

RENSSELAER COUNTY DEPARTMENT of HEALTH

Steven F. McLaughlin
County Executive

Mary Fran Wachunas
Public Health Director



March 12, 2020

Farrell Homes
P.O. Box 21
Grafton, NY 12082

RE: **Individual Water Supply Wells/Water Storage**
392 and 394 Brunswick Road
Troy, NY 12180

Dear Nick,

In response to your question about the water supply requirements for duplex homes, the Rensselaer County Department of Health offers the following information for individual water supply wells and water storage:

- One water supply well for each duplex home is sufficient. The required storage is based on the number of bedrooms if the well yield is less than 5 gallons per minute. Please see the attached fact sheet for the recommended minimum storage depending on the number of total bedrooms of the home.
- The water wells are required to be yield tested by a NYS DEC registered well driller. If the well yields 5 gallons per minute or greater, no further storage is required.
- If the well yield is less than 5 gallons per minute, a storage tank can be reduced in size or avoided if sufficient storage is provided within the well itself. The typical 6-inch diameter well will hold approximately 1.5 gallons per foot. The height of water above the pump when it is not operating is multiplied by the gallons of water per foot to approximate the amount of available storage. Shallow wells and wells with slow recovery may not contain reliable storage and caution is advised when considering their potential for storage capacity.

I have also attached a New York State Department of Health Fact Sheet to explain the well yield, water demand, storage, steps in determining supplemental storage needs, and storage recommendations for individual water supply wells.

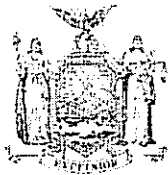
Please contact me if you have any questions or any further information is needed. I can be reached at (518) 270-2660 weekdays.

Sincerely,
Derrick Gardner, P.E.
Water/Sewer Engineer

NED PATTISON RENSSELAER COUNTY GOVERNMENT CENTER
TROY, NEW YORK 12180 (518)270-2626 FAX (518)270-2638

PERM 42 (09/09)

State of New York
Department of Transportation
Highway Work Permit



Permit No.: 20190183432 ✓
Date Issued: 03/31/2020
Project ID No.:
Expiration Date: 12/31/2020

*Permittee 1:
FARRELL HOMES
PO BOX 21
GRAFTON, NY 12082
Emergency Contact: BUTCH FARRELL
Emergency Number: 518-256-3091

Under the provisions of the Highway Law or Vehicle & Traffic Law, permission is hereby granted to the permittee to:

INSTALL 15" CULVERT & DRIVEWAY FOR SINGLE FAMILY DWELLING. 392 BRUNSWICK RD (RT 2) TROY NY 12180. ALL WORK TO BE APPROVED BY THE RESIDENT ENGINEER. DURING THE COVID-19 PANDEMIC, DEVELOPERS/PERMITTEES MUST COMPLY WITH ALL EO 202.6 REQUIREMENTS - SPECIFICALLY PARAGRAPH 9: CONSTRUCTION. [HTTPS://ESD.NY.GOV/GUIDANCE-EXECUTIVE-ORDER-2026](https://esd.ny.gov/guidance-executive-order-2026)

THE PERMITTEE IS RESPONSIBLE FOR TEMPORARY TRAFFIC CONTROL IN ACCORDANCE WITH THE NATIONAL MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND THE NYS SUPPLEMENT. ANYONE WORKING WITHIN THE HIGHWAY RIGHT-OF-WAY SHALL WEAR HIGH-VISIBILITY APPAREL MEETING THE ANSI 107-2004 CLASS II STANDARDS AND A HARD HAT.

County	Municipality	State Hwy	State Route	Beg Ref	End Ref
RENSELAER	BRUNSWICK	-	2	-	-

as set forth and represented in the attached application at the particular location or areas, or over the routes as stated therein, if required; and pursuant to the conditions and regulations general or special, and methods of performing work, if any; all of which are set forth in the application and form of this permit. See additional conditions on PAGE 2.
THIS PERMIT IS ISSUED BASED ON ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS BEING SATISFIED.

Dated at: Albany Date Signed: 03/31/2020 Commissioner of Transportation By: Mark Pyskadlo

IMPORTANT:
THIS PERMIT, WITH APPLICATION AND DRAWING (OR COPIES THEREOF) ATTACHED, SHALL BE PLACED IN THE HANDS OF THE CONTRACTOR BEFORE ANY WORK BEGINS. THE HIGHWAY WORK PERMIT SHALL BE AVAILABLE AT THE SITE DURING CONSTRUCTION.
BEFORE WORK IS STARTED AND UPON ITS COMPLETION, THE PERMITTEE ABSOLUTELY MUST NOTIFY:
Mike Lashmet, Resident Engineer 518-286-2300
"UPON COMPLETION OF WORK", SECOND TO LAST PAGE, MUST BE COMPLETED, SIGNED BY THE PERMITTEE, AND DELIVERED TO THE RESIDENT ENGINEER.

PERM 42 (09/09)

State of New York
Department of Transportation
Highway Work Permit



Permit No.: 20190183433 ✓
Date Issued: 03/31/2020
Project ID No.:
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GLEAFON, NY 12082
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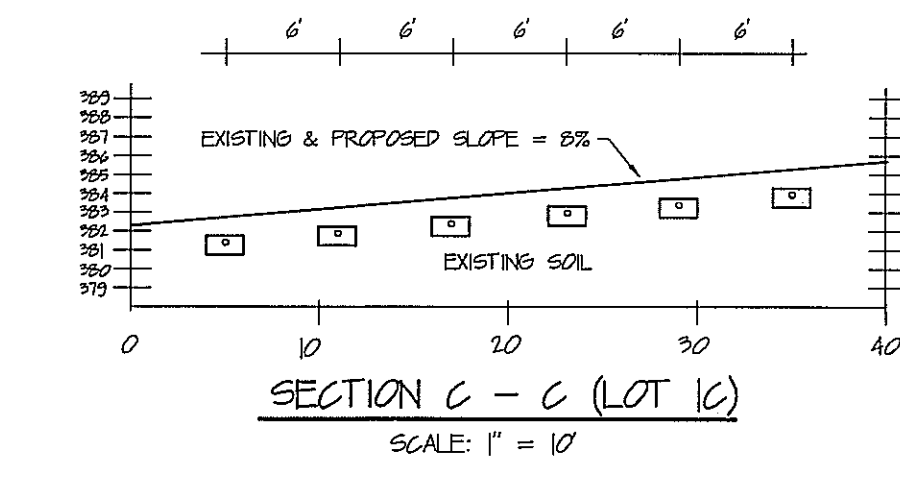
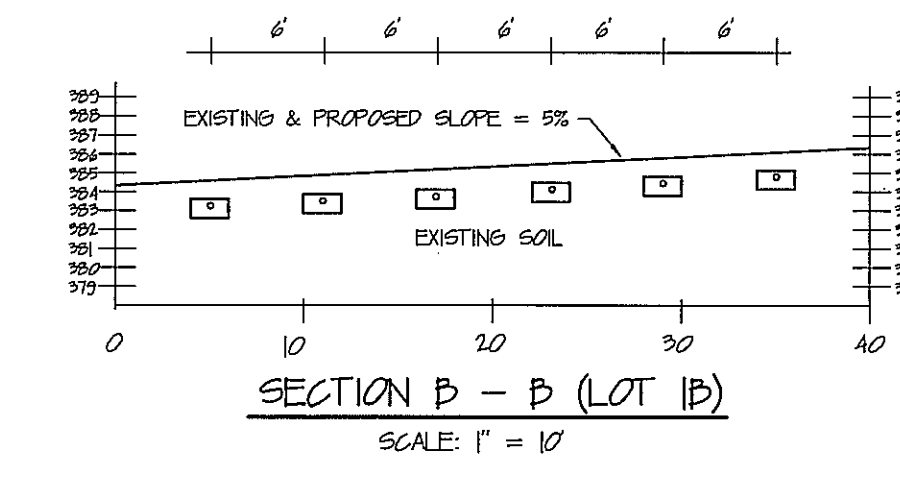
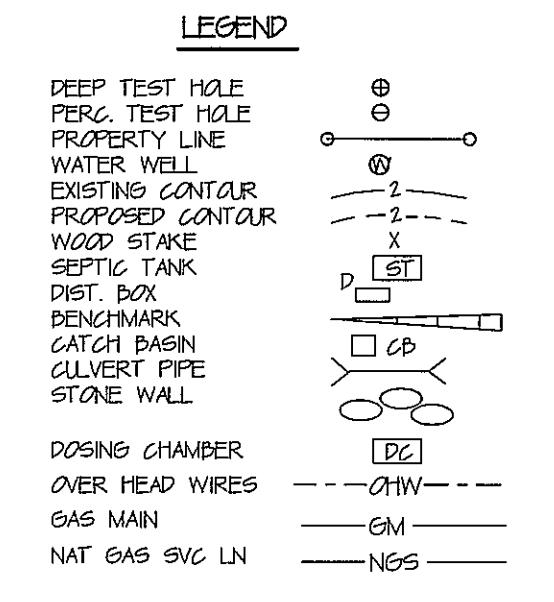
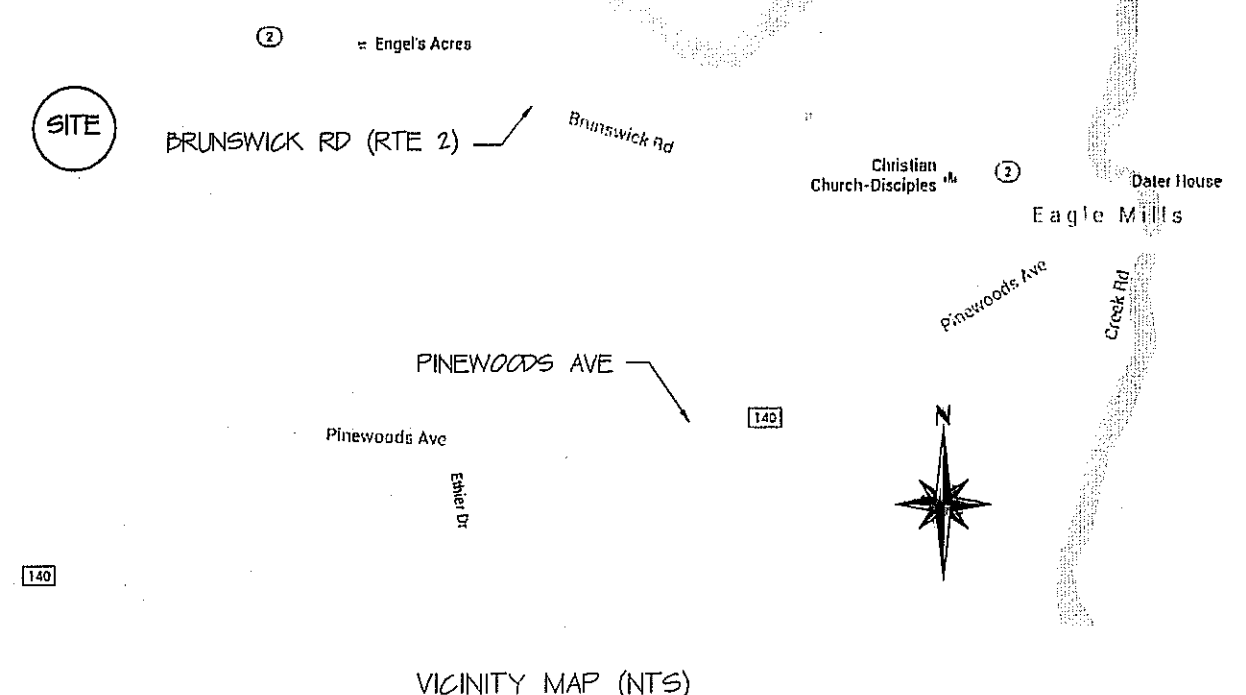
County	Municipality	State Hwy	State Route	Beg Ref	End Ref
RENSSELAER	BRUNSWICK	-	2	2 14022021	2 14021022

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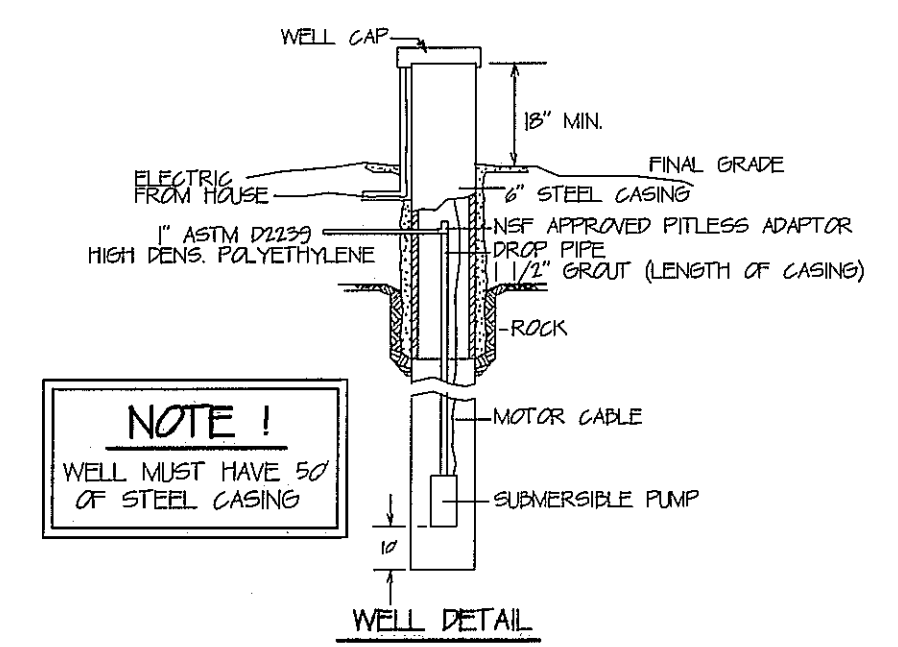
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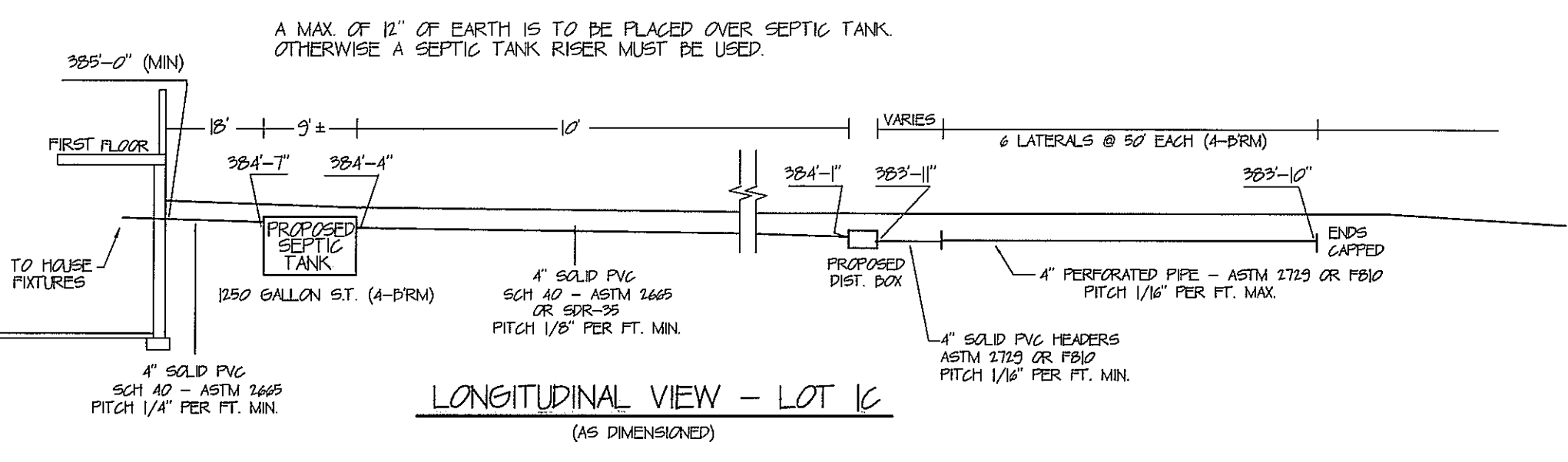
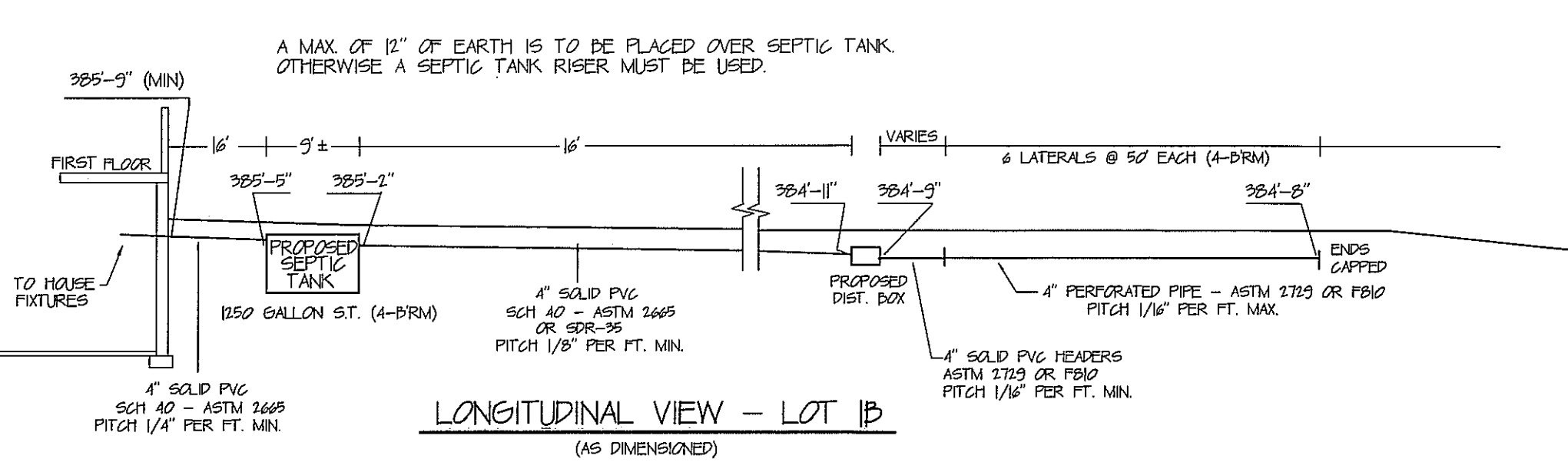
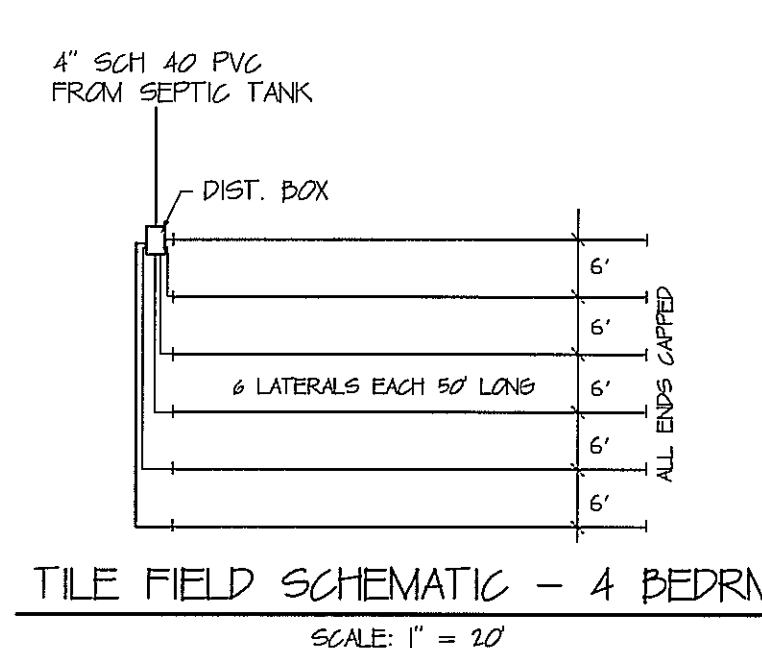
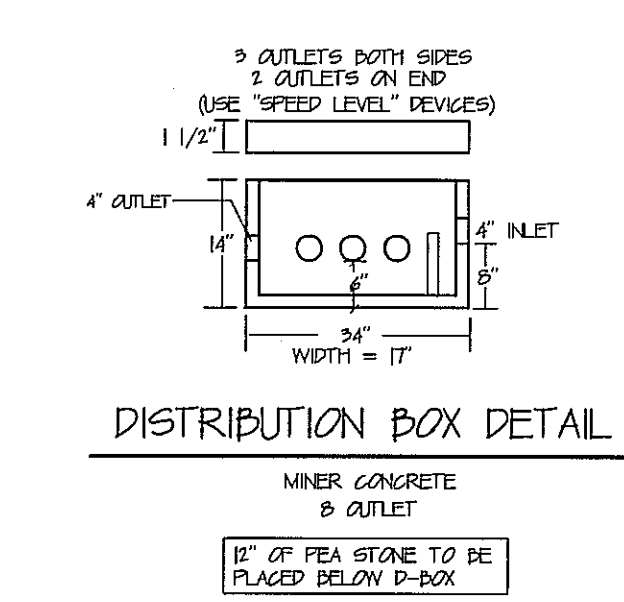
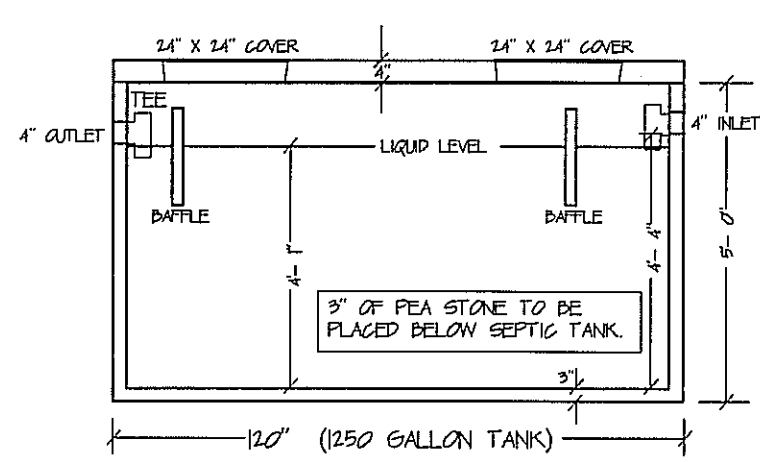
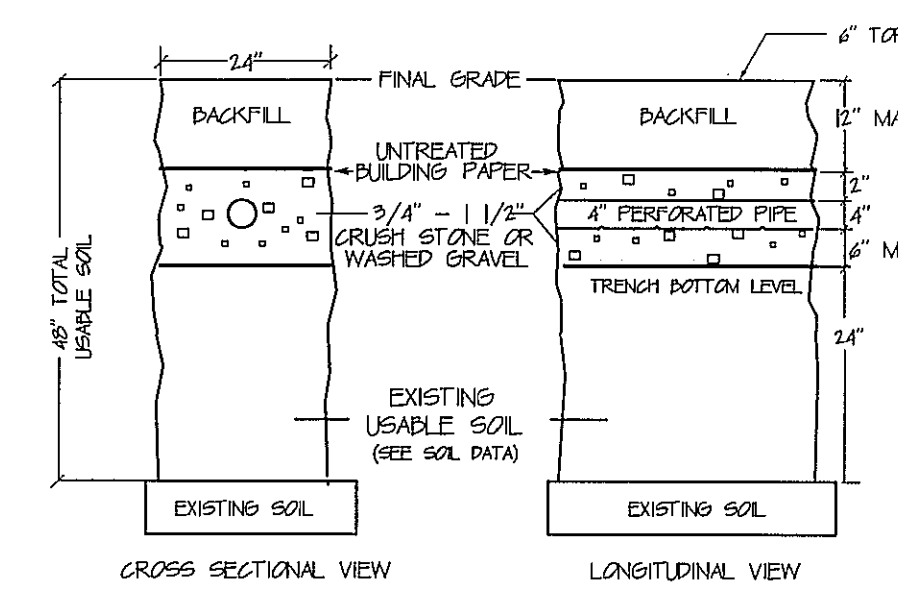
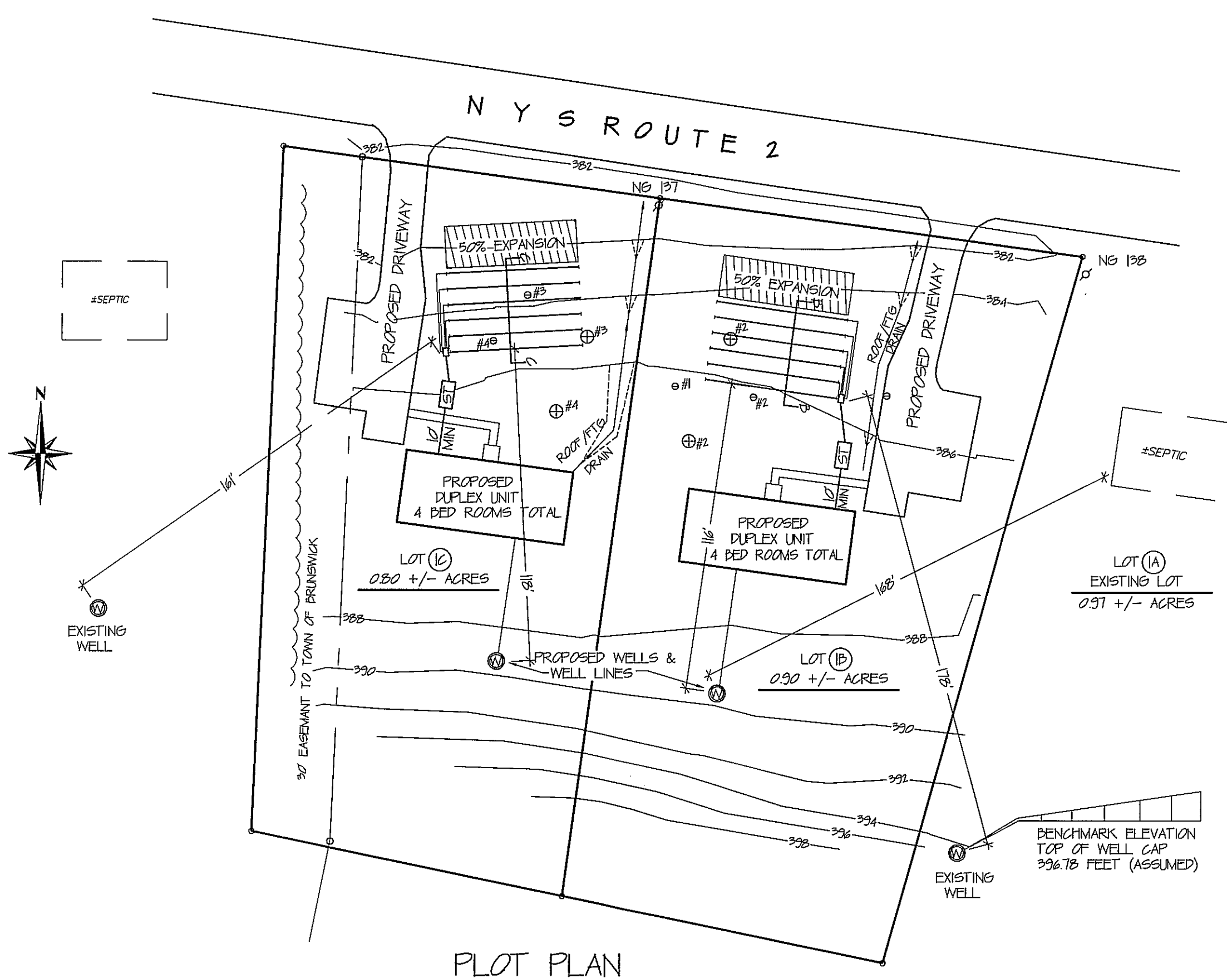
CALCULATIONS

FLOW RATE FOR A 4 BEDROOM DUPLEX HOME = 440 GAL / DAY
 APPLICATION RATE OF 6-7 MINUTE SOL = 10 GPD / SF
 REQUIRED TRENCH AREA = 440 GPD / 10 = 440 SF
 REQUIRED LENGTH OF 24" WIDE TRENCH = 440 SF / 2 FT = 220 LINEAL FEET
 PROPOSED TRENCH = 6 LATERALS @ 50 FT EACH = 300 LINEAL FEET



- WATER SUPPLY NOTES
- RCHD ACCEPTANCE OF RESIDENTIAL WELLS SHALL BE BASED UPON THE FOLLOWING:
- WELL CONSTRUCTION IN ACCORDANCE WITH APPENDIX 5-D OF THE NEW YORK STATE SANITARY CODE.
 - A WELL LOG COMPLETED BY A WELL DRILLER REGISTERED WITH NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION.
 - A MINIMUM WELL YIELD OF 5 GPM OR TOTAL YIELD AND STORAGE IN ACCORDANCE WITH APPLICABLE NEW YORK STATE DOH RECOMMENDATIONS.
 - DISINFECTION, PRESSURE AND LEAK TESTING OF THE WELL AND APPURTENANCES IN ACCORDANCE WITH CURRENT AWMA PROCEDURES.
 - A SATISFACTORY BACTERIOLOGICAL EXAMINATION OF THE WELL WATER FROM A SAMPLE TESTED BY A NYS CERTIFIED LAB AND SUBMITTED TO THE RENSSELAER COUNTY HEALTH DEPT.

PROPOSED WELL MUST NOT BE IN THE DIRECT PATH OF RUNOFF FROM ANY SEWAGE SYSTEM AREA AND MUST BE 100 FT FROM ANY SEWAGE SYSTEM. PROPOSED WELL MUST ALSO BE A MIN OF 50 FT FROM SEPTIC TANK.



SOIL DATA

SOL TESTS PERFORMED ON 11/25/2016 BY CARL AIKEN

DEEP TEST HOLE # 1	0' - 12" TOPSOIL / HEAVY ROOT MASS
12" - 40" SILTY COARSE GRAVEL / WELL DRAINED	TOTAL DEPTH = 42" NO GROUND WATER
DEEP TEST HOLE # 2	0' - 12" TOPSOIL / HEAVY ROOT MASS
12" - 65" SILTY COARSE GRAVEL / WELL DRAINED	TOTAL DEPTH = 65" NO GROUND WATER
PERCOLATION TEST HOLE # 1	1" IN 6 MINUTES
PERCOLATION TEST HOLE # 2	1" IN 7 MINUTES
DESIGN BASED ON 45" USABLE SOL / CONVENTIONAL	

SOL TESTS PERFORMED ON 11/25/2016 BY CARL AIKEN

DEEP TEST HOLE # 1	0' - 10" TOPSOIL / HEAVY ROOT MASS
10" - 40" SILTY COARSE GRAVEL / WELL DRAINED	TOTAL DEPTH = 40" NO GROUND WATER
DEEP TEST HOLE # 2	0' - 12" TOPSOIL / HEAVY ROOT MASS
12" - 42" SILTY COARSE GRAVEL / WELL DRAINED	TOTAL DEPTH = 42" NO GROUND WATER
PERCOLATION TEST HOLE # 1	1" IN 6 MINUTES
PERCOLATION TEST HOLE # 2	1" IN 6 MINUTES
DESIGN BASED ON 45" USABLE SOL / CONVENTIONAL	

- #### Required Notes for Conventional Systems
- A. General Notes:**
- Sanitary facilities may be constructed only after a Rensselaer County Department of Health (RCHD) "Permit to Construct" has been issued.
 - These facilities shall not be placed in operation until a RCHD "Certificate of Completion" has been issued. Contact the designated RCHD representative regarding the procedures.
 - There shall be no deviation from the sewage system plans during construction without prior approval of a licensed design professional (LDP) is an Engineer, Exempt Surveyor, or Architect, licensed to practice in the State of New York, and the RCHD. Any significant sewage system modifications must be approved in writing prior to implementation.
 - This system is designed for a 4 bedroom duplex house. It is not designed to allow installation of a food disposer or spa tub.
 - No roof, floor, footing, cooling system, or water softener backwash drains are to be connected to this system. All such discharges are to be directed away from the absorption field as shown on the plans.
 - Prior to excavation, consult the Underground Facilities Protective Organization.
 - Any electrical equipment installed in accordance with this plan must be compliant with the NYS Uniform Building Code.
- B. Sewage System Notes**
- The materials specified on these plans, or equal, must be utilized unless alternates are accepted and approved in writing by a LDP and the RCHD. Follow all manufacturers' instructions for component installation.
 - Proposed site grading shown on these plans is an integral part of the RCHD plan approval. Any changes to the proposed grading affecting the wastewater absorption area in any way SHALL be approved by the LDP and the RCHD prior to implementation.
 - A LDP shall supervise system installation; certify that the construction followed the approved plan; furnish an "as built" plan; and apply to the RCHD for a "Certificate of Completion".
 - No existing or proposed water supply or sewage treatment facilities are located within 200 feet of the boundaries of this project except as specifically noted on the plan.
 - No vehicular parking or traffic circulation shall be allowed on any portion of the completed sewage treatment system except as specifically provided for and noted on the plan.
 - A copy of the approved plan, including "As Built" dimensions, shall be provided to the purchaser of the lot or house and to the RCHD.
- C. Absorption Field Protection**
- The contractor shall protect the area(s) where the absorption system is to be constructed to preclude disturbance or compaction of the natural soil. Except as needed to install distribution piping, and spread topsoil and seed, no construction equipment is to run over the area and it is not to be used for material stockpiling or storage. Do not strip topsoil from the absorption area. FAILING TO FOLLOW THIS INSTRUCTION MAY RESULT IN THE SUSPENSION OF RCHD APPROVAL AND REQUIRE RETESTING OF THE IN-PLACE SOILS TO INSURE THAT THEY STILL MEET THE REQUIRED SYSTEM DESIGN PARAMETERS.
- D. Required Inspections**
- Site inspections of sanitary facility construction shall be conducted jointly by a LDP and the designated RCHD representative as follows:
 - During design, prior to plan approval / deep test pits and native soil percolation testing.
 - Prior to backfilling wastewater distribution system, i.e. tank, distribution box, absorption field piping, pump or siphon system, and during pump or siphon system calibration.
 - After final grading and seeding.

REV	DATE	RENSSELAER COUNTY HEALTH APPROVAL
1	4/4/17	
2	5/20/17	
3	4/20/20	

SHEET 1 OF 2
 SEWAGE SYSTEM DESIGN - CONVENTIONAL

CHARLES FARRELL "LOT 1" SUBDIVISION

NYS RTE 2
 TAX MAP # 102-3-101

TOWN OF BRUNSWICK	COUNTY OF RENSSELAER
DATE: 3/6/17	SCALE: AS SHOWN

AIKEN ENGINEERING
 CARL R. AIKEN, P.E. 287 MANNIX ROAD EAST GREENBUSH, NY 12041
 (518) 283-7749 FAX: (518) 375-7029 EMAIL: CARL.AIKEN@GMAIL.COM

BOUNDARY INFORMATION ON THIS PLOT PLAN WAS OBTAINED FROM A SURVEY MAP PREPARED BY BRIAN R. HOLBRITTER PLS. DATED 11/12/2016.

LEGEND

- DEEP TEST HOLE
- PERC. TEST HOLE
- PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- WOOD STAKE
- SEPTIC TANK
- DIST. BOX
- BENCHMARK
- CATCH BASIN
- CULVERT PIPE
- STONE WALL
- DOSING CHAMBER
- OVER HEAD WIRES
- GAS MAIN
- NAT GAS SVC LN

PROPOSED SWALES
 INSTALL CHECK DAMS AT EVERY TWO FOOT DROP IN SWALE. CHECK DAMS WILL BE TWO FEET HIGH WITH A WEIR AT 1'-6" FROM SWALE BOTTOM.

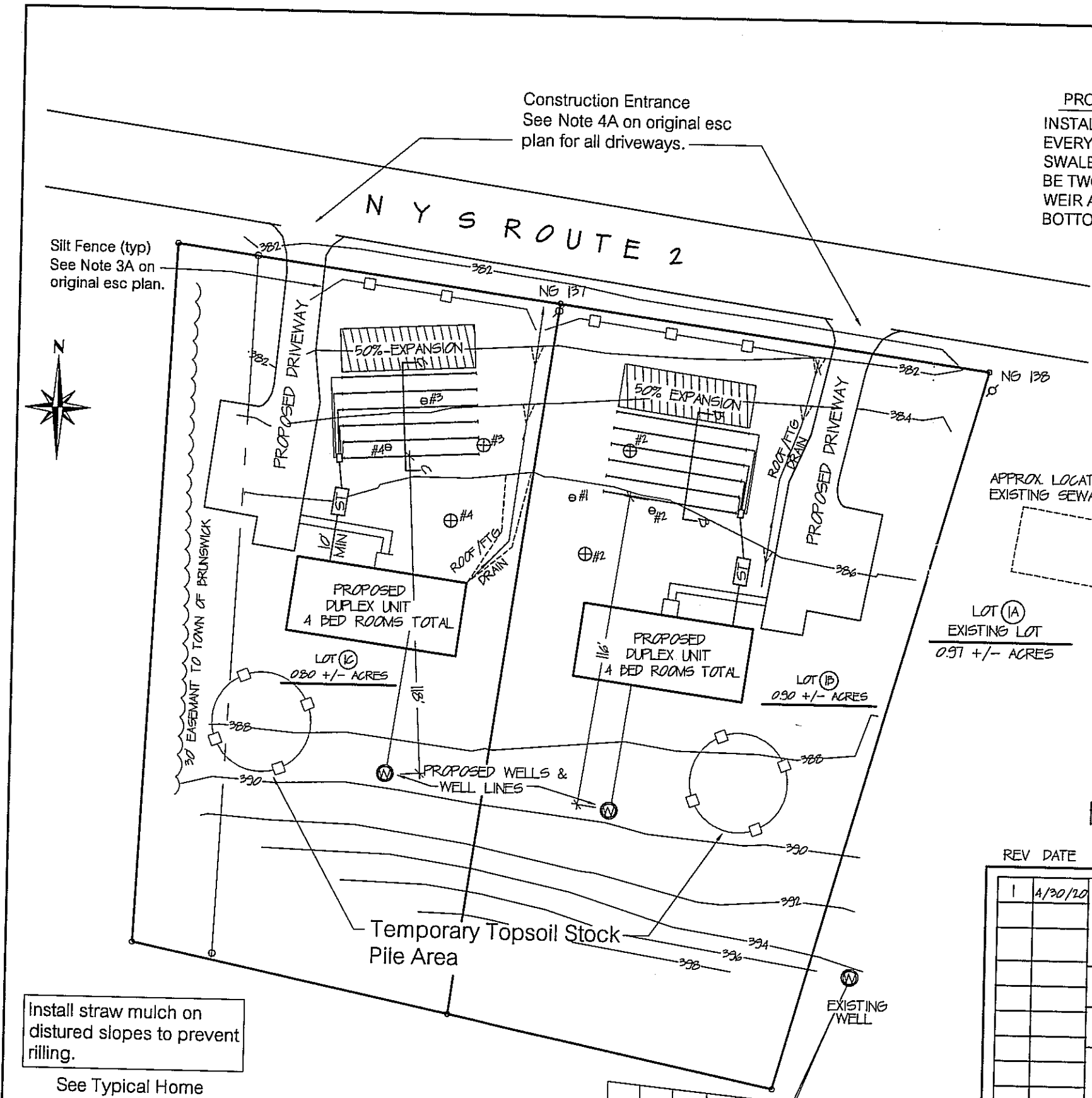
CONSTRUCTION PHASE:
 PHASE 1: EACH RESIDENTIAL LOT WILL BE CONSTRUCTED AND WILL HAVE ITS OWN CONSTRUCTION ACCESS AND INDIVIDUAL SEDIMENT CONTROLS UNTIL THE SITE HAS BEEN STABILIZED. KEEP OVERALL DISTURBANCE OF ALL LOTS UNDER 5 ACRES AT ONE TIME. INDIVIDUAL LOTS WILL BE CONSTRUCTED WHEN THE MARKET ALLOWS.

THIS PLAN IS AN ADDENDUM TO AN EXISTING EROSION AND SEDIMENT CONTROL PLAN FOR THE "CHARLES FARRELL 5-LOT SUBDIVISION" DATED 2/2/16.

EROSION AND SEDIMENT CONTROL PLAN

REV DATE SHEET 2 OF 2

1	4/30/20	CHARLES FARRELL "LOT 1" SUBDIVISION	
		NYS RTE 2 TAX MAP # 102-2-101	
		TOWN OF BRUNSWICK	COUNTY OF RENSSELAER
		DATE: 2/2/16	SCALE: AS SHOWN
CARL R. AIKEN, P.E. □ 287 MANNIX ROAD □ EAST GREENBUSH, NY 12061 (518) 283-7749 □ FAX: (518) 375-7029 □ EMAIL: CARL.AIKEN@GMAIL.COM			



PLOT PLAN
 SCALE: 1" = 40'

BENCHMARK ELEVATION
 TOP OF WELL CAP
 396.78 FEET (ASSUMED)

Silt Fence (typ)
 See Note 3A on original esc plan.



Construction Entrance
 See Note 4A on original esc plan for all driveways.

Install straw mulch on disturbed slopes to prevent rilling.

See Typical Home Erosion Control Plan on original esc plan. Each lot to have concrete washout area.