

SITE ENGINEER:

CIVIL ENGINEERING ASSOCIATES, INC.  
10 MANSFIELD VIEW LANE, SOUTH BURLINGTON, VT 05403  
802-654-2323 FAX: 802-654-2271 web: www.cenai.com

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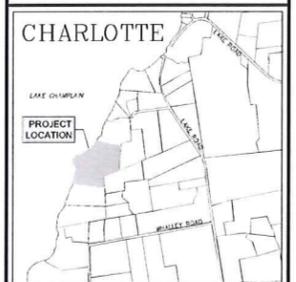
DRAWN: MAB  
CHECKED: JLM  
APPROVED: JLM

OWNER:

**THOMAS & MICHELLE TILLER**  
362 HOLMES ROAD  
CHARLOTTE  
VERMONT

PROJECT:

**TILLER BARN**  
362 HOLMES ROAD  
CHARLOTTE  
VERMONT



LOCATION MAP 1" = 2000'

DATE	CHECKED	REVISION
11/17/14	JLM	ADDITIONAL TPO FOR W.A. AND BARN
7/2/16	DSM	UPDATED PLANS FOR HOUSE PLANS
7/27/18	DSM	REV. BASED ON EX. UTILITY LOCATIONS

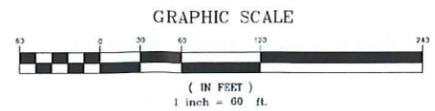
**OVERALL SITE PLAN**

DATE: MAY, 2018  
SCALE: 1" = 60'  
PROJ. NO.: 13229.02

DRAWING NUMBER: **C1.0**

- LEGEND**
- EXISTING CONTOUR
  - - - APPROXIMATE PROPERTY LINE
  - TOP OF BANK
  - ● IRON ROD/PIPE FOUND/SET
  - CONCRETE MONUMENT
  - WATER LINE
  - UE UNDERGROUND ELECTRIC
  - SS GRAVITY SEWER LINE
  - DECIDUOUS TREE
  - CONIFEROUS TREE
  - ~ EDGE OF BRUSH/WOODS
  - FENCE
  - DRAINAGE SWALE
  - PROJECT BENCHMARK
  - TEST PIT
  - PERCOLATION TEST

- GENERAL NOTES**
- 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.
  - All existing utilities not incorporated into the final design shall be removed or abandoned as indicated on the plans or directed by the Engineer.
  - 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.
  - The Contractor shall repair/restore all disturbed areas (on or off the site) as a direct or indirect result of the construction.
  - All graded areas shall be maintained until full vegetation is established.
  - Maintain all trees outside of construction limits.
  - The Contractor shall be responsible for all work necessary for complete and operable facilities and utilities.
  - 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.
  - 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.
  - The tolerance for finish grades for all pavement, walkways and lawn areas shall be 0.1 feet.
  - Any dewatering necessary for the completion of the sitework shall be considered as part of the contract and shall be the Contractor's responsibility.
  - The Contractor shall install the electrical, cable and telephone services in accordance with the utility companies requirements.
  - Existing pavement and tree stumps to be removed shall be disposed of at an approved off-site location. All pavement cuts shall be made with a pavement saw.
  - If there are any conflicts or inconsistencies with the plans or specifications, the Contractor shall contact the Engineer for verification before work continues on the item in question.
  - This plan is not a boundary survey and is not intended to be used as one.
  - Project benchmark is Lake Champlain established from the United States Geological Survey Gauging Station 04294500 located in Burlington, Vermont. (Datum NGVD 29).
  - Property line information is based on a plan entitled "Pamela L. & Willett S. Foster IV - Westwind Farms Subdivision". Recorded June 18, 1979, Volume 3, Page 40. Monumentation recovered was consistent with the recorded documents.
  - This property lies in the Shoreland District per town of Charlotte Land Use Regulations Dated November 2, 2010.



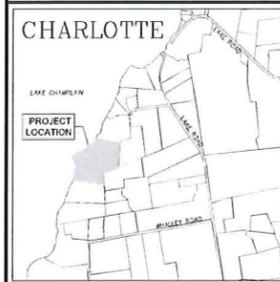
PlanCAD 2018 10/13/2018 10:45:00 AM File: D:\Projects\13229.02\13229.02.dwg, 10/13/2018 10:45:00 AM

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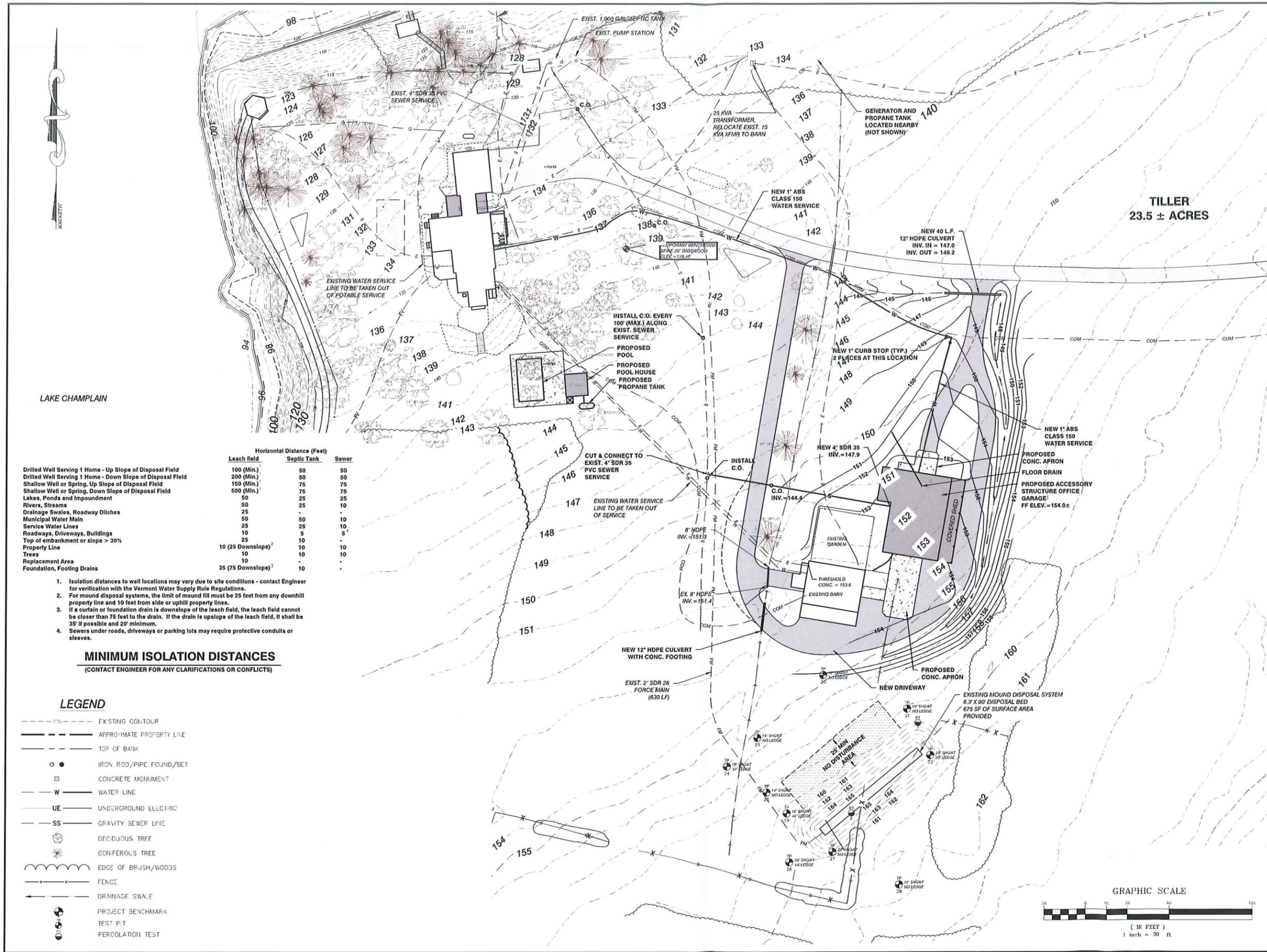


LOCATION MAP  
 1" = 2000'

DATE	CHECKED	REVISION
7/27/15	DSM	REV. BASED ON EX. UTILITY LOCATIONS

**PARTIAL PROPOSED SITE PLAN**

DATE: MAY, 2018  
 SCALE: 1" = 30'  
 PROJ. NO.: 13229.02  
 DRAWING NUMBER: **C1.1**



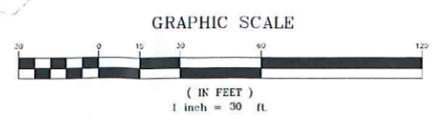
LAKE CHAMPLAIN

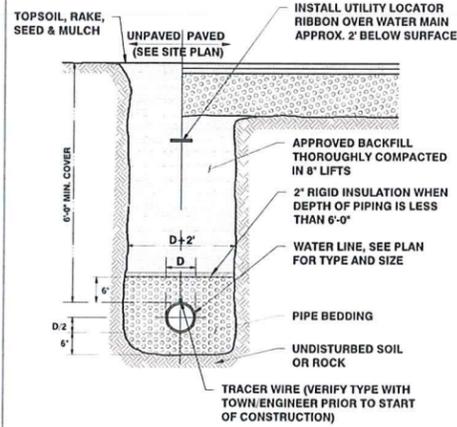
	Horizontal Distance (Feet)		
	Leach field	Septic Tank	Sewer
Drilled Well Serving 1 Home - Up Slope of Disposal Field	100 (Min.)	50	50
Drilled Well Serving 1 Home - Down Slope of Disposal Field	200 (Min.)	50	50
Shallow Well or Spring, Up Slope of Disposal Field	150 (Min.)	75	75
Shallow Well or Spring, Down Slope of Disposal Field	500 (Min.)	75	75
Lakes, Ponds and Impoundment	50	25	25
Rivers, Streams	50	25	10
Drainage Swales, Roadway Ditches	25	-	-
Municipal Water Main	50	50	10
Service Water Lines	25	25	10
Roadways, Driveways, Buildings	10	5	5
Top of embankment or slope > 30%	25	10	10
Property Line	10 (25 Downslope) <sup>2</sup>	10	10
Trees	10	10	10
Replacement Area	10	-	-
Foundation, Footing Drains	35 (75 Downslope) <sup>3</sup>	10	-

- Isolation distances to well locations may vary due to site conditions - contact Engineer for verification with the Vermont Water Supply Rule Regulations.
- For mound disposal systems, the limit of mound fill must be 25 feet from any downhill property line and 10 feet from side or uphill property lines.
- If a curtain or foundation drain is downslope of the leach field, the leach field cannot be closer than 75 feet to the drain. If the drain is upslope of the leach field, it shall be 35' if possible and 20' minimum.
- Sewers under roads, driveways or parking lots may require protective conduits or sleeves.

**MINIMUM ISOLATION DISTANCES**  
 (CONTACT ENGINEER FOR ANY CLARIFICATIONS OR CONFLICTS)

- LEGEND**
- - - - - 350' - - - - - EXISTING CONTOUR
  - - - - - APPROXIMATE PROPERTY LINE
  - - - - - TOP OF BANK
  - ● IRON ROD/PIPE FOUND/SET
  - CONCRETE MONUMENT
  - W — WATER LINE
  - UE — UNDERGROUND ELECTRIC
  - SS — GRAVITY SEWER LINE
  - DECIDUOUS TREE
  - CONIFEROUS TREE
  - ~ ~ ~ EDGE OF BRUSH/WOODS
  - FENCE
  - DRAINAGE SWALE
  - PROJECT BENCHMARK
  - TEST P/T
  - PERCOLATION TEST

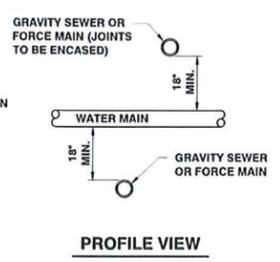
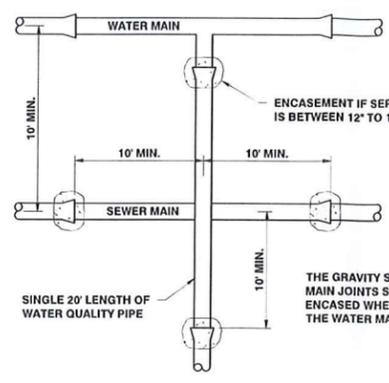




- NOTES:**
1. COMPACTION OF BACKFILL AND BEDDING SHALL BE A MINIMUM OF 90% (95% UNDER ROADWAY SURFACES) OF MAXIMUM DRY DENSITY DETERMINED IN THE STANDARD PROCTOR TEST (ASTM D698).
  2. BEDDING MATERIAL SHALL NOT BE PLACED ON FROZEN SUBGRADE.
  3. APPROVED BACKFILL SHALL NOT CONTAIN ANY STONES MORE THAN 1 1/2" IN LARGEST DIMENSION (6" IN ROADWAYS, 1 1/2" MAXIMUM DIAMETER WITHIN 24" OF THE OUTSIDE OF THE PIPE), OR CONTAIN ANY FROZEN, WET, OR ORGANIC MATERIAL.
  4. TRENCHES SHALL BE COMPLETELY DEWATERED PRIOR TO PLACING OF PIPE BEDDING MATERIAL AND KEPT DEWATERED DURING INSTALLATION OF PIPE AND BACKFILL.
  5. IN TRENCHES WITH UNSTABLE MATERIALS OR HIGH WATER TABLE, TRENCH BOTTOM SHALL FIRST BE STABILIZED BY PLACEMENT OF FILTER FABRIC THEN CRUSHED STONE (3/4" MAXIMUM).
  6. THE SIDES OF TRENCHES 4' OR MORE IN DEPTH ENTERED BY PERSONNEL SHALL BE SHEETED OR SLOPED TO THE ANGLE OF REPOSE AS DEFINED BY O.S.H.A. STANDARDS.
  7. BEDDING MATERIAL SHALL CONSIST OF CRUSHED STONE, OR SAND WITH A MAXIMUM SIZE OF 1/2". SUBMIT A SAMPLE TO THE ENGINEER FOR APPROVAL.
  8. CONTRACTOR TO INSTALL TRACER WIRE ALONG ALL SECTIONS OF NEW WATER LINE. TERMINATE TRACER WIRE AT ALL VALVE BOXES AND HYDRANTS. COORDINATE INSTALLATION WITH TOWN AND ENGINEER.

**TYPICAL WATER TRENCH DETAIL**  
N.T.S.

W-001 Trench  
W-001  
REVISED 12/08/2016

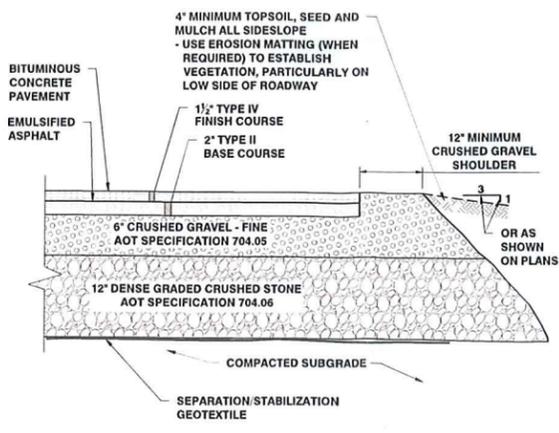


**PROFILE VIEW**

REFERENCE:  
VT. WATER SUPPLY RULE  
CHAPTER 21, APPENDIX A,  
SECTION 8.6

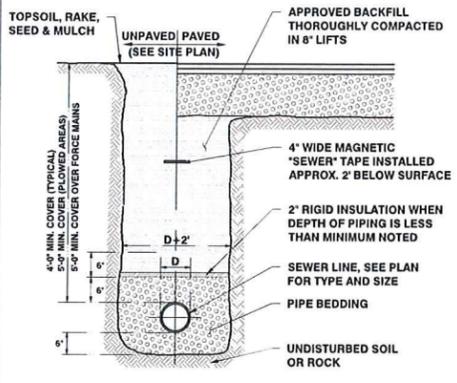
**WATER/SEWER CROSSING**  
N.T.S.

W-007 Water-Sewer Crossing  
W-007  
REVISED 6/15/2015



**TYPICAL PAVEMENT SECTION**  
(FULL DEPTH CONSTRUCTION SECTION) N.T.S.

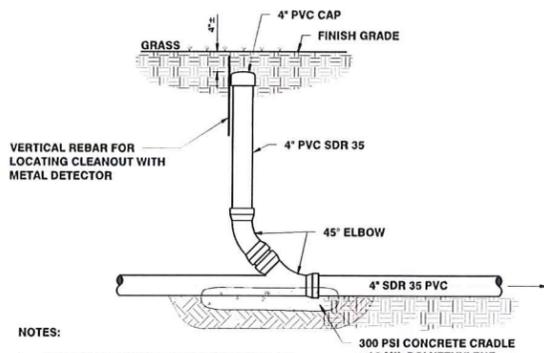
S-003 Pave Sec-Shoulder  
S-003  
REVISED 11/10/2014



- NOTES:**
1. COMPACTION OF BACKFILL AND BEDDING SHALL BE A MINIMUM OF 90% (95% UNDER ROADWAY SURFACES) OF MAXIMUM DRY DENSITY DETERMINED IN THE STANDARD PROCTOR TEST (ASTM D698).
  2. BEDDING MATERIAL SHALL NOT BE PLACED ON FROZEN SUBGRADE.
  3. APPROVED BACKFILL SHALL NOT CONTAIN ANY STONES MORE THAN 1 1/2" IN LARGEST DIMENSION (6" IN ROADWAYS, 1 1/2" MAXIMUM DIAMETER WITHIN 24" OF THE OUTSIDE OF THE PIPE), OR CONTAIN ANY FROZEN, WET, OR ORGANIC MATERIAL.
  4. TRENCHES SHALL BE COMPLETELY DEWATERED PRIOR TO PLACING OF PIPE BEDDING MATERIAL AND KEPT DEWATERED DURING INSTALLATION OF PIPE AND BACKFILL.
  5. IN TRENCHES WITH UNSTABLE MATERIALS OR HIGH WATER TABLE, TRENCH BOTTOM SHALL FIRST BE STABILIZED BY PLACEMENT OF FILTER FABRIC THEN CRUSHED STONE (3/4" MAXIMUM).
  6. THE SIDES OF TRENCHES 4' OR MORE IN DEPTH ENTERED BY PERSONNEL SHALL BE SHEETED OR SLOPED TO THE ANGLE OF REPOSE AS DEFINED BY O.S.H.A. STANDARDS.
  7. BEDDING MATERIAL FOR WASTEWATER LINES SHALL CONSIST OF CRUSHED STONE, GRAVEL OR SAND WITH A MAXIMUM SIZE OF 1/2". SUBMIT A SAMPLE TO THE ENGINEER FOR APPROVAL.
  8. ALL JOINTS TO BE INSPECTED BY OWNER/ENGINEER/TOWN PRIOR TO BACKFILL.

**TYPICAL SEWER TRENCH DETAIL**  
N.T.S.

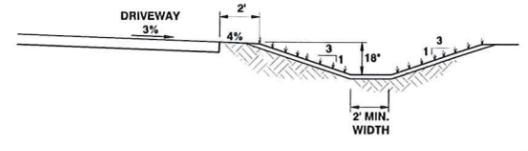
SWR-001 Trench  
SWR-001  
REVISED 12/08/2016



- NOTES:**
1. CONTRACTOR SHALL PROVIDE TWO TIES TO ALL BURIED C.O.'s ON THE AS-BUILT PLANS SUBMITTED TO THE OWNER.
  2. CLEANOUT TO BE INSTALLED AT INTERVALS OF NOT MORE THAN 100 FEET, AND UPSTREAM OF BEND(S) IN BUILDING SEWER(S) WHEN CHANGE IN PIPE DIRECTION EXCEEDS 45' (USE LONG SWEEP FITTINGS WHEN EXCEEDING 45')

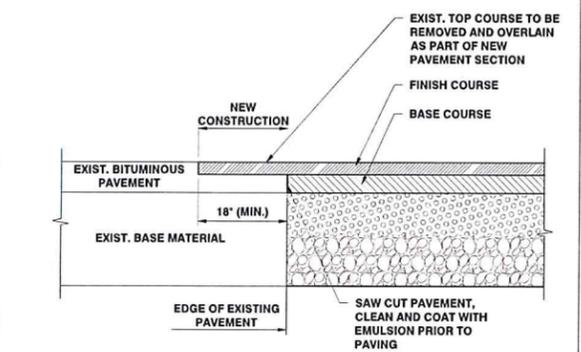
**TYPICAL CLEANOUT DETAIL**  
N.T.S.

SWR-009 CC PVC/Rebar  
SWR-009  
REVISED 10/07/2015



**GRASS LINED SWALE**  
N.T.S.

ST-014 Grass Ditch  
ST-014  
REVISED 10/07/2015



**TRANSITION FROM NEW PAVEMENT TO EXISTING PAVEMENT**  
N.T.S.

S-014 Pavement Transition  
S-014  
REVISED 6/15/2017

SITE ENGINEER:

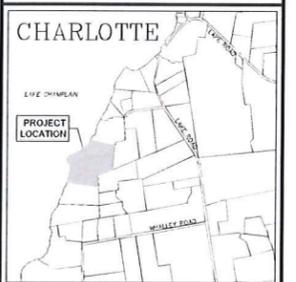
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362 HOLMES ROAD  
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VERMONT



**LOCATION MAP**  
1" = 2000'

DATE	CHECKED	REVISION

**DETAILS**

DATE: MAY, 2018	DRAWING NUMBER: <b>C2.0</b>
SCALE: AS SHOWN	
PROJ. NO. 13229.02	