

Sewage Disposal System Operation Permit

APPENDIX F

Property Owner

Chesapeake Bay Bridge and Tunnel District
32386 Lankford Highway
CAPE CHARLES, VA 23310
Phone: (757)

Health Dept. ID: 13-165-0082
Tax Map: 117((A))25
Locality: Northampton

Property Location

Property Address: 32386 Lankford Highway
CAPE CHARLES, VA 23310

Directions:

Chesapeake Bay Bridge and Tunnel District is hereby granted permission to operate a **Commercial Conventional Onsite Sewage System** at the above referenced location, having a design capacity of **600 gallons per day**.

This permit is issued in accordance with the provisions of Title 32.1, Chapter 6 of the Code of Virginia as Amended, and Section 12VAC 5-610-340 of the Sewage Handling and Disposal Regulations of the Virginia Department of Health. The issuance of an operation permit does not denote or imply any guarantee by the department that the sewage disposal system will function for any specified period of time. It shall be the responsibility of the owner or any subsequent owner to maintain, repair, or replace any sewage disposal system that ceases to operate in accordance with the regulations.

September 06, 2013
Effective Date

Cathy Plant
Environmental Health Technical
Specialist


Signature

Completion Statement

Commonwealth of Virginia
State Department of Health

Health Department
Identification Number: B-165-0082
NORTHAMPTON COUNTY Health Department

Name of Company/Corporation/Individual: BUNDICK WELLY PUMP CO.

Address: P.O. BOX 15 PAINTER, VA 23420 Telephone: 442-5555

Owner's Name: CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT

Owner's Address: 32386 LANFORD HIGHWAY CAPE CHARLES, VA 23310

Location of Installation: Lot: _____ Block: _____

Section: _____ Subdivision: _____

Other: 32386 LANFORD HIGHWAY - NORTH SIDE OF ADMINISTRATION BLDG.

I hereby certify that the onsite sewage disposal system has been installed and completed in accordance with the construction permit issued
(Date) 6-20-13 and is in compliance with Part D of the Sewage Handling and Disposal Regulations and when appropriate the plans and

specifications for the project.

Date 6-25-13



Signature and Title



Northampton County Health Department
P. O. Box 248 / 7114 Lankford Highway
Nassawadox, VA 23413
(757) 442-6228 Voice
(757) 442-4307 Fax

June 20, 2013

***OSE or PE in Consultation with an OSE
Sewage System Construction Permit Approval-- Level I Review by VDH***

Chesapeake Bay Bridge and Tunnel District
32386 Lankford Highway
CAPE CHARLES, VA 23310

Property Address: 32386 Lankford Highway, CAPE CHARLES, VA
Tax Map # : 117((A))25
HDID#: 13-165-0082

Dear Sir:

This letter, in conjunction with the approved plans and specifications (13 pages) **dated June 17, 2013**, which are attached, constitutes your **permit** to install:

- **Sewage Disposal System: 600 gallons per day**

Application for a permit was submitted pursuant to §32.1-163.5 of the Code of Virginia which requires the Health Department to accept private soil evaluations and designs from an Onsite Soil Evaluator (OSE) or a Professional Engineer working in consultation with an OSE for residential development. The permitted site was certified as being in compliance with the Board of Health's *Sewage Handling and Disposal Regulations 12 VAC 5-610-20 et seq* (and *Regulations for Alternative Onsite Sewage Systems 12 VAC 5-613-20 et seq* if applicable) (and local ordinances if the locality has authorized the local health department to accept private evaluations for compliance with local ordinances) by the following named consultant. This letter is issued in reliance upon that certification.

Evaluated by: Grant Merrill Cooley, Private OSE
Designed by: Charles Cooley, PE

The Board of Health hereby recognizes that the soil and site conditions acknowledged by this correspondence, and documented by additional records on file at the local health department, are suitable for the installation of onsite sewage disposal systems. The attached plat (or plats) shows the approved areas for the sewage disposal systems. This letter is void if there is any substantial physical change in the soil or site conditions where a sewage disposal system is to be located.

If modifications or revisions are necessary between now and when you construct your dwelling, please contact the Onsite Soil Evaluator (OSE) or Professional Engineer (PE) who performed the evaluation and design on which this permit is based. The name, address, and phone number of the OSE/PE appears on the certification form attached to this permit. Should revisions be necessary during construction, your

contractor should consult with the OSE/PE that submitted the site evaluation or site evaluation and design. The OSE or PE is authorized to make minor adjustments in the location or design of the system at the time of construction provided adequate documentation is provided to the Northampton County Health Department.

This authorization is null and void if conditions are changed from those shown on the application or conditions are changed from those shown on the attached construction drawings, plans and specifications. No part of any installation shall be covered or used until inspected, corrections made if necessary, and approved by the Northampton County Health Department or unless expressly authorized by the Northampton County Health Department. Any part of any installation which has been covered prior to approval shall be uncovered if necessary, upon the direction of the Department.

This Permit has been issued in accordance with applicable regulations based on the information and materials provided at the time of application. There may be other local, state, or federal laws or regulations that apply to the proposed construction of this onsite sewage system. The owner is responsible at all times for complying with all applicable local, state, and federal laws and regulations.

If you have any questions, please contact me. This authorization to construct a sewage disposal system **expires: December 20, 2014.**

This Permit is NOT TRANSFERABLE to any other person or location.

Sincerely,



Cathy Plant
Environmental Health Technical Specialist

cc: Cooley, Grant Merrill, Mr., Private OSE

AOSE/PE Inspection Report and Completion Statement

Commonwealth of Virginia
State Department of Health

Health Department Identification Number: 13-165-0082 Tax Map: 117-A-25

NORTHAMPTON COUNTY Health Department

Name of OSE/PE: GRANT COOLEY License Number: 1361

Address: P.O. Box 354 MELFA, VA 23410 Telephone: 757-787-2773

Contractors Name: BUNDICK WELL & PUMP, Co.

Owner's Name: CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT

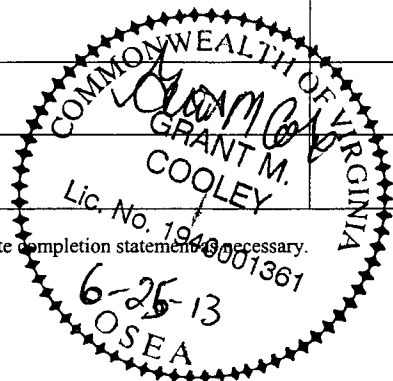
Owner's Address: 32386 LANFORD HIGHWAY CAPE CHARLES, VA 23310

Location of Installation: Subdivision: _____ Section: _____ Block: _____ Lot: _____

Other: 32386 LANFORD HIGHWAY - NORTH SIDE OF ADMINISTRATION BLDG.

Inspection Results

Component	Comments, Materials, Etc. Deficiencies Observed, Date Deficiencies Observed Corrective Action Required	Date Approved
Water Supply Location and Construction	EXISTING	
Building Sewer	EXISTING	
Septic Tank	EXISTING TANK REMAINS - NEW 1250 GALLON S.T.	
Inlet-Outlet Structure	O.K.	
Pump and Pump Station	N/A.	
Conveyance Method	3" PVC GRAVITY SEWER LINE	
Distribution Box or Pressure Manifold	6 PORT D-BOX W/ FLOW LEVELERS	
Header, Conveyance, Return, etc. Lines	O.K.	
Percolation Lines, Drip, Chambers, etc.		
Absorption Trenches and Dispersal Field	5 LINES @ 60' x 3', 9' O.C. INSTALLED @ 48" DEPTH GRAVEL	
(Other Components: treatment unit, etc.)		



Attach observed deficiencies and corrective actions taken on a separate completion statement if necessary.

OSE/PE Report for:

Construction Permit

Certification Letter

Subdivision Approval

Property Location:

911 Address: 32386 LANKFORD Highway City: CAPE CHARLES

Lot _____ Section _____ Subdivision _____

GPIN or Tax Map # 117-A-25 Health Dept ID # 13-165-0082

Latitude _____ Longitude _____

Applicant or Client Mailing Address:

Name: CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT

Street: 32386 LANKFORD Highway

City: CAPE CHARLES State VA Zip Code 23310

Prepared by:

OSE Name GRANT COOLEY License # 1361

Address P.O. Box 354

City MELFA State VA Zip Code 23410

PE Name: CHARLES E. COOLEY License # 5206

Address P.O. Box 354

City MELFA State VA Zip Code 23410

Date of Report 6-12-13

Date of Revision #1 _____

OSE/PE Job # _____

Date of Revision #2 _____

Contents/Index of this report (e.g., Site Evaluation Summary, Soil Profile Descriptions, Site Sketch, Abbreviated Design, etc.)

- ① APPLICATION
- ② SITE SKETCH
- ③ SOIL SUMMARY
- ④ SOIL EVALUATION

- ⑤ DESIGN CALCULATIONS
- ⑥ CONSTRUCTION SPECIFICATIONS
- ⑦ SITE PLAN
- ⑧ CERTIFICATION

Certification Statement

I hereby certify that the evaluations and/or designs contained herein were conducted in accordance with the Sewage Handling and Disposal Regulations (12 VAC5-610), the Private Well Regulations (12 VAC5-630) and all other applicable laws, regulations and policies implemented by the Virginia Department of Health. I further certify that I currently possess any professional license required by the laws and regulations of the Commonwealth that have been duly issued by the applicable agency charged with licensure to perform the work contained herein.

The work attached to this cover page has been conducted under an exemption to the practice of engineering, specifically the exemption in Code of Virginia Section 54.1-402.11

I recommend that a (select one): construction permit certification letter subdivision approval
be (select one) issued denied .

OSE/PE Signature [Signature] Date 6-12-13

9723
\$50.00

Commonwealth of Virginia

Application for a Sewage Disposal System Construction Permit

Type of sewage system: Repair X (VDH Use) Date 6-17-13
Northampton County Health Department Tax Map # 117-A-25

Health Department ID # 13-165-0082

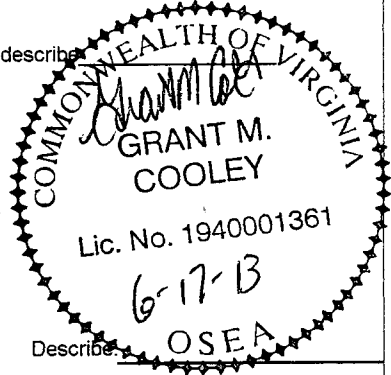
To Be Completed By The Applicant

Owner Chesapeake Bay Bridge and Tunnel District Address 32386 Lankford Highway Phone 757-331-2960
c/o Richard Denniston Cape Charles, VA 23310
Agent Grant M. Cooley Address P.O. Box 354 Phone 757 787 2773
AOSE#1361 Melfa VA 23410

Directions to Property: Site is the Administration Building of the Chesapeake Bay Bridge and Tunnel District - 32386 Lankford Highway- on the west side of U.S. 13 at the south toll plaza.

Subdivision _____ Section _____ Block _____ Lot _____
Other Property Identification North side of Admin. Bldg. Tax Map No. 117-A-25
Dimension/Size of Lot/Property _____

Building/facility _____ New Existing
Intermittent Use _____ Yes No If yes, describe _____
Residential Use _____ Yes No
Termite Treatment Yes _____ No
_____ Single Family _____ Multi-family
_____ Number of bedrooms 1 Number of Units _____
Basement _____ Yes No
Fixtures in Basement _____ Yes No
Commercial Use Yes _____ No
Commercial Wastewater _____ Yes No Number of Patrons _____
Number of Employees 20-30



If yes, give volumes and describe previously permitted for 600 gpd (HDID#165-88-0348)

Proposed Sewage Disposal Method:

Onsite Sewage Disposal System: Septic Tank & Drainfield _____ LPD _____ Mound _____ Other*

Water Supply:

Public _____ New Existing
_____ Private _____ New _____ Existing

Describe: Existing Deep well

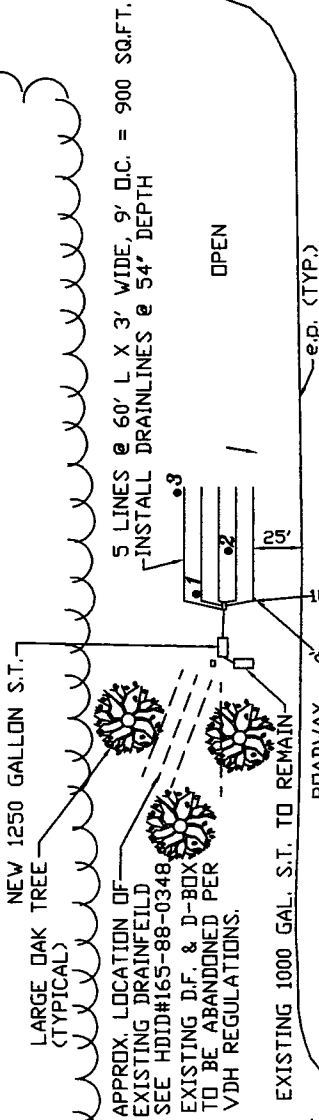
The property lines, building location, and sewage disposal system site are clearly marked and the property is sufficiently visible to see the topography. I give permission to the Department to enter onto the property described for the purpose of processing this application.

Grant M. Cooley
Signature of Owner/Agent

6-17-13
Date

SITE SKETCH - REPAIR
CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT
32386 LANKFORD HWY. - ADMINISTRATIN BLDG.

SCALE: 1" = 100'



SLOPE OVER DISPOSAL AREA = 0-1%
PERC. RATE = 20-25 MPI

NORTH SIDE OF ADMINISTRATION BLDG.
20-30 EMPLOYEES @ 20 GPD = 600 GPD
AREA REQUIRED = 872 SQ.F.T.

DRAINFIELD REPAIR DESIGN:

5 LINES @ 60' L X 3' WIDE, 9' D.C. = 900 SQ.F.T.
INSTALL DRAINLINES @ 48' DEPTH
(UP TO 36' FILL IN D.F. AREA)

INSTALL NEW 6 PORT D-BOX

INSTALL NEW 1250 GALLON S.T.

EXISTING 1000 GALLON S.T. TO REMAIN IN SERVICE

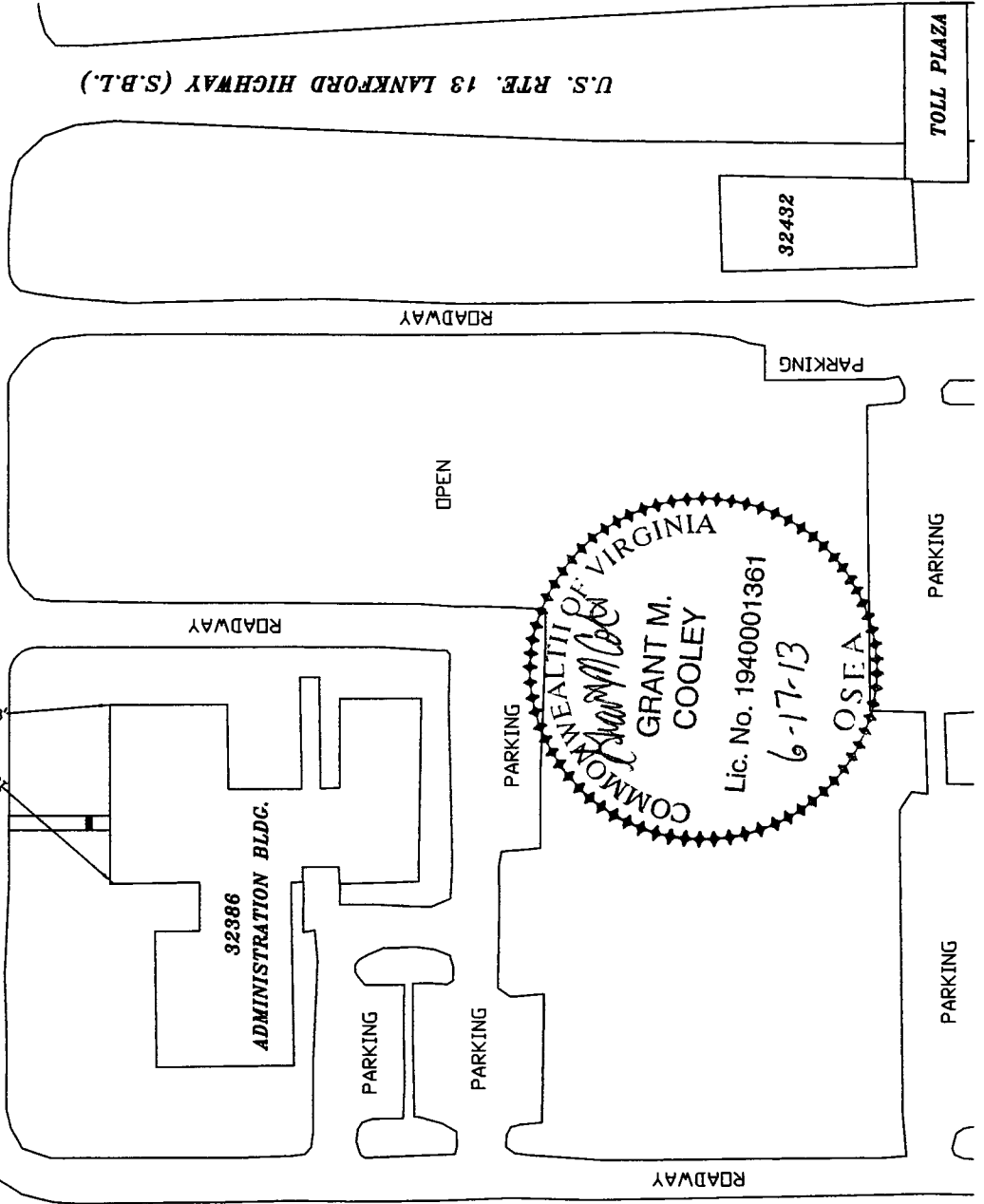
EXISTING DEEP WELL

EXISTING DEEP WELL IS
LOCATED BEHIND (WEST OF) THE
ADMINISTRATION BUILDING



OPEN

WOODED



Commonwealth of Virginia

Soil Summary Report

Health Department ID# 13-165-0082 (VDH Use)

GENERAL INFORMATION

Date 2013 7/12/2012 Submitted to: Northampton County Health Department

Applicant Chesapeake Bay Bridge and Tunnel District Address P.O. Box 15 Phone 442-5555
c/o Bundick Well & Pump, Co.

Painter, Va. 23420

Owner Chesapeake Bay Bridge and Tunnel District Address 32386 Lankford Highway Phone 757-331-2960
c/o Richard Denniston

Capeville, VA

Directions to Property: 32386 Lankford Highway - Administration Building

Subdivision _____ Section _____ Block _____ Lot _____

Other Property Identification north side of Administration Building Tax Map No. 117-A-25

SOIL INFORMATION SUMMARY

1. Position in landscape satisfactory: Yes No Describe: open, little slope over d.f. area

2. Slope: 0-1%

3. Depth to rock or impervious strata: _____ Max _____ Min None up to 36" of fill on disposal site

4. Depth to apparent seasonal water table: _____ No Yes 74 Inches

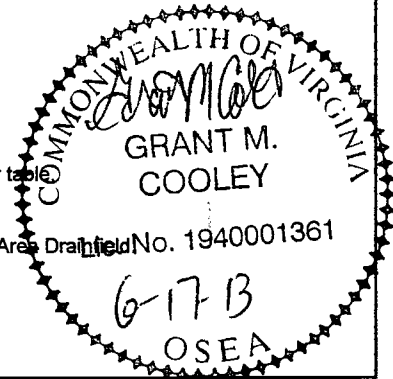
5. Free water present: No _____ Yes _____ Range (inches)

6. Soil percolation rate estimated: _____ No Yes Texture Group II Rate 20-25 mpi

7. Percolation test performed: No _____ Yes Measured Rate _____ mpi

Site Approved Drainlines to be placed at: 48" inches depth on site designated on permit.
 Site Disapproved

- Reason for rejection:
- Position in landscape subject to flooding or periodic saturation.
 - Insufficient depth of suitable soil over hard rock.
 - Insufficient depth of suitable soil over seasonal/apparent seasonal water table.
 - Rates of absorption too slow.
 - Insufficient area of acceptable soil for required Primary and/or Reserve Area.
 - Proposed system too close to well.
 - Other:

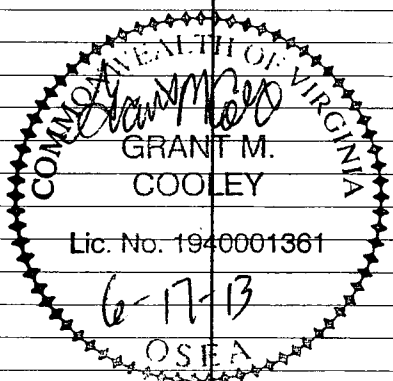


**Profile Description
 SOIL EVALUATION REPORT**

CBBT Administration Building north side - drainfield repair 4 of 8
 Profile holes and sketch of the area investigated including all structural features eg., sewage disposal systems, wells, etc. Within 100' of the site is shown on

See construction permit See application sketch See attached site plan

Hole #	Horizon	Depth	Description of color, texture, etc.	Texture Group
1	Bt1 Bt2 C	0"-10"	10YR 3/3 Dark Brown Sandy Loam - FILL	II
		10"-36"	2.5Y 5/4 Light Olive Brown Sandy Clay Loam - few stones - Fill	IIB
		36"-68"	2.5Y 5/4 Light Olive Brown Sandy Loam	II
		68-74	2.5Y 6/4 Light Yellowish Brown Sand	I
		74-84	2.5Y 6/2 Light Brownish Gray Sand	I
2	Bt1 Bt2 C	0"-12"	10YR 3/3 Dark Brown Sandy Loam - FILL	II
		12"-35"	2.5Y 5/4 Light Olive Brown Sandy Clay Loam - few stones - Fill	IIB
		35"-75"	2.5Y 5/4 Light Olive Brown Sandy Loam	II
		75-79	2.5Y 6/2 Light Brownish Gray Sand	I
		74-80	2.5Y 7/3 Pale Yellow Sand	I
3		0"-10"	10YR 4/4 Dark Yellowish Brown Sandy Loam - FILL	II
		10"-18"	10YR 4/3 Brown Sandy Loam - FILL	II
		18-24	2.5Y 5/3 Light Olive Brown Sandy Loam w/ few stones - FILL	II
		24-34	2.5Y 5/4 Light Olive Brown Sandy Clay Loam - Fill	IIB
		34-50	2.5Y 5/4 Light Olive Brown Sandy Loam	II
		50-66	2.5Y 5/4 Light Olive Brown Sand	I
		66-76	2.5Y 5/3 Light Olive Brown Sand	I
		76-84	2.5Y 6/2 Light Brownish Gray Sand	I



Remarks: site has up to 36" of fill over original ground in area of drainfield and repair - fill is consistently uniform in color

Commonwealth of Virginia

Design Calculations

Health Department ID# 13-165-0082 (VDH Use)

PROPERTY IDENTIFICATION

Name of property / site: Chesapeake Bay Bridge and Tunnel District

Subdivision _____ Section _____ Block _____ Lot _____

Other Property Identification north side of administration building Tax Map No. 117-A-25

DESIGN BASIS

A. Estimated percolation rate: 20-25 mpi

B. Trench bottom square footage required: _____ (based on x Gravity or _____ LPD)

Per bedroom: _____

Per 100-gallons: 146

C. Number of bedrooms: _____ (at _____ gallons/bedroom) Total flow from bedrooms: _____ gpd

Other: 20-30 (at 20 gpd) Total flows from other sources: 600 gpd

employees (at _____ gpd) Total Sewage Flows = 600 gpd

_____ (at _____ gpd)

AREA CALCULATIONS

D. Length of trenches: 60 ft (length of available area 60 ft)

E. Width of trenches: 3 ft

F. Number of trenches: 5

G. Center-to-center spacing: 9 ft

H. Required width of drainfield: 21 ft (width of available area 39 ft)

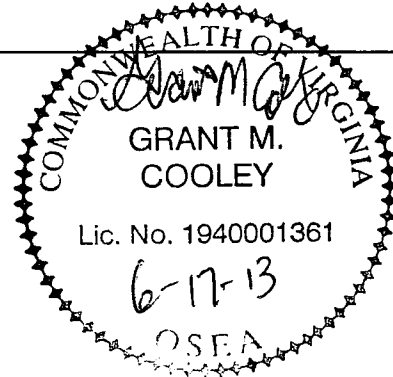
I. Total area required: 872 sf

J. Square footage in design: 900 sf

K. Is a reserve area required? Yes x No: _____ **Drainfield for repair**

Size: _____ % Area provided: _____

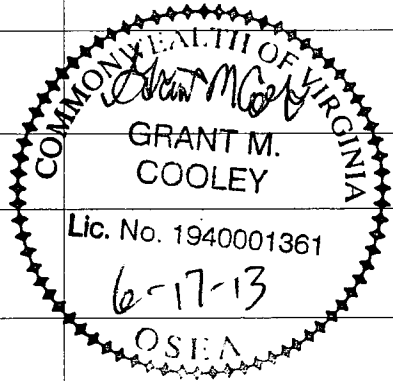
Type: **TL1 Gravity sewage system**



Sewage Disposal System Construction Specifications

General Information

Northampton County Health Department		ID #	13-165 - 0082
		Map reference	117-A-25
New <input type="checkbox"/>	Repair <input checked="" type="checkbox"/>	Expanded <input type="checkbox"/>	
Owner	Chesapeake Bay Bridge and Tunnel District		Telephone 757-331-2960
Address	P.O. Box 761 Warrington, PA 18976		
For a Type	I Sewage disposal system which is to be constructed on/at at 32386 Lankford Highway - north side of Administration Bldg.		
Subdivision	Section	Block	Lot
Actual or estimated water use:	600 gpd		
			NOTES
Water supply, existing: (describe) existing deep well -IIIA			
To be installed: class _____ cased _____ grouted _____			
Building Sewer: 4" I.D. PVC Schedule 40, or equivalent Slope 1.25" per 10' (minimum). <input type="checkbox"/> Other: _____			
Septic tank: Capacity 1000 gallons (minimum). <input type="checkbox"/> Other: Existing tank to remain in service + new 1250 gallon s.t. in series			
Inlet-Outlet structures: PVC Schedule 40, 4" tees or equivalent <input type="checkbox"/> Other: _____			
Pump and pump station: No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> describe and show design: If yes: _____			
Gravity mains: 3" or larger I.D., minimum 6" fall per 100', 1500 lb. Crush strength or eq. <input type="checkbox"/> Other: _____			
Distribution Box: Precast concrete with 6 ports. <input type="checkbox"/> Other: _____			
Header lines: Material: 4" I.D. 1500 lb. Crush strength plastic or equivalent from distribution box to 2' into trench. Slope 2" minimum <input type="checkbox"/> Other: _____			
Percolation lines: Gravity 4" plastic 1000 lb. Per foot bearing load or equivalent, slope 2"-4" (min. max) per 100'. <input type="checkbox"/> Other: _____			
Absorption trenches:			
Depth of aggregate:	13"	Trench length:	60'
Square feet required:	900	Trench width:	3'
Depth from ground surface to bottom of trench:	48"	Number of trenches:	5



Revised 6/99

Inspected by: _____

Date: _____

SITE PLAN - REPAIR

**CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT
32386 LANKFORD HWY. - ADMINISTRATIN BLDG.**

SHEET 7 OF 8

WOODED

SCALE: 1" = 100'

NEW 1250 GALLON S.T.

LARGE OAK TREE
(TYPICAL)

APPROX. LOCATION OF
EXISTING DRAINFEILD
SEE HDD#165-88-0348

EXISTING D.F. & D-BOX
TO BE ABANDONED PER
VDH REGULATIONS.

5 LINES @ 60' L X 3' WIDE, 9' D.C. = 900 SQ.FT.
INSTALL DRAINLINES @ 54' DEPTH

OPEN

NORTH SIDE OF ADMINISTRATION BLDG.

DRAINFIELD REPAIR DESIGN:

5 LINES @ 60' L X 3' WIDE, 9' D.C. = 900 SQ.FT.
INSTALL DRAINLINES @ 48" DEPTH
(CUP TO 36" FILL IN D.F. AREA)

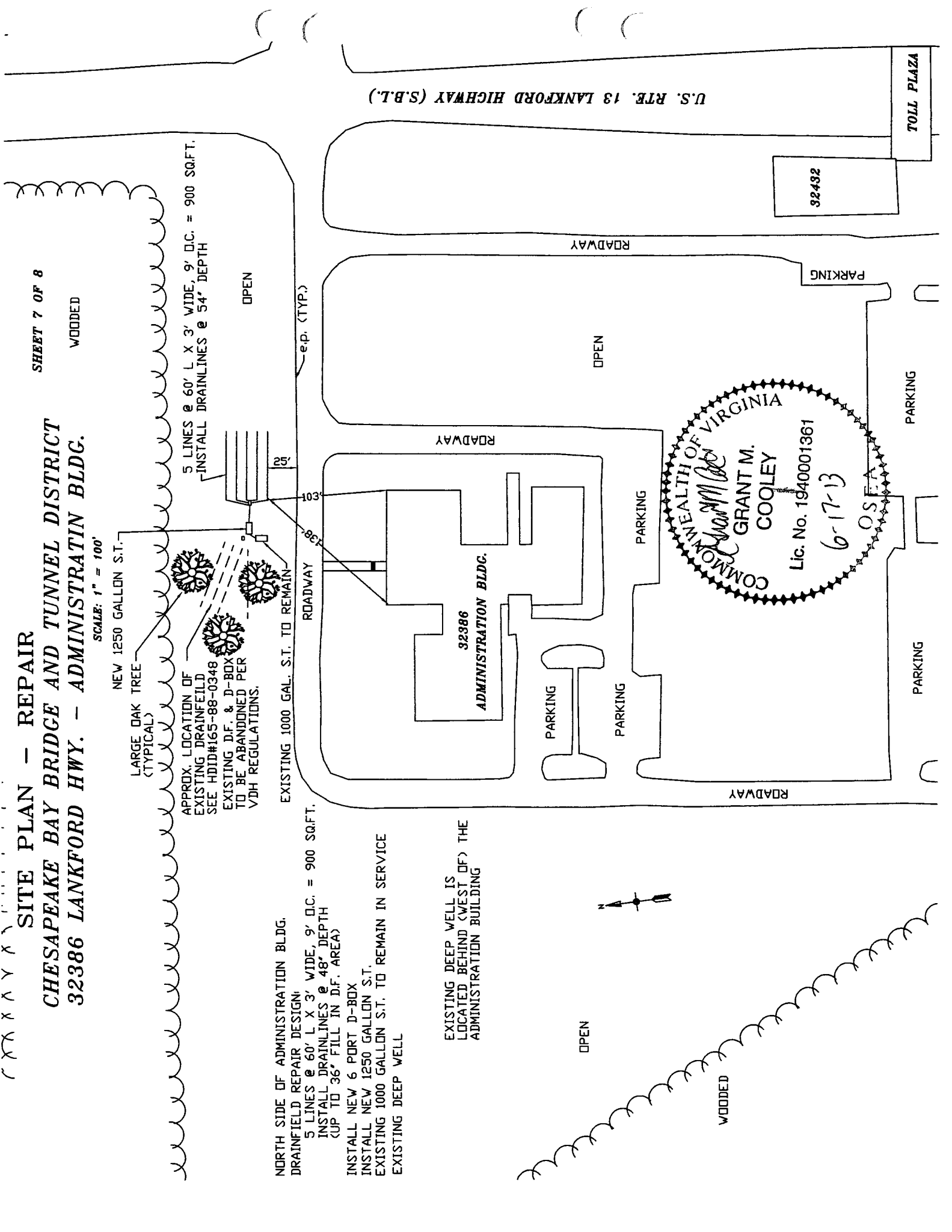
INSTALL NEW 6 PORT D-BOX

INSTALL NEW 1250 GALLON S.T.

EXISTING 1000 GALLON S.T. TO REMAIN IN SERVICE

EXISTING DEEP WELL

EXISTING DEEP WELL IS
LOCATED BEHIND (WEST OF) THE
ADMINISTRATION BUILDING



U.S. RTE. 13 LANKFORD HIGHWAY (S.B.L.)

TOLL PLAZA

32432

ROADWAY

32386

ADMINISTRATION BLDG.

PARKING

PARKING

PARKING

OPEN

ROADWAY

PARKING

PARKING

PARKING

ROADWAY

OPEN

WOODED

COMMONWEALTH OF VIRGINIA
 GRANT M. COOLEY
 Lic. No. 1940001361
 6-17-13
 O.S.E.A.

Commonwealth of Virginia Certification Statement

Health Department ID# 13-165-0082 (VDH Use)

PROPERTY IDENTIFICATION

County: Northampton County Date: _____

Name of property / site: Chesapeake Bay Bridge and Tunnel District

Subdivision _____ Section _____ Block _____ Lot _____

Other Property Identification 32386 Lankford Highway-Admin. Bldg. Tax Map No. 117-A-25

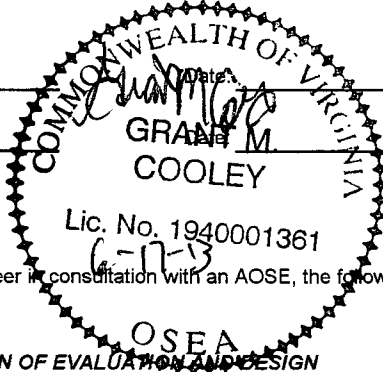
Submitted by: Grant M. Cooley AOSE #1361

CERTIFICATION OF WORK

This is to certify according to S32.1-163.5 of the *Code of Virginia* that work submitted for the referred property is in accordance to and complies with the *Sewage Handling and Disposal Regulations* of the Virginia Department of Health. I recommend this lot be approved for a Certification Letter.

AOSE Grant M. Cooley AOSE# 1361 Date: _____

Soil Consultant _____



If the submission contains a certification by a professional engineer in consultation with an AOSE, the following statement shall be signed and sealed:

CERTIFICATION OF EVALUATION AND DESIGN

I hereby certify that the evaluations and designs contained herein (refer to subdivision, lot, etc.) were conducted in accordance with the *Sewage Handling and Disposal Regulations* (12 VAC 5-610-10 et seq., the "Regulations") and the policies of the Virginia Department of Health for implementation of those *Regulations*. Furthermore, I certify that the evaluations and designs comply with the minimum requirements of the *Regulations*.

I recommend a permit/certification letter / subdivision approval be approved.

Licensed PE: Charles E. Cooley Date: 6/19/13



SEAL

Sewage System Construction Inspection Report

Health Department ID Number: **13-165-0082**

Tax Map/GPIN: 117((A))25

System Location

Owner: Chesapeake Bay Bridge and Tunnel District
 Property Address: 32386 Lankford Highway
 County: Northampton

Sewer Line

Diameter: 4 "	Satisfactory: Yes
Material:	Date Inspected:
	Comments: Existing

Septic Tank

Volume: 1250 gallons	Satisfactory: Yes
Material: Concrete (pre-cast)	Date Inspected: 6/26/2013
Grade on Tees:	Comments: Existing 1000 gallon septic tank remains

Conveyance Line

Method: Gravity	Satisfactory: Yes
Pipe Size: 3"	Date Inspected: 6/26/2013
Material: Sch 40 Plastic	Comments:

Distribution System and Header Lines

Method: Distribution Box	Satisfactory: Yes
Box Material: Concrete Box	Date Inspected: 6/26/2013
Number of Ports: 6	Comments:
Header Material: Smooth-bore plastic	

Trench Dispersal Area

Design Type: Standard	Satisfactory: Yes
Square Feet: 900 sq feet	Date Inspected: 6/26/2013
	Comments:
Trench Number: 5	Trench Width: 3'
Trench Length: 60'	Center Spacing: 9'
Trench Depth: 48"	Aggregate Type: Gravel

Overall Construction

Overall Construction: Yes
 Construction Comments:
 Completion Statement Received Date: July 3, 2013
 Inspected by: Cooley, Charles E. PE