



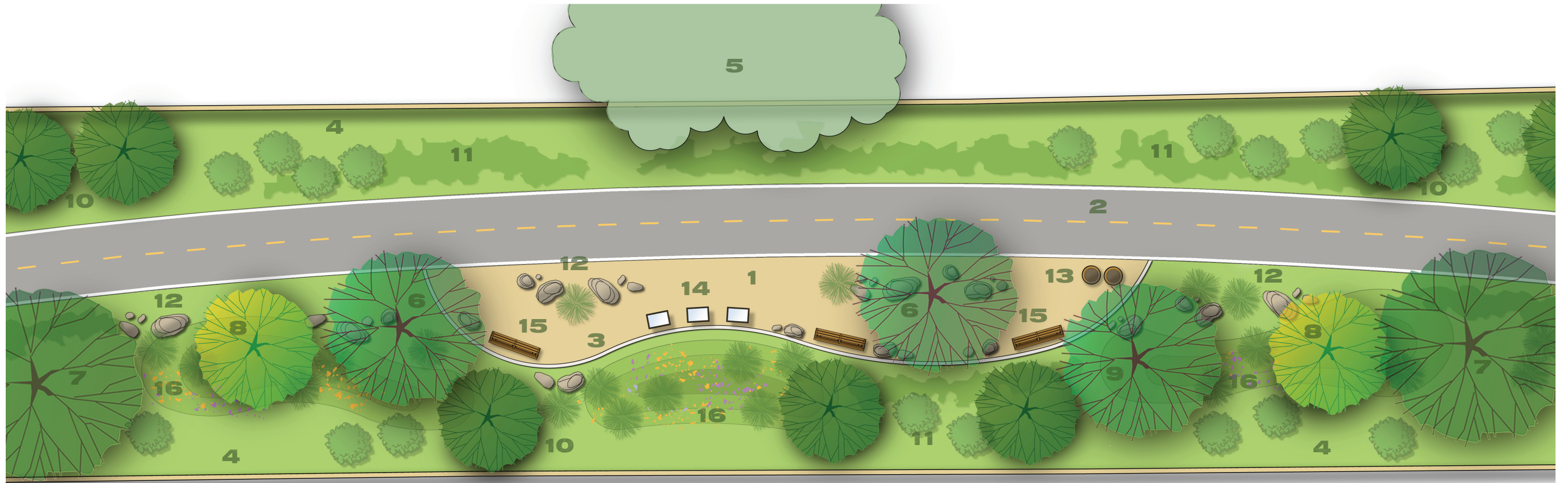
LEGEND

1. MONUMENT SIGN
2. STABILIZED DG
3. ASPHALT BIKE PATH & STRIPING
4. BOLLARDS WITH STEEL CABLE
5. GROUPS OF BOULDERS
6. TRAIL REGULATIONS AND MAP
7. TRASH CAN
8. PIPELINE WARNING SIGN
9. DOG BAGS DISPENSOR
10. CONCRETE HEADER

11. CA NATIVE PLANTING
12. STEEL SAFETY FENCING
13. TOYON
14. DRINKING FOUNTAINS
15. COAST LIVE OAK
16. STOP SIGN
17. EXISTING TREE CANOPIES
18. EXISTING SIDEWALK
19. EXISTING CROSSWALK
20. EXISTING TRAFFIC LIGHT
21. EXISTING FIRE HYDRANT
22. EXISTING METER
23. EXISTING BACKFLOW
24. NEW POC
25. NEW BACKFLOW FOR DRINKING FOUNTAINS
26. NEW BACKFLOW FOR IRRIGATION
27. NEW VALVE BOXES
28. EXISTING TURF

CONCEPT DRAWINGS / COLLINS-WANDA ENTRANCE

SANTIAGO CREEK TRAIL BEAUTIFICATION PROJECT



LEGEND

- | | |
|------------------------------------|--|
| 1. STABILIZED DG | 9. CATALINA ISLAND CHERRY |
| 2. ASPHALT BIKE PATH WITH STRIPING | 10. TOYON |
| 3. 6" CONCRETE HEADER | 11. XERISCAPE PLANTING / DRIP IRRIGATION |
| 4. EXISTING FENCING AND WALLS | 12. GROUPS OF NATIVE BOULDERS |
| 5. EXISTING TREE CANOPY | 13. TRASH RECEPTACLES |
| 6. COAST LIVE OAK | 14. EDUCATIONAL DISPLAY |
| 7. TORREY PINE | 15. WOOD COMPOSITE BENCHES |
| 8. MEXICAN ELDERBERRY | 16. WATER HARVESTING SWALE |

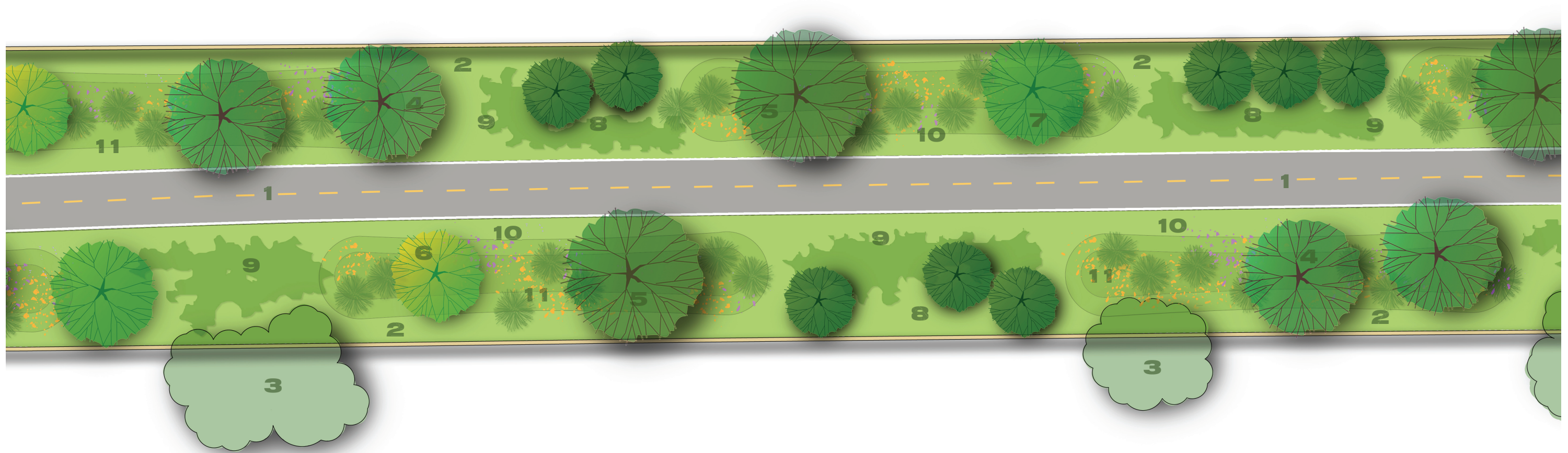


CONCEPT DRAWINGS / PLAN VIEW OF REST STOP

SANTIAGO CREEK TRAIL BEAUTIFICATION PROJECT



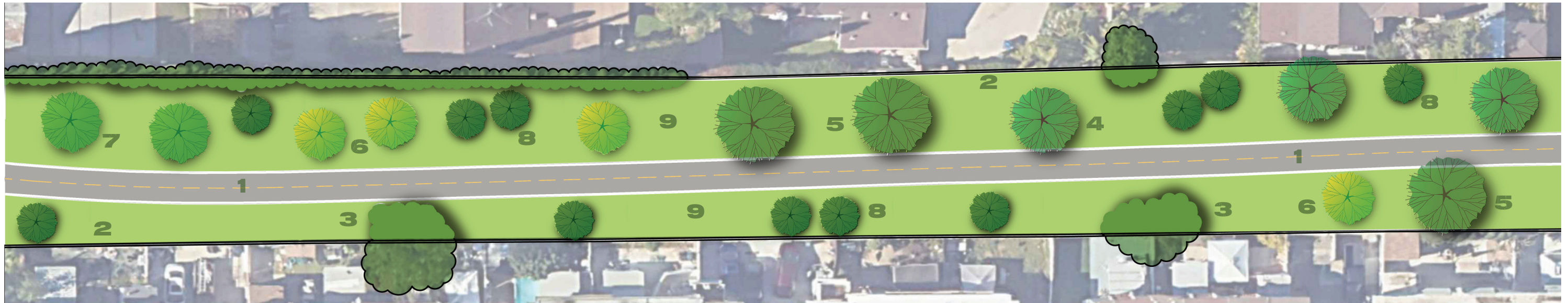
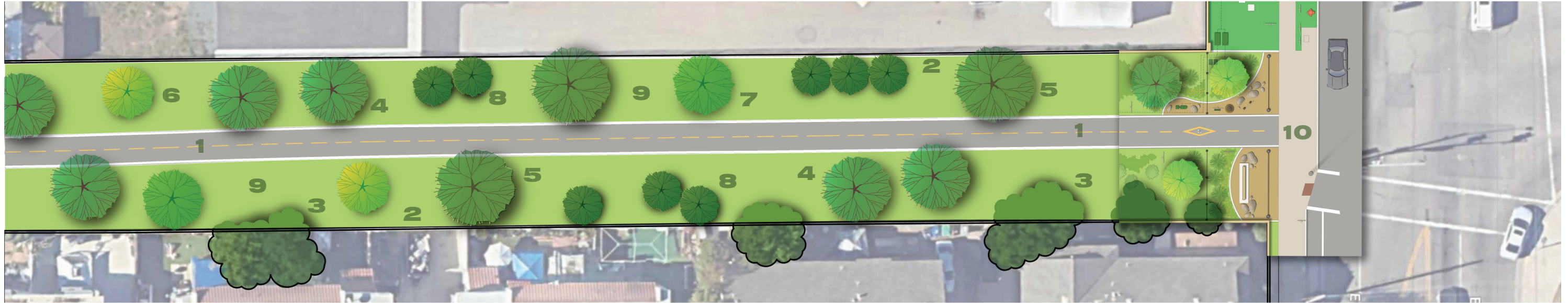
12.06.24



LEGEND

- | | |
|------------------------------------|--|
| 1. ASPHALT BIKE PATH WITH STRIPING | 7. CATALINA ISLAND CHERRY |
| 2. EXISTING FENCING AND WALLS | 8. TOYON |
| 3. EXISTING TREE CANOPY | 9. XERISCAPE PLANTING / DRIP IRRIGATION |
| 4. COAST LIVE OAK | 10. WATER HARVESTING SWALE |
| 5. TORREY PINE | 11. NATIVE GRASSES AND PERENNIALS FOR SEASONAL COLOR |
| 6. MEXICAN ELDERBERRY | |





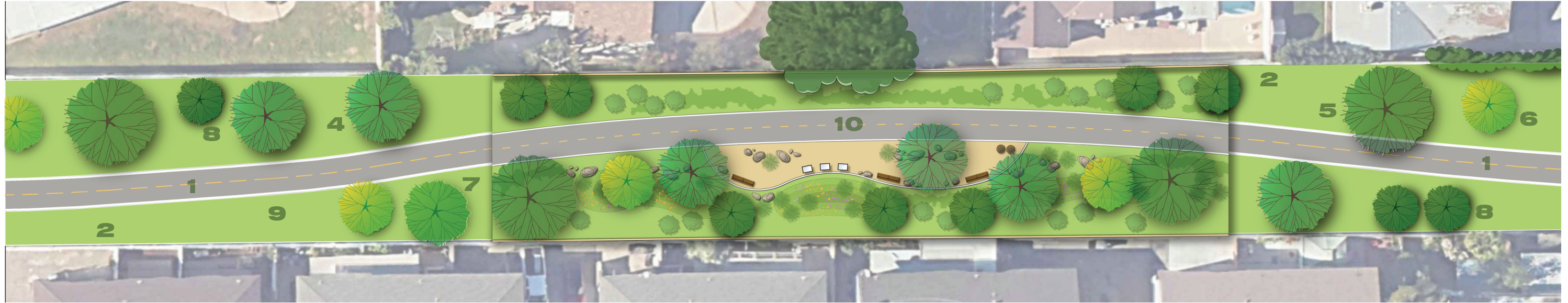
LEGEND

- | | | |
|------------------------------------|---------------------------|--|
| 1. ASPHALT BIKE PATH WITH STRIPING | 5. TORREY PINE | 9. NATURAL LANDSCAPE OF NATIVE GRASSES, SHRUBS, AND PERENNIALS |
| 2. EXISTING FENCING AND WALLS | 6. MEXICAN ELDERBERRY | 10. DETAIL OVERLAY - COLLINS-WANDA ENTRANCE |
| 3. EXISTING TREE CANOPY | 7. CATALINA ISLAND CHERRY | |
| 4. COAST LIVE OAK | 8. TOYON | |



CONCEPT DRAWINGS / SITE PLAN 1 & 2 SANTIAGO CREEK TRAIL BEAUTIFICATION PROJECT





LEGEND

- | | | |
|------------------------------------|---------------------------|--|
| 1. ASPHALT BIKE PATH WITH STRIPING | 5. TORREY PINE | 9. NATURAL LANDSCAPE OF NATIVE GRASSES, SHRUBS, AND PERENNIALS |
| 2. EXISTING FENCING AND WALLS | 6. MEXICAN ELDERBERRY | 10. DETAIL OVERLAY - REST STOP |
| 3. EXISTING TREE CANOPY | 7. CATALINA ISLAND CHERRY | |
| 4. COAST LIVE OAK | 8. TOYON | |



CONCEPT DRAWINGS / SITE PLAN 3 & 4

SANTIAGO CREEK TRAIL BEAUTIFICATION PROJECT



12.06.24



LEGEND

- | | |
|------------------------------------|--|
| 1. ASPHALT BIKE PATH WITH STRIPING | 7. CATALINA ISLAND CHERRY |
| 2. EXISTING FENCING AND WALLS | 8. TOYON |
| 3. EXISTING TREE CANOPY | 9. NATURAL LANDSCAPE OF NATIVE GRASSES, SHRUBS, AND PERENNIALS |
| 4. COAST LIVE OAK | 10. E. ORANGE GROVE AVE. ENTRANCE |
| 5. TORREY PINE | |
| 6. MEXICAN ELDERBERRY | |



CONCEPT DRAWINGS / SITE PLAN 5

SANTIAGO CREEK TRAIL BEAUTIFICATION PROJECT





LEGEND

- | | |
|------------------------------------|--|
| 1. ASPHALT BIKE PATH WITH STRIPING | 7. CATALINA ISLAND CHERRY |
| 2. EXISTING FENCING AND WALLS | 8. TOYON |
| 3. EXISTING REST STOP | 9. NATURAL LANDSCAPE OF NATIVE GRASSES, SHRUBS, AND PERENNIALS |
| 4. COAST LIVE OAK | 10. MAIN SANTIAGO CREEK TRAIL |
| 5. TORREY PINE | 11. SANTIAGO CREEK CHANNEL |
| 6. MEXICAN ELDERBERRY | |



CONCEPT DRAWINGS / SITE PLAN 6

SANTIAGO CREEK TRAIL BEAUTIFICATION PROJECT



12.06.24

TREES



Coast Live Oak
Quercus agrifolia



Torrey Pine
Pinus torreyana



Toyon
Heteromeles arbutifolia



Blue Elderberry
Sambucus nigra ssp. mexicana



Catalina Cherry
Prunus ilicifolia ssp. lyonii

SHRUBS



Lemonade Berry
Rhus integrifolia



Twin Peaks Coyote Brush
Baccharis pilularis 'Twin Peaks'



Deer Grass
Muhlenbergia rigens



Common Buckwheat
Eriogonum fasciculatum



Jojoba
Simmondsia chinensis

PERENNIALS



Showy Penstemon
Penstemon spectabilis



White Sage
Salvia apiana



California Fuchsia
Romneya coulteri



Matilija Poppy
Romneya coulteri



Purple Needle Grass
Stipa pulchra

PLANT PALETTE / SOUTH COAST REGIONAL NATIVES

SANTIAGO CREEK TRAIL BEAUTIFICATION PROJECT



Vehicular safety infrastructure



Proximity to residential neighborhood



Proximity to fire station



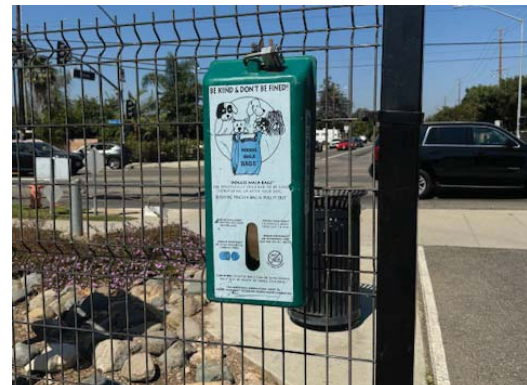
Proximity to POC for drinking water and irrigation



Existing bike / jogging trail in good condition



Existing signage and maps



Existing amenities for trail users and pets



Good visibility



Borrowed view from adjacent trees in residential backyards



Space for new trail amenities and beautification



Dedicated open space at south end along Santiago Creek



Access point from adjacent residential street



Connection to Santiago Creek corridor and main trail



Bird / Wildlife Viewing



Proximity to Grijalva Park

EXISTING SITE CONDITIONS / ASSETS

SANTIAGO CREEK TRAIL BEAUTIFICATION PROJECT



Constraints from petroleum pipeline and easement



No dedicated car or disabled parking for trail users



Minimal space for Collins & Wanda entrance enhancement



No existing stormwater drainage or management



Existing abandoned underground infrastructure



Minimal shade until late afternoon



Signs of vandalism/tagging along property walls



No screening at adjacent two-story residential units



No maintenance on existing plants along property walls



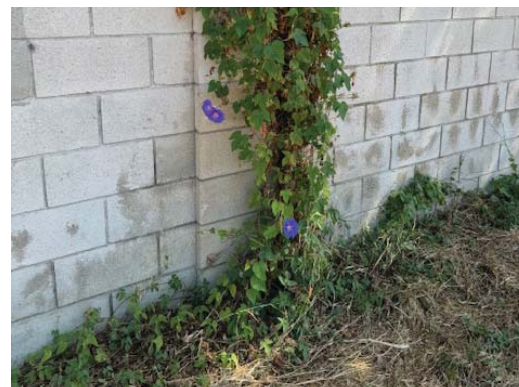
Limited amenities for path users, i.e. lighting, benches



Access from site to some private residential properties



Minimal fencing / security in some locations



Invasive plant species found throughout the site



No maintenance of large trees from adjacent residences



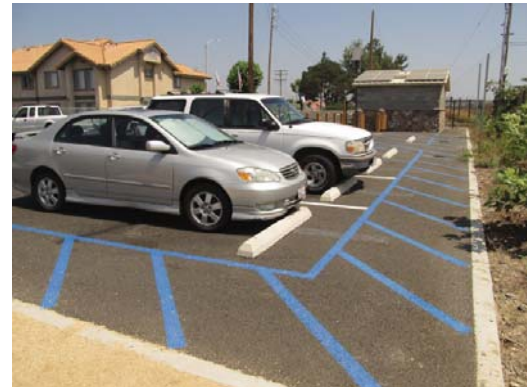
Many property walls damaged and aging - needing repair

EXISTING SITE CONDITIONS / CONSTRAINTS

SANTIAGO CREEK TRAIL BEAUTIFICATION PROJECT



Asphalt path edged with concrete curb and lane striping



Dedicated parking for park users



Bollards at vehicular and pedestrian interfaces



Low fencing to separate and buffer path



Cycling related amenities



Three-tier drinking fountain for children, adults, and dogs



Convenient amenities for pet owners



Trash receptacles



Dedicated seating at rest areas



Low wall with cap as alternative seating and buffer



Low-carbon steel wire mesh safety fencing



Themed decorative fence panels



Mileage markers



Informative signage along path



Monument signage at park entrances

SITE ANALYSIS / CASE STUDY SITE ELEMENTS

SANTIAGO CREEK TRAIL BEAUTIFICATION PROJECT



Way-finding maps at park entrance



Regulatory signage stating park rules and regulations



Dedicated parking for the disabled



Storyboard kiosks at rest stops



Alternative environmental signage



Native shrubs and small trees for screening, character



Attractive, character driven rest areas adjacent to path



Solar-powered lighting



Native vegetation provides color and attracts pollinators



Appropriate drainage inlets for storm water overflow



Irrigation components easily accessible for maintenance



Reclaimed water irrigation system for planting areas



Nesting boxes along fencing



Appropriate path-adjacent planting



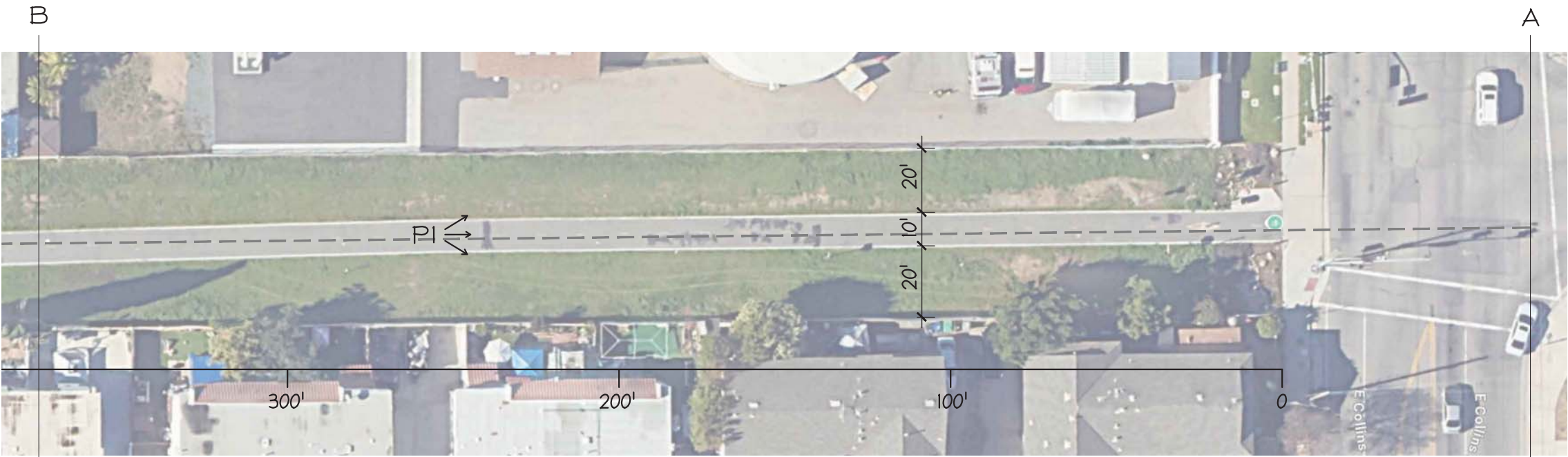
Cobble swales capture and filter water from storm events

SITE ANALYSIS / CASE STUDY SITE ELEMENTS

SANTIAGO CREEK TRAIL BEAUTIFICATION PROJECT



PERSPECTIVE P1



PLAN VIEW AB



PERSPECTIVE P2



PLAN VIEW BC

EXISTING SITE CONDITIONS / PLAN VIEW & PERSPECTIVE

SANTIAGO CREEK TRAIL BEAUTIFICATION PROJECT



PERSPECTIVE P3



PLAN VIEW CD

1"=40'



PERSPECTIVE P4



PLAN VIEW DE

1"=40'

EXISTING SITE CONDITIONS / PLAN VIEW & PERSPECTIVE

SANTIAGO CREEK TRAIL BEAUTIFICATION PROJECT





PERSPECTIVE P5



PLAN VIEW EF

1"=40'



PERSPECTIVE P6



PLAN VIEW FG

1"=40'

EXISTING SITE CONDITIONS / PLAN VIEW & PERSPECTIVE

SANTIAGO CREEK TRAIL BEAUTIFICATION PROJECT

Santiago Creek Trail Beautification Preliminary Budget
Project Site: 149,953 sf (3.45 acres)
This general estimate of a conceptual plan is for budgetary purposes only

No.	Task	Quantity	Unit Cost	Extended Cost	Phase Cost Est.	Total Cost Est.
Improvements - Collins & Wanda Entrance						
1 Site Demolition						
	Tree Trimming along perimeter + discard	2 u	\$400.00 pu	\$800.00		
	Grub existing landscape + discard	1,600 sf	\$0.25 sf	\$400.00		
					\$1,200.00	
2 Construction						
	Stabilized DG + install	540 sf	\$5.00 sf	\$2,700.00		
	6" Concrete Header + install	65 lf	\$14.00 lf	\$910.00		
	Fine Grading	1,000 sf	\$1.50 sf	\$1,500.00		
					\$5,110.00	
3 Irrigation						
	POC + install	1 u	\$1,500.00 pu	\$1,500.00		
	Backflow Preventors + install	2 u	\$2,000.00 pu	\$4,000.00		
	Basic drip irrigation system installation	1,000 sf	\$1.50 sf	\$1,500.00		
					\$7,000.00	
4 Planting						
	1 Gal. Shrubs/Perr. + prep, amend & install	40 u	\$20.00 pu	\$800.00		
	5 Gal. Shrubs + prep, amend & install	12 u	\$60.00 pu	\$720.00		
	15 Gal. Trees + prep, amend & install	3 u	\$200.00 pu	\$600.00		
					\$2,120.00	
5 Site Improvements						
	Monument Sign + design & install	1 u	\$12,000.00 pu	\$12,000.00		
	New Bollards with Steel Cable + install	2 sets	\$2,500.00 pu	\$5,000.00		
	Boulders (3 large, 5 med, 8 small)	1 u	\$8,000.00 pu	\$8,000.00		
	Trash Can + install	1 u	\$1,500.00 pu	\$1,500.00		
	3-Tier Drinking Fountain + install	1 u	\$10,000.00 pu	\$10,000.00		
	Dog Waste Bag Dispenser + install	1 u	\$3,000.00 pu	\$3,000.00		
	Move Existing Signage	2 u	\$500.00 pu	\$1,000.00		
					\$40,500.00	
						\$55,930.00
Improvements - Rest Area & Educational Display						
1 Site Demolition						
	Tree Trimming along perimeter + discard	1 u	\$400.00 pu	\$400.00		
	Grub existing landscape + discard	9,375 sf	\$0.25 sf	\$2,343.75		
					\$2,743.75	
2 Construction						
	Stabilized DG + install	1,108 sf	\$5.00 sf	\$5,540.00		
	6" Concrete Header + install	113 lf	\$14.00 lf	\$1,582.00		
	Fine Grading	1,500 sf	\$1.50 sf	\$2,250.00		
					\$9,372.00	
3 Irrigation						
	Basic drip irrigation system installation	9,375 sf	\$1.50 sf	\$14,062.50		
					\$14,062.50	
4 Planting						
	1 Gal. Shrubs/Perr. + prep, amend & install	150 u	\$20.00 pu	\$3,000.00		
	5 Gal. Shrubs + prep, amend & install	40 u	\$60.00 pu	\$2,400.00		
	15 Gal. Trees + prep, amend & install	14 u	\$200.00 pu	\$2,800.00		
					\$8,200.00	
5 Amenities						
	Edu. Display Signs + design & install	3 u	\$3,500.00 pu	\$10,500.00		
	Boulders (3 large, 5 med, 8 small)	2 u	\$8,000.00 pu	\$16,000.00		
	Trash Cans + install	2 u	\$1,500.00 pu	\$3,000.00		
	Benches + install	3 u	\$2,000.00 pu	\$6,000.00		
					\$35,500.00	
						\$69,878.25
Overall Site Improvements						
1 Site Demolition						
	Tree Trimming along perimeter + discard	18 u	\$400.00 pu	\$7,200.00		
	Grub existing landscape + discard	113,450 sf	\$0.25 sf	\$28,362.50		
					\$35,562.50	
2 Construction						
	Rough Grade Swale (75L x 12W x .5D)	900 sf	\$1.50 sf	\$1,350.00		
	Swales throught site (75L x 12W x .6D)	21 u	\$1,350.00 sf	\$28,350.00		
					\$29,700.00	
3 Irrigation						
	Basic drip irrigation at swale locations	20,000 sf	\$1.50 sf	\$30,000.00		
					\$30,000.00	
4 Planting						
	1 Gallon Shrubs & Perennials + install	600 u	\$20.00 pu	\$12,000.00		
	5 Gallon Trees & Shrubs + install	90 u	\$60.00 pu	\$5,400.00		
	24" Box Trees + install	44 u	\$200.00 pu	\$8,800.00		
					\$26,200.00	
5 Site Improvements						
	New Signage + design & install	4 u	\$250.00 pu	\$1,000.00		
	Bike Path Patching/Resurfacing option	2,555 lf	\$20.00 lf	\$51,100.00		
	Bike Path Restriping option	2,555 lf	\$1.00 lf	\$2,555.00		
					\$54,655.00	
						\$176,117.50
				10% Contingency		\$17,611.75
				Total Estimate		\$319,537.50