#### AGENDA PACKET

### JANUARY 11, 2022 MEETING

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#### 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, January 11, 2022

Via Zoom videoconferencing and live streaming to Lewisboro TV YouTube channel

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

https://www.youtube.com/channel/UCNUNE5gXs5rnHcyR4l6dikA

#### I. SITE DEVELOPMENT PLAN REVIEWS

Cal #04-21PB, Cal #42-21WP, Cal #08-21SW 397 Smith Ridge Road, LLC; 397 Smith Ridge Road, South Salem; Sheet 50A, Block 9848, Lot 2 (397 Smith Ridge Road, LLC, owner of record) - Application for an addition to an existing self-storage facility.

#### Cal #10-21PB

Palminteri Residence, 4 Bluestone Lane, South Salem; Sheet 40, Block 10552, Lot 42 (Chazz And Gianna Palminteri, owners of record) – Waiver of site development plan procedures application for the construction of a single-family house.

#### II. WETLAND VIOLATION

#### <u>Cal #01-21WV</u>

Maple Tree Farm, 400 Smith Ridge Road, South Salem; Sheet 24, Block 9831, Lot 49B (Maple Tree Farm, LLC, owner of record)

#### III. DISCUSSION

2022 Fee Schedule

- IV. MINUTES OF December 21, 2021.
- V. MOTION TO CONVENE EXECUTIVE SESSION
- VI. NEXT MEETING DATE: February 15, 2022.
- VII. ADJOURN MEETING



#### MEMORANDUM

TO:	Chairperson Janet Andersen and Members of Lewisboro Planning Board
CC:	Ciorsdan Conran
	Judson Siebert, Esq. Joseph Angiello
	CKQ
FROM:	Jan K. Johannessen, AICP
	Joseph M. Cermele, P.E., CFM
	Town Consulting Professionals
DATE:	January 6, 2022
RE:	Site Development Plan Approval, Wetland Activity Permit, and Stormwater Permit
	397 Smith Ridge Road, LLC
	397 Smith Ridge Road
	Sheet 50A, Block 9848, Lot 2

#### PROJECT DESCRIPTION

The subject property consists of  $\pm 0.93$  acres of land and is located at 397 Smith Ridge Road within the GB Zoning District. The subject property is developed with two (2) self-storage buildings. The applicant is proposing the construction of two (2), new self-storage buildings, resulting in  $\pm 2,846$  s.f. of new space. The applicant is also proposing to expand the existing stormwater management facility to accommodate additional flows and has proposed wetland mitigation in the form of planting.

#### <u>SEQRA</u>

The proposed action has been preliminarily identified as a Type II Action and is therefore categorically exempt from the State Environmental Quality Review Act (SEQRA).

#### **REQUIRED APPROVALS/REFERRALS**

- 1. Amended Site Development Plan Approval, a Town Stormwater Permit, and a Wetland Activity Permit are required from the Planning Board; a public hearing is required.
- 2. It appears that a building coverage variance is required from the Zoning Board of Appeals.

CIVIL ENGINEERING | LANDSCAPE ARCHITECTURE | SITE & ENVIRONMENTAL PLANNING

Chairperson Janet Andersen January 6, 2022 Page 2 of 4

- 3. Referral to the Architecture and Community Appearance Review Council is required.
- 4. The application has been referred to the Westchester County Planning Board as required under Section 239-m of the General Municipal Law.

#### COMMENTS

- 1. This office defers review of the plan for zoning compliance to the Building Inspector. It is recommended that the revised plans be forwarded to the Building Inspector to determine if the comments contained within his August 10, 2021 memorandum have been satisfactorily addressed.
- 2. It is recommended that the application be referred to the Fire Department for review; the applicant should coordinate this referral with the Building Inspector (please do not send plans directly to the Fire Department).
- 3. As part of the original approval for the self-storage facility, the applicant was required to submit annual maintenance reports relating to the originally installed wetland mitigation plantings; reports were never submitted. The applicant has since inspected the mitigation area and has submitted a report entitled "Report on Wetland Mitigation Area", prepared by Alan Pilch, P.E., RLA, dated December 13, 2021. The report identifies that the entire wetland mitigation area has been consumed by invasives, a condition that could have been prevented if the applicant had been diligent with required inspections. The applicant is proposing to remove the invasives and replant the former mitigation area; however, the plan does not satisfy the minimum required 1:1 mitigation ratio and there is a 2,560 s.f. deficit. The applicant should evaluate options for achieving the minimum requirement. We note that the previously proposed off-site mitigation area has been eliminated with this latest plan submission.
- 4. As previously identified, the applicant must coordinate with the New York State Department of Environmental Conservation (NYSDEC) to determine if the NYSDEC wetland boundary needs to be reverified and to discuss if any permitting is required for work proposed within the NYSDEC 100-foot Wetland Adjacent Area (proposed mitigation).
- 5. As previously requested, provide a Lighting Plan to demonstrate proposed illuminance levels and provided details of lighting fixtures for the new buildings.
- 6. The stormwater mitigation design for the original approval included an infiltration system consisting of 55 infiltration units located along the rear of the drive. Pre-treatment of stormwater runoff was provided via temporary storage of influent flows. The plan proposes to relocate a portion of the previously installed system to accommodate the proposed building foundations. The system will be expanded as needed to mitigate peak runoff rates from the added impervious area. The hydrologic design demonstrates that peak discharge rates through the 25-year storm

Chairperson Janet Andersen January 6, 2022 Page 3 of 4

will be attenuated. We note that the original design and approval required attenuation of peak discharge rates through the 100-year design storm. The analysis should be updated to demonstrate that the same level of mitigation will be maintained as previously approved.

- 7. The stormwater design indicates that water quality treatment is being provided for the added impervious area. We note, however, that the plan proposes to install a new catch basin, Proposed Catch Basin CB-1, which will collect runoff from the proposed storage building roof and expanded driveway. These flows will not be pre-treated prior to discharging to the infiltration system. Please modify the system layout as needed to provide pre-treatment of all collected stormwater runoff. The SWPPP should include updated water quality treatment calculations to demonstrate that the existing pretreatment system is adequate.
- 8. Please provide invert elevations for all inlet and outlet piping connections at Existing Catch Basin, CB-1. It is unclear whether pretreatment of stormwater runoff is being provided prior to discharge to the proposed 12 infiltration units. Please provide a detail for the required modifications to the existing catch basin.
- 9. We note that the two (2) identified snow storage areas require access through a gate; this is not ideal. The applicant should consider elimination of the gated access.
- 10. Provide construction details for all proposed improvements, including but not limited to, the concrete retaining wall, refuse enclosure and stormwater components.
- 11. The chain link fence detail on Sheet C-112 references plans that are not included within the plan set. The detail should state that the proposed chain link fence is to match what is existing elsewhere on the property. Note that the previously approved chain link fence was to be black vinyl coated galvanized steel.

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 ALP ENGINEERING, DATED DECEMBER 9, 2021:

- Site Layout Plan (Sheet C-101)
- Site Grading and Utilities Plan (Sheet C-102)
- Erosion and Sediment Control Plan (Sheet C-103)
- Mitigation Planting Plan (Conceptual) (Sheet C-104)
- Construction Details (Sheet C-111, C-112, C-113)

Chairperson Janet Andersen January 6, 2022 Page 4 of 4

#### **DOCUMENTS REVIEWED:**

- Letter, prepared by ALP Engineering, dated December 19, 2021
- Stormwater Pollution Prevention Plan Report, dated December 13, 2021
- Exhibit 1: Wetland Buffer, Impacts and Mitigation, dated December 9, 2021
- Report on Wetland Mitigation Area, dated December 13, 2021

JKJ/dc

https://kellardsessionsconsulti.sharepoint.com/sites/Kellard/Municipal/Lewisboro/Correspondence/2022\_01-06\_LWPB\_Kaplan Storage - 397 Smith Ridge Road\_Review Memo.docx

#### TOWN OF LEWISBORO Westchester County, New York



Tel: (914) 763-3060 Fax: (914) 875-9148 Email: jangiello@lewisborogov.com

Building Department 79 Bouton Road South Salem, New York 10590

August 10, 2021 revision 1

Ms. Janet Andersen, Chair Town of Lewisboro Planning Board

Re: Cal#4-21PB, Cal#42-21WP, Cal#08-21SW Kaplan Storage, 397 Smith Ridge Rd., sheet 050A, block 9848, lot 02

Dear Ms. Andersen and Members of the Board,

I have reviewed the plans from Alan L. Pilch, P.E. dated 4/15/21, the plan from Steven R. Kaplan, Architect dated 11/16/20 and the survey from Terry Bergendorff Collins, Surveyor latest revision dated 12/1/15 as well as the memo from Jan K. Johannessen, AICPI and Joseph M. Cermele, P.E. dated 6/10/2021. I agree with the comments from our Town Consulting Professionals and will not repeat them here. I have the following comments:

- 1. A fire apparatus road (minimum width 20') must extend to within 150' of all portions of the facility per Section 503 of the 2020 Fire Code of NYS. Proposed building #4 could be decreased in size to provide a minimum 20' access width on its southern side. The space adjacent to the existing keypad reader must also be increased to a minimum width of 20'.
- 2. A minimum fire separation distance of 10' is required between buildings per Table 602 of the 2020 Building Code of NYS or the design professional may elect to treat all the separate buildings as one per Section 503.1.2 of the 2020 Building Code of NYS.
- 3. Storage areas are not included in the Schedule of Off-street Parking Requirements. The number of required parking spaces for these areas shall be determined by the Planning Board per Section 220-56E of the Zoning Code.

Please do not hesitate to contact me with any questions.

Sincerely,

Joe Angiello Building Inspector



ALP Engineering & Landscape Architecture, PLLC

December 19, 2021

Hon. Janet Andersen, Chairwoman and Members of the Planning Board Town of Lewisboro 79 Bouton Road South Salem, NY 10590

Re: 397 Smith Ridge Road

Sheet 50A, Block 9848, Lot 2

Application for Amended Site Development Plan Approval, Wetlands and Stormwater Management Permits

Dear Chairwoman Andersen and Members of the Planning Board:

We are pleased to submit four (4) copies of the following drawings in support of this application by 397 Smith Ridge Rd, LLC, the owner of the property located at 397 Smith Ridge Road for Amended Site Development Plan Approval, Wetlands and Stormwater Management Permits. As a result of comments received from the Planning Board, the plans have been modified since the prior submission to the Planning Board. In the prior application, a total of 3,350 square feet of new storage building was proposed. In the current application, the amount of new building proposed is 2,846 s.f., a reduction of 504 s.f. The changes to the plans are described below.

Drawing No.:	Drawing Title:	Date:
Dwg. C-101	Site Layout Plan	12/09/2021
Dwg. C-102	Site Grading and Utilities Plan	12/09/2021
Dwg. C-103	Erosion and Sediment Control Plan	12/09/2021
Dwg. C-104	Mitigation Planting Plan	12/09/2021
0	Construction Details	12/09/2021
Dwg. C-112	Construction Details	12/09/2021
Dwg. C-113	Construction Details	12/09/2021

Also submitted for review are the following:

- Report on Wetland Mitigation Area, dated December 13, 2021;
- Stormwater Pollution Prevention Plan / Stormwater Management Report For Self-Storage Facility, dated December 13, 2021.

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



• Exhibit 1, Wetland Buffer: Impacts and Mitigation, dated 12/09/2021.

#### Summary of Changes to the Plans:

- The addition at the eastern end of Building 1 has been eliminated.
- Two new buildings are proposed; Building 3 will be 1,500 square feet and Building 4 will be 1,346 square feet.
- With these changes, the building coverage on the site is reduced from the previously proposed 10,062.5 square feet to 9,558.5 square feet. A variance will be needed for building coverage, but the variance will be smaller, amounting to 3.53% (instead of 4.76%) in excess of the 20% that is permitted.
- The rear yard setback is increased from 51.1 feet to 57.8 feet.
- The new buildings have been designed to work with the existing drainage system to the maximum extent possible. One row of the existing Cultec 330XLHD chambers (a total of 11 chambers) will be abandoned (they will be under Building 3) and a new system to consist of 12 chambers is proposed to the north of Building 3.
- Snow storage has been moved to be located at the north end of Building 3 and south end of Building 4.
- The entry at the keypad will be widened to 13' (from 10.5 feet) as per the comments of the Building Inspector.
- A detailed mitigation planting plan is provided (see Sheet C-104). Due to the steep slope from the edge of the fill pad in the eastern portion of the property down to the rear of the property line, we do not feel it is feasible to plant this area and be able to readily maintain it. As a result, as shown on Exhibit 1, the sum of the as-built disturbance within the wetland buffer plus the additional disturbance from the proposed modifications is calculated to be 9,212 square feet. A planted mitigation area of 6,652 square feet is provided, leaving a deficit of 2,560 square feet.

The following responds to the comments from the June 15, 2021 Planning Board meeting:

#### How is access to be obtained to the mitigation planting area?

<u>Response</u>: Access to the mitigation planting area is obtained through the two new gates being provided at the north end of Building #3 and south end of Building #4.

# What is the grade change between the "alleyways" between the buildings and the grade below.

<u>Response</u>: With the proposed building modifications, there is no drop in grade at the north end of Building #3. At the south end of Building #4, the grade change is made through the



use of steps. Between Buildings #3 and #4, the grade change is about 6 feet. There is a proposed 5-foot height railing between the two buildings.

What impact would snow storage have on the mitigation planting that is being done in this area.

<u>Response</u>: In the two snow storage areas, vigorous groundcover plantings are proposed which should manage to continue their growth with the melting snow. Snow could also be removed from the premises.

Have there been any neighbor complaints about the property? Any police reports? Noise issues?

<u>Response</u>: The owner is not aware of any neighbor complaints or police reports at the property.

*Provide more information on the use of the dumpster, given that the dumpster area in the new design is much smaller.* 

<u>Response</u>: At present, the owner has two standard size top hinged trash containers at the property. The volume of waste generated has not in the past and does not presently warrant the use of a dumpster. The new trash area at the south end of Building #3 is sufficiently sized to place the two trash receptacles.

Provide a photograph of the existing level spreader discharge. The Chair of the Board indicated her concern regarding the maintenance of water quality of the stormwater discharge.

<u>Response</u>: Above (at the top of Page 4) is a photograph showing the level spreader discharge. As you can see in the photograph, there is no evidence at or below the level spreader of any erosion or sedimentation that is occurring.





*Mr.* Kerner asked if the plan should be revised to eliminate the alleyways between the buildings in order to pull the new space away from the new level spreader discharge location.

<u>Response</u>: The design of the project has been modified significantly so that there is only one "alleyway" between the two new buildings that are proposed.

The Chair asked if some landscaping can be done on the south side of the driveway to improve its appearance.

<u>Response</u>: Additional landscaping in the form of native understory trees and hardy (and salt-tolerant) shrubs are proposed on the south side of the driveway.

The following responds to the comments from the Town Planning and Engineering consultants:

1. Amended Site Development Plan Approval, a Town Stormwater Permit, and a Wetland Activity Permit are required from the Planning Board; unless waived by the Planning Board, a public hearing is required to be held.



Response: So noted.

2. The proposed action requires a building coverage variance from the Zoning Board of Appeals.

<u>Response</u>: As noted in the application, a variance for building coverage is required. A variance of 1,429 square feet of building coverage will be requested. This compares to the prior submission which requested a variance of 1,933 square feet.

3. Referral to the Architecture and Community Appearance Review Council is required.

Response: So noted.

4. Referral to the Westchester County Planning Board is required under Section 239-m of the General Municipal Law.

Response: So noted.

#### COMMENTS

1. This office defers review of the plan for zoning compliance to the Building Inspector. It is recommended that the application be referred to the Building Inspector for review.

<u>Response</u>: We have forwarded the application to the Building Inspector for review.

2. It is recommended that the application be referred to the fire department for review.

<u>Response</u>: We have forwarded the revised application to the fire department for its review and comment.

3. The Bulk Zoning Table shall be revised to compare the requirements of the underlying Zoning District to the existing and proposed condition; if no change is proposed, this shall be stated within the table.

<u>Response</u>: The Bulk Zoning table has been amended to include a column 'Change from Existing' which compares the current to the future condition. The notes at the bottom of the table provides details on the proposed change.



4. The Bulk Zoning shall be revised with the correct rear-yard setback of 15-feet. The Bulk Zoning Table currently has 40-feet listed. Further, the rear-yard setback shall be revised on the plan, where 20-feet is currently illustrated.

<u>Response</u>: The Bulk Zoning table has been corrected to show that the rear yard setback is 15 feet. Sheet C-101 has been corrected as well to show the 15-foot rear yard setback.

5. The plan shall be revised to identify the dimension between buildings/structures and the closest property line(s); provide dimension between buildings.

<u>Response</u>: Additional dimensions have been provided between buildings and from the buildings to the northern and southern property lines, and to the rear yard property line.

6. The submitted Wetland Mitigation Plan is conceptual in nature; the plan shall be developed to contain a full planting schedule, including size, species, and quantity of all proposed plantings. As part of the original approval for the self-storage facility, the applicant was required to submit annual maintenance reports relating the installed wetland mitigation; reports were never submitted. In order to evaluate the condition of the previously installed mitigation plantings, we recommend that the applicant provide a report that assesses the quantity and condition of the plantings and to compare the existing condition to that previously approved/installed. Any missing, dead, or compromised plants shall be replaced.

<u>Response</u>: A mitigation planting plan is depicted on sheet C-104. The mitigation planting plan includes a full planting schedule, as requested, and details the genus and species of the plants to be installed, as well as the quantity of plants, the size of the plants at the time of planting, and the spacing between the plants.

A report, Report on Wetland Mitigation Area, is also submitted on the present condition of the mitigation area and the plants that were installed as part of the original approval. It is proposed to remove the invasive plants that have become established over much of the former mitigation area and install the native trees and shrubs in their place.

7. It is recommended that the Planning Board Attorney review the easement agreement that has been submitted in connection with the off-site wetland mitigation.

Response: So noted.

ALP Engineering & Landscape Architecture, PLLC P.O. Box 843 Ridgefield, CT 06877 EAEC Office: 162 Falls Road Bethany, CT 06524 Direct Tel: (475) 215-5343 Mobile: (203) 710-0587 EAEC Tel: (203) 393-0690 x114



8. Wetland mitigation planting are proposed within the New York State Department of Environmental Conservation (NYSDEC) Wetland Adjacent Area; the applicant should contact the NYSDEC to determine permitting requirements, if any. The applicant must also coordinate with the NYSDEC to determine if the NYSDEC wetland boundary needs to be reverified.

<u>Response</u>: It is not proposed to extend the planting mitigation area beyond the area that was previously proposed.

9. The applicant shall prepare and submit a Landscaping Plan demonstrating compliance with Section 220-15 and 220-55E of the Zoning Code. The plan shall illustrate the location of all proposed plants and shall include a corresponding plant schedule identifying the specie type, size and quantity of all proposed plant material. Cross-section installation details shall be provided for proposed trees and shrubs, as applicable.

<u>Response</u>: Please refer to sheet C-104 which provides a complete landscaping plan for the property.

10. A Lighting Plan shall be provided to demonstrate proposed illuminance levels; provided details.

<u>Response</u>: Sconce lighting to match the existing will be installed on the new buildings. There are no freestanding light fixtures on the property. No changes to fixtures on existing buildings are proposed.

11. We note that there is limited space devoted to refuse and snow storage; the applicant shall clarify how both these items will be managed. The proposed enclosure must be dimensioned and detailed on the plan.

Response: The proposed refuse disposal area has been modified. The refuse disposal area is located at the south end of proposed building no. 3, in roughly the same location as the present disposal area. The 11' long x 5' wide disposal area is more than sufficient given that the present facility has two garbage cans each of which is about 3' wide x 30'' deep and 3'-8'' height.

The amended plan shows two snow storage locations, one of which is located on the south end of Building No. 3; the other is at the north end of Building No. 4.



12. Top and bottom elevations of all proposed walls shall be identified on the plan; all walls greater than four (4) feet in height shall be designed by a NYS Licensed Professional Engineer. Provide construction details and specifications on the plan.

<u>Response</u>: Top and bottom elevations of all proposed walls are provided. The only walls to be constructed are associated with the building walls.

13. The plan shall be revised to illustrate and identify the location, specie type and diameter at breast height (dbh) of all trees with a dbh of 8 inches or greater and located within the limits of disturbance and 25 feet beyond. Indicate trees to be removed and/or protected. If no trees are proposed to be removed, a note to this effect shall be added to the plan.

<u>Response</u>: It is proposed to remove two trees for the installation of the proposed stormwater chambers to be located to the north of Building #3. The trees to be removed were planted at the time of the original construction, and are less than 8" dbh.

14. The plan shall illustrate the location of all existing and proposed above and belowground electric lines.

<u>Response</u>: The location of the existing underground electric lines from the pole along the site frontage into the building is shown on Sheet C-102.

15. All drive aisles shall be dimensioned on the plan.

Response: The dimensions of the proposed drive aisles are shown on drawing C-101.

16. The submitted Stormwater Pollution Prevention Plan (SWPPP) and engineering details will be reviewed with the Step II Application.

Response: So noted.

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

<u>Response</u>: Deep hole testing was performed on July 20, 2021 and the testing was witnessed by Vinny Federici of Kellard Sessions Consulting. The location of the deep hole test is shown on sheet C-102. Deep hole testing that was performed in January 2008 is also shown on this plan. The deep hole test found the following: Topsoil from ground surface to 12



inches, and 12" to 96" a medium to coarse sand and boulders which are  $12"\pm$  in size. No groundwater was evident and no seeps were present. Bedrock was not encountered.

Due to the numerous and large boulders that were encountered in the excavation, it is the opinion of the project engineer that it would not be feasible to conduct a percolation test, since from the elevation of the "shelf", the percolation test hole would be dug using a post hole digger. In lieu of performing a percolation test, the applicant's engineer is respectfully requesting using a very conservative 1" per hour rate in the modeling of the stormwater management plan. Based on the coarse sands and boulders we encountered in the deep hole test, it is very certain that the percolation rate of the soils would be much higher than this conservative rate. It does not appear from reviewing the files that any percolation testing was performed in 2008 or afterward for the initial construction at this property.

18. Provide construction details for all proposed improvements, including but not limited to, concrete retaining walls, the refuse enclosure, gates, etc.

Response: Construction details are shown on Sheets C-111 and C-112.

19. The applicant shall submit a full-size existing condition survey (boundary and 2-foot contours), signed and sealed by a NYS Licensed Land Surveyor.

<u>Response</u>: Enclosed with this letter is a drawing entitled "Final As-Built Survey prepared for Steven Kaplan and Ellen Fisher", dated 11/11/2015.

20. The plan shall note that disturbance limits shall be staked in the field prior to construction.

<u>Response</u>: A note has been added to Sheet C-103 which states that the limit of disturbance indicated on this plan shall be staked prior to the commencement of construction.

21. All applications shall be signed by the owner.

Response: So noted. Applications have been signed by the owner.

22. The Planning Board's standard signature blocks shall appear on all sheets. In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein.



<u>Response</u>: Planning Board's standard signature blocks have been added to all of the plans in the drawing set.

We look forward to your review of the amended site development plans for the construction of the additions to the existing self-storage facility. If you have any questions regarding this submission, please feel free to call us at (475) 215-5343.

Sincerely,

a . . . . .

ALP ENGINEERING & LANDSCAPE ARCHITECTURE, PLLC Alan L. Pilch, P.E R.L.

Principal

cc: Jan Johannessen, AICP Steven Kaplan Beth Evans

> ALP Engineering & Landscape Architecture, PLLC P.O. Box 843 Ridgefield, CT 06877 EAEC Office: 162 Falls Road Bethany, CT 06524 Direct Tel: (475) 215-5343 Mobile: (203) 710-0587 EAEC Tel: (203) 393-0690 x114

#### **REPORT ON WETLAND MITIGATION AREA**

Lewisboro Self-Storage 397 Smith Ridge Road, South Salem

#### Prepared by: Alan L. Pilch, PE, RLA Date: December 13, 2021

This report describes the current conditions in the wetland mitigation area on the Lewisboro Self-Storage property. The condition of the plantings was reviewed by Alan L. Pilch, PE, RLA on October 29, 2021.

#### Summary:

The wetland buffer mitigation area is very overgrown with invasive species which now dominate the planting area. Unfortunately, access to the mitigation area was restricted, since the chain link fence that was installed to the east of the existing driveway and circulation access had no gates. Access into the mitigation area was only feasible by having a landscape contractor clear a narrow path through the area. This condition (no access due to the lack of a gate in the fence) will be remedied in the current plan for the property.

The buffer mitigation area is dominated by invasive species such as multiflora rose (Rosa multiflora) shrubs, porcelain-berry (Ampelopsis brevipedunculata), Japanese honeysuckle (Lonicera japonica), Asiatic bittersweet (Celastrus orbiculata), along with iris (Iris sp.), Japanese knotweed (Polygonum cuspidatum), mugwort (Artemisia vulgaris), garlic mustard (Alliaria petiolate) and wild grape (Vitis spp.). Trees that were apparently planted within the mitigation area were noted as being wound with vines. Due to the density of the invasive species, it was not possible to identify shrubs which were planted as mitigation.

#### Recommendation:

It is recommended that: (1) the entire wetland buffer mitigation planting area be cleared of the invasive species that have taken over, (2) that a gate be installed in the new fence to provide future access and maintenance, (3) that a mulch path be placed from the access point in the fence to facilitate this access, and (4) that new plants consisting of native trees and shrubs as well as groundcovers be installed in accordance with drawing C-104.

## REPRESENTATIVE PHOTOGRAPHS OF WETLAND BUFFER MITIGATION AREA





#### Submission Form to the Westchester County Planning Board For Planning and Zoning Referrals REQUIRING NOTIFICATION ONLY

County Ref. No. LEW N21-001

The Westchester County Planning Board has predetermined that certain categories of planning and zoning applications are matters for local determination only. For any application listed below, submission of this completed form will satisfy the requirements of NYS General Municipal Law and the Westchester County Administrative Code that the local board provided adequate notification to the County Planning Board in accordance with Planning Board procedures. No other material need be sent. Upon receipt, the County Planning Board will complete the bottom section of this form and return it to you to for your records to indicate compliance with referral requirements.

When completed save this form and e-mail to: <u>muniref@westchestergov.com</u> or print and fax to 914-995-3780.

Municipality: Lewisboro Referring Agency (check one): x Planning Board or Commission

Planning Board or Commission
 Zoning Board of Appeals
 City or Common Council/Town Board/Village Board of Trustees

Application Name and Local Case Number:**397 Smith Ridge Road LLC Self-Storage Facility**Address:**397 Smith Ridge Road**Section:**50A**Block:**9848**Lot:**2** 

Submitted by (name and title): Ciorsdan Conran, Planning Board Administrator

E-mail address (or fax number): planning@lewisborogov.com

The above referenced application qualifies for the notification only procedure to the County Planning Board because it falls within the category of action checked below:

**Zoning Area Variance** to decrease front yard setback, decrease minimum street frontage or decrease average lot width for property abutting a State or County road or park

Special Use Permit or Use Variance to allow less than 5,000 square feet of new or renovated floor area and less than 10,000 square feet of land disturbance.

**x** *Site Plan* to allow less than 5,000 square feet of new or renovated floor area and less than 10,000 square feet of land disturbance on property within 500 feet of:

- The boundary of a city, town or village
- The boundary of an existing or proposed state or county park, recreation area or road right-of-way
- An existing or proposed county drainage channel line
- The boundary of state- or county-owned land on which a public building/institution is located or
- The boundary of a farm located in an agricultural district.

(Please note: All applications given a Positive Declaration pursuant to SEQR must be referred as a complete application. Do not use this form.)

Do not write below this line. Date received by the Westchester County Planning Board: 8/11/21 Notification acknowledged by (name and title): Lukas Herbert, Associate Planner

#### **Ciorsdan Conran**

From: Sent: To: Subject: Jeff Peck <jpeck@vistafd.org> Tuesday, August 10, 2021 10:04 AM Ciorsdan Conran 397 Smith Ridge Road

Good morning,

In regards to the 397 Smith Ridge Road plans I received, myself and the Building Inspector agreed that the entryway needs to be wide enough for fire apparatus to enter. I believe we agreed that it should be 20 feet wide so that we can adequately perform our duties and make entry into the structure with our apparatus.

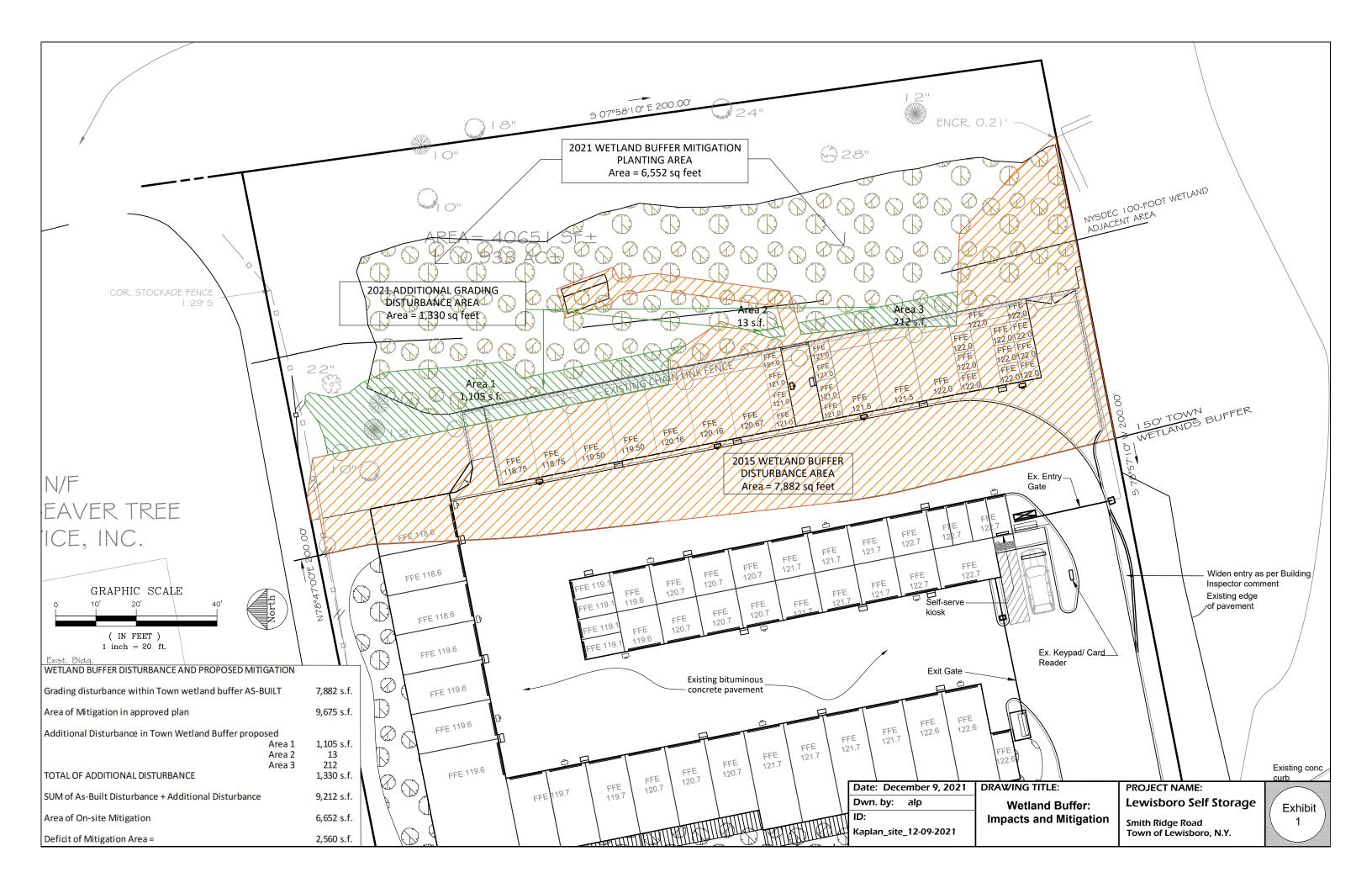
If you have any further questions, please reach out.

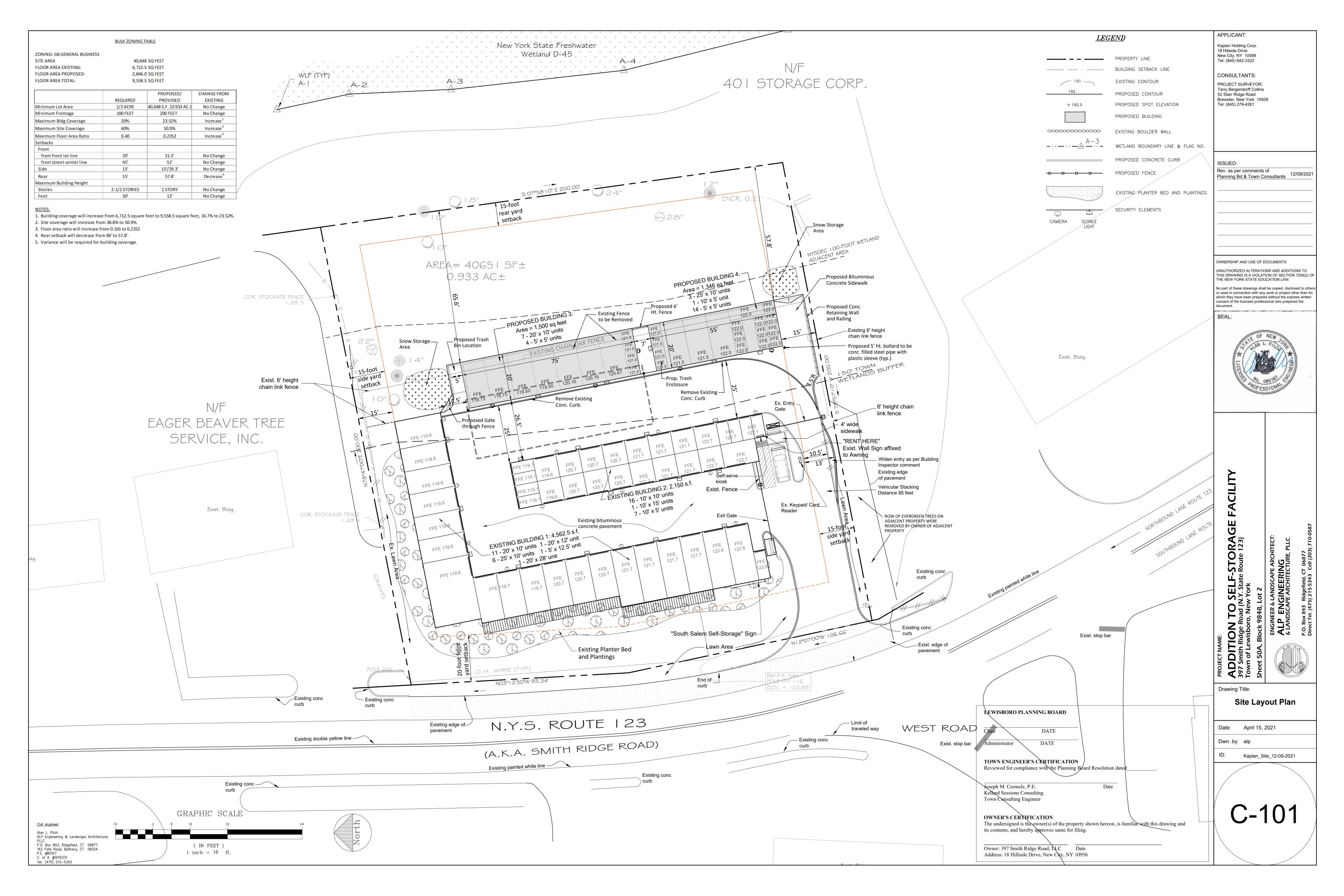
Thanks,

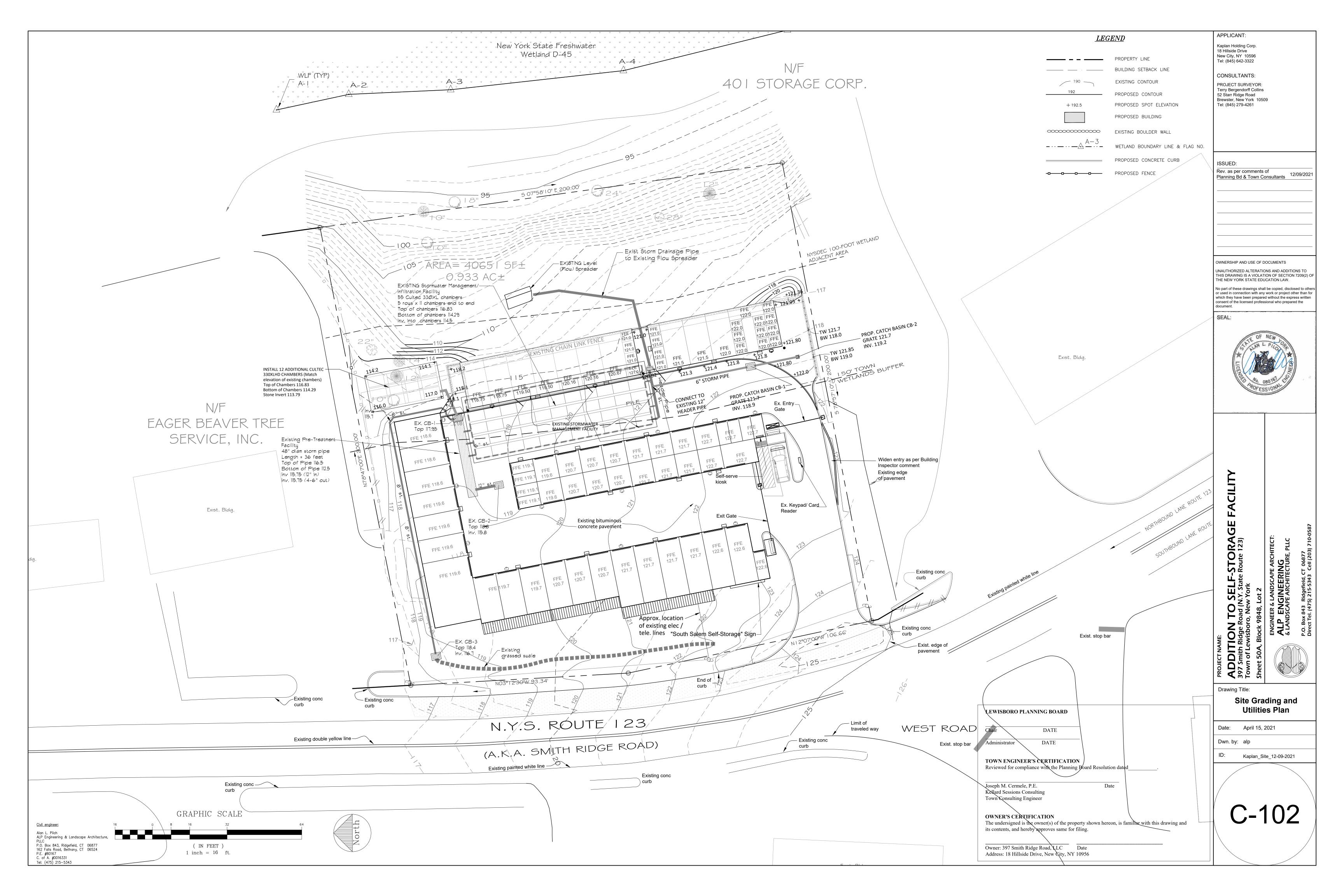
\_\_\_

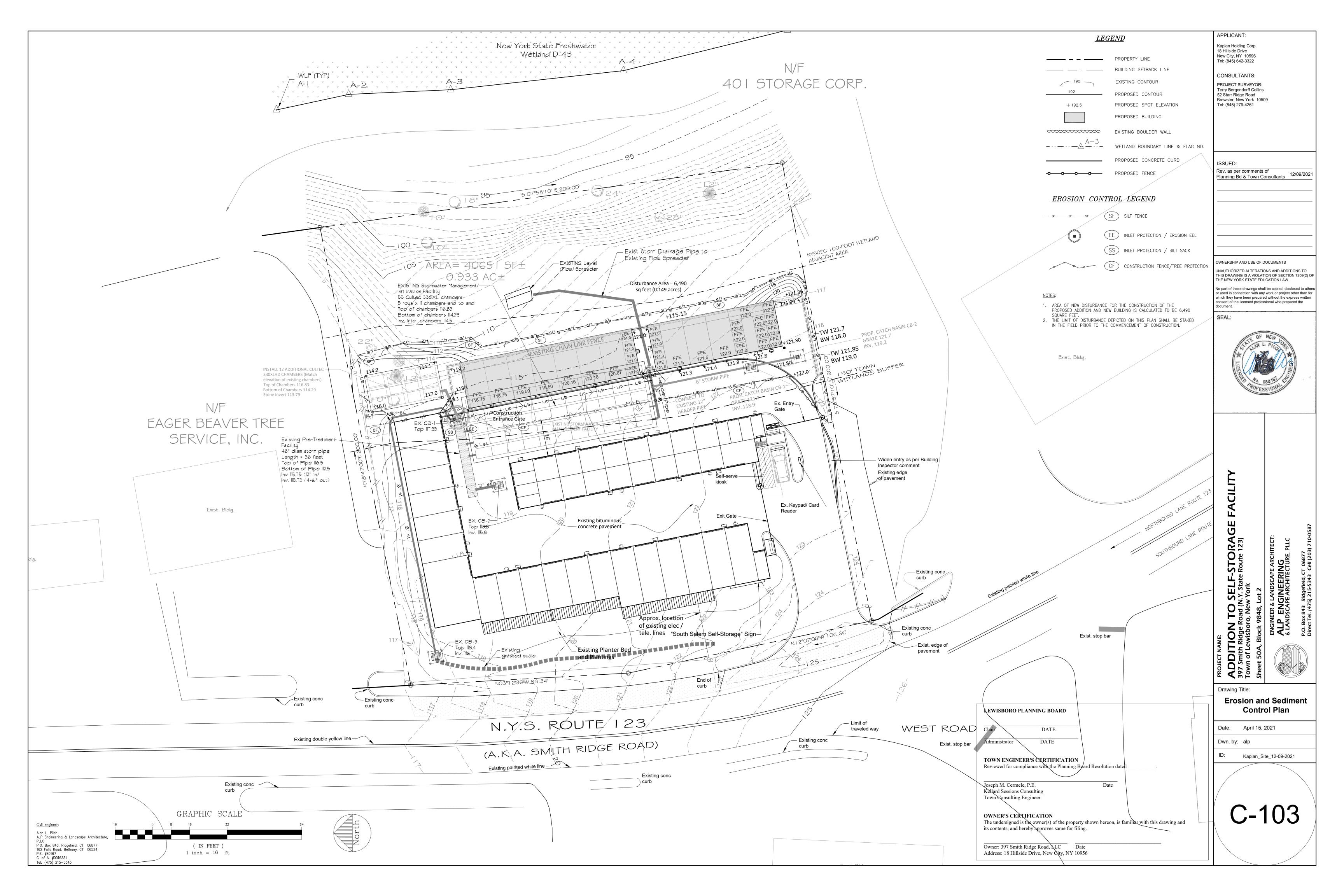
Chief Jeff Peck

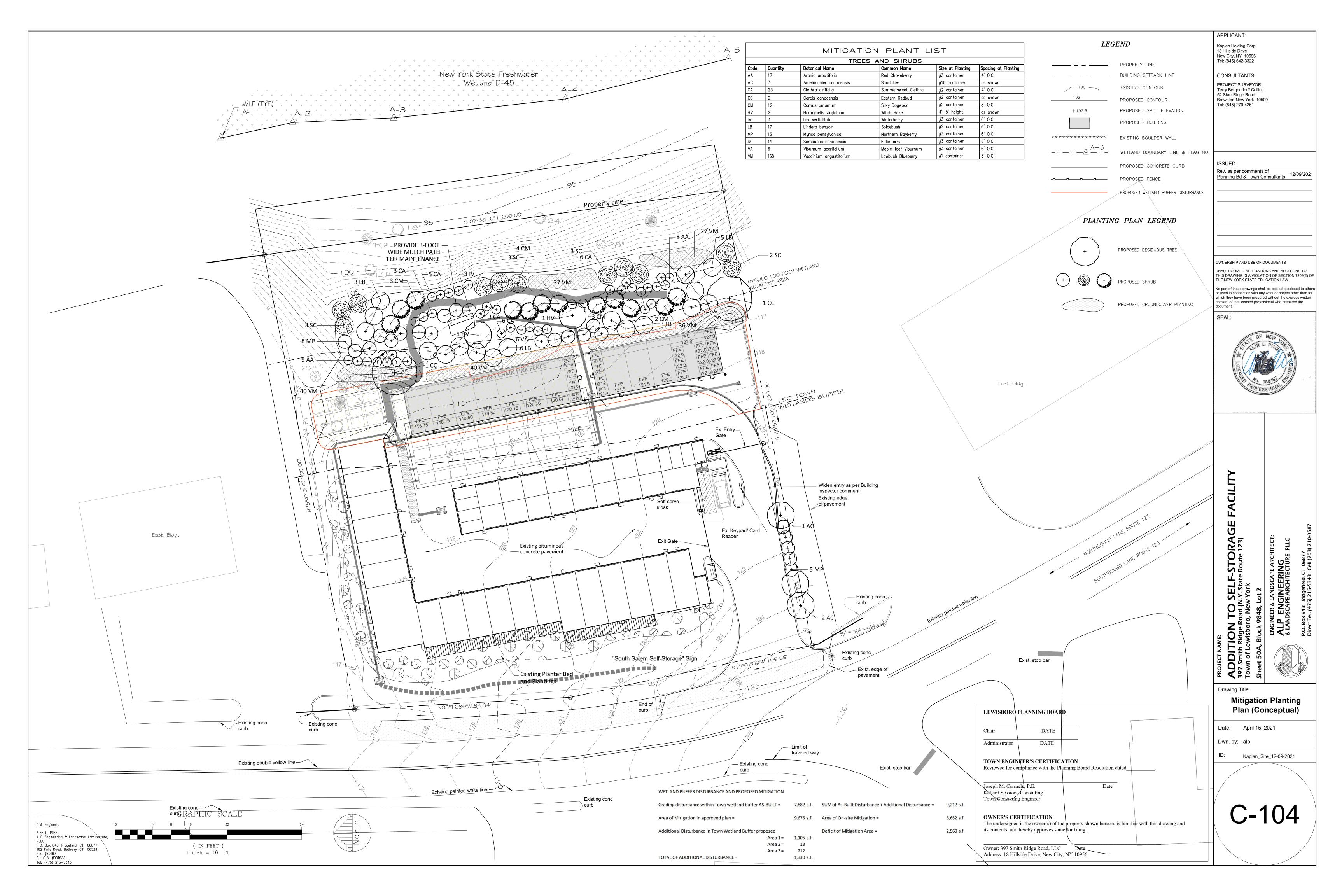
Vista Volunteer Fire Department 377 Smith Ridge Road South Salem, NY 10590 Office: 1-914-533-2727 Cell: 1-203-434-0053 Email: JPeck@VistaFD.org

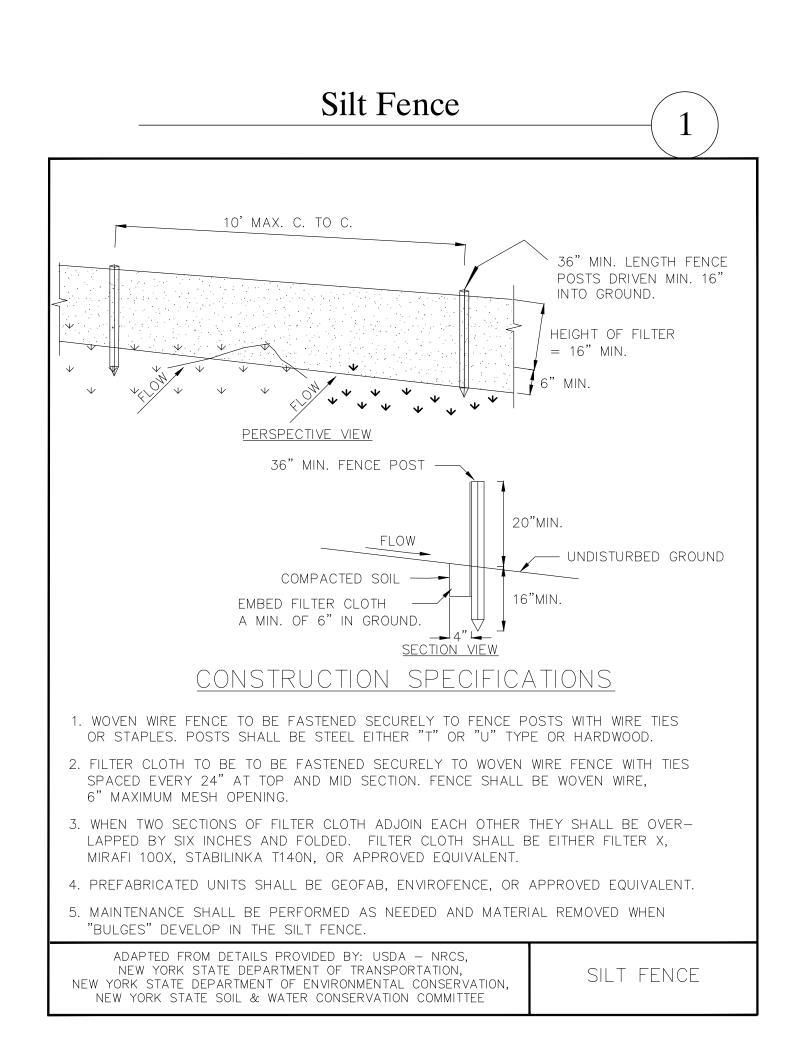


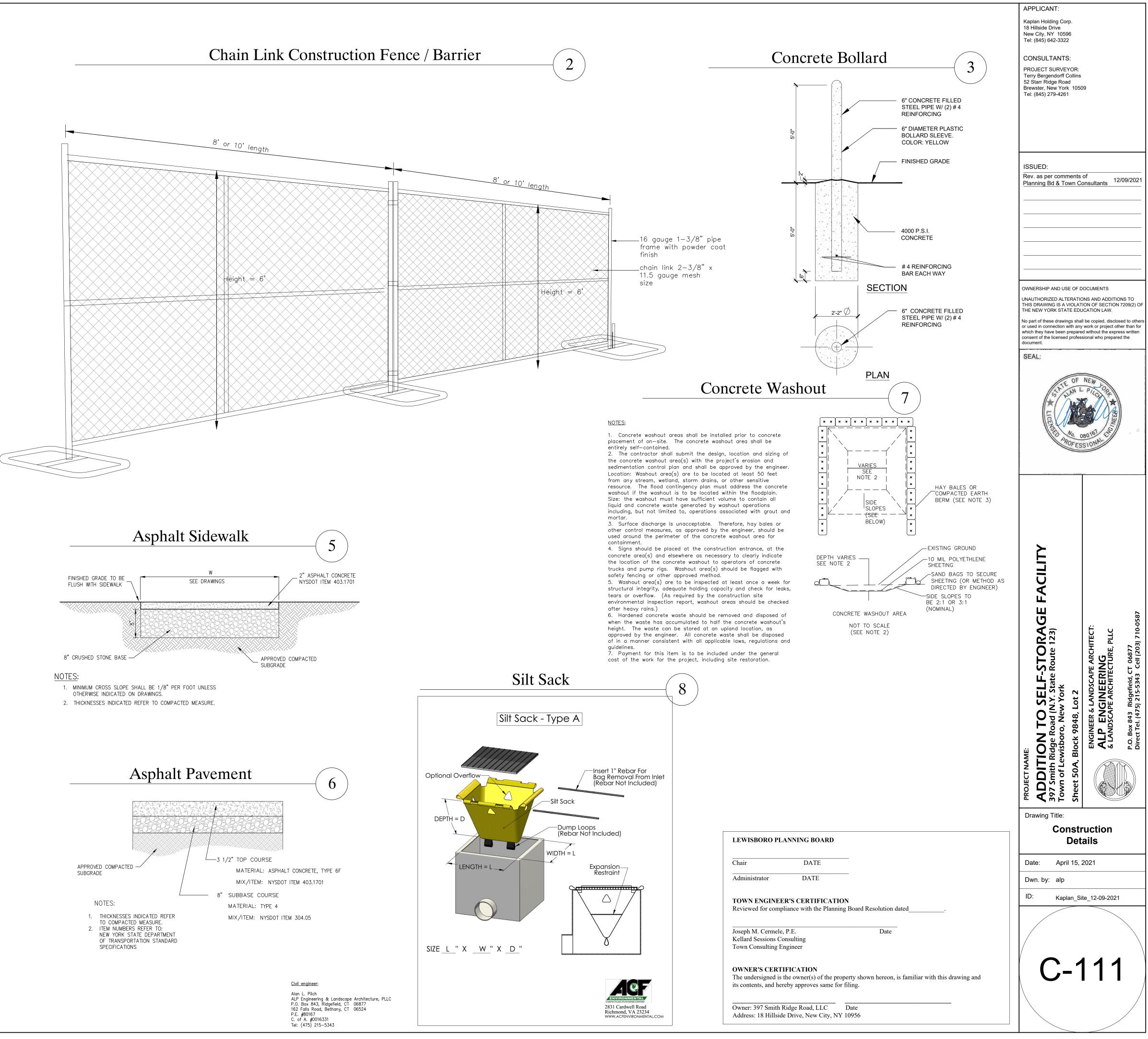


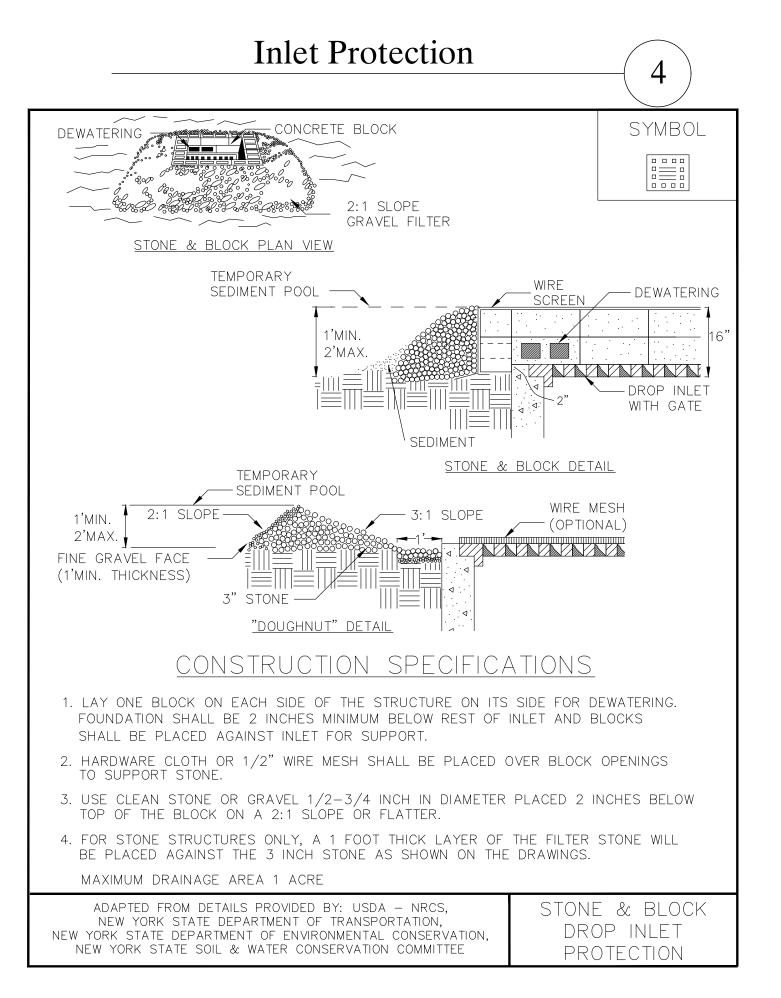


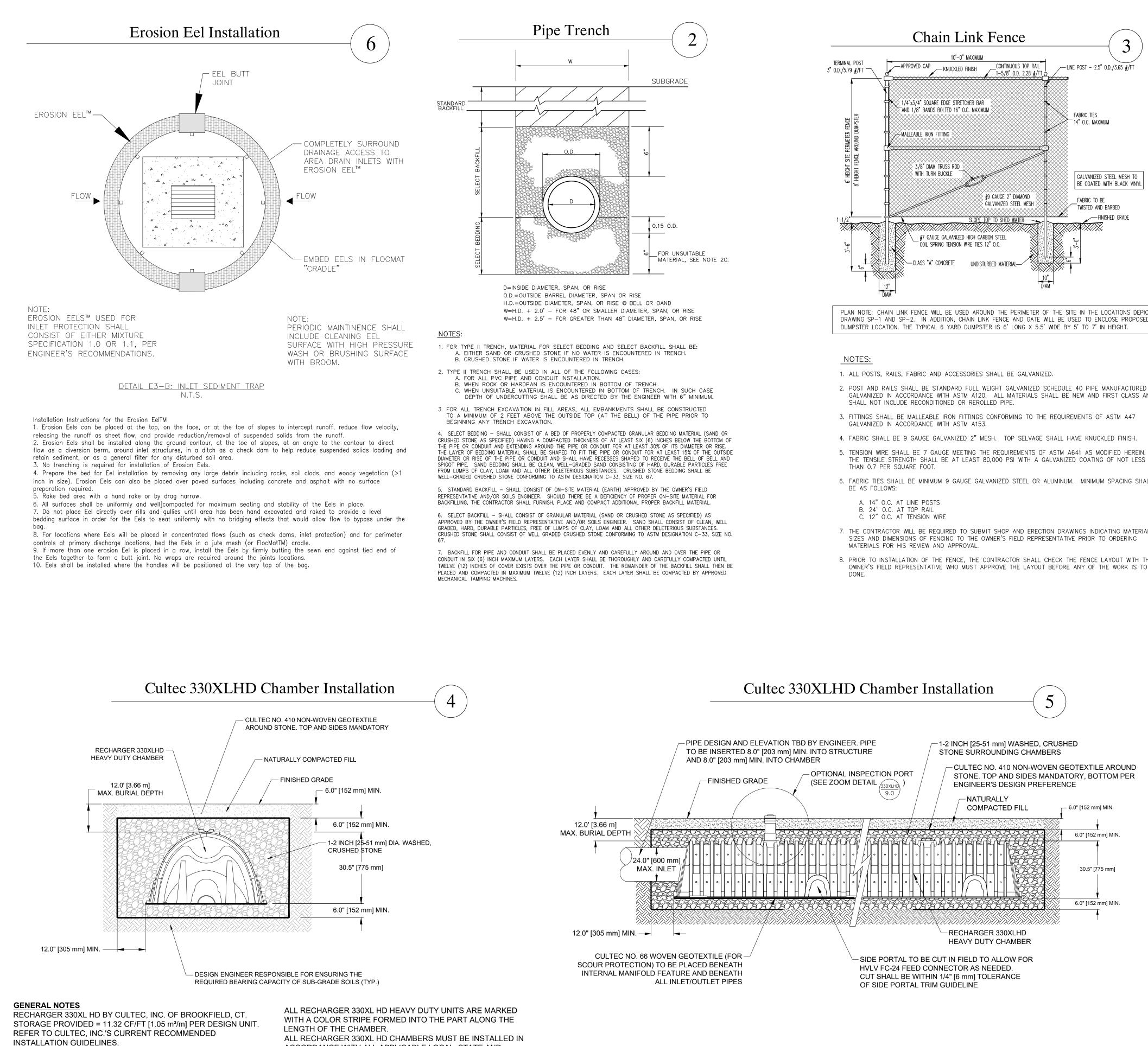






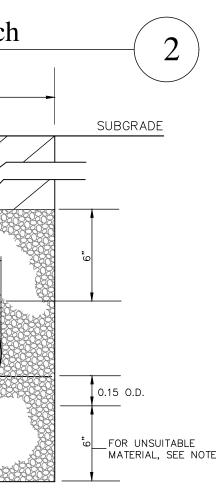


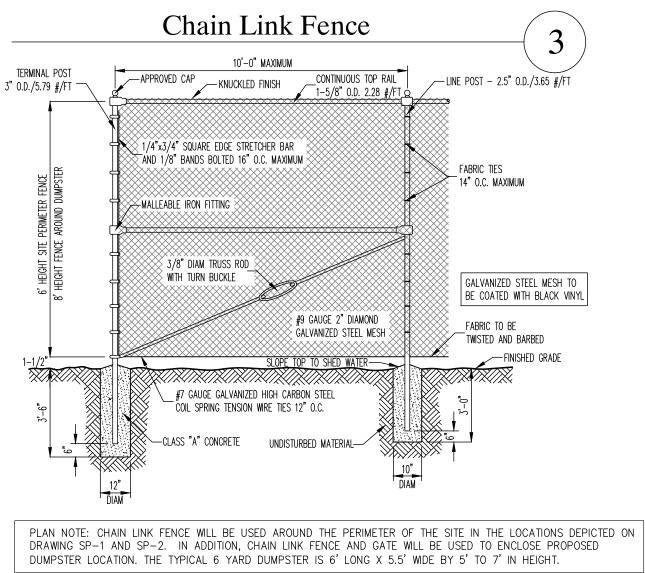




THE CHAMBER WILL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS

ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS





- 2. POST AND RAILS SHALL BE STANDARD FULL WEIGHT GALVANIZED SCHEDULE 40 PIPE MANUFACTURED AND GALVANIZED IN ACCORDANCE WITH ASTM A120. ALL MATERIALS SHALL BE NEW AND FIRST CLASS AND

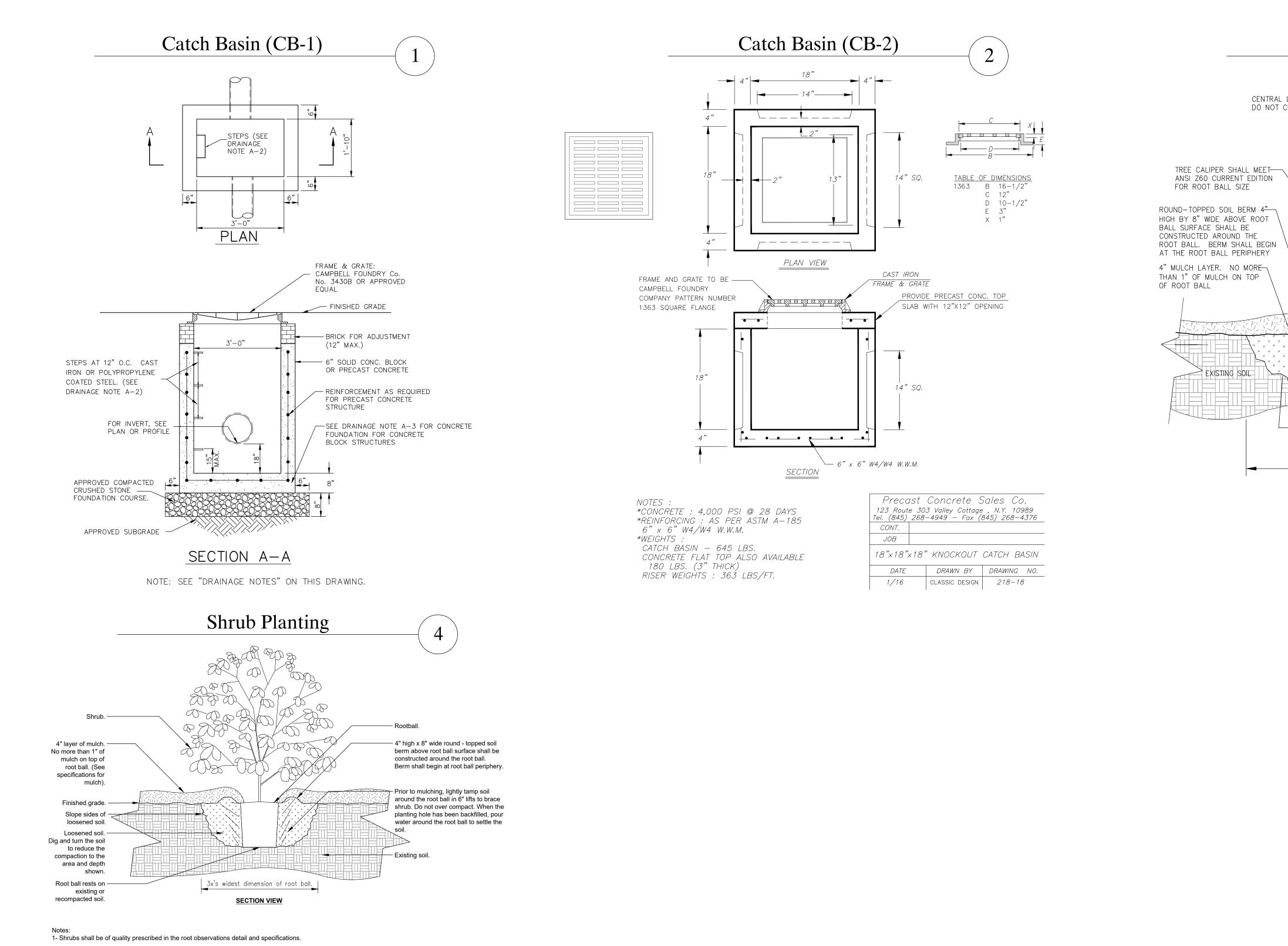
- THE TENSILE STRENGTH SHALL BE AT LEAST 80,000 PSI WITH A GALVANIZED COATING OF NOT LESS
- 6. FABRIC TIES SHALL BE MINIMUM 9 GAUGE GALVANIZED STEEL OR ALUMINUM. MINIMUM SPACING SHALL
- 7. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT SHOP AND ERECTION DRAWINGS INDICATING MATERIALS.
- 8. PRIOR TO INSTALLATION OF THE FENCE, THE CONTRACTOR SHALL CHECK THE FENCE LAYOUT WITH THE OWNER'S FIELD REPRESENTATIVE WHO MUST APPROVE THE LAYOUT BEFORE ANY OF THE WORK IS TO BE

<u>Civil engineer:</u> 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

APPLICANT: Kaplan Holding Corp. 18 Hillside Drive New City, NY 10596 Tel: (845) 642-3322	
CONSULTANTS: PROJECT SURVEYOR: Terry Bergendorff Collins 52 Starr Ridge Road Brewster, New York 1050 Tel: (845) 279-4261	09
ISSUED: Rev. as per comments Planning Bd & Town C	
THE NEW YORK STATE EDU	DNS AND ADDITIONS TO TON OF SECTION 7209(2) OF JCATION LAW. Il be copied, disclosed to other work or project other than for ed without the express written
SEAL:	NEW ORA PILCORA BOIGI CHO SIONAL CHO SIONAL
PROJECT NAME: <b>ADDITION TO SELF-STORAGE FACILITY</b> 397 Smith Ridge Road (N.Y. State Route 123) Town of Lewisboro, New York Sheet 50A, Block 9848, Lot 2	ENGINEER & LANDSCAPE ARCHITECT: ALP ENGINEERING & LANDSCAPE ARCHITECTURE, PLLC P.O. Box 843 Ridgefield, CT 06877 Direct Tel. (475) 215-5343 Cell (203) 710-0587
	ruction ails
Date: April 15,	2021
Dwn. by: alp ID: Kaplan_Si	ite_12-09-2021
C-'	112

LEWISBORO PLA	ANNING BOARD	
Chair	DATE	
Administrator	DATE	
Joseph M. Cermele, Kellard Sessions Co Town Consulting En	onsulting	Date
-	IFICATION	

Owner: 397 Smith Ridge Road, LLC Date Address: 18 Hillside Drive, New City, NY 10956



2- See specifications for further requirements related to this detail.

# Tree

	APPLICANT:
	Kaplan Holding Corp. 18 Hillside Drive
Tree Planting	New City, NY 10596 Tel: (845) 642-3322
- (3)	CONSULTANTS:
	PROJECT SURVEYOR: Terry Bergendorff Collins 52 Starr Ridge Road
CENTRAL LEADER.	Brewster, New York 10509 Tel: (845) 279-4261
N J	
TOP OF ROOT BALL SHALL BE FLUSH WITH	
L MEET PRIOR TO MULCHING, LIGHTLY	
EDITION TAMP SOIL AROUND THE ROOT BALL IN 6" LIFTS TO BRACE	ISSUED:
TREE. DO NOT OVER COMPACT. WHEN THE PLANTING HOLE HAS BEEN BACKFILLED, POUR WATER	
E ROOT E THE SOIL	
IL BEGIN IPHERY LOOSENED SOIL. DIG AND	
MORE TOP THE AREA AND DEPTH SHOWN	
FINISHED GRADE	
	OWNERSHIP AND USE OF DOCUMENTS
	UNAUTHORIZED ALTERATIONS AND ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209(2) OF THE NEW YORK STATE EDUCATION LAW.
	No part of these drawings shall be copied, disclosed to others or used in connection with any work or project other than for which they have been prepared without the express written
	consent of the licensed professional who prepared the document.
SLOPE SIDES OF BOTTOM OF ROOT BALL	SEAL:
LOOSENED SOIL RESTS ON EXISTING OR RECOMPACTED SOIL	F OF NEW
3X WIDEST DIMENSION OF ROOT BALL	SIN HUAN L PILCORF
	E BERNE
	1200 No. 080167 4
	PROFESSIONAL
	<b>DN TO SELF-STOR</b> Ige Road (N.Y. State Route 12 sboro, New York ock 9848, Lot 2 ENGINEER & LANDSCAPE ARCHIT ALP ENGINEERING & LANDSCAPE ARCHITECTURE, PI & LANDSCAPE ARCHITECTURE, PI P.O. Box 843 Ridgefield, CT 06877 Direct Tel. (475) 215-5343 Cell (203)
	: <b>DN TO SELF-S</b> Jge Road (N.Y. State R isboro, New York ock 9848, Lot 2 ENGINEER & LANDSCAPE ENGINEER & LANDSCAPE ALP ENGINEERIN & LANDSCAPE ARCHITEC P.O. Box 843 Ridgefield, CT Direct Tel. (475) 215-5343 C
	SEL SEL Vork Vork Vork Vork Vork Vork Vork Vork
	<b>O SI</b> New Y. Vew Y. Vew Y. S. Lot CAPE A CAPE A CAPE A CAPE A CAPE A
	<b>DN TC</b> Ige Road sboro, N6 ock 9848 ock 9848 ENGINEER & LANDSC & LANDSC
	AME: <b>FION TO</b> Ridge Road (N ewisboro, New block 9848, L ENGINEER & I ALP ENG & LANDSCAP P.O. Box 843 F Direct Tel. (475
	PRC 397 397 Tov
	Drawing Title:
LEWISBORO PLANNING BOARD	Construction Details
Chair DATE	
Administrator     DATE	Date: December 9, 2021
	Dwn. by: alp ID: Kaplan Site 12-09-2021
TOWN ENGINEER'S CERTIFICATION         Reviewed for compliance with the Planning Board Resolution dated	ID: Kaplan_Site_12-09-2021
Joseph M. Cermele, P.E. Date	
Kellard Sessions Consulting Town Consulting Engineer	
OWNER'S CERTIFICATION	
The undersigned is the owner(s) of the property shown hereon, is familiar with this drawing and its contents, and hereby approves same for filing.	C-113
Owner: 397 Smith Ridge Road, LLC Date Address: 18 Hillside Drive, New City, NY 10956	

#### STORMWATER POLLUTION PREVENTION PLAN/ STORMWATER MANAGEMENT REPORT FOR SELF-STORAGE FACILITY SMITH RIDGE ROAD (NEW YORK ROUTE 123) TOWN OF LEWISBORO, NEW YORK

Date: December 13, 2021 (revised)

#### Report Contents:

- 1) Existing Site Conditions
- 2) Stormwater Management Design Criteria
- 3) Stormwater Analysis
- 4) Stormwater Facilities
- 5) Peak Rate Attenuation Analysis

Appendix AWater Quality Volume (WQv) CalculationsAppendix BHydrographs and Routings

#### 1) <u>Existing Site Conditions</u>

The subject property is 0.933 acres in size and is located on the east side of Smith Ridge Road (New York State Route 123) in the Vista hamlet area. The property is essentially a rectangle, about 200 feet on a side. The property is essentially a rectangle, about 200 feet on a side. The property presently contains two self-storage buildings, an L-shaped building in the northern and western portion of the property, and a building in the central portion of the property. Paved parking and circulation drives provide vehicular access to the self-storage buildings.

According to the Soils Survey of Putnam and Westchester Counties, the soils over the entire property consist of Urban Land-Charlton complex soils. Charlton soils are in hydrologic group B; Urban Land soils are not classified. For purposes of modeling the runoff, land cover types are classified in hydrologic group B.

#### 2) <u>Stormwater Management Design Criteria</u>

This update to the stormwater management plan for the property has been designed to meet the requirements of the New York State *Stormwater Management Design Manual* to the maximum extent practicable. The property is located in the watershed of the Silvermine Brook, and therefore the site lies *outside* of the New York City watershed. The stormwater management facilities are therefore designed to: (1) capture and treat the Water Quality Volume (WQv), the 1.3" storm event, and (2) provide peak rate attenuation for the 1 through 25 year storm events in accordance with the Town requirements.

#### 3) <u>Stormwater Analysis</u>

The majority of the runoff from the project site is conveyed directly to the east into New York State Freshwater Wetland D-45 which lies about 50 feet to the east of the property. Runoff from a small portion of the property is conveyed to the northwest toward the property to the north and to Smith Ridge Road. The overall majority of the runoff is conveyed to a single design line in the eastern portion of the site.

Stormwater Management Report December 13, 2021 Page 2

In the existing condition, three drainage areas were delineated, as follows:

Existing Condition Drainage Area 1 (XDA-1) is 21,405 s.f. in size and is to consist of the lands which in the future will convey runoff to the stormwater management facility. This drainage area includes all of the new on-site impervious surfaces. Runoff from this drainage area is conveyed to Design Line 1.

Existing Condition Drainage Area 2 (XDA-2) is 18,379 s.f. in size and consists of the remainder of the property which will convey runoff to Design Line 1.

Existing Condition Drainage Area 3 (XDA-3) is 3,868 s.f. and consists of the lands which will continue to convey runoff to the northwest corner of the site, eventually discharging to Smith Ridge Road.

In the future condition, three drainage areas were delineated, as follows:

<u>Future Condition Drainage Area 1 (FDA-1)</u> is 23,002 s.f. in size and is to consist of the lands which in the future will convey runoff to the stormwater management facilities. This drainage area includes the existing developed site and the new on-site impervious surfaces. Runoff from this drainage area is conveyed to Design Line 1.

<u>Future Condition Drainage Area 2 (FDA-2)</u> is 16,782 s.f. in size and consists of the lands in the eastern portion of the property which contributes runoff to Design Line 1.

<u>Future Condition Drainage Area 3 (FDA-3)</u> is 3,868 s.f. and consists of the lands which will continue to convey runoff to the northwest corner of the site, eventually discharging to Smith Ridge Road.

#### 4) <u>Stormwater Facilities</u>

Runoff from the parking area facing roofs of the two new buildings will be conveyed by sheet flow across the new pavement surface and into existing catch basins and existing and future subsurface storm pipes to the stormwater management facilities. The runoff from the interior of the site will be conveyed by sheet flow to the two existing on-site catch basins. One of the catch basins directly discharges to an existing 36-foot long, 4-foot diameter subsurface pipe which serves as a pre-treatment facility for runoff being conveyed to the subsurface chambers.

The existing stormwater management facility consist of a subsurface recharger/detention system. It presently contains 55 Cultec Model 330XL chambers arranged as 5 rows of 11 chambers placed end-to-end. The proposed construction of the new Building 3 will require that the row of 11 chambers nearest to the building be eliminated. To attenuate the flows from the property to Design Line 1 from the additional impervious surfaces, 12 Cultec chambers will be installed to

the north of Building 3. Runoff flows to the 12 new chambers will conveyed from the existing pre-treatment facility.

#### 5) <u>Peak Rate Attenuation Analysis</u>

The peak rate of runoff from the property to the design line has been calculated. The analysis of peak rates of runoff was performed in accordance with the methodology of the United States Department of Agriculture Soil Conservation Service (now Natural Resources Conservation Service) publication *Urban Hydrology for Small Watersheds*, *Technical Release 55* (TR-55), 1986. To calculate the peak rate of runoff conveyed to the design line from the property, the following information was obtained or determined:

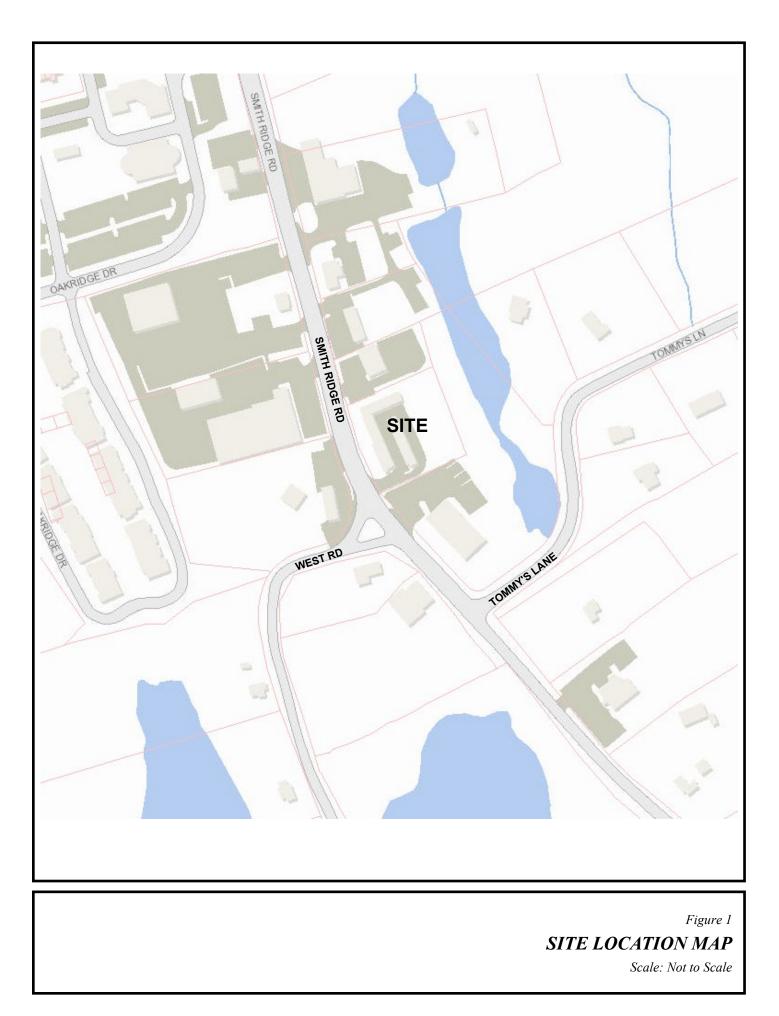
The precipitation depths have been adjusted to the data from the Northeast Regional Climate Center. The analysis shows that for all modeled storm events the peak rate of runoff conveyed to the design line (and to the wetland to the east of the subject site) is less than the existing peak rate of runoff.

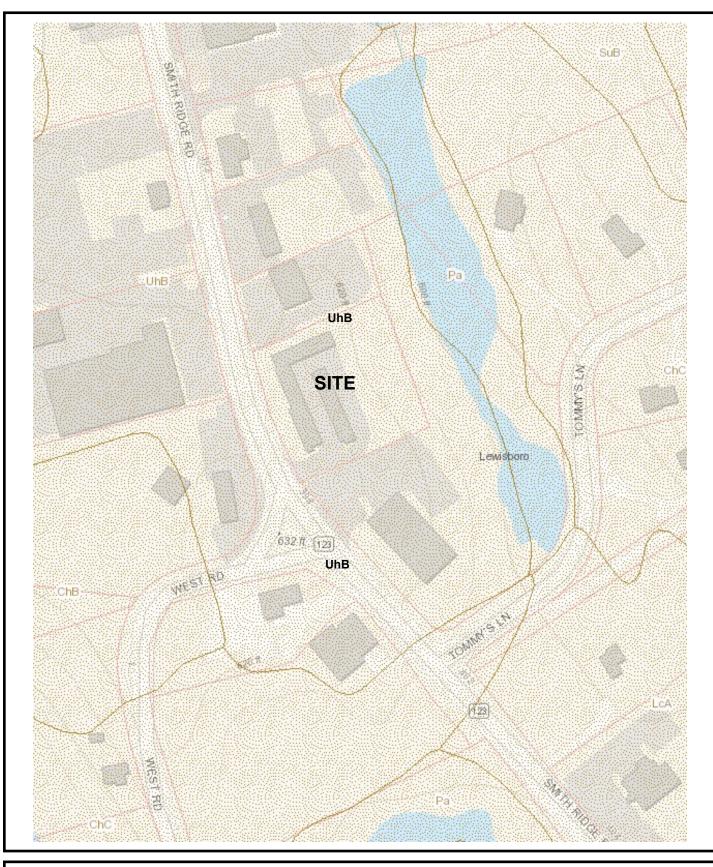
**Table 1**, Peak Rates of Runoff summarizes the peak rates of flow conveyed by the site in the existing and future conditions to the design line and State highway for the modeled storms.

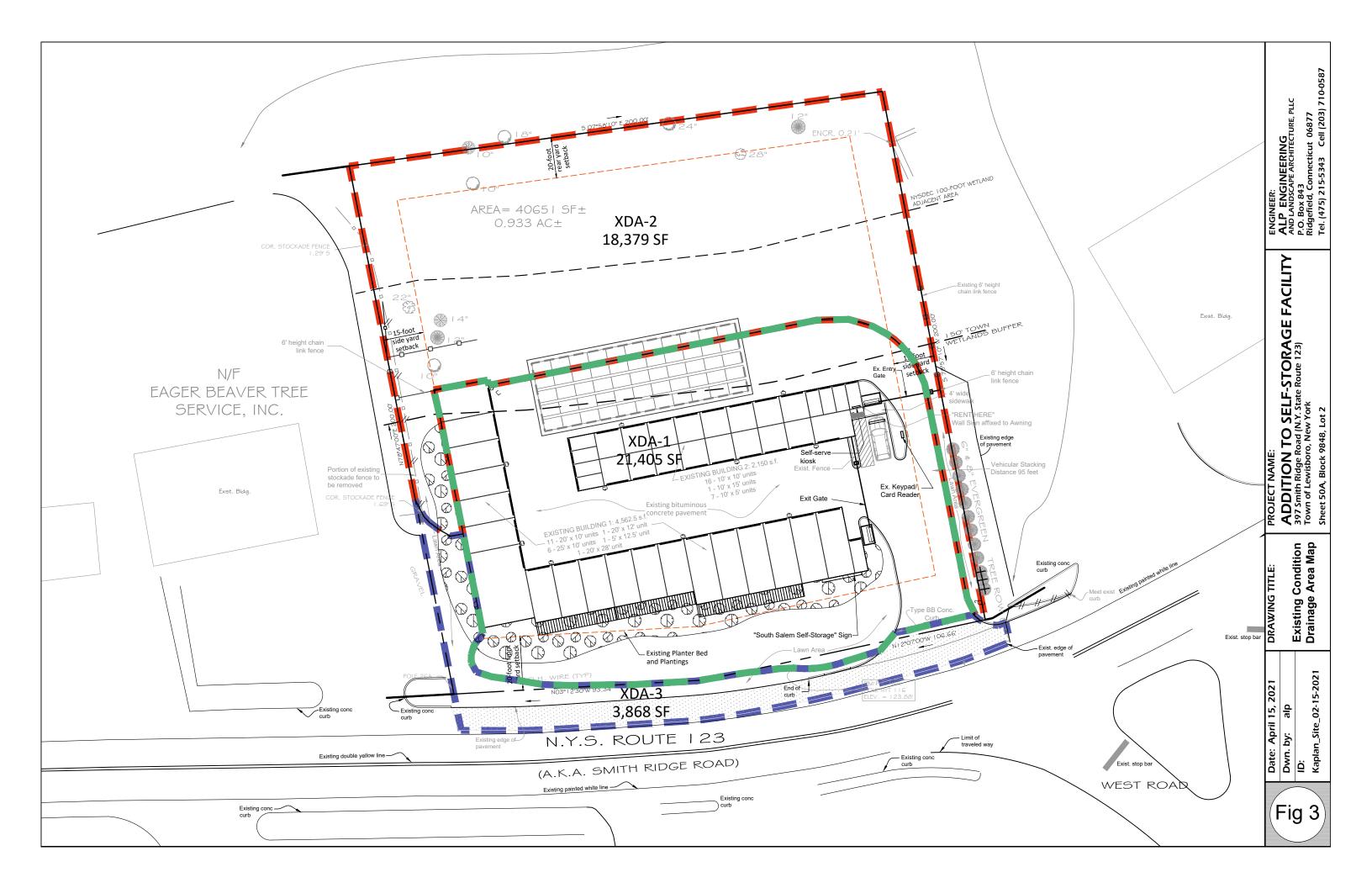
(an nows in cubic reer per second)				
Drainage Area/ Storm Interval	1 year	2 year	10 year	25 year
	1 yeu	- yea:	10 year	yeu
Existing Condition				
Flows to				
Design Line/Wetland	0.03	0.08	0.46	1.26
Flows to Smith				
Ridge Road	0.12	0.17	0.32	0.45
Future Condition				
Flows to				
Design Line/Wetland	0.02	0.07	0.44	0.99
Flows to Smith				
Ridge Road	0.12	0.17	0.32	0.45

## Table 1. Peak Rates of Runoff to Design Line 1 (all flows in cubic feet per second)

# Figures



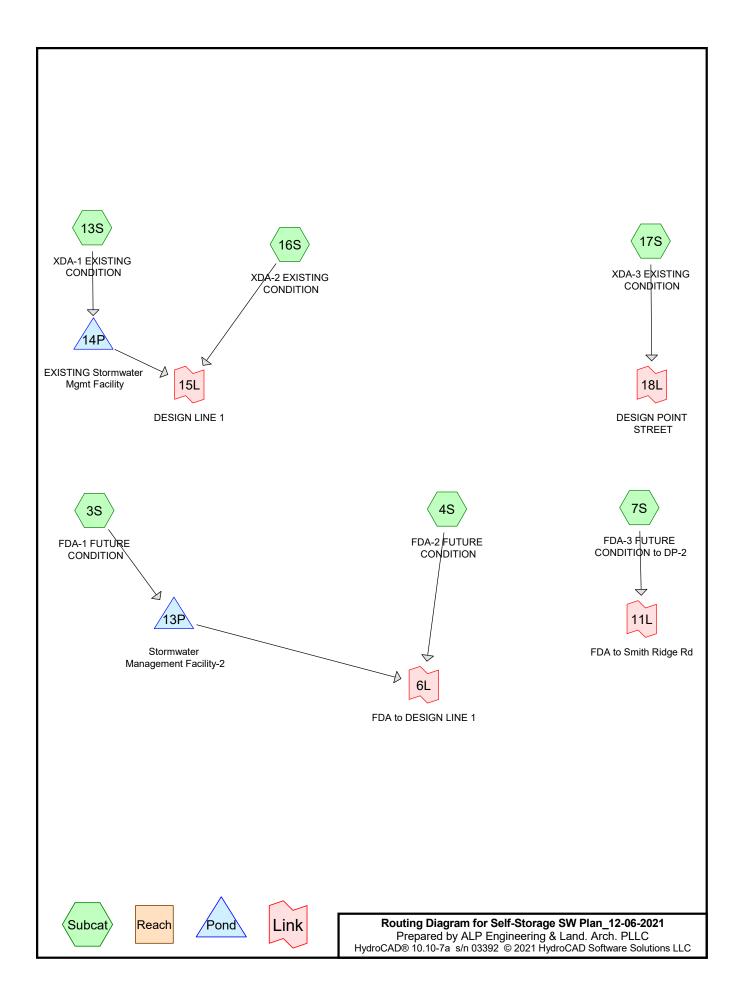






Appendix A

Stormwater Management Report Hydrographs and Routings



## Self-Storage SW Plan\_12-06-2021

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1 year	Type III 24-hr		Default	24.00	1	2.85	2
2	2 year	Type III 24-hr		Default	24.00	1	3.44	2
3	10 year	Type III 24-hr		Default	24.00	1	5.12	2
4	25 year	Type III 24-hr		Default	24.00	1	6.43	2

## Rainfall Events Listing (selected events)

Self-Storage SW Plan\_12-06-2021 Prepared by ALP Engineering & Land. Arch. PLLC HydroCAD® 10.10-7a s/n 03392 © 2021 HydroCAD Software Solutions LLC

## Area Listing (all nodes)

Area	CN	Description
(acres)		(subcatchment-numbers)
0.301	61	>75% Grass cover, Good, HSG B (3S, 7S, 13S, 17S)
0.422	56	Brush, Fair, HSG B (16S)
0.178	48	Brush, Good, HSG B (4S)
0.092	98	Pavement (7S, 17S)
0.803	98	Roofs, HSG B (3S, 13S)
0.053	98	Unconnected roofs, HSG B (4S)
0.154	58	Woods/grass comb., Good, HSG B (4S)
2.004	76	TOTAL AREA

## Self-Storage SW Plan\_12-06-2021

Prepared by ALP Engineering & Land. Arch. PLLC
HydroCAD® 10.10-7a s/n 03392 © 2021 HydroCAD Software Solutions LLC

Total HSG-A HSG-B HSG-C HSG-D Other Ground Subcatchment (acres) (acres) (acres) (acres) (acres) (acres) Cover Numbers 0.000 0.301 0.000 0.000 0.000 0.301 >75% Grass cover, Good 3S, 7S, 13S, 17S 0.000 0.422 0.000 16S 0.000 0.000 0.422 Brush, Fair 0.000 0.178 0.000 0.000 0.000 0.178 Brush, Good 4S 0.000 0.000 0.000 0.000 0.092 0.092 Pavement 7S, 17S 0.000 0.803 0.000 0.000 0.000 0.803 Roofs 3S, 13S 0.000 0.053 0.000 0.000 0.000 0.053 Unconnected roofs 4S 0.000 0.154 0.000 0.000 0.000 0.154 Woods/grass comb., Good 4S 0.000 1.912 0.000 0.000 2.004 0.092 **TOTAL AREA** 

#### Ground Covers (all nodes)

Page 4

#### Self-Storage SW Plan\_12-06-2021

Prepared by ALP Engineering & Land. Arch. PLLC

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Type III 24-hr 1 year Rainfall=2.85"

Page 5

Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 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 3S: FDA-1 FUTURE	Runoff Area=23,002 sf 79.53% Impervious Runoff Depth=1.85" Tc=6.0 min CN=90 Runoff=1.13 cfs 0.081 af
Subcatchment 4S: FDA-2 FUTURE	Runoff Area=16,782 sf 13.76% Impervious Runoff Depth=0.18" Tc=6.0 min UI Adjusted CN=56 Runoff=0.02 cfs 0.006 af
Subcatchment 7S: FDA-3 FUTURE	Runoff Area=3,868 sf 52.04% Impervious Runoff Depth=1.14" Tc=5.0 min CN=80 Runoff=0.12 cfs 0.008 af
Subcatchment 13S: XDA-1 EXISTING	Runoff Area=21,405 sf 78.04% Impervious Runoff Depth=1.85" Tc=6.0 min CN=90 Runoff=1.06 cfs 0.076 af
Subcatchment 16S: XDA-2 EXISTING	Runoff Area=18,379 sf 0.00% Impervious Runoff Depth=0.18" Tc=6.0 min CN=56 Runoff=0.03 cfs 0.006 af
Subcatchment 17S: XDA-3 EXISTING	Runoff Area=3,868 sf 52.04% Impervious Runoff Depth=1.14" Tc=5.0 min CN=80 Runoff=0.12 cfs 0.008 af
Pond 13P: Stormwater Management Discarded=0.05 cfs	Peak Elev=115.07' Storage=1,840 cf Inflow=1.13 cfs 0.081 af 0.081 af Primary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.081 af
Pond 14P: EXISTING Stormwater Mgmt Discarded=0.05 cfs	Peak Elev=115.03' Storage=1,700 cf Inflow=1.06 cfs 0.076 af 0.076 af Primary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.076 af
Link 6L: FDA to DESIGN LINE 1	Inflow=0.02 cfs 0.006 af Primary=0.02 cfs 0.006 af
Link 11L: FDA to Smith Ridge Rd	Inflow=0.12 cfs 0.008 af Primary=0.12 cfs 0.008 af
Link 15L: DESIGN LINE 1	Inflow=0.03 cfs 0.006 af Primary=0.03 cfs 0.006 af
Link 18L: DESIGN POINT STREET	Inflow=0.12 cfs 0.008 af Primary=0.12 cfs 0.008 af

Total Runoff Area = 2.004 ac Runoff Volume = 0.186 af Average Runoff Depth = 1.11" 52.66% Pervious = 1.055 ac 47.34% Impervious = 0.949 ac

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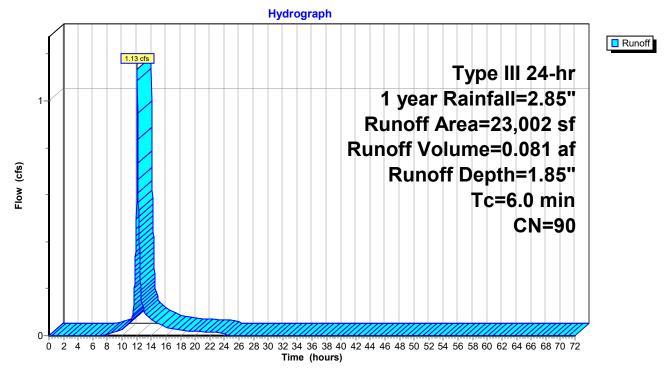
## Summary for Subcatchment 3S: FDA-1 FUTURE CONDITION

Runoff = 1.13 cfs @ 12.09 hrs, Volume= 0.081 af, Depth= 1.85" Routed to Pond 13P : Stormwater Management Facility-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 1 year Rainfall=2.85"

A	rea (sf)	CN	Description		
	18,293	98	Roofs, HSG	βB	
	4,709	61	>75% Gras	s cover, Go	ood, HSG B
	23,002	90	Weighted A	verage	
	4,709		20.47% Per	vious Area	1
	18,293		79.53% Imp	pervious Are	ea
_		<u>.</u>			
Tc	Length	Slope	,	Capacity	Description
(min)	(feet)	(ft/ft	) (ft/sec)	(cfs)	
6.0					Direct Entry,

## Subcatchment 3S: FDA-1 FUTURE CONDITION



Page 7

#### Summary for Subcatchment 4S: FDA-2 FUTURE CONDITION

Runoff = 0.02 cfs @ 12.38 hrs, Volume= Routed to Link 6L : FDA to DESIGN LINE 1 0.006 af, Depth= 0.18"

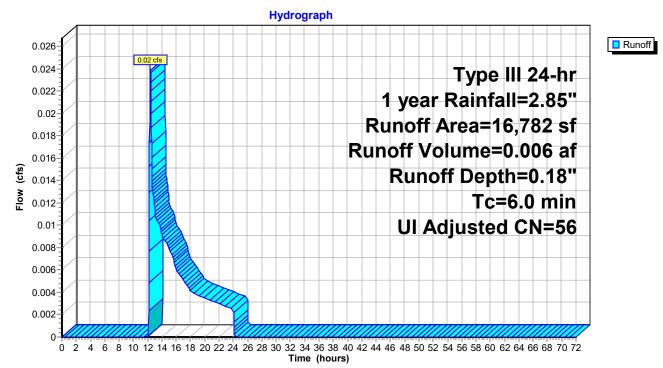
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 1 year Rainfall=2.85"

Area (s	f) CN	Adj	Description			
6,70	9 58		Woods/grass comb., Good, HSG B			
7,76	64 48		Brush, Good, HSG B			
2,30	98 98		Unconnected roofs, HSG B			
16,78	32 59	56	Weighted Average, UI Adjusted			
14,47	'3		86.24% Pervious Area			
2,30	)9	13.76% Impervious Area				
2,30	)9	100.00% Unconnected				
Tc Lena (min) (fe	gth Slop et) (ft/i		elocity Capacity Description t/sec) (cfs)			



Direct Entry,

#### Subcatchment 4S: FDA-2 FUTURE CONDITION



Type III 24-hr 1 year Rainfall=2.85"

Prepared by ALP Engineering & Land. Arch. PLLC HydroCAD® 10.10-7a s/n 03392 © 2021 HydroCAD Software Solutions LLC

Page 8

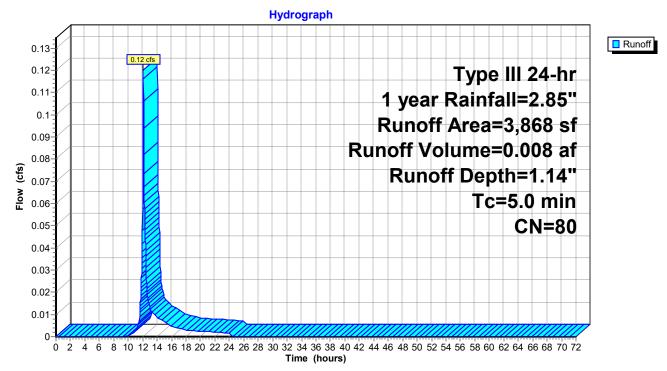
## Summary for Subcatchment 7S: FDA-3 FUTURE CONDITION to DP-2

Runoff = 0.12 cfs @ 12.08 hrs, Volume= Routed to Link 11L : FDA to Smith Ridge Rd 0.008 af, Depth= 1.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 1 year Rainfall=2.85"

_	A	rea (sf)	CN	Description		
		1,855	61	>75% Gras	s cover, Go	ood, HSG B
*		2,013	98	Pavement		
		3,868	80	Weighted A	verage	
		1,855		47.96% Pe	vious Area	а
		2,013		52.04% Imp	pervious Ar	rea
	Tc (min)	Length (feet)	Slope (ft/ft	,	Capacity (cfs)	Description
	5.0					Direct Entry,

## Subcatchment 7S: FDA-3 FUTURE CONDITION to DP-2



Page 9

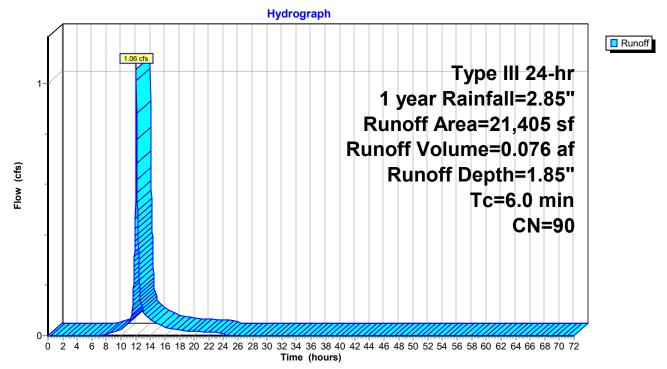
## Summary for Subcatchment 13S: XDA-1 EXISTING CONDITION

Runoff = 1.06 cfs @ 12.09 hrs, Volume= 0.076 af, Depth= 1.85" Routed to Pond 14P : EXISTING Stormwater Mgmt Facility

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 1 year Rainfall=2.85"

A	rea (sf)	CN I	Description			
	16,705	98 I	Roofs, HSG	ВВ		
	4,700	61 ;	>75% Gras	s cover, Go	ood, HSG B	
	21,405		Neighted A	0		
	4,700		21.96% Pervious Area			
	16,705	-	78.04% Imp	ervious Are	ea	
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
6.0					Direct Entry,	

## Subcatchment 13S: XDA-1 EXISTING CONDITION

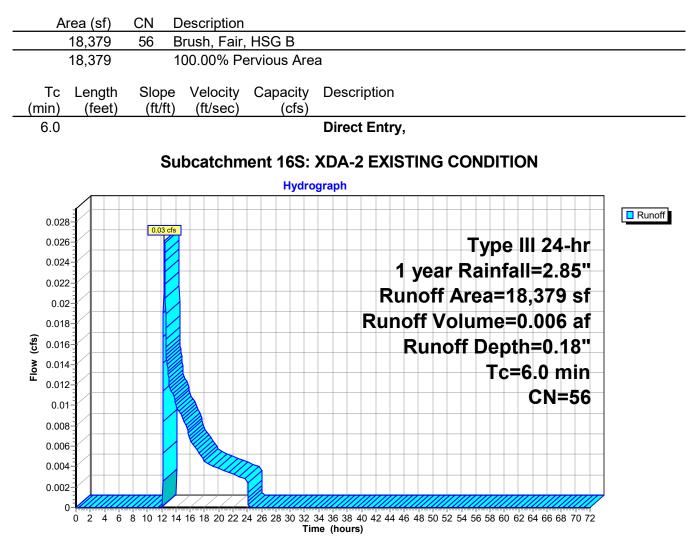


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## Summary for Subcatchment 16S: XDA-2 EXISTING CONDITION

Runoff = 0.03 cfs @ 12.38 hrs, Volume= Routed to Link 15L : DESIGN LINE 1 0.006 af, Depth= 0.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 1 year Rainfall=2.85"



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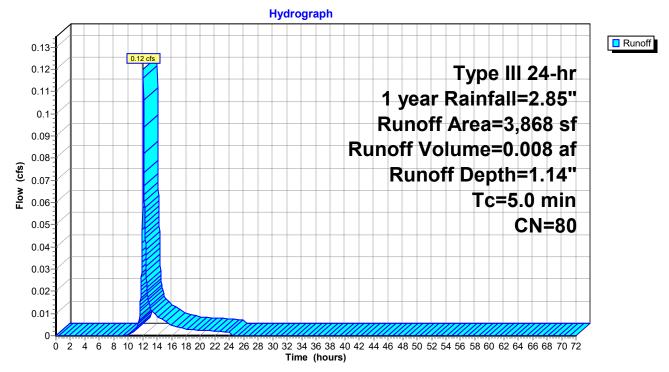
## Summary for Subcatchment 17S: XDA-3 EXISTING CONDITION

Runoff = 0.12 cfs @ 12.08 hrs, Volume= Routed to Link 18L : DESIGN POINT STREET 0.008 af, Depth= 1.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 1 year Rainfall=2.85"

	Area (sf)	CN	Description		
	1,855	61	>75% Gras	s cover, Go	lood, HSG B
*	2,013	98	Pavement		
	3,868 1,855 2,013		Weighted A 47.96% Pei 52.04% Imp	rvious Area	
T (min	5	Slope (ft/ft		Capacity (cfs)	1
5.	0				Direct Entry,

## Subcatchment 17S: XDA-3 EXISTING CONDITION



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#### Summary for Pond 13P: Stormwater Management Facility-2

Inflow Area =	0.528 ac, 79.53%	6 Impervious, Inflow D	Depth = 1.85" for 1 year event
Inflow =	1.13 cfs @ 12.09	hrs, Volume=	0.081 af
Outflow =	0.05 cfs @ 11.04	hrs, Volume=	0.081 af, Atten= 96%, Lag= 0.0 min
Discarded =	0.05 cfs @ 11.04	hrs, Volume=	0.081 af
Primary =	0.00 cfs @ 0.00	) hrs, Volume=	0.000 af
Routed to Link	6L : FDA to DESIGI	N LINE 1	

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Peak Elev= 115.07' @ 15.10 hrs Surf.Area= 2,181 sf Storage= 1,840 cf

Plug-Flow detention time= 352.2 min calculated for 0.081 af (100% of inflow) Center-of-Mass det. time= 352.2 min (1,163.6 - 811.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	113.79'	1,440 cf	20.83'W x 80.50'L x 3.54'H Field A Existing
			5,940 cf Overall - 2,340 cf Embedded = 3,600 cf x 40.0% Voids
#2A	114.29'	2,340 cf	Cultec R-330XLHD x 44 Inside #1
			Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf
			Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
			Row Length Adjustment= +1.50' x 7.45 sf x 4 rows
#3B	113.79'	450 cf	16.00'W x 31.50'L x 3.54'H Field B Proposed
			1,785 cf Overall - 659 cf Embedded = 1,126 cf x 40.0% Voids
#4B	114.29'	659 cf	Cultec R-330XLHD x 12 Inside #3
			Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf
			Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
			Row Length Adjustment= +1.50' x 7.45 sf x 3 rows
		4,889 cf	Total Available Storage

4,889 cf Total Available Storage

Storage Group A created with Chamber Wizard Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	114.00'	15.0" Round Culvert
	-		L= 108.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 114.00' / 108.00' S= 0.0556 '/' Cc= 0.900
			n= 0.012, Flow Area= 1.23 sf
#2	Device 1	115.75'	<b>5.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads
#3	Device 1	117.25'	3.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#4	Discarded	113.79'	1.000 in/hr Exfiltration over Horizontal area

**Discarded OutFlow** Max=0.05 cfs @ 11.04 hrs HW=113.83' (Free Discharge) **4=Exfiltration** (Exfiltration Controls 0.05 cfs)

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=113.79' (Free Discharge)

-1=Culvert (Controls 0.00 cfs)

-2=Orifice/Grate (Controls 0.00 cfs)

-3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

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## Pond 13P: Stormwater Management Facility-2 - Chamber Wizard Field A Existing

## Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)

Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 4 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

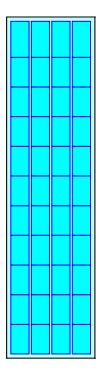
11 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 78.50' Row Length +12.0" End Stone x 2 = 80.50' Base Length 4 Rows x 52.0" Wide + 6.0" Spacing x 3 + 12.0" Side Stone x 2 = 20.83' Base Width 6.0" Stone Base + 30.5" Chamber Height + 6.0" Stone Cover = 3.54' Field Height

44 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 4 Rows = 2,339.6 cf Chamber Storage

5,939.7 cf Field - 2,339.6 cf Chambers = 3,600.1 cf Stone x 40.0% Voids = 1,440.0 cf Stone Storage

Chamber Storage + Stone Storage = 3,779.6 cf = 0.087 afOverall Storage Efficiency = 63.6%Overall System Size =  $80.50' \times 20.83' \times 3.54'$ 

44 Chambers 220.0 cy Field 133.3 cy Stone





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## Pond 13P: Stormwater Management Facility-2 - Chamber Wizard Field B Proposed

#### Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)

Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 3 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

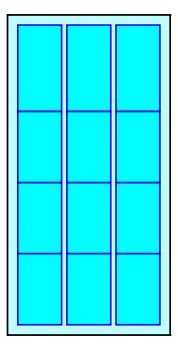
4 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 29.50' Row Length +12.0" End Stone x 2 = 31.50' Base Length 3 Rows x 52.0" Wide + 6.0" Spacing x 2 + 12.0" Side Stone x 2 = 16.00' Base Width 6.0" Stone Base + 30.5" Chamber Height + 6.0" Stone Cover = 3.54' Field Height

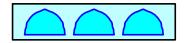
12 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 3 Rows = 659.4 cf Chamber Storage

1,785.0 cf Field - 659.4 cf Chambers = 1,125.6 cf Stone x 40.0% Voids = 450.2 cf Stone Storage

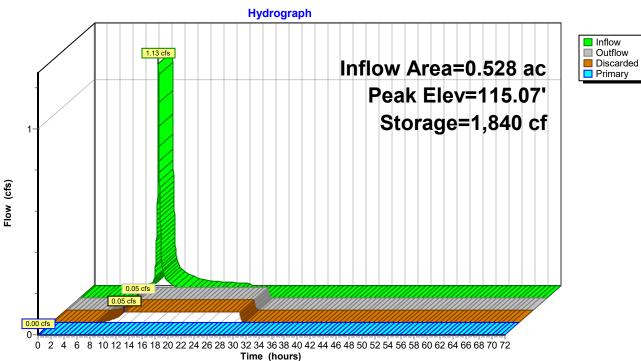
Chamber Storage + Stone Storage = 1,109.6 cf = 0.025 af Overall Storage Efficiency = 62.2%Overall System Size =  $31.50' \times 16.00' \times 3.54'$ 

12 Chambers 66.1 cy Field 41.7 cy Stone



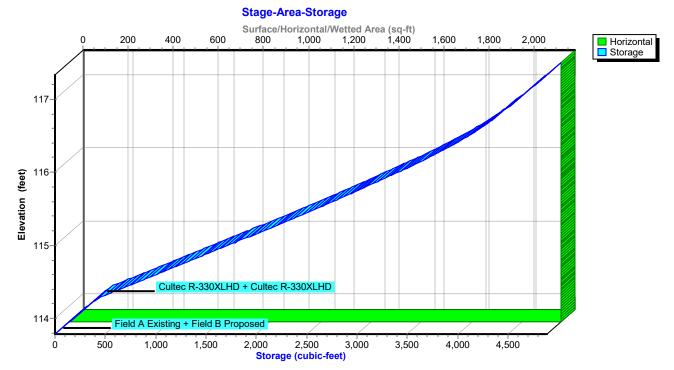


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# Pond 13P: Stormwater Management Facility-2





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#### Summary for Pond 14P: EXISTING Stormwater Mgmt Facility

Inflow Area =	0.491 ac, 78.04% Impervious, Inflow De	epth = 1.85" for 1 year event
Inflow =	1.06 cfs @ 12.09 hrs, Volume=	0.076 af
Outflow =	0.05 cfs @ 11.08 hrs, Volume=	0.076 af, Atten= 95%, Lag= 0.0 min
Discarded =	0.05 cfs @ 11.08 hrs, Volume=	0.076 af
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0.000 af
Routed to Link	15L : DESIGN LINE 1	

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Peak Elev= 115.03' @ 15.04 hrs Surf.Area= 2,066 sf Storage= 1,700 cf

Plug-Flow detention time= 343.2 min calculated for 0.076 af (100% of inflow) Center-of-Mass det. time= 343.2 min (1,154.7 - 811.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	113.79'	1,757 cf	25.67'W x 80.50'L x 3.54'H Field A
			7,318 cf Overall - 2,925 cf Embedded = 4,393 cf x 40.0% Voids
#2A	114.29'	2,925 cf	Cultec R-330XLHD x 55 Inside #1
			Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf
			Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
			Row Length Adjustment= +1.50' x 7.45 sf x 5 rows
		4,682 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	114.00'	12.0" Round Culvert
	-		L= 30.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 114.00' / 108.00' S= 0.2000 '/' Cc= 0.900
			n= 0.012, Flow Area= 0.79 sf
#2	Device 1	115.75'	7.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	117.20'	3.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#4	Discarded	113.79'	1.000 in/hr Exfiltration over Surface area

**Discarded OutFlow** Max=0.05 cfs @ 11.08 hrs HW=113.83' (Free Discharge) **4=Exfiltration** (Exfiltration Controls 0.05 cfs)

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=113.79' (Free Discharge)

-1=Culvert (Controls 0.00 cfs)

**2=Orifice/Grate** (Controls 0.00 cfs)

-3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

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## Pond 14P: EXISTING Stormwater Mgmt Facility - Chamber Wizard Field A

#### Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)

Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 5 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

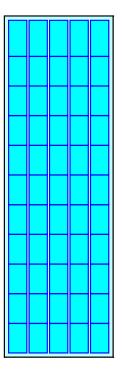
11 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 78.50' Row Length +12.0" End Stone x 2 = 80.50' Base Length
5 Rows x 52.0" Wide + 6.0" Spacing x 4 + 12.0" Side Stone x 2 = 25.67' Base Width
6.0" Stone Base + 30.5" Chamber Height + 6.0" Stone Cover = 3.54' Field Height

55 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 5 Rows = 2,924.5 cf Chamber Storage

7,317.7 cf Field - 2,924.5 cf Chambers = 4,393.2 cf Stone x 40.0% Voids = 1,757.3 cf Stone Storage

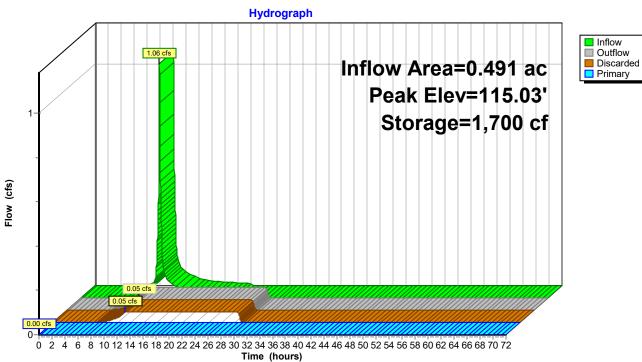
Chamber Storage + Stone Storage = 4,681.8 cf = 0.107 afOverall Storage Efficiency = 64.0%Overall System Size =  $80.50' \times 25.67' \times 3.54'$ 

55 Chambers 271.0 cy Field 162.7 cy Stone



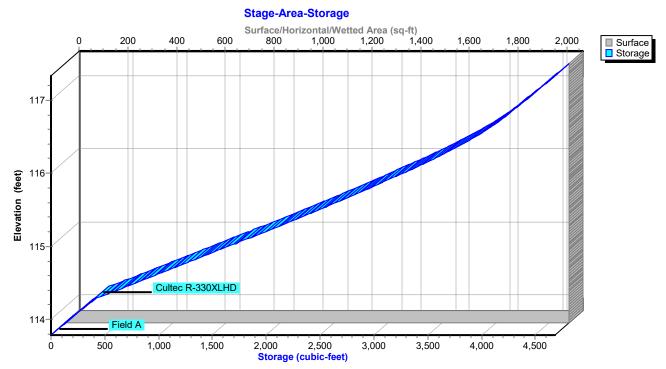


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# Pond 14P: EXISTING Stormwater Mgmt Facility



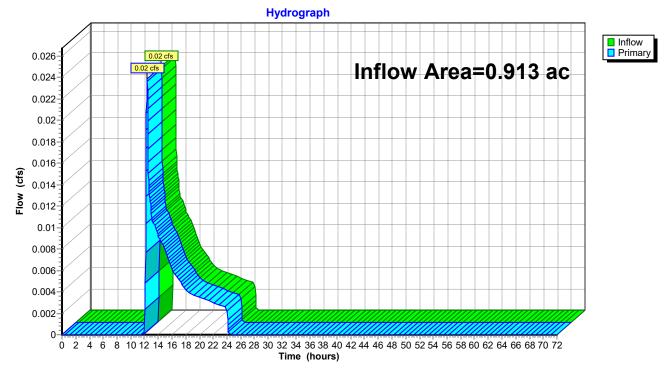


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## Summary for Link 6L: FDA to DESIGN LINE 1

Inflow Area =	0.913 ac, 51.78% Impervious, Inflow D	Depth = 0.08" for 1 year event
Inflow =	0.02 cfs @ 12.38 hrs, Volume=	0.006 af
Primary =	0.02 cfs @ 12.38 hrs, Volume=	0.006 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs



## Link 6L: FDA to DESIGN LINE 1

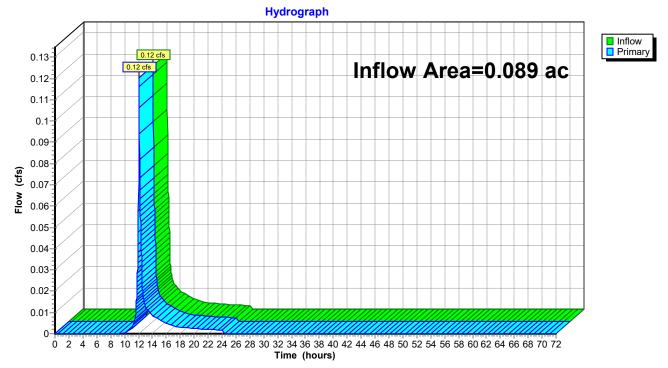
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## Summary for Link 11L: FDA to Smith Ridge Rd

Inflow Area =	0.089 ac, 52.04% Impervious,	Inflow Depth = 1.14" for 1 year event
Inflow =	0.12 cfs @ 12.08 hrs, Volume	= 0.008 af
Primary =	0.12 cfs @ 12.08 hrs, Volume	= 0.008 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs



# Link 11L: FDA to Smith Ridge Rd

#### Self-Storage SW Plan\_12-06-2021

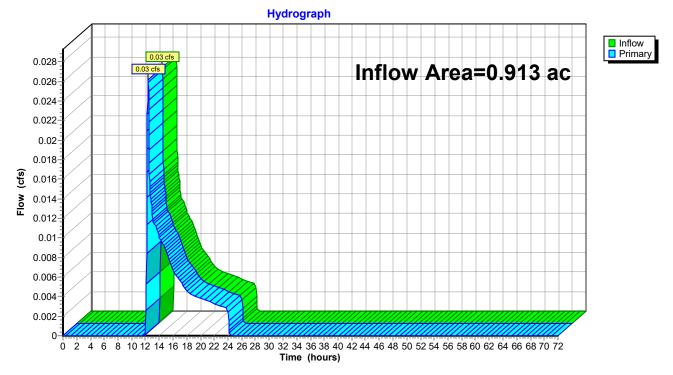
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## Summary for Link 15L: DESIGN LINE 1

Inflow Area =	0.913 ac, 41.99% Impervious,	Inflow Depth = 0.08" for 1 year event
Inflow =	0.03 cfs @ 12.38 hrs, Volume	e= 0.006 af
Primary =	0.03 cfs @ 12.38 hrs, Volume	e= 0.006 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs



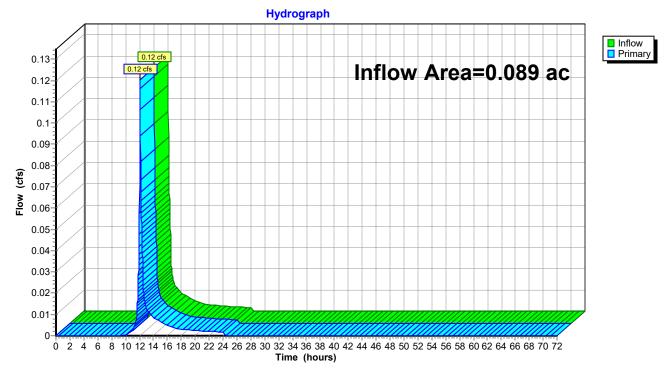
## Link 15L: DESIGN LINE 1

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## Summary for Link 18L: DESIGN POINT STREET

Inflow Area =	0.089 ac, 52.04% Impervious,	Inflow Depth = 1.14" for 1 year event
Inflow =	0.12 cfs @ 12.08 hrs, Volume	= 0.008 af
Primary =	0.12 cfs @ 12.08 hrs, Volume	= 0.008 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs



## Link 18L: DESIGN POINT STREET

Self-Storage SW Plan\_12-06-2021

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Type III 24-hr 2 year Rainfall=3.44"

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Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 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 3S: FDA-1 FUTURE	Runoff Area=23,002 sf 79.53% Impervious Runoff Depth=2.39" Tc=6.0 min CN=90 Runoff=1.46 cfs 0.105 af
Subcatchment 4S: FDA-2 FUTURE	Runoff Area=16,782 sf 13.76% Impervious Runoff Depth=0.36" Tc=6.0 min UI Adjusted CN=56 Runoff=0.07 cfs 0.012 af
Subcatchment 7S: FDA-3 FUTURE	Runoff Area=3,868 sf 52.04% Impervious Runoff Depth=1.59" Tc=5.0 min CN=80 Runoff=0.17 cfs 0.012 af
Subcatchment 13S: XDA-1 EXISTING	Runoff Area=21,405 sf 78.04% Impervious Runoff Depth=2.39" Tc=6.0 min CN=90 Runoff=1.36 cfs 0.098 af
Subcatchment 16S: XDA-2 EXISTING	Runoff Area=18,379 sf 0.00% Impervious Runoff Depth=0.36" Tc=6.0 min CN=56 Runoff=0.08 cfs 0.013 af
Subcatchment 17S: XDA-3 EXISTING	Runoff Area=3,868 sf 52.04% Impervious Runoff Depth=1.59" Tc=5.0 min CN=80 Runoff=0.17 cfs 0.012 af
Pond 13P: Stormwater Management Discarded=0.05 cfs	Peak Elev=115.51' Storage=2,605 cf Inflow=1.46 cfs 0.105 af 0.105 af Primary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.105 af
Pond 14P: EXISTING Stormwater Mgmt Discarded=0.05 cfs	Peak Elev=115.45' Storage=2,409 cf Inflow=1.36 cfs 0.098 af 0.098 af Primary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.098 af
Link 6L: FDA to DESIGN LINE 1	Inflow=0.07 cfs 0.012 af Primary=0.07 cfs 0.012 af
Link 11L: FDA to Smith Ridge Rd	Inflow=0.17 cfs 0.012 af Primary=0.17 cfs 0.012 af
Link 15L: DESIGN LINE 1	Inflow=0.08 cfs 0.013 af Primary=0.08 cfs 0.013 af
Link 18L: DESIGN POINT STREET	Inflow=0.17 cfs 0.012 af Primary=0.17 cfs 0.012 af

Total Runoff Area = 2.004 ac Runoff Volume = 0.251 af Average Runoff Depth = 1.50" 52.66% Pervious = 1.055 ac 47.34% Impervious = 0.949 ac

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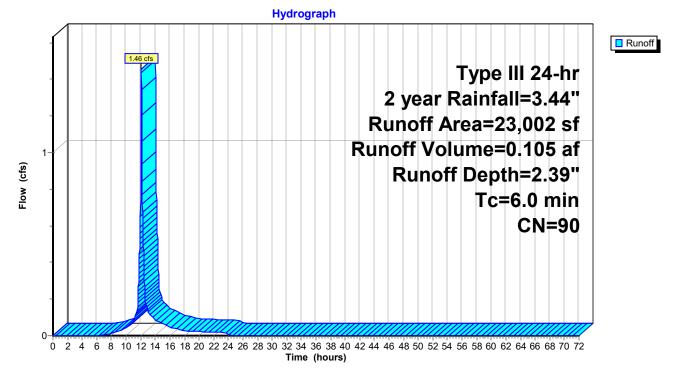
## Summary for Subcatchment 3S: FDA-1 FUTURE CONDITION

Runoff = 1.46 cfs @ 12.09 hrs, Volume= 0.105 af, Depth= 2.39" Routed to Pond 13P : Stormwater Management Facility-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 2 year Rainfall=3.44"

A	rea (sf)	CN	Description				
	18,293	98	Roofs, HSC	βB			
	4,709	61	>75% Gras	s cover, Go	bod, HSG B		
	23,002	90	Weighted Average				
	4,709		20.47% Pervious Area				
	18,293		79.53% Impervious Area				
т.	المربع مرالم			0	Description		
Tc	Length	Slope	,	Capacity	Description		
(min)	(feet)	(ft/ft	) (ft/sec)	(cfs)			
6.0					Direct Entry,		
					-		

## Subcatchment 3S: FDA-1 FUTURE CONDITION



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#### Summary for Subcatchment 4S: FDA-2 FUTURE CONDITION

Runoff = 0.07 cfs @ 12.15 hrs, Volume= Routed to Link 6L : FDA to DESIGN LINE 1 0.012 af, Depth= 0.36"

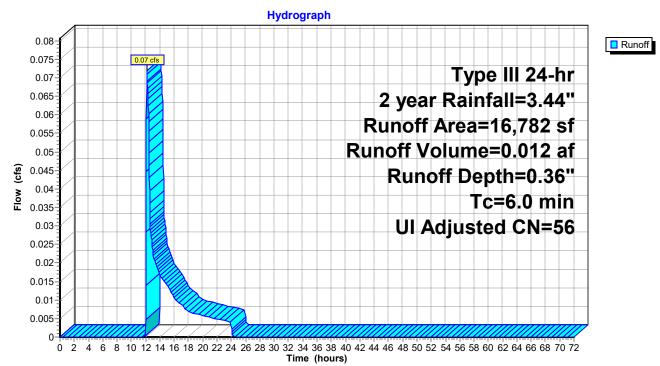
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 2 year Rainfall=3.44"

	Area (sf)	CN	Adj	Description				
	6,709	58		Woods/grass comb., Good, HSG B				
	7,764	48		Brush, Good, HSG B				
	2,309	98		Unconnected roofs, HSG B				
	16,782	59	56	Weighted Average, UI Adjusted				
	14,473			86.24% Pervious Area				
	2,309			13.76% Impervious Area				
	2,309			100.00% Unconnected				
Г	c Length	Slope		ocity Capacity Description				
(mii	n) (feet)	(ft/ft)	) (ft/s	/sec) (cfs)				



Direct Entry,

#### Subcatchment 4S: FDA-2 FUTURE CONDITION



Type III 24-hr 2 year Rainfall=3.44"

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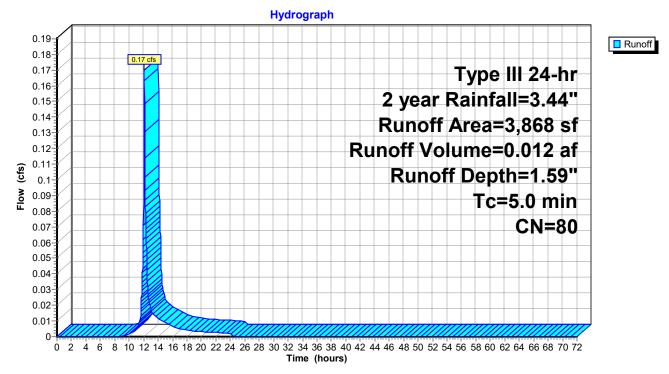
## Summary for Subcatchment 7S: FDA-3 FUTURE CONDITION to DP-2

Runoff = 0.17 cfs @ 12.08 hrs, Volume= Routed to Link 11L : FDA to Smith Ridge Rd 0.012 af, Depth= 1.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 2 year Rainfall=3.44"

_	A	rea (sf)	CN	Description						
		1,855	61	>75% Gras	>75% Grass cover, Good, HSG B					
*		2,013	98	Pavement						
		3,868	80	Weighted Average						
		1,855		47.96% Pervious Area						
		2,013		52.04% Impervious Area						
	Tc (min)	Length (feet)	Slope (ft/ft		Capacity (cfs)	Description				
	5.0					Direct Entry,				

## Subcatchment 7S: FDA-3 FUTURE CONDITION to DP-2



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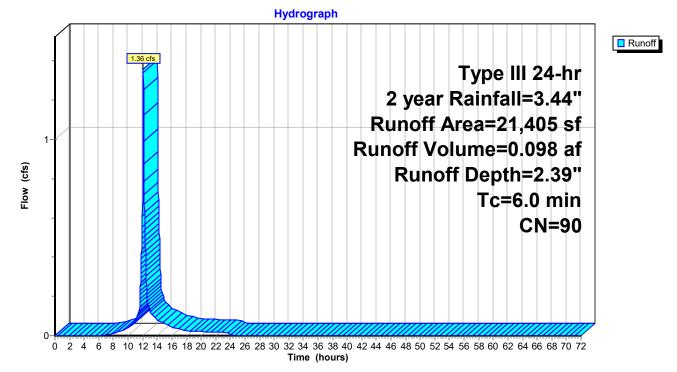
## Summary for Subcatchment 13S: XDA-1 EXISTING CONDITION

Runoff = 1.36 cfs @ 12.09 hrs, Volume= 0.098 af, Depth= 2.39" Routed to Pond 14P : EXISTING Stormwater Mgmt Facility

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 2 year Rainfall=3.44"

A	rea (sf)	CN	Description					
	16,705	98	Roofs, HSG	βB				
	4,700	61	>75% Gras	s cover, Go	bod, HSG B			
Tc (min)_	21,405 4,700 16,705 Length (feet)		,	vious Area				
6.0					Direct Entry,			

## Subcatchment 13S: XDA-1 EXISTING CONDITION



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# Summary for Subcatchment 16S: XDA-2 EXISTING CONDITION

Runoff = 0.08 cfs @ 12.15 hrs, Volume= Routed to Link 15L : DESIGN LINE 1 0.013 af, Depth= 0.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 2 year Rainfall=3.44"

		18,379		rush, Faiı	,					
		18,379	1	00.00% P	Pervious Ar	rea				
		Length	Slope (ft/ft)	Velocity (ft/sec)						
	in) 6.0	(feet)	(1011)	(11/Sec)	(cfs	) Direct Entry				
			_			-				
			Su	bcatchn	nent 16S	: XDA-2 EXIS	STING CC	ONDITI	ON	
					Hyd	rograph				_
	0.085									Runof
	0.085		0.08 cfs							
	0.075								III 24-hr	
	0.07						2 year F	Rainfa	all=3.44"	
	0.065	E				R	inoff A	rea=1	8,379 sf	
	0.06 0.055	E							0.013 af	
	0.055									
Ű	0.045	=					Runoff	Dept	th=0.36"	
riow (cis)	0.04	=						Tc=	=6.0 min	
	0.035								CN=56	
	0.03								<b>CIN-30</b>	
	0.025	=								
	0.02									
	0.015 <sup>.</sup> 0.01	E								
	0.005									
	0.000							///////////////////////////////////////		7

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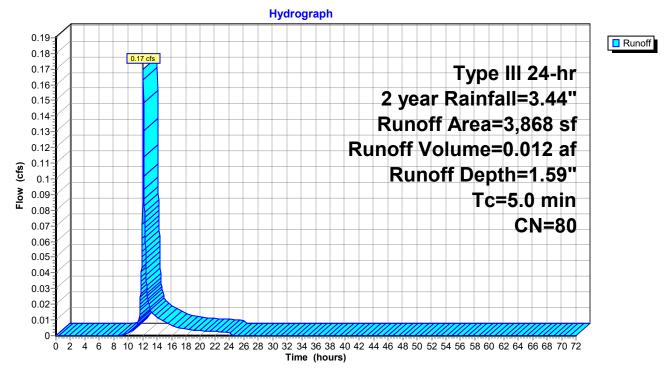
## Summary for Subcatchment 17S: XDA-3 EXISTING CONDITION

Runoff = 0.17 cfs @ 12.08 hrs, Volume= Routed to Link 18L : DESIGN POINT STREET 0.012 af, Depth= 1.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 2 year Rainfall=3.44"

	A	rea (sf)	CN	Description					
		1,855	61	>75% Grass cover, Good, HSG B					
*		2,013	98	Pavement					
		3,868	80	) Weighted Average					
		1,855		47.96% Pervious Area					
		2,013		52.04% Imp	pervious Ar	rea			
	Tc (min)	Length (feet)	Slope (ft/ft	,	Capacity (cfs)	Description			
	5.0					Direct Entry,			

## Subcatchment 17S: XDA-3 EXISTING CONDITION



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#### Summary for Pond 13P: Stormwater Management Facility-2

Inflow Area =	0.528 ac, 7	9.53% Impervious, Infl	ow Depth = 2.39" for 2 year event			
Inflow =	1.46 cfs @	12.09 hrs, Volume=	0.105 af			
Outflow =	0.05 cfs @	10.50 hrs, Volume=	0.105 af, Atten= 97%, Lag= 0.0 min			
Discarded =	0.05 cfs @	10.50 hrs, Volume=	0.105 af			
Primary =	0.00 cfs @	0.00 hrs, Volume=	0.000 af			
Routed to Link 6L : FDA to DESIGN LINE 1						

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Peak Elev= 115.51' @ 15.75 hrs Surf.Area= 2,181 sf Storage= 2,605 cf

Plug-Flow detention time= 491.9 min calculated for 0.105 af (100% of inflow) Center-of-Mass det. time= 491.9 min (1,296.1 - 804.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	113.79'	1,440 cf	20.83'W x 80.50'L x 3.54'H Field A Existing
			5,940 cf Overall - 2,340 cf Embedded = 3,600 cf x 40.0% Voids
#2A	114.29'	2,340 cf	Cultec R-330XLHD x 44 Inside #1
			Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf
			Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
			Row Length Adjustment= +1.50' x 7.45 sf x 4 rows
#3B	113.79'	450 cf	16.00'W x 31.50'L x 3.54'H Field B Proposed
			1,785 cf Overall - 659 cf Embedded = 1,126 cf x 40.0% Voids
#4B	114.29'	659 cf	Cultec R-330XLHD x 12 Inside #3
			Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf
			Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
			Row Length Adjustment= +1.50' x 7.45 sf x 3 rows
		4.889 cf	Total Available Storage

4,889 cf Total Available Storage

Storage Group A created with Chamber Wizard Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	114.00'	15.0" Round Culvert
	-		L= 108.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 114.00' / 108.00' S= 0.0556 '/' Cc= 0.900
			n= 0.012, Flow Area= 1.23 sf
#2	Device 1	115.75'	<b>5.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads
#3	Device 1	117.25'	3.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#4	Discarded	113.79'	1.000 in/hr Exfiltration over Horizontal area

**Discarded OutFlow** Max=0.05 cfs @ 10.50 hrs HW=113.83' (Free Discharge) **4=Exfiltration** (Exfiltration Controls 0.05 cfs)

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=113.79' (Free Discharge)

-1=Culvert (Controls 0.00 cfs)

-2=Orifice/Grate (Controls 0.00 cfs)

-3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

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## Pond 13P: Stormwater Management Facility-2 - Chamber Wizard Field A Existing

#### Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)

Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 4 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

11 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 78.50' Row Length +12.0" End Stone x 2 = 80.50' Base Length 4 Rows x 52.0" Wide + 6.0" Spacing x 3 + 12.0" Side Stone x 2 = 20.83' Base Width 6.0" Stone Base + 30.5" Chamber Height + 6.0" Stone Cover = 3.54' Field Height

44 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 4 Rows = 2,339.6 cf Chamber Storage

5,939.7 cf Field - 2,339.6 cf Chambers = 3,600.1 cf Stone x 40.0% Voids = 1,440.0 cf Stone Storage

Chamber Storage + Stone Storage = 3,779.6 cf = 0.087 afOverall Storage Efficiency = 63.6%Overall System Size =  $80.50' \times 20.83' \times 3.54'$ 

44 Chambers 220.0 cy Field 133.3 cy Stone

 Image: Image:



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## Pond 13P: Stormwater Management Facility-2 - Chamber Wizard Field B Proposed

#### Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)

Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 3 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

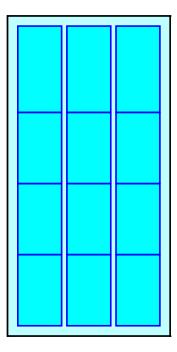
4 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 29.50' Row Length +12.0" End Stone x 2 = 31.50' Base Length 3 Rows x 52.0" Wide + 6.0" Spacing x 2 + 12.0" Side Stone x 2 = 16.00' Base Width 6.0" Stone Base + 30.5" Chamber Height + 6.0" Stone Cover = 3.54' Field Height

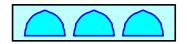
12 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 3 Rows = 659.4 cf Chamber Storage

1,785.0 cf Field - 659.4 cf Chambers = 1,125.6 cf Stone x 40.0% Voids = 450.2 cf Stone Storage

Chamber Storage + Stone Storage = 1,109.6 cf = 0.025 af Overall Storage Efficiency = 62.2%Overall System Size =  $31.50' \times 16.00' \times 3.54'$ 

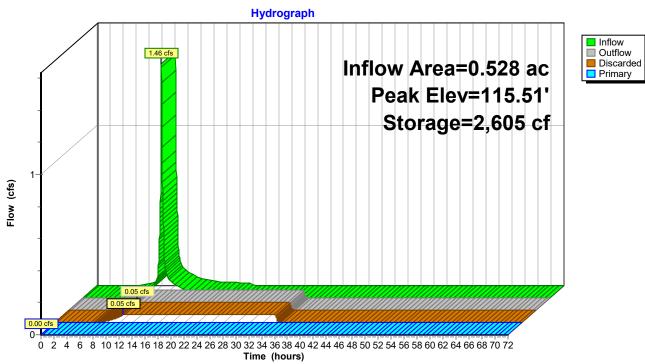
12 Chambers 66.1 cy Field 41.7 cy Stone



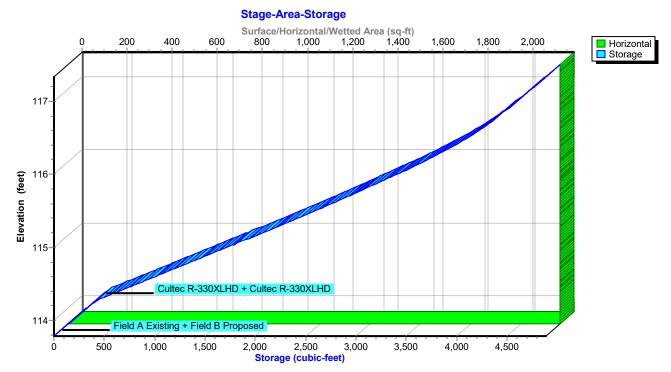


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## Pond 13P: Stormwater Management Facility-2



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#### Summary for Pond 14P: EXISTING Stormwater Mgmt Facility

Inflow Area =	0.491 ac, 78.04% Impervious, Inflow D	epth = 2.39" for 2 year event
Inflow =	1.36 cfs @ 12.09 hrs, Volume=	0.098 af
Outflow =	0.05 cfs @ 10.52 hrs, Volume=	0.098 af, Atten= 96%, Lag= 0.0 min
Discarded =	0.05 cfs @ 10.52 hrs, Volume=	0.098 af
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0.000 af
Routed to Link	15L : DESIGN LINE 1	

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Peak Elev= 115.45' @ 15.70 hrs Surf.Area= 2,066 sf Storage= 2,409 cf

Plug-Flow detention time= 480.0 min calculated for 0.098 af (100% of inflow) Center-of-Mass det. time= 480.1 min (1,284.2 - 804.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	113.79'	1,757 cf	25.67'W x 80.50'L x 3.54'H Field A
			7,318 cf Overall - 2,925 cf Embedded = 4,393 cf x 40.0% Voids
#2A	114.29'	2,925 cf	Cultec R-330XLHD x 55 Inside #1
			Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf
			Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
			Row Length Adjustment= +1.50' x 7.45 sf x 5 rows
		4,682 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	114.00'	12.0" Round Culvert
	-		L= 30.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 114.00' / 108.00' S= 0.2000 '/' Cc= 0.900
			n= 0.012, Flow Area= 0.79 sf
#2	Device 1	115.75'	7.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	117.20'	3.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#4	Discarded	113.79'	1.000 in/hr Exfiltration over Surface area

**Discarded OutFlow** Max=0.05 cfs @ 10.52 hrs HW=113.83' (Free Discharge) **4=Exfiltration** (Exfiltration Controls 0.05 cfs)

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=113.79' (Free Discharge)

-1=Culvert (Controls 0.00 cfs)

**2=Orifice/Grate** (Controls 0.00 cfs)

-3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

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#### -

#### Pond 14P: EXISTING Stormwater Mgmt Facility - Chamber Wizard Field A

#### Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)

Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 5 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

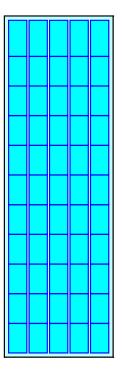
11 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 78.50' Row Length +12.0" End Stone x 2 = 80.50' Base Length 5 Rows x 52.0" Wide + 6.0" Spacing x 4 + 12.0" Side Stone x 2 = 25.67' Base Width 6.0" Stone Base + 30.5" Chamber Height + 6.0" Stone Cover = 3.54' Field Height

55 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 5 Rows = 2,924.5 cf Chamber Storage

7,317.7 cf Field - 2,924.5 cf Chambers = 4,393.2 cf Stone x 40.0% Voids = 1,757.3 cf Stone Storage

Chamber Storage + Stone Storage = 4,681.8 cf = 0.107 afOverall Storage Efficiency = 64.0%Overall System Size =  $80.50' \times 25.67' \times 3.54'$ 

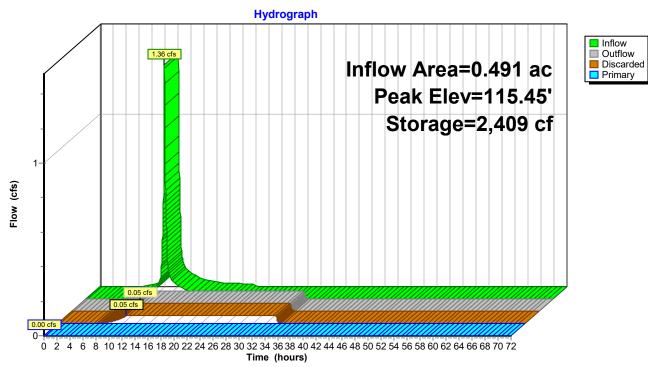
55 Chambers 271.0 cy Field 162.7 cy Stone



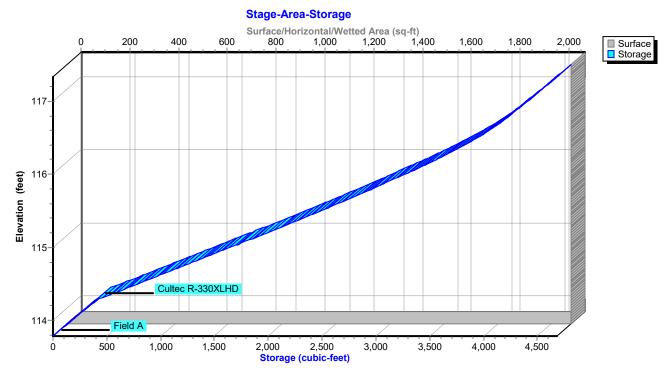


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# Pond 14P: EXISTING Stormwater Mgmt Facility



## Pond 14P: EXISTING Stormwater Mgmt Facility

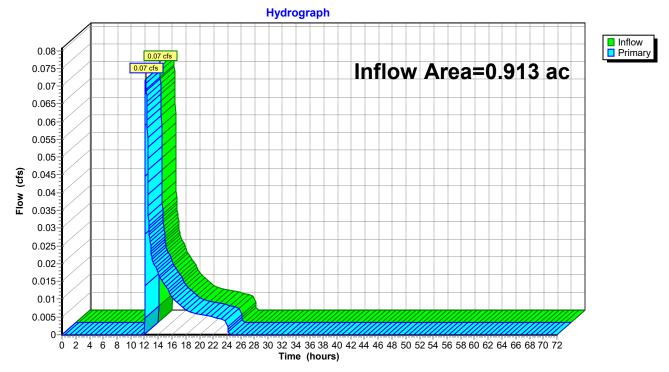


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## Summary for Link 6L: FDA to DESIGN LINE 1

Inflow Area =	0.913 ac, 51.78% Impervious, Inflow	w Depth = 0.15" for 2 year event	
Inflow =	0.07 cfs @ 12.15 hrs, Volume=	0.012 af	
Primary =	0.07 cfs @ 12.15 hrs, Volume=	0.012 af, Atten= 0%, Lag= 0.0 mi	in

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs



## Link 6L: FDA to DESIGN LINE 1

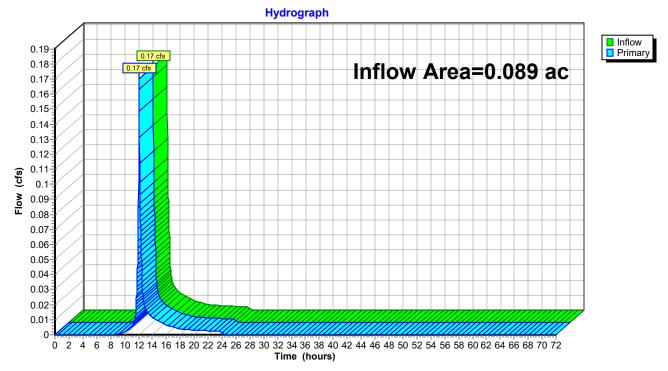
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## Summary for Link 11L: FDA to Smith Ridge Rd

Inflow Area	=	0.089 ac, 52.04% Impervious, Inflow Depth = 1.59" for 2 year event	
Inflow	=	0.17 cfs @ 12.08 hrs, Volume= 0.012 af	
Primary	=	0.17 cfs @ 12.08 hrs, Volume= 0.012 af, Atten= 0%, Lag= 0.0 m	in

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs



## Link 11L: FDA to Smith Ridge Rd

### Self-Storage SW Plan\_12-06-2021

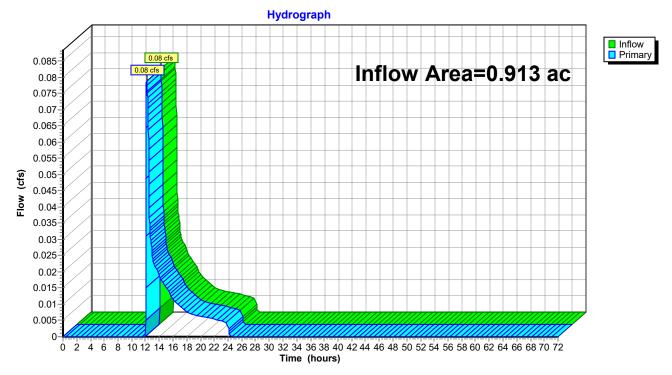
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## Summary for Link 15L: DESIGN LINE 1

Inflow Area =	=	0.913 ac, 41.	99% Impervious,	Inflow Depth =	0.17"	for 2 year event
Inflow =	:	0.08 cfs @ 12	2.15 hrs, Volume	e= 0.013	af	
Primary =	:	0.08 cfs @ 12	2.15 hrs, Volume	e= 0.013	af, Atte	en= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs



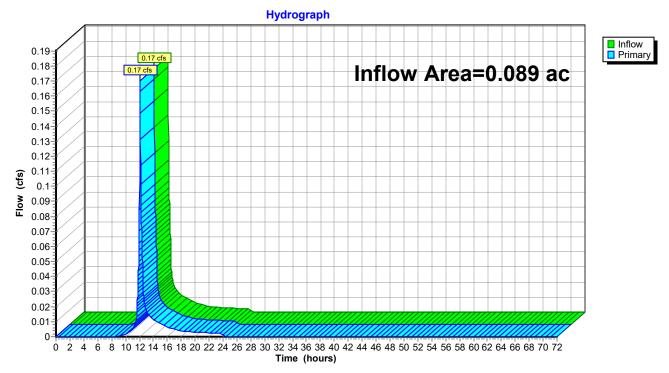
### Link 15L: DESIGN LINE 1

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## Summary for Link 18L: DESIGN POINT STREET

Inflow Area	=	0.089 ac, 52.04% Impervious, Inflow Depth = 1.59" for 2 year event	
Inflow	=	0.17 cfs @ 12.08 hrs, Volume= 0.012 af	
Primary	=	0.17 cfs @ 12.08 hrs, Volume= 0.012 af, Atten= 0%, Lag= 0.0 m	in

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs



## Link 18L: DESIGN POINT STREET

#### Self-Storage SW Plan\_12-06-2021

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Type III 24-hr 10 year Rainfall=5.12"

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Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 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 3S: FDA-1 FUTURE	Runoff Area=23,002 sf 79.53% Impervious Runoff Depth=3.99" Tc=6.0 min CN=90 Runoff=2.38 cfs 0.176 af
Subcatchment 4S: FDA-2 FUTURE	Runoff Area=16,782 sf 13.76% Impervious Runoff Depth=1.10" Tc=6.0 min UI Adjusted CN=56 Runoff=0.42 cfs 0.035 af
Subcatchment 7S: FDA-3 FUTURE	Runoff Area=3,868 sf 52.04% Impervious Runoff Depth=3.00" Tc=5.0 min CN=80 Runoff=0.32 cfs 0.022 af
Subcatchment 13S: XDA-1 EXISTING	Runoff Area=21,405 sf 78.04% Impervious Runoff Depth=3.99" Tc=6.0 min CN=90 Runoff=2.21 cfs 0.163 af
Subcatchment 16S: XDA-2 EXISTING	Runoff Area=18,379 sf 0.00% Impervious Runoff Depth=1.10" Tc=6.0 min CN=56 Runoff=0.46 cfs 0.039 af
Subcatchment 17S: XDA-3 EXISTING	Runoff Area=3,868 sf 52.04% Impervious Runoff Depth=3.00" Tc=5.0 min CN=80 Runoff=0.32 cfs 0.022 af
Pond 13P: Stormwater Management Discarded=0.05 cfs	Peak Elev=116.17' Storage=3,665 cf Inflow=2.38 cfs 0.176 af 0.130 af Primary=0.30 cfs 0.045 af Outflow=0.35 cfs 0.176 af
Pond 14P: EXISTING Stormwater Mgmt Discarded=0.05 cfs	Peak Elev=116.09' Storage=3,399 cf Inflow=2.21 cfs 0.163 af 0.124 af Primary=0.32 cfs 0.040 af Outflow=0.37 cfs 0.163 af
Link 6L: FDA to DESIGN LINE 1	Inflow=0.44 cfs 0.081 af Primary=0.44 cfs 0.081 af
Link 11L: FDA to Smith Ridge Rd	Inflow=0.32 cfs 0.022 af Primary=0.32 cfs 0.022 af
Link 15L: DESIGN LINE 1	Inflow=0.46 cfs 0.079 af Primary=0.46 cfs 0.079 af
Link 18L: DESIGN POINT STREET	Inflow=0.32 cfs 0.022 af Primary=0.32 cfs 0.022 af

Total Runoff Area = 2.004 ac Runoff Volume = 0.458 af Average Runoff Depth = 2.74" 52.66% Pervious = 1.055 ac 47.34% Impervious = 0.949 ac

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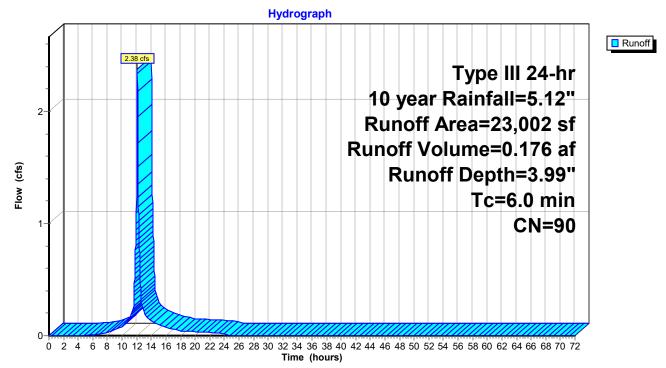
### Summary for Subcatchment 3S: FDA-1 FUTURE CONDITION

Runoff = 2.38 cfs @ 12.09 hrs, Volume= 0.176 af, Depth= 3.99" Routed to Pond 13P : Stormwater Management Facility-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 10 year Rainfall=5.12"

Α	rea (sf)	CN	Description					
	18,293	98	Roofs, HSC	ЪВ				
	4,709	61	>75% Gras	s cover, Go	ood, HSG B			
	23,002	90	Weighted A	verage				
	4,709		20.47% Per	vious Area	a			
	18,293		79.53% Imp	pervious Are	rea			
_								
Тс	Length	Slope	,	Capacity	Description			
(min)	(feet)	(ft/ft	) (ft/sec)	(cfs)				
6.0					Direct Entry,			
					-			

#### Subcatchment 3S: FDA-1 FUTURE CONDITION



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#### Summary for Subcatchment 4S: FDA-2 FUTURE CONDITION

Runoff = 0.42 cfs @ 12.10 hrs, Volume= Routed to Link 6L : FDA to DESIGN LINE 1 0.035 af, Depth= 1.10"

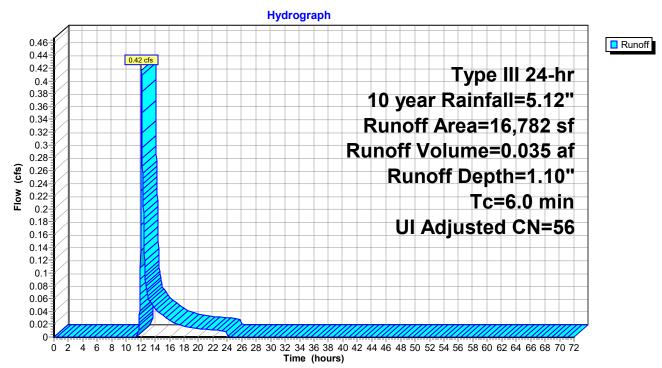
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 10 year Rainfall=5.12"

Area (sf)	CN	Adj	Description				
6,709	58		Woods/grass comb., Good, HSG B				
7,764	48		Brush, Good, HSG B				
2,309	98		Unconnected roofs, HSG B				
16,782	59	56	Weighted Average, UI Adjusted				
14,473			86.24% Pervious Area				
2,309			13.76% Impervious Area				
2,309			100.00% Unconnected				
Tc Length (min) (feet)	Slope (ft/ft		ocity Capacity Description sec) (cfs)				



Direct Entry,

#### Subcatchment 4S: FDA-2 FUTURE CONDITION



Type III 24-hr 10 year Rainfall=5.12"

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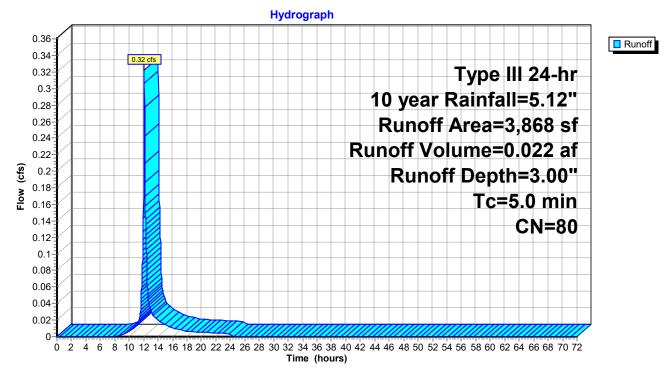
#### Summary for Subcatchment 7S: FDA-3 FUTURE CONDITION to DP-2

Runoff = 0.32 cfs @ 12.08 hrs, Volume= Routed to Link 11L : FDA to Smith Ridge Rd 0.022 af, Depth= 3.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 10 year Rainfall=5.12"

	Area (sf)	CN	Description						
	1,855	61	>75% Gras	s cover, Go	lood, HSG B				
*	2,013	98	Pavement						
	3,868 1,855 2,013		Weighted Average 47.96% Pervious Area 52.04% Impervious Area						
T (min	5	Slope (ft/ft		Capacity (cfs)	1				
5.	0				Direct Entry,				

#### Subcatchment 7S: FDA-3 FUTURE CONDITION to DP-2



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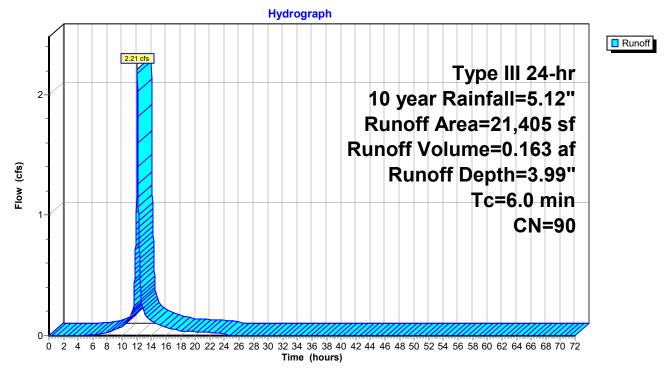
#### Summary for Subcatchment 13S: XDA-1 EXISTING CONDITION

Runoff = 2.21 cfs @ 12.09 hrs, Volume= 0.163 af, Depth= 3.99" Routed to Pond 14P : EXISTING Stormwater Mgmt Facility

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 10 year Rainfall=5.12"

A	rea (sf)	CN	Description					
	16,705	98	Roofs, HSG	βB				
	4,700	61	>75% Gras	s cover, Go	ood, HSG B			
	21,405	90	Weighted A	verage				
	4,700		21.96% Per	vious Area	1			
	16,705		78.04% Imp	pervious Are	ea			
Tc	Length	Slope	,	Capacity	Description			
(min)	(feet)	(ft/ft	) (ft/sec)	(cfs)				
6.0					Direct Entry,			
					-			

## Subcatchment 13S: XDA-1 EXISTING CONDITION

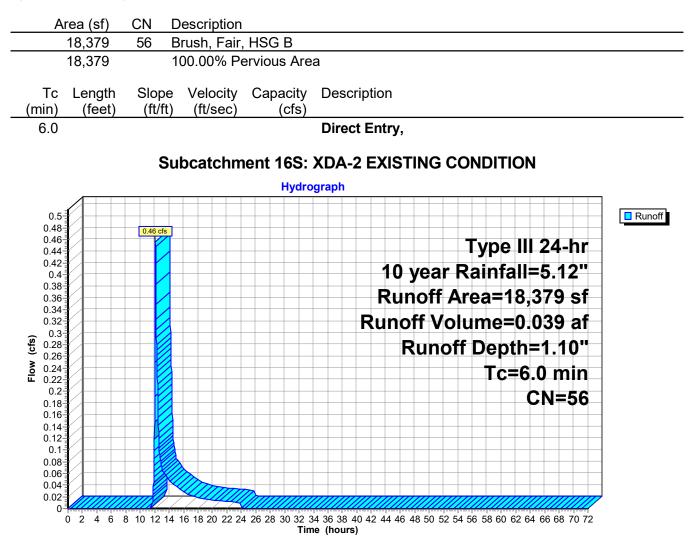


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### Summary for Subcatchment 16S: XDA-2 EXISTING CONDITION

Runoff = 0.46 cfs @ 12.10 hrs, Volume= Routed to Link 15L : DESIGN LINE 1 0.039 af, Depth= 1.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 10 year Rainfall=5.12"



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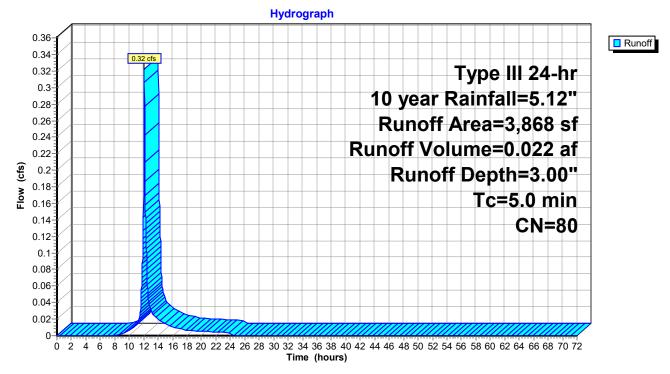
#### Summary for Subcatchment 17S: XDA-3 EXISTING CONDITION

Runoff = 0.32 cfs @ 12.08 hrs, Volume= Routed to Link 18L : DESIGN POINT STREET 0.022 af, Depth= 3.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 10 year Rainfall=5.12"

	A	rea (sf)	CN	Description		
		1,855	61	>75% Gras	s cover, Go	ood, HSG B
*		2,013	98	Pavement		
		3,868 1,855 2,013	80	Weighted A 47.96% Pei 52.04% Imp	vious Area	
	Tc (min)	Length (feet)	Slope (ft/ft	,	Capacity (cfs)	Description
	5.0					Direct Entry,

## Subcatchment 17S: XDA-3 EXISTING CONDITION



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#### Summary for Pond 13P: Stormwater Management Facility-2

Inflow Area =	0.528 ac, 7	9.53% Impervious, Inflo	w Depth = 3.99" for  10 year event	
Inflow =	2.38 cfs @	12.09 hrs, Volume=	0.176 af	
Outflow =	0.35 cfs @	12.58 hrs, Volume=	0.176 af, Atten= 85%, Lag= 29.8 min	
Discarded =	0.05 cfs @	9.10 hrs, Volume=	0.130 af	
Primary =	0.30 cfs @	12.58 hrs, Volume=	0.045 af	
Routed to Link 6L : FDA to DESIGN LINE 1				

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Peak Elev= 116.17' @ 12.58 hrs Surf.Area= 2,181 sf Storage= 3,665 cf

Plug-Flow detention time= 452.8 min calculated for 0.176 af (100% of inflow) Center-of-Mass det. time= 452.9 min (1,242.8 - 789.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	113.79'	1,440 cf	20.83'W x 80.50'L x 3.54'H Field A Existing
			5,940 cf Overall - 2,340 cf Embedded = 3,600 cf x 40.0% Voids
#2A	114.29'	2,340 cf	Cultec R-330XLHD x 44 Inside #1
			Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf
			Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
			Row Length Adjustment= +1.50' x 7.45 sf x 4 rows
#3B	113.79'	450 cf	16.00'W x 31.50'L x 3.54'H Field B Proposed
			1,785 cf Overall - 659 cf Embedded = 1,126 cf x 40.0% Voids
#4B	114.29'	659 cf	Cultec R-330XLHD x 12 Inside #3
			Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf
			Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
			Row Length Adjustment= +1.50' x 7.45 sf x 3 rows
		4,889 cf	Total Available Storage

4,889 cf Total Available Storage

Storage Group A created with Chamber Wizard Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	114.00'	15.0" Round Culvert
	-		L= 108.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 114.00' / 108.00' S= 0.0556 '/' Cc= 0.900
			n= 0.012, Flow Area= 1.23 sf
#2	Device 1	115.75'	<b>5.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads
#3	Device 1	117.25'	3.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#4	Discarded	113.79'	1.000 in/hr Exfiltration over Horizontal area

**Discarded OutFlow** Max=0.05 cfs @ 9.10 hrs HW=113.83' (Free Discharge) **4=Exfiltration** (Exfiltration Controls 0.05 cfs)

**Primary OutFlow** Max=0.30 cfs @ 12.58 hrs HW=116.17' (Free Discharge)

-1=Culvert (Passes 0.30 cfs of 5.80 cfs potential flow)

**2=Orifice/Grate** (Orifice Controls 0.30 cfs @ 2.22 fps)

-3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Type III 24-hr 10 year Rainfall=5.12"

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## Pond 13P: Stormwater Management Facility-2 - Chamber Wizard Field A Existing

#### Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)

Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 4 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

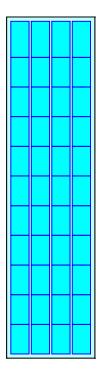
11 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 78.50' Row Length +12.0" End Stone x 2 = 80.50' Base Length 4 Rows x 52.0" Wide + 6.0" Spacing x 3 + 12.0" Side Stone x 2 = 20.83' Base Width 6.0" Stone Base + 30.5" Chamber Height + 6.0" Stone Cover = 3.54' Field Height

44 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 4 Rows = 2,339.6 cf Chamber Storage

5,939.7 cf Field - 2,339.6 cf Chambers = 3,600.1 cf Stone x 40.0% Voids = 1,440.0 cf Stone Storage

Chamber Storage + Stone Storage = 3,779.6 cf = 0.087 afOverall Storage Efficiency = 63.6%Overall System Size =  $80.50' \times 20.83' \times 3.54'$ 

44 Chambers 220.0 cy Field 133.3 cy Stone





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### Pond 13P: Stormwater Management Facility-2 - Chamber Wizard Field B Proposed

#### Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)

Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 3 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

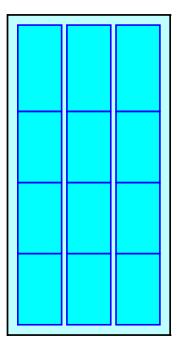
4 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 29.50' Row Length +12.0" End Stone x 2 = 31.50' Base Length 3 Rows x 52.0" Wide + 6.0" Spacing x 2 + 12.0" Side Stone x 2 = 16.00' Base Width 6.0" Stone Base + 30.5" Chamber Height + 6.0" Stone Cover = 3.54' Field Height

12 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 3 Rows = 659.4 cf Chamber Storage

1,785.0 cf Field - 659.4 cf Chambers = 1,125.6 cf Stone x 40.0% Voids = 450.2 cf Stone Storage

Chamber Storage + Stone Storage = 1,109.6 cf = 0.025 af Overall Storage Efficiency = 62.2%Overall System Size =  $31.50' \times 16.00' \times 3.54'$ 

12 Chambers 66.1 cy Field 41.7 cy Stone



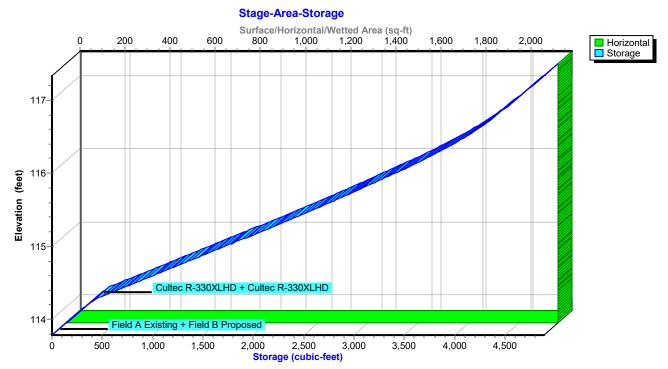


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## Hydrograph Inflow Outflow 2.38 cfs Discarded Inflow Area=0.528 ac Primary Peak Elev=116.17' Storage=3,665 cf 2 Flow (cfs) 1 0.35 cfs 0.30 cfs 0.05 0 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 Time (hours)

## Pond 13P: Stormwater Management Facility-2





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#### Summary for Pond 14P: EXISTING Stormwater Mgmt Facility

Inflow Area =	0.491 ac, 7	8.04% Impervious,	Inflow Depth = 3.99" for 10 year event
Inflow =	2.21 cfs @	12.09 hrs, Volume	= 0.163 af
Outflow =	0.37 cfs @	12.56 hrs, Volume	= 0.163 af, Atten= 83%, Lag= 28.3 min
Discarded =	0.05 cfs @	9.14 hrs, Volume	= 0.124 af
Primary =	0.32 cfs @	12.56 hrs, Volume	= 0.040 af
Routed to Link	15L : DESIGI	N LINE 1	

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Peak Elev= 116.09' @ 12.56 hrs Surf.Area= 2,066 sf Storage= 3,399 cf

Plug-Flow detention time= 462.4 min calculated for 0.163 af (100% of inflow) Center-of-Mass det. time= 462.5 min (1,252.4 - 789.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	113.79'	1,757 cf	25.67'W x 80.50'L x 3.54'H Field A
			7,318 cf Overall - 2,925 cf Embedded = 4,393 cf x 40.0% Voids
#2A	114.29'	2,925 cf	Cultec R-330XLHD x 55 Inside #1
			Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf
			Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
			Row Length Adjustment= +1.50' x 7.45 sf x 5 rows
		4,682 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	114.00'	12.0" Round Culvert
	•		L= 30.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 114.00' / 108.00' S= 0.2000 '/' Cc= 0.900
			n= 0.012, Flow Area= 0.79 sf
#2	Device 1	115.75'	7.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	117.20'	
#4	Discarded	113.79'	1.000 in/hr Exfiltration over Surface area

**Discarded OutFlow** Max=0.05 cfs @ 9.14 hrs HW=113.83' (Free Discharge) **4=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.32 cfs @ 12.56 hrs HW=116.09' (Free Discharge) 1=Culvert (Passes 0.32 cfs of 4.77 cfs potential flow) 2=Orifice/Grate (Orifice Controls 0.32 cfs @ 1.98 fps) 3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

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### Pond 14P: EXISTING Stormwater Mgmt Facility - Chamber Wizard Field A

#### Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)

Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 5 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

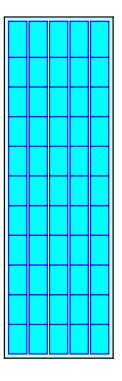
11 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 78.50' Row Length +12.0" End Stone x 2 = 80.50' Base Length 5 Rows x 52.0" Wide + 6.0" Spacing x 4 + 12.0" Side Stone x 2 = 25.67' Base Width 6.0" Stone Base + 30.5" Chamber Height + 6.0" Stone Cover = 3.54' Field Height

55 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 5 Rows = 2,924.5 cf Chamber Storage

7,317.7 cf Field - 2,924.5 cf Chambers = 4,393.2 cf Stone x 40.0% Voids = 1,757.3 cf Stone Storage

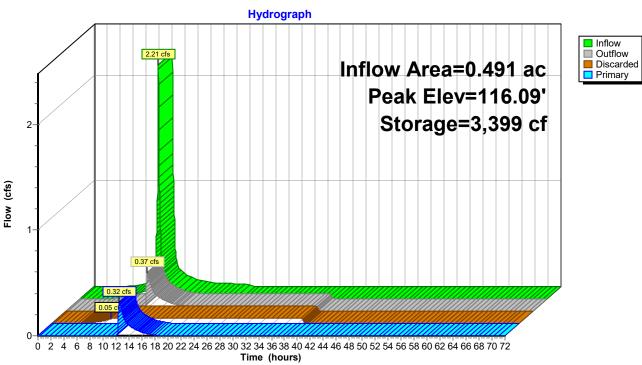
Chamber Storage + Stone Storage = 4,681.8 cf = 0.107 afOverall Storage Efficiency = 64.0%Overall System Size =  $80.50' \times 25.67' \times 3.54'$ 

55 Chambers 271.0 cy Field 162.7 cy Stone



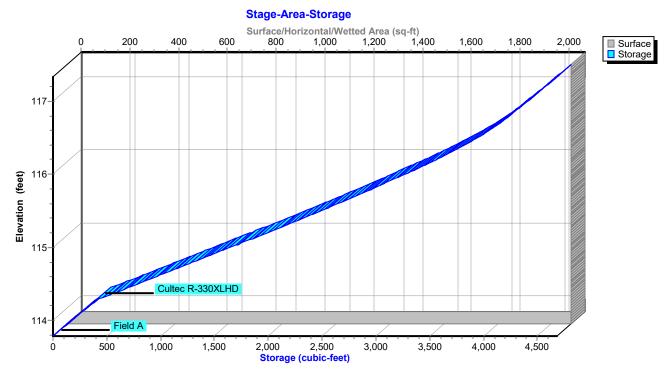


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# Pond 14P: EXISTING Stormwater Mgmt Facility

## Pond 14P: EXISTING Stormwater Mgmt Facility

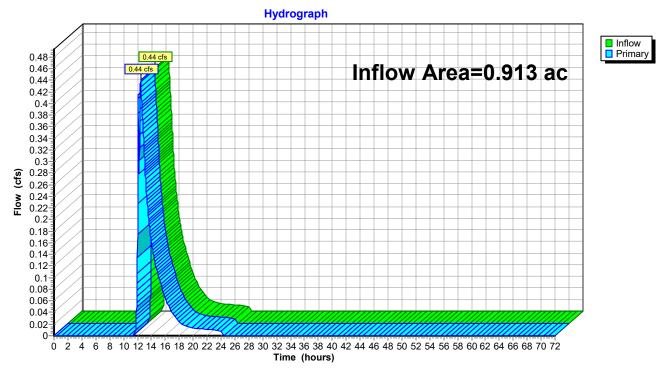


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## Summary for Link 6L: FDA to DESIGN LINE 1

Inflow Area	a =	0.913 ac, 51.78% Impervious, Inflow Depth = 1.06" for 10 year even	ent
Inflow	=	0.44 cfs @ 12.46 hrs, Volume= 0.081 af	
Primary	=	0.44 cfs @ 12.46 hrs, Volume= 0.081 af, Atten= 0%, Lag= 0	.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs



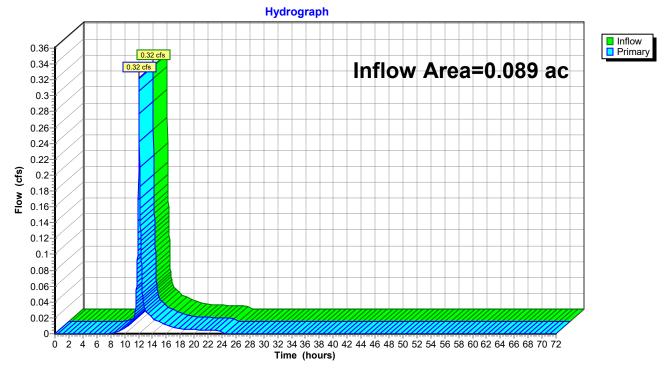
## Link 6L: FDA to DESIGN LINE 1

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### Summary for Link 11L: FDA to Smith Ridge Rd

Inflow Area =	0.089 ac, 52.04% Impervious, I	nflow Depth = 3.00" for 10 year event
Inflow =	0.32 cfs @ 12.08 hrs, Volume=	0.022 af
Primary =	0.32 cfs @ 12.08 hrs, Volume=	0.022 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs



## Link 11L: FDA to Smith Ridge Rd

#### Self-Storage SW Plan\_12-06-2021

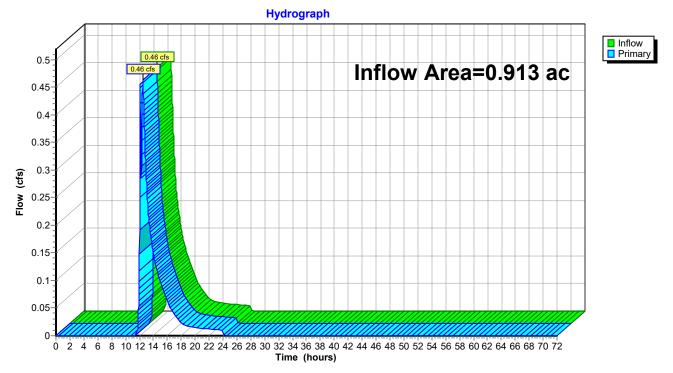
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## Summary for Link 15L: DESIGN LINE 1

Inflow Area	a =	0.913 ac, 41.99% Impervious, Inflow Depth = 1.03" for 10	year event
Inflow	=	0.46 cfs @ 12.49 hrs, Volume= 0.079 af	
Primary	=	0.46 cfs @ 12.49 hrs, Volume= 0.079 af, Atten= 0%,	, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs



### Link 15L: DESIGN LINE 1

Type III 24-hr 10 year Rainfall=5.12"

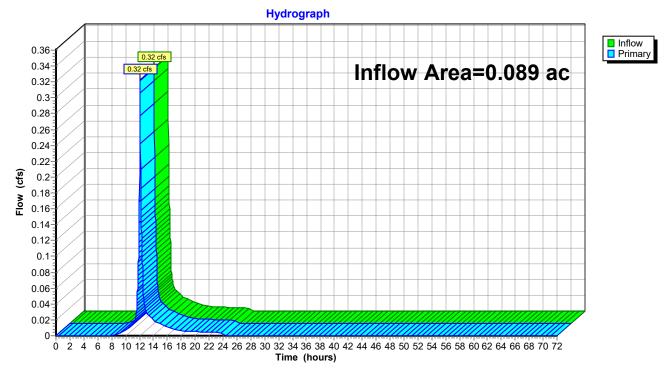
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## Summary for Link 18L: DESIGN POINT STREET

Inflow Area	=	0.089 ac, 52.04% Impervious, Inflow Depth = 3.00" for 10 year e	vent
Inflow	=	0.32 cfs @ 12.08 hrs, Volume= 0.022 af	
Primary	=	0.32 cfs @ 12.08 hrs, Volume= 0.022 af, Atten= 0%, Lag=	0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs



## Link 18L: DESIGN POINT STREET

Self-Storage SW Plan\_12-06-2021

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Type III 24-hr 25 year Rainfall=6.43"

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Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 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 3S: FDA-1 FUTURE	Runoff Area=23,002 sf 79.53% Impervious Runoff Depth=5.27" Tc=6.0 min CN=90 Runoff=3.09 cfs 0.232 af
Subcatchment 4S: FDA-2 FUTURE	Runoff Area=16,782 sf 13.76% Impervious Runoff Depth=1.86" Tc=6.0 min UI Adjusted CN=56 Runoff=0.77 cfs 0.060 af
Subcatchment 7S: FDA-3 FUTURE	Runoff Area=3,868 sf 52.04% Impervious Runoff Depth=4.17" Tc=5.0 min CN=80 Runoff=0.45 cfs 0.031 af
Subcatchment 13S: XDA-1 EXISTING	Runoff Area=21,405 sf 78.04% Impervious Runoff Depth=5.27" Tc=6.0 min CN=90 Runoff=2.87 cfs 0.216 af
Subcatchment 16S: XDA-2 EXISTING	Runoff Area=18,379 sf 0.00% Impervious Runoff Depth=1.86" Tc=6.0 min CN=56 Runoff=0.85 cfs 0.065 af
Subcatchment 17S: XDA-3 EXISTING	Runoff Area=3,868 sf 52.04% Impervious Runoff Depth=4.17" Tc=5.0 min CN=80 Runoff=0.45 cfs 0.031 af
Pond 13P: Stormwater Management Discarded=0.05 cfs	Peak Elev=116.92' Storage=4,529 cf Inflow=3.09 cfs 0.232 af 0.138 af Primary=0.64 cfs 0.093 af Outflow=0.69 cfs 0.232 af
Pond 14P: EXISTING Stormwater Mgmt Discarded=0.05 cfs	Peak Elev=116.49' Storage=3,931 cf Inflow=2.87 cfs 0.216 af 0.131 af Primary=0.86 cfs 0.084 af Outflow=0.91 cfs 0.216 af
Link 6L: FDA to DESIGN LINE 1	Inflow=0.99 cfs 0.153 af Primary=0.99 cfs 0.153 af
Link 11L: FDA to Smith Ridge Rd	Inflow=0.45 cfs 0.031 af Primary=0.45 cfs 0.031 af
Link 15L: DESIGN LINE 1	Inflow=1.26 cfs 0.150 af Primary=1.26 cfs 0.150 af
Link 18L: DESIGN POINT STREET	Inflow=0.45 cfs 0.031 af Primary=0.45 cfs 0.031 af

Total Runoff Area = 2.004 ac Runoff Volume = 0.634 af Average Runoff Depth = 3.80" 52.66% Pervious = 1.055 ac 47.34% Impervious = 0.949 ac

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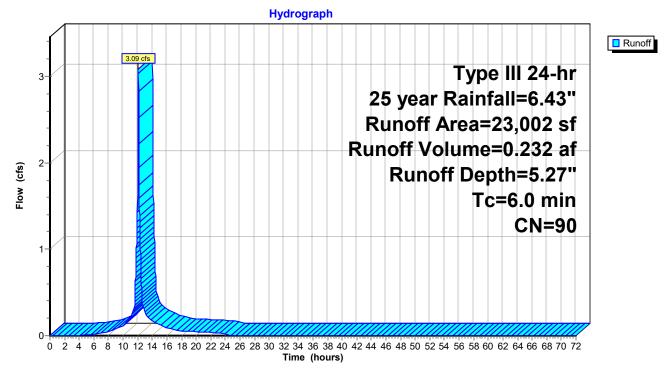
#### Summary for Subcatchment 3S: FDA-1 FUTURE CONDITION

Runoff = 3.09 cfs @ 12.08 hrs, Volume= 0.232 af, Depth= 5.27" Routed to Pond 13P : Stormwater Management Facility-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 25 year Rainfall=6.43"

Α	rea (sf)	CN	Description					
	18,293	98	Roofs, HSG B					
	4,709	61	>75% Gras	s cover, Go	ood, HSG B			
	23,002	90	Weighted A	verage				
	4,709		20.47% Pervious Area					
	18,293		79.53% Imp	pervious Are	rea			
Тс	Length	Slope	,	Capacity	1			
(min)	(feet)	(ft/ft	) (ft/sec)	(cfs)				
6.0					Direct Entry,			
					-			

#### Subcatchment 3S: FDA-1 FUTURE CONDITION



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#### Summary for Subcatchment 4S: FDA-2 FUTURE CONDITION

Runoff = 0.77 cfs @ 12.10 hrs, Volume= Routed to Link 6L : FDA to DESIGN LINE 1 0.060 af, Depth= 1.86"

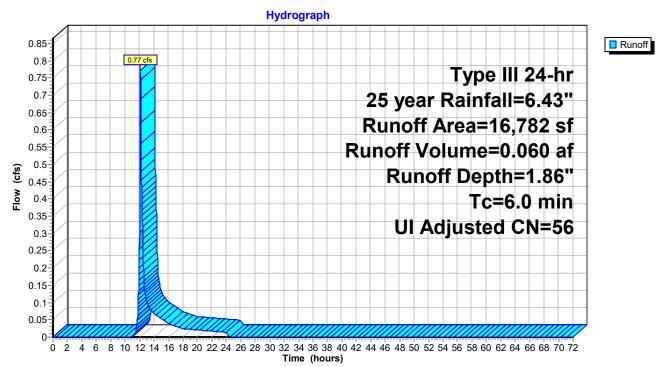
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 25 year Rainfall=6.43"

_	Ar	ea (sf)	CN	Adj D	Description					
		6,709	58	V	Woods/grass comb., Good, HSG B					
		7,764	48	E	Brush, Good, HSG B					
_		2,309	98	ι	Jnconnected ro	oofs, HSG B				
		16,782	59	56 V	Veighted Avera	age, UI Adjusted				
		14,473		86.24% Pervious Área						
		2,309		1	13.76% Impervious Area					
		2,309		100.00% Unconnected						
	Tc	Length	Slope			Description				
_	(min)	(feet)	(ft/ft)	(ft/se	ec) (cfs)					



Direct Entry,

#### Subcatchment 4S: FDA-2 FUTURE CONDITION



Type III 24-hr 25 year Rainfall=6.43"

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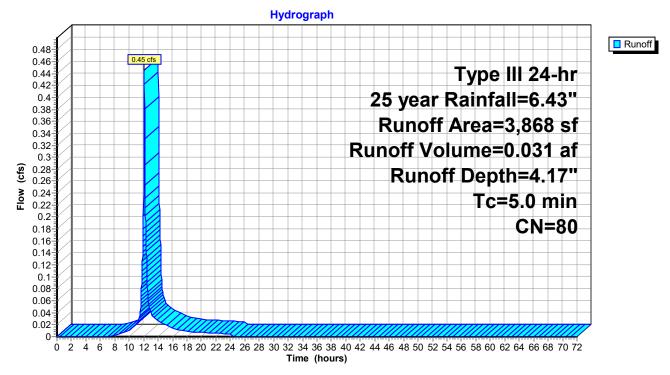
#### Summary for Subcatchment 7S: FDA-3 FUTURE CONDITION to DP-2

Runoff = 0.45 cfs @ 12.07 hrs, Volume= Routed to Link 11L : FDA to Smith Ridge Rd 0.031 af, Depth= 4.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 25 year Rainfall=6.43"

	A	rea (sf)	CN	Description				
		1,855	61	>75% Gras	s cover, Go	ood, HSG B		
*		2,013	98	Pavement				
		3,868	80	Weighted A	verage			
		1,855		47.96% Pervious Area				
		2,013		52.04% Imp	pervious Are	rea		
	Tc (min)	Length (feet)	Slope (ft/ft	,	Capacity (cfs)	Description		
	5.0		•			Direct Entry,		
	(min)	2,013 Length	Slope	52.04% Imp Velocity	pervious Aro Capacity	rea Description		

#### Subcatchment 7S: FDA-3 FUTURE CONDITION to DP-2



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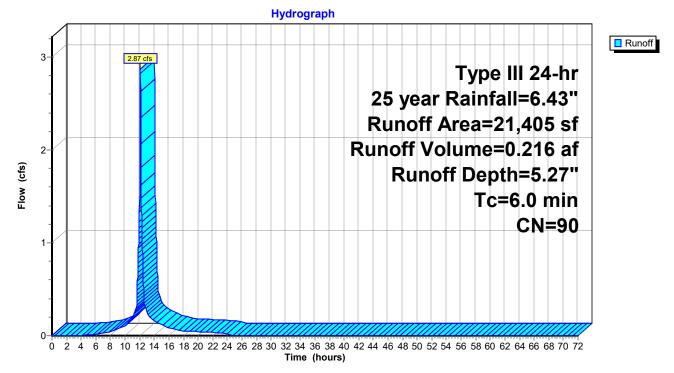
#### Summary for Subcatchment 13S: XDA-1 EXISTING CONDITION

Runoff = 2.87 cfs @ 12.08 hrs, Volume= 0.216 af, Depth= 5.27" Routed to Pond 14P : EXISTING Stormwater Mgmt Facility

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 25 year Rainfall=6.43"

A	rea (sf)	CN	Description						
	16,705	98	3 Roofs, HSG B						
	4,700	61	>75% Gras	s cover, Go	bod, HSG B				
	21,405		Weighted A						
	4,700	4,700 21.96% Pervious Area							
	16,705		78.04% Imp	pervious Are	ea				
Tc (min)	Length (feet)	Slope (ft/ft)	,	Capacity (cfs)	Description				
6.0					Direct Entry,				

## Subcatchment 13S: XDA-1 EXISTING CONDITION



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#### Summary for Subcatchment 16S: XDA-2 EXISTING CONDITION

Runoff = 0.85 cfs @ 12.10 hrs, Volume= Routed to Link 15L : DESIGN LINE 1 0.065 af, Depth= 1.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 25 year Rainfall=6.43"

		rush, Fair		
18,	,379 1	00.00% P	ervious Are	ea
Tc Le	ength Slope	Velocity	Capacity	Description
min)	(feet) (ft/ft)	(ft/sec)	(cfs)	
6.0				Direct Entry,
	Su	bcatchm	nent 16S:	XDA-2 EXISTING CONDITION
			Hydro	ograph
0.9	0.85 cfs			
0.85 0.8				Type III 24-hr
0.75				25 year Rainfall=6.43"
0.7				
0.65				Runoff Area=18,379 sf
0.6				Runoff Volume=0.065 af
0.55 0.5				Runoff Depth=1.86"
(ci) 0.55 0.5 0.45				
0.4				Tc=6.0 min
0.35				CN=56
0.3				
0.25 0.2				
0.15				
0.1				
0.05		Imm		

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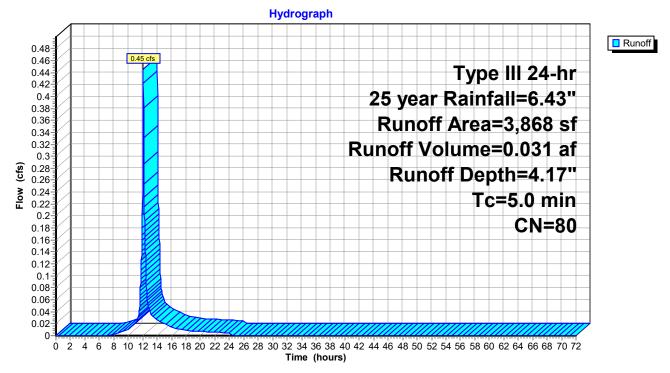
#### Summary for Subcatchment 17S: XDA-3 EXISTING CONDITION

Runoff = 0.45 cfs @ 12.07 hrs, Volume= Routed to Link 18L : DESIGN POINT STREET 0.031 af, Depth= 4.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Type III 24-hr 25 year Rainfall=6.43"

_	Α	rea (sf)	CN	Description				
		1,855	61	>75% Gras	s cover, Go	ood, HSG B		
*		2,013	98	Pavement				
		3,868	80	Weighted A	verage			
		1,855		47.96% Pervious Area				
		2,013		52.04% Imp	pervious Are	rea		
	Tc (min)	Length (feet)	Slope (ft/ft	,	Capacity (cfs)	Description		
	5.0					Direct Entry,		

## Subcatchment 17S: XDA-3 EXISTING CONDITION



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#### Summary for Pond 13P: Stormwater Management Facility-2

Inflow Area =	0.528 ac, 7	9.53% Impervious, Inflov	w Depth = 5.27" for 25 year event				
Inflow =	3.09 cfs @	12.08 hrs, Volume=	0.232 af				
Outflow =	0.69 cfs @	12.49 hrs, Volume=	0.232 af, Atten= 78%, Lag= 24.1 min				
Discarded =	0.05 cfs @	8.36 hrs, Volume=	0.138 af				
Primary =	0.64 cfs @	12.49 hrs, Volume=	0.093 af				
Routed to Link 6L : FDA to DESIGN LINE 1							

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Peak Elev= 116.92' @ 12.49 hrs Surf.Area= 2,181 sf Storage= 4,529 cf

Plug-Flow detention time= 375.9 min calculated for 0.232 af (100% of inflow) Center-of-Mass det. time= 376.1 min (1,158.6 - 782.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	113.79'	1,440 cf	20.83'W x 80.50'L x 3.54'H Field A Existing
			5,940 cf Overall - 2,340 cf Embedded = 3,600 cf x 40.0% Voids
#2A	114.29'	2,340 cf	Cultec R-330XLHD x 44 Inside #1
			Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf
			Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
			Row Length Adjustment= +1.50' x 7.45 sf x 4 rows
#3B	113.79'	450 cf	16.00'W x 31.50'L x 3.54'H Field B Proposed
			1,785 cf Overall - 659 cf Embedded = 1,126 cf x 40.0% Voids
#4B	114.29'	659 cf	Cultec R-330XLHD x 12 Inside #3
			Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf
			Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
			Row Length Adjustment= +1.50' x 7.45 sf x 3 rows
		4,889 cf	Total Available Storage

4,889 cf Total Available Storage

Storage Group A created with Chamber Wizard Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	114.00'	15.0" Round Culvert
	-		L= 108.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 114.00' / 108.00' S= 0.0556 '/' Cc= 0.900
			n= 0.012, Flow Area= 1.23 sf
#2	Device 1	115.75'	<b>5.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads
#3	Device 1	117.25'	3.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#4	Discarded	113.79'	1.000 in/hr Exfiltration over Horizontal area

**Discarded OutFlow** Max=0.05 cfs @ 8.36 hrs HW=113.83' (Free Discharge) **4=Exfiltration** (Exfiltration Controls 0.05 cfs)

**Primary OutFlow** Max=0.64 cfs @ 12.49 hrs HW=116.92' (Free Discharge)

-1=Culvert (Passes 0.64 cfs of 7.06 cfs potential flow)

**2=Orifice/Grate** (Orifice Controls 0.64 cfs @ 4.72 fps)

-3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

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### Pond 13P: Stormwater Management Facility-2 - Chamber Wizard Field A Existing

#### Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)

Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 4 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

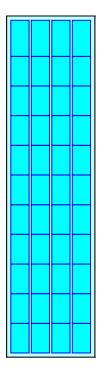
11 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 78.50' Row Length +12.0" End Stone x 2 = 80.50' Base Length 4 Rows x 52.0" Wide + 6.0" Spacing x 3 + 12.0" Side Stone x 2 = 20.83' Base Width 6.0" Stone Base + 30.5" Chamber Height + 6.0" Stone Cover = 3.54' Field Height

44 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 4 Rows = 2,339.6 cf Chamber Storage

5,939.7 cf Field - 2,339.6 cf Chambers = 3,600.1 cf Stone x 40.0% Voids = 1,440.0 cf Stone Storage

Chamber Storage + Stone Storage = 3,779.6 cf = 0.087 afOverall Storage Efficiency = 63.6%Overall System Size =  $80.50' \times 20.83' \times 3.54'$ 

44 Chambers 220.0 cy Field 133.3 cy Stone





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#### -

#### Pond 13P: Stormwater Management Facility-2 - Chamber Wizard Field B Proposed

#### Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)

Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 3 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

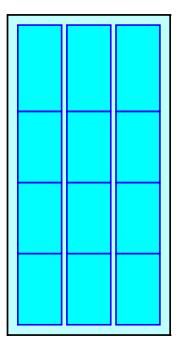
4 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 29.50' Row Length +12.0" End Stone x 2 = 31.50' Base Length 3 Rows x 52.0" Wide + 6.0" Spacing x 2 + 12.0" Side Stone x 2 = 16.00' Base Width 6.0" Stone Base + 30.5" Chamber Height + 6.0" Stone Cover = 3.54' Field Height

12 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 3 Rows = 659.4 cf Chamber Storage

1,785.0 cf Field - 659.4 cf Chambers = 1,125.6 cf Stone x 40.0% Voids = 450.2 cf Stone Storage

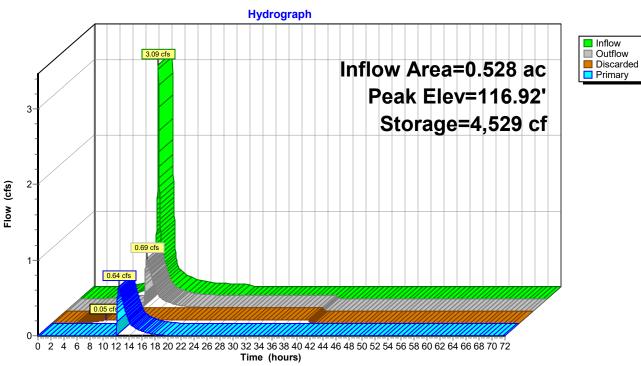
Chamber Storage + Stone Storage = 1,109.6 cf = 0.025 af Overall Storage Efficiency = 62.2%Overall System Size =  $31.50' \times 16.00' \times 3.54'$ 

12 Chambers 66.1 cy Field 41.7 cy Stone



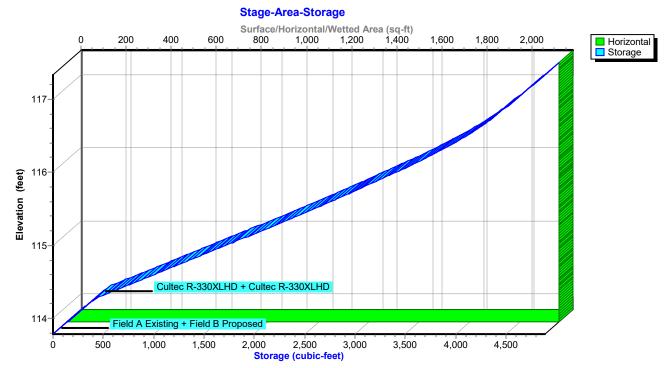


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#### Pond 13P: Stormwater Management Facility-2





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#### Summary for Pond 14P: EXISTING Stormwater Mgmt Facility

Inflow Area =	0.491 ac, 7	8.04% Impervious,	Inflow Depth = 5.27" for 25 year event
Inflow =	2.87 cfs @	12.08 hrs, Volume	= 0.216 af
Outflow =	0.91 cfs @	12.39 hrs, Volume	= 0.216 af, Atten= 68%, Lag= 18.3 min
Discarded =	0.05 cfs @	8.40 hrs, Volume	= 0.131 af
Primary =	0.86 cfs @	12.39 hrs, Volume	= 0.084 af
Routed to Link	15L : DESIG	N LINE 1	

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs Peak Elev= 116.49' @ 12.39 hrs Surf.Area= 2,066 sf Storage= 3,931 cf

Plug-Flow detention time= 380.7 min calculated for 0.216 af (100% of inflow) Center-of-Mass det. time= 380.9 min (1,163.4 - 782.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	113.79'	1,757 cf	25.67'W x 80.50'L x 3.54'H Field A
			7,318 cf Overall - 2,925 cf Embedded = 4,393 cf x 40.0% Voids
#2A	114.29'	2,925 cf	Cultec R-330XLHD x 55 Inside #1
			Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf
			Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
			Row Length Adjustment= +1.50' x 7.45 sf x 5 rows
		4,682 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	114.00'	12.0" Round Culvert
	•		L= 30.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 114.00' / 108.00' S= 0.2000 '/' Cc= 0.900
			n= 0.012, Flow Area= 0.79 sf
#2	Device 1	115.75'	7.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	117.20'	
#4	Discarded	113.79'	1.000 in/hr Exfiltration over Surface area

**Discarded OutFlow** Max=0.05 cfs @ 8.40 hrs HW=113.83' (Free Discharge) **4=Exfiltration** (Exfiltration Controls 0.05 cfs)

**Primary OutFlow** Max=0.86 cfs @ 12.39 hrs HW=116.49' (Free Discharge)

**2=Orifice/Grate** (Orifice Controls 0.86 cfs @ 3.22 fps)

-3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

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#### Pond 14P: EXISTING Stormwater Mgmt Facility - Chamber Wizard Field A

#### Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)

Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 5 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

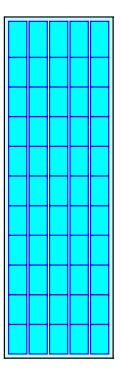
11 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 78.50' Row Length +12.0" End Stone x 2 = 80.50' Base Length 5 Rows x 52.0" Wide + 6.0" Spacing x 4 + 12.0" Side Stone x 2 = 25.67' Base Width 6.0" Stone Base + 30.5" Chamber Height + 6.0" Stone Cover = 3.54' Field Height

55 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 5 Rows = 2,924.5 cf Chamber Storage

7,317.7 cf Field - 2,924.5 cf Chambers = 4,393.2 cf Stone x 40.0% Voids = 1,757.3 cf Stone Storage

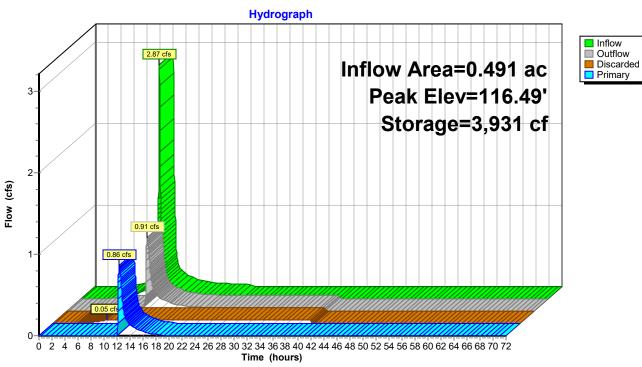
Chamber Storage + Stone Storage = 4,681.8 cf = 0.107 afOverall Storage Efficiency = 64.0%Overall System Size =  $80.50' \times 25.67' \times 3.54'$ 

55 Chambers 271.0 cy Field 162.7 cy Stone



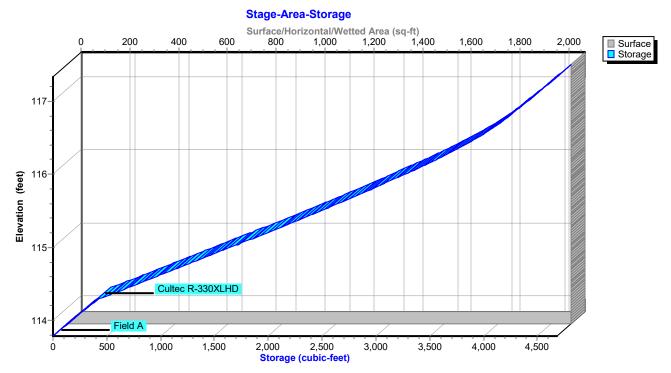


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#### Pond 14P: EXISTING Stormwater Mgmt Facility

#### Pond 14P: EXISTING Stormwater Mgmt Facility

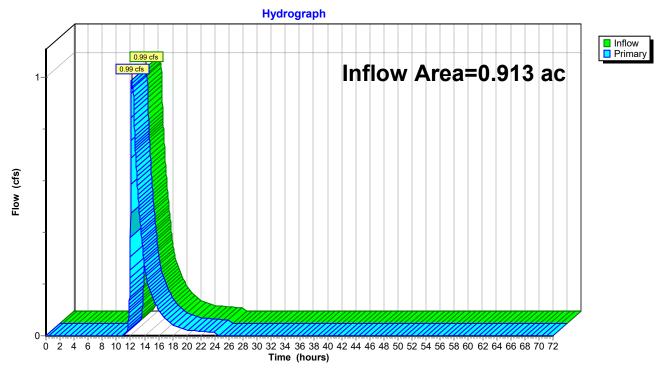


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#### Summary for Link 6L: FDA to DESIGN LINE 1

Inflow Area =	0.913 ac, 51.78% Impervious, Inflo	w Depth = 2.01"	for 25 year event
Inflow =	0.99 cfs @ 12.15 hrs, Volume=	0.153 af	
Primary =	0.99 cfs @ 12.15 hrs, Volume=	0.153 af, Atte	en= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs



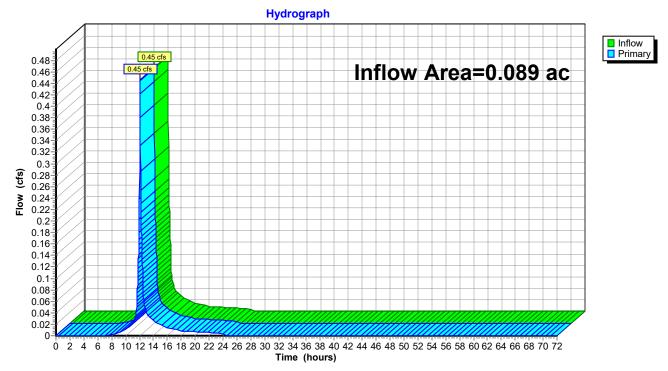
#### Link 6L: FDA to DESIGN LINE 1

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#### Summary for Link 11L: FDA to Smith Ridge Rd

Inflow Area =	0.089 ac,	52.04% Impervious,	Inflow Depth = 4.	17" for 25 year event
Inflow =	0.45 cfs @	12.07 hrs, Volume	e= 0.031 af	
Primary =	0.45 cfs @	12.07 hrs, Volume	e= 0.031 af,	Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs



#### Link 11L: FDA to Smith Ridge Rd

#### Self-Storage SW Plan\_12-06-2021

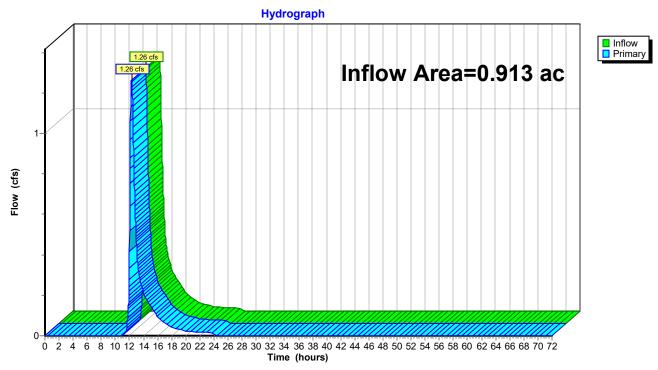
Prepared by ALP Engineering & Land. Arch. PLLC HydroCAD® 10.10-7a s/n 03392 © 2021 HydroCAD Software Solutions LLC

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#### Summary for Link 15L: DESIGN LINE 1

Inflow Area =	0.913 ac, 41.99% Impervious, Inflow E	Depth = 1.96" for 25 year event
Inflow =	1.26 cfs @ 12.30 hrs, Volume=	0.150 af
Primary =	1.26 cfs @ 12.30 hrs, Volume=	0.150 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs



#### Link 15L: DESIGN LINE 1

Type III 24-hr 25 year Rainfall=6.43"

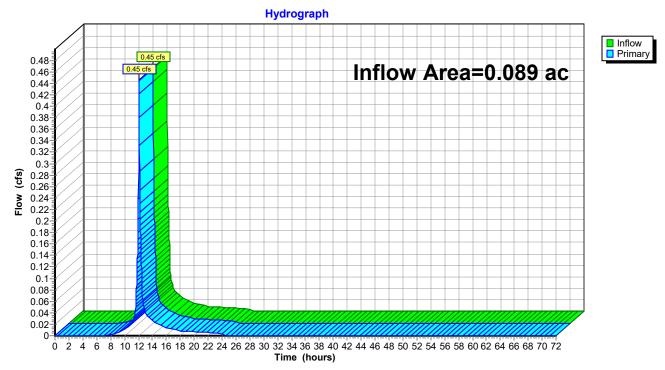
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#### Summary for Link 18L: DESIGN POINT STREET

Inflow Area =	0.089 ac,	52.04% Impervious	Inflow Depth = 4	1.17" for 25 year event
Inflow =	0.45 cfs @	12.07 hrs, Volum	e= 0.031 a	f
Primary =	0.45 cfs @	12.07 hrs, Volum	e= 0.031 a	f, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs



#### Link 18L: DESIGN POINT STREET



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:	January 6, 2022
RE:	Palminteri Residence 4 Bluestone Lane, South Salem Sheet 40, Block 10552, Lot 42

#### **PROJECT DESCRIPTION**

The subject property consists of ±3.174 acres of land and is located at 4 Bluestone within the R-4A Zoning District. The subject property is vacant and was approved as Lot 5 of a cluster subdivision known as JVG Estates (formerly known as the Popoli Subdivision). The applicant is proposing to construct a single-family residence, inground pool, driveway, septic system, private well and other ancillary improvements. While the dwelling is proposed in approximately the same location as shown on the previously approved construction drawings, portions of the home are proposed to be located outside of the approved Contiguous Buildable Area and the proposed limits of land disturbance differ slightly from the previously approved plan. Given the incursion outside of the contiguous buildable area and proposed modifications to the previously approved plan, the applicant has applied to the Planning Board to amend the construction plan of record.

#### **SEQRA**

The proposed action has been preliminarily identified as a Type II Action and is therefore categorically exempt from the State Environmental Quality Review Act (SEQRA).

CIVIL ENGINEERING | LANDSCAPE ARCHITECTURE | SITE & ENVIRONMENTAL PLANNING

Chairperson Janet Andersen January 6, 2022 Page 2 of 2

#### REQUIRED APPROVALS

- 1. Modifications to the previously approved plan, including construction of portions of the residence outside of the Contiguous Buildable Area, requires Planning Board Approval.
- 2. The applicant has obtained a variance from the Zoning Board of Appeals under Section 220-10E, which prohibits the construction of a residence within the Contiguous Buildable Area.
- 3. The proposed potable water well and sanitary sewage treatment system require approval from the Westchester County Department of Health (WCDH).

#### COMMENTS

- Given the fact that the Zoning Board of Appeals has granted a variance allowing construction outside of the Contiguous Buildable Area, this office has no objection to the revised layout from an engineering and planning perspective. Ultimately, the applicant will be required to provide an engineered site plan illustrating proposed grading, drainage, utilities, erosion controls, construction details, etc. It is likely that the previously approved drainage plan for this lot will need to be modified to manage changes in lot development and design.
- 2. The applicant shall provide a copy of the Westchester County Department of Health (WCDH) Approval, including signed plans and permits, related to the proposed wastewater treatment system and potable water well.

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 DIMOVSKI ARCHITECTURE, PLLC, DATED OCTOBER 12, 2021:

- Zoning Analysis, Site Plan (SP-1)
- Floor Plans, Elevations (Z-1, Z-2)

#### **DOCUMENTS REVIEWED:**

- Letter, prepared by Dimovski Architecture, PLLC, dated December 6, 2021
- Waiver of Site Development Plan Procedures Application
- Average Grade Calculation
- Previously Approved Plan

JKJ/dc https://kellardsessionsconsulti.sharepoint.com/sites/Kellard/Municipal/Lewisboro/Correspondence/2022-01-06\_LWPB\_Palminteri Residence - 4 Bluestone Lane\_Review Memo.docx

#### TOWN OF LEWISBORO PLANNING BOARD

79 Bouton Road, South Salem, NY 10590 Tel: (914) 763-5592 Email: planning@lewisborogov.com

#### <u>Site Development Plan/Subdivision Plat Application – Check all that apply:</u>

Waiver of Site Development Plan Procedures✓Site Development Plan ApprovalStep ISpecial Use Permit ApprovalStep ISubdivision Plat ApprovalStep I	Step II Step II Step II
Project Information	
Project Name: Palminteri New Single Family Residence	
Project Address: 4 Bluestone Lane, South Salem, NY 10590	
Gross Parcel Area: 3.174 acres Zoning District: 4A Sheet(s	
Project Description: Submission to modify approved constru	ction plans for a New Single Family Residence
to build. Note: This variance was approved by the ZBA o	n 11/17/21.
Is the site located within 500 feet of any Town boundary? Is the site located within the New York City Watershed? Is the site located on a State or County Highway? Does the proposed action require any other permits/approvals fro	
Town Board ☐ ZBA ✓ ACARC ☐ NYSDEC ☐ NYSDOT ☐ Town Wetland ☐ Other <u>*ZBA</u> approved 11/17/21	Building Dept. NYCDEP WCDH
Owner's Information	
Name: Gianna Palminteri	Email: mgrp101@hotmail.com
Address: 34 Stone Paddock Place, Bedford, NY 10506	Phone: 914-747-3500
Applicant's Information (if different)           Name:         Dimovski Architecture PLLC / Paulette Dimovski	Email:paulette@dimovskiarchitecture.com
Address: 59 Kensico Road, Thornwood, NY 10594	Phone: 914-747-3500
Authorized Agent's Information	
Name: Dimovski Architecture PLLC / Paulette Dimovski	Email:paulette@dimovskiarchitecture.com
Address: 59 Kensico Road, Thornwood, NY 10594	Phone: 914-747-3500
THE APPLICANT understands that any application is considered complete only v received by the Planning Board. The applicant further understands that the applincurred by the Planning Board. THE UNDERSIGNED WARRANTS the truth of all statements contained herein and and belief, and authorizes visitation and inspection of the subject property by the APPLICANT'S SIGNATURE	licant is responsible for the payment of all application and review fees d in all supporting documents according to the best of his/her knowledge
owner's signature. IM Arama Fal	UN DATE 12 5 21

#### **TOWN OF LEWISBORO PLANNING BOARD**

79 Bouton Road, South Salem, NY 10590 Email: <u>planning@lewisborogov.com</u> Tel: (914) 763-5592 Fax: (914) 875-9148

### Affidavit of Ownership

State of :	New York		
County of:	Westchester		
Gianna Palmi	nteri	, being duly s	worn, deposes and says that he/she
resides at $\_4$ ]	Bluestone Lane		
in the County	of		, State of
		he owner, or the	
of			Title
Ν	lame of corporation, par	tnership, or other legal entity	1
which is the c	owner, in fee of all that c	ertain log, piece or parcel of	land situated, lying and being in the
Town of Lewi	sboro, New York, afores	aid and know and designate	d on the Tax Map in the Town of
Lewisboro as	:		
Block	42, Lot	10552, on S	heet
		M. Fian	va Palmenters
	×	Owner's Signature	
Sworn to bef			
<u> </u>	of <u>December</u>	, 2 <u>021</u>	MEGHAN KIMBERLY MELLINA NOTARY PUBLIC-STATE OF NEW YORK No. 01ME6412645 Qualified in Rockland County My Commission Expires 01-04-2025

Notary Public – affix stamp

#### Short Environmental Assessment Form Part 1 - Project Information

#### **Instructions for Completing**

**Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1.** Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

lead agency; attach additional pages as necessary to supplement any item.				
Part 1 – Project and Sponsor Information				
Palminteri New Single Family Residence				
Name of Action or Project:				
New Single Family Residence				
Project Location (describe, and attach a location map):				
4 Bluestone Lane, South Salem, NY 10590				
Brief Description of Proposed Action:				
New Single Family Residence proposed with a total of 650 SF located outside the contiguous on 11/17/21.	buildable area. This variance	was ap	proved by	the ZBA
Name of Applicant or Sponsor:	Telephone: 914-747-3500	0		
Dimovski Architecture PLLC / Paulette Dimovski	E-Mail: paulette@dimovs	skiarchite	ecture.com	
Address:				
59 Kensico Road	v			
City/PO:	State:	Zip C	lode:	
Thornwood	NY	10594		
1. Does the proposed action only involve the legislative adoption of a plan, loca administrative rule, or regulation?	l law, ordinance,		NO	YES
If Yes, attach a narrative description of the intent of the proposed action and the e may be affected in the municipality and proceed to Part 2. If no, continue to quest	environmental resources the	at	$\checkmark$	
2. Does the proposed action require a permit, approval or funding from any other If Yes, list agency(s) name and permit or approval:	er government Agency?		NO	YES
3. a. Total acreage of the site of the proposed action?	3.174 acres .12 acres 3.174 acres			
4. Check all land uses that occur on, are adjoining or near the proposed action:				

□ Urban
 □ Rural (non-agriculture)
 □ Industrial
 □ Commercial
 ☑ Residential (suburban)
 □ Aquatic
 □ Other(Specify):
 □ Parkland

5. Is the proposed action,	NO	YES	N/A
a. A permitted use under the zoning regulations?		$\checkmark$	
b. Consistent with the adopted comprehensive plan?		$\checkmark$	
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape	.?	NO	YES
	r:		$\checkmark$
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?		NO	YES
If Yes, identify:		$\checkmark$	
		NO	YES
8. a. Will the proposed action result in a substantial increase in traffic above present levels?			
b. Are public transportation services available at or near the site of the proposed action?			
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?			
9. Does the proposed action meet or exceed the state energy code requirements?		NO	YES
If the proposed action will exceed requirements, describe design features and technologies:			
			$\overline{\mathbf{V}}$
10. Will the proposed action connect to an existing public/private water supply?		NO	YES
If No, describe method for providing potable water:			
			$\checkmark$
11. Will the proposed action connect to existing wastewater utilities?		NO	YES
If No, describe method for providing wastewater treatment:			
			V
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or distr	ict	NO	YES
which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the	e	$\checkmark$	
State Register of Historic Places?			
		$\checkmark$	$\square$
b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?			
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?		NO	YES
		$\checkmark$	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?		$\checkmark$	
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres:			
	<u></u>		

14 Identified a minimum definition of the second seco				
14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:				
Shoreline Forest Agricultural/grasslands Early mid-successional				
Wetland Urban 🖌 Suburban				
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or	NO	YES		
Federal government as threatened or endangered?	$\checkmark$			
16. Is the project site located in the 100-year flood plan?	NO	YES		
	$\checkmark$			
17. Will the proposed action create storm water discharge, either from point or non-point sources?	NO	YES		
If Yes,		$\checkmark$		
a. Will storm water discharges flow to adjacent properties?	$\checkmark$			
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?		$\checkmark$		
If Yes, briefly describe:				
Storm water will be managed via dry wells on the property				
18. Does the proposed action include construction or other activities that would result in the impoundment of water	NO	YES		
or other liquids (e.g., retention pond, waste lagoon, dam)? If Yes, explain the purpose and size of the impoundment:				
A pool is included in the proposed project.	$\overline{\mathbf{A}}$			
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste	NO	YES		
management facility?				
If Yes, describe:	$\overline{\mathbf{A}}$			
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or	NO	YES		
completed) for hazardous waste? If Yes, describe:				
	$\overline{\mathbf{V}}$			
		است		
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BE	ST OF			
MY KNOWLEDGE				
Applicant/sponsor/name: Dimovski Architecture PLLC / Paulette Dimovski Date: 12/01/21				
Signature:				

## ď+

## dimovskiarchitecture

December 6, 2021

Chair Janet Andersen Board Members Town of Lewisboro Planning Board 79 Bouton Road South Salem, NY 10590

## Re: New Single Family Residence – 4 Bluestone Lane, South Salem SBL: 40/10552/42

Applicant: Dimovski Architecture PLLC Owner: Gianna Palminteri

Dear Sir/Madam,

We are transmitting four copies of the following items for your consideration for Site Development Plan Approval:

- Cover Letter
- Planning Board Applications
- Short Environmental Assessment Form
- Average Grade Calculations
- Final Cluster Subdivision Plat (Approved under prior application No. 29079, 08/18/2017)

Architectural Drawings:

- Drawing SP-1 Site Plan/Zoning Data
- Drawing Z-1
   Floor Plans
- Drawing Z-2
   Elevation Plans

Dimovski Architecture submits this application on behalf of property owner Gianna Palminteri. The property is located at 4 Bluestone Lane, South Salem which is Lot 5 of the previously approved Cluster Development, No. 29079. We are proposing a 2-story and basement single family residence.

The style and size of the home will be in character with the residential neighborhood, taking on a more European style. The house will be set back from the front property line for security and privacy purposes. The location and style are illustrated on the attached drawings.

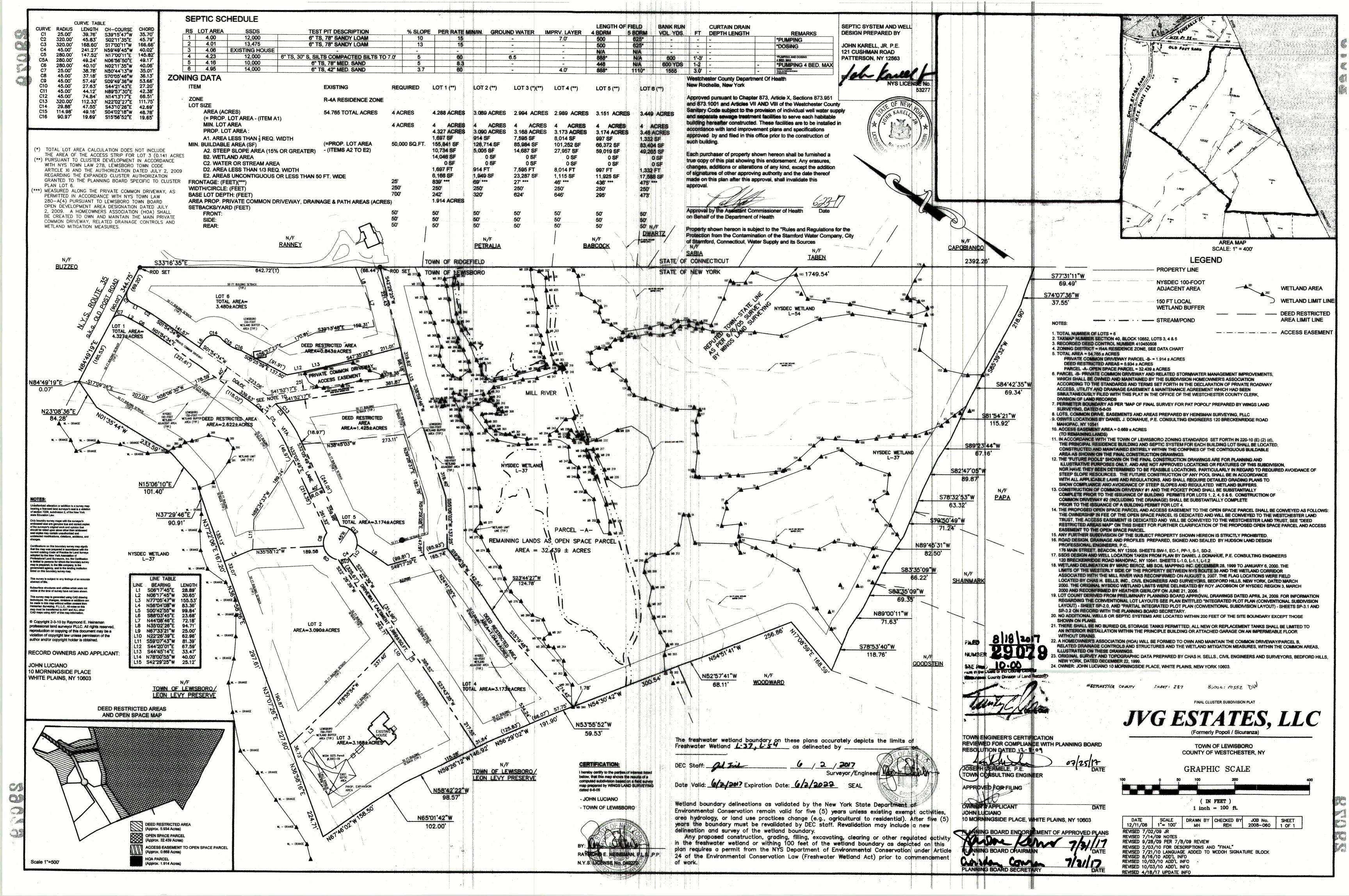
Due to the configuration of the lot, and the limitations of the Contiguous Buildable Area, we were granted a variance to encroach on the area by 650 square feet. We respectfully request approval to develop the site and plans accordingly.

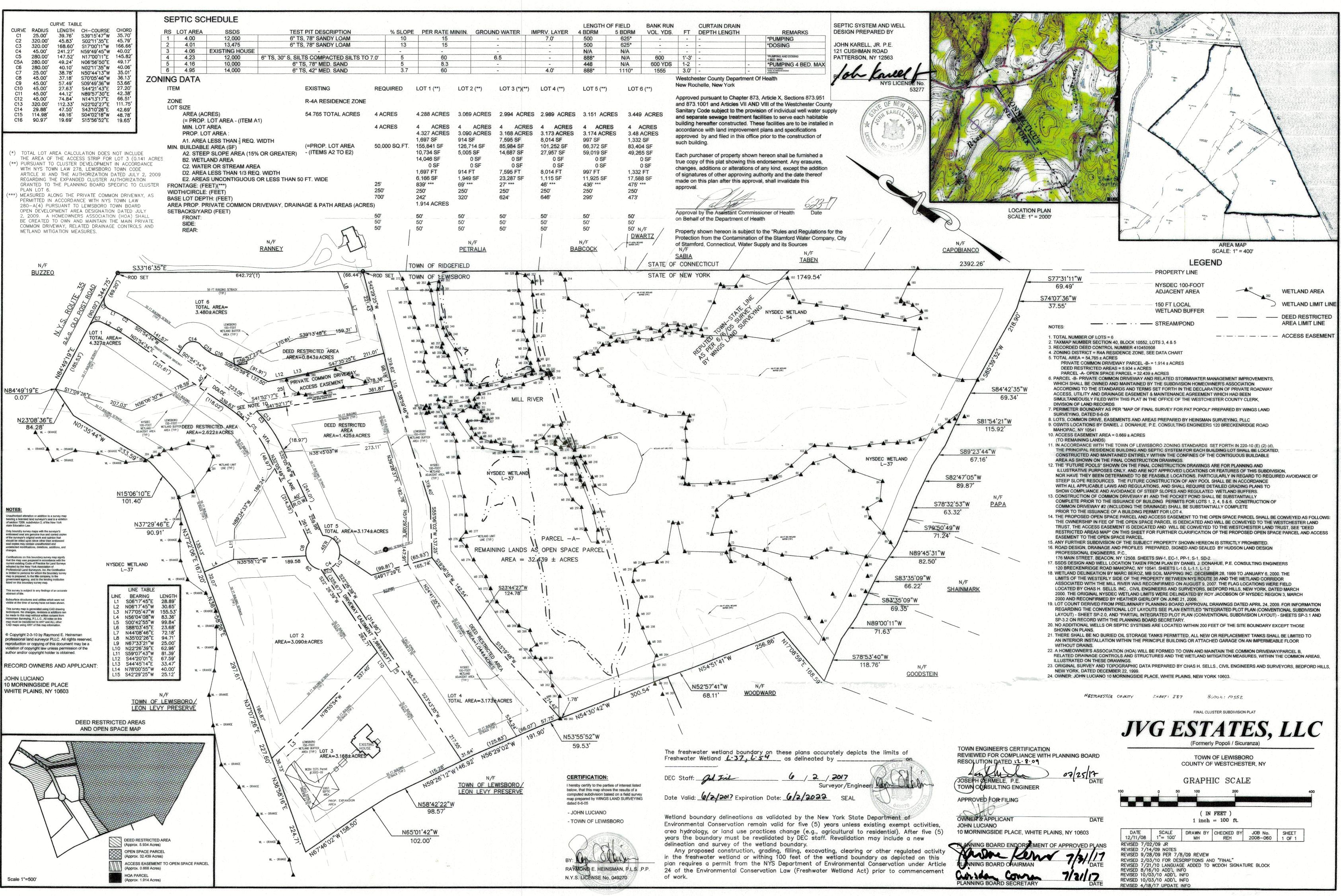
We look forward to presenting our proposal to the Board. If you have any questions or concerns, please do not hesitate to contact me at (914) 747-3500.

Very truly yours, DIMOVSKI ARCHITECTURE PLLC Paulette Dimovski Paulette Dimovski, AIA

#### cc: Kellard Sessions Consulting

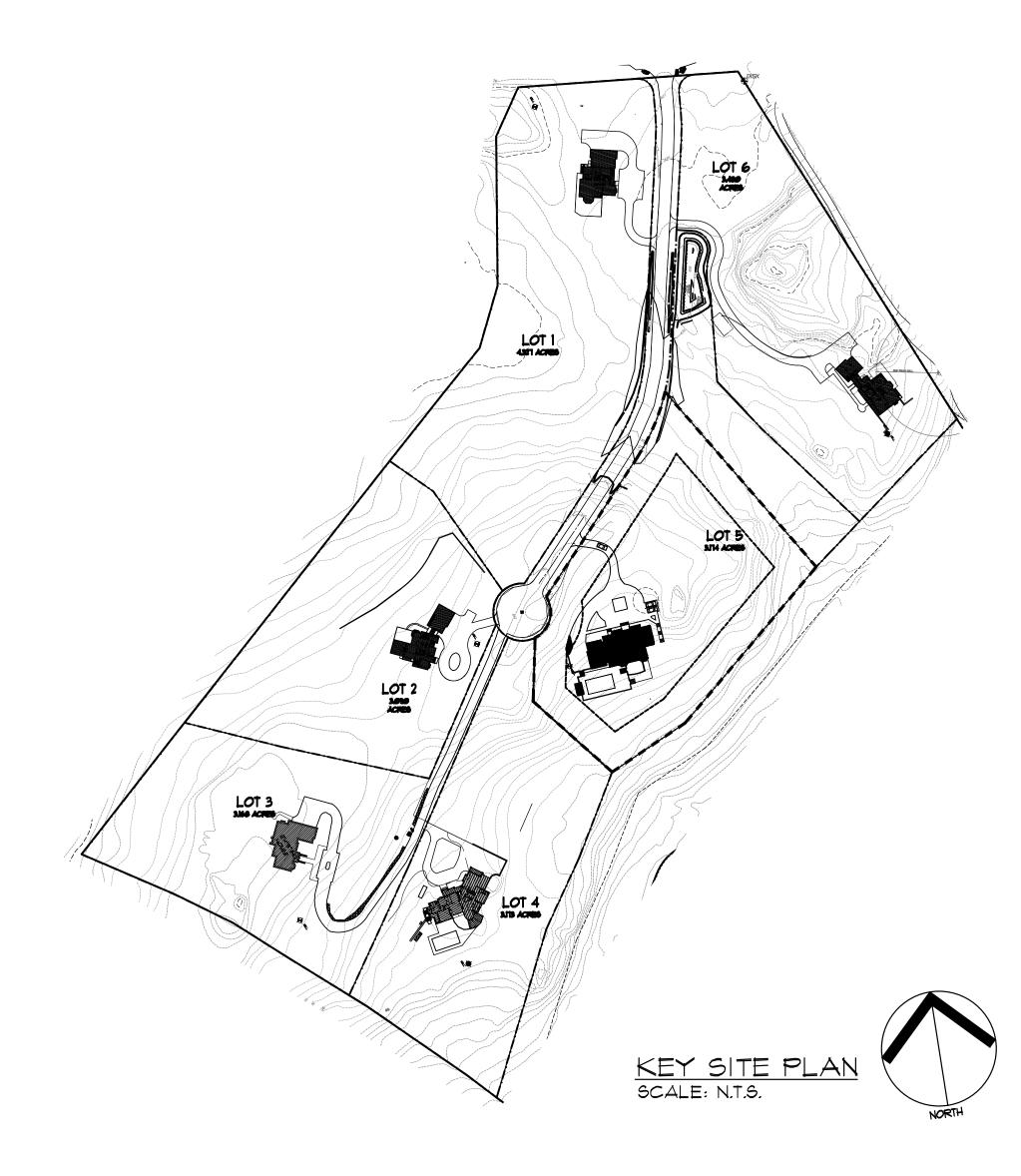
59 Kensico Road, Thornwood, NY 10594 | tel. 914.747.3500 | www.dimovskiarchitecture.com

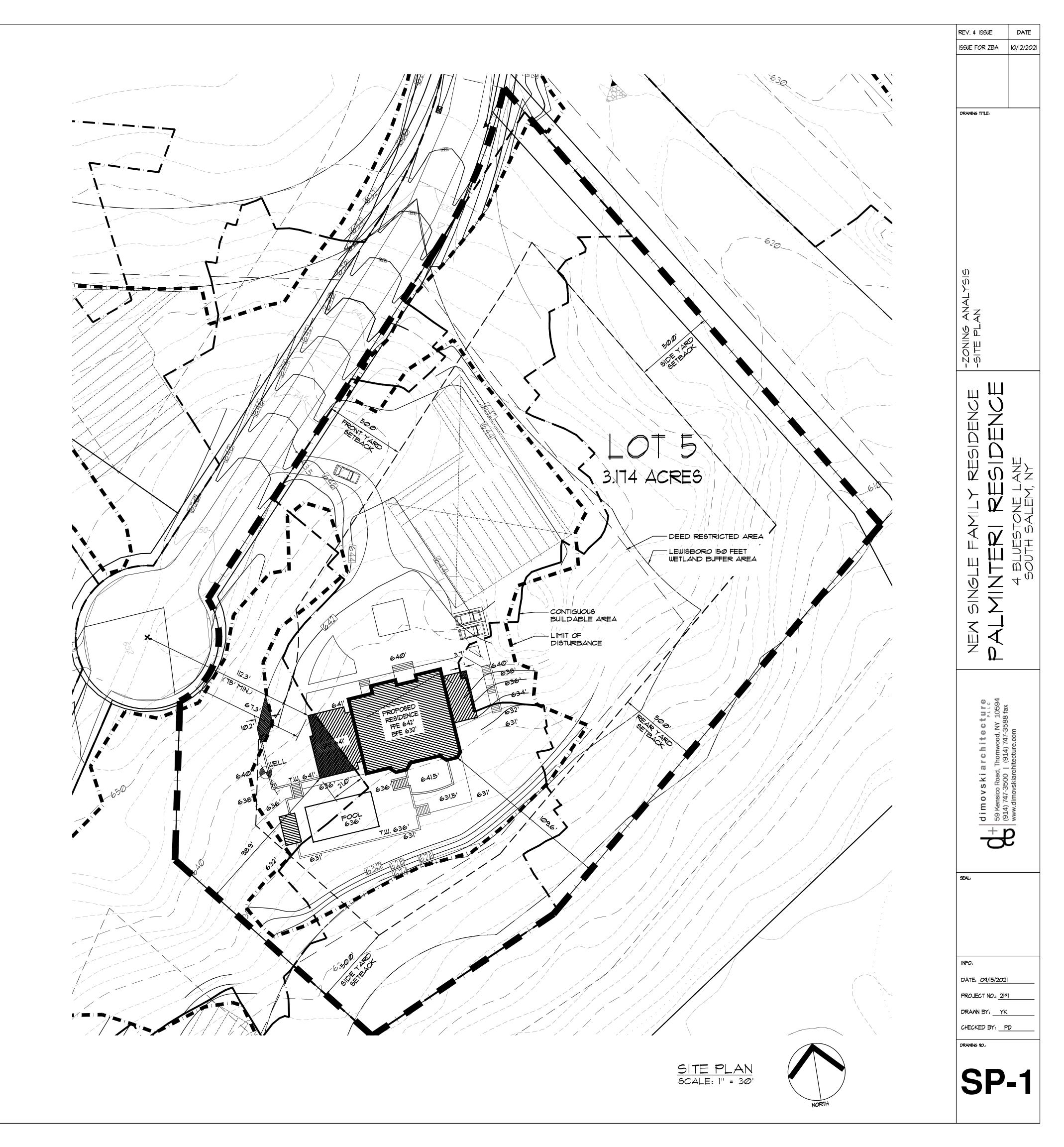




# NEW SINGLE FAMILY RESIDENCE PALMINTERI RESIDENCE

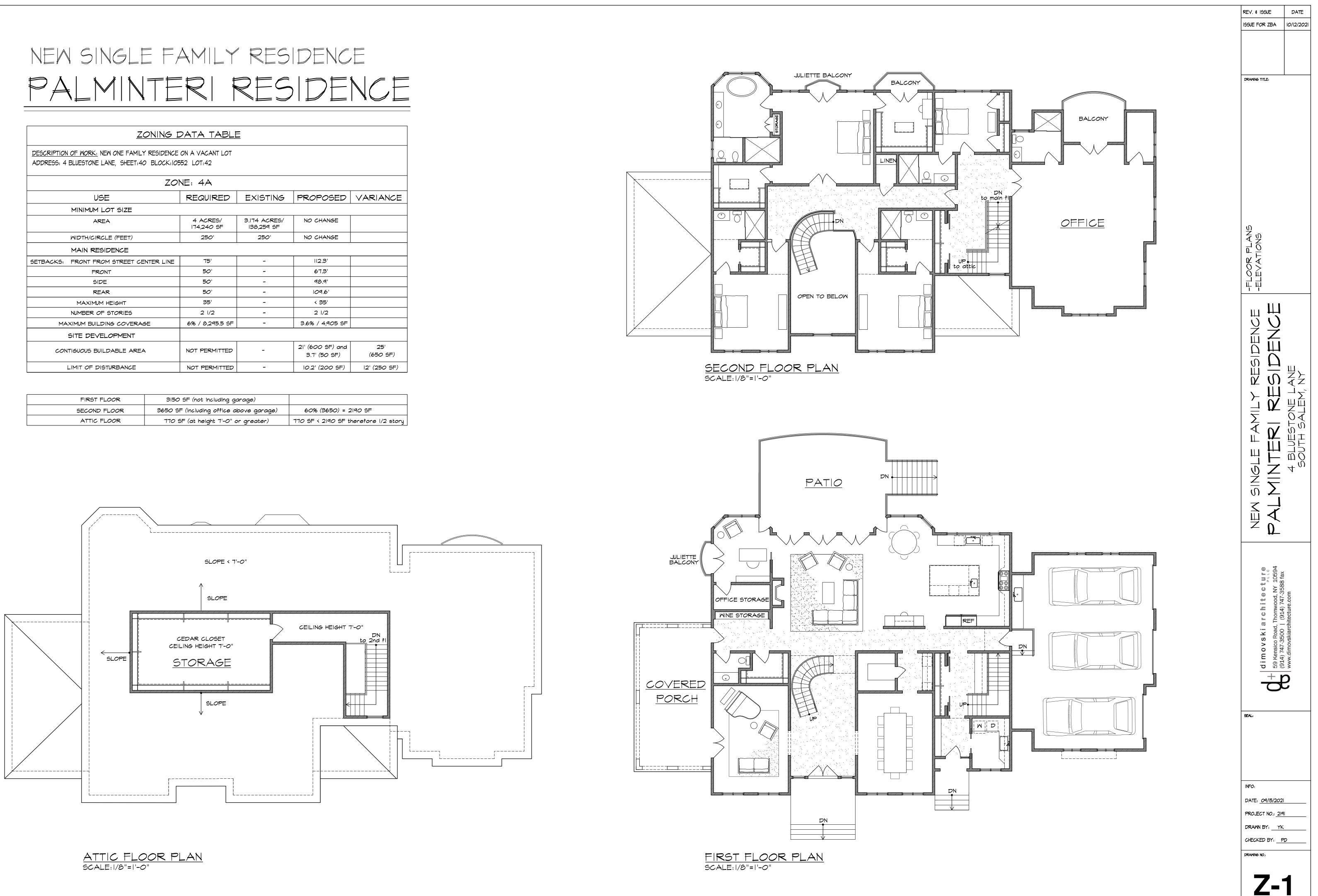
#### ZONING DATA TABLE DESCRIPTION OF WORK: NEW ONE FAMILY RESIDENCE ON A VACANT LOT ADDRESS: 4 BLUESTONE LANE, SHEET: 40 BLOCK: 10552 LOT: 42 ZONE: 4A REQUIRED EXISTING PROPOSED VARIANCE USE MINIMUM LOT SIZE 3.174 ACRES/ 138,259 SF 4 ACRES/ 174,240 SF NO CHANGE AREA 250' NO CHANGE WIDTH/CIRCLE (FEET) 250' MAIN RESIDENCE SETBACKS: FRONT FROM STREET CENTER LINE 75' 112.3' -50' 67.3' FRONT -SIDE 50' 98.9' -REAR 50' -109.6' 35' < 35' MAXIMUM HEIGHT -NUMBER OF STORIES 2 1/2 2 1/2 -6% / 8,295.5 SF 3.6% / 4,905 SF MAXIMUM BUILDING COVERAGE -SITE DEVELOPMENT 21' (600 SF) and 25' CONTIGUOUS BUILDABLE AREA NOT PERMITTED (650 SF) 3.7'(50 SF) LIMIT OF DISTURBANCE NOT PERMITTED 10.2' (200 SF) 12' (250 SF) -





	ZO	NE: 4A			
	USE	REQUIRED	EXISTING	PROPOSED	
	MINIMUM LOT SIZE				
AREA		4 ACRES/ 174,240 SF	3.174 ACRES/ 138,259 SF	NO CHANGE	
WIDTH/CIRCLE (FEET)		250'	250'	NO CHANGE	
	MAIN RESIDENCE				
SETBACKS:	FRONT FROM STREET CENTER LINE	75'	_	112.3'	
	FRONT	50'	-	67.3'	
	SIDE	50'	-	98.9'	
	REAR	50'	-	109.6'	
MAXIMUM HEIGHT		35'	_	< 35'	
NUMBER OF STORIES		2 1/2	-	2 1/2	
MAXIMUM BUILDING COVERAGE		6% / 8,295.5 SF	-	3.6% / 4,905 SF	
	SITE DEVELOPMENT				
CONTIGUOUS BUILDABLE AREA		NOT PERMITTED	-	21' (600 SF) and 3.7' (50 SF)	25' (650 SF)
	LIMIT OF DISTURBANCE	NOT PERMITTED	-	10.2' (200 SF)	12' (250 SF)

FIRST FLOOR	3150 SF (not including garage)	
SECOND FLOOR	3650 SF (including office above garage)	60% (3650) = 2190 SF
ATTIC FLOOR	770 SF (at height 7'-0" or greater)	770 SF < 2190 SF therefore 1/2 sto





#### Average Grade Calculation

Project: Palminteri Residence-Option 9

Address: 4 Bluestone Lane 09/29/2021

S/B/L: 40/10552/42 (#5)

Average Grade Calculation					
Side	Elevation 1	Elevation 2	Average Elevation (Midpoint)	Length	Extended
AB	641.00	641.00	641.00	42.00	26922.00
BC	636.00	636.00	636.00	33.00	20988.00
CD	636.00	636.00	636.00	8.00	5088.00
DD'	636.00	636.00	636.00	27.00	17172.00
DE	631.50	631.50	631.50	40.40	25512.60
EF	631.50	632.00	631.75	18.00	11371.50
FG	632.00	632.00	632.00	15.50	9796.00
GH	632.00	640.00	636.00	30.00	19080.00
HI	640.00	640.00	640.00	92.10	58944.00
IA	640.00	641.00	634.00	11.70	7417.80
			0.00		0.00
			0.00		0.00
			0.00		0.00
Total 317.70 202291.90					
Average Grade Elevation (AGE) $= \frac{202291.90}{100}$					

317.70	Average Grade Elevation (AGE) =
636.74	Average Grade Elevation (AGE) =
642.00	First Floor Elevation (FF) =
1.00	Floor Joist Hgt w/ Finish (FJH) =
641.00	Basement Ceiling Height (BCH) =
4.26	Basement Wall Height (BWH) = [BCH-AGE]

Basement Wall Height = 4.26 < 5', therefore the Basement does not qualify as a story.

Lewisboro Definition: STORY = CLG is more than 5' above the mean average level of the adjoining finish grade.

RECEIVED BY DEC 0 9 2021

> Town Clerk Town of Lewisboro

#### RESOLUTION TOWN OF LEWISBORO ZONING BOARD OF APPEALS IN THE MATTER OF THE APPLICATION OF DIMOVSKI / PALMINTERI FOR A VARIANCE ARTICLE IV §220-10E CAL. NO. 30-21-BZ

INTRODUCED BY: Board Member Chair Price

SECONDED BY: Board Member Rendo

DATE OF CONSIDERATION/ADOPTION: November 17, 2021

WHEREAS, Dimovski Architecture PLLC, as the applicant (Palminteri, Chazz & Maria Gianna, owner of record) has made application to the Lewisboro Zoning Board of Appeals (the "ZBA"), on the subject premises located at, 4 Bluestone Lane, South Salem, NY, Tax Map as Sheet 0040, Block 10552, Lot 042, ("the property"), for the following variance of the proposed dwelling will have a total of 650 square feet located outside the contiguous buildable area whereas this is not permitted per Article III, Section 220-10E(2)(d) of the Town of Lewisboro Zoning Code.

WHEREAS, this application for an area variance constitutes a Type II action under 6 NYCRR Part 617, and therefore, requires no further review under the State Environmental Quality Review Act (SEQRA), and

WHEREAS, a public hearing at the Town Offices, 79 Bouton Road, South Salem, New York in this matter on November 17, 2021, and a site walk was conducted on November 13, 2021 to consider the application, after which a vote was taken with regard to the variance as set forth above, and

WHEREAS, The Lewisboro Zoning Board of Appeals has given careful consideration to the facts presented in the application at the public hearing based upon the criteria set forth in Section 267-b(3)(b) of the Town Law of the State of New York, and finds as follows:

- The property is an approximate 3.16-acre parcel in the R-4AC, Four-Acre Residential zoning district owned by Chazz Palminteri & Maria Gianna and will be improved with a single-family residence, the applicant wishes to construct a single-family dwelling which will have a total of 650 square feet located outside the contiguous buildable area whereas this is not permitted per Article III, Section 220-10E(2)(d) of the Town of Lewisboro Zoning Code.
- 2. There will be no undesirable change in the character of the neighborhood or detriment to nearby properties.
- 3. There is no practical alternative to the variance requested.
- 4. The Board found that the variance is not substantial.

5. There will not be an adverse effect or impact to the physical or environmental conditions of the neighborhood.

6. The Board found that the difficulty was not self-created.

WHEREAS, pursuant to Section 267-b(3)(c), the ZBA hereby determines that the minimum area variance necessary in this application is a variance for a total of 650 square feet located outside the contiguous buildable area.

**NOW, THEREFORE BE IT RESOLVED**, that the Lewisboro Zoning Board of Appeals hereby grants an area variance for a total of 650 square feet located outside the contiguous buildable area, per Article III, Section 220-10E(2)(d) of the Town of Lewisboro Zoning Code.

VOTE:

Chair Price	-	In Favor
Board Member Mandelker	-	In Favor
Board Member Casper	-	In Favor
Board Member Infield	-	In Favor
Board Member Rendo	-	In Favor

VOTE: Resolution carried by a vote of 5 to 0.

Rohn In Ze

Robin Price, Jr. Chair

Dated in South Salem, New York This <u></u>day of December 2021

Expiration: The variance shall deemed to authorize only the particular use or uses specified in the decision, and unless other provisions are set forth by the Zoning Board of Appeals in connection with its decision, shall expire if work is not initiated pursuant thereto within one (1) year of the date said decision is filed with the Office of the Town Clerk or if said use or uses shall cease for more than one (1) year. Applicants wishing to seek an extension are advised to make application therefore to the Zoning Board of Appeals sufficiently in advance of expiration so as to allow their request for extension to be calendared and heard by the Zoning Board of Appeals prior to the date of expiration. Any such application must include a chronological listing of work (which may include efforts to obtain other regulatory approvals) initiated pursuant to the variance.

Palminteri, Resolution Cal. No. 30-21-BZ

STATE OF NEW YORK

) ) ss.:

COUNTY OF WESTCHESTER

I, Donna Orban, Secretary of the Zoning Board of Appeals, do hereby certify that the above is an excerpt/summary/fair representation of the Resolution adopted by the Zoning Board of Appeals of the Town of Lewisboro at a meeting of said Board on November 17 2021.

Dated: les 9 2001

kn 1 our

Donna Orban Secretary Zoning Board of Appeals

#### TOWN OF LEWISBORO – 2022 FEE SCHEDULE

#### 1. APPLICATION FEES, for filing with:

2.

Planni	ing Board	
a)	Pre-Conference	\$205.00
b)	Sketch Plan Review (all applications)	\$205.00
	Lot Line Change	\$205.00
	Preliminary Subdivision Approval	\$400.00
	(per lot on plat plus \$5.00 records mgt. fee)	
e)	Final Subdivision Approval	
·	a. Per lot on plat plus \$5.00 records mgt. fee	\$150.00
	b. Amendment Approval	\$255.00
	c. Per lot tax map fee	\$ 35.00
f)	Site Development Plan Approval	
<i>,</i>	a. Season Outdoor Seating	\$255.00
	b. All Others	\$505.00
	Plus:	
	1) per square foot of gross floor area	\$0.50
	of new or modified building structure AN	D
	2) Per new, modified or relocated parking	\$ 25.00
	space (non residential and multifamily use	s) AND;
	3) Per dwelling unit (multi-family)	\$300.00
g)	Waiver of Site Plan Application Procedures	\$205.00
	Special Use Permit	
/	a. Applications to the Town Board	\$130.00
	b. Applications to the Zoning Board	\$255.00
	c. Applications to the Planning Board	\$505.00
	except Communication facilities	\$1,505.00
	fast food establishments	\$1,505.00
i)	Zone Text or Map Changes	¢1,000.00
-)	a. Zoning map amendment	\$505.00
	b. Zoning text change	\$1,005.00
i)	Alteration to Wetlands	\$1,005.00
J/	(see administrative wetland permit fee schedule)	
	Applications to the Planning Board	\$255.00
k)	Recreation Fee	¢ <b>2</b> 35.00
к)		\$10,000.00
	Per multi-family "density unit"	\$7,500.00
1)	Storm Water	φ7,500.00
1)	(see administrative wetland permit fee schedule)	
	Application Fee	\$155.00
	Application 1 cc	ψ155.00
TA	AX RECEIVER'S OFFICE	
	Advertising Fee	\$ 20.00
,	Memo Bill Fee	\$ 5.00
	Reminder Bill Fee	\$ 2.00
,	Foreclosure Fee	\$400.00
- /		

3.	BUILDING DEPARTMENT		
	a) Building Permit Fee		\$102.00
	(includes plumbing/heating/mechanical)		
	Estimated Cost of Construction	\$10.00/	/\$1,000.00
	b) CO/CC Fee	\$10.00/	/\$1,000.00
	(estimated cost of construction – min. of \$20)		
	c) C/O Section 220-76 Fee		\$102.00
	(includes records management fee)		
	d) Demolition Fee (structures less than 600 sq. ft.)		\$ 75.00
	For structures 600 sq. ft. and greater		\$100.00
	Certificate of compliance fee		\$ 20.00
	e) Blasting Permit Fee		\$150.00
	f) Operating Permit Fee		\$150.00
	g) Civil Penalty Fee		
	Re-inspection for not cancelling or showing up		\$100.00
	Building without a permit (min. \$250.00)	min.	\$250.00
	Violation of "STOP WORK"		\$500.00/day
	Occupying or using building or structure w/o C/O		\$500.00/week
	Missed inspection		\$100.00
	h) Tree Permit		\$150.00
4.	ZONING		
	a) Application for a Zoning Variance Fee		\$252.00
	b) Application for a Special Permit		\$502.00

#### 5. TOWN CLERK'S OFFICE

Bad Check Redeposit Fee (including all online che	ecks and this pertains to all
departments)	\$ 20.00
Badge Deposit	\$ 2.00
Cemetery Grave	\$1,500.00
Cremation Grave	\$400.00
Certified Copy/Birth	\$ 10.00
Certified Copy/Death	\$ 10.00
Certified Copy/Marriage	\$ 10.00
Copies	\$.25
Cremation Opening	\$300.00
Dog Adoption	\$ 10.00
Dog License Late Fee first 30 days	\$ 10.00
Dog License Late Fee 60 days (compounded)	\$ 25.00
Dog License new spayed/neutered	\$ 10.00
Dog License new unsprayed/unneutered	\$ 18.00
Dog License renewal spayed/neutered	\$ 10.00
Dog License renewal unsprayed/unneutered	\$ 18.00
Dog Redemption – $1^{st}$ offense	\$ 30.00
Dog Redemption – $2^{nd}$ offense	\$ 40.00
Dog Redemption $-3^{rd}$ offense and up	\$ 50.00

Dog Shelter/per day	\$ 45.00
Fax Fee	\$ 3.00
Foundation Fee	
Small	\$300.00
Medium	\$450.00
Large	\$550.00
Grave Opening	\$1,000.00
Surcharge for weekend burials	\$250.00
Land Development Regulations	\$ 15.00
Master Plan	\$ 25.00
Medal/Town of Lewisboro	\$ 3.50
Monument Permit	\$100.00
Pin/Town of Lewisboro	\$ 3.00
Rental Fee/Community House	\$150.00
Rental Deposit/Community House	\$100.00
Rental Fee/Onatru Farm	\$250.00
Rental Deposit/Onatru Farm	\$500.00
Water Rent	\$300.00
Weekend Cemetery Fee	\$250.00
License/Permit Fees:	
Cabaret License	\$150.00
Marriage License	\$ 40.00
Peddler's Bond	\$250.00
Peddler's License	\$ 50.00
Refuse License residential	per schedule
Refuse License commercial	per schedule
Video Game License/per game	\$ 25.00
Outdoor Special Events & Sales	\$200.00