



**PINE HILLS NEIGHBORHOOD IMPROVEMENT DISTRICT
SEPTIC TO SEWER PROJECT
WEDNESDAY, OCTOBER 2, 2024**

**PRESENTED BY:
Zuzanna Wasowska, P.E.
Burgess & Niple**

Agenda

- Welcome and Introductions
- Background
- Pine Hills Septic-to-Sewer Project
- Questions and Answers

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OWNER



- David Arms, Chief Engineer
- Marina Toro, Engineer II
- James Montalvo, Chief Inspector
- Mark Boger, Inspector II

CONTRACTOR



- Malcolm Ray, Project Manager
- Tara Rezaei, Construction Admin
- Brandon Ozdemir, Project Engineer

CONSULTING ENGINEER



- Jason Warren, Project Manager
- Zuzanna Wasowska, Lead Engineer
- Allie Snyder, Project Engineer

PUBLIC INFORMATION OFFICER



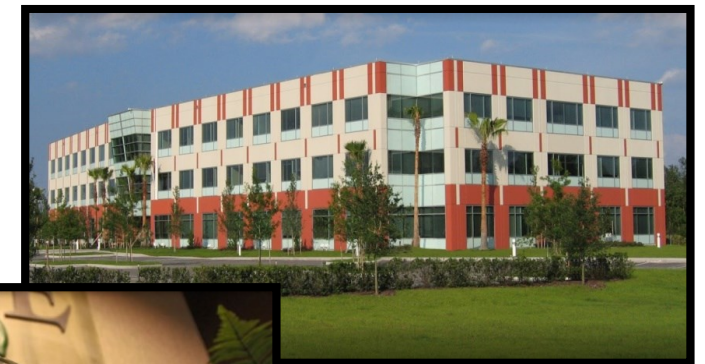
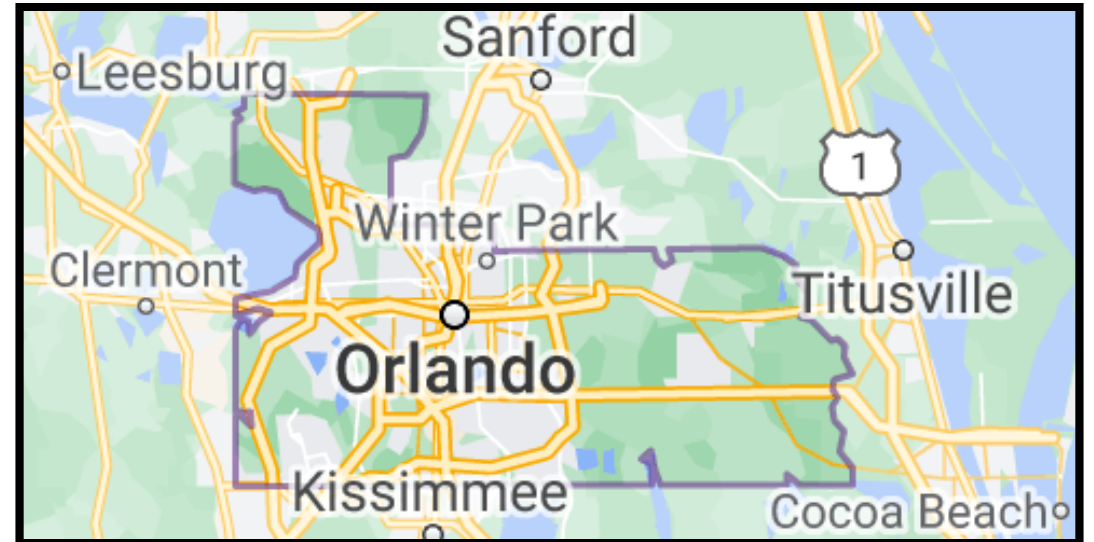
- Samantha Scarp, Program Lead
- Ashley Moore, Program Lead



Welcome and Introductions

Orange County & Orange County Utilities

- Orange County Utilities provides wastewater collection, treatment and reuse, drinking water, garbage disposal, and recycling services to more than 210,000 customers
 - Wastewater services for a population of 1,046,000
 - Four regional wastewater plants
 - 1,421 miles of gravity mains and 641 miles of force mains
 - 823 pump stations
 - Ranked #1 in Customer Satisfaction for Midsize Water Utilities in the South by J.D. Power



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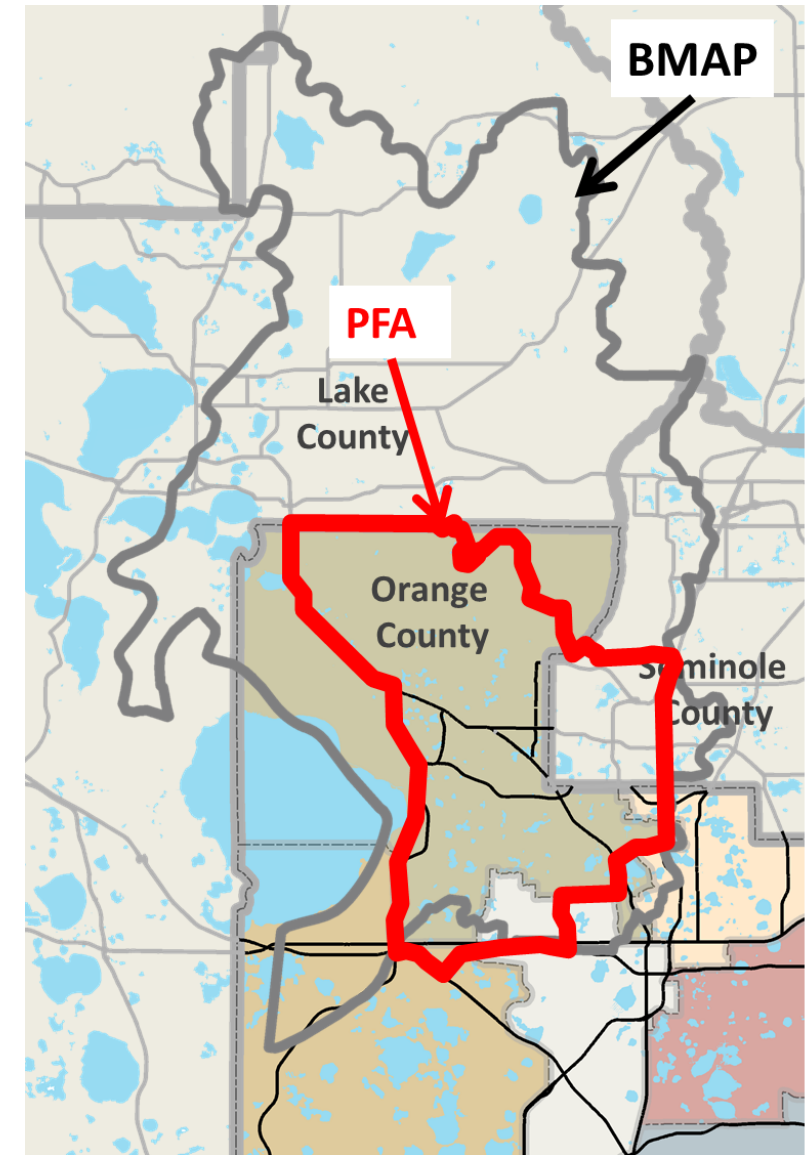
Background

- Wekiwa Springs is a 7,000-acre Florida State Park near Apopka containing diverse plants and wildlife
- Popular for swimming, canoeing, hiking, and camping
- 42 million gallons flow from Wekiwa Springs to the Wekiwa River each day
- Wekiwa Springs and Rock Springs Run are impaired by nutrients
 - Nitrate
 - Total phosphorus
- Excess nutrients cause overabundance of algae
 - Reduce diversity of plants and animals
 - Cause fish kills



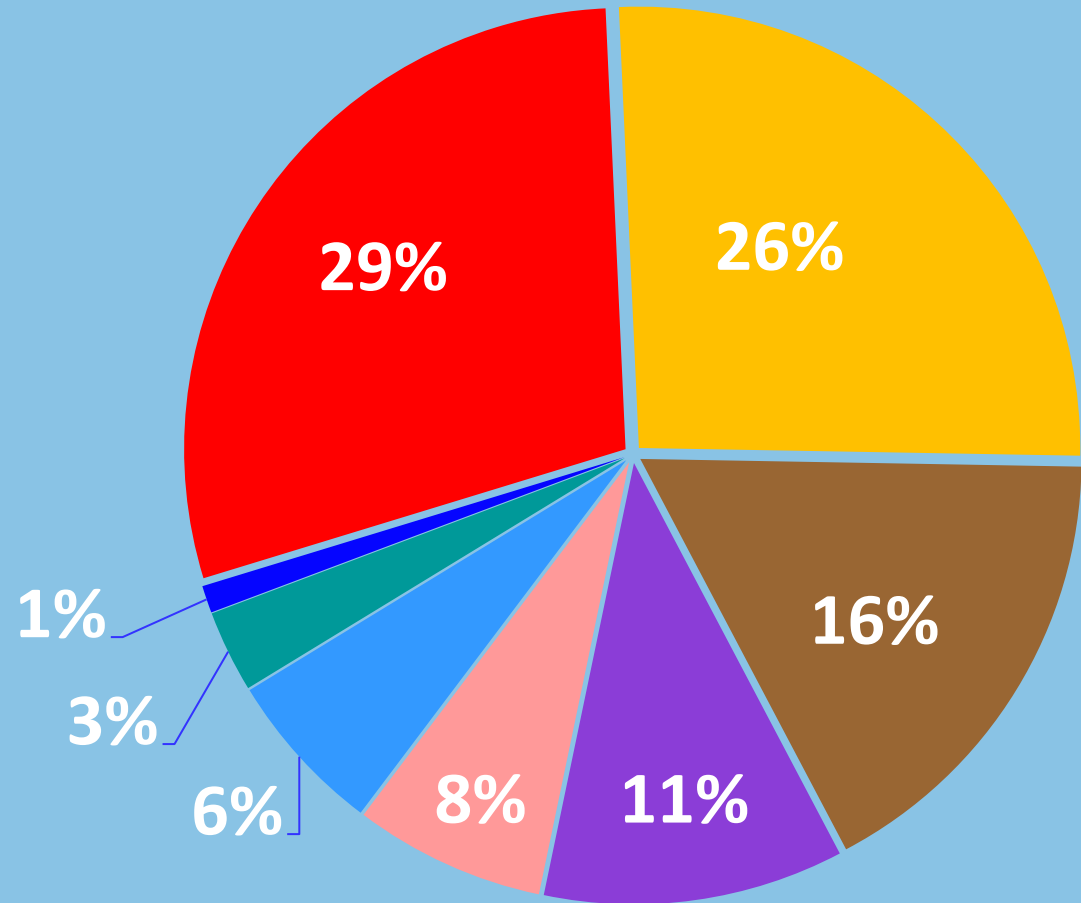
Background

- FDEP formulated a Basin Management Action Plan (BMAP) to reduce nutrient loading to the springs
 - Delineates a Priority Focus Area (PFA), which is the area where the aquifer is most vulnerable
 - 18,000 septic tanks within Orange County Utilities' service area inside the PFA
 - Identified septic tanks as the source of 29% of nitrogen in the springs
 - Includes a Septic System Remediation Plan



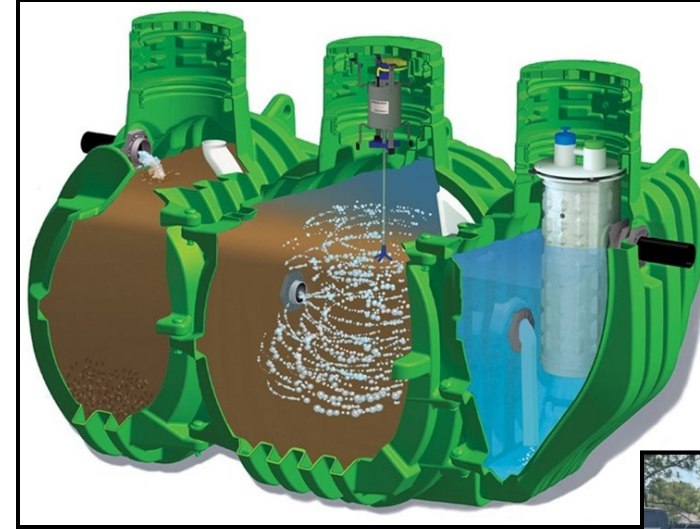
Background

- Septic Systems
- Urban Fertilizer
- Wastewater Trt Facility
- Farm Fertilizer
- Sports Turf
- Atmospheric Deposition
- Nurseries
- Livestock Waste



Background

- All parcels in the PFA that are less than one acre are affected
- In accordance with Florida legislation, in the next 20 years property owners will have two choices
 - Connect to sanitary sewer
 - Upgrade to enhanced OSTDS that reduces nutrient loads
 - Estimated costs range from \$20,000 to \$25,000 per system
- Property owners cannot keep conventional septic systems

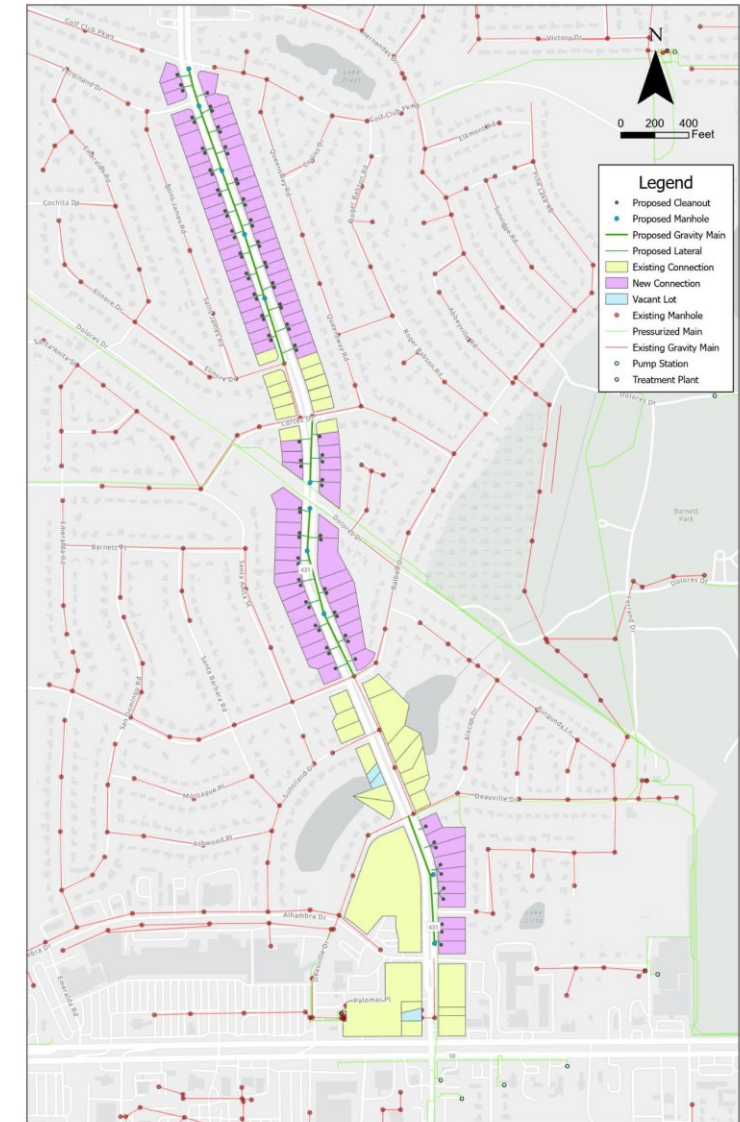


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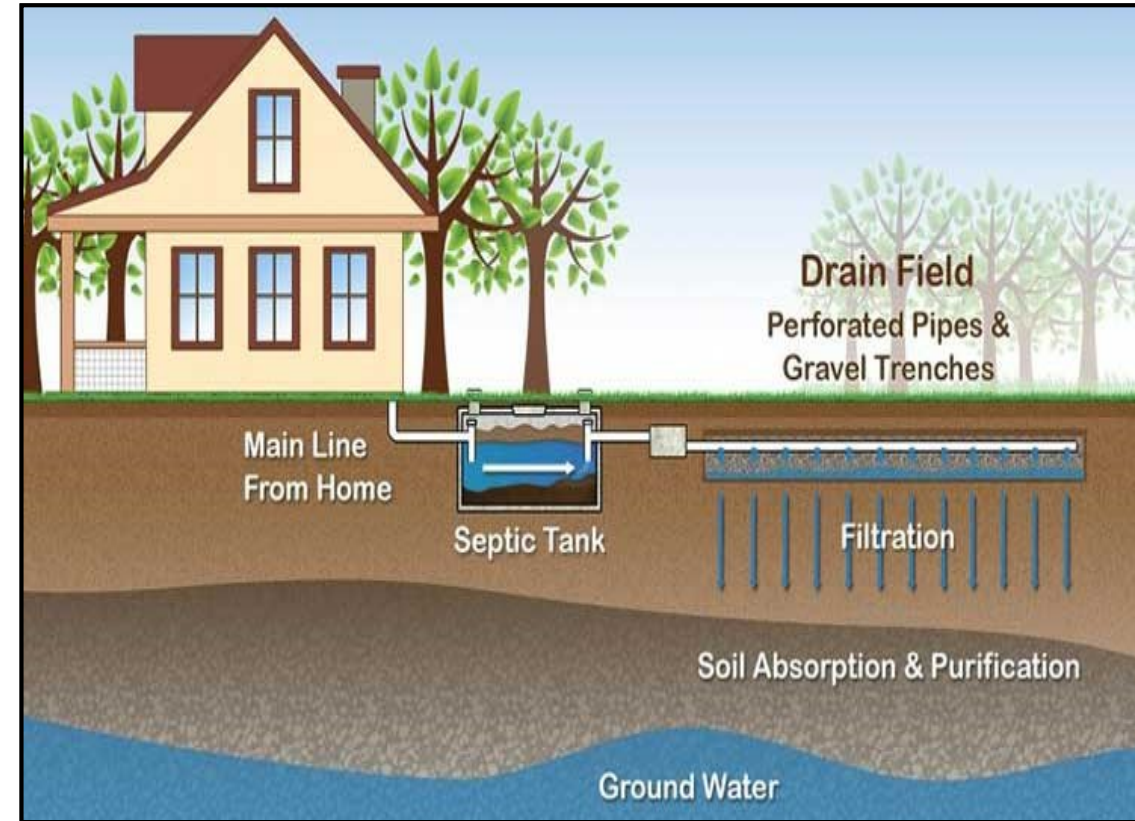
Pine Hills Septic-to-Sewer Project

- Engineering design services provided by Burgess & Niple
 - Convert 93 parcels from septic to County sewer along Pine Hills Road from SR 50 to Golf Club Parkway
 - Approximately 70% commercial, 30% residential parcels within project area
 - Installation of approximately 4,000 LF of sanitary sewer, 4,000 LF of service laterals and 22 manholes in the right-of-way
 - Connect existing properties to new service laterals at no cost to property owners.
 - Abandon existing septic tanks in accordance with state regulations
- Utilize and connect to existing sanitary sewer in area wherever possible



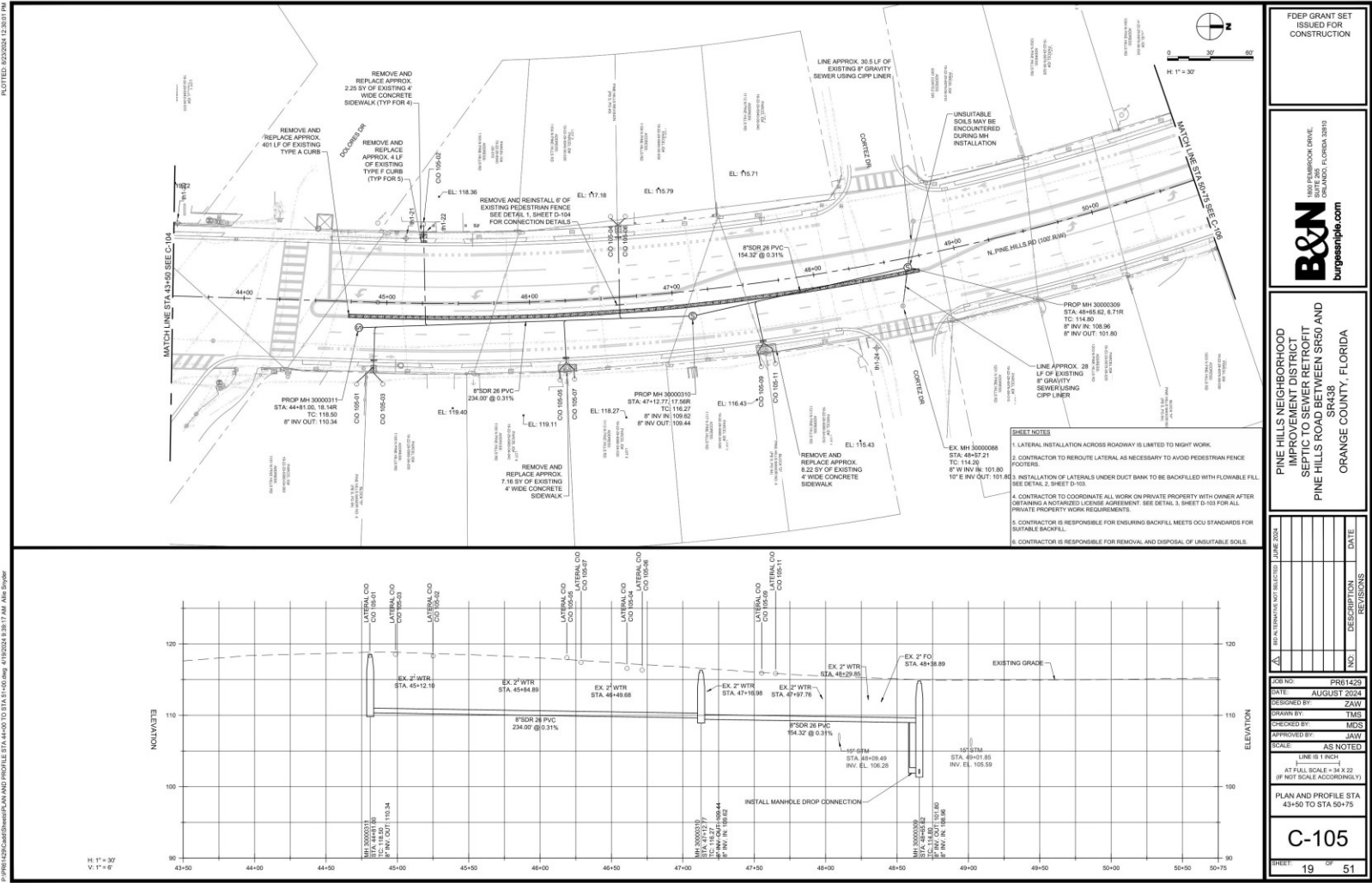
Pine Hills Septic-to-Sewer Project

- Onsite Sewage Treatment & Disposal System (OSTDS)
 - Collect wastewater in a watertight tank
 - Solids settle to the bottom
 - Liquid (effluent) exits the tank to a drain field
- Drain field
 - Spreads effluent into unsaturated soil, where it is filtered and treated
 - Water is discharged into the groundwater
 - Some nutrients remain in the treated water



Pine Hills Septic-to-Sewer Project

- Construction of new gravity sewer system in the right-of-way



FDEP GRANT SET
ISSUED FOR
CONSTRUCTION

1000 PINEBROOK DRIVE,
SUITE 200
ORLANDO, FLORIDA 32813

B&N
burgesssample.com

PINE HILLS NEIGHBORHOOD
IMPROVEMENT DISTRICT
SEPTIC TO SEWER RETROFIT
PINE HILLS ROAD BETWEEN SR50 AND
SR438
ORANGE COUNTY, FLORIDA

NO.	DESCRIPTION	DATE

DESIGNED BY: ZAW
DRAWN BY: TMS
CHECKED BY: MBS
APPROVED BY: JAW

SCALE: AS NOTED
LINE IS 1 INCH = 40 FEET
AT FULL SCALE = 34 X 22
(IF NOT SCALE ACCORDINGLY)

PLAN AND PROFILE STA
43+50 TO STA 50+75

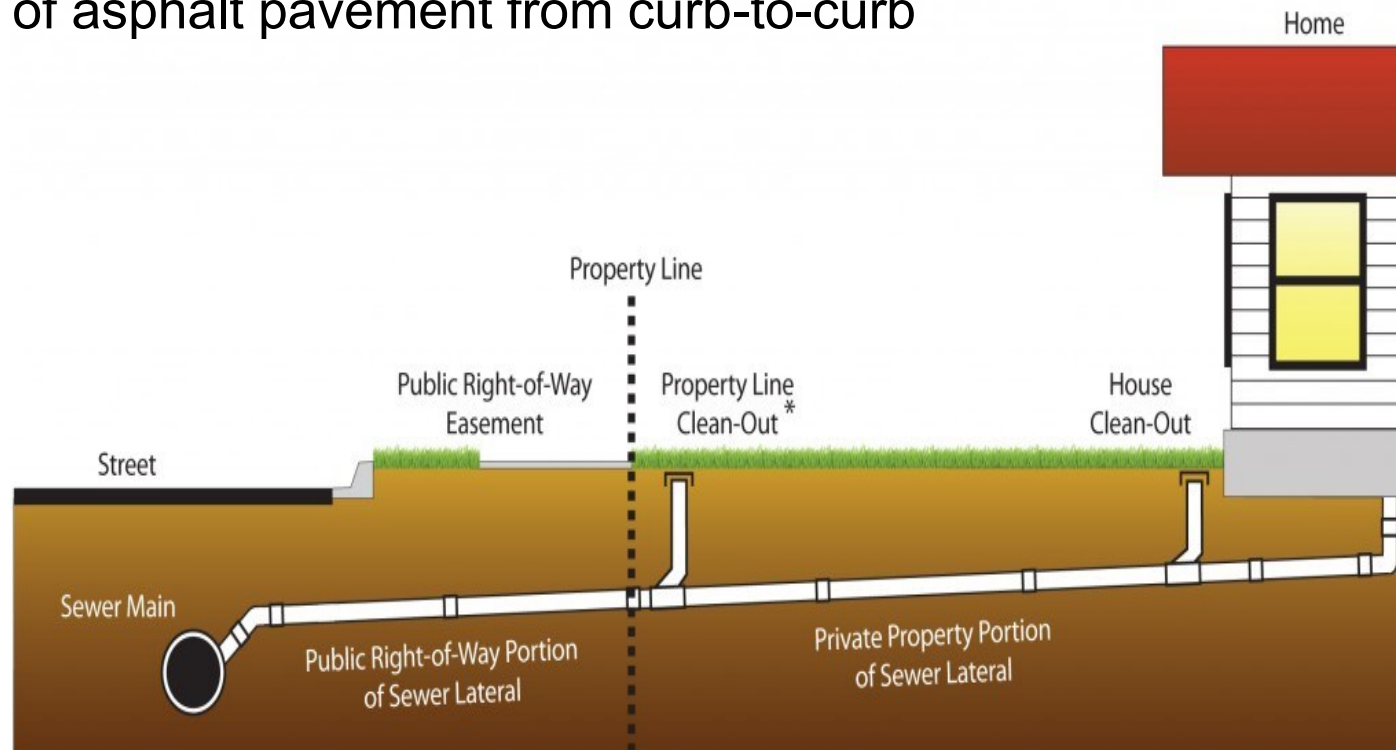
C-105

SHEET: 19 OF 51



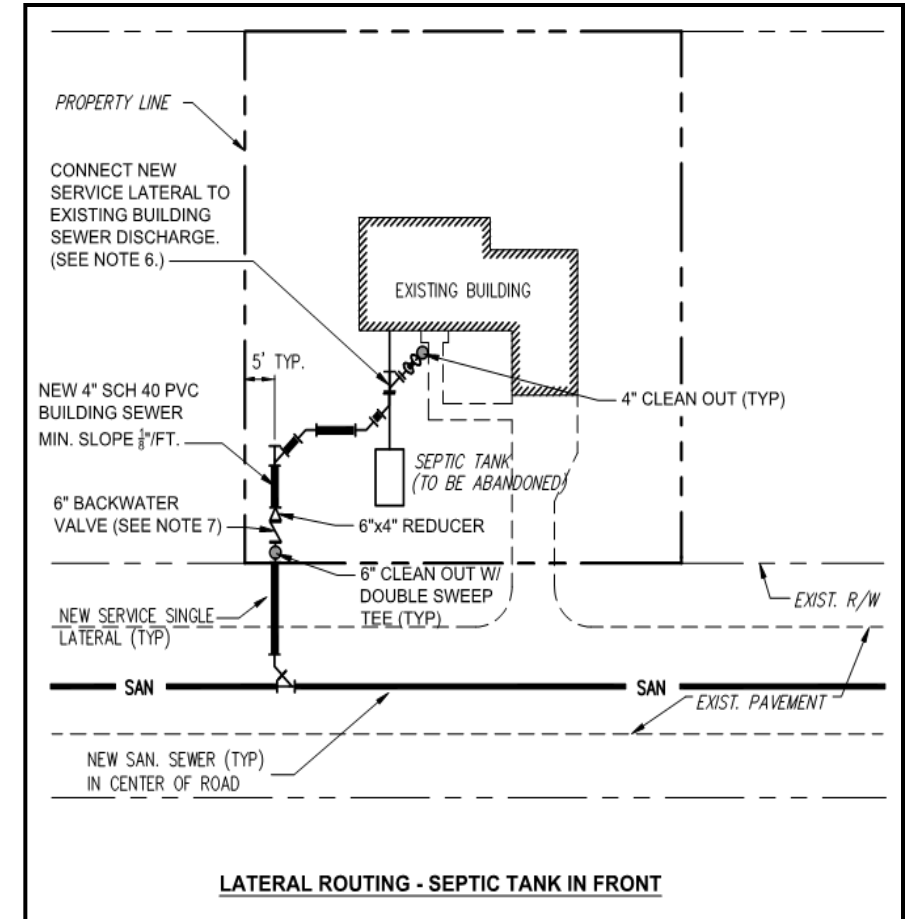
Pine Hills Septic-to-Sewer Project

- Construction of new gravity sewer system in the right-of-way
- Ensure reasonable efforts to maintain access to each parcel at the end of the day/during business hours
- Install service lateral from property line
- Abandon existing septic tank and drain field
- Replacement of asphalt pavement from curb-to-curb



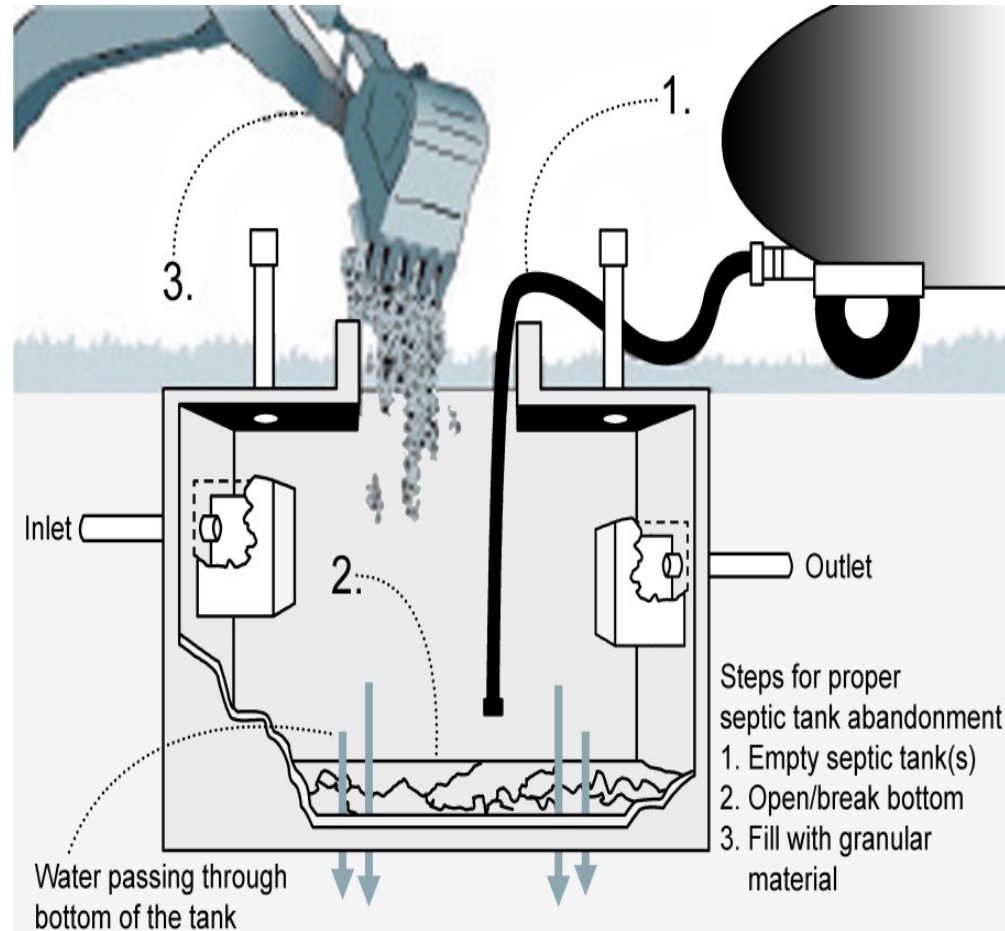
Pine Hills Septic-to-Sewer Project

- Includes connection of each building to central sewer by the OCU contractor upon receiving authorization from the property owner via license agreement
- Install new 4-inch sewer lateral and connect at existing discharge point
- Septic tanks will be abandoned in place in accordance with law: remove liquids and sludge, break up the bottom and sides to 12 inches below grade, backfill, and restore with sod
- **Any impacts to existing driveways, sidewalks, sod, irrigation, etc. will be fixed by the OCU contractor**
- **All of this work is included in the project; there will be no additional costs to the property owner**

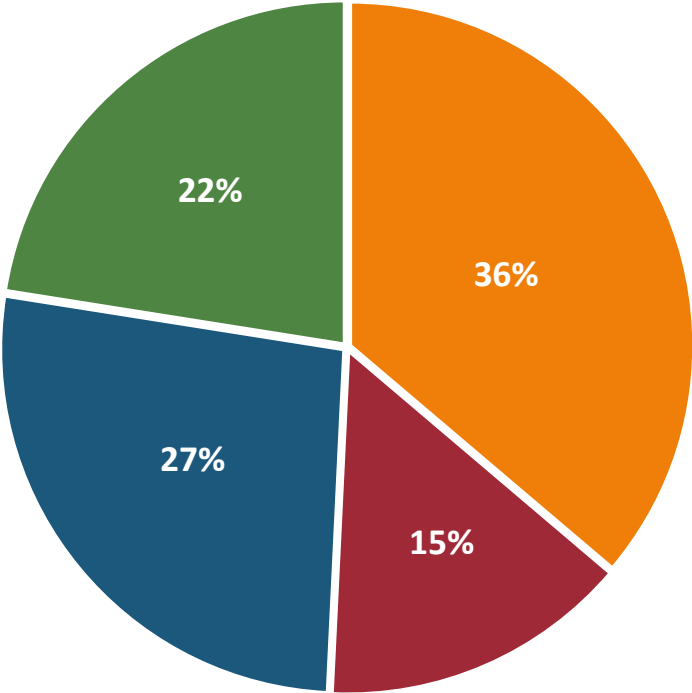


Pine Hills Septic-to-Sewer Project

- Septic Tank Abandonment



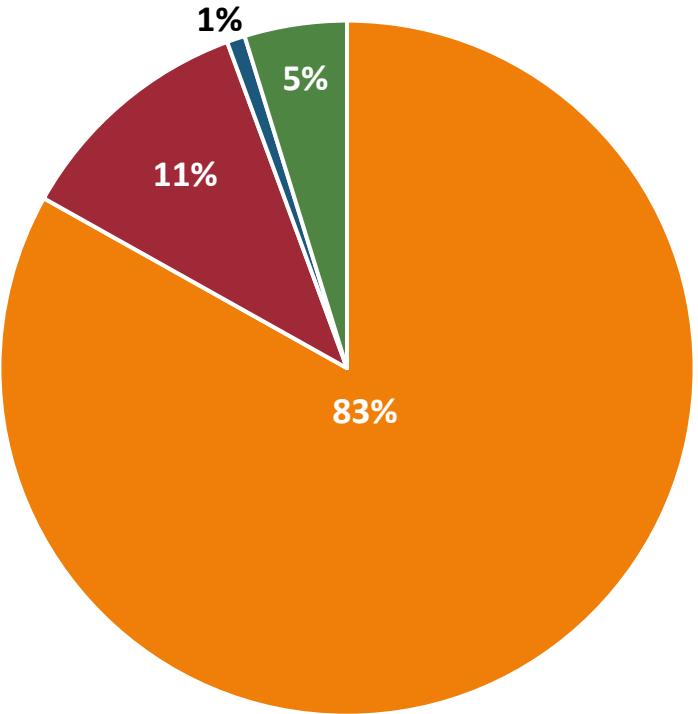
Pine Hills Septic-to-Sewer Project



- FDEP Wastewater Grant (Awarded) - \$4,290,000
- ARPA Grant (Awarded) - \$1,725,814.62
- SJRWMD Cost Share Grant (Pending) - \$3,167,000
- OCU Contribution (up to 25% per Ordinance) - \$2,666,428.42

Total Funding - \$11,849,243.04

Project Funding Allocations



- RMS Construction Costs - \$9,849,999.52
- B&N Consultant Fees - \$1,335,183.52
- Materials Testing - \$100,000
- Capital Charges - \$564,060



Pine Hills Septic-to-Sewer Project

- Septic to Sewer Project Potential Schedule
 - Design Complete - April 19, 2024
 - Proposal from Contractor - July 19, 2024
 - BCC Approval - August 27, 2024
 - Construction Commencement - September 3, 2024
 - Construction Completion – November 13, 2025

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