



City of Sunset Valley

Sunset Valley Savanna Trail at Upper Cougar Creek

Schematic Design Package

6/06/2023

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Client:



Project Team:

mend collaborative



Timeline

	Phase	Month													
		Feb '23	Mar '23	April '23	May '23	June '23	July '23	Aug '23	Sep '23	Oct '23	Nov '23	Dec '23	Jan '24	Feb '24	Mar '24
Community Engagement	1 & 2	█	█	█											
Schematic Design	1 & 2	█	█	█	█	●									
Design Development	1					█									
Construction Documents	1						█	█							
Permitting (CSV, TCEQ)	1								█	█	█				
Bidding	1											█	█		
Groundbreaking	1													█	█

We Are Here - End of Schematic Design for Phase 1 & 2 of the Upper Cougar Creek project

Phase 1 -

- ADA accessible multiuse trail
- Wayfinding
- Restorative planting
- Environmental art

Phase 2 -

- Themed trail features for play, discovery & gathering
- Wayfinding and trail heads (as needed)
- Restorative planting
- Environmental art

Vision Statement and Guiding Principles

The **Sunset Valley Savanna Trail** (Upper Cougar Creek) Will Be...

A unique destination that brings residents and visitors together to move and play, connecting people to the City of Sunset Valley's commercial district, trail systems, and outdoor amenities. Three guiding principles provide the framework for the design and are listed here:

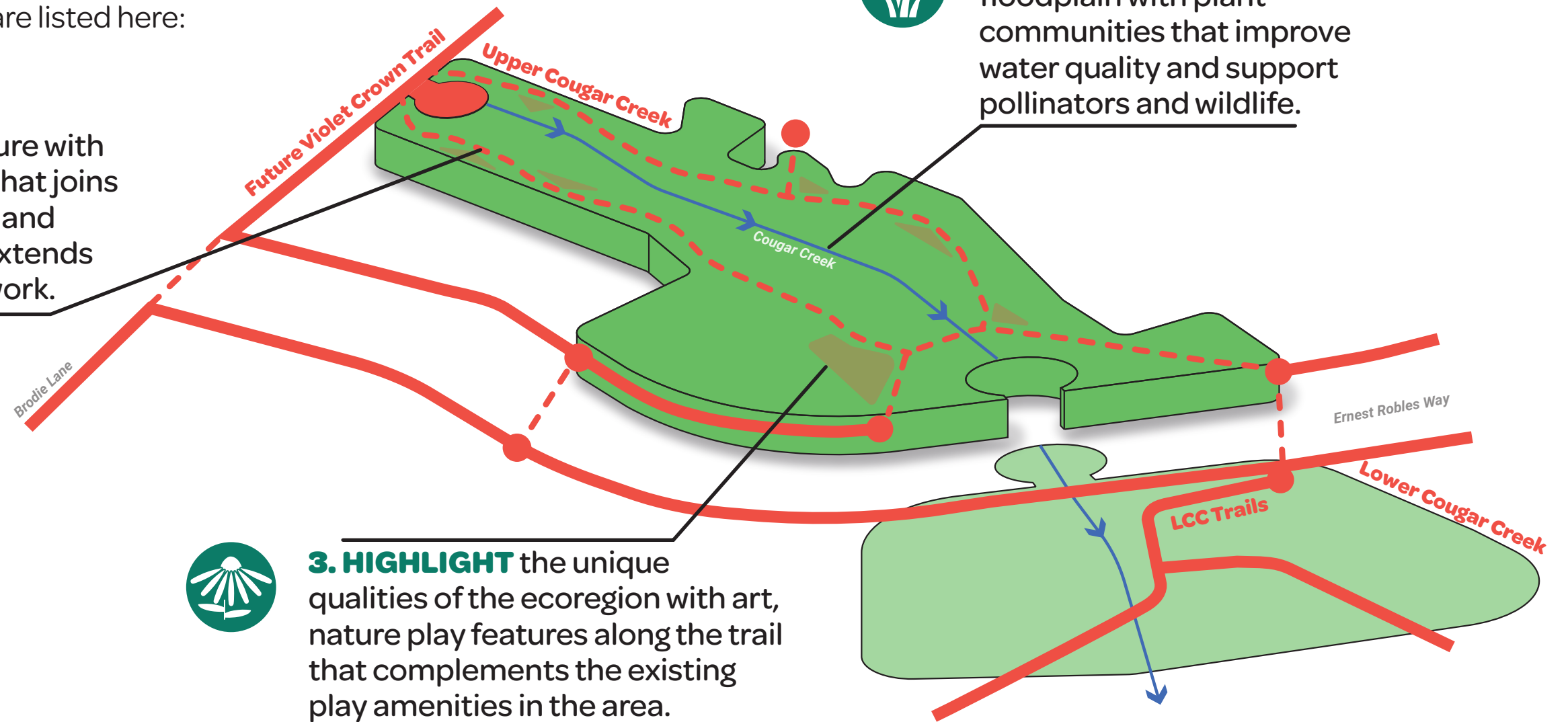
1. CONNECT people to nature with an accessible trail system that joins regional trails, open space, and commercial districts and extends the Cougar Creek trail network.



2. REHABILITATE the floodplain with plant communities that improve water quality and support pollinators and wildlife.



3. HIGHLIGHT the unique qualities of the ecoregion with art, nature play features along the trail that complements the existing play amenities in the area.



The vision statement and guiding principles were developed using the results of the 2021 concept design survey, the Parks and Open Space Master Plan, and the 2023 survey put forth as part of this design process.

What We Heard...

75 respondents participated in survey #1

- **Trails:** Decomposed granite trails with concrete band, permeable concrete
- **Play:** Nature and adventure play, swings, climbing structures, slides, hills and tunnels, artistic play features
- **Shade Structure:** Artistic
- **Art:** Functional Art, Environmental Art
- **Restoration:** Floodplain Meadow and Wildlife-Focused
- **Environmental Education:** Artistic Features and Signage
- **Creek Health:** Rain Meadows and Grow Zones
- **Disc Golf:** No Disc Golf
- **Traffic Calming:** Painted Crosswalks

What We Drew...

...in response to survey #1



What We Heard...

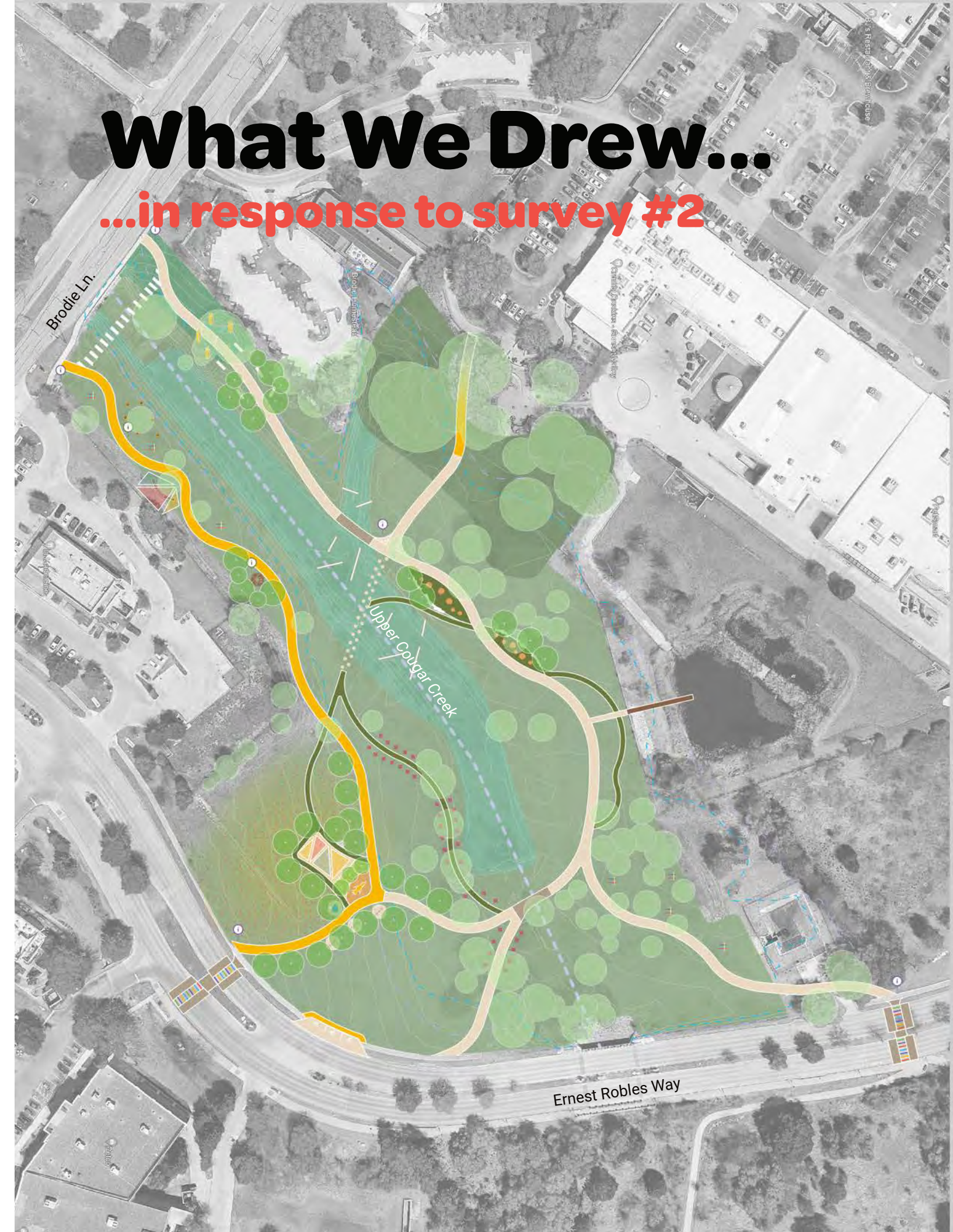
35 respondents participated in survey #2

Open response comments were categorized into Likes, Concerns, and Desires so similar comments could be grouped together.

- **Likes:** Planting and habitat restoration, trail, pond overlook, playground, shade structure, environmental art
- **Concerns:** Pavilion, lack of parking and access, playground safety, people may not use it, no restroom, maintenance
- **Desires:** Different location, preserve more natural space, multi-generational activities, leave as is, remove playground
- **Summary:** Overall there is support for the trail, planting and habitat restoration, and environmental art. The type and style of play was liked, however, participants were concerned on the location. Similarly, participants were concerned on the location of the pavilion and gathering area.

What We Drew...

...in response to survey #2



Sunset Valley Savanna Trail

Overall Site Plan + Theme Areas

Legend

- New Tree
- Existing Tree
- Pervious Concrete Trail
- Decomposed Granite Trail
- Low Water Crossing
- Mown Art Loop Path
- Savannah Meadow
- Cedar Elm Grove
- Creek Meadow
- Heritage Oaks
- Boardwalk
- Limestone Block Seating

Theme Areas






- A **Shady Elm Grove**
- B **Habitat Trail**
- C **Meadow Gathering Space**
- D **Environmental Art Loop**
- E **Heritage Oaks & Doc's Playground**

Further details on these theme areas start on page 9 of this report.



Sunset Valley Savanna Trail Access, Trails, & Wayfinding

Legend

-  Pervious Concrete Multiuse Trail
-  Decomposed Granite Multiuse Trail
-  Low Water Crossing
-  ADA Accessible Loop
-  Future Violet Crown Trail

Access, Trails, and Wayfinding Objectives:

1. Provide an ADA accessible loop from Brodie Ln. to Ernest Robles Way.
2. Only use impervious surfacing where absolutely necessary at low water crossings.
3. Create safe connections to the Lower Cougar Creek Trail and commercial areas using raised and painted crosswalks.



1 11' Pervious Concrete Multiuse Trail



2 11' Decomposed Granite Multiuse Trail



3 11' Concrete Low Water Crossing



Sunset Valley Savanna Trail

Theme Areas

Theme Areas are selected and located based on these criteria:

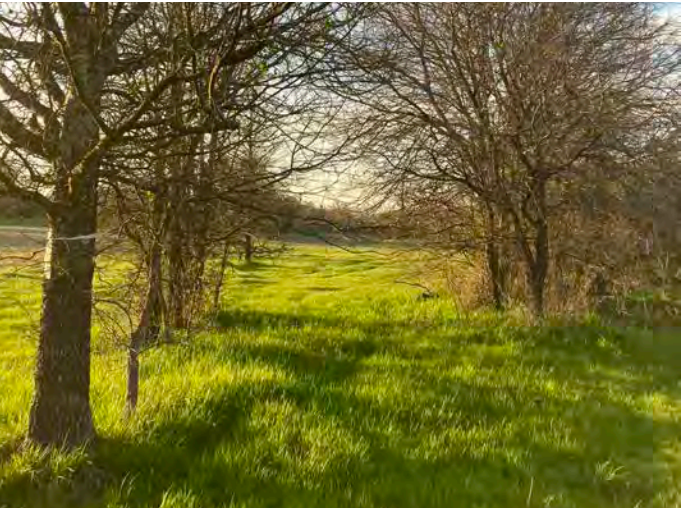
1. Locate more permanent features outside the floodplain.
2. Locate theme areas around unique site features, see examples below.
3. In the floodplain, use low impact, natural materials, & restoration techniques.



1 Mesquite Savanna at the Habitat Trail



2 Heritage Oaks at Doc's Playground



3 Trace Allée at the Environmental Loop



4 Existing Wildflowers at the Meadow Gathering Space

Sunset Valley Savanna Trail

A. Shady Elm Grove

The **Shady Elm Grove** is oriented around a grove of Cedar Elms in the northeast section of the site. Here, more quiet, contemplative features include limestone block seating under tree canopy and opportunities for interactive art features. Bird nest boxes will be installed for species adapted to the edge between the grove, meadow, and surrounding urban areas. Most features are outside the floodplain, with the exception of a small area on the southwest side of the trail.



1 Limestone Seating



2 Environmental Art



3 Artful Songbird Nest Boxes



4 Interactive Art - TBD

Sunset Valley Savanna Trail

B. Habitat Trail

The **Habitat Trail** is located in the northwest bank of Upper Cougar Creek. The trail will feature habitat spaces for wildlife such as bird boxes, insect shelter boxes, and oak tree enclosures distributed along the trail. Features reminiscent of wildlife habitat, such as bird nests will provide the inspiration for play features along the trail. Features are outside the floodplain in this area.



1 Shade Sails



2 Artful Songbird Nest Boxes



3 Artful Tree Enclosures



4 Spider Web Climbing Area



5 Bird Nest Play



6 Artful Insect Shelter Boxes

Sunset Valley Savanna Trail

C. Meadow Gathering Space

The **Meadow Gathering Space** is located south of La Madeleine on an upland parcel of land. This area is a meeting and picnic location along Sunset Valley Savanna Trail. It will provide shade, seating areas, adult exercise equipment, a water refill area, and bike racks. An artistically designed bird sculpture and play feature will reinforce the habitat theme along the trail. Features are outside the floodplain in this area.



1 Shade Sails



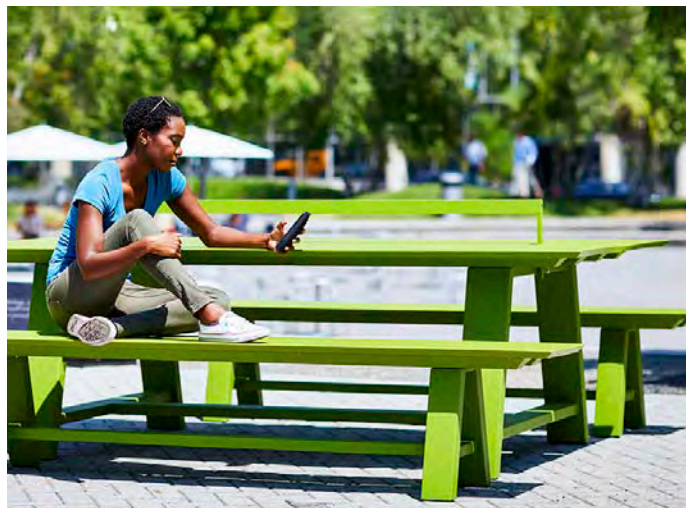
2 Diverse Wildflower Meadow



3 Artful Bird Structure



4 Steel Bikes Racks



5 Steel Picnic Tables



6 Water Refill Station
Artful Bike Racks

Sunset Valley Savanna Trail

D. Environmental Art Loop

The **Environmental Art Loop** is the heart of the trail and is oriented around Upper Cougar Creek. The mown path weaves between the multiuse trail and site features such as the trace allée, stormwater pond, and creek. Environmental education and art interventions will be distributed along the trail including restoration areas, stump jumps, signage, and wooden seating areas. All features are within the floodplain, thus, only low-impact, natural materials and restoration techniques will be used.



1 Artful Gabions/Wet Meadow Planting



2 Artful Wood Stump Jump



3 Mown Path



4 Artful Educational Signage



5 Artful Artificial Perches



6 Limestone Scramble



Sunset Valley Savanna Trail

E. Heritage Oaks & Doc's Playground

The **Heritage Oaks and Doc's Playground** is located east of Upper Cougar Creek near the Homestead venue and Doc's Backyard Grill. The large live oaks in this area were present when the land was part of the Weaver Ranch and provide shade and beauty. A Sunset Valley playground is located here and provides play features for kids 5 years and older, however, some of these features are in disrepair. Improvements and repairs to the playground equipment are suggested to enhance the site, which is located outside the floodplain.



1 Improve Health of Existing Live Oaks



2 Diverse Perennial Species



3 Upgrade Swing Set



4 Upgrade Existing Play Structures



5 Toddler Play Area



Plant Communities

Legend

- 1 Shady Elm Grove
- 2 Heritage Oaks
- 3 Savanna Meadow
- 4 Whistlers' Pond
- 5 Creek Meadow
- 6 Trace Allée
- 7 Trail Turf Edge-Full Length of Trail
- 8 Wildflower Meadow

Two Types of Planting Communities:

1. Light touch restoration strategy, more about process than final product,
2. Designed plant communities for signature areas.

Plant Community Objectives

The Upper Cougar Creek parcel is 75% within a floodplain and in the critical water quality zone; a light touch, gentle restoration strategy is suggested.

1. Add biodiversity and nudge the trajectory of the plant communities towards more native and diverse species.
2. Use manual methods to remove invasive plant species. Do not use herbicides that may compromise water quality.
3. Create designed plant communities for signature areas, like the playground and gathering space.

Plant Communities and Restoration Strategies - Continued

1 Cedar Elm Grove

Existing Vegetation: Cedar Elm, Prickly Pear, Pencil Cactus, Mesquite, Wintergrass

Type of Planting: Restoration-Style Interventions Along Trail

Target Plant Community: Upland Cedar Grove

Target Plant Species: Agarita, Texas Kidneywood, Texas Persimmon, Prickly Pear, Grasses

Percent Cover: 30% Tree Canopy | 20% Shrub/Understory | 50% Grassland

Post Establishment Management: Seasonal Cut Back of Grass Matrix, Prune Trees and Shrubs Annually



2 Heritage Oaks

Existing Vegetation: Live oaks, Wintergrass, Dwarf Palmetto

Type of Planting: Understory Vegetation Enhancement

Target Plant Community: Oak Deep Shade Understory

Target Plant Species: Texas Mt Laurel, Twist Leaf, Sedges, Blue Mist Flower, Spiderwort, Dwarf Palmetto

Percent Cover: 60% Tree Canopy | 15% Shrub/Understory | 25% Grassland/Open

Post Establishment Management: More Traditional Garden Maintenance



3 Savanna Meadow

Existing Vegetation: Mesquite, Retama, Kingranch Bluestem, Wintergrass, Silver Leaf Nightshade

Type of Planting: Restoration-Style Intervention | Nursery Tree | No-Till Drill & Live Plantings

Target Plant Community: Oak Savanna and More Diverse Grassland Meadow

Target Plant Species: Post Oak, Blackjack Oak, Texas Red Oak, Max Sunflower, Flameleaf Sumac, Wintergrass, Sideoats Grama, Silver Bluestem, Green Sprangletop, Wildflowers

Percent Cover: 10-20% Tree Canopy | 5% Understory | 85-75% Grassland

Post Establishment Management: Seasonal Cut Back of Grass Matrix, Prune and Remove Select Trees and Shrubs Annually

Existing Mesquite | Retama Savanna



Future Oak Savanna



Plant Communities and Restoration Strategies - Continued

4 Whistlers' Pond (Stormwater Pond)

Existing Vegetation: Wet Meadow, Pond Species

Type of Planting: Restoration-Style Intervention | Strategic Additions

Target Plant Community: More Diverse Riparian Species

Target Plant Species: Button Bush, Dwarf Palmetto, Rush, Max Sunflower, Pickerel Weed, Bushy Bluestem

Percent Cover: TBD

Post Establishment Management: TBD with Owner



5 Creek Meadow

Existing Vegetation: Johnsongrass, Moist Tolerant Grasses Herbaceous Groundcover

Type of Planting: Restoration-Style Intervention | Microcatchment Rock Filter/Safe Sites

Target Plant Community: More Diverse Wet Meadow

Target Plant Species: Easterngama Grass, Bushy Bluestem, Switchgrass, Rush

Percent Cover: 70% Grasses | 30% Herbaceous

Post Establishment Management: Seasonal Weed Management



6 Trace Allée

Existing Vegetation: Oaks, Hackberry, Cedar Elms, Mixed Grasses and Herbaceous Species

Type of Planting: Restoration-Style Intervention | Artificial Perches for Seed Dispersal

Target Plant Community: Tree Allée Along Trail

Target Plant Species: Diverse Tree Species

Percent Addition: 30% More Tree Cover

Post Establishment Management: Seasonal Weed Management, Prune Trees As Needed



7 Upper Cougar Creek Trail

Type of Planting: Buffalo Grass Turf Edge | Periodic Mow

Target Plant Species: Other Species Allowed to Seed Out into Buffalo Grass

Percent Cover: 90% Grasses | 10% Herbaceous

Post Establishment Management: Periodic Mow Only on Edge



Plant Communities and Restoration Strategies - Continued

8 Wildflower Meadow

Existing Vegetation: Kingranch Bluestem, Wintergrass, Texas Blue Bonnet, Firewheel, Silver Leaf Nightshade

Type of Planting: Restoration-Style Intervention | Interseeding

Target Plant Community: More Diverse Wildflower Meadow

Target Plant Species: Wintergrass, Sideoats Grama, Silver Bluestem, Green Sprangletop, Wildflowers

Percent Cover: 5% Tree Canopy | 5% Understory | 90% Grassland | Wildflowers

Post Establishment Management: Seasonal Cut Back of Grass Matrix, Mow paths

Wildflower Meadow



Phasing Approach

Phase 1 (groundbreaking in Winter 2024)



Phase 1 Includes -

- ADA-Loop
- Tree Planting
- Restorative Planting
- Environmental Art
- Rock Scramble
- Limestone Seating
- Wayfinding Signage

Phase 2 (To be determined)



Phase 2 Includes -

- ADA-Loop
- Tree Planting
- Restorative Planting
- Environmental Art
- Rock Scramble
- Limestone Seating
- Wayfinding Signage
- Environmental Art
- Creek Crossing at Brodie
- Meadow Gathering Space
- Raised Crosswalks
- Play Features
- Pond Overlook
- Parking

Opinion of Probable Construction Cost

Phase 1



Phase 1 Includes -

- ADA-Loop
- Tree Planting
- Restorative Planting
- Environmental Art
- Rock Scramble
- Limestone Seating
- Wayfinding Signage

Item	Cost
Construction Set-up & Demolition	\$ 28,953.20
ADA Loop	\$ 426,473.60
Tree Planting	\$ 14,275.00
Restoration Planting	\$ 60,000.00
Environmental Art	\$ 28,400.00
Rock Scramble	\$ 12,000.00
Limestone Seats	\$ 10,000.00
Wayfinding Signage	\$ 12,000.00
Subtotal	\$ 592,101.80
Contingency	25%
Project Subtotal	\$ 740,127.25

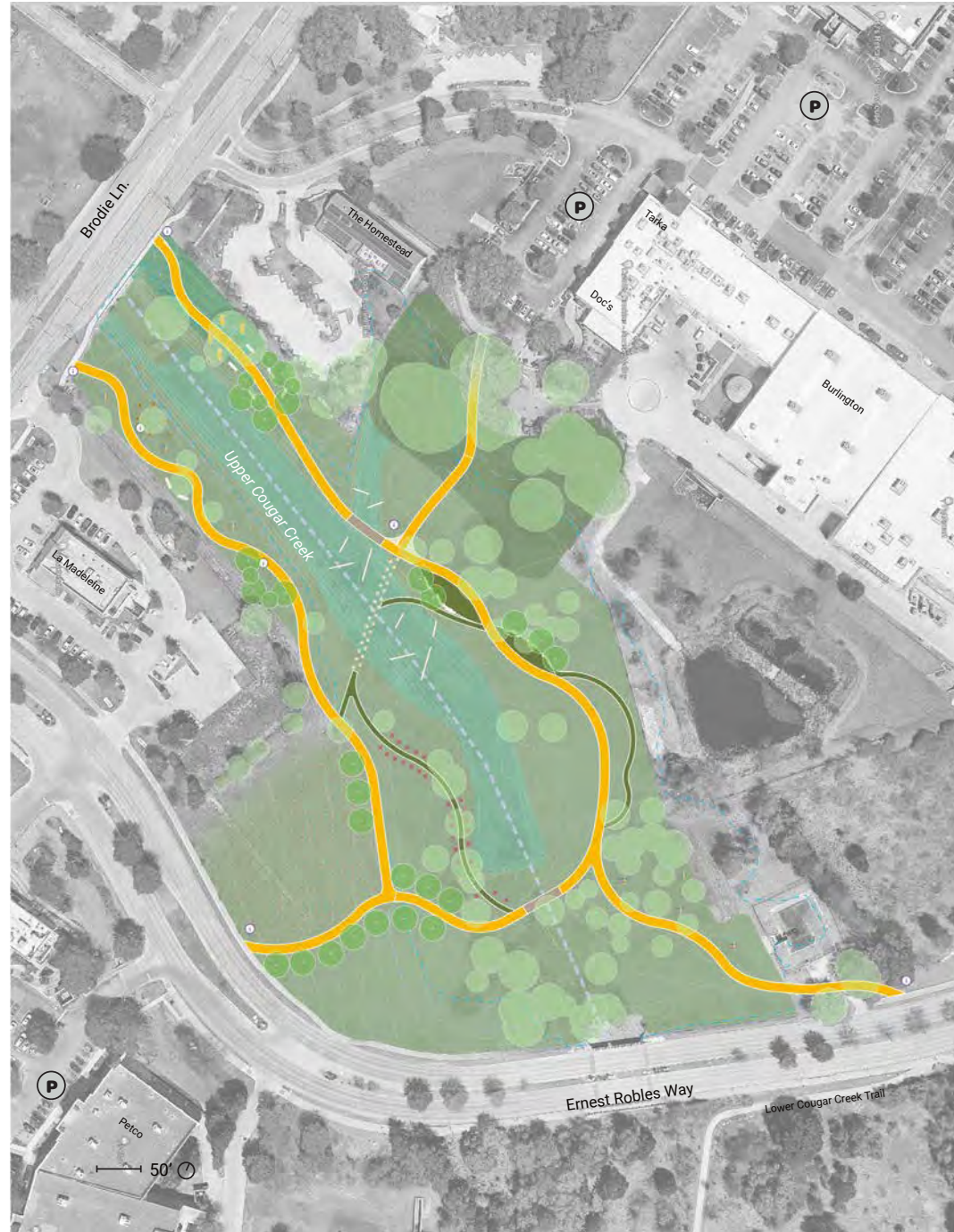
Items Eligible for Venue Tax + HOT Funds	\$ 129,928.60
Total General Fund Cost	\$ 610,198.65

Opinion of Probable Construction Cost (OPCC) are cost estimates to facilitate budgetary and feasibility determinations, based on historical information with adjustments made for specific project conditions. These cost forecasts are prepared during the schematic design, design development, and construction documents phases of the design process for the guidance of the owner. The estimate here is for the schematic design phase and will be revisited as the project develops further. The Austin market is susceptible to fluctuations in construction costs.

Opinion of Probable Construction Cost

Phase 1 - ALT 1

Substitutes Stabilized Decomposed Granite for Porous Paving



Phase 1 Includes -

- ADA-Loop
- Tree Planting
- Restorative Planting
- Environmental Art
- Rock Scramble
- Limestone Seating
- Wayfinding Signage

Item	Cost
Construction Set-up & Demolition	\$ 28,953.20
ADA Loop	\$ 345,023.60
Tree Planting	\$ 14,275.00
Restoration Planting	\$ 60,000.00
Environmental Art	\$ 28,400.00
Rock Scramble	\$ 12,000.00
Limestone Seats	\$ 10,000.00
Wayfinding Signage	\$ 12,000.00
Subtotal	\$ 510,651.80
Contingency	25%
Project Subtotal	\$ 638,314.75

Items Eligible for Venue Tax + HOT Funds	\$ 129,928.60
Total General Fund Cost	\$ 508,386.15

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Opinion of Probable Construction Cost

Phase 1 - ALT2

Substitutes Stabilized Decomposed Granite for Porous Paving, No Connection to Doc's in Phase 1



Phase 1 Includes -

- ADA-Loop
- Tree Planting
- Restorative Planting
- Environmental Art
- Rock Scramble
- Limestone Seating
- Wayfinding Signage

Item	Cost
Construction Set-up & Demolition	\$ 28,953.20
ADA Loop	\$ 316,133.60
Tree Planting	\$ 14,275.00
Restoration Planting	\$ 60,000.00
Environmental Art	\$ 28,400.00
Rock Scramble	\$ 12,000.00
Limestone Seats	\$ 10,000.00
Wayfinding Signage	\$ 12,000.00
Subtotal	\$ 481,761.80
Contingency	25%
Project Subtotal	\$ 602,202.25

Items Eligible for Venue Tax + HOT Funds	\$ 129,928.60
Total General Fund Cost	\$ 472,273.65

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THANK YOU