

# ***Paperchase Trail / Hurdle Fence Drive Sanitary Sewers Informational Meeting***



**July 23, 2015**

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## **Primary Drivers for Project**

- **High need area as evaluated within the Sewer Facilities Plan and a moderately high priority for roadway improvements as identified in the Pavement Management Plan**
- **Petition from Area Homeowners (2014)**
- **Age of Septic Systems**
- **High ground water in the area (as proven by borings)**
- **Area abuts existing public sewer (Cambridge Crossing) making connection to existing sewers feasible**

## **Project goals:**

- 1. Provide gravity sanitary sewer service to first-floor connections at every residence (basement service to many)**
- 2. Minimize disturbance to environment – particularly inland wetlands**
- 3. Locate manholes to minimize driver impediments**
- 4. Determine interest and feasibility to bring other utilities to the neighborhood (public water and natural gas) – coordinate design and construction as appropriate**
- 5. Complete road overlay after both phases are finished (assuming Town budget approval)**

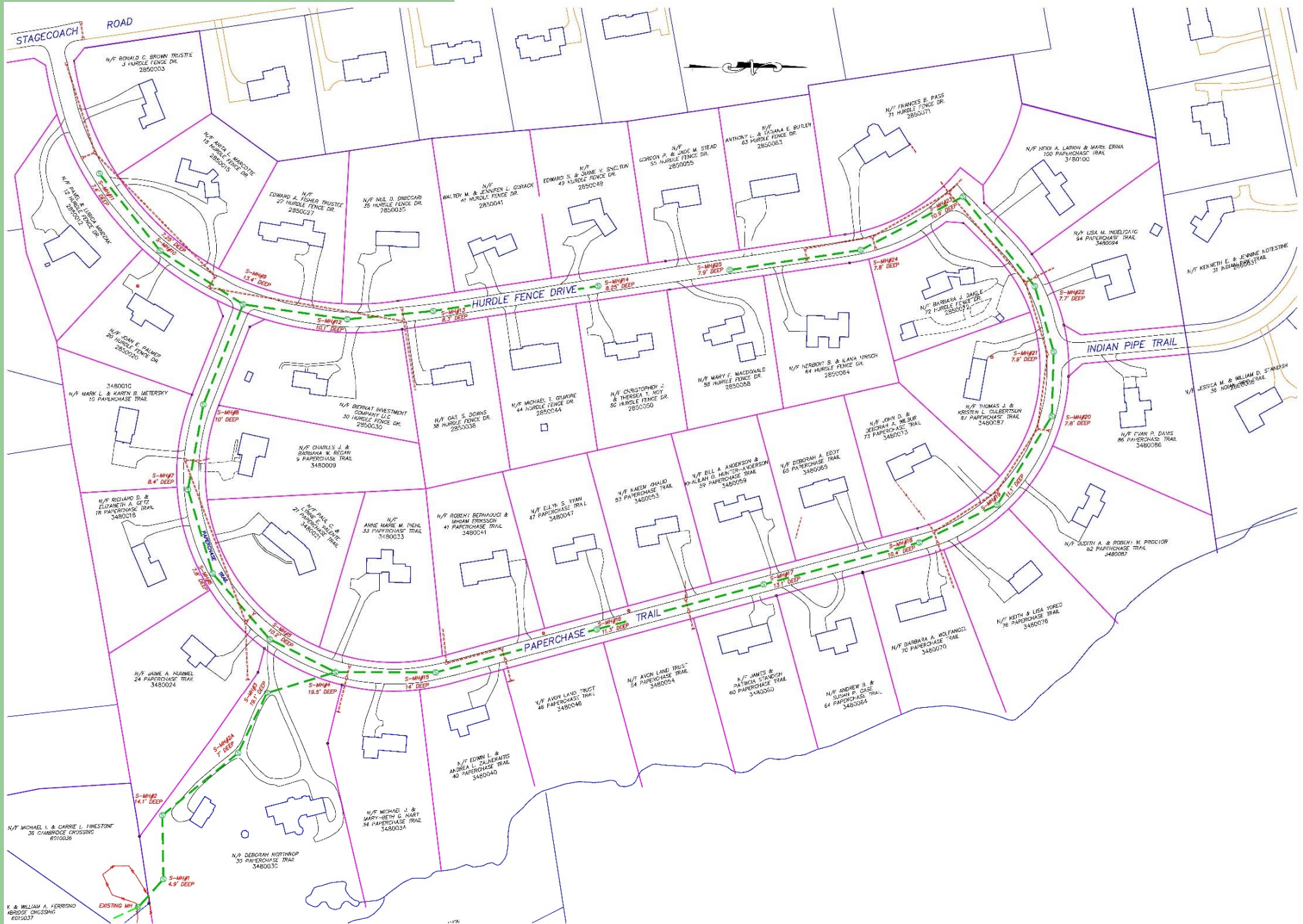
## **Work completed to date:**

- 1. Performed field survey – to locate all topographic features within the ROW corridor and limited private property features**
- 2. Performed office survey to identify property ownership information**
- 3. Performed soil borings to identify presence of ledge rock, soil types, and ground water depth**
- 4. Prepared preliminary design**
- 5. Met with Avon Water and CNG to discuss project and solicit interest**
- 6. Identified and evaluated routes to connect to the existing sanitary sewer – meet with property owner(s) to determine accessibility options for same**
- 7. Met with select property owners with challenging connection issues to determine lateral location**
- 8. Prepared preliminary cost estimates – both internally and via local contractor**
- 9. Prepared Public information meeting presentation and materials**

## **Project Considerations:**

- 1. Approximately 4500 ft of sanitary main**
- 2. 26 manholes**
- 3. 44 service laterals**
- 4. Depth of mainline between 8ft and 21ft**
- 5. Current design has 2 residences that will need to pump**
- 6. Road will be partially closed during construction (in construction zone)**
- 7. Temporary pavement over disturbed roadway (paved in several stages)**
- 8. Complete road overlay after both phases are finished (assuming Town budget approval – not paid for under this project)**

# Preliminary Design



## **Project cost drivers:**

- 1. Depth of sewer – deeper sewer has greater impact, greater restoration and greater cost**
- 2. Number of manholes**
- 3. Existence of ledge rock and groundwater**
- 4. Backfill material – typically backfill can be material that came out of trench – not all of this can due to groundwater saturation**
- 5. Access to existing sewer to connect to – private easement and restoration to current conditions**
- 6. Bidding contractor work load**
- 7. Costs of materials**

# Assessment Estimate

## Sewer Construction Cost Estimate:

|                       |           |
|-----------------------|-----------|
| Town of Avon Estimate | \$605,000 |
|-----------------------|-----------|

|              |           |
|--------------|-----------|
| CVC Estimate | \$976,000 |
|--------------|-----------|

## Soft Costs Estimates:

|                       |         |
|-----------------------|---------|
| Field Survey (Actual) | \$7,750 |
|-----------------------|---------|

|                  |         |
|------------------|---------|
| Borings (Actual) | \$7,590 |
|------------------|---------|

|                                        |                 |
|----------------------------------------|-----------------|
| <u>Legal &amp; Easement (Estimate)</u> | <u>\$20,000</u> |
|----------------------------------------|-----------------|

|                           |                          |
|---------------------------|--------------------------|
| Total cost estimate range | \$640,340 to \$1,011,340 |
|---------------------------|--------------------------|

|                                                        |    |
|--------------------------------------------------------|----|
| Number of properties serviced (inc. 2 Avon Land Trust) | 44 |
|--------------------------------------------------------|----|

Estimated Assessment per property=(\$640,340/44) to (\$1,011,340/44)

or \$14,553 to \$22,985

Note: these are relatively conservative estimates – it is impossible to determine with confidence what the true costs will be until the project is bid

# Other Costs

## Other costs incurred at time of connection (\*):

|                                                    |                      |
|----------------------------------------------------|----------------------|
| Connection Charge                                  | \$2500               |
| Connection Cost (to contractor hired by homeowner) | \$3000 - \$6000 (**) |
| Annual Sewer Use Fee                               | \$335/yr/home        |
| Sewer permit fee                                   | \$50                 |

(\*) **Note:** These costs occur at the time of connection from house to Town sewer and are the current fees, subject to AWPCA revision

(\*\*) **The cost to connect the lateral stub to each residence varies depending on several factors including length, depth, impediments such as trees and rock, landscaping, and restoration requirements**

**NOTE: Residents are not required to connect just because there is sewer available**

# Other Possible Design Alternatives

## 1. Raise the sewer

**Description:** look at raising the sewer in select areas

### **Pros:**

- o Reduce the cost per foot of the areas raised due to time and material reduction
- o Reduce the impact to the areas raised (reduces restoration costs in concept)
- o Will reduce construction time
- o Reduces the amount of clean dry backfill required
- o Will result in a lower assessment

### **Cons:**

- o Will require more homes to pump up to the sewer
  - (these pumps are owned, powered, and maintained by home owners)
  - Pumps generally cost around \$5,000 plus installation
  - Cost of lateral for pumps is lower and the route more flexible
  - These are powered by electricity – lose power means lose pump unless on a back-up generator
  - Systems generally have a storage capacity equal to a day

# Other Possible Design Alternatives

## 2. Low pressure sewer

**Description:** consider low pressure sewer for the entire neighborhood

### **Pros:**

- o Reduce the cost per foot of the areas raised due to:
  - Shallower sewer (force main is 4-5 ft deep)
  - Time to construct and material costs reduction
- o Reduce the impact to entire project area (reduces restoration costs)
- o Will reduce construction time
- o Reduces the amount of clean dry backfill required
- o Will result in a significantly lower assessment
- o Cost of lateral for pumps is lower and the route more flexible

### **Cons:**

- o Will require all homes to pump up to the sewer
  - Pumps are owned, powered, and maintained by home owners
  - Pumps generally cost around \$5,000 plus installation
  - These are powered by electricity – lose power means lose pump unless on a back-up generator
  - Systems generally have a storage capacity equal to a day

# Potential Project Schedule

|                                                                                                               |                         |
|---------------------------------------------------------------------------------------------------------------|-------------------------|
| <b>Public Information Meeting</b>                                                                             | <b>July 2015</b>        |
| <b>Project Design Finalization (includes meeting with<br/>home owners to determine lateral stub locations</b> | <b>Oct. 2015</b>        |
| <b>Second Public Information meeting / Public Hearing</b>                                                     | <b>Nov. 2015</b>        |
| <b>Prepare Bid Package and Go Out to Bid</b>                                                                  | <b>Winter 2015/16</b>   |
| <b>Award Project</b>                                                                                          | <b>Spring 2016</b>      |
| <b>Begin Construction</b>                                                                                     | <b>Summer 2016</b>      |
| <b>Complete Construction</b>                                                                                  | <b>Summer 2016</b>      |
| <b>Other utility construction (if interested)</b>                                                             | <b>Summer/Fall 2016</b> |
| <b>Mill and overlay (budget dependent)</b>                                                                    | <b>2017</b>             |
| <b>Determine final costs and Assessment</b>                                                                   | <b>Fall 2016</b>        |
| <b>Conduct Public Hearing on Assessment</b>                                                                   | <b>Fall 2016</b>        |
| <b>Levy Assessments</b>                                                                                       | <b>Winter 2016/17</b>   |

# Frequently Asked Questions

Q: If the sewer is installed, am I required to connect?

***A: Whereas the AWPCA regulations have certain stipulations concerning this, unless the FVHD district requires connection due to failure, you will not be required to connect***

Q: If I decide to connect what will my costs be?

***A: Please see the hand-out: Connection charge = \$2,500, Permit Fee = \$50, Hire a licensed contractor to connect from lateral stub to the home = variable***

Q: How will the Town determine where to locate my lateral connection?

***A: Town staff will attempt to meet with every property owner during the final design stage. The purpose of the meeting will be to discuss lateral route options so we can locate the lateral on the design plans***

Q: What is the next step?

***A: The AWPCA has to decide which direction they would like to pursue – Engineering will provide services accordingly***