AGENDA PACKET

JULY 21, 2020 MEETING

TOWN OF LEWISBORO
Westchester County, New York

Planning Board
79 Bouton Road
South Salem, New York 10590

Tel: (914) 763-5592
Fax: (914) 875-9148
Email: planning@lewisborogov.com

AGENDA

Tuesday, July 21, 2020 **Via Zoom videoconferencing**

Zoom meeting at 1-929-205-6099 when prompted, enter Meeting ID: 968 7632 4675
One tap mobile +19292056099,,96876324675# US (New York)

Note: Meeting will start at 7:30 p.m. and end at or before 11:00 p.m.

I. SKETCH PLAN REVIEW

Cal# 11-19PB, Cal# 91-19WP, Cal# 10-19SW
McArthur and Salazar Residence, 40 Old Pond Road, South Salem, Sheet 33C, Block 11155, Lots 16, 17 & 44 (William McArthur, owner of record) - Application for Site Plan, Wetland Activity and Stormwater Permits in connection with the reconstruction of a lakeside cottage.

II. WETLAND PERMIT REVIEW

Cal# 41-18WP
Handler Residence, 25 Woodway Road, South Salem, NY 10590, Sheet 38, Block 10549, Lots 12 & 20 (Martha and Richard Handler, owners of record) – To schedule the public hearing.

III. CORRESPONDENCE

Town of New Canaan, Milne Dam test holes Public Hearing notice.

IV. MINUTES OF June 16, 2020.

V. NEXT MEETING DATE: August 18, 2020.

KELLARD SESSIONS

John Kellard, P.E.
David Sessions, RLA, AICP
Joseph M. Cermele, P.E., CFM
Jan K. Johannessen, AICP

MEMORANDUM

TO: Chairperson Janet Andersen and
Members of Lewisboro Planning Board

CC: Ciorsdan Conran
Judson Siebert, Esq.
Joseph Angiello

FROM: Jan K. Johannessen, AICP
Joseph M. Cermele, P.E., CFM
Town Consulting Professionals

DATE: July 16, 2020

RE: William McArthur & Alejandra Salazar
40 Old Pond Road
Sheet 33C, Block 11155, Lots 16, 17 & 44

PROJECT DESCRIPTION

The subject property consists of three (3) tax lots totaling ±1.17 acres of land located at 40 Old Pond Road within the R-2A and R-4A Zoning Districts. The subject property contains a 3-bedroom residence, which is in a state of disrepair, along with a detached garage, asphalt driveway, septic system, potable water well and other ancillary residential improvements. The applicant is proposing the demolition of the existing residence and garage and construction of a new, 2-bedroom residence and detached 1-bedroom cabana. The subject property is located immediately adjacent to Lake Waccabuc and the majority of the proposed improvements are located within the Town's 150-foot wetland buffer. There are no proposed improvements to Tax Lot 17, meaning all proposed improvements will occur within the R-2A Zoning District.

SEQRA

The proposed action is a Type II Action and is categorically exempt from the State Environmental Quality Review Act (SEQRA).

REQUIRED APPROVALS

1. A Wetland Permit and Town Stormwater Permit is required from the Planning Board; a public hearing is required to be held on the Wetland Permit.

2. According to the applicant, the required area variances have been obtained from the Zoning Board of Appeals.

3. An Individual Residential Stormwater Permit is be required from the New York City Department of Environmental Protection (NYCDEP).

4. As disturbance will exceed 5,000 s.f. and as the property is located within the New York City Department of Environmental Protection (NYCDEP) East of Hudson Watershed, coverage under the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002) will be required.

5. A Floodplain Development Permit is required from the Town Building Inspector in accordance with Chapter 126, Flood Damage Prevention, of the Town Code.

REVIEW COMMENTS:

1. As previously requested, the applicant shall identify the ownership and maintenance responsibilities of Old Pond Road. The Planning Board will need to determine whether access to the subject property is suitably improved for emergency access. The current condition and width of the road shall be documented and illustrated on a plan. It is recommended that the Planning Board refer the application to the Fire Department for review.

2. The applicant is proposing off-site mitigation in the form of drainage improvements, invasive species removal and plantings on lands owned by the Westchester Land Trust. This agreement must be formalized, and the applicant must develop protocols/plans for both effectuating/completing the mitigation, as well as long-term maintenance. The applicant should contact this office to schedule a site visit, so that the adjacent Westchester Land Trust Parcel can be evaluated.

3. While off-site mitigation is allowed under the Code in certain circumstances, on-site mitigation is the preferred approach. While the applicant has not yet provided a fully developed mitigation/planting plan, based on the conceptual mitigation plan, there appears to be more on-site mitigation opportunities along the lake edge. While the applicant is proposing a development restriction along the lake, much of this area appears to be proposed as maintained lawn. Additional plantings and naturalization of the restricted area is encouraged.

4. It is recommended that any form of development restriction proposed along the lake edge take the form of a conservation easement or declaration; legal instruments should be submitted for review.

5. The existing condition and extent of repair of the sea wall and dock shall be identified on the plan; construction details shall be provided as necessary.

6. The applicant shall submit copies of all outside agency approvals [NYCDEP, Westchester County Department of Health (WCDH), Zoning Board of Appeals (ZBA)].

7. We previously noted that an existing stonewall and stone patio extend off-site and onto lands owned by the Westchester Land Trust. The applicant should clarify and provide further detail about how this condition is proposed to be resolved (via easement or land conveyance).

8. As previously requested, all walls greater than four (4) feet in height shall be designed by a NYS Licensed Professional Engineer and certified by the Design Professional prior to the issuance of a Certificate of Occupancy/Completion. Provide construction details and specifications on the plan.

9. As previously stated, the floor plans that were signed by the WCDH as "No Objection" differ slightly from those submitted to the Planning Board. Most notably, the configuration and number/type of kitchen related appliances provided in the cabana are different. The WCDH should review the floor plans again once finalized. The plans shall clarify and specify, by name, all kitchen-related appliances proposed within the cabana.

10. The submitted survey shall be signed and sealed by the NYS Licensed Land Surveyor.

11. The meets and bounds of the property line shall be shown on the existing conditions plan.

12. The FEMA floodplain map has been provided on Sheet 4 of 5. The boundary limit and base flood elevation of the 100-year FEMA floodplain shall be illustrated on the Site Plan.

13. As previously requested, provide all applicable construction details including, but not limited to the driveway, retaining wall, curtain drain, plantings, and drainage.

14. The plans shall illustrate and quantify the limits of disturbance. The plan shall note that the limit of disturbance shall be staked in the field prior to construction.

15. The stormwater calculations provided indicate that an infiltration rate of two (2) inches/hour was used when designing the raingarden. Testing is required to confirm the infiltration rate, which shall be witnessed by this office. All soil test results shall be noted on the stormwater plans.

16. Rain garden sizing calculations shall be based on the required water quality volume (WQv). The greater volume from the 1-year, 24-hour rainfall or the 90% rainfall event shall be used.

17. As per the NYSDEC Stormwater Design Manual, infiltration practices shall be installed in virgin soils and cannot be installed on slopes greater than 15%. The proposed rain garden is located on slopes greater than 15%; the plan shall be revised accordingly.

18. The location of the existing septic area has been shown on the plan. A note shall be added to the plans indicating that the system shall be cordoned off during construction.

19. The plan shall demonstrate that all required WCDH setbacks and separation distances associated with existing septic, well and drainage structures have been maintained, including the proposed curtain drain.

20. The Notice of Intent (NOI) requires the signatures of the preparer and of the owner. Further, Question #12 shall be answered "Yes", as the property is located within a watershed of an AA or AA-S waterbody.

21. Pre- and post-condition drainage maps shall be submitted for reference with the Stormwater Pollution Prevention Plan (SWPPP).

In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein.

PLANS REVIEWED, PREPARED BY J.D. BARRETT & ASSOCIATES, LLC, DATED JUNE 30, 2020:

- Site Information Plan (Sheet 1 of 5)
- Zoning Conformance Plan (Sheet 2 of 5)
- Removals Plan and Site Plan (Sheet 3 of 5)
- Erosion Control Plan (Sheet 4 of 5)
- Wetland Buffer Mitigation Plan (Sheet 5 of 5)

PLANS REVIEWED, PREPARED BY ALP ENGINEERING, DATED JUNE 26, 2020:

- C-101 (Sheet 1 of 2)
- C-112 (Sheet 2 of 2)

DOCUMENTS REVIEWED:

- Letter, prepared by J.D. Barrett & Associates, LLC, dated June 30, 2020
- Letter, prepared by ALP Engineering, dated June 26, 2020

- Stormwater Pollution Prevention Plan (SWPPP), prepared by ALP Engineering, dated June 26, 2020Wetland Report, prepared by Stephen W. Coleman Environmental Consulting, LLC, dated June 26, 2020
- Letter, prepared by the Westchester County Land Trust (WLT)
- Email Exchange between the applicant and the Town's Highway Superintendent
- Survey, prepared by Link Land Surveyors, P.C., dated March 29, 2017

JKJ/JMC/dc

T:\Lewisboro\Correspondence\2020-07-16_LWPB_McArthur Salazar 40 Old Pond Rd_Review Memo.docx

TO: Town of Lewisboro Planning Board

FROM: Lewisboro Conservation Advisory Council

SUBJECT: McArthur and Salazar Residence
40 Old Pond Road

DATE: July 8, 2020

The Conservation Advisory Council (CAC) reviewed the applicant's submission of a sketch plan for a single-family home on Old Pond Road.

The new plan from McArthur and Salazar appears to be an improvement over the one submitted in 2019 by the previous owner. The property is both very rocky and has a steep slope down to the lake. The planned renovation and new construction for this project is entirely in the wetland buffer with the studio/cabana within 20 feet of Waccabuc Lake. Given the steepness and rockiness of the site and the close proximity to the lake, the CAC would like to have all actions specified in the constructions plan executed and monitored carefully and thoroughly to prevent sediment and construction materials from entering the lake.

The use of dry wells as a septic system continues to concern the CAC given the amount of rock and lack of soil suitable for infiltration.

The CAC would also like to see some of the mitigation plantings down near the rock wall along the lakefront to help protect the lack of any sediments or other materials running off the property.

To: Town of Lewisboro Planning Board
Via email to planning@lewisborogov.com

From: Paul Lewis and Ron Tetelman, on behalf of the Three Lakes Council

Date: July 14, 2020

Re: Cal. No. 11-19PB McArthur
40 Old Pond Road

Dear Chairman Janet Andersen and Members of the Planning Board:

Both of us are members of the Three Lakes Council and long term residents of the three lakes area. We have reviewed the plans for this application plus other documents, and are making the following comments on behalf of the Three Lakes Council.

We request that a Public Hearing be held for this application. This will be a substantial project and have an impact on the lake. If permitted, there will be a lot of construction activity on this site and the Public Hearing would be a way to let the residents know what is proposed and have an opportunity express their opinions.

We submitted a memo on January 20, but the latest plans show little reaction to our recommendations. We are attaching that memo for reference.

We did note that the curtain drain at the northern edge of the property will no longer drain to the level spreader as we suggested, but where will it drain to? Or, is one not needed. We still believe it should extend beyond the septic system to reduce nutrient travel.

We continue to believe the proposed level spreader near the lake shore should be eliminated. We mentioned the Cedar Eden report in the previous letter and the impact of Phosphorus loading in the lakes. At the moment we are undergoing algae blooms as a result of the phosphorus, and these blooms are adversely affecting the lakes. **We must strive to eliminate all the phosphorus entering the lakes.** Phosphorus laden water must be put into the ground as soon as it hits the earth, not transported to the water's edge.

The goal of the Three Lakes Council is to preserve and protect the Three Lake Watershed, and this project should be viewed as an opportunity to protect Lake Waccabuc from further eutrophication. It would good to apply this thinking to any project in the watershed that comes before the Board, not just this one.

J.D. BARRETT & ASSOCIATES, LLC
www.jdbarrett.com
Landscape Architects • Site Planners • Environmental Scientists

June 30, 2020

Ms. Janet Andersen, Chair
Town of Lewisboro Planning Board (PB)
79 Bouton Road
South Salem, NY 10590-1430

Re: McArthur & Salazar Property
40 Old Pond Road – 1.1719 Acres
Sheet 33C, Block 11155, Lots 16, 17, 44

Dear Chairman Andersen and Members of the PB:

At this time we are providing the PB with new and revised information in support of permit approvals to rebuild and renovate the subject property. We enclose the following information for the PB's continued review of the project.

- This explanatory **Cover Letter**, prepared by J.D. Barrett & Associates, LLC, dated June 30, 2020.
- An **Engineering Review Response Letter**, prepared by ALP Engineering, dated June 26, 2020.
- **Stormwater Engineering Plans,** prepared by ALP Engineering, dated June 26, 2020.
  - Sheet 1 of 2 C-101
  - Sheet 2 of 2 C-111
- **A Stormwater Pollution Prevention Plan (SWPPP),** prepared for the project by ALP Engineering, dated June 26, 2020.
- **A Wetland Report,** prepared by Stephen W. Coleman Environmental Consulting, LLC, dated June 26, 2020.
- A **Letter from the Westchester County Land Trust (WLT)** indicating their permission for the applicant to install portions of the wetland mitigation plantings on portions the WLT property.
- A copy of an **Email Exchange** between the applicant and the Town's Highway Superintendent that discusses Old Pond Road.
- A copy of the **Survey for the Property**, prepared by Link Land Surveyors, dated March 29, 2017.
- **Updated Site Plans** for the project, prepared by J.D. Barrett & Associates, LLC, dated June 30, 2020, including:
  - Sheet 1 of 5 Site Information Plan
  - Sheet 2 of 5 Zoning Conformance Plan
  - Sheet 3 of 5 Removals Plan and Site Plan
  - Sheet 4 of 5 Erosion Control Plan
  - Sheet 5 of 5 Wetland Buffer Mitigation Plan

Overview & Background

This application is before the PB to obtain environmental permits to allow the renovation and reconstruction of the property. Since the applicant last appeared before the PB on February 25, 2020 to discuss the results of the PB site walk at the property on January 25, 2020 the applicant and his professionals have been preparing new and revised information for the PB' review. We are pleased to report that the applicant appeared before the Zoning Board of Appeals (ZBA) on June 24, 2020

and obtained the necessary variances to allow the construction of the proposed new residence (cabin) at the higher portions of the property and a new lake side cabana, together with outdoor patios, realigned driveway and site work to position the new improvements on the sloping property. The existing septic system and well on the property shall continue to be used to service the property.

Existing Conditions

The property is comprised of three tax lots measuring in total 1.1719 acres. Two of the tax lots (16 and 44) are located in the R-2A Zoning District and this is where the house and yard areas are located. Tax Lot 17 is in the R-4 Zoning District. This is the most northerly tax lot and this lot will remain undisturbed in its current wooded condition.

The existing home and property are currently in a state of severe disrepair as the property has suffered from years of deferred maintenance and neglect. Inasmuch, the house requires a total renovation. The existing home dates back to the 1940's and is constructed as a three-bedroom home that is serviced by an on-site well, septic system and electrical service. The property enjoys approximately 160 LF of lake frontage on Lake Waccabuc with spectacular views down the lake. The lake side portion of the property where the house is positioned is relatively flat, with some lawn areas around the house, but the remainder of the property slopes steeply to the north and is currently vegetated with trees and understory vegetation, vines, etc. There are rock outcrops scattered throughout the property. The on-site soils that occur on the developed, more southerly portion of the property are the Chatfield-Charlton Complex soils – 15-35% slope, very rocky and the more northerly soils on the undeveloped portion of the property are the Hollis-Rock Overland Complex soils, 35-60% slopes.

There is currently a very long driveway (+/- 4500 SF) that travels from the top of the property where a two-car garage is located down to the house area by the lake. The driveway is paved with asphalt and very steep (+/- 25%), and directs stormwater runoff directly into the lake but gets flatter down by the lake where a parking area is located. It is proposed that this very steep and long driveway be removed as part of this project.

Planning Board's Continuing Review of the Project

The following responses to comments received from the PB and Town Consultants is offered in response to the review comments section in the Town Planner's Consulting Project Review Memorandum, dated June 16, 2020.

Comment #1 – Re: Zoning Compliance

The property, in the existing condition, can be considered a legally non-compliant lot because it is zoning deficient in several regards, including lot area, minimal circle diameter, side yard and rear yard setbacks. On June 24, 2020, the applicant appeared before the Town's ZBA and obtained four (4) variances to legalize the property for renovations and redevelopment per the plan before the PB now, as follows:

1. Area Variance – Proposed lake studio floor area of 980 SF exceeds permitted maximum of 600 SF for an accessory structure. Area variance of 380 SF was granted.
2. Yard Setback Variance – Proposed lake cottage rear yard setback of 43'-5" is less than required 50' for R-2A zone. Rear yard setback variance of 6'-7" was granted.
3. Yard Setback Variance – Proposed deck rear yard setback of 39'-9" is less than required 50'. Rear yard setback variance of 10'-3" was granted.
4. Yard Setback Variance – Proposed terrace rear yard setback of 28'-6" is less than required 50'. Rear yard setback variance of 21'-6" was granted.

Comment #2 – Re: Old Pond Road

The applicant has had several conversations and site meetings with the Town's Highway superintendent, Mr. Ripperger, to discuss the suitability of Old Pond Road to service the subject property. It was agreed that no changes are proposed to Old Pond Road and that Old Pond Road can continue to service the property. Please see email exchanges (attached) between Mr. Ripperger and the applicant.

Comment #3 – Re: Wetland Report

We attach a Wetland Report for the subject property prepared by Stephen W. Coleman Environmental Consulting, LLC, dated June 26, 2020.

Comment #4 – Re: Wetland Buffer Mitigation

We have calculated on the site plan that the area within the proposed grading limit line to install the proposed improvements is approximately 19,807 SF. The area of proposed disturbance within the 100' wetland buffer line is 16,696 SF. The project will be required to provide 1:1 wetland buffer mitigation also at 16,696 SF in order to achieve 1:1 wetland buffer mitigation. We have provided a Wetland Buffer Mitigation Plan, Sheet 5 of 5. We have calculated on the plan that the area we proposed to install/perform mitigation to be approximately 17,000+ SF, which will comply with the 1:1 mitigation ratio required. Forms of wetland buffer mitigation proposed include:

A. Installation of a comprehensive erosion control plan to control erosion and sedimentation during construction to protect Lake Waccabuc.

B. Installation of a mixed planting of proposed trees, shrubs, groundcovers and seed mixes. The mitigation plan currently shows the proposed plantings in conceptual format. Once the PB finds the mitigation approach acceptable, we will provide detailed planting plans for the proposed planting mitigation.

C. The applicant has currently secured permission from the WLT to allow portions of the mitigation work to be performed on a +/- 60'wide parcel of land west of and adjacent to the subject property.

   Wetland buffer mitigation measures proposed on this parcel will include the renovation of an existing stormwater ditch that conveys runoff around the subject property. Here, it is proposed that the existing channel be cleaned out and rock stabilized, as necessary. In addition, it is proposed that native ferns be planted along the banks side slope of the ditch to help stabilize the drainage ditch. Also, a proposed sediment sump/plunge pool is shown positioned between two opposing rock outcroppings. We discussed in the field with the WLT representative that we would install three gabion baskets (3' x 3' x 6') filled with 5" rip-rap, between the two rock outcroppings to block the drainage ditch. The gabions would serve as an energy dissapator where the storm flows would slow down and drop their sediment load behind the gabion dam for routine cleaning. It is believed that this will improve the water quality entering the lake. See plan for location and details of the gabion sediment trap.

D. A comprehensive stormwater management plan has been developed for the project by the project engineer, including providing stormwater management for the new impervious surface.

E. A staked/sandbagged 18" diameter, high-density coir log will be placed upslope of the proposed development area on the lot and serve to direct storm flows around the work area and house. The coir log diversion shall direct the storm flows to the stabilized drainage ditch and gabion sediment sump. This feature will control the area runoff from the steep

slopes above the house site and provide for long-term stabilization to the house site and yard area.

F. The applicant has agreed to place a "No Building" restriction on the first 30' from the lake shoreline back toward the house. The restricted area is shown on the plan in a dot pattern.

Comments # 5, 6, 7, 8, 9 – Re: Stormwater Management
ALP Engineering has provided a stormwater management report, plan and SWPPP for the project, as well as a response letter addressing comments 5, 6, 7, 8 and 9. This information is attached herein.

Comment #10 – Re: Decks
As noted above, the decks and patios associated with the project have received variances from the Town of Lewisboro ZBA.

Comment #11 – Re: Sea Wall
During the PB site walk in January 2020, we inspected the sea wall and we noted that it is in surprisingly good condition. There are a few loose stones to be repaired and this will be done by hand methods.

Comment #12 – Re: Stone Patio on Lands of WLT
The applicant has secured an agreement with the WLT to access their property for wetland buffer mitigation installation and maintenance. The applicant, his attorney and the WLT continue to engage in negotiations where the applicant would acquire this 60' wide section of land west of and adjacent to his property in consideration for the lands of McArthur north of the proposed driveway and other consideration. More information on this matter will be provided once it becomes available.

Comment #13 – Re: FEMA Flood Plain
We have added flood plain information to Sheet 3 of 5. The information was sourced from the FEMA website.

Comment #14 – Re: Construction Details
Once the site plan layout is agreed to with the PB, the appropriate construction details shall be provided for Building Permit Approval.

Comment #15 – Re: Retaining Walls in Excess of 4' ht.
Once the site plan layout is agreed to with the PB, the appropriate construction details shall be provided for Building Permit Approval.

Comment #16 – Re: WCDH No Objection Letter
Once the final plan layout is agreed to with the PB, the applicant shall provide to the PB the requested "No Objection Letter" from the Health Department.

Comment #17 – Re: Professional Seals on Plans
All construction plans shall bear the professional stamp/seal of the licensed professional who prepared them.

Comment #18 – Re: Names of Adjacent Property Owners
The names of the adjacent property owners to the subject property are shown on Sheet 1 of 5, Site Information Plan.

Comment #19 – Re: PB Site Walk
The PB conducted their site walk at the property with the project team on January 25, 2020.

Summary

We trust that the new and revised information provided herein will be helpful to the PB's continued review of the project. We look forward to discussing the project with the PB at the July 2020 meeting.

Respectfully submitted,

Jeri Barrett

Jeri D. Barrett, R.L.A.
Enc.
cc: William McArthur/Alejandra Salazar
Michael Sirignano, Esq.
Michael Campbell, PE
Teo Siguenza, RA

ALP Engineering
& Landscape Architecture, PLLC

June 26, 2020

Chairperson Janet Anderson and Members of the Planning Board
Town of Lewisboro
11 Main Street
South Salem, NY 10590

Re: William McArthur and Alejandra Salazar
40 Old Pond Road
Sheet 33C, Block 11155, Lots 16, 17 and 44

Honorable Chairperson Anderson and Members of the Planning Board:

This letter addresses the stormwater management comments from the Memorandum to the Planning Board dated January 16, 2020, and more specifically review comments 5 through 9. Each comment appears below in italics followed by the response.

5. While we recognize that the project would result in a net decrease in impervious cover, the applicant shall sufficiently mitigate stormwater runoff from new impervious surfaces. All proposed drainage improvements shall be designed by a New York State Professional Engineer and the applicant shall submit a Stormwater Pollution Prevention Plan (SWPPP) in compliance with Town and NYSDEC Regulations.

Response: The calculations for the most recent plans indicate that there are 7,068 square feet of existing impervious surfaces on the property, and that this number will increase to 7,500 square feet with the redevelopment of the property. The increase in impervious surfaces is 432 square feet, or about 6.11%. For purposes of the calculation of impervious surfaces, walls are considered to be impervious – there are 845 square feet of walls on the future condition property.

6. Disturbance of over 5,000 s.f. will require conformance with the NYSDEC SPDES General Permit (GP-0-15-002) and filing of a Notice of Intent (N01) and MS4 SWPPP

P.O. Box 843 Ridgefield, CT 06877
EAEC Office: 162 Falls Road Bethany, CT 06524
Direct: (475) 215-5343 Mobile: (203) 710-0587
EAEC Tel: (203) 393-0690 x114
Email: alan@eaec-inc.com

Acceptance Form with the NYSDEC. The applicant shall submit draft copies of these documents for review.

Response: The draft Notice of Intent and MS4 Acceptance form is attached to this letter.

7. The applicant shall perform deep and percolation soil testing in the vicinity of the proposed stormwater mitigation system to be witnessed by this office. The test locations and results shall be shown on the plan. Contact this office to schedule the testing.

Response: The subject property is an extremely constrained site due to its topography – the very steep slopes over much of the lot – and the location of the septic system and well. The restrictive distances around the two latter constraints (25 feet minimum distance from a septic system to piped drainage and 50 feet from a drywell or subsurface infiltration facility, and 50 feet from a well to stormwater treatment from a roof and 100 feet from a well to stormwater treatment from a driveway) mean that much of the property is not available for either conveyance of stormwater runoff or its treatment.

Deep hole testing was performed on the property on June 17, 2020 and the testing was witnessed by the Town's Engineering Consultant and the New York City Department of Environmental Conservation. Two deep hole test pits were dug, labeled on the plans as Deep Hole Test #1 and #2 (see drawing C-101).

Deep hole test #1 found: 4" topsoil, 1'-6" of medium brown sandy loam fill, a 6" layer of gray sandy loam, followed by 2'-8" of brown sandy loam. A seep was noted at the time of the testing 38" below grade. The test pit was dug to a depth of 5'-4". Deep hole #2 was essentially similar to Deep Hole #1. Groundwater filled into the deep hole, eventually rising to a depth of about 2'-6" below grade. The results of the deep hole testing may be referenced in the Appendix A of this report.

The deep hole testing confirmed that the property is essentially unsuitable for any type of infiltration chamber, due to the shallow depth of groundwater in the lowermost portion of the property nearest to the lake and the ground slope in other parts of the property. Percolation testing was not performed, since the 4" diameter casing that was installed with the top of the casing 12" below grade was filled with water to a depth of 21" at the time of the attempted pre-soak.

8. The applicant shall coordinate with the New York City Department of Environmental Protection (NYCDEP) to determine if an Individual Residential Stormwater Permit is required.

Response: Discussions with Andreea Oncioiu of the New York City Department of Environmental Protection confirmed that an IRSP would be required since Lake Waccabuc is considered by the NYCDEP to be a watercourse and there would be new impervious surfaces within 100 feet of the watercourse.

9. The plan shall demonstrate that all required separation distances to the existing septic system and drilled well have been maintained.

Response: Drawing C-101 depicts the 25-foot and 50-foot offsets from the existing septic system. In accordance with the health department requirements, no piped drainage is shown within 25 of the septic system.

In addition, the 50-foot setback is depicted from the existing well. In accordance with Part 5, Subpart 5-1 Standards for Water Wells - Appendix 5B, a surface wastewater recharge absorption system with no automotive related wastes (such as roof drain leaders) must be at least 50 feet from a well. The proposed rain garden is about 90 feet from the well. Driveway runoff is not proposed to discharged to an absorption system; rather, it will be treated in a hydrodynamic separator; flows from the developed portions of the site will be captured in a StormCapture SC1 facility which will provide peak rate attenuation from the flows.

Should you have any questions about the proposed stormwater management plan, please refer to the submitted Stormwater Pollution Prevention Plan Report, or call me at (475) 215-5343.

Sincerely,

ALP ENGINEERING & LANDSCAPE ARCHITECTURE, PLLC

Alan L. Pilch, P.E., R.L.A.
Principal

cc: William McArthur and Alejandra Salazar
Jeri Barrett

Gmail

Jeri Barrett <jeri@jdbarrett.com>

Billy McArthur
(917) 628-6604

Begin forwarded message:

From: Peter Ripperger <highway@lewisborogov.onmicrosoft.com>
Date: June 12, 2020 at 8:35:41 AM EDT
To: William McArthur <billymcarthur@gmail.com>
Subject: RE: Email

Mr. McArthur,

Good talking to you. I understand that you will be making

Improvements to your new property. As far as the driveway goes,

We need you to keep in mind the road (Old Pond rd.) There

Is no area for turning around in this location. Any improvements

That you make, you must keep this in mind. If you are able to increase the wide of the road would be great. Don't shorten the width.

The road is made up of dirt and gravel, very rustic

Good Luck,

Peter Ripperger

From: William McArthur <billymcarthur@gmail.com>
Sent: Thursday, June 11, 2020 1:07 PM
To: Peter Ripperger <highway@lewisborogov.onmicrosoft.com>
Subject: Email

Westchester Land Trust

It's Our Nature

June 12, 2020

Chairperson Janet Anderson
Town of Lewisboro Planning Board
79 Bouton Road
South Salem, NY 10590

RE: Cal# 11-19PB, CAL# 91-19WP, Cal# 10-19SW, LOI to allow applicant to install a portion of their required 1:1 mitigation on Westchester Land Trust property

Dear Chairperson Anderson,

The Westchester Land Trust (WLT) is a conservation non-profit that has worked to protect nearly 9,000 acres of open space in Westchester and eastern Putnam Counties across 260 properties through conservation easements, fee-owned land, and assisted deals. One of these protected properties, our Garrell-Paltrow Preserve, is the subject of this letter. This preserve is managed by WLT to protect watersheds, wildlife, and scenic vistas.

We offer this letter to confirm our intent to allow Mr. McArthur access to our Garrell-Paltrow Preserve (0 Old Pond Road / parcel ID 33.1-1-5) to install and maintain wetland mitigation practices required as per the above referenced permits.

We understand this mitigation work to include invasive plant control, replanting with native vegetation, and the stabilization of an old channel that straddles our shared boundary, and that this work will take place in the area enclosed by our shared property line, a stone wall about 60 feet to the west, and the shoreline to the south.

Mr. McArthur and his consultants have generously committed to work with us on all aspects of the work including invasive removal techniques and species selection. Mr. McArthur has also committed to maintaining the mitigation work to the degree necessary to ensure its success.

We thank the Planning Board and Mr. McArthur for this opportunity to work together to protect and improve Lake Waccabuc and our Garrell-Paltrow Preserve.

Sincerely,

Brendan Murphy
Director of Stewardship
914-234-6992 x10
brendan@westchesterlandtrust.org

cc: Billy McArthur

phone 914.234.6992
fax 914.234.6673
info@westchesterlandtrust.org

403 Harris Road
Bedford Hills, NY 10507
westchesterlandtrust.org

STEPHEN W. COLEMAN
ENVIRONMENTAL CONSULTING, LLC

Environmental Planning & Site Analysis
Wetland Mitigation & Restoration Plans
Wetland Delineation & Assessment
Natural Resource Management
Pond & Lake Management
Wildlife & Plant Surveys
Breeding Bird Surveys
Landscape Design

June 26, 2020

Ms. Janet Andersen, Chairperson
Town of Lewisboro Planning Board (PB)
Town Offices – 79 Bouton Road
South Salem, New York 10590-1430

Re: McArthur Property, 40 Old Pond Road, Sheet 33C, Block 11155, Lots 16,44, 17 – Wetland Delineation, Overview of Project Impacts and Recommended Mitigation Measures

Dear Chairperson Andersen and Members of the PB:

As per Chapter 217 -7, the following information is submitted in support of a Wetlands Permit application for the McArthur Property, 40 Old Pond Road.

Section 217-7A (5) (a-f) – Wetland/Watercourse delineation report and assessment:

A wetland/watercourse investigation of the subject property located at 40 Old Pond Road, Town of Lewisboro, New York was completed on 04-16-20. The environmental review included investigation and determination of selected wetland and watercourse resources present on the property. The respective wetland/watercourse features were documented in accordance with Chapter 217, "Freshwater Wetlands" of the Code of the Town of Lewisboro, and criteria outlined by New York State Department of Environmental Conservation (NYSDEC). As noted in the Town's Code and NYSDEC, vegetation, soils and hydrological parameters were used to determine the outer wetland boundary limits.

The only wetland area is Waccabuc Lake, a NYSDEC regulated water body, which is located immediately adjacent to the southern edge of the property. A prominent concrete retaining wall runs along the entire length of the southern property boundary and separates the property from Waccabuc Lake. The concrete retaining wall serves as the wetland boundary and has previously been survey located. Hence, no wetland flags were placed along the concrete retaining wall as the boundary is clearly defined. The 150-foot wetland buffer extends into the property and encompasses the majority, of the parcel.

Waccabuc Lake is a NYSDEC regulated water body and is classified as a wetland. Due to the classification as a Lake, all three parameters for wetlands are present, including hydrophytic vegetation, hydric soils, and wetland hydrology. Hydrophytic vegetation is restricted to scattered emergent wetland vegetation along sections of the shoreline and mostly aquatic vegetation both submerged and floating varieties. The adjacent Town of Lewisboro 150 ft. wetland buffer extends into the property and includes the majority, of the parcel and a majority of the existing and proposed improvements. The 150 ft. wetland buffer has previously been converted to residential lakefront property and includes the existing two-story frame dwelling, a frame garage, septic system, terrace and stone patio, extensive sections of asphalt paving areas, and conversion of the lakefront to lawn grasses. Several large existing trees are present throughout the property.

Please refer to the proposed Mitigation Plan that shows the concrete retaining wall and the 150-ft. wetland buffer line.

Section 217-7A (6) - Narrative description of the proposed regulated activity or use:

(a) Location of subject property and area to be affected.

- The McArthur property is located at 40 Old Pond Road and consists of approximately 1.1719 acres. Two of the tax lots (16 and 44) are in the R-2A Zoning District and includes the location of the existing house and yard areas. Tax lot 17 is in the R-4 Zoning District and encompasses the northern portion of the property and will remain undisturbed in its current wooded condition.

- The proposed renovations will occur within the designated R-2A zoning district where the existing house and yard areas are currently located. The subject property consists of a three-bedroom home that was constructed in the 1940's and is serviced by an on-site well, septic system and electrical service. The property includes approximately 160 linear feet of lake frontage on Waccabuc Lake. The lake side portion of the property where the existing house is positioned is relatively flat, with some lawn areas around the house, with the remainder of the property sloping steeply to the north. This steep slope area is currently vegetated with trees and understory vegetation including some shrubs and ground covers, along with well-established invasive plant species.

- The property is served by a very, long driveway that travels from the top of the property where a two-car garage is located and travels down to the house area by the Lake. The driveway exceeds 20% and is paved with asphalt. Due to the steepness of the driveway, stormwater runoff is conveyed quickly downslope and directly into the lake.

- The property is immediately adjacent to Lake Waccabuc and the 150 ft wetland buffer extends directly into the lot. The majority, of the existing uses are located within the regulated wetland buffer. The proposed modifications and improvements proposed for the property will also occur within the 150 ft. wetland buffer. The majority, of the useable area of the property is located within the 150 ft. wetland buffer and the proposed use of the site does not permit avoidance of impacts within the regulated 150 ft. wetland buffer area.

- As noted, the existing and proposed changes are located within the 150 ft. wetland buffer. The existing residence, garage and other site conditions will be removed, and the proposed improvements -although still within the 150 ft. wetland buffer- have been modified to relocate proposed improvements further away from the lake edge. In addition, stormwater will be properly addressed, and any runoff re-directed to avoid any direct discharge to the lake.

(b) Environmental impact assessment and description of the wetland, watercourse and/or buffer area proposed to be disturbed or altered.

- As noted, the existing residence and accessory structures are currently located within the regulated 150 ft. wetland buffer. The proposed improvements will still be located within the regulated 150 ft. wetland buffer area; however, the proposed improvements have been re-designed to move proposed improvements further away from the Lake edge. Approximately, disturbance will be kept a minimum of 40 feet away from the Lake edge. The remaining buffer along the Lake edge will be include

mitigation in the form of new native plantings to create more of a vegetated buffer and filter strip along the Lake edge.

- The majority, of the proposed improvements, are located within areas previously altered from existing conditions.

- A large section of the wetland buffer has been converted to impervious surfaces. Stormwater runoff from these areas currently flows directly into the Lake. No treatment of impervious surfaces is present within the existing conditions. The proposed renovations and work within the wetland buffer will be managed by the proposed stormwater management plan and comply with required stormwater practices for the treatment of impervious surfaces. The implementation of stormwater practices and proper buffer mitigation measures will minimize the impact from stormwater runoff and result in a net improvement of water quality.

(c) *Intended purpose of the proposed activity or use and the applicant's interest in the subject property and the area to be affected.*

- See comments under (a) and (b) for a description of purpose and area to be affected. The applicant is the current owner of the property.

(d) *Intended purpose and extent of impact or alteration on the affected wetland, watercourse and/or buffer area.*

- See comments under (a), (b) and (c)

- No direct wetland disturbance will occur. Disturbance is restricted to the regulated wetland buffer. Due to the existing conditions, the majority, of the wetland buffer, has been impacted or converted to different uses. The proposed improvements will be located within the same areas of the buffer that have previously been altered.

- The proposed improvements will comply with required stormwater practices which will greatly improve water quality from the impact of impervious surfaces.

- The proposed disturbance has been minimized along the Lake edge and approximately forty feet of the buffer from the Lake edge will be restored with a combination of native plantings to assist with filtering of any runoff from typical residential uses.

(e) *Explanation why the proposed regulated activity cannot be located at another site or location with no or less impact upon wetland, watercourse and/or buffer area.*

- The property is situated directly on Lake Waccabuc and is considered lake-front property. The existing property improvements date back to the 1940's and converted the majority, of the regulated wetland buffer functions, to residential uses. A large percentage of the property acreage is considered unusable due to the steep slopes (25% or greater). Based upon the property features, the impact to regulated wetland buffer is unavoidable and necessary for the property to be maintained as a single-family residence.

- As noted, the proposed improvements will essentially be located within buffer areas previously disturbed. Every attempt has been made to reduce the amount of disturbance and to further reduce the proximity to the Lake edge. The proposed plans will keep the footprint of the proposed cabana a minimum of 40 feet from the water's edge. The prior residence was constructed less than 20 feet from the water's edge. In addition, the amount of buffer along the Lake edge will be mitigated to improve the filtering ability of this section of the buffer, and to assist with filtering and absorbing excess nutrients from runoff of residential areas.

- The proposed improvements will occur within buffer area that has been previously disturbed, which will minimize the impact from proposed changes within regulated area.

- The lake area will be protected during construction by a comprehensive erosion control plan. Mitigation plantings will re-vegetate all disturbed areas and provide long-term slope protection. In addition, new stormwater practices will further minimize any water quality impacts to the adjacent wetland and lake from impervious surfaces that will remain.

(f) Explanation as to whether or not the proposed activity is dependent on the affected wetland, watercourse and/or buffer area.

- See comment in (e) above.

(g) The alternatives to the proposed activity considered, and why the proposal to disturb or alter the affected wetland, watercourse and/or wetland area was chosen instead.

- See comment in (e) above.
- The proposed layout occurs in previously disturbed sections of the wetland buffer. The new improvements, that still encroach within the buffer, will be stabilized with walls, paving and plantings to provide long-term protection to the lake.

(h) The mitigation measures proposed to avoid or reduce impact on the affected wetland, watercourse and/or buffer area.

Several mitigation measures have been proposed- in an effort- to reduce and minimize the impact of the proposed improvements located within the regulated wetland buffer:

- The amount of wetland buffer disturbance associated with the project reconstruction is approximately 17,000 sq.ft. Mitigation will comply with the 1:1 ratio and is slightly greater than the 1:1 ratio of wetland buffer impact to wetland buffer mitigation. Mitigation measures will include preserving a 30-ft. wide no development area along the edge of the Lake; removal of invasive plants located within the wooded understory within the property, and immediately adjacent to the property on land owned by the Westchester Land Trust; and mitigation plantings consisting of a combination of new native trees, shrubs and groundcovers and designated turf areas located where feasible throughout the property.

- The 30 ft. wide no development zone along the edge of the Lake will be restored to include a combination of new buffer plantings that will serve as a vegetated filter strip

along sections of the Lake edge. These plantings will include a combination of native trees, shrubs and groundcovers.

- Invasive plant management will occur within the property, and, also within the existing drainage channel and sloped areas of the adjacent property owned by the Westchester Land Trust. A management agreement has been created between the property owner and the Westchester Land Trust to allow the restoration of the drainage channel and the removal and ongoing management of invasive plant species. The restoration of the drainage channel is a critical component of the overall stormwater strategy and proposed mitigation measures for the proposed improvement on the McArthur property.

- The existing drainage channel located on the adjacent property owned by the Westchester Land Trust will be restored to optimize the ability of the drainage channel to temporarily store and treat surface and stormwater runoff that occurs from existing conditions and also from proposed improvements. During storm events, surface water collects at the base of the steep slope that starts by the existing driveway and travels towards the western side of the property, and eventually drains into the existing drainage channel, that is located on the Westchester Land Trust property. During larger storm events, the water flows towards the lake and has caused scouring downslope and creates erosion of soil that works its way untreated towards Waccabuc Lake. As the water travels down the slope it eventually spreads out before entering Waccabuc Lake.

- The drainage channel will be stabilized to include the placement of stone along key sections of the channel, and the use of gabion baskets that are filled with stone. The gabion baskets will be placed perpendicular to the channel and filled with assorted stone that will provide stability and the ability to filter water as it flows through the channel. The gabion basket check dam will serve as a plunge pool to allow sediment to filter out and to increase retention time within the channel during lower water flows. The side banks of the drainage ditch will be re-planted with native ground covers (ferns, grasses, and vines) and native shrubs to assist with stabilizing the banks of the channel and to improve overall habitat. The bottom of the channel will be stabilized with placed stone to prevent any scouring action and to allow natural infiltration as the water dissipates downslope.

- Japanese Barberry (*Berberis thunbergii*), an aggressive invasive shrub has taken over a large section of the existing drainage channel and surrounding sloped areas. The proposed method of removal will be the use of a backpack-mounted propane torch, as outlined in the publication "Japanese Barberry Control Methods, a reference guide for foresters and professional woodland managers" special bulletin – February 2013, as prepared by the Connecticut Agricultural Experiment Station.

- The flame from the propane torch is directed to the base of each barberry clump, to heat-girdle stems and kill basal buds at the top of the root-crown. Heat is directed to all sides of the base of the plant. Once the initial treatment is completed, a second treatment will be scheduled to repeat the process to burn any new sprouts that develop from the base of the plant. The dead materials will then be collected and properly disposed of off-site. The work will be carried out by professional landscapers that have a proven track record in this type of treatment. The use of fire is recommended as it reduces the amount of disturbance to the slope and keeps the soil stabilized.

- A detailed erosion and sediment control plan is developed that will assist with avoiding any direct wetland disturbance from construction activities, and to restrict the planned disturbance to areas of wetland buffer that had previously been altered.

- A comprehensive stormwater management program has also been developed, which will provide for storage and treatment of stormwater runoff from impervious surfaces. These practices will improve water quality to the adjacent Lake from impervious surfaces. The existing residence currently has no stormwater practices in place to mitigate the impacts from the property.

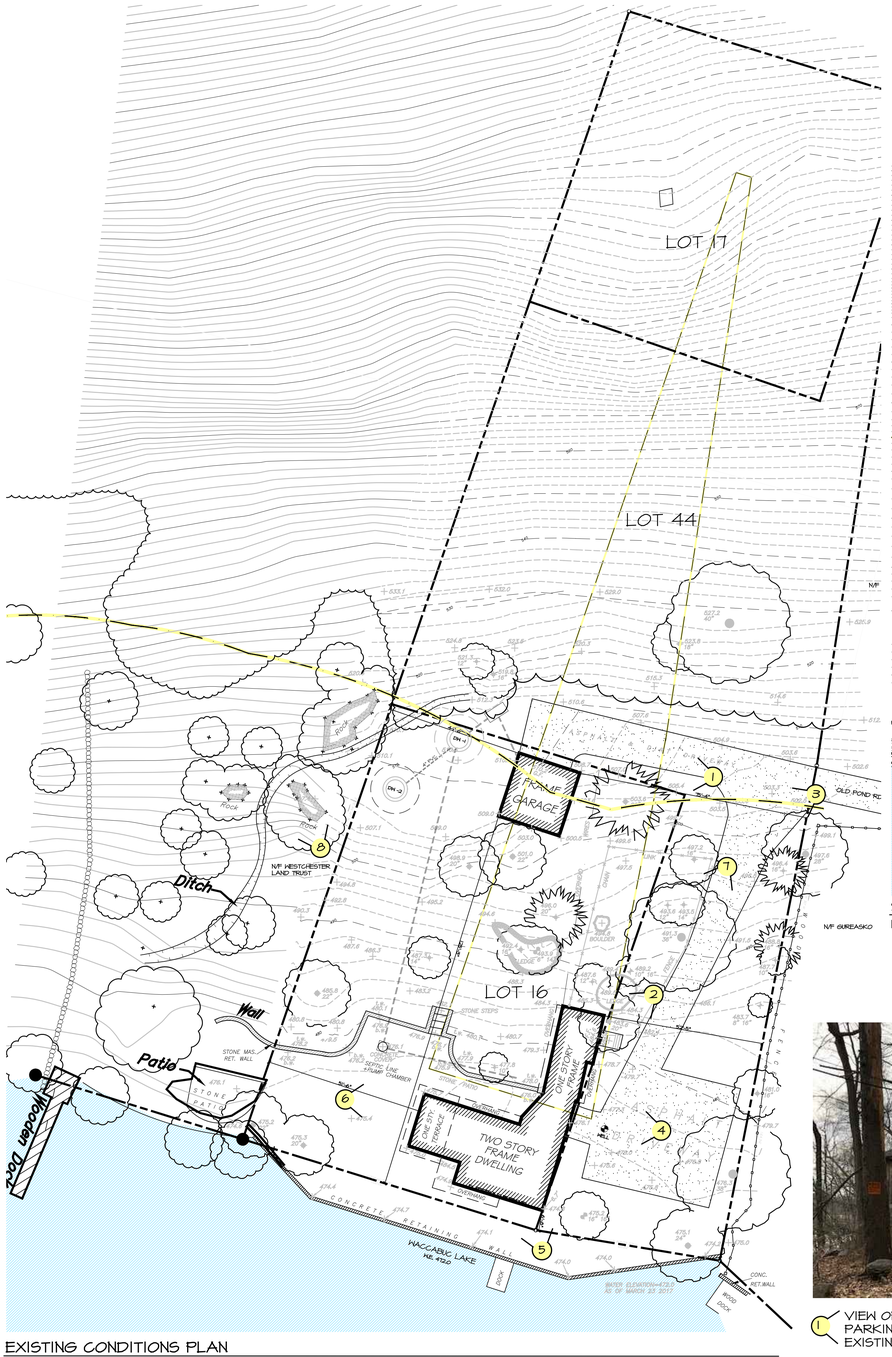
Summary

The proposed site plan has been designed to minimize to the greatest extent feasible, disturbance to the regulated wetland buffer. It is our hope that the project narrative ad submitted plans will be helpful to the PB's ongoing review of this project.

Sincerely,

Stephen W. Coleman

Stephen W. Coleman Environmental Consulting, LLC
SWC/tbh
cc: William McArthur/Alejandra Salazar
Michael Sirignano, Esq.
Jeri Barrett, R.L.A.
Alan Pilch, P.E.
Michael Campbell, P.E.

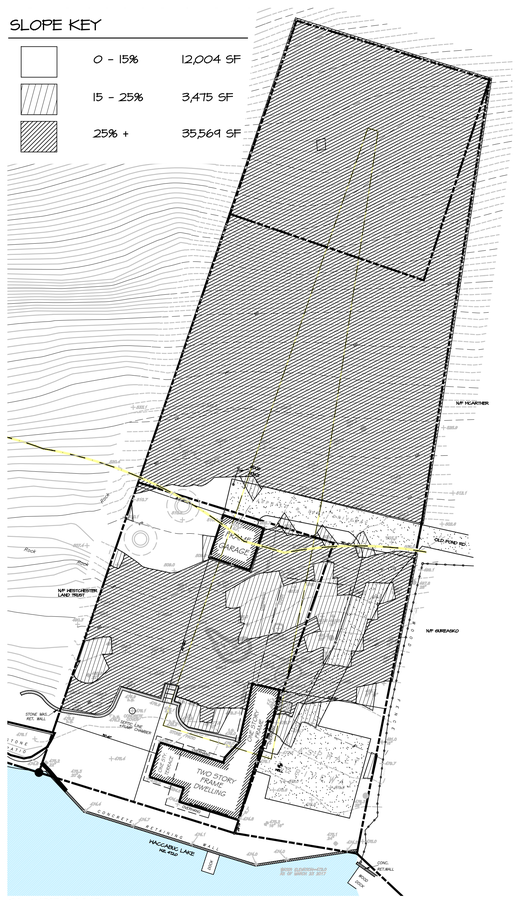


EXISTING CONDITIONS PLAN

1" = 20'

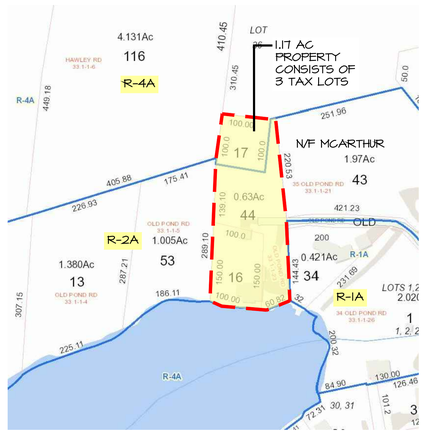
SLOPE KEY

	0 - 15%	12,004 SF
	15 - 25%	3,475 SF
	25% +	35,569 SF



SLOPE MAP

1" = 30'



ZONE MAP

NTS

GENERAL NOTES

1. THESE PLANS ARE PREPARED FOR REVIEW BY THE TOWN OF LEWISBORO PLANNING AND ZONING BOARDS FOR PROPOSED RENOVATIONS TO THE EXISTING STRUCTURES AND SITE FEATURES.

2. THIS SET OF PLANS HAS BEEN PREPARED SPECIFICALLY FOR THE CONTINUED REVIEW FOR THE PLANNING BOARD.

3. IT IS ENVISIONED THAT THE THREE TAX LOTS THAT COMPRISE THE PROPERTY SHALL BE MERGED INTO ONE TAX LOT.

4. PROPERTY OWNER, CONTACT AND APPLICANT FOR THIS APPLICATION IS BILLY MCARTHUR, 35 OLD POND ROAD, LEWISBORO, NEW YORK.

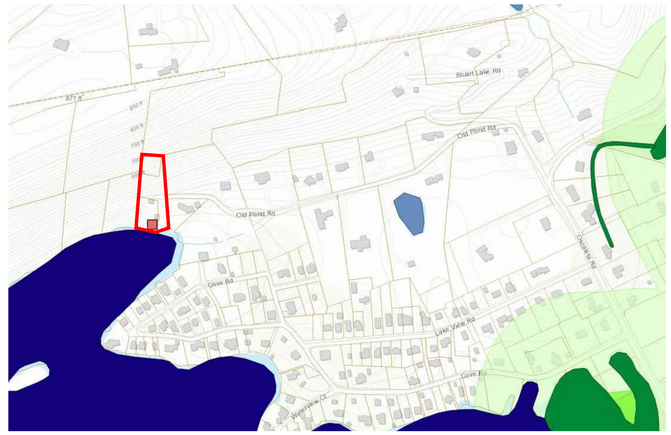
5. SURVEY INFORMATION FOR THE PROJECT HAS BEEN PREPARED BY LINK SURVEYORS, MAHOPAC, NEW YORK.

6. SITE PLANS HAVE BEEN PREPARED BY J.D. BARRETT & ASSOCIATES, LLC., EASTON, CT, LANDSCAPE ARCHITECTS AND ENVIRONMENTAL PLANNERS,

7. ARCHITECTURAL PLANS HAVE BEEN PREPARED BY TEO SIGUENZA ARCHITECTS, BEDFORD, NEW YORK.

8. SEPTIC INVESTIGATION PERFORMED BY CAMPBELL ENGINEERING LLP, MILLWOOD, NY.

9. STORMWATER MANAGEMENT SYSTEM TO BE DESIGNED BY ALP ENGINEERING, RIDGEFIELD CT



LOCATION MAP/ DEC WETLANDS MAP

NTS

BIRDS EYE AERIAL - 40 OLD POND ROAD

NTS

DRAWING INDEX

SITE INFORMATION PLAN

Prepared For :
MCARTHUR PROPERTY
40 OLD POND ROAD
LEWISBORO, NEW YORK
SEC. 33 C, Block 1155, Lots 16, 17 & 44
Area: 1.1719 acres

Attorney
MICHAEL FULLER SIRIGNANO
OLD POST ROAD PROFESSIONAL BUILDING
842 ROUTE 35, PO BOX 784
CROSS RIVER, NY 10518
Tel. 914-763-5500

Plan Prepared By :
Landscape Architect/Environmental Planner :
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109 SPORT HILL ROAD
EASTON, CONNECTICUT 06612
Tel. 203.372.5805 Fax 203.372.0499

Architect :
TEO SIGUENZA ARCHITECTS
460 OLD POST ROAD
BEDFORD, NEW YORK, 10506
TEL: 914.234.6284 FAX 914.234.0619

Stormwater Engineer:
ALP ENGINEERING & LANDSCAPE ARCHITECTURE, PLLC
P.O. Box 843
RIDGEFIELD, CT 06877
Tel. 475.215.5343

Civil Engineer:
CAMPBELL ENGINEERING, LLP
5 SCHUMAN RD
MILLWOOD, NEW YORK 10546
Tel. 914.238.3555

Environmental Consultant:
STEPHEN COLEMAN
ENVIRONMENTAL CONSULTING, LLC
3 ASPEN COURT, OSSINING, NY 10562
914.494.5544

Surveyor :
LINK SURVEYORS, P.C.
21 CLARK PLACE, SUITE 1-B
MAHOPAC, NEW YORK 10541
TEL: 845.628.5857 FAX 845.621.0013

Date: December 16, 2019
Rev: April 29, 2020
Rev: June 30, 2020

REGISTERED LANDSCAPE ARCHITECT JOHN D. BARRETT 001342 STATE OF NEW YORK

NORTH

SHEET: 1 OF 5

1 VIEW OF EXISTING GARAGE AND DRIVEWAY PARKING AREA AT NORTH OF PROPERTY. EXISTING SEPTIC AREA IS BEHIND GARAGE.

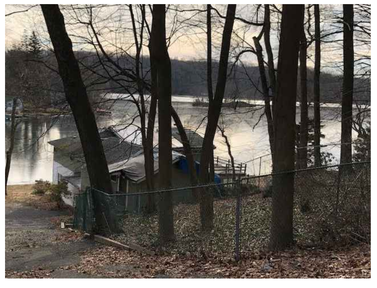
2 VIEW SOUTH TOWARD EXISTING HOUSE AND LAKE. EXISTING DRIVEWAY IS AT LEFT OF PHOTO. HOME IS IN SEVERE STATE OF DISREPAIR.

3 VIEW WEST TOWARD EXISTING HOUSE AND GARAGE FROM DRIVEWAY. BOTH STRUCTURES TO BE RENOVATED. MAJORITY OF DRIVEWAY TO BE REMOVED.

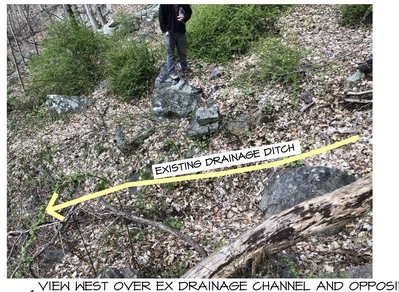
4 VIEW WEST TOWARD EXISTING HOUSE TO BE RENOVATED. DOMESTIC WELL FOR PROPERTY IS POSITIONED UNDER DRIVEWAY.

5 VIEW TOWARD BACK OF EXISTING HOUSE THAT FRONTS ON LAKE. NOTE FLAT YARD AREAS ADJACENT TO HOUSE.

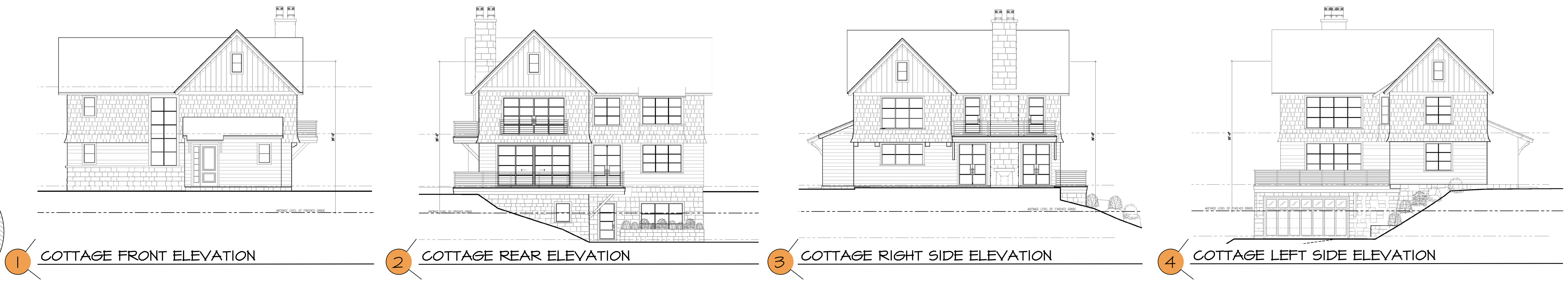
6 VIEW OF EAST OF EXISTING HOUSE TO BE REMOVED AND REPLACED W/ LAKESIDE STUDIO. PROPERTY ENJOYS APPROXIMATELY 160 FT OF LAKE FRONTAGE.

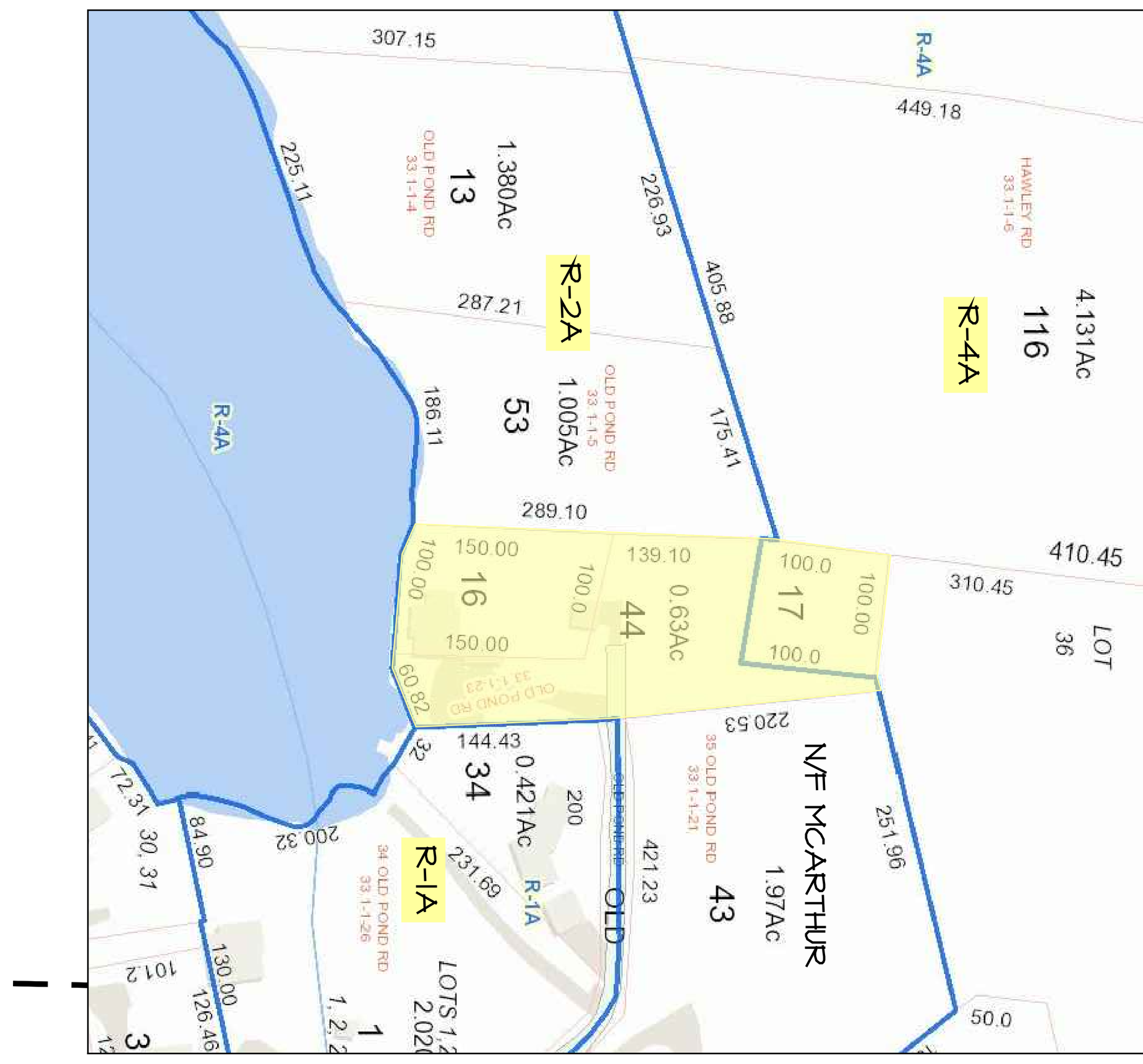


7 VIEW SOUTH TOWARD EXISTING HOUSE AND DRIVEWAY AT LEFT. FENCING TO BE REMOVED. LARGE LEANING OAK AT LEFT PHOTO TO BE REMOVED, ALONG WITH SMALLER TREES.

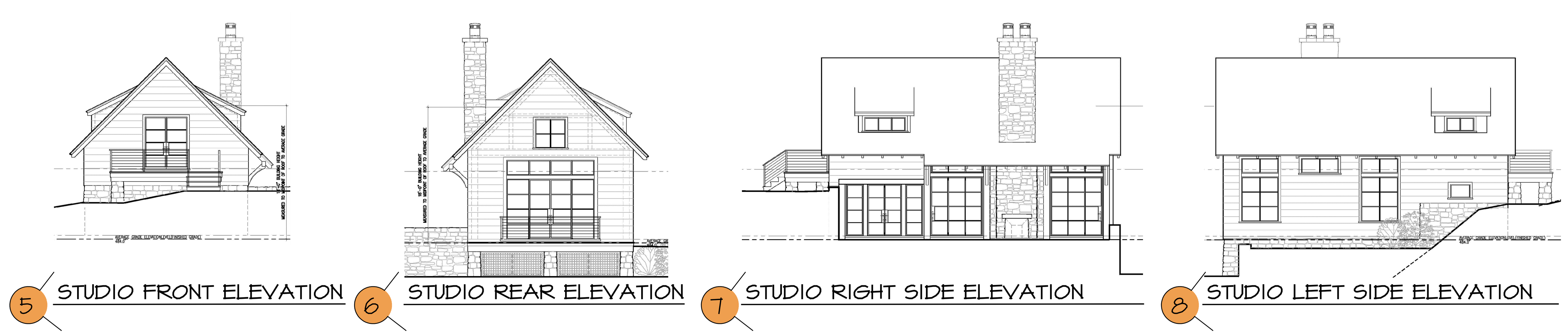


8 VIEW WEST OVER EX DRAINAGE CHANNEL AND OPPOSING ROCK OUTCROPS. GABION BASKETS SHALL BE INSTALLED BETWEEN THE OUTCROPS TO CREATE A SEDIMENT SUMP IN THE DRAINAGE CHANNEL TO CAPTURE SUSPENDED SEDIMENT FOR ROUTINE REMOVAL BEFORE IT CAN ENTER THE LAKE. NOTE PRESENCE OF INVASIVE JAP. BARBARRY TO BE REMOVED





ZONE MAP
NTS



ZONING CONFORMANCE TABLE

REGULATION - R2A ZONE	REQUIRED	EXISTING	PROPOSED
MINIMUM LOT AREA	2 ACRES	1.1719 AC	1.1719 AC
MINIMUM YARD (FEET) FRONT:	50'	52'-5" (Residence) 75'-4" (Garage)	51'-11" (Cottage) 51'-5" (Studio)
SIDE	40'	6'-8" (Residence) 125'-3" (Garage)	104'-7" (Cottage) 40'-2" (Studio)
REAR	50'	51'-10" (Residence) 44'-6" (Garage) NA	43'-3" (Cottage) 75'-2" (Studio) 28'-6" (Terrace)
MAXIMUM BUILDING HEIGHT STORIES FEET	 2 1/2 35'	 2 < 35'	SEE ARCH PLANS
MAXIMUM BUILDING COVERAGE (PERCENTAGE OF LOT AREA)	9% (bldg area) / (lot area)	4.6% 2,333 SF / 51,048 SF	5.2% 2,647 SF / 51,048 SF
ACCESSORY STRUCTURE FLOOR AREA (MAX)	600 SF	449 SF (Garage)	980 SF (Studio)

ZONING VARIANCE REQUESTS*

	CODE SECTION
1 AREA VARIANCE* PROPOSED LAKE STUDIO FLOOR AREA OF 980 SF EXCEEDS PERMITTED MAX OF 600 SF FOR AN ACCESSORY STRUCTURE. AREA VARIANCE OF 380 SF REQUESTED.	ARTICLE IV Sec. 220-23D (11)
2 YARD SETBACK VARIANCE* PROPOSED LAKE COTTAGE REAR YARD SETBACK OF 43'-5" IS LESS THAN REQUIRED 50' FOR R-2A ZONE. REAR YARD SETBACK VARIANCE OF 6'-7" REQUESTED.	ARTICLE IV Sec. 220-23E
3 YARD SETBACK VARIANCE* PROPOSED DECK REAR YARD SETBACK OF 39'-9" IS LESS THAN REQUIRED 50'. REAR YARD SETBACK VARIANCE OF 10'-3" REQUESTED.	ARTICLE IV Sec. 220-23E
4 YARD SETBACK VARIANCE* PROPOSED TERRACE REAR YARD SETBACK OF 28'-6" IS LESS THAN REQUIRED 50'. REAR YARD SETBACK VARIANCE OF 21'-6" REQUESTED.	ARTICLE IV Sec. 220-23E

NOTE: REQUESTED ZONING VARIANCES WERE APPROVED BY THE ZBA AT ITS JUNE 24TH MEETING.

ZONING CONFORMANCE PLAN

Prepared For :
MCARTHUR PROPERTY
40 OLD POND ROAD
LEWISBORO, NEW YORK
SEC. 33 C, Block 11155, Lots 16, 17 & 44
Area: 1.1719 acres

Attorney
MICHAEL FULLER SIRIGNANO
OLD POST ROAD PROFESSIONAL BUILDING
892 ROUTE 35, PO BOX 784
CROSS RIVER, NY 10518
Tel. 914-763-5500

Plan Prepared By :
Landscape Architect/Environmental Planner :
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Stormwater Engineer:
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Civil Engineer:
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MILLWOOD, NEW YORK 10546
Tel. 914.238.3555

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21 CLARK PLACE, SUITE 1-B
MAHOPAC, NEW YORK 10541
TEL: 845.628.5857 FAX 845.621.0013

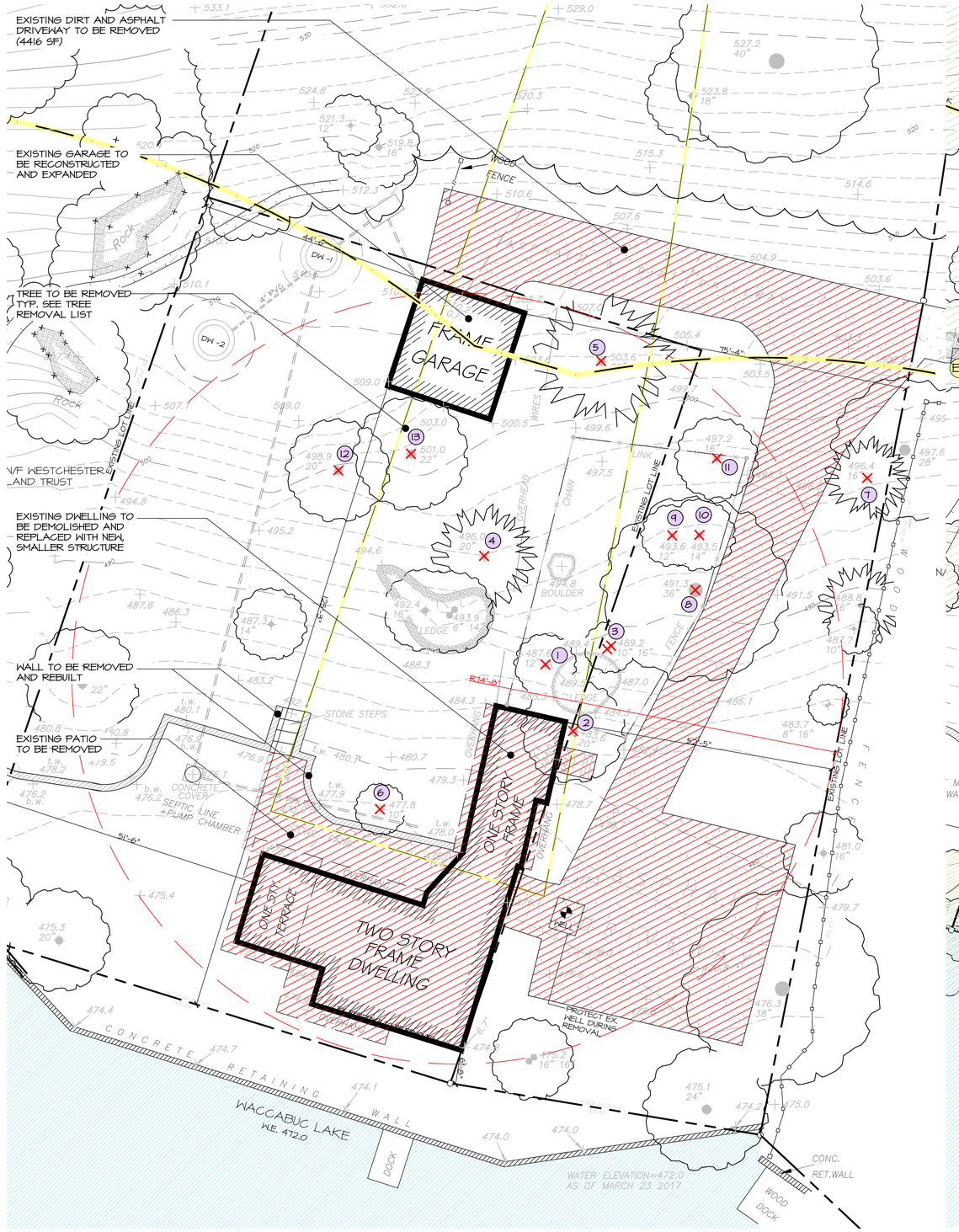
REGISTERED LANDSCAPE ARCHITECT JERID. BARRETT 001342 STATE OF NEW YORK

NORTH

0' 10' 20'

Date: April 29, 2020
Rev: June 30, 2020

SHEET: 2 OF 5

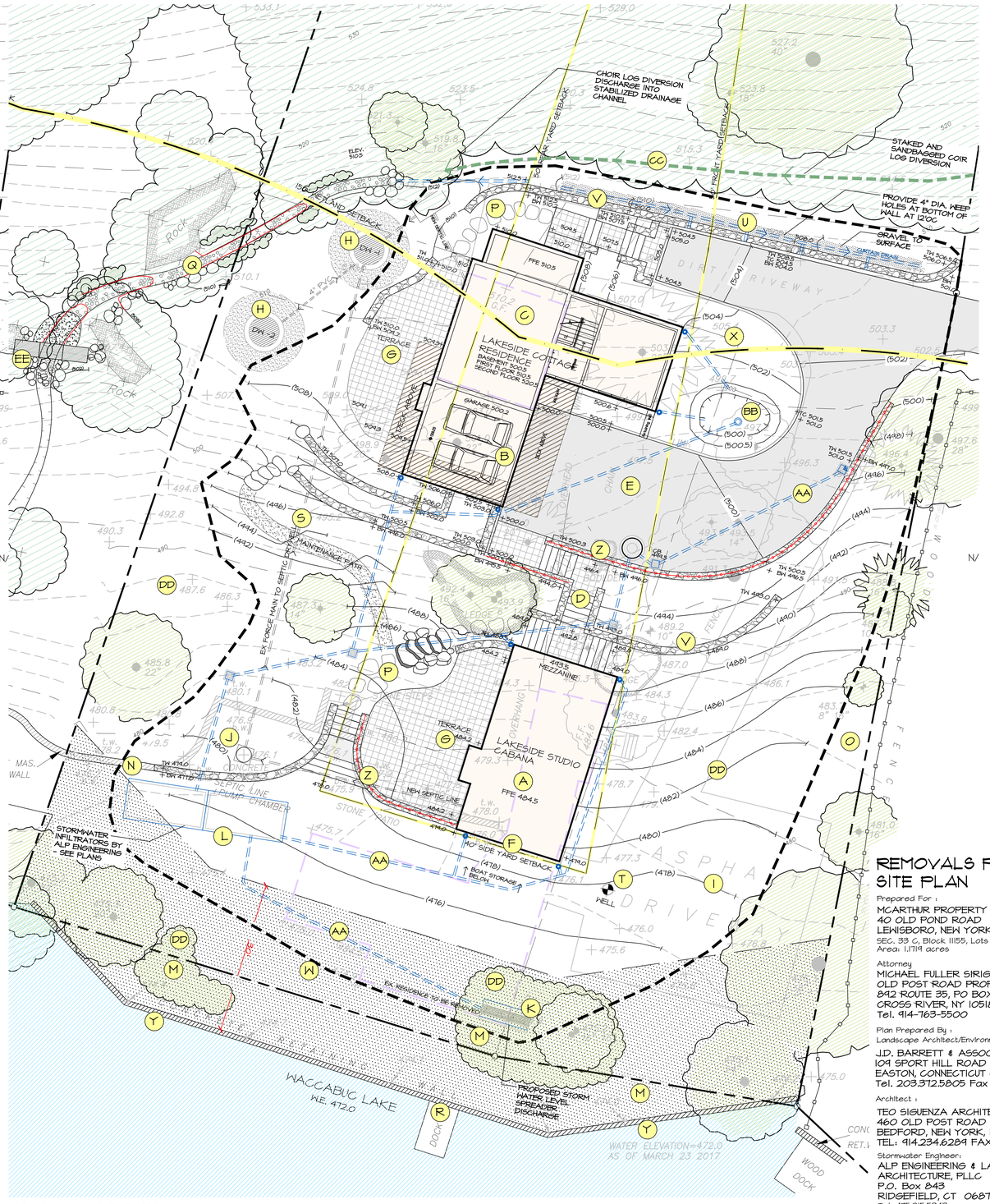


EXISTING CONDITIONS AND REMOVALS PLAN

1"= 10'

TREE REMOVAL LIST

ID	DBH	Species	ID	DBH	Species
1	12"	OAK	8	36"	OAK (LEANING)
2	20"	OAK	9	12"	OAK
3	10"	MAPLE	10	14"	OAK
4	20"	SPRUCE	11	16"	MAPLE
5	26"	SPRUCE	12	20"	MAPLE
6	10"	MAPLE	13	22"	OAK
7	16"	HEMLOCK			



PROPOSED SITE PLAN

1"= 10'

LEGEND

- (A) EXISTING RESIDENSE TO BE DEMOLISHED AND REBUILT AS A LAKESIDE STUDIO
- (B) PROPOSED LOWER LEVEL GARAGE
- (C) EXISTING GARAGE TO BE EXPANDED AND CONVERTED TO A RESIDENCE
- (D) CONNECTION BETWEEN DRIVEWAY AND STUDIO TO INCLUDE SERIES OF STEPS AND LANDINGS
- (E) PROPOSED REALIGNED ASPHALT DRIVEWAY
- (F) SMALL BOAT STORAGE BELOW STUDIO
- (G) PROPOSED TERRACE
- (H) EXISTING SEPTIC DRYWELLS
- (I) EXISTING DRIVEWAY TO BE REMOVED
- (J) EXISTING SEPTIC TANK, PUMP CHAMBER AND OVERFLOW TANK TO REMAIN
- (K) PROPOSED INFILTRATION TRENCH/ LEVEL SPREADER
- (L) PROPOSED STORMWATER MANAGEMENT AREA
- (M) LAKESIDE PLANTINGS REPLACE GRASS (SEE MITIGATION PLANTING PLAN)
- (N) EXISTING WALL TO BE REBUILT
- (O) PROPOSED HEDGEROW (SEE MITIGATION PLANTING PLAN)
- (P) PROPOSED STEPPING STONES
- (Q) RENOVATED DRAINAGE CHANNEL
- (R) EXISTING DOCK TO BE REBUILT
- (S) APPROXIMATE LOCATION OF 2" SEPTIC FORCE MAIN
- (T) EXISTING DOMESTIC WELL TO BE REUSED
- (U) GRAVEL INFILTRATION TO CURTAIN DRAIN
- (V) PROPOSED STONE WALL
- (W) PROPOSED AREA OF NO DEVELOPMENT ALONG LAKE SHORE (+/-5000 SF)
- (X) INDIVIDUAL LOTS TO BE MERGED TO CREATE A SINGLE, LARGER LOT
- (Y) EX. LAKESIDE WALL TO BE REPAIRED AS REQUIRED
- (Z) SAFETY RAILING
- (AA) STORMWATER CONVEYANCE SYSTEM
- (BB) RAIN GARDEN
- (CC) STAKED/ SANDBAGGED 18" COIR LOG DRAINAGE DIVERSION
- (DD) PROPOSED WETLAND MITIGATION AREA
- (EE) GABION BASKET SEDIMENT TRAP

REMOVALS PLAN & SITE PLAN

Prepared For :
MCARTHUR PROPERTY
40 OLD POND ROAD
LEWISBORO, NEW YORK
SEC. 33 C, Block 11155, Lots 16, 17 & 44
Area: 1.1719 acres

Attorney
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OLD POST ROAD PROFESSIONAL BUILDING
842 ROUTE 35, PO BOX 784
CROSS RIVER, NY 10518
Tel. 914-763-5500

Plan Prepared By :
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TEL: 845.628.5857 FAX 845.621.0013

REGISTERED LANDSCAPE ARCHITECT J.D. BARRETT 001043 STATE OF NEW YORK

NORTH

0' 10' 20'

Date: December 16, 2019
Rev: April 29, 2020
Rev: June 30, 2020

SHEET: 3 OF 5

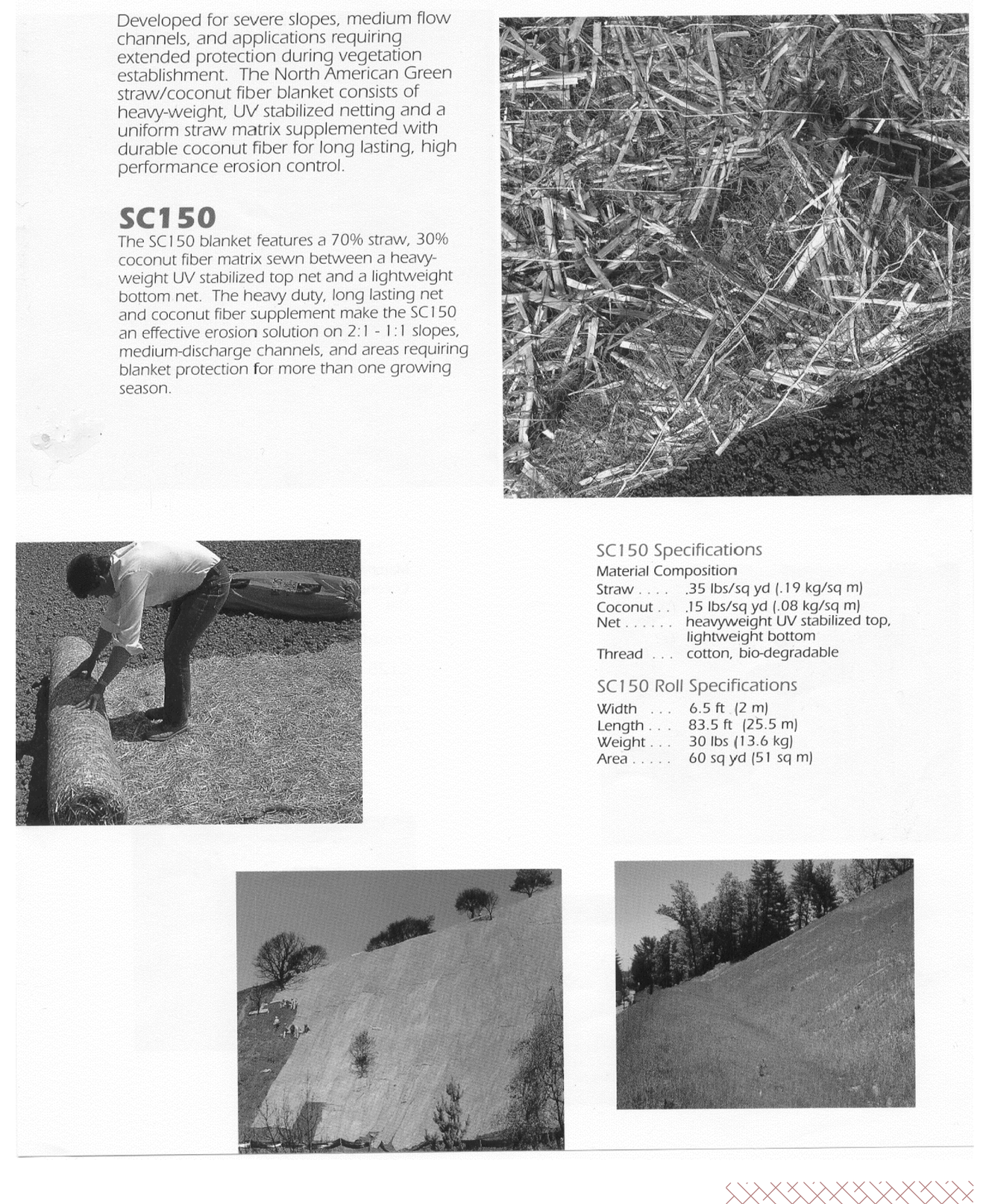
BLANKETS

North American Green® Straw/Coconut Fiber Erosion Control Blankets

Developed for severe slopes, medium flow channels, and applications requiring extended protection during vegetation establishment. The North American Green straw/coconut fiber blanket consists of heavy-weight, UV stabilized netting and a uniform straw matrix supplemented with durable coconut fiber for long lasting, high performance erosion control.

SC150

The SC150 blanket features a 70% straw, 30% coconut fiber matrix sewn between a heavy-weight UV stabilized top net and a lightweight bottom net. The heavy duty, long lasting net and coconut fiber supplement make the SC150 an effective erosion solution on 2:1 - 1:1 slopes, medium-discharge channels, and areas requiring blanket protection for more than one growing season.



SC150 Specifications

Material Composition

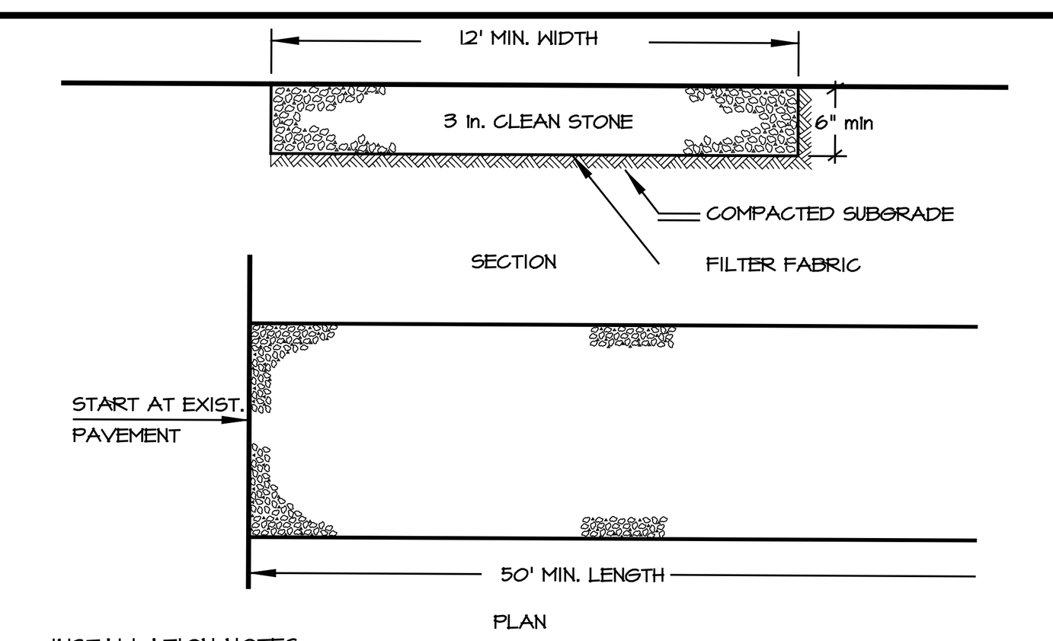
Straw	.35 lbs/sq yd (.19 kg/sq m)
Coconut	.15 lbs/sq yd (.08 kg/sq m)
Net	heavyweight UV stabilized top, lightweight bottom
Thread	cotton, bio-degradable

SC150 Roll Specifications

Width	6.5 ft (2 m)
Length	83.5 ft (25.5 m)
Weight	30 lbs (13.6 kg)
Area	60 sq yd (51 sq m)

SLOPE PROTECTION MAT

SCALE: NTS



INSTALLATION NOTES

1. STONE SIZE - USE 6-8" SURGE STONE OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.

2. LENGTH - AS REQUIRED 50' MIN, SEE PLAN.

3. THICKNESS - NOT LESS THAN SIX (6) INCHES.

4. WIDTH - 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCUR.

5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER CLOTH WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.

6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.

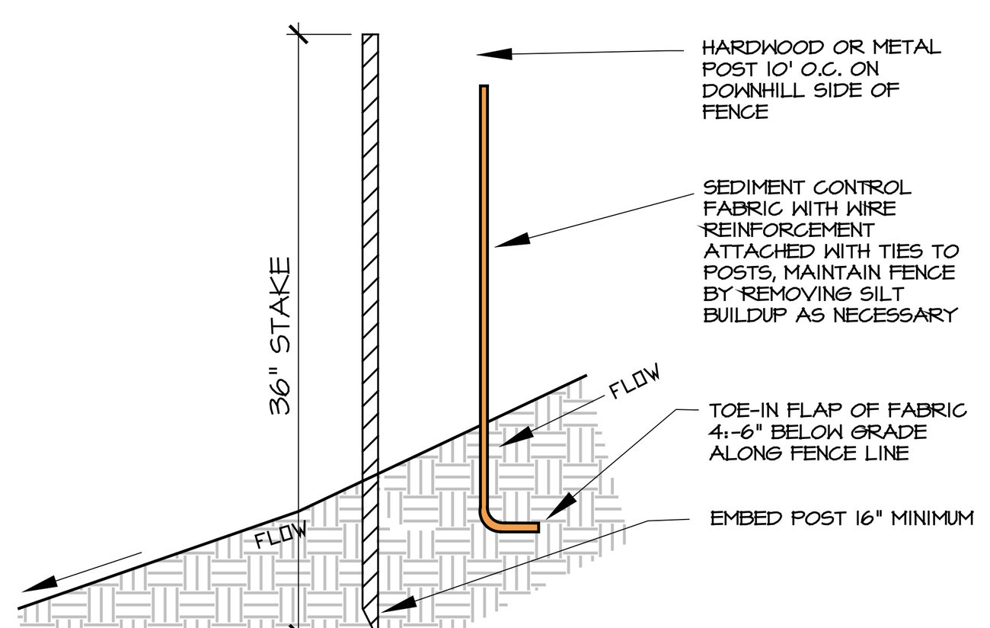
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT OF WAY THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY.

8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS PERFORMED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. TIRE WASHING REQUIRED BEFORE VEHICLE ENTERS PUBLIC ROAD.

9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE

SCALE: NTS



INSTALLATION NOTES

1. WIRE REINFORCED SILT FENCING FABRIC TO BE FASTENED SECURELY TO POSTS WITH WIRES OR STAPLES. POSTS SHALL BE STEEL, EITHER "T" OR "U" SHAPE TYPE OR HARDWOOD.

2. WHEN TWO SECTIONS OF FABRIC CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.

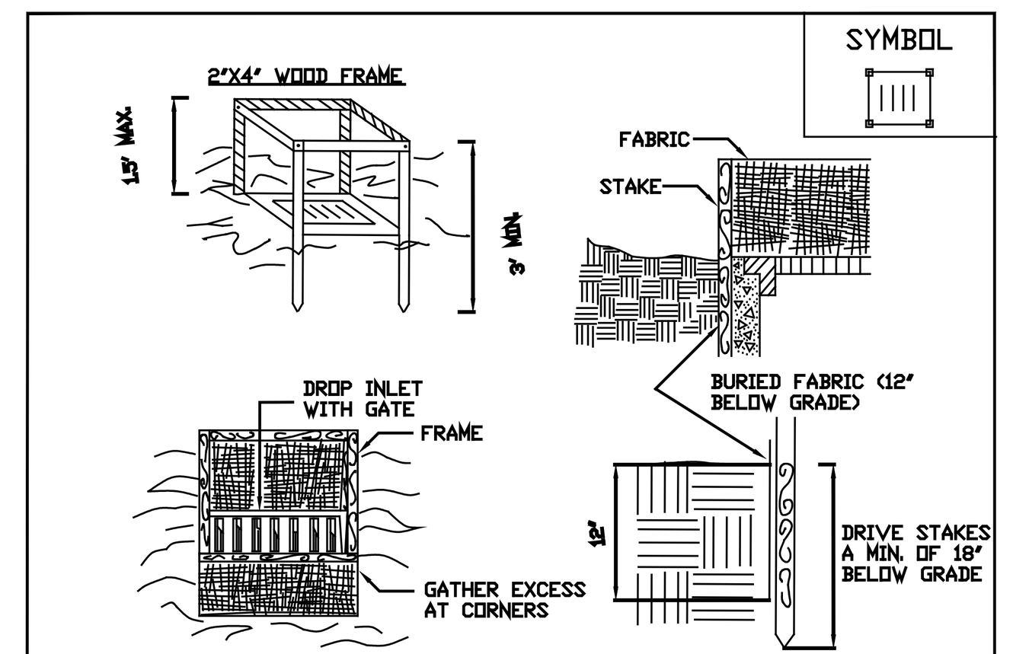
3. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.

4. MAINTENANCE SHALL BE PREFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

ORANGE SILT FENCE

SCALE: NTS

SYMBOL



CONSTRUCTION SPECIFICATIONS

1. FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

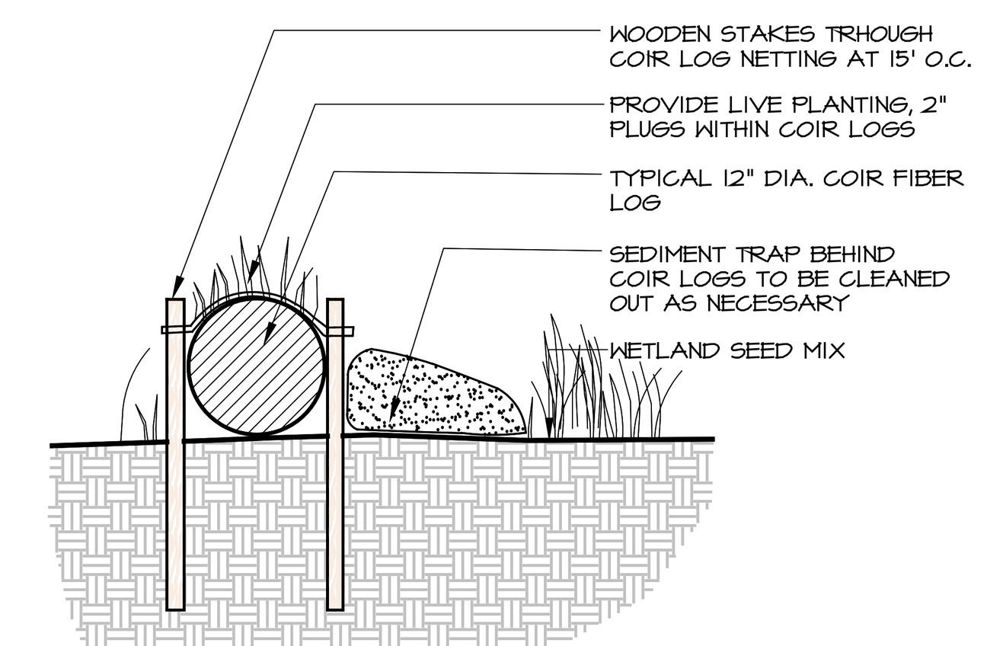
MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

FABRIC DROP INLET PROTECTION

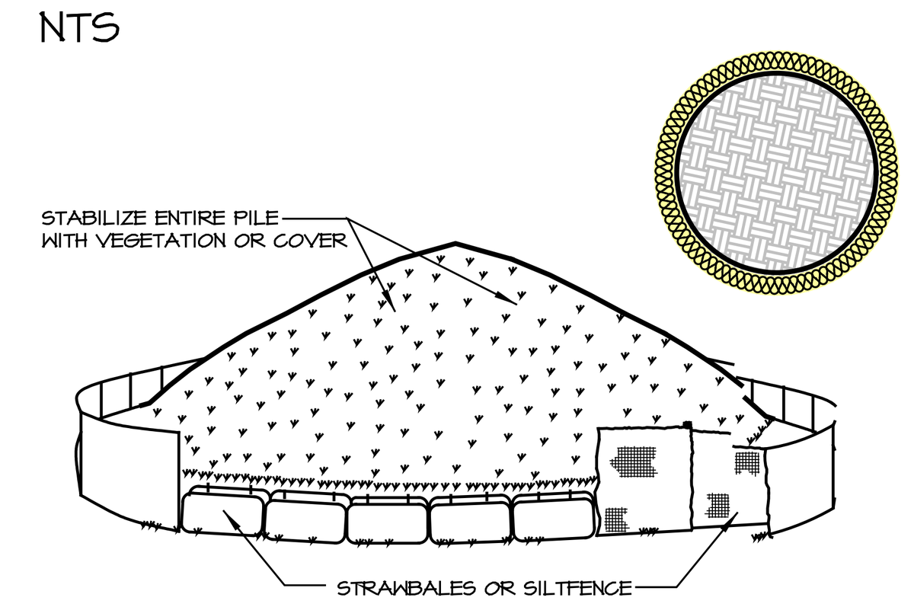
INLET PROTECTION

SCALE: NTS



12" HIGH DENSITY COIR LOG

NTS

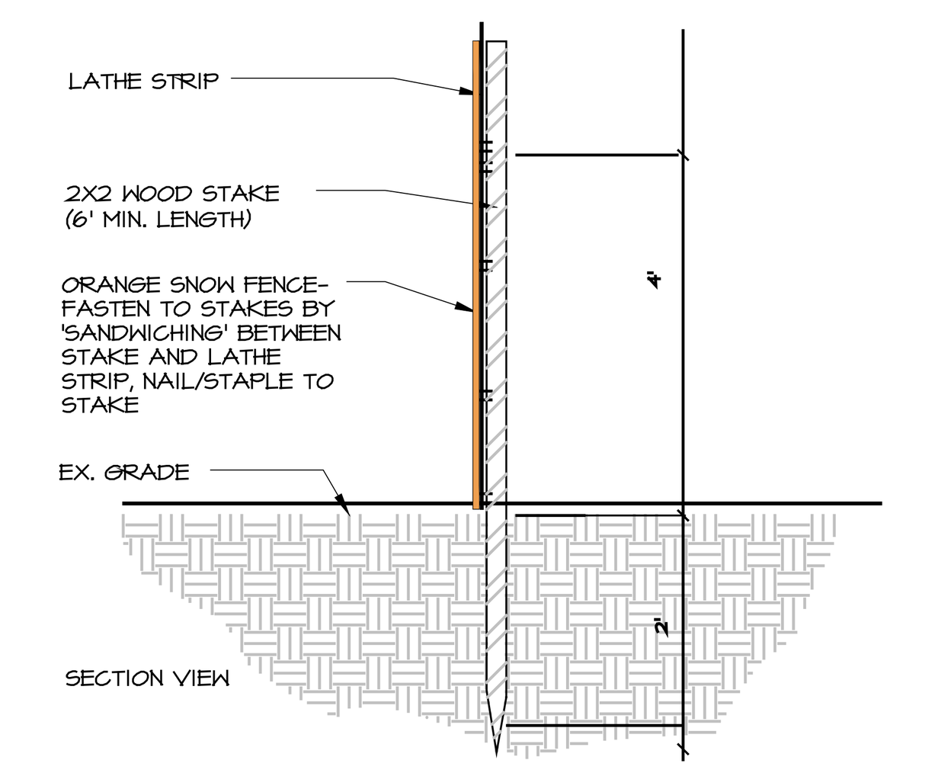


INSTALLATION NOTES

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 1:2.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAWBALES, THEN STABILIZED WITH VEGETATION OR COVERED.
4. SEE SPECIFICATIONS (THIS MANUAL) FOR INSTALLATION OF SILTFENCE.

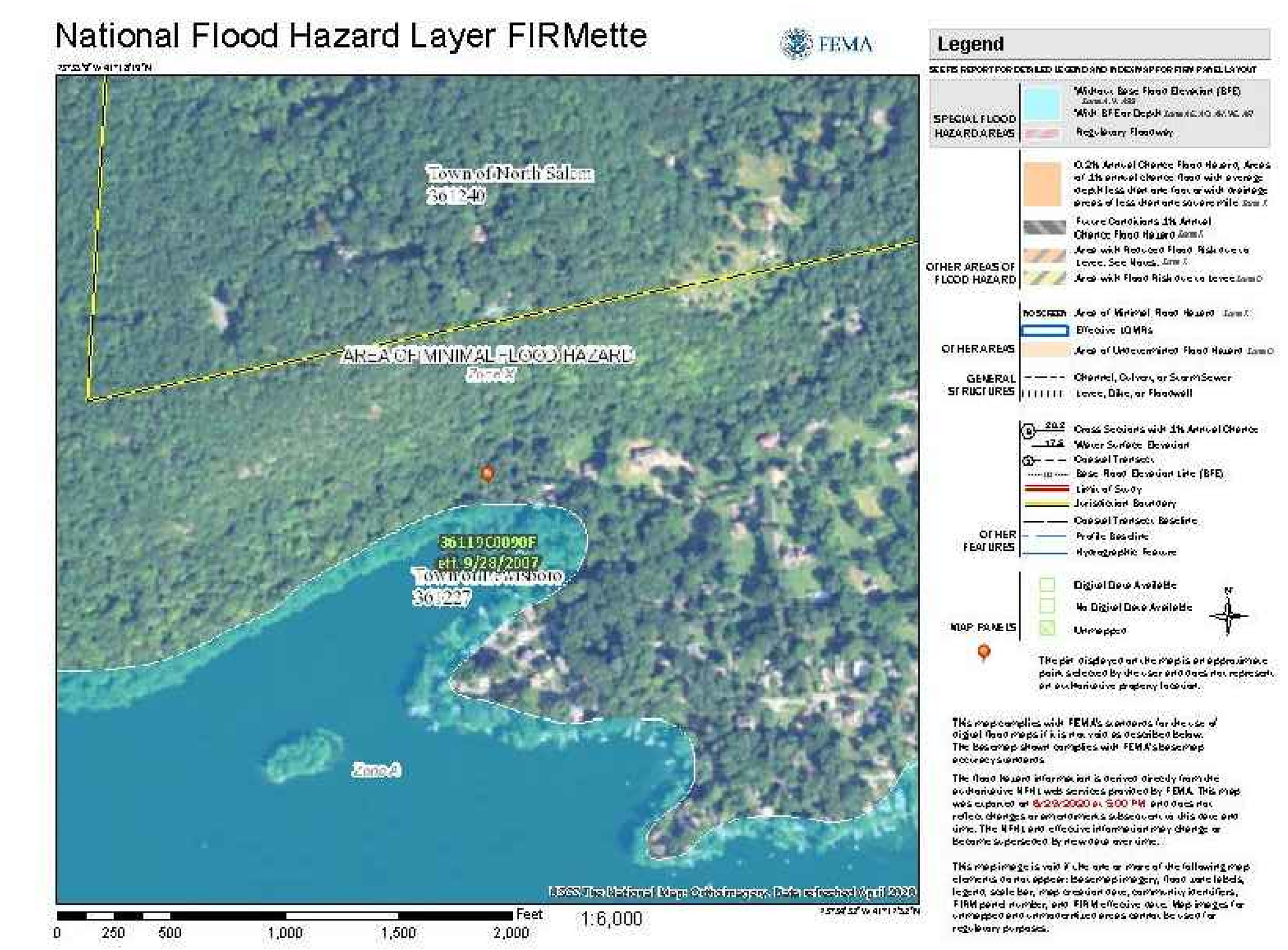
TOPSOIL STOCKPILE

SCALE: NTS



ORANGE SAFETY FENCE

SCALE: NTS



EROSION CONTROL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL SEDIMENT AND EROSION CONTROL PRACTICES. THE SEDIMENT AND EROSION CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.

2. TIMELY MAINTENANCE OF SEDIMENT CONTROL STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR. ALL STRUCTURES SHALL BE MAINTAINED IN GOOD WORKING ORDER AT ALL TIMES. THE SEDIMENT LEVEL IN ALL SEDIMENT TRAPS SHALL BE CLOSELY MONITORED AND SEDIMENT REMOVED PROMPTLY WHEN MAXIMUM LEVELS ARE REACHED OR AS ORDERED BY THE ENVIRONMENTAL CONSULTANT. ALL SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED ON A REGULAR BASIS, AND AFTER EACH HEAVY RAIN TO INSURE PROPER OPERATION AS DESIGNED. AN INSPECTION SCHEDULE SHALL BE SET FORTH PRIOR TO THE START OF CONSTRUCTION.

3. THE LOCATIONS AND THE INSTALLATION TIMES OF THE SEDIMENT CAPTURING STANDARDS SHALL BE AS ORDERED BY THE ENVIRONMENTAL CONSULTANT, AND IN ACCORDANCE WITH HE STANDARDS SET FORTH PER LOCAL CODES.

4. ALL TOPSOIL NOT TO BE USED FOR FINAL GRADING SHALL BE STRIPPED FROM THE WORK AREA FIRST AND PLACED IN A STABILIZED STOCKPILE OR FILL AREA. ALL TOPSOIL REQUIRED FOR FINAL GRADING AND STORED ON SITE SHALL BE LIMED, FERTILIZED, TEMPORARILY SEEDED AND MULCHED WITHIN 14 DAYS.

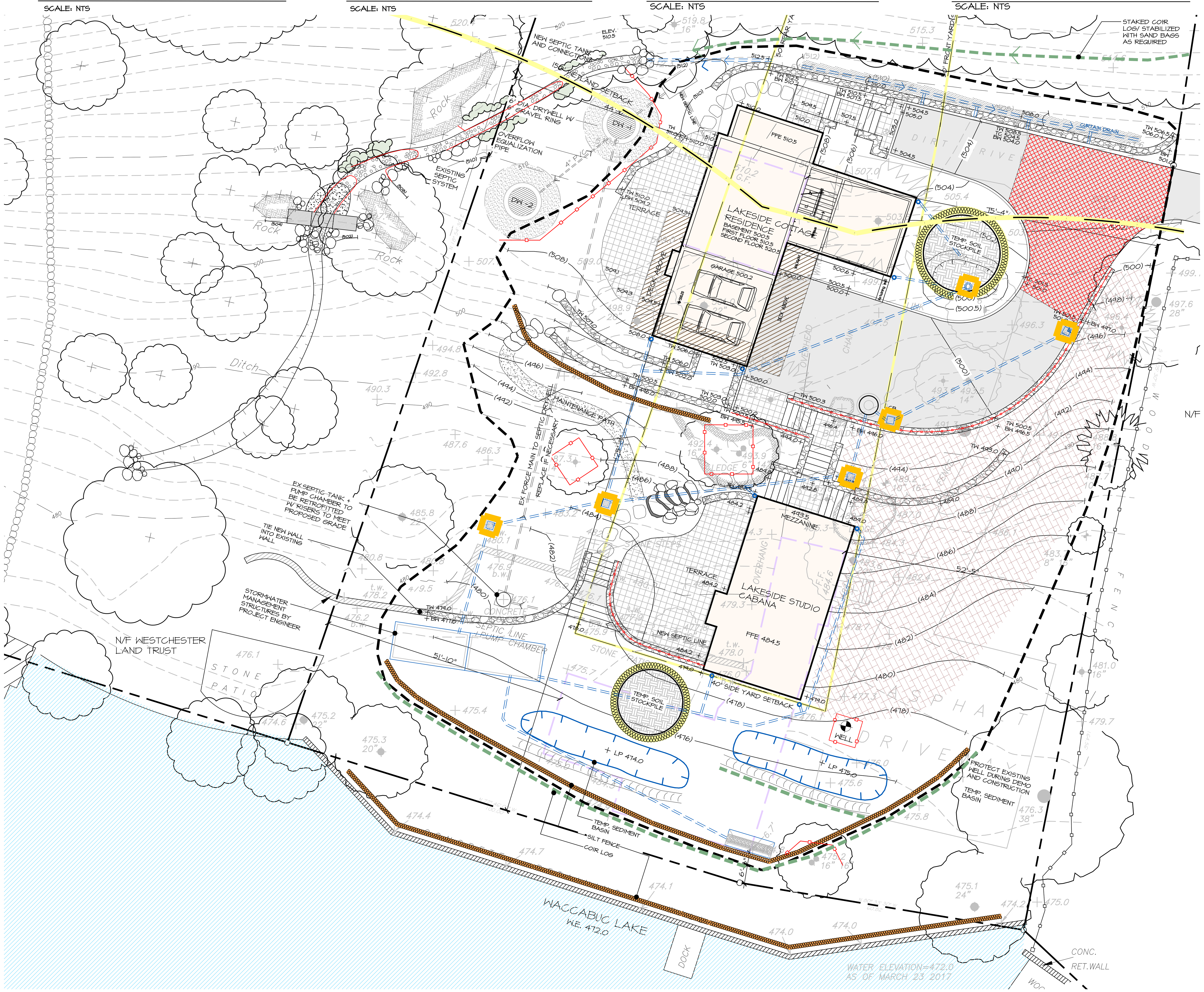
5. ALL INACTIVE DISTURBED AREAS NOT SUBJECT TO CONSTRUCTION TRAFFIC, SHALL RECEIVE TEMPORARY SEEDING WITHIN SEVEN DAYS. MULCH SHALL BE USED IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER. DISTURBED AREAS SHALL BE LIMED AND FERTILIZED PRIOR TO SEEDING. FINAL STABILIZATION SHALL BE APPLIED UPON COMPLETION OF FINAL GRADING AND SOIL RESTORATION WITHIN 7 DAYS.

6. ALL DISTURBED AREAS WITHIN 500 FEET OF AN INHABITED DWELLING SHALL BE WETTED AS NECESSARY TO PROVIDE DUST CONTROL.

7. THE CONTRACTOR SHALL KEEP THE ROADWAYS WITHIN THE PROJECT CLEAR OF SOIL AND DEBRIS AND IS RESPONSIBLE FOR ANY STREET CLEANING NECESSARY DURING THE COURSE OF THE PROJECT. SEE NOTE NUMBER 8 BELOW ON ANTI TRACKING PAD DETAIL.

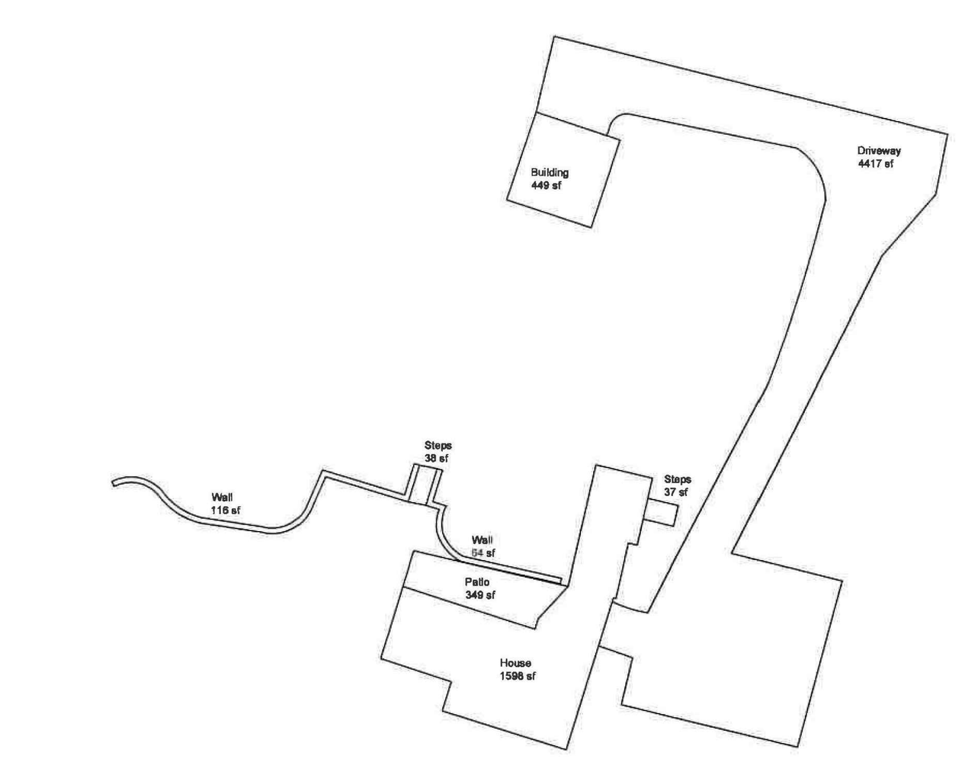
8. SEDIMENT AND EROSION CONTROL PRACTICES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED BY PERMANENT MEASURES.

9. EROSION CONTROL MEASURES SHALL BE INSPECTED BY ENVIRONMENTAL CONSULTANT ON A WEEKLY BASIS WHILE EARTHWORK ACTIVITY IS ON GOING AND UP UNTIL VEGETATIVE STABILIZATION OCCURS ON ALL DISTURBED AREAS.



EROSION CONTROL PLAN

1"= 10'

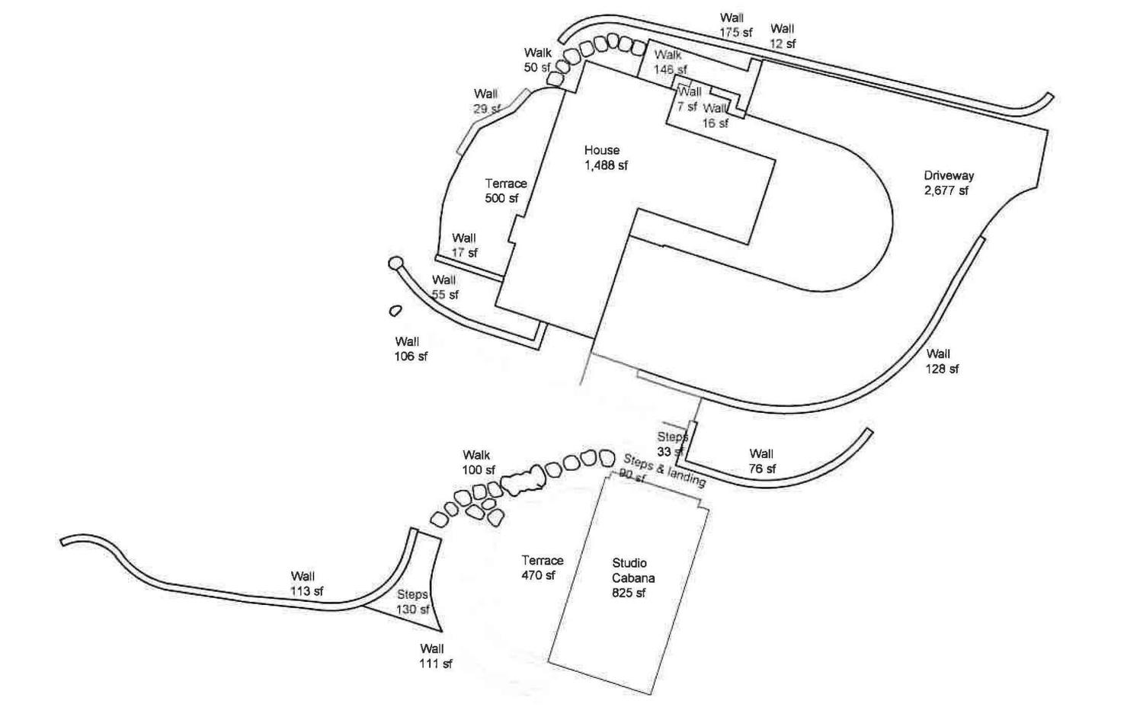


EXISTING CONDITION

FEATURE	AREA (in sq feet)
Garage Building	449
Driveway	4,417
Wall	116
Wall	64
Steps	38
Steps	37
Patio	349
House	1,598
TOTAL	7,068
	26,851
	19,783

IMPERVIOUS COVERAGE - EXISTING CONDITION +/- 7,068 SF

INFO PROVIDED BY ALP ENGINEERING



FUTURE CONDITION

FEATURE	AREA (in sq feet)
House	1,488
Driveway	2,677
Wall	175
Wall	12
Wall	7
Wall	16
Walk	146
Walk	50
Wall	29
Terrace	500
Wall	17
Wall	55
Wall	106
Wall	128
Landing	146
Wall	76
Steps	33
Steps and Landing	90
Studio Cabana	825
Terrace	470
Walk	100
Steps	130
Wall	111
Wall	113
TOTAL	7,500
CHANGE (increase)	432 sq feet
% CHANGE	6.11 %

IMPERVIOUS COVERAGE - PROPOSED CONDITION +/- 7,500 SF

INFO PROVIDED BY ALP ENGINEERING

DISTURBANCE SUMMARY

TOTAL WETLAND DISTURBANCE	0 SF
TOTAL BUFFER DISTURBANCE	16,696 SF
TOTAL DISTURBANCE AREA (GLL)	19,807 SF

EROSION AND SEDIMENT CONTROL PLAN

Prepared For :
MCARTHUR PROPERTY
40 OLD POND ROAD
LEWISBORO, NEW YORK
SEC. 33 C, Block 11155, Lots 16, 17 & 44
Area: 1.1719 acres

Attorney
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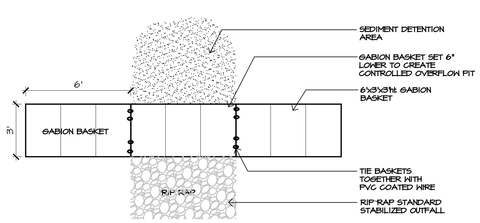
MAHOPAC, NEW YORK 10541
TEL: 845.628.5857 FAX 845.621.0013

REGISTERED LANDSCAPE ARCHITECT JERID. BARRETT 001342 STATE OF NEW YORK

NORTH

0' 10' 20'

Date: December 16, 2019
Rev: April 29, 2020
Rev: June 30, 2020



GABION DISCHARGE PIT

NTS

MITIGATION LEGEND

- INVASIVE UNDERSTORY PLANT REMOVAL & NATIVE SHRUB REPLACEMENT
- PROPOSED GROUND COVER/ NO MOW AREA
- PROPOSED TREE PLANTING
- PROPOSED SHRUB PLANTING

TOTAL	TBD SF
NO DEVELOPMENT AREA	5045 SF

WETLAND AND BUFFER IMPACT SUMMARY

TOTAL	WETLAND DISTURBANCE	0 SF
TOTAL	BUFFER DISTURBANCE	16,896 SF
PROPOSED	MITIGATION	17,000+ SF

WETLAND BUFFER MITIGATION PLAN

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LEWISBORO, NEW YORK
SEC. 33 C, Block 1155, Lots 16, 17 & 44
Area: 1.1719 acres

Attorney
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MAHOPAC, NEW YORK 10541
TEL: 845.628.5857 FAX 845.621.0013

LICENSED LANDSCAPE ARCHITECT — J.D. BARRETT — 001343 — STATE OF NEW YORK

NORTH

0' 10' 20'

SHEET: 5 OF 5

Date: December 16, 2019
Rev: April 29, 2020
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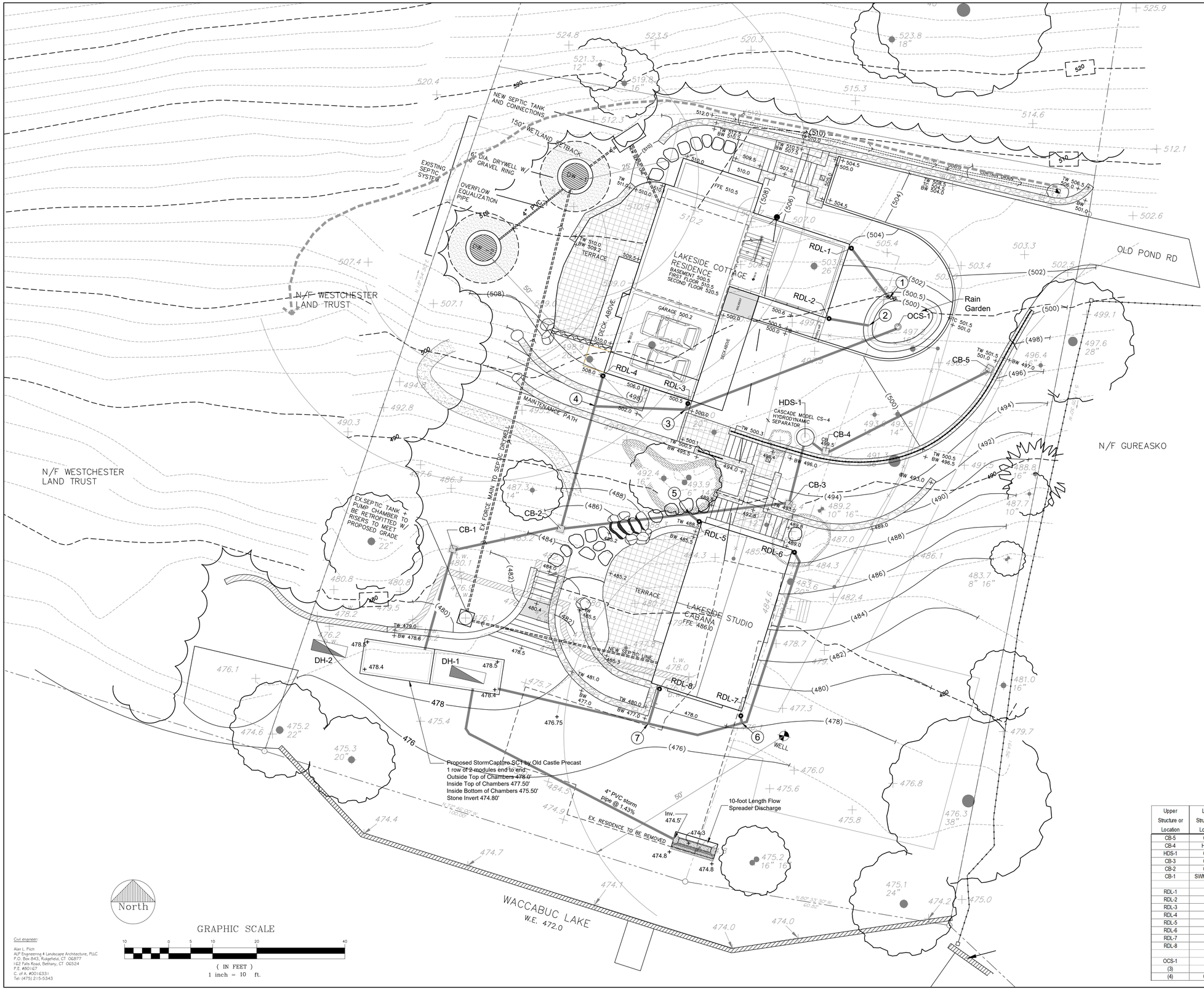

Civil engineer:
Alan L. Pitch
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P.O. Box 843, Ridgefield, CT 06877
162 Falls Road, Bethany, CT 06524
P.E. #50127
C. of A. #0016331
Tel: (475) 215-5343

STORM PIPE TABLE

Upper Structure or Location	Lower Structure or Location	Upper Structure Grate/Elev	Size (In.)	Slope %	Length (ft)	Fall (ft)	Invert Upper Location	Invert Lower Location
CB-5	CB-4	501.00	6	3.49	42	1.45	498.95	497.50
CB-4	HDS-1	499.50	6	13.16	4	0.50	497.50	497.00
HDS-1	CB-3	499.50	6	44.96	14	6.25	496.75	490.50
CB-3	CB-2	492.50	6	16.50	52	8.50	490.50	482.00
CB-2	CB-1	485.00	6	8.06	25	2.00	482.00	480.00
CB-1	SWM FACIL.	482.00	6	12.92	24	3.10	480.00	476.90
RDL-1	(1)	503.50	4	9.44	15	1.42	501.67	500.25
RDL-2	(2)	501.75	4	102.78	9	9.25	499.92	490.67
RDL-3	(3)	500.40	4	53.33	2	1.07	498.57	497.50
RDL-4	(4)	508.00	4	61.11	15	9.17	506.17	497.00
RDL-5	(5)	488.00	4	5.56	3	0.17	486.17	486.00
RDL-6	(6)	489.00	4	24.68	42	10.37	487.17	476.80
RDL-7	(6)	478.50	4	8.33	2	0.17	477.17	477.00
RDL-8	(7)	478.50	4	5.21	8	0.42	477.17	476.75
OCS-1	(3)	500.50	4	1.27	52	0.67	498.17	497.50
(3)	(4)	500.50	4	2.38	21	0.50	497.50	497.00
(4)	CB-2	501.00	4	52.98	28	14.83	497.00	482.17

CONSULTANTS:

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EASTON, CONNECTICUT 06612
Tel. 203.372.5805 Fax 203.372.0499

ISSUED:

SEAL:

STATE OF NEW YORK ALAN L. PITCH No. 080167 LICENSED PROFESSIONAL ENGINEER

PROJECT NAME:
McArthur Property Redevelopment
40 Old Pond Road
South Salem, New York

ENGINEER & LANDSCAPE ARCHITECT:
ALP ENGINEERING
& LANDSCAPE ARCHITECTURE, PLLC
P.O. Box 843 Ridgefield, CT 06877
Direct Tel. (475) 215-5343 Cell (203) 710-0587

Drawing Title:
Stormwater Management Plan

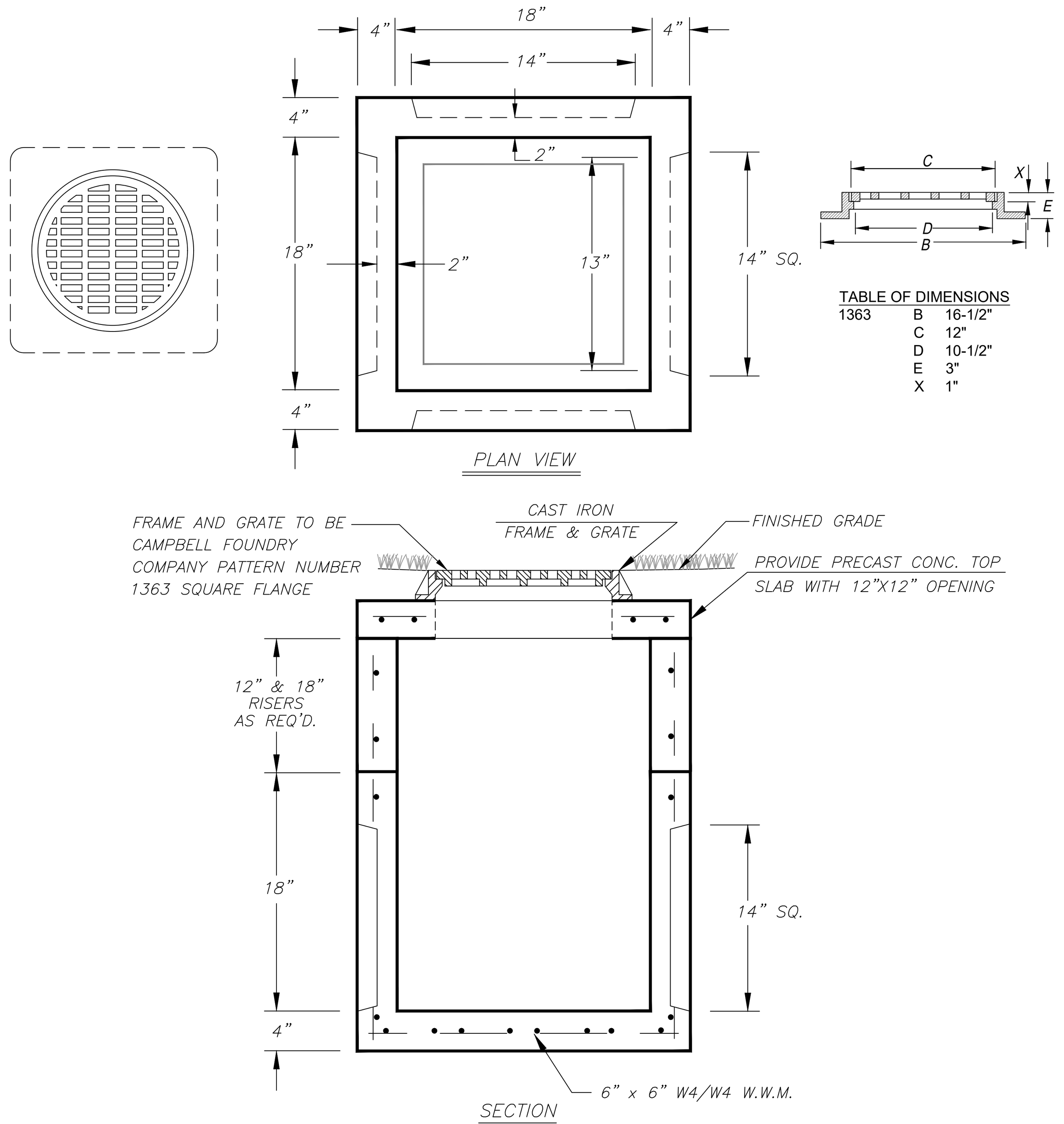
Date: June 26, 2020

Dwn. by: alp

ID: McArthur_Civil_06-22-2020

C-101

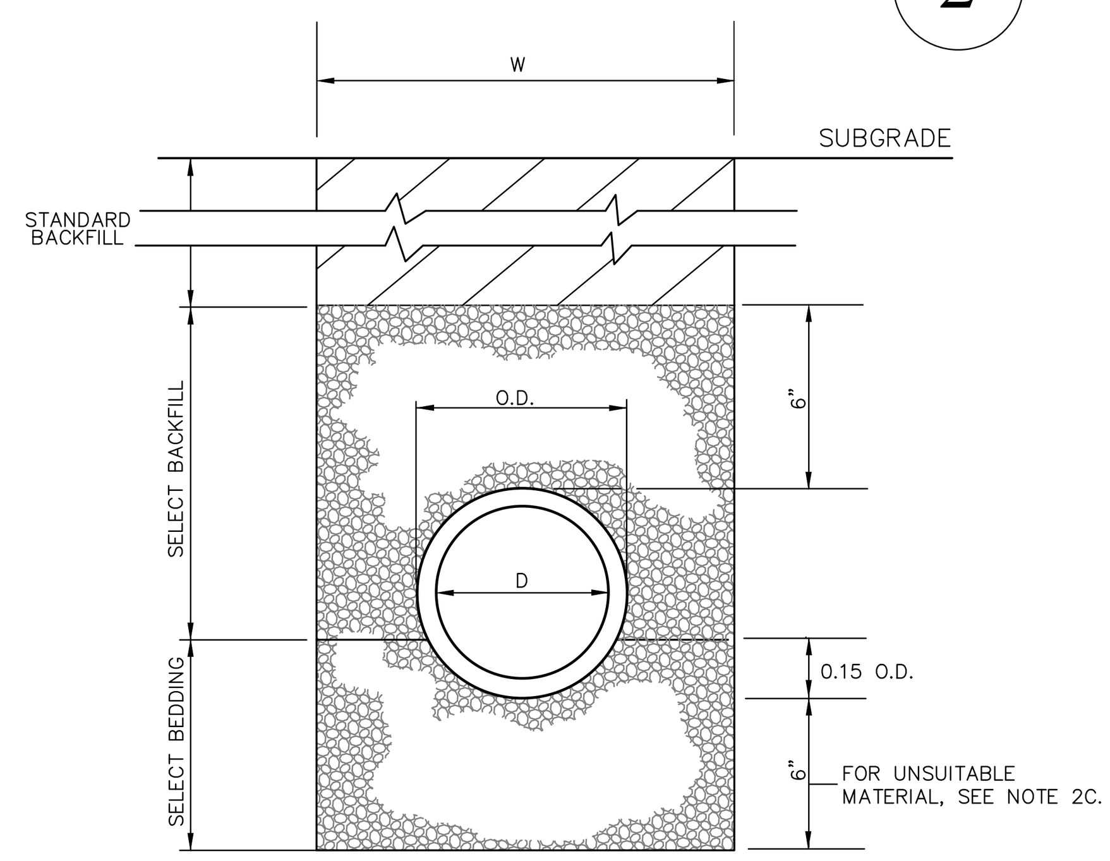
Catch Basin
1



NOTES :
*CONCRETE : 4,000 PSI @ 28 DAYS
*REINFORCING : AS PER ASTM A-185
6" x 6" W4/W4 W.W.M.
*WEIGHTS :
CATCH BASIN – 645 LBS.
CONCRETE FLAT TOP ALSO AVAILABLE
180 LBS. (3" THICK)
RISER WEIGHTS : 363 LBS/FT.

Precast Concrete Sales Co. 123 Route 303 Valley Cottage , N.Y. 10989 Tel. (845) 268-4949 – Fax (845) 268-4376		
CONT.		
JOB		
18"x18"x18" KNOCKOUT CATCH BASIN		
DATE	DRAWN BY	DRAWING NO.
1/16	CLASSIC DESIGN	218–18

Pipe Trench
2

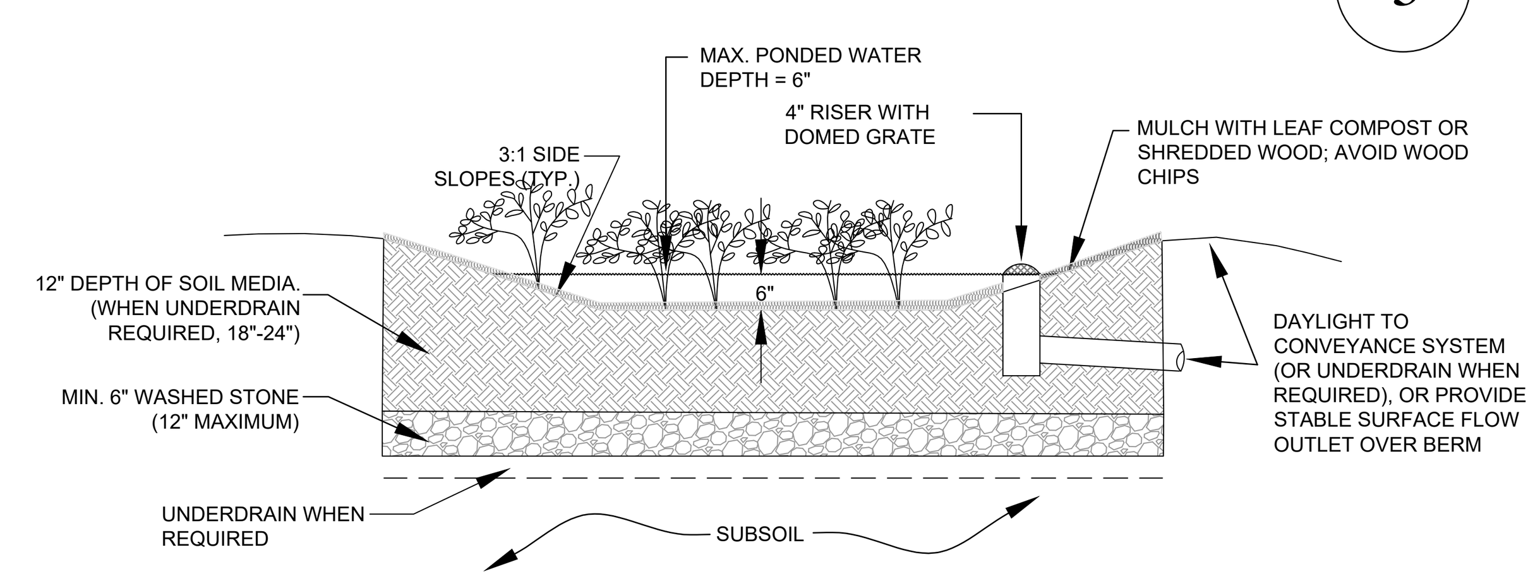


D=INSIDE DIAMETER, SPAN, OR RISE
O.D.=OUTSIDE BARREL DIAMETER, SPAN OR RISE
H.D.=OUTSIDE DIAMETER, SPAN, OR RISE @ BELL OR BAND
W=H.D. + 2.0' – FOR 48" OR SMALLER DIAMETER, SPAN, OR RISE
W=H.D. + 2.5' – FOR GREATER THAN 48" DIAMETER, SPAN, OR RISE

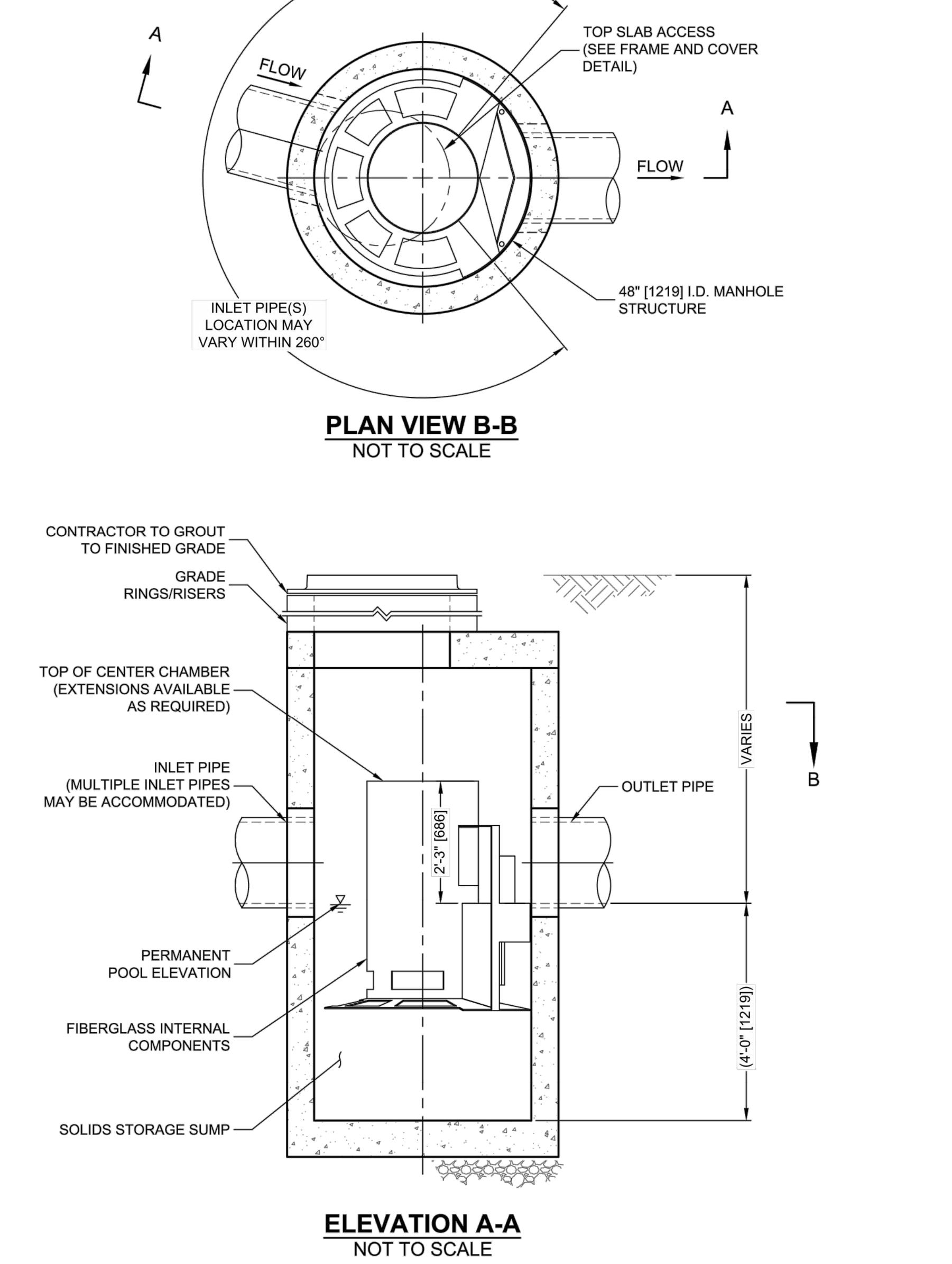
NOTES:

1. FOR TYPE II TRENCH, MATERIAL FOR SELECT BEDDING AND SELECT BACKFILL SHALL BE:
   A. EITHER SAND OR CRUSHED STONE IF NO WATER IS ENCOUNTERED IN TRENCH.
   B. CRUSHED STONE IF WATER IS ENCOUNTERED IN TRENCH.
2. TYPE II TRENCH SHALL BE USED IN ALL OF THE FOLLOWING CASES:
   A. FOR ALL PVC PIPE AND CONDUIT INSTALLATION.
   B. WHEN ROCK OR HARDPAN IS ENCOUNTERED IN BOTTOM OF TRENCH.
   C. WHEN UNSUITABLE MATERIAL IS ENCOUNTERED IN BOTTOM OF TRENCH. IN SUCH CASE DEPTH OF UNDERCUTTING SHALL BE AS DIRECTED BY THE ENGINEER WITH 6" MINIMUM.
3. FOR ALL TRENCH EXCAVATION IN FILL AREAS, ALL EMBANKMENTS SHALL BE CONSTRUCTED TO A MINIMUM OF 2 FEET ABOVE THE OUTSIDE TOP (AT THE BELL) OF THE PIPE PRIOR TO BEGINNING ANY TRENCH EXCAVATION.
4. SELECT BEDDING – SHALL CONSIST OF A BED OF PROPERLY COMPACTED GRANULAR BEDDING MATERIAL (SAND OR CRUSHED STONE AS SPECIFIED) HAVING A COMPACTED THICKNESS OF AT LEAST SIX (6) INCHES BELOW THE BOTTOM OF THE PIPE OR CONDUIT AND EXTENDING AROUND THE PIPE OR CONDUIT FOR AT LEAST 30% OF ITS DIAMETER OR RISE. CRUSHED STONE BEDDING SHALL BE WELL–GRADED CRUSHED STONE CONFORMING TO ASTM DESIGNATION C–33, SIZE NO. 67.
5. STANDARD BACKFILL – SHALL CONSIST OF ON–SITE MATERIAL (EARTH) APPROVED BY THE OWNER'S FIELD REPRESENTATIVE AND/OR SOILS ENGINEER. SHOULD THERE BE A DEFICIENCY OF PROPER ON–SITE MATERIAL FOR BACKFILLING, THE CONTRACTOR SHALL FURNISH, PLACE AND COMPACT ADDITIONAL PROPER BACKFILL MATERIAL.
6. SELECT BACKFILL – SHALL CONSIST OF GRANULAR MATERIAL (SAND OR CRUSHED STONE AS SPECIFIED) AS APPROVED BY THE OWNER'S FIELD REPRESENTATIVE AND/OR SOILS ENGINEER. SAND SHALL CONSIST OF CLEAN, WELL GRADED, HARD, DURABLE PARTICLES, FREE OF LUMPS OF CLAY, LOAM AND ALL OTHER DELETERIOUS SUBSTANCES. CRUSHED STONE SHALL CONSIST OF WELL GRADED CRUSHED STONE CONFORMING TO ASTM DESIGNATION C–33, SIZE NO. 67.
7. BACKFILL FOR PIPE AND CONDUIT SHALL BE PLACED EVENLY AND CAREFULLY AROUND AND OVER THE PIPE OR CONDUIT IN SIX (6) INCH MAXIMUM LAYERS. EACH LAYER SHALL BE THOROUGHLY AND CAREFULLY COMPACTED UNTIL TWELVE (12) INCHES OF COVER EXISTS OVER THE PIPE OR CONDUIT. THE REMAINDER OF THE BACKFILL SHALL THEN BE PLACED AND COMPACTED IN MAXIMUM TWELVE (12) INCH LAYERS. EACH LAYER SHALL BE COMPACTED BY APPROVED MECHANICAL TAMPING MACHINES.

Rain Garden
3



Hydrodynamic Separator
4

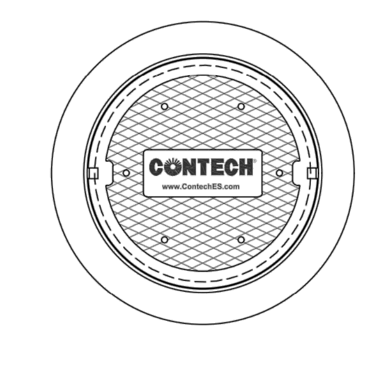


CASCADE separator™

CASCADE SEPARATOR DESIGN NOTES

THE STANDARD CS-4 CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION
GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES



FRAME AND COVER
(DIAMETER VARIES)
NOT TO SCALE

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			
WATER QUALITY FLOW RATE (cfs [L/s])			
PEAK FLOW RATE (cfs [L/s])			
RETURN PERIOD OF PEAK FLOW (yrs)			
RIM ELEVATION			
PIPE DATA:	INVERT	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2			
OUTLET PIPE			
NOTES / SPECIAL REQUIREMENTS:			

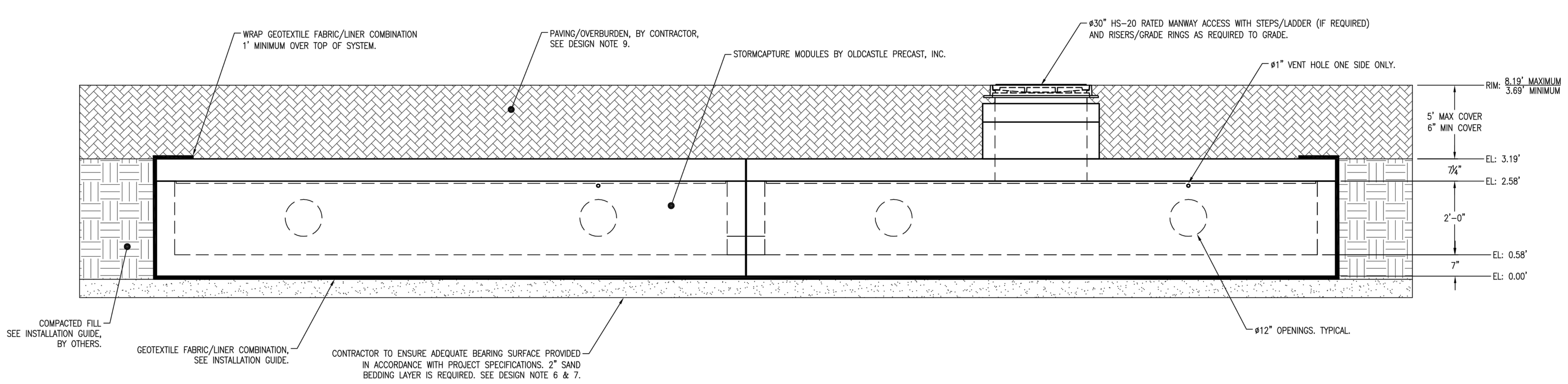
GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CASCADE SEPARATOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. CASCADE SEPARATOR STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. CASCADE SEPARATOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CASCADE SEPARATOR MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH ENGINEERED SOLUTIONS LLC
www.contechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CS-4
CASCADE SEPARATOR
STANDARD DETAIL

StormCapture Model SC1 Detention Facility
5



TYPICAL ELEVATION
SCALE: 3/8" = 1'-0"

DESIGN NOTES:
1. DESIGN LOADINGS:
   A. AASHTO HS-20-44 W/ IMPACT.
   B. DEPTH OF COVER = 6" - 5'-0" (120 PCF ASSUMED).
   C. ASSUMED WATER TABLE = BELOW BOTTOM OF PRECAST.
   D. DRY LATERAL EARTH PRESSURE (EFP) = 45 PCF.
   E. LATERAL LIVE LOAD SURCHARGE = 80 PSF (APPLIED TO 8' BELOW GRADE).
   F. NO LATERAL SURCHARGE FROM ADJACENT BUILDINGS, WALL PIERS, OR FOUNDATIONS.
2. CONCRETE 28 DAY COMPRESSIVE STRENGTH SHALL BE 6,000 PSI.
3. STEEL REINFORCEMENT: REBAR, ASTM A-615 OR A-706, GRADE 60.
4. CEMENT: ASTM C-150 SPECIFICATION.
5. STORMCAPTURE MODULE TYPE = DETENTION.
6. REQUIRED BASE LAYER DEPTH = 2" SAND BEDDING LAYER.
7. REQUIRED NATIVE ALLOWABLE SOIL BEARING PRESSURE = 2,500 PSF.
8. REFERENCE STANDARDS:
   A. ASTM C 890
   B. ASTM C 891
   C. ASTM C 913
9. CONSTRUCTION EQUIPMENT EXCEEDING DESIGN LOADING SHALL NOT BE ALLOWED ON STRUCTURE. ANY DESIGN CONSTRAINT DIFFERENT FROM ABOVE REQUIRES CUSTOM STRUCTURAL DESIGN AND MAY REQUIRE THICKER SUBGRADE AND REVISED PRICING.

NOTES TO REVIEWING ENGINEER:
1. THIS SYSTEM IS DESIGNED TO THE PARAMETERS NOTED. PLEASE VERIFY THAT THESE PARAMETERS MEET PROJECT REQUIREMENTS (I.E. LIVE LOAD AND FILL RANGE). IF DESIGN PARAMETERS ARE INCORRECT NOTIFY OLDCASTLE IMMEDIATELY FOR REDESIGN AND RE-PRICING.
2. REVIEWING ENGINEER TO CONFIRM ALL PIPE PENETRATION LOCATIONS, SIZES, AND INVERTS.
3. REVIEWING ENGINEER TO CONFIRM ALL MANWAY ACCESS LOCATIONS AND RIM ELEVATIONS.
4. UNLESS OTHERWISE NOTED, ALL PIPE SUPPLIED AND INSTALLED BY OTHERS.
5. THIS SYSTEM IS DESIGNED FOR A GROUNDWATER TABLE BELOW SYSTEM INVERT. REVIEWING ENGINEER TO VERIFY THAT THE DESIGN GROUNDWATER TABLE IS BELOW INVERT OF PRECAST. IF DESIGN PARAMETERS ARE INCORRECT NOTIFY OLDCASTLE IMMEDIATELY FOR REDESIGN AND REVISED PRICING.
6. THIS SYSTEM IS DESIGNED WITH A CONTAINMENT MEMBRANE LINER. IF A LINER IS NOT NEEDED PLEASE CONTACT OLDCASTLE TO PROVIDE THIS OPTION IN THE FINAL DESIGN.

Detention/Infiltration

Stormwater

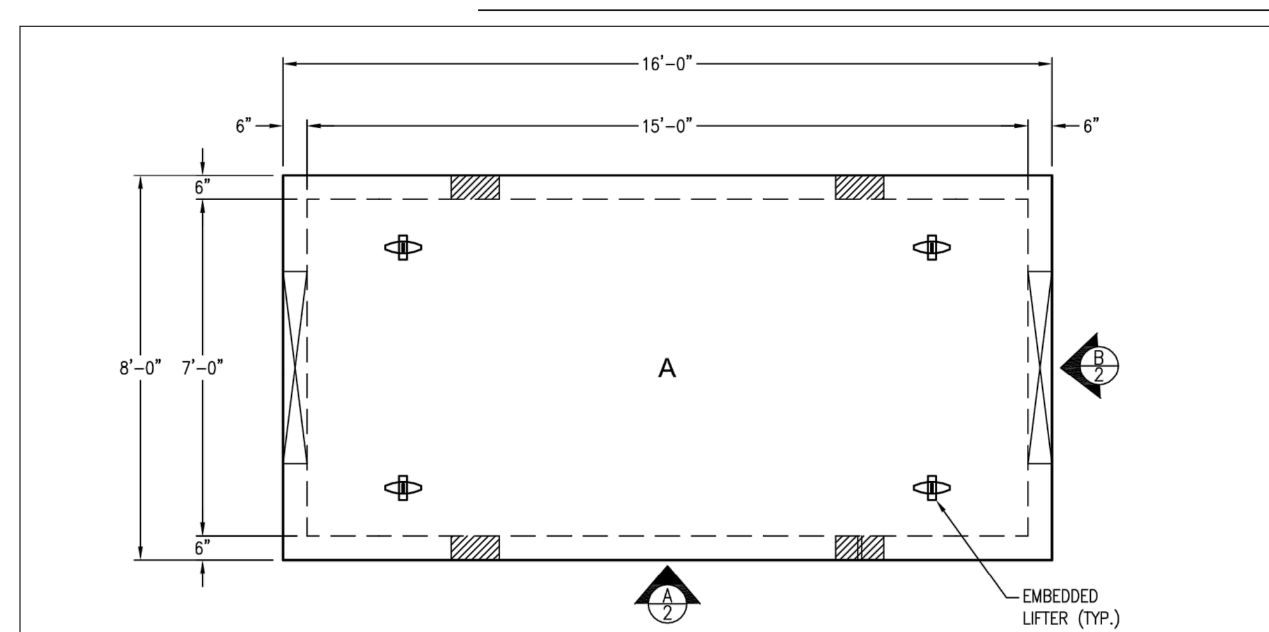
- PRELIMINARY -
NOT FOR CONSTRUCTION

Oldcastle Precast®
7921 Southpark Plaza, Suite 200 | Littleton, CO | 80120
Ph: 800.579.8819 | oldcastlestormwater.com

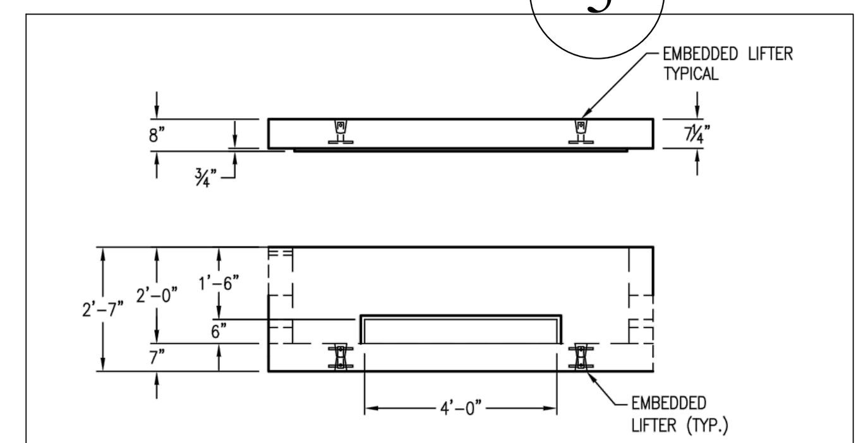
STORMCAPTURE ®
SC1 Detention System
EXAMPLE DETAIL
2-FOOT INSIDE HEIGHT W/ LINER

DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER
-	-	-	-	-	-
DRAWING NUMBER				REVISION	SHEET
SCDD_2FT_SC1_DT-LNR				- REV DATE N/A	1 OF 2

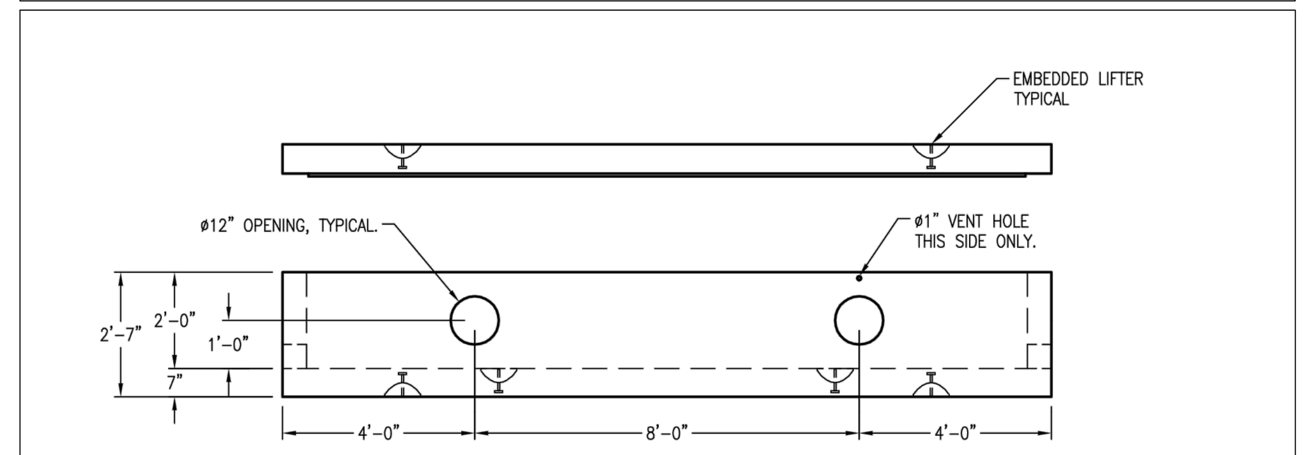
StormCapture Model SC1 Detention Facility
5



PLAN VIEW
SCALE: 1/4" = 1'-0"



VIEW B
SCALE: 1/4" = 1'-0"



VIEW A
SCALE: 1/4" = 1'-0"

Civil engineer:
Alan L. Pilch
ALP Engineering & Landscape Architecture, PLLC
P.O. Box 843, Ridgefield, CT 06877
162 Falls Road, Bethany, CT 06524
P.E. #80167
C. of A. #0016331
Tel: (475) 215-5343

CONSULTANTS:

Architect:
TEO SIGUENZA ARCHITECTS
460 OLD POST ROAD
BEDFORD, NEW YORK 10506
Tel. 914.234.6289 Fax 914.234.0619

Landscape Architect/Environmental Planner:
J. D. BARRETT & ASSOCIATES, LLC
109 SPORT HILL ROAD.
EASTON, CONNECTICUT 06612
Tel. 203.372.5805 Fax 203.372.0499

ISSUED:

SEAL:
STATE OF NEW YORK
ALAN L. PILCH
No. 080167
LICENSED PROFESSIONAL ENGINEER

PROJECT NAME:
McArthur Property Redevelopment
40 Old Pond Road
South Salem, New York

ENGINEER & LANDSCAPE ARCHITECT:
ALP ENGINEERING
& LANDSCAPE ARCHITECTURE, PLLC
P.O. Box 843 Ridgefield, CT 06877
Direct Tel. (475) 215-5343 Cell (203) 710-0587

Drawing Title:
Stormwater Management Plan

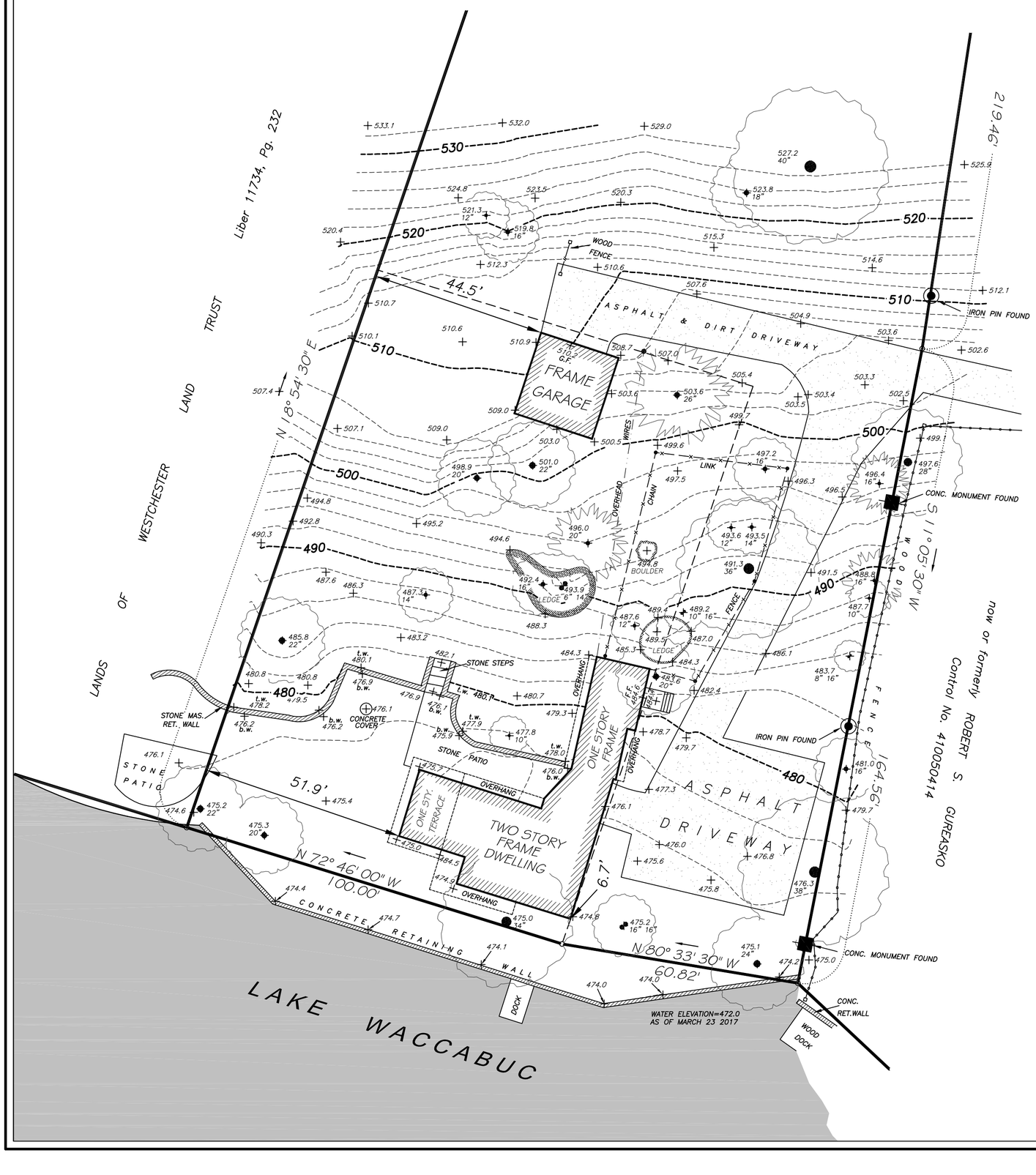
Date: June 26, 2020

Dwn. by: alp

ID: McArthur_Civil_06-22-2020

C-111

7765



TOPOGRAPHIC SURVEY
OF A PORTIONOF PROPERTY
SITUATE IN THE
TOWN OF LEWISBORO
WESTCHESTER COUNTY
NEW YORK

SCALE: 1"= 20'
SURVEYED: MARCH 13, 2017
AMENDED TO SHOW TOPOGRAPHIC INFORMATION: MARCH 29, 2017

- PREMISES ARE DESIGNATED ON THE TAX MAPS FOR THE TOWN OF LEWISBORO
  SECTION: 33.1 BLOCK: 1 LOTS: 22, 23 & 24
  STREET ADDRESS: 40 OLD POND ROAD
  PROPERTY AREA: 51,048 Sq. Ft. / 1.1719 Acres
- THE PREMISES SHOWN HEREON BEING PROPERTY DESCRIBED TITLE REPORT PREPARED BY COURT STREET ABSTRACT, INC., UNDER TITLE REPORT No. CSA17- 07018-W.
- THE ELEVATIONS SHOWN HEREON ARE APPROXIMATELY IN THE "NAVD 88", (NORTH AMERICAN VERTICAL DATUM 1988).
- THE OFFSETS SHOWN HEREON ARE NOT INTENDED TO ESTABLISH PROPERTY LINES FOR THE ERECTION OF FENCES, STRUCTURES OR ANY OTHER IMPROVEMENTS.
- ENCROACHMENTS BELOW GRADE AND/OR SUBSURFACE FEATURES, IF ANY, NOT LOCATED OR SHOWN HEREON.
- UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUBDIVISION 2, OF THE NEW YORK STATE EDUCATION LAWS.
- THE INFORMATION DEPICTED HEREON IS BASED UPON AN ACTUAL FIELD SURVEY AND IS AN OPINION BASED UPON SAID SURVEY. VARIATIONS IN OFFSETS FROM THAT OF THE OTHERS CAN AND MAY EXIST.
- ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S SEAL SHALL BE CONSIDERED TO BE TRUE VALID COPIES.
- THIS MAP WAS PREPARED FROM AN ACTUAL FIELD SURVEY CONDUCTED ON THE DATE SHOWN AND THAT SAID SURVEY WAS PERFORMED IN ACCORDANCE WITH THE EXISTING " CODE OF PRACTICE FOR LAND SURVEYS " ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS.

PREPARED FOR: JOHN B. RYAN & KIRA W. RYAN

Link
Land Surveyors P.C.
21 Clark Place, Suite 1-B Phone 845-628-5857
Mahopac N.Y. 10541 Fax 845-621-0013

ERIK J. LINK
NEW YORK STATE LICENSED
LAND SURVEYOR NO. 050542

0644089821

NOTICE OF INTENT

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

NYR _____ (for DEC use only)

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-20-001

All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

-IMPORTANT-

RETURN THIS FORM TO THE ADDRESS ABOVE

OWNER/OPERATOR MUST SIGN FORM

Owner/Operator Information

Owner/Operator (Company Name/Private Owner Name/Municipality Name)

Owner/Operator Contact Person Last Name (NOT CONSULTANT)
McARTHUR

Owner/Operator Contact Person First Name
WILLIAM

Owner/Operator Mailing Address
35 OLD POND ROAD

City
SOUTH SALEM

State
NY

Zip
10590-1019

Phone (Owner/Operator) ___-___-____

Fax (Owner/Operator) ___-___-____

Email (Owner/Operator)
billymcarthur@gmail.com

FED TAX ID
__-_____ (not required for individuals)

Project Site Information

Project/Site Name
McARTHUR PROPERTY

Street Address (NOT P.O. BOX)
40 OLD POND ROAD

Side of Street
○ **North** ● **South** ○ **East** ○ **West**

City/Town/Village (THAT ISSUES BUILDING PERMIT)
LEWISBORO

State: NY
Zip: 10590-
County: WESTCHESTER
DEC Region: 3

Name of Nearest Cross Street
OSCALETA ROAD

Distance to Nearest Cross Street (Feet)
1685

Project In Relation to Cross Street
○ **North** ○ **South** ○ **East** ● **West**

Tax Map Numbers
Section-Block-Parcel
33 11155 16 17

Tax Map Numbers
44

1. Provide the Geographic Coordinates for the project site in NYTM Units. To do this you **must** go to the NYSDEC Stormwater Interactive Map on the DEC website at:

www.dec.ny.gov/imsmaps/stormwater/viewer.htm

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located your project site, go to the tool boxes on the top and choose "i"(identify). Then click on the center of your site and a new window containing the X, Y coordinates in UTM will pop up. Transcribe these coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting): 618818

Y Coordinates (Northing): 4573196

2. What is the nature of this construction project?

○ **New Construction**

● **Redevelopment with increase in impervious area**

○ **Redevelopment with no increase in impervious area**

3. Select the predominant land use for both pre and post development conditions.
SELECT ONLY ONE CHOICE FOR EACH

Pre-Development Existing Land Use

- ○ FOREST
- ○ PASTURE/OPEN LAND
- ○ CULTIVATED LAND
- ● SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY
- ○ PARKING LOT
- ○ OTHER

Post-Development Future Land Use

- ● SINGLE FAMILY HOME — Number of Lots
- ○ SINGLE FAMILY SUBDIVISION
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ MUNICIPAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY (water, sewer, gas, etc.)
- ○ PARKING LOT
- ○ CLEARING/GRADING ONLY
- ○ DEMOLITION, NO REDEVELOPMENT
- ○ WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
- ○ OTHER

***Note**: for gas well drilling, non-high volume hydraulic fractured wells only

4. In accordance with the larger common plan of development or sale, enter the total project site area; the total area to be disturbed; existing impervious area to be disturbed (for redevelopment activities); and the future impervious area constructed within the disturbed area. (Round to the nearest tenth of an acre.)

Total Site Area	Total Area To Be Disturbed	Existing Impervious Area To Be Disturbed	Future Impervious Area Within Disturbed Area
1.2	0.5	0.2	0.2

5. Do you plan to disturb more than 5 acres of soil at any one time? ○ **Yes** ● **No**

6. Indicate the percentage of each Hydrologic Soil Group(HSG) at the site.

A	B	C	D
%	60 %	%	40 %

7. Is this a phased project? ○ **Yes** ● **No**

8. Enter the planned start and end dates of the disturbance activities.

Start Date	End Date
09/01/2020	09/30/2021

9. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.

Name

LAKE WACCABUC

9a. Type of waterbody identified in Question 9?

- ○ Wetland / State Jurisdiction On Site (Answer 9b)
- ○ Wetland / State Jurisdiction Off Site
- ○ Wetland / Federal Jurisdiction On Site (Answer 9b)
- ○ Wetland / Federal Jurisdiction Off Site
- ○ Stream / Creek On Site
- ○ Stream / Creek Off Site
- ○ River On Site
- ○ River Off Site
- ● Lake On Site
- ● Lake Off Site
- ○ Other Type On Site
- ○ Other Type Off Site

9b. How was the wetland identified?

- ○ Regulatory Map
- ○ Delineated by Consultant
- ○ Delineated by Army Corps of Engineers
- ○ Other (identify)

10. Has the surface waterbody(ies) in question 9 been identified as a 303(d) segment in Appendix E of GP-0-20-001? ○ **Yes** ● **No**

11. **Is this project located in one of the Watersheds identified in Appendix C of GP-0-20-001?** ● **Yes** ○ **No**

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters? ○ **Yes** ● **No**
If no, skip question 13.

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey? ○ **Yes** ○ **No**
If Yes, what is the acreage to be disturbed?

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area? ○ **Yes** ● **No**

15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)? ○ Yes ● No ○ Unknown

16. What is the name of the municipality/entity that owns the separate storm sewer system?

17. Does any runoff from the site enter a sewer classified as a Combined Sewer? ○ Yes ● No ○ Unknown

18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law? ○ Yes ● No

19. Is this property owned by a state authority, state agency, federal government or local government? ○ Yes ● No

20. Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) ○ Yes ● No

21. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)? ● Yes ○ No

22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)? ○ Yes ● No
If No, skip questions 23 and 27-39.

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual? ○ Yes ○ No

24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:

- ● **Professional Engineer (P.E.)**
- ○ **Soil and Water Conservation District (SWCD)**
- ○ **Registered Landscape Architect (R.L.A)**
- ○ **Certified Professional in Erosion and Sediment Control (CPESC)**
- ○ **Owner/Operator**
- ○ **Other**

SWPPP Preparer
ALP ENGINEERING & LAND ARCH, PLLC

Contact Name (Last, Space, First)
PILCH ALAN

Mailing Address
P.O. BOX 843

City
RIDGEFIELD

State CT Zip 06877-

Phone 475-215-5343

Fax

Email
alan@eaec-inc.com

SWPPP Preparer Certification

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-20-001. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First Name ALAN **MI** L

Last Name PILCH

Signature

Date 06/26/2020

25. Has a construction sequence schedule for the planned management practices been prepared? ● Yes ○ No

26. Select **all** of the erosion and sediment control practices that will be employed on the project site:

Temporary Structural

- ○ Check Dams
- ○ Construction Road Stabilization
- ○ Dust Control
- ○ Earth Dike
- ● Level Spreader
- ○ Perimeter Dike/Swale
- ○ Pipe Slope Drain
- ○ Portable Sediment Tank
- ○ Rock Dam
- ● Sediment Basin
- ○ Sediment Traps
- ● Silt Fence
- ● Stabilized Construction Entrance
- ● Storm Drain Inlet Protection
- ○ Straw/Hay Bale Dike
- ○ Temporary Access Waterway Crossing
- ○ Temporary Stormdrain Diversion
- ○ Temporary Swale
- ○ Turbidity Curtain
- ○ Water bars

Biotechnical

- ○ Brush Matting
- ○ Wattling

Vegetative Measures

- ○ Brush Matting
- ○ Dune Stabilization
- ○ Grassed Waterway
- ● Mulching
- ● Protecting Vegetation
- ○ Recreation Area Improvement
- ● Seeding
- ○ Sodding
- ○ Straw/Hay Bale Dike
- ○ Streambank Protection
- ○ Temporary Swale
- ○ Topsoiling
- ○ Vegetating Waterways

Permanent Structural

- ○ Debris Basin
- ○ Diversion
- ○ Grade Stabilization Structure
- ○ Land Grading
- ○ Lined Waterway (Rock)
- ○ Paved Channel (Concrete)
- ○ Paved Flume
- ● Retaining Wall
- ○ Riprap Slope Protection
- ○ Rock Outlet Protection
- ○ Streambank Protection

Other

Post-construction Stormwater Management Practice (SMP) Requirements

Important: Completion of Questions 27-39 is not required if response to Question 22 is No.

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.

- ○ **Preservation of Undisturbed Areas**
- ○ **Preservation of Buffers**
- ○ **Reduction of Clearing and Grading**
- ○ **Locating Development in Less Sensitive Areas**
- ○ **Roadway Reduction**
- ○ **Sidewalk Reduction**
- ○ **Driveway Reduction**
- ○ **Cul-de-sac Reduction**
- ○ **Building Footprint Reduction**
- ○ **Parking Reduction**

27a. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6("Soil Restoration") of the Design Manual (2010 version).

- ○ All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).
- ○ Compacted areas were considered as impervious cover when calculating the **WQv Required**, and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout).

Total WQv Required

☐☐☐.☐☐☐ **acre-feet**

29. Identify the RR techniques (Area Reduction), RR techniques(Volume Reduction) and Standard SMPs with RRv Capacity in Table 1 (See Page 9) that were used to reduce the Total WQv Required(#28).

Also, provide in Table 1 the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use Tables 1 and 2 to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

Table 1 - Runoff Reduction (RR) Techniques and Standard Stormwater Management Practices (SMPs)

	Total Contributing Area (acres)		Total Contributing Impervious Area (acres)
RR Techniques (Area Reduction)			
○ Conservation of Natural Areas (RR-1)	___.___	and/or	___.___
○ Sheetflow to Riparian Buffers/Filters Strips (RR-2)	___.___	and/or	___.___
○ Tree Planting/Tree Pit (RR-3)	___.___	and/or	___.___
○ Disconnection of Rooftop Runoff (RR-4)	___.___	and/or	___.___
RR Techniques (Volume Reduction)			
○ Vegetated Swale (RR-5)			___.___
○ Rain Garden (RR-6)			___.___
○ Stormwater Planter (RR-7)			___.___
○ Rain Barrel/Cistern (RR-8)			___.___
○ Porous Pavement (RR-9)			___.___
○ Green Roof (RR-10)			___.___
Standard SMPs with RRv Capacity			
○ Infiltration Trench (I-1)			___.___
○ Infiltration Basin (I-2)			___.___
○ Dry Well (I-3)			___.___
○ Underground Infiltration System (I-4)			___.___
○ Bioretention (F-5)			___.___
○ Dry Swale (O-1)			___.___
Standard SMPs			
○ Micropool Extended Detention (P-1)			___.___
○ Wet Pond (P-2)			___.___
○ Wet Extended Detention (P-3)			___.___
○ Multiple Pond System (P-4)			___.___
○ Pocket Pond (P-5)			___.___
○ Surface Sand Filter (F-1)			___.___
○ Underground Sand Filter (F-2)			___.___
○ Perimeter Sand Filter (F-3)			___.___
○ Organic Filter (F-4)			___.___
○ Shallow Wetland (W-1)			___.___
○ Extended Detention Wetland (W-2)			___.___
○ Pond/Wetland System (W-3)			___.___
○ Pocket Wetland (W-4)			___.___
○ Wet Swale (O-2)			___.___

Table 2 - Alternative SMPs
(DO NOT INCLUDE PRACTICES BEING USED FOR PRETREATMENT ONLY)

Alternative SMP	Total Contributing Impervious Area (acres)
○ **Hydrodynamic**	___.___
○ **Wet Vault**	___.___
○ **Media Filter**	___.___
○ **Other** _____	___.___

Provide the name and manufacturer of the Alternative SMPs (i.e. proprietary practice(s)) being used for WQv treatment.

Name _____

Manufacturer _____

Note: Redevelopment projects which do not use RR techniques, shall use questions 28, 29, 33 and 33a to provide SMPs used, total WQv required and total WQv provided for the project.

30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29.

Total RRv provided

___.___ **acre-feet**

31. Is the Total RRv provided (#30) greater than or equal to the total WQv required (#28).

○ **Yes** ○ **No**

If Yes, go to question 36.
If No, go to question 32.

32. Provide the Minimum RRv required based on HSG.
[Minimum RRv Required = (P)(0.95)(Ai)/12, Ai=(S)(Aic)]

Minimum RRv Required

___.___ **acre-feet**

32a. Is the Total RRv provided (#30) greater than or equal to the Minimum RRv Required (#32)?

○ **Yes** ○ **No**

If Yes, go to question 33.
Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

33. Identify the Standard SMPs in Table 1 and, if applicable, the Alternative SMPs in Table 2 that were used to treat the remaining total WQv(=Total WQv Required in 28 - Total RRv Provided in 30).

Also, provide in Table 1 and 2 the total impervious area that contributes runoff to each practice selected.

Note: Use Tables 1 and 2 to identify the SMPs used on Redevelopment projects.

33a. Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in question 29.

WQv Provided

[ ][ ][ ].[ ][ ][ ] **acre-feet**

Note: For the standard SMPs with RRv capacity, the WQv provided by each practice = the WQv calculated using the contributing drainage area to the practice - RRv provided by the practice. (See Table 3.5 in Design Manual)

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a). [ ][ ][ ].[ ][ ][ ]

35. Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)? ○ **Yes** ○ **No**

If Yes, go to question 36.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

36. Provide the total Channel Protection Storage Volume (CPv) required and provided or select waiver (36a), if applicable.

CPv Required

[ ][ ][ ].[ ][ ][ ] **acre-feet**

CPv Provided

[ ][ ][ ].[ ][ ][ ] **acre-feet**

36a. The need to provide channel protection has been waived because:

○ Site discharges directly to tidal waters or a fifth order or larger stream.

○ Reduction of the total CPv is achieved on site through runoff reduction techniques or infiltration systems.

37. Provide the Overbank Flood (Qp) and Extreme Flood (Qf) control criteria or select waiver (37a), if applicable.

Total Overbank Flood Control Criteria (Qp)

Pre-Development

[ ][ ][ ].[ ][ ][ ] **CFS**

Post-development

[ ][ ][ ].[ ][ ][ ] **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development

[ ][ ][ ].[ ][ ][ ] **CFS**

Post-development

[ ][ ][ ].[ ][ ][ ] **CFS**

37a. The need to meet the Qp and Qf criteria has been waived because:

- ○ Site discharges directly to tidal waters or a fifth order or larger stream.
- ○ Downstream analysis reveals that the Qp and Qf controls are not required

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed? ○ **Yes** ○ **No**

If Yes, Identify the entity responsible for the long term Operation and Maintenance

39. Use this space to summarize the specific site limitations and justification for not reducing 100% of WQv required(#28). (See question 32a) This space can also be used for other pertinent project information.

40. Identify other DEC permits, existing and new, that are required for this project/facility.

- ○ Air Pollution Control
- ○ Coastal Erosion
- ○ Hazardous Waste
- ○ Long Island Wells
- ○ Mined Land Reclamation
- ○ Solid Waste
- ○ Navigable Waters Protection / Article 15
- ○ Water Quality Certificate
- ○ Dam Safety
- ○ Water Supply
- ○ Freshwater Wetlands/Article 24
- ○ Tidal Wetlands
- ○ Wild, Scenic and Recreational Rivers
- ○ Stream Bed or Bank Protection / Article 15
- ○ Endangered or Threatened Species(Incidental Take Permit)
- ○ Individual SPDES
- ○ SPDES Multi-Sector GP N Y R
- ○ Other
- ● None

41. Does this project require a US Army Corps of Engineers Wetland Permit? **If Yes, Indicate Size of Impact.** . ○ **Yes** ● **No**

42. Is this project subject to the requirements of a regulated, traditional land use control MS4? **(If No, skip question 43)** ● **Yes** ○ **No**

43. Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI? ● **Yes** ○ **No**

44. If this NOI is being submitted for the purpose of continuing or transferring coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned. N Y R

Owner/Operator Certification

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Print First Name

WILLIAM

MI

Print Last Name

McARTHUR

Owner/Operator Signature

Date

/ /

STORMWATER POLLUTION PREVENTION PLAN REPORT
For 40 Old Pond Road
Town of Lewisboro (South Salem P.O.), New York
Prepared by: Alan L. Pilch, PE, RLA, ALP Engineering & Landscape Architecture, PLLC
Date: June 26, 2020

1) Introduction

This SWPPP report has been prepared in accordance with the requirements of Chapter 189, Stormwater Management of the Town of Lewisboro.

All SWPPPs shall provide the following background information and erosion and sediment controls:
(1) Background information about the scope of the project, including location, type and size of project.

The project involves the construction of a lakeside cottage residence and a lakeside studio cabana on an existing residential lot.

The subject property is 51,048.3 square feet (1.173 acres) in size and is located on the northern shore of Lake Waccabuc. The property is roughly rectangular in shape. The area of the property which is developed is the southern 1/2 of the lot. The northern 1/2 of the lot is very steep – slopes are about (about 80%). The property is located in the Waccabuc River Basin watershed, and therefore lies within the New York City Water Supply watershed.

At present, the lot contains an existing two story frame dwelling and a frame garage. The existing house and garage building on the property will be demolished. An asphalt driveway provides vehicular access to the dwelling and garage. Much of the asphalt driveway will also be removed. The existing subsurface sewage disposal facilities (septic tank and two drywell seepage pits), as well as a potable water well, are also present on the property. It is proposed to retain the septic system and well.

The Town regulated wetland is Lake Waccabuc at the southern end of the property. The 150-foot wetland buffer from the on- and off-site wetlands encompass approximately 43% of the entire lot.

The subject property is an extremely constrained site due to its topography – the very steep slopes over much of the lot – and the location of the septic system and well. The restrictive distances around the two latter constraints (25 feet minimum distance from a septic system to piped drainage and 50 feet from a drywell or subsurface infiltration facility, and 50 feet from a well to stormwater treatment from a roof and 100 feet from a well to stormwater treatment from a driveway) mean that much of the property is not available for either conveyance of stormwater runoff or its treatment.

(2) Site map/construction drawing(s) for the project, at a scale no smaller than one inch equals 100 feet, including a general location map. At a minimum, the site map shall 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 water(s), wetlands and drainage patterns that could be affected by the construction activity; existing and final slopes; locations of different soil types with boundaries; locations of off-site material, waste, borrow or equipment storage areas; and location(s) of the stormwater discharge(s).

The site and construction drawings may be referenced on drawings prepared by J.D. Barrett & Associates ("JDB") and ALP Engineering and Landscape Architecture, PLLC ("ALP". The general location map may be found on JDB Sheet 1 of 3. The total site area is depicted on sheets JDB Sheet 1 of 3. The area of disturbance may be referenced on JDB Sheet 3 of 3. Areas beyond the limit of disturbance are not being proposed to be disturbed (i.e., graded or removal of trees). Existing vegetation may be found on JDB Sheet 1 of 3. The only wetland on or adjacent to the property is Lake Waccabuc to the south. The runoff flows in a southerly direction from the property into Lake Waccabuc. Grading on the property may be referenced on JDB Sheet 2 of 3 and on ALP drawing C-101. The USDA SCS has mapped two soils on the property: (i) CsD - Chatfield-Charlton complex, 15 to 35 percent slopes, very rocky, in the lower half of the property, and (ii) HrF - Hollis-Rock outcrop complex, 35 to 60 percent slopes in the upper half of the property The soils boundaries may be found in this report. It is not proposed to store any material from the property off-site. Equipment storage areas during construction will use the existing driveway access to the existing garage

(3) Description of the soil(s) present at the site, including an identification of the hydrologic soil group (HSG).

Chatfield-Charlton complex are composed of fine sandy loam and gravelly fine sandy loam. It is well drained and the runoff class is high. Chatfield-Charlton complex soils are in hydrologic soils group B.

Hollis -Rock Outcrop soils are also typically composed of gravelly fine sandy loam. The drainage class is somewhat excessively drained and runoff class is very high. Bedrock is typically shallow, at a depth of 8 to 23 inches. Hollis-Rock Outcrop soils are in hydrologic soils group D.

All of the work on the property is being proposed in the Chatfield-Charlton complex soils.

Deep hole testing was performed on the property on June 17, 2020 and the testing was witnessed by the Town's Engineering Consultant and the New York City Department of Environmental Conservation. Two deep hole test pits were dug, labeled on the plans as Deep Hole Test #1 and #2.

Deep hole test #1 found: 4" topsoil, 1'-6" of medium brown sandy loam fill, a 6" layer of gray sandy loam, followed by 2'-8" of brown sandy loam. A seep was noted at the time of the testing 38" below grade. The test pit was dug to a depth of 5'-4". Deep hole #2 was essentially similar to Deep Hole #1. Groundwater filled into the deep hole, eventually rising to a depth of about 2'-6" below grade. The results of the deep hole testing may be referenced in the Appendix A of this report.

The deep hole testing confirmed that the property is essentially unsuitable for any type of infiltration chamber, due to the shallow depth of groundwater in the lowermost portion of the property nearest to the lake. Given that the ground surface at the deep hole testing locations is abut 476 and the water surface of Lake Waccabuc was noted as being at 472.0 feet, that the groundwater is so shallow at the base of a hill in close proximity to the lake is not surprising.

(4) Construction phasing plan and sequence of operations describing the intended sequence of construction activities, including tree removal, stumping, clearing and grubbing, excavation and grading, utility and infrastructure installation and any other land development activities.

The construction sequence of operations may be found on JDB Sheet 2 of 3. It is proposed to remove 6 trees from the property to construct the house, driveway access to the garage of the new house and studio building. The mitigation plan (JDB Sheet 2 of 3) shows that many more trees will be planted on the property with its redevelopment.

(5) A description of the minimum erosion and sediment control practices to be installed or implemented for each land development activity that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented.

The erosion and sediment control measures to be installed prior to the beginning of land disturbance activities include: (1) A stabilized construction entrance for construction vehicle access to the property; (2) Silt fence in the locations shown on the drawings and installed as per the instructions of the manufacturer and as shown on the construction details, (3) Tree protection and construction fences to protect trees to remain and the existing septic system, (4) slope protection mat, (5) coir logs, (6) inlet protection around catch basins, and (7) two small temporary sediment basins. All of these measures are depicted on the Erosion and Sediment Control Plan.

(6) A temporary and permanent soil stabilization plan that meets the requirements of the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of final stabilization.

Permanent soil stabilization consists of cleaning up all residual site debris and litter and preparing all disturbed areas not to be hard surfaced for topsoiling and seeding and/or planting. All disturbed areas are to be stabilized as noted in the Mitigation Plan on Sheet 2 of 3.

In addition, the permeability of the soil shall be restored by following the Soil Restoration steps in accordance with the 2015 New York State *Stormwater Management Design Manual*.

(7) Dimensions, material specifications, installation details and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any temporary sediment basins and structural practices that will be used to divert flows from exposed soils.

JDB Sheet 3 of 3 shows the material specifications and the details of construction for the erosion and sediment control practices that are proposed. This drawing provides the operation and maintenance requirements for all erosion and sediment control practices to be installed.

(8) A site map/construction drawing(s) specifying the location(s), size(s) and length(s) of each erosion and sediment control practice.

JDB Sheet 3 of 3 depicts the locations, sizes and lengths of each of the proposed erosion and sediment control practices.

(9) Maintenance schedule to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection schedule shall be in accordance with the requirements in the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control.

The maintenance schedule for the erosion and sediment control measures may be found on JDB Sheet 3 of 3.

(10) Description and location of any stormwater discharges associated with industrial activity other than construction at the site, including, but not limited to, stormwater discharges from asphalt plants and concrete plants located on the construction site.

Runoff from the property is presently conveyed to the south toward the lake. The design line is the lake shoreline. There are no existing or proposed discharges associated with any industrial activities.

(11) 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.

Construction materials and debris will be temporarily stored in the driveway to the existing garage. The construction fence and silt fence will ensure that litter, construction chemicals and construction debris are not blown or washed to adjacent properties or into the public street.

(12) Description of construction and waste materials expected to be stored on site with updates as appropriate, and a description of controls to reduce pollutants from these materials, including storage practices to minimize exposure of the materials to stormwater, and spill prevention and response.

Construction materials expected to be stored temporarily on site include, but are not limited to, soil stockpiles, aggregate, and seed to establish lawn for the disturbed ground, wood forms and steel for the footings and foundation for the new buildings, wood for the house, and building roofing materials. These items are not sources of pollution in the short- or long-term.

(13) Identification of any elements of the design that are not in conformance with the requirements in the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is equivalent to the technical standards.

The design of the project is in conformance with the New York State Standards and Specifications for Erosion and Sediment Control, latest edition.

(14) Stormwater quantity and quality controls, at the discretion of the SMO and/or the Town Engineer, may be required.

The project provides stormwater quantity controls, as required. It is not feasible to provide water quality controls, except through the one green infrastructure practice (a rain garden) and a proprietary practice (a hydrodynamic separator) for runoff from the new driveway pavement.

Constraints on the implementation of other quality practices include: (i) the horizontal separation required from the existing septic system, (ii) the horizontal separation (50 feet for roof runoff and 100 feet for driveway runoff) required from the existing potable well to remain, (iii) the very steep slopes present on much of the property, and (iv) the high groundwater table in the gently sloping areas nearest to the lake.

D. Post-construction stormwater management practice component.

(1) All construction projects identified as needing post-construction stormwater management practices pursuant to the SPDES General Permit for Construction Activities shall prepare a

SWPPP that includes practices designed in conformance with the Design Manual, including green infrastructure practices, in addition to the items listed under § 189-8C above. Where post-construction stormwater management practices are not designed in conformance with this technical standard, the applicant must demonstrate equivalence to the technical standard.

The stormwater management practices described in this SWPPP and depicted on the plans have been designed in accordance with the Design Manual.

(2) At a minimum, the post-construction stormwater practice component of the SWPPP shall include the following:

(a) Identification of all post-construction stormwater management practices to be constructed as part of the project.

The proposed stormwater management practices are to consist of: (i) a subsurface (water-tight) concrete tank that will provide attenuation of the peak rate of runoff up to the 25-year storm event, (ii) a rain garden to provide treatment of runoff from a portion of the roof of the new house, and (iii) a hydrodynamic separator for treating runoff from the new driveway.

(b) Site map/construction drawing(s) showing the specific location(s) and size(s) of each post-construction stormwater management practice.

The location and sizes of the post-construction stormwater management practices may be referenced on drawing C-101.

(c) Hydrologic and hydraulic analysis for all structural components of the stormwater management control system for the applicable design storms. The analysis shall include tributary area maps with two-foot contours for the pre-development and post-development conditions.

Flows will be conveyed to the practices via 4" and 6" PVC pipes. The Rational Method (Q = c x I x A) was used to determine the peak rate of runoff from the roof drain leaders and catch basins to each point in the flow path.

For the 6" diameter pipes, the pipe slopes range from 3.49% to 45%. Based on Manning's equation, a 6" pipe with a Manning's n factor of 0.012 (using N-12 HDPE pipe) would have a flow capacity ranging from 1.1 cubic feet per second (cfs) to 4.1 cfs. Both capacities are well in exceedance of the peak flow calculated for post-development drainage areas FDA-2 and FDA-3 for the 25-year storm event, 0.36 cfs and 0.15 cfs, respectively.

Likewise, the 4" storm pipes, which will be used for roof drain leader flows only, based on slopes which range from 5.21% to over 100%, would have a capacity ranging from 0.5 cfs to 2.1

cfs. These flow rates would also be well in excess of the anticipated rates of runoff from the building roofs.

Conclusion: The proposed storm pipe conveyance facilities have sufficient capacity to convey the 25-year storm events to the proposed stormwater management practice.

(d) Detailed summary (including calculations) of the sizing criteria that was used to design all post-construction stormwater management practices. At a minimum, the summary shall address the required design criteria from the applicable chapter of the Design Manual; including the identification of and justification for any deviations from the Design Manual, and identification of any design criteria that are not required based on the design criteria or waiver criteria included in the Design Manual.

The sizing criteria used for the rain garden and subsurface stormwater detention facility may be referenced in Table 1 (rain garden sizing calculations) in this SWPPP report. The detention facility is sized to provide peak rate attenuation of the flows to the 25-year storm event.

(e) Identification of any elements of the design that are not in conformance with the Design Manual. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is equivalent to the technical standards.

The sizing of the post-development stormwater practices are in conformance with the 2015 NYS Stormwater Management Design Manual.

(f) Comparison of post-development stormwater runoff conditions with pre-development conditions.

Appendix B of this SWPPP report provides the calculations which compare the pre-development conditions and the post-development conditions.

Table 1. Flows to Design Point #1

	Existing Condition	Future Condition
1-year storm	0.35	0.34
10-year storm	1.48	1.17
25-year storm	2.26	1.77

(g) Dimensions, material specifications and installation details for each post-construction stormwater management practice or facility.

The proposed StormCapture facility is a rectangle that is 32 feet in length x 8 feet in width x 3 feet in height. The rain garden will be an oval about 18' x 12', with a depth of 6". The rain garden planting soil mix will consist of a minimum of 12 inches of planting soil media. The composition of the soil media is to 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. The hydrodynamic separator is similar in dimensions to a manhole structure (i.e. 5 feet in diameter).

(h) Site maps must include existing topography with two-foot contours, a proposed grading plan with a limit of disturbance line and the calculated area of disturbance in acres.

Two foot contours are provided on ALP drawing C-101 and JDB drawing Sheet 3 of 3. The limit of disturbance may be referenced on Sheet 3 of 3. The total land disturbance is calculated to be 0.46 acres.

(i) An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each postconstruction stormwater management practice or facility. The plan shall identify the entity that will be responsible for the long-term operation and maintenance of each practice.

The operations and maintenance plan is the responsibility of the homeowner.

Maintenance of the Cascade CS-4 hydrodynamic separator involves removal of sediment and any floatables. It is anticipated that this would need to be done once every few years. There is no specific maintenance that is required for the StormCapture facility. The rain garden will require occasional removal of weeds, placement of shredded hardwood bark mulch on an annual basis (typically in the spring), and pruning of plants, as needed.

FIGURES

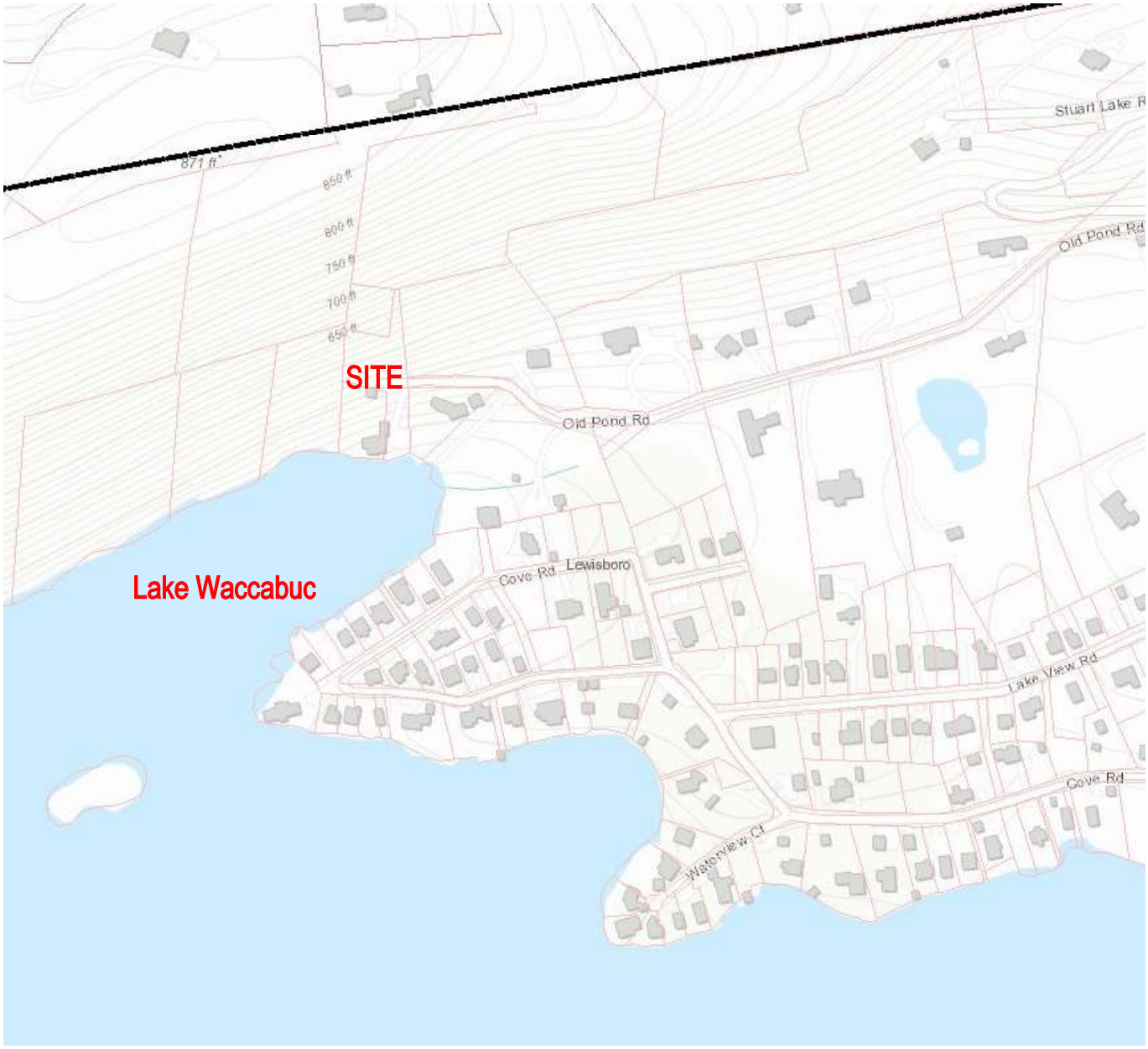


Figure 1

SITE LOCATION MAP

Scale: Not to Scale

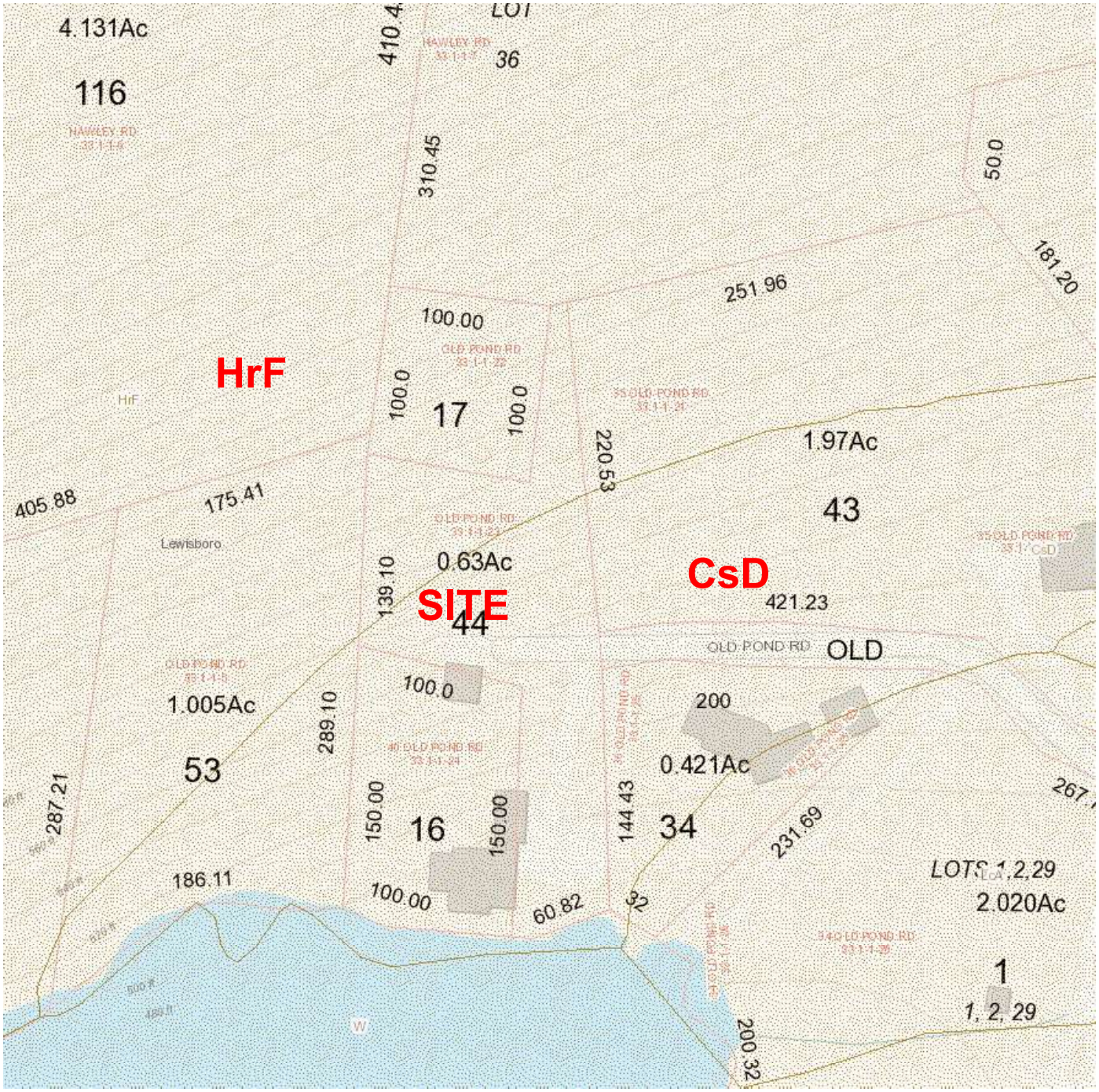


Figure 2

SOILS MAP

Scale: Not to Scale

Appendix A

DEEP HOLE TESTING

ALP ENGINEERING LANDSCAPE ARCHITECTURE, PLLC
P.O. Box 843, Ridgefield CT 06877

40 OLD POND ROAD, SOUTH SALEM, NEW YORK
TEST DATA REQUIRED TO BE SUBMITTED WITH APPLICATION
DESCRIPTION OF SOILS ENCOUNTERED IN TEST HOLES

DEPTH	HOLE # 1 Elev. 475.8±	HOLE # 2 Elev. 476±	HOLE # _____	HOLE # _____
GROUND				
0'-6"	4" topsoil	4" topsoil		
1'-0"	Medium brown	Medium brown		
1'-6"	sandy loam fill	sandy loam fill		
2'-0"				
2'-6"	Grey sandy loam			
3'-0"				
3'-6"	Brown sandy	Brown sandy		
4'-0"	loam	loam		
4'-6"				
5'-0"				
5'-6"	Dug to 5'-4"	Dug to 5'		
6'-0"				
6'-6"				
7'-0"				
7'-6"				
8'-0"				
8'-6"				
G.W.	Seep @ 38" Water @ 21" depth	Seep @ 38" Water @ 21" depth		
ROCK				

TESTS MADE BY: Alan L. Pilch, PE, RLA DATE: 6/17/2020

NAME: ALP Engineering & Land Arch, PLLC SIGNATURE:
ADDRESS: P.O. Box 843, Ridgefield, CT 06877 SEAL:

Appendix B

SUPPORTING DOCUMENTS

Table 1
40 Old Pond Road, South Salem
Drainage Area to Rain Garden

DRAINAGE AREA	*Area (in sq feet)*	*Area (in acres)*
FDA-3 TO RAIN GARDEN		
impervious	404	0.009
lawn/landscape	984	0.023
impervious walls	23	0.001
TOTAL	1,411	0.032
TOTAL	2,822	0.065

WQv Calculation:

P =	1.5	inches
impervious area =	0.010	acres
% impervious =	15.1	%
Rv =	0.19	
WQv =	0.002	acre-feet, OR
WQv =	66	cu feet

Table 2
40 Old Pond Road, South Salem
Rain Garden Sizing Calculations

RAIN GARDEN DESIGN

Elevation *feet*	**Area** *s.f.*	**Incremental Volume** *c.f.*	**Volume Sum** *cu. ft.*	**Volume Sum** *acre-feet*
500.00	99	0	0	0
500.25	139	30	30	0.0007
500.50	185	41	70	0.0016
500.75	225	51	122	0.0028

Parameters for Rain Garden Design as per 2015 NYS Stormwater Management Design Manual

Equations as per 2015 NYS SMDM:
WQv ≤ VSM + VDL + (DP x ARG)
VSM = ARG x DSM x nSM
VDL (optional) = ARG x DDL x nDL
where:

VSM = volume of the soil media [cubic feet]
VDL = volume of the gravel drainage layer [cubic feet]
ARG = rain garden surface area [square feet]
DSM = depth of the soil media, typically* 1.0 to 1.5 [feet]
DDL = depth of the drainage layer, minimum 0.5 [feet]
DP = depth of ponding above surface, maximum 0.5 feet [feet]
nSM = porosity of the soil media (≥ 20%)
nDL = porosity of the drainage layer (≥ 40%)
WQv = Water Quality Volume [cubic feet], as defined in Chapter 4

			Remarks
Surface Area of Rain Garden, ARG =	139	sq feet	*as per design*
Depth of the Soil Media, DSM =	1.0	foot	*as per design*
Porosity of the Soil Media, nSM =	20	%	*typical*
Depth of the Gravel Drainage Layer =	0.5	foot	*as per design*
Porosity of the Drainage Layer, nDL =	40	%	*typical*
Depth of Ponding above Surface =	0.50	feet	*as per design*
Volume of Soil Media, VSM =	28	cubic feet	*calculated*
Volume of Gravel Drainage Layer, VDL =	28	cubic feet	*calculated*
WQv Calculated =	66	cubic feet	*calculated*
WQv <= VSM + VDL + (DP x ARG) =	125	cubic feet	*calculated*

Since the WQv is less than the equation above, the design is acceptable.

CDS ESTIMATED NET ANNUAL SOLIDS LOAD REDUCTION
BASED ON THE RATIONAL RAINFALL METHOD
BASED ON AN AVERAGE PARTICLE SIZE OF 50 MICRONS
MCARTHUR PROPERTY REDEVELOPMENT
SOUTH SALEM, NY
for SYSTEM: HYDRODYNAMIC SEPARATOR

CONTECH ENGINEERED SOLUTIONS

CDS

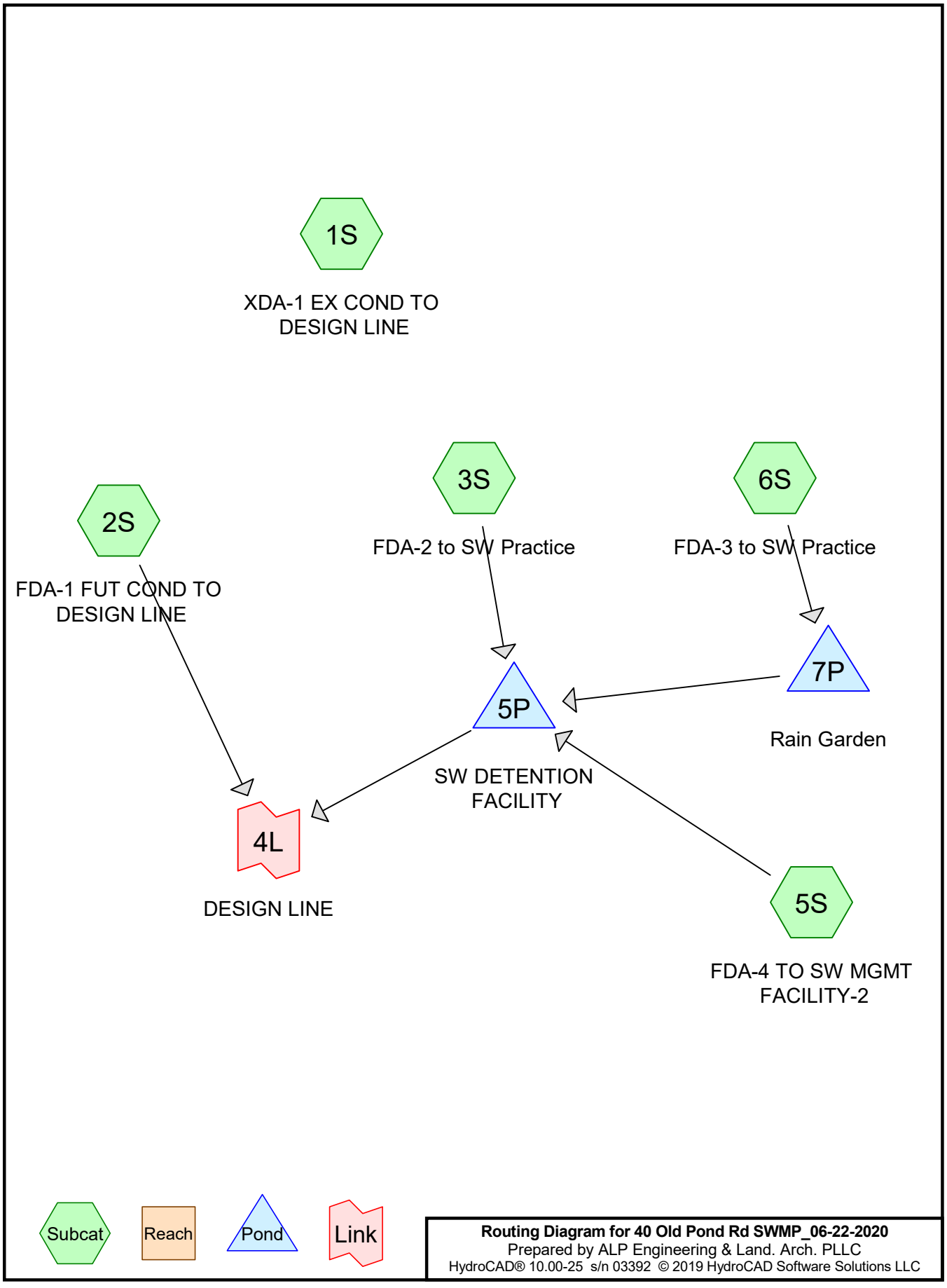
Area	0.05	acres	CDS Model	2015	
Weighted C	0.90		Particle size	50	microns
Tc	6	minutes			

Rainfall Intensity[1] (in/hr)	Percent Rainfall Volume[1]	Cumulative Rainfall Volume	Total Flowrate (cfs)	Treated Flowrate (cfs)	Operating Rate (%)	Removal Efficiency (%)	Incremental Removal (%)
0.02	8.4%	8.4%	0.00	0.00	0.13	97.2	8.2
0.04	9.1%	17.5%	0.00	0.00	0.26	97.1	8.8
0.06	9.1%	26.6%	0.00	0.00	0.39	97.1	8.8
0.08	8.0%	34.6%	0.00	0.00	0.51	97.0	7.8
0.10	6.8%	41.5%	0.00	0.00	0.64	97.0	6.6
0.12	4.8%	46.2%	0.01	0.01	0.77	97.0	4.6
0.14	5.0%	51.3%	0.01	0.01	0.90	96.9	4.9
0.16	5.2%	56.5%	0.01	0.01	1.03	96.9	5.1
0.18	3.7%	60.3%	0.01	0.01	1.16	96.8	3.6
0.20	3.4%	63.6%	0.01	0.01	1.29	96.8	3.3
0.25	8.0%	71.6%	0.01	0.01	1.61	96.7	7.7
0.30	6.3%	77.9%	0.01	0.01	1.93	96.6	6.1
0.35	4.7%	82.6%	0.02	0.02	2.25	96.5	4.5
0.40	2.1%	84.7%	0.02	0.02	2.57	96.3	2.0
0.45	2.9%	87.6%	0.02	0.02	2.89	96.2	2.8
0.50	2.3%	89.9%	0.02	0.02	3.21	96.1	2.2
0.75	4.4%	94.3%	0.03	0.03	4.82	95.6	4.2
1.00	2.7%	97.0%	0.05	0.05	6.43	95.0	2.6
1.50	1.4%	98.4%	0.07	0.07	9.64	93.9	1.3
2.00	0.4%	98.9%	0.09	0.09	12.86	92.8	0.4
2.50	1.1%	100.0%	0.11	0.11	16.07	91.7	1.0
							96.6
						Removal Efficiency Adjustment[2] =	6.5%
						Predicted % Annual Rainfall Treated =	93.5%
						Predicted Net Annual Load Removal Efficiency =	**90.2%**

1 - Based on 10 Years of Hourly Precipitation Data From NCDC Station 5803, New York Kennedy WSCMO, Queens Coun
2 - Reduction due to use of 60-minute data for a site that has a time of concentration less than 30-minutes.

Appendix C

HYDROGRAPHS AND ROUTINGS



Routing Diagram for 40 Old Pond Rd SWMP_06-22-2020
Prepared by ALP Engineering & Land. Arch. PLLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.023	61	>75% Grass cover, Good, HSG B (6S)
0.061	98	Driveway, HSG B (5S)
0.213	98	Paved parking, HSG B (1S, 2S)
0.051	98	Roofs and Walks, HSG B (3S)
0.009	98	Roofs, HSG B (6S)
0.001	98	Walls, HSG B (6S)
0.875	58	Woods/grass comb., Good, HSG B (1S, 2S)
1.233	**69**	**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.023	0.000	0.000	0.000	0.023	>75% Grass cover, Good	6S
0.000	0.061	0.000	0.000	0.000	0.061	Driveway	5S
0.000	0.213	0.000	0.000	0.000	0.213	Paved parking	1S, 2S
0.000	0.009	0.000	0.000	0.000	0.009	Roofs	6S
0.000	0.051	0.000	0.000	0.000	0.051	Roofs and Walks	3S
0.000	0.001	0.000	0.000	0.000	0.001	Walls	6S
0.000	0.875	0.000	0.000	0.000	0.875	Woods/grass comb., Good	1S, 2S
0.000	**1.233**	**0.000**	**0.000**	**0.000**	**1.233**	**TOTAL AREA**	

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: XDA-1 EX COND TO Runoff Area=26,851 sf 26.32% Impervious Runoff Depth=0.58"
Flow Length=187' Tc=4.8 min CN=69 Runoff=0.35 cfs 0.030 af

Subcatchment 2S: FDA-1 FUT COND TO Runoff Area=20,562 sf 10.79% Impervious Runoff Depth=0.33"
Flow Length=187' Tc=4.8 min CN=62 Runoff=0.10 cfs 0.013 af

Subcatchment 3S: FDA-2 to SW Practice Runoff Area=2,201 sf 100.00% Impervious Runoff Depth=2.59"
Tc=2.0 min CN=98 Runoff=0.16 cfs 0.011 af

Subcatchment 5S: FDA-4 TO SW MGMT Runoff Area=2,677 sf 100.00% Impervious Runoff Depth=2.59"
Tc=2.0 min CN=98 Runoff=0.19 cfs 0.013 af

Subcatchment 6S: FDA-3 to SW Practice Runoff Area=1,411 sf 30.26% Impervious Runoff Depth=0.70"
Tc=2.0 min CN=72 Runoff=0.03 cfs 0.002 af

Pond 5P: SW DETENTION FACILITY Peak Elev=476.00' Storage=105 cf Inflow=0.35 cfs 0.024 af
4.0" Round Culvert n=0.010 L=36.0' S=0.0278 '/' Outflow=0.24 cfs 0.024 af

Pond 7P: Rain Garden Peak Elev=500.17' Storage=19 cf Inflow=0.03 cfs 0.002 af
Discarded=0.01 cfs 0.002 af Primary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.002 af

Link 4L: DESIGN LINE Inflow=0.34 cfs 0.037 af
Primary=0.34 cfs 0.037 af

Total Runoff Area = 1.233 ac Runoff Volume = 0.069 af Average Runoff Depth = 0.67"
72.83% Pervious = 0.898 ac 27.17% Impervious = 0.335 ac

Summary for Subcatchment 1S: XDA-1 EX COND TO DESIGN LINE

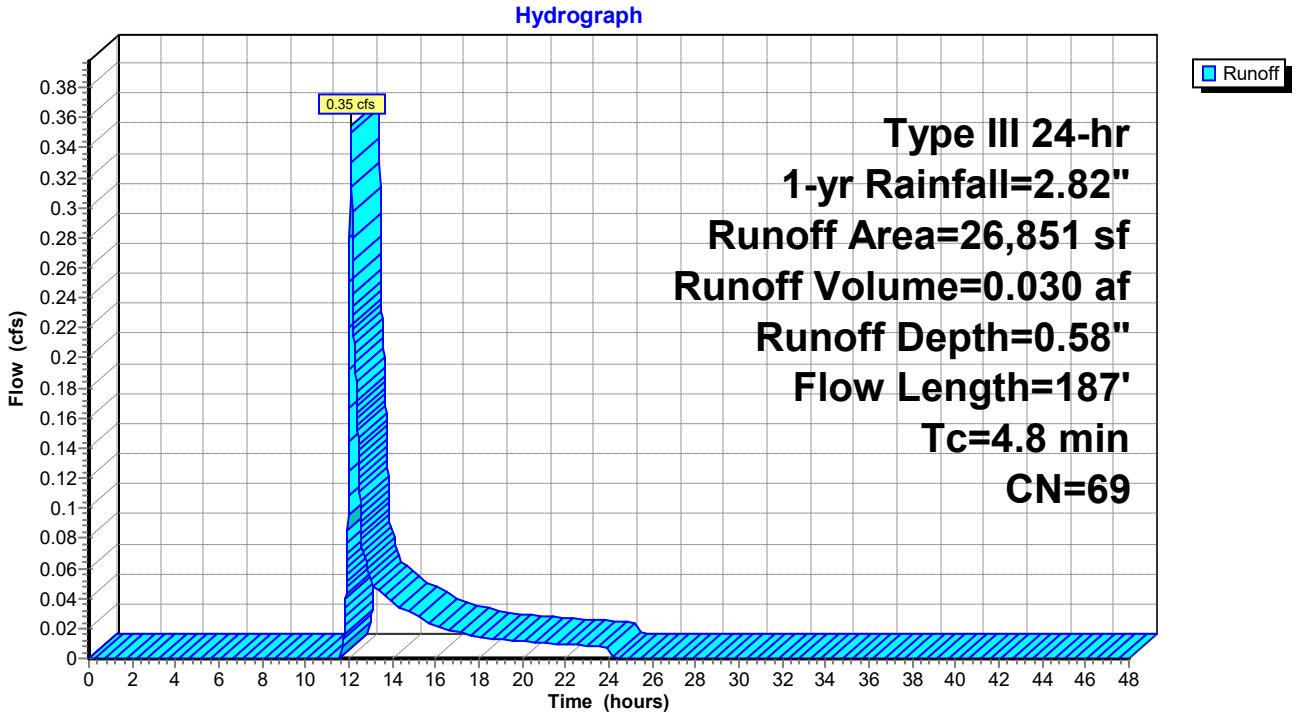
Runoff = 0.35 cfs @ 12.09 hrs, Volume= 0.030 af, Depth= 0.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-yr Rainfall=2.82"

Area (sf)	CN	Description
7,068	98	Paved parking, HSG B
19,783	58	Woods/grass comb., Good, HSG B
26,851	69	Weighted Average
19,783		73.68% Pervious Area
7,068		26.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.6	19	0.5263	0.12		**Sheet Flow, A-B** Woods: Dense underbrush n= 0.800 P2= 3.40"
1.0	45	0.0889	0.75		**Shallow Concentrated Flow, B-C** Forest w/Heavy Litter Kv= 2.5 fps
0.3	30	0.6000	1.94		**Shallow Concentrated Flow, C-D** Forest w/Heavy Litter Kv= 2.5 fps
0.3	26	0.3846	1.55		**Shallow Concentrated Flow, D-E** Forest w/Heavy Litter Kv= 2.5 fps
0.6	67	0.0791	1.97		**Shallow Concentrated Flow, E-F** Short Grass Pasture Kv= 7.0 fps
4.8	187	Total			

Subcatchment 1S: XDA-1 EX COND TO DESIGN LINE



Summary for Subcatchment 2S: FDA-1 FUT COND TO DESIGN LINE

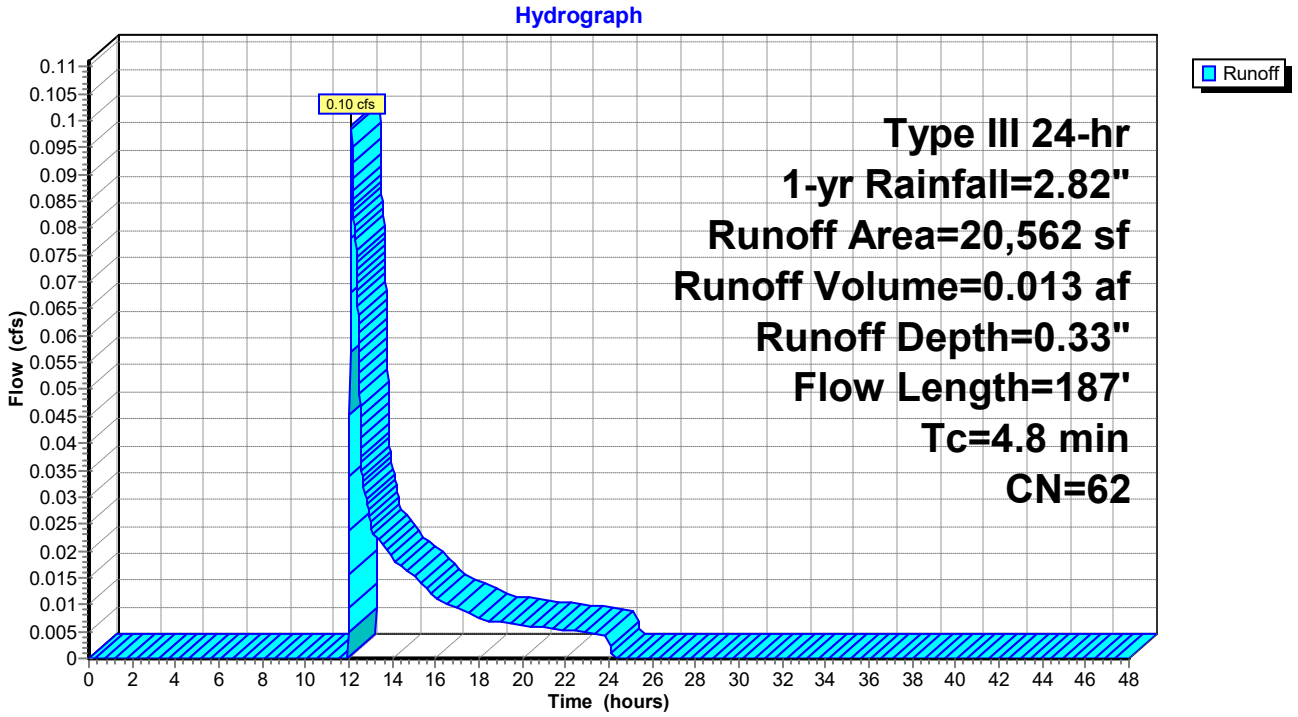
Runoff = 0.10 cfs @ 12.12 hrs, Volume= 0.013 af, Depth= 0.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-yr Rainfall=2.82"

Area (sf)	CN	Description
2,218	98	Paved parking, HSG B
18,344	58	Woods/grass comb., Good, HSG B
20,562	62	Weighted Average
18,344		89.21% Pervious Area
2,218		10.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.6	19	0.5263	0.12		**Sheet Flow, A-B** Woods: Dense underbrush n= 0.800 P2= 3.40"
1.0	45	0.0889	0.75		**Shallow Concentrated Flow, B-C** Forest w/Heavy Litter Kv= 2.5 fps
0.3	30	0.6000	1.94		**Shallow Concentrated Flow, C-D** Forest w/Heavy Litter Kv= 2.5 fps
0.3	26	0.3846	1.55		**Shallow Concentrated Flow, D-E** Forest w/Heavy Litter Kv= 2.5 fps
0.6	67	0.0791	1.97		**Shallow Concentrated Flow, E-F** Short Grass Pasture Kv= 7.0 fps
4.8	187	Total			

Subcatchment 2S: FDA-1 FUT COND TO DESIGN LINE



Summary for Subcatchment 3S: FDA-2 to SW Practice

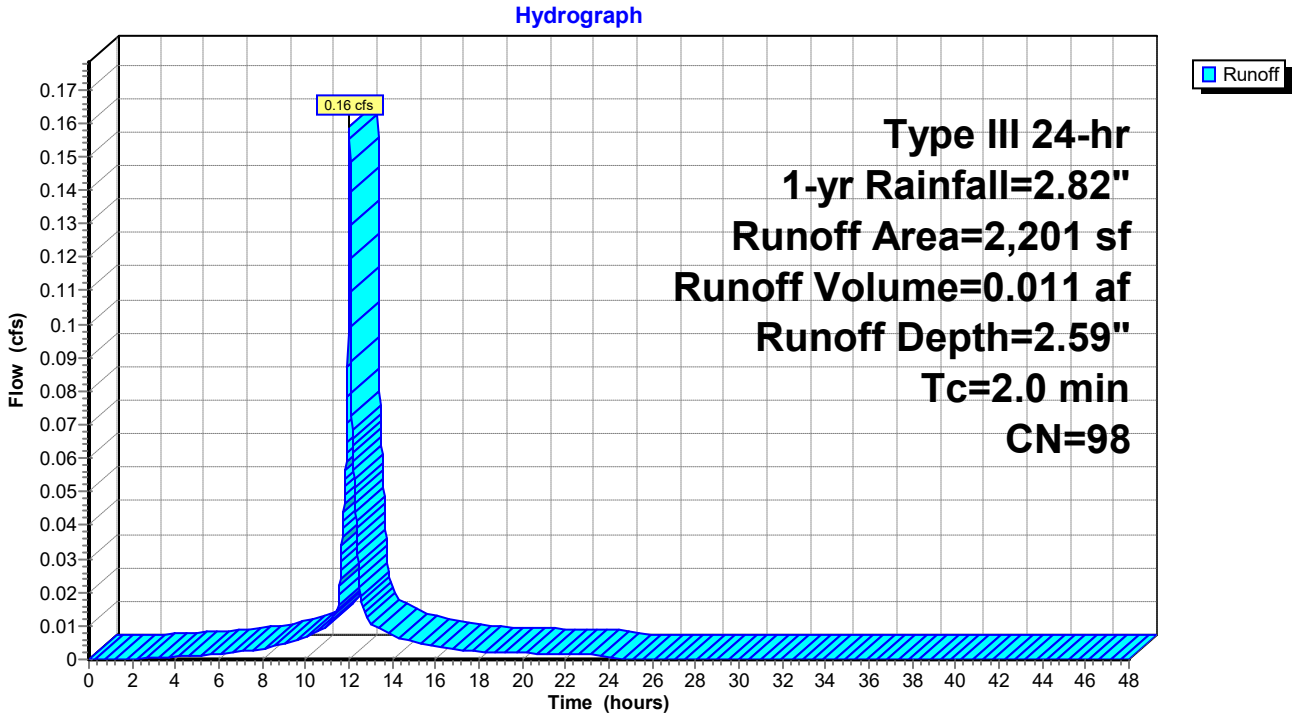
Runoff = 0.16 cfs @ 12.03 hrs, Volume= 0.011 af, Depth= 2.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-yr Rainfall=2.82"

	Area (sf)	CN	Description
*	2,201	98	Roofs and Walks, HSG B
	2,201		100.00% Impervious Area

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

Subcatchment 3S: FDA-2 to SW Practice



Summary for Subcatchment 5S: FDA-4 TO SW MGMT FACILITY-2

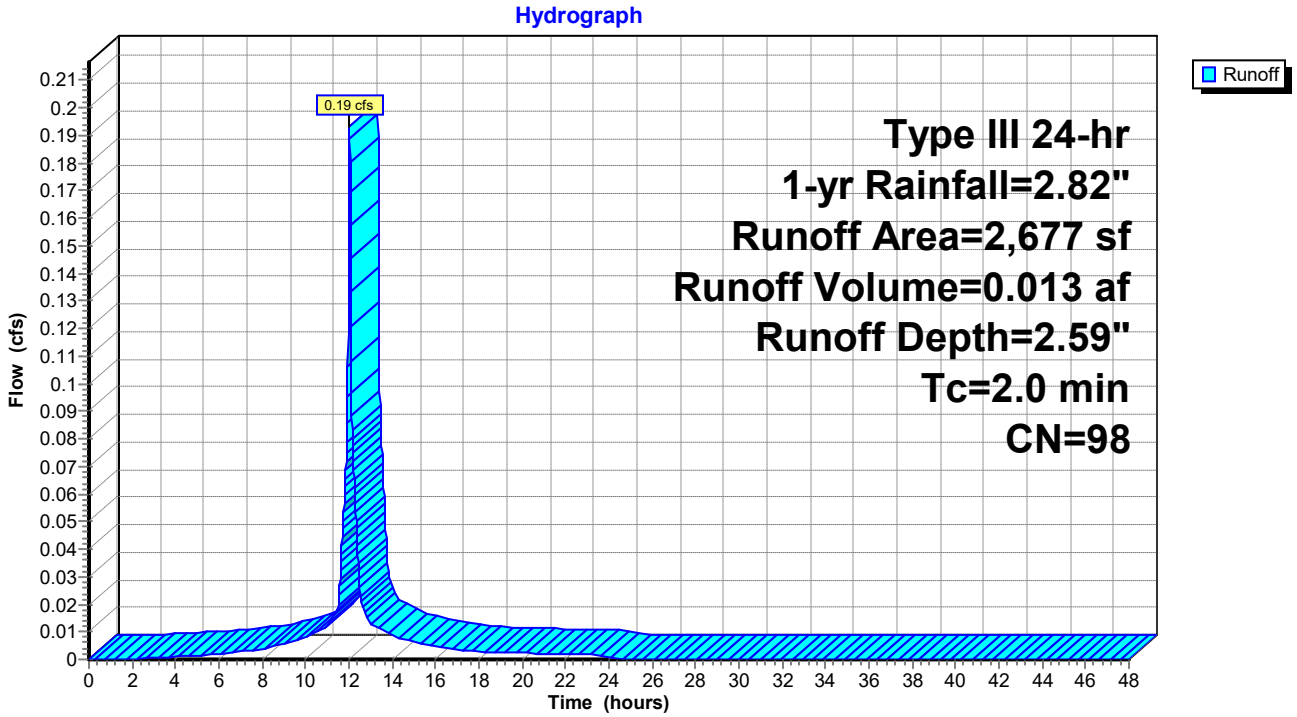
Runoff = 0.19 cfs @ 12.03 hrs, Volume= 0.013 af, Depth= 2.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-yr Rainfall=2.82"

	Area (sf)	CN	Description
*	2,677	98	Driveway, HSG B
	2,677		100.00% Impervious Area

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

Subcatchment 5S: FDA-4 TO SW MGMT FACILITY-2



Summary for Subcatchment 6S: FDA-3 to SW Practice

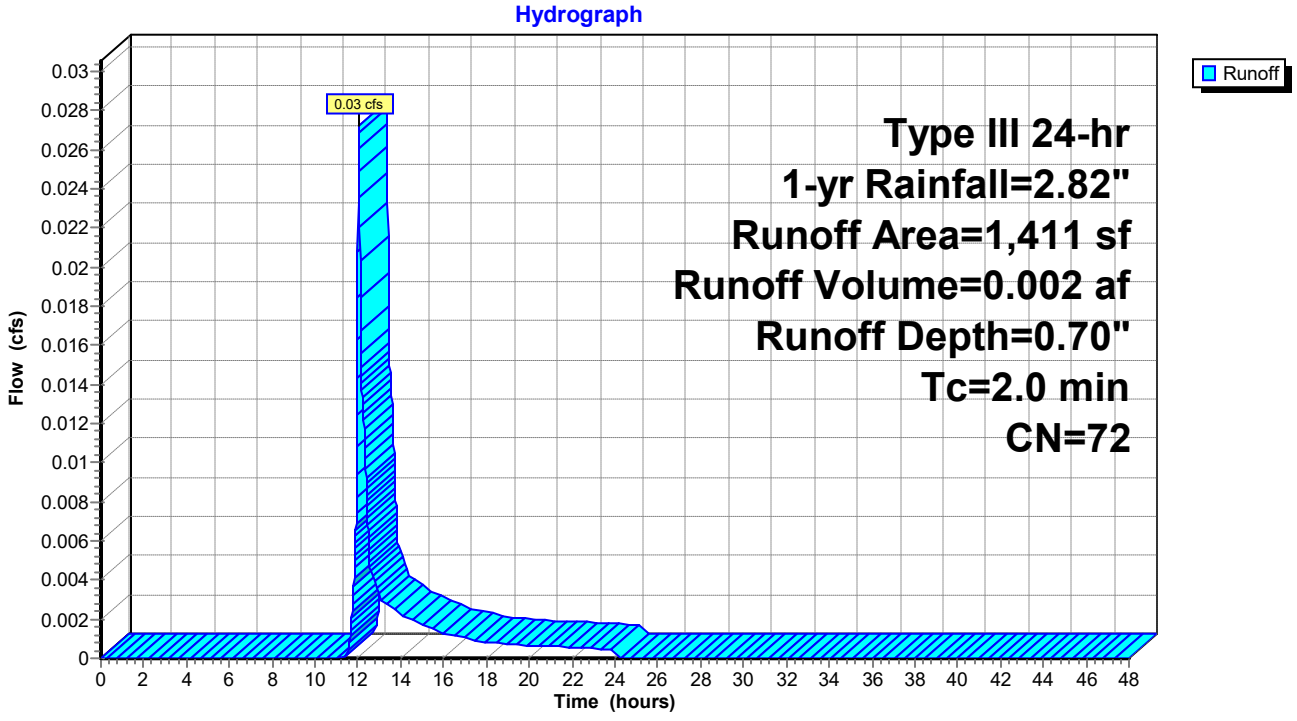
Runoff = 0.03 cfs @ 12.04 hrs, Volume= 0.002 af, Depth= 0.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-yr Rainfall=2.82"

	Area (sf)	CN	Description
	404	98	Roofs, HSG B
	984	61	>75% Grass cover, Good, HSG B
*	23	98	Walls, HSG B
	1,411	72	Weighted Average
	984		69.74% Pervious Area
	427		30.26% Impervious Area

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

Subcatchment 6S: FDA-3 to SW Practice



Summary for Pond 5P: SW DETENTION FACILITY

Inflow Area = 0.144 ac, 84.35% Impervious, Inflow Depth = 2.01" for 1-yr event
Inflow = 0.35 cfs @ 12.03 hrs, Volume= 0.024 af
Outflow = 0.24 cfs @ 12.09 hrs, Volume= 0.024 af, Atten= 31%, Lag= 3.7 min
Primary = 0.24 cfs @ 12.09 hrs, Volume= 0.024 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 476.00' @ 12.09 hrs Surf.Area= 256 sf Storage= 105 cf

Plug-Flow detention time= 16.1 min calculated for 0.024 af (100% of inflow)
Center-of-Mass det. time= 16.0 min (771.5 - 755.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	474.50'	0 cf	**8.00'W x 32.00'L x 3.58'H Field A** 917 cf Overall - 661 cf Embedded = 256 cf x 0.0% Voids
#2A	475.50'	420 cf	**Oldcastle StormCapture SC1 2'** x 2 Inside #1 Inside= 84.0"W x 24.0"H => 13.13 sf x 16.00'L = 210.0 cf Outside= 96.0"W x 31.0"H => 20.67 sf x 16.00'L = 330.7 cf
		420 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	475.50'	**4.0" Round Culvert** L= 36.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 475.50' / 474.50' S= 0.0278 '/' Cc= 0.900 n= 0.010, Flow Area= 0.09 sf

Primary OutFlow Max=0.24 cfs @ 12.09 hrs HW=476.00' (Free Discharge)
1=Culvert (Inlet Controls 0.24 cfs @ 2.77 fps)

Pond 5P: SW DETENTION FACILITY - Chamber Wizard Field A

Chamber Model = Oldcastle StormCapture SC1 2' (Oldcastle StormCapture® SC1)
Inside= 84.0"W x 24.0"H => 13.13 sf x 16.00'L = 210.0 cf
Outside= 96.0"W x 31.0"H => 20.67 sf x 16.00'L = 330.7 cf

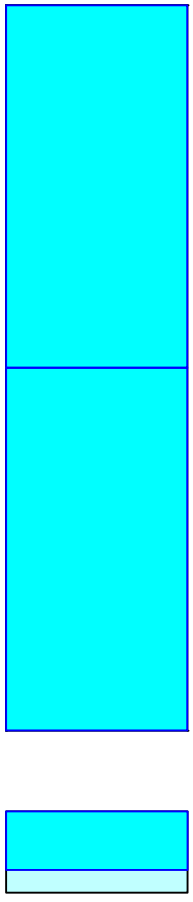
2 Chambers/Row x 16.00' Long = 32.00' Row Length
1 Rows x 96.0" Wide = 8.00' Base Width
12.0" Base + 31.0" Chamber Height = 3.58' Field Height

2 Chambers x 210.0 cf = 420.0 cf Chamber Storage
2 Chambers x 330.7 cf = 661.3 cf Displacement

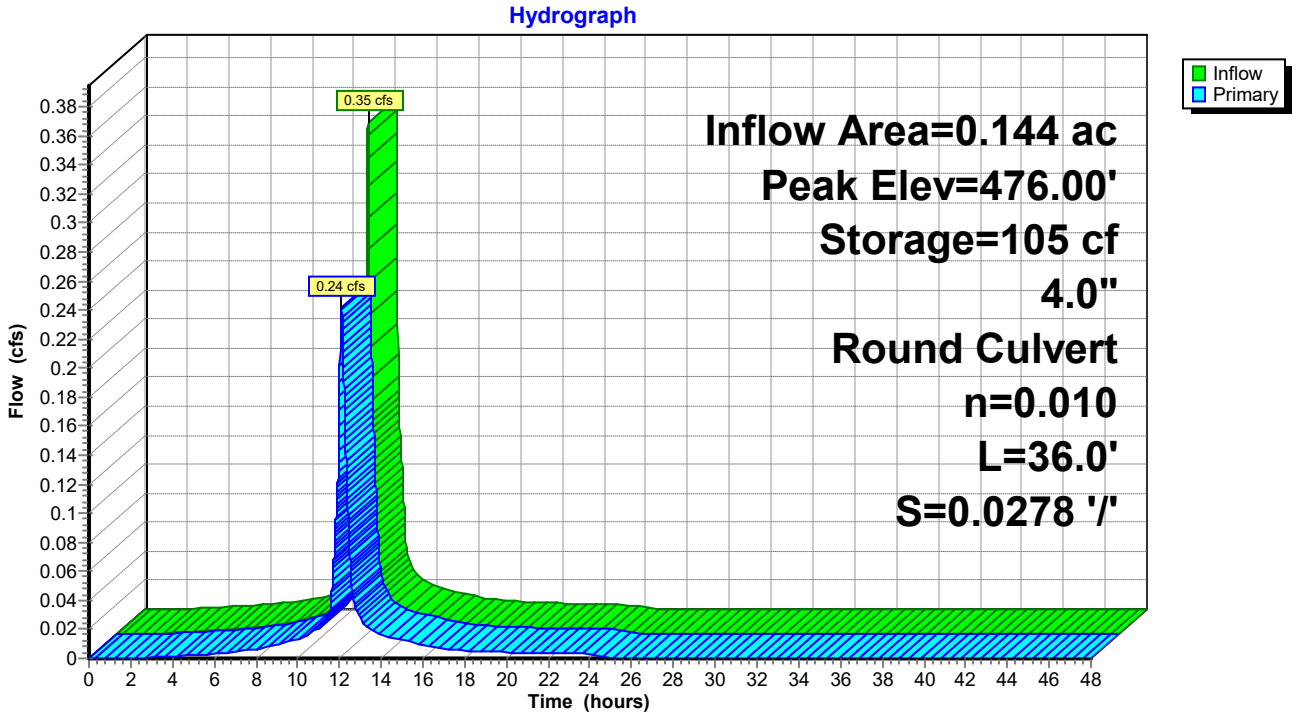
917.3 cf Field - 661.3 cf Chambers = 256.0 cf Stone x 0.0% Voids = 0.0 cf Stone Storage

Chamber Storage = 420.0 cf = 0.010 af
Overall Storage Efficiency = 45.8%
Overall System Size = 32.00' x 8.00' x 3.58'

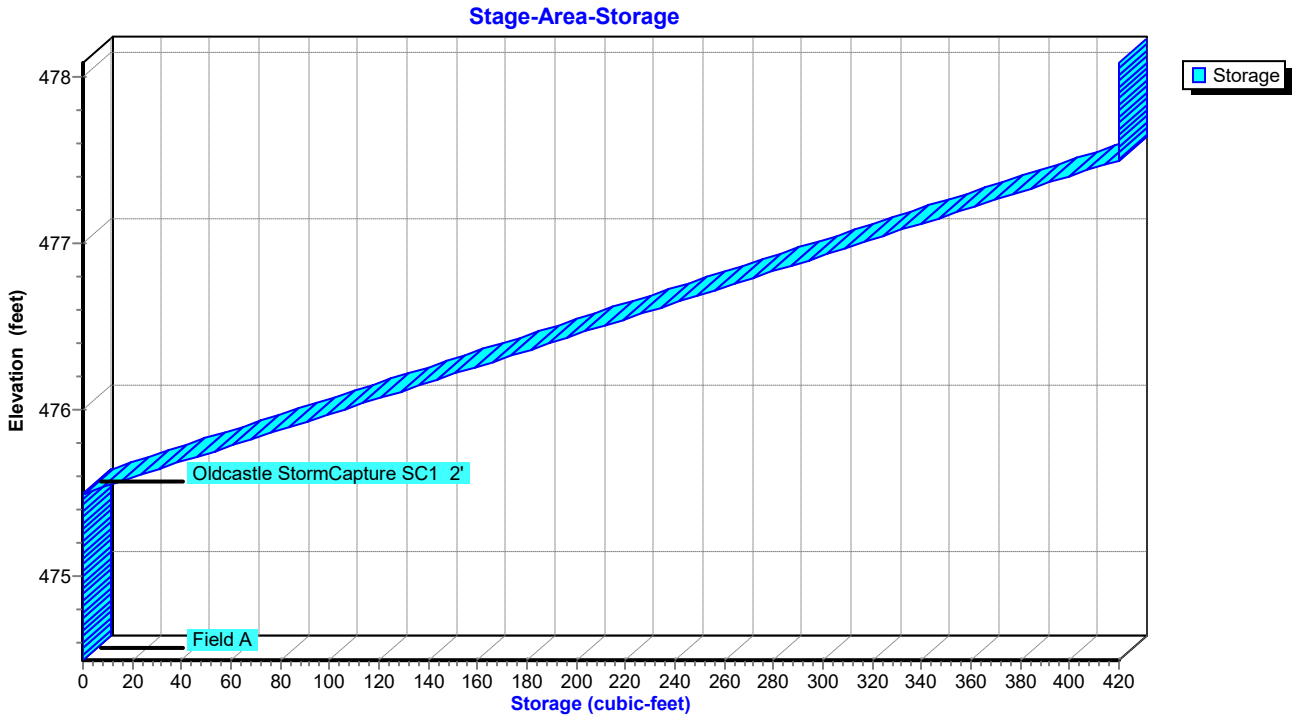
2 Chambers
34.0 cy Field
9.5 cy Stone



Pond 5P: SW DETENTION FACILITY



Pond 5P: SW DETENTION FACILITY



Summary for Pond 7P: Rain Garden

Inflow Area = 0.032 ac, 30.26% Impervious, Inflow Depth = 0.70" for 1-yr event
Inflow = 0.03 cfs @ 12.04 hrs, Volume= 0.002 af
Outflow = 0.01 cfs @ 12.49 hrs, Volume= 0.002 af, Atten= 79%, Lag= 27.2 min
Discarded = 0.01 cfs @ 12.49 hrs, Volume= 0.002 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 500.17' @ 12.49 hrs Surf.Area= 125 sf Storage= 19 cf

Plug-Flow detention time= 22.1 min calculated for 0.002 af (100% of inflow)
Center-of-Mass det. time= 22.1 min (896.4 - 874.3)

Volume	Invert	Avail.Storage	Storage Description
#1	500.00'	179 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

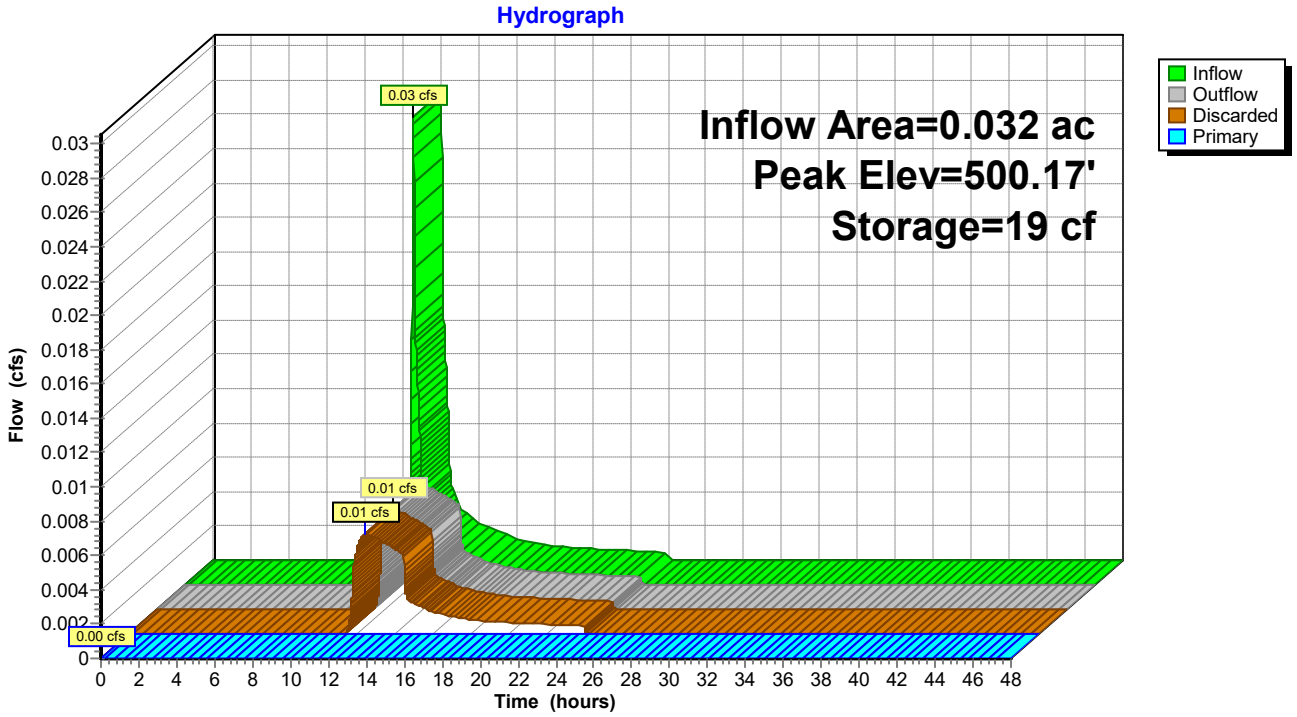
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
500.00	98	0	0
500.25	139	30	30
500.50	185	41	70
501.00	250	109	179

Device	Routing	Invert	Outlet Devices
#1	Primary	500.50'	**4.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Discarded	500.00'	**2.000 in/hr Exfiltration over Horizontal area**

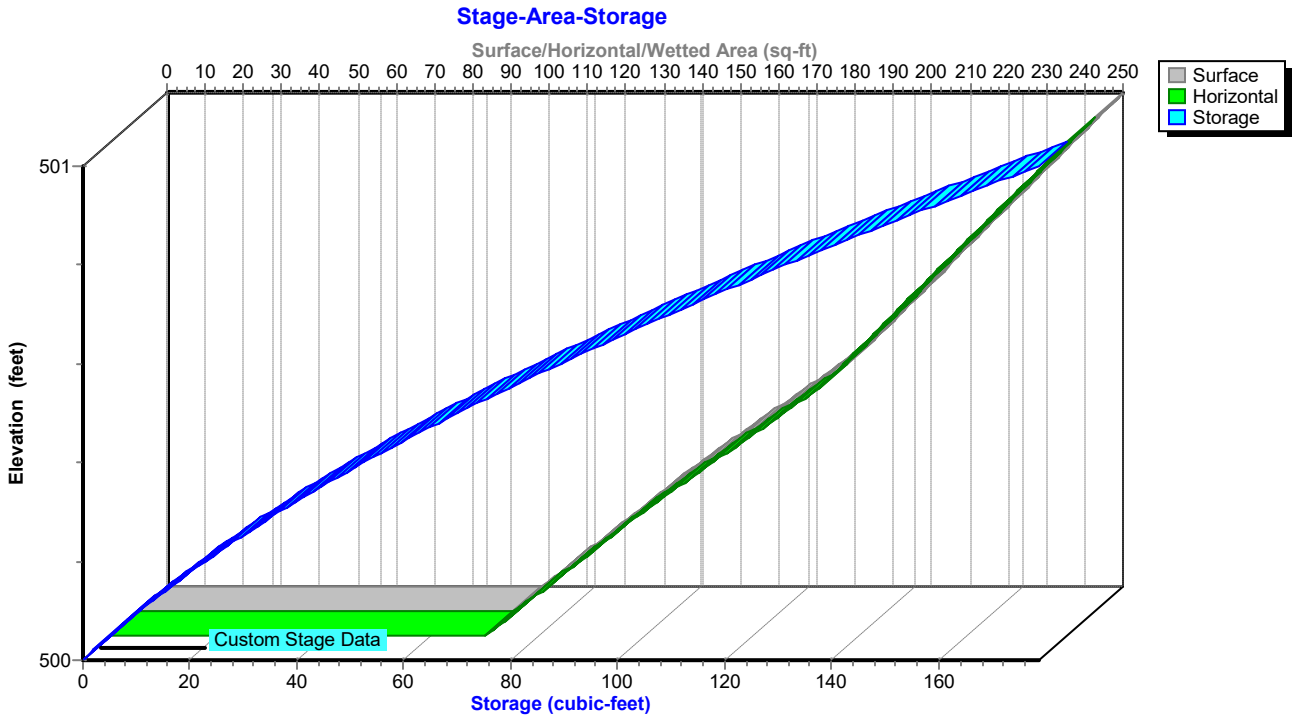
Discarded OutFlow Max=0.01 cfs @ 12.49 hrs HW=500.17' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=500.00' (Free Discharge)
↑—**1=Orifice/Grate** (Controls 0.00 cfs)

Pond 7P: Rain Garden



Pond 7P: Rain Garden

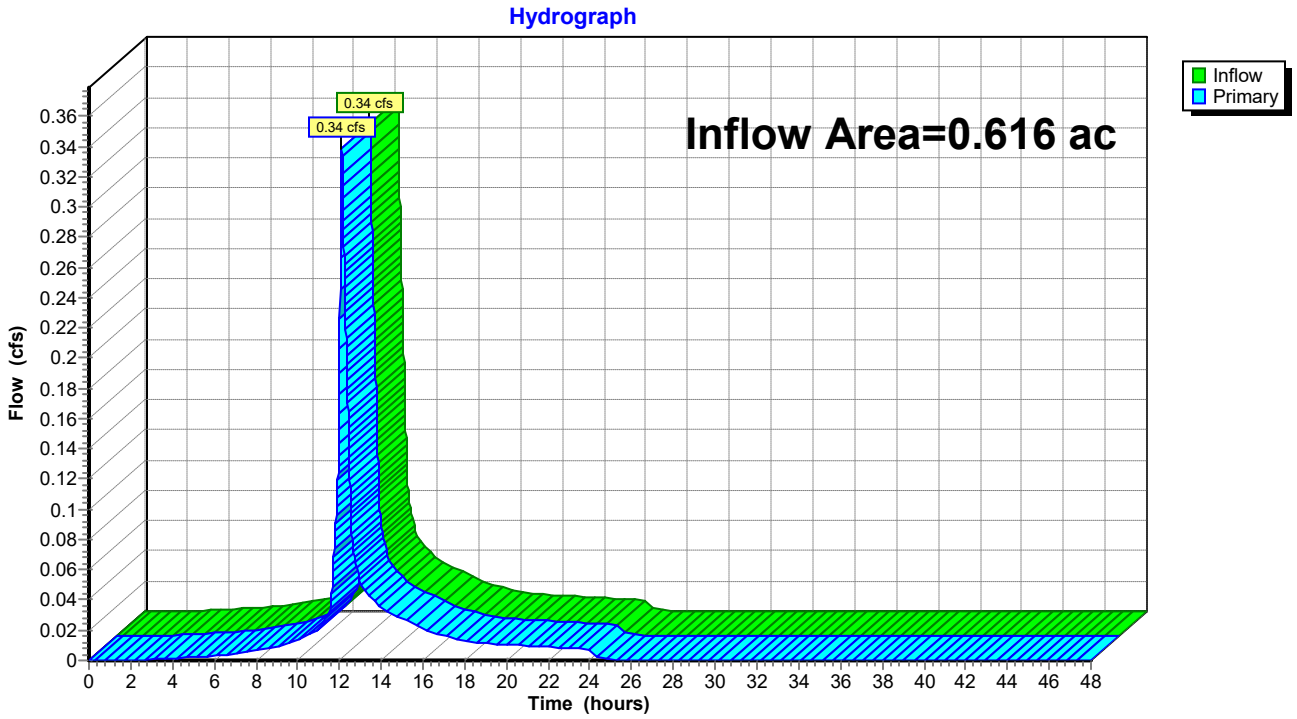


Summary for Link 4L: DESIGN LINE

Inflow Area = 0.616 ac, 28.02% Impervious, Inflow Depth = 0.72" for 1-yr event
Inflow = 0.34 cfs @ 12.11 hrs, Volume= 0.037 af
Primary = 0.34 cfs @ 12.11 hrs, Volume= 0.037 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 4L: DESIGN LINE



Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: XDA-1 EX COND TO Runoff Area=26,851 sf 26.32% Impervious Runoff Depth=2.01"
Flow Length=187' Tc=4.8 min CN=69 Runoff=1.48 cfs 0.103 af

Subcatchment 2S: FDA-1 FUT COND TO Runoff Area=20,562 sf 10.79% Impervious Runoff Depth=1.48"
Flow Length=187' Tc=4.8 min CN=62 Runoff=0.79 cfs 0.058 af

Subcatchment 3S: FDA-2 to SW Practice Runoff Area=2,201 sf 100.00% Impervious Runoff Depth=4.83"
Tc=2.0 min CN=98 Runoff=0.29 cfs 0.020 af

Subcatchment 5S: FDA-4 TO SW MGMT Runoff Area=2,677 sf 100.00% Impervious Runoff Depth=4.83"
Tc=2.0 min CN=98 Runoff=0.35 cfs 0.025 af

Subcatchment 6S: FDA-3 to SW Practice Runoff Area=1,411 sf 30.26% Impervious Runoff Depth=2.25"
Tc=2.0 min CN=72 Runoff=0.10 cfs 0.006 af

Pond 5P: SW DETENTION FACILITY Peak Elev=476.49' Storage=208 cf Inflow=0.64 cfs 0.046 af
4.0" Round Culvert n=0.010 L=36.0' S=0.0278 '/' Outflow=0.38 cfs 0.046 af

Pond 7P: Rain Garden Peak Elev=500.54' Storage=77 cf Inflow=0.10 cfs 0.006 af
Discarded=0.01 cfs 0.005 af Primary=0.03 cfs 0.001 af Outflow=0.03 cfs 0.006 af

Link 4L: DESIGN LINE Inflow=1.17 cfs 0.104 af
Primary=1.17 cfs 0.104 af

Total Runoff Area = 1.233 ac Runoff Volume = 0.213 af Average Runoff Depth = 2.07"
72.83% Pervious = 0.898 ac 27.17% Impervious = 0.335 ac

Summary for Subcatchment 1S: XDA-1 EX COND TO DESIGN LINE

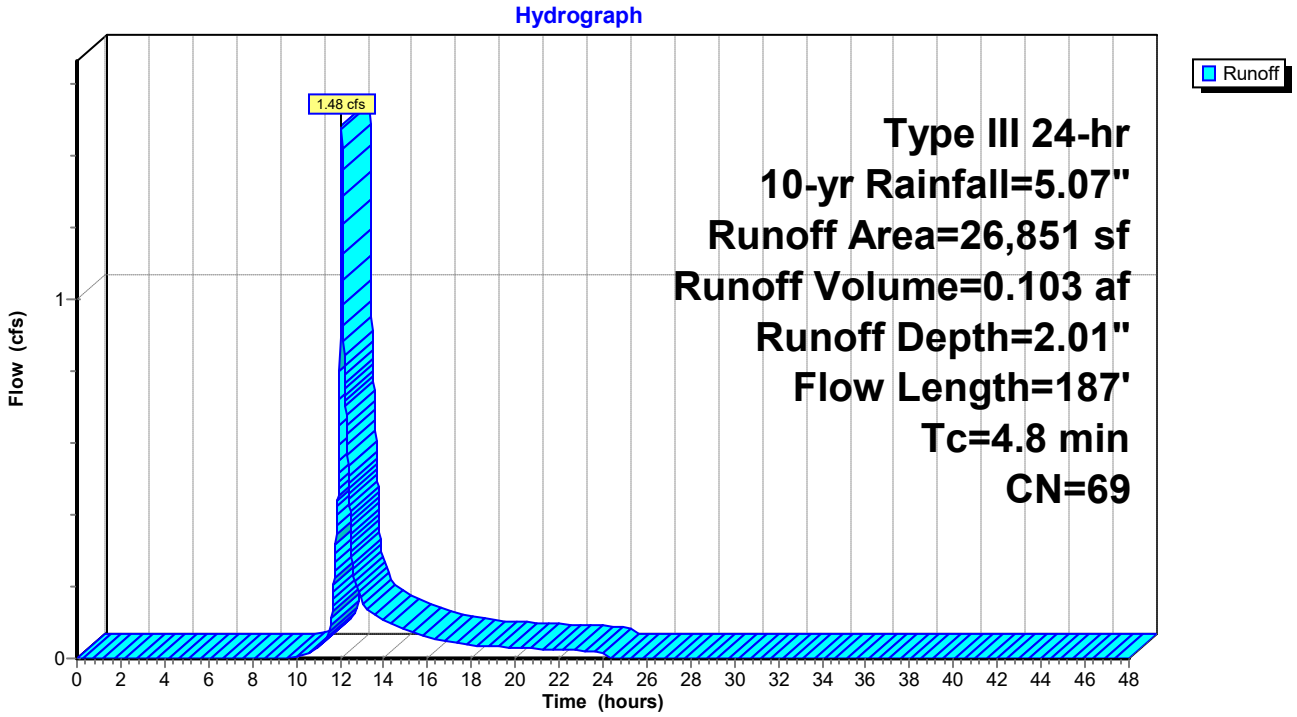
Runoff = 1.48 cfs @ 12.08 hrs, Volume= 0.103 af, Depth= 2.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.07"

Area (sf)	CN	Description
7,068	98	Paved parking, HSG B
19,783	58	Woods/grass comb., Good, HSG B
26,851	69	Weighted Average
19,783		73.68% Pervious Area
7,068		26.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.6	19	0.5263	0.12		**Sheet Flow, A-B** Woods: Dense underbrush n= 0.800 P2= 3.40"
1.0	45	0.0889	0.75		**Shallow Concentrated Flow, B-C** Forest w/Heavy Litter Kv= 2.5 fps
0.3	30	0.6000	1.94		**Shallow Concentrated Flow, C-D** Forest w/Heavy Litter Kv= 2.5 fps
0.3	26	0.3846	1.55		**Shallow Concentrated Flow, D-E** Forest w/Heavy Litter Kv= 2.5 fps
0.6	67	0.0791	1.97		**Shallow Concentrated Flow, E-F** Short Grass Pasture Kv= 7.0 fps
4.8	187	Total			

Subcatchment 1S: XDA-1 EX COND TO DESIGN LINE



Summary for Subcatchment 2S: FDA-1 FUT COND TO DESIGN LINE

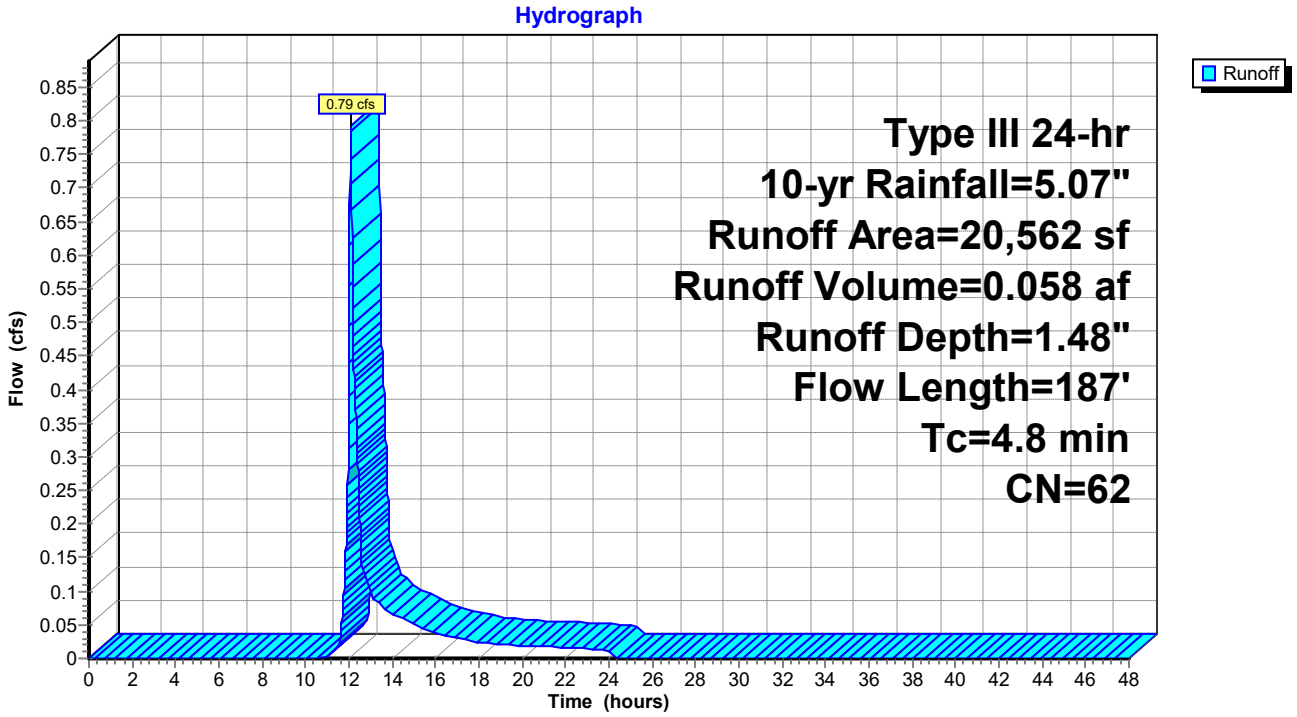
Runoff = 0.79 cfs @ 12.08 hrs, Volume= 0.058 af, Depth= 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.07"

Area (sf)	CN	Description
2,218	98	Paved parking, HSG B
18,344	58	Woods/grass comb., Good, HSG B
20,562	62	Weighted Average
18,344		89.21% Pervious Area
2,218		10.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.6	19	0.5263	0.12		**Sheet Flow, A-B** Woods: Dense underbrush n= 0.800 P2= 3.40"
1.0	45	0.0889	0.75		**Shallow Concentrated Flow, B-C** Forest w/Heavy Litter Kv= 2.5 fps
0.3	30	0.6000	1.94		**Shallow Concentrated Flow, C-D** Forest w/Heavy Litter Kv= 2.5 fps
0.3	26	0.3846	1.55		**Shallow Concentrated Flow, D-E** Forest w/Heavy Litter Kv= 2.5 fps
0.6	67	0.0791	1.97		**Shallow Concentrated Flow, E-F** Short Grass Pasture Kv= 7.0 fps
4.8	187	Total			

Subcatchment 2S: FDA-1 FUT COND TO DESIGN LINE



Summary for Subcatchment 3S: FDA-2 to SW Practice

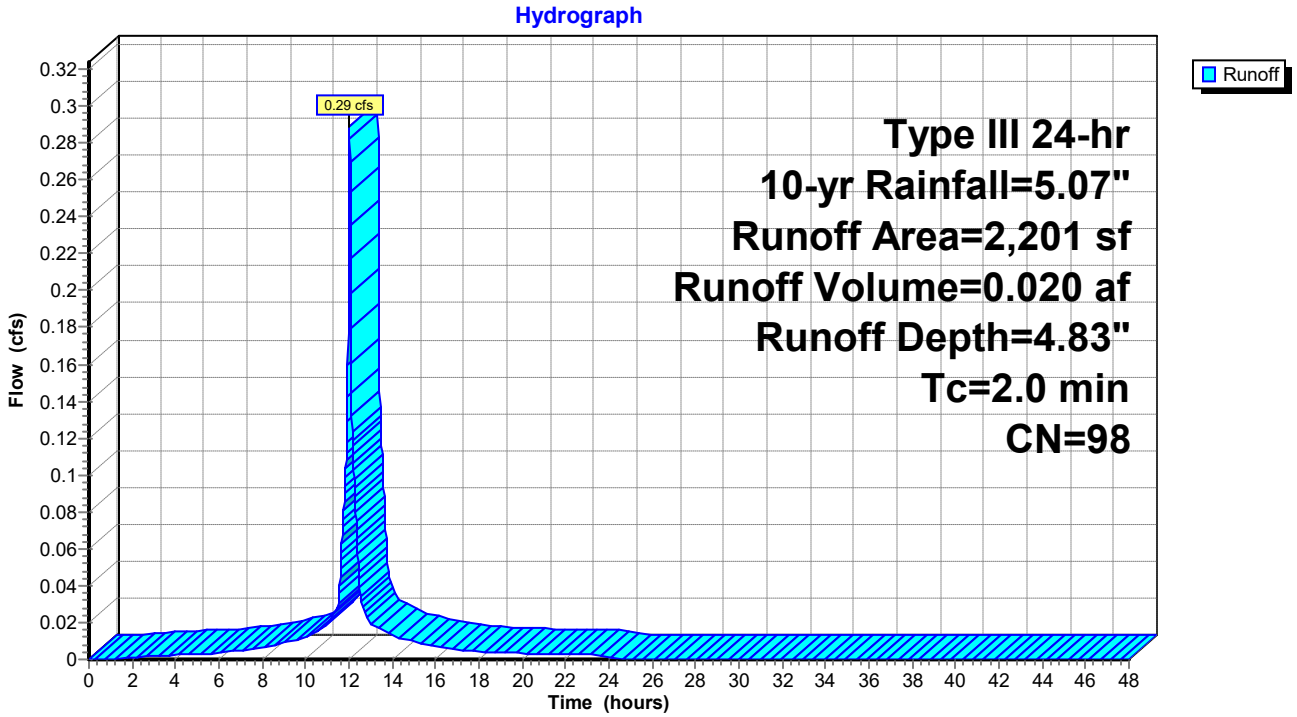
Runoff = 0.29 cfs @ 12.03 hrs, Volume= 0.020 af, Depth= 4.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.07"

	Area (sf)	CN	Description
*	2,201	98	Roofs and Walks, HSG B
	2,201		100.00% Impervious Area

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

Subcatchment 3S: FDA-2 to SW Practice



Summary for Subcatchment 5S: FDA-4 TO SW MGMT FACILITY-2

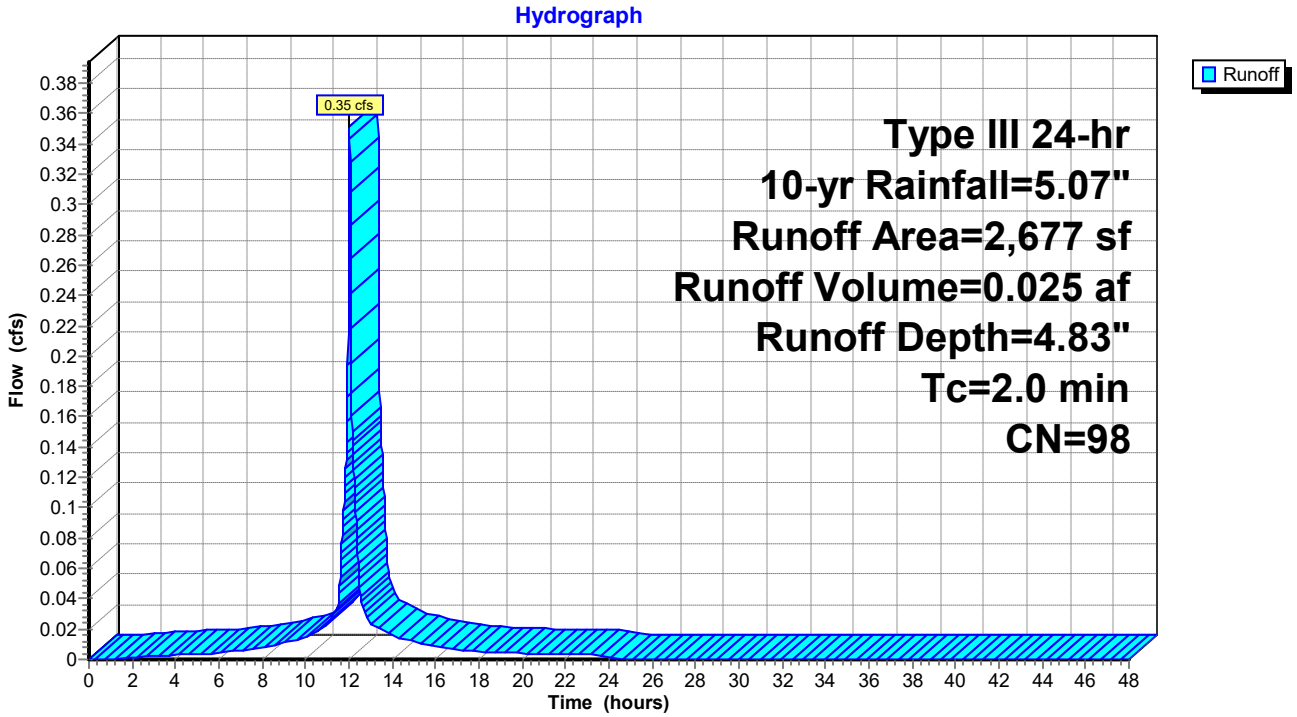
Runoff = 0.35 cfs @ 12.03 hrs, Volume= 0.025 af, Depth= 4.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.07"

	Area (sf)	CN	Description
*	2,677	98	Driveway, HSG B
	2,677		100.00% Impervious Area

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

Subcatchment 5S: FDA-4 TO SW MGMT FACILITY-2



Summary for Subcatchment 6S: FDA-3 to SW Practice

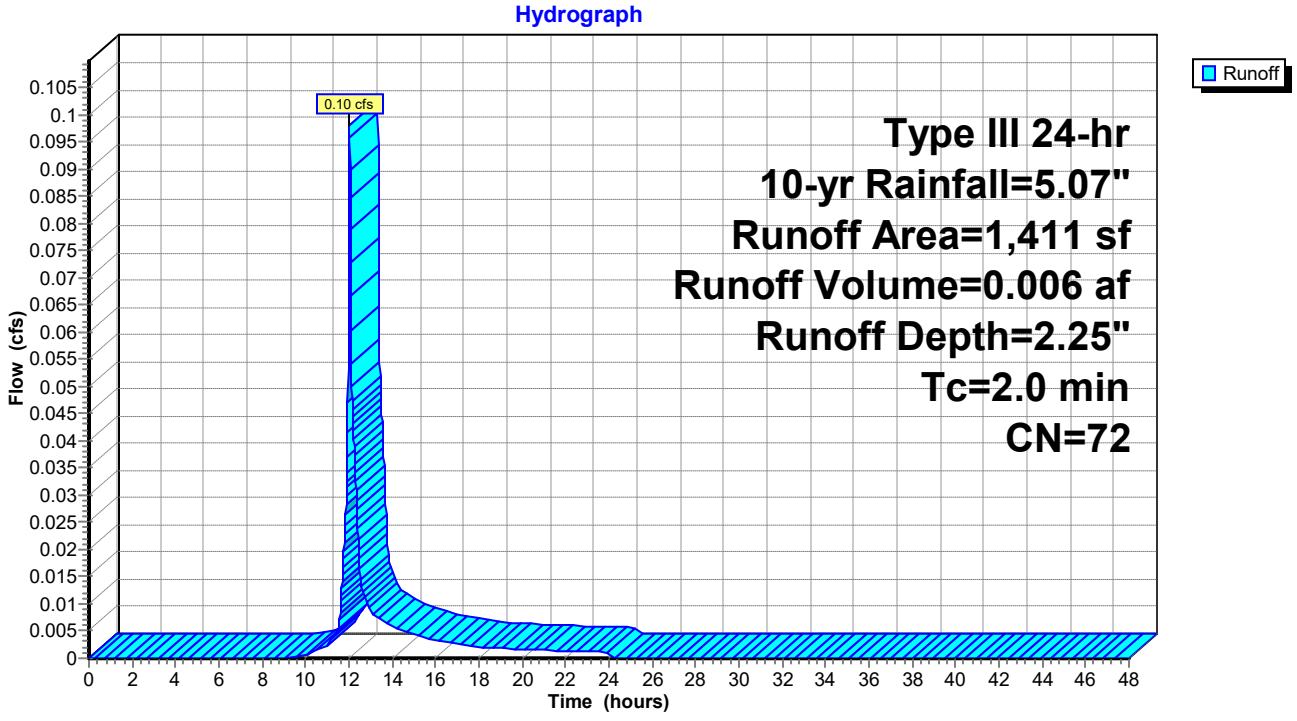
Runoff = 0.10 cfs @ 12.03 hrs, Volume= 0.006 af, Depth= 2.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.07"

	Area (sf)	CN	Description
	404	98	Roofs, HSG B
	984	61	>75% Grass cover, Good, HSG B
*	23	98	Walls, HSG B
	1,411	72	Weighted Average
	984		69.74% Pervious Area
	427		30.26% Impervious Area

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

Subcatchment 6S: FDA-3 to SW Practice



Summary for Pond 5P: SW DETENTION FACILITY

Inflow Area = 0.144 ac, 84.35% Impervious, Inflow Depth = 3.81" for 10-yr event
Inflow = 0.64 cfs @ 12.03 hrs, Volume= 0.046 af
Outflow = 0.38 cfs @ 12.10 hrs, Volume= 0.046 af, Atten= 41%, Lag= 4.5 min
Primary = 0.38 cfs @ 12.10 hrs, Volume= 0.046 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 476.49' @ 12.10 hrs Surf.Area= 256 sf Storage= 208 cf

Plug-Flow detention time= 13.2 min calculated for 0.046 af (100% of inflow)
Center-of-Mass det. time= 13.1 min (757.2 - 744.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	474.50'	0 cf	**8.00'W x 32.00'L x 3.58'H Field A** 917 cf Overall - 661 cf Embedded = 256 cf x 0.0% Voids
#2A	475.50'	420 cf	**Oldcastle StormCapture SC1 2'** x 2 Inside #1 Inside= 84.0"W x 24.0"H => 13.13 sf x 16.00'L = 210.0 cf Outside= 96.0"W x 31.0"H => 20.67 sf x 16.00'L = 330.7 cf
		420 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	475.50'	**4.0" Round Culvert** L= 36.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 475.50' / 474.50' S= 0.0278 '/' Cc= 0.900 n= 0.010, Flow Area= 0.09 sf

Primary OutFlow Max=0.38 cfs @ 12.10 hrs HW=476.49' (Free Discharge)
1=Culvert (Inlet Controls 0.38 cfs @ 4.37 fps)

Pond 5P: SW DETENTION FACILITY - Chamber Wizard Field A

Chamber Model = Oldcastle StormCapture SC1 2' (Oldcastle StormCapture® SC1)
Inside= 84.0"W x 24.0"H => 13.13 sf x 16.00'L = 210.0 cf
Outside= 96.0"W x 31.0"H => 20.67 sf x 16.00'L = 330.7 cf

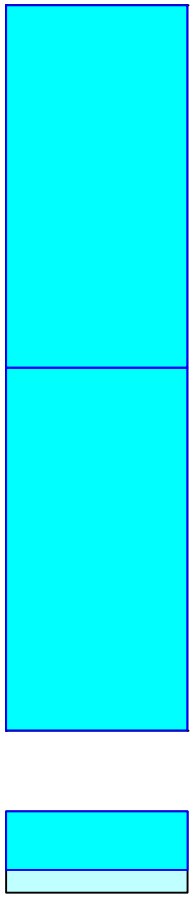
2 Chambers/Row x 16.00' Long = 32.00' Row Length
1 Rows x 96.0" Wide = 8.00' Base Width
12.0" Base + 31.0" Chamber Height = 3.58' Field Height

2 Chambers x 210.0 cf = 420.0 cf Chamber Storage
2 Chambers x 330.7 cf = 661.3 cf Displacement

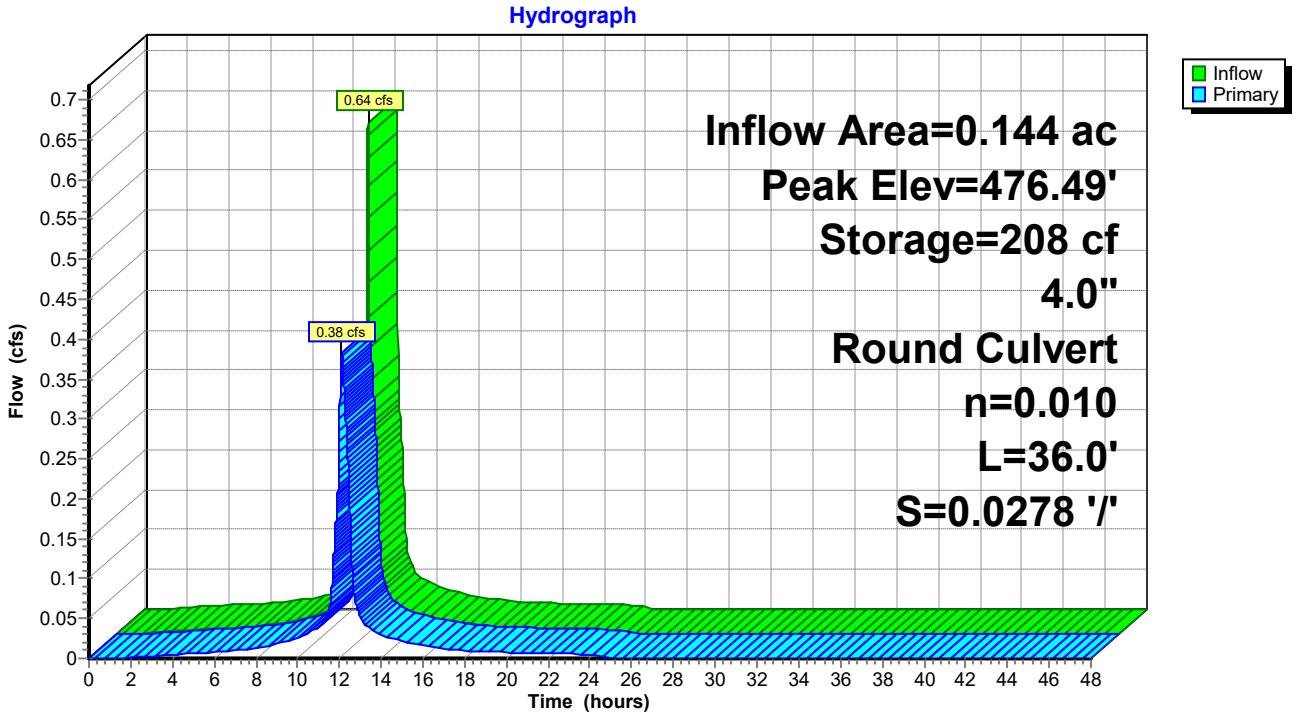
917.3 cf Field - 661.3 cf Chambers = 256.0 cf Stone x 0.0% Voids = 0.0 cf Stone Storage

Chamber Storage = 420.0 cf = 0.010 af
Overall Storage Efficiency = 45.8%
Overall System Size = 32.00' x 8.00' x 3.58'

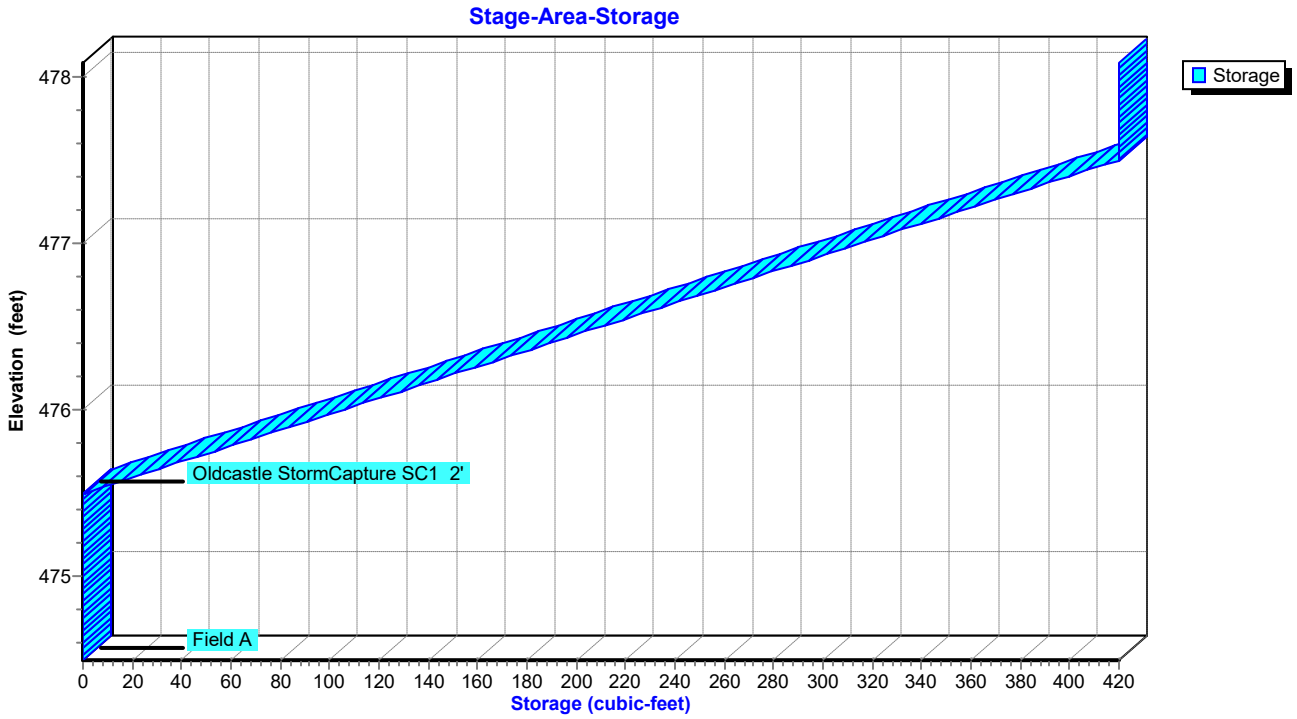
2 Chambers
34.0 cy Field
9.5 cy Stone



Pond 5P: SW DETENTION FACILITY



Pond 5P: SW DETENTION FACILITY



Summary for Pond 7P: Rain Garden

Inflow Area = 0.032 ac, 30.26% Impervious, Inflow Depth = 2.25" for 10-yr event
Inflow = 0.10 cfs @ 12.03 hrs, Volume= 0.006 af
Outflow = 0.03 cfs @ 12.29 hrs, Volume= 0.006 af, Atten= 65%, Lag= 15.6 min
Discarded = 0.01 cfs @ 12.29 hrs, Volume= 0.005 af
Primary = 0.03 cfs @ 12.29 hrs, Volume= 0.001 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 500.54' @ 12.29 hrs Surf.Area= 190 sf Storage= 77 cf

Plug-Flow detention time= 72.8 min calculated for 0.006 af (100% of inflow)
Center-of-Mass det. time= 72.8 min (910.9 - 838.1)

Volume	Invert	Avail.Storage	Storage Description
#1	500.00'	179 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
500.00	98	0	0
500.25	139	30	30
500.50	185	41	70
501.00	250	109	179

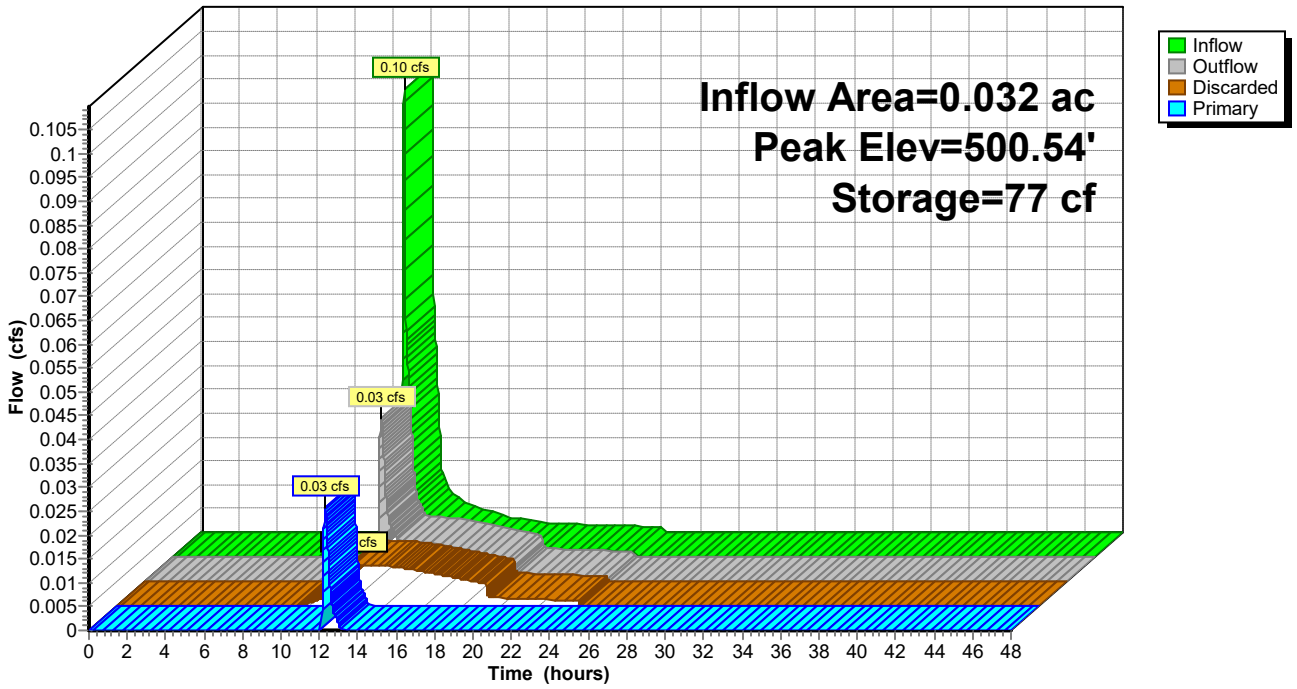
Device	Routing	Invert	Outlet Devices
#1	Primary	500.50'	**4.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Discarded	500.00'	**2.000 in/hr Exfiltration over Horizontal area**

Discarded OutFlow Max=0.01 cfs @ 12.29 hrs HW=500.54' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.03 cfs @ 12.29 hrs HW=500.54' (Free Discharge)
↑—**1=Orifice/Grate** (Weir Controls 0.03 cfs @ 0.64 fps)

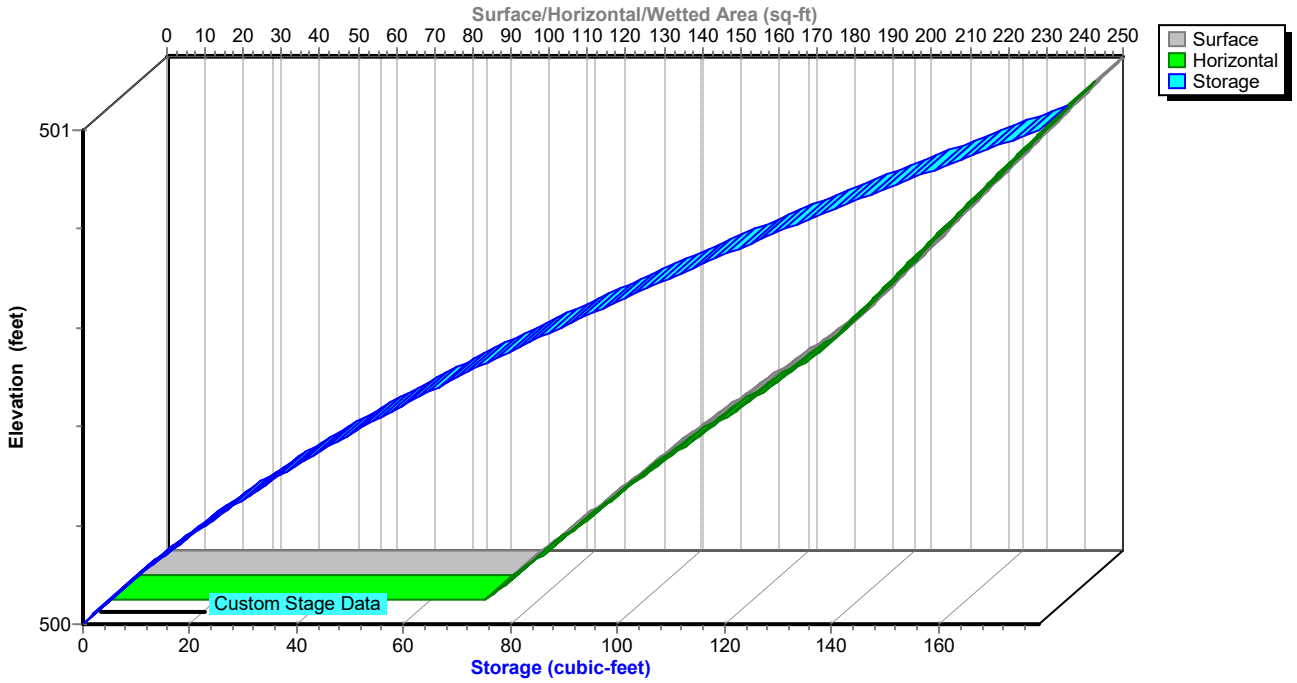
Pond 7P: Rain Garden

Hydrograph



Pond 7P: Rain Garden

Stage-Area-Storage

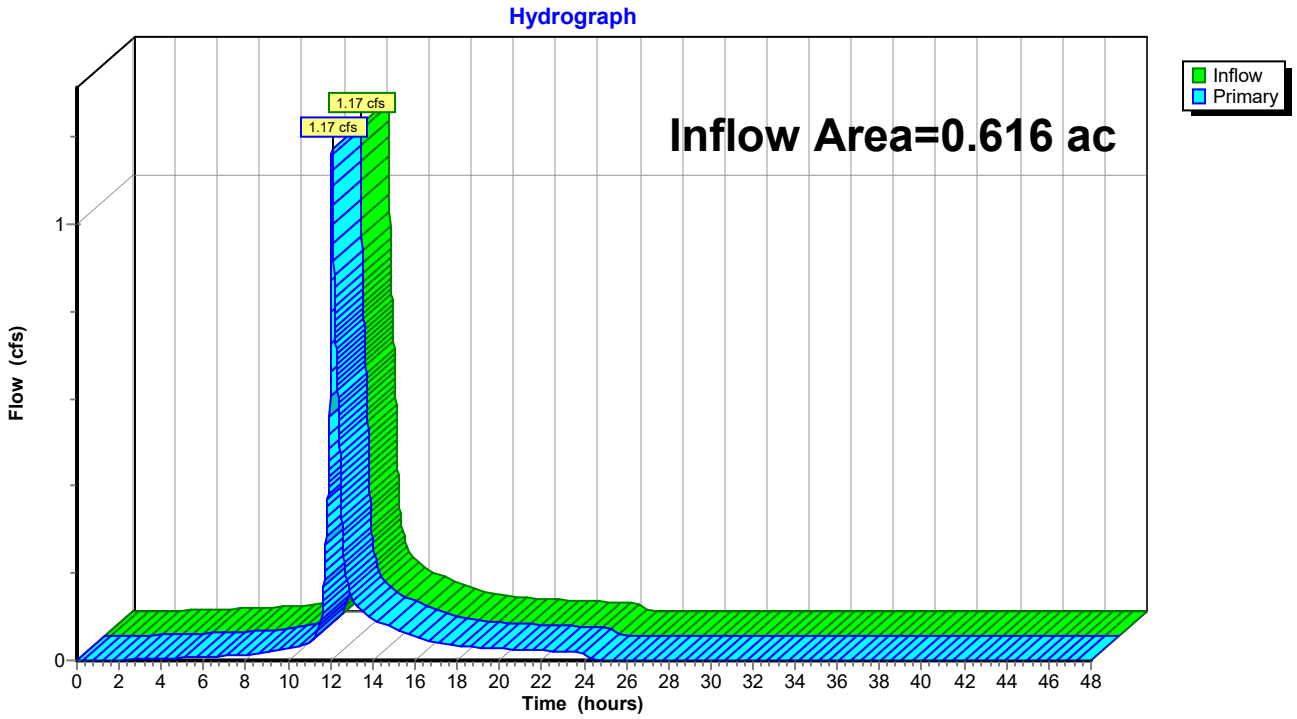


Summary for Link 4L: DESIGN LINE

Inflow Area = 0.616 ac, 28.02% Impervious, Inflow Depth = 2.03" for 10-yr event
Inflow = 1.17 cfs @ 12.08 hrs, Volume= 0.104 af
Primary = 1.17 cfs @ 12.08 hrs, Volume= 0.104 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 4L: DESIGN LINE



Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: XDA-1 EX COND TO Runoff Area=26,851 sf 26.32% Impervious Runoff Depth=3.01"
Flow Length=187' Tc=4.8 min CN=69 Runoff=2.26 cfs 0.155 af

Subcatchment 2S: FDA-1 FUT COND TO Runoff Area=20,562 sf 10.79% Impervious Runoff Depth=2.35"
Flow Length=187' Tc=4.8 min CN=62 Runoff=1.32 cfs 0.093 af

Subcatchment 3S: FDA-2 to SW Practice Runoff Area=2,201 sf 100.00% Impervious Runoff Depth=6.14"
Tc=2.0 min CN=98 Runoff=0.36 cfs 0.026 af

Subcatchment 5S: FDA-4 TO SW MGMT Runoff Area=2,677 sf 100.00% Impervious Runoff Depth=6.14"
Tc=2.0 min CN=98 Runoff=0.44 cfs 0.031 af

Subcatchment 6S: FDA-3 to SW Practice Runoff Area=1,411 sf 30.26% Impervious Runoff Depth=3.31"
Tc=2.0 min CN=72 Runoff=0.15 cfs 0.009 af

Pond 5P: SW DETENTION FACILITY Peak Elev=476.91' Storage=297 cf Inflow=0.82 cfs 0.060 af
4.0" Round Culvert n=0.010 L=36.0' S=0.0278 '/' Outflow=0.47 cfs 0.060 af

Pond 7P: Rain Garden Peak Elev=500.59' Storage=87 cf Inflow=0.15 cfs 0.009 af
Discarded=0.01 cfs 0.006 af Primary=0.09 cfs 0.002 af Outflow=0.10 cfs 0.009 af

Link 4L: DESIGN LINE Inflow=1.77 cfs 0.152 af
Primary=1.77 cfs 0.152 af

Total Runoff Area = 1.233 ac Runoff Volume = 0.314 af Average Runoff Depth = 3.05"
72.83% Pervious = 0.898 ac 27.17% Impervious = 0.335 ac

Summary for Subcatchment 1S: XDA-1 EX COND TO DESIGN LINE

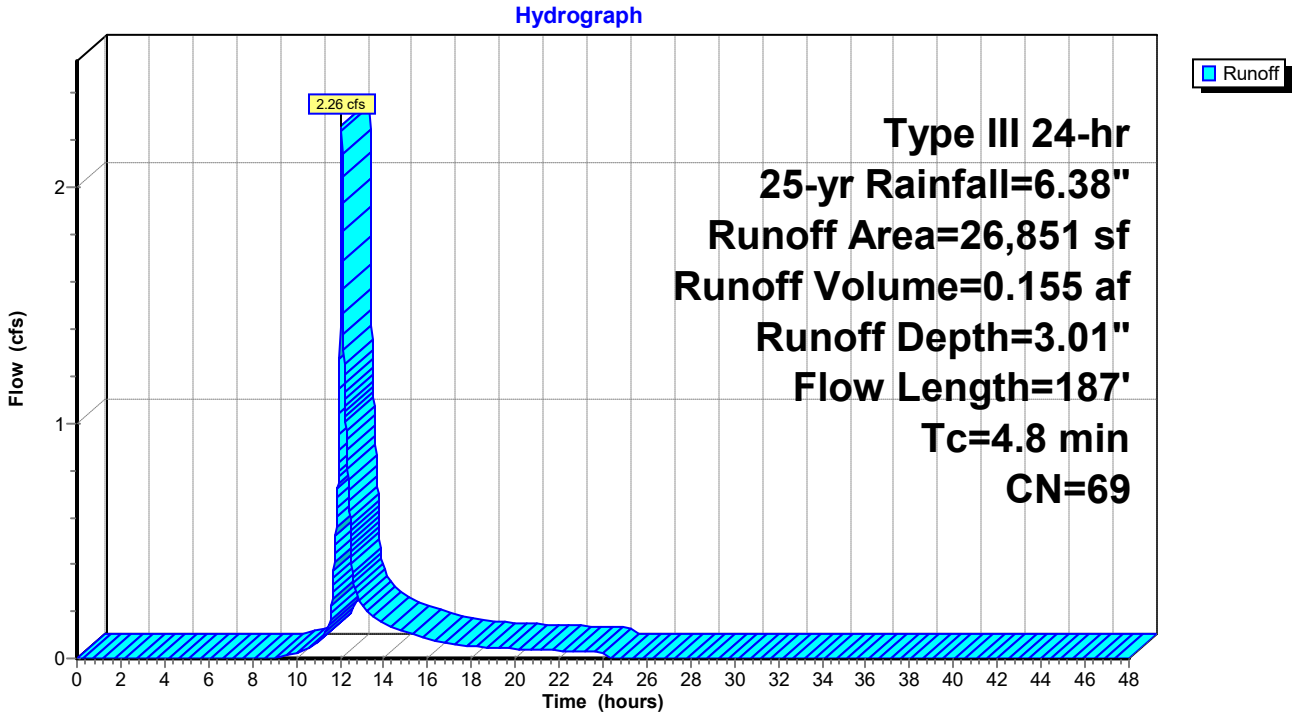
Runoff = 2.26 cfs @ 12.07 hrs, Volume= 0.155 af, Depth= 3.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-yr Rainfall=6.38"

Area (sf)	CN	Description
7,068	98	Paved parking, HSG B
19,783	58	Woods/grass comb., Good, HSG B
26,851	69	Weighted Average
19,783		73.68% Pervious Area
7,068		26.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.6	19	0.5263	0.12		**Sheet Flow, A-B** Woods: Dense underbrush n= 0.800 P2= 3.40"
1.0	45	0.0889	0.75		**Shallow Concentrated Flow, B-C** Forest w/Heavy Litter Kv= 2.5 fps
0.3	30	0.6000	1.94		**Shallow Concentrated Flow, C-D** Forest w/Heavy Litter Kv= 2.5 fps
0.3	26	0.3846	1.55		**Shallow Concentrated Flow, D-E** Forest w/Heavy Litter Kv= 2.5 fps
0.6	67	0.0791	1.97		**Shallow Concentrated Flow, E-F** Short Grass Pasture Kv= 7.0 fps
4.8	187	Total			

Subcatchment 1S: XDA-1 EX COND TO DESIGN LINE



Summary for Subcatchment 2S: FDA-1 FUT COND TO DESIGN LINE

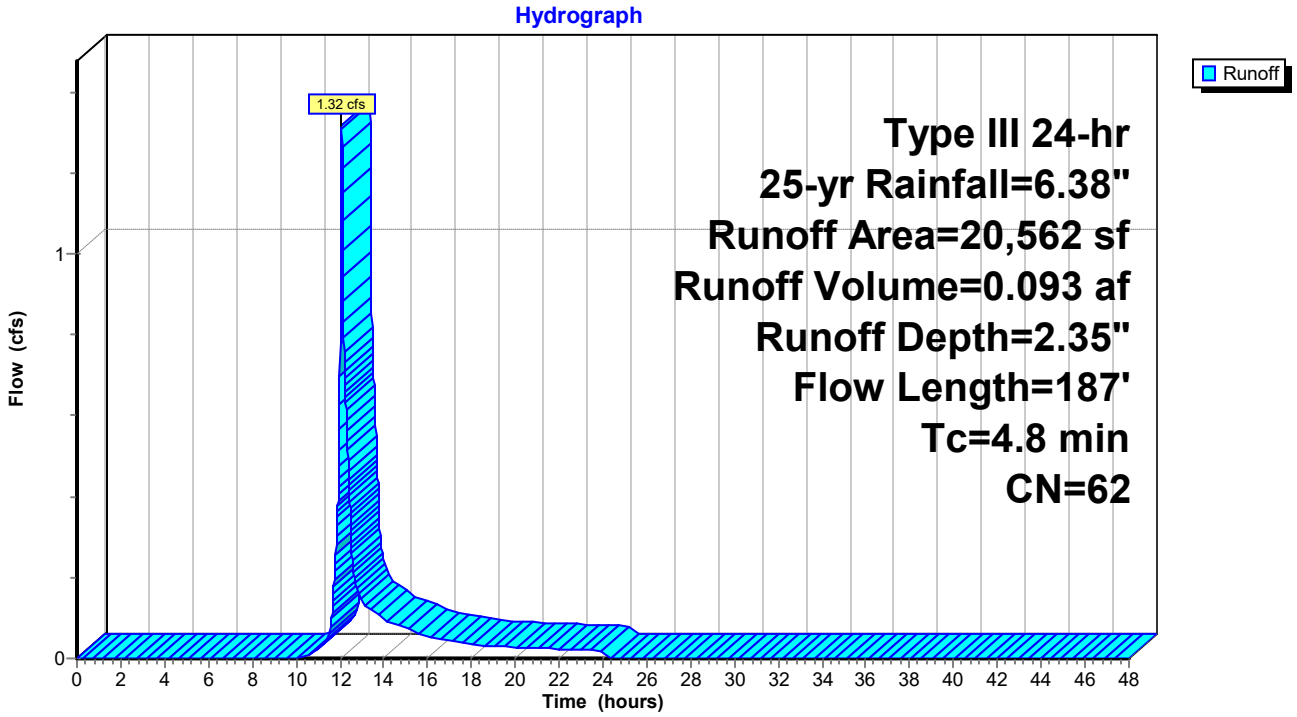
Runoff = 1.32 cfs @ 12.08 hrs, Volume= 0.093 af, Depth= 2.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-yr Rainfall=6.38"

Area (sf)	CN	Description
2,218	98	Paved parking, HSG B
18,344	58	Woods/grass comb., Good, HSG B
20,562	62	Weighted Average
18,344		89.21% Pervious Area
2,218		10.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.6	19	0.5263	0.12		**Sheet Flow, A-B** Woods: Dense underbrush n= 0.800 P2= 3.40"
1.0	45	0.0889	0.75		**Shallow Concentrated Flow, B-C** Forest w/Heavy Litter Kv= 2.5 fps
0.3	30	0.6000	1.94		**Shallow Concentrated Flow, C-D** Forest w/Heavy Litter Kv= 2.5 fps
0.3	26	0.3846	1.55		**Shallow Concentrated Flow, D-E** Forest w/Heavy Litter Kv= 2.5 fps
0.6	67	0.0791	1.97		**Shallow Concentrated Flow, E-F** Short Grass Pasture Kv= 7.0 fps
4.8	187	Total			

Subcatchment 2S: FDA-1 FUT COND TO DESIGN LINE



Summary for Subcatchment 3S: FDA-2 to SW Practice

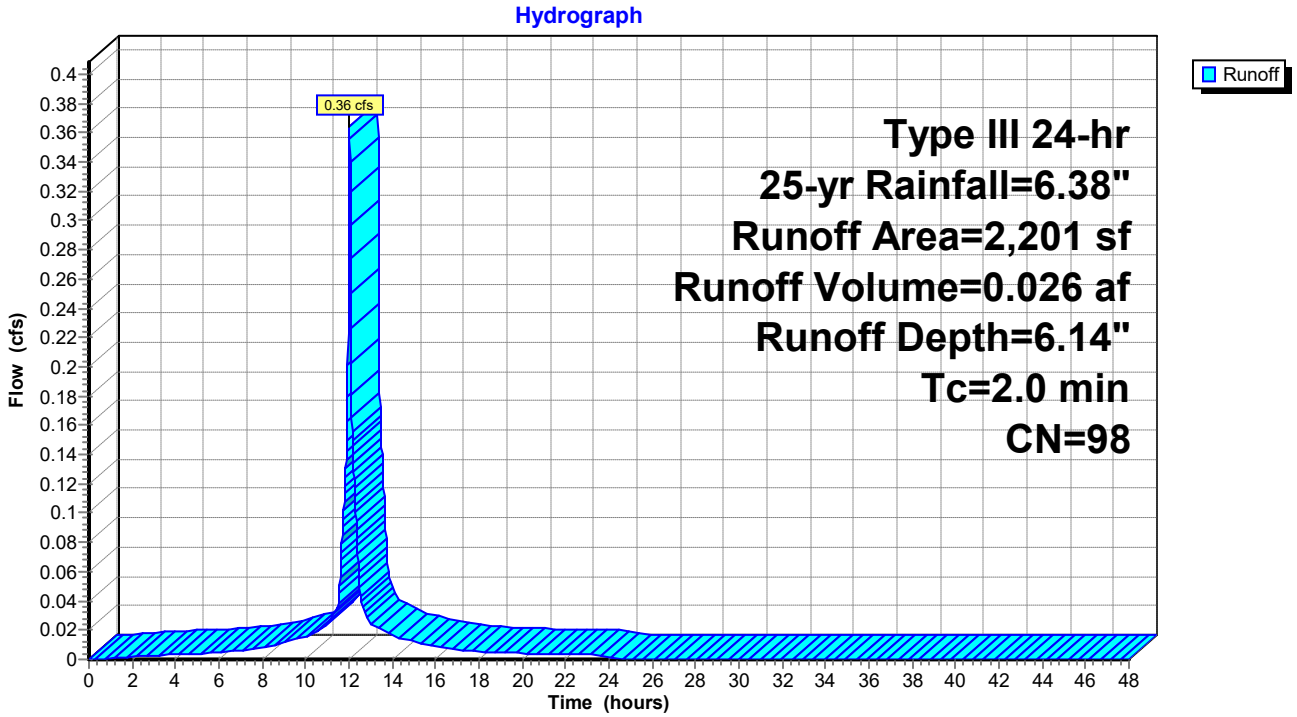
Runoff = 0.36 cfs @ 12.03 hrs, Volume= 0.026 af, Depth= 6.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-yr Rainfall=6.38"

	Area (sf)	CN	Description
*	2,201	98	Roofs and Walks, HSG B
	2,201		100.00% Impervious Area

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

Subcatchment 3S: FDA-2 to SW Practice



Summary for Subcatchment 5S: FDA-4 TO SW MGMT FACILITY-2

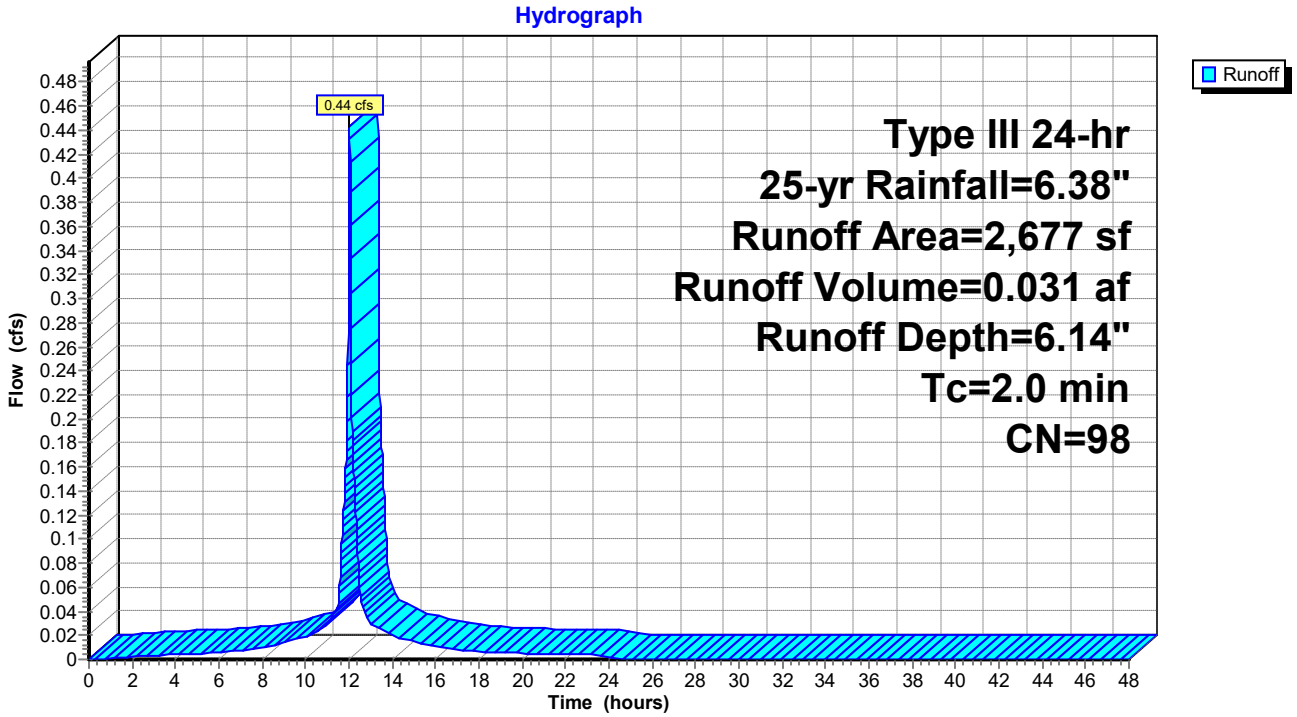
Runoff = 0.44 cfs @ 12.03 hrs, Volume= 0.031 af, Depth= 6.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-yr Rainfall=6.38"

	Area (sf)	CN	Description
*	2,677	98	Driveway, HSG B
	2,677		100.00% Impervious Area

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

Subcatchment 5S: FDA-4 TO SW MGMT FACILITY-2



Summary for Subcatchment 6S: FDA-3 to SW Practice

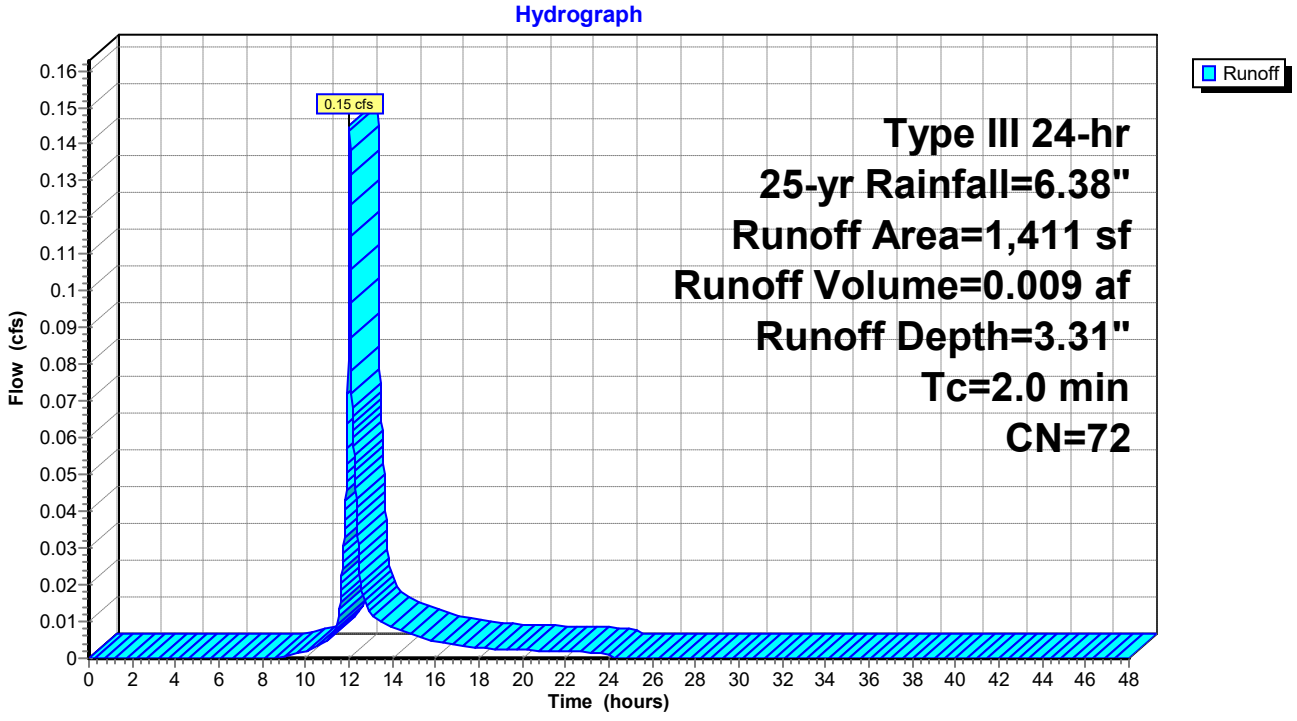
Runoff = 0.15 cfs @ 12.03 hrs, Volume= 0.009 af, Depth= 3.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-yr Rainfall=6.38"

	Area (sf)	CN	Description
	404	98	Roofs, HSG B
	984	61	>75% Grass cover, Good, HSG B
*	23	98	Walls, HSG B
	1,411	72	Weighted Average
	984		69.74% Pervious Area
	427		30.26% Impervious Area

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

Subcatchment 6S: FDA-3 to SW Practice



Summary for Pond 5P: SW DETENTION FACILITY

Inflow Area = 0.144 ac, 84.35% Impervious, Inflow Depth = 4.97" for 25-yr event
Inflow = 0.82 cfs @ 12.04 hrs, Volume= 0.060 af
Outflow = 0.47 cfs @ 12.12 hrs, Volume= 0.060 af, Atten= 43%, Lag= 5.4 min
Primary = 0.47 cfs @ 12.12 hrs, Volume= 0.060 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 476.91' @ 12.12 hrs Surf.Area= 256 sf Storage= 297 cf

Plug-Flow detention time= 12.3 min calculated for 0.060 af (100% of inflow)
Center-of-Mass det. time= 12.4 min (753.0 - 740.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	474.50'	0 cf	**8.00'W x 32.00'L x 3.58'H Field A** 917 cf Overall - 661 cf Embedded = 256 cf x 0.0% Voids
#2A	475.50'	420 cf	**Oldcastle StormCapture SC1 2'** x 2 Inside #1 Inside= 84.0"W x 24.0"H => 13.13 sf x 16.00'L = 210.0 cf Outside= 96.0"W x 31.0"H => 20.67 sf x 16.00'L = 330.7 cf
		420 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	475.50'	**4.0" Round Culvert** L= 36.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 475.50' / 474.50' S= 0.0278 '/' Cc= 0.900 n= 0.010, Flow Area= 0.09 sf

Primary OutFlow Max=0.47 cfs @ 12.12 hrs HW=476.91' (Free Discharge)
1=Culvert (Inlet Controls 0.47 cfs @ 5.38 fps)

Pond 5P: SW DETENTION FACILITY - Chamber Wizard Field A

Chamber Model = Oldcastle StormCapture SC1 2' (Oldcastle StormCapture® SC1)
Inside= 84.0"W x 24.0"H => 13.13 sf x 16.00'L = 210.0 cf
Outside= 96.0"W x 31.0"H => 20.67 sf x 16.00'L = 330.7 cf

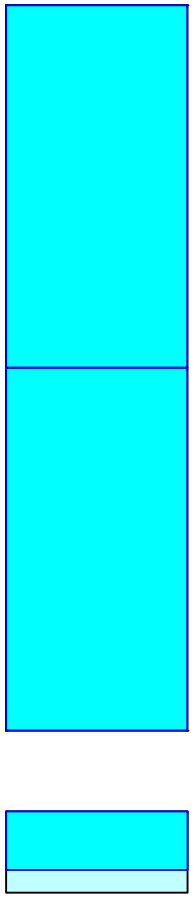
2 Chambers/Row x 16.00' Long = 32.00' Row Length
1 Rows x 96.0" Wide = 8.00' Base Width
12.0" Base + 31.0" Chamber Height = 3.58' Field Height

2 Chambers x 210.0 cf = 420.0 cf Chamber Storage
2 Chambers x 330.7 cf = 661.3 cf Displacement

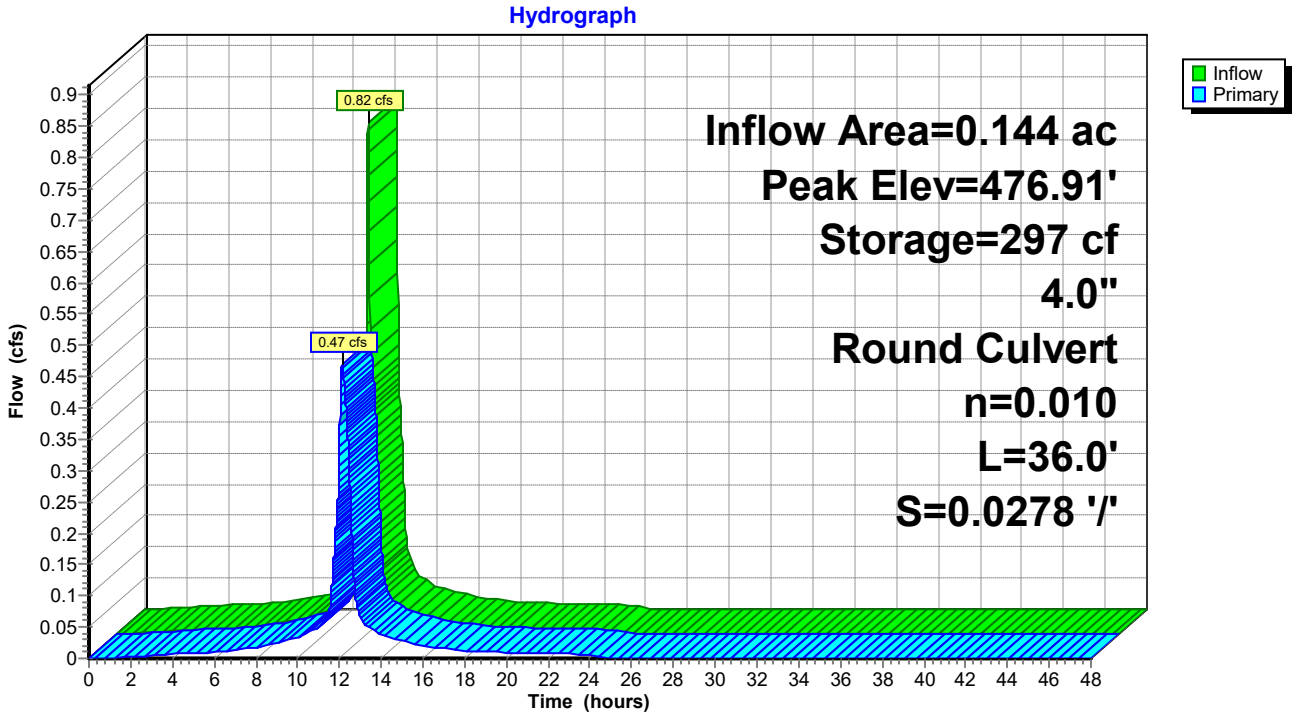
917.3 cf Field - 661.3 cf Chambers = 256.0 cf Stone x 0.0% Voids = 0.0 cf Stone Storage

Chamber Storage = 420.0 cf = 0.010 af
Overall Storage Efficiency = 45.8%
Overall System Size = 32.00' x 8.00' x 3.58'

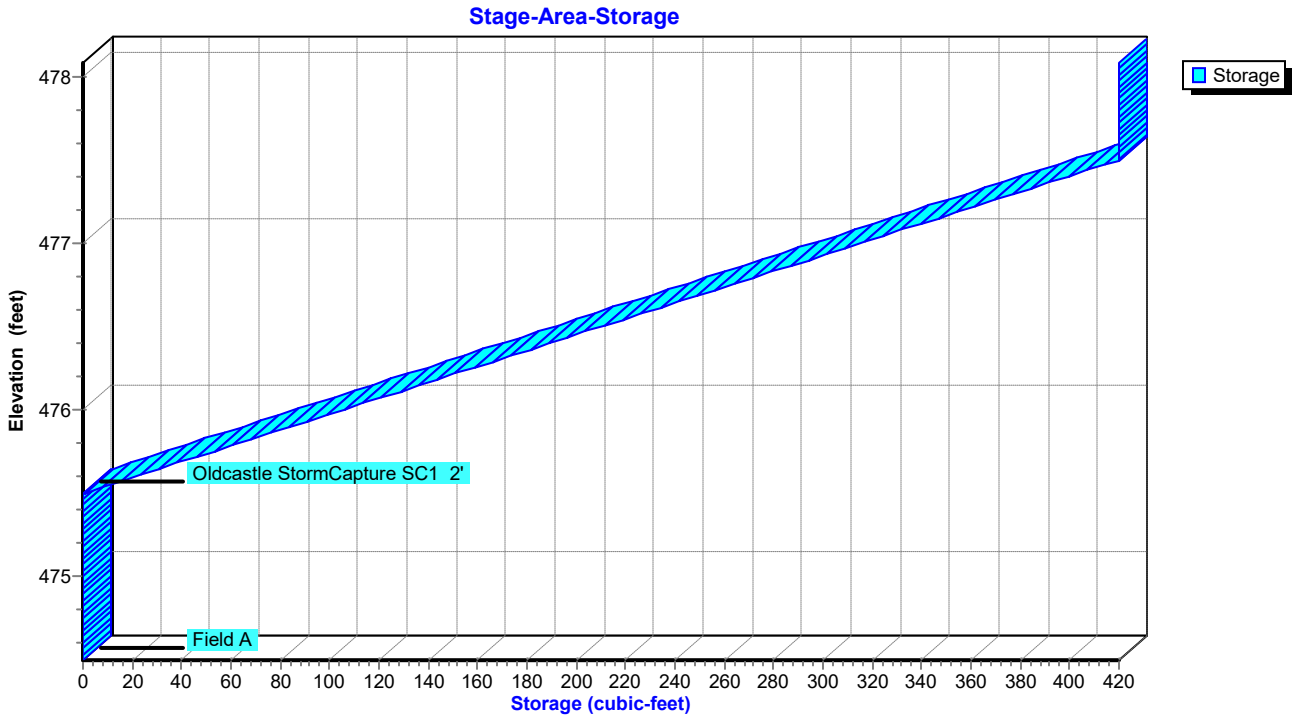
2 Chambers
34.0 cy Field
9.5 cy Stone



Pond 5P: SW DETENTION FACILITY



Pond 5P: SW DETENTION FACILITY



Summary for Pond 7P: Rain Garden

Inflow Area = 0.032 ac, 30.26% Impervious, Inflow Depth = 3.31" for 25-yr event
Inflow = 0.15 cfs @ 12.03 hrs, Volume= 0.009 af
Outflow = 0.10 cfs @ 12.10 hrs, Volume= 0.009 af, Atten= 32%, Lag= 4.0 min
Discarded = 0.01 cfs @ 12.10 hrs, Volume= 0.006 af
Primary = 0.09 cfs @ 12.10 hrs, Volume= 0.002 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 500.59' @ 12.10 hrs Surf.Area= 196 sf Storage= 87 cf

Plug-Flow detention time= 63.6 min calculated for 0.009 af (100% of inflow)
Center-of-Mass det. time= 63.6 min (890.6 - 826.9)

Volume	Invert	Avail.Storage	Storage Description
#1	500.00'	179 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

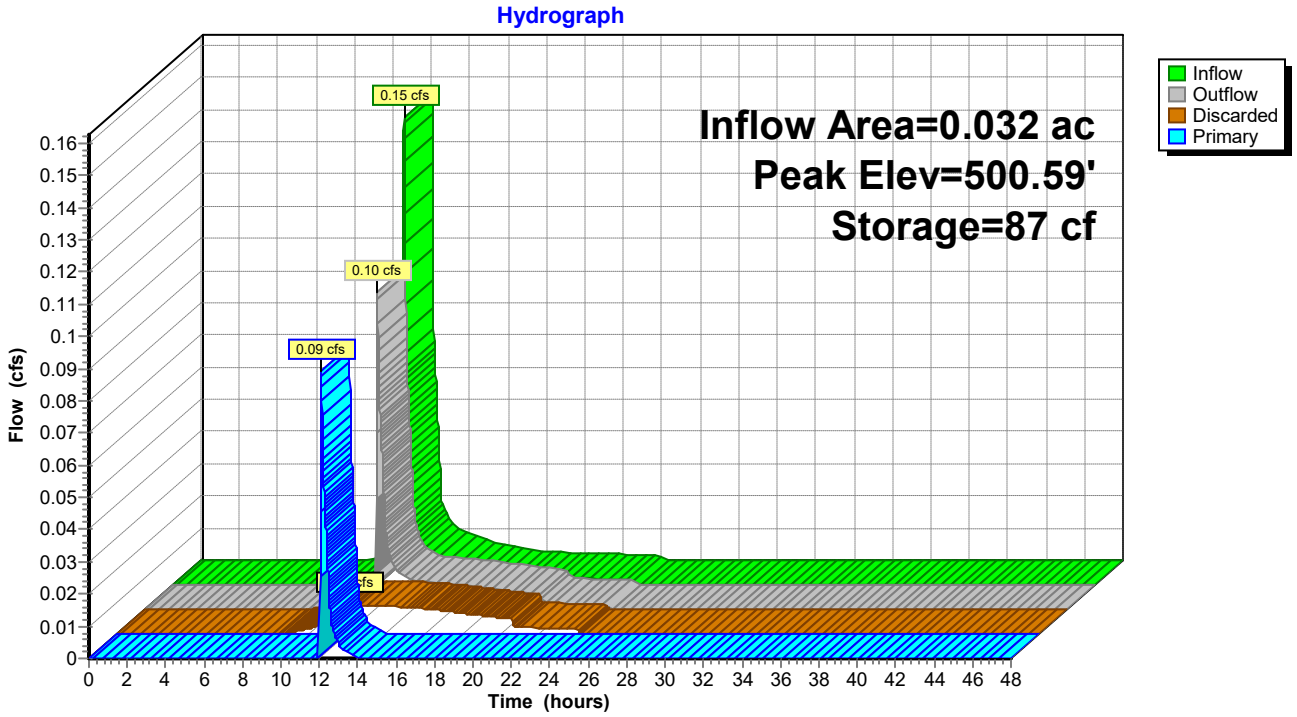
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
500.00	98	0	0
500.25	139	30	30
500.50	185	41	70
501.00	250	109	179

Device	Routing	Invert	Outlet Devices
#1	Primary	500.50'	**4.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Discarded	500.00'	**2.000 in/hr Exfiltration over Horizontal area**

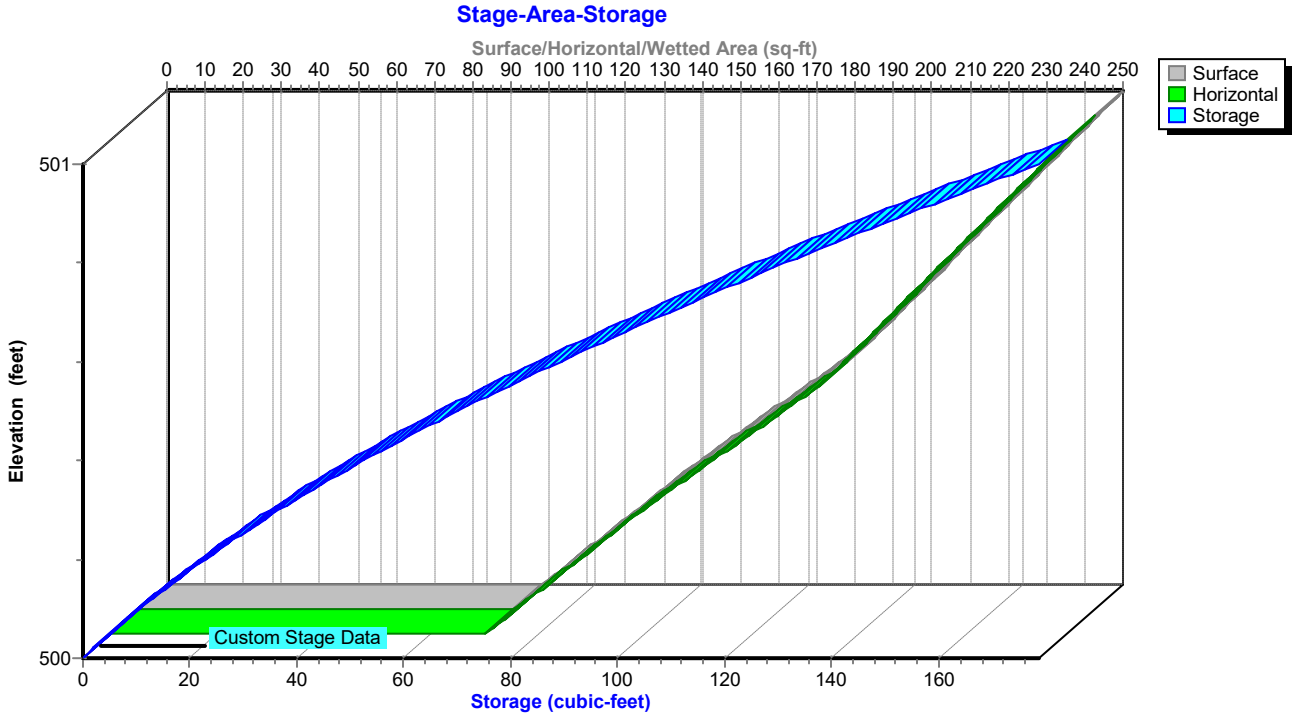
Discarded OutFlow Max=0.01 cfs @ 12.10 hrs HW=500.59' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.09 cfs @ 12.10 hrs HW=500.59' (Free Discharge)
↑—**1=Orifice/Grate** (Weir Controls 0.09 cfs @ 0.97 fps)

Pond 7P: Rain Garden



Pond 7P: Rain Garden

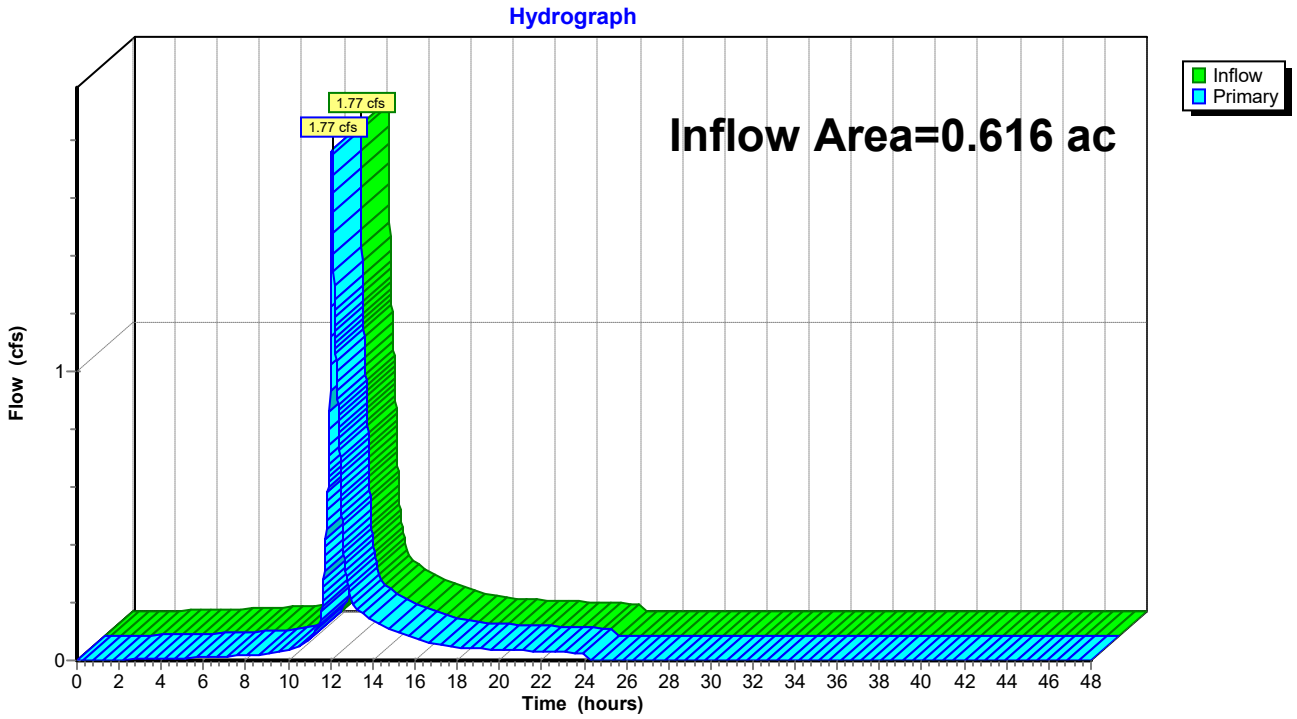


Summary for Link 4L: DESIGN LINE

Inflow Area = 0.616 ac, 28.02% Impervious, Inflow Depth = 2.97" for 25-yr event
Inflow = 1.77 cfs @ 12.08 hrs, Volume= 0.152 af
Primary = 1.77 cfs @ 12.08 hrs, Volume= 0.152 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 4L: DESIGN LINE



TO: Town of Lewisboro Planning Board

FROM: Lewisboro Conservation Advisory Council

SUBJECT: Handler Residence, 25 Woodway, sheet 38, Block 10549, Lots 12 & 20

DATE: July 8, 2020

The Conservation Advisory Council (CAC) reviewed the applicant's submission documents and plans from July 2020.

While the CAC encourages the removal of non-native species and the increase of native meadows lands we have the following concerns with this application. The CAC understands how difficult It is to get rid of phragmites, autumn olive and the others mentioned. However, the use of the two chemicals mentioned raises concerns. Even though Roundup can be very effective against the phragmites, we would like to make sure every attempt is made to keep it from entering the ponds and/or stream.

There is much controversy concerning glyphosates. It has neither been proven nor disproven that they cause cancer. As such, the CAC has concerns about glyphosate based products being applied in a substantial wetland area that effects watercourses and lakes and their associated communities.

In the areas that border the ponds and streams, CAC would prefer to see non-toxic methods employed. In nearby areas, Rodeo is preferred over the more toxic Roundup. The use of Rodeo around the waters edges is much safer than Roundup. Again, non-toxic methods are preferred. Because the outflow from this property is the primary surface water source for lake Truesdale we would suggest that the application of any glyphosates be done in the dry conditions available to minimize downstream effects.

The DEC Approval letter specifies certain procedures as part of the approval. The CAC would like to see a plan that follows these procedures and includes an inspection schedule and an inspector.

Agency Use Only [If applicable]

Project : 3-5530-00226/00001,2

Date : 4/10/2020

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer "**Yes"** to a numbered question, please complete all the questions that follow in that section.
- If you answer "**No"** to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land

Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)

☑ NO ☐ YES

If "Yes", answer questions a - j. If "No", move on to Section 2.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☐	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☐	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☐	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☐	☐
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☐	☐
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☐	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☐	☐
h. Other impacts: _____ _____		☐	☐

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☑ NO ☐ YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	□	□
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	□	□
c. Other impacts: _____ _____		□	□

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☐ NO ☑ YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	☑	☐
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	☑	☐
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☑	☐
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	☑	☐
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☑	☐
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☑	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☑	☐
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	☑	☐
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☑	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☑	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☑	☐

l. Other impacts: _____ _____		☐	☐

4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t)

☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	☐	☐
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	☐	☐
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	☐	☐
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	☐	☐
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	☐	☐
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	☐	☐
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	☐	☐
h. Other impacts: _____ _____		☐	☐

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2)

☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	☐	☐
b. The proposed action may result in development within a 100 year floodplain.	E2j	☐	☐
c. The proposed action may result in development within a 500 year floodplain.	E2k	☐	☐
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	☐	☐
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	☐	☐
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	☐	☐

g. Other impacts: _____ _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. ☑ NO ☐ YES
(See Part 1. D.2.f., D.2.h, D.2.g)
If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☐	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☐	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☐	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☐	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☐	☐
vi. 43 tons/year or more of methane	D2h	☐	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☐	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☐	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☐	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☐	☐
f. Other impacts: _____ _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☐ NO ☑ YES
If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☑	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☑	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☑	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☑	☐

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	☑	☐
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	☑	☐
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	☑	☐
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	☑	☐
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	☑	☐
j. Other impacts: _____ _____		☐	☐

8. Impact on Agricultural Resources

The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	**No, or small impact may occur**	**Moderate to large impact may occur**
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	□	□
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, Elb	□	□
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	□	□
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	□	□
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	El a, E1b	□	□
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	□	□
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	□	□
h. Other impacts: _____		□	□

9. Impact on Aesthetic Resources

The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)

☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", go to Section 10.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	 ☐ ☐	 ☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	 ☐ ☐	 ☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____ _____		☐	☐

10. Impact on Historic and Archeological Resources

The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)

☑ NO ☐ YES

If "Yes", answer questions a - e. If "No", go to Section 11.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on the National or State Register of Historical Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places.	E3e	☐	☐
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☐	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☐	☐

d. Other impacts: _____ _____		□	□
e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	□	□
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	□	□
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	□	□

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.
(See Part 1. C.2.c, E.1.c., E.2.q.)
If "Yes", answer questions a - e. If "No", go to Section 12.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	□	□
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	□	□
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	□	□
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	□	□
e. Other impacts: _____ _____		□	□

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)
If "Yes", answer questions a - c. If "No", go to Section 13.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	□	□
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	□	□
c. Other impacts: _____ _____		□	□

13. Impact on Transportation

The proposed action may result in a change to existing transportation systems. ☑ NO ☐ YES
(See Part 1. D.2.j)
If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____ _____		☐	☐

14. Impact on Energy

The proposed action may cause an increase in the use of any form of energy. ☑ NO ☐ YES
(See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
e. Other Impacts: _____ _____			

15. Impact on Noise, Odor, and Light

The proposed action may result in an increase in noise, odors, or outdoor lighting. ☑ NO ☐ YES
(See Part 1. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☐	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☐	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☐	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☐	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☐	☐
f. Other impacts: _____ _____		☐	☐

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☑ NO ☐ YES

If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may cccur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☐	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☐	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☐	☐
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☐	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☐	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☐	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☐	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☐	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☐	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☐	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☐	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☐	☐
m. Other impacts: _____ _____			

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. ☑ NO ☐ YES
(See Part 1. C.1, C.2. and C.3.)
If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, Elb	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. ☑ NO ☐ YES
(See Part 1. C.2, C.3, D.2, E.3)
If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

PRINT FULL FORM

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:
To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

See Attached

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☑ Type 1 ☐ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information
see attached

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the New York State Department of Environmental Conservation as lead agency that:

☑ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.7(d)).

☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: Runamuk Farm - Wetland and Meadow Restoration and Enhancement Project

Name of Lead Agency: New York State Department of Environmental Conservation

Name of Responsible Officer in Lead Agency: Tracey O'Malley

Title of Responsible Officer: Deputy Regional Permit Administrator, Division of Environmental Permits

Signature of Responsible Officer in Lead Agency: Date:

Signature of Preparer (if different from Responsible Officer) Date:

For Further Information:

Contact Person: Tracey O'Malley

Address: 21 S. Putt Corners Rd. New Paltz, NY 12561

Telephone Number: 845-256-3059

E-mail: tracey.omalley@dec.ny.gov

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

PRINT FULL FORM

Attachment to Full Environmental Assessment Form, Part 3
Name of Action: Runamuk Farm – Invasive Species Removal
DEC Number: 3-5530-00226/00001,2

Department Jurisdictions:

ECL, Article 24 Freshwater Wetlands
ECL, Article 15 Aquatic Pesticides
ECL, Article 17, Title 17 General Permit GP-0-16-005, SPDES General Permit for Point Source Discharges to Surface Waters of New York from Pesticide Applications

Other Approvals Required:

Town of Lewisboro Wetland Activity Permit (Chapter 217 of the Town Code).

Summary Description of Action:

The proposed project involves the treatment and removal of approximately 20.2 acres of non-native and invasive species within New York State Freshwater Wetland L-16, Class 1. The goal of the project is to establish a native meadow. The majority of the site's wetland areas are dominated by Common Reed and Reed Canarygrass. Proposed methods of removal include physical removal, mowing, and supplemental plantings, as well as the use of herbicide Round Up, Rodeo or Aquaneat (active ingredient: glyphosphate). Application of herbicides will be through broadcast spray and spot treatment. Targeted species include Giant Reed grass (Phragmites autralis), Autumn Olive (Eleaegnus umbellate), Reed Canary grass (Phalaris arundinaceae), Mugwort (Artemesia vulgaris), creeping thistle (Cirsisum arvense), Japanese stilt grass (Microstegium), and cool season grasses (Poa spp.). Herbicide applications will be made by broadcast spray and spot treatment over the course of approximately three years to ensure eradication of persistent nuisance species. The site will be replanted with native vegetation, and the three years of targeted herbicide treatment will support the sustainable growth of native species.

Materials considered by the Department and which support its determination of significance:

1. Letter from Jay Fain & Associates to the NYSDEC Regional Permit Administrator, dated July 17, 2018 and the following enclosures:
    a. Joint Application Form, NYSDEC Article 24 Weltand Permit Application, for Richard and Martha Handler, 21 & 25 Woodway Road, dated July 16, 2018;
    b. Affidavit of Ownership, for Richard and Martha Handler, 21 & 25 Woodway Road, Sheet 38, Block 10549, Lots 12 and 20;
    c. Site Location Map for 21 & 25 Woodway Road, South Salem, NY, as generated by the NYSDEC Environmental Mapper;
    d. 2018 Site Aerial Photograph, as generated from the Westchester County GIS System;

e. Site Photographs, Photo Location Map and 7 Site Photos, prepared by Larry Weaner Landscape Associates, dated September 15, 2017; and
f. Wetland Application Narrative, Meadow Restoration and Enhancement" Report for Camp Runamuk, prepared by Jay Fain & Associates, dated June 2018;

2. Preliminary Plat/Integrated Plot Plan, prepared by McManus Engineering, last revised March 15, 1997;
3. Subdivision Plan, prepared by McManus Engineering and H. Stanley Johnson and Company, Land Surveyors, P.C., last revised May 27, 1997;
4. NYSDEC Wetland Map, prepared by Jay Fain & Associates, LLC, with NYSDEC Freshwater Wetland Boundary Validation dated July 20, 2018;
5. The following Drawings prepared by Larry Weaner Landscape Associates (4 Sheets), last revised August 24, 2018:, including: "Camp Runamuk – Existing Conditions Plan," 1 of 4; "Camp Runamuk – Existing Conditions Plan," 2 of 4 (sometimes referred to as "Spray Plan"); "Camp Runamuk – Planting Plan," 3 of 4; and "Plant Schedule and Seed Mixes," 4 of 4;
6. Letter from Keane & Beane, P.C., attorneys for the Town of Lewisboro Planning Board to NYSDEC, dated November 6, 2018;
7. Full Environmental Assessment Form, prepared by Jay Fain & Associates, dated February 7, 2019
8. Aquatic Pesticide Application of Richard and Martha Handler for a Permit to Use a Pesticide for the Control of an Aquatic Pest (AQV (11/2016)), signed by Applicant/Owner Martha Handler on September 9, 2019 and Certified Applicator Drew O'Neill on September 3, 2019 (9 pages);
9. Letter from NYCDEP to NYSDEC (Tracey O'Malley), dated November 13, 2019;
10. Letter from Town of Lewisboro Planning Board to NYSDEC (Tracey O'Malley), dated November 21, 2019;
11. 1981 Aquatic Vegetation Management FEIS;
12. 1995 SEIS for Fluridone and Glyphosate; and
13. 2014 Statement of Findings;
14. Memorandum, dated March 7, 2005; A Synoptic Review of Technical Information Regarding the Use of Herbicides in Fish-Bearing Waters of the state.

Reasons Supporting This Determination:

Impacts on Surface Water – Significant adverse impacts to surface water, wetland resources or water quality are not anticipated.

The project site is within NYS regulated Freshwater Wetland L-16 (Class I) and Truesdale Stream, Waters Index Number H-31-P44-35-P109-6-13, Class C. Two open water ponds are present within the wetland complex and connected by watercourses. There will be no significant impairment of the natural resource functions and benefits provided by the wetland as a result of this project. The existing site contains invasive and non-native plant species. A targeted restoration and replanting of the site to create a native meadow will improve ecological function, habitat quality and biodiversity.

Significant impacts to water quality are not anticipated, as a result of the proposed pesticide treatment, or the physical removal of existing vegetation, and replanting. The project site is located within the Cross River Reservoir drainage basin of the New York City's Water Supply, and the Cross River Reservoir is phosphorous restricted.

The application of herbicides will be carried out by a New York State certified pesticide applicator in accordance with New York State registered pesticide label directions. While herbicides are proposed for use throughout the 20.2 acre project site, no open water application is proposed. However, incidental drift can occur when application is in close proximity to water. The applicant will pump down water levels to prevent discharge for the required 48 hours.

Best management practices and pesticide label requirements will be adhered to during application. Herbicide applications will not take place when wind exceed12 miles per hour, to avoid the potential for any drift. Herbicide applications will not take place if precipitation is forecasted within 12 hours of the completion of the application. All herbicide applications that occur directly adjacent to any waterbody will be carried out using handheld application tools, to avoid overspray into the adjacent waterbody. In addition, all tank mixing will be completed on an impermeable surface, in a predefined location, 100 ft minimum from any regulated wetlands or waterbody, and an emergency spill kit will be immediately available when any mixing or application of herbicide is occurring.

Turbidity and sedimentation are not anticipated as a result of this proposal, as no ground disturbance is proposed. The proposed actions will not cause changes to drainage patterns or water levels.

The application qualifies for coverage under General Permit GP-0-16-005, SPDES General Permit for Point Source Discharges to Surface Waters of New York from Pesticide Applications, and the Applicant will be required to file a Notice of Intent and comply with the General Permit.

Impacts on Plants and Animals - Significant adverse impacts to plants and animals are not anticipated as a result of this project.

The objective of the project is to improve ecological function, habitat quality, on-site biodiversity and aesthetics of the existing meadows and wetlands on-site. Existing invasive and non-native species will be removed, and native species will be introduced. While there will be an immediate loss of existing flora and fauna on-site, the intent is to replace it will native, higher quality species. Removal and establishment will be conducted over a phased approach.
Rodeo and/or Aquaneat, active ingredient glyphosate, and its non-wetland counterpart, Round Up will be used for treatment. The Department studied the potential environmental impacts in an SEIS in 1995 and a positive Amended Findings Statement concluding that they can be used without adversely affecting wetland resources was adopted in 2014 (the "Findings Statement"). As stated in the 2014 Findings Statement,

the use of herbicides can be an important component in a comprehensive management approach to limit the spread of invasive species.

The active ingredient to be used for treatment is Glyphosate, which is a systematic herbicide that causes toxicity by interfering with the plant's ability to synthesize proteins and produce new plant tissue. Glyphosate can be effective for controlling emergent and floating vegetation and must be applied to foliage in order to be absorbed. As noted above, open water application is not proposed, however, aquatic organisms are generally not sensitive to glyphosate, and the normal application rates are well below toxicity thresholds. Water levels will be managed prior to application and held for 48 hours.

New York State Department of Environmental Conservation
Division of Environmental Permits
NYSDEC Region 3 Headquarters
21 S Putt Corners Rd
New Paltz, NY 12561
(845) 256-3054

April 10, 2020

LISA DEVINE
21 WOODWAY RD
SOUTH SALEM, NY 10590

Re: DEC ID # 3-5530-00226/00001
RUNAMUCK FARM

Dear Applicant :

Please be advised that your application for a DEC permit(s) is complete and a technical review has commenced. Notice and the opportunity for public comment is required for this application. Enclosed is a Notice of Complete Application for your project. Please have the Notice published in the newspaper identified below once during the week of 4/13/2020 on any day Monday through Friday.

The official newspaper of the Town (City) of LEWISBORO.
Contact the Town (City) Clerk's office to confirm the official newspaper.

On the Notice of Complete Application, that information presented between the horizontal lines, on the enclosed page(s) should be published. Do not print this letter or the information contained below the second horizontal line. Please request the newspaper publisher to provide you with a Proof of Publication for the Notice. Upon receipt of the Proof of Publication promptly forward it to this office. You must provide the Proof of Publication before a final decision can be rendered on your application. You are responsible for paying the cost of publishing the Notice in the newspaper.

Notification of this complete application is also being provided by this Department in the NYSDEC Environmental Notice Bulletin.

This notification does not signify approval of your application for permit. Additional information may be requested from you at a future date, if deemed necessary to reach a decision on your application. Your project is classified major under the Uniform Procedures Act. Accordingly, a decision is due within 90 days of the date of this notice unless a public hearing is held, which may extend this time frame. If a public hearing is necessary, you will be notified.

If you have any questions please contact me at the above address or phone number above.

Sincerely,

TRACEY L O'MALLEY
Division of Environmental Permits

THIS IS NOT A PERMIT

New York State Department of Environmental Conservation
Notice of Complete Application

Date: 04/10/2020

Applicant: LISA DEVINE

Facility: RUNAMUCK FARM
21 Woodway Rd
South Salem, NY 10590

Application ID: 3-5530-00226/00001

Permits(s) Applied for: 1 - Article 15 Title 3 Aquatic Pesticides
1 - Article 24 Freshwater Wetlands

Project is located: in LEWISBORO in WESTCHESTER COUNTY

Project Description:
The applicant proposes the treatment and removal of approximately 20.2 acres of non-native and invasive species within New York State Freshwater Wetland L-16, Class 1. Proposed methods of removal include physical removal, mowing, and supplemental plantings, as well as the use of herbicide Round Up or Rodeo (active ingredient: glyphosphate). Application of herbicides will be through broadcast spray and spot treatment. Targeted species include Giant Reed grass, Autumn Olive, Reed Canary grass, Mugwort, creeping thistle, Japanese stilt grass, and cool season grasses. The site will be replanted with native vegetation.

Availability of Application Documents:
Filed application documents, and Department draft permits where applicable, are available for inspection during normal business hours at the address of the contact person. To ensure timely service at the time of inspection, it is recommended that an appointment be made with the contact person.

State Environmental Quality Review (SEQR) Determination
Project is a Type I action and will not have a significant effect on the environment. A coordinated review with other involved agencies was performed and a Negative Declaration is on file.

SEQR Lead Agency NYS Department of Environmental Conservation

State Historic Preservation Act (SHPA) Determination
Cultural resource lists and maps have been checked. The proposed activity is not in an area of identified archaeological sensitivity and no known registered, eligible or inventoried archaeological sites or historic structures were identified or documented for the project location. No further review in accordance with SHPA is required.

Availability For Public Comment

Comments on this project must be submitted in writing to the Contact Person no later than 04/30/2020 or 15 days after the publication date of this notice, whichever is later.

Contact Person

TRACEY L O'MALLEY
NYSDEC
21 S Putt Corners Rd
New Paltz, NY 12561
(845) 256-3054

CC List for Complete Notice

Lisa Devine
Jay Fain
Town of Lewisboro
NYCDEP
ENB

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits, Region 3
21 South Putt Corners Road, New Paltz, NY 12561-1620
P: (845) 256-3054 | F: (845) 255-4659
www.dec.ny.gov

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

IMPORTANT NOTICE TO ALL PERMITTEES

The permit you requested is enclosed. Please read it carefully and note the conditions that are included in it. The permit is valid for only that activity expressly authorized therein; work beyond the scope of the permit may be considered a violation of law and be subject to appropriate enforcement action. Granting of this permit does not relieve the permittee of the responsibility of obtaining any other permission, consent or approval from any other federal, state, or local government which may be required.

Please note the expiration date of the permit. Applications for permit renewal should be made well in advance of the expiration date (minimum of 30 days) and submitted to the Regional Permit Administrator at the above address. For SPDES, Solid Waste and Hazardous Waste Permits, renewals must be made at least 180 days prior to the expiration date.

The DEC permit number & program ID number noted on page 1 under "Permit Authorization" of the permit are important and should be retained for your records. These numbers should be referenced on all correspondence related to the permit, and on any future applications for permits associated with this facility/project area.

If a permit notice sign is enclosed, you must post it at the work site with appropriate weather protection, as well as a copy of the permit per General Condition 1.

If the permit is associated with a project that will entail construction of new water pollution control facilities or modifications to existing facilities, plan approval for the system design will be required from the appropriate Department's regional Division of Water or delegated local Health Department, as specified in the State Pollutant Discharge Elimination System (SPDES) permit.

If you have any questions on the extent of work authorized or your obligations under the permit, please contact the staff person indicated below or the Division of Environmental Permits at the above address.

Tracey L.M. O'Malley
Division of Environmental Permits, Region 3
Telephone (845) 256-3059

- ☐ Applicable only if checked. Please note all work authorized under this permit is prohibited during trout spawning season commencing October 1 and ending April 30.
- ☐ Applicable only if checked for STORMWATER SPDES INFORMATION: We have determined that your project requires coverage under the General Stormwater SPDES Permit. You must file a Notice of Intent to obtain coverage under the General Permit. This form can be downloaded at: http://www.dec.ny.gov/chemical/43133.html ¨
- ☐ Applicable only if checked - MS4 Areas: This site is within an MS4 area (Municipal Separate Storm Sewer System), therefore the SWPPP must be reviewed and accepted by the municipality. The MS-4 Acceptance Form must be submitted in addition to the Notice of Intent.

Send the completed form(s) to: NYS DEC, Stormwater Permitting, Division of Water, 625 Broadway, Albany, New York 12233-3505.

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

PERMIT
Under the Environmental Conservation Law (ECL)

Permittee and Facility Information

Permit Issued To:
LISA DEVINE
21 WOODWAY RD
SOUTH SALEM, NY 10590
(203) 500-0832

RICHARD/MARTHA HANDLER
25 WOODWAY RD
SOUTH SALEM, NY 10590

Facility:
RUNAMUCK FARM
21 Woodway Rd
South Salem, NY 10590

Facility Location: in LEWISBORO in WESTCHESTER COUNTY
Facility Principal Reference Point: NYTM-E: 622.333 NYTM-N: 4570.423
Latitude: 41°16'33.5" Longitude: 73°32'21.6"
Project Location: 21, 25 Woodway, South Salem
Authorized Activity: This permit authorizes the treatment and removal of approximately 20.2 acres of non-native and invasive species within New York State Freshwater Wetland L-16, Class 1. Methods of removal include physical removal, mowing, and supplemental plantings, as well as the use of herbicide Aquaneat (active ingredient: glyphosphate). Application of herbicides will be through broadcast spray and spot treatment. Targeted species include Giant Reed grass, Autumn Olive, Reed Canary grass, Mugwort, creeping thistle, Japanese stilt grass, and cool season grasses. The site will be replanted with native vegetation.
NO TREATMENT IS AUTHORIZED UNDER THIS PERMIT ON LANDS WITHIN THE STATE OF CONNECTICUT.

Please be aware that a new Aquatic Pesticides permit is required for each year of treatment.

Permit Authorizations

Freshwater Wetlands - Under Article 24
Permit ID 3-5530-00226/00001
New Permit Effective Date: 6/17/2020 Expiration Date: 12/31/2025
Aquatic Pesticides - Under Article 15, Title 3
Permit ID 3-5530-00226/00002
New Permit Effective Date: 6/17/2020 Expiration Date: 11/1/2020

NYSDEC Approval

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, and all conditions included as part of this permit.

Permit Administrator: TRACEY L O'MALLEY, Deputy Regional Permit Administrator
Address: NYSDEC Region 3 Headquarters
21 S Putt Corners Rd
New Paltz, NY 12561

Authorized Signature: _____ Date ___/____/____

Distribution List

Lisa Devine, applicant
Jay Fain, Jay Fain & Associates, LLC
Town of Lewisboro
Westchester County DOH
Josh Fisher, NYSDEC BEH
Cathy Ahlers, Aquatic Pesticides
Chris Hertel, Aquatic Pesticides
D. Quentin, NYCDEP
Kathy Iller, Weeds Inc.

Permit Components

NATURAL RESOURCE PERMIT CONDITIONS

GENERAL CONDITIONS, APPLY TO ALL AUTHORIZED PERMITS

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

Permit Attachments

Permit Sign

NATURAL RESOURCE PERMIT CONDITIONS - Apply to the Following Permits: FRESHWATER WETLANDS; AQUATIC PESTICIDES

1. **Conformance With Plans** All activities authorized by this permit must be in strict conformance with the approved plans submitted by the applicant or applicant's agent as part of the permit application. Such approved plans were prepared by Larry Weaner landscape associates, Revision 2018-0824, as outlined in Natural Resource Condition No. 2.

2. **Approved Plans**
Camp Runamuk, prepared by Larry Weaner landscape associates, Revision 2018-0824, including: "Camp Runamuk - Existing Conditions Plan", Sheet 1 of 4; "Camp Runamuk - Existing Conditions Plan", Sheet 2 of 4; Camp Runamuk - Planting Plan", Sheet 3 of 4; and "Plant Schedule & Seed Mixes", Sheet 4 of 4.

3. **Authorized Pesticides** Authorized Pesticide	EPA Registration Number	Name, % or Weight of Active Ingredient	Total Amount of Pesticide Authorized	Not To Exceed Dosage Rate	Shall Be Applied Not Later Than
Aquaneat	228-365	Glyphosate; 53.8%	1.5 gal/season	22.4 PPB	October 30

4. **Follow Product Label Directions** The applicator must follow all pesticide label directions. Where label and labeling directions, permit conditions and regulations address the same point, the more prohibitive requirements must be complied with. A copy of the product labeling, including any applicable Special Local Need (SLN) labeling, must be on site during all treatments. The applicator, and all others handling the product, must wear appropriate personal protective clothing as required by label directions.

5. **Target Species** This permit authorizes treatment for: Common Reed Grass and Reed Canary Grass

6. **Authorized Area To Be Treated** The following areas are authorized to be treated: Up to 1 acre within the surface water body of Wetland L-16/Truesdale Stream; and treatment within Wetland L-16 and the adjacent area (not over or within water) as authorized under Natural Resource Conditions No. 2.

7. **Seed, Mulch Disturbed Areas** All areas denuded of vegetation must be replanted immediately with appropriate seed mix or plantings and mulched until vegetation is established.

8. **Instream Pond Treatment** If the proposed application will be taking place in an in-stream waterbody, the applicator must show that the treatment will not impact aquatic natural resources while holding outflow during the water use restriction period. To that end, field observations must be made in order to document the extent that downstream aquatic resources may be impacted by holding outflow. This information shall be obtained at the end of the water use restriction period prior to the resumption of outflow (unless a significant rain event is forecasted that is likely to refill the impoundment and resume outflow earlier than planned). A report containing this information shall document the effect of the drawdown/buildup below the water control structure, and shall include: photos, a verbal description of the approximate volume of flow in the stream and any observations noted. These observations must take place at the incoming stream, the outflow point, and downstream at the first road crossing below the impoundment and thereafter until flow is detected. This report must be submitted by the end of the calendar year to the Bureau of Pesticides, NYSDEC, 21 South Putt Corners Rd., New Paltz, NY 12561.

9. Bureau of Ecosystem Health Year-End Report No later than December 1 of each year this permit is in effect, the permittee must submit a year end report to Josh Fisher, Bureau of Ecosystem Health (Joshua.Fisher@dec.ny.gov), which includes a quantitative discussion of chemical treatment including a through description of the effectiveness of treatment on target species, noticeable impacts to non-target species, and pre & post photo documentation. In addition to the above description, the report shall include:

Photos
- A photo location map depicting where photos were taken and in what direction;
- Photos taken of the infestations before treatment. These photos should clearly depict the extent of the infestation of target species;
- Photos taken after treatment must be from the same location as the before photos. These photos should clearly show the reduction of target species. Both before and after photos must be taken during growing season.

Quantitative report
- A narrative indicating the details of treatments;
- Quantitative analysis that goes along with the photos to include:
    - Before and after target species presence
    - Estimate of treatment success

Please be aware that a complete report submitted and approved by the Department, as described above, is required in order for future permits to be considered and reissued.

10. Final Report Required The permittee/applicator shall submit a Final Report to the Pesticide Control Specialist no later than December 1. The Final Report shall identify all pesticides used to control aquatic vegetation by product name, active ingredient and EPA Registration Number, the total quantity of each pesticide used during the season, the areas of treatment and any additional information, which has been made a part of this permit, as determined by the Department.

This permit requirement does not relieve the permittee, pesticide applicator, registered agency, or registered pesticide business of the statutory obligation to comply with annual reporting requirements set forth in Article 33, Section 1205 of the Environmental Conservation Law.

11. No Right to Treat Non-Target Waters This permit does not authorize the treatment of pesticides to non-target water or water lying on or passing through the property of others without their consent. The permittee or applicator must obtain landowner consent before treatment. The permittee and applicator are responsible for damages suffered by riparian owners or others as a result of their activities conducted under this permit.

12. Pesticide Control Specialist When used in this permit, the Pesticide Control Specialist is:

Pesticide Control Specialist
NYSDEC Region 3 Headquarters
21 S Putt Corners Rd
New Paltz, NY12561

Cathy Ahlers and/or Chris Hertel; 845-256-3097

13. Rescheduling Notification

a.) In the event that pesticide treatment must be rescheduled, the permittee/applicator must contact the Pesticide Control Specialist a minimum of 24 hours prior to the date of the original treatment date.

b.) In the event that a pesticide application is not conducted during a year authorized by this permit, the permittee or their representative must provide notification to the Pesticide Control Specialist annually, no later than December 31, for each year this permit is valid.

14. Certified Pesticide Applicator ("Applicator") and Identification Number This permit authorizes the following applicator(s): the Applicator(s) listed in conjunction with the Article 15 Aquatic Pesticides application approved by the Bureau of Pesticides Management.

The applicator must possess a valid Commercial Pesticide Applicator Certification identification card in Category 5A issued by the Department, and must have the card with him/her at the time of treatment. The certified applicator must be on site during all treatments. However, "Pesticide Technicians" and/or "Pesticide Apprentices," may apply the pesticides under this permit to the extent allowed by 6 NYCRR Part 325.7.

15. Precautions Against Contamination of Waters All necessary precautions shall be taken to preclude contamination of any wetland or waterway by suspended solids, sediments, fuels, solvents, lubricants, epoxy coatings, paints, concrete, leachate or any other environmentally deleterious materials associated with the project.

16. Riparian Owner and User Notification The permittee must provide prior actual notice of the date(s) of treatment and of the water use restrictions to any affected riparian owner, riparian user and known users.

17. State Not Liable for Damage The State of New York shall in no case be liable for any damage or injury to the structure or work herein authorized which may be caused by or result from future operations undertaken by the State for the conservation or improvement of navigation, or for other purposes, and no claim or right to compensation shall accrue from any such damage.

18. State May Order Removal or Alteration of Work If future operations by the State of New York require an alteration in the position of the structure or work herein authorized, or if, in the opinion of the Department of Environmental Conservation it shall cause unreasonable obstruction to the free navigation of said waters or flood flows or endanger the health, safety or welfare of the people of the State, or cause loss or destruction of the natural resources of the State, the owner may be ordered by the Department to remove or alter the structural work, obstructions, or hazards caused thereby without expense to the State, and if, upon the expiration or revocation of this permit, the structure, fill, excavation, or other modification of the watercourse hereby authorized shall not be completed, the owners, shall, without expense to the State, and to such extent and in such time and manner as the Department of Environmental Conservation may require, remove all or any portion of the uncompleted structure or fill and restore to its former condition the navigable and flood capacity of the watercourse. No claim shall be made against the State of New York on account of any such removal or alteration.

19. State May Require Site Restoration If upon the expiration or revocation of this permit, the project hereby authorized has not been completed, the applicant shall, without expense to the State, and

to such extent and in such time and manner as the Department of Environmental Conservation may lawfully require, remove all or any portion of the uncompleted structure or fill and restore the site to its former condition. No claim shall be made against the State of New York on account of any such removal or alteration.

GENERAL CONDITIONS - Apply to ALL Authorized Permits:

1. **Facility Inspection by The Department** The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71- 0301 and SAPA 401(3).

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

2. **Relationship of this Permit to Other Department Orders and Determinations** Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

3. **Applications For Permit Renewals, Modifications or Transfers** The permittee must submit a separate written application to the Department for permit renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing. Submission of applications for permit renewal, modification or transfer are to be submitted to:

Regional Permit Administrator
NYSDEC Region 3 Headquarters
21 S Putt Corners Rd
New Paltz, NY12561

4. **Submission of Renewal Application** The permittee must submit a renewal application at least 30 days before permit expiration for the following permit authorizations: Aquatic Pesticides, Freshwater Wetlands.

5. **Permit Modifications, Suspensions and Revocations by the Department** The Department reserves the right to exercise all available authority to modify, suspend or revoke this permit. The grounds for modification, suspension or revocation include:

a. materially false or inaccurate statements in the permit application or supporting papers;

b. failure by the permittee to comply with any terms or conditions of the permit;

c. exceeding the scope of the project as described in the permit application;

d. newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit;

e. noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

6. Permit Transfer Permits are transferrable unless specifically prohibited by statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification
The permittee, excepting state or federal agencies, expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees, and agents ("DEC") for all claims, suits, actions, and damages, to the extent attributable to the permittee's acts or omissions in connection with the permittee's undertaking of activities in connection with, or operation and maintenance of, the facility or facilities authorized by the permit whether in compliance or not in compliance with the terms and conditions of the permit. This indemnification does not extend to any claims, suits, actions, or damages to the extent attributable to DEC's own negligent or intentional acts or omissions, or to any claims, suits, or actions naming the DEC and arising under Article 78 of the New York Civil Practice Laws and Rules or any citizen suit or civil rights provision under federal or state laws.

Item B: Permittee's Contractors to Comply with Permit
The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

Item C: Permittee Responsible for Obtaining Other Required Permits
The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required to carry out the activities that are authorized by this permit.

Item D: No Right to Trespass or Interfere with Riparian Rights
This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.

Item E: SEQR Type I Action, DEC Lead Agency, No Significant Impact Under the State

Environmental Quality Review Act (SEQR), the project associated with this permit is classified as a Type I Action with the Department of Environmental Conservation designated as the lead agency. It has been determined that this project will not have a significant effect on the environment.

New York State

Department of Environmental Conservation

NOTICE

The Department of Environmental Conservation (DEC) has issued permit(s) pursuant to the Environmental Conservation Law for work being conducted at this site. For further information regarding the nature and extent of work approved and any Department condition on it, contact the DEC at 845-256-3054. Please refer to the permit number shown when contacting the DEC.

Permittee: Lisa Devine/Martha & Richard Handler **Permit No.** 3-5530-00226/00001,2

Effective Date: 6/17/2020 **Expiration Date:** 12/31/2025

❑ **Applicable if checked. No instream work allowed between October 1 & April 30**

NOTE: This notice is NOT a permit.

TOWN OF NEW CANAAN
INLAND WETLANDS DEPARTMENT
Town Hall, 77 Main Street
New Canaan, CT 06840

www.newcanaan.info

203.594.3036

June 12, 2020

CERTIFIED MAIL - RETURN RECEIPT REQUESTED
7019 1640 0001 3590 5184

RECEIVED BY

JUN 23 2020

Town Clerk
Town of Lewisboro

Ms. Janet Donahue
Town of Lewisboro
P.O. Box 500
11 Main Street
South Salem, NY 10590

RE: SECTION 9.5 NOTICE TO ADJACENT MUNICIPALITIES
INLAND WETLANDS AND WATERCOURSES REGULATIONS for the TOWN OF NEW CANAAN for 367 Luke's Wood Road, New Canaan-Notice to Adjacent Municipality

Dear Ms. Donahue:

The Inland Wetlands Commission of the Town of New Canaan has received a wetland application for 554 North Wilton Road, New Canaan from the First taxing District of the City of Norwalk. The current application is requesting permission to:

1. Permit Number 19-20-36 - 554 North Wilton Road-First Taxing District, Map 47 Block 103 Lot 7. This is a limited project for a subsurface exploration program to obtain data for a stability analysis of the Dam with test borings and for the installation of piezometers to obtain information to monitor the performance of the Dam in the future. The project will include the installation of a temporary 15'-20' feet wide by 50' long gravel accessway, across a pool area at the base of the Dam, for equipment to perform test borings.
   Agent: Albert Vasko, Esq., First taxing District

The proposed project is located within 500' of the Lewisboro town line. Under the State Statutes the Commission is required to give you notice of this pending application.

The application is electronically on file on the Commission's webpage: www.newcanaan.info.

If you have any questions regarding this proposal, please contact the Commission's office (203)594-3036 or email written comments to: Kathleen.holland@newcanaanct.gov.

Sincerely,

Kathleen Holland

Kathleen Holland
Director of Inland Wetlands and Watercourses

cc: file

\\ncdata\Wetlands\Inland Wetlands\Adjoining Municipality Notice\2020\554 North Wilton Road 061220.docx