Belmont Bridge Replacement
August 8, 2017  City of Charlottesville Planning Commission

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Next Steps

- Board of Architectural Review
  August 15
- Steering and Technical Committee
  August / September
- City Council
  October
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• To replace an insufficient and deteriorating bridge for vehicular, bicyclists and pedestrian usage
• To improve pedestrian and bicycle access along this corridor from the Belmont neighborhood to the downtown mall and neighborhoods to the north
• To improve aesthetics along this corridor and linkage path to downtown
• To create a “gateway” to downtown from the south
• To create synergy for economic development
• To minimize disturbing existing utilities
• To minimize disruption of the CSX/BBRR active rail-line and railroad operations
• To minimize impact and disruption of Pavilion events
• To minimize impact and disruption to the Downtown Transit Center
• To minimize vehicular and pedestrian traffic impact and disruption to surrounding businesses and travelling public
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- Bridge is the gateway into downtown
- Maintain 25 MPH speed limit
- Two lanes – one in each direction
- Views to the mountains and of the railroad tracks should be preserved
- Innovative, entertaining design
- Separate pedestrian, vehicles, and bicycles
- Reduce the bridge length
- Enhance the landscape design elements on the approaches
- Accent lighting to showcase the bridge
- Bike lanes 10’, pedestrian lanes 10’ and traffic lanes 11’
Stakeholder & Public Engagement
# Belmont Bridge Replacement

**August 8, 2017**  
City of Charlottesville Planning Commission

## Steering Committee

<table>
<thead>
<tr>
<th></th>
<th>Name</th>
<th>Organization</th>
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<tbody>
<tr>
<td>1</td>
<td>Amy Gardner</td>
<td>Belmont Neighborhood</td>
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<tr>
<td>2</td>
<td>John Harrison</td>
<td>Business Community</td>
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<tr>
<td>3</td>
<td>Patrick Healy</td>
<td>Ridge Street Neighborhood</td>
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<tr>
<td>4</td>
<td>Heather Danforth Hill</td>
<td>North Downtown Neighborhood</td>
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<tr>
<td>5</td>
<td>Harry Holsinger</td>
<td>Martha Jefferson Neighborhood</td>
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<tr>
<td>6</td>
<td>Tim Mohr</td>
<td>PLACE Design Task Force</td>
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<tr>
<td>7</td>
<td>Scott Paisley</td>
<td>PLACE Design Task Force</td>
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<td>8</td>
<td>John Santoski</td>
<td>Planning Commission</td>
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<tr>
<td>9</td>
<td>Lena Seville</td>
<td>CAT Advisory Board</td>
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<tr>
<td>10</td>
<td>Fred Wolf</td>
<td>PLACE Design Task Force</td>
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<tr>
<td>11</td>
<td>Brennan Duncan</td>
<td>NDS – Traffic Engineer</td>
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<tr>
<td>12</td>
<td>Tony Edwards</td>
<td>NDS – Development Services Manager</td>
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<tr>
<td>13</td>
<td>Alex Ikefuna</td>
<td>NDS Director</td>
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<tr>
<td>14</td>
<td>Jeanette Janiczek</td>
<td>NDS – UCI Program Manager</td>
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<td>15</td>
<td>Carrie Rainey</td>
<td>NDS – Urban Designer</td>
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<tr>
<td>16</td>
<td>Marty Silman</td>
<td>NDS – City Engineer</td>
</tr>
<tr>
<td>Name</td>
<td>Title/Position</td>
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<tr>
<td>Matthew Alfele</td>
<td>NDS – Neighborhood Planner</td>
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<tr>
<td>Missy Creasy</td>
<td>NDS – Assistant Director</td>
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<tr>
<td>Jay Davis</td>
<td>City Fire Marshal</td>
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<tr>
<td>Brennan Duncan</td>
<td>NDS – Traffic Engineer</td>
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<tr>
<td>Susan Elliott</td>
<td>P/W – Environmental</td>
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<tr>
<td>Tom Elliott</td>
<td>NDS – Building Code Official</td>
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<tr>
<td>Craig Fabio</td>
<td>NDS – Asst. Zoning Administrator</td>
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<tr>
<td>David Frazier</td>
<td>NDS – VSMP E&amp;S Specialist</td>
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<tr>
<td>Chris Gensic</td>
<td>Parks and Trail Planner</td>
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<tr>
<td>Brian Haluska</td>
<td>NDS – Neighborhood Planner</td>
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<tr>
<td>Christian Chirico</td>
<td>Public Utilities – Gas Utility Project Assistant</td>
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<tr>
<td>Charles Kanary</td>
<td>CAT Acting Asst. Transit Mgr. - Maintenance</td>
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<tr>
<td>Juwhan Lee</td>
<td>CAT Asst. Transit Mgr. – Operations</td>
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<tr>
<td>John Mann</td>
<td>Parks – Landscape Manager</td>
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<tr>
<td>Jason McIlwee</td>
<td>Public Utilities Engineer</td>
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<tr>
<td>Camie Mess</td>
<td>NDS – Historic Preservation Assistant</td>
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<tr>
<td>Heather Newmeyer</td>
<td>NDS – Neighborhood Planner</td>
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<tr>
<td>Stacy Pethia</td>
<td>NDS – Housing Program Coordinator</td>
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<tr>
<td>Amanda Poncy</td>
<td>NDS – Bicycle and Pedestrian Coordinator</td>
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<tr>
<td>Carrie Rainey</td>
<td>NDS – Urban Designer</td>
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<tr>
<td>Michael Ronayne</td>
<td>Parks – Urban Designer</td>
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<tr>
<td>Mary Joy Scala</td>
<td>NDS – Preservation &amp; Design Planner</td>
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<tr>
<td>William Scalfani</td>
<td>Police Crime prevention Unit</td>
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<tr>
<td>Rick Siebert</td>
<td>Parking Manager</td>
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<tr>
<td>Marty Silman</td>
<td>NDS – City Engineer</td>
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<tr>
<td>Lance Stewart</td>
<td>P/W – Public Services / Facilities Mgr.</td>
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<tr>
<td>Dan Sweet</td>
<td>P/U – Stormwater Utility Administrator</td>
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<tr>
<td>Tich Tablan</td>
<td>Assistant Fire Marshal</td>
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<tr>
<td>Stephen Walton</td>
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- ADA Advisory Committee
- Bicycle and Pedestrian Advisory Committee
- Board of Architectural Review
- Downtown Business Association of Charlottesville / Chamber of Commerce
- PLACE Design Task Force
- Planning Commission
- Tree Commission
Outreach & Engagement

Steering Committee Meetings x4
Small Stakeholder Group Meetings x18
Mobility Summit 100+ attendees
MetroQuest Survey 896 responses
Design Charrette 3 days + 3 public sessions
Open House 60+ attendees
Topical Online Survey 244 responses
Belmontbridge.org 2,196 unique users 8,053 page views

Since February 2017

3,500+ touch points
30,500+ individual data points
1,250+ written comments

3,500+ touch points
30,500+ individual data points
1,250+ written comments
Public Input: Common Themes and Key Takeaways

• Design a *functional, integrated design*

• Improve *connectivity* – emphasis on relationship between downtown and neighborhoods

• Design focus on *multimodal functionality and safety*

• Create *safe bike and pedestrian facilities*

• Include improved, safe street crossings – calm traffic to reduce travel speed

• Improve intersections and approaches (traffic functions, bike/pedestrian safety, aesthetics)

• Do not negatively impact *access to local businesses*

• Create opportunities for *landscaping and public spaces*

• Address short term and long term *parking needs*
Open House Takeaways

Supported: Overall Corridor Plan: closing Old Avon at Garrett

Supported: Protected bike lane and wide sidewalks

Supported: No Landscaped medians – wider perimeter landscape on approaches

Supported: Lighting approach

More Discussion: Options for at-grade crosswalk and passageway under 9th Street

More Discussion: Turning movements at Graves Street and 9th Street

More Discussion: Stairs on east and west sides with mezzanine connection – study ADA ramp options
Conceptual Design
Roadway Sections

Looking North on 9th St. on Belmont Bridge

Looking North on 9th St. from Graves St.

Looking North on 9th St. from North of Bridge
Vertical Circulation

North Abutment

Preferred: Central and West Stairs w/ Mezz
Vertical Circulation

North Abutment

Preferred: Central and West Stairs w/ Mezz

Renderings - Looking East to Bridge
Vertical Circulation

North Abutment

Preferred: Central and West Stairs w/ Mezz
Piers

Rendering – Looking Southeast from Water Street
Cable Net – 98% Transparency

Section

View From Bridge Sidewalk
Lighting

Perspective Views

Landscape Forms FGP Pedestrian Light
Lighting

Site and Accent

Lighting Types

Recessed Wall Fixture at Parapet

Recessed Handrail Fixture

Recessed Wall Light
Walls  Formed Precast

Precast Concrete: Modular Panel System

Blue Ridge Mountain Outcropping

Intermittent Shadows Produced by Convex/Concave Faceted Panels

Precast Panels - Modules

1

2

3

4

5

Panel Cross Section A

Panel Axon
Walls

Green Screen

Trellis Panel on Masonry Wall

Trellis Panel: 3’ - 4’ module

Precast mounting Detail
Walls: North Abutment

Perspective from East on Water St.
Walls: North Abutment

Perspective from South
Walls: South Abutment

West Elevation

West Elevation - Typical Components

- Flat and Beveled Modular Precast Panels
- 3' modular Green Screen Panels
- Location for Mural or Graffiti

West Elevation @ Tunnel
Open Design Issues
Issues Summary – At-Grade Crossing at Graves Street

• Crossing is a desirable, convenient location for Belmont residents to cross 9th Street
• Conflicting and potentially unsafe conditions at crossing
  • 9 Crashes at Graves and 9th Street (2012 – 2016)
  • 2 crashes involved pedestrians in/near existing crosswalk
  • Existing 6% grade along 9th Street – high travel speeds
  • Existing crosswalk is 190’ north of signalized crosswalk at 9th/Avon/Graves/Levy Intersection
• Crosswalk is not in accordance with Streets That Work or VDOT guidance
Concept

- Pedestrian passageway beneath 9th Street
  - Provides east-west accessible route under 9th Street for bikes and pedestrians
  - 10’+- tall and 21’ wide – emphasis on good lighting
  - Opportunity to promote new, safer mobility patterns
  - Will help activate 6th Street, South Street and Old Avon Block with planned redevelopment
- Maintain existing pedestrian crosswalk north of Graves Street on 9th
- Stairs on west side and/or sidewalk in Old Avon R/W provide access to 9th Street
- Pedestrian upgrades at intersection at Levy – Old Avon – Garrett for improved mobility

Pedestrian Circulation South of Railroad
Steering Committee Endorsed

- **Maintain** existing pedestrian crosswalk north of Graves Street on 9th Street
- Construct pedestrian passageway beneath 9th Street
- Stairs on west side and/or sidewalk in Old Avon R/W provide access to 9th Street
- Pedestrian upgrades at intersection at Levy – Old Avon – Garrett for improved mobility

Staff / Consultant Recommendation

- **Remove** existing pedestrian crosswalk north of Graves Street on 9th
- Construct pedestrian passageway beneath 9th Street
- Stairs on west side and/or sidewalk in Old Avon R/W provide access to 9th Street
- Pedestrian upgrades at intersection at Levy – Old Avon – Garrett for improved mobility
Issues Summary

- Existing condition allows full movement turn entering and exiting Graves at 9th Street
- South-bound left turns on to 9th can create congestion on east side, impact traffic on 9th Street

Current Concept

- Prohibit left turns from Graves Street to 9th Street (Avon Street) SB
- Allow left turns from 9th Street (Avon Street) SB
- Allow right-in and right-out movements from Graves Street

Benefits of Restricting Lefts out of Graves Street

- Improved Safety - 8 Crashes in last 5 years (2012-2016)
- Improves traffic operations at 9th/Avon/Levy/Garret
- Decreases delay for SB traffic on 9th/Avon
Steering Committee Endorsed & Staff/Consultant Recommendation:
• Prohibit left turns from Graves Street to 9th Street (Avon Street) SB
• Allow left turns from 9th Street (Avon Street) SB
• Allow right-in and right-out movements from Graves Street

Alternatives Under Review (as directed by the Steering Committee)
• Allow lefts out of Graves Street with Time of Day Restrictions
  - Potential enforcement issue
• Convert Monticello to 2-way operation
  - Eliminates on street parking
• Reverse Monticello to 1-way SB
  - Difficult turning movements at Levy
• Continued observation of current circulation patterns/needs for businesses/residents
• Analysis of existing site needs for business deliveries
Issues Summary
• Lack of connectivity / Accessible routes east to west
• Lack of vertical circulation from Water Street to bridge

Current Concept
• Stairs to Water Street from 9th Street:
  • NW Quadrant (Sprint Pavilion Side)
  • NE Quadrant (Lexus Nexus Side)
  • Stairs/Mezzanine Connection between bridge and Water Street for NW to NE pedestrian connection
Vertical Circulation North of Water Street

Steering Committee Endorsed & Staff/Consultant Recommendation:
• Mezzanine
• Stairs to Water Street in NW/NE quadrant
• Ramp option – to be analyzed against budget constraints and required tradeoffs
Vertical Circulation North of Water Street

Alternatives Under Review

• NW/NE Ramps from 9\textsuperscript{th} Street to Mezzanine and NW/NE Stairs to Water Street from Mezzanine:
  • Accessible Route from 9\textsuperscript{th} Street (both sides) to Downtown Mall
  • No direct accessible route to Water Street from 9\textsuperscript{th} Street
  • Requires reconstruction of existing block retaining wall on Water Street
  • Cost of wall replacement may reduce aesthetic site improvements due to budget constraints
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Meets Transportation Goals – Summary

Existing Conditions
• Two 6’ wide sidewalks
• One partial 5’ wide bike lane/sharrows traveling south
• At-grade crossings across 9th Street at Levy Avenue and Graves Street.

Proposed
• Two 10’ wide sidewalks
• Two 10’ wide protected bike lanes
• At-grade crossing across 9th Street at Levy Avenue
• Pedestrian passageway under 9th Street, north of Graves Street.
• New connection from east side of bridge to Downtown Mall & Water Street.
• New connection from west side of bridge from Downtown Mall & Water Street.
Meets - Transportation Goals

Goal 1: Increase safe, convenient and pleasant accommodations for pedestrians, bicyclists, and people with disabilities that improve the quality of life within the community and within individual neighborhoods.

1.2: Provide convenient and safe pedestrian connections within ¼ miles of all commercial and employment centers, transit routes, schools and parks.

1.3: Provide design features on roadways, such as street trees within buffers, street furniture and sidewalk widths that improve the safety and comfort level of all users and contribute to the City’s environmental goals.

1.4: Explore and implement safe, convenient and visually attractive crossing alternatives to enable pedestrians and bicycles to cross major thoroughfares.

1.5: Continue to include bicycle and pedestrian accommodations in conjunction with the planning and design of all major road projects, all new development and road paving projects.

1.6: Consistently apply ADA standards to facility design and ensure that accessible curb ramps exist at all pedestrian crossings where conditions allow.
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Meets - Urban Design Goals: Summary

Per the public comment received, design focus is on seeking to blend and connect the new bridge into the surrounding neighborhoods with simple but modern and/or funky design features.

The project is proposing to close Old Avon Street at the Garrett/Levy/9th intersection to create a pedestrian zone. Both the pedestrian passageway and mezzanine will be designed to encourage pedestrian use through good design concepts. Enhanced landscaping is also proposed.

This project will be coordinated with the Virginia Department of Historic Resources as well as receive a Certificate of Appropriateness from the City's Board of Architectural Review.

The project provides for upgraded pedestrian and bicycle facilities, including upgraded multi-modal connections from the pedestrian mall in downtown Charlottesville to the Belmont and Martha Jefferson neighborhoods.

Opportunities for art are being proposed along the bridge's abutment walls south of the railroad tracks – as well as preservation of a programmed space for graffiti or commissioned art.

The extensive public participation process is ensuring design excellence and seeks to meet the community's present and future needs.
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**Meets - Urban Design Goals**

Goal 1: Continue Charlottesville’s history of architectural and design excellence by maintaining existing traditional features while encouraging creative, context-sensitive, contemporary planning and design

1.1: Emphasize the importance of public buildings, public spaces, and other public improvements as opportunities to promote a sense of place and a welcoming environment for residents and visitors.

1.2: Promote Charlottesville’s diverse architectural and cultural heritage by recognizing, respecting, and enhancing the distinct characteristics of each neighborhood.

1.3: Facilitate development of nodes of density and vitality in the City’s Mixed Use Corridors, and encourage vitality, pedestrian movement, and visual interest throughout the City.

1.4: Develop pedestrian-friendly environments in Charlottesville that connect neighborhoods to community facilities, to commercial areas and employment centers, and that connect neighborhoods to each other, to promote a healthier community.

1.5: Encourage community vitality and interaction through the incorporation of art in public spaces, neighborhoods, signage, and gateways.

1.6: Encourage the incorporation of meaningful public spaces, defined as being available to the general public, into urban design efforts.

1.7: Promote design excellence for public projects and installations at all scales.
## AGENDA

**Process Overview**

**Review for Comprehensive Plan Consistency**

**Public Engagement Overview**

**Conceptual Design Review**

### Next Steps

1. BAR Presentation #1 August 15
2. Steering and Technical Committee August / September
3. BAR Presentation #2 TBD
4. City Council Presentation and Action TBD
Thank you.... Questions?
Reference slides
Pedestrian Circulation

Option 1. Construct a pedestrian underpass

Option 2. Maintain existing at-grade crossing

Option 3. Do both
Pedestrian Circulation

View Looking North within passageway

Potential At Grade Crossing near Graves St.

Pedestrian Passageway Opening

Section Key
Graves Street Access

Alternative 1
Restrict left turns from southbound 9th Street to Graves Street; Allow right turns onto and from Graves Street (but prohibit left turns from Graves Street to southbound 9th Street)

Alternative 1A
Allow left turns from southbound 9th Street to Graves Street; Allow right turns onto and from Graves Street (but prohibit left turns from Graves Street to southbound 9th Street)
Graves St. Access

Alternative 1
This alternative includes a concrete median that prevents vehicles from turning onto Graves St. from southbound 9th St. Vehicles also are permitted to turn right in and out of Graves St. Vehicles cannot turn left from Graves St.

Alternative 1A
This alternative allows vehicles to turn left onto Graves St. from southbound 9th St. Vehicles are also permitted to turn right in and out of Graves St. Vehicles cannot turn left from Graves St.
Vertical Circulation Concepts

Concept 1
Stairs on east and west side with a mezzanine connection between 9th Street and Water Street

Concept 2
Stairs on east and west side (no mezzanine connection)

Concept 3
Stairs on east side with a mezzanine connection between 9th Street and Water Street. No west side stairs to Water Street.
Vertical Circulation

Option 1 – Stairs on east side and west side with Mezzanine connection
- East and West stairs to Water St.
- Mezzanine connection to west side stairs

Option 2 – Stairs on east side and west side (NO Mezzanine connection)
- East and West stairs to Water St.

Option 3 – Stairs on east side and with Mezzanine connection
- East and West stairs to Water St.
- Mezzanine connection to West stairs
Vertical Circulation

Belmont Bridge Access from Mall

5% Ramp

Belmont Bridge Access West

Expanded Bus Lane

Belmont Bridge Access East
Vertical Circulation

North Abutment

Preferred: Central and West Stairs w/ Mezz
Vertical Circulation

North Abutment

Preferred: Central and West Stairs w/ Mezz
Vertical Circulation

ADA Ramp from 9th St. to Water St.
- 440 Linear Feet of Ramp
- Requires 4,000 SF of ROW Purchase
- Would be necessary to replace the Water St. retaining wall

ADA Ramp to Mezzanine
- 215 Linear Feet of Ramp
- Requires 2,200 SF of ROW Purchase
- Would be necessary to replace the Water St. retaining wall
Pedestrian Circulation – SC Direction

Option 1.
Construct a pedestrian underpass

Option 2
Maintain existing at-grade crossing

Option 3
Do both

45.7%
32.2%
22.1%
Graves Street Access - SC Direction

Alternative 1
Restrict left turns from southbound 9th Street to Graves Street; Allow right turns onto and from Graves Street (but prohibit left turns from Graves Street to southbound 9th Street)

Alternative 1A
Allow left turns from southbound 9th Street to Graves Street; Allow right turns onto and from Graves Street (but prohibit left turns from Graves Street to southbound 9th Street)
Vertical Circulation Concepts – SC Direction

Concept 1
Stairs on east and west side with a mezzanine connection between 9th Street and Water Street

Concept 2
Stairs on east and west side (no mezzanine connection)

Concept 3
Stairs on east side with a mezzanine connection between 9th Street and Water Street. No west side stairs to Water Street.
SC Endorsement