Fancher Creek Bridle Trail

Master Plan

Fresno County

March 16, 2016

LARS ANDERSEN & ASSOCIATES, INC.
INTRODUCTIONS

County of Fresno
David Chavez – Parks Manager
  Department of Public Works & Planning - Resources
Dale Siemer, PE – Senior Engineer
  Department of Public Works & Planning - Design

Consultants
Lars Engineers – Civil Engineers
  Dan Zoldak, PE, CASP – Engineer in Charge
Sierra Designs Inc. Landscape Architects
  Daniel M. Veyna, ASLA – Principal in Charge
  Kay Hutmacher, ASLA - Principal

Partner Organizations
Tree Fresno
Sunnyside Property Owners Association
High Sierra Volunteer Trail Crew
A. Project History

- Fancher Creek Bridle Trail was platted the early 1940s
  - The trail was active from the 1950’s to the early 1980’s due to multiple ‘horse properties’ and a commercial boarding stable just to the south on Clovis Ave.
  - Use as a bridle Trail diminished, most likely in the ‘80’s and early ‘90’s and greatly reduced when the commercial boarding stable closed.
  - At some point the lack of use as an ‘Equestrian Trail’ declined to the point that the trail became over grown.
  - Pedestrians and occasional equestrians currently use the FID Service Road on the North/South portion of the trail a East/West ‘service road’ on the East/West alignment.

B. Project Funding Source

C. Project Design Process to Date

D. Project Design Process Moving Forward
I. Project Overview

- Fancher Creek Bridle Trail was platted the early 1940s
- A Landscape Design completed and installed at some point
  - Probably in the 1950’s
    - Many/most of the trees appear to have been planted within 3 – 10’ of the western edge of the easement
  - Mostly non-native tree species popular at that time,
    - American Elm, Cork Oak, Eucalyptus, Acacia,
    - Coast Live Oak, Locust, and Carob
  - Multiple other trees appear to have colonized or been bird seeded:
    - Privet, Mulberry, Native Cottonwood, Valley Oak, Almond,
    - Peach, Native Black Willow and Palms
    - Some very desirable habitat – Native Oak, Cottonwood, Willow -
    - Some naturalized and provide habitat, shade and substance – Mulberry
    - Some are weeds – Privet,
    - Some are neutral - Almond, Peach
    - Neighbor plantings – Citrus
  - Currently Mixed Maturing Urban Forest planting:
    - Short 15 – 25 years
    - Medium 25 – 75 years
    - Long 75 – 200+ years
II. Project Overview - Existing Conditions

- Some Neighbors have planted trees, shrubs and vines on both sides of the easement line.
  - Over the years some neighbors have planted screening plants & hedges: Carolina Cherry, Pittosporum, Citrus, Privet, Oleander, etc.
  - Vines are Star Jasmin, Algerian Ivy, Creeping Fig, and Grape
  - Larger properties planted larger trees, redwoods, cedars and fruit trees.
  - Apparently some of the plantings of screening material and other plants on the Fancher Creek Equestrian Trail have been planted by adjacent private property owners.

- Major Clean up Effort in the Last 2 – 3 years
  - Clean up spear headed by SPOA, Tree Fresno, High Sierra Volunteer Trail Crew with assistance from the County of Fresno
  - Major progress in the last year
    - Clearing out weeds, downed tree limbs, weeds, weed trees
    - Major clearing under the powerlines located mostly on the N/S alignment
Existing Conditions, continued

- **Encroachments**
  - Some of the adjacent property owners have encroached into the FCET Easement.
  - The encroachments vary from minor, a fence line wavering back and forth across the property line by 6” or less to major, encroaching by 15’ on the N/S alignment to as much as 35’ – 45’ on the E/W alignment.
  - Encroachments include structures: fences, block walls, arbors, and sheds, mostly on the N/S alignment – entire structures, barns, garages and other structures on the E/W alignment.
Existing Conditions, continued

- **Trees:**
  - Trees over 8” diameter at Breast height, have been evaluated by an arborist.
  - Trees are a mix of short, medium and long lived trees.
    - Many of the short and medium lived trees are at or nearing the end of their life span.
  - Based on the arborist's evaluation approximately 80+ larger trees and multiple smaller and sapling trees will be removed.
  - All trees have been evaluated by the arborist and all are in need of pruning, and have been prioritized for pruning:
    - Safety and trail clearance pruning are priority 1,
    - other pruning has been prioritized and recommended to be completed in 1 – 4 years.
  - There are multiple tree stumps, not in the trail alignment will remain.
    - Sprouted suckers to be removed if they are in or near or trail alignment.

- **Shrubs:**
  - There are shrubs, mostly along the fence line.
  - Some are in the easement, others in the easement but behind fences that encroach into the easement and others that are behind the property line.
  - Many of the shrubs are overgrown.
  - Volunteers have pruned many, however there is still a fair amount of pruning needed.
Existing Conditions - continued

- **Ground Plane:**
  - The ground plane is a mix of bare soil, leaf mulch (2”-12” thick), weeds, grass, ground cover (vinca major), and trailing vines (grapes & Algerian ivy).
  - On the southern portion of the N/S section of the trail the grass (presumably Bermuda grass) is still green even during the drought.

- **Water:**
  - The site is not irrigated and there is no evidence of irrigation within the easement
  - It appears that a few of the neighbors have augmented their plantings and naturalized plantings within the FCETE with overhead spray and/or manually from hose bibs.

- **Trail Use:**
  - There is a significant amount of pedestrians using the FID service road along Fancher Creek as a walking jogging trail, baby carriages and occasionally bicycles.
  - Per some users there is use by equestrians on a very limited bases.
  - It appears that the E/W portion of the trail, from Clovis avenue to Fancher Creek is rarely used by pedestrians, those using it appear to be property owners that live on that portion.
  - Both the City of Fresno and FID use the E/W gravel road for access.
  - Multiple adjacent property owners use the trail easement and the FID service road for vehicle access to the back of their properties.
  - There are a few homeless that use the trail as a path of travel and portions of the easement as a place to sleep, less now that there is less cover
III. Project Criteria & Requests

- **Provide an Equestrian Trail:**
  - 10’ wide trail surface with 2- 1’ shoulders and 10’ head clearance 12’ overall
  - Surface to be suitable for Equestrian use – No concrete or asphalt
  - Desirable for the Trail to also be usable by pedestrians & causal wheels
  - Partially or fully ADA accessible; All trail access points shall be meet ADA requirements
  - Preferably with long sweeping curves with long sightlines where feasible
  - Keep trail as far away as possible from private property
  - Schematic design for a safe crossing at Butler

- **Trees and other Plantings:**
  - Preserve as many of the existing trees as possible with the exception of weed trees, suckers sprouting from tree stumps, and smaller trees (4" DBH or less) to allow for trail construction.
  - Tree stumps not affecting the trail alignment during construction shall remain
  - New tree plantings to be enhance a ‘natural’ feel, preferably in groves or groupings.
  - New planting shall provide seasonal interest
  - New planting shall discourage homeless encampments
  - Trees to compliment/support Valley Arboretum concept
  - Screen private property from the trail
  - FID will not allow any portion of tree canopy to encroach property easement
  - Use drought tolerant planting (low to medium water use per WOLCOLS)

- **Irrigation:**
  - Provide Partial Irrigation for new plantings
  - Provide permanent irrigation for trees

- **Safety:**
  - Design to be a safe for Equestrian use
  - Removal of hazardous trees and limbs (as recommended by arborist)
  - Design to reduce the use of the site by homeless for encampments

- **Encroachments:**
  - Encroachments are not to be considered or hinder the design of the trail.
  - Encroachments are only going to be removed when there is a conflict with path alignment and existing trees to remain.
IV. Project Constraints Impacting the Design & Trail Alignment

- **Existing Tree Protection – Per Arborist Recommendations**
  - Maintain a minimum distance for trail compaction of 9’ from Cork Oaks and 6’ from Eucalyptus and other trees, more if possible
  - Trail subgrade compaction should be no more than 6” within the tree drip line
  - Do not cut roots larger than 1” in diameter
  - Pothole within the tree drip line prior to trenching to determine root size and depth Hand trenching shall be required under the drip line, unless specifically waived on a case by case, tree by tree basis by either the Arborist or the Landscape Architect, based on exploratory pot holing in the trench alignment
  - Pruning and limb removal per Arborist recommendations.
  - Remove all Dead, Nearly Dead and Dangerous Trees

- **Encroachments of the FID & RR:**
  - The Trail shall not encroach into the FID Easement
  - The Trail shall not encroach into the Railroad Easements

- **Trail Alignment:**
  - Due to tree protection requirements, the trail alignment ignores encroachments and may traverses through some fences, walls and structures that some neighbors have built as needed.
  - Due to tree protected requirements and the desire to maintain as many existing trees as possible, in many locations the trail is forced to come very near and/or abut, existing fences and the easement property line.
  - No healthy larger trees are to be removed to accommodate the trail
  - Minimum 2’ clearance from any vertical object (i.e. Fence, structure, pole, guy wire, tree, etc.)
  - To miss trees the trail alignment is not able to have long sweeping curves.
  - The trail alignment will not be prejudiced by encroachments
  - Provide recommended trail crossing at Butler Ave within COF Easement
  - Trail location at the south end will be in a swale as directed by COF.
  - At the E/W section maintain trail in the southern 45’ width of the easement
  - Trail alignment, where possible or necessary, shall be placed where the least amount of grading is needed.
Trail Design Concepts - 2

- Trail Surfaces Options:
  - Native Soil
  - Compacted Native Soil
  - Slightly Compacted Decomposed Granite on Native
  - Slightly Compacted Decomposed Granite on Compacted Native
  - Compacted Base Rock over Compacted Native
  - Compacted DG over Compacted Base Rock over Compacted Native

- Other Potential Trail Amenities:
  - Irrigation – None - Revegetation type effort only
  - Irrigation – establishment only
  - Irrigation – Permanent - Partial Site
  - Irrigation – Permanent – Entire Site

- Other Potential Trail Amenities
  - Signage – Regulatory
  - Signage – Interpretive
  - Bollards at Entries
  - Bollards or Boulders at Power Pole Obstructions
  - Hitching Posts
  - Benches
  - Trash Cans
  - Cross Walk at Butler
  - Activated Warning Lights or other safety crossing feature(s) at Butler
**Alternate Trail Alignment**

- Trail has long curves to accommodate road bicycles – average speed 10 – 15 mph
- Removes many Large Trees (42)
- Conflicts with Arborist Recommendations
- Abuts Neighbors Fences
- New Large Trees Conflict with:
  - Power lines
  - Existing Tree Canopies

**Sierra Designs Trail Alignment**

- Trail curves to avoid Large trees and provide safe equestrian/pedestrian path – average speed 3 – 4 mph
- Large Trees Remain (11 removed)
- Follows Arborist Recommendations
- Abuts Neighbors Fences
- New Large Trees will avoid conflicts with:
  - Power lines
  - Existing Tree Canopies
Alternative Path
Alignment Differences

Alternative Path
Removes Several Healthy Trees

Preferred Path
Most Trees Remain

Sheet L 1.1 A
Paths Adjacent to Private Property
Tree Removal Implications

Alternative Path
Removes Healthy Trees

Preferred Alignment
Trees to Remain

L1.1 B
Design Process

Completed to Date

- Review of Budget
- Review of Existing Conditions
- List of “In Kind” items to be performed by County
- Site Survey of Existing Conditions
- Rough Conceptual Layout Designs
- Conceptual Budgets
- Refine to ‘Doable’ Schematic Design
- Preserve Opportunities
- Plan for Potential Future Improvements not funded
- Meetings to review concepts with Sunnyside Property Owners Association & Tree Fresno
- Refine Design to reflect ‘Doable’ consensus plan allowed within the Grant
- Estimate of Probable Construction Costs – based on Consensus Design
- Community Out Reach and Input

Moving Forward

- Design Development Construction Drawings and Cost Estimate
- Bid Set Construction Drawings & Specifications
- Bidding & Construction Contract Award
- Construction by General Contractor
- Trail Re-Opening
Design Process
by Dan Veyna
Sierra Designs-
Landscape Architecture
Tree Removal
(Yellow to be Removed)

Summary
Trees to be removed

50 Trees recommended by Arborist
14 Trees for Trail Alignment
3 Trees to Thin
3 Trees/Weeds for Aesthetics

70 Trees Total
270 Trees to Remain
Tree Removal
(Yellow to be Removed)
Tree Removal
(Yellow to be Removed)
Tree Removal
(Yellow to be Removed)
Tree Removal
(Yellow to be Removed)

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Tree Removal

Summary

Trees to be removed

- 50 Trees recommended by Arborist
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- 3 Trees/Weeds for Aesthetics

70 Trees Total
270 Trees to Remain
New Trail Alignment
Kings Canyon South (A-D)

Irrigation Zone
Section ‘A’
New Trail Alignment
Butler North (E-H)

Section ‘B’

Irrigation Zone

Section ‘C’

Butler Ave

Vicinity Map
New Trail Alignment
Butler South (I-M)

Section ‘D’
Irrigation Zone

Vicinity Map

Legend
- Proposed Trail
- Existing Canal Access Road
- Rancher Canal
- Shrubs
- Tree Trunk
- Eucalyptus Tree
- Corn Tree
- Palm Tree
- Pine Tree
- Crape Myrtle
- Almond Tree
- Dead Tree
- Walnut Tree
- Olive Tree
- Cactus
- Chinese Pistachio Tree
- Remove Tree Trunk
- Proposed Deciduous Tree
- Proposed Evergreen Tree
New Trail Alignment
Butler South (Cross Section D)
New Trail Alignment
West of Clovis Ave (M-S)
New Trail Alignment
West of Clovis Ave (Cross Section E)
Option Coverage Areas

Entire Trail Options 1-3 – Large Booster Pump
Option 4 – Medium Booster Pump

- Option 5 - 1000’ – Small Pump
- Option 6 – 500’ – No Pump

Drip Ring Detail

NOTE: Do not install pipe directly under tree.
Planting Concepts

- Over All Planting Concept:
  - Utilize 90% +- California native plants
  - The vast majority of native plants being regionally native to Fresno County
    - Great Valley Oak Riparian, Foothill Woodland, Foothill Chaparral Communities
  - The balance of native plants are those which are climate adaptable
  - The non native tree plantings are limited to accent focal color at each street entry – selection based on available irrigation type and anticipated life cycle.
  - The non native tree and shrub plantings are limited to trees and shrubs that solve unique issues that can not be easily or confidently resolved by natives.
  - Explore Phased Planting of trees and shrubs based on funding and plant availability
Trail Entry Sample
Butler North

Vicinity Map

- Ceanothus
- Rosemary
- Crepe Myrtle
- Redbud
- Carpet Rose
- Oregon Grape
Planting layout Sample

Unirrigated

Sugar Bush

Lupine - annuals

Buckwheat

Evergreen Current or Bare Soil

Native Honeysuckle

Mt. Lilac tree form
Planting layout Sample
Irrigated - or Non Irrigated in Wetter Areas

- Evergreen Current
- Dwarf Myrtle
- Redbud
- Native or Non Native Honeysuckle
- Lemonade Berry
- Nevins Mahonia
Full Sun Planting Sample
West of Clovis Avenue – Trail Turn Around

- Wormwood
- Redbud
- Our Lord’s Candle
- Sunset Manzanita
- Mesquite Hybrid
- Jeffrey Pine
Tree Grouping Sample
West of Clovis Avenue

Honey Mesquite
Hybrid Mesquite
Blue Oak
Jeffery Pine
Interior Live Oak
# Project Probable Cost Summary

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<th>Cost</th>
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*Future Items Not Included in Estimate*

- Replacement of Encroaching Fences & structures
- Safety Indicators at Butler
- Traffic Signage
- Electrical Transformers
- Year 2 - 4 pruning ($ 55,000)
- County In House Soft Costs
- Inspections, Reviews, Testing
- Hand Trenching under trees
The End
New Trail Alignment
Kings Canyon South (A-D)

Section ‘A’
New Trail Alignment
Kings Canyon South (A-C)
New Trail Alignment
Butler North (E-H)
New Trail Alignment
Mid Section- Kings Canyon to Butler (D-G)
New Trail Alignment
Butler South (I-M)
New Trail Alignment
North and South (H-L)

Vicinity Map
New Trail Alignment
West of Clovis Ave (M-S)
New Trail Alignment
MidSection Butler South to Clovis (M-P)
New Trail Alignment
East of Clovis Ave (Q-R)
New Trail Alignment
East of Clovis Ave (S)
The End
## Irrigation Math

**Drip Rings**

Minimum Operating Pressure 10 PSI

At Full Build Out - 344 New Trees, 270 Existing and 3000 shrubs

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<th>Loss Calcs</th>
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## Irrigation Math

### Drip Emitters
Minimum Operating Pressure 10 PSI  
At Full Build Out - 344 New Trees, 270 Existing and 3000 shrubs

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