

3 Van Wyck Lane  
Wappingers Falls, New York 12590  
Phone: 845-223-3202

October 25, 2022

Dutchess County Health Department  
Attn: Dan Keeler, PE  
85 Civic Center Plaza - Suite 106  
Poughkeepsie, New York 12601

**Re: Lot 4 - Filed map 9132  
Tax Id # 135689-6156-02-872849  
Cooper Road  
Town of Wappinger**

Mr. Keeler:

Please find the following responses to your October 11, 2022 comment letter, in **bold**.

1. Please provide proof of preliminary planning board approval as well as the Town SEQR determination, when available.  
**A letter from the town's planner indicating this is a type 2 action is attached.**
2. The HD-I application submitted was not signed by the owner. Please provide a signed copy with your next submission.  
**The signed HD1 is included in the revised report.**
3. Please provide additional information regarding the existing well (i.e. well type, depth, casing, yield, etc.). If paperwork on the yield is not available, please perform a pump test on the well prior to approval. The test must demonstrate a 4-hour stabilized yield and drawdown.  
**Well information will be available in the beginning of November.**
4. Please revise the plan to show metes and bounds for the proposed driveway easement. Please also provide a signed easement agreement prior to approval.  
**Metes and bounds are provided.**
5. Please revise sheet numbering to indicate the total number of sheets (i.e. 1/3).  
**Revised**
6. The existing conditions map and proposed conditions map show the existing absorption system but no existing septic tank for this system is shown on either map. Please locate this structure and specify it to be properly abandoned.  
**Revised**

7. The SDS abandonment note on sheet C530 appears to indicate that only existing SDS components within the 100% reserve area are to be abandoned as specified. Please revise this note to indicate that all existing structures are to be abandoned as per the procedure specified in this note, not just components within the reserve system area. Please also revise this note to indicate that said abandonment shall be certified by the supervising PE.  
**The note has been revised.**
8. Please revise the plan such that the neighboring well, located about 108' uphill of the proposed primary OWTS, is not labeled "reputed".  
**Revised. The surveyor confirmed this is the correct location.**
9. Deep tests 3 and 4 do not agree with the results recorded by this office (see attached results). Based on the results recorded by this office, it appears a minimum 4' of fill is required for the reserve system, using an 18" maximum trench depth. Please revise the plan accordingly.  
**The fill and deep test schedule have been revised.**
10. Grading for the primary and reserve areas must be revised to provide 10' from the lowest trench to the top of slope (6' provided for primary, 3-4' provided for reserve).  
**The fill pads have been revised.**
11. The grading illustrated for the primary system does not illustrate 3' of fill throughout the system. Please revise to show additional fill.  
**The system has been revised.**
12. The reserve system is shown within 20' of the dwelling. Please revise to provide the required separation.  
**The toe of slope is 20' from the building.**
13. It is strongly recommended that manhole risers to grade be added for the septic tank for this project. It is likely that this tank will be pumped much more often than a typical single-family house.  
**Risers are now shown on the septic tank detail.**
14. Please revise the plan such that the force mains are not shown exiting the pump chamber at awkward angles. Please illustrate these lines as they will be installed and revise TDH calcs accordingly (if necessary).  
**The force mains have been reconfigured. The head calcs are updated in the revised report.**
15. It is not understood why the plan shows cleanouts on fairly short forcemain runs. Please clarify or remove if these were added unintentionally.  
**Cleanouts have been eliminated.**

16. Due to the proximity of the pump chamber to the building, please revise the detail to specify the vent to be extended to the rooftop to avoid any potential odors.

**Revised**

17. The pump station detail specifies a dose volume of 419 gallons (for primary system) but the tile field schedule appears to indicate a dose of 376 gallons (for primary) and 366 gallons (for reserve). Due to the forcemain length draining back into the chamber, the dose of 419 gallons is preferable for the primary system. Please provide calculations and float settings for the reserve system dose and revise the tile field schedule to provide consistent information on the plan.

**The dose proposed is 415 gallons; 419 was a typo. The tile field schedule has been updated.**

18. It is not understood why a "C" value of 130 is used in the Hazen-Williams equation. Ten States Standards specifies, "for other smooth pipe materials such as PVC, a higher "C" value, not to exceed 120, may be allowed for design." Please revise accordingly.

**The calculations were revised using 120.**

19. Please add a note to the pump station detail indicating that all electrical work shall conform to the National Electric Code (NEC), latest edition.

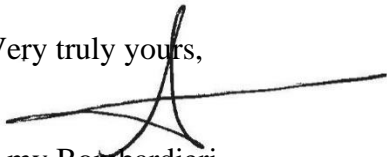
**Added**

20. It is not understood why two different drop box details are provided on the plan (sheet C530). DC EHSD standard notes are also provided twice on the plans (sheets 1 and 3). Please revise for clarity. The plan appears to show drop boxes for both the primary and reserve systems, but the tile field schedule indicates drop boxes only for the primary system. Please revise for consistency

**The duplicates have been eliminated and drop boxes are specified for both systems.**

Please feel free to contact me if you require any further information on this matter.

Very truly yours,



Amy Bombardieri

Cc: Town of Wappinger, file

## **MEMORANDUM**

To: Bruce M. Flower, Chairman,  
and the Town of Wappinger Planning Board

Date: July 13, 2022

Subject: **Cooper Road Conversion of Existing Residential Structure to Multi-family Dwelling– Amended Site Plan and Special Permit**  
Tax Lot 6156-02-872849

As requested, we reviewed the application of John Goetz of the Mid-Hudson Development Corp. (the “Applicant” and “Owner”) for Amended Site Plan Approval and Special Permit Approval.

### **The Property**

The subject property is a 3.62-acre lot located at 135 Cooper Road, is designated as tax lot 6156-02-872849 on the Town of Wappinger tax maps and is located within the R-20 Single Family Zoning District (the “Subject Property” or “Site”).

### **The Proposal**

The Applicant is proposing to convert an existing 1920 residence of over 4,000 sf. to a multi-family dwelling with 4 units (2 bedrooms each). The conversion will also require upgrades to the existing driveway and sewage system as well as an expansion of the existing parking area from 3 spaces to 11 (the “Project” or “Proposed Action”).

### **Submission**

The Applicant has submitted for review an Application for Site Plan Approval form dated 6/20/22; an Application for Special Permit Approval form dated 6/20/22; A Full EAF form prepared by John Goetz dated 6/20/22; and a site plan (1 sheet) entitled “Conversion of Existing Residential Structure to Multifamily Dwelling” prepared by Day and Stokosa and dated 6/2/22.

We offer the following comments for your consideration.

## **REVIEW COMMENTS**

1. SEQRA. The Proposed Action is considered a Type II Action pursuant to SEQRA. This Application requires no additional SEQRA action.

2. Environmental. The EAF identifies the potential presence of the Indiana Bat and the Blanding's Turtle on the Site. The Applicant should reach out to the NYSDEC for additional information on potential impact mitigation. Correspondence with the DEC should be forwarded to the Town to be included in the record.

The plans do not show an area of disturbance associated with the parking area improvements or the proposed SDS system but there is assumed to be tree clearing involved with the proposed SDS system and a note should be added to the plans for calendar restrictions on tree clearing as mitigation to the Indiana Bat.

3. Sight Distance. We defer to the Town Superintendent of Highways and the Town Engineer with respect to sight distance measurements at the existing driveway.
4. Lighting. The existing lighting conditions are not shown on the plans. The Applicant should confirm what the existing lighting conditions are and if the lighting is proposed to change with the change in use. Sufficient lighting for safety purposes should be proposed.
5. Driveway. Aerial imagery shows a shared driveway on the Site that is not shown on the plans. The Applicant should address the condition of the existing driveway.
6. Building Entrances. The proposed building entrances should be shown on the plans to demonstrate compliance with §240-56.F of the zoning law.

We look forward to discussing our comments with you. If you have any questions with respect to the above, please let us know.

Sarah Brown, AICP  
Senior Planner

Malcolm Simpson  
Planner

cc: James Horan, Esq.  
Barbara Roberti  
Jon Bodendorf, PE  
Michael Sheehan  
John Goetz

3 Van Wyck Lane  
Wappingers Falls, New York 12590  
Phone: 845-223-3202

**Engineer's Report**  
for the redesign of the  
**Water Supply & OWTS**  
for  
**Filed map 9132A - Lot #4**

**Location:**  
Cooper Road  
Wappinger Falls, NY 12533  
County of Dutchess

**Date:** September 8, 2022  
**Revised:** October 25, 2022

## 1.0 Purpose

This report shall outline the design of the proposed sewage disposal system (SDS) that will support four 2-bedroom (multi-family) dwelling units for a total of 8 bedrooms. This project consists of the conversion of an existing residence constructed in 1920. This is currently under review by the Town of Wappinger.

The 3.62 acre parcel is identified by tax ID # 135689-6156-02-872849.

## 2.0 Design Flows

According to the Dutchess County Design and Construction Standards Plan Submission Guide (September 1, 2016), the flow for a new residence is 110 gal/day/bedroom. Therefore, the total daily flow rate for the proposed multi-family residence is 880 gal/day. The entire interior is being gutted; the plumbing fixtures will meet low flow rating. A 2,500 gallon septic tank is proposed.

## 3.0 Onsite Wastewater Treatment System

### 3.1 SDS Design for Eight-Bedroom home (Max.)

The primary and replacement areas are 170 feet apart. The soil test results are slightly different. The primary system is based on an application rate of 0.45 gpd/sf and the reserve on a rate of 0.50 gpd/sf. The design calculations are as follows:

#### Primary

Required Area = 880 GPD / 0.45 Application Rate = 1,956 sq.ft.

$$1,956 \text{ SF} * 75\% = 1,467 \text{ SF}$$

$$1,467 \text{ SF} / 2' = 734 \text{ LF} \rightarrow 13 @ 60' \text{ ea} = 768 \text{ LF}$$

#### Reserve

Required Area = 880 GPD / 0.50 Application Rate = 1,760 sq.ft.

$$1,760 \text{ SF} * 75\% = 1,320 \text{ SF}$$

$$1,320 \text{ SF} / 2' = 660 \text{ LF} \rightarrow 11 @ 60' \text{ ea} = 660 \text{ LF}$$

\*This office is proposing the use of infiltrators for the SDS to reduce the required lineal feet of the absorption field by 25%.

A 2,500 gallon pump chamber is proposed. The dose is set to 75% of the primary volume. The chamber will provide 2 days storage above the high level alarm.

## 4.0 Water Supply

The lot shall be served by the existing well as shown on the attached plan.

## **Appendix**



DUTCHESS COUNTY DEPARTMENT OF HEALTH  
APPLICATION FOR APPROVAL OF PLANS FOR A WASTEWATER DISPOSAL SYSTEM

Mid Hudson Development

1. Name & address of applicant: P.O. Box 636  
Fishkill NY 12540
2. Name of Project: Conversion to Multi-Family  
Dwelling revision to f.m. 9132a
3. Location: T/V/C Town of Wappinger
4. Project Engineer Day & Stokosa Engineering P.C.
5. Address 3 Van Wyck Lane  
Wappinger Falls NY 12590
6. Type of Project ☒ Private/Residential ☐ Camp ☐ Commercial ☐ Apartments  
☐ Institutional ☐ Mobile Home Park ☐ Office Building  
☐ Food Service ☐ Other (specify) \_\_\_\_\_  
☐ Realty Subdivision
7. Is this project subject to State Environmental Quality Review (SEQR)?  
Type status (check one) ☐ Type I ☒ Type II ☐ Exempt ☐ Unlisted
8. Is a Draft Environmental Impact Statement (DEIS) required? No
9. Has a DEIS been completed and found acceptable by the Lead Agency? N/A
10. Name of Lead Agency: N/A
11. Is this project in an area under the control of local Planning, Zoning or other officials, ordinances? Yes
12. If so, have plans been submitted to such authorities? Yes
13. Has preliminary approval been granted by such authorities? NO
14. Type of sewage disposal system discharge: ☐ Surface waters ☒ Ground waters
15. If surface water discharge, what is the stream class designation? N/A
16. Waters index number (surface) N/A
17. Is project located near a public water supply system? No
18. If yes, name of water supply: N/A Distance to water supply: N/A
19. Is project site near a public sewage collection or disposal system? No
20. Name of sewage system: N/A Distance to sewage system: No
21. Were subsurface soil tests observed by a Health Department representative? YES
22. Date observed: 04/12/22 & 06/28/22
23. Name of Health Inspector: Dan Keeler, P.E.
24. Project design flow (gallons per day) 880 GPD
25. Is an application for State Pollutant Discharge Elimination System (SPDES) required? No

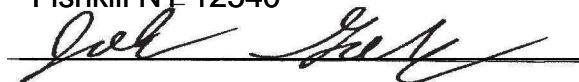
26. Has application been submitted to local NYSDEC office? No
27. Is any portion of this project located within a designated wetland? No
28. Is a Wetland Permit required? No                      29. Has application been made to local DEC office? No
30. Does project require a Stream Disturbance Permit? No
31. Is project located within 1000 feet of existence of abandoned landfill, hazardous waste site, salt stockpile or any other potential known source of contamination? No  
Describe: None known of
32. Does this project involve discharge or storage of industrial or hazardous wastes? No  
Describe: None known of
33. Is there a local master plan on file with the Town, Village, City? Yes
34. Are community water, sewer facilities planned to be developed within 15 years? No
35. Are any sewage disposal areas in excess of 10% slope? No
36. Tax Map I.D. Number: 135689-6156-02-872849
37. Approved plans are to be returned to:      Applicant                        X   Engineer

If the application is signed by a person other than the applicant shown in Item 1, the application must be accompanied by a letter of authorization. Failure to comply with this provision may be grounds for the rejection of any submission.

I hereby affirm, under penalty of perjury, that information provided on this form is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A Misdemeanor pursuant to Section 210.45 of the Penal Law.

Signatures and official titles: Mid Hudson Development  
P.O. Box 636  
Fishkill NY 12540

Mailing address:



# DEEP TEST RESULTS

DUTCHESS COUNTY DEPARTMENT OF BEHAVIORAL AND COMMUNITY HEALTH

Date: 4/12/22

Name of property: Morningside (formerly)

Ⓣ(V)(C) Wappinger

TAX GRID #

1	3	5	6	8	9	6	1	5	6	0	2	8	7	2	8	4	9
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Owner of property: Mid-Hudson Holdings

Engineer: Day / Stokosa

Person directing test: Amy Bombardieri

DCHD Rep: D. Keeler

HOLE #	LOT #	TOTAL DEPTH	ROCK DEPTH	WATER DEPTH	MOTTLING DEPTH	SOIL DESCRIPTION
1		6'	—	3.5'	—	clay loam
2		6'	—	3.5'	—	clay loam

General remarks (terrain; weather; springs, streams, etc.)

**DUTCHESS COUNTY DEPARTMENT OF HEALTH  
PERCOLATION TEST DATA**

MIDHUDSON  
DEVELOPMENT CORP

Name: \_\_\_\_\_

TAX GRID # \_\_\_\_\_

135689-6156-02-872849

(T)(V)(C) Wm. Miller

Date: SEPTEMBER 13, 2022

By: **DAY STOKOSA**  
ENGINEERING P.C.

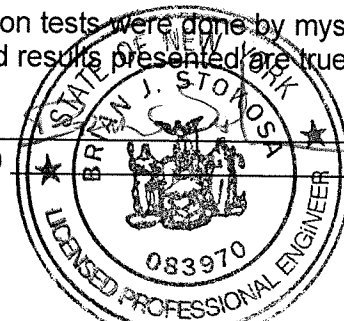
DCHD Inspector \_\_\_\_\_

Lot No.	Test Hole No.	Test Hole Depth	Soil Type	Soaked	TEST RUNS					
					*	1	2	3	4	5
	1	24"	Silt Loam	4/11/22	Finish	9:41	10:16	10:53	11:31	
					Start	9:00	9:40	10:17	10:55	
					Time	34	36	36	36	
	2	30"	Silt Loam	4/11/22	Finish	9:41	10:27	11:16	12:06	
					Start	9:03	9:42	10:28	11:20	
					Time	38	45	46	46	
	3	24"	Silt Loam	6/27/22	Finish	10:41	11:25	12:08	12:48	
					Start	10:00	10:43	11:25	12:05	
					Time	41	42	43	43	
	4	30"	Silt Loam	6/27/22	Finish	10:39	11:22	12:05	12:48	1:31
					Start	10:02	10:41	11:22	12:05	12:48
					Time	37	42	43	43	43
					Finish					
					Start					
					Time					
					Finish					
					Start					
					Time					
					Finish					
					Start					
					Time					
					Finish					
					Start					
					Time					

I, B. Stokosa, the undersigned, certify that these percolation tests were done by myself or under my direction according to the standard procedure. The data and results presented are true and correct.

Dated: September 13, 2022

Signature: \_\_\_\_\_  
License No. (P.E.)(L.S.) \_\_\_\_\_



## Pump/Chamber Design

### Pump Design:

#### Hazen-Williams

$$H_f = \frac{L(10.44) (GPM)^{1.85}}{C^{1.85}(d \text{ inches})^{4.8655}}$$

Force Main Input		
C	120	100-120
L	136	Ft
d	1.5	In
Static Head (Hs) ft		3.4

Friction Head (Hf)			Total Dynamic Head (TDH)		
10 Gpm	1.991	ft	10 Gpm	5.391	ft
20 Gpm	7.176	ft	20 Gpm	10.576	ft
30 Gpm	15.193	ft	30 Gpm	18.593	ft
40 Gpm	25.870	ft	40 Gpm	29.270	ft
50 Gpm	39.091	ft	50 Gpm	42.491	ft
60 Gpm	54.772	ft	60 Gpm	58.172	ft

forcemain length = 114' nominal length + 2-90 degree bends @ 4.3' per bend + 11' per check valve + 2.7' long sweep ell = 136'



# WE Series Model 3885

SUBMERSIBLE EFFLUENT PUMPS



### FEATURES

**Impeller:** Cast iron, semi-open, non-clog with pump-out vanes for mechanical seal protection. Balanced for smooth operation. Silicon bronze impeller available as an option.

**Casing:** Cast iron volute type for maximum efficiency. 2" NPT discharge.

**Mechanical Seal:** Silicon Carbide vs. Silicon Carbide sealing faces. Stainless steel metal parts, BUNA-N elastomers.

**Shaft:** Corrosion-resistant, stainless steel. Threaded design. Locknut on all models to guard against component damage on accidental reverse rotation.

**Fasteners:** 300 series stainless steel.

Capable of running dry without damage to components.

Designed for continuous operation when fully submerged.

**EXTENDED WARRANTY AVAILABLE FOR RESIDENTIAL APPLICATIONS.**

### APPLICATIONS

Specifically designed for the following uses:

- Homes, Farms, Trailer Courts, Motels, Schools, Hospitals, Industry, Effluent Systems

### SPECIFICATIONS

#### Pump

- Solids handling capabilities:  $\frac{3}{4}$ " maximum
- Discharge size: 2" NPT
- Capacities: up to 140 GPM
- Total heads: up to 128 feet TDH
- Temperature: 104°F (40°C) continuous, 140°F (60°C) intermittent.
- See order numbers on reverse side for specific HP, voltage, phase and RPM's available.

#### MOTORS

- Fully submerged in high-grade turbine oil for lubrication and efficient heat transfer.
- Class B insulation on  $\frac{1}{3}$  - 1½ HP models.
- Class F insulation on 2 HP models.

#### Single phase (60 Hz):

- Capacitor start motors for maximum starting torque.
- Built-in overload with automatic reset.

- SJTOW or STOW severe duty oil and water resistant power cords.
- $\frac{1}{3}$  - 1 HP models have NEMA three prong grounding plugs.
- 1½ HP and larger units have bare lead cord ends.

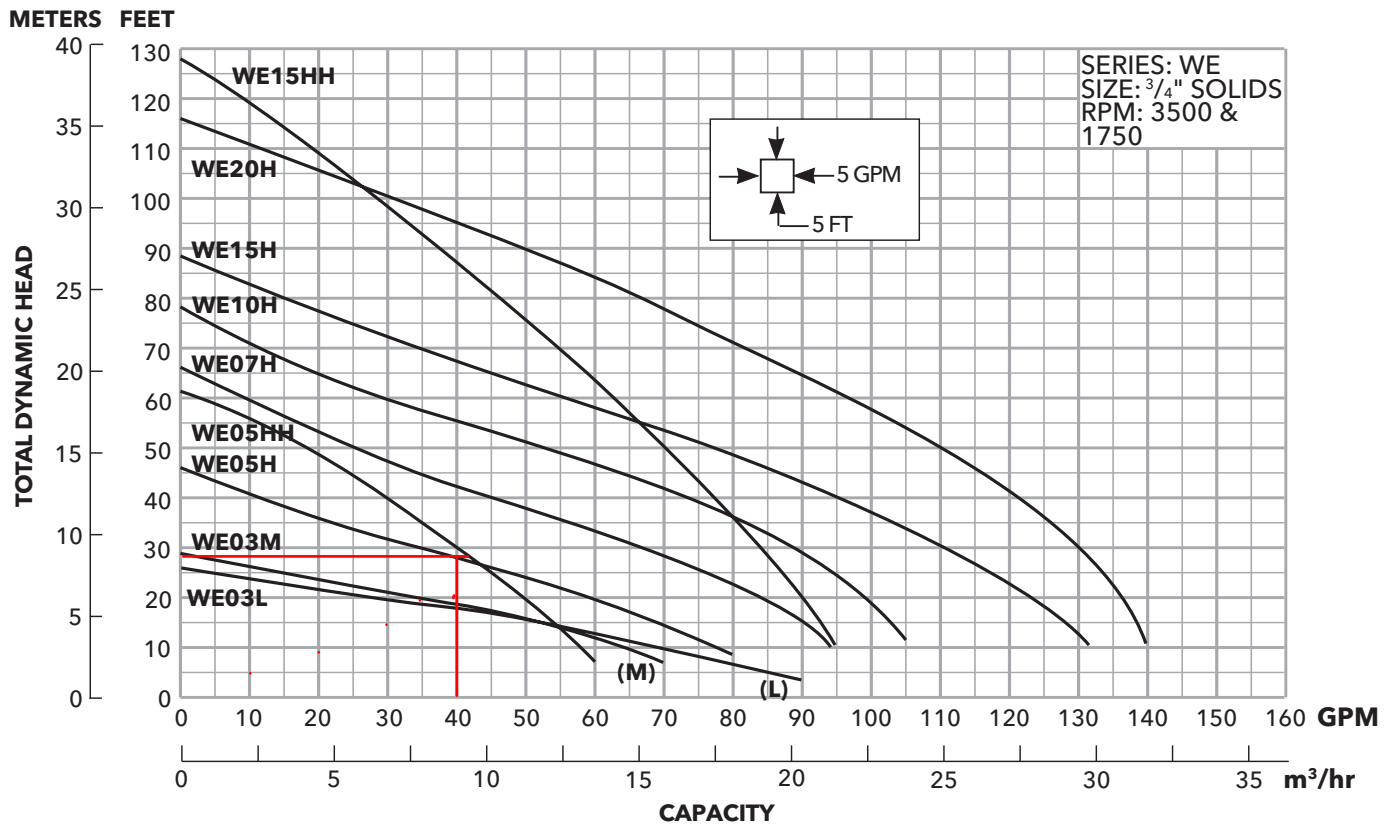
#### Three phase (60 Hz):

- Class 10 overload protection must be provided in separately ordered starter unit.
- STOW power cords all have bare lead cord ends.
- Designed for Continuous Operation: Pump ratings are within the motor manufacturer's recommended working limits, can be operated continuously without damage when fully submerged.
- Bearings: Upper and lower heavy duty ball bearing construction.
- Power Cable: Severe duty rated, oil and water resistant. Epoxy seal on motor end provides secondary moisture barrier in case of outer jacket damage and to prevent oil wicking. Standard cord is 20'. Optional lengths are available.
- O-ring: Assures positive sealing against contaminants and oil leakage.

#### AGENCY LISTINGS

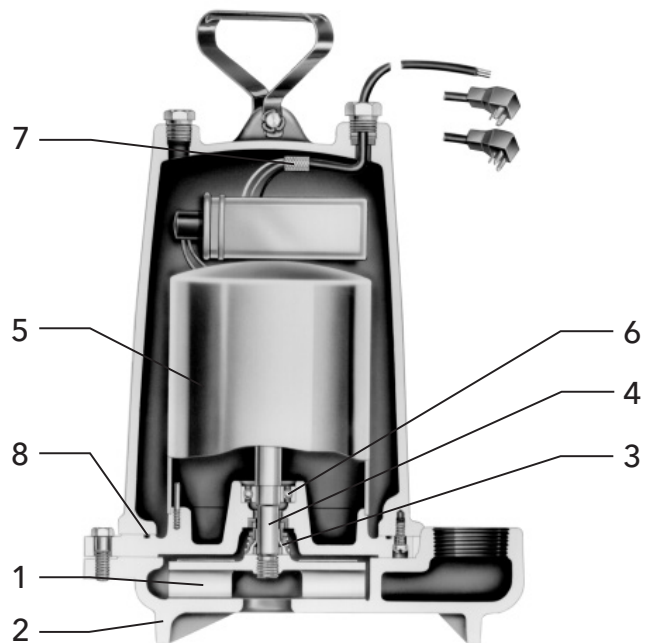


Tested to UL 778 and CSA 22.2 108 Standards  
By Canadian Standards Association File #LR38549



### COMPONENTS

Item No.	Description
1	Impeller
2	Casing
3	Mechanical Seal
4	Motor Shaft
5	Motor
6	Ball Bearings
7	Power Cable
8	Casing O-Ring





### MODELS

Order Number	HP	Phase	Volts	RPM	Impeller Diameter (in.)	Maximum Amps	Locked Rotor Amps	KVA Code	Full Load Efficiency %	Resistance		Power Cable Size	Weight (lbs.)		
										Start	Line-Line				
WE0311L	0.33	1	115	1750	5.38	10.7	30.0	M	54	11.9	1.7	16/3	56		
WE0318L			208			6.8	19.5	K	51	9.1	4.2				
WE0312L			230			4.9	14.1	L	53	14.5	8.0				
WE0311M			115			10.7	30.0	M	54	11.9	1.7				
WE0318M			208			6.8	19.5	K	51	9.1	4.2				
WE0312M			230			4.9	14.1	L	53	14.5	8.0				
WE0511H	0.5		115	3450	3.56	14.5	46.0	M	54	7.5	1.0	14/3	60		
WE0518H			208			8.1	31.0	K	68	9.7	2.4	16/3			
WE0512H			230			7.3	34.5	M	53	9.6	4.0	14/4			
WE0538H			3			200	4.9	22.6	R	68	NA			3.8	
WE0532H						230	3.3	18.8	R	70	NA			5.8	
WE0534H						460	1.7	9.4	R	70	NA			23.2	
WE0537H		575			1.4	7.5	R	62	NA	35.3					
WE0511HH		1	115		3.88	14.5	46.0	M	54	7.5	1.0	14/3		14/3	
WE0518HH			208			8.1	31.0	K	68	9.7	2.4	16/3			
WE0512HH			230			7.3	34.5	M	53	9.6	4.0				
WE0538HH			3			200	4.9	22.6	R	68	NA	3.8			14/4
WE0532HH						230	3.6	18.8	R	70	NA	5.8			
WE0534HH						460	1.8	9.4	R	70	NA	23.2			
WE0537HH		575			1.5	7.5	R	62	NA	35.3					
WE0718H		0.75	1		208	4.06	11.0	31.0	K	68	9.7	2.4	14/3	70	
WE0712H					230		10.0	27.5	J	65	12.2	2.7			
WE0738H			3		200		6.2	20.6	L	64	NA	5.7	14/4		
WE0732H					230		5.4	15.7	K	68	NA	8.6			
WE0734H					460		2.7	7.9	K	68	NA	34.2			
WE0737H					575		2.2	9.9	L	78	NA	26.5			
WE1018H		1	1		208	4.44	14.0	59.0	K	68	9.3	1.1	14/3	70	
WE1012H					230		12.5	36.2	J	69	10.3	2.1			
WE1038H			3		200		8.1	37.6	M	77	NA	2.7	14/4		
WE1032H					230		7.0	24.1	L	79	NA	4.1			
WE1034H					460		3.5	12.1	L	79	NA	16.2			
WE1037H					575		2.8	9.9	L	78	NA	26.5			
WE1518H	1.5	1	208	4.56	17.5	59.0	K	68	9.3	1.1	14/3	80			
WE1512H			230		15.7	50.0	H	68	11.3	1.6	14/4				
WE1538H		3	200		10.6	40.6	K	79	NA	1.9					
WE1532H			230		9.2	31.7	K	78	NA	2.9					
WE1534H			460		4.6	15.9	K	78	NA	11.4					
WE1537H			575		3.7	13.1	K	75	NA	16.9					
WE1518HH		1	208	5.50	17.5	59.0	K	68	9.3	1.1	14/3		14/3		
WE1512HH			230		15.7	50.0	H	68	11.3	1.6					
WE1538HH		3	200		10.6	40.6	K	79	NA	1.9	14/4				
WE1532HH			230		9.2	31.7	K	78	NA	2.9					
WE1534HH			460		4.6	15.9	K	78	NA	11.4					
WE1537HH			575		3.7	13.1	K	75	NA	16.9					
WE2012H	2	1	230	5.38	18.0	49.6	F	78	3.2	1.2	14/3	83			
WE2038H		3	200		12.0	42.4	K	78	NA	1.7	14/4				
WE2032H			230		11.6	42.4	K	78	NA	1.7					
WE2034H			460		5.8	21.2	K	78	NA	6.6					
WE2037H			575		4.7	16.3	L	78	NA	10.5					

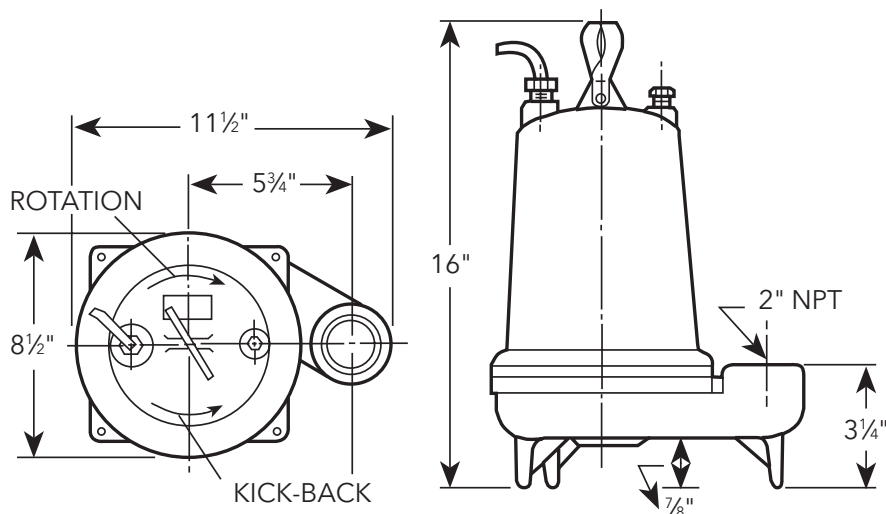
### PERFORMANCE RATINGS (gallons per minute)

Order No.	WE-03L	WE-03M	WE-05H	WE-07H	WE-10H	WE-15H	WE05HH	WE15HH	WE-20H
<b>HP</b>	1/3	1/3	1/2	3/4	1	1 1/2	1/2	1 1/2	2
<b>RPM</b>	1750	1750	3500	3500	3500	3500	3500	3500	3500
5	86	-	-	-	-	-	-	-	-
10	70	63	78	94	-	-	58	95	-
15	52	52	70	90	103	128	53	93	138
20	27	35	60	83	98	123	49	90	136
25	5	15	48	76	94	117	45	87	133
30	-	-	35	67	88	110	40	83	130
35	-	-	22	57	82	103	35	80	126
40	-	-	-	45	74	95	30	77	121
45	-	-	-	35	64	86	25	74	116
50	-	-	-	25	53	77	-	70	110
55	-	-	-	-	40	67	-	66	103
60	-	-	-	-	30	56	-	63	96
65	-	-	-	-	20	45	-	58	89
70	-	-	-	-	-	35	-	55	81
75	-	-	-	-	-	25	-	51	74
80	-	-	-	-	-	-	-	47	66
90	-	-	-	-	-	-	-	37	49
100	-	-	-	-	-	-	-	28	30

Total Head Feet of Water

### DIMENSIONS

(All dimensions are in inches. Do not use for construction purposes.)



### STANDARD PANEL OPTIONS

Pump Order Number	K Series		Boulay Series	
	Simplex	Duplex	Simplex	Duplex
WE0311L	KS19020WF	KD19020WF	S10020	D10020
WE0318L	KS19020WF	KD19020WF	S10020	D10020
WE0312L	KS19020WF	KD19020WF	S10020	D10020
WE0311M	KS19020WF	KD19020WF	S10020	D10020
WE0318M	KS19020WF	KD19020WF	S10020	D10020
WE0312M	KS19020WF	KD19020WF	S10020	D10020
WE0511H	KS19020WF	KD19020WF	S10020	D10020
WE0518H	KS19020WF	KD19020WF	S10020	D10020
WE0512H	KS19020WF	KD19020WF	S10020	D10020
WE0538H	KS31255WF	KD31255WF	S34063	D34063
WE0532H	KS31255WF	KD31255WF	S32540	D32540
WE0534H	KS31255WF	KD31255WF	S31625	D31625
WE0537H	N/A	N/A	S31625	D31625
WE0511HH	KS19020WF	KD19020WF	S10020	D10020
WE0518HH	KS19020WF	KD19020WF	S10020	D10020
WE0512HH	KS19020WF	KD19020WF	S10020	D10020
WE0538HH	KS31255WF	KD31255WF	S34063	D34063
WE0532HH	KS31255WF	KD31255WF	S32540	D32540
WE0534HH	KS31255WF	KD31255WF	S31625	D31625
WE0537HH	N/A	N/A	S31625	D31625
WE0718H	KS19020WF	KD19020WF	S10020	D10020
WE0712H	KS19020WF	KD19020WF	S10020	D10020
WE0738H	KS34518WF	KD34518WF	S36310	D36310
WE0732H	KS34518WF	KD34518WF	S34063	D34063
WE0734H	KS31255WF	KD31255WF	S32540	D32540
WE0737H	N/A	N/A	S31625	D31625
WE1018H	KS19020WF	KD19020WF	S10020	D10020
WE1012H	KS19020WF	KD19020WF	S10020	D10020
WE1038H	KS34518WF	KD34518WF	S36310	D36310
WE1032H	KS34518WF	KD34518WF	S36310	D36310
WE1034H	KS34518WF	KD34518WF	S32540	D32540
WE1037H	N/A	N/A	S32540	D32540
WE1518H	KS19020WF	KD19020WF	S10020	D10020
WE1512H	KS19020WF	KD19020WF	S10020	D10020
WE1538H	KS34518WF	KD34518WF	S31016	D31016
WE1532H	KS34518WF	KD34518WF	S36310	D36310
WE1534H	KS34518WF	KD34518WF	S34063	D34063
WE1537H	N/A	N/A	S32540	D32540
WE1518HH	KS19020WF	KD19020WF	S10020	D10020
WE1512HH	KS19020WF	KD19020WF	S10020	D10020
WE1538HH	KS34518WF	KD34518WF	S31016	D31016
WE1532HH	KS34518WF	KD34518WF	S36310	D36310
WE1534HH	KS34518WF	KD34518WF	S34063	D34063
WE1537HH	N/A	N/A	S32540	D32540
WE2012H	KS19020WF	KD19020WF	S10020	D10020
WE2038H	KS34518WF	KD34518WF	S31016	D31016
WE2032H	KS34518WF	KD34518WF	S31016	D31016
WE2034H	KS34518WF	KD34518WF	S34063	D34063
WE2037H	N/A	N/A	S34063	D34063

**Note:** Boulay Series part numbers have additional available features, see page 7 for more information.

**Note:** K Series panel part numbers include floats, to order without float switches, remove the 'WF' suffix. Boulay Series panels do not include float switches.



### K-SERIES

- NEMA 4X dead front outdoor rated enclosure
- Red LED alarm beacon
- HOA selector switch
- Field wiring terminal block
- Single phase models handle 120, 208 and 230V service
- Three phase models handle 200, 230 and 460V service
- Requires separate control/alarm power feed
- See brochure "BCPKSDPANELS" for additional information

### BOULAY SERIES

- NEMA 4X outdoor rated enclosure
- Red alarm beacon
- HOA selector switch
- Through door pump run light(s)
- Through door alarm test and horn silence button
- Single phase models handle 120, 208 and 230V service
- Three phase models handle 200, 230, 460 and 575V service
- Accepts single or dual power feed
- See brochure "BCP3 R11" for additional information on simplex models
- See brochure "BCP4 R14" for additional information on duplex models

# Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're a global team unified in a common purpose: creating advanced technology solutions to the world's water challenges. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. Our products and services move, treat, analyze, monitor and return water to the environment, in public utility, industrial, residential and commercial building services settings. Xylem also provides a leading portfolio of smart metering, network technologies and advanced analytics solutions for water, electric and gas utilities. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise with a strong focus on developing comprehensive, sustainable solutions.

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Phone: (866) 325-4210  
Fax: (888) 322-5877  
[www.xylem.com/goulds](http://www.xylem.com/goulds)

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Zone Classification	R-20
Existing Use	Homes for the Aged
Proposed Use	Multi-family Residential
Tax Map Parcel No	135689-6156-02-872849 - Lot #4 - FILED MAP 9132
Topographic Datum	USGS
Total Existing Acreage:	3.62 AC
Water Supply:	Individual Well
Sewage Disposal:	Individual Subsurface Disposal

AREA MAP

SCALE: 1" = 200'

# 1 EXISTING CONDITIONS

IT IS A VIOLATION OF NEW YORK STATE EDUCATION LAW FOR ANY PERSONS TO ALTER THESE PLANS, SPECIFICATIONS, OR REPORTS IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR.

**DAY | STOKOSA**  
ENGINEERING P.C.

SCALE	DRAWN BY	DRAWING NO.  <b>G001</b> SHEET 1 OF 4
AS NOTED	ALB	
DATE	CHECKED BY	
09.02.2022	BJS	

Owner/Applicant
Mid-Hudson Development 982 NY-82, Hopewell Junction, NY 12533

Owner's Consent Note	
THE UNDERSIGNED OWNER OF THIS PROPERTY HEREON STATES THAT HE IS FAMILIAR WITH THIS MAP, ITS CONTENTS AND ITS LEGENDS AND HEREBY CONSENTS TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON	
OWNER	DATE

[illegible]

3 PROPOSED TEMPORARY GRADING EASEMENT  
SCALE: 1" = 40'

2 PROPOSED SHARED DRIVEWAY EASEMENT  
SCALE: 1" = 40'

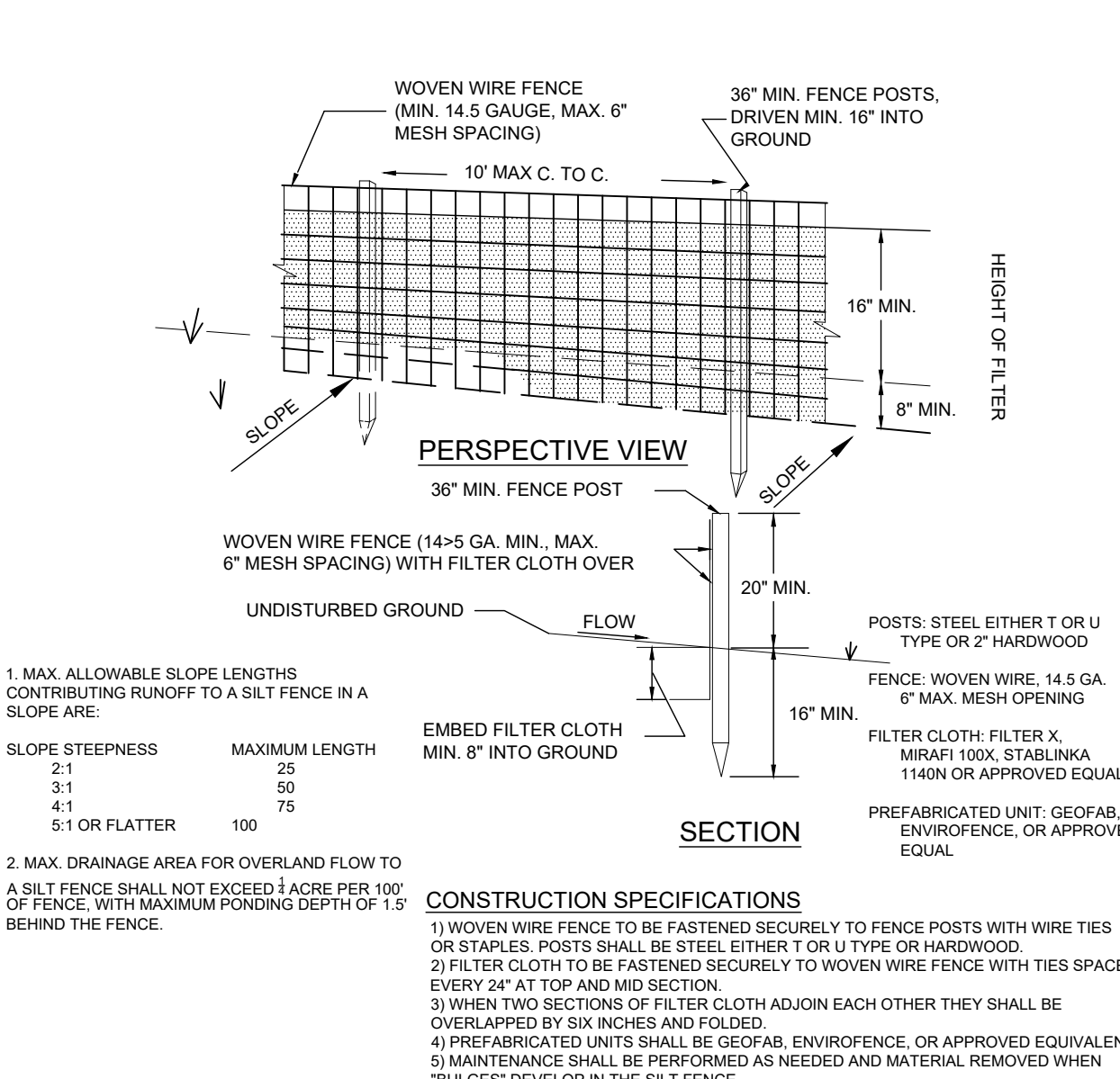






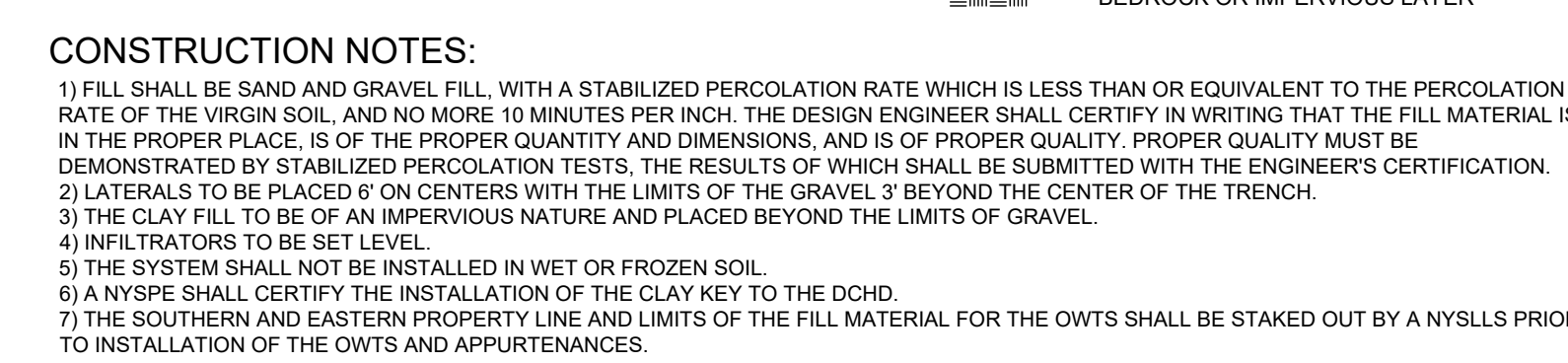
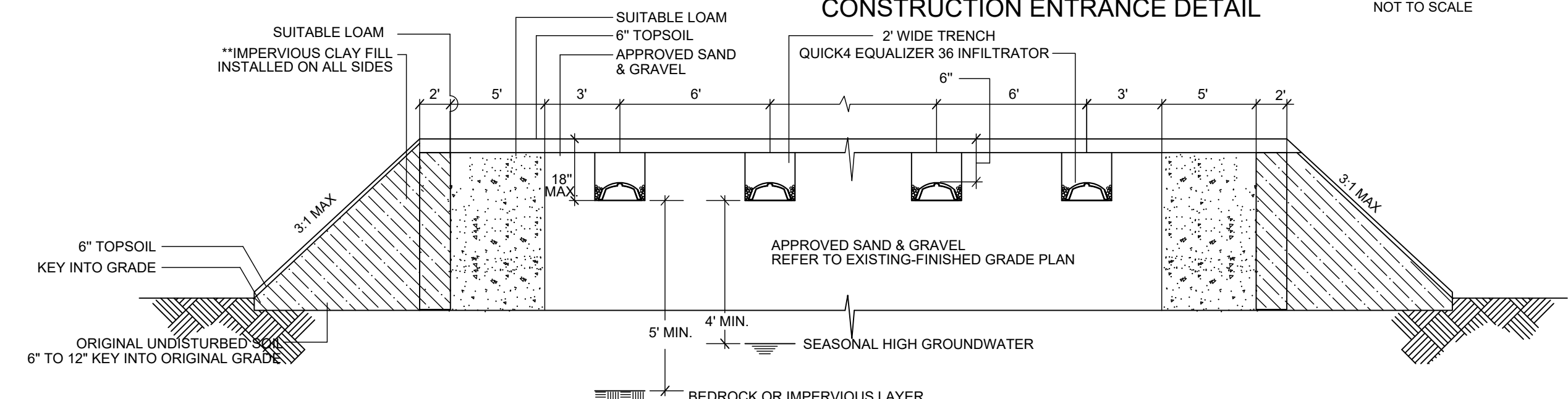






## SILT FENCING PLAN

NOT TO SCALE



## TYPICAL FORCE MAIN

NOT TO SCALE

## PERCOLATION TEST DATA

PERCOLATION TESTS HOLES 1 AND 2 WERE PERFORMED ON THE DATE OF MAY 13, 2022. PERCOLATION TESTS HOLES 3 AND 4 WERE PERFORMED ON THE DATE OF JULY 14, 2022. PERCOLATION HOLES WERE DUG AND SOAKED 24 HOURS PRIOR TO TESTING.

PERCOLATION TEST RUN(S)		1	2	3	4	5
T.H. NO.	DEPTH	1	2	3	4	5
1	24"	34	36	36	36	
2	30"	38	45	46	46	
3	24"	41	43	43	43	
4	30"	37	42	43	43	43

DESIGN RATE IMPLEMENTED  
880 GPD / 0.45 = 1956 SF  
1956 SF \* 75% = 1,467 SF  
1,467 SF / 2' TRENCH WIDTH = 734 LINEAR FEET  
REPLACEMENT AREA 31-45 DESIGN RATE  
880 GPD / 0.50 = 1,760 SF  
1,760 SF \* 75% = 1,320 SF  
1,320 SF / 2' TRENCH WIDTH = 660 LINEAR FEET

## DEEP TEST SOIL DATA

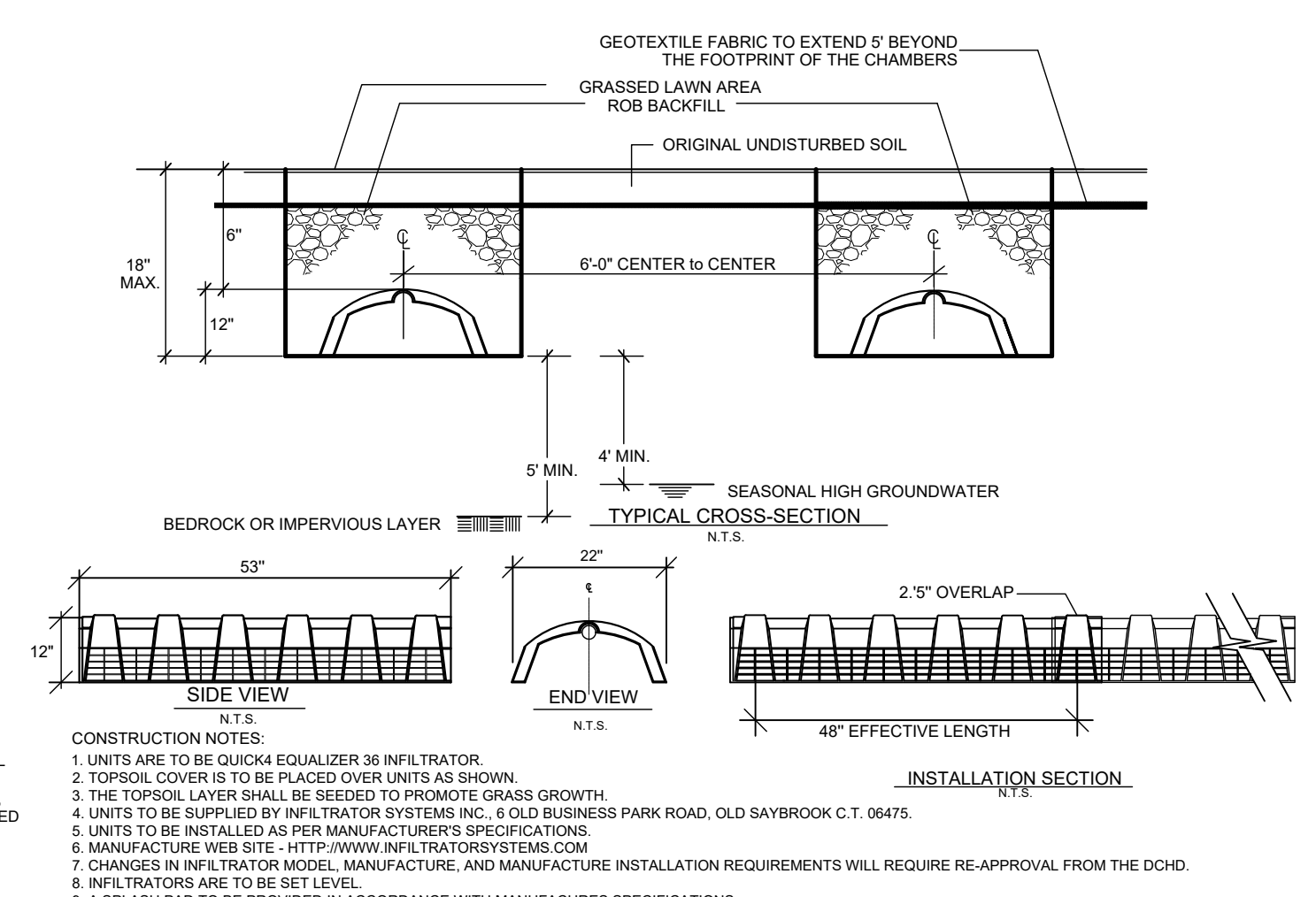
DEEP TESTS 1 AND 2 PERFORMED ON APRIL 12, 2022 AND 3 AND 4 ON JUNE 28, 2022 BY THE OFFICE OF DAY & STOKOSA ENGINEERING P.C. & WITNESSED BY DAN KEELER OF THE DCHD.

TEST HOLE	DEPTH	ROCK	IMP.	WATER	RESULTS
1	6'-0"			3'-6" SEEPAGE	6" TOPSOIL, BAL. - CLAY LOAM
2	6'-0"			3'-6" SEEPAGE	6" TOPSOIL, BAL. - CLAY LOAM
3	7'-6"		32"		6" TOPSOIL, 6"-32" GRAVELY LOAM, BAL. - CLAY LOAM
4	6'-0"		24"		6" TOPSOIL, 6"-24" GRAVELY LOAM, BAL. - CLAY LOAM

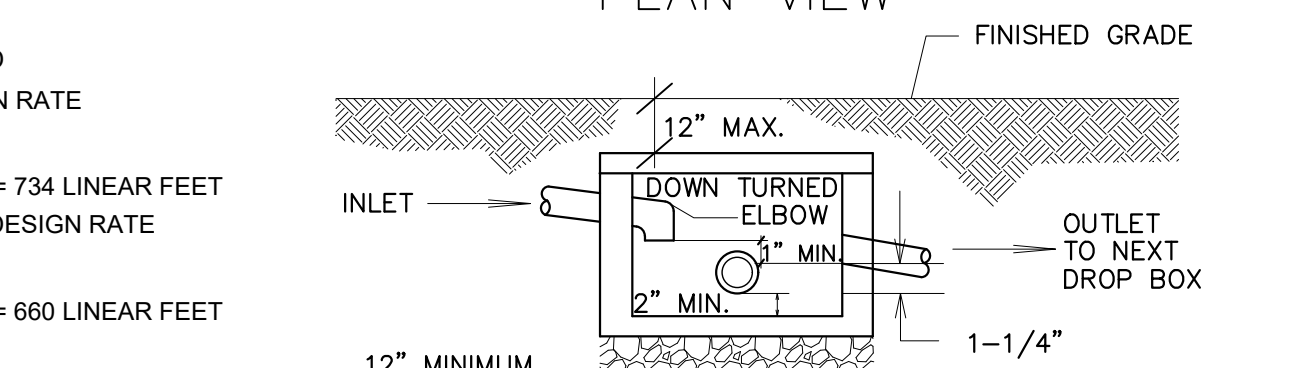
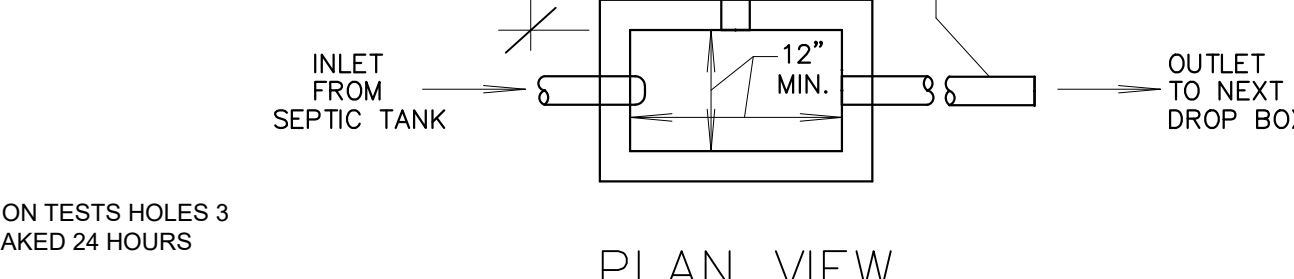
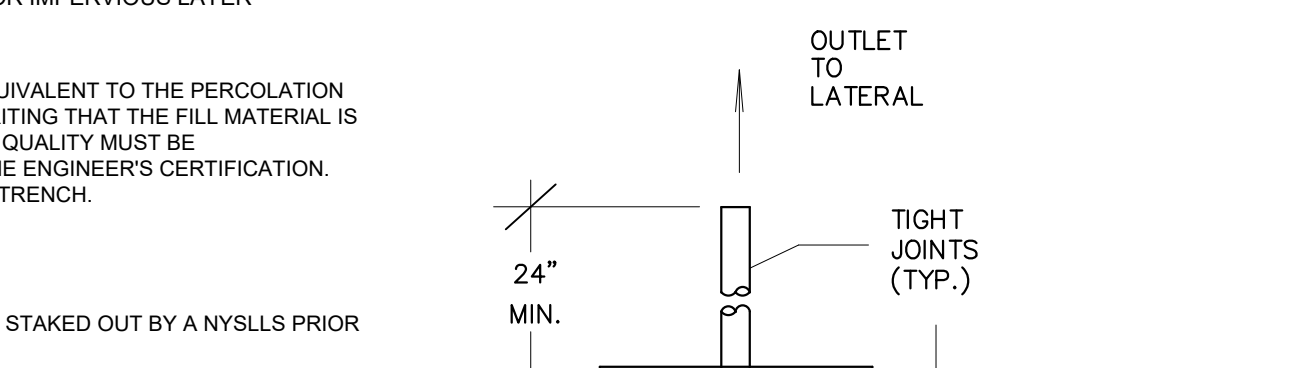
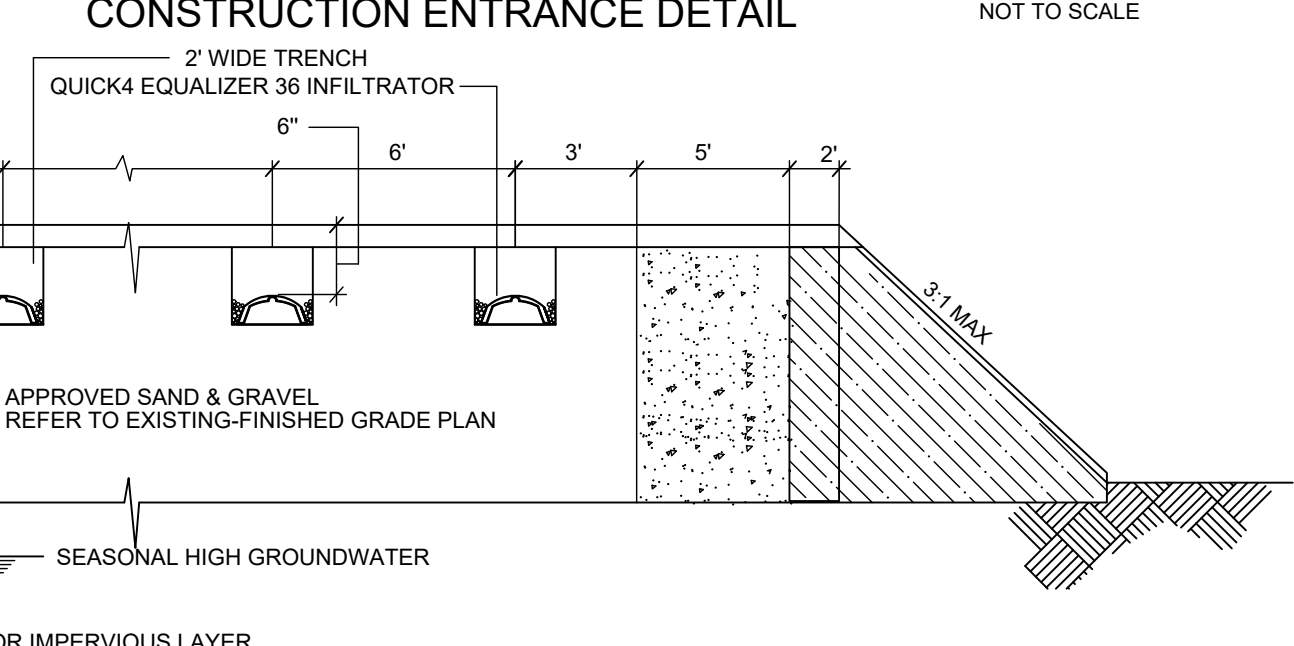
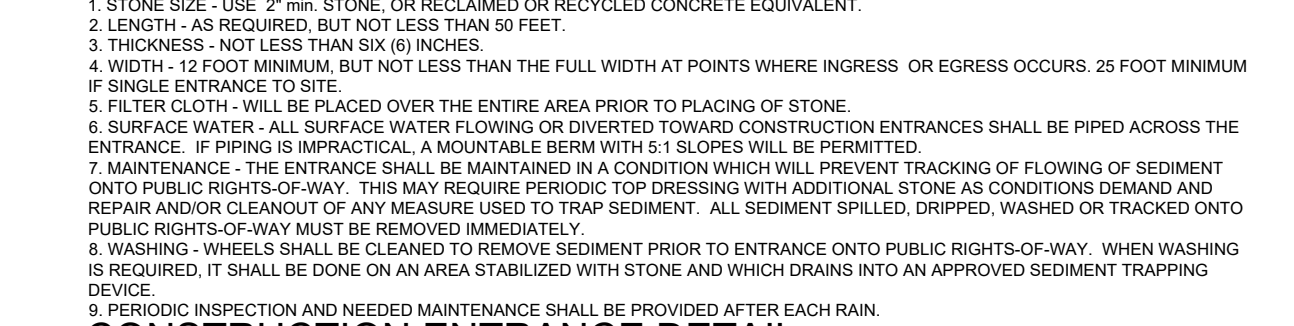
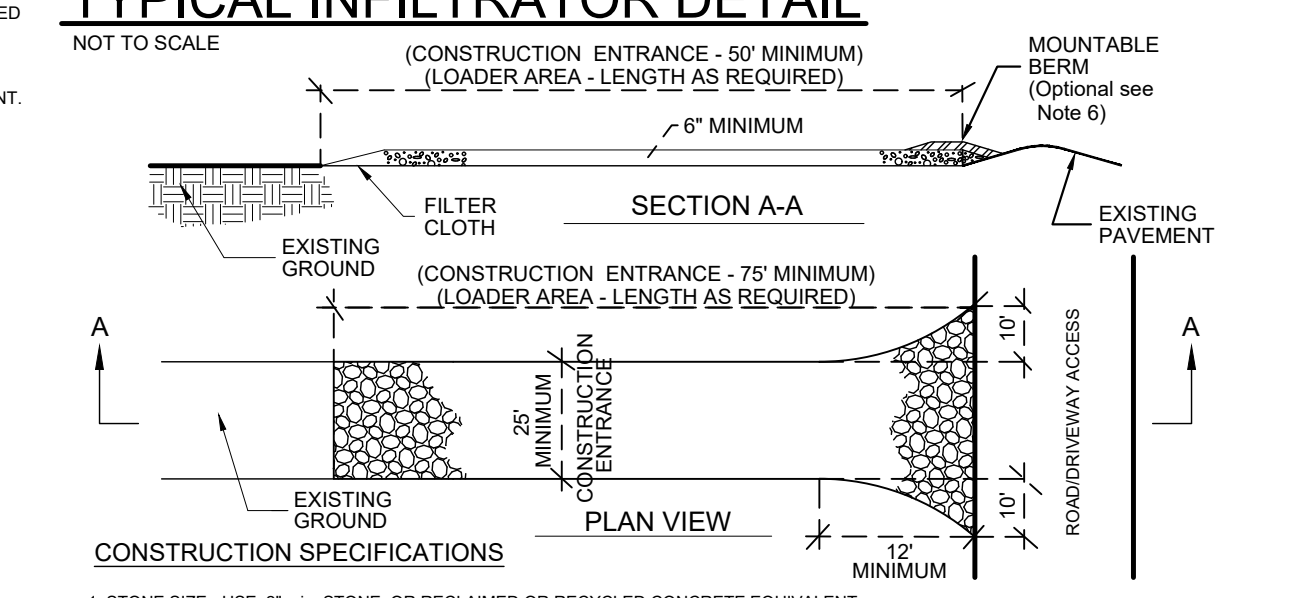
## TILE FIELD SCHEDULE

ABSORPTION AREA INFILTRATOR  
8 BDRM DESIGN - 880 GPD

PRIMARY AREA	REPLACEMENT AREA	SAND & GRAVEL FILL (MINIMUM)	TOPSOIL COVER	TRENCH DEPTH (MAXIMUM)	TRENCH WIDTH	PUMP CHAMBER	DROP BOX	ONSITE WASTEWATER TREATMENT SYSTEM	SEPTIC TANK SIZE (GAL.)	FIELD CONFIGURATION	L.S.E. MIN. INV.
768 L.F.	660 L.F.	3'-0" PRIMARY 4'-0" RESERVE	6"	18"	24"	PRIMARY / RESERVE 415 GALLONS	YES	INFILTRATOR	2,500	13 @ 60 EA. = 768 LF 11 @ 60 EA. = 660 LF	328



## TYPICAL INFILTRATOR DETAIL



## TYPICAL FORCE MAIN

NOT TO SCALE

## CONSTRUCTION NOTES:

1. ALL ELECTRICAL CONNECTIONS TO BE MADE OUTSIDE OF PUMP CHAMBER, INCLUDING JUNCTION BOX.
2. THE FLOAT HANGER AND/OR BRACKET SHALL BE MADE OF CORROSION RESISTANT MATERIAL.
3. ALL JOINTS AND PENETRATIONS ARE TO BE CAULKED AND MADE WATERTIGHT.
4. PUMP TO BE GOULDS 3885 (MODEL #WE0518H).
5. CONTROL PANEL TO BE GOULDS (MODEL #D34063).
6. CONTROL SWITCHES TO BE GOULDS (MODEL #A2-3).
7. BOTTOM OF TANK TO SLOPE TOWARDS PUMP IN ALL DIRECTIONS.
8. CHAIN TO BE PLACED AS SHOWN FOR EASE IN REMOVING PUMP FOR SERVICING AND INSPECTION.

## TYPICAL 2,500 GALLON PUMP CHAMBER

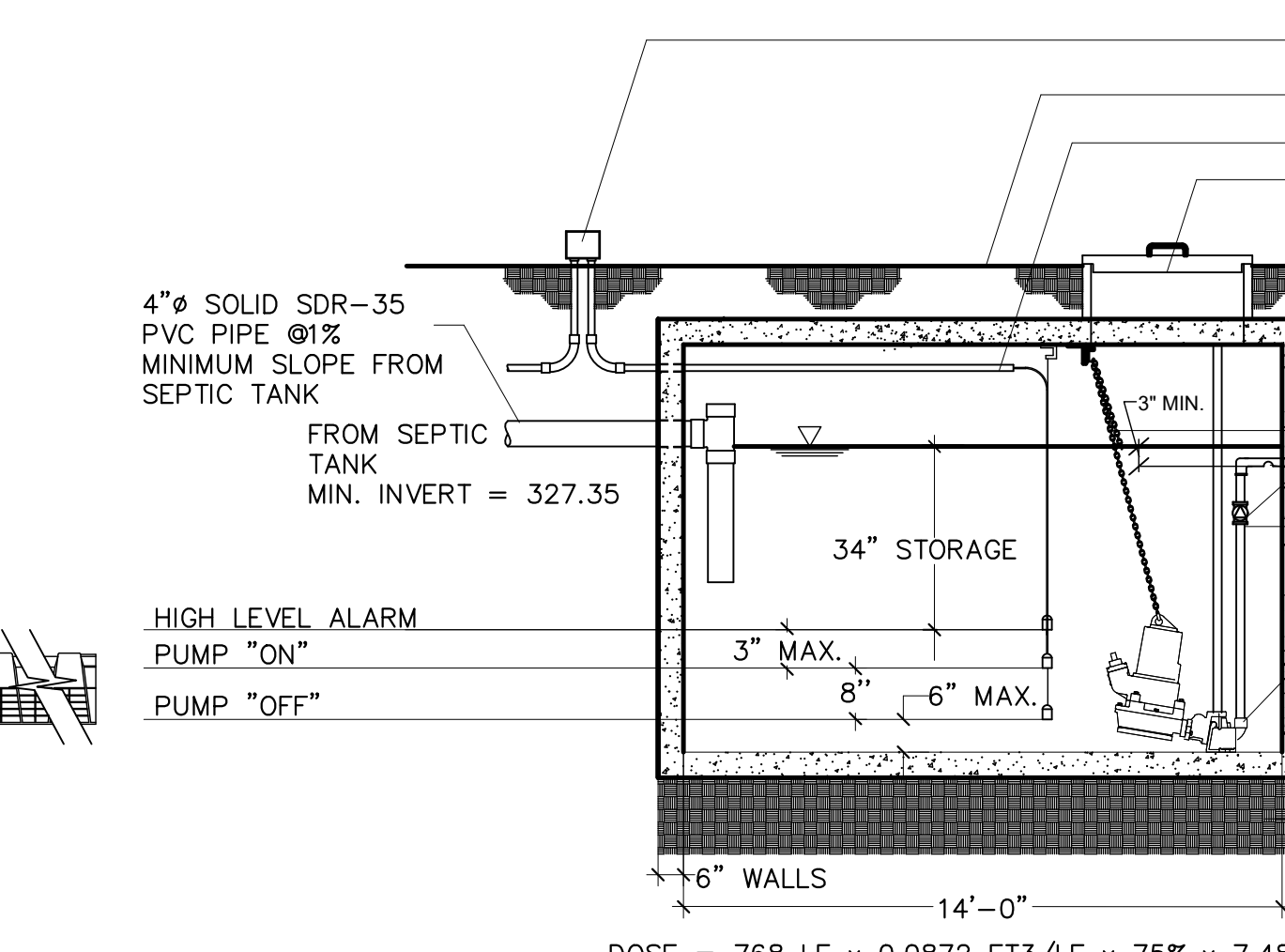
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## CONSTRUCTION NOTES:

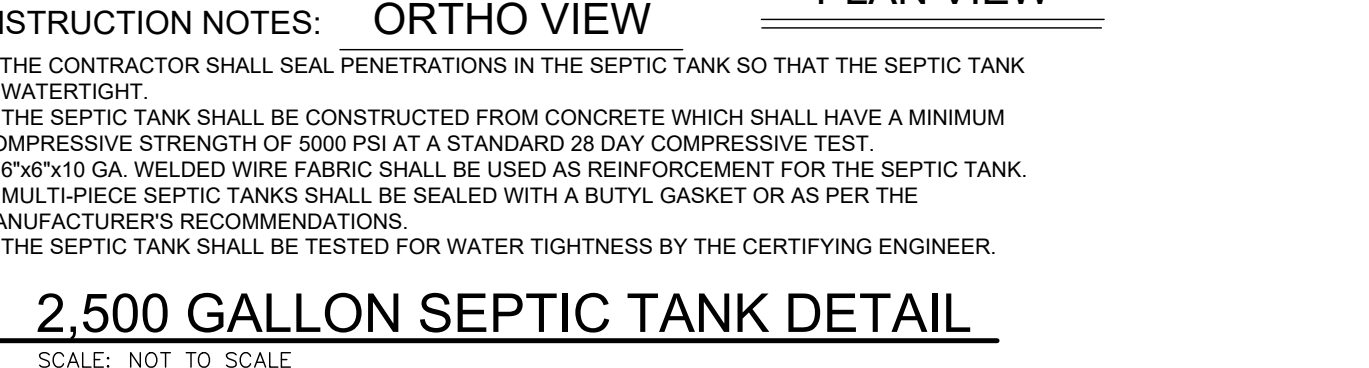
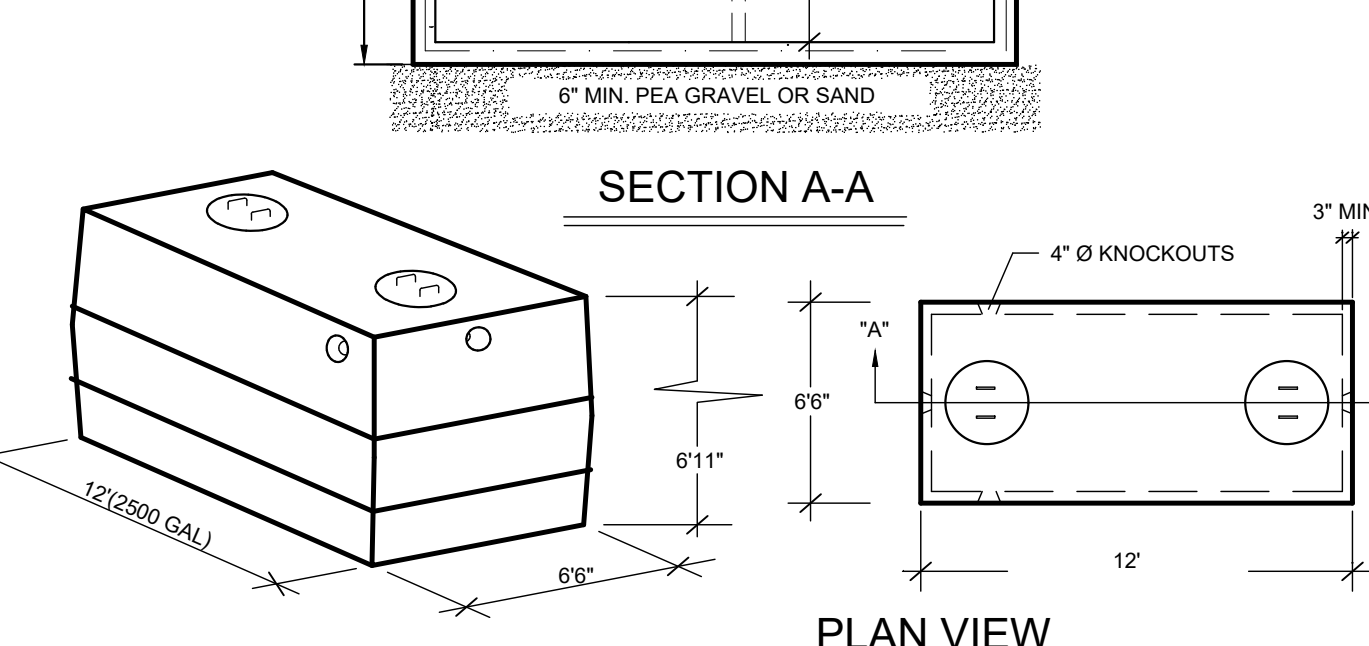
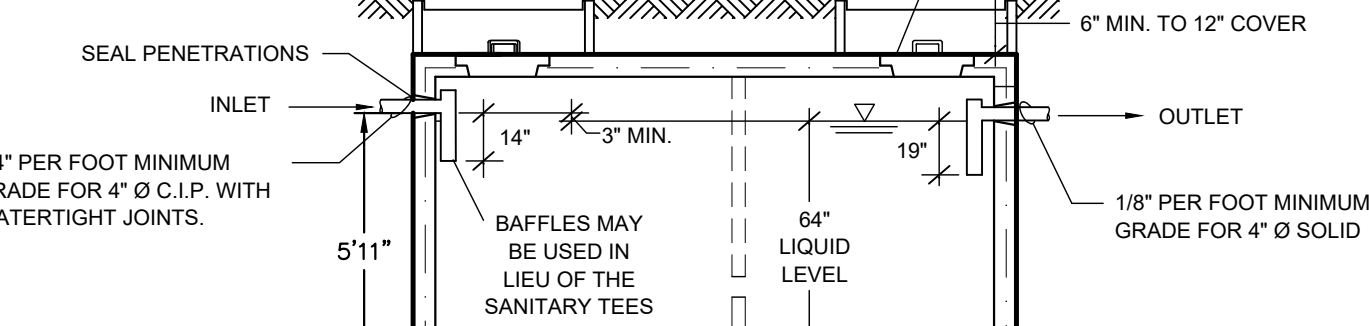
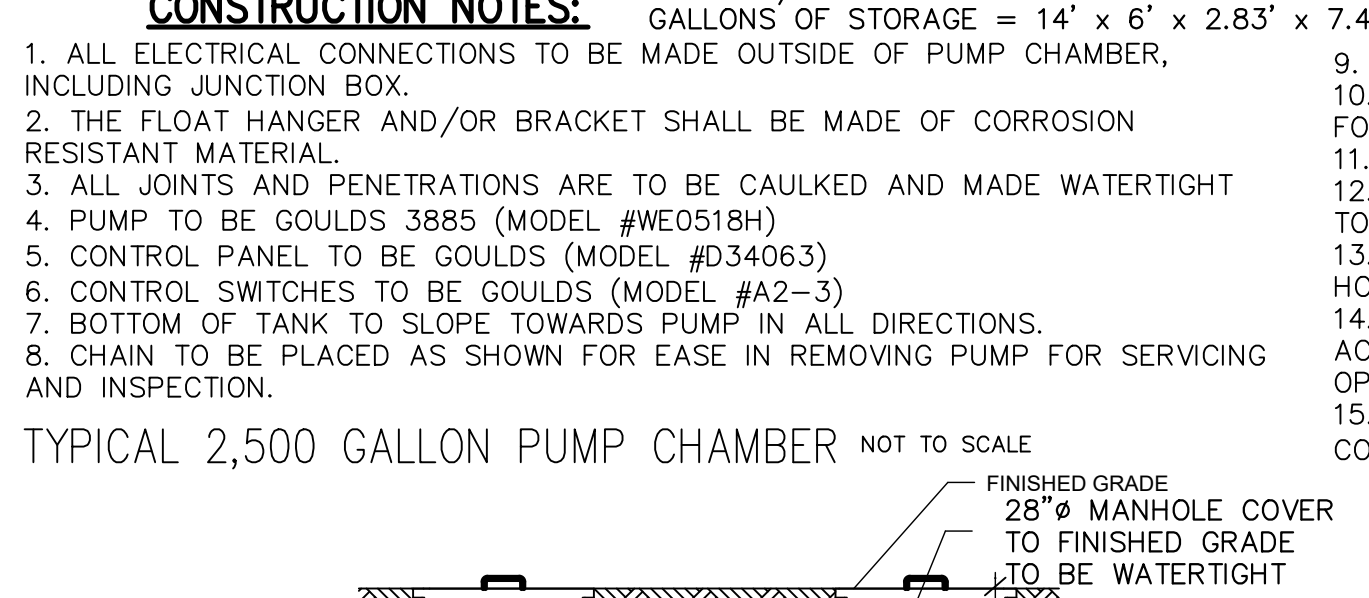
1. STONE SIZE - USE 2" MIN. STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET.
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 25 FOOT MINIMUM IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURE USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DRIPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

## CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE



## TYPICAL 2,500 GALLON PUMP CHAMBER



## TYPICAL FORCE MAIN

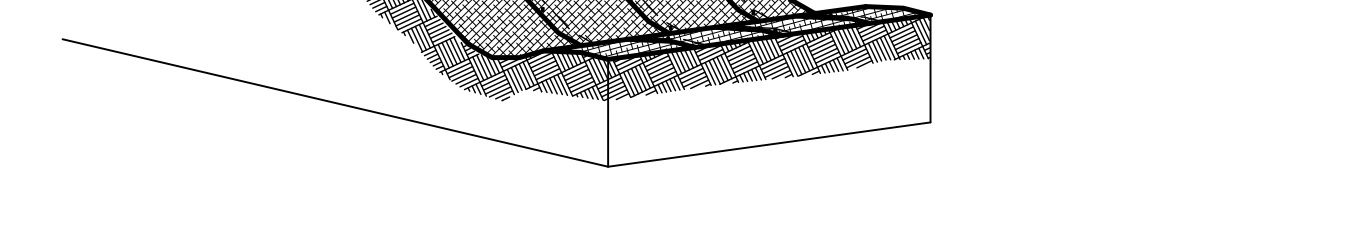
NOT TO SCALE

## CONSTRUCTION NOTES:

- 1) THE CONTRACTOR SHALL SEAL PENETRATIONS IN THE SEPTIC TANK SO THAT THE SEPTIC TANK IS WATERTIGHT.
- 2) THE SEPTIC TANK SHALL BE CONSTRUCTED FROM CONCRETE WHICH SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI AT A STANDARD 28 DAY COMPRESSIVE TEST.
- 3) 5/8"x10 GA. WELDED WIRE FABRIC SHALL BE USED AS REINFORCEMENT FOR THE SEPTIC TANK.
- 4) MULTI-PIECE SEPTIC TANKS SHALL BE SEALED WITH A BUTYL GASKET OR AS PER THE MANUFACTURER'S RECOMMENDATIONS.
- 5) THE SEPTIC TANK SHALL BE TESTED FOR WATER TIGHTNESS BY THE CERTIFYING ENGINEER.

## 2,500 GALLON SEPTIC TANK DETAIL

SCALE: NOT TO SCALE



## EROSION CONTROL MATTING

NOT TO SCALE

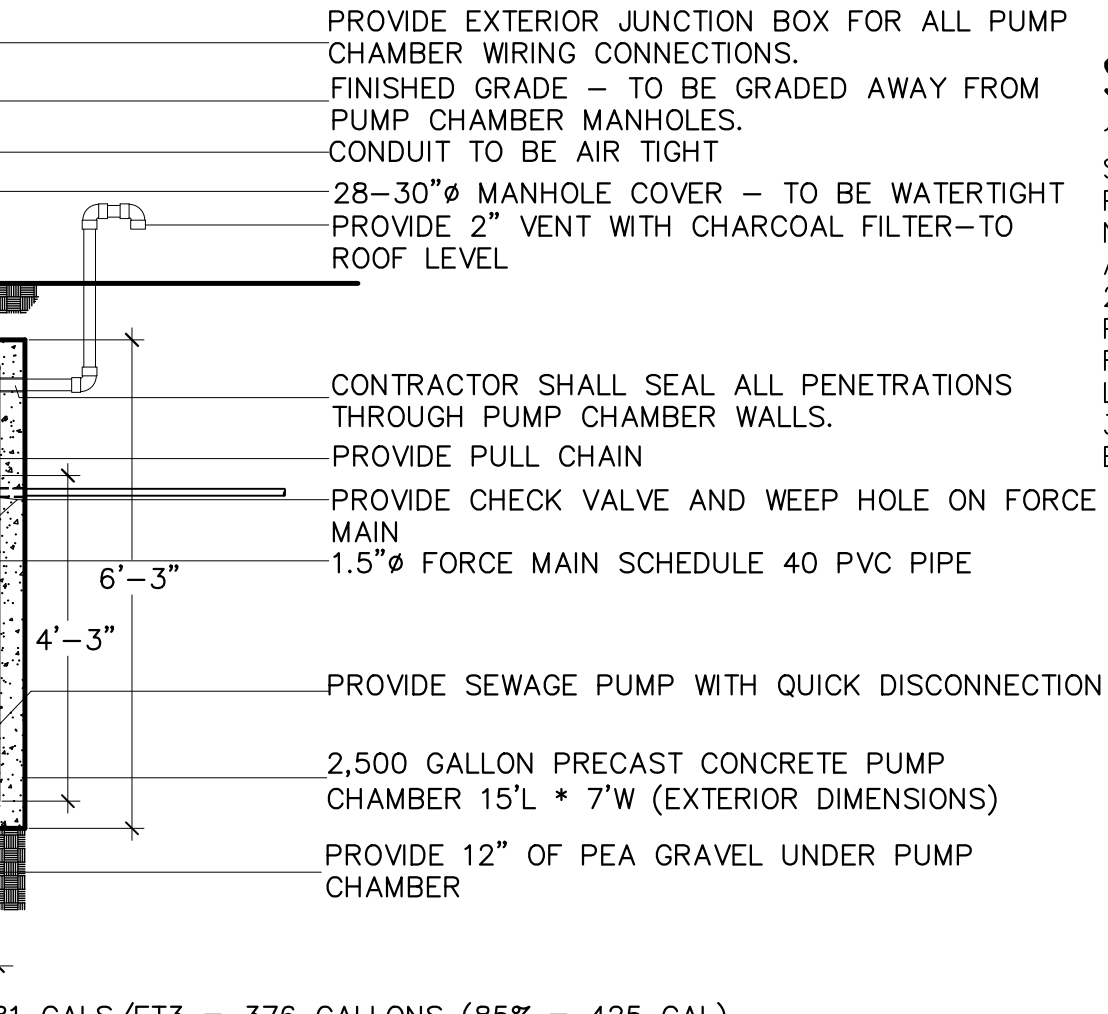
## CONSTRUCTION NOTES:

1. CONTRACTOR TO INSTALL AMERICAN EXCELSIOR CURLEX II BLANKETS (OR EQUAL) PARALLEL TO THE SLOPE.
2. THERE SHALL BE A 4" OVERLAP OVER CONTIGUOUS STRIPS OF MATTING.
3. INSTALL 3/4" x 3/4" WOODEN STAKES @ 6' INTERVALS. LEAVE A 1" REVEAL.
4. HYDROSEED SHOULD BE APPLIED TO AREA AS SOON AS PRACTICABLE.
5. WATER TO BE APPLIED AS REQUIRED TO GERMINATE GRASS SEED.
6. THE CONTRACTOR TO PERIODICALLY INSPECT MATTING AND MAKE REPAIRS AS NECESSARY.
7. THE MATTING SHALL BE INSPECTED IMMEDIATELY AFTER A STORM EVENT.
8. CONTRACTOR TO USE 20% OF RYE GRASS IN THE GRASS SEED MIX TO PROMOTE A STABILIZED GRASS MIXTURE.

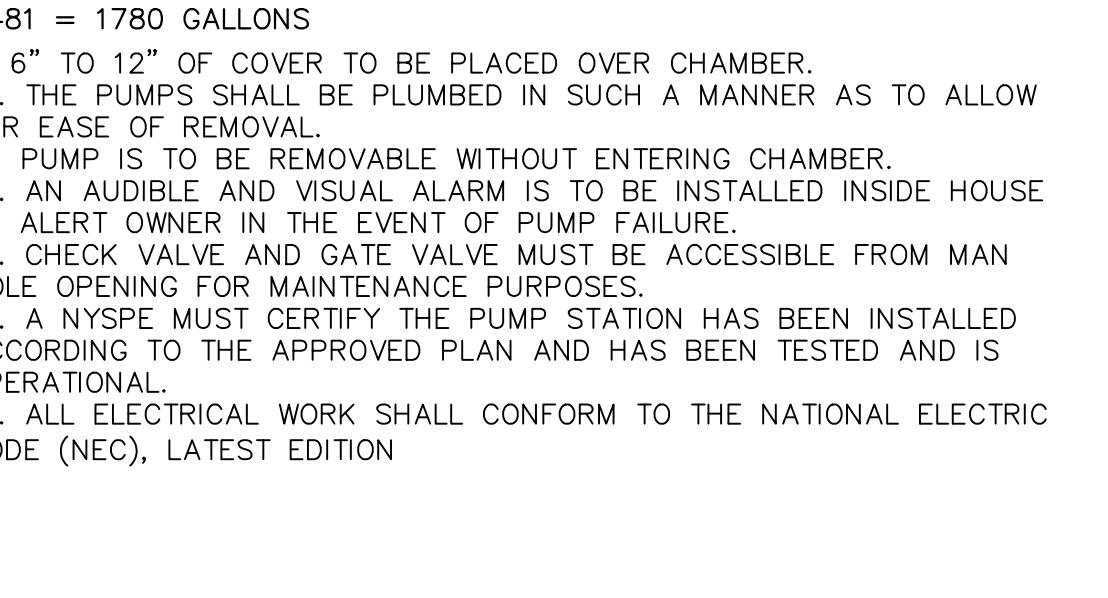
## Owner's Consent Note

THE UNDERSIGNED OWNER OF THIS PROPERTY HEREON STATES THAT HE IS FAMILIAR WITH THIS MAP, ITS CONTENTS AND ITS LEGENDS AND HEREBY CONSENTS TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON

OWNER \_\_\_\_\_ DATE \_\_\_\_\_



## TYPICAL 2,500 GALLON PUMP CHAMBER



## TYPICAL FORCE MAIN

NOT TO SCALE

## CONSTRUCTION NOTES:

1. THE RUN OF THE TRENCH TO BE 3/4" TO 1-1/2" IN SIZE, FREE OF ANY ORGANIC MATERIAL.
2. THE RUN OF THE TRENCH SHALL BE COMPACTED IN 9" LIFTS.
3. FORCE MAIN SHALL BE PRESSURE TESTED AT 1.5 TIMES THE WORKING PRESSURE FOR A MINIMUM PERIOD OF TWO HOURS.
4. FORCE MAIN TO BE SCHEDULE 40 PVC PIPE, 1.5" IN DIAMETER.
5. PROVIDE INSULATION AROUND FORCE MAIN WHERE 4' OF COVER CANNOT BE MET.

## Owner's Consent Note

THE UNDERSIGNED OWNER OF THIS PROPERTY HEREON STATES THAT HE IS FAMILIAR WITH THIS MAP, ITS CONTENTS AND ITS LEGENDS AND HEREBY CONSENTS TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON

OWNER \_\_\_\_\_ DATE \_\_\_\_\_

## Owner/Applicant

Mid-Hudson Development  
982 NY-82  
Hopewell Junction, NY 12533

OWNER \_\_\_\_\_ DATE \_\_\_\_\_

## SDS ABANDONMENT

1. THE EXISTING SEPTIC TANK, DISTRIBUTION BOX AND ANY OTHER SUBSURFACE STRUCTURE LOCATED ON THIS PARCEL IS TO BE PUMPED EMPTY, CLEANED AND REMOVED FROM SITE BY A LICENSED N.Y.S. SEWAGE HAULER PRIOR TO ISSUANCE OF A C.O. ALL VOIDS ARE TO BE REPLACED WITH SANDY LOAM TO EXISTING GRADE.
2. THE EXISTING TILE FIELD IS TO BE ABANDONED BY REMOVING ALL PIPING AND STONE AND REFILLING THE AREA WITH A SANDY LOAM. REMOVED PIPING SHALL BE HAULED TO A D.E.C. APPROVED LANDFILL.
3. ABANDONMENT TO BE CERTIFIED BY A NY STATE LICENSED ENGINEER.

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