



# Ellicott City Watershed Master Plan

Public Meeting —March 2018

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Consulting | Preservation Consulting

*In consultation with: McCormick Taylor*

*Note: this document contains slides presented by Howard County's consultant team at the March 22, 2018 Ellicott City Watershed Master Plan public workshop. The consultant team has also provided speaker's notes and additional slides as part of this document to further explain the ideas and emerging recommendations.*

*For more information on the master plan effort, please visit:*

[www.howardcountymd.gov/ecmp](http://www.howardcountymd.gov/ecmp)

# Outline

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INTRODUCTION

VISION + CORE GOALS

STRATEGIES

EMERGING RECOMMENDATIONS (*Selected Focus*)

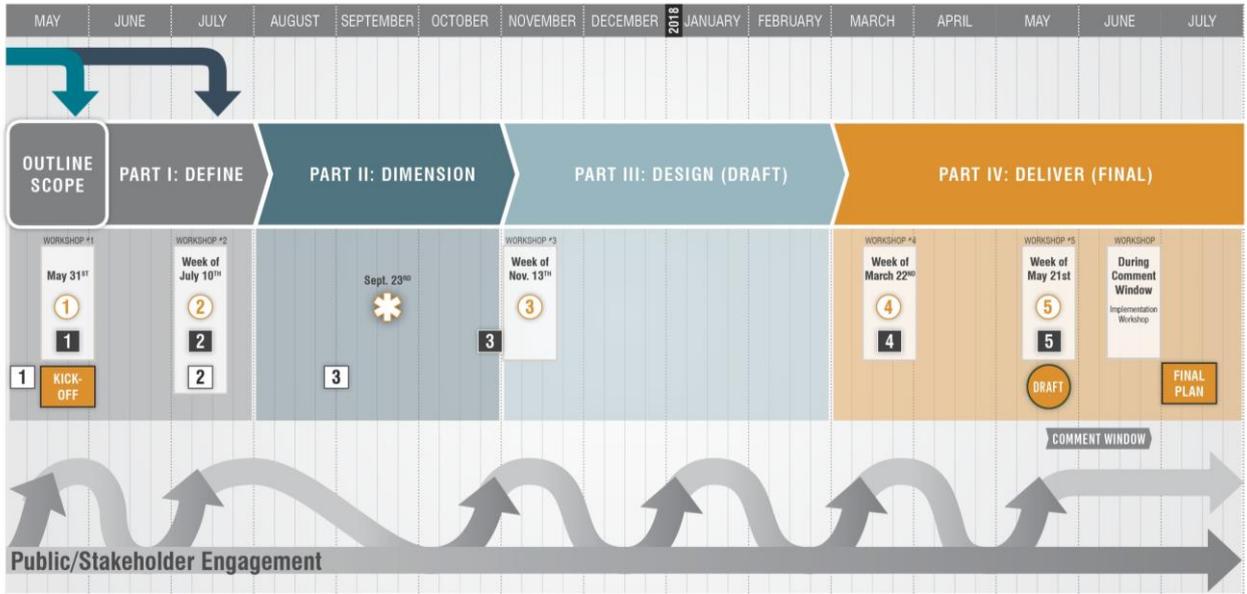
NEXT STEPS

DISCUSSION

# Introduction

# Process Diagram

- Public Meeting
- MPAT Meeting
- Technical Team Meeting
- Special Pop-Up Engagement
- Army Corps Study
- McCormick Taylor H&H Study



This is a year long process. The original schedule has been delayed by approximately one month in order to complete hydraulic modeling.

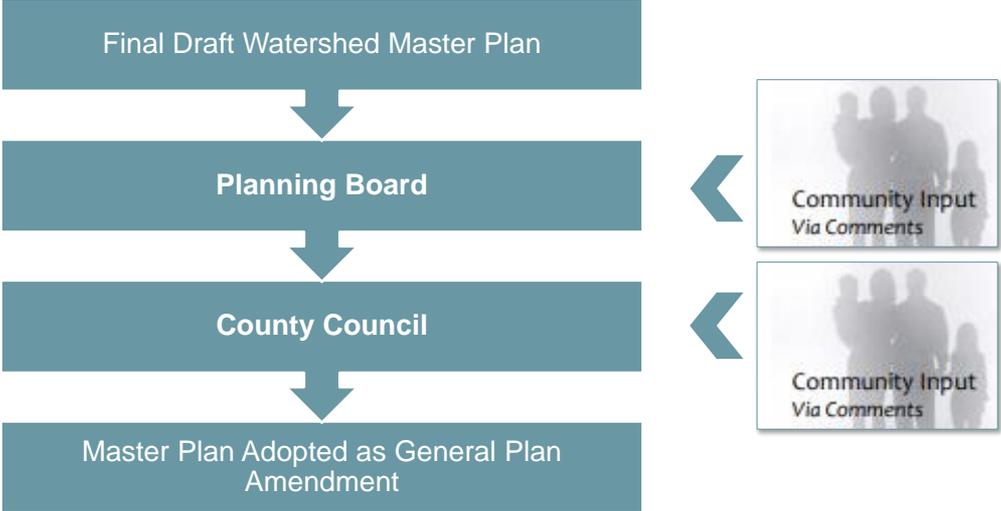
# Master Plan Process

-  Public Meeting
-  MPAT Meeting
-  Technical Team Meeting
-  Special Pop-Up Engagement
-  Army Corps Study
-  McCormick Taylor H&H Study



We will be providing a full draft for online review in late May with a final plan delivered to Howard County in late June.

# General Plan Amendment Process



It is important to remember that once the final draft is delivered to Howard County, there will be additional opportunities for community input prior to adoption as a General Plan Amendment.



# Introduction

## What are the Boundaries and the Focus of the Ellicott City Watershed Master Plan?

Tiber-Hudson Watershed (and Regional Context) | Series of Recommendations Organized Around Inter-Related Strategies

## What is the Timing?

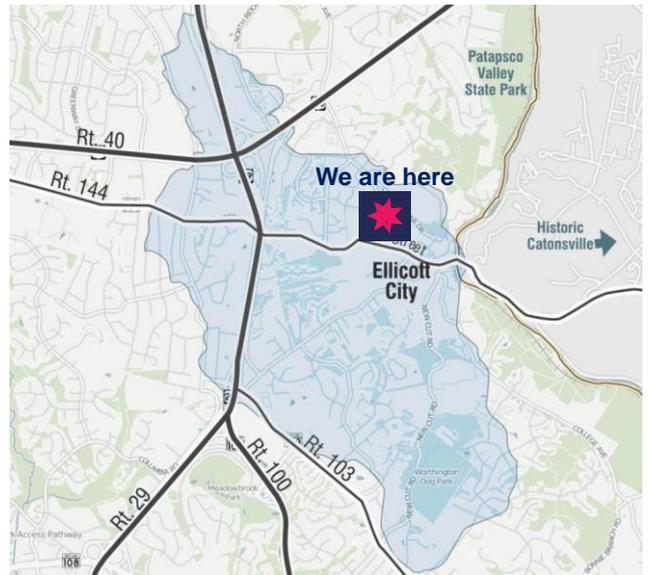
1-30 Years (Short, Mid, and Long-Term Projects and Initiatives)

## How are Priorities Determined?

Cost-Benefit | Ownership | Inter-Relationship with Other Priorities | Funding | Constructability | Phasing

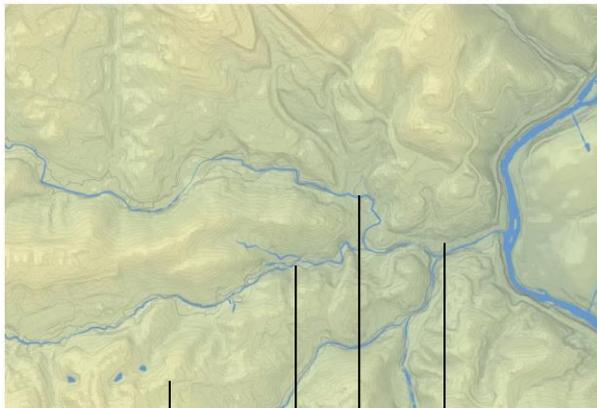
## What is Particularly Unique About this Master Plan?

Tightly Interwoven Set of Challenges and Opportunities



While all master plans have unique aspects, this master planning effort has particular challenges and opportunities.

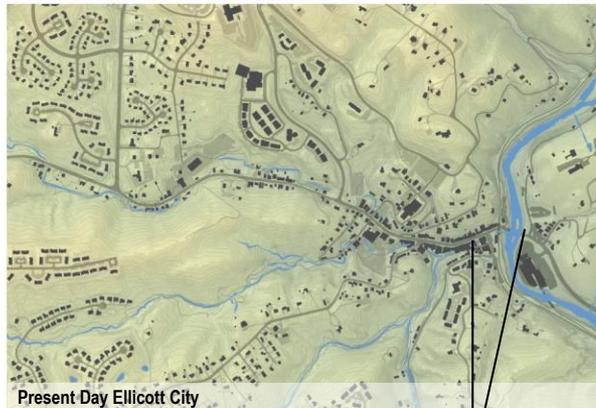
# Early Foundations



Ridgetop,  
Relatively flat,  
developable

Tributary  
valley,  
steep,  
challenging  
access

Tributary confluence,  
Utility as mill site?  
More expansive floodplain,  
Room for town settlement

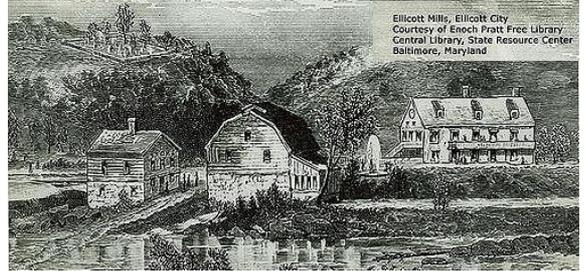


Present Day Ellicott City

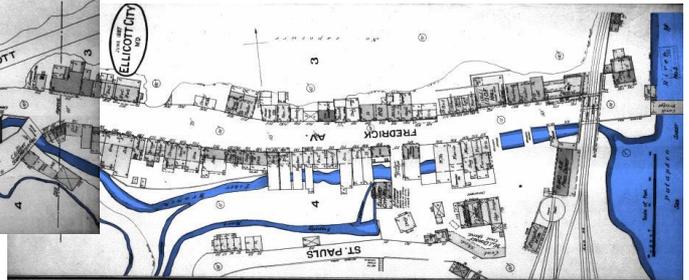
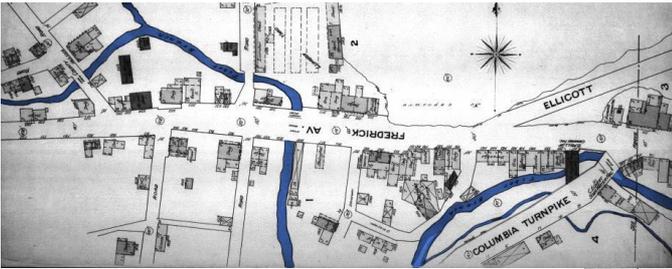
Historic mills of Ellicott City

The steep terrain and confluence of multiple tributaries was particularly attractive for establishing a mill town where the water's energy could be harnessed.

# Early Foundations

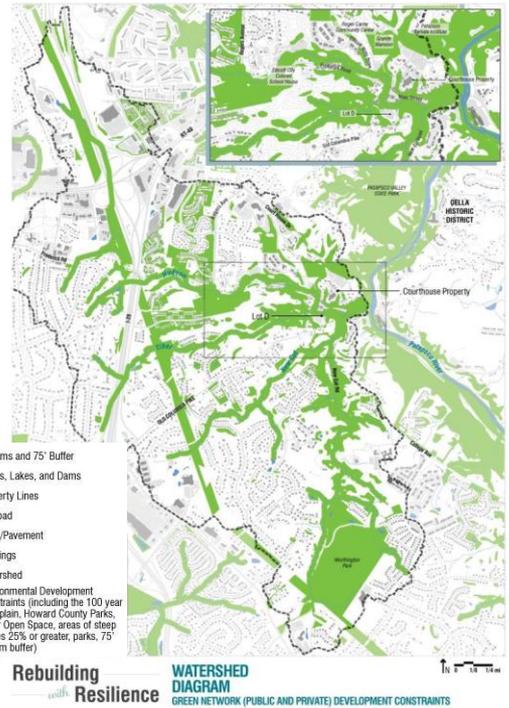
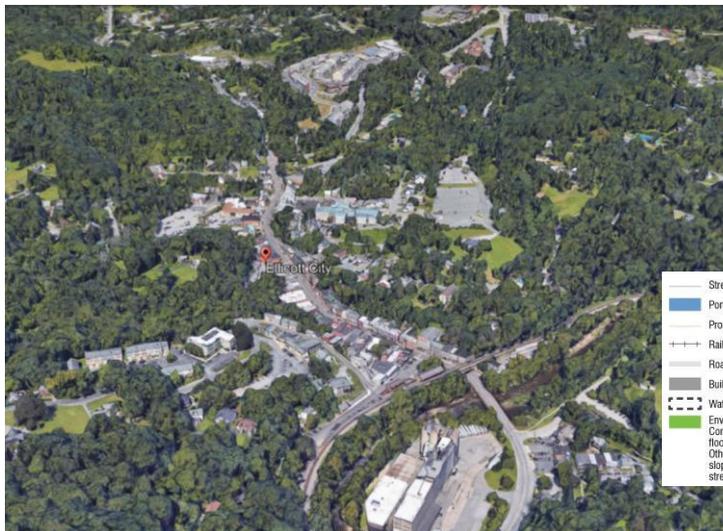


Ellicott Mills, Ellicott City  
Courtesy of Enoch Pratt Free Library  
Central Library, State Resource Center  
Baltimore, Maryland



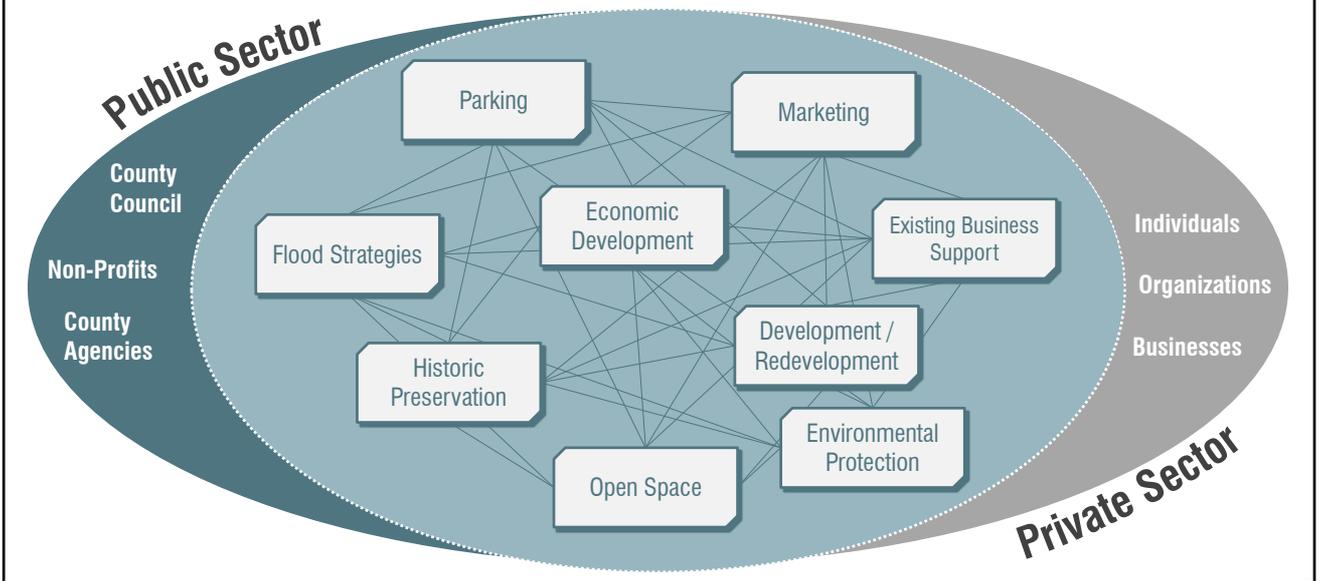
This required building over the tributaries and manipulating the waterways.

# Watershed



Beyond the core of the historic mill town, the tributaries create a green network.

# Moving Forward



The diverse recommendations included in the master plan, whether related to historic preservation, flood strategies or economic development, are inter-related. No one entity can implement these recommendations. Rather, implementation is dependent upon the public, non-profit and private sectors; agencies, departments, organizations and individuals.

# Vision + Core Goals

## Vision

Ellicott City and its watershed is a model, resilient community that thrives by protecting its people, commerce, history, culture and natural environment.



## Core Goals

## “Four Pillars”



### **Rebuilding: *Emphasize resilience and placemaking in rebuilding***

Resilient Infrastructure | Attractive Downtown | National Model | Walkable and Accessible Destination



### **Environmental: *Protect the environment***

Healthy Natural Resources | Embrace Rivers and Tributaries | Interventions Address Flood Mitigation and Increased Green Space



### **Preservation: *Preserve Ellicott City’s heritage***

Distinctive Elements | Buildings, Terrain, River Valleys | Importance of Historic Preservation | Social, Physical and Cultural Resources | History, Environment, Creativity and Culture



### **Economy: *Revitalize the downtown economy***

Balanced Economic Growth and Commercial Success | Investment – Existing and New Businesses | Thriving Small Businesses | Targeted Economic Development to Strengthen Main Street and West End | Leverage Baltimore County and Oella

The “four pillars” that resulted from the Community Advisory Group (CAG) process following the flood represent the core goals for the master plan and inform the recommendations. The recommendations are then organized under 5 overall strategies.

# Strategies

## Strategies (Multiple Core Goals Apply to Each)

**#1 MANAGING AND PROTECTING THE WATER**

**#2 PLANNING FOR ECONOMIC SUCCESS**

**#3 ENHANCING THE EXPERIENCE**

**#4 PROTECTING AND PROMOTING THE IDENTITY**

**#5 ORGANIZING FOR SUCCESS**

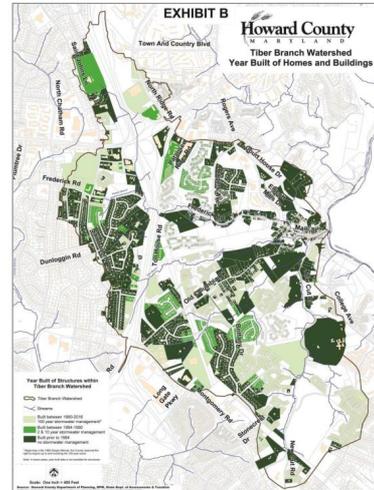
This presentation will only get into the details of some of the recommendations, primarily from the first three strategies.



# Managing and Protecting the Water

# Considerations | Foundation for Recommendations

1. **PlanHoward 2030: Areas of Growth and Revitalization**
2. **EC Core: Floodplain, multiple streams, steep topo**
3. **Ex. Conveyance Infrastructure: Unable to contain 100 yr. storm**
4. **Upstream Development: Impact depends upon SWM req. at time of construction**



## Summary Slide

It is important to consider some background which serves as a foundation for the recommendations under Strategy 1:

1. Portions of the watershed are identified as areas of growth and revitalization in PlanHoward 2030, particularly the historic core and those areas adjacent to Route 40.
2. The historic core is established over the confluence of multiple streams and is characterized by steep topography.
3. The existing infrastructure is unable to contain the 100 year storm and even smaller storms.
4. As we consider upstream development, it is important to understand that development in the watershed is not the sole or primary source of flooding. Additionally, the impact of development depends upon the SWM requirements at the time of construction. For example, the map shown illustrates in dark green that a significant portion of the watershed was developed prior to 1980 and was, therefore, not subject to managing stormwater.

# Considerations | Foundation for Recommendations

## 1. Current SWM Requirement

*Goals: Mimic runoff capacity of “woods in good condition”*

## 2. Watershed Characteristics:

*Minimizes effects of land use on runoff during heavy storm events*

## ***Greatest Public Improvements to Reduce Flood Impacts by:***

- *Addressing Conveyance, alongside*
- *Retention basins*
- *Preventing additional runoff*

## ***While Balancing:***

- *Water quality*
- *Cost benefits*
- *Constructability*
- *Policies for appropriate growth and revitalization*

## Summary Slide

Current SWM requirement goals include matching runoff capacity of “woods in good condition”. Additionally, the watershed characteristics of shallow granite bedrock and steep terrain minimizes the effects of land use on runoff during heavy storm events.

The greatest public improvement that can be made to reduce flood impacts is addressing conveyance. This should be done in conjunction with other means such as retention basins and preventing additional runoff.

# Considerations

- 1. Portions of the EC and Tiber Hudson Watersheds:**  
*Areas of Growth and Revitalization (PlanHoward 2030)*
- 2. EC Core:** *Built within a floodplain and over confluence of multiple streams.*
- 3. Watershed:** *Steep topography; underlain by granite*

*Ellicott City watersheds are highly prone to severe flash flooding with potential for significant property damage in core. Flood impacts can be reduced with a combination of practices and policies.*

These next series of slides describe in more detail the points made on the summary slide (only the summary slides were included in the March 22 presentation).

## Considerations

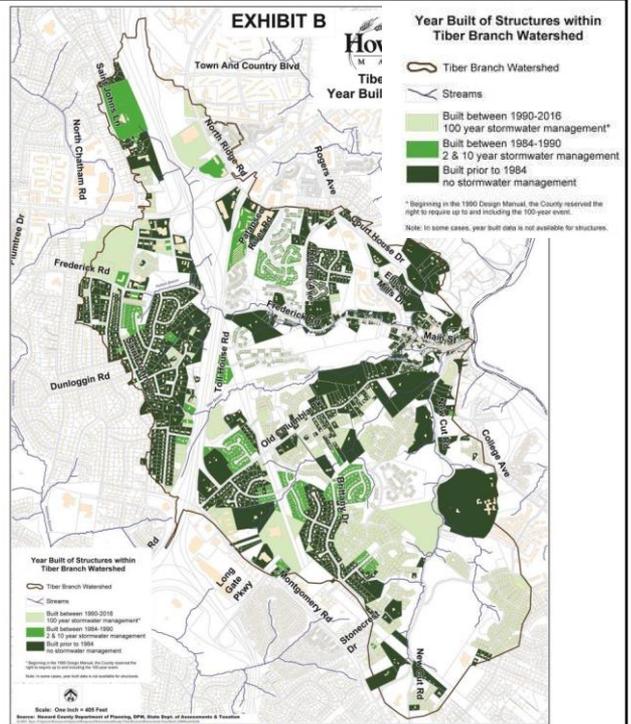
**1. Existing Conveyance Infrastructure:** *Unable to contain 100-year storms (H&H)*

**2. Many Historic Buildings and Homes:** *Sit directly above or adjacent to stream channels*

*Because of the constrained nature of conveyance system, flood impacts in the core would be significant even if the remainder of the watershed was as it remained over 100 years ago, in forest (H&H).*

# Considerations

- 1. Upstream Development:** *Among many contributing factors; not the primary or sole reason for flooding*
- 2. Impact of Development on Stormwater Flows:** *Also depends on the year of development and associated SWM requirements in place at that time*



# Considerations

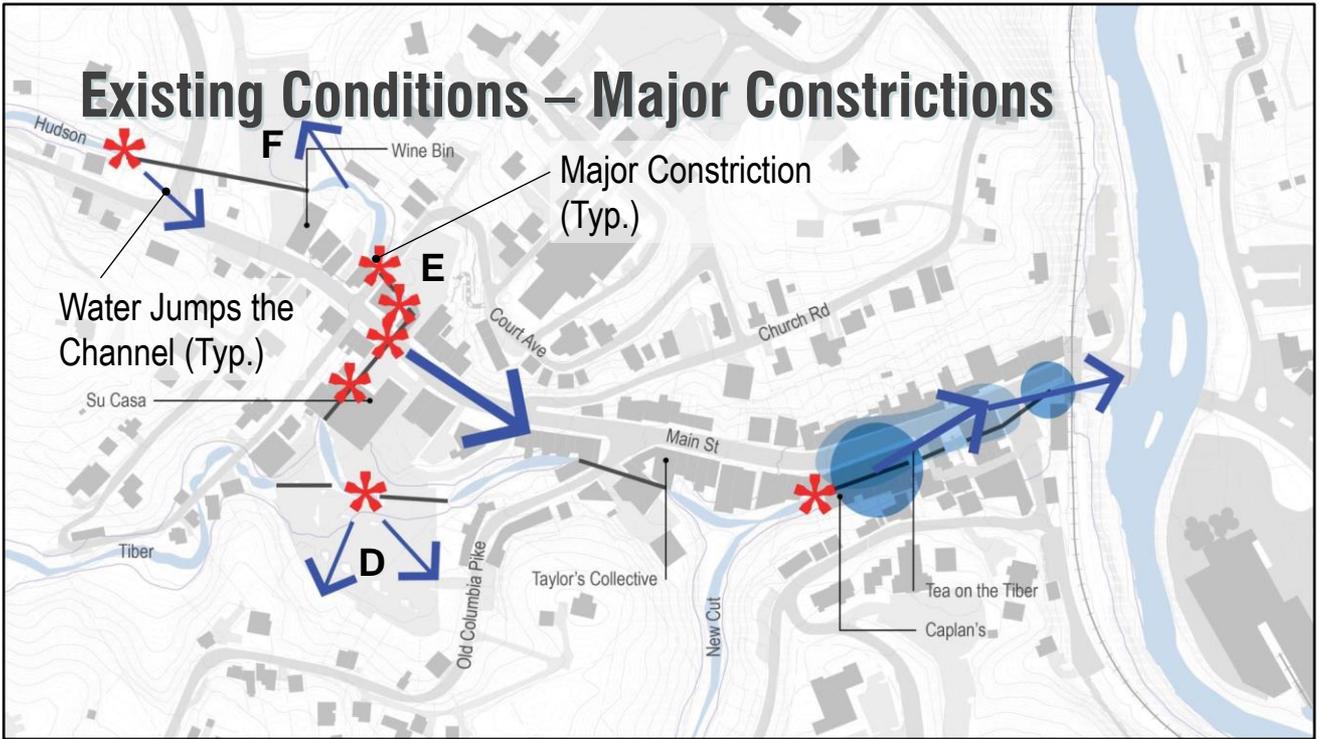
1. **Goal of Current SWM Requirements:** *Ensure that new development mimics runoff capacity of “woods in good condition” – results in less runoff than open land or developed impervious land cover*
2. **Natural Watershed Characteristics (Shallow Bedrock and Steep Slopes):** *Minimizes the effect of land use on runoff, particularly during heavy storms.*

*To have the most impact in reducing flooding risk, other strategies need to be considered, particularly the **conveyance of stormwater** and minimizing constrictions/pinch-points within the channels*

## Foundation for Recommendations

*The **greatest public improvements** to reduce flood impacts in Ellicott City can be made by **addressing conveyance, alongside other practices** that include retention basins in the watershed and preventing additional runoff from redevelopment.*

*This needs to be done while **balancing water quality, cost benefits, constructability, and polices for appropriate growth and revitalization.***

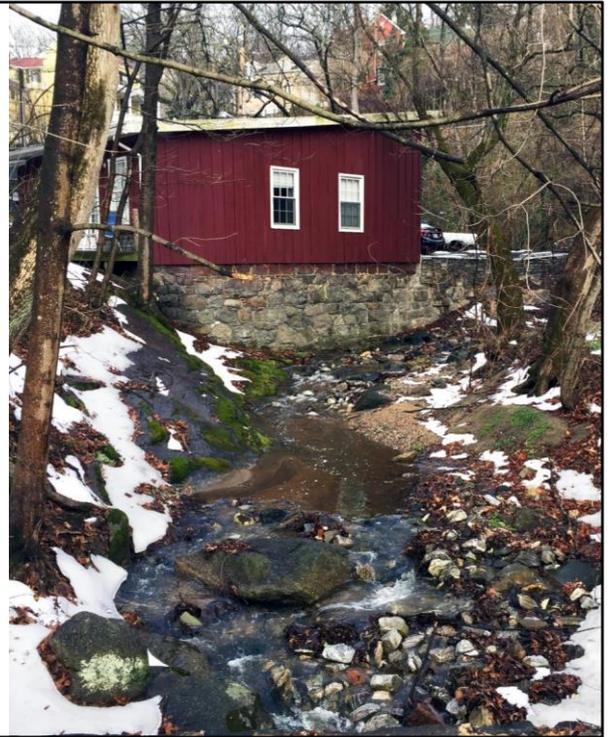


In order to improve conveyance, we must address the pinch points and major constrictions. The red symbols show these where water is forced to jump the channel and flow onto Main Street.

# Strategy 1

## Recommendations

- 1-A: Flood Management
- 1-B: Non-Structural Floodproofing
- 1-C: Tiber-Hudson Watershed Special Protection District
- 1-D: Water Quality Improvements

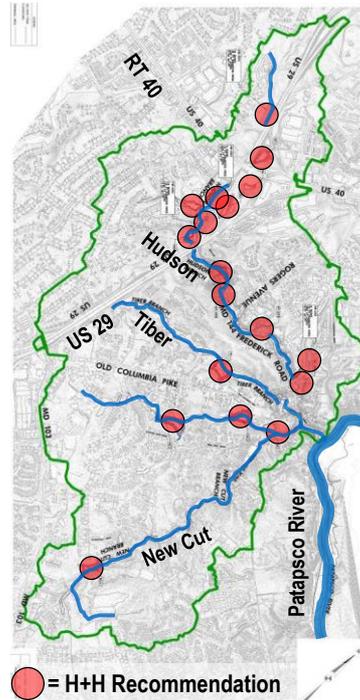


There are four primary recommendations under Strategy 1. This presentation will focus on two of these.

# 1-A Flood Management



- Phase 1 Flood Mitigation Facilities
- Improved Conveyance Strategies
- Patapsco River Flooding



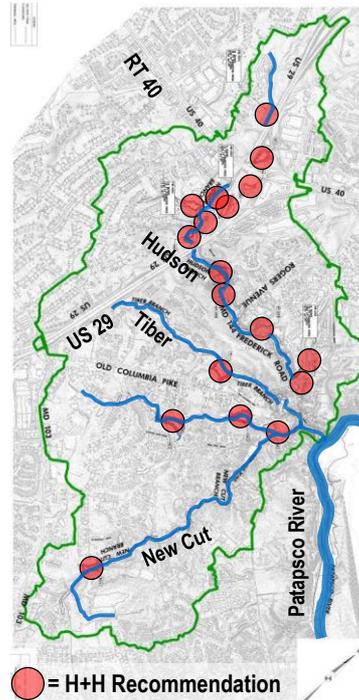
Recommendation 1-A focusses on the Phase I flood mitigation facilities (H&H study) and improved flood conveyance strategies that we will discuss in this presentation.

Additionally we will briefly discuss Patapsco River flooding as there have been several questions related to how this master plan deals with that. The map to the right highlights the 18 flood management facilities identified in the H&H study.

# H+H Recap

## H&H Recommendations

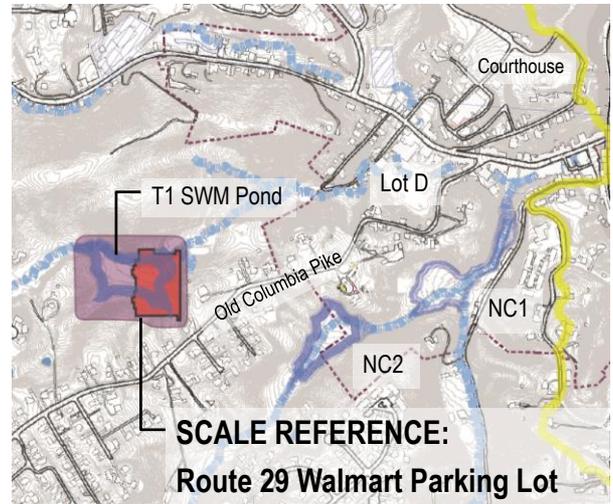
- Phase 1 Improvements = \$18.5 m
  - Aboveground Retention = \$30 m
  - Belowground Retention = \$50 m
- Total = \$80 million**
- *Tunnel Bores = \$60 m - ??*



Summary of H&H recommendation costs. Phase I Improvements represent a portion of the \$80 million total costs.

# H+H Recap

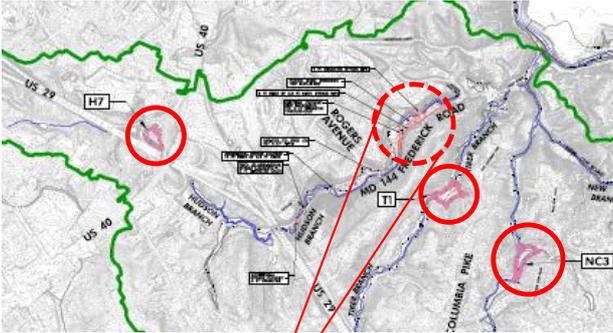
- **Constructability** (mathematical assessment vs. on-the-ground implementation)
- **Cost** (~\$80M *estimated* )
- **Complexity of planning and permitting** 18 discrete projects
- **Limited ability to achieve multiple master plan core goals** (open space, placemaking, etc.)



It is important to note some of the challenges with the H&H study recommendations.

# Phase 1 Facilities

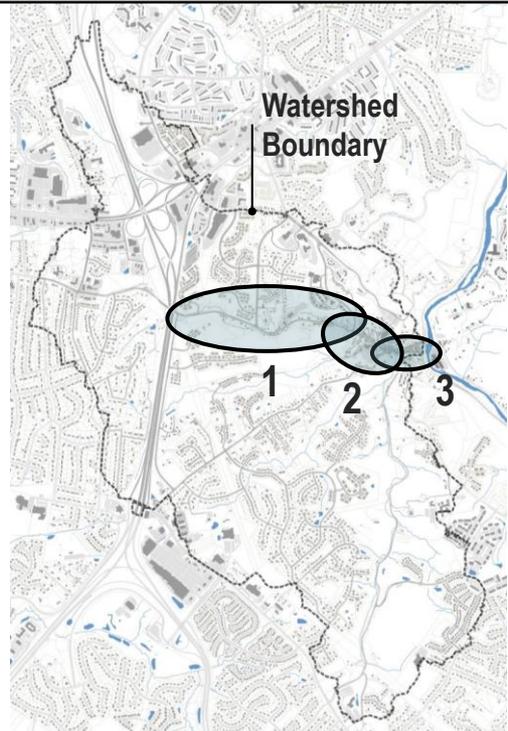
- Retention Ponds
- Culvert Expansion
- Diversion Pipes
- Cost = \$18.5 million



# Conveyance Strategy

**Objective:** Keep water in channel and keep it from flowing down Main Street

1. West End – *Limited Opportunities to Improve Conveyance; Focus - Floodproofing*
2. **Upper Main - Opportunity**
3. Lower Main – *Opportunities but Constructability Issues; Focus - Floodproofing*

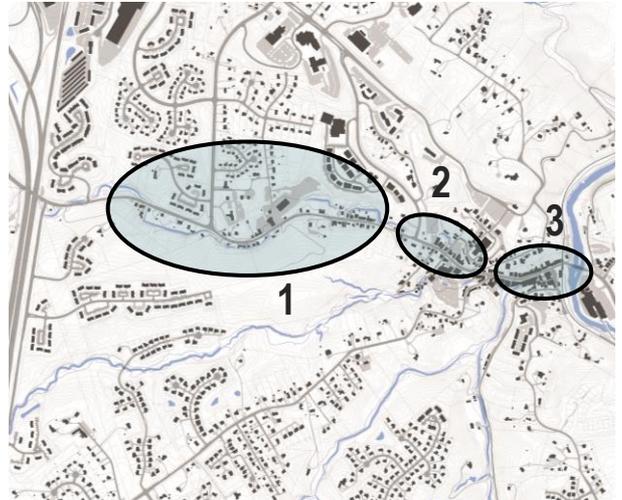


The conveyance strategy we are looking at has the most potential to mitigate flooding on upper Main Street, between Ellicott Mills Road and Caplans.

# Conveyance Strategy

**Objective:** Keep water in channel and keep it from flowing down Main Street

1. West End – *Limited Opportunities for Major Conveyance; Focus - Floodproofing*
2. Upper Main - **Opportunity**
3. Lower Main – *Opportunities but Constructability Issues; Focus - Floodproofing*

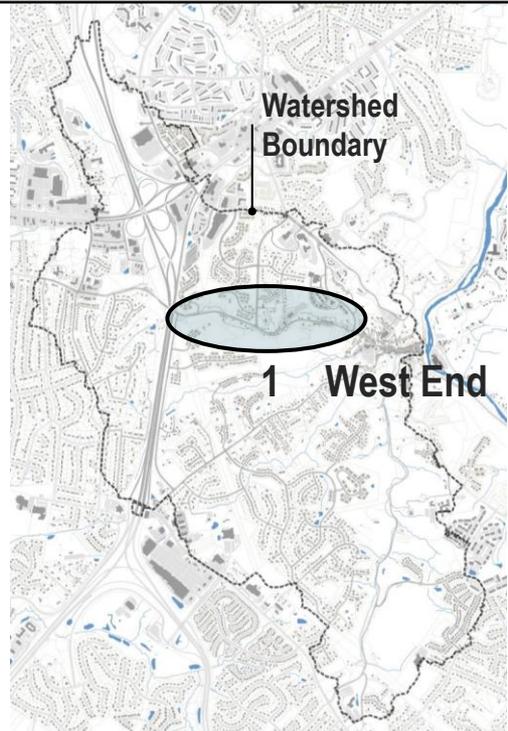


# Conveyance Strategy

## West End: Phase I Improvements

1. Culvert Expansion
2. Diversion Pipes
3. Retention Ponds
4. Long-Term Potential: West End Service Site

*\* Pair with Floodproofing*



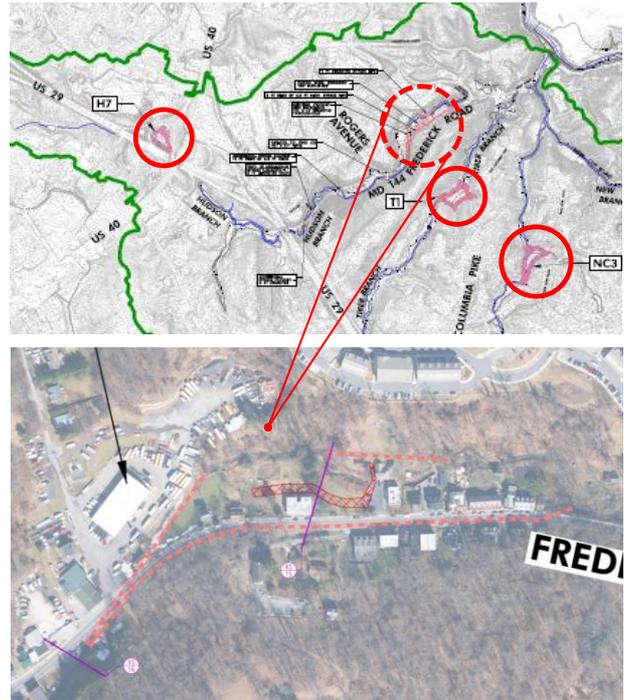
In the West End, the ability to improve conveyance at a broad scale is limited because of the limited room between the roadway and hillside and the fact that many homes were constructed immediately adjacent to the stream channel.

# Conveyance Strategy

## West End: Phase I Improvements

1. Culvert Expansion
2. Diversion Pipes
3. Retention Ponds
4. Long-Term Potential: West End Service Site

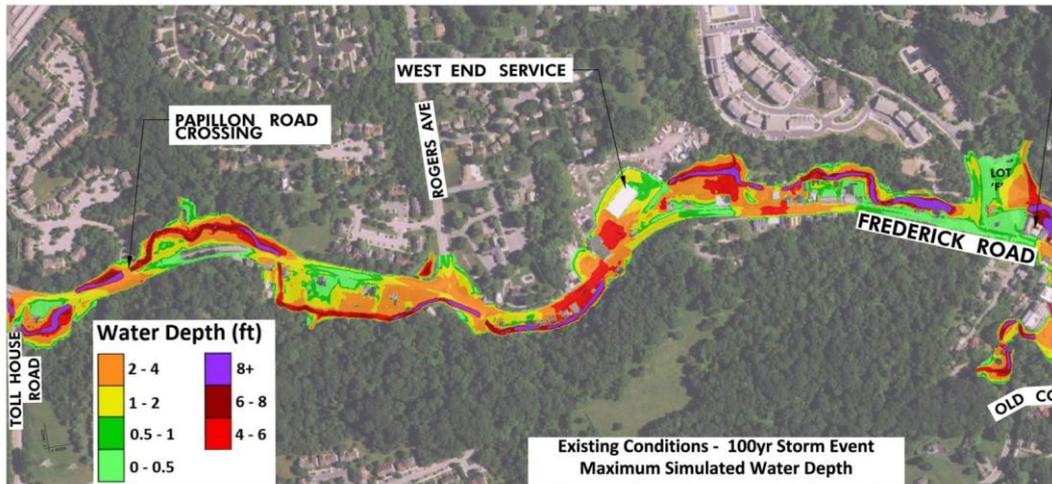
*\* Pair with Floodproofing*



In the West End, the focus is on improvements currently underway as part of the Phase I H&H recommendations. Application of floodproofing to buildings will also be important in the West End to address resiliency.

# West End

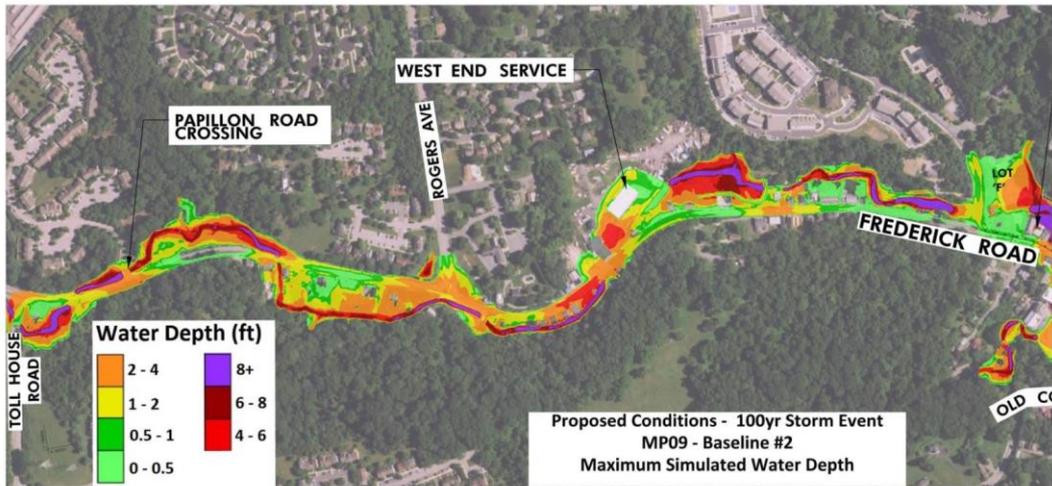
Existing Conditions (100yr)



When comparing the existing conditions flood model for the 100 year storm with the model showing the Phase I projects, it is clear that there are improvements with the 100 year storm, however, the greatest improvements will be made for smaller storms.

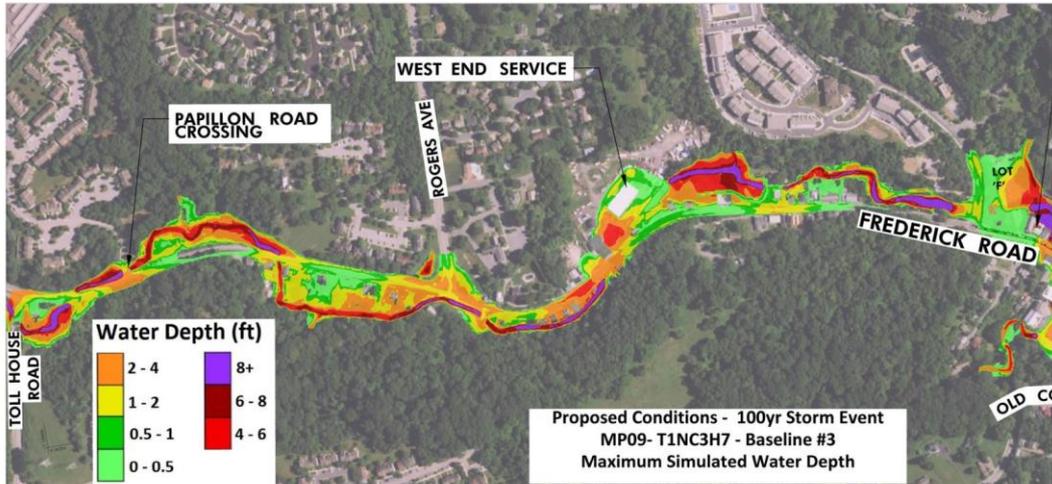
# West End

## Phase 1 Conveyance Improvements (100yr)



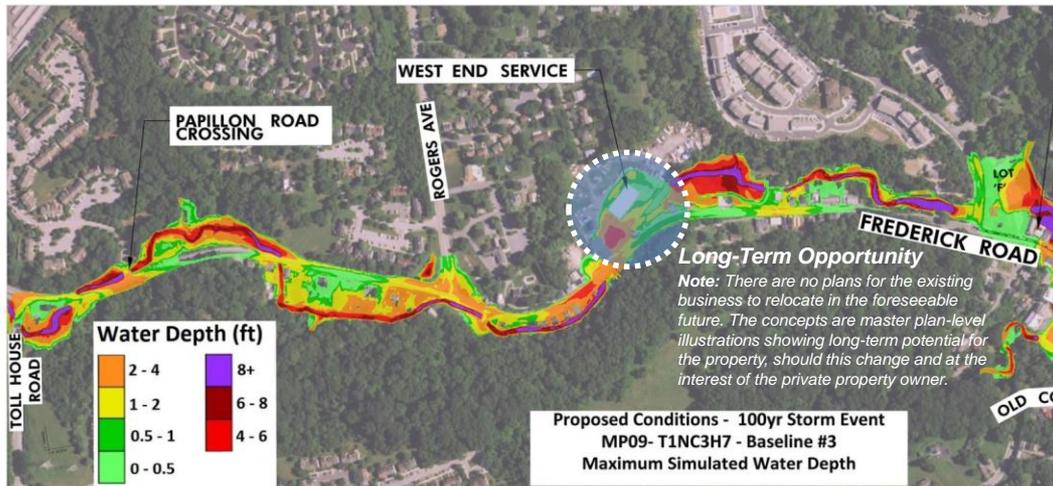
# West End

All Phase 1 Improvements (SWM + Conveyance) (100yr) \$18.5 million



# West End

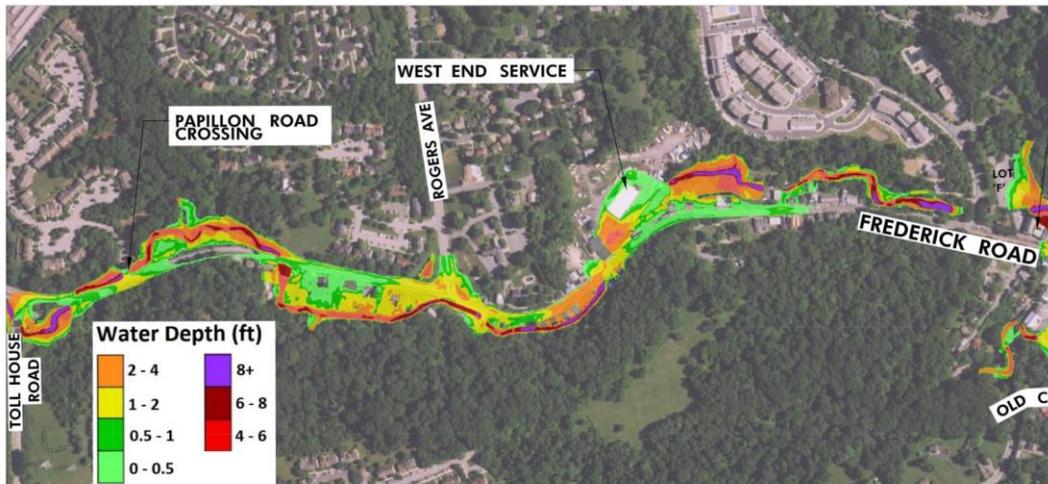
All Phase 1 Improvements (SWM + Conveyance) (100yr) \$18.5 million



While there are no plans for the existing West End Service to relocate in the foreseeable future, the property does provide opportunities for flood management should this change at the interest of the property owner. Here the stream channel could be daylighted or underground stormwater management could be considered as outlined in the H&H study.

# West End

All Aboveground SWM Facilities and Conveyance Improvements (100yr) \$30 million



As a comparison, this slide shows the flood levels with all of the aboveground SWM facilities and conveyance improvements from the H&H study.

# West End

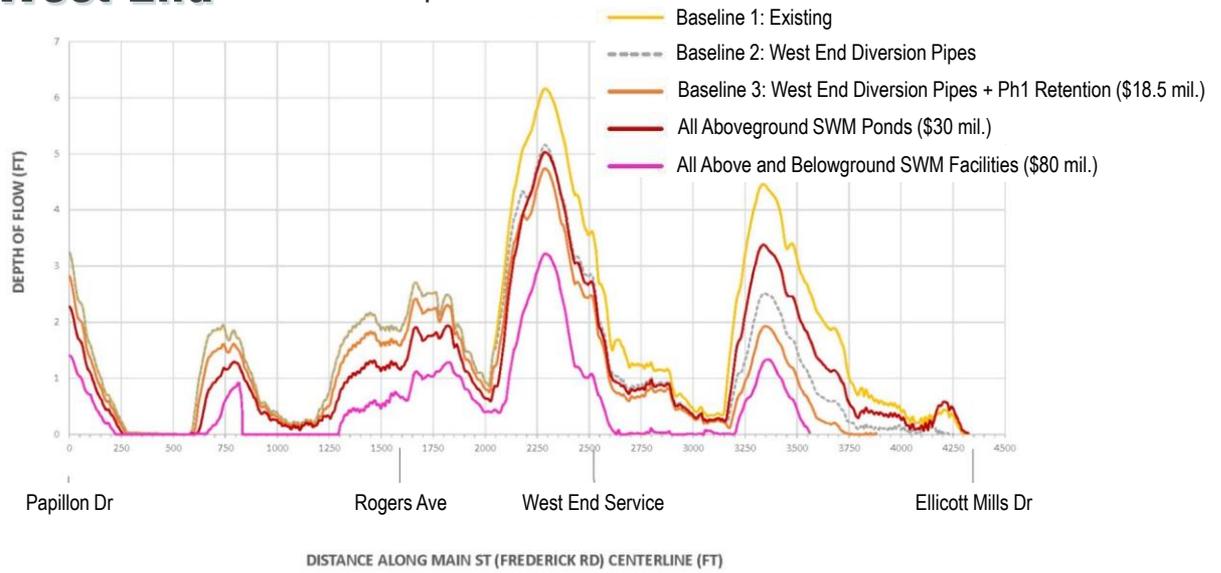
All Above + Belowground SWM Facilities and Conveyance Improvements (100yr) \$80 million



As a further comparison, this slide shows the extent of improvements with all of the above and below-ground SWM facilities and conveyance improvements from the H&H study, including a 25' deep pipe farm beneath West End Service.

# West End

## Depth of Flow on Main St



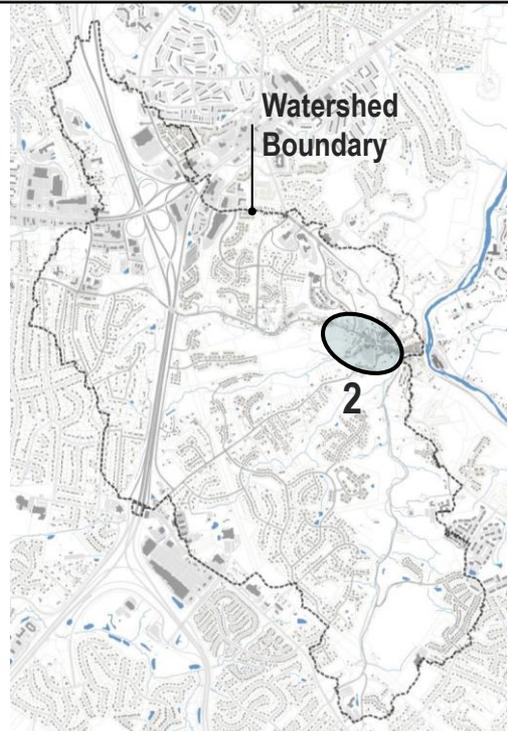
This hydrograph illustrates the simulated water depths at various points along Main Street/Frederick Road in the West End with the various models.

# Conveyance Strategy

**Upper Main:** County-owned surface lots are the “opportunity sites” to make channel improvements with the least impact on buildings/private properties

1. Lot G (Former Roger Carter)
2. Lots F, E and D

*Note: Lots not suitable for meaningful surface retention*



The greatest opportunity to improve conveyance on a large scale occurs along Upper Main Street from Ellicott Mills Drive to Caplans. The large, County-owned surface parking lots provide the opportunity to do this.

# Conveyance Strategy

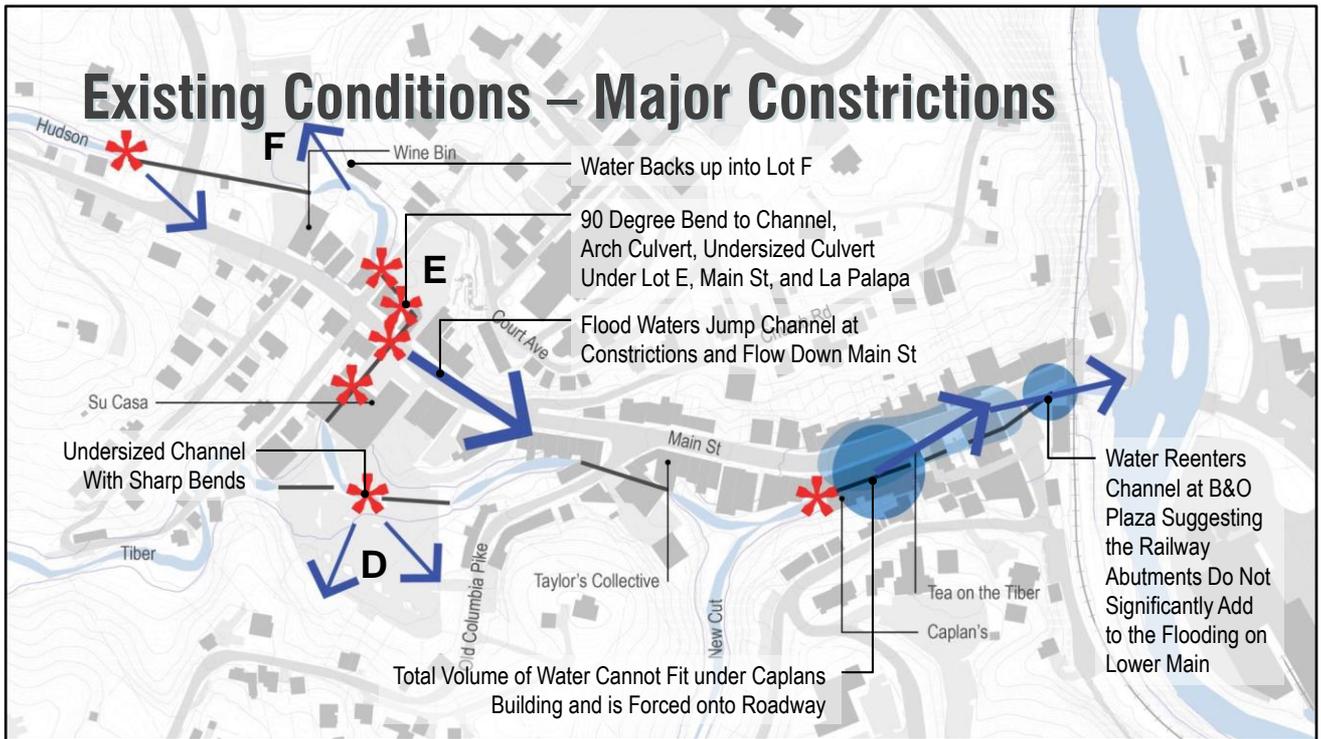
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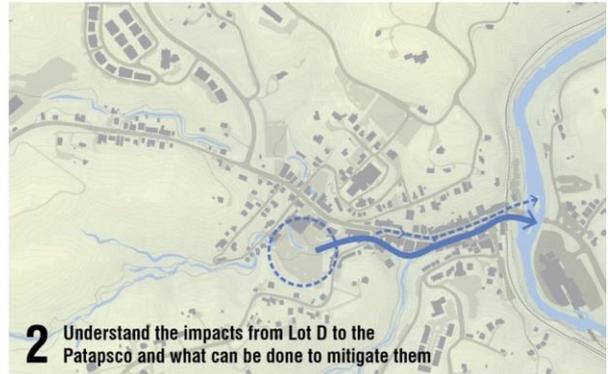
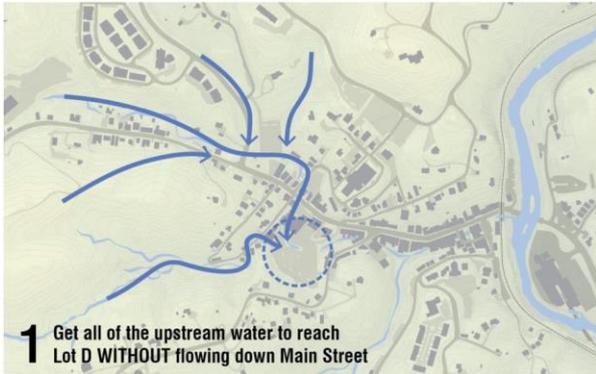


As we discussed during the November meetings, it is important to look at these County-owned sites holistically as flood management, parking, open space and placemaking opportunities are all inter-related.



As we saw earlier, there are numerous constrictions and pinch points in this area that need to be addressed in order to improve conveyance.

## 'Upper Main Conveyance' - Objective



The primary objective of the Upper Main Conveyance strategy is to try to get all of the water to Lot D without jumping the channel and flowing down Main Street and without worsening flood impacts on lower Main Street.

# Conveyance Strategy – 2 Options

## “Upper Main Conveyance”

### Proposal #1: Existing Channel

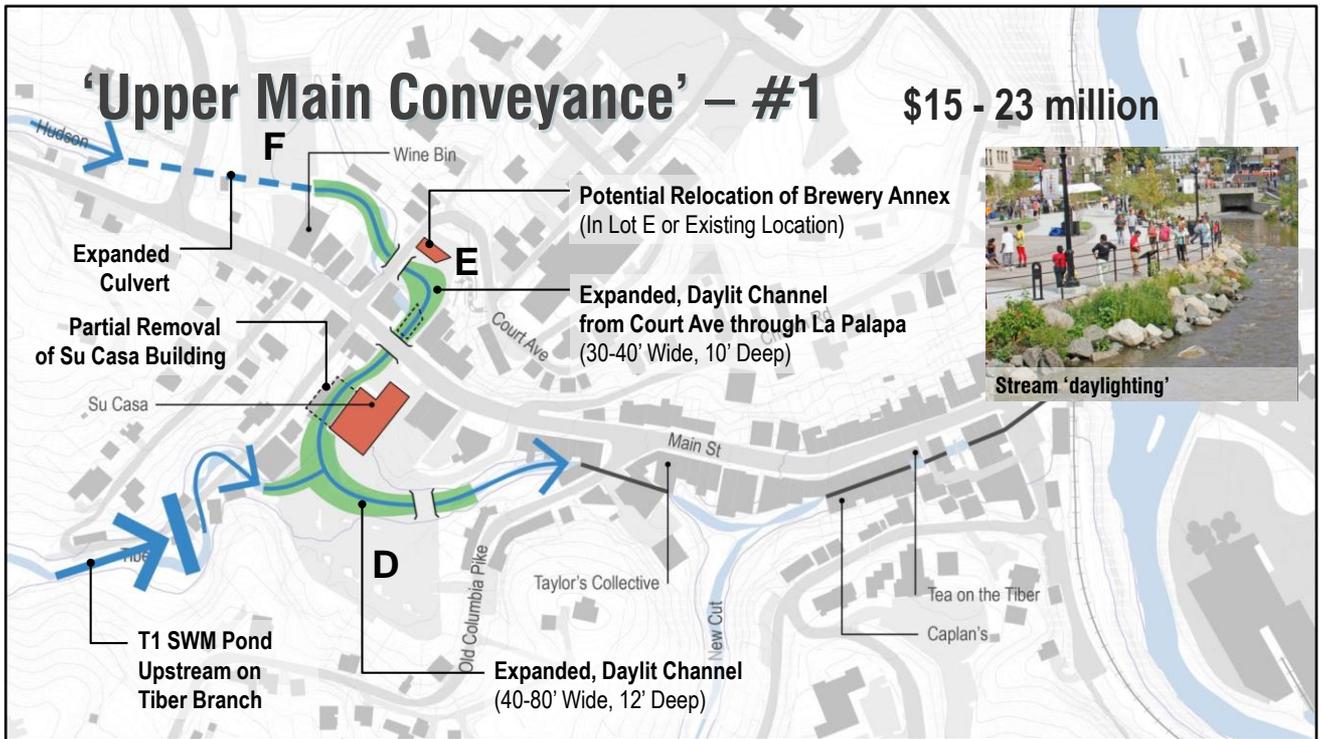
- Widen culvert under Ellicott Mills
- “Daylight” from Lot F to Tonge Row

### Proposal #2: By-Pass

- Keep most of the existing between Ellicott Mills and upper Lot D
- Provide by-pass between Ellicott Mills and upper Lot D



We examined several options to do this, and there are two proposals that yield the most positive results.



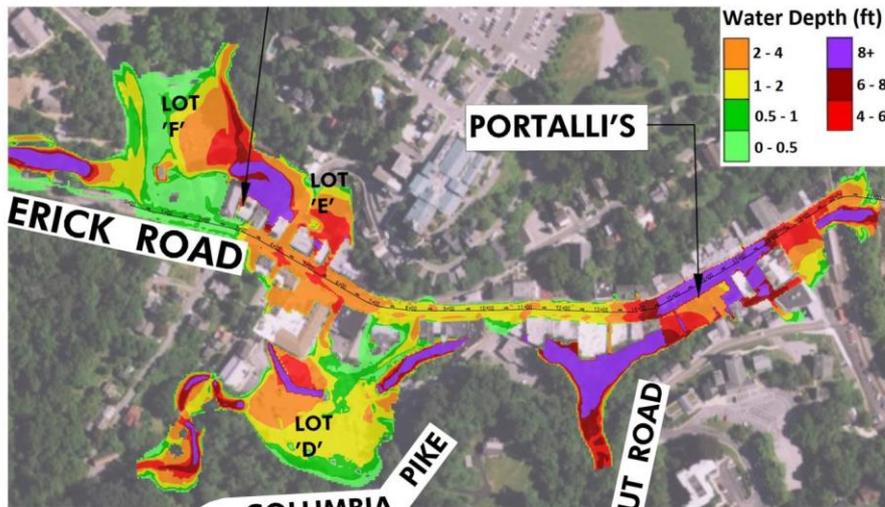
The first, and most effective, proposal is to follow the existing channel alignment, remove constrictions and widen the channel while daylighting it at the same time.

While most of these improvements can be made on public property, this concept does impact two properties: the existing LaPalapa and Ellicott Mills Brewery annex. The project team and County met with these property/business owners to review the concept and to make sure they were comfortable with us showing these concepts.

In the case of the LaPalapa portion of the existing building, it would have to be removed AFTER the business could be relocated nearby. The frame construction brewery annex building could be moved to another location in Lot E or it could be replaced over the widened channel.

# 'Upper Main Conveyance' - #1

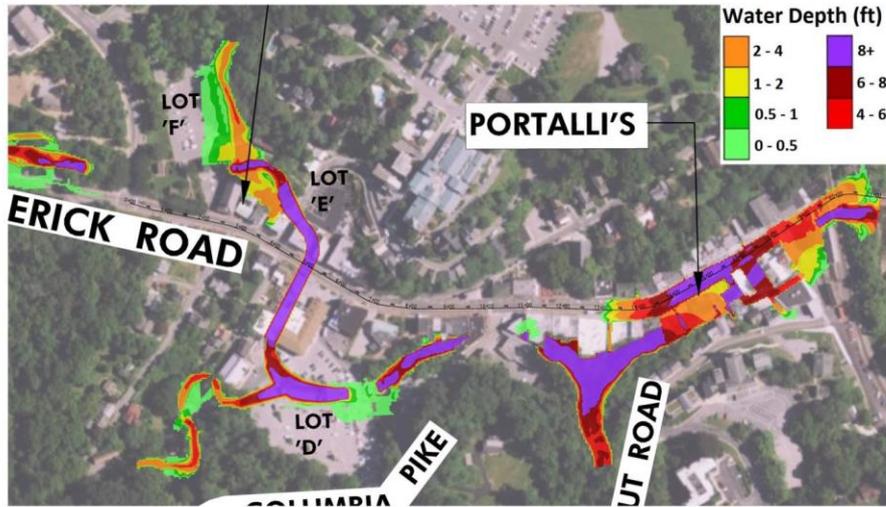
Existing Conditions w/ Phase 1 Conveyance Improvements (100yr)



Again, the model showing simulated water depths during a 100 year storm. This view assumes existing conditions and the Phase I conveyance improvements.

# 'Upper Main Conveyance' - #1

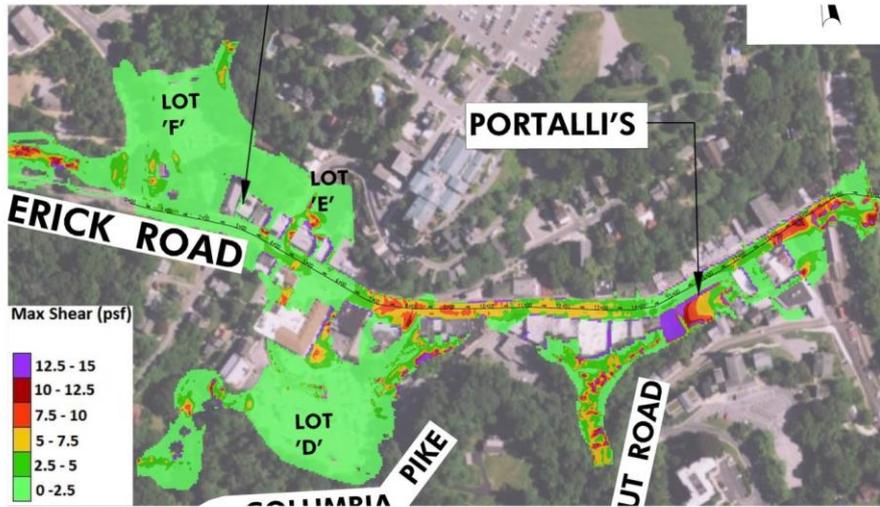
Proposed Open Channel Conveyance Improvement (100yr)



This is the same view assuming the Upper Main Conveyance Proposal #1 (open channel and the T1 Retention Basin). Note the reduced flooding in Lot F, Lot D and along Main Street from Ellicott Mills down toward Caplans. Also note that conditions do not worsen on lower Main Street. In reality, they slightly improve, however, it is important to note that flooding in lower Main area is still significant.

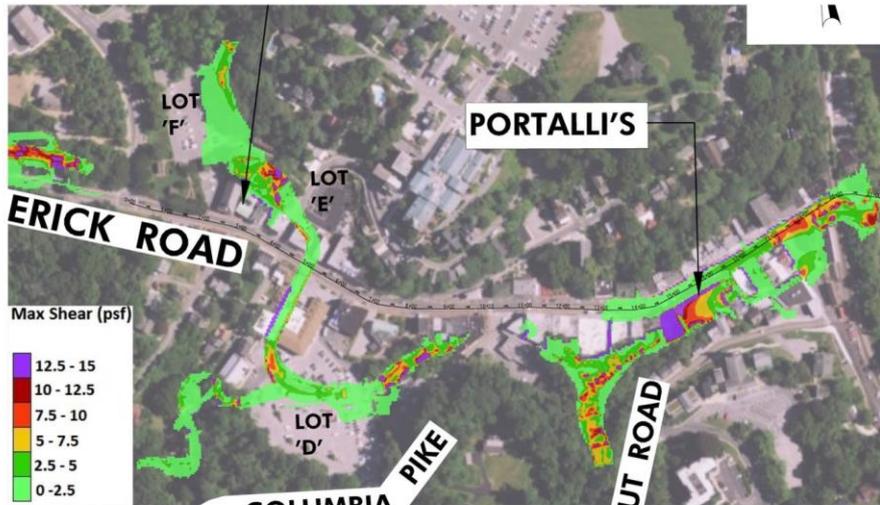
# 'Upper Main Conveyance' - #1

Shear Stress: Phase 1 West End Conveyance Improvements (100yr)



# 'Upper Main Conveyance' - #1

Shear Stress: Proposed Open Channel Conveyance Improvement (100yr)



Similarly, this shear stress model shows that the shear stress does not increase in lower Main while significantly improving in the upper Main area.

# 'Upper Main Conveyance' - #1: Lower Main Strategy

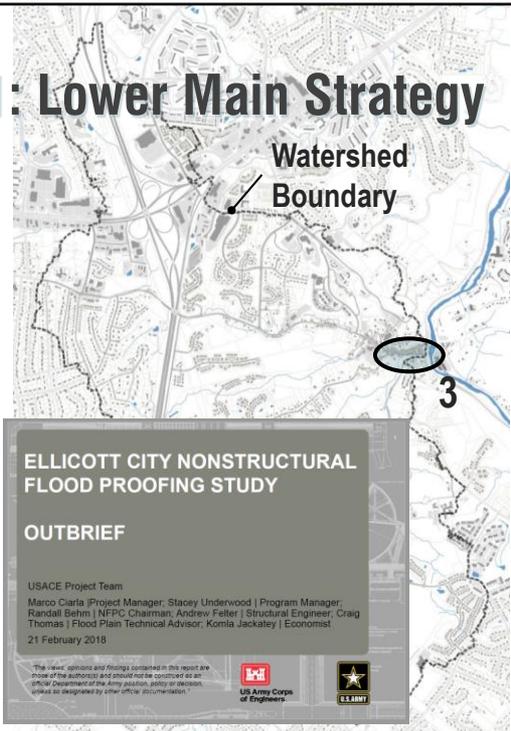
## Conveyance Under Lower Main Street:

- Constructability challenges
- Economic Impacts

*\*Still at risk for Patapsco Flooding*

## Strategy:

- Floodproofing
- Localized improvements
- Select flow-through structures

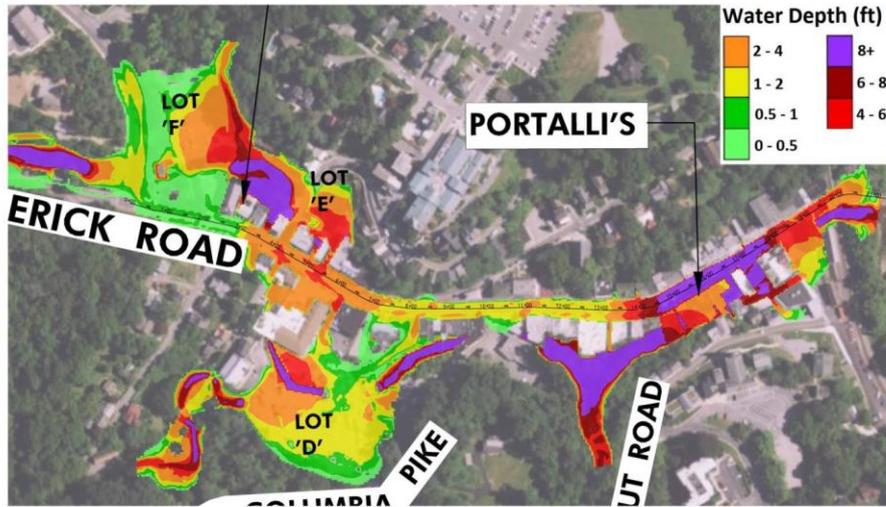


For lower Main Street area, the team examined parallel culverts under Main Street, which would be effective in improving conveyance along this section of Main Street, however, constructability challenges are too great with the number of underground utilities and the economic impacts of shutting down Main Street for an extended period of time.

Here, the strategy should focus on floodproofing, localized drainage improvements, channel maintenance and changes to specific buildings (to remove obstructions) to improve conveyance.

# 'Upper Main Conveyance' - #1: Lower Main Strategy

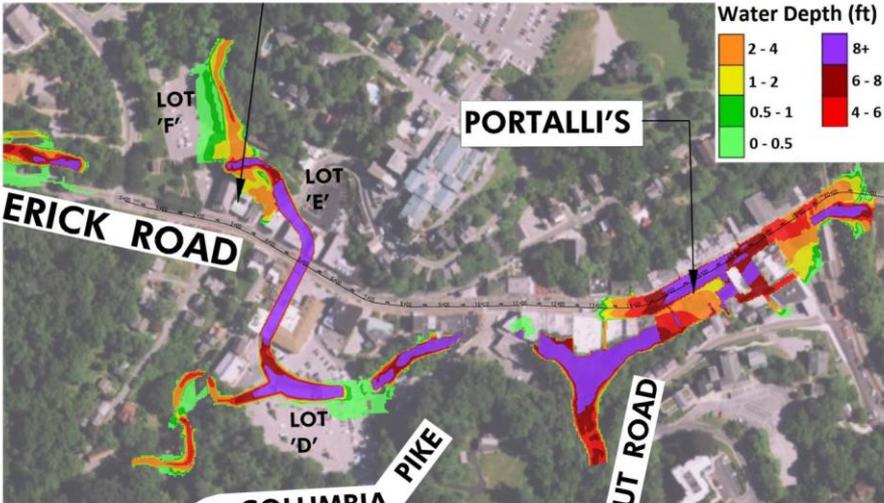
Existing Conditions w/ Phase 1 Conveyance Improvements (100yr)

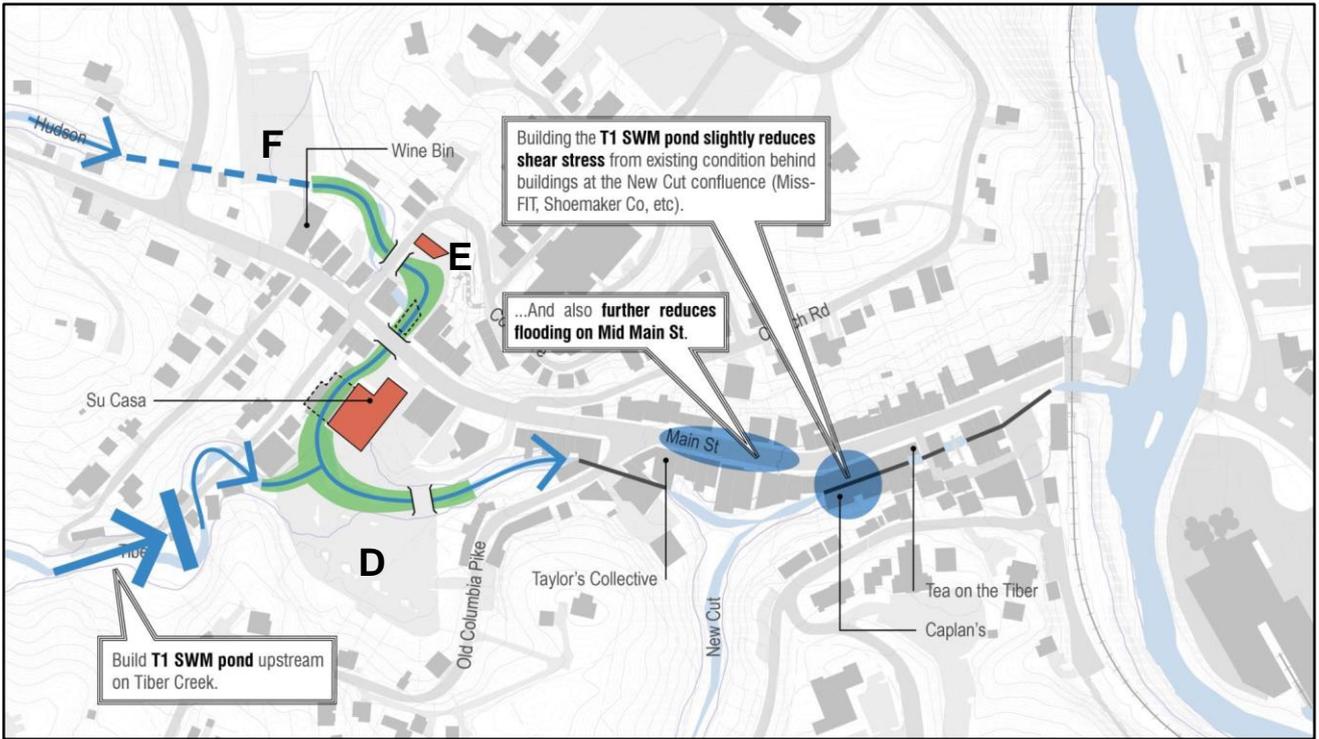


Again, the flood models (this slide and the following slide) showing that the Upper Main Conveyance strategy does not worsen the conditions along lower Main Street.

# 'Upper Main Conveyance' - #1: Lower Main Strategy

Proposed Open Channel Conveyance Improvement (100yr)

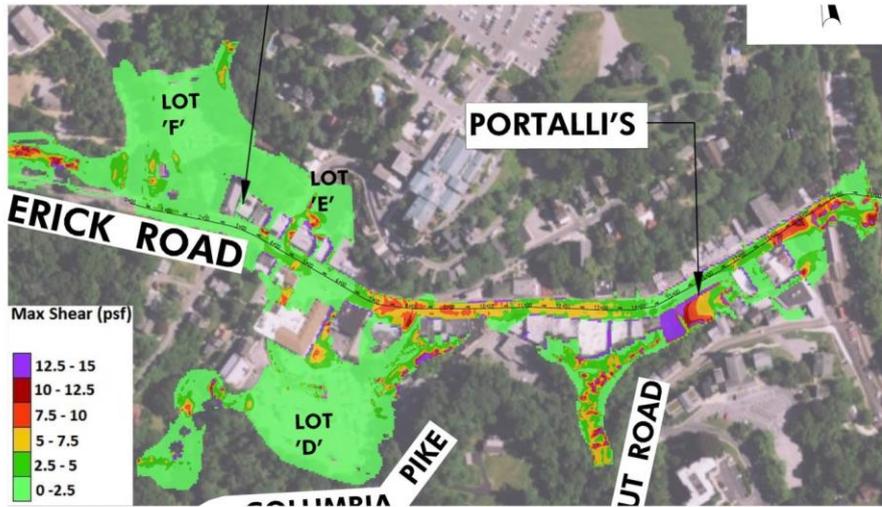




Constructing the T1 Retention Basin upstream on Tiber Creek (beyond the view of the map on this slide) helps to slightly reduce the shear stress in the lower Main Street area.

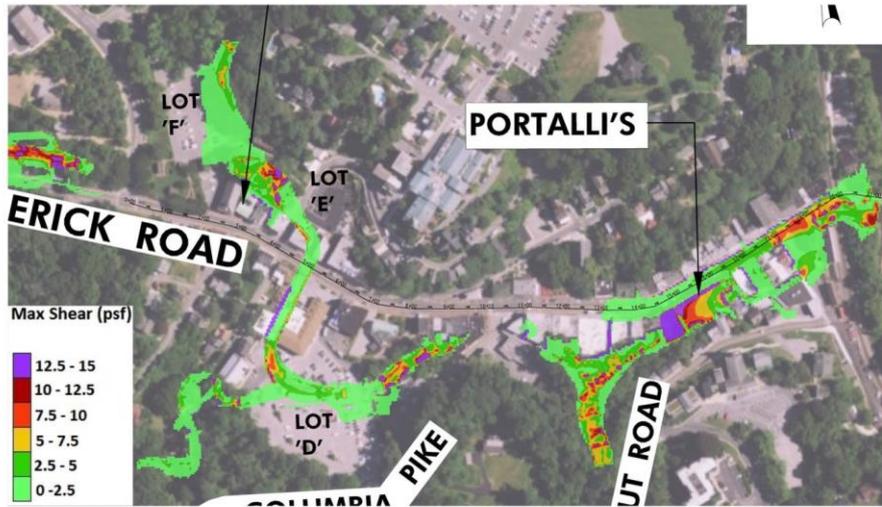
# 'Upper Main Conveyance' - #1: Lower Main Strategy

Shear Stress: Phase 1 West End Conveyance Improvements (100yr)



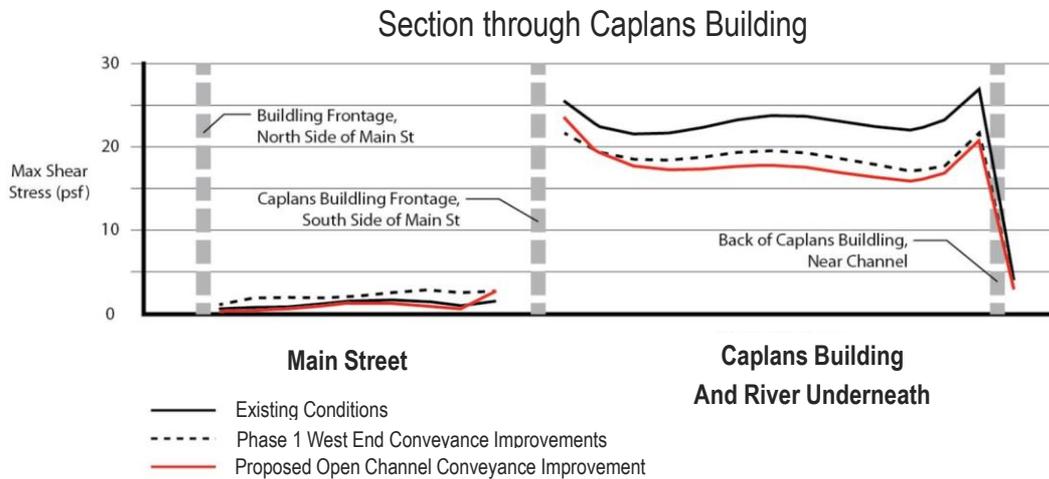
# 'Upper Main Conveyance'- #1: Lower Main Strategy

Shear Stress: Proposed Open Channel Conveyance Improvement (100yr)

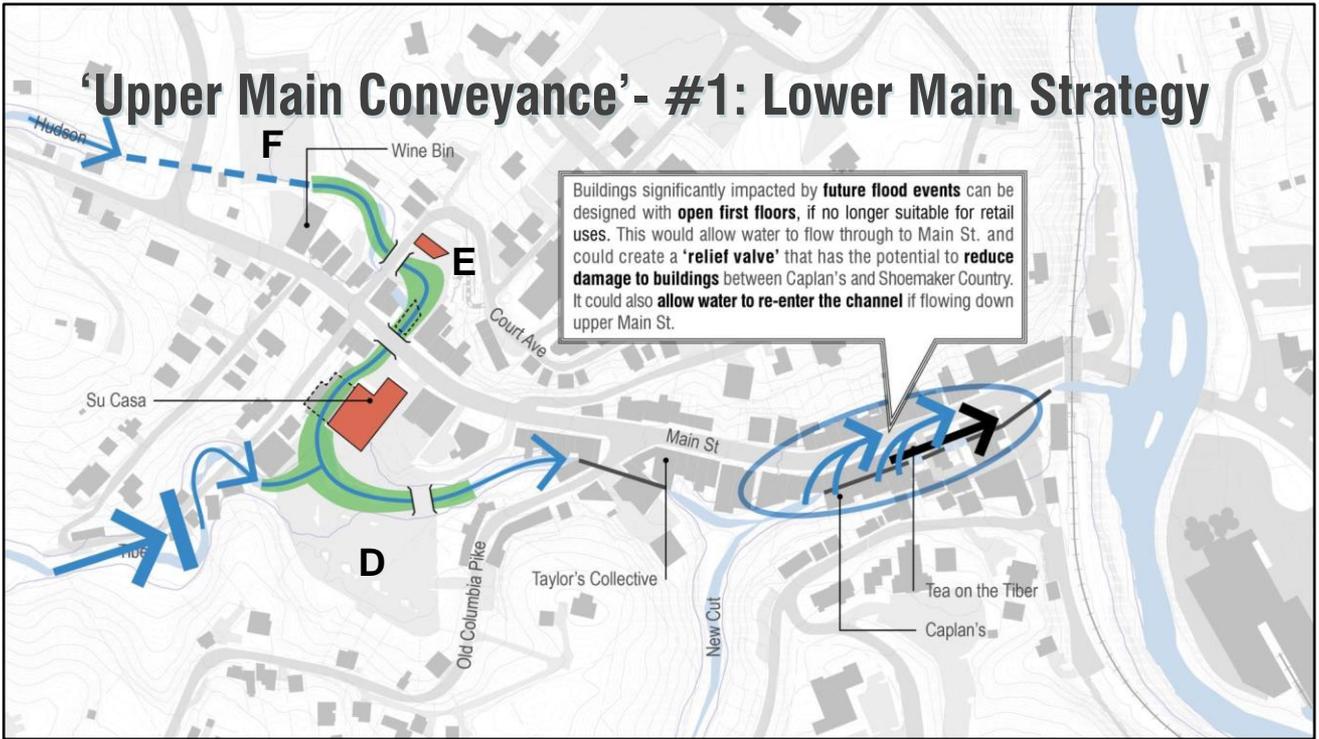


# 'Upper Main Conveyance' - #1: Lower Main Strategy

## Shear Stress at New Cut Confluence



This cross section taken from the model shows shear stress being reduced slightly on lower Main Street with the open channel conveyance improvement.



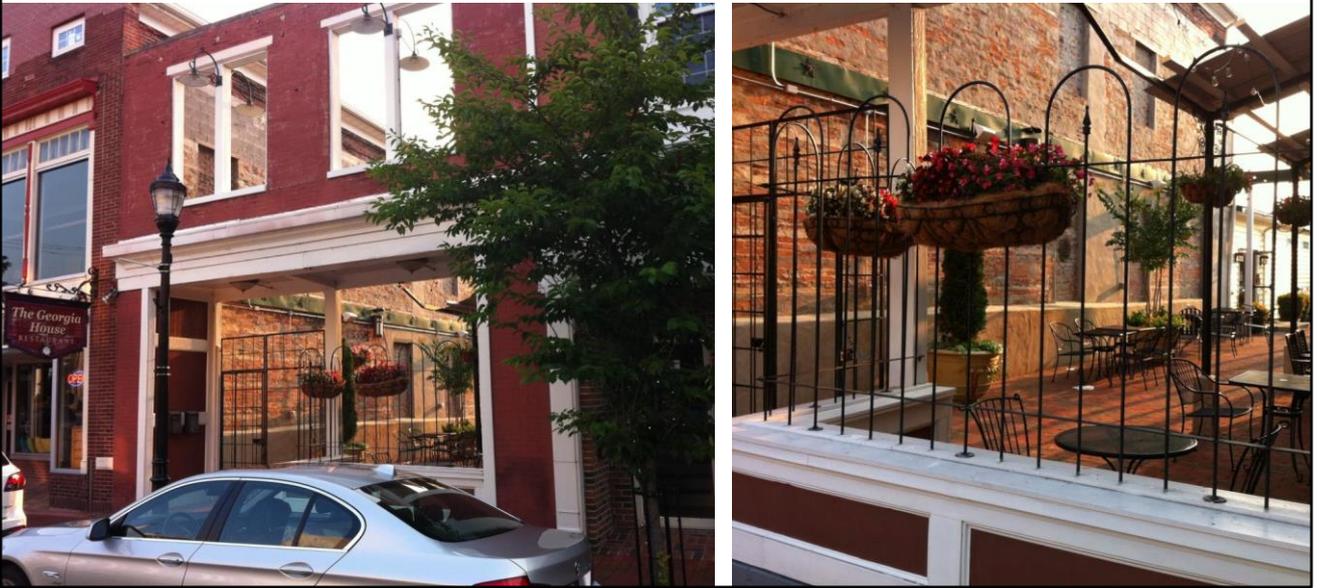
Over the long-term, if any buildings prove to be too difficult to floodproof and be habitable (at least on the first floor), these structures might be repurposed to allow for water to flow through and to serve as “relief points”. The structure itself could be preserved to maintain the historic architectural integrity of Main Street. Examples are shown on the following slides.

## 'Upper Main Conveyance' - #1: Lower Main Strategy



This building is in a floodplain and can no longer be occupied. It has been repurposed as an open pavilion and event space.

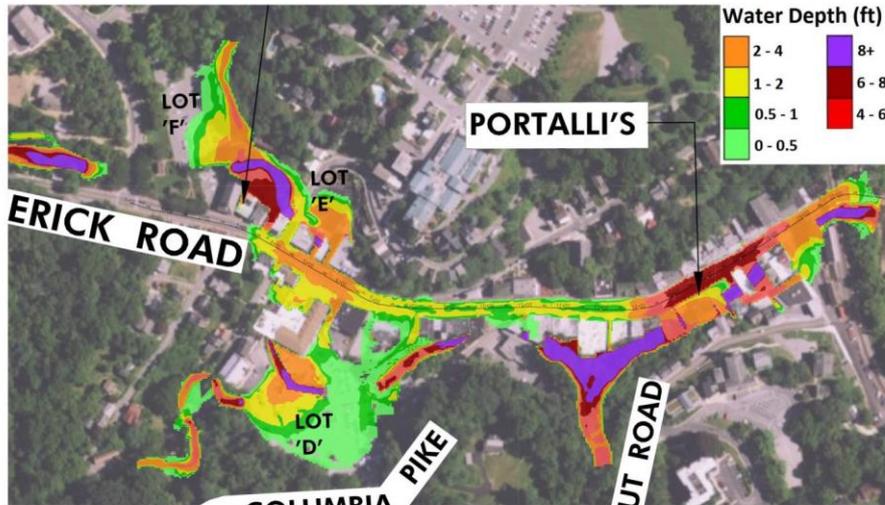
## ‘Upper Main Conveyance’- #1: Lower Main Strategy



This building, while not adapted because of flooding (it was damaged during a fire), shows how the concept could apply along Main Street. The façade (or entire structure) could remain, however, the first floor area could be repurposed as public open space and flood conveyance.

# 'Upper Main Conveyance'- #1: Lower Main Strategy

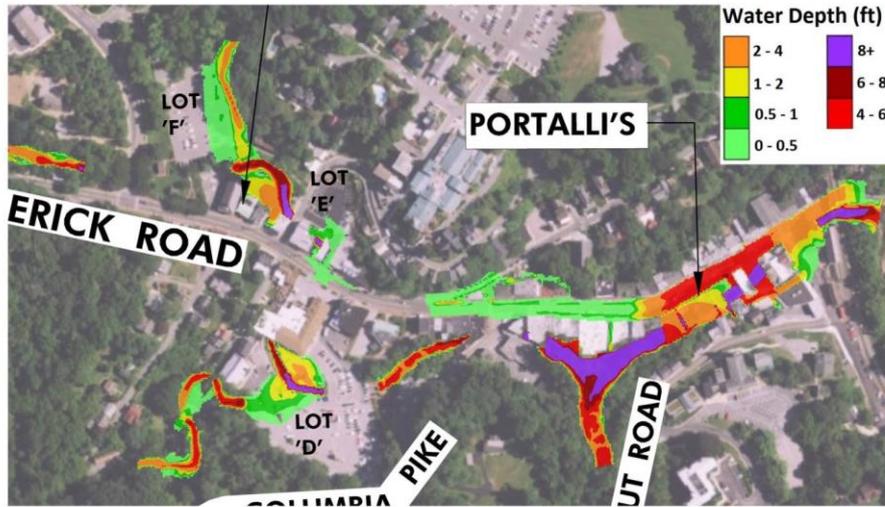
All Aboveground SWM Facilities and Conveyance Improvements (100yr) \$30 million



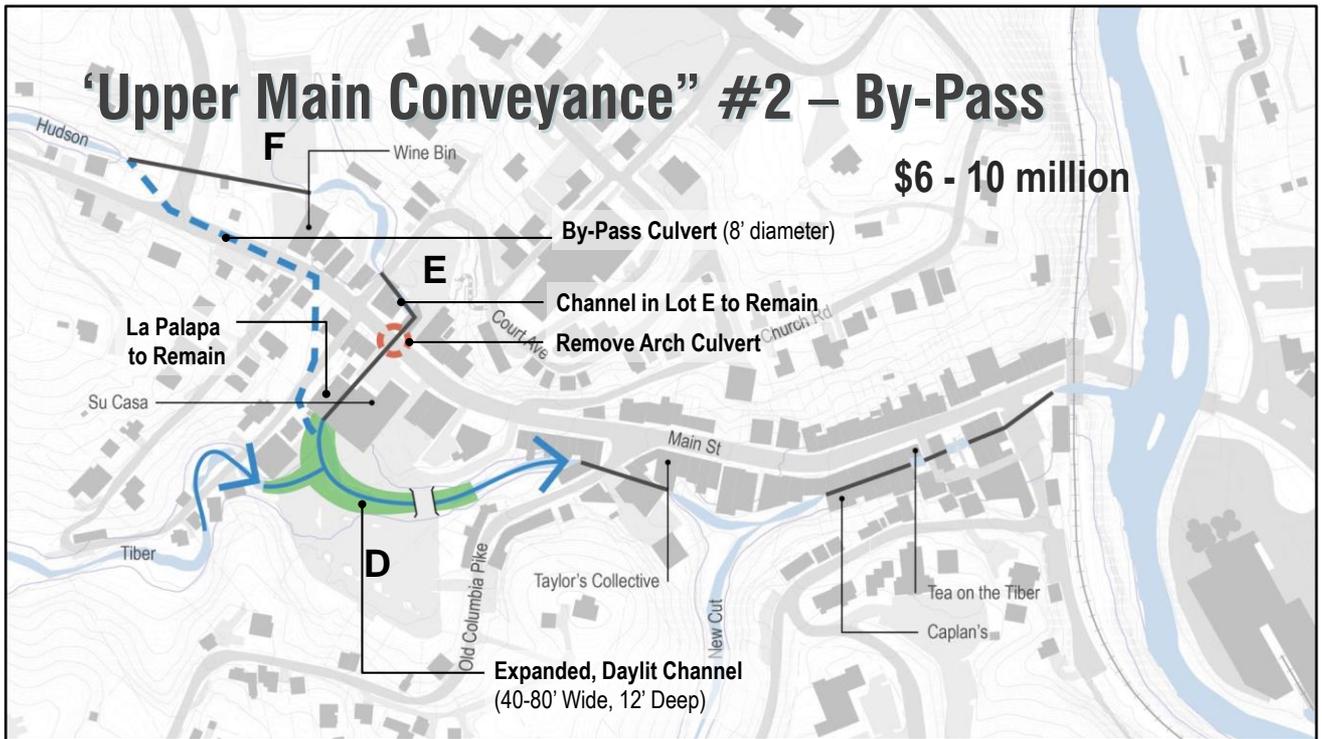
For reference, the flood modeling maps showing all of the aboveground SWM facilities and conveyance improvements from the H&H study and the resulting simulated water depths on upper and lower Main Street.

# 'Upper Main Conveyance'- #1: Lower Main Strategy

All Above+ Belowground SWM Facilities and Conveyance Improvements (100yr) \$80 million



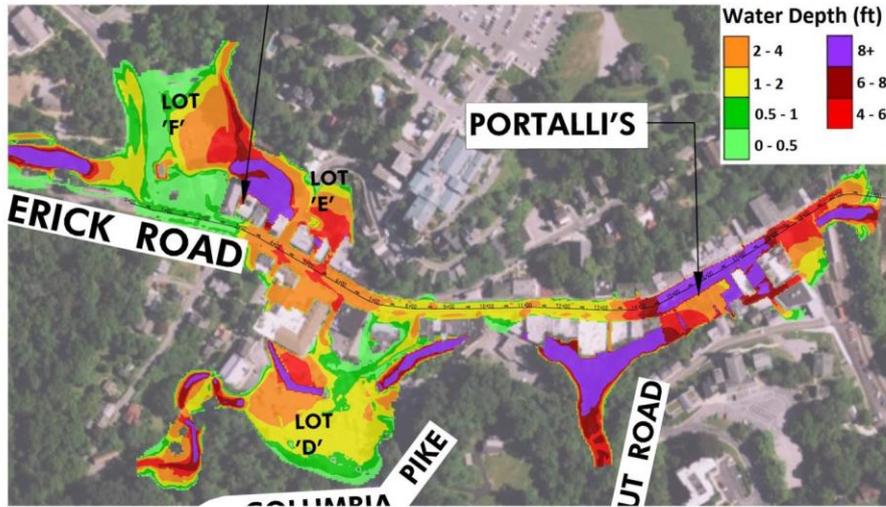
This model view from the H&H study shows significant improvements when adding in the belowground SWM facilities.



If removing the Ellicott Mills brewery annex and the LaPalapa buildings proves to be too problematic (or if there are other constraints with the open channel concept shown in Proposal #1), the project team looked at Proposal #2 which utilizes a secondary by-pass culvert from Ellicott Mills to Lot D. This would not require the removal of the buildings but it does assume removal of the “Arch Culvert” under Main Street. The concept is significantly less expensive, however, the results are not as effective as the open channel concept.

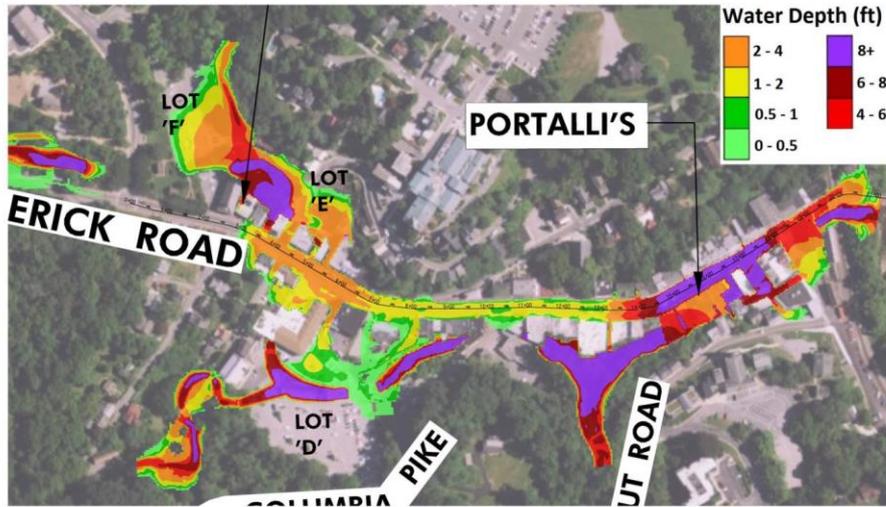
# 'Upper Main Conveyance' #2 – By-Pass

Existing Conditions w/ Phase 1 Conveyance Improvements (100yr)



# 'Upper Main Conveyance' #2 – By-Pass

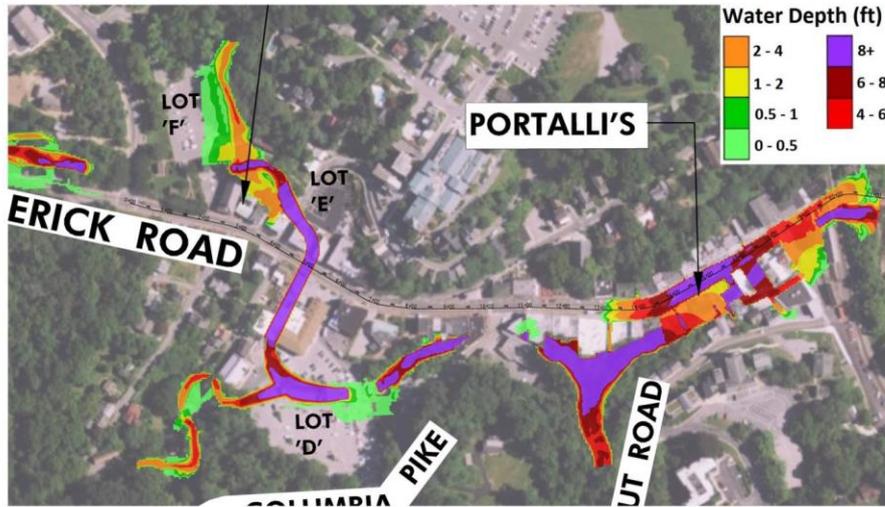
Alternative Proposal (100yr) | Limited Flood Benefit



Improvements can be seen when comparing this model (with the by-pass culvert ) and the existing conditions with Phase I conveyance (on the previous slide). However, this does not keep the water from leaving the channel and flowing down Main Street.

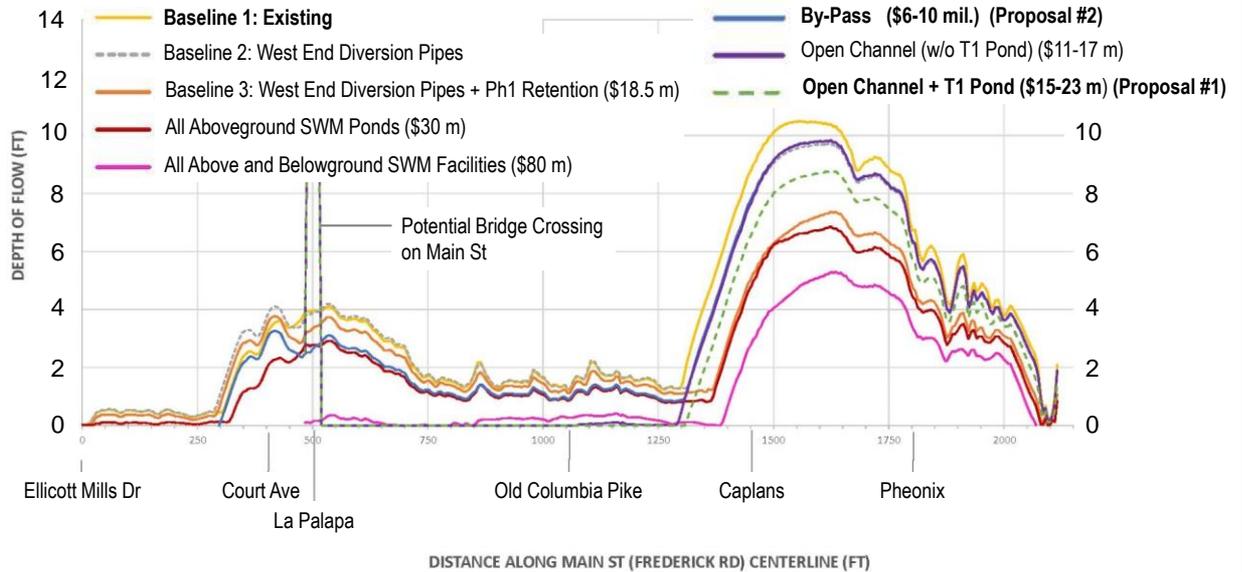
# 'Upper Main Conveyance' #1 – Comparison

Proposed Open Channel Conveyance Improvement (100yr)



For comparison, the model for Proposal #1 (open channel) shows considerably more effective results.

# “Upper Main Conveyance” Summary

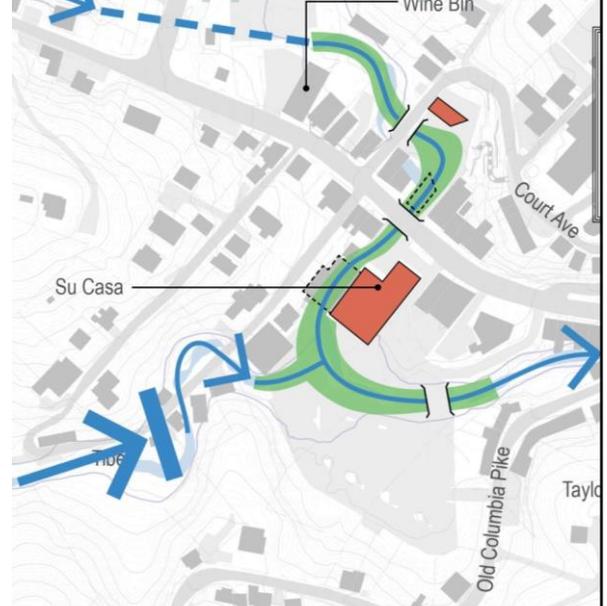


This hydrograph shows the changes in water elevations for the two proposals when compared to existing conditions and other models (such as the models from the H&H Study)

## “Upper Main Conveyance”

- Conveyance Improvements
- Significantly Reduced Flooding on Large Section of Upper Main Street
- Exposure/Visibility of the Water
- Amenity Space
- New Pedestrian Experience
- Placemaking/Outdoor Dining

## The Opportunity

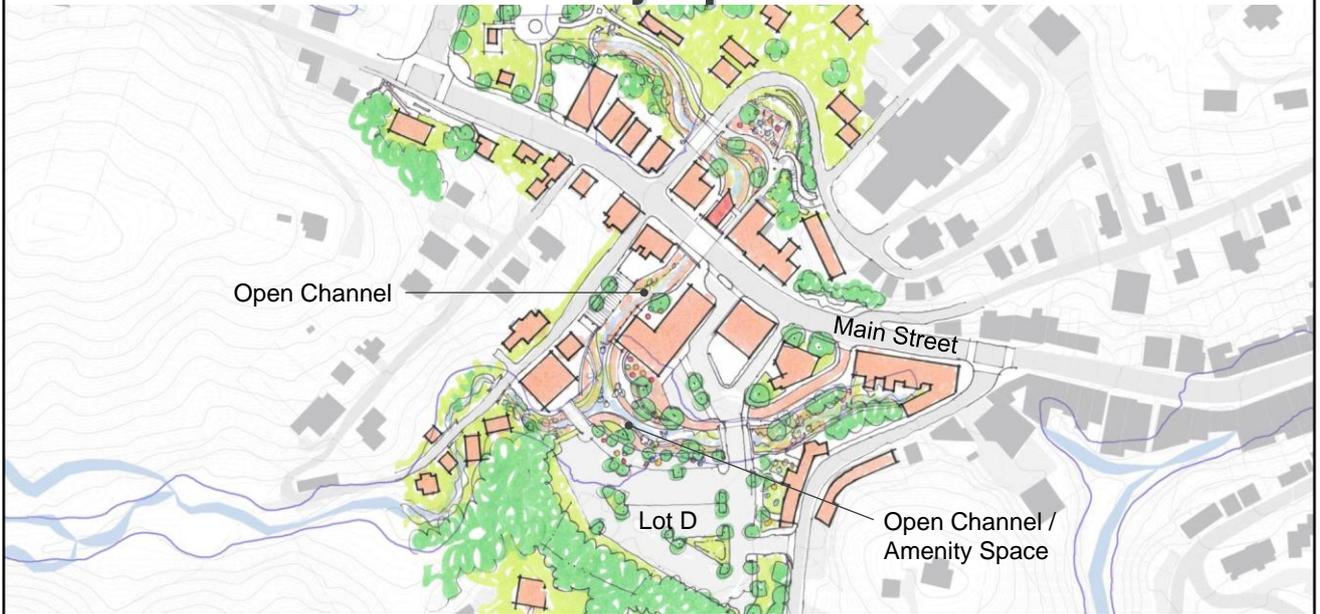


What is the opportunity with improved conveyance along upper Main Street?

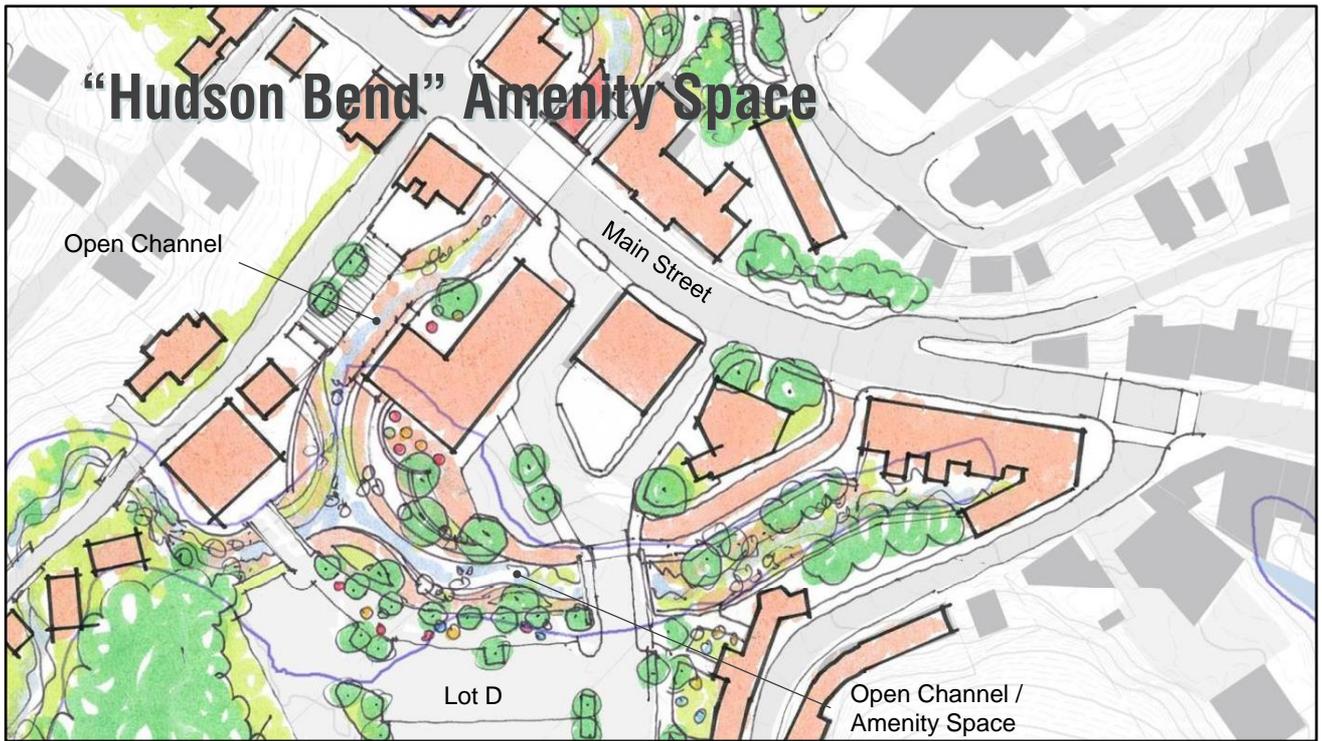
In addition to the reduced flooding, by opening the channel through the center of town and on publicly owned land, there is a tremendous opportunity to increase visibility of the water systems that flow through Ellicott City.

Additionally, there is the opportunity to add amenity space, develop a new pedestrian experience complementary to Main Street (to be discussed in more detail later in this presentation) and create opportunities for outdoor dining and placemaking.

# “Hudson Bend” Amenity Space

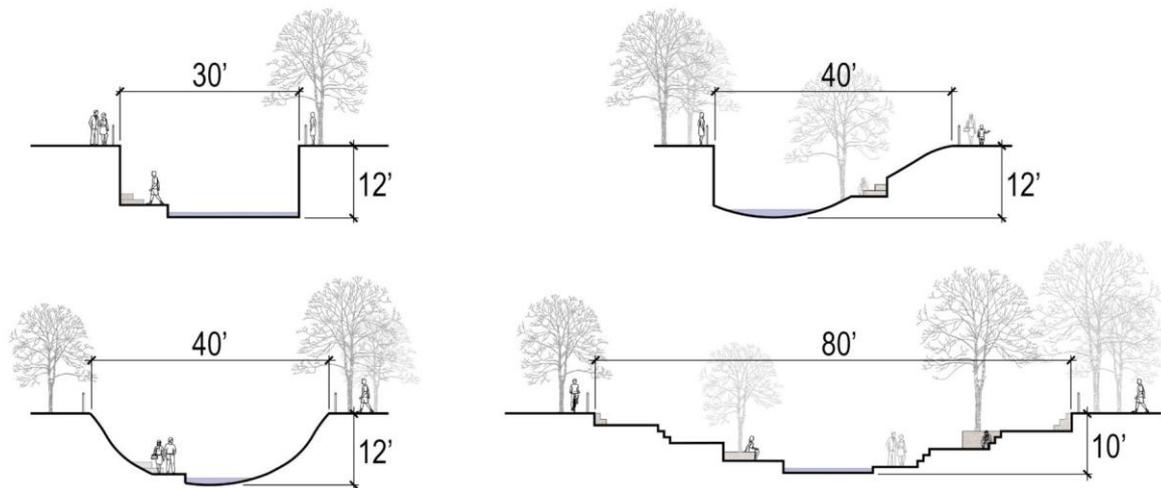


This is an illustrative concept showing how this open channel might be designed. The following slide zooms in closer.



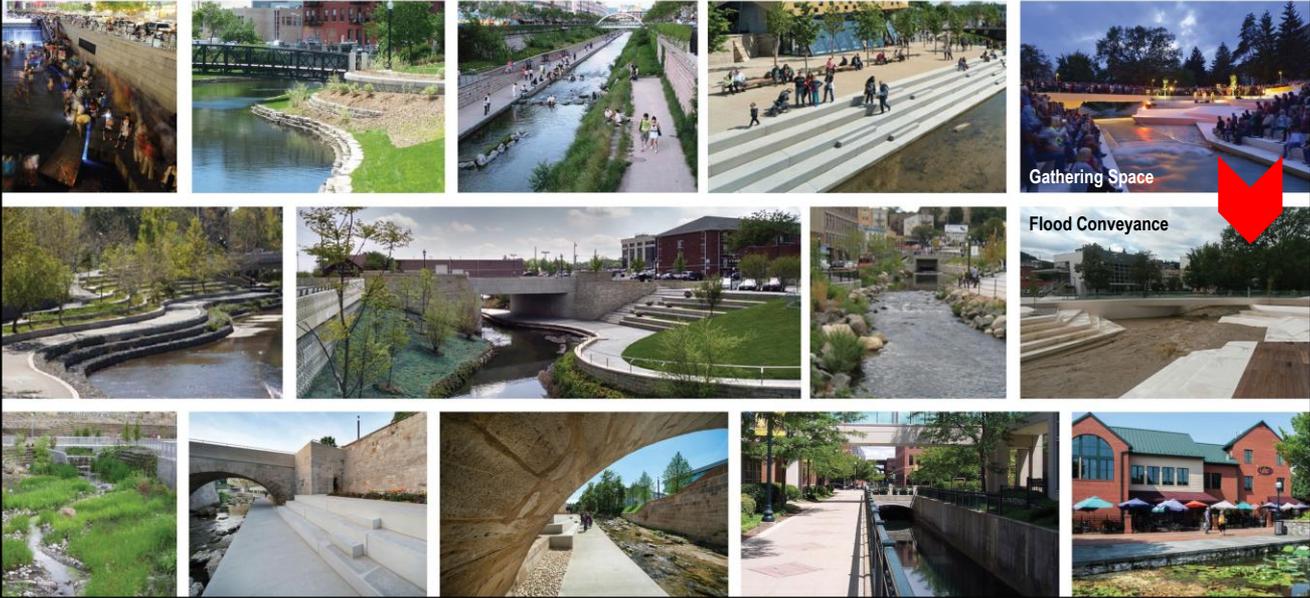
The channel in Lot D would be the widest, allowing for steps and terraces. It is important to note that because of the water dynamics during flooding, this will not be a naturalized channel. Rather, it will be primarily hard materials with opportunities to introduce pockets of plant material and trees. Regardless, it could still be designed to be an amenity and will need to adhere to a high level of design with its location in the historic district.

# “Hudson Bend” Amenity Space – Cross Sections



Examples showing how the stream channel might be designed. There is an opportunity to have pedestrian access along the upper and lower edge of the channel.

# Gathering Space at Open Channel



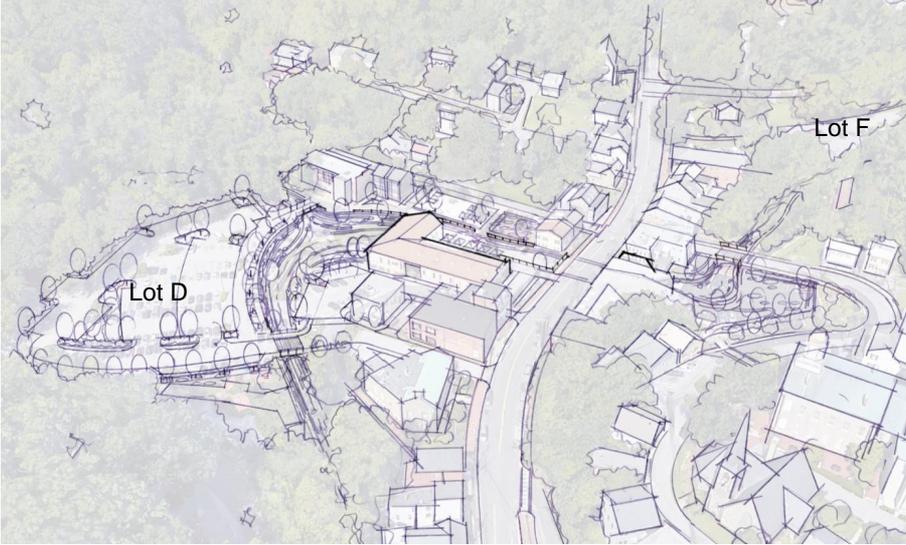
These photographs illustrate some of the design features that might be incorporated. It is important to note that while the flows will often be very low through the channel, it can still be designed as an amenity. Public art can even be incorporated into the paving of the channel to convey a stream channel.

## “Hudson Bend” Amenity Space

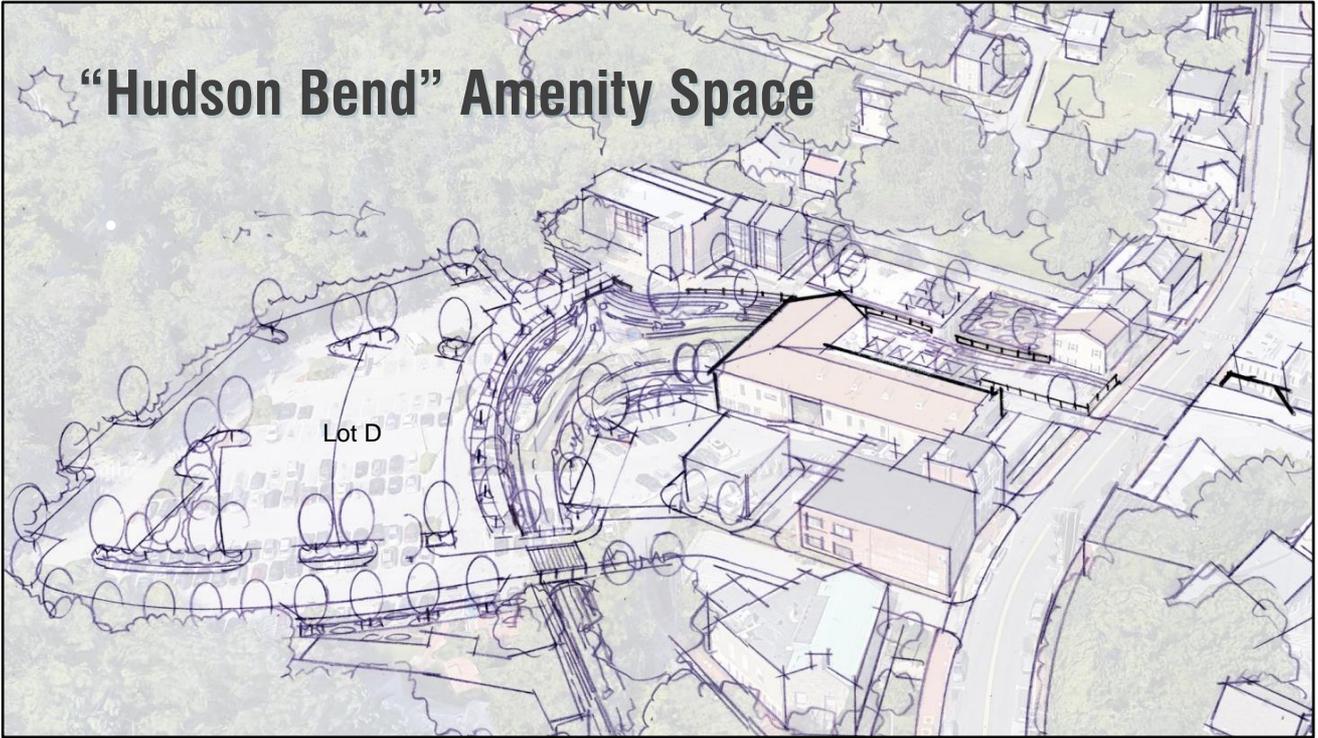


This series of slides shows a sketch of how the open channel might appear. The view is looking west toward Lot D.

# “Hudson Bend” Amenity Space



# “Hudson Bend” Amenity Space

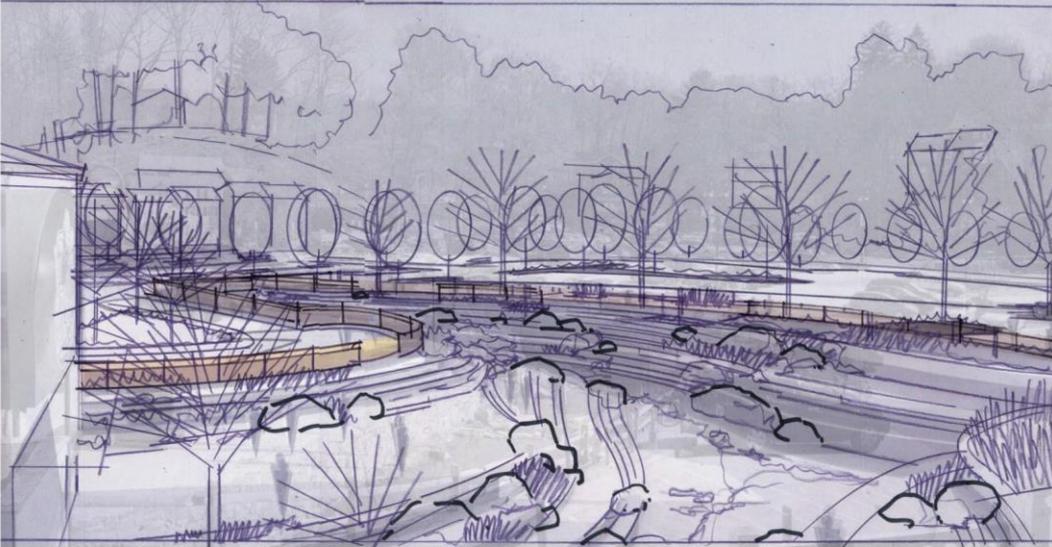


## “Hudson Bend” Amenity Space



This is another view from Merryman Street

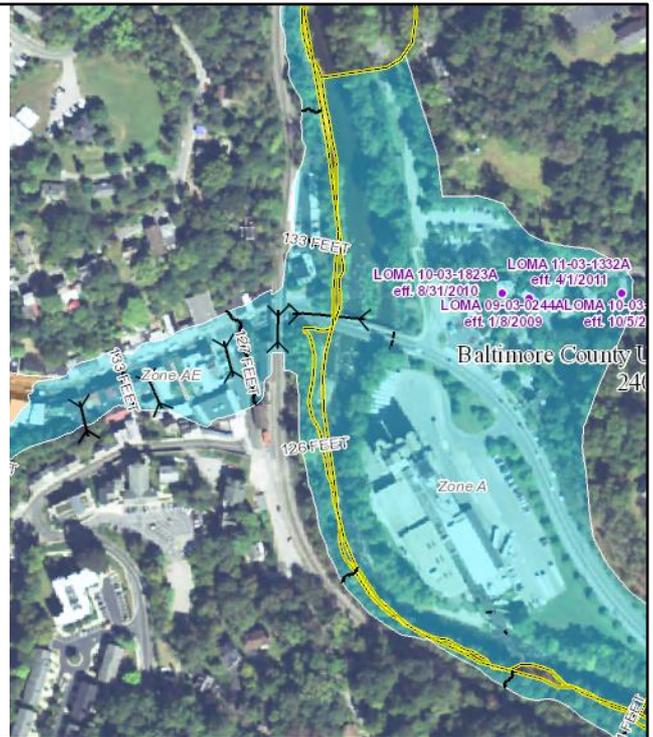
# “Hudson Bend” Amenity Space



# Patapsco River Flooding

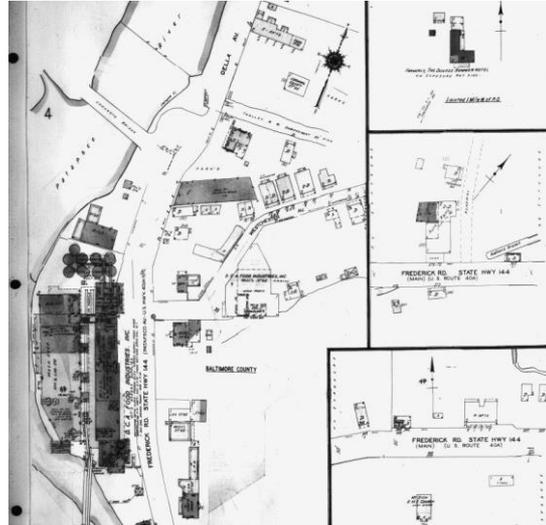
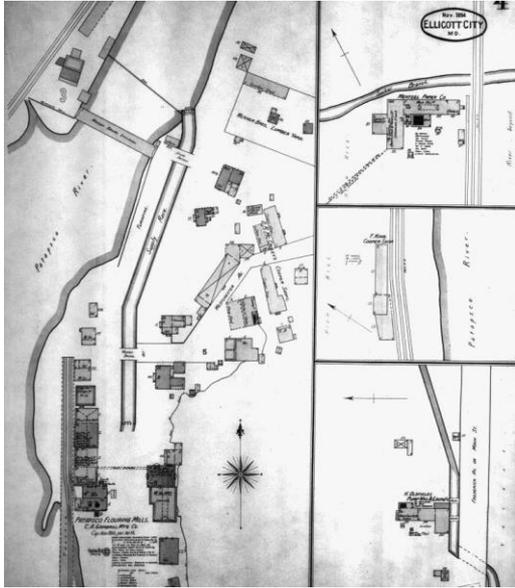
## Recommendation: Conduct Sensitivity Analysis

- Flour Mill Site – Long-Term Potential to Expand Channel?
- Main Street Bridge Constrictions



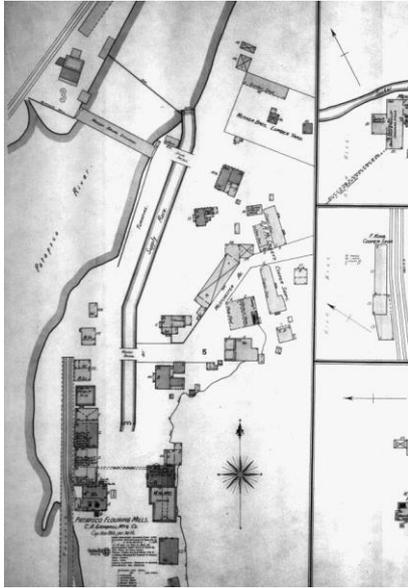
While the H&H model did not include the Patapsco River flooding, we are recommending that a sensitivity analysis be done in the area of the flour mill and the Main Street bridge.

# Patapsco River Flooding



Reviewing old maps over time show that the mill site likely “filled in” portions of the channel, creating additional constrictions.

# Patapsco River Flooding



Potential channel constrictions over time

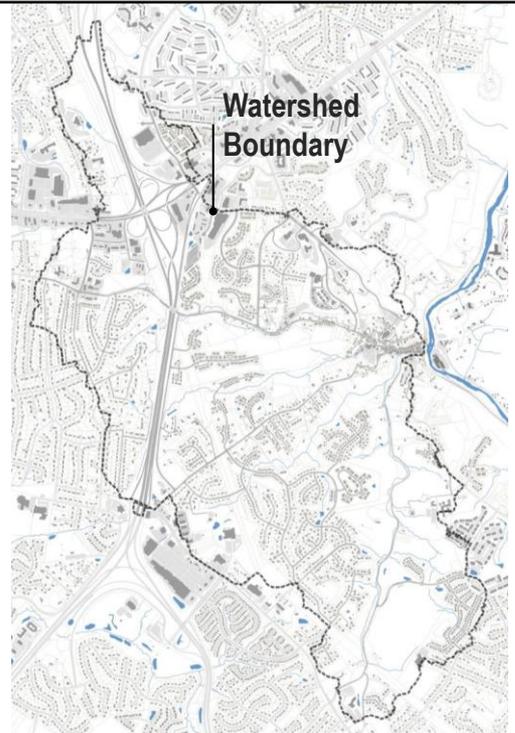
The green show potential channel constrictions over time. While there are no plans for the mill to leave, if it ever does, consideration might be given to using a portion of that land to widen the Patapsco River channel.

The sensitivity analysis may show that widening the stream channel could reduce backwater on lower Main Street. Additionally, a sensitivity analysis should be done on the Main Street bridge. A combination of the mill site and the bridge might play a role in river flooding.

# Strategy 1

## Recommendations

- 1-A: Flood Management
- 1-B: Non-Structural Floodproofing
- 1-C: Tiber-Hudson Watershed Special Protection District**
- 1-D: Water Quality Improvements

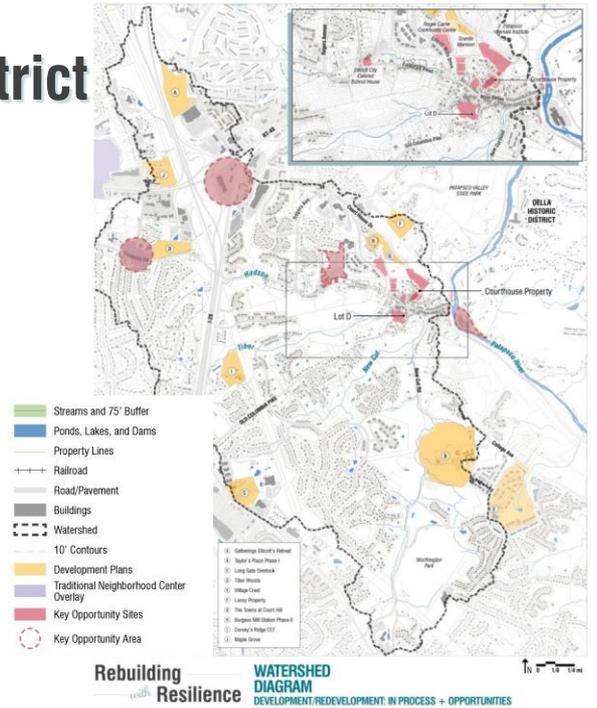


In addition to flood management, the team is also recommending, under Strategy #1, the creation of the Tiber-Hudson Watershed Special Protection District.

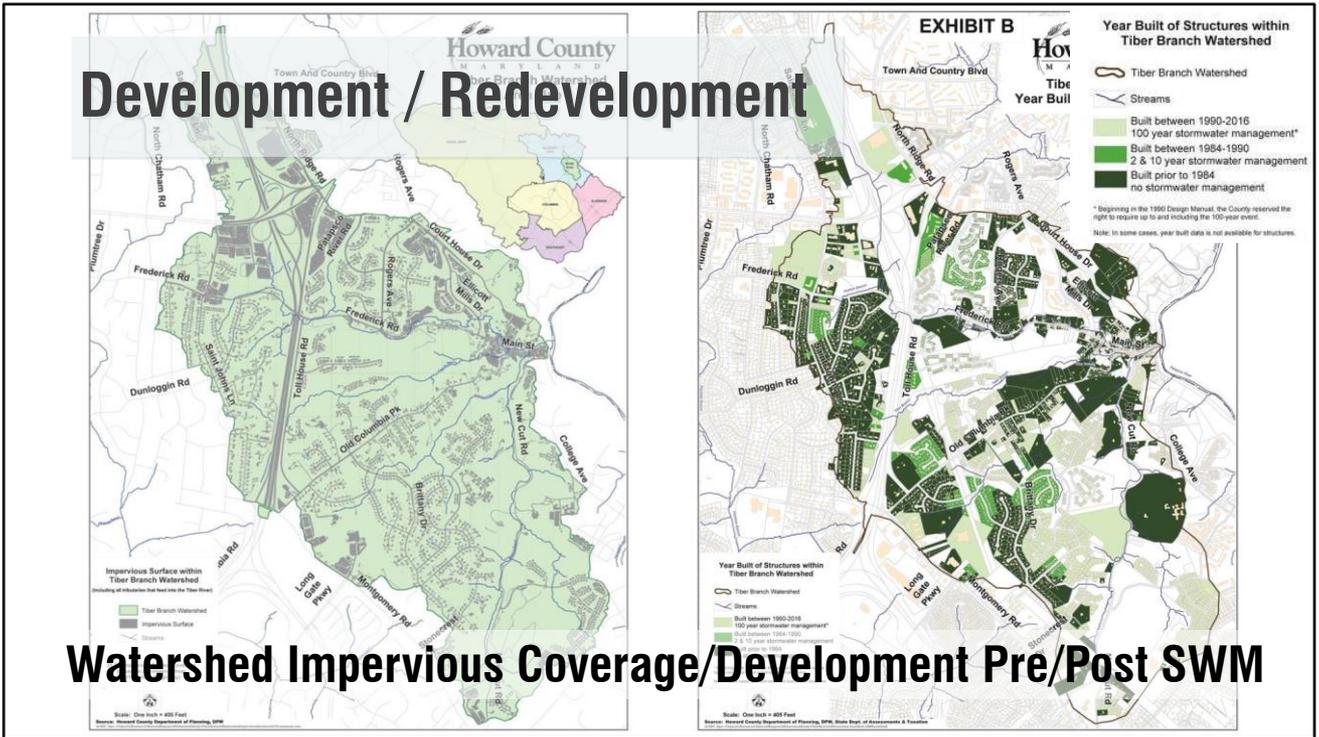
# 1-C Special Protection District



- Post-Construction SWM Monitoring Pilot Projects
- Floodplain / Steep Slope Restrictions
- Open Space Conservation Easements
- Development / Redevelopment



This district would include several recommendations as outlined above.



Regarding development and redevelopment, the map on the left shows the current impervious surface in the watershed. The map on the right shows development that was completed at various points in time with corresponding SWM requirements at the time. The dark green represents development done prior to any SWM requirements (prior to 1980).

# Development / Redevelopment

- **County Property Redevelopment**
- Non-County Property Redevelopment Options to Explore
- Fee-in-Lieu Exploration:
- Impervious Coverage Limits:

## Manage 100-Year Storm Event

### Explore:

- Manage on-site
- Allocate net increase management (from current state standards for redevelopment) toward conveyance improvements within the watershed
- Combination

The recommendation for the watershed is that all County-owned property in the watershed (not just the historic district) manage the 100 year storm event for redevelopment.

However, sites should be evaluated on a case-by-case basis to determine if funds would be more effectively allocated toward conveyance improvements within the watershed.

# Development / Redevelopment

- County Property Redevelopment
- **Non-County Property Redevelopment Options to Explore**
- Fee-in-Lieu Exploration

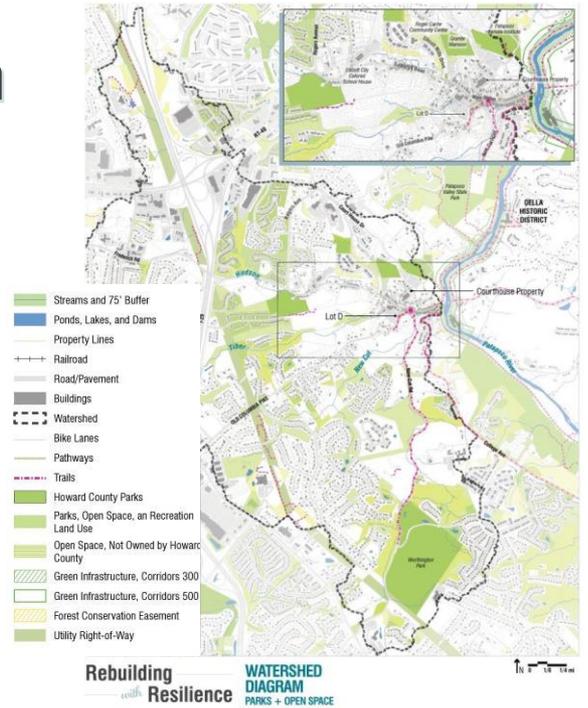
## Explore:

- Manage 100-year storm for existing sites with between 40-80% impervious coverage (explore as requirement or incentive-based)
- Explore current State standards for redevelopment for existing sites with greater than 80% impervious coverage

Similarly, we are recommending that some of the privately owned land within the watershed manage the 100 year storm event (in accordance to the considerations outlined above).

# Open Space / Conservation

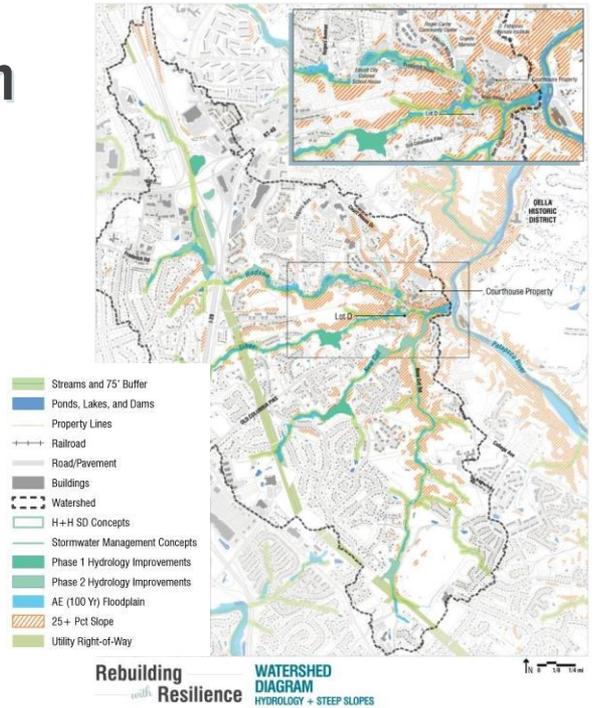
- Parks
- Dedicated Open Space
- Forest Conservation Easements
- Steep Slopes
- Floodplains
- Stream Buffers



This map shows existing open space – parks, conservation easements, dedicated open space within subdivisions, etc.

# Open Space / Conservation

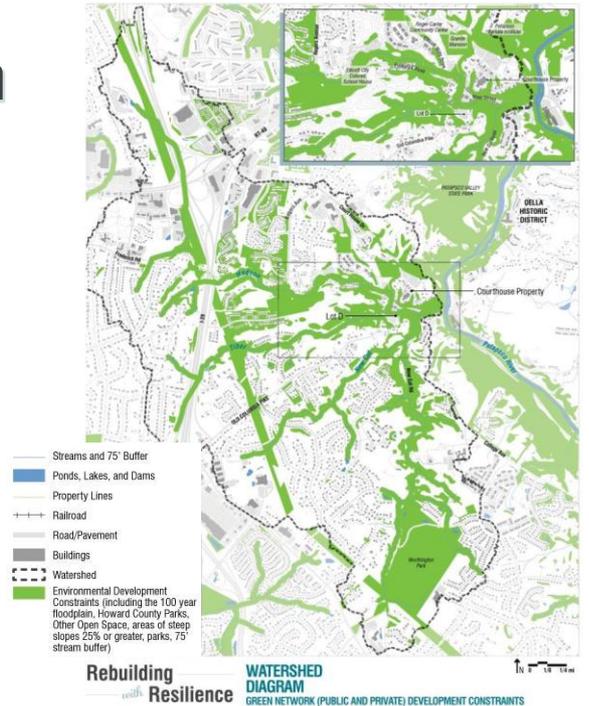
- Parks
- Dedicated Open Space
- Forest Conservation Easements
- **Step Slopes**
- **Floodplains**
- **Stream Buffers**
- 



Additionally, undevelopable steep slopes, floodplains and stream buffers contribute to the open space in the watershed.

# Open Space / Conservation

- Parks
- Dedicated Open Space
- Forest Conservation Easements
- Steep Slopes
- Floodplains
- Stream Buffers



Together, they create an interconnected network. Opportunities to add to this network and provide for missing connections – particularly along the Patapsco River – should be explored.



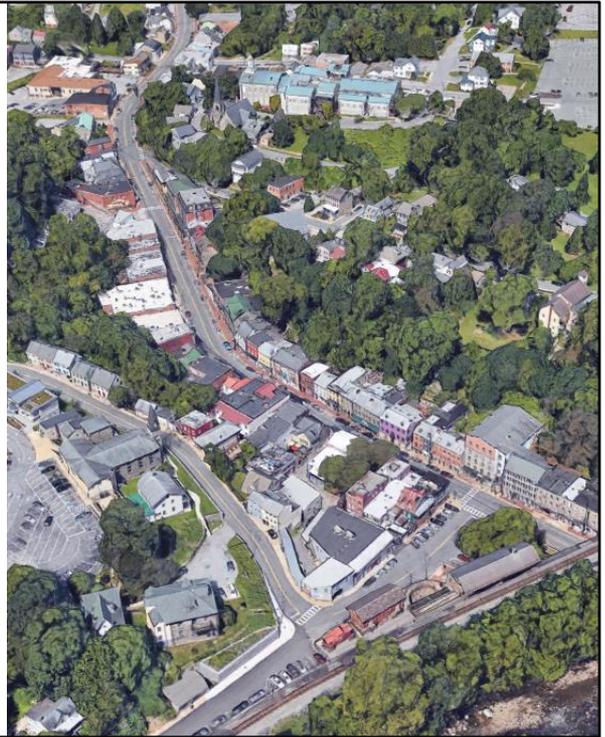
## Planning for Economic Success

Strategy #2: Planning for Economic Success

# Strategy 2

## Recommendations

- 2-A: Historic Preservation Program Enhancements
- 2-B: Market Attraction
- 2-C: Mixed-Use Opportunities
- 2-D: Business Support Programs



There are four key areas for recommendations under Strategy #2. Each of these include multiple recommendations.

## 2-A Historic Preservation



- **Property Maintenance and Neglect Policy Exploration (County-Wide)**
- Tiered-Boundary – Extension to West End (*Potential Form or Character-Based Codes*)
- New Cut Road Scenic Corridor Overlay (*Potential Form or Character-Based Codes*)

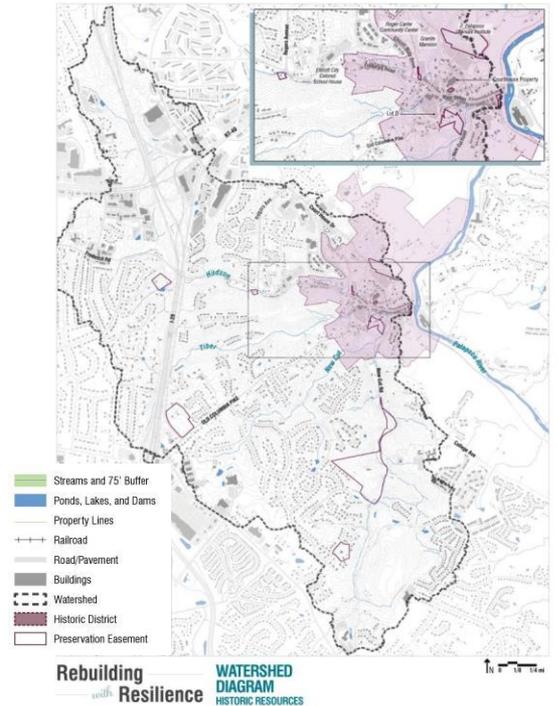


Historic preservation is included under this strategy because the extensive and intact historic district is the economic engine for Ellicott City. An important component to protecting this historic district is addressing neglected properties. The County should explore county-wide policies to better address property maintenance and neglect.

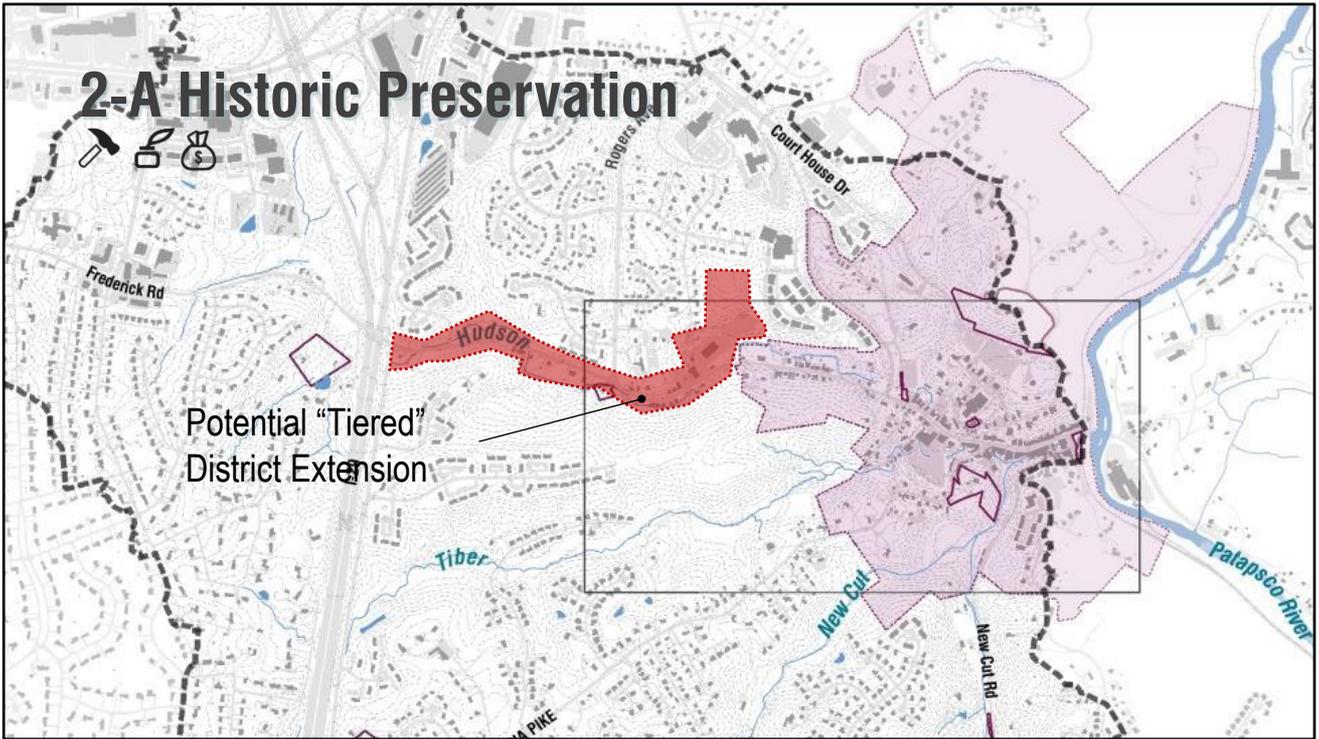
## 2-A Historic Preservation



- Property Maintenance and Neglect Policy Exploration (County-Wide)
- **Tiered-Boundary – Extension to West End** (*Potential Form or Character-Based Codes*)
- New Cut Road Scenic Corridor Overlay (*Potential Form or Character-Based Codes*)



It is also worth exploring an extension of the historic district in some form to include the West End.

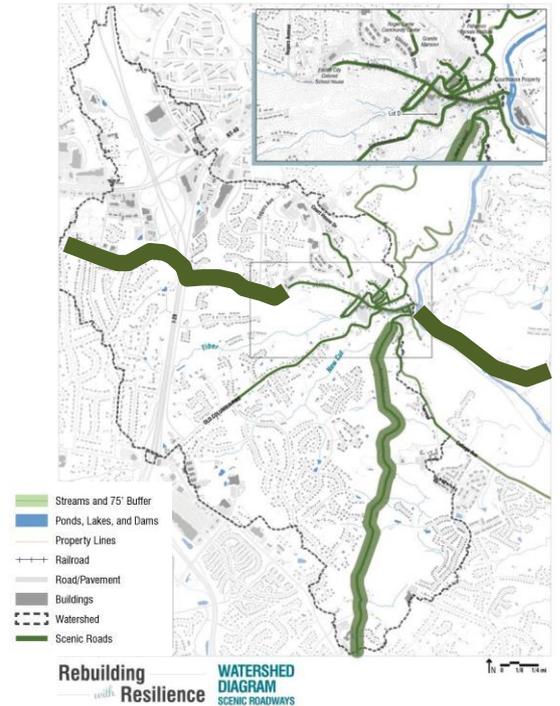


The recommendation is to explore a “tiered” boundary in the West End, one with incentive-based protections to preserve and enhance the character of the district. This may be accomplished through character-based codes as part of the zoning code rewrite and could help reinforce a seamless connection between the Main Street Core and West End Main.

## 2-A Historic Preservation



- Property Maintenance and Neglect Policy Exploration (County-Wide)
- Tiered-Boundary – Extension to West End (*Potential Form or Character-Based Codes*)
- **New Cut Road / Frederick Road Scenic Corridor Overlays** (*Potential Form or Character-Based Codes*)



The roads leading into Ellicott City are designated as Scenic Roads in the General Plan. PlanHoward 2030 encouraged policies regarding scenic roads to be re-examined to ensure that their view sheds are protected. This is particularly important along Main Street (extending west to St. John's Lane) and New Cut Road.

This may be done with scenic corridor overlay districts as part of the zoning code rewrite where character-based codes can be applied. Additionally, Howard County should work with Baltimore County to explore a similar overlay district along Frederick Road on the Baltimore County side of the river.

## 2-B Market Attraction



- “Macro” and “Micro” Spaces
- Creative Places Initiative
- Accommodations Options
- Unique Residential Products within Walkable Core



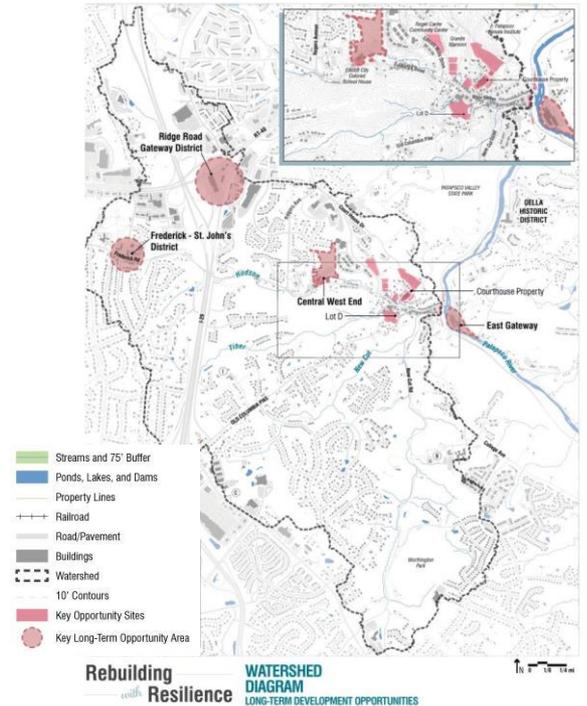
We learned in November from the market analysis that the core of Ellicott City is losing potential sales, particularly as it relates to food-related businesses (restaurants, gourmet grocers, demonstration kitchens, food trucks, etc.) and home accessory businesses. To attract these, a variety of “macro” and “micro” spaces will be needed. It is important to note that “macro” spaces would be similar in scale to the existing Su Casa space or slightly larger.

Additionally, we are recommending some focus on complementary uses to the retail businesses such as “creative places” (makers spaces, co-working space, etc.), accommodations (which may consider but not be limited to a boutique hotel), and unique residential products that provide more living options within the walkable core.

## 2-C Mixed Use



- Ridge Road Gateway District
- Frederick-St. John's District
- "Central West End" (Long-Term Potential)
- "Hudson Bend" (Lot D)
- "Courthouse Hill"
- Ellicott Mills Gateway (Lot F)
- East Gateway (Baltimore County)

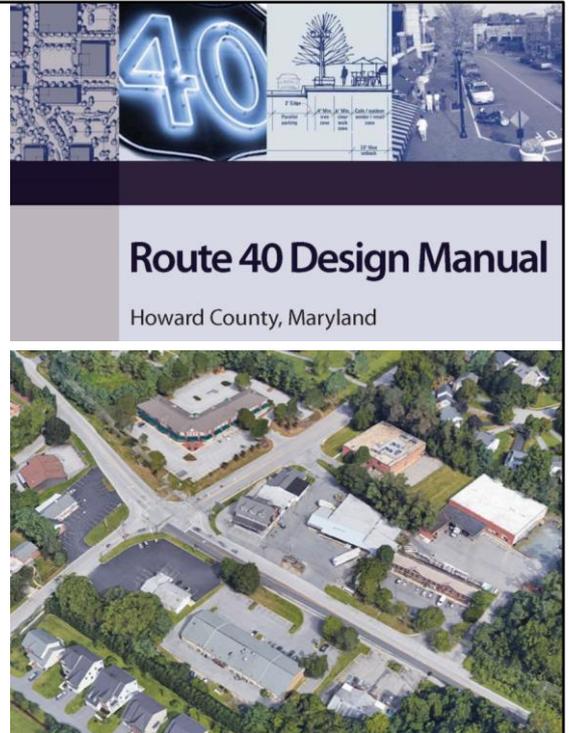


There are numerous redevelopment opportunities within the watershed where sites can be redeveloped with a mix of uses and provide SWM on sites where none currently exists. Most of these sites are within the historic core, however, two opportunities exist in the upper areas of the watershed; one includes the existing shopping center at Ridge Road and Rt. 40 and the other is the area surrounding the intersection of St. John's Lane and Frederick Road.

It is important to note that there are currently no plans for any redevelopment of these properties. They are addressed in the master plan, should any changes occur in the future.

# Frederick-St. John's District

- Mixed-Use Focal Point
- Pedestrian Focus with Any Long-Term Redevelopment
- Route 40 Design Manual and Form/Character-Based Code Application
- Pedestrian Connections to Main Street



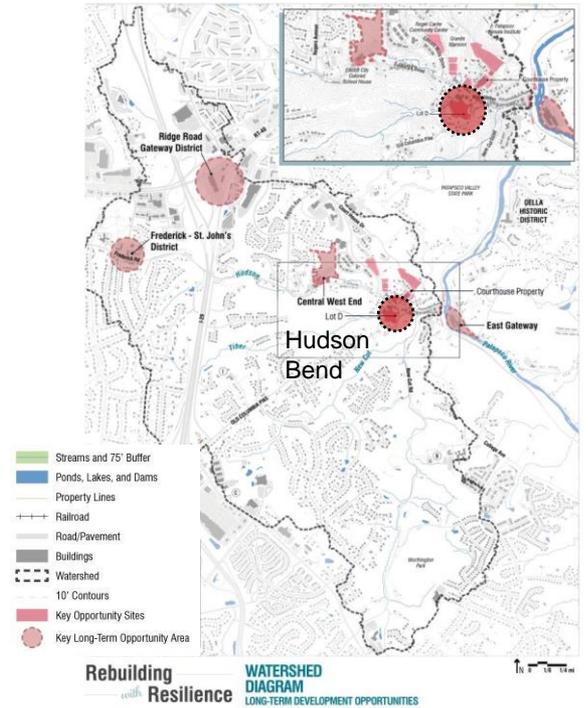
The intersection of Frederick Road and St. John's Lane could become a more pedestrian-friendly district. The district could be defined by appropriately scaled mixed-use buildings oriented to the streets, and serve as a neighborhood anchor to the surrounding residential neighborhoods. An important component of any redevelopment would be a sidewalk/trail connection along Frederick Road to West End Main and the historic district.

This recommendation reinforces the goals of the Route 40 Design Manual, however, the "Traditional Neighborhood Overlay District" may be replaced by a mixed-use district as is currently being explored by the zoning code rewrite. Through this code rewrite, character-based codes could be applied to achieve a more pedestrian-friendly environment.

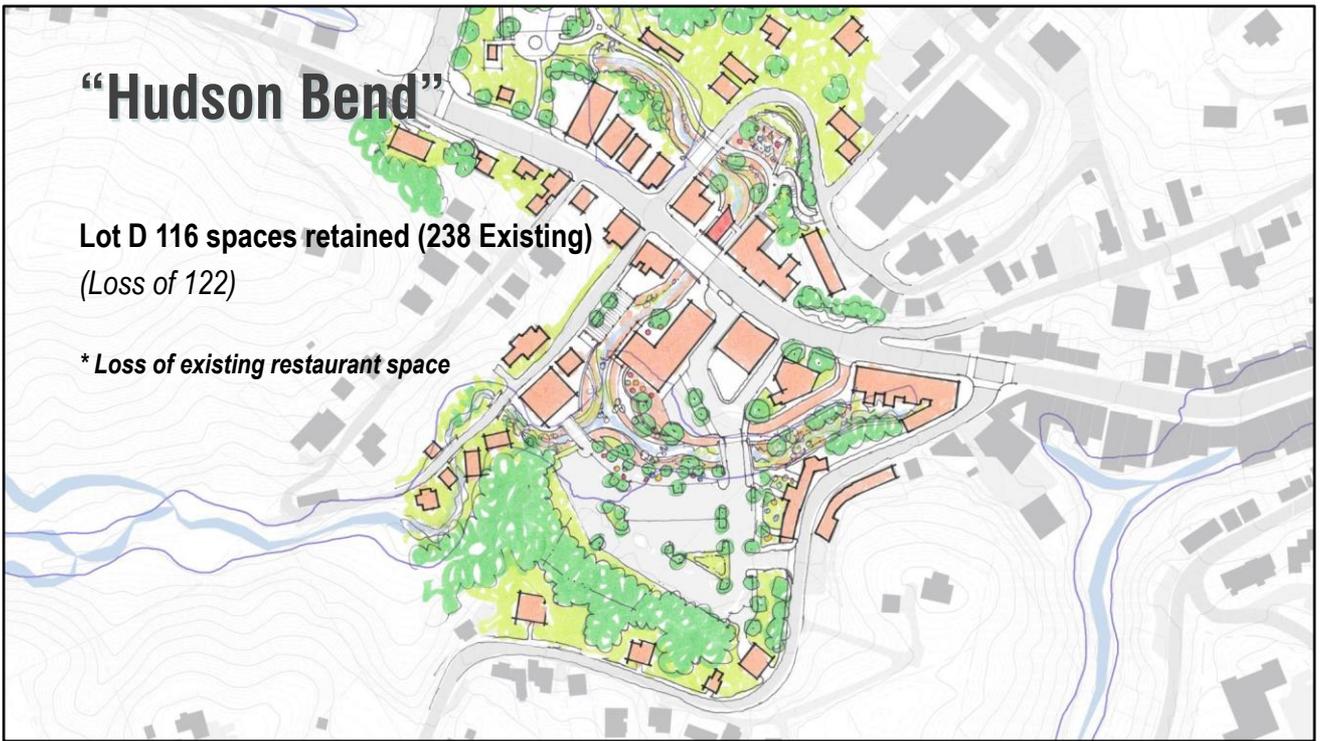
It is important to note that the team did not meet with property owners in this area and are unaware of any planned redevelopment in the near future.

# “Hudson Bend”

- Flood Conveyance Opportunity
- Open/ Gathering Space in a Central Location
- Increase Visibility of the Water
- Parking (Surface or Deck)
- Replacement Retail (Stand Alone or “Liner”)
- Additional Active Uses – Retail, Office, Housing and/or Accommodations (“Liner”)

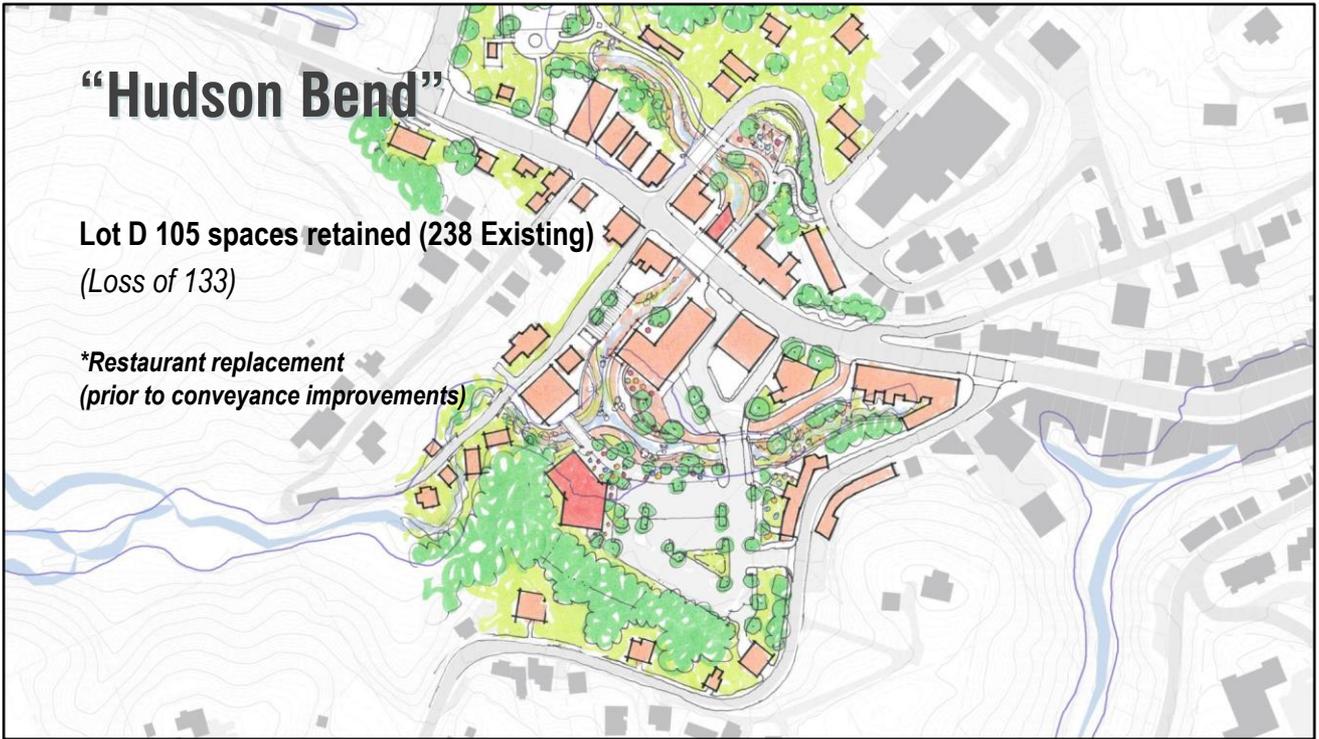


As we move to the core of Ellicott City, Lot D provides the most exciting opportunity for a mix of uses, particularly as it relates to flood management enhancements associated with the Hudson Tributary as described earlier.

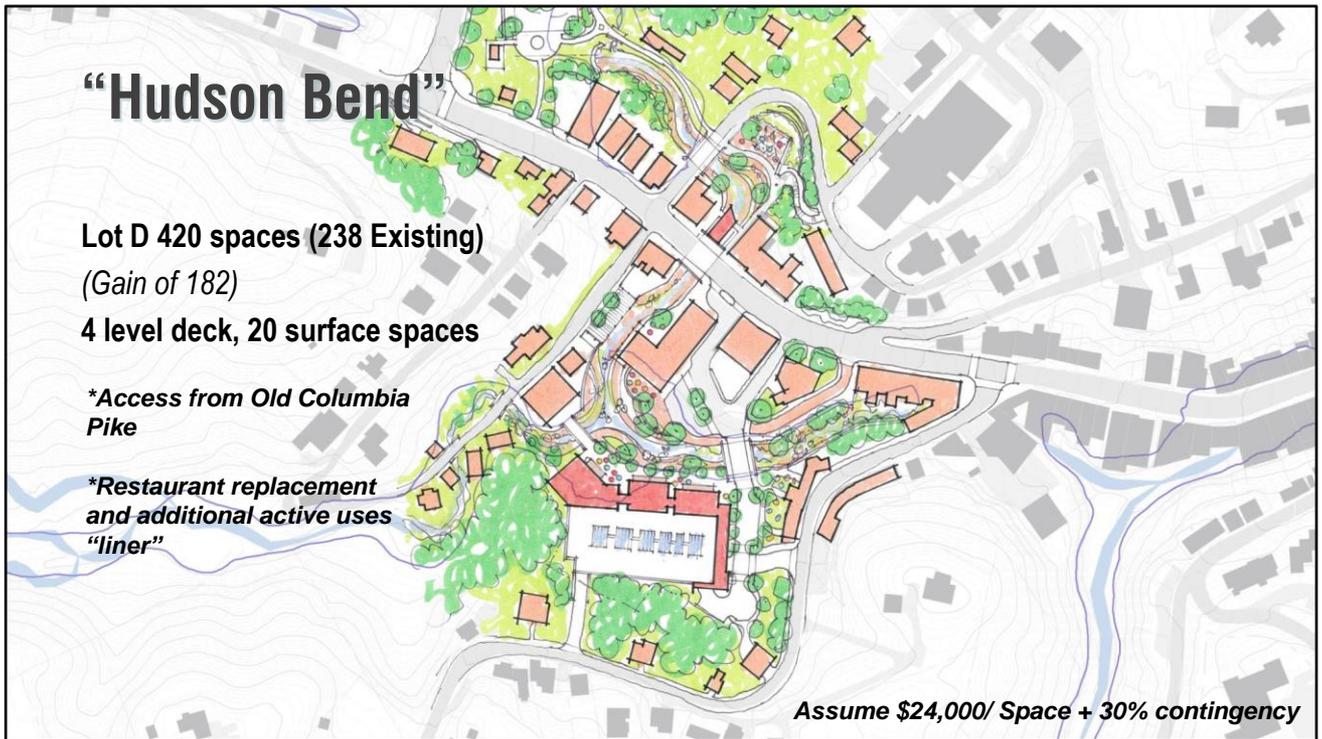


As we saw earlier, the “Upper Main Conveyance Proposal #1” strategy opens the channel through Lot D, providing an amenity space in addition to flood management. Because this would require the removal of the LaPalapa building, a replacement location is needed for the business prior to the removal of that building.

For the purposes of this master plan, we are calling this area “Hudson Bend”.



A replacement opportunity could be located in Lot D as a “stand-alone” building (prior to the removal of the existing building)...



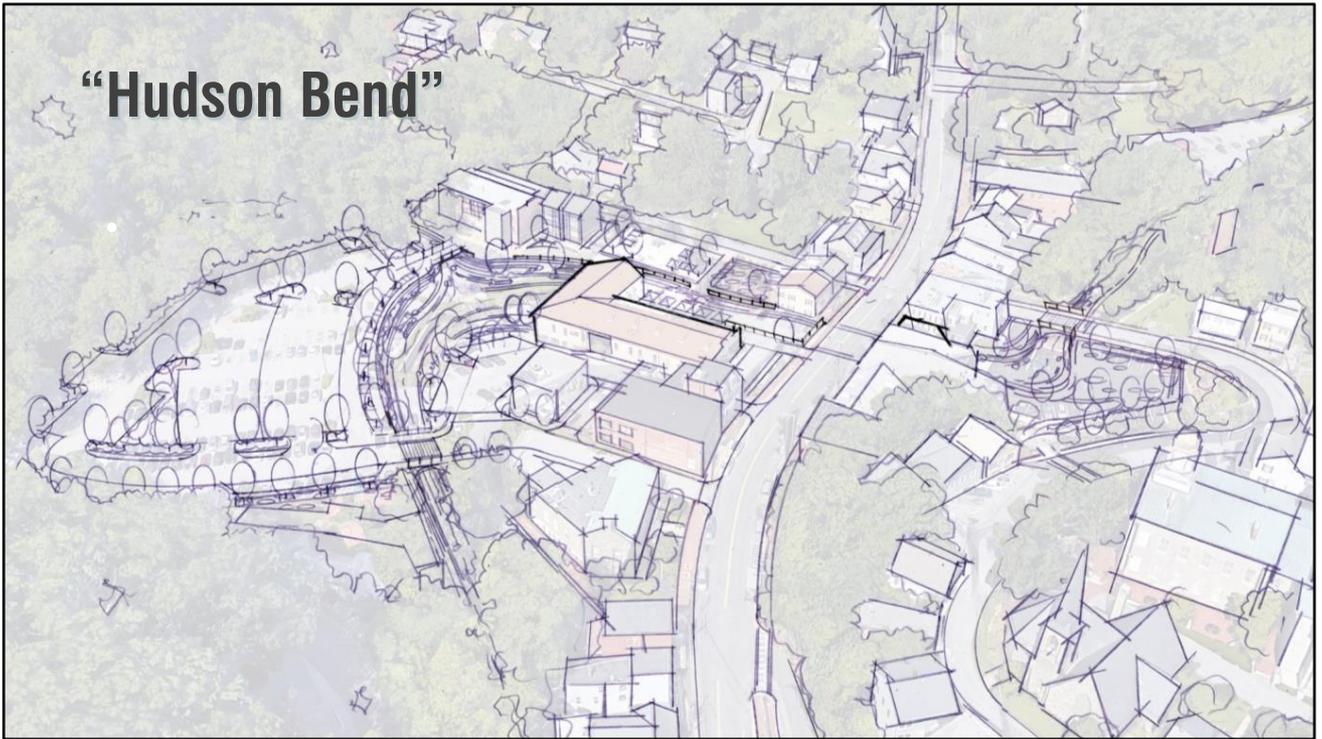
...or it could be accommodated as part of a larger mixed-use building that “wraps” a parking deck with active uses. Important things to note:

- The flood management improvements described earlier will be costly. A public/private partnership to provide a mix of active uses along Lot D will help generate revenues needed to make the flood management improvements.
- The parking and active uses should be set as far to the rear of Lot D as possible to maintain an open space in the center of the lot.
- Access to the upper levels of the deck might be provided off of Old Columbia Pike to capture vehicles prior to entering the core of the district.
- Restaurant uses, in particular, are important on the first level where outdoor dining can take advantage of the stream channel amenity and extend the environment currently provided by the outdoor dining along Tonge Row. Housing can be accommodated on upper floors.
- Solar panels and/or “green roof” elements could be accommodated on the upper level of the deck.

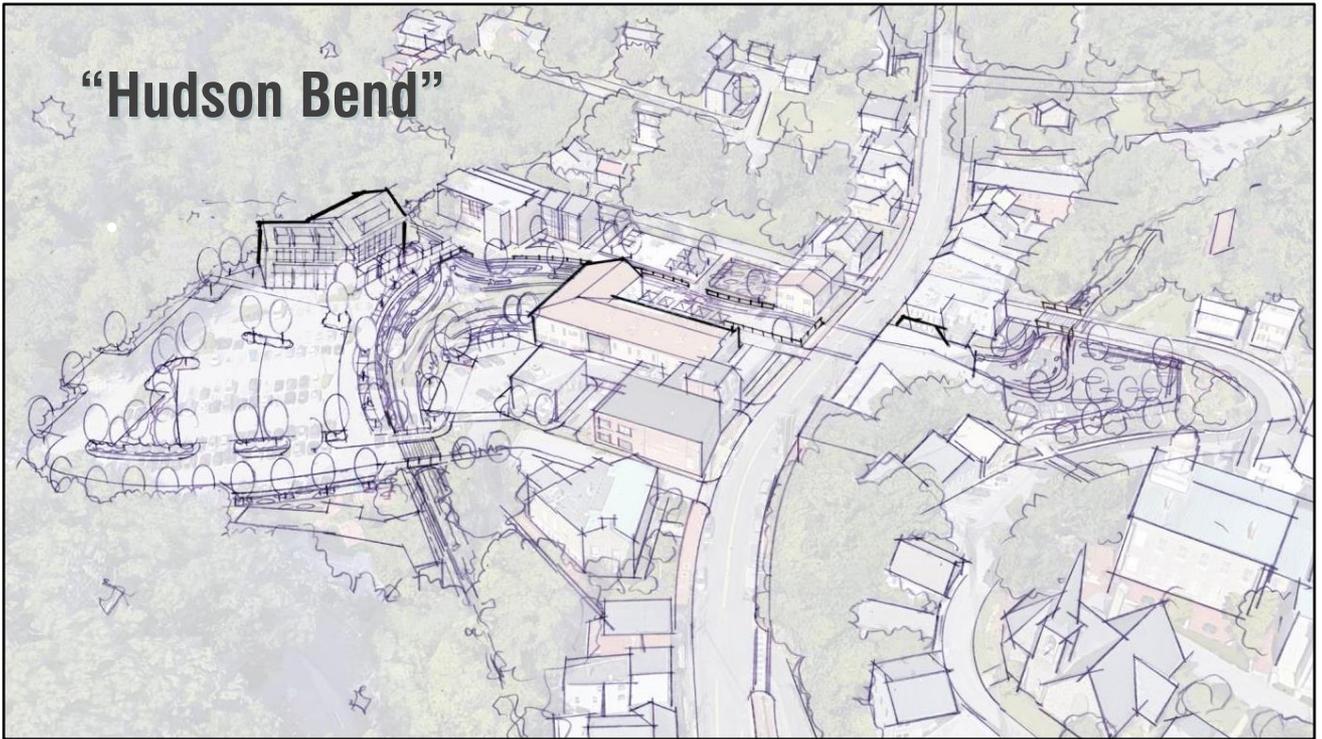
## “Hudson Bend”



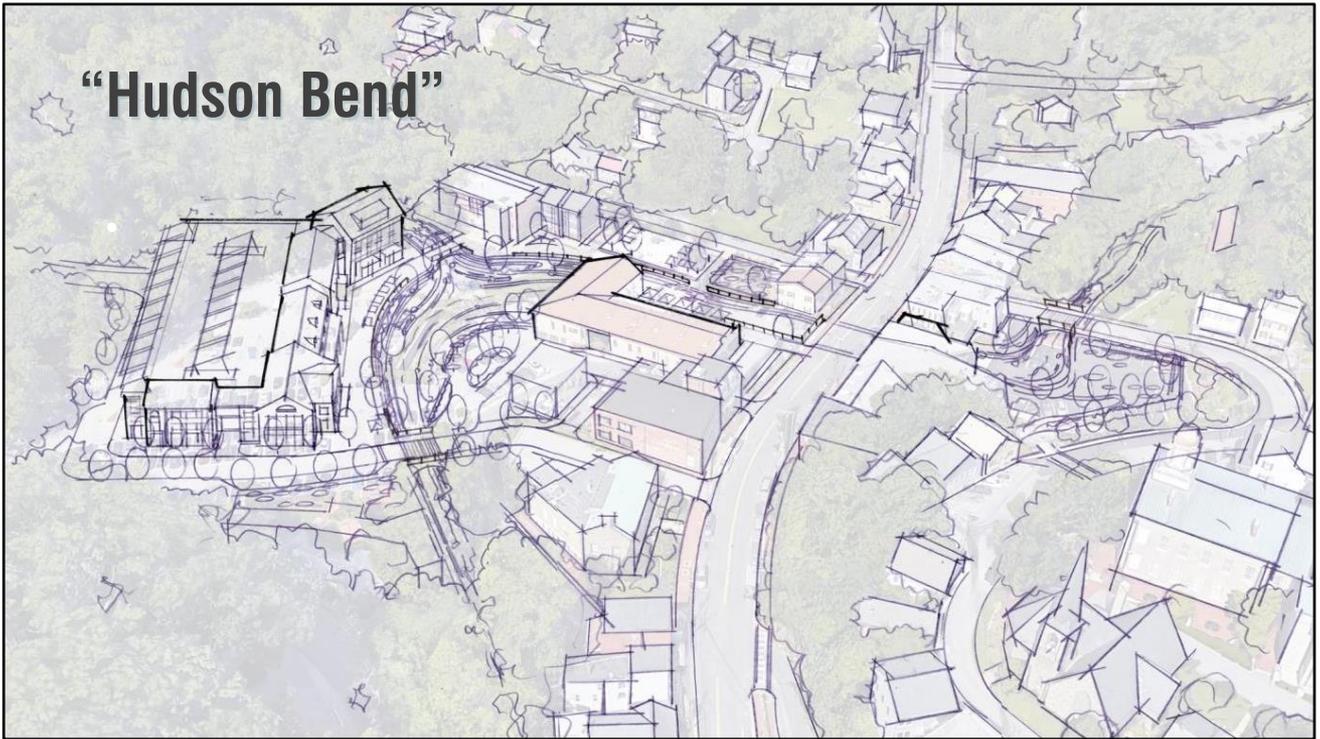
This is the existing view shown earlier, looking west toward Lot D.



This view shows the addition of the expanded channel.



This view shows the addition of a stand-a-lone building to accommodate the existing LaPalapa business prior to its removal.



This view shows how additional mix of uses can be accommodated, wrapping a parking deck. While the architecture will not be designed as part of this master plan, it is important that it be articulated, scaled and designed to be compatible to the historic district and that first floors accommodate active restaurant and retail uses.

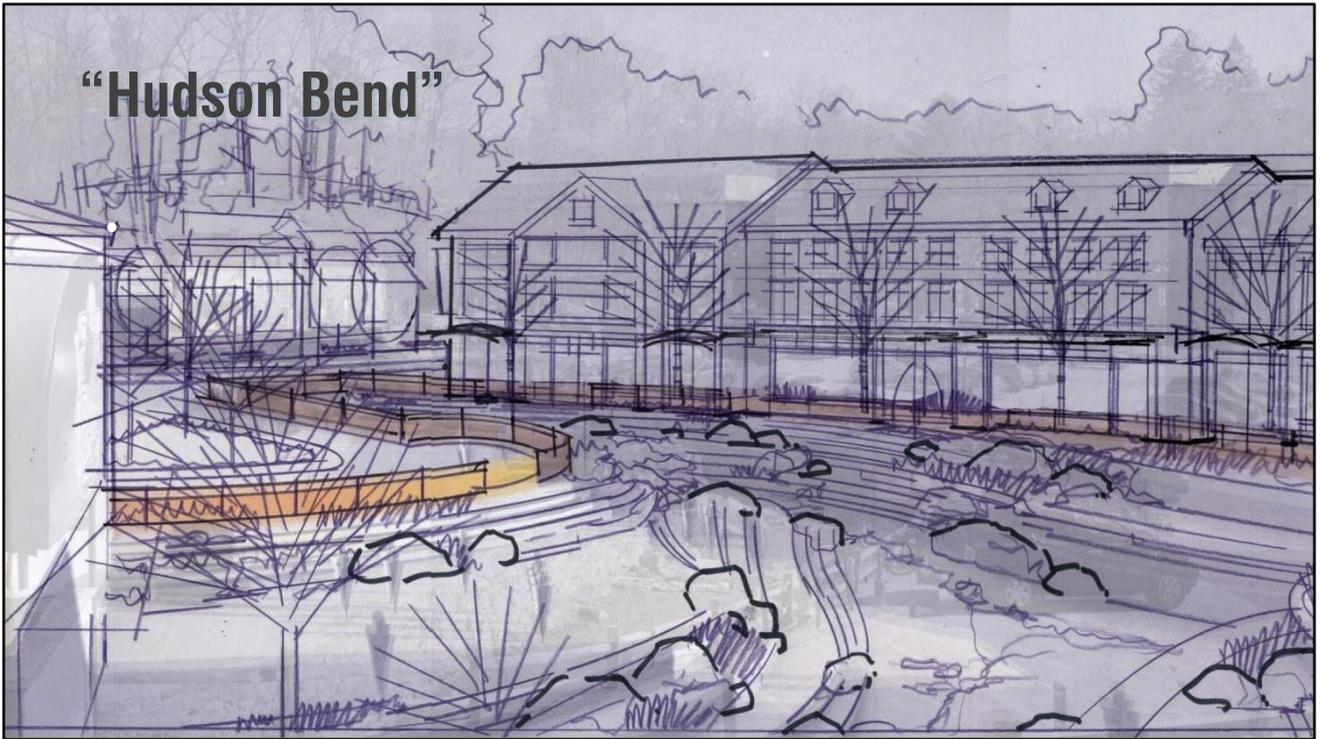
# “Hudson Bend”



These are examples of how the architecture might be articulated. The images to the left show a new mixed used building constructed adjacent to the Carroll Creek amenity in Frederick. The center image, above, shows a parking structure hidden by mixed uses.



Another view from Merryman Lane. This is the existing condition.



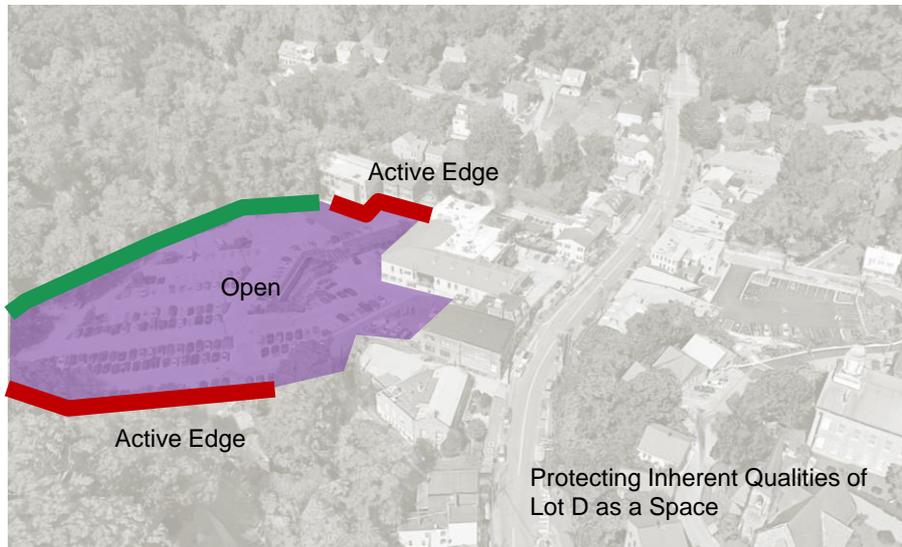
This is a potential proposed view (preliminary sketch) showing how ground floor uses could front onto and activate the stream amenity.

## “Hudson Bend”



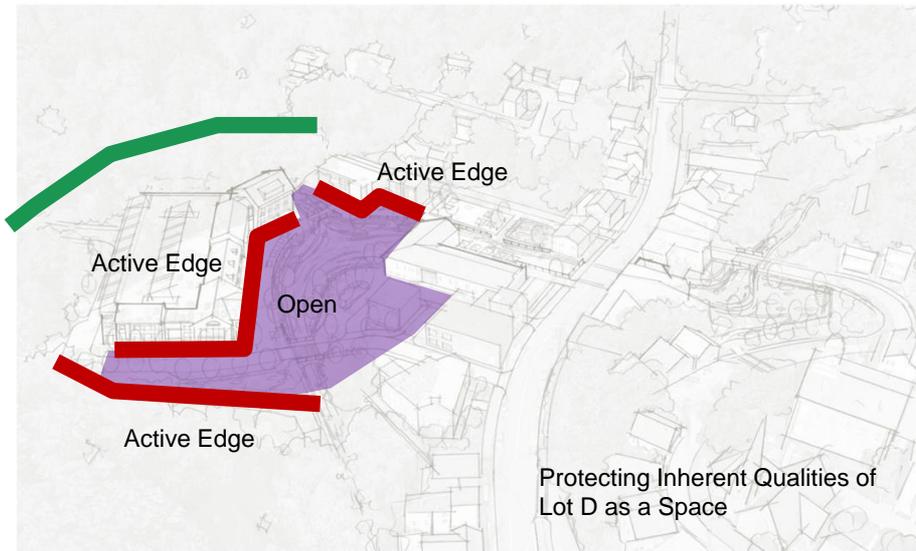
From a conceptual standpoint, it is important to maintain an “open space” in Lot D, as opposed to “filling” the space.

## “Hudson Bend”



Currently, the open parking lot is defined by strong edges; two of which include active uses, particularly Tonge Row (along the bottom of the image). The rear of the lot is well-defined by the wooded hillside.

## “Hudson Bend”

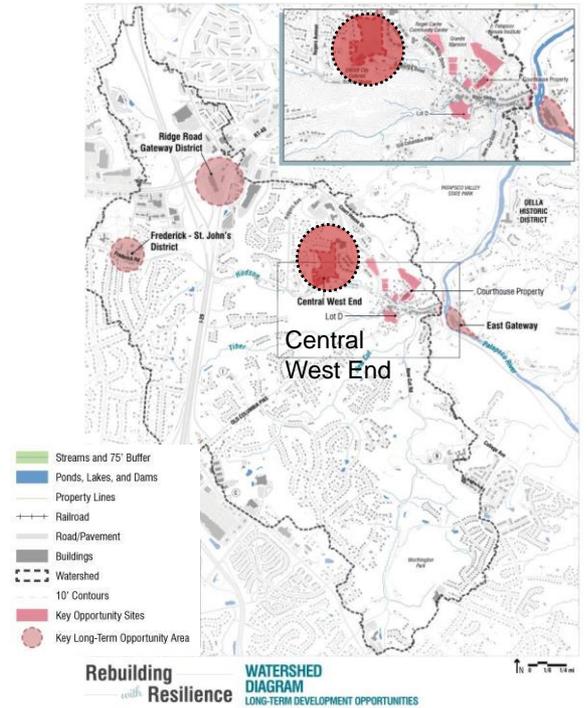


By setting the deck and new uses to the rear of the lot, there is an opportunity to maintain a significant central open space while adding additional active uses around the edges and maintaining a backdrop of trees.

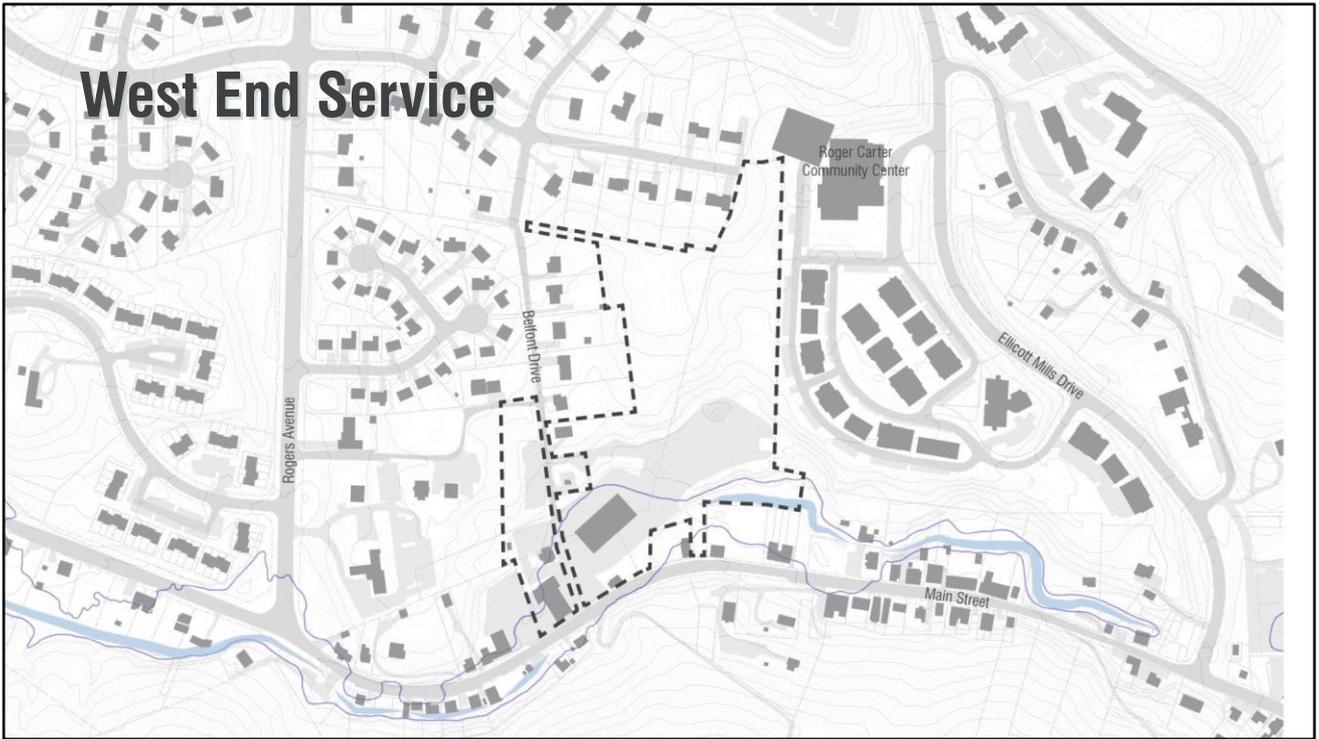
# “Central West End”

(Long-Term Opportunity)

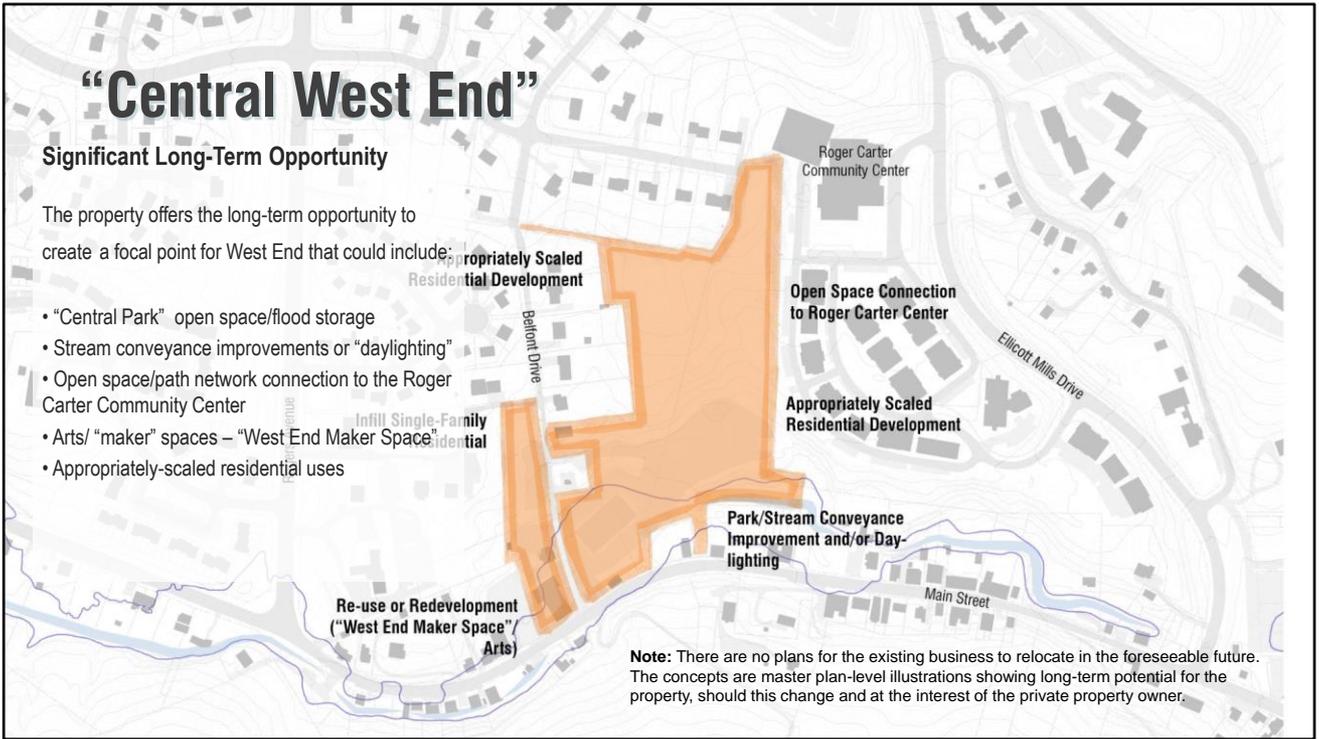
- No current plans for the existing business to relocate in the foreseeable future
- Concept is for master plan purposes showing long-term potential should this change and at the interest of the property owner



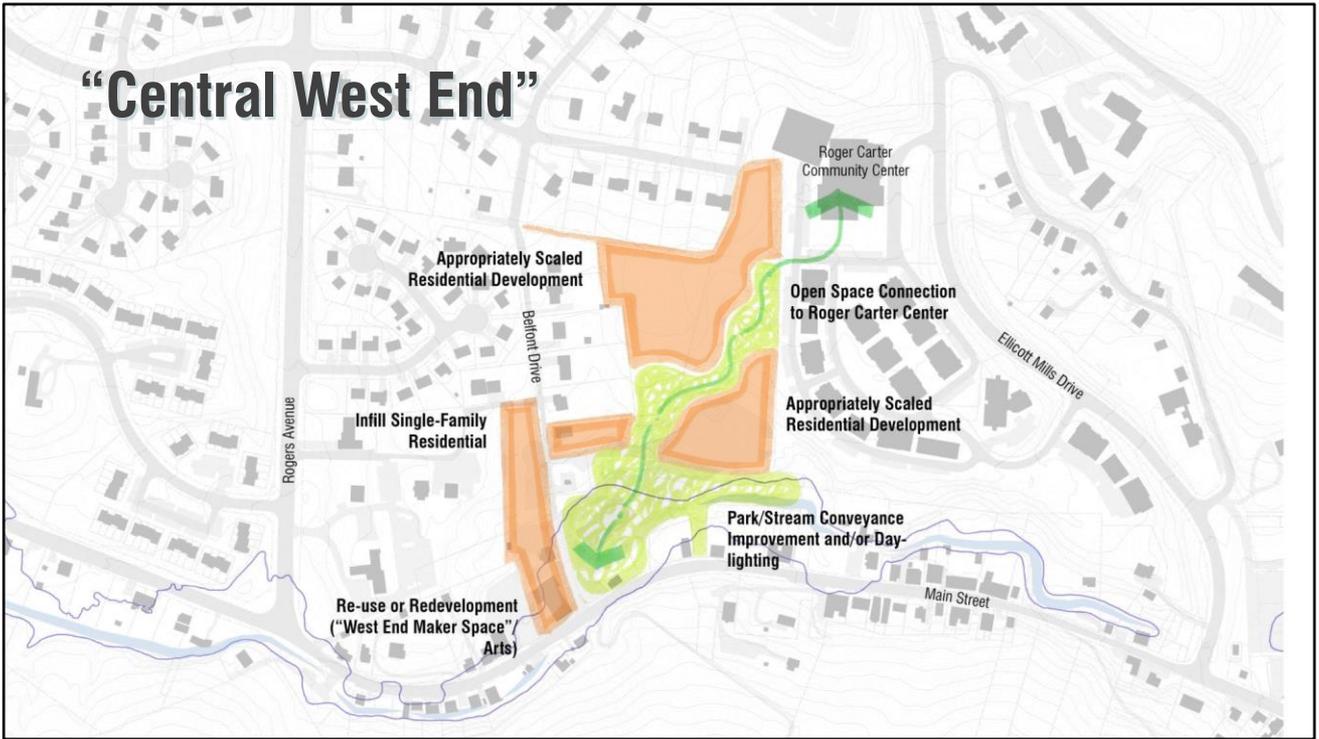
Another long-term opportunity for a mixed use is the site of the West End Service. While no plans exist for this business to relocate, the master plan identifies opportunities for the property should that change.



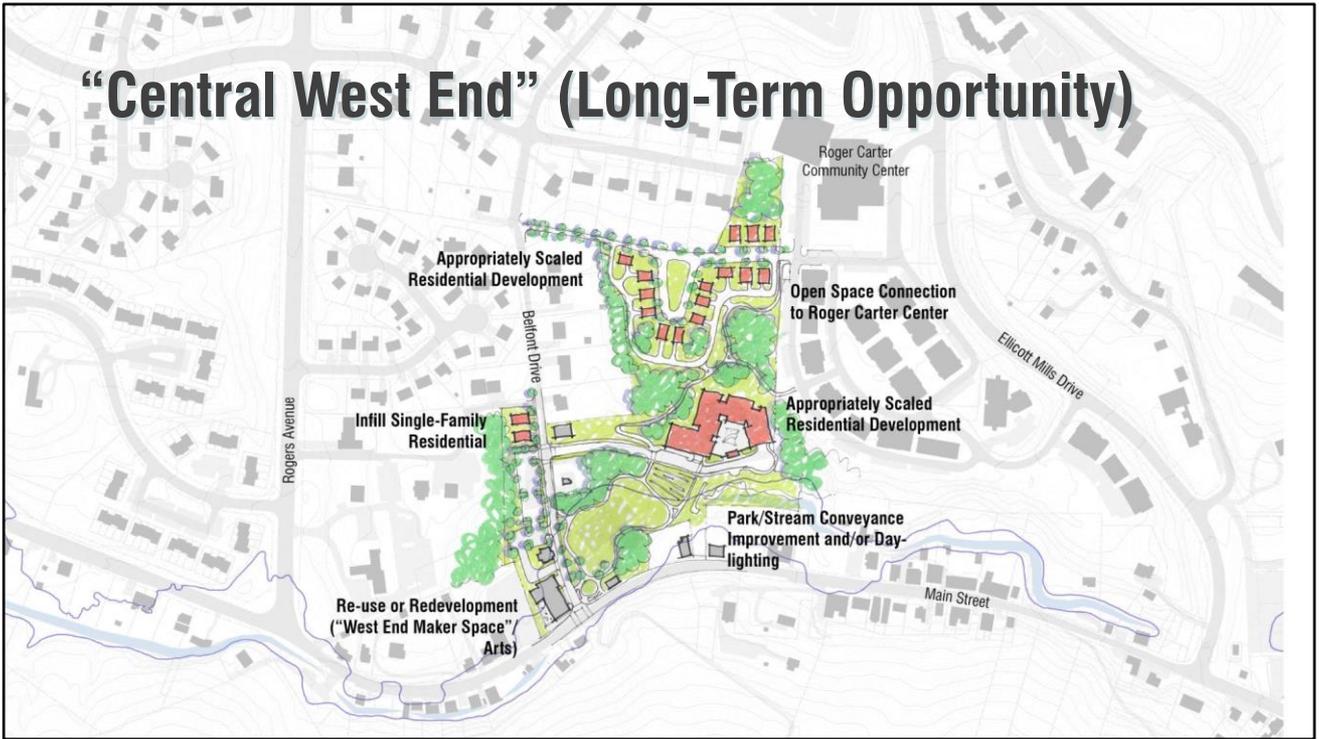
This map shows the existing property with the buildings in dark gray and paved areas in light gray. The stream is contained within a culvert underneath the service center.



The master plan may identify the opportunity with a simple diagram and narrative description...



...or with a diagram that illustrates key areas to be preserved as open space and areas that can accommodate a mix of uses. There is an opportunity to create a central open space that serves as a focal point for West End Main while also providing for open space and pathway connections to the Roger Carter Community Center.



The long-term opportunity may also be shown in a more illustrative format as shown above. This image shows conceptually how the property could be redeveloped. It will be important to maintain opportunities for economic development to help offset open space associated with flood management improvements.

## “Central West End” (Long-Term Opportunity)



This illustration shows how a community park space could be developed over underground stormwater management storage (as identified as an opportunity in the H&H study). Alternatively, the park space could also be developed more naturalistically, with the stream channel widened and daylighted.

Some of the existing buildings along Main Street could also be repurposed for artist studios and/or “makers spaces” to reinforce the existing artist spaces in the West End. Surface parking would also need to be provided as parking along Main Street is limited.

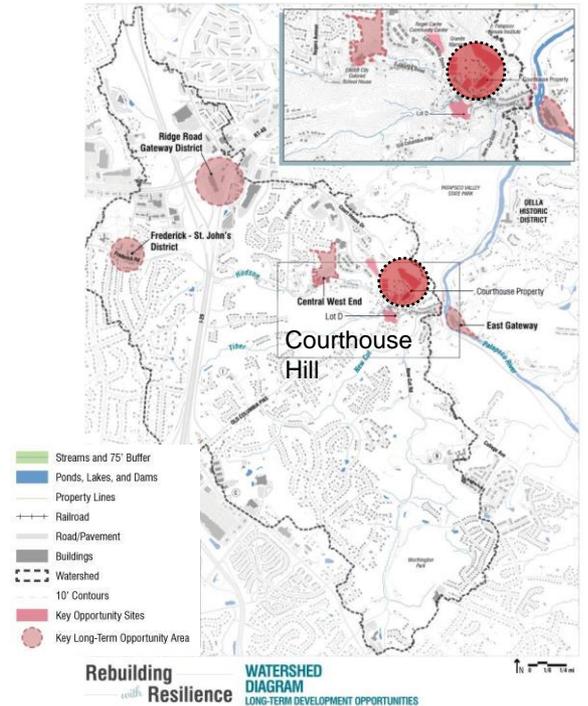
## “Central West End” (Maker’s Spaces)



Examples showing how some of the existing buildings could be repurposed as “makers spaces” and how the open space could serve as a neighborhood gathering space.

# “Courthouse Hill”

- RFP
- Coordinate Site Plan with Patapsco Female Institute and Mount Ida
- Maintain Public Parking Component
- Incorporate SWM



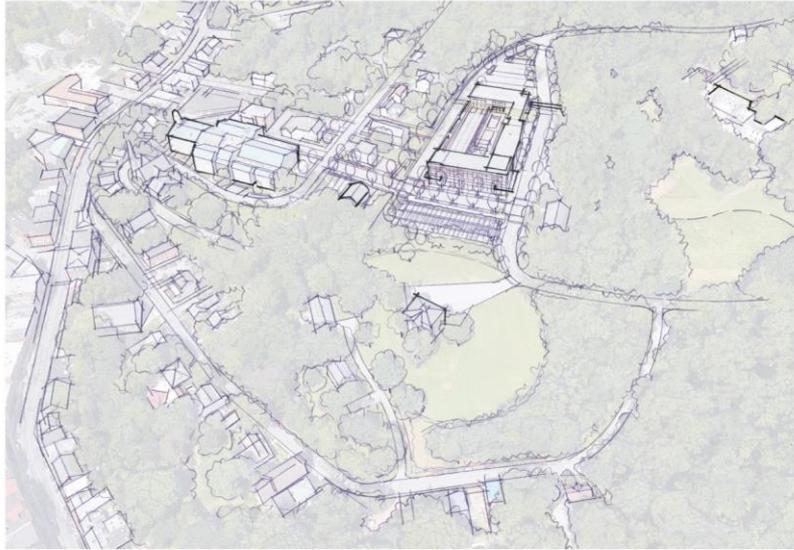
As a review from November, the courthouse site, “Courthouse Hill”, represents the other most significant opportunity in the historic core.

## “Courthouse Hill”



This is an existing view of Courthouse Hill showing the existing courthouse building and extensive surface parking lot that provides a significant opportunity for Ellicott City once the courthouse function moves to a new location.

## “Courthouse Hill”



While this site can accommodate a variety of uses, it will be particularly important to seize the opportunity to reinforce connections among Main Street, the historic courthouse building, Mount Ida and the Patapsco Female Institute.



While the site may develop in any number of ways, some important elements that should be incorporated include:

- A clear, pedestrian-friendly street network that organizes the space and better connects this district to Main Street
- Incorporation of stormwater management as an amenity along the southern and eastern boundaries of the site.
- A parking deck, wrapped by active uses, that accommodates public parking as well as parking for any new uses.
- Potential upper level bridge connection to the Patapsco Female Institute site.



Strategy 3: Enhancing the Experience

# 3 Recommendations

## Recommendations

- 3-A: Transportation Network
- 3-B: **Parking**
- 3-C: **Main Street Streetscape**
- 3-D: **Parks, Open and Amenity Spaces**
- 3-E: **Sidewalk / Trail Network**
- 3-F: Wayfinding and Signage
- 3-G: Lighting and Public Art
- 3-H: Programming and Events



This strategy addresses recommendations related to how residents and visitors experience Ellicott City, particularly as pedestrians.

## 3-B: Parking



### Facilities

- Surface
- Deck
- Flexible Use
- Long-Term Ability to Repurpose

### Management Considerations

- Combination Paid and Free Parking
- Valet
- Shuttle
- Role of Autonomous Vehicles



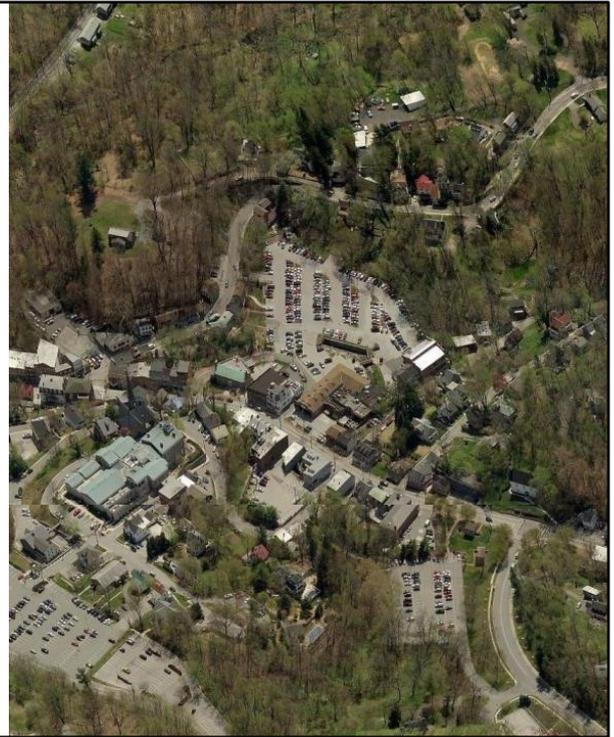
Parking strategies cover both physical facilities as well as management. With advancements in autonomous vehicles, it is important to give consideration to the long-term ability to repurpose any parking deck that is developed (or at least some of the floors) for other uses, in the event that parking demands are reduced. These considerations would include greater floor-to-floor heights, level floors, elevators and stairs located in the core, etc. to make them more attractive for conversion to other uses.

## 3-B: Parking



### What We Know:

- Sufficient parking today – *most of the time*
- Distribution of spaces poor (Lower Main underserved)
- Important to keep parking on Main St
- Meters – System flaws but not reason for reduced business
- County-owned lots are the opportunity sites to leverage



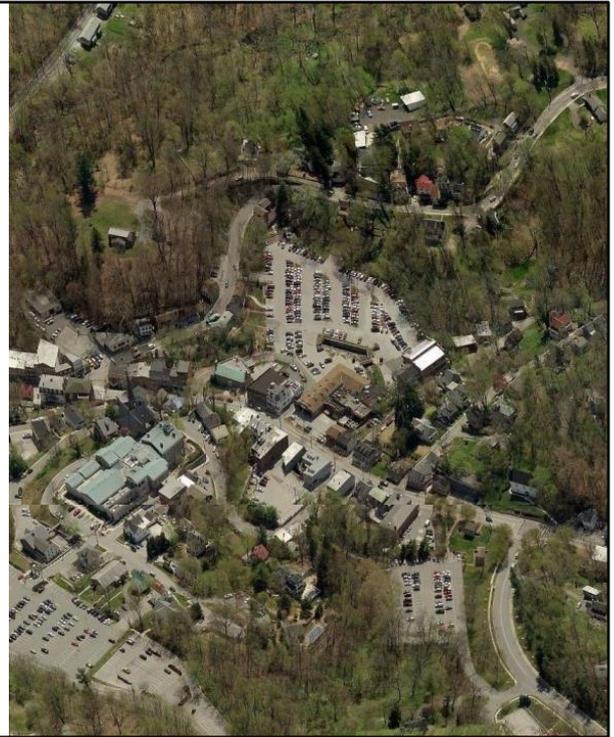
## 3-B: Parking



### What We Heard:

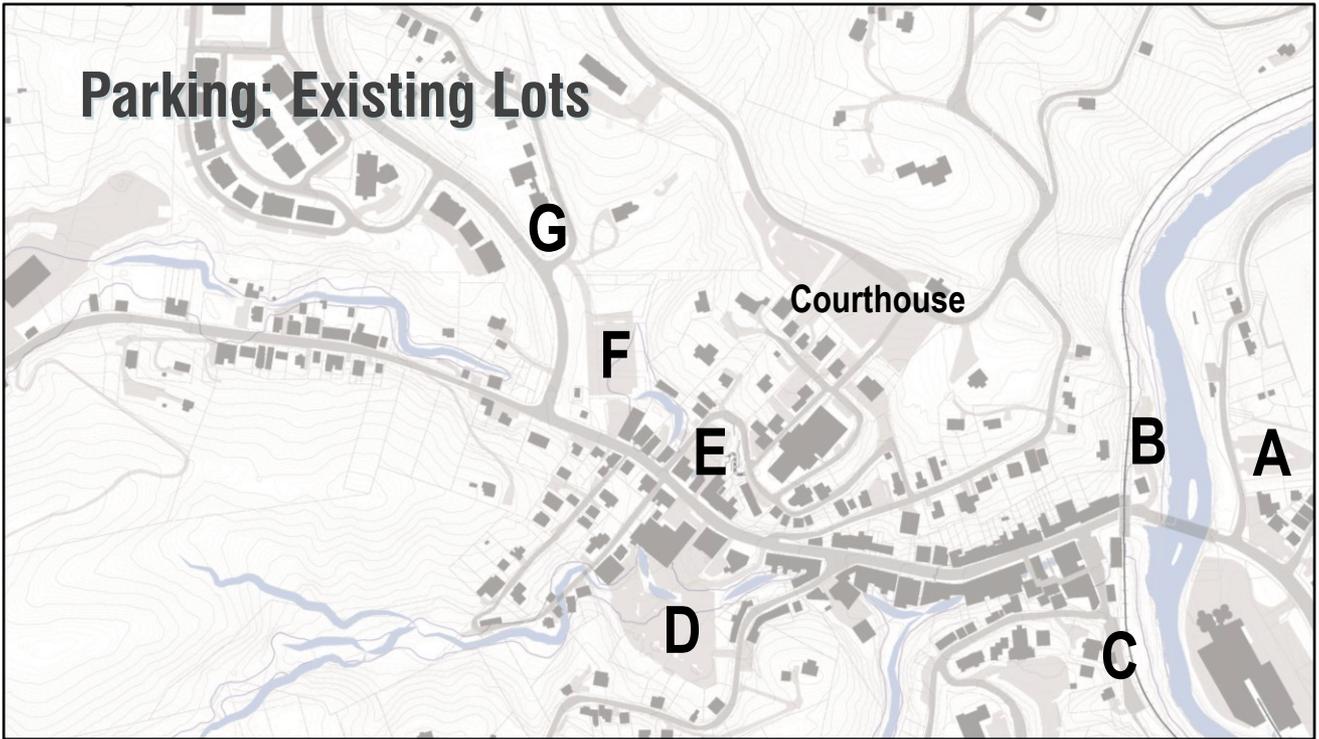
- Preference for deck in Lot A over Lot F
- Divided thoughts regarding deck in Lot D
- Why do we need a deck?

*Also: Desire for flood mitigation, more open space amenity*

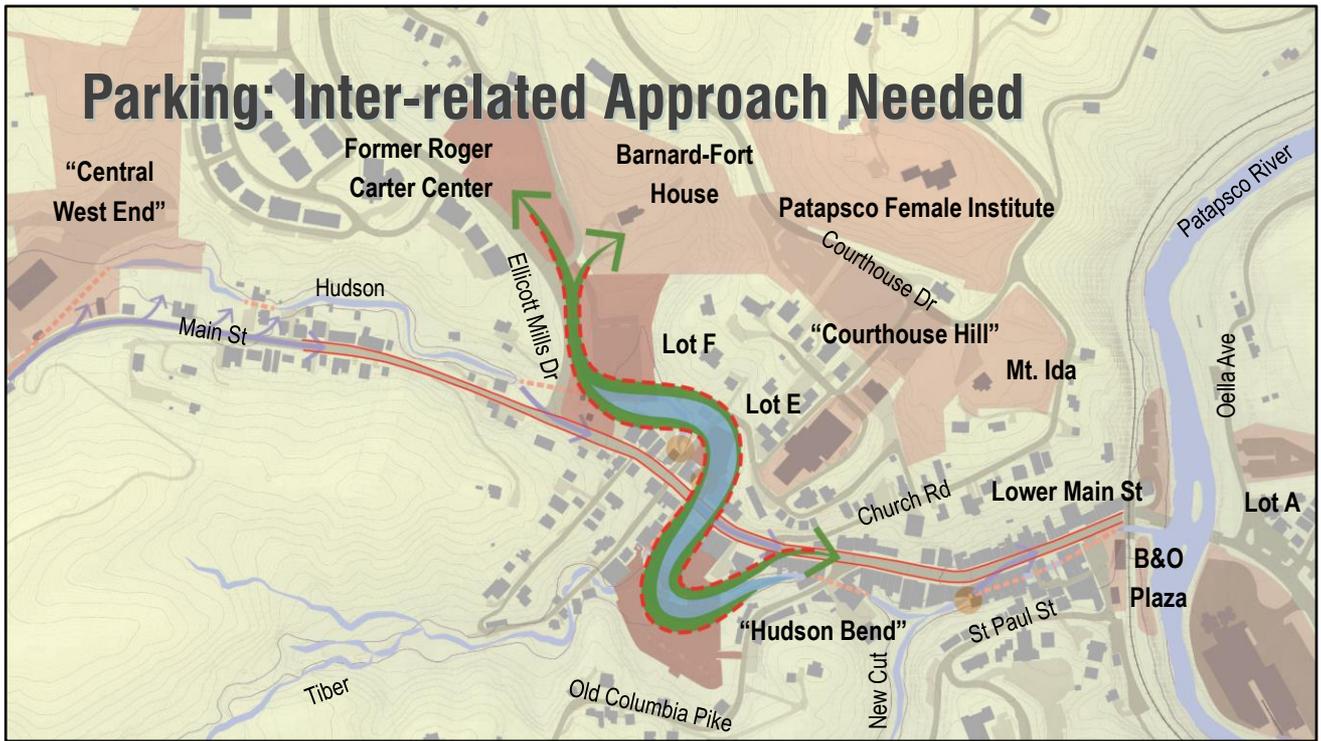


It is important to stress that the development of a parking deck is part of a strategy that allows the County to take a significant amount of parking off line (in Lot D and Lot E) to allow for the implementation of the flood conveyance improvements. Regardless of whether the open channel proposal or by-pass proposal is pursued, expanding the channel in Lot D is an important part of both proposals to reduce the flooding in Lot D and along Tongue Row.

In order to make the channel improvements, additional parking resources will be need to be in place, prior to constructing the improvements. The two logical locations include Lot A and/or Lot F. We know from the November meetings that there was a strong preference for a deck in Lot A over Lot F and mixed feelings for a deck in Lot D.



This map shows the existing parking resources in Ellicott City. It is important to note that Lot G is temporary. The 70 spaces in this lot will help compensate for the loss of parking during construction of a deck (which will, in turn, allow for the construction of the flood conveyance improvements in Lot D and, potentially, Lot E).



As a reminder, the primary recommended flood conveyance improvements occur between Ellicott Mills Drive and Lot D. Parking strategies are closely interrelated to these improvements.

## Parking Scenario I - “Bookends to the Core”



### Pros

- Both intercept people before getting to the busy core of Main St
- Both can utilize adjacent grades to access multiple levels of the structure
- Provides parking resources to both the core and lower Main St
- Maintains open surface lot event space in Lot D
- Can potentially reduce parking in Lot B to increase open space along the River

### Cons

- Parking is not centrally located
- Limited opportunity to incorporate retail uses in either location
- Lot A requires partnership with Baltimore County

We examined four different scenarios. Scenario 1 provides significant parking resources at each end of Main Street, in Lots A and Lot F (allowing surface parking to remain in Lot D, along with a stand-a-lone replacement building for LaPalapa). This approach allows visitors from both the east and the west to park their cars prior to arriving to the most congested part of Main Street.

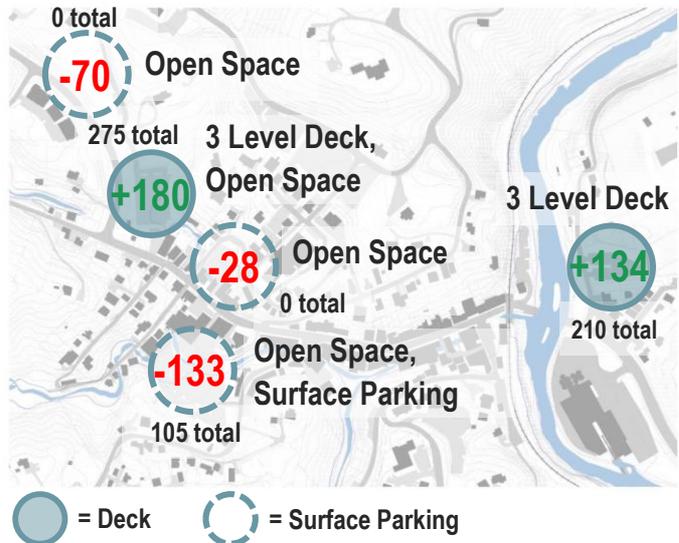
# Parking Scenario I - “Bookends to the Core”

**TOTAL = 999 spaces (gain 83)**

*Ex. Total = 846 + 70 Temporary = 916*

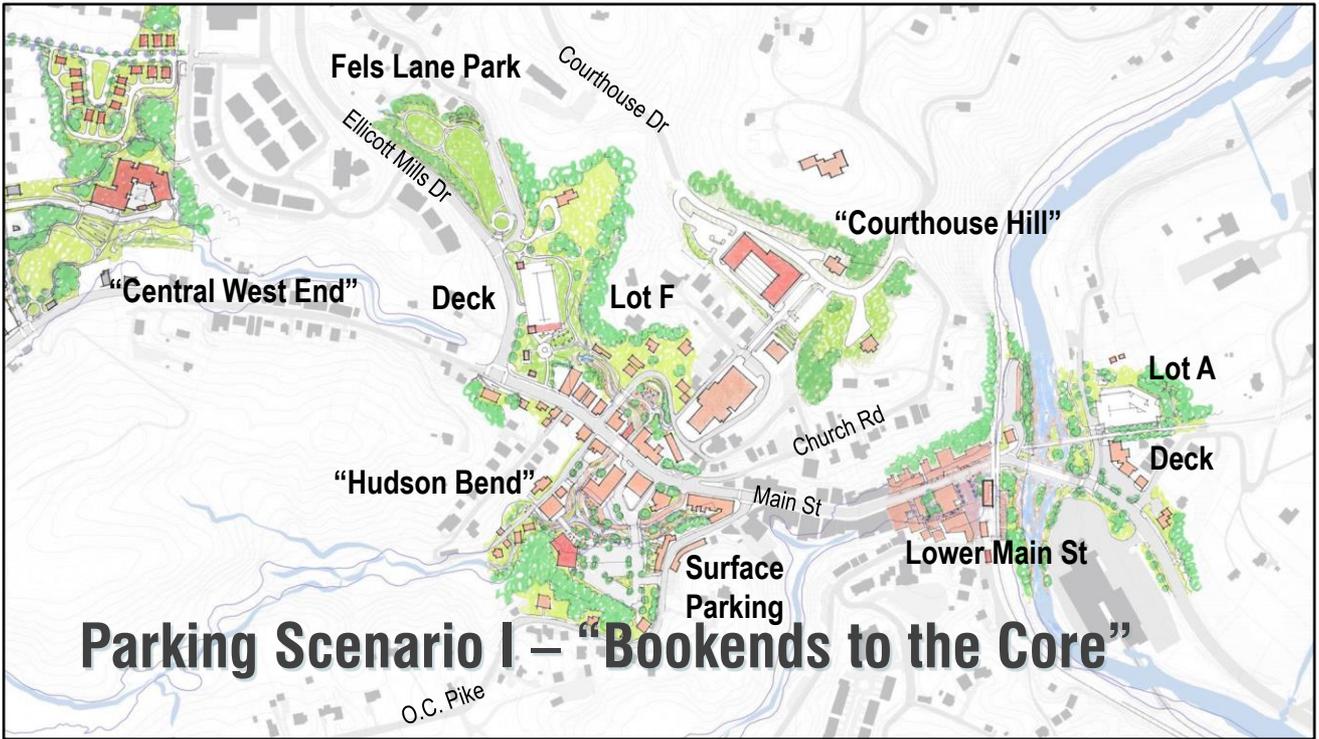
*Net loss of 161 spaces in the core*

*\*Consider: Courthouse Site - Assume loss of 90-180 spaces during construction*

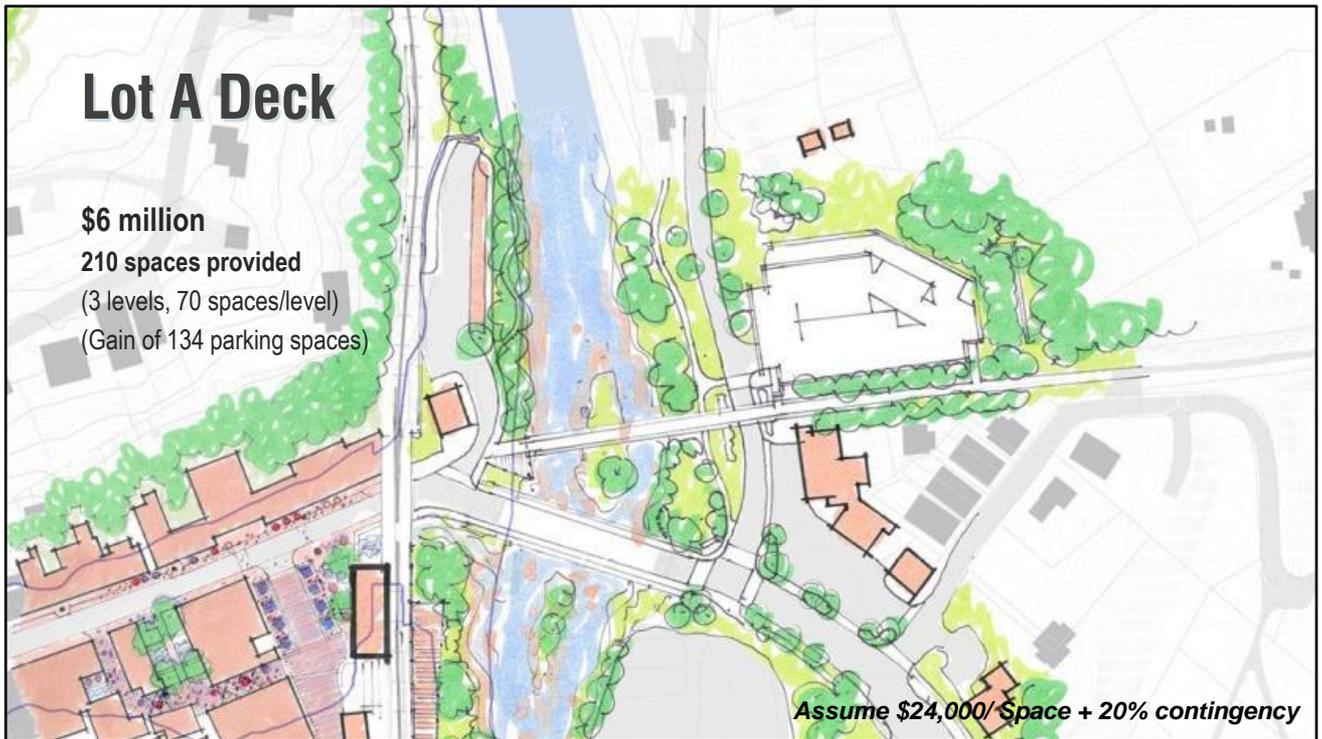


The numbers above show the potential resultant spaces in each lot along with the net gain or net loss.

It is important to note that impacts resulting from changes to the courthouse site need to be considered as well. There are currently 270 spaces in the Courthouse Lot. It is conceivable that one-third to two-thirds of those spaces may not be available during construction of any new uses on that site. Reuse of this site needs to be factored in to any parking phasing considerations.



This plan shows Scenario I in an illustrative fashion with decks on both Lots A and F, allowing Lot D to remain in surface parking.



This diagram shows how a deck could be located in Lot A. An exterior ramp will likely be required because of the configuration of the site, a former quarry. This parking strategy is interrelated to a potential pedestrian/bike bridge over the Patapsco River as an extension to the Trolley Line #9 trail. This bridge would make the parking resource very accessible from/to the businesses of lower Main Street where parking resources are most needed.

The project team and Howard County met with representatives of Baltimore County to explore this concept. It will be important, however, to include the Oella community and continue to work with Baltimore County should this concept be pursued.

# Lot F Options



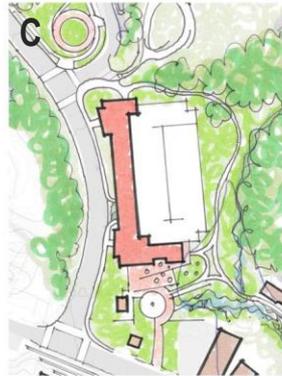
## Reconfigured Surface Parking

Allows for more open space and potential future deck



## \$8 million + cost of retail/residential space

275 spaces provided (3 levels)



## \$9 million + cost of retail/residential space

315 spaces provided (3 levels)



## \$9 million + cost of retail/residential space

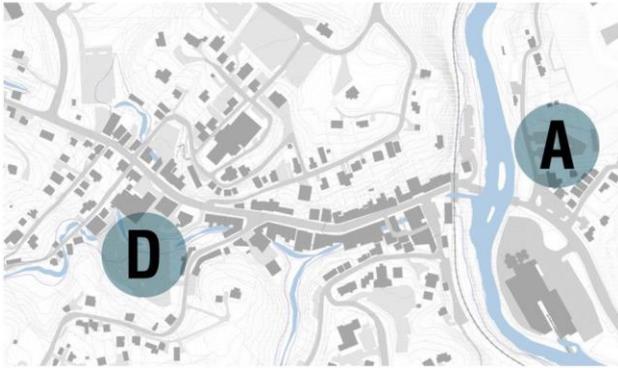
315 spaces provided (3 levels)

**Assume \$24,000/ Space + 20% contingency**

For Lot F, the two center diagrams show how a parking deck could be configured to allow for some active uses, such as artist studios, along the south façade and/or other active uses wrapped along the Ellicott Mills Drive façade.

Diagram D shows a deck constructed on the existing surface lot footprint. This approach is discouraged because it encroaches on the 100 year floodplain. Diagram A shows our recommended reconfiguration of the surface parking lot which will be discussed on slides that follow later in this presentation.

## Parking Scenario II – “Balance the Core/Lower Main”



### Pros

- Parking is more evenly distributed between core and Lower Main
- Lot D provides flexibility to incorporate retail and active uses with deck while increasing activity along the stream amenity
- Opportunity to access upper levels in Lot D from Old Columbia Pike
- Logical phasing approach: Construct Lot A in advance of conveyance improvements in Lot D
- Can potentially reduce parking in Lot B to increase open space along the River
- Positive meeting with Baltimore County

### Cons

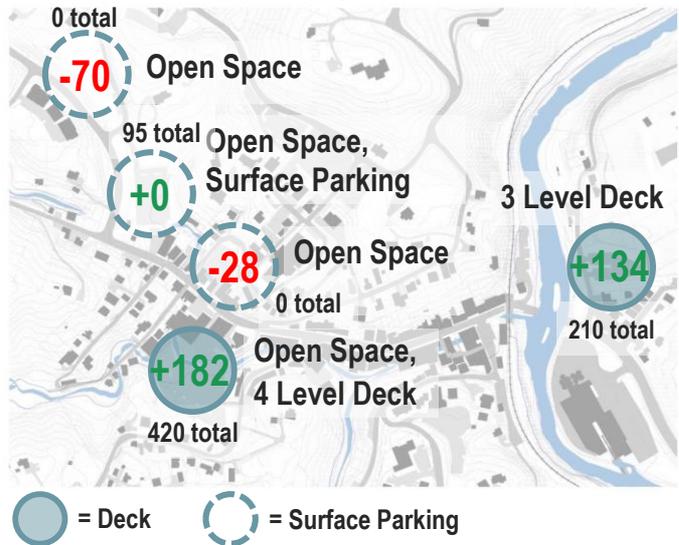
- Lose a large centrally-located parking resource in Lot D during construction of conveyance improvements
- Requires partnership with Baltimore County

Parking Scenario II considers balancing the parking resources between the core and lower Main Street with major parking resources in Lot A and Lot D.

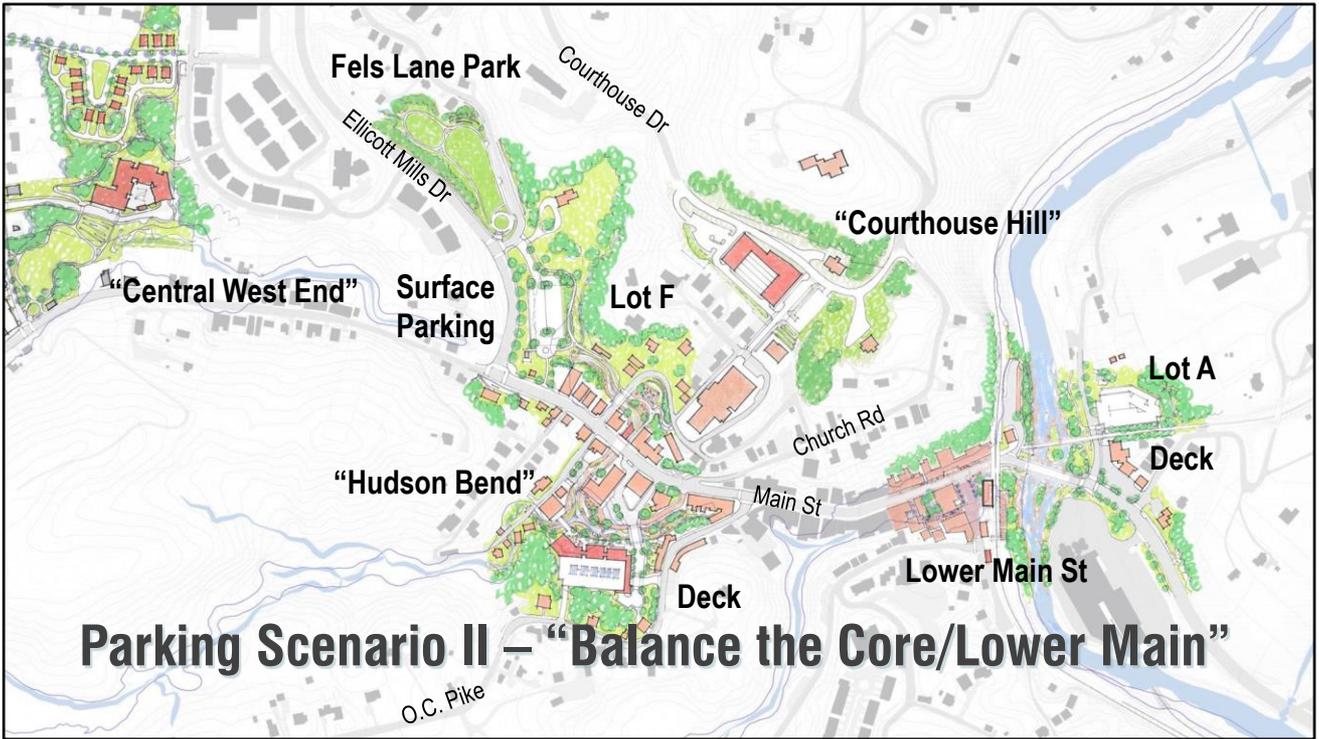
# Parking Scenario II - "Balance the Core/Lower Main"

**TOTAL = 1134 (gain 218)**

*Ex. Total = 846 + 70 Temporary = 916*



*\*Consider: Courthouse Site -Assume loss of 90-180 spaces during construction*



In this scenario, Parking Lot F would remain as surface parking.

## Lot F Surface (Park and Rec Surface Lot Concept)



The Department of Parks and Recreation has developed a preliminary concept for redesigning the surface lot to include a median with bio-retention areas and an expanded gathering area near Main Street. While this concept has many positive features, the parking encroaches into the hillside of the Barnard Fort House, requiring a retaining wall and more abrupt transition between the parking and Fort House.

## Lot F Surface (Recommendation)

95 spaces provided (no net change)

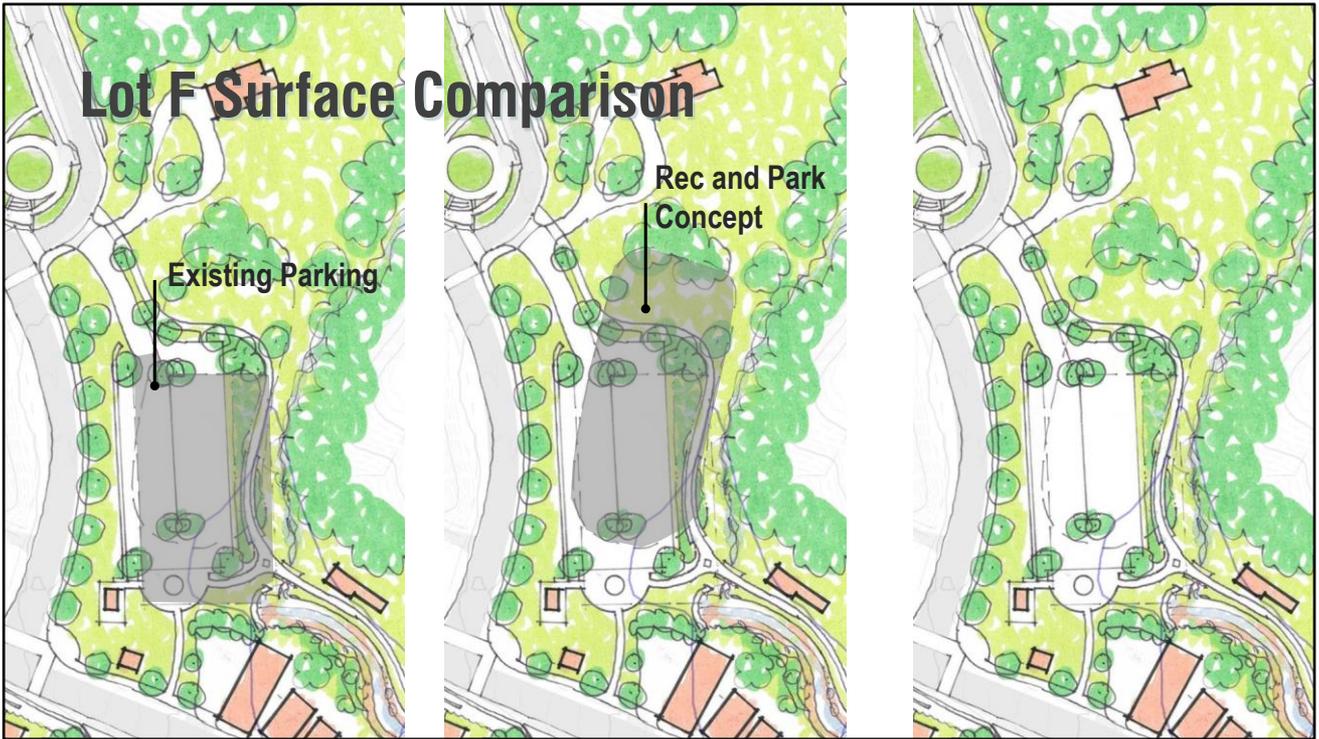
Gain more open space when complete

Configured to allow flexibility for future deck



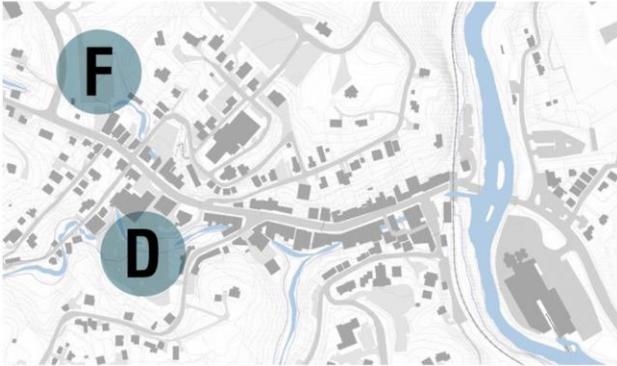
We are recommending that, should Lot F remain as surface parking, the parking area move closer to Ellicott Mills Drive, further away from the stream tributary along the east side of the lot. This may impact some trees on the low side of the Ellicott Mills Drive hillside, however, it provides the opportunity to expand the green space adjacent to the stream and provide bio-retention facilities adjacent to the stream.

When considering the conveyance improvements and widened channel through Lots E and D, there is the opportunity to provide a pedestrian trail extending along the stream channel (from Lot D) and interfacing with the potential bio-retention and stream valley in Lot F. This pedestrian trail could then extend up to the Barnard Fort House and a new Fel's Lane Park (in the former Roger Carter site, now Lot G).



This diagram shows the comparison of our recommendation (far right) to the existing surface lot (in gray to the left) to the Parks and Recreation proposal (center). The recommended location maximizes green space adjacent to the stream channel. It would also still allow for upper levels of parking to be developed with access off of Ellicott Mills Drive, should that ever be desired or required (if a deck in Lot A is not feasible).

## Parking Scenario III - “Focus on the Core”



### Pros

- Parking is centrally located
- Lot D provides flexibility to incorporate retail and active uses with deck while increasing activity along the stream amenity
- Opportunity to access upper levels in Lot D from Old Columbia Pike

### Cons

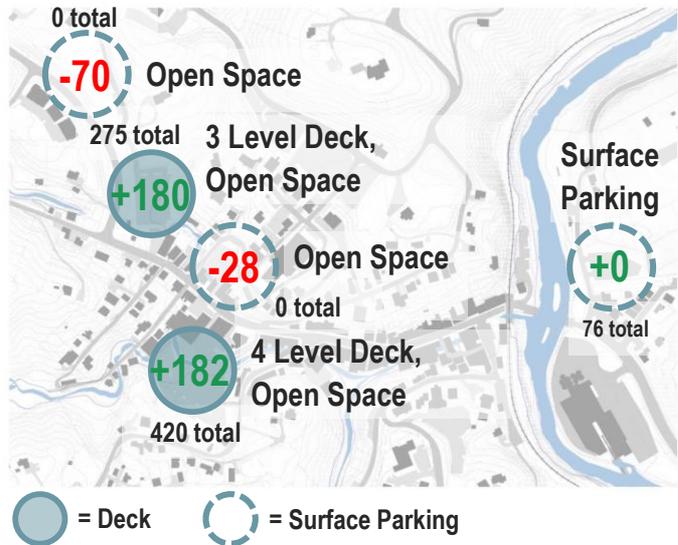
- Does not increase parking on lower Main St
- Loss of large open surface lot “event space” in both Lots D and F

Parking Scenario III focusses on parking resources in the core, with an initial parking deck on Lot F followed by a deck on Lot D once flood conveyance improvements are made.

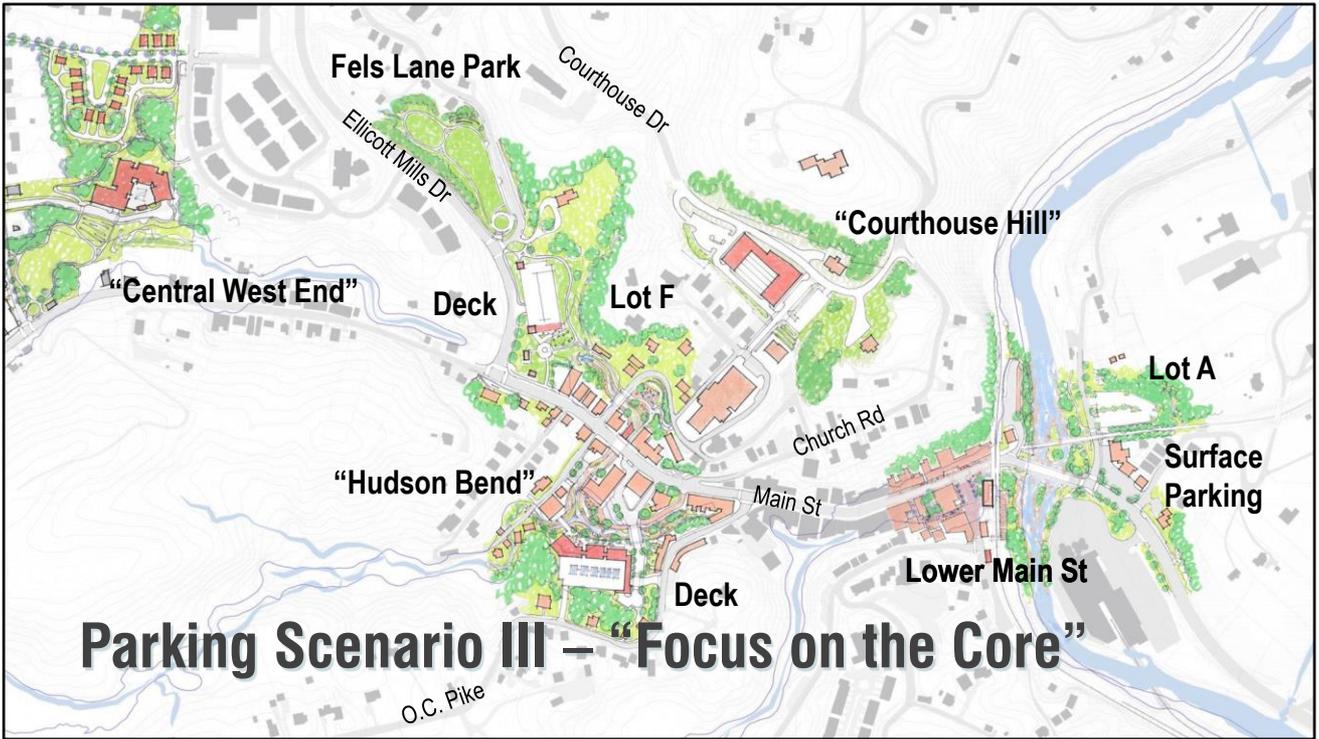
# Parking Scenario III - "Focus on the Core"

**TOTAL = 1180 (gain 264)**

*Ex. Total = 846 + 70 Temporary = 916*

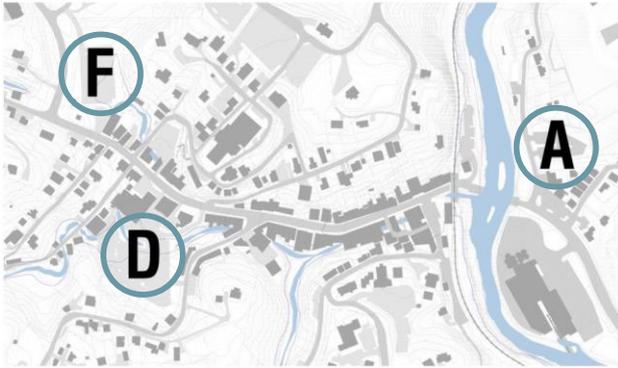


*\*Consider: Courthouse Site - Assume loss of 90-180 spaces during construction*



The illustrative plan view of this scenario shows a deck wrapped with mixed use in Lot D as previously illustrated on previous slides. It is important to emphasize that Lot D provides the greatest opportunity to leverage a public/private partnership to help generate revenues to fund the flood conveyance improvements.

## Parking Scenario IV - “Surface + Shuttle”



### Pros

- No cost of deck
- Opportunity to turn shuttle into an “experience”

### Cons

- Significant reduction in parking after flood conveyance improvements
- No opportunity to accommodate spaces lost during construction
- Public acceptance of having to use a shuttle

Scenario IV explores the development of no parking structure, assuming surface parking is supplemented by a shuttle.

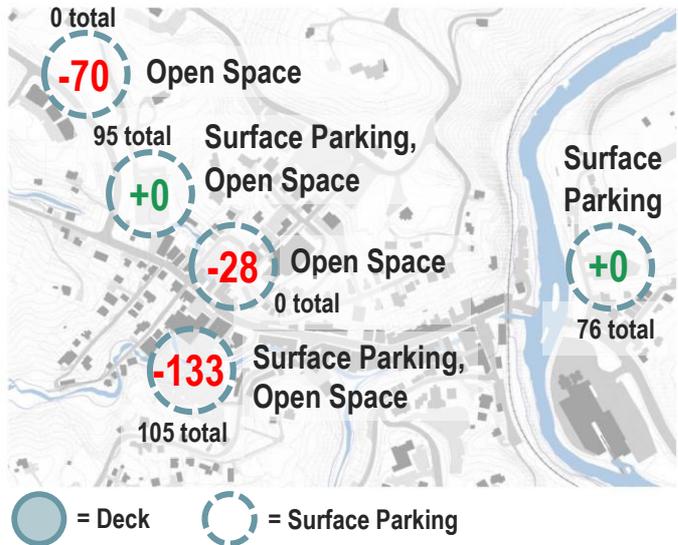
# Parking Scenario IV - “Surface + Shuttle”

**TOTAL = 685 (loss 231)**

Ex. Total = 846 + 70 Temporary = 916 spaces

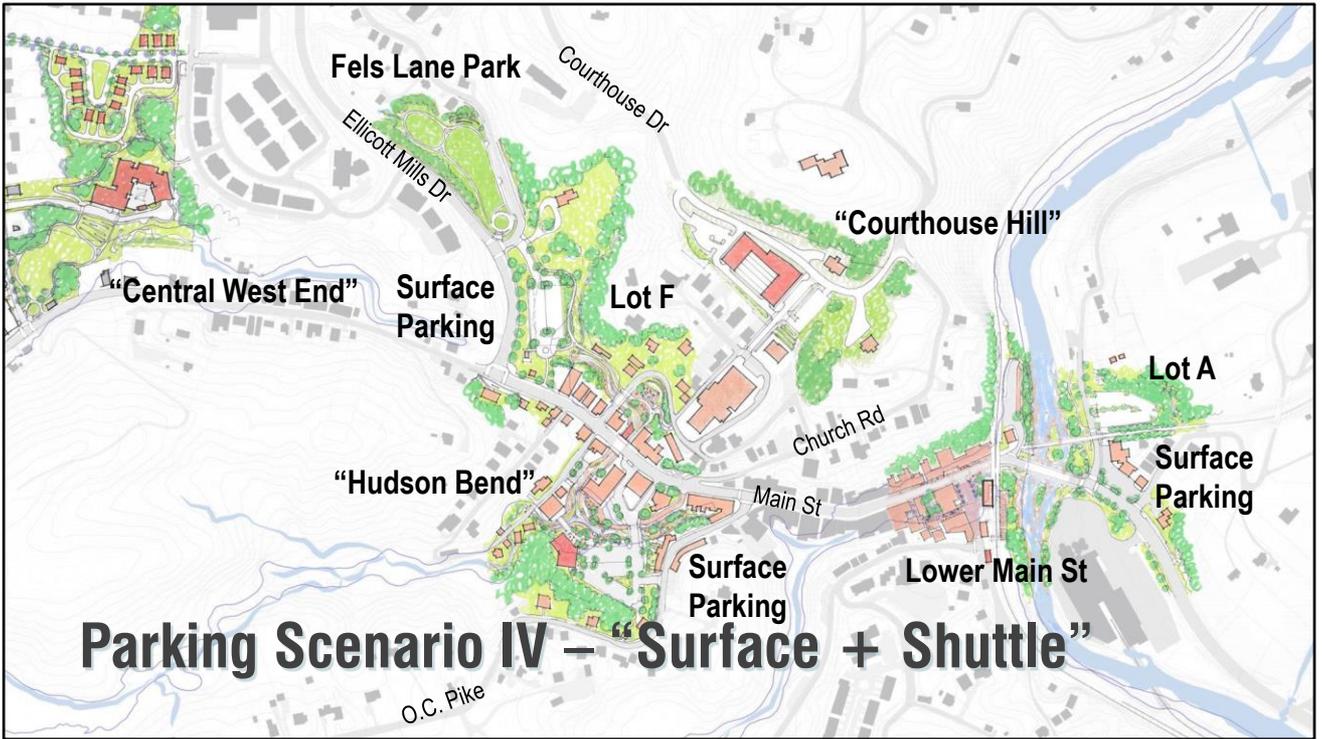
\* Shuttle Parking at Howard County Offices, Library, other?

\***Consider: Courthouse Site** -Assume loss of 90-180 spaces during construction



We do not recommend this approach as there is a considerable loss of parking spaces after construction of the flood conveyance improvements. During construction, even more spaces would be lost.

Additionally, consideration needs to be given to the challenges associated with running a shuttle through a congested Main Street while trying to maintain acceptable service headways. Instead, a shuttle might be used as a strategy while parking is minimized during implementation of other improvements and during special events.



## 3-C: Main Street Streetscape

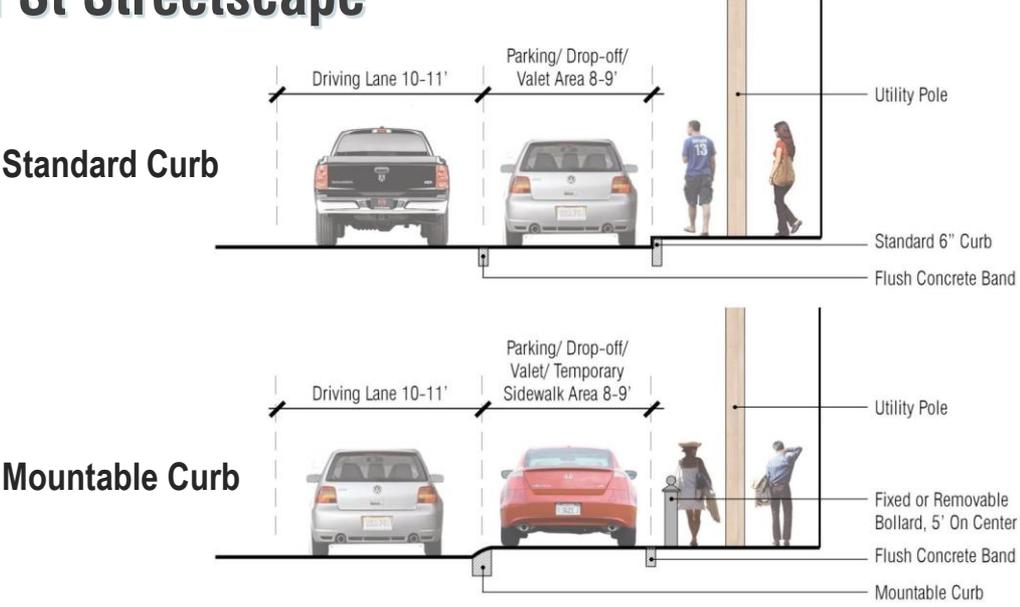


- ADA Accessibility
- Flexible Service Lane
- Resilient Pavement
- Design Measures to Slow Traffic
- Pedestrian Safety



There was a lot of discussion throughout the process regarding the Main Street streetscape. As discussed in November, it is important to maintain most of the on-street parking spaces rather than eliminate the parking spaces to allow for wider sidewalks.

# Main St Streetscape



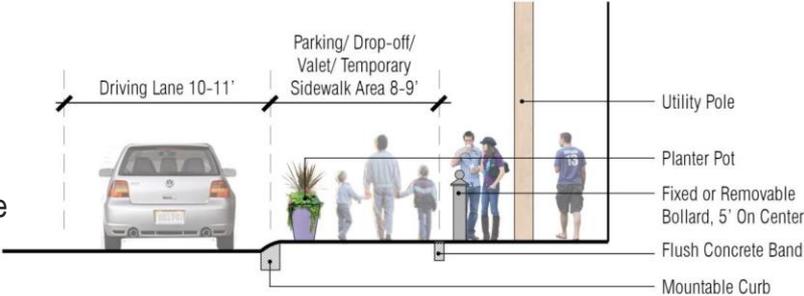
Instead, there is the opportunity to treat the on-street parking lane as “flexible space”. In some areas (bottom view), this parking zone could be elevated to sidewalk level to allow this area to serve as expanded sidewalk area during events. Most of the time, however, it would function as parking. In other areas, it may be necessary to utilize a traditional curb between the sidewalk and parking lane.

# Main St Streetscape

## Mountable Curb Parking Lane



## Mountable Curb Flexible Event Space



This graphic shows how the lane could function as parking or expanded sidewalk area.

# Main St Streetscape

Shear Stress: Existing Conditions (100yr)

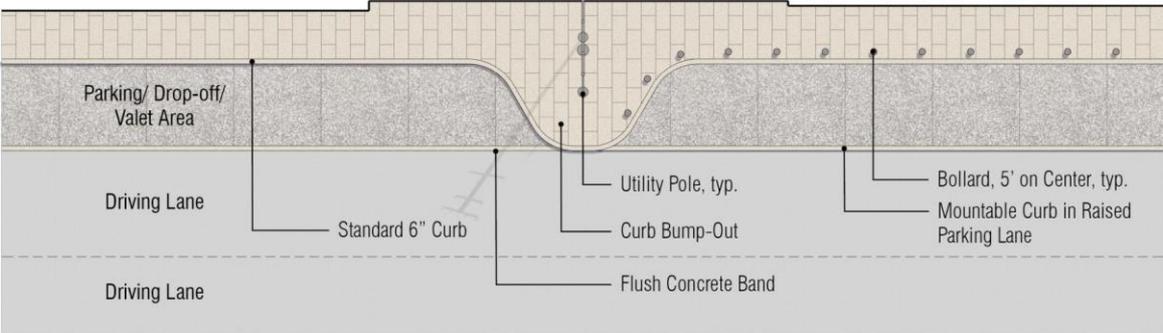


SIDEWALK MATERIALS GUIDE

We also discussed resiliency of the paving materials in November. This model shows shear stress along upper and lower Main Street. The areas in red are those areas not suitable for brick or individual pavers as they are more susceptible to being torn up, exposing utilities and foundations below. Therefore, we are recommending that sidewalks be constructed of scored concrete. This approach was supported by the Army Corp during the floodproofing presentation.

It is important to note that the Upper Main Conveyance strategies, discussed earlier in this presentation, would lower the shear stress to appropriate levels for brick sidewalks. However, the conveyance improvements may take 10-15 years to implement given the complexity of the project and streetscape improvements are likely to occur in the shorter term.

# Main St Streetscape



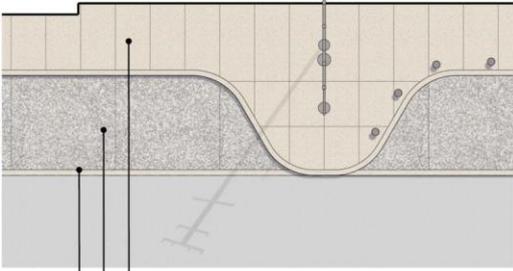
This diagram shows our recommendation to create “bumpouts” at utility poles to accommodate ADA access. This diagram also shows the option to distinguish the parking lane from the travel lanes with a different paving texture.

# Main St Streetscape



An example from Unionville, Ontario showing a raised parking zone. Note this example does not feature bollards which would accompany any raised parking zone in Ellicott City.

# Main St Streetscape

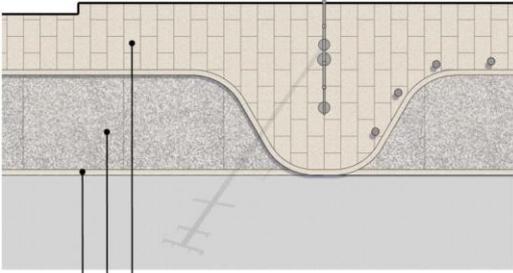


- Concrete with Large Rectangular Scoring Pattern
- Exposed Aggregate Concrete Paving in Parking Lane
- Concrete Curbs (Standard, Mountable, or Flush Bands)



An option for a simple scoring pattern, which is already being used along some sections of Main Street.

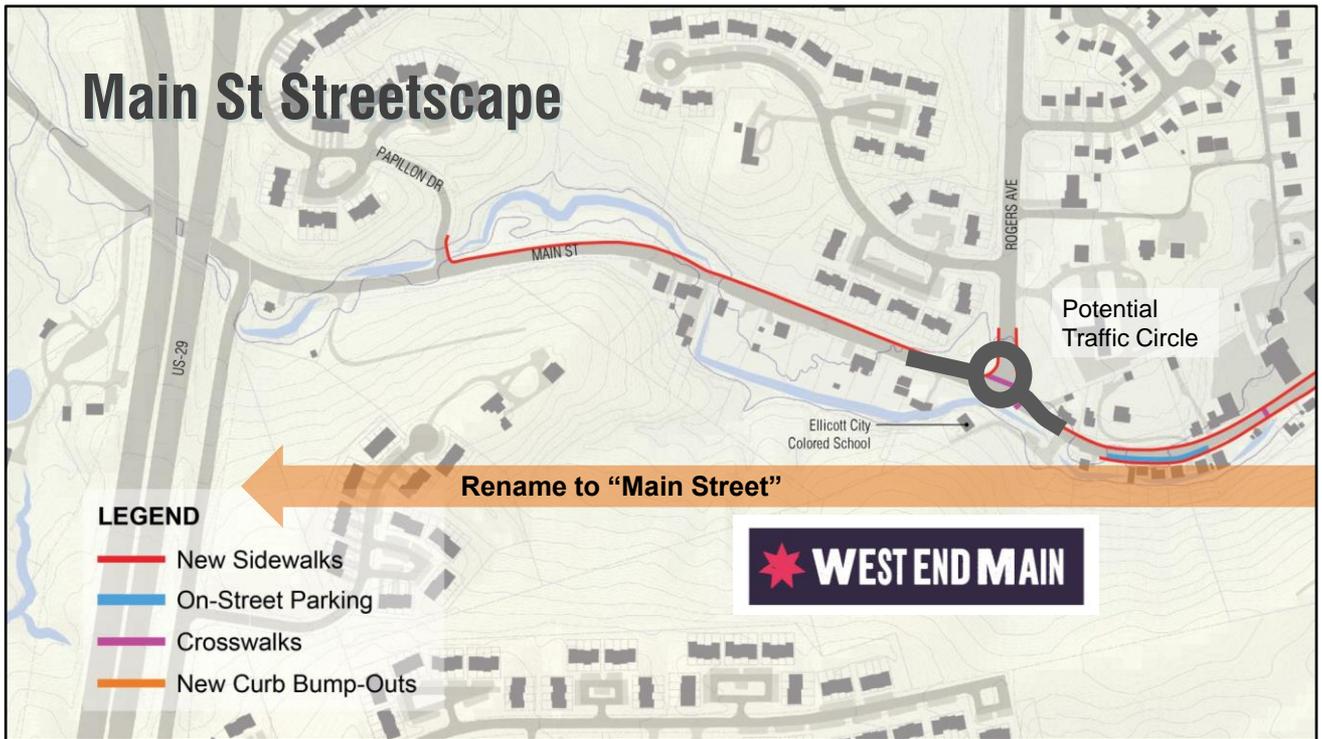
# Main St Streetscape



- Concrete with Detailed Scoring Pattern
- Exposed Aggregate Concrete Paving in Parking Lane
- Concrete Curbs (Standard, Mountable, or Flush Bands)



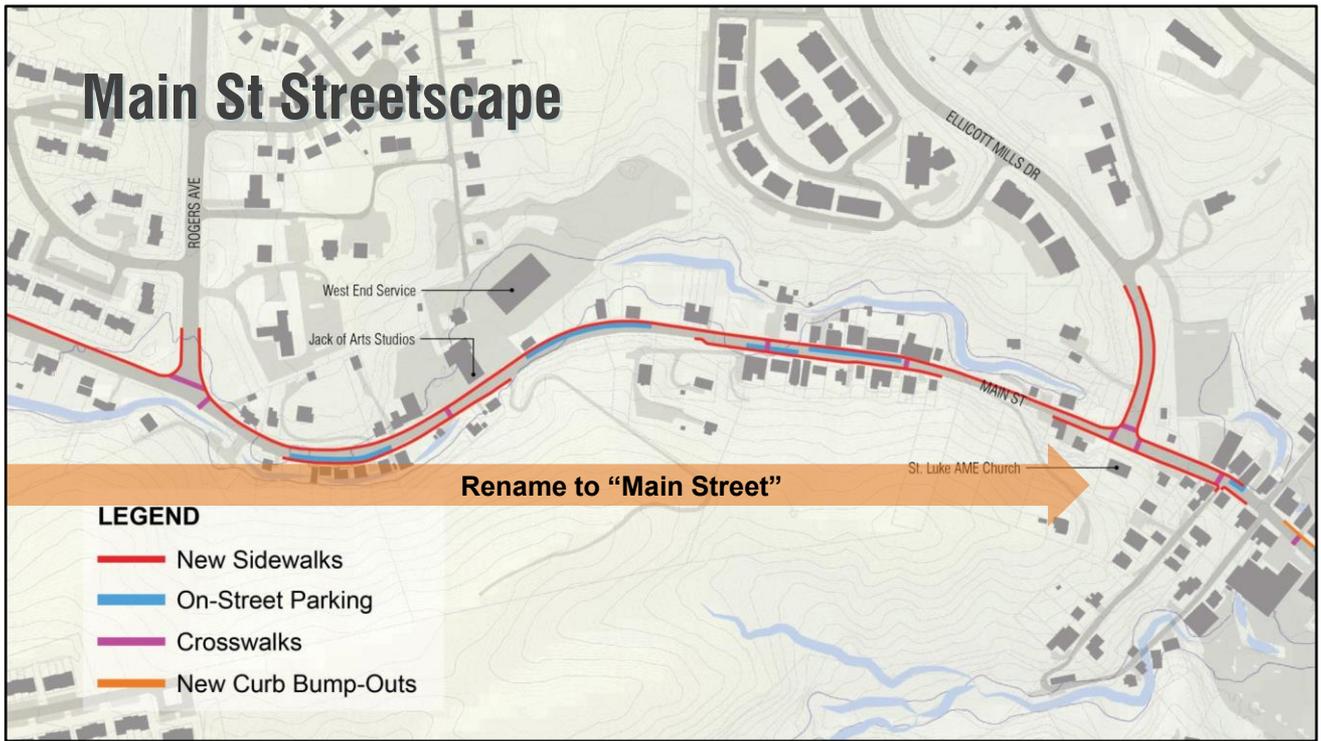
An example showing another option for sidewalk scoring.



As discussed in November, we are recommending that Frederick Road be renamed to “Main Street” in the West End to reinforce the connection between West End and the Main Street core.

This view also shows the potential for a traffic circle at Rogers Avenue to help slow vehicle speeds while allowing for a gateway to West End Main and Main Street.

# Main St Streetscape



## LEGEND

- New Sidewalks
- On-Street Parking
- Crosswalks
- New Curb Bump-Outs

# Main St Streetscape



The mid-block crosswalks, sidewalk bumpouts and traffic circle shown on the previous slides will change the environment of this section of Main Street and help encourage slower travel speeds. In addition, restriping of the roadways to reduce the width of travel lanes and increase the width of parking lanes (where possible) will also help to reduce traffic speeds.



Part of the Main Street streetscape improvements include stabilization of the embankment at St. Luke A.M.E. Church. This diagram shows how a low stone retaining wall could be located at the base of the slope, adjacent to a widened sidewalk. The remainder of the slope could be stabilized and vegetated. A free-standing gateway sign could also be provided to announce arrival to West End Main and Main Street.

# Main St Streetscape



# Main St Streetscape



Textomir Reinforced Soil Slope



ABG Geosynthetics Webwall Geocell



Flex MSE Vegetated Wall



Low Shrub and Perennial Planting



Geosolutions GeoWeb Cellular Confinement System



ABG Geosynthetics Geocell



Flex MSE Vegetated Wall



Winter Jasmine Low Shrub Planting

Examples showing how an anchoring system could be used to stabilize the slope while allowing for vegetation.

# Main St Streetscape

**Downtown** (Ellicott Mills Dr to Patapsco River) = **\$2.3 million**

**Tiber Alley/Maryland Ave** = **\$850K**

**West End** (Ellicott Mills Dr to Rt 29) = **\$800K**

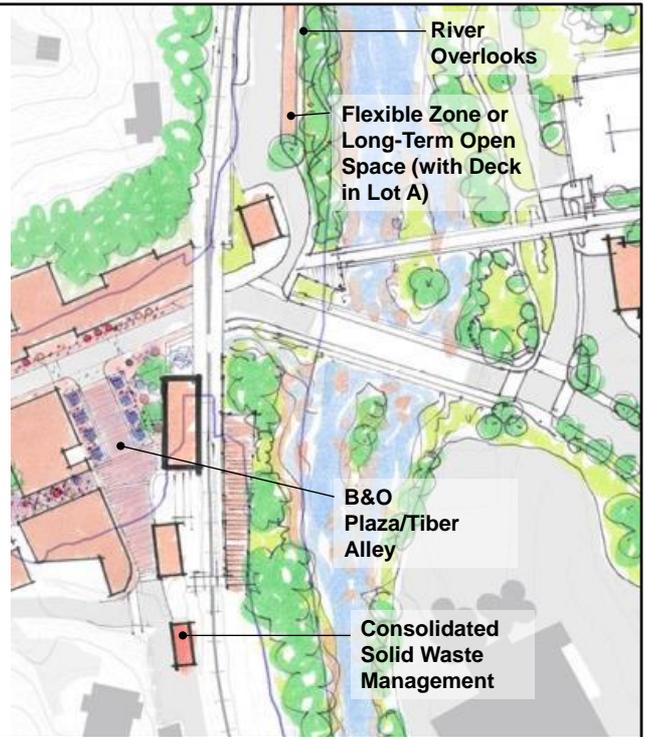


As a review from the earlier presentation in November, there is an opportunity to enhance Tiber Alley as a shared use space (service and pedestrians) and enhance the lower portion of Maryland Avenue to allow flexibility for expanded pedestrian areas. The same concept of using rolled curbs to bring the parking zone up to sidewalk level (as is recommended along Main Street) could also be utilized here so that during events, the sidewalk area is expanded.

## 3-D: Parks/Open Space



- B&O Plaza / Tiber Alley
- River Overlooks
- Hudson Bend Amenity
- West End Central Park
- Other Parks
- Amenities



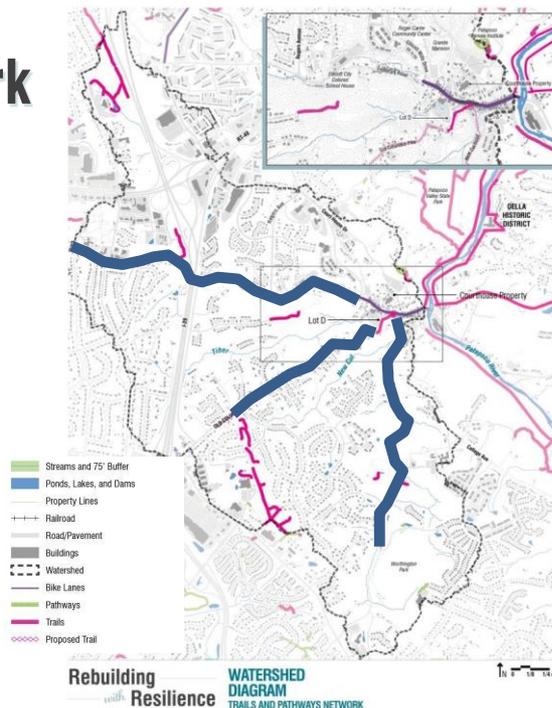
Should a parking deck and additional parking spaces be located in Lot A, this would also allow some spaces in Lot C to be used as a consolidated solid waste management zone so recycle and trash bins to not have to sit in Tiber Alley. Tiber Alley could, therefore, become more of an amenity space (but still accommodate service).

Similarly, expanded parking resources in Lot A could allow for Lot B to be used on occasion as a riverfront event space. Consideration might even be given to reducing the number of parking spots in the lot to allow for a permanent riverfront park space. Again, this would only be possible if a significant parking resource is developed in Lot A.

## 3-E: Sidewalk / Trail Network



- New Cut Trail
- Old Columbia Pike Sidewalk
- Frederick Road Sidewalk/Trail to West and Library
- Patapsco River Bridge Crossing (Trolley Trail)



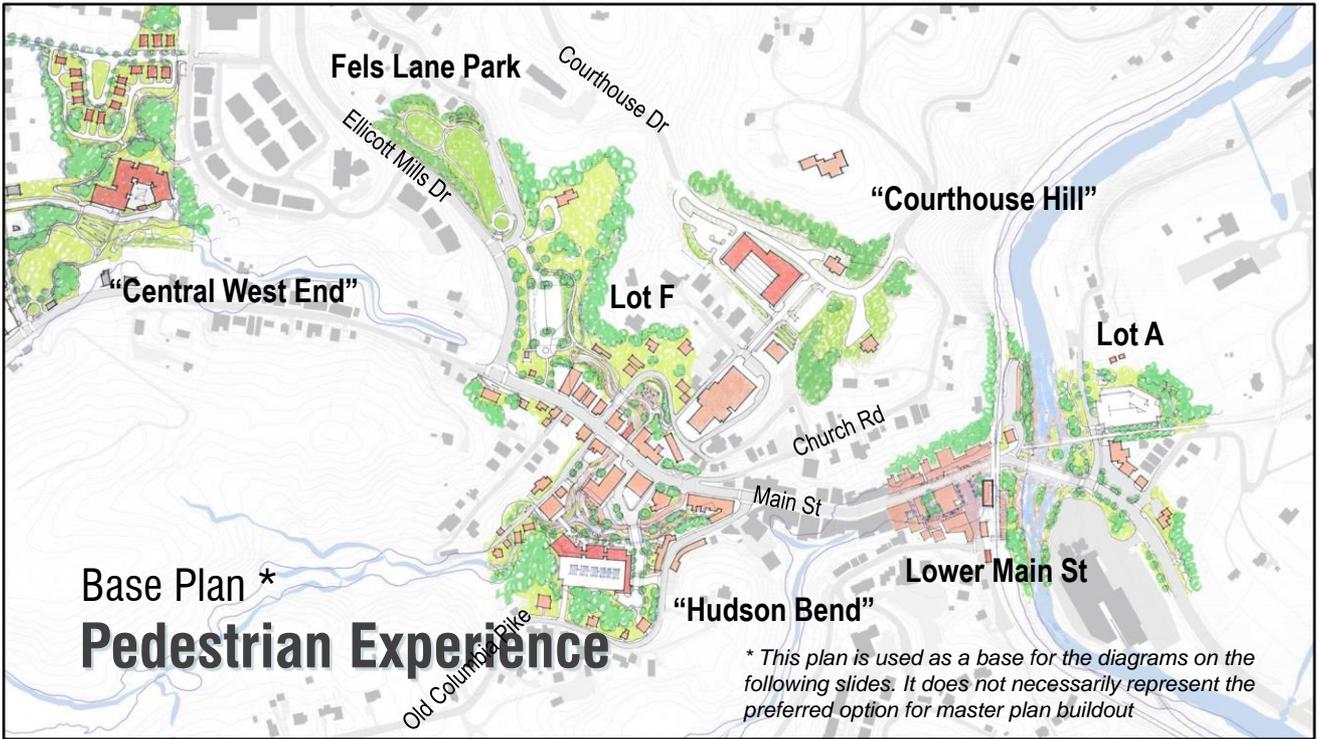
As we expand out from the core, we are recommending several enhanced sidewalk and trail connections to better connect surrounding neighborhoods to West End Main and Main Street. These include:

**New Cut Trail:** This is a recreational trail running along the New Cut tributary, connecting the historic core with Worthington Park. This recommendation reinforces recommendations made in earlier planning efforts to make this connection and take advantage of this scenic corridor while providing non-vehicular connections.

**Old Columbia Pike Sidewalk:** We heard a lot of desire for the sidewalk along Old Columbia Pike (in the historic core) to extend along the entire length of the roadway to connect these neighborhoods to the core.

**Frederick Road Sidewalk/Trail:** As with Old Columbia Pike, we heard of a desire for neighborhoods at the western end of the watershed to have a pedestrian connection between the library to the west and to the historic core to the east. This may take on the form of a sidewalk in some areas and trail in other areas as site conditions require.

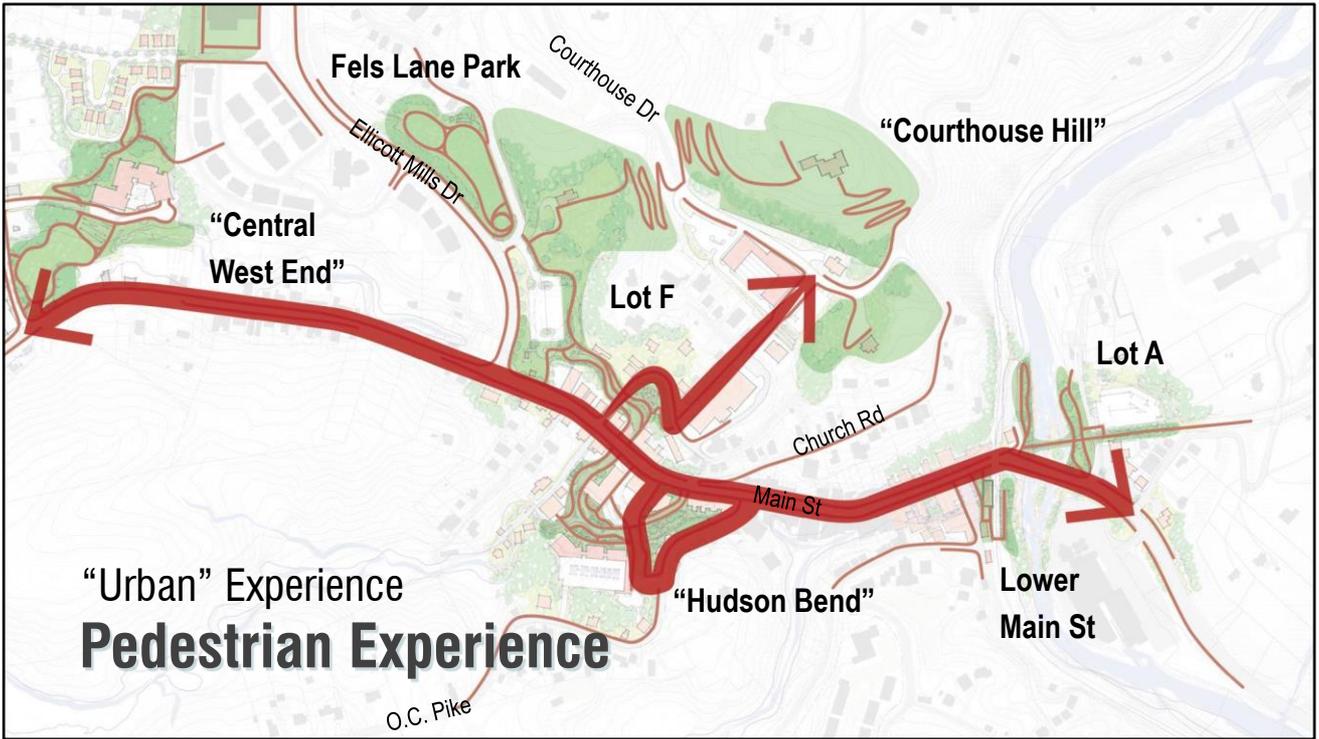
**Trolley Trail #9 Bridge:** As discussed earlier, regional bike and trail plans call for the extension of Trolley Trail #9 over the Patapsco River which will provide for direct connection into Ellicott City and a stronger connection to the parking resources in Lot A.



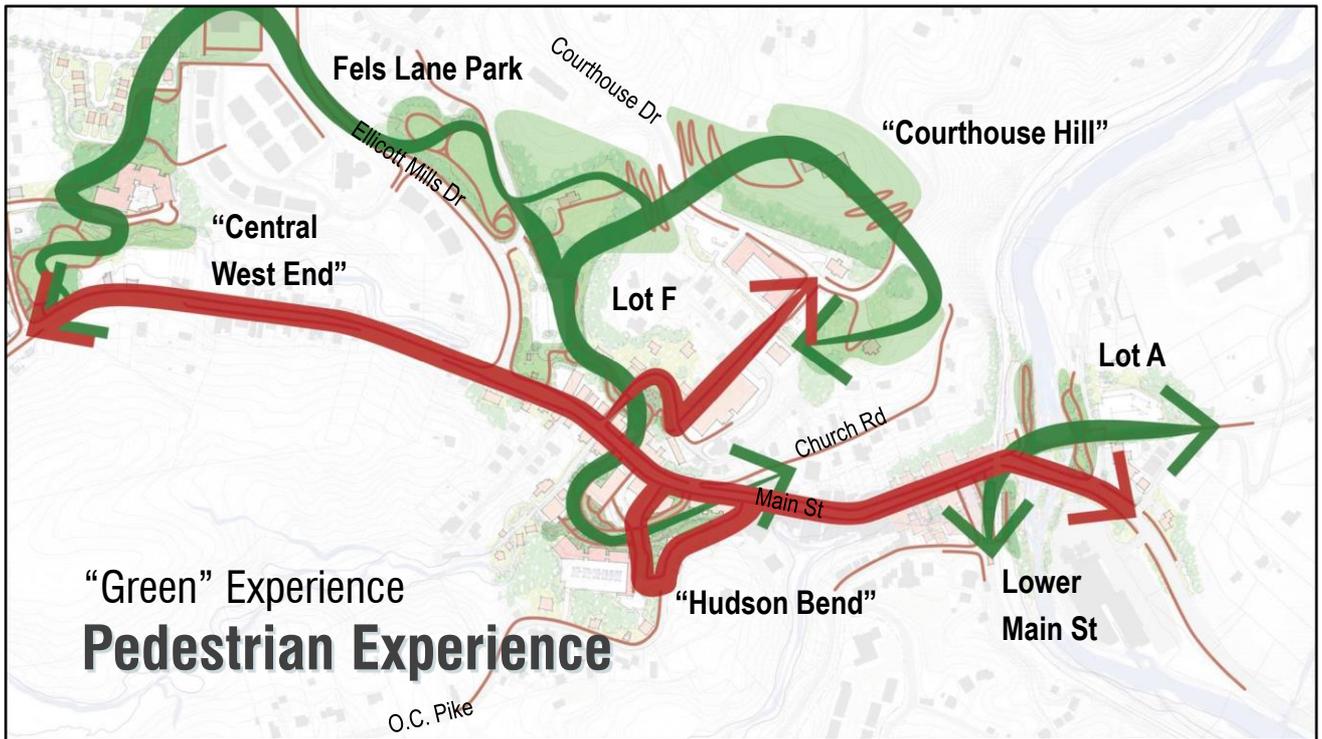
As we look at pedestrian connections closer to the core, there is a tremendous opportunity to create a variety of pedestrian experiences in the core and West End Main. Using one of the illustrative plans from earlier as a base, we can see on the following slides the potential for the pedestrian network.



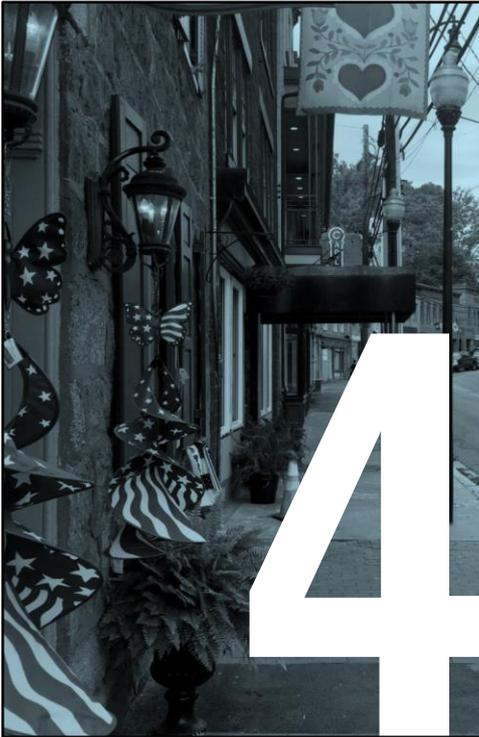
If we look at existing and potential sidewalks, we can see the potential for an interconnected network linking Ellicott City businesses, attractions and resources.



At a very conceptual level, we have the more “urban” or “traditional” Main Street experience along storefronts and building frontages.



With the recommendations of the plan for improved flood conveyance, parking resources and mixed use, there is the long-term opportunity to overlay a complementary pedestrian experience – one that exposes visitors to parks, open spaces, attractions, community facilities and natural resources. This provides for a richer experience of Ellicott City.



## Protecting and Promoting the Identity

Strategy 4: Protecting and Promoting the Identity.

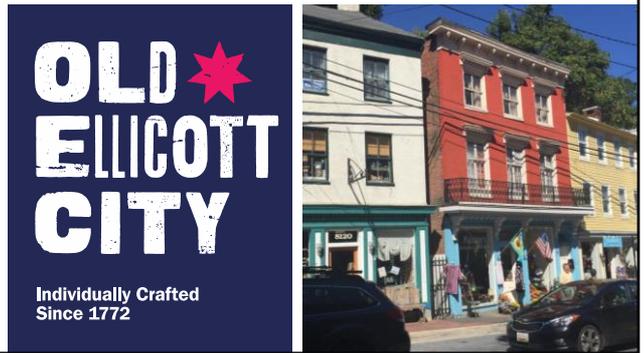
# Strategy 4

## Recommendations

4-A: Physical Environment

4-B: Community Brand

4-C: Community Marketing Program



This strategy includes recommendations that help protect and enhance the physical environment (both inside and outside the watershed) and use the existing community branding for Old Ellicott City to better promote the district and promote important messages about the community.

This strategy was the focus of several stakeholder meetings that followed the public meeting so this presentation did not delve too deeply into these recommendations. More detail will be provided with the draft plan.

## 4-A: Physical Environment



- Design Guide / “Style Guide” for Outside Historic District (Form or Character-Based Codes)
- Historic District Guidelines: Solid Waste Enclosures
- Façade Master Plan



**Avoid: Site designed to fit architecture**

One recommendation to enhance the physical environment is to create character-based codes as part of the zoning code rewrite to encourage more effective site design. In particular, much of Ellicott City’s historic character is derived from the architecture of its buildings being adapted to the unique site conditions. Some recent development, however, adapts the site to the architecture (designed for flat sites) resulting in awkward grading conditions and retaining walls that appear to be “forced” on the site.

## 4-A: Physical Environment



Encourage: Architecture designed to the site

Although this is not always the case. This is a good example of a building adapted to the sloping site.

## 4-A: Physical Environment



**Encourage: Site walls integrated into site design**

The Howard County Government Complex is another good example of how the architecture can be designed to the site as is the case with these retaining walls. The buildings, site elements and retaining walls are all part of a cohesive, integrated design.

## 4-A: Physical Environment



- Design Guide / “Style Guide” for Outside Historic District (Incentive Based)
- Historic District Guidelines: Solid Waste Enclosures
- **Façade Master Plan**



Another recommendation to enhance the physical character is to consider a Façade Master Plan where façade improvements could be made for several properties under one coordinated contract as a coordinated, future private effort. This would allow for “economies of scale” as the work could be bid to one contractor and materials sourced from the same suppliers. The Façade Master Plan could encompass the entire façade of multiple buildings or it might utilize a “component grant” in which specific elements are the focus (such as business signs).

## 4-B: Community Brand



- Brand Extension
- Messages
- Merchant Ads
- Collateral Material

The logo for Old Ellicott City, featuring the words "OLD", "ELICOTT", and "CITY" stacked vertically in a bold, white, distressed font. A red, multi-pointed star is positioned to the right of the word "OLD". The entire logo is set against a dark blue background.

**OLD**   
**ELICOTT**  
**CITY**

In order to promote the district, we will be looking at a number of ways to continue using the existing Old Ellicott City brand. This will include a number of applications as outlined above. Examples will be included and described in more detail as part of the draft plan.



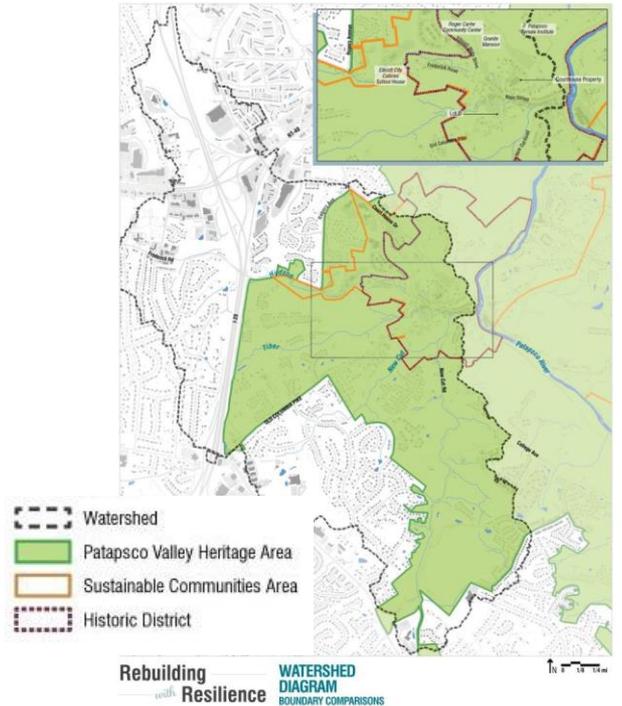
## Organizing for Success

Strategy 5: Organizing for Success

# Strategy 5

## Recommendations

- 5-A: ECIZ (Ellicott City Investment Zone)?
- 5-B: Organizational Entity
- 5-C: Ellicott City Forum
- 5-D: Bi-County Summit



Similar to Strategy 4, this strategy is currently being developed and will be described in detail in the draft plan. These recommendations are focused on plan implementation and identifying the organizational entity(ies) whose role will focus on Ellicott City and only Ellicott City.

# Strategies

**#1 MANAGING AND PROTECTING THE WATER**

**#2 PLANNING FOR ECONOMIC SUCCESS**

**#3 ENHANCING THE EXPERIENCE**

**#4 PROTECTING AND PROMOTING THE IDENTITY**

**#5 ORGANIZING FOR SUCCESS**

Hopefully, the preceding summary of the five strategies under which the recommendations of this plan are organized illustrates how the recommendations and goals of the plan are interwoven and the complexities associated with plan implementation. This is a long-range plan that will guide implementation with some recommendations that can be implemented in the next 1-5 years; others in 5-10 years and still others in 10-30 years.

## Core Goals



**Rebuilding:** *Emphasize resilience and placemaking in rebuilding*



**Environmental:** *Protect the environment*



**Preservation:** *Preserve Ellicott City's heritage*



**Economy:** *Revitalize the downtown economy*

In some cases, recommendations will help to achieve one of the four core goals, while in other cases recommendations will help to achieve multiple, if not all, of the core goals.

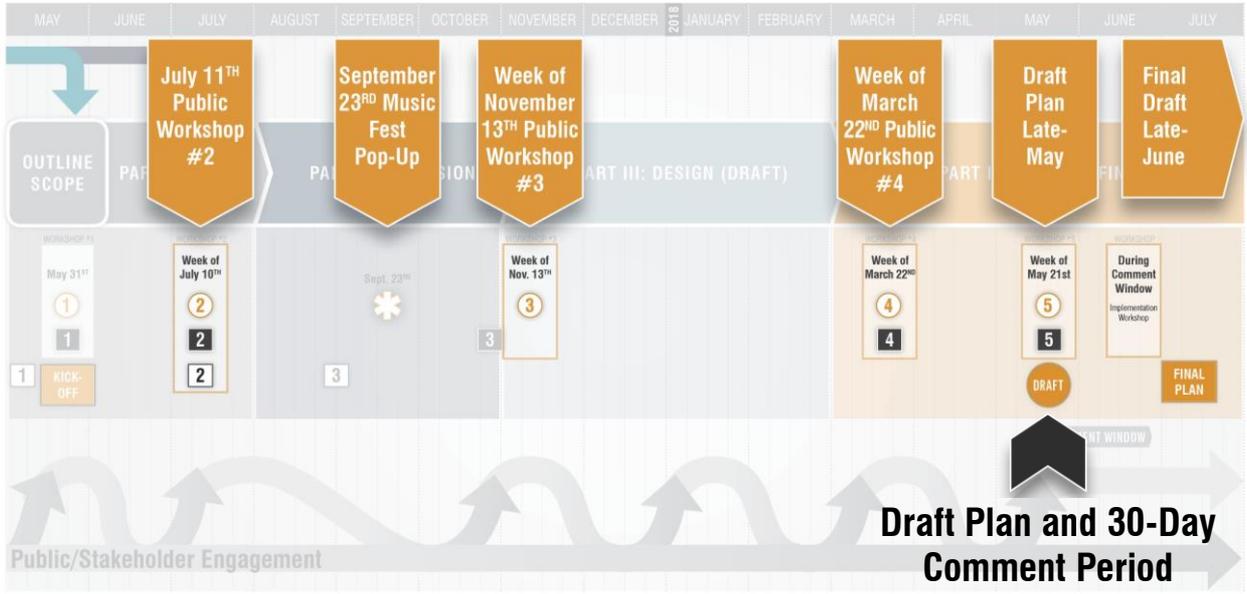
# Next Steps

## Next Steps

1. **Presentation posted on DPZ website: *Look for an email blast when available.***
2. **Provide additional comments via survey to be released (DPZ to email).**
3. **Stay tuned for future email notifications on the draft plan release and future meetings.**

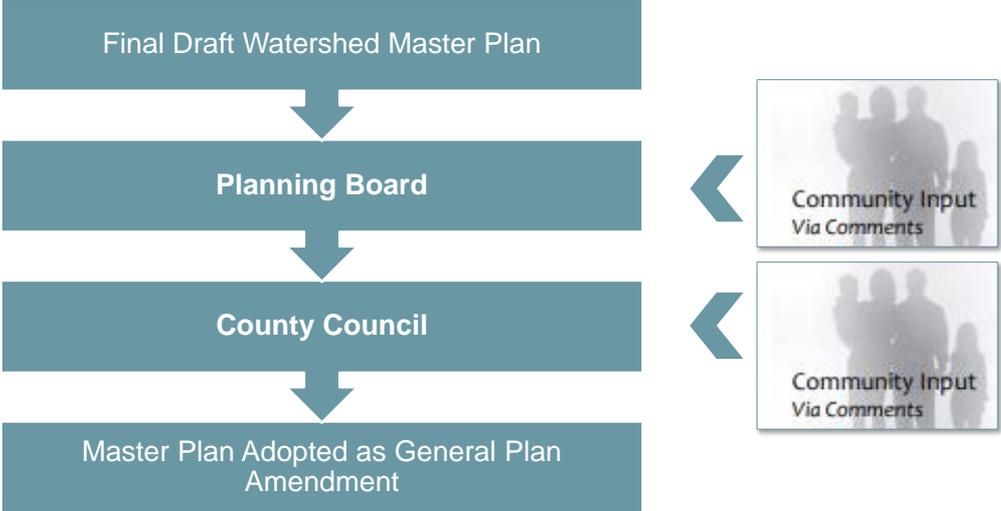
# Master Plan Process

-  Public Meeting
-  MPAT Meeting
-  Technical Team Meeting
-  Special Pop-Up Engagement
-  Army Corps Study
-  McCormick Taylor H&H Study



Highlight public work sessions

# General Plan Amendment Process



# Discussion

# Discussion

## Q&A

### Table Discussion

1. Open Topic
2. *Upper Main Street Conveyance Strategy (Open Channel): What would be important to you should this strategy be pursued as a project? Opportunities to capture? Cautions?*
3. *Overall Reactions? Most Challenging Aspects? Most Promising?*

### Reporting Out

**Thank you!**