January 2013 Update

North Kensington Street and 32nd Street North Green Street and Sewer Capacity Meeting
Friday, July 20 and Monday, July 23, 2012
Summary of Citizen Questions and Concerns

Thank you for participating in the recent street-side meetings. Below is a summary of the questions and concerns that were raised during the meeting. Included in this summary are comments that were received via e-mail from a citizen that did not attend the meetings.

Storm Sewer Capacity-related Questions and Concerns

- Following the installation of the new storm sewer pipe (which is not currently connected), the manhole in the yard of 3206 is surrounded by dead grass. Can something be done to address the dead grass?
  Response:
  County staff cannot answer this question at this time. County staff will discuss this with our engineers to see if there is a remedy.

  January 2013 Update:
  County staff visited the yard of 3206 and planted new grass in the fall of 2012.

- The installation of the new storm sewer pipe resulted in an increase of rats in the neighborhood. After citizen complaints about the rats were submitted, the County poisoned the rats. Dead rats were found around the neighborhoods and in yards. How will the rats be addressed during this round of storm sewer work?
  Response:
  County staff cannot answer this question at this time. County staff will take this comment into consideration as planning for this project continues and will coordinate with the Health Department as necessary. More information about the County's rat and mice programs can be found at: www.arlingtonva.us/departments/HumanServices/services/health/envhealth/HumanServicesRodentControl.aspx. Further information about what attracts rodents to your homes can be found at www.arlingtonva.us/departments/HumanServices/services/health/envhealth/HumanServicesRatControl.aspx.

Green Street-related Questions and Concerns

Rain Garden Design

- Can the utility strip be used as part of the rain garden to reduce the amount of street width that is taken for the rain garden? Can the rain garden accommodate the utility pole that is in the utility strip in front of 3212, thus allowing the rain garden to include the utility strip area? What will be the width of the rain garden?
  Response:
  We will take these suggestions into consideration. We will be working with our engineers in the coming weeks to determine a more detailed design for the project.

  January 2013 Update:
  The rain garden varies between 7 and 11 feet in width. These width measurements do not include the curb on either side of the rain garden. The utility strip area has been incorporated into the rain garden where feasible to reduce the amount of street width taken for the rain garden and maximize the volume of stormwater that the rain garden can treat. To ensure the stability of the existing utility pole in front of 3212 N. Kensington Street, this utility strip will remain and this area will be excluded from the rain garden.

- The opening of the rain garden is relatively small and positioned so that only a portion of heavy rain will even enter the "filter" area.
  Response:
  The opening is sized and positioned to accept stormwater from a 1" rain storm, which accounts for roughly 90% of the storms in Arlington. The rain gardens are designed to "overflow"during storms larger than 1"

into the storm sewer system to avoid flooding the streets. For the safety of traffic and property, this is an intentional part of the design.

January 2013 Update:
The location and width of the curb cuts that allow stormwater to enter the rain gardens will be determined during the final stage of design.

- The "filter" area will quickly become saturated in all but the most basic rain fall. Owner observations during moderate rainfall point to at least a 5 gal per min curbside flow rate.
  Response:
  A Green Street rain garden is designed to become saturated, allowing the stormwater to filter through the media and/or be absorbed by the plants. There is a pipe at the bottom of the rain garden that allows the water that drains through the rain garden's mulch, soil and gravel layers to flow back into the stormwater system. This process slows the release of water into the stormwater system and decreases the maximum volume of water that enters our streams during storms. Any water the rain garden can't accept will continue into the storm sewer system.

  Please also note that the Center for Watershed Protection has completed an in depth study of potential Green Street locations within the Little Pimmit Watershed, including a study of the drainage area for each proposed Green Street. The drainage area and amount of runoff are all taken into consideration with the design of a Green Street (www.arlingtonva.us/departments/EnvironmentalServices/Sustainability/page75627.aspx).

- The filter area, if created from natural clay-rich soil, is essentially hard pack during summer months and thus of limited effectiveness.
  Response:
  The filter media is not created from a clay-rich soil. A special soil blend that includes sand is used in rain gardens to allow for the proper infiltration. Below the soil is a gravel/rock layer. A basic cross-section of a Green Street rain garden is found at www.arlingtonva.us/departments/EnvironmentalServices/Sustainability/page81126.aspx.

- How long will the water stand in the rain gardens?
  Response:
  Speaking in general terms, a rain garden is designed to hold water for up to 24 hours at the surface and will completely drain through the filter media within 48 hours. The design details for these specific rain gardens, which are not completed yet, will impact how long it takes the water to soak into the ground. We will be working with our engineers in the coming weeks on the rain garden design and will have more information in the future.

  January 2013 Update:
  The design engineer's calculations indicate that water will completely drain through the filter media of these rain gardens within 15 hours. Water will remain in the ponding area for even less time, likely only a few hours immediately following a rain event.

- Will chemicals (pesticides/herbicides) be applied to the plants in the rain gardens?
  Response:
  No.

- What type of plants will be planted in the rain gardens?
  Response:

The County will be using native plants in the rain gardens. The neighborhood will have an opportunity to provide input on the plant selection.

January 2013 Update:
The plant palettes for Green Streets have been posted to the County web site – www.arlingtonva.us/departments/EnvironmentalServices/Sustainability/page88466.aspx. Residents adjacent to the rain gardens will have the opportunity to indicate their preference following the February 26 open house.

Traffic & Parking

- Will parking be lost on both sides of the street or on just one side of the street on 32nd Street North and North Kensington Street at the sites of the rain gardens?
  Response:
  County staff cannot answer this question at this time. We will be working with our engineers in the coming weeks to develop a more detailed design.

  January 2013 Update:
  The rain garden will take up the parking lane in front of 3206 and 3212 North Kensington St. No additional parking will be lost on North Kensington Street. On 32nd Street North, the rain garden is located at the intersection with Kensington St. For safety, parking will not be allowed on 32nd Street North in the vicinity of the rain garden on either side of the street.

- What if a resident is mobility-challenged and loses the street parking in front of their house?
  Response:
  County staff will take this into consideration with the design and placement of the rain gardens. We will be working with our engineers in the coming weeks to develop a more detailed design for the project.

  January 2013 Update:
  The rain garden will not remove street parking for residents who have previously shared information about mobility challenges with County staff.

- Can something else be added to slow down the traffic on North Kensington? From my perspective, this is essentially traffic calming approached through an environmental route.
  Response:
  Arlington's Green Streets program is a part of the County's stormwater management program. The proposed projects are not traffic calming initiatives. The location and sizing of the rain gardens are selected specifically to filter and clean stormwater (www.arlingtonva.us/departments/EnvironmentalServices/Sustainability/page81126.aspx).There may be some slowing of traffic as a result of the road becoming narrower, but the rain gardens are not designed for this purpose.

Pets

- The filter will quickly become a pet area and thus higher concentrations of urea would flow into the storm sewers.
  Response:
  The Green Street rain gardens will be planted with plants that are taller than the existing grass in yards or in the utility strip. Once the plants are established, the rain gardens will not be inviting pet areas. The utility strip areas will be a more inviting pet area than the rain garden. However, whether pet waste is deposited in

the rain garden or in the area of land that drains to it, the rain garden's soil and plants will remove pollutants such as nitrogen in the pet waste.

- There is a concern that dogs will drink the standing water in the rain gardens.
  Response:
  According to County code 2-6 Leashing Dogs, it is the responsibility of pet owners that "All dogs shall be kept secured by a leash or lead, and under the control of the owner or other responsible person, or within the real property limits of its owners." (www.arlingtonva.us/departments/CountyBoard/CountyCode/file74496.pdf)
  While walking their pets, citizens can discourage their pets from drinking water in the rain garden, just as one can choose not to allow one's dog to drink water in the street gutter.

General

- How high will the plants grow in the rain gardens and will they pose a sight obstruction? Will the rain gardens be dangerous and obstruct the sight of children and cars "behind" the rain garden?
  Response:
  The plant choices for the rain gardens are low growing. To provide for clear sight lines for drivers, Arlington County's Department of Transportation limits the height of plants in medians and curb side plantings to 2 ½ feet above the curb. At this height, the rain garden plants will not pose any more of a sight hazard than a trash can or recycling bin that may be at the edge of the pavement. Residents will be able to provide input on the plants chosen for the rain gardens in their neighborhood.

- Will the rain gardens pose a safety hazard for bicyclists?
  Response:
  Due to the very low height of the rain garden plants, bicyclists will be visible. Today, bicyclists are in the flow of traffic and do not have a designated bike lane. After the installation of the rain gardens, this would still be the case.

- The parking lane, across from the proposed rain garden site on North Kensington, is dark at night. There isn't a street light along this block of the street.
  Response:
  The neighborhood can request the addition of a street light through the department of transportation (www.arlingtonva.us/departments/EnvironmentalServices/dot/traffic/streetlights/EnvironmentalServicesHb14.aspx). Concerns about night-time visibility will also be considered during development of a more detailed design for the project.

  January 2013 Update:
  Reflective bollards will be affixed to the street-side curb to make the rain garden more visible at night.

- Has the County considered widening the driveways of residents so that they can park more cars on their property to make up for the loss of street parking?
  Response:
  The County will not install larger driveways for the homes impacted by this project. The County is offering the first year of its StormwaterWise Landscapes Program (www.arlingtonva.us/departments/EnvironmentalServices/Sustainability/page83039.aspx). Through this program, citizens may apply to install practices that reduce impervious area and increase the infiltration of stormwater. Pervious driveways are included in this program.

- Many of the homes have sump pumps in their basements and have experienced flooding in the past. Will the rain garden cause further basement flooding because it is encouraging water infiltration?
  Response:
  This is valuable input for County staff. The rain gardens can be designed with an impervious layer on the side adjacent to the homes. We can make adjustments to our designs to accommodate for this.

  January 2013 Update:
  Infiltration from the rain gardens is highly unlikely to cause basement flooding in adjacent homes. There will be a considerable distance between the homes and the rain gardens. The relative elevations of adjacent homes and the rain gardens will not encourage water flow towards adjacent basements.

- Who will be responsible for plowing or shoveling the extended driveway aprons for the homes that are adjacent to the rain garden?
  Response:
  It is the homeowner's responsibility to plow or shovel their driveway. The extent to which driveways will be extended has not been determined at this time.

  January 2013 Update:
  The driveway for 3113 North Kensington St will be extended as a result of this project. The driveways for 3206 and 3212 will receive new aprons. No other driveway modifications will take place as a result of this project.

- Existing homes are being extensively renovated along the street and with them, additional cars. We anticipate additional parking pressure in the future.
  Response:
  Unlike other neighborhoods in Arlington, the homes in this neighborhood have private driveways. In the future, if the anticipated parking pressure occurs, the neighborhood can investigate getting zoned parking for the street
  (www.arlingtonva.us/Departments/EnvironmentalServices/dot/traffic/parking/EnvironmentalServicesRppfaq.aspx#1). There is a defined process in place for getting an area designated for zoned parking. A household can obtain one FlexPass and up to three vehicle-specific permits in Arlington.

- New building and renovations are increasing impervious surfaces in Arlington. What is being done about the new homes?
  Response:
  New building in Arlington today has to comply with more restrictive environmental standards than buildings from earlier decades. Buildings that undergo new construction have greater requirements to treat stormwater onsite. The most recent revision to stormwater requirements for new and renovated properties went into full effect on January 1, 2012. Due to the adoption of more stringent state regulations, Arlington will be updating its stormwater requirements again in 2014. More information on the Chesapeake Bay Preservation Ordinance can be found at:
  www.arlingtonva.us/departments/EnvironmentalServices/PermitsAndInspection/ChesBay/EnvironmentalServicesChesbay.aspx .
  Arlington's new building website is http://building.arlingtonva.us/ .

- Since the rain gardens are designed to collect stormwater, there is a concern about the hazardous chemicals that will collect in the rain gardens.
  Response:
  Right now, the pollutants that the rain gardens are designed to capture and break down are running into our streams, untreated. In many cases these streams are visited by pets and citizens. The streams, then release into the Potomac River, which is the region's drinking water source.

The rain garden plants and the microbes in the soil break down and absorb the pollutants of concern. This function of rain gardens is what makes them such a benefit to our community. The rain gardens will not be landscaped to encourage play in them, and their quick infiltration rate will make it unlikely that people will come into contact with the stormwater in them. Please also remember that citizens are exposed to these pollutants each time it rains and they come into contact with the stormwater.

- Will the rain gardens pose a drowning hazard, especially for children?
  Response:
  - *The rain gardens will be shallow, with a maximum of a foot of ponding depth. There is a low risk that someone will fall in and not be able to climb out because they are so shallow.*
  - *Once established, the plants will fill in the rain garden area. The area will be not be inviting to children to play in because of the thick vegetation.*

- Are there any studies to show the impact of Green Streets on property values?
  Response:
  Many find rain gardens to be an amenity because they add flowering plants and additional green space to the neighborhood. Many rain garden plants are beneficial to butterflies and encourage butterflies to visit the area. This is also viewed as an amenity to many citizens.

  If you were to perform a Google search of rain gardens and property values, you will find numerous mentions of rain gardens and bioretention improving property values. Grand Traverse Region, Michigan has created a guidebook for Low Impact Development, which includes projects like the rain gardens we have discussed (http://data.gtbay.org/downloads/low_impact_development_guidebook_small_2.pdf). In their guidebook they note:

  - *Increased property values based on desirability and proximity to open space. A real estate study conducted by American Lives, Inc, found that 78% of prospective homeonwers rated natural, open space as "very important" or essential in planned communities.*
  - *Faster sales. The aesthetic value of landscaping with trees, shrubs, and flowering plants inherent in LID practices increases property values; this results in faster sales due to perceived value of "additional" landscaping.*
  - *Higher property value. Location, location, location. Property owners are willing to pay premium prices to be located near aesthetically pleasing amenities such as open space, water features, and gardens.*

- If a citizen is unhappy with the Green Street project, who can they take their concerns to?
  Response:
  We hope that citizens and the Green Street project manager will be able to adequately address citizen concerns through the public process, such as these street-side meetings. There are also plans for future opportunities for discussion. If these avenues are not adequate, the citizen may contact their elected County Board Member.

- The rain gardens will present a hazard to drivers and plows during snow conditions.
  Response:
  The County plows are able to plow around other road improvements like bump-outs and traffic circles. County staff does not anticipate any plowing challenges due to the installation of rain gardens. The rain gardens will be bordered by a standard curb, making them no different along the edge from the existing road curb.

- It is not clear from the guidance just what Environmental rules are being violated without these modifications as your own write-up indicates these are only in selected locations.

Response:
There are a variety of environmental rules and regulations that are driving the addition of Green Streets in Arlington.

- *VA DEQ recently listed Little Pimmit Run as impaired for E. coli bacteria, requiring a pollution budget, or Total Maximum Daily Load (TMDL), to be created.*
- *Citizen and professional stream sampling data show that Little Pimmit Run is "severely stressed." The "severely stressed" designation is used by the state to determine that a waterway is impaired for aquatic organisms, which are indicators of water quality.*
- *The County's Municipal Separate Storm Sewer (MS4) Permit requires that the County reduce pollution in stormwater. The renewal of the County's permit by US EPA and VA DCR will bring with it more stringent requirements for reducing the volume of stormwater and the pollutants carried by stormwater.*
- *The Chesapeake Bay TMDL has resulted in municipalities, like Arlington, being assigned targets for pollutant load reductions for nutrients and sediment.*

Please also note that the Center for Watershed Protection has completed an in depth study of potential Green Street locations within the Little Pimmit Watershed, including a study of the drainage area for each proposed Green Street. The drainage area and amount of runoff are all taken into consideration with the design and location of a Green Street (www.arlingtonva.us/departments/EnvironmentalServices/Sustainability/page75627.aspx).