



June 26, 2023

Mr. Adam R. Kaufman, AICP  
Director of Planning  
Town of North Castle  
17 Bedford Road  
Armonk, NY 10504

**RE:    Revision to Application [2022-017] – Special Use Permit  
      Barn Accessory Structure – 1 Ashfields Lane**

Dear Mr. Kaufman,

On behalf of Ashfields Lane, LLC, the owner of 1 Ashfields Lane, we are pleased to submit the enclosed revised application documents for the construction of a barn accessory structure. The special use permit approval application was originally filed in April of 2022, and revisions to address staff comments were submitted in June of 2022. After the June revisions were filed, the project was put on hold due to feedback received from the Conyers Farm Planning and Architectural Review Committee (PARC). After a back and forth with PARC, the barn was relocated southwest of the primary residence. PARC approval for the new location was obtained in March 2023. The proposed barn requires a Special Use Permit because the footprint exceeds 800 sq.ft.

The selected location is in the rear of the primary residence, in a lightly wooded area just beyond the limit of maintained lawn and directly adjacent to existing woodchip trails that the owner maintains. The barn design and purpose has not changed; it is a 36ft x 34ft barn for the purpose of storing equipment and tools used to maintain the property. As such, the original barn design plans and Gross Floor Area Calculation Worksheet have not been revised. The new location is 110ft set back from the rear (west) property line and 175ft from the closest flagged wetland.

The original application required a variance approval from the Zoning Board of Appeals due to being located within the “front yard”. The new location is no longer within the “front yard” and therefore no longer requires a variance.

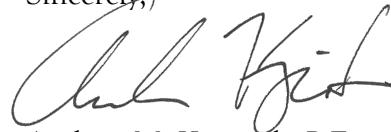
Construction is expected to disturb 4,800 sq.ft. of land and will result in 1,503 sq.ft. of additional on-site impervious coverage. A stormwater management system is proposed to mitigate the increase in coverage. The system provides both water quality enhancements and peak flow attenuation through the 100-year storm event. A sediment and erosion control plan has been provided to minimize erosion and contain & properly dispose of any accumulated sediment during construction. It should be noted that no Town regulated tree removal is expected. An in-depth explanation of the proposed stormwater and sediment & erosion control improvements is provided within the enclosed Site Engineering Report.

In support of this Application for Special Use Permit Approval, we provide the following attached documents:

- Site Engineering Drawings (SE-1 through SE-3), prepared and certified by Redniss & Mead, revised June 26, 2023
- Barn Average Grade Calculation & Exhibit, prepared by Redniss & Mead, revised June 26, 2023
- Gross Land Coverage Calculations Worksheet & Exhibit, prepared by Redniss & Mead, revised June 26, 2023
- Site Engineering Report, prepared and certified by Redniss & Mead, Inc., revised June 26, 2023

One hard copy of each revised document listed above is enclosed in accordance with the application guidelines. Once the revised documents are deemed complete, we will submit the additional hard copies. We look forward to presenting the revised plans at the next available Planning Board meeting. Should you or your staff have any questions or comments in the interim, please do not hesitate to contact me.

Sincerely,

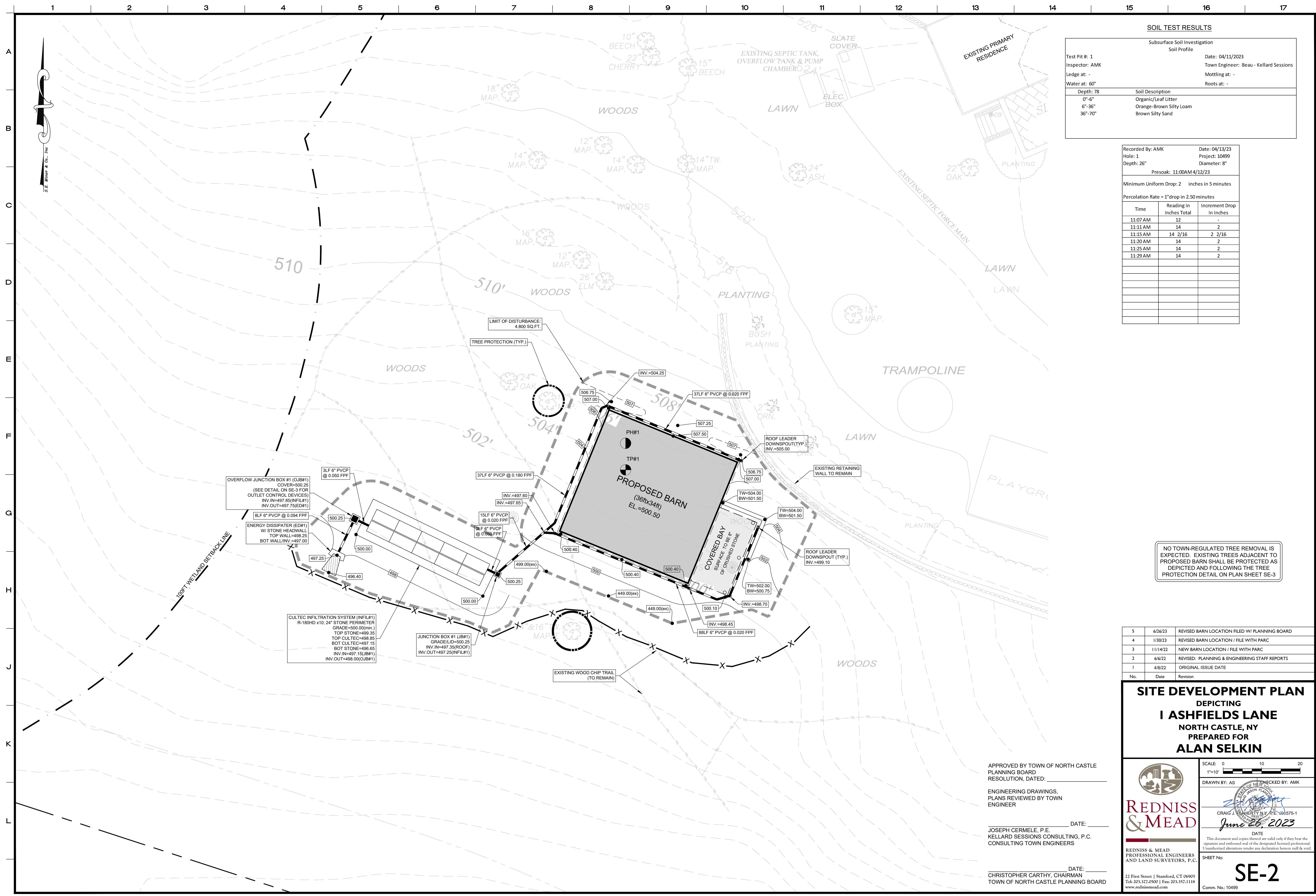


Andrew M. Kuzmich, P.E.

Enclosures

cc (w/ Enc.): 1 Ashfields Lane LLC





**SOIL TEST RESULTS**

Subsurface Soil Investigation  
Soil Profile

Test Pit #: 1  
Inspector: AMK  
Ledge at: -  
Water at: 60"

Date: 04/11/2023  
Town Engineer: Beau - Kellard Sessions  
Mottling at: -  
Roots at: -

Depth: 78"	Soil Description
0'-6"	Organic/Leaf Litter
6'-36"	Orange-Brown Silty Loam
36'-70"	Brown Silty Sand

Recorded By: AMK  
Hole: 1  
Depth: 26"

Date: 04/13/23  
Project: 10499  
Diameter: 8"

Presoak: 11:00AM/4/12/23

Minimum Uniform Drop: 2 inches in 5 minutes

Percolation Rate = 1" drop in 2.50 minutes

Time	Reading In Inches Total	Increment Drop In Inches
11:07 AM	12	-
11:11 AM	14	2
11:15 AM	14 2/16	2 2/16
11:20 AM	14	2
11:25 AM	14	2
11:29 AM	14	2

NO TOWN-REGULATED TREE REMOVAL IS EXPECTED. EXISTING TREES ADJACENT TO PROPOSED BARN SHALL BE PROTECTED AS DEPICTED AND FOLLOWING THE TREE PROTECTION DETAIL ON PLAN SHEET SE-3

No.	Date	Revision
5	6/26/23	REVISED BARN LOCATION FILED W/ PLANNING BOARD
4	1/30/23	REVISED BARN LOCATION / FILE WITH PARC
3	1/11/22	NEW BARN LOCATION / FILE WITH PARC
2	6/6/22	REVISED: PLANNING & ENGINEERING STAFF REPORTS
1	4/8/22	ORIGINAL ISSUE DATE

**SITE DEVELOPMENT PLAN**  
DEPICTING  
**1 ASHFIELDS LANE**  
NORTH CASTLE, NY  
PREPARED FOR  
**ALAN SELKIN**

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED: \_\_\_\_\_

ENGINEERING DRAWINGS, PLANS REVIEWED BY TOWN ENGINEER \_\_\_\_\_

DATE: \_\_\_\_\_

JOSEPH CERMELE, P.E.  
KELLARD SESSIONS CONSULTING, P.C.  
CONSULTING TOWN ENGINEERS

DATE: \_\_\_\_\_

CHRISTOPHER CARTHY, CHAIRMAN  
TOWN OF NORTH CASTLE PLANNING BOARD

SCALE: 0 10 20  
1"=10'

DRAWN BY: AS  
CHECKED BY: AMK

CRAIG J. KEMBERTY, N.Y. P.E. 006575-1  
June 26, 2023

DATE: June 26, 2023

This document and copies thereof are valid only if they bear the signature and embossed seal of the designated licensed professional. Unauthorized alterations render any declaration herein null & void.

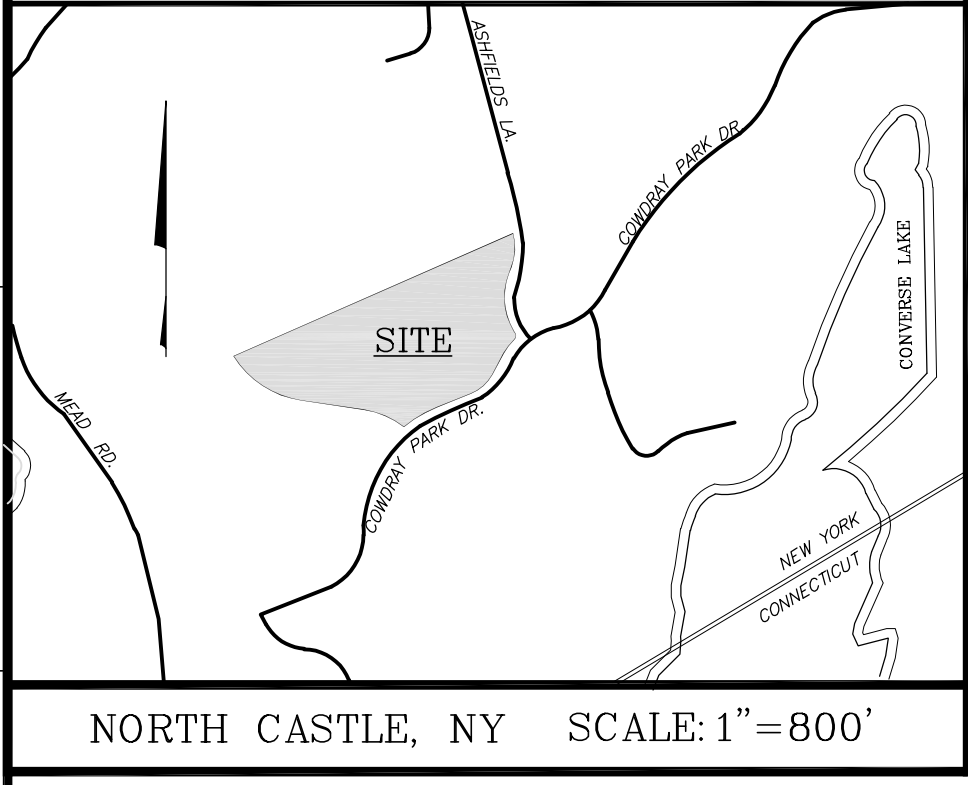
REDNISS & MEAD  
PROFESSIONAL ENGINEERS AND LAND SURVEYORS, P.C.

22 First Street | Stamford, CT 06905  
Tel: 203.327.9500 | Fax: 203.357.1118  
www.rednissmead.com

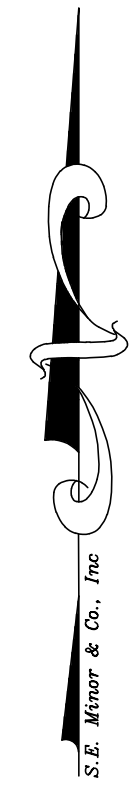
SHEET No: **SE-2**  
Comm. No.: 10499



TAX ID: 102.03-2-36 ZONE: R-2A



NORTH CASTLE, NY SCALE: 1"=800'



ZONING DATA TABLE  
ZONE: R-2A SINGLE FAMILY RESIDENCE (2 ACRE)

ITEM	REQUIRED (MIN.)	EXISTING	PROPOSED
LOT AREA	87,120 SF (2 AC)	492,741 SF (11.312 AC)	492,741 SF (11.312 AC)
FRONTAGE	150 FT	432 FT	432 FT
LOT WIDTH	150 FT	406 FT (min.)	406 FT (min.)
LOT DEPTH	150 FT	717 FT (min.)	717 FT (min.)
DWELLING UNIT SIZE	1,400 SF	13,526 SF	13,526 SF
YARDS		MAIN HOUSE GARAGE	MAIN HOUSE GARAGE BARN
FRONT	50 FT	336.7 FT 278.4 FT	336.7 FT 278.4 FT 579.0 FT
STREET SIDE	50 FT	219.1 FT 216.8 FT	219.1 FT 216.8 FT 188.0 FT
SIDE	30 FT	185.2 FT 297.9 FT	185.2 FT 297.9 FT 310.0 FT
REAR	50 FT	251.7 FT 347.5 FT	251.7 FT 347.5 FT 110.0 FT
PARKING			
OFF STREET	2 SPACES	3 SPACES	3 SPACES
ITEM	PERMITTED (MAX.)		
GROSS FLOOR AREA	23,162 SF <sup>1</sup>	14,464 SF <sup>1</sup>	16,288 SF <sup>1</sup>
ACCESSORY STRUCTURE GROSS FLOOR AREA	25% OF PRIMARY RESIDENCE (3,502 SF)		13.0% (1,824 SF <sup>1</sup> )
BUILDING COVERAGE	8%	1.4% (6,936 SF)	1.7% (8,439 SF)
BUILDING HEIGHT	30 FT (PRIMARY)	29.65 FT (MAIN HOUSE) <sup>3</sup>	NO CHANGE (MAIN HOUSE)
	22 FT (ACCESSORY)		16.6 FT (BARN) <sup>4</sup>
GROSS LAND COVERAGE	43,691 SF <sup>2</sup>	5.4% (26,598 SF)	5.7% (28,261 SF)

1) REFER TO FLOOR AREA CALCULATIONS WORKSHEET DATED APRIL 5, 2022. EXISTING RESIDENCE BASED ON BPN10455. EXISTING SHED BASED ON BPN2031-3712. PROPOSED BARN BASED ON PLANS BY COUNTRY CARPENTERS. LOWER LEVEL CONSIDERED A BASEMENT BY CODE.  
 2) REFER TO GROSS LAND COVERAGE CALCULATIONS WORKSHEET DATED MAY 22, 2023.  
 3) BUILDING HEIGHT BASED ON A CALCULATED AVERAGE GRADE OF 532.10 & PEAK ROOF EL.=561.75 (REF. TO HOUSE PLANS PREPARED BY ALAN WANZENBERG ARCHITECT, P.C., DATED 7/31/197)  
 4) BUILDING HEIGHT BASED ON A CALCULATED AVERAGE GRADE OF 502.5 & MEAN ROOF ELEVATION OF 519.1 (REF. TO BARN PLANS PREPARED BY COUNTRY CARPENTERS)

**SITE INFORMATION:**  
 PROPERTY OWNER: 1 ASHFIELDS LANE, LLC  
 1 ASHFIELDS LANE  
 NORTH CASTLE, NY 10506  
 PROJECT LOCATION: 1 ASHFIELDS LANE  
 NORTH CASTLE, NY 10506  
 ZONE: R-2A, SINGLE-FAMILY RESIDENCE  
 EXISTING USE: SINGLE-FAMILY RESIDENCE  
 TOWN TAX MAP: 102.03, BLOCK 2, LOT 36  
 SITE AREA: 11.31 ACRES (490,000 SQ.FT.)  
 SEWAGE FACILITIES: ON-SITE SEPTIC SYSTEM  
 WATER FACILITIES: PRIVATE WELL  
 SCHOOL DISTRICT: BYRAM HILLS CENTRAL DISTRICT #3  
 FIRE DISTRICT:

APPROVED BY TOWN OF NORTH CASTLE  
 PLANNING BOARD  
 RESOLUTION, DATED: \_\_\_\_\_

ENGINEERING DRAWINGS,  
 PLANS REVIEWED BY TOWN  
 ENGINEER

DATE: \_\_\_\_\_  
 JOSEPH CERMELE, P.E.  
 KELLARD SESSIONS CONSULTING, P.C.  
 CONSULTING TOWN ENGINEERS

DATE: \_\_\_\_\_  
 CHRISTOPHER CARTHY, CHAIRMAN  
 TOWN OF NORTH CASTLE PLANNING BOARD

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1	4/8/22	ORIGINAL ISSUE DATE
No.	Date	Revision

**ZONING SITE PLAN**  
 DEPICTING  
**I ASHFIELDS LANE**  
 NORTH CASTLE, NY  
 PREPARED FOR  
**ALAN SELKIN**

**REDNISS & MEAD**  
 PROFESSIONAL ENGINEERS  
 AND LAND SURVEYORS, P.C.

SCALE: 0 40 80  
 1"=40'

DRAWN BY: AS CHECKED BY: AMK

DATE: June 26, 2023  
 CRAIG J. FLAHERTY N.Y. P.E. 093575-1

This document and copies thereof are valid only if they bear the signature and embossed seal of the designated licensed professional. Unauthorised alterations render any declaration herein null & void.

SHEET No: **SE-1**

22 First Street | Stamford, CT 06905  
 Tel: 203.327.0500 | Fax: 203.357.1118  
 www.rednissmead.com  
 Comm. No: 10499



**GENERAL NOTES:**

- These drawings are intended only to depict the design of site grading, drainage and sediment & erosion controls. These drawings are for approval purposes only. No construction may begin prior to obtaining all necessary permits and approvals.
- All survey data, boundary lines, topography, building locations and area calculations are from a survey prepared by Robert L. Hock Licensed Land Surveyor LLC entitled "Topographic Survey Prepared For Selkin Residence" dated March 2023.
- Refer to plans prepared by Country Carpenters for information and design of the proposed barn structure.
- Property lies in the R-2A zone.
- Property Tax Map Designation: 102.03-2-36 (new); 1.11.11-12 (old).
- Property lies within Fire District #3 and Byram Hills Cent. School District.
- Total Lot Area = 11.31 acres.
- All construction shall comply with the Town of North Castle requirements, the State of New York Residential Building Code 2022, and The New York State Standard and Specifications for Erosion and Sediment Control.
- Contractor shall supply complete shop drawings including manufacturer's product data sheets to the Site Engineer, for all construction material used in conjunction with these drawings. Contractor shall allow a 5 day review period prior to fabrication and installation.
- Information on existing utilities has been compiled from various sources including utility company records, municipal record maps and field survey and is not guaranteed to be correct or complete. The contractor is solely responsible for determining actual locations and elevations of all utilities including underground works.
- The property is served by private well and an on-site wastewater treatment system (septic system).
- Prior to any excavation the Contractor and/or Applicant, in accordance with NYS Code Rule 753, shall be required to contact "Dig Safely, New York" at 811 for mark-out of underground utilities. Dig test pits (at utility crossing) to check actual clearances with new utilities prior to construction. If conflicts are found the contractor shall notify the engineer, at which time the sewer in question shall be redesigned. If such redesign is not possible, the existing pipes or utilities shall be relocated to avoid the conflict. Such relocation shall be done with knowledge of and in accordance with the owner of the utility.
- It shall be the responsibility of the contractor to provide any excavation safeguards, necessary barricades, flagmen, etc., for traffic control and site safety. All work shall be done in accordance with OSHA requirements. The contractor shall be responsible for compliance with OSHA requirements.
- When preparing the existing site for the proposed development, all materials removed shall be disposed of in conformance with all governing agencies.
- Remove stumps and brush from site, or chip and use during landscaping. Do not bury stumps on site.
- Special attention of the contractor is called to the required type and compaction of pipe bedding and backfill specified on these drawings. These requirements will be strictly enforced.
- The Contractor is responsible for coordinating with a licensed surveyor to prepare an "as-built" plan. The Contractor is responsible to coordinate with the Record Site Engineer and Town Engineer 48 hours prior to any inspections.
- The record engineer shall be notified by the contractor three (3) days prior to the commencement of each phase of construction.
- A preconstruction meeting shall be held with the Owner, Architect and Engineer to review the scope of construction. The contractor shall be responsible to coordinate the preconstruction meeting.

**EARTHWORK & GRADING:**

- Grade away from building walls at 2% minimum (typical).
- Earth slopes shall be no steeper than 3:1 (horz:vert).
- Disturbed areas shall be topsoiled, seeded with grass and mulched.
- After the areas to be topsoiled have been brought to grade, the subgrade shall be loosened by scarifying to a depth of at least 2" to ensure bonding of the topsoil and subsoil.
- Topsoil shall be friable and loamy with high organic content. It shall be free of debris, rocks larger than 2" and roots. Topsoil shall have at least 1.5 percent by weight of fine textured stable organic material and no greater than 6 percent. Topsoil shall not have less than 20% fine textured material (passing the No. 200 sieve) and not more than 15% clay. pH range shall be 6.0-7.5 and soluble salts shall not exceed 500ppm.
- Fill or topsoil shall not be placed nor compacted while in a frozen or muddy condition or while subgrade is frozen.
- During the excavation, it is anticipated that existing utilities and sewers may be exposed. The contractor shall provide protection and support of these facilities and repair any damage caused by the work in a manner satisfactory to the owner. The condition of the existing facilities shall be observed by the owner's representative who shall determine if the facilities shall be replaced. Replacement of the facilities shall be done in a manner satisfactory to the owner and in compliance with applicable Codes.

**STORM AND SANITARY SEWER SYSTEMS:**

- All pipe shall be installed straight and at the vertical and horizontal alignment shown. Pipes shall have a uniform slope as specified.
- Minimum cover on all pipes shall be two feet (2') unless otherwise noted.
- All storm pipe specified as Poly Vinyl Chloride Pipe (PVC) shall be SDR 35 with rubber gasketed joints and meet the requirements of ASTM D3034 and D3212.
- Dig test pits at utility and sewer crossings to check actual clearances with these facilities prior to construction. Dig test pits at the connection points to existing sanitary sewer pipes to confirm that the elevation of the proposed gravity sewer is appropriate. If conflicts are found the contractor shall notify the engineer at which time the sewer in question shall be redesigned. If such redesign is not possible, the existing pipes or utilities shall be relocated to avoid conflict.
- All catch basins and area drains shall have a two foot (2') sump with bell traps or 90° PVC elbows attached to the outlet pipe.
- All existing and proposed catch basins, manhole rims and utility facilities shall be raised or lowered to be flush with finished grade.
- When connecting new pipes to existing structures such as manholes and catch basins, the structure shall be completely cleaned out. The hole made in the structure shall be made as small as possible. The structure shall be repaired to match its original type of construction. The joint between the structure and the pipe shall be made watertight by filling the joint with mortar.
- Crushed stone underneath drainage structures shall be gradation no. 2 per NYS DOT Standard Specification Section 703. Stone shall consist of sound, tough, durable particles free from soft, thin, elongated, laminated, friable, deleterious material.
- At the end of construction, after the site has been fully stabilized, all new and previously existing storm sewer facilities including, but not limited to, catch basins, area drains, manholes, junction boxes, flow control structures, pipes, oil grit separators, permeable pavers and porous pavement shall be fully cleaned with equipment designed for that purpose to the satisfaction of the inspecting engineer.

**STORM WATER INFILTRATION SYSTEM:**

- The proposed culcut infiltration system shall comply fully with the manufacturer specifications.
- There shall be a minimum of two feet (2') of crushed stone on the sides & ends of the culcut system.
- There shall be 6" of crushed stone below the culcut system.
- There shall be 3" of crushed stone between each row of culcuts.
- Crushed stone associated with the Culcut Infiltration system shall be gradation no. 2 per NYS DOT Standard Specification Section 703. Stone shall consist of sound, tough, durable particles free from soft, thin, elongated, laminated, friable, deleterious material.
- The infiltration system shall remain disconnected until up gradient areas are fully stabilized.
- The infiltration system shall be a minimum of 36" above high groundwater or ledge and be a minimum of 10' from any footing drain.
- Prior to the installation of the culcut infiltration system, the contractor is required to dig a test pit to verify subsurface soil conditions comply with the minimum separation distances (see note 56). Additionally, the Design Engineer shall run a percolation test to verify the ability for soil to infiltrate water. Test pit & percolation test shall be witnessed by the Design Engineering and Town Engineer. Results of testing may warrant a re-design of the Culcut System.
- Each culcut row to have access ports shown on plan.
- All roof runoff from the proposed barn shall go to the culcut system as specified. Roofs shall be piped to system in accordance with the invert elevations indicated on plan sheet SE-2.
- Contact the Design Engineer and Town Engineer three (3) days prior to excavation for the culcut system. During the excavation, the Design Engineer may revise the elevations of the galleries if field conditions dictate.
- Maintenance of all onsite drainage facilities shall be the responsibility of the property owner.

**SEDIMENT AND EROSION CONTROL NARRATIVE:**

The purpose of the Sediment and Erosion Control Plan, details, and notes is to outline a program that minimizes soil erosion during construction. The primary policies of this program are:

- Trapping particles at source by promptly stabilizing disturbed areas;
- Avoid concentration of water;
- Avoid contamination of existing storm drains;
- Maintenance (weekly maintenance and after storm events) of controls to ensure they are functioning properly.

**SEDIMENT AND EROSION CONTROL:**

- Sheet SE-2 is intended to describe the soil sediment and erosion control treatment of this site only. For other details with respect to construction, see appropriate drawings.
- All sediment and erosion controls shall be done in conformance with the "New York Standards and Specifications for Erosion and Sediment Control" prepared by The New York State Department of Environmental Conservation.
- The contractor is assigned the responsibility for implementing this sediment and erosion control plan. This responsibility includes the installation and maintenance of control measures, informing all parties engaged on the construction site of the requirements and objectives of the plan notifying the Zoning Department of any transfer of this responsibility, and the Town Engineer that construction is to begin three (3) days prior to commencing work.
- Temporary sediment control measures and tree protection must be installed in accordance with drawings and manufacturer recommendations prior to work in any upland areas.
- No construction or construction equipment or storage of materials will be allowed on the downhill side of the site fence or within fenced off areas, except during construction of the proposed facilities shown beyond the fences.
- Where existing trees are to be saved, trees shall be protected with trunk armor where shown. Tree limbs shall be trimmed as needed to protect the trees from damage by construction operations. Such trimming shall be minimized. Armoring and any limb trimming should be done before construction begins. Tree protection should be maintained during construction. Equipment Trafficking and materials storage over the tree roots shall be avoided.
- Anti-tracking pads shall be installed at start of construction and maintained in an effective condition throughout the duration of construction. Pads consist of 2" - 4" crushed stone, 6" minimum thickness and extend the width of the construction access. The length of the access shall be sufficient to prevent dirt from being tracked onto off site roads (minimum length of 50').
- The location of material stockpiles may vary throughout the construction period. Excavated silt and earth stockpiles shall be stored on site. Silt fence shall be placed at the base of the stockpile to prevent sediment from leaving the site and to protect storm drains, wetlands and watercourses.
- Silt fence shall be Miraf1 100x or equivalent. Install silt fence according to manufacturer's instruction, particularly, bury lower edge of fabric into ground.
- All roof leader downspouts shall temporarily discharge onto splash pads measuring at least 8' wide by 18" long, or approved equal.
- Land disturbance shall be kept to a minimum. All disturbed area shall be planted in where permanent plantings are called for as soon as practicable. Seed and mulch disturbed areas with grass seed where permanent plantings are not called for, as soon as practicable. Prepare seedbed (4" thick minimum) with topsoil. Seed, rake, roll, water and mulch areas according to mixes below. Water as often as necessary (up to 3 times per day) to establish cover. Mulch seeded areas at 1 to 2 tons/acre with salt hay. Maintain mulch and watering until grass is 3" high with 85% cover. Reseed or overseed if necessary.

**TEMPORARY SEED MIX:**

Perennial ryegrass	40 lbs/acre	(1 lb/1000 sq ft)
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**PERMANENT LAWS:**

Kentucky Bluegrass	20 lbs/acre	(1 lb/1000 sq ft)
Creeping Red Fescue	20 lbs/acre	
Perennial Ryegrass	5 lbs/acre	

**OPTIMUM SEEDING DATES:**

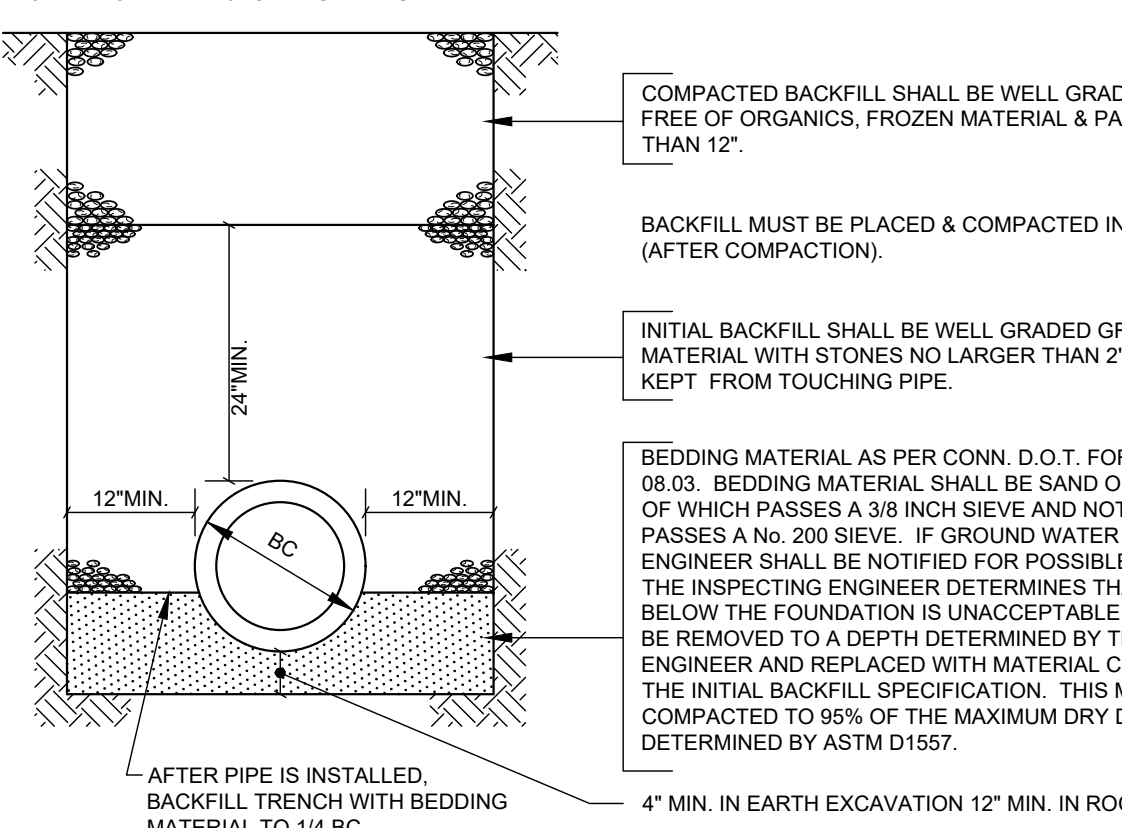
April 15 through June 15  
August 15 through October 1

- If disturbed areas cannot be seeded immediately due to the time of year, mulch area until seeding can occur; remove mulch and seed and reseed when season permits.
- If excavation dewatering is required, all dewatering pumping must have sediment and erosion control provisions to maintain clear water discharge (not muddy). Such provisions shall be approved by governing agencies. All pump discharge from dewatering shall be clear at the point where it flows off the property.
- Upon installation of each catch basin and area drain, immediately surround it with haybales as per sediment filter detail.
- Haybales shall be new and are to be replaced whenever their condition deteriorates beyond reasonable usability.
- Temporarily block pipes leading into the storm water infiltration system until upland areas are thoroughly stabilized. Under no circumstances shall sediment or silt water be allowed to enter the infiltration system.
- Pavement and curbing should be placed as soon as possible after drainage is installed.
- Loaded trucks shall be covered as required to keep down dust.
- Affected portions of off site roads and sidewalks must be swept clean when required to keep down dust and prevent safety hazards or at least once a week during construction and as directed by Site Engineer.
- Dust control to be achieved with watering down disturbed areas as required.
- After each storm event or on bi-weekly, all sediment and erosion controls shall be inspected. Any corrective actions to mitigate environmental concerns will be ordered by the site engineer or environmental engineer. It is the Owner's responsibility to retain such consultant.
- Additional sediment and erosion control measures may be installed during the construction period if found necessary by the Inspecting Engineer, Town Engineer or any Governing Agency.
- All permanent and temporary sediment control devices will be maintained in effective condition throughout the construction period until upland disturbed areas are thoroughly stabilized. Upon completion of work and stabilization of all upland areas, all temporary sediment control devices and tree protection should be removed from the site and any silt disposed of legally.
- Excavated silt and earth stockpiles shall not be permitted to be stored on site. Excess material shall be disposed of legally.
- Periodically and upon completion of the job, clean silt from any affected storm sewer systems including pipes and inlets. Use silt during final landscaping or dispose off-site legally.

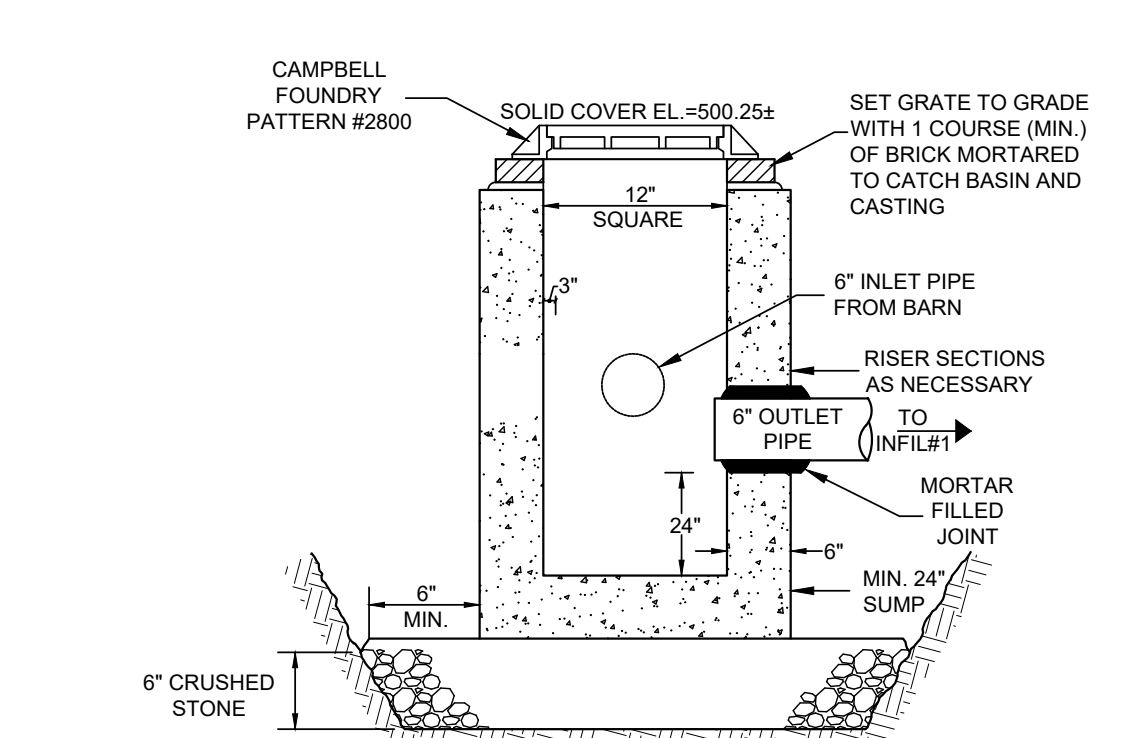
**WATER STOP:** 10' UPSTREAM OF STRUCTURES AND WHERE SHOWN, FOUNDATION MATERIAL, BEDDING, HAUNCHING, INITIAL BACKFILL, AND THE BOTTOM FOOT OF GENERAL BACKFILL TO BE REPLACED WITH SM, SC, OR ML SOIL AS PER UNIFIED SOIL CLASSIFICATION SYSTEM WITH MAXIMUM PARTICLE SIZE OF 1-1/2" FOR 3 LINEAR FEET OF TRENCH. WATER STOP TO BE KEPT INTO TRENCH BOTTOM AND WALLS A MINIMUM OF ONE FOOT. NO STONES LARGER THAN 6" SHALL BE WITHIN 12" OF THE PIPE. ALL FOUNDATION, INITIAL BACKFILL & BACKFILL MATERIAL TO BE APPROVED BY THE INSPECTING ENGINEER.

ANY DEVIATION FROM THESE METHODS & MATERIALS MUST BE APPROVED IN WRITING BY THE INSPECTING ENGINEER.

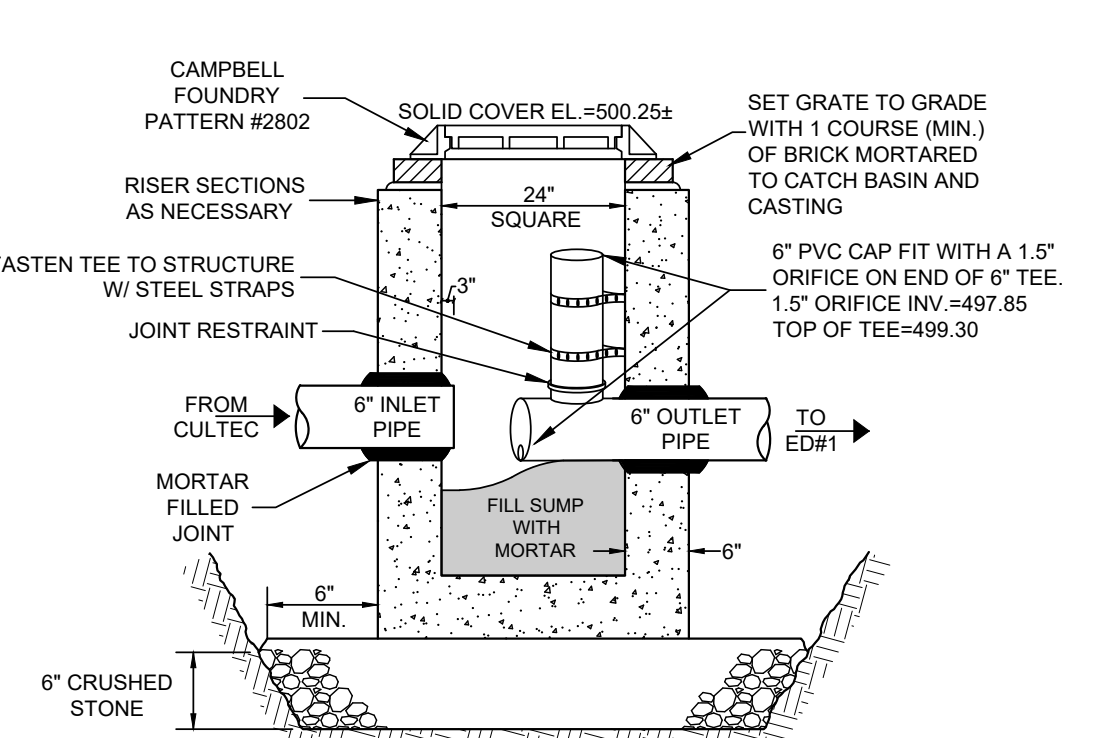
ALL MATERIAL TO BE COMPACTED TO 95% OF THE MAX. DRY DENSITY AS DETERMINED BY ASTM D1557, EXCEPT COMPACTED BACKFILL NOT UNDER PAVEMENT WHICH SHALL BE COMPACTED TO A DENSITY AT LEAST EQUAL TO THAT OF THE ADJACENT UNDISTURBED MATERIAL.



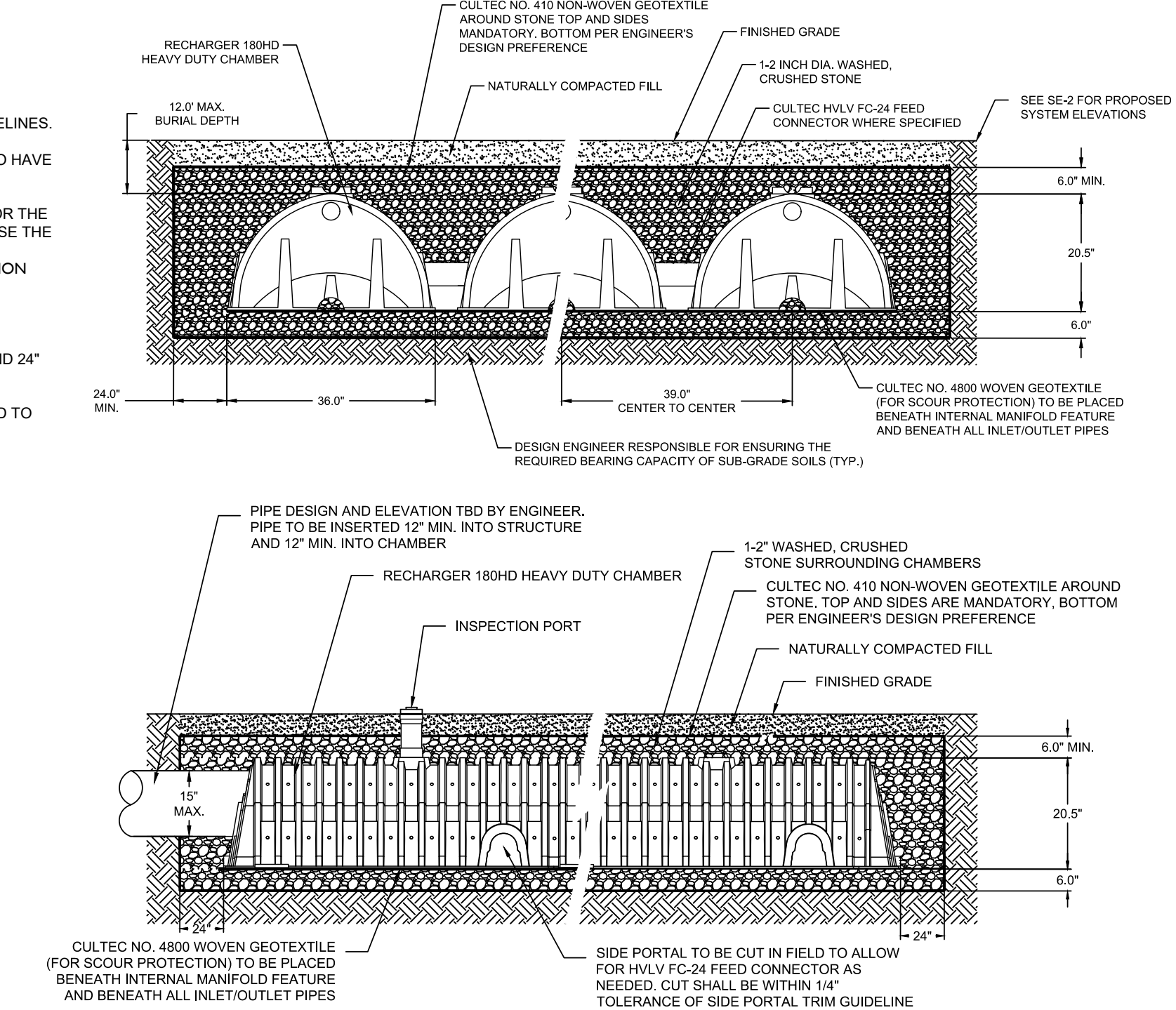
**PVC/RCP PIPE TRENCH BEDDING DETAIL (48" DIA. & UNDER) N.T.S.**



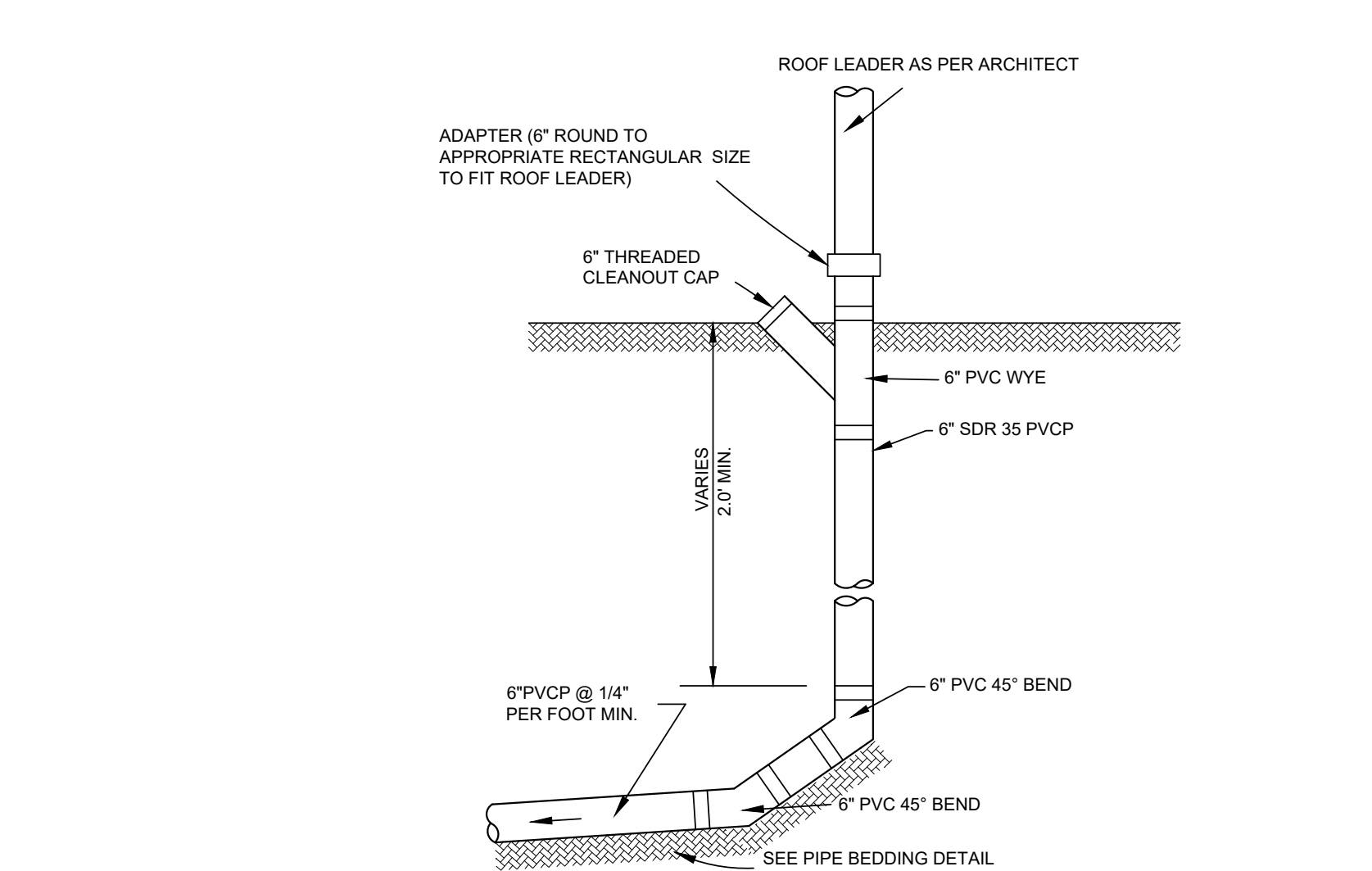
**12" JUNCTION BOX (JB#1) N.T.S.**



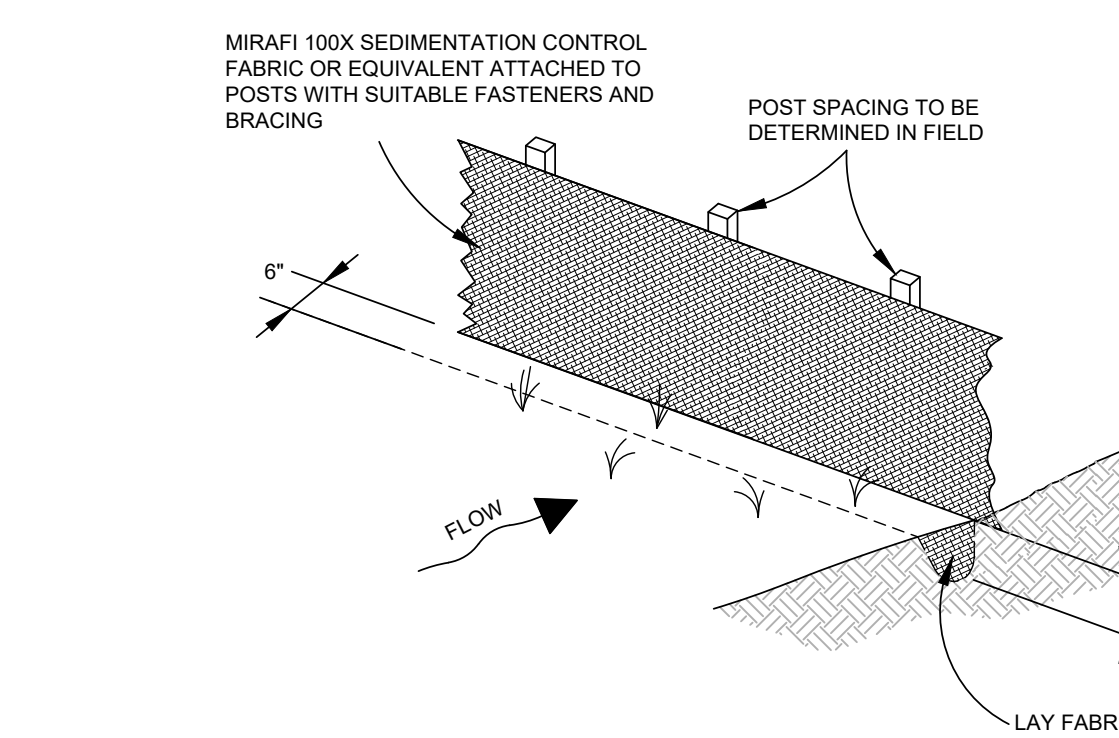
**24" JUNCTION BOX (JB#1) N.T.S.**



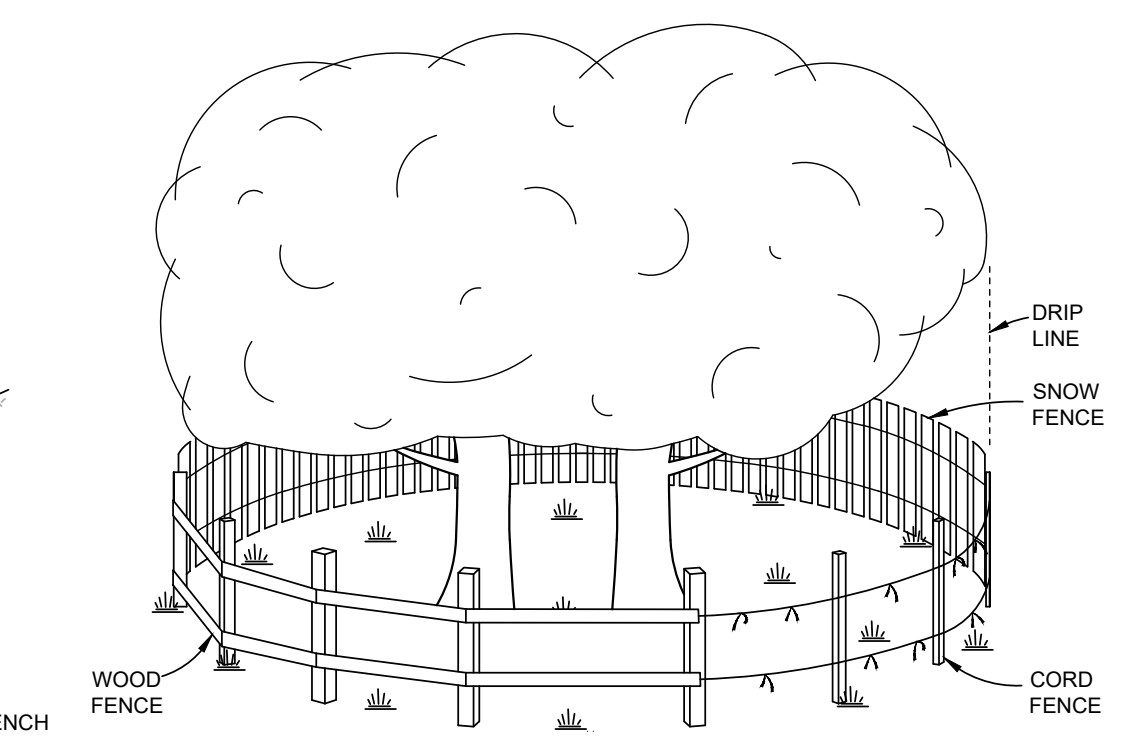
**CULTEC RECHARGER 180HD (INFILTRATION SYSTEM) N.T.S.**



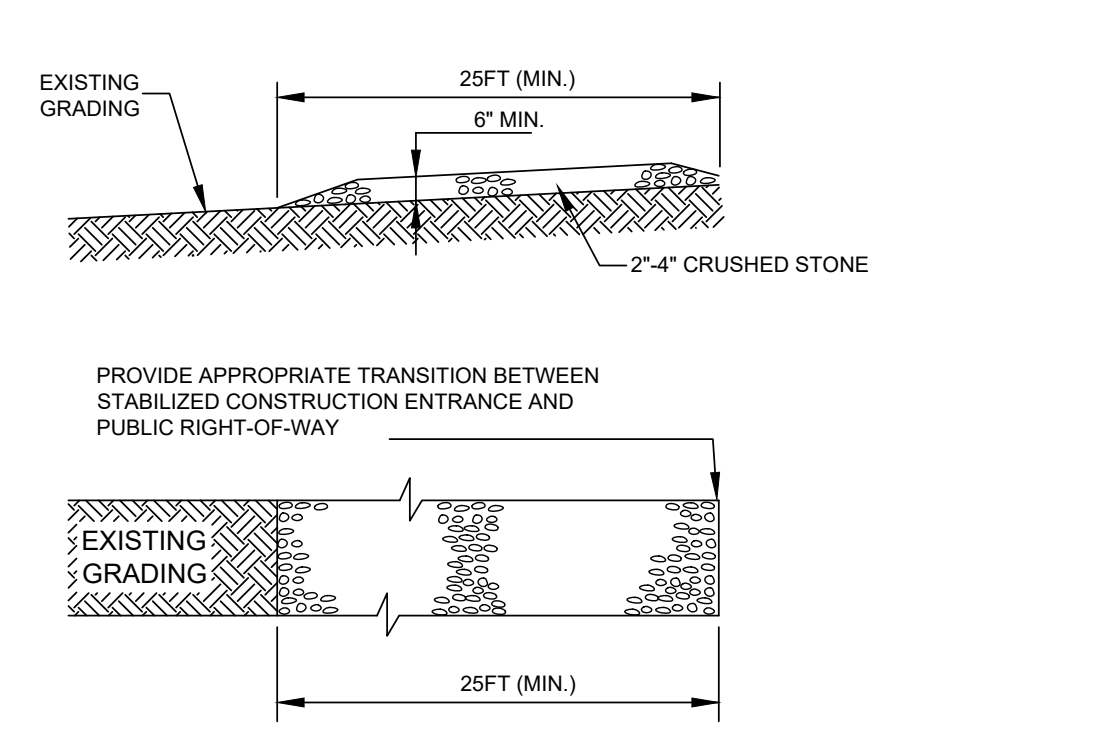
**ROOF LEADER CLEANOUT DETAIL N.T.S.**



**FABRIC & POST SILTATION BARRIER (SILT FENCE) N.T.S.**



**TREE PROTECTION (SHOWING ACCEPTABLE TYPES OF FENCING) N.T.S.**



**STABILIZED CONSTRUCTION ENTRANCE (TRACKING PAD) N.T.S.**

2	6/26/23	REVISED BARN LOCATION FILED W/ PLANNING BOARD
1	4/8/22	ORIGINAL ISSUE DATE
No.	Date	Revision

**NOTES & DETAILS**  
DEPICTING  
**1 ASHFIELDS LANE**  
NORTH CASTLE, NY  
PREPARED FOR  
**ALAN SELKIN**

APPROVED BY TOWN OF NORTH CASTLE PLANNING BOARD RESOLUTION, DATED: \_\_\_\_\_

ENGINEERING DRAWINGS, PLANS REVIEWED BY TOWN ENGINEER \_\_\_\_\_ DATE: \_\_\_\_\_

JOSEPH CERMELE, P.E. KELLARD SESSIONS CONSULTING, P.C. CONSULTING TOWN ENGINEERS

DATE: \_\_\_\_\_  
CHRISTOPHER CARTHAY, CHAIRMAN TOWN OF NORTH CASTLE PLANNING BOARD

SCALE: 0 20 40  
1"=20'

DRAWN BY: AS CHECKED BY: AMK

REDNISS & MEAD  
PROFESSIONAL ENGINEERS AND LAND SURVEYORS, P.C.  
22 First Street | Stamford, CT 06905  
Tel: 203.327.8500 | Fax: 203.357.1118  
www.rednissandmead.com

DATE: June 26, 2023

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SHEET No: **SE-3**

Comm. No.: 10499

6/26/2023 9:16 AM\1\10499\2\100001\104001\10499\DWG\10499\_MSR\ENG.DWG



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## SITE ENGINEERING REPORT

**I Ashfields Lane  
North Castle, NY**

**Prepared For**  
Alan Selkin  
I Ashfields Lane  
North Castle, NY

**Prepared by**  
Redniss & Mead, Inc.  
22 First Street  
Stamford, CT  
(203) 327-0500

Issued on  
April 8, 2022  
June 6, 2022  
**June 26, 2023**



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HydroCAD Computer Model .....	Appendix 2
USDA NRCS Websoil Survey .....	Appendix 3
Rainfall Data .....	Appendix 4

## Narrative

### Project Description

The applicant is seeking approval to build a barn accessory structure within the existing 11.31-acre property located in the R-2A zone. Improvements consist of building the barn and the accompanying stormwater management system. The property is on the western corner of the intersection between Cowdray Park Drive and Ashfields Lane. No portion of the property lies within a Special Flood Hazard Area as depicted on Flood Insurance Rate Map community number 360923, Map number 360923C1695F; effective date: 9/28/2007.

### Existing Conditions:

The proposed barn is located within a **6.44-acre** portion of the property that flows overland and into a valley to the west of the property that conveys water south, underneath Cowdray Park Drive, ultimately discharging into Converse Lake. This report focuses on this portion of the property for the purposes of evaluating stormwater impacts related to the development. The remaining portion of the property flows directly into the stormwater collection and conveyance system within Ashfields Lane & Cowdray Park Drive and remains unaffected by this development. The study area contains the rear half of the residences roof, the rear yard patio space and a portion of the existing pool & pool patio. The total existing impervious coverage in this area is 7,567 square feet. There are no known stormwater detention/infiltration system(s) serving the property.

### Proposed Conditions:

The proposed limit of disturbance will envelope an area of the site totaling 5,500 square feet in size. Surrounding areas not impacted by construction activities will be delineated with the use of silt fence and will remain undisturbed. No stockpiling will occur outside the limit of disturbance.

Overall impervious coverage will increase by approximately 1,503 square feet. An on-site stormwater management system is proposed to mitigate the increase in coverage. This system provides both water quality and peak flow attenuation through the 100-year storm event. ***Field soil testing consisting of one deep test pit and one percolation test hole was performed to determine the adequacy of infiltration practices. The soil testing results can be found on plan sheet SE-2. The system design provided on the site plans utilizes a restrictive soil depth of 60" per test pit #1 and hydraulic soil group "B" type soils per the USDA NRCS Websoil Survey and verified via the percolation test.***

The proposed stormwater management system consists of **10 Cultec Recharger 180HD** stormwater chambers (2 rows - 5 chambers per row) with a total storage capacity of **555 cu.ft.** The system is located southwest of the barn underneath an existing woodchipped trail. The entire roof of the new barn, totaling 1,503 square feet, is tributary to the system. Two outlet devices are proposed: a 1.5" diameter vertical orifice and a 6" diameter horizontal orifice/standpipe. The vertical orifice is set at **elevation 497.85** in order to ensure the water quality volume, 179 cubic



feet, will infiltrate into the ground. The horizontal orifice is set at **elevation 499.30** and is provided as a high-overflow outlet for the larger storm events. **Both outlets are tied into a single 6" overflow pipe which is piped south and discharges at grade. A rip-rap energy dissipater is provided at the outlet to prevent erosion at the discharge point.** An analysis of the pre and post construction peak flow rates for the study area has been prepared using HydroCAD. The model uses rainfall intensities from Cornell's "Extreme Precipitation in New York & New England: An Interactive Web Tool for Extreme Precipitation Analysis" (see appendix #4). The results of which indicate controlled peak flow rates for all storm events studied through the 100-year design storm. See appendix #2 for model results. The following table documents the sites peak rates of runoff for both pre-construction and post-construction conditions through the 100-year storm event:

**Table 1 (Study Area - West Basin)**

Return Period (yrs)	Peak Flow (cfs)			
	Ex	Pr	Change (cfs)	% Change
1	1.02	1.02	0.00	0.0%
2	2.33	2.32	-0.01	-0.4%
5	4.84	4.83	-0.01	-0.2%
10	7.57	7.56	-0.01	-0.1%
25	12.55	12.53	-0.02	-0.2%
50	17.64	17.61	-0.03	-0.2%
100	24.05	24.03	-0.02	-0.1%

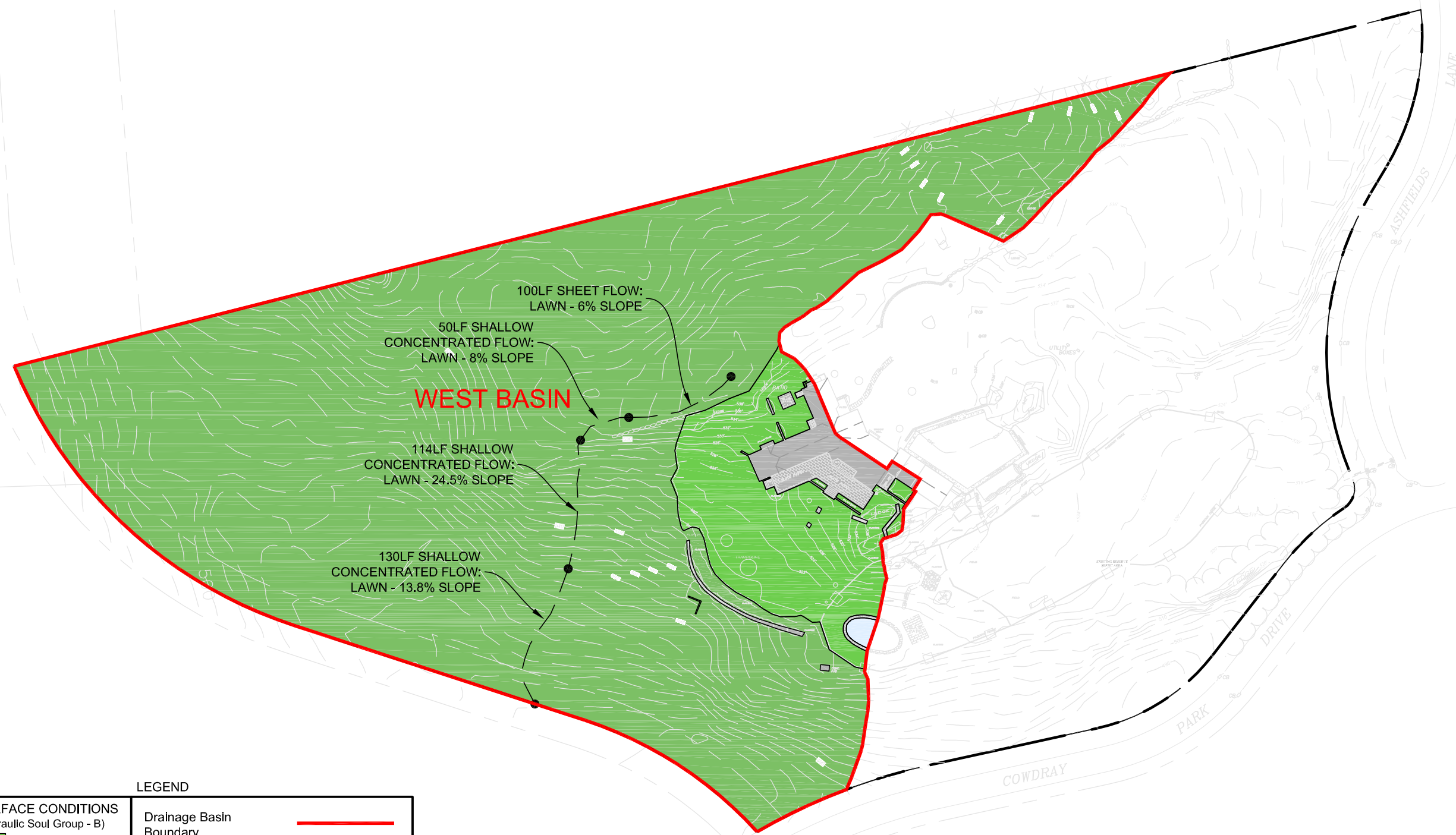
Stormwater quality will be enhanced with the addition of the Cultec infiltration system. The infiltration system will recharge groundwater, cool stormwater runoff and filter pollutants on-site prior to discharging off the property.

**Sediment and Erosion Controls:**

A Sediment and Erosion Control Plan, including a system of controls both temporary and permanent, has been provided to minimize erosion and contain & properly dispose of any accumulation of sediment during construction. The erosion control measures proposed shall be installed and maintained in accordance with The New York Standards and Specifications for Erosion and Sediment Control. Temporary sediment and erosion controls include silt fence & tree protection. The proper use of sediment and erosion controls minimizes potential negative impacts during construction.

**Conclusion:**

The stormwater design employs effective strategies designed to maintain or reduce the peak rates of runoff and filter sediments and pollutants from the water through the use of an infiltration system. Based on the above information and with proper implementation of the design drawings, the proposed development will not adversely impact adjacent or downstream properties or Town or State-owned drainage facilities.



**LEGEND**

<b>SURFACE CONDITIONS</b> (Hydraulic Soil Group - B)		Drainage Basin Boundary
	LAWN	
	WOODS	Flow Length Segments (Time of Concentration)
	WATER (POOL)	
	IMPERVIOUS	

DRAINAGE BASIN SUMMARY TABLE			
BASIN	CN	SIZE (SF.)	TC (MIN.)
WEST BASIN	62	280,571	16.8

**EXISTING DRAINAGE BASIN  
I ASHFIELDS LANE  
NORTH CASTLE, NY**

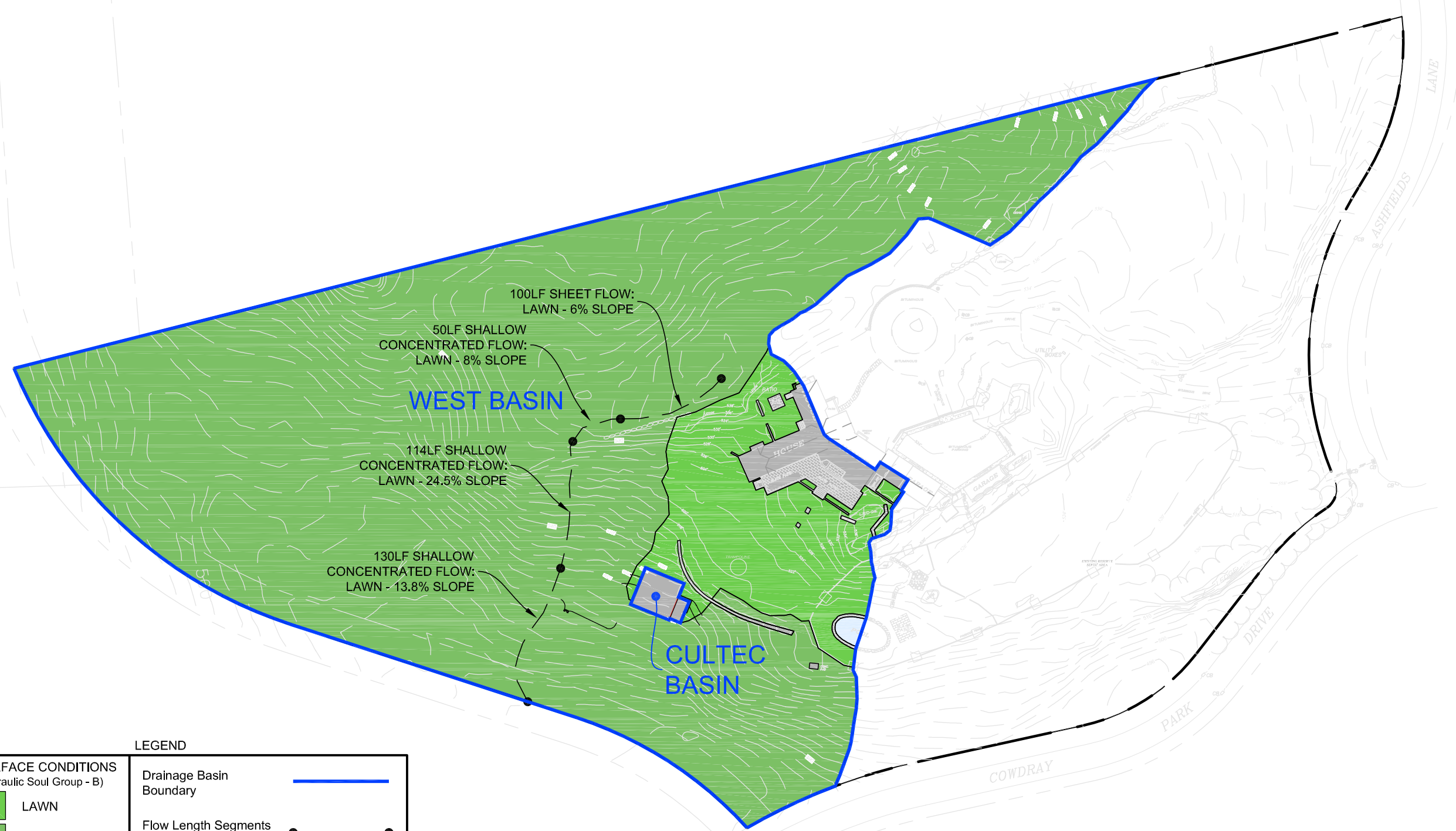
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COMM. NO.: <b>10499</b>	DATE: 6/26/23
	SCALE: 1"=100'





**LEGEND**

SURFACE CONDITIONS (Hydraulic Soil Group - B)		Drainage Basin Boundary
	LAWN	
	WOODS	Flow Length Segments (Time of Concentration)
	WATER (POOL)	
	IMPERVIOUS	

**DRAINAGE BASIN SUMMARY TABLE**

BASIN	CN	SIZE (SF.)	TC (MIN.)
WEST BASIN	62	279,068	16.8
CULTEC BASIN	98	1,503	5.0

**PROPOSED DRAINAGE BASIN  
I ASHFIELDS LANE  
NORTH CASTLE, NY**

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COMM. NO.: 10499	DATE: 6/26/23
	SCALE: 1"=100'

## Water Quality Volume Calculations

<b>Project:</b> <i>1 Ashfields Lane - Proposed Barn</i>	<b>Project #:</b> <i>10499</i>	<b>Date:</b> <i>5/22/2023</i>
<b>Location:</b> <i>North Castle, New York</i>	<b>By:</b> <i>AMK</i>	<b>Checked:</b> <i>CJF</i>

### Barn Roof Infiltration System

Area=	0.035	acres
Impervious Area=	0.035	acres
P=	1.5	inches <sup>a</sup>
I=	1.000	<sup>b</sup>
R=	0.950	<sup>c</sup>
WQV=	0.004	ac. ft. <sup>d</sup>

<b>Required WQV=</b>	<b>178.48 ft.<sup>3</sup></b>	
<b>Provided WQV=</b>	<b>242 * ft.<sup>3</sup></b>	

<sup>a</sup> P=90% Rainfall Event Number, See Figure 4.1 in Section 4.2 of the 2015 New York State Stormwater Management Design Manual

<sup>b</sup> I=Percent Impervious Coverage

<sup>c</sup> R=0.05+0.009(I); Volumetric runoff Coefficient, Equation taken from 2004 Connecticut Stormwater Quality Manual section 7.4.1

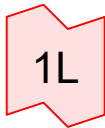
<sup>d</sup> WQV=(P\*Rv\*A)/12; Water Quality Volume, Equation taken from 2015 New York State Stormwater Management Design Manual section 4.2

\* Storage provided below 1.5" orifice in infiltration system #1

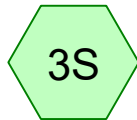




EX. WEST



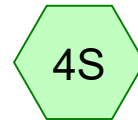
EX. WEST



PR. WEST



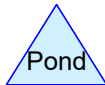
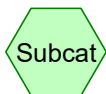
PR. WEST



CULTEC



CULTEC



**Routing Diagram for 10499 Rear Yard Location**  
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**10499 Rear Yard Location**

Type III 24-hr 1 Rainfall=2.82"

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Page 2

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment1S: EX. WEST**

Runoff Area=280,571 sf 2.70% Impervious Runoff Depth>0.33"  
Flow Length=394' Tc=16.8 min CN=62 Runoff=1.02 cfs 7,640 cf

**Subcatchment3S: PR. WEST**

Runoff Area=279,068 sf 2.71% Impervious Runoff Depth>0.33"  
Flow Length=394' Tc=16.8 min CN=62 Runoff=1.02 cfs 7,599 cf

**Subcatchment4S: CULTEC**

Runoff Area=1,503 sf 100.00% Impervious Runoff Depth>2.59"  
Tc=5.0 min CN=98 Runoff=0.10 cfs 324 cf

**Pond 5P: CULTEC**

Peak Elev=497.90' Storage=267 cf Inflow=0.10 cfs 324 cf  
Outflow=0.00 cfs 62 cf

**Link 1L: EX. WEST**

Inflow=1.02 cfs 7,640 cf  
Primary=1.02 cfs 7,640 cf

**Link 2L: PR. WEST**

Inflow=1.02 cfs 7,662 cf  
Primary=1.02 cfs 7,662 cf



**10499 Rear Yard Location**

Type III 24-hr 2 Rainfall=3.43"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment1S: EX. WEST**

Runoff Area=280,571 sf 2.70% Impervious Runoff Depth>0.58"  
Flow Length=394' Tc=16.8 min CN=62 Runoff=2.33 cfs 13,550 cf

**Subcatchment3S: PR. WEST**

Runoff Area=279,068 sf 2.71% Impervious Runoff Depth>0.58"  
Flow Length=394' Tc=16.8 min CN=62 Runoff=2.32 cfs 13,478 cf

**Subcatchment4S: CULTEC**

Runoff Area=1,503 sf 100.00% Impervious Runoff Depth>3.19"  
Tc=5.0 min CN=98 Runoff=0.12 cfs 400 cf

**Pond 5P: CULTEC**

Peak Elev=497.94' Storage=277 cf Inflow=0.12 cfs 400 cf  
Outflow=0.01 cfs 138 cf

**Link 1L: EX. WEST**

Inflow=2.33 cfs 13,550 cf  
Primary=2.33 cfs 13,550 cf

**Link 2L: PR. WEST**

Inflow=2.32 cfs 13,616 cf  
Primary=2.32 cfs 13,616 cf

**10499 Rear Yard Location**

Type III 24-hr 5 Rainfall=4.30"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment1S: EX. WEST**

Runoff Area=280,571 sf 2.70% Impervious Runoff Depth>1.02"  
Flow Length=394' Tc=16.8 min CN=62 Runoff=4.84 cfs 23,886 cf

**Subcatchment3S: PR. WEST**

Runoff Area=279,068 sf 2.71% Impervious Runoff Depth>1.02"  
Flow Length=394' Tc=16.8 min CN=62 Runoff=4.81 cfs 23,758 cf

**Subcatchment4S: CULTEC**

Runoff Area=1,503 sf 100.00% Impervious Runoff Depth>4.06"  
Tc=5.0 min CN=98 Runoff=0.15 cfs 509 cf

**Pond 5P: CULTEC**

Peak Elev=498.10' Storage=316 cf Inflow=0.15 cfs 509 cf  
Outflow=0.03 cfs 246 cf

**Link 1L: EX. WEST**

Inflow=4.84 cfs 23,886 cf  
Primary=4.84 cfs 23,886 cf

**Link 2L: PR. WEST**

Inflow=4.83 cfs 24,004 cf  
Primary=4.83 cfs 24,004 cf

**10499 Rear Yard Location**

Type III 24-hr 10 Rainfall=5.11"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment1S: EX. WEST**

Runoff Area=280,571 sf 2.70% Impervious Runoff Depth>1.50"  
Flow Length=394' Tc=16.8 min CN=62 Runoff=7.57 cfs 35,063 cf

**Subcatchment3S: PR. WEST**

Runoff Area=279,068 sf 2.71% Impervious Runoff Depth>1.50"  
Flow Length=394' Tc=16.8 min CN=62 Runoff=7.53 cfs 34,875 cf

**Subcatchment4S: CULTEC**

Runoff Area=1,503 sf 100.00% Impervious Runoff Depth>4.87"  
Tc=5.0 min CN=98 Runoff=0.18 cfs 610 cf

**Pond 5P: CULTEC**

Peak Elev=498.29' Storage=362 cf Inflow=0.18 cfs 610 cf  
Outflow=0.04 cfs 346 cf

**Link 1L: EX. WEST**

Inflow=7.57 cfs 35,063 cf  
Primary=7.57 cfs 35,063 cf

**Link 2L: PR. WEST**

Inflow=7.56 cfs 35,221 cf  
Primary=7.56 cfs 35,221 cf



**10499 Rear Yard Location**

Type III 24-hr 25 Rainfall=6.42"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment1S: EX. WEST**

Runoff Area=280,571 sf 2.70% Impervious Runoff Depth>2.37"  
Flow Length=394' Tc=16.8 min CN=62 Runoff=12.55 cfs 55,475 cf

**Subcatchment3S: PR. WEST**

Runoff Area=279,068 sf 2.71% Impervious Runoff Depth>2.37"  
Flow Length=394' Tc=16.8 min CN=62 Runoff=12.48 cfs 55,178 cf

**Subcatchment4S: CULTEC**

Runoff Area=1,503 sf 100.00% Impervious Runoff Depth>6.18"  
Tc=5.0 min CN=98 Runoff=0.23 cfs 774 cf

**Pond 5P: CULTEC**

Peak Elev=498.65' Storage=438 cf Inflow=0.23 cfs 774 cf  
Outflow=0.05 cfs 509 cf

**Link 1L: EX. WEST**

Inflow=12.55 cfs 55,475 cf  
Primary=12.55 cfs 55,475 cf

**Link 2L: PR. WEST**

Inflow=12.53 cfs 55,687 cf  
Primary=12.53 cfs 55,687 cf

**10499 Rear Yard Location**

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Type III 24-hr 25 Rainfall=6.42"

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**Summary for Subcatchment 1S: EX. WEST**

Runoff = 12.55 cfs @ 12.24 hrs, Volume= 55,475 cf, Depth> 2.37"  
 Routed to Link 1L : EX. WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 25 Rainfall=6.42"

Area (sf)	CN	Description
26,791	69	50-75% Grass cover, Fair, HSG B
* 7,074	98	Impervious Coverage
* 496	100	Pool
246,210	60	Woods, Fair, HSG B
280,571	62	Weighted Average
273,001		97.30% Pervious Area
7,570		2.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	100	0.0600	0.12		<b>Sheet Flow,</b> Woods: Light underbrush n= 0.400 P2= 3.05"
0.6	50	0.0800	1.41		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
0.8	114	0.2450	2.47		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
1.2	130	0.1380	1.86		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
16.8	394	Total			

**10499 Rear Yard Location**

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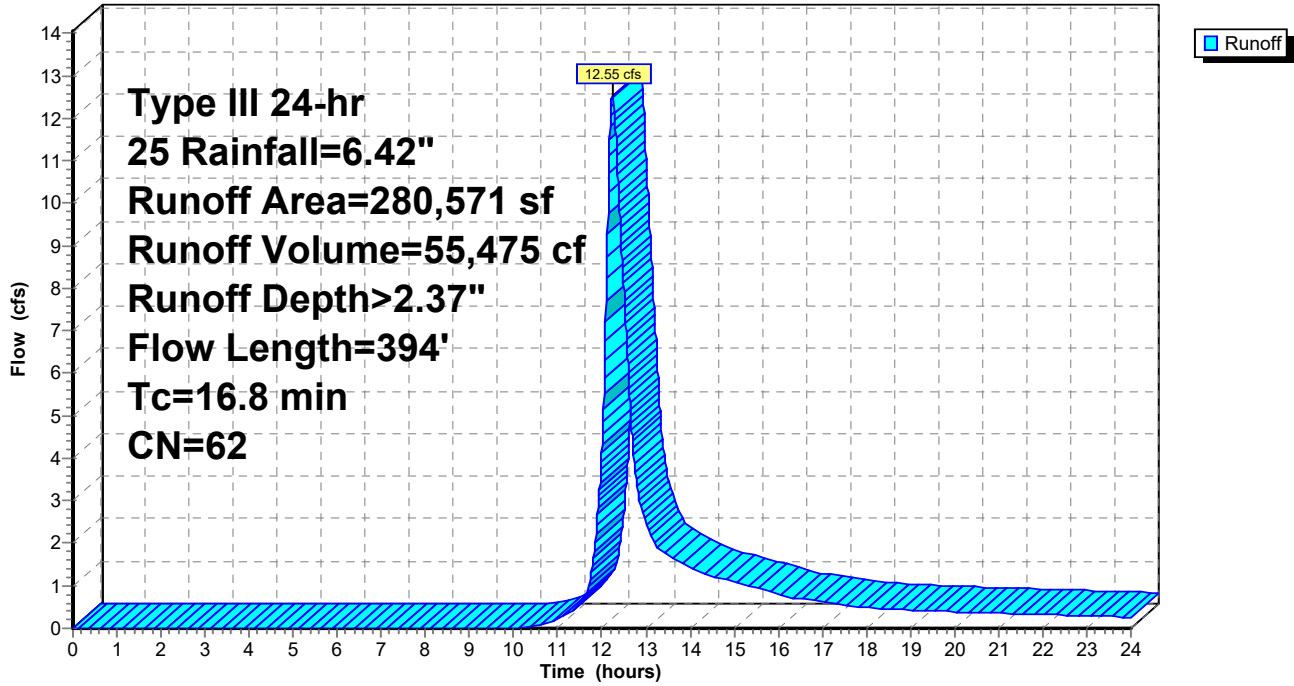
Type III 24-hr 25 Rainfall=6.42"

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**Subcatchment 1S: EX. WEST**

Hydrograph





**10499 Rear Yard Location**

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Type III 24-hr 25 Rainfall=6.42"

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**Summary for Subcatchment 3S: PR. WEST**

Runoff = 12.48 cfs @ 12.24 hrs, Volume= 55,178 cf, Depth> 2.37"  
 Routed to Link 2L : PR. WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 25 Rainfall=6.42"

Area (sf)	CN	Description
29,193	69	50-75% Grass cover, Fair, HSG B
* 7,074	98	Impervious Coverage
* 496	100	Pool
242,305	60	Woods, Fair, HSG B
279,068	62	Weighted Average
271,498		97.29% Pervious Area
7,570		2.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	100	0.0600	0.12		<b>Sheet Flow,</b> Woods: Light underbrush n= 0.400 P2= 3.05"
0.6	50	0.0800	1.41		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
0.8	114	0.2450	2.47		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
1.2	130	0.1380	1.86		<b>Shallow Concentrated Flow,</b> Woodland Kv= 5.0 fps
16.8	394	Total			

**10499 Rear Yard Location**

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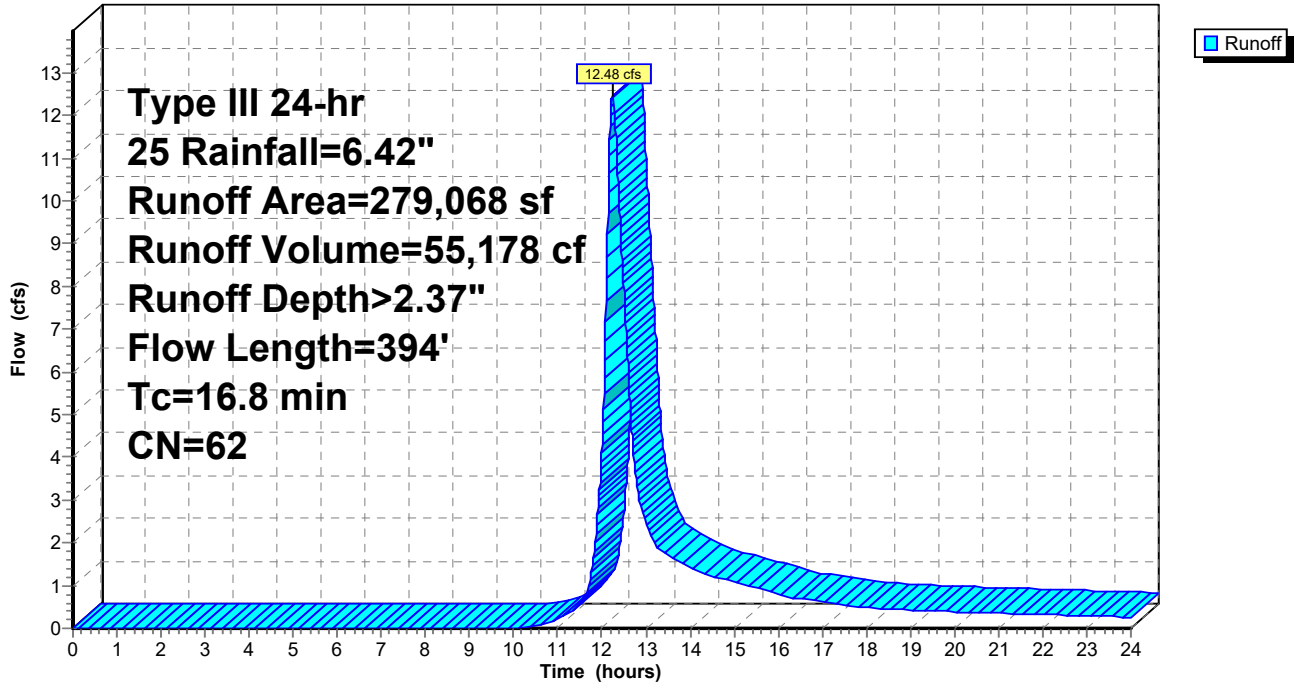
Type III 24-hr 25 Rainfall=6.42"

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**Subcatchment 3S: PR. WEST**

Hydrograph



# 10499 Rear Yard Location

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Type III 24-hr 25 Rainfall=6.42"

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## Summary for Subcatchment 4S: CULTEC

Runoff = 0.23 cfs @ 12.07 hrs, Volume= 774 cf, Depth> 6.18"  
Routed to Pond 5P : CULTEC

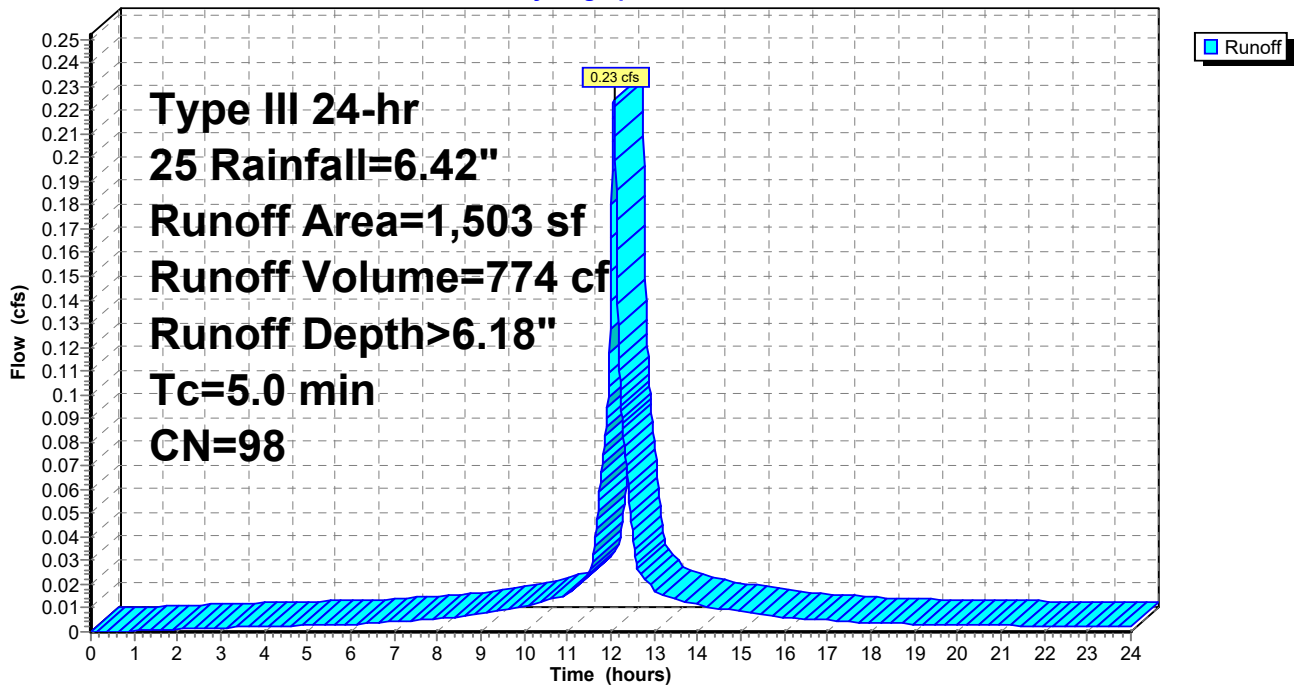
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
Type III 24-hr 25 Rainfall=6.42"

Area (sf)	CN	Description
* 1,503	98	Impervious
1,503		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

## Subcatchment 4S: CULTEC

Hydrograph





**10499 Rear Yard Location**

Type III 24-hr 25 Rainfall=6.42"

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**Summary for Pond 5P: CULTEC**

Inflow Area = 1,503 sf, 100.00% Impervious, Inflow Depth > 6.18" for 25 event  
 Inflow = 0.23 cfs @ 12.07 hrs, Volume= 774 cf  
 Outflow = 0.05 cfs @ 12.45 hrs, Volume= 509 cf, Atten= 77%, Lag= 23.0 min  
 Primary = 0.05 cfs @ 12.45 hrs, Volume= 509 cf  
 Routed to Link 2L : PR. WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Peak Elev= 498.65' @ 12.45 hrs Surf.Area= 380 sf Storage= 438 cf

Plug-Flow detention time= 233.6 min calculated for 509 cf (66% of inflow)  
 Center-of-Mass det. time= 131.6 min ( 874.4 - 742.8 )

Volume	Invert	Avail.Storage	Storage Description
#1A	496.65'	317 cf	<b>10.25"W x 36.65'L x 2.71'H Field A</b> 1,017 cf Overall - 225 cf Embedded = 793 cf x 40.0% Voids
#2A	497.15'	225 cf	<b>Cultec R-180 x 10 Inside #1</b> Effective Size= 33.6"W x 20.0"H => 3.44 sf x 6.33'L = 21.8 cf Overall Size= 36.0"W x 20.5"H x 7.33'L with 1.00' Overlap Row Length Adjustment= +1.00' x 3.44 sf x 2 rows
#3	497.00'	13 cf	<b>JB#1 (Prismatic)</b> Listed below (Recalc)
		555 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
497.00	4	0	0
500.25	4	13	13

Device	Routing	Invert	Outlet Devices
#1	Primary	499.30'	<b>6.0" Horiz. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads
#2	Primary	497.85'	<b>1.5" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads

**Primary OutFlow** Max=0.05 cfs @ 12.45 hrs HW=498.65' TW=0.00' (Dynamic Tailwater)

- 1=Orifice/Grate ( Controls 0.00 cfs)
- 2=Orifice/Grate (Orifice Controls 0.05 cfs @ 4.14 fps)

**10499 Rear Yard Location**

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Type III 24-hr 25 Rainfall=6.42"

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**Pond 5P: CULTEC - Chamber Wizard Field A**

**Chamber Model = Cultec R-180 (Cultec Recharger®180HD)**

Effective Size= 33.6"W x 20.0"H => 3.44 sf x 6.33'L = 21.8 cf

Overall Size= 36.0"W x 20.5"H x 7.33'L with 1.00' Overlap

Row Length Adjustment= +1.00' x 3.44 sf x 2 rows

36.0" Wide + 3.0" Spacing = 39.0" C-C Row Spacing

5 Chambers/Row x 6.33' Long +1.00' Row Adjustment = 32.65' Row Length +24.0" End Stone x 2 = 36.65' Base Length

2 Rows x 36.0" Wide + 3.0" Spacing x 1 + 24.0" Side Stone x 2 = 10.25' Base Width

6.0" Stone Base + 20.5" Chamber Height + 6.0" Stone Cover = 2.71' Field Height

10 Chambers x 21.8 cf +1.00' Row Adjustment x 3.44 sf x 2 Rows = 224.6 cf Chamber Storage

1,017.4 cf Field - 224.6 cf Chambers = 792.8 cf Stone x 40.0% Voids = 317.1 cf Stone Storage

Chamber Storage + Stone Storage = 541.7 cf = 0.012 af

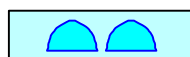
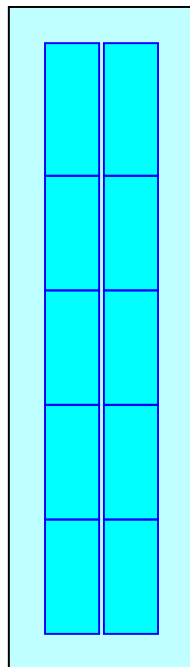
Overall Storage Efficiency = 53.2%

Overall System Size = 36.65' x 10.25' x 2.71'

10 Chambers

37.7 cy Field

29.4 cy Stone



# 10499 Rear Yard Location

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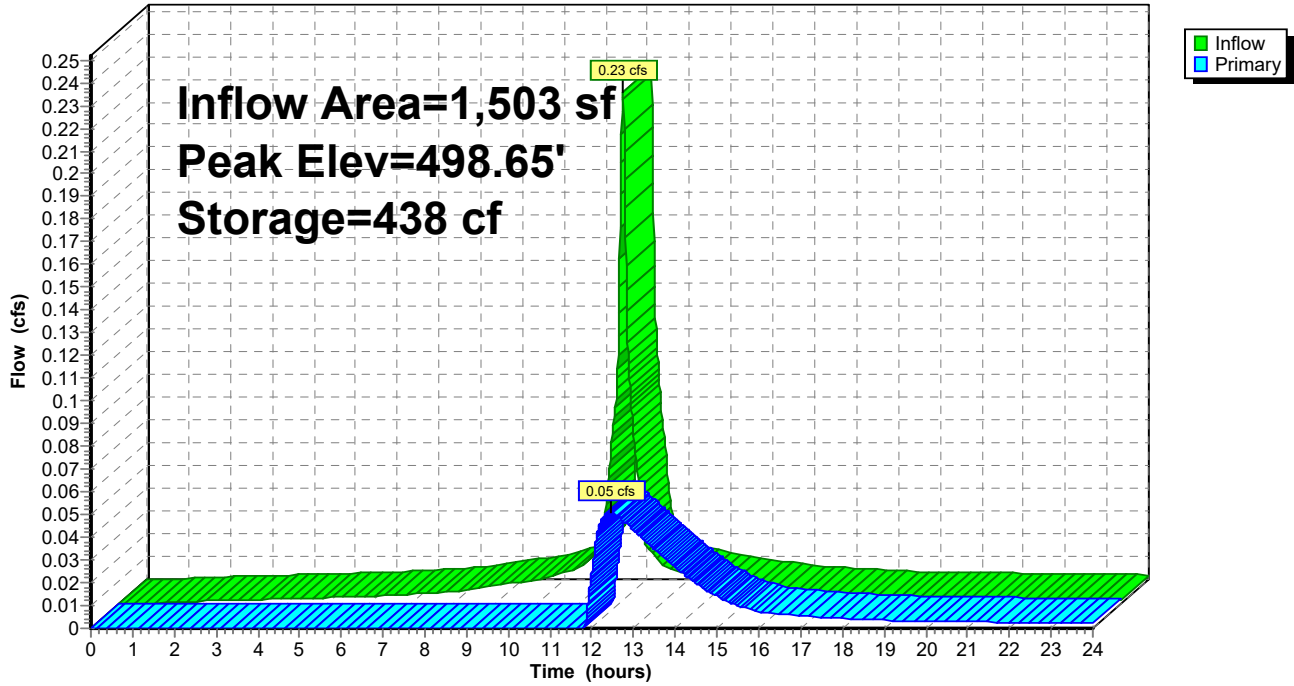
Type III 24-hr 25 Rainfall=6.42"

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## Pond 5P: CULTEC

### Hydrograph



# 10499 Rear Yard Location

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Type III 24-hr 25 Rainfall=6.42"

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## Stage-Area-Storage for Pond 5P: CULTEC

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
496.65	0	499.25	534
496.70	8	499.30	542
496.75	15	499.35	550
496.80	23	499.40	551
496.85	30	499.45	552
496.90	38	499.50	552
496.95	45	499.55	552
497.00	53	499.60	552
497.05	60	499.65	552
497.10	68	499.70	553
497.15	76	499.75	553
497.20	89	499.80	553
497.25	102	499.85	553
497.30	115	499.90	553
497.35	128	499.95	554
497.40	141	500.00	554
497.45	154	500.05	554
497.50	167	500.10	554
497.55	179	500.15	554
497.60	192	500.20	555
497.65	205	500.25	<b>555</b>
497.70	218		
497.75	230		
497.80	243		
497.85	255		
497.90	268		
497.95	280		
498.00	293		
498.05	305		
498.10	317		
498.15	329		
498.20	341		
498.25	352		
498.30	364		
498.35	375		
498.40	386		
498.45	397		
498.50	408		
498.55	418		
498.60	428		
498.65	438		
498.70	447		
498.75	456		
498.80	465		
498.85	473		
498.90	480		
498.95	488		
499.00	496		
499.05	504		
499.10	511		
499.15	519		
499.20	527		



# 10499 Rear Yard Location

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Type III 24-hr 25 Rainfall=6.42"

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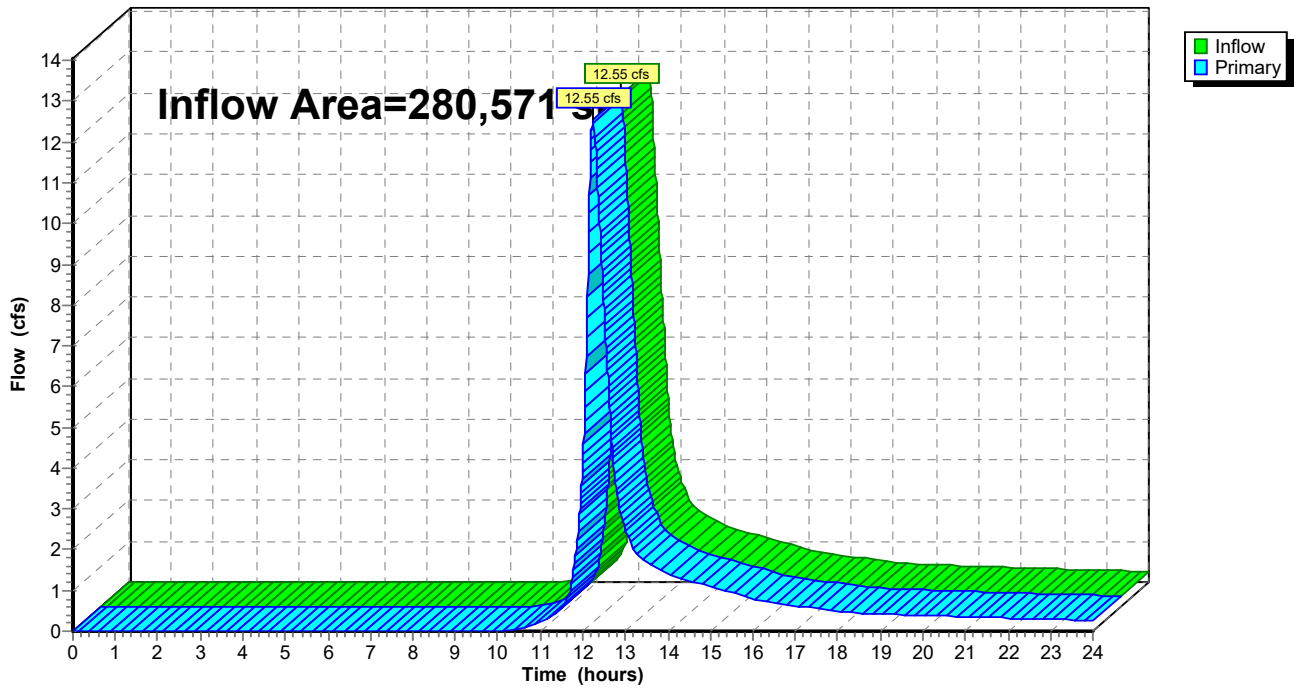
## Summary for Link 1L: EX. WEST

Inflow Area = 280,571 sf, 2.70% Impervious, Inflow Depth > 2.37" for 25 event  
Inflow = 12.55 cfs @ 12.24 hrs, Volume= 55,475 cf  
Primary = 12.55 cfs @ 12.24 hrs, Volume= 55,475 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Link 1L: EX. WEST

Hydrograph



# 10499 Rear Yard Location

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Type III 24-hr 25 Rainfall=6.42"

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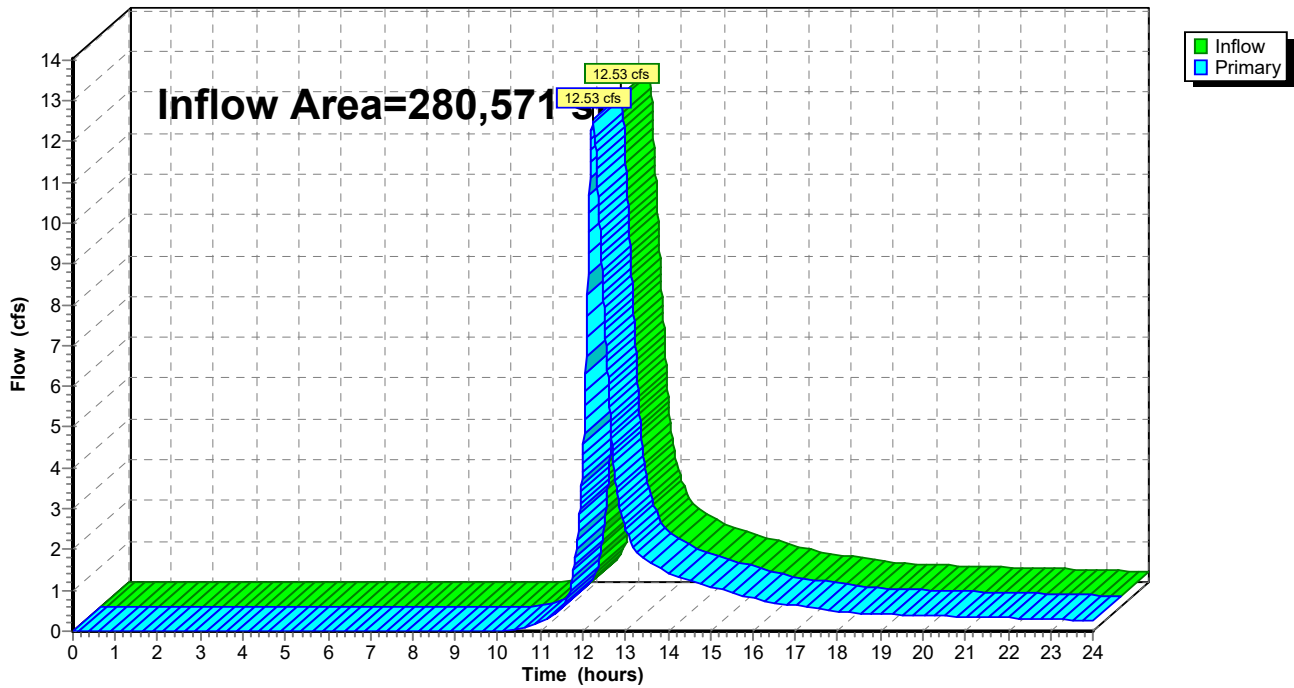
## Summary for Link 2L: PR. WEST

Inflow Area = 280,571 sf, 3.23% Impervious, Inflow Depth > 2.38" for 25 event  
Inflow = 12.53 cfs @ 12.24 hrs, Volume= 55,687 cf  
Primary = 12.53 cfs @ 12.24 hrs, Volume= 55,687 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Link 2L: PR. WEST

#### Hydrograph



**10499 Rear Yard Location**

Type III 24-hr 50 Rainfall=7.64"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment1S: EX. WEST**

Runoff Area=280,571 sf 2.70% Impervious Runoff Depth>3.27"  
Flow Length=394' Tc=16.8 min CN=62 Runoff=17.64 cfs 76,389 cf

**Subcatchment3S: PR. WEST**

Runoff Area=279,068 sf 2.71% Impervious Runoff Depth>3.27"  
Flow Length=394' Tc=16.8 min CN=62 Runoff=17.55 cfs 75,980 cf

**Subcatchment4S: CULTEC**

Runoff Area=1,503 sf 100.00% Impervious Runoff Depth>7.40"  
Tc=5.0 min CN=98 Runoff=0.27 cfs 926 cf

**Pond 5P: CULTEC**

Peak Elev=499.05' Storage=504 cf Inflow=0.27 cfs 926 cf  
Outflow=0.06 cfs 661 cf

**Link 1L: EX. WEST**

Inflow=17.64 cfs 76,389 cf  
Primary=17.64 cfs 76,389 cf

**Link 2L: PR. WEST**

Inflow=17.61 cfs 76,641 cf  
Primary=17.61 cfs 76,641 cf

**10499 Rear Yard Location**

Type III 24-hr 100 Rainfall=9.09"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment1S: EX. WEST**

Runoff Area=280,571 sf 2.70% Impervious Runoff Depth>4.40"  
Flow Length=394' Tc=16.8 min CN=62 Runoff=24.05 cfs 102,957 cf

**Subcatchment3S: PR. WEST**

Runoff Area=279,068 sf 2.71% Impervious Runoff Depth>4.40"  
Flow Length=394' Tc=16.8 min CN=62 Runoff=23.92 cfs 102,405 cf

**Subcatchment4S: CULTEC**

Runoff Area=1,503 sf 100.00% Impervious Runoff Depth>8.84"  
Tc=5.0 min CN=98 Runoff=0.32 cfs 1,108 cf

**Pond 5P: CULTEC**

Peak Elev=499.35' Storage=550 cf Inflow=0.32 cfs 1,108 cf  
Outflow=0.13 cfs 841 cf

**Link 1L: EX. WEST**

Inflow=24.05 cfs 102,957 cf  
Primary=24.05 cfs 102,957 cf

**Link 2L: PR. WEST**

Inflow=24.03 cfs 103,246 cf  
Primary=24.03 cfs 103,246 cf



United States  
Department of  
Agriculture

**NRCS**

Natural  
Resources  
Conservation  
Service

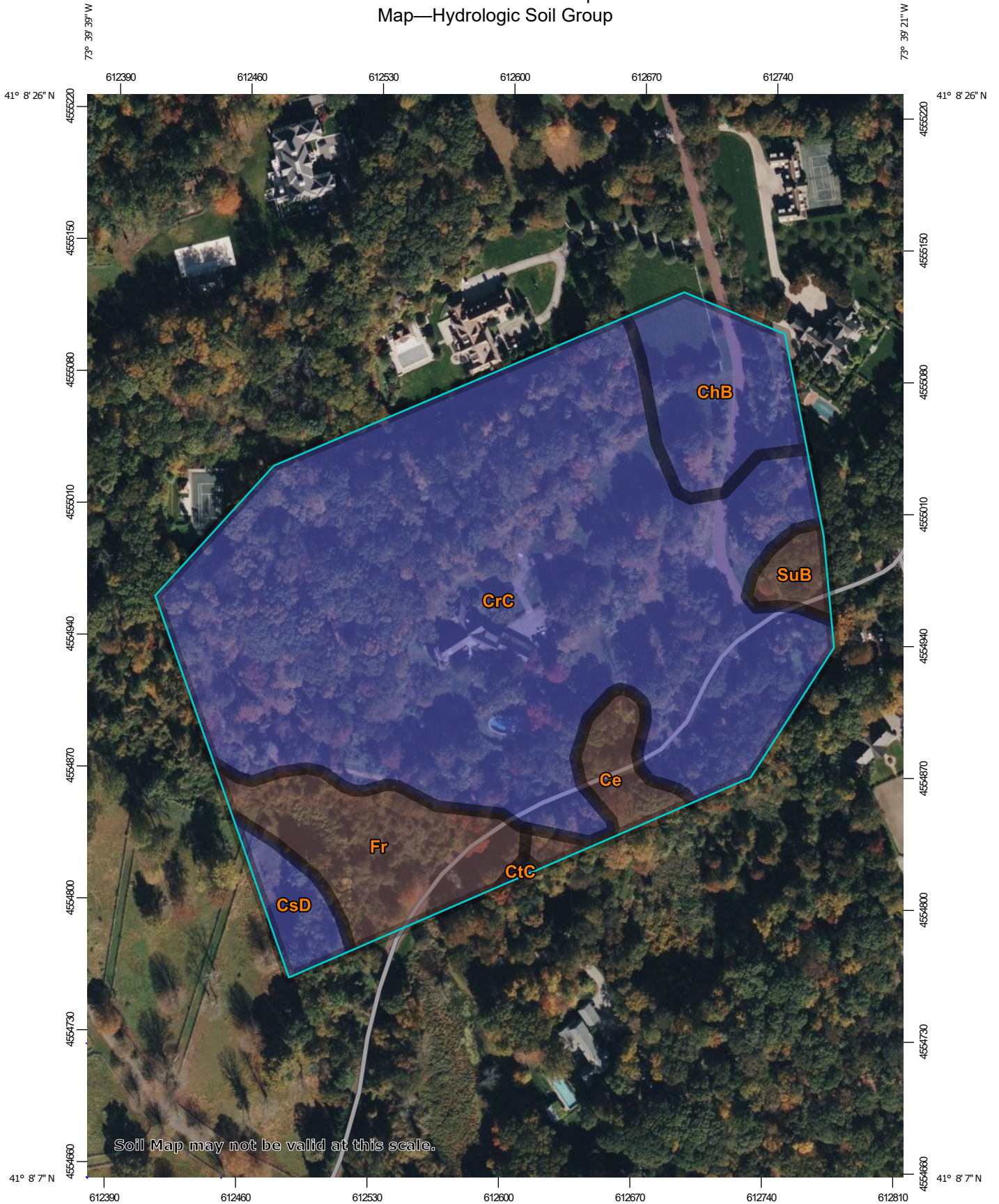
A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for **Westchester County, New York**

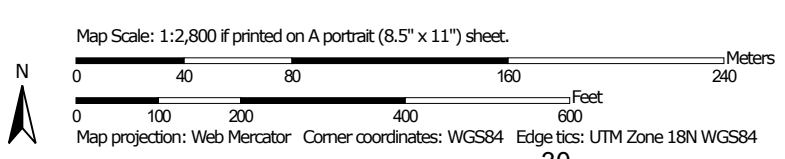





Custom Soil Resource Report  
Map—Hydrologic Soil Group



Soil Map may not be valid at this scale.











### MAP LEGEND









**Area of Interest (AOI)**  
 Area of Interest (AOI)

**Soils**





**Soil Rating Polygons**


-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

**Soil Rating Lines**






-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available


**Soil Rating Points**

-  A
-  A/D
-  B
-  B/D





**Water Features**  
 Streams and Canals

**Transportation**

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

**Background**  
 Aerial Photography

**Soils**

-  C
-  C/D
-  D
-  Not rated or not available

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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: Westchester County, New York  
 Survey Area Data: Version 17, 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: Oct 8, 2020—Oct 14, 2020

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.

**Table—Hydrologic Soil Group**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Ce	Catden muck, 0 to 2 percent slopes	B/D	0.7	3.5%
ChB	Charlton fine sandy loam, 3 to 8 percent slopes	B	1.7	8.3%
CrC	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	B	15.3	73.6%
CsD	Chatfield-Charlton complex, 15 to 35 percent slopes, very rocky	B	0.6	2.8%
CtC	Chatfield-Hollis-Rock outcrop complex, 0 to 15 percent slopes	B	0.0	0.1%
Fr	Fredon silt loam	B/D	2.1	10.0%
SuB	Sutton loam, 3 to 8 percent slopes	B/D	0.4	1.8%
<b>Totals for Area of Interest</b>			<b>20.8</b>	<b>100.0%</b>

**Rating Options—Hydrologic Soil Group**

*Aggregation Method:* Dominant Condition

*Component Percent Cutoff:* None Specified

*Tie-break Rule:* Higher

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- 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

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# Extreme Precipitation Tables

## Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

<b>Smoothing</b>	Yes
<b>State</b>	New York
<b>Location</b>	
<b>Longitude</b>	73.658 degrees West
<b>Latitude</b>	41.138 degrees North
<b>Elevation</b>	0 feet
<b>Date/Time</b>	Tue, 08 Feb 2022 16:23:05 -0500

## Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
<b>1yr</b>	0.34	0.52	0.64	0.84	1.05	1.31	<b>1yr</b>	0.91	1.22	1.50	1.86	2.29	2.82	3.19	<b>1yr</b>	2.50	3.06	3.55	4.26	4.91	<b>1yr</b>
<b>2yr</b>	0.40	0.62	0.77	1.02	1.28	1.60	<b>2yr</b>	1.10	1.49	1.84	2.27	2.79	3.43	3.86	<b>2yr</b>	3.03	3.71	4.26	5.05	5.72	<b>2yr</b>
<b>5yr</b>	0.47	0.73	0.92	1.23	1.58	1.99	<b>5yr</b>	1.36	1.83	2.30	2.85	3.51	4.30	4.88	<b>5yr</b>	3.81	4.69	5.43	6.33	7.10	<b>5yr</b>
<b>10yr</b>	0.53	0.83	1.05	1.42	1.85	2.36	<b>10yr</b>	1.60	2.15	2.73	3.39	4.18	5.11	5.83	<b>10yr</b>	4.52	5.61	6.53	7.51	8.36	<b>10yr</b>
<b>25yr</b>	0.61	0.98	1.24	1.72	2.29	2.95	<b>25yr</b>	1.97	2.66	3.43	4.28	5.27	6.42	7.38	<b>25yr</b>	5.68	7.10	8.35	9.43	10.38	<b>25yr</b>
<b>50yr</b>	0.70	1.12	1.43	2.00	2.69	3.50	<b>50yr</b>	2.33	3.12	4.08	5.09	6.27	7.64	8.83	<b>50yr</b>	6.76	8.49	10.05	11.20	12.24	<b>50yr</b>
<b>100yr</b>	0.79	1.27	1.64	2.33	3.17	4.15	<b>100yr</b>	2.74	3.67	4.86	6.07	7.47	9.09	10.57	<b>100yr</b>	8.04	10.16	12.10	13.30	14.43	<b>100yr</b>
<b>200yr</b>	0.89	1.46	1.89	2.71	3.75	4.93	<b>200yr</b>	3.23	4.32	5.78	7.24	8.91	10.82	12.65	<b>200yr</b>	9.58	12.16	14.58	15.81	17.02	<b>200yr</b>
<b>500yr</b>	1.07	1.76	2.30	3.33	4.67	6.19	<b>500yr</b>	4.03	5.36	7.28	9.14	11.24	13.64	16.05	<b>500yr</b>	12.07	15.43	18.67	19.86	21.17	<b>500yr</b>

## Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
<b>1yr</b>	0.26	0.40	0.49	0.65	0.80	0.93	<b>1yr</b>	0.69	0.91	1.28	1.61	2.00	2.58	2.79	<b>1yr</b>	2.28	2.69	3.22	3.79	4.16	<b>1yr</b>
<b>2yr</b>	0.39	0.60	0.74	1.01	1.24	1.49	<b>2yr</b>	1.07	1.45	1.70	2.17	2.74	3.32	3.74	<b>2yr</b>	2.94	3.60	4.13	4.89	5.55	<b>2yr</b>
<b>5yr</b>	0.43	0.66	0.82	1.13	1.43	1.74	<b>5yr</b>	1.24	1.70	1.98	2.57	3.21	3.94	4.50	<b>5yr</b>	3.49	4.33	5.00	5.80	6.57	<b>5yr</b>
<b>10yr</b>	0.46	0.71	0.89	1.24	1.60	1.96	<b>10yr</b>	1.38	1.92	2.23	2.93	3.64	4.49	5.16	<b>10yr</b>	3.97	4.97	5.75	6.56	7.45	<b>10yr</b>
<b>25yr</b>	0.50	0.76	0.95	1.35	1.78	2.27	<b>25yr</b>	1.54	2.22	2.60	3.47	4.29	5.29	6.20	<b>25yr</b>	4.68	5.97	6.93	7.72	8.78	<b>25yr</b>
<b>50yr</b>	0.52	0.80	0.99	1.43	1.92	2.53	<b>50yr</b>	1.66	2.47	2.94	3.96	4.87	5.98	7.13	<b>50yr</b>	5.29	6.86	7.94	8.69	9.94	<b>50yr</b>
<b>100yr</b>	0.55	0.84	1.05	1.52	2.08	2.80	<b>100yr</b>	1.79	2.74	3.32	4.53	5.46	6.75	8.20	<b>100yr</b>	5.98	7.88	9.10	9.79	11.26	<b>100yr</b>
<b>200yr</b>	0.58	0.88	1.12	1.61	2.25	3.12	<b>200yr</b>	1.94	3.05	3.76	5.20	6.21	7.60	9.42	<b>200yr</b>	6.72	9.06	10.44	10.95	12.74	<b>200yr</b>
<b>500yr</b>	0.62	0.93	1.19	1.73	2.47	3.60	<b>500yr</b>	2.13	3.52	4.44	6.29	7.36	8.87	11.29	<b>500yr</b>	7.85	10.85	12.46	12.69	15.01	<b>500yr</b>

## Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
<b>1yr</b>	0.37	0.57	0.70	0.94	1.16	1.39	<b>1yr</b>	1.00	1.36	1.59	2.07	2.61	3.03	3.43	<b>1yr</b>	2.68	3.30	3.84	4.62	5.31	<b>1yr</b>
<b>2yr</b>	0.43	0.66	0.82	1.11	1.36	1.58	<b>2yr</b>	1.18	1.55	1.80	2.31	2.89	3.55	4.00	<b>2yr</b>	3.15	3.85	4.44	5.27	5.92	<b>2yr</b>
<b>5yr</b>	0.51	0.79	0.98	1.35	1.72	2.01	<b>5yr</b>	1.48	1.97	2.33	2.97	3.70	4.67	5.27	<b>5yr</b>	4.14	5.07	5.89	6.87	7.65	<b>5yr</b>
<b>10yr</b>	0.61	0.93	1.16	1.62	2.09	2.42	<b>10yr</b>	1.80	2.37	2.83	3.59	4.50	5.76	6.50	<b>10yr</b>	5.10	6.25	7.32	8.42	9.30	<b>10yr</b>
<b>25yr</b>	0.77	1.17	1.46	2.09	2.74	3.13	<b>25yr</b>	2.37	3.06	3.67	4.62	5.80	7.62	8.62	<b>25yr</b>	6.74	8.28	9.79	11.07	12.04	<b>25yr</b>
<b>50yr</b>	0.92	1.40	1.74	2.50	3.36	3.80	<b>50yr</b>	2.90	3.71	4.47	5.58	7.03	9.42	10.66	<b>50yr</b>	8.33	10.25	12.23	13.62	14.65	<b>50yr</b>
<b>100yr</b>	1.11	1.67	2.09	3.03	4.15	4.62	<b>100yr</b>	3.58	4.52	5.44	6.76	8.79	11.69	13.20	<b>100yr</b>	10.34	12.69	15.30	16.79	17.84	<b>100yr</b>
<b>200yr</b>	1.33	2.00	2.53	3.67	5.12	5.62	<b>200yr</b>	4.42	5.49	6.62	8.17	10.72	14.51	16.36	<b>200yr</b>	12.84	15.73	19.12	20.70	21.75	<b>200yr</b>
<b>500yr</b>	1.72	2.56	3.29	4.78	6.80	7.26	<b>500yr</b>	5.87	7.10	8.60	10.50	13.96	19.33	21.73	<b>500yr</b>	17.10	20.90	25.74	27.38	28.24	<b>500yr</b>



TOWN OF NORTH CASTLE  
WESTCHESTER COUNTY  
17 Bedford Road  
Armonk, New York 10504-1898

PLANNING DEPARTMENT  
Adam R. Kaufman, AICP  
Director of Planning

Telephone: (914) 273-3542  
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[www.northcastleny.com](http://www.northcastleny.com)

## GROSS LAND COVERAGE CALCULATIONS WORKSHEET

Application Name or Identifying Title: 1 Ashfields Ln - Barn Date: June 26, 2023

Tax Map Designation or Proposed Lot No.: 102.03-2-36

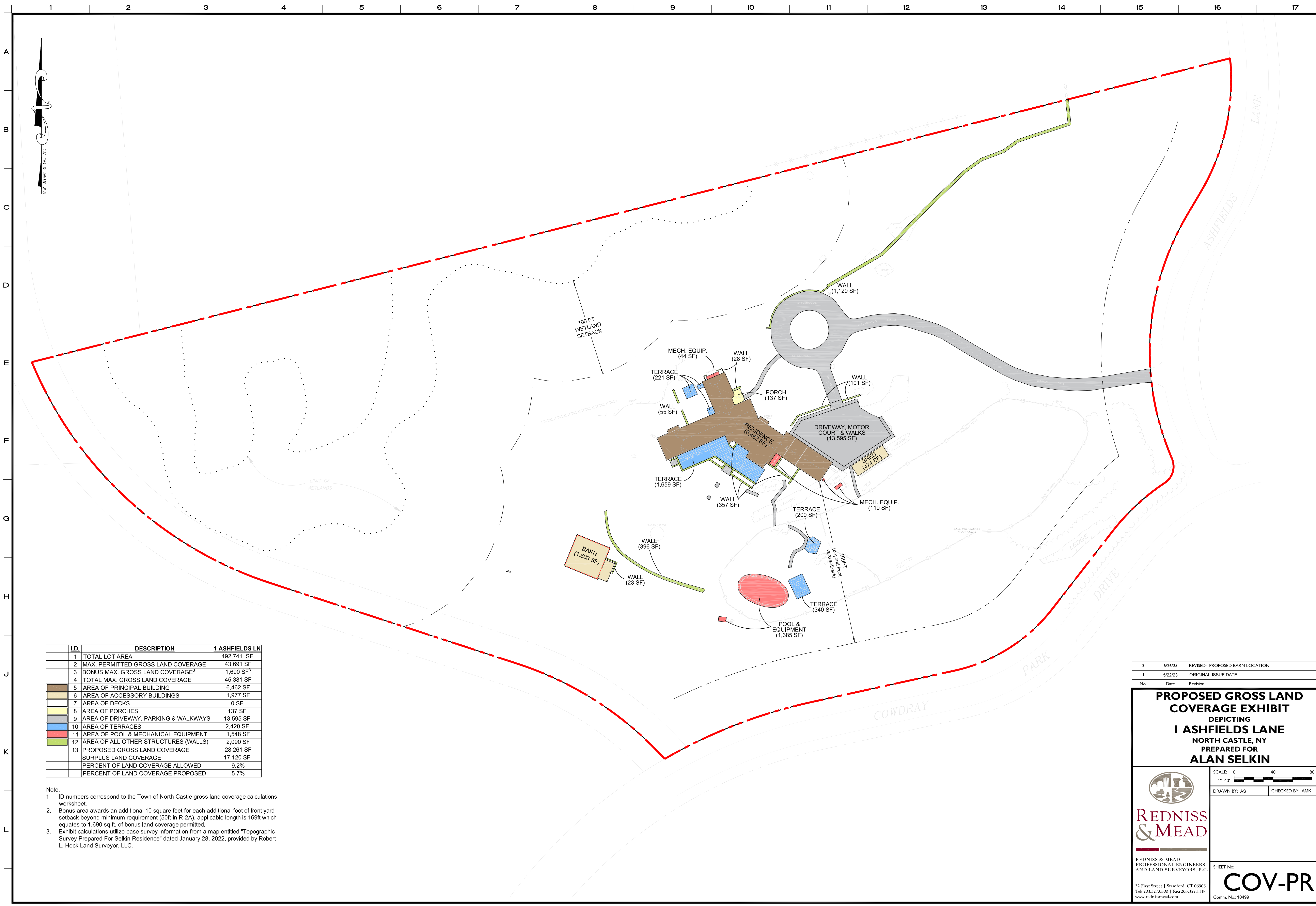
### Gross Lot Coverage

1. Total lot Area (Net Lot Area for Lots Created After 12/13/06): 492,741 sq.ft.
2. **Maximum** permitted gross land coverage (per Section 355-26.C(1)(a)): 43,691 sq.ft.
3. **BONUS** maximum gross land cover (per Section 355-26.C(1)(b)):  
Distance principal home is beyond minimum front yard setback  
169 ft x 10 = 1,690 sq.ft.
4. **TOTAL Maximum Permitted gross land coverage** = Sum of lines 2 and 3 45,381 sq.ft.
5. Amount of lot area covered by **principal building**:  
6,462 existing + 0 proposed = 6,462 sq.ft.
6. Amount of lot area covered by **accessory buildings**:  
474 existing + 1,505 proposed = 1,977 sq.ft.
7. Amount of lot area covered by **decks**:  
0 existing + 0 proposed = 0 sq.ft.
8. Amount of lot area covered by **porches**:  
137 existing + 0 proposed = 137 sq.ft.
9. Amount of lot area covered by **driveway, parking areas and walkways**:  
13,487 existing + 0 proposed = 13,595 sq.ft.
10. Amount of lot area covered by **terraces**:  
2,420 existing + 0 proposed = 2,420 sq.ft.
11. Amount of lot area covered by **tennis court, pool and mechanical equip**:  
1,548 existing + 0 proposed = 1,548 sq.ft.
12. Amount of lot area covered by **all other structures: (walls)**  
2,067 existing + 23 proposed = 2,090 sq.ft.
13. Proposed **gross land coverage**: Total of Lines 5 – 12 = 28,261 sq.ft.

If Line 13 is less than or equal to Line 4, your proposal **complies** with the Town's maximum gross land coverage regulations and the project may proceed to the Residential Project Review Committee for review. If Line 13 is greater than Line 4 your proposal does not comply with the Town's regulations.

\_\_\_\_\_  
Signature and Seal of Professional Preparing Worksheet

June 26, 2023  
Date




I.D.	DESCRIPTION	1 ASHFIELDS LN
1	TOTAL LOT AREA	492,741 SF
2	MAX. PERMITTED GROSS LAND COVERAGE	43,691 SF
3	BONUS MAX. GROSS LAND COVERAGE <sup>2</sup>	1,690 SF <sup>3</sup>
4	TOTAL MAX. GROSS LAND COVERAGE	45,381 SF
5	AREA OF PRINCIPAL BUILDING	6,462 SF
6	AREA OF ACCESSORY BUILDINGS	1,977 SF
7	AREA OF DECKS	0 SF
8	AREA OF PORCHES	137 SF
9	AREA OF DRIVEWAY, PARKING & WALKWAYS	13,595 SF
10	AREA OF TERRACES	2,420 SF
11	AREA OF POOL & MECHANICAL EQUIPMENT	1,548 SF
12	AREA OF ALL OTHER STRUCTURES (WALLS)	2,090 SF
13	PROPOSED GROSS LAND COVERAGE	28,261 SF
	SURPLUS LAND COVERAGE	17,120 SF
	PERCENT OF LAND COVERAGE ALLOWED	9.2%
	PERCENT OF LAND COVERAGE PROPOSED	5.7%

Note:  
 1. ID numbers correspond to the Town of North Castle gross land coverage calculations worksheet.  
 2. Bonus area awards an additional 10 square feet for each additional foot of front yard setback beyond minimum requirement (50ft in R-2A), applicable length is 169ft which equates to 1,690 sq.ft. of bonus land coverage permitted.  
 3. Exhibit calculations utilize base survey information from a map entitled "Topographic Survey Prepared For Selkin Residence" dated January 28, 2022, provided by Robert L. Hock Land Surveyor, LLC.

No.	Date	Revision
2	6/26/23	REVISED: PROPOSED BARN LOCATION
1	5/22/23	ORIGINAL ISSUE DATE

**PROPOSED GROSS LAND COVERAGE EXHIBIT**  
 DEPICTING  
**1 ASHFIELDS LANE**  
 NORTH CASTLE, NY  
 PREPARED FOR  
**ALAN SELKIN**



**REDNISS & MEAD**  
 PROFESSIONAL ENGINEERS  
 AND LAND SURVEYORS, P.C.

22 First Street | Stamford, CT 06905  
 Tel: 203.327.0500 | Fax: 203.357.1118  
 www.rednissmead.com

SCALE: 0 40 80  
 1"=40'

DRAWN BY: AS      CHECKED BY: AMK

SHEET No:  
**COV-PR**

Comm. No: 10499



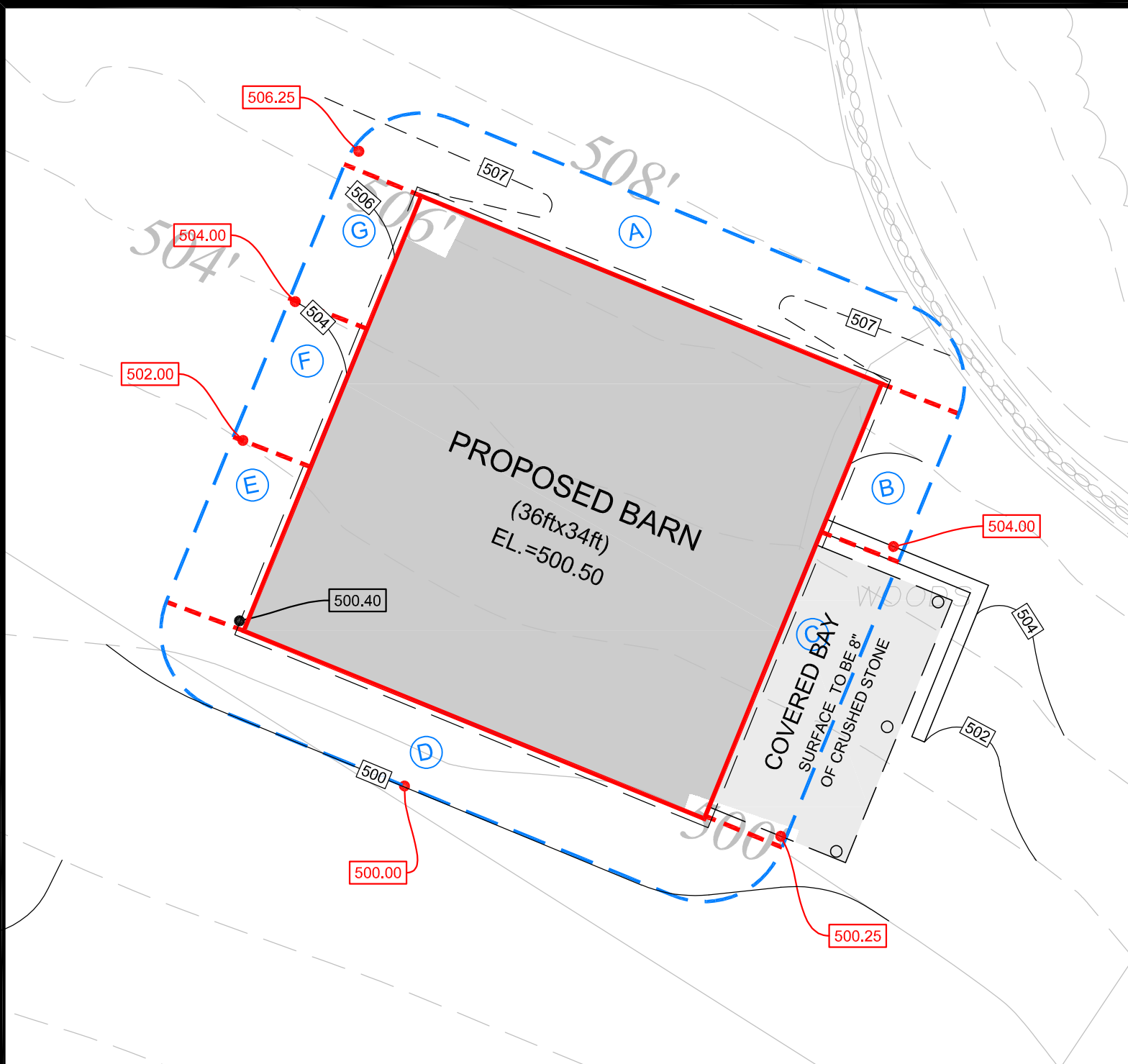
Client Name: Selkin Residence  
 Site Location: 1 Ashfields Lane, North Castle, NY  
 Calculated by: AMK

Job: 10499  
 Date: 6/26/2023


**~ PROPOSED BARN ~**  
**Average Grade Calculations**  
 REFER TO ATTACHED EXHIBIT

Side (A)	Lowest Elevation within 6' Envelope (B)	Length along Foundation (C)	Product (D) = (B x C)	Lowest Elevation along Foundation (E)	Length along Foundation where grade is greater than 6' below FFE (G)
A	506.3	36.0	18,225.0	506.0	0.0
B	504.0	11.6	5,846.4	504.0	0.0
C	500.3	22.4	11,205.6	500.4	0.0
D	500.0	36.0	18,000.0	500.4	0.0
E	500.4	12.8	6,405.1	500.4	0.0
F	502.0	10.8	5,421.6	502.0	0.0
G	504.0	10.4	5,241.6	504.0	0.0
<b>Total</b>		140.0	70,345.3	500.4	0.0

Grade Plane = 502.50      Column D/Column C  
 First Floor Elev = 500.5  
 Lower Level Elev = N/A  
 First Floor Elev - Grade Plane = -2.00 ft  
<sup>2</sup> First Floor - Lower Level Elev = N/A  
<sup>3</sup> Percent of Foundation where Grade is More than 6' Below FFE = 0.0 %  
 Distance between Lowest Elevation along Foundation and FFE = 0.1 ft  
 Is the Basement Considered a Story? N/A



**AVERAGE GRADE EXHIBIT - BARN**  
**1 ASHFIELDS LANE**  
**NORTH CASTLE, NY**



**REDNISS & MEAD**

LAND SURVEYING  
 CIVIL ENGINEERING  
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 PERMITTING

22 First Street | Stamford, CT 06905  
 Tel: 203.327.0500 | Fax: 203.357.1118  
 www.rednissmead.com

COMM. NO.: 10499      DATE: 6/26/23  
 SCALE: 1"=10'

6/26/2023 9:21 AM H:\Jobfiles\210000\10400\10499\DWG\10499 Master3.dwg