



**NORTH SMITHFIELD, RHODE ISLAND**

**Preliminary Design Report**

**APRIL 2020**

## **Greenville Road Sewer Extension**



April 9, 2020  
W-P Project No. 20256

Gary S. Ezovski, PE  
Town Administrator  
Memorial Town Building  
One Main Street  
Slatersville, Rhode Island 02876

Subject: North Smithfield Sewer Department  
Preliminary Design report for the Greenville Road Sewer Extension

Dear Mr. Ezovski:

Wright-Pierce is pleased to submit the Preliminary Design Report for the Greenville Road Sewer Extension to serve five houses identified as numbers 128, 132, 136, 145, and 147. The preliminary design is based on information provided by the town and the responses to the homeowner questionnaires.

Two alternative preliminary designs have been developed for comparative purposes. The first alternative considers an extension of the gravity sewer system, which would only serve two of the five houses. The second alternative is for the development of a low-pressure grinder pump system for all five houses. The report presents the constraints and estimated costs of each alternative.

We look forward to your review of this document. If you should have any questions regarding the information provided, please contact me at 401-808-8305 or at [louis.ragazzino@wright-pierce.com](mailto:louis.ragazzino@wright-pierce.com).

Sincerely,  
WRIGHT-PIERCE



Louis Ragazzino, PE  
Regional Group Leader

*Enclosures*

cc: Russ Carpenter, North Smithfield  
Derick Hopkins, Wright-Pierce

# GREENVILLE ROAD SEWER EXTENSION

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## Section 1 Introduction

## SECTION 1

### INTRODUCTION

#### 1.1 PURPOSE OF PROJECT

The Town of North Smithfield has contracted with Wright-Pierce to complete a preliminary design of an extension of sanitary sewer service to five unsewered homes on Greenville Road, near the interchange with Route 146. The houses are identified as numbers 128, 132, 136, 145, and 147, as shown in Figure 1.

The purpose of this effort is to develop an understanding of the constructability and reasonableness of the cost of the sewer extension, for use in further discussion with the affected parties, regarding their desire and contribution toward the cost of the sewer extension and connection.



Figure 1 – Project Location

## **1.2 EXISTING CONDITIONS**

Wright-Pierce met with the Sewer Department Superintendent and obtained copies of the Record Drawings of the existing 15-inch gravity sewer in the project area, constructed in 1976. The existing gravity sewer extends to the location of the Terminus Manhole as shown on the previous page. House numbers 143 and 126 are the last houses that are currently served by the gravity sewer system.

The record drawings indicate that the existing 15-inch gravity sewer terminates in a manhole approximately four feet below the existing grade of Greenville Road. Based upon a review of the Record Drawings, the rim of the manhole is at 233.0, the invert of the existing terminus manhole of the gravity sewer is at elevation 228.60. This results in a depth of cover over the existing 15-inch gravity sewer of approximately 3 feet.

The grade of Greenville Road slopes downward away from the manhole and drops approximately two feet in elevation over approximately 400 feet in distance to a point adjacent to house number 136. This limits the ability to extend a gravity sewer much beyond the extent of the current installation.

The first floor (sill) elevations of the five houses are approximately five feet above the road grade. Based upon a visual inspection of the houses, four of the houses are single story ranch houses, with the exception of number 128, which is a two-story Dutch colonial. A copy of the existing condition plan and profiles of the existing gravity sewer system is included in Appendix A.

## **1.3 WASTEWATER MANAGEMENT FACILITIES PLAN**

In order to assess the eligibility of the connection of the additional five houses to the sanitary sewer system, we reviewed the Town's 2007 Wastewater Management Facilities Plan (WFMP) and determined that the new connections are within a sewered areas as defined by the WMFP.

The WMFP was also reviewed to assess the available capacity of the wastewater treatment plant, which will receive the flow from the additional connections. North Smithfield's design contribution to Woonsocket Wastewater Treatment Plant (WWTP) capacity is 3 million gallons per day (MGD). The 2025 Projected Average Daily Flow is 1.573 MGD, so there is adequate capacity to accommodate the additional connections.

Also reviewed was the capacity of the Pound Hill Pumping Station, which conveys sewerage from this collection system to the WWTP. This was reviewed to determine that there is also adequate capacity to accommodate the additional connections. The Pound Hill Pumping Station has a design capacity of 1.58 MGD and was reported to have a peak flow of 0.60 MGD, in 2007. Although additional connections have been added since 2007, the Superintendent indicated that there are no capacity restrictions with the pumping station, which would limit the additional connections.

#### **1.4 EXISTING SEPTIC SYSTEM INFORMATION**

Wright-Pierce also obtained information on the existing septic system from the RIDEM onsite wastewater treatment system (OWTS) database. The only permits which were available on the database was for an OWTS replacement was for 132 Greenville Road, dated May 7, 1993 and for 145 Greenville Road, dated July 24, 2018. It is unclear if the cesspool replacement at 145 was completed. These permits are also included in Appendix A.

#### **1.5 SEWER DESIGN CRITERIA**

The design of a new sanitary sewer system must comply with both Town Ordinance and Building Code and Rhode Island Department of Environmental Management (RIDEM) regulations.

The North Smithfield Town Sewer Ordinance requires the minimal diameter for a gravity sewer to be 8-inches, and the North Smithfield Building Code requires that the laterals connecting the

houses to the main are sloped  $\frac{1}{4}$  in/ft. The RIDEM regulations require that the minimum slope for an 8-inch gravity sewer is 0.40 ft/100 ft. and requires that the estimate sanitary sewer flow rate for a residential dwelling is 300 gallons per day per household.

Greenville Road is a Rhode Island Department of Transportation (RIDOT) maintained road, and as such, a Utility Permit will be required from RIDOT. During the preliminary design, coordination with RIDOT is needed to determine if the sewer extension will be allowed and to what extent pavement restoration will be required.

## Section 2

# Preliminary Design of Sewer Extension

## SECTION 2

### PRELIMINARY DESIGN OF SEWER EXTENSION

#### **2.1 SANITARY SEWER FLOW RATES**

As stated in the previous section, the North Smithfield Town Sewer Ordinance requires the minimal diameter for a gravity sewer to be 8-inches and the North Smithfield Building Code requires that the laterals connecting the houses to the main are sloped  $\frac{1}{4}$  in/ft. The RIDEM regulations requires that the minimal slope for an 8-inch gravity sewer is 0.40 ft/100 ft. and requires that the estimate sanitary sewer flow rate for a residential dwelling is 300 gallons per day per household.

The estimated sanitary sewer flow rates for the connection of five additional houses is equal to 1,500 gallons/day. This additional flow rate will have no impact on the capacity of the existing gravity sewer system, pumping stations, or wastewater treatment plant. The capacity of the existing 15-inch gravity sewer has been calculated to be 2.14 million gallons per day (mgd).

It is unusual for the end of a sanitary sewer to be 15-inches in diameter and have such a large capacity. Conversations with the Town officials indicated that this may have been designed in anticipation of future connections and sewerage flows from the west side of Route 146.

#### **2.2 HOMEOWNER QUESTIONNAIRES**

As part of this study, a questionnaire was sent to the five houses to confirm their interest in a connection to the municipal sanitary sewer system. The questionnaire consisted of a cover letter explaining the purpose of the questionnaire, the following questions, and a site plan of each individual property.

- Are you interested in a connection to the municipal sewer system?
- Are you willing to allow Wright-Pierce and Town staff access to your property?
- Are you willing to allow Wright-Pierce and Town staff access to the inside of your house?
- If you are willing to grant access to the interior of your house what day of the week and time are best for you?
- Do you know what side of your house the sewage exits on its way to the septic or cesspool?
- Does your house have a basement?
- If your house has a basement, are there plumbing fixtures located within it?
- Are there any additional comments you would like to make?
- Would you like to provide an email or phone number for future communications

Four of the five properties returned the questionnaire to the Town and all of the responses express interest in connecting to the municipal system. In addition, all of the responses indicated that the houses contained basement and plumbing fixtures exist within the basement. This is important to note, as it determines the depth of the sewer line from the house and is a factor in determining if a gravity connection can be made to the existing sewer. A copy of the questionnaire and homeowner responses are included in Appendix B.

## 2.3 SEWER EXTENSION ALTERNATIVES

### 2.3.1 Alternative 1 – 8-inch Sewer Extension in Greenville Road

Based upon the Record Drawings and above noted criteria, a preliminary sewer profile was developed, which includes an extension of the sanitary sewer with an 8-inch pipe. As noted on the Record Drawings, a 15-inch stub exists at the existing terminus manhole to which the 8-inch line can be connected. The 8-inch gravity sewer can only be extended approximately 100 feet from the

end of the existing sewer. A 100-foot long extension of an 8-inch pipe, at 0.40ft/100 ft, results in an invert of the 8-inch pipe of 229.0. The grade at this location is approximately 231.5 (from the record drawings). This results in a depth of cover over the 8-inch gravity sewer of only 1.84 feet. This shallow depth, in the center of the road, will require installation of ductile iron pipe and a shallow terminal manhole, if allowed by RIDOT. The 8-inch gravity sewer extension can potentially serve only two of the five properties, 128 Greenville Road and 145 Greenville Road and is dependent upon the location of the existing septic systems and routing of the house laterals. Based upon the responses to the house questionnaires provided in Appendix C, if basement service is to be provided for the properties, then a gravity connection to these houses will not be possible.

Due to the shallow depth of cover on the sanitary sewer, it will be necessary to serve the remaining three properties, 132, 136, and 147, with grinder pumps and a low-pressure system. This will require grinder pumps at each house and a low-pressure sewer connecting to the gravity system.

There are also two 12-inch storm drains that cross the alignment of the proposed sewer extension. The first is located at Station 5+00 and the second at Station 3+00, as shown on the plan and profile Sheet C-2, in Appendix C. The first crossing would need to be raised, in order to accommodate the 8-inch gravity extension. The low pressure forcemain could go under the existing drain line at Station 2+40, since it is under pressure. The inverts of these drains will need to be confirmed during the preliminary design effort and modification of the storm drain confirmed with RIDOT.

Greenville Road is a RIDOT maintained road, and as such, a Utility Permit will be required from RIDOT. Confirmation with RIDOT must be made to determine if the shallow sewer and drainage modification will be allowed and to what extent will pavement restoration be required.

Another constraint of the 8-inch sewer extension is that the reduced pipe diameter would reduce the capacity of the 15-inch sewer system from 2.14 mgd to 0.46 mgd for the 8-inch extension. This would limit the capacity of the existing 15-inch gravity sewer system for potential future sewerage flows.

Therefore, an extension of an 8-inch sanitary sewer presents the following constraints:

1. The 8-inch sewer would only extend approximately 100 feet.
2. The 8-inch sewer would have shallow cover, less than 3 feet, and will require the installation of ductile iron pipe to be able to handle the load of the traffic, if acceptable to RIDOT.
3. The gravity sewer extension may only be able to serve two of the five houses via gravity, and that is questionable based upon the results of the homeowner questionnaires.
4. Three of the five houses will require grinder pumps and low pressure forcemains to connect to the municipal system.
5. The gravity sewer extension will require the raising of a 12-inch storm drain which crosses the road.
6. The 8-inch sewer would reduce the capacity of the 15-inch gravity system.

### **2.3.2 Alternative 2 – Grinder Pumps Low Pressure System**

As a result of the multiple constraints of an extension of the gravity sewer system described in the previous section, a second alternative was developed. This alternative includes the installation of grinder pumps and a low pressure forcemain system at each house. Plan and profile Sheet C-3 shows the location and alignment of the grinder pump and forcemain routing for this alternative. Sheet C-3 is included in Appendix C.

It should be noted that the location of the existing septic system for house number 136 could not be verified with the owner, and it is assumed to be behind the house, as shown on the plan sheet. This location may require that an easement be acquired from the adjacent property owner in order to route the foremain across the back yard of house number 132 to a connection on Robert Street. If this is not attainable, then the forcemain would have to be routed to the front of the property and within the right-of-way of Greenville Road. All of the other individual house forcemains would be constructed within the right-of-way of Greenville Road and will discharge directly into the terminus manhole in Greenville Road.

The low pressure system would involve the replacement of the existing septic tank, or cesspool, with a self-contained wetwell and simplex grinder pump assembly, such as an E-One. A copy of this manufacturer's brochure is also included in Appendix C.

Installation of the grinder pump assembly will also require an electrical connection to the house, to a standard 120/240V circuit.

The installation of a grinder pump and low pressure sanitary sewer presents the following opportunities and constraints:

1. Each house will require a stand alone grinder pump installation.
2. Energy for the operation of the pump system will be the responsibility of the home owner.
3. The mechanical pump system has a life expectancy of approximately 25-years. Replacement would only be of the pump, and not the entire assembly.
4. The low pressure forcemain is typically 1 ½ inches in diameter and can be routed in the shoulder of the road and require less road reconstruction.
5. The low pressure forcemain does not require the raising of the 12-inch stormdrain.
6. The low pressure forcemain does not reduce the capacity of the existing 15-inch gravity sewer system.

## Section 3 Estimation of Costs

## SECTION 3

### ESTIMATION OF COSTS

#### 3.1 COST COMPONENTS

As part of the scope of work, Wright-Pierce was also tasked with preparing an estimate of costs for the proposed sewer extension based upon the preliminary design plans which were developed. The items for which costs have been developed include the following items:

- Gravity sewer installation
- Sanitary manhole
- House connections and cleanouts within Right-of -Way (ROW)/property line
- Low pressure forcemain
- Low pressure lateral to ROW/property line
- Connection of lateral from house to ROW/property line
- Grinder pump installation and connection
- Connection of grinder pump to ROW/property line
- Pavement restoration
- Final design, permitting, construction inspection.

The costs have been broken down as the cost of all the construction in the ROW and the cost of the connection/improvement on the private property (this includes the cost of the house lateral for those homes able to connect by gravity and the grinder pump for those homes connecting to the low-pressure sewer). The following sections summarize the costs for the two alternatives described in the previous sections.

### **3.2 ALTERNATIVE 1 COST ESTIMATE – 8-INCH SEWER EXTENSION IN GREENVILLE ROAD**

A summary of the cost of the construction of the extension of a gravity sewer extension and installation of three grinder pumps and low pressure forcemain is estimated in the Table 1 below: A detailed breakdown of the estimated labor and material for each item is shown in Table 2.

The total project cost is then amortized over a 20-year payback period and divided by twelve to calculate the estimate monthly payment. Note that the amortized cost does not include interest.

**Table 1 – Alternative 1 - Summary of Estimated Project Costs**

<b>ITEM</b>	<b>DESCRIPTION</b>	<b>COST</b>
1	General Requirements	\$14,225
2	Demolition	\$7,694
3	Grinder Pumps	\$33,169
4	Low Pressure Sewer	\$70,792
5	Gravity Sewer	\$100,543
6	Traffic Control	\$4,974
	Construction - Subtotal	\$231,397
	Contingency (15%)	\$34,710
	Subtotal	\$266,106
	Engineering and Permitting (10%)	\$26,611
	Construction Oversight (5%)	\$13,305
	<b>Total Project Cost</b>	<b>\$306,022</b>
	Cost per House	\$61,204
	Annual cost amortized over 20 years*	\$3,060
	Monthly Cost	\$255
Note: * Amoratized cost does not include interest		

**Table 2 –Alternative 1 - Detailed Breakdown of Estimated Project Costs**

LABOR						MATERIALS				
Days	Number of Crew	Type	Hourly Rate	G&A	Total Labor	ITEM	Unit	Quantity	Unit Price	Subtotal
<b>Item 1. General Requirements</b>										
						Mob/Demob.	LS	1	3% of Total	\$ 6,515.14
						Sediment and Erosion	LS	1	5000	\$ 5,000.00
						General Proj Req.	LS	1	2500	\$ 2,500.00
									Total Material	\$ 14,015.14
									Material Markup 10%	
									Total Labor & Material	\$ 14,015.14
									Bond 1.5%	\$ 210.23
									Total	\$ 14,225.37
<b>Item 2. Demo</b>										
2	2	Laborer	\$ 30.00	2	\$ 1,920.00	Haul and Dispose	TON	36	50	\$ 1,800.00
2	1	Eq. Operator	\$ 40.00	2	\$ 1,280.00					\$ -
2	1	Equipment	\$ 75.00	2	\$ 2,400.00					
					<b>Total Labor \$ 5,600.00</b>				Total Material	\$ 1,800.00
									Material Markup 10%	\$ 180.00
									Total Labor & Material	\$ 7,580.00
									Bond 1.5%	\$ 113.70
									Total	\$ 7,693.70
<b>Item 3. Grinder Pump</b>										
1	2	Laborer	\$ 30.00	2	\$ 960.00	Unit	EA	1	5500	\$ 5,500.00
1	1	Eq. Operator	\$ 40.00	2	\$ 640.00	S&H	LS	1	250	\$ 250.00
0.5	2	Electrician	\$ 50.00	2	\$ 800.00	Misc Materials	LS	1	500	\$ 500.00
1	1	Equipment	\$ 75.00	2	\$ 1,200.00	Backfill	CY	10	38	\$ 380.00
					<b>Total Labor \$ 3,600.00</b>				Total Material	\$ 6,630.00
									Material Markup 10%	\$ 663.00
									Total Labor & Material	\$ 10,893.00
									Bond 1.5%	\$ 163.40
									Total	\$ 11,056.40
									Total (x3 Units) =	\$ 33,169.19
<b>Item 4. Install Low Pressure Sewer Line and Gravity Laterals</b>										
5	2	Laborer	\$ 30.00	2	\$ 4,800.00	1.5 SDR 11	LF	500	1.63	\$ 815.00
5	1	Eq. Operator	\$ 40.00	2	\$ 3,200.00	Bedding Sand	CY	83	60	\$ 4,980.00
0	1	Electrician	\$ 50.00	2	\$ -	Backfill	CY	83	38	\$ 3,154.00
5	1	Equipment	\$ 75.00	2	\$ 6,000.00	Pavement Milling	SY	255	15.75	\$ 4,016.25
						Saw Cut	LF	375	3.5	\$ 1,312.50
					<b>Total Labor \$ 14,000.00</b>	Patching HMA	TON	110	225	\$ 24,750.00
						Shoulder HMA	TON	10	210	\$ 2,100.00
						Seeding	SY	25	2	\$ 50.00
						4-inch sewer lateral	LF	100	95	\$ 9,500.00
									Total Material	\$ 50,677.75
									Material Markup 10%	\$ 5,067.78
									Total Labor & Material	\$ 69,745.53
									Bond 1.5%	\$ 1,046.18
									Total	\$ 70,791.71
<b>Item 5. Install Gravity Sewer Line</b>										
5	2	Laborer	\$ 30.00	2	\$ 4,800.00	8" Sewer	LF	100	110	\$ 11,000.00
5	1	Eq. Operator	\$ 40.00	2	\$ 3,200.00	6" Sewer	LF	230	130	\$ 29,900.00
0	0	Electrician	\$ 50.00	2	\$ -	Catch Basin Mod.	EA	1	500	\$ 500.00
5	1	Equipment	\$ 75.00	2	\$ 6,000.00	Catch Basin	EA	1	4000	\$ 4,000.00
					<b>Total Labor \$ 14,000.00</b>	12" RCP Class V	LF	35	110	\$ 3,850.00
						Pavement Milling	SY	200	15.75	\$ 3,150.00
						Patching HMA	TON	80	225	\$ 18,000.00
						Driveway HMA	TON	5	210	\$ 1,050.00
						Special San. Manhole	EA	1	4000	\$ 4,000.00
						San. Manhole Adj.	EA	1	425	\$ 425.00
						Saw Cut	LF	400	3.5	\$ 1,400.00
						Seeding	SY	25	2	\$ 50.00
									Total Material	\$ 77,325.00
									Material Markup 10%	\$ 7,732.50
									Total Labor & Material	\$ 99,057.50
									Bond 1.5%	\$ 1,485.86
									Total	\$ 100,543.36
<b>Item 6. Traffic Management</b>										
5	1	Flagger	\$ 55.00	2	\$ 4,400.00	Cones	DAY	5	100	\$ 500.00
					<b>Total Labor \$ 4,400.00</b>				Total Material	\$ 500.00
									Material Markup 10%	\$ -
									Total Labor & Material	\$ 4,900.00
									Bond 1.5%	\$ 73.50
									Total	\$ 4,973.50
<b>Project Total</b>										
									<b>Total Project Cost</b>	<b>\$ 231,396.83</b>
									Contingency (15%)	\$ 34,709.52
									Subtotal	\$ 266,106.35
									Engineering and Permitting (10%)	\$ 26,610.64
									Construction Oversight (5%)	\$ 13,305.32
									<b>Total Project Cost</b>	<b>\$ 306,022.30</b>

### **3.3 ALTERNATIVE 2 COST ESTIMATE – ALTERNATIVE 2 – GRINDER PUMPS LOW PRESSURE SYSTEM**

A summary of the cost of the construction of the installation of five grinder pumps and connection of a low pressure forcemain to the existing terminus manhole on the 15-inch gravity sewer is estimated in Table 3 below: A detailed breakdown of the estimated labor and material for each items is shown in Table 4.

The total project cost is then amortized over a 20-year payback period and divided by twelve to calculate the estimate monthly payment. Note that the amortized cost does not include interest.

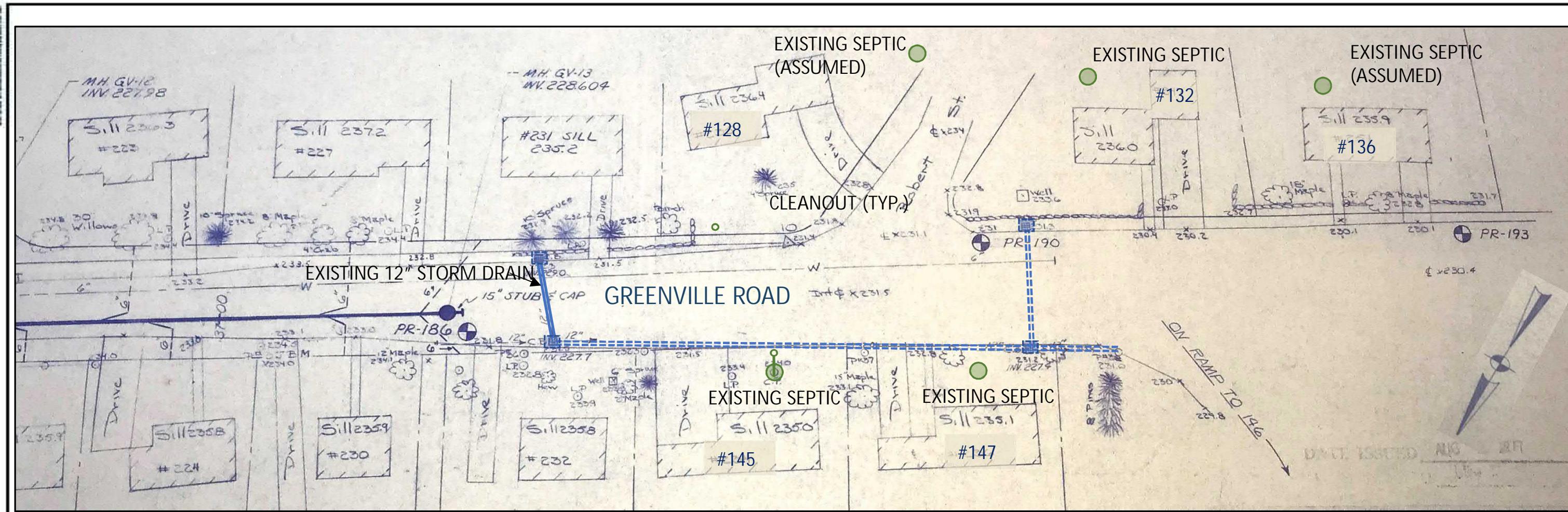
**Table 3 – Alternative 2 - Summary of Estimated Project Costs**

<b>ITEM</b>	<b>DESCRIPTION</b>	<b>COST</b>
1	General Requirements	\$11,678
2	Demolition	\$7,694
3	Grinder Pumps	\$55,282
4	Low Pressure Sewer	\$65,861
5	Traffic Control	\$4,669
	Construction - Subtotal	\$145,184
	Contingency (15%)	\$21,778
	Subtotal	\$166,961
	Engineering and Permitting (10%)	\$16,696
	Construction Oversight (5%)	\$8,348
	<b>Total Project Cost</b>	<b>\$192,005</b>
	Cost per House	\$38,401
	Annual cost amortized over 20 years*	\$1,920
	Monthly Cost	\$160
Note: * Amoratized cost does not include interest		

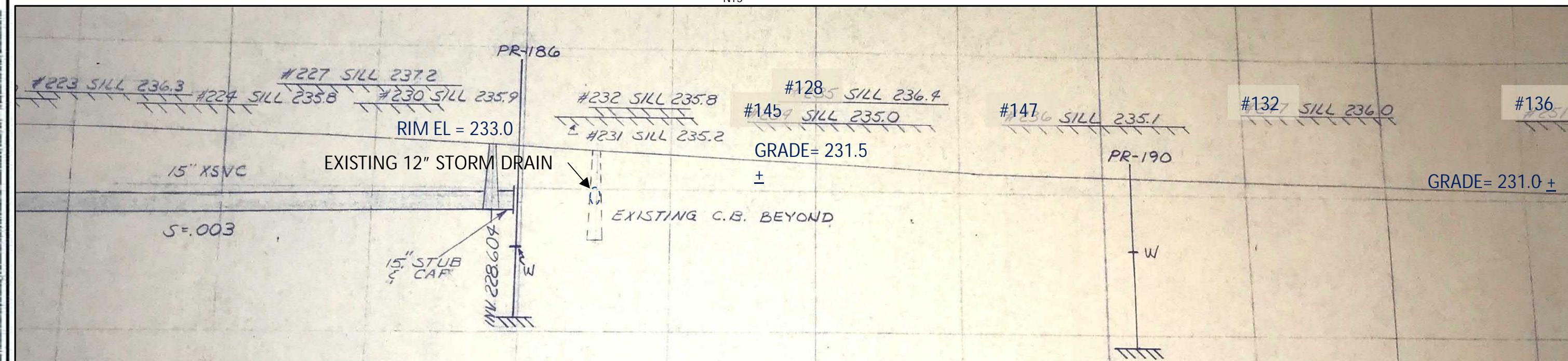
**Table 2 –Alternative 2 - Detailed Breakdown of Estimated Project Costs**

LABOR						MATERIALS				
Days	Number of Crew	Type	Hourly Rate	G&A	Total Labor	ITEM	Unit	Quantity	Unit Price	Subtotal
<b>Item 1. General Requirements</b>										
						Mob/Demob.	LS	1	3% of Total	\$ 4,005.18
						Sediment and Erosion	LS	1	5000	\$ 5,000.00
						General Proj Req.	LS	1	2500	\$ 2,500.00
									Total Material	\$ 11,505.18
									Material Markup 10%	
									Total Labor & Material	\$ 11,505.18
									Bond 1.5%	\$ 172.58
									<b>Total</b>	<b>\$ 11,677.75</b>
<b>Item 2. Demo</b>										
2	2	Laborer	\$ 30.00	2	\$ 1,920.00	Haul and Dispose	TON	36	50	\$ 1,800.00
2	1	Eq. Operator	\$ 40.00	2	\$ 1,280.00					\$ -
2	1	Equipment	\$ 75.00	2	\$ 2,400.00					
					<b>Total Labor \$ 5,600.00</b>				Total Material	\$ 1,800.00
									Material Markup 10%	\$ 180.00
									Total Labor & Material	\$ 7,580.00
									Bond 1.5%	\$ 113.70
									<b>Total</b>	<b>\$ 7,693.70</b>
<b>Item 3. Grinder Pump</b>										
1	2	Laborer	\$ 30.00	2	\$ 960.00	Unit	EA	1	5500	\$ 5,500.00
1	1	Eq. Operator	\$ 40.00	2	\$ 640.00	S&H	LS	1	250	\$ 250.00
0.5	2	Electrician	\$ 50.00	2	\$ 800.00	Misc Materials	LS	1	500	\$ 500.00
1	1	Equipment	\$ 75.00	2	\$ 1,200.00	Backfill	CY	10	38	\$ 380.00
					<b>Total Labor \$ 3,600.00</b>				Total Material	\$ 6,630.00
									Material Markup 10%	\$ 663.00
									Total Labor & Material	\$ 10,893.00
									Bond 1.5%	\$ 163.40
									<b>Total</b>	<b>\$ 11,056.40</b>
									<b>Total (x5 Units) =</b>	<b>\$ 55,281.98</b>
<b>Item 4. Install Low Pressure Sewer Line</b>										
7	3	Laborer	\$ 30.00	2	\$ 10,080.00	1.5 SDR 11	LF	725	1.63	\$ 1,181.75
7	2	Eq. Operator	\$ 40.00	2	\$ 8,960.00	Bedding Sand	CY	161	60	\$ 9,666.67
0	1	Electrician	\$ 50.00	2	\$ -	Backfill	CY	80	38	\$ 3,040.00
7	2	Equipment	\$ 75.00	2	\$ 16,800.00	Pavement Milling	SY	65	15.75	\$ 1,023.75
					<b>Total Labor \$ 35,840.00</b>	Saw Cut	LF	300	3.5	\$ 1,050.00
						Patching HMA	TON	30	225	\$ 6,750.00
						Cement Concrete Sidewalk	SY	10	65	\$ 650.00
						Driveway HMA	TON	12	210	\$ 2,520.00
						Seeding	SY	50	2	\$ 100.00
						Sanitary Structure Adj.	EA	1	425	\$ 425.00
									Total Material	\$ 26,407.17
									Material Markup 10%	\$ 2,640.72
									Total Labor & Material	\$ 64,887.88
									Bond 1.5%	\$ 973.32
									<b>Total</b>	<b>\$ 65,861.20</b>
<b>Item 5. Traffic Management</b>										
5	1	Flagger	\$ 55.00	2	\$ 4,400.00	Cones	DAY	2	100	\$ 200.00
					<b>Total Labor \$ 4,400.00</b>				Total Material	\$ 200.00
									Material Markup 10%	\$ -
									Total Labor & Material	\$ 4,600.00
									Bond 1.5%	\$ 69.00
									<b>Total</b>	<b>\$ 4,669.00</b>
<b>Project Total</b>										
									<b>Total Project Cost</b>	<b>\$ 145,183.63</b>
									Contingency (15%)	\$ 21,777.54
									Subtotal	\$ 166,961.18
									Engineering and Permitting (10%)	\$ 16,696.12
									Construction Oversight (5%)	\$ 8,348.06
									<b>Total Project Cost</b>	<b>\$ 192,005.35</b>

## Appendix A Existing Conditions Plans / information



PLAN  
NTS

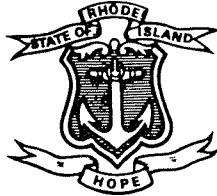


PROFILE  
NTS

GREENVILLE ROAD  
SEWER EXTENSION  
NORTH SMITHFIELD, RHODE ISLAND  
EXISTING CONDITIONS  
NOT FOR CONSTRUCTION

DRAWING  
C-1

**WRIGHT-PIERCE**  
Engineering a Better Environment



## STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

### INDIVIDUAL SEWAGE DISPOSAL SYSTEM SECTION 291 PROMENADE STREET PROVIDENCE, RI 02908

TO:

Alfred W. Alix  
132 Greenville Road  
North Smithfield, RI 02895

May 7, 1993

#### SITE INFORMATION

APPLICATION NUMBER: 9325- 340

STREET: 132 Greenville Road, North Smithfield, RI

PLAT: 12 LOT: 184,

SUBDIVISION:

SUBDIVISION LOT NO.:

## CERTIFICATE OF CONFORMANCE

This Certificate of Conformance means that the Individual Sewage Disposal System (ISDS), which has been installed under the above application number, appears to substantially conform with the design requirements and other requirements as indicated on the application, and associated plans and specifications. **PERMISSION IS THEREFORE GRANTED FOR UTILIZATION OF THE SEWAGE DISPOSAL SYSTEM.** A copy of this certificate has been forwarded to the building official of the municipality having jurisdiction over the subject site; he/she may issue a Certificate of Occupancy for the building provided all other local requirements have been met. The building official must receive a copy of the Certificate of Conformance prior to his or her issuing a certificate of occupancy for the building or facility to be served by the ISDS.

This Certificate is based upon the representations of the Owner and his/her agents, who are responsible for the proper installation of this system. This Department has approved the ISDS installation in reliance upon those representations and is not responsible for any of the construction, design details, specifications, distances or elevations indicated on the application, plan or specifications.

This approval is subject to future suspension and revocation in the event that: subsequent examination reveals that any of the data indicated on the application, plan or specifications is incorrect or not in compliance with applicable regulations; or the ISDS system discharges sewage to the surface of the ground or to any watercourse, fails to otherwise operate satisfactorily or is altered in a manner which deviates from the terms of the approved application.

Authorized Agent: BRIAN M. MOORE, P.E.

#### INDIVIDUAL SEWAGE DISPOSAL SYSTEM SECTION

**SEE REVERSE SIDE FOR IMPORTANT INFORMATION ON CARE AND MAINTENANCE**

cc: Building Inspector

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
DIVISION OF GROUNDWATER & FRESHWATER WETLANDS  
INDIVIDUAL SEWAGE DISPOSAL SYSTEMS SECTION

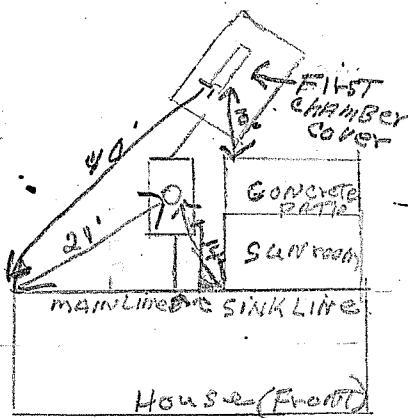
INSTALLER'S CERTIFICATE OF CONSTRUCTION FOR ISDS SYSTEM

I, WALTER KEENE, to the extent that I have performed the  
Installer's Name (Please Print)

work on said system as of the 4 day of MAY, 1993

certify that the individual sewage disposal system as shown on the plans for ISDS Permit  
No. 9325-340 was installed in conformance with the permit and plans for such system  
as approved by the Director of Environmental Management.

The property is located at (Street) 132 Green Ville RD in the City  
or Town of No. Smithfield. The septic tank is located as set  
forth below.



Walter L. Keene  
Installer's Signature

Date Signed 5/4/93

System Inspected by \_\_\_\_\_



Rhode Island Department of Environmental Management  
Division of Groundwater and ISDS  
Individual Sewage Disposal System Section

INSPECTION REPORT

APPLICATION NUMBER: 9325-340

STREET: 132 Greenville Road

INSPECTOR: J Kiczek

CITY/TOWN: North Smithfield

INSPECTION DATE: 05/04/93

PLAT/LOT: 12 184

POLE NO:

ARRIVAL TIME: 1:30  
WEATHER CONDITIONS:

ISDS INSTALLER: Keene L0041

PHONE NO: 401-769-8472

INSPECTION NUMBER: 3

TYPE OF INSPECTION: LUVER INSPECTION

FINDINGS/COMMENTS

OK. to cover

Looks good!

- On Cert. of Construction show  
all fittings from Foundation  
to S.T. 127. H. cover + to D-Box  
(when installed)

RESULTS OF INSPECTION/ACTION REQUIRED

- Bottom Bed OK -- Construct system and call for cover inspection
- (RFA) Address items listed or checked and call for a re-inspection
- (FEE) If this item is checked, a \$50 fee is required before re-inspection. Send copy of this inspection form with the check.
- (COC) Paper and cover system and submit certificate of construction
- (COC) Correct items listed or checked and submit certificate of construction
- (RFAD) STOP CONSTRUCTION. Contact designer since items listed are too complex for a simple resolution.

Signature of Inspector(s) \_\_\_\_\_

- (ASB) Submit As Built Plans
- (RPREQ) Submit Revised Plans
- (SOS) Submit Designer's Statement of Supervision
- (WELL) Call for inspection when well installed.

Date Installed: \_\_\_\_\_

- (FND) Call for inspection when foundation installed

Date Installed: \_\_\_\_\_

- (WELLRPT) Submit Well Completion Report
- (OTHER) \_\_\_\_\_



Rhode Island Department of Environmental Management  
Division of Groundwater and ISDS  
Individual Sewage Disposal System Section

INSPECTION REPORT

APPLICATION NUMBER: 9325-340

STREET: 132 Greenville Road

INSPECTOR: J Kiczek

CITY/TOWN: North Smithfield

INSPECTION DATE: 05/03/95

PLAT/LOT: 12 184

POLE NO:

ISDS INSTALLER: Keene L0041

ARRIVAL TIME: 12:30  
WEATHER CONDITIONS: C

PHONE NO: 401-769-8472 INSPECTION NUMBER: 2

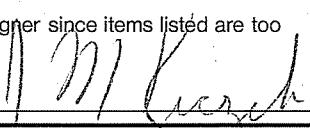
TYPE OF INSPECTION: REINSPECTION

FINDINGS/COMMENTS

Bottom OK. Rescav. prior to  
placing gravel. 6" of stone max.

RESULTS OF INSPECTION/ACTION REQUIRED

- Bottom Bed OK -- Construct system and call for cover inspection
- (RFA) Address items listed or checked and call for a re-inspection
- (FEE) If this item is checked, a \$50 fee is required before re-inspection. Send copy of this inspection form with the check.
- (COC) Paper and cover system and submit certificate of construction
- (COC) Correct items listed or checked and submit certificate of construction
- (RFAD) STOP CONSTRUCTION. Contact designer since items listed are too complex for a simple resolution.

Signature of Inspector(s) 

- (ASB) Submit As Built Plans
- (RPREQ) Submit Revised Plans
- (SOS) Submit Designer's Statement of Supervision
- (WELL) Call for inspection when well installed.

Date Installed: \_\_\_\_\_

- (FND) Call for inspection when foundation installed

Date Installed: \_\_\_\_\_

- (WELLRPT) Submit Well Completion Report
- (OTHER) \_\_\_\_\_

**DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
DIVISION OF LAND RESOURCES  
INDIVIDUAL SEWAGE DISPOSAL SYSTEM APPLICATION (279)**

PURPOSE OF APPLICATION

NEW BUILDING  ALTERATION OF  
CONSTRUCTION  EXISTING SYSTEM

REPAIR TO  
MALFUNCTIONING  
SYSTEM

SITE LOCATION

STREET

CITY/TOWN

ZIP CODE

WET SEASON DESIGN  
DEPTH

FEET

EXPLAIN HOW DETERMINED:

Engineer/Surveyor

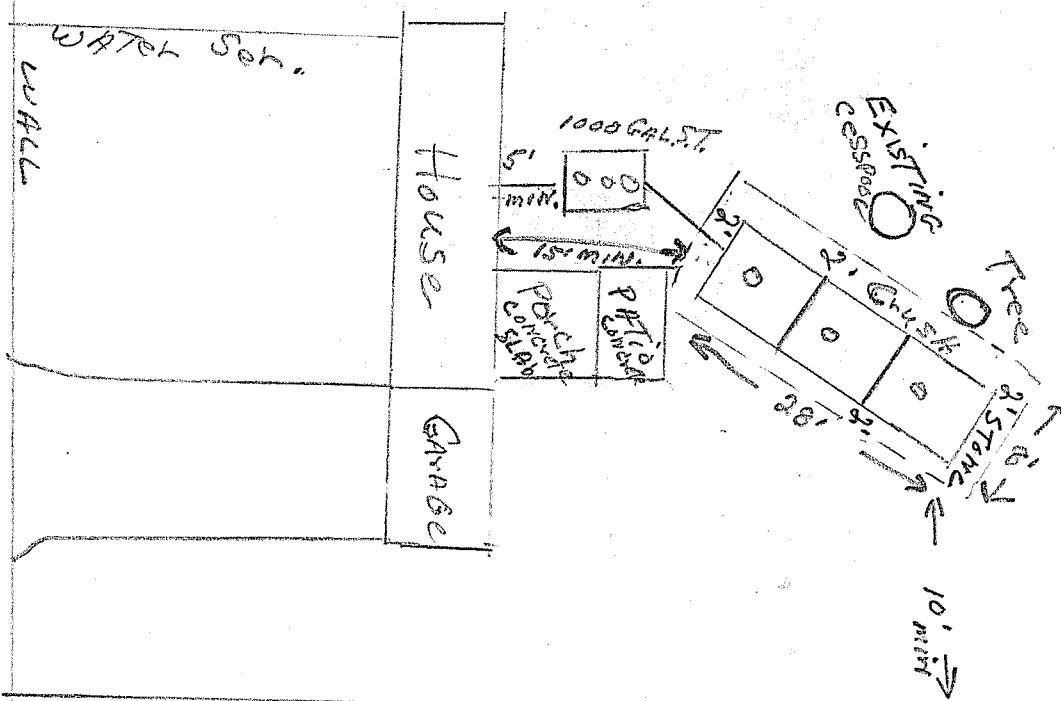
or  
Architect

or  
Other

or  
None

Notes:

- ① Trees within 10' of Leach Area to be removed
- ② Cesspool to be pumped & filled
- ③ 1 ft. Crush Stone under flow effluent
- ④ See, 3.5 pipe to be used
- ⑤ S.T. Man Hole to Grade

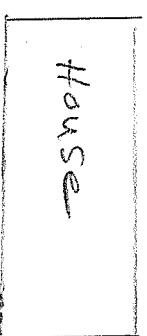


PROPERTY LINE

Please call this office for an INSPECTION of the bottom of the leaching area excavated after stripping but PRIOR to the place start of any ER ... done

DEPT OF ENVIRONMENTAL MANAGEMENT  
I.S.D.S. SECTION

APPROVED M. Lueger  
DATE 4-26-93 PLAN # 9325-346  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE  
KEPT AT CONSTRUCTION SITE.



RT. 146

← North

Greenville RD.

RT 104



Rhode Island Department of Environmental Management  
Division of Groundwater and ISDS  
Individual Sewage Disposal System Section

INSPECTION REPORT

APPLICATION NUMBER: 9325-340

STREET: 132 Greenville Road

INSPECTOR: J Kiczek

CITY/TOWN: North Smithfield

INSPECTION DATE: 04/29/93

PLAT/LOT: 12 184

POLE NO:

ARRIVAL TIME: 11:10  
WEATHER CONDITIONS:

ISDS INSTALLER: Keene L0041

PHONE NO: 401-749-8472

INSPECTION NUMBER: 1

TYPE OF INSPECTION: BOTTOM INSPECTION

FINDINGS/COMMENTS

Existing Grade Water Table is approx 6' from existing grade; If flow diffusers were to be installed now there would only be a 1' V separation from the W.T. Water has filtered into bottom area. A small trench system should be put in to at least get 2' v. Separation, Construction is ~~ok~~ <sup>4-30-93</sup> ~~ok~~ <sup>ok</sup> immediately. Speak to P.E. if necessary. Brian McNamee, Public Works and Bridge ~~should~~ <sup>has</sup> ~~get~~ <sup>water out</sup> in put.

RESULTS OF INSPECTION/ACTION REQUIRED

- Bottom Bed OK -- Construct system and call for cover inspection.
- (RFA) Address items listed or checked and call for a re-inspection
- (FEE) If this item is checked, a \$50 fee is required before re-inspection. Send copy of this inspection form with the check.
- (COC) Paper and cover system and submit certificate of construction
- (COC) Correct items listed or checked and submit certificate of construction
- (RFAD) STOP CONSTRUCTION. Contact designer since items listed are too complex for a simple resolution.

Signature of Inspector(s) Levy

- (ASB) Submit As Built Plans
- (RPREQ) Submit Revised Plans
- (SOS) Submit Designer's Statement of Supervision
- (WELL) Call for inspection when well installed.

Date Installed: \_\_\_\_\_

- (FND) Call for inspection when foundation installed

Date Installed: \_\_\_\_\_

- (WELLRPT) Submit Well Completion Report
- (OTHER) \_\_\_\_\_



**RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
ONSITE WASTEWATER TREATMENT SYSTEM CONSTRUCTION PERMIT**



**APPLICATION No.** 1825-0907 **DATE RECEIVED** 6/26/18 **AMOUNT RECEIVED \$** 100 **CHECK #** 1768 **NOTE** 014

**TYPE OF APPLICATION (CHECK ALL THAT APPLY)**

NEW BUILDING CONSTRUCTION  A/E TECHNOLOGY CERTIFICATION  LEVEE  
 ALTERATION  VARIANCE  JUN 26 2018  
 REPAIR  REDESIGN  JOINT OWTS  
 TRANSFER  WETLANDS PERMIT  
Department of Environmental Management

**SITE INFORMATION**

145 Greenville Rd North Smithfield, RI  
NO. STREET CITY/TOWN  
PLAT NUMBER 012 LOT NUMBER 205 SUBDIVISION LOT NUMBER  
LOT SIZE 15,800 SQUARE FEET  
SUBDIVISION NAME  
SUBDIVISION SITE SUITABILITY CERTIFICATION #

**OWNER INFORMATION**

Townsend Austin  
LAST NAME FIRST NAME M.I.  
145 Greenville Rd North Smithfield 02896  
NO. STREET CITY/TOWN  
ZIP CODE

**RIDEM APPLICATION HISTORY**

PREVIOUS SITE TESTING  YES  NO APPLICATION #  
 DEPTH TO APPROVED WATER TABLE 4 1/2' HOW DETERMINED STATE NSP  
 TEST HOLE # 1 DATE EXCAVATED 4/24/18 WETLANDS within 200' OF OWTS  YES  NO  
 WETLAND DETERMINATION  YES  NO RIDEM FILE # 1 DATE 1/1/18  
 LARGE SYSTEM  YES  NO

**DESIGN INFORMATION**

BUILDING USE:  Residential  Commercial  
 WATER SUPPLY:  public water  public well  private well JUN 26 2018  
 # OF DESIGN UNITS 3 BC  
 UNIT DESIGN FLOW 115 gallons per BC(unit) TOTAL DAILY FLOW 345 gallons  
 TANK SIZE 1000 gallons DESIGN LOADING RATE 6 gpd/sf  
 MINIMUM REQUIRED LEACHFIELD AREA 566 square feet  
 LEACHFIELD TYPE ELTEN IN DRAINS 21 MAT  
 TOTAL AREA OF LEACHFIELD PROVIDED 588 square feet

**FOR RIDEM USE ONLY**

**CERTIFICATION**

SCOTT W RYLAH (print), the undersigned licensed OWTS designer, certify that I prepared this application and accompanying forms, submittals, plans and sketches in accordance with the RULES of the RIDEM pertaining to OWTS and that all the information provided on this application and accompanying forms, submittals, plans and sketches is true and accurate.

Designer's Signature Scott W Rylah

License # D1100

Business/Company Name RYLAH + SON INC

Designer's Email gs.rylah@gmail.com Phone # 401-651-9027

I certify that a) I am the owner of the property indicated under the site information on this application, b) I will hire a licensed OWTS installer to install the system proposed herein, c) the system will be installed in strict accordance with this application, d) I will hire and retain the licensed OWTS designer of record to witness and inspect the installation of the system, e) I assume all responsibility for the truth and accuracy of this application and all liability and responsibility for any improper installations of the system on this site and agree to hold the RIDEM harmless from any and all claims relating whatsoever to the system. In the case of a transfer application, I acknowledge that the permit application and plans previously approved and accompanying this application are the operative documents subject to certification.

Owner(s) Signature Christie Townsend Phone Number 401-600-2222

**PERMIT APPROVAL SECTION: DO NOT WRITE BELOW THIS LINE**

Based upon the representations of the owner and the owner's agents, including the representations of the owner's OWTS designer, and the truth and accuracy of all information submitted, this application for an OWTS is hereby approved. The RIDEM assumes no responsibility or liability for the future safe operation or maintenance of the approved system, or the fitness or suitability of this system to this site, nor does it assume any responsibility for the accuracy and truth of the owner's, or the owner's agents' representations. This approval is subject to future suspension or revocation in the event that subsequent examination reveals any data indicated on any application, form, submitted plan or sketch to be incorrect, or not in compliance with the RULES or any conditions at the site are such that the approved design is not in accordance with the RULES, or in the event that the system discharges inadequately treated wastewater to waters of the State or fails to operate satisfactorily in any other manner.

**IMPORTANT: Additional terms of approval as circled.**

(C) Bottom of leaching area excavation must be inspected by the RIDEM prior to placement of any gravel or stone.

(C) System installation must be inspected by RIDEM prior to covering any component of the system with backfill.

(D) Applicant shall comply with all requirements, conditions and stipulations of variance(s) approved on \_\_\_\_\_.

(E) Joint Permit: Designer of record must contact RIDEM prior to start of any site construction.

(F) A/E Technology: Additional installation, operation or maintenance requirements may apply (see A/E Technology Certification).

(G) Copy of this form and Operation/Maintenance contract must be filed in land evidence records prior to conformance.

(H) Proposed construction falls within 'Coastal Zone'. Contact Rhode Island Coastal Resources Management Council.

(I) Proper erosion and sedimentation controls must be installed prior to start of construction.

(J) Transfer: See original permit for all applicable conditions.

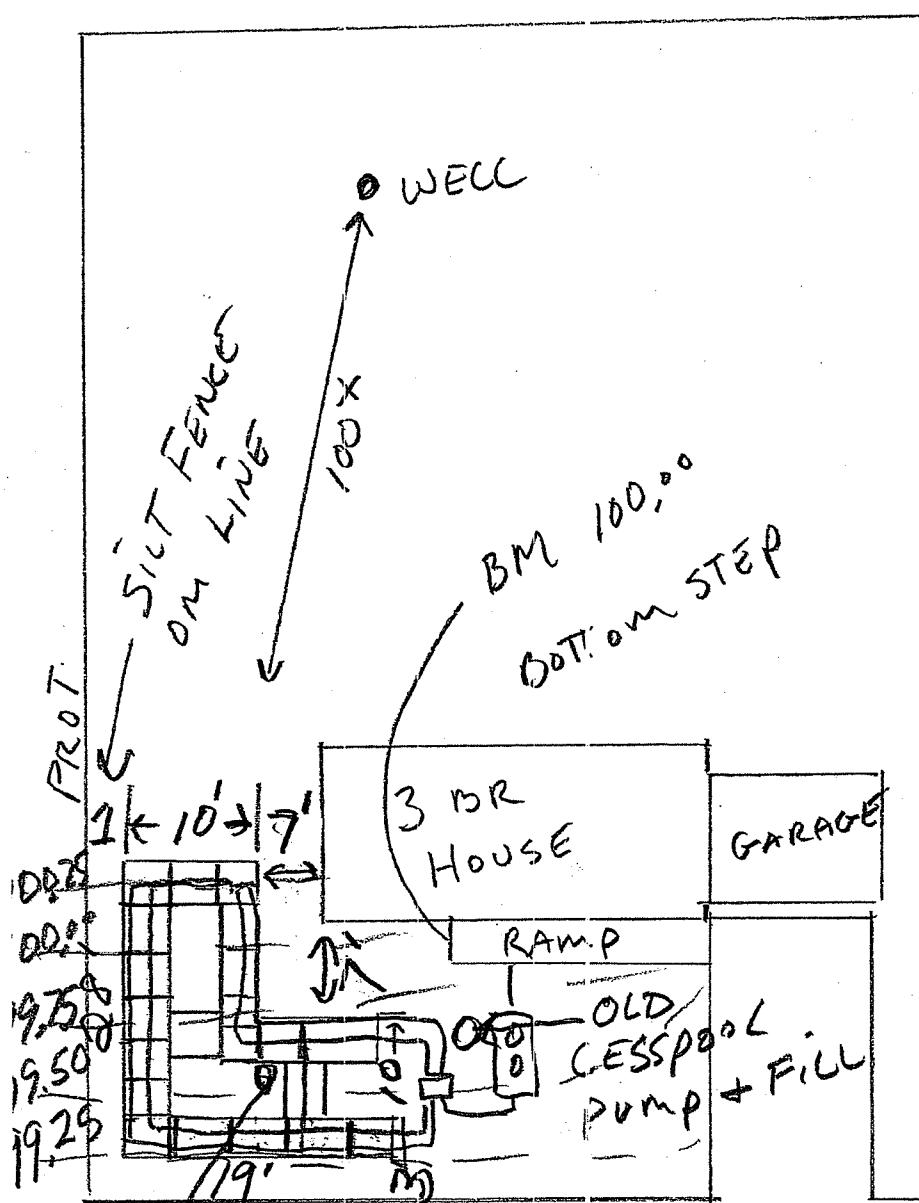
(K) Other

**REMOVE EXISTING CESSPOOL**

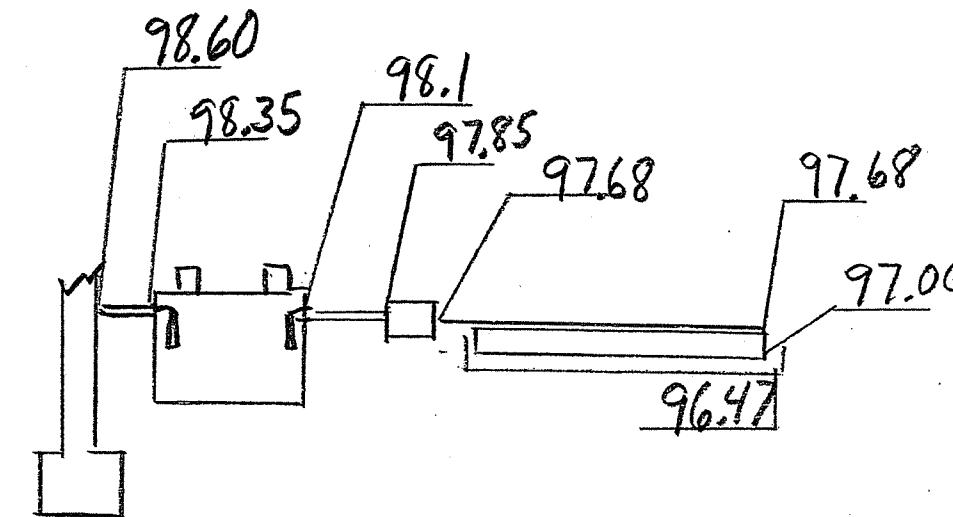
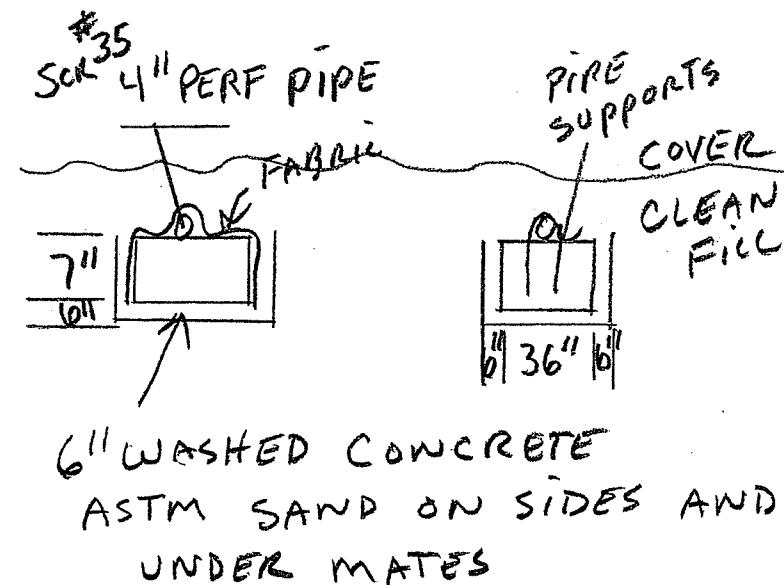
Signature of RIDEM Official

Date of Approval 7/24/18 Date of Expiration 7/24/19

PREPARED BY  
 SCOTT W RYLAH  
 55 GEORGE EDDY DR  
 PASCOAG RI 02859  
 DESIGNER # D1100  
 (401) 568-0175 HOME  
 (401) 651-9077 CELL



REPAIR OF OANTS  
 FOR  
 ANNIE TOWNSEND  
 145 GREENVILLE RD  
 NORTH SMITHFIELD RI 02896  
 (401) 529-6027



TEST HOLE 145 GREENVILLE RD

NOTES

- ① SILT FENCE SHALL BE INSTALLED BEFORE START OF CONSTRUCTION.
- ② PUMP AND FILL OLD CESSPOOL.
- ③ SCH #40 FROM HOUSE TO TANK THEN SCH #35 THERE FORTH.
- ④ BRING TANK COVERS TO GRADE AND INSTALL INLET, OUTLET TEE WITH ZABBLE FILTER IN OUTLET TEE.
- ⑤ APPROVED FOR USE ONLY IN NEW BUILDING CONSTRUCTION  
MAINTAIN LONG TERM IN THIS APPROVAL 7.68  
 FOR 10' THEN 3' TO 1' SLOPE
- ⑥ NO TREES OR BUSHES WITHIN 10' OF SYSTEM.
- ⑦ COVER WITH CLEAN FILL, LOAM AND SEED.
- ⑧ 1000 GAL TWO COMPARTMENT

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT	
OFFICE OF WATER RESOURCES	
OANTS PROGRAM	
PLAN #	1828-0912
APPROVED	7.24.18
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL	
APPROVED PLANS MUST BE KEPT AT CONSTRUCTION SITE	

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
JUN 26 2018
OFFICE OF WATER RESOURCES



## Property Record Card

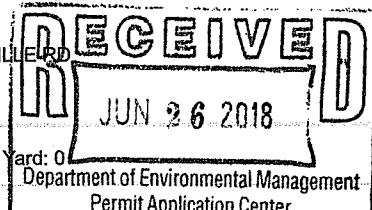
145 GREENVILLE RD

ID: 012-205 Book / Page: 0752-0299



Owner: TOWNSEND ANNIE  
 Co-Owner: LIFE ESTATE  
 Mailing Address: 145 GREENVILLE RD  
 N SMITHFIELD RI 02896

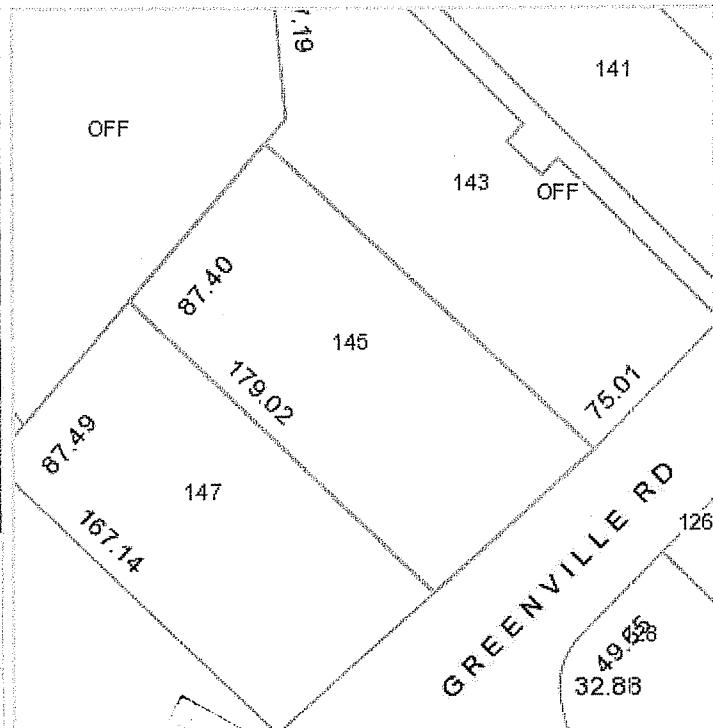
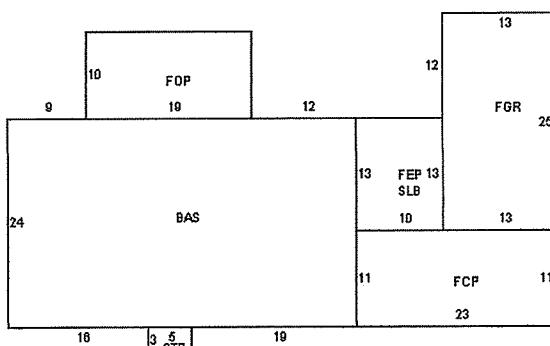
Assessment: Total: 163400  
 Building: 105200, Land: 58200, Yard: 0



Department of Environmental Management  
 Permit Application Center

## Sales History

Grantor	Legal Reference	Sale Date	Sale Price
TOWNSEND ANNIE,	0752-0299	7/20/2017	0
TOWNSEND GEORGE W & ANNIE,	0015-0003	1/6/2015	0
AUUIAR JOSEPH C & FLORENCE J/T		1/26/1954	
FERRIER CHRISTOPHER & ROSE ALBA	56-8	6/18/1953	
BARRETT WILLIAM & FRANCES M J/T	86-155	1/1/1900	
CRISAFULLI SALVATORE & MARY E	82-711	9/16/1975	
VETERANS ADMINISTRATION	58-394	3/7/1973	
WOONSOCKET INSTITUTION FOR	58-98	8/21/1956	
SAVINGS	58-88	8/25/1955	
CALABRESE CHARLES & OLGA J/T	56-555	2/23/1955	
FORCIER ADELARD J/T	56-554	1/13/1955	
Land Information	56-460	11/15/1954	
Land Area: 1/36 Acre 1,630 SQ FT			
Zoning: REA			
CALABRESE LOUIS & ROSE &			
Land Use: 01 - Single Fam			
Neighborhood: 0065 - 0065			



MainStreetGIS

MainStreetGIS, LLC  
 www.mainstreetgis.com

JUN 26 2018

## Building Information

Units: 1  
 Year Built: 1955  
 Style: Ranch  
 Rooms: 5  
 Bedrooms: 3  
 Baths: 1  
 Half Baths: 0

Stories: 1 Story

Heat Fuel: Oil  
 Heat Type: BB Hot Wtr  
 Roof Structure: Gable  
 Roof Covering: Asphalt  
 Kitchens: 1  
 Fireplaces: 0

## Extra Feat. / Yard Items

Type	Area	Assessment
Shed Frame	112	0

## Sub Areas

Type	Area	Assessment
First Floor	960	84096
Carport	253	2857
PorchEnc	130	4130
Garage	325	7295
Porch, Open	190	4620
Bsmt,Fin Rsd	720	22075
Slab	130	0
Stoop	15	0
Bsmt, Unf	240	4205

Printed from: <http://www.mainstreetmaps.com/ri/northsmithfield/>

## Appendix B

### Homeowner Questionnaires

February, xx 2020

To: Mr. & Mrs. Paul Ponanski  
128 Greenville Rd.  
N. Smithfield RI 02896

From: Maura Beck, North Smithfield Water & Sewer Coordinator  
*On behalf of Wright-Pierce*

Re: Access Request and Questionnaire

Wright-Pierce has been retained by the Town of North Smithfield to create a preliminary design and cost estimate for a sewer line extension along Greenville Road to service your property located at 128 Greenville Road, North Smithfield RI 02896.

As part of our preliminary planning effort Wright-Pierce along with Town staff would like permission to enter your property to determine what side of your home sewage exits on its way to your septic/cesspool. Additionally, Wright-Pierce would like to be able to obtain limited survey data on your property. Obtaining this information will help us create the most efficient and effective sewer line extension possible.

Attached is a short survey regarding your house's septic and your willingness, and ability to have Wright-Pierce and Town staff on your property. Please take a moment to complete this survey and return it the self-addressed envelope. All information and answers provided will remain confidential. You may also scan and email your survey to Maura Beck, North Smithfield Water & Sewer Coordinator, at [mbeck@nsmithfieldri.org](mailto:mbeck@nsmithfieldri.org)

Please feel free to contact me with any questions or concerns.

Thank you,

Maura Beck  
*Water & Sewer Coordinator*  
*Town of North Smithfield RI*  
*575 Smithfield Road*  
*North Smithfield, RI 02896*  
*401-767-2200 x 305*  
[mbeck@nsmithfieldri.org](mailto:mbeck@nsmithfieldri.org)

Cc: G. Ezovski, Town of North Smithfield  
R. Carpenter, Town of North Smithfield  
L. Ragozzio, Wright-Pierce  
D. Hopkins, Wright-Pierce

# 128

Please circle the most appropriate response:

Are you interested in connection to the municipal sewer system?

YES      NO

Are you willing to allow Wright-Pierce and Town staff access to your property?

YES      NO

Are you willing to allow Wright-Pierce and Town staff access to the inside of your house?

YES      NO

If you are willing to grant access to the interior of your house, what day of the week and time are best for you?

MON.      TUE.      WED.      THURS.      FRI       SAT.      SUN.

AM      PM      Not willing to allow access

Do you know what side of your house the sewage exits on its way to the septic or cesspool?

NORTH       SOUTH      EAST      WEST

Does your house have a basement?

YES      NO

If your house has a basement, are there plumbing fixtures located within it?

YES      NO

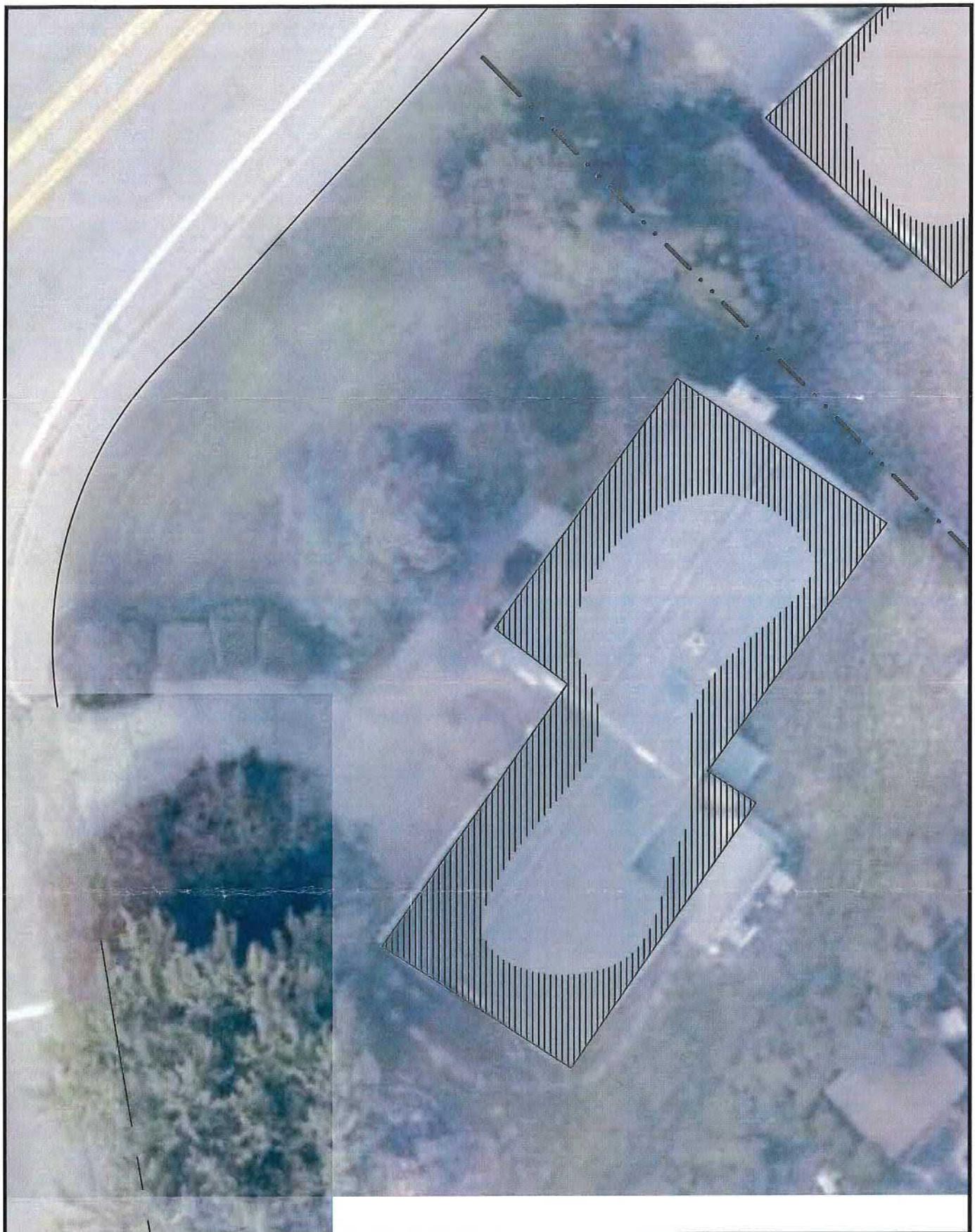
Are there any additional comments you would like to make?

We are very grateful for the opportunity to connect to the existing sewer lines. Thank you for making this project possible.

Would you like to provide an email or phone number for future communications (if so please write below)?

401-258-0776 (cell) Please leave a message; we'll return your call.

For your convenience a site plan of your property is attached. Please use this to identify the location of your existing septic/cesspool and where your sewage exits your house on its way to the septic/cesspool. Thank you!!



[#132]

Please circle the most appropriate response:

Are you interested in connection to the municipal sewer system?

YES    NO

if within range of my being able to afford

Are you willing to allow Wright-Pierce and Town staff access to your property?

YES    NO

Are you willing to allow Wright-Pierce and Town staff access to the inside of your house?

YES    NO

If you are willing to grant access to the interior of your house, what day of the week and time are best for you?

MON.      TUE.      WED.      THURS.      FRI      SAT.      SUN.

AM       PM      Not willing to allow access

schedule, Pierce's

Do you know what side of your house the sewage exits on its way to the septic or cesspool?

NORTH      SOUTH      EAST      WEST

Does your house have a basement?

YES      NO

If your house has a basement, are there plumbing fixtures located within it?

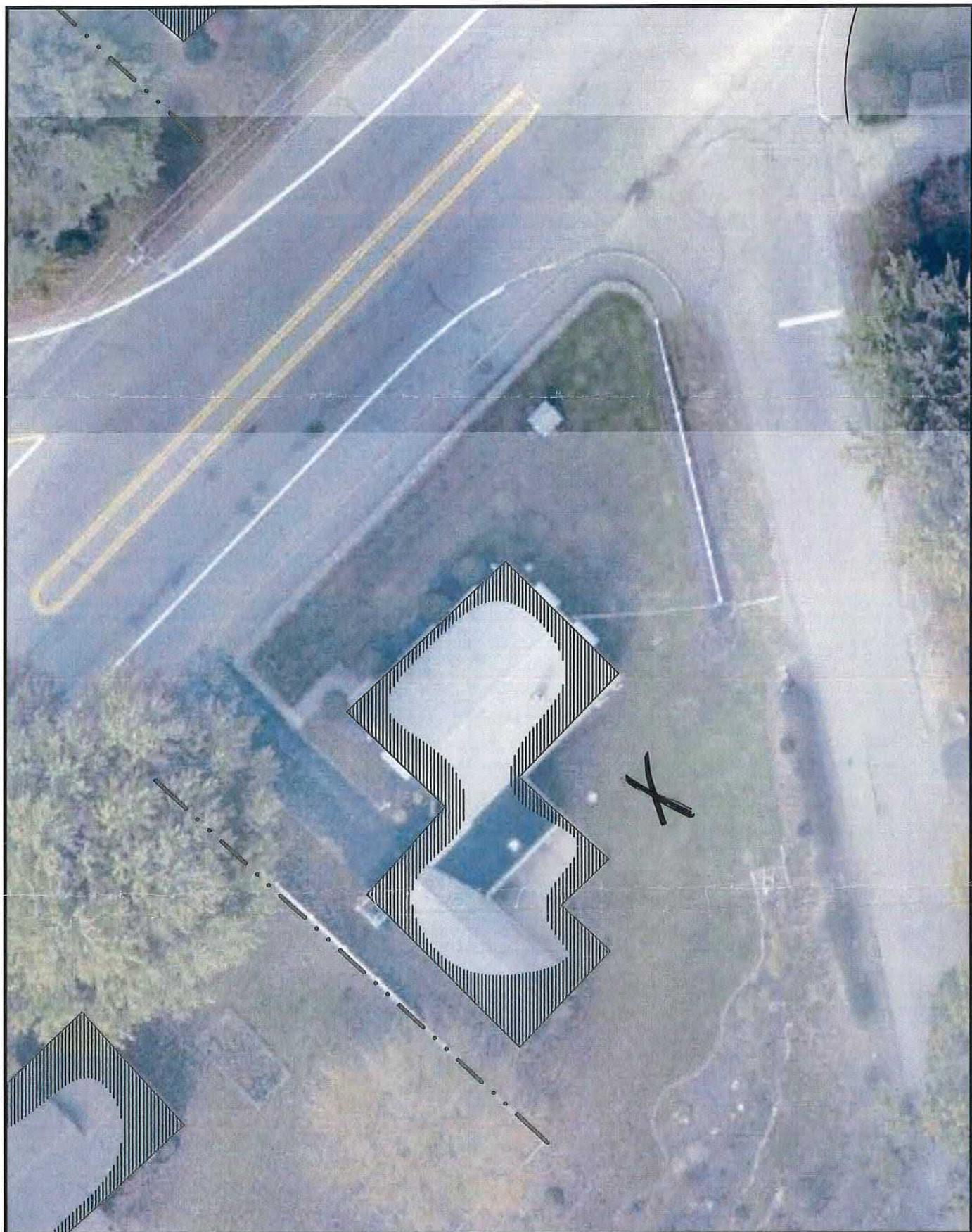
YES      NO

?

Are there any additional comments you would like to make?

Would you like to provide an email or phone number for future communications (if so please write below)?

**For your convenience a site plan of your property is attached. Please use this to identify the location of your existing septic/cesspool and where your sewage exits your house on its way to the septic/cesspool. Thank you!!**



Kenneth Page

145 Greenville Rd

Please circle the most appropriate response:

Are you interested in connection to the municipal sewer system?

YES    NO

Are you willing to allow Wright-Pierce and Town staff access to your property?

YES    NO

Are you willing to allow Wright-Pierce and Town staff access to the inside of your house?

YES    NO

If you are willing to grant access to the interior of your house, what day of the week and time are best for you?

MON.	TUE.	WED.	THURS.	FRI	SAT.	<input checked="" type="radio"/> SUN.
AM	<input checked="" type="radio"/> PM	Not willing to allow access				By Appointment, Ty

Do you know what side of your house the sewage exits on its way to the septic or cesspool?

NORTH    SOUTH ←  EAST   WEST  
SE 149°

Does your house have a basement?

YES    NO

If your house has a basement, are there plumbing fixtures located within it?

YES    NO

Are there any additional comments you would like to make?

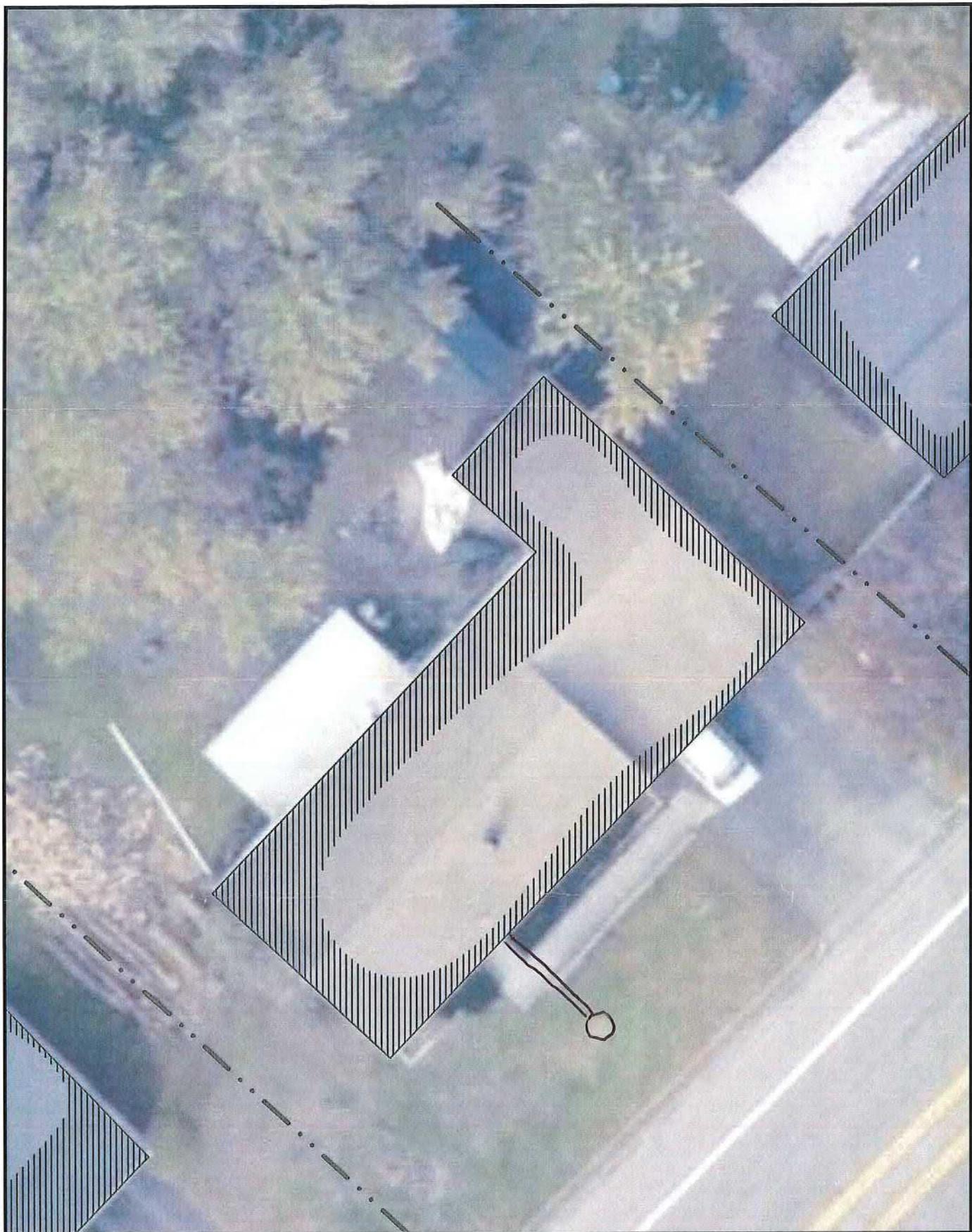
welcome to enter dwelling. By Appointment. Thank you.

401-255-6766

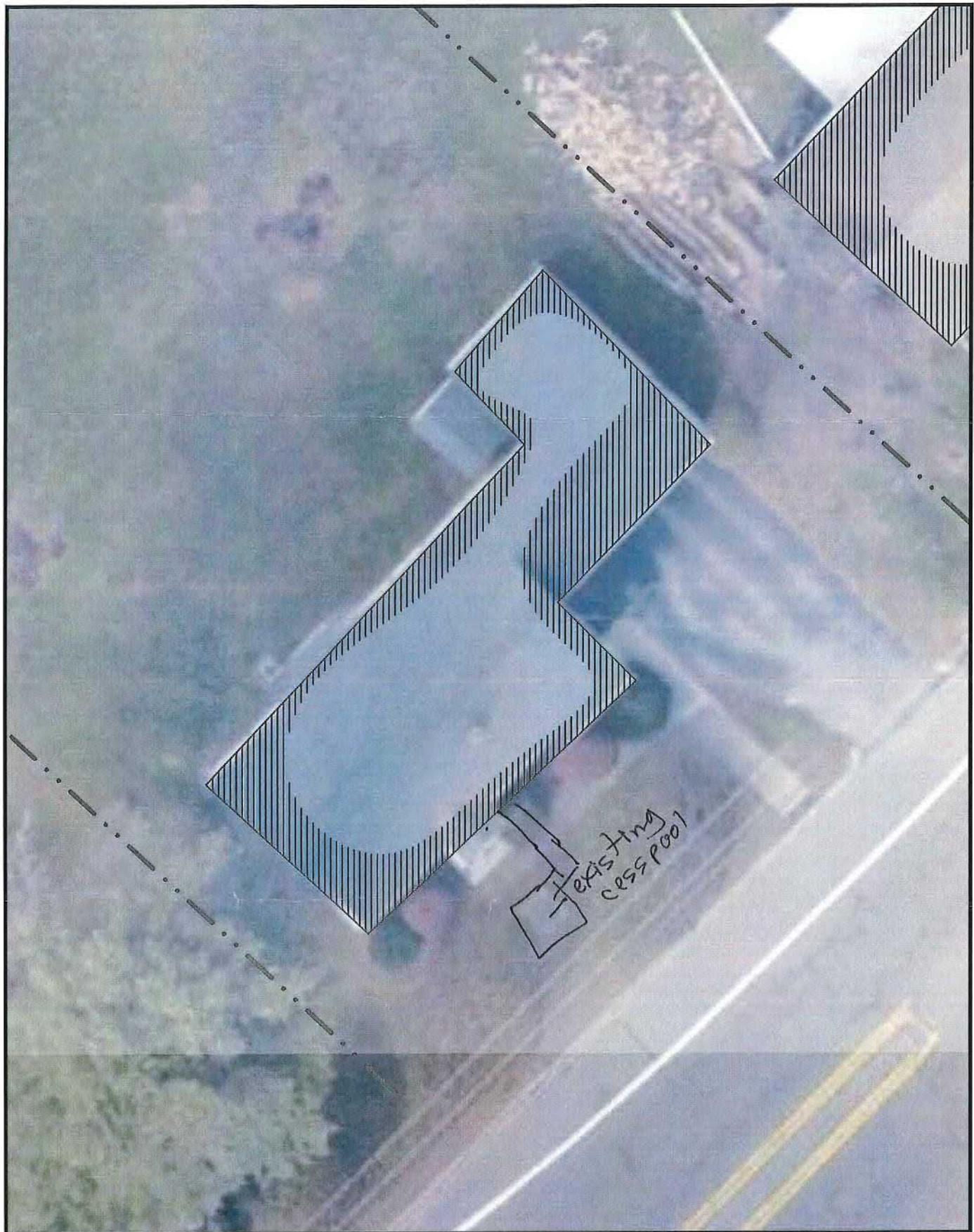
Ken6711@gmail.com

Would you like to provide an email or phone number for future communications (if so please write below)?

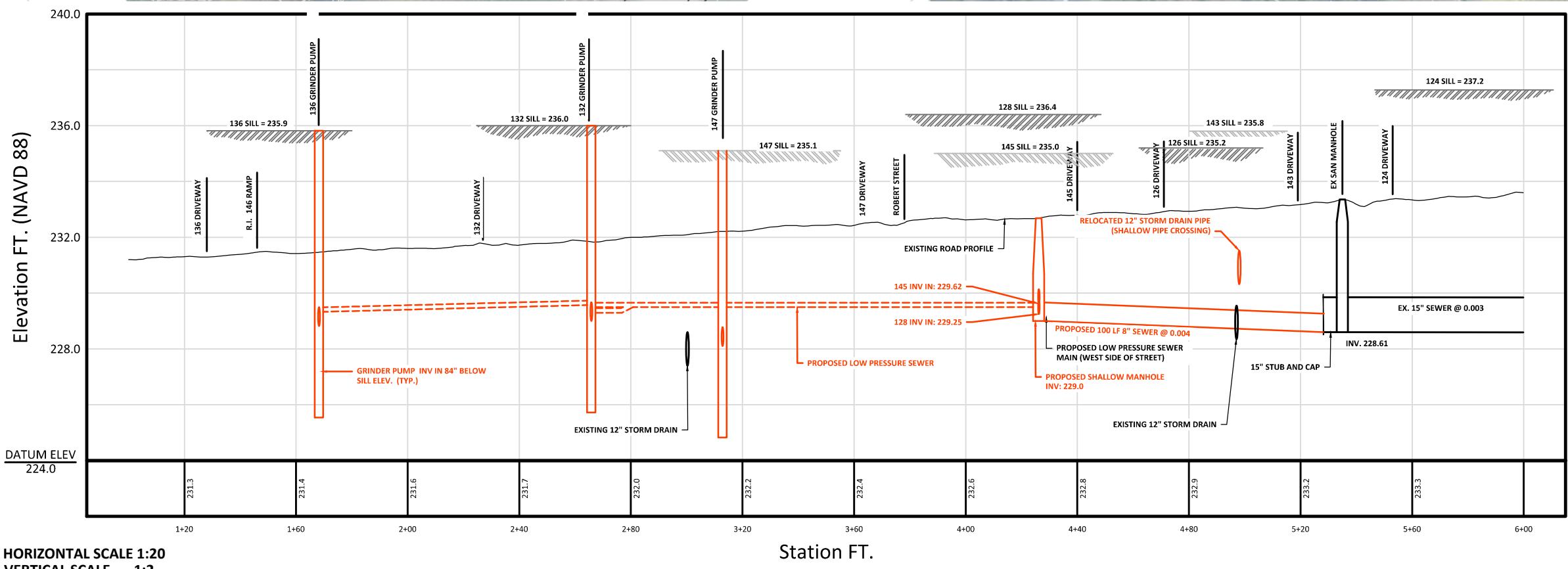
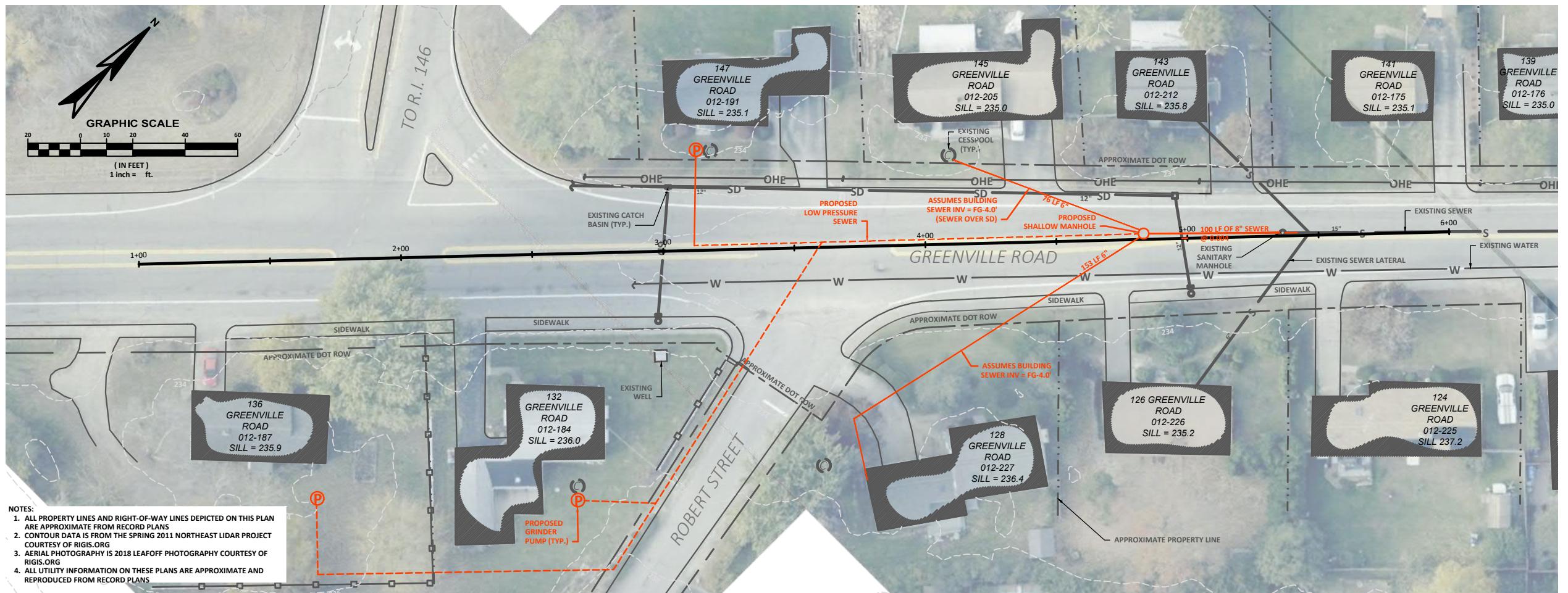
For your convenience a site plan of your property is attached. Please use this to identify the location of your existing septic/cesspool and where your sewage exits your house on its way to the septic/cesspool. Thank you!!





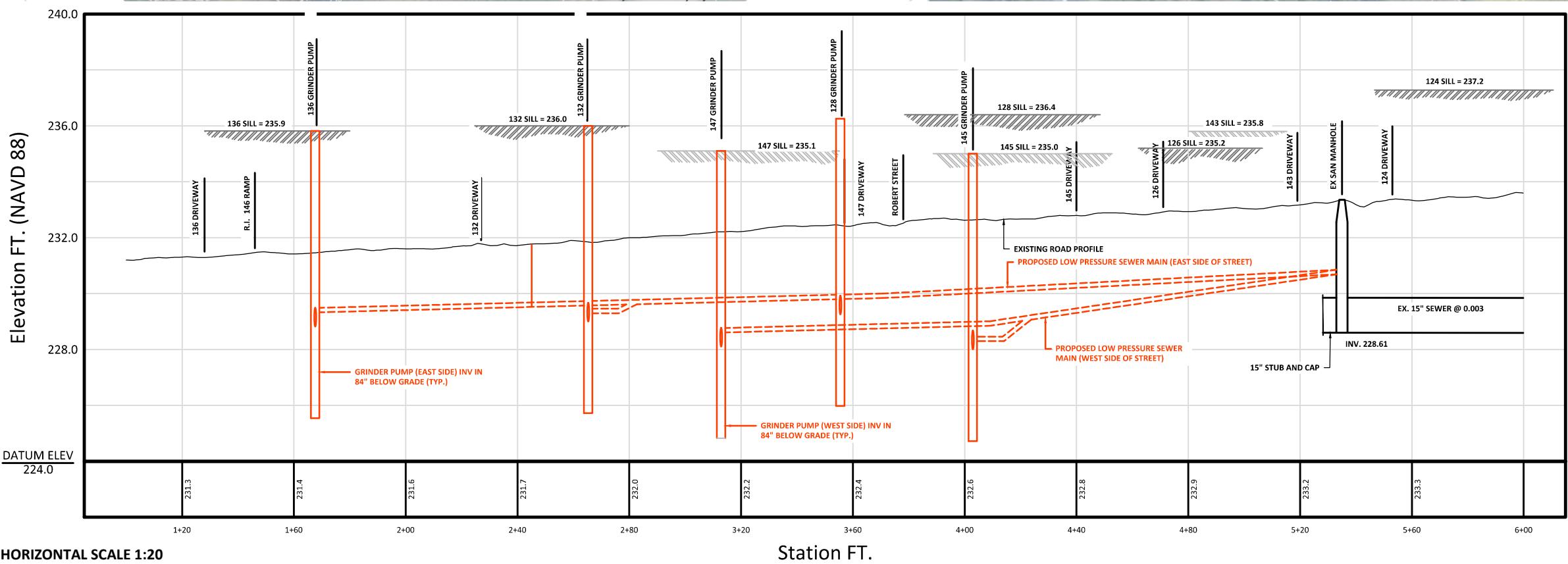
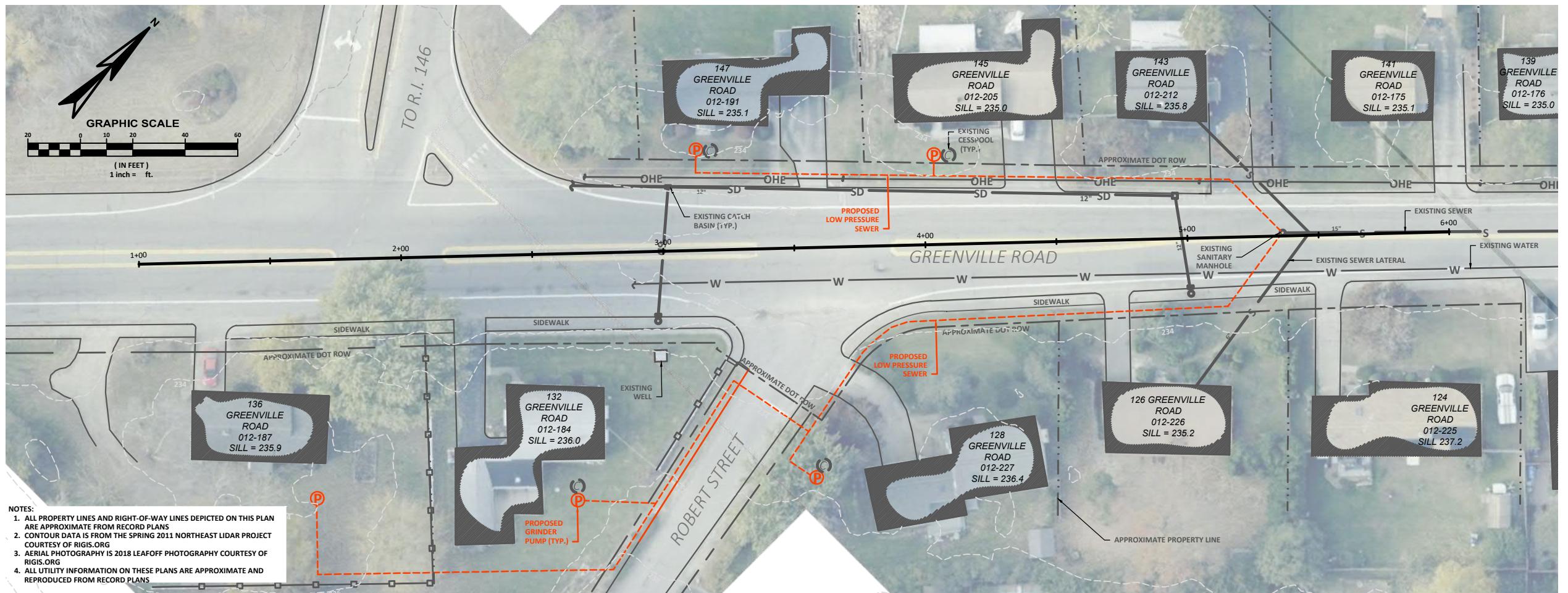


## Appendix C Alternative Preliminary Design Plans



APPROVED DATE	SUBMISSIONS/REVISONS	APPROVED DATE
DESIGNED BY: DBH	CAD COORD: CAD: DBH	LR
CHECKED BY: LR	APPROVED BY: DATE: 04/09/2020	
PROJECT NO: 202156A	DATE:	

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**GREENVILLE ROAD  
SEWER EXTENSION  
NORTH SMITHFIELD, RHODE ISLAND**

LOW PRESSURE SEWERLINE ALTERNATIVE  
NOT FOR CONSTRUCTION

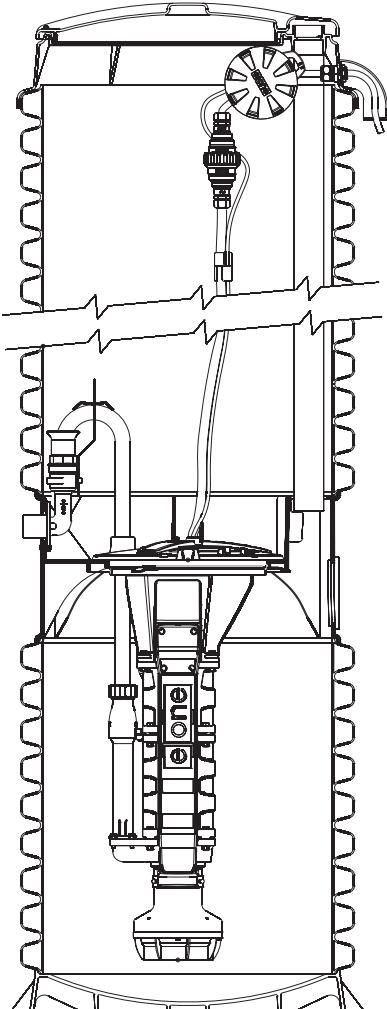
## **DRAWING**

# DH071/DR071

## General Features

The model DH071 or DR071 grinder pump station is a complete unit that includes: the grinder pump, check valve, HDPE (high density polyethylene) tank, controls, and alarm panel. A single DH071 or DR071 is a popular choice for one, average single-family home and can also be used for up to two average single-family homes where codes allow and with consent of the factory.

- Rated for flows of 700 gpd (2650 lpd)
- 70 gallons (265 liters) of capacity
- Indoor or outdoor installation
- Standard outdoor heights range from 61 inches to 160 inches



The DH071 is the “hardwired,” or “wired,” model where a cable connects the motor controls to the level controls through watertight penetrations.

The DR071 is the “radio frequency identification” (RFID), or “wireless,” model that uses wireless technology to communicate between the level controls and the motor controls.

## Operational Information

### *Motor*

1 hp, 1,725 rpm, high torque, capacitor start, thermally protected, 120/240V, 60 Hz, 1 phase

### *Inlet Connections*

4-inch inlet grommet standard for DWV pipe. Other inlet configurations available from the factory.

### *Discharge Connections*

Pump discharge terminates in 1.25-inch NPT female thread. Can easily be adapted to 1.25-inch PVC pipe or any other material required by local codes.

### *Discharge*

15 gpm at 0 psig (0.95 lps at 0 m)  
11 gpm at 40 psig (0.69 lps at 28 m)  
7.8 gpm at 80 psig (0.49 lps at 56 m)

## Accessories

E/One requires that the Uni-Lateral, E/One's own stainless steel check valve, be installed between the grinder pump station and the street main for added protection against backflow.

Alarm panels are available with a variety of options, from basic monitoring to advanced notice of service requirements.

The Remote Sentry is ideal for installations where the alarm panel may be hidden from view.

Patent Numbers: 5,752,315  
5,562,254 5,439,180

NA0050P01 Rev C

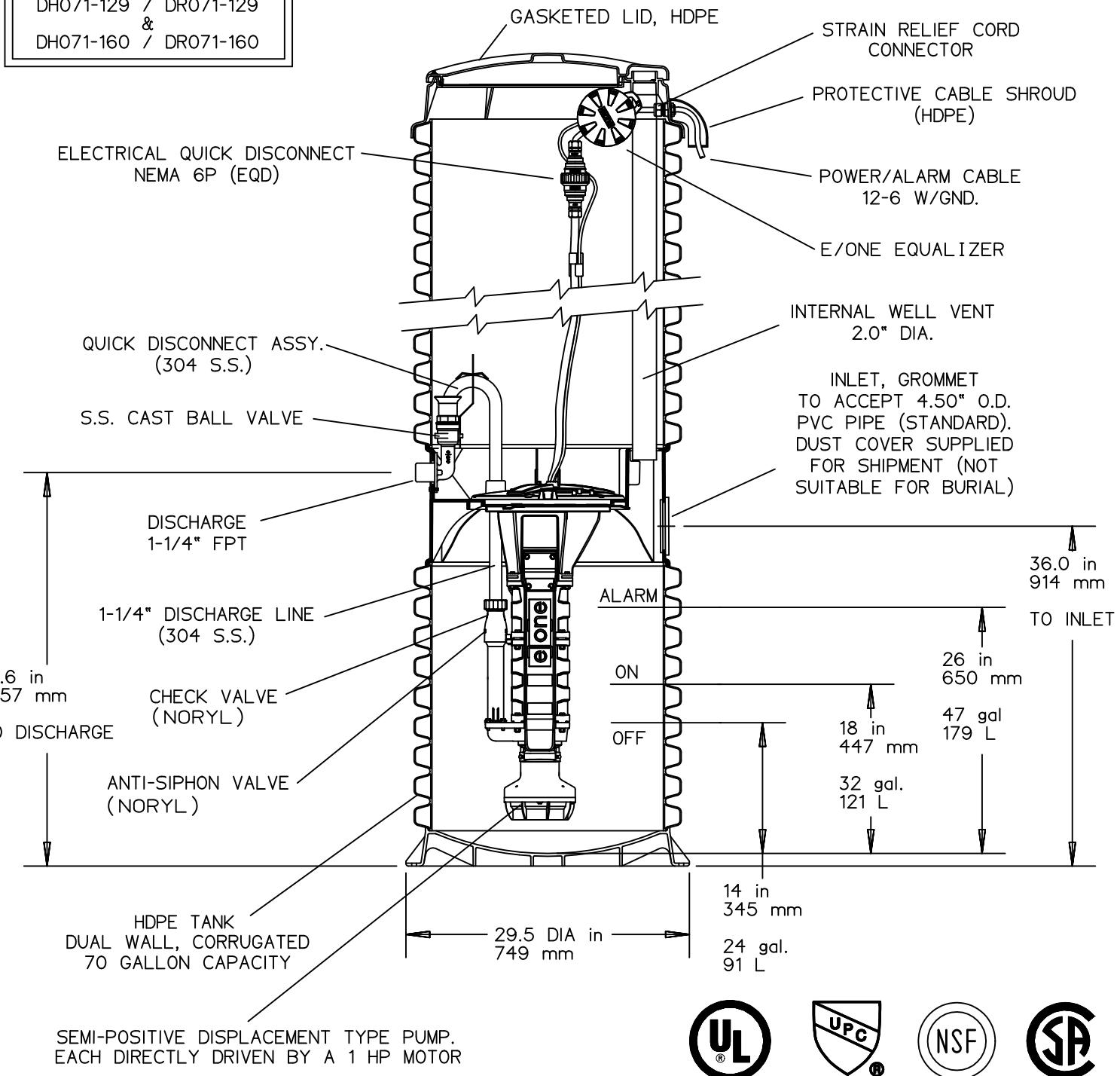
# OPTIONS : DH071

(HARD WIRED  
LEVEL CONTROLS)

# DR071

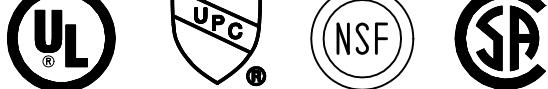
(WIRELESS  
LEVEL CONTROLS)

FIELD JOINT REQUIRED  
FOR MODELS  
DH071-129 / DR071-129  
&  
DH071-160 / DR071-160



CONCRETE BALLAST MAY BE REQUIRED  
SEE INSTALLATION INSTRUCTION  
FOR DETAILS

NOTE: DIMENSIONS ARE FOR REF ONLY



AD	CH	10/20/10	E	
DR BY	CHK'D	DATE	ISSUE	SCALE
<b>eOne</b> SEWER SYSTEMS				
MODEL DH071 / DR071 DETAIL SHEET				
NA0050P02				



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