APPENDIX 1

RIVER CORRIDOR PLAN SUPPLEMENTAL MATERIALS

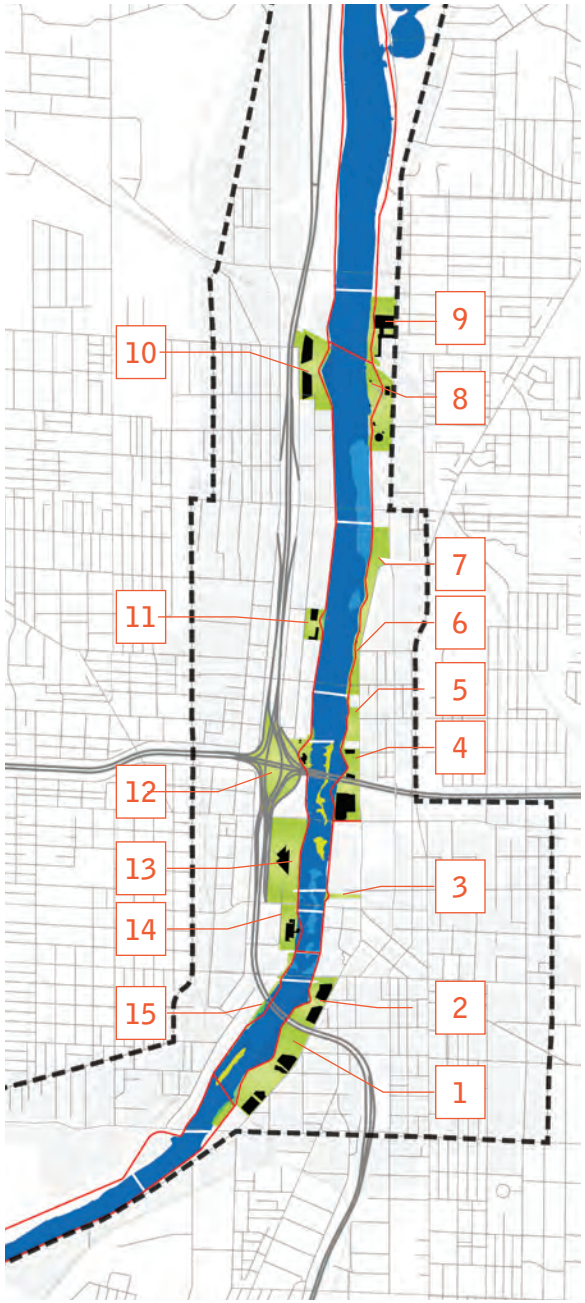
GR FORWARD
DOWNTOWN & RIVER ACTION PLAN >>

APPENDIX 1 >>

Building off the feedback from the public process, a series of priorities were developed that frame and expand upon the idea that certain spaces can be prioritized as they relate to: the possible scale and location of the program, the expansion of program into all four seasons, activation of places, and the inclusion of art. From this process, 15 priority riverfront opportunity sites were identified based upon their ownership status, their need for flood protection infrastructure improvements, and the potential use of these sites as construction staging areas for the GRWW initiative. Each of theses sites has one of four types of open spaces that help to create the new park system: Public Development Sites, Public/Private Partnerships, New Parks and Renovated Park. The detailed descriptions and elaboration on those types can be found in the main report under Goal 1. The illustrative content in this document portrays the intent of the GR Forward masterplan. The exhibits are conceptual in nature and serve as a resource and the basis of further coordination, technical recommendations, and potential implementation.

APPENDIX 1

OPPORTUNITY SITES



1 201 Market
2 Fulton + Market
3 Lyon Street
4 MSU / KC / City
5 6th Street
6 Canal Street
7 Coldbrook
8 Adventure Park
9 Baker Furniture
10 KCRC River Edge
11 Grandview Park
12 Rapids View Park and Interchange Park
13 Ah Nab Awen Park
14 Public Museum
15 GVSU

FIG A1.1: *Birds-eye view of the Grand River looking north*

FIG A1.2: *Birds-eye view of the Grand River looking north*

FIG A1.3: *Birds-eye view of the Grand River looking north*

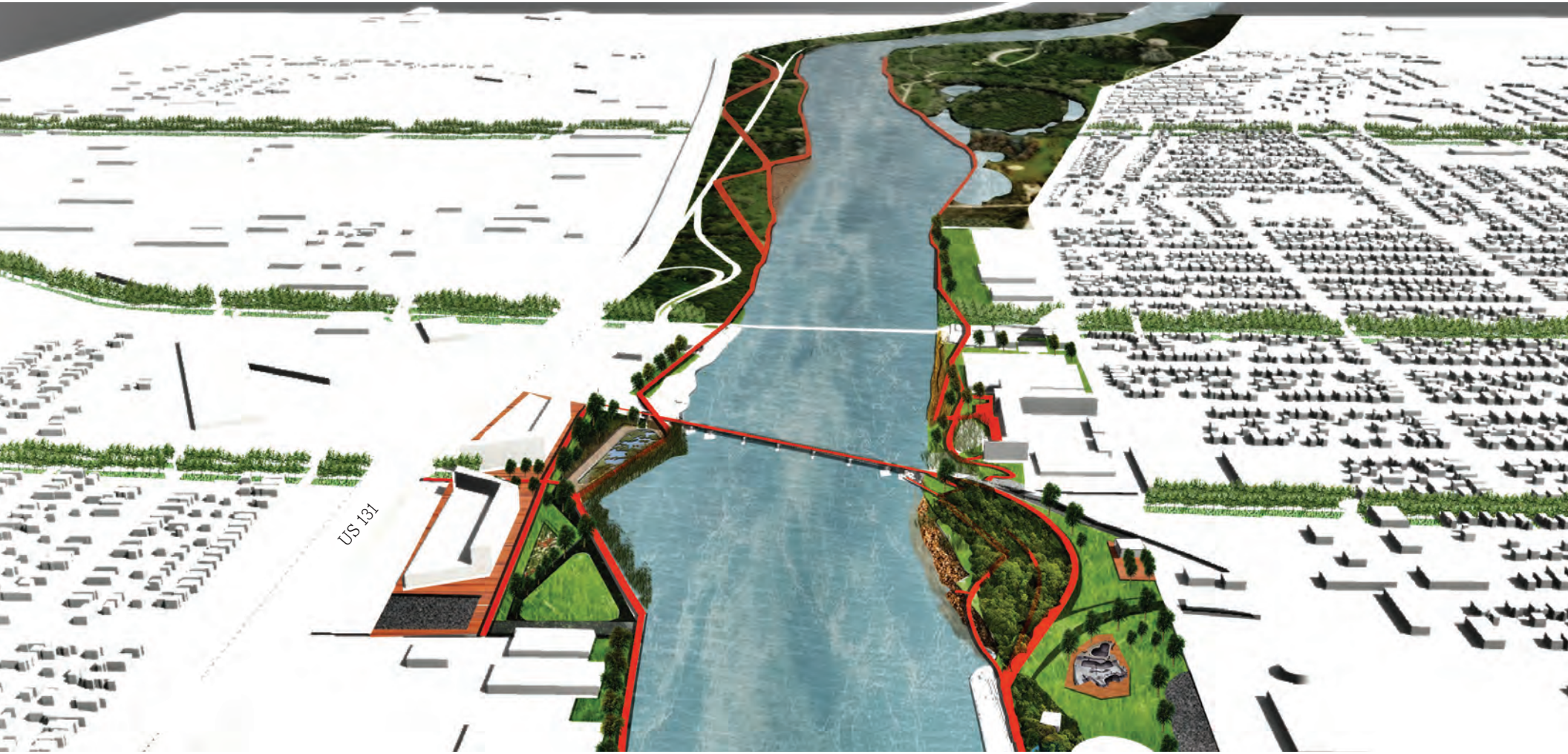


FIG A1.4: *Birds-eye view of the Grand River*

>> 201 Market Street

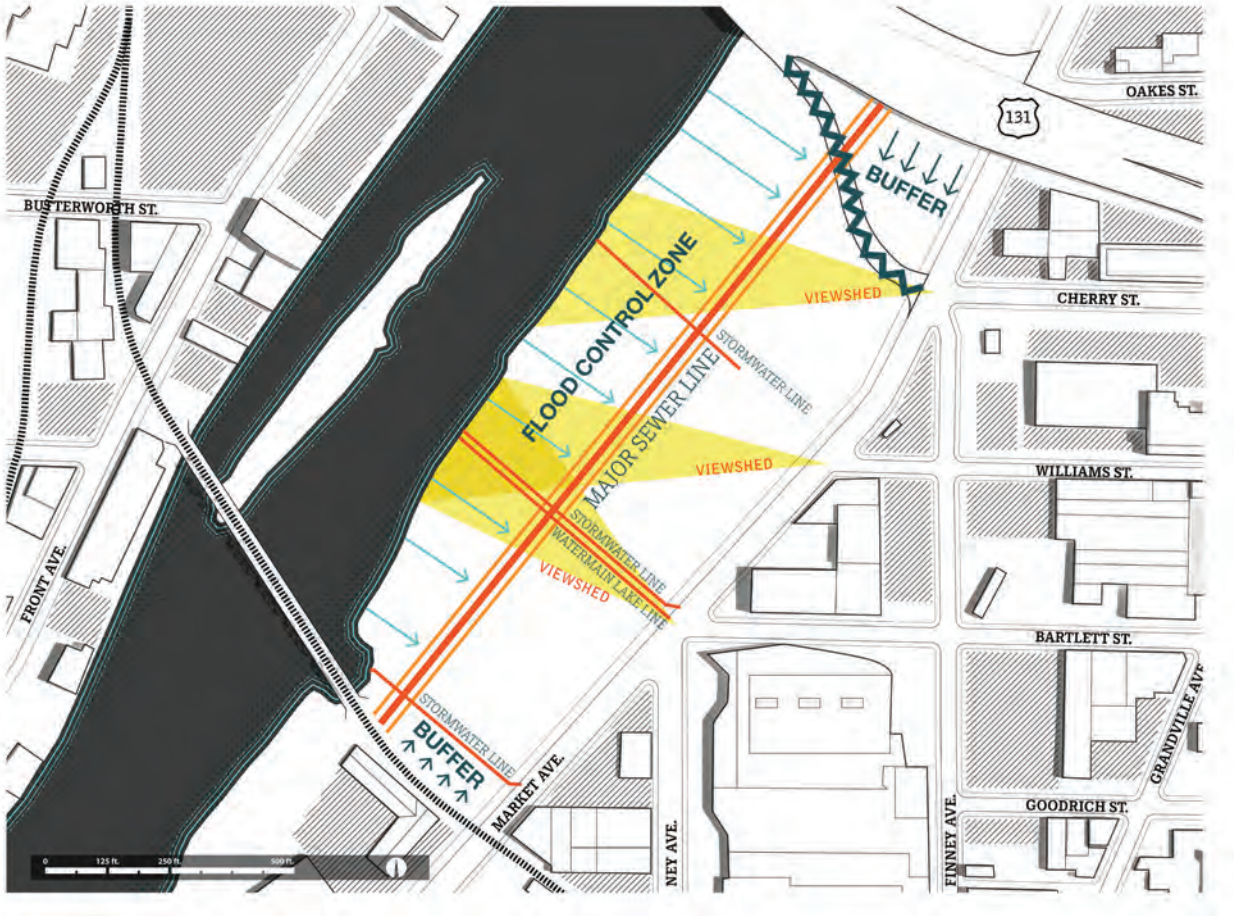


FIG A1.5: *201 Market Street opportunities and constraints*

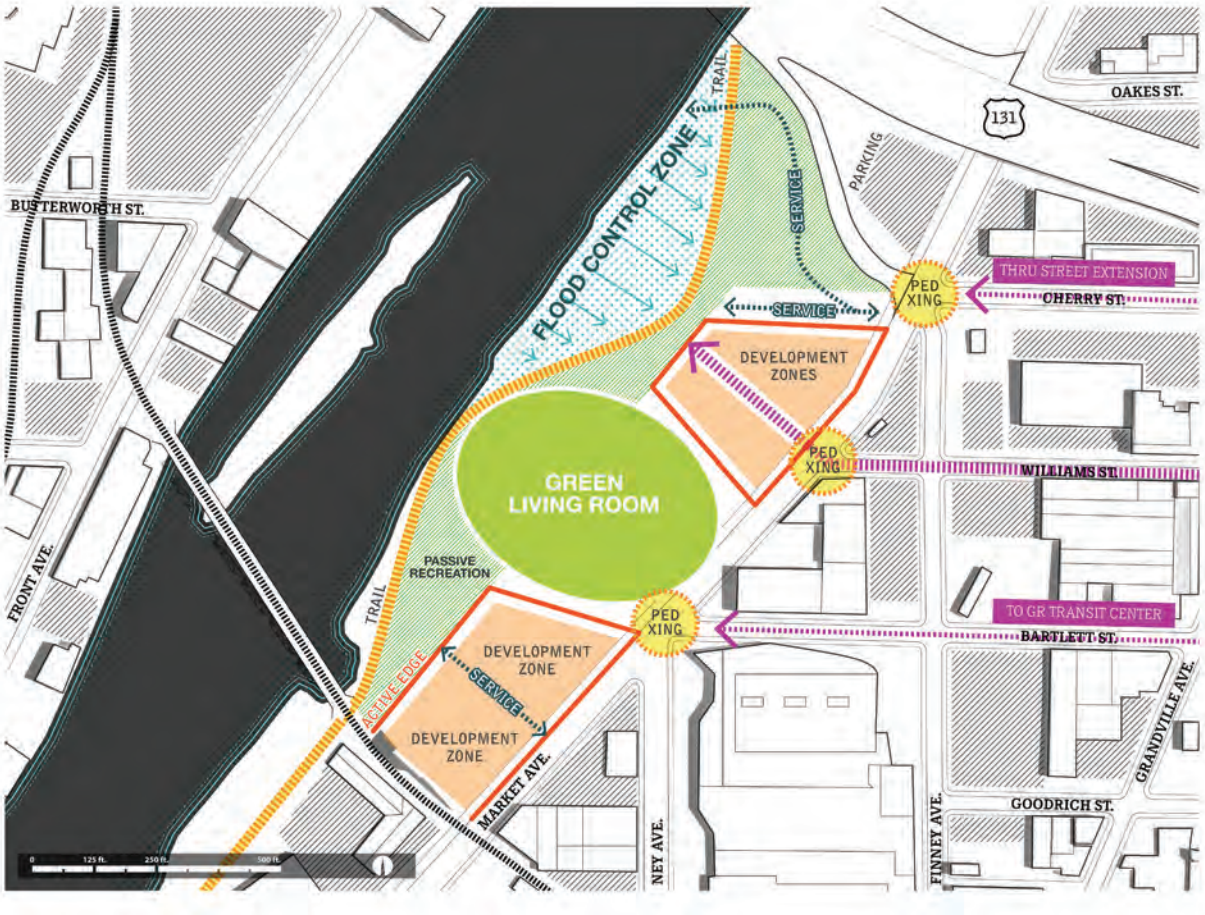


FIG A1.6: *201 Market Street concept design*

Utility Constraints:

- Major sewer line with easement, one minor sewer line, 2 stormwater lines, 48" lake line

The goals of 201 Market are:

- Create a destination, and large scale programmable open space
- Manage flooding through the design of the landscape
- Provide an ecological edge that manages on site stormwater and provides river habitat
- Provide river access including boat access
- Provide a continuous multi-use trail connection and a connection north
- Ensure there are active uses facing both Market Street and the River
- Buffer 131 and the rail line from the open space
- Create safe intersections along Market Street
- Establish a gateway at Cherry Street
- Establish new housing and supporting uses to active the River
- Visually extend "Downtown" south along the River

Flood Managment Method

- Wetland terracing to berm and trail

FIG A1.7: *Proposed 201 Market Street site plan*

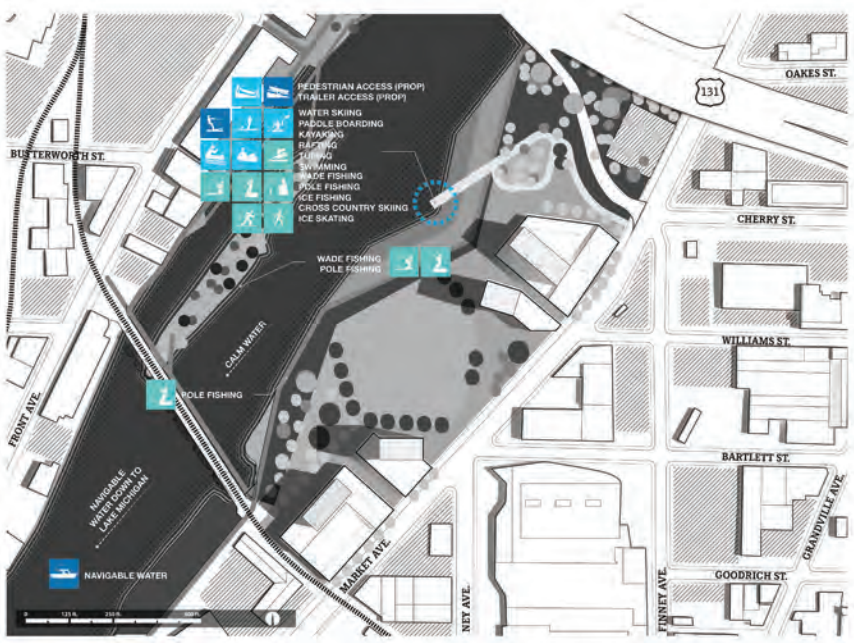


FIG A1.8: *Proposed 201 Market Street water access*

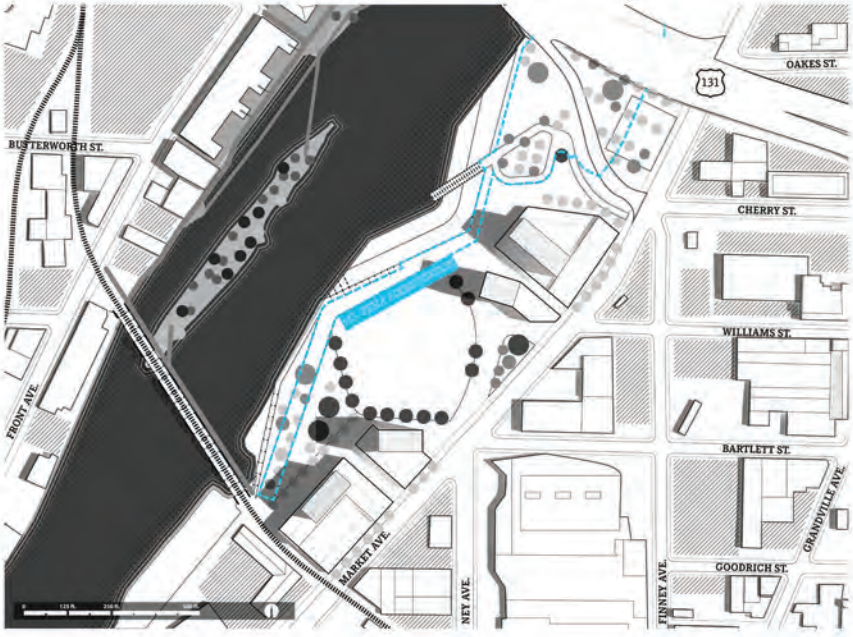


FIG A1.9: *201 Market Street flood considerations*

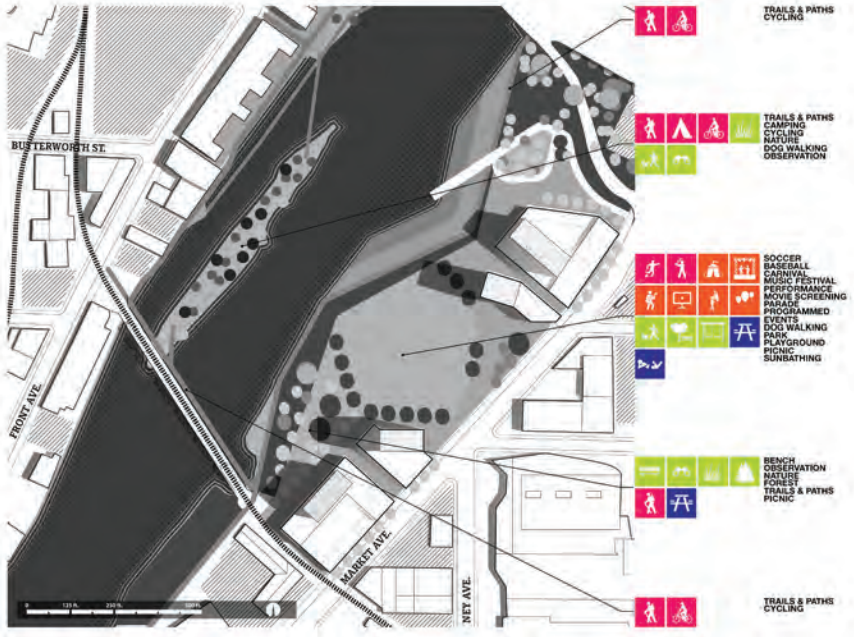


FIG A1.10: *Proposed 201 Market Street land program*

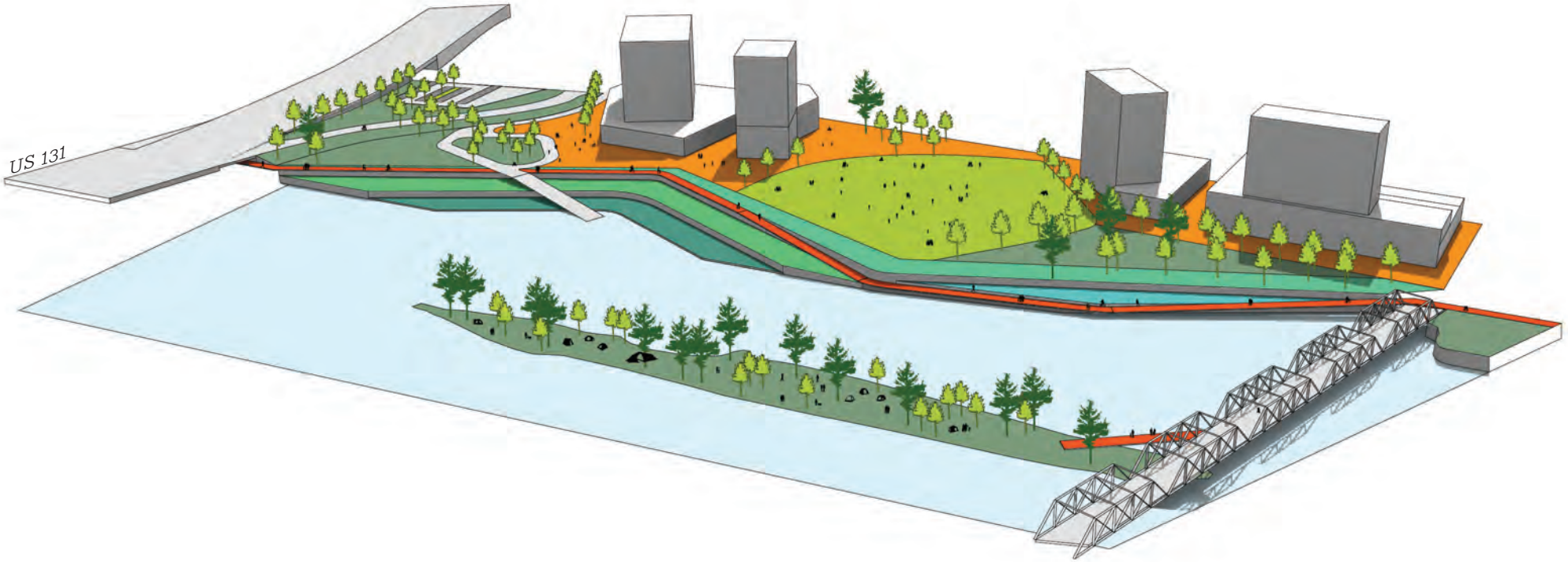


FIG A1.11: *Proposed 201 Market Street aerial view*

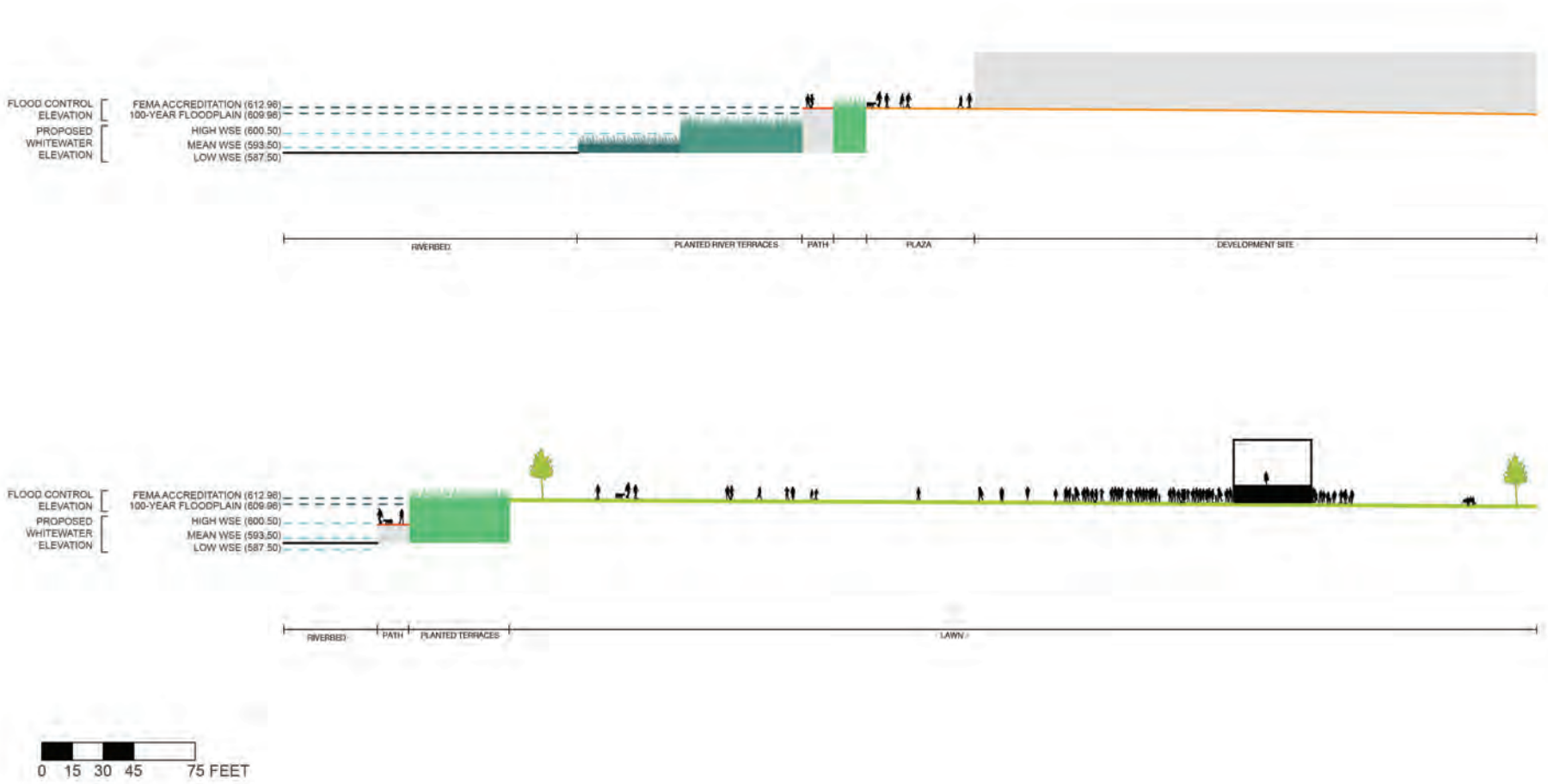


FIG A1.12: *Proposed 201 Market Street site sections*

FIG A1.13: *Proposed 201 Market Street aerial rendering*

>> Fulton + Market

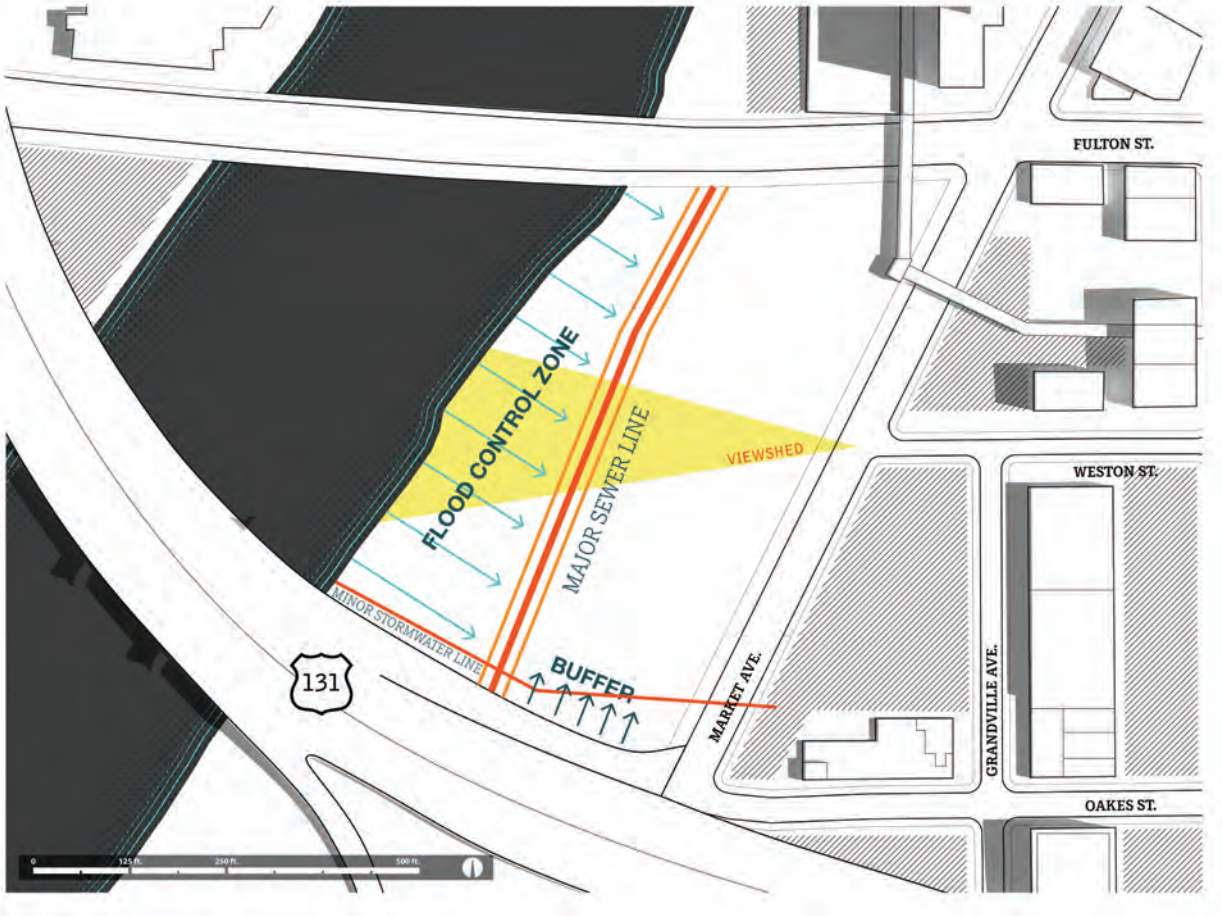


FIG A1.14: *Fulton + Market opportunities and constraints*

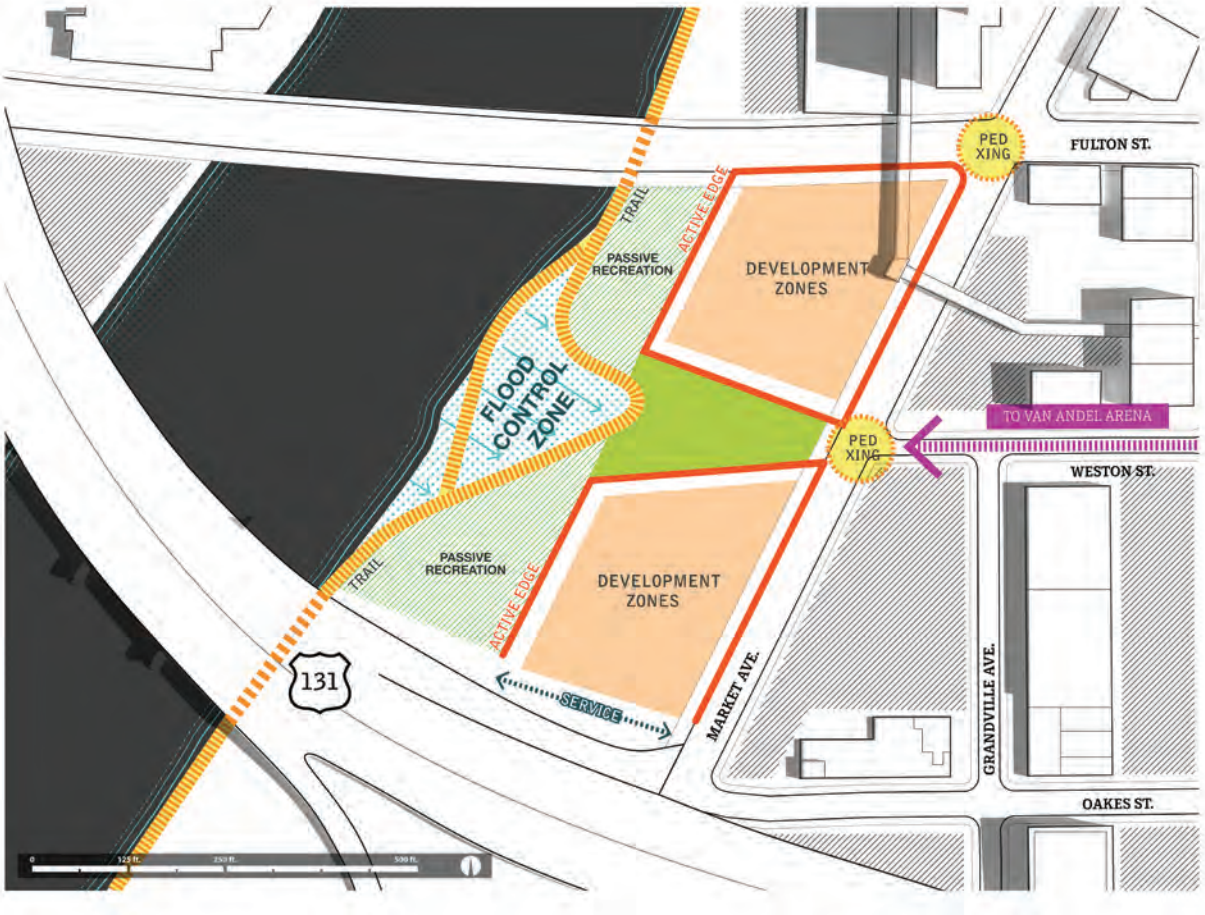


FIG A1.15: *Fulton + Market concept design*

Utility Constraints:

- 1 major sewer line with easement, 1 stormwater line

The goals of Fulton + Market are:

- Manage flooding through the design of the landscape
- Provide a sloped/terraces landscape that allows the public to experience the river
- Provide a continuous multi-use trail connection
- Provide outdoor spaces to support ground floor uses
- Bring the idea of water into the site, celebrate site stormwater management as a feature
- Ensure there are active uses facing Market Street, Fulton Street and the River
- Buffer 131 from the open space
- Establish a prominent gateway at Market and Fulton intersection
- Establish new housing and supporting uses to active the River
- Provide new parking for the development and to serve Downtown day-time uses
- Visually extend “Downtown” south along the River

Flood Managment Method

- Land slopes up as beach and amphitheater to FEMA level and trail

FIG A1.16: *Proposed Fulton + Market site plan*

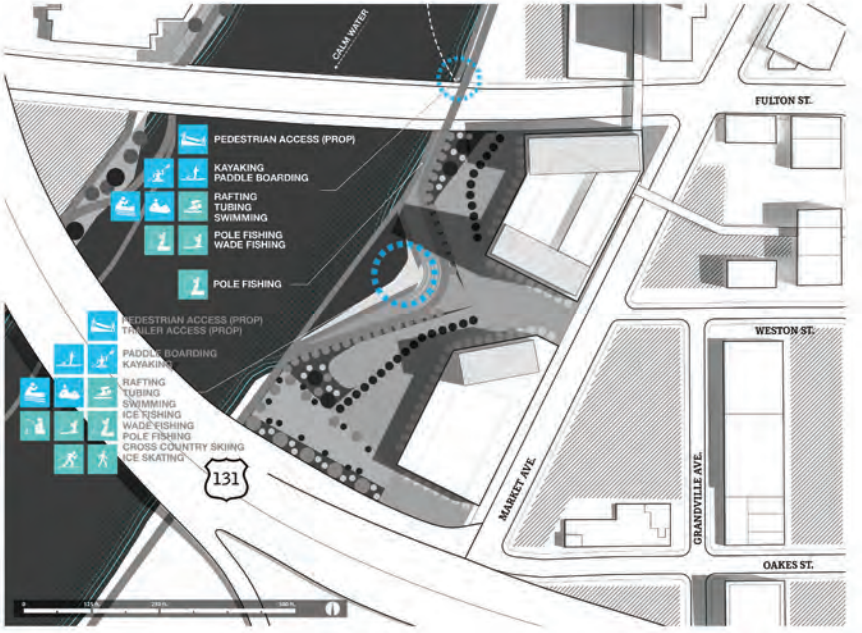


FIG A1.17: *Proposed Fulton + Market water access*

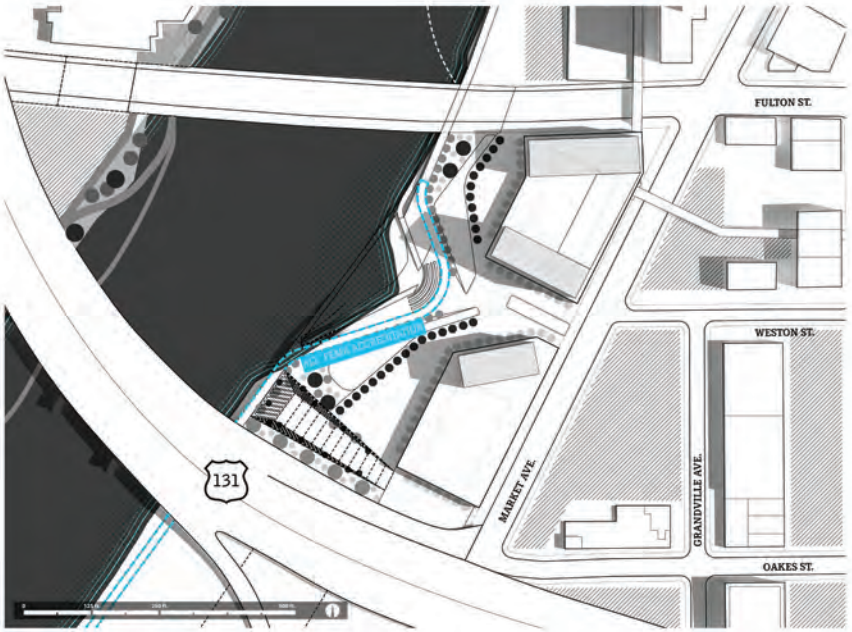


FIG A1.18: *Fulton + Market flood considerations*

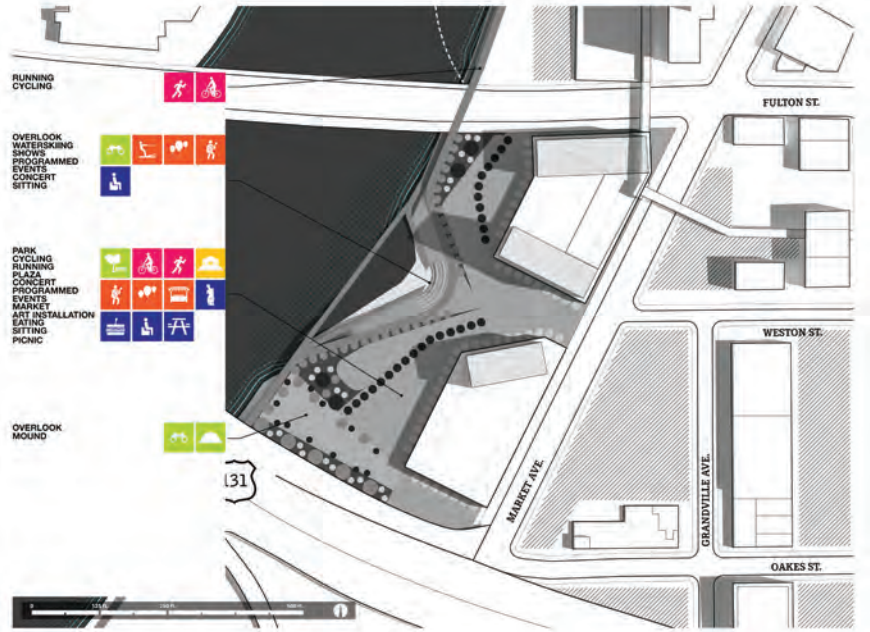


FIG A1.19: *Proposed Fulton + Market land program*

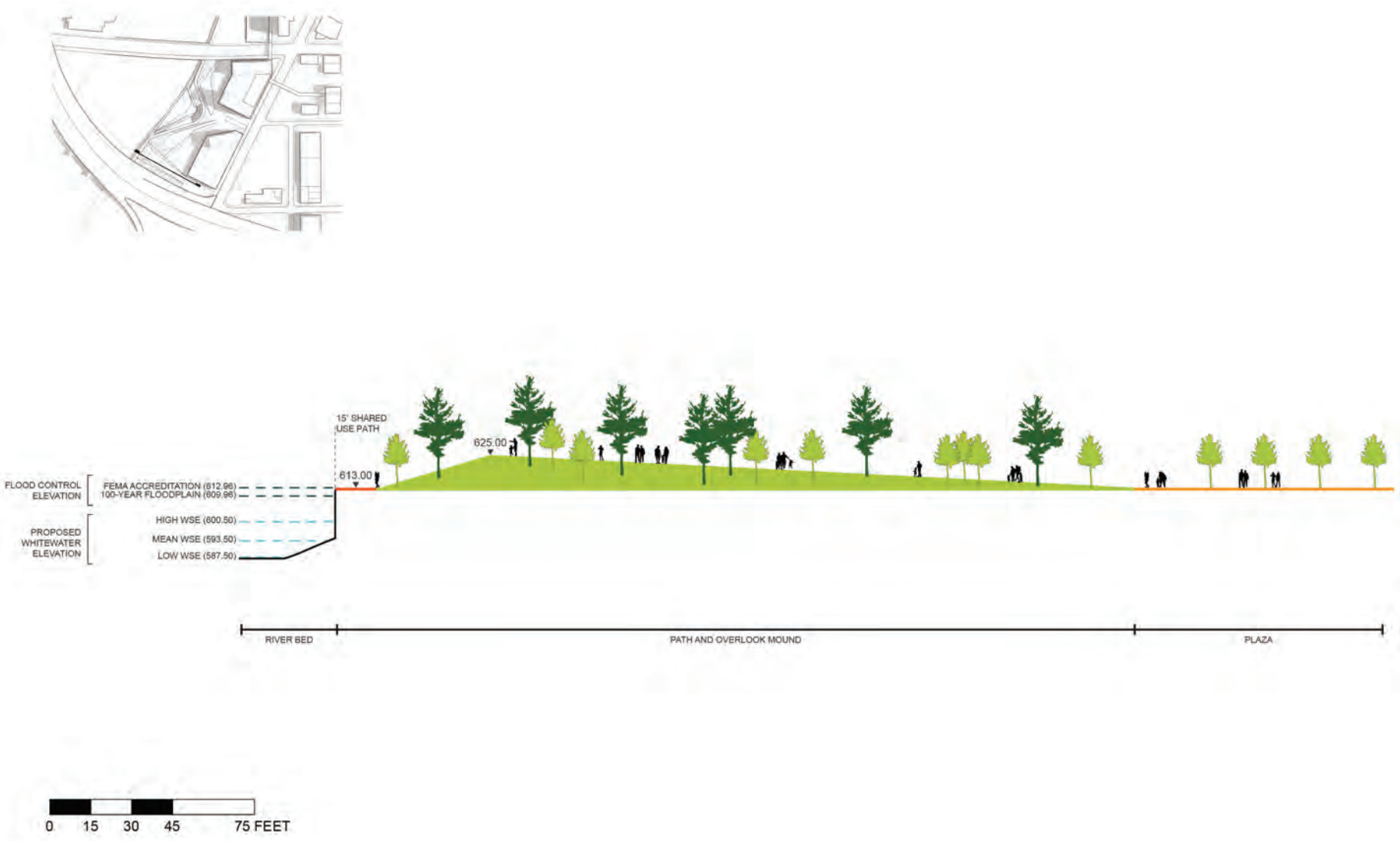


FIG A1.20: *Proposed Fulton + Market site sections*

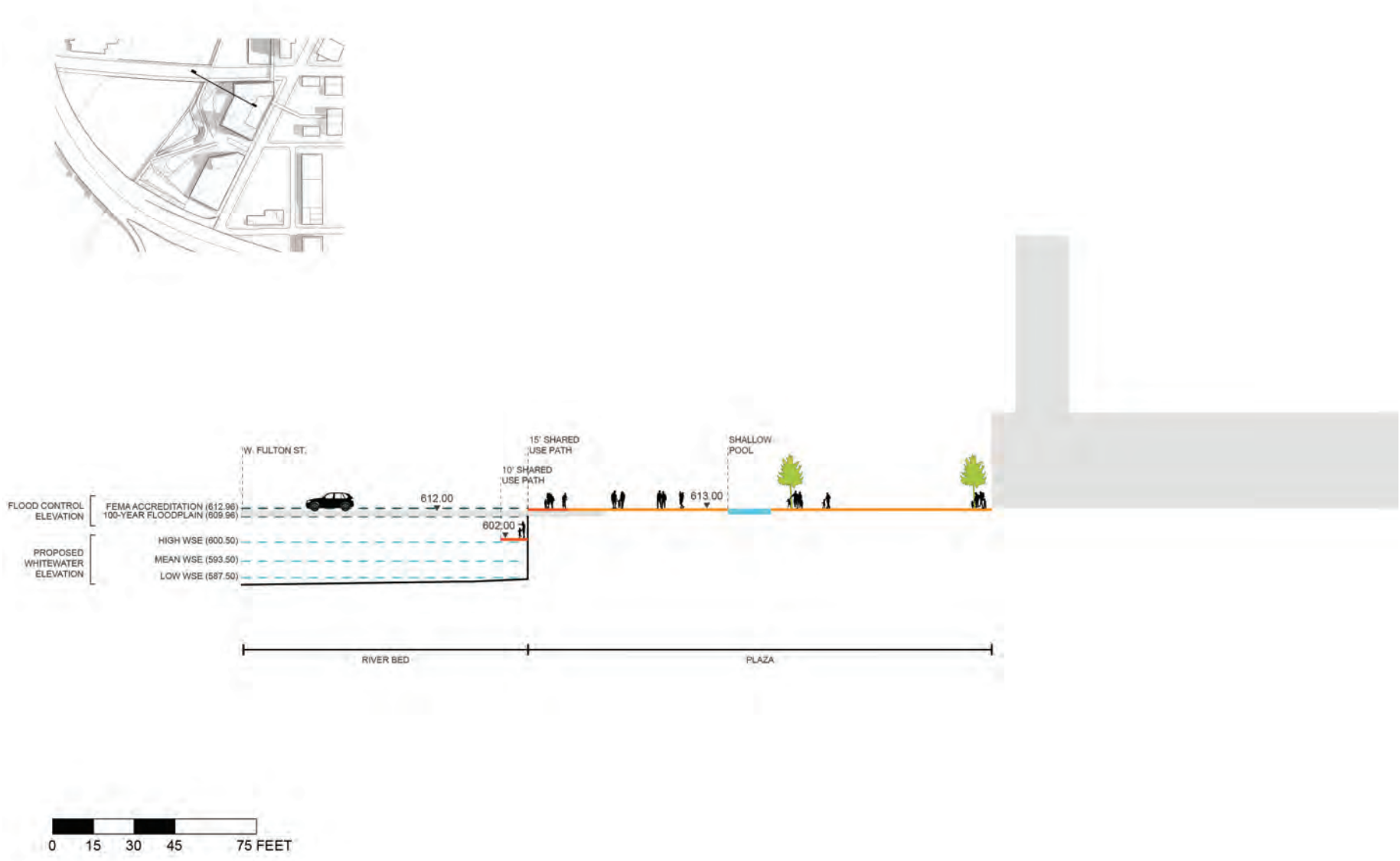


FIG A1.21: *Proposed Fulton + Market site sections*

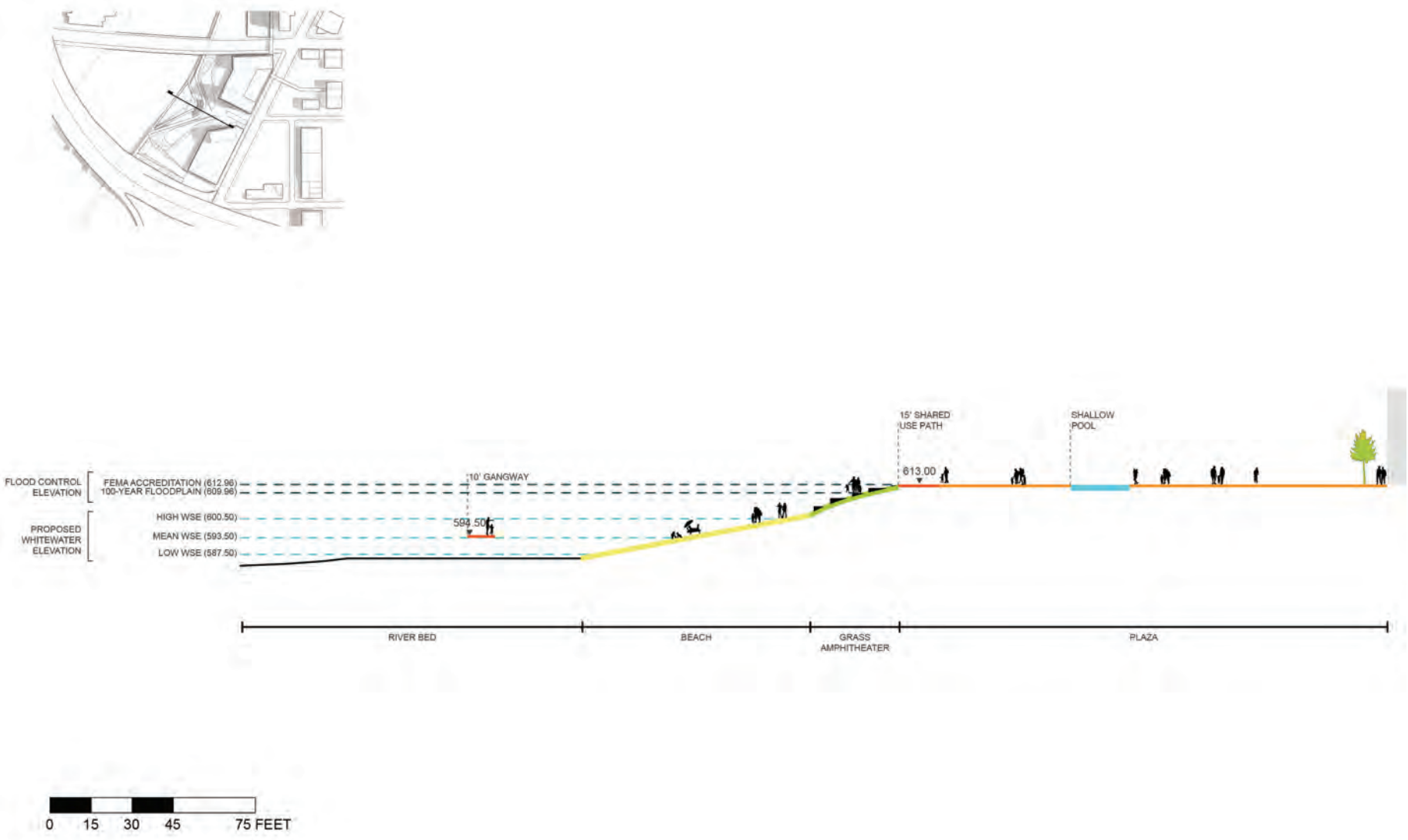


FIG A1.22: *Proposed Fulton + Market site sections*

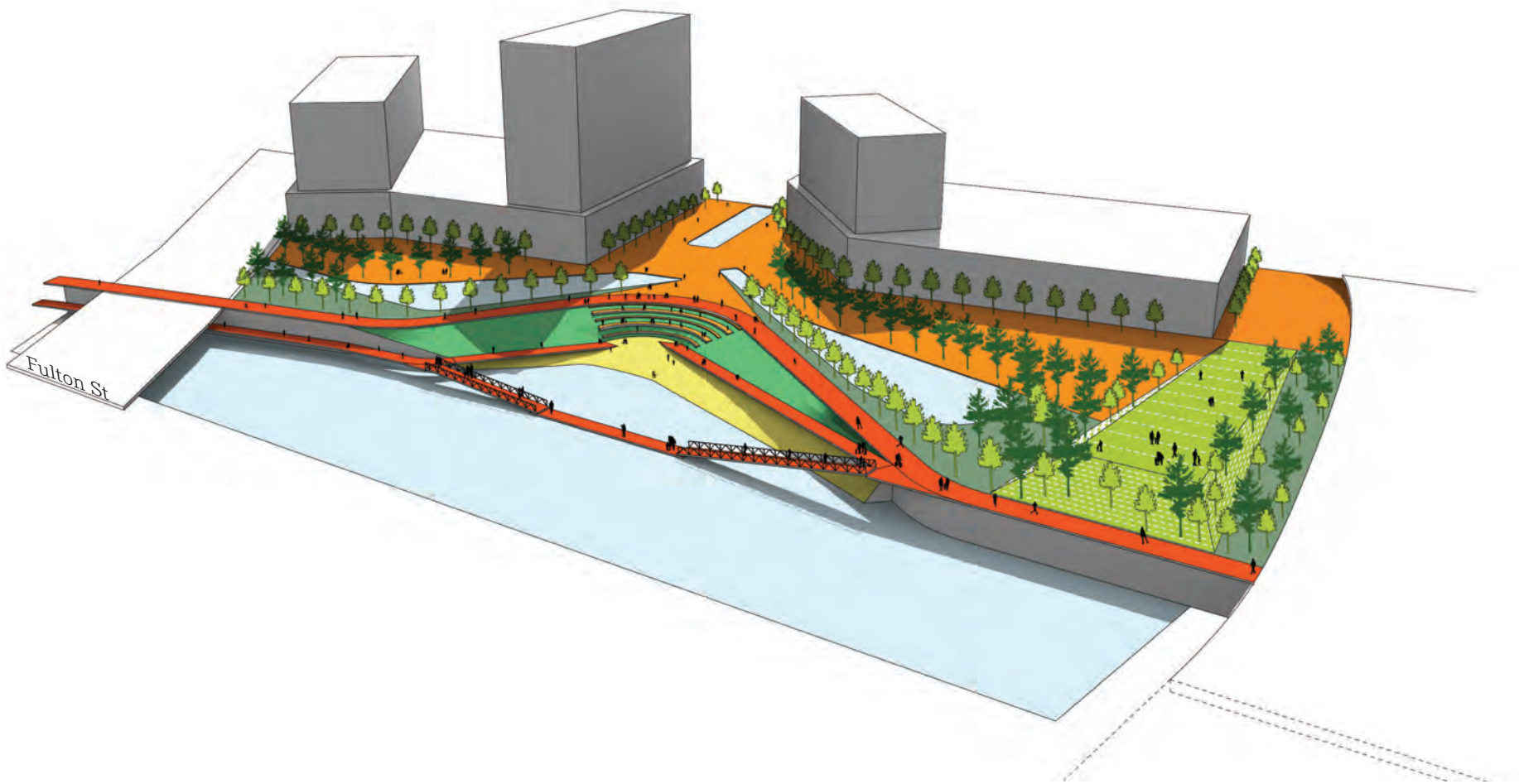


FIG A1.23: *Proposed Fulton + Market aerial view*

FIG A1.24: *Proposed Lyon Square aerial rendering*

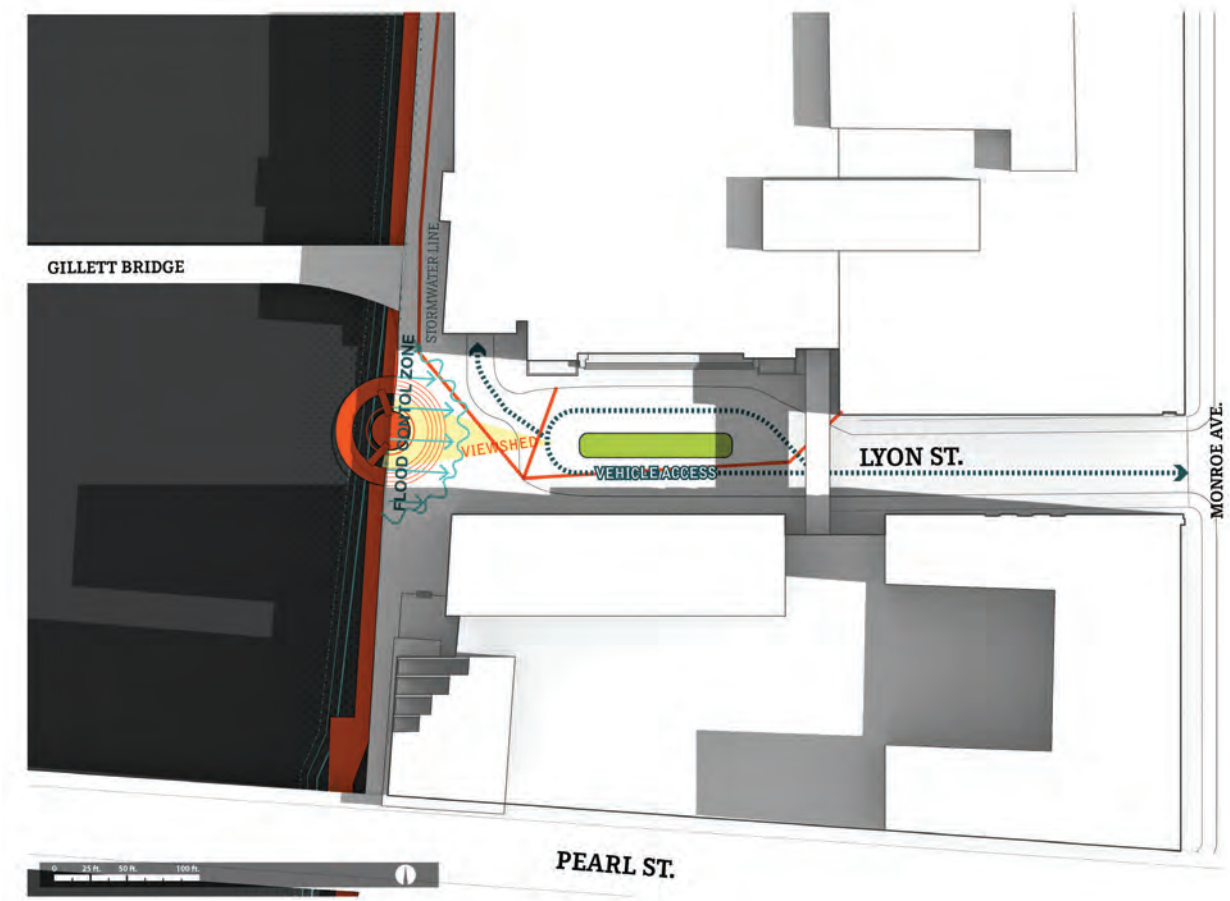


FIG A1.25: *Lyon Square Amphitheater opportunities and constraints*

>> Lyon Square Amphitheater

Utility Constraints:

- 1 stormwater line, ramp, and loading dock ingress/egress

The goals of Lyon Square Amphitheater are:

- Create a public/private development opportunity that includes 2600 sqft of events space and 1300 sqft (100 tables) of dining area
- Manage flooding by raising grade to freeboard deficient, then provide additional flood protection via emergency measures
- Provide access to the lower river walkway
- Demonstrate ecological capacity along the River's edge in an urban location
- Provide a continuous multi-use trail connection and a connection north
- Create an events plaza in Lyon Square Amphitheater by removing curbs and resurfacing the street, while providing parking flow at non-event times

Flood Managment Method

- Emergency closure point implemented

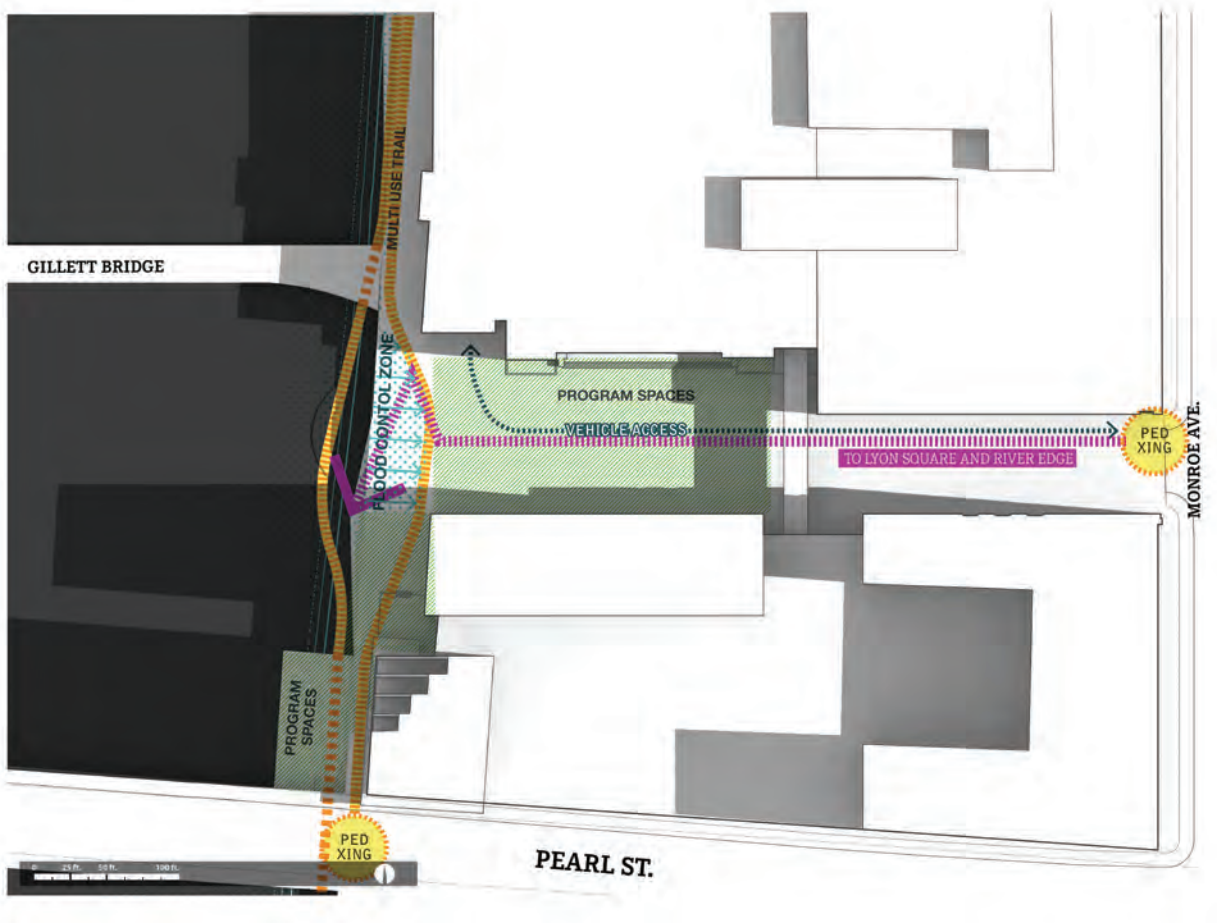


FIG A1.26: *Lyon Square Amphitheater concept design*

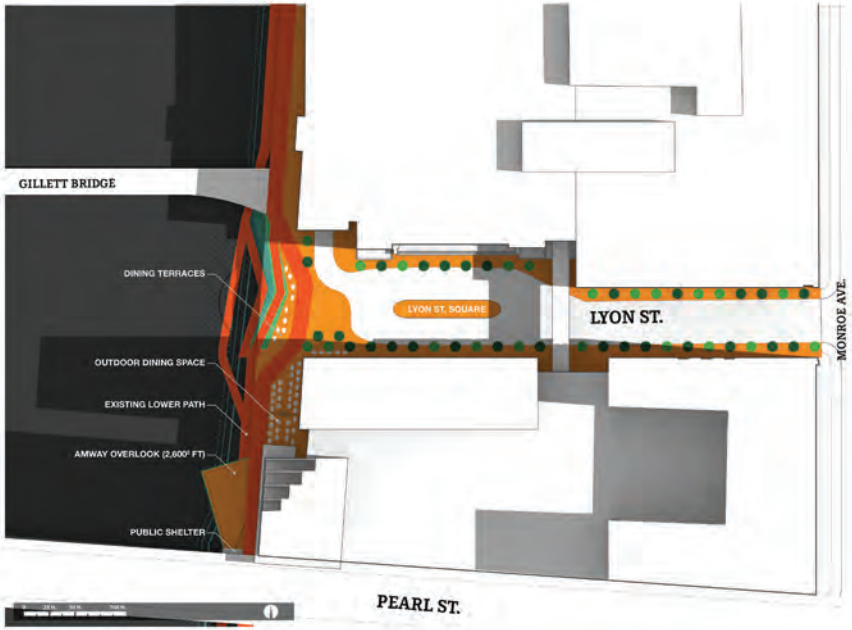


FIG A1.27: *Proposed Lyon Square Amphitheater site plan*

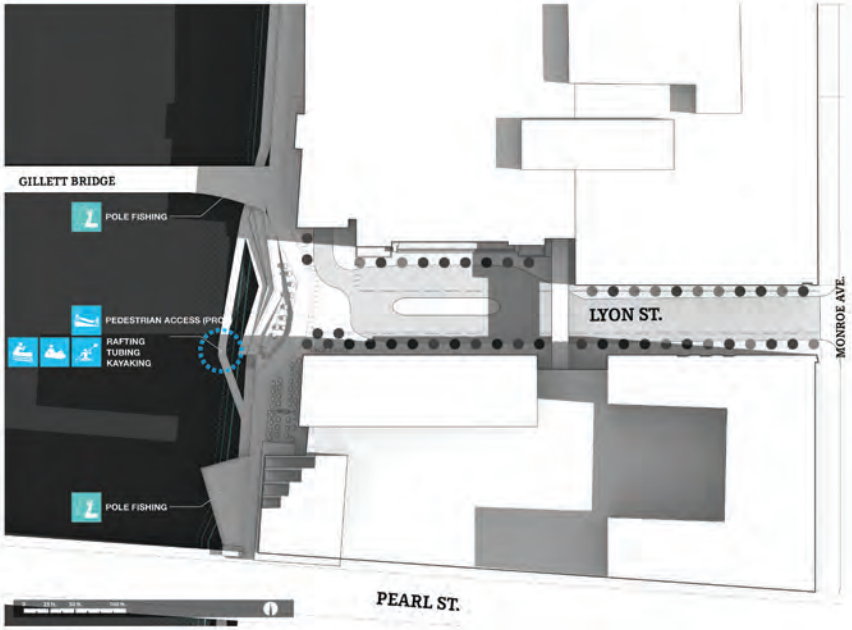


FIG A1.28: *Proposed Lyon Square Amphitheater water access*

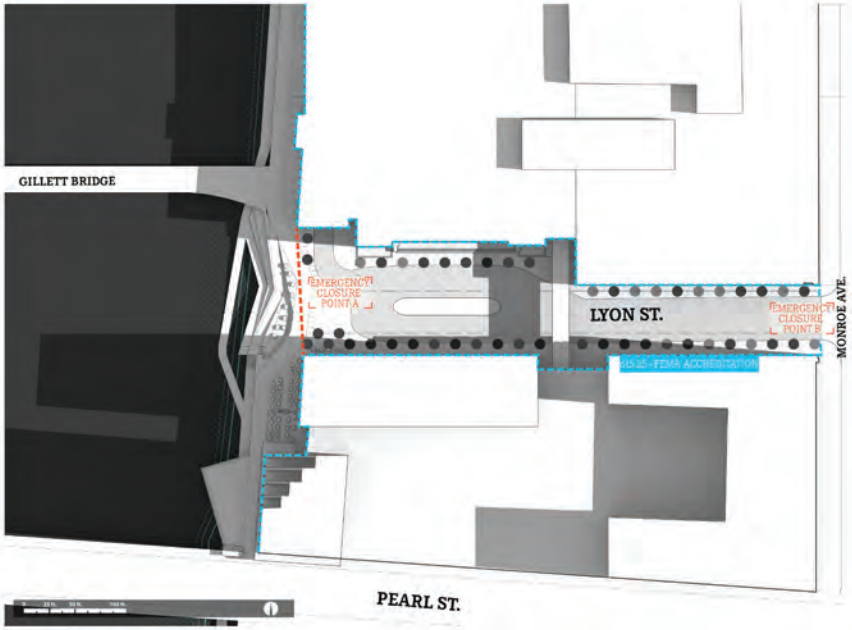


FIG A1.29: *Lyon Square Amphitheater flood considerations*

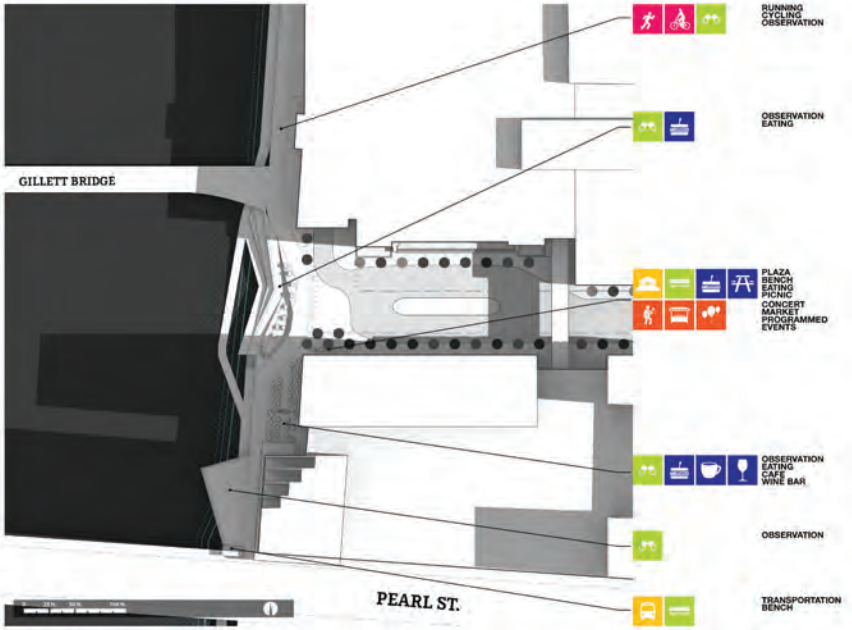


FIG A1.30: *Proposed Lyon Square Amphitheater land program*

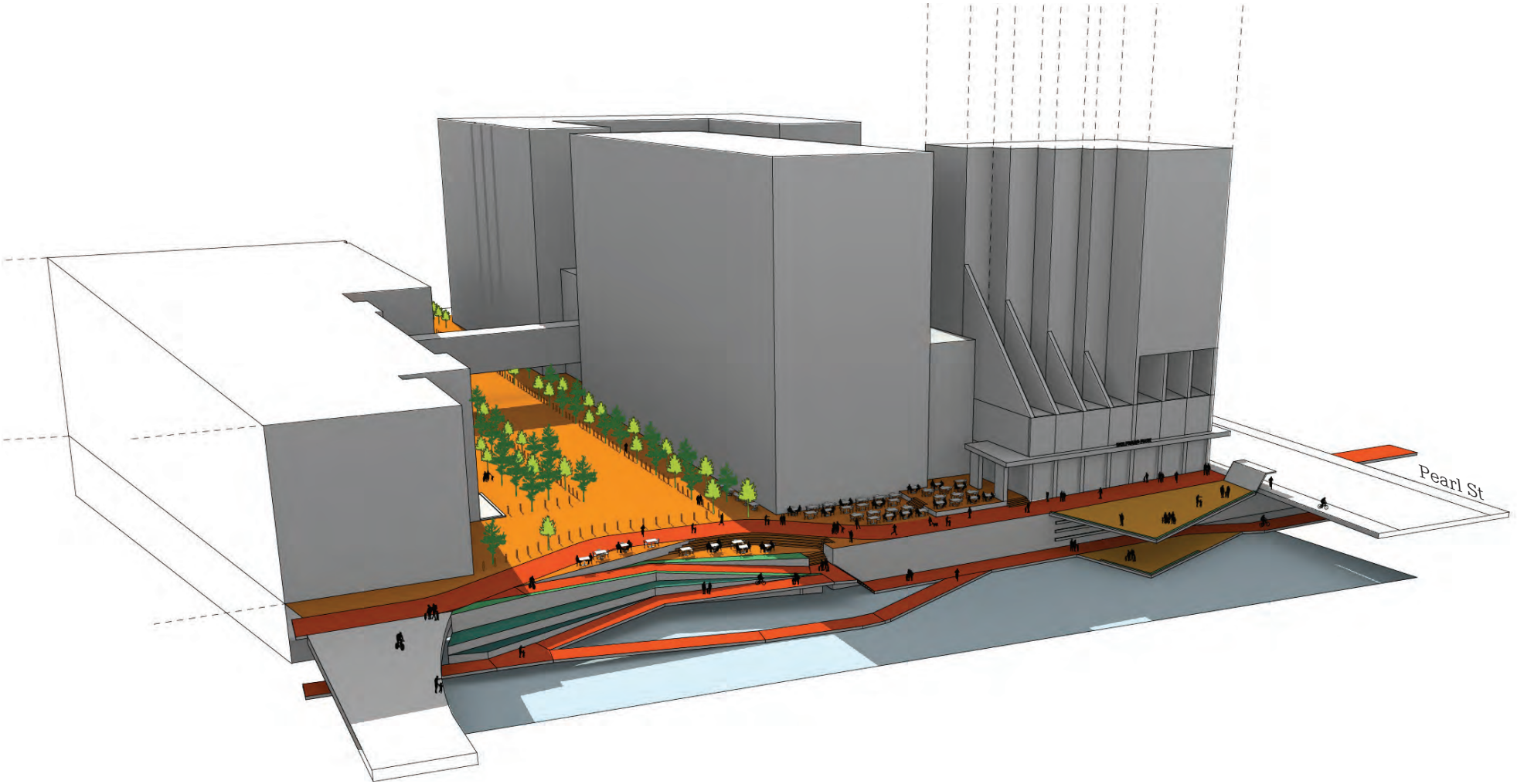


FIG A1.31: *Proposed Lyon Square Amphitheater aerial view*

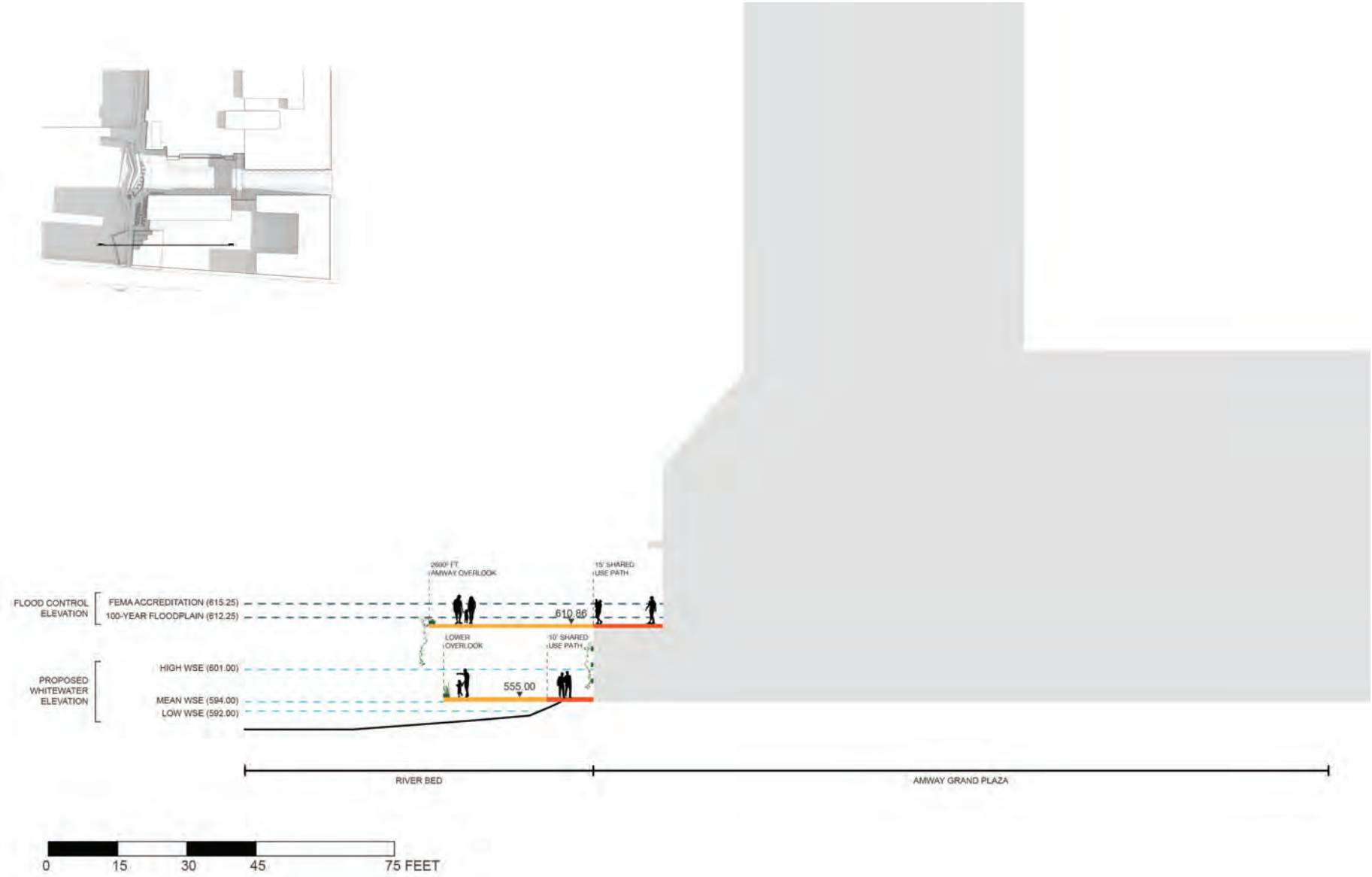


FIG A1.32: *Proposed Lyon Square Amphitheater site sections*

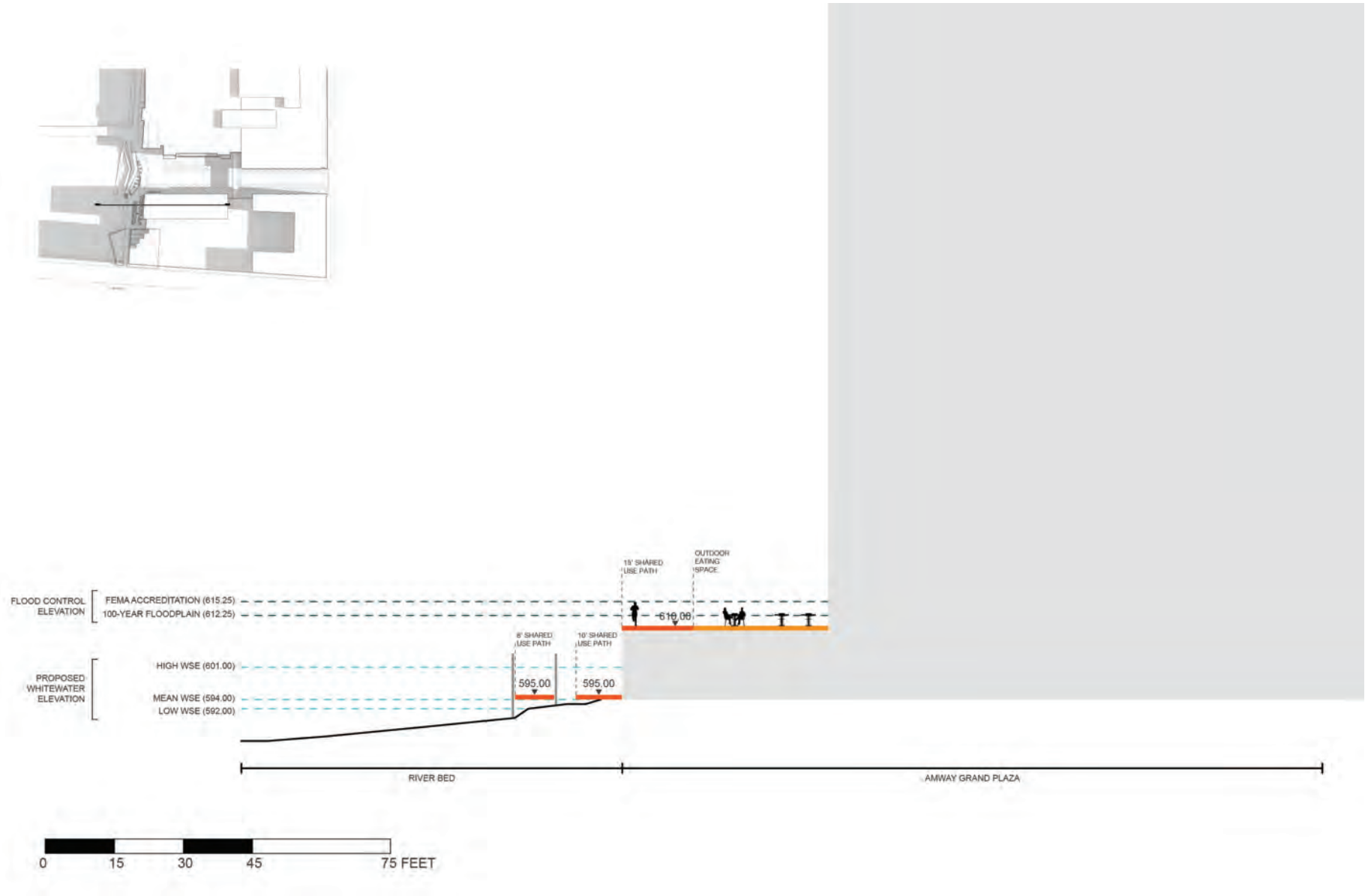
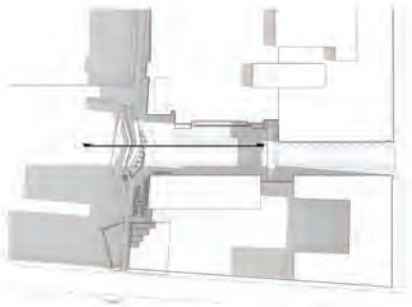


FIG A1.33: *Proposed Lyon Square Amphitheater site sections*



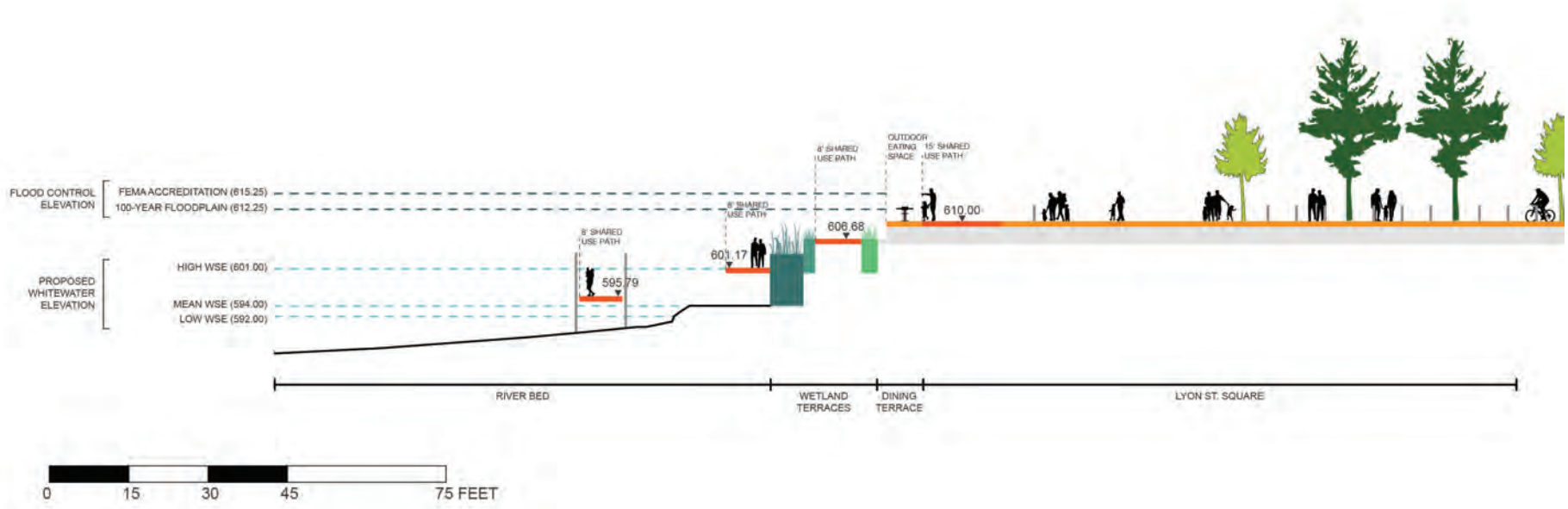
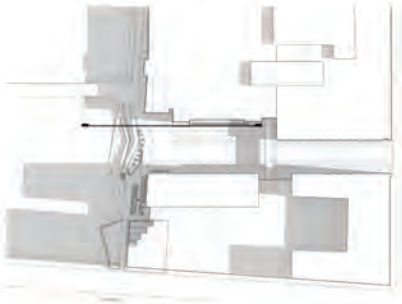


FIG A1.34: *Proposed Lyon Square Amphitheater site sections*



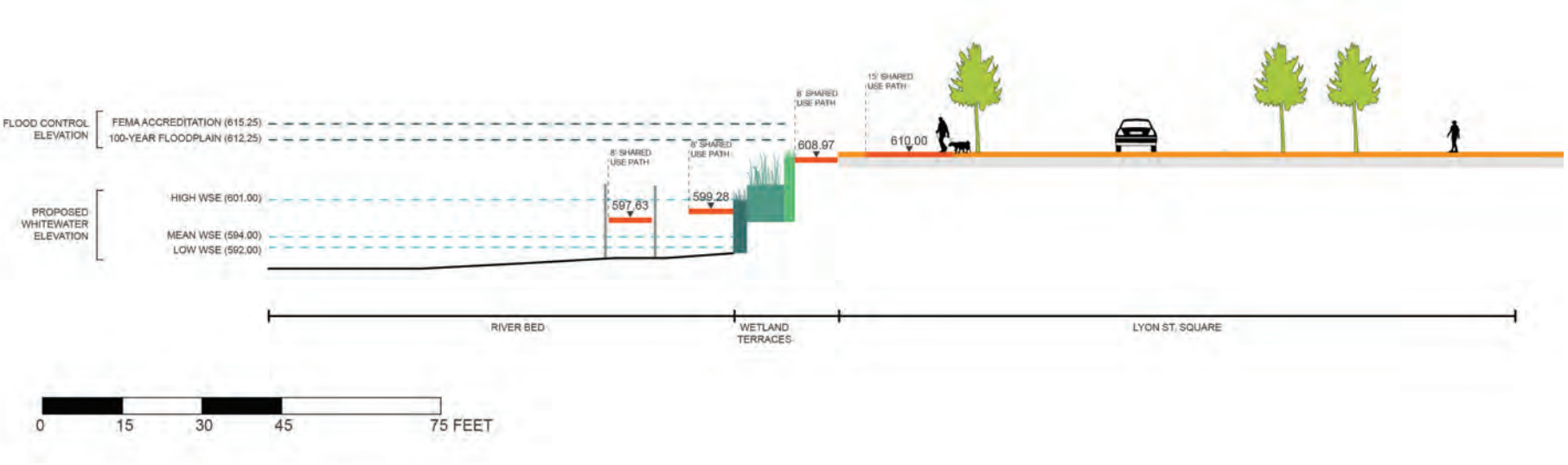


FIG A1.35: *Proposed Lyon Square Amphitheater site sections*

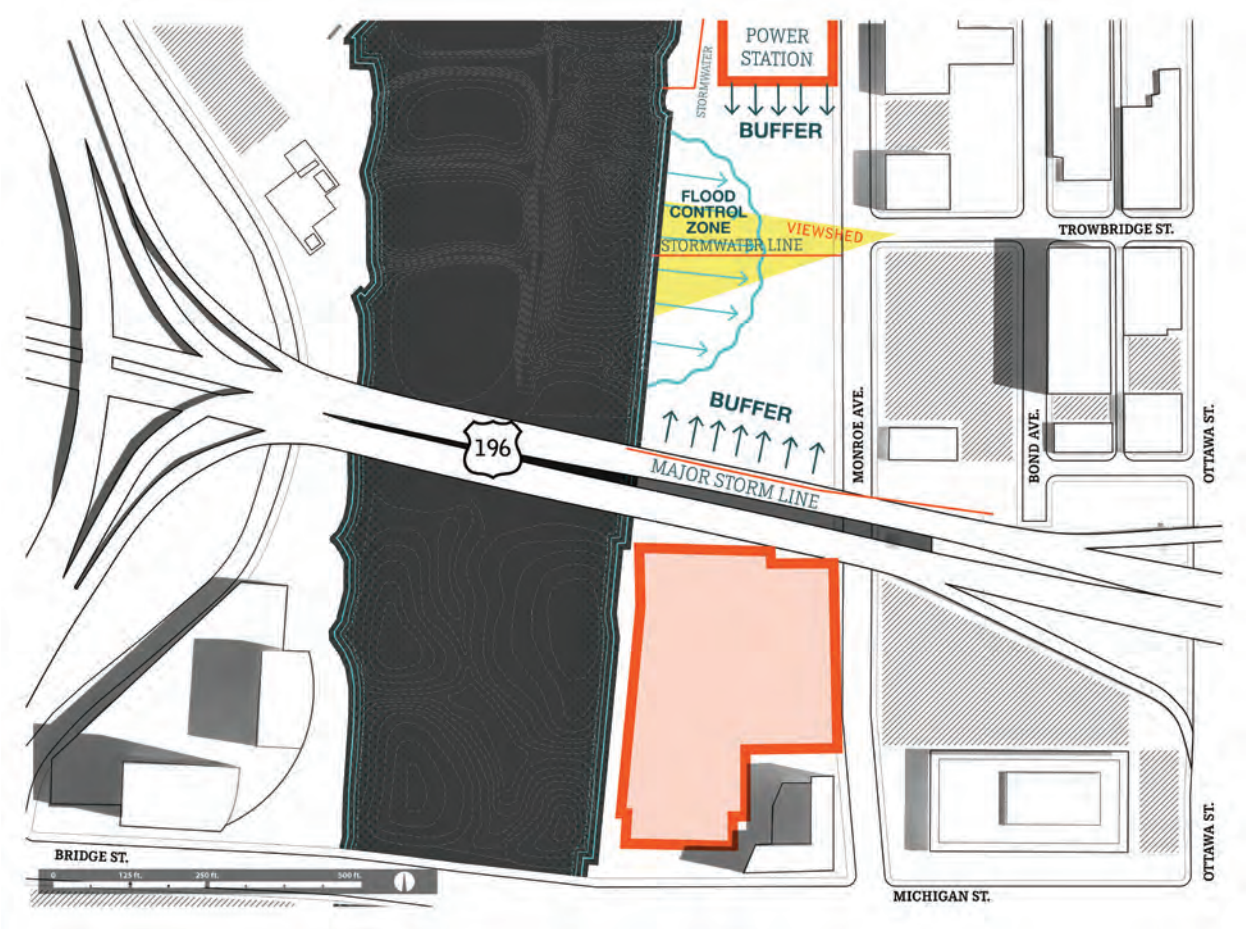


FIG A1.36: *MSU / City / KC opportunities and constraints*

>> MSU / City / KC

Utility Constraints:

- 3 stormwater lines, 1 power station, I-196, Post Office building

The goals of MSU / City / KC are:

- Manage flooding/stormwater through the design of the landscape
- Create a developable river edge
- Provide a continuous multi-use trail connection
- Activate the river with programming
- Link development and openspace
- Make a connection from Downtown to Monroe North
- Create an active edge that creates opportunities to watch river events
- Provide connection(s) to the river island
- Allow for public views to the river

Flood Managment Method

- Land slopes up as beach and wetland terraces to FEMA level and trail

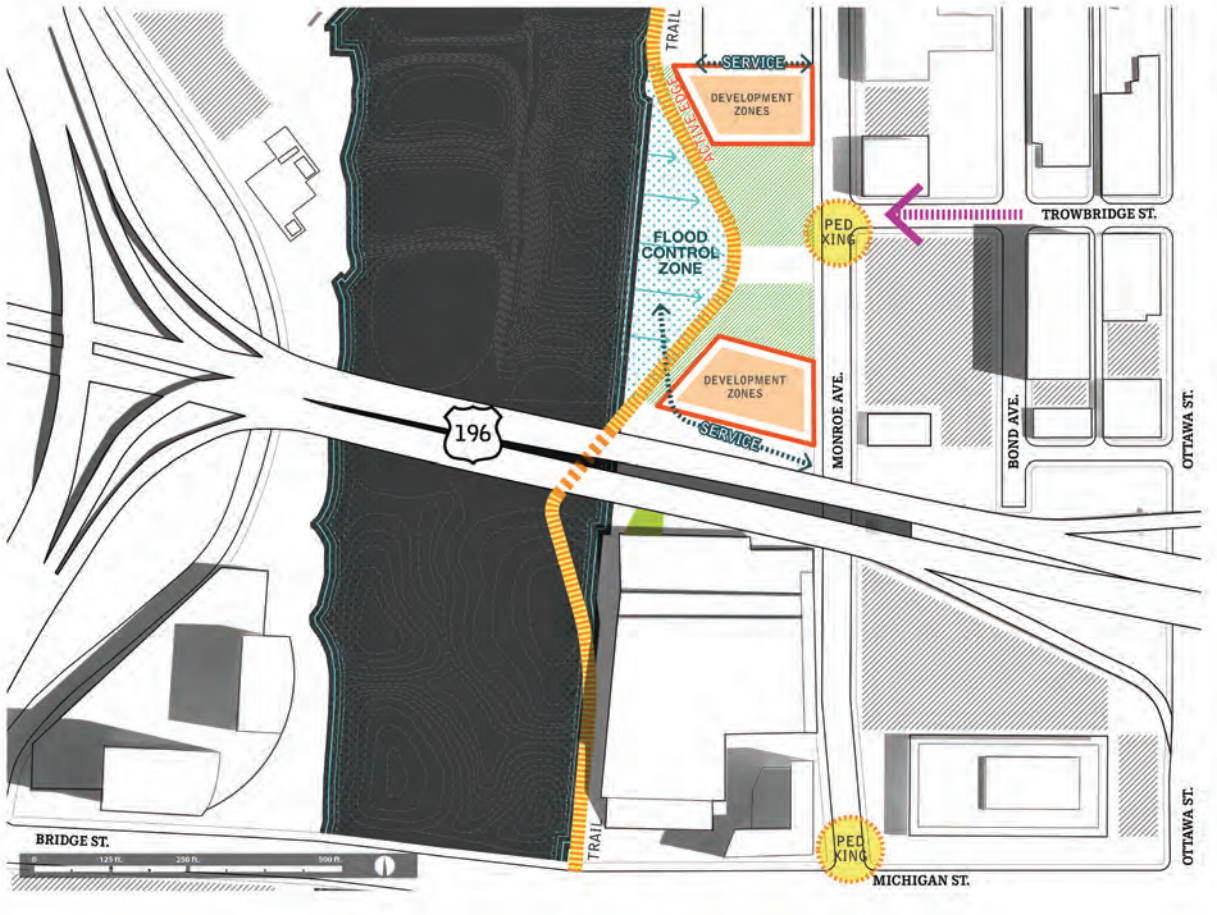


FIG A1.37: *MSU / City / KC concept design*

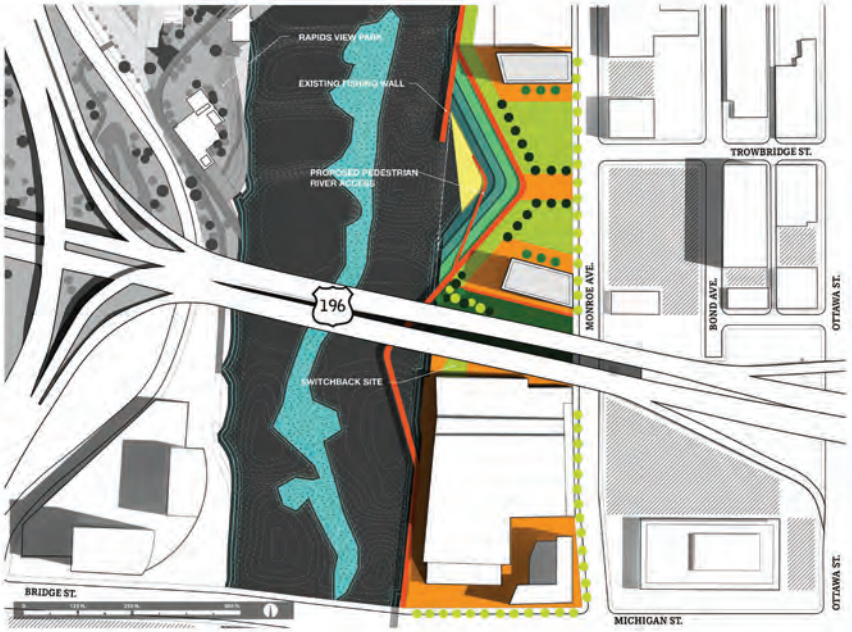


FIG A1.38: *Proposed MSU / City / KC site plan*

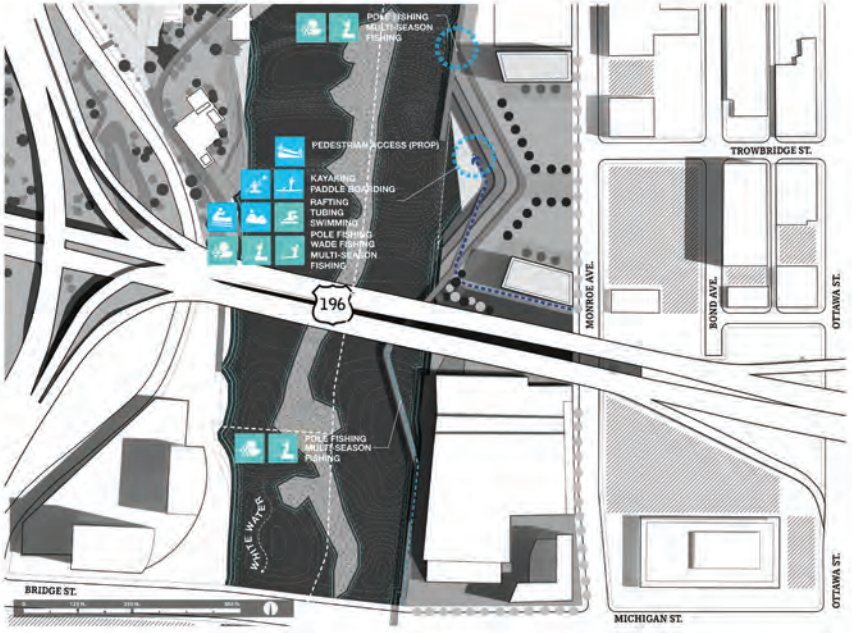


FIG A1.39: *Proposed MSU / City / KC water access*

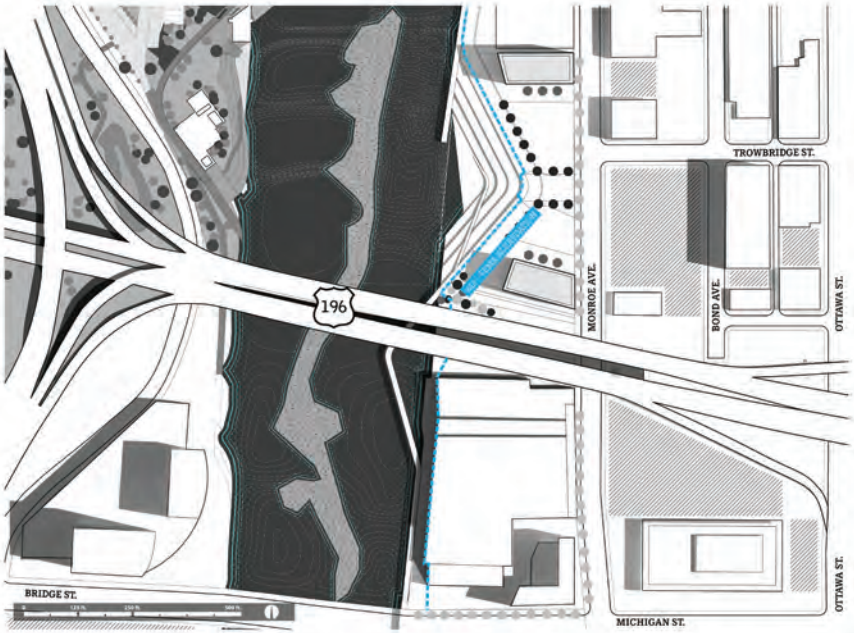


FIG A1.41: *MSU / City / KC flood considerations*

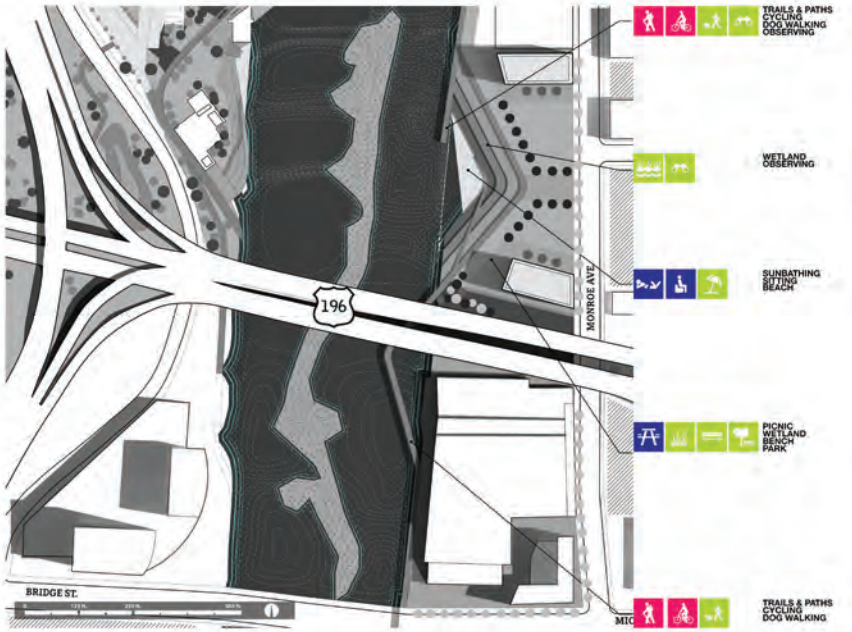


FIG A1.40: *Proposed MSU / City / KC land program*

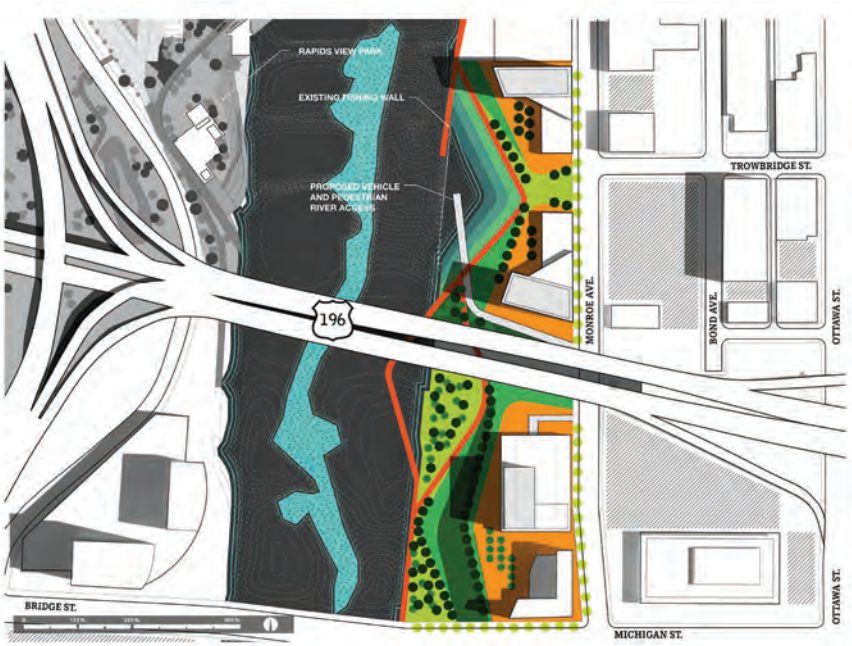


FIG A1.42: *Proposed MSU / City / KC site plan - Alternate 1*

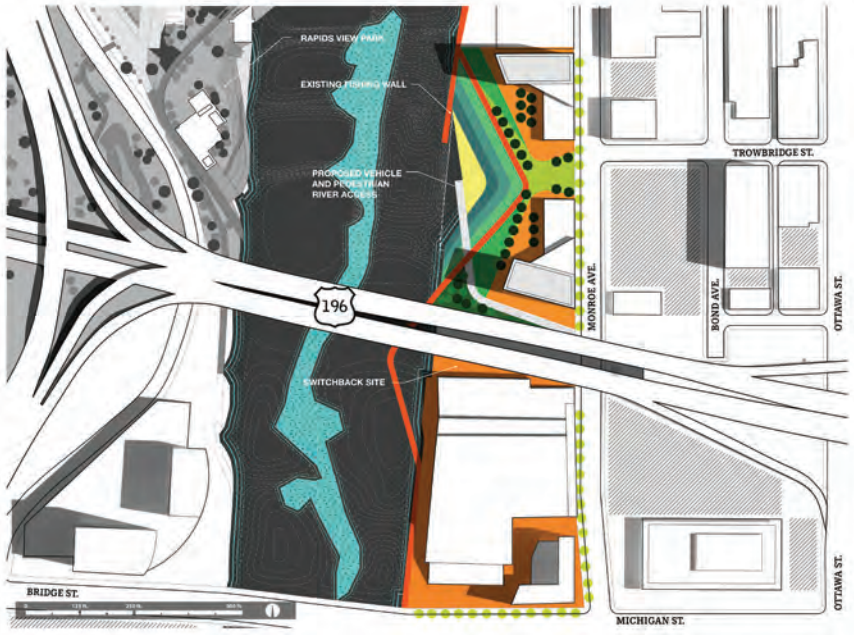


FIG A1.43: *Proposed MSU / City / KC site plan - Alternate 2*

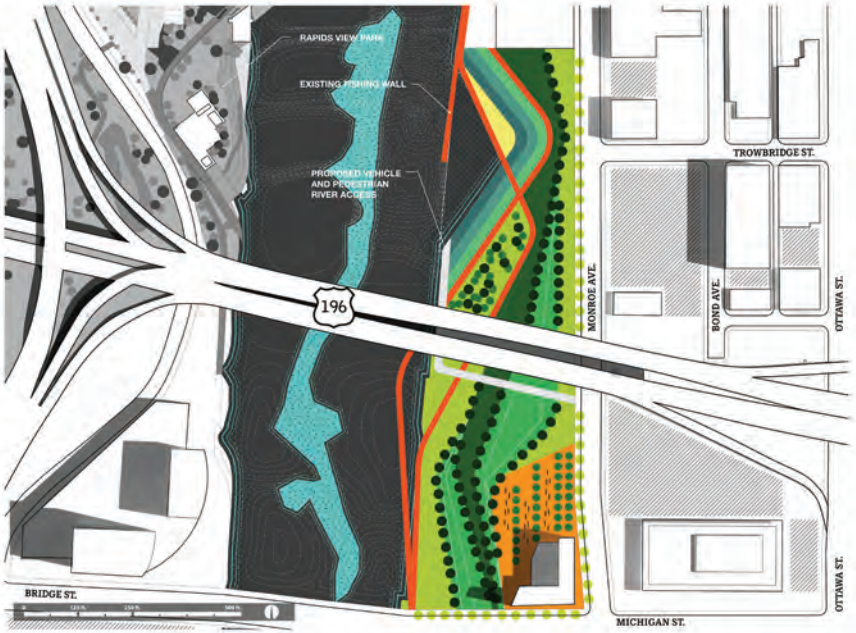


FIG A1.44: *Proposed MSU / City / KC site plan - Alternate 3*

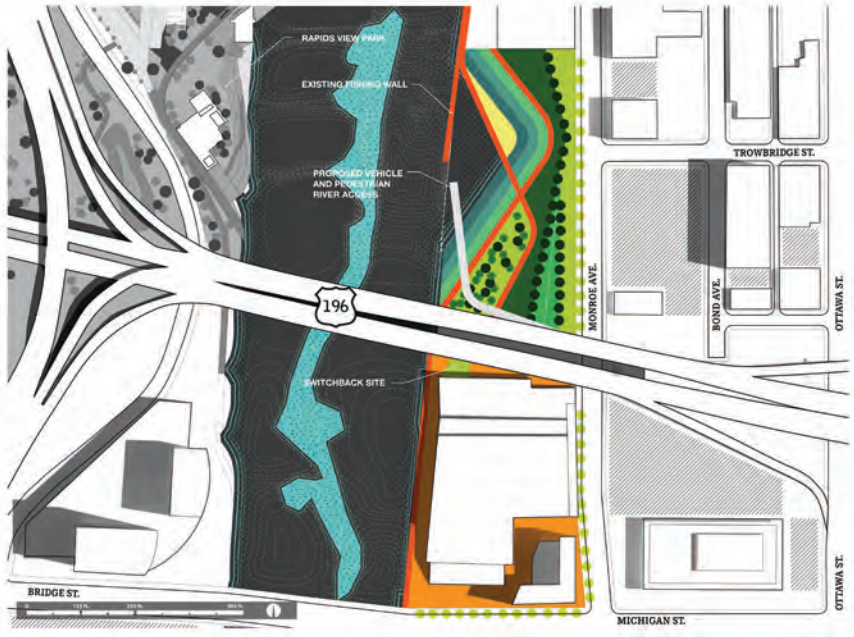


FIG A1.45: *Proposed MSU / City / KC site plan - Alternate 4*

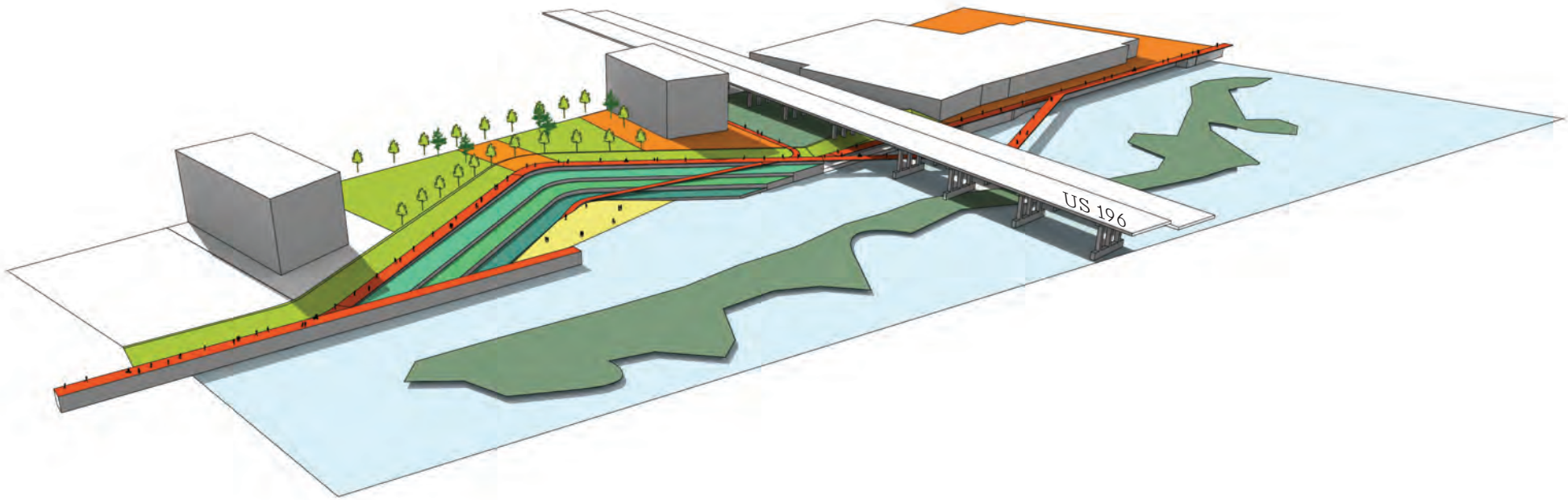


FIG A1.46: *Proposed MSU / City / KC aerial view*

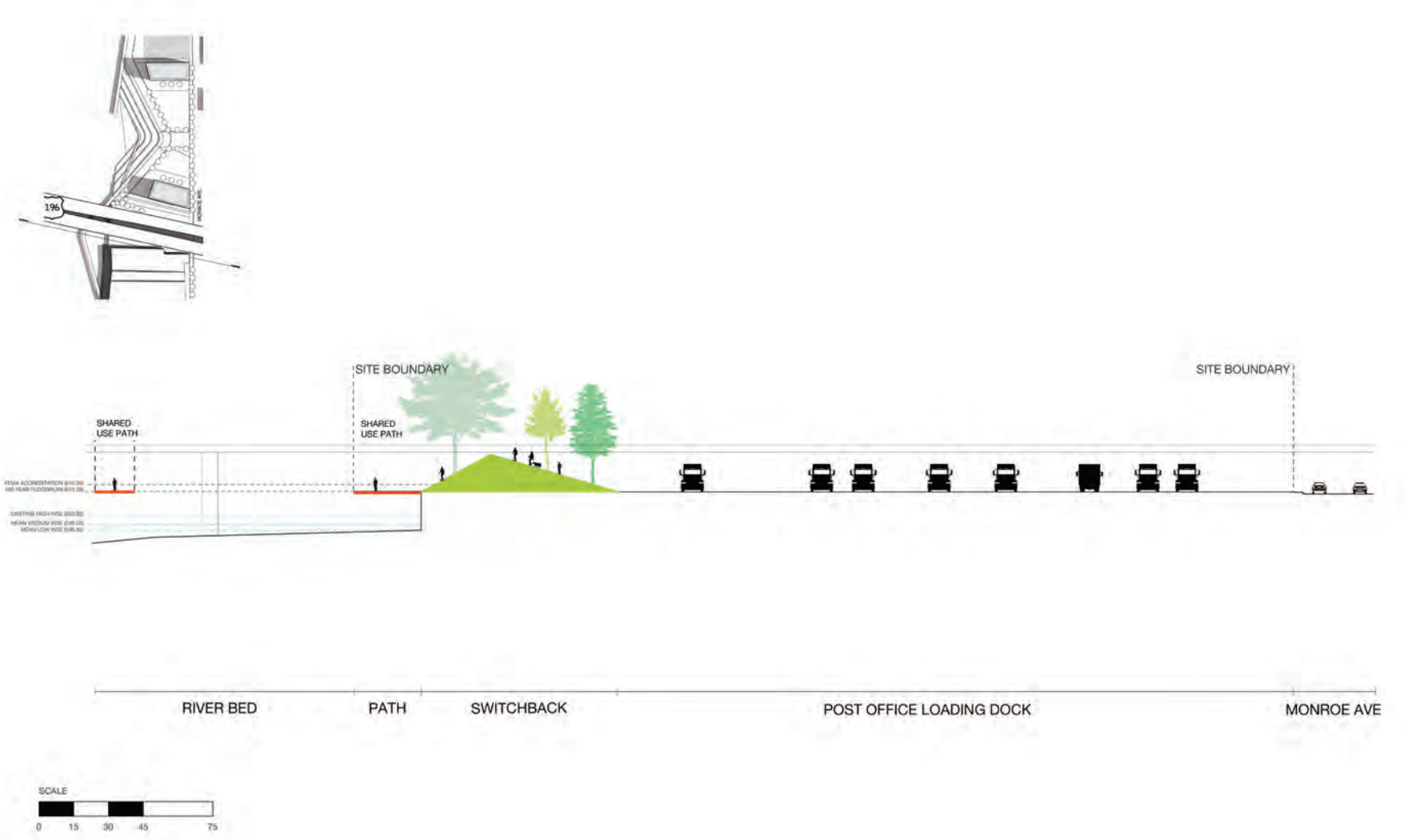


FIG A1.47: *Proposed MSU / City / KC aerial site sections*

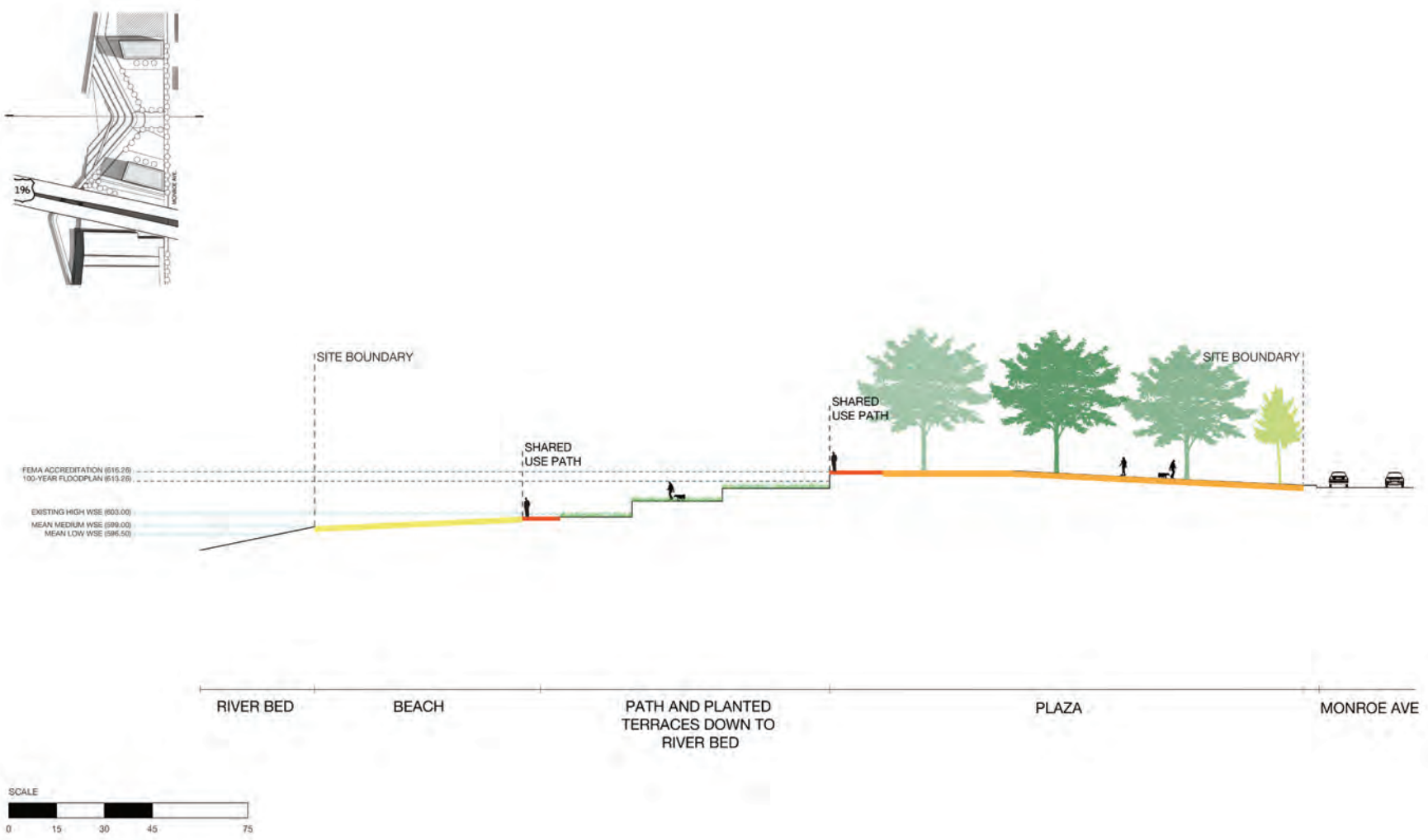


FIG A1.48: *Proposed MSU / City / KC aerial site sections*

>> 6th Street Park

FIG A1.49: *6th Street Park opportunities and constraints*

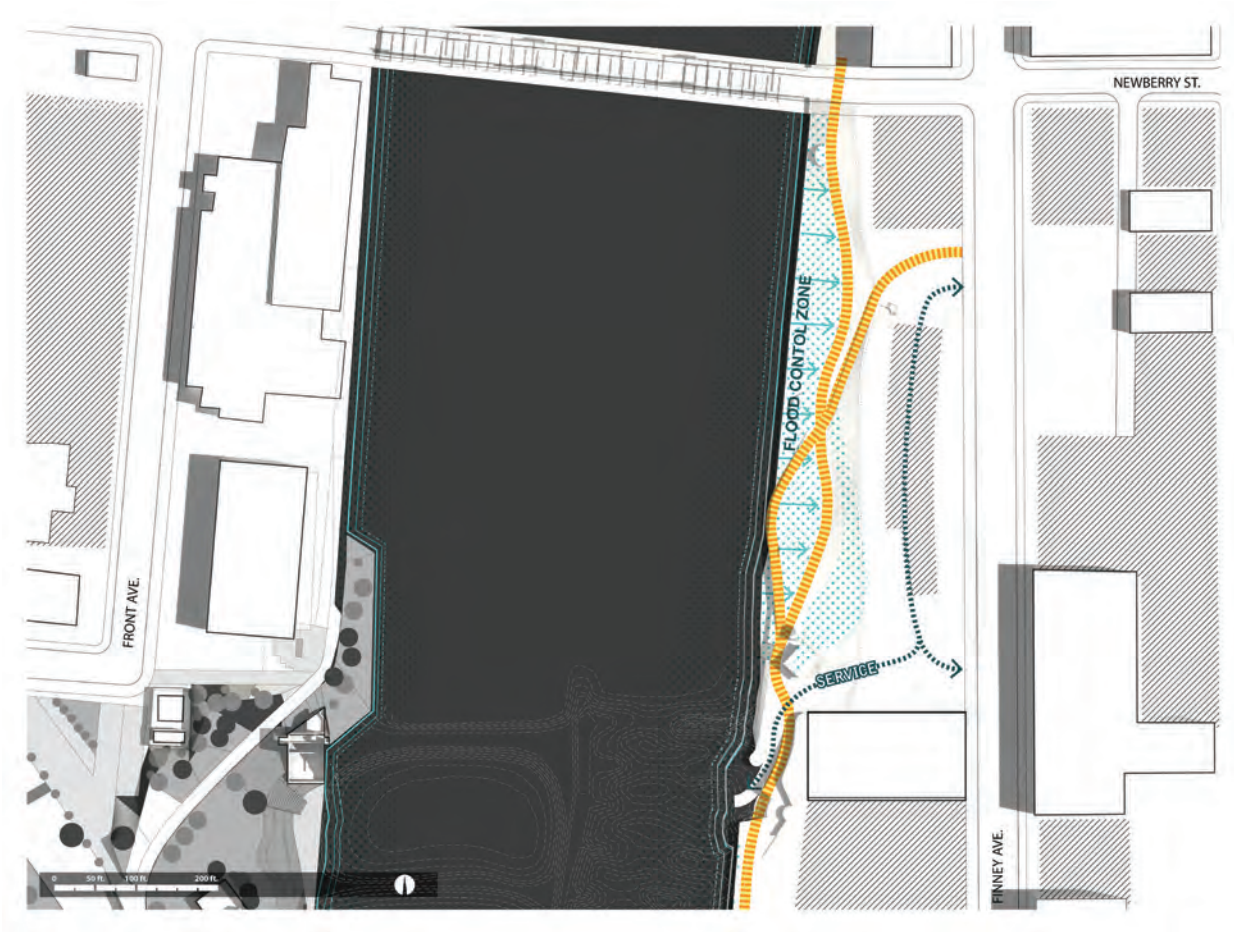


FIG A1.50: *6th Street Park concept design*

Utility Constraints:

- Power station

The goals of 6th Street Park are:

- Manage flooding/stormwater through the design of the landscape
- Provide/Maintain river access including boat access
- Provide a continuous multi-use trail connection
- Activate the River with programming
- Create habitat and increase opportunities to manage stormwater
- Renovate and upgrade existing park to blend with river corridor park system
- Create an active edge that creates opportunities to watch River events
- Allow for public views to the river

Flood Managment Method

- Existing floodwall and berm

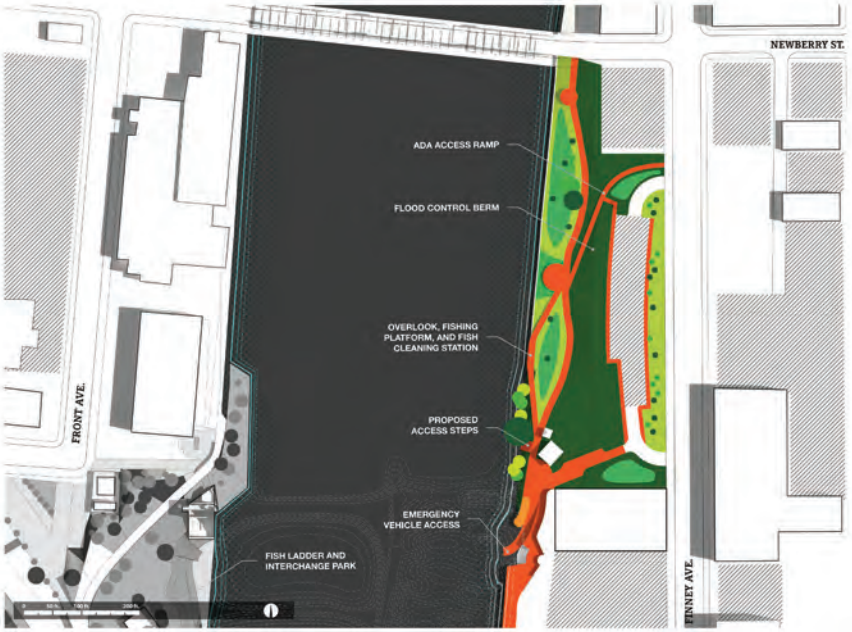


FIG A1.51: *Proposed 6th Street Park site plan*

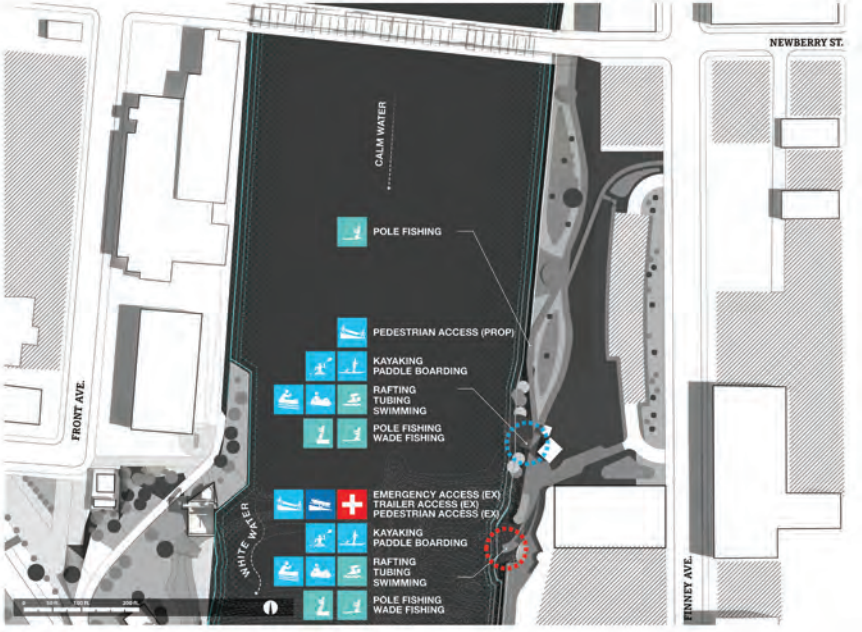


FIG A1.52: *Proposed 6th Street Park water access*

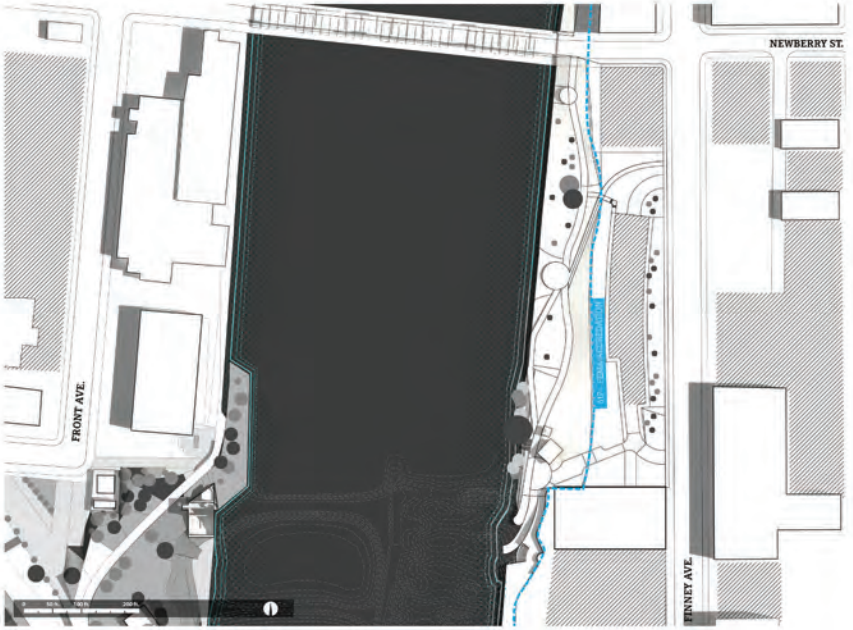


FIG A1.53: *6th Street Park flood considerations*

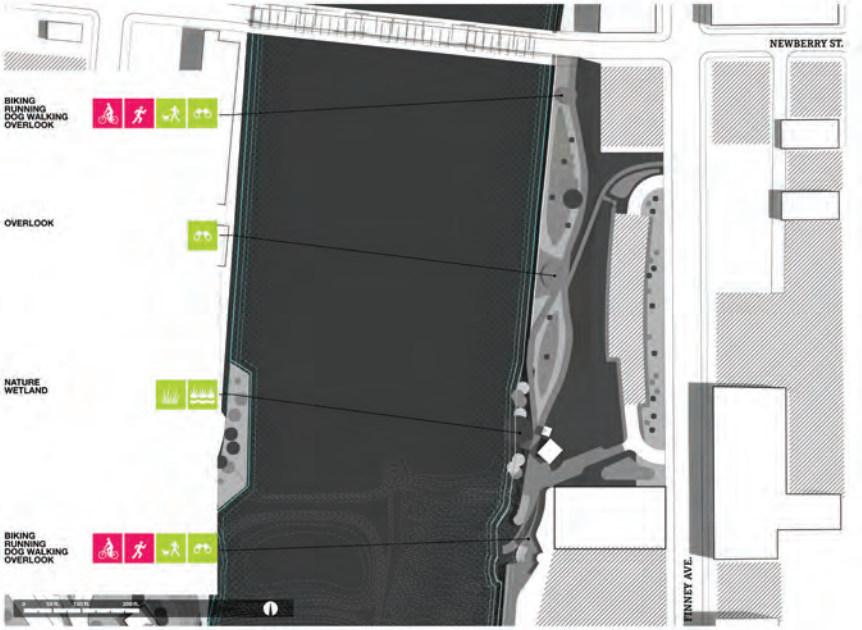


FIG A1.54: *Proposed 6th Street Park land program*

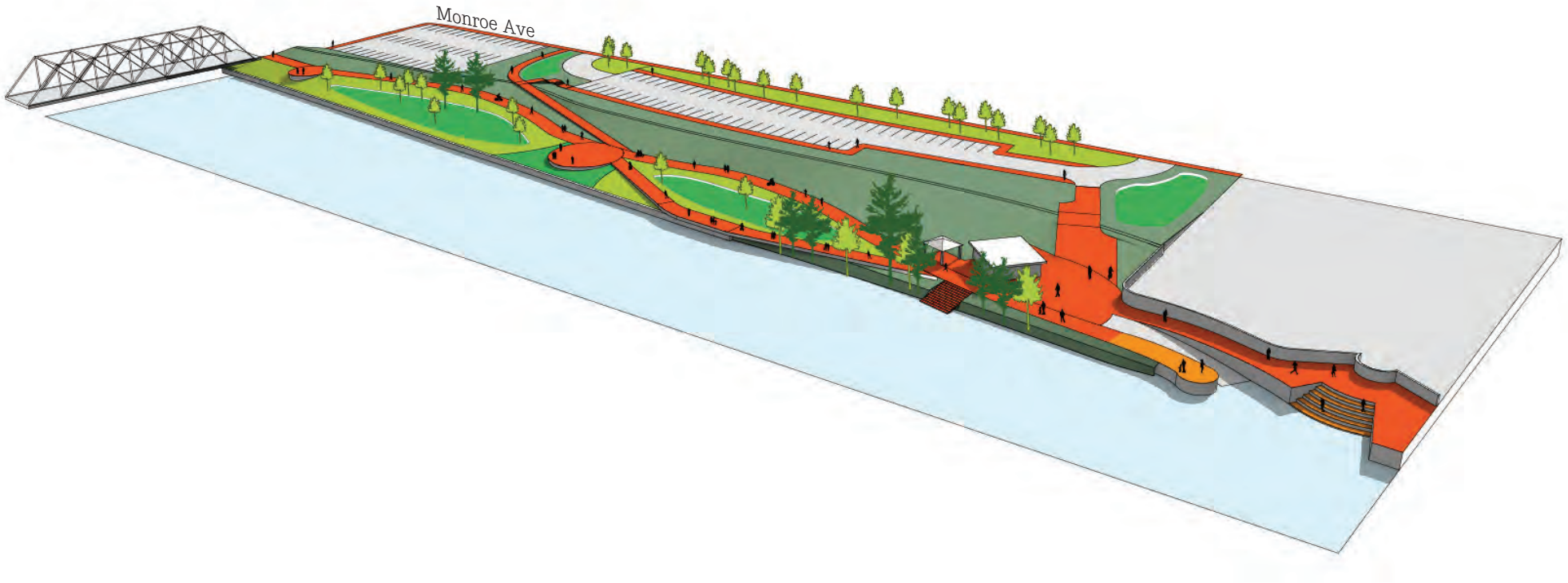


FIG A1.55: *Proposed 6th Street Park aerial view*

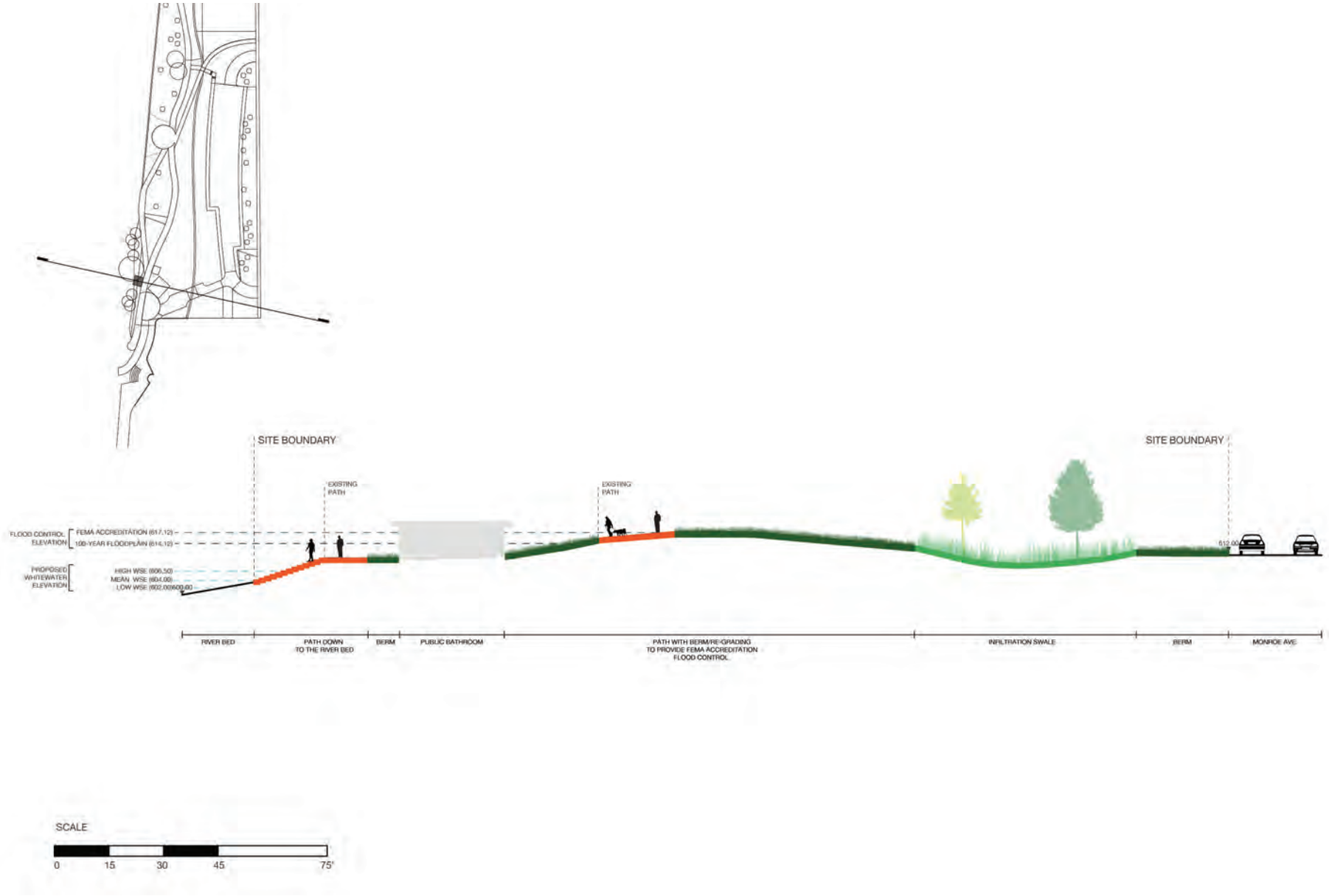


FIG A1.56: *Proposed 6th Street Park site sections*

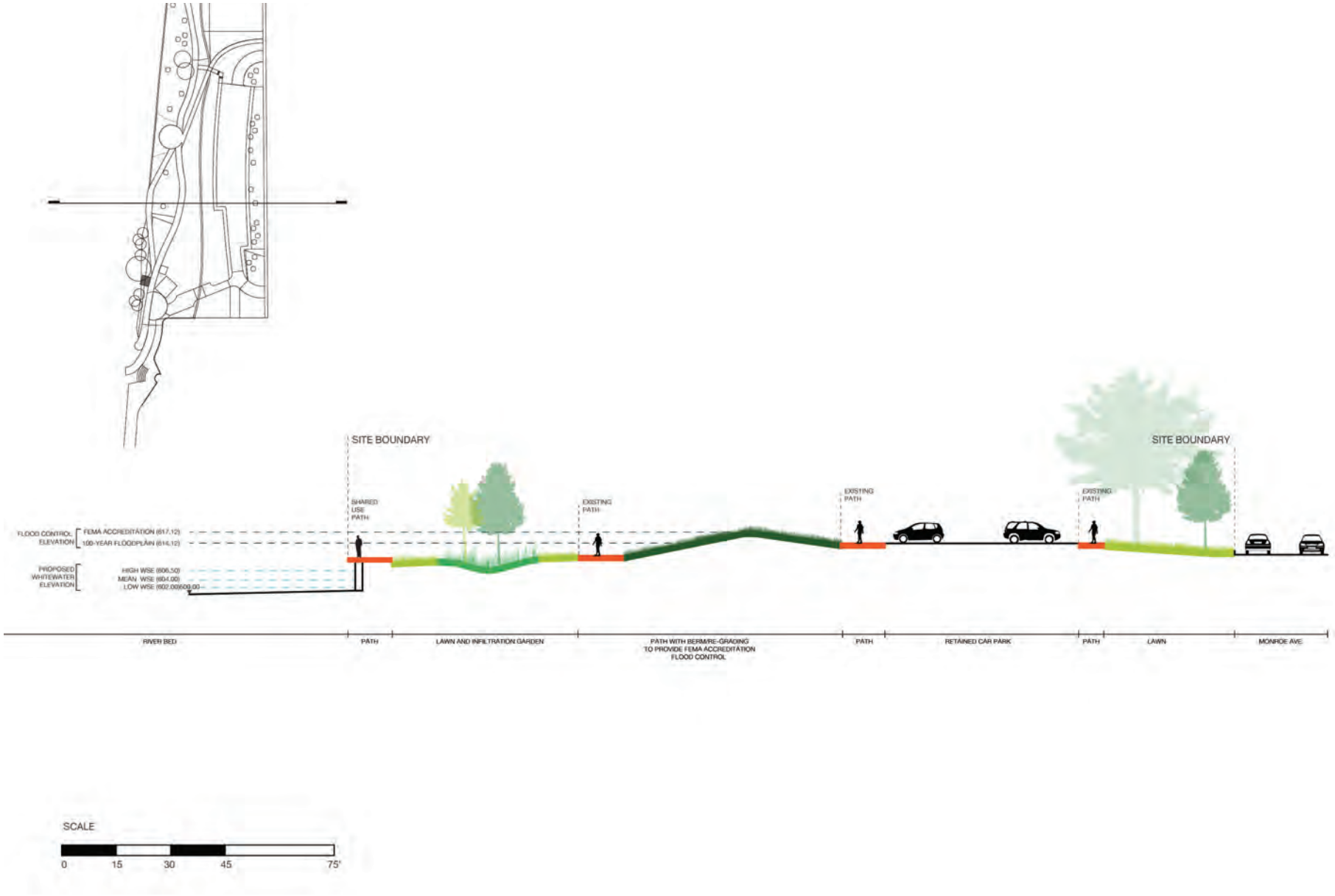


FIG A1.57: *Proposed 6th Street Park site sections*

>> Canal Street Park

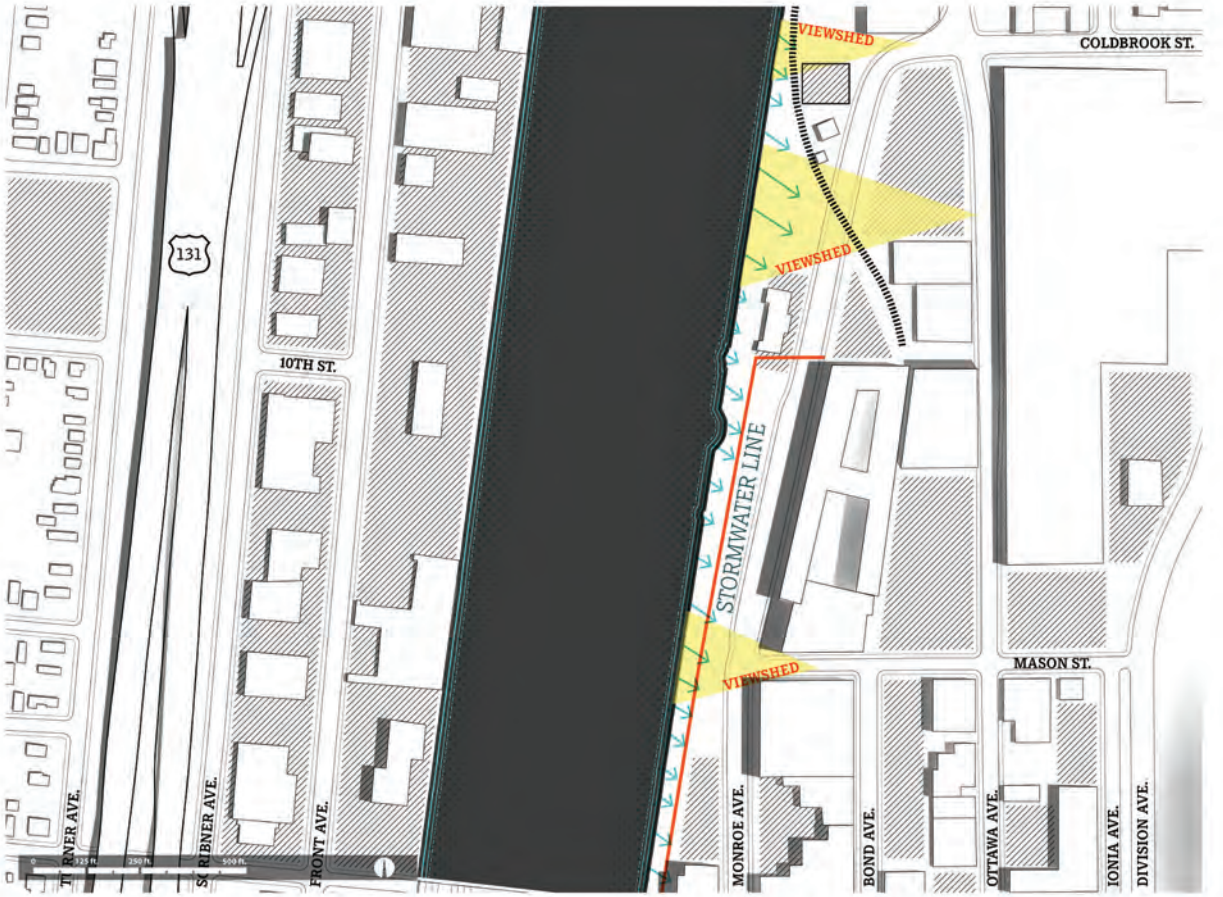


FIG A1.58: *Canal Street Park opportunities and constraints*

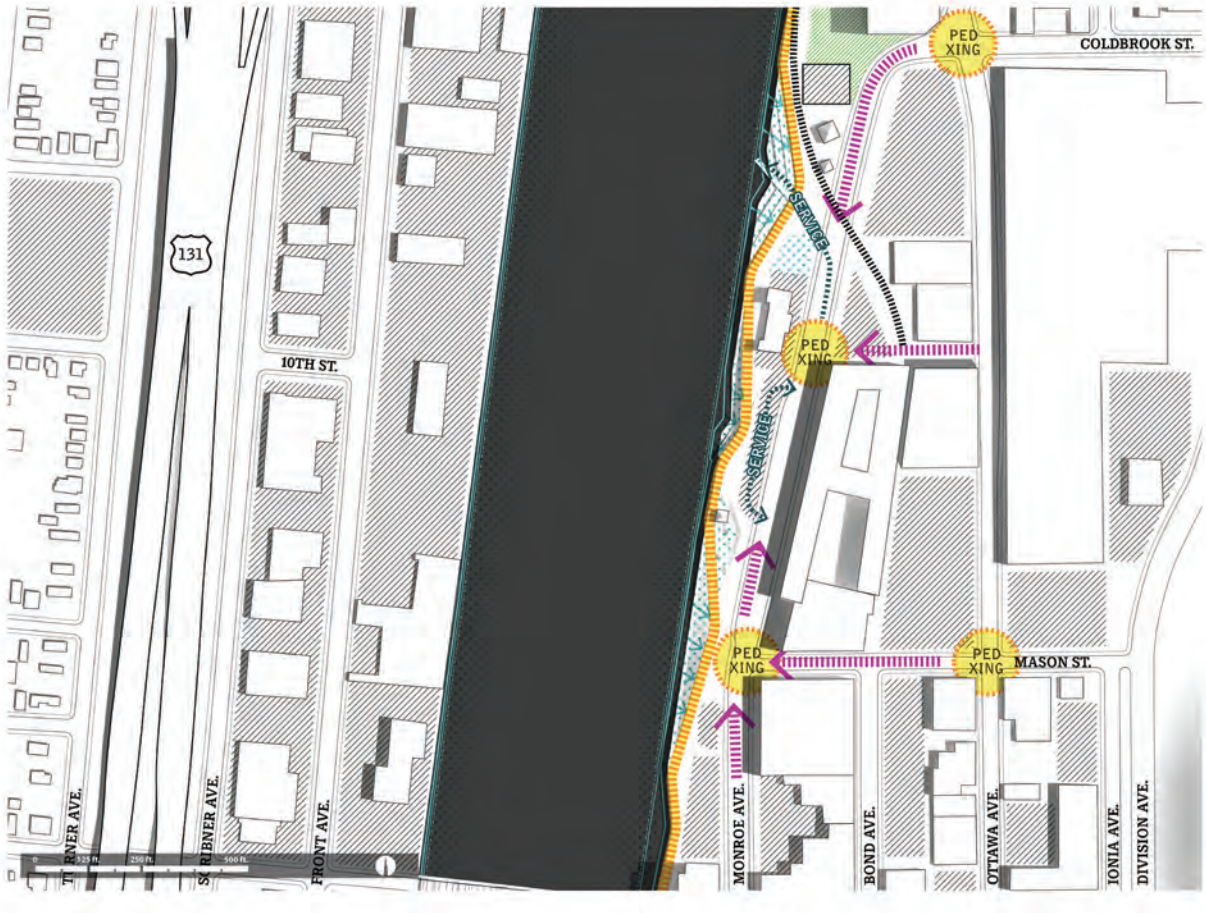


FIG A1.59: *Canal Street Park concept design*

Utility Constraints:

- 1 stormwater line

The goals of Canal Street Park are:

- Manage flooding/stormwater through the design of the trail landscape
- Provide/maintain river access including boat access
- Provide a continuous multi-use trail connection
- Create habitat and increase opportunities to manage stormwater
- Renovate and upgrade existing park to blend with river corridor park system
- Create an active edge that creates opportunities to watch River events
- Allow for public views and access to the river

Flood Managment Method

- Existing floodwall, wetland terraces, and sloped land to berm and trail

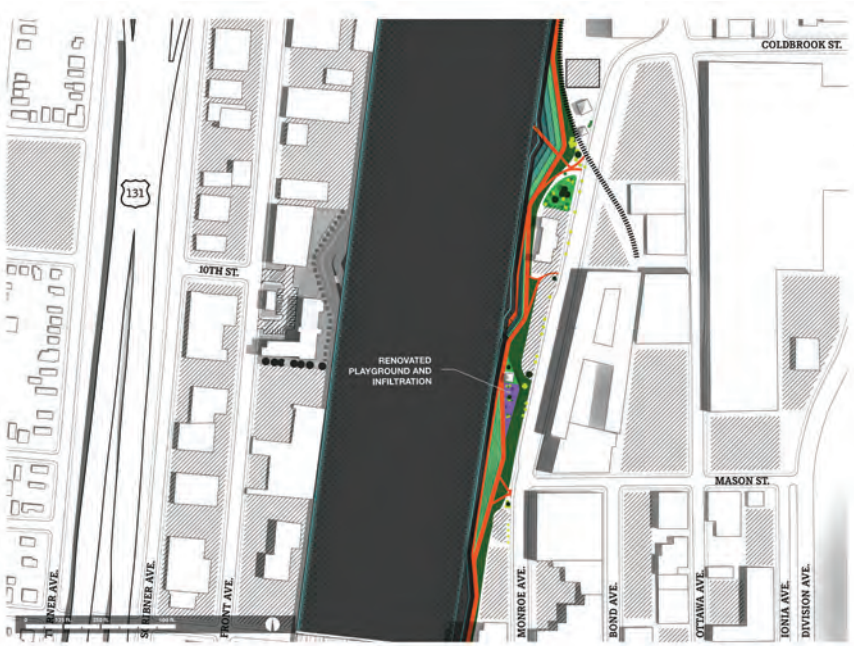


FIG A1.60: *Proposed Canal Street Park site plan*

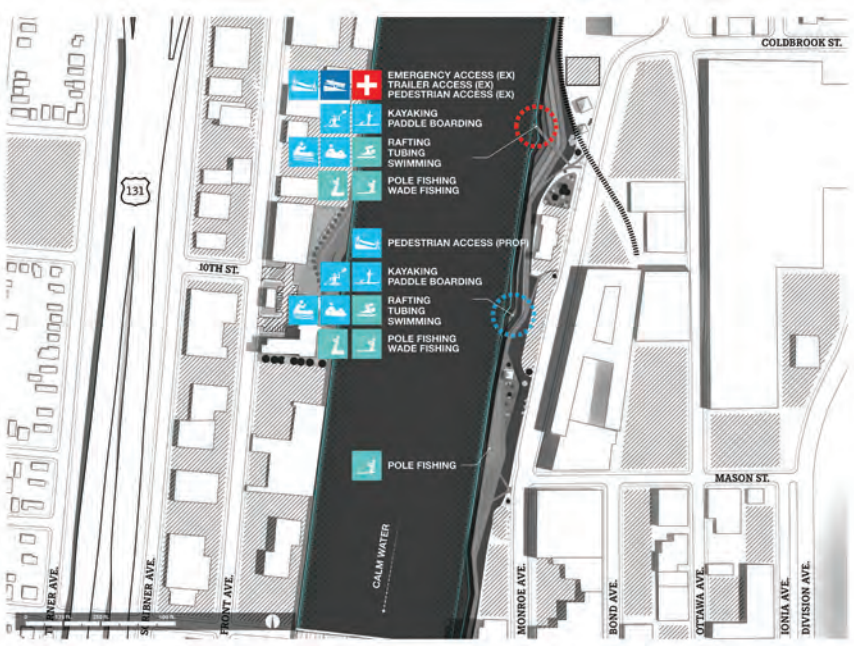


FIG A1.61: *Proposed Canal Street Park water access*

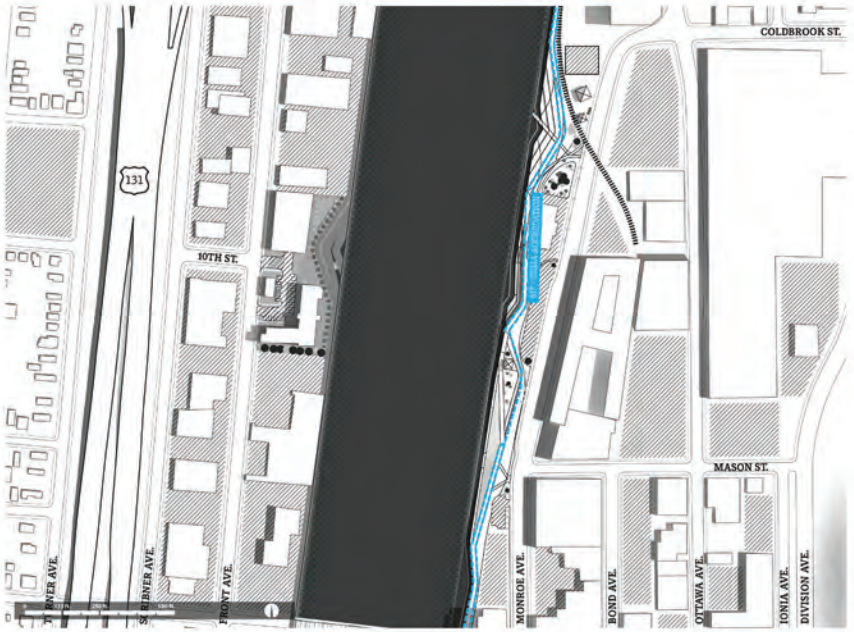


FIG A1.62: *Canal Street Park flood considerations*

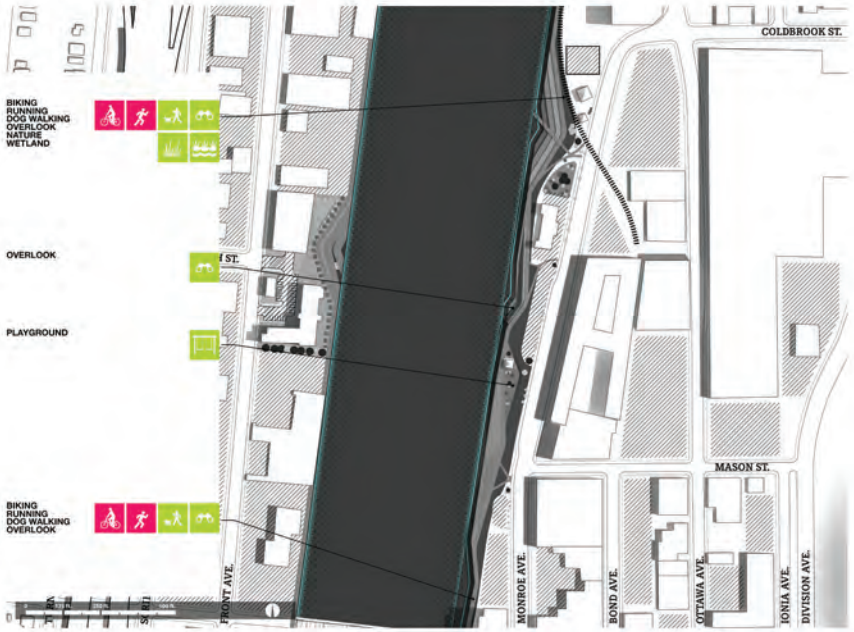


FIG A1.63: *Proposed Canal Street Park land program*

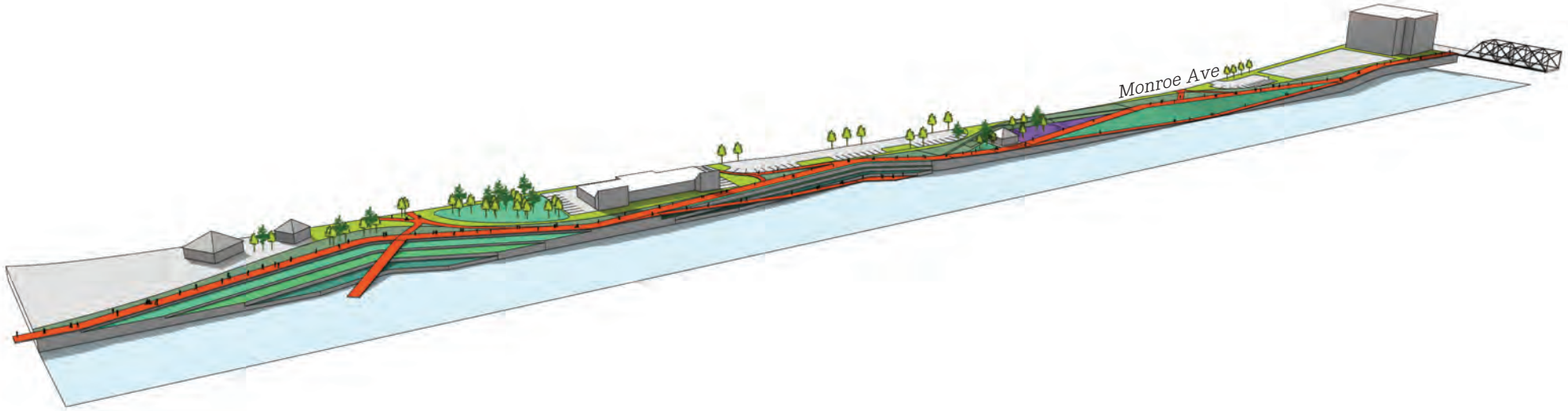


FIG A1.64: *Proposed Canal Street Park aerial view*

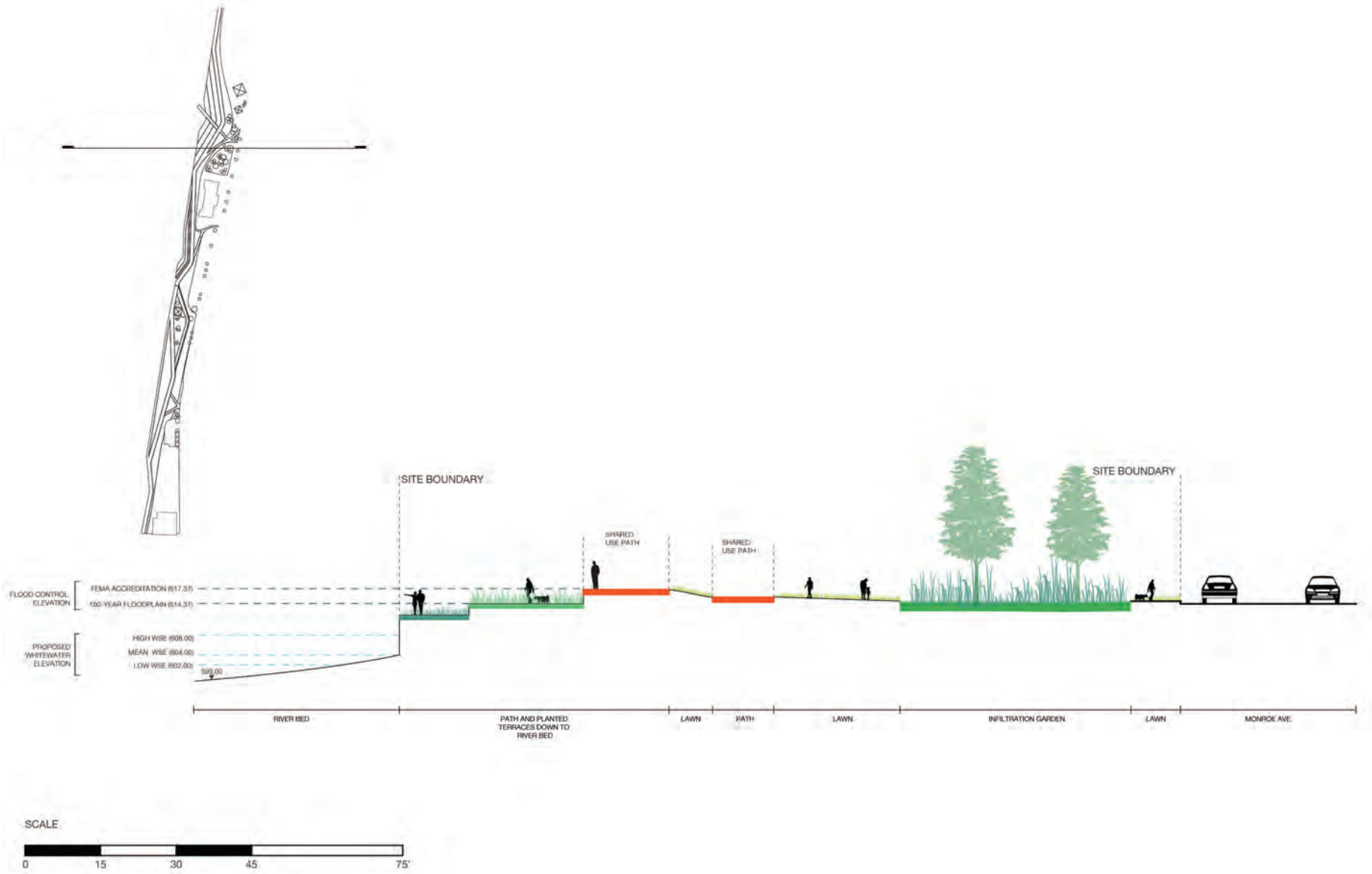


FIG A1.65: *Proposed Canal Street site sections*

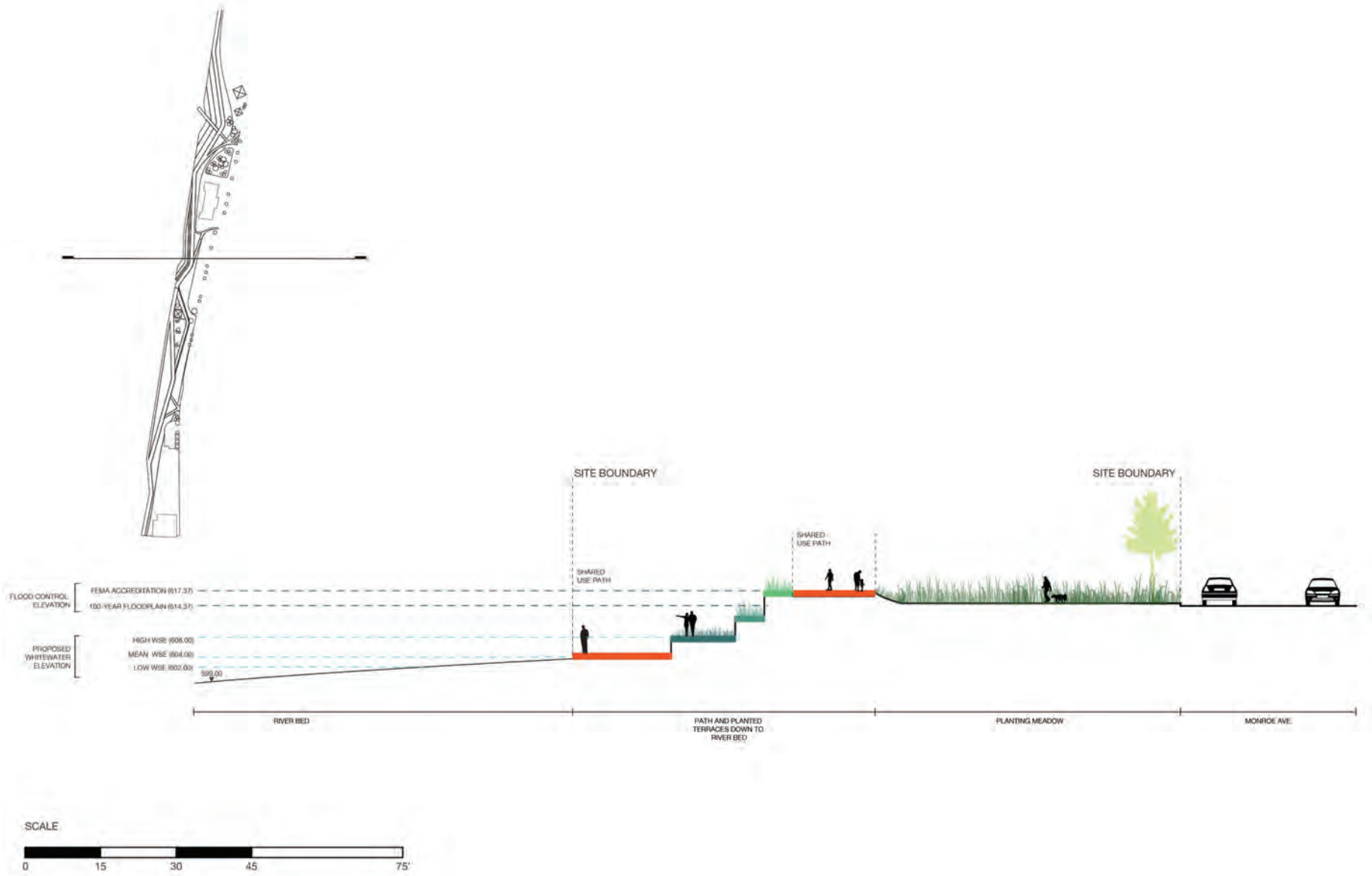


FIG A1.66: *Proposed Canal Street site sections*

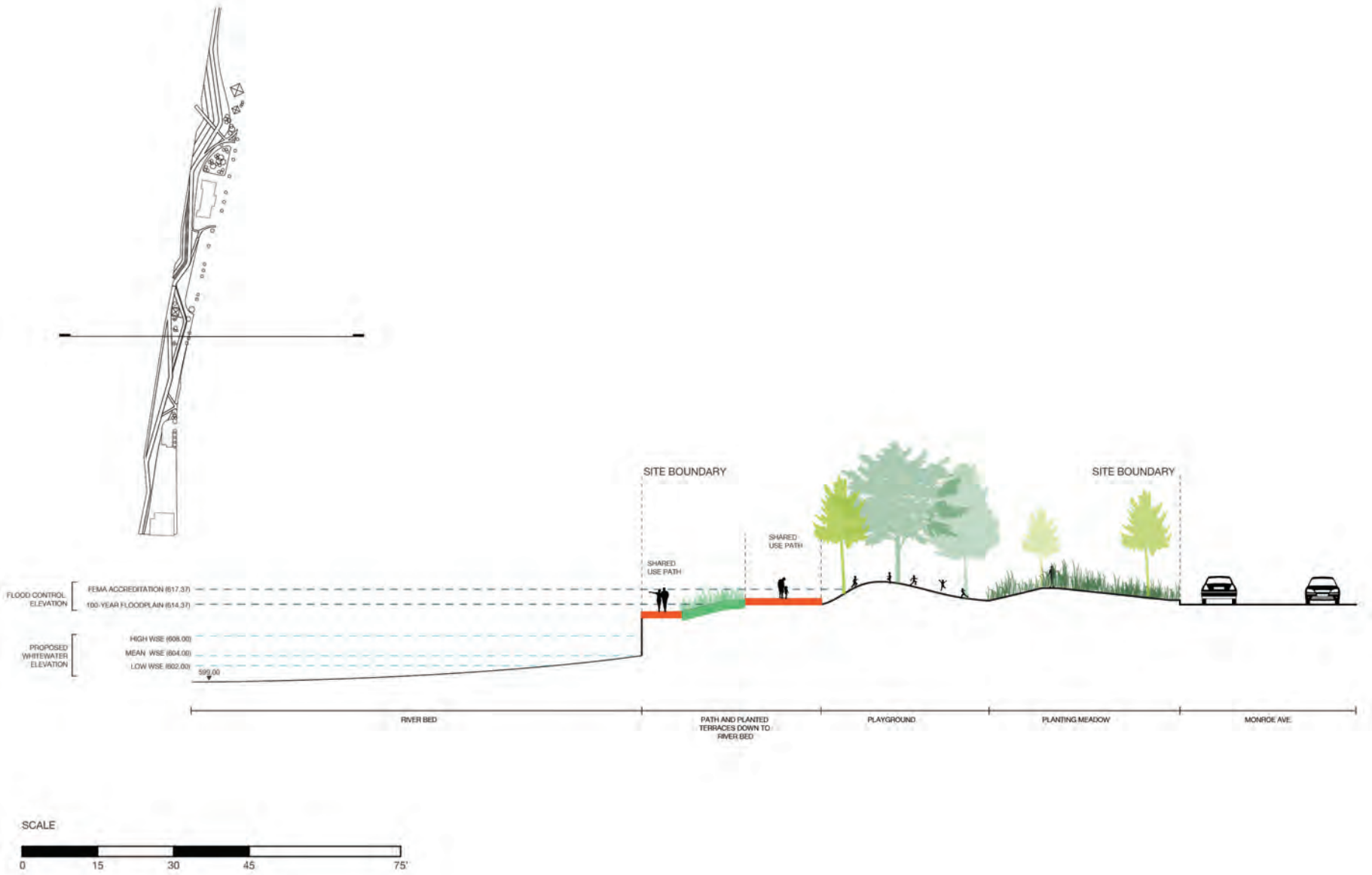


FIG A1.67: *Proposed Canal Street site sections*

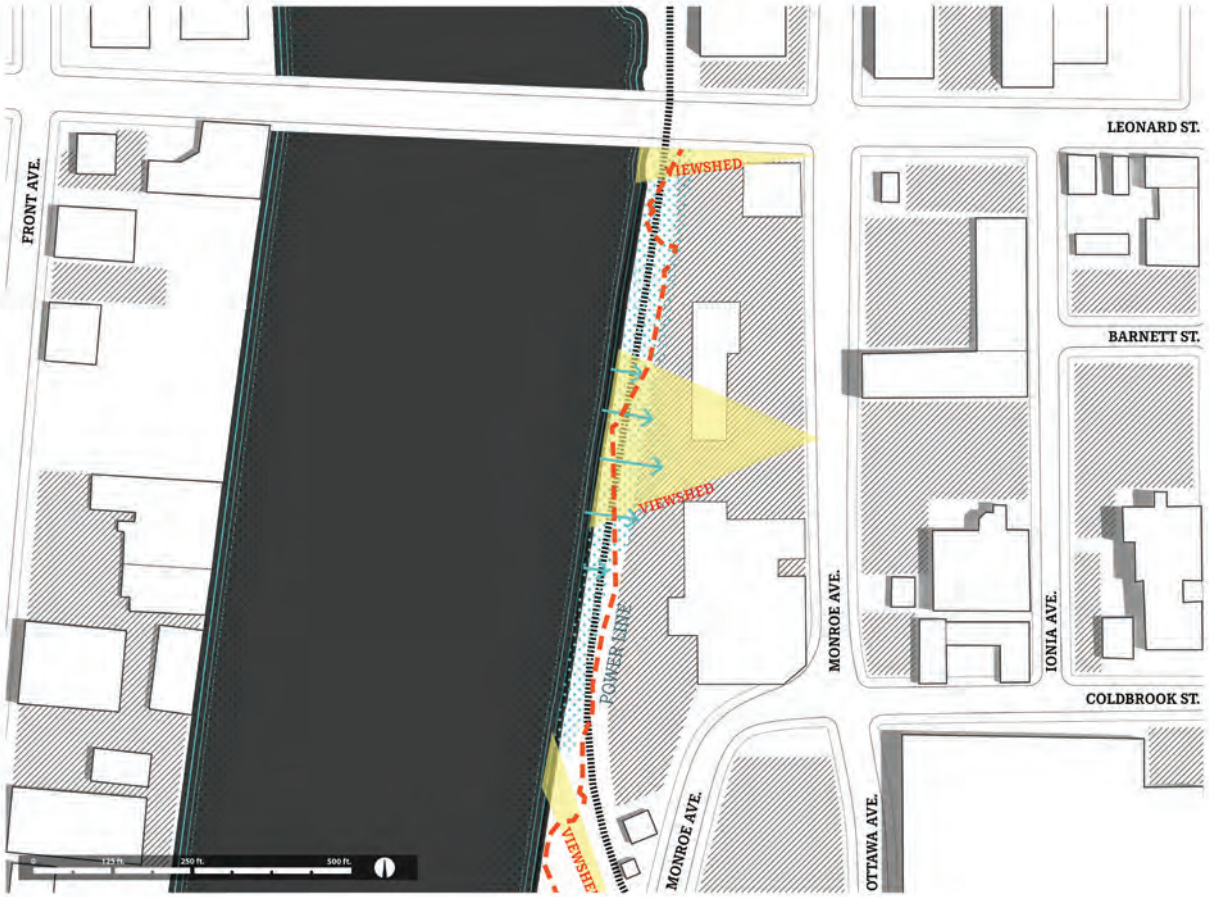


FIG A1.68: *Coldbrook opportunities and constraints*

>> Coldbrook

Utility Constraints:

- Power lines

The goals of Coldbrook are:

- Manage flooding/stormwater through the design of the trail landscape
- Create pedestrian access to The Ledge
- Provide a continuous multi-use trail connection
- Create habitat and increase opportunities to manage stormwater
- Create a demonstration of how the trail will look and feel
- Allow for the future expansion of the site as a development both on site and across the street
- Create a connection to the exiting trail north of Leonard

Flood Managment Methods:

- existing floodwall, wetland terraces to berm and trail

FIG A1.69: *Coldbrook concept design*

FIG A1.70: *Proposed Coldbrook site plan*

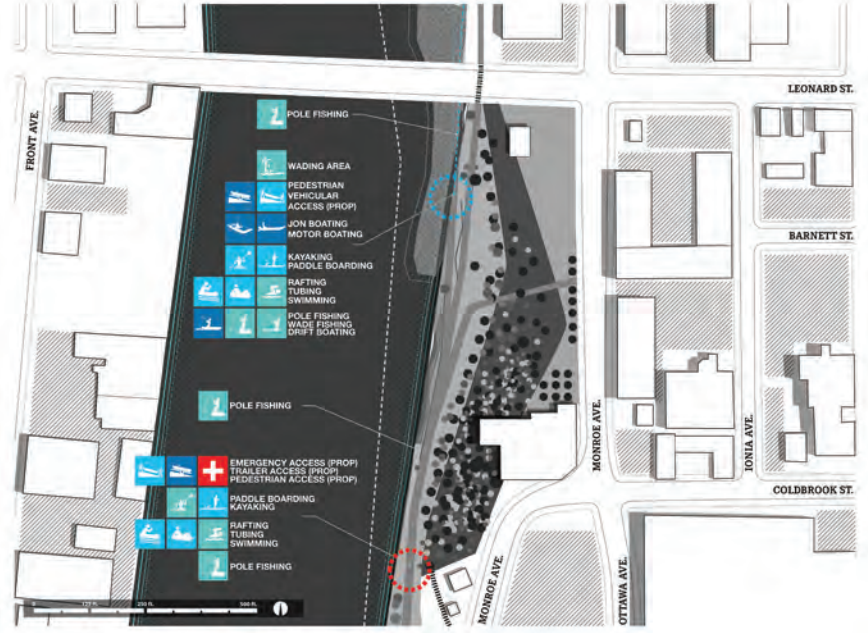


FIG A1.71: *Proposed Coldbrook water access*

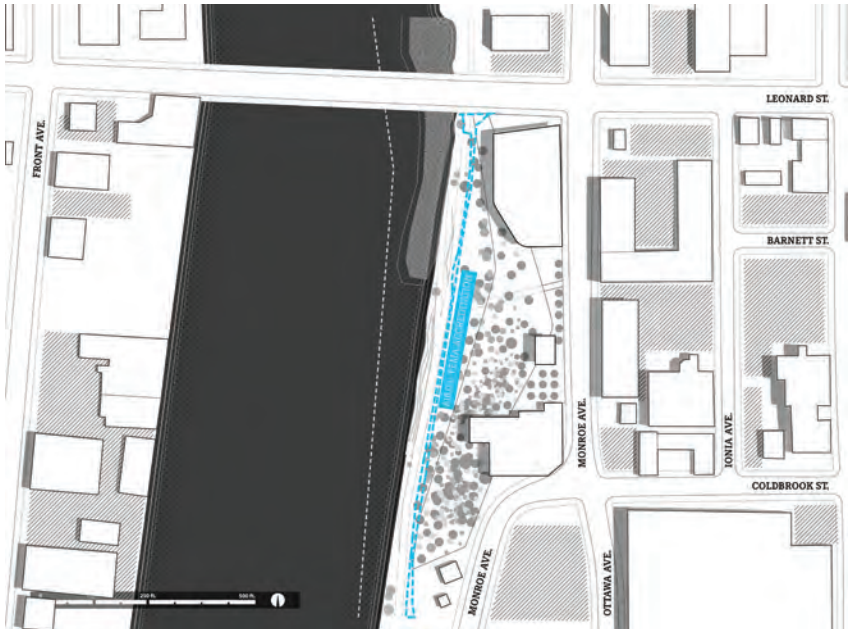


FIG A1.73: *Coldbrook flood considerations*

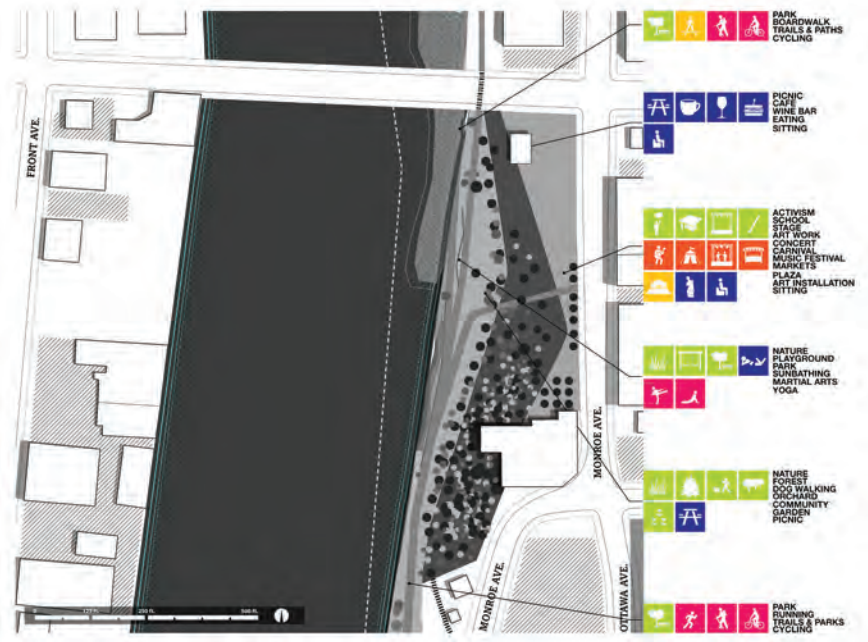


FIG A1.72: *Proposed Coldbrook land program*

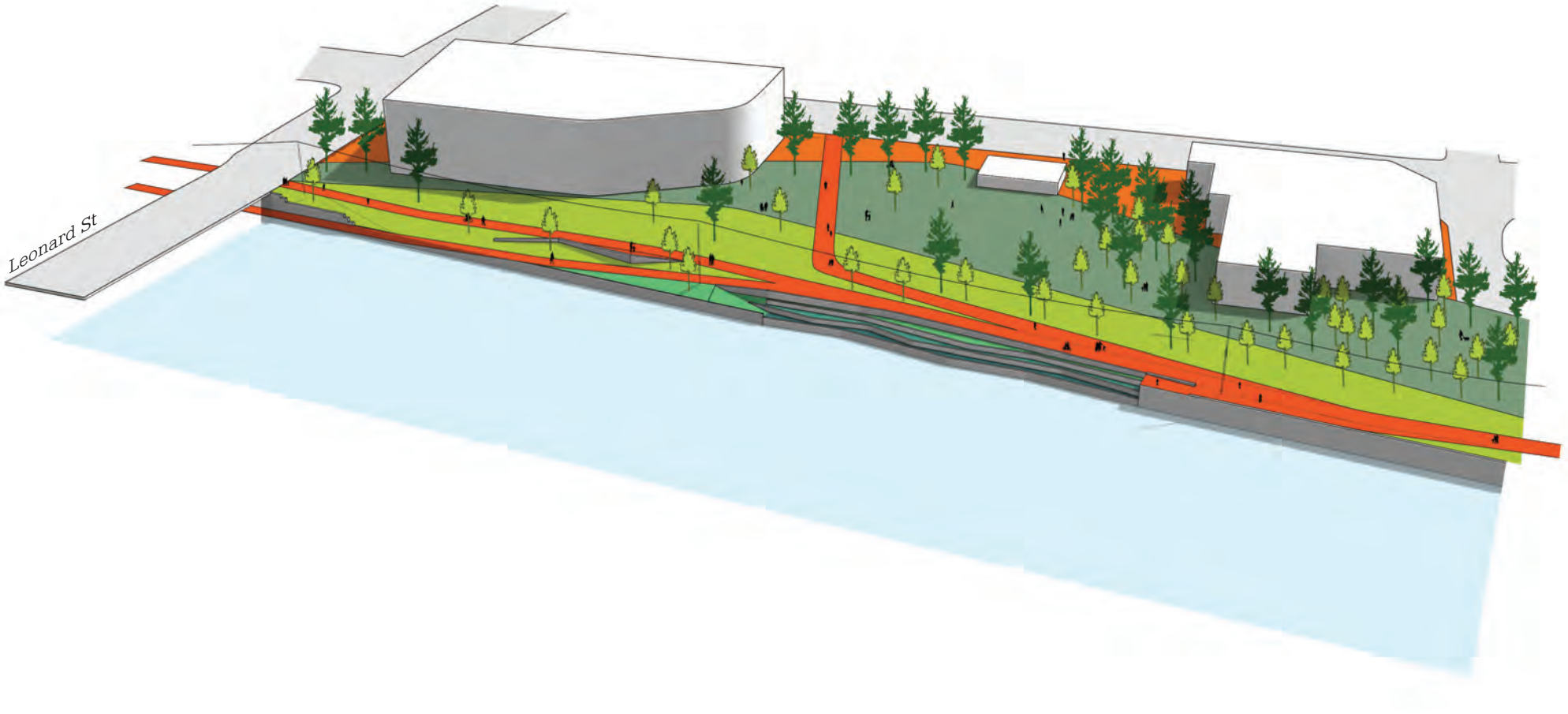


FIG A1.74: *Proposed Coldbrook aerial view*

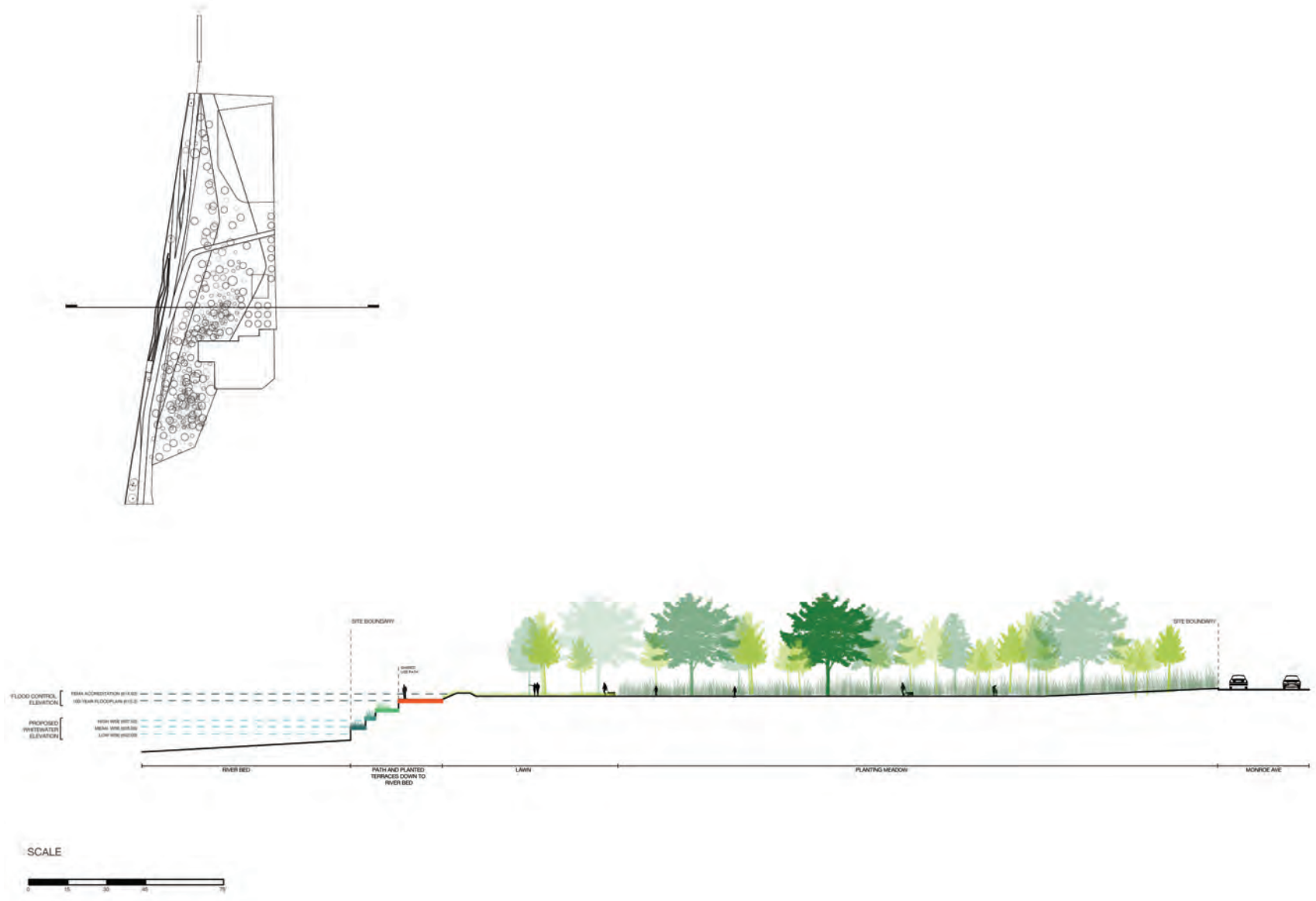


FIG A1.75: *Proposed Coldbrook site sections*

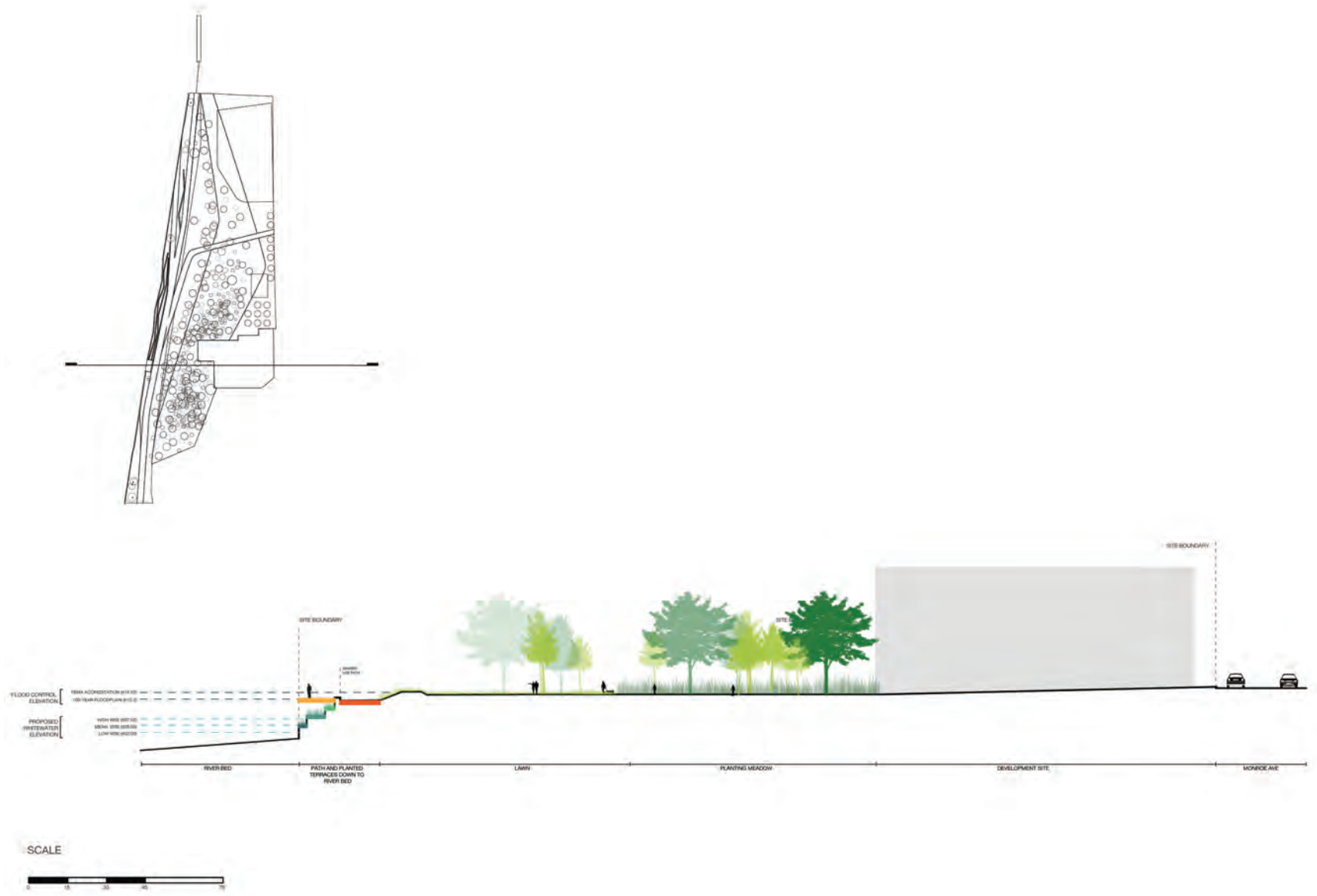


FIG A1.76: *Proposed Coldbrook site sections*

FIG A1.77: *Proposed Coldbrook aerial rendering*

>> Adventure Park

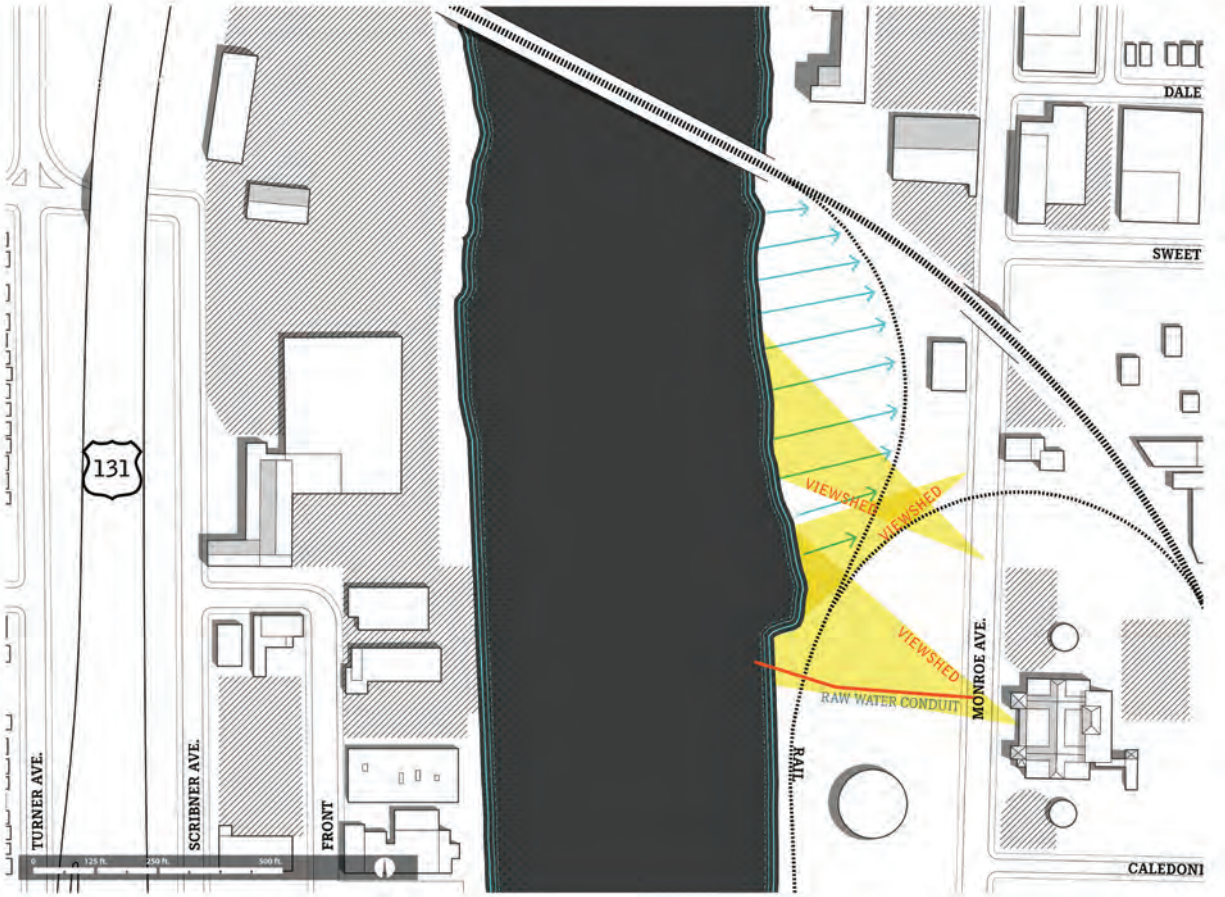


FIG A1.78: *Adventure Park opportunities and constraints*

FIG A1.79: *Adventure Park concept design*

Utility Constraints:

- Raw water conduit

The goals of Adventure Park are:

- Create an adventure landscape that allows for people to experience the ecology while participating in extreme and active program
- Manage flooding/stormwater through the design of the trail landscape
- Create pedestrian access to river and provide access to fish bypass and controls for dynamic barrier
- Provide a continuous multi-use trail connection
- Create habitat and increase opportunities to manage stormwater
- Allow for the expansion of the site as a development both on site and across the street
- Create a connection to the exiting trail north of Leonard

Flood Managment Method

- existing conditions accomplish elevation goals

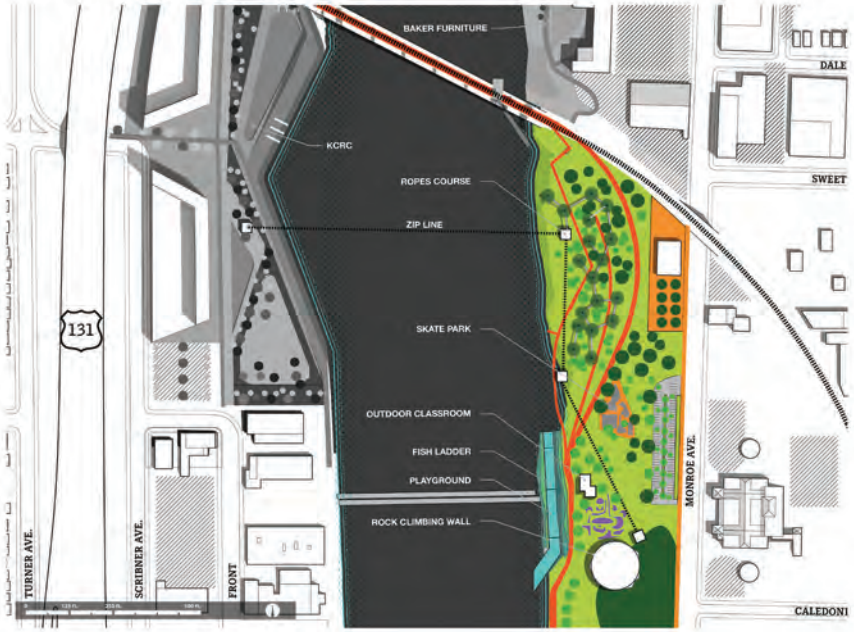


FIG A1.80: *Proposed Adventure Park site plan*

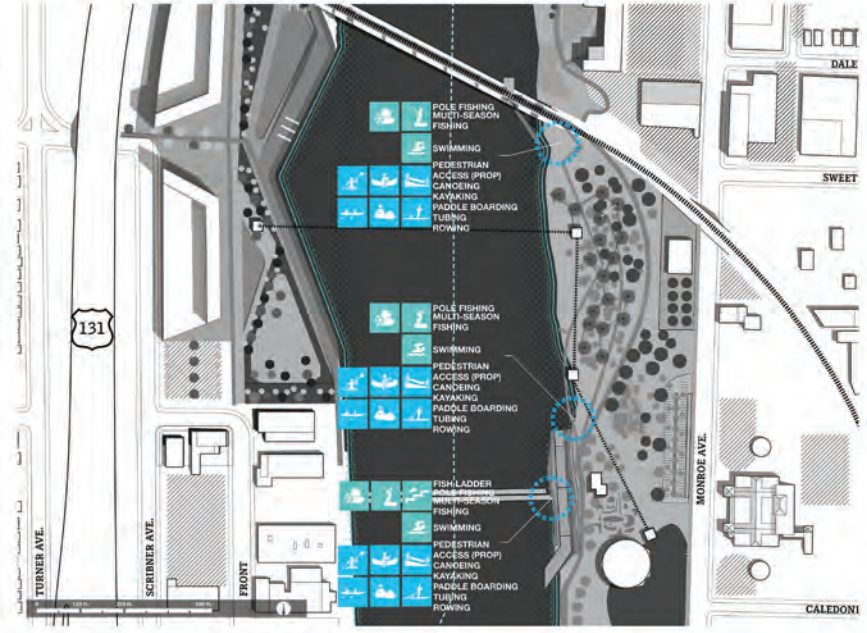


FIG A1.81: *Proposed Adventure Park water access*

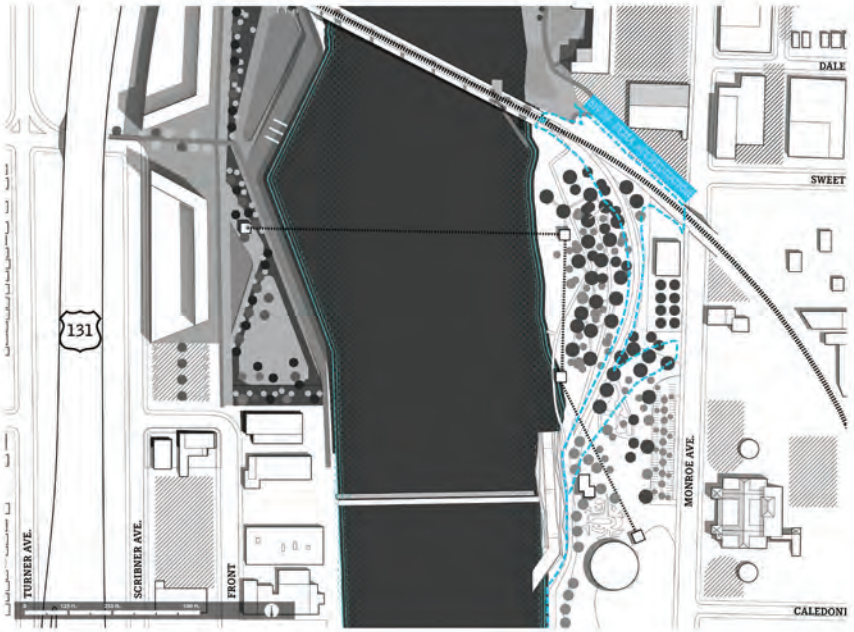


FIG A1.82: *Adventure Park flood considerations*

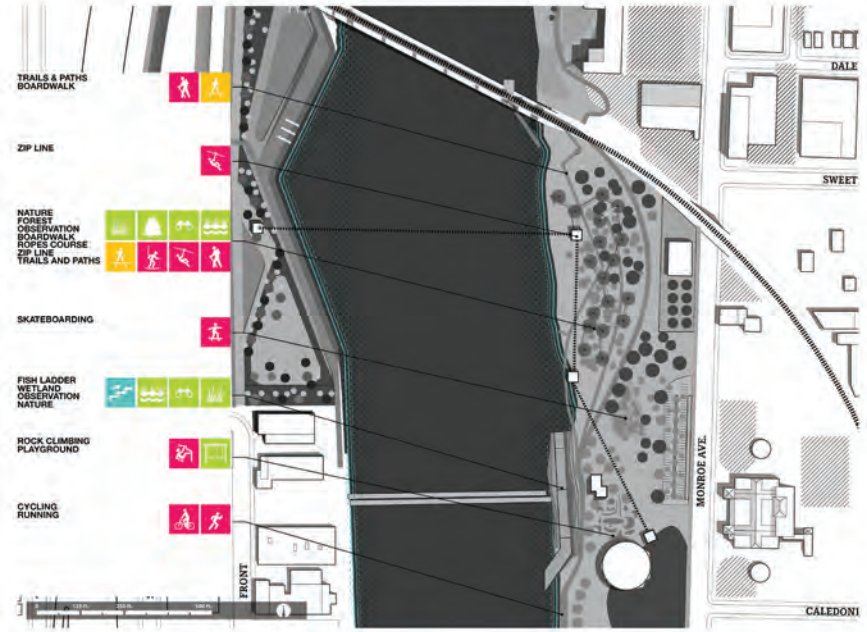


FIG A1.83: *Proposed Adventure Park land program*

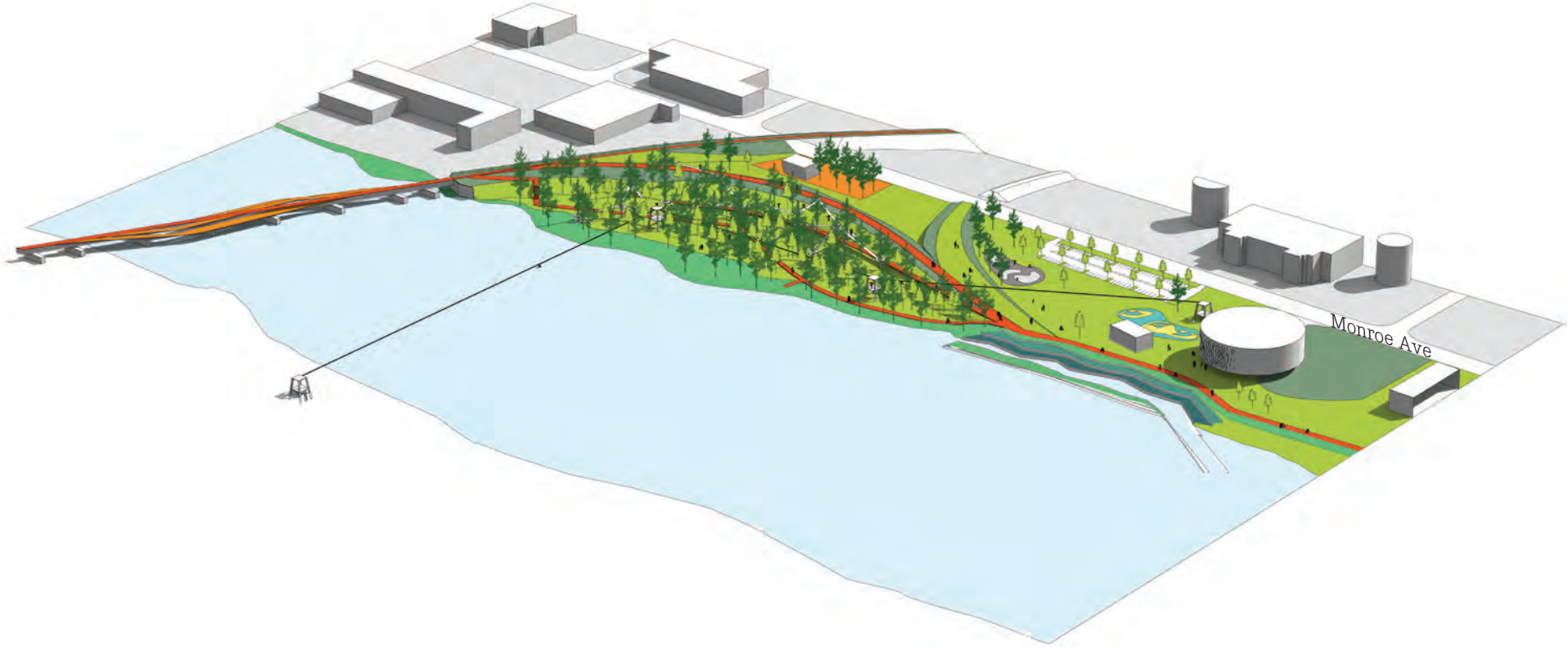


FIG A1.84: *Proposed Adventure Park aerial view*

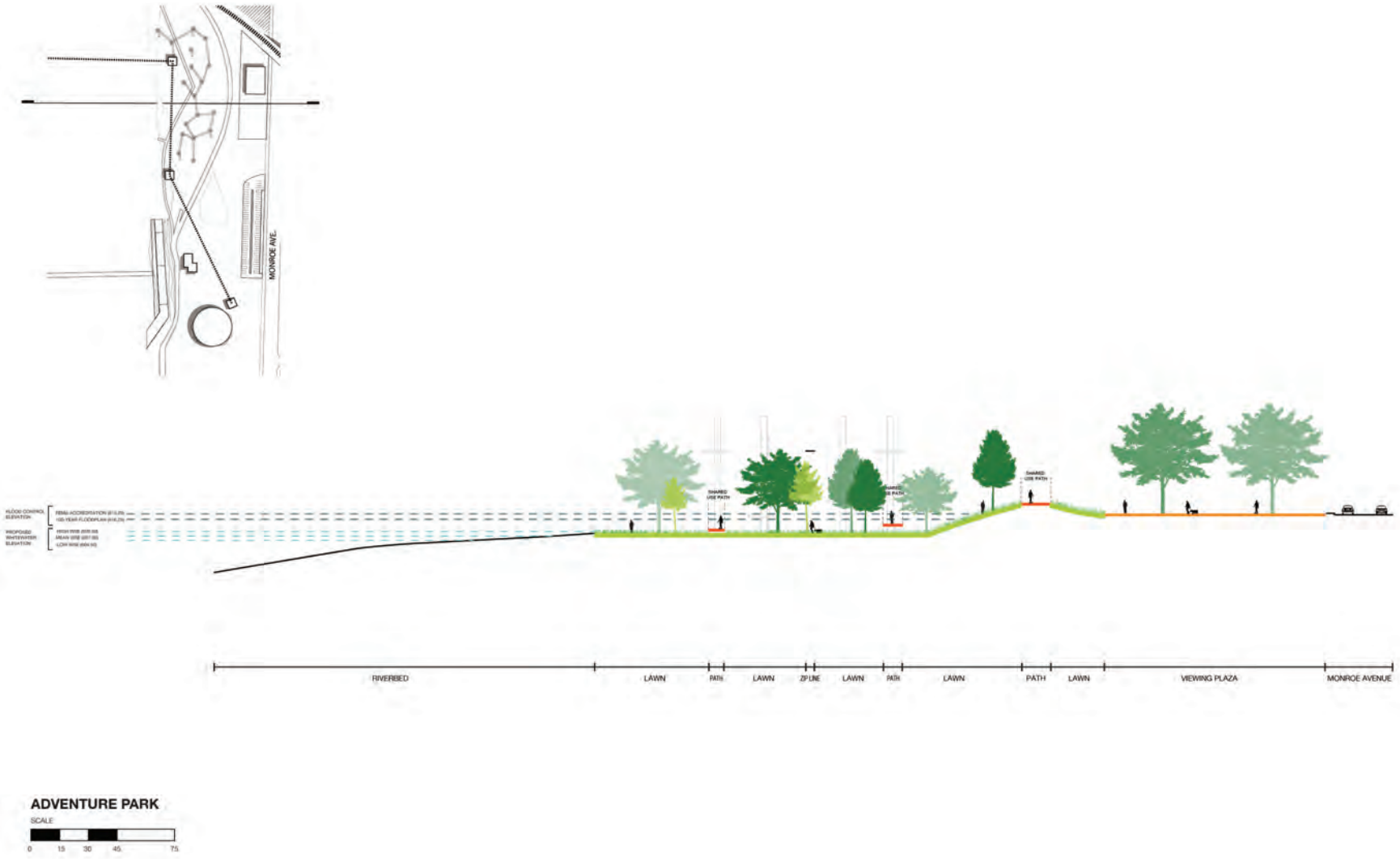


FIG A1.85: *Proposed Adventure Park site sections*

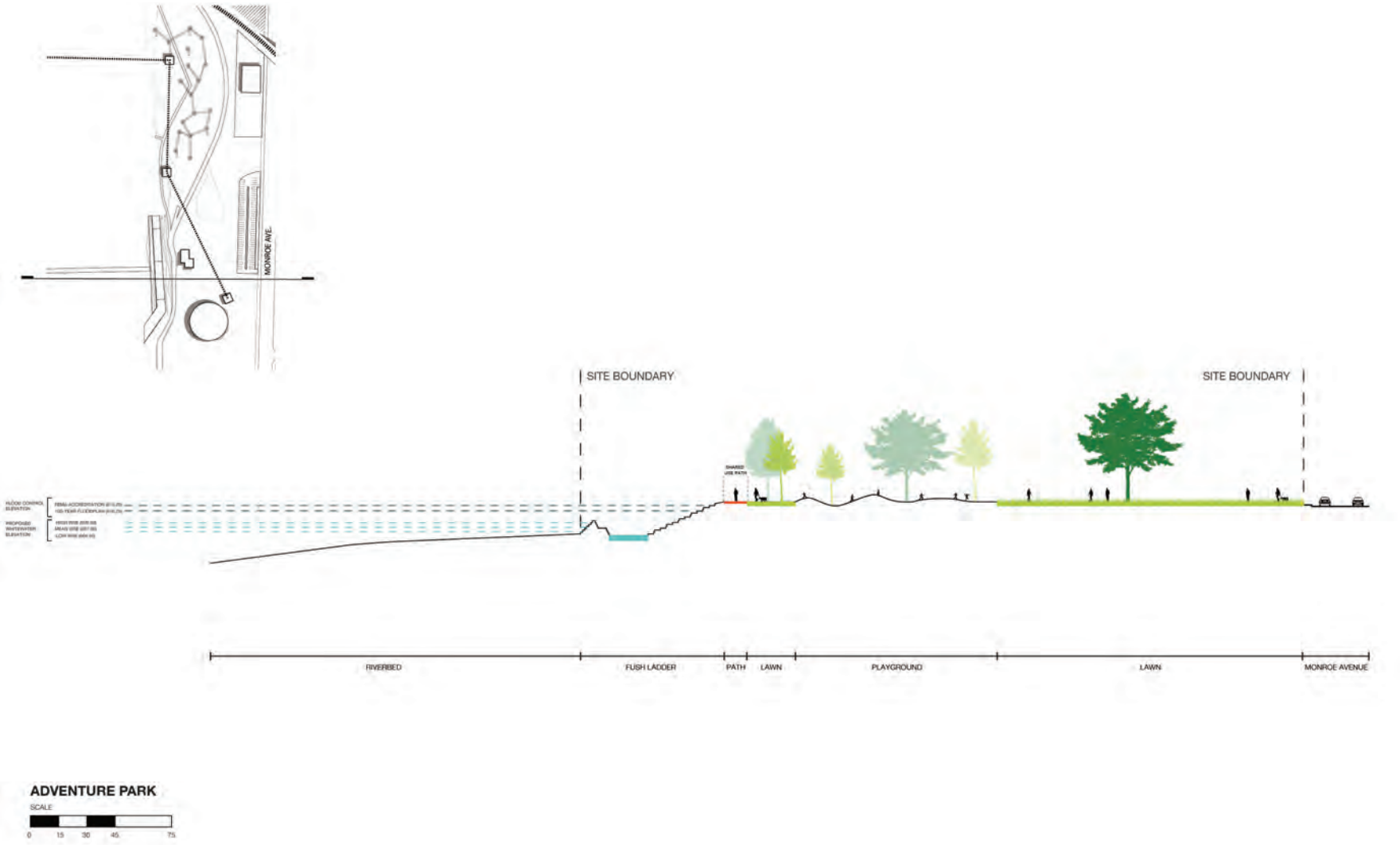


FIG A1.86: *Proposed Adventure Park site sections*

FIG A1.87: *Proposed Adventure Park aerial rendering*

FIG A1.88: *Baker Furniture opportunities and constraints*

>> Baker Furniture

Utility Constraints:

- Stormwater pipe

The goals of Baker Furniture are:

- Create a public private partnership that increases program opportunities by moving flood infrastructure onto private land
- Manage flooding/stormwater through the design of the trail landscape
- Create pedestrian access to river and development
- Provide a continuous multi-use trail connection
- Create habitat and increase opportunities to manage stormwater

Flood Managment Methods:

- Wetland terracing
- Sloped land to FEMA level

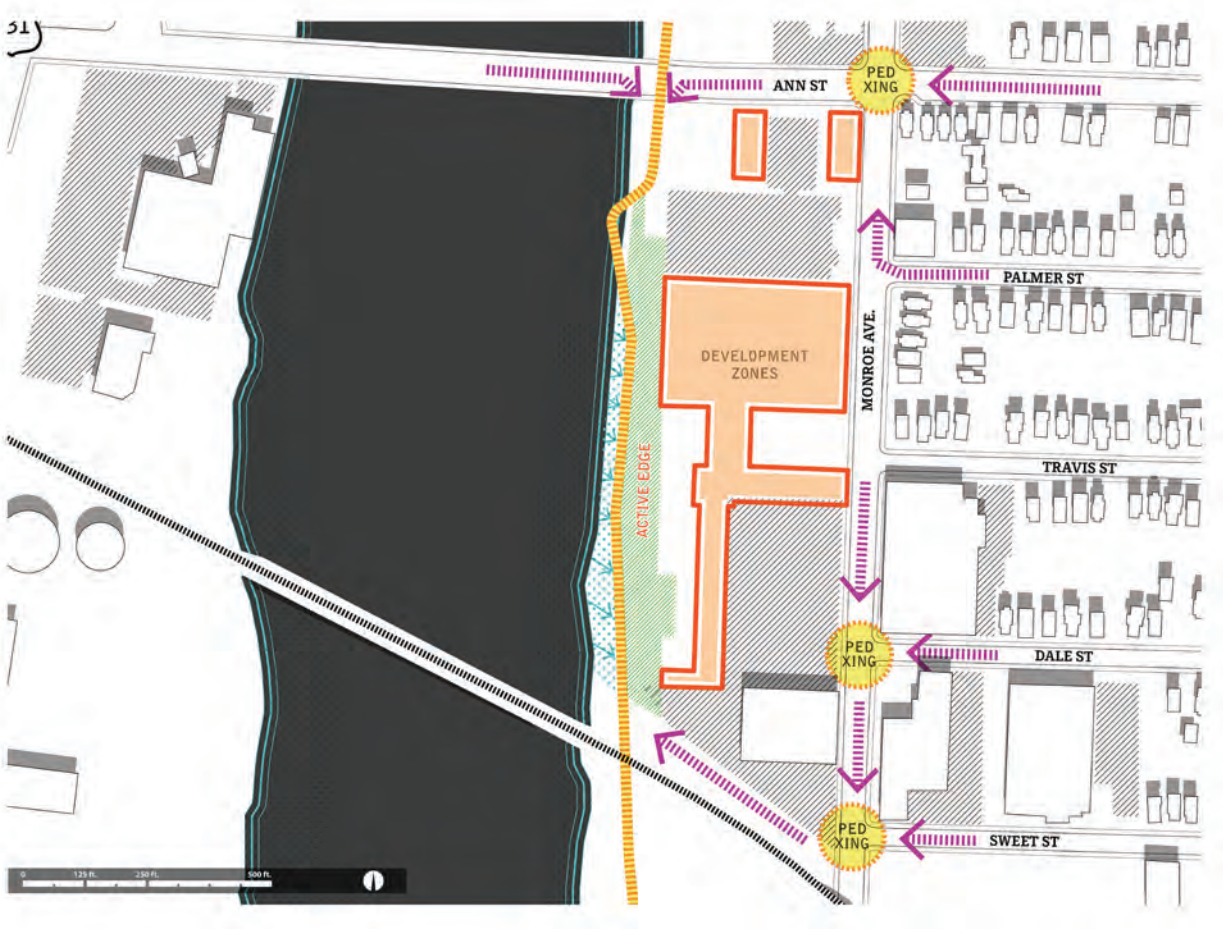


FIG A1.89: *Baker Furniture concept design*

FIG A1.90: *Proposed Baker Furniture site plan*

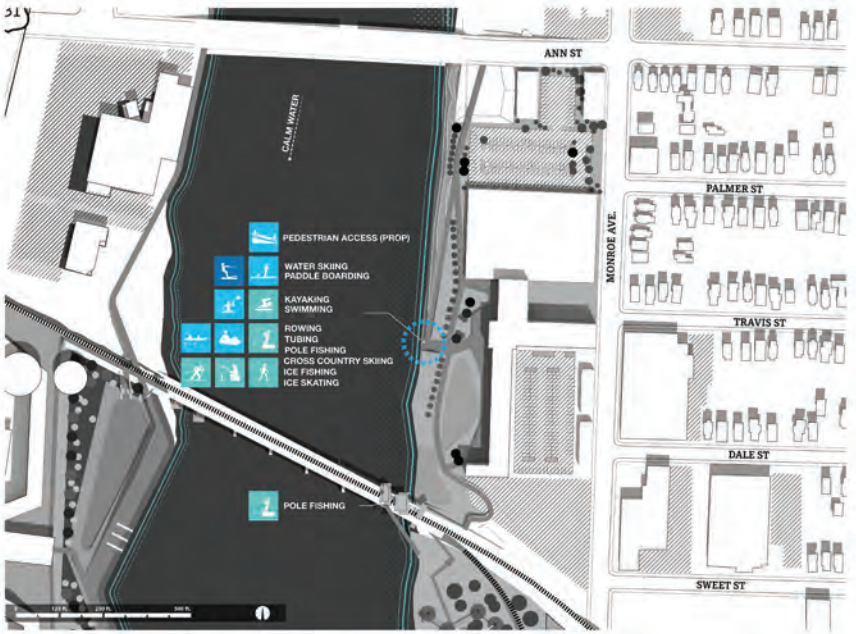


FIG A1.91: *Proposed Baker Furniture water access*

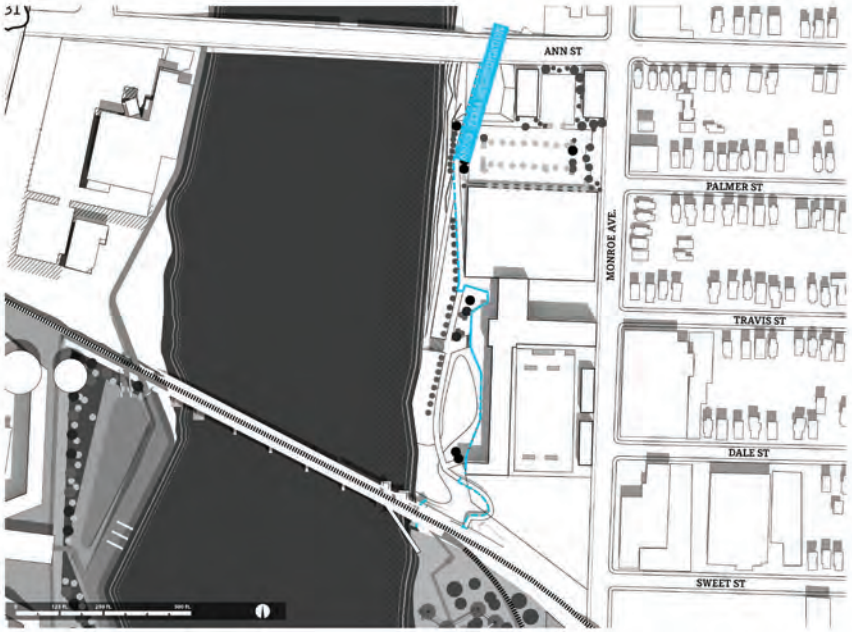


FIG A1.92: *Baker Furniture flood considerations*

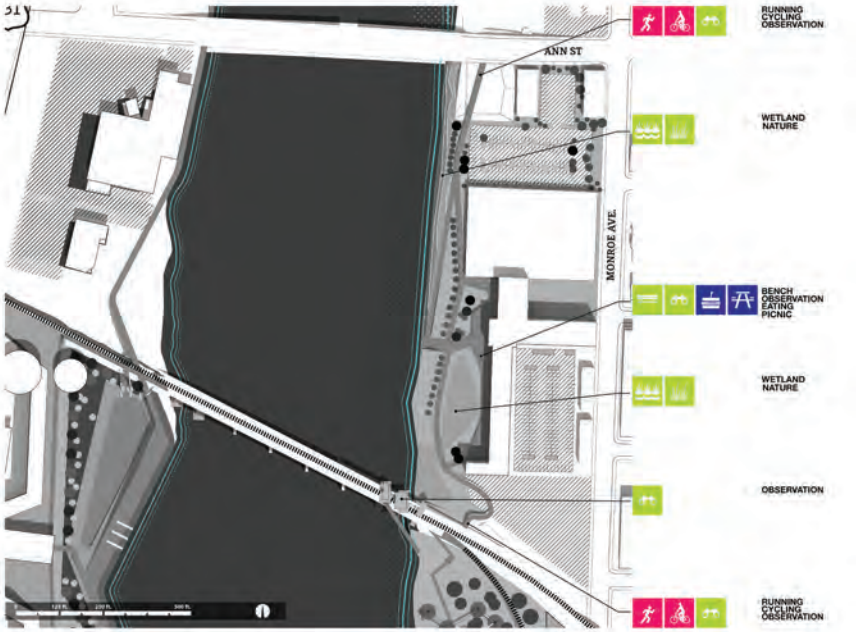


FIG A1.93: *Proposed Baker Furniture land program*

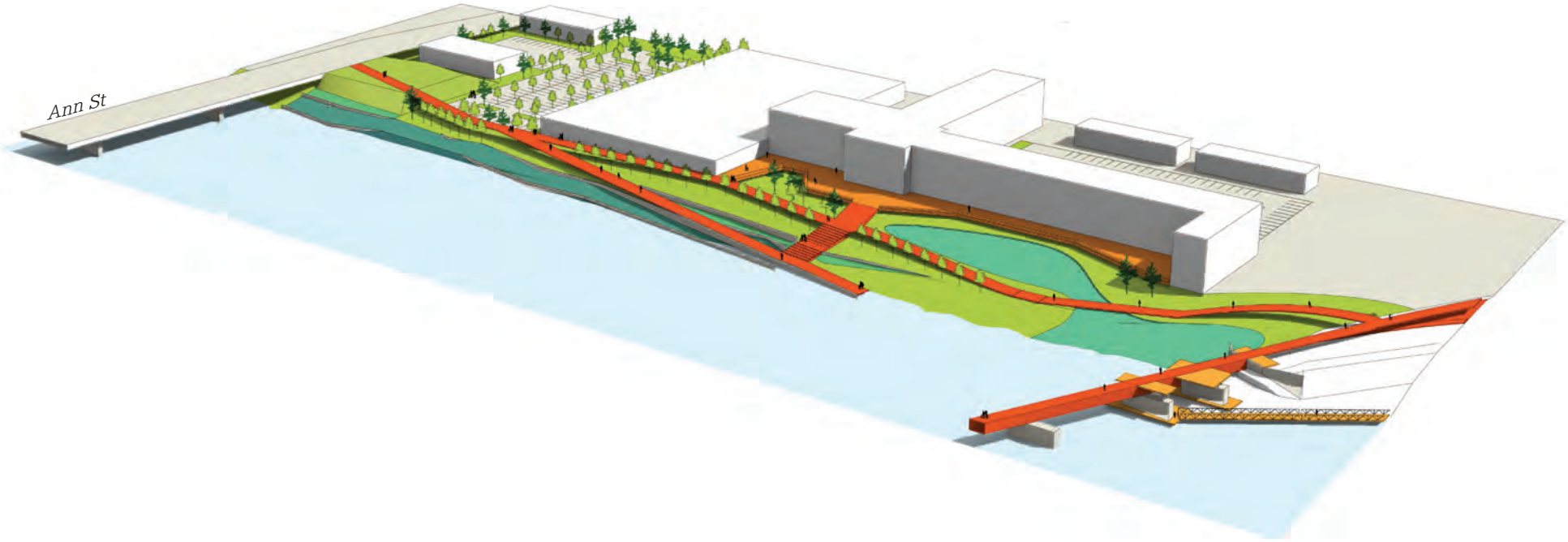


FIG A1.94: *Proposed Baker Furniture aerial view*

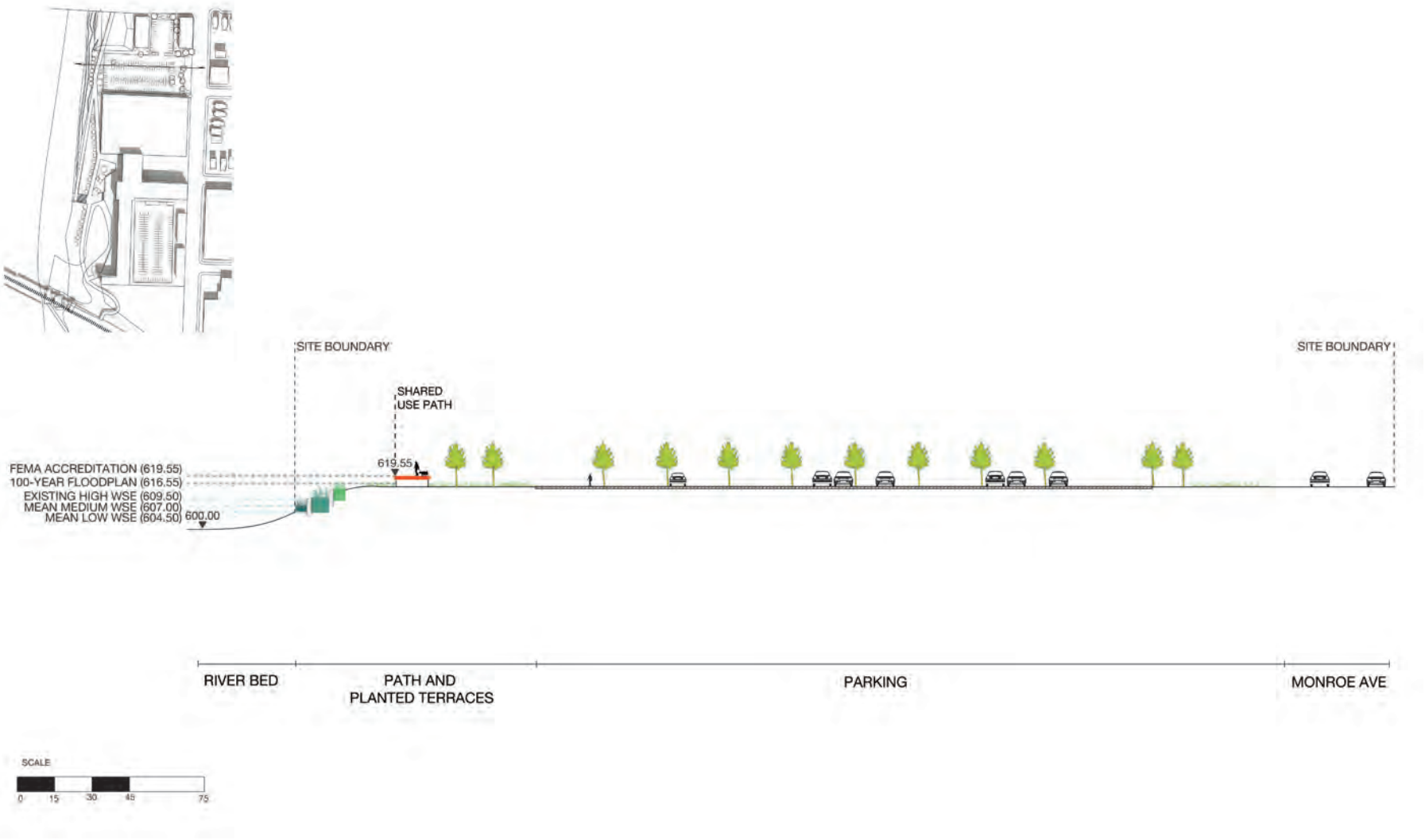


FIG A1.95: *Proposed Baker Furniture site sections*

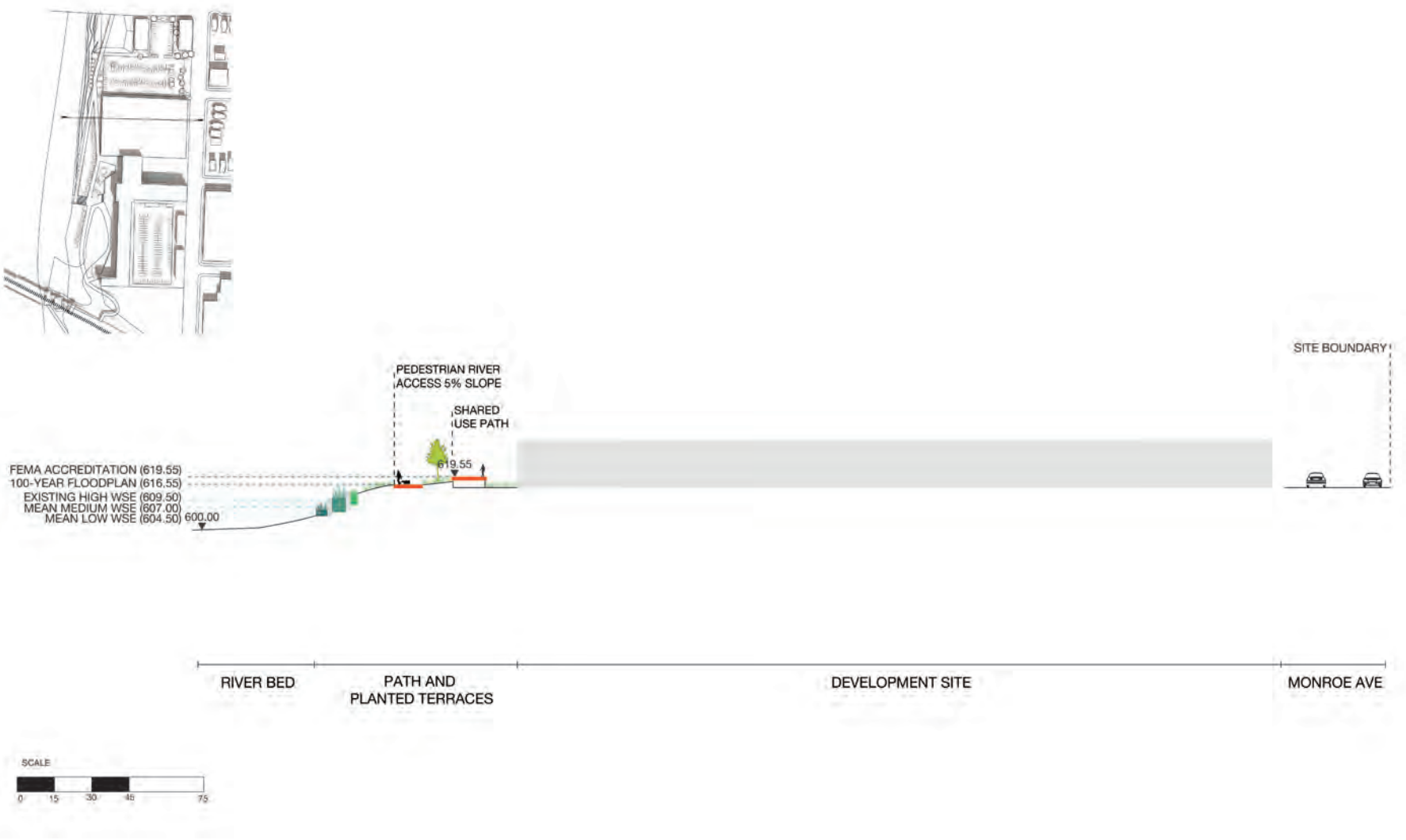


FIG A1.96: *Proposed Baker Furniture site sections*

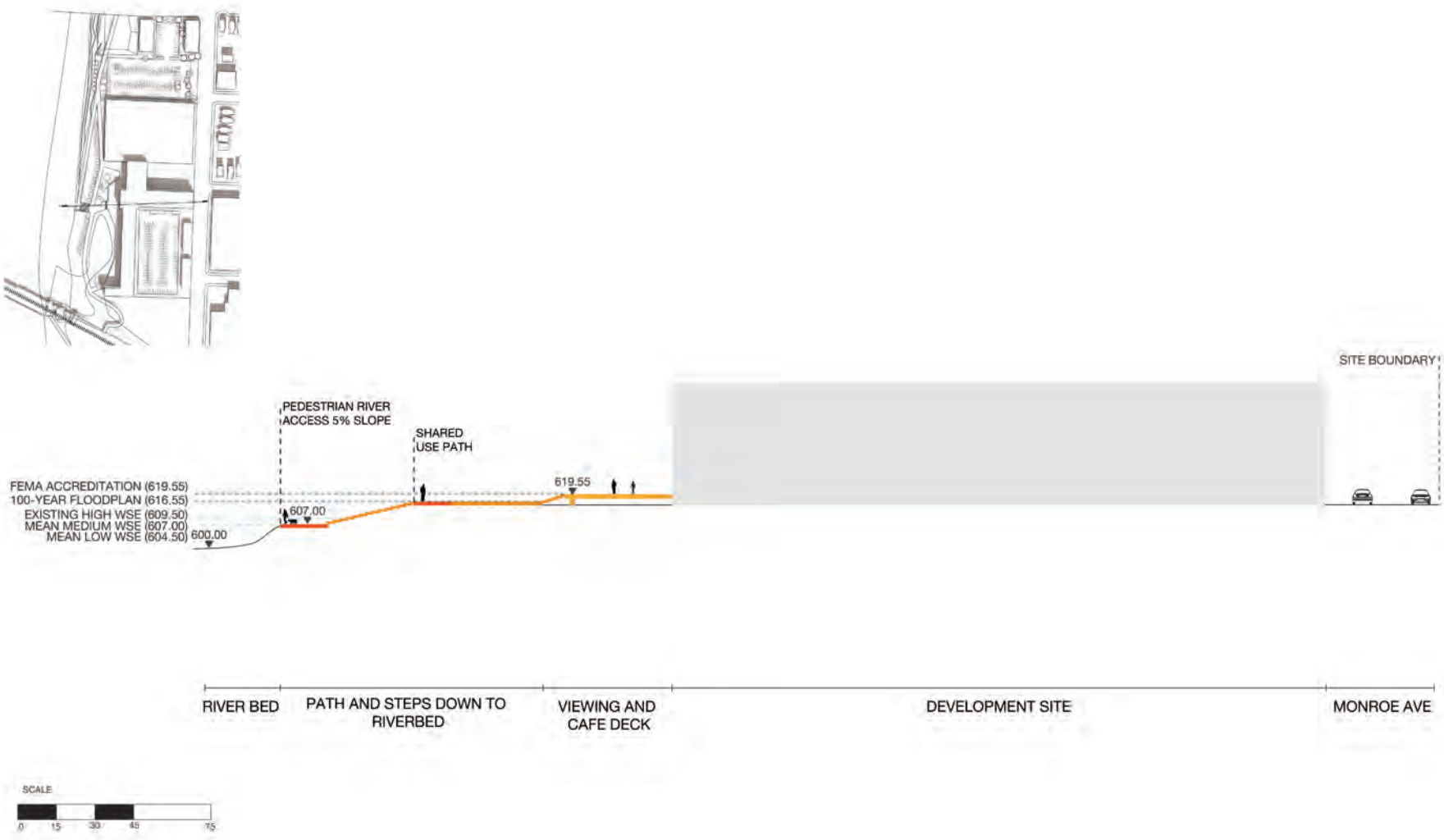


FIG A1.97: *Proposed Baker Furniture site sections*

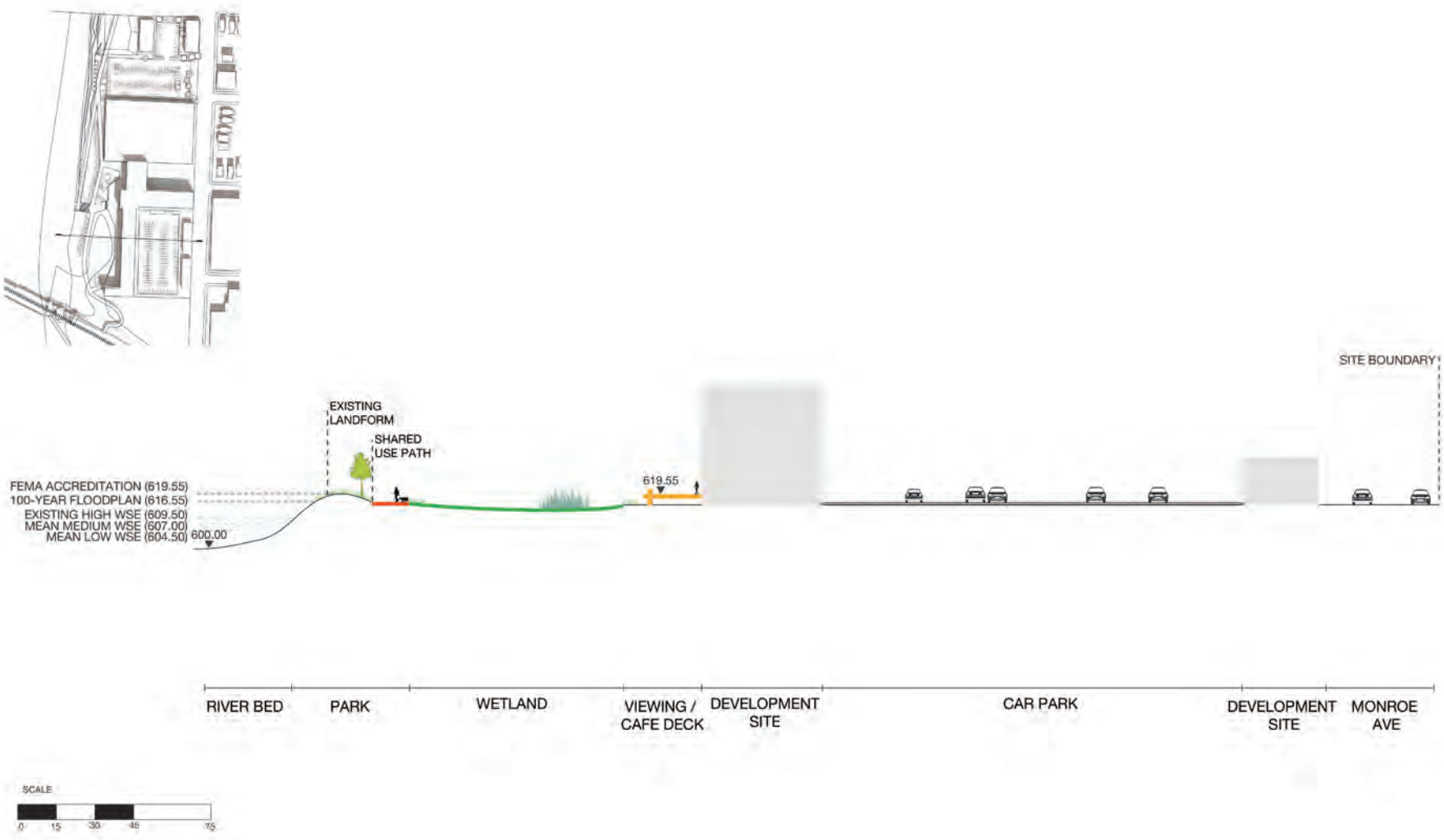


FIG A1.98: *Proposed Baker Furniture site sections*

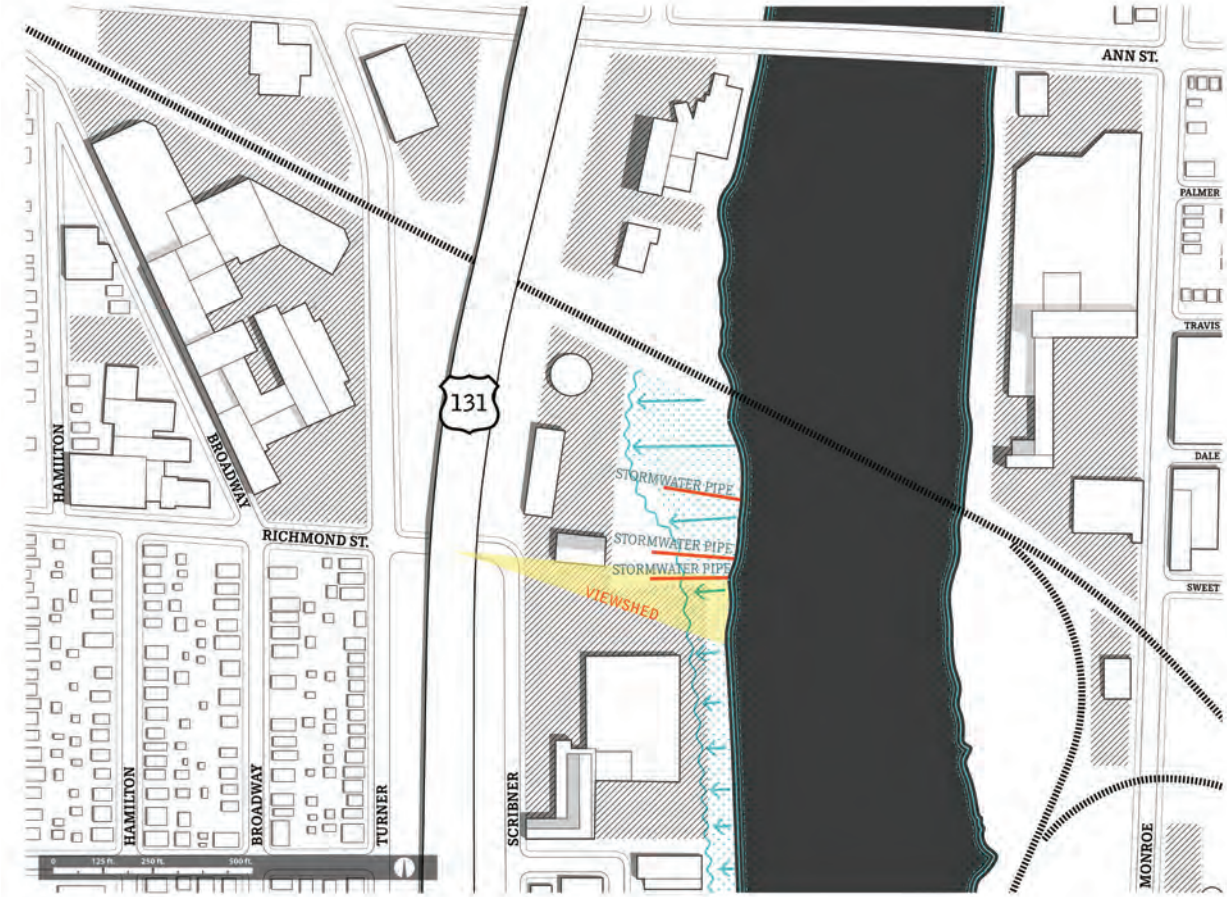


FIG A1.99: *KCRC River Edge opportunities and constraints*

>> KCRC River Edge

Utility Constraints:

- 3 stormwatwer pipes

The goals of KCRC River Edge are:

- Manage flooding/stormwater through the design of the trail landscape
- Create pedestrian access to river and development
- Provide a continuous multi-use trail connection
- Create habitat and increase opportunities to manage stormwater
- Create active recreation
- Create a demonstration project that improves the water quality of the Indian Mill Creek
- Create opportunities for the development of high loft and office space

Flood Managment Method

- Wetland terracing to FEMA level

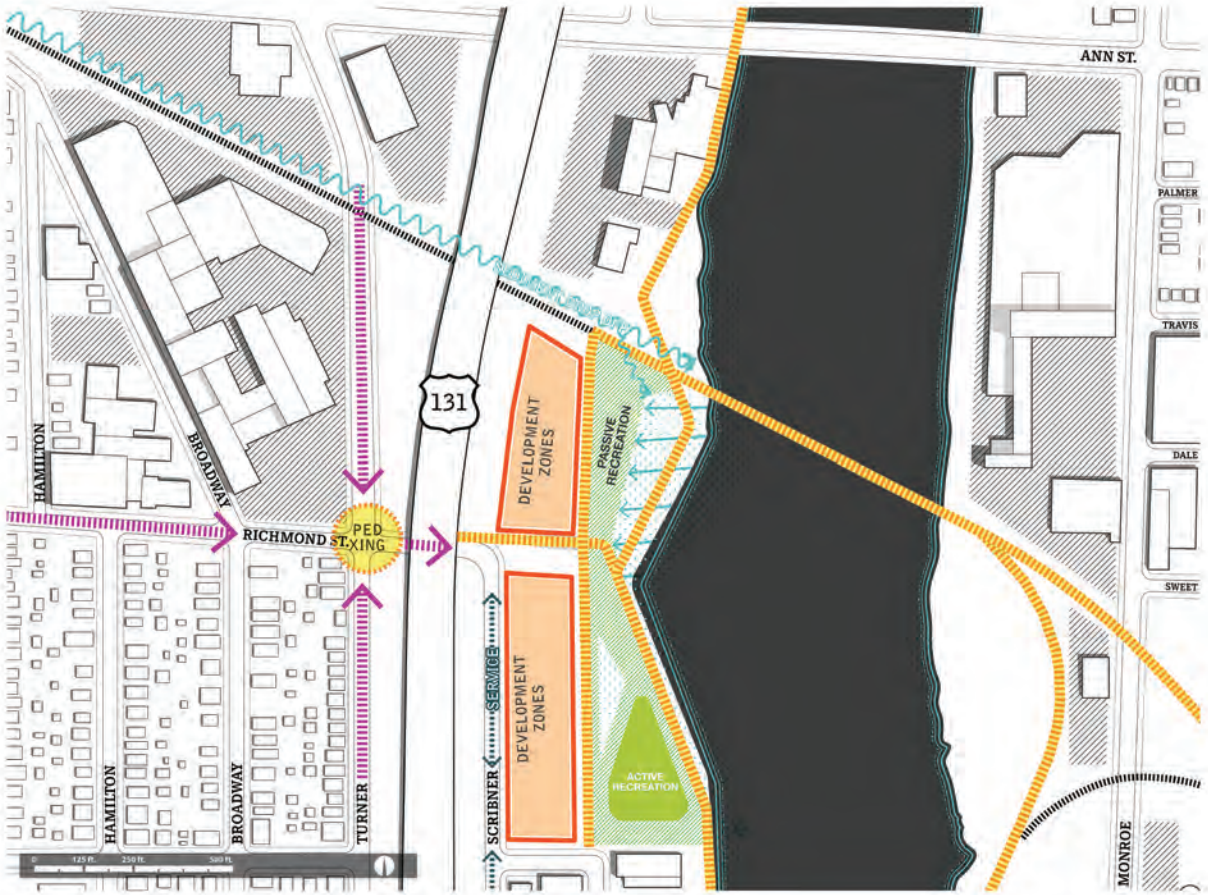


FIG A1.100: *KCRC River Edge concept design*

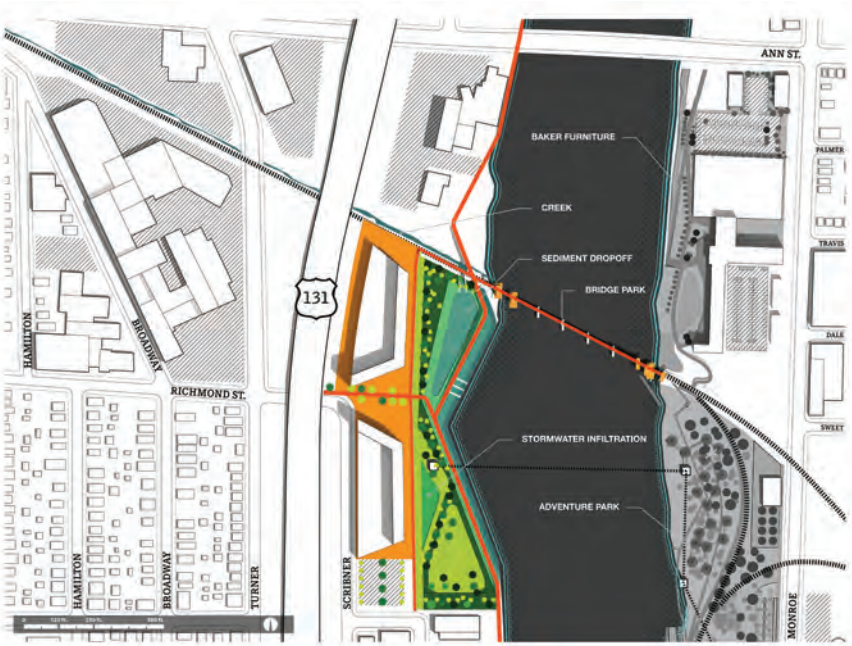


FIG A1.101: *Proposed KCRC River Edge site plan*

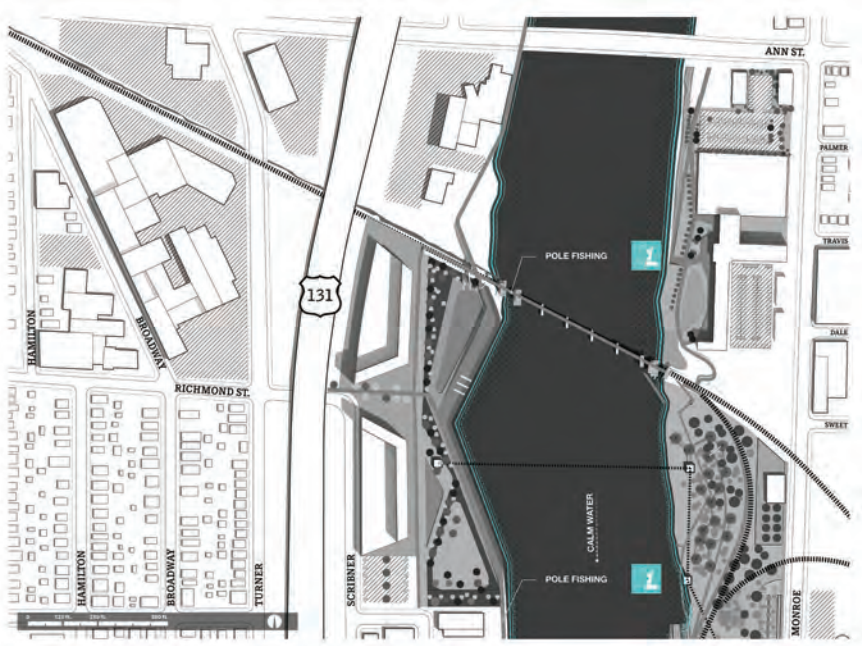


FIG A1.102: *Proposed KCRC River Edge water access*

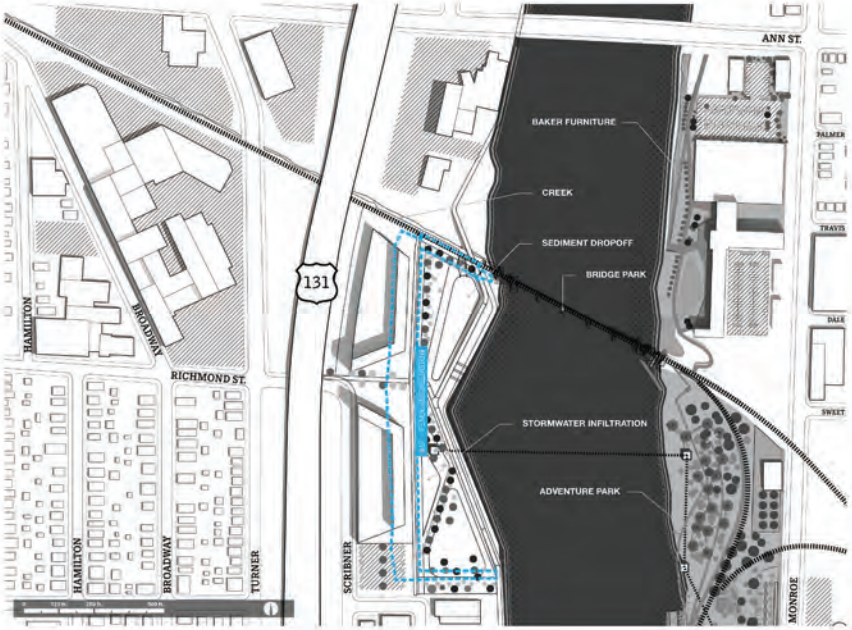


FIG A1.103: *KCRC River Edge flood considerations*

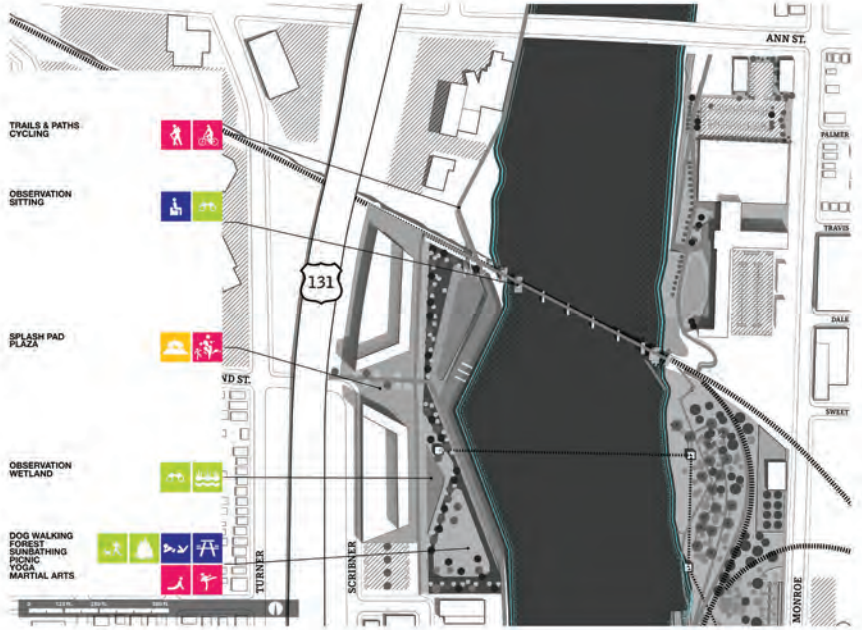


FIG A1.104: *Proposed KCRC River Edge land program*

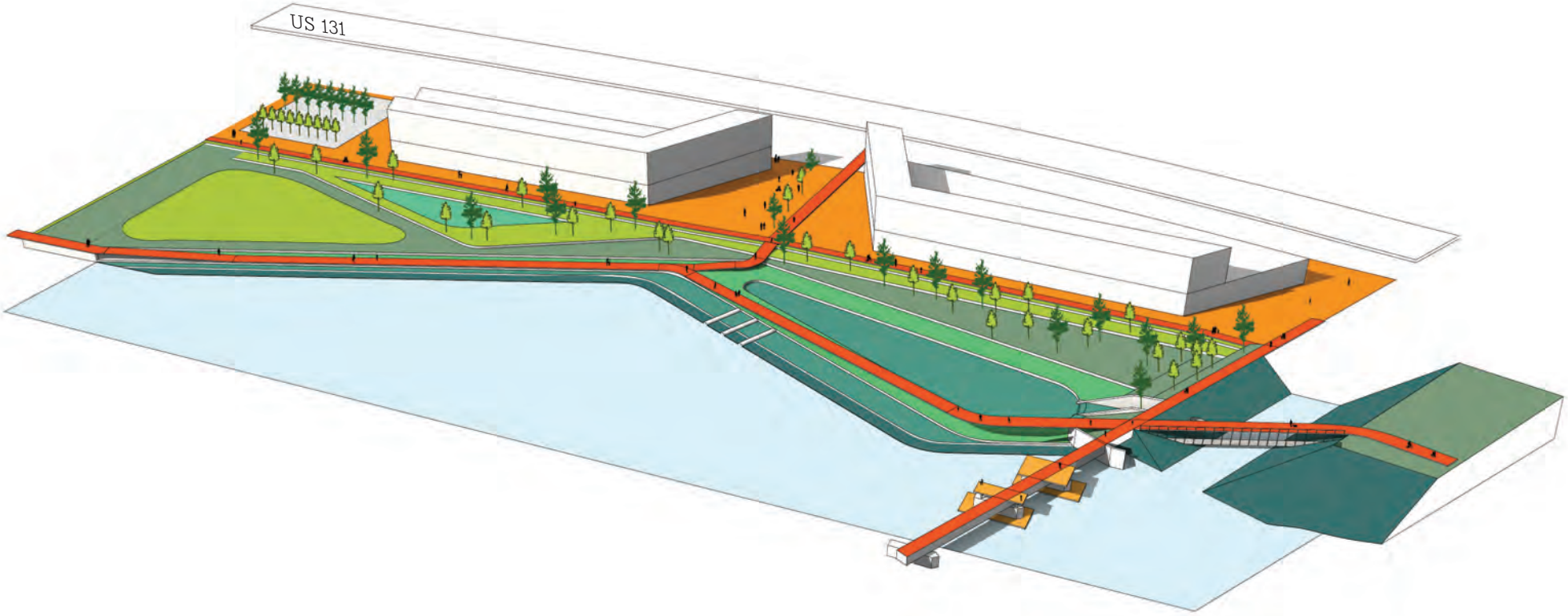


FIG A1.105: *Proposed KCRC River Edge aerial view*

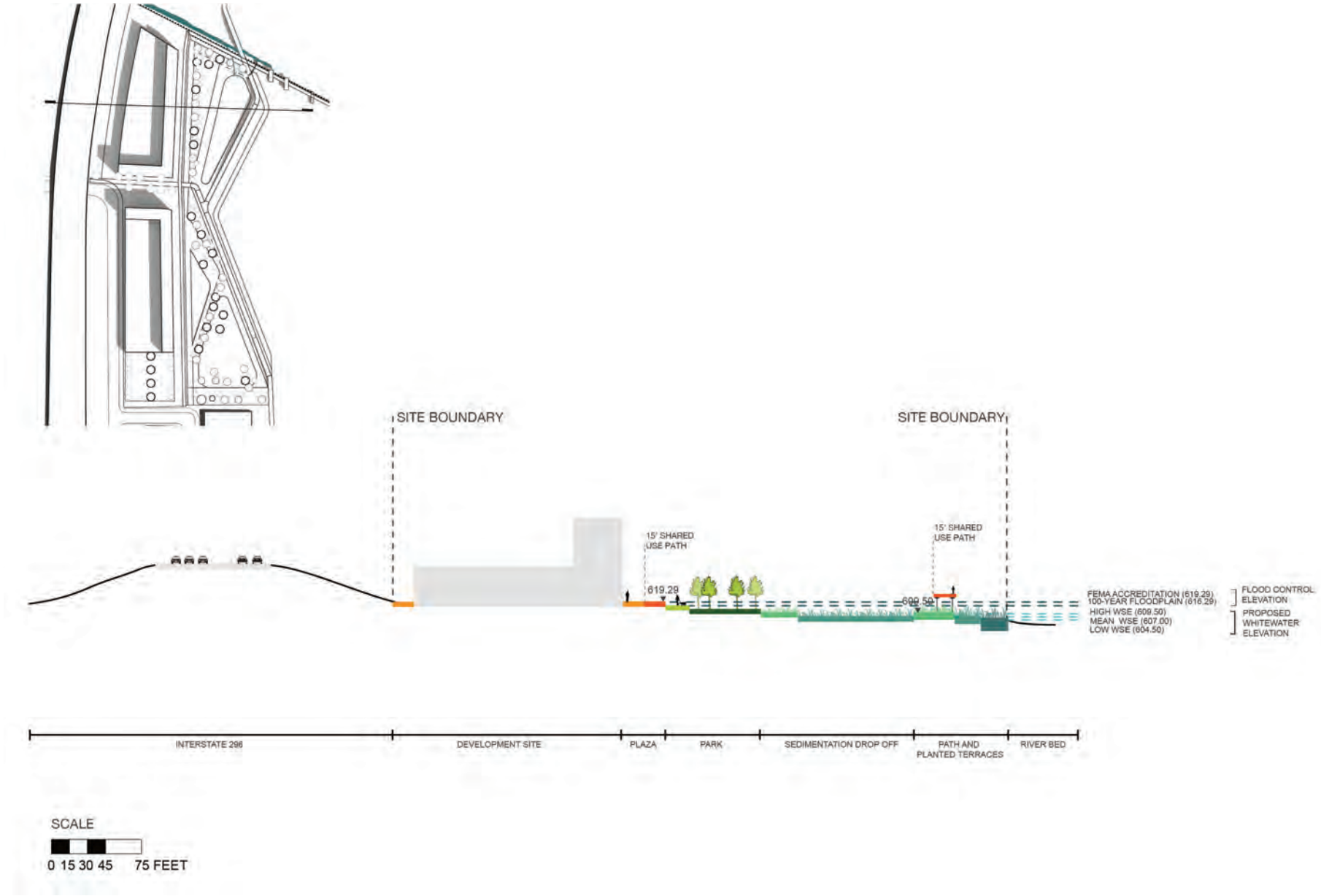


FIG A1.106: *Proposed KCRC River Edge site sections*

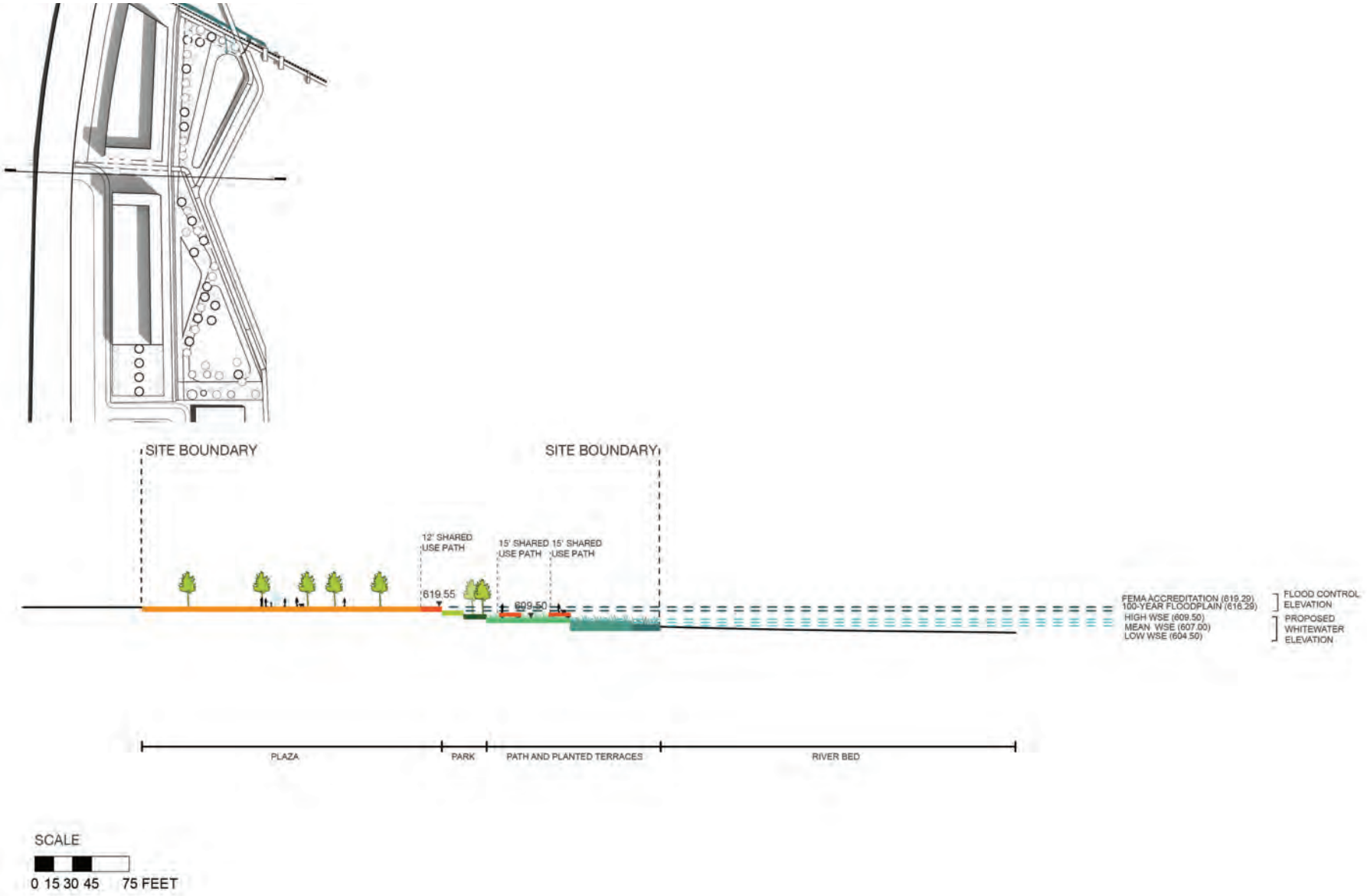


FIG A1.107: *Proposed KCRC River Edge site sections*

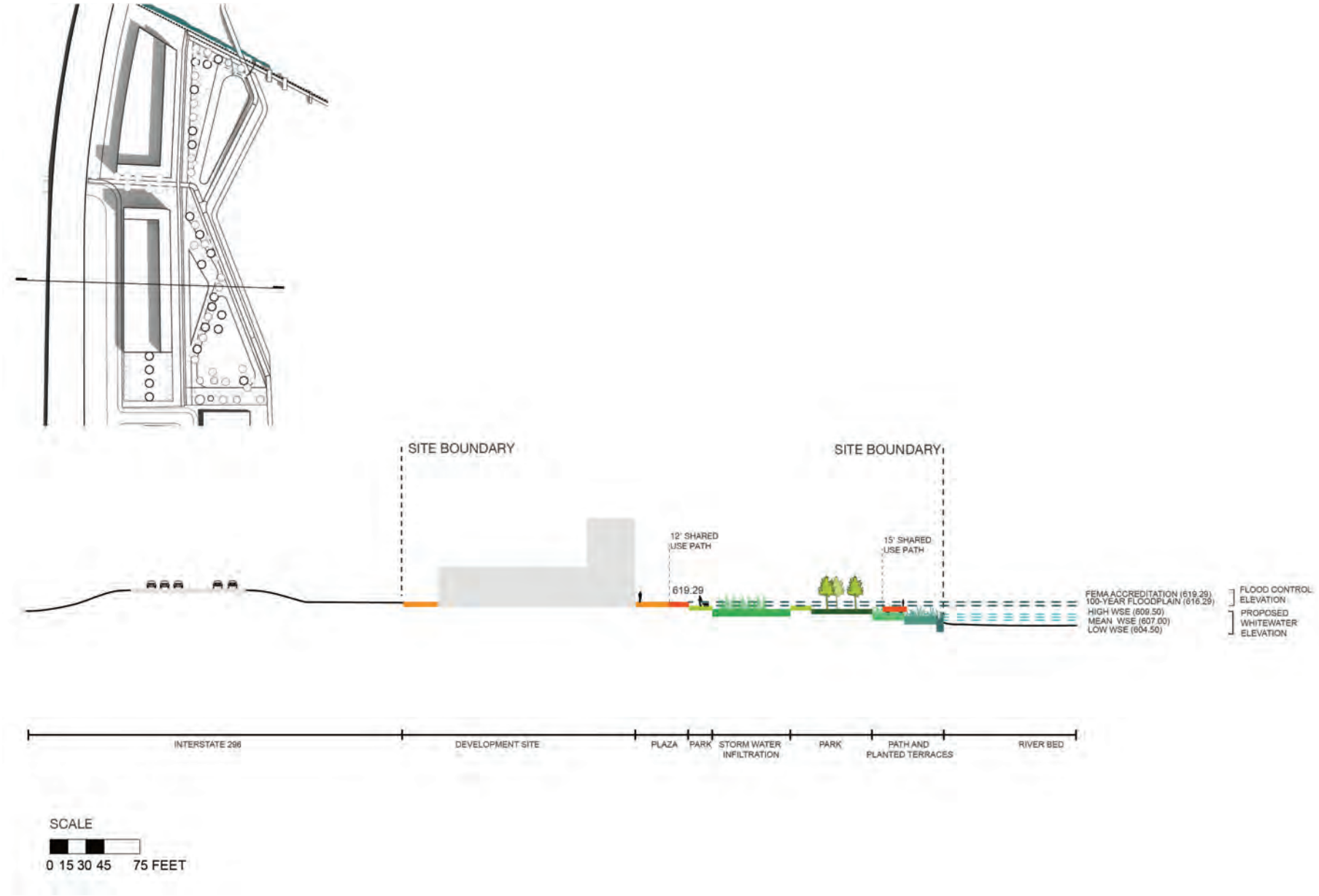


FIG A1.108: *Proposed KCRC River Edge site sections*

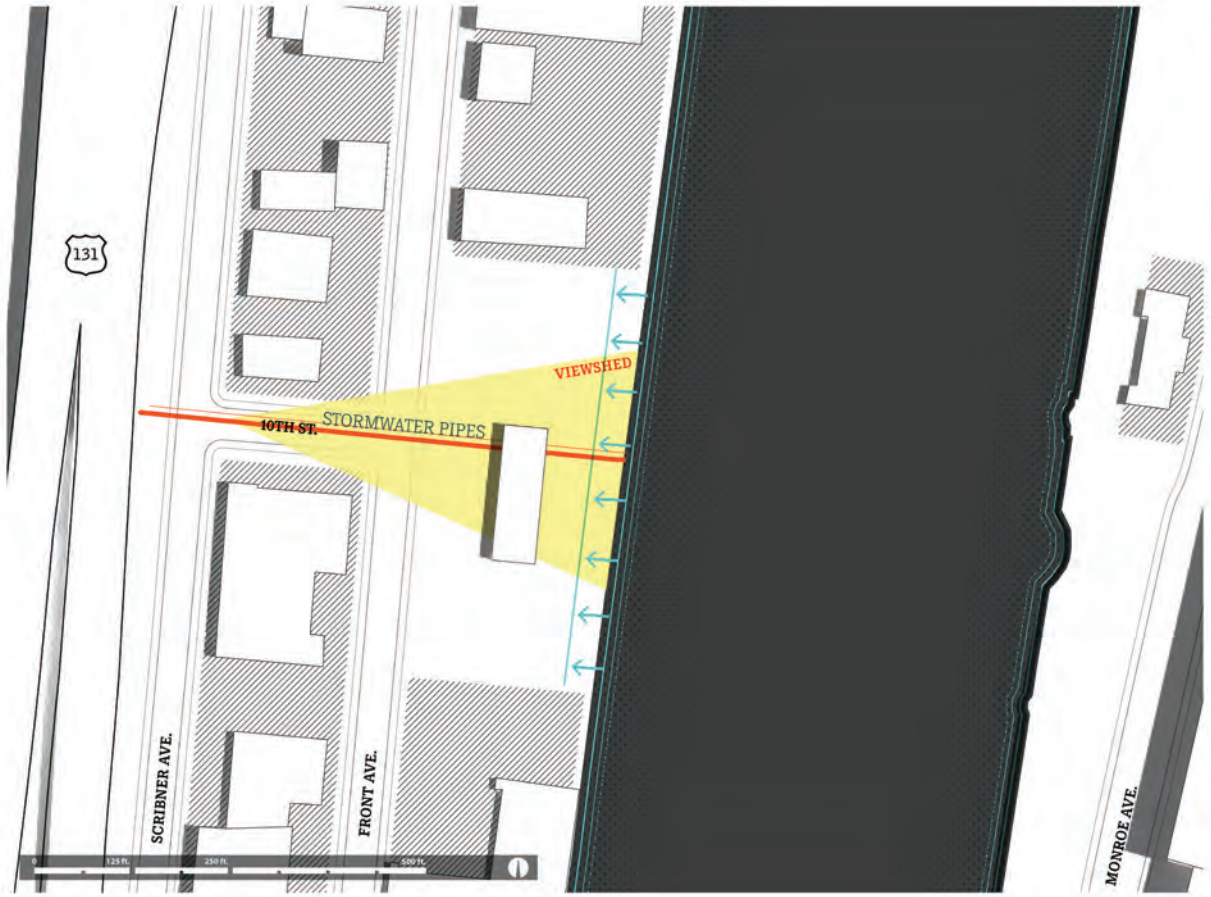


FIG A1.109: *Grand View Place opportunities and constraints*

>> Grandview Place

Utility Constraints:

- 2 stormwater lines

The goals of Grand View Place are:

- Create a public private partnership that increases program opportunities by moving flood infrastructure onto private land allowing for more program space
- Manage flooding/stormwater through the design of the trail landscape
- Create pedestrian access to river and development
- Provide a continuous multi-use trail connection
- Create habitat and increase opportunities to manage stormwater

Flood Managment Method

- Existing floodwall
- Wetland terracing to FEMA level

FIG A1.110: *Grand View Place concept design*

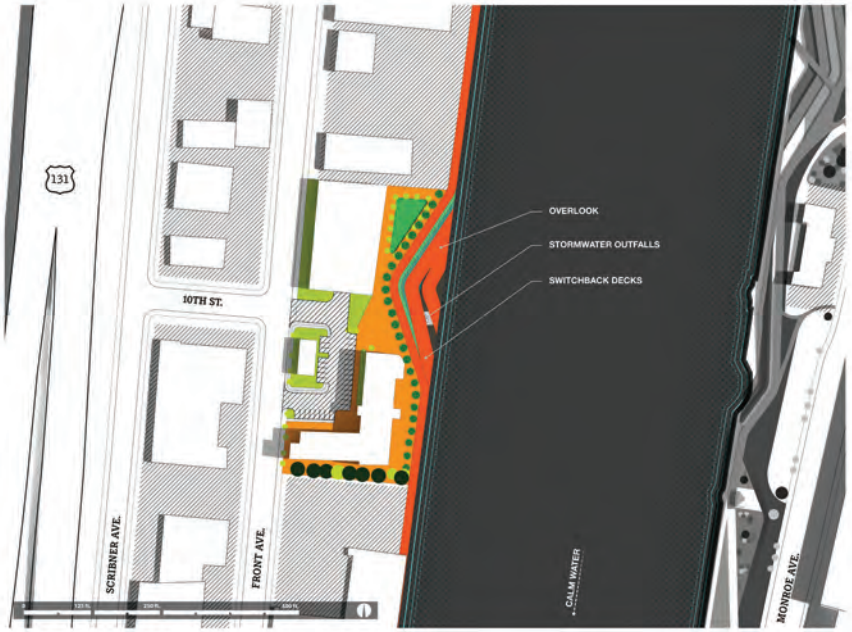


FIG A1.111: *Proposed Grandview Place site plan*

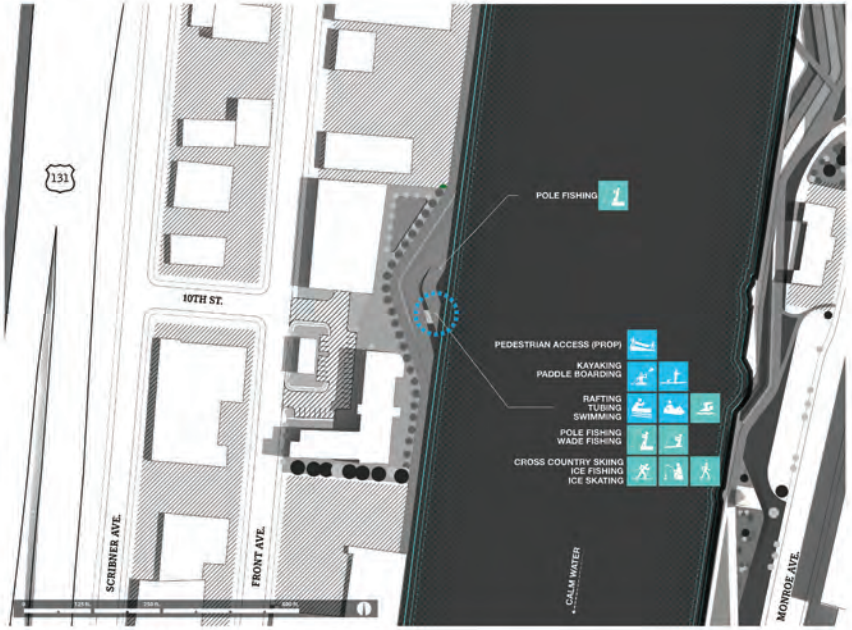


FIG A1.112: *Proposed Grandview Place water access*

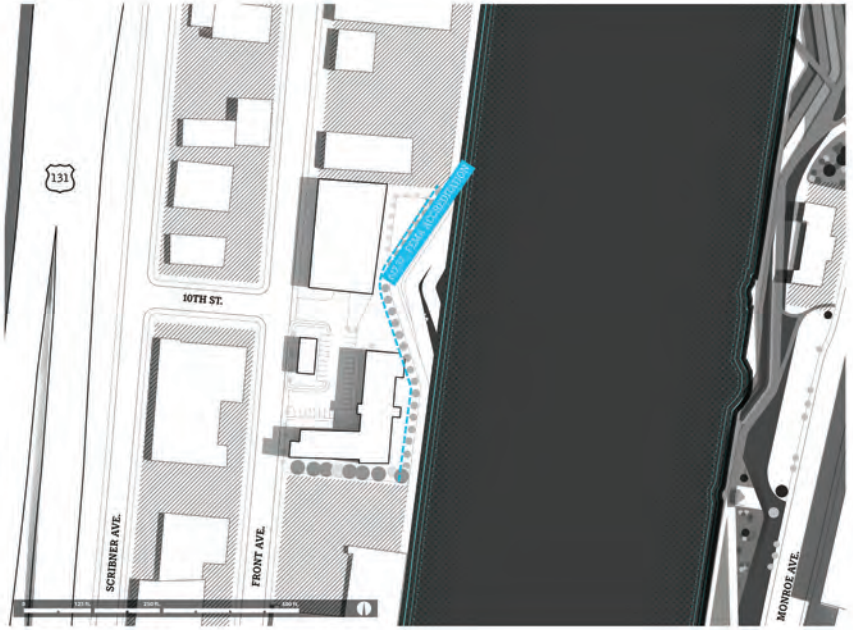


FIG A1.113: *Grandview Place flood considerations*

FIG A1.114: *Proposed Grandview Place land program*

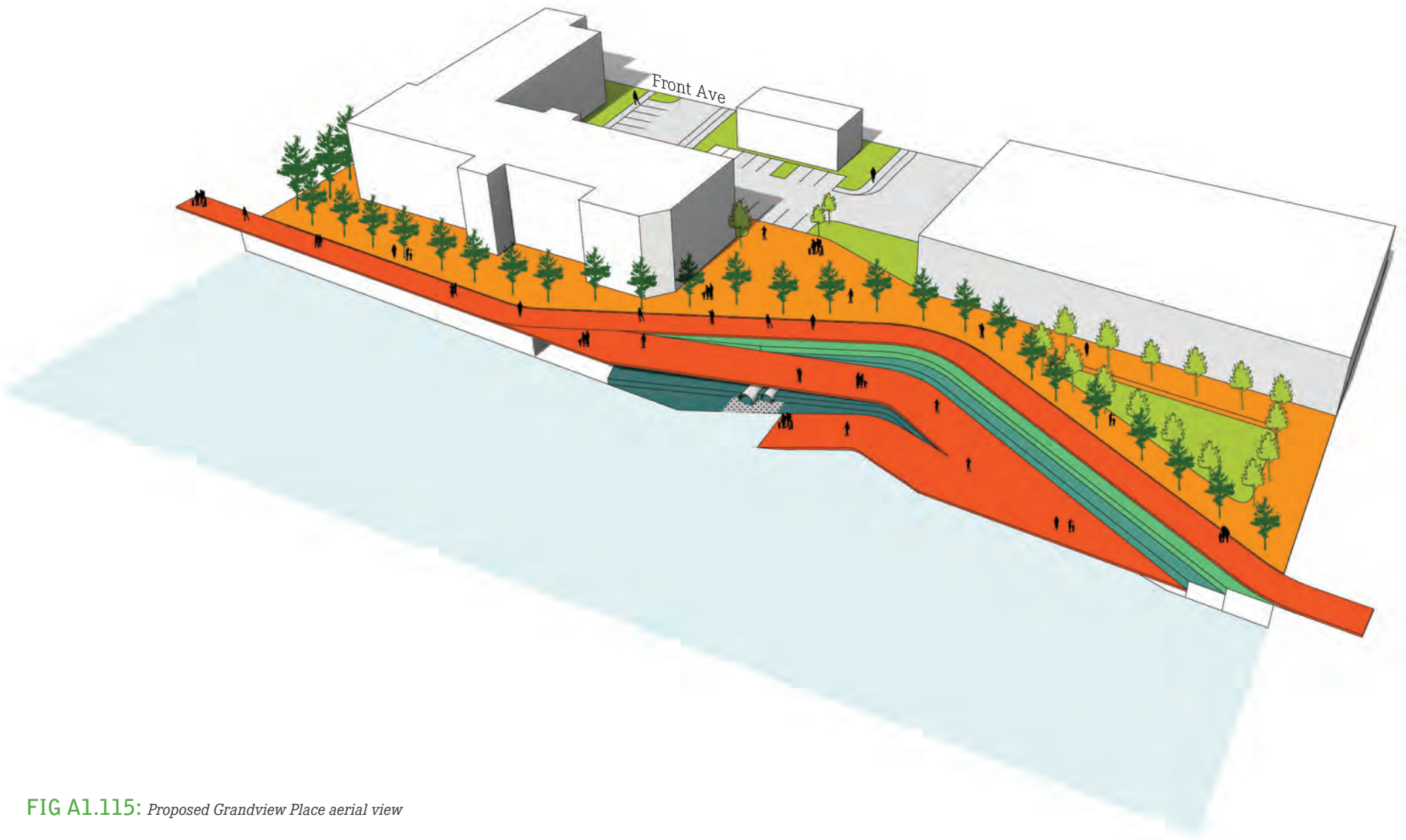


FIG A1.115: *Proposed Grandview Place aerial view*

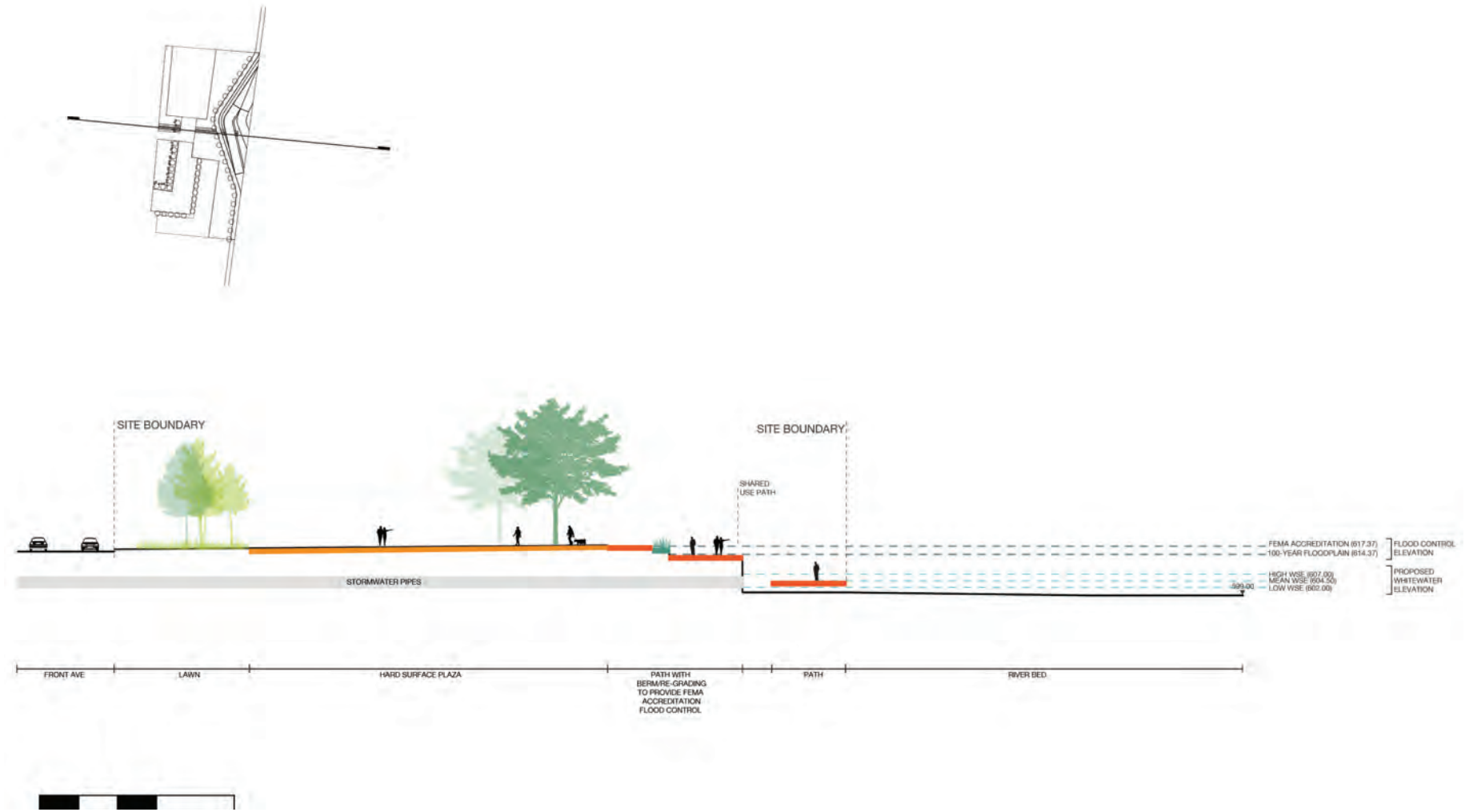


FIG A1.116: *Proposed Grandview Place site sections*

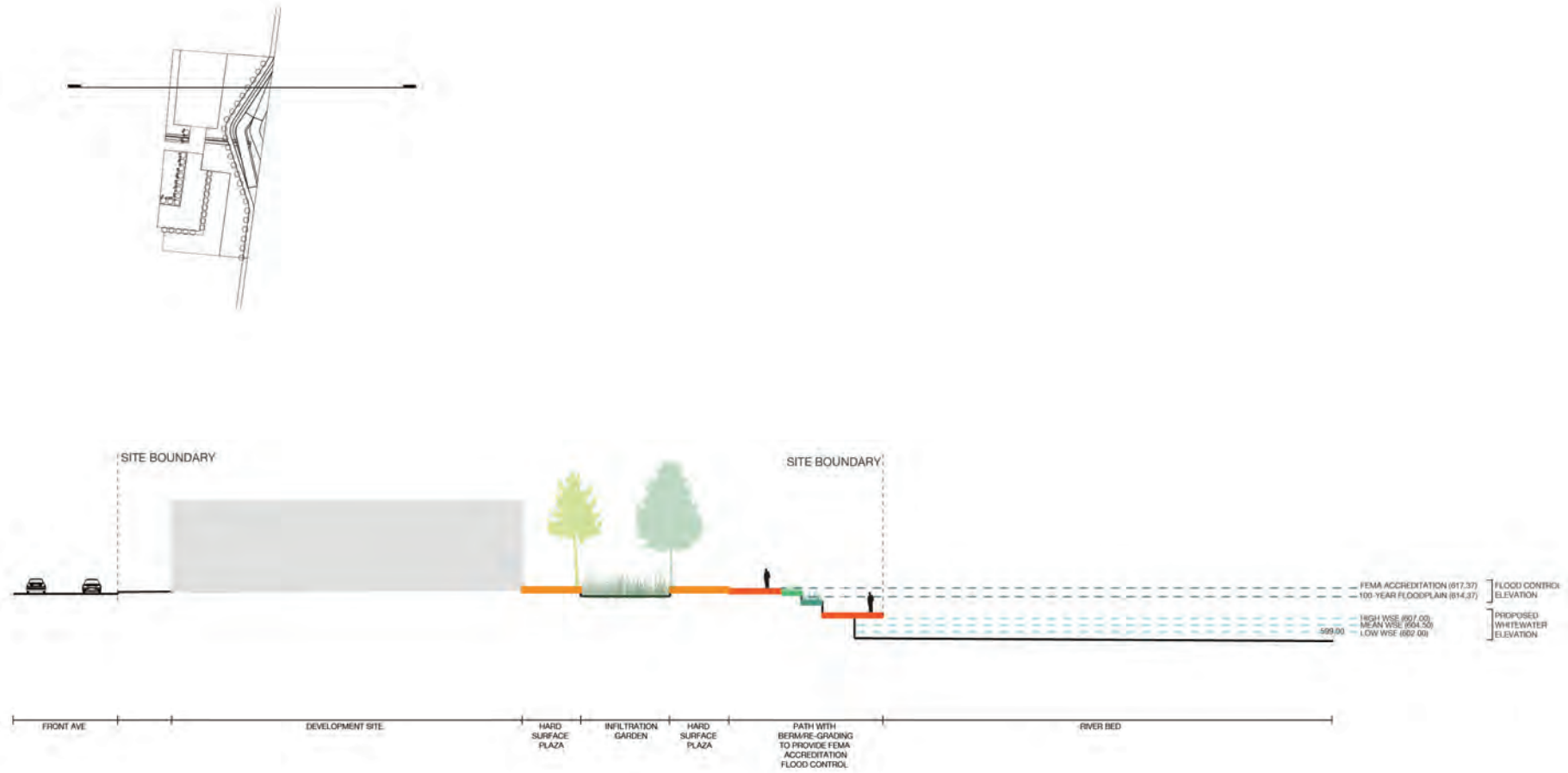


FIG A1.117: *Proposed Grandview Place site sections*

>> Rapids View and Interchange Park

FIG A1.118: *Rapids View and Interchange Park opportunities and constraints*

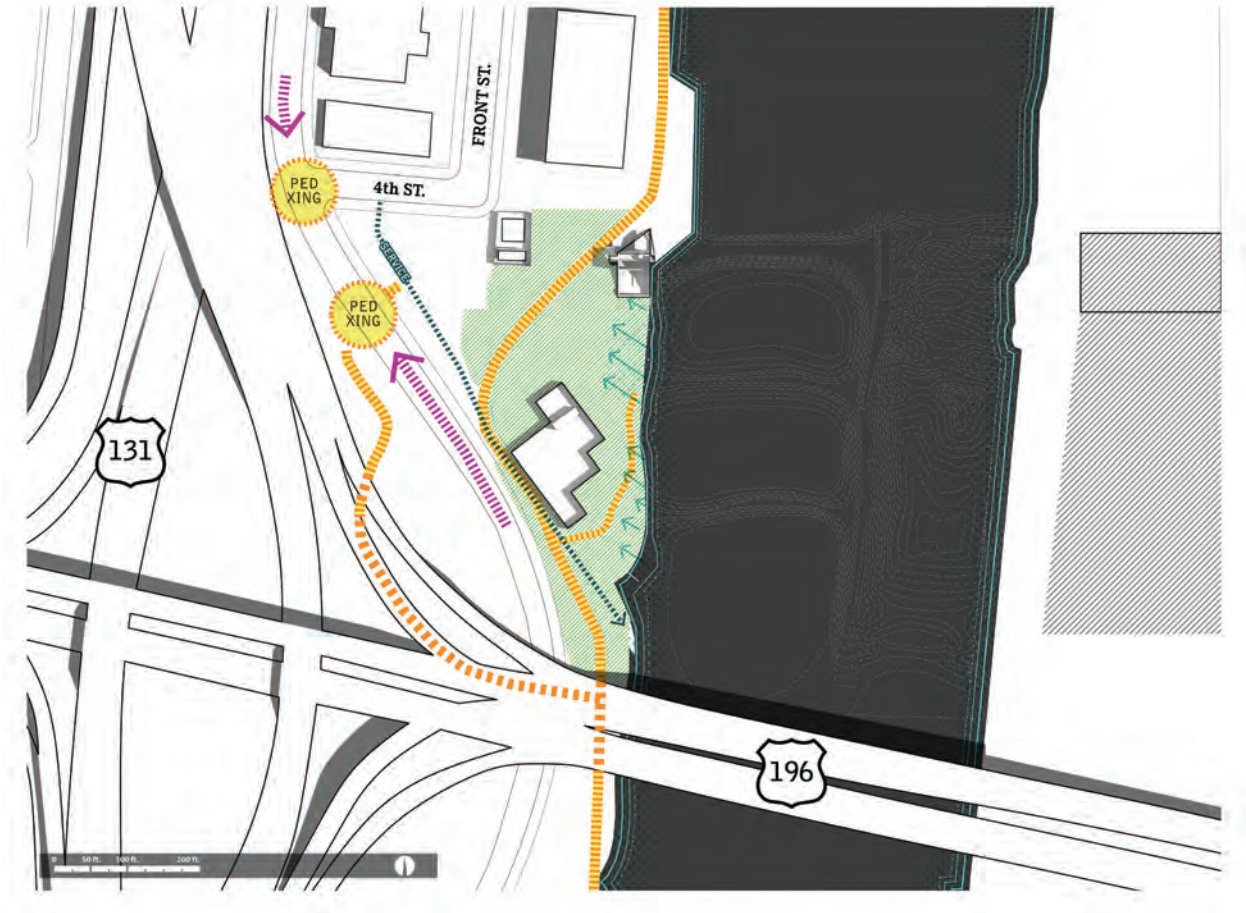


FIG A1.119: *Rapids View and Interchange Park concept design*

Utility Constraints:

- stormwater line through pump station

The goals of Rapids View and Interchange Park are:

- Create a public space in the River for the general public to experience the River and activities
- Allow for viewing of the most exciting part of the rapids
- Create pedestrian access to River
- Provide a continuous multi-use trail connection
- Create a link to the interchange Park
- Create a large scale demonstration of stormwater technology
- Create gateways to the City that celebrates water

Flood Managment Methods:

- Beach
- Amphitheater terracing to FEMA level

FIG A1.120: *Proposed Rapids View and Interchange Park site plan*

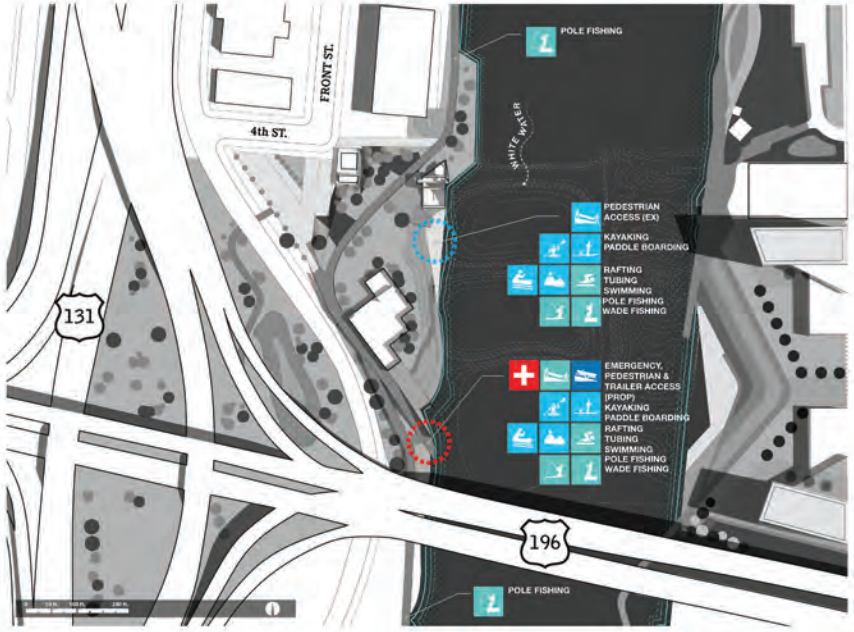


FIG A1.121: *Proposed Rapids View and Interchange Park water access*

FIG A1.122: *Rapids View and Interchange Park flood considerations*

FIG A1.123: *Proposed Rapids View and Interchange Park land program*

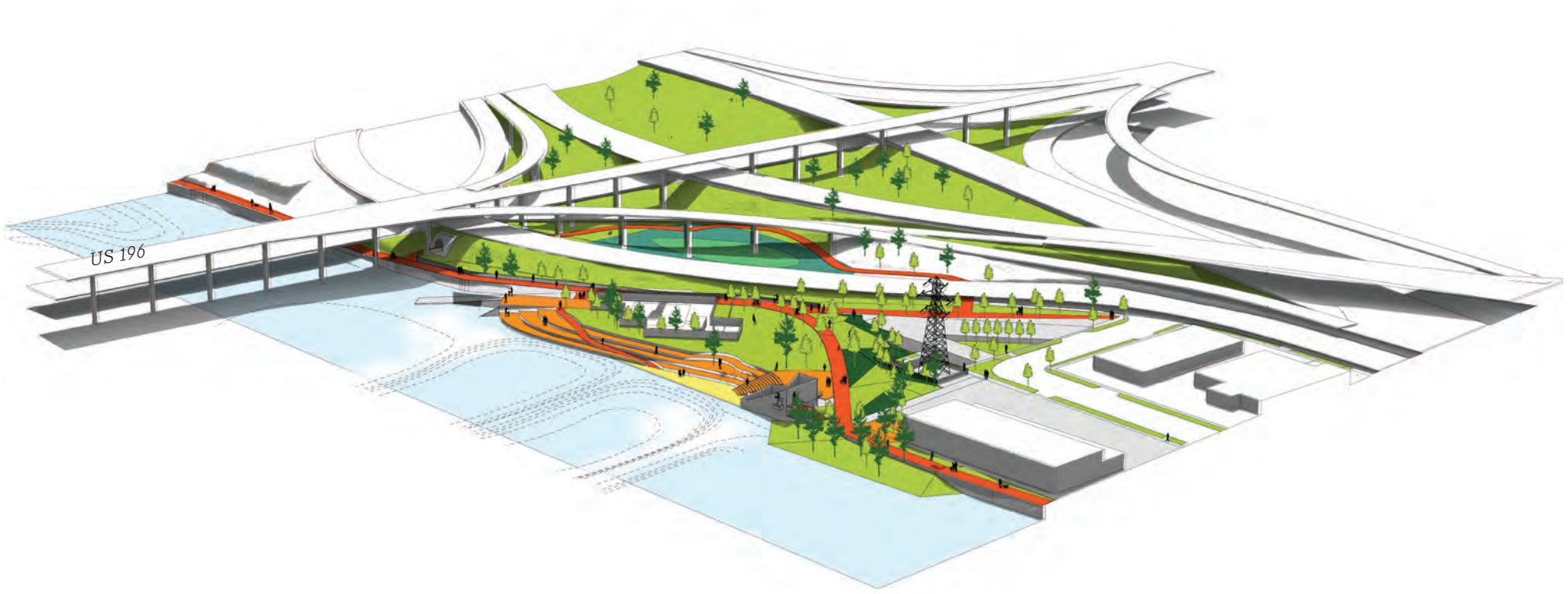


FIG A1.124: *Proposed Rapids View and Interchange Park aerial view*

FIG A1.125: *Proposed Rapids View and Interchange site sections*

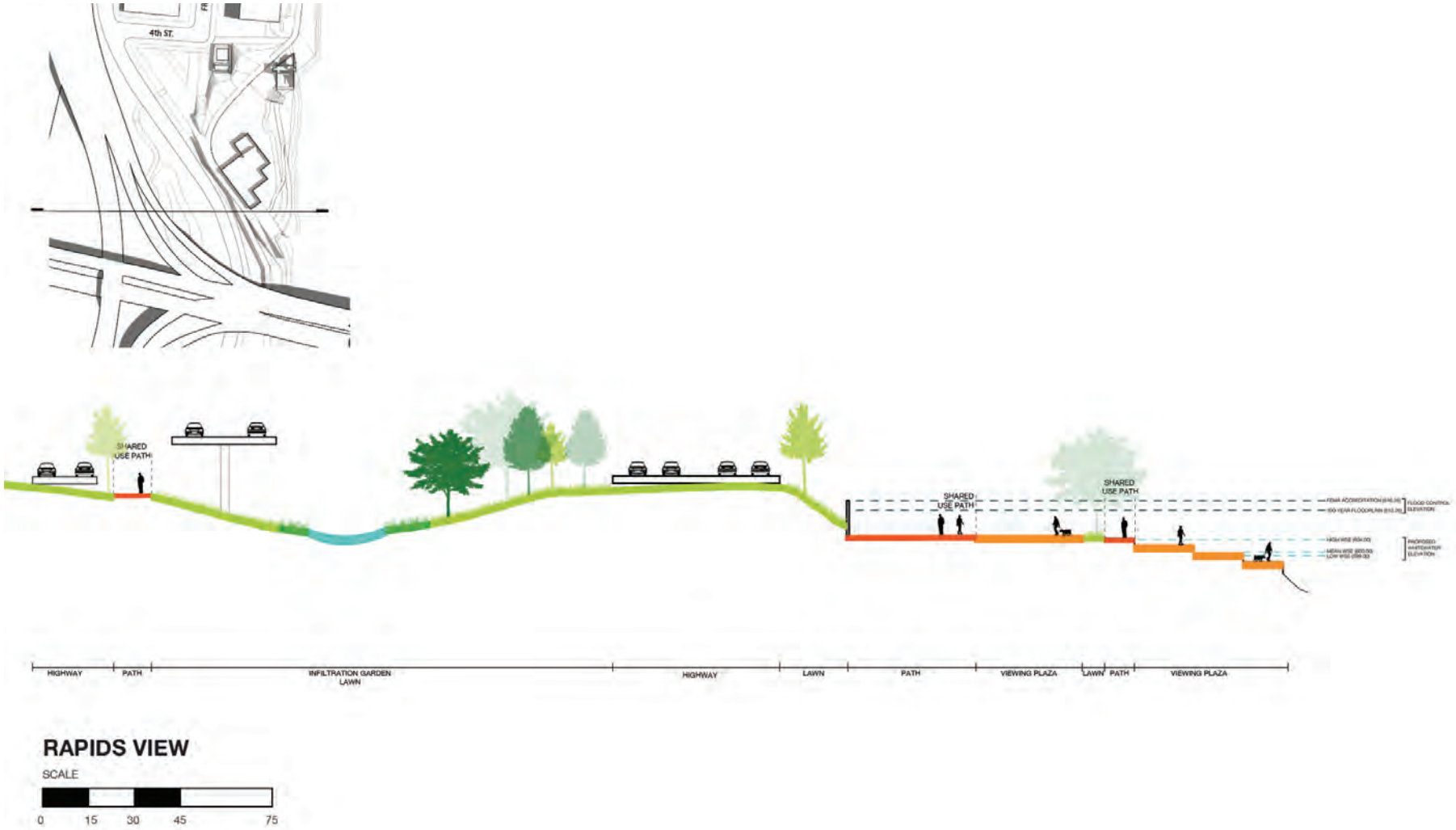


FIG A1.126: *Proposed Rapids View and Interchange site sections*

FIG A1.127: *Proposed Rapids View and Interchange Park aerial rendering*

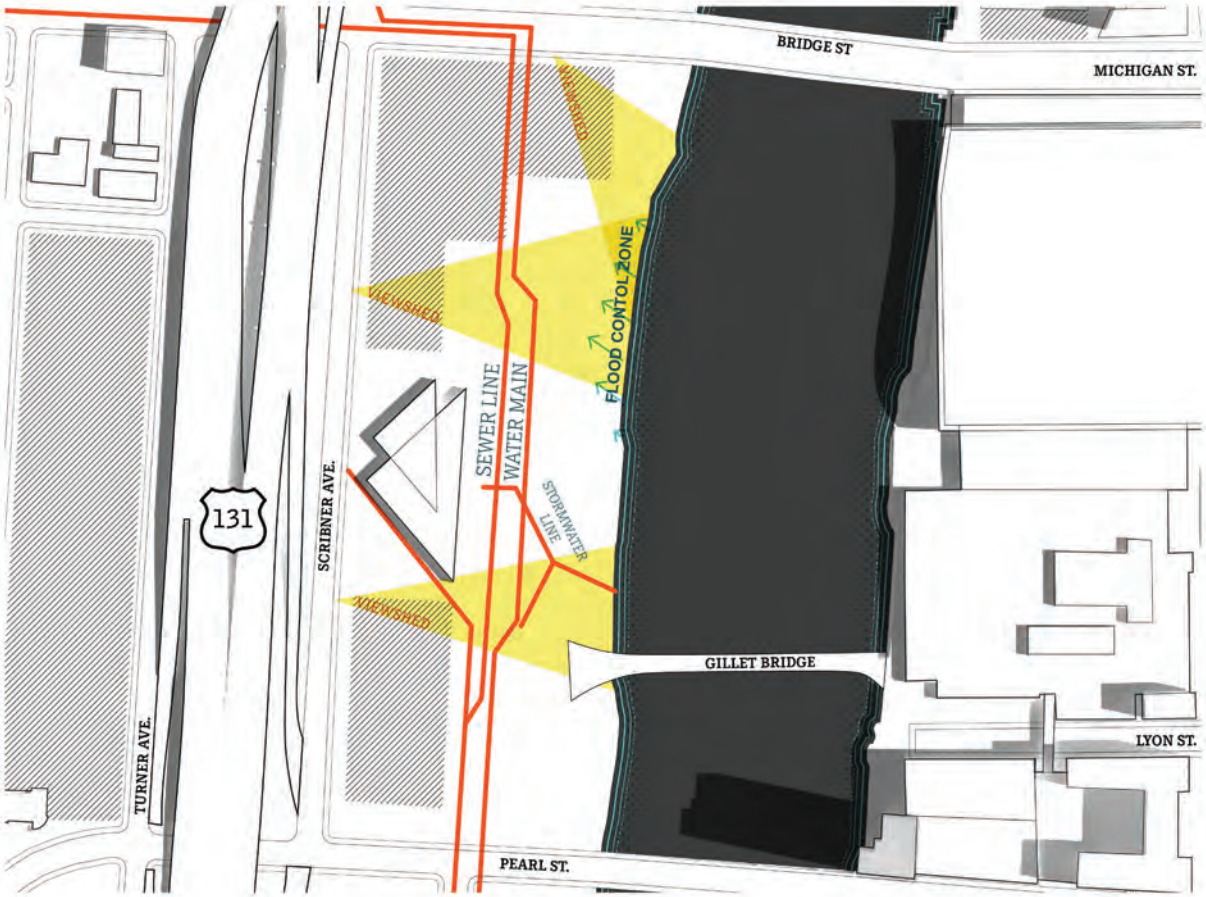


FIG A1.128: *Ah Nab Awen Park opportunities and constraints*

>> Ah Nab Awen Park

Utility Constraints:

- sewer line, water main, stormwater line

The goals of Ah Nab-Awen Park are:

- Manage flooding/stormwater through the design of the trail landscape
- Maintain existing program opportunities
- Provide a continuous multi-use trail connection
- Create habitat and increase opportunities to manage stormwater
- Maintain character and increase access to the river

Flood Managment Method

- Berm at Pearl St. and green wall along Scribner Ave.

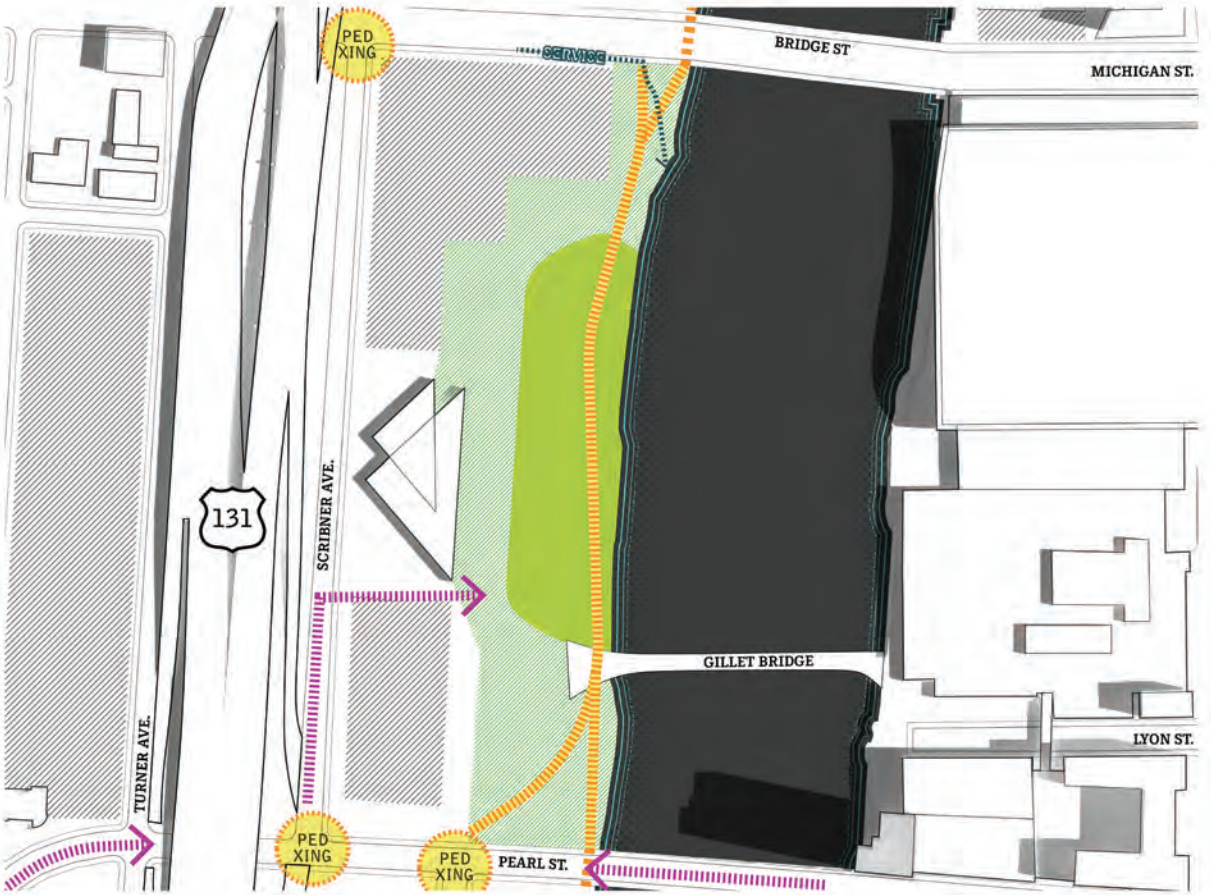


FIG A1.129: *Ah Nab Awen Park concept design*

FIG A1.130: *Proposed Ah Nab Awen Park site plan*

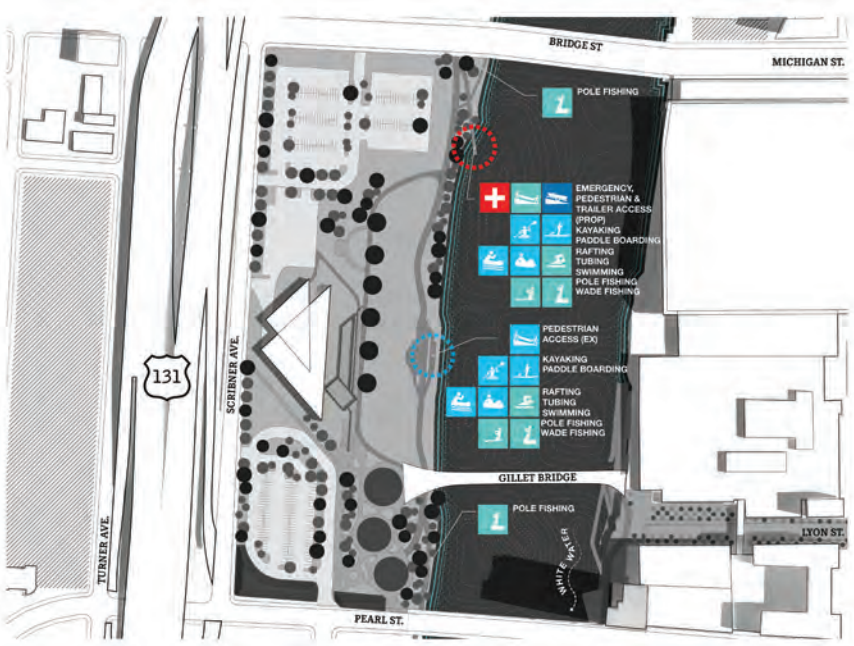


FIG A1.131: *Proposed Ah Nab Awen Park water access*

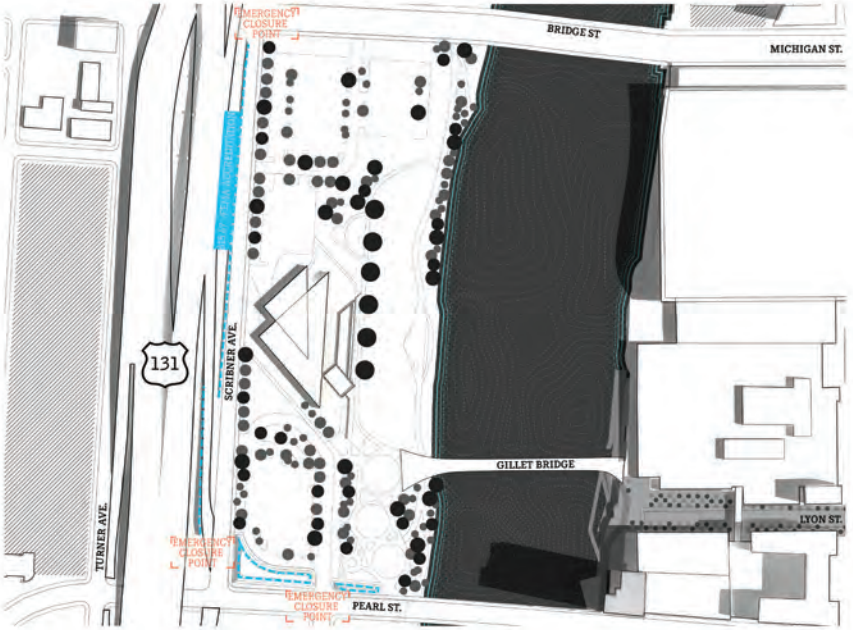


FIG A1.132: *Ah Nab Awen Park flood considerations*

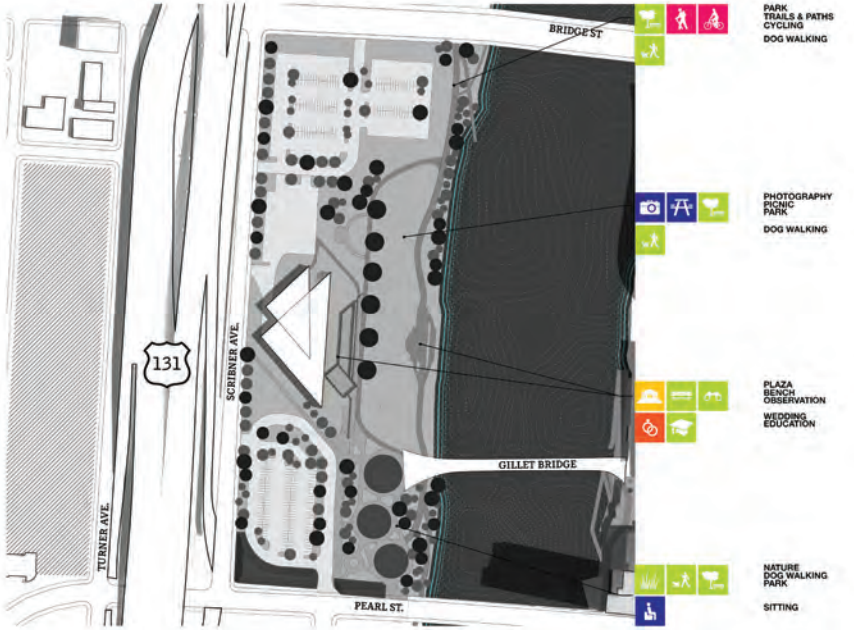


FIG A1.133: *Proposed Ah Nab Awen Park land program*

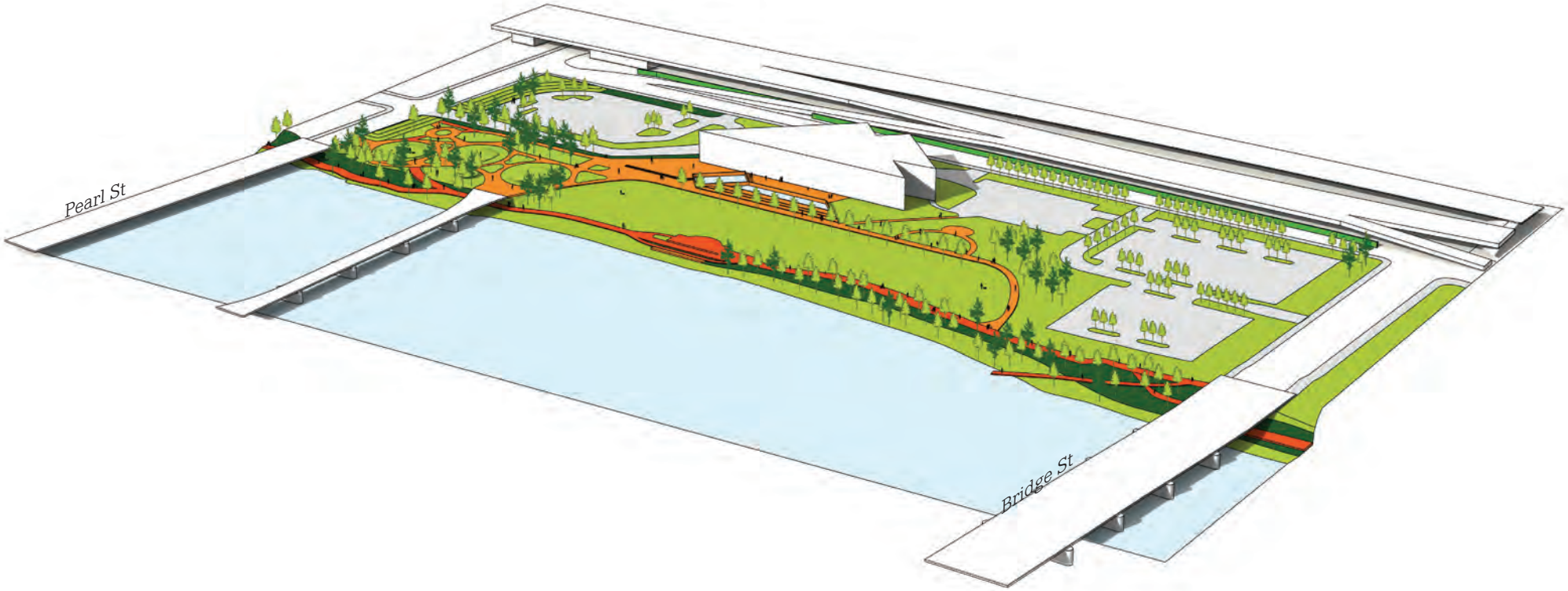


FIG A1.134: *Proposed Ah Nab Awen Park aerial view*

FIG A1.135: *Proposed Ah Nab Awen Park site sections*

FIG A1.136: *Proposed Ah Nab Awen Park site sections*

>> Public Museum

FIG A1.137: *Public Museum opportunities and constraints*

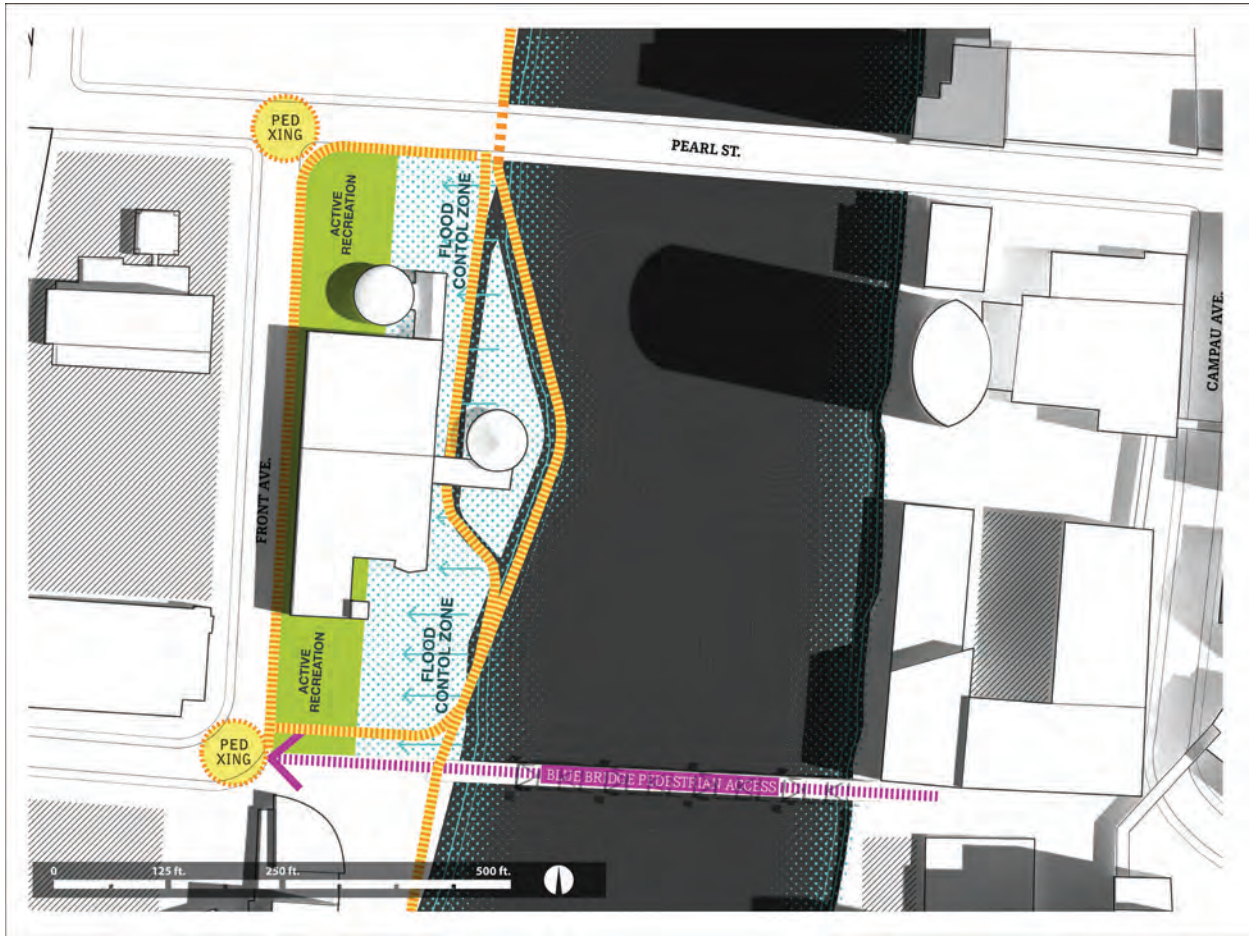


FIG A1.138: *Public Museum concept design*

Utility Constraints:

- 3 stormwater lines

The goals of Public Museum are:

- Create a world class exhibit about the Grand River that expands opportunities for the museum to grow in its mission to support a healthy river
- Expand public opens pace access on the Westside
- Create access to the river
- Create pedestrian access to river provide a continuous multi-use trail
- Create habitat and allow for a unique river experience in the city

Flood Managment Method

- Wetland terracing to sloped lawn to FEMA level

FIG A1.139: *Proposed Public Museum site plan*

FIG A1.140: *Proposed Public Museum water access*

FIG A1.141: *Public Museum flood considerations*

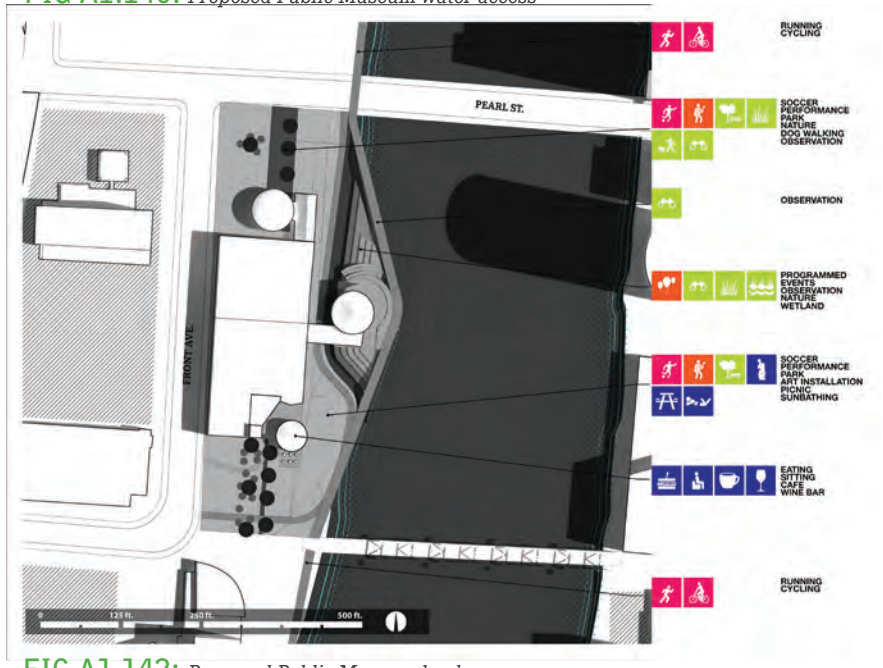


FIG A1.142: *Proposed Public Museum land program*

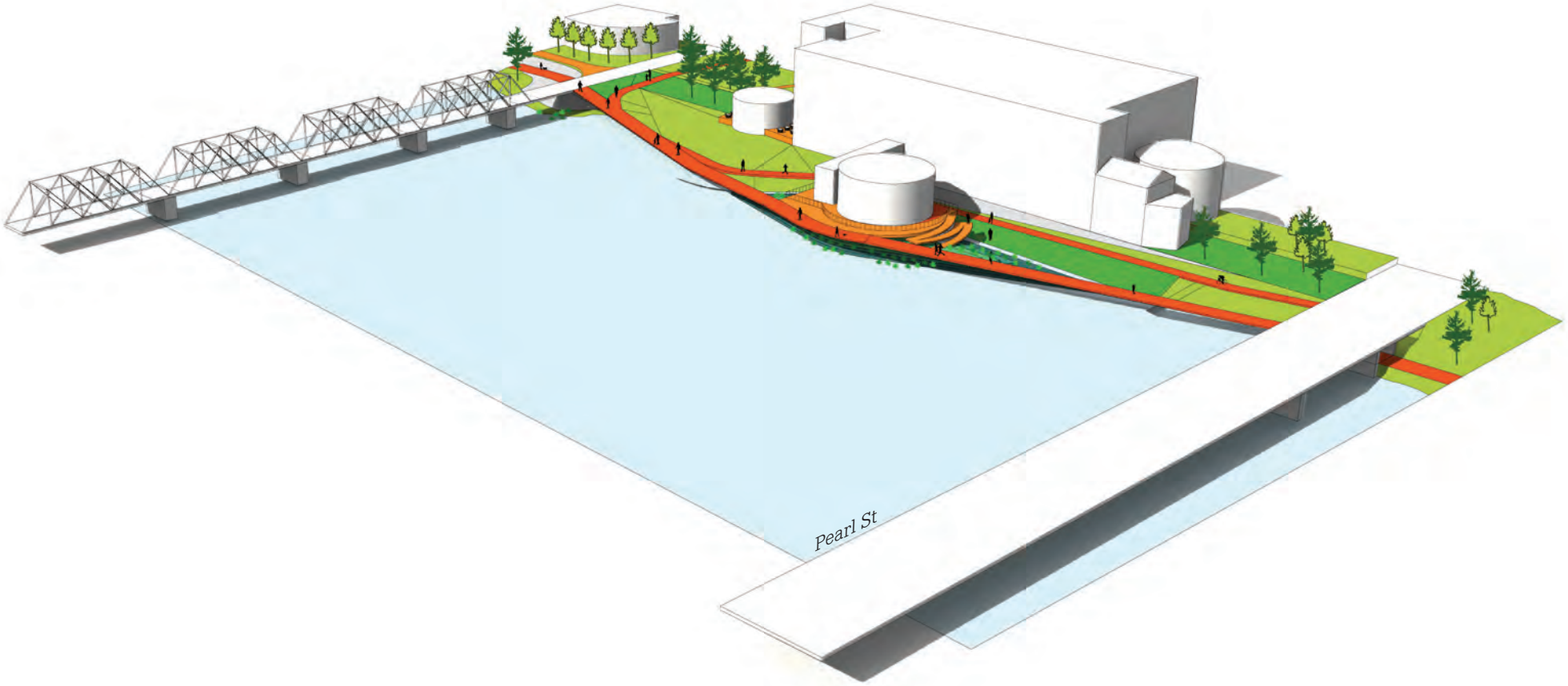


FIG A1.143: *Proposed Public Museum aerial view*

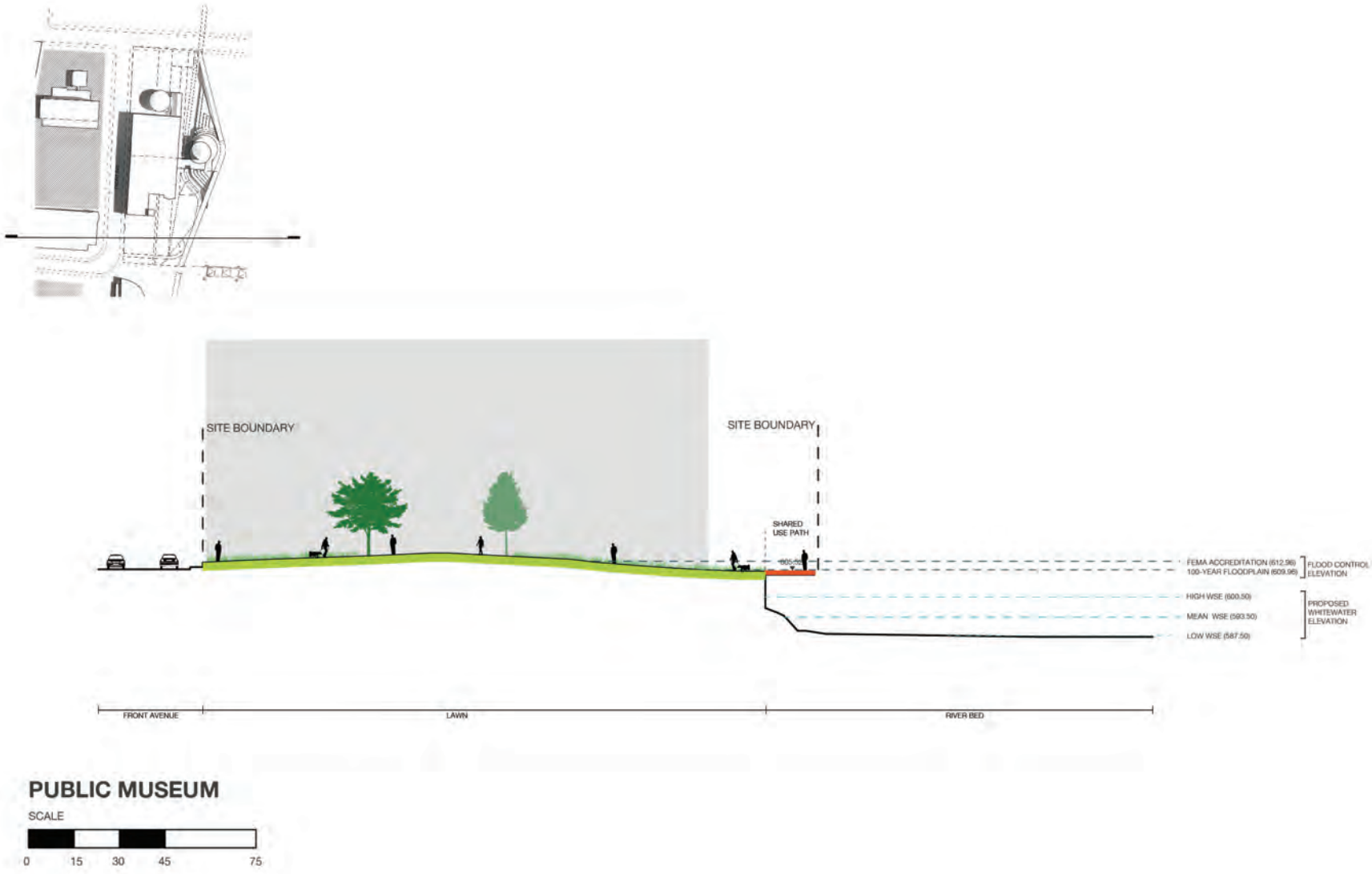


FIG A1.144: *Proposed Public Museum site sections*

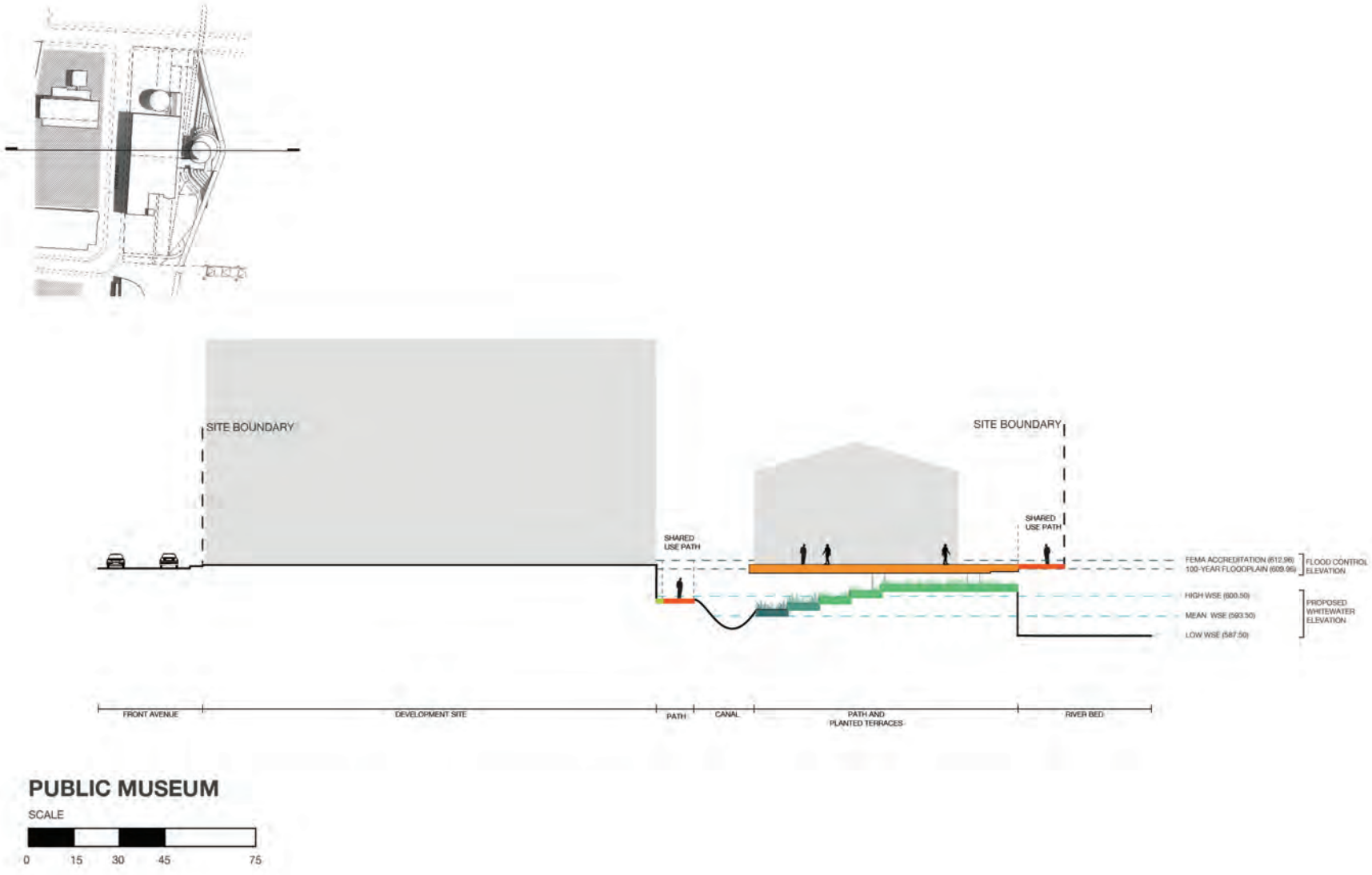


FIG A1.145: *Proposed Public Museum site sections*

FIG A1.146: *Proposed GVSU aerial rendering*

>> GVSU Seidman

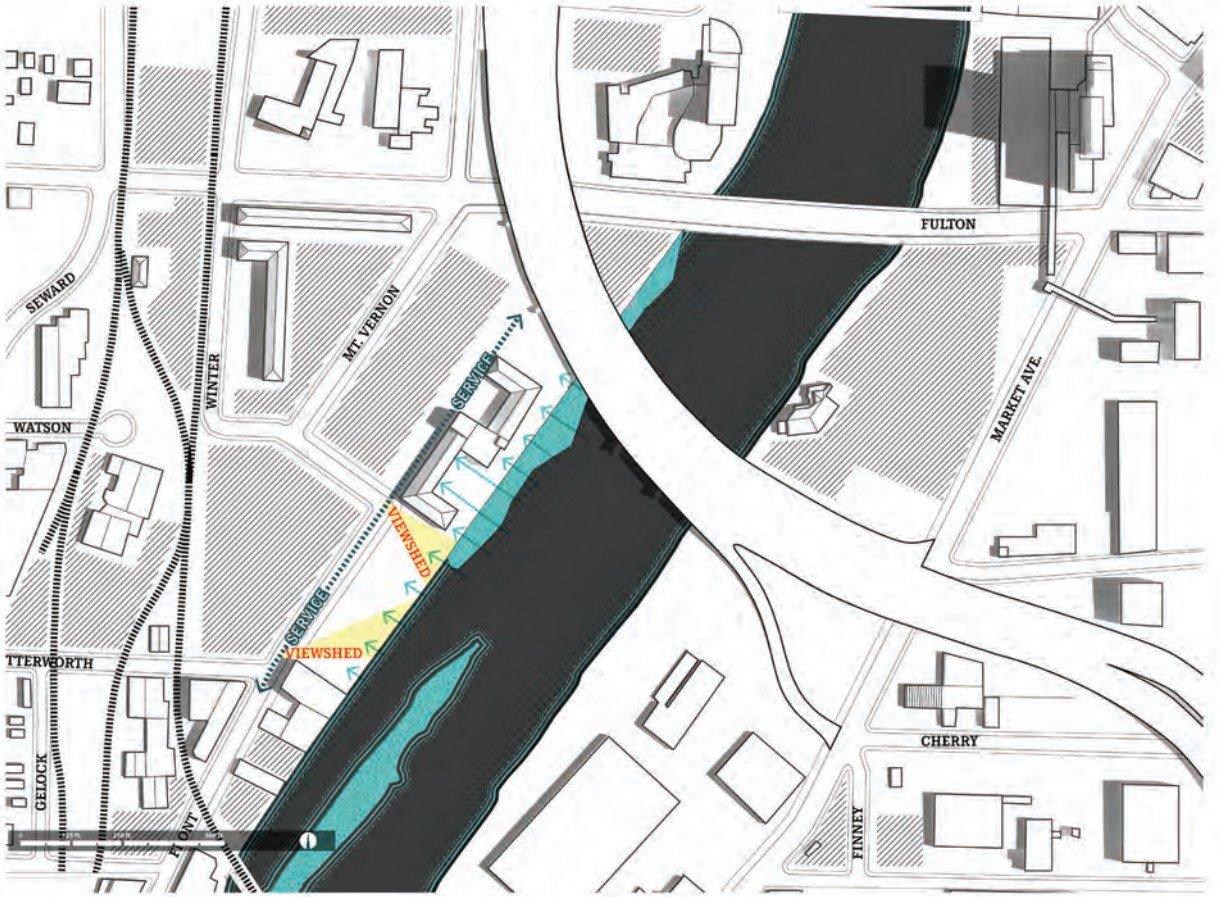


FIG A1.147: *GVSU Seidman opportunities and constraints*

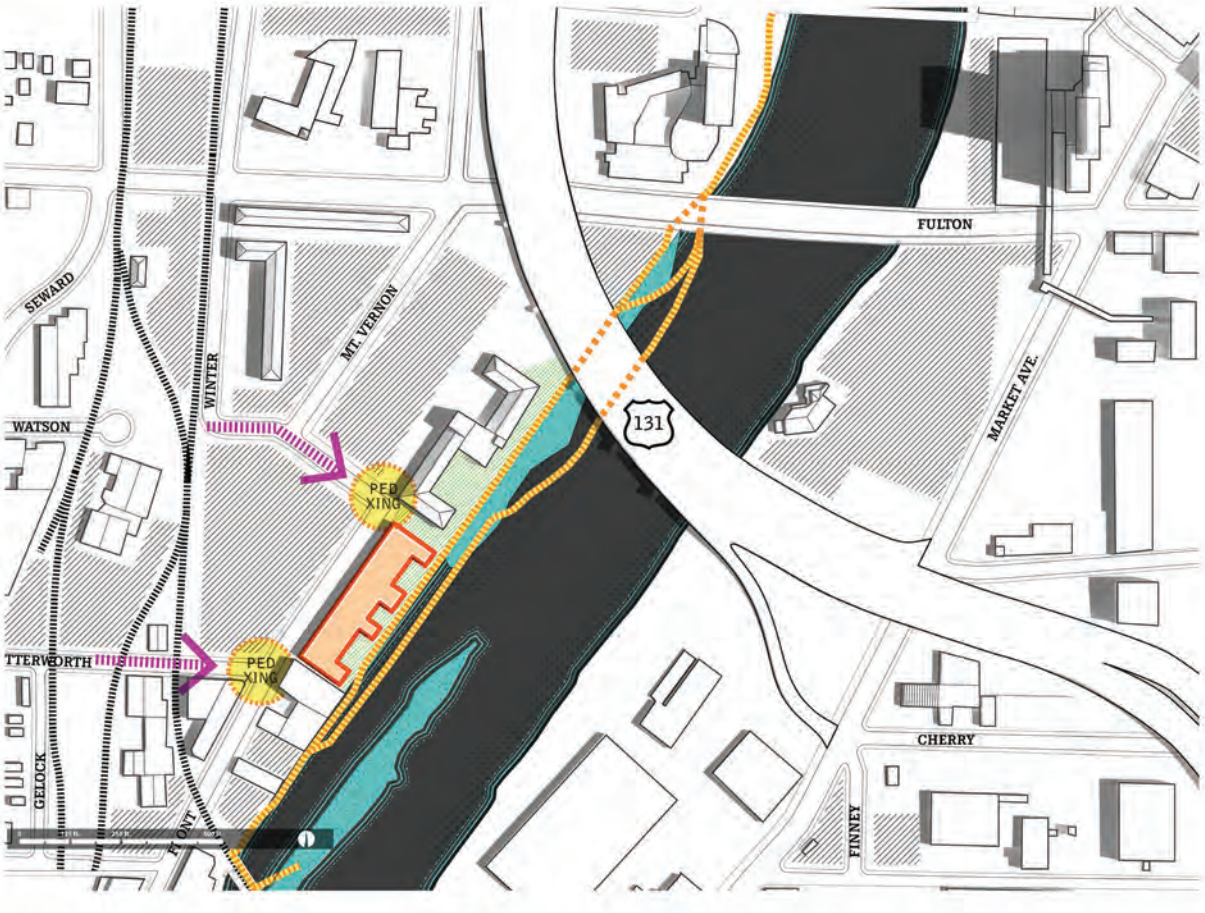


FIG A1.148: *GVSU Seidman concept design*

The goals of GVSU Seldman are:

- Allow for the creation of a new edge to GVSU
- Expand public openspace access on the Westside
- Create unique views to the river
- Create pedestrian access to river provide a continuous multi-use
- Create an upper and lower trail for varied experience and view of the river

Flood Managment Method

- Green wall along Winter Ave rail

FIG A1.149: *Proposed GVSU Seidman site plan*

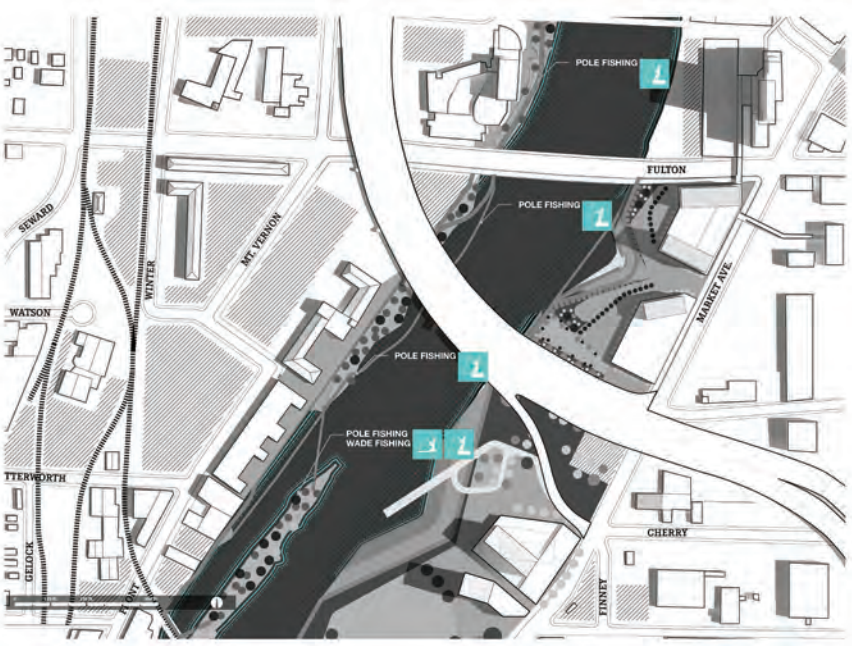


FIG A1.150: *Proposed GVSU Seidman water access*

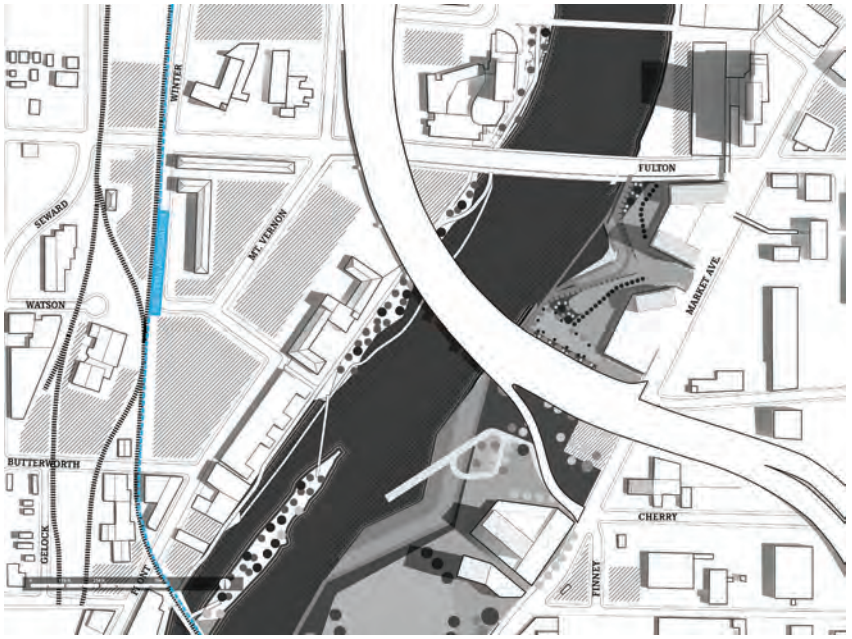


FIG A1.151: *GVSU Seidman flood considerations*

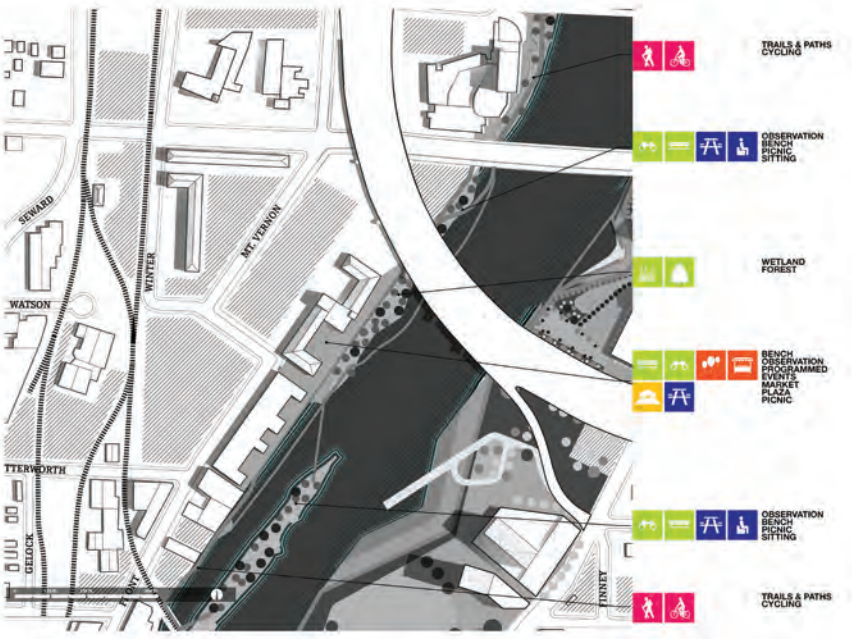


FIG A1.152: *Proposed GVSU Seidman land program*

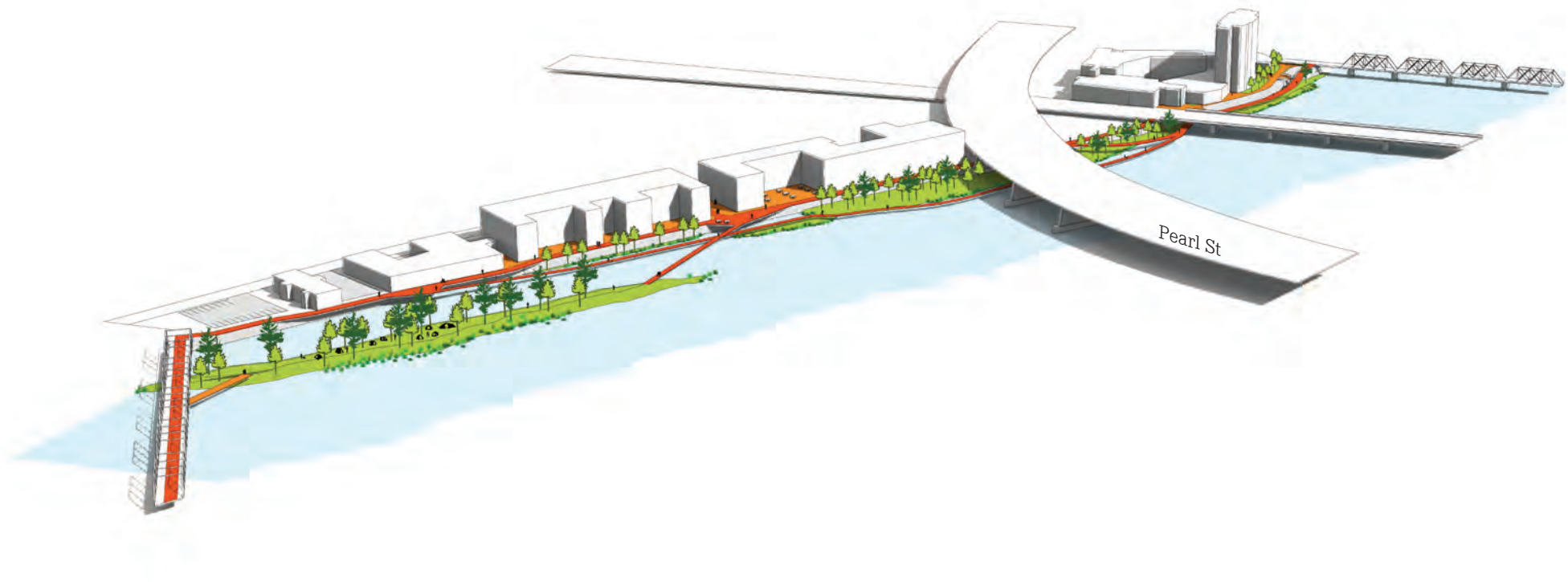


FIG A1.153: *Proposed GVSU Seidman aerial view*

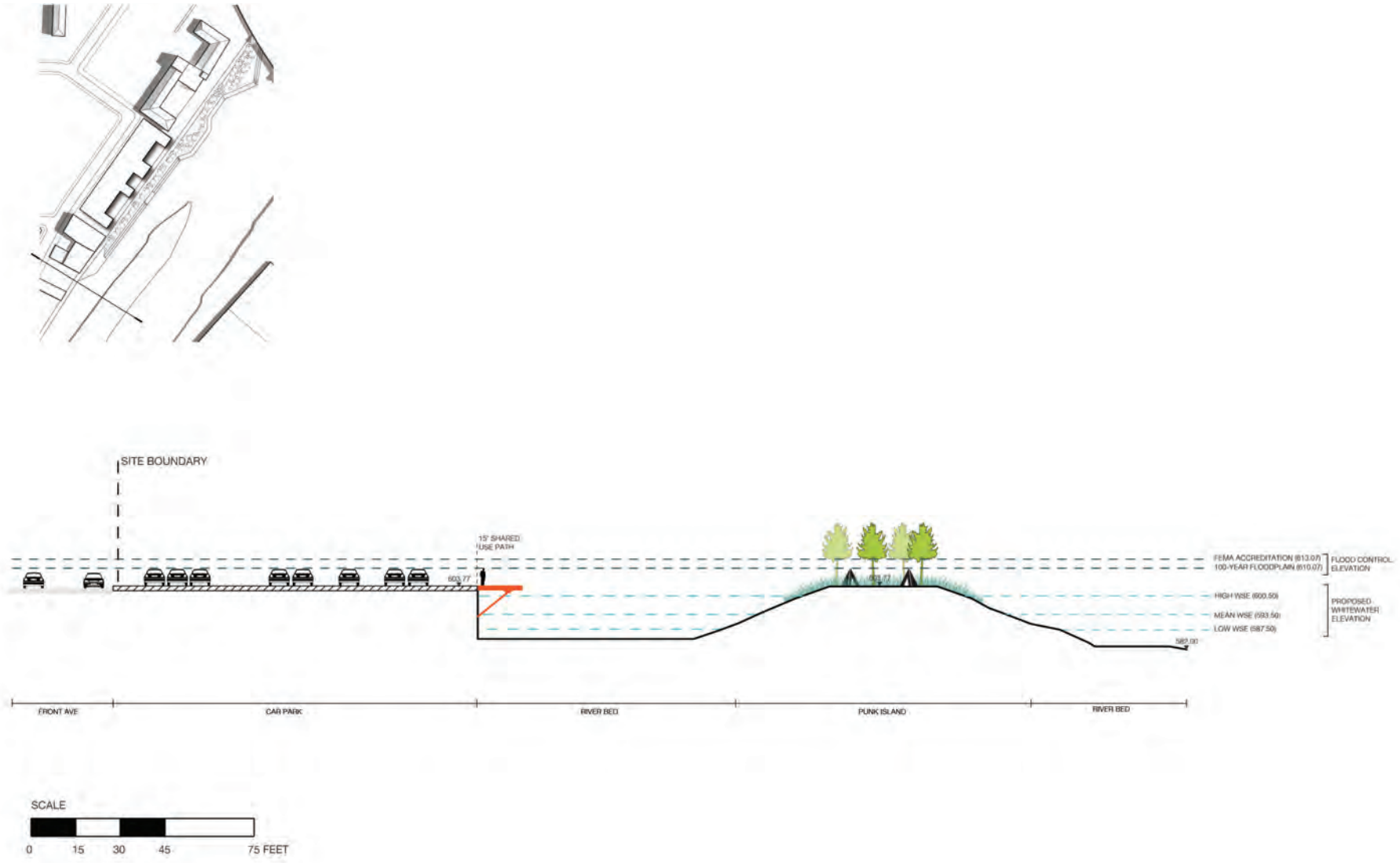


FIG A1.154: *Proposed GVSU Seidman site sections*

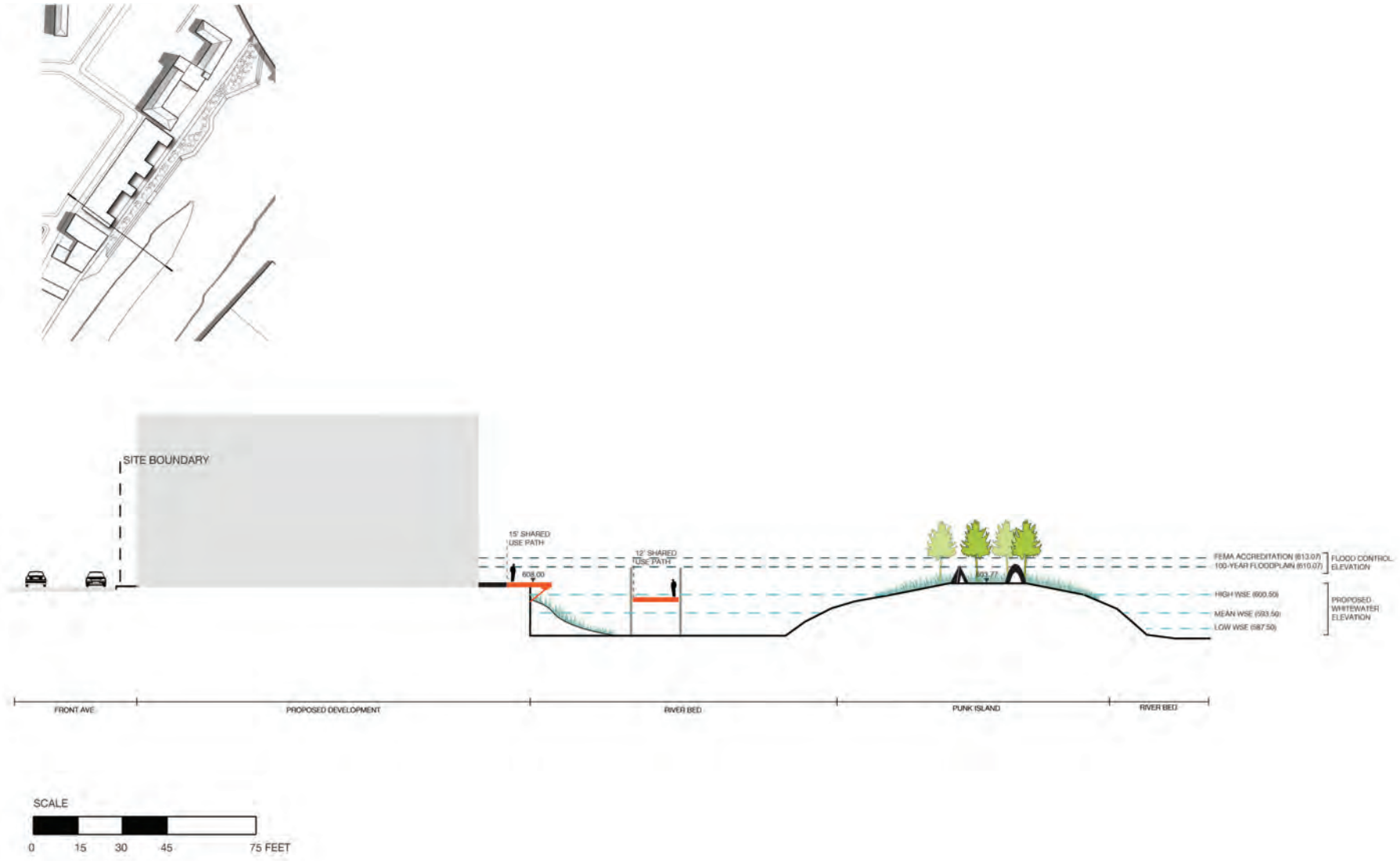


FIG A1.155: *Proposed GVSU Seidman site sections*

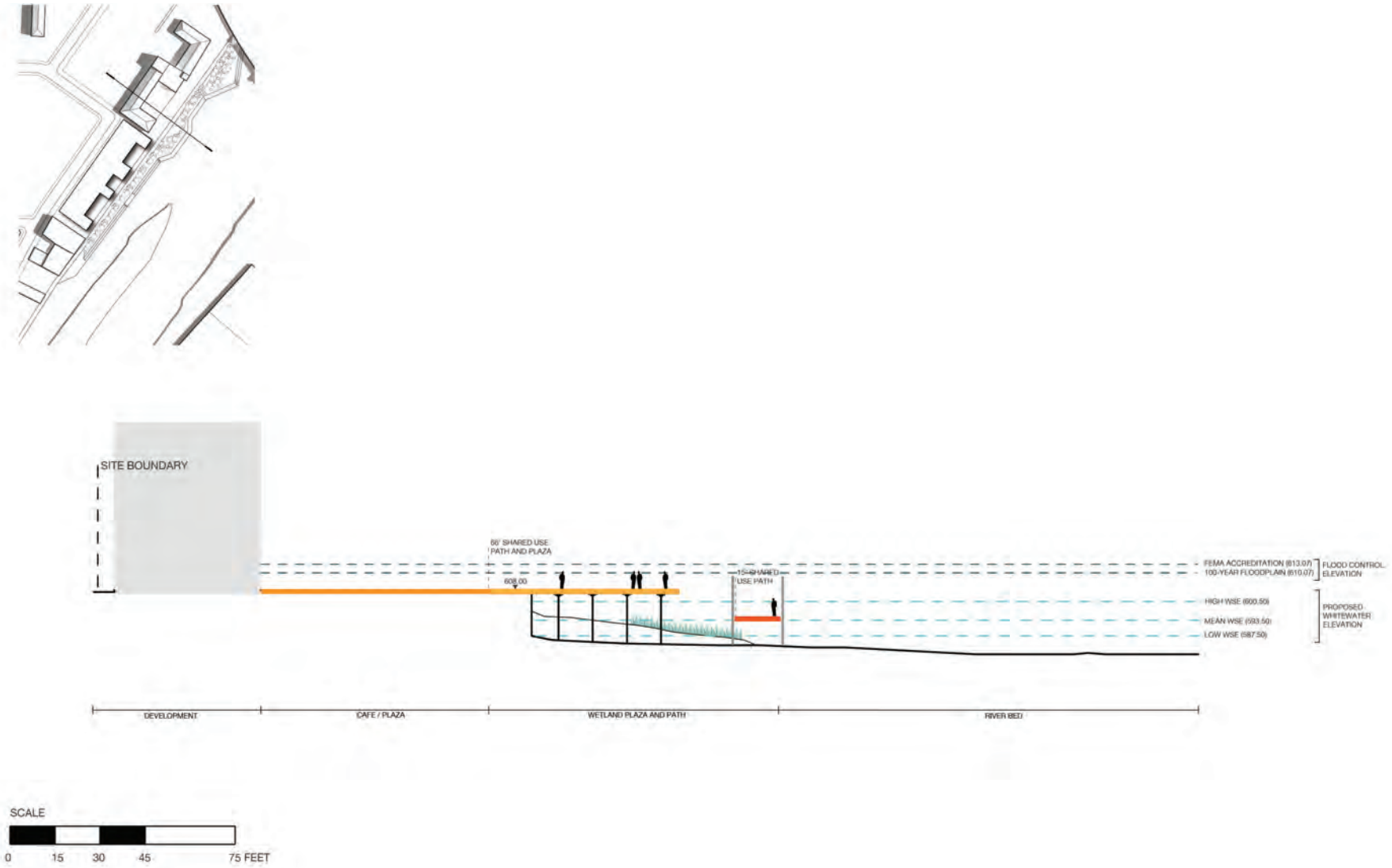


FIG A1.156: *Proposed GVSU Seidman site sections*

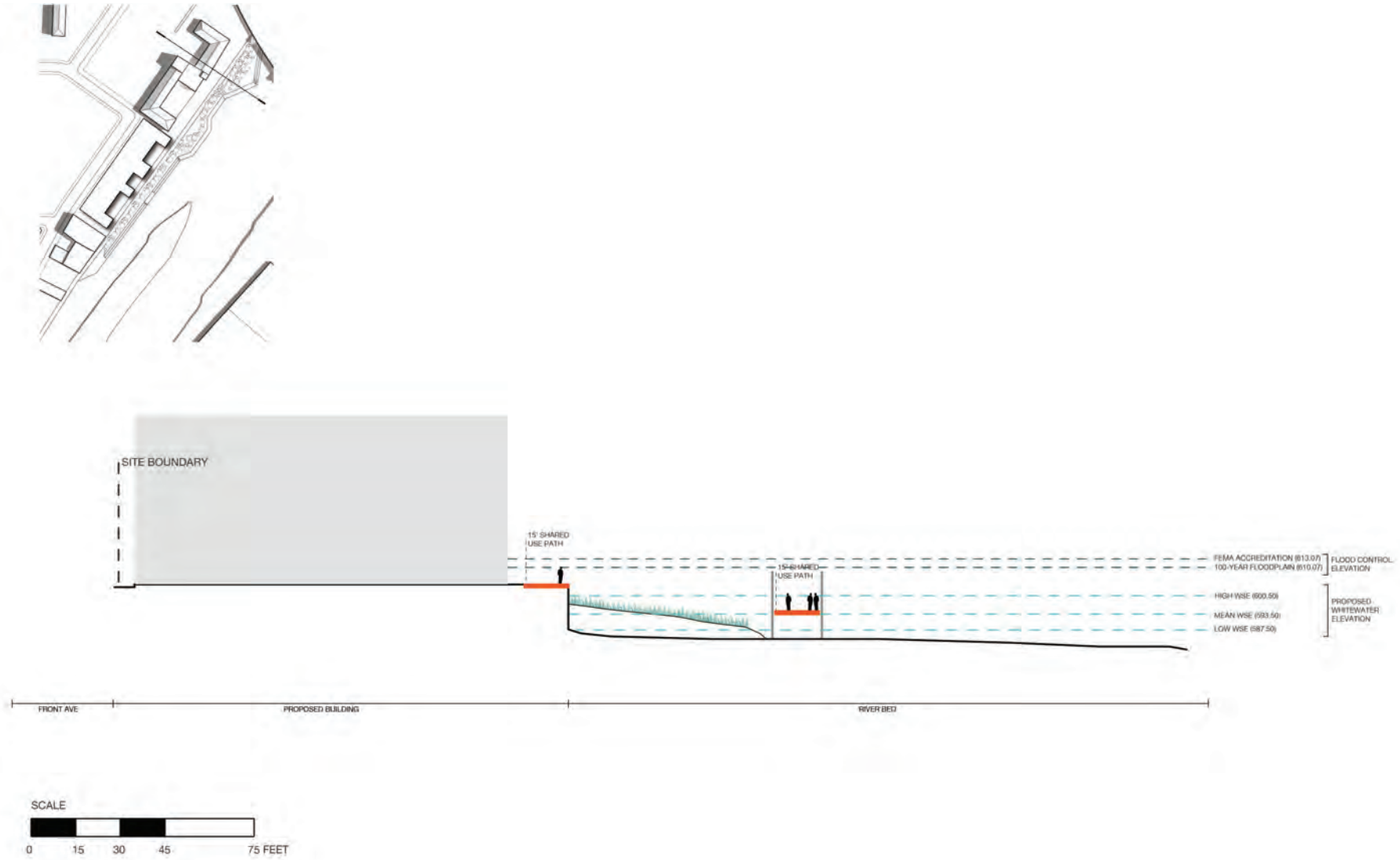


FIG A1.157: *Proposed GVSU Seidman site sections*

FIG A1.158: *Proposed GVSU aerial rendering*

APPENDIX 1

PHASE II SITES

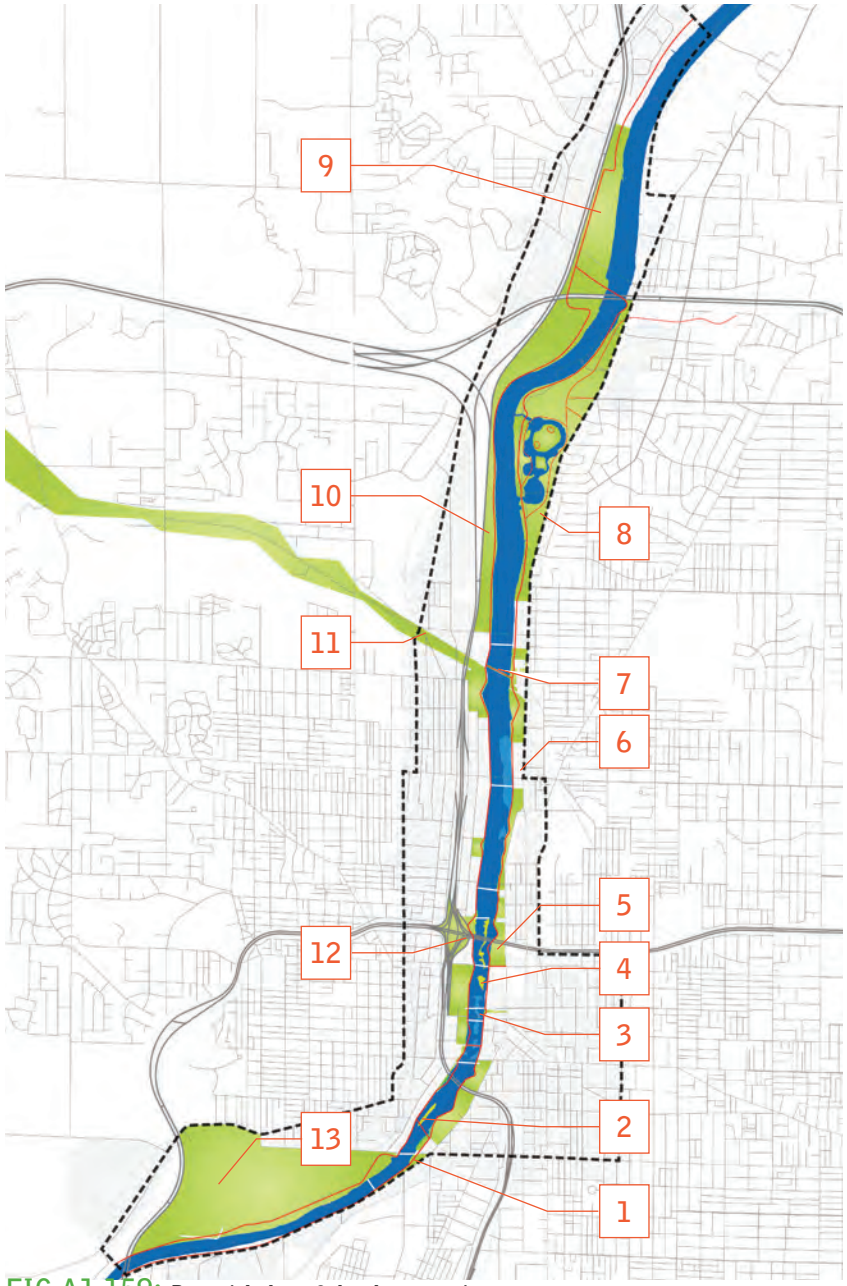


FIG A1.159: *Potential phase 2 development sites*

1 Market St. Marina

2 Punk Island Urban Campground

3 City Island Plaza

4 Middle River Islands

5 Post Office

6 The Ledge

7 Bridge Park

8 Riverside Park Lagoon

9 Walker Waterfront Park

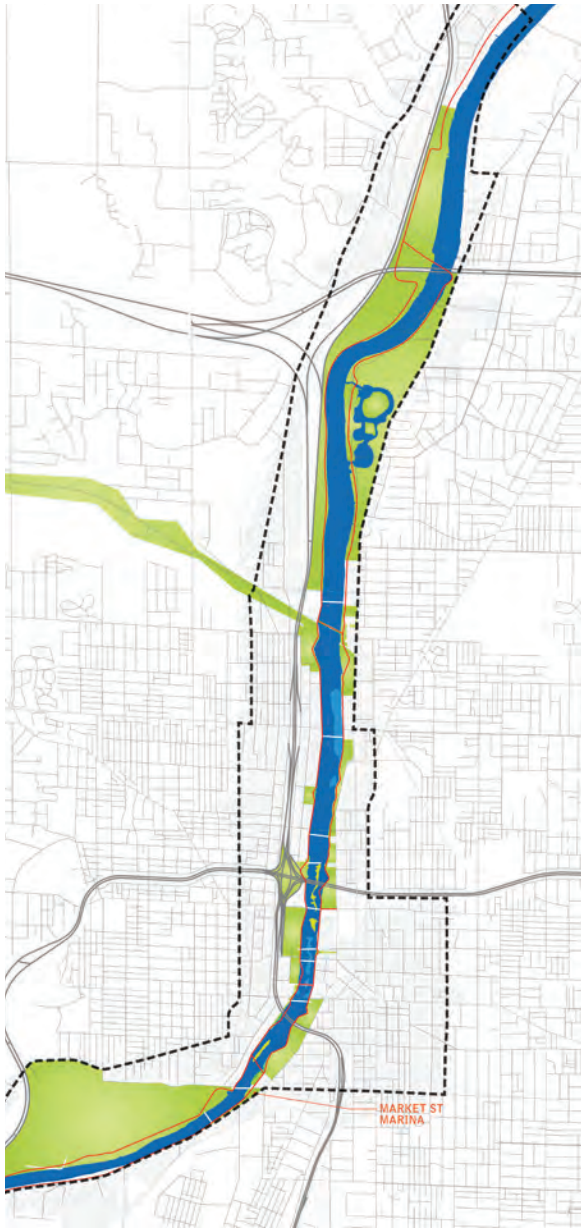
10 Westside Park

11 Indian Mill Creek Greenway

12 Storm Park

13 Tech Park

>> Market St. Marina



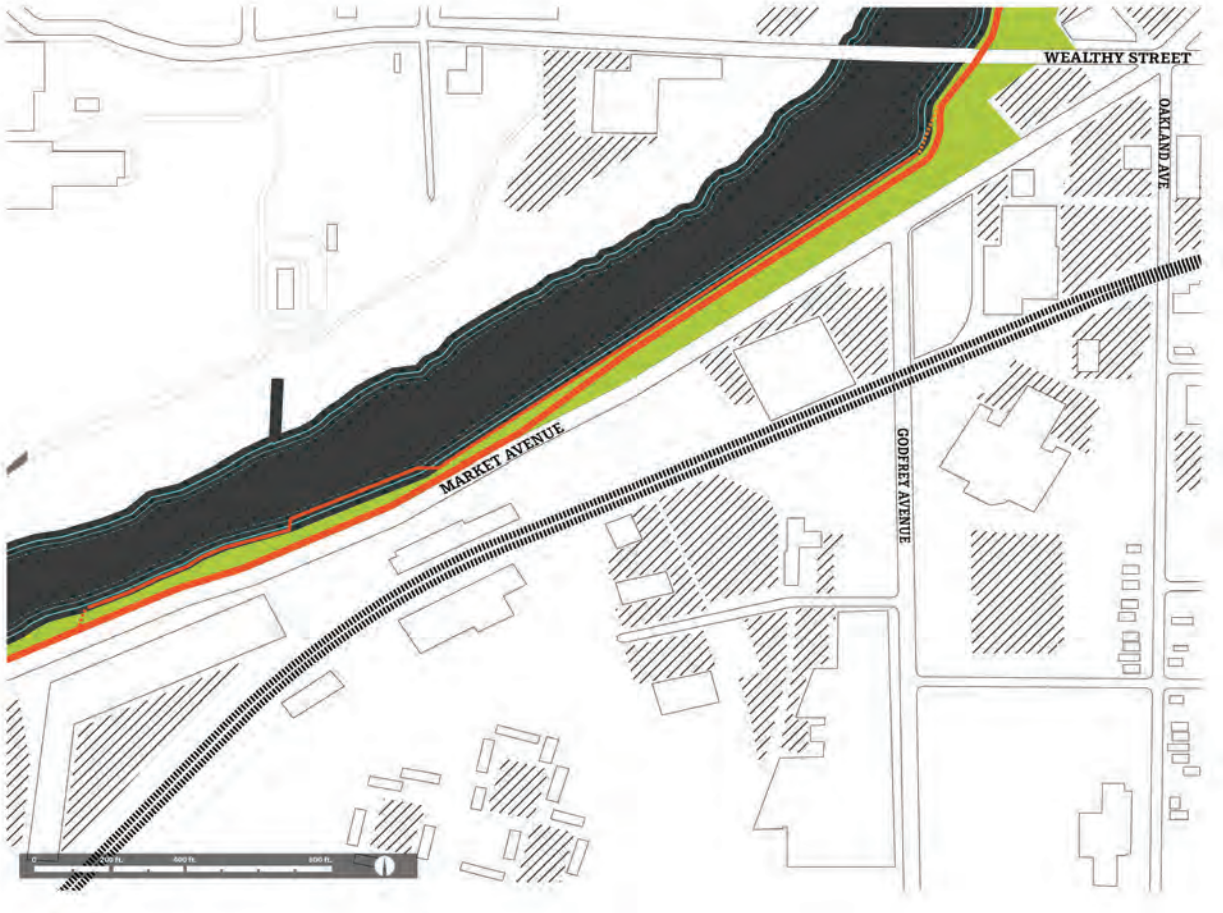


FIG A1.160: *Proposed Market Street Marina site plan*

>> Punk Island Campground

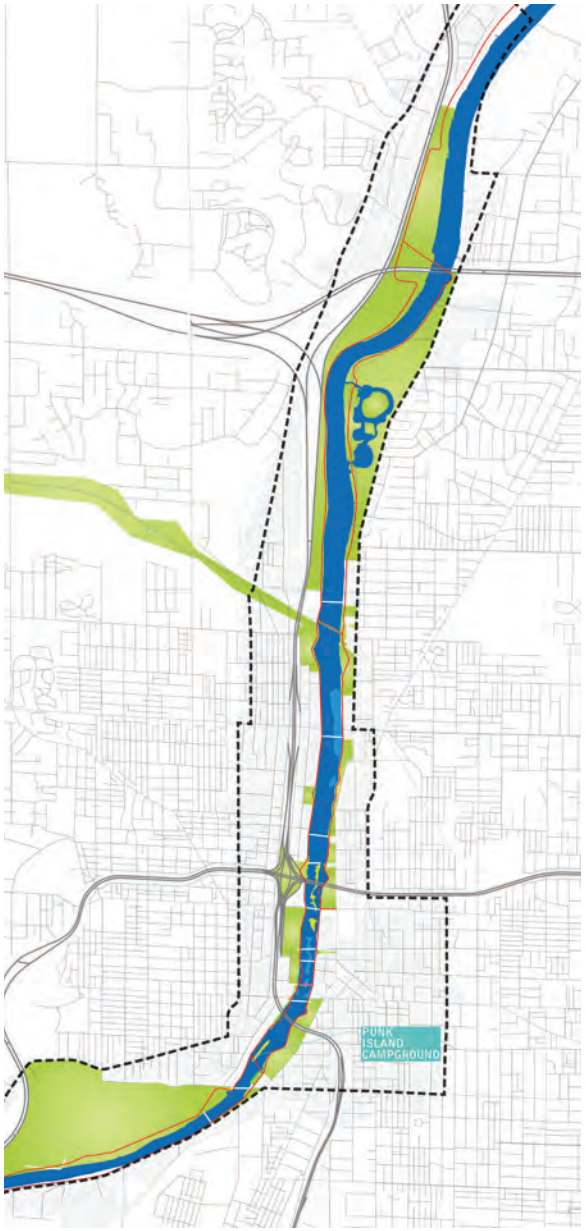


FIG A1.161: *Proposed Punk Island Urban Campground site plan*

>> City Island Plaza

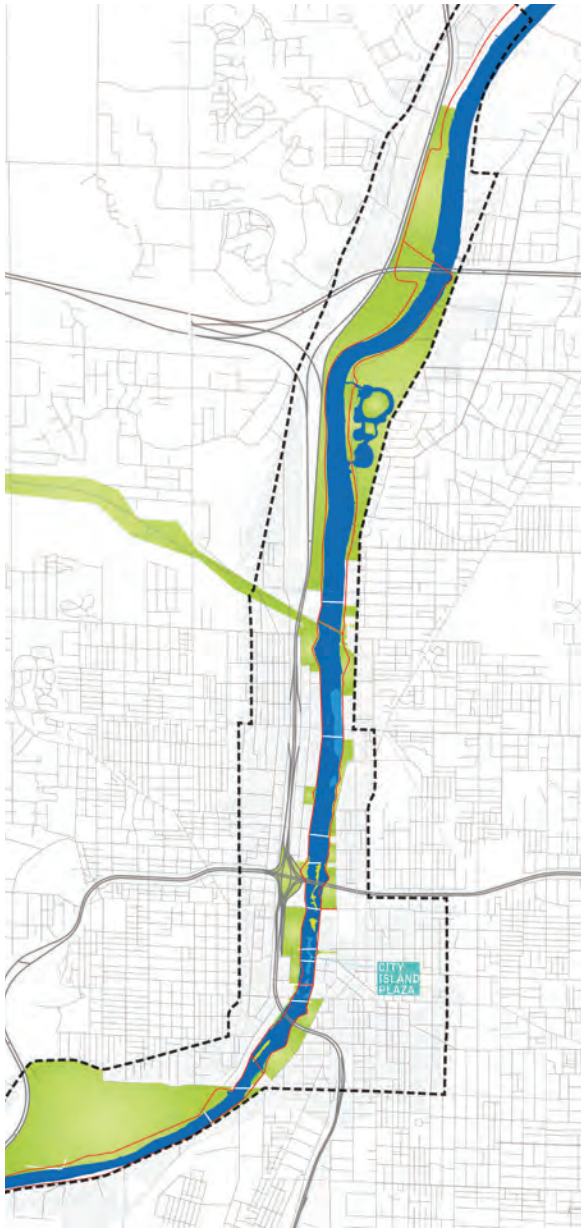
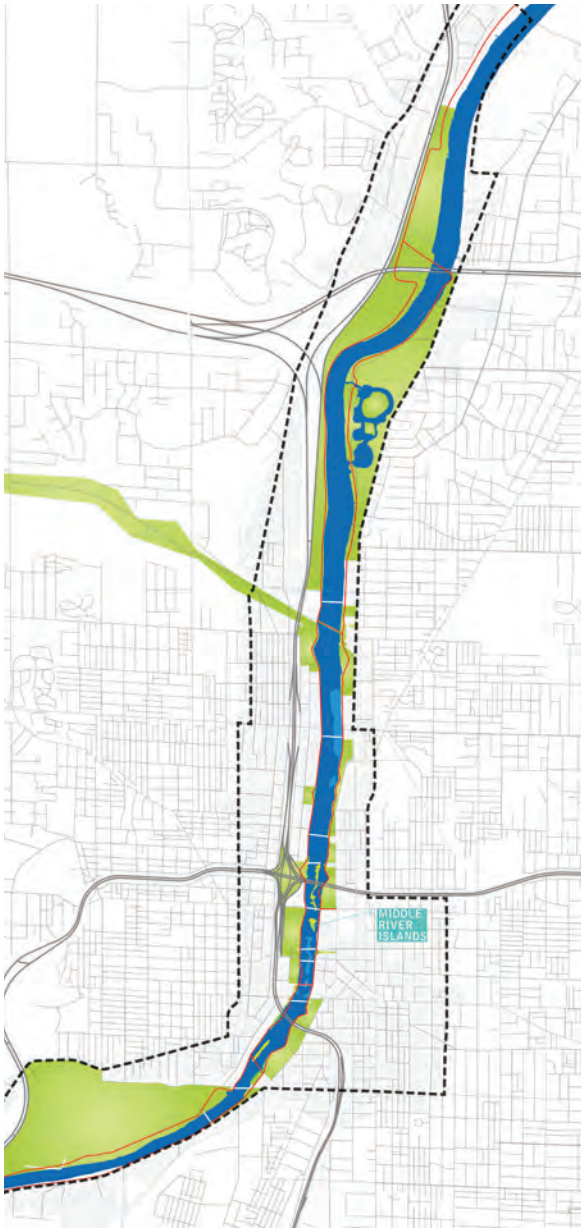


FIG A1.162: *Proposed City Island Plaza site plan*

>> Middle River Island



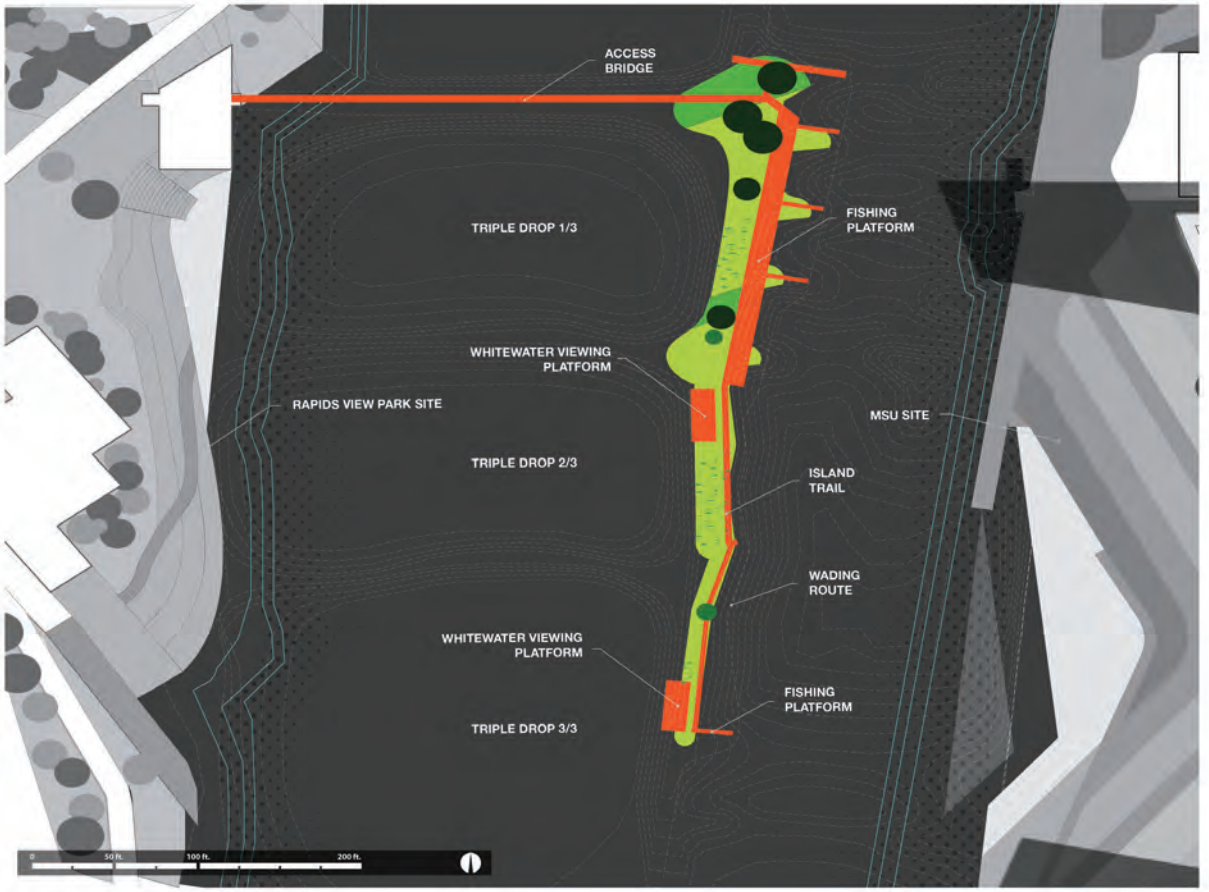


FIG A1.163: *Proposed Middle River Islands site plan*

>> Post Office

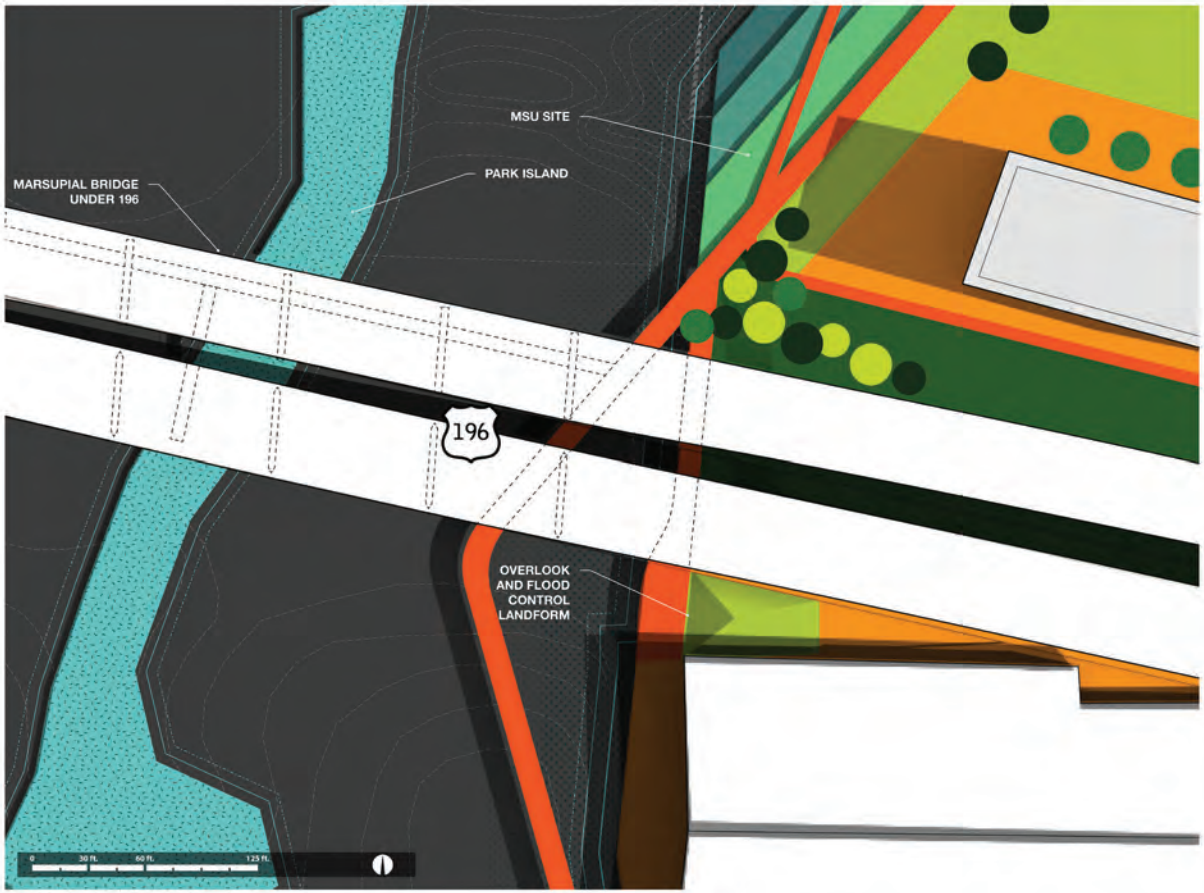


FIG A1.164: *Proposed Post Office site plan*

>> The Ledge

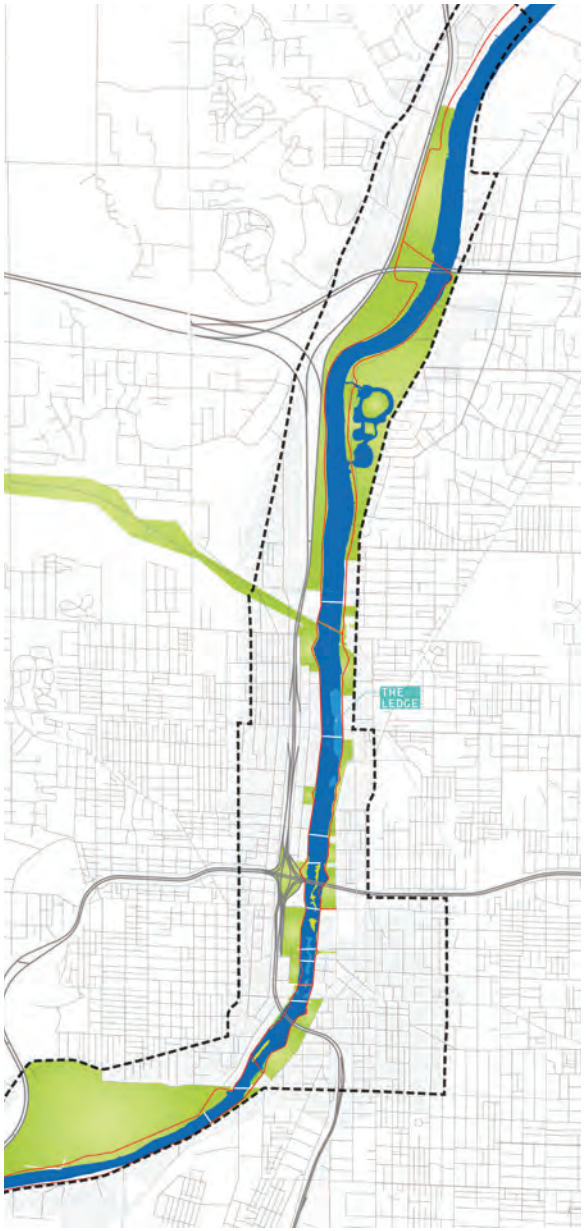
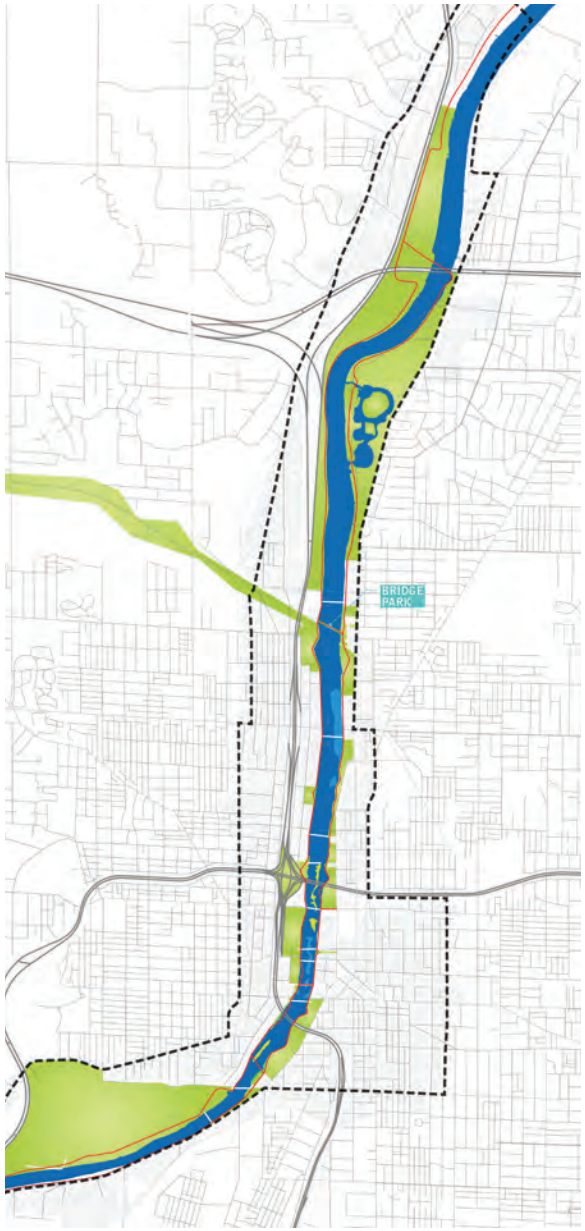


FIG A1.165: *Proposed The Ledge site plan*

>> Bridge Park



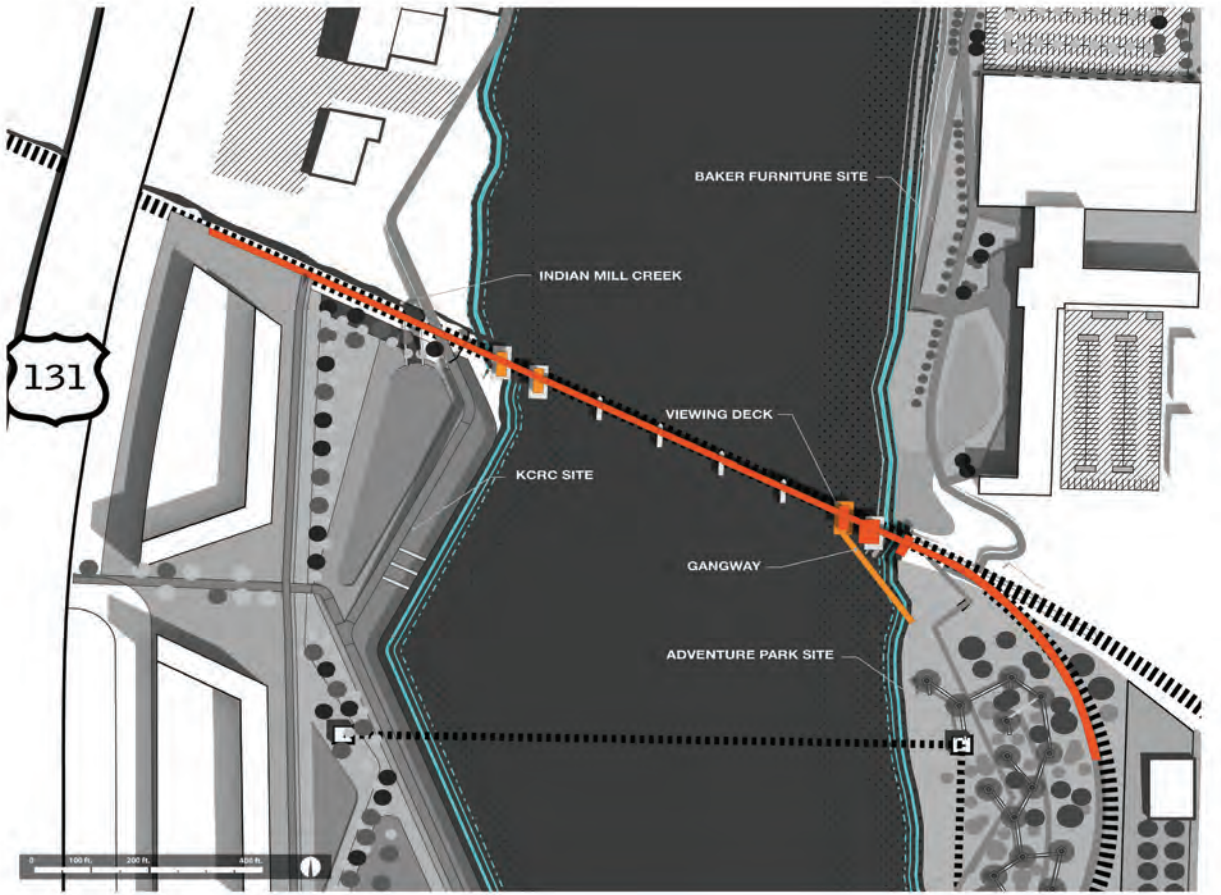


FIG A1.166: *Proposed Bridge Park site plan*

>> Riverside Park Lagoon

FIG A1.167: *Proposed Riverside Park Lagoon site plan*

>> Walker Waterfront Park

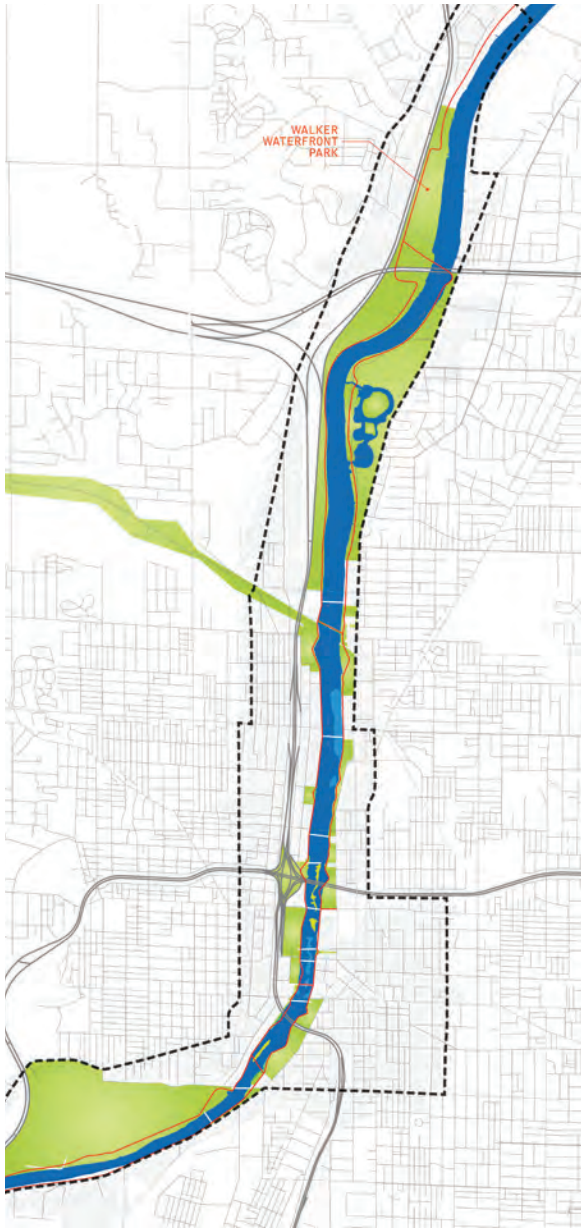


FIG A1.168: *Proposed Walker Waterfront Park site plan*

>> Westside Park

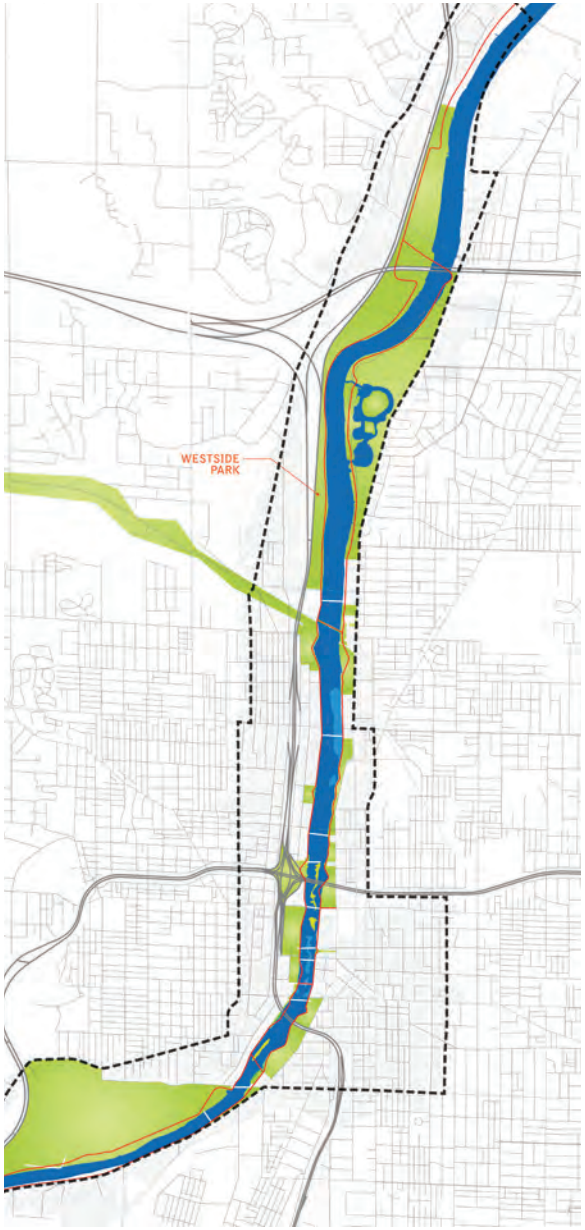


FIG A1.169: *Proposed Westside Park site plan*

>> Indian Mill Greenway

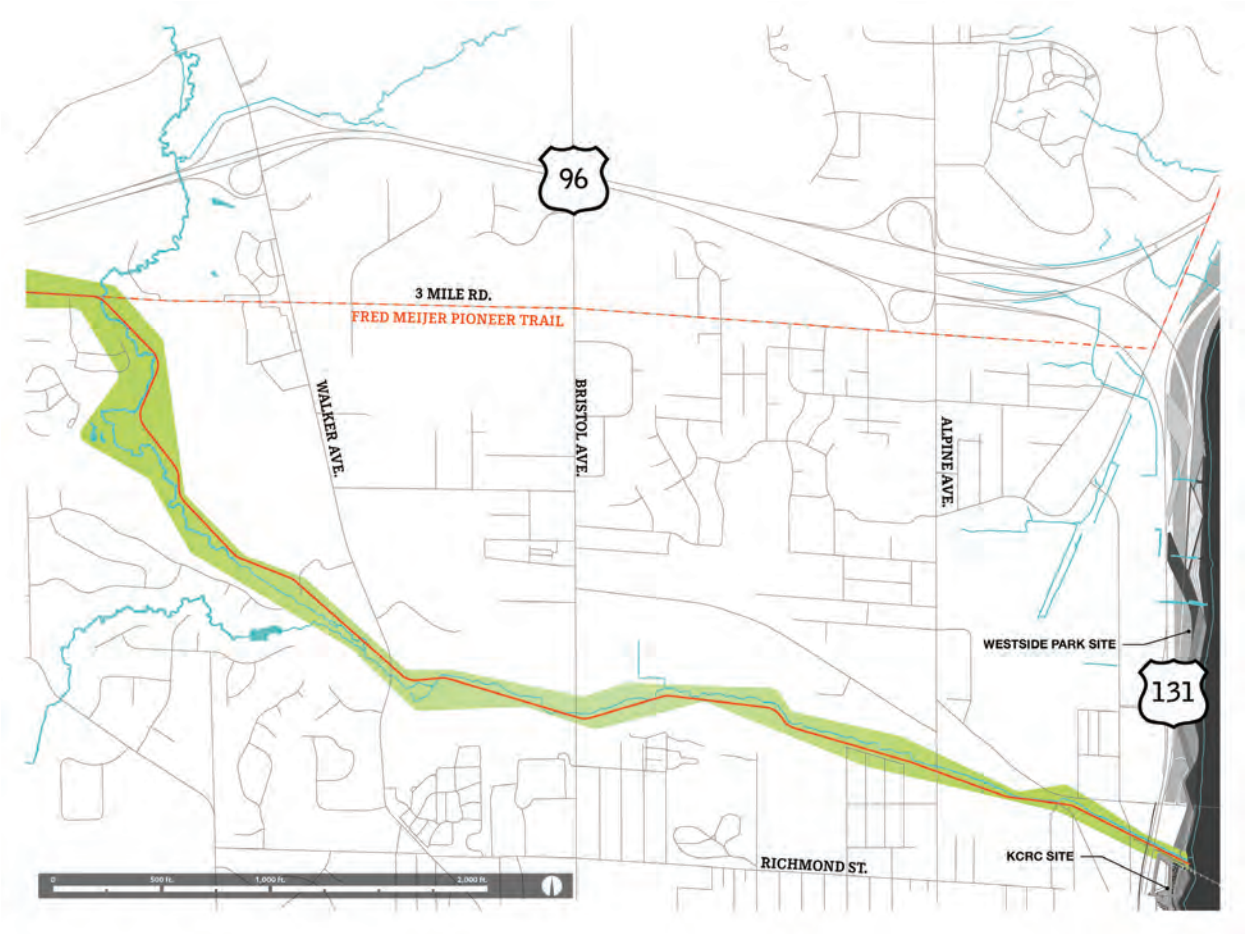


FIG A1.170: *Proposed Indian Mill Creek Greenway site plan*

>> Storm Park

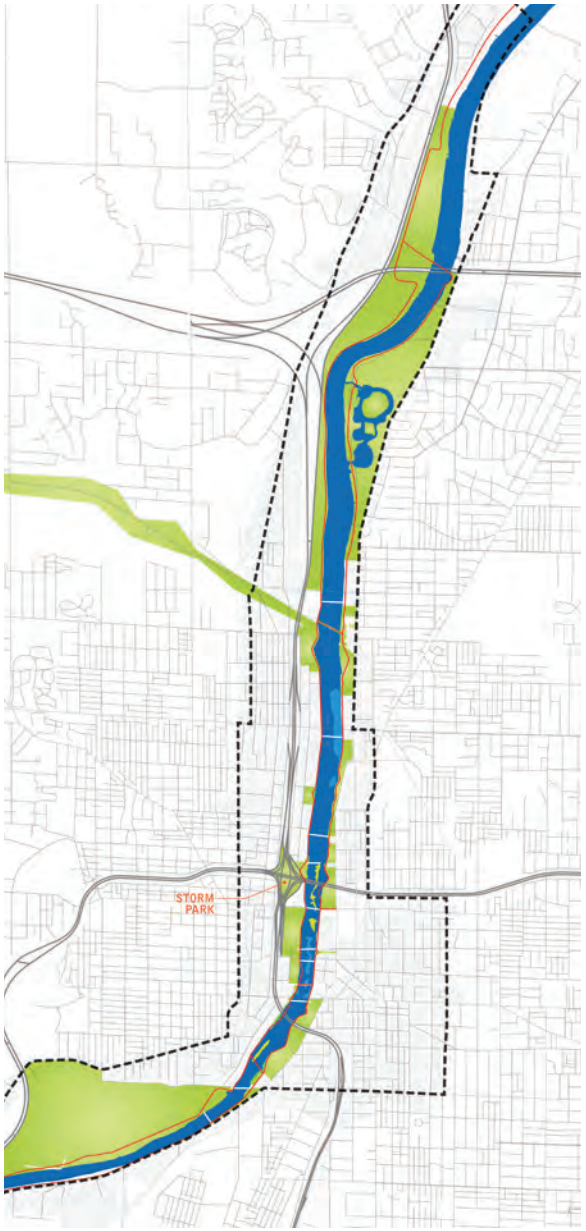


FIG A1.171: *Proposed Storm Park site plan*

>> Indian Mill Greenway

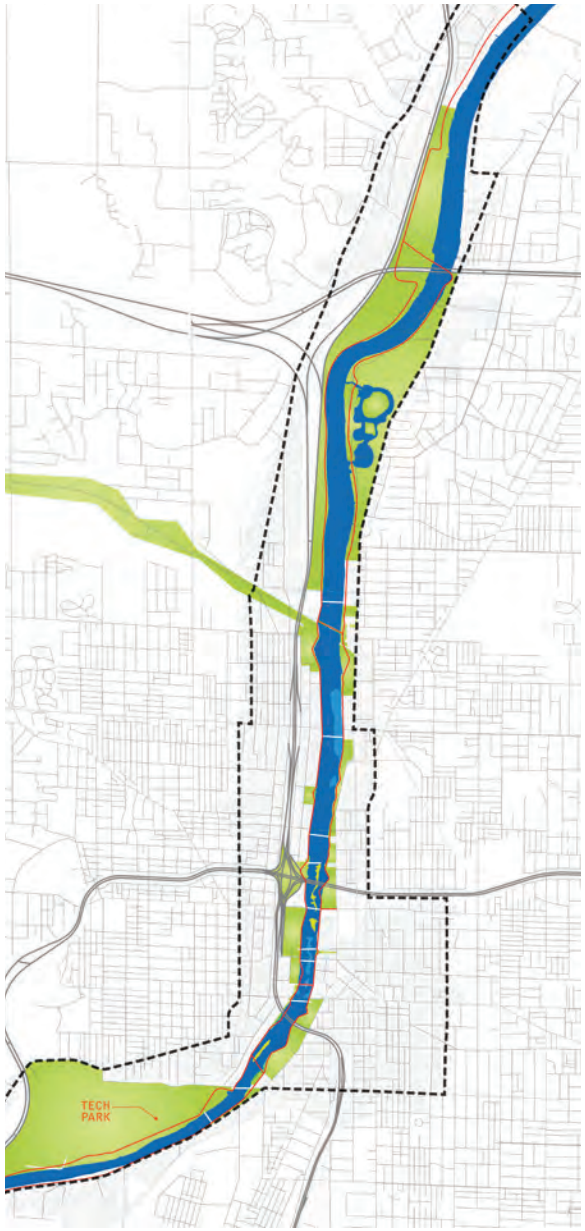
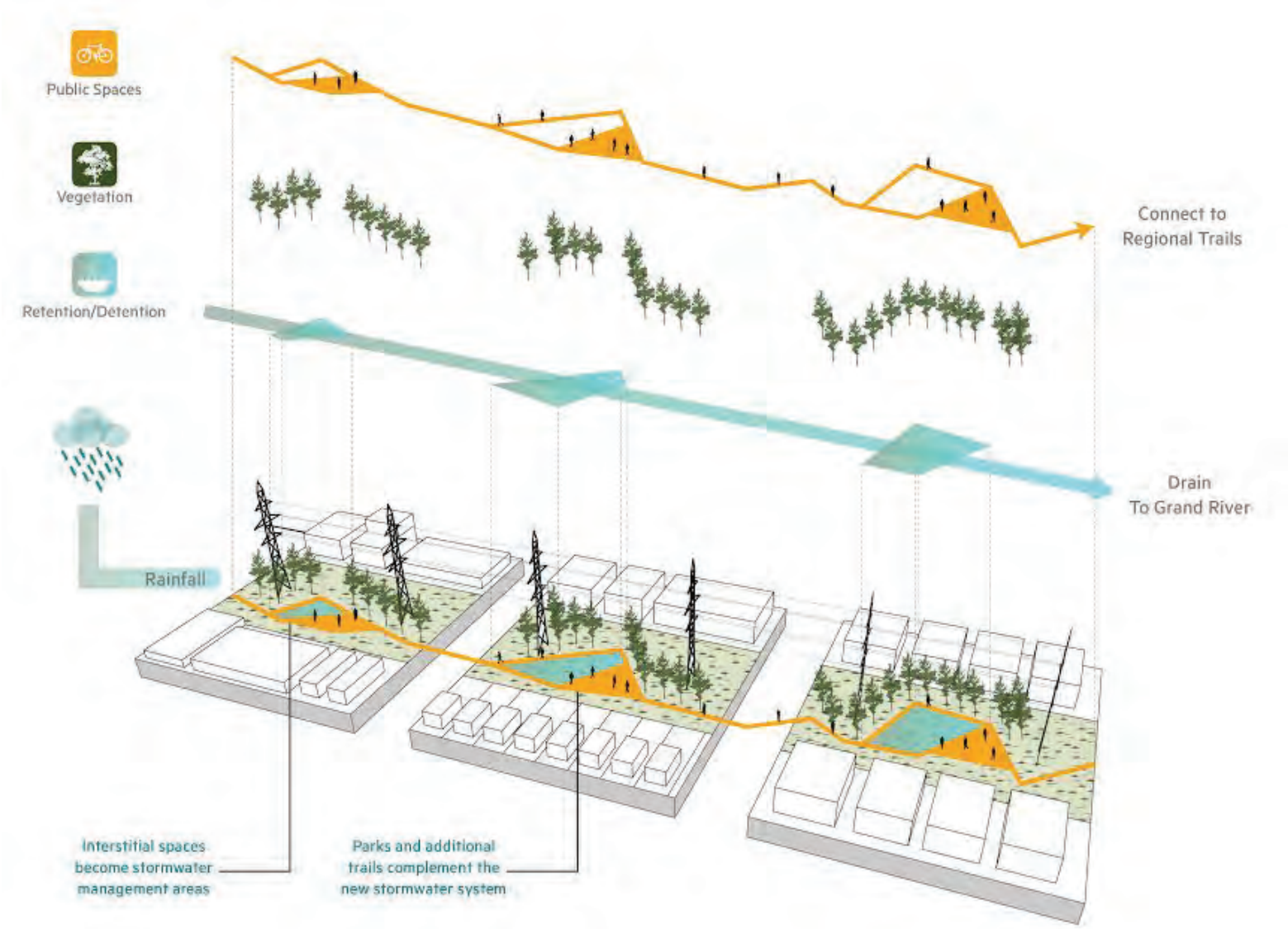


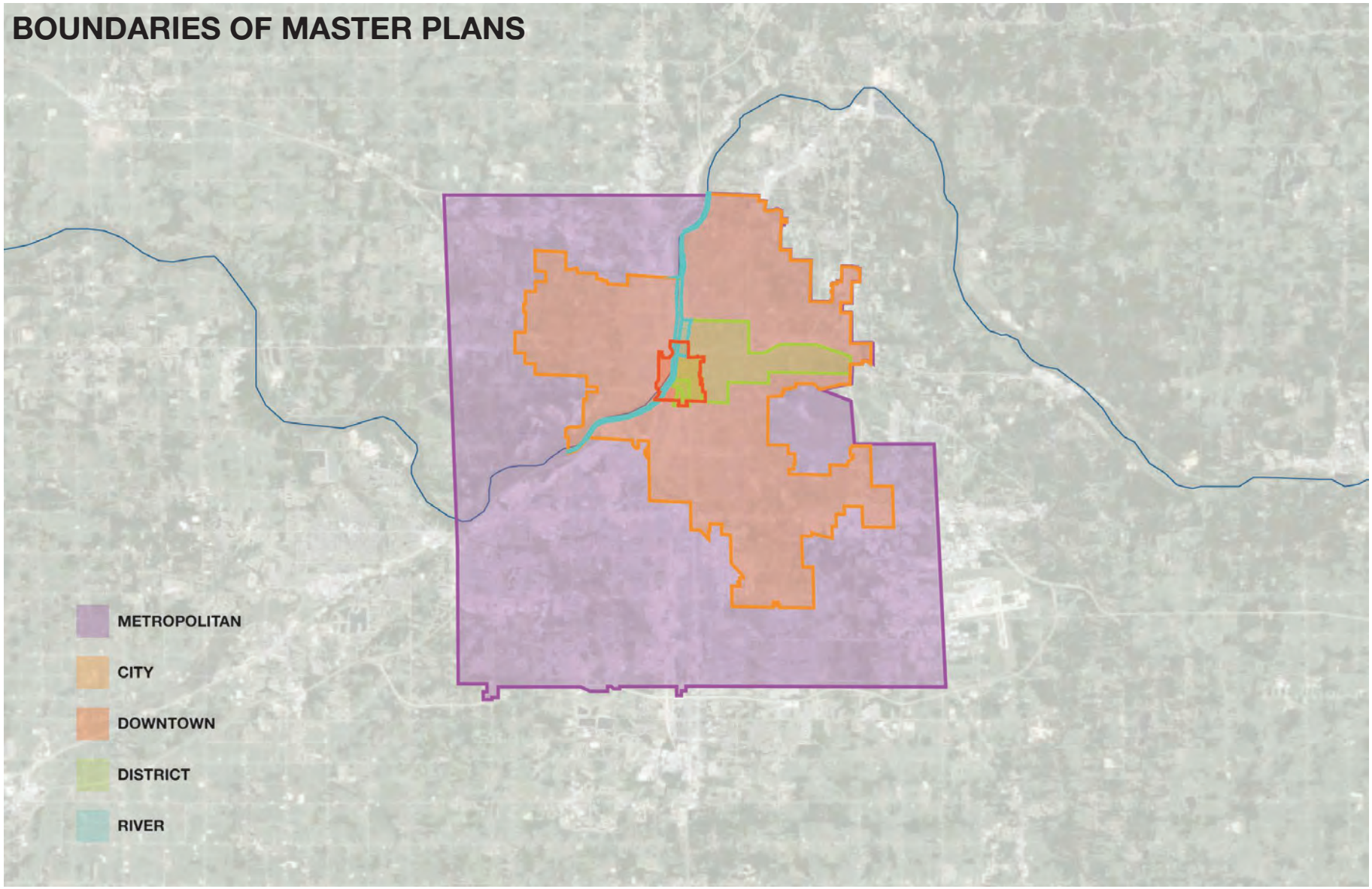
FIG A1.172: *Proposed Tech Park site plan*

APPENDIX 1

SUPPLEMENTAL SITE ANALYSIS

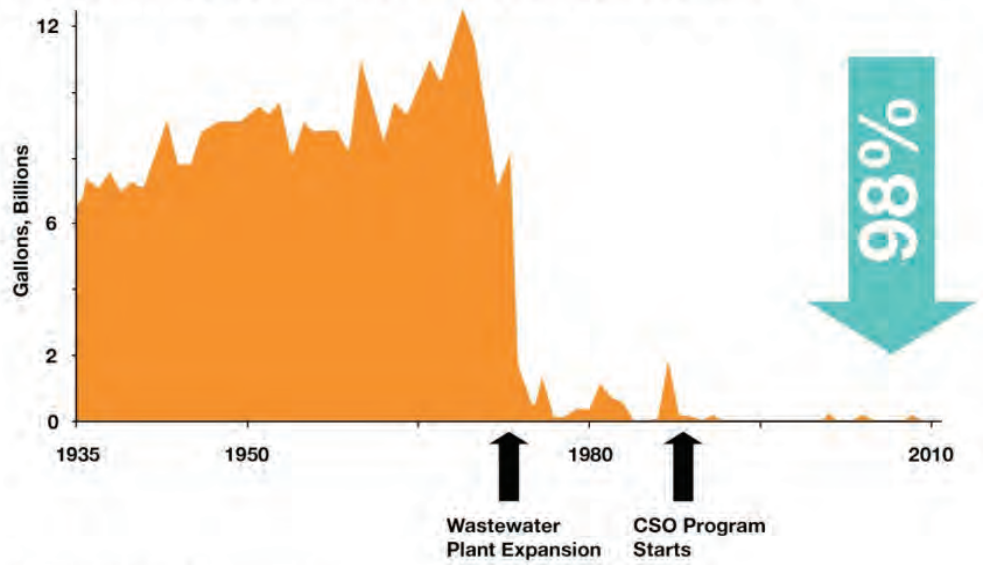
BMPs CONNECTIVE HYDROLOGY SYSTEMS




BOUNDARIES OF MASTER PLANS
METROPOLITAN
CITY
DOWNTOWN
DISTRICT
RIVER

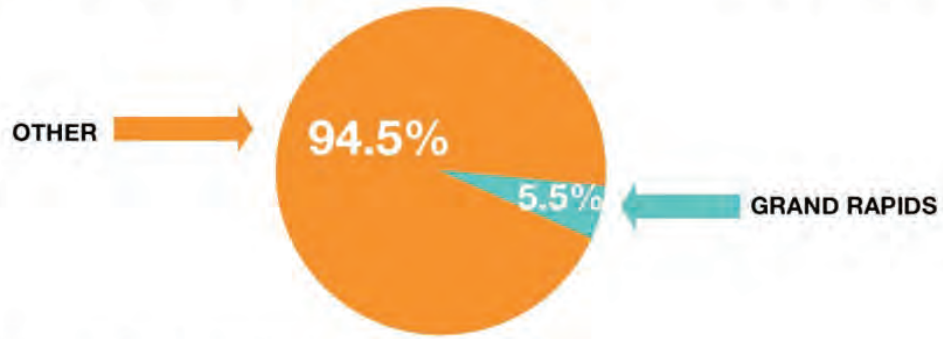
CITY EFFORTS

GRAND RAPIDS COMBINED SEWER OVERFLOW HISTORY



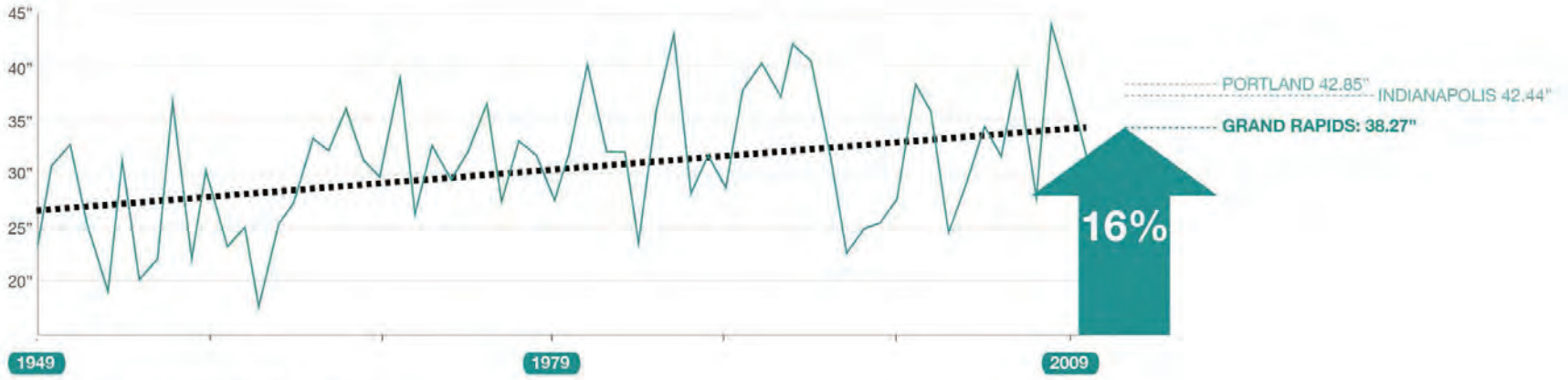
Source: City of Grand Rapids, Environment Services

2009 CSO DISCHARGE TO THE GRAND RIVER (% OF VOLUME)



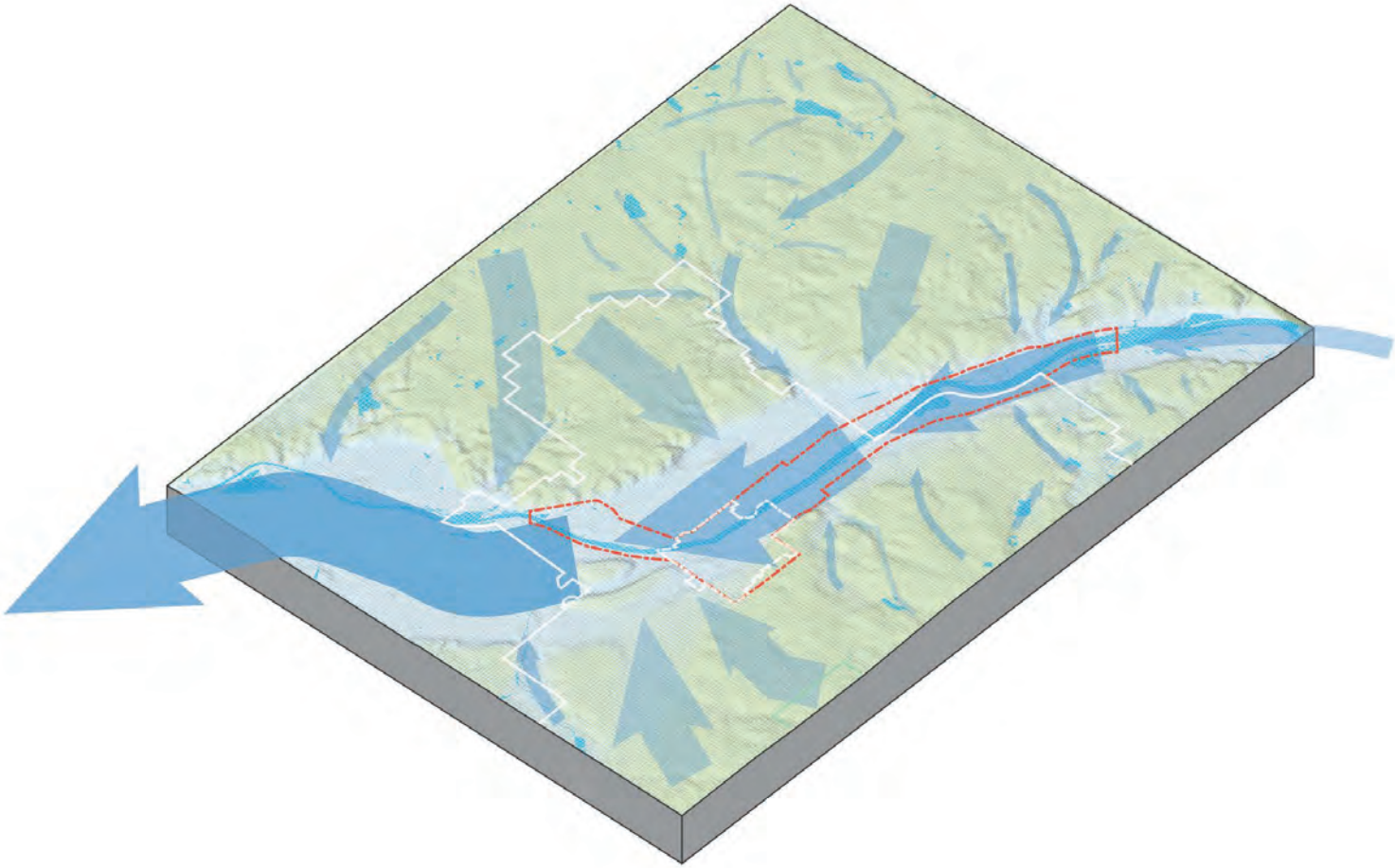
Source: City of Grand Rapids, Environment Services

CLIMATE CHANGE - RAINFALL

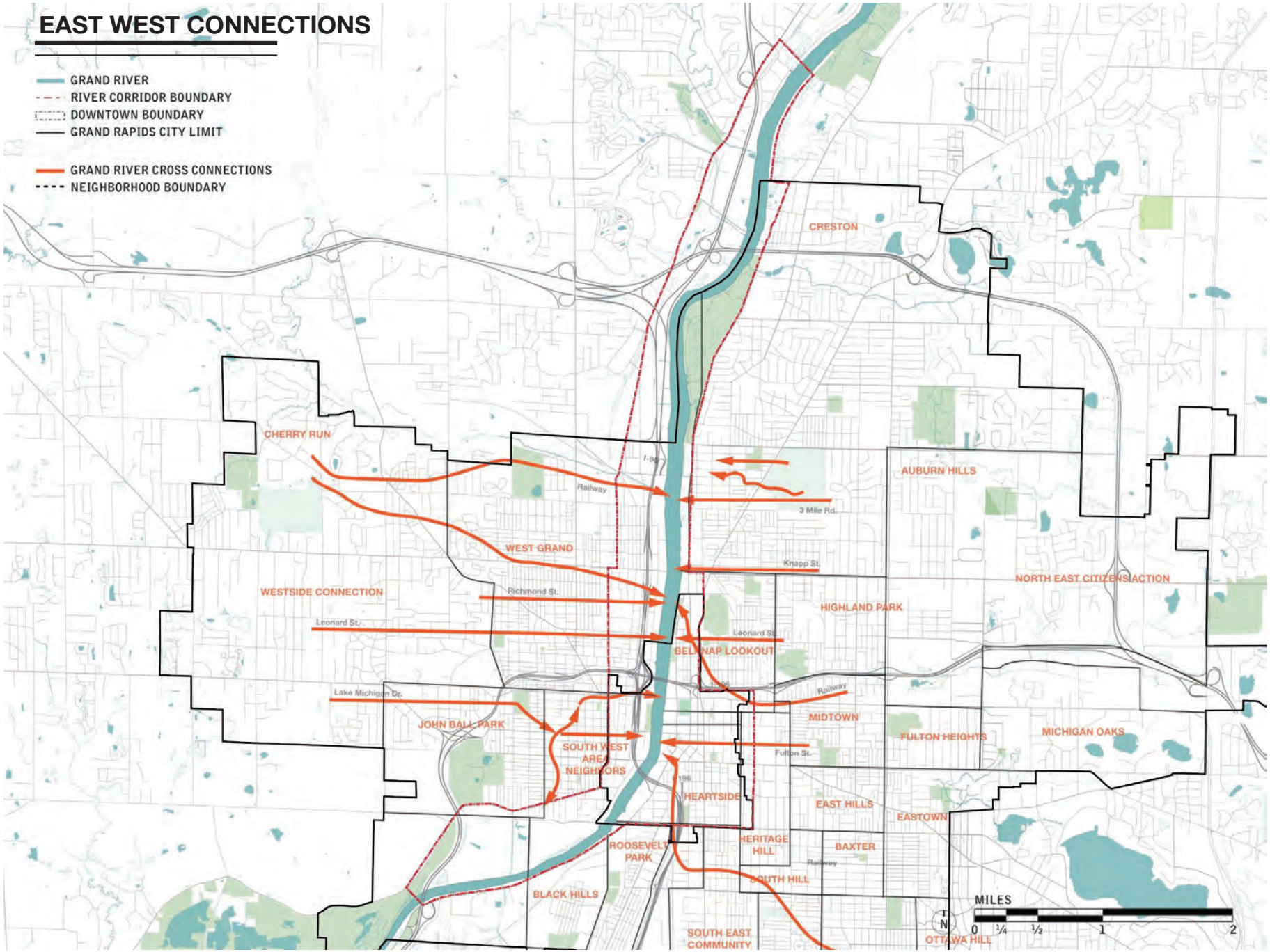


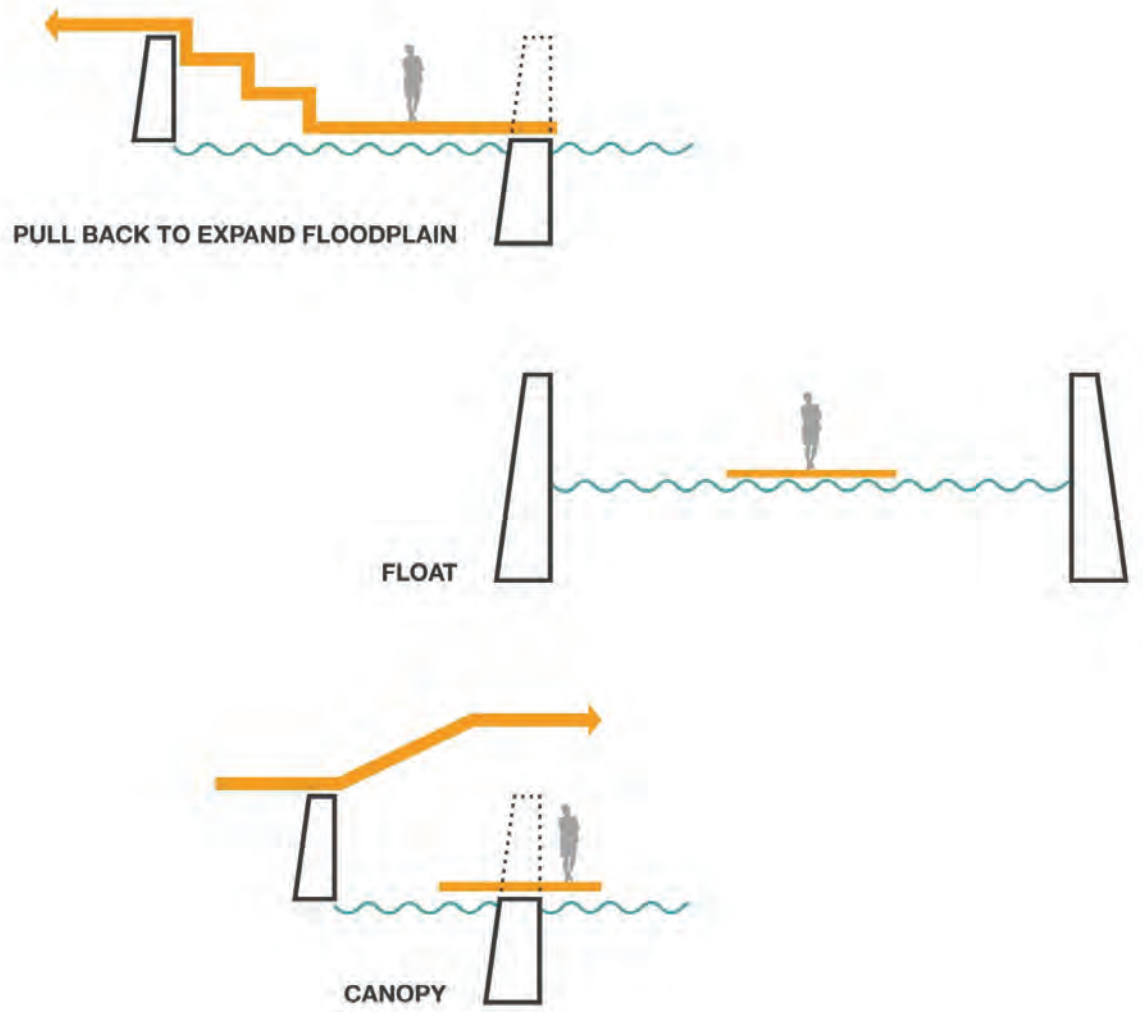
The annual average rainfall in Grand Rapids has grown by 16% in the last 60 years.

DRAINAGE MAP

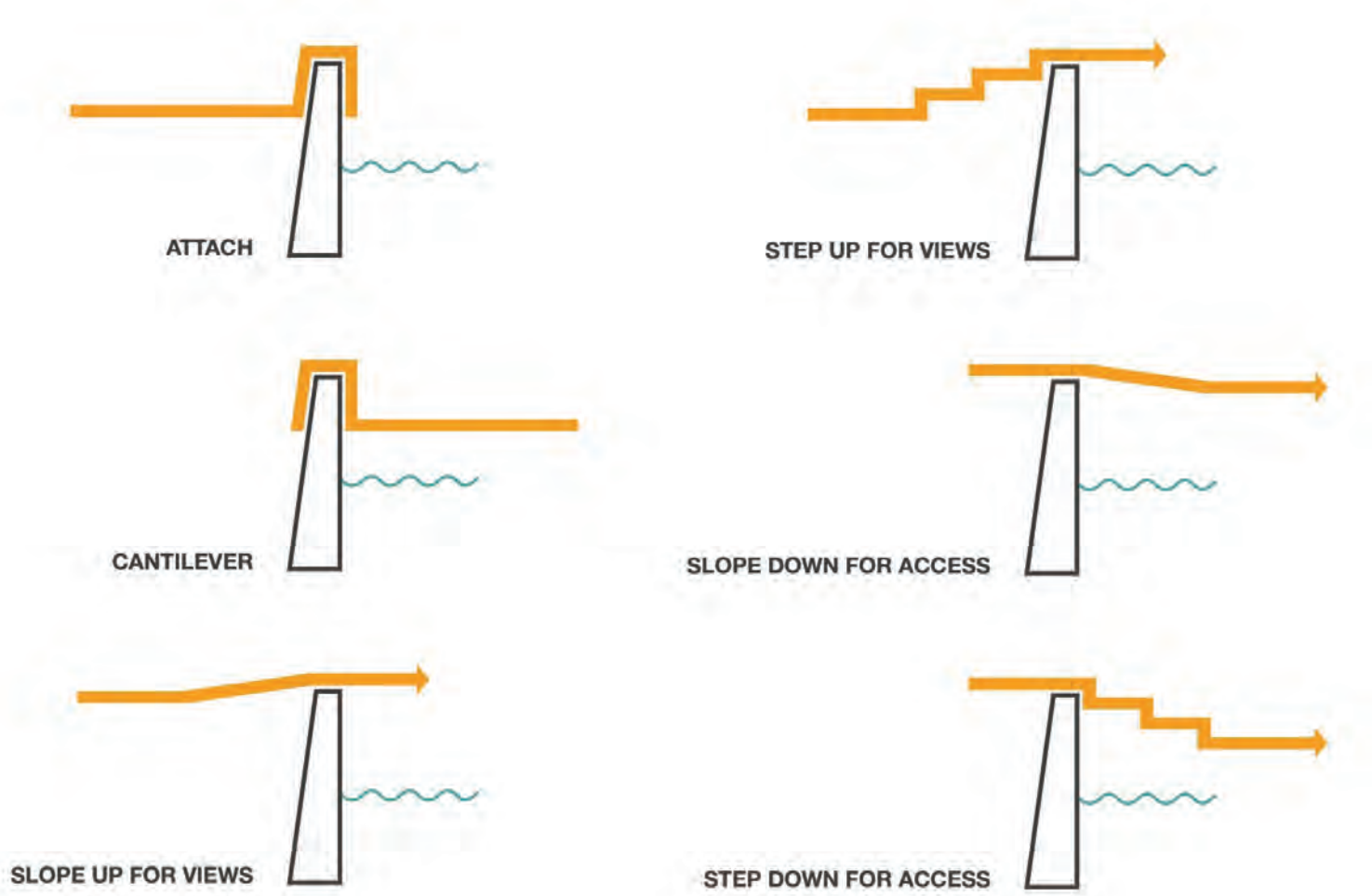


EAST WEST CONNECTIONS

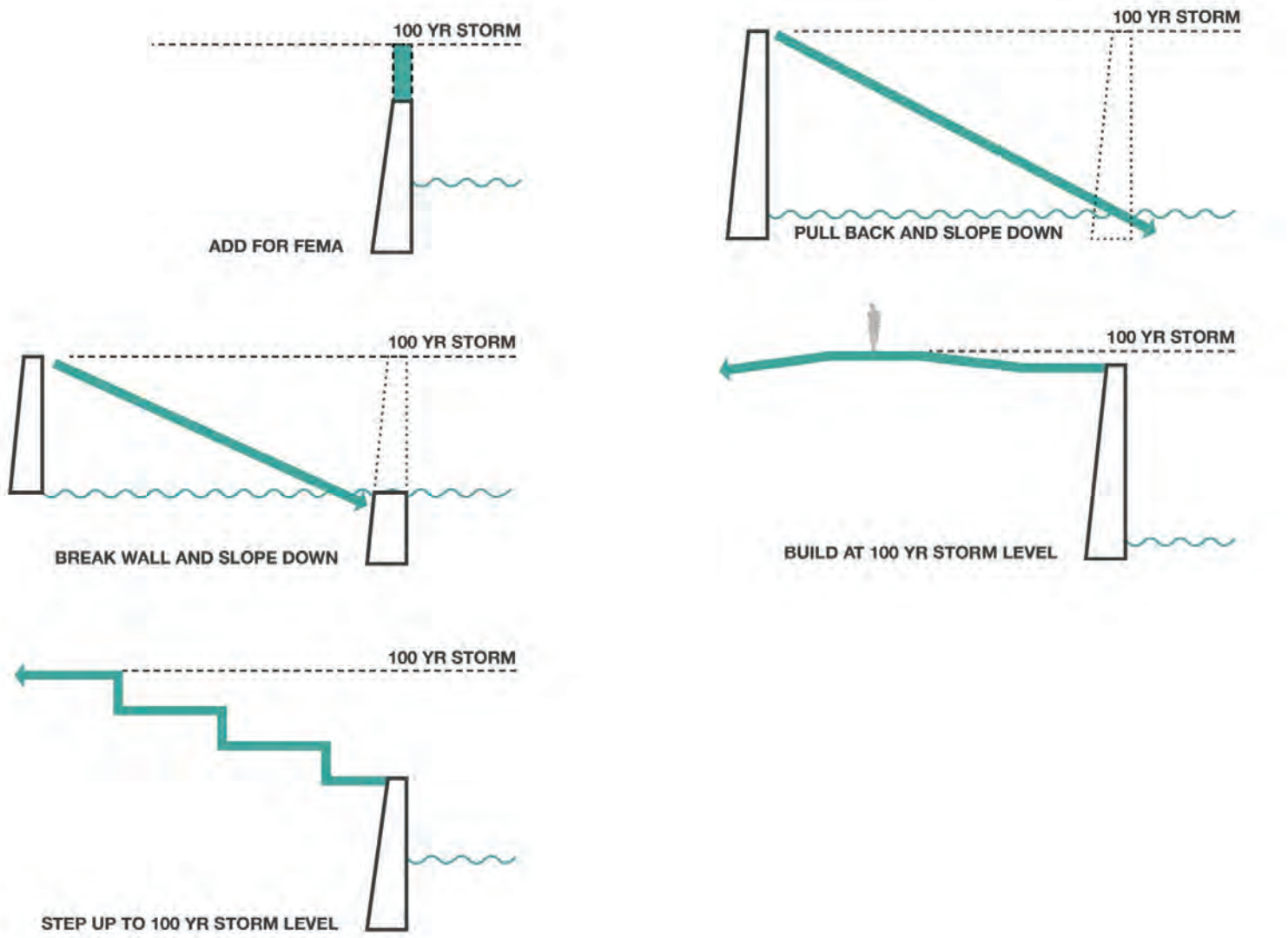




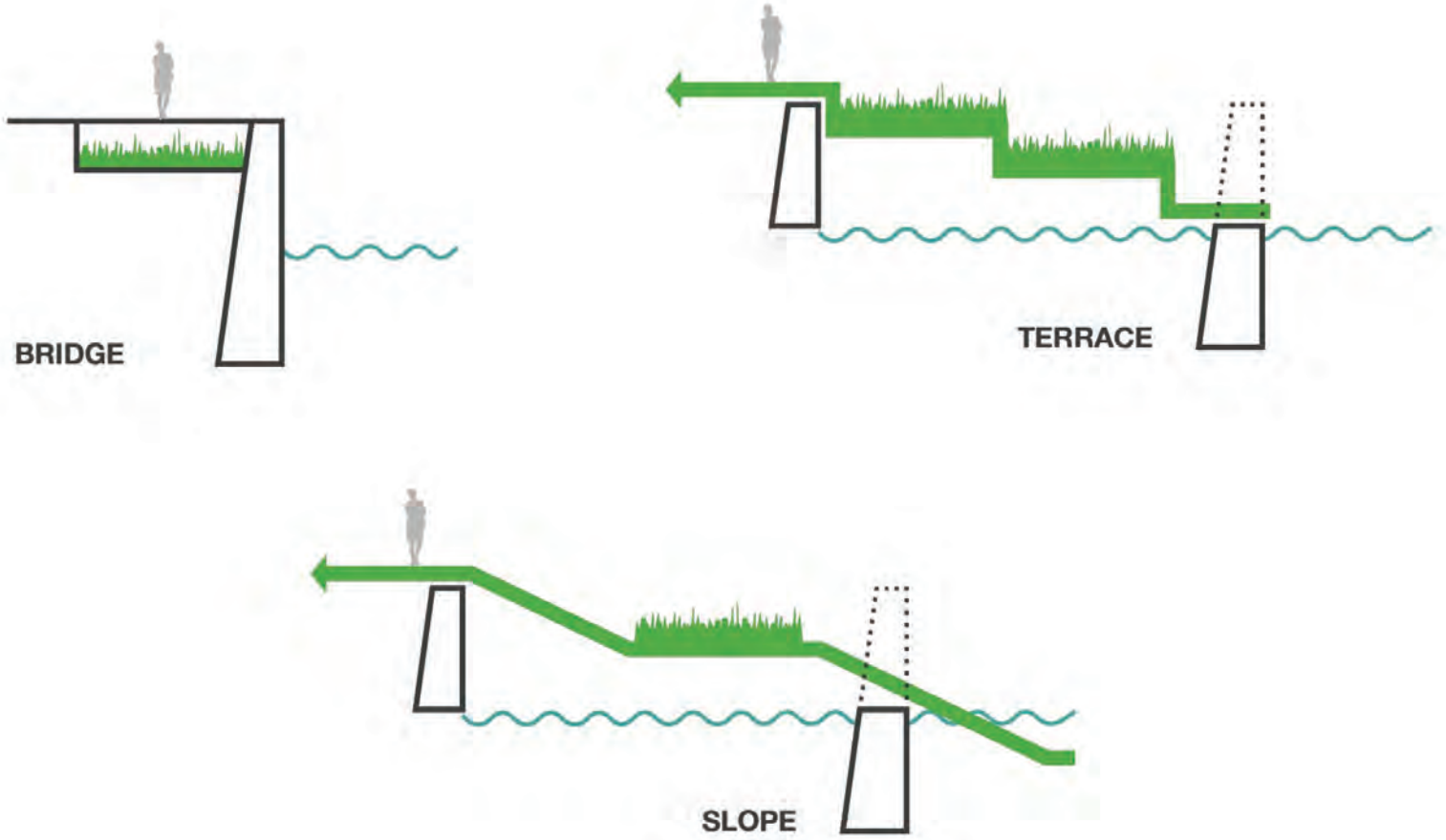
EDGE DESIGN – ACCESS + RECREATION



EDGE DESIGN – ACCESS + RECREATION

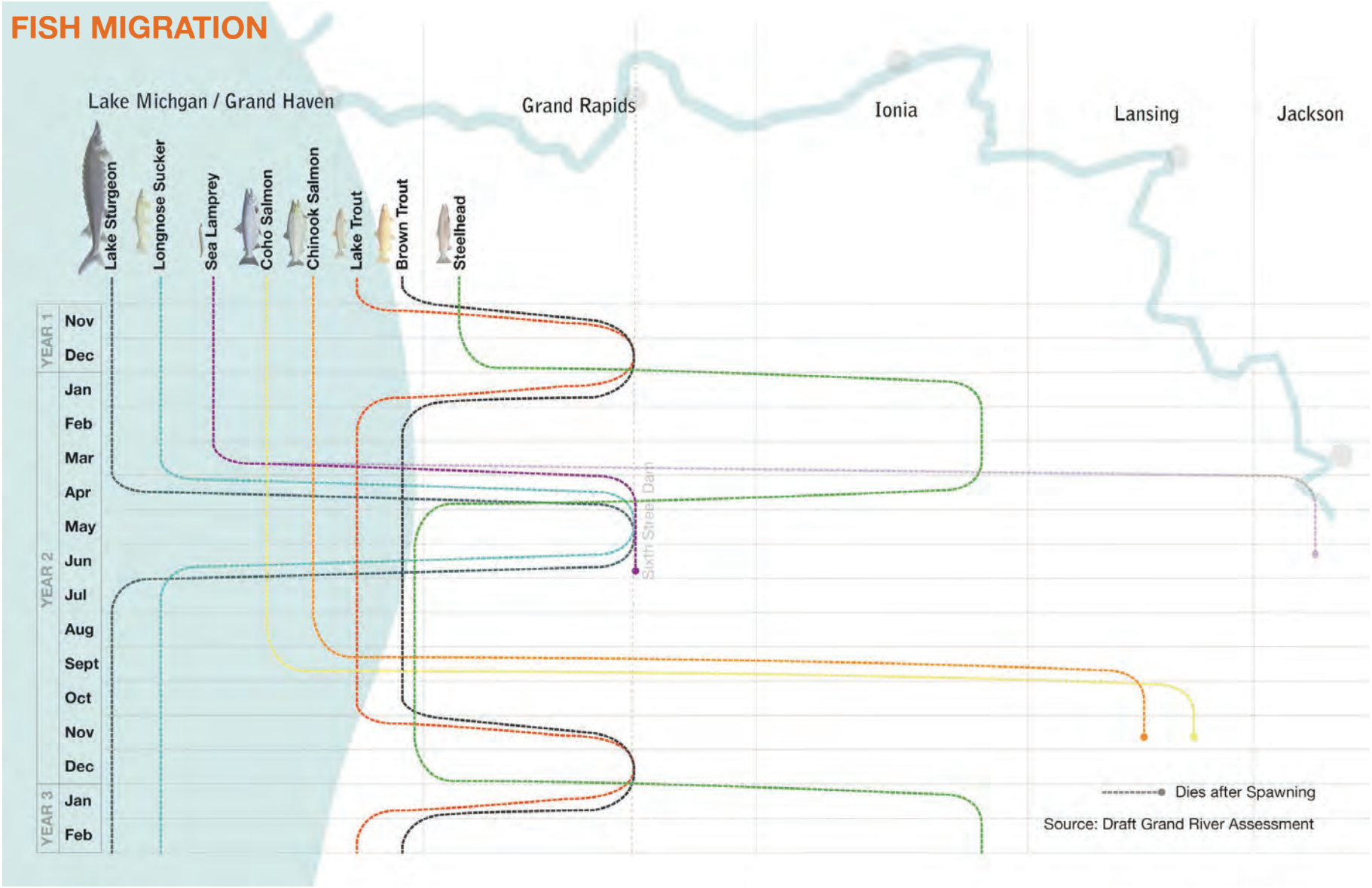


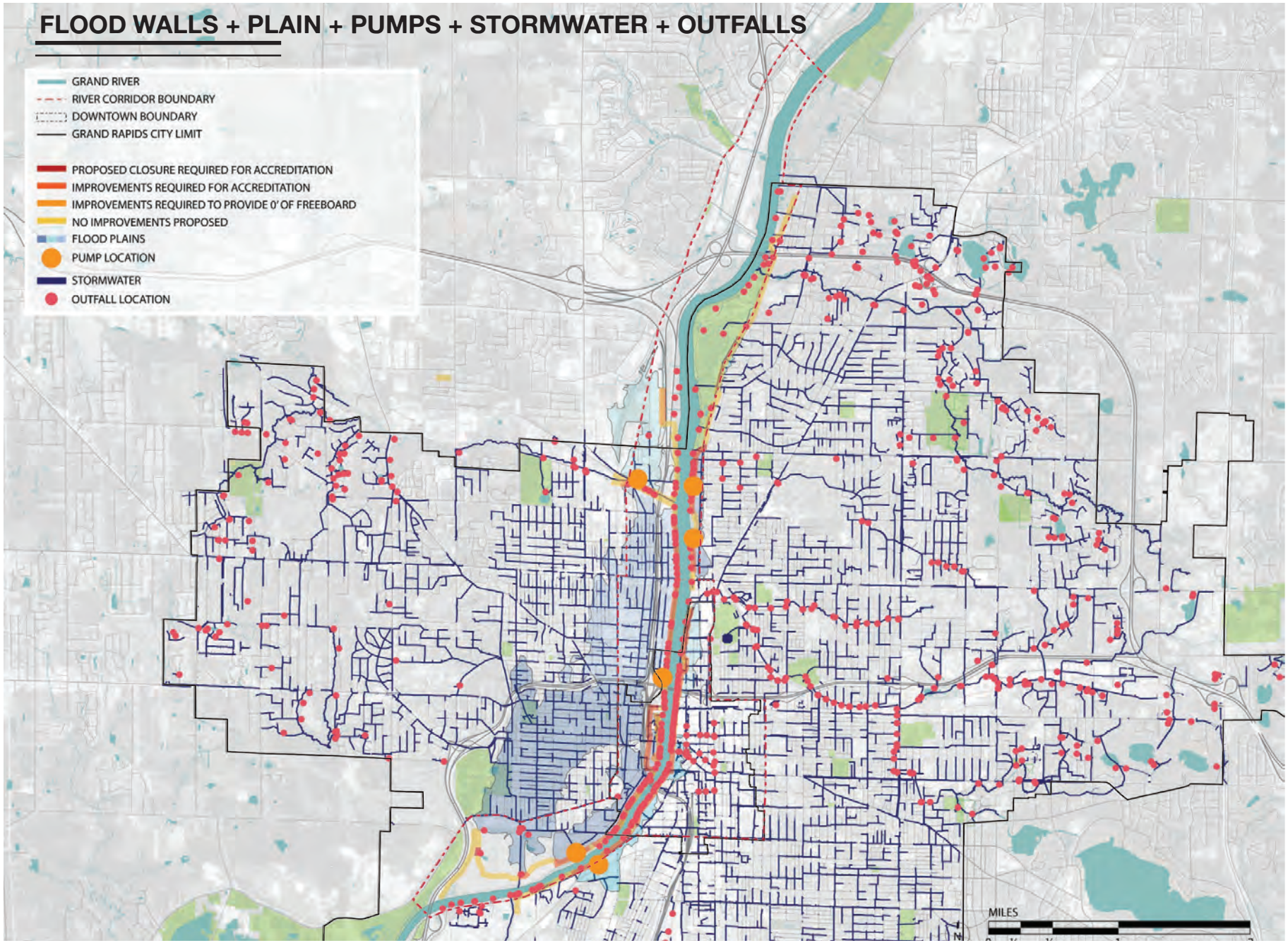
EDGE DESIGN - FLOOD MANAGEMENT



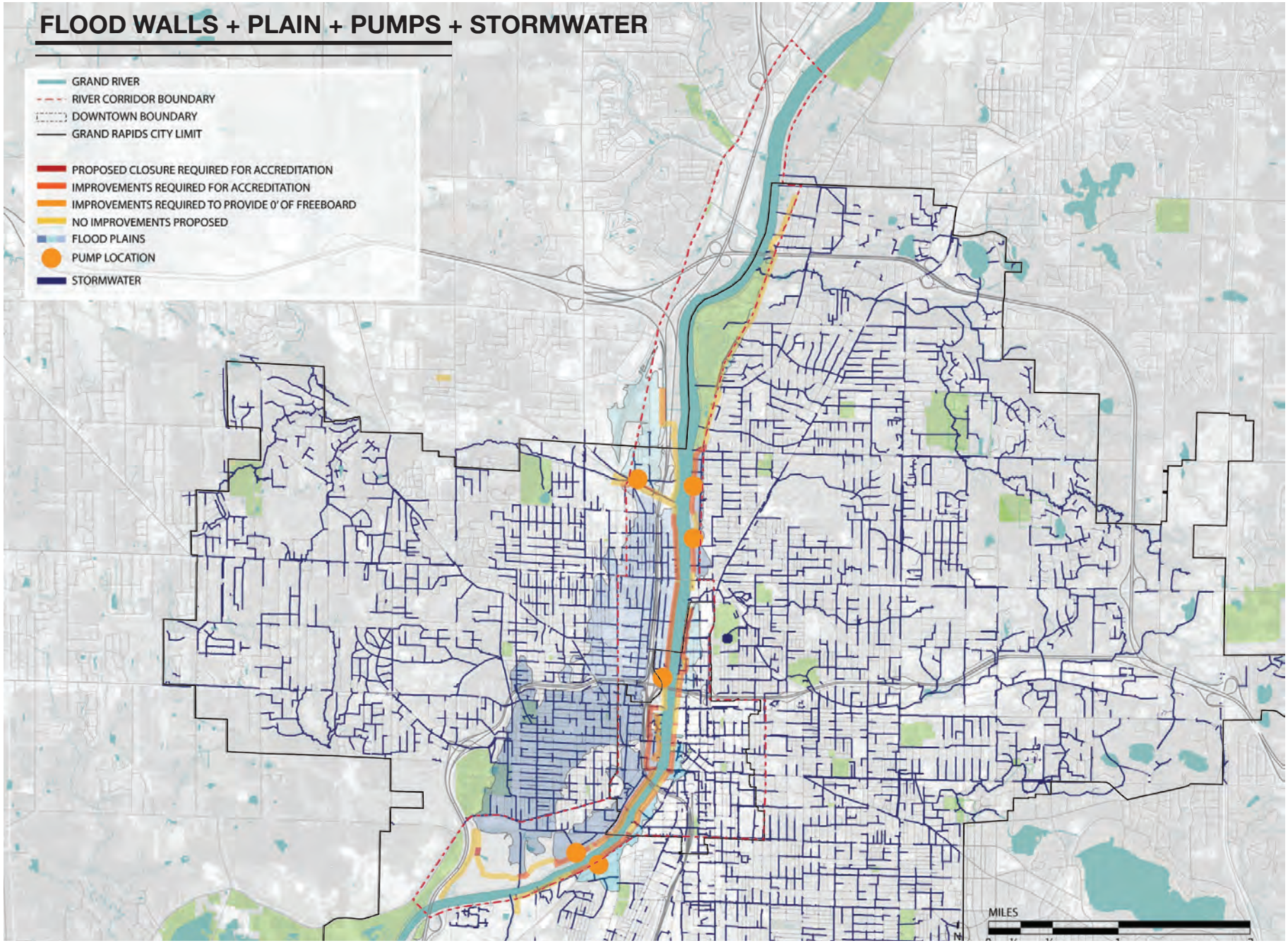
EDGE DESIGN - STORMWATER MANAGEMENT

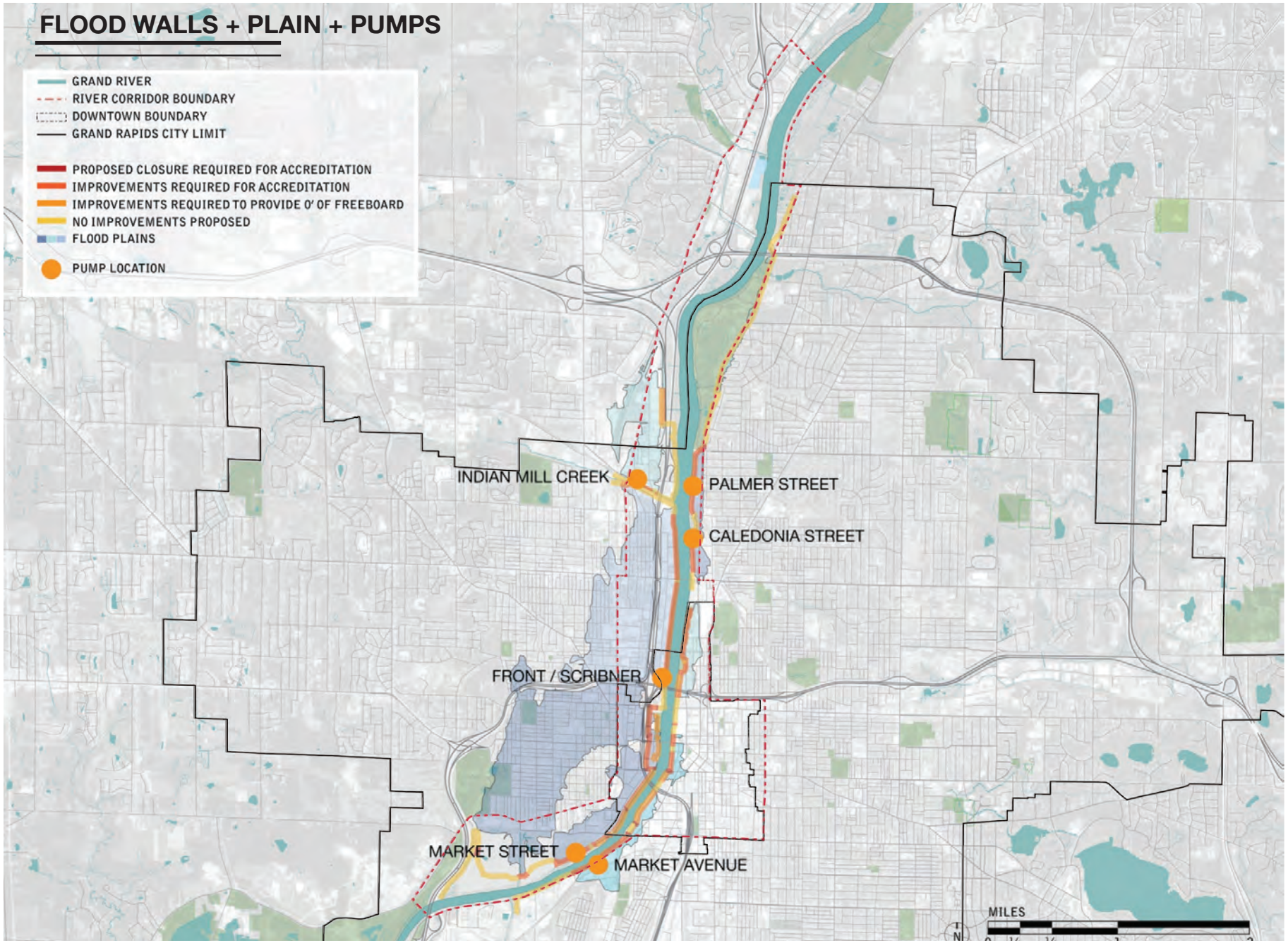
FISH MIGRATION

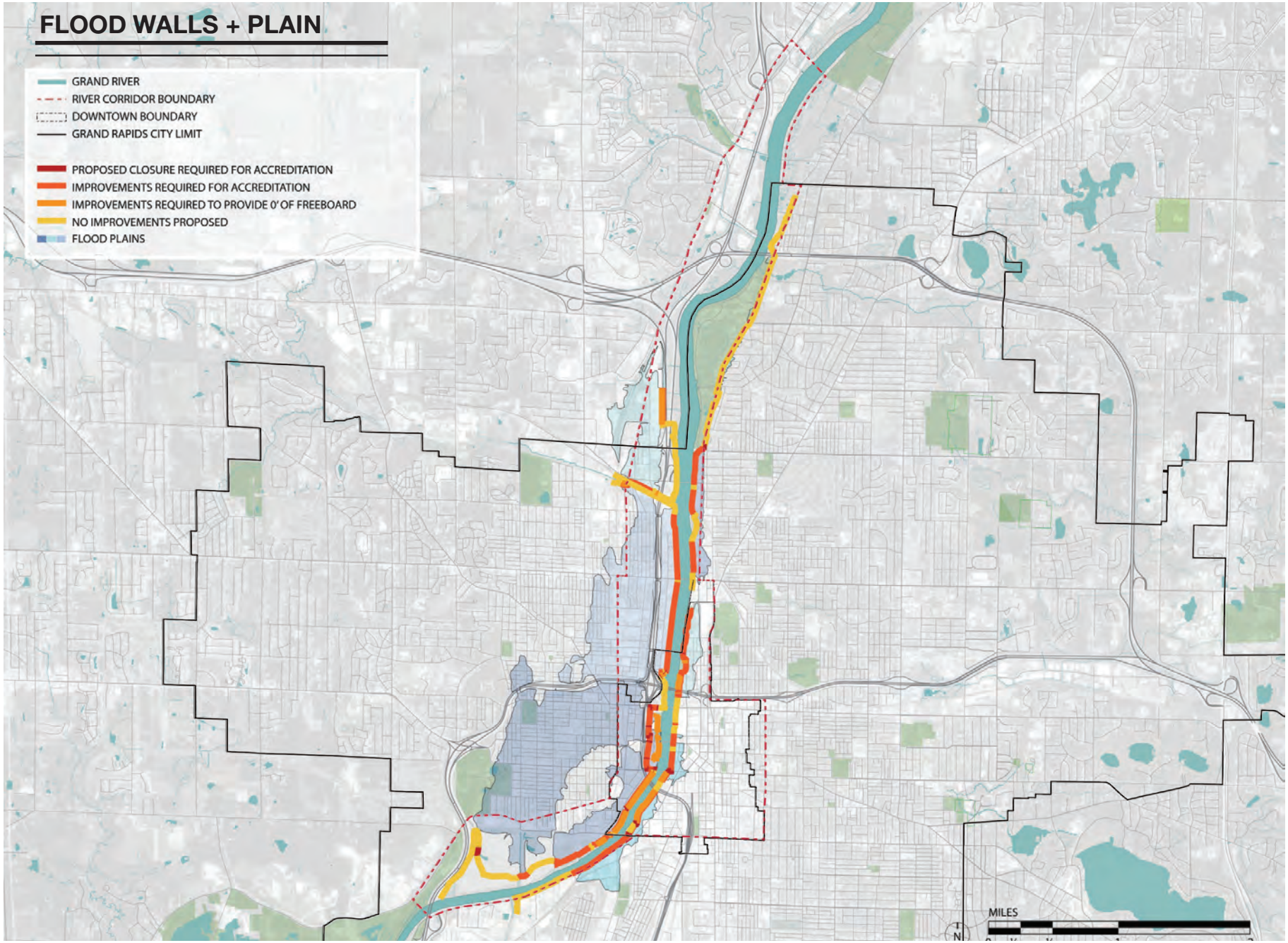


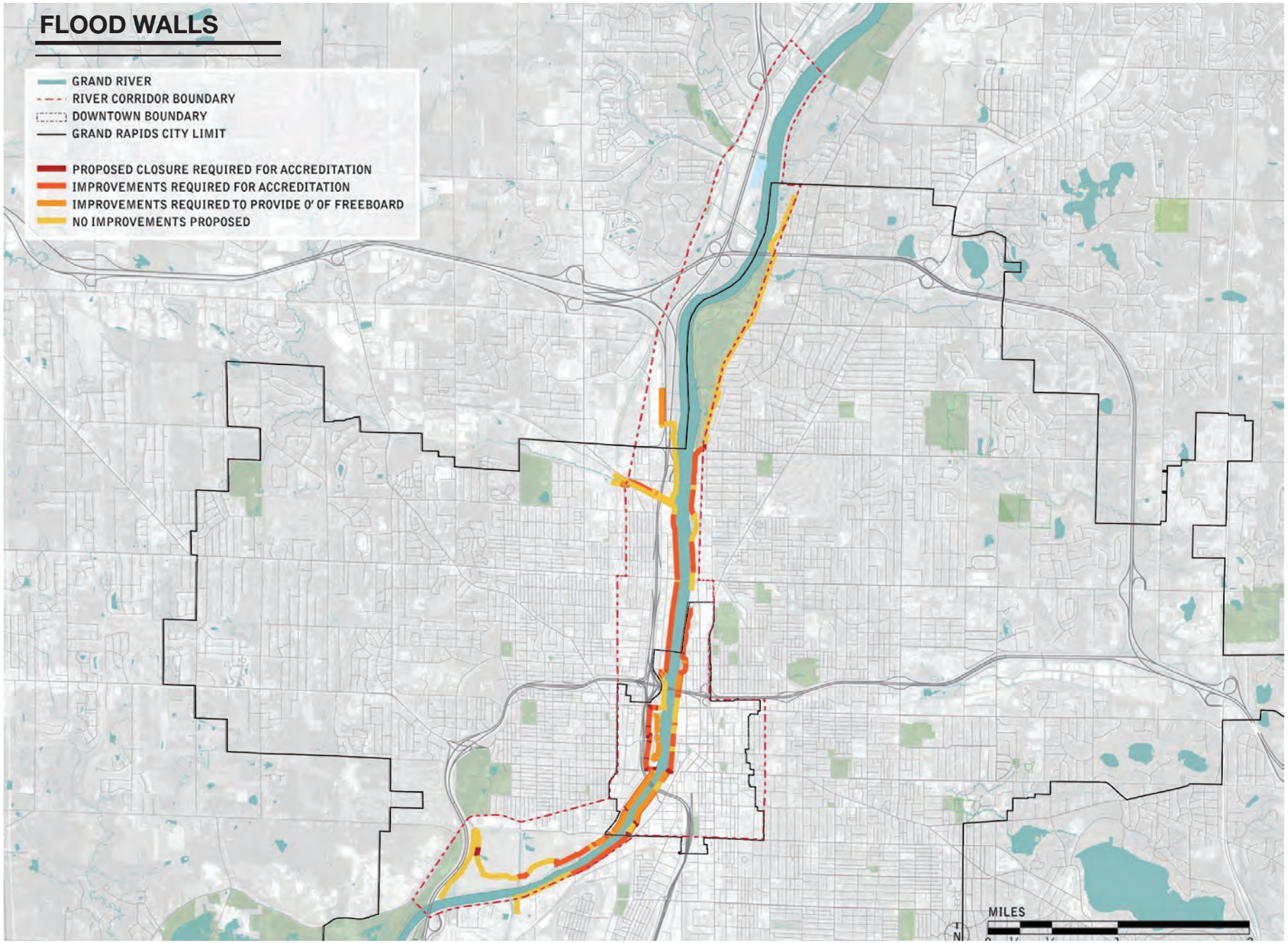

FLOOD WALLS + PLAIN + PUMPS + STORMWATER + OUTFALLS
GRAND RIVER
RIVER CORRIDOR BOUNDARY
DOWNTOWN BOUNDARY
GRAND RAPIDS CITY LIMIT
PROPOSED CLOSURE REQUIRED FOR ACCREDITATION
IMPROVEMENTS REQUIRED FOR ACCREDITATION
IMPROVEMENTS REQUIRED TO PROVIDE 0' OF FREEBOARD
NO IMPROVEMENTS PROPOSED
FLOOD PLAINS
PUMP LOCATION
STORMWATER
OUTFALL LOCATION
MILES

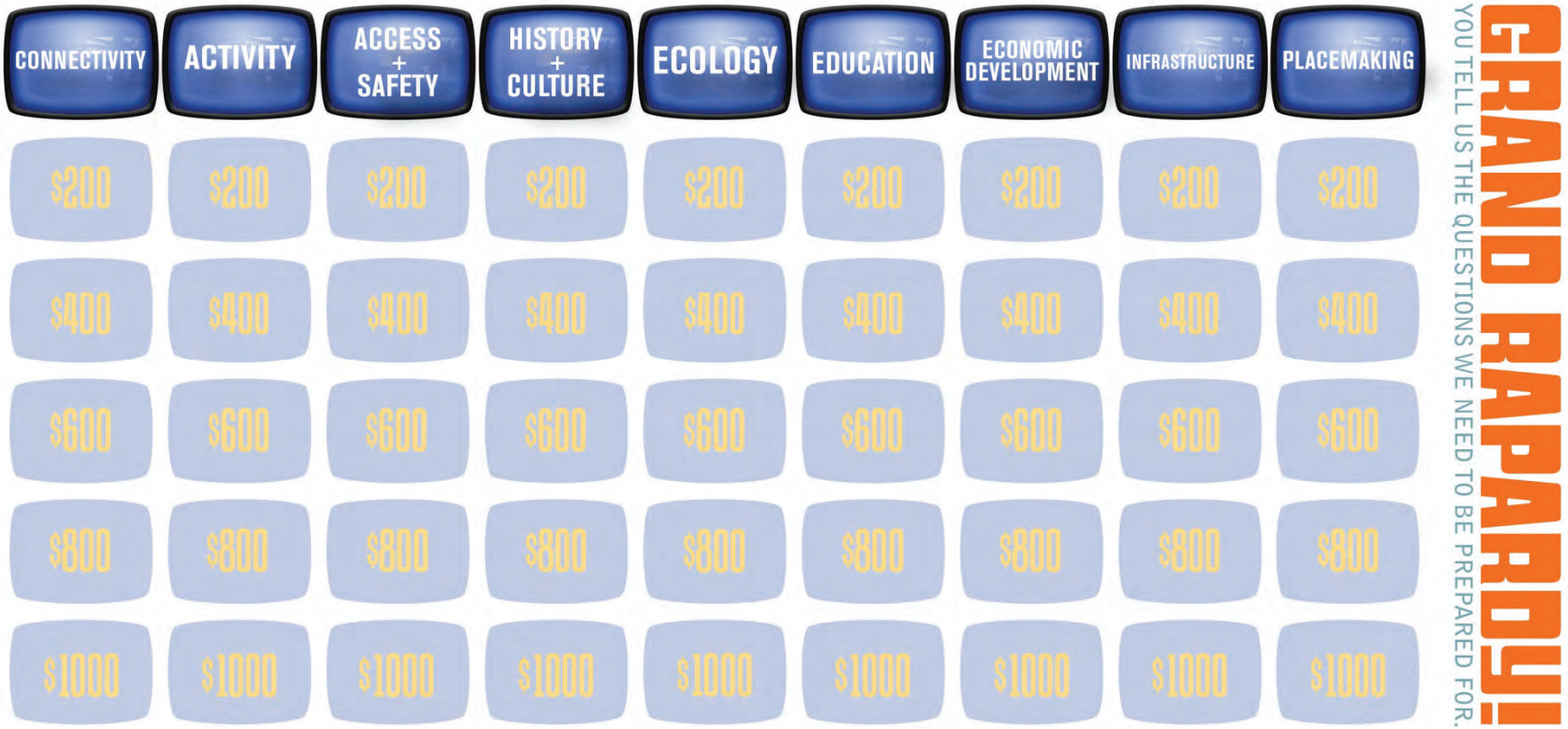
FLOOD WALLS + PLAIN + PUMPS + STORMWATER




FLOOD WALLS + PLAIN + PUMPS
GRAND RIVER
RIVER CORRIDOR BOUNDARY
DOWNTOWN BOUNDARY
GRAND RAPIDS CITY LIMIT
PROPOSED CLOSURE REQUIRED FOR ACCREDITATION
IMPROVEMENTS REQUIRED FOR ACCREDITATION
IMPROVEMENTS REQUIRED TO PROVIDE 0' OF FREEBOARD
NO IMPROVEMENTS PROPOSED
FLOOD PLAINS
PUMP LOCATION
INDIAN MILL CREEK
PALMER STREET
CALEDONIA STREET
FRONT / SCRIBNER
MARKET STREET
MARKET AVENUE
MILES

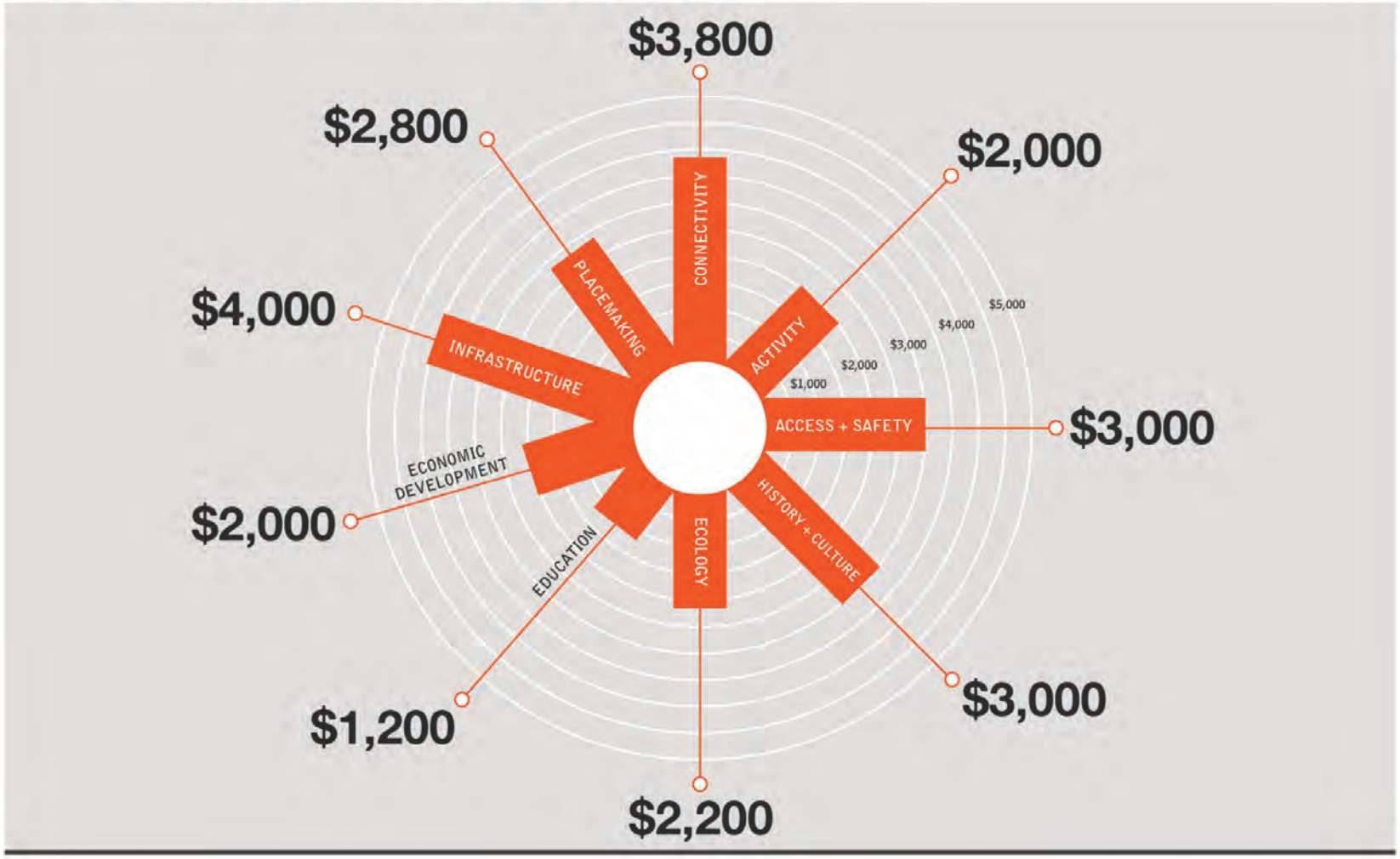

FLOOD WALLS + PLAIN
GRAND RIVER
RIVER CORRIDOR BOUNDARY
DOWNTOWN BOUNDARY
GRAND RAPIDS CITY LIMIT
PROPOSED CLOSURE REQUIRED FOR ACCREDITATION
IMPROVEMENTS REQUIRED FOR ACCREDITATION
IMPROVEMENTS REQUIRED TO PROVIDE 0' OF FREEBOARD
NO IMPROVEMENTS PROPOSED
FLOOD PLAINS
MILES

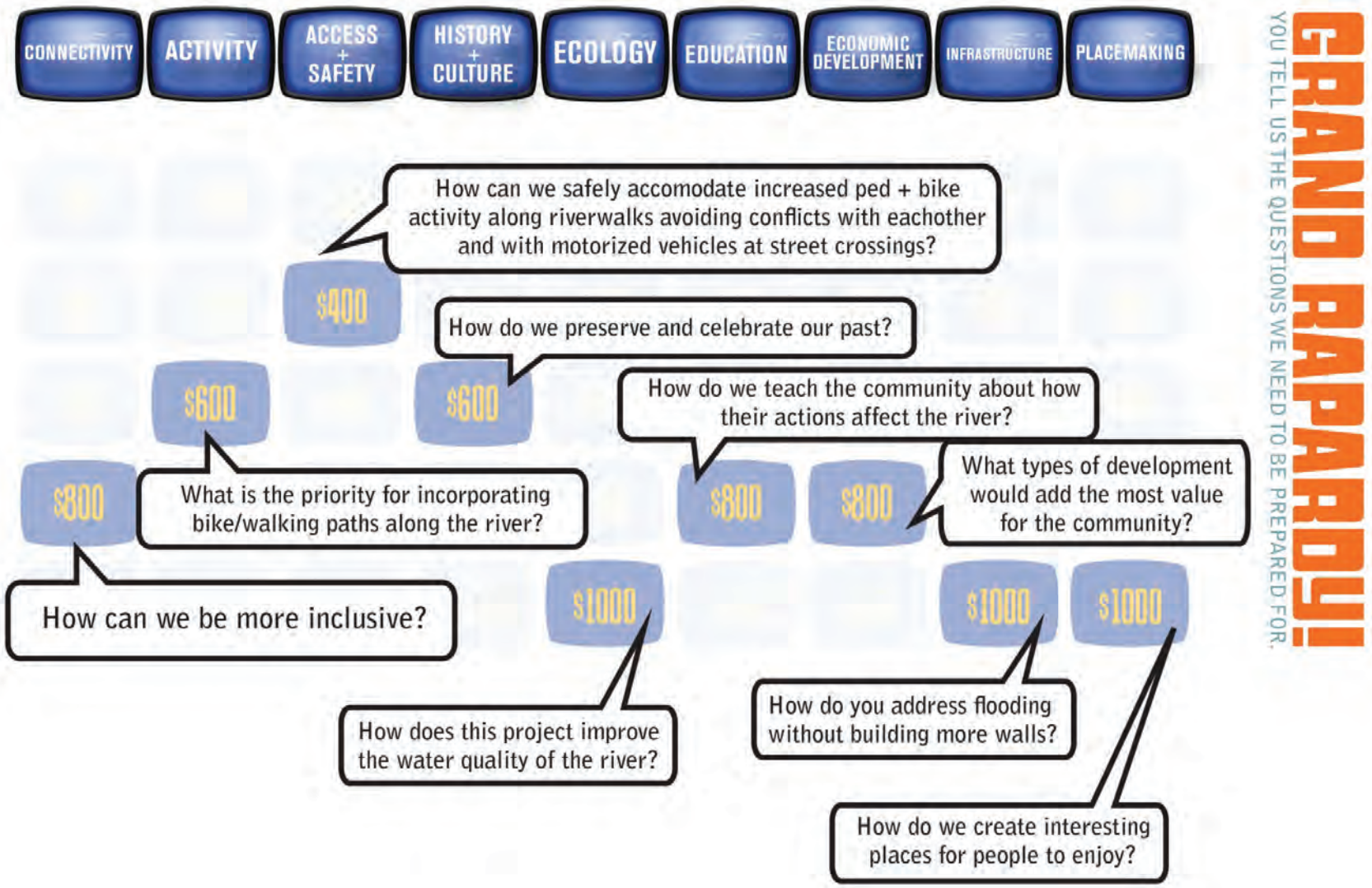

FLOOD WALLS
GRAND RIVER
RIVER CORRIDOR BOUNDARY
DOWNTOWN BOUNDARY
GRAND RAPIDS CITY LIMIT
PROPOSED CLOSURE REQUIRED FOR ACCREDITATION
IMPROVEMENTS REQUIRED FOR ACCREDITATION
IMPROVEMENTS REQUIRED TO PROVIDE 0' OF FREEBOARD
NO IMPROVEMENTS PROPOSED
MILES
N


CONNECTIVITY
ACTIVITY
ACCESS + SAFETY
HISTORY + CULTURE
ECOLOGY
EDUCATION
ECONOMIC DEVELOPMENT
INFRASTRUCTURE
PLACEMAKING
$200
$400
$600
$800
$1000
GRAND RAPIDS!
YOU TELL US THE QUESTIONS WE NEED TO BE PREPARED FOR.

New Themes

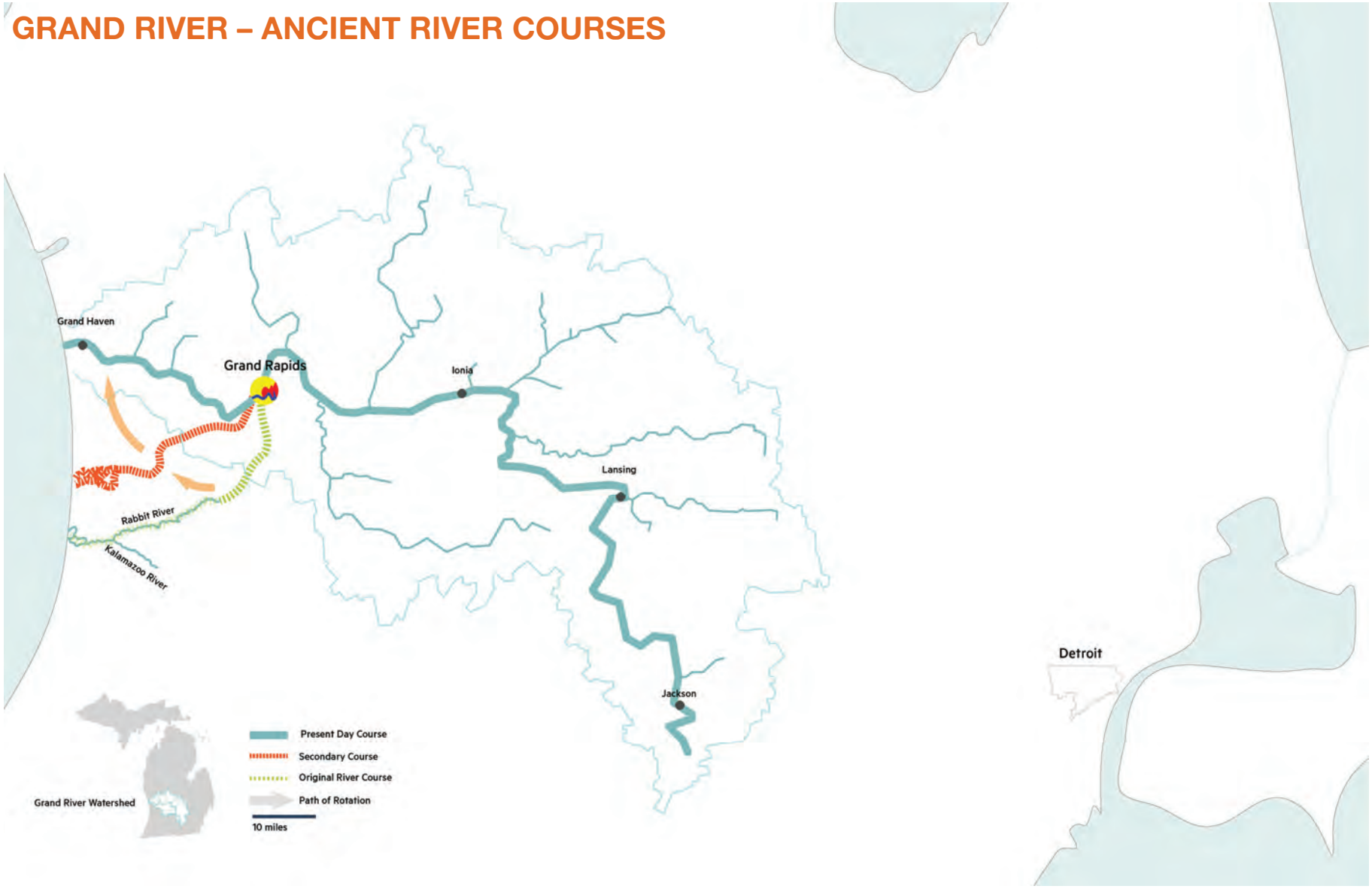
WHICH CATEGORIES HAD THE MOST VALUABLE QUESTIONS?



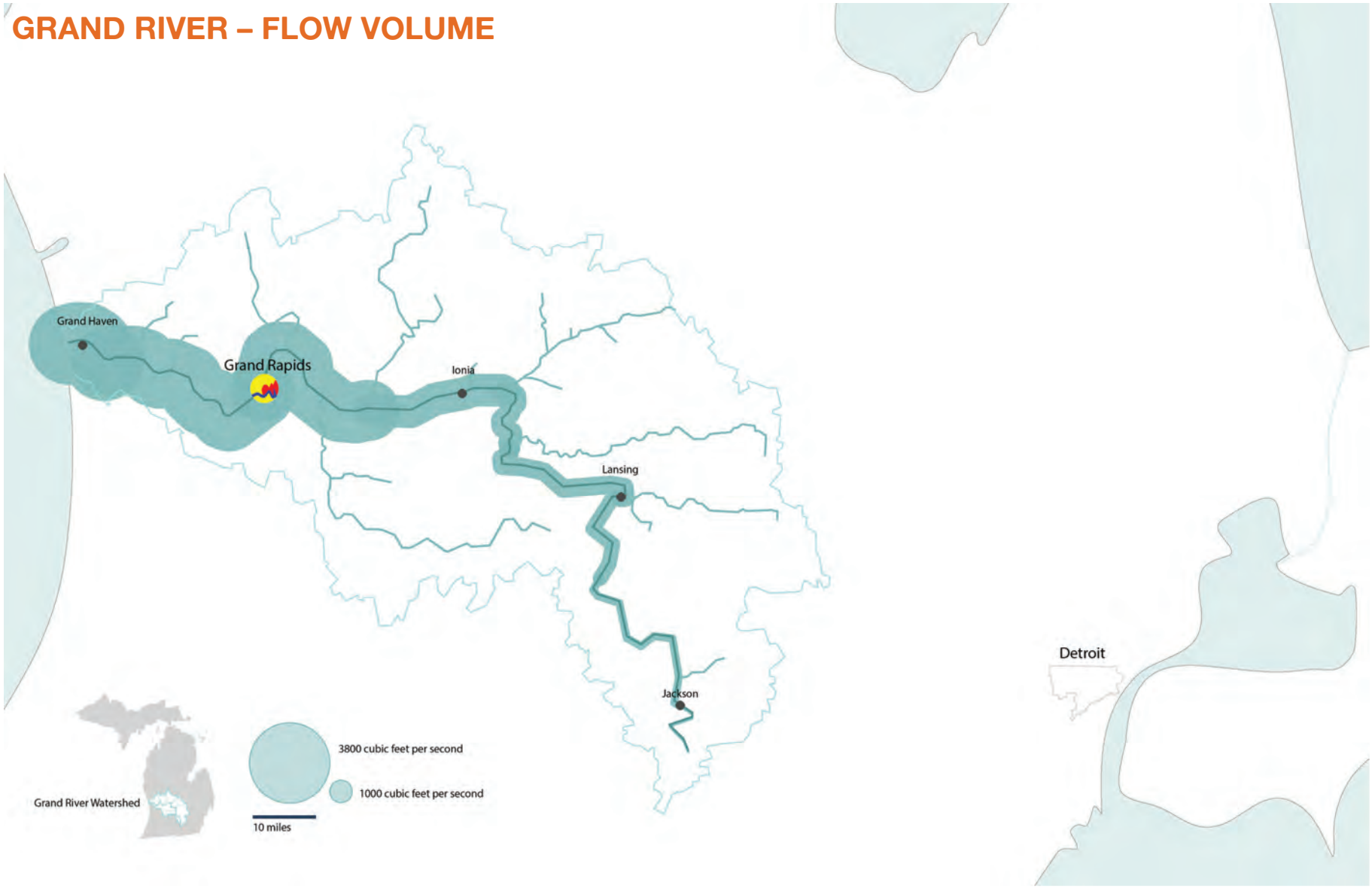

CONNECTIVITY
ACTIVITY
ACCESS + SAFETY
HISTORY + CULTURE
ECOLOGY
EDUCATION
ECONOMIC DEVELOPMENT
INFRASTRUCTURE
PLACEMAKING
How can we safely accomodate increased ped + bike activity along riverwalks avoiding conflicts with eachother and with motorized vehicles at street crossings?
$400
How do we preserve and celebrate our past?
$600
$600
How do we teach the community about how their actions affect the river?
What is the priority for incorporating bike/walking paths along the river?
$800
$800
$800
What types of development would add the most value for the community?
How can we be more inclusive?
$1000
$1000
$1000
How does this project improve the water quality of the river?
How do you address flooding without building more walls?
How do we create interesting places for people to enjoy?
GRAND RAPIDS!
YOU TELL US THE QUESTIONS WE NEED TO BE PREPARED FOR.

Grand Rapardy → Themes

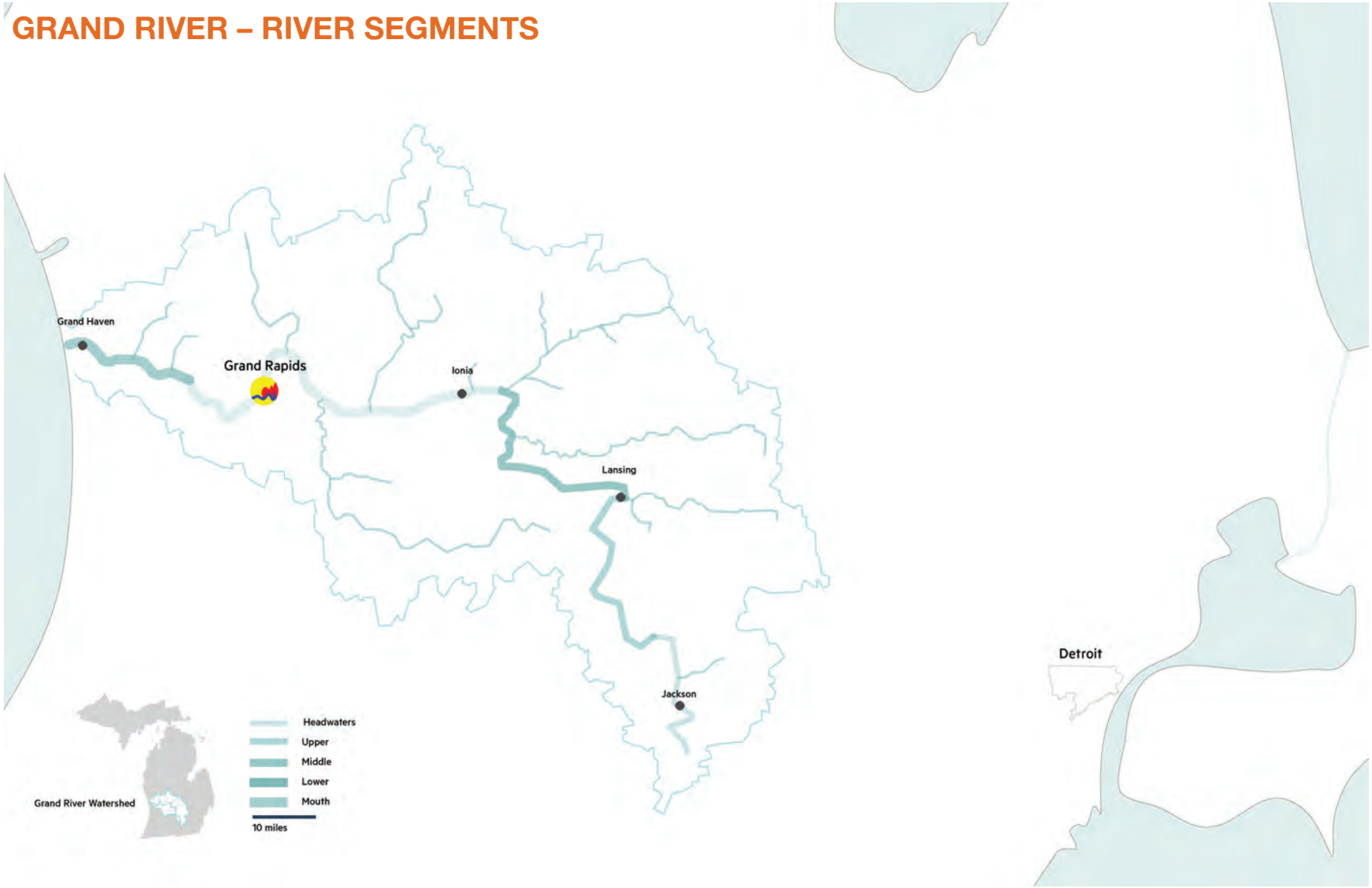
GRAND RIVER – ANCIENT RIVER COURSES



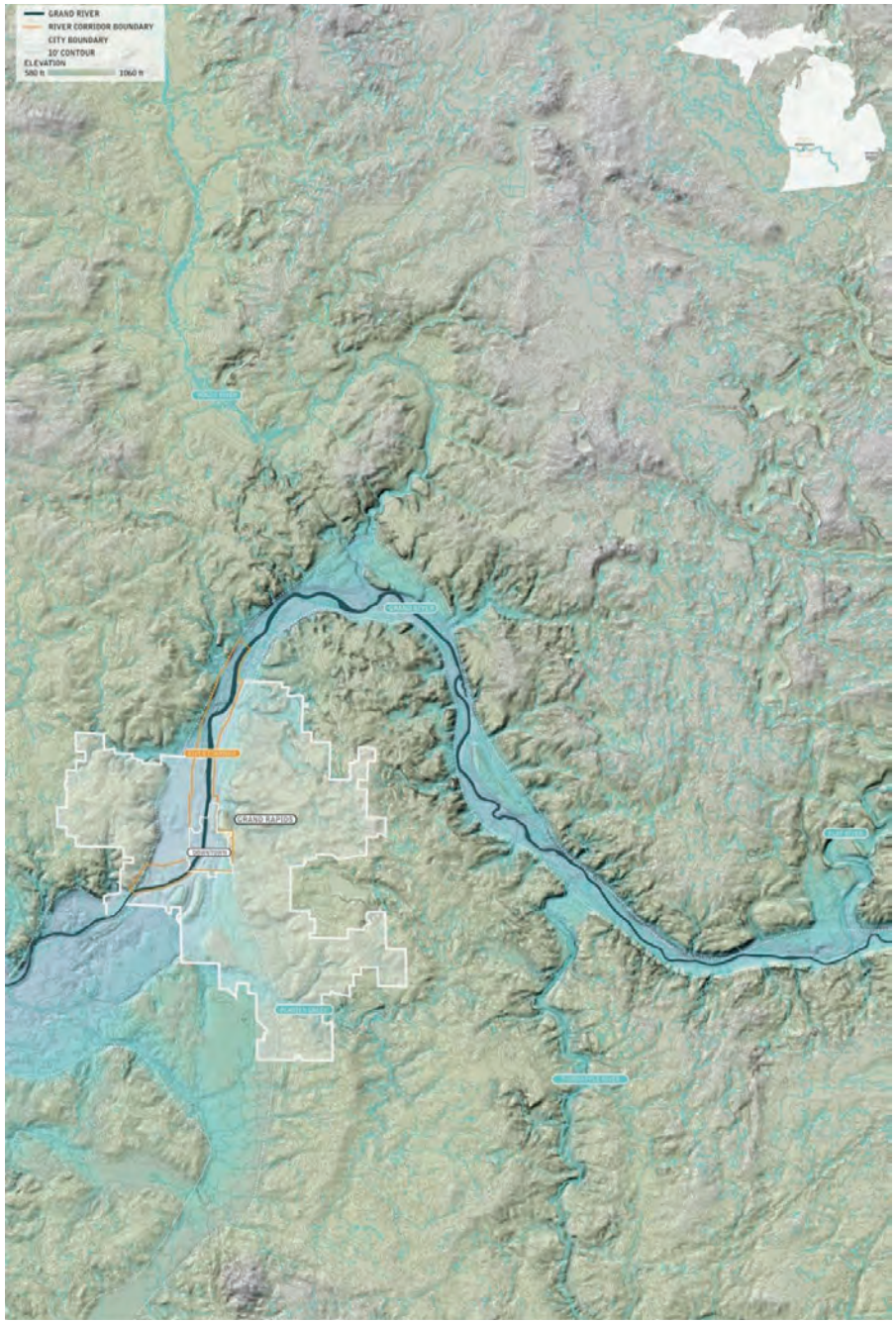
GRAND RIVER – FLOW VOLUME



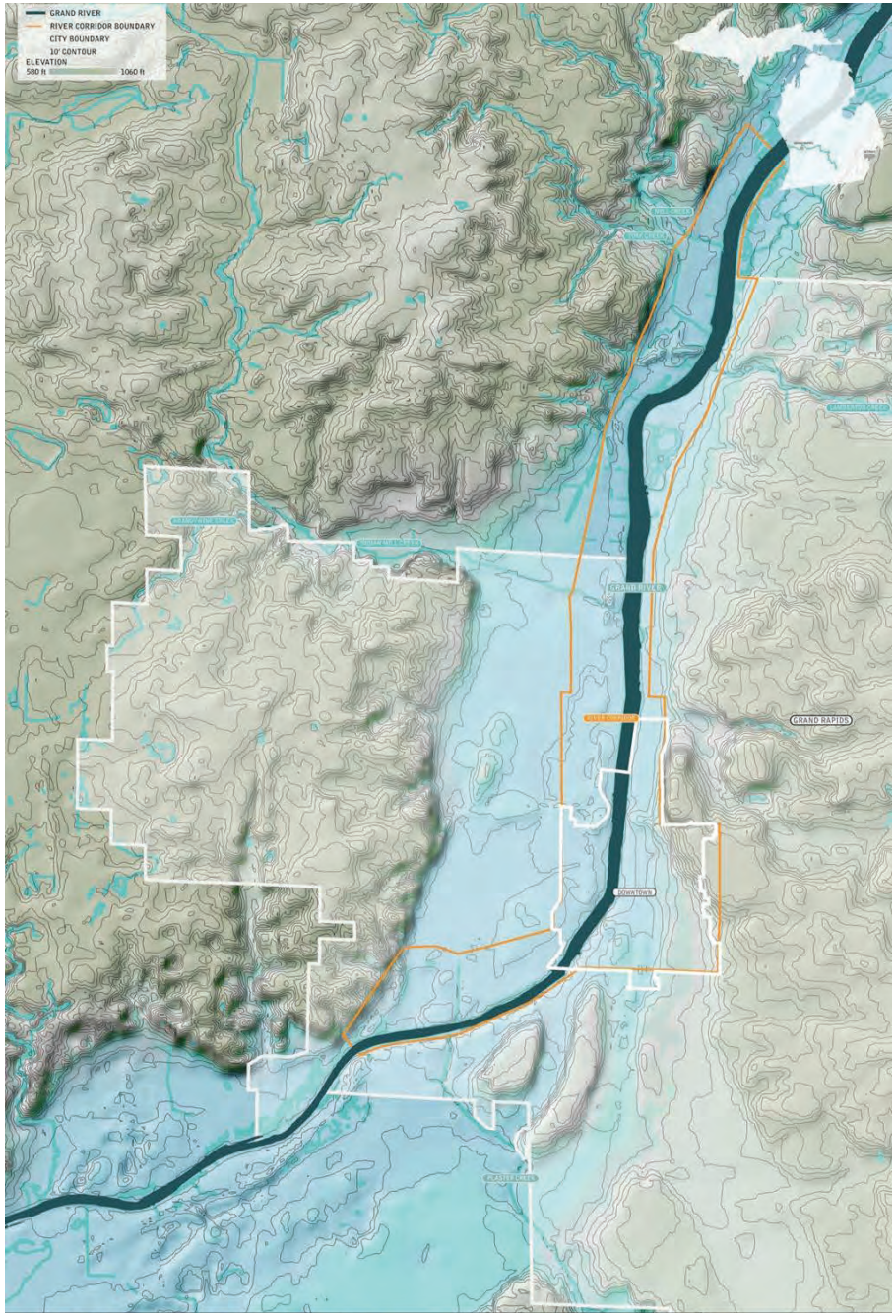
GRAND RIVER – RIVER SEGMENTS



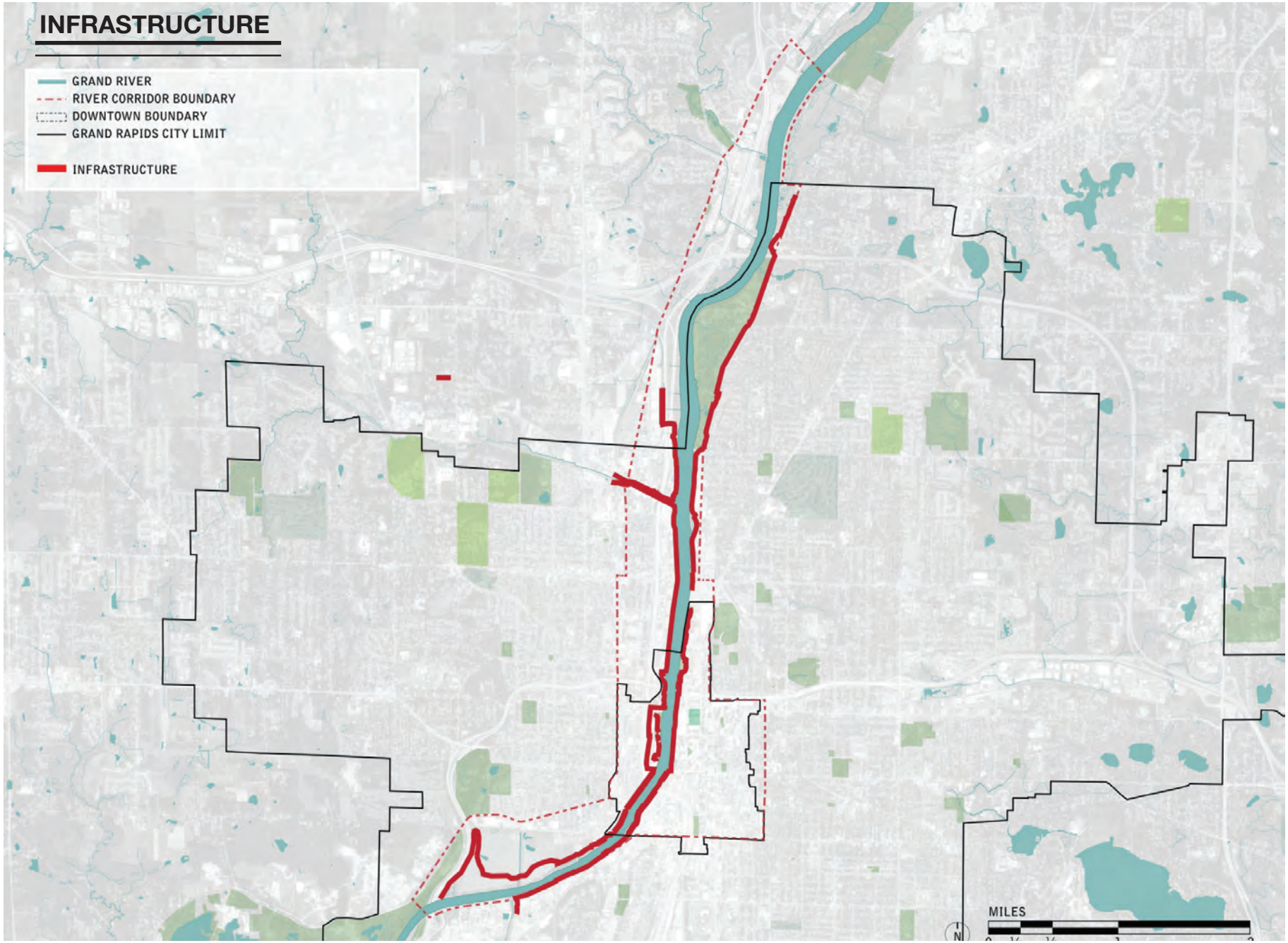
HOW THE RIVER FORMED

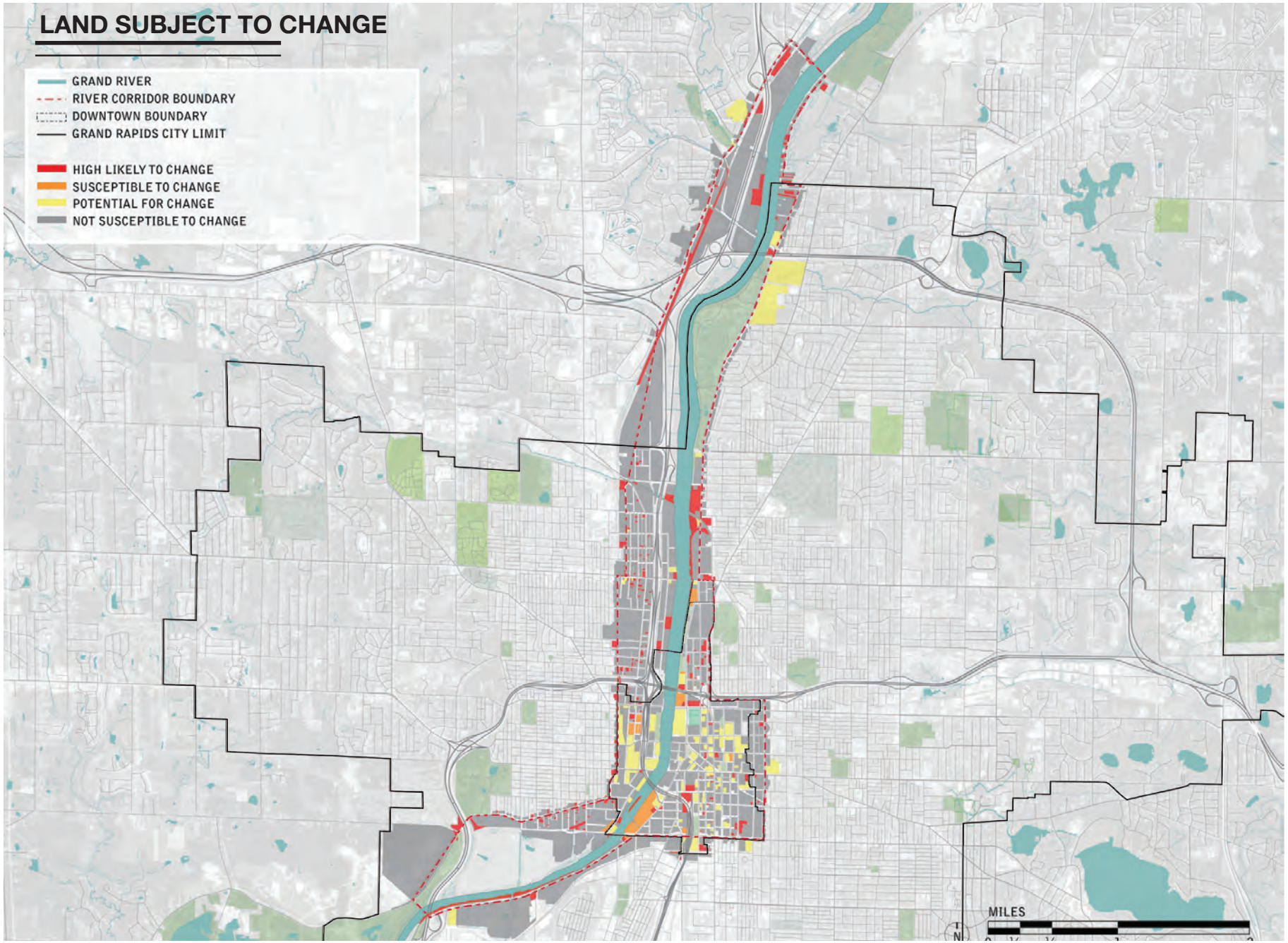


HOW THE RIVER FORMED

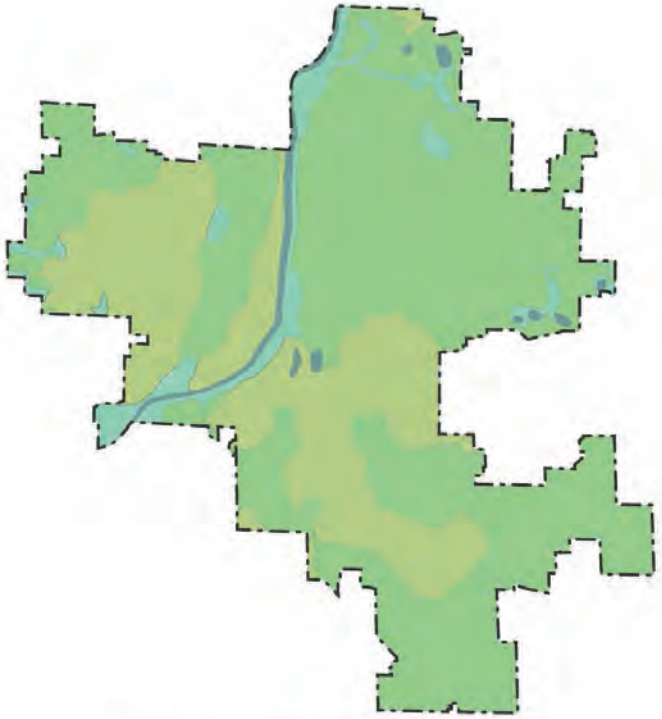


HYBRIDIZED HYDROLOGY

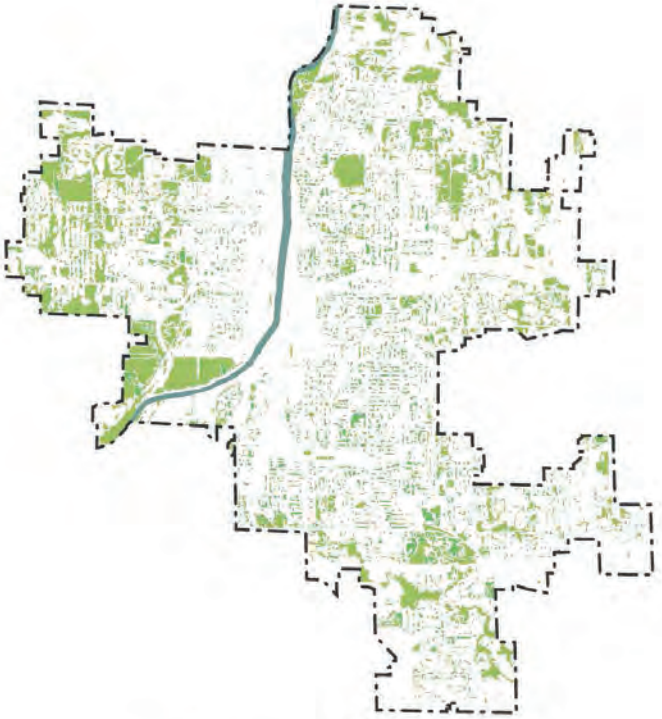

INFRASTRUCTURE
GRAND RIVER
RIVER CORRIDOR BOUNDARY
DOWNTOWN BOUNDARY
GRAND RAPIDS CITY LIMIT
INFRASTRUCTURE
MILES
N


LAND SUBJECT TO CHANGE
GRAND RIVER
RIVER CORRIDOR BOUNDARY
DOWNTOWN BOUNDARY
GRAND RAPIDS CITY LIMIT
HIGH LIKELY TO CHANGE
SUSCEPTIBLE TO CHANGE
POTENTIAL FOR CHANGE
NOT SUSCEPTIBLE TO CHANGE
MILES

LAND COVER

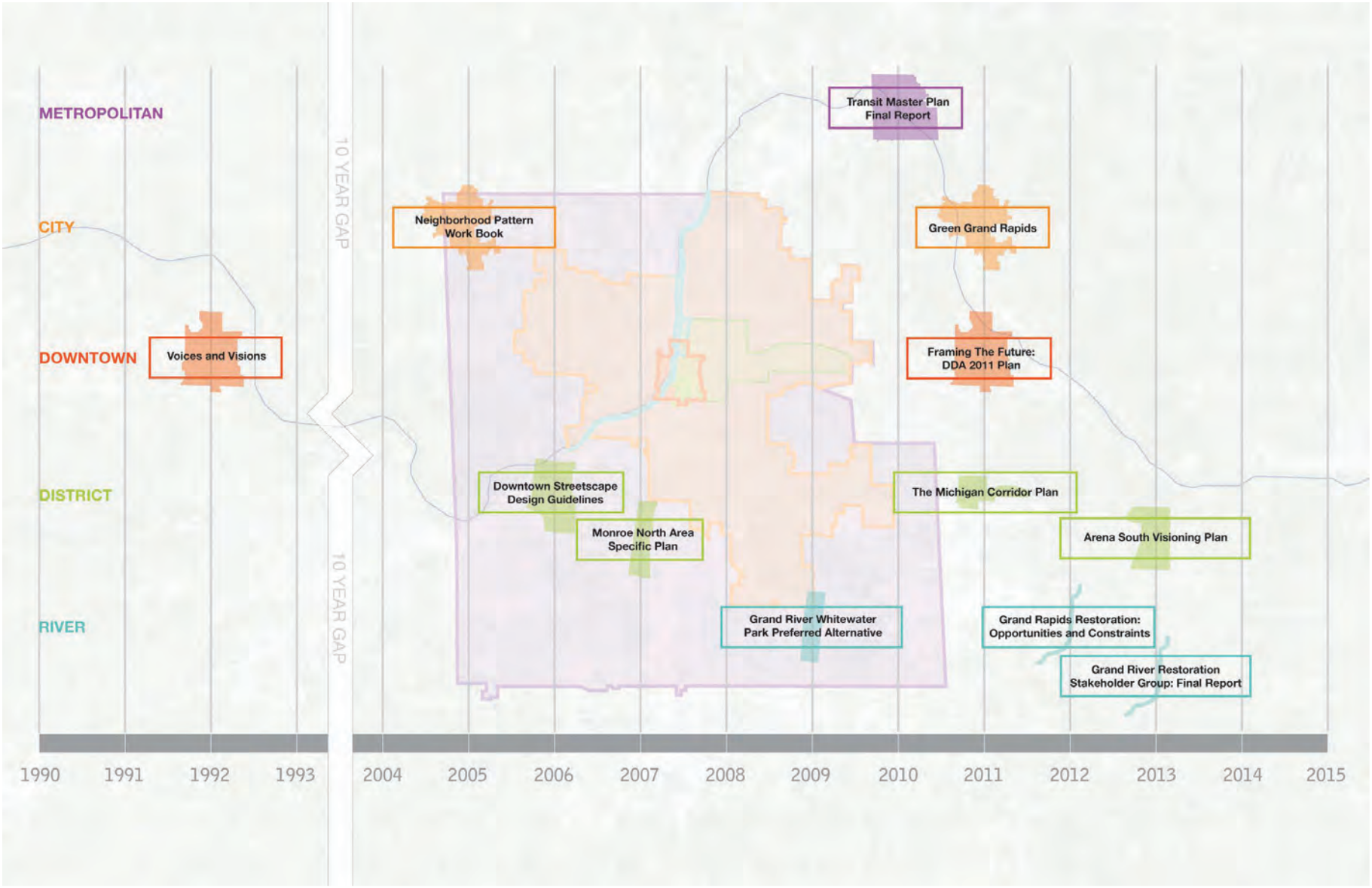


GRAND RAPIDS 1816
Source: Natural System Atlas by Green Grand Rapids



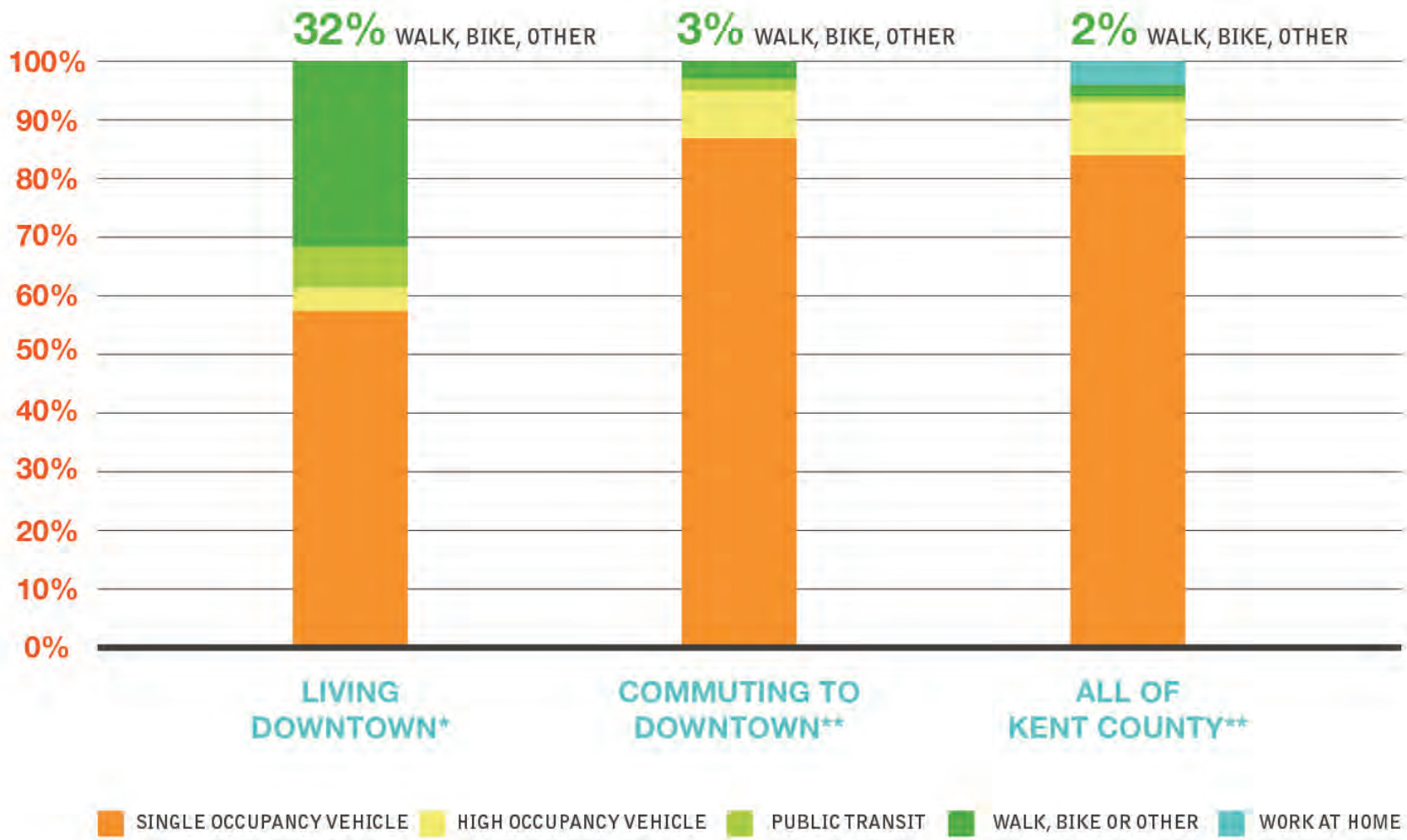
GRAND RAPIDS 2008
Source: Urban Forest Ecological Services Assessment by City of Grand Rapids

- Trees
- Savannah / Grass
- Swamp / Marsh
- Bodies of Water

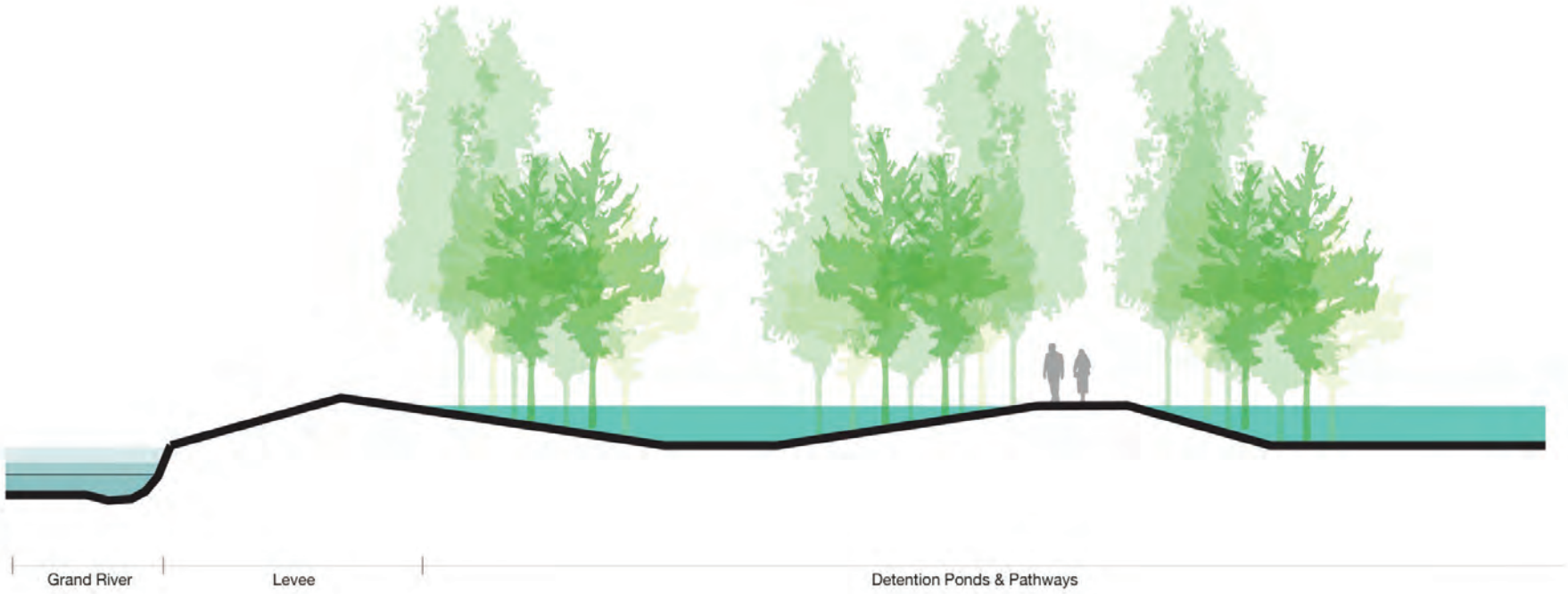

METROPOLITAN
CITY
DOWNTOWN
DISTRICT
RIVER
10 YEAR GAP
10 YEAR GAP
Transit Master Plan Final Report
Neighborhood Pattern Work Book
Green Grand Rapids
Voices and Visions
Framing The Future: DDA 2011 Plan
Downtown Streetscape Design Guidelines
The Michigan Corridor Plan
Monroe North Area Specific Plan
Arena South Visioning Plan
Grand River Whitewater Park Preferred Alternative
Grand Rapids Restoration: Opportunities and Constraints
Grand River Restoration Stakeholder Group: Final Report
1990
1991
1992
1993
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015

GRAND RAPIDS MODE OF TRANSPORTATION SPLIT

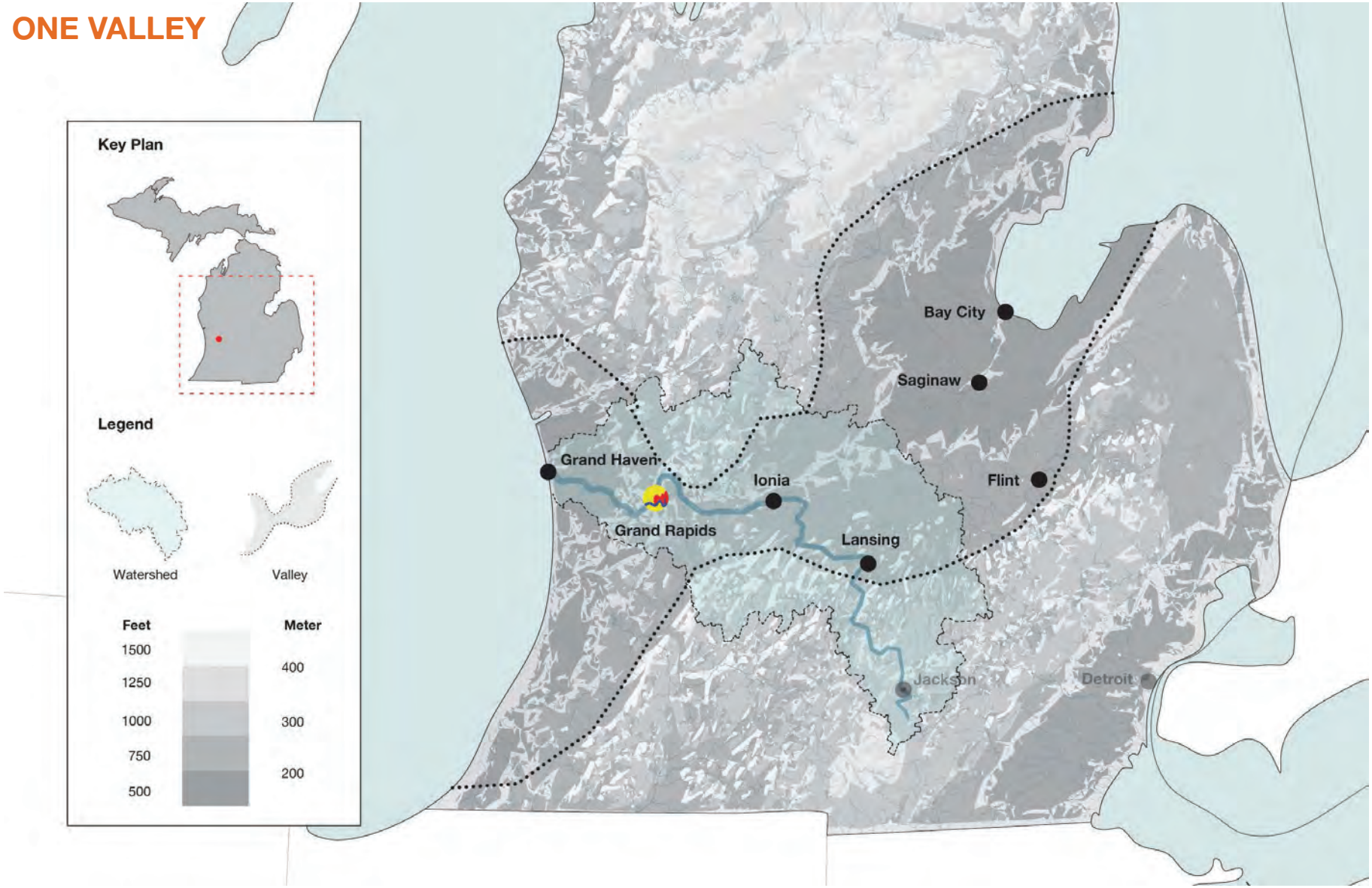
* 2012 ACS, ** 2006-2010 CTPP

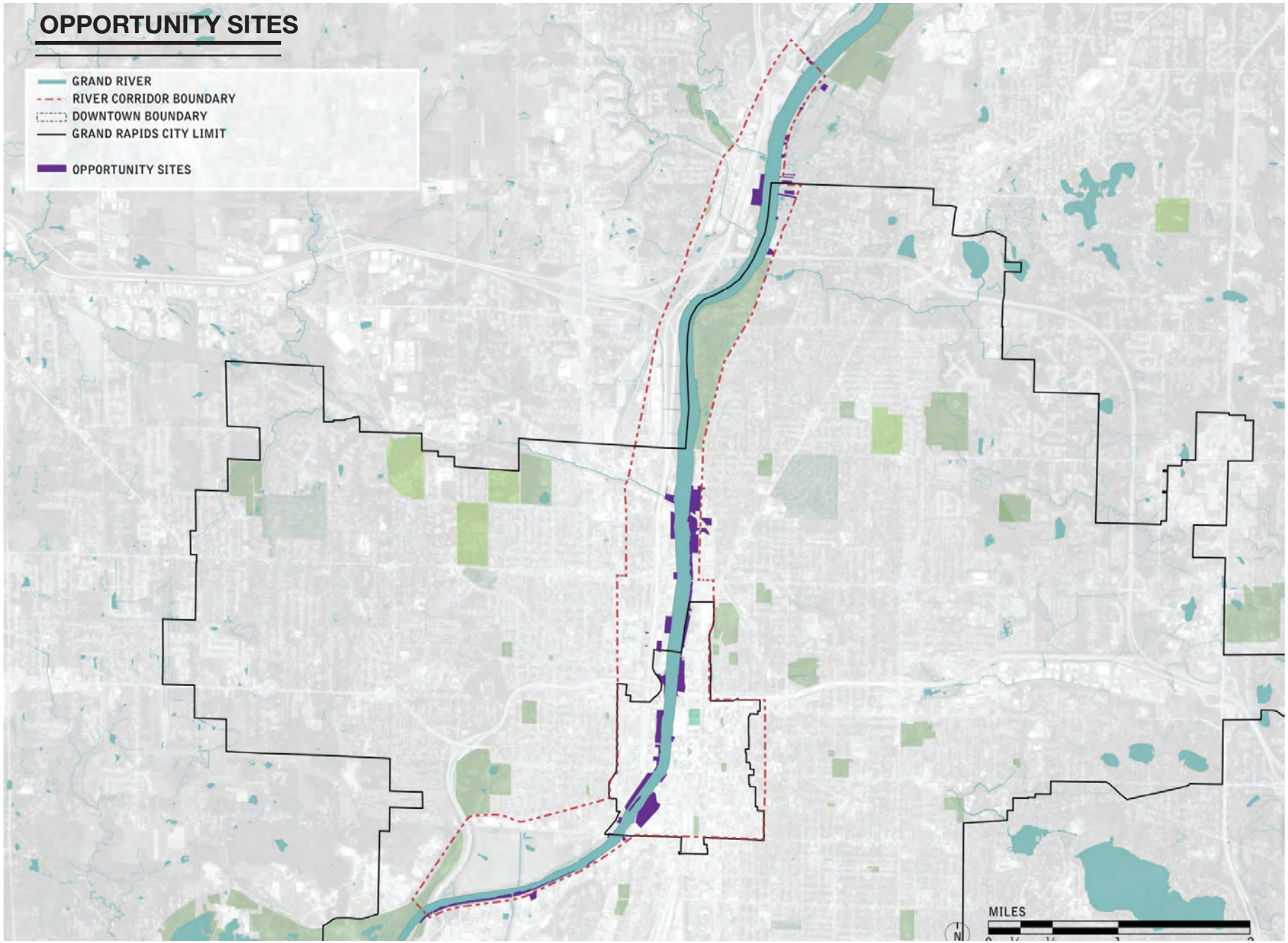


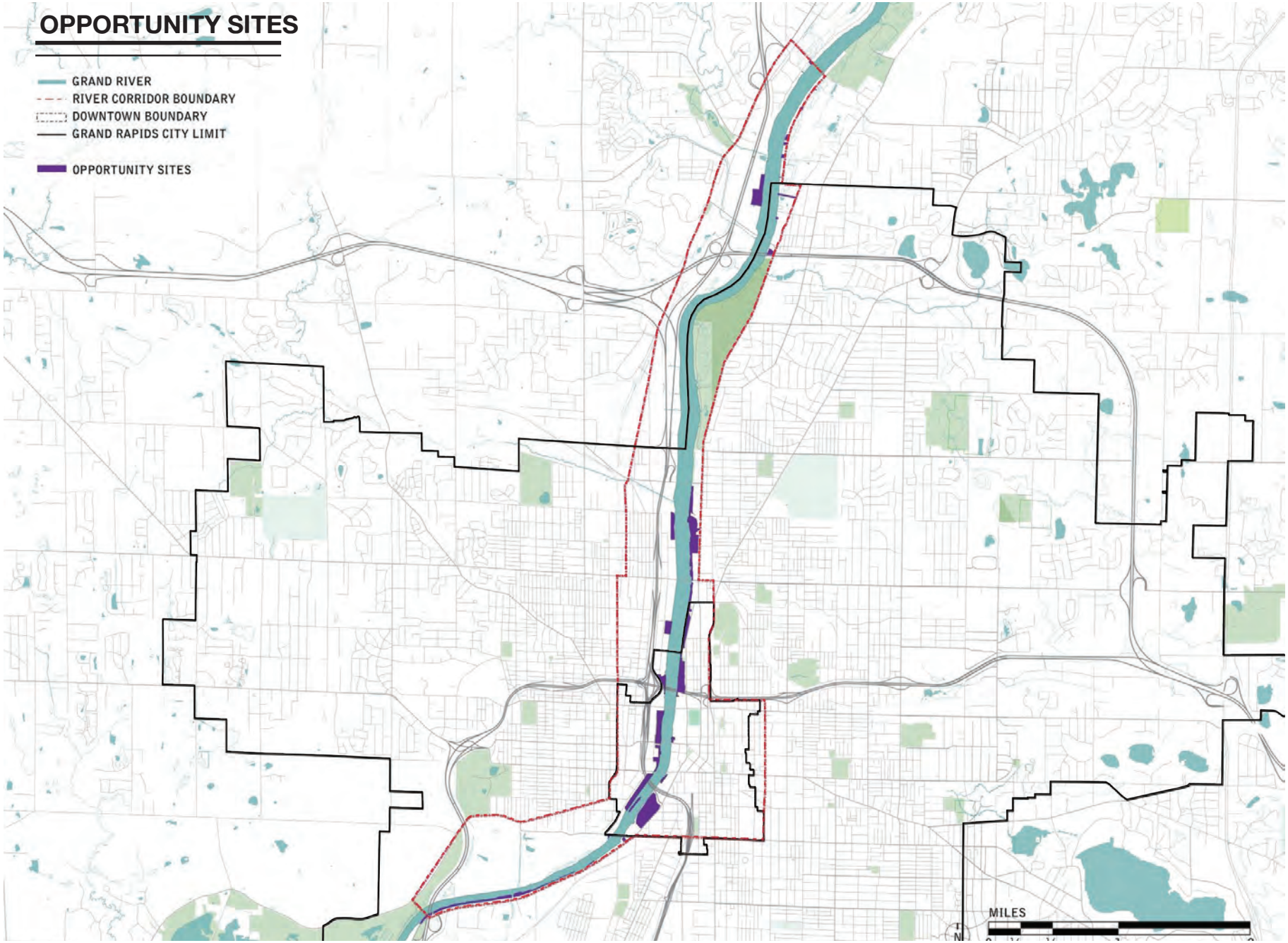
NEW HYDROLOGY – STORMWATER POLISHING



ONE VALLEY


Key Plan
Legend
Watershed
Valley
Feet
1500
1250
1000
750
500
Meter
400
300
200
Bay City
Saginaw
Grand Haven
Ionia
Flint
Grand Rapids
Lansing
Jackson
Detroit


OPPORTUNITY SITES
GRAND RIVER
RIVER CORRIDOR BOUNDARY
DOWNTOWN BOUNDARY
GRAND RAPIDS CITY LIMIT
OPPORTUNITY SITES
MILES
N

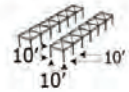
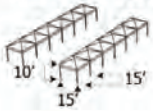
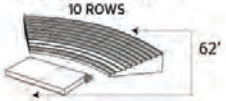
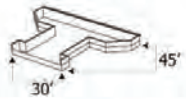
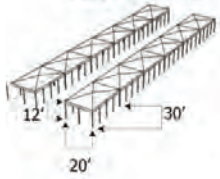
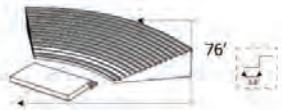
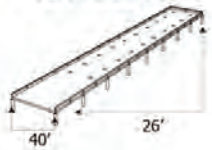

OPPORTUNITY SITES
GRAND RIVER
RIVER CORRIDOR BOUNDARY
DOWNTOWN BOUNDARY
GRAND RAPIDS CITY LIMIT
OPPORTUNITY SITES
MILES

PREVAILING WINDS

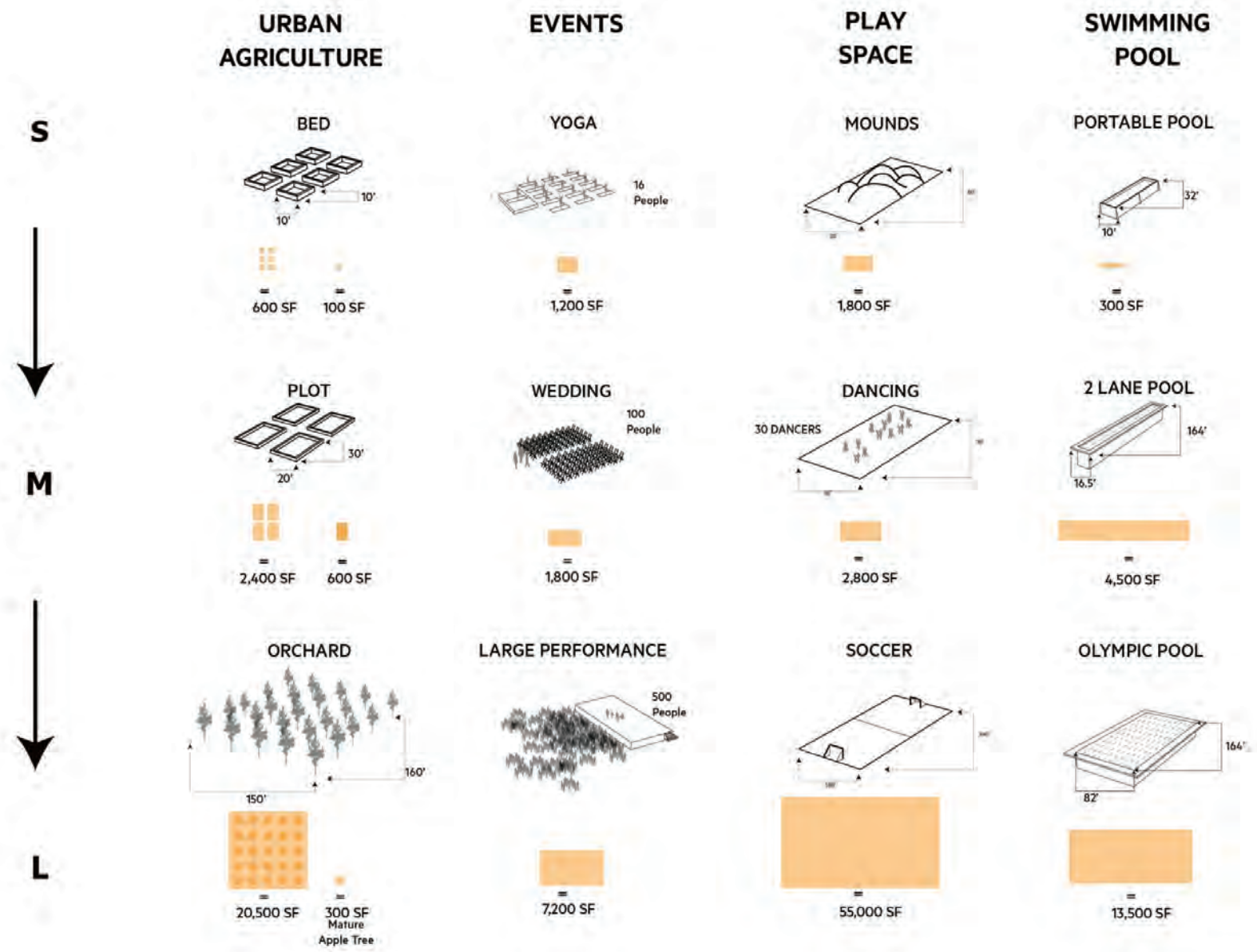
1 The North American Jetream creates prevailing Westerly winds, which carry storms across the country.

2 The Grand River's catchment runs prodominantly west to east; the same direction as storms blown across Michigan. This means that rainfall can be heavy across the entire catchment, and flood the river.

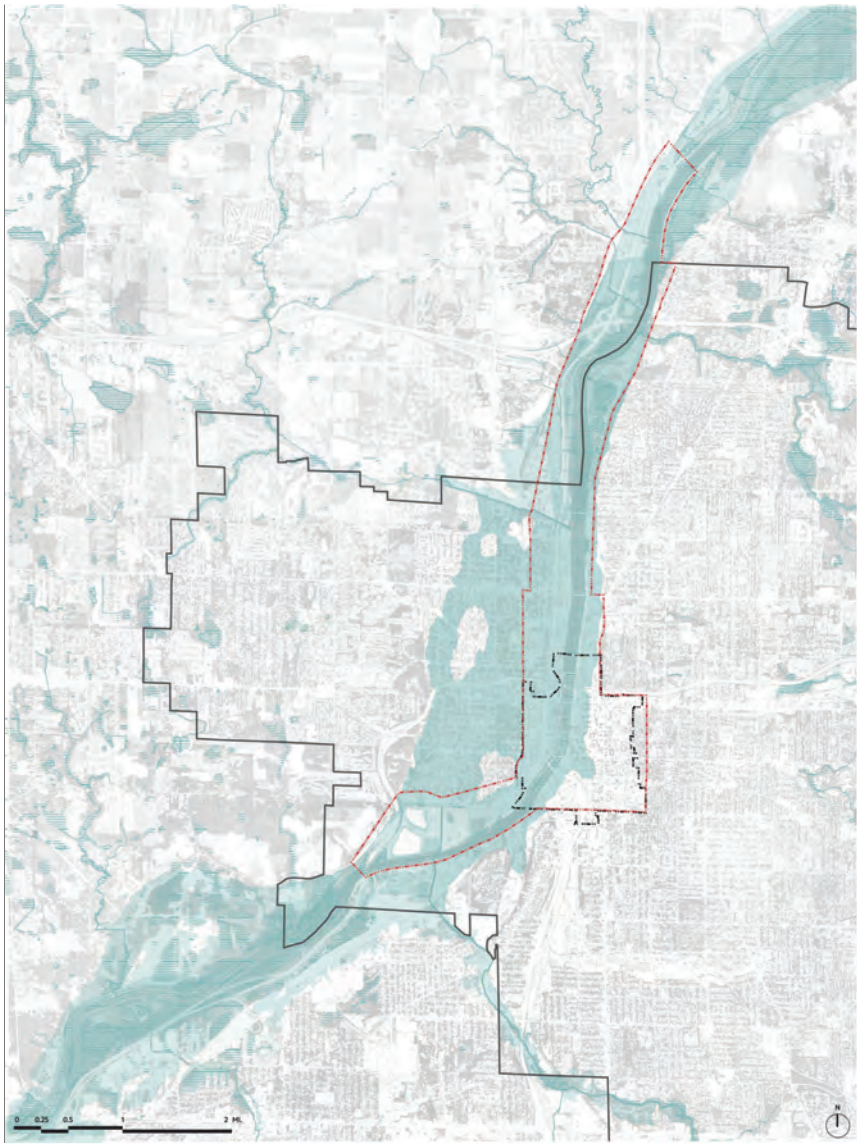
PROGRAM

	FARMERS MARKET	PERFORMANCE SPACE	KAYAK CANOE LAUNCH	FISHING PLATFORM
S	SMALL STORE   = 1,200 SF = 100 SF	50 PERSON 5 ROWS   = 1,200 SF	1 PERSON  = 220 SF	1 PERSON  = 650 SF
M	MEDIUM STORE   = 2,700 SF = 225 SF	150 PERSON 10 ROWS   = 2,700 SF	2 PERSON  = 375 SF	5 PERSON  = 2,000 SF
L	LARGE STORE   = 7,200 SF = 600 SF	300 PERSON 15 ROWS   = 7,200 SF	MULTIPERSON  = 520 SF	20 PERSON  = 10,300 SF

PROGRAM

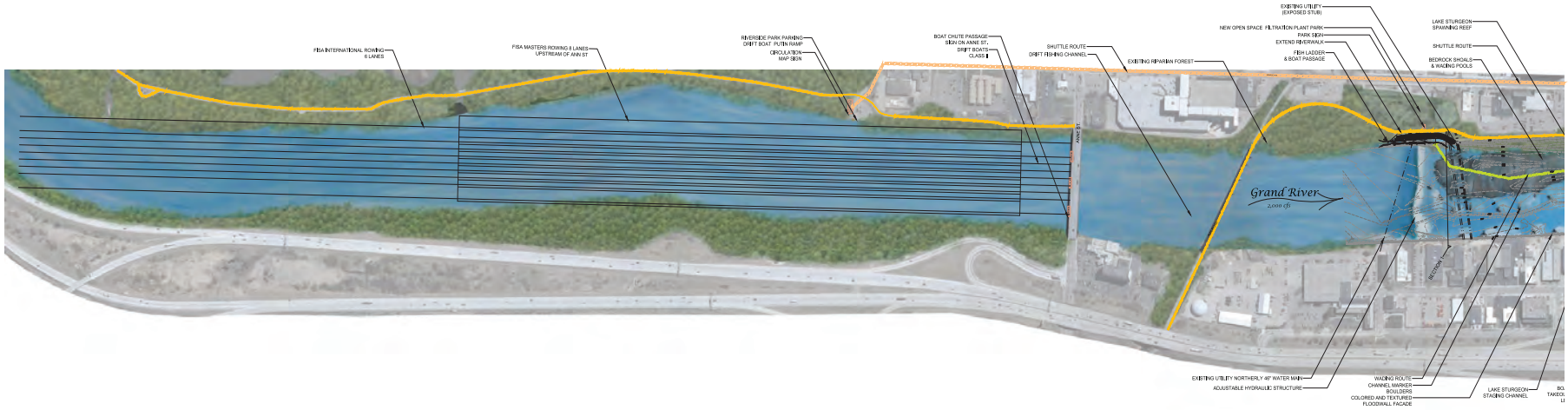

URBAN AGRICULTURE
EVENTS
PLAY SPACE
SWIMMING POOL
S
M
L
BED
10'
10'
600 SF
100 SF
YOGA
16 People
1,200 SF
MOUNDS
1,800 SF
PORTABLE POOL
32'
10'
300 SF
PLOT
30'
20'
2,400 SF
600 SF
WEDDING
100 People
1,800 SF
DANCING
30 DANCERS
2,800 SF
2 LANE POOL
164'
16.5'
4,500 SF
ORCHARD
160'
150'
20,500 SF
300 SF Mature Apple Tree
LARGE PERFORMANCE
500 People
7,200 SF
SOCCER
55,000 SF
OLYMPIC POOL
164'
82'
13,500 SF

PROPOSED EDGE CONDITIONS – LEVEE + SEATING


0 0.25 0.5 1 2 MI.
N

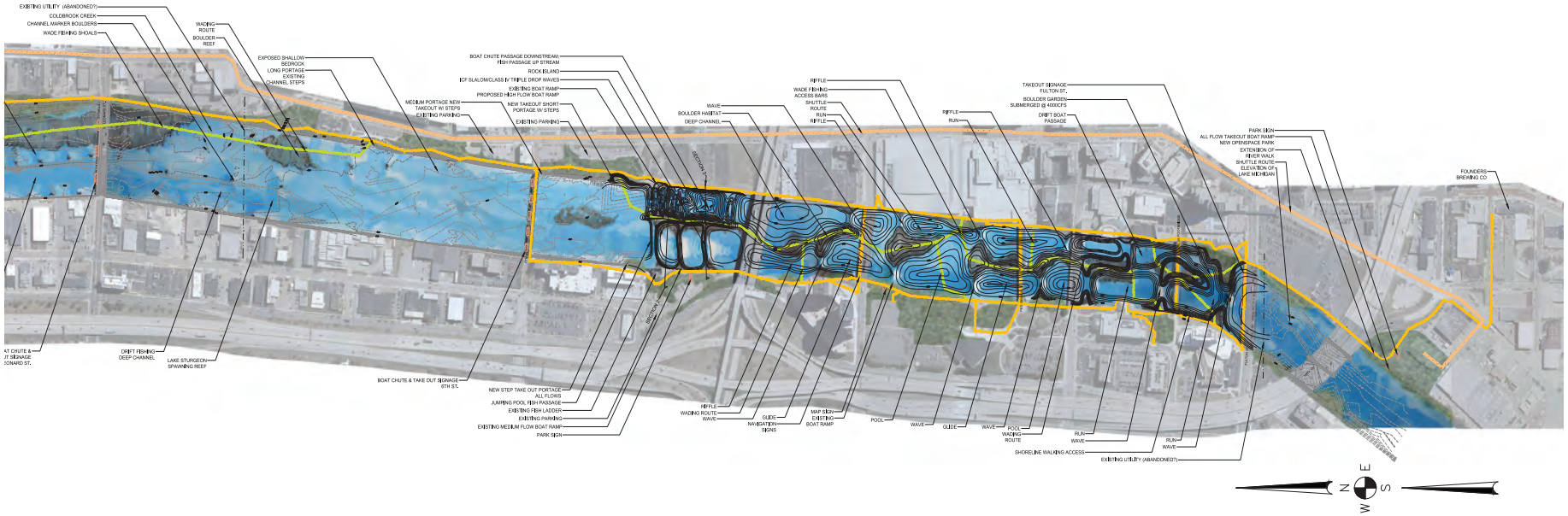
APPENDIX 1

WHITEWATER - RIVER RESTORATION



IMPROVE THE ROWING POOL

MASTER PLAN

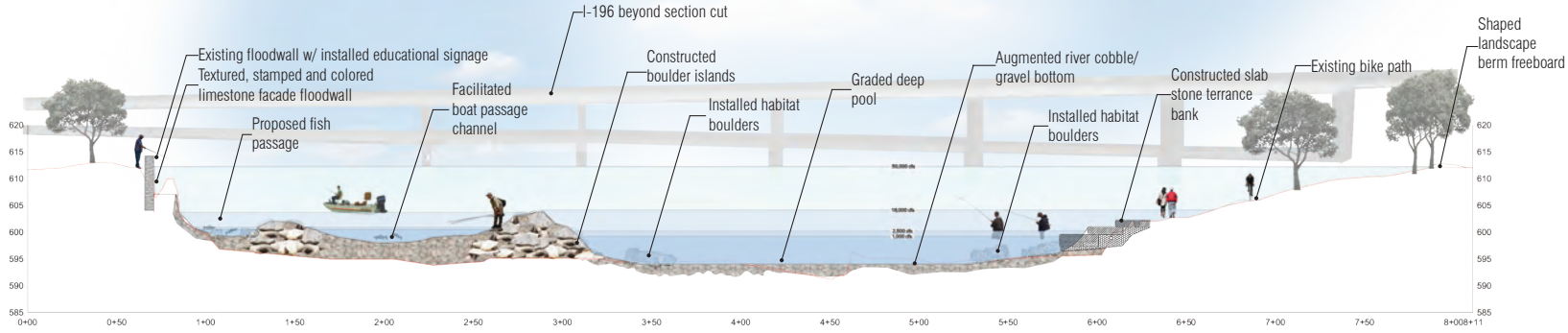


UNCOVER THE BEDROCK RAPIDS

RESTORE THE BOULDER RAPID

CREATE SHORELINE ACCESS

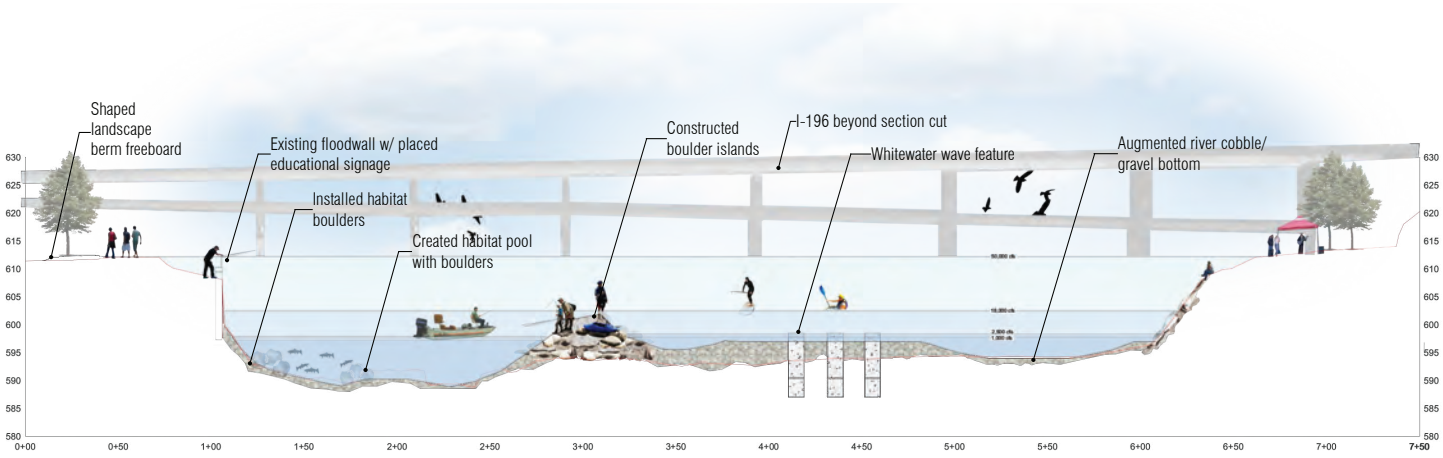
STRENGTH IN DIVERSITY



BoatPassage_2 PROFILE
HORIZ. SCALE: 1" = 20'
VERT. SCALE: 1" = 7'

SCALE: 1" = 25'

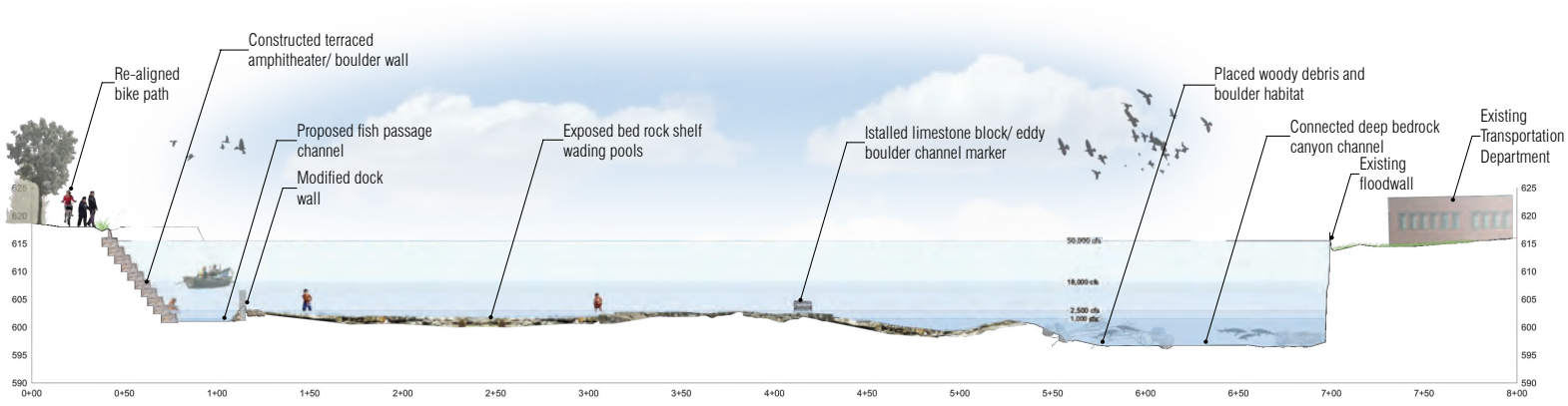
Grand Rapids Restoration
Boat Passage Section



Grand Rapids Restoration
Boat Passage Section

BoatPassage_2 PROFILE
HORIZ. SCALE: 1" = 20'
VERT. SCALE: 1" = 7'

0 25' 50'
SCALE: 1" = 25'



0 25' 50'
SCALE: 1" = 25'

BoatPassage_2 PROFILE
HORIZ. SCALE: 1" = 20'
VERT. SCALE: 1" = 7'

Grand Rapids Restoration
Fish Passage Section