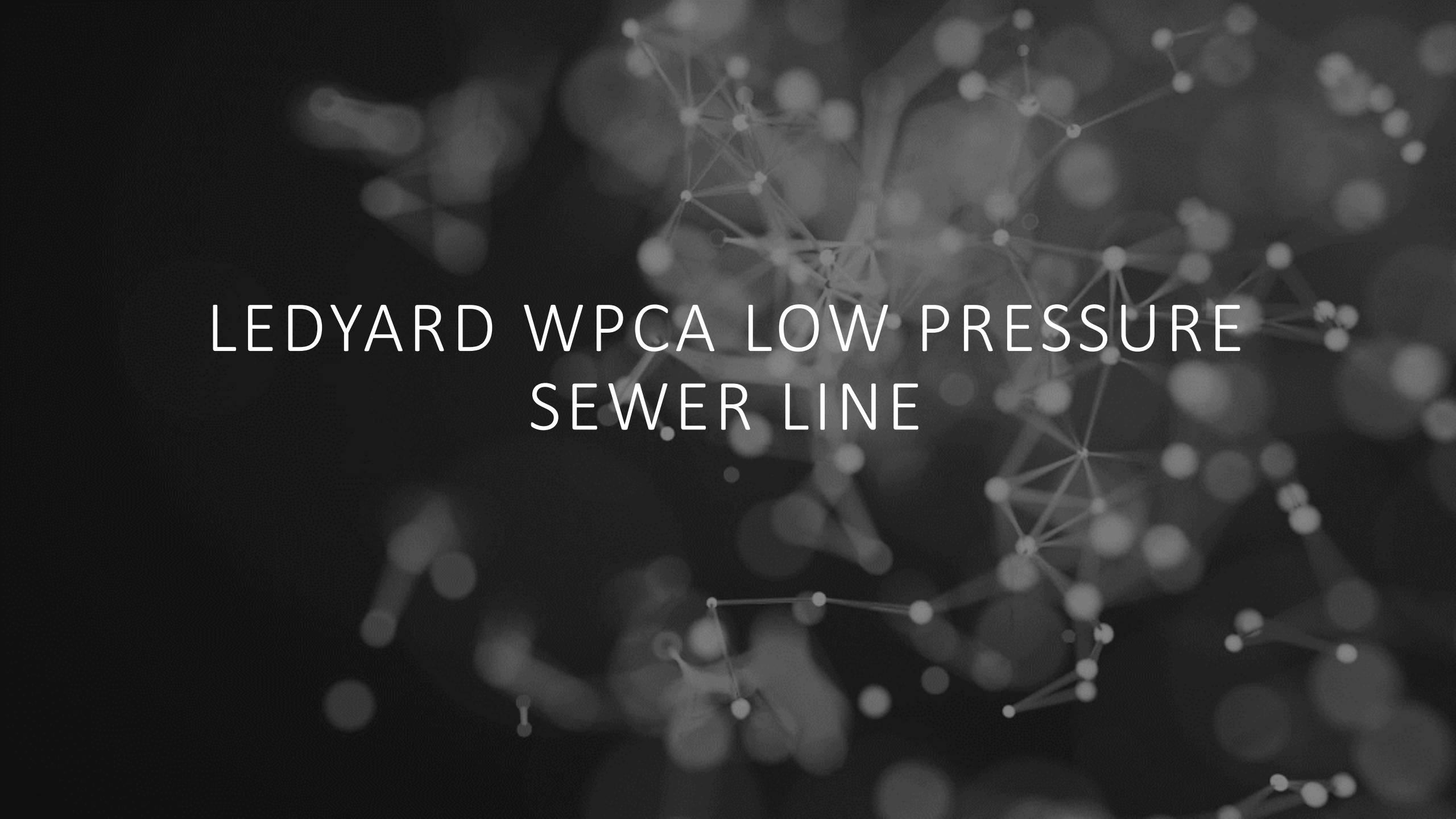




# LEDYARD WPCA LOW PRESSURE SEWER LINE



Figure 1: Dry Well



Figure 2: Wet Well



Figure 3: Control Panels



Figure 4: Force Main Discharge

# AGENDA

OVERVIEW

PLANT BUDGET

DEVELOPMENT

PHASE I – MULTI-TRAIL

PHASE III – GALLUP HILL

FUTURE PROJECTS

# OVERVIEW

# PLANT BUDGET

- Fixed cost – and a static customer base
- Proven increase capacity
- Recent Plant Upgrades – \$1.3 million upgrade – screen plant, decaners, blowers, piping, pumps, thickener, controllers
- Opportunity – multi-trail / Development and ARPA funding
- Multiphase approach – low cost operational design for the town (LPS)

DEVELOPMENT

# TYPICAL GRINDER PUMP SYSTEM

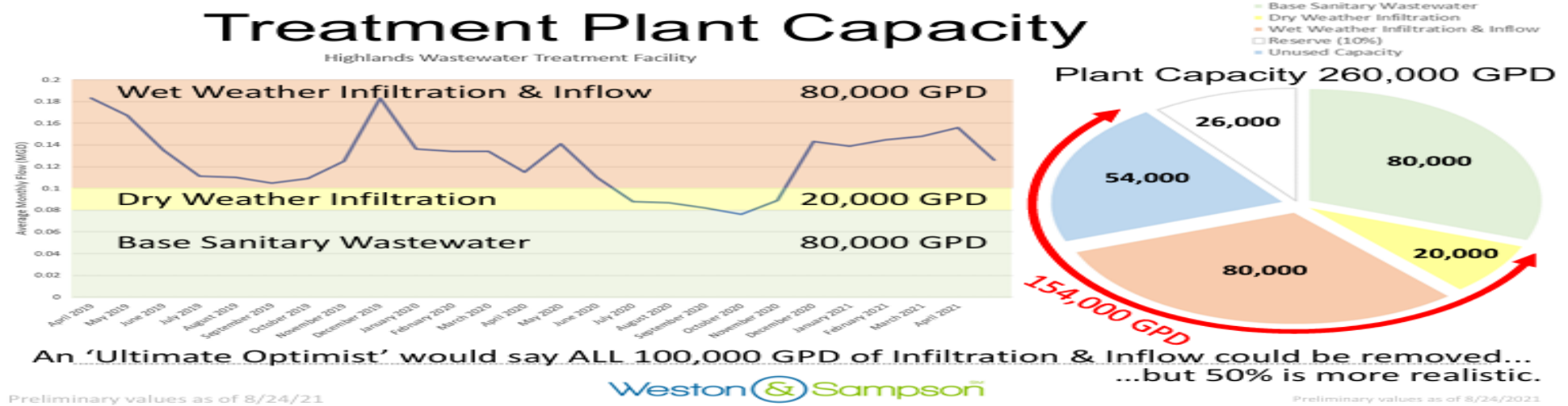


Burcam Complete Sewage Grinder Pump System  
401446P

4.5/5 ★★★★★ (4 user reviews)

Typically \$702-\$729

# PRESENT PLANT CAPACITY

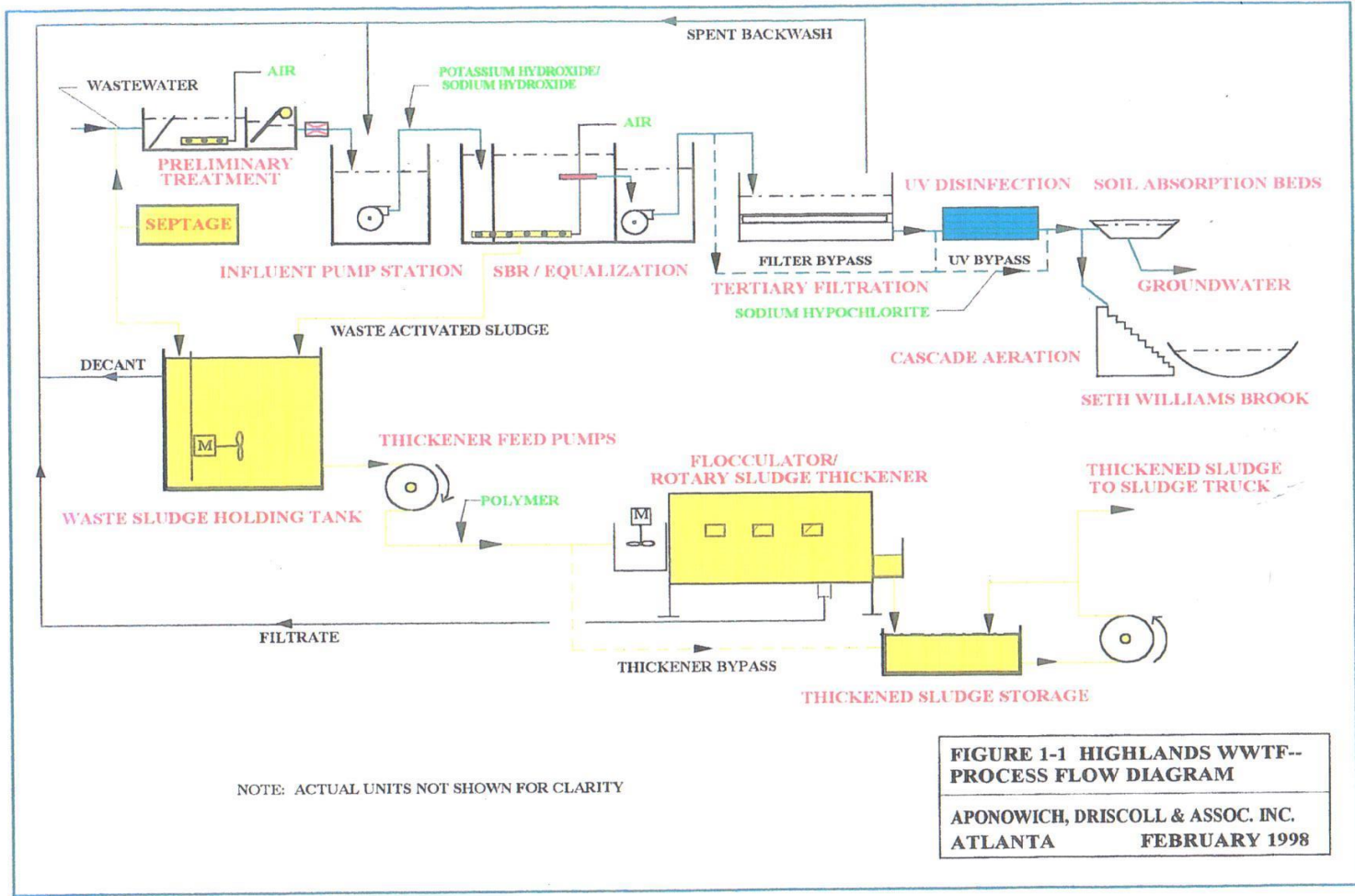


## Treatment Plant Capacity

|             |                                                  |
|-------------|--------------------------------------------------|
| 54,000 GPD  | 'Immediate' Treatment Plant Capacity             |
| 104,000 GPD | 'Realist' Max Available Treatment Plant Capacity |
| 154,000 GPD | 'Ultimate Optimist' Treatment Plant Capacity     |

# PLANT FLOW DIAGRAM

Highlands WWTF – O&M Manual



# SEWER LINE PHASES

Multiphase – I, II, III

I – Trail from Ledyard Center to  
the high school

II – Developers Investment

III from the high school to Pennywise

# PHASE I, II, III – MULTI- PURPOSE TRAIL

# PHASE I – LEDYARD CENTER TO THE HIGH SCHOOL

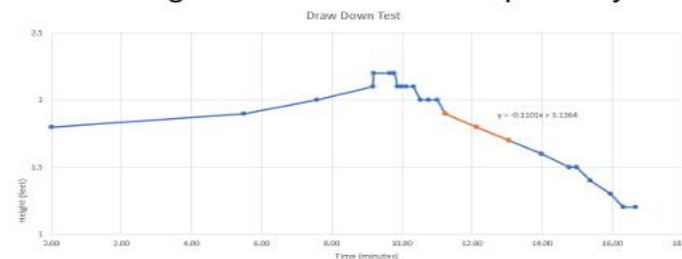
## Proposed Sewer Extension



## High School Pump Station



- Results: 14 GPM @ 120 ft TDH (52 PSI)
- Short pump cycle vs. long discharge pipe
- Discharge pipe has limited scouring
- Increasing flow volume would improve system



# ORIGINAL PROPOSAL

## Proposed Sewer Extension

|                  |                                                                                                                           |
|------------------|---------------------------------------------------------------------------------------------------------------------------|
| Initial Phase    | Town constructs Low Pressure Sewer (LPS) under multi use pathway                                                          |
| Center Phase     | Developers extend LPS across parcels                                                                                      |
| Final Phase      | Town replaces 3-inch LPS bottleneck along Gallup Hill Rd from High School to Pennywise Ln & reduce I/I at treatment plant |
| Future Build-Out | Developers extend LPS west of Route 117                                                                                   |

Weston &amp; Sampson

## Proposed Sewer Extension



## Low Pressure Sewers with Grinder Pumps

Weston &amp; Sampson

# PROPOSED SEWER EXTENSION

## Proposed Sewer Extension

|                  |                                                   |
|------------------|---------------------------------------------------|
| Initial Phase    | \$1,200,000 by Town                               |
| Center Phase     | \$ TBD by Private Developers                      |
| Final Phase      | \$950,000 by Town<br>\$ TBD I/I reduction by Town |
| Future Build-Out | \$ TBD by Private Developers                      |

Weston & Sampson

Preliminary values as of 8/24/2023



# OPTIONS

## Reduce Development Scenarios by 50%



|                                |             | Estimated Flow (GPD) |                  |
|--------------------------------|-------------|----------------------|------------------|
|                                |             | Center Phase         | Future Build-Out |
| Parcel A                       | Residential | 43,000               | 0                |
|                                | Commercial  | 0                    | 0                |
| Parcel B                       | Residential | 0                    | 0                |
|                                | Commercial  | 650                  | 0                |
| Parcel C                       | Residential | 0                    | 6,500            |
|                                | Commercial  | 0                    | 0                |
| Parcel D                       | Residential | 0                    | 0                |
|                                | Commercial  | 0                    | 5,000            |
| Parcel E                       | Residential | 0                    | 22,500           |
|                                | Commercial  | 0                    | 22,500           |
| Parcel F                       | Residential | 0                    | 0                |
|                                | Commercial  | 175                  | 0                |
| Parcel G                       | Residential | 0                    | 0                |
|                                | Commercial  | 175                  | 0                |
| Miscellaneous Infilling        |             | 5,000                | 5,000            |
| Total Estimated Flow per Phase |             | 49,000               | 61,500           |
| Total Estimated Flow           |             | 110,500 GPD          |                  |

Preliminary values as of 8/24/2023

Weston & Sampson

## Proposed Sewer Extension

Flows must be less than capacity

✓ 54,000 GPD  
✓ 49,000 GPD

'Immediate' Treatment Plant Capacity  
Center Phase Estimated Wastewater Flows

✓ 154,000 GPD  
✓ 110,500 GPD

'Ultimate Optimist' Treatment Plant Capacity  
Future Build-Out Estimated Wastewater Flows

✗ 104,000 GPD  
✗ 110,500 GPD

'Realist' Max Available Treatment Plant Capacity  
Future Build-Out Estimated Wastewater Flows

Almost got it!

Weston & Sampson

## PRESENT COMMITMENTS

- Habitat— 11,600 gallons/day
- 2 Colby Drive -

The background is a dark gray field featuring a complex network of white dots and thin white lines. These elements form various geometric shapes, including triangles and polygons, scattered across the frame. The lines connect the dots, creating a web-like structure that is more dense in some areas and more sparse in others. The overall effect is a subtle, technical, or scientific aesthetic.

THANK YOU