temperatures and the soils immediately adjacent to the stream would not change.

3.3 Water Resources

Potential Impacts

The Putnam Community Foundation site is located in New York City's phosphorous restricted Croton Falls Reservoir watershed, part of the City's 2,000 square mile public drinking water supply watershed. Existing phosphorous loads in the Croton Falls Reservoir exceed the Total Maximum Daily Load (TMDL) established by NYSDEC for the reservoir. For these reasons, the NYCDEP, and others, expressed concern about potential adverse impacts on the water supply,

and cited the need for measures to mitigate potential impacts on water quality that could result from the proposed development.

The Proposed Action would result in approximately 8.8 acres of new impervious surfaces (in the form of buildings, parking areas, and roadways) and 25.3 acres of temporary land disturbance on the two parcels that make up the project site. The DEIS disclosed that surface water resources could be adversely impacted from sedimentation during construction of the project, and by post construction changes in the peak rate, volume, and quality of stormwater discharged from the developed site.

As documented in the DEIS and FEIS, potential adverse impacts on surface water resources anticipated from the project are associated with erosion and sedimentation during construction and with post construction changes in stormwater quality and quantity. The EIS identified that surface waters could experience impacts from changes in site hydrology that would increase the rate of stormwater runoff, or from changes to the quality of runoff caused by increased nutrients and sediment. The NYCDEP and others expressed concern about the potential impacts on surface water quality that could result from the proposed development.

The primary tool mandated by the regulatory controls to protect surface water resources is the development, and implementation, of a site-specific stormwater pollution prevention plan (SWPPP). The Putnam Community Foundation SWPPP includes an Erosion and Sediment Control Plan to be implemented during construction to prevent erosion, and sedimentation of on, and off, site surface water resources. The SWPPP also includes a Stormwater Management Plan that specifies practices that will control post construction increases in peak rates of stormwater discharge and in stormwater pollutant loading.

A pollutant loading analysis for the proposed development was included in the DEIS and FEIS and used the pollutant loading coefficient method to meet the requirements of New York City's regulations. The analysis was included in the project specific SWPPP and showed an overall reduction in the post construction mean phosphorus loads that will discharge from the site.

Proposed Mitigation

Various regulatory controls affecting stormwater have been implemented by NYSDEC and NYCDEP. By complying with these, and in some instances exceeding, regulatory controls, the potential adverse impacts would be mitigated.

Under the proposed plan potential impacts on surface water would be mitigated through implementation of the temporary and permanent stormwater treatment practices specified in the SWPPP. Included in the SWPPP are a Erosion and Sediment Control Plan, and a Stormwater Management Plan, that address stormwater runoff quantity and quality. Combined, these measures will prevent erosion and sedimentation and will achieve a significant reduction in post construction increases in phosphorous and other pollutant loads entering the reservoir.

The Operation and Maintenance Plan included in the Putnam Community Foundation SWPPP specifies a schedule for the long-term inspection and maintenance of all stormwater management facilities.

The Applicant notes that the project site’s proximity to the Croton Falls Reservoir increases the importance of designing and implementing adequate stormwater management practices. The Applicant has considered this and modified the project by relocating the access drive outside of

the regulated limiting distances; there are no proposed impervious surfaces located within the 300 foot reservoir stem limiting distance.

Due to topography, runoff from a very minor segment of the proposed access drive cannot be directed to the stormwater management basins for treatment. This runoff would be treated by a proprietary subsurface stormwater filter that meets the NYSDEC requirements, and therefore complies with the new enhanced phosphorous removal requirements set forth in GP-0-08-001 and the New York State Stormwater Management Design Manual.

Erosion and Sediment Control

Implementing the proposed sequence of construction and phasing plan included in the Erosion and Sediment Control Plan will further reduce the potential for erosion. The proposed sequencing plan divides construction into six separate phases and will limit the area of disturbed soil at any time, thereby reducing potential impacts associated with erosion, and subsequent sedimentation of on, and off, site water resources. Soil disturbance will be limited to a maximum of five acres at any given time. All disturbed areas will be stabilized in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, April 2005.

To further prevent erosion and sedimentation during construction, the proposed project includes the construction of temporary surface water diversions and temporary sediment basins to control stormwater runoff. The SWPPP also includes a description of other measures proposed to control erosion and prevent sedimentation of water resources during construction. As shown on the construction plans, positive drainage will be established and maintained by the proposed grading of the site.

Stormwater uantity

The proposed increase in impervious surfaces on the project site will result in increases in stormwater volumes; this can not be avoided. The increase in stormwater volume would have a negligible increase in the elevation of the Croton Falls Reservoir, which is mechanically adjusted by the NYCDEP. The stormwater volume is released over a period of time to reduce peak discharges and to allow for water quality treatment with extended detention as required by NYSDEC and NYCDEP. Potential adverse effects resulting from increases in peak rates of stormwater runoff from the proposed development have been addressed by the proposed multiple stormwater management facilities. These facilities were selected, designed, and would be constructed, in accordance with NYSDEC and NYCDEP design guidelines and regulations. Accepted stormwater management techniques address the peak discharge rates of runoff since increases in peak rates can result in downstream flooding, erosion, and stream channel degradation. By reducing the post-development peak discharge rates to below pre-development levels, potential impacts on down-gradient water resources from the effects of flooding, and streambed and bank erosion, have been mitigated.

The proposed construction of the access road, and hospital parking, will necessitate the reconfiguration the three existing stormwater ponds on the southwest portion of the Putnam Hospital Center parcel. The oldest pond is proposed to be relocated. This pond was originally, designed in 1999 and approved by the NYCDEP. The relocated pond will have essentially the same contributing area and will provide the same treatment volume as the previously approved design. The proposed action will result in the enlargement of the two other ponds. These ponds were originally designed in 2006 as a NYSDEC P-1 micropool extended detention basin and as a NYCDEP extended detention basin. The ponds were approved by NYSDEC under GP- 02-01

and by NYCDEP. The drainage area of the two ponds will be increased following development of the site and the ponds will be expanded to provide treatment, and attenuation, of additional stormwater from the proposed parking area and access driveway located in the expanded drainage area.

Stormwater uality

The proposed project requires coverage under the NYSDEC SPDES General Permit for Stormwater Discharges GP-0-08-001. To meet the requirements of GP-0-08-001, the stormwater management practices were designed in accordance with the latest edition of the *ew ork State Stormwater Design Manual*. Further, since the project is located within a TMDL watershed the stormwater facilities designs also satisfy the enhanced phosphorus removal standards set forth in the permit. To meet NYCDEP requirements, the stormwater management system has also been designed to satisfy Section 18-39 of the *Rules and Regulations for the Protection from Contamination, Degradation, and Pollution of the ew ork City Water Supply and Its Sources*.

The EIS included a discussion of winter road and driveway maintenance and the use of deicing compounds, particularly salt, which can have a adverse impact on receiving water quality. The application of road salt on The PCF site would follow strict guidelines in accordance with the State of New York, Office of the Attorney General memo concerning Scientific Guidance on Lower-Phosphorus Roadway De-icers. In addition, to further safeguard water resources, road deicing agents, such as salt, would be stored at the maintenance contractor's facility or elsewhere off-site. The measures proposed to mitigate potential impacts, such as reduced use of road salt and use of non-phosphorus fertilizers for landscape maintenance, will be legally enforced by including them as an operation and maintenance note/condition on the final site plans.

With respect to phosphorous, which is the pollutant of concern in TMDL watersheds, the SWPPP for the project is expected to achieve better than the calculated mean removal efficiencies due to adjunct stormwater treatment practices that have been incorporated into the project design, but not considered in the calculation of post construction stormwater quality. These adjuncts include vegetated filter strips, grass swales, catch basin/drain inlet sumps and the addition of permanent pools in the stormwater basins. The stormwater basin permanent pools would include landscaping capable of removing dissolved phosphorous. Based on these facts, it is common to look at the higher end of the removal rates. Under these rates, the project, as designed, meets the agency's requirements.

3.4 Zoning and Surrounding Land Use

Potential Impacts

From a land use perspective, the Proposed Action will be compatible with surrounding development, which consists of a variety of residential densities similar to the proposed development, and will not result in significant adverse impacts.

The proposed Project, as designed, meets the Town of Carmel Zoning Code bulk and area requirements for a R (Residential) Zoning District. Multi-family dwellings for the elderly are allowed in the Residential District as a conditional use and require a Special Exception Use Permit subject to approval by the Planning Board.

Upon review of the project, the Planning Board referred the Applicant to the Zoning Board of Appeals (ZBA) for an interpretation regarding compliance with § 156-39.B (16) of the code which requires that the project "...site shall be within 2,500 feet of retail and service establishments at the time of its approval." On February 27, 2008, the ZBA determined that the Proposed Action, as designed, complies with this paragraph of the Town Zoning Code.

The Proposed Action may propose a more dense residential use than set forth in the 2000 Draft Comprehensive Plan but the clustered layout of the plan is designed to protect the natural resources located on the site as well as provide a diversity of senior housing options to the Town of Carmel. The Proposed Action also would represent appropriate development in an area where infrastructure and roadway networks are capable of handling such development. Therefore, the proposed project will conform to policies of the Town's Land Use Plan and the 2000 Draft Comprehensive Plan.

In addition, by addressing the stated need for senior housing and helping to maintain the county's population diversity, the project is consistent with the *ision 2* County Master Plan.

The proposed development has been designed to conform with all applicable standards set forth in the Town Code. Therefore no impacts would result.

Mitigation Proposed

In that no significant impacts would result from the development of the Proposed Action, no mitigation is proposed.

3.5 Traffic and Transportation

Potential Impacts

Frontage to the subject site is located on Stoneleigh Avenue (County Route 35) in the Town of Carmel. Stoneleigh Avenue, a two-lane road that runs generally north-south between US Route 202 and US Route 6, forms the western boundary of the PCF and PHC parcels.

The EIS evaluated the operation of nearby intersections to ascertain potential impacts and to identify the mitigation measures required to offset those impacts resulting from the proposed development. The Traffic Analysis evaluated three intersections:

1. Drewville Road (County Road 36) and Stoneleigh Avenue (County Road 35).
2. Putnam Hospital Center Main Entrance and Stoneleigh Avenue (CR 35).
3. Daisy Lane (Westchester County Road 137) and US Route 202.

The intersection analyses were performed for future conditions both with (Build) and without (No-Build) the project. Both future conditions factored in increased traffic volumes associated with background growth and other proposed developments. The No-Build condition is used as a baseline for comparisons with future conditions resulting from the proposed development.

Traffic counts were taken during February of 2007 to determine the existing level of traffic and the a.m. and p.m. peak hour of traffic volumes. Under existing conditions, all study intersections perform at level of service D or higher. When considering future growth, traffic volume increases would result in a decline in level of service for at least one movement at each intersection under the No-Build Condition. With the modified project, no decrease in the level of service of any movement would result from the No-Build to Build Condition.

Under existing conditions, vehicle trips which pass by the proposed project entrance on Stoneleigh Avenue during the a.m. peak hour is 513 and during the p.m. peak hour is 329 vehicle trips. The DEIS traffic analysis for the future conditions without the project (No-Build Condition) found 558 vehicle trips passing the site during the a.m. peak hour and 380 vehicle trips passing the site during the p.m. peak hour. The revised traffic analysis presented in the FEIS showed that trip generation projected by the proposed action would be 33 a.m. peak hour trips, 38 p.m. peak hour trips.

Five years of collision data in the project vicinity were assessed as part of the EIS. A total of 11 collisions were identified during this time period.

Mitigation Proposed

The Proposed Action has been modified in response to comments raised and concerns expressed during the review of the Putnam Community Foundation DEIS. The site access has been moved to create a direct connection between the project site and the Putnam Hospital Center and to share an access with the Putnam Hospital Center. The hospital will retain their existing access and will have the shared access as a second access.

The new site access would provide a direct connection between the hospital and the Putnam Community Foundation site. Traffic volume changes from the DEIS configuration affect only the site and hospital access drive intersections with Stoneleigh Avenue and not other studied intersections. Overall the new access drive configuration presented in the FEIS provides better operation than the DEIS configuration by splitting the hospital traffic between two access points. The proposed access also allows vehicles to travel between the two sites without using Stoneleigh Avenue.

The traffic analysis presented in the EIS documented the level of service for the studied intersections does not decline from the future No-Build Condition to the Build Condition meaning the Proposed Action will not result in significant impacts to the local read network. Therefore, mitigation in the form of roadway improvements is not proposed by the Applicant.

The New York State Department of Transportation (NYS DOT) has included on the Transportation Improvement Program (TIP) three projects in the area:

1. Stoneleigh and Drewville Road intersection improvements (County Project)
2. Stoneleigh reconstruction - Putnam Hospital Center to US Route 6 (County Project)
3. US Route 202 and Croton Falls Signal Replacement (State Regional Signal Project)

These improvements are intended to address existing and future traffic issues including those increases resulting from the proposed action at the noted intersections. Based on recent telephone conversations with the NYS DOT, improvement #3 has been completed and numbers 1 and 2 are proposed to be let in November of 2011.

3.6 Community Services and Socioeconomics

3.6.1 Taxes and Demographics

The Applicant is a not-for-profit organization and the project site, which is owned by the Applicant, has a current taxable value of $0. The project site is tax exempt from Town and County taxes, but does pay special district taxes.

A project specific Senior Housing Market Analysis was developed for the EIS. Approximately 8,800 residents in the Town of Carmel will be age qualified to live in the subject project (age 55 and older) in the year 2008 according to the Study. This category of residents represents almost 25 percent of Carmel's population.

Rents would range from $750 to $1,150 depending on the type of unit and the amenities provided.

Potential Impacts

The Applicant proposes a not-for-profit senior rental housing development that would be owned and managed by the Applicant. The project site after development would remain tax exempt resulting in no post-development tax revenues to the Town of Carmel and Putnam County. Residents of the senior housing project, however, would be responsible for Out of District Water and Sewer usage fees at the Town level post development.

The proposed senior housing units are projected to increase the Town's population by 164 persons, when fully occupied. The proposed senior housing units are age restricted units, thus, no school age children are anticipated from the proposed development.

As documented in the EIS, an assessment of the number of potential qualifying households was performed. Households meeting the age restrictions and with sufficient income across Putnam County would total 9,737 in 2008. The project therefore would need to capture 1.2 percent of the age and income eligible households to be fully occupied.

Mitigation Measures

All the units proposed for development meet the New York State Division of Housing and Community Renewal, State Low Income Housing Tax Credit Program (SLIHC) definition of Low Income Housing, which states units must serve households whose incomes are at or below 90 percent of area median income.

The proposed development is to be built to meet the lifestyle needs of this generation's seniors who wish to continue to live near their families and to meet today's demand for senior housing which has and will continue to increase with an expected peak around 2015. Therefore, the proposed project would support current demographic trends through provision of senior housing. As a result, no further mitigation measures are proposed.

3.6.2 Police/Fire Protection/Emergency Medical Services

Police Protection

Potential Impacts

Police protection for the project site would be provided by the Town of Carmel Police Department. The impacts from the proposed action related to police protection would be associated with the increase in the Town's population by 164.

Based on Urban Land Institute (ULI) standards, the project would result in the need for 0.4 additional staff and 0.7 additional vehicles.

Mitigation Measures

The department is currently understaffed according to the Police Chief and ULI standards. As this condition would exist with or without the proposed development and the project will provide the community with important and much needed resources, no mitigation is proposed.

Fire Protection

Potential Impacts

Fire protection for the project site would be provided by the Town of Carmel Fire Department. The impacts from the proposed action related to fire protection would be associated with the increase in the Town's population by 164.

Based on Urban Land Institute (ULI) standards, the project would result in the need for 0.27 additional fire department staff and 0.03 additional vehicles.

The ULI multipliers assume no existing services, thus the actual demand on fire personnel and vehicles is expected to be insignificant.

Mitigation Measures

Due to the lack of significant impacts projected as a result of this project, no mitigation measures are proposed. Additionally as noted, all proposed buildings would be constructed and all operations would be permitted in accordance with the provisions of the State Fire Prevention Code. In addition, all buildings will be protected by fire sprinkler systems.

Emergency Medical Services

Potential Impacts

Emergency Medical Services (EMS) for the project site would be provided by the Carmel Volunteer Ambulance Corps. The impacts from the proposed action related to emergency medical services would be associated with the increase in the Town's population by 164.

Based on ULI standards, a total of 36.5 calls per a population of 1,000 per year would be the multiplier used to project the increase in EMS calls for new development. Due to the nature of the Proposed Action, a senior housing facility, a conservative estimate of 73 calls per a population of 1,000 per year was used to project future EMS calls generated by the proposed project. The multiplier used doubles the standard Urban Land Institute multiplier. The projected 164 residents that expected to reside at development would increase EMS calls by 12 annually.

The ULI multipliers assume no existing services, thus the actual demand on EMS personnel and vehicles is expected to be insignificant.

Mitigation Measures

The location of the project adjacent to the PHC and the direct access between the project and the hospital is expected to help mitigate any potential impacts on the Ambulance Corps.

Due to its location and the lack of significant impacts projected as a result of this project, no mitigation measures are proposed.

3.6.3 Solid Waste

Potential Impacts

Based on ULI standards, the project would be expected to generate 5.74 per month of non-recyclable solid waste and 2.87 tons per month of recyclable materials.

Mitigation Measures

Refuse containers would be centrally located and properly screened to avoid potential visual impacts. Refuse would be collected by private carting companies and transported to the Charles Point Resource Recovery Facility. No further mitigation is proposed.

3.6.4 Water Service

Potential Impacts

Water service for the project is to be provided by Carmel Water District (CWD) #2 per an Out of District Water Service Agreement found in Liber 1598 Pg 413 signed on 7/9/02. CWD #2 is the largest water district in the Town of Carmel, serving approximately 4,400 people. The average daily design flow of the project is 18,000 gallons. CWD #2 is prepared to supply 72,000 gallons per day (gpd) to the proposed project, four times calculated daily usage.

Mitigation Measures

The Applicant has paid $2,404.01 in past capital charges as well as contributed $75,000 for the expansion of storage capacity for CWD #2. Water usage fee revenues, in addition to the contribution of $75,000 from the Applicant to cover water district expansion costs, are expected to address the water costs associated with this development. All work would be done in accordance with the standards and specifications of the Town of Carmel and the Putnam County Department of Health. No impacts to CWD # 2 are expected from the proposed project and, as such, no further mitigation is proposed.

3.6.5 Sewage Disposal

Potential Impacts

The wastewater from the site is to be received by Carmel Sewer District (CSD) #8 per the Out of District Sewer Service Agreement. The Proposed Action is expected to generate 14,400 gallons per day (gpd) of sewage, which is five times less than the 72,000 gpd of sewage a day that CSD #8 could receive from the project site as per the Out of Sewer District Agreement. Therefore, the proposed project would place less demand on CSD #8.

Mitigation Measures

The Applicant has paid $214,115.75 in past capital charges for the use of CSD #8, which was prepared to receive 72,000 gallons of sewage a day from the proposed development through an

Out of Sewer District Agreement. User fee revenues are expected to address the sewer costs associated with this development. All improvements to the municipal sewer system would be done in accordance with the standards and specifications of the Town of Carmel and the Putnam County Department of Health. No impacts to CSD # 8 are expected from the proposed project and, as such, no further mitigation is proposed.

3.6.6 Cumulative Impacts

Potential Impacts

Given the controls on development that have recently been established by the Town, and the fact that the Town has responded satisfactorily to increases in population and housing units over the past years, it is not likely that the cumulative effect of construction of all the proposed and approved developments would be significantly adverse. A minor increase in the built density of the Town of Carmel would occur.

Mitigation Measures

No mitigation is proposed.

3.7 Visual Resources

Potential Impacts

Construction of the project as proposed will remove some 25.3 acres of existing woods and successional field along the back (east) and central portions of the site and replace it with buildings, pavement, and new plantings, thus creating a change to the visual character of the site. The buildings will be situated on the east side and in the central portion of the property along and on the west side of the ridge between two lobes of the Croton Falls Reservoir. Stormwater detention basins will be site further down slope toward Stoneleigh Avenue and near the intersection of the access road with Stoneleigh Avenue.

Given the orientation of the project site on the west side of a ridge, the lack of residences and other visual receptors in the immediate vicinity, the presence intervening woodland vegetation and the variability of the local topography, visibility of the site from local vantage points is notably limited. The potential viewshed of the project site, due to its higher topographic position in the landscape, includes West Shore Drive to the west and Lower Mine Road and Reservoir Road to the east, although the views are also obscured by existing trees. The most direct view to the site is from the Croton Falls Reservoir itself, which provides an open view across the water to the site from the east and west.

Mitigation Measures

The proposed development plan provides for the clustering of facilities and protection of the wooded perimeter as open space, addressing important goals of the Town of Carmel. No aesthetic resources have been identified that would be significantly affected by this project. There would be direct views of portions of the new buildings on the site's hillside from the Croton Falls Reservoir; however the number of viewers from the water would be small. Residential properties in the area would also not be adversely impacted.

The landscaping plan was designed to replace a portion of the tree canopy removed by the development with shade trees, understory trees and flowering shrubs. The plan would also provide evergreen tree buffering, if necessary, to reduce lighting glare at the property line. The lighting plan for the development was designed to provide adequate illumination on all primary roadways and parking areas to minimum light levels for public safety and security and would include light shields where necessary to minimize glare and stray light. Since provisions to preserve the visual character of the site area are part of the project design, as identified above, further mitigation measures are not required.

3.8 Cultural Resources

Potential Impacts

There are no National Register Listed properties located on or within one mile of the project site. Therefore, the proposed project would not result in any significant impacts to historic resources.

A Phase 1A and B Archeological Assessment was conducted for the project site. No resources of cultural import were found.

Proposed Mitigation

No mitigation is proposed.

4.0 ALTERNATIVES

The New York State Environmental Quality Review Act (SEQRA) calls for a description and evaluation of the range of reasonable alternatives to the action, which are feasible, considering the objectives and capabilities of the project sponsor. Alternatives for the Proposed Action that have been analyzed include a "No Action Alternative", an "Alternative Use--Single Family Dwelling Alternative", and a "Reduced Scale Alternative".

4.1 No Action Alternative

The No Action Alternative is the scenario that would occur if no development were to take place on the project site. This is effectively an open space preservation alternative. The site would remain in its current undeveloped state. The No Action Alternative would eliminate the adverse impacts identified in the EIS. However, this alternative would not be consistent with the objectives of the local Zoning Ordinance of Carmel, since it and the Comprehensive Plan have identified these parcels as appropriate for residential development. Considering this project site's suitability for senior residential housing, it makes sense to be consistent with current plans and zoning and move forward with its development.

4.2 Alternative Use--Single Family Dwelling Alternative

An Alternative Use plan, an alternative consistent with site zoning, was also examined in the EIS. This alternative evaluates the development of the project parcel as a seven, single-family lot subdivision. The site plan prepared for this alternative, which shows seven single family homes along with required infrastructure, does not require a special use permit but would

require subdivision of the parcel. This development would result in less overall disturbance to the project site but the disturbance would be distributed across the entire site and not concentrated as with the Proposed Action. Impacts associated with this plan would be reduced in every impact, except in the categories of impervious surfaces within the limiting distance of a NYCDEP regulated watercourse; and the number of school aged children, both of which would be greater under this alternative. However, as this plan eliminates the provision of badly needed senior rental housing, it does not meet the objectives of the Applicant or the County's *ision 2* .

4.3 Reduced Scale Alternative

The Reduced Scale Alternative eliminates all of the single family attached buildings and concentrates all units in six, two story, multi-family buildings located in the central and eastern portions of the project site. This alternative reduces impervious surface area by incorporating parking under the buildings. While the total number of units under this alternative is 24 more than that planned for the Proposed Action, overall site disturbance and associated impacts is reduced. Impacts related to traffic community services and visual quality would be greater under this alternative. This alternative lacks the diversity of housing types and rental ranges that the Applicant is committed to providing to the community and therefore does not meet their objectives.

5.0 ADVERSE ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

The development of the Proposed Action is not expected to result in significant adverse environmental impacts which cannot be avoided. The Proposed Action incorporates a variety of environmentally responsible design and maintenance practices to offset any identified short- or long-term adverse impacts to the maximum extent practicable.

6.0 OTHER ISSUES

6.1 Irreversible and Irretrievable Commitment of Resources

The proposed plan would commit the project site to residential uses and associated infrastructure. Once committed to these uses, the site would be unavailable for other uses for the foreseeable future. The finite resources that would be irretrievably committed by implementation of the proposed action are the materials and energy required for construction and for maintenance of the development afterward. However, given the reduced scale of this development and the provision of senior rental housing, the commitment of resources is not significant.

6.2 Growth Inducing, Cumulative and Secondary Impacts

No significant adverse effects on the area's utilities, community services, or facilities are expected, and no new access to currently inaccessible areas would be created. No adverse effects on area commercial services are expected as a result of the proposed development. In

addition, the increase in resident population anticipated as a result of the proposed project is not expected to induce further residential development in the area.

Additionally, the proposed action would further the objectives of the Town's Comprehensive Plan because of the existing capacity of infrastructure and roadway networks.

6.3 Energy Use and Conservation

Energy consumption would occur during construction and occupancy of the proposed residences. All future buildings and facilities on this site would be designed and built in conformance with the energy conservation regulations of the New York State Energy and Building Codes, at a minimum. This would include the incorporation of low flow plumbing and fixtures. The orientation of buildings would take advantage of solar exposure where possible, and modern heating and cooling systems would be utilized to conserve energy resources.

6.4 Unavoidable Adverse Impacts

Refer to Section 5.0 ADVERSE ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED above, for text addressing unavoidable impacts.

7.0 CERTIFICATION OF FINDINGS TO APPROVE

Having considered the Draft and Final EIS and having considered the preceding written facts and conclusions relied upon to evaluate whether the requirements of 6 N.Y.C.R.R. 617.11 have been met and a hard look given, this Statement of Findings certifies that:

1. The Planning Board of the Town of Carmel has carefully and thoroughly weighed and balanced the relevant potential environmental impacts anticipated from the proposed action for The Putnam Community Foundation Senior Housing Development, as modified and set forth in the Environmental Impact Statement, with social, economic and other considerations, and hereby certifies that the requirements of 6 N.Y.C.R.R. Part 617 (SEQRA) and the corresponding SEQRA Regulations have been met.

2. Consistent with social, economic and other essential considerations from among the reasonable alternatives available, the proposed action for The Putnam Community Foundation Senior Housing Development, as modified and set forth in the FEIS, avoids or minimize adverse environmental impacts to the maximum extent practicable and that adverse environmental impacts will be avoided or minimized to the maximum extent practicable by incorporating as conditions to the decision those mitigative measures that were identified as practicable.

3. The modified proposed action for The Putnam Community Foundation Senior Housing Development (set forth in the FEIS) are subject to the mitigation measures described in the DEIS, FEIS and set forth in this Findings Statement. These findings are substantiated by the analyses in the DEIS and FEIS, which disclose potential environmental impacts and demonstrates that the potential environmental impacts associated with the action would be mitigated to the maximum extent practicable.

The preceding facts, as documented in the DEIS, the FEIS, and in the public record associated with these proceedings support these findings. After due consideration, the lead agency finds that this revised proposed action for The Putnam Community Foundation Senior Housing

Development set forth in the FEIS will achieve a balance between the protection of the environment and the need to accommodate social, economic and other considerations.

Name of Agency:	Town of Carmel Planning Board
Name of Responsible Officer:	Mr. Harold Gary
Signature of Responsible Officer:	_____
Title:	Planning Board Chairman
Date:	_____
Address of Lead Agency:	Carmel Town Hall 60 McAlpin Avenue Mahopac, New York 10541

Attachment B

Town of Carmel Student
Enrollment Report

School Age Children
Carmel Central School District Student Enrollment

Town of Carmel, Putnam County, New York

Prepared for:
Kearney Realty & Development Group
57 Route 6, Suite 207
Baldwin Place, NY 10505

Prepared by:
Tim Miller Associates, Inc.
10 North Street
Cold Spring, NY 10516

Submitted:
July 14, 2021

School Age Children in Carmel

Table of Contents

1.0 TOWN OF CARMEL ZONING HISTORY

In 2002 the Town of Carmel amended the Zoning for the Town based upon concerns related to over-development including increased traffic, higher cost of Town services, and the sustained growth of the school districts' continuing increase in enrollments. At that time the Town replaced 1-acre and 1.5-acre zoning with a single option for 3-acre single family development as the Town's only residential zone. It was anticipated that up-zoning would solve development pressure, by increasing house prices, by slowing home building and theoretically spurring business growth. Part of the motivation to restrict development was in consideration of protection to the New York Watershed lands which provide New York City's water supply. However, the 3-acre zoning was applied to all residential lands, whether there was municipal water and sewer service available or not.

Having only one residential zone in the entire Town, which requires a minimum of 3 acres for the development of a residential dwelling unit, leaves those with a limited income or more diverse needs unable to find housing within the Town. The Town of Carmel is composed of a diverse population of varying ages and income levels. There is an unmet need to provide housing for entry level homebuyers, millennials just out of college, empty nesters who are preparing for retirement and senior citizens who may prefer to live in a general population community. There are no options for any housing in the Town other than the type of house that belongs on a 3-acre lot. Large lot 3-acre zoning promotes sprawl, requires more infrastructure, and creates isolated neighborhoods that rely solely on automobiles. This is not the most effective measure for providing environmental protection to NY City watershed lands, nor does it meet the needs of the existing population. This type of zoning makes the Town vulnerable to a federal fair housing lawsuit.

2.0 DEMOGRAPHIC ANALYSIS

Table 1 provides a summary of the population and housing statistics for the Town of Carmel. The Table provides a comparison to historic values from 2000 and 2010, compared to current 2020 data and provides a projection to 2025.

As can be seen, although the population had been increasing, the rate of growth which was approximately 7.4 % over the ten years from 2000 to 2010 has slowed to approximately 2.1% over the following decade and is projected to continue to decline. The period between 2010 and 2020 actually show a decrease in overall population. During the same time periods the median age has steadily increased from 37.1 in 2000 to 41.2 in 2010 to 43.7 in 2020 and is projected to continue to increase to 43.8 in 2025. This indicates an aging population. Population aging is influenced by a number of factors. The Town has placed an emphasis on providing housing for its Seniors. Existing homeowners are remaining in their homes. There has been no influx of younger entry level residents. There has been a decline in the ability to own a housing unit based upon the steady increase in housing prices. The housing market in Putnam and northern Westchester has continued to appreciate in value, putting home ownership out of reach for many entry level homebuyers. The percentage of renter occupied units has grown from 14.8 percent to 17.3 percent for residents of the

Town. There has also been a significant migration of young persons out of the Town to other areas in search of rental dwelling units within their budget.

Table 1 Town of Carmel - Demographic Analysis				
Year	2000	2010	2020	2025
Total Population	32,997	34,305	34,113	33,570
Median Age	37.1	41.2	43.7	43.8
Number of Households	10,838	11,672	11,753	11,613
% Householder 55+	38.2%	42.1%	53.6%	55.9%
Owner Occupied Housing Units	9,160	9,668	9,715	9,603
Renter Occupied Housing Units	1,678	2,004	2,038	2,010
% Renter Occupied	14.8%	17.2%	17.3%	17.3%
Median Home Value	--	$389,200	$409,404	$459,448
Average Home Value	--	$425,500	$471,076	$531,128
Median Household Income	$77,406	$99,560	$106,984	$112,997
Source: US Census Data, ESRI Demographic Forecasts June 18, 2021				

Table 2 provides a detailed breakdown of the Town's youngest and older population by age category for the years 2010, 2020 and a projection to 2025.

As Table 2 shows there has been a steady decrease of the school age population and a continued aging of the population. The numbers and percentages of the 0 to 19-year-old population is consistently decreasing, approaching 20% of the total population.

Table 2 Population Trends			
	2010	**2020**	**2025**
Total Population	34,305	34,113	33,570
Population 0-19	9,424	7,836	7,039
% Population 0-19	27.5%	23.0%	21.0%
Population 55+	8602	11,517	12,152
% Population 55+	25.0%	33.8%	36.2%
Source: US Census Data, ESRI Demographic Forecasts June 18, 2021			

During this same time period the over 55 population grew to increasing percentages of the overall population. The 55 and older population rose from 2010 to 2020 and is expected to continue to increase through 2025 representing more than 12,000 persons and 36.2% of the total population.

This trend is directly related to the emphasis the Town has placed on Senior housing and the lack of entry level housing that would attract families starting out. The current Carmel residential 3- acre zoning exacerbates these demographic trends by failing to provide balanced housing opportunities, especially for young people.

Without an influx of young families, the family-oriented nature of the Town of Carmel and Putnam County will inevitably change. Community priority will shift. Recreation facilities will need to cater to an older population not a family-oriented community. Section 3.0 below discusses the impacts this type of shift is having on the Carmel Central School District enrollment.

3.0 SCHOOL DISTRICT ENROLLMENTS

Areas within the Town of Carmel being considered for Multifamily Development are located primarily in the Carmel Central School District. This study assesses the enrollment trends in the Carmel District based upon historical information and a projection of anticipated demographics.

Student enrollments have been steadily declining in the Carmel CSD for more than a decade. Peak enrollment for the Carmel CSD occurred in 2002/2003 when enrollment was 4,956 students. As shown in Table 3 below, student enrollment has declined every year for the past 18 years. Table 3 illustrates that there hasn't been a single school year since 2002/03 in which the current enrollment wasn't less than the previous school year. Table 3 shows the official New York State Department of Education BEDS[1] count by school year and indicates the decline in the number of students compared to the prior school year.

Enrollments have declined by 16 to 149 students per year each year, with the biggest drop occurring during the most recent school year. This most recent drop could be related to the COVID Pandemic, however there have been four other occurrences where the decline in student enrollment has been 90 students or more. Current 2020/2021 enrollment is 3,830 a reduction of 1,126 students or almost a 23 percent decline compared to peak District enrollments. In 2018 Western Suffolk BOCES prepared a study of enrollment trends in the Carmel Central School District. This study was based upon an analysis of historical enrollment information, following the various student populations through the cohort of grades; in combination with data about new births and new housing starts within the Carmel Central School District. The BOCES Study indicates the reduction in students is expected to continue to 2025 and beyond, with the 2025/2026 enrollment estimated at 3,521 students which represents a 29.4 % decline from the peak enrollment.

The Superintendent for Business in Carmel indicated, that although enrollments have been declining, there has been no discussion for contraction of facilities at this time[2]. The 2021/2022 Carmel School District budget was defeated by residents of the school district in both May of 2021 and again on June 15, of 2021. As a result, the District was compelled to adopt their contingency budget which excludes any Capital purchases from being made in the upcoming school year. Thus, no capital improvements are currently scheduled. It also forces the district to consider elimination of positions that become vacant due to attrition or retirement.

[1] BEDS is an acronym which stands for Basic Education Data System used by the NYS Department of Education.
[2] Phone call with Carmel Central School District, Superintendent for Business, June 21, 2021.

Table 3 Carmel Central School District Enrollments			
Notes	School Year	Student Enrollment	Change from the Previous Year
	1993	4,956	--
	98/99	4693	--
	99/00	4778	+85
	00/01	4856	+78
	01/02	4931	+75
Peak Year	02/03	4956	+25
	03/04	4857	-99
	04/05	4841	-16
	05/06	4805	-36
	06/07	4783	-22
	07/08	4693	-90
	08/09	4646	-47
	09/10	4630	-16
	10/11	4581	-49
	11/12	4483	-98
	12/13	4423	-60
	13/14	4341	-82
	14/15	4233	-108
	15/16	4192	-41
	16/17	4173	-19
	17/18	4115	-58
	18/19	4040	-75
	19/20	3979	-61
	20/21	3830	-149
Enrollment Decline compared to Peak Year			-1,126
	21/22	3802	-28
	22/23	3705	-97
	23/24	3662	-43
	24/25	3582	-80
	25/26	3521	-61
Projected Additional Decline from Current Enrollment			-309
Source; NYS Department of Education BEDS Data Base			

Table 4 Carmel Central School District SCHOOL CAPACITY							
School	Grades Served	02/03 Peak Enrollment	17/18 Enrollment	20/21 Current Enrollment	25/26 Projected Enrollment	Building Capacity	2025 Available Capacity
Carmel High School	9 to 12	1,541	1,448	1,410	1,191	1,450	259
George Fischer Middle School	5 to 8	1,601	1,326	1,194	1,090	1,450	360
Matthew Paterson Elementary	K to 4	686	496	476	447	600	153
Kent Elementary	K to 4	594	450	372	418	500	82
Kent Primary	K to 4	534	395	378	375	500	125
Total District Enrollment		4,956	4,115	3,830	3,521	4,500	979
Source: NYS Dept BEDS							

Table 4 shows the utilization of the school districts buildings for select school years. Enrollments for the 2002/2003 peak enrollment year represent the maximum capacity for which the buildings have been used. However, this peak utilization could have involved measures which were atypical to accommodate the 4,956 peak student population. The 2017/2018 school year has been reviewed as a representative year where the enrollment totals 4,115. As shown in Table 4 Building Capacity lies between these two enrollments and is estimated to be 4,500 students for the district. The projected enrollments for the 2025/2026 school year are 3,521 students indicating available capacity of almost 1,000 additional students.

A review of budget data and school enrollment projections for the next 5 to 10 years indicate continuing declines for the Carmel Central School District. This trend has the potential to result in excess infrastructure, where the number of students is significantly lower than the enrollment capacity. Thus, the school district could be forced to consolidate facilities and staff, resulting in school closures along with potential teacher firings. An increase in residential development will result in an increase in the assessed valuation of the District, which translates into additional revenues for the School District. Since the infrastructure and staff resources are already in place, the incremental costs for new students associated with new residential housing would be minimal.

4.0 PROPOSED PROJECTS

There are currently two multifamily housing developments proposed before the Town of Carmel. The first is Hamlet at Carmel a Multifamily Development which includes a total of 150 units. Half of these units are to be market rate rentals and the other half are to be affordable to households whose income ranges from 60% to 90% of the Putnam County Median Income as published by HUD[3] on an annual basis.

The second residential development is known as the Fairways and is located off US Route 6. This development is also for 150 units. These units are all market rate rentals and are anticipated to be primarily 2-BR units.

Hamlet at Carmel Multifamily Development

Demographic multipliers published by the Rutgers University Center for Urban Policy Research (CUPR) were used to project the future population of the Hamlet at Carmel development. As shown in Table 5, Demographic multipliers of 1.67 persons were used to project the population for the 1-BR units. A multiplier of 2.31 persons were used to project the population for the 2-BR units. A multiplier of 3.81 persons were used to project the population for the 3-BR units. Demographic multipliers of 0.30, 0.23, and 1.0 students were used to project the school age population of the 1-BR, 2-BR and 3-BR units respectively. The same multipliers were used for both Market Rate and Affordable units based upon the anticipated rental value of the units.

Table 5
Population Projections

Unit Type	Number of Units	Population Multiplier	Population	School Age Children Multiplier	School Age Population
Multifamily Units					
1 Bedroom	38	1.67	63	0.30	11
2 Bedroom	79	2.31	183	0.23	19
3 Bedroom	33	3.81	126	1.00	34
TOTAL	**150**		**372**		**64**

Source: Rutgers University Center for Urban Policy Research.

Based upon the residential multipliers, approximately 372 persons are projected to reside in the proposed housing on Stoneleigh Avenue including approximately 64 school age children.

[3] The Federal Office of Housing and Urban Development (HUD) publishes a median income by county each year for the purposed of defining Affordable income limits.

Fairways Multifamily Development

Demographic multipliers published by the Rutgers University Center for Urban Policy Research (CUPR) were also used to project the future population of the Fairways Multifamily development. As shown in Table 6, Demographic multipliers of 2.31 persons were used to project the population for the 2-BR units. A Demographic multiplier of 0.23 students was used to project the school age population.

Table 5
Population Projections

Unit Type	Number of Units	Population Multiplier	Population	School Age Children Multiplier	School Age Population
Market Rate Multifamily Units					
2 Bedroom	150	2.31	347	0.23	35
TOTAL	**150**		**347**		**35**
Source: Rutgers University Center for Urban Policy Research.					

Based upon the residential multipliers, approximately 347 persons are projected to reside in the proposed housing at Fairways including approximately 35 school age children.

5.0 CUMULATIVE IMPACT

As discussed in Section 3.0, the Carmel Central School District has seen declining enrollments over more than the past decade. The District is not currently anticipating any reduction in its current facilities. As shown on Table 4, there is available capacity in the district's facilities for approximately 1,000 students.

When combined, the two anticipated multifamily residential developments, are projected to result in less than 100 new students. The available capacity would indicate the Carmel Central School District could handle this type of increase, spread out over the district's schools, without substantial negative impacts.

The most recent School Budget was voted down by residents of the School District. An increase in residential development will result in an increase in the assessed valuation of the District, which translates into additional revenues for the School District. Since the infrastructure and staff resources are already in place, the incremental costs for new students associated with new residential housing would be minimal, thus these proposed developments could result in a positive impact to the School District.

Appendix C

NYS HCR Funding Guidelines

Summer 2021
The Kearney Realty & Development Group, Inc.
The Hamlet at Carmel

EXHIBIT B-1: HCR MULTIFAMILY FINANCE 9% PROGRAMS

City/Town/Borough: Carmel
County: Putnam

Indicate the requested funding amounts and the proposed length of the corresponding DHCR/HTFC regulatory period. If the amounts listed on this form differ from those indicated in the Underwriting Model, the application will be evaluated based on the amounts requested below. Consult the Multifamily Term Sheets on the HCR website for financing terms and requirements.

Financing Source	Amount Requested	Regulatory Term (Years)
9% Low-Income Housing Credit (LIHTC)	$ 1,430,000	50
State Low Income Housing Credit Program (SLIHC)	$ 396,000	50
Federal Housing Trust Fund Program (FHTF)		
Low-Income Housing Trust Fund Program (HTF)	$ 3,400,000	30
Rural and Urban Community Investment Fund (CIF)		
Supportive Housing Opportunity Program (SHOP)		
Public Housing Preservation Program (PHP)		
Middle Income Housing Program (MIHP)		
Housing Development Fund (HDF)		
Senior Housing Program (SENR)		
HOME Program (HOME)		

Project Units per Funding Source

For each permanent funding source (including non-HCR sources), indicate the regulatory term length (if applicable) and the number of existing and/or new construction units to be financed. In the "Exist/Rehab" column, only include existing units that will be rehabilitated or preserved.

		Residential Units		Community Room Units		Community Service Facility Units		Civic Units		Commercial Units	
Funding Source (name)	Regulatory Term (Years)	Exist/ Rehab	New Construction	Exist/ Rehab	New Construction	Exist/ Rehab	New Construction	Exist/ Rehab	New Construction	Exist/ Rehab	New Construction
LIHTC	50		65								
SLIHC	50		74								
[illegible]-Income Housing Trust Fund	30		74								

For LIHTC/SLIHC Projects:

9% LIHTC Program Set-Aside Designations *(Refer to the RFP for details)*

- ☐ Not Applicable
- ☐ Empire State Supportive Housing Initiative (ESSHI) Projects
- ☐ Supportive Housing Projects
- ☑ Housing Opportunity Projects
- ☐ NYCHA Seniors First
- ☐ Public Housing Redevelopment Projects
- ☐ Vital Brooklyn

Will the project elect the Income Averaging minimum set-aside?	No
Will the project bifurcate and/or transfer SLIHC?	No
Will there be a tenant buy-out plan?	No
Will a right of first refusal be offered to a qualified non-profit organization?	No

State Housing Goals

Complete the appropriate box(es) for the State Housing Goal(s) met by the Project. Refer to the RFP for further Housing Goal details.

	Explanation of how the project meets the Housing Goal:
mmunity Renewal and Revitalization Projects: Projects that address a component ated in the municipality's most recent comprehensive plan, or other municipal approved plan, as demonstrated by one or more of the following: • Demonstrate site control of land acquired through Land Banks, established pursuant to Article 16 of New York State Not-for-Profit Corporation Law, in neighborhoods that have experienced a high incidence of abandoned and/or "zombie" properties; •Demonstrate the donation of one or more of the project sites from the municipality in which the project is located at either $0 or $1 acquisition; •Demonstrate the rezoning of, or the granting of a zoning variance/special use permit for, at least one project site necessary to complete the project; •Demonstrate the project municipality has committed capital financing to the project as evidenced in the application sources and uses; •A draft commitment for a PILOT for the project (at a level greater than Section 581-A of Real Property Tax Law); •Listed as a priority project in the municipality's latest Action Plan; •Utilizing a site for the project which has been designated for redevelopment by an Urban Renewal Plan; or, •Applicant, or its affiliate, has been identified as the Designated Developer for the project by the municipality.	
Integrated Supportive Housing Projects: Projects that provide permanent supportive housing to one or more special needs populations, and that can show evidence of a service and operating subsidy from a governmental agency, such as Empire State Supportive Housing Initiative (ESSHI).	
Housing Opportunity Projects: Family projects in an area of opportunity linked to schools that meet or exceed minimum performance standards and that meet or exceed other measures of opportunity, including, but not limited to, the rate of poverty, as defined in a list of census tracts published by HCR. At least 10% of the project units must be targeted to and serve households at or below 30% of AMI. Additionally, average unit size must be at least 2 bedrooms.	The Hamlet at Carmel (The Hamlet) meets this state housing goal. The Hamlet is located in Census Tract 116.00, which was designated by New York State Homes and Community Renewal (HCR) as a Housing Opportunity Census Tract. Residents of The Hamlet will be enrolled in Carmel Central School District, ranked at the highest level of 4 by the New York State Education Department for college, career and civic readiness. Eight (8) units or 10.67% are set aside for households at 30% of AMI. The average unit size is two (2) bedrooms.
Workforce Opportunity Projects: Projects that propose housing within a safe half-mile walk of frequently occurring public transportation (available 7 days a week on a repetitive, fixed-route schedule that is regular and continuing).	
lects Advancing State Revitalization and Economic Development Initiatives, ding: owntown Revitalization Initiative Projects: Projects that propose residential and/or mixed-use projects located in Downtown Revitalization Initiative plan areas that clearly advance the objectives of an approved Downtown Revitalization Initiative Strategic Investment Plan. •Economic Development Projects: Projects specifically endorsed in the Regional Economic Council Strategic Plans that will support the construction and/or rehabilitation of affordable housing. •Brownfield Cleanup Program Projects: Projects resulting in the cleanup/redevelopment of property that has been determined to be eligible to participate in the New York State Brownfield Cleanup Program (BCP). The application must propose a plan of finance fully utilizing all BCP tax credits generated from the cleanup/redevelopment of the property. •Projects which will be implemented in a neighborhood located in a designated Empire State Poverty Reduction Initiative (ESPRI) locality and coordinated with the ESPRI activities underway. At least 15% of the project units must be targeted to and serve households at or below 30% of AMI.	
Senior Housing: Projects that allow low-income seniors to live independently in the community. Preference will be given to projects that also meet at least one of the following State Housing Goals: 1) Community Renewal and Revitalization, 2) Workforce Opportunity, 3) Economic Development, or 4) Downtown Revitalization Initiative.	

Kearney Realty & Development Group, LLC (Kearney Group) is proud to develop The Hamlet at Carmel (The Hamlet) in the Town of Carmel, Putnam County. The Hamlet is an unprecedented housing development as the first non-age restricted affordable housing development in Putnam County History. The Hamlet is an innovative, mixed-income and Housing Opportunity residential housing development. The Hamlet will advance the New York State Homes & Community Renewal's (HCR) state housing goal by being a Housing Opportunity Project. The Hamlet will consist of five (5) new construction buildings comprising of seventy-five (75) residential units.

The land upon which The Hamlet will be constructed is unimproved and serviced by central water and sewer and is appropriately zoned ("as of right"), in the Residential (R) District.

Kearney Realty & Development Group, Inc. (The Applicant) has site control by way of a 99-year land-lease. Kearney Group has entered into a 99-year land-lease with The Hamlet at Carmel Associates, LLC (The Owner) in which the land lease is assignable to the HDFC. The Owner has ownership by way of deed and purchased the land in December 2014. The site is an excellent location, convenient to shopping centers, banking facilities and a variety of restaurants. Additionally, the site is three (3) miles from the Croton Falls Metro North train station and is adjacent to Putnam Hospital.

The project site underwent a Full Environmental Impact Statement (FEIS) that has been approved by the town of Carmel. The Applicant currently has full site plan approval for 120 senior housing units, including water and sewer approvals. The applicant has since amended the site plan following a collaborative effort between the applicant and the Town of Carmel's Zoning Board of Appeals (ZBA). Historically, interpretations of the zoning code were that non-age restricted multifamily development was not permitted in any zoning district in the Town of Carmel, including the Residential (R) district where the project site is located. However, there were conflictions in the zoning code, which included language that allowed non-age restricted multifamily housing in the Residential (R) district. The applicant, based on their experience in similar municipalities and with the help of legal professionals, formulated a strong legal opinion that non-age restricted multifamily housing was permitted "as of right" in the Residential (R) district; an interpretation which would ensure that the municipality is taking steps to Affirmatively Further Fair Housing. Based on the advisory of the applicant, the Town of Carmel's Zoning Board of Appeals voted unanimously (7-0) in agreement with the applicant's interpretation of the zoning code to allow for non-age restricted multifamily in the Residential (R) district. Following the ZBA's interpretation, the applicant filed an amended site plan with a long form EAF for the site specific SEQRA review for the revised site plan. The Hamlet at Carmel will not only be the first non-age restricted affordable housing development in Carmel, but will also be the first non-age restricted affordable housing development in the entirety of Putnam County.

The Hamlet will bring much needed affordable, workforce housing to Putnam County. Putnam County Pattern for Progress performed a housing cost burden analysis for Putnam County. It was found that 69% of renters in Putnam County are cost burdened (spending 30%-50% of their income on housing) and, furthermore, 37.7% of renters in Putnam County are severely cost burdened (spending 50% or more of their income on housing). Putnam County Housing Corporation recently performed a Housing Needs Assessment in January 2014 which identified a high demand for more affordable housing. "Putnam County is faced with limited choice and an insufficient supply of affordable and market rate rental housing… There is an overwhelming need to develop new affordable housing at all income levels, especially at lower-income levels. Bolstering the supply of housing that is affordable to working class and middle-income households is

critical to building and retaining talent for the local economy." The Hamlet's location makes it an ideal location for affordable housing with a preference for, essential workers, who are rent burdened at a higher-than-average rate. The Hamlet is adjacent to and within walking distance of Putnam Hospital. Subject to approval by HCR's Fair and Equitable Housing Office (FEHO) The Hamlet will include a set-aside of 15% or twelve (12) units for essential workers in accordance with the NYS essential worker's occupancy preference effective May 7, 2021. The essential worker's set-aside will be in accordance with NYS HCR's "List of Essential Workers" which includes: Food Industry Workers, Health Care Professionals, Hotel Workers, Child Care Providers, P-12 School Faculty, Group Living Facilities Staff, Public Transit Drivers, Corrections workers and First Responders and Support Staff. This essential workers preference request is subject to any HCR modifications and FEHO approval.

The Hamlet will comprise of five (5) new construction buildings. Building 1, which is 17,606 square feet, will have four (4) one-bedroom apartments, eight (8) two-bedroom apartments, four (4) three-bedroom apartments. Building 2, which is 8,770 square feet, will have eight (8) two-bedroom apartments. Building 3, which is 17,606 square feet, will have four (4) one-bedroom apartments, eight (8) two-bedroom apartments, four (4) three-bedroom apartments. Building 4, which is 24,660 square feet, will have five (5) one-bedroom apartments, Seven (7) two-bedroom apartments, three (3) three-bedroom apartments, and common facilities. Building 5, which is 23,975 square feet, will have four (4) one-bedroom apartments, ten (10) two-bedroom apartments, six (6) three-bedroom apartments. The Hamlet is designed to provide housing to individuals and families at numerous income levels. Utilizing LIHTC, SLIHTC, and HTF subsidy, The Hamlet will comprise of eight (8) units at 30% of Putnam County Area Median Income (AMI), fifty-seven (57) units at 60% of Putnam County AMI, six (6) units at 80% of Putnam County AMI, and three (3) units at 90% of Putnam County AMI. Of these units, seventeen (17) will be one-bedroom, forty (40) will be two-bedrooms, seventeen (17) will be three-bedrooms, and one non-rent bearing two (2) bedroom apartment for a super-intendent. In addition, The Hamlet will consist of eight (8) mobility adapted apartments and four (4) audio and visually adapted apartments.

The Hamlet will be designed to include high-quality amenities for the residents, which are important compliments to the objectives of the State Housing Goal; Housing Opportunity Projects. The Hamlet will offer; an on-site management office that will be staffed during the week; an on-site superintendent; a large common room for social events; on-site laundry facilities; and interior bike storage. In addition, The Hamlet will offer exterior amenities such as a gazebo, playground, and a patio area with benches. Furthermore, the residents will have access to Wi-Fi throughout the building and broadband internet connections will be available to residents in the common room. The Residents of The Hamlet will also have access to one hundred and forty-nine (149) on-site parking spaces. In accordance with HCR's Design Guidelines, The Hamlet will provide five (5) EV charging stations.

The Hamlet will accomplish the State Housing Goal; Housing Opportunity Projects. The Hamlet is located in Census Tract 116.00, which was designated by New York State Homes and Community Renewal (HCR) as a Housing Opportunity Census Tract. Residents of The Hamlet will be enrolled in Carmel Central School District (CCSD). CCSD is a high-achieving school district, ranked at the highest level of four (4) by the New York State Education Department (NYSED) for college, career, and civic readiness. The college, career, and civic readiness index measures school quality and student success. The indicators included in the index measure how well students are prepared to be involved in activities important to being a productive

citizen. This would be the case whether they plan to attend college or whether they plan to enter the workforce after high school. The quality of CCSD is evidenced by assessment results as presented by different New York State Standardized tests. Students of CCSD scored at a proficient level at high rates; 96% in Regents English; 95% in Regents Algebra I; 89% in Regents Algebra II; 90% in Regents Living Environment; 93% in Regents Earth Science; 100% in Regents Physics; and 93% in Regents U.S. History & Government. Residents of The Hamlet, especially school-age children, will be offered a tremendous opportunity to grow and prosper as a member of the CCSD.

As a Housing Opportunity project, The Hamlet will provide families with much needed affordable housing and better access to job opportunities, while simultaneously giving the children access to healthier living environments and high-quality education.

The Hamlet will help advance the Fair Housing Matters NY initiative, which looks to analyze and address segregated living patterns and housing disparities in New York. This initiative seeks to continue to follow the Obama-era regulations and uphold the Fair Housing Act by working to address the root, historical causes of segregation and housing inequality that harm New York's most vulnerable populations. These regulations include the Affirmatively Furthering Fair Housing Rule, or AFFH, enacted in 2015, that requires states and local municipalities to analyze and develop meaningful actions to reduce segregated living patterns and concentrated areas of poverty, address unequal opportunity in neighborhoods, increase accessibility and strengthen fair housing enforcement. Limitations of where someone can live has profound impacts on an individual's access to quality education, a good job, and adequate healthcare. As a Housing Opportunity Project, located in Putnam County, The Hamlet supplies much needed, affordable, mixed-income, and workforce housing with access to the highly ranked Carmel Central School District and nearby medical facilities.

The residents of The Hamlet will benefit greatly from the partnership with one of the leading not-for-profits in the area of affordable housing, Housing Action Council, Inc. (HAC). HAC, incorporated in 1974, is a not-for-profit organization dedicated to expanding housing opportunities for low and moderate-income households throughout the Hudson Valley. HAC has developed or facilitated the development of over 4,000 affordable housing units in New York State. To date, Kearney Group and/or its affiliates, and HAC have successfully partnered in the construction and management of over three hundred and seventy-five (375) affordable housing units. HAC will work with Kearney Group in establishing linkages to support services, marketing, and qualifying applicants. In addition, Kearney Group and HAC will set aside 15% of the affordable apartments, or twelve (12), apartments for special needs population of individuals or families with physical disabilities/traumatic brain injury.

The Hamlet will benefit from a project team with substantial development and management experience, and an outstanding track record and reputation in affordable housing. The developers, Kenneth Kearney and Sean K. Kearney, President and Vice President, respectively, of Kearney Realty & Development Group, Inc. (Kearney Group), are highly regarded developers with an outstanding regional reputation for quality and integrity. Kearney Group and their affiliates have developed fifteen (15) affordable housing developments and currently manage over one thousand three hundred (1,300) units of affordable and mixed-income housing. Kearney Group will also be responsible for all marketing and rent-up activities, as well as the ongoing management of The Hamlet.

The project architect, A.J. Coppola of Coppola Associates, has designed and completed twenty (20) affordable housing complexes. Mr. Coppola will be responsible for preparation of all design documents and specifications, as well as the oversight of mechanical, structural and site engineering, and will ensure compliance with all NYSHCR Project Design Handbook requirements and code related issues, including compliance with the Americans with Disabilities Act.

The project engineer, Jeffrey Contelmo of Insite Engineering, has experience in all phases of site development, both large and small. The Hamlet's general contractor, Tern Construction & Development, LLC, has built fifteen (15) affordable projects and has an excellent reputation. Tern Construction & Development, LLC will be contracted through a pre-negotiated/fixed-price contract.

The Hamlet's counsel, Melissa Beskid of Cannon Heyman & Weiss, LLP, practices in the area of multi-family finance and real estate development, and focuses his practice in the construction, rehabilitation and financing of affordable housing using tax credits and other subsidy programs.

The Hamlet will be owned by The Hamlet at Carmel Limited Partnership (the "Owner"), the managing general partner of which shall be named The Hamlet at Carmel Associates, LLC, a New York limited liability company, the members and managers will The Hamlet at Carmel Managers II, LLC and JUCCA Company LLC. HAC, through The Hamlet at Carmel Housing Development Fund Company, Inc., a housing development fund company organized under Articles XI of the New York Private Housing Finance Law shall be the co-general partner. Each general partner will own a .005% interest in the Owner. HAC will materially participate in The Hamlet's operations through (i) its agreement to provide referrals to The Hamlet's residents, (ii) integration of The Hamlet's residents into its community programs, and (iii) its right, as co-general partner of the Owner, to consent to selection of The Hamlet's management agent.

The Applicant, Kearney Group, and its affiliates and subsidiaries, have ample capacity to successfully develop the Hamlet. Currently, Kearney Group and its affiliates and subsidiaries, have two developments under construction. Copper City Lofts and The Woods at Pawling, both of which were recently funded through HCR's Fall 2020 funding round, are anticipated to begin construction in Fall of 2021. Kearney Group and its affiliates have the capacity to successfully manage six active HCR funded developments at any given time.

In keeping with Kearney Group's commitment for sustainable development, The Hamlet will be fully compliant with NYSERDA's New Construction – Housing Program, NYSERDA compliant, and LEED certified. In addition, The Hamlet has contracted with a benchmarking firm to provide annual benchmarking data. The cost of the benchmarking service is included in the operating budget.

Sources of construction financing for The Hamlet are anticipated to consist of: (i) a construction loan from Sterling Bank in the amount of $16,400,000; (ii) tax credit in the amount of $6,922,306, raised from the syndication of LIHTC; (iii) tax credit in the amount of $1,373,361, raised from the syndication of SLIHTC; (iv) deferred developer fee in the amount of $3,246,252; and (v) unfunded reserves of $289,067.

Sources of permanent financing for The Hamlet are anticipated to consist of: (i) a permanent loan from Sterling Bank in the amount $7,350,000; (ii) tax credit in the amount of $13,844,613, raised from the syndication of LIHTC; (iii) tax credit in the amount of $2,746,722, raised from the syndication of SLIHTC; (iv) Low-Income Housing Trust Fund in the amount of $3,400,000; (v) deferred developer fee in the amount of $814,651; and (vi) NYSERDA funding in the amount of $75,000.

Summer 2021
The Kearney Realty & Development Group, Inc.
The Hamlet at Carmel

EXHIBIT B-3: PROJECT SUMMARY

Complete this form to describe the project **as a whole**, unless otherwise specified. The summary below **must be consistent with the rest of the application.**

Project Type (select all that apply)

- [x] New Construction
- [ ] Adaptive Reuse
- [ ] Preservation
- [ ] Public Housing
- [ ] Senior Housing
- [ ] Supportive Housing
- [ ] Occupied Rehabilitation

Project Use (select all that apply)

- [x] Residential
- [ ] Community (Service) Facility
- [ ] Civic
- [ ] Commercial

Is the project subject to:

Davis-Bacon wage rates?	No
Section 3 requirements?	No
Section 504 requirements?	No

Location Summary

Does the project include multiple sites?	No
Does the site include multiple buildings?	Yes

If the project includes multiple sites or buildings, complete and attach Exhibit B-3a: Multiple Sites and/or Buildings.

Community Board (NYC Only): N/A

Complete the following box for the project as a whole. List multiple census tract numbers where applicable.

HUD QCT?	No
HUD DDA?	No
Housing Opportunity Census Tract?	Yes
Qualified Opportunity Zone?	No
CHDO Eligible?	No

HOCT #: 116

Any other special project locality designation(s):

Is the project...

located in a flood plain area?	No
located in a waterfront revitalization area?	No
located in or adjacent to a coastal area?	No
eligible for/listed in the National Register of Historic Places?	No

If yes to any of the above, attach a description.

Communities under Court Order/Court Decision

Is the project located in a community in which a court decision or court-ordered plan to address desegregation or remedy a violation of law has been issued? No

If yes, attach evidence that the proposed project is consistent with such court decision or court-entered plan.

Summer 2021
The Kearney Realty & Development Group, Inc.
The Hamlet at Carmel

Finance Summary				
TDC	$ 28,230,986	Total Residential Development Cost	$ 28,230,986	
TDC/SF	$ 305	Total Residential Hard Costs	$ 17,289,169	
TDC/DU	$ 376,413	Residential Hard Costs/SF	$ 187	
Total Developer Fee	$ 3,364,210	Residential Hard Costs/DU	$ 230,522	

Residential Unit Summary

	Unit Size								
Target AMI	0 BR	1 BR	2 BR	3 BR	4 BR	5+ BR	Applicable HCR Programs	# of Units	% of Project	Targets
30%		2	5	1			LIHTC, SLIHC, HTF	8	11%	30% AMI
40%										
50%										
60%		15	28	14			LIHTC, SLIHC, HTF	57	76%	60% AMI
70%										
80%			5	1			SLIHC, HTF	6	8%	80% AMI
90%			2	1			SLIHC, HTF	3	4%	90% AMI
100%										
110%										
120%										
130%										
Market										
Super/Mgr			1					1	1%	Super
Total #		17	41	17				75		
% of Project		23%	55%	23%						
		1 BR	2 BR	3 BR						

Target Populations for Residential Units		# of Units	% of Project
Special Needs Populations (non-ESSHI)			
Persons with Physical Disability/Traumatic Brain Injury		12	16%
(select)			
(select)			
(select)			
(select)			
ESSHI Populations			
(select)			
(select)			
(select)			
(select)			
(select)			
Total Units Targeted to Special Populations:		12	16%
Other Populations			
Senior/Elderly (non-frail)	(select age restriction)		
Not targeted to specific populations		63	84%
Total Units Targeted to Other Populations:		63	84%
Total Units in Project:		75	

Included in the residential rent/carrying charge:

Equipment:
- [x] Range & oven
- [ ] Microwave oven
- [x] Refrigerator
- [x] Cable TV hook-up
- [x] Laundry facilities in common area
- [ ] Laundry facilities in living unit
- [x] Central air conditioning (equipment)
- [ ] Broadband internet

Services:
- [ ] Heat
- [ ] Hot water
- [ ] Central air conditioning

Parking:
- [x] Surface
- [ ] Covered/enclosed
- [ ] Other (specify):

Residential Tenant-Paid Utilities:
- [x] Electricity
- [x] Heat
- [x] Gas
- [ ] Water
- [ ] Repairs
- [ ] Other (specify):

Architectural Summary

Number of Buildings:	5
Number of Floors (Total):	12
Construction Method:	Wood frame
Façade Materials:	Fiber-cement planks and shakes
Number of Elevators:	0
Cellar Excavation (Full, Partial, or Minimal):	Bldg 1-3 slab on grade. Bldg 4-5 partial basement

Units and Square Footages (Entire Project)	# of Existing Units	Include all units in the project, regardless of funding source. # of New Units	Total # of Units	Total Usable SF	% of Total (by SF)
Residential Dwellings		75	75	72,359	81%
Community Rooms		1	1		
Residential Common Space				16,856	19%
Community Service Facility			0		0%
Civic Space			0		0%
Commercial Space			0		0%
Enclosed Parking (if applicable)			0		0%
Other _____			0		0%
Total				89,215	

Community rooms: For the exclusive use of the residential tenants.

Community Service Facility: Not for the exclusive use of residential tenants.

Civic space: Non-residential, non-commercial space used for activities engaged by the local community for conducting municipal affairs or for general public u

Current Use(s) of Project Site(s) at the Time of Application Submission

# of existing buildings on the project site(s) at the time of application submission: 0 (Enter "0" for vacant land)

Describe the use(s) of any existing buildings on the site at the time of application submission:

Vacant land

Describe any existing accessory structures, recreational facilities, and parking on the site at the time of application submission:

No existing structures.

Is the project occupied at the time of application submission? No

# of occupied residential units:
# of occupied non-residential units:
Will relocation of tenants be necessary?
How many? Residential: Non-residential:

Project History

Has this project previously received DHCR/HTFC funding? No SHARS ID number(s):

Has the project ever been under the supervision of DHCR Housing Operations? No

Original name of the project, if different from the project name proposed in this application:

Supervision Start Date: Supervision End Date:

DHCR Contact: Project Contact:

Has an application previously been submitted to DHCR/HTFC for this project? No

Month and Year of submission(s)/Project ID if known: N/A

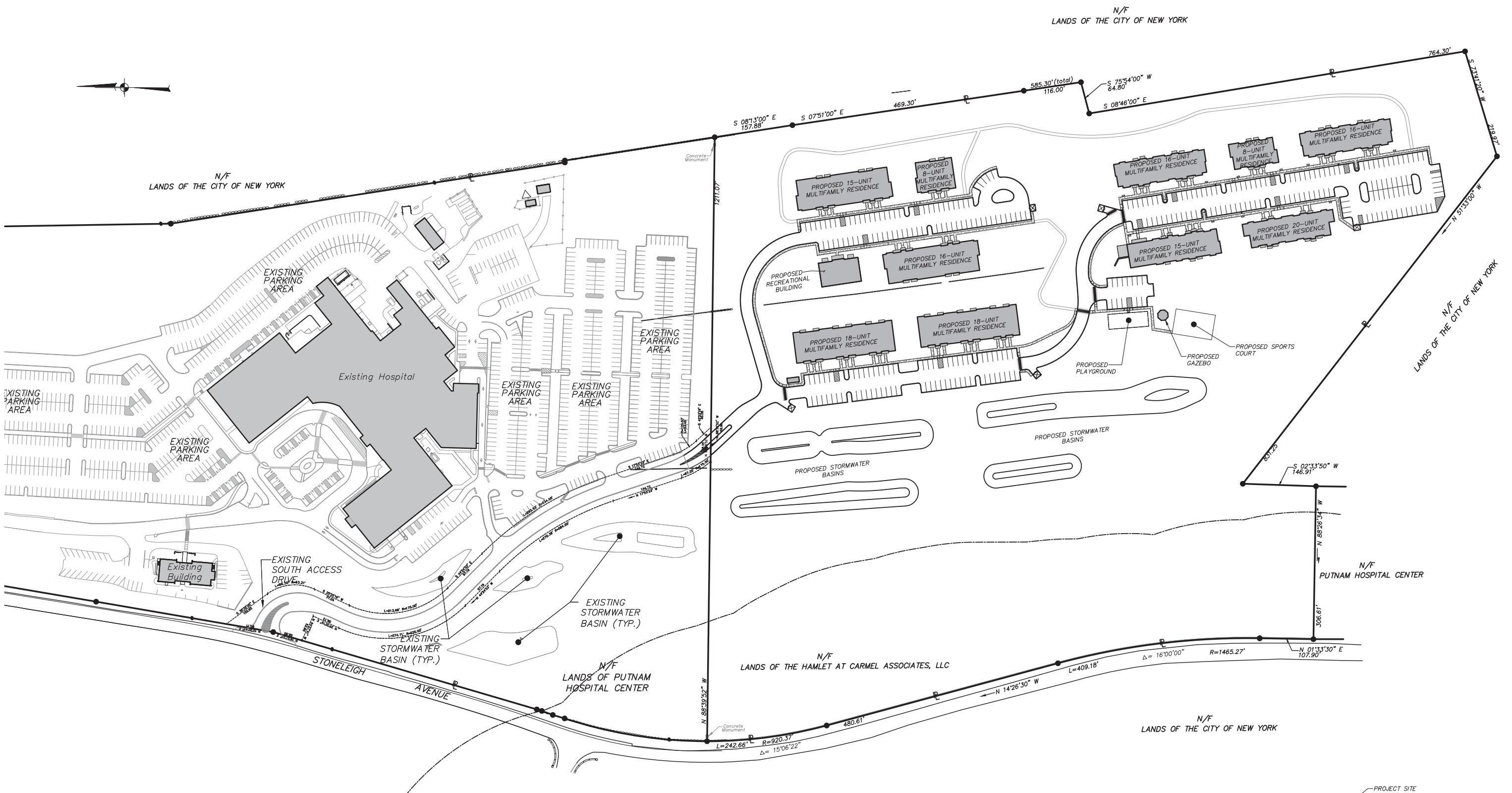
Project name(s) previously submitted under: N/A

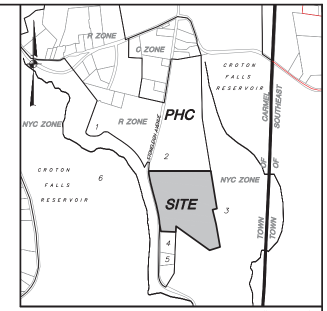
Project Name: The Hamlet at Carmel
Applicant: Kearney Realty & Development Group
Project County: Putnam County

SUMMARY		Amount	Percentage	Per Unit	
Total Units		75			
Total LIHTC Units		65	86.67%		
Income Mix:	20%	-	0%		
	30%	8	11%		
	40%	-	0%		
	50%	-	0%		
	60%	57	77%		
	70%	-	0%		
	80%	6	8%		
	90%	3	4%		74
	Over 90%	-	0%		100.00%
Studios		-	0%		
One-Bedrooms		17	23%		
Two-Bedrooms		40	53%		
Three-Bedrooms		17	23%		
Four-Bedrooms		-	0%		
Five-Bedrooms		-	0%		74
Residential Gross Square Footage		92,617		1,235	
Community Service Facility Gross Square Footage		-			
Other Non-residential Gross Square Footage		-			
Parking Spaces		-			
Total Project Income		1,273,836		16,984	
Residential Vacancy Rate			5.00%		
CSF Vacancy Rate			10.00%		
Other Non-residential Vacancy Rate			10.00%		
CSF + Non-Residential Income as % of Total			0.47%		
Total Expenses		679,174		9,056	
Net Operating Income		530,970		7,080	
Total Construction Term		24			
Income to Expense Year 1		1.05			
DSCR Year 1		1.11			
Residential Income Inflation			2.00%		
Operating Expense Inflation (Excluding Mgmt. Fee)			3.00%		
Management Fee Expense Inflation			2.00%		
Net Cash Flow 15 Years		1,243,778		16,584	
Sterling Bank		7,350,000	26%	98,000	
LIHTC Equity		13,844,613	49%	184,595	
SLIHC Equity		2,746,722	10%	36,623	
Low-Income Housing Trust Fund		3,400,000	12%	45,333	
NYSERDA		75,000	0%	1,000	
Deferred Developer Fee		814,651	3%	10,862	
	0	-	0%	-	
	0	-	0%	-	
	0	-	0%	-	
	0	-	0%	-	
	0	-	0%	-	
	0	-	0%	-	
	0	-	0%	-	
		-	0%	-	
		-	0%	-	
Acquisition		2,784,000	10%	37,120	
Construction Costs		17,289,169	61%	230,522	
Soft Costs		4,504,540	16%	60,061	
Reserves & Escrow		289,067	1%	3,854	
Developer Fee		3,364,210	12%	44,856	
Total Development Costs		28,230,986		376,413	
Total Residential Development Costs		28,230,986		376,413	

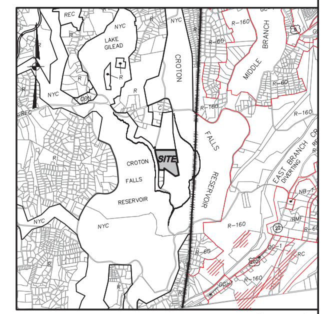
500' ADJOINERS

1. N/F VISTA ON THE LAKES, INC
2. N/F PUTNAM HOSPITAL CENTER
3. N/F CITY OF NEW YORK
4. N/F PUTNAM HOSPITAL CENTER
5. N/F SADKI, A. & KAORU, N.
6. N/F CITY OF NEW YORK





AREA MAP SCALE: 1" = 1000'



LOCATION MAP SCALE: 1" = 3000'

RECORD OWNER/APPLICANT:

The Hamlet at Carmel Associates, LLC
1777 Route 6
Carmel, NY 10152

SITE DATA:

Total Area:	35.28 AC. ±
Tax Map No.:	66-2-58
Zoning District:	R (Residential)
Proposed Use:	Multifamily Residential

GENERAL NOTES:

1. Property boundary shown hereon taken from subdivision plat entitled 'Boundary Line Adjustment Map prepared for Putnam Community Foundation and Putnam Hospital Center..." filed January 4, 2006 as map no. 3008."
2. Existing conditions and topography shown hereon taken from survey entitled "Topographic Survey prepared for The Putnam Community Foundation", prepared by Terry Bergendorff Collins, L.S., last revised April 25, 2007.

R – ZONE REQUIREMENTS:

	Required:	Provided:
Min. Lot Area:	120,000 SF	1,536,611 SF ±
Min. Lot Width:	200'	1,170' ±
Min. Lot Depth:	200'	1,161' ±
Min. Yard Setbacks:		
Front:	40'	655'
Side:	25'	102'
Rear:	40'	170'
Max. Building Height:	35'	<35'
Max. Building Coverage:	15 %	6.2%

* See §156–28 Multi–Family Dwellings Zoning Requirements below.

PARKING REQUIREMENTS:*

2.0 spaces per unit x 150 units – Required	= 300 spaces
Total spaces Provided	= 300 spaces

* Per §156–28 of the Town of Carmel Zoning Code.

§156–28 MULTI–FAMILY DWELLINGS ZONING REQUIREMENTS:*

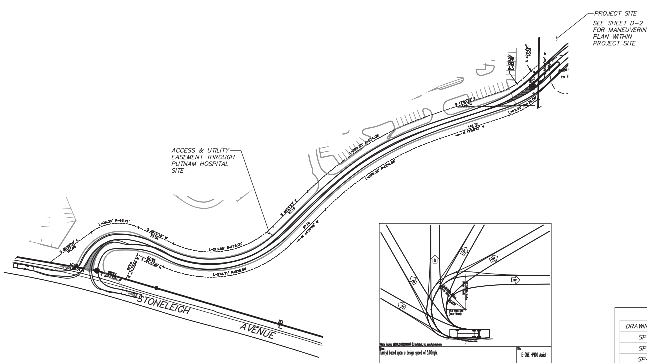
	Required/Permitted:	Provided:
Min. Lot Area	217,800 SF (10.0 AC)	1,536,611 SF ± (35.28 AC)
Max. Density (Units/Acre)	5.0	4.25
Max. Dwelling Units	150	150
Max. Building Coverage	30%	6.2%
Min. Property Line Setback	100'	102'
Max. Building Height/ Stories	35' / 2	less than 35' / 2
Distance Between Buildings	50'	50'
Max. Building Length	200'	200'
Min. Recreation Space	300 SF / unit	302 SF / unit

RECREATION REQUIREMENTS:

1. Indoor Common Space: 10,885 SF±
2. Patio Area: 470 SF±
3. Active Recreation Area: (Playground, Sports Court) 10,500 SF±
3. Walking Path Area: 10,000 SF±
4. Common Green: 9,600 SF±
5. Recreational Building: 3,888 SF±

TOTAL RECREATION PROVIDED: 45,343 SF

TOTAL RECREATION REQUIRED: (300 SF/Unit x 150 Units) 45,000 SF



MANEUVERING PLAN
E–ONE AERIAL FIRE TRUCK
1" = 50'

LIST OF DRAWINGS

DRAWING NO.	DRAWING NAME	SHEET
SP–1	Overall Site Plan	1
SP–1	Existing Conditions Plan	2
SP–2	Layout, Landscape, & Lighting Plan	3
SP–3	Grading & Utilities Plan	4
SP–4	Erosion Control & Phasing Plan	5
D–1	Site Details	6
D–2	Site Details	7
D–3	Site Details	8
D–4	Stormwater Pond Details	9
D–5	Stormwater Pond Details	10

GRAPHIC SCALE
0 50 100 200
(IN FEET)
1 inch = 100 ft.

NO.	DATE	REVISION	BY
3	11–29–21	GENERAL REVISION	SMR
2	9–29–21	GENERAL REVISION	MEU
1	7–19–21	GENERAL REVISION	MEU

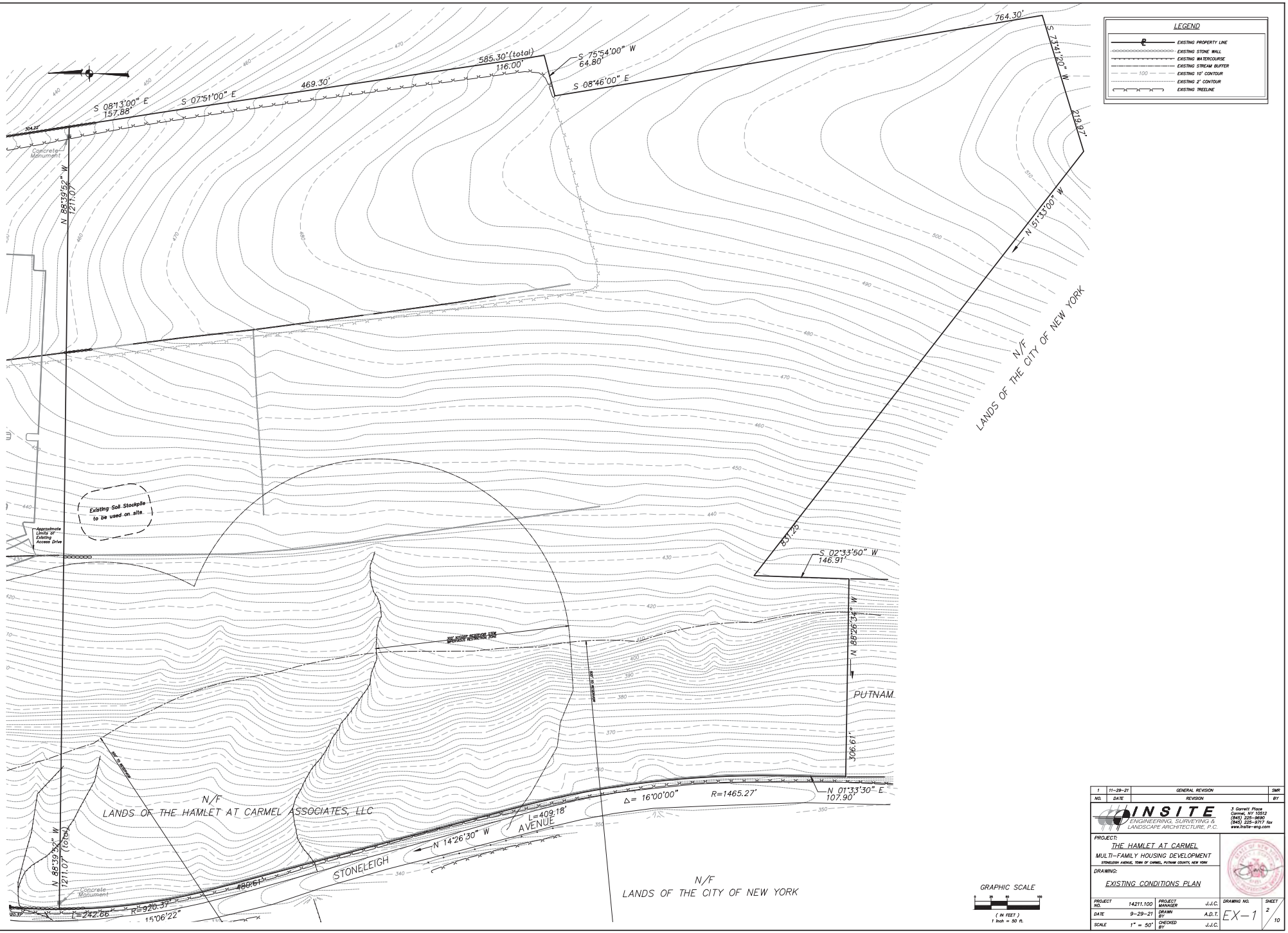
INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225–9690
(845) 225–9717 fax
www.insite–eng.com

PROJECT:
THE HAMLET AT CARMEL
MULTI–FAMILY HOUSING DEVELOPMENT
STONELEIGH AVENUE, TOWN OF CARMEL, PUTNAM COUNTY, NEW YORK

DRAWING:
OVERALL SITE PLAN

PROJECT NO.	14211.100	PROJECT MANAGER	J.J.C.
DATE	2–10–21	DRAWN BY	M.E.U.
SCALE	1" = 100'	CHECKED BY	J.J.C.

DRAWING NO. SP–1
SHEET 1/10



NO.	DATE	REVISION	BY
1	11-29-21	GENERAL REVISION	SMR

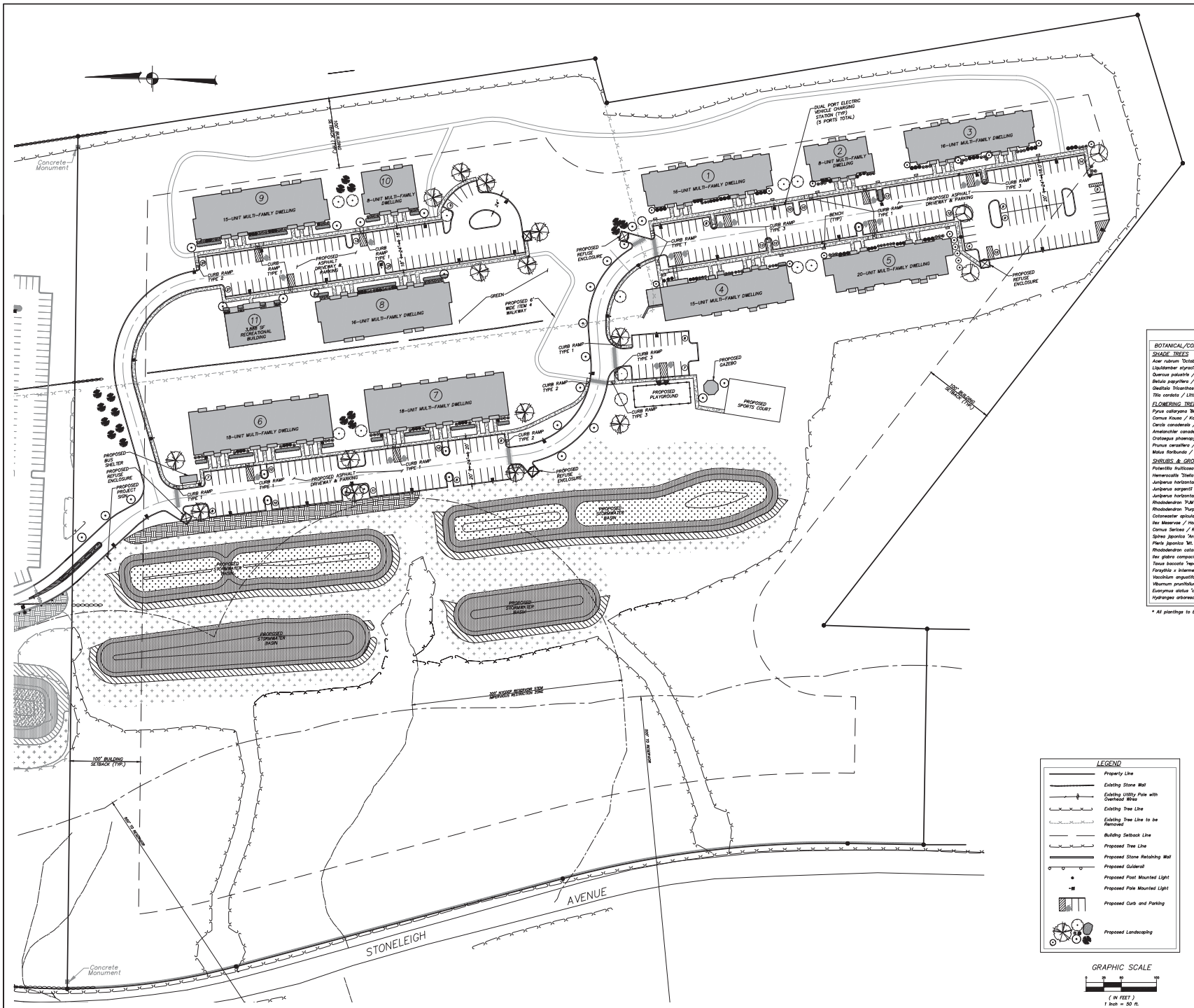
INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
THE HAMLET AT CARMEL
MULTI-FAMILY HOUSING DEVELOPMENT
STONELEIGH AVENUE, TOWN OF CARMEL, PUTNAM COUNTY, NEW YORK

DRAWING:
EXISTING CONDITIONS PLAN

PROJECT NO.	14211.100	PROJECT MANAGER	J.J.C.
DATE	9-29-21	DRAWN BY	A.D.T.
SCALE	1" = 50'	CHECKED BY	J.J.C.

DRAWING NO. EX-1
SHEET 2 / 10



PLANT LIST

BOTANICAL/COMMON NAME	SIZE	ROOT	REMARKS
SHADE TREES			
Acer rubrum 'October Glory' / October Glory Red Maple	2 1/2" – 3" CAL.	B & B	
Liquidamber styraciflaa / Sweetgum	2 1/2" – 3" CAL.	B & B	
Quercus palustris / Pin Oak	2 1/2" – 3" CAL.	B & B	
Betula papyrifera / Paper Birch	8' – 10' HT.	B & B	Multi-stem
Gleditsia Tricanthos / Honey Locust	8' – 10' HT.	B & B	
Tilia cordata / Little Leaf Linden	8' – 10' HT.	B & B	
FLOWERING TREES			
Pyrus calleryana 'Bradford' / Bradford Pear	2" – 2 1/2" CAL	B & B	
Cornus Kousa / Kousa Dogwood	7' – 8' HT.	B & B	
Cercis canadensis / Eastern Redbud	8' – 10' HT.	B & B	
Amelanchier canadensis / Shadblow Serviceberry	8' – 10' HT.	B & B	Multi-stem
Crataegus phaenopyrum / Washington Hawthorn	2" – 2 1/2" CAL.	B & B	
Prunus cerasifera / Purple Leaf Plum	2" – 2 1/2" CAL.	B & B	
Malus floribunda / Japanese Flowering Crabapple	2" – 2 1/2" CAL.	B & B	
SHRUBS & GROUNDCOVERS			
Potentilla fruticosa 'Sunset' / Sunset Potentilla	2 GAL.	CONT.	
Hemerocallis 'Stella D'Oro' / Miniature Daylilies	2 GAL.	CONT.	
Juniperus horizontalis 'Plumosa Nana' / Dwarf Andorra Juniper	3 GAL.	CONT.	
Juniperus sargentii / Sargent's Juniper	3 GAL.	CONT.	
Juniperus horizontalis 'Blue Rug' / Blue Rug Juniper	2 GAL.	CONT.	
Rhododendron 'PJM' / PJM Rhododendron	2" – 2 1/2" HT.	B & B	
Rhododendron 'Purple Gem' / Purple Gem Rhododendron	3 GAL.	CONT.	
Cotoneaster apiculata / Cranberry Cotoneaster	3 GAL.	CONT.	
Ilex Meserveae / Holly	4" – 5' HT.	B & B	
Cornus Sericea / Red Twig Dogwood	4" – 5' HT.	B & B	
Spirea Japonica 'Anthony Waterer' / Anthony Waterer Spirea	3" – 4' HT.	CONT.	
Pieris Japonica 'Mt. Fire' / Mt. Fire Andromeda	2" – 2 1/2' HT.	CONT.	
Rhododendron catawbiense / Catawba Rhododendron	2 1/2" – 3' HT.	CONT.	
Ilex glabra compacta / Dwarf Inkberry	18" – 24" HT.	CONT.	
Taxus baccata 'rependens'/ English Yew	18" – 24" HT.	CONT.	
Forsythia x Intermedia / Border Forsythia	4' – 5' HT.	CONT.	
Vaccinium angustifolium / Lowbush Blueberry	3 GAL.	CONT.	
Viburnum prunifolium / Blackhaw Viburnum	2 1/2" – 3' HT.	B & B	
Euonymus alatus 'compacta'/ Dwarf Burning Bush	2 1/2" – 3' HT.	CONT.	
Hydrangea arborescens "Annabelle" / Hydrangea	5 GAL.	CONT.	

* All plantings to be verified by the Town of Carmel Wetland Inspector.

Planting Notes:

1. All plant material to be nursery grown.
2. Plants shall conform with the American Association of Nurserymen Standards in all ways including dimensions.
3. Plants shall be planted in all locations designed on the plan or as staked in the field by the project Landscape Architect.
4. All plants shall be hardy under climate conditions similar to those in the locality of the project.
5. 4" pine bark mulch shall be spread over all landscaped areas.
6. All proposed seeded areas to receive 4" min. depth of topsoil and all proposed planting beds to receive a 12" min. depth of topsoil.
7. For all additional notes see detail sheets.
8. In addition to these standards, all plantings will be installed per §142 of the Town of Carmel Code.

LIGHTING NOTES:

1. All site lighting shall be solar powered.
2. Model, style and finish of all luminaires to be selected by owner and approved by the Planning Board.
3. Proposed lights will run on photocells.
4. Type, location, and shading of all proposed lighting shall prevent the spillover of light onto all adjacent residential properties.
5. All light fixtures to be full cutoff to comply with dark sky guidelines.

LEGEND

- Property Line
- Existing Stone Wall
- Existing Utility Pole with Overhead Wires
- Existing Tree Line
- Existing Tree Line to be Removed
- Building Setback Line
- Proposed Tree Line
- Proposed Stone Retaining Wall
- Proposed Guiderail
- Proposed Post Mounted Light
- Proposed Pole Mounted Light
- Proposed Curb and Parking
- Proposed Landscaping

GRAPHIC SCALE

0 25 50 100

(IN FEET)
1 Inch = 50 ft.

NO.	DATE	REVISION	BY
4	11-29-21	GENERAL REVISION	SMR
3	9-29-21	GENERAL REVISION	MEU
2	8-30-21	GENERAL REVISION	MEU
1	7-19-21	GENERAL REVISION	MEU

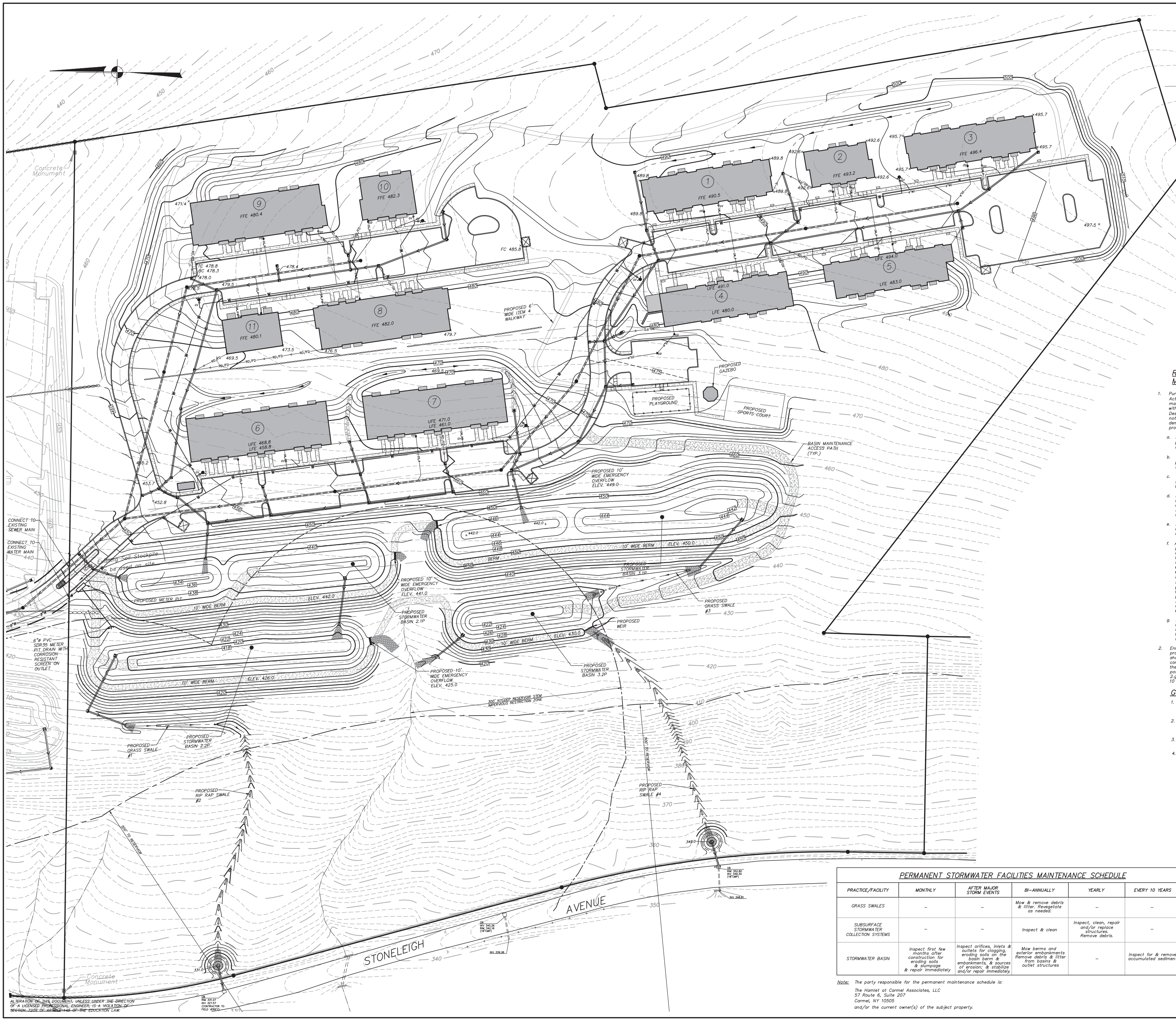
INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
THE HAMLET AT CARMEL
MULTI-FAMILY HOUSING DEVELOPMENT
STONELEIGH AVENUE, TOWN OF CARMEL, PUTNAM COUNTY, NEW YORK

DRAWING:
LAYOUT, LANDSCAPING, & LIGHTING PLAN

PROJECT NO.	14211.100	PROJECT MANAGER	J.J.C.
DATE	2-10-21	DRAWN BY	M.E.U.
SCALE	1" = 50'	CHECKED BY	J.J.C.

DRAWING NO. SP-2
SHEET 3 / 10



LEGEND

- Property Line
- Existing 2' Contour
- Existing 10' Contour
- Existing Spot Grade
- Existing Drain Inlet and Drainage Pipe
- Proposed 2' Contour
- Proposed 10' Contour
- Existing Stone Wall
- Existing Stone Wall to be Removed
- Proposed Retaining Wall
- Proposed 8"Ø PVC SDR 35 Sewer Main With Sewer Manhole
- Proposed HDPE Drainage Pipe
- Proposed Roof/Footing Drain
- Proposed Sewer Manhole
- Proposed Catch Basin/ Drain Inlet
- Proposed Drainage Manhole
- Proposed Outlet Structure
- Proposed End Section With Rip Rap Apron
- Proposed Grass Swale
- Proposed Riprap Swale
- Proposed 8"Ø PVC DR14 Water Main
- Proposed Fire Hydrant and Gate Valve
- Proposed 4"Ø PVC SDR 35 Sewer Service Line W/Clean Out
- Proposed 6"Ø PVC SDR 35 Sewer Service Line W/Clean Out
- Proposed 6"Ø PVC DR 14 (Main to Service Valve) or Ductile Iron Water (Service Valve to Building) Service Line (Final Size Per Fire Protection System Requirements)
- Proposed Gate Valve

REQUIRED POST-CONSTURCTION STORMWATER MANAGEMENT PRACTICE COMPONENTS:

1. Pursuant to the NYSDEC "SPDES General Permit for Stormwater Discharges from Construction Activity" (GP-0-20-001), all construction projects needing post-construction stormwater management practices shall prepare a SWPPP that also includes practices designed in conformance with the most current version of the technical standard, New York State Stormwater Management Design Manual ("Design Manual"). Where post-construction stormwater management practices are not designed in conformance with this technical standard, the owner or operator must demonstrate equivalence to the technical standard. The following list of SWPPP components is provided in accordance with Part III.B.2a-g and III.B.3:

   a. Identification of all post-construction stormwater management practices to be constructed as part of the project; This plan, and details/notes shown hereon serve to satisfy this SWPPP requirement.

   b. A site map/construction drawing(s) showing the specific location and size of each post-construction stormwater management practice; This plan, and details/notes shown hereon serve to satisfy this SWPPP requirement.

   c. The dimensions, material specifications and installation details for each post-construction stormwater management practice; This plan, and details/notes shown hereon serve to satisfy this SWPPP requirement.

   d. Identification of any elements of the design that are not in conformance with the Design Manual. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is equivalent to the technical standards; All post-construction stormwater management practices are in conformance with the Design Manual.

   e. A hydrologic and hydraulic analysis for all structural components of the stormwater management control system; The required analysis is provided in the report titled Stormwater Pollution Prevention Plan for The Putnam Community Foundation.

   f. A detailed summary (including calculations) of the sizing criteria that was used to design all post-construction stormwater management practices. At a minimum, the summary shall address the required design criteria from the applicable chapter of the Design Manual; including the identification of and justification for any deviations from the Design Manual, and identification of any design criteria that are not required based on the redevelopment criteria or waiver criteria included in the Design Manual; The stormwater practices are sized in accordance with the Design Manual, specifically chapters 4, 6, and 10. The stormwater facilities have been designed to provide water quality volume treatment (treatment of the 1 year 24-hour design storm per the Enhanced Phosphorus Removal Standards). Channel Protection Volume is provided through 24-hour center of mass detention of the 1 year 24-hour design storm. Overbank Flood Control and Extreme Flood Control are provided by attenuating post-development peak stormwater discharges to below pre-development levels for the 10-year and 100-year 24-hour design storm. Calculations are provided in report entitled Stormwater Pollution Prevention Plan for Putnam Community Foundation. All practices are designed in accordance with the Design Manual.

   g. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice. The Permanent Stormwater Facilities Maintenance Schedule provided on these plans serves to satisfy this requirement.

2. Enhanced Phosphorus Removal Standards – Beginning on September 30, 2008, all construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the most current version of the technical standard, New York Stormwater Management Design Manual. At a minimum, the post-construction stormwater management practice component of the SWPPP shall include items 2.a – 2.g above. The permanent stormwater practices for this project have been sized according to chapter 10 of the Design Manual Enhanced Phosphorus Removal Standards. Please see 2.a – 2.g above.

General Notes:

1. Property boundary shown hereon taken from subdivision plat entitled 'Boundary Line Ajustment Map prepared for Putnam Community Foundation and Putnam Hospital Center..." filed January 4, 2006 as map no. 3008 ."
2. Existing conditions and topography shown hereon taken from survey entitled "Topographic Survey prepared for The Putnam Community Foundation", prepared by Terry Begendorf Collins, L.S., last revised April 25, 2007.
3. Cleaning of existing drainage structures along Stoneleigh Avenue shall be accomplished as part of the required Highway Work Permit for the connection to the existing drainage structure.
4. Due to high pressures in the water main, pressure reducing valves shall be installed to protect domestic plumbing fixtures.

GRAPHIC SCALE

0 25 50 100

(IN FEET)
1 inch = 50 ft.

PERMANENT STORMWATER FACILITIES MAINTENANCE SCHEDULE

PRACTICE/FACILITY	MONTHLY	AFTER MAJOR STORM EVENTS	BI-ANNUALLY	YEARLY	EVERY 10 YEARS
GRASS SWALES	–	–	Mow & remove debris & litter. Revegetate as needed.	–	–
SUBSURFACE STORMWATER COLLECTION SYSTEMS	–	–	Inspect & clean	Inspect, clean, repair and/or replace structures. Remove debris.	–
STORMWATER BASIN	Inspect first few months after construction for eroding soils & slumpage & repair immediately	Inspect orifices, inlets & outlets for clogging, eroding soils on the basin berm & embankments, & sources of erosion; & stabilize and/or repair immediately.	Mow berms and exterior embankments Remove debris & litter from basins & outlet structures	–	Inspect for & remove accumulated sediment

Note: The party responsible for the permanent maintenance schedule is:

The Hamlet at Carmel Associates, LLC
57 Route 6, Suite 207
Carmel, NY 10505
and/or the current owner(s) of the subject property.

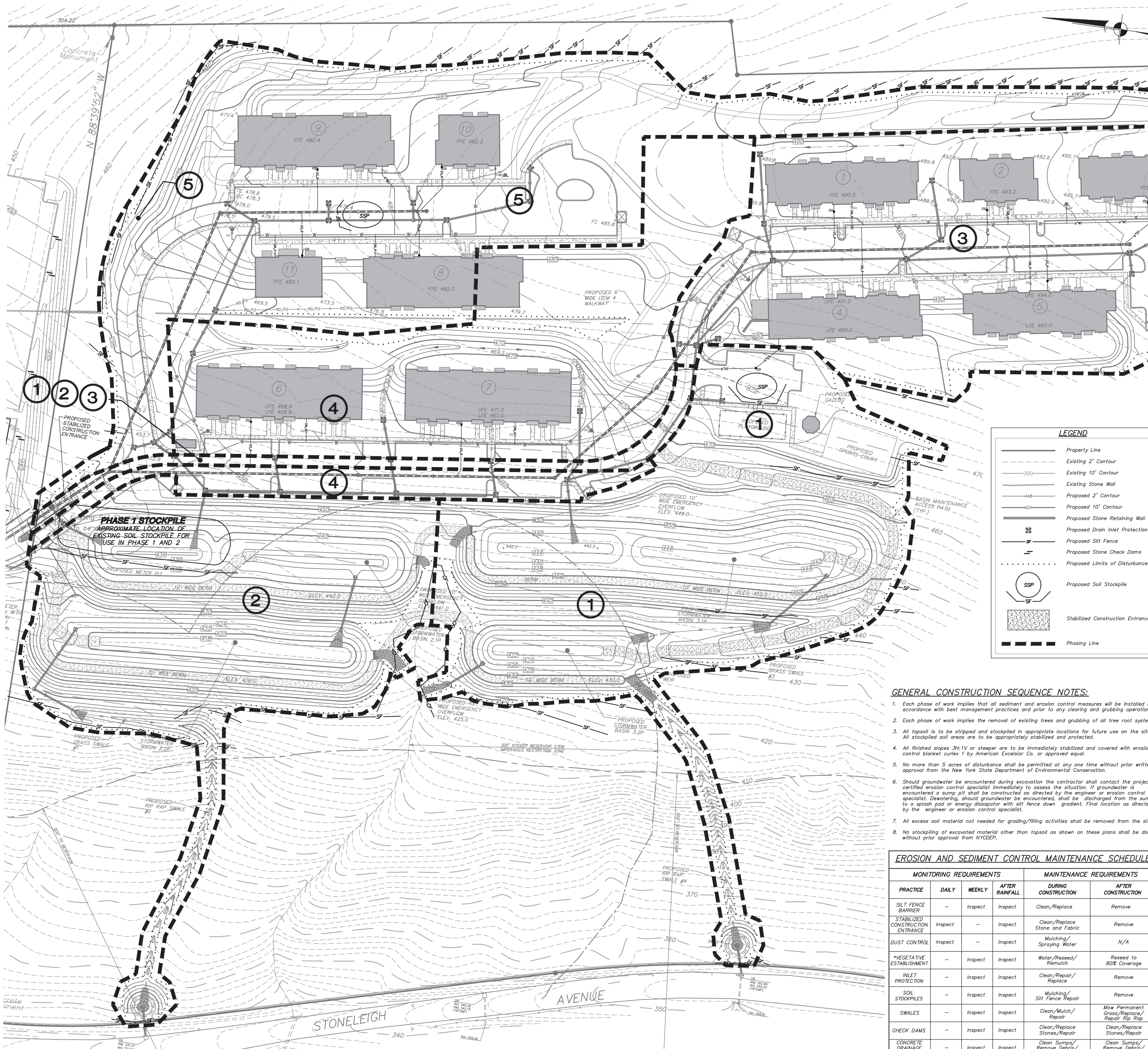
NO.	DATE	REVISION	BY
4	11-29-21	GENERAL REVISION	SMR
3	9-29-21	GENERAL REVISION	MEU
1	7-19-21	GENERAL REVISION	MEU

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
THE HAMLET AT CARMEL
MULTI-FAMILY HOUSING DEVELOPMENT
STONELEIGH AVENUE, TOWN OF CARMEL, PUTNAM COUNTY, NEW YORK

DRAWING:
GRADING & UTILITIES PLAN

PROJECT NO.	14211.100	PROJECT MANAGER	J.J.C.	DRAWING NO.	SHEET
DATE	2-10-21	DRAWN BY	M.E.U.	SP-3	4 / 10
SCALE	1" = 50'	CHECKED BY	J.J.C.		



GENERAL CONSTRUCTION SEQUENCE NOTES:

1. Each phase of work implies that all sediment and erosion control measures will be installed in accordance with best management practices and prior to any clearing and grubbing operations.
2. Each phase of work implies the removal of existing trees and grubbing of all tree root systems.
3. All topsoil is to be stripped and stockpiled in appropriate locations for future use on the site. All stockpiled soil areas are to be appropriately stabilized and protected.
4. All finished slopes 3H:1V or steeper are to be immediately stabilized and covered with erosion control blanket curlex 1 by American Excelsior Co. or approved equal.
5. No more than 5 acres of disturbance shall be permitted at any one time without prior written approval from the New York State Department of Environmental Conservation.
6. Should groundwater be encountered during excavation the contractor shall contact the project's certified erosion control specialist immediately to assess the situation. If groundwater is encountered a sump pit shall be constructed as directed by the engineer or erosion control specialist. Dewatering, should groundwater be encountered, shall be discharged from the sump to a splash pad or energy dissapator with silt fence down gradient. Final location as directed by the engineer or erosion control specialist.
7. All excess soil material not needed for grading/filling activities shall be removed from the site.
8. No stockpiling of excavated material other than topsoil as shown on these plans shall be done without prior approval from NYCDEP.

EROSION AND SEDIMENT CONTROL MAINTENANCE SCHEDULE

MONITORING REQUIREMENTS				MAINTENANCE REQUIREMENTS	
PRACTICE	DAILY	WEEKLY	AFTER RAINFALL	DURING CONSTRUCTION	AFTER CONSTRUCTION
SILT FENCE BARRIER	–	Inspect	Inspect	Clean/Replace	Remove
STABILIZED CONSTRUCTION ENTRANCE	Inspect	–	Inspect	Clean/Replace Stone and Fabric	Remove
DUST CONTROL	Inspect	–	Inspect	Mulching/ Spraying Water	N/A
*VEGETATIVE ESTABLISHMENT	–	Inspect	Inspect	Water/Reseed/ Remulch	Reseed to 80% Coverage
INLET PROTECTION	–	Inspect	Inspect	Clean/Repair/ Replace	Remove
SOIL STOCKPILES	–	Inspect	Inspect	Mulching/ Silt Fence Repair	Remove
SWALES	–	Inspect	Inspect	Clean/Mulch/ Repair	Mow Permanent Grass/Replace/ Repair Rip Rap
CHECK DAMS	–	Inspect	Inspect	Clean/Replace Stones/Repair	Clean/Replace Stones/Repair
CONCRETE DRAINAGE STRUCTURES	–	Inspect	Inspect	Clean Sumps/ Remove Debris/ Repair/Replace	Clean Sumps/ Remove Debris/ Repair/Replace
DRAINAGE PIPES	–	Inspect	Inspect	Clean/Repair	Clean/Repair
ROAD & PAVEMENT	–	Inspect	Inspect	Clean	Clean
*STORMWATER TRAP/BASIN	–	Inspect	Inspect	Clean/Mulch/ Repair/Reseed	See Permanent Stormwater Facilities Maintenance Schedule on Drawing SP–3.1

* Permanent vegetation is considered stabilized when 80% of the plant density is established. Erosion control measures shall remain in place until all disturbed areas area permanently stabilized.

Note: The party responsible for implementation of the maintenance schedule during and after construction is:
The Hamlet at Carmel Associates, LLC
57 Route 6, Suite 207
Carmel, NY 10505
and/or the current owner(s) of the subject property.

REQUIRED EROSION CONTROL SWPPP CONTENTS:

Pursuant to the NYSDEC "SPDES General Permit for Stormwater Discharges from Construction Activity" (GP–0–20–001), all Stormwater Pollution Prevention Plan's (SWPPP) shall include erosion and sediment control practices designed in conformance with the most current version of the technical standard, "New York Standards and Specifications for Erosion and Sediment Control." Where erosion and sediment control practices are not designed in conformance with this technical standard, the owner or operator must demonstrate equivalence to the technical standard. The following list of required SWPPP components is provided in accordance with Part III.B.1a–l of General Permit GP–0–20–001:

a. Background Information: The subject project consists of the construction of 120 single bedroom senior housing units, a clubhouse and associated appurtenances.

b. Site map / construction drawing: This plan serves to satisfy this SWPPP requirement for planimetric design and details.

c. Description of the soils present at the site: Onsite soils located within the proposed limits of disturbance consist of Paxton fine sandy loams (PnB, PnC, PnD) and Charlton loam (ChE), as identified on the Soil Conservation Service Web Soil Survey. The Paxton type belongs to the Hydrologic Soil Group "C" and the Charlton soil belongs to Hydrologic Soil Group "B".

d. Construction phasing plan / sequence of operations: A Construction Sequence and Erosion and Sediment Control Maintenance Schedule has been provided. The Sedimentation and Erosion Control Notes contained hereon outline a general sequence of operations for the proposed project. In general all erosion and sediment control facilities shall be installed prior to commencement with land disturbing activities, and areas of disturbance shall be limited to the shortest period of time as practicable. As greater than five acres of disturbance is proposed, the project will be completed in phases with disturbance of less than five acres. Description of erosion and sediment control practices: This plan, and details / notes shown hereon serve to satisfy this SWPPP requirement.

e. Temporary and permanent soil stabilization plan: The Sedimentation and Erosion Control Notes and Details provided heron identify temporary and permanent stabilization measures to be employed with respect to specific elements of the project, and at the various stages of development.

f. Site map / construction drawing: This plan serves to satisfy this SWPPP requirement for erosion control notes and details.

g. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices: The Details, Sedimentation and Erosion Control Notes and Erosion and Sediment Control Maintenance Schedule serve to satisfy this SWPPP requirement.

h. An inspection schedule: Inspections are to be performed weekly and by a qualified professional as required by the General Permit GP–0–20–001. In addition the NYSDEC Trained Contractor shall perform additional inspections as cited in the Sedimentation and Erosion Control Notes.

i. A description of pollution prevention measures that will be used to control litter, construction chemicals and construction debris: In general, all construction litter / debris shall be collected and removed from the site. The general contractor shall supply either waste barrels or dumpster for proper waste disposal. Any construction chemicals utilized during construction shall either be removed from site daily by the contractor or stored in a structurally sound and weatherproof building. No hazardous waste shall be disposed of onsite, and shall ultimately be disposed of in accordance with all federal, state and local regulations. Material Safety Data Sheets (MSDS), material inventory, and emergency contact numbers shall be maintained by the general contractor for all construction chemicals utilized onsite. Finally, temporary sanitary facilities (portable toilets) shall be provided onsite during the entire length of construction, and inspected weekly for evidence of leaking holding tanks.

j. A description and location of any stormwater discharges associated with industrial activity other than construction at the site: There are no known industrial stormwater discharges present or proposed at the site.

k. Identification of any elements of the design that are not in conformance with the technical standard, "New York Standards and Specifications for Erosion and Sediment Control." All proposed elements of this SWPPP have been designed in accordance with the "New York Standards and Specifications for Erosion and Sediment Control."

GRAPHIC SCALE
0 25 50 100
(IN FEET)
1 inch = 50 ft.

GENERAL NOTES:

1. Property boundary shown hereon taken from subdivision plat entitled 'Boundary Line Ajustment Map prepared for Putnam Community Foundation and Putnam Hospital Center..." filed January 4, 2006 as map no. 3008 ."
2. Existing conditions and topography shown hereon taken from survey entitled "Topographic Survey prepared for The Putnam Community Foundation", prepared by Terry Begendorf Collins, L.S., last revised April 25, 2007.

SEDIMENTATION & EROSION CONTROL NOTES:

1. The Erosion Control Plan is only to be referred to for the installation of sedimentation and erosion control measures. For all other construction related activities, including, but not limited to, grading and utilities, refer to the appropriate drawings.
2. All soil erosion and sediment control practices shall be installed in accordance with New York–Standards and Specifications for Erosion & Sediment Control, latest edition.
3. Wherever feasible, natural vegetation should be retained and protected.
4. When land is exposed during development, the exposure shall be kept to the shortest practical period of time.
5. Silt fence and hay bales shall be installed as shown on drawing prior to beginning any clearing and grubbing or earthwork.
6. All topsoil to be stripped from the area being developed shall be stockpiled and immediately seeded with K–31 Perennial Tall Fescue.
7. Any graded areas not subject to further disturbance or construction traffic shall, within 10 days of final grading, receive permanent vegetation cover in combination with a suitable mulch. All seeded areas to receive a minimum 4" topsoil (from Seed mixture to be planted between April 1 and May 15, or between August stockpile area) and be seeded and mulched as follows:
15 and October 15 or as directed by project representative at a rate of 50 pounds per acre in the following proportions:
Kentucky Bluegrass 20%
Creeping Red Fescue 40%
Perennial Ryegrass 20%
Annual Ryegrass 20%
Mulch: Salt hay or small grain straw applied at a rate of 90 lbs./1000 s.f. or 2 tons/acre, to be applied and anchored according to New York–Guidelines for Urban Erosion & Sediment Control, latest edition.
8. Grass seed mix may be applied by either mechanical or hydroseeding methods. Hydroseeding shall be performed in accordance with the current edition of the NYSDOT Standard Specification, Construction and Materials, Section 610–3.02, Method No. 1.
9. Cut or fill slopes steeper than 3:1 shall be stabilized immediately after grading.
10. Paved roadways shall be kept clean at all times.
11. The site shall at all times be graded and maintained such that all stormwater runoff is diverted to soil erosion and sediment control facilities.
12. All storm drainage outlets shall be stabilized, as required, before the discharge points become operational.
13. Stormwater from disturbed areas must be passed through erosion control device before discharge beyond disturbed areas or discharged into other drainage systems.
14. Sedimentation and erosion control measures shall be inspected and maintained on a daily basis by NYSDEC Trained Contractor to insure that channels, temporary and permanent ditches and pipes are clear of debris, that embankments and berms have not been breached and that all straw bales and silt fences are intact. Any failure of sediment and erosion control measures shall be immediately repaired by the contractor and inspected for approval by the NYSDEC Trained Contractor and/or site engineer.
15. Dust shall be controlled by sprinkling or other approved methods as necessary, or as directed by the NYSDEC Trained Contractor.
16. Cut and fills shall not endanger adjoining property, nor divert water onto the property of others.
17. All fills shall be compacted to provide stability of material and to prevent settlement.
18. The NYSDEC Trained Contractor shall inspect downstream conditions for evidence of sedimentation on a weekly basis and after rainstorms.
19. As warranted by field conditions, special additional sedimentation and erosion control measures, as specified by the site engineer and/or Town Engineer shall be installed by the contractor.
20. Erosion control measures shall remain in place until all disturbed areas are suitably stabilized.

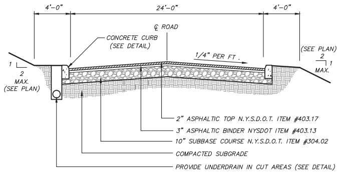
NO.	DATE	REVISION	BY
3	11–29–21	GENERAL REVISION	SMR
2	9–29–21	GENERAL REVISION	MEU
1	7–19–21	GENERAL REVISION	MEU

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225–9690
(845) 225–9717 fax
www.insite–eng.com

PROJECT:
THE HAMLET AT CARMEL
MULTI–FAMILY HOUSING DEVELOPMENT
STONELEIGH AVENUE, TOWN OF CARMEL, PUTNAM COUNTY, NEW YORK

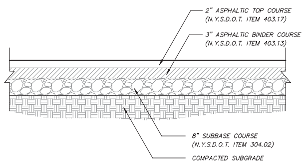
DRAWING:
EROSION CONTROL & PHASING PLAN

PROJECT NO.	14211.100	PROJECT MANAGER	J.J.C.	DRAWING NO. SP–4	SHEET 5/10
DATE	2–10–21	DRAWN BY	M.E.U.		
SCALE	1" = 50'	CHECKED BY	J.J.C.		



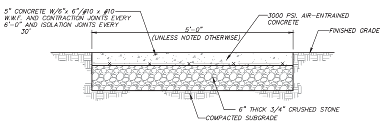
ACCESS ROAD DETAIL

(N.T.S.)



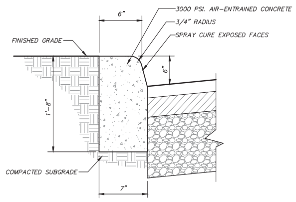
MULTI-FAMILY DRIVEWAY / PARKING SPACE DETAILS

(N.T.S.)



CONCRETE SIDEWALK DETAIL

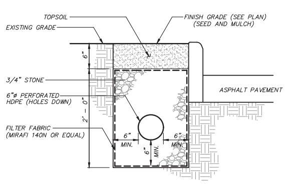
(N.T.S.)



NOTE: ISOLATION JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 20'-0" APART AND SHALL BE FILLED WITH CELLULAR COMPRESSION MATERIALS AS SPECIFIED, RECESSED 1/4" IN FROM FRONT FACE AND TOP OF CURB.

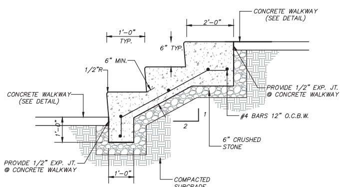
CONCRETE CURB DETAIL

(N.T.S.)



UNDERDRAIN DETAIL

(N.T.S.)

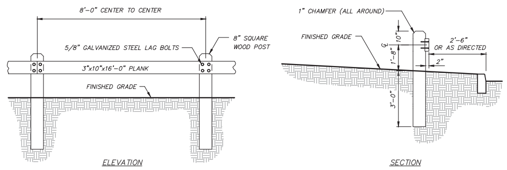


NOTES:
1. REFER TO PLAN FOR NUMBER OF RISERS AND TREADS.

CONCRETE STEPS DETAIL

(N.T.S.)

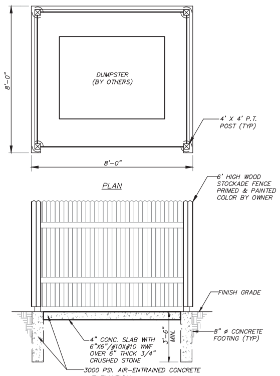
ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.



NOTES:
1. ALL WOOD TO BE SEASONED NO.1 DOUGLAS FIR, SOUTHERN PINE OR OTHER APPROVED STRUCTURAL LUMBER.
2. ALL WOOD TO BE TREATED WITH AN APPROVED WOOD PRESERVATIVE SUITABLE FOR INSTALLATION IN AND ADJACENT TO GROUND SURFACES.

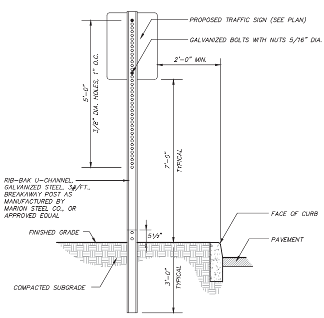
WOOD GUIDE RAIL DETAIL

(N.T.S.)



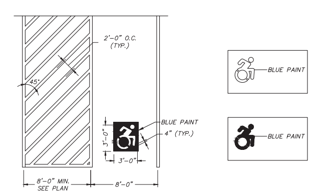
DUMPSTER ENCLOSURE DETAIL

(N.T.S.)



TRAFFIC SIGN DETAIL

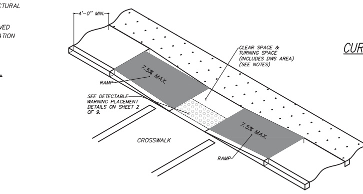
(N.T.S.)



NOTE:
ALL HANDICAP STRIPING SHALL BE 4" WIDE BLUE PAINT.

PAINTED NYS ACCESSIBLE PARKING DETAIL

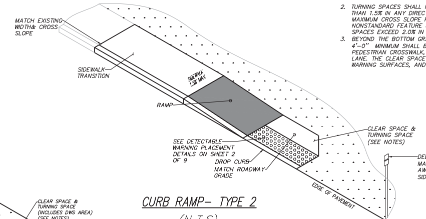
(N.T.S.)



CURB RAMP- TYPE 1

(N.T.S)

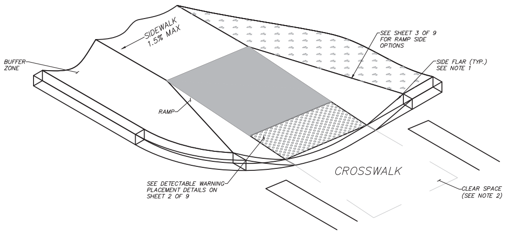
NOTES:
1. WHERE A CHANGE IN DIRECTION IS REQUIRED TO UTILIZE A CURB RAMP, A TURNING SPACE SHALL BE PROVIDED AT THE BASE OR THE TOP OF CURB RAMP AS APPLICABLE. TURNING SPACES SHALL BE PERMITTED TO OVERLAP CLEAR SPACES.
2. TURNING SPACES SHALL NOT BE DESIGNED WITH CROSS SLOPE GREATER THAN 1.5% IN ANY DIRECTION, WHILE PROVIDING POSITIVE DRAINAGE. THE MAXIMUM CROSS SLOPE FOR WORK ACCEPTANCE IS 2.0%. A NONSTANDARD FEATURE JUSTIFICATION IS REQUIRED WHERE TURNING SPACES EXCEED 2.0% IN ANY DIRECTION.
3. BEYOND THE BOTTOM GRADE BREAK, A CLEAR SPACE OF 4'-0" x 4'-0" MINIMUM SHALL BE PROVIDED WITHIN THE WIDTH OF THE PEDESTRIAN CROSSWALK, AND OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE. THE CLEAR SPACE MAY OVERLAP TURNING SPACES, DETECTABLE WARNING SURFACES, AND DROP CURBS.



CURB RAMP- TYPE 2

(N.T.S)

NOTES:
1. WHERE A CHANGE IN DIRECTION IS REQUIRED TO UTILIZE A CURB RAMP, A TURNING SPACE SHALL BE PROVIDED AT THE BASE OR THE TOP OF CURB RAMP AS APPLICABLE. TURNING SPACES SHALL BE PERMITTED TO OVERLAP CLEAR SPACES.
2. TURNING SPACES SHALL NOT BE DESIGNED WITH CROSS SLOPE GREATER THAN 1.5% IN ANY DIRECTION, WHILE PROVIDING POSITIVE DRAINAGE. THE MAXIMUM CROSS SLOPE FOR WORK ACCEPTANCE IS 2.0%. A NONSTANDARD FEATURE JUSTIFICATION IS REQUIRED WHERE TURNING SPACES EXCEED 2.0% IN ANY DIRECTION.
3. BEYOND THE BOTTOM GRADE BREAK, A CLEAR SPACE OF 4'-0" x 4'-0" MINIMUM SHALL BE PROVIDED WITHIN THE WIDTH OF THE PEDESTRIAN CROSSWALK, AND OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE. THE CLEAR SPACE MAY OVERLAP TURNING SPACES, DETECTABLE WARNING SURFACES, AND DROP CURBS.



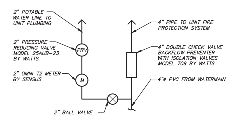
CURB RAMP- TYPE 3

(N.T.S)

NOTES:
1. RAMP SIDE OPTIONS ARE DETAILED ON SHEET 3 OF 9 FOR USE WITH THE BUFFER ZONE. WHERE A PEDESTRIAN CIRCULATION PATH CROSSES THE CURB RAMP, FLARED SIDES, SHALL BE INSTALLED WITH A MAX. SLOPE OR 9.5% FOR DESIGN AND LAYOUT, AND 10% MAX. FOR WORK ACCEPTANCE. THE SLOPE OF FLARED SIDES IS MEASURED PARALLEL TO THE CURB LINE.
2. BEYOND THE BOTTOM GRADE BREAK, A CLEAR SPACE OF 4'-0" X 4'0" MIN. SHALL BE PROVIDED WITH THE WIDTH OF PEDESTRIAN CROSSWALK, AND OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE. THE CLEAR SPACE MAY OVERLAP TURNING SPACES, DETECTABLE WARNING SURFACES, AND DROP CURBS.

GENERAL NOTES FOR ACCESSIBLE ROUTES ON THE SITE:

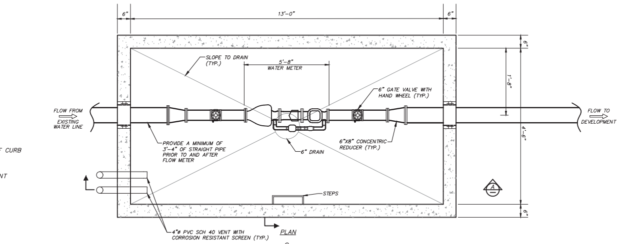
1. Accessible routes on the site include marked accessible parking spaces and access aisles, sidewalk curb ramps, walkways and ramps.
2. Marked accessible parking spaces and access aisles shall have surface slopes not steeper than 1:50. (2%)
3. Sidewalk curb ramps shall comply with the following items as applicable:
   a. Walking surfaces of sidewalk curb ramps shall be stable, firm and slip resistant.
   b. The running slope shall not exceed 8.0%.
   c. The cross slope shall not exceed 1:50 (2%).
   d. Landings and blended transitions shall be constructed to prevent the accumulation of water.
   e. Where provided, side flares for curb ramps shall not be steeper than 1:10 (10%).
   f. Curb ramps at marked crosswalks shall be wholly contained within the markings, excluding any flared sides.
   g. Landings shall be provided at the top of curb ramps. the clear length of the landing shall be 36 inches minimum. the clear width of the landing shall be at least as wide as the curb ramp, excluding flared sides, leading to the landing.
   h. Where detectable warnings are provided on curb ramps, they shall be 24 inches minimum in depth in the direction of travel, shall extend the full width of the curb ramp or flush surface, and be located so that the edge nearest the curb line is 6 inches minimum and 8 inches maximum from the curb line.
   i. Refer to sidewalk curb ramp details for additional information.
4. Walkways along an accessible route shall comply with the following items as applicable:
   a. Walking surfaces shall be stable, firm and slip resistant.
   b. Vertical changes in level along walking surface shall not exceed 1/4". Changes in level greater than 1/4" in height and not more than 1/2" shall be beveled with a slope not steeper than 1:2.
   c. The running slope of the walking surfaces shall not be steeper than 1:20 (5%).
   d. The cross slope of a walking surface shall not be steeper than 1:50 (2%).
   e. The clear width of an accessible route shall be 36" minimum.
   f. An accessible route with a clear width less than 60 inches shall provide passing spaces at intervals of 200 feet maximum. passing spaces shall be 60 inch minimum by 60 inch minimum.
5. Ramps along an accessible route shall comply with the following items:
   a. Ramp runs shall have a running slope greater than 1:20 (5%) and not steeper than 8.0%..
   b. The cross slope of ramp runs shall not exceed 1:50 (2%).
   c. Walking surfaces of ramp runs and associated landings shall be stable, firm and slip resistant.
   d. The clear width of a ramp run shall be 36 inches minimum or as shown. handrails and handrail supports that are provided on the ramp run shall not project into the required clear width of the ramp run or associated landing.
   e. The maximum rise for any ramp is 2'-6".
   f. The maximum run for any ramp is 30'-0".
   g. Ramps shall have landings at the bottom and top of each ramp run. landings shall have a slope not to exceed 1:50 (2%) and shall have a clear length and width of 60" minimum.
   h. Adjacent finished grades along sides of ramp shall not have a vertical dropoff of 1/2" within 10" of the edge of the concrete.
   i. Refer to concrete handicap ramp detail for additional information.



MULTIPLE FAMILY WATER SERVICE SCHEMATIC DETAIL

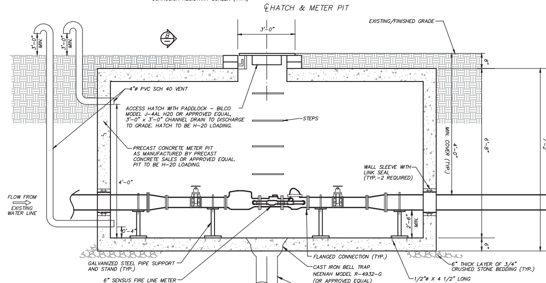
(N.T.S.)

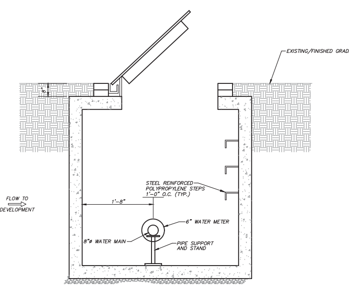
NOTES:
1. THIS DETAIL SHOWS SCHEMATIC WATER SERVICE, FINAL DESIGN AND LOCATION BY MECHANICAL ENGINEER.
2. THE DOUBLE CHECK VALVE (DCV) BACKFLOW PREVENTER SHALL HAVE THE FOLLOWING CLEARANCES:
8" MINIMUM BEHIND
30" MINIMUM IN FRONT
30" MINIMUM OFF FLOOR
60" MAXIMUM ABOVE FLOOR
24" MINIMUM CLEAR DISTANCE ABOVE



℄ HATCH & METER PIT

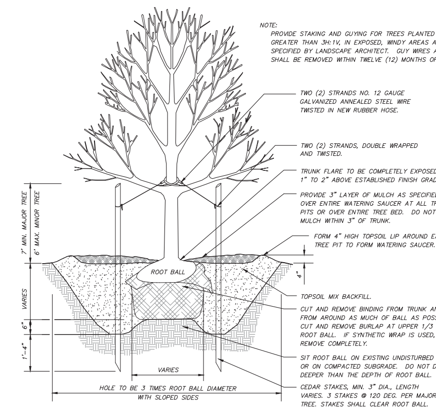
METER PIT NOTES:
1. CONCRETE VAULTS TO TEST AT 5,000 PSI FOR 28 DAYS. PLASTIC TO EXCEED 20,000 LB. VERTICAL CRUSH LIMIT.
2. 36"x36" BILCO DOORS WILL BE EMPLOYED ON NON DRIVE AREAS OTHERWISE A 30" MANHOLE COVER AND FRAME, H20 LOADING WITH BRICK CHIMNEY TO GRADE ABOVE SLOPE AND WILL GRADE AWAY FROM MANHOLE COVER IN ALL DIRECTIONS. ENTRANCE TO METER VAULT SHALL BE CLOSEST TO METER IF POSSIBLE. PVC OR ALUMINUM RUNGS MUST BE TO THE TOP OF THE ENTRANCE.
3. ALL PIPES SHALL HAVE A STRAIGHT RUN THROUGH VAULT.
4. VENT PIPES WILL BE 4" PLASTIC (SCHEDULE 40) WITH SCREENED OPENINGS ONLY. VENTS WILL BE PLACED OPPOSITE OF OPENING AND HAVE ONE 4" FROM FLOOR AND OTHER 4' FROM FLOOR.
5. VAULTS SHALL HAVE A MINIMUM 6" OF 3/4" CRUSHED STONE, LEVELED AND LAID OVER STABLE NATIVE SOIL. IF EXCAVATION REVEALS UNSTABLE SOIL, BEDDING REQUIREMENT SHALL BE MODIFIED BY PROJECT ENGINEER.
6. GALVANIZED STEEL SUPPORTS FOR METER SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
7. NO BYPASS IS ALLOWED AROUND METER.





METER PIT DETAIL

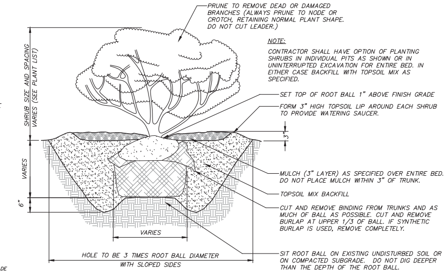
(N.T.S.)



NOTE:
PROVIDE STAKING AND GUYING FOR TREES PLANTED ON SLOPES GREATER THAN 3H:1V, IN EXPOSED, WINDY AREAS AND AS SPECIFIED BY LANDSCAPE ARCHITECT. GUY WIRES AND STAKES SHALL BE REMOVED WITHIN TWELVE (12) MONTHS OF PLANTING.

TREE PLANTING DETAIL

(N.T.S.)



NOTE:
CONTRACTOR SHALL HAVE OPTION OF PLANTING SHRUBS IN INDIVIDUAL PITS AS SHOWN OR IN UNINTERRUPTED EXCAVATION FOR ENTIRE BED. IN EITHER CASE BACKFILL WITH TOPSOIL MIX AS SPECIFIED.

SHRUB PLANTING DETAIL

(N.T.S.)

NO.	DATE	REVISION	BY
3	11-29-21	GENERAL REVISION	SMR
2	9-29-21	GENERAL REVISION	MEU
1	7-19-21	GENERAL REVISION	MEU

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

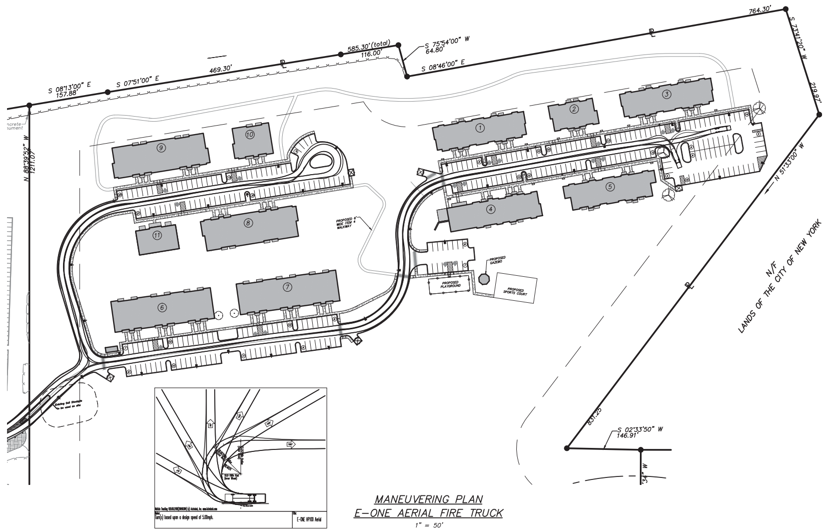
PROJECT:
THE HAMLET AT CARMEL
MULTI-FAMILY HOUSING DEVELOPMENT
STONELEIGH AVENUE, TOWN OF CARMEL, PUTNAM COUNTY, NEW YORK

DRAWING:
SITE DETAILS

PROJECT NO.	14211.100	PROJECT MANAGER	J.J.C.
DATE	2-10-21	DRAWN BY	M.E.U.
SCALE	AS SHOWN	CHECKED BY	J.J.C.

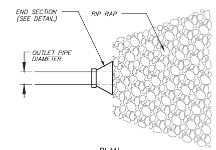
DRAWING NO. D-1

SHEET 6 / 10

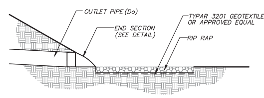


MANEUVERING PLAN
E-ONE AERIAL FIRE TRUCK
1" = 50'

Note: See drawing SP-1 for maneuvers through Putnam Hospital site to Stoneleigh Avenue.

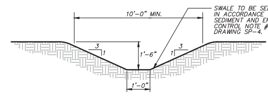


PLAN



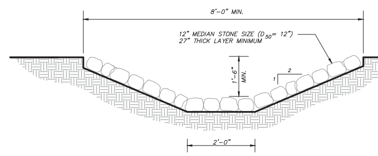
SECTION

RIP RAP APRON DETAIL
(N.T.S.)

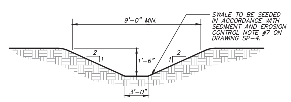


GRASS SWALE TO BE LINED WITH CHANNEL LINER C-125 AS MANUFACTURED BY "NORTH AMERICAN GREEN" OR APPROVED EQUAL.

GRASS SWALE #1 DETAIL
(N.T.S.)

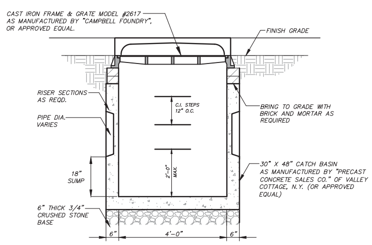


RIP RAP SWALE #2 DETAIL
(N.T.S.)

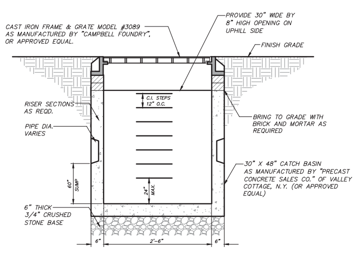


GRASS SWALE TO BE LINED WITH CHANNEL LINER C-125 AS MANUFACTURED BY "NORTH AMERICAN GREEN" OR APPROVED EQUAL.

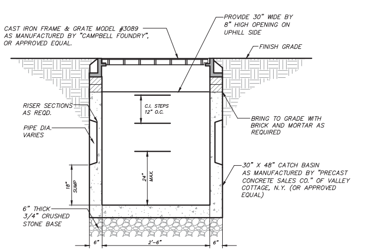
GRASS SWALE #3 DETAIL
(N.T.S.)



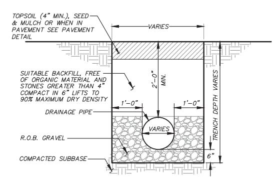
CATCH BASIN DETAIL
(N.T.S.)
(STRUCTURE AND GRATE TO BE DESIGNED FOR H-20 LOADING)



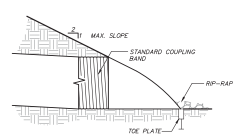
DEEP SUMP SIDE DRAIN INLET DETAIL
(N.T.S.)
(STRUCTURE AND GRATE TO BE DESIGNED FOR H-20 LOADING)



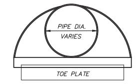
SIDE DRAIN INLET DETAIL
(N.T.S.)
(STRUCTURE AND GRATE TO BE DESIGNED FOR H-20 LOADING)



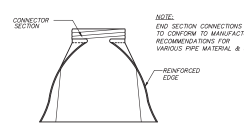
DRAINAGE LINE TRENCH DETAIL
(N.T.S.)



SECTION



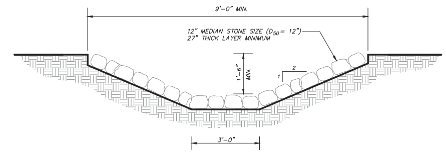
ELEVATION



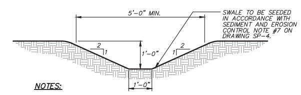
NOTE:
END SECTION CONNECTIONS TO CONFORM TO MANUFACTURERS RECOMMENDATIONS FOR VARIOUS PIPE MATERIAL & SIZES

PLAN

END SECTION DETAIL
(N.T.S.)



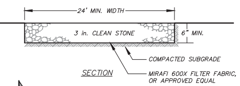
RIP RAP SWALE #4 DETAIL
(N.T.S.)



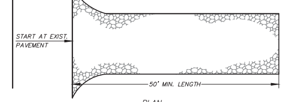
NOTES:

1. GRASS SWALE TO BE LINED WITH CHANNEL LINER C-125 AS MANUFACTURED BY "NORTH AMERICAN GREEN" OR APPROVED EQUAL.
2. ALL GRASS SWALES NOT LABELED #1, #2, #3, OR #4 IN THE DRAWING SET SHALL CONFORM TO THIS DETAIL.

GRASS SWALE DETAIL
(N.T.S.)



SECTION

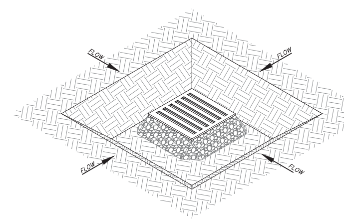


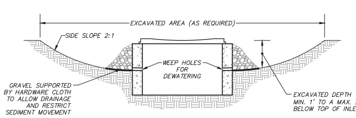
PLAN

INSTALLATION NOTES

1. STONE SIZE – USE 3" STONE
2. LENGTH – AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.)
3. THICKNESS – NOT LESS THAN SIX (6) INCHES.
4. WIDTH – 10 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCUR.
5. FILTER CLOTH – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER CLOTH WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
6. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT OF WAY THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING – WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

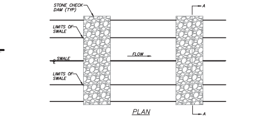
STABILIZED CONSTRUCTION ENTRANCE DETAIL
(N.T.S.)



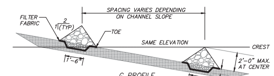


1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL EXCAVATION WITH STABLE SOIL TO FINAL GRAFE, COMPACT IT PROPERLY, AND STABILIZE WITH PERMANENT SEEDING
5. MAXIMUM DRAINAGE AREA = 1 ACRE

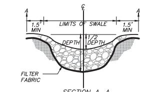
EXCAVATED DROP INLET PROTECTION DETAIL
(N.T.S.)



PLAN



C PROFILE

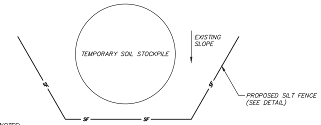


SECTION A-A

NOTES:

1. STONE SHALL BE PLACED ON A FILTER FABRIC FOUNDATION. STONE TO BE WELL-GRADED 2" TO 12" DIAMETER.
2. SET SPACING OF CHECK DAMS SO THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.

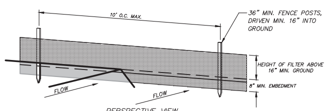
STONE CHECK DAM DETAIL
(N.T.S.)



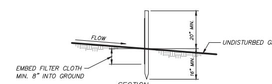
NOTES:

1. AREA CHOSEN FOR STOCKPILE LOCATION SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE IMMEDIATELY SEEDED WITH K31 PERENNIAL TALL FESCUE.
4. ALL STOCKPILES SHALL BE PROTECTED WITH SILT FENCING INSTALLED ON THE DOWNGRADIENT SIDE.

TEMPORARY SOIL STOCKPILE DETAIL
(N.T.S.)



PERSPECTIVE VIEW



SECTION

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. FILTER CLOTH TO BE FASTENED SECURELY TO POSTS AT TOP AND MID SECTION.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD

FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUAL

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

SILT FENCE DETAIL
(N.T.S.)

NO.	DATE	REVISION	BY
3	11-29-21	GENERAL REVISION	SMR
2	9-29-21	GENERAL REVISION	MEU
1	7-19-21	GENERAL REVISION	MEU

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
THE HAMLET AT CARMEL
MULTI-FAMILY HOUSING DEVELOPMENT
STONELEIGH AVENUE, TOWN OF CARMEL, PUTNAM COUNTY, NEW YORK

DRAWING:
SITE DETAILS

PROJECT NO.	14211.100	PROJECT MANAGER	J.J.C.	DRAWING NO.	SHEET
DATE	2-10-21	DRAWN BY	M.E.U.	D-2	7 / 10
SCALE	AS SHOWN	CHECKED BY	J.J.C.		

WATER MAIN NOTES:

1. All water mains shall be either Class 52 cement lined tyton joint ductile iron pipe or PVC Class 200 DR 14 pipe with factory installed push-on gaskets unless otherwise noted. All pipe shall be in conformance with the latest edition AWWA C600 or C900.
2. All water main fittings shall be Class 350 ductile iron mechanical joints in accordance with the latest edition of AWWA/ANSI Standards C111/A21.11. "GRIP RING" restrained joint connections shall be provided at every fitting (as manufactured by FORD, Megalug, Inc. or approved equal).
3. Thrust blocks shall be installed at all changes in horizontal or vertical alignment.
4. All water mains and appurtenances shall be installed in accordance with the latest edition of AWWA C600 or C605.
5. Gate valves shall be "Mueller" or approved equal, iron body, non-rising stem conventional bronze, resilient seated, mechanical joint with restrained joint gaskets, pressure class 350, opening shall be left (CCW) and operation shall be by 2" square wrench nut.
6. All water mains and appurtenances (including water service lines up to the curb stop) shall be pressure tested and leakage tested to the satisfaction of the Design Engineer, and the Putnam County Department of Health. This shall be done in accordance with the latest edition of AWWA Standard C600 & C605.
7. All water mains and appurtenances shall be flushed, disinfected, and tested to the satisfaction of the Design Engineer, and the Putnam County Department of Health. This shall be done in accordance with the latest edition of AWWA Standard C651, section 4.4.3, the "Continuous Feed Method". The "Tablet method" will not be allowed.
8. Water mains shall be laid at least 10 feet horizontally from any existing or proposed sanitary or storm sewer main. The distance shall be measured edge to edge. In cases where it is not practical to maintain a 10 foot separation, the Design Engineer and Putnam County Department of Health may allow deviation with prior approval on a case-by-case basis, if supported by data from the Design Engineer prior to the installation of the water lines. The horizontal separation also applies to water service connections.
9. Water mains crossing sanitary or storm sewer mains shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to maintain line and grade. In cases where it is not practical to maintain the 18 inch vertical separation, the Design Engineer and Putnam County Department of Health may allow deviation with prior approval on a case-by-case basis, if supported by data from the Design Engineer prior to the installation of the water lines. The vertical separation also applies to water service connections.
10. The Design Engineer, Putnam County Department of Health, and Town's Authorized Representative shall be notified forty eight (48) hours before construction is started.
11. The water mains shall not be placed into service until a certificate of construction compliance has been submitted to and accepted by the Putnam County Department of Health.
12. The Putnam County Department of Health and the New York City Department of Environmental Protection must be notified forty eight (48) hours prior to pressure testing the water main improvements.

WATER MAIN TESTING PROCEDURES

TESTS ON PRESSURE PIPING FOR TRANSPORT OF WATER

A. Hydrostatic Pressure Test
Hydrostatic testing shall be performed in accordance with the revision of AWWA C600, Section 5.2,"Hydrostatic Testing" or AWWA C605, Section 7.3, "Hydrostatic Testing".

1. Test pressure shall be as scheduled or, where no pressure is scheduled, shall be 150 psi, or 1.25 times the static operating pressure, whichever is higher.
2. Test pressure shall be held on the piping for a period of at least 2 hours, unless a longer period is requested by the Engineer.
3. The test medium shall be water.

B. Hydrostatic Leakage Test

1. The leakage test shall be conducted concurrently with the pressure test.
2. The rate of leakage shall be determined at 15-minute intervals by means of volumetric measurement of the makeup water added to maintain the test pressure. The test shall proceed until the rate of leakage has stabilized or is decreasing below an allowable value, for three consecutive 15-minute intervals. After this, the test pressure shall be maintained for at least another 15 minutes.
   a. At the completion of the test, the pressure shall be released at the furthermost point from the point of application.
3. All exposed piping shall be examined during the test and all leaks, defective material or joints shall be repaired or replaced before repeating the tests.
4. The allowable leakage will be determined by the following formula.

$$Q = \frac{LD\sqrt{P}}{148,000}$$

Where:
Q = quantity of makeup water, in gallons per hour
L = length of pipe tested, in feet
D = nominal diameter of the pipe, in inches
P = average test pressure during the hydrostatic test, in pounds per square inch (gauge)

5. Regardless of the above allowables, any visible leaks shall be permanently stopped.
6. The test medium shall be water.

C. Disinfection
Prior to placing the water main into service, the new pipe shall be cleaned and disinfected in accordance with the latest revision of AWWA C651, Section 4.4.3, "The Continuous Feed Method". The "Tablet Method" will not be accepted.

1. All work under this section shall be performed in the presence of the Design Engineer, and a representative of the public health authority having jurisdiction, as required.
2. Chlorination shall be scheduled such that sampling and flushing will be performed during normal daylight working hours. The contractor shall provide acceptable backflow prevention on all supply water to prevent any potential backflow condition or cross connection.
3. Chlorination shall be by the use of a solution of water and liquid chlorine, calcium hypochlorite or sodium hypochlorite and the solution shall be contained in the pipe or structure as specified.
4. Prior to chlorination, all dirt and foreign matter shall be removed by a thorough cleaning and flushing of the pipeline or structure.
5. The chlorine solution shall be introduced to pipelines through corporation stops placed in the horizontal axis of the pipe, to structures by means of tubing extending directly into the structure, or other approved methods.
6. The application of the chlorine solution shall be by means of a controlled solution feed device. The rate of chlorine solution flow shall be in such proportion to the rate of water entering the pipe or structure that the resulting free chlorine residual shall be between 25 and 50 parts per million (PPM) or milligrams per liter (mg/l).
7. The chlorine treated water shall be retained in the pipe or structure at least 24 hours, unless otherwise directed. During the retention period, all valves and hydrants within the treated sections shall be operated.
8. The chlorine residual shall be not less than 10 PPM (or mg/l) at any point in the pipe or structure at the end of the 24-hour retention period.
9. When making repairs to, or when specified, structures and portions of pipelines shall be chlorinated by a concentrated chlorine solution containing not less than 200 PPM (mg/l) of free chlorine. The solution shall be applied with a brush or sprayed on the entire inner surface of the empty pipes or structures. The structures disinfected shall remain in contact with the strong chlorine solution for at least 30 minutes.
10. After the required retention of chlorinated water in the pipe or structures, they shall be thoroughly flushed until the replacement water shall, upon test, both chemically and bacteriological, be proven equal to water quality served by the public from the existing water supply system.
11. The disposal of chlorinated water from any pipe or structure shall be such that it will not cause damage to any vegetation, fish, or animal life.
12. The Contractor shall make all arrangements for the testing of water quality by an approved independent laboratory. Two acceptable bacteriological test, taken at least 24 hours apart, shall be collected from the new water main. At least 1 set of samples must be collected from every 1,000 LF of the new water main, plus one set from the end of the line and at least one set from each branch. The results for all tests shall be forwarded to the Design Engineer and the public health authority having jurisdiction.
13. All water quality requirements shall be fulfilled prior to the passage of any water through the new system to a public supply or the use of the new system.

SEWER TESTING PROCEDURES

TESTS FOR NON-PRESSURE PIPELINES FOR TRANSPORT OF SEWAGE

The leakage shall be determined by exfiltration, infiltration or low pressure air.

A. Exfiltration Testing
   1. Exfiltration tests shall be made by filling a section of pipeline with water and measuring the quantity of leakage.
   2. The head of water at the beginning of the test shall be at least 2 feet above the highest pipe within the section being tested.
      a. Should groundwater be present within the section being tested, the head of water for the test shall be 2 feet above the hydraulic gradient of the groundwater.
      b. Should the requirement of 2 feet of water above the highest pipe subject any joint at the lower end of the test section to a differential head of greater than 11.5 feet, another method of testing shall be employed.

B. Prior to any testing, the Town Engineer and Department of Health must be notified at least 48 hours in advance.

C. Infiltration Testing
   1. Infiltration tests will be allowed only when the water table gauges determine the groundwater level to be 2 feet or more above the highest pipe of the section being tested.
   2. Infiltration test shall be made by measuring the quantity of water leaking into a section of pipeline.
   3. Measurement of the infiltration shall be by means of a calibrated weir constructed at the outlet of the section being tested.

C. Allowable Leakage for Non-Pressure Pipelines
   1. The allowable leakage (exfiltration or infiltration) for non-pressure pipelines shall not exceed the following in gallons per 24 hours per inch of diameter per 1000 feet of pipe:

Type of Pipe	Leakage
Ductile Iron – mechanical or push-on joints	100
Polyvinyl chloride, thermal plastic or fiberglass with rubber gaskets	100
Cast Iron soil pipe	0

   2. Regardless of the above allowable leakage, any spurting leaks detected shall be permanently stopped.

D. Low Pressure Air Testing
   1. Air testing for acceptance shall not be performed until the backfilling has been completed.
   2. Low pressure air tests shall conform to ASTM C 828 or ASTM F1417–92, Section 8.2.2, Time–Pressure Drop Method for a 0.5 psi drop, except as specified herein and shall not be limited to type or size of pipe.
   3. All sections of pipelines shall be cleaned and flushed prior to testing.
   4. The air test shall be based on the starting pressure of 3.5 to 4.0 psi gauge. The time allowed for the 0.5 psi drop in pressure, measured in seconds, will be computed based on the size and length of the test section by the Engineer.
      a. When groundwater is present, the average test pressure of 3 psig shall be above any back pressure due to the groundwater level.
      b. The maximum pressure allowed under any condition in air testing shall be 10 psig. The maximum groundwater level for air testing is 1.3 feet above the top of the pipe.
   5. The equipment required for air testing shall be furnished by the Contractor and shall include the necessary compressor, valves, gauges and plugs to allow for the monitoring of the pressure, release of pressure and a separate test gauge.
      a. The test gauge shall be sized to allow for the measuring of the 0.5 psig loss allowed during the test period and shall be on a separate line to the test section.

E. Deflection Testing
   1. Deflection testing shall be performed 30 days after backfilling. The test shall be made by passing a ball or cylinder no less than 95% of the pipe diameter through the pipe. The test shall be performed without mechanical pulling devices.

F. Manhole Testing
   1. General
      a. Each manhole shall be tested by either exfiltration, infiltration or vacuum testing.
      b. A manhole shall be acceptable if the leakage does not exceed an allowance of one gallon per vertical foot of depth for 24 hours. Regardless of the allowable leakage, any leaks detected shall be permanently stopped.
   2. Exfiltration tests shall be performed after backfilling. The test shall be made by filling the manhole with water and observing the level for a minimum of eight hours.
   3. Infiltration tests shall be performed after backfilling when the groundwater level is above the joint of the top section of a precast manhole.
   4. Vacuum testing shall be performed after backfilling in accordance with the latest revision of ASTM C1244–02 as follows:
      a. The test head shall be placed at the top of the manhole in accordance with the manufacturer's recommendations.
      b. A vacuum of 10 in. of mercury shall be drawn on the manhole, the valve on the vacuum line to the test head closed, and the vacuum pump shut off. The time shall be measured for the vacuum to drop to 9 in. of mercury.
      c. The manhole shall pass if the time for the vacuum reading to drop from 10 in. of mercury to 9 in. of mercury meets or exceeds the values indicated below:

Minimum Test Times for Various Manhole Diameters in Seconds:

Depth (ft)	Diameter (inches) 48	60
	Time (seconds)	
8 or less	20	26
10	25	33
12	30	39
14	35	46
16	40	52
18	45	59
20	50	65

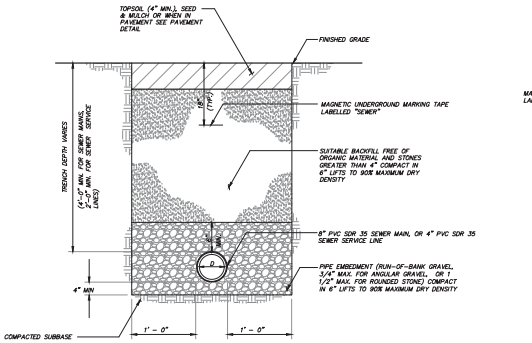
   d. If the manhole fails the initial test, necessary repairs shall be made by an approved method. The manhole shall then be retested until a satisfactory test is obtained.

TOWN OF CARMEL WATER NOTES:

1. All water service connections shall be of a size and type as shown on the plans.
2. Gate valves shall be AWWA non-rising stem type, as manufactured by Mueller Company, Model A-2360-23, or approved equal, conforming to the latest AWWA Standard for Gate Valves – 3" through 48" – for Water and Other Liquids, AWWA Designation C-509.
3. Sizes up to and including 12" shall be 250 psi working pressure. The valve body and bonnet shall be ductile iron. All interior and exterior metal surfaces shall be coated with a two-part thermosetting epoxy complying with AWWA C550.
4. Valves shall have dual "O" ring seals, inside screw, resilient wedge seats in accordance with AWWA Designation C-509 and shall be constructed so as to provide unobstructed full port clearance when fully open and immediate complete closure when closed. The ends of the valves shall be mechanical joint.
5. All valves shall be arranged to open in counter clockwise direction unless otherwise specifically indicated and operating nuts shall be 2" square.
6. Valves shall be tested to a pressure of not less than two times the working pressure.
7. Where water Service Saddles are used , they shall be equal to those as manufactured by Mueller, Model 725" x 1" SS Series Stainless Steel Saddle, Double Stud.
8. Where corporation stops are used, they shall be equal to those as manufactured by Mueller Company, Model B-25000Series, NRS and of the size required. Such corporation stops shall meet the requirements of AWWA Specification No. C800.
9. Curb valves (stops) shall be equal to those as manufactured by Mueller Company, Model H-15214 and shall conform to AWWA Specification No. C800.
10. Curb boxes shall be equal to those as manufactured by Mueller Company and similar to Mueller extension type with arch pattern base model H-15314 all extension rods shall be stainless steel.
11. All fire hydrants shall be the approved AWWA type fire hydrants in conformance with the American Water Works Association Standard for Fire Hydrants for Ordinary Water Works Service, AWWA Designation C502, and shall have a 5-1/4" valve opening, a 6" mechanical joint inlet complete with an auxiliary gate valve (close coupled), a 6" mechanical joint shoe, and all appurtenances.

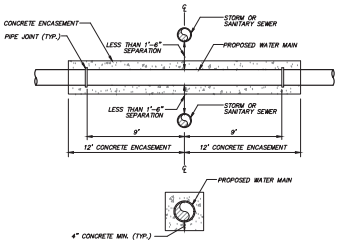
SEWER MAIN NOTES

1. All sewer mains & sewer services shown on these plans shall be polyvinyl chloride (PVC) SDR 35. SDR 35 meets the Town of Carmel Town Code 129-29.
2. Sewers shall be laid at least 10 feet horizontally from any existing or proposed water main. The distance shall be measured edge to edge. In cases where it is not practical to maintain a 10 foot horizontal separation, the Design Engineer and Putnam County Department of Health may allow deviation with prior approval on a case-by-case basis, if supported by data from the Design Engineer prior to sewer line installation. The horizontal separation also applies to service connections.
3. Sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to maintain line and grade. In cases where it is not practical to maintain a 10 foot horizontal separation, the Design Engineer and Putnam County Department of Health may allow deviation with prior approval on a case-by-case basis, if supported by data from the Design Engineer prior to the installation. The vertical separation also applies to service connections.
4. Sanitary sewer service lines shall be tested in conjunction with the sewer mains to the property line or easement line, and in accordance with the latest Putnam County Department of Health Rules & Regulations.
5. Testing of the manholes with the pipeline shall not be permitted. Manholes & sanitary sewer lines shall be tested independently of each other.
6. The owner/applicant shall be responsible for acquiring supervision of the construction of the sanitary sewer main system by a person or firm qualified to practice professional engineering in the state of New York.
7. The owner/applicant shall be responsible for providing Three (3) copies of as-built drawings signed and sealed by a licensed and registered New York State Professional Engineer to the Putnam County Department of Health at the completion of the construction.
8. The Design Engineer, Putnam County Department of Health, and Town Engineering Department shall be notified forty eight (48) hours before construction is started.
9. The sanitary sewer mains shall not be placed into service until a certificate of construction compliance has been submitted to and accepted by the Putnam County Department of Health.
10. The Putnam County Department of Health and the New York City Department of Environmental Protection must be notified forty eight (48) hours prior to pressure testing the sewer main improvements.
11. Manhole frames & covers to be campbell pattern #10070 for 24" opening or approved equal. M.H. covers to be marked "SEWER" and to have six 3/4"ø hole vents. (use solid covers where necessary.)
12. The exterior of all manholes shall be covered with an approved asphalt waterproofing.
13. Concrete base slabs shall be air entrained concrete with a minimum design strength of 3,000 psi.
15. The contractor shall submit shop drawings of the precast manholes to the Design Engineer for review and acceptance.
16. Precast manholes shall have minimum reinforcement of 0.12 sq. in. per lin. ft. for 48" barrel & be designed in accordance with A.S.T.M. C-478, and withstand an H-20 design loading.
17. Precast base sections to have the required number of gaskets and openings as shown and specified.
18. Precast manhole sections shall employ a watertight gasket arrangement between each section approved by the Design Engineer.
19. Openings for pipes shall be precast or machine cored. Gaskets or collars for pipe connections to manholes shall be resilient and watertight and compatible with the type of pipe being used.
20. The length of pipes entering or leaving any manhole shall be greater than 2'-0".
21. Precast manholes under 6'-0" deep shall have a "Flat Top" slab roof.
22. Gaskets or collars for pipe connections to manhole shall provide a minimum of 0.1" drop across the manhole.
23. The contractor shall notify the Design Engineer every day that sewer main installation shall occur.

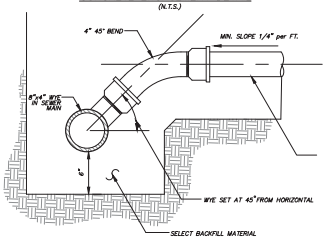


SEWER LINE TRENCH DETAIL
(N.T.S.)

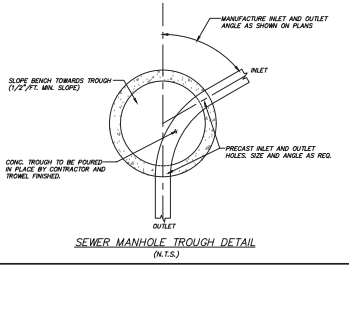
WATER MAIN TRENCH DETAIL
(N.T.S.)



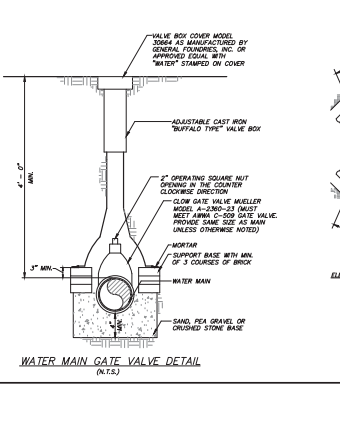
CONCRETE ENCASEMENT DETAIL
(N.T.S.)



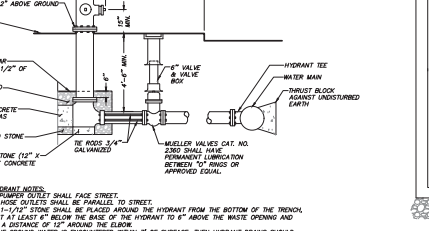
SANITARY SEWER SERVICE CONNECTION
(N.T.S.)



SEWER MANHOLE TROUGH DETAIL
(N.T.S.)

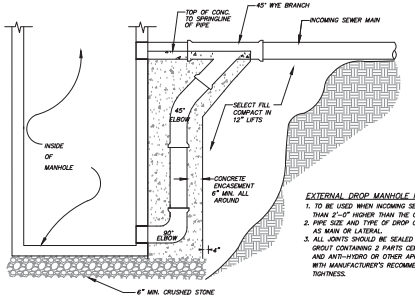


WATER MAIN GATE VALVE DETAIL
(N.T.S.)



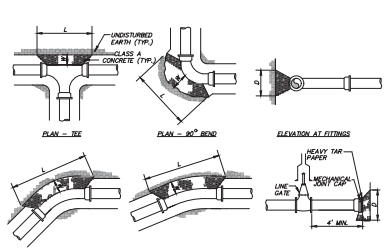
HYDRANT NOTES:
1. PUMPER OUTLET SHALL FACE STREET.
2. HOSE OUTLETS SHALL BE PARALLEL TO STREET.
3. 1-1/2" STONE SHALL BE PLACED AROUND THE HYDRANT FROM THE BOTTOM OF THE TRENCH, BUT AT LEAST 6" BELOW THE BASE OF THE HYDRANT TO 6" ABOVE THE WASTE OPENING AND TO A DISTANCE OF 12" AROUND THE ELBOW.
4. IF GROUND WATER IS ENCOUNTERED WITHIN 7' OF SURFACE, THEN HYDRANT DRAINS SHOULD BE PLUGGED. THE HYDRANT BARRELS MUST BE PUMPED DRY AFTER USE DURING FREEZING WEATHER. WHERE HYDRANT DRAINS ARE NOT PLUGGED, A GRAVEL POCKET OR DRY WELL SHALL BE PROVIDED UNLESS THE NATURAL SOILS WILL PROVIDE ADEQUATE DRAINAGE. HYDRANT DRAINS SHALL NOT BE CONNECTED TO OR LOCATED WITHIN 10 FEET OF SANITARY SEWERS OR STORM DRAINS.
5. ALL FIRE HYDRANTS SHALL BE RATED FOR A WORKING PRESSURE OF 250 PSI AND SHALL BE THE APPROVED AWWA TYPE FIRE HYDRANTS IN CONFORMANCE WITH THE AMERICAN WATER WORKS ASSOCIATION STANDARD FOR FIRE HYDRANTS FOR ORDINARY WATER WORKS SERVICE, AWWA DESIGNATION C502, AND SHALL HAVE A 5-1/4" VALVE OPENING, A 6" MECHANICAL JOINT INLET COMPLETE WITH AN AUXILIARY GATE VALVE (CLOSE COUPLED), A 6" MECHANICAL JOINT SHOE, AND ALL APPURTENANCES
6. FIRE HYDRANT SHALL BE RATED FOR A WORKING PRESSURE OF 250 PSI.

HYDRANT DETAIL
(N.T.S.)



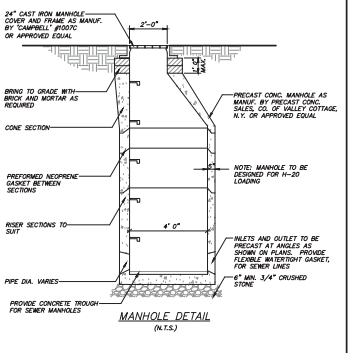
EXTERNAL DROP MANHOLE NOTES:
1. TO BE USED WHEN INCOMING SEWER IS MORE THAN 2'-0" HIGHER THAN THE OUTGOING SEWER.
2. PIPE SIZE AND TYPE OF DROP CONNECTION TO BE SAME AS MAIN OR LATERAL.
3. ALL JOINTS SHOULD BE SEALED INSIDE AND OUT WITH CEMENT GROUT CONTAINING 2 PARTS CEMENT AND 1 PART SAND AND ANTI-HYDRO OR OTHER APPROVED ADDITIVE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS TO INSURE WATER TIGHTNESS.

EXTERNAL DROP MANHOLE DETAIL
(N.T.S.)



THRUST BLOCK SCHEDULE									
PIPE SIZE	CAP/TEE L	CAP/TEE D	22 1/2° L	22 1/2° D	45° L	45° D	90° L	90° D	W
8"	2'	1.5'	2'	1.5'	2'	1.5'	2'	1.5'	1.5'

THRUST BLOCK DETAILS
(N.T.S.)



MANHOLE DETAIL
(N.T.S.)

NO.	DATE	REVISION	BY
3	11-29-21	GENERAL REVISION	SMR
2	9-29-21	GENERAL REVISION	MEU
1	7-19-21	GENERAL REVISION	MEU

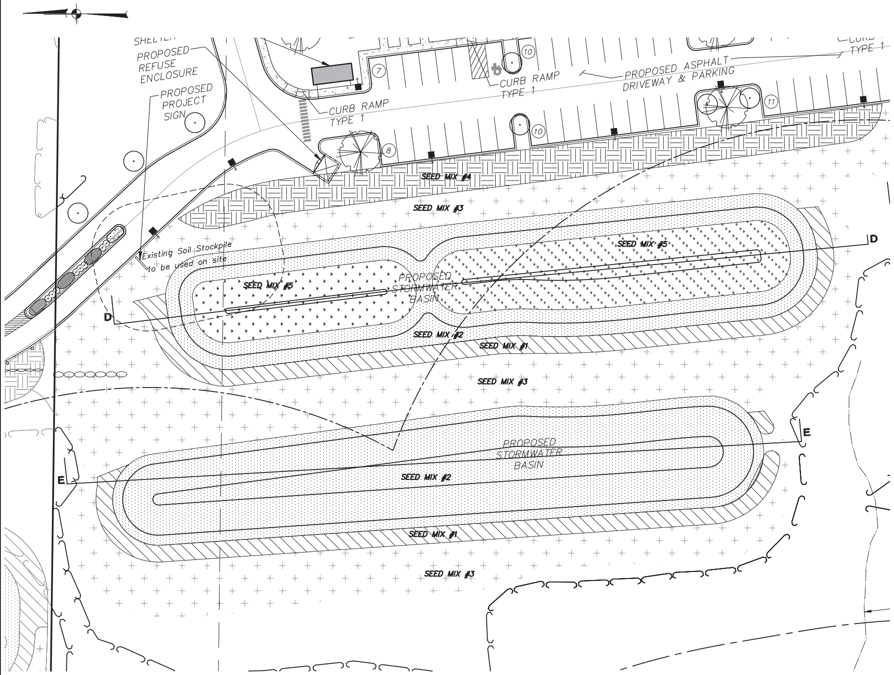
INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT: THE HAMLET AT CARMEL
MULTI-FAMILY HOUSING DEVELOPMENT
STONEGLEN AVENUE, TOWN OF CARMEL, PUTNAM COUNTY, NEW YORK

DRAWING: SITE DETAILS

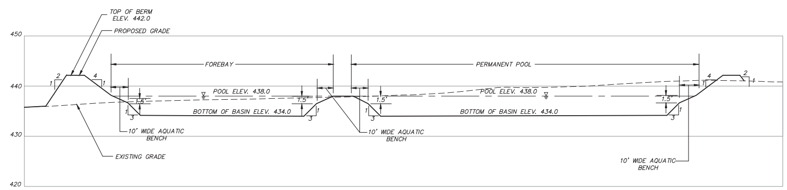
PROJECT NO.	14211.100	PROJECT MANAGER	J.J.C.
DATE	2-10-21	DRAWN BY	M.E.U.
SCALE	AS SHOWN	CHECKED BY	J.J.C.

DRAWING NO. D-3
SHEET 8 / 10



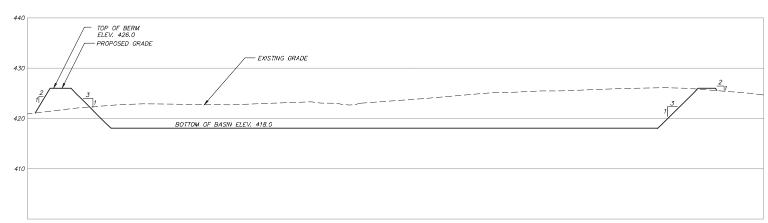
STORMWATER BASINS 2.1P AND 2.2P ENLARGED PLAN VIEW

Scale: 1"=30'



STORMWATER BASIN 2.1P SCHEMATIC SECTION D-D

N.T.S.



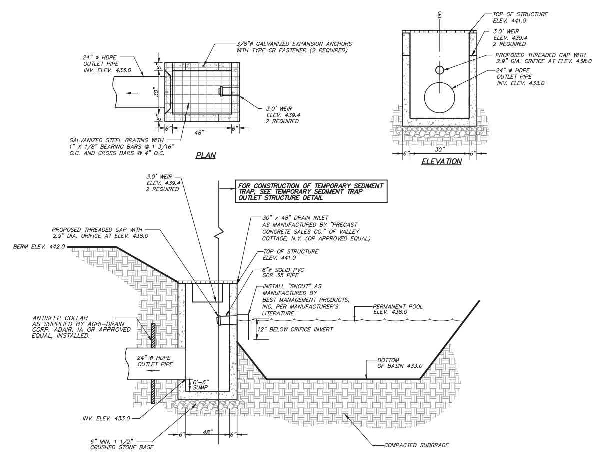
STORMWATER BASIN 2.2P SCHEMATIC SECTION E-E

N.T.S.

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

STORMWATER BASIN OUTLET NOTES

1. THE BASINS ARE PROPOSED TO BE UTILIZED AS TEMPORARY SEDIMENT TRAPS (TST's) DURING CONSTRUCTION.
2. AFTER THE CONTRIBUTING AREAS TO THE BASINS HAVE BEEN PERMANENTLY STABILIZED, THE FOLLOWING SHALL BE ACCOMPLISHED:
   A. CLEAN BASINS AND OUTLET STRUCTURES AND REMOVE 6"ø PERFORATED VERTICAL RISER PIPE, CRUSHED STONE AND FILTER FABRIC.
   B. ADD THREADED CAP WITH ORIFICE AT DISCHARGE END OF 6"ø SOLID PVC SDR 35 PIPES PER DETAIL.
   C. REPLACE THE PERFORATED PIPE AND CRUSHED STONE. DO NOT REPLACE FILTER FABRIC.
   D. ESTABLISH THE FINAL VEGETATION IN THE BASINS IN ACCORDANCE WITH THE STORMWATER BASIN PLANTING DETAILS.
   E. FOR BASINS 2.1P AND 3.1P EXCAVATE BOTTOM OF TST TO PERMANENT STORMWATER BASIN BOTTOM. ANY EXCESS SOIL SHALL BE TRUCKED OFF SITE AND BE PLACED IN A MANOR SO IT WILL NOT ERODE OR CAUSE EROSION.
   F. CONVERSION OF TST's SHALL BE ACCOMPLISHED ONE AT A TIME. THIS WILL ALLOW FOR THE TRAP UNDERGOING CONVERSION TO BE DEWATERED TO A STABILIZED TRAP OR BASIN. THE SECOND BASIN SHALL NOT START CONVERSION UNTIL THE FIRST BASIN IS STABILIZED AND THE THIRD AND FOURTH BASINS SHALL NOT START CONVERSION UNTIL THE PREVIOUS BASIN IS STABILIZED.
3. THE 6"ø PERFORATED VERTICAL RISER SHALL BE CONSTRUCTED AS FOLLOWS:
   * WHEN INITIALLY USED AS THE TEMPORARY SEDIMENT TRAP DEWATERING DEVICE THE RISER SHALL BE WRAPPED WITH TYPAR 3201 GEOTEXTILE OR APPROVED EQUAL AND SURROUNDED WITH 2"ø STONE. THE TOP OF THE RISER SHALL BE SET AT THE SAME ELEVATION AS THE WEIRS AS SHOWN IN THE STORMWATER BASIN OUTLET STRUCTURE DETAILS.
   * WHEN THE PERMANENT RISER FOR BASIN IS CONSTRUCTED THE RISER SHALL BE UNWRAPPED WITH THE TOP ELEVATION SET AT SPECIFIED ELEVATIONS.

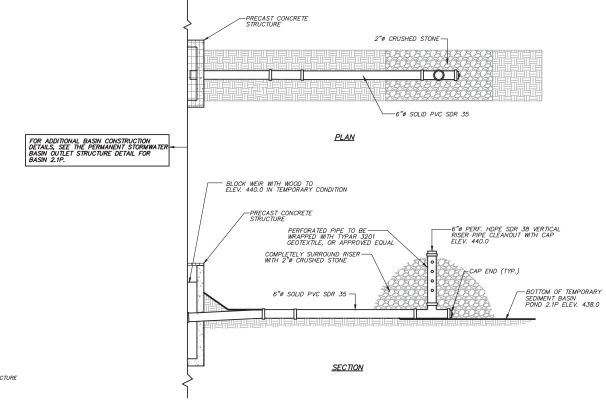


PERMANENT STORMWATER BASIN 2.1P OUTLET STRUCTURE DETAIL

(N.T.S.)

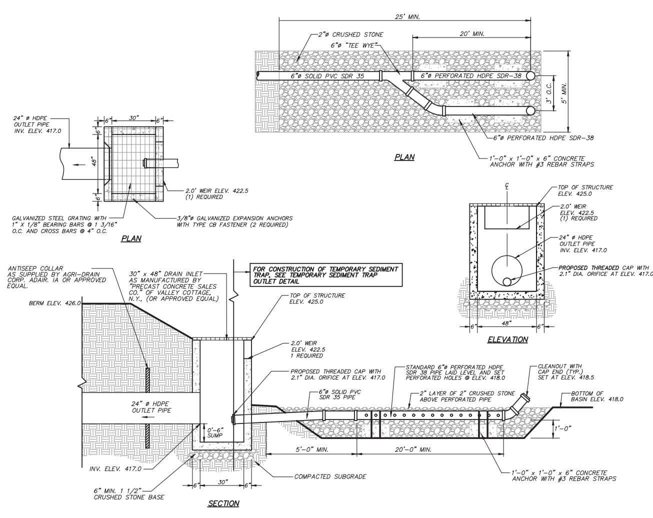
PLANTING NOTES:

1. All proposed planting beds to receive a 12" min. depth of topsoil. Soil amendments and fertilizer application rates shall be determined based on specific testing of topsoil material.
2. Any new soils added will be amended as required by results of soil testing and placed using a method that will not cause compaction.
3. No fertilizer shall be added in stormwater basin plantings. Nutrient requirements to be met by incorporation of acceptable organic matter.
4. All plant material to be nursery grown.
5. Plants shall conform with ANSI Z60.1 American Standard for Nursery Stock in all ways including dimensions.
6. Plant material shall be taken from healthy nursery stock.
7. All plants shall be grown under climate conditions similar to those in the locality of the project.
8. Plants shall be planted in all locations designed on the plan or as staked in the field by the Landscape Architect.
9. The location and layout of landscape plants shown on the site plan shall take precedence in any discrepancies between the quantities of plants shown on the plans and the quantity of plants in the Plant List.
10. Provide a 3" layer of shredded pine bark mulch (or as specified) over entire watering saucer at all tree pits or over entire planting bed. Do not place mulch within 3" of tree or shrub trunks.
11. All landscape plantings shall be maintained in a healthy condition at all times. Any dead or diseased plants shall immediately be replaced "in kind" by the contractor (during warranty period) or project owner.
12. For all areas to be planted with emergent vegetation, soil shall be decompacted using tilling or other method approved by Landscape Architect and amended as required by results of soil testing to a depth of at least 12".
13. Upon final grading and placement of topsoil and any required soil amendments, areas to receive permanent vegetation cover in combination with suitable mulch as follows:
    - select seed mixture per drawings and seeding notes.
    - fertilizer applied at the manufacturer's recommended rate using Lesco 10-0-18 (no phosphorous) fertilizer or equivalent.
    - mulch: salt hay or small grain straw applied at a rate of 90 lbs./1000 s.f. or 2 tons/acre, to be applied and anchored according to New York State Standards and Specifications for Erosion and Sediment Control, August 2005.
    - if the season prevents the establishment of a permanent vegetation cover, the disturbed areas will be mulched with straw or equivalent.
14. All proposed seeded areas to stormwater basins to receive 4" min. depth of topsoil. Soil amendments and fertilizer application rates shall be determined based on specific testing of topsoil material.
15. The Stormwater Basin seed mixes as specified on these drawings from New England Wetland Plants, Inc. of Amherst, MA. are as follows:
    A. Seed Mix #1 at a rate of 35 lbs. per acre: New England Erosion Control/Restoration Mix (for Detention basins and Moist Sites).
    B. Seed Mix #2 at a rate of 23 lbs. per acre: New England Wildflower Mix.
    C. Seed Mix #3 at a rate of 25 lbs. per acre: New England Conservation/Wildlife Mix.
    D. Seed Mix #4 at a rate of 35 lbs. per acre New England Roadside Matrix Upland Seed Mix.
    E. Seed Mix #5 at a rate of 18 lbs. per acre: New England Wetmix.
16. Interiors of ponds including aquatic bench to be seeded. Permanent water to be drawn down below seeded areas until vegetation establishes.



TEMPORARY SEDIMENT BASIN TRAP 2.1P OUTLET DETAIL

(N.T.S.)



PERMANENT STORMWATER BASIN 2.2P OUTLET STRUCTURE DETAIL

(N.T.S.)

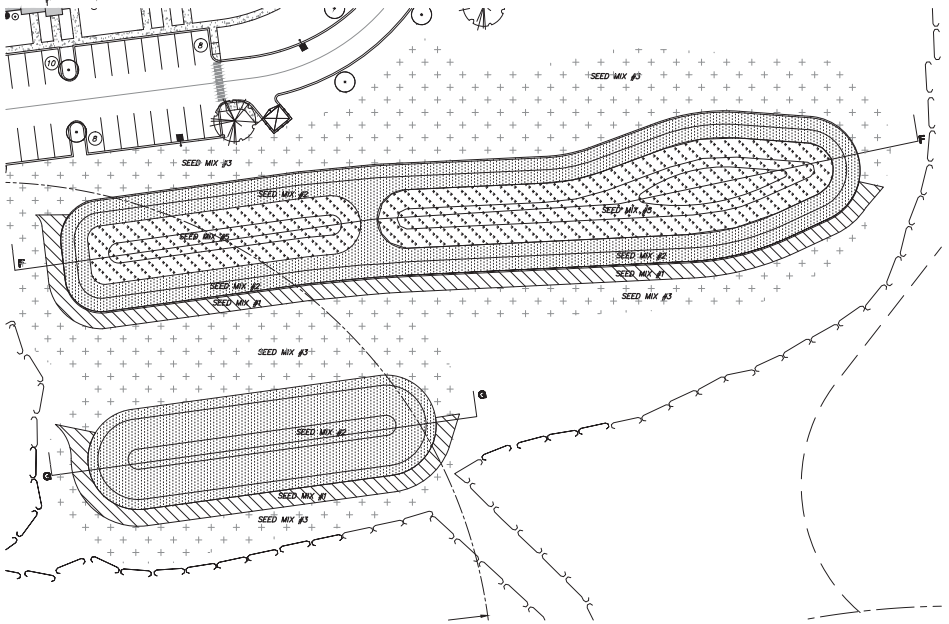
NO.	DATE	REVISION	BY
3	11-29-21	GENERAL REVISION	SMR
2	9-29-21	GENERAL REVISION	MEU
1	7-19-21	GENERAL REVISION	MEU

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
THE HAMLET AT CARMEL
MULTI-FAMILY HOUSING DEVELOPMENT
STONELEIGH AVENUE, TOWN OF CARMEL, PUTNAM COUNTY, NEW YORK

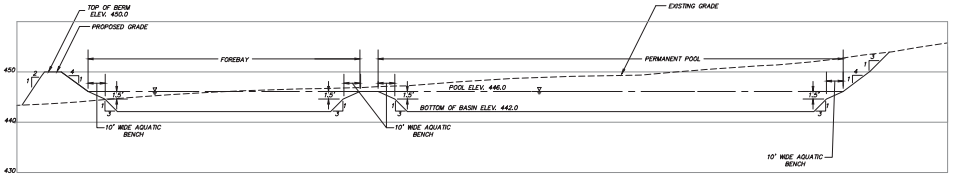
DRAWING:
STORMWATER POND DETAILS

PROJECT NO.	14211.100	PROJECT MANAGER	J.J.C.	DRAWING NO.	SHEET
DATE	2-10-21	DRAWN BY	M.E.U.	D-4	9 / 10
SCALE	AS SHOWN	CHECKED BY	J.J.C.		



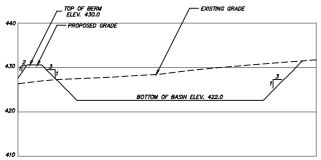
STORMWATER BASINS 3.1P AND 3.2P ENLARGED PLAN VIEW

Scale: 1"=30'



STORMWATER BASIN 3.1P SCHEMATIC SECTION F–F

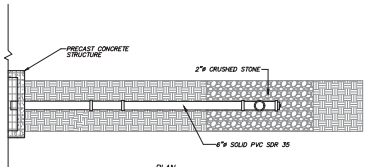
N.T.S.



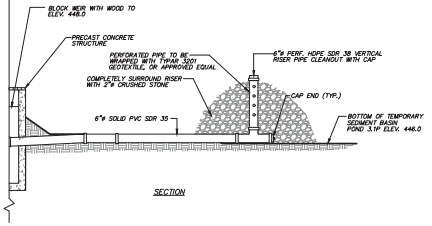
STORMWATER BASIN 3.2P SCHEMATIC SECTION G–G

N.T.S.

FOR ADDITIONAL BASIN CONSTRUCTION DETAILS, SEE THE PERMANENT STORMWATER BASIN OUTLET STRUCTURE DETAIL FOR BASIN 3.1P.



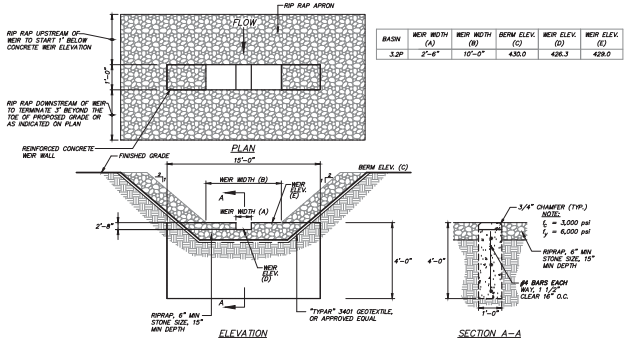
PLAN



SECTION

TEMPORARY SEDIMENT TRAP 3.1P OUTLET DETAIL

(N.T.S.)



BASIN	WEIR WIDTH (A)	WEIR WIDTH (B)	BERM ELEV. (C)	WEIR ELEV. (D)	WEIR ELEV. (E)
3.2P	2'–6"	10'–0"	430.0	426.3	429.0

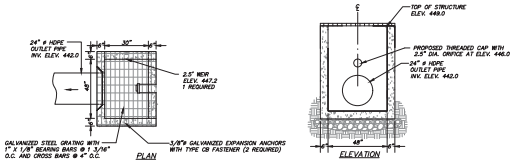
PLAN

ELEVATION

SECTION A–A

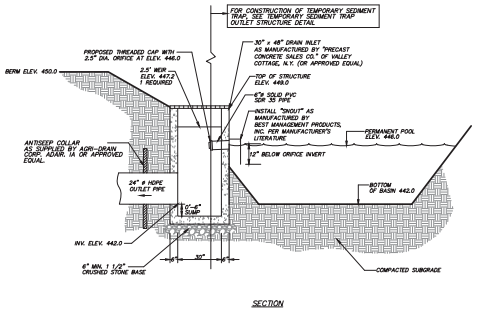
STORMWATER BASIN 3.2P OUTLET WEIR DETAIL

(N.T.S.)



PLAN

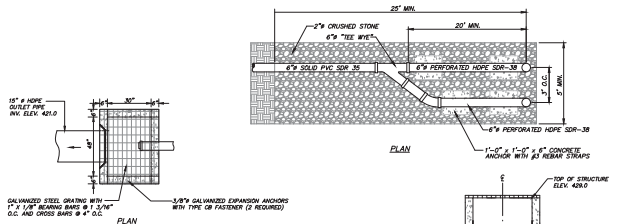
ELEVATION



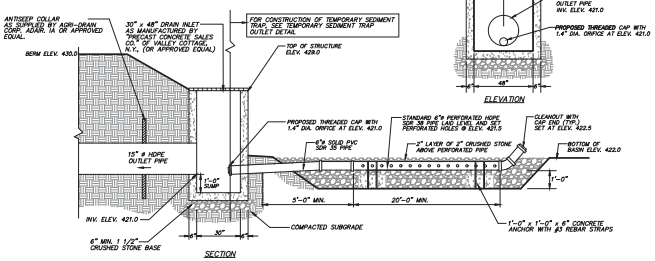
SECTION

PERMANENT STORMWATER BASIN 3.1P OUTLET STRUCTURE DETAIL

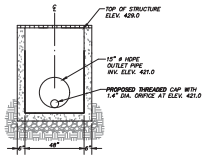
(N.T.S.)



PLAN



SECTION



ELEVATION

PERMANENT STORMWATER BASIN 3.2P OUTLET STRUCTURE DETAIL

(N.T.S.)

STORMWATER BASIN OUTLET NOTES

1. THE BASINS ARE PROPOSED TO BE UTILIZED AS TEMPORARY SEDIMENT TRAPS (TSTs) DURING CONSTRUCTION.
2. AFTER THE CONTRIBUTING AREAS TO THE BASINS HAVE BEEN PERMANENTLY STABILIZED, THE FOLLOWING SHALL BE ACCOMPLISHED:
   A. CLEAN BASINS AND OUTLET STRUCTURES AND REMOVE 6"ø PERFORATED VERTICAL RISER PIPE, CRUSHED STONE AND FILTER FABRIC.
   B. ADD THREADED CAP WITH ORIFICE AT DISCHARGE END OF 6"ø SOLID PVC SDR 35 PIPES PER DETAIL.
   C. REPLACE THE PERFORATED PIPE AND CRUSHED STONE. DO NOT REPLACE FILTER FABRIC.
   D. ESTABLISH THE FINAL VEGETATION IN THE BASINS IN ACCORDANCE WITH THE STORMWATER BASIN PLANTING DETAILS.
   E. FOR BASINS 2.1P AND 3.1P, EXCAVATE BOTTOM OF TST TO PERMANENT STORMWATER BASIN BOTTOM. ANY EXCESS SOIL SHALL BE TRUCKED OFF SITE AND BE PLACED IN A MANOR SO IT WILL NOT ERODE OR CAUSE FOULING.
   F. CONVERSION OF TST's SHALL BE ACCOMPLISHED ONE AT A TIME. THIS WILL ALLOW FOR THE TRAP UNDERGOING CONVERSION TO BE CONVERTED TO A STABILIZED TRAP OR BASIN. THE SECOND BASIN SHALL NOT START CONVERSION UNTIL THE FIRST BASIN IS STABILIZED AND THE THIRD AND FOURTH BASINS SHALL NOT START CONVERSION UNTIL THE PREVIOUS BASIN IS STABILIZED.
3. THE 6"ø PERFORATED VERTICAL RISER SHALL BE CONSTRUCTED AS FOLLOWS:
   * WHEN INITIALLY USED AS THE TEMPORARY SEDIMENT TRAP DEWATERING DEVICE THE RISER SHALL BE WRAPPED WITH TYPAR 3201 GEOTEXTILE OR APPROVED EQUAL AND SURROUNDED WITH 2"ø STONE. THE TOP OF THE RISER SHALL BE SET AT THE SAME ELEVATION AS THE WEIRS AS SHOWN IN THE STORMWATER BASIN OUTLET STRUCTURE DETAILS.
   * WHEN THE PERMANENT RISER FOR BASIN IS CONSTRUCTED THE RISER SHALL BE UNWRAPPED WITH THE TOP ELEVATION SET AT SPECIFIED ELEVATIONS.

PLANTING NOTES:

1. All proposed planting beds to receive a 12" min. depth of topsoil. Soil amendments and fertilizer application rates shall be determined based on specific testing of topsoil material.
2. Any new soils added will be amended as required by results of soil testing and placed using a method that will not cause compaction.
3. No fertilizer shall be added in stormwater basin plantings. Nutrient requirements to be met by incorporation of acceptable organic matter.
4. All plant material to be nursery grown.
5. Plants shall conform with ANSI Z60.1 American Standard for Nursery Stock in all ways including dimensions.
6. Plant material shall be taken from healthy nursery stock.
7. All plants shall be grown under climate conditions similar to those in the locality of the project.
8. Plants shall be planted in all locations designed on the plan or as staked in the field by the Landscape Architect.
9. The location and layout of landscape plants shown on the site plan shall take precedence in any discrepancies between the quantities of plants shown on the plans and the quantity of plants in the Plant List.
10. Provide a 3" layer of shredded pine bark mulch (or as specified) over entire watering saucer at all tree pits or over entire planting bed. Do not place mulch within 3" of tree or shrub trunks.
11. All landscape plantings shall be maintained in a healthy condition at all times. Any dead or diseased plants shall immediately be replaced "in kind" by the contractor (during warranty period) or project owner.
12. For all areas to be planted with emergent vegetation, soil shall be decompacted using tilling or other method approved by Landscape Architect and amended as required by results of soil testing to a depth of at least 12".
13. Upon final grading and placement of topsoil and any required soil amendments, areas to receive permanent vegetation cover in combination with suitable mulch as follows:
   – select seed mixture per drawings and seeding notes.
   – fertilizer applied at the manufacturer's recommended rate using Lesco 10–0–18 (no phosphorous) fertilizer or equivalent.
   – mulch: salt hay or small grain straw applied at a rate of 90 lbs./1000 s.f. or 2 tons/acre, to be applied and anchored according to New York State Standards and Specifications for Erosion and Sediment Control, August 2005.
   – if the season prevents the establishment of a permanent vegetation cover, the disturbed areas will be mulched with straw or equivalent.
14. All proposed seeded areas to stormwater basins to receive 4" min. depth of topsoil. Soil amendments and fertilizer application rates shall be determined based on specific testing of topsoil material.
15. The Stormwater Basin seed mixes as specified on these drawings from New England Wetland Plants, Inc. of Amherst, MA. are as follows:
   A. Seed Mix #1 at a rate of 35 lbs. per acre:
      New England Erosion Control/Restoration Mix (for Detention basins and Moist Sites).
   B. Seed Mix #2 at a rate of 23 lbs. per acre:
      New England Wildflower Mix.
   C. Seed Mix #3 at a rate of 25 lbs. per acre:
      New England Conservation/Wildlife Mix.
   D. Seed Mix #4 at a rate of 35 lbs. per acre
      New England Roadside Matrix Upland Seed Mix.
   E. Seed Mix #5 at a rate of 18 lbs. per acre:
      New England Wetmix.
16. Interiors of ponds including aquatic bench to be seeded. Permanent water to be drawn down below seeded areas until vegetation establishes.

NO.	DATE	REVISION	BY
3	11–29–21	GENERAL REVISION	SMR
2	9–29–21	GENERAL REVISION	MEU
1	7–19–21	GENERAL REVISION	MEU

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225–9690
(845) 225–9717 fax
www.insite-eng.com

PROJECT:
THE HAMLET AT CARMEL
MULTI–FAMILY HOUSING DEVELOPMENT
STONEGLEN AVENUE, TOWN OF CARMEL, PUTNAM COUNTY, NEW YORK

DRAWING:
STORMWATER POND DETAILS

PROJECT NO.	14211.100	PROJECT MANAGER	J.J.C.	DRAWING NO.	SHEET
DATE	2–10–21	DRAWN BY	M.E.U.	D–5	10
SCALE	AS SHOWN	CHECKED BY	J.J.C.		10

KELLARD SESSIONS

John Kellard, P.E.
David Sessions, RLA, AICP
Joseph M. Cermele, P.E., CFM
Jan K. Johannessen, AICP

VIA FEDERAL EXPRESS

November 22, 2021

Planning Board
Town of Carmel
60 McAlpin Avenue
Mahopac, New York 10541

Attn: Craig Paeprer, Chairman

RE: Western Bluff Subdivision
Section 66.14, Block 1, Lot 20
350 West Shore Drive

Dear Chairman Paeprer:

Please find enclosed five (5) copies of the following documents in support of my client's application for Subdivision Approval:

- Subdivision Construction Plans for Western Bluff Subdivision, prepared by Kellard Sessions Consulting, dated (last revised) November 8, 2021:
  - Cover Sheet
  - Sheet 1/9 Existing Conditions Plan
  - Sheet 2/9 Subdivision Layout Plan
  - Sheet 3/9 Sediment & Erosion Control Plan
  - Sheet 4/9 Tree Removal & Landscape Plan
  - Sheet 5/9 Construction Details
  - Sheet 6/9 Construction Details
  - Sheet 7/9 Sediment & Erosion Control Details & Notes
  - Sheet 8/9 Driveway Profiles
  - Sheet 9/9 Drainage Profiles

- Subdivision Map Prepared for Santucci Construction, prepared by Ward Carpenter Engineers, Inc., dated November 19, 2019 and last revised November 10, 2021

- Letter from Joseph S. Paravati, P.E., Putnam County Department of Health (PCDH), dated July 30, 2020 (septic and wells)

- Letter from Danny Shedlow, P.E., NYCDEP, dated May 26, 2020 (septic and wells)
- Kellard Sessions Consulting letter to New York State Department of Environmental Conservation (NYSDEC), dated October 10, 2018, requesting general permit clarification
- NYSDEC email to Kellard Sessions Consulting, dated October 16, 2018, noting project's eligibility under the General Permit
- Property Deed, dated October 26, 1978
- Stormwater Cost Estimate, prepared by Kellard Sessions Consulting, dated November 8, 2021
- List of Adjacent Owners, prepared by Ward Carpenter Engineers, Inc.

We are in receipt of the review memorandum prepared by Richard J. Franzetti, P.E., Town Engineer, dated July 20, 2021, to the Town of Carmel Planning Board. The application documents have been amended to address each comment within the memorandum. An itemized response follows:

I. General Comments

1. The following referrals would appear to be warranted:

   a. Mahopac Fire Department – application submitted May 2017, per the applicant, no response has been provided.

      The applicant submitted the project plans to the Mahopac Fire Department in May 2017 for their review and comment. No response was received. A follow up call in August 2018 also did not result in comments on the project.

   b. Town of Carmel Environmental Conservation Board – application made to ECB in May of 2017.

      The applicant has not received coverage under the Chapter 89 Freshwater Wetlands of the Town of Carmel Town Code and will need to do so prior to any site work being performed.

      An Application for Wetland Permit was submitted to the Town of Carmel Environmental Conservation Board (ECB) on May 15, 2017. I appeared before the Board on May 18, 2017 whereby I reviewed the details of the project with

the Board. The Board's comments which have been incorporated into the project plans included.

- **Specify abandonment of existing septic tank.**
- **Silt fence to have wire backing.**
- **Divert runoff away from wetland during construction.**
- **Topsoil and seed old driveway.**
- **Provide a construction schedule.**
- **Provide methods of fueling equipment.**

The Environmental Conservation Board directed us to proceed with NYCDEP Stormwater Permit and PCDH permitting and return to the Board upon resolution of permitting with those Departments. A resubmission to ECB was made on July 14, 2021. However, per recommendation from the Town Planning Office, our appearance before the Board was postponed until approval of the project by the Town Planning Board.

c. Putnam County Department of Health – needed for water and SSTS.

A formal application for Realty Subdivision Approval was submitted to the PCDH on December 19 2019. Septic system deep holes and percolation tests were performed and subsequent submissions made addressing the PCDH comments since December 2019.

Our application with the PCDH has progressed to the point where a few comments remain. These comments have been incorporated into the plan set. A copy of the last correspondence from Joseph S. Paravati, P.E., PCDH, dated July 30, 2020, is enclosed.

We have also enclosed the last correspondence from the NYCDEP regarding the proposed septic permitting. Correspondence from Danny Shedlo, P.E., dated May 26, 2020, acknowledges no additional design issues.

Upon approval of the project by the Carmel Planning Board, we will submit to PCDH for final signatures.

d. Town of Carmel Highway Permit – needed for the driveway.

A Curb Cut Permit is required from the Putnam County Department of Public Works (PC DPW). Brian Hildenbrand, P.E. has been updated on the project's status.

Applicant had previously noted the need for these referrals/permits. None have been provided.

2. A Stormwater Pollution Prevention Plan (SWPPP), as detailed by the NYSDEC, is required.

   The applicant should note that this project may not be eligible to receive coverage under the General Stormwater Permit for discharges from Construction Activities (GP-0-15-002), as defined in Part IF.6.a., b. and c. of the General Permit. The project may have to seek an individual permit. Additional information should be provided to confirm this assessment.

   This information has not been provided.

   A SWPPP has been prepared for the project. The SWPPP was approved by the NYCDEP on April 18, 2021. A copy of the approved SWPPP is enclosed.

   On October 10, 2018, Kellard Sessions Consulting submitted a request for determination by the NYSDEC regarding the project's compliance with the General Permit Section 1.F(6) (a-c). A copy of our letter is enclosed.

   Sarah Pawliczak of the NYSDEC responded on October 16, 2018 by email, copy enclosed. Ms. Pawliczak's response was clear that in order to be ineligible for the General Permit there would need to be over one (1) acre of disturbance on slopes greater than 25% which are in E or F soil groups. The project is eligible for coverage under the General Permit.

3. A SWPPP, as defined by the NYCDEP pursuant to Chapter 18-39 of the NYCDEP Watershed Rules and Regulations is required.

   The applicant provided an approved SWPPP from the NYCDEP.

   The NYCDEP approved SWPPP, approved April 18, 2021, was forwarded to your office on July 14, 2021. Please let us know if there are any comments.

4. Requirements as set forth in Chapter 131-13 Preliminary Plat, of the Town of Carmel Town Code, have not been provided. This includes, but is not limited to, the following:

   a. Proposed utility layouts – in particular electric service:

As per Section 131-13 of the Carmel Town Code, the proposed location of electric service has been shown on the Subdivision Layout Plan, as well as the drainage profiles where crossings of the drainage system occur.

b. Existing or proposed covenants or deed restrictions applying to the site and a preliminary draft of homeowners' association documents if applicable.

There are no known existing covenants or deed restrictions which apply to the project site. A copy of the Deed for the property, dated October 26, 1978, is enclosed. Proposed easements are limited to access and utility easements which have been included on the Subdivision Plat, which will be filed with the County Clerk. A homeowner's association is not proposed for the project.

c. Identification and copies of all filed maps affecting the property to be subdivided and all properties within 500 feet thereof.

There are no filed maps associated with the subject property. The Subdivision Plat for the project enclosed, "Subdivision Plat Prepared for Santucci Construction" includes all adjacent owners. A separate list is enclosed which includes name, address and Tax ID # of all property owners within 500 feet of the property.

5. The Board should be aware that the drawing does not contain information regarding areas proposed to be reserved for open space. The applicant has noted that this is a conventional subdivision with no planned open space.

A note must be provided on the drawings. The applicant should note that per Chapter 131-25 A (3), that a payment is required in lieu of reservation of land.

A note has been added to the project plans Cover Sheet, "The project does not include a reservation of Open Space, therefore, in accordance with Section 131-25 A(3) of the Town of Carmel Town Code, a payment is required in lieu of a reservation of land, from the applicant."

6. Should any public improvements (i.e., stormwater controls, etc.) be deemed necessary as part of the development of the tract, a Performance Bond and associated Engineering Fee must be established for the work.

The applicant will need to develop a quantity take off for bonding purposes. No update has been provided.

The subdivision will have no public improvements required as part of the development of the tract, therefore, a Performance Bond and associated engineering fee is not required.

7. The applicant is advised that a stormwater bond and maintenance guarantee, pursuant to Chapter 156.87 of the Town Code, may be required.

   Applicant has noted the need for this bond. No update has been provided.

   As per Section 156.87 of the Town Code, a quantity take off and estimated cost of construction of the stormwater system for the project has been prepared and included herein. The stormwater cost estimate includes all stormwater improvements for the project, i.e., collection, piping and treatment. The estimate has been prepared with subtotals for each of the three (3) lots.

II. Detailed Comments

1. Information regarding any/all easements (water, sewer, stormwater, etc.) should be provided; no update has been provided.

   There are no existing easements on the project site. Proposed easements which are shown on the Subdivision Plat by metes and bounds include:

   - **Access and utility easement over Lot #3 in favor of Lots #1 and #2.**
   - **Access and utility easement over Lot #2 in favor of Lot #1.**
   - **Drainage and maintenance easement over Lot #1 in favor of Lot #2.**

2. The location, top elevation and bottom elevation of retaining walls on the property must be shown.

   The applicant has provided a detail on the wall, however, the location of the walls on the site plan has been provided.

   Previously proposed retaining walls have been eliminated by modification of site grading. The retaining wall detail has therefore been removed from the Detail Sheet.

3. All regrading required to accomplish the intended development of each lot must be shown.

   Proposed grading required to construct the complete project is shown on Sheet 2 of 9 Subdivision Layout Plan.

4. Any existing PCDH Approvals for either lot should be submitted, for the Board's records.

   Applicant has noted comment and will provide copies once approved by PCDH. No update has been provided.

   Proposed domestic wells and subsurface sewage disposal systems (SSDS) for each of the individual lots is shown on Sheet 2 of 9 Subdivision Layout Plan. Test hole locations, septic grading, absorption trenches, septic tanks and piping between the dwelling and absorption fields are also shown on the plan. The Subdivision Plat prepared by the project Surveyor also includes the well locations, areas designated for the absorption trenches and expansion areas and a subsurface sewage disposal system design chart. Upon Town Planning Board Approval of the project, PCDH will sign the Subdivision Plat.

5. Driveway cross-sections should be added to the plan. This information has been provided.

   All driveways must be in accordance with Chapter 128 of the Town of Carmel Town Code. A note should be added to the drawing.

   It should be noted that slopes for the first 15' at less than 6%; last 30' less than 7% and not to exceed 15%.

   A note has been added to the subdivision plan Cover Sheet, "All driveways must comply with Section 128 of the Town of Carmel Town Code."

   Profiles of all driveways are included on Sheet 8 of 9 Driveway Profiles. Profiles conform with Town Code.
   Driveway Cross Section Detail is included on Sheet 5 of 9 Construction Details.

6. All asphalt for roads (not being dedicated to Town)/parking/driveways should have a top layer of pavement at 2 inches, the binder course at 3 inches and the subgrade at 8 inches.

   The driveway cross section has been amended to comply as follows, two (2) inch asphalt top course, three (3) inch asphalt binder course and eight (8) inch subbase course.

7. All utilities serving the lots should be shown.

   The location of electric service has not been provided. No update has been provided.

   Proposed electric service lines have been added to Sheet 2 of 9 Subdivision Layout Plan.

8. Metes and bounds of the proposed internal lot boundary line should be provided.

   Metes and bounds of all proposed internal lot boundary lines are included on the Subdivision Plat.

9. The drawings should contain a phasing diagram for the construction of the site.

   Applicant has provided this information.

   A Construction Sequencing Program has been prepared and included on Sheet 3 of 9 Sediment & Erosion Control Plan.

10. A landscaping plan will need to be provided.

    Applicant noted this comment and will provide under a separate cover. No update has been provided.

    The Tree Removal Plan has been modified to include proposed slope restoration and wetland buffer seed mix. The plan Sheet 4 of 9 has been renamed to Tree Removal and Landscape Plan.

11. All planting should be verified by the Town of Carmel Wetlands Inspector and all plantings shall be installed per Chapter 142 of the Town of Carmel Town Code.

    A note should be added to the drawings.

    A note has been added to the Subdivision Plan Cover Sheet, "All proposed plantings shall be installed in conformance with Section 142 of the Town of Carmel Town Code. All plantings shall be verified by the Town of Carmel Wetland Inspector."

12. The location of trees being protected should be provided.
    Applicant has provided this information.

    Trees to be protected are shown on the Tree Removal and Landscape Plan Sheet 4 of 9.

13. Graphic representation of vehicle movements through the site should be provided to illustrate that sufficient space exists to maneuver all types of vehicles anticipated at the site.

Turning radii has been included on the Subdivision Layout Plan, where an insert was provided. This includes the ability of a UPS Box Tuck to maneuver at the tee intersection of the common driveway.

14. All turning radii for the site should be graphically provided. This includes the turning radii into the modified site entrances.

    See Comment #13 above.

15. Available sight distances calculations should be specified on the plan. Any clearing along the edge of the roadway r.o.w. that may be necessary to assure appropriate sight distances are provided, should be identified.

    Sight distance lines are shown on the Subdivision Layout Plan where an insert is provided. Sight lines only require trimming of low branches along the property frontage. A note has been provided on the Subdivision Layout insert, as well as the Tree Removal and Landscape Plan. Sight distance calculations are included on the plan.

I expect the submitted documents will adequately address all comments and concerns. We would request that the application be placed on the next available Planning Board Agenda. Should there be any further concerns, please call me.

Sincerely,

John Kellard

John Kellard, P.E.
Kellard Sessions Consulting

JK/dc

Enclosures

cc: Dominick Santucci

C:\Users\dcinguina\Kellard Sessions Consulting\Kelses - Project Docs (P)\CASANTUCCI100\KSC Correspondence\2021-11-22_CASantucci100_Carmel PB_Paeprer_Subm_ltr.docx

PUTNAM COUNTY DEPARTMENT OF HEALTH
1 Geneva Road, Brewster, NY 10509 ▪ 845-808-1390
www.putnamcountyny.gov/health
A PHAB-ACCREDITED HEALTH DEPARTMENT

MaryEllen Odell
COUNTY EXECUTIVE

Michael J. Nesheiwat, MD
COMMISSIONER OF HEALTH

July 30, 2020

Vincenzo Federici
Kellard Sessions
500 Main Street
Armonk, NY 10504

Re: Proposed Subdivision – Western Bluff
350 West Shore Drive
(T) Carmel, T.M. 66.14-1-20

Dear Mr. Federici:

This offer has received and reviewed the most recent set of plans for the above-mentioned project. We would like to offer the following comments for your review and consideration.

1. Is the Integrated Plot Plan to be filed? If so, all septic trench layouts and septic components are to be removed from the plan. Boxes for the septic areas are to be provided instead.
2. The lot lines are not shown on the Integrated Plot Plan.
3. The well keyholes should be removed from the subdivision plat.
4. There doesn't appear to be 3' of fill for the proposed Lot 1 septic system.
5. All septic fill is to extend 10' past the trench ends.
6. Please see the enclosed comments from the NYCDEP.

This office will continue its review upon consideration of the above-mentioned comments. Please feel free to contact me at ext. 43157 if any questions arise.

Sincerely,

Joseph S. Paravati Jr., P.E.
Public Health Engineer

JSP:cml
cc: Danny Shedlo, P.E. NYCDEP

NYC Environmental Protection

Vincent Sapienza, P.E.
Commissioner

Paul V. Rush, P.E.
Deputy Commissioner
Bureau of Water Supply
prush@dep.nyc.gov

465 Columbus Avenue
Valhalla, NY 10595

May 26, 2020

Mr. Joseph Paravati, P.E.
Putnam County Health Department
1 Geneva Road
Brewster, New York 10509

Re: Western Bluff Subdivision – Request for Comments
(T) Carmel, Putnam County
Croton Falls Reservoir Drainage Basin
350 West Shore Drive - TM# 66.14-1-20
DEP Log # 2014-CF-0199-DJR.2

Dear Mr. Paravati:

The New York City Department of Environmental Protection (DEP) has reviewed the above-referenced subdivision plan and offers the following comments:

1. The submitted soil data shows acceptable soils to support the proposed septic areas, and no other design issues are noted at this time.
2. Please note that as the project is located in the Croton Falls basin, all individual SSTS reviews will be subject to "Joint Review" between our agencies.
3. Note as well that a Stormwater Pollution Prevention Plan (SWPPP) application for this project is currently under review by DEP.

These comments are based on the review of the drawing titled "Integrated Plot Plan – Western Bluff Subdivision", prepared by Kellard Sessions Consulting, and dated December 19, 2020.

If there are any questions, I may be reached at (914)749-5266.

Sincerely,

Danny Shedlo, P.E.
Section Chief
Regulatory & Engineering Programs

c: Jason Coppola, PE, DEP
Patrick Palmer, NYSDOH

NYC Environmental Protection

Vincent Sapienza, P.E.
Commissioner

Paul V. Rush, P.E.
Deputy Commissioner
Bureau of Water Supply
prush@dep.nyc.gov

465 Columbus Avenue
Valhalla, NY 10595

May 26, 2020

Mr. Joseph Paravati, P.E.
Putnam County Health Department
1 Geneva Road
Brewster, New York 10509

Re: Western Bluff Subdivision – Request for Comments
(T) Carmel, Putnam County
Croton Falls Reservoir Drainage Basin
350 West Shore Drive - TM# 66.14-1-20
DEP Log # 2014-CF-0199-DJR.2

Dear Mr. Paravati:

The New York City Department of Environmental Protection (DEP) has reviewed the above-referenced subdivision plan and offers the following comments:

1. The submitted soil data shows acceptable soils to support the proposed septic areas, and no other design issues are noted at this time.
2. Please note that as the project is located in the Croton Falls basin, all individual SSTS reviews will be subject to "Joint Review" between our agencies.
3. Note as well that a Stormwater Pollution Prevention Plan (SWPPP) application for this project is currently under review by DEP.

These comments are based on the review of the drawing titled "Integrated Plot Plan – Western Bluff Subdivision", prepared by Kellard Sessions Consulting, and dated December 19, 2020.

If there are any questions, I may be reached at (914)749-5266.

Sincerely,

Danny Shedlo, P.E.
Section Chief
Regulatory & Engineering Programs

c: Jason Coppola, PE, DEP
Patrick Palmer, NYSDOH

KELLARD SESSIONS

John Kellard, P.E.
David Sessions, RLA, AICP
Joseph M. Cermele, P.E., CFM
Jan K. Johannessen, AICP

October 10, 2018

New York State
Department of Environmental Conservation
Region 3 Headquarters
21 South Putt Corners Road
New Paltz, New York 12561-1620

Attn: Regional Permit Administrator

RE: Western Bluff Subdivision
Town of Carmel

Dear Sir/Madam:

Please find enclosed one (1) copy of the following plan and documents for the above-referenced project.

- Sheet 3/7 entitled Sediment & Erosion Control Plan dated (last revised) October 4, 2018
- USDA Soil Map of the Property
- USDA Map Unit Legend

We are submitting the above-referenced documents for your Department's determination if this project can gain coverage under the SPDES General Permit for Construction Activities, GP-0-15-002. The Town of Carmel's Engineer raised the question in a review memorandum as to whether or not this project exceeded the thresholds of coverage outlined in Section 1.F,6 (a-c) of the General Permit. We would submit the following analysis:

- The project is within the Croton Falls Reservoir Basin and, therefore, is tributary to AA-S classified waters.
- The project will disturb one or more acres. There is an existing house and driveway that will be removed and restored to grass. However, the majority of the site is currently undisturbed.
- Portions of the property contain soils with a Slope Phase that identifies as an E or F based on the USDA Soil Survey. A USDA soils map has been submitted for reference. However, there are no proposed disturbances within these E and F slope categories. The soils boundaries have been included on the enclosed Sediment & Erosion Control Plan for comparison to the limit of disturbance.

The Code also mentions soils with a "map unit name inclusive of 25%". There is approximately 30,000 square feet (0.68 acre) of disturbance of Chatfield-Charlton Complex, 15 to 35% slopes. The submitted Sediment & Erosion Control Plan shows slopes of 25% and greater for all soil categories. The steep slopes were avoided to the greatest extent practicable, but grading is required to construct the proposed common driveway.

Based on above, we are optimistic the NYSDEC will determine this proposed project falls within the guidelines of Section 1.F.6, and would be able to gain SPDES coverage under the General Permit.

Please let me know if you required any additional information.

Very truly yours,

Brian Hildenbrand, P.E.
Kellard Sessions Consulting

BH/pg

Enclosures

cc: Dominick Santucci w/Enc.

P:\Stc100\KSC Correspondence\2018-10-10-NYSDEC-RegPermitAdmin_Determination_ltr.docx

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CrC	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	7.9	32.0%
CsD	Chatfield-Charlton complex, 15 to 35 percent slopes, very rocky	8.4	33.8%
HrF	Hollis-Rock outcrop complex, 35 to 60 percent slopes	3.8	15.2%
LcB	Leicester loam, 3 to 8 percent slopes, stony	1.8	7.1%
PnB	Paxton fine sandy loam, 3 to 8 percent slopes	1.5	5.9%
PnC	Paxton fine sandy loam, 8 to 15 percent slopes	1.5	5.9%
W	Water	0.0	0.2%
Totals for Area of Interest		**24.7**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit

Custom Soil Resource Report
Soil Map

Map Scale: 1:3,120 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 45 90 180 270

Feet
0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

Danielle Cinguina

From: Brian Hildenbrand
Sent: Tuesday, October 16, 2018 3:51 PM
To: John Kellard; Peggy Galloway
Cc: Dominick
Subject: FW: CH# 6681 Western Bluff Subdivision, Carmel
Attachments: 2018-10-10_NYSDEC_RegPermitAdmin_Determination_ltr.pdf; Western Bluff Erosion Control Plan.pdf

For the Western Bluff file.
Good news, We are not required to get and individual SPDES permit.

-Brian

From: Pawliczak, Sarah A (DEC) <Sarah.Pawliczak@dec.ny.gov>
Sent: Tuesday, October 16, 2018 3:44 PM
To: Brian Hildenbrand <bhildenbrand@kelses.com>
Subject: RE: CH# 6681 Western Bluff Subdivision, Carmel

Mr. Hildenbrand,

I am in receipt of your letter dated October 10, 2018 requesting clarification on whether the above-referenced project qualifies for the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002). Division of Water staff have reviewed the attached documents. In order to be ineligible for the general permit, there would need to be over one acre of construction on greater than 25% slopes in E or F soils. Based on the information submitted, it does not appear that this project met all three of the criteria in Section 1.F6 (a-c). Therefore, it appears that this project is eligible for coverage under the general permit.

Thank you,

Sarah Pawliczak
Environmental Analyst, Division of Environmental Permits
New York State Department of Environmental Conservation
21 South Putt Corners Road, New Paltz, NY 12561
P: (845) 256-3050 | F: (845) 255-4659 | sarah.pawliczak@dec.ny.gov
www.dec.ny.gov |

From: Brian Hildenbrand [mailto:bhildenbrand@kelses.com]
Sent: Wednesday, October 10, 2018 3:07 PM
To: dec.sm.DEP.R3 <DEP.R3@dec.ny.gov>
Cc: Peggy Galloway <pgalloway@kelses.com>
Subject: Western Bluff Subdivision - Carmel, NY

Attached are documents related to the "Western Bluff Subdivision" in the Town of Carmel. We are seeking a determination if coverage under the SPDES General Permit is appropriate.
A hard copy of the submission will also be mailed to your office.

Thanks,

BRIAN HILDENBRAND, P.E.

KELLARD SESSIONS

KELLARD SESSIONS CONSULTING
500 Main Street | Armonk, New York 10504
T: 914.273.2323 | **F:** 914.273.2329
bhildenbrand@kelses.com | www.kelses.com

CIVIL ENGINEERING | LANDSCAPE ARCHITECTURE
SITE & ENVIRONMENTAL PLANNING

Standard N.Y.B.T.U. Form 8002—Bargain and Sale Deed, with Covenants against Grantor's Acts—Individual or Corporation. (single sheet)

CONSULT YOUR LAWYER BEFORE SIGNING THIS INSTRUMENT - THIS INSTRUMENT SHOULD BE USED BY LAWYERS ONLY

THIS INDENTURE, made the 26th day of October, nineteen hundred and seventy-eight

BETWEEN CHARLOTTE GUILTINAN residing at 407 Beech Street, Rome, New York,

party of the first part, and CARL KLING residing at 22 Annandale Street, Armonk, New York

party of the second part,

WITNESSETH, that the party of the first part, in consideration of ten dollars and other valuable consideration paid by the party of the second part, does hereby grant and release unto the party of the second part, the heirs or successors and assigns of the party of the second part forever,

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam and State of New York more specifically bounded and described as follows:

BEGINNING at a point on the northeasterly side of West Shore Drive where the same is intersected by the division line between the subject premises on the west and premises of the City of New York on the East; thence from said point of beginning along the northeasterly and easterly side of West Shore Drive the following courses and distances; on a curve to the right having a radius of 262.94 feet and central angle of 36° 34' 53" a distance of 167.88 feet to a point; North 25° 29' 00" West 295.44 feet to a point on a curve to the right having a radius of 803.96 feet and a central angle of 22° 11' 00" a distance of 311.27 feet to a point, North 3° 18' 00" West 244.29 feet to premises now or formerly of Irving and Lillian Goldfluss; thence along the same 4° 18' 00" East 158.71 feet, North 1° 26' 48" West 68.82 feet, North 0° 35' 03" East 36.86 feet, North 2° 31' 38" West 69.28 feet, North 1° 26' 48" West 143.01 feet, North 1° 39' 13" West 238.89 feet and North 1° 19' 49" East 18.17 feet to premises now or formerly of the City of New York; thence along the same North 61° 02' 00" East 1.99 feet, thence continuing along the same and generally along the south face of a stone wall South 86° 26' 00" East 236.97 feet and South 43° 18' 00" East 499.90 feet to a point; thence continuing along lands of the City of New York and generally along the westerly face of the stone wall South 10° 51' 00" West 1308.22 feet to the northeasterly side of WestShore Drive and the point or place of BEGINNING; said premises containing 14.795 acres more or less.

THESE PREMISES are also known as Map 68, Block 2 and Lot 2 on the Tax Assessment Map of the Town of Carmel, Putnam County, New York.

TOGETHER with all right, title and interest, if any, of the party of the first part in and to any streets and roads abutting the above described premises to the center lines thereof; TOGETHER with the appurtenances and all the estate and rights of the party of the first part in and to said premises; TO HAVE AND TO HOLD the premises herein granted unto the party of the second part, the heirs or successors and assigns of the party of the second part forever.

AND the party of the first part covenants that the party of the first part has not done or suffered anything whereby the said premises have been encumbered in any way whatever, except as aforesaid.

AND the party of the first part, in compliance with Section 13 of the Lien Law, covenants that the party of the first part will receive the consideration for this conveyance and will hold the right to receive such consideration as a trust fund to be applied first for the purpose of paying the cost of the improvement and will apply the same first to the payment of the cost of the improvement before using any part of the total of the same for any other purpose.

The word "party" shall be construed as if it read "parties" whenever the sense of this indenture so requires.

IN WITNESS WHEREOF, the party of the first part has duly executed this deed the day and year first above written.

IN PRESENCE OF:

Charlotte Guiltinan

Charlotte Guiltinan

STATE OF NEW YORK, COUNTY OF Oneida ss:

On the 23 day of October 19 78, before me personally came CHARLOTTE GUILTINAN

to me known to be the individual described in and who executed the foregoing instrument, and acknowledged that she executed the same.

Licia G. Seifert
Notary Public

LICIA G. SEIFERT
Notary Public in the State of New York
Appointed in Oneida County
My Commission Expires March 30, 1980

STATE OF NEW YORK, COUNTY OF ss:

On the day of 19 , before me personally came

to me known to be the individual described in and who executed the foregoing instrument, and acknowledged that executed the same.

STATE OF NEW YORK, COUNTY OF ss:

On the day of 19 , before me personally came

to me known, who, being by me duly sworn, did depose and say that he resides at No.

that he is the of , the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the board of directors of said corporation, and that he signed h name thereto by like order.

STATE OF NEW YORK, COUNTY OF ss:

On the day of 19 , before me personally came

the subscribing witness to the foregoing instrument, with whom I am personally acquainted, who, being by me duly sworn, did depose and say that he resides at No.

that he knows to be the individual described in and who executed the foregoing instrument; that he, said subscribing witness, was present and saw execute the same; and that he, said witness, at the same time subscribed h name as witness thereto.

Bargain and Sale Deed

WITH COVENANT AGAINST GRANTOR'S ACTS

TITLE NO.

CHARLOTTE GUILTINAN

TO

CARL KLING

7.00
93.50

STANDARD FORM OF NEW YORK BOARD OF TITLE UNDERWRITERS

Distributed by

CHICAGO TITLE INSURANCE COMPANY

TAX BILLING ADDRESS
22 ANNADALE ST
ARMONK N.Y

~~SECTION~~ Map 68

BLOCK 2

LOT 2

COUNTY ~~OR TOWN~~ of Putnam, Town of Carmel

Recorded at Request of
CHICAGO TITLE INSURANCE COMPANY

Return by Mail to

Carl Kling, Esq.
2 Annadale Street
Armonk, NY

Zip No.

RESERVE THIS SPACE FOR USE OF RECORDING OFFICE

PUTNAM COUNTY
'78 OCT 31 AM 9 58
CLERK'S OFFICE

RECEIVED
$ 93.50
REAL ESTATE
OCT 31 1978
TRANSFER TAX
PUTNAM
COUNTY

028

Recorded in the Clerk's Office of the County of Putnam on the 31 day of October 1978 at 9 hours and 58 minutes A.M. In Book No. 755 of Deeds on page 1184 and compared.

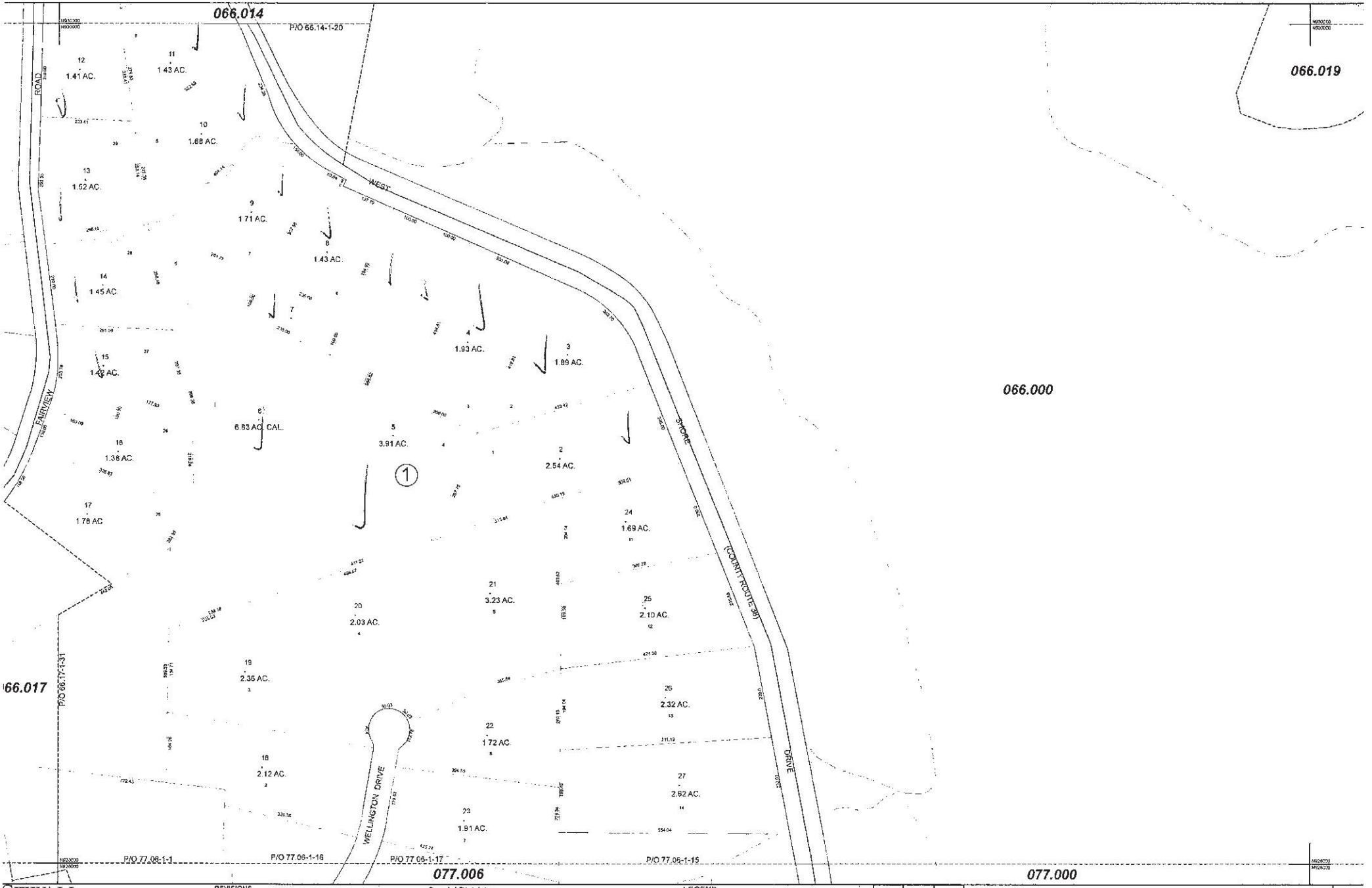
Joseph V. Falcone
Clerk

755 1184

Western Bluff Subdivision - Town Of Carmel
Drainage Cost Bond Estimate
November 8, 2021

Category / Description	Quantity	Unit	Unit Price	Extended Total	Subtotal
Lot 1					
Stormwater					
Catch Basins	2	EA	$ 2,500.00	$ 5,000.00	
Drain Manholes	5	EA	$ 2,500.00	$ 12,500.00	
Drain Pipe Trench Excavation	700	CY	$ 12.00	$ 8,400.00	
Pretreatment Tank	2	EA	$ 4,500.00	$ 9,000.00	
Oversize Drainage Structures	1	EA	$ 3,000.00	$ 3,000.00	
Drain Pipe 8" HDPE	32	LF	$ 25.00	$ 800.00	
Drain Pipe 10" HDPE	108	LF	$ 30.00	$ 3,240.00	
Drain Pipe 12" HDPE	313	LF	$ 33.00	$ 10,329.00	
Drain Pipe 15" HDPE	175	LF	$ 38.00	$ 6,650.00	
Treatment System "1B"					
Cultec 330XL w/ gravel	105	LF	$ 120.00	$ 12,600.00	
Excavation	150	CY	$ 12.00	$ 1,800.00	
Treatment System "1C"					
Cultec 330XL w/ gravel	105	LF	$ 120.00	$ 12,600.00	
Excavation	150	CY	$ 12.00	$ 1,800.00	
Lot 2					
Stormwater					
Catch Basins	9	EA	$ 2,500.00	$ 22,500.00	
Drain Manholes	1	EA	$ 2,500.00	$ 2,500.00	
Drain Pipe Trench Excavation	700	CY	$ 12.00	$ 8,400.00	
Pretreatment Tank	1	EA	$ 4,500.00	$ 4,500.00	
Oversize Drainage Structures	1	EA	$ 3,000.00	$ 3,000.00	
Drain Pipe 6" HDPE	50	LF	$ 20.00	$ 1,000.00	
Drain Pipe 8" HDPE	526	LF	$ 25.00	$ 13,150.00	
Drain Pipe 12" HDPE	38	LF	$ 33.00	$ 1,254.00	
Treatment System "3A"					
Cultec 150XL w/ gravel	205	LF	$ 120.00	$ 24,600.00	
Excavation	175	CY	$ 12.00	$ 2,100.00	
Lot 3					
Stormwater					
Catch Basins	4	EA	$ 2,500.00	$ 10,000.00	
Drain Manholes	8	EA	$ 2,500.00	$ 20,000.00	
Drain Pipe Trench Excavation	730	CY	$ 12.00	$ 8,760.00	
Stormwater Basins	3	EA	$ 1,500.00	$ 4,500.00	
Oversize Drainage Structures	1	EA	$ 3,000.00	$ 3,000.00	
Drain Pipe 6" HDPE	13	LF	$ 20.00	$ 260.00	
Drain Pipe 8" HDPE	176	LF	$ 25.00	$ 4,400.00	
Drain Pipe 10" HDPE	42	LF	$ 30.00	$ 1,260.00	
Drain Pipe 12" HDPE	334	LF	$ 33.00	$ 11,022.00	
Drain Pipe 15" HDPE	490	LF	$ 38.00	$ 18,620.00	
			Drainage Construction Subtotal:	$ 252,545.00	
			Total Estimated Cost:	**$ 252,545.00**	
				$ 252,545.00	

KELLARD SESSIONS CONSULTING, P.C.



SEWALL

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

Special Districts
CARMEL CENTRAL SCHOOL DISTRICT
CARMEL FD
MAHOPAC CENTRAL SCHOOL DISTRICT
MAHOPAC FD

LEGEND

STATE LINE		DISPUTED AREA		WETLANDS LINE & SYMBOL	
COUNTY LINE		CONTINUOUS OWNERSHIP		DEVELOPERS LOT NUMBER	5
TOWN LINE		ROAD R.O.W.		DEED DIMENSION	100(D)
VILLAGE LINE		STREAM WATER LINE		SCALED DIMENSION	100(S)
BLOCK LINE		SPECIAL DISTRICT LINE		CALCULATED AREA	2.34 AC. CAL.
ORIGINAL LOT LINE		SCHOOL DISTRICT LINE		VISUAL CENTROID	+
PROPERTY LINE		PART OF PARCEL BOUNDARY		PARCEL NUMBER	21

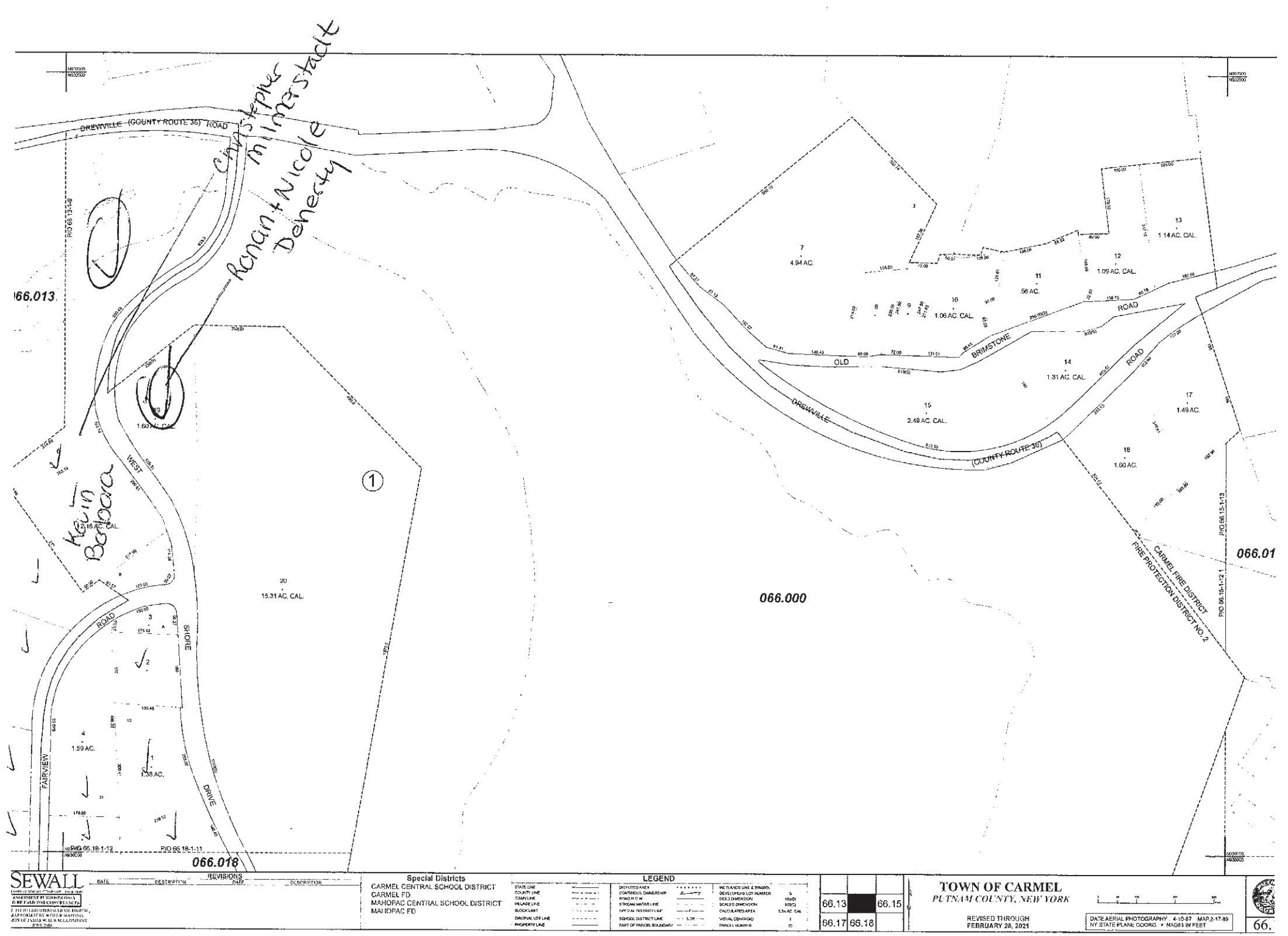
66.13	66.14	66.15
66.17		
77.05	77.06	

TOWN OF CARMEL
PUTNAM COUNTY, NEW YORK

REVISED THROUGH
FEBRUARY 28, 2021

DATE AERIAL PHOTOGRAPHY .. 4-10-87 MAP 2-17-89
NY STATE PLANE COORD. = NAD83 IN FEET

66.



SEWALL

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

Special Districts

CARMEL CENTRAL SCHOOL DISTRICT
CARMEL FD
MAHOPAC CENTRAL SCHOOL DISTRICT
MAHOPAC FD

LEGEND

STATE LINE	DISPUTED AREA	INCREASING LINE & SYMBOL	
COUNTY LINE	CONTINUOUS OWNERSHIP	DEVELOPABLE LOT NUMBER	5
TOWN LINE	ROAD R.O.W.	DEED DIMENSION	100(D)
VILLAGE LINE	STREAM/WATER LINE	SCALED DIMENSION	100(S)
BLOCK LINE	SPECIAL DISTRICT LINE	CALCULATED AREA	1.34 AC. CAL.
ORIGINAL LOT LINE	SCHOOL DISTRICT LINE	VISUAL CENTROID	+
PROPERTY LINE	PART OF PARCEL BOUNDARY	PARCEL NUMBER	25

66.13		66.15
66.17	66.18	

TOWN OF CARMEL
PUTNAM COUNTY, NEW YORK

REVISED THROUGH
FEBRUARY 28, 2021

DATE AERIAL PHOTOGRAPHY: 4-10-67 MAP 2-17-89
NY STATE PLANE COORD. = NAD83 IN FEET

66.

372000-066-014-0001-019-000-0000
Ronan and Nicole Doherty
380 w Shore Drive

372000-066-014-0001-006
Christopher and Denise Milmerstadt
383 w Shore Drive

37200-066-014-0001-005-8
Kevin and Lethtia Barber
375 w Shore Drive

37200-066-013-0001-016
Miriam Soto and Doris Ocasio
93 Fairview Road

372000-066-013-0001-017
Marek Razmierowski and Magdalena Pawlawska
99 Fairview Road

372000-066-013-0001-015-
Benjamin and Irene Dancygier
83 Fairview Road

372000-066-017-0001-029
Richard and Anna Maria Luce
75 Fairview Road

372000-066-017-0001-028
Irrev Acquinas
63 Fairview Rd

372000-066-017-0001-027
James and Maria Lataner
57 Fairview Rd

372000-066-017-0001-026
Paul and Agnes Califano
51 fairview Road

372000-066-018-0001-014
Richard and Mary Gleason
52 Fairview Road

372000-066-018-0001-013
Jacquelyn DiCicco and Alfred Pizzuto Jr
62 Fairview Road

372000-066-018-0001-012
Ronald Kammerer
74 Fairview Rd

372000-066-014-0001-004
Barbara Devereaux
90 fairview Road

372000-066-014-0001-003
Town of Carmel
96 Fair View Rd

372000-066-014-0001-002
Kenneth and Clare Ryan
355 W Shore Drive

372000-066-014-0001-001
Richard and Crystal Wolodin
347 W Shore Drive

372000-066-018-0001-011
Anthony and Samantha Calvert
339 W Shore Drive

372000-066-018-0001-010
Russell and Rachelle Bleakley
333 W Shore Drive

372000-066-018-0001-009
Lisa and Steven Tornambre
325 W Shore Drive

372000-066-018-0001-008
Elaine Bessen
317 W Shore Drive

PRELIMINARY SUBDIVISION PLAN

FOR

WESTERN BLUFF SUBDIVISION

TOWN OF CARMEL, PUTNAM COUNTY, NEW YORK

DATE: JANUARY 13, 2017
REVISED: MAY 01, 2017
REVISED: MAY 15, 2017
REVISED: JANUARY 19, 2018
REVISED: JULY 5, 2018
REVISED: OCTOBER 31, 2018
REVISED: MAY 7, 2019
REVISED: JANUARY 20, 2020
REVISED: OCTOBER 20, 2020
REVISED: NOVEMBER 8, 2021

GENERAL NOTES

1. THE PROJECT INCLUDES ACCESS AND UTILITY EASEMENTS AND A STORMWATER EASEMENT.
   - ACCESS AND UTILITY EASEMENT OVER LOT #3 IN FAVOR OF LOTS #1 AND #2
   - ACCESS AND UTILITY EASEMENT OVER LOT #2 IN FAVOR OF LOT #1
   - ACCESS AND UTILITY EASEMENT OVER LOT #1 IN FAVOR OF LOT #2

   PLEASE SEE SUBDIVISION MAP WESTERN BLUFF SUBDIVISION PREPARED FOR SANTUCCI CONSTRUCTION FOR ALL EASEMENTS.

2. THE PROJECT DOES NOT INCLUDE A RESERVATION OF OPEN SPACE, THEREFORE, IN ACCORDANCE WITH SECTION 131-25A(3) OF THE TOWN OF CARMEL TOWN CODE A PAYMENT IS REQUIRED IN LIEU OF A RESERVATION OF LAND, FROM THE APPLICANT.

3. ALL DRIVEWAYS MUST COMPLY WITH SECTION 128 OF THE TOWN OF CARMEL TOWN CODE.

4. ALL PROPOSED PLANTINGS SHALL BE INSTALLED IN CONFORMANCE WITH SECTION 142 OF THE TOWN OF CARMEL TOWN CODE. ALL PLANTINGS SHALL BE VERIFIED BY THE TOWN OF CARMEL WETLAND INSPECTOR.

SITE DATA

OWNER:	CARL C. KLING 440 COLONY DRIVE WHITELAND, IN 46184
APPLICANT:	DOMINICK SANTUCCI 15 TRAVIS LANE MONTROSE, N.Y. 10548
PROPERTY ADDRESS:	350 WEST SHORE DRIVE CARMEL, N.Y.
TAX MAP DESIGNATION:	SECTION: 66.14, BLOCK: 1, LOT 20
LOT AREA:	644,463 S.F. (14.79 AC.)
ZONING DESIGNATION:	R-RESIDENTIAL

LOCATION MAP
N.T.S

SHEET INDEX

KELLARD SESSIONS
CONSULTING
ENGINEERING, LANDSCAPE ARCHITECTURE & PLANNING, P.C.
500 Main Street • Armonk, N.Y. 10504
T: (914) 273-2323
F: (914) 273-2328
www.kellard.com

LEGEND

(symbol)	EXISTING PROPERTY LINE
600	EXISTING 10' CONTOURS
(symbol)	EXISTING 2' CONTOURS
(symbol)	EXISTING WETLAND
(symbol)	WETLAND BUFFER
(symbol)	RESERVOIR STEM BUFFER
(symbol)	EXISTING STREAM
12"MAPLE	EXISTING TREE
(symbol)	EXISTING STRUCTURES
(symbol)	SLOPES 15% - 25%
(symbol)	SLOPES 25% AND GREATER

SOIL LEGEND

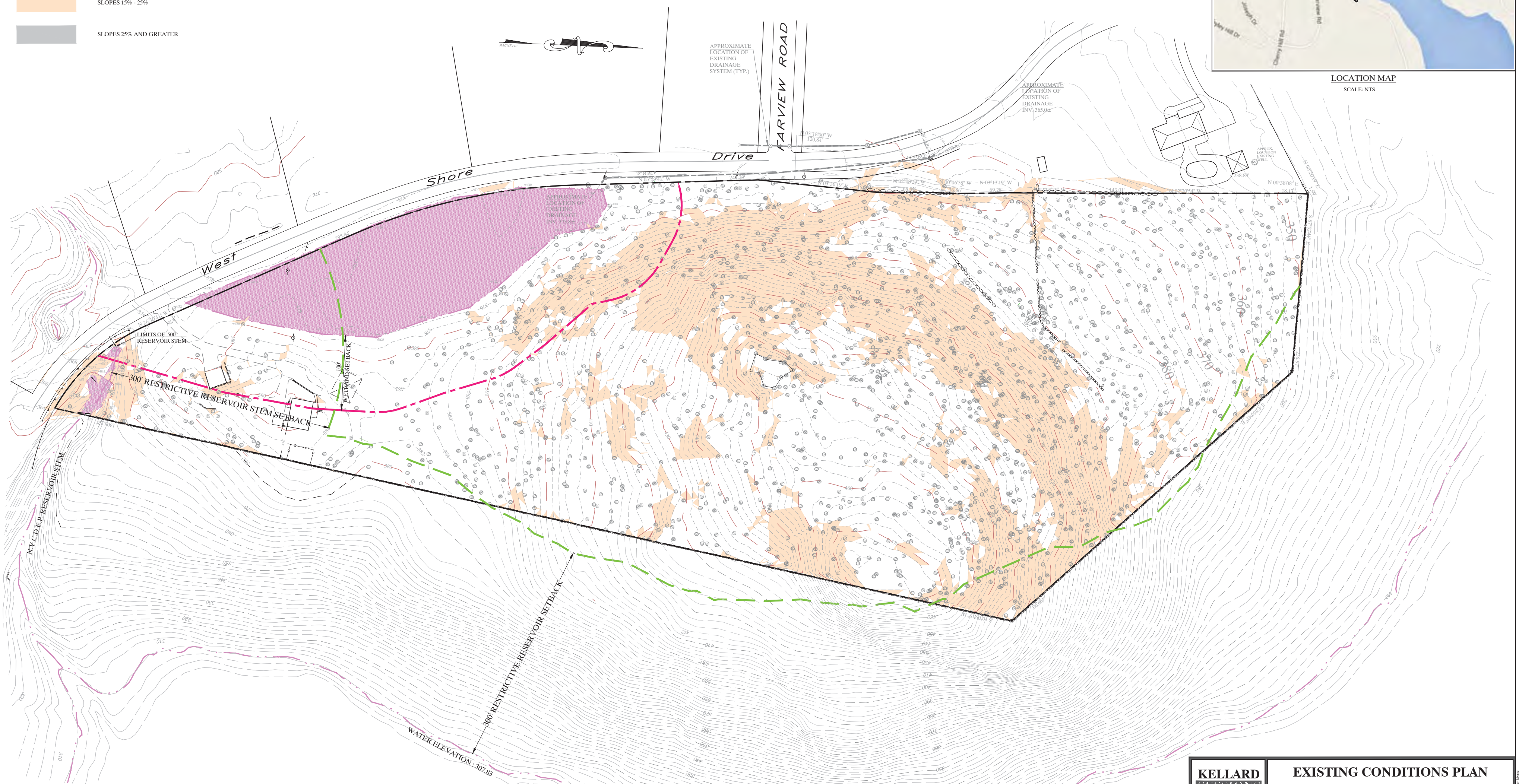
(symbol)	SOIL BOUNDARY
Lc	LEICESTER LOAM
Pn	PAXTON FINE SANDY LOAM
Cs	CHATFIELD - CHARLTON COMPLEX
Cr	CHARLTON - CHATFIELD COMPLEX
HrF	HOLLIS - ROCK

SITE DATA

OWNER:	CARL C. KLING 440 COLONY DRIVE WHITELAND, IN 46184
APPLICANT:	DOMINICK SANTUCCI 15 TRAVIS LANE MONTROSE, N.Y. 10548
PROPERTY ADDRESS:	350 WEST SHORE DRIVE CARMEL, N.Y.
TAX MAP DESIGNATION:	SECTION: 66.14, BLOCK: 1, LOT 20
LOT AREA:	644,463 S.F. (14.79 AC.)
ZONING DESIGNATION:	R-RESIDENTIAL

LOCATION MAP

SCALE: NTS



GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

GENERAL NOTES:

1. BASE MAP INFORMATION (BOUNDARY, TOPOGRAPHY, WETLANDS AND TREES) PROVIDED FROM MAP ENTITLED, "TOPOGRAPHICAL SURVEY" PREPARED FOR CARL KLING, IN THE TOWN OF CARMEL PREPARED BY WARD CARPENTERS ENGINEERS, INC. DATED OCTOBER 28, 2014. SURVEY WAS UPDATED ON FEBRUARY 17, 2016 TO INCLUDE BOUNDARY OF RESERVOIR AND RESERVOIR STEM.
2. WETLAND FLAGGED CONDUCTED BY DAVID J. SESSIONS, RLA, AND SURVEYED BY WARD CARPENTERS ENGINEERS INC.
3. SOILS BOUNDARIES AND IDENTIFICATIONS ARE PROVIDED BY THE NATIONAL SOIL CONSERVATION SERVICE.
4. FIELD VERIFICATION OF NYCDEP REGULATED WATERCOURSES AND RESERVOIR STEM WAS CONDUCTED ON AUGUST 15, 2017.

KELLARD SESSIONS CONSULTING

ENGINEERING, LANDSCAPE ARCHITECTURE & PLANNING, P.C.

500 MAIN STREET
ARMONK, N.Y. 10504
P: (914) 273-2323
F: (914) 273-2329
WWW.KELSES.COM

EXISTING CONDITIONS PLAN

WESTERN BLUFF SUBDIVISION

TOWN OF CARMEL — PUTNAM COUNTY, NEW YORK

STATE OF NEW YORK — JOHN KELLARD — 058736 — LICENSED PROFESSIONAL ENGINEER

	REVISIONS
9.	NOVEMBER 8, 2021 - TOWN ENGINEER COMMMENTS
8.	OCTOBER 20, 2020 - NYCDEP COMMENTS
7.	JANUARY 20, 2020 - NYCDEP COMMENTS
6.	MAY 7, 2019 - NYCDEP COMMENTS
5.	OCTOBER 31, 2018 - DEP COMMENTS
4.	JULY 5, 2018 - DEP COMMENTS
3.	JANUARY 19, 2018 - DEP SUBMISSION
2.	MAY 15, 2017 ENVIRONMENTAL BOARD
1.	MAY 01, 2017 PLANNING BOARD

1 / 9

PROJECT I.D.: STC100

DATE: JANUARY 13, 2017

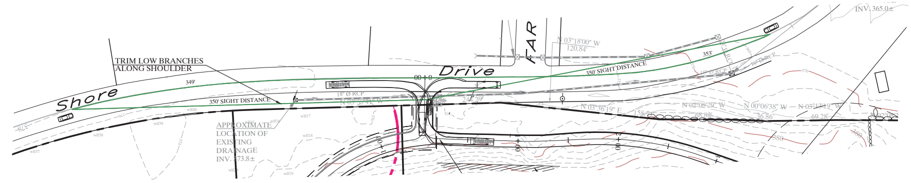
Nov 18, 2021 - 3:45pm G:\STC100\CAD Dwgs\STC100_DESIGN-2021-11-08.dwg - kbyrne

LEGEND

- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- ZONING SETBACK LINE
- LIMITS OF DISTURBANCE (3.85 ACRES ±)
- EXISTING 10' CONTOURS
- EXISTING 2' CONTOURS
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- EXISTING WETLAND
- WETLAND BUFFER
- RESERVOIR BUFFER
- EXISTING STREAM
- EXISTING TREE
- EXISTING STRUCTURES TO BE REMOVED
- SLOPES 15% - 25%
- SLOPES 25% AND GREATER
- PROPOSED PRIMARY SEPTIC FIELDS
- PROPOSED EXPANSION SEPTIC FIELDS
- PROPOSED STORMWATER SYSTEMS
- PROPOSED DRAINAGE LINE
- PROPOSED CATCH BASIN
- PROPOSED SIGHT LINE DISTANCE
- PROPOSED ELECTRIC SERVICE

DEEP TEST PIT RESULTS - WITNESSED BY DEP 11/21/17		
TEST PIT	DEPTH FROM SURFACE(INCH)	SOIL DESCRIPTION
D-1-1	0-8" 8"-29" 29"-90"	TOPSOIL ORANGE/BROWN SANDS GRAY MEDIUM TO FINE SANDS LEDGE @ 90"
D-1-2	0-8" 8"-38" 38"-72"	TOPSOIL ORANGE/BROWN SANDS GRAY MEDIUM TO FINE SANDS LEDGE @ 72"
D-2-1	0-4" 4"-32" 32"-60"	TOPSOIL ORANGE/BROWN LOAMY LANDS W/ SILT GRAY SANDS; FINE SILT LEDGE @ 60"
D-2-2	0-4" 4"-33" 33"-72"	TOPSOIL ORANGE/BROWN LOAMY LANDS W/ SILT GRAY SANDS; FINE SILT
D-3-1	0-4" 4"-32" 32"-90"	TOPSOIL SILTY SANDS, MODERATELY COMPACT LIGHT BROWN SILTY LOAM, VERY COMPACT
D-3-2	0-4" 4"-32" 32"-86"	TOPSOIL SILTY SANDS, MODERATELY COMPACT LIGHT BROWN SILTY LOAM, VERY COMPACT
D-3-3	0-8" 8"-24" 24"-54"	TOPSOIL ORANGE/BROWN LOAMY SANDS MODERATELY COMPACT TRACES OF SILT, SANDS W/ GRAVEL MOTTLING @ 36"
D-3-4	0-18" 18"-40"	DARK BROWN TOPSOIL TIGHTLY COMPACT SILT, SOME SANDS W/ BOULDERS MOTTLING @ 24"

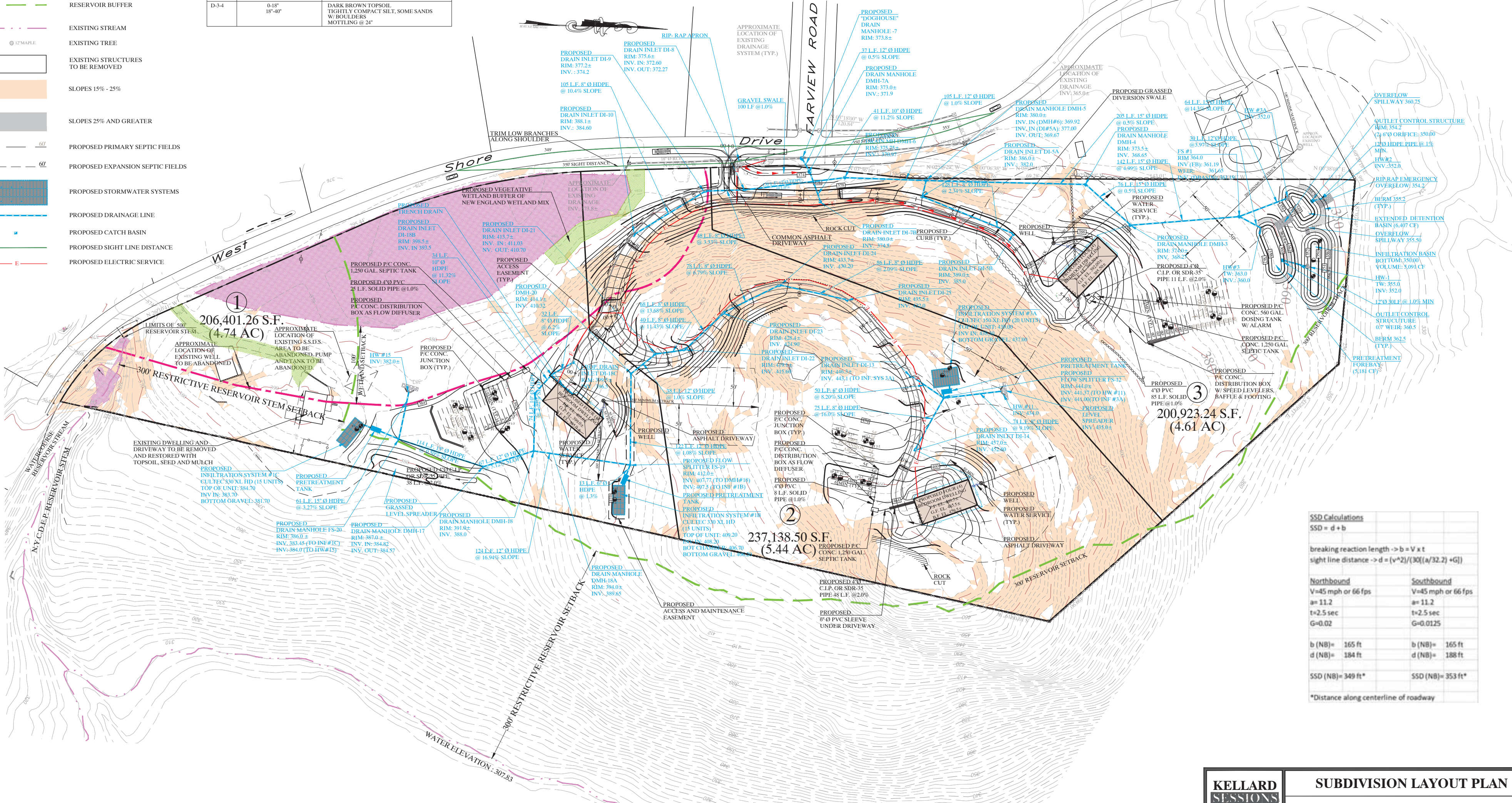
PERCOLATION TEST RESULTS 11/21/17	
PERC HOLE #	PERC RATE
P1	3.00 MIN/INCH
P2	1.60 MIN/INCH
P3	2.61 MIN/INCH
P4	3.33 MIN/INCH



VEHICLE TURNING ANALYSIS AND SIGHT LINE DISTANCE

SITE DATA

OWNER:	CARL C. KLING 440 COLONY DRIVE WHITELAND, IN 46184
APPLICANT:	DOMINICK SANTUCCI 15 TRAVIS LANE MONTROSE, N.Y. 10548
PROPERTY ADDRESS:	350 WEST SHORE DRIVE CARMEL, N.Y.
TAX MAP DESIGNATION:	SECTION: 66.14, BLOCK: 1, LOT 20
LOT AREA:	644,463 S.F. (14.79 AC.)
ZONING DESIGNATION:	R-RESIDENTIAL



SSD Calculations			
SSD = d + b			
breaking reaction length -> b = V x t			
sight line distance -> d = (v^2)/(30[(a/32.2) +G])			
Northbound		Southbound	
V=45 mph or 66 fps		V=45 mph or 66 fps	
a= 11.2		a= 11.2	
t=2.5 sec		t=2.5 sec	
G=0.02		G=0.0125	
b (NB)=	165 ft	b (NB)=	165 ft
d (NB)=	184 ft	d (NB)=	188 ft
SSD (NB)=	349 ft*	SSD (NB)=	353 ft*
*Distance along centerline of roadway			

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

ZONING CHART

LOT NUMBER	LOT AREA (S.F.)	LOT WIDTH (FT.)	LOT DEPTH (FT.)	FRONT YARD (FT.)	SIDE YARD (FT.)	REAR YARD (FT.)	MAX. BLDG HEIGHT(FT.)	MAX. BLDG COVERAGE (%)	FRONTAGE (FT.)
REQUIRED	120,000	200	200	40	25/EACH SIDE	40	35	15%	100
LOT #1	206,401.26	424	539	302	79/93	65	35<	1.3%	752
LOT #2	237,138.50	372	666	552	153/315	87	35<	1.1%	168
LOT #3	200,923.24	248	737	328	75/109	289	35<	1.3%	100

REVISIONS	
19.	
18.	
17.	
16.	
15.	
14.	
13.	NOVEMBER 8, 2021- TOWN ENGINEER COMMENTS
12.	OCTOBER 20, 2020 - NYCDEP COMMENTS
11.	JANUARY 20, 2020 - NYCDEP COMMENTS

KELLARD SESSIONS CONSULTING
ENGINEERING, LANDSCAPE ARCHITECTURE & PLANNING, P.C.
500 MAIN STREET
ARMONK, N.Y. 10504
P: (914) 273-2323
F: (914) 273-2329
WWW.KELSES.COM

SUBDIVISION LAYOUT PLAN

WESTERN BLUFF SUBDIVISION

TOWN OF CARMEL PUTNAM COUNTY, NEW YORK

STATE OF NEW YORK · JOHN KELLARD · LICENSED PROFESSIONAL ENGINEER · 058736

REVISIONS	
10.	MAY 7, 2019 - NYCDEP COMMENTS
9.	OCTOBER 31, 2018 - DEP COMMENTS
8.	JULY 5, 2018 - DEP COMMENTS
7.	JANUARY 19, 2018 - DEP SUBMISSION
6.	MAY 15, 2017 ENVIRONMENTAL BOARD
5.	APRIL 25, 2017 PLANNING BOARD
4.	JANUARY 13, 2017
3.	JULY 20, 2016
2.	JULY 14, 2016
1.	JUNE 21, 2016

2 / 9

PROJECT I.D.: STC100

DATE: JANUARY 9, 2015

LEGEND

- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- ZONING SETBACK LINE
- LIMITS OF DISTURBANCE (3.85 ACRES ±)
- EXISTING 10' CONTOURS
- EXISTING 2' CONTOURS
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- EXISTING WETLAND
- WETLAND BUFFER
- RESERVOIR BUFFER
- EXISTING STREAM
- EXISTING TREE
- EXISTING STRUCTURES
- SILT FENCE
- TEMPORARY SOIL STOCKPILE
- STABILIZED CONSTRUCTION ENTRANCE
- EROSION CONTROL MATTING
- SLOPES 25% +

EROSION CONTROL MAINTENANCE SCHEDULE

DEVICE	WEEKLY	BI-MONTHLY	MONTHLY	AFTER SIGNIFICANT RAINFALL
STABILIZED CONSTRUCTION ENTRANCE	INSPECT	INSPECT	INSPECT/CLEAN	INSPECT/CLEAN
SILT FENCE	INSPECT	INSPECT	INSPECT/CLEAN	INSPECT/CLEAN
SOIL STOCKPILE	INSPECT	INSPECT	INSPECT	INSPECT/CLEAN
EROSION CONTROL BLANKET	INSPECT	INSPECT	INSPECT	INSPECT
INLET PROTECTION	INSPECT	INSPECT	INSPECT	INSPECT/CLEAN

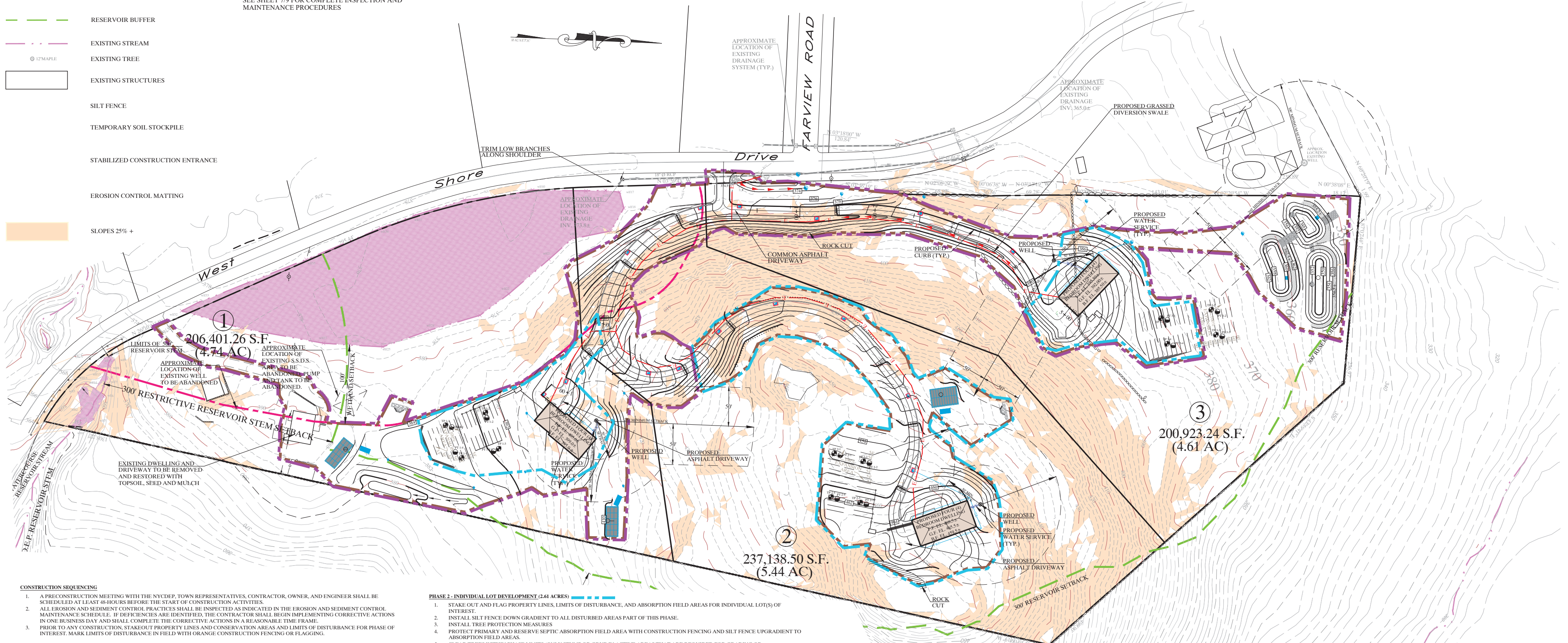
SEE SHEET 7/9 FOR COMPLETE INSPECTION AND MAINTENANCE PROCEDURES

CUT & FILL ANALYSIS

	CUT VOLUME	FILL VOLUME	NET
TOTAL	6,214 CY	7,090 CY	876 CY (FILL)
PHASE 1	5,282 CY	1,000 CY	4,282 CY (CUT)
PHASE 2	932 CY	6,090 CY	5,158 CY (FILL)

SOIL LEGEND

	SOIL BOUNDARY
LcB	LEICESTER LOAM
PnB & PnC	PAXTON FINE SANDY LOAM
CsD	CHATFIELD - CHARLTON COMPLEX
CrC	CHARLTON - CHATFIELD COMPLEX
HrF	HOLLIS - ROCK



GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

CONSTRUCTION SEQUENCING

1. A PRECONSTRUCTION MEETING WITH THE NYCDEP, TOWN REPRESENTATIVES, CONTRACTOR, OWNER, AND ENGINEER SHALL BE SCHEDULED AT LEAST 48-HOURS BEFORE THE START OF CONSTRUCTION ACTIVITIES.
2. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSPECTED AS INDICATED IN THE EROSION AND SEDIMENT CONTROL MAINTENANCE SCHEDULE. IF DEFICIENCIES ARE IDENTIFIED, THE CONTRACTOR SHALL BEGIN IMPLEMENTING CORRECTIVE ACTIONS IN ONE BUSINESS DAY AND SHALL COMPLETE THE CORRECTIVE ACTIONS IN A REASONABLE TIME FRAME.
3. PRIOR TO ANY CONSTRUCTION, STAKEOUT PROPERTY LINES AND CONSERVATION AREAS AND LIMITS OF DISTURBANCE FOR PHASE OF INTEREST. MARK LIMITS OF DISTURBANCE IN FIELD WITH ORANGE CONSTRUCTION FENCING OR FLAGGING.

PHASE 1 - COMMON INFRASTRUCTURE (2.52 ACRES)

1. INSTALL STABILIZED CONSTRUCTION ENTRANCES AT THE PROPOSED INTERSECTION WITH WEST SHORE DRIVE.
2. INSTALL SILT FENCE DOWN GRADIENT TO ALL DISTURBED AREAS PART OF THIS PHASE AND UP GRADIENT TO PROPOSED INFILTRATION BASIN AND LOT 3 SEPTIC FIELD AREA.
3. INSTALL TREE PROTECTION MEASURES
4. PLACE CONSTRUCTION STAGING AREA AT LOT 3 PER PHASING PLAN.
5. PLACE CONSTRUCTION FENCE AROUND PROPOSED LOCATION OF INFILTRATION BASIN AND PROPOSED SEPTIC SYSTEM ABSORPTION FIELDS WITHIN AND NEAR TO THE LIMITS OF PHASE 1. PROTECT THESE AREAS FROM TRAFFIC DURING CONSTRUCTION ACTIVITIES.
6. CONSTRUCT DETENTION BASIN PER DESIGN DRAWINGS. USE FOREBAY AS A TEMPORARY SEDIMENT BASIN DURING CONSTRUCTION.
7. STABILIZE ALL GRADED AND DISTURBED AREAS WITHIN DIVERSION SWALE AREA.
8. CLEAR REMAINING TREES WITHIN PHASE LIMITS (ONLY STUMP OR GRUB IN ACTIVE AREAS THAT ARE REQUIRED FOR GRADING OR INFRASTRUCTURE CONSTRUCTION).
9. EXCAVATE AND CONSTRUCT PRETREATMENT SEDIMENT BASIN PER DESIGN DRAWINGS (EXCEPT DO NOT CONSTRUCT WEIR AND SPILLWAY DOWN TO INFILTRATION AREA). ONCE STABILIZED, CONSTRUCT THE TEMPORARY OUTLET TO SEDIMENT BASIN. THE PRETREATMENT SEDIMENT FOREBAY / SHALL BE USED AS PRETREATMENT TO SEDIMENT BASIN DURING CONSTRUCTION.
10. CONSTRUCT PIPE NETWORK AND STRUCTURES IN REVERSE ORDER GOING UPHILL. STARTING FROM THE DRAINAGE OUTLET HW3, HW 3A, FS 1, DMH3, DMH4, DMH5, DMH6, DI8, DI9 AND DI 10 INSTALL EROSION MATTING OVER STEEP SLOPES AS SPECIFIED ON DESIGN DRAWINGS.
11. INFILTRATION SYSTEM #1B WILL BE INSTALLED ALONG WITH THE PRETREATMENT TANK, FS19, DMH 20 AND THE CONNECTING PIPING. A PIPE STUB WILL BE INSTALLED TO THE PROPERTY LINE FOR FUTURE CONNECTION DURING LOT 2 DEVELOPMENT.
12. INSTALL INLET PROTECTION AT ALL OPEN GRATED DRAINAGE INLETS TO PROTECT DOWN GRADIENT CONVEYANCE SYSTEMS.
13. KEEP ANY INSTALLED INFILTRATION PRACTICE OFFLINE UNTIL THE DRAINAGE AREA IS STABILIZED.
14. ROUGH GRADE COMMON ROAD THAT WILL SERVICE LOTS 1, 2, &3.
15. INSTALL EROSION MATTING ALONG ROAD EMBANKMENT PER PLANS.
16. INSTALL COMMON ROAD BINDER COURSE AND CURBING.
17. ENSURE AREAS OUTSIDE OF THE ROAD AND THAT WILL NOT BE DISTURBED IN THE IMMEDIATE FUTURE ARE STABILIZED WITH VEGETATION (TOPSOIL, SEED AND MULCH AS NECESSARY).

PHASE 2 - INDIVIDUAL LOT DEVELOPMENT (2.61 ACRES)

1. STAKE OUT AND FLAG PROPERTY LINES, LIMITS OF DISTURBANCE, AND ABSORPTION FIELD AREAS FOR INDIVIDUAL LOT(S) OF INTEREST.
2. INSTALL SILT FENCE DOWN GRADIENT TO ALL DISTURBED AREAS PART OF THIS PHASE.
3. INSTALL TREE PROTECTION MEASURES
4. PROTECT PRIMARY AND RESERVE SEPTIC ABSORPTION FIELD AREA WITH CONSTRUCTION FENCING AND SILT FENCE UPGRADIENT TO ABSORPTION FIELD AREAS.
5. CLEAR TREES WITHIN PHASE LIMITS (ONLY STUMP OR GRUB IN ACTIVE AREAS THAT ARE REQUIRED FOR GRADING OR CONSTRUCTION).
6. ROUGH GRADE LOTS AND DRIVEWAYS.
7. INSTALL REMAINING INFRASTRUCTURE THAT WILL TIE INTO THE COMMON STORMWATER CONVEYANCE SYSTEM. LOT 1: HW 15, FS-20, DMH 17, DMH 18, DMH 18A, DI18B, DI18C. LOT 2: HW 11, FS-12, DI 14, DI 13, DI 21,AND DI 22
8. INSTALL DRAINAGE INLET PROTECTION AS NECESSARY.
9. TOPSOIL, SEED, AND MULCH DISTURBED AREAS OUTSIDE OF CONSTRUCTION TRAFFIC AREAS.
10. INSTALL RESIDENTIAL HOUSES PER THE DIRECTION AND APPROVAL OF ALL REGULATORY AND GOVERNING AGENCIES.
11. INSTALL ANY REMAINING DRAINAGE FACILITIES SHOWN ON THE DESIGN PLANS.
12. KEEP THE INFILTRATION SYSTEM OFFLINE UNTIL THE CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED.
13. INSTALL WELL AND SEWAGE DISPOSAL SYSTEMS PER THE DIRECTION AND APPROVAL OF ALL REGULATORY AND GOVERNING AGENCIES.
14. FINISH INDIVIDUAL LOT GRADING AS NECESSARY. TOPSOIL, SEED, AND MULCH AS NECESSARY.
15. PUT INFILTRATION SYSTEMS ONLINE ONLY AFTER CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED.
16. INSTALL FINAL DRIVEWAY ASPHALT AS NECESSARY.

PHASE 3 - FINAL SITE CLEANUP AND INFILTRATION BASIN CONVERSION (NO NEW DISTURBANCE)

1. AFTER LOTS 1 THROUGH 3 HAVE BEEN DEVELOPED AND ALL AREAS ARE PERMANENTLY STABILIZED TO THE SATISFACTION OF THE TOWN ENGINEER AND NYCDEP, INSTALL THE TOP PAVEMENT COURSE TO THE SHARED COMMON DRIVEWAY.
2. AFTER ALL LOTS (LOTS 1 THROUGH 3) HAVE BEEN DEVELOPED AND ALL AREAS ARE PERMANENTLY STABILIZED, THE INFILTRATION BASIN SHALL BE PUT ONLINE.
3. ONCE BASINS ARE STABILIZED, CONSTRUCT OUTLET WORKS PER DESIGN DRAWINGS.
4. ONCE ALL DISTURBED AREAS ARE STABILIZED, CONVERT THE TEMPORARY SEDIMENT BASIN TO THE PERMANENT DETENTION BASIN. ONCE THE DISTURBED AREA HAS BEEN PERMANENTLY STABILIZED, THE ENTIRE DRAINAGE NETWORK SHALL BE CLEANED TO REMOVE ANY SEDIMENT IN THE CATCH BASINS SUMPS OR PIPE NETWORKS. ALL BASIN OUTLET WORKS SHALL BE MAINTAINED AND CLEANED. REMOVE ANY DEBRIS AT RIPRAP OUTFALLS.
5. AFTER ALL ABOVE WORK IS COMPLETE AND AT THE DIRECTION AND APPROVAL OF THE TOWN ENGINEER AND THE NYCDEP, INSTALL THE OVERFLOW SYSTEM AT THE PRETREATMENT SEDIMENT FOREBAY TO DIRECT CLEAN DRAINAGE TO THE INFILTRATION BASIN.
6. CONTRACTOR SHALL PERFORM FINAL SITE CLEAN UP TO ENSURE ALL SILT FENCE, TREE PROTECTION, CONSTRUCTION DEBRIS IS REMOVED.
7. IN ACCORDANCE WITH GP-0-15-002, A FINAL STABILIZATION INSPECTION AND INSPECTION OF LONG-TERM STORMWATER MANAGEMENT FACILITIES BY A QUALIFIED INSPECTOR IS REQUIRED. IF APPLICABLE, SIGN-OFF BY THE LOCAL MS4 MAY BE REQUIRED BEFORE THE NOTICE OF TERMINATION (NOT) CAN BE FILED WITH NYSDEC.
8. THE GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES STATES THAT IT IS UNLAWFUL FOR ANY PERSON TO CAUSE OR CONTRIBUTE TO A VIOLATION OF WATER QUALITY STANDARDS. STABILIZATION MEANS COVERING OR MAINTAINING AN EXISTING COVER OVER SOIL. COVER CAN BE VEGETATIVE (E.G. GRASS, TREES, SEED AND MULCH, SHRUBS OR TURF) OR NON-VEGETATIVE (E.G. GEO-TEXTILES, RIPRAP, GABIONS, PAVEMENT, OR CRUSHED STONE) PER SPDES GENERAL PERMIT FOR STORMWATER RUNOFF FROM CONSTRUCTION ACTIVITIES, GP-0-15-002.

INDIVIDUAL LOT CONTINGENCY NOTE

IN THE EVENT THE OWNER / DEVELOPER DECIDE NOT TO DEVELOP ALL LOTS AND INTEND ON FILING THE NOTICE OF TERMINATION WITH THE NYSDEC, ALL AREAS SHALL BE STABILIZED TO THE SATISFACTION OF THE TOWN ENGINEER AND NYCDEP. THE DEVELOPER MUST CONSTRUCT ALL PERMANENT STORMWATER PRACTICES AND PLACE THESE PRACTICES ON-LINE PRIOR TO CLOSING THE NYSDEC PERMIT. FUTURE DISTURBANCE OR LAND DEVELOPMENT OPERATIONS WILL REQUIRE NEW APPROVALS

	REVISIONS
10.	NOVEMBER 8, 2021- TOWN ENGINEER COMMENTS
9.	OCTOBER 20, 2020 - NYCDEP COMMENTS
8.	OCTOBER 20, 2020 - NYCDEP COMMENTS
7.	JANUARY 20, 2020 - NYCDEP COMMENTS
6.	MAY 7, 2019 - NYCDEP COMMENTS
5.	OCTOBER 31, 2018 - DEP COMMENTS
4.	OCTOBER 4, 2018 - NYSDEC SPDES REVIEW
3.	JULY 5, 2018 - DEP COMMENTS
2.	JANUARY 19, 2018 - DEP SUBMISSION
1.	MAY 15, 2017 ENVIRONMENTAL BOARD

KELLARD SESSIONS
CONSULTING
ENGINEERING, LANDSCAPE ARCHITECTURE & PLANNING, P.C.
500 MAIN STREET
ARMONK, N.Y. 10504
P: (914) 273-2323
F: (914) 273-2329
WWW.KELSES.COM

SEDIMENT & EROSION CONTROL PLAN
WESTERN BLUFF SUBDIVISION

TOWN OF CARMEL — PUTNAM COUNTY, NEW YORK

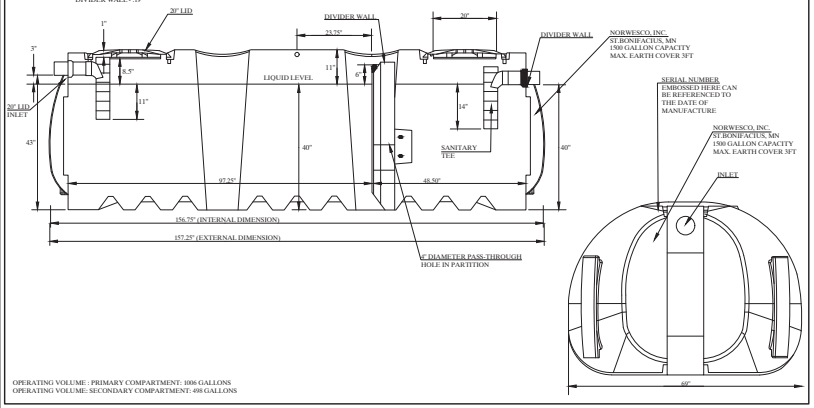
STATE OF NEW YORK · JOHN KELLARD · LICENSED PROFESSIONAL ENGINEER · 058736

PROJECT I.D.: STC100
DATE: JANUARY 13, 2017


LEGEND
EXISTING PROPERTY LINE
PROPOSED PROPERTY LINE
LIMITS OF DISTURBANCE (3.85 ACRES ±)
EXISTING 10' CONTOURS
EXISTING 2' CONTOURS
PROPOSED 10' CONTOUR
PROPOSED 2' CONTOUR
EXISTING WETLAND
WETLAND BUFFER
RESERVOIR BUFFER
EXISTING STREAM
EXISTING TREE
EXISTING TREE TO BE REMOVED
EXISTING TREE TO BE PROTECTED
EXISTING STRUCTURES
West Shore Drive
ARVIEW ROAD
TRIM LOW BRANCHES ALONG SHOULDER
PROPOSED VEGETATIVE WETLAND BUFFER OF NEW ENGLAND WETLAND MIX
WOODED FILTER STRIP
WOODED FILTER STRIP
WOODED FILTER STRIP
WOODED FILTER STRIP
1
206,401.26 S.F.
(4.74 AC)
2
237,138.50 S.F.
(5.44 AC)
3
200,923.24 S.F.
(4.61 AC)
100' RESTRICTIVE RESERVOIR STORMSETBACK
EXISTING DWELLING AND DRIVEWAY TO BE REMOVED AND RESODDED WITH TOPSOIL, SEED AND MULCH
PROPOSED ACCESS AND MAINTENANCE EASEMENT
WATER ELEVATION: 307.83
PROPOSED GRASSED DIVERSION SWALE
GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.
KELLARD SESSIONS CONSULTING
ENGINEERING, LANDSCAPE ARCHITECTURE & PLANNING, P.C.
500 MAIN STREET ARMONK, N.Y. 10504
P: (914) 273-2323
F: (914) 273-2329
WWW.KSLSES.COM
TREE REMOVAL & LANDSCAPE PLAN
WESTERN BLUFF SUBDIVISION
TOWN OF CARMEL
PUTNAM COUNTY, NEW YORK
NOVEMBER 8, 2021 - TOWN ENGINEER COMMENTS
OCTOBER 20, 2020 - NYCDEP COMMENTS
JANUARY 20, 2020 - NYCDEP COMMENTS
MAY 7, 2019 - NYCDEP COMMENTS
OCTOBER 31, 2018 - DEP COMMENTS
JULY 5, 2018 - DEP COMMENTS
JANUARY 19, 2018 - DEP SUBMISSION
MAY 15, 2017 ENVIRONMENTAL BOARD
REVISIONS
4
9
PROJECT I.D.:
STC100
DATE:
JANUARY 13, 2017

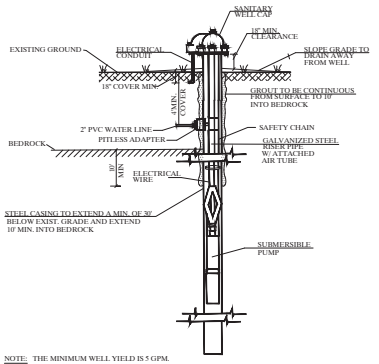
1500 GALLON LOW PROFILE PRE-TREATMENT TANK DETAIL (N.T.S.)

MATERIAL: HIGH-DENSITY POLYETHYLENE
WALL THICKNESS: TANK WALL - .250"
DIVIDER WALL - .19"



OPERATING VOLUME : PRIMARY COMPARTMENT: 1006 GALLONS
OPERATING VOLUME: SECONDARY COMPARTMENT: 498 GALLONS

DRILLED WELL DETAIL (N.T.S.)

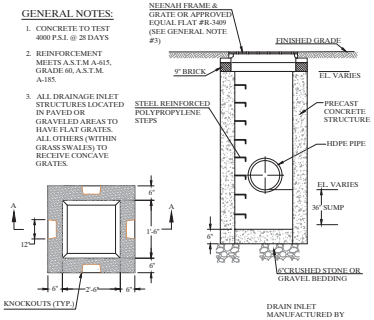


NOTE: THE MINIMUM WELL YIELD IS 5 GPM. YIELDS LESS THAN 5 GPM MUST BE IMMEDIATELY REPORTED TO THE DEPARTMENT.

PRECAST DRAIN INLET (N.T.S.)

GENERAL NOTES:

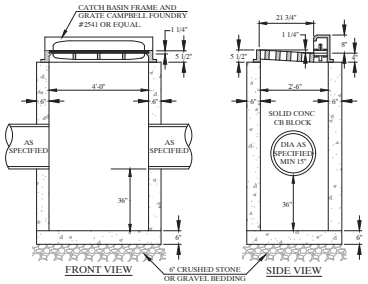
1. CONCRETE TO TEST 4000 P.S.I. @ 28 DAYS
2. REINFORCEMENT MEETS A.S.T.M A-615, GRADE: 60, A.S.T.M. A-185.
3. ALL DRAINAGE INLET STRUCTURES LOCATED IN PAVED OR GRAVELED AREAS TO HAVE FLAT GRATES. ALL OTHERS (WITHIN GRASS SWALES) TO RECEIVE CONCAVE GRATES.



DRAIN INLET MANUFACTURED BY PRECAST CONCRETE SALES OR APPROVED EQUAL.

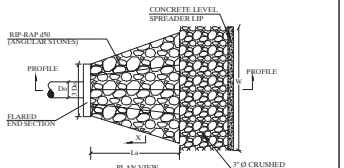
HS-20-44 LOADING DESIGN REQUIRED

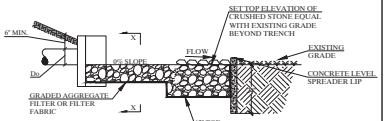
CATCH BASIN DETAIL (N.T.S.)

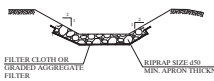


NOTE:
TYPE A CATCH BASIN AS SHOWN HERE ON WILL BE UTILIZED WHERE THE NEED FOR A DROP INLET EXISTS. THE CURB TYPE CASTING SHALL BE SUBSTITUTED WITH CAMPBELL FOUNDRY FRAME AND GRATE # 3433 OR EQUAL.

RIP RAP OUTLET PROTECTION WITH LEVEL SPREADER DETAIL (N.T.S.)



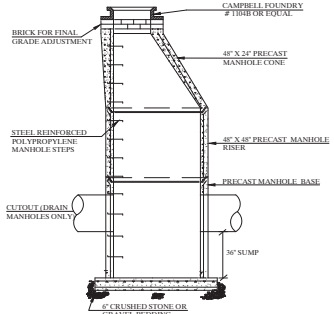




Do - Pipe Diameter
3Do - Headwall Width
La - Approx. Length
W - Approx. Width @ end
d50 - 50% Stone Size
Minimum Rip-Rap Blanket Thickness - 9"

OUTLET PROTECTION LOCATION	$Q_{25\ yr}$ (cfs)	Do (in)	3Do (ft)	La (min.) (ft)	W (ft)	d50 (in)
HW 1	1.67	12	3.0	8	9	4
HW 2	2.36	12	3.0	8	9	4
HW 3	2.17	12	3.0	8	9	4
HW 3A	2.95	15	3.75	10	8	6
HW 11	1.21	8	2.0	6	7	4
HW 15	1.52	15	3.75	10	8	6

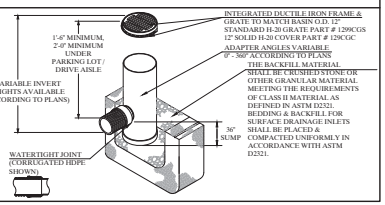
PRECAST DRAIN MANHOLE DETAIL (N.T.S.)



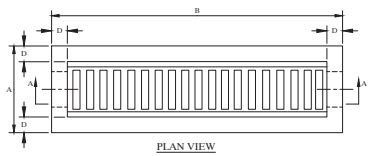
NOTES:

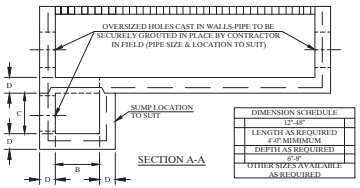
1. ALL JOINTS ON PRECAST UNITS ARE TO BE 'O' RING RUBBER GASKETS WITH EXTERIOR MORTARED JOINTS.
2. ALL MANHOLE STEPS ARE TO BE CAST IN PLACE DURING CONSTRUCTION.
3. MANHOLE STEPS ARE TO BE ALUMINUM OR APPROVED EQUAL.

NYOPLAST DRAINAGE BASIN DETAIL (N.T.S.)



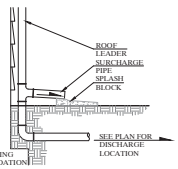
TRENCH DRAIN WITH SUMP DETAIL (N.T.S.)



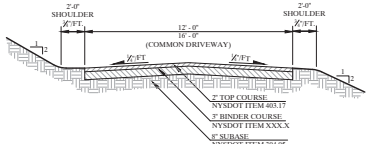


DIMENSION SCHEDULE
12"-48"
LENGTH AS REQUIRED 4'-0" MINIMUM
DEPTH AS REQUIRED 6'-0"
OTHER SIZES AVAILABLE AS REQUIRED

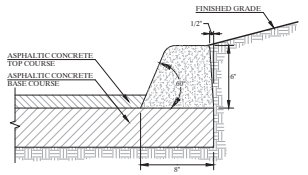
ROOF LEADER DETAIL (N.T.S.)



DRIVEWAY SECTION DETAIL (N.T.S.)



ASPHALTIC CONCRETE CURB DETAIL (N.T.S.)



KELLARD SESSIONS
CONSULTING
ENGINEERING, LANDSCAPE ARCHITECTURE & PLANNING, P.C.
500 MAIN STREET
ARMONK, N.Y. 10504
P: (914) 273-2323
F: (914) 273-2320
WWW.KELSES.COM

CONSTRUCTION DETAILS
WESTERN BLUFF SUBDIVISION

TOWN OF CARMEL — PUTNAM COUNTY, NEW YORK

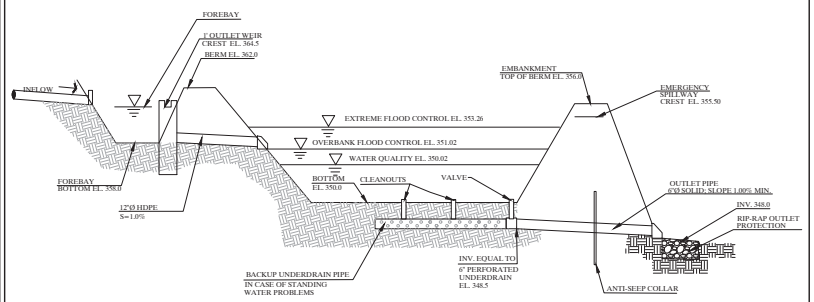
8.	
7.	NOVEMBER 8, 2021 - TOWN ENGINEER COMMENTS
6.	OCTOBER 20, 2020 - NYCDEP COMMENTS
5.	JANUARY 20, 2020 - NYCDEP COMMENTS
4.	MAY 7, 2019 - NYCDEP COMMENTS
3.	OCTOBER 31, 2018 - DEP COMMENTS
2.	JULY 5, 2018 - DEP COMMENTS
1.	JANUARY 10, 2018 - DEP SUBMISSION
	MAY 15, 2017 ENVIRONMENTAL BOARD
	REVISIONS

5 / 9

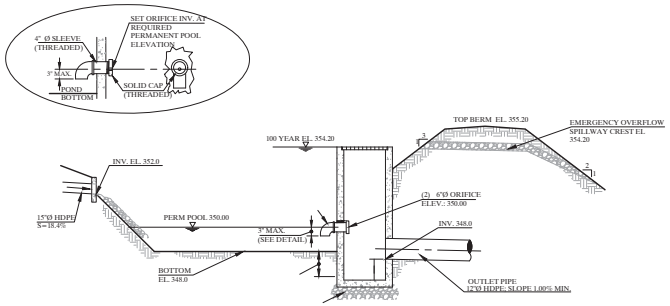
PROJECT I.D.: STC100

DATE: JANUARY 13, 2017

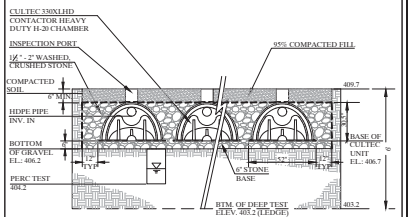
INFILTRATION BASIN (I-2) DETAIL (N.T.S.)



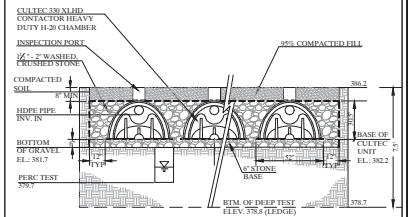
DETENTION BASIN DETAIL (N.T.S.)



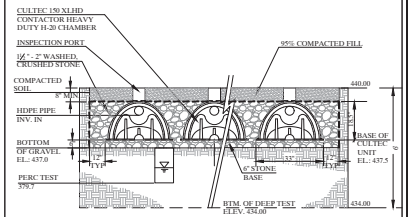
INFILTRATION SYSTEM 1B (N.T.S.)



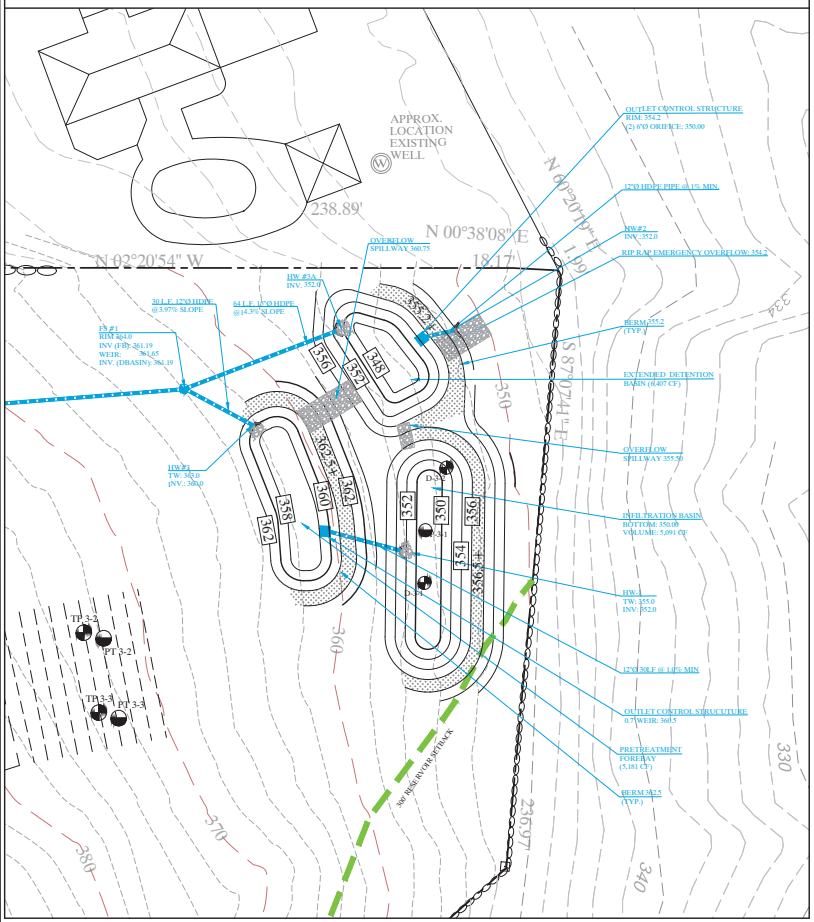
INFILTRATION SYSTEM 1C (N.T.S.)



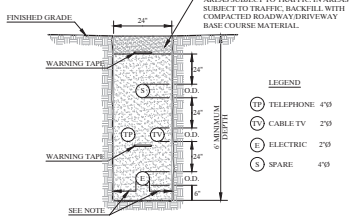
INFILTRATION SYSTEM 3A (N.T.S.)



INFILTRATION BASIN (I-2) DETAIL (SCALE: 1" = 20')



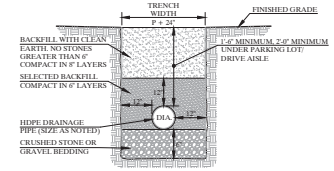
SERVICE TRENCH DETAIL (N.T.S.)



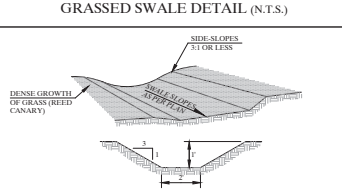
NOTES:

1. ELECTRIC PRIMARY CONDUIT MUST BE 6" MINIMUM FROM SIDE OF TRENCH. IF MORE THAN ONE CONDUIT IS INSTALLED, MAINTAIN A 1-1/2" SEPARATION FROM EACH ELECTRIC CONDUIT.
2. ELECTRIC SECONDARY/SERVICE CONDUIT MUST BE 2" MINIMUM FROM SIDE OF TRENCH. IF MORE THAN ONE CONDUIT IS INSTALLED, MAINTAIN A 1-1/2" SEPARATION FROM EACH ELECTRIC CONDUIT.

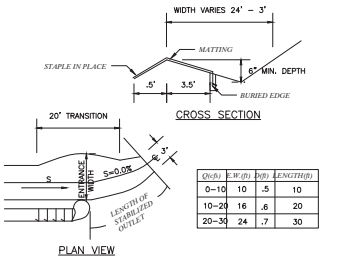
DRAINAGE TRENCH DETAIL (N.T.S.)



GRASSED SWALE DETAIL (N.T.S.)



LEVEL SPREADER DETAIL (N.T.S.)



Q(cfs)	W (ft)	h(ft)	LENGTH(ft)
0–10	10	.5	10
10–20	16	.6	20
20–30	24	.7	30

CONSTRUCTION SPECIFICATIONS

1. *THE MATTING SHOULD BE A MINIMUM OF 3FT. WIDE EXTENDING 6 INCHES OVER THE LIP AND BURIED 6 INCHES DEEP IN A VERTICAL TRENCH ON THE LOWER EDGE. THE UPPER EDGE SHOULD BUTT AGAINST SMOOTHLY CUT SOIL AND BE SECURELY HELD IN PLACE WITH CLOSELY SPACED HEAVY DUTY WIRE STAPLES AT LEAST 12 INCHES IN LENGTH.*
2. *ENSURE THAT THE LIP IS LEVEL TO UNIFORMLY SPREAD DISCHARGE.*
3. *THE LIP SHALL BE CONSTRUCTED ON UNDISTURBED SOIL NOT FILL.*
4. *A 20 FOOT TRANSITION SECTION WILL BE CONSTRUCTED FROM THE DIVERSION CHANNEL TO THE SPREADER TO SMOOTHLY BLEND THE DIFFERENT DIMENSION AND GRADES.*
5. *THE RUNOFF DISCHARGE WILL BE OUTLETED ONTO A STABILIZED VEGETATED SLOPE NOT EXCEEDING 10%.*
6. *SEED AND MULCH THE DISTURBED AREA IMMEDIATELY AFTER CONSTRUCTION.*

KELLARD SESSIONS
CONSULTING
ENGINEERING, LANDSCAPE ARCHITECTURE & PLANNING, P.C.
500 MAIN STREET
ARMONK, N.Y. 10504
P: (914) 273-2323
F: (914) 273-2329
WWW.KELSES.COM

CONSTRUCTION DETAILS
WESTERN BLUFF SUBDIVISION

TOWN OF CARMEL — PUTNAM COUNTY, NEW YORK

K	NOVEMBER 8, 2021 - TOWN ENGINEER COMMENTS
J	OCTOBER 20, 2020 - NYCDEP COMMENTS
H	JANUARY 20, 2020 - NYCDEP COMMENTS
G	MAY 7, 2019 - NYCDEP COMMENTS
F	OCTOBER 31, 2018 - DEP COMMENTS
E	JULY 5, 2018 - DEP COMMENTS
D	JANUARY 10, 2018 - DEP SUBMISSION
C	MAY 15, 2017 ENVIRONMENTAL BOARD
	REVISIONS

6 / 9

PROJECT I.D.: STC100

DATE: JANUARY 13, 2017

EROSION AND SEDIMENT CONTROL PLAN

All proposed soil erosion and sediment control practices have been designed in accordance with the following publications:

- New York Standards and Specifications for Erosion and Sediment Control, latest edition
- New York State SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001)
- Town Code of Carmel Chapter 156 Article X "Stormwater Management and Erosion and Sediment Control"

The primary aim of the soil erosion and sediment control plan is to reduce soil erosion from areas stripped of vegetation during and after construction and to prevent silt from reaching the drainage structures, Cultec infiltration systems, wetland systems and downstream properties. The Cultec infiltration systems shall not be put into service until the contributing drainage areas to the systems have been stabilized. As outlined in the construction sequencing notes below and on the Sediment & Erosion Control Plans, the Sediment & Erosion Control Plan is an integral component of the construction phasing and sequencing and will be implemented to control sediment and re-establish vegetation as soon as practicable. The plan will be implemented prior to the commencement of any earthmoving activities.

Each contractor/subcontractor(s) and trained contractor involved in the soil disturbance and/or stormwater management practices shall sign and date a copy of the contractor certification prior to undertaking any land development activity.

The owner/operator shall maintain a copy of the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-20-001, the Notice of Intent (NOI), the NOI acknowledgment letter, the Stormwater Pollution Prevention Plan Report for Western Bluff Subdivision, the MS4 SWPPP Acceptance Form and inspection reports from the qualified inspector at the construction site until all disturbed areas have achieved final stabilization and the Notice of Termination (NOT) has been filed with the NYSDEC.

The applicant or developer or their representative shall be on site at all times when construction or grading activity takes place. A qualified inspector shall conduct site inspections at least twice every seven (7) calendar days. The qualified inspector shall inspect and document the effectiveness of all erosion and sediment control practices. The qualified inspector shall prepare an inspection report subsequent to each and every inspection. The reports shall be forwarded to the Town's Stormwater Management Officer and also copied to the site logbook. The qualified inspector must be a licensed Professional Engineer, a Certified Professional in Erosion and Sediment Control (CPESC), a Registered Landscape Architect or someone working under the direct supervision of, and at the same company as, the Licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a soil and water conservation district.

The proposed soil erosion and sediment control devices include the planned erosion control practices outlined below. Maintenance procedures for each erosion control practice are also provided herein. The owner or operator must ensure that all erosion and sediment control practices identified herein are maintained in effective operating condition at all times.

In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of next business day and completed within 7 days.

Copies of the Inspection and Maintenance Checklists are provided in the Stormwater Pollution Prevention Plan report.

STABILIZED CONSTRUCTION ENTRANCE

A stabilized construction entrance shall be installed at the project entrance as indicated on the plans. The purpose of the stabilized construction entrance is to prevent vehicles leaving the site from tracking sediment, mud or any other construction-related materials from the site onto West Shore Drive.

Maintenance/Inspection

The Contractor shall maintain the construction entrance in a manner which prevents or significantly reduces the tracking of sediment/soil onto West Shore Drive. The Contractor shall inspect the construction entrance daily and after each rain event for displacement or loss of aggregate. The Contractor shall top-dress the construction entrance when displacement/loss of aggregate occurs, or if the aggregate becomes clogged or silted to the extent that the entrance can no longer perform its intended function. The Contractor shall inspect the vicinity of the construction entrance several times a day and immediately remove any sediment dropped or washed onto West Shore Drive.

SILT FENCE

Silt fence (geotextile filter cloth) shall be placed in locations depicted on the approved plans. The purpose of the silt fence is to reduce the velocity of sediment-laden stormwater from small drainage areas and to intercept the transported sediment load. In general, silt fence shall be used at the perimeter of disturbed areas, toe of slopes or intermediately within slopes where obvious channel concentration of stormwater is not present. Silt fence shall always be installed parallel to the contours in order to prevent concentrated flows from developing along the silt fence.

Maintenance/Inspection

Silt fencing shall be inspected at a minimum of twice every seven (7) days. Inspections shall include ensuring that the fence material is tightly secured to the wood posts. In addition, overlapping filter fabric shall be secure and the fabric shall be maintained a minimum of eight (8) inches below grade. In the event that any "bulges" develop in the fence, that section of fence shall be replaced immediately with a new fence section. Any visible sediment build-up against the fence shall be removed and deposited on-site a minimum of 150 feet from any wetland.

INLET PROTECTION

After the driveway's drain inlets have been installed and the site is completely constructed and stabilized, these drain inlets will receive stormwater from the driveway and overland watersheds. This barrier will allow stormwater to be filtered prior to reaching the inlet grate.

Maintenance/Inspection

Inlet protection devices shall be inspected at a minimum of twice every seven (7) days. Care shall be taken to ensure that all inlet protection devices are properly located and secure and do not become displaced. Any accumulated sediments shall be removed from the device and deposited not less than 150 feet from a wetland.

TREE PROTECTION

All significant trees to be preserved located within the limits of disturbance and on the perimeter of the disturbance limits shall be protected from harm by erecting a three (3) feet high (minimum) snow fence completely surrounding the tree. Snow fence should extend to the drip-line of the tree to be preserved. Trees designated to be protected/saved shall be identified during the staking of the limits of disturbance.

Maintenance/Inspection

The snow fence shall remain at the drip-line of the tree to be preserved. The snow fence shall be inspected at a minimum of twice every seven (7) days. Any damaged portions of the fence shall be repaired or replaced. Care shall also be taken to ensure that no construction equipment is driven or parked within the drip-line of the tree to be preserved.

SOIL/MATERIAL STOCKPILING

All soil/material stripped from the construction area during grubbing and grading shall be stockpiled in locations illustrated on the approved plans, or in practical locations on-site.

Maintenance/Inspection

All stockpiles shall be inspected (for signs of erosion or problems with seed establishment) at a minimum of twice every seven (7) days. Soil stockpiles shall be protected from erosion by vegetating the stockpile with a rapidly-germinating grass seed and surrounded with either silt fence or staked weed-free haybales. In the non-growing season, the stockpiles shall be protected by a tarpaulin covering the entire stockpile.

RIP-RAP OUTLET PROTECTION

The outlets of all stormwater discharge areas will be protected from erosion by the placement of stone rip-rap at the culvert/swale outlet. The purpose of the stone outlet protection is to reduce the velocities of the discharged water such that flows will not erode the receiving area.

Maintenance/Inspection

Maintenance of the outlet protection devices shall be inspected at a minimum of twice every seven (7) days to determine if any scouring beneath the rip-rap has occurred and/or if any rip-rap has been displaced. All displaced rip-rap shall be re-positioned or replaced with new rip-rap. In addition, all leaves, twigs and brush shall be removed in the vicinity of the culvert/swale outlet to ensure that stormwater is flowing unobstructed.

SURFACE STABILIZATION

All disturbed areas will be protected from erosion with the use of vegetative measures (e.g., grass seed mix, sod) hydromulch, weed-free hay or Curlex Excelsior Erosion Control Blankets.

Erosion control barriers consisting of silt fencing shall be placed around exposed areas during construction. Any areas stripped of vegetation during construction will be vegetated and/or mulched to prevent erosion of the exposed soils. In site areas where significant erosion potential exists (steep slopes/slopes exceeding 2:1) and/or where specifically directed, Curlex Excelsior Erosion Control Blankets (Manufactured by American Excelsior or approved equal) shall be installed. Mulch is also used alone for temporary stabilization in non-growing months.

Materials that may be used for mulching include weed-free straw/ hay/salt hay, wood fiber, synthetic soil stabilizers, mulch netting, erosion control blankets or sod. A permanent vegetative cover will be established upon completion of construction of those areas which have been brought to finish grade and to remain undisturbed.

GENERAL LAND GRADING

The applicant/developer or their representatives shall be on-site at all times when construction or grading activity takes place and shall inspect and document the effectiveness of all sediment and erosion control practices.

The intent of the erosion controls is to control all disturbed areas, such that soils are protected from erosion by temporary methods and, ultimately by permanent vegetation. All cut and fill slopes shall be kept to a maximum slope of 2:1. In the event that a slope must exceed a 2:1 slope, it shall be stabilized with stone rip-rap. On fill slopes, all material will be placed in layers not to exceed 9 inches in depth and adequately compacted. Where practicable, diversion swales shall be constructed on the top of all fill embankments to divert any overland flows away from the fill slope.

DUST CONTROL

Where vegetative or mulch cover is not practicable in disturbed areas of the site, dust shall be controlled by the use of water sprinkling. The surface shall be sprayed until wet. Dust control shall continue until such time as the entire site is adequately stabilized with permanent vegetative cover.

POLLUTION PREVENTION MEASURES FOR CONSTRUCTION RELATED ACTIVITIES

Pollution prevention practices for preventing litter, construction chemicals (if applicable) and construction debris from becoming a pollutant source in stormwater discharge includes daily pickup of construction debris, inspection, designated storage areas, and physical controls such as silt fencing and inlet protection. Inspections will also be conducted to ensure that dust control measures are utilized as necessary. During construction, maintenance, construction and waste materials will be stored within suitable areas/dumpsters, as appropriate, to minimize the exposure of the materials to stormwater and spill prevention. All maintenance and construction waste will be disposed of in a safe manner in accordance with all applicable regulations.

GENERAL CONSTRUCTION SEQUENCING

Outlined below is a brief listing of the construction sequencing for the project. See sheet 3/9 for detailed phasing descriptions.
Prior to any interior site activity, the owner, contractor, owner's engineer, Town Engineer and NYCDEP representative shall hold a pre-construction meeting.

Stabilization shall be defined as covering or maintaining an existing cover over soil. Cover can be vegetative (e.g., grass, trees, seed and mulch, shrubs, or turf) or non-vegetative (e.g., geotextiles, rip-rap, or gabions, pavement, roofs, etc.).

The applicant shall notify the Town of Carmel enforcement official at least 48 hours before any of the following as required by the Stormwater Management Officer:

- Start of construction
- Survey/Stake clearing limits & sediment & erosion control measures
- Installation of sediment and erosion control measures
- Completion of site clearing of driveway, storm water facilities & utilities.
- Completion of rough grading of driveway, storm water facilities & utilities.
- Installation of driveway, related storm water facilites & utilities.
- Keep storm water facilties offline until contributing drainage areas are stabilized.
- Completion of final grading of driveway and storm water facilities.
- Close of the construction season
- Completion of final landscaping
- Successful establishment of landscaping in public areas

The owners/contractor is required to submit As-Built plans for any stormwater management practices located on site after final construction is completed. The plan must show the final design specifications for all stormwater management facilities and must be certified by a New York State licensed land surveyor or professional engineer.

Individual Lot Construction Sequencing

- Obtain all necessary permits/approvals.
- Conduct pre-construction meeting.
- Stake clearing limits for residential construction.
- Install perimeter erosion controls.
- Construct stabilized construction entrance.
- Commence clearing and grubbing of individual driveway, house area and drainage facilities.
- Rough grade driveway and building area.
- Install drainage, utilities and SSDS
- Installation of infiltration facilities. Keep infiltration systems off-line until contributing drainage areas are stabilized.
- Construct dwelling.
- Final grade driveway.
- Complete dwelling and accessory structures.
- Re-vegetation of disturbed areas.
- Once site is stabilized, infiltration systems to be placed on-line.
- Remove sediment and erosion controls from individual lot construction areas upon site stabilization.

POST-CONSTRUCTION STORMWATER FACILITY INSPECTION AND MAINTENANCE PROGRAM

General

The "Erosion & Sediment Control Plan" (Sheet 3/9) and "Details" (Sheet 6/9) are integral components of the post-construction stormwater facility inspection and maintenance program. The owner, its successors and/or assigns shall completely familiarize themselves with the plans, details and notes.

The drainage collection system, infiltration systems, biotetention area, swales, and their related appurtenances shall be collectively referred to herein as the "stormwater facilities."

The owner, its successors and/or assigns shall be responsible for the ongoing inspection and maintenance of the stormwater facilities. The purpose of the inspection/maintenance program is to provide basic instructions to the owner as to the proper inspection and maintenance of the stormwater facilities and related appurtenances and to help the owner identify if these facilities are not performing properly.

The applicant must execute a maintenance easement agreement/deed restriction that shall be binding on all subsequent landowners served by the stormwater management facilities. The easement shall provide for access to the facility at reasonable times for periodic inspection by the Town of Carmel to ensure that the facility is maintained in proper working condition to meet design standards and any other provisions established by the Town. The easement shall be recorded by the grantor in the office of the County Clerk and Town Clerk after approval by the Town Attorney for the Town of Carmel.

Inspection and Maintenance of Permanent Drainage Systems and BMPs

1. General Stormwater Facilities (i.e., drain inlets, vegetated swale, grass swale, bioretention area, rip-rap outlets)

   These stormwater facilities shall be inspected weekly for the first three (3) months following the completion of construction. Thereafter, these facilities shall be inspected at a minimum quarterly, and always immediately following a rain event. Upon inspection, facilities shall be immediately maintained and/or cleaned as may be required. Any site areas exhibiting soil erosion of any kind shall be immediately restored and stabilized with vegetation, mulch or rip-rap stone, depending on the area to be stabilized.

   Upon each inspection, all visible debris including, but not limited to, twigs, leaf and forest litter shall be removed from the swales and bioretention area, discharge points and frames and grates of drainage structures.

2. Vegetated Areas

   The areas within the swales and bioretention area shall be mowed periodically. Any debris, litter or fallen trees/shrubs shall be removed from within swales or bioretention area at the time of each mowing, unless such debris impedes the proper flow of water, in which case all debris shall be immediately removed upon inspection. All visible accumulated sediments shall be removed when sediments become clearly visible.

   Special care shall be taken when removing sediment so as not to disrupt the intended finished grades or stone rip-rap within the swales or bioretention area. Any displaced or removed rip-rap shall be replaced, in-kind, to maintain the slopes and original design intent of the swale or bioretention area.

3. Drain Inlets

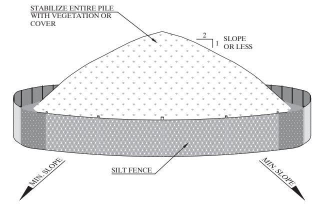
   All drain inlets have been designed to trap sediment prior to its transport to the infiltration systems and, ultimately, downstream. These sumps will require periodic inspection and maintenance to ensure that adequate depth is maintained within the sumps.

   All sumps shall be inspected once per month for the first three (3) months (after drainage system has been put into service). Thereafter, all sumps shall be inspected every four (4) months (i.e., production of ½ inch of rainfall or greater). The owner shall take measurements of the sump depth. All sumps shall be inspected once per month for the first three (3) months (after drainage system has been put into service). Thereafter, all sumps shall be inspected every four (4) months (i.e., production of ½ inch of rainfall or greater). The owner shall take measurements of the sump depth.

   If sediment has accumulated to one-half the depth of the sump, all sediment shall be removed from the sump. Sediments can be removed from the sumps with hand-labor or with a vacuum device.

   Contact Person: The entity responsible for implementing the maintenance program will be the owner, its successors and/or assigns. The current owners is Carl Kling, 44 Colony Drive, Whiteland IN, 46184

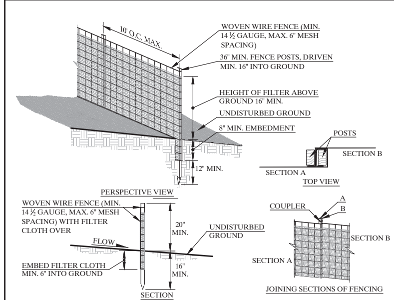
TEMPORARY SOIL STOCKPILE DETAIL (N.T.S.)



INSTALLATION NOTES

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 1:2.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH SILT FENCING, THEN STABILIZED WITH VEGETATION OR COVERED.
4. SEE SPECIFICATIONS FOR INSTALLATION OF SILT FENCE.

WIRE SILT FENCE DETAIL (N.T.S.)

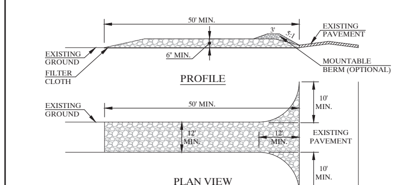


CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP OF MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD
FENCE: WOVEN WIRE, 14 ½ GA. 6" MAX. MESH OPENING
FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUAL
PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

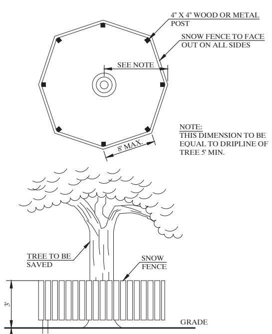
STABILIZED CONSTRUCTION ENTRANCE DETAIL (N.T.S.)



CONSTRUCTION SPECIFICATIONS

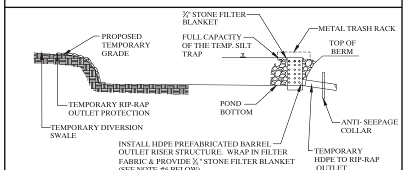
1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CON- STRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

TREE PROTECTION DETAIL (N.T.S.)



TREE PROTECTION SHALL BE PROVIDED FOR SPECIMEN TREES TO BE SAVED WHICH ARE LOCATED IMMEDIATELY ADJACENT TO CONSTRUCTION AREAS OR AS DIRECTED.

TEMPORARY SEDIMENT TRAP DETAIL (N.T.S.)



NOTES:

1. TEMPORARY SEDIMENT TRAP WILL BE INSPECTED AFTER EACH STORM OF 1/2" RAINFALL OR GREATER AND RISER WILL BE CLEARED OF ANY DEBRIS OR EXCESSIVE SILT.

2. TEMPORARY SEDIMENT TRAP SHALL BE CLEANED OUT WHEN 1/2 OF CAPACITY HAS BEEN ACCUMULATED WITH SEDIMENT. ONCE SEDIMENT HAS REACHED THIS MARK, CONTRACTOR WILL IMMEDIATELY CLEAN OUT SEDIMENT TO ORIGINAL SEDIMENT TRAP GRADE.

3. BERM TO BE MECHANICALLY COMPACTED EACH FILL, 8" LIFTS TO (95 % PROCTOR DENSITY). BERM FILL SHALL BE FREE OF ROOTS, WOODY VEGETATION, OVERSIZED STONES AND RELATIVELY PERVIOUS MATERIALS SUCH AS SAND OR GRAVEL.

4. TEMPORARY SEDIMENT TRAP WILL BE STABILIZED WITH JUTE MESH DURING THE NON GROWING SEASON. DURING THE GROWING SEASON HYDROMULCH AND/ OR SEED AND STRAW MULCH.

5. THE TOP 2/3 OF THE RISER SHALL BE PERFORATED WITH ONE (1) INCH DIAMETER HOLES OR SLITS SPACED SIX (6) INCHES VERTICALLY AND HORIZONTALLY AND PLACED IN THE CONCAVE PORTION OF PIPE. NO HOLES WILL BE ALLOWED WITHIN SIX (6) INCHES OF THE HORIZONTAL BARREL.

6. THE RISER SHALL BE WRAPPED WITH 1/4 TO 1/2 INCH HARDWARE CLOTH WIRE THEN WRAPPED WITH FILTER CLOTH (HAVING AN EQUIVALENT SIEVE SIZE OF 40-80). THE FILTER CLOTH SHALL EXTEND SIX (6) INCHES ABOVE THE HIGHEST HOLE AND SIX (6) INCHES BELOW THE LOWEST HOLE. WHERE ENDS OF THE FILTER CLOTH COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND STAPLED TO PREVENT BYPASS. PROVIDE 3/4" STONE FILTER BLANKET AROUND FILTER CLOTH.

7. STRAPS OR CONNECTION BANDS SHALL BE USED TO HOLD THE FILTER CLOTH AND WIRE FABRIC IN PLACE. THEY SHALL BE PLACED AT THE TOP AND BOTTOM OF THE CLOTH.

8. FILL MATERIAL AROUND THE PIPE SPILLWAY SHALL BE HAND COMPACTED IN FOUR (4) INCH LAYERS. A MINIMUM OF TWO (2) FEET OF HAND COMPACTED BACKFILL SHALL BE PLACED OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT.

9. THE RISER PIPE SHALL BE ANCHORED WITH EITHER A CONCRETE BASE OR STEEL PLATE BASE TO PREVENT FLOTATION AND/OR WATER FROM LEAVING THE BASIN BENEATH THE RISER. FOR CONCRETE BASED THE DEPTH SHALL BE TWELVE (12) INCHES WITH THE RISER EMBEDDED NINE (9) INCHES. A 1/4 INCH MINIMUM THICKNESS STEEL PLATE SHALL BE ATTACHED TO THE RISER BY CONTINUOUS WELD AROUND THE BOTTOM TO FORM A WATERTIGHT CONNECTION AND THEN PLACE TWO (2) FEET OF STONE, GRAVEL OR TAMPED EARTH ON THE PLATE.

10. ALL PIPE CONNECTIONS SHALL BE WATERTIGHT, (SEE NOTE #9).

11. ALL SLOPES SHALL BE 2:1 OR FLATTER.

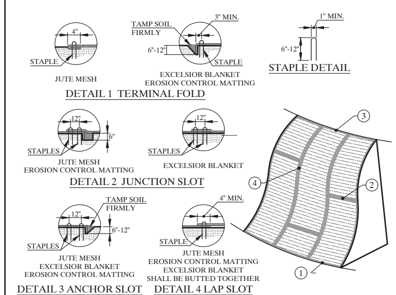
12. THE STRUCTURE SHALL BE REMOVED AND AREA STABILIZED WHEN THE DISTURBED DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

13. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE MINIMIZED.

TEMPORARY SEDIMENT TRAP	DRAINAGE AREA (ACRES)	VOLUME REQUIRED (CUBIC FEET)	VOLUME PROVIDED (CUBIC FEET)	RISER PIPE DIA. (INCHES)	OUTLET PIPE DIA. (INCHES)
1	0.6	2,160	7,430	15	12
2	0.5	1,800	1,940	15	12
3	0.8	2,880	3,658	15	12

*VOLUME REQUIRED = 3600 CF x DRAINAGE AREA(AC.)

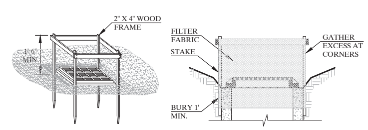
EROSION CONTROL BLANKET DETAIL (N.T.S.)



CONSTRUCTION SPECIFICATIONS

1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME AND SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4' X 225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4' X 150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

FILTER FABRIC DROP INLET PROTECTION DETAIL (N.T.S.)

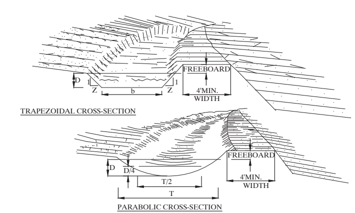


CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

MAXIMUM DRAINAGE AREA = 1 ACRE

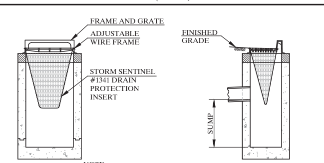
DIVERSION SWALE DETAIL (N.T.S.)



CONSTRUCTION SPECIFICATIONS

1. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE DIVERSION.
2. THE DIVERSION SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN, AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
3. FILLS SHALL BE COMPACTED AS NEEDED TO PREVENT UNEQUAL SETTLEMENT THAT WOULD CAUSE DAMAGE IN THE COMPLETE DIVERSION.
4. ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED OF SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE DIVERSION.
5. STABILIZATION SHALL BE DONE ACCORDING TO THE APPROPRIATE STANDARD AND SPECIFICATIONS FOR VEGETATIVE PRACTICES.
   A. FOR DESIGN VELOCITIES OF LESS THAN 3.5 FT. PER. SEC., SEEDING AND MULCHING MAY BE USED FOR THE ESTABLISHMENT OF THE VEGETATION. IT IS RECOMMENDED THAT, WHEN CONDITIONS PERMIT, TEMPORARY DIVERSIONS OR OTHER MEANS SHOULD BE USED TO PREVENT WATER FROM ENTERING THE DIVERSION DURING THE ESTABLISHMENT OF THE VEGETATION.
   B. FOR DESIGN VELOCITIES OF MORE THAN 3.5 FT. PER. SEC., THE DIVERSION SHALL BE STABILIZED WITH SOD, WITH SEEDING PROTECTED BY JUTE OR EXCELSIOR MATTING OR WITH SEEDING AND MULCHING INCLUDING TEMPORARY DIVERSION OF THE WATER UNTIL THE VEGETATION IS ESTABLISHED.

CATCH BASIN FILTERS - INLET PROTECTION DETAIL (N.T.S.)



NOTE:
INSERTS TO BE MODEL # 1341 ADJUSTABLE CATCH BASIN INSERTS BY ENPAC OR APPROVED EQUAL.

KELLARD SESSIONS
CONSULTING

ENGINEERING, LANDSCAPE ARCHITECTURE & PLANNING, P.C.

500 MAIN STREET
ARMONK, N.Y. 10504
P: (914) 273-2323
F: (914) 273-2329
WWW.KELSES.COM

SEDIMENT & EROSION CONTROL DETAILS & NOTES

WESTERN BLUFF SUBDIVISION

TOWN OF CARMEL — PUTNAM COUNTY, NEW YORK

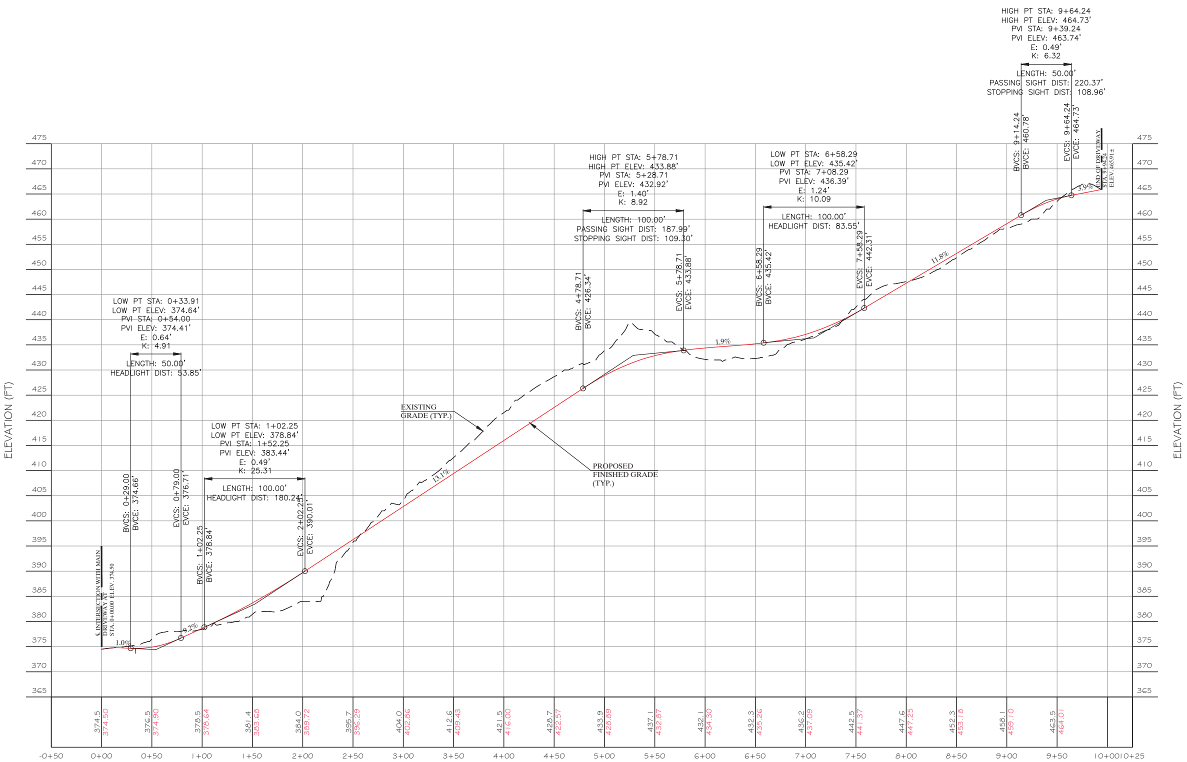
STATE OF NEW YORK · JOHN KELLARD · LICENSED PROFESSIONAL ENGINEER · 058736

No.	REVISIONS
9.	
8.	NOVEMBER 8, 2021 - TOWN ENGINEER COMMENTS
7.	OCTOBER 20, 2020 - NYCDEP COMMENTS
6.	JANUARY 20, 2020 - NYCDEP COMMENTS
5.	MAY 7, 2019 - NYCDEP COMMENTS
4.	OCTOBER 31, 2018 - DEP COMMENTS
3.	JULY 5, 2018 - DEP COMMENTS
2.	JANUARY 19, 2018 - DEP SUBMISSION
1.	MAY 15, 2017 ENVIRONMENTAL BOARD

7 / 9

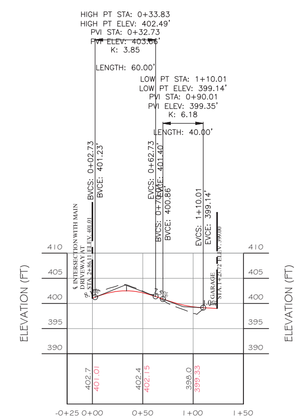
PROJECT I.D.: STC100
DATE: JANUARY 13, 2017

Nov 18, 2021 - 3:46pm G:\STC100\CAD Dwgs\STC100_DESIGN-2021-11-05.dwg - kbyrne



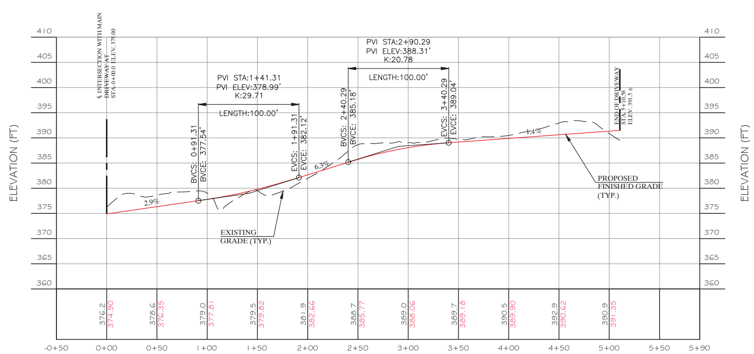
LOT #2 DRIVEWAY

PROFILE SCALE:
HORIZ: 1"=50'
VERT: 1"=10'



LOT 1-REV ALGN

PROFILE SCALE:
HORIZ: 1"=50'
VERT: 1"=10'



PROPOSED LOT 3 COMMON DRIVEWAY

PROFILE SCALE:
HORIZ: 1"=50'
VERT: 1"=10'

KELLARD SESSIONS
CONSULTING

ENGINEERING,
LANDSCAPE
ARCHITECTURE
&
PLANNING, P.C.

500 MAIN STREET
ARMONK, N.Y. 10504
P: (914) 273-2323
F: (914) 273-2329
WWW.KELSES.COM

DRIVEWAY PROFILES

WESTERN BLUFF SUBDIVISION

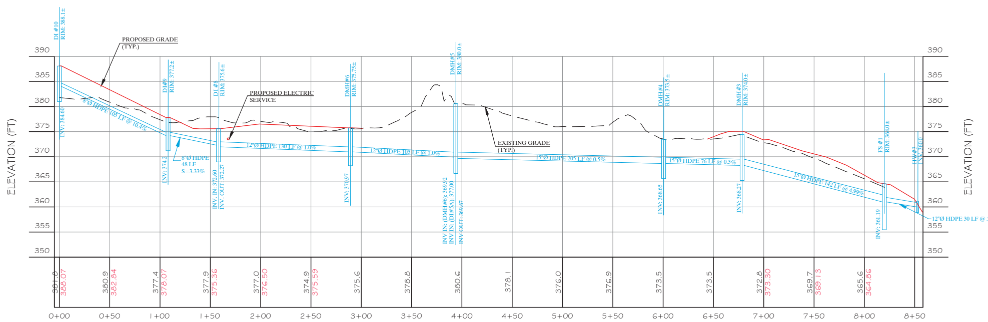
TOWN OF CARMEL — PUTNAM COUNTY, NEW YORK

No.	REVISIONS
9.	
8.	NOVEMBER 8, 2021 - TOWN ENGINEER COMMENTS
7.	OCTOBER 20, 2020 - NYCDEP COMMENTS
6.	JANUARY 20, 2020 - NYCDEP COMMENTS
5.	MAY 7, 2019 - NYCDEP COMMENTS
4.	OCTOBER 31, 2018 - DEP COMMENTS
3.	JULY 5, 2018 - DEP COMMENTS
2.	JANUARY 19, 2018 - DEP SUBMISSION
1.	MAY 15, 2017 ENVIRONMENTAL BOARD

8 / 9

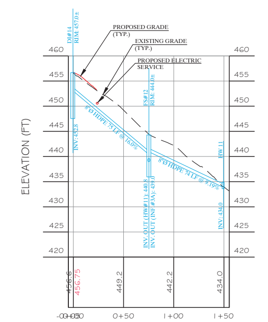
PROJECT I.D.: STC100

DATE: JANUARY 13, 2017



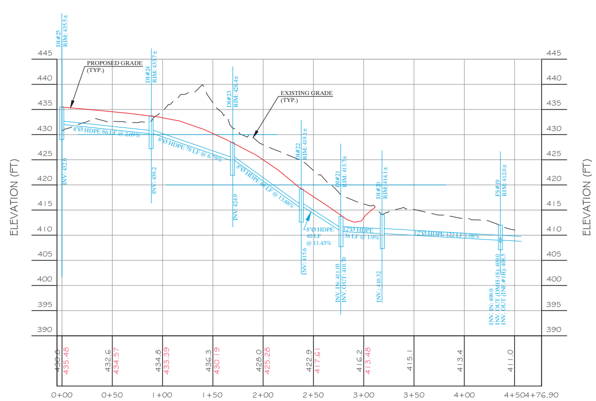
DI10-HW3

PROFILE SCALE:
HORIZ: 1"=50'
VERT: 1"=10'



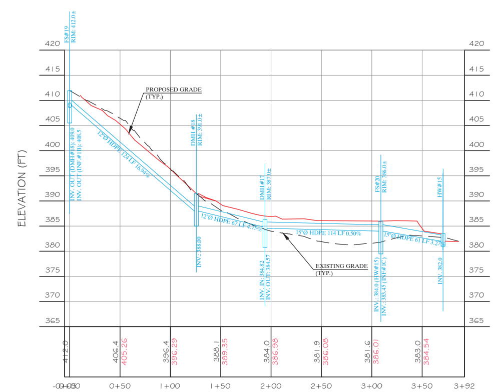
DI14-HW11

PROFILE SCALE:
HORIZ: 1"=50'
VERT: 1"=10'



DI25-FS19

PROFILE SCALE:
HORIZ: 1"=50'
VERT: 1"=10'



FS19-HW15

PROFILE SCALE:
HORIZ: 1"=50'
VERT: 1"=10'

KELLARD SESSIONS CONSULTING

ENGINEERING, LANDSCAPE ARCHITECTURE & PLANNING, P.C.

500 MAIN STREET
ARMONK, N.Y. 10504
P: (914) 273-2323
F: (914) 273-2329
WWW.KELSES.COM

DRAINAGE PROFILES

WESTERN BLUFF SUBDIVISION

TOWN OF CARMEL — PUTNAM COUNTY, NEW YORK

No.	REVISIONS
9.	
8.	NOVEMBER 8, 2021 - TOWN ENGINEER COMMENTS
7.	OCTOBER 20, 2020 - NYCDEP COMMENTS
6.	JANUARY 20, 2020 - NYCDEP COMMENTS
5.	MAY 7, 2019 - NYCDEP COMMENTS
4.	OCTOBER 31, 2018 - DEP COMMENTS
3.	JULY 5, 2018 - DEP COMMENTS
2.	JANUARY 19, 2018 - DEP SUBMISSION
1.	MAY 15, 2017 ENVIRONMENTAL BOARD

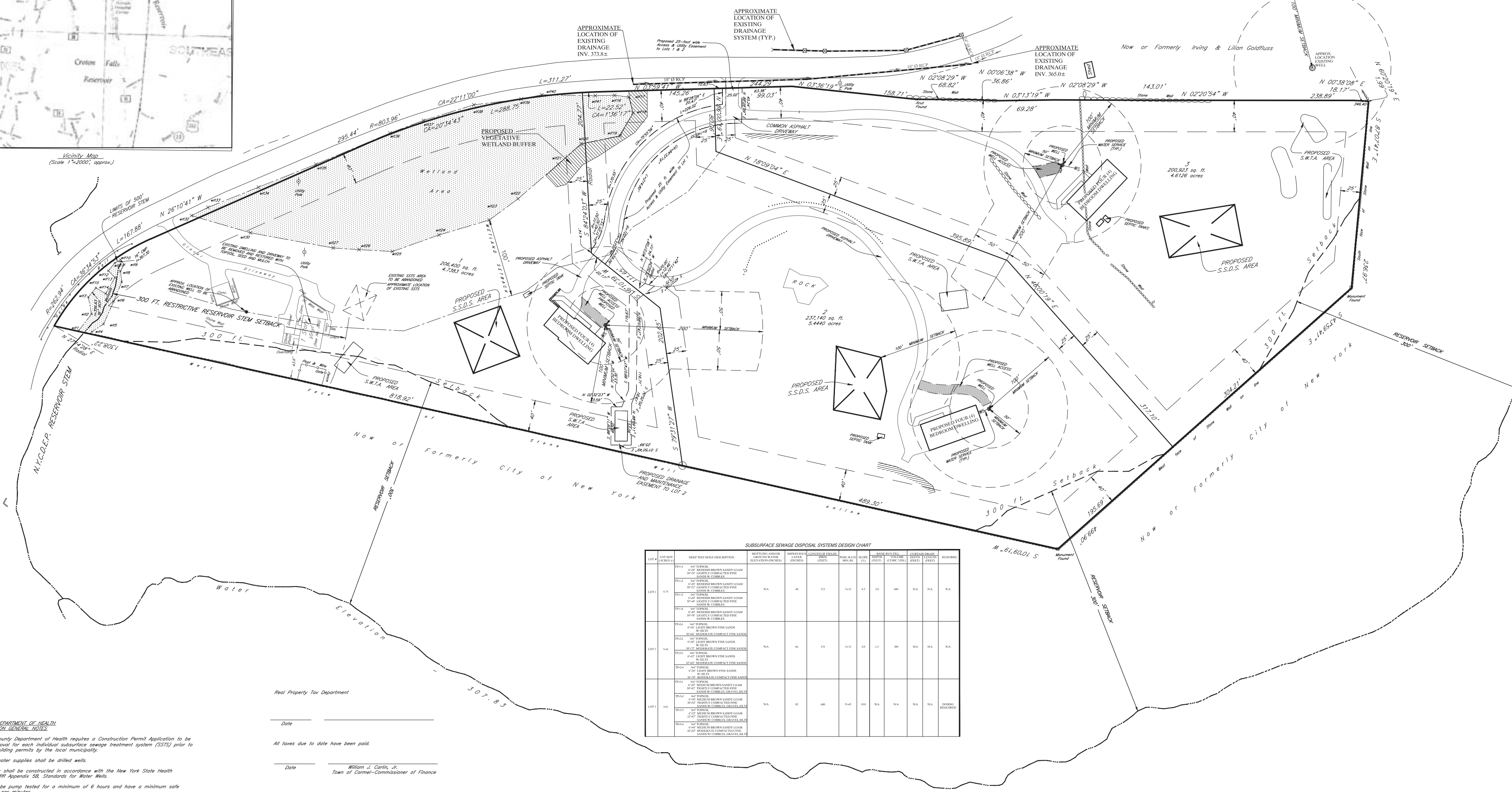
9 / 9

PROJECT I.D.: STC100

DATE: JANUARY 13, 2017

Vicinity Map
(Scale 1"=2000', approx.)

ZONING CHART									
LOT NUMBER	LOT AREA (S.F.)	LOT WIDTH (FT.)	LOT DEPTH (FT.)	FRONT YARD (FT.)	SIDE YARD (FT.)	REAR YARD (FT.)	MAX. BLDG HEIGHT(FT.)	MAX. BLDG COVERAGE (%)	FRONTAGE (FT.)
REQUIRED	120,000	200	200	40	25/EACH SIDE	40	35	15%	100
LOT #1	206,401.26	424	539	302	79/93	65	35<	1.3%	752
LOT #2	237,138.50	372	666	552	153/315	87	35<	1.1%	168
LOT #3	200,923.24	248	737	328	75/109	289	35<	1.3%	100



SUBSURFACE SEWAGE DISPOSAL SYSTEMS DESIGN CHART

LOT #	LOT SIZE (ACRES ±)	DEEP TEST HOLE DESCRIPTION	MOTTLING AND/OR GROUND WATER ELEVATION (INCHES)	IMPERVIOUS LAYER (INCHES)	LENGTH OF FIELDS 4BRM. (FEET)	PERC.RATE MIN./IN.	SLOPE (%)	BANK RUN FILL DEPTH (FEET)	BANK RUN FILL VOLUME (CUBIC YDS.)	CURTAIN DRAIN DEPTH (FEET)	CURTAIN DRAIN LENGTH (FEET)	REMARKS
LOT 1	4.74	TP-1-1 0-6" TOPSOIL; 6"-38" REDDISH BROWN SANDY LOAM; 38"-74" LIGHTLY COMPACTED FINE SANDS W/ COBBLES TP-1-2 0-6" TOPSOIL; 6"-30" REDDISH BROWN SANDY LOAM; 30"-72" LIGHTLY COMPACTED FINE SANDS W/ COBBLES TP-1-3 0-6" TOPSOIL; 6"-30" REDDISH BROWN SANDY LOAM; 30"-48" LIGHTLY COMPACTED FINE SANDS W/ COBBLES TP-1-4 0-6" TOPSOIL; 6"-30" REDDISH BROWN SANDY LOAM; 30"-78" LIGHTLY COMPACTED FINE SANDS W/ COBBLES	N/A	48	375	11-15	6.3	3.0	600	N/A	N/A	N/A
LOT 2	5.44	TP-2-1 0-6" TOPSOIL; 6"-36" LIGHT BROWN FINE SANDS W/ SILTS; 36"-66" MODERATE COMPACT FINE SANDS TP-2-2 0-6" TOPSOIL; 6"-38" LIGHT BROWN FINE SANDS W/ SILTS; 38"-72" MODERATE COMPACT FINE SANDS TP-2-3 0-6" TOPSOIL; 6"-42" LIGHT BROWN FINE SANDS W/ SILTS; 42"-84" MODERATE COMPACT FINE SANDS TP-2-4 0-6" TOPSOIL; 6"-36" LIGHT BROWN FINE SANDS W/ SILTS; 36"-78" MODERATE COMPACT FINE SANDS	N/A	66	375	11-15	8.0	1.5	300	N/A	N/A	N/A
LOT 3	4.61	TP-3-1 0-6" TOPSOIL; 6"-30" MEDIUM BROWN SANDY LOAM; 30"-92" TIGHTLY COMPACTED FINE SANDS W/ COBBLES, GRAVEL,SILTS TP-3-2 0-6" TOPSOIL; 6"-30" MEDIUM BROWN SANDY LOAM; 30"-92" TIGHTLY COMPACTED FINE SANDS W/ COBBLES, GRAVEL,SILTS TP-3-3 0-6" TOPSOIL; 6"-22" MEDIUM BROWN SANDY LOAM; 22"-87" TIGHTLY COMPACTED FINE SANDS W/ COBBLES, GRAVEL,SILTS TP-3-4 0-6" TOPSOIL; 6"-44" MEDIUM BROWN SANDY LOAM; 44"-82" MODERATE COMPACTED FINE SANDS W/ COBBLES, GRAVEL,SILTS	N/A	82	600	31-45	10.8	N/A	N/A	N/A	N/A	DOSING REQUIRED

PUTNAM COUNTY DEPARTMENT OF HEALTH REALTY SUBDIVISION GENERAL NOTES

1. The Putnam County Department of Health requires a Construction Permit Application to be submitted for approval for each individual subsurface sewage treatment system (SSTS) prior to the issuance of building permits by the local municipality.

2. All individual water supplies shall be drilled wells.

3. All drilled wells shall be constructed in accordance with the New York State Health Department 10NYCRR Appendix 5B, Standards for Water Wells.

4. All wells shall be pump tested for a minimum of 6 hours and have a minimum safe yield of 5 gallons per minutes.

5. The Putnam County Department of Health approval is bsed on locations of SSTS, wells, house and driveway locations being maintained as shown. All modifications to have prior Putnam County Department of Health approval.

6. Unauthorized modifications made to this drawing after the date of Putnam County Health Department approval or any misinformation and/or erroneous data voids said approval.

7. No cut or fill is permitted in the SSTS area, except if so specified on approved plan.

8. All stone walls in and within 10 feet of the SSTS area shall be removed to their entire depth and the resulting void be replaces with similar site soil.

9. Purchasers of lots to be furnished with a true copy of this plan as approved by the Putnam County Department of Health together with a copy of the Certificate of Approval.

10. the conditions noted on the Putnam County department of Health Certificate of Approval are an integral part of this subdivision approval and compliance is required.

11. The area delineated for primary and reserve SSTS areas are to be physically marked on the ground and no earth moving or construction equipment, building equipment or excavated easth is to be allowed in those areas except as required for construction of the system.

12. It is the intention of this lan that wells to be a minimum of 100 feet from absorption trenches, except when a well is downhill and in direct line of drainage with the SSTS, then a minimum distance shall be 200 feet.

13. Flow from all proposed dwellings to the SSTS areas to be by gravity except if so noted in the SSTS schedule.

14. The SSTS designs do not provide for the installation of garbage grinders. Such installations require additional design and the approval of the Putnam County Helath Department.

15. Approval is herewith granted for a total of _____ lots only, namely lots ____, and these lots only.

Real Property Tax Department

Date ______ ______________

All taxes due to date have been paid.

Date ______ William J. Carlin, Jr.
Town of Carmel–Commissioner of Finance

Approved for filing in the Putnam County Clerk's Office

Date ______ Santucci Construction
Owner

Officer

Owner: Santucci Construction
15 Travis Lane
Montrose, NY 10548

Putnam County Department of Health
Carmel, New York

Approved subject to the provision of a private water supply and private sewage treatment system for each habitable ot in accordance with the Putnam County Sanitary Code and as shown on the Realty Subdivision Plan as filed with the Putnam County Department of Health. Consent is hereby given for the filing of this map in the Office of the County Clerk in accordance with the provisions of Sections 1116 and 1117 of the Public Health Law.

By: ______________ Date: ______________
Environmental Health Services

Subdivision Map prepared for **Santucci Construction** in the Town of **Carmel** Putnam County, N.Y.

Scale 1"=50' Nov. 19, 2019

Additional information added November 10, 2021.

The premises being Tax Lot 20, Block 1, Map 66.14 as shown on the Official Tax Assessment Maps for the Town of Carmel.

Town of Carmel Tax Assessment Designation
Section 66.14
Block 1
Lot 20

Lot Area = 644,463 sq. ft. or 14.7948 acres

Approved by a Resolution of the Carmel Planning Board

Chairman ______ Date ______

Site Utilities designed by: ______________
John Kellard , P.E.
New York State License No. 058736

Kellard Sessions Consulting DPC
500 Main Street
Armonk, N.Y. 10504
914-273-2323

"Unauthorized alterations or additions to a survey map is a violation of section 7209, sub-division 2, of the New York State Education Law".

We, Ward Carpenter Engineers Inc., the surveyors who made this map do hereby certify that the survey of property shown hereon was completed October 28, 2014 and that this map was completed on November 10, 2021.

William H. Free Jr., Senior Vice President
New York State License No. 49970

Ward Carpenter Engineers Inc.
76 Mamaroneck Avenue
White Plains, N.Y. 10601

Job # 50935–51911–54337–55962

LDD 50935\dwg\54337–SANTUCCI–SUBDIVISION.dwg