



TOWN OF WINCHESTER
PLANNING BOARD PUBLIC MEETING
TUESDAY, MAY 26, 2020 @ 7:30PM
REMOTE PARTICIPATION

Join Zoom Meeting

<https://us02web.zoom.us/j/84758016012?pwd=WnJGT1BSNW96ZFR2M1F6c3VJM2oyZz09>

Meeting ID: 847 5801 6012

Password: 527473

Dial by phone

929-205-6099

Meeting ID: 847 5801 6012

Password: 527473

	BUSINESS
7:30PM	Open Planning Board Meeting, Updates
7:35PM	Petition 3902: 53 Lawson Road
8:00PM	Join Conservation Commission meeting about potential Tree Preservation bylaw
9:00PM	Town Meeting articles: Vote to move forward or Indefinitely postpone articles pertinent to the Planning Board
9:50PM	Approval of minutes
9:55PM	New Business not known at time of the posting
10:00PM	Adjourn



TOWN OF WINCHESTER

OFFICE OF

PLANNING DEPARTMENT

BRIAN SZEKELY

Town Planner

71 Mount Vernon Street
Winchester, MA 01890

May 26, 2020 Planning Board Meeting

PETITION 3902

53 LAWSON

ROAD

Petitioner seeks Site Plan review Section 9.5.1 so as to construct a new single family dwelling where the total floor area is greater than 5,000 square feet. The property is located in the RDB zoning district and contains 19,360 SF.

	Requirement	Existing	Proposed
Lot Size	10,000 SF	19,360 SF	unaltered
Front Setback	25'	31.3'	31.4'
Lot Width	80'	143.43'	unaltered
Rear Setback	15'	19'	46'
Side Setback	15'	70+' 29'	15.3' 33.3'
Green Space	Min 35%	80.3%	60.5%
Hardscape	Max 35%	9.6%	17.7%
Frontage	80'	143.43'	unaltered

Petitioner proposes to destroy an existing house and free-standing garage, in order to build a new single family home that will exceed 5,000 square feet and therefore requires Site Plan Review. The new house is the result of the Historical Commission lifting the delay at their **March 25, 2019** meeting. However, the Historical Commission feels strongly that they need to review the proposal again before the petition is in front of the ZBA. They plan to review the drawings at their meeting on June 1, 2020. I would strongly recommend the ZBA to take into consideration the comments from the Historical Commission as there was an agreed upon design and scale of the structure which allowed the delay to be lifted. Twelve months have passed since the delay was put on the property, but even so, the Commission's opinion on the matter is of great importance.

53 Lawson Road – Demolition follow-up

Scott and Heather Penna presented the HC with a rendering of their proposed rebuild for the site, as well as a schematic of the current home and proposed footprint on the property plans.

The HC agreed that the proposed home fits in well with the neighborhood.

Motion: The Historical Commission agrees to lift the twelve-month delay that was imposed on this property at the March 4, 2019 meeting with the conditions that the replacement construction will utilize the renderings as submitted to the Historical Commission at the March 25, 2019 meeting with the 12 over 12 window features shown. Janet Boswell made the motion and it was seconded.

4 in favor, 0 opposed, 1 Abstain: Clemson 2 Absent: Carlisle, Hickey

It has been brought up by a resident that this project involves 2 parcels, one at 11,595 SF and the other at 7,768 SF. These have been in common ownership since the 1950s. Although parcel 5-108 is "Not a buildable lot," it is only considered that based on its own, meaning that 1 house would not be able to be built on that undersized parcel on its own. Two houses cannot be built on the total property, but that is not to say that 1 house couldn't span the two lots. There are many houses in Winchester that have more than 1 lot associated with it, and that does not mean that someone could not build on that portion of the lot that is undersized, as they are under common ownership. If someone was to feel that this was extremely important or potentially a legal matter, a simple ANR would be used to join the lots. The petitioner takes into account both lots and it should be analyzed as such.....something that is done routinely here and in other municipalities in Massachusetts.

The FAR analysis that was performed by the applicant is helpful, but shows that this would still be one of the largest houses in the area. The good thing is that this is one of the largest lots in the neighborhood, but when compared to other lots of this size, the house is significantly greater than those (see Leslie Road, as all of them must be less than an FAR of 0.32). The FAR analysis seems to prove that nearly all of the houses that are on lots approaching 20,000 SF have FARs under 0.32. However, Lawson Road has 5 houses over 6,000 square feet so the proposed house is not significantly out of scale with the surrounding properties. Also, see 35 Jefferson as one of the only houses in the area that is over 6,000 SF, built in 2016, and an FAR of 0.5. Right next door to the proposed project is a 5,812 SF house on an 11,000 SF lot. The proposed house is nearly 7,000 SF but on a lot that is almost 8,000 SF more. Based on the FAR analysis of the neighborhood and the immediate abutters, the proposed house is very large, but not significantly out of scale. I am more concerned as to why the house needs to be so close to the southerly neighbor. I think it should shift away from this neighbor because there appears to be enough room for the driveway on the north side of the property.

Materials and general design of the house are consistent with the neighborhood. I recommend waiting for the Historical Commission to analyze the project again, and for the petitioner to increase the southern side setback several feet, as a majority of the houses are more than 30' away from each other. A photo of the existing house is below.





BOARD OF APPEALS

NOTICE OF PUBLIC HEARING

The WINCHESTER BOARD OF APPEALS will hold a REMOTE PARTICIPATION PUBLIC HEARING on THURSDAY, JUNE 11, 2020 at 7:00 P.M. on the following matter:

PETITION NO. 3902 - That of SCOTT C. and HEATHER B. PENNA concerning the property at 53 LAWSON ROAD, WINCHESTER, MA. The petitioners seek Site Plan Review under Section 9.5.1 of the Winchester Zoning By-Law in accordance with Massachusetts General Laws so as to construct a new single family dwelling where the total floor area is greater than 5,000 square feet. The property is located in the RDB (Single Residence) zoning district and contains 19,360 +/- square feet.

WINCHESTER BOARD OF APPEALS

Petition may be viewed on the Board of Appeals web page under Government/Appointed Boards www.winchester.us

Link to the meeting can be found on the Government Calendar www.winchester.us

3902

TOWN OF WINCHESTER
BOARD OF APPEALS
71 MOUNT VERNON STREET
WINCHESTER, MASSACHUSETTS 01890
(781) 721-7115

RECEIVED AND FILED

2020 MAR 16 PM 5:20

TOWN CLERK
TOWN OF WINCHESTER
FORM 2

APPLICATION FOR
ZONING HEARING

Application Date March 13, 2020

The undersigned hereby petitions the Board of Appeals for the following:

- Appeal Variance Special Permit Use Special Permit/Site Plan Review
- Special Permit Sign Special Permit (Pre-existing non-conforming structure) Site Plan Review

Property Address 53 Lawson Road Zoning District RDB

Area of Lot 19,360 sf+/- Frontage 143.43+/- Year Built _____

Street Frontage is Public Way Subdivision Control Way Private Way

Petitioner's Name Scott C Penna and Heather B Penna Address 52 North Border Road, Winchester, MA 01890

Name _____ Address _____

Name _____ Address _____

Brief Description of Work:

Petitioner is proposing to demolish existing home and garage structures and construct a new single family residence containing 6,960 +/- square feet (including garage), which requires Site Plan approval pursuant to Section 9.5.1(5) of the Zoning Bylaw.

Applicants for an Appeal must complete Form 2A

Applicants for a Variance must complete Form 2B

Applicants for a Special Permit Use must complete Form 2C

Applicants for a Special Permit/Site Plan Review or Site Plan Review must complete Form 2D

Applicants for a Special Permit Sign must complete Form 2E

Applicants for a Special Permit Pre-existing Nonconforming 1 or 2 Family must complete Form 2F

Applicants for a Special Permit Pre-existing Non-conforming Other must complete Form 2G

FORM 2

The undersigned is () the owner of the subject property; or () the holder of a written option to purchase the subject property, or () the holder of a valid lease to the subject property. (Written authorization from the property owner must be submitted with the other application documents when the applicant is not the record owner of the property).

Record title to the subject property stands in the name (s) Scott C. Penna and Heather B. Penna

Address of owner of record 52 North Border Road, Winchester, MA 01890

Title Reference:

(Unregistered land) Middlesex County Registry of Deeds; Book _____, Page _____

(Registered land) Land Court Certificate of Title No. ²⁶⁹⁷⁶⁶ Book 1540, Page 108

Date of Recording: 02/04/2019

State briefly what building and structures currently exist on the premises:

Single family residence and detached garage

Attorney, agent, or other representative acting for petitioner:

Name Mark T. Vaughan, Esquire Address Riemer & Braunstein LLP, 700 District Ave,
11th Floor, Burlington, MA 01803

Name _____ Address _____

Written evidence of agent's standing to represent petitioner may be requested.

Signed as a statement of fact under the pains and penalties of perjury, this <u>5th</u> day of <u>March</u> , 20 <u>20</u> .	
SIGNATURE _____ (Petitioner/Agent)	SIGNATURE <u>[Signature]</u> (Property Owner/Agent)
Address _____	Address <u>52 N. Border Rd Winchester</u>
Tel No. _____	Tel No. <u>617-901-3777</u>
Email address _____	Email address <u>scott.penna@arramp.com</u>

Note: Do not attempt to discuss the merits of your case with any member of the Board of Appeals at any time after filing this application and prior to the hearing thereon.



Town of Winchester

MIDDLESEX COUNTY, MASSACHUSETTS

FORM 2D

TOWN HALL
71 MOUNT VERNON STREET
WINCHESTER, MASSACHUSETTS 01890
(617) 721-7115

BOARD OF APPEALS

Date: March 13, 2020

To the Board of Appeal of the Town of Winchester:

The undersigned hereby petitions the Board of Appeal for the relief specified below.

Property Location 53 Lawson Road Lot # _____

Zoning District: RDB Area of Lot: 19,360+/- Frontage: 143.43+/-

Street Frontage is: Public Way Subdivision Control Way Private Way

Owner of Record: Scott C. Penna and Heather B. Penna

Mailing Address: 52 North Border Road, Winchester, MA 01890 Tel. 617-901-3777

Date Deed Recorded: 02/04/2019 (Completa Deed Reference Below)

Middlesex South Registry of Deeds: Book 1540 Page 106

Middlesex South Registry District of the Land Court as Cert. of Title No. 269766

Present Use: Single family residence and detached garage

Proposed Use: Single family residence

Relief Desired:

- Appeal (MGL Chp. 40A, Sect. 8), attach copy of decision or order being appealed.
- Special Permit in accordance with Zoning By-Law Sect. _____
- Special Permit/Site Plan Review in accordance with Zoning By-Law Sect. 9.5.1(5)
- Dimensional Variance (MGL chp. 40A, Sect. 10) from Zoning By-Law Sect. _____
- Sign Permit under Chp. 9 of the General By-Laws of the Town of Winchester

Describe change, extension, alterations or modifications, etc. requested.

Construction of a single family residence containing 6,960+/- square feet (including garage)

Petitioner: Scott C. Penna Signature: [Signature]

Mailing Address: 52 North Border Road, Winchester, MA 01890 Tel. 617-901-3777

Petitioner is: Owner Tenant Licensee Binding Optionee

Petition must be fully completed, typewritten or plainly printed in ink.

March 13, 2020

Zoning Board of Appeals
Town of Winchester
71 Mt. Vernon Street
Winchester, Massachusetts 01890

Re: Site Plan Application/53 Lawson Road, Winchester, Massachusetts

Dear Board Members:

Please be advised that this office and the undersigned represent Scott C. Penna and Heather Penna (collectively, the "Petitioner") in connection with its proposed redevelopment of the property located at 53 Lawson Road, Winchester, Massachusetts.

The subject property (which is located within the RDB-10 Zoning District) consists of approximately 19,360 square feet of land, and contains a single family residential structure and a stand alone garage. My client is proposing to demolish the existing structures on the property and construct a new single family residence on the property, which residence would contain approximately 6,960 square feet (inclusive of attached garage).

Pursuant to Section 9.5.1 (5) of the Winchester Zoning Bylaw, Site Plan Approval from the Board of Appeals is required for buildings via new construction or expansion in which the floor area is equal to or greater than 5,000 square feet (including garage and any floor area with head room of 7 feet or higher, excluding basement) in the RDB-10 zoning district.

The Petitioner has worked closely with its architect to design a home which would be consistent with the character, materials, and scale of other residential homes in this area. As you can see from the enclosed map which depicts the sizes of other homes in the area and the respective floor area ratios for each, the size of this home in relation to the lot size would very much be in keeping with the scale of other homes in the vicinity.

Also, we would like to make reference to the attached March 27, 2019 letter from the Winchester Historical Commission to Building Commissioner Wile agreeing to lift the twelve-month demolition delay imposed by the Commission on February 6, 2019 (while the letter states "2018", we believe that to be in error and was meant to be "2019" based on the record) subject to the condition that the building to be built in place of the existing building be constructed substantially in accordance with plans/designs provided at that time to the Historical Commission (and subsequently to the Building Commissioner).

March 13, 2020

Page 2

While that twelve-month demolition delay has expired on its own (and thus the condition referenced therein no longer applicable), the Petitioner has nonetheless designed a home which is substantially in accordance with those referenced plans/design¹. We have attached a copy of the letter and referenced plans/design.

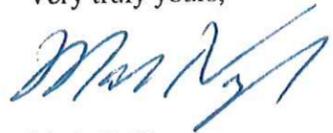
Enclosed please find the following materials being submitted in connection with this Application:

1. Original plus twenty (20) copies of Form 2 (Request for Hearing);
2. Original plus twenty (20) copies of Form 2C (Site Plan);
3. Twenty (20) copies of the Plans;
4. Assessor's Map;
5. Map showing comparable Floor Area Ratios of other homes in the neighborhood; and
6. Check made payable to the Town of Winchester in the amount of \$50.00 for the filing fee.

It is my understanding that this matter will be scheduled for a public hearing on April 27, 2020.

Thank you for your attention to this matter and please do not hesitate to contact me should you have any questions or comments whatsoever.

Very truly yours,



Mark T. Vaughan

MTV:sm

Enclosures

cc: Mr. and Mrs. Scott C. Penna

2589409.1

¹ We note that the volume and massing of the house along the Lawson Road frontage has been reduced from what was previously shown to the Historical Commission.

Back



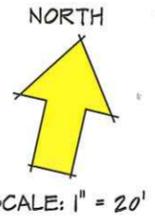
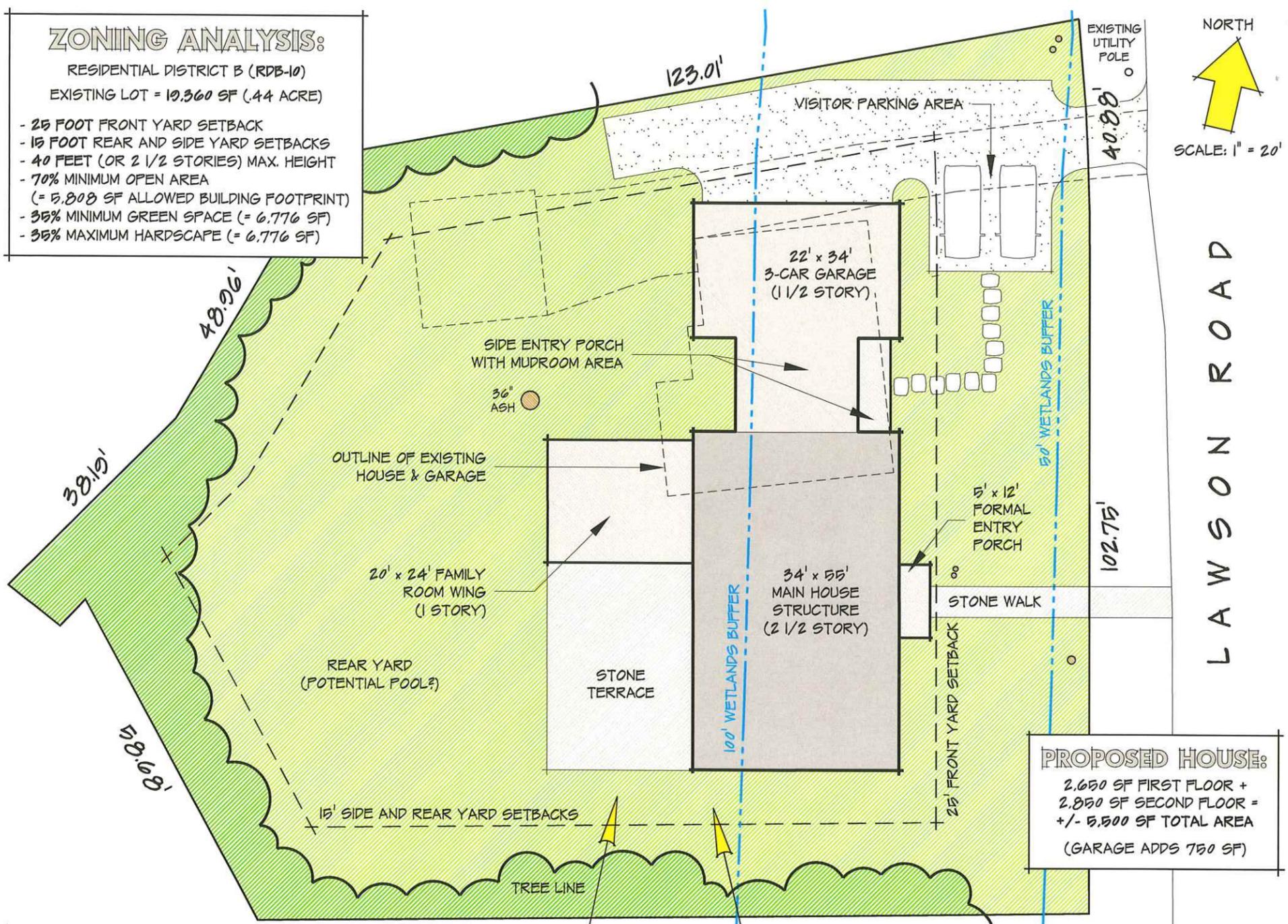
Learn More

Save

ZONING ANALYSIS:

RESIDENTIAL DISTRICT B (RDB-10)
 EXISTING LOT = 10,360 SF (.44 ACRE)

- 25 FOOT FRONT YARD SETBACK
- 15 FOOT REAR AND SIDE YARD SETBACKS
- 40 FEET (OR 2 1/2 STORIES) MAX. HEIGHT
- 70% MINIMUM OPEN AREA
 (= 5,808 SF ALLOWED BUILDING FOOTPRINT)
- 35% MINIMUM GREEN SPACE (= 6,776 SF)
- 35% MAXIMUM HARDSCAPE (= 6,776 SF)



PROPOSED HOUSE:
 2,650 SF FIRST FLOOR +
 2,850 SF SECOND FLOOR =
 +/- 5,500 SF TOTAL AREA
 (GARAGE ADDS 750 SF)

ON THE BOARDS DESIGN
 MARCH 22, 2010

53 LAWSON ROAD.
 PRELIMINARY CONCEPTUAL PROPERTY ANALYSIS.



APPROVED BY WINCHESTER HISTORICAL COMMISSION



5 Raymond Street
 Lexington, MA 02421
 SpaceCraftArch.com
 Voice: 781.223.5665
 Fax: 781.674.2111

PRECEDENTS
 PROPOSED RESIDENCE
 53 LAWSON ROAD
 WINCHESTER, MA 01890

SCALE:
 NTS

DATE:
 1 27 APR 20

Z1



RIGHT FRONT VIEW

RENDERING OF PROPOSED DWELLING

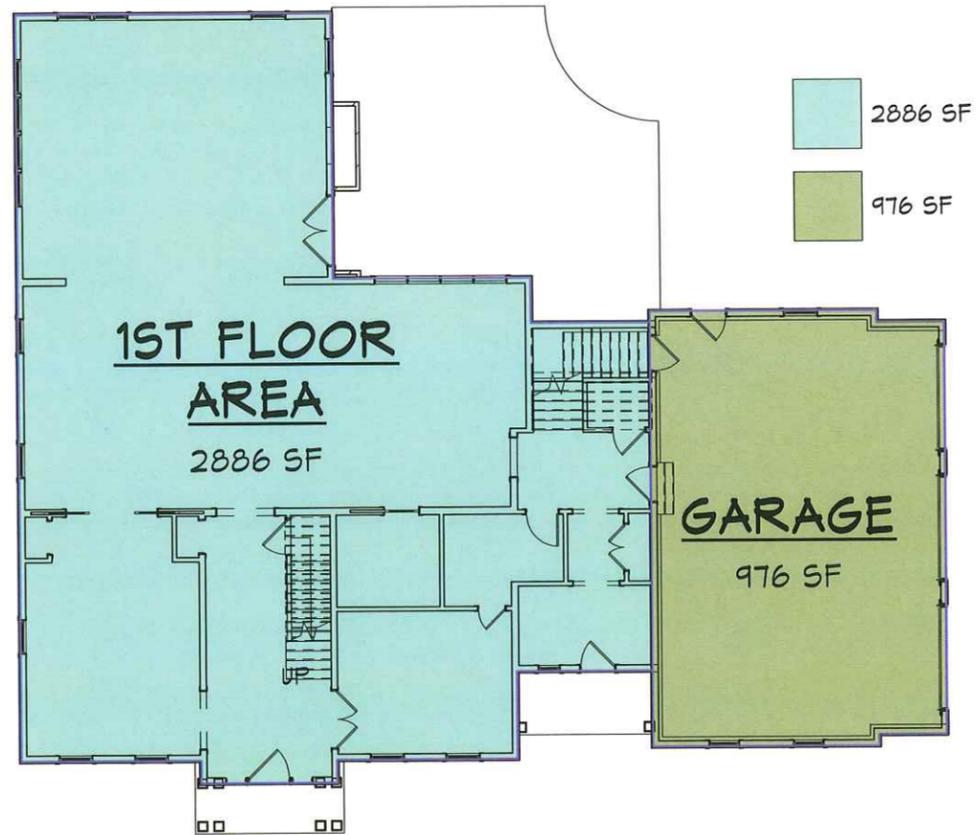


5 Raymond Street
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PROPOSED RENDERING
 PROPOSED RESIDENCE
 53 LAWSON ROAD
 WINCHESTER, MA 01890

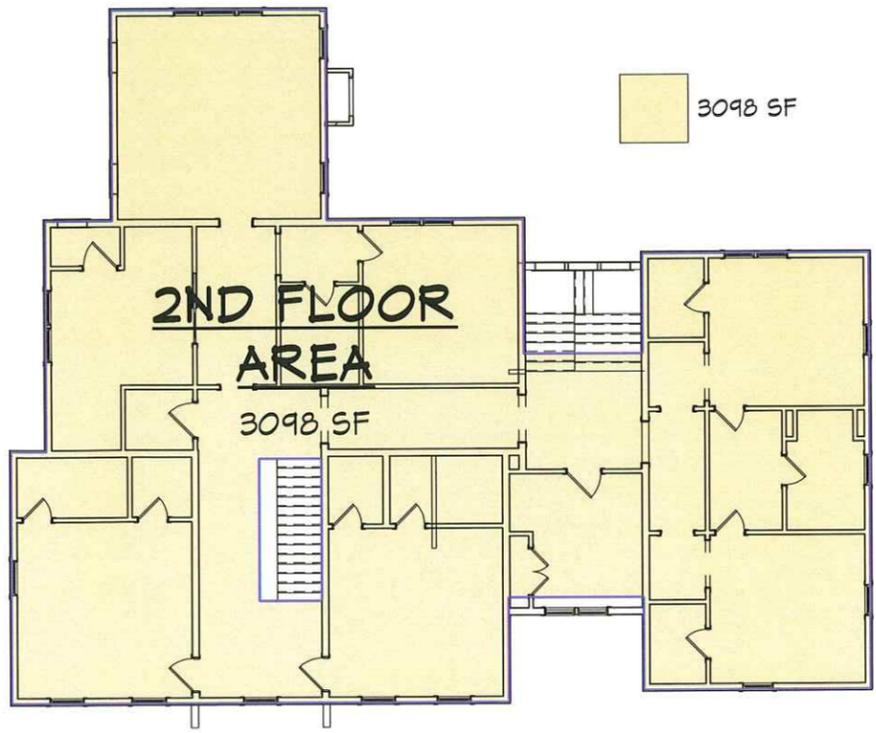
SCALE:
 NTS

DATE:
 1 27 APR 20



AREA LEGEND

FIRST	2886 SF
GARAGE	976 SF
SECOND	3098 SF
<hr/>	
TOTAL	6960 SF

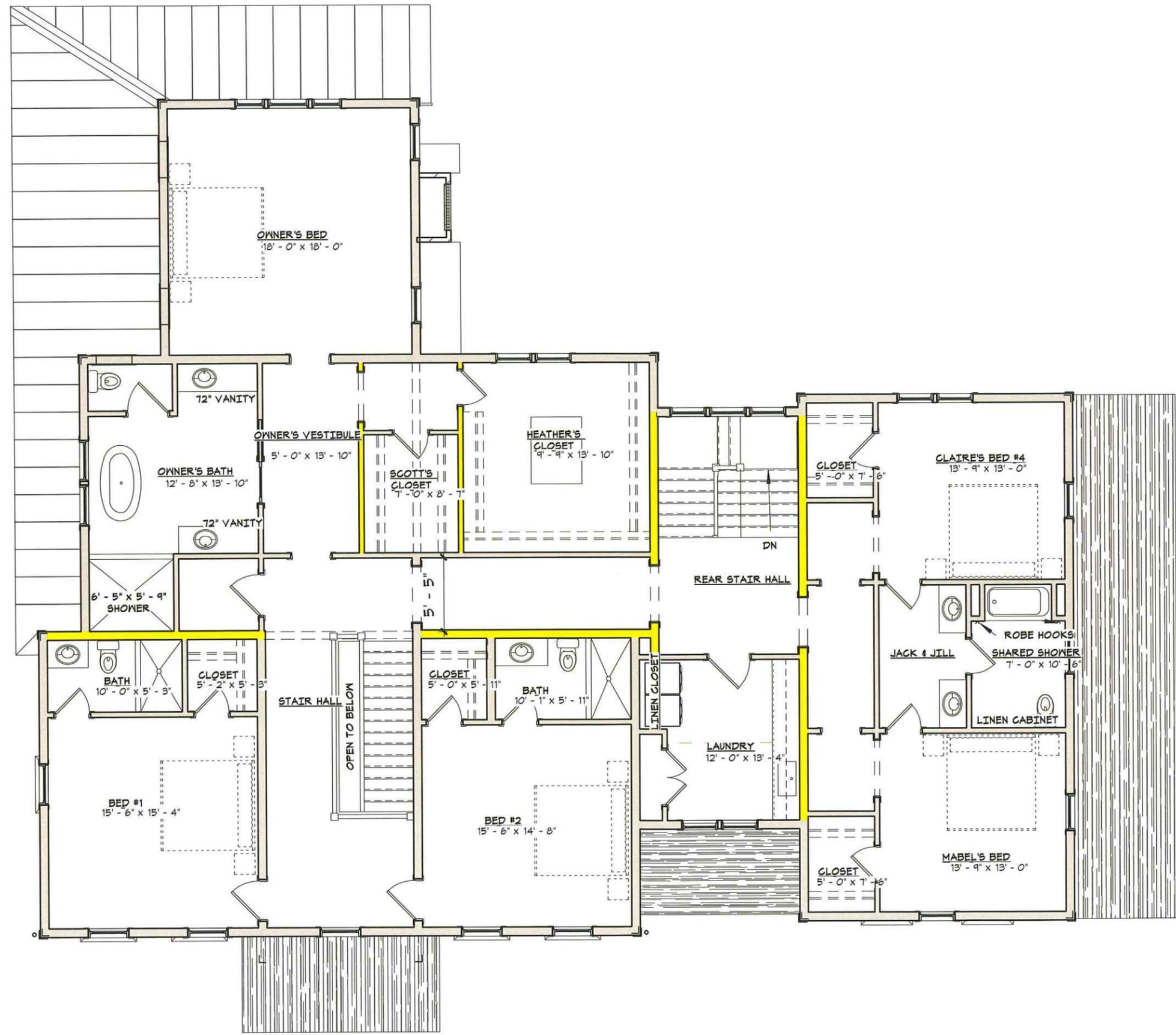


5 Raymond Street
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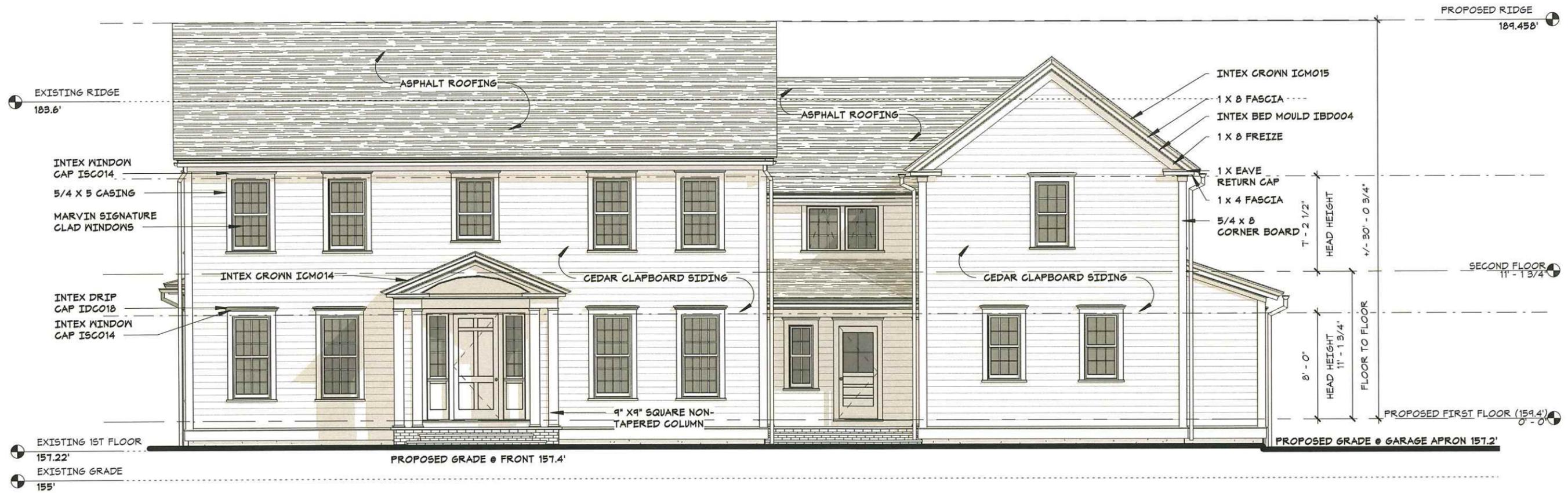
AREA PLANS
 PROPOSED RESIDENCE
 53 LAWSON ROAD
 WINCHESTER, MA 01890

SCALE:
 1/16" = 1'-0"
 DATE:
 1 27 APR 20

SCALE:	
1/8" = 1'-0"	
DATE:	
1	27 APR 20



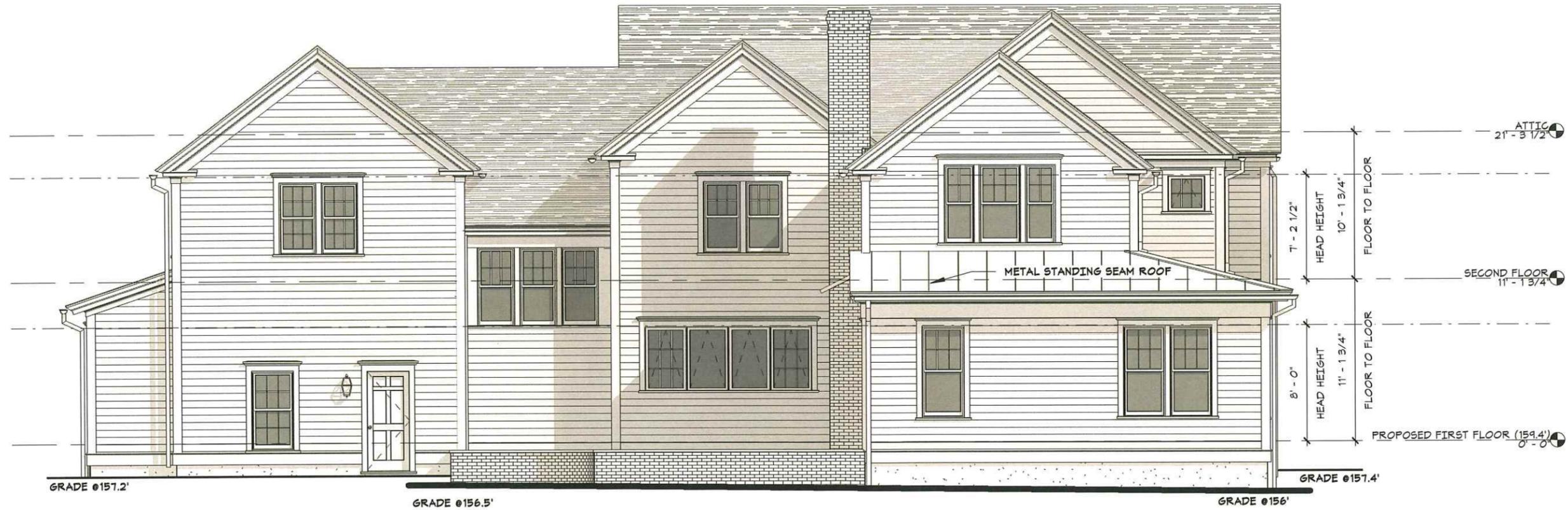
PROPOSED SECOND FLOOR PLAN



1 FRONT ELEVATION 1/8" SCALE
 1/8" = 1'-0"

SCALE:
 1/8" = 1'-0"

DATE:
 1 27 APR 20



1 REAR ELEVATION 1/8" SCALE
1/8" = 1'-0"



1 LEFT ELEVATION 1/8" SCALE
1/8" = 1'-0"



1 RIGHT ELEVATION 1/8" SCALE
1/8" = 1'-0"



PROPOSED FRONT LEFT VIEW



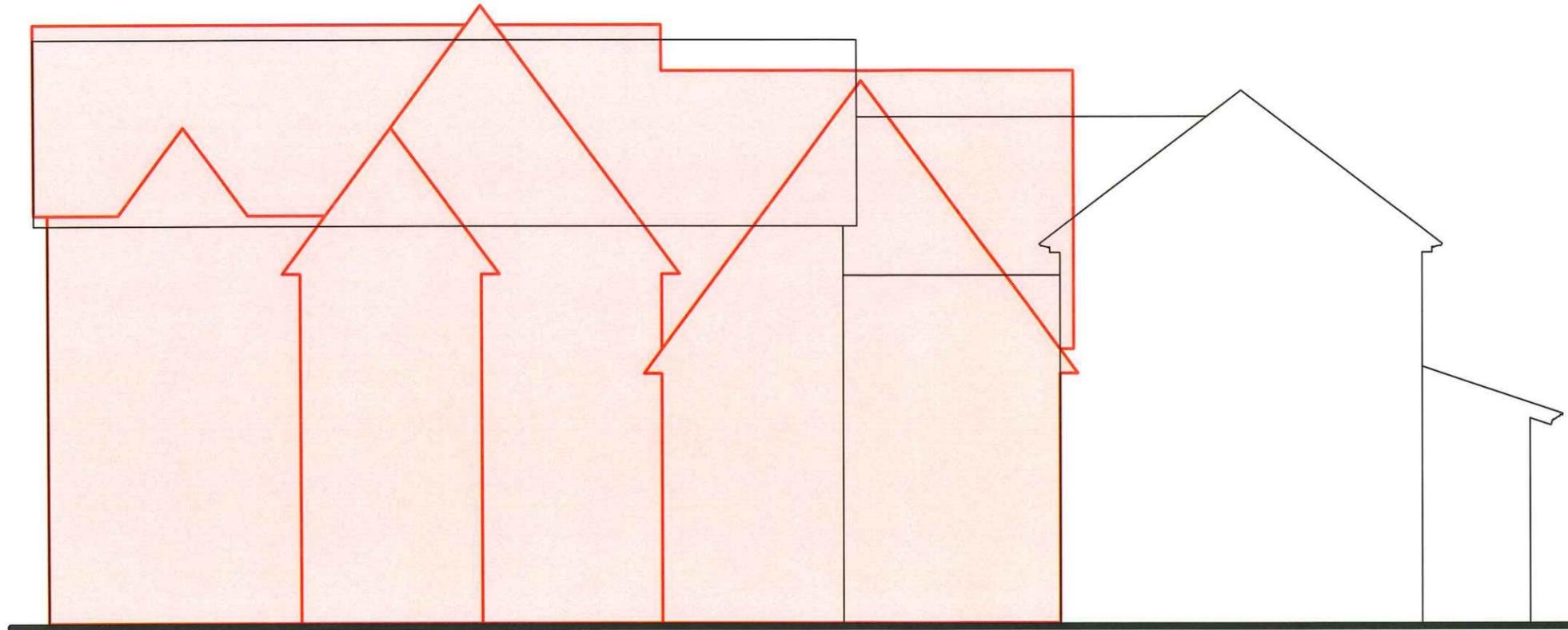
5 Raymond Street
Lexington, MA 02421
SpaceCraftArch.com
Voice: 781.223.5665
Fax: 781.674.2111

PERSPECTIVES
PROPOSED RESIDENCE
53 LAWSON ROAD
WINCHESTER, MA 01890

SCALE:
NTS

DATE:
1 27 APR 20

Z10



① 6 LESLIE OVERLAY
1/8" = 1'-0"



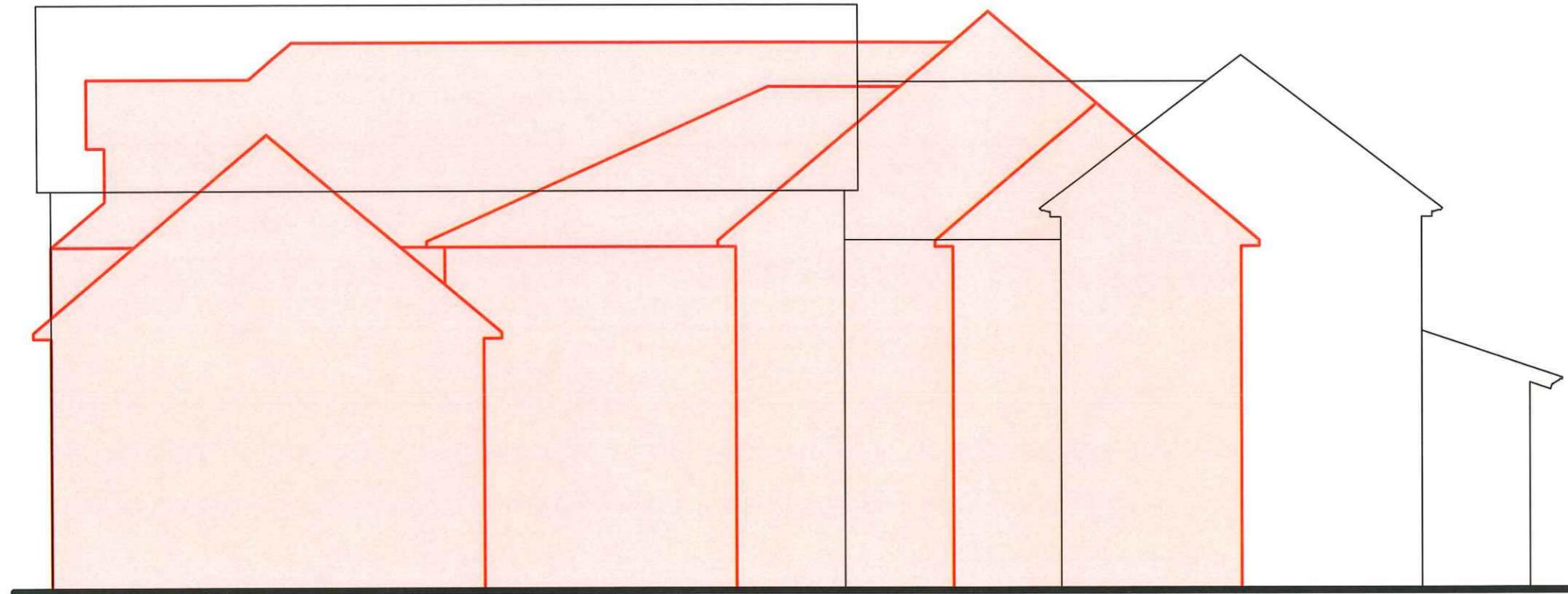
5 Raymond Street
Lexington, MA 02421
SpaceCraftArch.com
Voice: 781.223.5665
Fax: 781.674.2111

OVERLAY DIAGRAMS
PROPOSED RESIDENCE
53 LAWSON ROAD
WINCHESTER, MA 01890

SCALE:
1/8" = 1'-0"

DATE:
1 27 APR 20

Z12



① 42 LAWSON RD OVERLAY
1/8" = 1'-0"



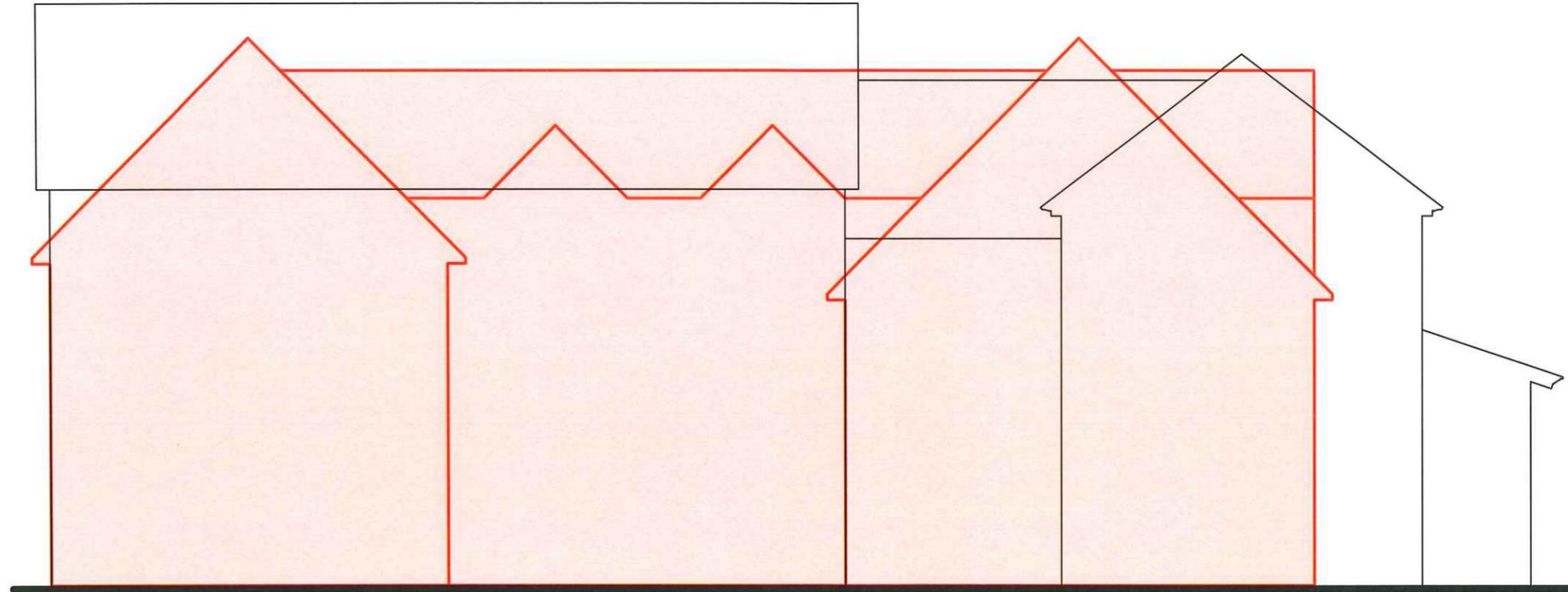
5 Raymond Street
Lexington, MA 02421
SpaceCraftArch.com
Voice: 781.223.5665
Fax: 781.674.2111

OVERLAY DIAGRAMS
PROPOSED RESIDENCE
53 LAWSON ROAD
WINCHESTER, MA 01890

SCALE:
1/8" = 1'-0"

DATE:
1 27 APR 20

Z13



① 57 LAWSON RD OVERLAY
 1/8" = 1'-0"



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OVERLAY DIAGRAMS
 PROPOSED RESIDENCE
 53 LAWSON ROAD
 WINCHESTER, MA 01890

SCALE:
 1/8" = 1'-0"

DATE:
 1 27 APR 20

Z14



FRONT RIGHT VIEW



FRONT LEFT VIEW



FRONT VIEW



5 Raymond Street
 Lexington, MA 02421
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 Voice: 781.223.5665
 Fax: 781.674.2111

EXISTING HOUSE
 PROPOSED RESIDENCE
 53 LAWSON ROAD
 WINCHESTER, MA 01890

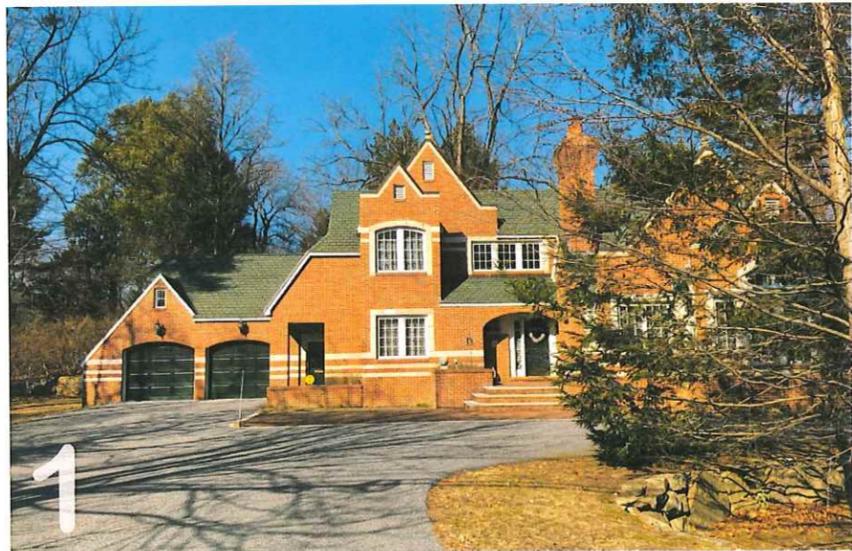
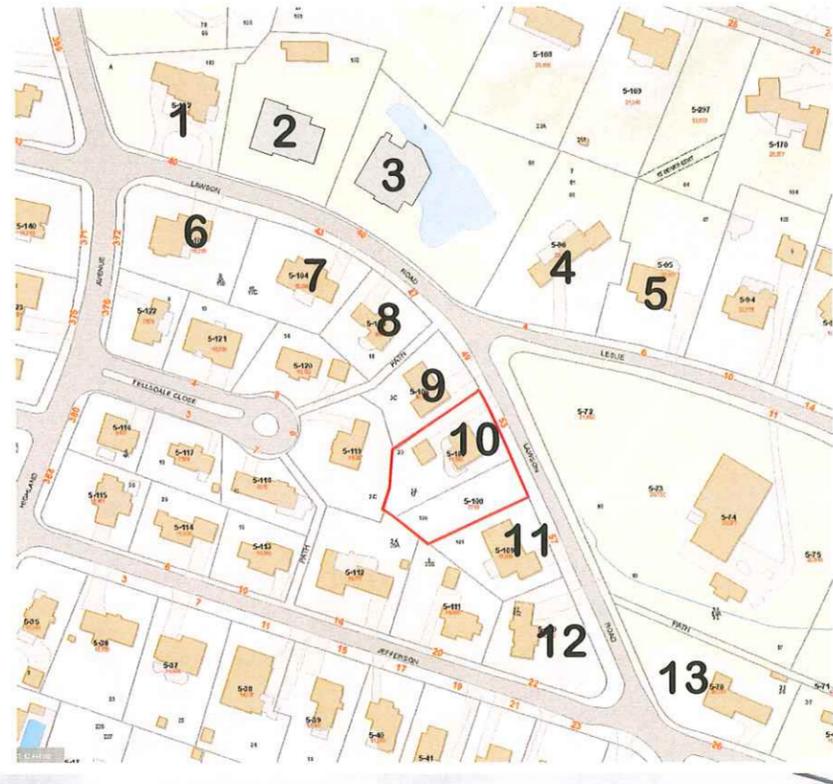
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DATE:
 1 27 APR 20

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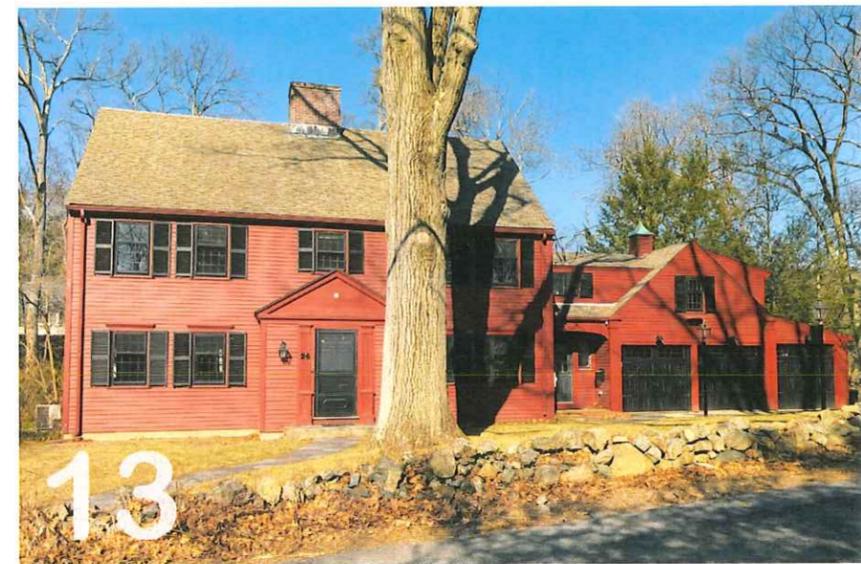
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Fax: 781.674.2111



NEIGHBORHOOD PHOTOS
PROPOSED RESIDENCE
53 LAWSON ROAD
WINCHESTER, MA 01890

SCALE:
NTS
DATE:
1 27 APR 20

Z16



5 Raymond Street
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 SpaceCraftArch.com
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 Fax: 781.674.2111

NEIGHBORHOOD PHOTOS
 PROPOSED RESIDENCE
 53 LAWSON ROAD
 WINCHESTER, MA 01890

SCALE:
 NTS

DATE:
 1 27 APR 20

Z17

DRAINAGE ANALYSIS

***53 LAWSON ROAD
WINCHESTER, MA***



MARCH 9, 2020

53 Lawson Road
Drainage Summary

The Owner/Applicant is proposing demolish the existing dwelling and garage and construct a new single family dwelling at 53 Lawson Road. Rainfall data for this analysis was based on the Cornell University Northeast Regional Climate Center Atlas for Northeast United States.

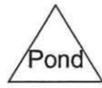
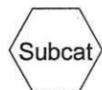
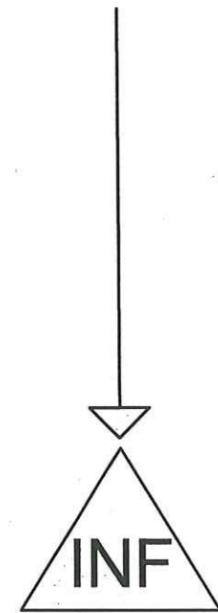
The proposed dwelling, driveway and walk will create approximately 7,370+/- sf of impervious cover. In order to offset the proposed increase in impervious cover, downspouts and roof drains for the proposed dwelling will connect to a subsurface infiltration system adequately designed for the 100-year storm event, using a 8.90" inch rainfall.

Soils investigations, including two deep-hole observations to establish the estimated annual high water table and soil texture were conducted on-site. Based on this investigation a "sandy loam" soil was observed at test pit 1 and a silt loam, extremely tight and restrictive, was observed at test pit 2. The Natural Resources Conservation Service Web Soil Survey was also referenced and classifies on-site soils conditions as Hydrologic Group "C" soils. As a result the proposed infiltration system was located near test pit 1 and a Rawls exfiltration rate of 1.02 inches per hour was used for its design. (*Note: bottom area only of proposed infiltration system used for exfiltration rate design*).

In summary by utilizing the proposed subsurface infiltration system to mitigate stormwater runoff generated by the proposed dwelling, peak rates and volume of runoff will be reduced for post development conditions.

Pre-Development vs. Post-Development Drainage Summary Table

Storm Event	Pre-Development		Post-Development	
	Rate (cfs)	Volume (cf)	Rate (cfs)	Volume (cf)
2	0.60	2,157	0.47	1,689
10	1.24	4,381	0.97	3,431
25	1.75	6,225	1.37	4,875
100	2.84	10,246	2.23	8,023



53 Lawson Road

Type III 24-hr 2 year storm Rainfall=3.20"

Prepared by Frederick W. Russell, PE

HydroCAD® 10.00-24 s/n 04321 © 2018 HydroCAD Software Solutions LLC

Page 2

Time span=0.00-36.00 hrs, dt=0.01 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 EXIST: Runoff Area=19,360 sf 19.68% Impervious Runoff Depth=1.34"
Tc=10.0 min CN=79 Runoff=0.60 cfs 2,157 cf

Pond INF: Peak Elev=152.21' Storage=343 cf Inflow=0.31 cfs 1,039 cf
Outflow=0.03 cfs 1,039 cf

Subcatchment PROP: Runoff Area=15,160 sf 22.69% Impervious Runoff Depth=1.34"
Tc=10.0 min CN=79 Runoff=0.47 cfs 1,689 cf

Subcatchment ROOF: Runoff Area=4,200 sf 100.00% Impervious Runoff Depth=2.97"
Tc=5.0 min CN=98 Runoff=0.31 cfs 1,039 cf

Total Runoff Area = 38,720 sf Runoff Volume = 4,884 cf Average Runoff Depth = 1.51"
70.43% Pervious = 27,270 sf 29.57% Impervious = 11,450 sf

53 Lawson Road

Type III 24-hr 2 year storm Rainfall=3.20"

Prepared by Frederick W. Russell, PE

HydroCAD® 10.00-24 s/n 04321 © 2018 HydroCAD Software Solutions LLC

Summary for Subcatchment EXIST:

Runoff = 0.60 cfs @ 12.14 hrs, Volume= 2,157 cf, Depth= 1.34"

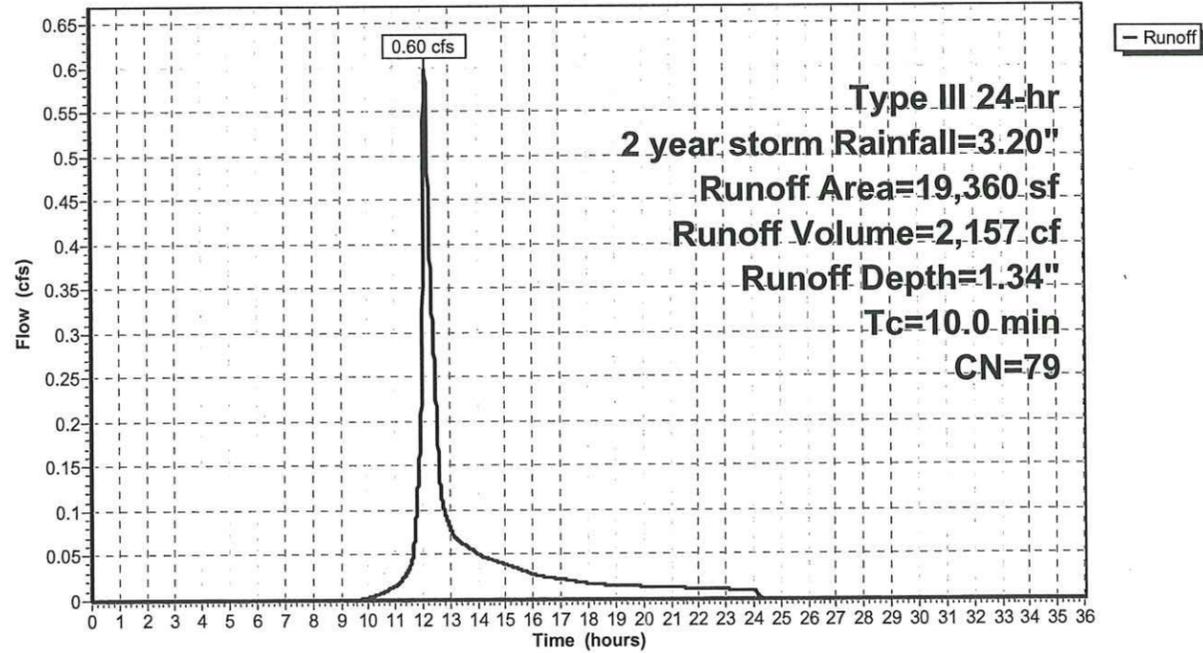
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 year storm Rainfall=3.20"

Area (sf)	CN	Description
1,950	98	Roofs, HSG C
1,060	98	Paved parking, HSG C
* 800	98	Patio/walks, HSG C
15,550	74	>75% Grass cover, Good, HSG C
19,360	79	Weighted Average
15,550		80.32% Pervious Area
3,810		19.68% Impervious Area

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

Subcatchment EXIST:

Hydrograph



53 Lawson Road

Type III 24-hr 2 year storm Rainfall=3.20"

Prepared by Frederick W. Russell, PE

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Summary for Pond INF:

Inflow Area = 4,200 sf, 100.00% Impervious, Inflow Depth = 2.97" for 2 year storm event
 Inflow = 0.31 cfs @ 12.07 hrs, Volume= 1,039 cf
 Outflow = 0.03 cfs @ 11.55 hrs, Volume= 1,039 cf, Atten= 90%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 11.55 hrs, Volume= 1,039 cf

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 152.21' @ 12.74 hrs Surf.Area= 1,359 sf Storage= 343 cf

Plug-Flow detention time= 72.1 min calculated for 1,038 cf (100% of inflow)
 Center-of-Mass det. time= 72.0 min (827.5 - 755.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	151.60'	883 cf	15.83'W x 85.85'L x 2.33'H Field A 3,172 cf Overall - 649 cf Embedded = 2,523 cf x 35.0% Voids
#2A	152.10'	649 cf	ADS_StormTech SC-310 +Cap x 44 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 44 Chambers in 4 Rows
		1,532 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	151.60'	1.020 in/hr Exfiltration over Horizontal area

Discarded OutFlow Max=0.03 cfs @ 11.55 hrs HW=151.62' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.03 cfs)

Pond INF: - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-310+Cap (ADS StormTech®SC-310 with cap length)

Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf

Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap

34.0" Wide + 10.0" Spacing = 44.0" C-C Row Spacing

11 Chambers/Row x 7.12' Long +0.60' Cap Length x 2 = 79.52' Row Length +38.0" End Stone x 2 = 85.85' Base Length

4 Rows x 34.0" Wide + 10.0" Spacing x 3 + 12.0" Side Stone x 2 = 15.83' Base Width

6.0" Base + 16.0" Chamber Height + 6.0" Cover = 2.33' Field Height

44 Chambers x 14.7 cf = 648.6 cf Chamber Storage

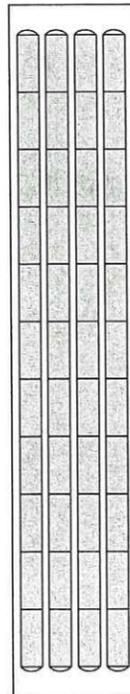
3,171.8 cf Field - 648.6 cf Chambers = 2,523.2 cf Stone x 35.0% Voids = 883.1 cf Stone Storage

Chamber Storage + Stone Storage = 1,531.8 cf = 0.035 af

Overall Storage Efficiency = 48.3%

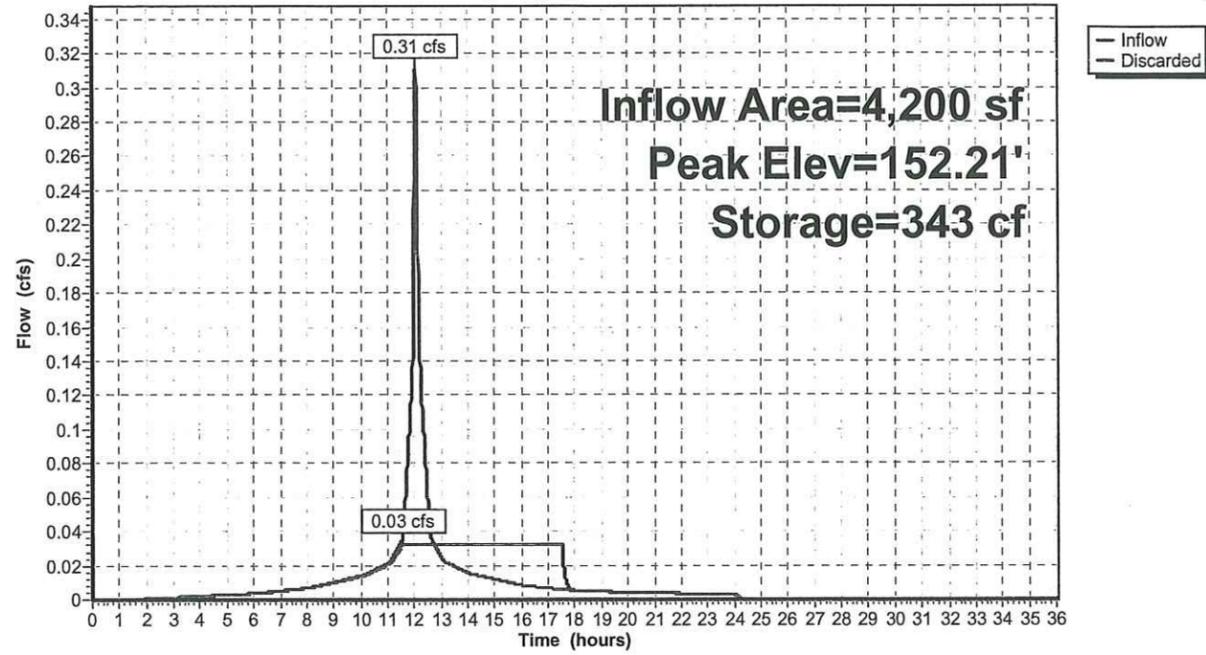
Overall System Size = 85.85' x 15.83' x 2.33'

44 Chambers
117.5 cy Field
93.5 cy Stone



Pond INF:

Hydrograph



53 Lawson Road

Type III 24-hr 2 year storm Rainfall=3.20"

Prepared by Frederick W. Russell, PE

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Summary for Subcatchment PROP:

Runoff = 0.47 cfs @ 12.14 hrs, Volume= 1,689 cf, Depth= 1.34"

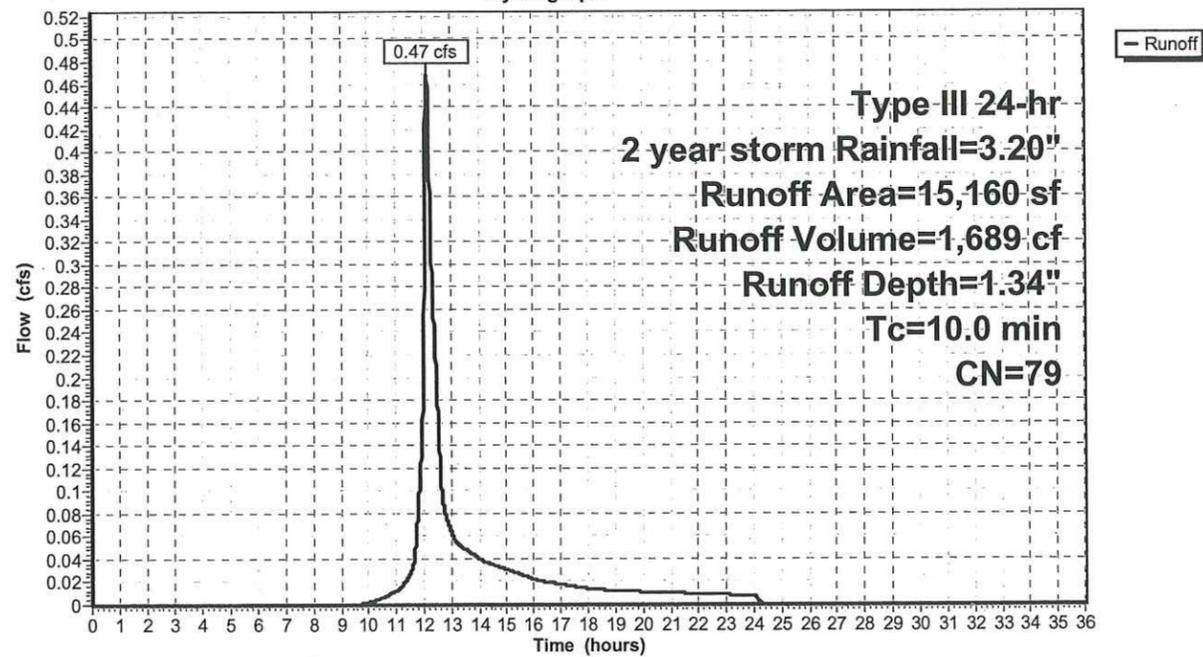
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 year storm Rainfall=3.20"

Area (sf)	CN	Description
2,010	98	Paved parking, HSG C
* 1,430	98	Patio/walks, HSG C
11,720	74	>75% Grass cover, Good, HSG C
15,160	79	Weighted Average
11,720		77.31% Pervious Area
3,440		22.69% Impervious Area

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

Subcatchment PROP:

Hydrograph



53 Lawson Road

Type III 24-hr 2 year storm Rainfall=3.20"

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Summary for Subcatchment ROOF:

Runoff = 0.31 cfs @ 12.07 hrs, Volume= 1,039 cf, Depth= 2.97"

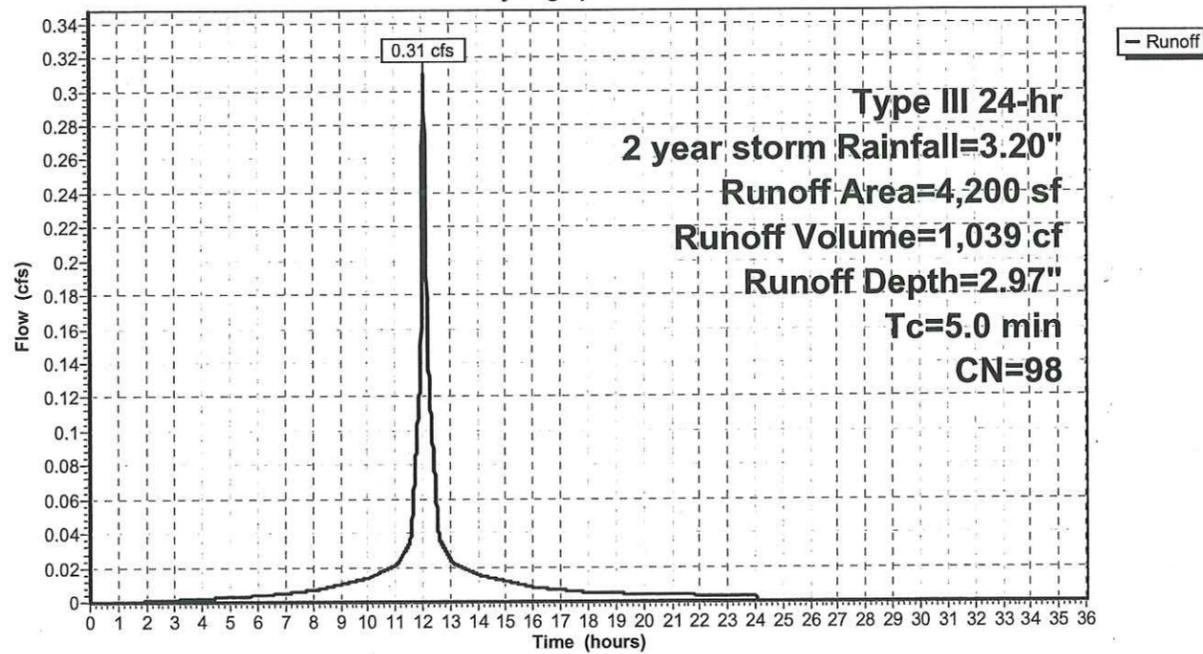
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 year storm Rainfall=3.20"

Area (sf)	CN	Description
4,200	98	Roofs, HSG C
4,200		100.00% Impervious Area

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

Subcatchment ROOF:

Hydrograph



53 Lawson Road

Type III 24-hr 10 year storm Rainfall=4.90"

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Time span=0.00-36.00 hrs, dt=0.01 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 EXIST: Runoff Area=19,360 sf 19.68% Impervious Runoff Depth=2.72"
Tc=10.0 min CN=79 Runoff=1.24 cfs 4,381 cf

Pond INF: Peak Elev=152.52' Storage=632 cf Inflow=0.48 cfs 1,632 cf
Outflow=0.03 cfs 1,632 cf

Subcatchment PROP: Runoff Area=15,160 sf 22.69% Impervious Runoff Depth=2.72"
Tc=10.0 min CN=79 Runoff=0.97 cfs 3,431 cf

Subcatchment ROOF: Runoff Area=4,200 sf 100.00% Impervious Runoff Depth=4.66"
Tc=5.0 min CN=98 Runoff=0.48 cfs 1,632 cf

Total Runoff Area = 38,720 sf Runoff Volume = 9,445 cf Average Runoff Depth = 2.93"
70.43% Pervious = 27,270 sf 29.57% Impervious = 11,450 sf

Summary for Subcatchment EXIST:

Runoff = 1.24 cfs @ 12.14 hrs, Volume= 4,381 cf, Depth= 2.72"

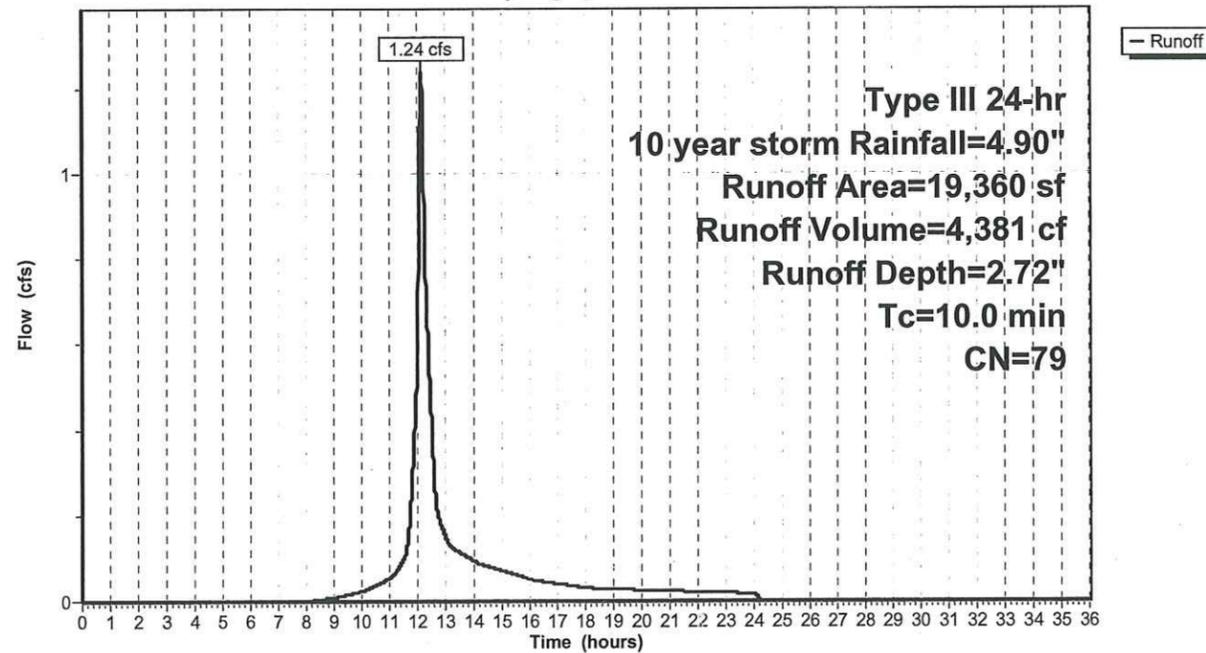
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 10 year storm Rainfall=4.90"

Area (sf)	CN	Description
1,950	98	Roofs, HSG C
1,060	98	Paved parking, HSG C
* 800	98	Patio/walks, HSG C
15,550	74	>75% Grass cover, Good, HSG C
19,360	79	Weighted Average
15,550		80.32% Pervious Area
3,810		19.68% Impervious Area

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

Subcatchment EXIST:

Hydrograph



53 Lawson Road

Type III 24-hr 10 year storm Rainfall=4.90"

Prepared by Frederick W. Russell, PE

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Summary for Pond INF:

Inflow Area = 4,200 sf, 100.00% Impervious, Inflow Depth = 4.66" for 10 year storm event
 Inflow = 0.48 cfs @ 12.07 hrs, Volume= 1,632 cf
 Outflow = 0.03 cfs @ 11.01 hrs, Volume= 1,632 cf, Atten= 93%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 11.01 hrs, Volume= 1,632 cf

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 152.52' @ 13.30 hrs Surf.Area= 1,359 sf Storage= 632 cf

Plug-Flow detention time= 148.5 min calculated for 1,632 cf (100% of inflow)
 Center-of-Mass det. time= 148.5 min (895.9 - 747.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	151.60'	883 cf	15.83'W x 85.85'L x 2.33'H Field A 3,172 cf Overall - 649 cf Embedded = 2,523 cf x 35.0% Voids
#2A	152.10'	649 cf	ADS_StormTech SC-310 +Cap x 44 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 44 Chambers in 4 Rows
		1,532 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	151.60'	1.020 in/hr Exfiltration over Horizontal area

Discarded OutFlow Max=0.03 cfs @ 11.01 hrs HW=151.62' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.03 cfs)

Pond INF: - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-310 +Cap (ADS StormTech®SC-310 with cap length)

Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf

Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap

34.0" Wide + 10.0" Spacing = 44.0" C-C Row Spacing

11 Chambers/Row x 7.12' Long +0.60' Cap Length x 2 = 79.52' Row Length +38.0" End Stone x 2 = 85.85' Base Length

4 Rows x 34.0" Wide + 10.0" Spacing x 3 + 12.0" Side Stone x 2 = 15.83' Base Width

6.0" Base + 16.0" Chamber Height + 6.0" Cover = 2.33' Field Height

44 Chambers x 14.7 cf = 648.6 cf Chamber Storage

3,171.8 cf Field - 648.6 cf Chambers = 2,523.2 cf Stone x 35.0% Voids = 883.1 cf Stone Storage

Chamber Storage + Stone Storage = 1,531.8 cf = 0.035 af

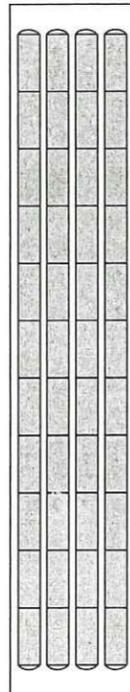
Overall Storage Efficiency = 48.3%

Overall System Size = 85.85' x 15.83' x 2.33'

44 Chambers

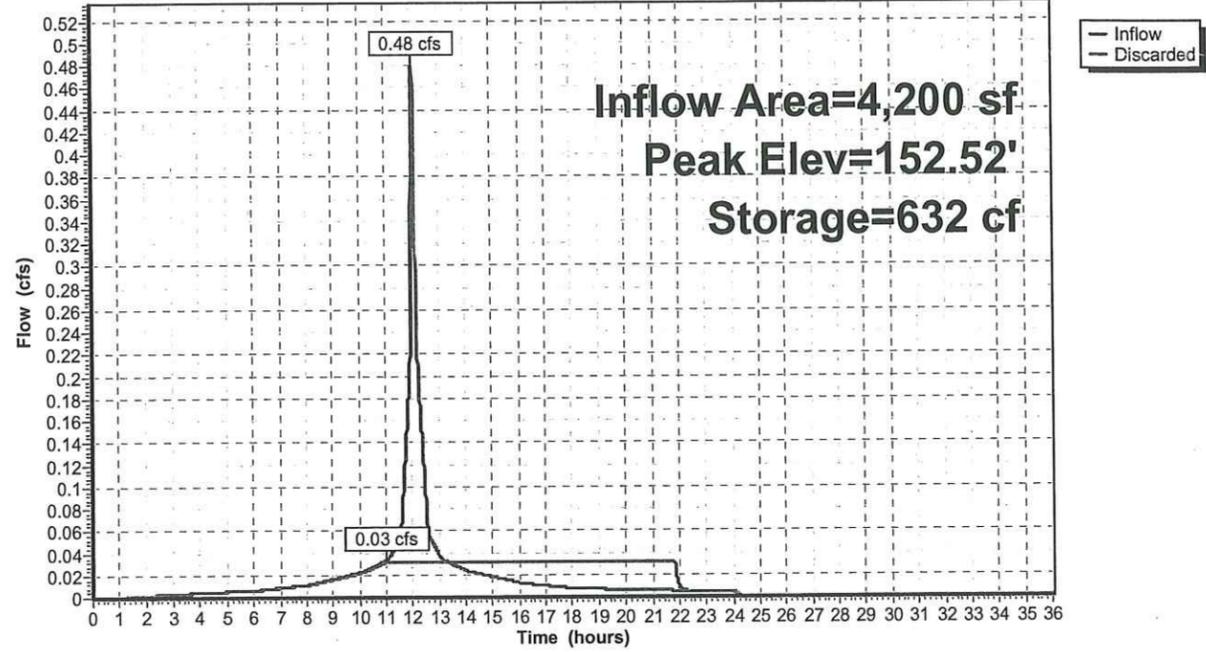
117.5 cy Field

93.5 cy Stone



Pond INF:

Hydrograph



Summary for Subcatchment PROP:

Runoff = 0.97 cfs @ 12.14 hrs, Volume= 3,431 cf, Depth= 2.72"

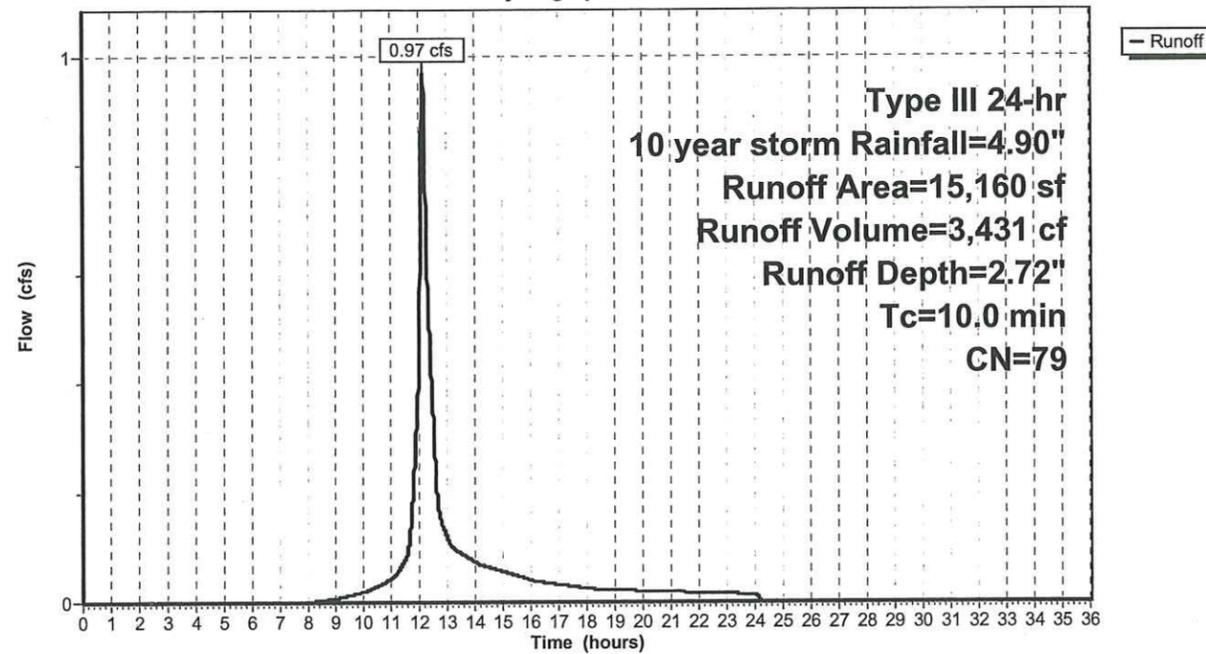
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 10 year storm Rainfall=4.90"

Area (sf)	CN	Description
2,010	98	Paved parking, HSG C
* 1,430	98	Patio/walks, HSG C
11,720	74	>75% Grass cover, Good, HSG C
15,160	79	Weighted Average
11,720		77.31% Pervious Area
3,440		22.69% Impervious Area

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

Subcatchment PROP:

Hydrograph



53 Lawson Road

Type III 24-hr 10 year storm Rainfall=4.90"

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Summary for Subcatchment ROOF:

Runoff = 0.48 cfs @ 12.07 hrs, Volume= 1,632 cf, Depth= 4.66"

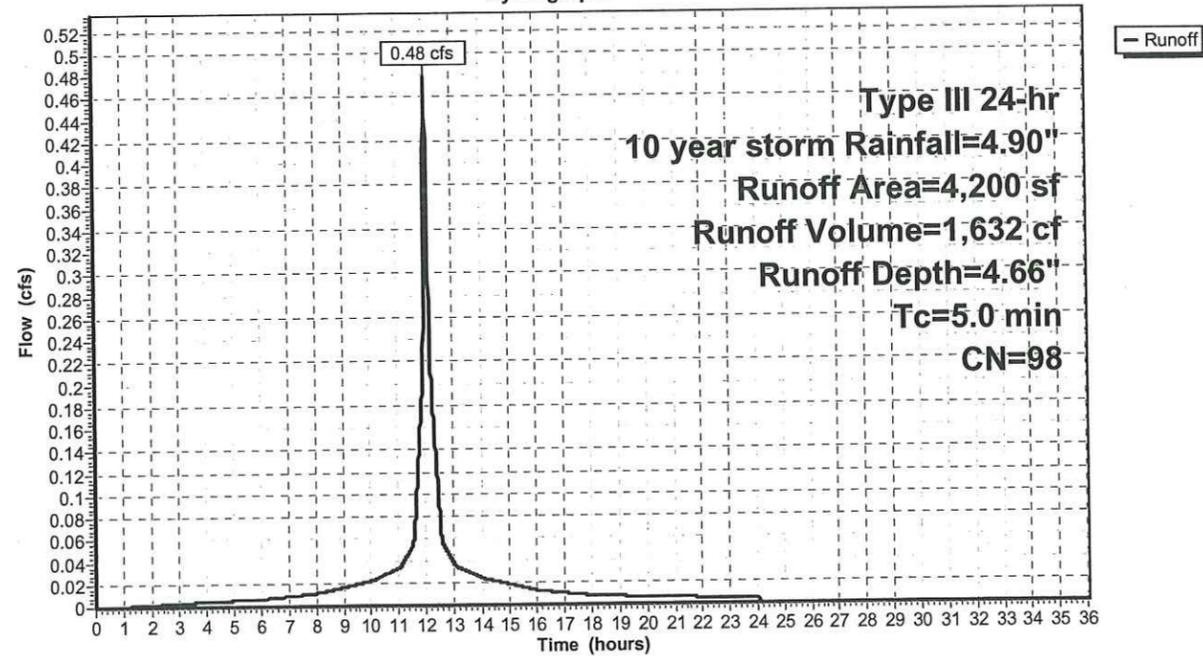
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 year storm Rainfall=4.90"

Area (sf)	CN	Description
4,200	98	Roofs, HSG C
4,200		100.00% Impervious Area

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

Subcatchment ROOF:

Hydrograph



53 Lawson Road

Type III 24-hr 25 year storm Rainfall=6.20"

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Time span=0.00-36.00 hrs, dt=0.01 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 EXIST: Runoff Area=19,360 sf 19.68% Impervious Runoff Depth=3.86"
Tc=10.0 min CN=79 Runoff=1.75 cfs 6,225 cf

Pond INF: Peak Elev=152.82' Storage=892 cf Inflow=0.61 cfs 2,087 cf
Outflow=0.03 cfs 2,087 cf

Subcatchment PROP: Runoff Area=15,160 sf 22.69% Impervious Runoff Depth=3.86"
Tc=10.0 min CN=79 Runoff=1.37 cfs 4,875 cf

Subcatchment ROOF: Runoff Area=4,200 sf 100.00% Impervious Runoff Depth=5.96"
Tc=5.0 min CN=98 Runoff=0.61 cfs 2,087 cf

Total Runoff Area = 38,720 sf Runoff Volume = 13,187 cf Average Runoff Depth = 4.09"
70.43% Pervious = 27,270 sf 29.57% Impervious = 11,450 sf

53 Lawson Road

Type III 24-hr 25 year storm Rainfall=6.20"

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Summary for Subcatchment EXIST:

Runoff = 1.75 cfs @ 12.14 hrs, Volume= 6,225 cf, Depth= 3.86"

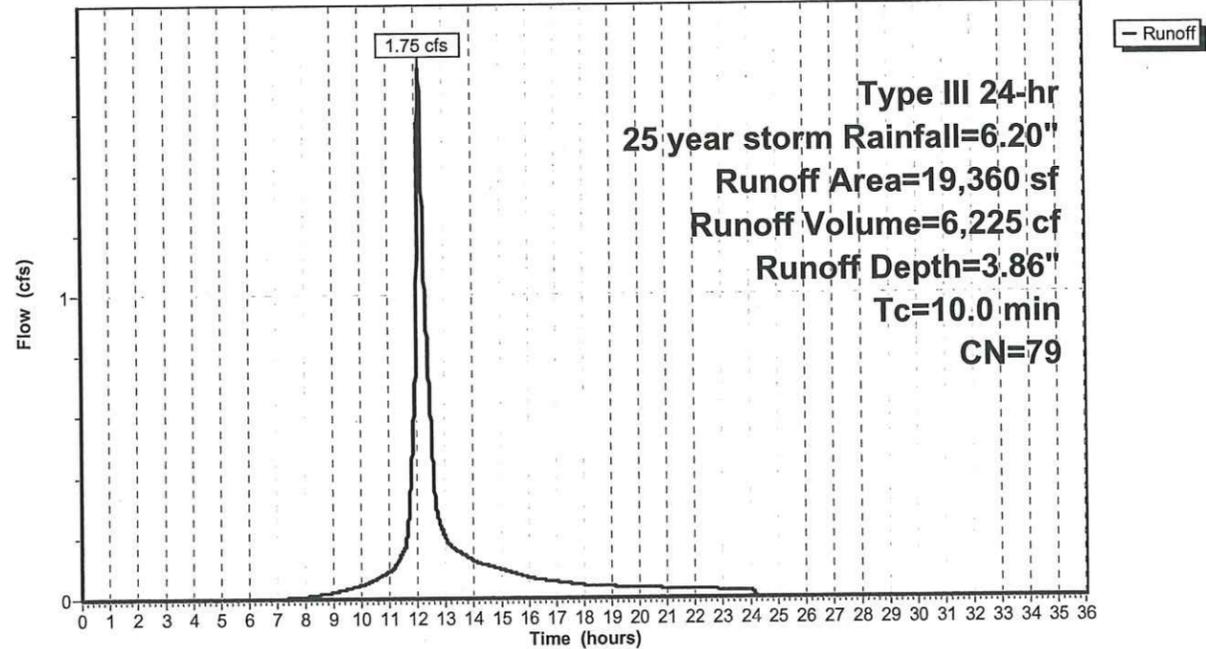
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25 year storm Rainfall=6.20"

Area (sf)	CN	Description
1,950	98	Roofs, HSG C
1,060	98	Paved parking, HSG C
* 800	98	Patio/walks, HSG C
15,550	74	>75% Grass cover, Good, HSG C
19,360	79	Weighted Average
15,550		80.32% Pervious Area
3,810		19.68% Impervious Area

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

Subcatchment EXIST:

Hydrograph



53 Lawson Road

Type III 24-hr 25 year storm Rainfall=6.20"

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Summary for Pond INF:

Inflow Area = 4,200 sf, 100.00% Impervious, Inflow Depth = 5.96" for 25 year storm event
 Inflow = 0.61 cfs @ 12.07 hrs, Volume= 2,087 cf
 Outflow = 0.03 cfs @ 10.40 hrs, Volume= 2,087 cf, Atten= 95%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 10.40 hrs, Volume= 2,087 cf

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 152.82' @ 13.90 hrs Surf.Area= 1,359 sf Storage= 892 cf

Plug-Flow detention time= 221.6 min calculated for 2,087 cf (100% of inflow)
 Center-of-Mass det. time= 221.6 min (965.3 - 743.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	151.60'	883 cf	15.83'W x 85.85'L x 2.33'H Field A 3,172 cf Overall - 649 cf Embedded = 2,523 cf x 35.0% Voids
#2A	152.10'	649 cf	ADS_StormTech SC-310 +Cap x 44 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 44 Chambers in 4 Rows
		1,532 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	151.60'	1.020 in/hr Exfiltration over Horizontal area

Discarded OutFlow Max=0.03 cfs @ 10.40 hrs HW=151.62' (Free Discharge)

↑ **1=Exfiltration** (Exfiltration Controls 0.03 cfs)

Pond INF: - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-310 +Cap (ADS StormTech®SC-310 with cap length)

Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf

Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap

34.0" Wide + 10.0" Spacing = 44.0" C-C Row Spacing

11 Chambers/Row x 7.12' Long +0.60' Cap Length x 2 = 79.52' Row Length +38.0" End Stone x 2 = 85.85' Base Length

4 Rows x 34.0" Wide + 10.0" Spacing x 3 + 12.0" Side Stone x 2 = 15.83' Base Width

6.0" Base + 16.0" Chamber Height + 6.0" Cover = 2.33' Field Height

44 Chambers x 14.7 cf = 648.6 cf Chamber Storage

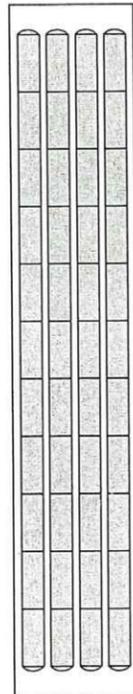
3,171.8 cf Field - 648.6 cf Chambers = 2,523.2 cf Stone x 35.0% Voids = 883.1 cf Stone Storage

Chamber Storage + Stone Storage = 1,531.8 cf = 0.035 af

Overall Storage Efficiency = 48.3%

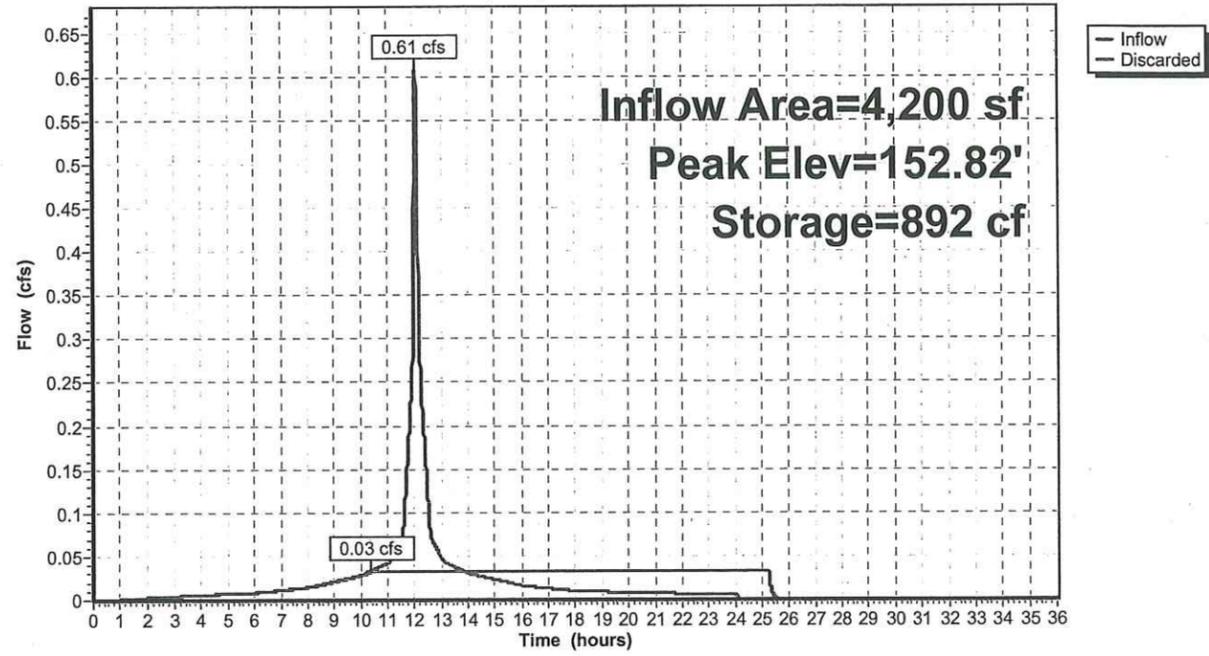
Overall System Size = 85.85' x 15.83' x 2.33'

44 Chambers
117.5 cy Field
93.5 cy Stone



Pond INF:

Hydrograph



53 Lawson Road

Type III 24-hr 25 year storm Rainfall=6.20"

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Summary for Subcatchment PROP:

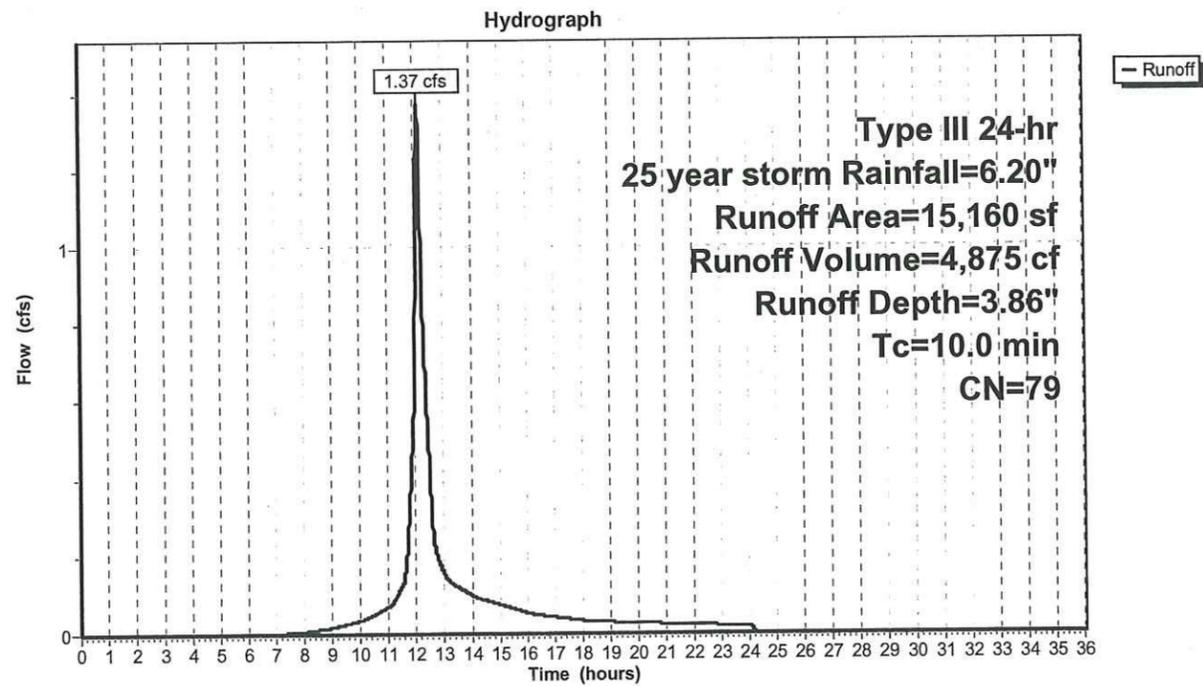
Runoff = 1.37 cfs @ 12.14 hrs, Volume= 4,875 cf, Depth= 3.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 year storm Rainfall=6.20"

Area (sf)	CN	Description
2,010	98	Paved parking, HSG C
* 1,430	98	Patio/walks, HSG C
11,720	74	>75% Grass cover, Good, HSG C
15,160	79	Weighted Average
11,720		77.31% Pervious Area
3,440		22.69% Impervious Area

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

Subcatchment PROP:



Summary for Subcatchment ROOF:

Runoff = 0.61 cfs @ 12.07 hrs, Volume= 2,087 cf, Depth= 5.96"

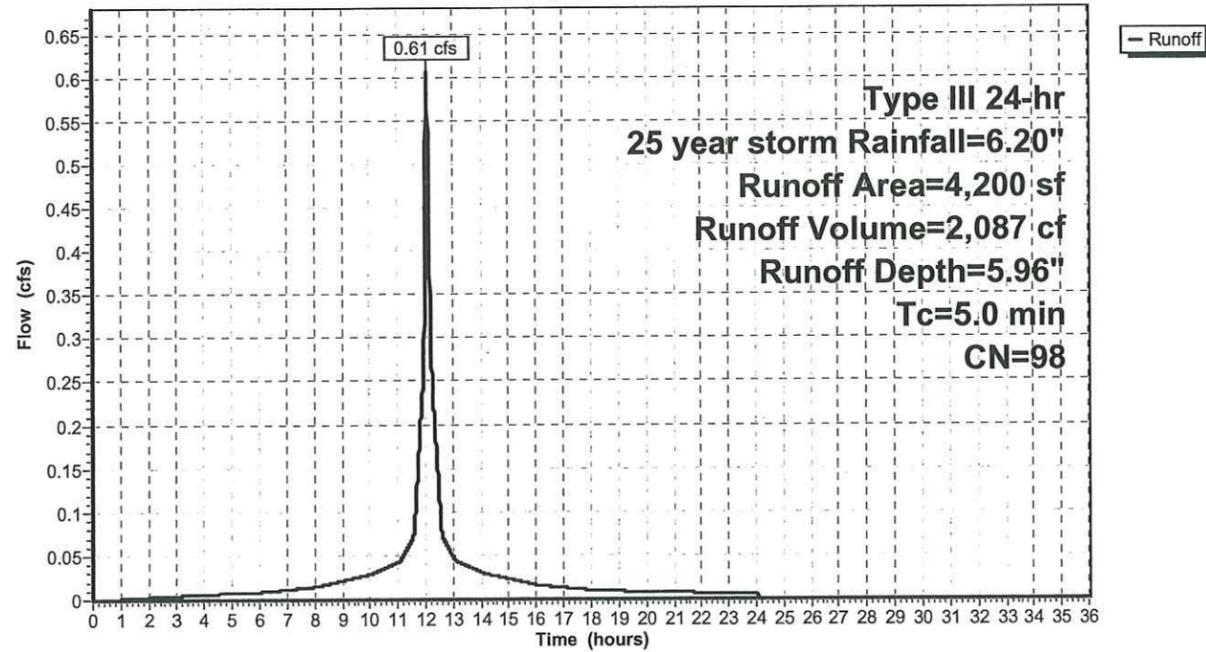
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25 year storm Rainfall=6.20"

Area (sf)	CN	Description
4,200	98	Roofs, HSG C
4,200		100.00% Impervious Area

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

Subcatchment ROOF:

Hydrograph



53 Lawson Road

Type III 24-hr 100 year storm Rainfall=8.90"

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Time span=0.00-36.00 hrs, dt=0.01 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 EXIST:

Runoff Area=19,360 sf 19.68% Impervious Runoff Depth=6.35"
Tc=10.0 min CN=79 Runoff=2.84 cfs 10,246 cf

Pond INF:

Peak Elev=153.90' Storage=1,517 cf Inflow=0.87 cfs 3,031 cf
Outflow=0.03 cfs 3,031 cf

Subcatchment PROP:

Runoff Area=15,160 sf 22.69% Impervious Runoff Depth=6.35"
Tc=10.0 min CN=79 Runoff=2.23 cfs 8,023 cf

Subcatchment ROOF:

Runoff Area=4,200 sf 100.00% Impervious Runoff Depth=8.66"
Tc=5.0 min CN=98 Runoff=0.87 cfs 3,031 cf

Total Runoff Area = 38,720 sf Runoff Volume = 21,300 cf Average Runoff Depth = 6.60"
70.43% Pervious = 27,270 sf 29.57% Impervious = 11,450 sf

Summary for Subcatchment EXIST:

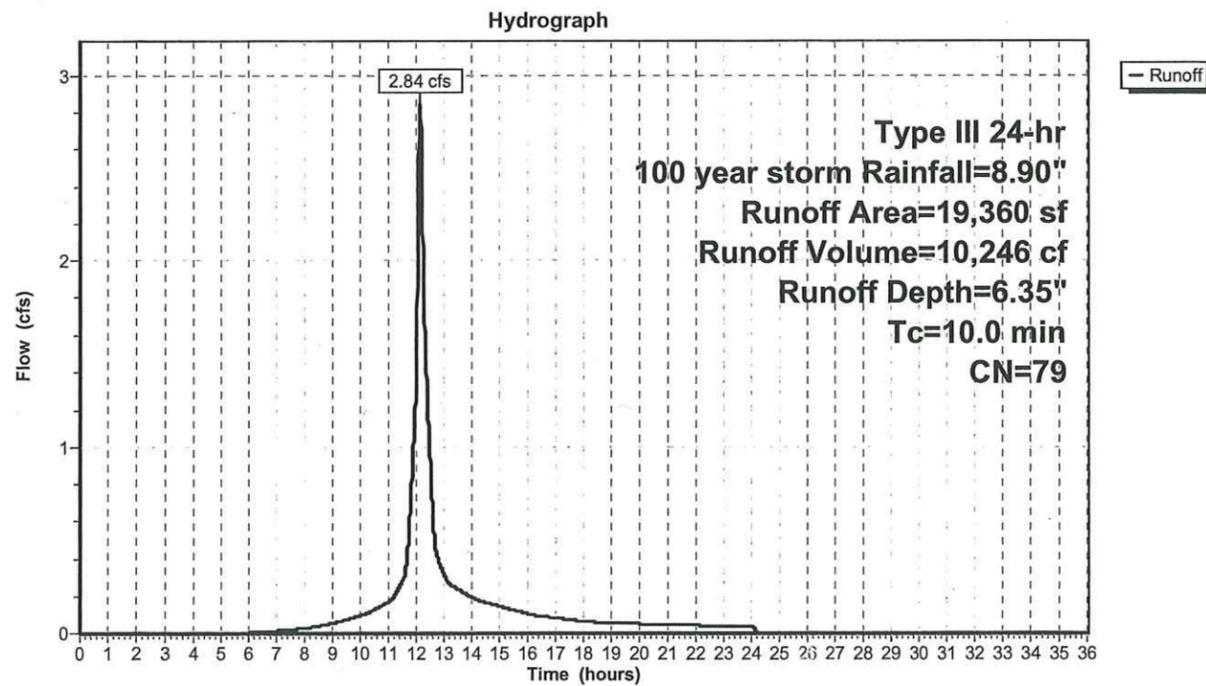
Runoff = 2.84 cfs @ 12.14 hrs, Volume= 10,246 cf, Depth= 6.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100 year storm Rainfall=8.90"

Area (sf)	CN	Description
1,950	98	Roofs, HSG C
1,060	98	Paved parking, HSG C
* 800	98	Patio/walks, HSG C
15,550	74	>75% Grass cover, Good, HSG C
19,360	79	Weighted Average
15,550		80.32% Pervious Area
3,810		19.68% Impervious Area

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

Subcatchment EXIST:



53 Lawson Road

Type III 24-hr 100 year storm Rainfall=8.90"

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Summary for Pond INF:

Inflow Area = 4,200 sf, 100.00% Impervious, Inflow Depth = 8.66" for 100 year storm event
 Inflow = 0.87 cfs @ 12.07 hrs, Volume= 3,031 cf
 Outflow = 0.03 cfs @ 9.21 hrs, Volume= 3,031 cf, Atten= 96%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 9.21 hrs, Volume= 3,031 cf

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 153.90' @ 15.11 hrs Surf.Area= 1,359 sf Storage= 1,517 cf

Plug-Flow detention time= 392.6 min calculated for 3,030 cf (100% of inflow)
 Center-of-Mass det. time= 392.6 min (1,131.6 - 739.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	151.60'	883 cf	15.83'W x 85.85'L x 2.33'H Field A 3,172 cf Overall - 649 cf Embedded = 2,523 cf x 35.0% Voids
#2A	152.10'	649 cf	ADS_StormTech SC-310 +Cap x 44 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 44 Chambers in 4 Rows
		1,532 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	151.60'	1.020 in/hr Exfiltration over Horizontal area

Discarded OutFlow Max=0.03 cfs @ 9.21 hrs HW=151.62' (Free Discharge)
 ↑**1=Exfiltration** (Exfiltration Controls 0.03 cfs)

Pond INF: - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-310 +Cap (ADS StormTech® SC-310 with cap length)

Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf

Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap

34.0" Wide + 10.0" Spacing = 44.0" C-C Row Spacing

11 Chambers/Row x 7.12' Long +0.60' Cap Length x 2 = 79.52' Row Length +38.0" End Stone x 2 = 85.85' Base Length

4 Rows x 34.0" Wide + 10.0" Spacing x 3 + 12.0" Side Stone x 2 = 15.83' Base Width

6.0" Base + 16.0" Chamber Height + 6.0" Cover = 2.33' Field Height

44 Chambers x 14.7 cf = 648.6 cf Chamber Storage

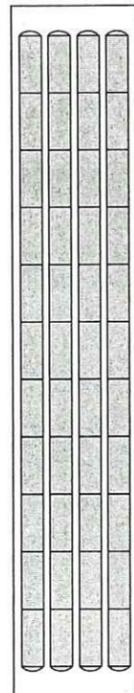
3,171.8 cf Field - 648.6 cf Chambers = 2,523.2 cf Stone x 35.0% Voids = 883.1 cf Stone Storage

Chamber Storage + Stone Storage = 1,531.8 cf = 0.035 af

Overall Storage Efficiency = 48.3%

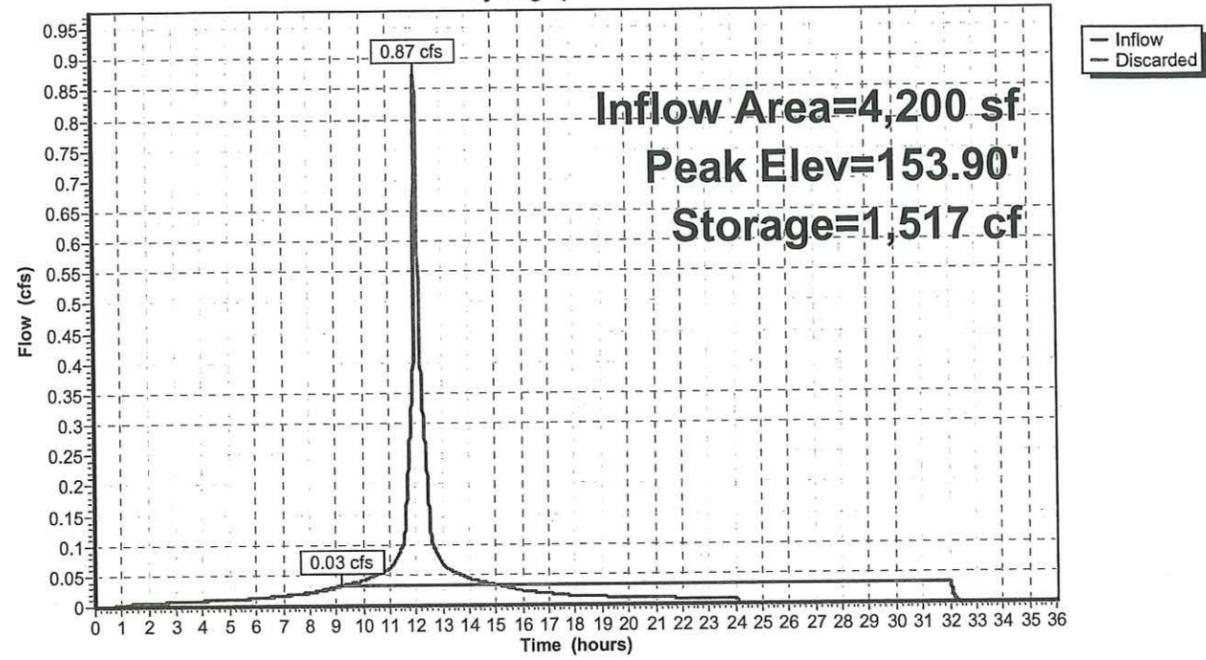
Overall System Size = 85.85' x 15.83' x 2.33'

44 Chambers
117.5 cy Field
93.5 cy Stone



Pond INF:

Hydrograph



Summary for Subcatchment PROP:

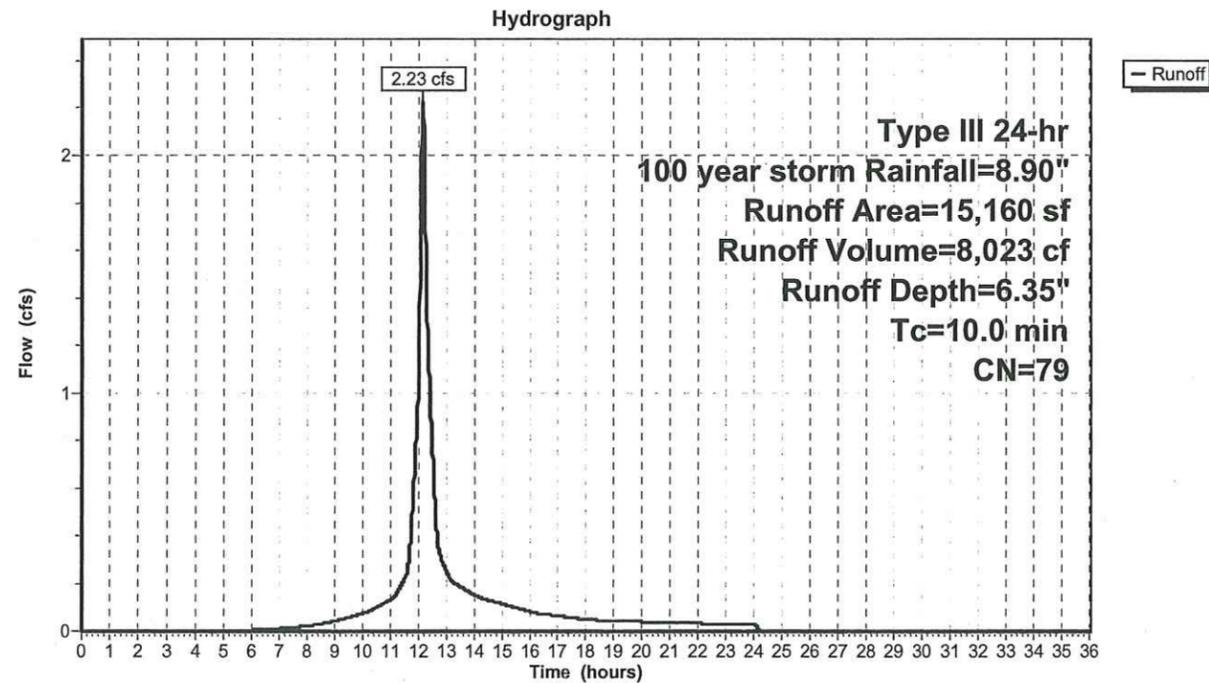
Runoff = 2.23 cfs @ 12.14 hrs, Volume= 8,023 cf, Depth= 6.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100 year storm Rainfall=8.90"

Area (sf)	CN	Description
2,010	98	Paved parking, HSG C
* 1,430	98	Patio/walks, HSG C
11,720	74	>75% Grass cover, Good, HSG C
15,160	79	Weighted Average
11,720		77.31% Pervious Area
3,440		22.69% Impervious Area

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

Subcatchment PROP:



53 Lawson Road

Type III 24-hr 100 year storm Rainfall=8.90"

Prepared by Frederick W. Russell, PE

HydroCAD® 10.00-24 s/n 04321 © 2018 HydroCAD Software Solutions LLC

Summary for Subcatchment ROOF:

Runoff = 0.87 cfs @ 12.07 hrs, Volume= 3,031 cf, Depth= 8.66"

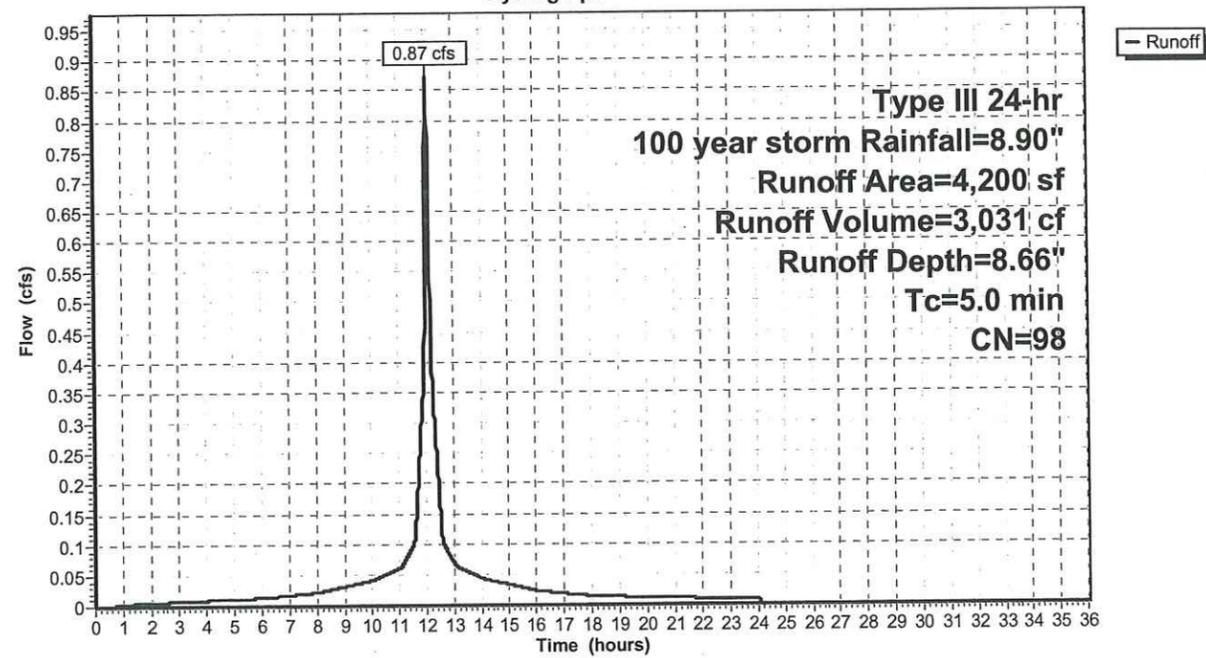
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 100 year storm Rainfall=8.90"

Area (sf)	CN	Description
4,200	98	Roofs, HSG C
4,200		100.00% Impervious Area

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

Subcatchment ROOF:

Hydrograph



53 LAWSON ROAD
STORMWATER OPERATION &
MAINTENANCE PLAN

Owner's & Applicant's Name(s) & Responsible for Maintenance:

Applicant/Owner:

Scott Penna
53 Lawson Road
Winchester, MA 01890

Stormwater System Description:

The proposed drainage system consists of one subsurface infiltration system containing forty-four (44) Stormtech SC-310© chambers. The proposed Infiltration System will recharge runoff generated by the proposed dwelling.

Planned Erosion and Sedimentation Control Measures During construction Activities

Erosion Control

Tubular sediment control shall consist of a 12-inch minimum diameter, 100% organic hessian fabric (burlap), filled with compost. Sediment control shall be placed along the limit of work as indicated on the plan. 1-in by 1-in by 3-ft oak stakes shall be installed at 8-ft maximum intervals. Ends of sediment control should overlap a minimum of six inches as per detail.

Drain Inlet Protection

Temporary storm inlet protection, filter fabric or silt sack, shall be placed in any existing catch basin in Lawson Road within 50 feet downstream of the project during construction. The purpose of the filter fabric and silt sacks is to prevent the inflow of sediments into the closed drainage system. The filter fabric and silt sacks shall remain in place until the proposed driveway is paved and a permanent vegetative cover is established, so that the transport of sediment is no longer visibly apparent. The filter fabric and silt sacks shall be inspected and maintained on a weekly basis, while in place.

Surface Stabilization

The surface of all disturbed areas shall be stabilized during and after construction. Temporary measures shall be taken during construction to prevent erosion and siltation. No construction sediment shall be allowed to enter the infiltration system. All disturbed slopes will be stabilized with a permanent vegetative cover. Some or all of the following measures will be utilized on this project as conditions may warrant.

- a. Temporary Seeding
- b. Temporary Mulching
- c. Permanent Seeding
- d. Placement of Sod
- e. Hydroseeding
- f. Placement of Hay
- g. Placement of Jute Netting

Subsurface Infiltration System:

Erosion controls (such as haybales or silt fencing) and temporary swales should be installed around the perimeter of the excavation to collect and/or divert runoff containing fines and sediments from entering the infiltration system during construction. The existing subgrade under the system bed area shall not be compacted or subject to excessive construction equipment traffic. Once the site is stabilized and final grade over the system is established, ensure that proper signs and/or barricades around the system are installed to avoid compaction or vehicular traffic over the system. During construction, the Infiltration System should be inspected weekly and after every major storm event. Ponded water inside the system (as visible from the observation wells) after several days often indicates that the bottom of the system is clogged. If the system is found to be clogged, flushing and vacuuming of the system using a sewer vacuum truck will be required (search “sewer vacuum truck services”).

Long-Term Inspection and Maintenance Measures After Construction

Erosion Control

Eroded sediments can adversely affect the performance of the stormwater management system. Eroding or barren areas should be immediately re-vegetated.

Subsurface Infiltration System:

The subsurface infiltration system should be inspected after the first several rainfall events or a few months after construction, after all major storms (>3.1 inches), and on regular bi-annual (April and October) scheduled dates. Ponded water inside the system (as visible from the observation wells) after several days often indicates that the bottom of the system is clogged. If the system is found to be clogged, flushing and vacuuming of the system using a sewer vacuum truck will be required (search “sewer vacuum truck services”).

Debris and Leaf Removal:

Roof gutters should be inspected every April and October and cleaned of any debris and leaves. Installation of “gutter guards” or similar material is recommended.

Erosion Control

Once all areas are stabilized, tubular sediment erosion control shall be cut and compost spread evenly. Burlap sock shall be removed and disposed of accordingly.

Other:

Additional maintenance specifications may also be referenced in the Order of Conditions issued by the Winchester Conservation Commission.

Hydrologic Soil Group—Middlesex County, Massachusetts
(53 Lawson Road)



Soil Map may not be valid at this scale.

Map Scale: 1:489 if printed on A landscape (11" x 8.5") sheet.

0 5 10 20 30 Meters

0 20 40 80 120 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

- Area of Interest (AOI)**
 Area of Interest (AOI)
- Soils**
- Soil Rating Polygons**
-  A
 -  A/D
 -  B
 -  B/D
 -  C
 -  C/D
 -  D
 -  Not rated or not available
- Soil Rating Lines**
-  A
 -  A/D
 -  B
 -  B/D
 -  C
 -  C/D
 -  D
 -  Not rated or not available
- Soil Rating Points**
-  A
 -  A/D
 -  B
 -  B/D
- Water Features**
-  Streams and Canals
- Transportation**
-  Rails
 -  Interstate Highways
 -  US Routes
 -  Major Roads
 -  Local Roads
- Background**
-  Aerial Photography
- Other Symbols:**
-  C
 -  C/D
 -  D
 -  Not rated or not available

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

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

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

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

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Middlesex County, Massachusetts
 Survey Area Data: Version 19, Sep 12, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 11, 2019—Oct 5, 2019

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
622C	Paxton-Urban land complex, 3 to 15 percent slopes	C	0.5	100.0%
Totals for Area of Interest			0.5	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Redmond Design Group

Plant schedule

Landscape plan
53 Lawson
Winchester ,ma

Penna residence

Plant schedule

Trees

Ac (1) Amelanchier canadensis 12-14 ft clump
Aj (1) Acer japonica "full moon" 5-6ft height
Ar (1) Acer rubrum. 2-2.5" cal
Ck (1) Cornus kousa 2-2.5 " cal.

Tc. (6) Tsuga canadensis 7-8 ft ht
10 ft oc

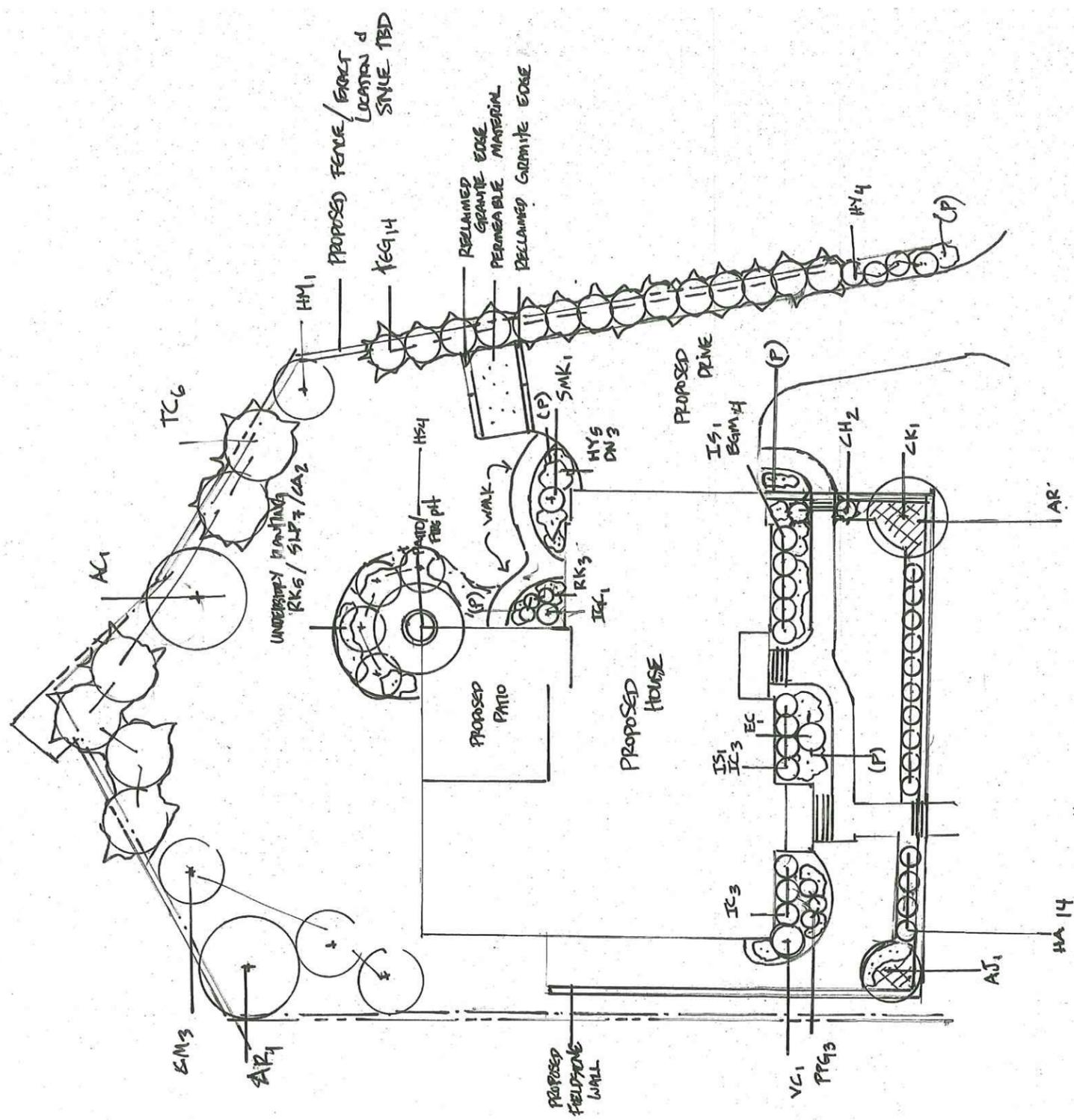
Shrubs

Bgm. (4) Buxus green mountain 7 gal
3 ft on center
Ca (2) Caryopteris "long wood blue" 5 gal. 4 ft oc
Ch (2) Chamaecyparis obtusa 'Nana Gracilis'.7 gal n/a
Cm(3) cornus mas 4-5 ft ht 7 ft oc
Dn (3) Deutzia "Nikko" 3 gal 3 ft oc
Ec. (1) Enkianthus campanulatus 4ft ht n/a
Ha (14) Hydrangea "annabelle" 3-4 ft 4 ft oc
Hm (1) Hamamelis mollis 4-5 ft ht 6 ft oc
Hs (4). Hibiscus Syriacus 5-6 ft ht 4 ft oc
Hy (5) Hypericum "hidcote". 2 gal 2 ft oc
Hy (4) Hydrangea bloom struck 5 gal
3 ft oc
Ic. (6). Ilex compacta 7 gal 3.5 ft oc
Igc(1) ilex Glabra compacta n/a
shamrock 7 gal
Is. (2). Ilex crenata "steeds". 7 ga
n/a
Ppg (3) Rhododendron purple gem
5 gal 3 ft oc
Rk. (8) Rosa Knockout 3 gal 3 ft oc
Smk (1) syringa miss Kim 7 gal n/a
Slp (7) spirea little princess 3 gal 3 ft o/c
Teg (14) Thuga emerald green 6-7 ft ht / 4 ft oc
Vc(1) Viburnum carlesii 4 ft ht n/a

Perennials 1 gallon
Assorted
Iris Siberica
Heuchera purple palace
Hemerocallis assorted
Coreopsis moonbeam
Anemone
Baptisia
Echinacea
Gaura
Nepeta
Salvia
Tiarella
Veronica

Ground cover 1 gallon
Bearberry
Iris cristata

Spacing
Perennials 1 ft on center
Groundcovers 1 ft on center



PENNA RESIDENCE
 53 LAWSON ROAD
 WINCHESTER, MA

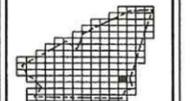
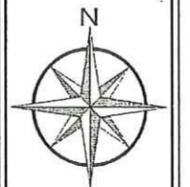
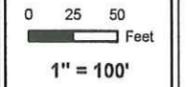
DESIGNED BY
 REDMOND DESIGN GROUP

DATE: MARCH 11, 2020
 LANDSCAPE PLAN



Legend

- Parcel Number
- Sublot Number
- Parcel Area (Square Feet)
- Address
- STREAM
- RAILROAD
- LAKE, POND, RIVER
- WET AREA



104	105	106
116	117	118
127	128	129

Map 117

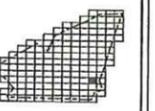
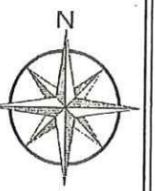
May 25, 2006



Legend

- Parcel Number
- Parcel Area (Square Feet)
- Address
- STREAM
- RAILROAD
- LAKE, POND, RIVER
- WET AREA

0 25 50 Feet
1" = 100'



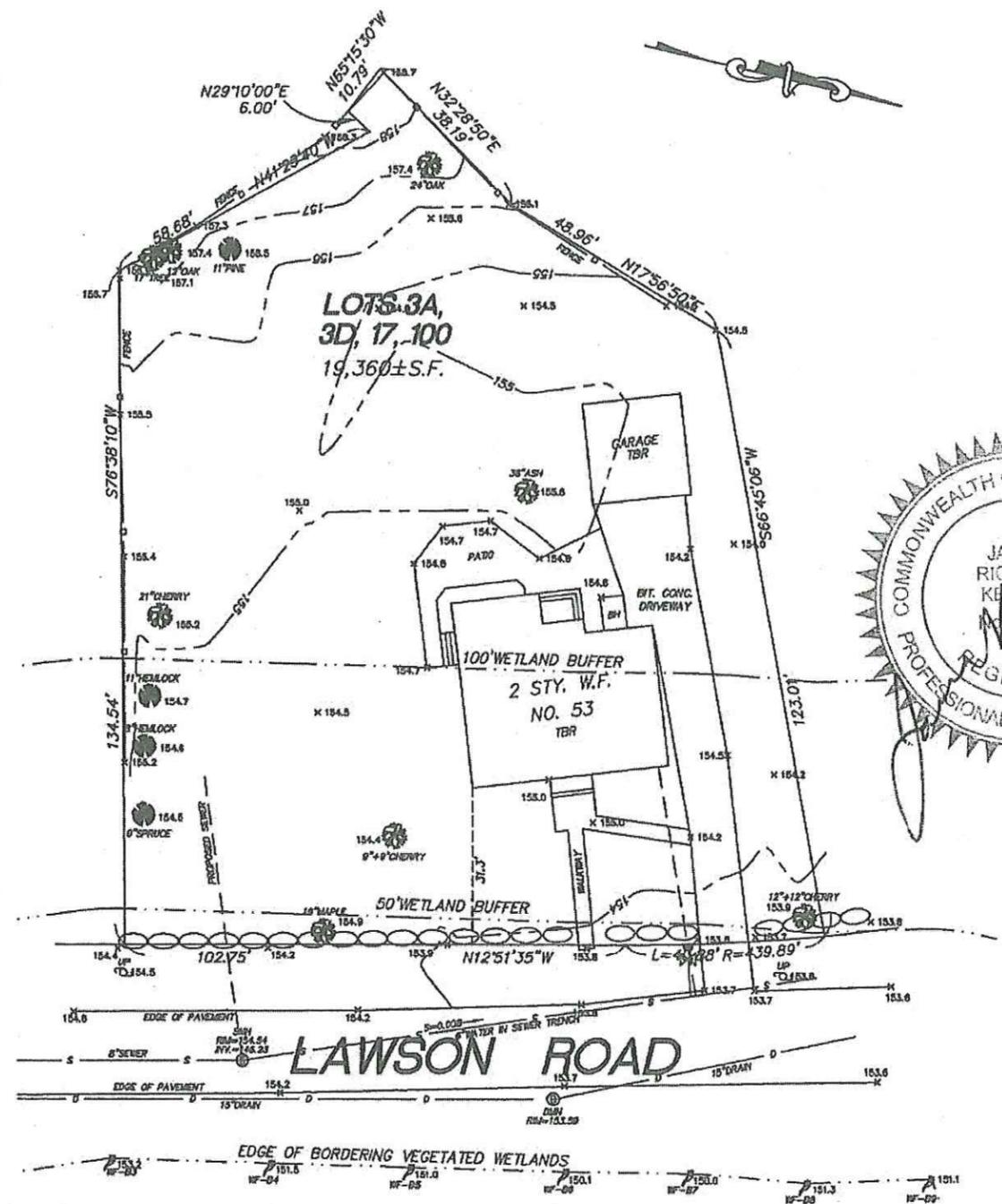
104	105	106
116	117	118
127	128	129



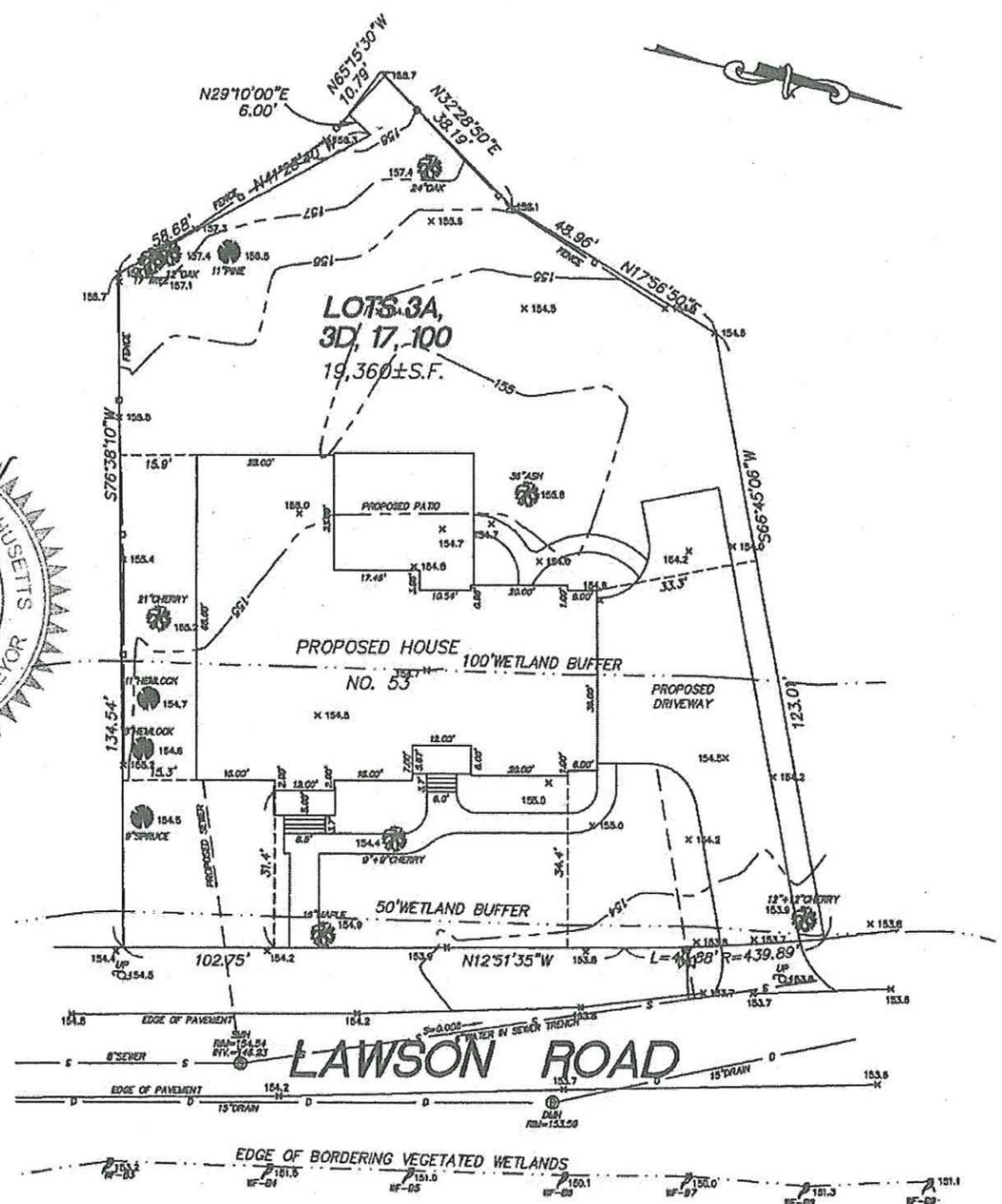
Yellow Indicates the subject property 53 Lawson Road (Including Garage)

Green Indicates an FAR of .36 or Greater (Including Garage)

Blue Indicates an FAR of .30 to .35 (Including Garage)



EXISTING



PROPOSED

- NOTES:**
- 1) WATER SERVICE TO BE 1" TYPE "K" COPPER.
 - 2) SEWER SERVICE TO BE 6" PVC.
 - 3) WATER AND SEWER LATERALS SHALL BE 10' APART (min.).
 - 4) PROPOSED SEWER AND WATER SERVICES TO BE CONNECTED TO MAINS.
 - 5) EXISTING SERVICES TO BE CUT & CAPPED AT THE MAIN.

LEGEND	
STY. W.F.	STORY WOOD FRAME
BIT.	BITUMINOUS
CONC.	CONCRETE
S.F.	SQUARE FEET
BH	BULKHEAD
TBR	TO BE REMOVED

EXISTING	PROPOSED
OPEN SPACE 89.9%	OPEN SPACE 78.3%
GREENSPACE 80.3%	GREENSPACE 60.5%
HARDSCAPE 9.6%	HARDSCAPE 17.7%

PER ENGINEER

PROPOSED	
AVERAGE GRADE	154.8
FIRST FLOOR	159.4
BASEMENT	150.6
PEAK	189.5
MAX. PEAK	194.8
MAX. HEIGHT	40'
GARAGE	157.2

I CERTIFY THAT THE BUILDINGS ARE LOCATED AS SHOWN AND THAT THIS PLOT PLAN IS THE RESULT OF AN INSTRUMENT SURVEY.

**PLOT PLAN
IN
WINCHESTER, MASS.**

SCALE: 1 IN. = 20 FT. MARCH 13, 2020

KEENAN SURVEY
8 WINCHESTER PLACE, SUITE 208
WINCHESTER, MASS. 01890
781-729-4213

Town of Lexington, MA
Wednesday, April 10, 2019

Chapter 120. Trees

[HISTORY: Adopted by the Annual Town Meeting of the Town of Lexington 4-11-2001 by Art. 34.
Amendments noted where applicable.]

§ 120-1. Findings.

The Town of Lexington finds that mature trees have aesthetic appeal, contribute to the distinct character of certain neighborhoods, improve air quality, provide glare and heat protection, reduce noise, aid in the stabilization of soil, provide natural flood- and climate-control, create habitats for wildlife, enhance property values and provide natural privacy to neighbors.

§ 120-2. Intent and purpose.

This bylaw is enacted for the purpose of preserving and protecting both public shade trees pursuant to General Law Chapter 87 and certain trees on portions of private property. To achieve these purposes, this bylaw establishes a Tree Committee and empowers the Committee, in conjunction with the Tree Warden, to regulate the removal and replacement of trees in certain circumstances, and to promote the planting and protection of trees throughout the Town. It is desirable that the Town plant more trees than are removed to compensate for tree losses and the length of time to maturity. The provisions of this bylaw, when pertaining to private property, apply only when there is major construction or demolition as defined below and only within setback areas.

§ 120-3. Definitions.

A. When used in this bylaw, the following definitions shall apply:

CALIPER

Diameter of a tree trunk (in inches) measured six inches above the ground for trees up to and including four-inch diameter, and 12 inches above the ground for larger trees.

DBH ("Diameter at Breast Height")

The diameter (in inches) of the trunk of a tree (or, for multiple trunk trees, the aggregate diameters of the multiple trunks) measured 4 1/2 feet from the existing grade at the base of the tree.

DEMOLITION

Any act of pulling down, destroying, removing or razing a building or commencing the work of total or substantial destruction with the intent of completing the same.

MAJOR CONSTRUCTION

Any construction of a structure on a vacant lot, or any construction of one or multiple structures or additions to structures on an existing lot, wherein there would result an increase of 50% or more in the total footprint of the new structure(s), when compared to the total footprint of the pre-existing structure(s).

PERSON

Any person, firm, partnership, association, corporation, company or organization of any kind including public or private utility and municipal department.

PROTECTED TREE

Any tree on private land, with a DBH of six inches or greater (or any multiple trunk tree with a DBH of 15 inches or greater), located in the setback area (or which, as determined by the Tree Warden, has any portion of the stem between six inches and 4 1/2 feet above grade actively growing into the setback area), provided that tree is not hazardous or undesirable as defined in the Tree Manual.

[Amended 4-4-2007 ATM by Art. 13]

PUBLIC SHADE TREE

Any tree within the public right-of-way except for state highways that, as determined by the Tree Warden, has any portion of the stem between six inches and 4 1/2 feet above grade actively growing into the public right-of-way.

REPLACEMENT INCH

The unit used when determining mandated replanting, which shall be calculated using the Replacement Inch Calculation Table in § 120-16.

[Added 4-5-2017 ATM by Art. 37]

SETBACK AREA

The minimum setback area around a lot shall be measured in accordance with the larger dimension of 30 feet from the front and 15 feet from the two sides and from the rear of the lot; and the minimum front yard, side yard and rear yard dimensional requirements under the Zoning Bylaw of the Town of Lexington. For the purposes of establishing the setback area in which the provisions of this bylaw shall apply, the measurement shall be from any point on any property line of the lot, to points along an imaginary line drawn representing the setback area as specified. Final judgments regarding required tree protections during construction shall be made by the Tree Warden where deviations from the setback are required.

[Amended 4-4-2007 ATM by Art. 13; 3-18-2013 ATM by Art. 30]

TOWN TREE

Any tree within a public park or open space under the jurisdiction of the Selectmen acting as park commissioners, on public school grounds, or on any other Town-owned land.

TREE REMOVAL

Any act that will cause a tree to die within a three-year period.

- B. The Tree Committee may provide other such definitions or terms in rules and regulations, approved by the Selectmen, deemed useful to implement this bylaw.

§ 120-4. Applicability.

- A. Applicability. The circumstances under which the tree protection, removal and replacement regulatory process delineated in this bylaw shall apply are as follows:
- (1) Proposed cutting (trunk, limbs or roots) of existing public shade trees on public and private ways (accepted or unaccepted streets) or of Town trees on Town-owned (or leased land being used as a public facility) by any person.
 - (2) Proposed demolition of an existing residential or nonresidential structure.
 - (3) Proposed major construction on an existing residential or nonresidential lot.

- B. For sites under the jurisdiction of the Planning Board or Zoning Board of Appeals, the Planning Board or Zoning Board of Appeals may, by including in their findings an explanation of the reasons, waive in part or in full this bylaw when they deem it necessary for the good of the community.
[Amended 3-23-2011 ATM by Art. 31]

§ 120-5. Tree Warden.

The Public Grounds Superintendent within the Department of Public Works shall serve as the Tree Warden unless another designee is appointed by the Selectmen.

- A. The duties or responsibilities of the Tree Warden shall conform to General Law Chapter 87 and shall include, but not be limited to, the following as may be further specified in this bylaw:
- (1) Management of all trees within public rights-of-way and adjacent to public buildings and commons; care and control of trees on Town property if so requested by the Selectmen, and on Town land owned by other departments such as Schools, Recreation and Conservation, if so requested by the respective department and approved by the Selectmen;
 - (2) Expending funds, in coordination with the Tree Committee, appropriated for planting trees on Town land under the jurisdiction of the Tree Warden;
 - (3) With recommendations from the Tree Committee, granting or denying and attaching reasonable conditions to all permits required under this bylaw;
 - (4) Work in conjunction with the Tree Committee to seek grants or other assistance concerning the preservation and maintenance of trees in Town;
 - (5) Development of rules, regulations, tree inventory, manuals and other data, in conjunction with the Tree Committee, to carry out the purposes and intent of this bylaw for approval and promulgation by the Selectmen;
 - (6) Enforcement of this bylaw;
 - (7) Appointment or removal of Deputy Tree Wardens.
- B. Moreover, the Selectmen may authorize the Tree Warden to undertake other responsibilities consistent with the purposes and intent of this bylaw.

§ 120-6. Tree Committee.

- A. The Town shall have a Tree Committee that consists of seven members as appointed by the Selectmen. For the first appointments, three members will serve one-year terms; two members will serve two-year terms; and two members shall serve three-year terms. All members up for renewal will then serve three-year terms.
- B. The Tree Committee shall have the following duties and responsibilities as may be further specified in this bylaw:
- (1) Development of rules, regulations, tree inventory, manuals and other data, in conjunction with the Tree Warden, to carry out the purposes and intent of this bylaw, for approval and promulgation by the Selectmen;
 - (2) Permit the removal of certain trees on private property upon appeal, by an applicant;

- (3) Public education and coordination with other Town Committees and civic groups to promote the purposes and intent of this bylaw;
- (4) Work in conjunction with the Tree Warden to seek grants or other assistance concerning the preservation and maintenance of trees in Town.

§ 120-7. Public shade trees and Town trees.

- A. Scope. A public shade tree or Town tree may not be cut, pruned, removed or damaged by any person or the Town until and unless the Tree Warden issues a written permit pursuant to this section.
- B. Procedures. Any person seeking to prune or remove a public shade tree or Town tree shall submit an application to the Tree Warden in accordance with any application requirements issued by the Tree Warden. The Tree Warden shall hold a public hearing on applications for removal, at the expense of the applicant, in accordance with the provisions outlined within General Law Chapter 87. The permit issued by the Tree Warden may specify schedules, terms, and conditions, including requiring the planting of replacement trees.
- C. Planting of trees on Public Land. Any person seeking to plant a tree on public land under the jurisdiction of the Tree Warden must obtain written permission from the Tree Warden. Such permission may specify schedules, terms, and conditions as deemed appropriate by the Tree Warden.

§ 120-8. Protected trees.

- A. Scope. The removal of protected trees in conjunction with demolition or major construction is prohibited unless authorized by the Tree Warden, or Tree Committee as set forth below.
- B. Procedures. When major construction or demolition is planned, the owner of the property shall submit to the Building Commissioner as part of the application for a building or demolition permit a site plan drawn and stamped by a registered land surveyor showing all existing trees on the property of six-inch DBH or greater.
[Amended 4-4-2007 ATM by Art. 13]
 - (1) If any protected trees will be removed or damaged in connection with major construction or demolition, the owner of the property shall submit a proposal for tree removal and mitigation to the Building Commissioner with the application for a building or demolition permit. Additionally, if any protected trees were removed during the 12 months preceding the application for the building or demolition permit, a tree removal and mitigation proposal regarding the protected trees already removed shall be submitted to the Building Commissioner. The proposal shall satisfy the mitigation requirements set forth below and any rules, regulations or manuals promulgated by the Selectmen. The Selectmen shall set an application fee. Such fee shall be at least \$5 per DBH inch of protected tree to be removed.
[Amended 3-19-2008 ATM by Art. 37]
 - (2) The Building Commissioner shall refer the tree proposal to the Tree Warden. The Tree Warden shall conduct a site visit. If the applicant's proposal is consistent with the mitigation requirements herein and the rules, regulations or manuals issued by the Selectmen, the Tree Warden will issue a permit within 10 business days of receipt by the Tree Warden of the proposal to authorize the tree work. If the proposal does not meet or satisfy these requirements, the Tree Warden shall so notify the applicant and deny the permit.
 - (3) An applicant may appeal the denial or grant of a tree permit to the Tree Committee. The Tree Committee shall conduct a public hearing on the appeal and shall give the public notice

thereof, at the expense of the applicant. Public notice shall include all persons owning land within 300 feet of any part of applicant's land at least 14 days before said hearing. The Tree Committee shall rule within 20 days of the public hearing.

- (4) Appeals of final decisions of the Tree Committee shall be to Superior Court and shall be limited to whether the decision was arbitrary or capricious.
- C. Mitigation. A protected tree shall not be removed unless at least one of the following provisions is satisfied:
- (1) Replanting of trees: such replanting shall be on the basis of one inch of caliper of new tree(s) for each replacement inch of DBH of tree(s) removed except that, to encourage the planting of large shade species, for each replanted tree listed in the Recommended Large Shade Trees list of the Lexington Tree Manual [Section V.B.5] replanting shall be on the basis of 1/2 inch of caliper of new tree(s) for each replacement inch of DBH of tree(s) removed and each replanted tree must have a minimum caliper of three inches. The replanting shall occur no later than 12 months after completion of the construction work, either on applicant's land or on land abutting applicant's land with express approval of the owner of such abutting land; [Amended 3-18-2013 ATM by Art. 30; 4-5-2017 ATM by Art. 37]
 - (2) Contribution into the Lexington Tree Fund, provided such fund is reauthorized to the extent required by law, or otherwise to the surplus revenue of the Town: such contribution shall be \$100 per replacement inch of protected tree or Town tree removed not already mitigated as per Subsection C(1); or [Amended 3-31-2004 ATM by Art. 34; 4-4-2005 ATM by Art. 16; 4-5-2017 ATM by Art. 37]
 - (3) (Reserved)^[1]
 [1] *Editor's Note: Former Subsection C(3), which required the applicant to demonstrate the desirability of removal of a protected tree, was repealed 3-22-2010 ATM by Art. 27.*
 - (4) All evergreens planted as replacement trees must be a minimum of six feet in height and may include, without limitation, pine, hemlock, spruce and fir. Low-growing evergreens shall not be accepted as replacement trees. [Added 4-4-2007 ATM by Art. 13]
- D. Trees not removed. Trees that are to be left on the site must be protected as specified in Section VIII B in the Tree Management Manual. [Added 4-4-2007 ATM by Art. 13; amended 4-5-2017 ATM by Art. 37].
- E. Failure to protect trees not removed. Trees left on site must be protected; and if not done so as required by this bylaw, the Tree Warden may impose the following: [Added 4-4-2007 ATM by Art. 13]
- (1) The Town may undertake tree protection measures and bill for any labor and material charges incurred.
 - (2) The Town may require replacement plantings larger than three inches in diameter to replace trees damaged during construction.
 - (3) The Town may hire an arborist whose charges will be billed to the owner/builder to ensure that trees left on the site will survive and remain healthy.
 - (4) The Town may impose fines as per the fine schedule in § 120-10 of this bylaw.

§ 120-9. Emergencies and exemptions.

Provisions of this bylaw shall not apply to:

- A. Emergency projects necessary for public safety, health and welfare as determined by the Director of Public Works or the Town Manager;
- B. Trees that are hazardous as determined in writing by the Tree Warden;
- C. (Reserved)^[1]
 - [1] *Editor's Note: Former Subsection C, which excluded invasive tree species, was repealed 3-22-2010 ATM by Art. 27.*
- D. Trees identified by the Commonwealth that pose a risk of disease or insect infestation.

§ 120-10. Enforcement.

- A. Any person violating this bylaw is subject to the penalties under Chapter 1, § 1-6 of the General Bylaws, General Law Chapter 87 (for violations concerning public shade trees) and other legal enforcement action by the Town. The Tree Warden is authorized to enforce the provisions of Chapter 1 of the General Bylaws and of General Law Chapter 87. Any other legal enforcement action shall be determined by the Selectmen in consultation with the Tree Committee, the Tree Warden and Town Counsel.
- B. Each instance in which a Town tree or a protected tree is removed without a tree permit shall constitute an offense under this bylaw. When Town trees or protected trees have been removed without a permit, mitigation (as outlined in § 120-8C of this bylaw) and the payment of fines (as outlined in the Fine Schedule at the end of this bylaw^[1]) shall be required.
 - [Amended 3-31-2004 ATM by Art. 34]
 - [1] *Editor's Note: See Ch. 1, General Provisions, Art. II, Use and Construction, § 1-6, Noncriminal disposition.*
- C. If mitigation and the payment of fines are completed in due time as determined by the Tree Warden, the project will be approved. If not completed, then each day beyond the determined and agreed upon completion date shall constitute a new and separate offense.
 - [Amended 3-31-2004 ATM by Art. 34]

§ 120-11. Rules and regulations.

The Selectmen may promulgate, after public notice and hearing, rules and regulations to effectuate the purposes and intent of this bylaw. Failure by the Selectmen to promulgate such rules and regulations shall not act to suspend or invalidate the effect of this bylaw.

§ 120-12. Severability.

If any section, paragraph or part of this bylaw is for any reason declared invalid or unconstitutional by any court, every other section, paragraph and part shall continue in full force.

§ 120-13. Relationship to other laws.

Nothing in this bylaw shall be construed to restrict, amend, repeal, or otherwise limit the application or enforcement of existing Town of Lexington bylaws or Commonwealth of Massachusetts laws.

§ 120-14. Funds.

[Added 3-31-2004 ATM by Art. 34; amended 4-4-2005 ATM by Art. 16; 4-4-2007 ATM by Art. 13]
Collection of voluntary contributions under this bylaw shall be deposited into the Lexington Tree Fund, provided such fund is annually reauthorized, or otherwise to the surplus revenue of the Town. The Tree Warden, with input from the Tree Committee, will request use of these funds for tree planting, transplanting, and other tree-related needs. The request to expend these funds will be approved by the Board of Selectmen.

§ 120-15. Tree Management Manual.

[Added 4-4-2007 ATM by Art. 13]
The Lexington Tree Management Manual will be used as the standard for tree planting, maintenance and protection in the Town.

§ 120-16. Replacement Inch Calculation Table.

[Added 4-5-2017 ATM by Art. 37]

Replacement Inch Calculation Table

Level	Removed Tree	Replacement Inches
Level 1:	Less than 24" DBH; or a tree of any size to be removed in order to comply with a condition, restriction or requirement of a local, state, or federal permit	Same as inches removed
Level 2:	24" DBH and larger	2 times inches removed