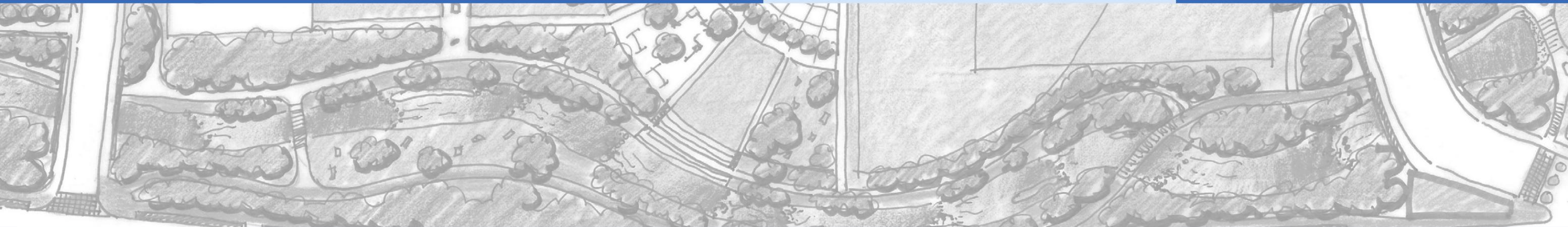




**PROJECT GROUNDWORK**  
*your pipeline to clean water*



# LICK RUN WET WEATHER STRATEGY COMMUNITY OPPORTUNITIES PLAN

DRAFT FOR INTERNAL REVIEW



# CONTEXT

In June 2009 the team of Human Nature and Strand Associates worked with the Metropolitan Sewer District of Greater Cincinnati (MSDGC) to identify strategies for reducing combined sewer overflows (CSOs) in the Lick Run watershed. The August 2009 *Lick Run Conceptual Report* identified strategic sewer separation and the restoration of the historical Lick Run stream channel as primary CSO reduction strategies. These strategies also focused on MSDGC's Communities of the Future program, which pairs the goals of CSO reduction with economic development, urban renewal, and long-term community sustainability.

Given the results of the initial conceptual evaluation, MSDGC commissioned the Human Nature/Strand Associates team to complete Lick Run Wet Weather Strategy Basis of Design study. As part of this effort, Strand Associates completed the November 2009 *Preliminary Engineering Analysis* report. This technical review focused on the basic hydrologic and hydraulic feasibility of the proposed CSO reduction strategies. An assessment of redevelopment opportunities within the watershed was not part of this technical review.

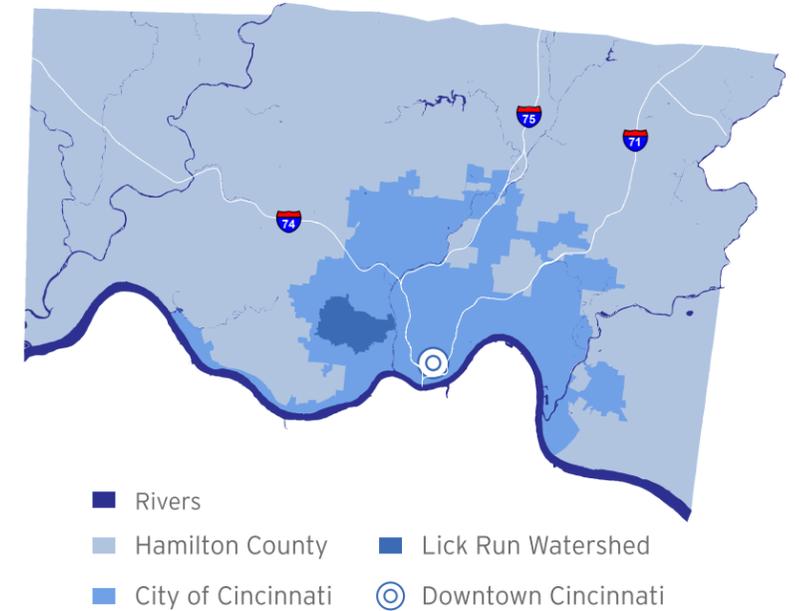
Within the comprehensive framework of MSDGC's Communities of the Future program, Human Nature created this report to accompany the ongoing Basis of Design study. Specifically, Human Nature focused on a revised concept - referred to as the Community Opportunities Plan - for the restored Lick Run stream channel. This report summarizes the comprehensive research efforts informing the Community Opportunities Plan; describes the plan's central components (and alternatives) in more detail; and provides recommendations for anticipated redevelopment in the watershed.

# ASSUMPTIONS

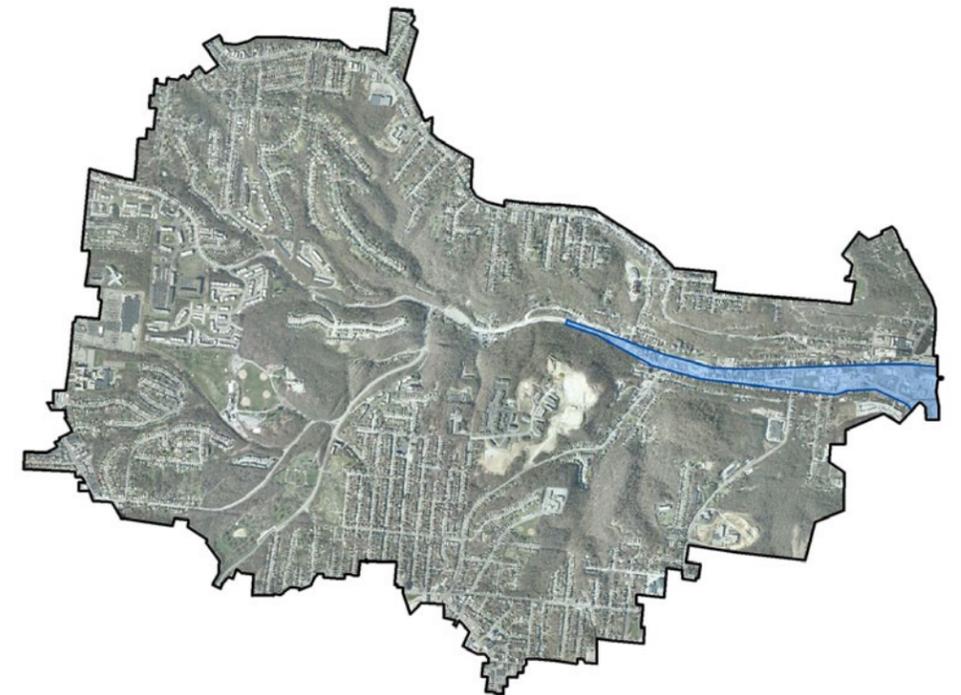
For the purposes of this study, and to advance the Community Opportunities Plan, Human Nature assumed the following:

- The existing transportation infrastructure will remain in place.
- Due to varying contextual conditions and stormwater system design requirements, the width and character of the restored stream channel are variable.
- A decentralized network of linked stormwater BMP elements will minimize the width of the stream channel, maximize base flow, and improve water quality.
- An underground, parallel stormwater conveyance system will also help minimize the width of the channel, while reducing maintenance of and improving accessibility to the restored stream channel.
- Public involvement and a more detailed cultural resource assessment will strengthen the efficacy and long-term success of the plan and related redevelopment potential.

**NOTE:** The conceptual drawings and renditions for the potential conveyance system and urban waterway for Lick Run are CONCEPTUAL and do not represent a preferred or selected alternative that will be constructed. These illustrations provided are at a very high level of planning, have not been designed at this time and in order to do so, require more detailed analysis and community input and participation.



The 2,700-acre Lick Run watershed is located in the Mill Creek Valley on the west side of Cincinnati. The restored Lick Run stream channel corridor, highlighted in blue (below), is the heart of the South Fairmount neighborhood and the primary focus of this document.



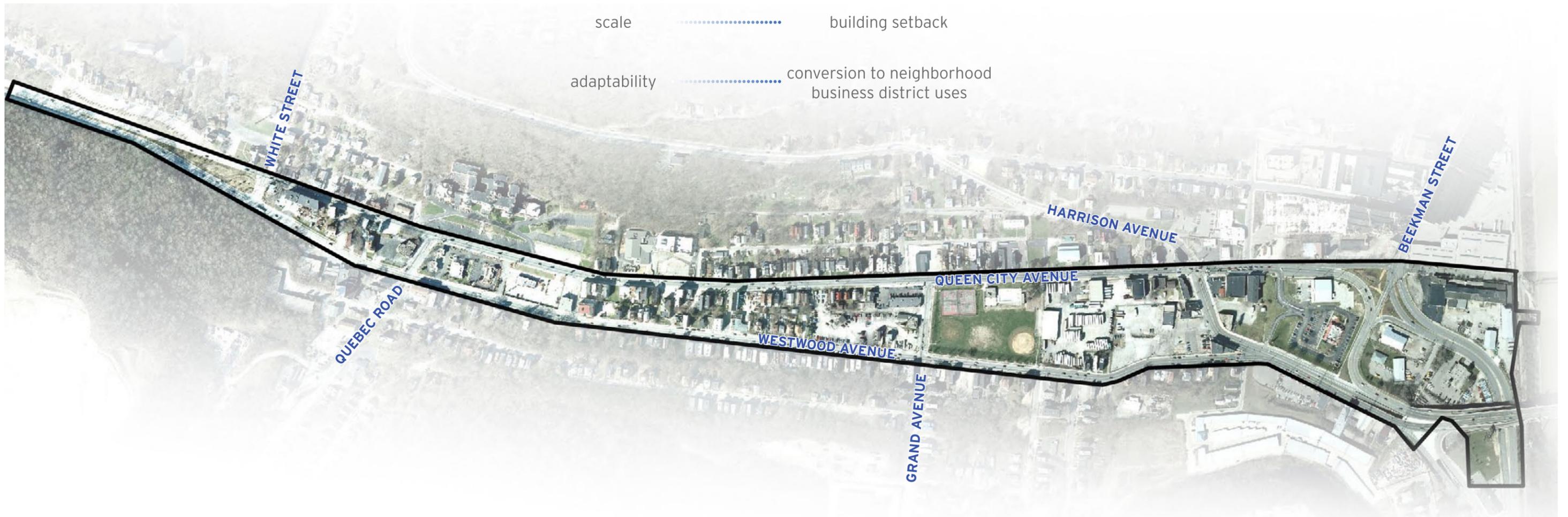
# CORRIDOR EVALUATION



# CORRIDOR EVALUATION

As communities change over time, they create unique patterns of development. The July 2009 Wet Weather Strategy: Lick Run Watershed conceptual report described how South Fairmount evolved from a small farming community in the early 1800s to an industrial, urban gateway in the twentieth century. The study of South Fairmount's physical patterns revealed much about its present social and economic structure and its susceptibility for change. The existing building stock is one component of a neighborhood's physical patterns. Buildings not only represent a neighborhood's history, but also help to form its identity. A more detailed assessment of the buildings in South Fairmount was necessary in order to identify potentially significant structures and to lay the groundwork for a refined Community Opportunities Plan. For example, analyzing architectural features helped to identify buildings that may merit preservation, while evaluating building scale helped to characterize the pedestrian environment. This evaluation was intended to guide the next level of conceptual planning and design. A more detailed evaluation by a certified cultural resources consultant, coupled with input from the community, will likely be necessary for the restored Lick Run channel permit requirements and during subsequent phases of redevelopment planning. Using GIS data, aerial images, and site photos, Human Nature assessed buildings in the South Fairmount corridor\* by assigning ranked values in each of the following categories:

<u>QUALITY</u>		<u>ASSESSMENT CATEGORY</u>
identity	.....	building condition
history	.....	architectural character
scale	.....	building setback
adaptability	.....	conversion to neighborhood business district uses



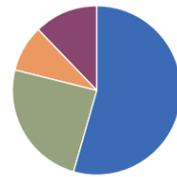
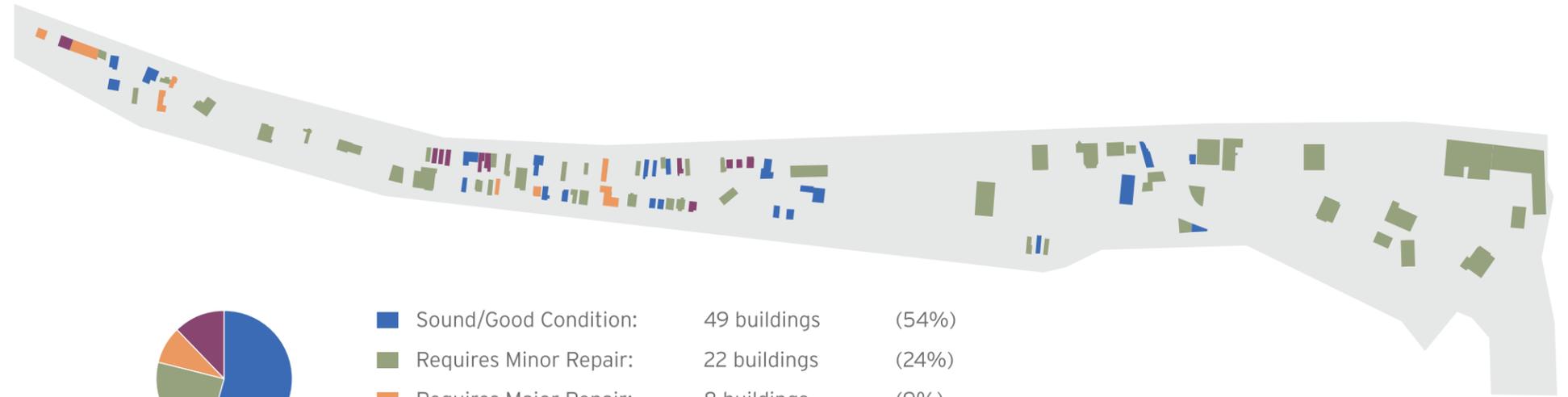
**\*NOTE:** For the purposes of this evaluation, the South Fairmount corridor was defined as the area south of Queen City Avenue, north of Westwood Avenue, west of the Mill Creek, and east of White Street. This area covers 61 acres and contains 90 existing structures.

## IDENTITY: BUILDING CONDITION

In September 2009, the Hamilton County Regional Planning Commission (HCRPC) completed an urban audit of South Fairmount. One aspect of this study was an assessment of the “exterior physical conditions” for 244 buildings in the neighborhood. The HCRPC’s evaluation rated buildings according to one of four categories:

- (1) Sound/Good Condition
- (2) Requires Minor Repair
- (3) Requires Major Repair
- (4) In Critical Condition

Within the stream channel corridor, more than half of the buildings were rated as sound/good condition. Twenty percent of the buildings were rated as requiring major repair or in critical condition.



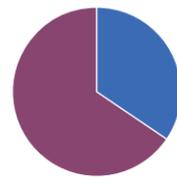
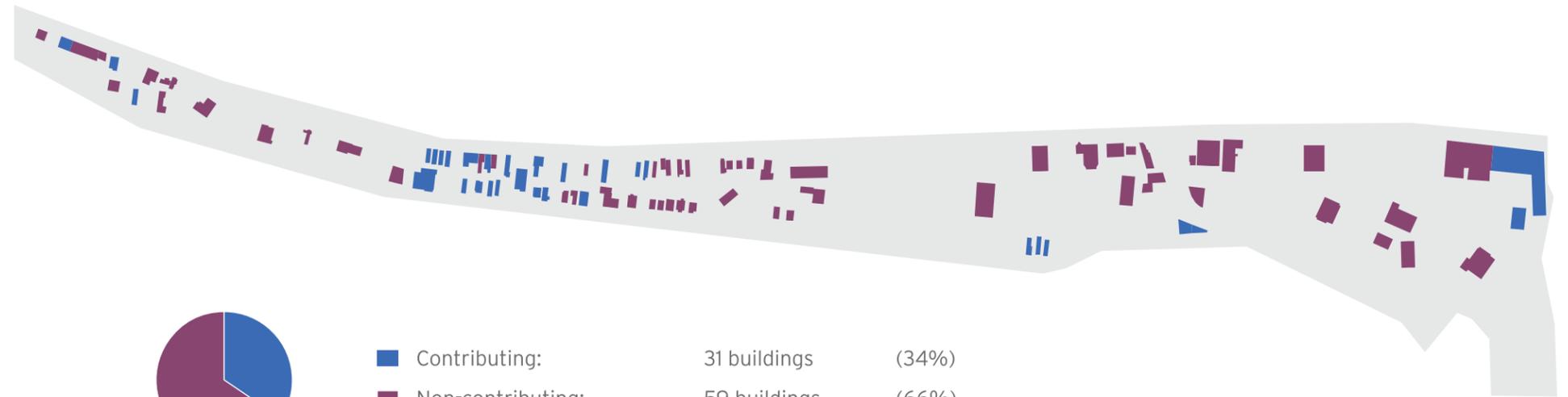
Sound/Good Condition:	49 buildings	(54%)
Requires Minor Repair:	22 buildings	(24%)
Requires Major Repair:	8 buildings	(9%)
Critical Condition:	11 buildings	(12%)

## HISTORY: ARCHITECTURAL CHARACTER

A second tier of evaluation focused on the architectural character of buildings in the South Fairmount corridor. Specifically, this evaluation rated buildings according to one of two categories:

- (1) Contributing
- (2) Non-contributing

A contributing building, such as a nineteenth century residence, adds to the neighborhood’s historical integrity and/or architectural qualities. A non-contributing building, such as a gas station, is considered to be less significant. Within the stream corridor, 34 percent of the buildings were rated as contributing. Fifty-nine buildings (66% percent of the buildings in the corridor) were rated as non-contributing.



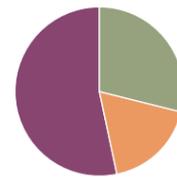
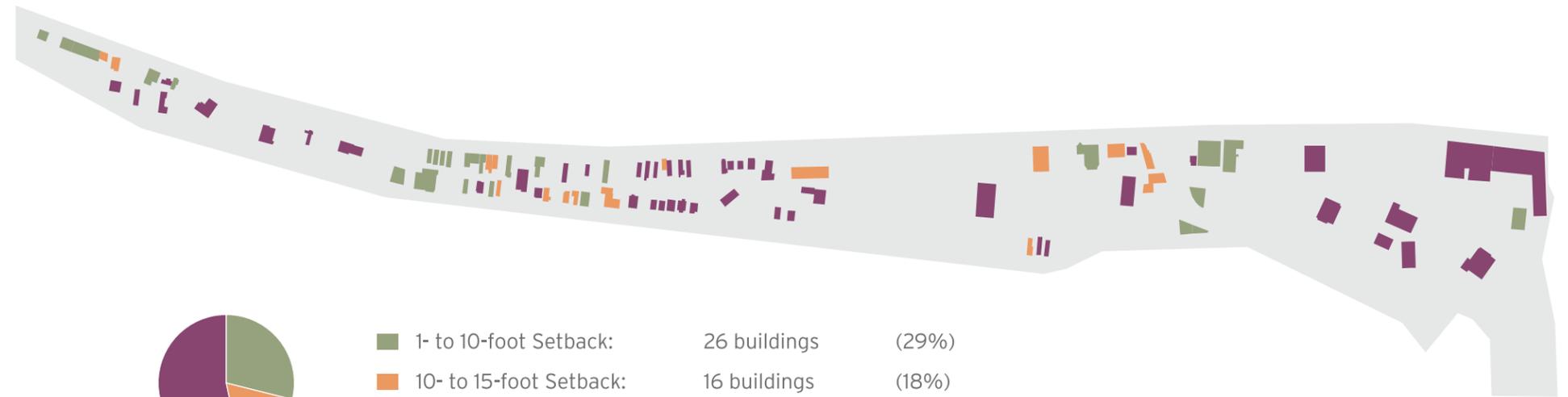
Contributing:	31 buildings	(34%)
Non-contributing:	59 buildings	(66%)

## SCALE: BUILDING SETBACK

A third tier of evaluation focused on building scale within the corridor. The scale of buildings in relation to the sidewalk and roadway (i.e., the building setback) is vital to the long-term success of a neighborhood business district. For example, buildings with appropriate setbacks (i.e., those oriented closer to the street) help improve accessibility and enhance the pedestrian environment. The evaluation of scale rated buildings according to one of three categories:

- (1) 1- to 10-foot setback
- (2) 10- to 15-foot setback
- (3) > 15-foot setback

Twenty-six buildings in the corridor have limited setbacks (i.e., ten feet or less), while more than half is located fifteen feet or more from the edge of the roadway.



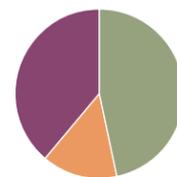
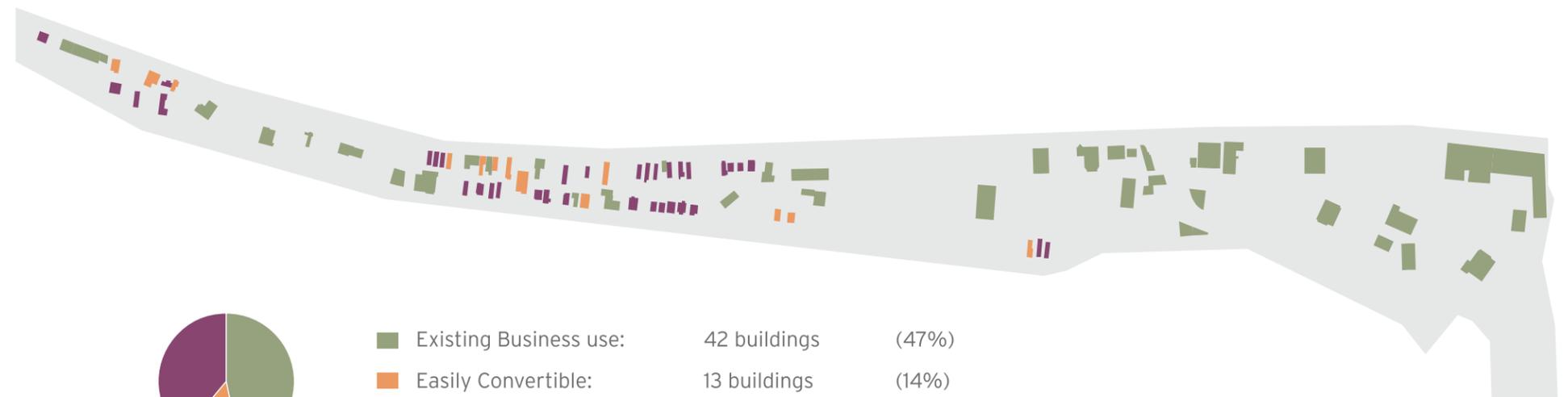
1- to 10-foot Setback:	26 buildings	(29%)
10- to 15-foot Setback:	16 buildings	(18%)
> 15-foot Setback:	48 buildings	(53%)

## ADAPTABILITY: CONVERSION TO NBD USES

A neighborhood business district (NBD) provides employment opportunities and also serves as a destination for residents and visitors. Because of anticipated redevelopment in the corridor, the next level of evaluation focused on how well existing buildings adapt to uses conducive to a successful neighborhood business district. Specifically, the evaluation of adaptability rated buildings according to one of three categories:

- (1) Existing Business Use
- (2) Easily Convertible
- (3) Non-convertible

Slightly less than half of the buildings in the corridor are currently business use. Thirteen buildings (14 percent of the corridor) were rated as easily converted to a mixed uses. Forty percent were rated as non-convertible.



Existing Business use:	42 buildings	(47%)
Easily Convertible:	13 buildings	(14%)
Non-convertible:	35 buildings	(39%)

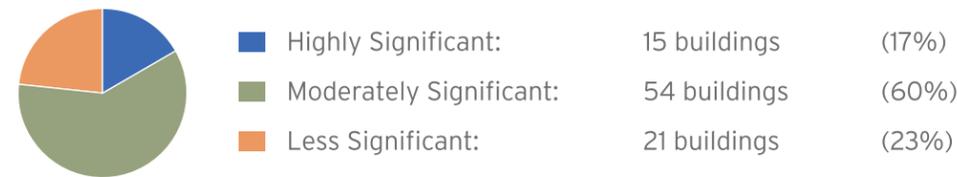
# COMPOSITE ASSESSMENT: BUILDING RATING

The final step of the corridor assessment identifies structures that contribute to South Fairmount as a neighborhood business district and as a destination for residents and visitors. Using a building rating overlay, Human Nature combined the ranked values from the four tiers of evaluation and characterized buildings as one of three types:

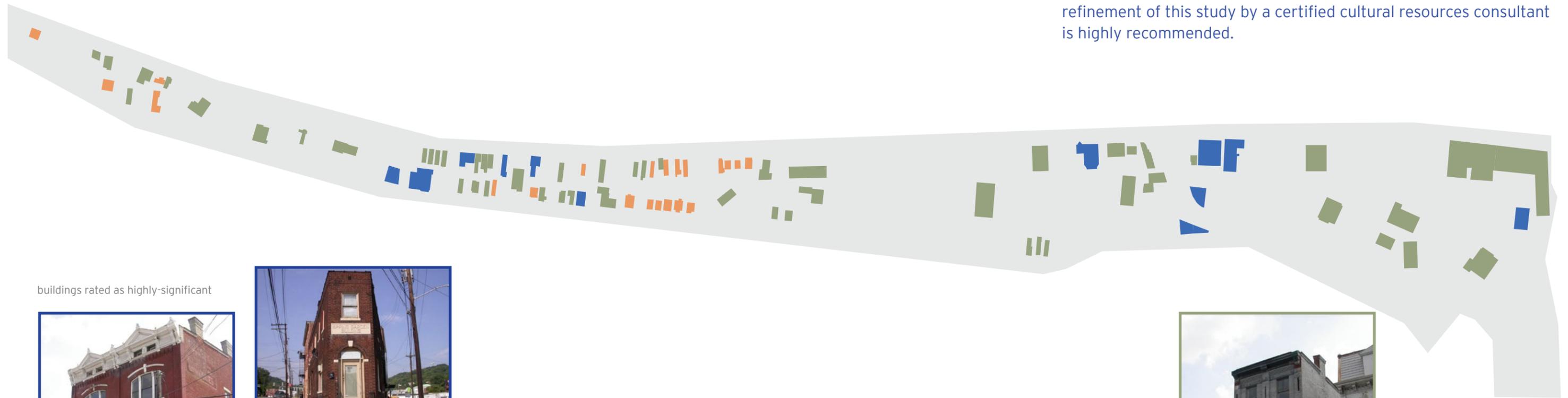
Highly-significant buildings are those that scored well in each evaluation category and had a composite rating between three and four; moderately-significant buildings are those that had a composite rating between five and seven; and less significant buildings had a composite rating between eight and nine.

The majority of buildings (60 percent) were rated as moderately significant. These buildings are in good condition, contribute to the neighborhood's unique architectural qualities, are located close to the sidewalk and roadway, and conform to business uses. Twenty-one buildings were rated as less significant. Overall, these buildings do not support redevelopment goals for the corridor.

- (3-4) Highly-significant
- (5-7) Moderately-significant
- (8-9) Less significant



**NOTE:** This evaluation was a preliminary step for identifying which buildings contribute to the qualities that make a successful neighborhood business district. This evaluation does not represent a complete evaluation of the corridor, nor does it address permitting requirements or incorporate community input and priorities. Further refinement of this study by a certified cultural resources consultant is highly recommended.



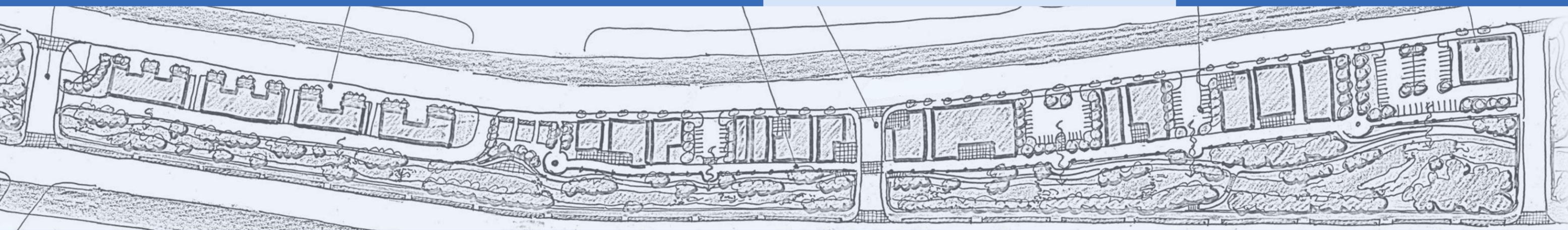
buildings rated as highly-significant



buildings rated as moderately-significant



# COMMUNITY OPPORTUNITIES PLAN

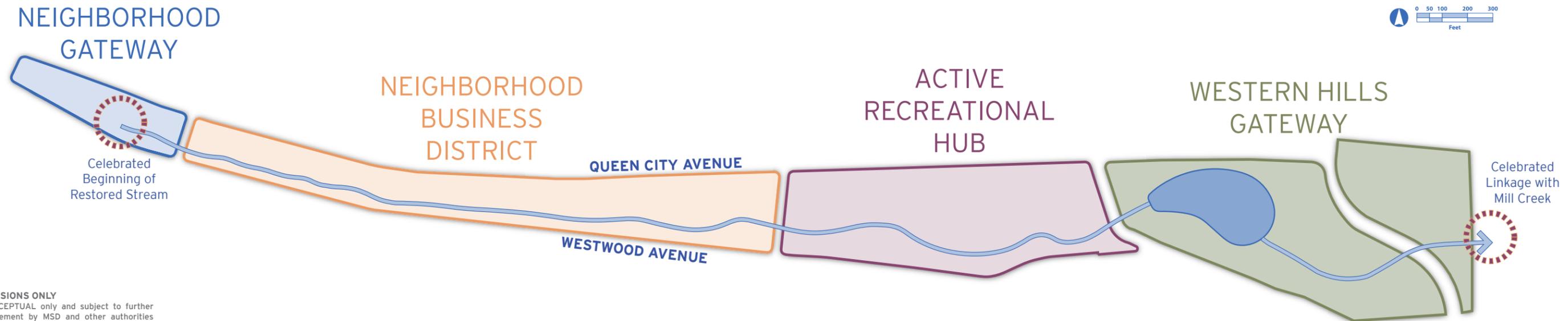


# COMMUNITY OPPORTUNITIES PLAN

Integrating the results from the assessment of buildings in the South Fairmount corridor, Human Nature created a conceptual vision for how MSD's investment could be a catalyst for the transformation of the core neighborhoods in the Lick Run watershed. Central to this vision is restoring the historical Lick Run stream in South Fairmount, relieving pressure on the combined sewer system, transporting and cleansing stormwater, and turning the corridor into an asset and amenity for the community. This restored stream would be the spine of a central open space system around which other community enhancements would be structured. A new, pedestrian-friendly neighborhood business district would flank the northern side of the open space corridor, which would have trails, recreational amenities, bridges, gardens, natural plantings and urban hardscape areas for community interaction. A holistic and comprehensive network of infrastructure throughout the entire Lick Run watershed is the foundation for the success of the restored stream corridor. This is the vision that supports goals for Communities of the Future, and this is the context in which the proposed restored stream was evaluated.

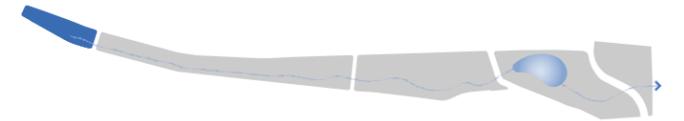


## LAND USE ZONES



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# NEIGHBORHOOD GATEWAY

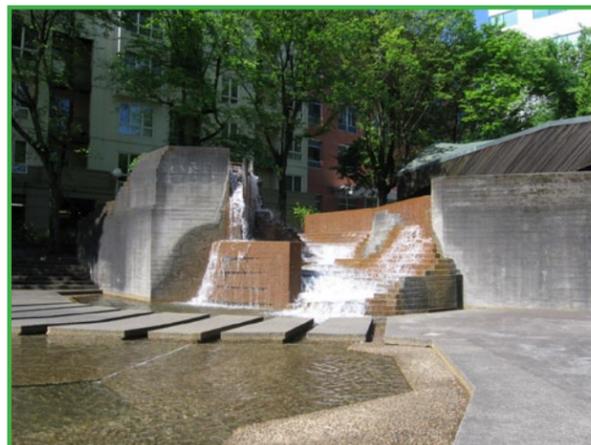


- At the western edge of the project corridor, this zone represents a physical neighborhood gateway and a celebratory moment for the beginning of the restored stream.
- On the west, stormwater runoff passes through a large water quality feature (i.e., sediment forebay) and then to a bioretention cell. Prominent gateway signage serves as a visual announcement for the adjacent neighborhood business district.
- A parking area provides access to the neighborhood gateway and headwaters of the restored stream, as well as to the corridor's internal pedestrian and bikeway trail system.
- This trail system is an important link to formal bike routes along Queen City and Sunset avenues and to Cincinnati's western neighborhoods.
- On the east, stormwater from the underground culvert passes through an artistic stream headwater feature (see image below) into a water-cleansing wetland.

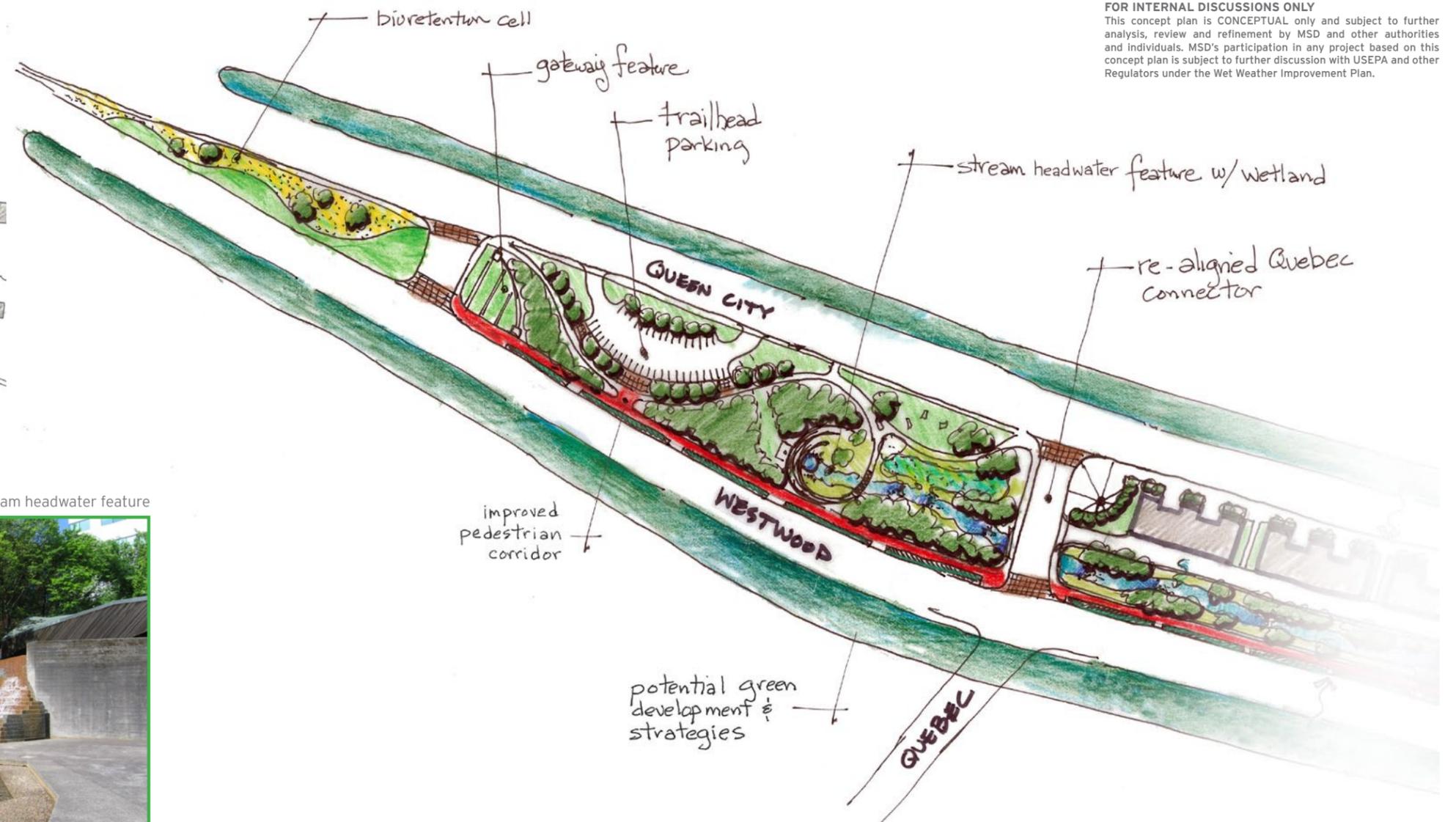
water quality feature (i.e., sediment forebay)



neighborhood gateway



artistic stream headwater feature



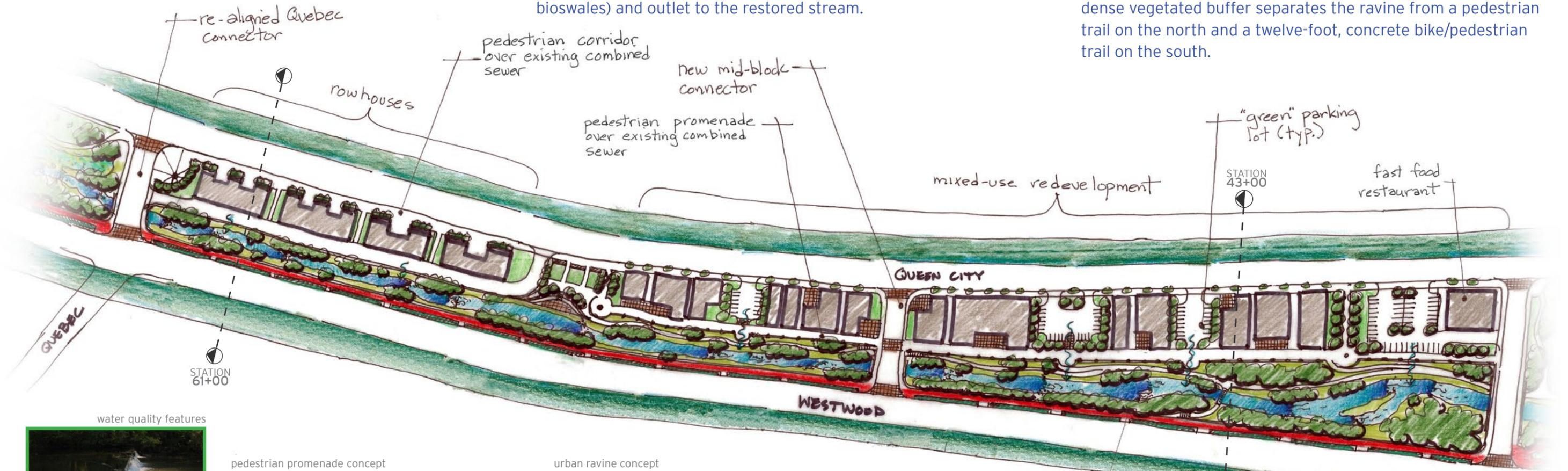
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NOTE: Concept image not to scale

# NEIGHBORHOOD BUSINESS DISTRICT



- This zone is flanked by Quebec Avenue on the west and Grand Avenue on the east. With residential, retail, and business uses, this area is the corridor's mixed-use destination and a sustainable catalyst for neighborhood redevelopment.
- Directly adjacent to the realigned Quebec Avenue connector, a cluster of row houses provides new housing opportunities for the neighborhood. With sufficient building depths, this cluster could incorporate retail uses at ground level.
- Redevelopment focuses on commercial and business uses like retail, restaurants, and offices. A formal promenade between these buildings and the stream channel provides an outdoor gathering space with seating and lighting. Secondary pathways connect the promenade to the edges of the ravine.
- The neighborhood business district relies on surface and on-street parking. Buildings and surface parking areas integrate green stormwater best management practices (e.g., porous pavement, bioswales) and outlet to the restored stream.
- A new mid-block connector provides access to this area and to both Queen City and Westwood avenues. All pedestrian crosswalks, which provide pedestrian safety and help to calm through traffic, incorporate specialized pavements.
- The restored stream passes through the urban ravine, which is a narrow channel surrounded by retaining walls and natural vegetation. The retaining walls, composed of natural stone, formalize the architectural character of the neighborhood. A dense vegetated buffer separates the ravine from a pedestrian trail on the north and a twelve-foot, concrete bike/pedestrian trail on the south.



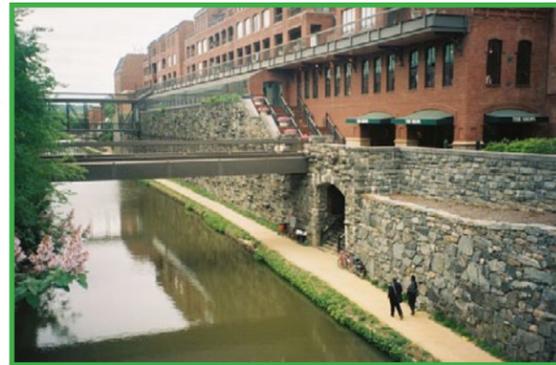
water quality features



pedestrian promenade concept



urban ravine concept



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NOTE: Concept image not to scale

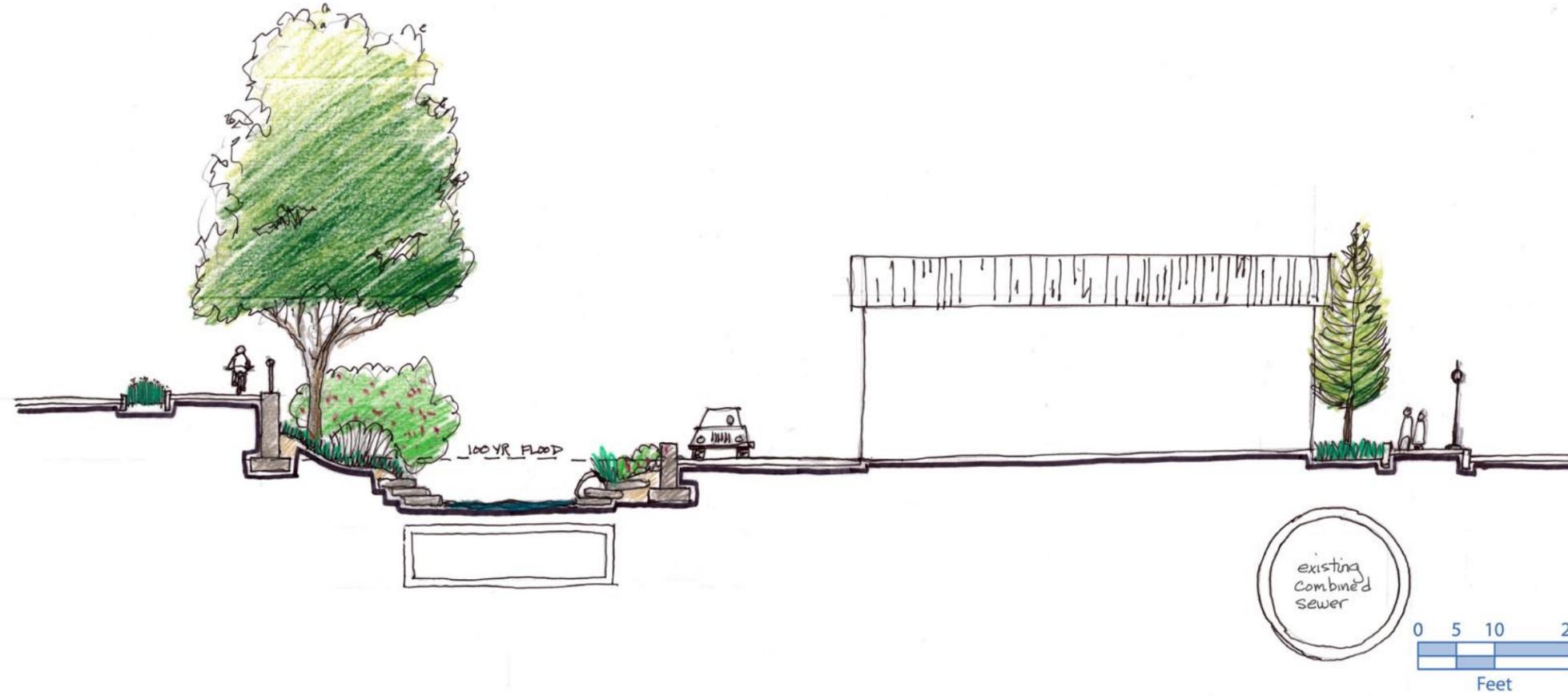
# STATION 61+00

VIEWING WEST

(REFER TO PAGE 13)

NOTE: Box conduit structure and flood elevations are shown for illustration purposes only

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# STATION 43+00

VIEWING WEST

(REFER TO PAGE 13)

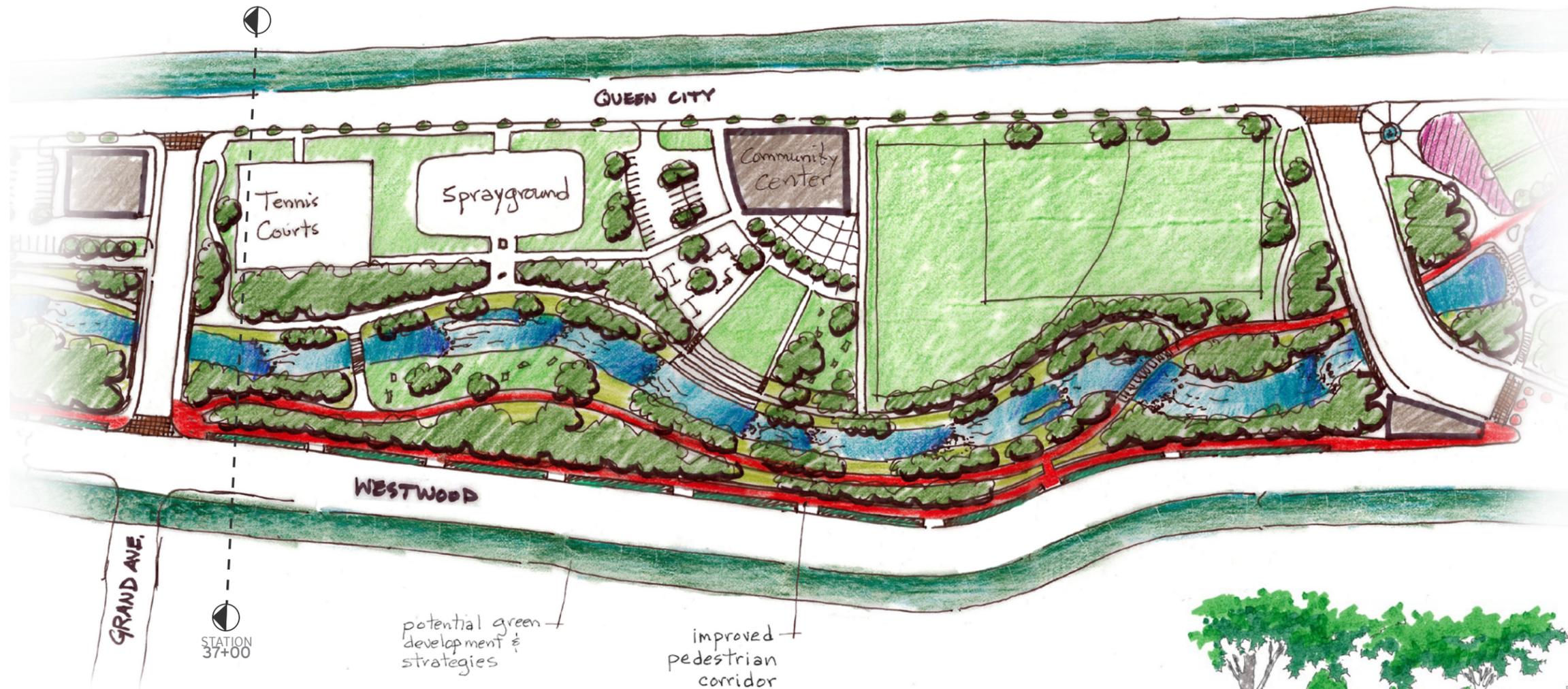


# ACTIVE RECREATIONAL HUB

- This zone between Grand and Harrison avenues serves as the primary destination for active recreation. The plan seeks to preserve existing recreational uses, although they are reorganized and improved. A new community center is located between tennis courts, a sprayground, and multi-use athletic fields. The community center is served by a surface parking lot, a playground, and an outdoor amphitheater, each having access to the northern banks of the stream channel.

- Here the restored stream changes from an urban ravine into a dynamic, more natural habitat that represents the beginning of a greenway linkage with the Mill Creek. The channel widens to accommodate a natural floodplain. The floodplain provides a robust riparian habitat, integrating native trees, shrubs and perennials within dense planting zones. Water quality features like step pools, riffles, and gentle meanders help keep water cool and aerated.

- This zone also builds upon the internal trail system. Directly east of Grand Avenue, the bicycle/pedestrian trail separates into two destinations: one following Westwood Avenue and leading to the Western Hills Viaduct, and the other following the stream and leading to the Mill Creek. Both provide important linkages to regional trail networks. There are two stream crossings, one for pedestrians and another for both pedestrians and bicycles.



natural floodplain concept



NOTE: Concept image not to scale

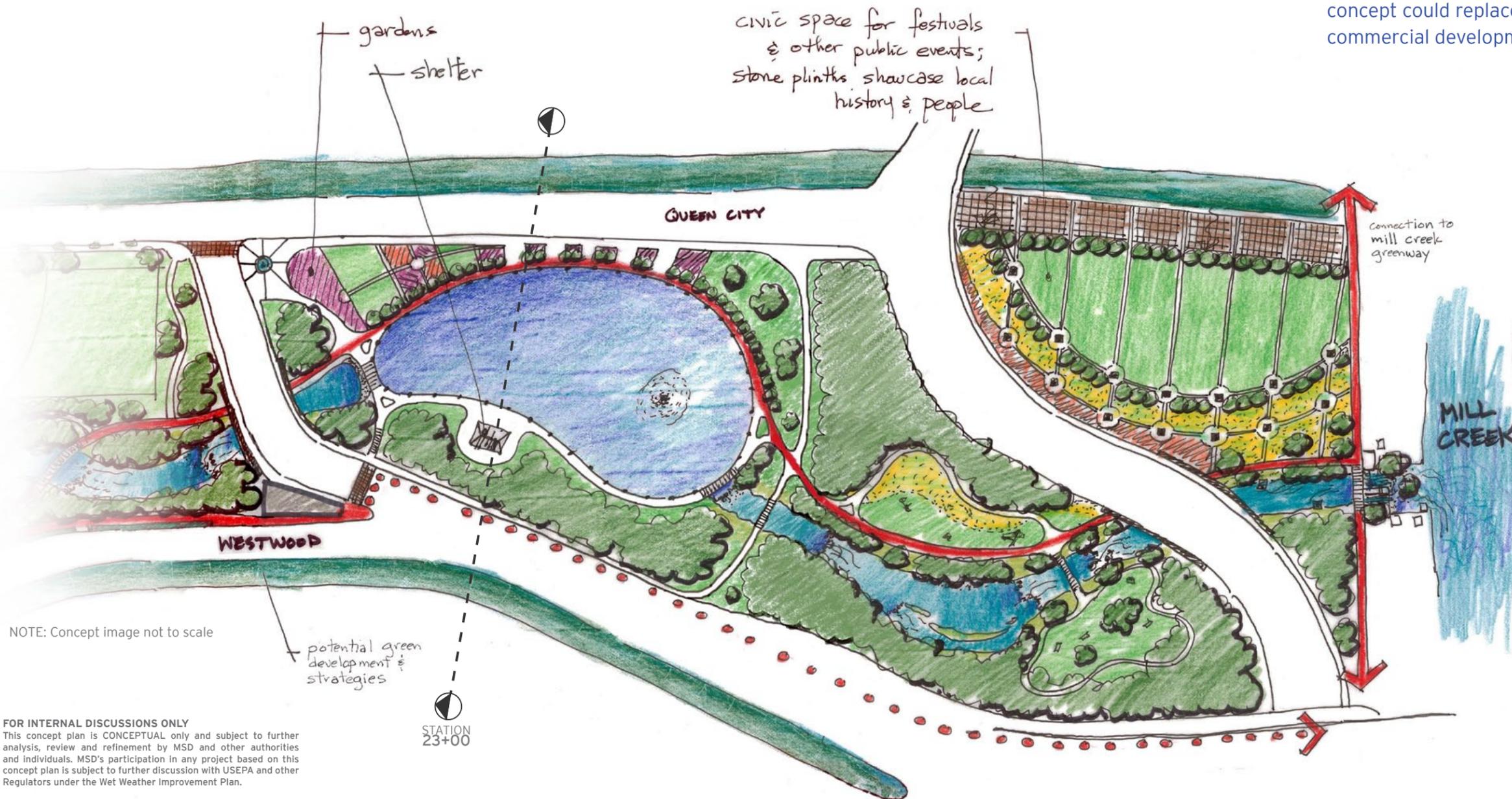
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# WESTERN HILLS GATEWAY

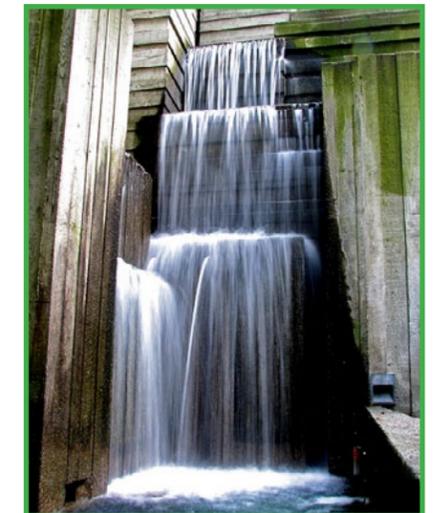
- This zone represents the celebratory moment of release to the Mill Creek and a highly-visible, natural gateway for west-bound traffic to Cincinnati's western neighborhoods.
- To better serve traffic flow, minor realignments are proposed for Harrison, Beekman, and State avenues. On one side, Queen City Avenue integrates permanent parking and innovative stormwater management features like stormwater planters and bump-outs.

- Directly east of Beekman Avenue, the restored stream empties into a large lake feature. This centralized lake serves as a primary civic space, featuring a lit pedestrian promenade, civic gardens, spaces for public art, and a shelter. The lake area offers passive recreational uses (e.g., walking and picnicking) and additional water quality benefits. An alternative concept could focus on commercial development space with a smaller lake feature.

- At the lake's outfall, the restored stream follows a dramatic meander through a heavily-vegetated floodplain. Along this final course, the stream passes over additional step pools and riffles before reaching its confluence with Mill Creek. In addition to serving as a flood barrier, this point presents opportunities for an architecturally-dramatic outfall feature.
- A civic space north of the channel integrates open space for festivals and other public events. Stone plinths acknowledge and celebrate the neighborhood's industrial history. An alternative concept could replace the civic use space with residential and commercial development.



outfall feature



trail system concept



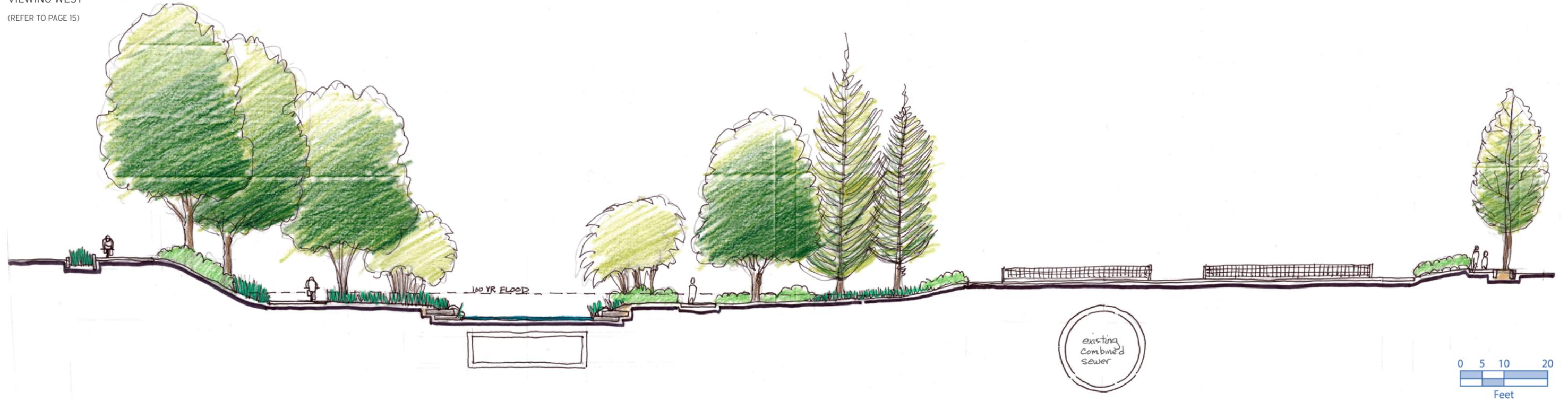
CONCEPTUAL SYSTEM CONFIGURATION

# STATION 37+00

VIEWING WEST

(REFER TO PAGE 15)

NOTE: Box conduit structure and flood elevations are shown for illustration purposes only

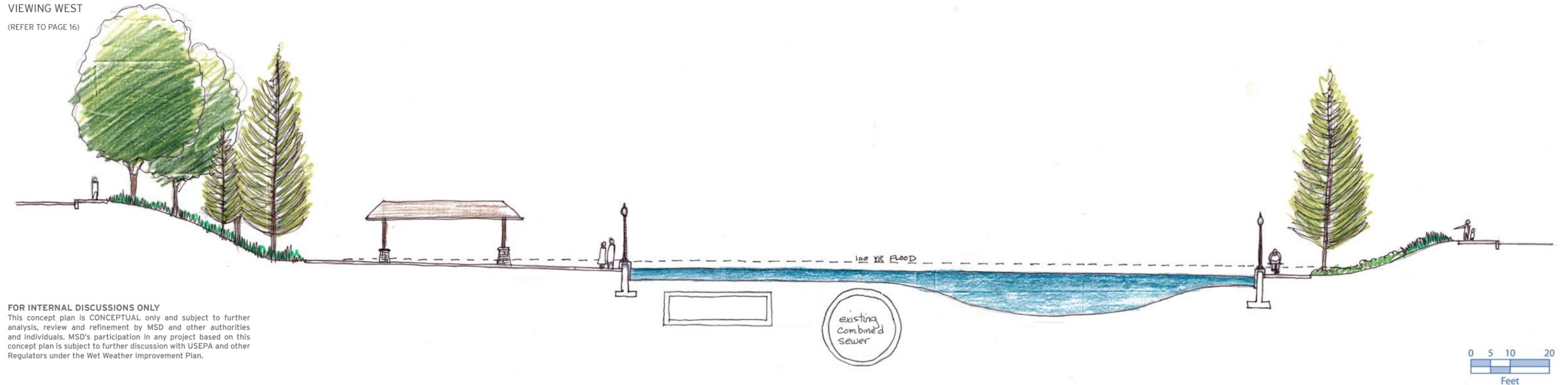


CONCEPTUAL SYSTEM CONFIGURATION

# STATION 23+00

VIEWING WEST

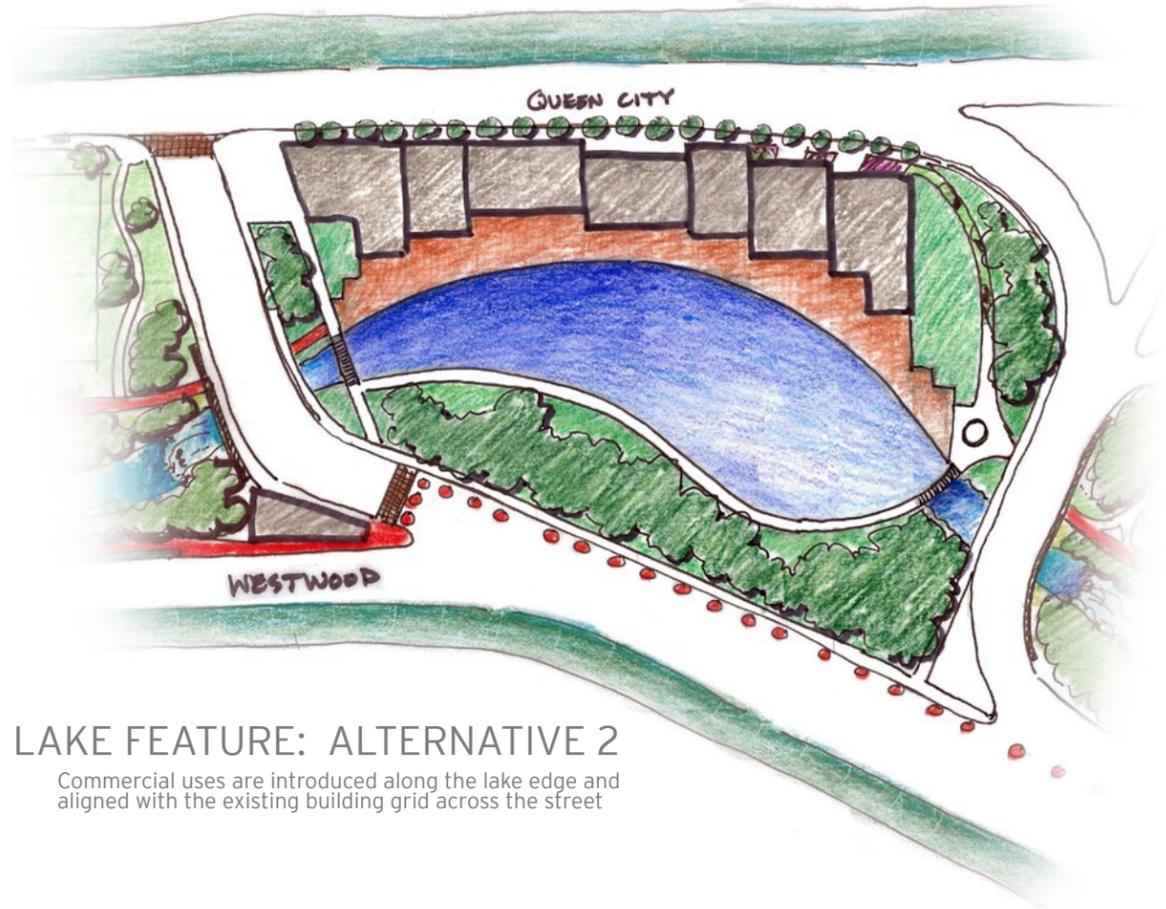
(REFER TO PAGE 16)



**FOR INTERNAL DISCUSSIONS ONLY**

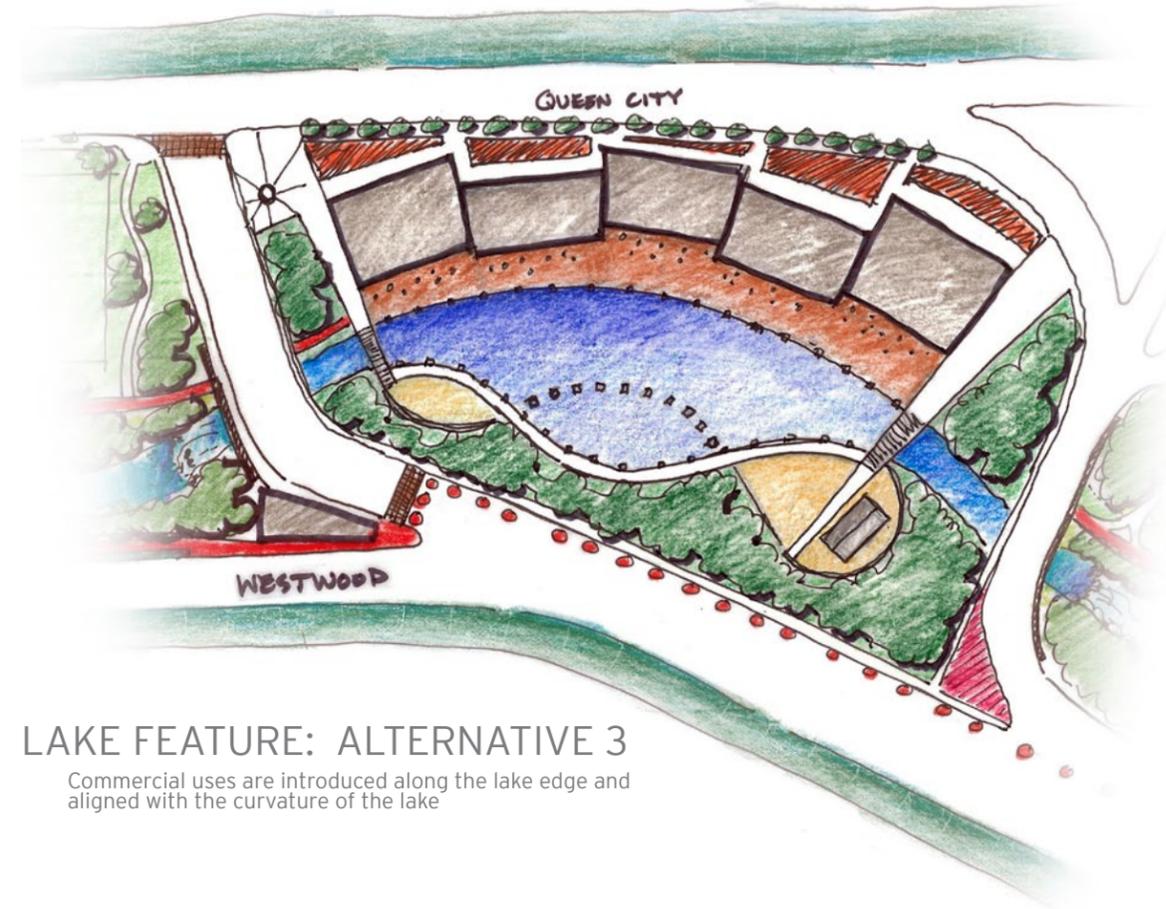
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# LAKE AREA ALTERNATIVES



## LAKE FEATURE: ALTERNATIVE 2

Commercial uses are introduced along the lake edge and aligned with the existing building grid across the street

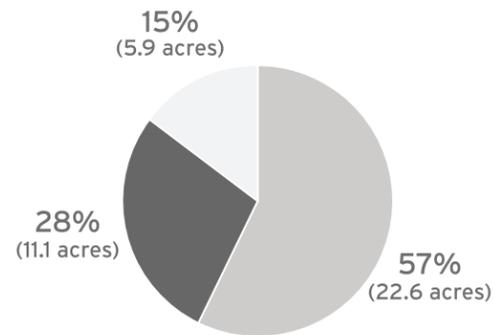


## LAKE FEATURE: ALTERNATIVE 3

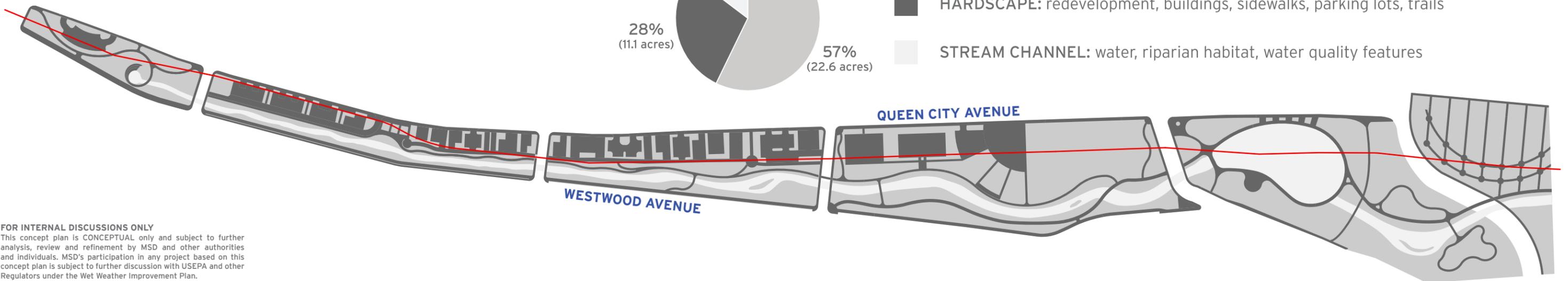
Commercial uses are introduced along the lake edge and aligned with the curvature of the lake

# CORRIDOR SUMMARY

EXISTING COMBINED SEWER SHOWN IN RED



- LANDSCAPE: public open space, native vegetation, meadows, gardens
- HARDSCAPE: redevelopment, buildings, sidewalks, parking lots, trails
- STREAM CHANNEL: water, riparian habitat, water quality features



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# REDEVELOPMENT PRINCIPLES

Restoring the historical Lick Run stream channel benefits MSD's combined sewer system and provides opportunities for comprehensive, sustainable redevelopment within the entire watershed. Reconnecting natural systems to the city's core neighborhoods is a leveraged infrastructure investment - a catalyst for transportation, employment, housing, and recreation improvements - that can help build upon the short- and long-term sustainability of the watershed community while celebrating its unique cultural and natural assets as a gateway community to Western Hills.

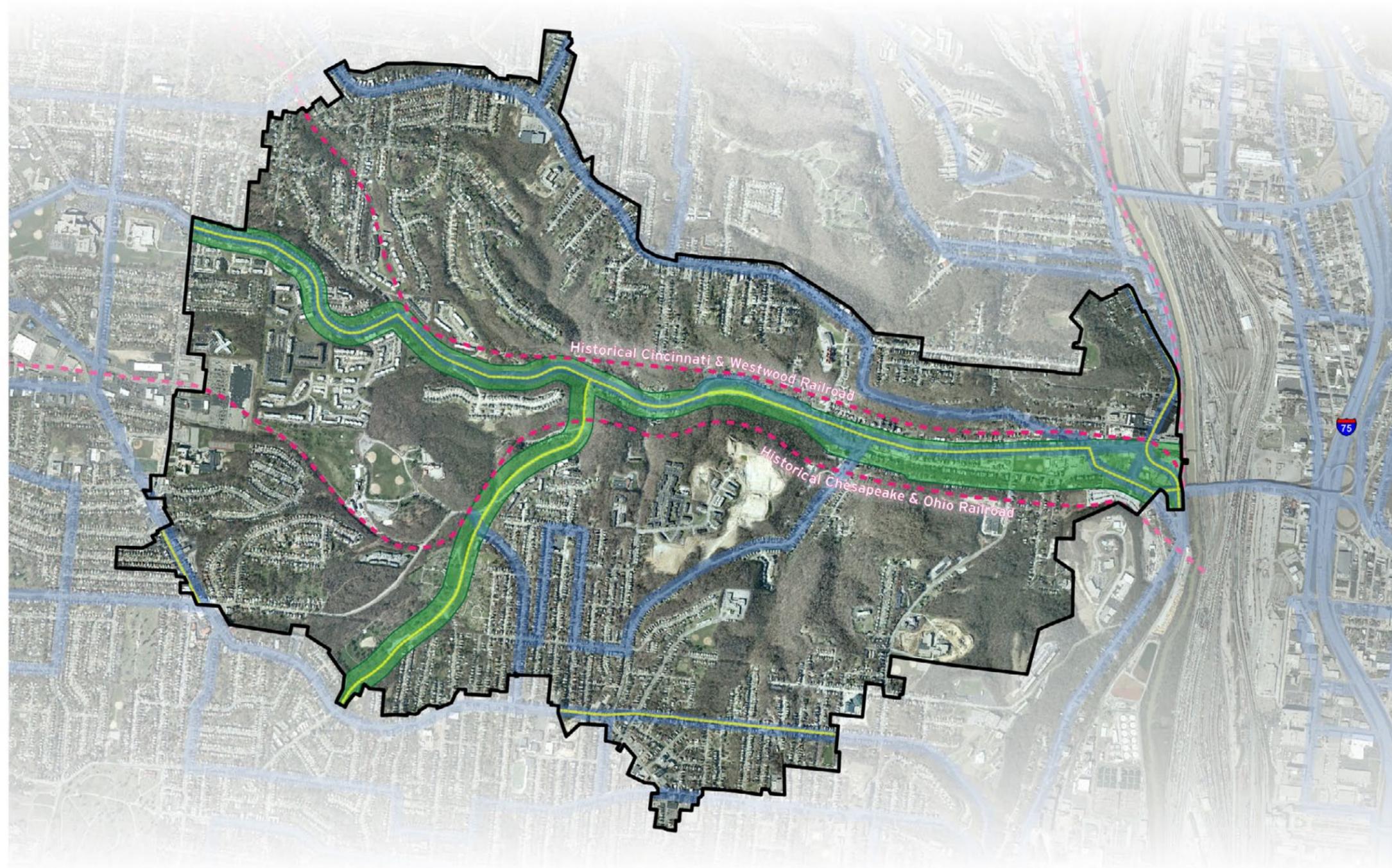
With this in mind, the following redevelopment principles are offered to help guide future improvements in the watershed and support MSD's goals for Communities of the Future.



- The corridor and the public process that helps recreate it should be a model for environmentally-, socially-, and economically-sensitive neighborhood redevelopment within greater Cincinnati.
- The corridor should be redeveloped as a unique neighborhood with a strong identity and character.
- Businesses should serve both residents and pass-through needs.
- Public spaces should serve the recreational, social, and civic needs of the community.
- Pedestrian and vehicular circulation systems should be safe, legible, and promote the quality of life for both residents and visitors.
- Bikeways, trails, and other open space systems should connect to existing/proposed systems in the sub-watershed and the Mill Creek valley.
- All redevelopment projects should meet or exceed sustainable principles (e.g., LEED) for green buildings and neighborhoods and incorporate form-based codes (where possible).
- Stormwater management strategies should maximize opportunities for surface infiltration, evaporation, and transpiration.
- Forested hillsides should be protected and, when possible, enhanced to control stormwater runoff, minimize landslides and erosion, and maximize the corridor's landscape frame.



# COMPREHENSIVE TRANSIT OPPORTUNITIES



## Legend

- - - Historical Railroad (abandoned)
- - - Bike Trail
- Bus Route
- Potential Multi-Modal Transit Corridor
- Watershed Boundary

### Chesapeake & Ohio of Indiana Railroad

This standard gauge line opened between 1902 and 1910 and ran west through South Fairmount into Indiana. The route through South Fairmount required navigating through rough terrain, steep hillsides and 9 wooden trestles. The steep hillsides made freight handling a problem. The difficulty of operating through the hillside, declining freight tonnage and the expansion of Queensgate Yards led to the abandonment of the line south of Farnald in 1979.

### Cincinnati & Westwood Railroad

The short, narrow gauge line was constructed in 1874 to provide transportation to the incorporated village of Westwood before it was annexed to the City of Cincinnati. The suburban railroad was constructed primarily as a means to improve the value of suburban land and to motivate people to buy suburban homes. The line was converted to Standard Gauge in 1891 but declined in 1895 with the opening of the Westwood streetcar, which competed for passenger business with cheaper fare and added convenience. The tracks were officially abandoned and dismantled in 1941.

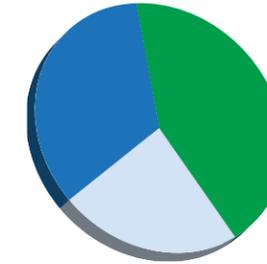
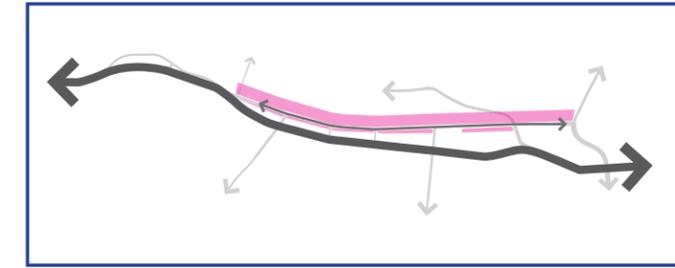
## SOURCE

GIS Data: CAGIS, March 2010  
 Railroad History: Jakuck, J. "Cincinnati Traction History: History, Maps, and Photos of Transit Infrastructure". <http://homepage.mac.com/jjakuckyk/Transit1/index.html>.

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# POTENTIAL BOULEVARD OPPORTUNITY

- Combine Queen City and Westwood avenues into one, multi-lane parkway with street trees and improved traffic flow. This alternative integrates well with recent improvements to Queen City Avenue.
- Transform the former Queen City Avenue into a “Main Street”, with an improved pedestrian realm (e.g., traffic-calming elements, street trees, street planters, etc.).
- Preserve architecturally-significant buildings (shown as black blocks in plan).
- Encourage mixed-use redevelopment (including commercial, office, and residential uses) where purple blocks are shown. Buildings face the “Main Street”, and the stream-side buildings include terraces, outdoor seating, and/or patios.
- Promote larger-scale mixed-use redevelopment (industrial, institutional, and/or commercial) at the eastern end of the corridor.
- Create a central greenspace with a daylighted stream, trail/path opportunities, active recreation, and other amenities.
- Celebrate the connection of the stream to the Mill Creek with a large-scale pond/detention area. This area would be the primary interactive, civic, and celebratory space for the neighborhood.



- Mixed-Use Redevelopment (Industrial, Institutional, Commercial) **24 acres**
- Pedestrian-Oriented Redevelopment (Commercial, Office, Residential) **16.3 acres**
- Green Space (Active and Passive Recreation, Civic Spaces) **30 acres**

FOR INTERNAL DISCUSSIONS ONLY

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