



Albemarle County

Legislation Text

File #: 19-409, **Version:** 1

AGENDA DATE: 7/17/2019

TITLE:

Development Area Drainage Infrastructure Program Discussion

SUBJECT/PROPOSAL/REQUEST: Receive information related to the development area drainage infrastructure draft program from staff and provide input on potential program scope and associated initial cost estimates.

ITEM TYPE: Regular Information Item

STAFF CONTACT(S): Richardson, Henry, Kamptner, Stewart, Harper

PRESENTER (S): Greg Harper

LEGAL REVIEW: Not Required

REVIEWED BY: Jeffrey B. Richardson

BACKGROUND: The Board has affirmed support for the development of a County program to adopt and proactively maintain portions of drainage infrastructure in the Development Areas that lie on private property. At its April 11, 2018 meeting, the Board directed staff to "continue work to determine, through camera imaging, where grey infrastructure issues exist within the County and attempt to set aside an adequate reserve fund to be used to address maintenance and ongoing repair needs of grey infrastructure issues where such issues are identified". At its December 5, 2018 meeting, the Board supported the continuation of video-assessments and authorized staff to develop a draft extent-of-service policy for subsequent Board consideration.

Staff have substantially completed the process of mapping drainage infrastructure in portions of Development Areas. Video assessments - totaling approximately 23,000 linear feet of infrastructure, or approximately 10% of the total estimated grey infrastructure in the Development Areas - have been completed throughout a pilot area in late 2018.

STRATEGIC PLAN: Infrastructure Investment: Prioritize, plan, and invest in critical infrastructure that responds to past and future changes and improves the capacity to serve community needs

DISCUSSION: The purpose for today's discussion is for staff to update the BOS on the progress of condition assessments of drainage infrastructure in the Development Areas. Staff will describe how the resulting data has been extrapolated to provide a rough estimate of long-term potential program costs.

Staff continues to lay the groundwork for a drainage infrastructure management program by evaluating the condition of the existing infrastructure. Staff are working with a new video-assessment contractor - procured through a competitive bidding process - to assess an additional 50,000 feet of infrastructure in July and August 2019. Assessments are planned to continue over the next two years to assess the remaining infrastructure in the Development Areas - approximately 200,000 feet.

Upon completion of the pilot video assessment, an engineering consultant was engaged to assess findings. A comprehensive list of potential repairs was developed. Each identified problem was prioritized based on the severity. A brief scope of work for each potential repair was provided, as well as estimated repair costs. Attachment A provides summary level findings of the engineering effort, as well as staff's extrapolation of that data to produce an estimate of potential future program costs. The analysis includes varying program costs models based on assumptions of differing extents and levels of service (EOS and LOS). At this time, all models do not account for any drainage infrastructure located outside the Development Areas.

EOS can be described by criteria that must be met for a section of infrastructure to be included in the program. Staff have grouped criteria into four increasingly inclusive EOS scenarios:

1. **County properties and public easements** - this scenario includes only infrastructure located on County-owned properties (including schools) and within easements dedicated to public use
2. **downstream of County properties and public easements** - this scenario includes infrastructure downstream of County properties and public easements to where the infrastructure meets a natural stream
3. **downstream of VDOT roadways** - in addition to infrastructure described in scenario 2, this scenario includes infrastructure located downstream of roadways maintained by the Virginia Department of Transportation (VDOT)
4. **concentrated discharges from multiple private properties** - in addition to infrastructure described in scenarios 2 and 3, this scenario includes infrastructure receiving runoff from three or more private properties

Note that none of these EOS scenarios include infrastructure located *within* VDOT right-of-way or that serves only one or two properties. As such, even the most inclusive scenario (#4) includes only approximately one-quarter of all known infrastructure.

LOS can be described by the frequency of continued assessments and by the period of time in which issues would be addressed. Staff have defined three LOS scenarios:

- A. **high** - Priority 1 issues are addressed within 5 years and Priority 2 issues within the following 15 years; assessments are completed every 10 years
- B. **medium** - Priority 1 issues are addressed within 10 years and Priority 2 issues within the following 20 years; assessments are completed every 20 years
- C. **low** - Priority 1 issues are addressed within 20 years; assessments are completed every 20 years

The consultant identified 13% of drainage pipe sections in the pilot area as having at least one issue significant enough that is recommended to be addressed within the next five years (labeled Priority 1). The consultant also categorized moderate (Priority 2) and minor (Priority 3) issues.

The Board will also be presented with a summary of key factors and decision points that staff will need to consider when developing a recommended policy. These matters include: refinement of both EOS and LOS criteria; methods to prioritize competing Priority 1 projects; and consideration of programmatic impacts of the limitations on local government's authority to perform work on private properties.

BUDGET IMPACT: The estimated annual program costs for combinations of the above EOS and LOS scenarios are included as Attachment A for discussion and feedback. Note that these costs are based on early estimates, that both EOS and LOS criteria need to be further refined, and that the estimates do not include program management overhead.

RECOMMENDATION:

Staff seeks input from the Board on program extent of service and level of service following the findings and

analysis of infrastructure assessment pilot.

ATTACHMENTS:

Attachment A: Projected Annual Program Costs Matrix