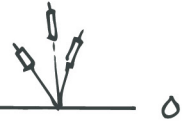


A
SEVEN CANYONS TRUST
& BOCKHOLT INC.
PROJECT



HERMAN FRANKS PARK

EMIGRATION CREEK

VISION

MASTER
PLAN

WINTER
2020

EDITION
ONE



Beginnings.

Some 60 to 90 million years ago, rock layers folded and compressed to form the broad, gently-sloped Emigration Canyon and its creek [01]. Indigenous peoples hunted, fished, and gathered here, and early pioneers used the canyon as a natural pathway to the Salt Lake Valley and beyond. Flowing out of the canyon, the creek meanders in an open, natural channel through Rotary Glen Park, Hogle Zoo, Bonneville Golf Course, Wasatch Hollow, Blaine Natural Area, Allen Park, and Westminster College. Outside Westminster, the creek flows underground into a stormwater conduit, towards Liberty Pond, and onto the Jordan River.

Industry and development have shaped Emigration Creek. Abandonment of the creek as drinking water prompted channelization to control flooding [01]. The banks became steep and eroded. This led to burial of the creek, dubbed a nuisance, in the early 20th Century. An estimated twelve miles have impaired water quality and five miles are culverted underground [02].

INCEPTION

In 2015, students with Westminster College traced Emigration Creek from campus to Liberty Park, in what's now a semiannual-walk. They found the creek flowed underneath a green space in the East Liberty neighborhood of Salt Lake City, Herman Franks Park (1351 South 700 East). Named after baseball legend and native-Utahan, Herman Franks, its attractors include three baseball diamonds and a dog park affixed between the fields. Students examined the benefits of uncovering Emigration Creek here and envisioned strategies to build community support.

KEY

Buried Creek Channel

Impaired Creek Channel

Watershed Boundaries

2

EMIGRATION CREEK PROFILE

Total Length: 16.4 mi

Buried: 4.9 mi

Impaired: 11.5 mi

Watershed Size: 24.0 sq mi

Avg. Peak Flow: 30 cfs





Engagement.

In 2016, the Seven Canyons Trust was selected by Bockholt Inc.'s technical assistance program to implement strategies proposed by the Westminster students. Engagement began with a stakeholders meeting, which included representatives from Bockholt Inc., East Liberty Park Community Organization, Salt Lake City, Salt Lake County, and Seven Canyons Trust. This meeting outlined the process, timeline, and mission of the project. Afterwards, the Trust hosted two community workshops focused on engaging the park's neighborhood, hanging a total of 1,200 flyers on doors. The workshops engaged 50 community members, establishing project goals. Water quality was voted as highest priority, followed by community amenity, then wildlife habitat, and, after, feedback was gathered on two concepts. The community-based design was then finalized through individual stakeholder meetings with Central City Baseball, a dog park advocate, a restoration specialist, and Salt Lake City Council, Parks & Public Lands, Sustainability, and Transportation.

ADDITIONAL OUTREACH

01. 5 presentations to community councils, including East Liberty Park, Central City, Liberty Wells, and Sugar House
02. 5 articles, featured in Building Salt Lake, Catalyst Magazine, and three community newsletters.
03. 4 outreach tabling events at park to get feedback from users
04. 256 students joined watershed walks to park
05. 150 comment forms submitted through workshops, walks, and online surveying

"[I] LIKE THAT THERE IS GOING TO BE MORE CONNECTION TO THE WATER. INCREASED AWARENESS WILL HOPEFULLY BRING ABOUT POSITIVE CHANGE AND HEALTHY DISCOURSE ABOUT CITIZEN RESPONSIBILITY IN REGARDS TO HEALTHY WATER SYSTEMS."

- ANONYMOUS WESTMINSTER STUDENT



VISION STATEMENT

A community-based design vision to restore Emigration Creek through Herman Franks Park to activate, supplement, and enhance current uses.

GOALS

01. Restore Emigration Creek to address water quality impairments, and protect the riparian corridor through site design.
02. Create a beautiful, vibrant community destination to access nature, learn about hydrology, and improve outdoor recreation and active transportation connections.
03. Enhance the site's vegetative biodiversity and habitat value for target wildlife species.



Benefits.

Communities across the globe are transforming antiquated stormwater systems by uncovering urban creeks.

WATER & AIR QUALITY

Emigration Creek is impaired under the Clean Water Act. Culverting speeds up creek velocities, increases erosion, and transports nutrients downstream. Underground streams provide no filtering of air and water through vegetation, both in-river and along streambanks. Natural creeks retain nutrients and clean water quality through streamside vegetation, streambank deposition, and groundwater infiltration [03]. Riparian forests filter air pollutants [04].

RESILIENCY

Culverts create choke points in the stormwater system. Evidence from flooding in 1983 suggests culverts became obstructed with flood debris, causing \$34 million worth of damage County-wide [05]. Whereas, daylighting removes choke points and slows water velocity, compared to smooth concrete culverts, through meanders and rocky and vegetated banks. Streams, especially with the inclusion of a floodplain, increase groundwater infiltration and storage [06]. Groundwater can become an increasingly important source of drinking water with climate change uncertainty and a growing population.

HABITAT

Salt Lake is a critical stopping point for neo-tropical migratory birds. Riparian vegetation supports the nesting and breeding of

"I LOVE THE IDEA OF EXPOSING THIS SECTION OF THE CREEK. I LIVE FIVE BLOCKS AWAY AND NEVER VISIT THE PARK. I WOULD LOVE A MORE DIVERSE SPACE HERE TO ENJOY, AND ALSO FEEL THE EXPOSURE WOULD INCREASE CREEK AWARENESS."

- JULIANNE



these world-travelers. Additionally, an estimated 80 percent of Utah's species rely on riparian ecosystems. However, these habitats represent a meager 1.2 percent of the City's total land area [07]. Daylighting creates new riparian habitat to support Utah's biodiversity, decreases habitat fragmentation and forms wildlife corridors, and improves fish passage.

QUALITY OF LIFE

Creeks add visual attraction, create a sense of place, and mask the sounds and sites of the urban environment. Residents gain restored access to nature, critical in the development of children and the mental and physical wellbeing of adults [08]. They provide gathering space for picnics, events, festivals, and interaction. Trees and streams cool air temperatures.

ECONOMICS

Daylighting facilitates surrounding development, and increases property values and business revenues. An \$18-million daylighting project, in Kalamazoo, MI, generates \$12 million in revenue each year through festivals. Many communities are finding daylighting to be more cost effective compared to the lifecycle costs of replace aging infrastructure [06].

EDUCATION

Creeks become living laboratories for nearby schools. Students can study the benefits of daylighting through water quality testing and biological surveys.

RECREATION

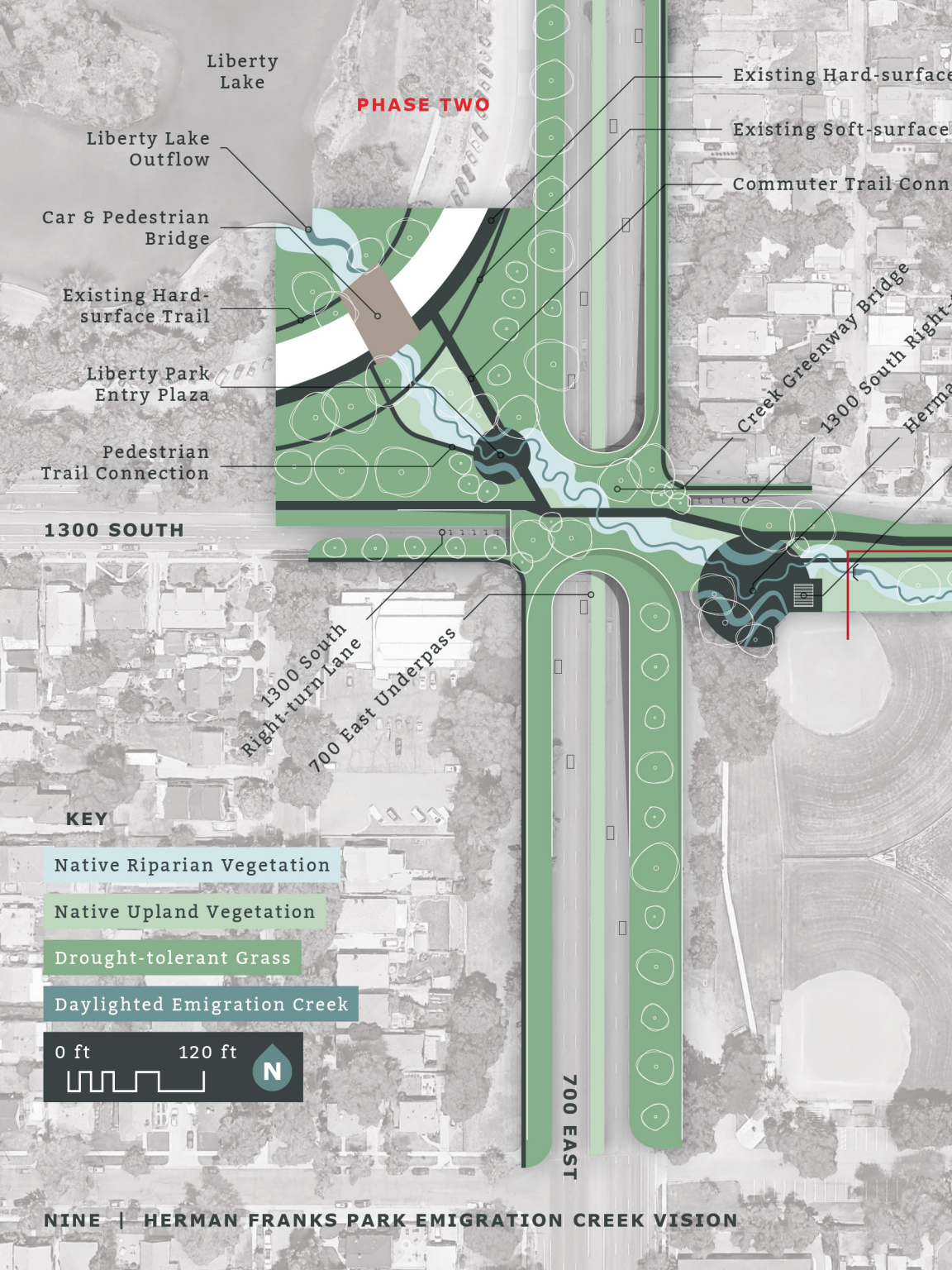
Streamside pathways and commuter trails create active transportation and recreation connections. On newly uncovered creeks, anglers can fish for Utah's indigenous trout, the Bonneville cutthroat. Access to trails and recreation increase public health. Trail users save over \$500 in reduced medical care due to increased physical activity [09].



PRECEDENT

In 2012, a 500-foot culvert conveying Wildcat Creek underneath the ballfields at Davis Park was removed. This \$1.8-million project restored 650-feet of creek, removed a barrier for steelhead trout, filled a gap in the regional Wildcat Creek Trail, and brought new activity to the park [11].





PHASE TWO

Liberty Lake

Liberty Lake Outflow

Car & Pedestrian Bridge

Existing Hard-surface Trail

Liberty Park Entry Plaza

Pedestrian Trail Connection

Existing Hard-surface

Existing Soft-surface

Commuter Trail Conn

Creek Greenway Bridge

1300 South Right

Herman

1300 SOUTH

1300 South Right-turn Lane

700 East Underpass

700 EAST

KEY

Native Riparian Vegetation

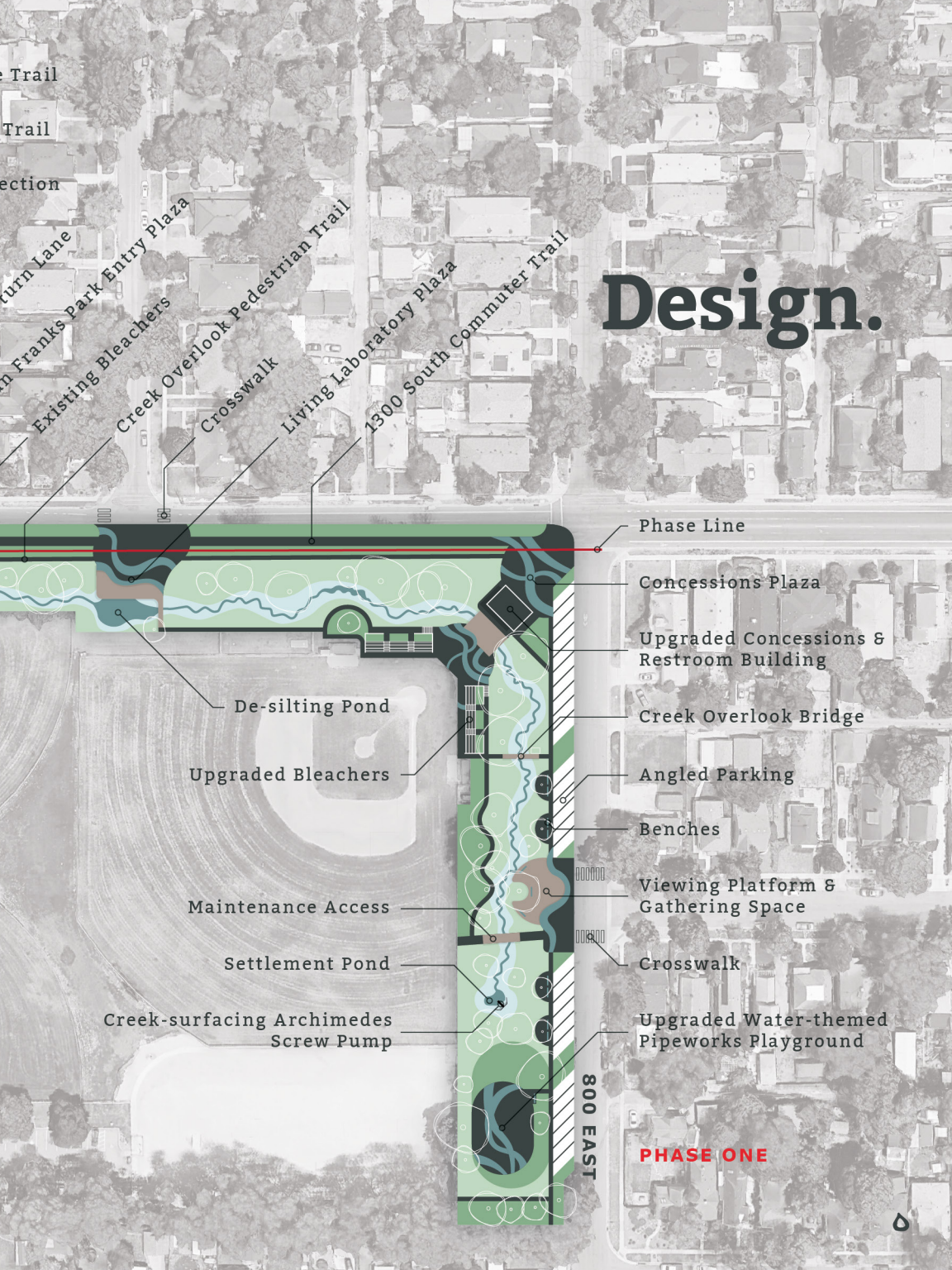
Native Upland Vegetation

Drought-tolerant Grass

Daylighted Emigration Creek

0 ft 120 ft





Trail
Trail
ection

turn Lane
an Franks Park Entry Plaza
Existing Bleachers
Creek Overlook Pedestrian Trail
Crosswalk
Living Laboratory Plaza
1300 South Commuter Trail

Design.

Phase Line

Concessions Plaza
Upgraded Concessions & Restroom Building
Creek Overlook Bridge
Angled Parking
Benches
Viewing Platform & Gathering Space
Crosswalk
Upgraded Water-themed Pipeworks Playground

De-silting Pond
Upgraded Bleachers
Maintenance Access
Settlement Pond
Creek-surfacing Archimedes Screw Pump

800 EAST

PHASE ONE





Description.

The vision extends over two phases. The first phase uses an Archimedes screw to bring Emigration Creek to the surface, allowing the existing stormwater culvert to remain in place. After, the stream will meander around the east and north-sides of the park through pools, runs, and riffles. The second phase will continue the creek through the intersection of 700 East and 1300 South to Liberty Pond. In turn, 700 East ramps down, underneath the creek, and 1300 South becomes a right-turn only onto 700 East. The green bridge creates a protected intersection for commuters, recreators, and pedestrians between Herman Franks Park and Liberty Park. The connected parks create over 90 acres of green space in the heart of Salt Lake City and a truly unique amenity.

PLAYGROUND & PUMP

Emigration Creek is pumped to the surface through a low-cost, low-maintenance Archimedes screw. Salt Lake City Public Utilities runs similar pumps, including one at the Cornell Lift Station (a stormwater treatment project along the Jordan River). The pump, encased in a see-through pipe, can become an educational feature. A “pipeworks” playground boosts the existing playground with a larger, site-specific design. Features include see-through stormwater pipes, empty culverts to climb and explore, and spigots and pumps for interaction with water. The east dog park entrance

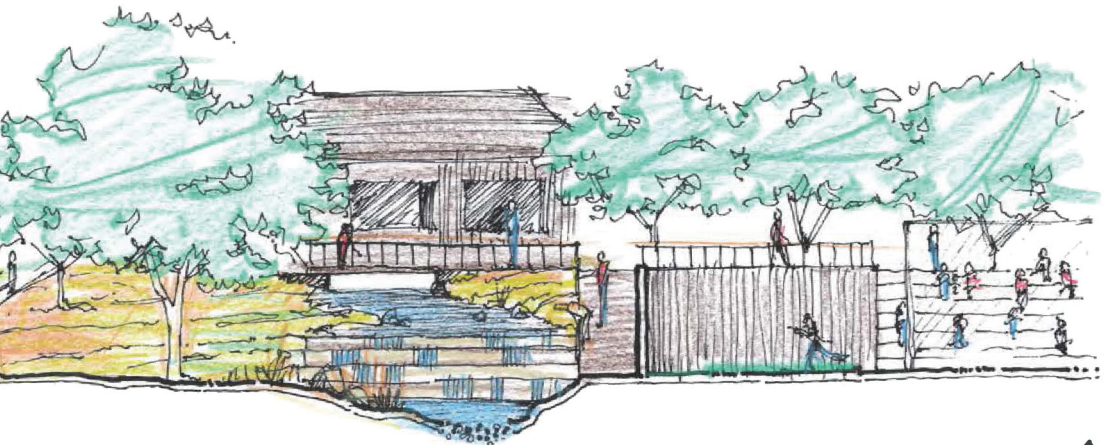


Ballfield & Stream

will be relocated to eliminate conflicts with the playground and a new access path will take users to the west entrance. A berm separates the playground and stream. The existing playground equipment will be donated to a school or community in need.

STREAM & LANDFORM

The existing landform is virtually flat. Emigration Creek will be designed with safety as priority through gently-sloped banks. Berming will define the stream channel. The stream will vary from one to three-feet wide and the riparian corridor, ten to fifteen-feet. The stream widens in pools to settle floatables and suspended solids (which can be removed by maintenance crews), and flows over riffles and runs to filter pollutants through vegetation. Retaining walls will raise the site and mitigate overuse due to its adjacency to the dog park. Hardened, high-use areas will provide opportunity to engage with the creek. Taking advantage of the new landform, the concessions and bleachers will be upgraded. The concessions are moved to the corner and the stream will flow between the concessions and field. The bleachers will be built into the landform, stepping down to the existing grade, while maintaining sightlines from the street. The baseball warm-up areas are preserved. A net will prevent baseballs from flying onto the street and into the stream. Along 800 East, 28 new angled spots will improve the parking situation.



TRAILS, BOARDWALKS, & GATHERING SPACE

Harden, high-use areas will focus activity away from natural banks to prevent erosion and protect vegetation. Plazas, at corners and new mid-block crossings, provide branded entrances and venues for events. Trails connect the existing amenities and Herman Franks Park to Liberty Park. A commuter trail provides active transportation connections down 1300 South. A living laboratory for nearby Westminster College and Hawthorne and Emerson Elementary schools provides on-site water quality testing equipment. Interpretative signage provides knowledge of local hydrology and daylighting, and live water quality data (collected on-site) can be visualized. Amenities include benches, lighting, and bike racks.

The green bridge connects Herman Franks Park and Liberty Park at-grade, while 700 East is ramped down below grade. This eliminates a dangerous intersection and east-west barrier. The impacted streets will be lined with trees and green infrastructure. Existing sidewalks will be widened for maintenance access and emergency vehicles. Due to existing utilities under the intersection, 1300 South will become a right-turn lane only. The congested signal and left-hand turn on 700 East will be eliminated. The surrounding urban form allows for the change. All streets, alleyways, and businesses are accessible as before. The idea challenges the notion that automobiles are given precedence over people and natural spaces. Similarly, Freeway Park in Seattle, WA connects the City's downtown neighborhoods through a large green bridge over an interstate, which includes an urban forest, plazas, and water features.

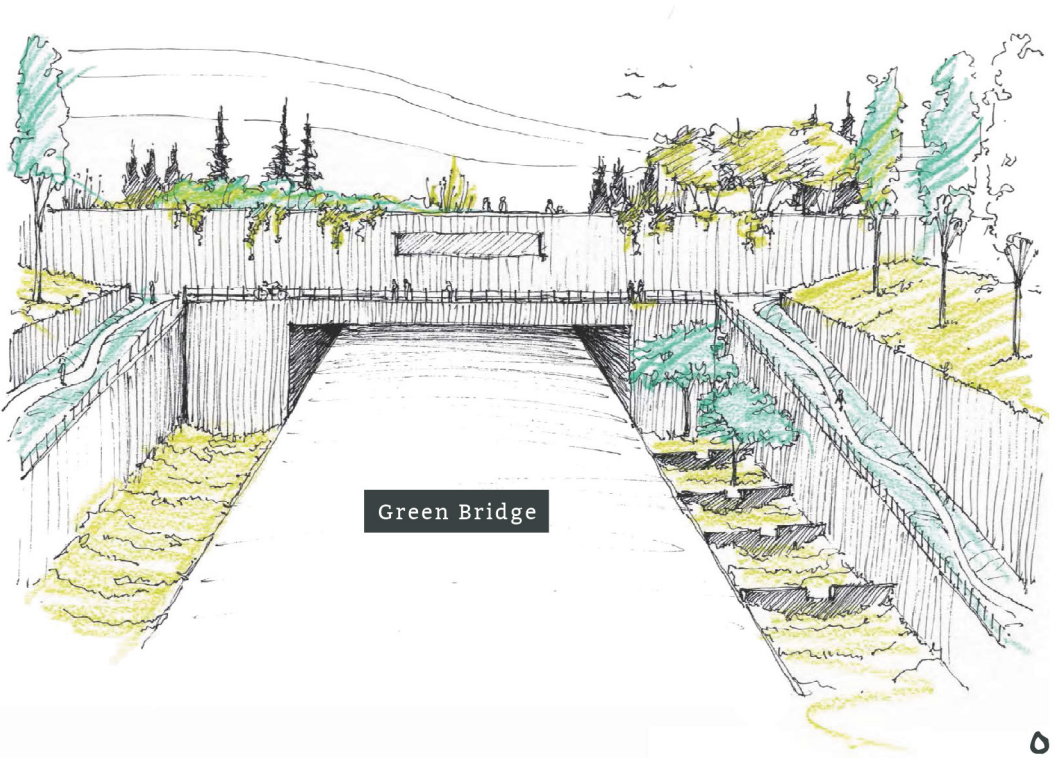
BARRIERS

Phase One presents an easily-implementable approach. Herman Franks Park has little infrastructure to overcome, besides the cost associated with pumping the creek to the surface. Because Salt Lake City is the landowner, municipal support will be necessary for implementation. Phase Two presents more potential barriers. Although the surrounding built environment allows 700 East to

ramp down, an engineering and traffic study is necessary to gauge the impacts, including changes to traffic patterns, feasibility with utilities, and groundwater pumping. In addition, construction will cause traffic delays during implementation. This phase requires considerable funding and political will.

IMPACT

- 01. 1,750 ft of daylighted creek
- 02. 110 trees and shrubs planted
- 03. 26,600 sq ft of riparian habitat restored
- 04. 36,700 sq ft of upland habitat restored
- 05. 3,900 ft of new trails created
- 06. 3,750 sq ft of new and upgraded playground area
- 07. 3,000 sq ft of living laboratory area
- 08. 22,400 sq ft of plaza and gathering space
- 09. 20,000 sq ft green bridge





Implementation.

The vision will be presented in a public open house, to community councils, and to Salt Lake City. Tactical intervention will build awareness and support. As landowner, Salt Lake City will decide on implementation.

SIGNAGE

Signs along the proposed route of the daylighted creek through Herman Franks Park will provide information about the creek and daylighting benefits, and build support for implementation.

EDUCATION/EVENTS

Educational walks follow Emigration Creek to the park. Discussions highlight benefits of daylighting and the vision. Volunteer projects develop stewardship in implementation and future maintenance. Other events at the park, such as a concert series, yoga, birding, and outreach tabling, can highlight efforts.

INSTALLATION/MURAL

Painted prompts invoke curiosity about the buried creek. For example, residents assisted in painting a stream over a buried creek in the Glendale neighborhood of Salt Lake City. A series of prompts, starting with “This would be a good spot for a creek,” guided users through. Murals can highlight stormdrains that empty to Emigration Creek. Installations can involve the community in building support for the vision. For instance, wooden fishes, painted by the community, can be affixed to the ballfield fences following the creek’s path.

AMENITIES

Benches and other features, colored blue with the words “Emigration Creek,” can brand the park. Sidewalks can include a meandering channel design, colored blue. Amenities, such as the playground, parking, plazas, or trails laid out in the vision, can be implemented as an initial step.

SCULPTURE/FOUNTAIN

Sculptures can visually represent the underground waters. For example, a piece used three bridges to represent three creeks flowing on the west-side of Salt Lake City. Another idea, imagine a pipe penetrating the culvert for users to listen to the running water underneath. Installation of the Archimedes screw can become an artistic fountain as an initial step.

BIO-SWALE/RIPARIAN GARDEN

Surface run-off can be drained to a bio-swale or riparian garden to drain and filter into the ground. This will reduce pressure on the culvert. Plantings can highlight species found along Emigration Creek, such as Fremont cottonwood or chokecherry.



COST ESTIMATE

Phase One [12]

Preparation \$ 207,298.88
Daylighting \$ 170,704.00
Creek, Vegetation, & Irrigation

Infrastructure \$ 808,065.50
Trails, Boardwalks, Railings,
Walls, Lighting, Furnishings,
Signage, & Parking

Amenities \$ 137,500.00
Playground, Concessions, &
Baseball Fencing

Other \$ 441,541.89
Sanitation, Design, Engineering
Permitting, & Contingency

Total \$ 1,765,110.27

Phase Two

Preparation \$ 1,481,533.76
Daylighting \$ 214,504.00
Creek, Vegetation, & Irrigation

Infrastructure \$ 1,585,058.00
Trails, Boardwalks, Railings,
Walls, Lighting, Furnishings,
Signage, & Parking

Amenities \$ 6,947,070.00
Green Bridge

Other \$ 2,769,269.76
Sanitation, Design, Engineering
Permitting, & Contingency

Total \$12,994,435.52

Playground





YOUR SUPPORT

Three ways you can support the effort:

- 01. Write to the City Mayor and/or an elected official.
- 02. Share your feedback on the project.
- 03. Provide a tax-deductible donation.

"IT WOULD ADD SO MUCH 'CURB APPEAL' TO THIS AREA AND WOULD INCREASE MY DESIRE TO COME TO THE PARK."

REFERENCES

- [01] Carlstrom, *The History of Emigration Canyon* (2003)
- [02] Salt Lake County Watershed Plan (2015)
- [03] Klapproth, *Understanding the science behind riparian forest buffers* (2009)
- [04] Nowak, *The effects of urban trees on air quality* (2002)
- [05] Hooton, Memorial Day Weekend 1983 (1999)
- [06] Trice, *Daylighting Streams* (2016)
- [07] Salt Lake City Riparian Corridor Study (2010)
- [08] Louv, *The Nature Principle* (2011)
- [09] Wang, *A cost-benefit analysis of physical activity using bike/pedestrian trails* (2005)
- [10] Photos by Restoration Design Group
- [11] SFGate, *Wildcat Creek cleanup gets \$1.8 million grant* (2010)
- [12] Bockholt, *Opinion of Probable Cost* (2017)

Survey Form.

Share your feedback on the Herman Franks Park Emigration Creek Vision:

I support Salt Lake City's implementation of this project.

Yes No





IN
PARTNERSHIP
WITH

Bockholt
Landscape Architecture

+



LUSH FRESH
HANDMADE
COSMETICS

+

**FRANKS FAMILY
FOUNDATION**

Donation Form.

Amount

Name

Email

Address

Card

Expiration

CVC

Send form to 122 J St, Salt Lake City, UT 84103, or provide a donation online: sevendcanyonstrust.org/hfp.
Proceeds support the Seven Canyons Trust's work on the Herman Franks Park Emigration Creek Vision.