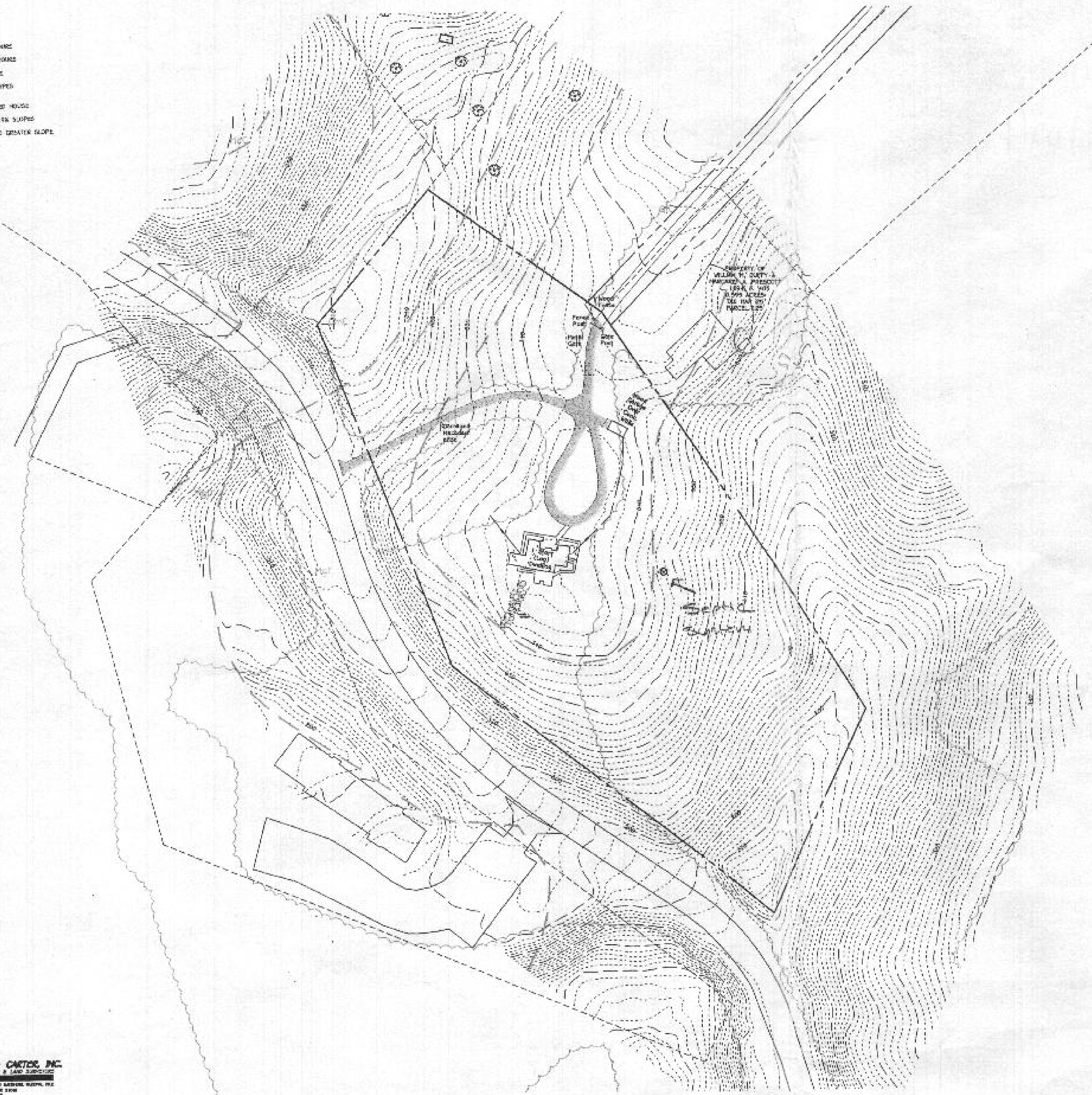
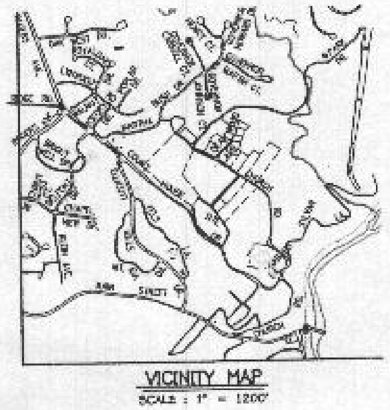
LEGEND

- EXISTING 2' CONTOURS
- EXISTING 10' CONTOURS
- EXISTING TREE LINE
- SOIL LINES AND TYPES
- DENOTES PROPOSED HOUSE
- DENOTES 15%-24.9% SLOPES
- DENOTES 25% AND GREATER SLOPE





VICINITY MAP
SCALE : 1" = 1200'

GENERAL NOTES:

THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
ALL HOUSE SITES SHOWN COMPLY WITH MINIMUM BUILDING RESTRICTION REGULATIONS.
TOPOGRAPHY SHOWN IS FROM HOWARD COUNTY GIS TOPOGRAPHY AT 2' CONTOUR INTERVAL AND SUPPLEMENTED BY FISHER, COLLINS & CARTER, INC.
BOUNDARY OUTLINE BASED ON AVAILABLE DEED OF RECORD WITHOUT THE THE BENEFIT OF A FIELD SURVEY AT THIS TIME.
ANY CHANGES TO A PRIVATE SEWERAGE EASEMENT SHALL REQUIRE A REVISED PERC CERTIFICATION PLAN.
DEED REFERENCE LIBER 2065 FOLIO 185.

REVISED
Date: 1/17/2020 B19004349
Comments: Revised to Show
★ the comments below
EXISTING WELL IN BASEMENT WILL BE ABANDONED AND PUBLIC WATER CONNECTION MADE.
LG

SOILS LEGEND

SOIL	NAME	CLASS
GfC	Gladstone-Urban land complex, 8 to 15 percent slopes	B
GmC	Glenville silt loam, 8 to 15 percent slopes	C
MaC	Manor loam, 8 to 15 percent slopes	B
MaD	Manor loam, 15 to 25 percent slopes	B
MgD	Manor-[illegible] sandy loams, 15 to 25 percent slopes, rocky	B
MgF	Manor-[illegible] sandy loams, 25 to 65 percent slopes, rocky	B

3534 CHURCH ROAD

TAX MAP #25 GRID No. 7
2ND ELECTION DISTRICT
SCALE: 1"=50'

PARCEL: 161
HOWARD COUNTY, MARYLAND
DATE: NOVEMBER 14, 2019

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

LARRY & HEATHER GAETANO CABIN RENOVATION PROJECT

3534 CHURCH ROAD, ELLICOTT CITY MD, 21043

Larry Gaetano
Stirling Homes

REV.	DATE	DESCRIPTION

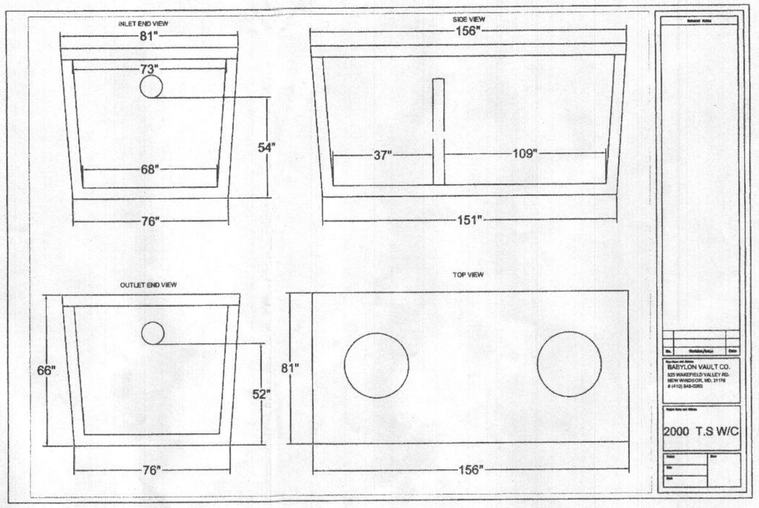
NO.	DATE	ISSUE NOTE

Date: November 2019

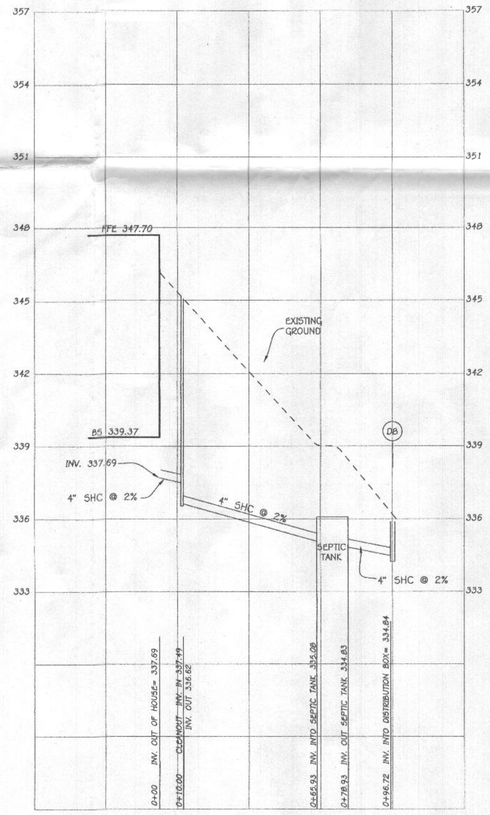
Site Plan

A0.1

1. ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
2. THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
3. THE PROPERTY IS CONNECTED TO PUBLIC WATER.
4. ALL WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.

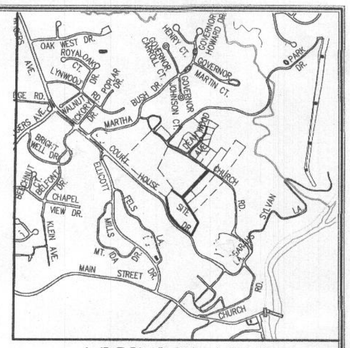


PLAN
SCALE: 1" = 30'

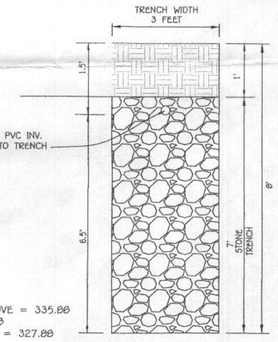


SEPTIC PROFILE
SCALE: 1"=30'

FFE 347.70
BSE 339.37
INV. OUT OF HOUSE = 337.69
PROP. GROUND AT CLEANOUT #1 = 345.7
INV. INTO CLEANOUT = 337.49
INV. OUT OF CLEANOUT = 336.62
EX. GROUND AT SEPTIC TANK = 339
PROP. GRADE ABOVE SEPTIC TANK = 339
TOP OF SEPTIC TANK = 336.08
INV. INTO SEPTIC TANK = 335.08
INV. OUT OF SEPTIC TANK = 334.83
EX. GROUND AT DISTRIBUTION BOX = 335.88
INV. INTO DISTRIBUTION BOX = 334.48
INV. OUT OF DISTRIBUTION BOX = 334.38



VICINITY MAP
SCALE: 1" = 1200'



INITIAL TRENCH DETAIL
SCALE : 1"=2'

TRENCH DATA:

TRENCH 1:
EX. GROUND ABOVE = 335.08
INV. IN = 334.38
BOTTOM TRENCH = 327.08

INITIAL SYSTEM

SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 2 BEDROOMS
LOADING RATE = 2 BEDROOMS X 150 GPD/BEDROOM = 300 GPD
APPLICATION RATE = 0.8
EFFECTIVE SIDEWALL BEGINS AT 3 FEET
TRENCH DEPTH = 8 FEET
TRENCH WIDTH (W) = 3 FEET
EFFECTIVE DEPTH (D) = 5 FEET
SF OF DRAINFIELD = 300 GPD / 0.8 = 375 SF
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = (W+2)/(W+1+2D)=(3+2)/(3+1+(2x5))=0.357
TRENCH LENGTH = 375 SF x .45 = 44.63 FEET
TRENCH SPACING = 2D+W = ((2+5) + 3) = 13' USE 13'

1ST REPLACEMENT SYSTEM

SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 2 BEDROOMS
LOADING RATE = 2 BEDROOMS X 150 GPD/BEDROOM = 300 GPD
APPLICATION RATE = 0.8
EFFECTIVE SIDEWALL BEGINS AT 3 FEET
TRENCH DEPTH = 8 FEET
TRENCH WIDTH (W) = 3 FEET
EFFECTIVE DEPTH (D) = 5 FEET
SF OF DRAINFIELD = 300 GPD / 0.8 = 375 SF
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = (W+2)/(W+1+2D)=(3+2)/(3+1+(2x5))=0.357
TRENCH LENGTH = 375 SF x .45 = 44.63 FEET
TRENCH SPACING = 2D+W = ((2+5) + 3) = 13' USE 13'

2ND REPLACEMENT SYSTEM

SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 2 BEDROOMS
LOADING RATE = 2 BEDROOMS X 150 GPD/BEDROOM = 300 GPD
APPLICATION RATE = 0.8
EFFECTIVE SIDEWALL BEGINS AT 3 FEET
TRENCH DEPTH = 8 FEET
TRENCH WIDTH (W) = 3 FEET
EFFECTIVE DEPTH (D) = 5 FEET
SF OF DRAINFIELD = 300 GPD / 0.8 = 375 SF
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = (W+2)/(W+1+2D)=(3+2)/(3+1+(2x5))=0.357
TRENCH LENGTH = 375 SF x .45 = 44.63 FEET
TRENCH SPACING = 2D+W = ((2+5) + 3) = 13' USE 13'

Approved Septic System Plan
Howard County Health Department
Signature 4/21/2020 Date

0' 30' 60' 120'
SCALE: 1" = 30'

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

OWNER/DEVELOPER
NV HOMES
9720 PATUXENT WOODS DRIVE
COLUMBIA, MD 21046
410-379-5956

STATE OF MARYLAND
ALDO MICHAEL VITUCCI
No. 20748
PROFESSIONAL ENGINEER

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2021.

Signature Of Professional Engineer 4/3/2020 DATE

SEPTIC SYSTEM INSTALLATION SITE PLAN
3534 CHURCH ROAD

TAX MAP NO.: 25 GRID NO.: 7 PARCEL NO.: 161
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1"=30' DATE: MARCH 18, 2020
SHEET 1 OF 1

I:\2019\19048\Engineering\Dwgs\19048 Septic Install Plan3-18-20.dwg, Layout1, 1:1

LARRY & HEATHER GAETANO
CABIN RENOVATION PROJECT

3534 CHURCH ROAD, ELLICOTT CITY MD, 21043

Larry Gaetano

Stirling Homes

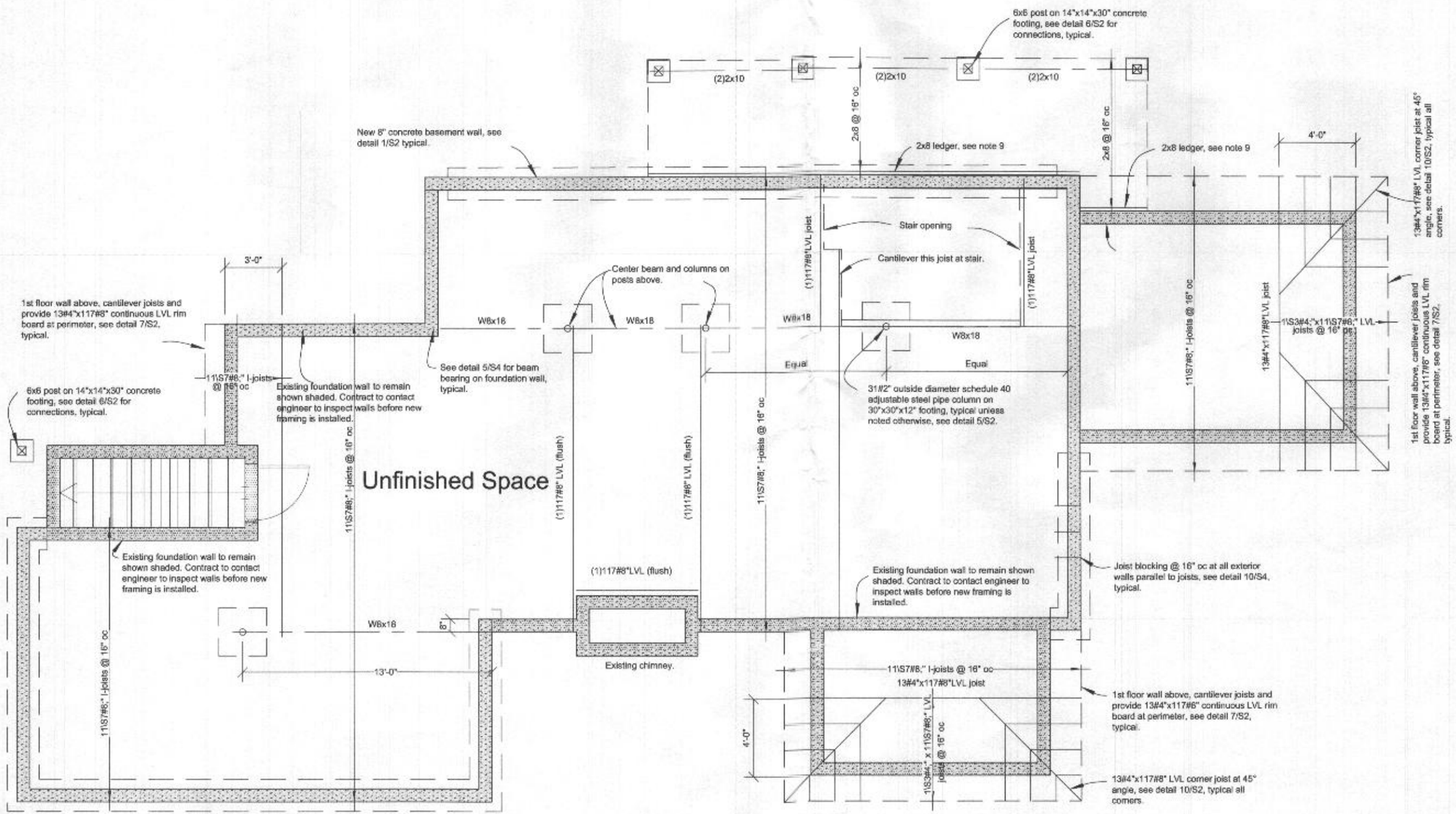
REV.	DATE	DESCRIPTION

NO.	DATE	ISSUE NOTE

November 2019

Gaetano 3534 Church Road

A1.0



EXISTING FOOTPRINT

1 Existing Basement
Scale: 1:30

See wall bracing notes for exterior wall framing, typical.

LARRY & HEATHER GAETANO CABIN RENOVATION PROJECT

3534 CHURCH ROAD, ELLICOTT CITY MD, 21043

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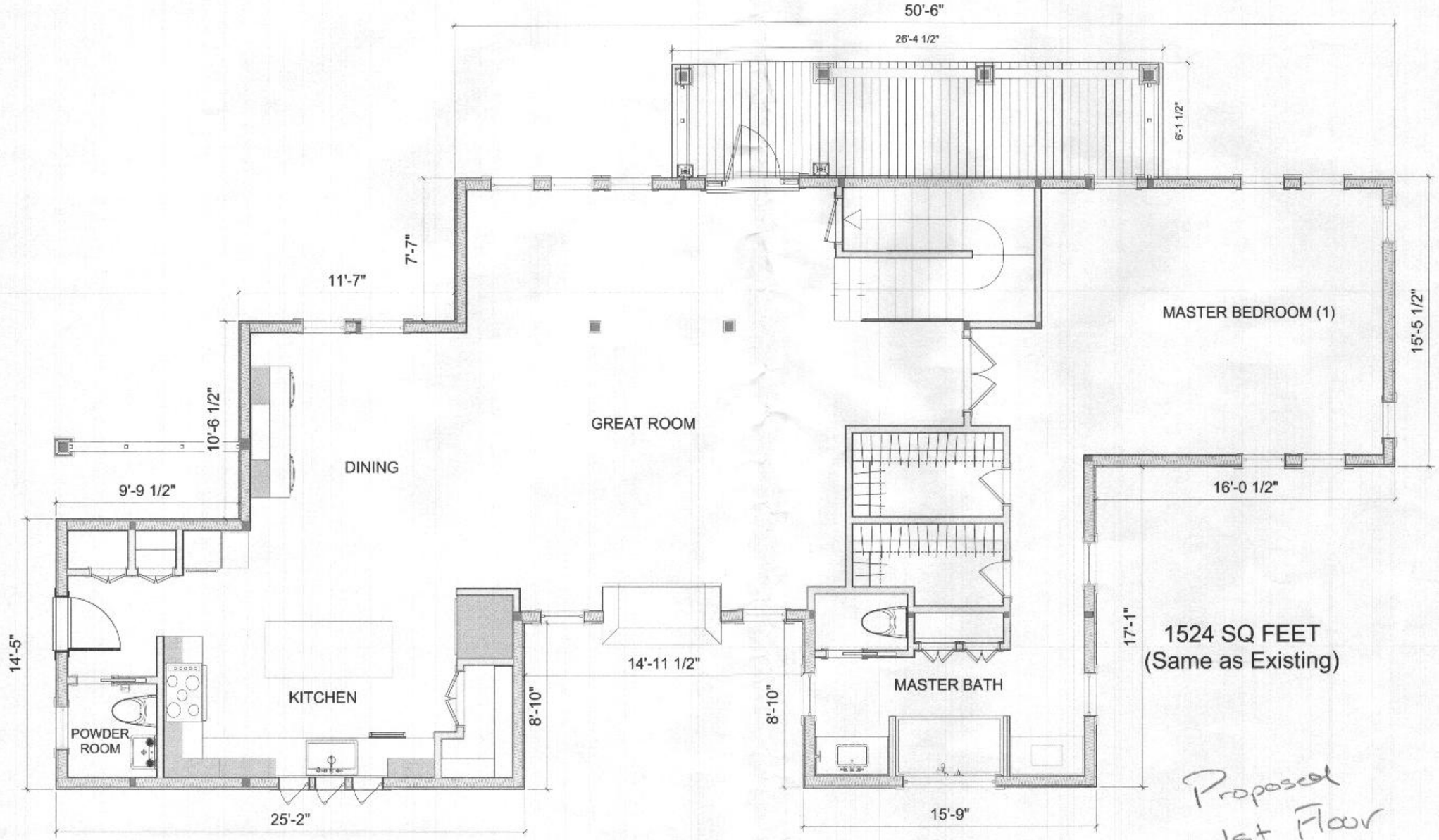
Existing Basement Plan

A1.1



1 First Floor Plan
Scale: 1:30

LARRY & HEATHER GAETANO
CABIN RENOVATION PROJECT

3534 CHURCH ROAD, ELLICOTT CITY MD, 21043

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NO.	DATE	DESCRIPTION

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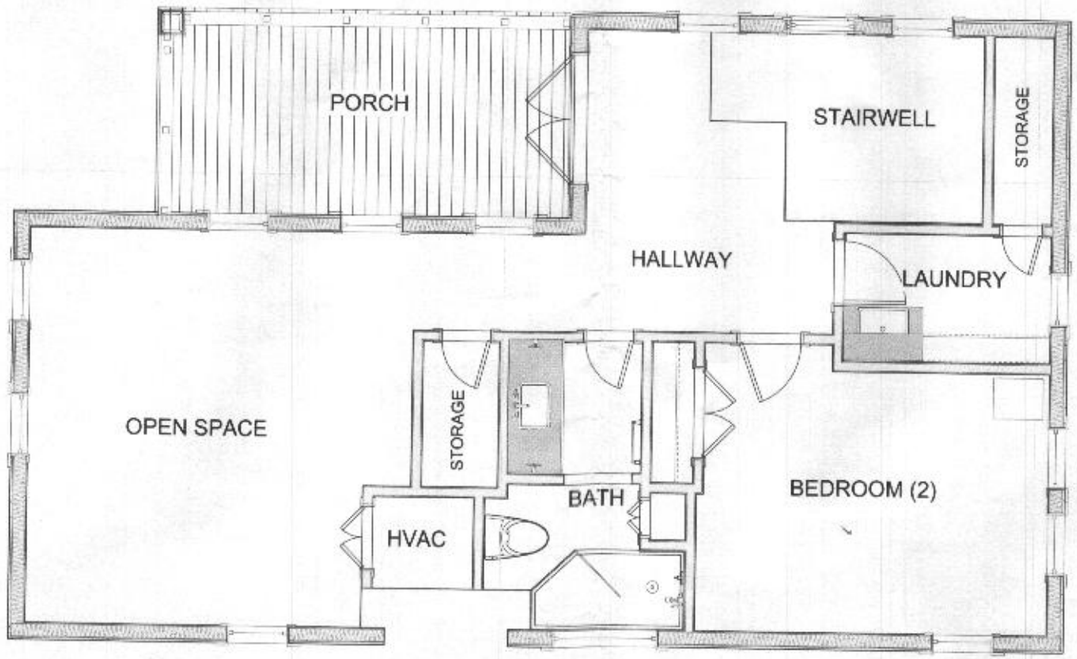
November 2018

First Floor Plan

A1.2



634 SQUARE FEET
(New Construction)

Proposed 2nd Floor

1 Second Floor Plan
Scale: 1:30

LARRY & HEATHER GAETANO
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3534 CHURCH ROAD, ELLICOTT CITY MD, 21043

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REV	DATE	DESCRIPTION

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November 2019

Second Floor Plan

A1.3

1 Front Elevation
Scale: 1:30

LARRY & HEATHER GAETANO
CABIN RENOVATION PROJECT

3534 CHURCH ROAD, ELLICOTT CITY MD, 21043

Larry Gaetano

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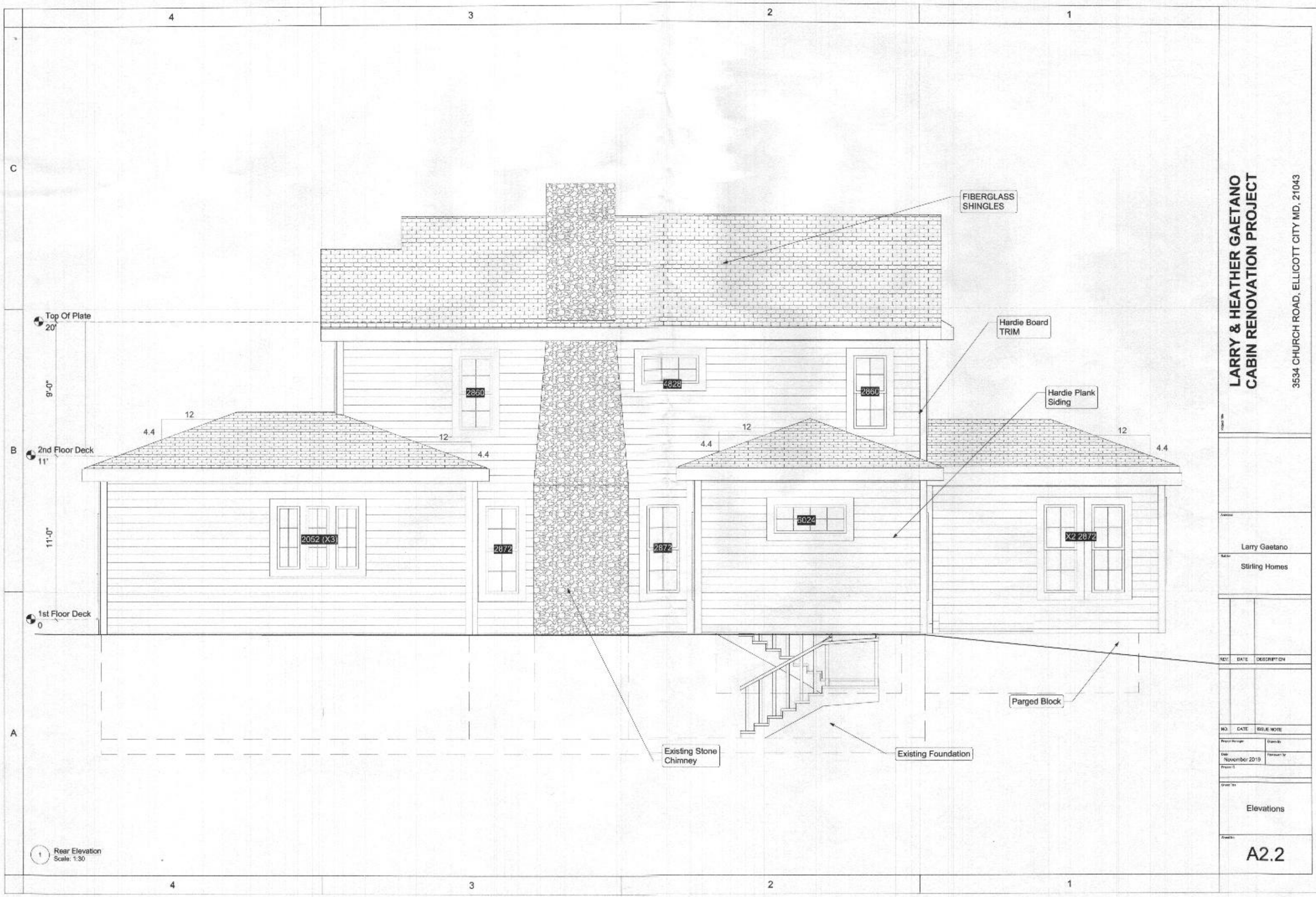
REV.	DATE	DESCRIPTION

NO.	DATE	ISSUE NOTE

November 2019

Elevations

A2.1



1 Rear Elevation
Scale: 1:30

LARRY & HEATHER GAETANO
CABIN RENOVATION PROJECT

3534 CHURCH ROAD, ELLICOTT CITY MD, 21043

Larry Gaetano

Stirling Homes

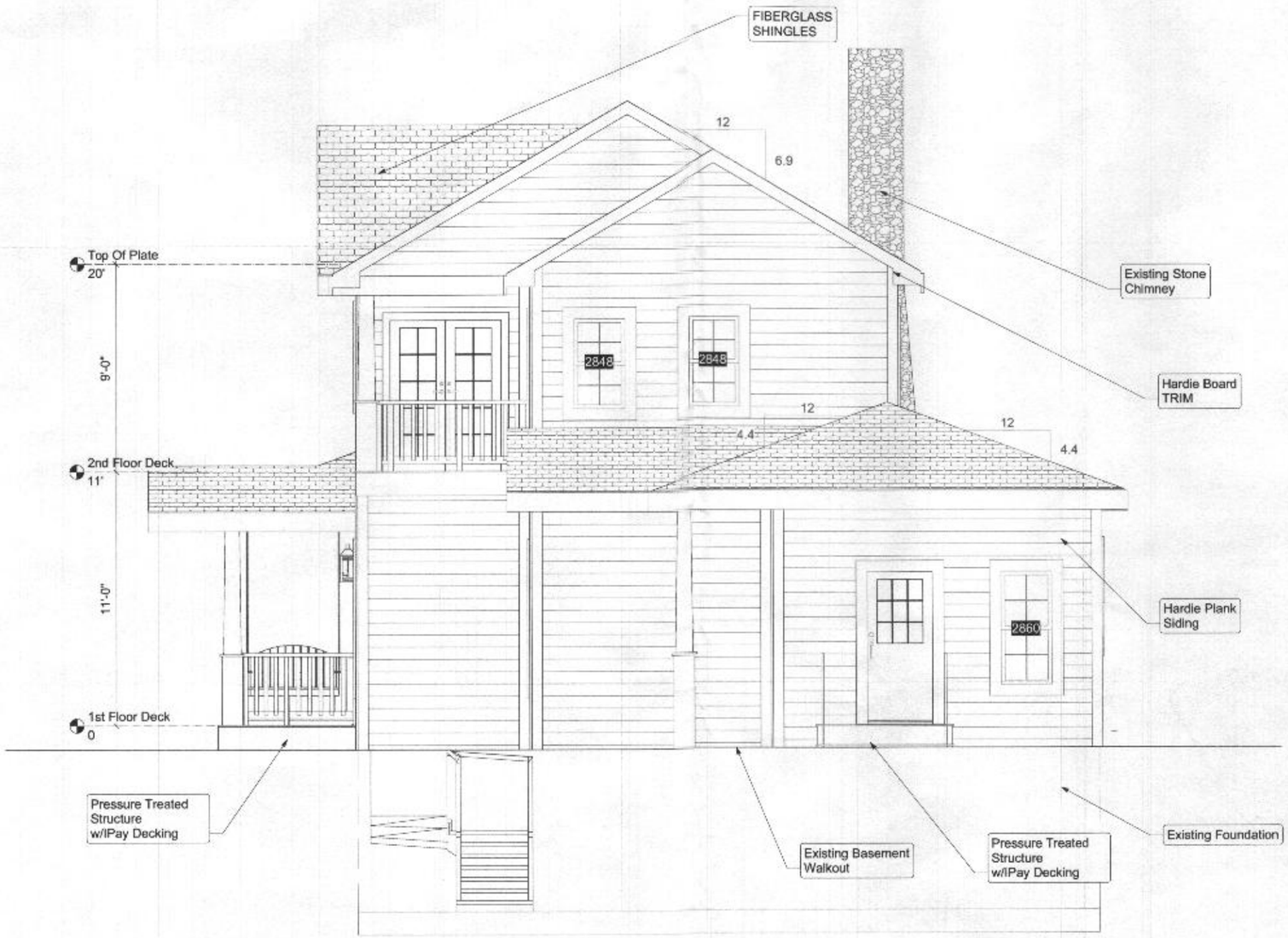
REV.	DATE	DESCRIPTION

NO.	DATE	ISSUE NOTE

November 2019

Elevations

A2.2



1 Right Elevation
Scale: 1:30

LARRY & HEATHER GAETANO
CABIN RENOVATION PROJECT

3534 CHURCH ROAD, ELLICOTT CITY MD, 21043

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REV.	DATE	DESCRIPTION

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November 2019

Elevations

A2.3

1 Left Elevation
Scale: 1:50

LARRY & HEATHER GAETANO
CABIN RENOVATION PROJECT

3534 CHURCH ROAD, ELLICOTT CITY MD, 21043

Larry Gaetano

Stirling Homes

REV.	DATE	DESCRIPTION

NO.	DATE	ISSUE NOTE

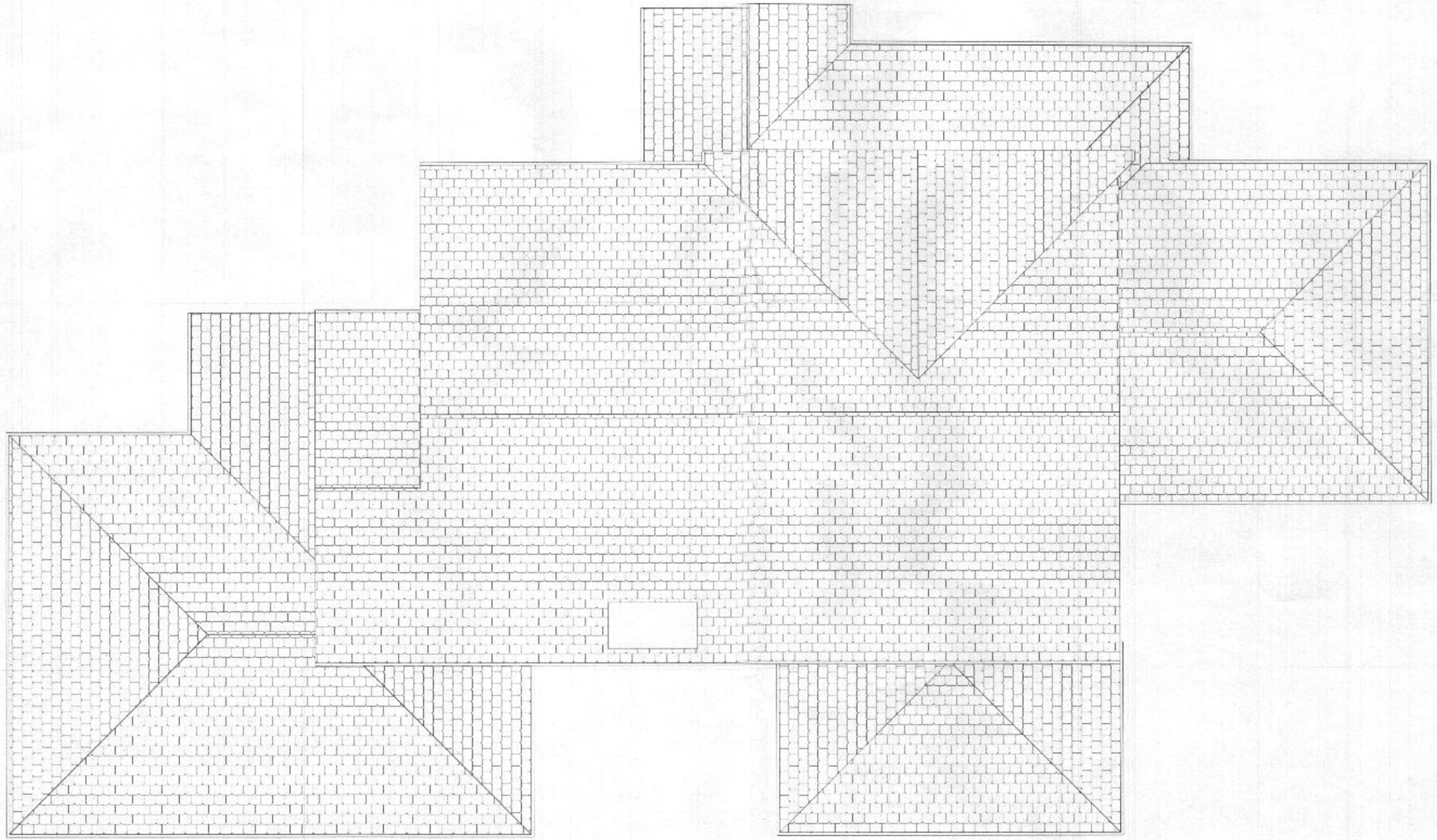
Project Manager | Drawn By

Date: November 2019 | Reviewed by

Project No.

Elevations

A2.4



1 Second Floor Plan
Scale: 1:30

LARRY & HEATHER GAETANO
CABIN RENOVATION PROJECT

3534 CHURCH ROAD, ELLICOTT CITY MD, 21043

Architect
Larry Gaetano

Builder
Stirling Homes

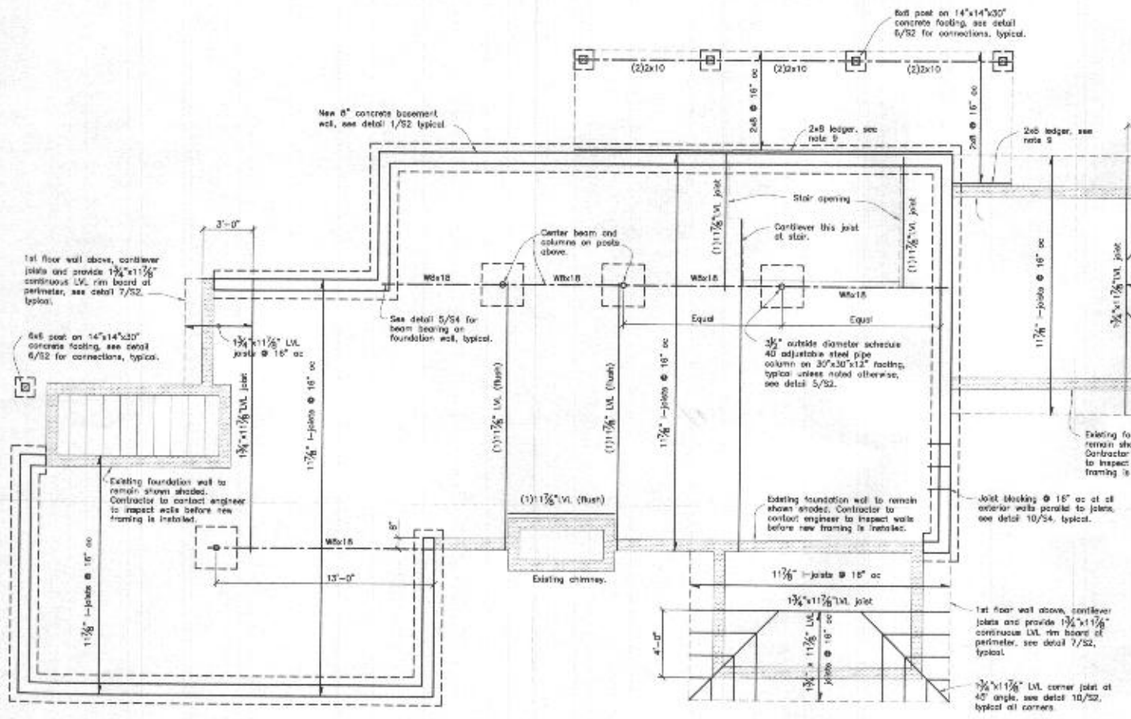
REV.	DATE	DESCRIPTION

NO.	DATE	ISSUE NOTE

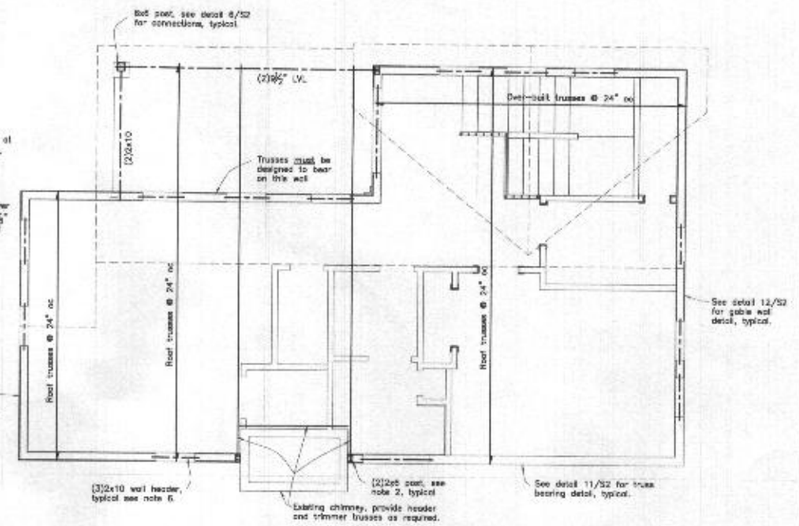
Project Manager | Drawn By
Date: November 2019 | Reviewed By
Project ID

Sheet Title
Roof Plan

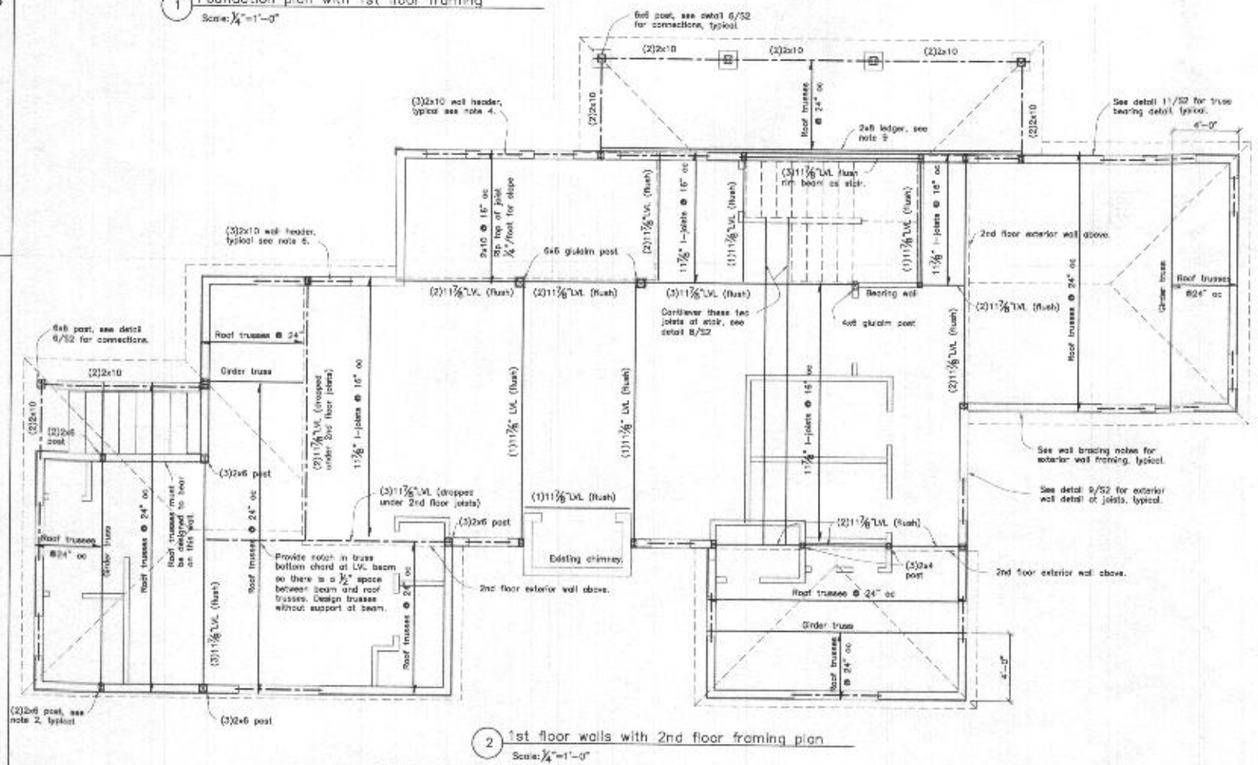
Sheet No.
A1.4



1 Foundation plan with 1st floor framing
Scale: ¼"=1'-0"



3 2nd floor walls with roof framing plan
Scale: ¼"=1'-0"



2 1st floor walls with 2nd floor framing plan
Scale: ¼"=1'-0"

Wall bracing notes:
This house was designed in accordance with Section R301.1.3 of the IRC code which allows engineered design in lieu of the prescriptive design method. Engineered shear walls were used instead of the prescriptive wall bracing specified in Section R602.10. All walls to be constructed as follows:

1. All exterior and new exterior stud walls shall have studs spaced at 16" oc with ⅞" OSB continuous sheathing on the outside face of all exterior walls. Provide framing members or blocking at all sheathing edges and roof sheathing to walls studs, blocking and wall plates with 8d nails @ 6" oc at all sheathing edges. Nail to intermediate supports @ 12" oc. Connect wall bottom plates to joist, rim joist or blocking with (3)16d nails @ 16" oc. Connect abutting studs at wall corners with 16d face nails @ 12" oc. Provide ½" gypsum board sheathing on the inside face of all exterior walls and connect sheathing to studs with #8x1⅝" screws @ 12" oc.
2. All interior stud walls shall have studs spaced at 16" oc with ½" gypsum board continuous sheathing on each face. Provide framing members or blocking at all sheathing edges and screw sheathing to walls studs, blocking and wall plates with #8 x 1½" screws @ 8" oc at all sheathing edges. Screw to intermediate supports @ 12" oc. Connect wall bottom plates to joist, rim joist or blocking with (2)16d nails @ 16" oc. Connect abutting studs at wall corners with 16d face nails @ 12" oc.

Framing notes:
1. All beams are to be dropped below floor or roof framing unless noted flush, beams are to bear the full depth of posts.
2. Provide double wall stud post under all beams, headers, trimmers, multiple joists and girder trusses bearing on stud walls unless noted otherwise. Block solid between floor joists at floor levels and provide same post in stud walls below under all posts to provide solid support to foundation. See general structural notes for jamb studs at bearing wall openings.
3. Connect all double LVLs together with LedgerLOK screws @ 16" oc staggered, connect all triple LVLs with 3" long LedgerLOK screws @ 12" oc staggered.
4. Connect all multiple ply stud posts with TimberLOK screws @ 12" oc staggered. Use 4" long screws at (2) ply studs and 6" long screws at (3) and (4) ply studs.
5. Provide metal hangers at all flush connections. Unless noted otherwise, connect single LVLs with Simpson LU4 hanger, connect double LVLs with Simpson HU/LSU10 hanger, connect triple LVLs with Simpson HHUS5.50/10. Connect all LVLs to posts with (2) Simpson LCE4 post caps and connect all roof trusses and rafters to supporting walls and beams with Simpson H2.5A hurricane tie.
6. Provide (3)2x10 wall header at all exterior stud wall openings unless noted.
7. Roof trusses and floor I-joists are to be designed by the supplier. Submit design drawings to the engineer to review prior to fabrication.
8. Provide ½" gypsum board continuous sheathing on bottom chord of roof trusses. Provide framing members or blocking at all sheathing edges and screw sheathing to trusses, blocking and rafters with #8 x 1½" screws @ 8" oc at all sheathing edges and intermediate supports.
9. Provide 2x8 ledger to support porch roof trusses and joists, connect to wall or rim board with (2) rows of LedgerLOK screws @ 16" oc. Align screws with wall studs and provide (2) screws at each end of ledger.

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 16452, Expiration Date: May 31, 2021

Sweeney Engineering, PC Structural Engineers (410)719-7446	Project: Gaetano Residence 3534 Church Road Ellicott City, MD 21043	Title: Roof framing plan	Sheet#: S1 Date: Dec 2 2019 Job#: 19213

www.sweeneyengineering.net
pat@sweeneyengineering.net

STATE OF MARYLAND · PATRICK WILLIAM SWEENEY · No. 16452 · REGISTERED PROFESSIONAL ENGINEER

LARRY & HEATHER GAETANO
CABIN RENOVATION PROJECT

3534 CHURCH ROAD, ELLICOTT CITY MD, 21043

Larry Gaetano

Stirling Homes

REV	DATE	DESCRIPTION

NO.	DATE	BRIEF NOTE

Project Manager | Checked By
Date: November 2019 | Approved By
Project #

Structural Engineering

A1.5