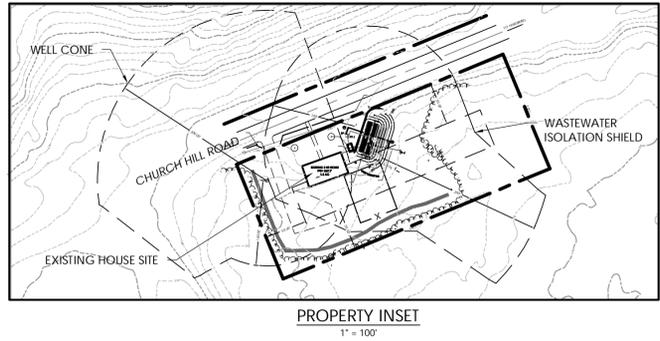


GENERAL NOTES:

- OWNER OF RECORD: FRANK & KATHLEEN WEIDMAN
602 CHURCH HILL ROAD
CHARLOTTE, VT 05445
- APPLICANT: FRANK & KATHLEEN WEIDMAN
- LOCATION: 602 CHURCH HILL ROAD
CHARLOTTE, VT. 05445
- DEED: B 127, p 518-19
- TAX MAP: 00007-0602
- LOT SIZE: 1.3 ± AC.
- ZONING DISTRICT: RURAL (RUR)
- SETBACKS: FRONT - 50' FROM ROW
SIDE - 50'
REAR - 50'

NOTE: THIS LOT PRECEDES CURRENT ZONING REGULATIONS IN THE TOWN OF CHARLOTTE



SOIL TEST PIT INFORMATION:
SOIL PROFILES WERE CONDUCTED ON 06/08/18 BY ANDRE LAMBERT JR., SD 406-B, BRIAN TREMBACK, TOWN OF CHARLOTTE
NRCS CLASSIFICATION: CV- COVINGTON SILT CLAY

TP-1
0-3" 10 YR 4/2, FINE SILT W/ SANDY CONCENTRATIONS
3-13" 10 YR 4/3, LIGHT BROWN SILT W/ ROOTS, BLOCKY & ANGULAR, W/ SMALL PEBBLES, FILL MATERIAL
13-30" 10 YR 4/6, REDDISH COARSE SAND W/ LARGE ROCKS & BOULDERS MIXED W/ FILL & DEBRIS, LARGE STONE @ 32"

TP-2
0-4" 10 YR 5/6, TAN FINE SAND
4-8" 10 YR 4/3, MEDIUM BROWN SILT
8-18" 10YR 3/1, MEDIUM GRAY SANDY TILL
18-37" 10YR 3/3, MEDIUM BROWN SILT LOAM, SANDY LENSES
37-50" 10YR 5/6, TAN FINE SAND, NO WATER, NO LEDGE

TP-3
0-10" 10 YR 3/3, TAN & BROWN SANDY LOAM
10-39" 10 YR 5/1, GRAY MEDIUM SAND W/ LEACH FIELD STONES IN UPPER HORIZONS
39-46" 10YR 5/1, SAME SAND CONTINUES.

TP-4
0-16" TAN FINE SAND, CLEAN LOOSE.
16-42" DARK BROWN & GRAY DENSE COVINGTON CLAY, SANDY INTRUSIONS & ROOTS.

I HEREBY CERTIFY THAT THE DESIGN RELATED INFORMATION SUBMITTED WITH THIS APPLICATION IS TRUE AND CORRECT, AND THAT, IN THE EXERCISE OF MY REASONABLE PROFESSIONAL JUDGMENT, THE DESIGN INCLUDED IN THIS APPLICATION FOR A PERMIT COMPLIES WITH THE VERMONT WASTEWATER SYSTEM AND POTABLE WATER SUPPLY RULES AND THE VERMONT WATER SUPPLY RULES* (REF. ENVIRONMENTAL PROTECTION RULES CHAPTER 1 S 1-302 (b)(1)).



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Revisions	No.	Description	Date	By

BASIS OF DESIGN FOR MOUND:
THE DESIGN FOR THE EXISTING 2 BEDROOM HOME IS PERFORMANCE BASED AND IS A "BEST FIX" APPROACH

- DESIGN FLOW FOR 2 BEDROOM HOME @ 140 GPD/BEDROOM = 280 GPD
- LOADING RATE: 1.0 GPD / SF
- REQUIRED DISPOSAL AREA: 280 GPD / 1.0 GPD/SF = 280 SF
- DISPOSAL AREA PROVIDED: 2 TRENCHES @ 4' WIDE x 35' LONG = 280 SF
- BASAL AREA REQUIRED = 280 GPD/0.74 GPD/SF = 378 SF
- BASAL AREA PROVIDED = 455 SF
- ORIFICE SPACINGS: (1) ORIFICE PER 25 SF OF TRENCH
- ORIFICES REQUIRED: 280 SF / 25 SF/ORIFICE = 12 ORIFICES
- USE 12 ORIFICES AT 0.25" - 1.28 GPM = 1.0 P.S.I. @ 3.0 FEET OF HEAD. (MAINTAIN MINIMUM 1 PSI PER ORIFICE)
- REQUIRED FLOW: 12 ORIFICES @ 1.28 GPM/ORIFICE = 15.36 GPM
USE 60 GPM @ 22' OF TDH. (SEE DESIGN CURVE AND OPERATING POINT)
- PUMP SELECTION: REFER TO DESIGN BRIEF AND CONFIRM CONDITIONS BASED ON ACTUAL ELEVATION OF HOUSE AND RESPECTIVE PUMP STATION.

DESKTOP MOUNDING ANALYSIS CALCULATING THE LINEAR LOADING RATE

THE LINEAR LOADING RATE IS DETERMINED USING TABLE 1 LINEAR LOADING RATE

FACTORS (f) AND THE AVAILABLE SOIL THICKNESS FOR GROUNDWATER MOUNDING (h).

(f) = 33.7 WITH 17% SLOPES FOUND IN THE AREA OF PROPOSED PERFORMANCE BASED TYPE WASTEWATER DISPOSAL AND FINE SAND WITH 16 INCHES TO THE SEASONAL HIGH GROUNDWATER TABLE

(h) ACTUAL SOIL THICKNESS USED FOR MOUNDING = 16" (SEE TP 4) - (6") = 10"

LINEAR LOADING RATE LLR = (h) (f) = (0.83) (33.7) = 27.9 OR 28 GPD / LF

THE LINEAR LOADING RATE IS CALCULATED BY TAKING THE DESIGN FLOW DIVIDED BY THE LINEAR LOADING RATE THE MINIMUM LENGTH OF THE SYSTEM = 280 GPD / 28 GPD / LF = 10' LF MINIMUM LENGTH
LOADING RATE = 1.0 GPD/SF, REQUIRED AREA = 280/1.0 = 280 SF.
USE 2 TRENCHES 4' WIDE, 35' LONG, FOR A TOTAL AREA OF 280 SF.

BASIS OF DESIGN FOR DRILLED WELL WATER SUPPLY:
TWO BEDROOM HOUSE = 280 GPD (140 GPD/BEDROOM x 2)

MAX. DAY DEMAND IS CALCULATED BY DIVIDING THE AVERAGE DAY DEMAND BY NOT MORE THAN 720 (12 HR. DELIVERY) MINUTES. 280 GPD / 720 = 0.39 GPM

THE INSTANTANEOUS PEAK DEMAND IS 5 GPM MULTIPLIED BY THE NUMBER OF UNITS = 5 GPM

ELEVATION KEY:	PERCOLATION TEST RESULTS:
FINISH FLOOR = 369.9	PT-1 50 MIN. /IN.
HOUSE INV. OUT = 363.8	PT-2 40 MIN. /IN.
SEPTIC TANK INV. IN = 363.6	
SEPTIC TANK INV. OUT = 363.3	
PUMP STATION INV. IN = 363.2	
PUMP STATION INV. OUT = 359.7	
RISER INV. = 365.3	

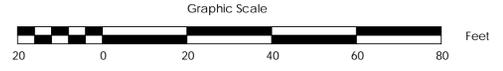
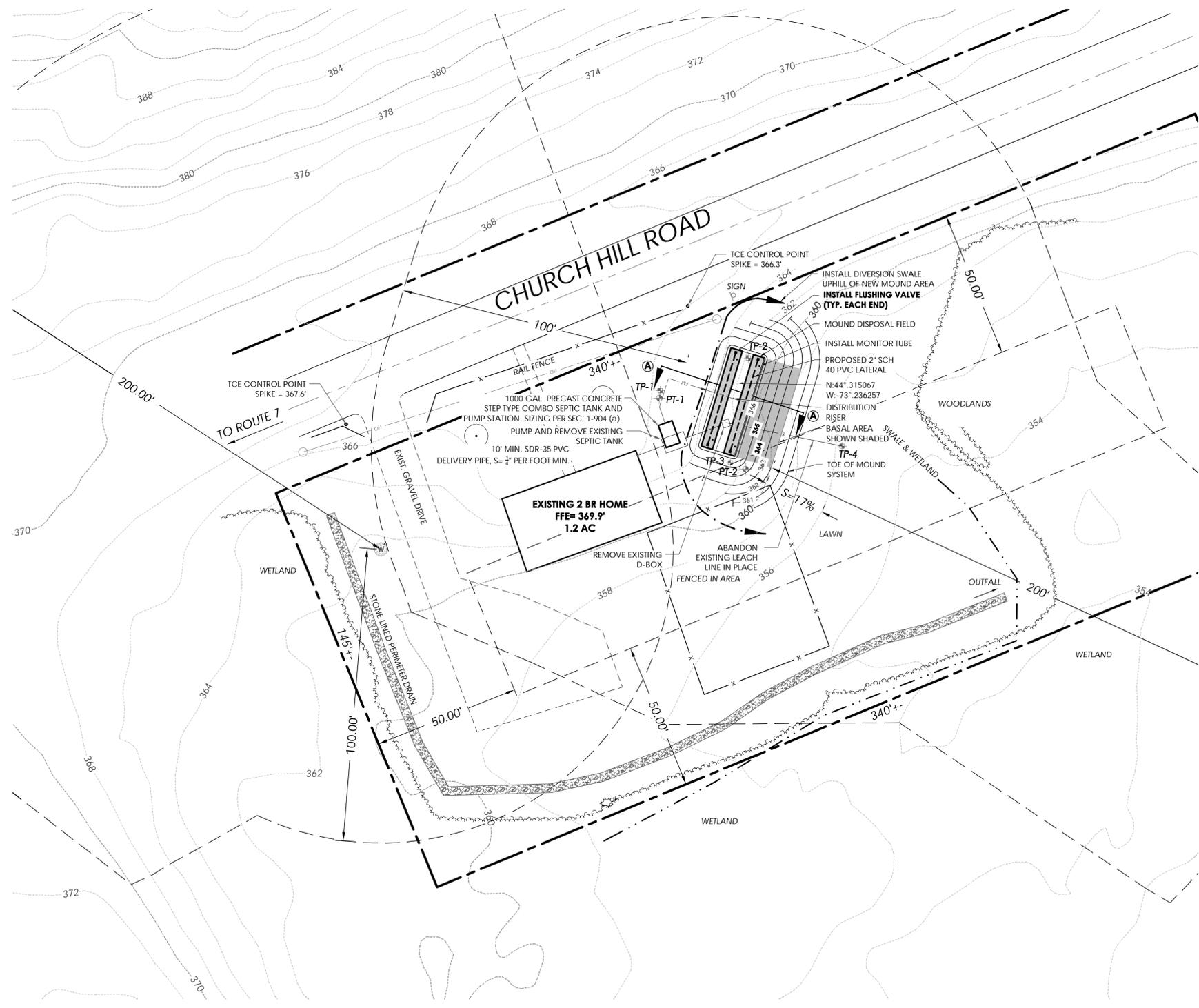
PURPOSE OF PLAN:
1. THIS PLAN HAS BEEN COMPILED TO DESIGN A REPLACEMENT SANITARY SYSTEM TO REPLACE THE EXISTING FAILED SYSTEM. IN ORDER FOR THIS TO BE PERMITTED SEVERAL VARIANCES ARE REQUESTED AS FOLLOWS:
A. TOE OF MOUND TO ROW LIMIT (LESS THAN 25')
B. TOE OF MOUND TO UTILITY POLE
C. TOE OF MOUND TO UPHILL SWALE

EXISTING CONDITIONS NOTES:

- THE PURPOSE OF THE EXISTING CONDITIONS PLAN IS TO DEPICT PERTINENT EXISTING CONDITIONS AS OF JUNE 08, 2018.
- BEARINGS SHOWN ARE BASED UPON VERMONT GRID NORTH.
- VERTICAL DATUM IS BASED ON NAVD88 (GEOID 12). A TRIMBLE R6 RTK GPS UNIT WAS EMPLOYED FOR THESE OBSERVATIONS.
- COORDINATE SYSTEM IS BASED ON VERMONT STATE PLANE (U.S. SURVEY FEET).
- THE LOCATION OF EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS SHOWN ARE BASED ON RESEARCH, UTILITY PLANS PROVIDED BY OTHERS, AND/OR SURFACE EVIDENCE ENCOUNTERED AND WERE OBTAINED IN A MANNER CONSISTENT WITH THE ORDINARY STANDARD OF PROFESSIONAL CARE AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THE DESIGN ENGINEER. ADDITIONAL UTILITIES NOT SHOWN MAY EXIST. ENGINEER SHALL BE NOTIFIED IF ANY DISCREPANCIES ARE ENCOUNTERED. ACTUAL LOCATION OF UNDERGROUND UTILITIES MAY VARY. DIGSAFE MUST BE CONTACTED PRIOR TO ANY EXCAVATION. CALL 1-888-DIG SAFE (344-7233).
- PERIMETER BOUNDARIES SHOWN HEREON STRICTLY FROM TAX MAP INFORMATION ONLY, THIS PLAN DOES NOT DEPICT A FORMAL BOUNDARY SURVEY, UNLESS NOTED AS SUCH.

LEGEND

PAVED DRIVE OR ROAD	—
SEWER MAINS AND SERVICES	— S —
SEWER FORCEMAIN	— FM —
WATER MAINS AND SERVICES	— W —
STORM DRAINAGE	— D —
PROPERTY LINE	—
SETBACKS	—
OUTLET OR END SECTION	<
SOIL TEST PIT	⊕



TAX ID:
Use of these Drawings
1. Unless otherwise noted, these Drawings are intended for preliminary planning, coordination with other disciplines or utilities, and/or approval from the regulatory authorities. They are not intended as construction drawings unless noted as such or marked approved by a regulatory authority.
2. By use of these drawings for construction of the Project, the Owner represents that they have reviewed, approved, and accepted the drawings, obtained all necessary permits, and have met with all applicable parties/disciplines, including but not limited to, the Engineer and the Architect, to insure these plans are properly coordinated including, but not limited to, contract documents, specifications, owner/contractor agreements, building and mechanical plans, private and public utilities, and other pertinent permits for construction.
3. Owner and Architect, are responsible for final design and location of buildings shown, including an area measured a minimum five (5) feet around any building and coordinating final utility connections shown on these plans.
4. Prior to using these plans for construction layout, the user shall contact TCE to ensure the plan contains the most current revisions.
5. These Drawings are specific to the Project and are not transferable. As instruments of service, these drawings, and copies thereof, furnished by TCE are its exclusive property. Changes to the drawings may only be made by TCE. If errors or omissions are discovered, they shall be brought to the attention of TCE immediately.
6. It is the User's responsibility to ensure this copy contains the most current revisions. If unsure, please contact TCE.



Project Title

Frank & Kathleen Weidman
602 Church Hill Road
Charlotte, Vt.

Sheet Title

Sanitary Plan

Date:	06-11-2018
Scale:	1" = 20'
Project Number:	18-091
Drawn By:	AAL
Project Engineer:	AAL
Approved By:	JPP
Field Book:	AAL6

C3-01

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