

BRISTOL WATER DISTRICT  
WSID #5002  
APPLICATION FOR NEW CONNECTION

Date: 6-02-2022

Name: Jacob E. Zubow

Address: 34 Garfield Street

Telephone: 262-325-7290

Property Owner: Jacob E. Zubow

Parcel Number: 235015

Location: Connection is for a proposed accessory dwelling in the back yard of 34/36 Garfield Street, parcel 235015.

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\_\_\_\_\_

Type of Connection: Single Family Residential  
*(single family residential, multi-residential, agricultural, commercial, other)*

Commentary: As indicated the connection is for a proposed accessory dwelling in the back yard of 34/36 Garfield Street , parcel 235015. For ease of connecting to the water system, it is proposed to make the connection from the existing duplex residence to the proposed accessory dwelling. This will eliminate the need to excavate through Garfield Street and disrupt traffic flow.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

*Departmental Use Only*

Approved: \_\_\_\_\_ Denied: \_\_\_\_\_

Remarks: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

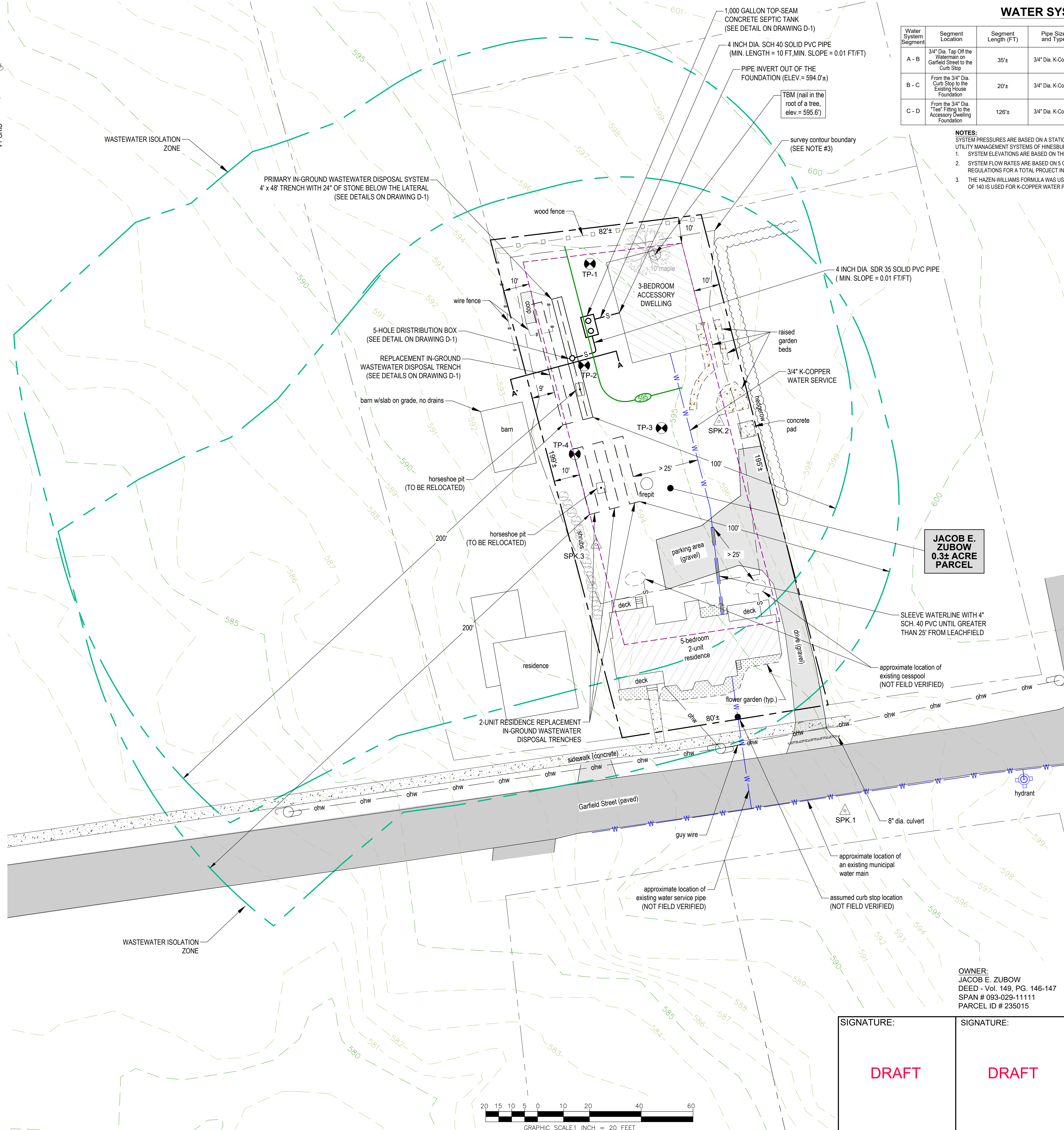
Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_



**Project Location Map**  
Not to Scale

ZONING INFORMATION	
ZONING DISTRICT <b>HIGH DENSITY RESIDENTIAL (HDR)</b>	
DIMENSIONAL REQUIREMENTS	
LOT AREA:	10,000 FT. MIN.
ROAD FRONTAGE:	75 FT. MIN.
LOT DEPTH:	75 FT. MIN.
LOT COVERAGE:	50% MAX.
SETBACK - FRONT YARD:	
PRINCIPAL *	40 FT. MIN.
ACCESSORY **	20 FT. MIN.
SETBACK - SIDE/REAR YARD:	
PRINCIPAL	15 FT. MIN.
ACCESSORY	10 FT. MIN.
BUILDING HEIGHT:	35 FT. MAX.
FOOTPRINT/STRUCTURE:	
PRINCIPAL	5,000 SF. MAX.
ACCESSORY	1,000 SF. MAX.
* = MEASURED FROM ROAD CENTERLINE	
** = 20 FT. BEHIND PRINCIPAL FRONTLINE	

- PROJECT NOTES:**
- THIS IS NOT A BOUNDARY SURVEY AND DOES NOT MEET THE LEGAL REQUIREMENTS OF A BOUNDARY SURVEY AS DESCRIBED IN 27 V.S.A. § 1403. PROJECT PERIMETER LINES ARE BASED ON BRISTOL TAX MAPS SHOWN ON THE AGENCY OF NATURAL RESOURCES (ANR) ENVIRONMENTAL INTEREST LOCATOR AND EVIDENCE FOUND DURING THE MAY 2022 TOPOGRAPHIC SURVEY. NO WARRANTY IS MADE TO THE ACCURACY OF THE BOUNDARY LINES SHOWN HEREON.
  - THE LOCATIONS OF EXISTING PHYSICAL FEATURES ON THIS PLAN ARE BASED ON A TOPOGRAPHIC SURVEY COMPLETED BY BARNARD & GERVAIS, LLC IN MAY 2022.
  - THE ELEVATIONS ON THIS PLAN WITHIN THE DASHED BOUNDARIES SHOWN ARE 1-FOOT CONTOURS BASED ON NAVD88 (GEOID12B) ESTABLISHED FROM SURVEY GRADE GNSS READINGS COLLECTED WITH A (LEICA GS15) TOPCON HIPER SR GNSS RECEIVER ADJUSTED TO VERMONT GRID ON RANDOM CONTROL POINTS USING REAL TIME KINEMATIC CORRECTIONS FROM A VIRTUAL REFERENCE STATION OF THE VT CORS NETWORK. THE ELEVATIONS ON THIS PLAN OUTSIDE THE DASHED BOUNDARIES SHOWN ARE 1-FOOT LIDAR CONTOURS OBTAINED FROM THE STATE OF VERMONT VCGI OPEN DATA PORTAL DATABASE.
  - FOR CLARITY, TEXT IDENTIFYING EXISTING ITEMS IS LOWER CASE; TEXT IDENTIFYING PROPOSED ITEMS IS UPPER CASE.
  - NO ATTEMPT HAS BEEN MADE TO LOCATE ANY UNDERGROUND UTILITIES BY BARNARD & GERVAIS, LLC. THE CONTRACTOR WILL BE RESPONSIBLE FOR CONTACTING DIG SAFE TO HAVE ANY UNDERGROUND UTILITIES MARKED PRIOR TO ANY EXCAVATION OR SITE WORK. THE CONTRACTOR SHALL NOTIFY THE DIG SAFE NETWORK AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
  - THIS WASTEWATER DISPOSAL SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH THE STATE OF VERMONT, AGENCY OF NATURAL RESOURCES, ENVIRONMENTAL PROTECTION RULES, CHAPTER 1, "WASTEWATER SYSTEM AND POTABLE WATER SUPPLY RULES" EFFECTIVE APRIL 12, 2019
  - NO WETLANDS WERE SHOWN ON THE SUBJECT PARCEL ON THE "VERMONT NATURAL RESOURCES ATLAS" AND NO OTHER WETLAND DELINEATION OF SAID PARCEL HAD BEEN CONDUCTED OF WHICH BARNARD & GERVAIS, LLC IS AWARE. BARNARD & GERVAIS, LLC MAKES NO WARRANTIES THAT WETLANDS OR ASSOCIATED BUFFERS DO OR DO NOT EXIST ON SAID PARCEL. IT IS RECOMMENDED THAT THE LANDOWNER OR CONTRACTOR CONTACT A WETLAND SPECIALIST TO CONFIRM NO WETLANDS EXIST PRIOR TO ANY EARTH WORK OR CONSTRUCTION.
  - BARNARD & GERVAIS, LLC IS NOT RESPONSIBLE FOR ANY ASPECTS OF HEALTH AND SAFETY ASSOCIATED WITH THIS PROJECT.
  - ALL EXCAVATION WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE STATE OF VERMONT, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) GUIDELINES FOR TRENCH EXCAVATIONS.
  - THE CONTRACTOR AND/OR LANDOWNER SHALL ADHERE TO THE GUIDELINES SET FORTH IN THE STATE OF VERMONT EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION SITES. IT IS THE RESPONSIBILITY OF THE LANDOWNER OR SITE CONTRACTOR TO ENSURE THESE GUIDELINES ARE FOLLOWED AND EROSION/SEDIMENT CONTROL MEASURES ARE MAINTAINED THROUGHOUT THE COURSE OF THE PROJECT.



**WATER SYSTEM DESIGN PRESSURES AND FLOWS**

Water System Segment	Segment Location	Segment Length (FT)	Pipe Size and Type	Elevation Change (FT)	Headloss From Elevation Change	Headloss Due To Friction	Additional Headloss from Fittings or Taps (psi)	Total Headloss in Segment (psi)	System Pressure at the End of the Segment (psi)
A - B	3/4" Dia. Tap Off the Watermain on Garfield Street to the Curb Stop	35±	3/4" Dia. K-Copper	1' Change in Elev. Tap to Curb Stop	1' x 0.433 psi/ft = 0.433 psi (gain/loss)	15 gallons per minute (gpm) Through 3/4" 3/4" dia pipe = 10.3 psi (loss)	Loss Through a 3/4" Dia. Tap and One Curb Stop = 0.7 psi	0.433 psi (loss) + 10.9 psi (loss) + 0.7 psi (loss) = 11.433 psi (loss)	124 psi - 11.433 psi = 112.57 psi at the 3/4" Curb Stop
B - C	From the 3/4" Dia. Curb Stop to the Existing House Foundation	20±	3/4" Dia. K-Copper	1' Increase in Elev. Curb Stop to the Existing Residence Foundation	1' x 0.433 psi/ft = 0.433 psi (loss)	15 gallons per minute (gpm) Through 27' of 3/4" dia pipe = 4.44 psi (loss)	Loss Through a 3/4" Dia. Tee Fitting = 0.7 psi	0.433 psi (loss) + 5.81 psi (loss) + 0.7 psi (loss) = 7.043 psi (loss)	105.57 psi - 7.043 psi = 98.53 psi at the Existing Residence Foundation
C - D	From the 3/4" Dia. Tee Fitting to the Accessory Dwelling Foundation	126±	3/4" Dia. K-Copper	2.0' Increase in Elev. Tee Fitting to the Accessory Dwelling Foundation	2.0' x 0.433 psi/ft = 0.866 psi (loss)	5 gallons per minute (gpm) Through 126' of 3/4" dia pipe = 4.87 psi (loss)	Loss Through a 3/4" Dia. Tee Fitting = 0.7 psi	0.866 psi (loss) + 4.87 psi (loss) + 0.7 psi (loss) = 7.876 psi (loss)	98.53 psi - 7.876 psi = 90.65 psi at the Accessory Dwelling Foundation

**NOTES:**  
SYSTEM PRESSURES ARE BASED ON A STATIC PRESSURE OF 124 POUNDS PER SQUARE INCH (PSI). THIS STATIC PRESSURE WAS PROVIDED BY VERMONT UTILITY MANAGEMENT SYSTEMS OF HINESBURG, VERMONT.  
1. SYSTEM ELEVATIONS ARE BASED ON THE PIPE BEING INSTALLED AT A DEPTH OF 5 TO 6 FEET BELOW EXISTING GROUND SURFACE.  
2. SYSTEM FLOW RATES ARE BASED ON 5 GALLONS PER MINUTE (GPM) FOR EACH RESIDENCE AS STIPULATED BY THE STATE OF VERMONT REGULATIONS FOR A TOTAL PROJECT INSTANTANEOUS PEAK DEMAND (IPD) OF 15 GPM.  
3. THE HAZEN-WILLIAMS FORMULA WAS USED TO CALCULATE THE FRICTION LOSS IN EACH SEGMENT OF WATER PIPE. A ROUGHNESS COEFFICIENT (C) OF 140 IS USED FOR K-COPPER WATER PIPE.

**LEGEND**

- BOUNDARY LINE/ R.O.W. (EXISTING)
- BOUNDARY LINE/ R.O.W. (ABUTTING)
- - - ZONING DISTRICT BOUNDARY
- - - 1-FOOT LIDAR CONTOUR (OBTAINED FROM VCGI DATABASE)
- - - 100 1-FOOT GROUND SURVEY CONTOUR
- - - 100 FINISH GRADE
- - - TREE LINE
- - - PROPOSED LIMITS OF CLEARING
- - - DITCHLINE
- - - GRAVITY SEWER (EXISTING)
- - - GRAVITY SEWER (PROPOSED)
- - - FORCE MAIN
- - - MUNICIPAL WATER SERVICE
- - - 1-INCH DIAMETER CL200 POLYETHYLENE PLASTIC WATER LINE (UNLESS OTHERWISE NOTED)
- - - WELL ISOLATION
- - - WASTEWATER ISOLATION
- - - UNDERGROUND ELECTRICAL CONDUIT
- - - UNDERGROUND GAS LINE
- - - UNDERGROUND TELEPHONE LINE
- - - UTILITY POLE/ OVERHEAD WIRES
- △ SURVEY TRAVERSE STATION
- △ TEMPORARY BENCHMARK (TYPE AND ELEVATION NOTED)
- ⊙ TEST PIT (TP-01)
- ⊙ SOIL BORING (SB-01)
- ⊙ DRILLED WELL (UNLESS OTHERWISE NOTED)

**JACOB E. ZUBOW**  
0.3± ACRE PARCEL



SIGNATURE: **DRAFT**

SIGNATURE: **DRAFT**

DATE	DESCRIPTION	BY
REVISIONS		
<b>BARNARD &amp; GERVAIS, LLC</b> Land Surveying Water & Wastewater Environmental Consulting 167 Main Street, P.O. Box 820 Hinesburg, VT 05461 Telephone: (802) 833-5168		
PROJECT NO.	22267	
DATE:	05-12-2022	
SCALE:	1" = 20'	
SURVEY:	OL	
DRAWN:	CS, RW	
CHECKED:	JB	
DRAWING NO.	<b>S-1</b>	
THESE PLANS WITH LATEST REVISIONS SHOULD ONLY BE USED FOR THE PURPOSE SHOWN BELOW: <input checked="" type="checkbox"/> PRELIMINARY DRAFT <input type="checkbox"/> FINAL STATE REVIEW		
SHEET 1 OF 2		