



# Littleton Linkages

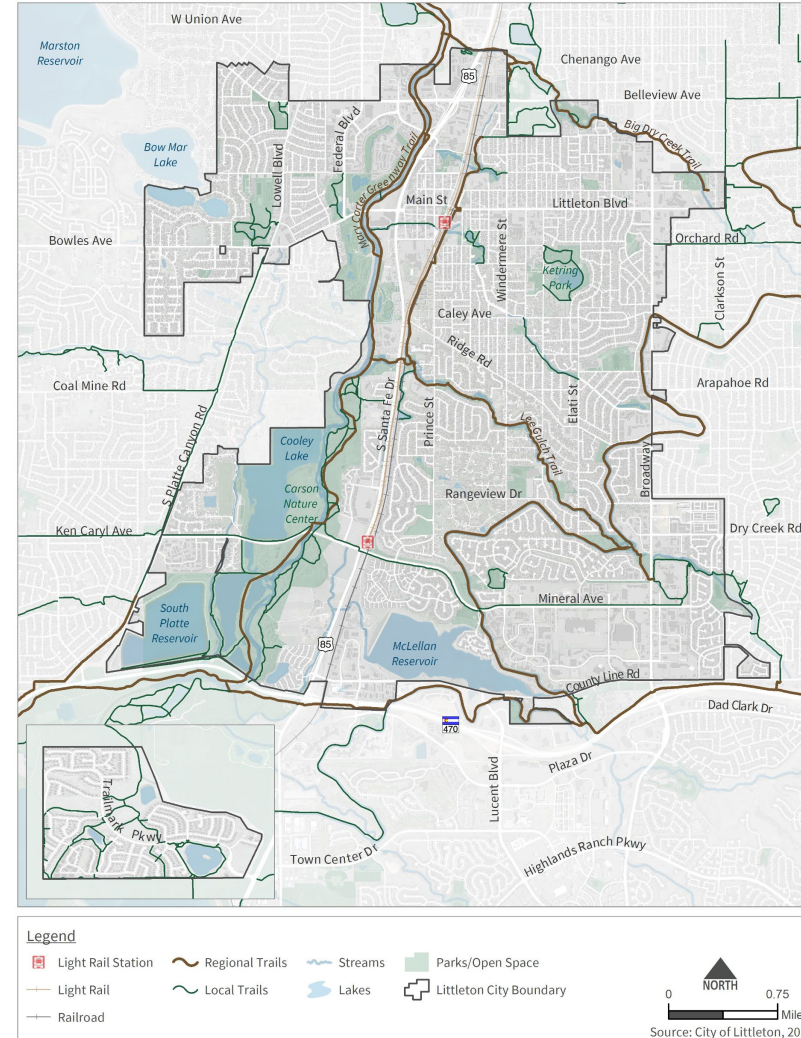
Transportation & Mobility Board

July 27<sup>th</sup>, 2023

# Study Overview

- Identify issues/opportunities of the local trail network
- Develop prioritized, map-based project list
  - Existing trail improvements
  - New trail connections
  - Trail crossing improvements

Existing Littleton Trail Network





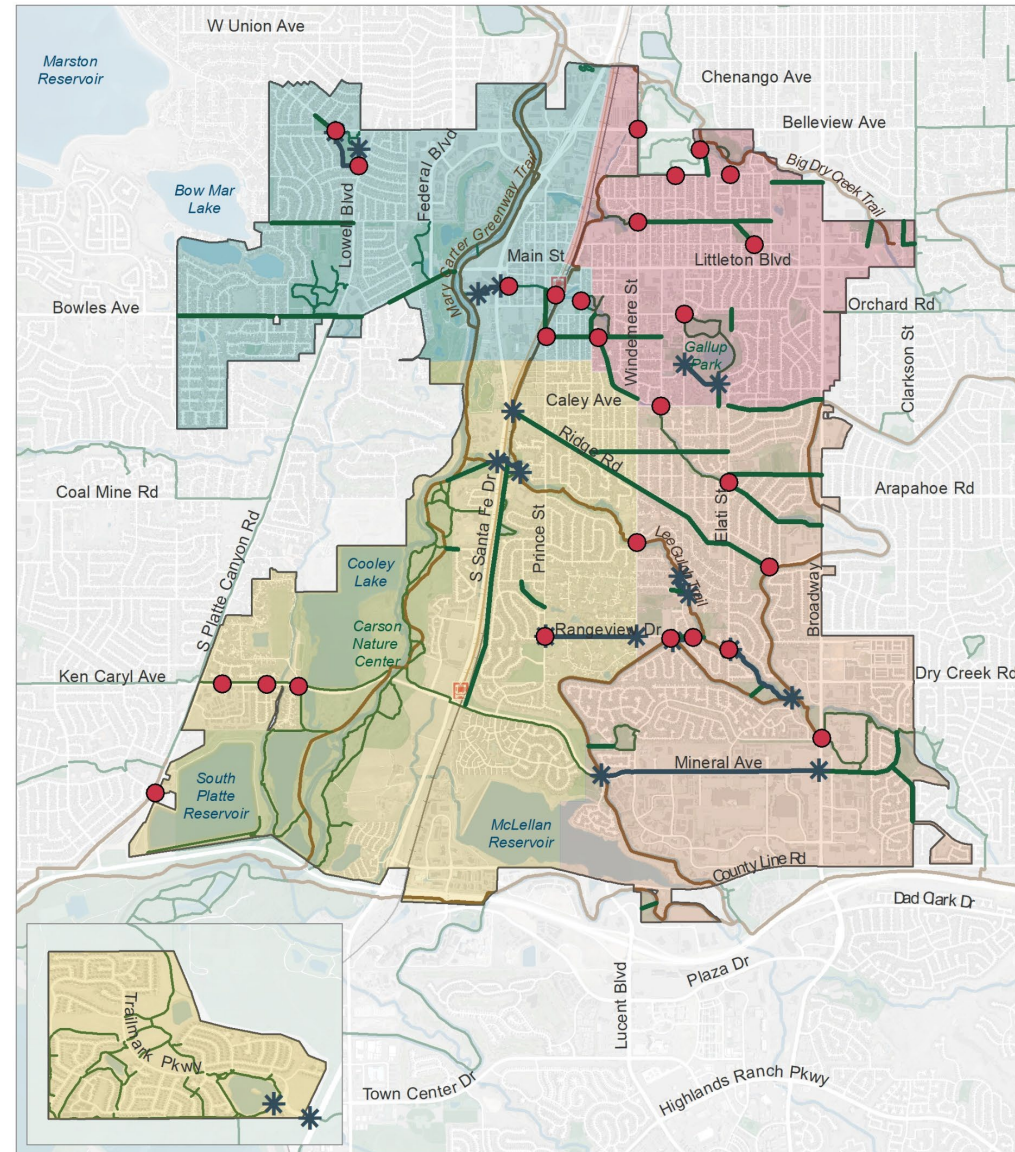


# Improvement Concepts

- Developed based on:
  - Existing conditions assessment
  - Initial public/stakeholder input
  - Brainstorming sessions with Littleton and SSPRD staff
  
- Grouped into three categories
  - Crossing Improvements – 23 concepts
  - Existing Trail Improvements – 11 concepts
  - New Trail Connections – 31 concepts

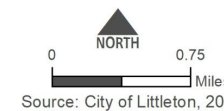
# DRAFT Improvement Concepts

- Crossing Improvements  
*23 concepts*
- Existing Trail Improvements  
*11 concepts*
- New Trail Connections  
*31 concepts*



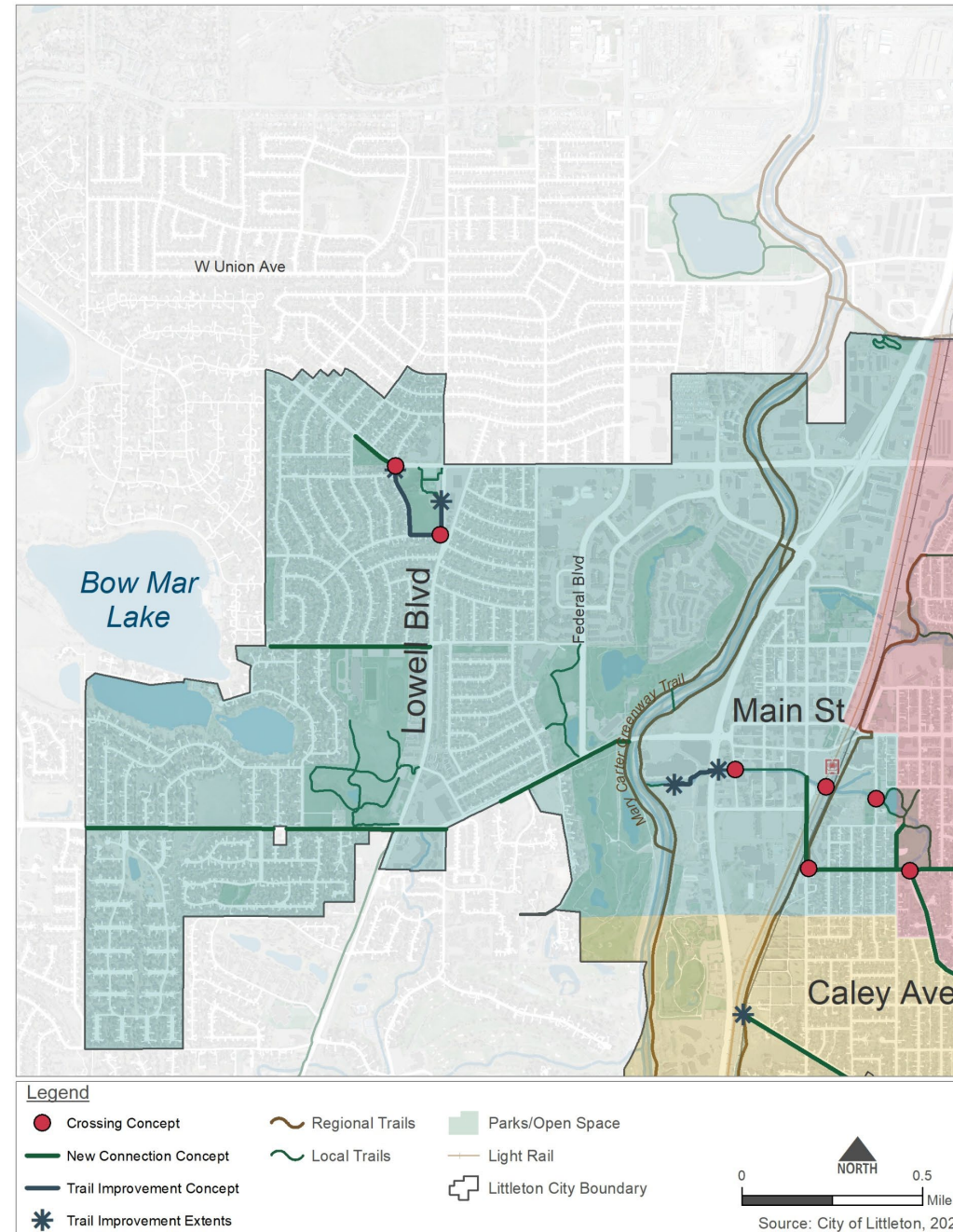
## Legend

- |                           |                         |                  |
|---------------------------|-------------------------|------------------|
| Crossing Concept          | Regional Trails         | Parks/Open Space |
| New Connection Concept    | Local Trails            | Light Rail       |
| Trail Improvement Concept | Littleton City Boundary |                  |
| Trail Improvement Extents |                         |                  |



# DRAFT Improvement Concepts – District 1

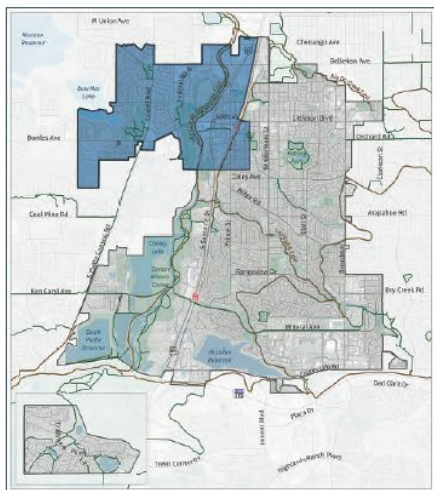
- Crossing Improvements  
*6 concepts*
- Existing Trail Improvements  
*2 concepts*
- New Trail Connections  
*5 concepts*





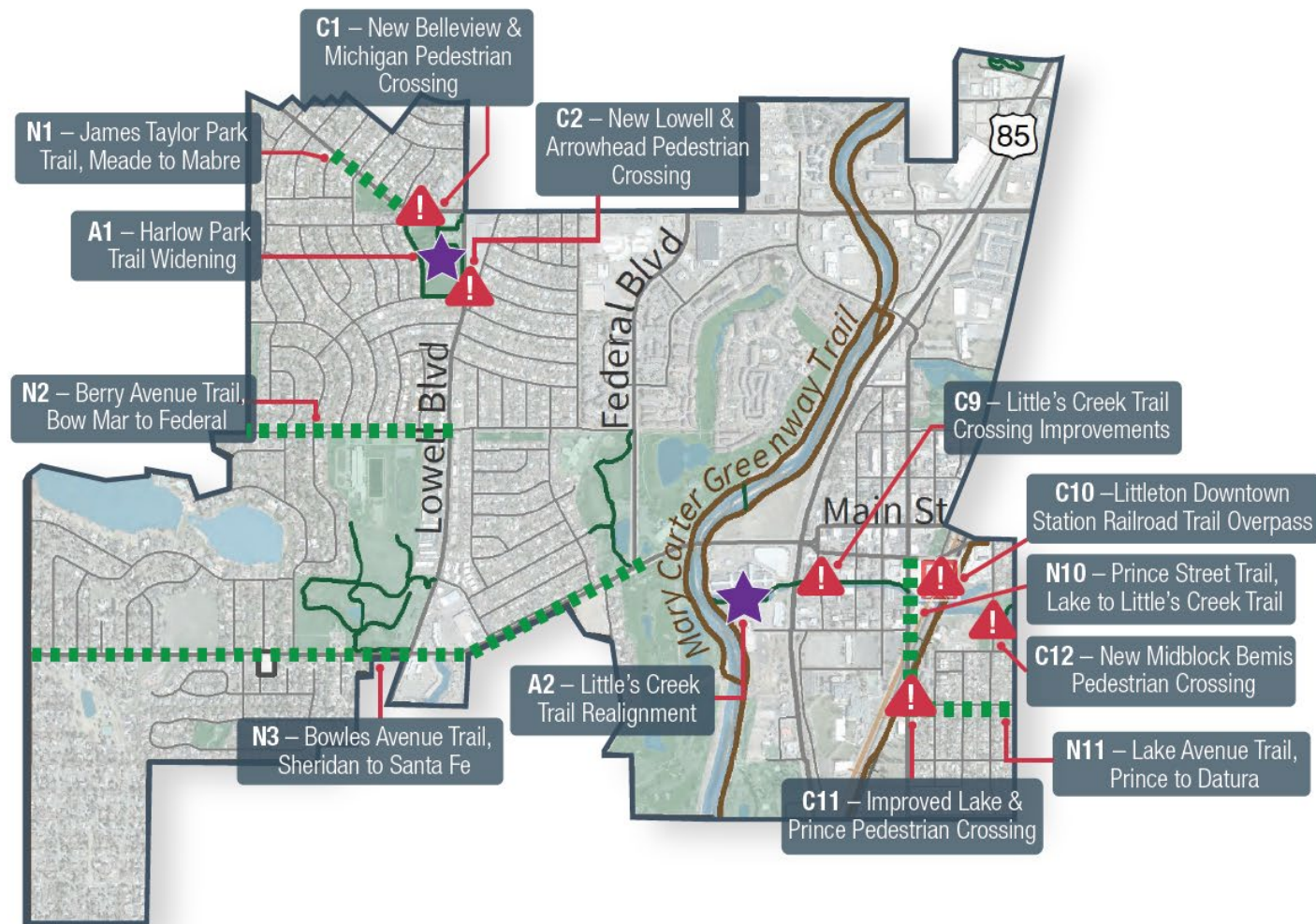
# DRAFT Improvement Concepts – District 1

Key



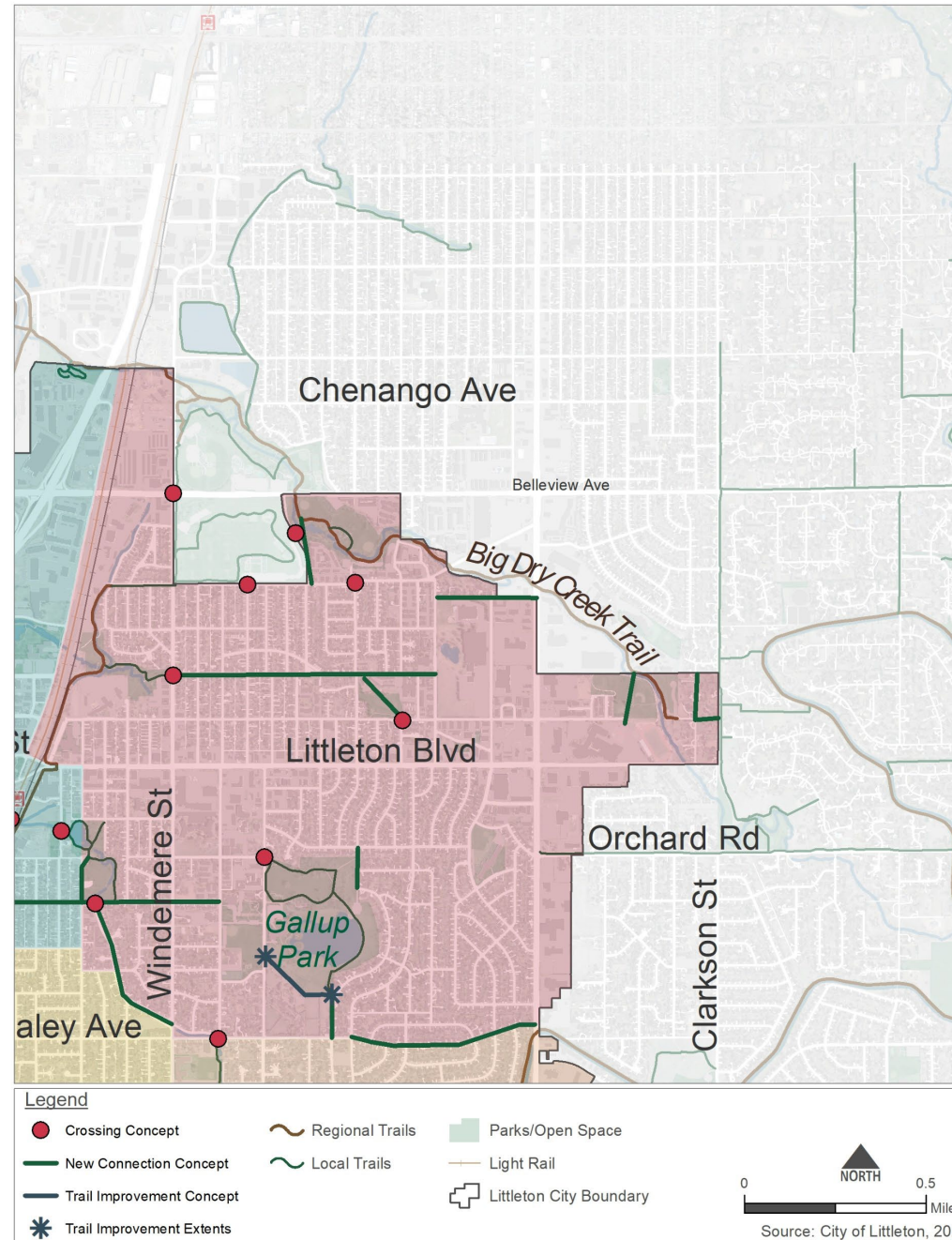
Legend

- = Crossing Improvements
- = New Trail Connections
- = Existing Trail Improvements



# DRAFT Improvement Concepts – District 2

- Crossing Improvements  
*9 concepts*
- Existing Trail Improvements  
*1 concept*
- New Trail Connections  
*10 concepts*

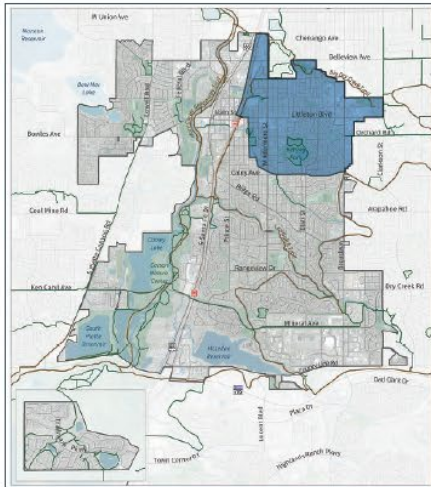






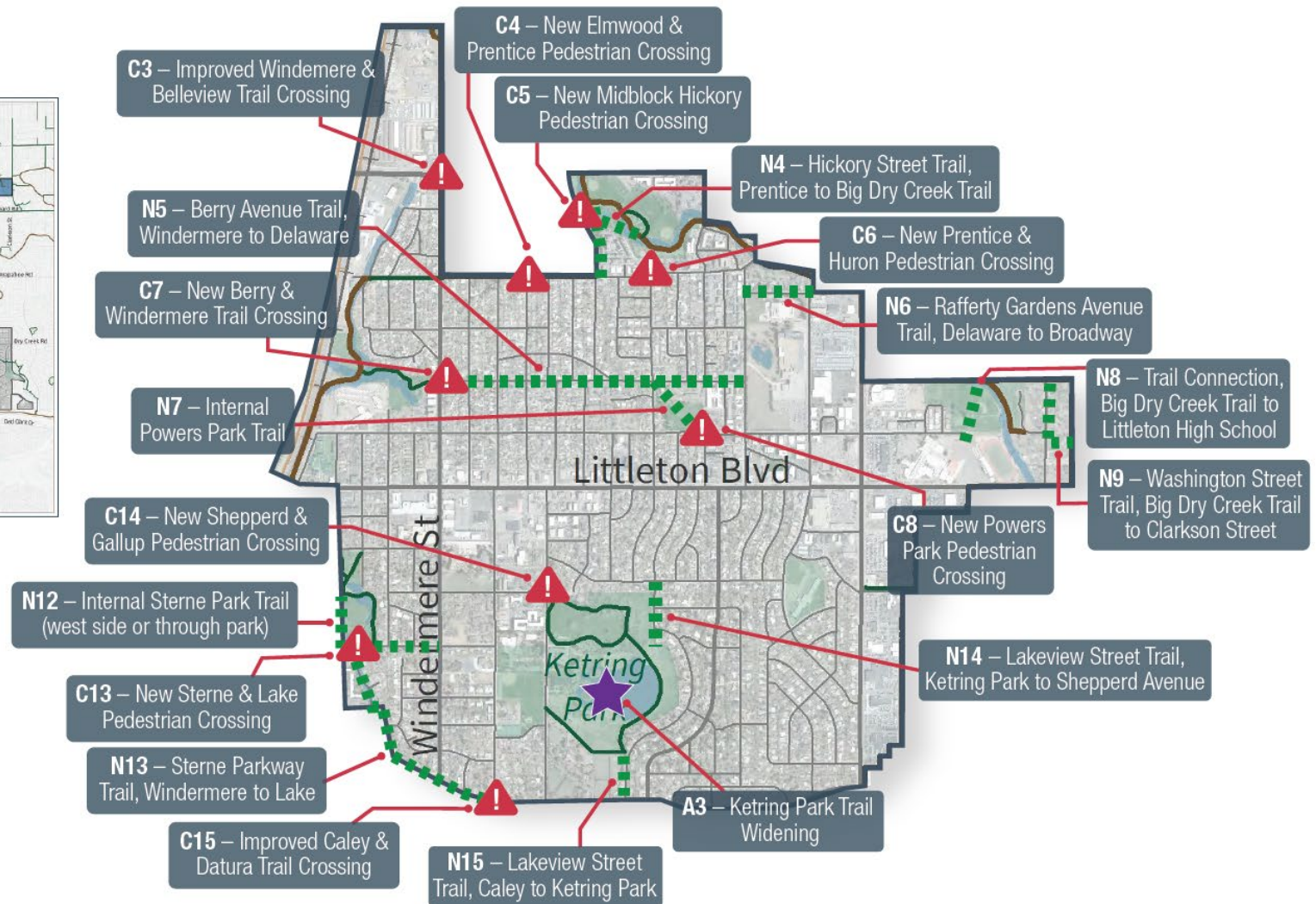
# DRAFT Improvement Concepts – District 2

## Key



## Legend

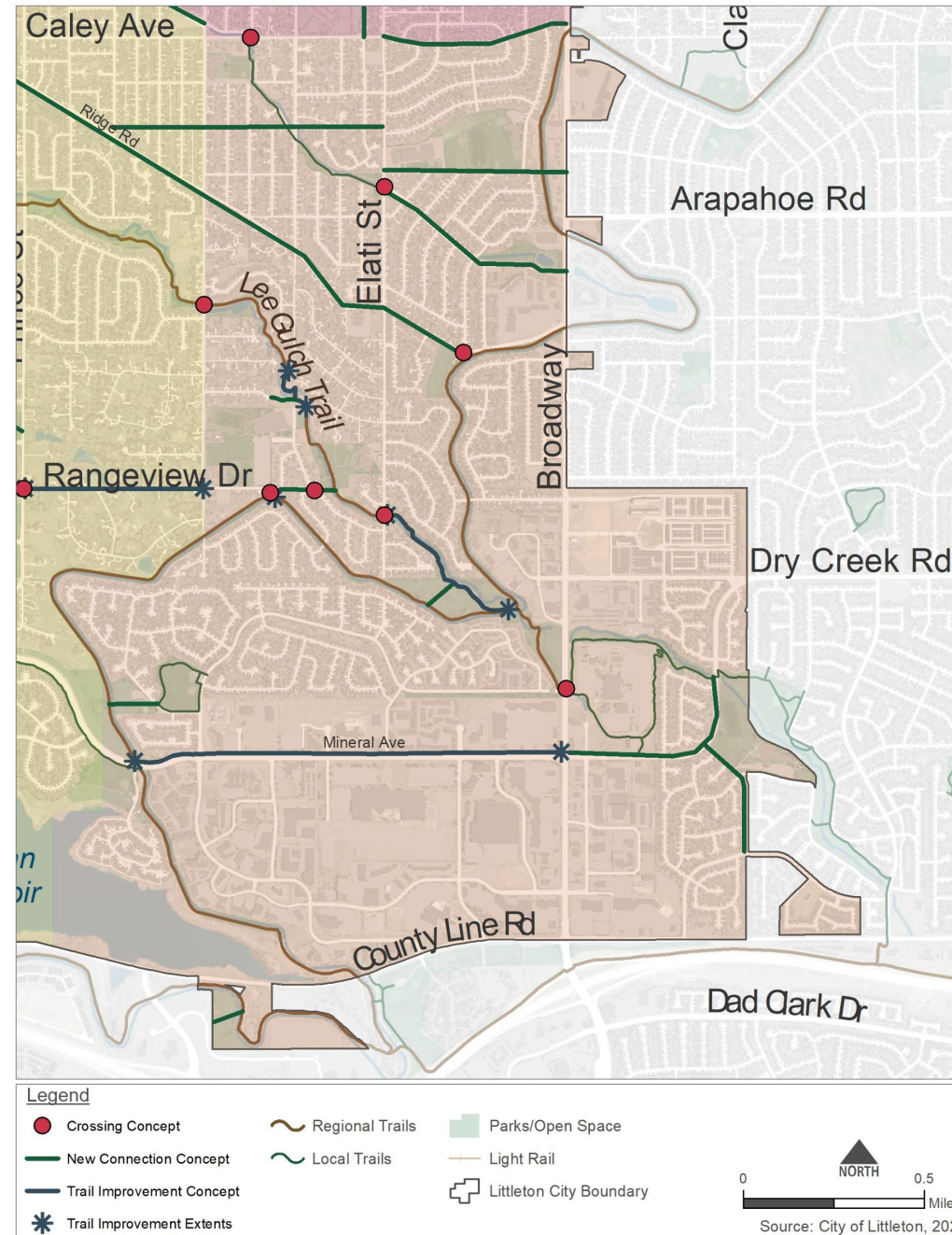
-  = Crossing Improvements
-  = New Trail Connections
-  = Existing Trail Improvements





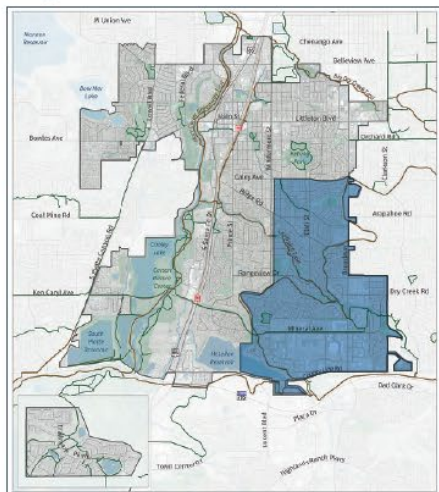
# DRAFT Improvement Concepts – District 3

- Crossing Improvements  
*7 concepts*
- Existing Trail Improvements  
*4 concepts*
- New Trail Connections  
*11 concepts*



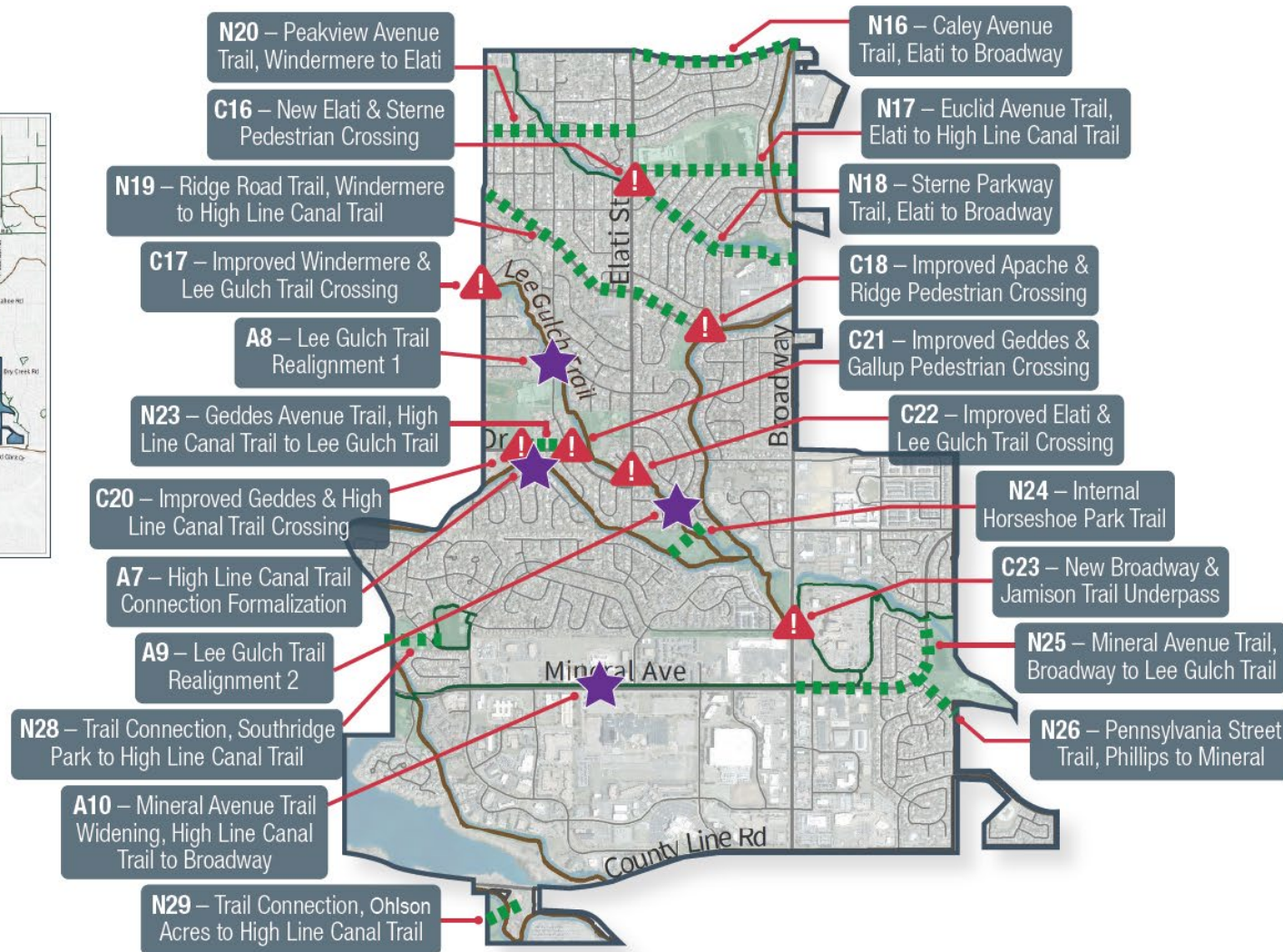
# DRAFT Improvement Concepts – District 3

## Key



## Legend

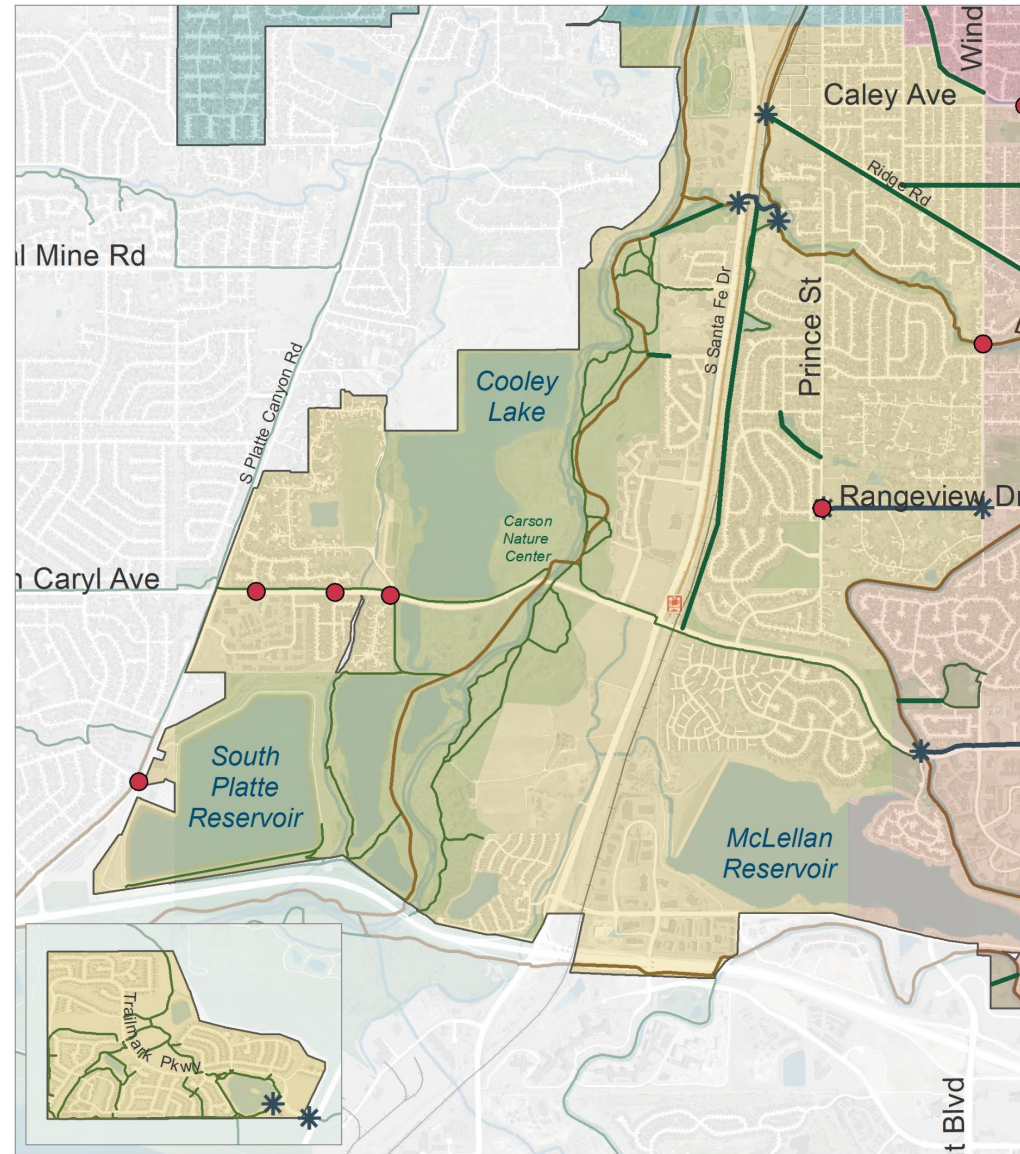
- = Crossing Improvements
- = New Trail Connections
- = Existing Trail Improvements





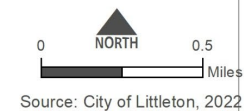
# DRAFT Improvement Concepts – District 4

- Crossing Improvements  
*5 concepts*
- Existing Trail Improvements  
*4 concepts*
- New Trail Connections  
*6 concepts*



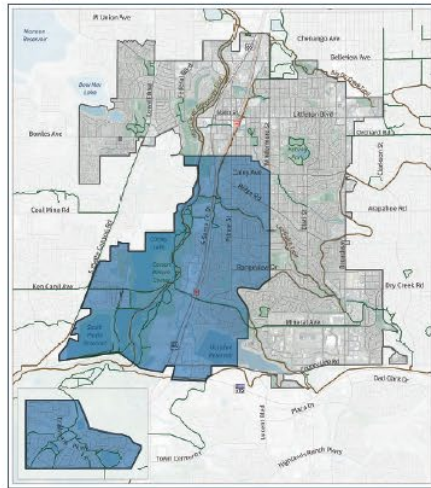
## Legend

- |                           |                         |                  |
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| Crossing Concept          | Regional Trails         | Parks/Open Space |
| New Connection Concept    | Local Trails            | Light Rail       |
| Trail Improvement Concept | Littleton City Boundary |                  |
| Trail Improvement Extents |                         |                  |



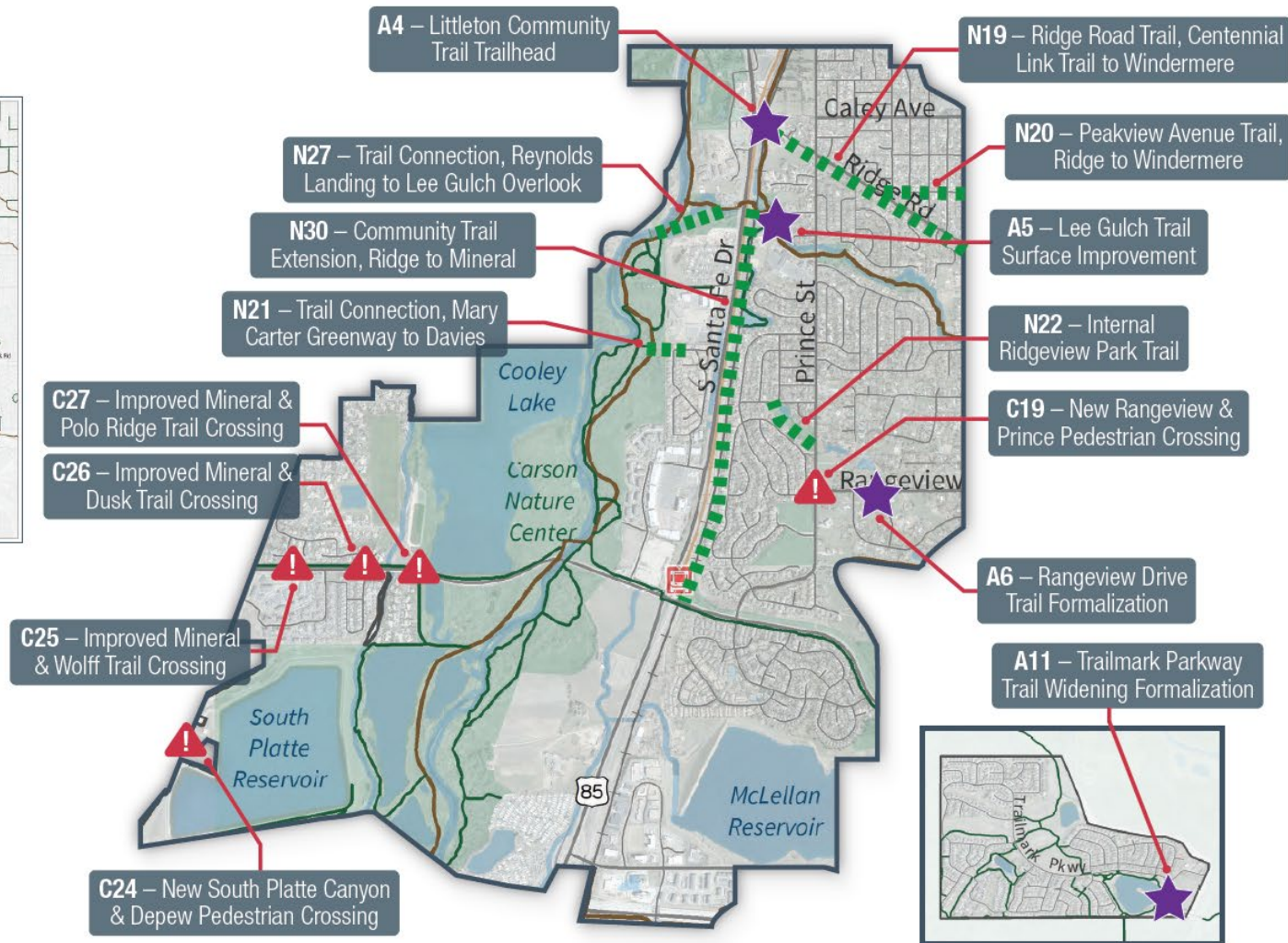
# DRAFT Improvement Concepts – District 4

**Key**



**Legend**

- = Crossing Improvements
- = New Trail Connections
- = Existing Trail Improvements





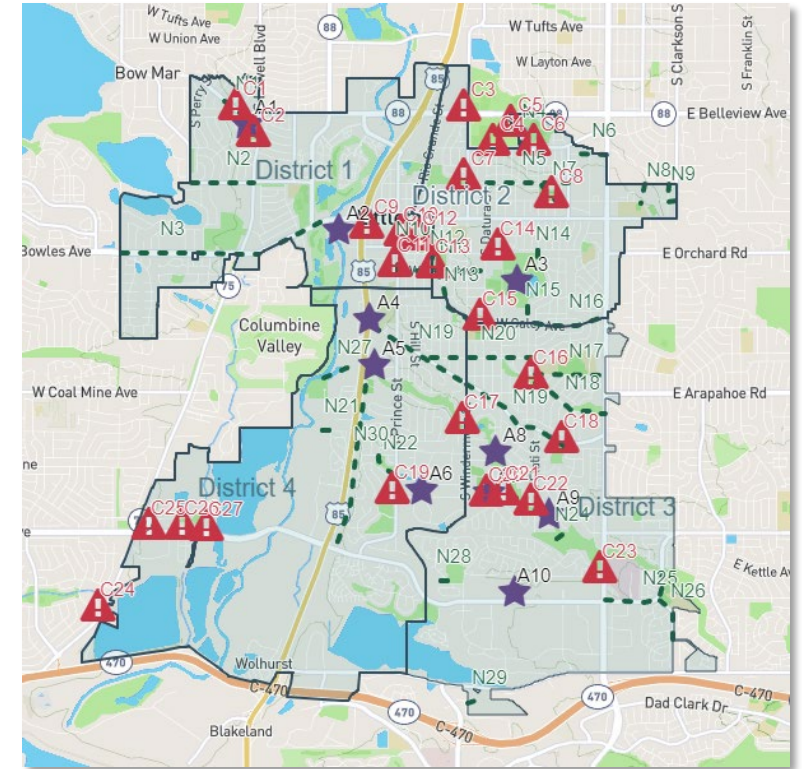


# Public Engagement – Phase 2

- Mix of in-person and virtual
  - Project page on Littleton’s website
  - In-person engagement centered on pop-up events
  - Virtual engagement centered on commenting maps
- Three primary phases
  - Phase 1 focused on input about the existing trail network
  - Phase 2 collected input on draft improvement concepts
  - Phase 3 will share the draft plan and prioritization results for review
- Social media, flyers, etc. being used to inform people

# Public Engagement – Phase 2

- Centered on maps of draft project recommendations
  - 80 survey responses and 25 additional comments
  
- Two in-person pop-up events:
  - Popsicles in the Park, Sterne Park
  - Littleton Meet, Greet, & Eat, Geneva Park

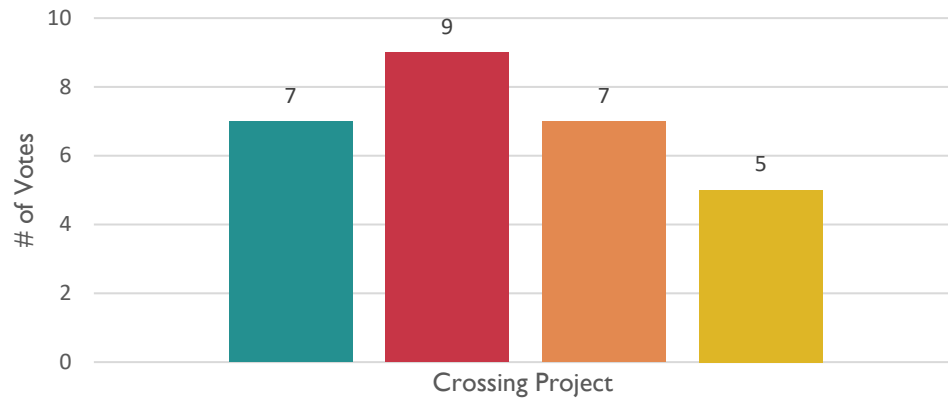






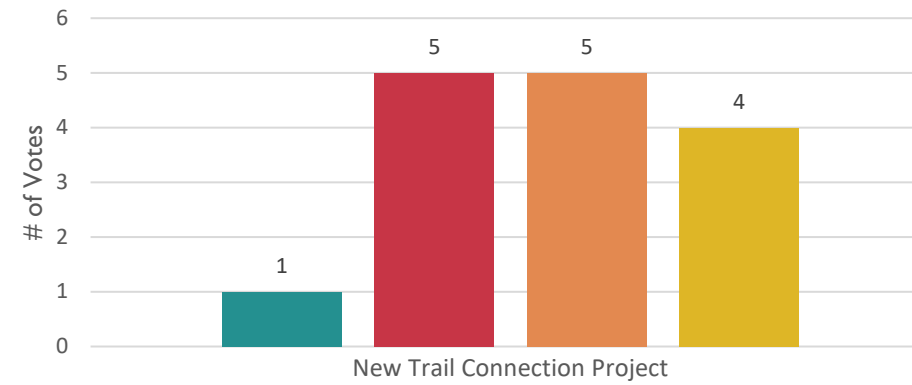
# Public Engagement – Phase 2

### District I Crossing Priorities



- C9 – Little's Creek Trail Crossing Improvements
- C10 – Littleton Downtown Station Railroad Trail Overpass
- C11 – Improved Prince & Lake Pedestrian Crossing
- C12 – New Midblock Bemis Pedestrian Crossing

### District I New Trail Connection Priorities

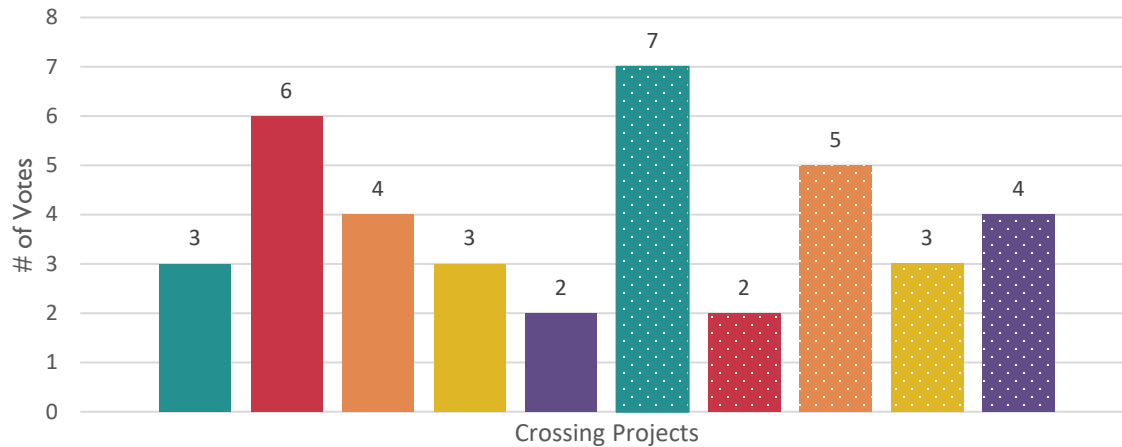


- N2 – Berry Avenue Trail, Bow Mar to Federal
- N3 – Bowles Avenue Trail, Sheridan to Santa Fe
- N10 – Prince Street Trail, Lake to Little's Creek Trail
- N11 – Lake Avenue Trail, Prince to Datura



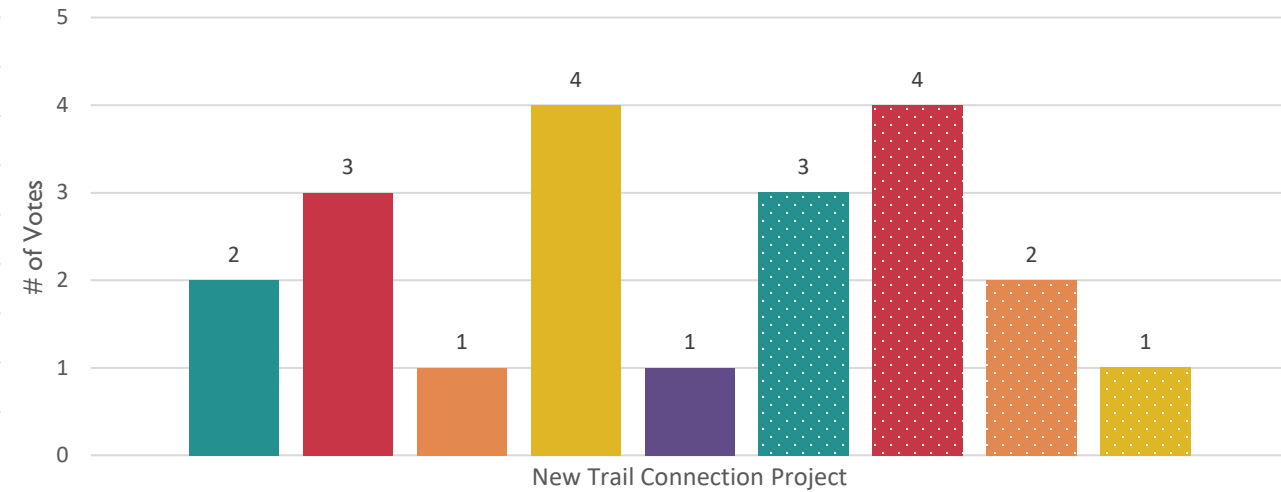
# Public Engagement – Phase 2

## District 2 Crossing Priorities



- C12 – New Midblock Bemis Pedestrian Crossing
- C3 – Improved Belleview & Windermere Trail Crossing
- C4 – New Prentice & Elmwood Pedestrian Crossing
- C5 – New Midblock Hickory Pedestrian Crossing
- C6 – New Prentice & Huron Pedestrian Crossing
- C7 – New Windermere & Berry Trail Crossing
- C8 – New Powers Park Pedestrian Crossing
- C13 – New Lake & Sterne Pedestrian Crossing
- C14 – New Sheppard & Gallup Pedestrian Crossing
- C15 – Improved Caley & Datura Trail Crossing

## District 2 New Trail Connection Priorities



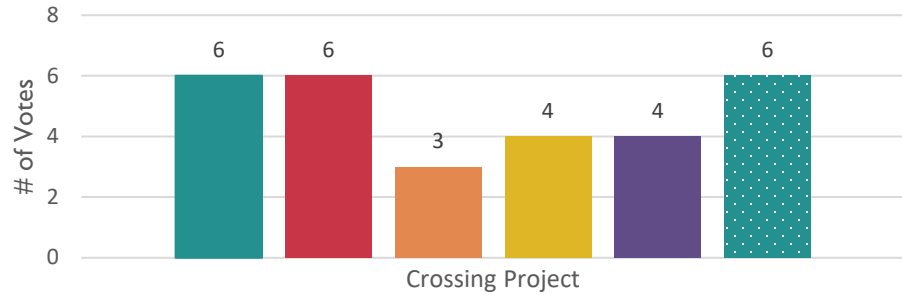
- N4 – Hickory Street Trail, Prentice to Big Dry Creek Trail
- N5 – Berry Avenue Trail, Windermere to Delaware
- N7 – Internal Powers Park Trail
- N8 – Trail Connection, Big Dry Creek Trail to Littleton High School
- N9 – Washington Street Trail, Big Dry Creek Trail to Clarkson Street
- N12 – Internal Sterne Park Trail (west side or through park)
- N13 – Sterne Parkway Trail, Windermere to Lake
- N15 – Lakeview Street Trail, Caley to Ketring Park
- N24 – Lakeview Street Trail, Ketring Park to Sheppard





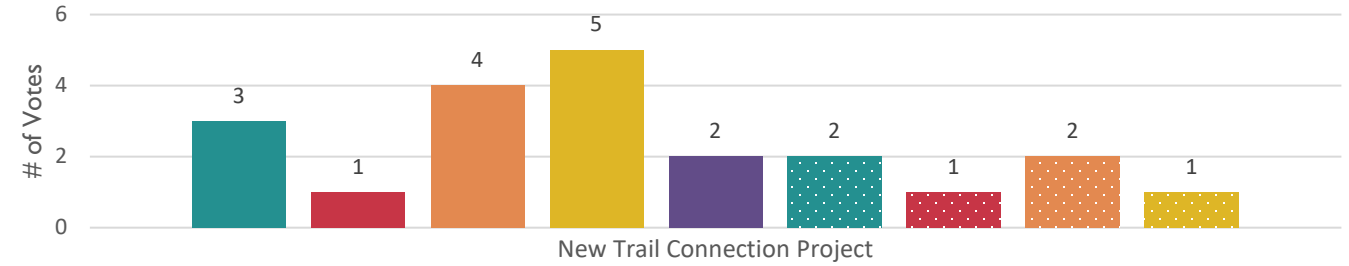
# Public Engagement – Phase 2

## District 3 Crossing Priorities



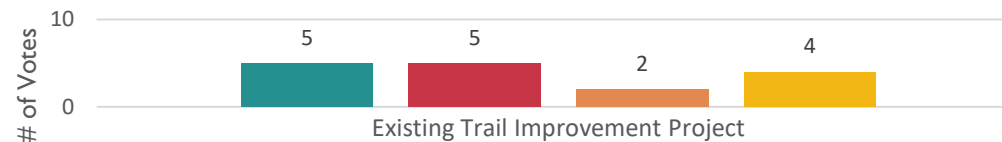
- C16 – New Sterne & Elati Pedestrian Crossing
- C17 – Improved Windermere & Lee Gulch Trail Crossing
- C18 – Improved Ridge & Apache Pedestrian Crossing
- C20 – Improved Geddes & High Line Canal Trail Crossing
- C22 – Improved Elati & Lee Gulch Trail Crossing
- C23 – New Broadway & Jamison Trail Underpass

## District 3 New Trail Connection Priorities



- N16 – Caley Avenue Trail, Elati to Broadway
- N17 – Euclid Avenue Trail, Elati to High Line Canal Trail
- N18 – Sterne Parkway Trail, Elati to Broadway
- N19 – Ridge Road Trail, Windermere to High Line Canal Trail
- N20 – Peakview Avenue Trail, Windermere to Elati
- N23 – Geddes Avenue Trail, High Line Canal Trail to Lee Gulch Trail
- N24 – Internal Horseshoe Park Trail
- N25 – Mineral Avenue Trail, Broadway to Lee Gulch Trail
- N29 – Trail Connection, Oldsen Acres to High Line Canal Trail

## District 3 Existing Trail Improvement Priorities

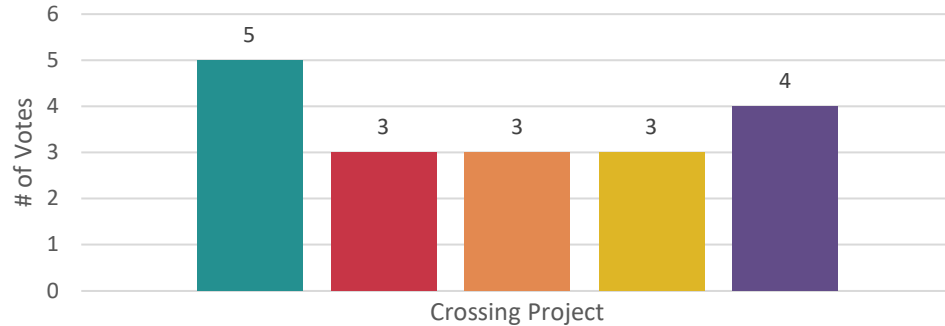


- A7 – High Line Canal Trail Connection Formalization
- A8 – Lee Gulch Trail Realignment 1
- A9 – Lee Gulch Trail Realignment 2
- A10 – Mineral Avenue Trail Widening, High Line Canal Trail to Broadway



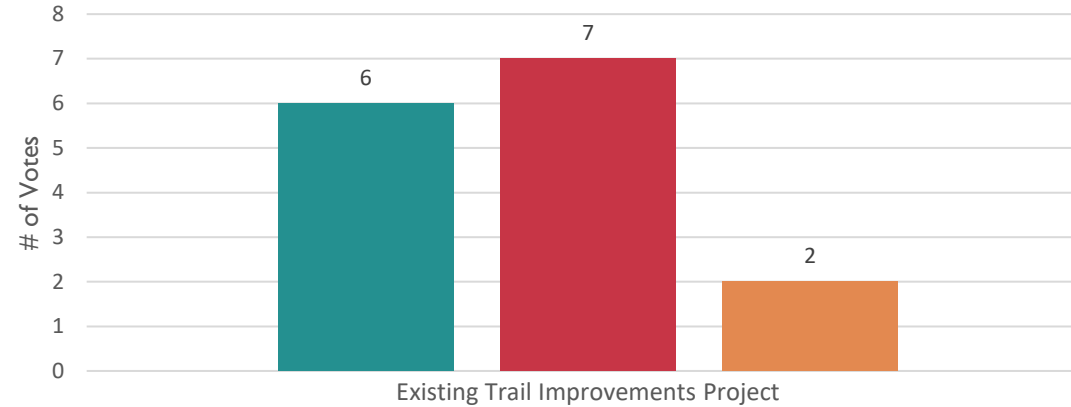
# Public Engagement – Phase 2

### District 4 Crossing Priorities



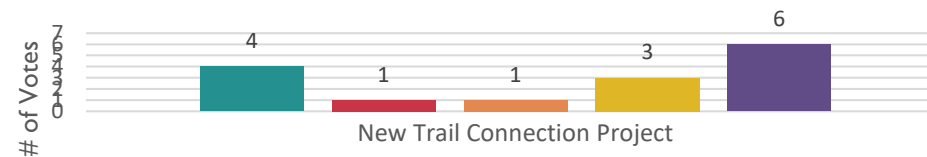
- C19 – New Prince & Rangeview Pedestrian Crossing
- C24 – New South Platte Canyon & Depew Pedestrian Crossing
- C25 – Improved Wolff & Mineral Trail Crossing
- C26 – Improved Dusk & Mineral Trail Crossing
- C27 – Improved Polo Ridge & Mineral Trail Crossing

### District 4 Existing Trail Improvement Priorities



- A4 – Littleton Community Trail Trailhead
- A5 – Lee Gulch Trail Surface Improvement
- A6 – Rangeview Drive Trail Formalization

### District 4 New Trail Connection Priorities



- N19 – Ridge Road Trail, Centennial Link Trail to Windermere
- N20 - Peakview Avenue Trail, Ridge to Windermere
- N21 - Trail Connection, Mary Carter Greenway to Davies
- N27 – Trail Connection, Reynolds Landing to Lee Gulch Overlook
- N30 – Community Trail Extension, Ridge to Mineral



# Concept Evaluation



- Framework based on the five project goals
  - *Connected, Safe, Accessible, Comfortable, Sustainable*
    - These are derived directly from the five Littleton TMP goals
  - Several quantitative variables identified for each factor to score individual concepts
  - Intent of evaluation is to inform concept prioritization
  - Weighting will be applied to factors

Littleton TMP Goal Framework





# Concept Evaluation

## ■ Preliminary Evaluation Criteria

- Connectivity to existing and planned bike/ped facilities
- Addition of trail or crossing where one does not exist
- Conflict improvement – safer crossings and wider trail facilities
- Number of nearby residents
- Number of accessibility issues addressed
- Proximity to equity communities
- Proximity to schools and parks
- Proximity to primary employment and commercial destinations
- Proximity to transit
- Right-of-way impacts
- Relative costs





# Next Steps

- Concept evaluation and scoring
- Concept prioritization within the three categories
- Conceptual design of priority improvements
- Development of draft and final study summary report
  - Project completion slated for late September/early October 2023



# DRAFT

## Littleton Linkages Improvement Concepts

### Trail Crossings

- + C1 – Belleview & Michigan Pedestrian Crossing
  - ▶ Install a formal pedestrian crossing along the west leg of the intersection, including at minimum ADA ramps at both corners and crosswalk striping.
  
- + C2 – Improved Lowell & Arrowhead/Aksarben Crossing
  - ▶ Improve the existing pedestrian crossing, including at a minimum ADA ramps and better signage.
  
- + C3 – Improved Belleview & Windermere Crossing
  - ▶ Implement pedestrian safety improvements at the intersection.
  
- + C4 – Prentice & Elmwood Pedestrian Crossing
  - ▶ Install a formal pedestrian crossing along the west and/or east leg of the intersection, including at a minimum ADA ramps at both corners and crosswalk striping.
  
- + C5 – Hickory Midblock Crossing
  - ▶ Install a formal pedestrian crossing aligned with the existing Progress Park access road, including ADA ramps, formal trail connections to both Progress Park and Cornerstone Park, and a pedestrian beacon.
  
- + C6 – Prentice & Huron Pedestrian Crossing
  - ▶ Install a formal pedestrian crossing along the east leg of the intersection, including at a minimum ADA ramps, bulb-outs, crosswalk striping, and a sidewalk connection between Prentice and the Big Dry Creek Trail.
  
- + C7 – Windermere & Berry Pedestrian Crossing
  - ▶ Install a pedestrian crossing along the south leg of the intersection, including at a minimum ADA ramps and crosswalk striping.





- + C8 – Powers Park Pedestrian Crossing
  - ▶ Install a formal pedestrian crossing along the west leg of the Fox Street intersection, including at a minimum ADA ramps, crosswalk striping, and a bulb-out.
  
- + C9 – Improved Littles Creek Trail Crossings
  - ▶ Install raised crosswalks where the Littles Creek Trail crosses Curtice and Rapp.
  
- + C10 – Littleton Downtown Station Railroad Trail Overpass
  - ▶ Adapt the drainage structure over the railroad south of Littleton/Downtown Station to include a bicycle & pedestrian overpass connecting the Littleton Community Trail with Littles Creek Trail.
  
- + C11 – Improved Prince & Lake Pedestrian Crossing
  - ▶ Improve the existing pedestrian crossing, including at a minimum ADA ramps.
  
- + C12 – Bemis Midblock Crossing
  - ▶ Install a formal pedestrian crossing north of the Rose Garden parking lot access, including ADA ramps and a pedestrian beacon.
    - May require access modifications
  
- + C13 – Lake & Sterne Pedestrian Crossing
  - ▶ Install a formal pedestrian crossing along the east leg of the intersection, including at a minimum ADA ramps, bulb-outs, and connecting sidewalk improvements.
  
- + C14 –Gallup & Shepperd Pedestrian Crossing
  - ▶ Install a formal pedestrian crossing along the south leg of the intersection, including at a minimum ADA ramps and a bulb-out on the west side.
  
- + C15 – Improved Caley & Datura Crossing
  - ▶ Improve the existing pedestrian crossing, including ADA ramps, bulb-outs, and access modifications to Sterne on the north side.



- + C16 – Elati & Sterne Pedestrian Crossing
  - ▶ Install a formal pedestrian crossing along the south leg of the intersection, including at a minimum ADA ramps and crosswalk striping.
  
- + C17 – Improved Windermere & Lee Gulch Trail Crossing
  - ▶ Improve the existing pedestrian crossing with a pedestrian beacon and sturdier bulb-outs.
  
- + C18 – Improved Ridge & Apache Pedestrian Crossing
  - ▶ Improve the existing pedestrian crossings with ADA ramps and bulb-outs on north intersection corners.
  
- + C19 – Improved Prince & Rangeview Pedestrian Crossing
  - ▶ Improve the existing pedestrian crossing, including at a minimum ADA ramps.
  
- + C20 – Improved Geddes & HLC Trail Crossing
  - ▶ Improve the existing pedestrian crossing with a raised crosswalk or bulb-outs and ADA ramps.
  
- + C21 – Improved Geddes & Gallup Pedestrian Crossing
  - ▶ Shift the existing pedestrian crossing east to align with the existing trail connection.
  
- + C22 – Improved Elati & Lee Gulch Trail Crossing
  - ▶ Improve the existing pedestrian crossing with a pedestrian beacon.
  
- + C23 – Broadway & Jamison Trail Underpass
  - ▶ Install a trail underpass of Broadway aligned with Lee Gulch Trail just north of the hospital access road.
  
- + C24 – Trail crossing at South Platte Canyon & Depew
  - ▶ Install a formal pedestrian crossing along the north leg of the intersection, including a refuge space in the existing median island, ADA ramps, and a pedestrian beacon.





+ C25 – Improved Wolff & Mineral Crossing

- ▶ Improve the existing pedestrian crossing with curb radii, ramp, and striping improvements.

+ C26 – Improved Dusk & Mineral Crossing

- ▶ Improve the existing pedestrian crossing with curb radii, ramp, and striping improvements.

+ C27 – Improved Polo Ridge & Mineral Crossing

- ▶ Improve the existing pedestrian crossing with curb radii, ramp, and striping improvements.



## New Trail Connections

- + N1 – James Taylor Park/Harlow Park Trail
  - ▶ Construct a concrete trail along the north/east edge the parks, generally parallel to Belleview, between Meade and Lowell.
  
- + N2 – Berry Avenue, Bow Mar to Federal
  - ▶ Construct a multi-use concrete trail along the south side of Berry between Bow Mar and Lowell, and between Julian and Federal.
  
- + N3 – Bowles Avenue, Sheridan to Santa Fe
  - ▶ Construct a multi-use detached concrete trail along the south side of Bowles Avenue.
  
- + N4 – Hickory Street, Prentice to Big Dry Creek Trail
  - ▶ Construct a multi-use concrete trail along the east side of Hickory between Prentice and the SSPRD access road, and along the access road between Hickory and the Big Dry Creek Trail.
  
- + N5 – Berry Avenue, Windermere to Delaware
  - ▶ Construct a multi-use concrete trail along the south side of Berry between Windermere and Delaware.
  
- + N6 – Rafferty Gardens Avenue, Delaware to Broadway
  - ▶ Construct a multi-use concrete trail along the south side of Rafferty Gardens between Delaware and Broadway. Include a crossing of Rafferty Gardens to access Big Dry Creek Trail.
  
- + N7 – Powers Park Trail
  - ▶ Widen the sidewalk along the west edge of Powers Park and construct a concrete or asphalt connection through the park.



- + N8 – Trail Connection, Big Dry Creek Trail to Littleton High School
  - ▶ Construct a concrete trail connection between the Big Dry Creek Trail and Powers along the south edge of the LHS sports fields.
    - Would require a new bridge over Big Dry Creek
  
- + N9 – Washington Street/Littleton Boulevard, Big Dry Creek Trail to Clarkson Street
  - ▶ Construct an multi-use concrete trail along the east side of Washington and the south side of Littleton Boulevard to connection the trailhead with Clarkson Street.
  
- + N10 – Prince Street, Lake to Little’s Creek
  - ▶ Construct an multi-use concrete trail along the west side of Prince.
  
- + N11 – Lake Avenue, Prince to Datura
  - ▶ Construct an multi-use concrete trail along the north side of Lake.
  
- + N12 – Sterne Park Trail
  - ▶ Construct a concrete or asphalt trail through the south portion of Sterne Park (along the west side) between the parking lot/playground and Lake.
  
- + N13 – Sterne Parkway, Windermere to Lake
  - ▶ Construct an multi-use concrete trail along the north side of Sterne Parkway.
  
- + N14 – Lakeview Street, Ketring Park to Shepperd Avenue
  - ▶ Construct a multi-use concrete trail along the west side of Lakeview.
  
- + N15 – Lakeview Street, Caley to Ketring Park
  - ▶ Construct a multi-use concrete trail along the east side of Lakeview.
  
- + N16 – Caley Avenue, Elati to Broadway/High Line Canal
  - ▶ Construct a multi-use concrete trail along the north side of Caley.





- + N17 – Euclid Avenue, Elati to High Line Canal/Broadway
  - ▶ Construct a multi-use concrete trail along the north side of Euclid.
  
- + N18 – Sterne Parkway, Elati to Broadway
  - ▶ Construct a multi-use concrete trail along the south side of Sterne Parkway.
  
- + N19 – Ridge Road, Centennial Link Trail to High Line Canal
  - ▶ Construct a multi-use concrete trail along the south side of Ridge Road.
  
- + N20 – Peakview Avenue, Ridge to Elati
  - ▶ Construct a multi-use concrete trail along the south side of Peakview.
  
- + N21 – Trail Connection, Mary Carter Greenway to Davies
  - ▶ Formalize the existing unpaved trail connection with concrete paving.
  
- + N22 – Ridgeview Park Trail
  - ▶ Construct a trail connection through Ridgeview Park parallel to the drainage channel between Rowland and Prince.
  
- + N23 – Trail Connection, Meadowbrook to Lee Gulch Trail
  - ▶ Formalize the existing unpaved travel connection between the Meadowbrook Road cul-de-sac and Lee Gulch Trail with concrete or asphalt paving.
  
- + N24 – Geddes Avenue, High Line Canal to Lee Gulch Trail
  - ▶ Construct a multi-use concrete trail along the south side of Geddes between the High Line Canal and Lee Gulch Trail accesses.
  
- + N25 – Horseshoe Park Trail
  - ▶ Formalize the existing footpath through Horseshoe Park between Lee Gulch and High Line Canal with crusher fines.
  
- + N26 – Mineral Avenue, Broadway to Lee Gulch Trail
  - ▶ Construct a multi-use detached concrete trail along the south or both sides of Mineral.



- + N27 – Pennsylvania Street, Phillips to Mineral
  - ▶ Construct a multi-use concrete trail along the east side of Pennsylvania.
  
- + N28 – Trail Connection, Reynolds Landing to Lee Gulch Overlook
  - ▶ Construct a trail connection between Lee Gulch Overlook and Reynold’s Landing along the east edge of the pond.
  
- + N29 – Trail Connection, Southridge Park to High Line Canal Trail
  - ▶ Construct an improved trail connection between High Line Canal and Prescott, including replacement of the existing bridge.
  
- + N30 – Trail Connection, Olhson Acres to High Line Canal Trail
  - ▶ Construct a connection (including a bridge) to the High Line Canal Trail from new planned development off of Plum Valley Lane.
    - Implement concurrently with development
  
- + N31 – Littleton Community Trail Extension, Euclid to Mineral
  - ▶ Extend the Littleton Community Trail south from it’s current terminus near Euclid to Mineral.



## Existing Trail Improvements

- + A1 – Harlow Park Trail Widening
  - ▶ Widen the sidewalks along the edges of Harlow Park.
  
- + A2 – Little’s Creek Trail Realignment
  - ▶ Reconstruct the trail alignment south and east of DISH Network to have smoother curvature.
  
- + A3 – Ketring Park Trail Widening & Formalization
  - ▶ Replace the existing trail along the south and west sides of Ketring Lake with wider concrete.
  
- + A4 – Littleton Community Trail Trailhead
  - ▶ Construct a trail head with amenities for Littleton Community Trail users at the west end of Ridge Road.
  
- + A5 – Lee Gulch Surface Improvements
  - ▶ Reconstruct the trail alignment between Lower Ridgewood Park and Lee Gulch Overlook with concrete.
  
- + A6 – Rangeview Drive Trail Formalization
  - ▶ Formalize the existing asphalt trail along the north side of Rangeview between Prince and Windermere with concrete.
  
- + A7 – High Line Canal Trail Connection Easement
  - ▶ Formalize the existing connection to the High Line Canal Trail through Footbridge Park by acquiring an easement.
  
- + A8 – Lee Gulch Trail Alignment Improvement 1
  - ▶ Reconstruct parts of the trail alignment between Ashbaugh Park and Carbone Park to have smoother curvature.





- + A9 – Lee Gulch Trail Alignment Improvement 2
  - ▶ Reconstruct the trail alignment between Elati Street and the High Line Canal, including the existing drainage crossings, to be smoother.
  
- + A10 – Mineral Avenue Trail Widening & Intersection Improvements
  - ▶ Widen the concrete trail along the north side of Mineral Avenue between High Line Canal and Broadway, and implement pedestrian crossing improvements at the major street crossings.
  
- + A11 – Trailmark Parkway Trail Widening
  - ▶ Widen the trail connection along Trailmark Parkway between Carr Way and Wadsworth Boulevard.