ONSITE SEWAGE PROGRAM ACCELERATED CERTIFICATION TRAINING

ONSITE SYSTEM CONSTRUCTION PERMITS AND ISNPECTIONS
(MASTER CONTRACTOR PART III)

Day 4 – Thursday 8:00 AM-4:00 PM (6 CEUs)

Objective:

To give a clear understanding of the permitting and inspection process for Onsite Sewage Treatment and Disposal Systems as provided for in 64E-6, FAC.

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8:00 – 8:15
Welcome, Introduction and Course Overview

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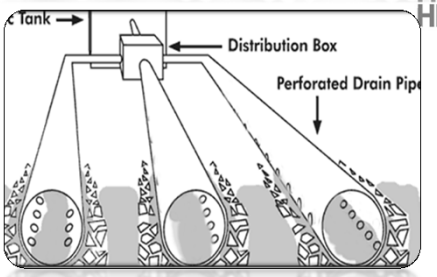

A - 8:15 – 10:15

Construction Permits for Conventional Systems

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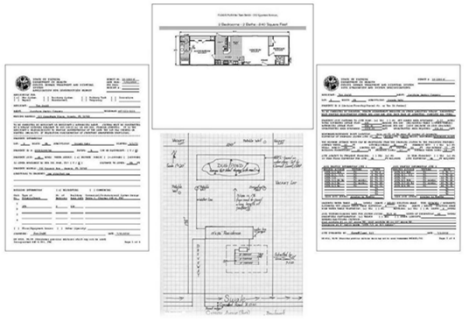
Items Required for Permit Writing

- Completion of a New System Construction Permit (DH4016pg1) for a conventional system requires the following documents:
  - Application (DH4015pg1).
  - Site Plan (DH4015pg2).
  - Site Evaluation (DH4015pg3).
  - Floor Plan
  - (64E-6.004(3)(b))

Items Required for Permit Writing



- These are used to determine:
  - Tank Sizes.
  - Drainfield sizes.
  - Drainfield elevation.

On Form DH4016pg1 (System Construction Permit)

STATE OF FLORIDA
DEPARTMENT OF HEALTH
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM
CONSTRUCTION PERMIT

PERMIT NO. _____
DATE PAID: _____
FEE PAID: _____
RECEIPT #: _____

CONSTRUCTION PERMIT FOR:
[ ] New System [ ] Existing System [ ] Holding Tank [ ] Innovative
[ ] Repair [ ] Abandonment [ ] Temporary [ ] _____

APPLICANT: _____

PROPERTY ADDRESS: _____

LOT: _____ BLOCK: _____ SUBDIVISION: _____

PROPERTY ID #: _____ [SECTION, TOWNSHIP, RANGE, PARCEL NUMBER] [OR TAX ID NUMBER]

SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH SPECIFICATIONS AND STANDARDS OF SECTION 381.0065, F.S., AND CHAPTER 64E-6, F.A.C. DEPARTMENT APPROVAL OF SYSTEM DOES NOT GUARANTEE SATISFACTORY PERFORMANCE FOR ANY SPECIFIC PERIOD OF TIME. ANY CHANGE IN MATERIAL FACTS, WHICH SERVED AS A BASIS FOR THE ISSUANCE OF THIS PERMIT, MUST BE REPORTED TO THE DEPARTMENT. FAILURE TO REPORT SUCH MODIFICATIONS MAY RESULT IN THIS PERMIT BEING MADE NULL AND VOID. ISSUANCE OF THIS PERMIT DOES NOT EXEMPT THE APPLICANT FROM COMPLIANCE WITH OTHER FEDERAL, STATE, OR LOCAL PERMITTING REQUIRED FOR DEVELOPMENT OF THIS PROPERTY.

SYSTEM DESIGN AND SPECIFICATIONS

T [ ] GALLONS / GPD SEPTIC TANK/AEROBIC UNIT CAPACITY MULTI-CHAMBERED/IN-SERIES [ ]
A [ ] GALLONS / GPD CAPACITY MULTI-CHAMBERED/IN-SERIES [ ]
N [ ] GALLONS GREASE INTERCEPTOR CAPACITY [MINIMUM CAPACITY SINGLE TANK: 1250 GALLONS]
K [ ] GALLONS DOSING TANK CAPACITY [ ] GALLONS I [ ] DOSES PER 24 HRS # PUMPS [ ]

D [ ] SQUARE FEET PRIMARY DRAINFIELD SYSTEM
R [ ] SQUARE FEET SYSTEM
A TYPE SYSTEM: [ ] STANDARD [ ] FILLED [ ] MOUND [ ] _____
I CONFIGURATION: [ ] TRENCH [ ] BED [ ] _____
N
A LOCATION OF BENCHMARK: _____
I ELEVATION OF PROPOSED SYSTEM SITE [ ] [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT
N BOTTOM OF DRAINFIELD TO BE [ ] [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT
L
D FILL REQUIRED: [ ] INCHES EXCAVATION REQUIRED: [ ] INCHES

O _____
T _____
H _____
E _____
R _____

SPECIFICATIONS BY: _____ TITLE: _____

APPROVED BY: _____ TITLE: _____ _____ CHD

DATE ISSUED: _____ EXPIRATION DATE: _____

DH 4016, 08/09 (Obsoletes all previous editions which may not be used)
Incorporated: 64E-6.003, FAC
Page 1 of 3

Items Determined **Location on Permit**

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Conventional Systems

- Tank size determinations and permitting
- Drainfield size determinations and permitting
- Drainfield Elevation Permitting
- Fill, Mound and Excavation Permitting
- Maintenance Requirements

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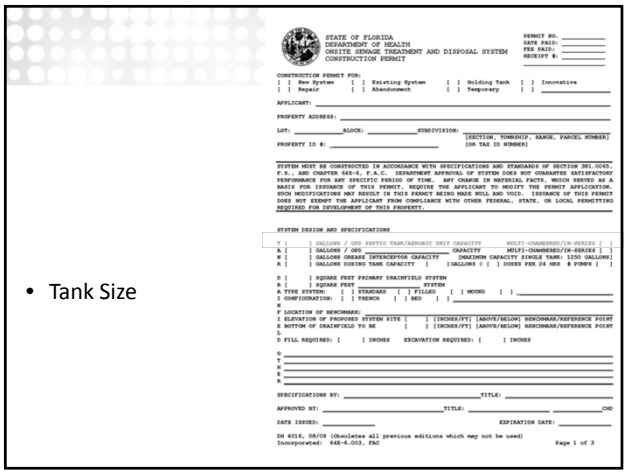

STATE OF FLORIDA
DEPARTMENT OF HEALTH
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM
CONSTRUCTION PERMIT

PERMIT NO. _____
DATE PAID: _____
FEE PAID: _____
RECEIPT #: _____

CONSTRUCTION PERMIT FOR:
[ ] New System [ ] Existing System [ ] Holding Tank [ ] Innovative
[ ] Repair [ ] Abandonment [ ] Temporary [ ] _____

APPLICANT: _____

PROPERTY ADDRESS: _____

LOT: _____ BLOCK: _____ SUBDIVISION: _____
[SECTION, TOWNSHIP, RANGE, PARCEL NUMBER]
PROPERTY ID #: _____ [OR TAX ID NUMBER]

SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH SPECIFICATIONS AND STANDARDS OF SECTION 381.0065, F.S., AND CHAPTER 64E-6, F.A.C. DEPARTMENT APPROVAL OF SYSTEM DOES NOT GUARANTEE SATISFACTORY PERFORMANCE FOR ANY SPECIFIC PERIOD OF TIME. ANY CHANGE IN MATERIAL FACTS, WHICH SERVES AS A BASIS FOR ISSUANCE OF THIS PERMIT, REQUIRE THE APPLICANT TO MODIFY THE PERMIT APPLICATION. SUCH MODIFICATIONS MAY RESULT IN THIS PERMIT BEING MADE NULL AND VOID. ISSUANCE OF THIS PERMIT DOES NOT EXEMPT THE APPLICANT FROM COMPLIANCE WITH OTHER FEDERAL, STATE, OR LOCAL PERMITTING REQUIRED FOR DEVELOPMENT OF THIS PROPERTY.

SYSTEM DESIGN AND SPECIFICATIONS

T [ ] GALLONS / GRD SEPTIC TANK/AEROBIC UNIT CAPACITY MULTI-CHAMBERED/IN-SERIES [ ]
A [ ] GALLONS / GRD _____ CAPACITY MULTI-CHAMBERED/IN-SERIES [ ]
N [ ] GALLONS GREASE INTERCEPTOR CAPACITY [MAXIMUM CAPACITY SINGLE TANK: 1250 GALLONS]
K [ ] GALLONS DOSING TANK CAPACITY [ ] GALLONS / [ ] DOSES PER 24 HRS @ PUMPS [ ]

D [ ] SQUARE FEET PRIMARY DRAINFIELD SYSTEM
R [ ] SQUARE FEET SYSTEM
A TYPE SYSTEM: [ ] STANDARD [ ] FILLED [ ] MOUND [ ] _____
I CONFIGURATION: [ ] TRENCH [ ] BED [ ] _____
N
F LOCATION OF BENCHMARK:
I ELEVATION OF PROPOSED SYSTEM SITE [ ] [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT
E BOTTOM OF DRAINFIELD TO BE [ ] [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT
L
D FILL REQUIRED: [ ] INCHES EXCAVATION REQUIRED: [ ] INCHES

O
T
H
E
R

SPECIFICATIONS BY: _____ TITLE: _____

APPROVED BY: _____ TITLE: _____ _____ CHD

DATE ISSUED: _____ EXPIRATION DATE: _____

DH 4016, 08/09 (Obsoletes all previous editions which may not be used)
Incorporated: 64E-6.003, FAC Page 1 of 3

- Tank Size

Tank size determinations for conventional systems:

- Tank sizes for conventional systems are determined using:
  - 64E-6.008(2-4).
  - 64E-6.013(2 and 8).
  - The Site Evaluation Form (DH4015 pg.3).
  - Table II, 64E-6.008, F.A.C.

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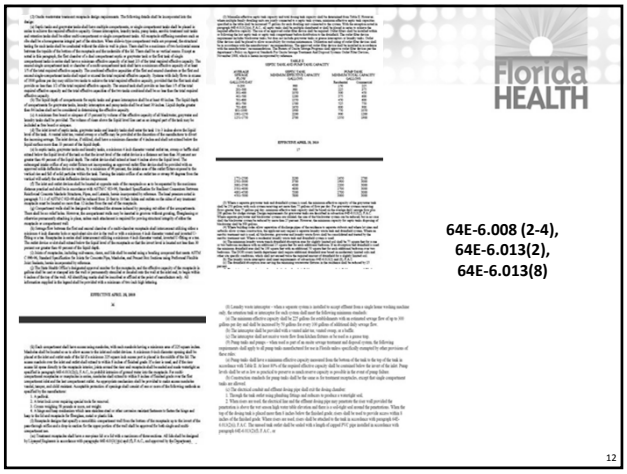

64E-6.008 (2-4), 64E-6.013(2), 64E-6.013(8)

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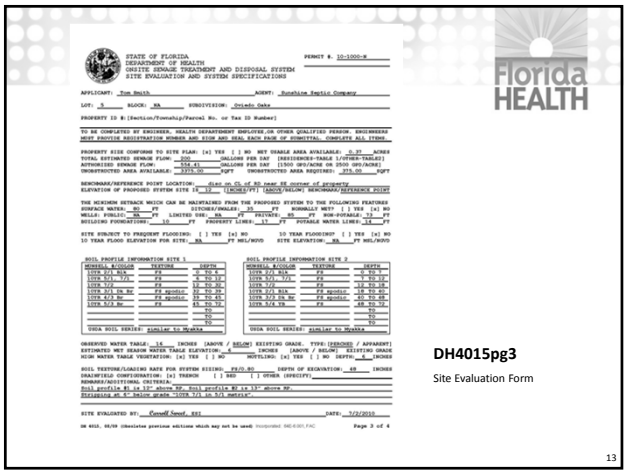

STATE OF FLORIDA
DEPARTMENT OF HEALTH
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM
SITE EVALUATION AND SYSTEM SPECIFICATIONS

PERMIT #. 10-1000-N

APPLICANT: Tom Smith AGENT: Sunshine Septic Company

LOT: 5 BLOCK: NA SUBDIVISION: Oviedo Oaks

PROPERTY ID #:[Section/Township/Parcel No. or Tax ID Number]

TO BE COMPLETED BY ENGINEER, HEALTH DEPARTEMENT EMPLOYEE,OR OTHER QUALIFIED PERSON. ENGINNEERS MUST PROVIDE REGISTRATION NUMBER AND SIGN AND SEAL EACH PAGE OF SUBMITTAL. COMPLETE ALL ITEMS.

PROPERTY SIZE CONFORMS TO SITE PLAN: [x] YES [ ] NO NET USABLE AREA AVAILABLE: 0.37 ACRES
TOTAL ESTIMATED SEWAGE FLOW: 200 GALLONS PER DAY [RESIDENCES-TABLE 1/OTHER-TABLE2]
AUTHORIZED SEWAGE FLOW: 554.41 GALLONS PER DAY [1500 GPD/ACRE OR 2500 GPD/ACRE]
UNOBSTRUCTED AREA AVAILABLE: 3375.00 SQFT UNOBSTRUCTED AREA REQUIRED: 375.00 SQFT

BENCHMARK/REFERENCE POINT LOCATION: disc on CL of RD near NE corner of property
ELEVATION OF PROPOSED SYSTEM SITE IS 12 [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT

THE MINIMUM SETBACK WHICH CAN BE MAINTAINED FROM THE PROPOSED SYSTEM TO THE FOLLOWING FEATURES
SURFACE WATER: 80 FT DITCHES/SWALES: 35 FT NORMALLY WET? [ ] YES [x] NO
WELLS: PUBLIC: NA FT LIMITED USE: NA FT PRIVATE: 85 FT NON-POTABLE: 73 FT
BUILDING FOUNDATIONS: 10 FT PROPERTY LINES: 15 FT POTABLE WATER LINES: 23 FT

SITE SUBJECT TO FREQUENT FLOODING: [ ] YES [x] NO 10 YEAR FLOODING? [ ] YES [x] NO
10 YEAR FLOOD ELEVATION FOR SITE: NA FT MSL/NGVD SITE ELEVATION: NA FT MSL/NGVD

SOIL PROFILE INFORMATION SITE 1

MUNSELL #/COLOR	TEXTURE	DEPTH
10YR 2/1 BLK	FS	0 TO 4
10YR 5/1, 7/1	FS	4 TO 12
10YR 7/2	FS	12 TO 32
10YR 7/2 GN BR	FS mpdlc	32 TO 45
10YR 6/3 Br	FS mpdlc	45 TO 65
10YR 5/3 Br	FS	65 TO 72
		TO
		TO
		TO

USDA SOIL SERIES: similar to Myakka

SOIL PROFILE INFORMATION SITE 2

MUNSELL #/COLOR	TEXTURE	DEPTH
10YR 2/1 BLK	FS	0 TO 7
10YR 5/1, 7/1	FS	7 TO 12
10YR 7/2	FS	12 TO 28
10YR 7/2 GN BR	FS mpdlc	28 TO 45
10YR 6/3 GN BR	FS mpdlc	45 TO 65
10YR 5/3 Br	FS	65 TO 72
		TO
		TO
		TO

USDA SOIL SERIES: similar to Myakka

OBSERVED WATER TABLE: 16 INCHES [ABOVE / BELOW] EXISTING GRADE. TYPE:[PERCHED / APPARENT]
ESTIMATED WET SEASON WATER TABLE ELEVATION: 4 INCHES [ABOVE / BELOW] EXISTING GRADE
HIGH WATER TABLE VEGETATION: [x] YES [ ] NO MOTTLING: [x] YES [ ] NO DEPTH: 6 INCHES

SOIL TEXTURE/LOADING RATE FOR SYSTEM SIZING: FS/0.80 DEPTH OF EXCAVATION: 48 INCHES
DRAINFIELD CONFIGURATION: [x] TRENCH [ ] BED [ ] OTHER (SPECIFY)
REMARKS/ADDITIONAL CRITERIA:
Soil profile #1 is 18' above RP. Soil profile #2 is 13' above RP.
Stringing at 6" below grade "(USDA 7/1 in 5/1 matrix)".

SITE EVALUATED BY: Carroll Sneed, EHI DATE: 7/2/2010

DH 4015, 08/09 (Obsolete previous editions which may not be used) Incorporated: 64E-6.001,FAC Page 3 of 4

DH4015pg3

Site Evaluation Form

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STATE OF FLORIDA
DEPARTMENT OF HEALTH
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM
SITE EVALUATION AND SYSTEM SPECIFICATIONS

PERMIT #. 10-1000-N

APPLICANT: Tom Smith AGENT: Sunshine Septic Company

LOT: 5 BLOCK: NA SUBDIVISION: Oviedo Oaks

PROPERTY ID #:[Section/Township/Parcel No. or Tax ID Number]

TO BE COMPLETED BY ENGINEER, HEALTH DEPARTEMENT EMPLOYEE,OR OTHER QUALIFIED PERSON. ENGINNEERS MUST PROVIDE REGISTRATION NUMBER AND SIGN AND SEAL EACH PAGE OF SUBMITTAL. COMPLETE ALL ITEMS.

PROPERTY SIZE CONFORMS TO SITE PLAN: [x] YES [ ] NO NET USABLE AREA AVAILABLE: 0.37 ACRES
TOTAL ESTIMATED SEWAGE FLOW: 200 GALLONS PER DAY [RESIDENCES-TABLE 1/OTHER-TABLE2]
AUTHORIZED SEWAGE FLOW: 554.41 GALLONS PER DAY [1500 GPD/ACRE OR 2500 GPD/ACRE]
UNOBSTRUCTED AREA AVAILABLE: 3375.00 SQFT UNOBSTRUCTED AREA REQUIRED: 375.00 SQFT

Total Estimated Sewage Flow from form DH4015pg3 (Site Evaluation)

200 Gallons Per Day

- Total estimated sewage flow from the site evaluation form is 200 gallons per day.
  - Use Table II [64E-6.008(2)] to determine the minimum required Septic Tank effective capacity.

TABLE II
SEPTIC TANK AND PUMP TANK CAPACITY

AVERAGE SEWAGE FLOW GALLONS/DAY	SEPTIC TANK MINIMUM EFFECTIVE CAPACITY GALLONS	PUMP TANK MINIMUM TOTAL CAPACITY GALLONS Residential	PUMP TANK MINIMUM TOTAL CAPACITY GALLONS Commercial
0-200	900	150	225
201-300	900	225	375
301-400	1050	300	450
401-500	1200	375	600
501-600	1350	450	600
601-700	1500	525	750
701-800	1650	600	900

- Find the corresponding sewage flow in Column 1.
- Then look across the row to find the minimum required tank capacity in Column 2.

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TABLE II
SEPTIC TANK AND PUMP TANK CAPACITY

AVERAGE SEWAGE FLOW GALLONS/DAY	SEPTIC TANK MINIMUM EFFECTIVE CAPACITY GALLONS	PUMP TANK MINIMUM TOTAL CAPACITY GALLONS Residential	Commercial
0-200	900	150	225
201-300	900	225	375
301-400	1050	300	450
401-500	1200	375	600
501-600	1350	450	600
601-700	1500	525	750
701-800	1650	600	900
801-1000	1900	750	1050
1001-1250	2200	900	1200
1251-1750	2700	1350	1900
1751-2500	3200	1650	2700
2501-3000	3700	1900	3000
3001-3500	4300	2200	3000
3501-4000	4800	2700	3000
4001-4500	5300	2700	3000
4501-5000	5800	3000	3000

EFFECTIVE APRIL 28, 2010

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Table II, 64E-6.008(2)

Septic Tank Size Specification:

STATE OF FLORIDA
DEPARTMENT OF HEALTH
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM
CONSTRUCTION PERMIT

PERMIT NO. 10-1000-N
DATE PAID: 7/1/2010
FEE PAID: _____
RECEIPT #: _____

CONSTRUCTION PERMIT FOR:
[X] New System [ ] Existing System [ ] Holding Tank [ ] Innovative
[ ] Repair [ ] Abandonment [ ] Temporary [ ] _____

APPLICANT: Tom Smith

PROPERTY ADDRESS: 312 Cypress Ave., Geneva, FL 32765

LOT: 5 BLOCK: NA SUBDIVISION: Oviedo Oaks
[SECTION, TOWNSHIP, RANGE, PARCEL NUMBER]
PROPERTY ID #: 293031000782 [OR TAX ID NUMBER]

SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH SPECIFICATIONS AND STANDARDS OF SECTION 381.0065, F.S., AND CHAPTER 64E-6, F.A.C. DEPARTMENT APPROVAL OF SYSTEM DOES NOT GUARANTEE SATISFACTORY PERFORMANCE FOR ANY SPECIFIC PERIOD OF TIME. ANY CHANGE IN MATERIAL FACTS, WHICH SERVED AS A BASIS FOR ISSUANCE OF THIS PERMIT, REQUIRE THE APPLICANT TO MODIFY THE PERMIT APPLICATION. SUCH MODIFICATIONS MAY RESULT IN THIS PERMIT BEING MADE NULL AND VOID. ISSUANCE OF THIS PERMIT DOES NOT EXEMPT THE APPLICANT FROM COMPLIANCE WITH OTHER FEDERAL, STATE, OR LOCAL PERMITTING REQUIRED FOR DEVELOPMENT OF THIS PROPERTY.

SYSTEM DESIGN AND SPECIFICATIONS

T [900] GALLONS / GPD SEPTIC TANK/AEROBIC UNIT CAPACITY MULTI-CHAMBERED/IN-SERIES [X]
A [ ] GALLONS / GPD _____ CAPACITY MULTI-CHAMBERED/IN-SERIES [ ]
N [ ] GALLONS GREASE INTERCEPTOR CAPACITY [MAXIMUM CAPACITY SINGLE TANK: 1250 GALLONS]
K [ ] GALLONS DOSING TANK CAPACITY [ ] GALLONS @ [ ] DOSES PER 24 HRS # PUMPS [ ]

- Drainfield Size and Configuration

STATE OF FLORIDA
DEPARTMENT OF HEALTH
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM
CONSTRUCTION PERMIT

PERMIT NO. _____
DATE PAID: _____
FEE PAID: _____
RECEIPT #: _____

CONSTRUCTION PERMIT FOR:
[ ] New System [ ] Existing System [ ] Holding Tank [ ] Innovative
[ ] Repair [ ] Abandonment [ ] Temporary [ ] _____

APPLICANT: _____

PROPERTY ADDRESS: _____

LOT: _____ BLOCK: _____ SUBDIVISION: _____
[SECTION, TOWNSHIP, RANGE, PARCEL NUMBER]
PROPERTY ID #: _____ [OR TAX ID NUMBER]

SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH SPECIFICATIONS AND STANDARDS OF SECTION 381.0065, F.S., AND CHAPTER 64E-6, F.A.C. DEPARTMENT APPROVAL OF SYSTEM DOES NOT GUARANTEE SATISFACTORY PERFORMANCE FOR ANY SPECIFIC PERIOD OF TIME. ANY CHANGE IN MATERIAL FACTS, WHICH SERVED AS A BASIS FOR ISSUANCE OF THIS PERMIT, REQUIRE THE APPLICANT TO MODIFY THE PERMIT APPLICATION. SUCH MODIFICATIONS MAY RESULT IN THIS PERMIT BEING MADE NULL AND VOID. ISSUANCE OF THIS PERMIT DOES NOT EXEMPT THE APPLICANT FROM COMPLIANCE WITH OTHER FEDERAL, STATE, OR LOCAL PERMITTING REQUIRED FOR DEVELOPMENT OF THIS PROPERTY.

SYSTEM DESIGN AND SPECIFICATIONS

T [ ] GALLONS / GPD SEPTIC TANK/AEROBIC UNIT CAPACITY MULTI-CHAMBERED/IN-SERIES [ ]
A [ ] GALLONS / GPD _____ CAPACITY MULTI-CHAMBERED/IN-SERIES [ ]
N [ ] GALLONS GREASE INTERCEPTOR CAPACITY [MAXIMUM CAPACITY SINGLE TANK: 1250 GALLONS]
K [ ] GALLONS DOSING TANK CAPACITY [ ] GALLONS @ [ ] DOSES PER 24 HRS # PUMPS [ ]

D [ ] SQUARE FEET PRIMARY DRAINFIELD SYSTEM
R [ ] SQUARE FEET REPLACEMENT SYSTEM
A TYPE SYSTEM: [ ] STANDARD [ ] FILLED [ ] MOUND [ ] _____
I CONFIGURATION: [ ] TRENCH [ ] BED [ ] _____
N

F LOCATION OF BENCHMARK:
I ELEVATION OF PROPOSED SYSTEM SITE [ ] [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT
E BOTTOM OF DRAINFIELD TO BE [ ] [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT
L
D FILL REQUIRED: [ ] INCHES EXCAVATION REQUIRED: [ ] INCHES

O _____
T _____
H _____
E _____
R _____

SPECIFICATIONS BY: _____ TITLE: _____

APPROVED BY: _____ TITLE: _____ _____ CHD

DATE ISSUED: _____ EXPIRATION DATE: _____

DH 4016, 08/09 (Obsoletes all previous editions which may not be used)
Incorporated: 64E-6.003, FAC

Page 1 of 3

Drainfield size and configuration determinations and permitting

- Drainfield size and configuration are determined using:
  - The estimated sewage flow documented on the site evaluation form (DH4015 pg 3).
  - The soil texture documented on the site evaluation form (DH4015 pg 3).
  - The drainfield configuration documented on the site evaluation form (DH4015 pg 3).
  - Table III, 64E-6.008(5).

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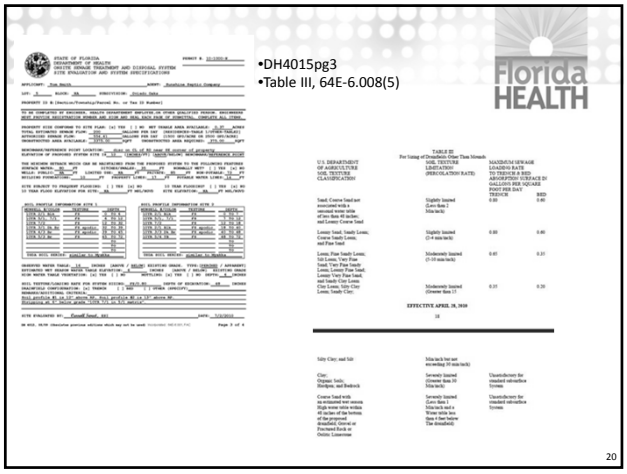

•DH4015pg3
•Table III, 64E-6.008(5)

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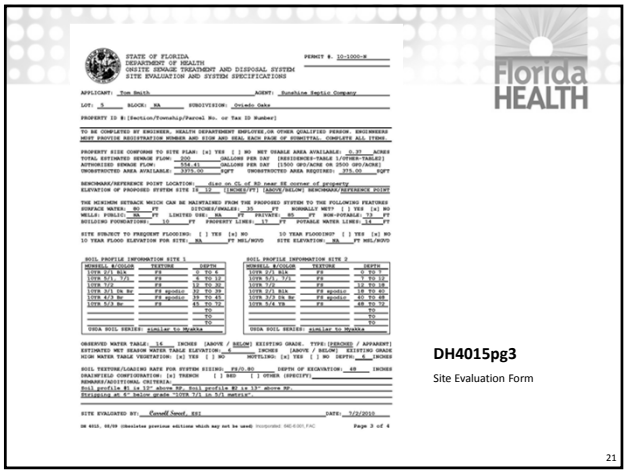

STATE OF FLORIDA
DEPARTMENT OF HEALTH
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM
SITE EVALUATION AND SYSTEM SPECIFICATIONS

PERMIT #: 10-1000-N

APPLICANT: Tom Smith AGENT: Sunshine Septic Company

LOT: 5 BLOCK: NA SUBDIVISION: Orlando Oaks

PROPERTY ID #:[Section/Township/Parcel No. or Tax ID Number]

TO BE COMPLETED BY ENGINEER, HEALTH DEPARTMENT EMPLOYEE,OR OTHER QUALIFIED PERSON. ENGINEERS MUST PROVIDE REGISTRATION NUMBER AND SIGN AND SEAL EACH PAGE OF SUBMITTAL. COMPLETE ALL ITEMS.

PROPERTY SIZE CONFORMS TO SITE PLAN: [x] YES [ ] NO NET USABLE AREA AVAILABLE: 0.35 ACRES
TOTAL ESTIMATED SEWAGE FLOW: 500 GALLONS PER DAY [REGIONORDS-TABLE 1/OTHER-TABLE1]
AUTHORIZED SEWAGE FLOW: 500.00 GALLONS PER DAY [1500 GPD/ACRE OR 2500 GPD/ACRE]
UNCONSTRUCTED AREA AVAILABLE: 2976.00 SQFT UNCONSTRUCTED AREA REQUIRED: 250.00 SQFT

BENCHMARK/REFERENCE POINT LOCATION: Bolt on CL of RD near SE corner of property
ELEVATION OF PROPOSED SYSTEM SITE IN 12 INCHES/FT [ABOVE/BELOW] BENCHMARK/REFERENCE POINT

THE MINIMUM SETBACK WHICH CAN BE MAINTAINED FROM THE PROPOSED SYSTEM TO THE FOLLOWING FEATURES
SURFACE WATER: NO FT DITCHES/SWALES: 35 FT NORMALLY WET? [ ] YES [x] NO
WELLS: PUBLIC: NA FT LIMITED USE: NA FT PRIVATE: 85 FT NON-POTABLE: 73 FT
BUILDING FOUNDATIONS: 10 FT PROPERTY LINES: 17 FT POTABLE WATER LINES: 13 FT

SITE SUBJECT TO FREQUENT FLOODING: [ ] YES [x] NO 10 YEAR FLOOD ELEVATION: [ ] YES [x] NO
10 YEAR FLOOD ELEVATION FOR SITE: NA FT MSL/NGVD SITE ELEVATION: NA FT MSL/NGVD

SOIL PROFILE INFORMATION SITE 1

MUNSELL #/COLOR	TEXTURE	DEPTH
10YR 2/1 Blk	FS	0 TO 4
10YR 5/1 Gry	FS	4 TO 12
10YR 7/2	FS	12 TO 30
10YR 3/1 Vk Br	FS spodic	30 TO 35
10YR 5/1 Gry	FS spodic	35 TO 48
10YR 5/2 Br	FS	48 TO 72
		TO
		TO
		TO
USDA SOIL SERIES: similar to Malabar		

SOIL PROFILE INFORMATION SITE 2

MUNSELL #/COLOR	TEXTURE	DEPTH
10YR 2/1 Blk	FS	0 TO 5
10YR 5/1 Gry	FS	5 TO 12
10YR 7/2	FS	12 TO 28
10YR 3/1 Vk Br	FS spodic	28 TO 35
10YR 5/1 Gry	FS spodic	35 TO 48
10YR 5/2 Br	FS	48 TO 72
		TO
		TO
		TO
USDA SOIL SERIES: similar to Malabar		

OBSERVED WATER TABLE: 16 INCHES [ABOVE / BELOW] EXISTING GRADE. TYPE:[PERCHED / APPARENT]
ESTIMATED WET SEASON WATER TABLE ELEVATION: 6 INCHES [ABOVE / BELOW] EXISTING GRADE
HIGH WATER TABLE VEGETATION: [x] YES [ ] NO MOTTLING: [x] YES [ ] NO DEPTH: 6 INCHES

SOIL TEXTURE/LOADING RATE FOR SYSTEM SIZING: FS/0.80 DEPTH OF EXCAVATION: 48 INCHES
DRAINFIELD CONFIGURATION: [x] TRENCH [ ] BED [ ] OTHER (SPECIFY)
REMARKS/ADDITIONAL SKETCHES:
Soil profile #1 is 14.16' above BF. Soil profile #2 is 13' above BF.
Estimated #6 " Below grade -USDA T/L in S/1 matrix".

SITE EVALUATED BY: Cornell Smart, EHS DATE: 7/2/2010

DH 4015, 08/09 (Obsolete previous editions which may not be used) Incorporated, 64E-6.001, F.A.C. Page 3 of 4

DH4015pg3

Site Evaluation Form

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STATE OF FLORIDA
DEPARTMENT OF HEALTH
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM
SITE EVALUATION AND SYSTEM SPECIFICATIONS

PERMIT #. 10-1000-N

APPLICANT: Tom Smith AGENT: Sunshine Septic Company

LOT: 5 BLOCK: NA SUBDIVISION: Oviedo Oaks

PROPERTY ID #:[Section/Township/Parcel No. or Tax ID Number]

TO BE COMPLETED BY ENGINEER, HEALTH DEPARTEMENT EMPLOYEE,OR OTHER QUALIFIED PERSON. ENGINNEERS MUST PROVIDE REGISTRATION NUMBER AND SIGN AND SEAL EACH PAGE OF SUBMITTAL. COMPLETE ALL ITEMS.

PROPERTY SIZE CONFORMS TO SITE PLAN: [x] YES [ ] NO NET USABLE AREA AVAILABLE: 0.37 ACRES
TOTAL ESTIMATED SEWAGE FLOW: 200 GALLONS PER DAY [RESIDENCES-TABLE 1/OTHER-TABLE2]
AUTHORIZED SEWAGE FLOW: 554.41 GALLONS PER DAY [1500 GPD/ACRE OR 2500 GPD/ACRE]
UNOBSTRUCTED AREA AVAILABLE: 3375.00 SQFT UNOBSTRUCTED AREA REQUIRED: 375.00 SQFT

Total Estimated Sewage Flow from form DH4015pg3 (Site Evaluation)

200 Gallons Per Day

SOIL PROFILE INFORMATION SITE 1

MUNSELL #/COLOR	TEXTURE	DEPTH
10YR 2/1 Blk	FS	0 TO 6
10YR 5/1, 7/1	FS	6 TO 12
10YR 7/2	FS	12 TO 32
10YR 3/1 Dk Br	FS spodic	32 TO 39
10YR 4/3 Br	FS spodic	39 TO 45
10YR 5/3 Br	FS	45 TO 72
		TO
		TO
		TO

USDA SOIL SERIES: similar to Myakka

SOIL PROFILE INFORMATION SITE 2

MUNSELL #/COLOR	TEXTURE	DEPTH
10YR 2/1 Blk	FS	0 TO 7
10YR 5/1, 7/1	FS	7 TO 12
10YR 7/2	FS	12 TO 18
10YR 2/1 Blk	FS spodic	18 TO 40
10YR 3/3 Dk Br	FS spodic	40 TO 48
10YR 5/4 YB	FS	48 TO 72
		TO
		TO
		TO

USDA SOIL SERIES: similar to Myakka

OBSERVED WATER TABLE: 16 INCHES [ABOVE / BELOW] EXISTING GRADE. TYPE:[PERCHED / APPARENT]
ESTIMATED WET SEASON WATER TABLE ELEVATION: 6 INCHES [ABOVE / BELOW] EXISTING GRADE
HIGH WATER TABLE VEGETATION: [x] YES [ ] NO MOTTLING: [x] YES [ ] NO DEPTH: 6 INCHES

SOIL TEXTURE/LOADING RATE FOR SYSTEM SIZING: FS/0.80 DEPTH OF EXCAVATION: 48 INCHES
DRAINFIELD CONFIGURATION: [x] TRENCH [ ] BED [ ] OTHER (SPECIFY)
REMARKS/ADDITIONAL CRITERIA:

Soil Texture/Loading Rate from form DH4015pg3 (Site Evaluation)

Fine Sand/0.80

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SOIL PROFILE INFORMATION SITE 1

MUNSELL #/COLOR	TEXTURE	DEPTH
10YR 2/1 Blk	FS	0 TO 6
10YR 5/1, 7/1	FS	6 TO 12
10YR 7/2	FS	12 TO 32
10YR 3/1 Dk Br	FS spodic	32 TO 39
10YR 4/3 Br	FS spodic	39 TO 45
10YR 5/3 Br	FS	45 TO 72
		TO
		TO
		TO

USDA SOIL SERIES: similar to Myakka

SOIL PROFILE INFORMATION SITE 2

MUNSELL #/COLOR	TEXTURE	DEPTH
10YR 2/1 Blk	FS	0 TO 7
10YR 5/1, 7/1	FS	7 TO 12
10YR 7/2	FS	12 TO 18
10YR 2/1 Blk	FS spodic	18 TO 40
10YR 3/3 Dk Br	FS spodic	40 TO 48
10YR 5/4 YB	FS	48 TO 72
		TO
		TO
		TO

USDA SOIL SERIES: similar to Myakka

OBSERVED WATER TABLE: 16 INCHES [ABOVE / BELOW] EXISTING GRADE. TYPE:[PERCHED / APPARENT]
ESTIMATED WET SEASON WATER TABLE ELEVATION: 6 INCHES [ABOVE / BELOW] EXISTING GRADE
HIGH WATER TABLE VEGETATION: [x] YES [ ] NO MOTTLING: [x] YES [ ] NO DEPTH: 6 INCHES

SOIL TEXTURE/LOADING RATE FOR SYSTEM SIZING: FS/0.80 DEPTH OF EXCAVATION: 48 INCHES
DRAINFIELD CONFIGURATION: [x] TRENCH [ ] BED [ ] OTHER (SPECIFY)
REMARKS/ADDITIONAL CRITERIA:

Drainfield Configuration from form DH4015pg3 (Site Evaluation)

Trench

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- The Total Estimated Sewage Flow from form DH4015pg3 is:
  - **200GPD**
- The Soil Texture/Loading Rate from form DH4015pg3 is:
  - **Fine Sand/0.80**
- The Drainfield Configuration from form DH4015pg3 is:
  - **Trench**

To determine the minimum required drainfield size, we divide:

- The Total Estimated Flow: 200gpd
- By the Loading Rate: 0.80 (for trenches in fine sand)

So: 200gpd / 0.80 = 250 square feet of drainfield in trenches required

Drainfield Size and Configuration as entered onto the system construction permit form (DH4016pg1).

D [250] SQUARE FEET PRIMARY DRAINFIELD SYSTEM
R [ ] SQUARE FEET SYSTEM
A TYPE SYSTEM: [ ] STANDARD [ ] FILLED [x] MOUND [ ] _____
I CONFIGURATION: [x] TRENCH [ ] BED [ ] _____
N

The required drainfield size and configuration go into the appropriate section of the system construction permit form.

- Benchmark location and Minimum Required Drainfield Elevation

STATE OF FLORIDA
DEPARTMENT OF HEALTH
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM
CONSTRUCTION PERMIT

PERMIT NO. _____
DATE PAID: _____
FEE PAID: _____
RECEIPT #: _____

CONSTRUCTION PERMIT FOR:
[ ] New System [ ] Existing System [ ] Holding Tank [ ] Innovative
[ ] Repair [ ] Abandonment [ ] Temporary [ ] _____

APPLICANT: _____

PROPERTY ADDRESS: _____

LOT: _____ BLOCK: _____ SUBDIVISION: _____

PROPERTY ID #: _____ [SECTION, TOWNSHIP, RANGE, PARCEL NUMBER] [OR TAX ID NUMBER]

SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH SPECIFICATIONS AND STANDARDS OF SECTION 381.0065, F.S., AND CHAPTER 64E-6, F.A.C. DEPARTMENT APPROVAL OF SYSTEM DOES NOT GUARANTEE SATISFACTORY PERFORMANCE FOR ANY SPECIFIC PERIOD OF TIME. ANY CHANGE IN MATERIAL FACTS, WHICH ISSUED AS A BASIS FOR ISSUANCE OF THIS PERMIT, REQUIRE THE APPLICANT TO MODIFY THE PERMIT APPLICATION. SUCH MODIFICATIONS MAY RESULT IN THIS PERMIT BEING MADE NULL AND VOID. ISSUANCE OF THIS PERMIT DOES NOT EXEMPT THE APPLICANT FROM COMPLIANCE WITH OTHER FEDERAL, STATE, OR LOCAL PERMITTING REQUIRED FOR DEVELOPMENT OF THIS PROPERTY.

SYSTEM DESIGN AND SPECIFICATIONS

T [ ] GALLONS / GPD SEPTIC TANK/AEROBIC UNIT CAPACITY MULTI-CHAMBERED/IN-SERIES [ ]
A [ ] GALLONS / GPD _____ CAPACITY MULTI-CHAMBERED/IN-SERIES [ ]
N [ ] GALLONS GREASE INTERCEPTOR CAPACITY [MAXIMUM CAPACITY SINGLE TANK: 1250 GALLONS]
K [ ] GALLONS DOSING TANK CAPACITY [ ] GALLONS @ [ ] DOSES PER 24 HRS # PUMPS [ ]
D [ ] SQUARE FEET PRIMARY DRAINFIELD SYSTEM
R [ ] SQUARE FEET SYSTEM
A TYPE SYSTEM: [ ] STANDARD [ ] FILLED [ ] MOUND [ ] _____
I CONFIGURATION: [ ] TRENCH [ ] BED [ ] _____
N _____
F LOCATION OF BENCHMARK: _____
I ELEVATION OF PROPOSED SYSTEM SITE [ ] [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT
E BOTTOM OF DRAINFIELD TO BE [ ] [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT
L _____
D FILL REQUIRED: [ ] INCHES EXCAVATION REQUIRED: [ ] INCHES
O _____
T _____
H _____
E _____
R _____

SPECIFICATIONS BY: _____ TITLE: _____

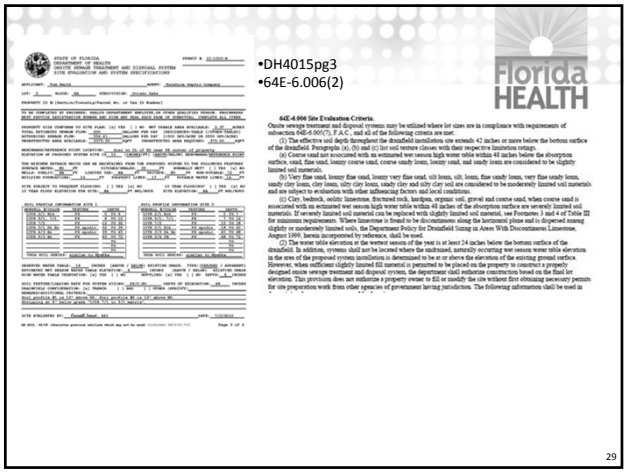
APPROVED BY: _____ TITLE: _____ _____ CHD

DATE ISSUED: _____ EXPIRATION DATE: _____

DH 4016, 08/09 (Obsoletes all previous editions which may not be used)
Incorporated: 64E-6.003, FAC
Page 1 of 3

Drainfield Elevation Permitting

- The drainfield elevation and type are determined using:
  - The WSWT documented on the Site Evaluation Form (DH4015pg3).
  - The elevation of the proposed system site documented on the Site Evaluation Form (DH4015pg3).
  - The WSWT separation specified in 64E-6.006(2).



•DH4015pg3
•64E-6.006(2)

64E-6.006 Site Evaluation Criteria.

Onsite sewage treatment and disposal systems may be utilized where lot sizes are in compliance with requirements of subsection 64E-6.005(7), F.A.C., and all of the following criteria are met:

(1) The effective soil depth throughout the drainfield installation site extends 42 inches or more below the bottom surface of the drainfield. Paragraphs (a), (b) and (c) list soil texture classes with their respective limitation ratings.

(a) Coarse sand not associated with an estimated wet season high water table within 48 inches below the absorption surface, sand, fine sand, loamy coarse sand, coarse sandy loam, loamy sand, and sandy loam are considered to be slightly limited soil materials.

(b) Very fine sand, loamy fine sand, loamy very fine sand, silt loam, silt, loam, fine sandy loam, very fine sandy loam, sandy clay loam, clay loam, silty clay loam, sandy clay and silty clay soil are considered to be moderately limited soil materials and are subject to evaluation with other influencing factors and local conditions.

(c) Clay, bedrock, solidic limestone, fractured rock, hardpan, organic soil, gravel and coarse sand, when coarse sand is associated with an estimated wet season high water table within 48 inches of the absorption surface are severely limited soil materials. If severely limited soil material can be replaced with slightly limited soil material, see Footnotes 3 and 4 of Table III for minimum requirements. Where limestone is found to be discontinuous along the horizontal plane and is dispersed among slightly or moderately limited soils, the Department Policy for Drainfield Siting in Areas With Discontinuous Limestone, August 1999, herein incorporated by reference, shall be used.

(2) The water table elevation at the wettest season of the year is at least 24 inches below the bottom surface of the drainfield. In addition, systems shall not be located where the undrained, naturally occurring wet season water table elevation in the area of the proposed system installation is determined to be at or above the elevation of the existing ground surface. However, when sufficient slightly limited fill material is permitted to be placed on the property to construct a properly designed onsite sewage treatment and disposal system, the department shall authorize construction based on the final lot elevation. This provision does not authorize a property owner to fill or modify the site without first obtaining necessary permits for site preparation work from other agencies of government having jurisdiction. The following information shall be used in

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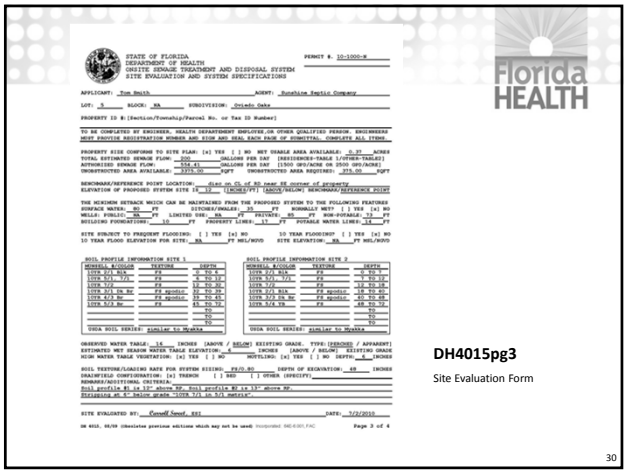

DH4015pg3

Site Evaluation Form

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STATE OF FLORIDA
DEPARTMENT OF HEALTH
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM
SITE EVALUATION AND SYSTEM SPECIFICATIONS

PERMIT #. 10-1000-N

APPLICANT: Tom Smith AGENT: Sunshine Septic Company

LOT: 5 BLOCK: NA SUBDIVISION: Oviedo Oaks

PROPERTY ID #:[Section/Township/Parcel No. or Tax ID Number]

TO BE COMPLETED BY ENGINEER, HEALTH DEPARTEMENT EMPLOYEE,OR OTHER QUALIFIED PERSON. ENGINNEERS MUST PROVIDE REGISTRATION NUMBER AND SIGN AND SEAL EACH PAGE OF SUBMITTAL. COMPLETE ALL ITEMS.

PROPERTY SIZE CONFORMS TO SITE PLAN: [x] YES [ ] NO NET USABLE AREA AVAILABLE: 0.37 ACRES
TOTAL ESTIMATED SEWAGE FLOW: 200 GALLONS PER DAY [RESIDENCES-TABLE 1/OTHER-TABLE2]
AUTHORIZED SEWAGE FLOW: 554.41 GALLONS PER DAY [1500 GPD/ACRE OR 2500 GPD/ACRE]
UNOBSTRUCTED AREA AVAILABLE: 3375.00 SQFT UNOBSTRUCTED AREA REQUIRED: 375.00 SQFT

BENCHMARK/REFERENCE POINT LOCATION: disc on CL of RD near SE corner of property
ELEVATION OF PROPOSED SYSTEM SITE IS 12 [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT

Disc on CL of RD near SE corner of property

•And the elevation of the proposed system site on the Site Evaluation Form (DH4015pg3):

12 Inches above the reference point

31

SOIL PROFILE INFORMATION SITE 1

MUNSELL #/COLOR	TEXTURE	DEPTH
10YR 2/1 Blk	FS	0 TO 6
10YR 5/1, 7/1	FS	6 TO 12
10YR 7/2	FS	12 TO 32
10YR 3/1 Dk Br	FS spodic	32 TO 39
10YR 4/3 Br	FS spodic	39 TO 45
10YR 5/3 Br	FS	45 TO 72
		TO
		TO
		TO

USDA SOIL SERIES: similar to Myakka

SOIL PROFILE INFORMATION SITE 2

MUNSELL #/COLOR	TEXTURE	DEPTH
10YR 2/1 Blk	FS	0 TO 7
10YR 5/1, 7/1	FS	7 TO 12
10YR 7/2	FS	12 TO 18
10YR 2/1 Blk	FS spodic	18 TO 40
10YR 3/3 Dk Br	FS spodic	40 TO 48
10YR 5/4 YB	FS	48 TO 72
		TO
		TO
		TO

USDA SOIL SERIES: similar to Myakka

OBSERVED WATER TABLE: 16 INCHES [ABOVE / BELOW] EXISTING GRADE. TYPE:[PERCHED / APPARENT]
ESTIMATED WET SEASON WATER TABLE ELEVATION: 6 INCHES [ABOVE / BELOW] EXISTING GRADE
HIGH WATER TABLE VEGETATION: [x] YES [ ] NO MOTTLING: [x] YES [ ] NO DEPTH: 6 INCHES

Wet Season Water Table from the Site Evaluation Form (DH4015pg3).

6 inches below grade

32

64E-6.006 Site Evaluation Criteria.

Onsite sewage treatment and disposal systems may be utilized where lot sizes are in compliance with requirements of subsection 64E-6.005(7), F.A.C., and all of the following criteria are met:

(1) The effective soil depth throughout the drainfield installation site extends 42 inches or more below the bottom surface of the drainfield. Paragraphs (a), (b) and (c) list soil texture classes with their respective limitation ratings.

(a) Coarse sand not associated with an estimated wet season high water table within 48 inches below the absorption surface, sand, fine sand, loamy coarse sand, coarse sandy loam, loamy sand, and sandy loam are considered to be slightly limited soil materials.

(b) Very fine sand, loamy fine sand, loamy very fine sand, silt loam, silt, loam, fine sandy loam, very fine sandy loam, sandy clay loam, clay loam, silty clay loam, sandy clay and silty clay soil are considered to be moderately limited soil materials and are subject to evaluation with other influencing factors and local conditions.

(c) Clay, bedrock, oolitic limestone, fractured rock, hardpan, organic soil, gravel and coarse sand, when coarse sand is associated with an estimated wet season high water table within 48 inches of the absorption surface are severely limited soil materials. If severely limited soil material can be replaced with slightly limited soil material, see Footnotes 3 and 4 of Table III for minimum requirements. Where limestone is found to be discontinuous along the horizontal plane and is dispersed among slightly or moderately limited soils, the Department Policy for Drainfield Sizing in Areas With Discontinuous Limestone, August 1999, herein incorporated by reference, shall be used.

(2) The water table elevation at the wettest season of the year is at least 24 inches below the bottom surface of the drainfield. In addition, systems shall not be located where the undrained, naturally occurring wet season water table elevation in the area of the proposed system installation is determined to be at or above the elevation of the existing ground surface. However, when sufficient slightly limited fill material is permitted to be placed on the property to construct a properly designed onsite sewage treatment and disposal system, the department shall authorize construction based on the final lot elevation. This provision does not authorize a property owner to fill or modify the site without first obtaining necessary permits for site preparation work from other agencies of government having jurisdiction. The following information shall be used in

The WSWT separation required in 64E-6.006(2).

24 Inches

33

- So we've determined a starting point for our calculations:
  - **"12 inches" above** the elevation of the "disc on CL of RD near SE corner of property…"
- We've determined our WSWT elevation:
  - **"6 inches below** grade…"
- …And we've determined the required WSWT separation to the bottom surface of the drainfield:
  - **"24 inches**…"
- So, now we must **use this information to calculate** the minimum required elevation for the bottom surface of the proposed drainfield.

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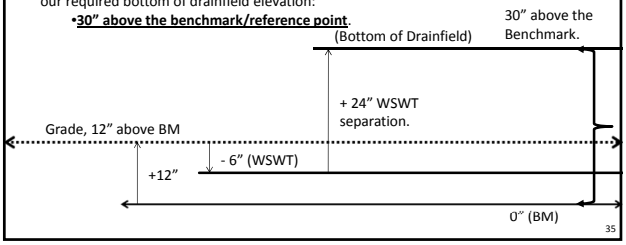
To calculate the bottom of drainfield elevation relative to the BM:

- Start at the benchmark (BM)/reference point (RP) elevation.
  - Consider this to be "**zero** inches above the benchmark."
  - Next, add or subtract to get to the proposed site, which is 12" above the benchmark, meaning we went "uphill" from the BM location:
    - **Add 12 inches**. This is grade, 12" above the BM.
  - Next, add or subtract to get to the WSWT elevation.
    - Our WSWT is 6" below grade, so **subtract 6"**. We are now at the WSWT, 6" above the BM.
  - Last, we **add 24"**, the required WSWT separation, and this takes us to our required bottom of drainfield elevation:
    - **30" above the benchmark/reference point**.



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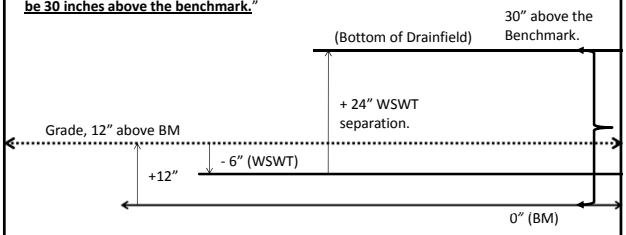
To calculate the bottom of drainfield elevation relative to the BM:

- Start at the benchmark (BM)/reference point (RP) elevation.
  - 0 (Benchmark = Starting Point)
  - + 12 (Add or subtract to go uphill or downhill to grade)
  - - 6 (Add or subtract to get to the WSWT above or below grade)
  - + 24 (Add to raise the drainfield above the WSWT)
  - = 30" (Elevation of the bottom of the drainfield, above or below the benchmark/reference point)

We enter this number on the permit: "**Bottom of drainfield to be 30 inches above the benchmark.**"



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Benchmark and Drainfield Elevation as entered onto the system construction permit form (DH4016pg1).

N
F LOCATION OF BENCHMARK: Disc in CL of Road near SE property corner
I ELEVATION OF PROPOSED SYSTEM SITE [12.00] [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT
E BOTTOM OF DRAINFIELD TO BE [30.00] [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT
L
D FILL REQUIRED: [36.00] INCHES EXCAVATION REQUIRED: [48.00] INCHES

O The licensed contractor installing the system is responsible for installing the minimum

The benchmark location and minimum bottom of drainfield elevation are entered into the appropriate section of the system construction permit form.

- Drainfield Type, Fill, and Excavations.

STATE OF FLORIDA
DEPARTMENT OF HEALTH
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM
CONSTRUCTION PERMIT

PERMIT NO. _____
DATE PAID: _____
FEE PAID: _____
RECEIPT #: _____

CONSTRUCTION PERMIT FOR:
[ ] New System [ ] Existing System [ ] Holding Tank [ ] Innovative
[ ] Repair [ ] Abandonment [ ] Temporary [ ] _____

APPLICANT: _____

PROPERTY ADDRESS: _____

LOT: _____ BLOCK: _____ SUBDIVISION: _____
[SECTION, TOWNSHIP, RANGE, PARCEL NUMBER]
PROPERTY ID #: _____ [OR TAX ID NUMBER]

SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH SPECIFICATIONS AND STANDARDS OF SECTION 381.0065, F.S., AND CHAPTER 64E-6, F.A.C. DEPARTMENT APPROVAL OF SYSTEM DOES NOT GUARANTEE SATISFACTORY PERFORMANCE FOR ANY SPECIFIC PERIOD OF TIME. ANY CHANGE IN MATERIAL FACTS, WHICH SERVED AS A BASIS FOR ISSUANCE OF THIS PERMIT, REQUIRES THE APPLICANT TO MODIFY THE PERMIT APPLICATION. SUCH MODIFICATIONS MAY RESULT IN THIS PERMIT BEING MADE NULL AND VOID. ISSUANCE OF THIS PERMIT DOES NOT EXEMPT THE APPLICANT FROM COMPLIANCE WITH OTHER FEDERAL, STATE, OR LOCAL PERMITTING REQUIRED FOR DEVELOPMENT OF THIS PROPERTY.

SYSTEM DESIGN AND SPECIFICATIONS

T [ ] GALLONS / GPD SEPTIC TANK/AEROBIC UNIT CAPACITY MULTI-CHAMBERED/IN-SERIES [ ]
A [ ] GALLONS / GPD _____ CAPACITY MULTI-CHAMBERED/IN-SERIES [ ]
N [ ] GALLONS GREASE INTERCEPTOR CAPACITY [MAXIMUM CAPACITY SINGLE TANK: 1250 GALLONS]
K [ ] GALLONS DOSING TANK CAPACITY [ ]GALLONS @ [ ] DOSES PER 24 HRS # PUMPS [ ]

D [ ] SQUARE FEET PRIMARY DRAINFIELD SYSTEM
R [ ] SQUARE FEET _____ SYSTEM
A TYPE SYSTEM: [ ] STANDARD [ ] FILLED [ ] MOUND [ ] _____
I CONFIGURATION: [ ] TRENCH [ ] BED [ ] _____
N
F LOCATION OF BENCHMARK:
I ELEVATION OF PROPOSED SYSTEM SITE [ ] [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT
E BOTTOM OF DRAINFIELD TO BE [ ] [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT
L
D FILL REQUIRED: [ ] INCHES EXCAVATION REQUIRED: [ ] INCHES

O _____
T _____
H _____
E _____
R _____

SPECIFICATIONS BY: _____ TITLE: _____

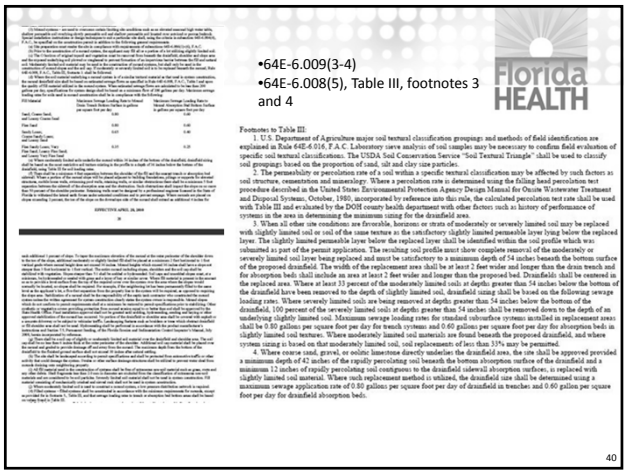
APPROVED BY: _____ TITLE: _____ _____ CHD

DATE ISSUED: _____ EXPIRATION DATE: _____

DH 4016, 08/09 (Obsoletes all previous editions which may not be used)
Incorporated: 64E-6.003, FAC
Page 1 of 3

Fill, Mound and Excavation Permitting

- Filled systems, mounded systems, and excavations are permitted per:
  - 64E-6.009(3-4)…
  - … And footnotes 3 and 4 to Table III, 64E-6.008(5).



- 64E-6.009(3-4)
- 64E-6.008(5), Table III, footnotes 3 and 4

Footnotes to Table III:

1. U.S. Department of Agriculture major soil textural classification groupings and methods of field identification are explained in Rule 64E-6.016, F.A.C. Laboratory sieve analysis of soil samples may be necessary to confirm field evaluation of specific soil textural classifications. The USDA Soil Conservation Service "Soil Textural Triangle" shall be used to classify soil groupings based on the proportion of sand, silt and clay size particles.
2. The permeability or percolation rate of a soil within a specific textural classification may be affected by such factors as soil structure, cementation and mineralogy. Where a percolation rate is determined using the falling head percolation test procedure described in the United States Environmental Protection Agency Design Manual for Onsite Wastewater Treatment and Disposal Systems, October, 1980, incorporated by reference into this rule, the calculated percolation test rate shall be used with Table III and evaluated by the DOH county health department with other factors such as history of performance of systems in the area in determining the minimum sizing for the drainfield area.
3. When all other site conditions are favorable, horizons or strata of moderately or severely limited soil may be replaced with slightly limited soil or soil of the same texture as the satisfactory slightly limited permeable layer lying below the replaced layer. The slightly limited permeable layer below the replaced layer shall be identified within the soil profile which was submitted as part of the permit application. The resulting soil profile must show complete removal of the moderately or severely limited soil layer being replaced and must be satisfactory to a minimum depth of 54 inches beneath the bottom surface of the proposed drainfield. The width of the replacement area shall be at least 2 feet wider and longer than the drain trench and for absorption beds shall include an area at least 2 feet wider and longer than the proposed bed. Drainfields shall be centered in the replaced area. Where at least 33 percent of the moderately limited soils at depth greater than 54 inches below the bottom of the drainfield have been removed to the depth of slightly limited soil, drainfield sizing shall be based on the following sewage loading rates: Where severely limited soils are being removed at depth greater than 54 inches below the bottom of the drainfield, 100 percent of the severely limited soils at depth greater than 54 inches shall be removed down to the depth of an underlying slightly limited soil. Maximum sewage loading rates for standard subsurface systems installed in replacement areas shall be 0.80 gallons per square foot per day for trench systems and 0.60 gallons per square foot per day for absorption beds in slightly limited soil textures. Where moderately limited soil materials are found beneath the proposed drainfield, and where system sizing is based on that moderately limited soil, soil replacements of less than 33% may be permitted.
4. Where coarse sand, gravel, or oolitic limestone directly underlies the drainfield area, the site shall be approved provided a minimum depth of 42 inches of the rapidly percolating soil beneath the bottom absorption surface of the drainfield and a minimum 12 inches of rapidly percolating soil contiguous to the drainfield sidewall absorption surface, is replaced with slightly limited soil material. Where such replacement method is utilized, the drainfield size shall be determined using a maximum sewage application rate of 0.80 gallons per square foot per day of drainfield in trenches and 0.60 gallon per square foot per day for drainfield absorption beds.

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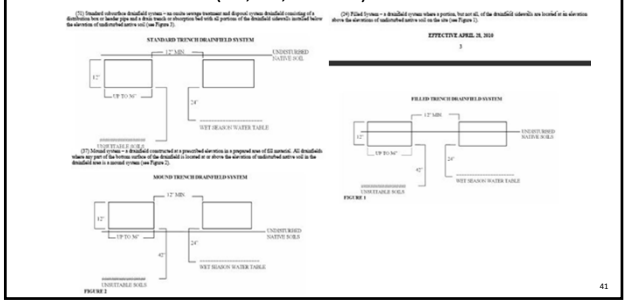
Fill, Mound and Excavation Permitting

- Subsurface, filled and mound systems are defined in 64E-6.002(24, 37, and 51).



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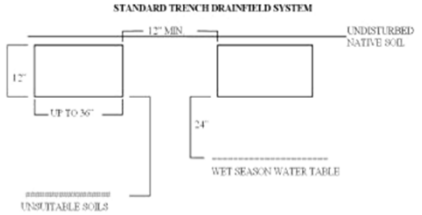
- A system is considered subsurface if the entire drainfield area is below natural grade. The definition reads:
  - "An onsite sewage treatment and disposal system drainfield consisting of a distribution box or header pipe and a drain trench or absorption bed with all portions of the drainfield sidewalls installed below the elevation of undisturbed native soil." (64E-6.002(51)



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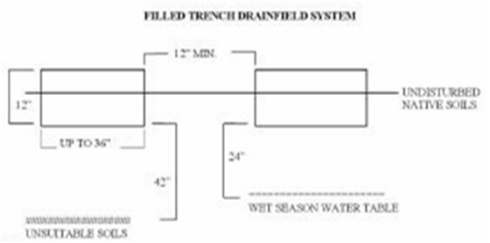
•A system is considered filled if any portion of the drainfield side-wall area is above natural grade. The definition reads:

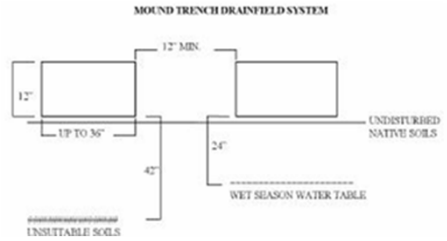
•"An drainfield system where a portion, but not all, of the drainfield sidewalls are located at an elevation above the elevations of undisturbed native soil on the site." (64E-6.002(24)



43

•A system is considered a mound system if any portion of the bottom surface of the drainfield is at or above natural grade. The definition reads:

•"An drainfield constructed at a prescribed elevation in a prepared area of fill material. All drainfields where any part of the bottom surface of the drainfield is located at or above the elevation of undisturbed native soil in the drainfield area is a mound system." (64E-6.002(37)



44

Fill, Mound and Excavation Permitting

- These options are permitted in order to keep the OSTDS drainfield in compliance with:
  - The required WSWT separation.
  - Effective soil depth requirements.

45

For example, to attain the required WSWT separation:

- If the WSWT is 6 inches below grade, and the bottom of the drainfield must maintain a 24-inch separation to it, what are the options?
  - 1 – The drainfield area can be raised 24 inches above the WSWT by placing sufficient fill on site to construct a mound.
    - This would be considered a mound because the bottom of the drainfield is 18 inches above natural grade.
  - 2 – The entire lot can be filled to raise the elevation of both the structure and the drainfield area.
    - This would also be considered a mound because the bottom of the drainfield is still 18-inches above natural grade.
- In both of these cases, the bottom of the drainfield is above natural grade, and so mound specifications will apply, requiring proper:
  - Shoulders.
  - Slopes.
  - Amount of cover.
  - Stabilization material.

46

Example: to keep the bottom of the drainfield out of areas subject to frequent flooding:

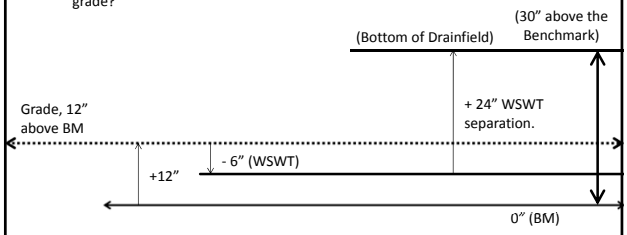
- If the WSWT is above natural grade, and the OSTDS is not being installed in a surface water body, what are the options?
  - 1 – The drainfield area or the entire lot can be raised above the unsuitable soil by placing sufficient fill on site to keep the bottom of the drainfield 24 inches above the WSWT.
    - This would be considered a mound because the bottom of the drainfield is 24 inches or more above natural grade.
    - In this circumstance, the CHD employee must notify all parties that there may be jurisdictional wetlands area impacted, however, this would not delay the issuance of the OSTDS permit if all other rule and statute requirements can be met.

47

So we know we will need to maintain the WSWT separation:

- How do we know if it will it require a subsurface, filled, or mound system?
  - First, determine where natural grade (the undisturbed native soil) is in relation to the bottom of the proposed drainfield.
  - Second, compare this to the definition of subsurface, filled, or mound system.

How do we determine the bottom of drainfield elevation relative to natural grade?



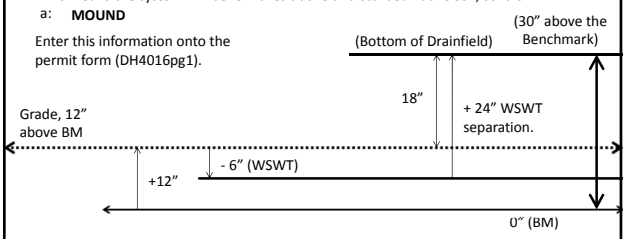
48

To calculate the bottom of drainfield elevation relative to grade:

- How would we determine how far above natural grade the bottom of the drainfield is?
  - First, find the elevation of the bottom of the drainfield relative to the benchmark:
    - In this case, it is 30 inches above the benchmark.
  - Next, find the elevation of grade relative to the benchmark:
    - In this case, it is 12 inches above the benchmark.
  - Last, find the difference between the two elevations.
    - In this case, the difference is 18 inches.

This means the system will be18 inches above undisturbed native soil, so it is a: **MOUND**

Enter this information onto the permit form (DH4016pg1).



49

System Type as entered onto the system construction permit form (DH4016pg1).

```
D [ 250  ] SQUARE FEET PRIMARY DRAINFIELD SYSTEM
R [      ] SQUARE FEET                 SYSTEM
A TYPE SYSTEM:    [  ] STANDARD    [  ] FILLED    [ x] MOUND    [  ] _____
I CONFIGURATION:  [ x] TRENCH    [  ] BED    [  ] _____
N
```

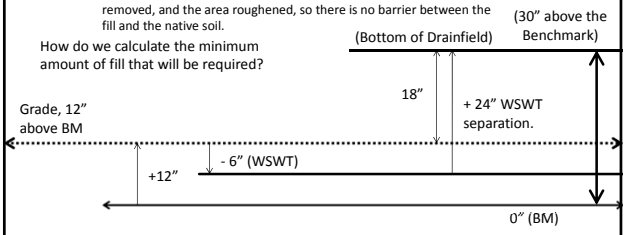
The type of system is entered into the appropriate section of the system construction permit form.

50

So we must build a mound system:

- How do we keep the drainfield elevated 18 inches above natural grade?
  - We must add fill to the site.
    - Fill requirements only consider the amount of fill above natural grade.
    - Fill must be of slightly limited material for standard system construction.
    - (If moderately limited material is to be used, a Low-Pressure Dosing System must be designed and installed)
    - Before fill can be placed in the drainfield area, the O-horizon must be removed, and the area roughened, so there is no barrier between the fill and the native soil.

How do we calculate the minimum amount of fill that will be required?

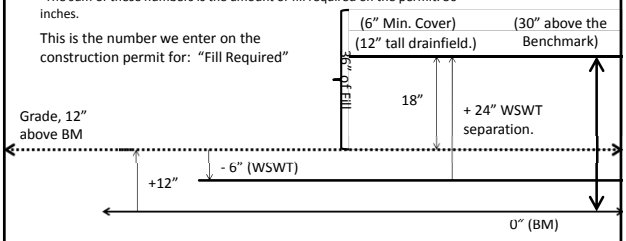


51

Calculate the amount of Fill Required:

- In order to keep the drainfield elevated 18 inches above natural grade, the installer must add fill material to the lot. In order to do so, they must:
  - Remove the 0-horizon, vegetation, and roughen the area to be filled.
  - Next, add sufficient fill to raise the drainfield elevation (18").
- Is this all the fill material that is needed?
  - No, there must also be enough fill to cover the drainfield.
  - To calculate the additional fill:
    - Add the height of the drainfield (standard is 12").
    - Next add the minimum amount of drainfield cover (6" minimum).
- The sum of these numbers is the amount of fill required on the permit: 36 inches.

This is the number we enter on the construction permit for: "Fill Required"



52

Fill Required as entered onto the system construction permit form (DH4016pg1).

```
N
F LOCATION OF BENCHMARK: Disc in CL of Road near SE property corner
I ELEVATION OF PROPOSED SYSTEM SITE [12.00] [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT
E BOTTOM OF DRAINFIELD TO BE        [30.00] [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT
L
D FILL REQUIRED: [36.00] INCHES    EXCAVATION REQUIRED: [48.00] INCHES

O The licensed contractor installing the system is responsible for installing the minimum
```

The minimum amount of fill required for system construction is entered into the appropriate section of the system construction permit form.

53

Methods for attaining the required effective soil depth:

- If there is unsuitable soil 18 inches below grade, what are the options?
  - 1 – The drainfield area or the entire lot can be raised above the unsuitable soil by placing sufficient fill on site to keep the bottom of the drainfield 42 inches above the unsuitable soil.
    - This would be considered a mound, as the bottom of the drainfield is above natural grade (24 inches above).
  - 2 – ? What other option is available?

A second option in this case would be: excavation.

54

Excavation:

•If the site evaluation shows that there is a strata of slightly-limited soil below the unsuitable layer…

SOIL PROFILE INFORMATION SITE 1

MUNSELL #/COLOR	TEXTURE	DEPTH
10YR 2/1 Blk	FS	0 TO 6
10YR 5/1, 7/1	FS	6 TO 12
10YR 7/2	FS	12 TO 32
10YR 3/1 Dk Br	FS spodic	32 TO 39
10YR 4/3 Br	FS spodic	39 TO 45
10YR 5/3 Br	FS	45 TO 72
		TO
		TO
		TO

USDA SOIL SERIES: similar to Myakka

SOIL PROFILE INFORMATION SITE 2

MUNSELL #/COLOR	TEXTURE	DEPTH
10YR 2/1 Blk	FS	0 TO 7
10YR 5/1, 7/1	FS	7 TO 12
10YR 7/2	FS	12 TO 18
10YR 2/1 Blk	FS spodic	18 TO 40
10YR 3/3 Dk Br	FS spodic	40 TO 48
10YR 5/4 YB	FS	48 TO 72
		TO
		TO
		TO

USDA SOIL SERIES: similar to Myakka

•… the unsuitable layer can be excavated and replaced with slightly-limited soil so that there is no unsuitable soil within 54-inches of the bottom of the drainfield [footnote 3, 64E-6.008(5)].

•In cases where the WSWT separation does not cause a mound, this could negate the need for a mounded system.

Excavation:

•If the site evaluation shows that there is a strata of slightly-limited soil below the unsuitable layer…

SOIL PROFILE INFORMATION SITE 1

MUNSELL #/COLOR	TEXTURE	DEPTH
10YR 2/1 Blk	FS	0 TO 6
10YR 5/1, 7/1	FS	6 TO 12
10YR 7/2	FS	12 TO 32
10YR 3/1 Dk Br	FS spodic	32 TO 39
10YR 4/3 Br	FS spodic	39 TO 45
10YR 5/3 Br	FS	45 TO 72
		TO
		TO
		TO

USDA SOIL SERIES: similar to Myakka

SOIL PROFILE INFORMATION SITE 2

MUNSELL #/COLOR	TEXTURE	DEPTH
10YR 2/1 Blk	FS	0 TO 7
10YR 5/1, 7/1	FS	7 TO 12
10YR 7/2	FS	12 TO 18
10YR 2/1 Blk	FS spodic	18 TO 40
10YR 3/3 Dk Br	FS spodic	40 TO 48
10YR 5/4 YB	FS	48 TO 72
		TO
		TO
		TO

USDA SOIL SERIES: similar to Myakka

•… the unsuitable layer can be excavated and replaced with slightly-limited soil so that there is no unsuitable soil within 54-inches of the bottom of the drainfield [footnote 3, 64E-6.008(5)].

•In cases where the WSWT separation does not cause a mound, this could negate the need for a mounded system.

Excavation:

•If the site evaluation **does not** document a strata of slightly-limited soil below the unsuitable layer…

SOIL PROFILE INFORMATION SITE 1

MUNSELL #/COLOR	TEXTURE	DEPTH
10YR 2/1 Blk	FS	0 TO 6
10YR 5/1, 7/1	FS	6 TO 12
10YR 7/2	FS	12 TO 32

USDA SOIL SERIES: similar to Myakka

SOIL PROFILE INFORMATION SITE 2

MUNSELL #/COLOR	TEXTURE	DEPTH
10YR 2/1 Blk	FS	0 TO 7
10YR 5/1, 7/1	FS	7 TO 12
10YR 7/2	FS	12 TO 18

USDA SOIL SERIES: similar to Myakka

Spodic Layer to 72” or refusal

(never got through either unsuitable layer).

•… the permit cannot be written for an excavation.

Excavation Required as entered onto the system construction permit form (DH4016pg1).

N
F LOCATION OF BENCHMARK: Disc in CL of Road near SE property corner
I ELEVATION OF PROPOSED SYSTEM SITE [12.00] [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT
E BOTTOM OF DRAINFIELD TO BE [30.00] [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT
L
D FILL REQUIRED: [36.00] INCHES EXCAVATION REQUIRED: [48.00] INCHES

O The licensed contractor installing the system is responsible for installing the minimum

The depth of excavation required for system construction is entered into the appropriate section of the system construction permit form.

"Other" specifications noted on the construction permit form (DH4016pg1).

O The licensed contractor installing the system is responsible for installing the minimum category of tank in accordance with s. 54E-6.013(3)(f), FAC.
T
H The system is sized for xx bedrooms with a maximum occupancy of xx persons (2 per
E bedroom), for a total estimated sewage flow of xx.
R

Additional information required for installation and notification of the parameters used to determine the system size are documented on the permit.

- Permit Approval and Issue/Expiration Dates..

STATE OF FLORIDA
DEPARTMENT OF HEALTH
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM
CONSTRUCTION PERMIT

PERMIT NO. _____
DATE PAID: _____
FEE PAID: _____
RECEIPT #: _____

CONSTRUCTION PERMIT FOR:
[ ] New System [ ] Existing System [ ] Holding Tank [ ] Innovative
[ ] Repair [ ] Abandonment [ ] Temporary [ ] _____

APPLICANT: _____

PROPERTY ADDRESS: _____

LOT: _____ BLOCK: _____ SUBDIVISION: _____
[SECTION, TOWNSHIP, RANGE, PARCEL NUMBER]
PROPERTY ID #: _____ [OR TAX ID NUMBER]

SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH SPECIFICATIONS AND STANDARDS OF SECTION 381.0065, F.S., AND CHAPTER 64E-6, F.A.C. DEPARTMENT APPROVAL OF SYSTEM DOES NOT GUARANTEE SATISFACTORY PERFORMANCE FOR ANY SPECIFIC PERIOD OF TIME. ANY CHANGE IN MATERIAL FACTS, WHICH SERVED AS A BASIS FOR ISSUANCE OF THIS PERMIT, REQUIRE THE APPLICANT TO MODIFY THE PERMIT APPLICATION. SUCH MODIFICATIONS MAY RESULT IN THIS PERMIT BEING MADE NULL AS VOID. ISSUANCE OF THIS PERMIT DOES NOT EXEMPT THE APPLICANT FROM COMPLIANCE WITH OTHER FEDERAL, STATE, OR LOCAL PERMITTING REQUIRED FOR DEVELOPMENT OF THIS PROPERTY.

SYSTEM DESIGN AND SPECIFICATIONS

T [ ] GALLONS / GPD SEPTIC TANK/AEROBIC UNIT CAPACITY MULTI-CHAMBERED/IN-SERIES [ ]
A [ ] GALLONS / GPD _____ CAPACITY MULTI-CHAMBERED/IN-SERIES [ ]
N [ ] GALLONS GREASE INTERCEPTOR CAPACITY [MAXIMUM CAPACITY SINGLE TANK: 1250 GALLONS]
K [ ] GALLONS DOSING TANK CAPACITY [ ] GALLONS ([ ] DOSES PER 24 HRS # PUMPS [ ]

D [ ] SQUARE FEET PRIMARY DRAINFIELD SYSTEM
R [ ] SQUARE FEET SYSTEM
A TYPE SYSTEM: [ ] STANDARD [ ] FILLED [ ] MOUND [ ] _____
I CONFIGURATION: [ ] TRENCH [ ] BED [ ] _____
N
F LOCATION OF BENCHMARK:
I ELEVATION OF PROPOSED SYSTEM SITE [ ] [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT
E BOTTOM OF DRAINFIELD TO BE [ ] [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT
L
D FILL REQUIRED: [ ] INCHES EXCAVATION REQUIRED: [ ] INCHES

O _____
T _____
H _____
E _____
R _____

SPECIFICATIONS BY: _____ TITLE: _____

APPROVED BY: _____ TITLE: _____ CHD

DATE ISSUED: _____ EXPIRATION DATE: _____

DH 4016, 08/09 (Obsoletes all previous editions which may not be used)
Incorporated: 64E-6.003, FAC
Page 1 of 3

Permit Specifications:

- Permit specifications are attributed to the person establishing tank size, drainfield size, elevation, configuration, etc.
  - Usually, it is the health department employee completing the permit form (DH4016pg1).
    - DOH employees may only write a permit containing the minimum specifications required by rule.
  - A non-DOH site evaluator would be entered as having provided the specifications only if they provide the DOH with the tank size, drainfield size, and elevation. This is often provided on form DH4016pg1 or DH4015pg3.
    - If only partial specifications are provided, these are included in the comments section.
    - Non-DOH site evaluators may specify system requirements that are greater than the minimums required by rule.

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Permit Approval:

- Permit approval is attributed to the DOH employee issuing the permit.
  - This person must be certified in the OSTDS program per Section 381.0101, FS.
    - This person also specifies:
      - The Date Issued.
      - The Expiration Date.
  - The length of time a permit is valid is specified in 64E-6.001(4), FAC and 381.0065(4), FS.
      - (18 months)
      - These sections also specify that, at the end of the 18-month period, the permit may be extended by 90 additional days.
        - » Per 64E-6.001(4), FAC, this only applies if building construction has commenced.
    - An expired permit cannot be "re-issued;" once a permit has expired, a new permit must be applied for.

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Permit Specifications, Approval, Date Issued, and Expiration Date as entered onto the system construction permit form (DH4016pg1).

O The licensed contractor installing the system is responsible for installing the minimum
T category of tank in accordance with s. 64E-6.013(3)(f), FAC.
H
E
R

SPECIFICATIONS BY: Carroll Sweet TITLE: Environmental Specialist I

APPROVED BY: John Forest, RS TITLE: Environmental Manager Sunshine CHD

DATE ISSUED: 7/6/2010 EXPIRATION DATE: 1/2/2012

DH 4016, 08/09 (Obsoletes all previous editions which may not be used)
Incorporated: 64E-6.003, FAC Page 1 of 3

The names of who determined permit specifications, who approved the permit, its issue date, its expiration date, are entered into the appropriate section of the system construction permit form.

63

Maintenance Requirements:

- Minimum recommended maintenance for conventional systems.
  - Pump the septic tank at least once every 3 to 5 years.
  - Service the outlet filter as needed between pump-outs.
  - Maintain the original site conditions as permitted and approved by the department.
  - Operate the system without exceeding the design parameters.

64