



INTEGRATED FRAMEWORK PLANNING

A FLEXIBLE FRAMEWORK FOR MAXIMIZING COMMUNITY
BENEFITS FROM INFRASTRUCTURE INVESTMENTS



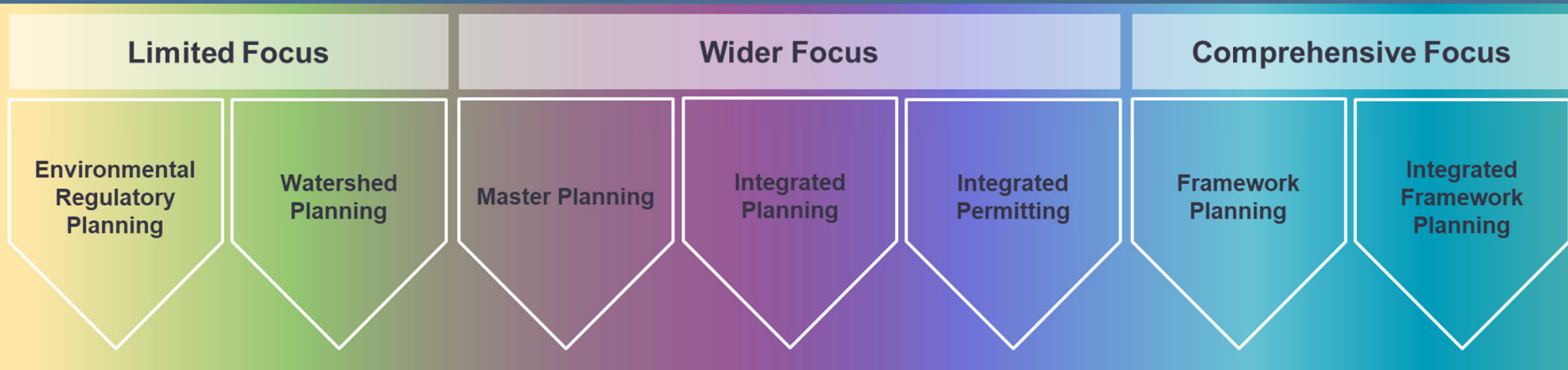
LimnoTech 
Water | Scientists
Environment | Engineers

POTENTIAL CHALLENGES

- Return on investment
- Competing needs and siloed departments within jurisdictions
- Increasingly stringent regulatory requirements
- Health and safety of residents
- Ecosystem condition and function
- Community growth
- Old infrastructure
- Planning for resilient / sustainable communities

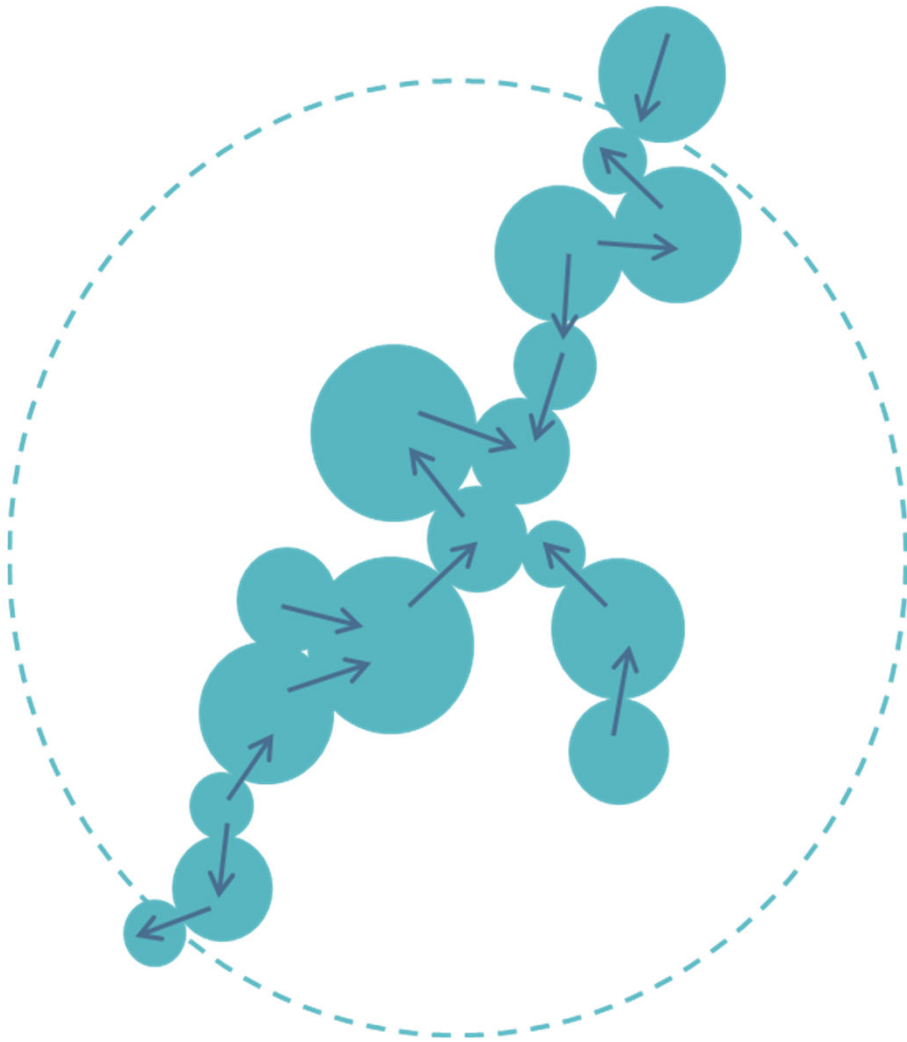


SPECTRUM of PLANNING PROCESSES



- Many options have been used over the years
- Each has strengths and limitations
- Many achieve a specific regulatory requirement, but do not connect other priorities
- Integrated Framework Planning takes planning further to also cater to a community's needs and resources





INTEGRATED FRAMEWORK PLANNING

The marriage of EPA's Integrated Planning process and a Framework Planning approach that has traditionally been implemented in urban planning and landscape architecture.



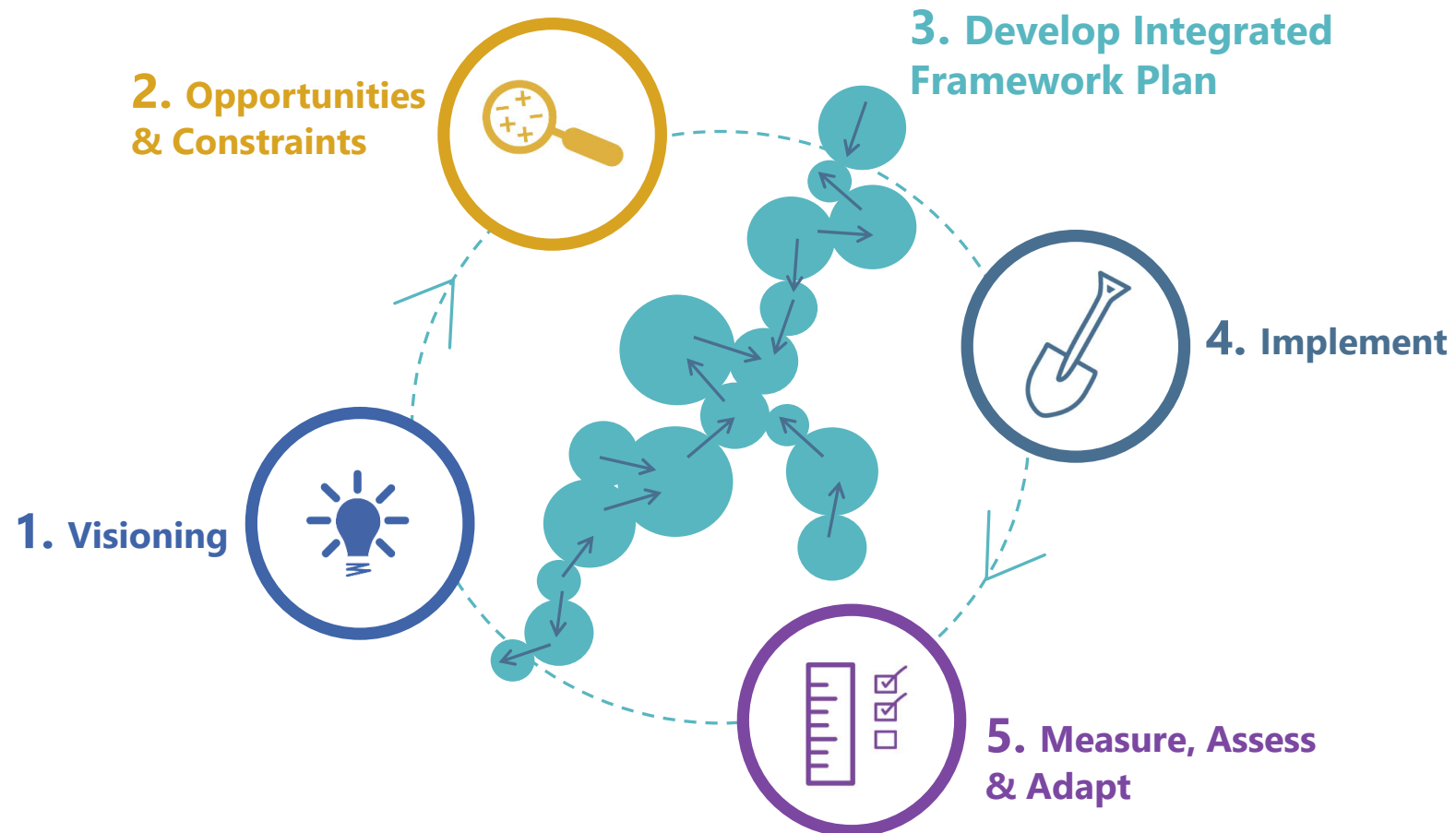


A PROVEN APPROACH

Chicago South Lakefront
North Macadam District, Portland
Portland State University
Anacostia River, Washington, DC
Boone, NC
Ohio State University
Dublin, OH
Denver University
Titusville, AL
Pittsburgh, PA
Cambridge, MA
Waterfront Seattle
Lower Don Lands, Toronto
Montana State University
Dundalk, Ireland
Detroit Future Cities
Lytlonsville, MD
Conway, AR
Gillies Creek Greenway, Richmond
Northeastern Illinois
Hamilton, Australia
Downtown Bethesda, MD



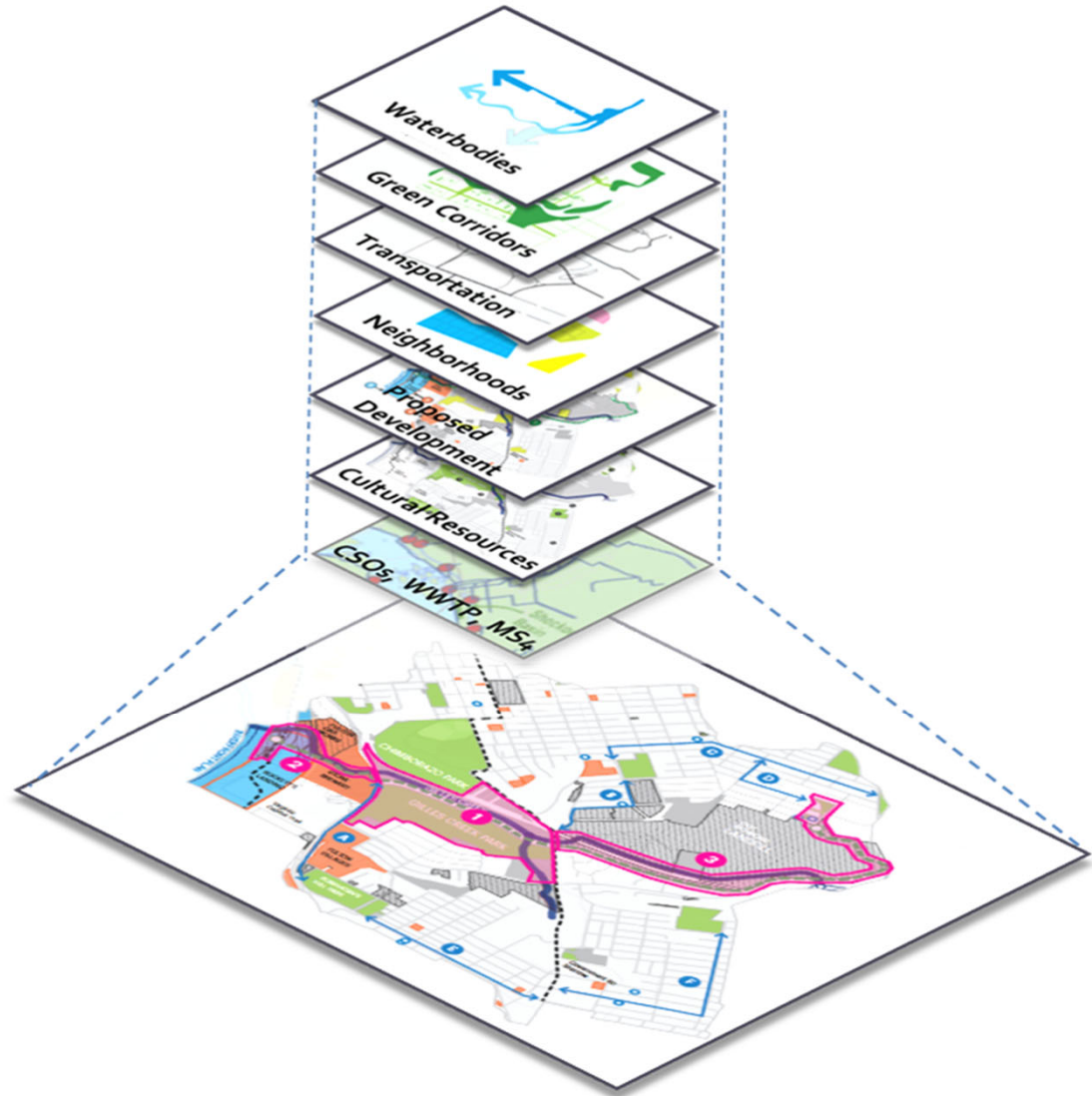
INTEGRATED FRAMEWORK PLANNING PROCESS





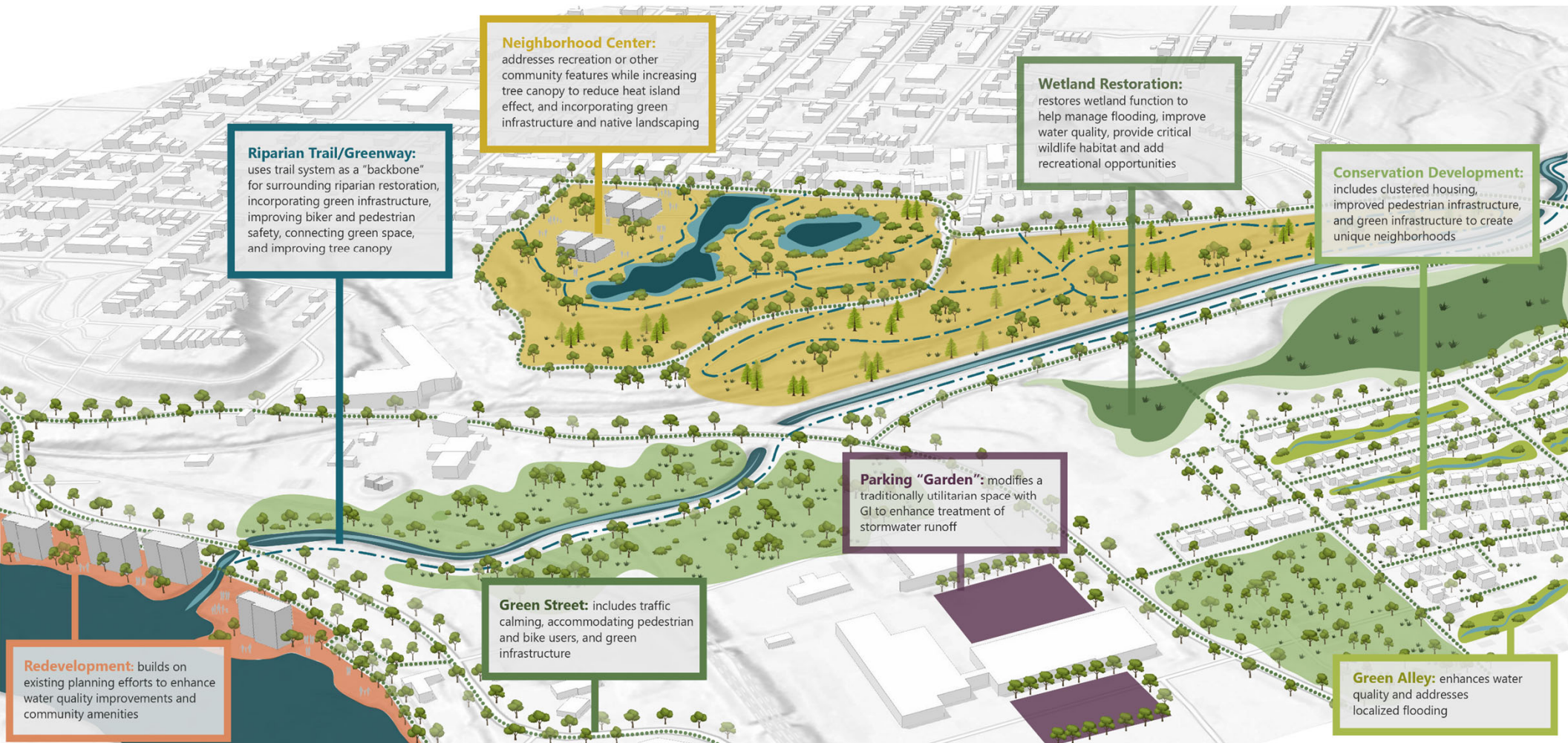
THE FRAMEWORK INCORPORATES KEY FEATURES

- Iterative feedback
- Programmatic integration
- Data convergences
- Flexibility to consider multiple drivers





INTEGRATED FRAMEWORK PLANNING: CLUSTERS AND CORRIDORS





EXAMPLES



WALLER CREEK, AUSTIN, TX

Iterative feedback...

- Stakeholder feedback
- Joint Development Agreement between the City and the Waller Creek Conservancy

Programmatic integration...

- Stream ecology, recreation, redevelopment

Multiple drivers...

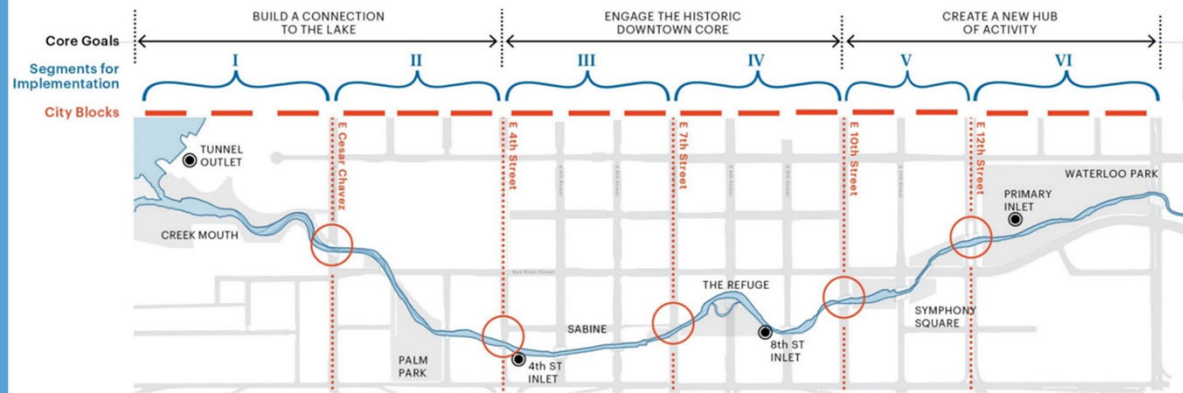
- Modeling, feasibility, cost (capital, operations and maintenance)

Data convergences...

- Trail network, utilities, trees, slopes, aquatic habitats, stormwater retrofits, hydraulics & hydrology

Combining projects...

- Tunnel
- Chain of parks and stream restoration



TORONTO, CANADA

Iterative feedback...

- Stakeholder involvement
- Multiple government agencies

Programmatic integration...

- New development, flooding, naturalization of river

Multiple drivers...

- Complex regulations

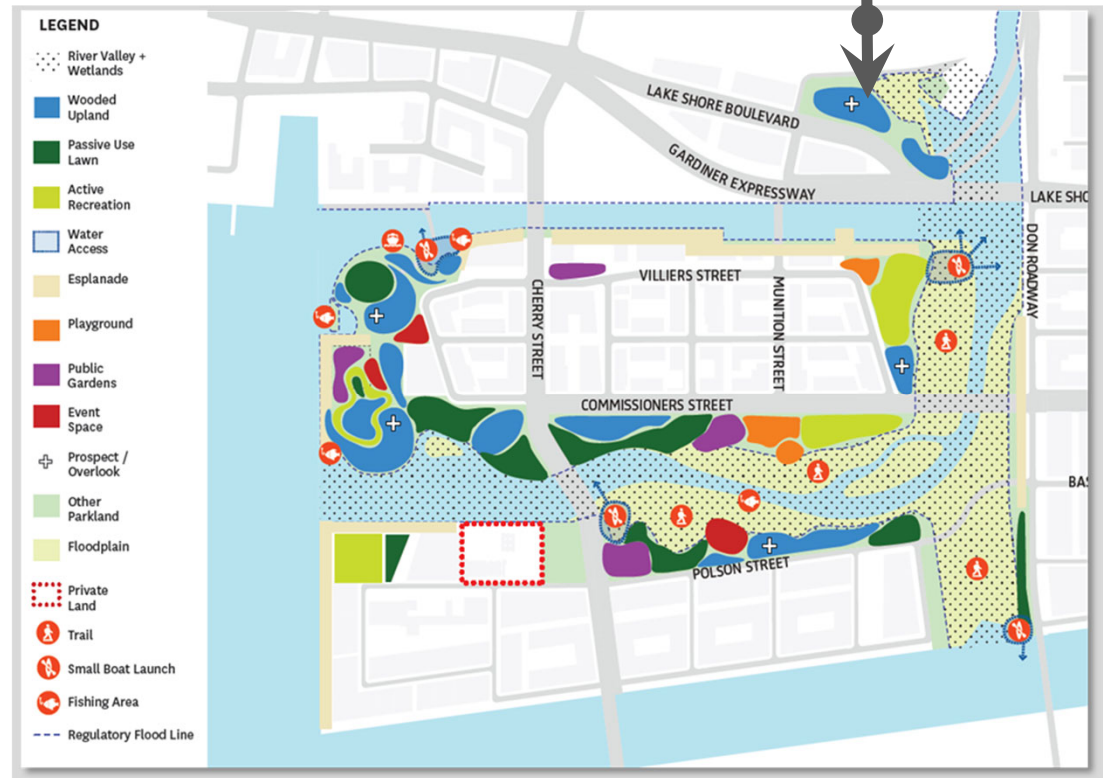
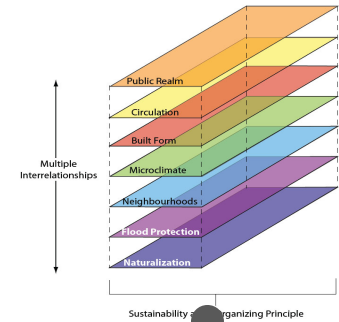
Data convergences...

- Recreation, new development, areas of flooding

Combining projects...

- Lower Don Lands waterfront

https://portlandsto.ca/wp-content/uploads/lower_don_lands_framework_plan_may_2010_15_mb_1.pdf



RICHMOND, VA

Iterative feedback...

- Extensive stakeholder involvement
- Ownership and ease of permit approval

Programmatic integration...

- Wet weather programs as well as habitat, potable water, land conservation, pedestrian safety, recreation

Multiple drivers...

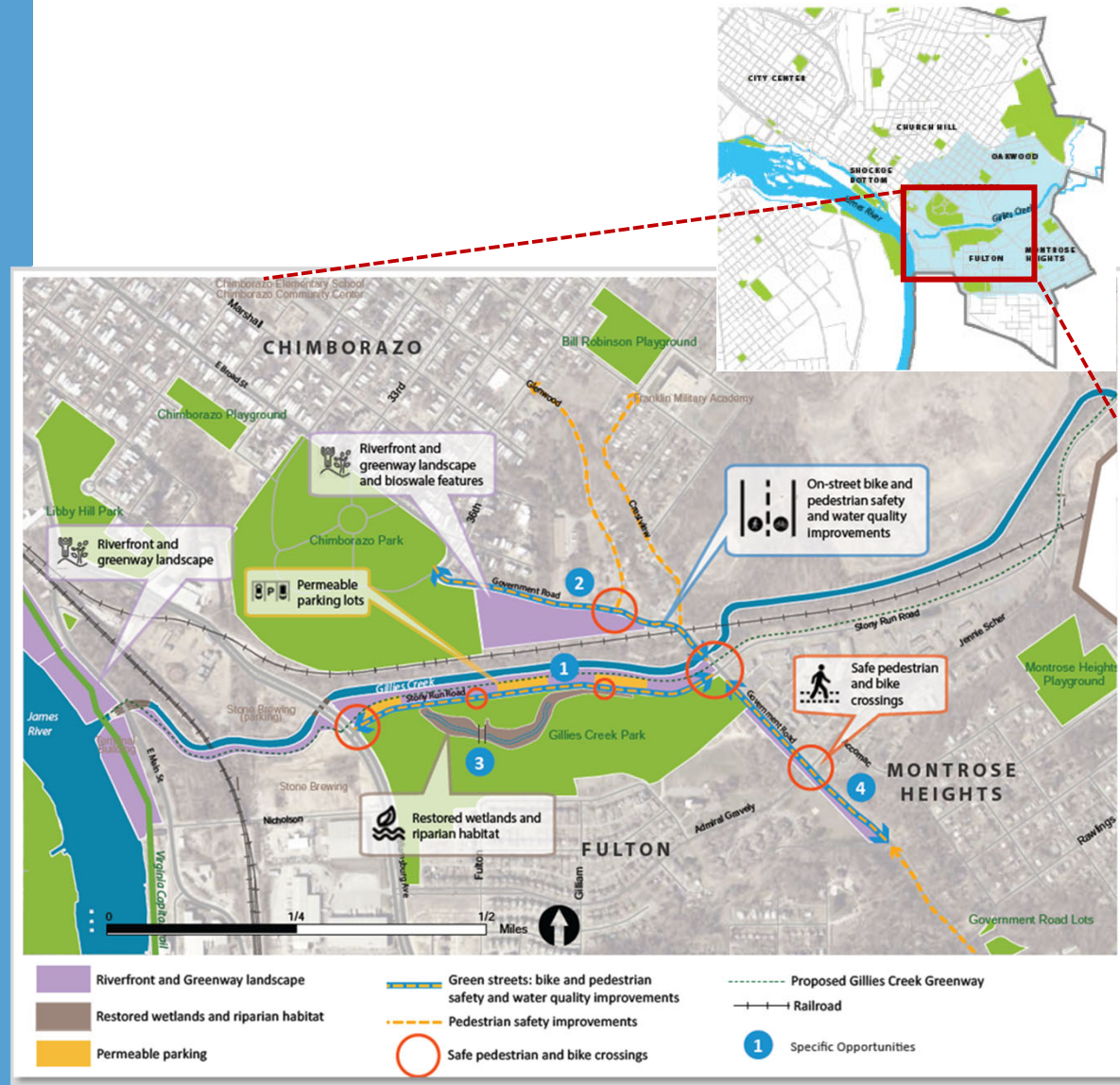
- NPDES permit, feasibility, affordability, unknowns

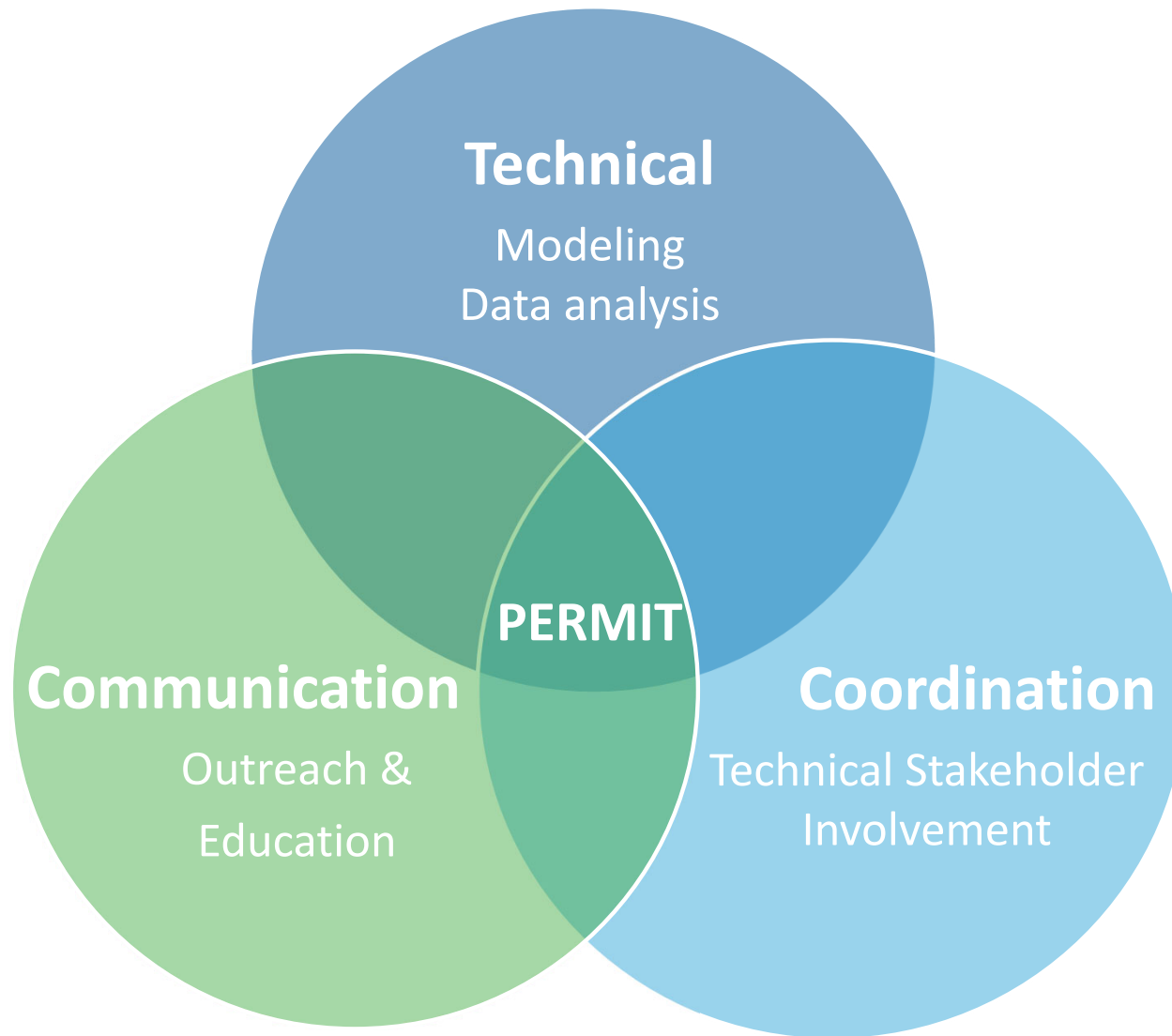
Data convergences...

- Overlay water resources with community needs

Combining projects...

- Ex.: Greenway with stormwater management and pedestrian and bike safety







GOALS RELATED TO:

- Pollution and Stormwater Peak Flows
- Habitat
- Public Engagement & Action
- Land Conservation & Management
- Partnerships
- Water Conservation
- Recreation
- Monitoring

STRATEGIES RELATED TO:

- Riparian areas
- Green Infrastructure in MS4
- Green Infrastructure in CSS
- Stream Restoration
- Native & Invasive Species
- Trees
- Land Conservation
- Potable Water Conservation
- Pollution I.D. & Reduction
- CSS Infrastructure

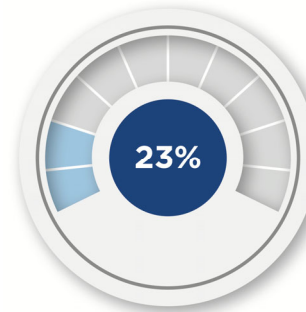


QUANTIFIABLE TARGETS

Metrics used to rank and prioritize strategies

- Examples:
 - Impervious surface reduced or treated (acres)
 - Habitat protected or restored (acres)
 - Streams restored (feet)
 - Stormwater volume discharge reduced (MG)
 - Average yearly TN load reduction (lbs)

Quantifiable targets for each strategy



GI in CSS

Target: 18 acres
Achieved: 4 acres



Stream Restoration

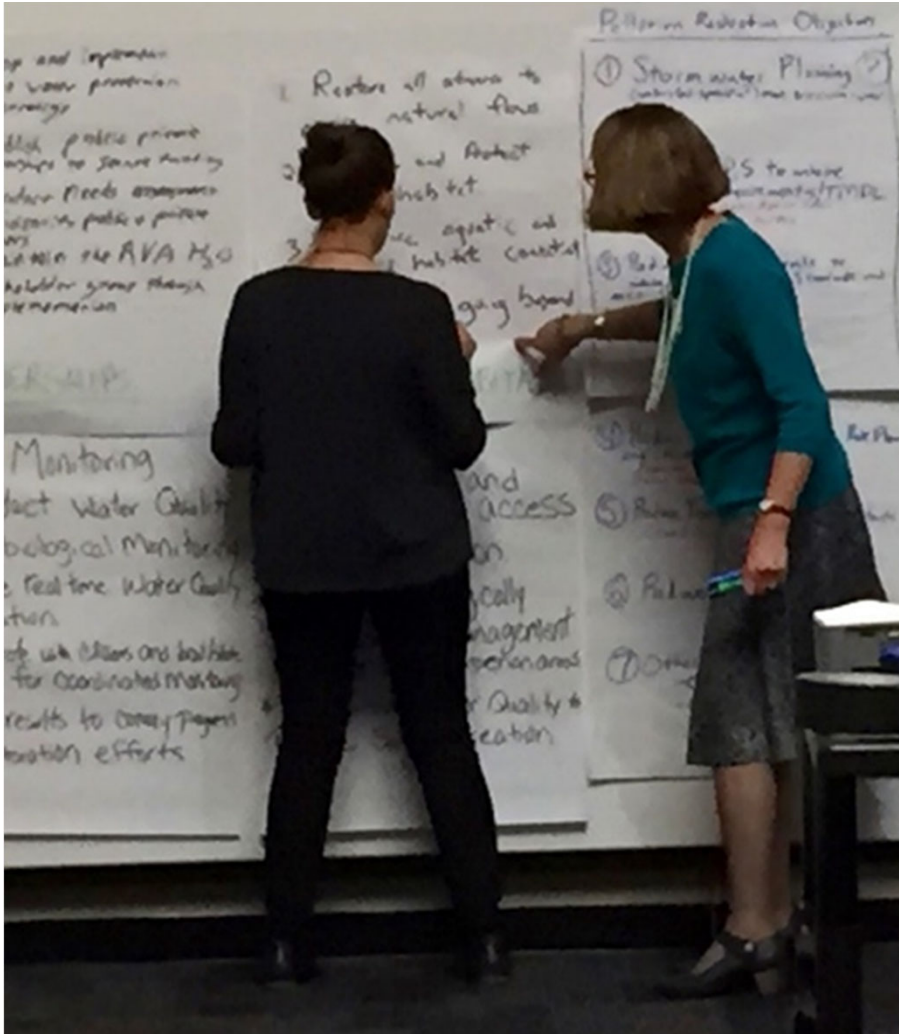
Target: 2,500 lf
Achieved: 15,580 lf



Trees

Target: 80 acres, 24,000 trees
Achieved: 24 acres, 7,124 trees



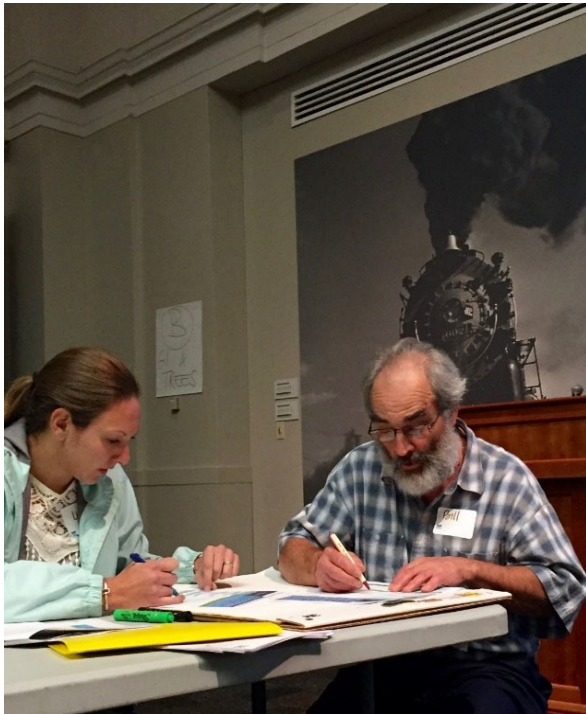


KEY ISSUES ADDRESSED IN PLANNING PROCESS

- Building Relationships
 - Establishing a Vision
 - Translating Technical Complexities
 - Learning to Plan Collaboratively
 - Keeping Stakeholders Engaged
- Preventing Derailment



KEY ISSUE:



Building Relationships

Challenges

- Communicating details
- Managing expectations
- Breaking down silos
- Building trust
- Are stakeholders understanding and learning?

Solutions

- Ensure information is detailed, accessible, and transparent
- Cast a wide net
- Involve a third-party mediator
- Structure of meetings and events can have a significant impact on the amount of feedback received – presentation vs. open house

Keep talking to people!



KEY ISSUE:



Preventing Derailment

Challenges

- Addressing single-issue participants
- Preventing melt-down when things get heated
- Preventing post-process push-back

Solutions

- Separate people from the problem
- Involve a third-party outreach firm and mediator
- Keep inviting participants to the table

Stay the course!



“We salute the process by which Richmond worked with stakeholders -- CBF, DEQ, water quality scientists, many NGOs, and others -- to help develop this integrated Permit (and the associated RVAH2O Clean Water Plan) as a **model of meaningful collaboration, rich public involvement and committed transparency.** We hope and believe it will prove to have **deepened the interested public’s understanding of applicable requirements, the challenges associated with meeting those requirements, and the opportunities that are available to incorporate green infrastructure and other strategies with a variety of co-benefits.”**

Peggy Sanner,
Virginia Assistant Director and Senior Attorney
Chesapeake Bay Foundation

- Implementation Support

Plans and Strategies
Integrated VPDES Permit
Priority Watersheds
Interagency Coordination
Water Plan Success
Partners



Mayor Levar Stoney – speaking at the RVA Clean Water Plan VPDES permit issuance celebration



Bellemeade Walkable Watershed



Partners:

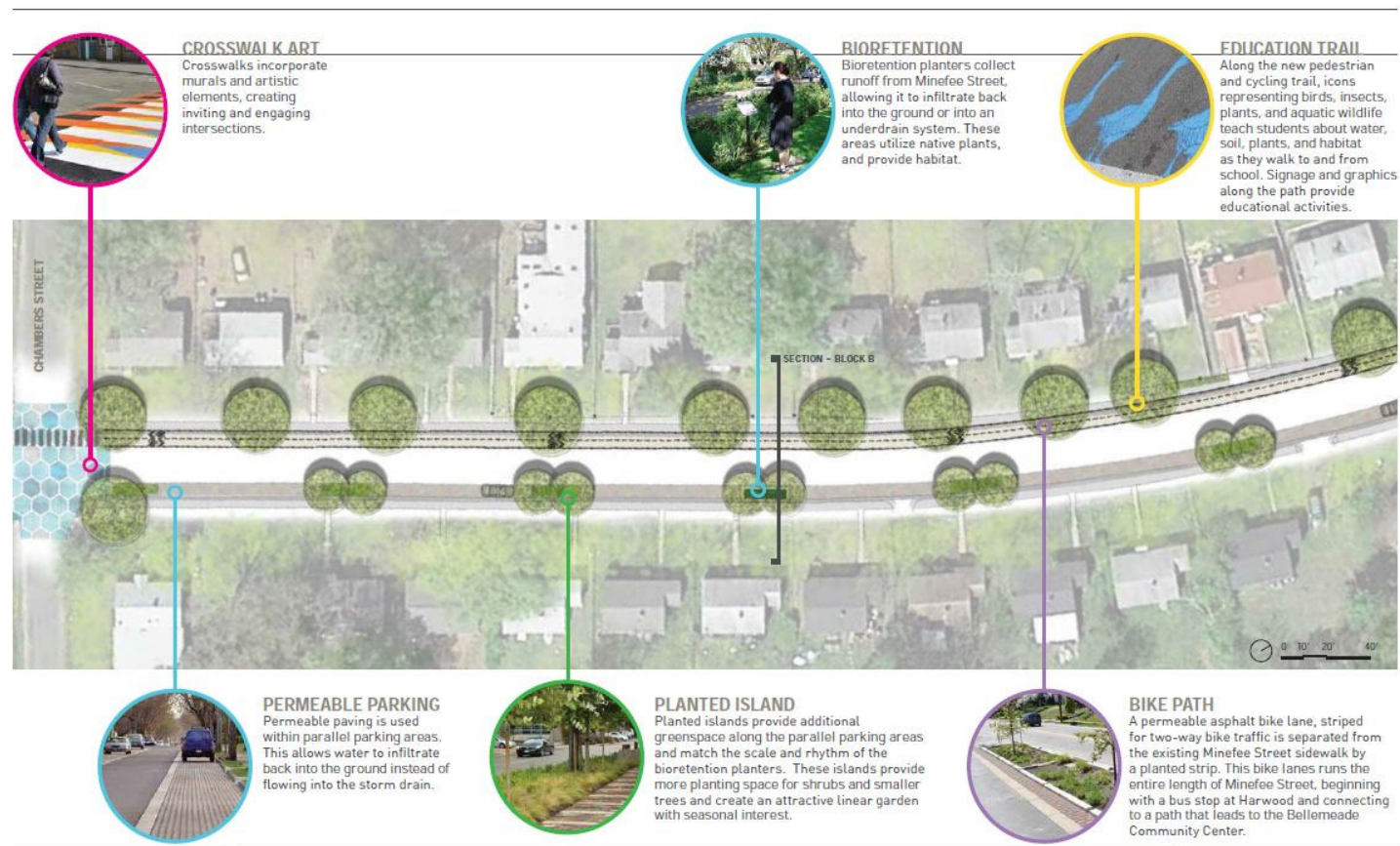




The Numbers

- 850sf of asphalt to planters
- 800sf bioretention
- 77 trees
- 663 native plants
- 3 Filterra
- Pollution reduction
 - 12.73 lbs/yr Nitrogen
 - 2.05 lbs/yr Phosphorous
 - 0.317 tons/yr Solids

Numbers may change. Design under revision





Green Work Force Development





2018 Clean Water Is An Art | Painting a Picture of Stormwater Awareness
West Cary Group, 2018

QUESTIONS?

The background of the slide features a solid dark blue color with several lighter blue, wavy, concentric-like patterns on the left side, creating a sense of movement and depth.

THANK YOU

HEATHER BOURNE

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