TOWN OF CHARLOTTE
DEVELOPMENT REVIEW BOARD

P.O. Box 119, Charlotte, VT 05445
Phone: 802-425-3533   Fax: 802-425-4241

APPLICATION FOR

☐ **SKETCH PLAN***   **SUBDIVISION** ☐ **PRELIM.** ☐ **FINAL**   ☒ **AMENDMENT**

*Applicant must schedule a pre-application meeting with Planning & Zoning staff prior to submitting a sketch plan application.

Office Use Only

Date Received: 8.21.25	Application #: DRB-25-135-SDA
Fee Paid: $450.	Classification:
Date Warning Mailed:	Date of Hearing: 9.10.25
Date Warning Published:	Date Hearing Closed:
45 Day Deadline:	Date Approved:

PROPERTY OWNER

Name Patricia O'Donnell & James Donovan

Address PO Box 321, CHarlotte, VT 05445

Email jdonovan@gmavt.net

Phone 802 425 4560

APPLICANT/CONTACT PERSON (if other than owner)

Name

Address

Email

Phone

Signature of property owner Patricia M O'Donnell

Signature of applicant ______

If applicant is acting as agent for owner, written authorization signed by owner must be filed with application.

Property Address: 501 Lake Road
Parcel ID # 00009-501

Total acreage 146.4   Zoning District Rural

Was this parcel part of a prior subdivision? Yes X No ___

If yes: Date: April 25, 2025 & July 1997 # of Lots: 2

Name of previous owner / name of previous subdivision:
Same

Application Reference #:

When your project is completed how many lots will there be? 1

Description: (check where appropriate)

___ Commercial   ___ Industrial
___ Multi-family   ___ Planned Residential Development
___ Major Subdivision   ___ Minor Subdivision
___ Modification   ___ Single Family
x Other, describe Expansion of Building Envelope

Briefly Describe Intent of Project:

The intent of the project is to expand the existing building envelope to allow the construction of a free standing Accessory Dwellling Unit

Proposed Dimensional Data: NO CHANGE

Lot #	Lot #	Lot #	Lot #
Acres	Acres	Acres	Acres
Frontage	Frontage	Frontage	Frontage

SUBDIVISION DESIGN GUIDE (TABLE 6.3)

Step 1. Identify Areas of High Public Value. The applicant shall clearly identify and delineate the boundaries of all Areas of High Public Value, as defined in Table 7.1, from maps, orthophotos, and site investigation. Appropriate management strategies shall be identified to ensure their preservation to the extent feasible. The *Charlotte Conservation Commission* and other appropriate organizations should be consulted with regard to determining which management strategies are most appropriate for particular resources.

Step 2. Identify Potential Development Areas. The applicant will identify potential development areas that minimize impact on Areas of High Public Value.

Step 3. Identify Building Envelopes. Building envelopes, to include all areas to be set aside for structures and parking areas, shall be identified. See Section 7.2(E)

Step 4. Identify Connecting Roads, Pedestrian Paths, Trails & Utilities. See Section 7.3(D).

Step 5. Identify Lot Lines (Boundaries). See Section 7.2(C).

Please describe the following:

Easements/Right-of-ways (existing and proposed): As shown on the plans

Existing Structures: One existing single family house, two silos and one shed

Access: For ADU - Via existing driveway

Wastewater Disposal System (existing and proposed): For ADU - Use of existing septic system

Water System: For ADU - Use of existing well

Drainage System: For ADU - As existing

Development Phasing Schedule: None

Other unusual circumstances: None

Please submit the following with your application (*please check all items included or not applicable*):

☒ Written **request for a waiver** of any of the required application materials. Please attach a separate sheet.
☐ **Names and addresses of all adjoining property owners**, including those across a road right-of-way (include stamped and addressed envelopes for each property).
☐ **Plat or plan (1 original [24"X36"] and 5 copies [11"X17"]; and 1 digital copy) with preparer information, certifications, North Arrow, Legend, Date, Scale (minimum 1" =200', 1" =100' preferred) to include the following, unless deemed not applicable (N/A) by the Planning & Zoning staff:**

Included	N/A	Waiver Requested	
☒	☐		4. vicinity map, which may consist of town parcel map, and which may be an inset on the preliminary/final plan; minimum scale = 1" =2,000';
☒	☐		5. project boundaries, property lines, existing and proposed lot lines, dimensions (drawn for preliminary plan; surveyed for final plan);
☒	☐		6. roads and drainage infrastructure, facilities and improvements in the immediate vicinity of the project which may be affected or used by the project;
☐	☒		7. zoning district designations and boundaries;
☐	☒		8. general indication of existing land cover (e.g., forested areas, tree lines and land in agricultural use within the last 5 years);
☐	☒		9. location of Areas of High Public Value (please refer to Table 7.1 of the *Land Use Regulations*);
☐	☒		10. existing conservation and agricultural easement areas or open space areas, including any on adjacent parcels;
☐	☒		11. proposed conservation areas or open space areas;
☐	☒		12. existing and proposed elevations (contour lines) near the development area (5' intervals);
☒	☐		13. existing buildings (footprints) near area to be developed or conserved;
☒	☐		14. proposed building envelopes with dimensions;
☐	☒		15. existing and proposed roads, parking areas, associated rights-of-way or easements with dimensions and distances (drawn for preliminary plan; surveyed for final plan);
☐	☒		16. existing and proposed park, playground, public access or other recreational areas (drawn for preliminary plan; surveyed for final plan);
☒	☐	☐	17. existing and proposed utility, water and wastewater system locations and associated rights-of-way or easements;
☒	☐	☒	18. existing and proposed monument locations.

The following supporting information, as applicable, is to be submitted with *Preliminary* and/or *Final Plan* applications:

Included	Waiver Requested	
☐		1. Engineering reports (water and wastewater systems), wastewater disposal plan (plan and section views) shall be presented at a minimum scale of 1"=100', although a scale of 1"=30' is preferred.
☐	☒	2. Existing and proposed traffic generation rates, volumes.
☐	☒	3. Road profiles, road intersection and parking area geometry and construction schematics (or as shown on the plat).
☐	☒	4. Proposed landscaping and screening.
☐	☒	5. Off-site easements (e.g., for water, wastewater, access).
☐	☒	6. Proposed phasing schedule.
☐	☒	7. Proposed covenants, easements, conserved land agreements, road maintenance agreements, roadway waiver, wastewater system maintenance agreement, wastewater waiver, fire pond agreement, trail easements and offer, and other associated deed restrictions, in both paper and electronic format.
☐	☒	8. Proposed homeowner or tenant association or agreements.
☐	☒	9. Proposed performance bond or surety.

The following additional supporting information, <u>if required by the Development Review Board</u> under sketch plan or preliminary plan approval, is to be submitted with *Preliminary Plan* and/or *Final Plan* applications:

Included	N/A	
☐	☒	1. Stormwater and erosion plan.
☐	☒	2. Grading plan (showing proposed areas of cut and fill).
☐	☒	3. Shoreland management plan (for any proposed shoreline improvements).
☐	☒	4. Proposed driveway and trail locations.
☐	☒	5. Conservation and Agricultural Land (open space) management plan.
☐	☒	6. Site reclamation plan (for subdivisions involving extraction).
☐	☒	7. Traffic impact analysis (current and proposed traffic volumes, capacities, levels of service, proposed improvements).
☐	☒	8. Fiscal impact analysis (analysis of fiscal costs and benefits to town).
☐	☒	9. Environmental assessment (analysis of potential environmental impacts, proposed mitigation measures).

*** Please note:*** Scheduling an informal pre-application meeting with Planning & Zoning staff is strongly recommended before hiring professionals to assist you in preparing your application. This meeting affords an opportunity for staff to advise you on the feasibility of your project, and to identify which application materials will be required for a complete application. It provides an opportunity to get answers to your questions about the process and timeline, before you start spending money.

Your application, including all supporting documents and application fees, must be deemed complete by the Zoning Administrator before your project will be scheduled for a Development Review Board public hearing.

Patricia O'Donnell
Jim Donovan
PO Box 321
Charlotte, VT 05445

August 20, 2025

Rebecca Kaplan
Interim Zoning Administrator
Town of Charlotte
159 Ferry Road
Charlotte, VT 05445

Dear Rebecca,

As part of our intent to construct an Accessory Dwelling Unit on our parcel at 501 Lake Road, we are requesting an extension of our existing building envelope to allow the construction of the unit in what we think is the most appropriate location. As part of our application to extend the building envelope, we are asking for waivers of several subdivision modification submission requirements.

In particular, we request a waiver of all of the supporting information noted on the application form for a subdivision amendment, because we believe that the information is not necessary to evaluate our request.

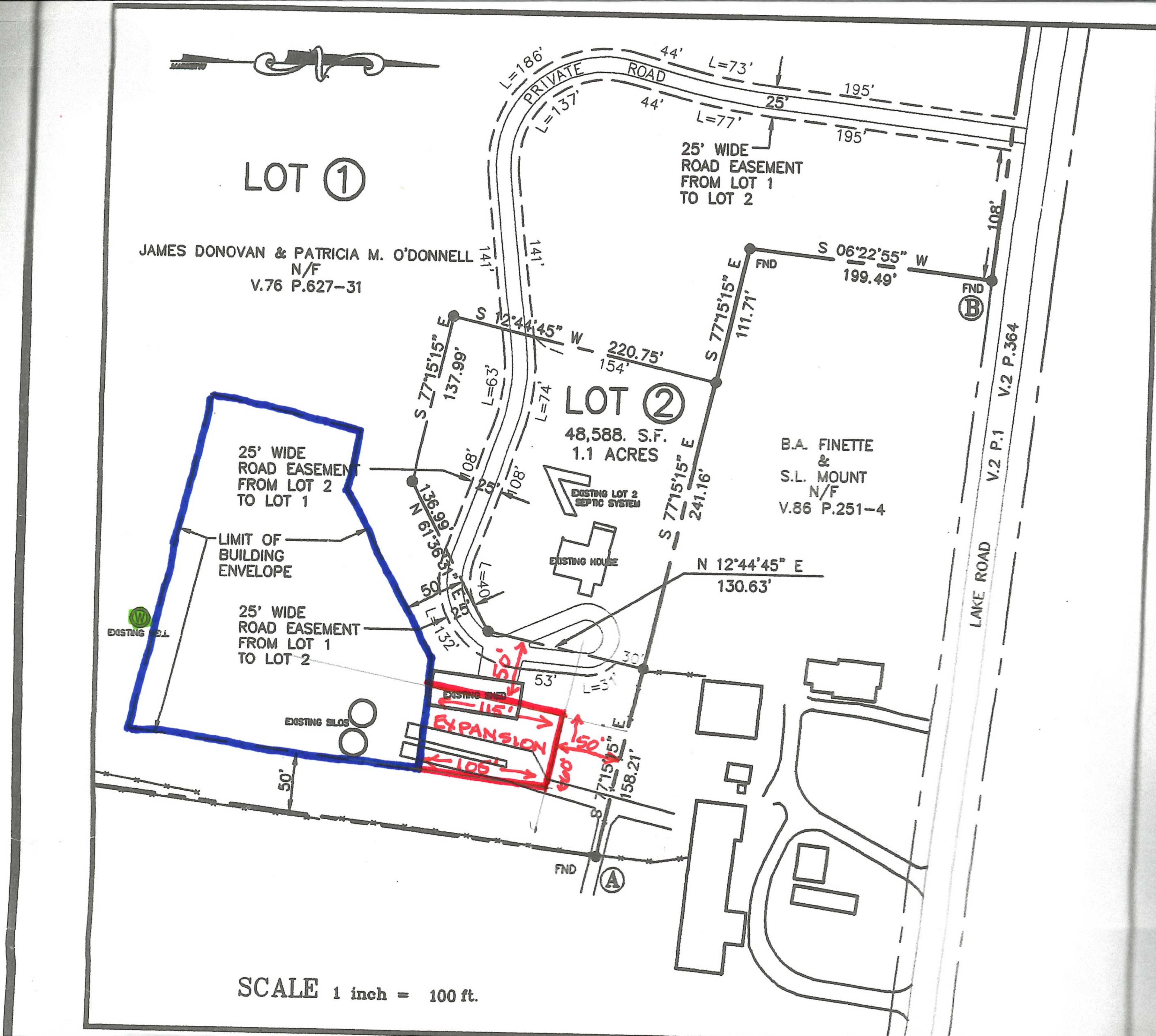
Thank You,

Patricia M O'Donnell

Patricia O'Donnell

Jim Donovan

Jim Donovan



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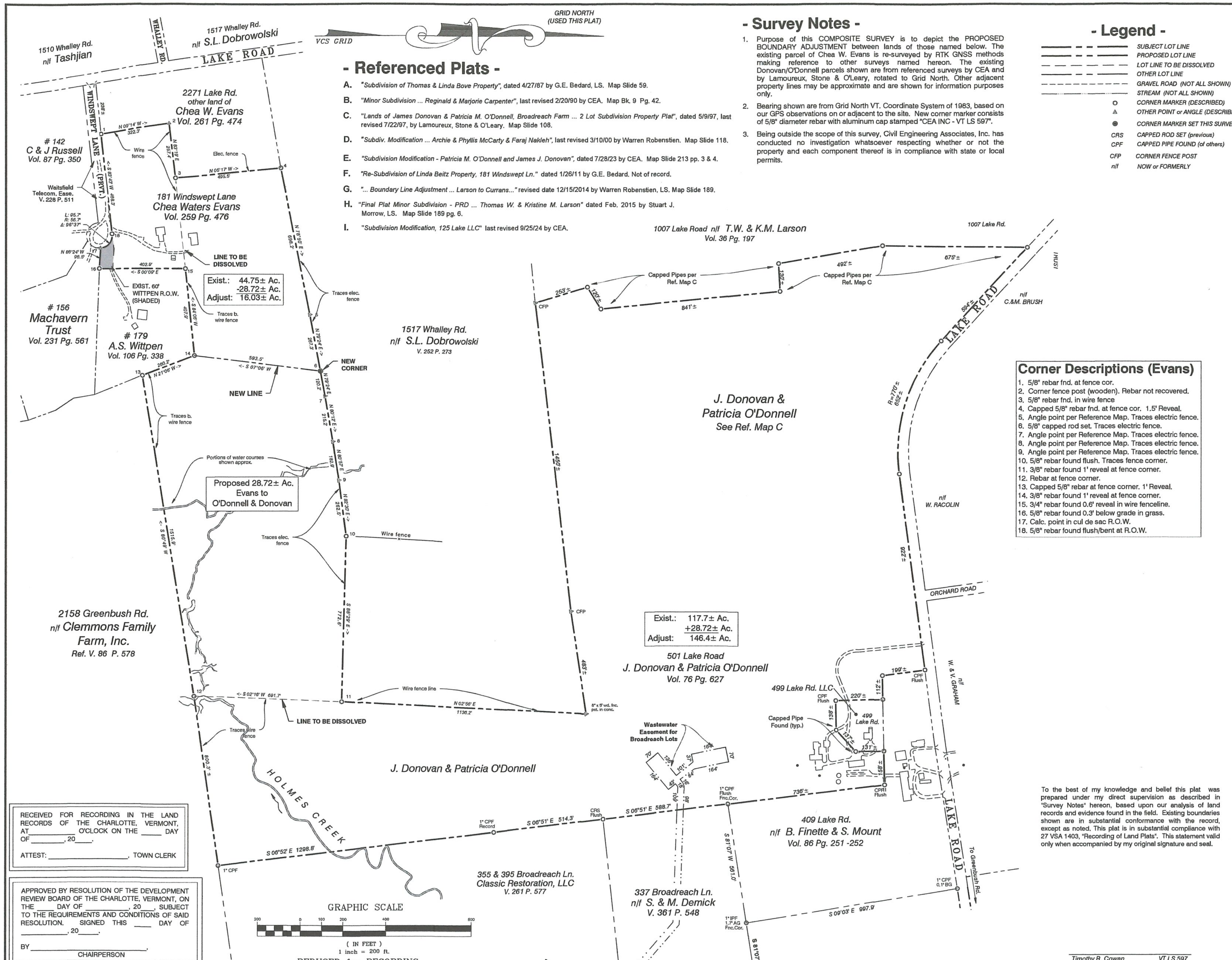


- Referenced Plats -

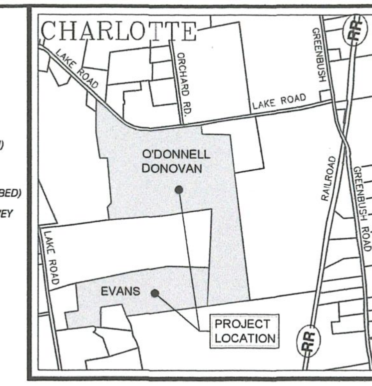
- A. *"Subdivision of Thomas & Linda Bove Property"*, dated 4/27/87 by G.E. Bedard, LS. Map Slide 59.
- B. *"Minor Subdivision ... Reginald & Marjorie Carpenter"*, last revised 2/20/90 by CEA. Map Bk. 9 Pg. 42.
- C. *"Lands of James Donovan & Patricia M. O'Donnell, Broadreach Farm ... 2 Lot Subdivision Property Plat"*, dated 5/9/97, last revised 7/22/97, by Lamoureux, Stone & O'Leary. Map Slide 108.
- D. *"Subdiv. Modification ... Archie & Phyllis McCarty & Faraj Nakleh"*, last revised 3/10/00 by Warren Robenstien. Map Slide 118.
- E. *"Subdivision Modification - Patricia M. O'Donnell and James J. Donovan"*, dated 7/28/23 by CEA. Map Slide 213 pp. 3 & 4.
- F. *"Re-Subdivision of Linda Beitz Property, 181 Windswept Ln."* dated 1/26/11 by G.E. Bedard. Not of record.
- G. *"... Boundary Line Adjustment ... Larson to Currans..."* revised date 12/15/2014 by Warren Robenstien, LS. Map Slide 189.
- H. *"Final Plat Minor Subdivision - PRD ... Thomas W. & Kristine M. Larson"* dated Feb. 2015 by Stuart J. Morrow, LS. Map Slide 189 pg. 6.
- I. *"Subdivision Modification, 125 Lake LLC"* last revised 9/25/24 by CEA.

- Survey Notes -

1. Purpose of this COMPOSITE SURVEY is to depict the PROPOSED BOUNDARY ADJUSTMENT between lands of those named below. The existing parcel of Chea W. Evans is re-surveyed by RTK GNSS methods making reference to other surveys named hereon. The existing Donovan/O'Donnell parcels shown are from referenced surveys by CEA and by Lamoureux, Stone & O'Leary, rotated to Grid North. Other adjacent property lines may be approximate and are shown for information purposes only.
2. Bearing shown are from Grid North VT. Coordinate System of 1983, based on our GPS observations on or adjacent to the site. New corner marker consists of 5/8" diameter rebar with aluminum cap stamped "CEA INC - VT LS 597".
3. Being outside the scope of this survey, Civil Engineering Associates, Inc. has conducted no investigation whatsoever respecting whether or not the property and each component thereof is in compliance with state or local permits.

- Legend -

	SUBJECT LOT LINE
	PROPOSED LOT LINE
	LOT LINE TO BE DISSOLVED
	OTHER LOT LINE
	GRAVEL ROAD (NOT ALL SHOWN)
	STREAM (NOT ALL SHOWN)
O	CORNER MARKER (DESCRIBED)
△	OTHER POINT or ANGLE (DESCRIBED)
●	CORNER MARKER SET THIS SURVEY
CRS	CAPPED ROD SET (previous)
CPF	CAPPED PIPE FOUND (of others)
CFP	CORNER FENCE POST
n/f	NOW or FORMERLY



LOCATION MAP

NOT to SCALE

Corner Descriptions (Evans)

1. 5/8" rebar fnd. at fence cor.
2. Corner fence post (wooden). Rebar not recovered.
3. 5/8" rebar fnd. in wire fence
4. Capped 5/8" rebar fnd. at fence cor. 1.5' Reveal.
5. Angle point per Reference Map. Traces electric fence.
6. 5/8" capped rod set. Traces electric fence.
7. Angle point per Reference Map. Traces electric fence.
8. Angle point per Reference Map. Traces electric fence.
9. Angle point per Reference Map. Traces electric fence.
10. 5/8" rebar found flush. Traces fence corner.
11. 3/8" rebar found 1' reveal at fence corner.
12. Rebar at fence corner.
13. Capped 5/8" rebar at fence corner. 1' Reveal.
14. 3/8" rebar found 1' reveal at fence corner.
15. 3/4" rebar found 0.6' reveal in wire fenceline.
16. 5/8" rebar found 0.3' below grade in grass.
17. Calc. point in cul de sac R.O.W.
18. 5/8" rebar found flush/bent at R.O.W.

RECEIVED FOR RECORDING IN THE LAND RECORDS OF THE CHARLOTTE, VERMONT, AT________ O'CLOCK ON THE ____ DAY OF _______, 20____.

ATTEST: ________________, TOWN CLERK

APPROVED BY RESOLUTION OF THE DEVELOPMENT REVIEW BOARD OF THE CHARLOTTE, VERMONT, ON THE ____ DAY OF ________, 20___, SUBJECT TO THE REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. SIGNED THIS ____ DAY OF ________, 20____.

BY ____________________,
CHAIRPERSON

To the best of my knowledge and belief this plat was prepared under my direct supervision as described in "Survey Notes" hereon, based upon our analysis of land records and evidence found in the field. Existing boundaries shown are in substantial conformance with the record, except as noted. This plat is in substantial compliance with 27 VSA 1403, "Recording of Land Plats". This statement valid only when accompanied by my original signature and seal.

Timothy R. Cowan VT LS 597

SURVEYORS:

CIVIL ENGINEERING ASSOCIATES, INC.
10 MANSFIELD VIEW LANE, SOUTH BURLINGTON, VT 05403
802-864-2323 FAX: 802-864-2271 web: www.cea-vt.com

DRAWN
CEA

CHECKED
TRC

APPROVED
TRC

DATE	CH'CK'D	REVISION

Plat of Boundary Line Adjustment Between

C. W. Evans and J. Donovan & P.M. O'Donnell

501 Lake Rd. & 181 Windswept Ln.
Charlotte, Vermont

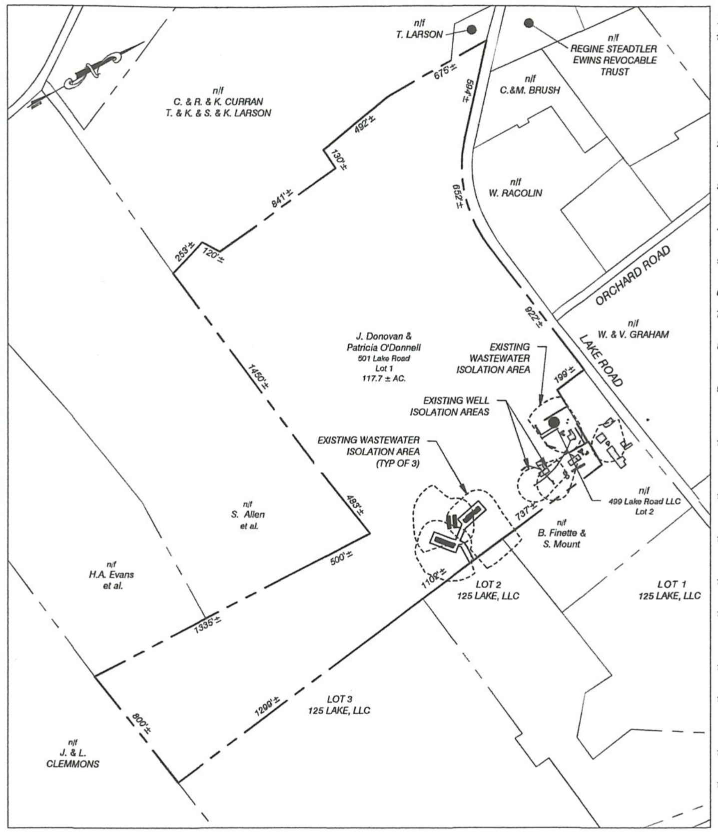
DATE
MAY 27, 2025

ORIGINAL SCALE
1" = 200'

PROJ. NO.
20214-03

DRAWING NUMBER
BA1

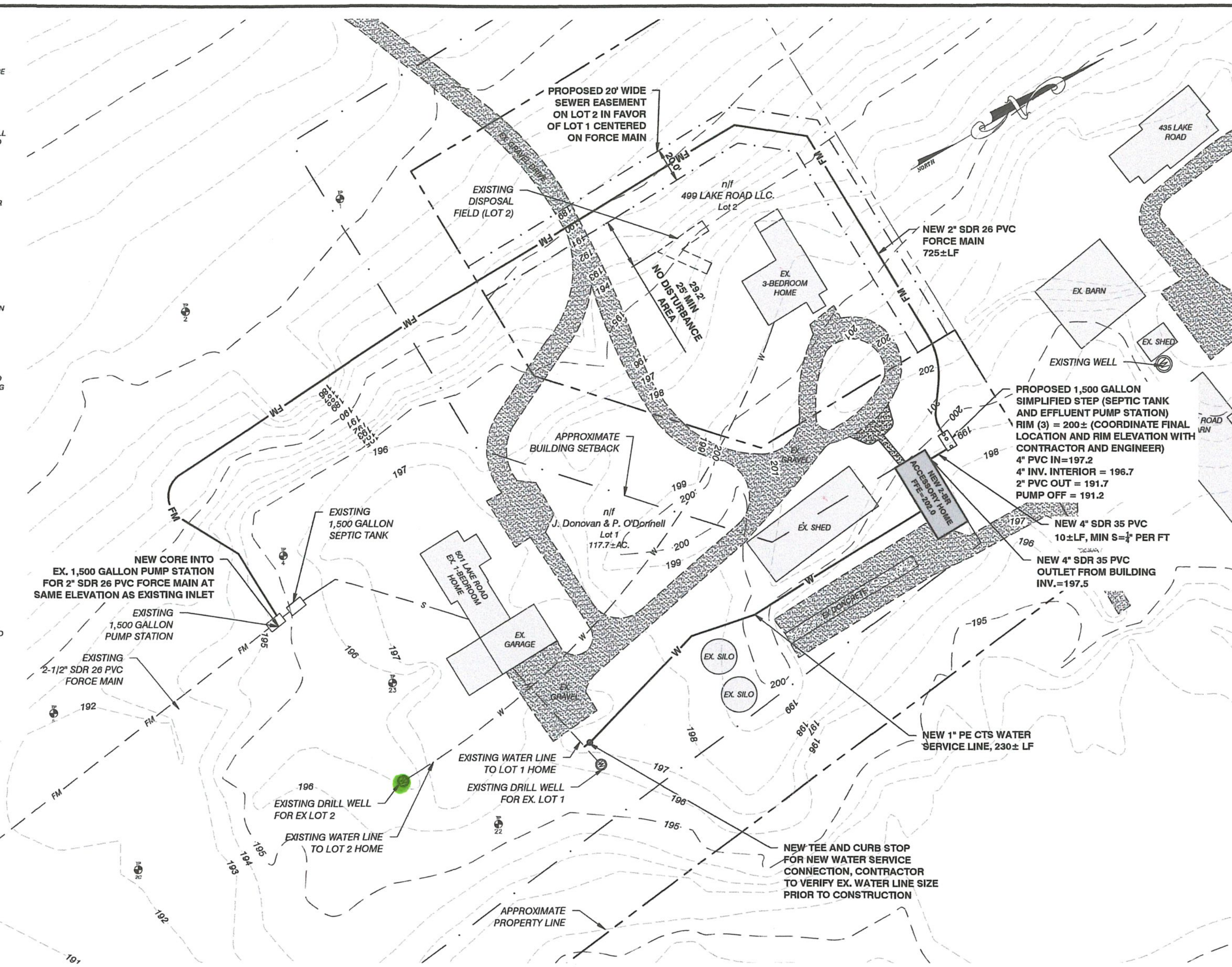
SHEET 1 of 1

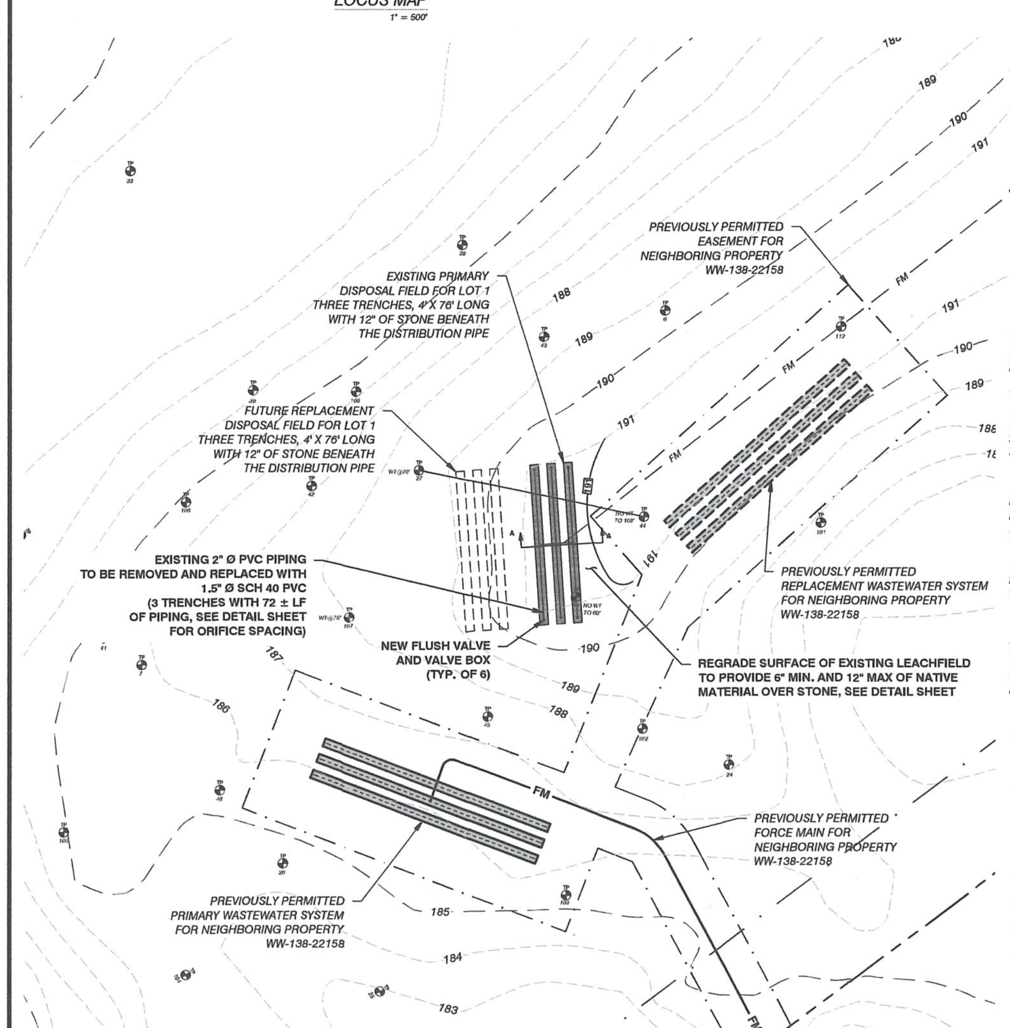


LOCUS MAP
1" = 500'

GENERAL NOTES

1. UTILITIES SHOWN DO NOT PURPORT TO CONSTITUTE OR REPRESENT ALL UTILITIES LOCATED UPON OR ADJACENT TO THE SURVEYED PREMISES. EXISTING UTILITY LOCATIONS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL UTILITY CONFLICTS. ALL DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER. THE CONTRACTOR SHALL CONTACT DIG SAFE (888-344-7233) PRIOR TO ANY CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL HIRE A PRIVATE UTILITY LOCATING FIRM TO LOCATE OWNER OWNED UNDERGROUND UTILITIES PRIOR TO START OF ANY EXCAVATION.
2. ALL EXISTING UTILITIES NOT INCORPORATED INTO THE FINAL DESIGN SHALL BE REMOVED OR ABANDONED AS INDICATED ON THE PLANS OR DIRECTED BY THE OWNER/ENGINEER.
3. THE CONTRACTOR SHALL MAINTAIN AS-BUILT PLANS (WITH TIES) FOR ALL UNDERGROUND UTILITIES. THOSE PLANS SHALL BE SUBMITTED TO THE OWNER AT THE COMPLETION OF THE PROJECT.
4. THE CONTRACTOR SHALL REPAIR/RESTORE ALL DISTURBED AREAS (ON OR OFF THE SITE) AS A DIRECT OR INDIRECT RESULT OF THE CONSTRUCTION.
5. ALL GRASSED AREAS SHALL BE MAINTAINED UNTIL FULL VEGETATION IS ESTABLISHED.
6. MAINTAIN ALL TREES OUTSIDE OF CONSTRUCTION LIMITS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK NECESSARY FOR COMPLETE AND OPERABLE FACILITIES AND UTILITIES.
8. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL ITEMS AND MATERIALS INCORPORATED INTO THE SITE WORK. WORK SHALL NOT BEGIN ON ANY ITEM UNTIL SHOP DRAWING APPROVAL IS GRANTED.
9. IN ADDITION TO THE REQUIREMENTS SET IN THESE PLANS AND SPECIFICATIONS, THE CONTRACTOR SHALL COMPLETE THE WORK IN ACCORDANCE WITH ALL PERMIT CONDITIONS AND ANY LOCAL PUBLIC WORKS STANDARDS.
10. THE TOLERANCE FOR FINISH GRADES FOR ALL PAVEMENT, WALKWAYS AND LAWN AREAS SHALL BE 0.1 FEET. UNLESS NOTED OTHERWISE, ALL EXISTING MANHOLE COVERS, VALVES, CURB STOPS AND OTHER ITEMS TO REMAIN SHALL BE ADJUSTED TO THE NEW FINISH GRADE.
11. ANY DEWATERING NECESSARY FOR THE COMPLETION OF THE SITEWORK SHALL BE CONSIDERED AS PART OF THE CONTRACT AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
12. THE CONTRACTOR SHALL INSTALL THE ELECTRICAL, CABLE AND TELEPHONE SERVICES IN ACCORDANCE WITH THE UTILITY COMPANIES REQUIREMENTS.
13. TREE STUMPS TO BE REMOVED SHALL BE DISPOSED OF AT AN APPROVED OFF-SITE LOCATION OR DISPOSED IN ACCORDANCE WITH STATE LAW.
14. IF THERE ARE ANY CONFLICTS OR INCONSISTENCIES WITH THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE OWNER AND ENGINEER FOR VERIFICATION BEFORE WORK CONTINUES ON THE ITEM IN QUESTION.
15. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING TESTING AND INSPECTION SERVICES INDICATED IN THE CONTRACT DOCUMENTS.
16. THE CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT AND FIELD ENGINEERING REQUIRED FOR COMPLETION OF THE PROJECT. CIVIL ENGINEERING ASSOCIATES WILL PROVIDE AN AUTOCAD FILE WHERE APPLICABLE.
17. THIS PLAN IS NOT A BOUNDARY SURVEY AND IS NOT INTENDED TO BE USED AS ONE.
18. SITE INFORMATION IS BASED ON A FIELD SURVEY PERFORMED BY CIVIL ENGINEERING ASSOCIATES, INC MARCH 2025. CIVIL ENGINEERING ASSOCIATES, INC. SURVEY ORIENTATION IS "GRID NORTH", VERMONT COORDINATE SYSTEM OF 1983 (HORIZONTAL) AND NAVD88 (VERTICAL) ESTABLISHED FROM GPS OBSERVATIONS ON SITE.





TEST PIT LOGS

DATE EXCAVATED: December 22, 1996
METHOD OF EXCAVATION: Backhoe

TEST PIT #6A
0 - 12" Dark brown loam - friable
12 - 24" Yellowish brown fine sandy loam - friable
24 - 36" Dark brown fine sandy loam - friable
36 - 60" Grayish brown gravelly loam - friable
Dry

DATE EXCAVATED: May 12, 1994
METHOD OF EXCAVATION: Backhoe

TEST PIT #27
0 - 8" Dark brown loam - friable
8 - 20" Yellowish brown fine sandy loam - friable
20 - 72" Grey loose sand w/stones - friable
72 - 84" Grey medium sandy loam - friable, moist
Roots to 42"
Mottled @ 70"+/-

TEST PIT #44
0 - 15" Light brown loam - friable
15 - 84" Grey gravelly loam w/shells - very friable
84 - 108" Light brown medium sand w/stones, very friable
Dry

O'Donnell-Donovan Test Pits
December 11, 2020 - D. Marshall, J. Donovan, B.Tremback, T, Case

TP#107

0"- 8"	Reddish-brown, loose, very fine sandy loam, blocky, weak, no mottles, 1-5% sub-round
8"- 25"	Reddish-brown, medium compact, very fine sandy loam, granular, weak, no mottles, 1-5% sub-round
25"- 31"	Dark reddish-brown, medium compact, very fine sandy loam, granular, weak, no mottles, 6-15% sub-round
31"- 52"	Reddish-brown, medium compact, coarse sand, granular, single grain, no mottles, >35% sub-round
52"- 65"	Dark reddish-brown, loose, coarse sand, granular, single grain, no mottles, >35% sub-round
65"- 75"	Reddish-brown, loose, sand, granular, single grain, no mottles, 16-35% sub-round
75"- 81"	Reddish-brown, medium compact, loamy fine sand, granular, single grain, few 0-2%, medium, faint, 1-5% sub-round

SHGWT 75" — Ground Slope 5%
Depth of Heavy Roots 30" — Depth of Fine Roots 48"
No ledge — No seeps

Basis of Design - Existing Home

Existing Design Flow
Ex. 1 Bedroom Home = 140 GPD

Proposed Design Flow
Ex. 1 Bedroom Home = 140 GPD
Proposed 2 Bedroom Home Accessory Home = 280 GPD
Reserve Capacity = 70 GPD
Total = 490 GPD

Inground Trench Design Application Rate
Table 9-3 from 2023 Wastewater and Potable Water Supply Rule
Limiting Soil Texture, and Structure in 0-3' below leachfield bottom:
=Fine Sandy Loam
Use Max Application Rate = 0.6 GPD/SF

Required Primary and Replacement Trench Area
Use 12" of Stone Beneath the Dist. Piping
Required Area of Trench = 490 GPD / (0.6 GPD/LF) =816 SF

Use three 4' Wide x 76' Long Primary and Replacement Trench
(3) x 4' x 76' = 912 SF Primary/Replacement Trench Provided

Pressure Distribution System
Minimum Required Number of Orifices
76 LF Bed x 4 FT width x 3 / (25 GPD/SF) =36.5, Use 48
48 ORIFICES x 0.63 GPM(3/16" ORIFICE@1 PSI)=30.2 GPM Min.
Provide three 1.5" Distribution Pipes, 71'-3" FT long
See Detail for Orifice Sizing and Layout
Fill Volume of Distribution Piping = 22.2 Gal
Minimum Required Dose Volume = 22.2 Gal x 5 = 111 Gal
Minimum Number of Doses per Day = 4
Maximum Dose Size = 490 GPD/4 = 122.5 Gal
No Drainback Volume
Use 119 Gallon Dose Volume

Water Basis of Design

AVERAGE DAILY DEMAND =490 GPD
DESIGN RATE =490 GPD/720 MIN. = 0.7 GPM
INSTANTANEOUS PEAK DEMAND: 5 GPM + 5 GPM =10 GPM
LONG TERM YIELD
Well Drillers Yield: 8 GPM
8 GPM x $\frac{1}{2}$ = 4 GPM

STORAGE
Minimum Storage Required: 269.5 Gallons
Storage Provided: 439 Gallons (see attached analysis)

WELL PUMP CAPACITY REQUIRED
=10 GPM MINIMUM

Pump Sizing

188.0= Invert of Lateral (or High Pt of FM)
191.0 = Low Elevation in Pump Station (FT)
-3.0 = Elevation Head (FT)

Length of SDR 26 PVC Force Main =550 FT
Diameter of Force Main = 2.5"
Design Flow Rate = 48.0 GPM
Pipe Velocity= 3.1 FPS (2.0 FPS Min)
Friction Loss per 100 LF = 2.65 FT
14.6 = Resulting Friction Head (FT)
-3.0 = Elevation Head (FT)
7.5 = System Head(5.8x1.3) (FT)
19.1 = Design TDH

Use existing pump originally designed fo the same 48 GPM design flow. If pump requires replacement provide Goulds PE51, 1 Ph, 60 Hz, 115 V or 230 V, 0.5HP Effluent pump or approved equal, pump voltage based on existing wiring.

Pump Station Emergency Storage
Required=490 Gallons
Pump Compartment = 34.0 gal/in
Required Emergency Storage Delta = Use 3"

Cycle Delta =119 Gal/34 Gal/inch =3.5"
Pump off above floor = 14"
Pump on above floor = 14"+3.5" =17.5"
Alarm above floor =17.5"+3" = 20.5"
Storage above alarm and below invert (inches) = 52.5"-20.5"=32"
Storage above alarm (gallons) = 32" x 34 Gal/inch
=1,088 Gallons Provided

Septic Tank Sizing
Minimum Size Required = 1,000 Gal for Design Flows <=560 GPD
Use existing 1,500 Gal septic tank, Effluent Filter Required to be installed

Pump Station Design -Accessory Home

Pump Sizing for Accessory Home
197.0= Invert of Lateral (or High Pt of FM)
191.2 = Low Elevation in Pump Station (FT)
5.8= Elevation Head (FT)

Length of SDR 26 PVC Force Main =725 FT
Diameter of Force Main = 2"
Design Flow Rate = 22.6 GPM
Pipe Velocity= 2.3 FPS (2.0 FPS Min)
Friction Loss per 100 LF = 1.5 FT
11.4 = Resulting Friction Head (FT)
5.8 = Elevation Head (FT)
0.3 = System Head(0.23x1.3) (FT)
17.5= Design TDH

Use Goulds PE31, 1 Ph, 60 Hz, 115 V,
0.33 HP Effluent pump or approved equal

Pump Station Emergency Storage
Required=280 Gallons
Pump Compartment =11 gal/in
Required Emergency Storage Delta = Use 4"

Minimum Number of Doses per Day = 4
Maximum Dose Size = 280 GPD/4 = 70 Gal
No Drainback Volume
Use 66 Gallon Dose Volume

Cycle Delta = 66 Gal/11 Gal/inch =6"
Pump off above floor = 12"
Pump on above floor = 12"+6" =18"
Alarm above floor = 18"+4" =22"
Storage above alarm and below inlet (inches)
= 59"-22"=37"
Storage above alarm (gallons) = 37" x 11 Gal/inch
=407 Gallons Provided

Septic Tank
Minimum Size Required = 1,000 Gal for
Design Flows <=560 GPD
Use a 1,000 Gal septic tank w/effluent filter

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

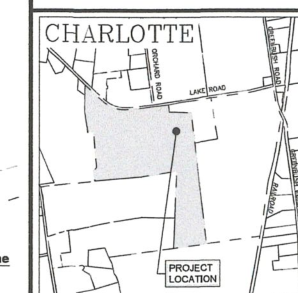
SITE ENGINEER:

CIVIL ENGINEERING ASSOCIATES, INC.
10 MANSFIELD VIEW LANE, SOUTH BURLINGTON, VT 05403
P: 802-864-2323 FAX: 802-864-2271 web: www.cea-vt.com

DRAWN: MAB
CHECKED: JDL
APPROVED: JDL

CLIENT:
O'DONNELL / DONOVAN
P.O. BOX 321
CHARLOTTE, VT 05445

PROJECT:
ACCESSORY STRUCTURE
501 LAKE ROAD
CHARLOTTE, VT 05445



LOCATION MAP
1" = 2000'

DATE	CHECKED	REVISION

PROPOSED WASTEWATER PLAN

DATE: JUNE, 2025
SCALE: 1" = 40'
PROJ. NO.: 25125
DRAWING NUMBER: C1.0