

September 28, 2023

Water & Sewer Commission c/o John Arneson, Town Manager Town of Richmond P.O. Box 285 Richmond, VT 05477

Re: Preliminary Water & Sewer Allocation Request
Allen & Lynne Knowles Family Trust III, Blair Knowles & Matt Parisi
112 Main St.
Richmond, VT 05477

Dear Commission Members,

Please find attached the following in conjunction with a new proposed 3-bedroom single family house to be located at 112 East Main St. in Richmond, VT –

- Completed Water Service Allocation Request
- Completed Sewer Service Allocation Request
- Proposed Condition Site & Detail Plans

The project involves the construction of a new, 3-bedrom, single family house at 112 E. Main St. in addition to the existing duplex apartment building.

The property is currently served by municipal water and sewer services. There is an existing 34" copper water service on the north side of the existing duplex located approximately 15' off the northwest building corner that ties into the East Main St. water main. There is also a 4" PVC sewer service on the north side of the existing duplex located directly off the northeast building corner that ties into the East Main St. sewer main. The project proposes to connect to these two existing municipal services to serve the new single family house. A new 34" CTS PE water service will be run from the new house to the front of the property where it will connect with a new curb stop to the existing water service. Similarly, a new 1,000 gal. concrete grinder pump station will pump sewer from the new house in a 2" PVC force main to the front of the property where it will connect with a new 2" x 4" wye connection to the existing gravity sewer service.

Regarding water demand and sewer flows, we have recently confirmed the required water and sewer allocation requirements with the State for this project. They are as follows –

- Existing Water Demand = 2 units @ 280 gpd/unit (140 gpd/bedroom @ 2 bedrooms each) = 560 gpd
- Additional Water Demand = 1 unit @ 360 gpd/unit (municipal connection) = 360 gpd
- Total Proposed Water Demand = 560 + 360 = 920 gpd
- Existing Sewer Flow = 2 units @ 210 gpd/unit (municipal connection >50,000 gpd) = 420 gpd
- Additional Sewer Flow = 1 unit @ 210 gpd/unit (municipal connection >50,000 gpd) = 210 gpd
- Total Proposed Sewer Flow = 420 + 210 = 630 gpd

At this time, on behalf of the owners of the property, we would like to respectfully request preliminary water and sewer allocation from the Town of Richmond for an additional 360 gpd of water, and 210 gpd of sewer, allocation to serve the proposed project. This would bring the total municipal water demand and sewer flow for the property to 920 gpd and 630 gpd, respectively.

If upon review of the applications and proposed plans, you have any questions or concerns, please feel free to contact me.

Sincerely,

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Jeffrey Olesky, P.E.

Cc: Matt Parisi, Owner (via email) CCE File #23037

SEWER SERVICE ALLOCATION REQUEST PRELIMINARY APPROVAL APPLICATION

	, PRELIMINARY APPROVAL AP	PLICATION				
Landowner Road Name Mailing Addre	Allen: Lynne Knowles Family Trust III, Plair Knowles & Math Pavisi 112 E. Main St. 2.chmord, VT 05477	Parcel Code Acreage	EM 0112 I O.40 M.			
	PLEASE FILL IN ALL BLANKS, T	HANK YOU.				
A. Service is (Describe use	requested for new, 3-bedroom, single family 4 be	amily house droom, 30 seat res	staurant, etc.)			
B. Allocation Allocation For	requested: new='210 (130 total) gallons permula or other officially adopted formula.	er day based on the	e State of Vermont			
C. Number of unit is conside	funits to be served based on one unit ored to be one unit, ie. 300 gallons per day is one unit.)	equal to 450 gallo	ns per day. (Less than one			
D. Plans for new improvements must be attached for application to be deemed complete.						
submitting this	oproval is hereby requested for the above purpose and in a Preliminary Application Request it is further understountil FINAL APPLICATION APPROVAL is received fired for preliminary application and approval.	od by the landows	d above. By signing and ner that occupancy and use			
	*	Date				
gallons per day and regulations	Water and Sewer Commission has reviewed the above and hereby such request based on the s. Conditions applied to	e preliminary alloc e application and a	ation request for pplicable ordinances, rules			
Water and Sew	,Chairperson	Date	_			
If Denied:	1. An appeal may be taken within 15 days to the Chil	ttenden County Su	perior Court.			
If Approved:	 An appeal may be taken within 15 days to the Chit A Final Allocation Approval Request must be subs 					
	3. A Town Treasurer receipt of all applicable fees in attached to the Final Approval Request. (Multiple che	the amount of \$_ ecks may be reques	92 6.10 must be sted)			

Town of Richmond, Vermont	Form WSWPA2/95

Application	No.	
TAPPMENEROIN	710.	

	LOWII OF INICIALIO	na, vermont	POPILI YYSYYPE	14193	Ap	plication No.	
	Landowner Road Name Mailing Address	112 E. M 112 E. M	PRELIMINAR NE Kriewies Fa With 1 Matt	Y APPROVAL mily Trust I Pavisi	FION REQUEST APPLICATION Parcel Cod Acreage		
			PLEASE FILL I	N ALL BLANK	S, THANK YOU.		
	A. Service is requested for <u>New 3-betroom, single family house</u> (Describe use of land proposed to be serviced, ie. Single family 4 bedroom, 30 seat restaurant, etc.)						
	B. Allocation requested: (1800 = 360 (020 + 661) gallons per day based on the State of Vermont Allocation Formula or other officially adopted formula.						
	C. Number of units to be served based on one unit equal to 450 gallons per day. (Less than one unit is considered to be one unit, ie. 300 gallons per day is one unit.)						
	D. Plans for new improvements must be attached for application to be deemed complete.						
Preliminary approval is hereby requested for the above purpose and in the amount listed above. By signing and submitting this Preliminary Application Request it is further understood by the landowner that occupancy and use can not occur until FINAL APPLICATION APPROVAL is received. No fee is required for preliminary application and approval.							
0			Blui Sk	mler	9-28-2023	1	
	Landowner Signa	ture			Date		
	(For office use only)						
	The Richmond Water and Sewer Commission has reviewed the above preliminary allocation request for gallons per day and hereby such request based on the application and applicable ordinances, rules and regulations. Conditions applied to decision:						

Water and Sewer Commission

If Denied:

1. An appeal may be taken within 15 days to the Chittenden County Superior Court.

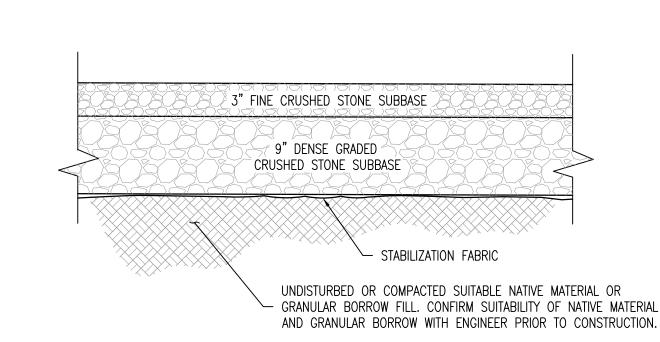
Chairperson

If Approved:

- 1. An appeal may be taken within 15 days to the Chittenden county Superior Court.
- 2. A Final Allocation Approval Request must be submitted within 60 days of preliminary approval.

Date

3. A Town Treasurer receipt of all applicable fees in the amount of \$ 680. 40 must be attached to the Final Approval Request. (Multiple checks may be requested)



NOTES:

- 1. FINE CRUSHED STONE AND DENSE GRADED CRUSHED STONE TO MEET AOT SPECS 704.05 AND 704.06 RESPECTIVELY.
- 2. STABILIZATION FABRIC TO MEET AOT SPEC 720.01 FOR GEOTEXTILE FOR ROADBED SEPARATOR.
- 3. SUBBASE TO BE INSTALLED IN ACCORDANCE WITH AOT SPECS 301 AND 406, RESPECTIVELY. SAND BORROW, WHERE REQUIRED, SHALL MEET AOT SPEC 703.03.

LAWN | PAVEMENT

—OD+2'—

1. SEWER LINES AND FITTINGS TO MEET AOT SPEC 710.06 AND BE INSTALLED AND TESTED IN ACCORDANCE WITH AOT

3. IN TRENCHES WITH UNSTABLE MATERIALS, THE TRENCH BOTTOM SHALL BE STABILIZED WITH FILTER FABRIC AND 4"

5. WHEN 6'OF COVER CANNOT BE MAINTAINED INSTALL 2" OF RIGID INSULATION, FOR EVERY 1'OF COVER THAT

CANNOT BE MAINTAINED, OVER THE PIPE EXTENDING A MINIMUM OF 2' BEYOND THE OUTER EDGES OF THE PIPE.

- 4. GRANULAR BORROW FILL TO MEET AOT SPEC 703.04.
- 5. COMPACTION OF SUBBASE MATERIALS TO MEET AOT SPEC 301.06.

6" MIN

DRIVEWAY SECTION DETAIL

SEWER LINE MARKING

COMPACTED SUITABLE

NATIVE MATERIAL, OR

BE PLACED ON FROZEN SUBGRADE.

OF 3/4" CRUSHED STONE MEETING AOT SPEC 704.02B.

4. GRANULAR BORROW FILL TO MEET AOT SPEC 703.04.

SEWER TRENCH DETAIL

IN 12" LIFTS

GRANULAR BORROW FILL

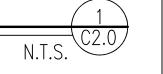
THOROUGHLY COMPACTED

NOTES:

24"-30" BELOW

FINISHED GRADE

TAPE SHALL BE PLACED



SEE PAVING DETAILS

- BEDDING MATERIAL

PROPOSED SEWER LINE

GRANULAR BORROW FILL.

MATERIAL AND GRANULAR

TO CONSTRUCTION.

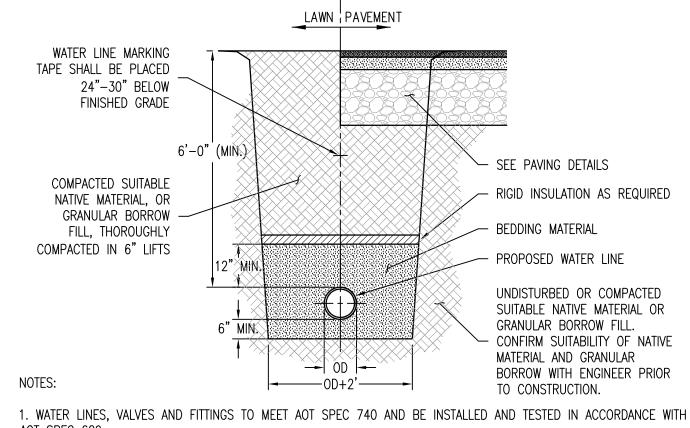
RIGID INSULATION AS REQUIRED

UNDISTURBED OR COMPACTED

SUITABLE NATIVE MATERIAL OR

CONFIRM SUITABILITY OF NATIVE

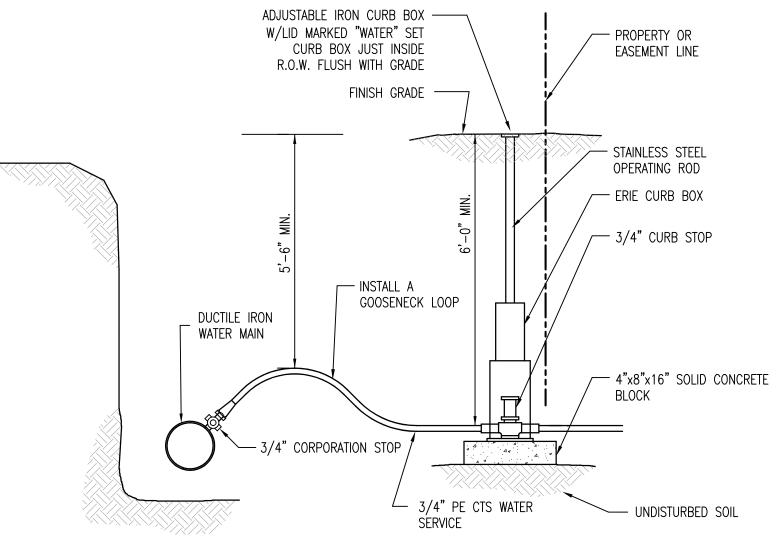
BORROW WITH ENGINEER PRIOR



AOT SPEC 629.

- 2. BEDDING MATERIAL SHALL BE SAND, GRAVEL OR CRUSHED STONE WITH NO STONES GREATER THAN 1". BEDDING MATERIAL SHALL NOT BE PLACED ON FROZEN SUBGRADE.
- 3. IN TRENCHES WITH UNSTABLE MATERIALS, THE TRENCH BOTTOM SHALL BE STABILIZED WITH FILTER FABRIC AND 4" OF 3/4" CRUSHED STONE MEETING AOT SPEC 704.02B.
- 4. GRANULAR BORROW FILL TO MEET AOT SPEC 703.04.
- 5. WHEN 6'OF COVER CANNOT BE MAINTAINED INSTALL 2" OF RIGID INSULATION, FOR EVERY 1'OF COVER THAT CANNOT BE MAINTAINED, OVER THE PIPE EXTENDING A MINIMUM OF 2' BEYOND THE OUTER EDGES OF THE PIPE.

WATER TRENCH DETAIL



WATER SERVICE CONNECTION DETAIL

GRANULAR BORROW FILL. CONFIRM SUITABILITY OF NATIVE MATERIAL

NOTES:

PROPOSED 2

SCH 40 PVC

FORCE MAIN

12" OF 3/4"

CRUSHED STONE TO

EXTEND 12" MINIMUM

BEYOND ALL SIDES

5'-7.5"

1. THE CONTRACTOR SHALL INSTALL THE WATER SERVICE AS INDICATED ON THE CONTRACT PLANS OR AS DIRECTED BY ENGINEER. EACH SERVICE SHALL CONSIST OF A CORPORATION, CURB STOP, HDPE TUBING AND A CURB BOX WITH SERVICE ROD. CORPORATION SHALL BE ATTACHED TO THE WATER MAIN BY MEANS OF A DIRECT TAP.

2. CORPORATIONS SHALL BE WATERWORKS BRASS (OR APPROVED EQUAL) AND MANUFACTURED IN ACCORDANCE WITH AWWA C800. CORPORATIONS SHALL HAVE MUELLER THREADS AT THE INLET AND A COMPRESSION TYPE FITTING AT THE OUTLET. BOTH THE INLET AND OUTLET SHALL BE OF THE SAME SIZE. CORPORATIONS SHALL BE DIRECTLY TAPPED INTO DUCTILE IRON PIPE. IN NO OTHER INSTANCE, EXCEPT WHEN A TAPPING SLEEVE AND VALVE IS USED, SHALL A TAP BE MADE WITH OUT A CORPORATION. CORPORATIONS SHALL BE MUELLER OR APPROVED EQUAL.

3. CURB STOPS SHALL BE INVERTED KEY TYPE MANUFACTURED BY WATERWORKS BRASS IN ACCORDANCE WITH AWWA C800.0 THE CURB STOP SHALL OPEN LEFT AND HAVE A POSITIVE STOP. NO CURB STOP SHALL HAVE THE ABILITY TO DRAIN THE SERVICE LINE. BOTH THE INLET AND OUTLET OF THE CURB STOP SHALL HAVE COMPRESSION TYPE FITTINGS. THE TEE HEAD OF THE CURB STOP SHALL HAVE PROVISIONS FOR THE CONNECTION OF A SERVICE ROD. CURB STOPS SHALL BE MUELLER 15200 OR APPROVED EQUAL.

4. SERVICE LINE SHALL BE PE CTS 250 PSI NFS TUBING. THE NAME OF THE TRADEMARK OF THE MANUFACTURER AND TYPE SHALL BE STAMPED AT REGULAR INTERVALS ALONG THE PIPE.

5. CURB BOXES SHALL BE OF THE SLIDING ADJUSTABLE TYPE CAPABLE OF ADJUSTING FROM FIVE (5) TO SIX (6) FEET. THE BASE OF THE BOX SHALL BE ARCH TYPE SO AS TO PREVENT THE BOX FROM RESTING DIRECTLY ON THE CURB STOP. THE ADJUSTABLE UPPER SECTION SHALL BE SUITABLE FOR USE WITH THE ASSOCIATED ROD.

6. THE CONTRACTOR SHALL MAKE ALL NECESSARY TAPS INTO THE WATER MAIN AND WILL INSTALL FOR EACH BUILDING AN APPROVED BRASS CORPORATION STOP. THE CONTRACTOR SHALL ALSO CONNECT THE SERVICE PIPE TO THE FLANGED JOINT, WHICH SHALL BE CONNECTED TO THE BRASS CURB STOP WITH INLET AND OUTLET FOR THE APPROPRIATE SERVICE PIPE. SUCH CURB STOP SHALL BE LOCATED NOT LESS THAN FIVE FEET SIX INCHES (5'-6") BELOW THE GROUND SURFACE AND SHALL BE ACCESSIBLE FROM THE SURFACE THROUGH AN APPROVED VALVE BOX.

7. THE CONTRACTOR SHALL MAKE ALL CONNECTIONS IN ACCORDANCE WITH THE LOCAL PUBLIC WORKS DEPARTMENT STANDARDS. THIS SHALL INCLUDE PREPARING THE PIPE FOR METER INSTALLATION BY THE WATER DEPARTMENT.

1. PUMP STATION TO BE INSTALLED AND TESTED IN ACCORDANCE WITH AOT SPEC 628.

4. SET PUMP FLOATS FOR 105 GALLON DISCHARGE PER PUMP CYCLE (±5").

THICKNESS OF AT LEAST 3 INCHES AND BE ADEQUATELY REINFORCED.

- REQ. EMERGENCY STORAGE = ONE DAY = 420 GAL.

THE COVER AND INFILTRATE INTO THE SYSTEM.

7. EMERGENCY STORAGE -

3. PROVIDE MYERS VR1 (1 Hp) GRINDER PUMP, OR APPROVED EQUIVALENT. THE CONTRACTOR SHALL

VERIFY PUMP SELECTION WITH ENGINEER IF FINAL SITE SELECTION IS OTHER THAN SHOWN ON PLANS.

5. CONCRETE PUMP STATION SHALL BE WATERTIGHT, STRUCTURALLY SOUND, AND CONSTRUCTED OF

A MINIMUM WALL THICKNESS OF 3 INCHES AND SHALL BE ADEQUATELY REINFORCED TO FACILITATE

6. ADEQUATE ACCESS MUST BE PROVIDED TO THE PUMP STATION FOR INSPECTION AND CLEANING.

ACCESS SHALL BE PROVIDED BY MEANS OF EITHER A REMOVABLE COVER OR A MANHOLE OF AT LEAST

- PROP. EMERGENCY STORAGE = $(56"-4"-12"-5"-6") \times 88" \times 56" = 83 \text{ CF} = \pm 618 \text{ GAL}.$

16 INCHES IN DIAMETER. COVERS SHOULD BE TIGHT FITTING AND DESIGNED TO PREVENT ENTRY BY

HANDLING. WHEN PRECAST SLABS ARE USED AS COVERS, THEY SHALL BE WATERTIGHT, HAVE A

MATERIALS NOT SUBJECT TO EXTENSIVE CORROSION OR DECAY. PRECAST CONCRETE TANKS SHALL HAVE

2. 3/4" STONE FOR BEDDING TO MEET AOT SPEC 704.02B.

8. ALL BRASS UNIONS AND ADAPTERS SHALL BE CAMBRIDGE BRASS NO-LEAD BRASS OR RED HEAD MANUFACTURING BRASS OR WATER DEPARTMENT APPROVED EQUAL

CATAMOUNT consulting eningeers, pllc PO Box 65067 | Burlington VT | 05406 802-598-8081 | www.ccevt.com

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OWNER:

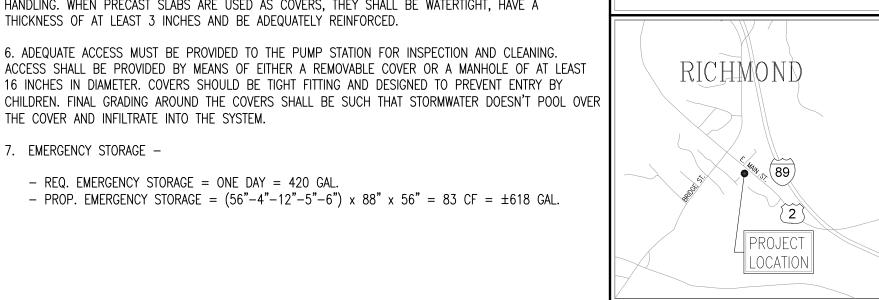
Allen & Lynne Knowles Family Knowles and Matt Parisi 112 E. Main St. Richmond, VT 05477

PROJECT:

Proposed House 112 E. Main St. Richmond, VT 05477

SHEET TITLE:

Proposed Site Details Plan



LOCATION MAP

PROJECT NO.: 23037

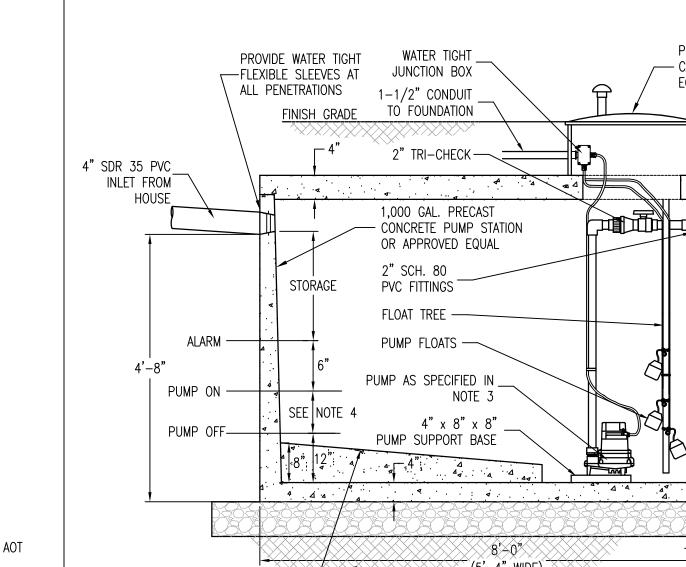
PRELIMINARY FOR PERMITTING

 $1" = \pm 2.000$

NOT FOR CONSTRUCTION FOR CONSTRUCTION

DATE: SEPTEMBER 28, 2023 SCALE: AS SHOWN REV. NO. DESCRIPTION

SHEET NUMBER:



POLYLOK RISER WITH HEAVY DUTY - CARBON VENT LID OR APPROVED EQUAL. RISER HEIGHT AS REQUIRED.

> (5'-4" WIDE)UNDISTURBED OR COMPACTED SUITABLE NATIVE MATERIAL OR

AND GRANULAR BORROW WITH ENGINEER PRIOR TO CONSTRUCTION.

PUMP STATION DETAIL

SLOPED FILLET

45 DEGREE WYE SADDLE CONNECTION EXISTING SEWER SERVICE 2" SCH 40 PVC FORCE MAIN STAINLESS STEEL CLAMP PLAN VIEW EXISTING SEWER SERVICE 2" SCH 40 PVC FORCE MAIN " MIN. BEDDING MATERIAL SECTION VIEW NOTES:

FLOW

2. BEDDING MATERIAL SHALL BE 3/4" CRUSHED STONE MEETING AOT SPEC 704.02B. BEDDING MATERIAL SHALL NOT

- 1. SEWER LINES AND FITTINGS TO MEET AOT SPEC 710.06 AND BE INSTALLED AND TESTED IN ACCORDANCE WITH AOT
- 2. BEDDING MATERIAL SHALL BE 3/4" CRUSHED STONE MEETING AOT SPEC 704.02B. BEDDING MATERIAL SHALL NOT BE PLACED ON FROZEN SUBGRADE.

SEWER SERVICE CONNECTION DETAIL

ELECTRICAL CABLE MARKING

CONTACT THE DESIGNER SHOULD SITE CONDITIONS NOT MEET THE FOLLOWING ENVIRONMENTAL PROTECTION RULES CITED FROM CHAPTER 1 OF THE WASTEWATER SYSTEM AND POTABLE WATER SUPPLY RULES HORIZONTAL DISTANCE (FEET) SEWER LINES WASTEWATER IN-GROUND LEACHFIELDS MOUND FEATURES AND OBJECTS & MANHOLES TANKS LEACHFIELDS IN MOUNDS CURTAIN DRAINS DOWNSLOPE CURTAIN DRAINS UPSLOPE DRAINAGE SWALES WITH SEEPS DOWNSLOPE DRAINAGE SWALES WITH SEEPS UPSLOPE DRAINAGE SWALES WITHOUT SEEPS FOUNDATION OR PERIMETER DRAIN DOWNSLOPE FOUNDATION OR PERIMETER DRAIN UPSLOPE FOUNDATION DOWNSLOPE FOUNDATION UPSLOPE POTABLE WATER SOURCE IN BEDROCK POTABLE WATER SOURCE IN UNCONFINED SURFICIAL AQUIFER PROPERTY LINES ROADWAYS, DRIVEWAYS & PARKING LOTS SLOPES EXCEEDING 30%

WATER STORAGE TANKS FOOTNOTES (GENERAL CRITERIA REGARDING ISOLATION DISTANCES)

SURFACE WATER AT NORMAL HIGH WATER ELEVATION

STORMWATER PRACTICES

WATER SERVICE PRESSURE LINES

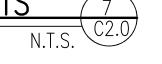
WATER SERVICE SUCTION LINES NON-POTABLE WATER SOURCE

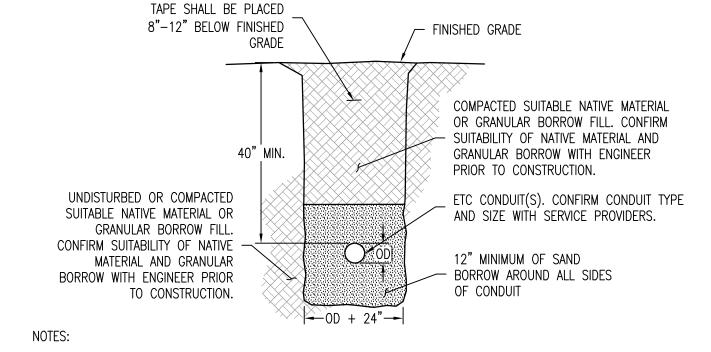
WATER MAINS

(a) SEPARATION BETWEEN POTABLE WATER SUPPLIES AND LEACHFIELDS SHALL BE DETERMINED BY TABLE 9–6 OF CHAPTER 1 (WASTEWATER SYSTEM AND POTABLE WATER SUPPLY RULES) OF THE STATE OF VERMONT ENVIRONMENTAL PROTECTION RULES.

(b) SEPARATION BETWEEN WATER MAINS/LINES AND SEWER MAINS/LINES SHALL BE DETERMINED IN ACCORDANCE WITH SECTION 1-1007 OF CHAPTER 1 (WASTEWATER SYSTEM AND POTABLE WATER SUPPLY RULES) OF THE STATE OF VERMONT ENVIRONMENTAL PROTECTION RULES.

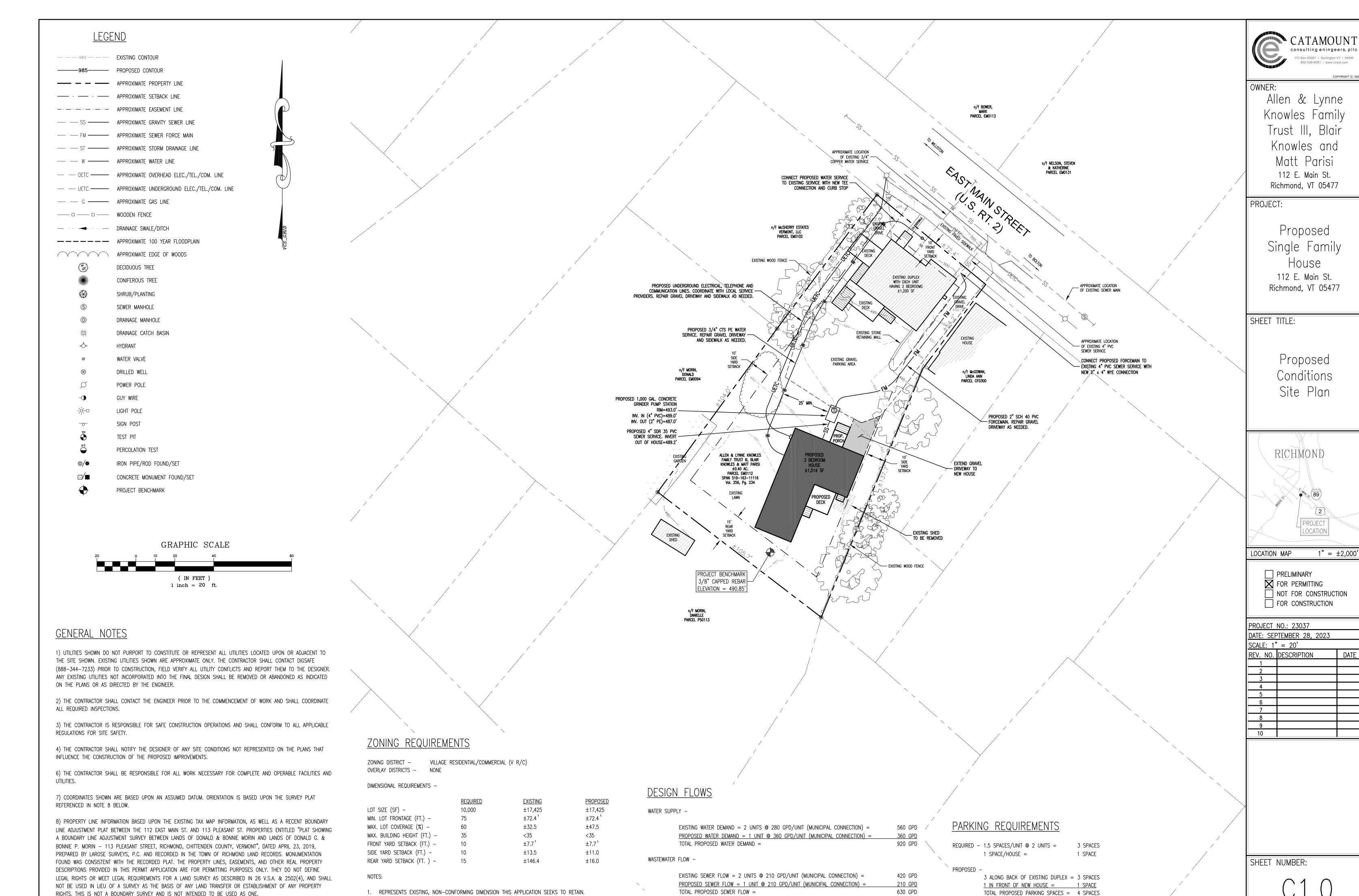
(c) FOR MOUND WASTEWATER DISPOSAL SYSTEMS, THE LIMIT OF MOUND FILL MUST BE 25 FEET FROM ANY DOWNSLOPE FEATURE OR ÓBJECT AND 10 FEET FROM ANY SIDE OR UPSLOPE FEATURE OR OBJECT. WASTEWATER ISOLATION REQUIREMENTS





- 1. ALL MATERIALS AND INSTALLATION PROCEDURES FOR SLEEVES FOR ELECTRICAL, TELEPHONE AND COMMUNICATION SERVICES SHALL MEET AOT SPEC 625.
- 2. SAND BORROW TO MEET AOT SPEC 703.03.
- 3. GRANULAR BORROW FILL TO MEET AOT SPEC 703.04.
- 4. COMPACTION OF MATERIALS TO MEET AOT SPEC 301.06.
- 5. REFER TO ELECTRICAL PLAN FOR CONDUIT TYPE AND SCHEDULE AND CONFIRM CONDUIT REQUIREMENTS WITH LOCAL
- 6. CONDUIT SHALL BE ENCASED IN 4" OF CLASS B CONCRETE FOR PORTIONS INSTALLED UNDER THE ROADWAY OR WITHIN 10' OF WATER, SEWER, GAS AND/OR DRAINAGE CROSSINGS.

ELECTRICAL CONDUIT TRENCH DETAIL



RIGHTS. THIS IS NOT A BOUNDARY SURVEY AND IS NOT INTENDED TO BE USED AS ONE.