



Todd Creek WWTP Upgrade

Public Meeting

Aug 31, 2023

Todd Creek WWTP Public Information Meeting

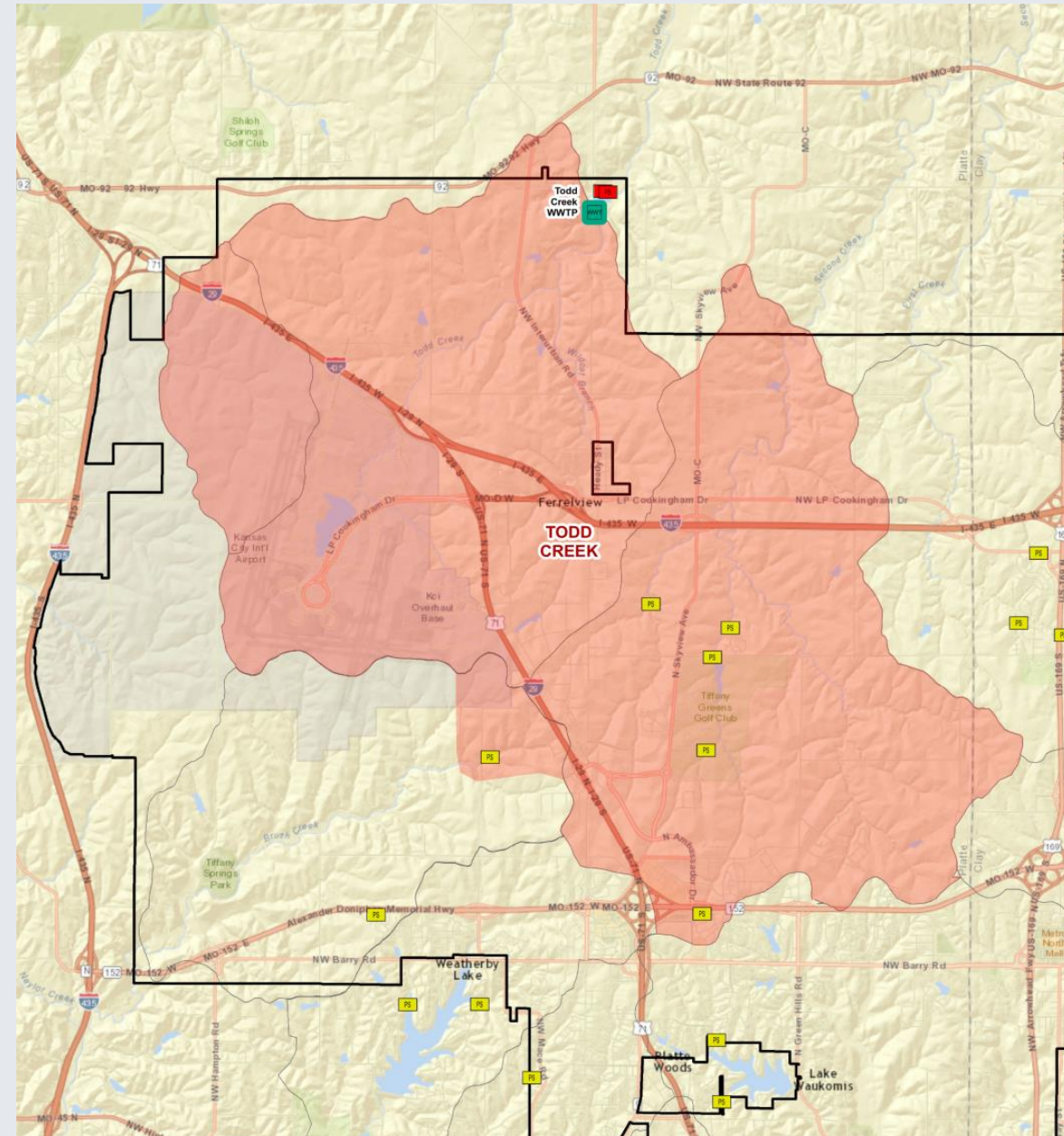


Agenda and House Keeping Items

- Project Purpose and Location
- Project Considerations
- Alternatives Evaluated
- Overview of Wastewater Treatment
- Selected Technology
- Facility Information and Community Benefits
- Community Concerns
- Project Schedule
- Q&A
- House Keeping
 - Please be sure to sign in
 - Hold questions until the Q&A session at the end of the presentation

Purpose of Project

- New Wastewater Treatment Facility for the Todd Creek and Second Creek Watershed area
- Higher quality water
 - Supports quality of life, use of streams and creeks
- Improved reliability
 - Protects human health and wildlife
- Increased treatment capacity
 - Supports area development and jobs
- Also serves Hoover Heights Subdivision



Project Location

- North of NW 144th St and West of Todd Creek Rd.
- 61 acres
- Livestock grazing
- Previously surface mined



Project Considerations

- Changes to FEMA floodplains
- Improve capacity, water quality
- Aging infrastructure/reliability
- Growing industrial, commercial, and residential in the area.
- Considered alternate locations to the SE and NW of Current Plant.



4 Treatment Alternatives Evaluated

1 – On Site Option

- Most expensive
- Requires flood hardening
- Nowhere to mitigate loss of floodplain

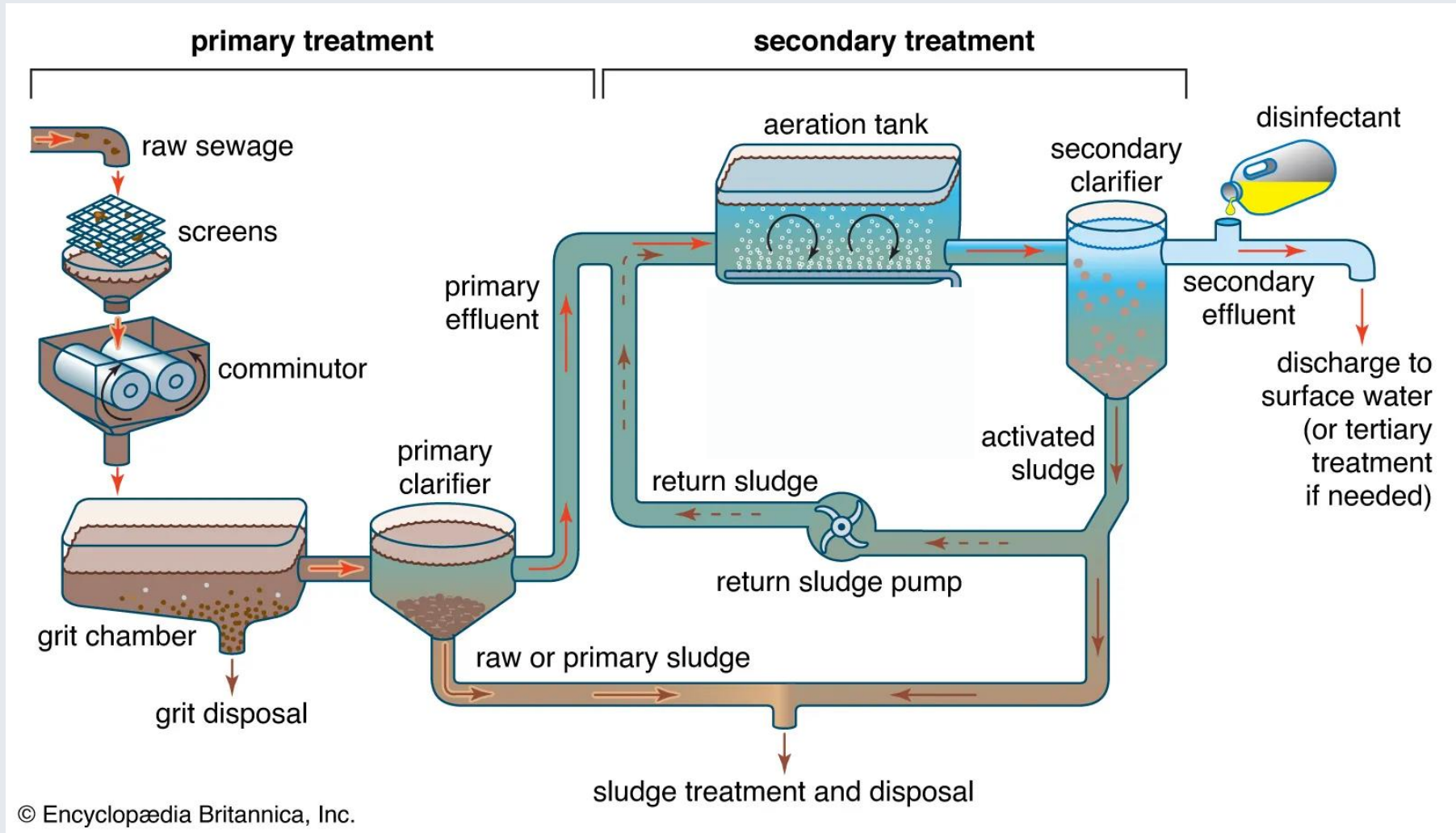
2 – Traditional Greenfield Options

- Most outdoor mechanical equipment
- Largest footprint
- Large open basins / odor concerns

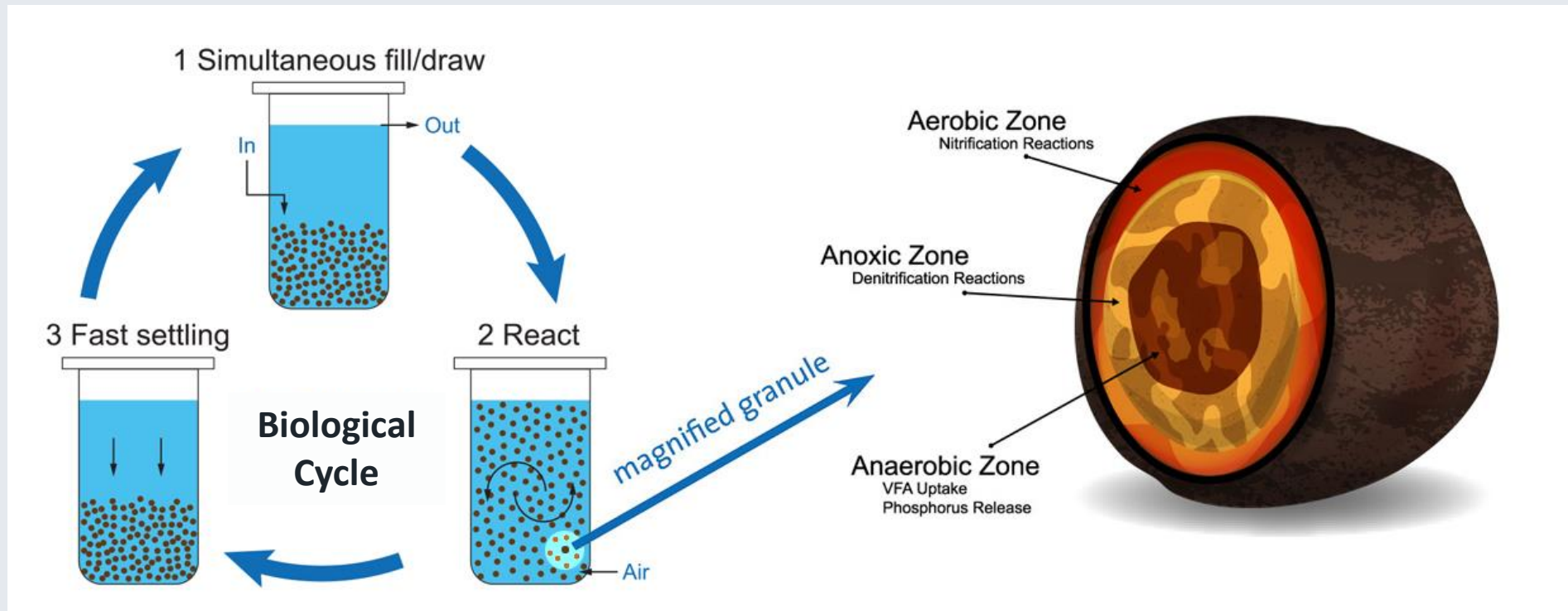
1 – Innovative Greenfield

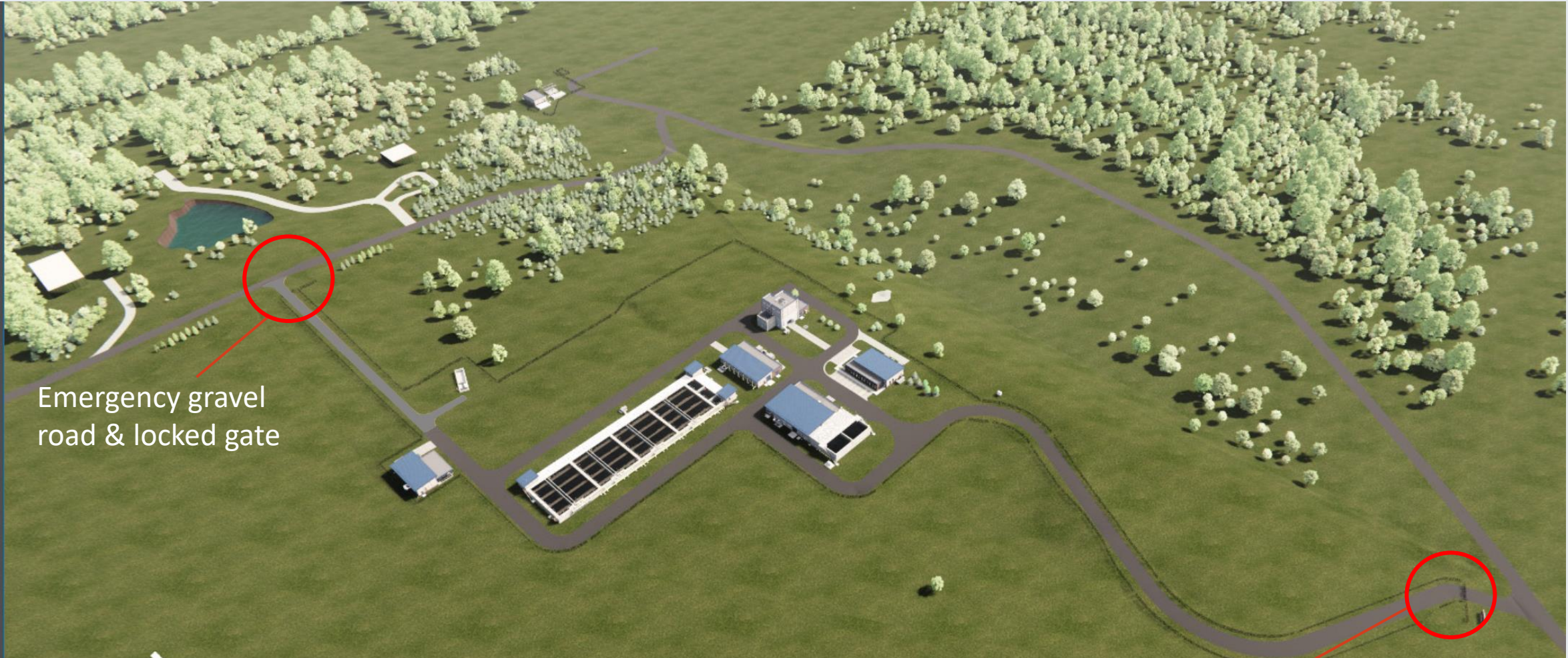
- Lowest cost option
- Smallest footprint
- Modular

How Does Wastewater Treatment Work?



Todd Creek Treatment Process (Aerobic Granular Sludge)





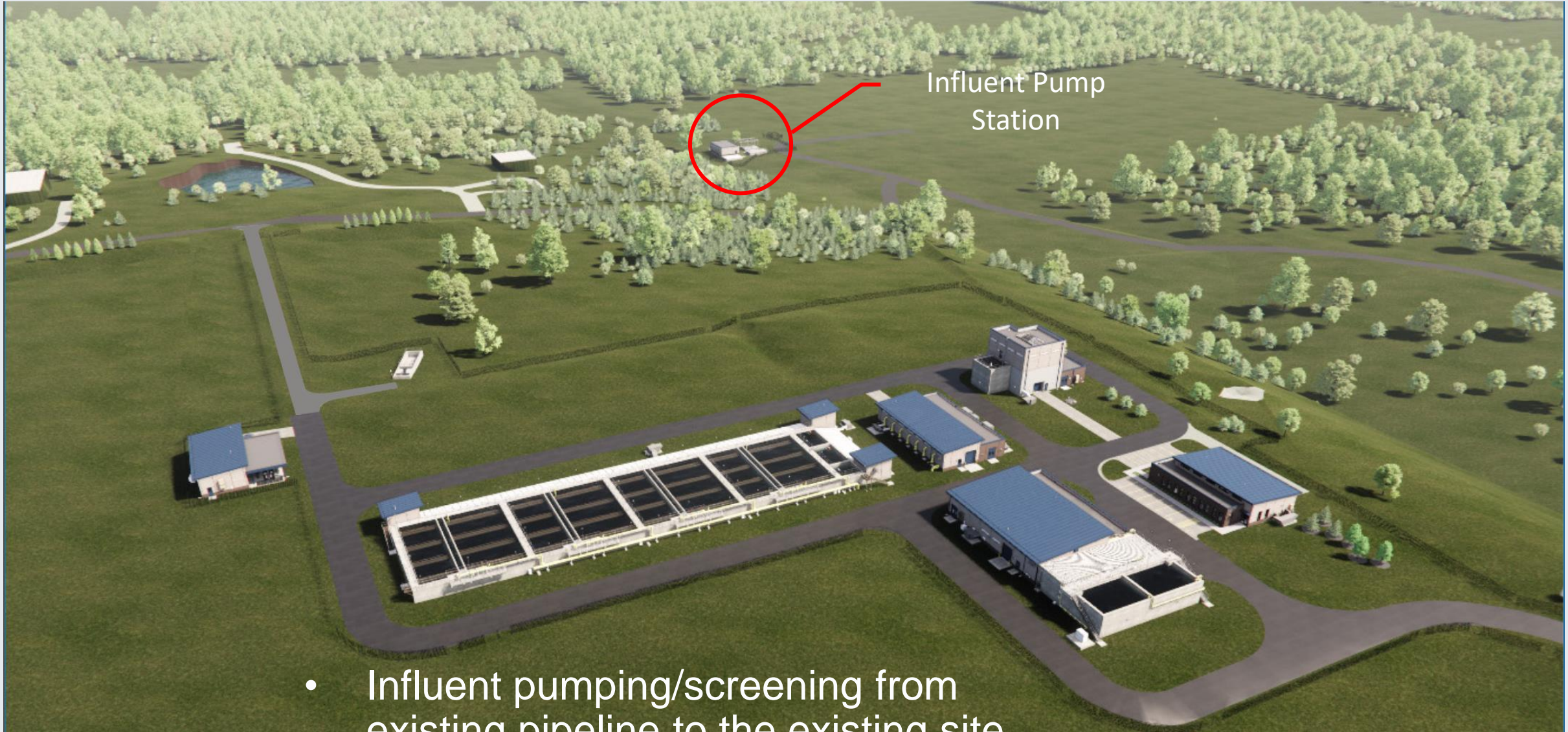
Emergency gravel road & locked gate

Main entrance off NW 144th

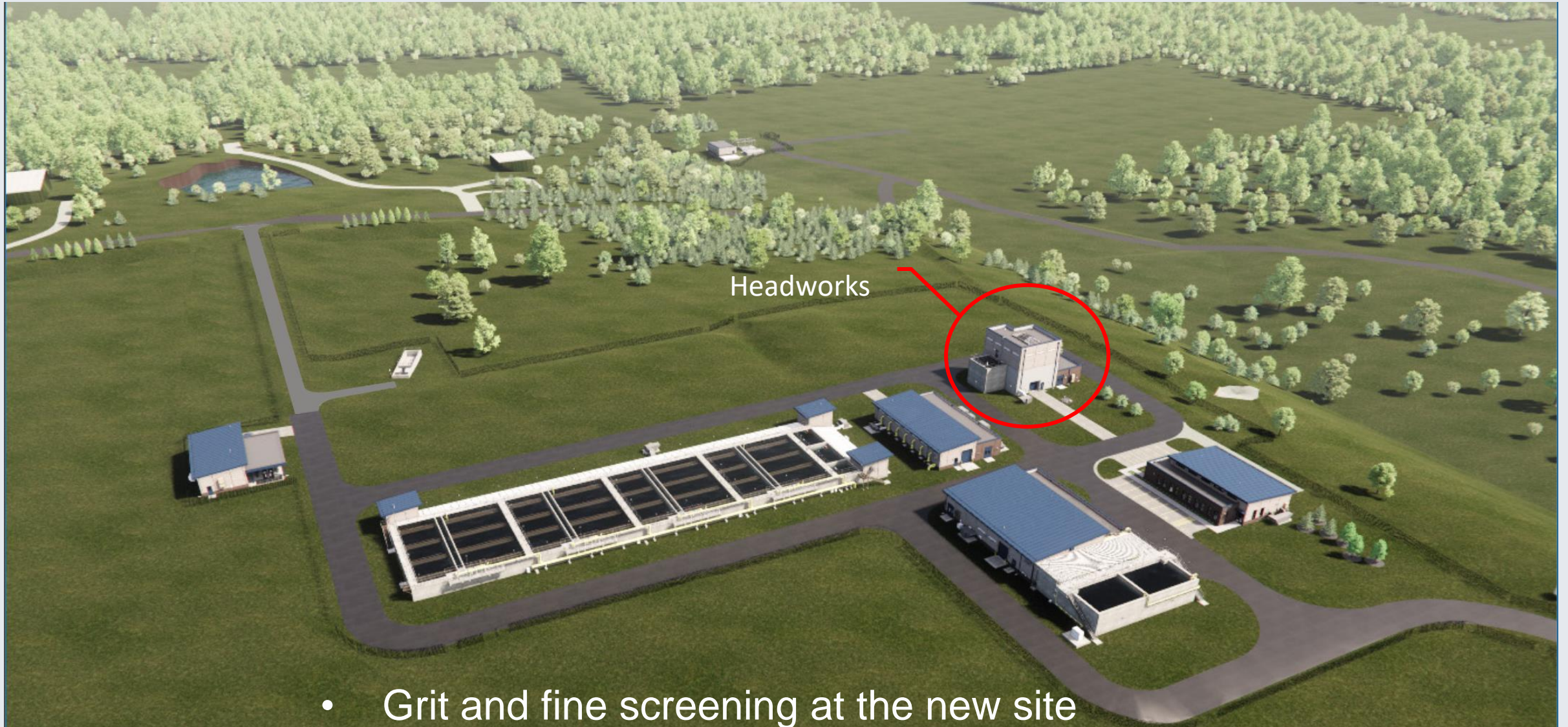
BURNS & MCDONNELL

WELLNER ARCHITECTS

Site Plan 1



- Influent pumping/screening from existing pipeline to the existing site



- Grit and fine screening at the new site

An aerial rendering of a water treatment facility. The central focus is a long, rectangular structure with multiple parallel channels, identified as the AGS/Biological Treatment area. This area is circled in red. A red line points from the text label to this circled area. Surrounding the main structure are several other buildings with blue roofs, paved roads, and green spaces with trees. In the background, there is a large wooded area and a small pond.

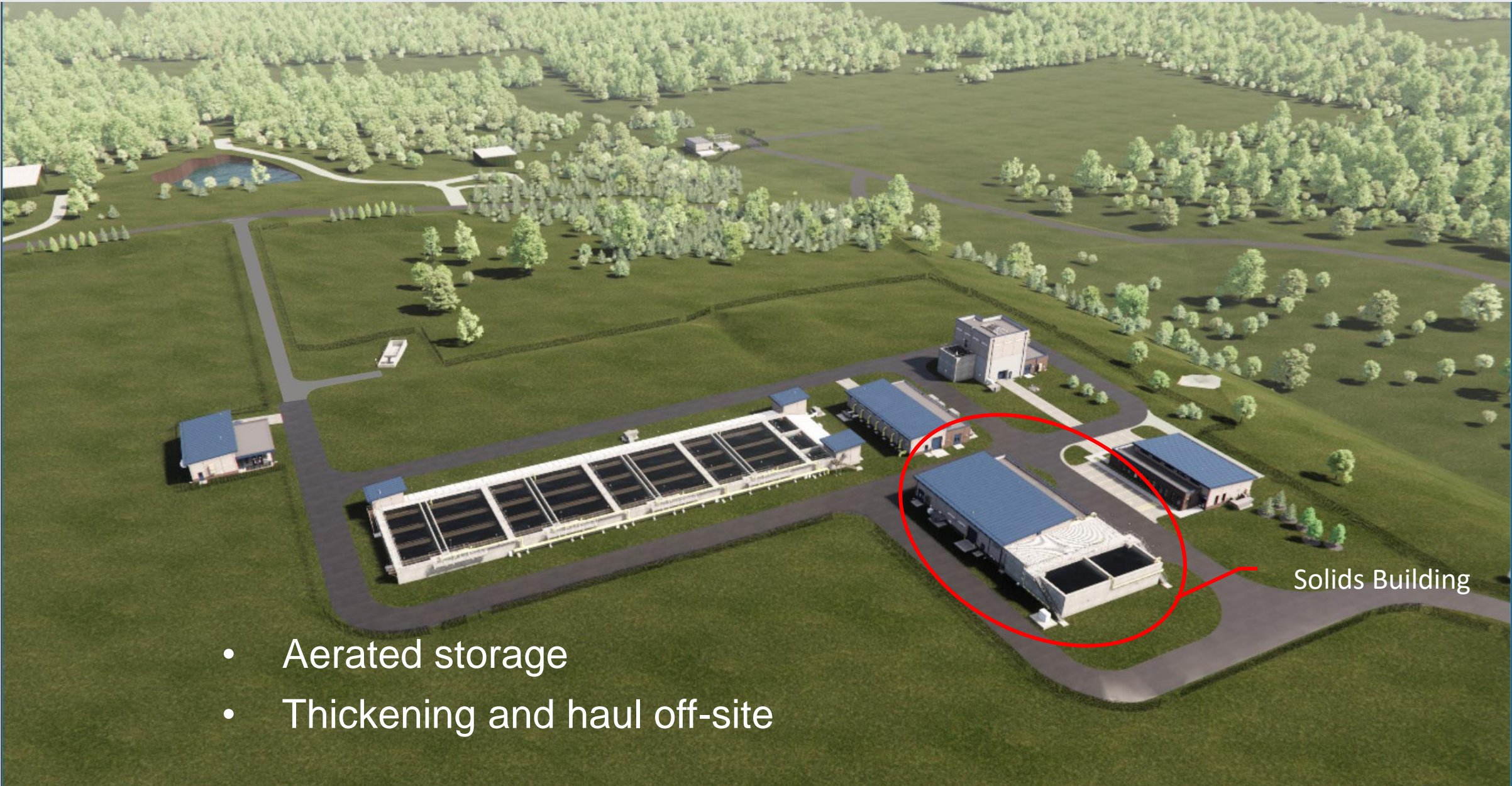
AGS / Biological
Treatment

- Small footprint, low energy, high quality water
- Removes organics and nutrients



Disinfection
Building

- UV Disinfection – chemical free deactivation of pathogens
- State of the Art
- Discharge to Todd Creek



- Aerated storage
- Thickening and haul off-site



- Laboratory and Controls
- Modern Architecture

Community Benefits

- Improved water quality
 - Nitrogen and Phosphorus removal
- Environmentally Responsible
 - Process does not rely on chemicals for nutrient removal.
 - Lower energy consumption
- Small footprint
 - Selected process does not need primary or final clarification
- Supports growth in the watershed
 - More jobs and homes in the area

Site Renderings – Entering Plant from NW 144th



Site Renderings – Blower Building and AGS



Site Renderings – Disinfection Building



Site Renderings – Admin Building



Community Concerns - Noise

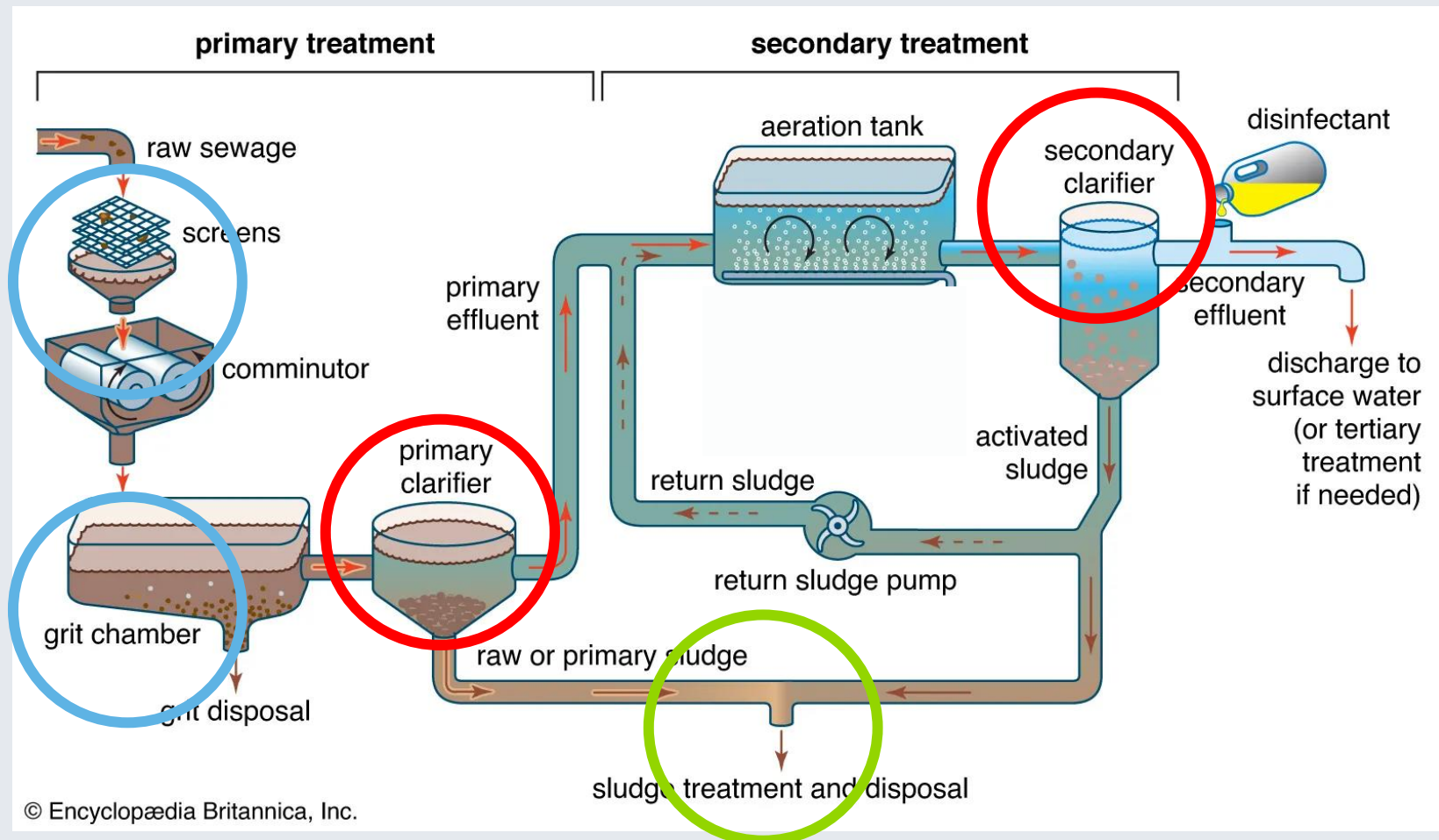
- Equipment in buildings + noise reducing enclosures
- Additional silencing methods
- Complying with OSHA limits for noise plus 1/10th of a mile setback from road
- Year-round vegetative screening
- Protections during construction
 - Limited hours of construction
 - White noise backup alarms on tractor vehicles



Community Concerns - Odor

• Where can odors originate?

- Clarifiers
 - No Clarifiers
- Solids storage
 - Vapex
- Grit and Screening
 - Hydrogen Peroxide



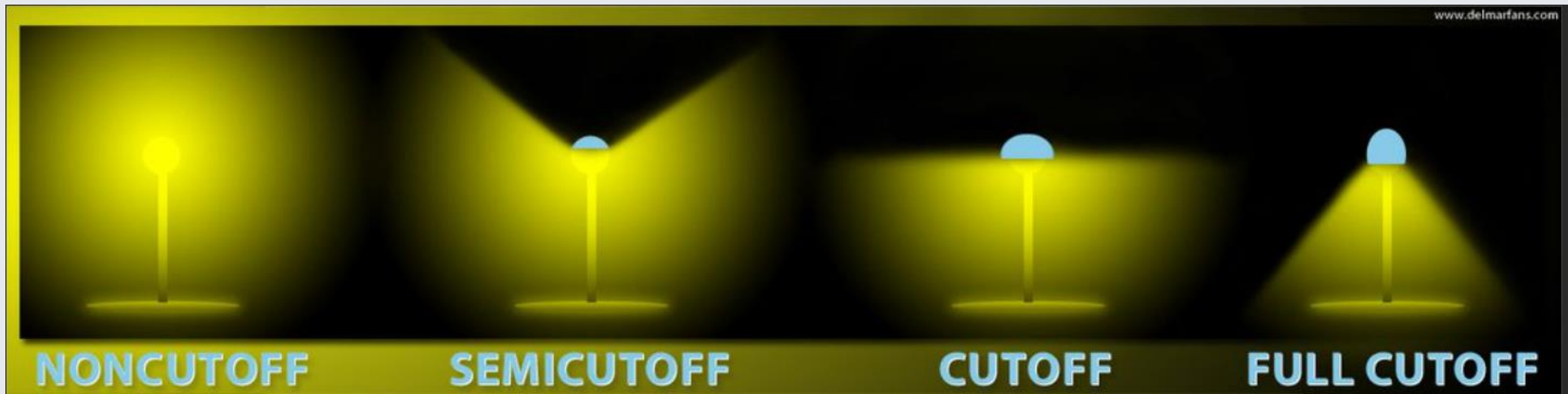
Community Concerns - Odor

- Hydrogen peroxide
 - Small quantities
 - Familiar materials

- Vapex
 - Hydroxyl Radicals
 - Similar to residential odor control



Community Concerns - Light



- “Dark Sky” design technology
- Lighting as-needed at night for security purposes
- Year-round vegetative screening

Community Concerns – Traffic

- All regular traffic on Interurban Road & 144th
- Todd Creek is an emergency access/egress point only
- Locked gate, unpaved road



Site Renderings – View from East of Todd Creek Rd



Site Renderings – View from East of Todd Creek Rd



Site Renderings – View from East of Todd Creek Rd





Projected Schedule

- 39 months
- Includes new facilities, demo and restoration of floodplain

Contact Information

- Email: water.projects@kcmo.org
- Phone: 816-513-0234

Questions?

THANK YOU

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