

**CITY OF BOULDER  
INFORMATION ITEM FOR:**

**TRANSPORTATION ADVISORY BOARD – May 9, 2016**  
**OPEN SPACE BOARD OF TRUSTEES – May 11, 2016**  
**PLANNING BOARD – May 5, 2016**  
**ENVIRONMENTAL ADVISORY BOARD – May 4, 2016**  
**WATER RESOURCES ADVISORY BOARD – May 16, 2016**  
**PARKS AND RECREATION ADVISORY BOARD – April 25, 2016**

**GREENWAYS ADVISORY COMMITTEE AGENDA ITEM**

**MEETING DATE: May 17, 2016**

**SUBJECT:**

Draft CEAP for Fourmile Canyon Creek Greenways Improvements from Upland Avenue to West of Broadway

**REQUESTING DEPARTMENT:**

Annie Noble – Greenways Coordinator  
Ward Bauscher – Engineering Project Manager, Flood & Greenways  
Christin Shepherd-Civil Engineer I, Flood & Greenways

**PURPOSE:** A summary of the draft CEAP is being provided to board members as an information item. It is requested you review the full CEAP and forward any comments or concerns regarding the draft CEAP to your Greenways Advisory Committee representative. If you have questions on this material, please contact Ward Bauscher at 303-441-4199 or [BauscherW@bouldercolorado.gov](mailto:BauscherW@bouldercolorado.gov). The full CEAP is available at: [https://www-static.bouldercolorado.gov/docs/DRAFT\\_2016\\_Fourmile\\_Upland\\_to\\_Broadway\\_CEAP-1-201604061106.pdf](https://www-static.bouldercolorado.gov/docs/DRAFT_2016_Fourmile_Upland_to_Broadway_CEAP-1-201604061106.pdf)

**GREENWAYS ADVISORY COMMITTEE ACTION REQUESTED:**

A recommendation from the Greenways Advisory Committee to City Council concerning the CEAP for the Fourmile Canyon Creek Greenways Improvements from Upland Avenue to West of Broadway is requested. Pending GAC approval, City Council will receive the CEAP as a call up item in summer of 2016.

Attached is the Executive Summary from the Fourmile Canyon Creek Greenways Improvements from Upland Avenue to West of Broadway CEAP summarizing the proposed recommendations.

## **FOURMILE CANYON CREEK GREENWAYS IMPROVEMENT PROJECT UPLAND AVENUE TO WEST OF BROADWAY EXECUTIVE SUMMARY**

In 2009, a Major Drainageway Plan was approved by City Council for Fourmile Canyon Creek and Wonderland Creek. The recommendations of the 2009 plan were finalized in the Fourmile Canyon Creek and Wonderland Creek Major Drainageway Planning Final Plan in May 2011 (MDP). The MDP proposed specific levels of flood mitigation for each reach along Fourmile Canyon Creek between Violet Avenue and Upland Avenue. In 2013, a formal CEAP process was underway for the mitigation measures outlined in the 2011 MDP as well as mitigation measures further upstream, from Violet to Broadway. Then, the September 2013 flood occurred, effectively halting further development of the CEAP document.

The September 2013 flood event produced high quantities of sediment, spill flows outside of the channel, and impassable roadways in the Fourmile Canyon Creek drainageway and created incentive for staff to revisit the mitigation measures outlined in the 2011 MDP. It also gave an incentive to revisit mitigation measures west of Broadway to see if new alternatives were feasible. Staff reviewed the 2011 MDP alternatives and investigated further options for spill flow control, sediment capture, and large scale detention ponds.

The existing Fourmile Canyon Creek floodplain between Violet and Upland Avenue extends beyond the creek channel, resulting in:

- One fire station in the 500year floodplain,
- One residential structure in the high hazard zone, and
- Water depths along Violet Avenue and Upland Avenue that preclude safe vehicular access to and from Crest View Elementary during a major storm event.

Staff reviewed the following flood mitigation alternatives:

- FM1: Multiple Detention Facilities
- FM2: Single Detention Facility
- FM3: Fourmile Canyon Creek 100-year Channel Improvements
- FM4: Spill Flow Diversion to Wonderland Creek
- FM5: Fourmile Canyon Creek 50-year Channel Improvements
- FM6: Fourmile Canyon Creek Sediment Capture Facility
- FM7: 2011 MDP recommendations

In 2012, a CEAP was developed for Fourmile Canyon Creek from 19<sup>th</sup> to 22<sup>nd</sup> Street that proposed alternatives for flood improvements, emergency access improvements, as well as pedestrian and bicycle access. The selected alternative includes an underpass at 19<sup>th</sup> Street that will allow the passage of the 100-year flood, as well as a grade-separated multi-use path. Construction of these improvements is anticipated to begin in 2016-2017. This CEAP will also evaluate alternatives for extending the multi-use path that was approved in the 2012 CEAP. Staff reviewed the following path alignment alternatives:

- Option 1: Connection to Countryside Village (mobile home park)
- Option 2A: North Alignment through Violet Park

- Option 2B: South Alignment through Violet Park
- Option 3A: Connect Upland to Violet via Fourmile Canyon Creek
- Option 3B: Connect Upland to Violet via 17<sup>th</sup> Alignment
- Option 3C: Connect Upland to Violet via South Alignment on Violet Avenue
- Option 3D: Connect Upland to Violet via North Alignment on Violet Avenue

*STAFF RECOMMENDATION*

Based on analysis that will be presented in this CEAP, the primary recommendation from City of Boulder staff is to pursue the recommendations outlined in the 2011 Major Drainageway Plan. These include replacing existing culverts under Violet and Upland Avenue, modifying the channel between these culverts to eliminate high hazard zone risk, and allowing for safe vehicular access to Crest View Elementary School. Sediment capture is recommended within Violet Park and staff recommends path alignment options 1, 2A, and 3A.

This approach allows for uninterrupted access to both the fire station and Crestview Elementary and the potential for the Fourmile Canyon Creek multi-use trail to be integrated into the flood improvements including trail underpasses at Violet Avenue, Upland Avenue, and 19<sup>th</sup> Street. Improvements have been budgeted in the Greenways and Flood Utility Capital Improvement Programs (CIP).