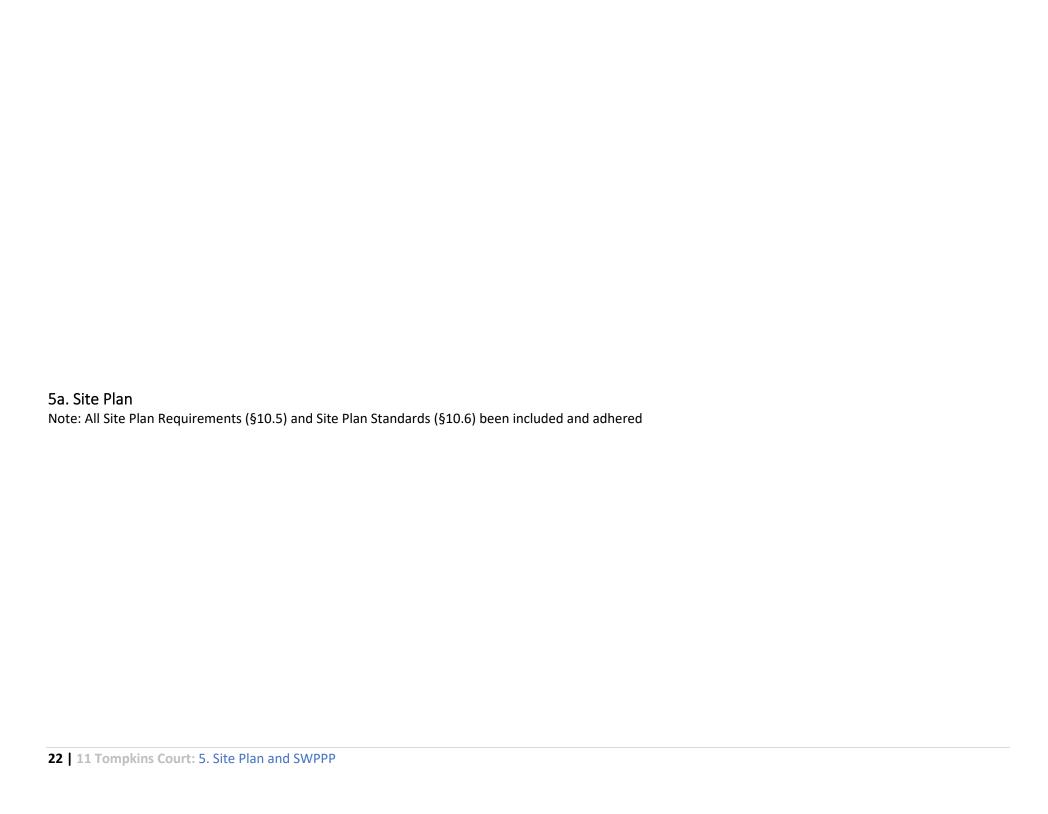
E. Cita Dian and CM/DDD		
5. Site Plan and SWPPP		
21 11 Tompkins Court: 5. Site Plan and SWPPP		



DRAWINGS PREPARED FOR

PROJECT GOOSE SITE PLAN

VILLAGE OF UPPER NYACK ROCKLAND COUNTY, NEW YORK

OWNER:

ADAM BUDGOR & SORAYA SCROGGINS 11 TOMPKINS COURT UPPER NYACK NY 10960

APPLICANT:

ADAM BUDGOR & SORAYA SCROGGINS 11 TOMPKINS COURT UPPER NYACK NY 10960

SITE ENGINEER:

BROOKER ENGINEERING P.L.L.C. 74 LAFAYETTE AVENUE, SUITE 501 SUFFERN, NEW YORK 10901 (845) 357-4411

LAND SURVEYOR:

JAY A. GREENWELL, PLS, LLC 34 WAYNE AVE, 2ND. FLOOR SUFFERN, NY 10901 (845) 357-08301

ARCHITECT:

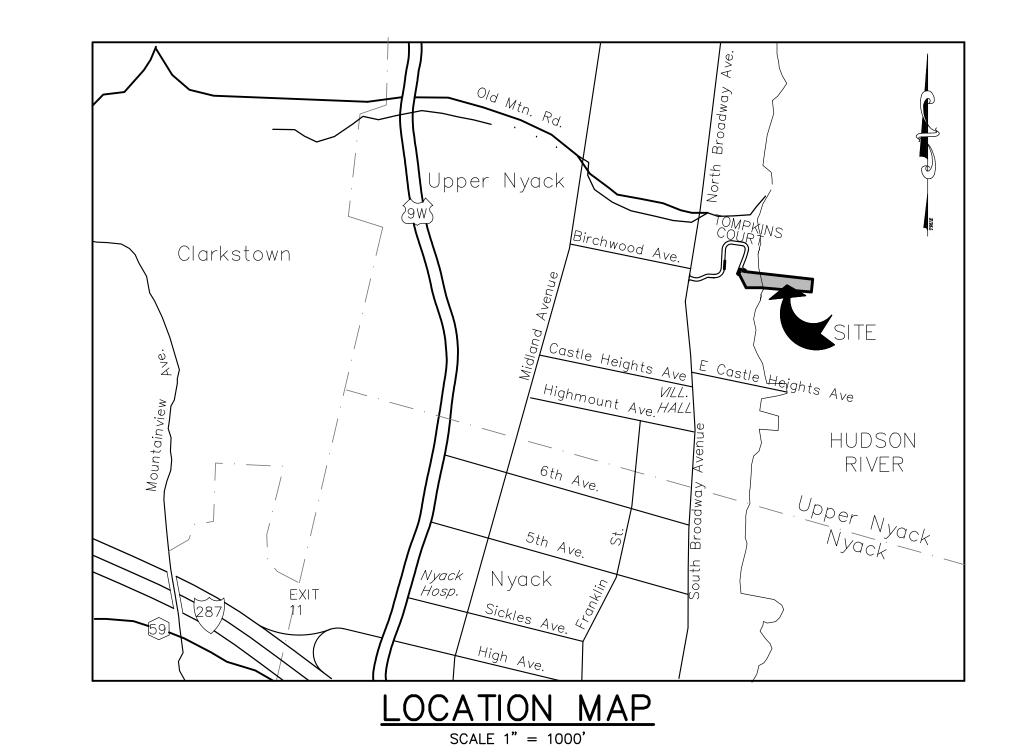
BARNES COY ARCHITECTS 1936 MONTAUK HIGHWAY PO BOX 763 BRIDGEHAMPTON, NY 11932 (631) 537-3555

ATTORNEY:

DONALD BRENNER, P.E., LL.B. 4 INDEPENDENCE AVENUE TAPPAN, NY 10983 PHONE: (845) 359-2210

LANDSCAPE ARCHITECT:

LAGUARDIA DESIGN LANDSCAPE ARCHITECT 38 SCUTTLE HOLE ROAD WATER MILL, NY 11976 (631)-726-1478



DRAWING LIST:

SITE PLAN DRAWINGS (BROOKER ENGINEERING, PLLC) LAST REVISED DATE Si-1 TITLE SHEET 05/10/2022 05/03/2022 Si-2 SITE PLAN 05/03/2022 05/10/2022 Si-3 EXISTING CONDITIONS AND DEMOLITION PLAN 05/03/2022 05/10/2022 Si-4 GRADING AND UTILITY PLAN 05/03/2022 05/10/2022 Si-5 SOIL EROSION & SEDIMENT CONTROL PLAN 05/03/2022 05/10/2022 05/03/2022 05/10/2022 Si-6 CONSTRUCTION DETAILS SURVEY DRAWINGS (JAY A. GREENWELL, PLS, LLC) LAST REVISED DATE EXISTING CONDITIONS SURVEY ORIGINAL DATE SLOPE CATEGORY MAP 09/28/2021 05/10/2022 04/18/2021 05/10/2022 LANDSCAPE DRAWINGS (LAGUARDIA DESIGN LANDSCAPE ARCHITECT) ORIGINAL DATE LAST REVISED DATE L2.1 TREE REMOVALS PLAN 04/29/2022 05/10/2022 L5.1 PLANTING PLAN 04/29/2022 05/10/2022 L6.1 ELECTRICAL PLAN 05/10/2022 04/29/2022

CHAIRMAN

1. THIS IS A SITE PLAN OF LOT 12.7, BLOCK 1, SECTION 60.14 OF THE TOWN OF UPPER NYACK TAX MAPS.

2. PROPERTY ADDRESS: 11 TOMPKINS COURT

UPPER NYACK NY 10960 3. AREA OF TRACT: 97,630 SF

4. ZONE: 5. RECORD OWNER: ADAM BUDGOR & SORAYA SCROGGINS

ADAM BUDGOR & SORAYA SCROGGINS

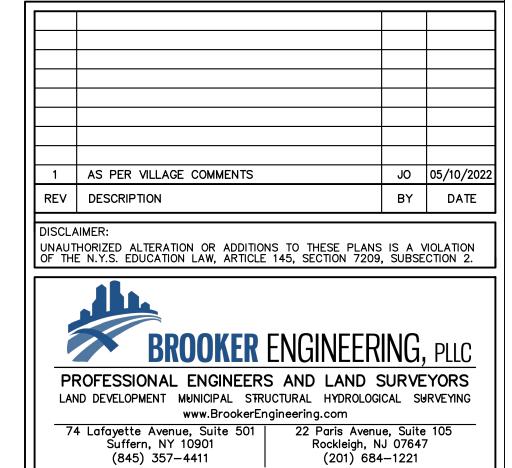
8. SCHOOL DISTRICT: NYACK UFCSD 392404

10. WATER SUPPLY: VEOLIA WATER COMPANY

12. DATUM: NAVD 88

13. ALL UTILITIES SHALL BE INSTALLED UNDERGROUND. ELECTRIC SERVICE CONNECTIONS TO BUILDING SHALL BE IN CONDUIT OF NOT LESS THAN 2 INCHES DIAMETER.

14. MINIMUM SIGHT DISTANCE FROM NEW DRIVEWAY 200'+ TO THE NORTH MEETS AASHTO



PROJECT GOOSE SITE PLAN

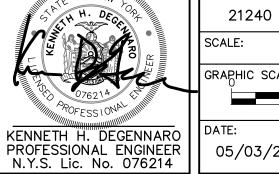
VILLAGE OF UPPER NYACK

ROCKLAND COUNTY, NEW YORK

TITLE SHEET

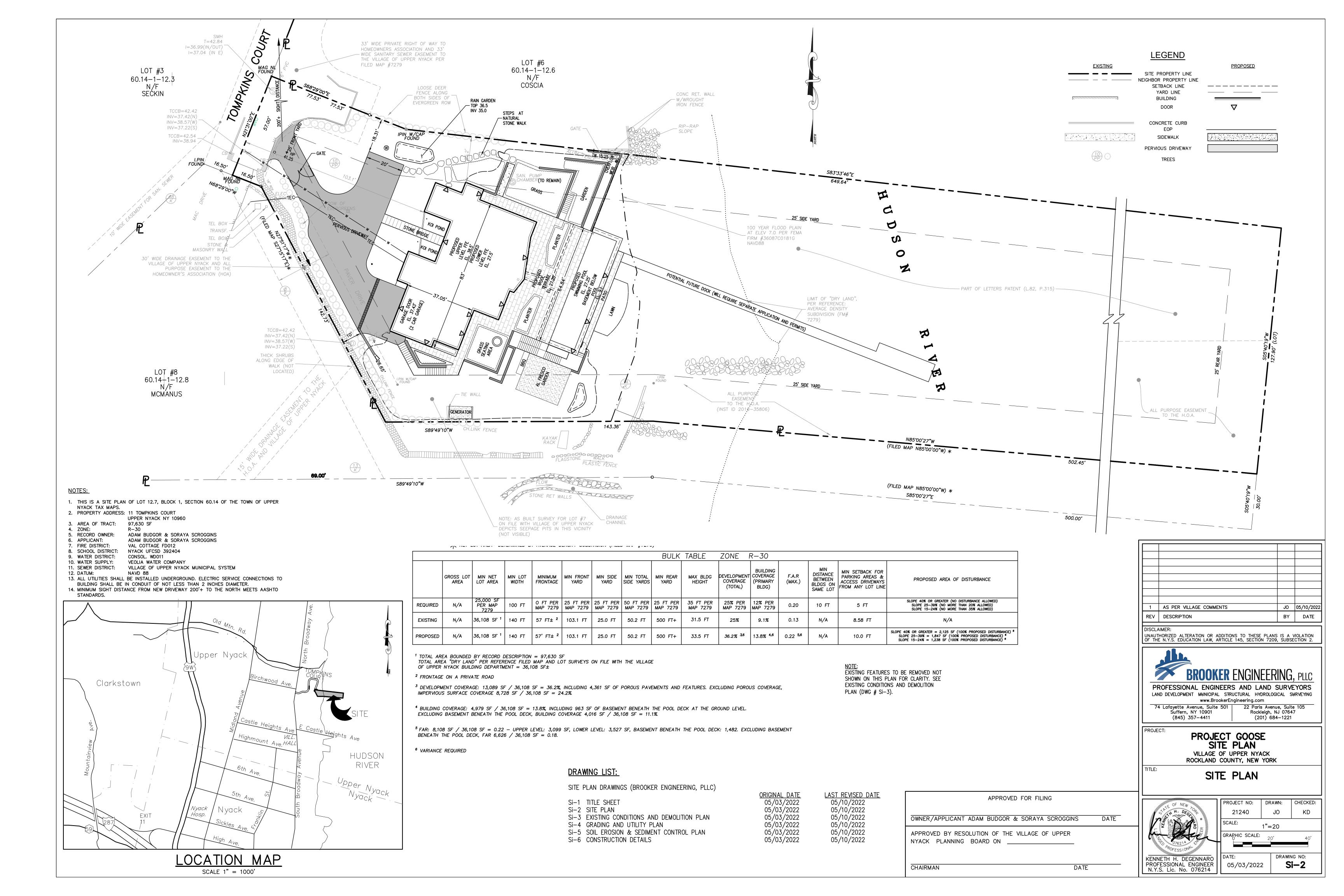
APPROVED FOR FILING OWNER/APPLICANT ADAM BUDGOR & SORAYA SCROGGINS APPROVED BY RESOLUTION OF THE VILLAGE OF UPPER NYACK PLANNING BOARD ON

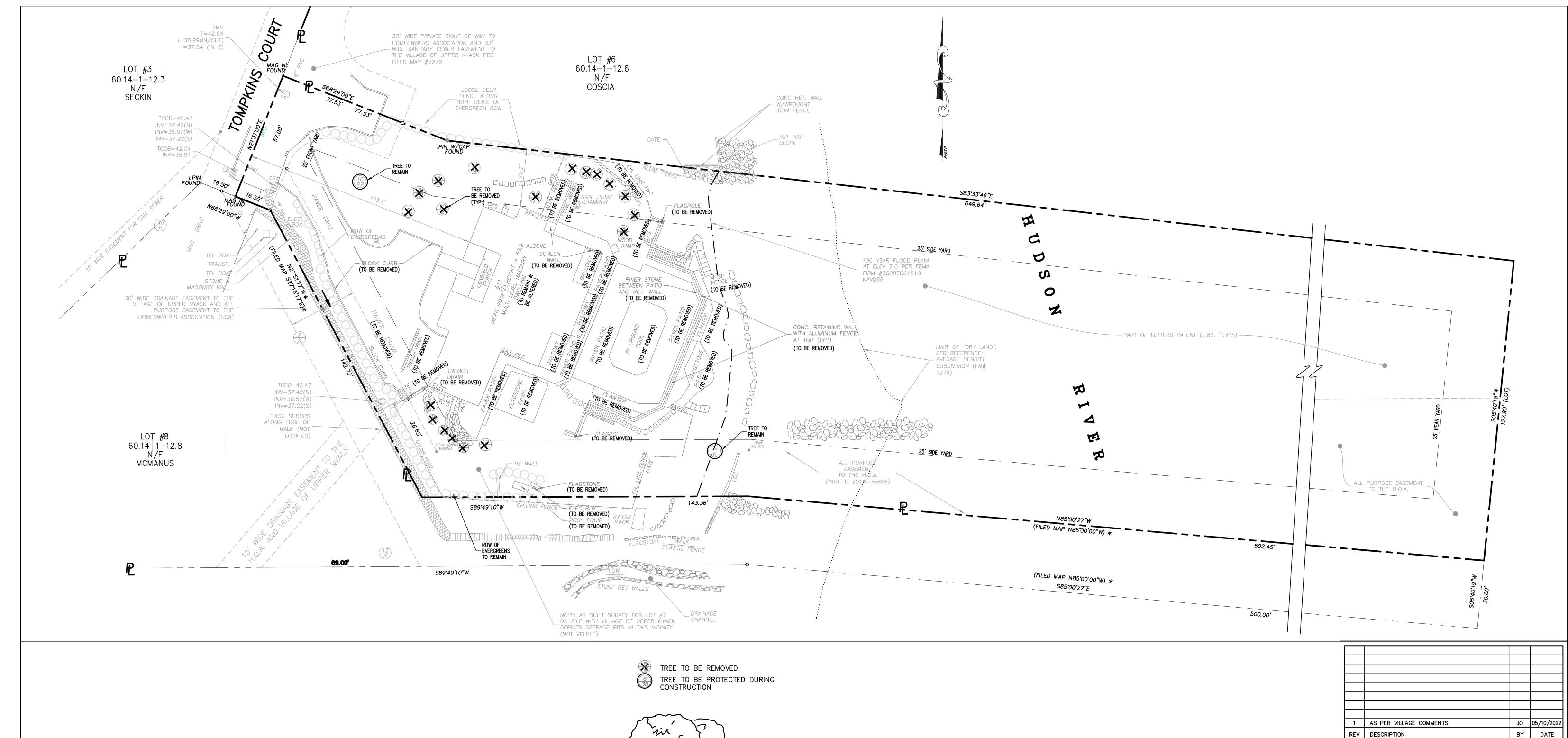
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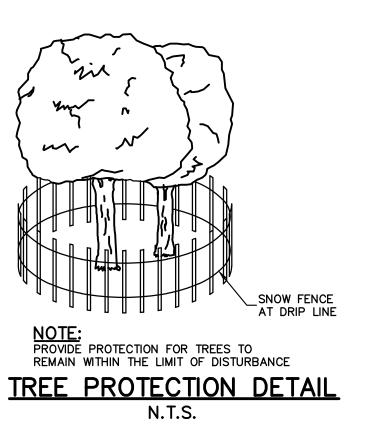


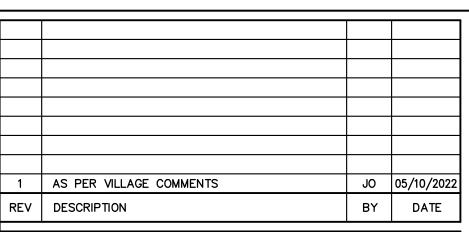
(845) 357-4411

1"=20 GRAPHIC SCALE: DRAWING NO: Si-1 05/03/2022









UNAUTHORIZED ALTERATION OR ADDITIONS TO THESE PLANS IS A VIOLATION OF THE N.Y.S. EDUCATION LAW, ARTICLE 145, SECTION 7209, SUBSECTION 2.



LAND DEVELOPMENT MUNICIPAL STRUCTURAL HYDROLOGICAL SURVEYING www.BrookerEngineering.com 74 Lafayette Avenue, Suite 501 | 22 Paris Avenue, Suite 105
Suffern, NY 10901 | Rockleigh, NJ 07647
(845) 357-4411 | (201) 684-1221

PROJECT:

PROJECT GOOSE SITE PLAN VILLAGE OF UPPER NYACK ROCKLAND COUNTY, NEW YORK

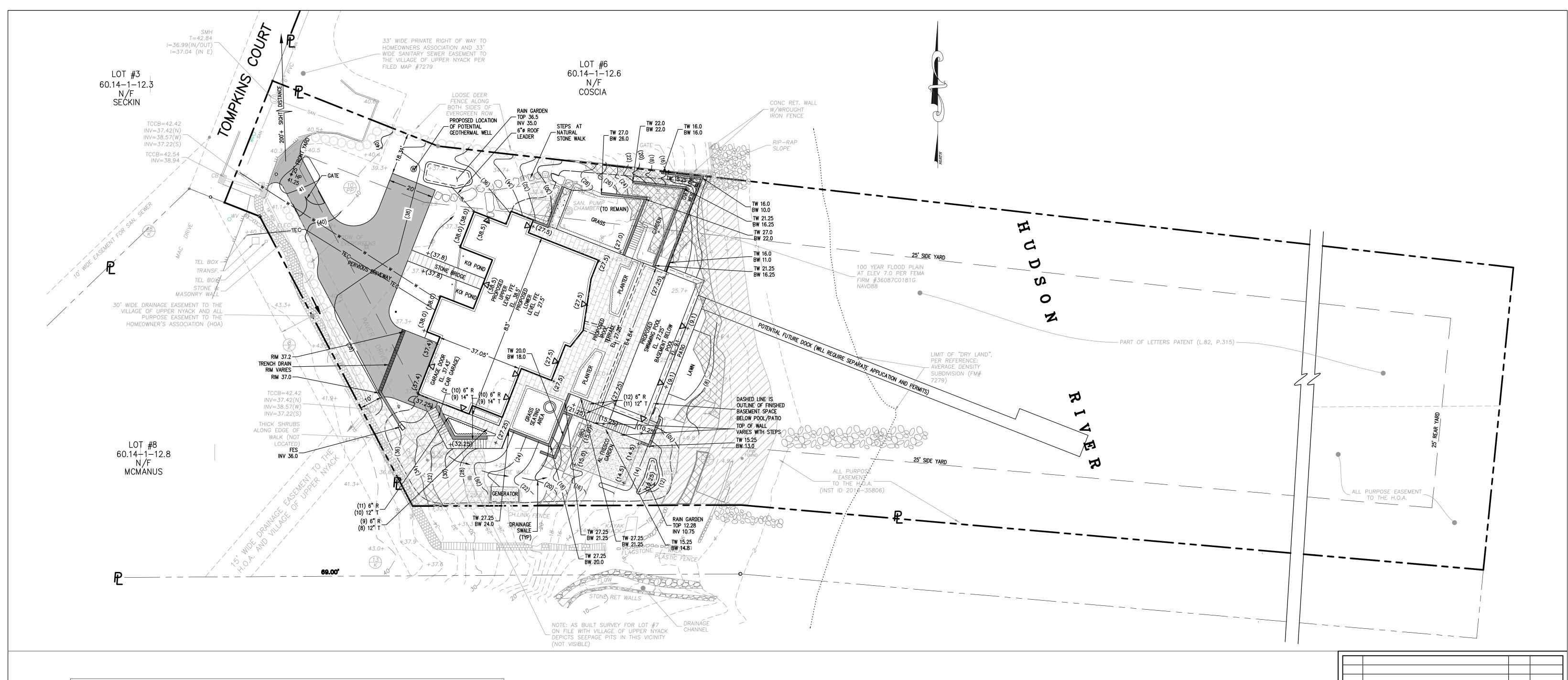
05/03/2022

EXISTING CONDITIONS AND DEMOLITION PLAN



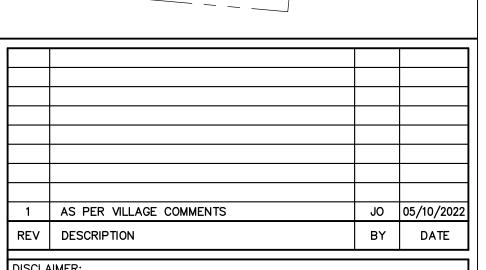
PROJECT NO:	DRAWN:	CHECKED:
21240	JO	KD
SCALE:	1"=20	
GRAPHIC SCALE:	20'	40'

DRAWING NO: Si-3



SLOPE CATEGORIES	TOTAL AREA	SLOPE DEDUCTION	LIMITATION OF DISTURBANCE PER SECT. 6.7.1	AMOUNT OF DISTURBA PROPOSED
SLOPE 40% OR GREATER	2125 SF	N/A *	(NO DISTURBANCE PERMITTED WITHOUT VARIANCE)	100%
SLOPE 25%-39%	1847 SF	n/a *	NO MORE THAN 20% OF THIS AREA MAY BE DISTURBED WITHOUT VARIANCE)	100%
SLOPE 15%-24%	1238 SF	_{N/A} *	NO MORE THAN 35% OF THIS AREA MAY BE DISTURBED WITHOUT VARIANCE)	100%
* NET LOT AREA DETERMINED BY AVERAGE DENSITY SUBDIVISION (FILED MAP #7279)				

EXISTING	SITE PROPERTY LINE NEIGHBOR PROPERTY LINE SETBACK LINE YARD LINE BUILDING DOOR	PROPOSED ——————————————— ▼
10 PP 0 330	CONCRETE CURB EOP SIDEWALK PERVIOUS DRIVEWAY TREES CONTOUR	(588)
× 318.5 ———————————————————————————————————	SPOT GRADE CATCH BASIN OUTLET STRUCTURE FLOOR DRAIN DRAINAGE PIPE DRAINAGE MANHOLE SANITARY MANHOLE CLEAN OUT SANITARY PIPE SANITARY HOUSE CONNECTION WATER SERVICE GAS SERVICE ELEPHONE, ELECTRIC AND CABLE SERVICE	+(325.0)
	WATER VALVE WATER MAIN GAS VALVE GAS MAIN OVERHEAD UTILITIES	



UNAUTHORIZED ALTERATION OR ADDITIONS TO THESE PLANS IS A VIOLATION OF THE N.Y.S. EDUCATION LAW, ARTICLE 145, SECTION 7209, SUBSECTION 2.



PROFESSIONAL ENGINEERS AND LAND SURVEYORS

LAND DEVELOPMENT MUNICIPAL STRUCTURAL HYDROLOGICAL SURVEYING www.BrookerEngineering.com

74 Lafayette Avenue, Suite 501 | 22 Paris Avenue, Suite 105 Rockleigh, NJ 07647

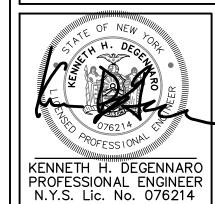
Suffern, NY 10901 (845) 357-4411

PROJECT:

PROJECT GOOSE SITE PLAN

VILLAGE OF UPPER NYACK

GRADING AND DRAINAGE PLAN



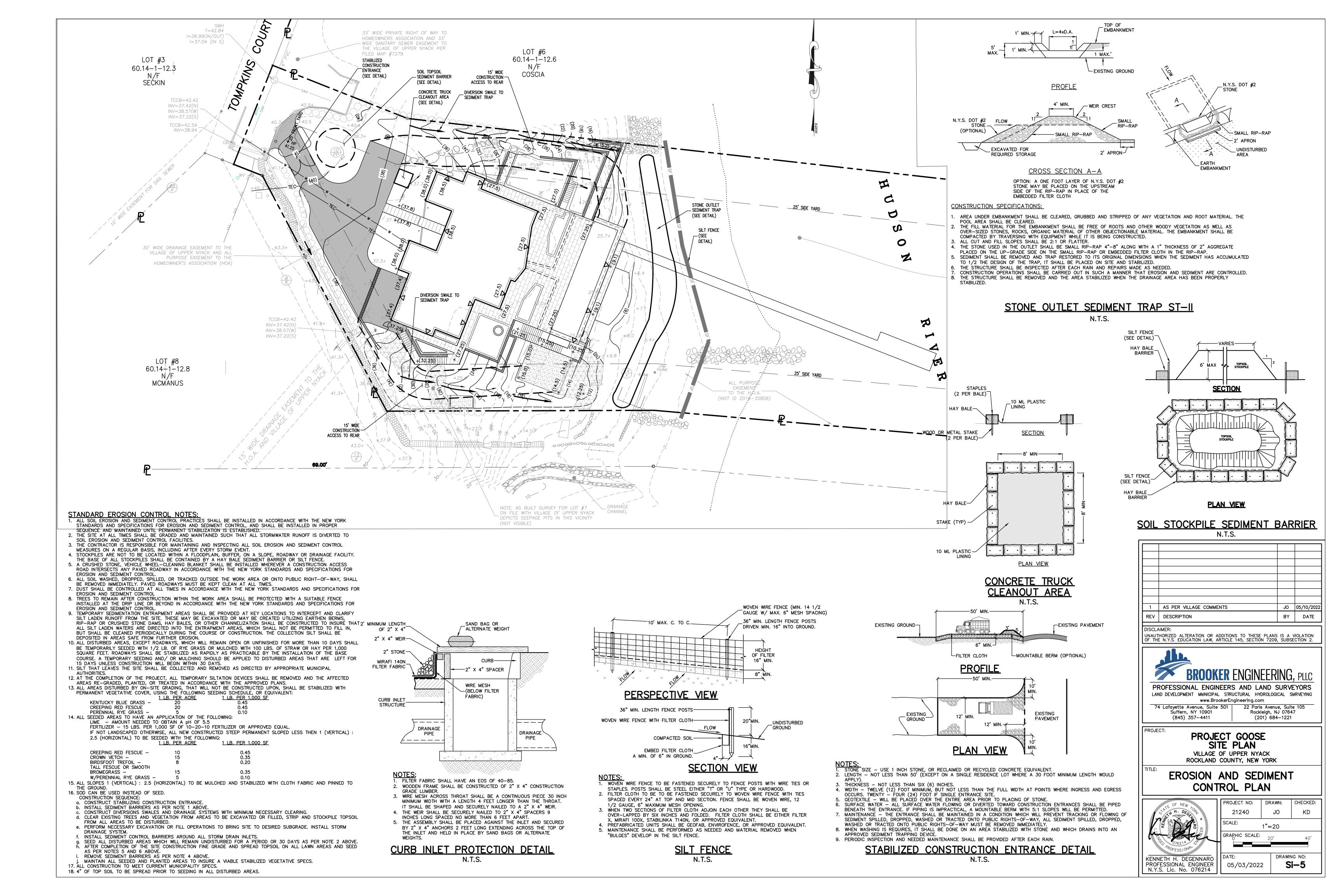
PLAN		
PROJECT NO:	DRAWN:	CHECKED:
21240	JO	KD
SCALE:	1"=20	
GRAPHIC SCALE:	20'	40'

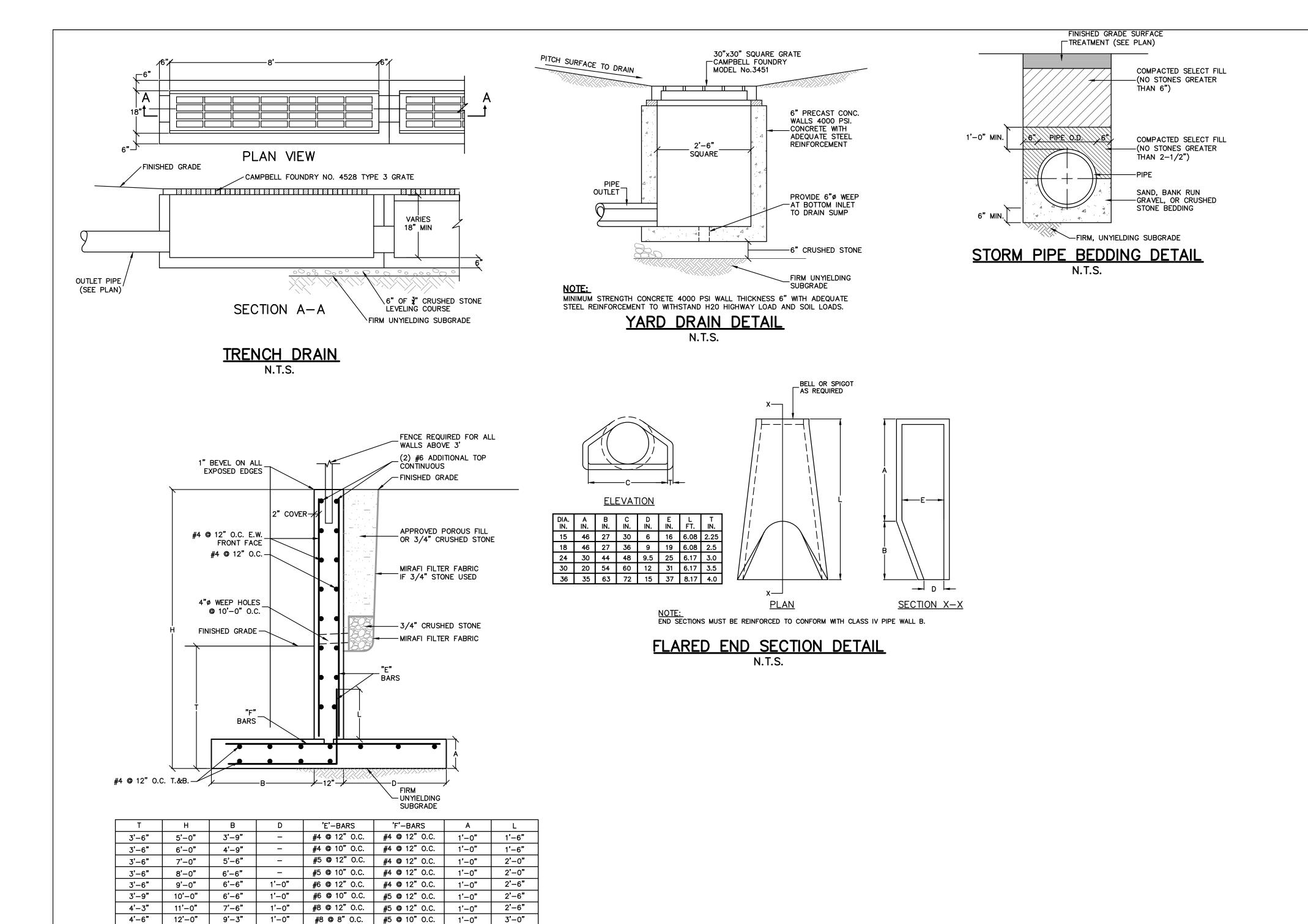
05/03/2022

DRAWING NO:

Si-4

(201) 684-1221





NOTES:

1. FINAL DESIGN IS SUBJECT TO REVISION OR AMENDMENT BY A PROFESSIONAL ENGINEER BASED ON FIELD

2. WALL CONSTRUCTION METHODOLOGY AND MATERIAL MAY BE SUBSTITUTED FOR THE CONCRETE WALL DESIGN SHOWN, SUBJECT TO DESIGN AND CERTIFICATION BY A NYS LICENSED PROFESSIONAL ENGINEER.

3. WALLS IN PARKING AREAS SHALL BE INSTALLED WITH A GUIDERAIL AND CONCRETE PARKING BLOCK. IN ADDITION, THE TOP OF WALL ELEVATION SHALL BE RAISED BY ONE FOOT ABOVE FINISHED GRADE.
 4. SOIL ENGINEER SHALL PERFORM SUBGRADE INSPECTION AS PER NYS CODE CHAPTER 17 TO VERIFY THE

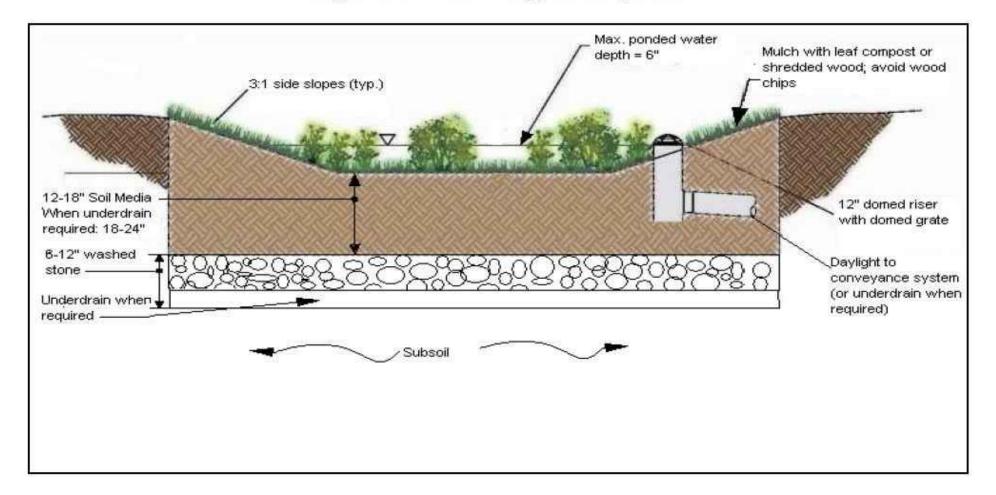
TYPICAL CONCRETE RETAINING WALL

CONDITIONS AND INTEGRITY OF EXISTING ROCK AND SOIL PROFILE.

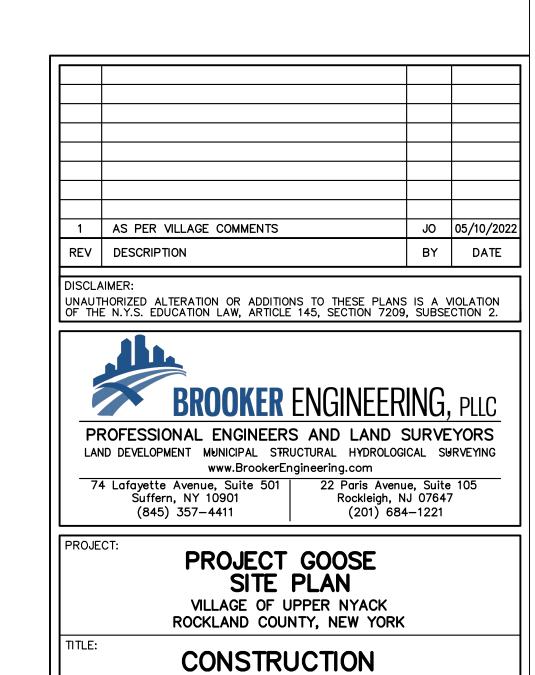
 $\gamma = 110$ PCF, $\Phi = 28^{\circ}$, $\mu = 0.50$, q= 3000 PSF

FOLLOWING DESIGN CRITERIA:

Figure 5.41 Profile of a typical rain garden



RAIN GARDEN DETAIL



DETAILS

SCALE:

KENNETH H. DEGENNARO

PROFESSIONAL ENGINEER N.Y.S. Lic. No. 076214 21240

GRAPHIC SCALE:

05/03/2022

PROJECT NO: DRAWN:

JO

DRAWING NO:

Si-6

N.T.S.

KD

5b. Stormwater Pollution and Prevention Plan8. Regulatory Appendices	
20 11 Tompkins Court: 5 Site Plan and SW/DDD	



NY OFFICE

74 Lafayette Avenue, Suite 501 845.357.4411 Tel Suffern, NY 10901 845.357.1896 Fax

NJ OFFICE

22 Paris Avenue, Suite 105 Rockleigh, NJ 07647 201.750.3527 Tel

May 3, 2022

Village of Upper Nyack 328 North Broadway Upper Nyack, NY 10960

Attn: Dennis Letson, PE, Village Engineer

Re: Project Goose Site Plan, 11 Tompkins Court, Nyack

Stormwater Pollution Prevention Plan

BBE # 21240

Dear Mr. Letson:

Below please find the narrative response outlining the required SWPPP elements as per Section 7.2.1 of the Village of Upper Nyack Local Law #4 of 2022:

7.2.1.1 COMMENT: Background information about the scope of the project, including location, type and size of project.

Response: The project is a redevelopment of the single family home at 11 Tompkins Court (tax lot 60.14-1-12.7). The property was created by average density subdivision of the Rose Subdivision, and the lot was developed in the early 1990s. The property contains a single family home with a driveway in the front and rear patio swimming pool. The redevelopment will keep the existing building footprint and with building additions in the rear. The swimming pool will be reconstructed, with new basement space under the new pool. A series of terraces with gardens and seating areas are proposed along the sides and rear of the property. The site will disturb less than one acre.

7.2.1.2 COMMENT: Site map/construction drawings for the project, including general location map. At a minimum, the site map should show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface waters; wetlands and drainage patterns that could be affected by the construction activity; existing and final slopes; locations of offsite material, waste, permanent or temporary equipment storage areas and location(s) of the storm water discharge(s).

Response: The Site Plan and Landscaping Plans include these required elements.

7.2.1.3 COMMENT: Description of the soil(s) present at the site.

Response: As per the attached (Appendix A) USDA Custom Soil Report, the site contains Wethersfield Gravelly Silt Loam (WeD) soils throughout the site. Please note the eastern part of the property contains lands under water of the Hudson River; these areas are not to be disturbed for this application.

7.2.1.4 **COMMENT**: Construction phasing plan describing the intended sequence of construction activities, including clearing and grubbing; excavation and grading; utility and infrastructure Construction phasing plan describing the intended sequence of construction activities, including clearing and grubbing; excavation and grading; utility and infrastructure installation and any other activity at the site that results in soil disturbance. Consistent with the New York Standards and Specifications for Erosion and Sediment

Response: Construction Schedule including erosion control measures consists of:

- 1. Install SWPPP inspection mailbox.
- 2. Demarcate clearing limit lines along the north and side sides of the property with construction fencing.
- 3. Perform clearing and grubbing of existing trees and vegetation within the clearing limits lines.
- 4. Strip topsoil and stock at designated topsoil stockpile area.
- 5. Install silt fence along the downhill limit of disturbance.
- 6. Install Sediment trap and diversion swales.
- 7. Install foundation for building addition.
- 8. Install site retaining walls for proposed plateau areas.
- 9. Finish grade north, west, and south side of site. Install rain gardens and remove temporary traps and diversion swales.
- 7.2.1.5 **COMMENT**: Description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a pollutant source in stormwater runoff.

Response: The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff.

Good Housekeeping:

The following good housekeeping practices will be followed on site during construction:

- An effort will be made to store only enough product required to do the job
- All materials stored on site will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure
- Products will be kept in their original containers with the original manufacturer's label.
- Substances will not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, all of a product will be used up before disposing of the container.
- Manufacturer's recommendations for proper use and disposal will be followed.
- The Job Supervisor will inspect daily to ensure proper use and disposal of materials on site.

Hazardous Products:

The following practices will be used to reduce the risks associated with hazardous materials:

• Products will be kept in original containers unless they are not re-sealable.

- Original labels and material safety data will be retained; they contain important product information.
- If surplus product must be disposed of, manufacturers' or local and State recommended methods for proper disposal will be followed.

7.2.1.6 **COMMENT**: Description of the pollution and waste materials expected to be stored on-site with updates as appropriate, and a description of controls for each stage of the project from initial land clearing and grubbing to project close-out.

Response: The following product specific practices will be followed on site.

Petroleum Products:

All onsite vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used on site will be applied according to the manufacturer's recommendations.

Fertilizers:

Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer or specified. Once applied fertilizer will be worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

Paints:

All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm drainage system, but will be properly disposed of according to manufacturers' instructions or State and local regulations.

Concrete Trucks:

Concrete trucks will be required to wash out or discharge surplus concrete or drum wash on the site at designated approved locations only.

Detergents and Cleaning Solvents:

Detergents and cleaning solvents will only be utilized on site when needed for immediate maintenance of construction equipment. Detergents and cleaning solvents will be stored in sealed containers, and will not be disposed of on the site or discharged to the storm drainage system. Environmentally friendly solvents and cleaners will be utilized when available.

7.2.1.7 **COMMENT**: Temporary and permanent structural and vegetative measures to be used for soil stabilization, runoff control and sediment control for each stage of the project from initial land clearing and grubbing to project close-out.

Response: Temporary structural measures include sediment traps, silt fence, anti-tracking pads, diversion swales and topsoil stockpile areas, as indicated on the Sediment and Erosion Control Plan. Permanent measures include installation of the hardscape and landscaping plan as indicated on the Landscaping Plan and Site Plan.

7.2.1.8 **COMMENT**: Site map/construction drawing(s) specifying the location(s), size(s), and length(s) of each erosion and sediment control practice.

Response: Sediment control practices (silt fence, anti-tracking pads, temporary sediment traps, and soil stockpile areas are located on the Sediment and Erosion Control Plan (Drawing Si-5).

7.2.1.9 **COMMENT**: Dimensions, material specifications and installation details for all erosion and sediment control practices, including the siting and sizing of any temporary sediment basins.

Response: Dimensions and material specifications for all sediment and erosion control measures on the site are contained in the Sediment and Erosion Control Plan (Drawing Si-5). These include:

A. Sediment Basins:

- Sediment basins are temporary basins formed by excavating and/or constructing an embankment so that sediment laden runoff is temporarily detained under slow-moving or inactive conditions, allowing sediment to settle out before the runoff is discharged.
- Sediment basins shall be designed to provide a minimum capacity of 3,600 cubic feet of storage per acre of drainage area contributing to the basin.
- Locate the basin so that it is accessible for maintenance.
- Outflow structures and emergency spillways must be provided.
- When possible, the outflow structure can consist of the permanent outflow structure, provided that the low flow orifice is sufficiently blocked so as to be watertight and non-functional.

B. Stabilized Construction Entrance:

- A stabilized construction access is defined by a point of entrance/exit to a construction site that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles.
- A stabilized pad of aggregate underlain with geotextile fabric.
- The geotextile fabric shall be Mirafi 600X or equal.
- Aggregate shall be a mix of 1" to 4" stone or recycled concrete equivalent.
- Minimum width shall be 12 feet; minimum thickness shall be 6 inches.
- The contractor shall keep the roadways within the project clear of soil and debris and is responsible for any street cleaning necessary during the duration of construction.

C. Silt Fence:

- A silt fence is a temporary linear sediment barrier of permeable fabric designed to intercept and slow the flow of sediment-laden sheet flow runoff. Silt fences allow sediment to settle from runoff before water leaves the construction site.
- Silt fences will be placed below the toe of exposed and erodible slopes; downslope of exposed soil areas; around temporary stockpiles; along streams and channels; along the perimeter of a project.
- Silt fence fabric shall be Mirafi 100X or equal.
- Wood posts shall be of sound quality hardwood, a minimum 36 inches long and two inches square.
- Metal posts shall be standard T and U section weighing not less than one pound per linear foot.
- Wire fence backing shall be a minimum 14-1/2 gage with a maximum six inch mesh opening and securely attached to fence posts.
- Posts shall extend a minimum of 16 inches into the ground.

D. Hay Bale Barriers:

- A hay bale barrier is a temporary linear sediment barrier consisting of straw bales, designed to intercept and slow sediment-laden sheet flow runoff. Straw bale barriers allow sediment to settle from runoff before water leaves the construction site.
- This BMP will be implemented on a project-by-project basis determined by the Engineer.
- The hay bales will be placed along the perimeter of the site; along streams and channels; below the toe of exposed and erodible slopes; down slope of exposed soil areas; around stockpiles; across minor swales or ditches with small catchments; around above grade type temporary concrete washouts; parallel to a roadway to keep sediment off paved areas.

E. <u>Temporary Stabilization:</u>

- Establishment of Temporary Grass Cover: Prepare seed bed, scarify if compacted, remove debris and obstacles such as rocks and stumps, and seed within 24 hours. Amend soil, lime soil to pH of 6.0 and fertilize at a rate of 1/2 lbs. per 1,000 square feet with a 5-10-10 or equivalent fertilizer. Work amendments a minimum of four inches into soil. If seeding in October/November seed shall be Certified Aroostook winter rye at 100 lbs. per acre, otherwise seed shall be ryegrass (annual).
- Mulch: Small grain straw mulch as specified on the drawings. Straw much shall be applied at a rate of two tons (100 to 120 bales) per acre.

F. Dust Control:

- Treat all disturbed soil surface areas where air movement of dust may cause offsite damage, health hazards, and traffic safety problems.
- For disturbed areas not subject to traffic, vegetation or mulching provide the most practical method of dust control.

- For driving areas and access roads, sprinkling should be used to spray the disturbance area with water until the surface is wet.
- Conform to all local and state regulations governing these activities.
- G. Temporary Soil and Rock Stockpiling:
- Stockpile management procedures and practices are designed to reduce or eliminate air and storm water pollution from stockpiles of soil, and paving materials such as Portland cement concrete (PCC) rubble, asphalt concrete (AC), asphalt concrete rubble, aggregate base, aggregate sub-base or pre-mixed aggregate, asphalt binder (so called "cold mix" asphalt) and pressure treated wood.
- Materials shall not be stockpiled on steep slopes, drainage swales, wetland areas, or wetland setback arrears. Stockpiles shall be surrounded with silt fence and revegetated following completion of construction activities.
- 7.2.1.10 **COMMENT**: Temporary practices that will be converted to permanent control measures.

Response: The only temporary practice to be converted to permanent control measures will be the use of temporary swales at the start of construction that will be grass lined/vegetated swales post construction to provide positive drainage away from the structures.

7.2.1.11 **COMMENT**: Implementation schedule for staging temporary erosion and sediment control practices, including the timing of initial placement and duration that each practice should remain in place.

Response: Construction Schedule including erosion control measures includes:

- 1. Install SWPPP inspection mailbox.
- 2. Demarcate clearing limit lines along the north and side sides of the property with construction fencing.
- 3. Perform clearing and grubbing of existing trees and vegetation within the clearing limits lines.
- 4. Strip topsoil and stock at designated topsoil stockpile area.
- 5. Install silt fence along the downhill limit of disturbance.
- 6. Install Sediment trap and diversion swales.
- 7. Install foundation for building addition.
- 8. Install site retaining walls for proposed plateau areas.
- 9. Finish grade north, west, and south side of site. Install rain gardens and remove temporary traps and diversion swales.
- 7.2.1.12 **COMMENT**: Maintenance schedule to ensure continuous and effective operation of the erosion and sediment control practice.

Response: SWPPP inspections will be performed weekly as per latest NYSDEC guidelines. Copies of the report will be submitted to the Village of Upper Grandview, General Contractor, Site Contractor, owner, and engineer. Hard copies of the report will be kept in the SWPPP mailbox.

7.2.1.13 **COMMENT**: Names of the receiving waterbodies (i.e. the Hudson River).

Response: Stormwater runoff from the site flows east directly toward the Hudson River. Rainfall runoff from the site flows directly to the receiving waterbody without entering neighboring properties.

7.2.1.14 **COMMENT**: Delineation of SWPPP implementation responsibilities for each part of the site.

Response: The owner of the construction site for the facility is:

Owner: Adam Budgor
Address: 11 Tompkins Court

Upper Nyack, NY 10960

Contact number: **212-233-2225**

The owner/operator has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications. The owner/operator shall be responsible to hire and/or retain trained contractors and qualified inspectors to implement the SWPPP plan. The duties of the trained contractors and/or qualified inspectors include the following:

- Provide oversight of maintenance practices identified as BMPs in the SWPPP for both during construction and post construction.
- Implement and oversee employees training.
- Conduct or provide for inspection and monitoring activities.
- Identify other potential pollutant sources and make sure they are added to the plan.
- Identify any deficiencies in the SWPPP and make sure they are corrected.
- Ensure that any changes in the construction plans are addressed in the SWPPP.
- 7.2.1.15 **COMMENT**: Description of the structural practices designed to divert flows from exposed soils, store flows, or otherwise limit runoff and discharge from exposed area of the site to the maximum extent practicable.

Response: A temporary sediment trap will be installed along the downhill limit of disturbance at the start of construction. Temporary swales will be installed along the northern and southern property lines to direct stormwater to the traps. Overflows from the traps will flow through silt fence prior to discharging to the Hudson River. Construction of the retaining walls and building foundation near the pool will be first; as these items are constructed the site will be finished graded and temporarily stabilized. After hardscape construction is complete, the temporary traps will be removed and the planting plan per the Landscape Architect will be installed.

- 7.2.1.16 **COMMENT**: Any existing data that describes the stormwater runoff at the site. **Response**: Stormwater runoff flows east toward the Hudson River. Stormwater runoff from the uphill areas are conveyed by the drainage system on Tompkins Court and are piped around the site in an easement to the Village of Upper Nyack.

 Development coverage is being reduced on the site by the use of pervious pavers and ground cover. The overall stormwater runoff from the site is being decreased by the addition of pervious features. However, rain gardens were conservatively sized to provide stormwater detention for the increases including pervious pavers.
- 7.2.3.2 COMMENT: Description of each post construction Stormwater Management Practice.

 Response: There will be two rain gardens proposed. Details are contained in the Site Plan Drawings (Si-5)
- 7.2.3.3 COMMENT: Site map/construction drawing(s) showing the specific location(s) and size(s) of each post construction Stormwater Management Practice;

Response: The three rain gardens are shown on the Grading and Utility Plan (Drawing Si-4). One is located along the northwest side of the house, one is located along the southwest corner of the house. These will each receive rooftop runoff. The third is located along the south east side of the pool and will receive stormwater runoff from the pool area.

7.2.3.4 COMMENT: Hydrologic and hydraulic analysis for all structural components of the stormwater management system for the applicable design storms (i.e. 50-year storm, 100-year storm).

Response: See Appendix B for calculation of Water Quality and Quantity for the rain gardens. The project requires 253.1 CF of storage and the rain gardens provide 280.8 CF of storage.

7.2.3.5 COMMENT: Comparison of post development stormwater runoff conditions with pre-development conditions.

Response: The flood storage provided decreases the post development runoff from the site by the addition of the rain gardens and use of pervious hardscape features to replace existing features. Quantification of the post construction stormwater runoff rates is not necessary as the site drains directly to the Hudson River (a 4th order watercourse) and the reduction of impervious areas.

7.2.3.6 COMMENT: Dimensions, material specifications and installation details for each post-construction Stormwater Management Practice.

Response: Details for the rain gardens are shown on the Construction Details Drawing (Si-5).

7.2.3.7 COMMENT: Maintenance schedule to ensure continuous and effective operation of each post-construction Stormwater Management Practice.

Response: Stormwater maintenance schedule as per Village requirements will be provided prior to final Planning Board approval.

- 7.2.3.8 COMMENT: Maintenance easements to ensure access to all Stormwater Management Practices at the site for the purpose of inspection and repair. Easements shall be recorded on the plan and shall remain in effect with transfer of title to the property.
 Response: The post construction stormwater facilities are designed to treat on site private stormwater runoff only; no maintenance easements are required. The form of the maintenance agreement will be to the satisfaction of the Village Engineer and Attorney to ensure long term maintenance of the systems are performed by the property owner.
- 7.2.3.9 COMMENT: Inspection and maintenance agreement binding on all subsequent landowners served by the on-site stormwater management measures in accordance with Section 9.

Response: The post construction stormwater facilities are designed to treat on site private stormwater runoff only; no maintenance easements are required. The form of the maintenance agreement will be to the satisfaction of the Village Engineer and Attorney to ensure long term maintenance of the systems are performed by the property owner.

Very truly yours,

BROOKER ENGINEERING, P.L.L.C.

ewell Denson

Kenneth DeGennaro, P.E. NY License No. 076214

APPENDIX A SOIL REPORT



Natural Resources Conservation Service A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Rockland County, New York



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2 053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

-

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

ဖ

Blowout

 \boxtimes

Borrow Pit

Ж

Clay Spot

 \Diamond

Closed Depression

Š

Gravel Pit

...

Gravelly Spot

0

Landfill Lava Flow

٨

Marsh or swamp

2

Mine or Quarry

0

Miscellaneous Water
Perennial Water

0

Rock Outcrop

+

Saline Spot

• •

Sandy Spot

Sodic Spot

_

Severely Eroded Spot

Sinkhole

Slide or Slip

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8

Spoil Area

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Stony Spot

03

Very Stony Spot

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Wet Spot Other

...

Special Line Features

Water Features

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Streams and Canals

Transportation

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Rails

~

Interstate Highways

US Routes

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Major Roads

 \sim

Local Roads

Background

Marie Contract

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24.000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Rockland County, New York Survey Area Data: Version 19, Sep 1, 2021

Soil map units are labeled (as space allows) for map scales 1:50.000 or larger.

Date(s) aerial images were photographed: Apr 13, 2021—Sep 14, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (11 Tompkins Court)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
WeD	Wethersfield gravelly silt loam, 15 to 25 percent slope s	0.9	100.0%
Totals for Area of Interest		0.9	100.0%

Map Unit Descriptions (11 Tompkins Court)

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 descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Custom Soil Resource Report

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Rockland County, New York

WeD-Wethersfield gravelly silt loam, 15 to 25 percent slope s

Map Unit Setting

National map unit symbol: 9v5n

Elevation: 0 to 640 feet

Mean annual precipitation: 47 to 50 inches Mean annual air temperature: 48 to 52 degrees F

Frost-free period: 135 to 215 days

Farmland classification: Not prime farmland

Map Unit Composition

Wethersfield and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wethersfield

Setting

Landform: Till plains, hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Convex

Parent material: Loamy acid till derived mainly from reddish sandstone, shale, and

conglomerate, with some basalt

Typical profile

H1 - 0 to 13 inches: gravelly silt loam H2 - 13 to 22 inches: gravelly loam

H3 - 22 to 60 inches: gravelly fine sandy loam

Properties and qualities

Slope: 15 to 25 percent

Depth to restrictive feature: 20 to 38 inches to densic material

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to

moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C

Ecological site: F145XY012CT - Well Drained Dense Till Uplands

Hydric soil rating: No

Minor Components

Riverhead

Percent of map unit: 5 percent

Hydric soil rating: No

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Charlton

Percent of map unit: 5 percent Hydric soil rating: No

Cheshire

Percent of map unit: 5 percent Hydric soil rating: No

Wallington

Percent of map unit: 3 percent Hydric soil rating: No

Yalesville

Percent of map unit: 2 percent Hydric soil rating: No

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2 053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2 053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2 053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

APPENDIX B WATER QUALITY CALCULATIONS

NY OFFICE

74 Lafavette Avenue Suffern, New York 10901

Tel: 845.357.4411 Fax: 845.357.1896

Tel: 201.750.3527

NJ OFFICE

Suite 105 Rockleigh, New Jersey 07647

Drainage Analysis

May 2, 2022

11 Tompkins Court

11 Tompkins Court, Nyack, NY 10960 Tax Lot: 60.14-1-12.7 BE #21240

The proposed action for this project is the renovation and expansion of a single-family home located on the east side of Tompkins Court, Nyack, NY. As part of the proposed action, the existing pool and patio will be removed and a new pool and patio will be constructed. The existing driveway will be removed and replaced with a permeable pavement driveway. To offset the net increase of approximately 1,000 s.f. in impervious surfaces, an equivalent amount of storage for runoff will be captured and stored elsewhere on site where constructability is more feasible. To offset the net increase in impervious surfaces, two rain gardens are proposed at the base of the driveway near the existing garage and near the northwest corner of the existing dwelling. The proposed rain gardens are designed treatment areas to offset the net increase of impervious coverage. The southern rain garden will be sized 12' x 8' and the northern rain garden will be sized 12' x 18'. Runoff will then be discharged easterly along the northern and southern edge of the property to maintain existing drainage patterns. Rain gardens were selected due to their aesthetically pleasing nature, ease of maintenance, and ability to store the sheet flow created by impervious structures. According to Web Soil Survey, the soil on site is comprised of Wethersfield gravelly silty loam (WeD), hydrologic soil group C. The rain garden has been sized according to the criteria provided by the New York State Stormwater Management Design Manual, Section 5.3: Green Infrastructure Techniques. The calculations are as follows:

Calculations to Size Rain Garden:

Step 1: Calculate water quality volume.

WQv = (P)(Rv)A / 12

Where:

P = 90% rainfall number = 1.5"

Rv = 0.05 + 0.009(I) = 0.05 + 0.009(100) = 0.95

I = Percentage impervious area draining to site = 100%

A = Area draining to treatment areas = 1,000 s.f.

 $WQv = (1.5")(0.95)(1,000) / 12 = 118.75 \text{ ft}^3$

Step 2: Solve for drainage layer and soil media storage volume.

 $V_{SM} = A_{RG} \times D_{SM} \times P_{SM}$ $V_{DL} = A_{RG} \times D_{DL} \times P_{DL}$

Where:

 A_{RG} = proposed rain garden surface area = ([12*18]+[12*8]) = 312 ft²

 D_{SM} = depth soil media = 1.0 ft (maximum depth in soil type C)

 D_{DL} = depth drainage layer = 0.5 ft (minimum depth of drainage layer)

 P_{SM} = porosity of soil layer = 0.20 (minimum)

 P_{DL} = porosity of soil layer = 0.40

Ken DeGennaro, P.E., C.F.M.

Stuart Strow, P.E., C.F.M.

$$V_{SM} = (312)(1.0)(0.20) = 62.4 \text{ ft}^3$$

 $V_{DL} = (312)(0.5)(0.40) = 62.4 \text{ ft}^3$

 D_P = ponding depth = 0.5 ft (maximum ponding depth above surface)

$$WQv \le V_{SM} + V_{DL} + (D_P x A_{RG}) = 62.4 \text{ ft}^3 + 62.4 \text{ ft}^3 + (0.5 \text{ ft } x 312 \text{ ft}^2) = 280.8 \text{ ft}^3$$

 $WQv = 118.75 \text{ ft}^3 \le 280.8 \text{ ft}^3$, **OK**

Therefore, the proposed design for treating the 1,000 s.f. impervious area draining to the rain gardens exceeds the WQv requirements.

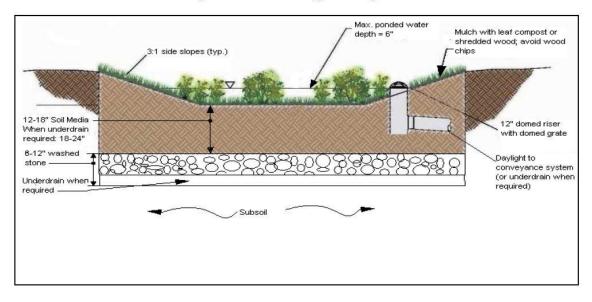
As per NYSSMDM, Section 5.3, specific recommendations for soil and landscaping used in the rain garden are suggested:

<u>Soil:</u> The composition of the soil media should consist of 50%-70% sand (less than 5% clay content), 50%-30% topsoil with an average of 5% organic material, such as compost or peat, free of stones, roots and woody debris and animal waste.

Plant List:

- Shrubs
 - Witch Hazel
 - Winterberry
 - Arrowwood
 - o Brook-side Alder
 - Red-Osier Dogwood
 - Sweet Pepperbush
- Herbaceous Plants
 - Cinnamon Coneflower
 - Woolgrass
 - New England Aster
 - Fox Sedge
 - Spotted Joe-Pye Weed
 - Switch Grass
 - Great Blue Lobelia
 - Wild Bergamot
 - o Red Milkweed

Figure 5.41 Profile of a typical rain garden



Calculations for Required Storage Volume:

To calculate required storage volume of the site, a 100-year design storm was utilized which resulted in a 9 in. 24-hour rainfall.

Calculate Re	quired Storage Volume	2						
Existing Run	off Curve Number							
Hydrologic Group	Cover Description		Soil Name		CN	Area (Acres)	CN x Area	
С	Impervious Area		WeD (Wethersfield)		eld)	98	0.259	25.382
С	Open Space - Good Condition		WeD (Wethersfield)		eld)	79	0.57	45.03
					To	tals =	0.829	70.412
			CN _{ex} (weighted)					84.9
Proposed Rur	noff Curve Number			L		•	, ,	
Hydrologic Group	Cover Description		Soil Name			CN	Area (Acres)	CN x Area
С	Impervious Are	s Area WeD (Wethersfield)		eld)	98	0.289	28.322	
С	Open Space - Fair Co	ondition WeD (Wethersfield)		eld)	79	0.54	42.66	
			•		To	tals =	0.829	70.982
100 5	year Design Storm				CNpr	(weig	(hted)	85.6
9 i	nch 24-hour rainfall			_				
		Existing	Proposed					
	Curve Number	84.9	85.6					
Max Runoff, S (in) 1.77		1.77	1.68					
Initial Abstraction, Ia (in) 0.35		0.34						
	Runoff, Vr (in)	7.17	7.26		$\Delta Vr =$	0.08	in	
	V s = (∆ V	Vr x Area) =	253.1	cf				

Storage Required = 253.1 cubic feet

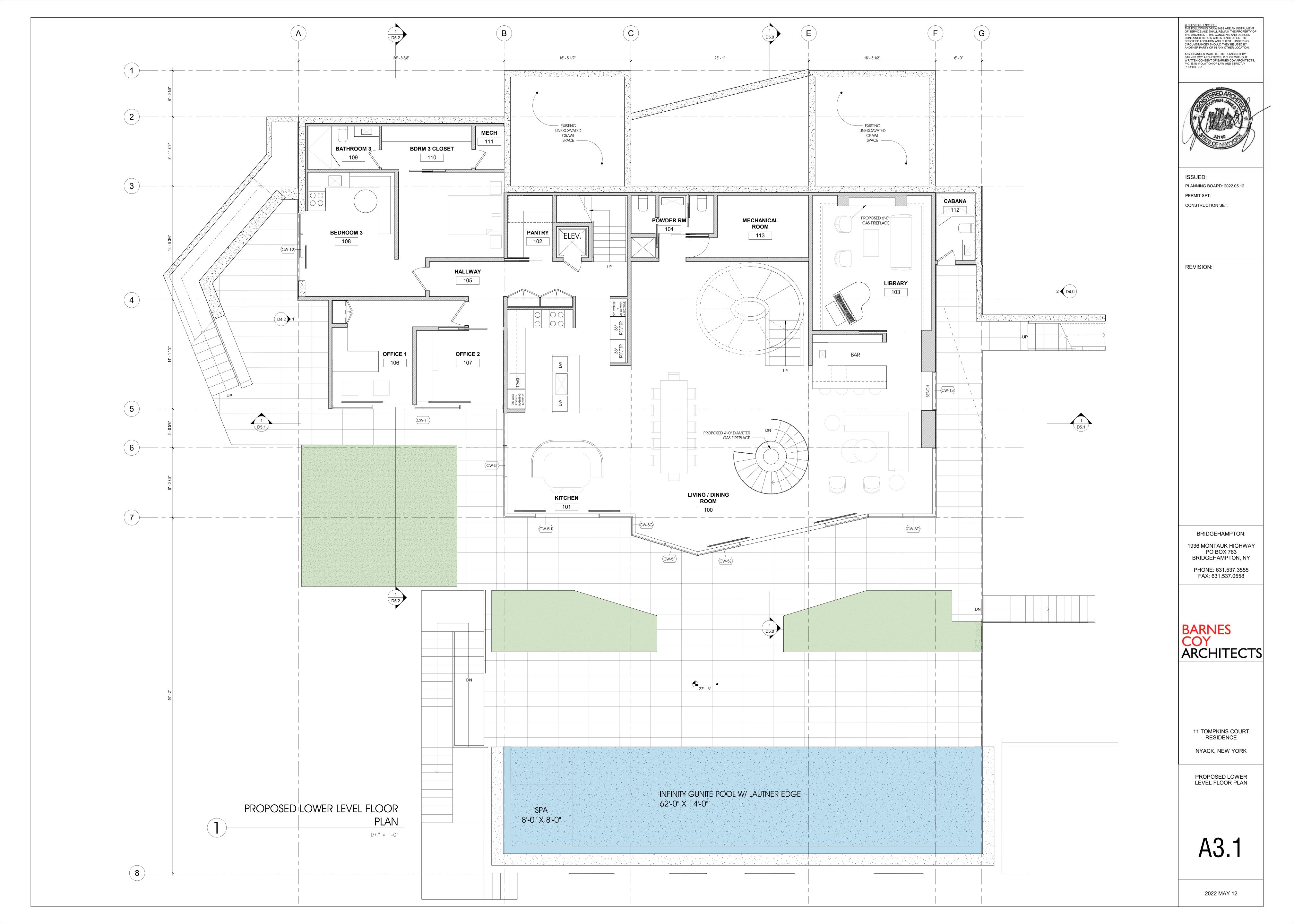
Storage Provided = 280.8 cubic feet (as per Rain Garden sizing calculation above)

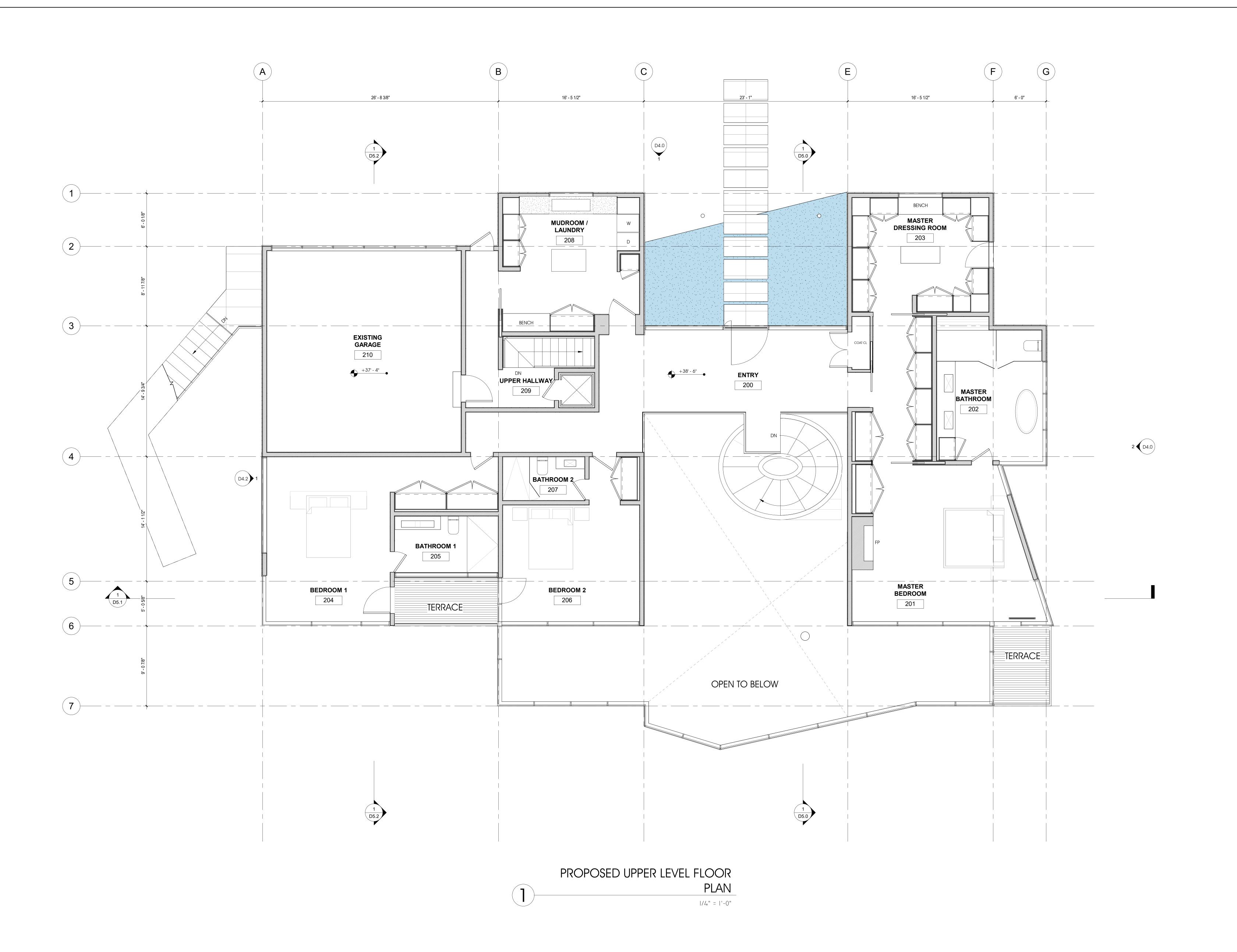
Storage Required = 253.1 ft³ \leq 280.8 ft³, **OK**

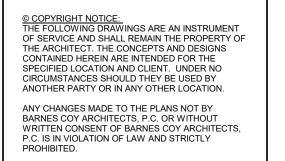
Under existing conditions, there is no stormwater mitigation present to collect run off on site. Providing the rain gardens will allow runoff from the roof (approximately 1,000 square feet of impervious surface) to be collected, stored, and infiltrated. The rain gardens have been positioned to collect flows from the roof of the dwelling and store the runoff during a storm. Therefore, this will offset the net increase of new impervious area (approximately 1,000 square foot increase of impervious).

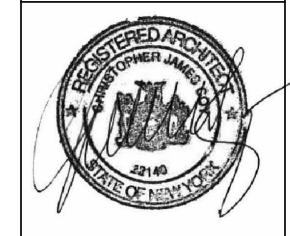
6. Architectural

6a. Floor Plans, Elevations, and Cross-Sections **61 | 11 Tompkins Court:** 6. Architectural









ISSUED:
PLANNING BOARD: 2022.05.12
PERMIT SET:

CONSTRUCTION SET:

REVISION:

BRIDGEHAMPTON:

1936 MONTAUK HIGHWAY
PO BOX 763
BRIDGEHAMPTON, NY

PHONE: 631.537.3555
FAX: 631.537.0558

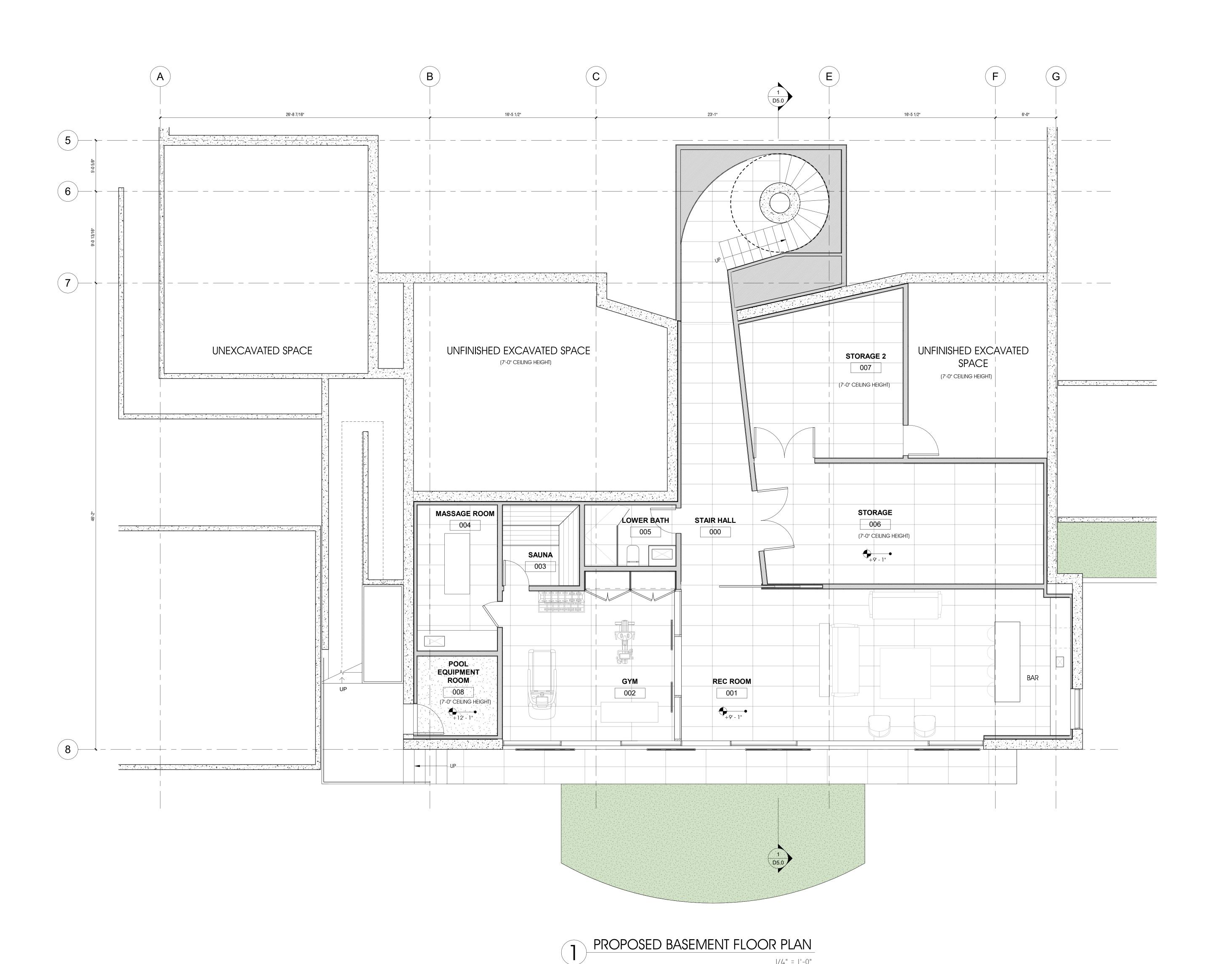
BARNES COY ARCHITECTS

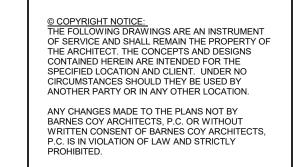
11 TOMPKINS COURT RESIDENCE

NYACK, NEW YORK

PROPOSED UPPER LEVEL FLOOR PLAN

A3.2







ISSUED:
PLANNING BOX

PLANNING BOARD: 2022.05.12
PERMIT SET:
CONSTRUCTION SET:

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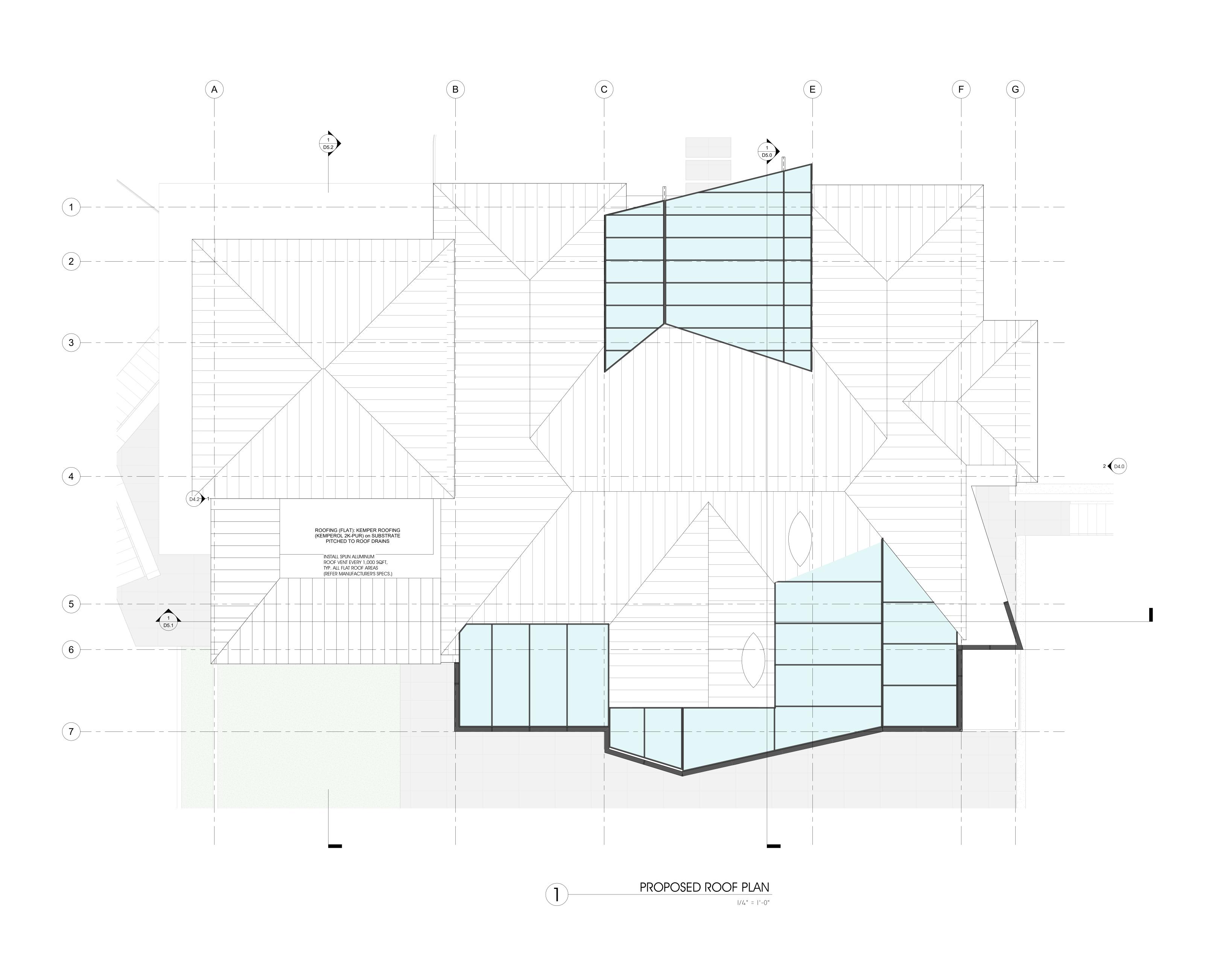
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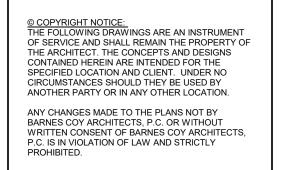
> 11 TOMPKINS COURT RESIDENCE

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PROPOSED BASEMENT FLOOR PLAN

A3.0







ISSUED: PLANNING BOARD: 2022.05.12 PERMIT SET:

CONSTRUCTION SET:

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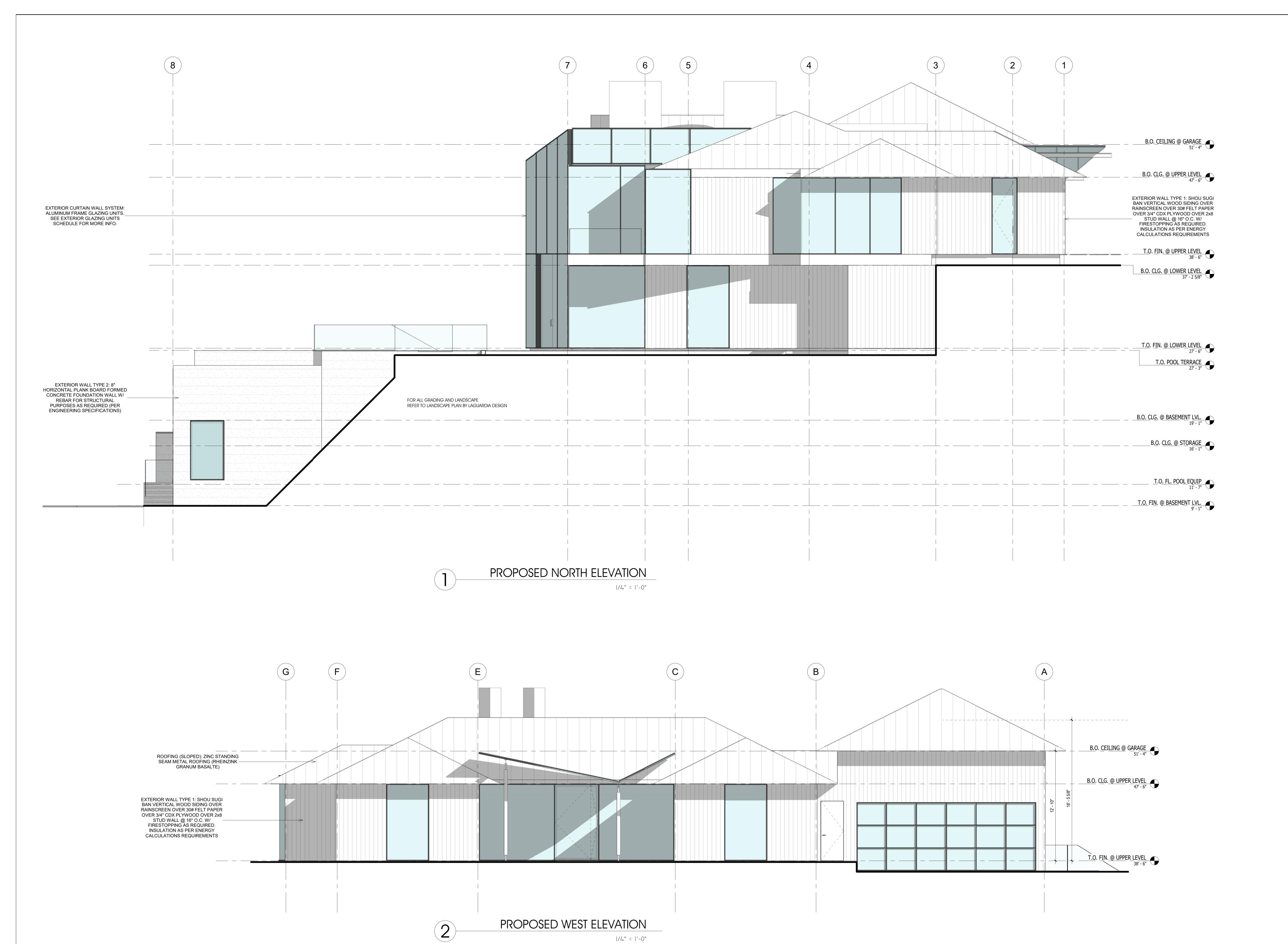
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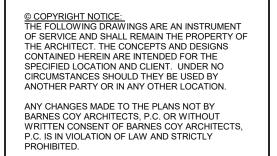
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PROPOSED ROOF PLAN

A3.3







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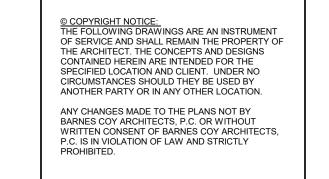
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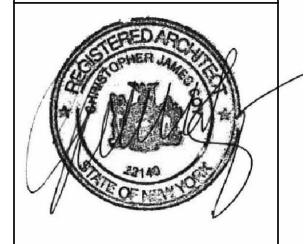
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PROPOSED NORTH + WEST EXTERIOR ELEVATIONS

A4.0





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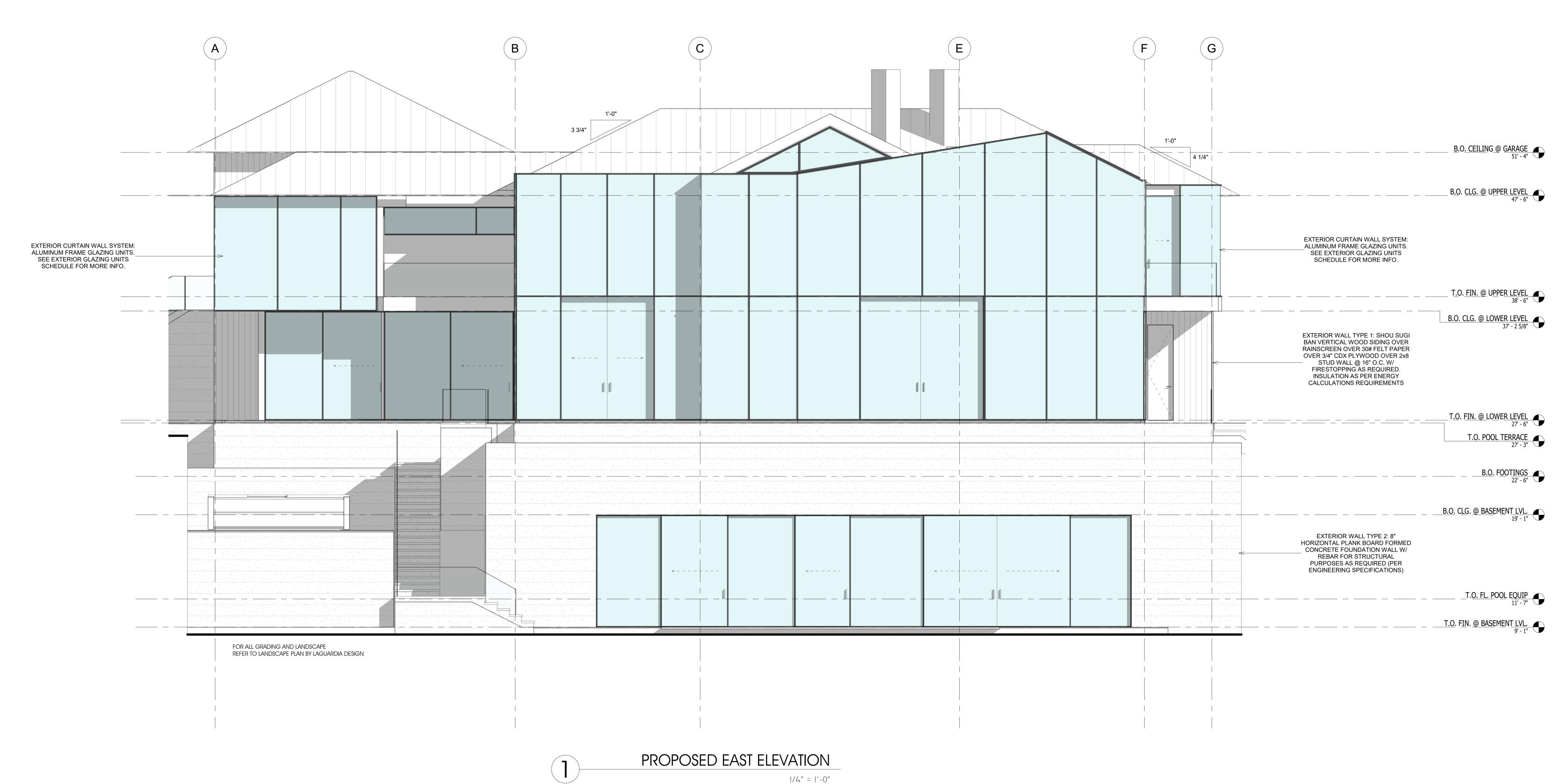
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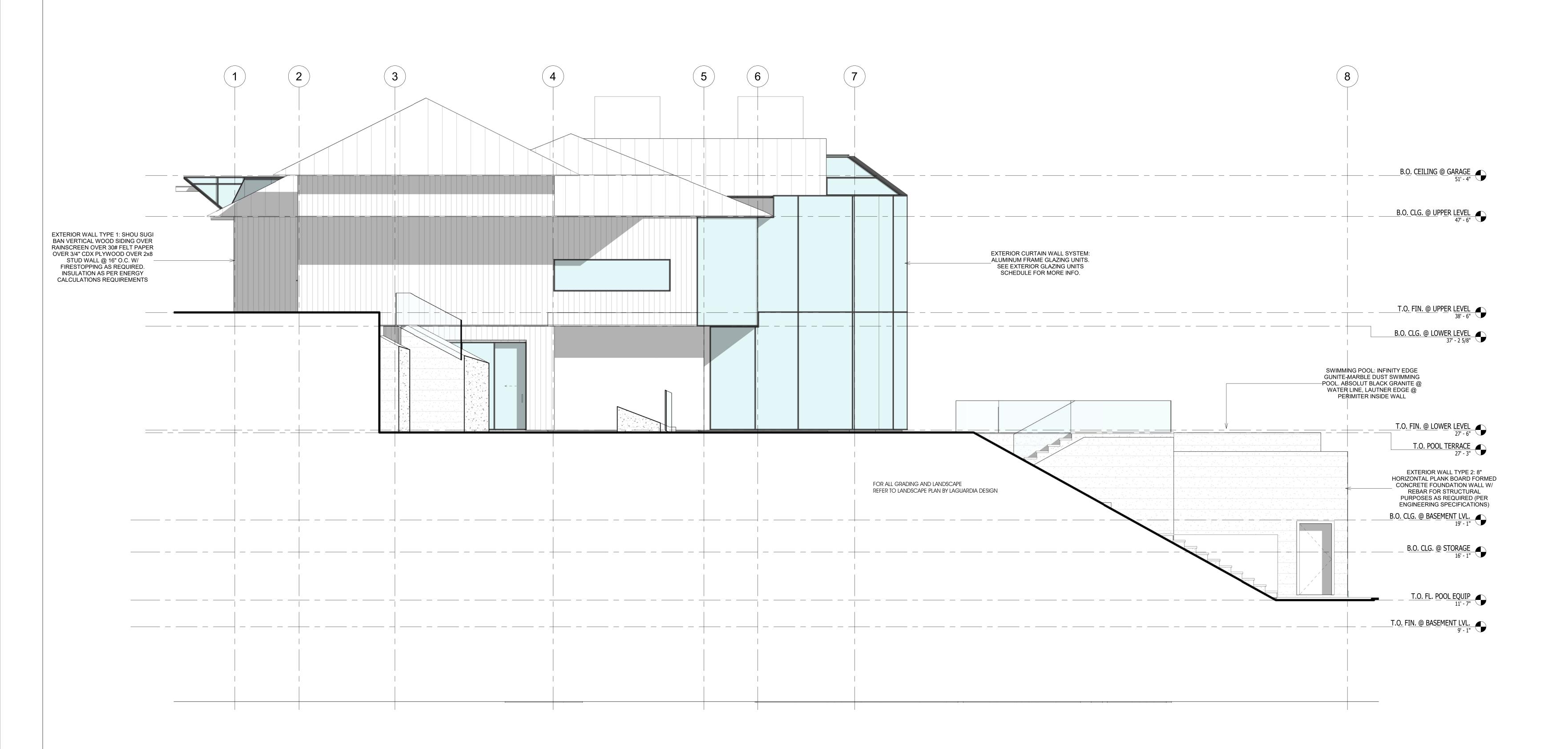
> 11 TOMPKINS COURT RESIDENCE

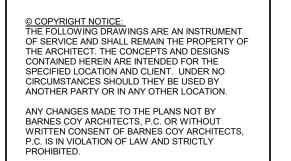
NYACK, NEW YORK

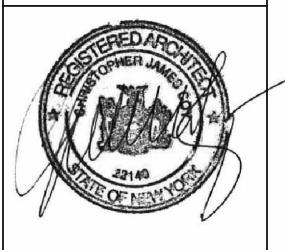
PROPOSED EAST ELEVATION

A4.1









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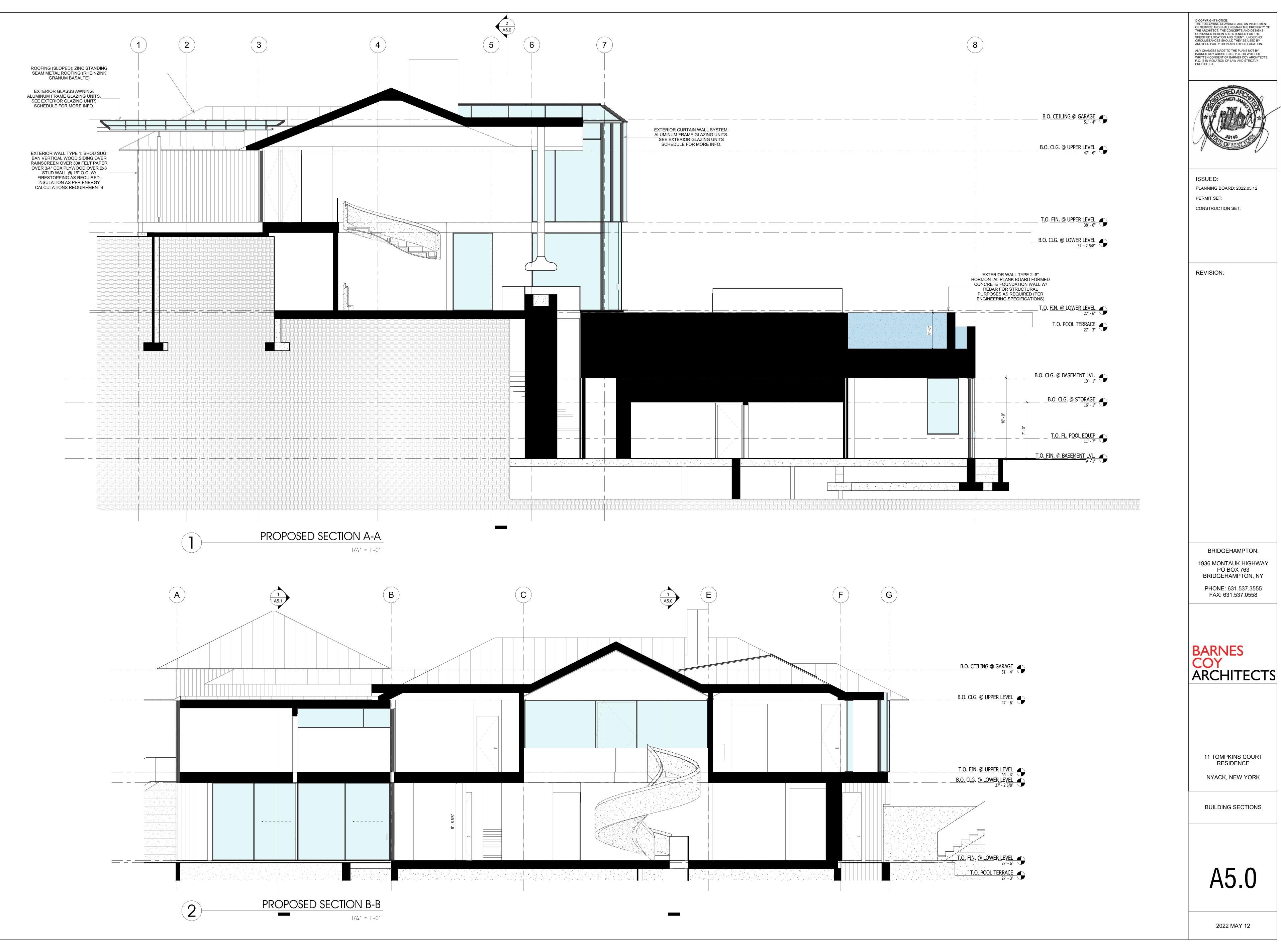
BARNES COY ARCHITECTS

11 TOMPKINS COURT RESIDENCE

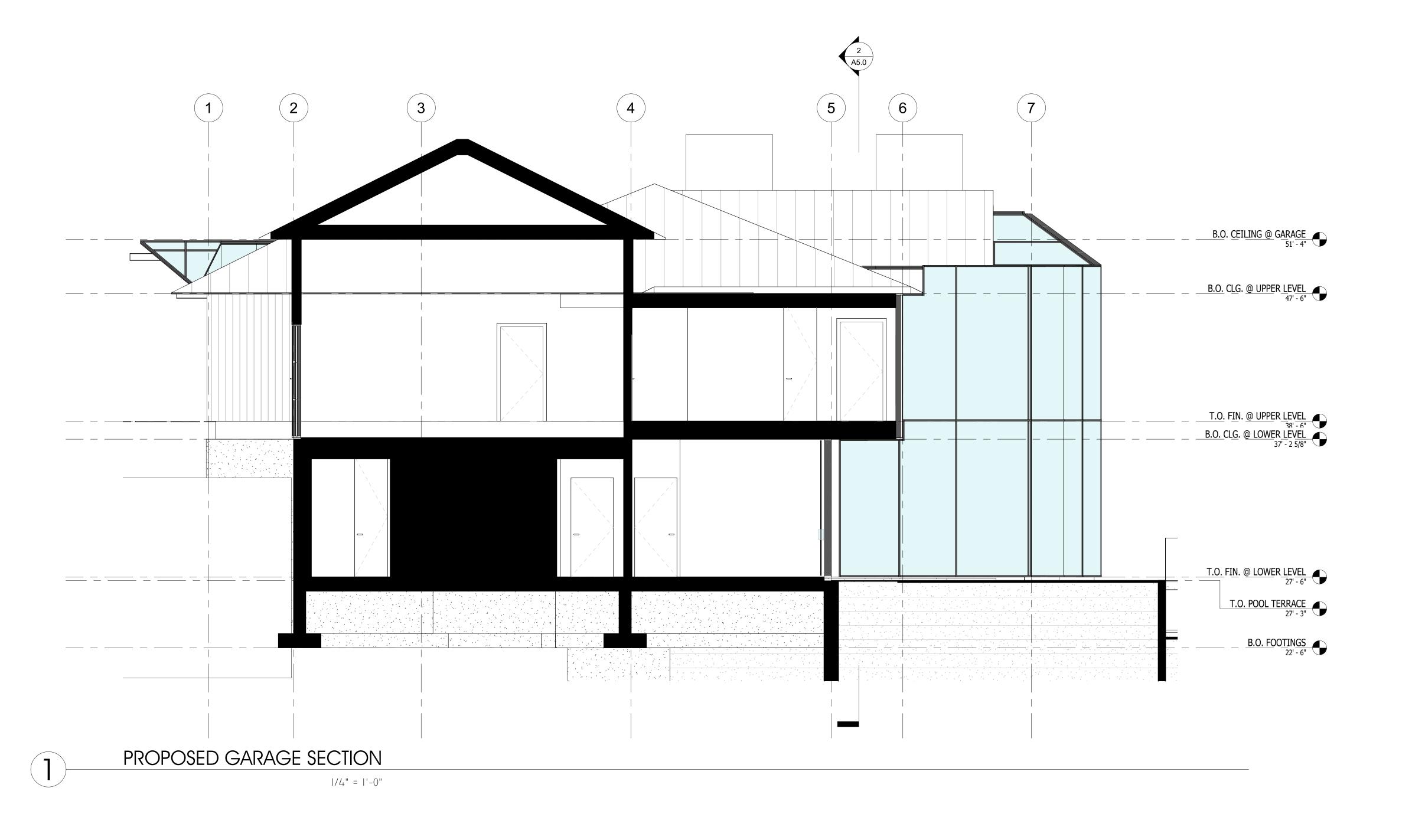
NYACK, NEW YORK

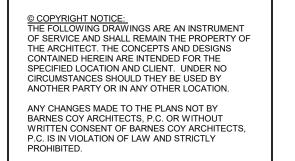
PROPOSED SOUTH ELEVATION

A4.2











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BARNES COY ARCHITECTS

11 TOMPKINS COURT RESIDENCE

NYACK, NEW YORK

BUILDING SECTIONS

45.1

ARCHITECTURAL REVIEW BOARD

EXTERIOR FINISH SCHEDULE

PROJECT NAME: 11 TOMPKINS RESIDENCE_PROJECT PHOENIX

DATE: 2022 MARCH 03

Element	Materials	Finish	Manufacturer (Mfg)	Mfg Style Name/#	Mfg Color Name/#
Foundation	CONCRETE	8" HORIZONTAL PLANK BOARD- FORMED CONCRETE	POURED IN PLACE	N/A	GREY
Front Porch	PORCELAIN PAVERS	STRATO 2CM	DEKTON	DEK-ANANKÉ	STRATO 2CM
Railings	GLASS	1/2" CLEAR STARPHIRE TEMPERED GLASS	N/A	N/A	N/A
Siding	VERTICAL SHOU SUGI BAN WOOD	KEBONY: SVERTE	reSAWN TIMBER CO.	KEBONY: SVERTE	KEBONY: SVERTE
Window Shutters	N/A				
Trim	N/A				
Decking	PORCELAIN PAVERS OVER PEDESTALS		DEKTON	DEK-ANANKÉ	STRATO 2CM
Garage Doors	PEDESTALS TEMPERED GLASS W/ ALUMINUM FRAME	SANDBLASTED GLASS W/ MATTE BLACK ALUMINUM FRAME	SCHWEISS	HYDRAULIC DOOR	N/A
Fascia	N/A				
Gutters	ZINC INTEGRATED GUTTERS	GRANUM BASALTE	RHEINZINK		GRANUM BASALTE
Louvers	N/A				
	STANDING SEAM ZINC	GRANUM BASALTE	RHEINZINK		GRANUM BASALTE
Chimney	ZINC	GRANUM BASALTE	RHEINZINK		GRANUM BASALTE
Stack Vents	ALUMINUM	TO MATCH RHEINZINK ROOF			TO MATCH RHEINZINK ROOF
Retaining Walls	CONCRETE	8" HORIZONTAL PLANK BOARD- FORMED CONCRETE	POURED IN PLACE	N/A	GREY

7			
7. Landscape and	Exterior Lighting		

