



# Cottonwood Heights

## Bonneville Shoreline Trail - Trailhead and Access Plan

September 2020



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# acknowledgements

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# CHAPTER ONE | INTRODUCTION & SUMMARY

THE BONNEVILLE SHORELINE TRAIL (BST) IS A LONG-ENVISIONED TRAIL SYSTEM PLANNED TO EXTEND OVER 280 MILES ALONG THE WASATCH FRONT AND CONNECT COMMUNITIES FROM LOGAN TO NEPHI. THE PROPOSED BST ALIGNMENT RUNS ALONG THE EASTERN BOUNDARY OF COTTONWOOD HEIGHTS CITY, AND THOUGH MANY MILES OF THIS TRAIL HAVE BEEN BUILT IN NEIGHBORING JURISDICTIONS, CURRENTLY NO FINISHED SECTIONS OF THE BST EXIST IN COTTONWOOD HEIGHTS. THE PURPOSE OF THIS MASTER PLAN IS TO IDENTIFY AND PRIORITIZE ACCESS POINTS TO THE BST WHEN IT IS CONSTRUCTED.

## 1.1 - INTRODUCTION & PURPOSE

Settled within the foothills of the Wasatch Mountain Range and between two of the most prominent and popular canyons within the Salt Lake Valley, Cottonwood Heights City (the City) is perfectly situated to provide access to miles of recreational trails and to the natural amenities that the mountains provide. Recognizing the importance of providing safe, controlled, and appropriate access to these amenities, the City has placed a renewed priority on beginning construction and implementation of the Bonneville Shoreline Trail (BST) within and adjacent to City limits. (see [Figure 1.1 - Bonneville Shoreline Trail](#)) Along with that comes the need to identify the most appropriate and viable trail access points, which is the purpose and goal of this master plan document.

Recent events have only emphasized the need and desire for activities that allow people to recreate and engage with nature individually or in small groups. Some municipalities have seen trail usage increase 200-400% in 2020 compared to previous years.

## 1.2 - EXECUTIVE SUMMARY

This Trailhead and Access Plan documents the existing conditions analysis; the needs assessment component of the project; establishes plan goals and objectives; recommends varying types and locations of trailheads and access points; and provides preliminary estimates of construction costs for budgeting purposes.

### 1.2.1 - EXISTING CONDITIONS ANALYSIS

Existing conditions of possible BST access points within City boundaries were analyzed in a variety of ways. Aerial and GIS information provided by the City were used to perform a high level accessibility, spacial, ownership, and topographical analysis. The proposed BST alignment was documented and considered. Existing and proposed development within the area was also considered. Additionally, site visits were performed to provide verification and more in depth “on-the-ground” analysis. (see [Figure 1.2 - Existing Aerial](#) and [Figures 1.3.1 - 1.3.5 Enlargements One through Five](#))

In summary, existing conditions are favorable to the selection and development of different types of trail access points along the City limits. Major constraints to be dealt with include property access/ownership; proximity to existing residences; and existing topography.

### 1.2.2 - NEEDS ASSESSMENT

A multi-faceted approach was taken to identify needs, desires and necessary improvements as they pertain to BST trailheads and access points. This process included meeting regularly with a City steering committee; meeting with the Cottonwood Heights Parks, Trails and Open Space Committee; performing a comparative analysis with other similar Wasatch Front communities; and engaging the public through a community open house. This assessment

was further informed and supported by previous planning and studies that the City has performed.

As construction of the BST through the City is just getting started and thereby no formalized access points to the BST currently exist, the greatest identified needs are to construct the BST and then to provide legal and safe access points to the trail.

Based on the existing access points to the existing trails (non-BST) in the area, it is clear that popularity and usage outweigh the current access provisions and facilities.

### 1.2.3 - GOALS AND OBJECTIVES

As informed by the needs assessment task of this plan, preliminary goals and objectives were established, reviewed by the City steering committee, refined, and then presented at the Community Open House. These goals and objectives represent the essence of the City's desires and intents for access to the BST.

**GOAL 1.0 | IDENTIFY AND PROVIDE SUFFICIENT AND EFFECTIVELY LOCATED REGIONAL, SECONDARY, AND LOCAL ACCESS POINTS TO THE BONNEVILLE SHORELINE TRAIL WITHIN COTTONWOOD HEIGHTS' CITY LIMITS THAT PROVIDE GOOD CONNECTIVITY TO THE WASATCH FRONT MOUNTAINS AND NATURAL AREAS.**

**OBJECTIVE 1.1:** Provide trailhead access points that are safe and accessible to all ages and abilities.

**OBJECTIVE 1.2:** Provide a minimum of two regional access points, at least one per four miles of trail.

**OBJECTIVE 1.3:** Provide A Minimum Of Three Local Access Points, At Least One Per Mile Of Trail.

**OBJECTIVE 1.4:** Identify Cost Estimates And Sufficient Funding Opportunities For All Trail Access Development.

**OBJECTIVE 1.5:** Prioritize And Identify Phasing Of Regional And Local Access Points.

**OBJECTIVE 1.6:** Identify and pursue local, regional, state, and national funding opportunities to achieve plan goals and objectives.

**GOAL 2.0 | PROVIDE WELL DESIGNED REGIONAL, SECONDARY, AND LOCAL ACCESS POINTS TO THE BONNEVILLE SHORELINE TRAIL WITHIN COTTONWOOD HEIGHTS' CITY LIMITS THAT HAVE APPROPRIATE WAYFINDING, AMENITIES, AND INTERPRETIVE ELEMENTS.**

**OBJECTIVE 2.1:** Provide clear trailhead and trail signage that allows for sufficient wayfinding and information to orient and direct all trails users, including trail etiquette and regulatory signage.

**OBJECTIVE 2.2:** Provide interpretive signage at trail

access points to interpret the natural environment including vegetation, wildlife, history, water resources, and geologic features.

**OBJECTIVE 2.3:** Provide restrooms, tables, benches, waste receptacles, pavilions, drinking fountains, bike repair stations, dog waste dispensers, and other appropriate amenities at trail access points.

### 1.2.4 - RECOMMENDATIONS

Based upon the existing conditions analysis and the needs assessment process, three types of recommended access points are proposed: Regional Trailhead, Secondary Access, and Local Access. (*see Figure 1.3 - Bonneville Shoreline Trail Access Plan*)

#### REGIONAL TRAILHEADS

These are primary accesses to the BST located at key points along the trail with significant amenities and meaningful parking. These trailheads would serve regional, community, and local trail users. Two new locations are proposed: one at the existing gravel pit at the northeast corner of the Wasatch Drive and Big Cottonwood Canyon Road; and one on Prospector Drive just down the hill and west of the existing Ferguson Canyon Trailhead. The existing Little Cottonwood Canyon Park and Ride is recognized as a third possible regional trailhead once the Bonneville Shoreline Trail is constructed through this area, though this parking lot is more than half a mile south of the City's boundary.

#### SECONDARY ACCESS

Secondary access points are accesses that may serve community and local trail use, as well as some regional use, though due to spatial constraints, location or other considerations, amenities and parking may be limited. Two locations are proposed: one up Big Cottonwood Canyon at an existing pull off on the south side of Big Cottonwood Road; and one just east of Wasatch Drive at the City's southern boundary. .

#### LOCAL ACCESS

Local access points are located within individual neighborhoods with very limited amenities and limited parking (if any). These are primarily for neighborhood residents and meant to be accessed by foot or bicycle. Three local access points are recommended. The plan shows five possible locations: one at the end of Mountain Cove Circle; one at the end of 8335 South; one at the end of Golden Oaks Drive; one at the southern end of King Hills Drive; and one from the cul-de-sac at the end of King Hills Place. These identified locations offer the City options to consider when the opportunity is presented to develop a local access point. Not all of these are required nor recommended.

### **1.2.5 - PRELIMINARY COST ESTIMATES**

To facilitate City funding and budgets and to assist in fundraising opportunities, preliminary construction cost estimates have been provided for both the specific and typical access improvements identified.

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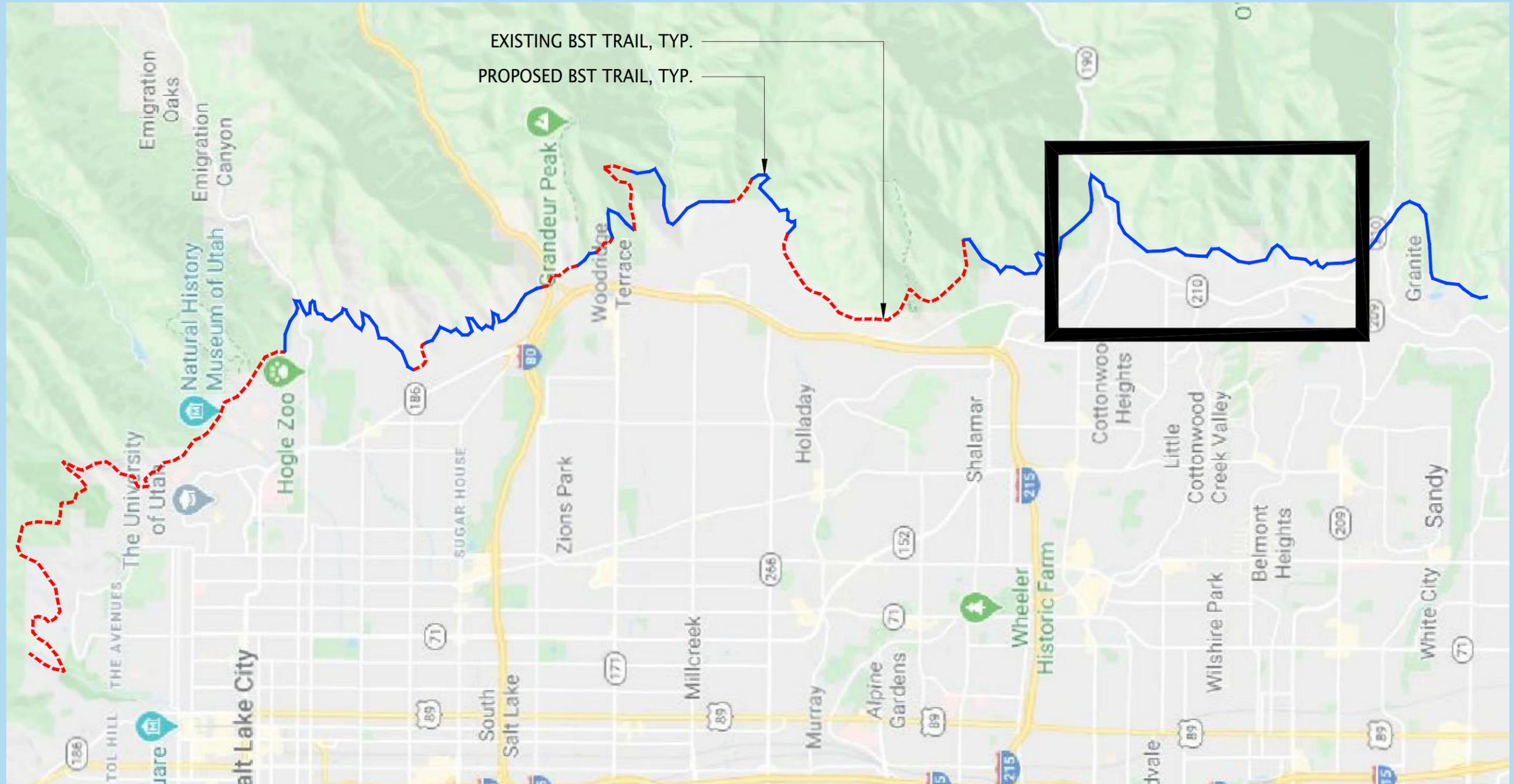
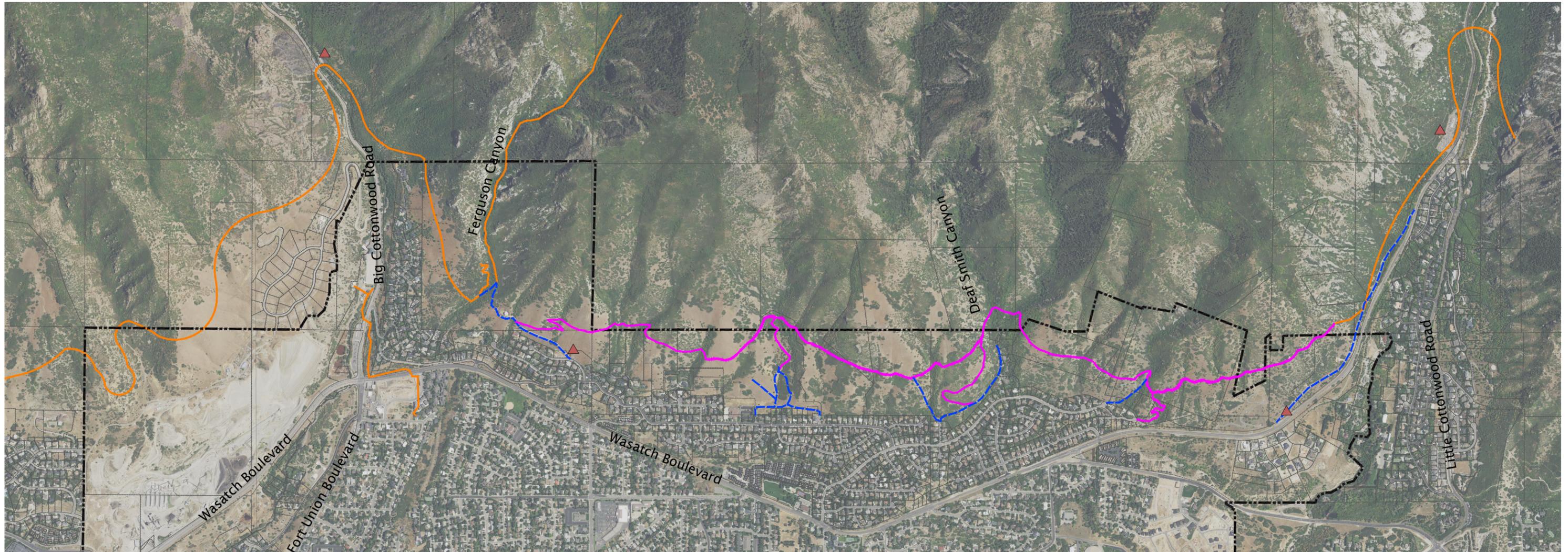


FIGURE 1.2 - EXISTING AERIAL

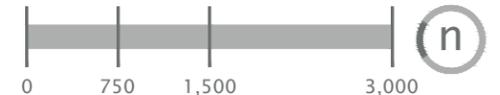


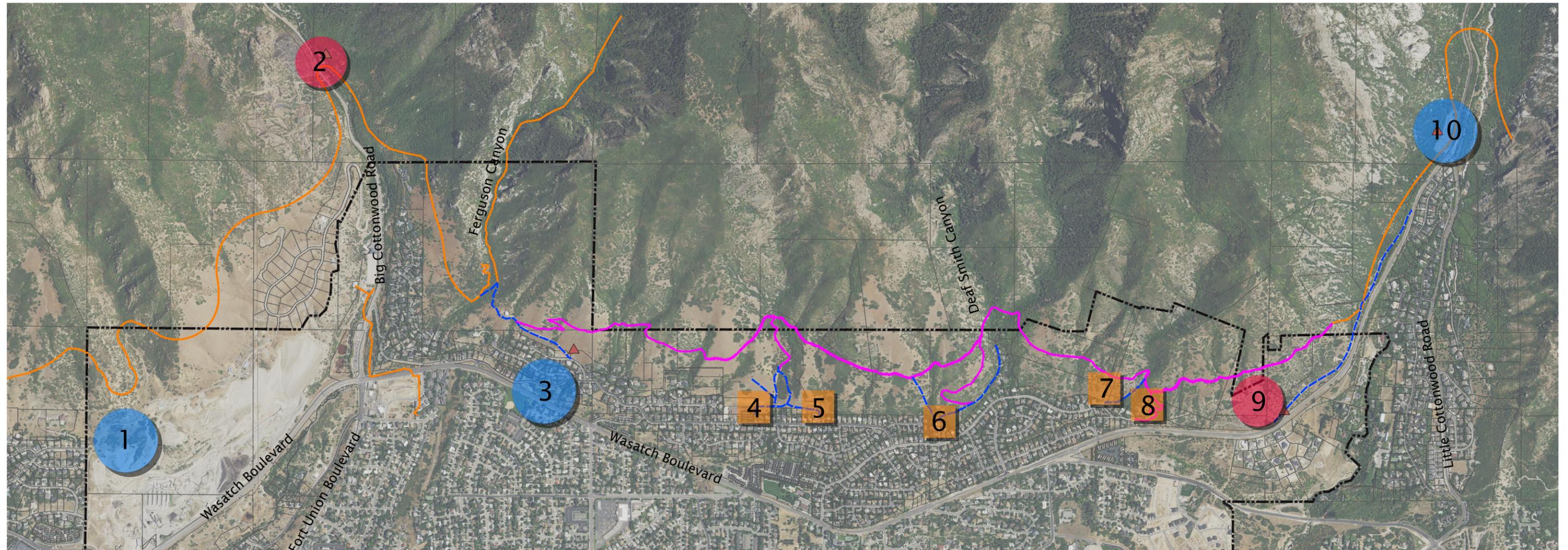
**LEGEND**

- - - Existing Trail
- Proposed Trail (CH)
- Proposed Trail (BST)
- ▲ Existing Trailhead
- Cottonwood Heights City Boundary



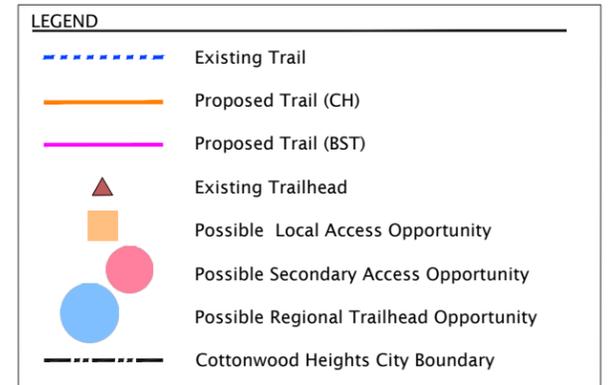
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Recommended Accesses:

- Three Regional Trailheads (Sites #1, #3, and #10)
- Two Secondary Accesses (Sites #2 and #9)
- Three Local Accesses (Selected from Sites #4-8)

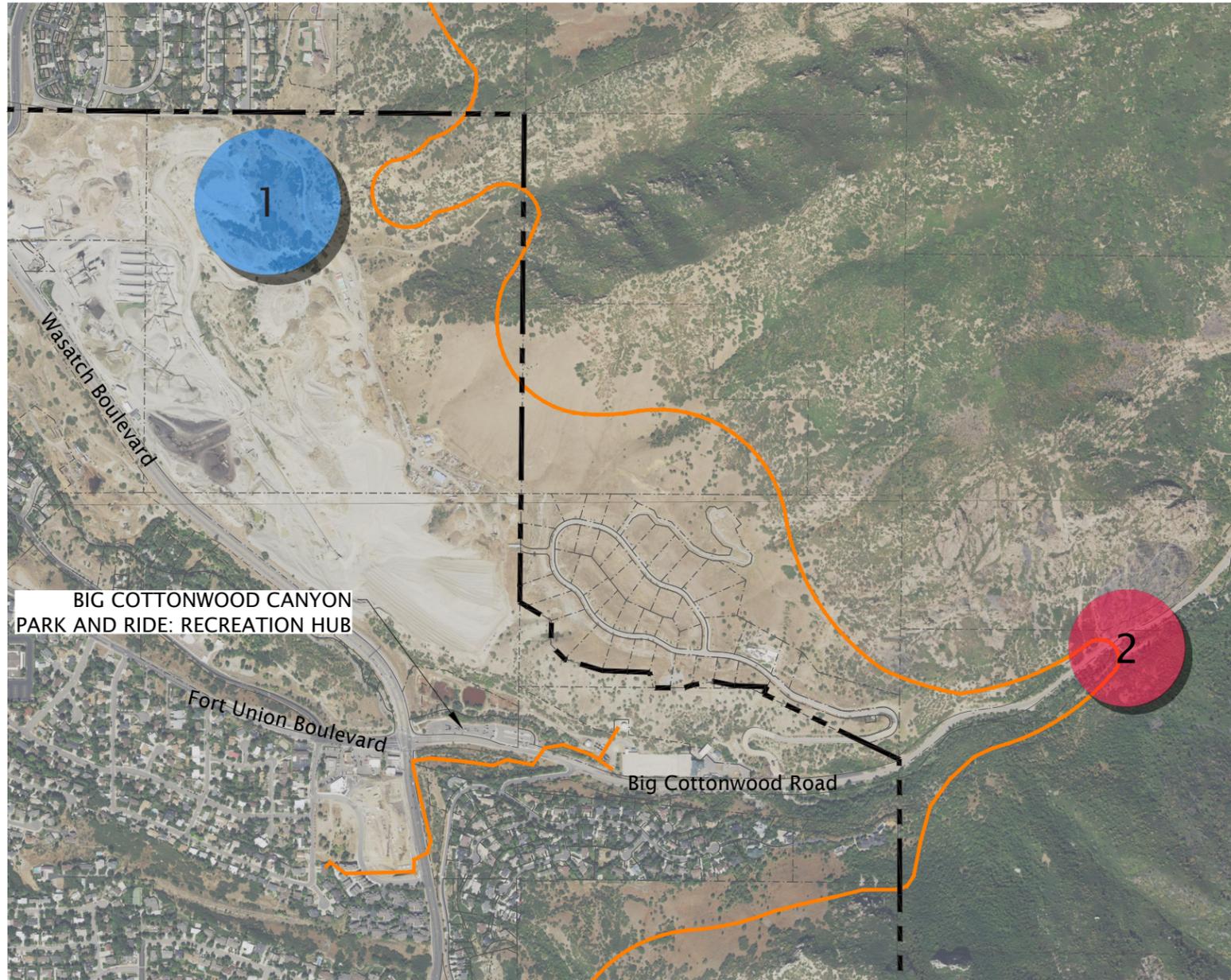


Bonneville Shoreline Trail Access Plan

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FIGURE 1.3.1 - ENLARGEMENT ONE



1. GRAVEL PIT: REGIONAL OPPORTUNITY

OPPORTUNITIES:

- No Existing Development
- Can Plan for Large Parking Lot/Access
- Expected Recreational Hub

CONSTRAINTS:

- Timing of Development
- Limited Existing Vegetation
- Significant Slopes



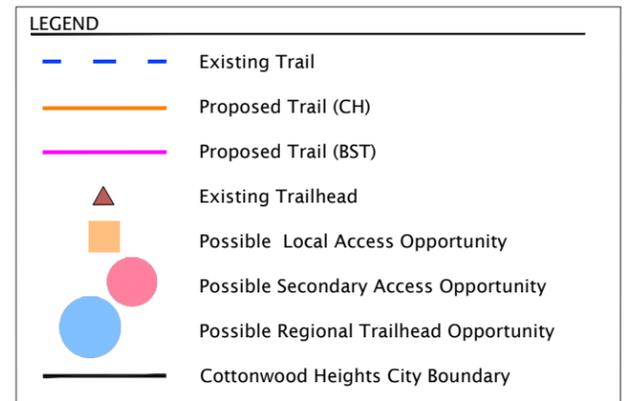
2. BIG COTTONWOOD CANYON PULL OFF: SECONDARY ACCESS OPPORTUNITY

OPPORTUNITIES:

- Existing Parking Lot and Access
- Visible and Easily Accessible
- Along Proposed BST Alignment
- Forest Service

CONSTRAINTS:

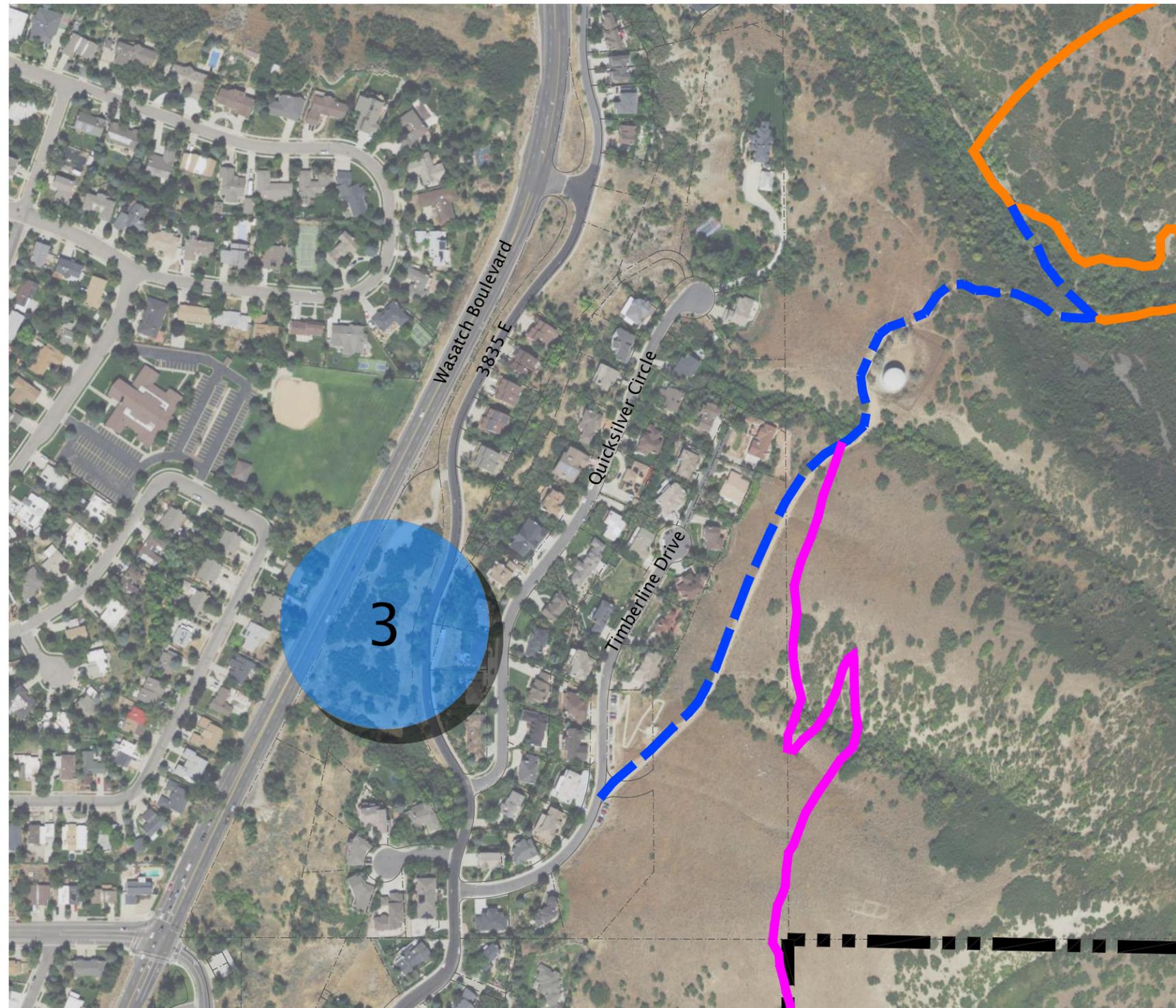
- Limited Space
- No Existing Crossing



BST Access Plan | Enlargement One

09.30.2020





3. FERGUSON CANYON OVERFLOW: REGIONAL OPPORTUNITY

OPPORTUNITIES:

- Available Land (Salt Lake County)
- Easily Accessible from Wasatch
- Within 1/4 Mile of Existing Trailhead
- At Periphery of Neighborhood
- Possible Connection to Shared Use Path on Wasatch

CONSTRAINTS:

- 1/4 Mile Hike to Existing Trailhead Through Neighborhood
- Additional Wayfinding Needed

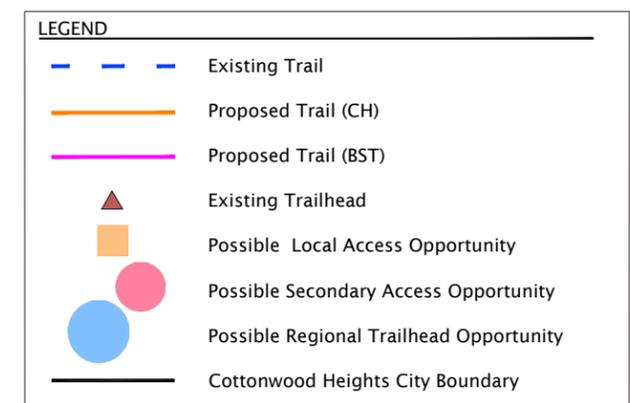
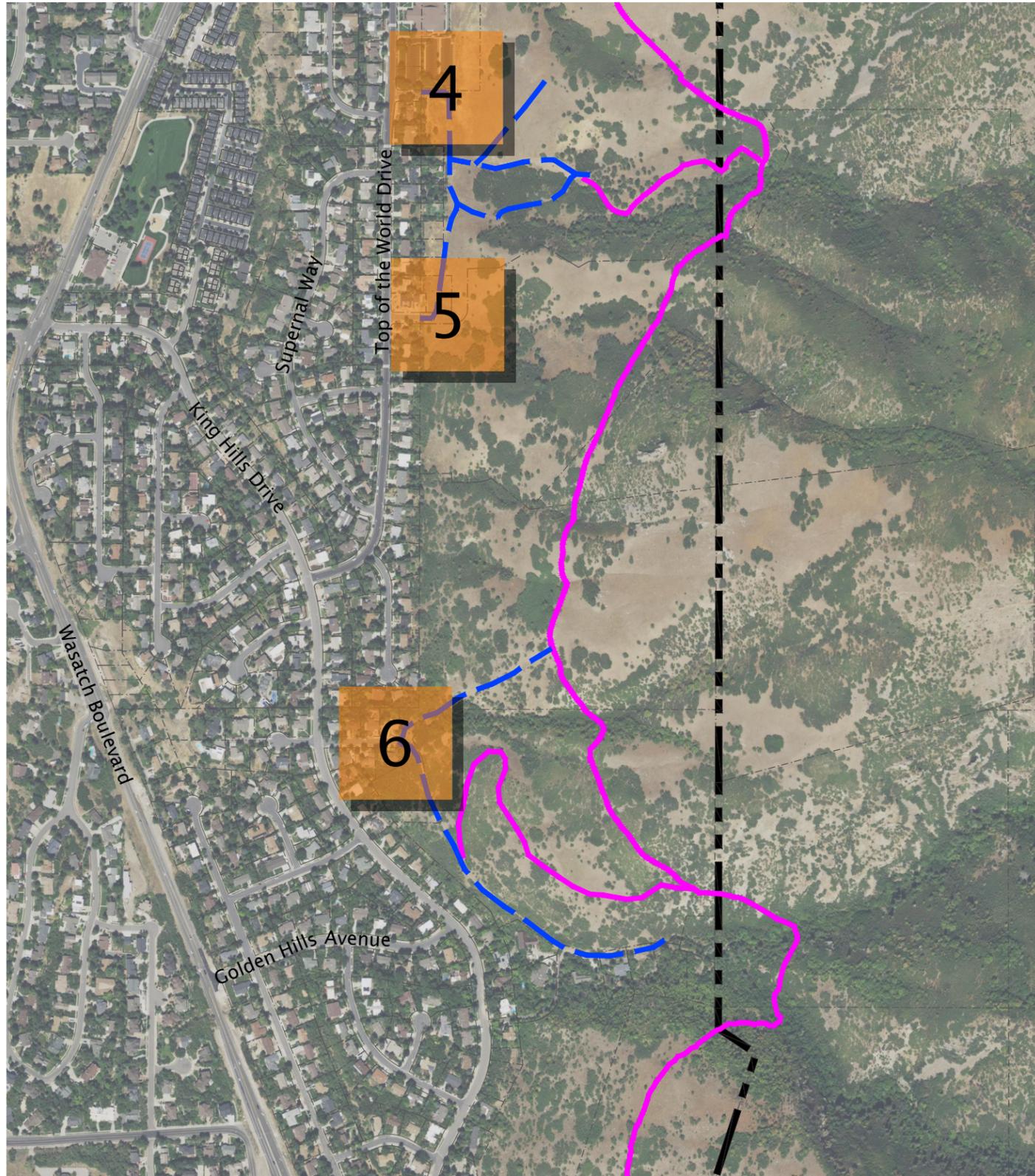


FIGURE 1.3.3 - ENLARGEMENT THREE



4. MOUNTAIN COVE CIR. (LDS CHAPEL LOCATION): LOCAL ACCESS OPPORTUNITY

PROS:

- Possible Use of LDS Parking Lot
- Room for Small Parking Lot at End of Road
- Favorable Grades
- Existing Informal Trail Access

CONS:

- Adjacent to Home
- Existing Uses
- Ownership



5. 8335 S: LOCAL ACCESS OPPORTUNITY

PROS:

- Room for Small Parking Lot at End of Road
- Favorable Grades
- Existing Informal Trail Access Space for Parking Lot

CONS:

- Adjacent to Homes
- Ownership



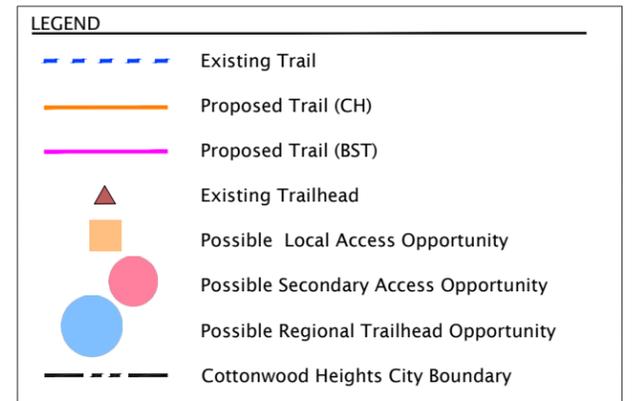
6. GOLDEN OAKS DRIVE: LOCAL ACCESS OPPORTUNITY

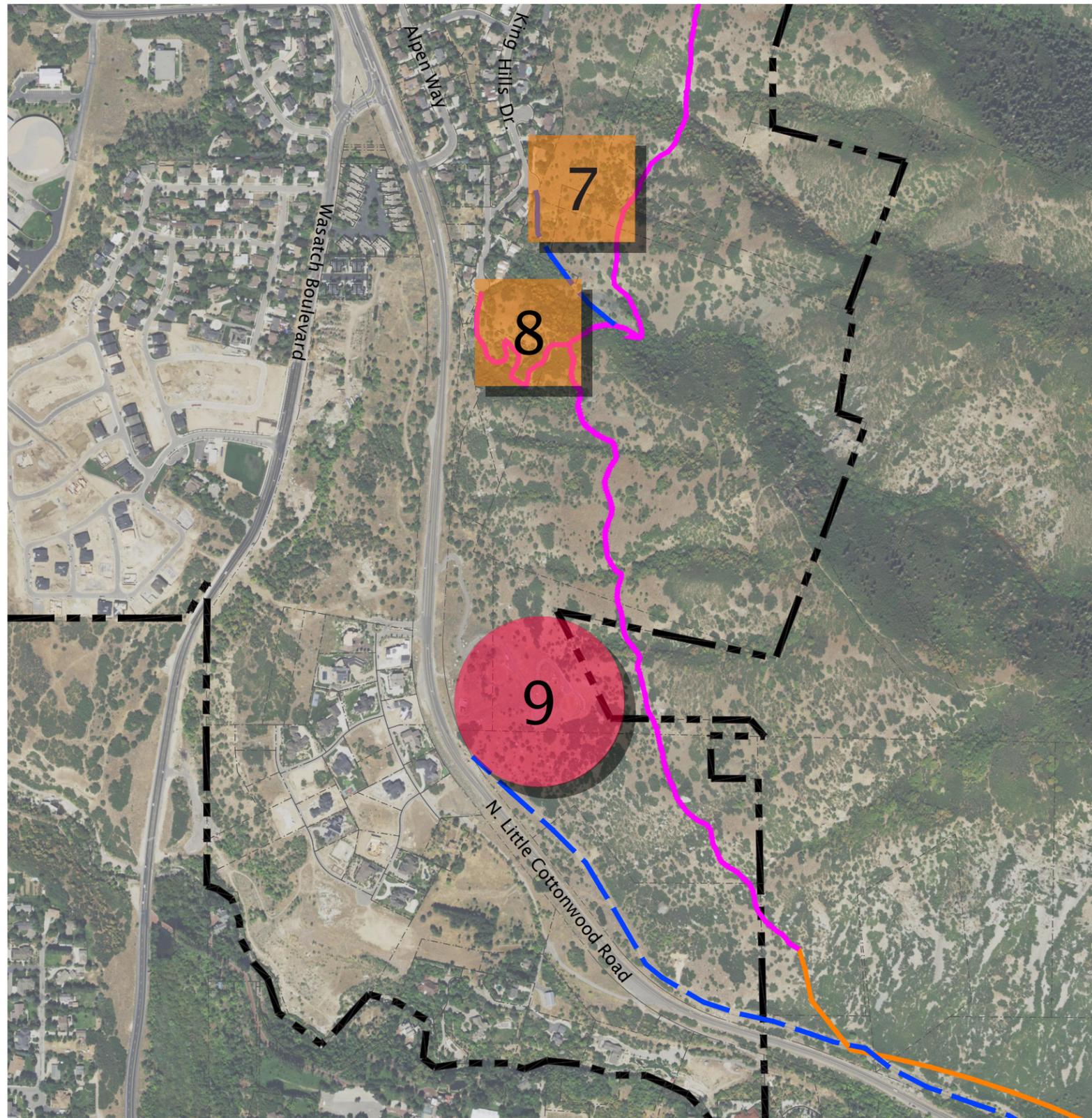
PROS:

- Existing Informal Trail Access
- Access to Deaf Smith Canyon

CONS:

- Adjacent to Homes
- Ownership
- Sloped Hillside





7. KING HILLS DRIVE: LOCAL OPPORTUNITY

- PROS:
- Good Trail Access
  - Open End of Cul-de-sac



- CONS:
- Ownership
  - Sloped Hillside

8. KING HILLS PLACE: LOCAL OPPORTUNITY

- PROS:
- Good Trail Access
  - Open End of Cul-de-sac



- CONS:
- Ownership
  - Adjacent to Home (Local Access Only)
  - Sloped Hillside

9. WATER TANKS/WASATCH PULL OFF: SECONDARY ACCESS OPPORTUNITY

- PROS:
- Good Access, Open and Elevated
  - Room for Parking
  - Away from Neighborhood



- CONS:
- Ownership
  - Sloped Hillside
  - Slope up to BST

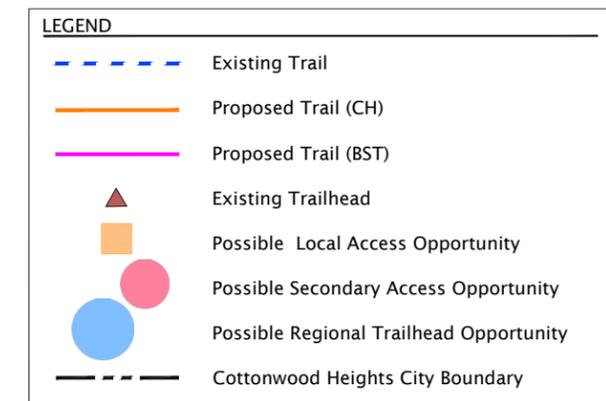
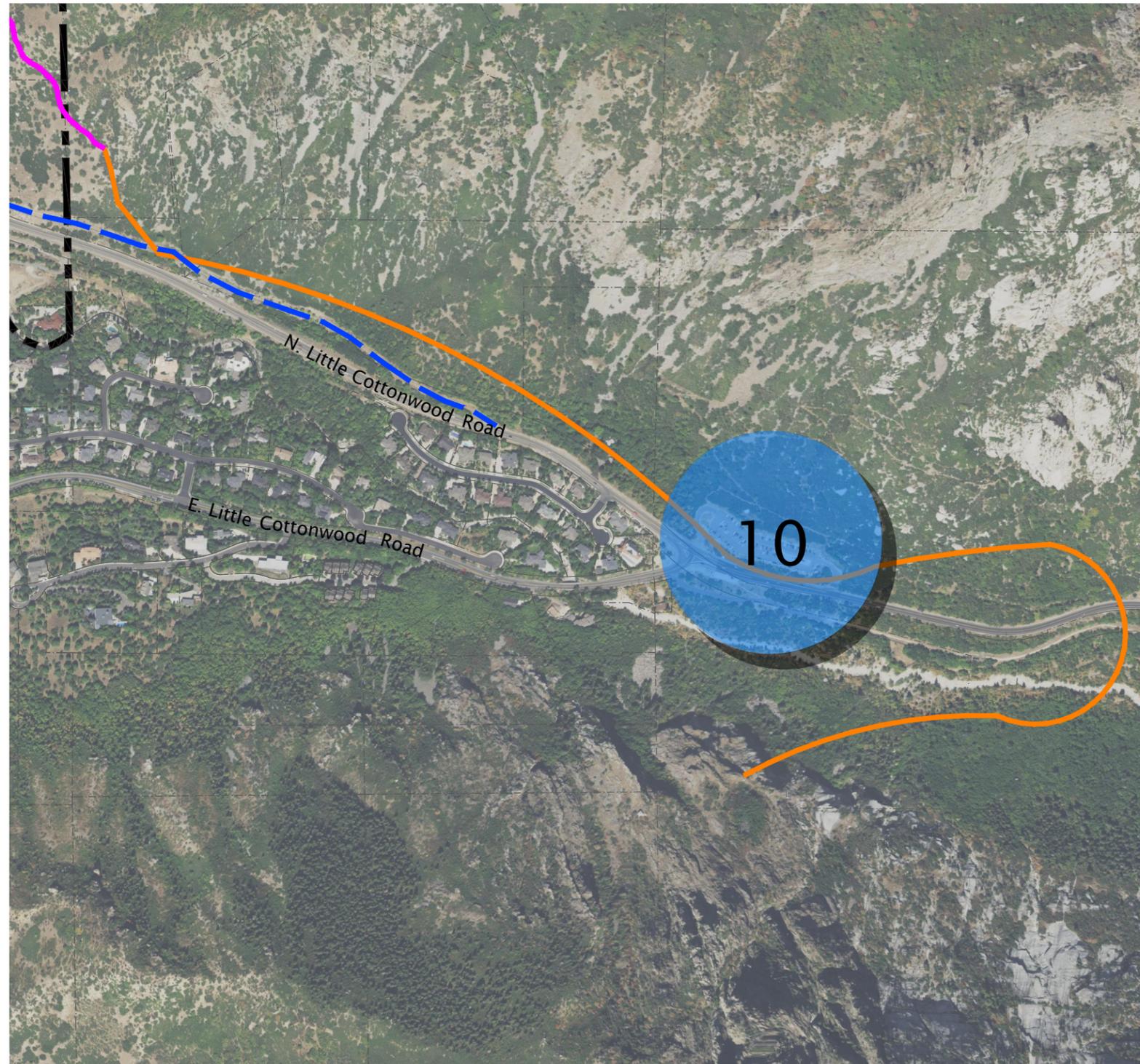


FIGURE 1.3.5 - ENLARGEMENT FIVE



10. LITTLE COTTONWOOD PARK AND RIDE: REGIONAL OPPORTUNITY

PROS:

- Existing Large Parking Lot
- Existing Restroom
- Access to N. Little Cottonwood Road
- Proximity to Proposed BST Alignment



CONS:

- Not City Controlled
- Existing Uses

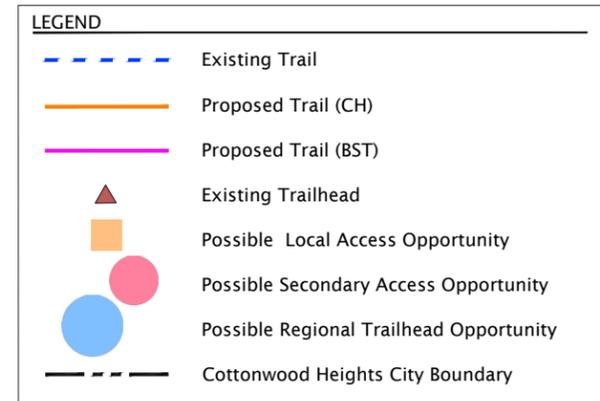


FIGURE 1.4 - REGIONAL TRAILHEAD TYPICAL



# Regional Trailhead, Typical Concept Plan

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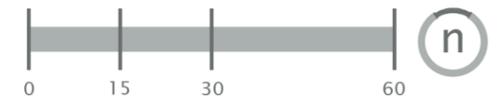
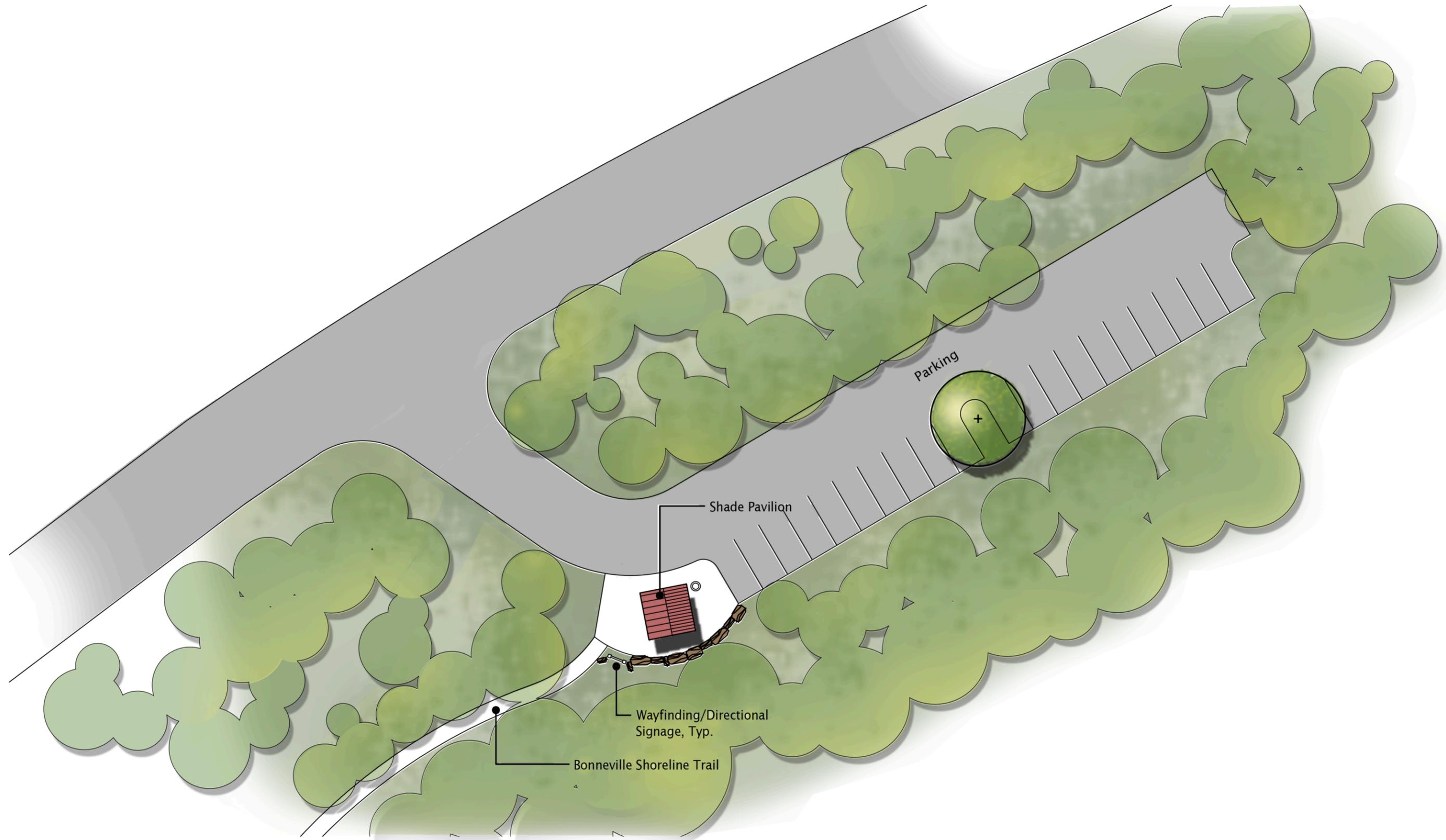


FIGURE 1.5 - SECONDARY ACCESS TRAILHEAD TYPICAL



Secondary Access Trailhead Typical  
Concept Plan

09.30.2020

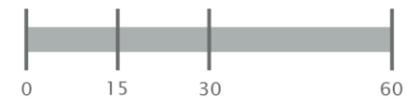


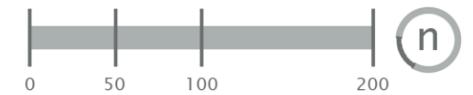
FIGURE 1.6 - FERGUSON TRAILHEAD

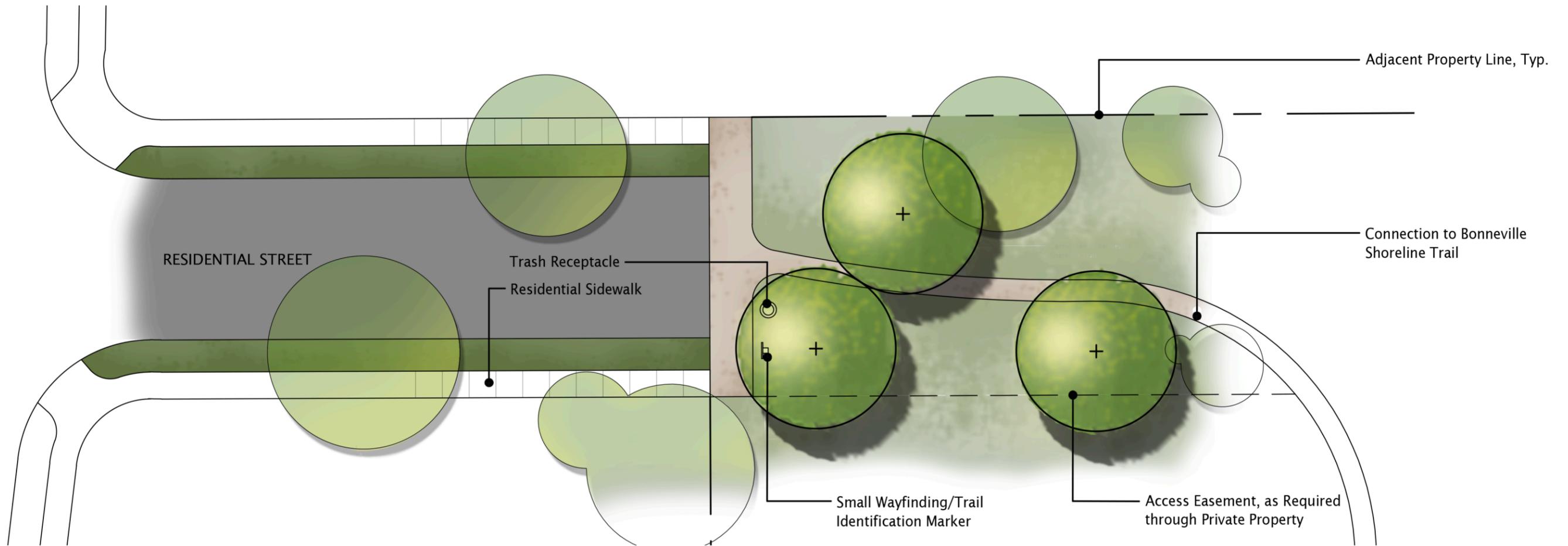


# Ferguson Trailhead

Concept Plan

09.11.2020





# FIGURE 1.8 - TYPICAL TRAILHEAD IMPROVEMENTS

## RESTROOM & PAVILIONS



## SIGNAGE & WAYFINDING



## SITE FURNITURE



## PARKING



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## CHAPTER TWO | NEEDS ASSESSMENT

THE BONNEVILLE SHORELINE TRAIL (BST) WILL BE USED AND ACCESSED BY ALL TYPES OF PEOPLE. INDIVIDUAL NEEDS AND DESIRES WILL VARY DEPENDING ON MANY DIFFERENT FACTORS. THE INTENT OF THIS TASK IS TO CONSIDER THE VARYING NEEDS OF ALL DIFFERENT USER TYPES TO MOST AFFECTIVELY INFORM PLAN RECOMMENDATIONS.

### 2.1 - EXISTING CONDITIONS ANALYSIS

As the crow flies, the City's eastern boundary through which the BST will traverse is approximately four miles in length. Existing conditions along this length vary substantially. The existing land use north of Big Cottonwood Canyon is predominantly a gravel pit. The middle section between Big Cottonwood Canyon and Alpen Way is fully developed as single family homes. The southern section from Alpen Way to the southern City boundary is predominantly undeveloped. (see [Figure 1.2 - Existing Aerial](#)) The only existing formalized trail access point is the Ferguson Canyon Trailhead, through there are numerous social trails that already exist on the hillsides above the City. The Ferguson Canyon Trailhead has only 16 stalls and resides within a residential neighborhood on Timberline Drive. Trail usage and parking demand already overwhelm this small trailhead. In addition to Ferguson Canyon, Deaf Smith Canyon is another well known and popular canyon within the plan area.

Many factors were considered in analyzing the best possible trail access points. These include: accessibility (pedestrian and vehicular), property ownership/use, and topography. An official site visit was performed with City staff and members of the Steering Committee to evaluate access points based on these considerations. Follow up visits to further investigate these sites and the general area were also performed.



Ferguson Canyon Trailhead

### ACCESSIBILITY

Though ADA accessibility is a consideration when looking at specific site design, accessibility as it pertains to possible trail access points considers more than that. The ability to physically access the trail, whether it be by walking or by vehicle is the main consideration here. As different access locations were considered, those that quickly rose to the top were the ones that already had vehicular or pedestrian connectivity in close proximity to the proposed BST alignment. A key factor that limits accessibility is property ownership (see below). Each access point considered was evaluated based on existing or possible accessibility to the BST.

### PROPERTY OWNERSHIP/USE

This was probably the most limiting evaluating factor as possible access points were considered. Of the approximate 4 miles of shared length with the BST trail alignment, approximately two-thirds of that length is already developed as single family residential lots. This

severely limits viable trail access points from both a physical standpoint and a social one. In areas where residential homes or development do not exist yet, viable access points were much easier to identify, such as at the very north end and very south end of the City. However, even when there was a clear opening through existing residential lots, in most cases, that trail access would still need to cross private property. In those cases, property would need to be acquired or some type of access easement would need to be agreed upon.

## TOPOGRAPHY

Topography becomes a limiting consideration when slopes are too steep to allow for viable trails and, in the case of secondary access points and regional access points, when they do not allow for trailhead/parking development. There are many dead end roads through the middle section of the City that seemingly could provide easy trail access until topography is considered. Dealing with steep topography, even when access is possible, results in costly construction and has a greater impact to the natural hillside.



Big Cottonwood Creek

## 2.2 - NEEDS ASSESSMENT

A multi-faceted approach was taken to identify needs, desires and necessary improvements to allow for BST access. Meetings were held with a Steering Committee and with the Parks, Trails, and Open Space Committee. A comparative analysis was performed with other Wasatch Front communities. Finally a public open house was held to gather critical feedback on preliminary findings and recommendations.

### 2.2.1 - STEERING COMMITTEE

The Steering Committee was made up of City staff and selected representatives from the Parks, Trails and Open Space Committee. The key purpose of the Steering Committee was to share their vision, to guide and inform

the process, and to give critical feedback at key points during the process.

Six meetings were held with the Steering Committee: a kick-off and visioning meeting; a preliminary analysis review meeting; a meeting to review preliminary Goals and Objectives and draft material for the Public Open House; a meeting to review and discuss Public Open House feedback; a meeting to review the preliminary draft Trailhead and Access Plan; and a final meeting to review the final draft Trailhead and Access Plan.

The Steering Committee was instrumental in providing valuable guidance, knowledge, and feedback during the planning process. They were also very supportive during the public engagement process and in communicating and coordinating with citizens, council members, and the Parks, Trails and Open Space Committee.

### 2.2.2 - PARKS, TRAILS, AND OPEN SPACE COMMITTEE

The Parks, Trails and Open Space Committee was created on August 28, 2018 “to perform research and outreach to help preserve outdoor recreational and open spaces with the intent of enhancing the quality of life in Cottonwood Heights”. The Parks, Trails and Open Space Committee has identified overarching goals including the following that pertain to and align with the goals and objectives of this plan:

- *Preserve and enhance the character, livability, and safety of the City through enhanced parks, trails and open space.*
- *Enhance the interconnectivity of trails (natural, paved, bike lanes, etc.) within the City and other communities.*
- *Preserve natural open space.*

Two presentations were given to the Parks, Trails, and Open Space Committee, presenting the preliminary analysis and a draft Trailhead and Access Plan. The Parks, Trails and Open Space Committee gave valuable feedback and was key in pushing the plan forward.

### 2.2.3 - PUBLIC OPEN HOUSE

A Public Open House was held on February 20, 2020 at the Cottonwood Heights City Hall to gather critical input and feedback from citizens, neighbors, and trail users. As an open house format, no formal presentation was given, but rather numerous informational boards were displayed for attendees to peruse, analyze, and give comment on. Attendees were allowed to mark or write directly on the boards and were also given a comment form to provide written feedback. Attendees were also encouraged to e-mail comments to City staff if desired. A detailed

summary of public comments is included in the Appendix.

The majority of the public comments can be grouped into one of four categories:

- 1) Access;
- 2) Bonneville Shoreline Trail location/alignment;
- 3) Privacy/Safety; and
- 4) Traffic/Parking

Of these, most comments, both positive and otherwise, dealt with the Bonneville Shoreline Trail project itself and not necessarily the proposed trailheads and access points presented.

#### ACCESS

Comments supported multiple points of access to disperse concentrated and congested access; parking outside of residential neighborhoods; and keeping the local access points as discreet as possible, with minimal amenities, to allow them to remain purely local in use.

#### BONNEVILLE SHORELINE TRAIL LOCATION/ALIGNMENT

Conflicting comments were received regarding the location and alignment of the BST. Some supported the trail being higher on the hill to be further away from residences, while others supported the trail being lower on the hill for easier access. Concerns over future maintenance and impacts of the BST were also voiced.

#### PRIVACY/SAFETY

Many of the comments regarding access locations and BST alignment revolved around concerns over privacy and safety. Many want a buffer between the trail and their property line to maintain their privacy and to minimize the impacts of numerous trail users on the trail.

#### TRAFFIC/PARKING

Even though the BST through the City has not been installed yet, and the only existing formalized trail access is the Ferguson Canyon Trailhead, the residential neighborhood within the project area already experiences traffic from outside users wanting to access the hills and mountainside above the City. Comments supported providing main access points outside of the existing neighborhoods to reduce outside traffic and parking congestion on neighborhood roads. Signage discouraging or prohibiting non-local parking should be considered.

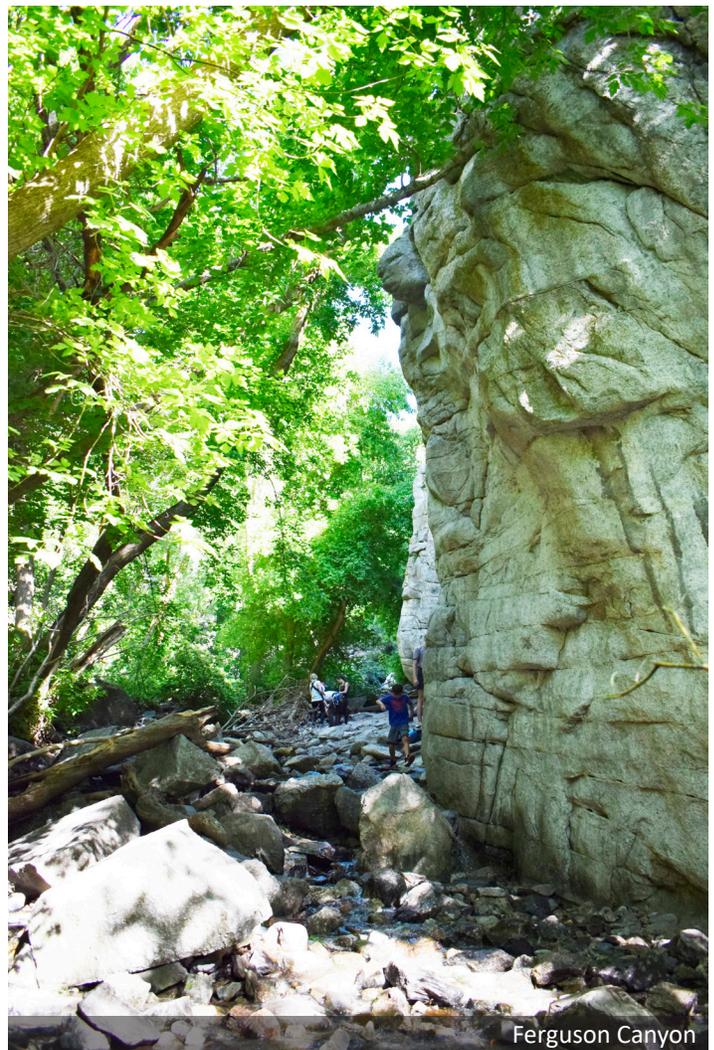
To that point, the proposed regional trailheads at the north end of the City and south end of the City, that would provide significant parking facilities outside of the existing residential neighborhood received strong support.

#### 2.2.4 - COMPARATIVE ANALYSIS

A comparative analysis was performed analyzing similar Utah communities along the Wasatch Front with existing or proposed access to the eastern hillsides, mountains, and BST. Draper, Sandy, Holladay/Millcreek, Salt Lake City, Bountiful, and Provo were considered. Total miles of trail was quantified along with the number, type, and frequency of trail access points provided. Parking quantity was also considered. Resulting averages are included below:

- **AVERAGE MILES OF TRAIL = 7.8 miles**
- **AVERAGE NO. OF TRAILHEADS = 3.33**
- **AVERAGE FREQUENCY OF TRAILHEADS = 1 per 3.5 miles**
- **AVERAGE NO. OF LOCAL ACCESSES = 6.5**
- **AVERAGE FREQUENCY OF LOCAL ACCESS = 1 per 1.6 miles**
- **AVERAGE NO. OF PARKING STALLS = 189**

Based upon these averages a minimum target of one trailhead access per four miles and one local access per mile was established.



Ferguson Canyon

### 2.2.5 - RELATED PLANS AND STUDIES

Over recent years, the City has expended significant effort and resources to understand the needs and desires of its public pertaining to parks, recreation and trails including completing and performing numerous plans, studies and surveys. These include:

- Cottonwood Heights General Plan (2005)
- Y2 Analytics Survey (2016)
- Y2 Analytics Survey (2017)
- Butteville Days Public Comments (2017)
- 2017 Open Space Open House
- 2018 Open Space Open House & Survey
- Y2 Analytics Survey (2019)
- Wasatch Boulevard Master Plan (2019)

Policies, concepts, comments and ideas from these plans, studies, and surveys were used to inform the recommendations of this plan including:

- *The need for an urban trail system and connection to the foothills and Bonneville Shoreline Trail.* (General Plan 2005)
- *Continue development and preservations of sidewalks, trails, open space; and provide access to open space and public lands.* (Y2 Analytics Survey (2016))
- *Provide additional parking, accessibility, and amenities at trailheads; and provide additional parks and trails.* (Y2 Analytics Survey (2017))
- *Preserve green space, develop Bonneville Shoreline Trail, and provide access to public lands.* (Butteville Days 2017 Public Comments)
- *Connect the BST between Big Cottonwood and Little Cottonwood Canyons and provide access to it.* (2017 Open Space Open House)

- *Provide access to the mountains and BST between Big Cottonwood and Little Cottonwood Canyons; and provide more trails.* (2018 Open Space Open House & Survey)
- *Improve quality of life through preserving existing open space and trails and providing additional open space and trails and access to the mountains.* (Y2 Analytics Survey (2019))

### 2.2.6 - BONNEVILLE SHORELINE TRAIL

The Bonneville Shoreline Trail (BST) is a planned regional trail on the west slopes of the Wasatch Range on or near the shoreline bench of ancient glacial Lake Bonneville in Cache, Box Elder, Weber, Davis, Salt Lake, and Utah Counties. (*see Figure 1.1 - Bonneville Shoreline Trail*) The trail is envisioned to connect from the Idaho border to Nephi - a stretch of over 280 miles. More important than the distance of the trail is the size of the population served and the magnitude of recreational opportunity the trail provides.

Placed near the Bonneville Bench, the trail skirts the developed areas of the Wasatch Front, often forming the boundary between urban subdivisions and National Forest wilderness. The BST will provide a long distance regional hiking, biking, and equestrian trail at the back door of more than a million people and will be the trunk line of a branching regional system of trails linking city sidewalks to wilderness mountain tops. Currently, just over 100 miles of the planned trail is officially designated as the Bonneville Shoreline Trail.

Though just a small piece of the greater system (approximately four miles), completion of the trail through Cottonwood Heights is important to allow for Cottonwood Height residents to access the foothills, mountains, and eventually the entire BST system. Naturally, once the trail segment(s) within Cottonwood Heights are installed, providing viable and functional access points to the trail is of critical importance to allow for use of this invaluable amenity.



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## CHAPTER THREE | GOALS AND OBJECTIVES

ANY GOOD PLAN NEEDS TO HAVE DEFINED AND ACHIEVABLE GOALS AND OBJECTIVES. THESE WILL CONTINUE TO PROVIDE GUIDANCE AND REASONING TO IMPLEMENTATION AS TIME GOES ON.

### 3.1 - GOALS AND OBJECTIVES

The plan goals and objectives are based on input from City Staff, the Steering Committee, and the comparative analysis. Preliminary Goals and Objectives were presented to the Steering Committee and revised prior to presentation at the Public Open House and inclusion in this document.

#### GOAL ONE:

- 1.0 | IDENTIFY AND PROVIDE SUFFICIENT AND EFFECTIVELY LOCATED REGIONAL, SECONDARY, AND LOCAL ACCESS POINTS TO THE BONNEVILLE SHORELINE TRAIL WITHIN COTTONWOOD HEIGHTS' CITY LIMITS THAT PROVIDE GOOD CONNECTIVITY TO THE WASATCH FRONT MOUNTAINS AND NATURAL AREAS.

#### OBJECTIVES:

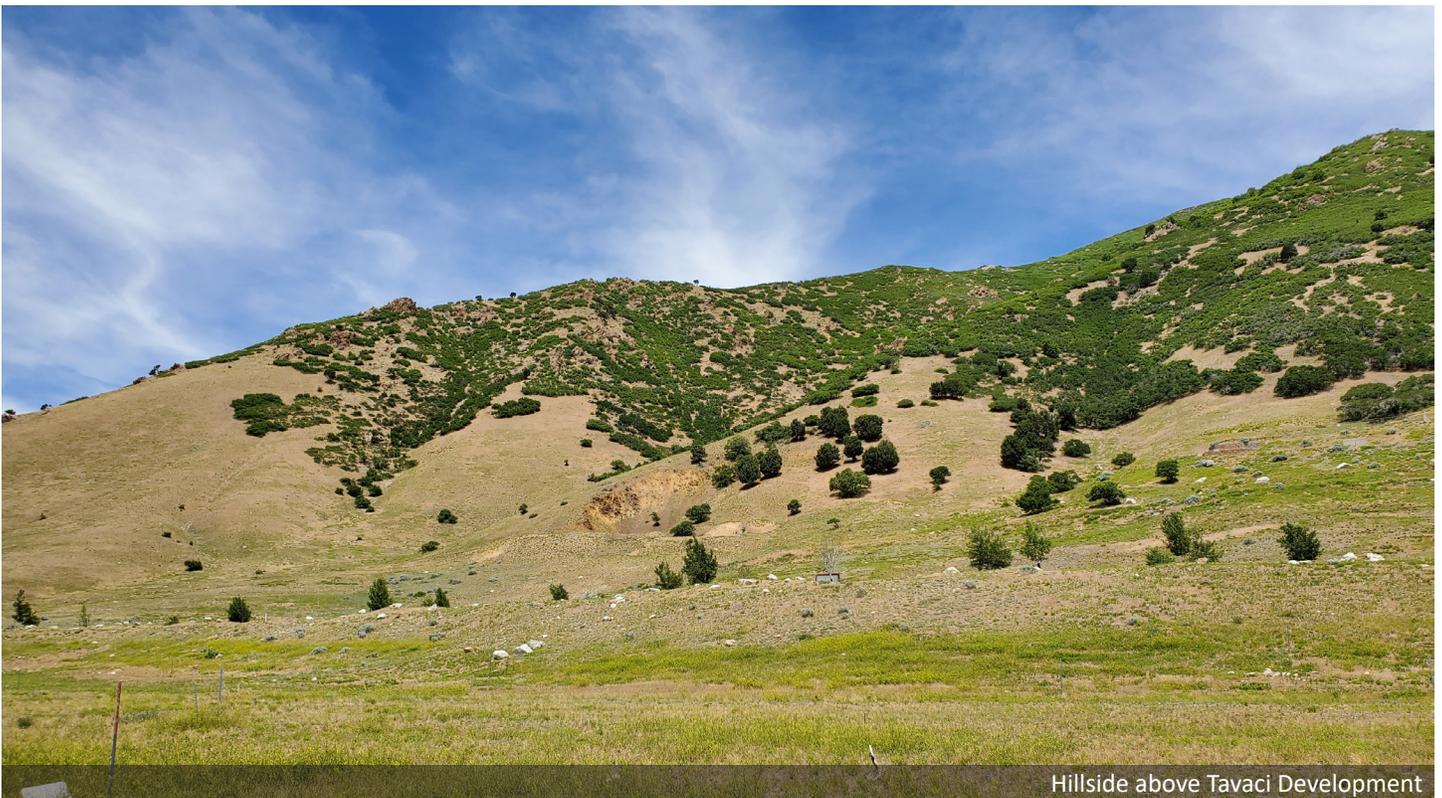
- 1.1 | PROVIDE TRAILHEAD ACCESS POINTS THAT ARE SAFE AND ACCESSIBLE TO ALL AGES AND ABILITIES.
- 1.2 | PROVIDE A MINIMUM OF TWO REGIONAL ACCESS POINTS, AT LEAST ONE PER FOUR MILES OF TRAIL.
- 1.3 | PROVIDE A MINIMUM OF THREE LOCAL ACCESS POINTS, AT LEAST ONE PER MILE OF TRAIL
- 1.4 | IDENTIFY COST ESTIMATES AND SUFFICIENT FUNDING OPPORTUNITIES FOR ALL TRAIL ACCESS DEVELOPMENT.
  - 1.4.1 | PRIORITIZE AND IDENTIFY PHASING OF REGIONAL AND LOCAL ACCESS POINTS.
  - 1.4.2 | IDENTIFY AND PURSUE LOCAL, REGIONAL, STATE, AND NATIONAL FUNDING OPPORTUNITIES TO ACHIEVE PLAN GOALS AND OBJECTIVES.

## GOAL TWO:

- 2.0 | PROVIDE WELL DESIGNED REGIONAL, SECONDARY, AND LOCAL ACCESS POINTS TO THE BONNEVILLE SHORELINE TRAIL WITHIN COTTONWOOD HEIGHTS' CITY LIMITS THAT HAVE APPROPRIATE WAYFINDING, AMENITIES, AND INTERPRETIVE ELEMENTS.

### OBJECTIVES:

- 2.1 | PROVIDE CLEAR TRAILHEAD AND TRAIL SIGNAGE THAT ALLOWS FOR SUFFICIENT WAYFINDING AND INFORMATION TO ORIENT AND DIRECT ALL TRAILS USERS, INCLUDING TRAIL ETIQUETTE AND REGULATORY SIGNAGE.
- 2.2 | PROVIDE INTERPRETIVE SIGNAGE AT TRAIL ACCESS POINTS TO INTERPRET THE NATURAL ENVIRONMENT INCLUDING VEGETATION, WILDLIFE, HISTORY, WATER RESOURCES, AND GEOLOGIC FEATURES.
- 2.3 | PROVIDE RESTROOMS, TABLES, BENCHES, WASTE RECEPTACLES, PAVILIONS, DRINKING FOUNTAINS, BIKE REPAIR STATIONS, DOG WASTE DISPENSERS, AND OTHER APPROPRIATE AMENITIES AT TRAIL ACCESS POINTS.



Hillside above Tavaci Development

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## CHAPTER FOUR | RECOMMENDATIONS

CONSIDERING THE EXISTING CONDITIONS ANALYSIS, THE NEEDS ASSESSMENT, AND ALL INPUT GATHERED FROM CITY STAFF, THE STEERING COMMITTEE, AND THE PUBLIC, THIS CHAPTER PRESENTS RECOMMENDED TRAILHEADS AND ACCESS POINTS ALONG THE PROPOSED BONNEVILLE SHORELINE ALIGNMENT WITHIN CITY LIMITS.

### 4.1 - TYPES OF ACCESS

For purposes of this plan there are three types of access points proposed: Regional Trailhead, Secondary Access, and Local Access. Each is defined below with either a specific and/or typical plan also included.

#### REGIONAL TRAILHEADS

These are primary accesses to the BST located at key points along the trail with significant amenities and meaningful parking. These trailheads would serve regional, community, and local trail users. Min. Frequency: 1 per 4 miles. Three recommended locations are proposed. (*see Figure 1.4 - Regional Trailhead Typical and Figure 1.6-Ferguson Trailhead*)

Typical Amenities Include:

- Trail Signage and Wayfinding
- Waste Receptacles
- Benches
- Tables
- Dog Waste Dispensers
- Restroom Facilities
- Pavilions
- Drinking Fountain
- Bike Repair Station
- Large Parking Lot

#### SECONDARY ACCESS

Secondary access points are accesses that may serve community and local trail use, as well as some regional use, though due to spatial constraints, location or other considerations amenities and parking may be limited. Two recommended locations are proposed. (*see Figure 1.5 - Secondary Access Trailhead Typical*)

Typical Amenities Include:

- Trail Signage and Wayfinding
- Waste Receptacle(s)
- Tables
- Dog Waste Dispensers
- Pavilion
- Parking Lot

#### LOCAL ACCESS

Local access points are located within individual neighborhoods with very limited amenities and limited parking (if any). These are primarily for neighborhood residents and meant to be accessed by foot or bicycle. Min. Frequency: 1 per mile. Five possible locations are proposed, though per the recommended standard only three are necessary. These possible locations provide options for the City to consider when specific opportunities to develop these accesses is presented. (*see Figure 1.7 - Local Access Typical*)

Typical Amenities Include:

- Trail Signage and Wayfinding
- Waste Receptacle
- Dog Waste Dispensers

It is recommended that the City explore the implementation of policies and practices for these local access points to discourage on-street parking for trail

access, particularly for non-resident and commuter vehicles, to mitigate the concern of vehicular traffic and parking at these access points, and to emphasize that they are intended only for pedestrian access. Such policies should be determined by the City on a case-by-case basis dependent on the location of the particular access point.

#### 4.2 - PLAN RECOMMENDATIONS

In total, along the approximate five mile length between the gravel pit site on the north to the existing Little Cottonwood Park and Ride lot on the south, four regional trailhead locations are proposed, one secondary access is proposed, and three local accesses are proposed (see [Figure 1.3 - Bonneville Shoreline Trail Access Plan](#)). These more than satisfy the recommended standards established following the needs assessment and comparative analysis performed.

##### 4.2.1 - REGIONAL TRAILHEAD LOCATIONS

LOCATION: **GRAVEL PIT (Site #1)**

DESCRIPTION: This location is ideally situated at the northern end of the City, and at the confluence of Fort Union Boulevard, Wasatch Boulevard, and the mouth of Big Cottonwood Canyon. Though currently functioning as a gravel pit, future development plans are currently underway. As development plans are submitted to the City for review, the City will work with developers to include a trailhead location as a key component of their plans. A regional trailhead here will connect proposed/existing urban trails along Wasatch and Fort Union to the BST system and will also help alleviate traffic in the existing neighborhoods east of Wasatch Boulevard. Typical regional trailhead amenities are proposed here.



Gravel Pit and Tavaci Development

LOCATION: **FERGUSON AT PROSPECTOR DRIVE (Site #3)**

DESCRIPTION: The City has had an Interlocal Cooperative Agreement with Salt Lake County since 2008 to develop this property as a trailhead to include such items as a parking lot, a pavilion, signage, and restroom facilities. Parking at this location will reduce the traffic and

congestion experienced at the existing Ferguson Canyon Trailhead. This site is easily accessed just off of Wasatch Boulevard from Prospector Drive. In addition to the amenities agreed upon in the Interlocal Cooperative Agreement, this trailhead will provide walking paths (both paved and natural) and pedestrian connections to Prospector Drive to connect to Ferguson Canyon and the future BST. Upon completion of this trailhead and expanded parking area, it is recommended that all existing trailhead parking on Timberline Drive be removed except for the required or appropriate amount of accessible stalls for the existing amphitheater use. It is recommended that no trail parking will be allowed on Timberline Drive and that all trail users utilize the regional access site.



Ferguson Overflow Parking

LOCATION: **LITTLE COTTONWOOD CANYON PARK AND RIDE (Site #10)**

DESCRIPTION: This is an existing park and ride located on the east side of North Little Cottonwood Road at the intersection of North Little Cottonwood Road and East Little Cottonwood Road. There are approximately 140 existing parking spaces here. Other existing amenities include a bus stop platform with two bus shelters, and an existing restroom. This park and ride is perfectly situated along the proposed BST alignment and easily accessible from N. Little Cottonwood Road. Typical regional trailhead amenities not already existing are proposed.



Little Cottonwood Park and Ride

#### 4.2.2 - SECONDARY ACCESS LOCATIONS

LOCATION: **BIG COTTONWOOD CANYON PULL OFF (Site #2)**

DESCRIPTION: There is an existing Forest Service pull off on the south side of Big Cottonwood Road that could possibly fit a small parking lot to provide a secondary access to the BST. This would provide easy-access parking from Big Cottonwood Road further reducing traffic into the existing neighborhood. This location is also conveniently located near the end of a segment of the BST that is currently being constructed. Typical secondary access amenities are proposed here.



LOCATION: **WATER TANKS/N. LITTLE COTTONWOOD (Site #9)**

DESCRIPTION: The exact site for a trailhead in this location is to be determined, but opportunities exist as development, conservation, and/or shared use are contemplated. In conjunction with a trailhead at the Big Cottonwood Canyon pull off, this location will provide a nice secondary access to the BST system on the south end of the City. Outside of existing residential development, the potential for meaningful parking exists, further reducing the need for traffic to enter existing neighborhoods to access the BST. Typical secondary access trailhead amenities are proposed here.



#### 4.2.3 - LOCAL ACCESS LOCATIONS

LOCATION: **MOUNTAIN COVE CIRCLE (Site #4)**

DESCRIPTION: Mountain Cove Circle dead ends into the hillside between an LDS Church and a private residence along Top of the World Drive. The existing topography at the end of the road is fairly gentle and could provide a nice connection to the proposed BST alignment further up the hill. The property is currently privately held however so property acquisition or an access easement would need to be explored. Typical local access amenities are proposed here.

LOCATION: **8335 SOUTH (Site #5)**

DESCRIPTION: 8335 South dead ends into the hillside between two private residences along Top of the World Drive. The existing topography at the end of the road is fairly gentle and could provide a nice connection to the proposed BST alignment further up the hill. The property is currently privately held however so property acquisition or an access easement would need to be explored. Typical local access amenities are proposed here.

LOCATION: **GOLDEN OAK DRIVE (Site #6)**

DESCRIPTION: Golden Oak Drive dead ends into the hillside between two private residences off of King Hills Drive. The existing topography at the end of the road slopes a little, but is not too steep to prohibit trail access. This location could provide a nice connection to the proposed BST alignment further up the hill and to Deaf Smith Canyon. The property is currently privately held however so property acquisition or an access easement would need to be explored. Typical local access amenities are proposed here.

LOCATION: **SOUTH KING HILLS DRIVE (Site #7)**

DESCRIPTION: At the very south end of King Hills Drive, there is a bulb out that opens up nicely to the existing hillside between residential homes. Initially there is a steep slope up from the bulb out to the open space, but eventually becomes more gentle and could provide a nice connection to the proposed BST alignment further up the hill. The property is currently privately held however so property acquisition or an access easement would need to be explored. Typical local access amenities are proposed here.

LOCATION: **KING HILLS PLACE (Site #8)**

DESCRIPTION: There is an opening between two residential homes at the south end of the King Hills Place cul-de-sac that could allow for a connection to the BST alignment further up the hill. However, the hillside here is quite steep with the only feasible trail route running along a residential property line that is elevated above that adjacent lot. The property is currently privately held

however so property acquisition or an access easement would need to be explored. Typical local access amenities are proposed here.



#### 4.3 - SIGNAGE AND WAYFINDING

Various levels of signage and wayfinding are recommended at each type of access: Regional, Secondary, and Local. (see [Figure 1.8- Typical Trailhead Improvements](#)) The final signage size, design, and content should correlate with the type of access it is. Furthermore, the signage design should be compatible with the natural character and feel of the open spaces in which these accesses will reside.

Types of signage that may be anticipated include:

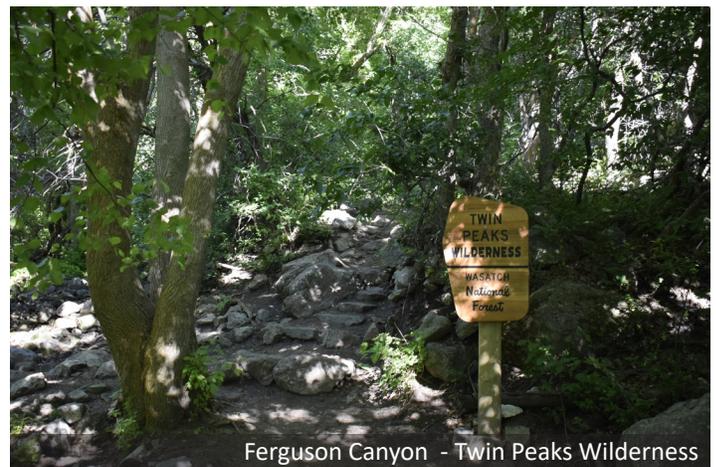
- **Trailhead Identification Signage** - clearly identifying the name of the trailhead from adjacent roadways. Appropriate at Regional and Secondary access locations.
- **Trailhead Kiosk** - may include such content as trail system and wilderness mapping including both local and regional information; regulatory information; and trail system and wilderness etiquette guidelines. Appropriate at Regional and Secondary access locations.
- **Wayfinding Markers** - small and more discrete in size, could include identification and directional information. Appropriate at Regional, Secondary, and Local access locations.
- **Interpretive Signage** - could be stand alone and vary in size or be incorporated into other sign types. These could include images and/or graphics; and educational narratives that interpret the features of the area such as vegetation, wildlife, history, water resources, geologic features, etc.

#### 4.4 - SITE FURNITURE

A variety of different site furniture is appropriate at each type of access. Regional and Secondary accesses may feature more prominent furnishings such as pavilions and restrooms, whereas Local accesses will be more minimalistic and may only include a waste receptacle and dog waste dispenser (see [typical amenity list by access type](#)). In any case, the selected furnishings should be complementary to each other in color and material and should also be appropriate to the natural setting they will be located in. (see [Figure 1.8- Typical Trailhead Improvements](#))

#### 4.5 - LANDSCAPING

Due to the native nature of most of these sites, it is recommended that any supplemental plant material to provide shade, buffering/screening, and/or visual interest be native or adaptive to the region and drought tolerant. If available, irrigation is recommended to establish even the most drought tolerant species. If not available, supplemental hand watering is recommended for at least the first full growing season. Revegetation of disturbed areas due to construction is critical to minimize erosion and invasive species establishment.



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## CHAPTER FIVE | COSTS AND FUNDING

RECOGNIZING THAT THE PROPOSED TRAILHEAD AND ACCESS IMPROVEMENTS FOR THE BONNEVILLE SHORELINE TRAIL REQUIRE FUNDING, THIS CHAPTER PRESENTS PRELIMINARY CONSTRUCTION COST ESTIMATES FOR EACH OF THE IDENTIFIED PROJECTS FOR FUNDRAISING AND BUDGETING PURPOSES. IT ALSO IDENTIFIES POSSIBLE FUNDING OPPORTUNITIES TO FACILITATE CONSTRUCTION.

### 5.1 - PRELIMINARY COST ESTIMATES

The proposed improvements of this plan vary from the small local access point to more significant regional trailheads. Preliminary construction cost estimates have been provided for each of the proposed projects ([Table 5.1](#)). These estimates are based on current industry pricing, recent similar projects, consulting with reputable contractors, and rough quantity takeoffs from the schematic layouts included in this master plan. It is noted that these estimates do not reflect detailed design of these projects and that depending on the timing of bidding and installation pricing will undoubtedly increase due to inflation, bidding environment, and material costs.

### 5.2 - FUNDING OPPORTUNITIES

#### 5.2.1 - IMPACT FEES

Impact fees are collected with new development projects to help pay for the costs of providing public services to new development. The collection and use of impact fees are governed by Utah law - UC11-36-202(1)(a)(ii).

#### 5.2.2 - BONDS

General Obligation Bonds (G.O. Bonds) are a low interest financing option for local government projects. Though low interest, this option is sometimes unpopular because it represents an additional tax burden on the City's residents.

These bonds would need to be approved by the public through a G.O. Bond election and are therefore subject to success or failure based on the popularity of the proposed project.

Like Impact Fees, G.O. Bond funding may only be used for a project's capital expenditures and may not be used for on-going maintenance and operational costs. Other bond alternatives include Sales Tax Revenue Bonds and Lease Revenue Bonds.

#### 5.2.3 - SPECIAL TAXES

Special taxes such as the Zoo, Arts & Parks (ZAP) tax or the Recreation, Arts & Parks (RAP) tax have been initiated and voted on by multiple Utah communities. These have successfully provided millions of dollars of improvements across the state. However this funding option is again voted on and approved by the public with an increased tax burden. Other special taxes may be utilized for parks and recreation development, but again would need to be approved by Santaquin's citizens.

#### 5.2.4 - FEDERAL & STATE FUNDING/GRANTS

There are many types of federal and state grants that may be utilized for parks and recreation facilities but are often minimal in nature and difficult to acquire. Some of these include:

- Community Development Block Grants (CDBG): funding provided and used in low and moderate income areas. Certain restrictions and guidelines apply to how these funds are utilized.
- Land and Water Conservation Fund
- Utah Trails and Pathways / Non-motorized Trails Program
- Federal Recreation Trails Program
- UDOT Transportation Alternatives Program (MAP-

**5.2.5 - PUBLIC/PRIVATE PARTNERSHIPS**

Cottonwood Heights may partner with other public entities or private groups/developers on facilities that service the public but are also attractive and beneficial to the private partner. This will result in a shared cost, thus reducing the up-front burden carried by the City, but may result in a pay-to-use facility that is not free to public use.

**5.2.6 - DEVELOPMENT AGREEMENTS**

Establishing development agreements with new developments within Cottonwood Heights is an established way to receive dedication of park land and in some cases developed park land and/or trails for public use. The City may elect to exchange the donation of park land and/or recreation facilities for developer concessions or negotiated considerations. Such considerations may include, but are not limited to: increased densities, reduced lot sizes, impact fee credits, future reimbursements for oversized facilities or credits for multi-use facilities such as storm drainage and park space. This practice is beneficial to the City and the developer.

**5.2.7 - PRIVATE DONATIONS/FUNDRAISING**

The potential for local investment and interest in parks and recreation projects that are important to special interest groups, neighborhoods, businesses, or even individuals and/or families should not be overlooked. This interest may result in focused fundraising efforts or at least in the donation of time and services. However, this type of funding usually requires a significant time and focused effort by municipal staff.

TABLE 5.1 - PRELIMINARY COST ESTIMATES

Regional Trailhead Typical					
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	\$ 56,529.65	\$ 56,529.65
2	SITE CLEARING AND GRUBBING	44,700	S.F.	\$ 0.10	\$ 4,470.00
3	DEMO	1	L.S.	\$ 10,000.00	\$ 10,000.00
4	SITE GRADING (PLACE AND COMPACT EXISTING MATERIAL)	1,656	C.Y.	\$ 18.00	\$ 29,800.00
5	IRRIGATION SERVICE	1	EA.	\$ 12,000.00	\$ 12,000.00
6	STORM DRAINAGE	1	L.S.	\$ 25,000.00	\$ 25,000.00
7	SEWER SERVICE	1	L.S.	\$ 8,000.00	\$ 8,000.00
8	LIGHTING/ELECTRICAL	1	L.S.	\$ 25,000.00	\$ 25,000.00
9	ASPHALT ROADWAY/PARKING	17,565	S.F.	\$ 4.50	\$ 79,042.50
10	CONCRETE PAVEMENT	3,495	S.F.	\$ 8.00	\$ 27,960.00
11	ADA RAMP	1	EA.	\$ 1,700.00	\$ 1,700.00
12	SOFT SURFACE TRAIL (5')	920	S.F.	\$ 2.50	\$ 2,300.00
13	ACCESSIBLE RESTROOM	1	L.S.	\$ 180,000.00	\$ 180,000.00
14	PAVILION (25'x25')	2	EA.	\$ 50,000.00	\$ 100,000.00
15	PICNIC TABLE	4	EA.	\$ 1,200.00	\$ 4,800.00
16	PARK BENCH	2	EA.	\$ 2,000.00	\$ 4,000.00
17	TRASH RECEPTACLE	4	EA.	\$ 1,000.00	\$ 4,000.00
18	DOG WASTE DISPENSER	2	EA.	\$ 500.00	\$ 1,000.00
19	DRINKING FOUNTAIN	1	EA.	\$ 5,000.00	\$ 5,000.00
20	TRAILHEAD SIGN	1	EA.	\$ 10,000.00	\$ 10,000.00
21	WAYFINDING SIGNAGE	2	EA.	\$ 5,000.00	\$ 10,000.00
22	DECIDUOUS TREE (2" CAL.)	14	EA.	\$ 400.00	\$ 5,600.00
23	NATIVE GRASS SEED MIX	22,185	S.F.	\$ 0.40	\$ 8,874.00
24	IRRIGATION - DRIP	1	L.S.	\$ 6,750.00	\$ 6,750.00
				<b>Subtotal</b>	<b>\$ 621,826.15</b>
				<b>Construction Contingency (10%)</b>	<b>\$ 62,182.62</b>
				<b>Engineering Cost (10%)</b>	<b>\$ 62,182.62</b>
				<b>Estimated Total</b>	<b>\$ 746,191.38</b>
Big Cottonwood Trailhead					
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	\$ 17,774.48	\$ 17,774.48
2	SITE CLEARING AND GRUBBING	21,215	S.F.	\$ 0.10	\$ 2,121.50
3	DEMO	1	L.S.	\$ 10,000.00	\$ 10,000.00
4	SITE GRADING (PLACE AND COMPACT EXISTING MATERIAL)	786	C.Y.	\$ 18.00	\$ 14,143.33
5	STORM DRAINAGE	1	L.S.	\$ 5,000.00	\$ 5,000.00
6	ASPHALT ROADWAY/PARKING	10,800	S.F.	\$ 4.50	\$ 48,600.00
7	CONCRETE PAVEMENT	1,015	S.F.	\$ 8.00	\$ 8,120.00
8	ADA RAMP	1	EA.	\$ 1,700.00	\$ 1,700.00
9	BOULDER RETAINING WALL	100	L.F.	\$ 150.00	\$ 15,000.00
10	PAVILION (25'x25')	1	EA.	\$ 50,000.00	\$ 50,000.00
11	PICNIC TABLE	2	EA.	\$ 1,200.00	\$ 2,400.00
12	TRASH RECEPTACLE	1	EA.	\$ 1,000.00	\$ 1,000.00
13	DOG WASTE DISPENSER	1	EA.	\$ 500.00	\$ 500.00
14	TRAILHEAD SIGN	1	EA.	\$ 10,000.00	\$ 10,000.00
15	WAYFINDING SIGNAGE	1	EA.	\$ 5,000.00	\$ 5,000.00
16	DECIDUOUS TREE (2" CAL.)	1	EA.	\$ 400.00	\$ 400.00
17	NATIVE GRASS SEED MIX	9,400	S.F.	\$ 0.40	\$ 3,760.00
				<b>Subtotal</b>	<b>\$ 195,519.32</b>
				<b>Construction Contingency (10%)</b>	<b>\$ 19,551.93</b>
				<b>Engineering Cost (10%)</b>	<b>\$ 19,551.93</b>
				<b>Estimated Total</b>	<b>\$ 234,623.18</b>
Ferguson Trailhead					
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	\$ 60,000.00	\$ 60,000.00
2	SITE CLEARING AND GRUBBING	53,745	S.F.	\$ 0.10	\$ 5,374.50
3	DEMO	1	L.S.	\$ 10,000.00	\$ 10,000.00
4	SITE GRADING (PLACE AND COMPACT EXISTING MATERIAL)	3,981	C.Y.	\$ 18.00	\$ 71,658.00
5	IRRIGATION SERVICE	1	EA.	\$ 12,000.00	\$ 12,000.00
6	STORM DRAINAGE	1	L.S.	\$ 59,000.00	\$ 59,000.00
7	SEWER SERVICE	1	L.S.	\$ 8,000.00	\$ 8,000.00
8	LIGHTING/ELECTRICAL	1	L.S.	\$ 35,000.00	\$ 35,000.00
9	ASPHALT ROADWAY/PARKING	32,000	S.F.	\$ 4.50	\$ 144,000.00
10	CONCRETE CURB & GUTTER (30")	1,460	L.F.	\$ 25.00	\$ 36,500.00
11	8-FT ASPHALT PATH	10,080	S.F.	\$ 3.50	\$ 35,280.00
12	CONCRETE PAVEMENT	7,465	S.F.	\$ 8.00	\$ 59,720.00
13	ADA RAMP	4	EA.	\$ 1,700.00	\$ 6,800.00
14	STEPS	20	EA.	\$ 3,200.00	\$ 64,000.00
15	RETAINING WALLS	1	L.S.	\$ 200,000.00	\$ 200,000.00
16	SOFT SURFACE TRAIL (5')	2,900	S.F.	\$ 2.50	\$ 7,250.00
17	ACCESSIBLE RESTROOM	1	L.S.	\$ 180,000.00	\$ 180,000.00
18	PAVILION (25'x25')	1	EA.	\$ 30,000.00	\$ 30,000.00
19	PICNIC TABLE	2	EA.	\$ 1,200.00	\$ 2,400.00
20	PARK BENCH	2	EA.	\$ 2,000.00	\$ 4,000.00
21	TRASH RECEPTACLE	3	EA.	\$ 1,000.00	\$ 3,000.00
22	DOG WASTE DISPENSER	2	EA.	\$ 500.00	\$ 1,000.00
23	DRINKING FOUNTAIN	1	EA.	\$ 5,000.00	\$ 5,000.00
24	TRAILHEAD SIGN	1	EA.	\$ 10,000.00	\$ 10,000.00
25	WAYFINDING SIGNAGE	2	EA.	\$ 5,000.00	\$ 10,000.00
26	6-FT BLACK EPOXY COATED CHAIN LINK FENCING	2600	L.F.	\$ 34.00	\$ 88,400.00
27	LANDSCAPING	1	L.S.	\$ 25,000.00	\$ 25,000.00
28	NATIVE GRASS SEED MIX	20,000	S.F.	\$ 0.40	\$ 8,000.00
29	IRRIGATION - DRIP	1	L.S.	\$ 20,000.00	\$ 20,000.00
				<b>Subtotal</b>	<b>\$ 1,199,882.50</b>
				<b>Construction Contingency (10%)</b>	<b>\$ 119,988.25</b>
				<b>Engineering Cost (10%)</b>	<b>\$ 119,988.25</b>
				<b>Estimated Total</b>	<b>\$ 1,439,859.00</b>
Local Access Typical					
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	\$ 746.32	\$ 746.32
2	SITE CLEARING AND GRUBBING	3,770	S.F.	\$ 0.10	\$ 377.00
3	SITE GRADING (PLACE AND COMPACT EXISTING MATERIAL)	140	C.Y.	\$ 18.00	\$ 2,513.33
4	CONCRETE PAVEMENT	425	S.F.	\$ 8.00	\$ 3,400.00
5	SOFT SURFACE TRAIL (5')	380	S.F.	\$ 2.50	\$ 950.00
6	TRASH RECEPTACLE	1	EA.	\$ 1,000.00	\$ 1,000.00
7	DOG WASTE DISPENSER	1	EA.	\$ 500.00	\$ 500.00
8	WAYFINDING SIGNAGE	1	EA.	\$ 5,000.00	\$ 5,000.00
9	NATIVE GRASS SEED MIX	2,965	S.F.	\$ 0.40	\$ 1,186.00
				<b>Subtotal</b>	<b>\$ 15,672.65</b>
				<b>Construction Contingency (10%)</b>	<b>\$ 1,567.27</b>
				<b>Engineering Cost (10%)</b>	<b>\$ 1,567.27</b>
				<b>Estimated Total</b>	<b>\$ 18,807.18</b>

\*NOTE: PRELIMINARY COST ESTIMATES DO NOT INCLUDE LAND ACQUISITION COSTS.

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