Ekwill Street and Fowler Road Extensions Project

Restoration Contractor Scope of Work for On-site Fowler Road Drainage Ditch and Old San Jose Creek (Fowler Road)

On-site Old San Jose Creek (East Ekwill Street)

On-site Temporary Riparian Impact Areas (Ekwill Street and Hollister Avenue)

prepared for

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October 2022

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1 Introduction

The purpose of this Scope of Work is to inform the Restoration Contractor that will be subcontracted to the General Contractor on what will be required to initiate the restoration phase of the City of Goleta (City) Ekwill Street and Fowler Road Extensions Project (Project). The "Restoration Contractor" is the firm responsible for the habitat restoration scope of work described herein. The "General Contractor" is the firm responsible for the construction scope of work described in the Project Special Provisions and the hiring of the Restoration Contractor. Figure 1 shows the Project site and mitigation sites in relation to each other.

The goal of the restoration phase is to fulfill the requirements of Environmental Impact Report (EIR) (City of Goleta 2011a) Mitigation Measure (MM) NA-1/City Condition of Approval (COA) No. 15 (City 2011b) Protection and Replacement of Riparian Habitat and EIR MM WE-2/City COA No. 20 Wetland Habitat Restoration to compensate for the loss of wetland and riparian habitat associated with the Project. The mitigation will take place on-site at the following locations:

- On-site Fowler Road Drainage Ditch and Old San Jose Creek (Fowler Road) – 0.49 acre
- On-site Old San Jose Creek (East Ekwill Street) – 0.31 acre
- On-site temporary riparian impacts areas (Ekwill Street and Hollister Avenue) – estimated at 0.13 acre and 0.05 acre, respectively

Restoration of these areas aims to expand the extent and functional capacity of the riparian corridor by increasing native species diversity and abundance along an otherwise non-native species-dominated drainage ditch and creek.

This Scope of Work for restoration preparation, installation, and maintenance follows the 2022 Biological Mitigation and Monitoring Plan (Mitigation Plan) prepared by Rincon Consultants, Inc. (Rincon) (Rincon 2022). The Mitigation Plan is included as Attachment A for reference. Note that this Scope of Work outlines all the responsibilities that are expected of the Restoration Contractor based on the Mitigation Plan and is a summarization of said document, i.e., restoration preparation, installation, and short-term maintenance (Section 2.4 of the Mitigation Plan). There are additional restoration-related aspects outlined in the Mitigation Plan that are not part of this Scope of Work and should not be included in the Restoration Contractor bid estimate, i.e., long-term maintenance, monitoring, reporting (Sections 2.6, 2.7, and 2.8 of the Mitigation Plan).

Installation of the restoration, including site preparation, is phased by mitigation site and is scheduled for summer of 2023 through fall of 2023 and summer of 2024 through fall of 2024. Maintenance of the mitigation sites, defined as the 90-day Plant Establishment Period (PEP), is phased by mitigation site and is scheduled for winter of 2023 through spring of 2024 and winter of 2024 through spring of 2025. The schedule is further detailed in Section 2.1.

This Scope of Work is organized by mitigation site, then by Installation Phase and Maintenance Phase, then by task. A summary of anticipated tasks is outlined in Table 1. The detailed Scope of Work is outlined in Section 2. The following Scope of Work will be performed by the Restoration Contractor under the oversight by the City-approved Restoration Biologist.

Table 1 Task Summary

Phase	Task by Mitigation Site		
	On-site Fowler Road Drainage Ditch and Old San Jose Creek Restoration (Fowler Road)	**On-site Old San Jose Creek at East Ekwill Street (Ekwill Street)**	**On-site Temporary Riparian Impact Areas (Ekwill Street and Hollister Avenue)**
Installation Phase			
	Task FR1: Site Preparation	Task ES1: Site Preparation	Task T1: Site Preparation
	Task FR2: Plant Installation	Task ES2: Plant Installation	Task T2: Plant Installation
	Task FR3: Seed Installation		
	Task FR4: Plant Procurement	Task ES3: Plant Procurement	Task T3: Plant Procurement
	Task FR5: Irrigation Design and Installation	Task ES4: Irrigation Design and Installation	
Maintenance Phase			
	Task FR6: Weed Removal	Task ES5: Weed Removal	Task T4: Weed Removal
	Task FR7: General Maintenance	Task ES6: General Maintenance	Task T5: General Maintenance

FR: Fowler Road, ES: Ekwill Street, T: Temporary

1.1 Restoration Contractor Qualifications

The following are the qualifications that must be met by the restoration and/or native landscaping firm that will conduct the mitigation installation for the Project, herein referred to as the Restoration Contractor.

For the on-site mitigation sites, the Restoration Contractor must have experience with installing and maintaining native landscaping (or restoration sites) as follows:

- The Restoration Contractor shall have successfully completed the installation and long-term maintenance of a minimum of three native landscaping (or restoration) projects, each over 0.25 acre in southern and/or central California.
- The Restoration Contractor shall be familiar with most native plant species listed in the Mitigation Plan, as well as moderately familiar with non-native plant species (including invasive species) common to the Goleta area.
- The Restoration Contractor shall be able to successfully install native plants in locations easily accessible by roads.
- The Restoration Contractor shall be able to successfully conduct hydroseeding efforts in locations easily accessible by roads.
- The Restoration Contractor shall be able to successfully install an above ground temporary irrigation system in locations easily accessible by roads.

The Restoration Contractor must possess and provide the following Santa Barbara County pesticide application licensing at the time of the bid submittal:

- A pest control business (PCM) or one of its licensed branches (PCB) with a current license issued by California Environmental Protection Agency (EPA) Department of Pesticide Regulation (DPR)
- A person currently licensed as a Qualified Applicator (QAL) and with a Category B (Natural Areas)

- The PCM/PCB and the QAL are required to be registered with the County Commissioner in Santa Barbara County

Additionally, the Restoration Contractor shall provide the following at the time of the bid submittal:

- California Contractors "C-27" Landscaping Contractor license
- Certificate of liability insurance

1.2 Questions and Clarification of The Scope of Work

Questions, requests for explanation, or clarifications in regard to this Scope of Work shall be made in written form and submitted via email to Gerald Comati, PE, Project Manager, City of Goleta, at gcomati@cityofgoleta.org.

The City will advise all bidding parties of responses to the requests for explanation or clarifications via email. All bidding parties interested in responding to the Scope of Work are advised to check their email for any updates. The bidder is also responsible for ensuring that they have complete bidding documents prior to the bid due date.

A site walk may be scheduled by the City. If so, details will be transmitted to the bidders. Attendance will be limited to a maximum of three (3) persons from each bidder.

1.3 Required Proposal Items

Bidding parties must submit a digital document of their proposal via email as described the Project Special Provisions.

The following additional items shall be included in the Restoration Contractor's proposal:

- Technical approach and methodologies
- Proposed resources: include organization chart with proposed staff at management and superintendent level
- Completed bid pricing sheet
- A copy of the State of California C-27 landscape contractor's license and liability insurance
- References for at least three other similar projects involving native plants in a natural setting successfully completed within the last 5 years
- A copy of the Santa Barbara County pesticide application license

2 Restoration Scope of Work

The Ekwill Street and Fowler Road Extension Project requires on-site restoration adjacent to the project at the following locations, see Figure 1.

- On-site Fowler Road Drainage Ditch and Old San Jose Creek (Fowler Road) – 0.49 acre
- On-site Old San Jose Creek (East Ekwill Street) – 0.31 acre
- On-site temporary impacts areas at Fowler Road, Ekwill Street, and Hollister Avenue – estimated at 0.13 acre and 0.05 acre respectively

The following summary of work by task will be performed by the Restoration Contractor under the oversight by the City-approved Restoration Biologist. All Installation and Maintenance Phases will adhere to the 2022 Biological Mitigation and Monitoring Plan; specifically, the goal to reach the Performance Criteria. The Performance Criteria established for this Project includes the following:

- All plantings shall have a minimum of 80% survival the first year and 100% survival thereafter.
- All plantings shall attain 75% cover after three years and 90% cover after five years.
- The mitigation site shall be entirely without supplemental irrigation for a minimum of two years.
- No single species shall constitute more than 50% of the vegetative cover.
- No woody invasive species shall be present.
- Herbaceous invasive species shall not exceed 5% cover.

2.1 Schedule

The restoration services outlined herein will be performed over an approximate timeframe of two years, between summer 2023 and spring 2025. The restoration work is phased by mitigation site, which is dependent upon the construction schedule for the Project. The General Contractor will establish the construction schedule at the beginning of the construction project to establish when the on-site restoration areas will be made available for restoration work. The project Special Provisions will establish the timeframe for installation of plants, which is expected to begin in late fall 2023. The restoration work is also separated into two phases: Installation Phase and Maintenance Phase. The Installation Phase includes sites preparation, plant/seed installation, and irrigation design and installation. The Maintenance Phase will begin after completing the Installation Phase and will be defined as the 90-day PEP. The Maintenance Phase includes non-native plant removal, watering, and repairing of damage to plants, erosion control devices, fencing, and/or signs as further described below. See Table 2 for a detailed draft restoration schedule. Note that although this schedule is an educated estimate, the General Contractor will provide the actual schedule to be approved by the City. The order in which the alignments will be built is unknown at the time of preparation of this scope of work. No major alterations, i.e., a change to the calendar year is expected. The Restoration Contractor must coordinate activities with the General Contractor, who is required to submit a Construction Schedule prior to the pre-construction conference.

Table 2 Restoration Schedule

Timing	On-site Fowler Road Drainage Ditch and Old San Jose Creek Restoration (Fowler Road)	On-site Old San Jose Creek at East Ekwill Street (Ekwill Street)	On-site Temporary Riparian Impact Areas (Ekwill Street and Hollister Avenue) [1]
Preparation			
Summer 2023	Task FR5: Design irrigation system	Task ES4: Design irrigation system	
Early Fall 2023	Task FR1: Initial non-native plant removal Task FR4: Plant procurement	Task ES1: Initial non-native plant removal Task ES3: Plant procurement	
Early Spring 2024			Task T3: Plant procurement
Early Fall 2024			Task T1: Initial non-native plant removal Task T3: Plant procurement
Installation			
Early Fall 2023	Task FR5: Install drip irrigation system	Task ES4: Install drip irrigation system	
Late Fall 2023	Task FR2: Install container plants Task FR3: Install seeds	Task ES2: Install container plants	
Late Fall 2024			Task T2: Install container plants
Maintenance (90-day Plant Establishment Period)			
Winter 2023 to Spring 2024	Task FR6: Conduct weeding Task FR7: Conduct general maintenance	Task ES5: Conduct weeding Task ES6: Conduct general maintenance	
Winter 2024 to Spring 2025			Task T4: Conduct weeding Task T5: Conduct general maintenance

[1] The order in which the alignments will be built is unknown at the time of preparation of this scope of work; the timing of work to be conducted in the on-site temporary riparian impact areas is an estimate at this time.

2.2 Coordination

The Restoration Contractor will work in coordination and oversight by the City-approved Restoration Biologist. The City-approved Restoration Biologist will provide oversight for plant stock; container plant and seeding installation locations and layout; non-native plant removal; success criteria; and irrigation schedules. The City-approved Restoration Biologist will be on-site regularly to direct work as needed.

2.3 Crew Education (Cultural Resources)

Although no resources have been identified within the mitigation areas, the project site is generally sensitive for cultural resources. Therefore, a crew education program will be established to be implemented prior to construction per MM CUL-2 (Crew Education). The education program will describe the roles and responsibilities of the archaeologist and Native American monitor, identify what types of resources may be found in the area, procedures to follow in the event of a find, and discuss the regulatory protections for resources and identify the penalties for the destruction or unauthorized

collection of cultural resources. Each team member from the Restoration Contractor crew is required to attend the cultural resources education program, which will be offered prior to the Installation Phase and at any time during the Installation Phase and/or Maintenance Phase if new crew members are employed.

The preparation of the crew education program will be the management and fiscal responsibility of the Environmental Compliance firm and will not be the management or fiscal responsibility for the Restoration Contractor. This summary of this Mitigation Measure is included herein for informational purposes only.

2.4 On-site Fowler Road Drainage Ditch and Old San Jose Creek Restoration

The restoration site is located at the western terminus of the Fowler Road Extension where an unnamed drainage ditch drains to Old San Jose Creek. Fowler Road Drainage Ditch and Old San Jose Creek are directly adjacent to the Fowler Road Extension portion of the project within the Coastal Zone and the City, see Figure 2. The restoration location was selected by the City to restore and enhance areas along Old San Jose Creek where native riparian habitat is lacking due to invasion of non-native species and expanding the existing riparian canopy.

A total of 0.49 acre of riparian habitat will be expanded, enhanced and created. Approximately 0.17 acre have been identified for riparian habitat enhancement, see Figure 2. Along the main stem of Old San Jose Creek and the eastern end of the drainage ditch, the understory of the existing arroyo willows will be restored with riparian and seasonal wetland species, see Figure 2. Approximately 0.34 acre has been identified for riparian habitat creation that includes a bioswale, see Figure 2, Figure 3 and Figure 4. These mitigation areas are also represented on the Project Plans (Dewberry|Drake Haglan 2022), see Mitigation Planting Plan sheet F-MP-1, which is also included as herein as Figure 3.

The following outlines the scope of work by installation and maintenance phases, then by task. Tasks are named as FR for Fowler Road.

2.4.1 Installation Phase

The Restoration Contractor will provide all labor, equipment and materials needed to complete the work. The Fowler Road Drainage Ditch and Old San Jose Creek mitigation site will be accessed by vehicle via two proposed access routes, Technology Drive or Fowler Road. At the terminus of the vehicle access routes, a small staging area will be established, and further access will be on foot. Staging areas for both sites will be contained to the smallest footprint possible.

Task FR1: Site Preparation

The City-approved Restoration Biologist will work with the General Contractor and Restoration Contractor to stake the limits of restoration. Prior to installation, the site will need to be prepared for restoration activities. Site preparation includes the following:

- Non-native plants, except for mature trees, will be removed from the site using hand removal methods, such as hand-held weed whips, loppers, and hoes. If hand removal is not feasible due to the characteristics of the species, such as resistance to hand removal methods, the size of the plants, or the number of plants, perennial invasive non-native species may be treated with herbicides. Herbicide application conditions are as follows:

  - Only individual plants will be treated; no blanket spraying efforts will be allowed.
  - If herbicide is applied, it will be applied during dry and low wind conditions in order to prevent conveyance of herbicide into drainages or other non-targeted areas.
  - Herbicide application must be performed by a licensed applicator that can identify the species to be treated and is experienced in the handling and application of herbicides.
  - Herbicides must be approved for use by the City of Goleta and allowed under permit and property conditions.
  - Only herbicides approved for use near or in water, such as AquaMaster™ or equivalent, will be used if necessary.
- Install temporary fencing, made of green construction mesh-like fence and t-posts (or similar), on the east side of the mitigation site. Approximately 950 feet of fence will be needed.
- Install temporary signage, such as laminated 8.5”x11” paper signs, to alert the Project team and the public of restoration efforts. Permanent signs will be installed by the City.

Timing: The General Contractor will establish the construction schedule at the beginning of the construction project to establish when the on-site restoration areas will be made available for restoration work. Preparation is expected to occur in early fall 2023.

Task FR2: Plant Installation

Plant installation will require specific timing and spacing between planting as described in the 2022 Mitigation and Monitoring Plan. Within the 0.49-acre site, a total of 1,003 plants will be needed for the enhancement and creation of habitat at Fowler Road Drainage Ditch and Old San Jose Creek, see Figure 2. Table 3 provides a representative palette of native species that may be used for each habitat treatment type. The City-approved Restoration Biologist will flag the exact location of each planted area and provide field oversight while the plants are installed.

Table 3 Plant Palette – Fowler Road Drainage Ditch and Old San Jose Creek

Scientific Name	Common Name	Number of Plants
Arroyo Willow Woodland Understory (0.17 ac; 5-foot spacing; shrubs, forbs, grasses)		
Artemisia douglasiana	Mugwort	17
Baccharis salicifolia	Mule fat	17
Bromus carinatus	California brome	17
Elymus condensatus	Giant wild rye	17
Elymus triticoides	Alkali ryegrass	17
Hordeum brachyantherum	California barley	17
Phacelia ramossisima	Branching phacelia	17
Rosa californica	California rose	17
Rubus ursinus	California blackberry	17
Salix exigua	Sandbar willow	20
Salix laevigata	Red willow	20
Salix lasiolepis	Arroyo willow	20
Salvia spathacea	Hummingbird sage	17
Sambucus nigra	Blue elderberry	20
Solanum douglasii	Douglas nightshade	17
Solidago velutina ssp. *californica*	Velvety goldenrod	17
Verbena lasiostachys	Verbena	17
Subtotal		**301**
Coast Live Oak/Black Walnut/Elderberry Woodland (0.15 ac; 5-foot spacing for forbs/grasses/shrubs, 10-foot spacing for trees; forbs, grasses, shrubs, trees)		
Artemisia douglasiana	Mugwort	26
Bromus carinatus	California brome	26
Distichlis spicata	Saltgrass	26
Elymus triticoides	Alkali ryegrass	26
Juglans californica	Black walnut	40
Heteromeles arbutifolia	Toyon	26
Quercus agrifolia	Coast live oak	40
Rubus ursinus	California blackberry	26
Sambucus nigra	Blue elderberry	26
Subtotal		**266**
Channel Bank Mix (0.10 ac; 4-foot spacing; forbs and grasses)		
Artemisia douglasiana	Mugwort	70
Elymus triticoides	Alkali ryegrass	70
Hordeum brachyantherum	California barley	70
Juncus patens	Common California rush	70
Subtotal		**280**

Scientific Name	Common Name	Number of Plants
Channel Bottom Mix (0.04 ac; 4-foot spacing; forbs and grasses)		
Distichlis spicata	Saltgrass	36
Juncus patens	Common California rush	36
Juncus phaeocephalus	Brown-headed rush	36
Subtotal		**108**
Riparian Mix (0.02 ac; 4-foot spacing for forbs/grasses/shrubs, 8-ft spacing for trees; forbs, grasses, shrubs, trees; 4-in, 1-gal, and/or live cuttings)		
Artemisia douglasiana	Mugwort	7
Baccharis salicifolia	Mule fat	5
Elymus triticoides	Alkali ryegrass	7
Salix exigua	Sandbar willow	12
Sambucus nigra	Blue elderberry	12
Rubus ursinus	California blackberry	5
Subtotal		**48**
Total		**1,073**

Installation of plants in the tables above will involve the following:

- Shrubs, grasses, and wetland plants will be installed at 4- to 5-foot spacing and trees will be installed at 8-foot spacing.
- Most non-tree species will be installed as 5-gallon containers and with some being installed as 1-gallon contains in select areas determined in the field by the City-approved Restoration Biologist.
- Holes for the container plants will be dug by hand using a shovel, hang auger, or similar device.
- The rootball, stems or branches of container plants shall not be disturbed.
- Planting pits will be backfilled with native soil and wood mulch will be placed round each plant. Mulch will be placed around each container plant at a depth of at least 3 inches, and at least a 2-foot radius for trees and a 1-foot radius for other species. If generated, the mulch from the removed non-native trees would be allowed some time to dry and then would be used around installed plants as feasible. Additional mulch originating from Santa Barbara may be acquired as needed, such as mulch available from the County's South Coast Recycling and Transfer Station. All purchased mulch will be free of Argentine ants.
    - A layer of mulch will be added on top of the bioswale at Fowler Road drainage ditch. Note that the construction of the bioswale will be the responsibility of the General Contractor; however, the layer of mulch to be applied will be the responsibility of the Restoration Contractor as it will be applied in conjunction with plant installation within the bioswale. Engineering details are represented on the Project Plans (Dewberry|Drake Haglan 2022), see RWQCB Drainage Details sheet F-DD-1, which is also represented herein as Figure 4 for reference.
- Each container plant will be immediately watered by a drip emitter system or by hand as conditions allow. Long-term irrigation will be applied and discussed in Task FR5 below.
- Erosion control materials will be installed as needed and may include low silt fences, hay bales at the base of slopes, and/or straw wattle only. The quantity of erosion control materials that is expected to be needed is minimal; materials would only be used within the mitigation areas and not for the construction portion of the project.

- Signage and temporary construction fencing will be placed around the mitigation sites to inform people to stay out of the restoration area as described in Task FR1.

Note that the construction of the bioswale will be the responsibility of the General Contractor. Engineering details are represented on the Project Plans (Dewberry│Drake Haglan 2022), see RWQCB Drainage Details sheet F-DD-1, which is also included as herein as Figure 4 for reference.

Timing: Will coincide with the first major winter storm when soil conditions are moist. The construction of the bioswale needs to be completed prior to plant installation. The installation of plants within the bioswale may or may not be conducted at the same time as the remainder of the plants located beyond and adjacent to the bioswale. Adjacent construction may need to be accounted for access and safety purposes. Installation is expected to in late fall/winter 2023.

Task FR3: Seed Installation

Seed installation will occur along the two earthen-bottom swales that lead to the bioswale for erosion control purposes, as well as to provide native habitat. The area to be revegetated within the proposed earthen-bottom swales totals approximately 0.01 acre. Native grasses will be seeded at a rate of 23.5 pounds per acre, for a total of 0.235 pounds. Figure 2 illustrates the location of the revegetation treatment and Table 4 provides the species and quantities proposed. The City-approved Restoration Biologist will flag the exact location of each seeded area and provide field oversight while the seeds are installed.

Seeds will be installed via hydroseeding. Prior to hydroseeding, the ground will be scarified with a rotary tiller/rake/similar device to a depth of 3 inches below ground surface. After scarification is complete, a mixture of seeds, wood fiber mulch, tackifier, and dye will be applied via hydroseeding. To minimize fugitive dust, prevent loss of seed material, and prevent over spraying during hydroseeding, seeding will only occur during low wind conditions.

Timing: Will coincide with the first major winter storm when soil conditions are moist. The installation of the bioswale needs to be completed prior to plant installation. The installation of plants within the bioswale may or may not be conducted at the same time as the remainder of the plants located beyond and adjacent to the bioswale. Adjacent construction may need to be accounted for access and safety purposes. Installation is expected to occur in late fall 2023.

Table 4 Seeding Palette – Earthen-bottom Swales

Scientific Name	Common Name	Application Rate (lbs/acre)	Minimum Percent Pure Live Seed[1]
Upland Mix (0.01 ac; 23.5 lbs/acre; grasses)			
Agrostis pallens	California native bentgrass	5	85
Bromus carinatus	California brome	2	–
Elymus (*Leymus*) *triticoides*	Alkali ryegrass	6	75
Melica imperfecta	Melic grass	2	70
Muhlenbergia rigens	Deer grass	0.5	32
Stipa lepida	Foothill needlegrass	2	65
Stipa pulchra	Purple needlegrass	6	75

[1] Minimum Percent Pure Live Seed (PLS) = Seed Purity x Germination Rate

Task FR4: Plant Procurement

The native plant materials in Table 3 have already been contracted through Santa Barbara Natives. A deposit has already been paid for by the City. The Restoration Contractor would be responsible for paying for the remainder of the cost. The cost will be $11,251 for both the Fowler Road Drainage Ditch and East Ekwill Street. See Attachment B for the Santa Barbara Natives cost proposal. Although the current bid that the City has obtained for the native container plants includes a delivery charge, assume that the Restoration Contractor will need to pick up the plants at the nursery on a daily or regular basis and bring them to the site. Assume that only a very limited number of plants can be stored safely on-site overnight. If plants remain on-site longer than the day on which they are installed, they must be watered daily.

The Restoration Contractor would be responsible for procuring and paying for the native seed materials in Table 4. Seeds must be purchased from a reputable native seed supplier such as S & S Seeds or Stover Seeds. To preserve the integrity of local gene pools, ensure adaptation to site-specific conditions, and avoid inadvertent introduction of inappropriate species or pathogens, the majority of seeds used for revegetation will be collected primarily from each of the mitigation sites, or within the respective watersheds. If sufficient seeds cannot be collected from these areas alone, plant stock from within a 15-mile radius, limited to the coastal side of the Santa Ynez Mountains, may also be acceptable.

Timing: The final payment installment for the container plants must be made at the time of plant delivery. Plant procurement will occur in early fall 2023.

Task FR5: Irrigation Design and Installation

The Restoration Contractor will design and install a temporary above ground drip irrigation system. The irrigation system should be set up to target individual plants and should avoid watering in between the plants to help prevent the growth of non-natives. However, irrigation materials cannot be installed in areas where creek flows would be prohibitive such as the bottom of the bioswale, so sprinklers can be employed as needed in that specific area.

A maximum of 0.49 acre will require a temporary irrigation system to be designed and installed by the Restoration Contractor. The design of the irrigation system is up to the Restoration Contractor based on their experience and site conditions observed during the site walk. The irrigation system will be designed

by a qualified irrigation specialist as an aboveground temporary drip irrigation system, which will persist for 5 years with regular maintenance, and can be easily removed at the end of 5 years. The irrigation system will be designed so that it is automated, powered by either batteries or solar operated controllers, and will be weather sensor compatible. Primary lines will be of 2-inch-diameter schedule (or larger diameter if deemed necessary by the Restoration Contractor) 40 polyvinyl chloride (PVC). Any variations from these materials specifications must be indicated in the bid estimate. The irrigation design will be schematic and does not require an architect or engineer stamp.

Water to be used during the restoration preparation, installation, and maintenance will be furnished on-site for the Restoration Contractor and shall be of suitable quality for irrigation. The location of the irrigation connection point is a permanent hookup/riser represented on the Project Plans (Dewberry|Drake Haglan 2022), see and Irrigation Plan sheet L-2.1, which is also included as herein as Figure 5. The Restoration Contractor will have the authority to use water as needed to fulfill the irrigation tasks through the General Contractor's closeout. The associated meter will be provided by the City.

Following award of the contract, the City will supply the Restoration Contractor with site specifications needed to complete the irrigation system design (e.g., water pressure details, etc.). The Restoration Contractor will work with the City-approved Restoration Biologist to ensure that the design meets all materials and site specifications and will submit a draft irrigation design to the City for approval by early summer 2022. The irrigation design shall be prepared in computer-aided design and drafting (CADD), or similar program that is acceptable in the landscape industry. The City will provide comments to be incorporated into the final irrigation design so that it can be installed (in part, i.e., primary lines to be installed before plant installation and secondary/lateral lines to be installed after plant installation) in late summer/early fall 2022 prior to plant installation.

Timing: The Restoration Contractor finalize the irrigation design so that it can be installed (in part, i.e., primary lines to be installed before plant installation and secondary/lateral lines to be installed after plant installation) in late summer/early fall 2022 prior to plant installation. The Restoration Contractor will install the irrigation system on-site before or after initial non-native vegetation removal, depending on a mutual agreement between the Restoration Contractor and City. The City-approved Restoration Biologist will provide oversight in the field. The irrigation system will be installed in late summer/early fall 2022, prior to plant/seed installation in late fall/early winter 2023.

2.4.2 Maintenance Phase

The Restoration Contractor will maintain the restoration site throughout the Installation Phase and 90-day PEP. Once the City deems the restoration installation complete, the 90-day PEP will begin. Maintenance will include non-native plant removal, watering, replanting, and repairing of damage to plants, erosion control devices, fencing, and/or signs that are a result of erosion or vandalism. The Restoration Contractor will also be adhered to the following measures during the Maintenance Phase:

- Large plants with potential to contain bird nests will not be removed during the breeding bird season (March 1 to September 15) unless the City-approved Restoration Biologist determines that it does not contain active bird nests.

Task FR6: Weed Removal

Weed removal at the restoration site will include the following:

- Non-native plants will be removed primarily using hand removal methods. If hand removal is not feasible due to species resistance to hand removal methods, the size of the plant, or the number of

plants, perennial invasive non-native species may be treated with herbicides. Herbicide application requirements are described in Task FR1.

- All tools, equipment, vehicles, clothing and footwear, and other gear shall be cleaned to remove soil, seeds, and other plant parts before accessing the restoration area.
- Frequency: One "event" or site visit will be equal to 1 day (or more if necessary) and include a crew of an appropriate size to remove weeds in one event. During the Installation Phase, weeding must be conducted so that the site and installed native plants do not become overrun or dominated by weeds, the frequency will be dependent upon site conditions. A minimum of one event per month is required. Assume a minimum of 4 events will be required during the 90-day PEP, spaced a maximum of 1 month and a minimum of 2 weeks apart over the 90-day PEP.

Timing: Weed removal will occur throughout the Installation Phase, with a focus on the peak growing season in the winter and spring. Weed removal will be conducted during the Installation Phase, as well as through the 90-day PEP in approximately winter 2023 through spring 2024.

Task FR7: General Maintenance

Once the City deems the restoration installation complete, the 90-day PEP will begin. Maintenance will be performed during the 90-day PEP. Maintenance at the restoration site will include the following:

- The Restoration Contractor will be responsible to install a temporary aboveground irrigation system (see Task FR5 above), maintain the system, and water the plants immediately after installation and for the duration of the 90-day PEP.
- The City of Goleta-approved Restoration Biologist will establish an irrigation schedule in conjunction with the Restoration Contractor. Irrigation will be scheduled to maximize growth of native species and will account for natural rainfall, while minimizing growth of invasive non-native plants. Generally, if irrigation is needed, more irrigation will be provided during the growing season (winter and spring) to mimic seasonal weather patterns, and minimal irrigation will be provided during the summer and fall as needed to keep plants alive.
- Conduct routine activities to maintain the plantings in a healthy condition.
  - If plants die or seeds do not germinate during the 90-day PEP due to the techniques employed by the Restoration Contractor, i.e., not due to natural causes, the Restoration Contractor will be responsible for replacement planting and/or seeding.
- Maintain fencing and signage.
- Remove trash.
- Control erosion of the mitigation site.
- Ensure performance criteria are being achieved.

Timing: General maintenance will be conducted during the Installation Phase, as well as through the 90-day PEP in approximately winter 2023 through spring 2024.

2.5 On-site Old San Jose Creek at East Ekwill Street

The restoration site is located at Old San Jose Creek at East Ekwill Street, outside yet near the Coastal Zone, see Figure 2. The restoration location was selected by the City of Goleta to restore and enhance areas along Old San Jose Creek where native riparian habitat is lacking due to invasion of non-native species and expanding the existing riparian canopy.

A total of 0.31 acre of riparian habitat will be created. Along the outer edge of the existing riparian canopy at Old San Jose Creek, a highly disturbed area will be restored with arroyo willow woodland, see Figure 6. This mitigation area is also represented on the Project Plans (Dewberry|Drake Haglan 2022), see Mitigation Planting Plan sheet E-MP-1, which is also included as herein as Figure 7.

The following outlines the scope of work by installation and maintenance phases, then by task. Tasks are named as ES for Ekwill Street.

2.5.1 Installation Phase

The Restoration Contractor will provide all labor, equipment and materials needed to complete the work. The Old San Jose Creek mitigation site located near east Ekwill Street will be accessed by vehicle via the proposed Ekwill Street alignment. At the terminus of the vehicle access routes, a small staging area will be established, and further access will be on foot. Staging areas for both sites will be contained to the smallest footprint possible.

Task ES1: Site Preparation

The City-approved Restoration Biologist will work with the General Contractor and Restoration Contractor to stake the limits of restoration. Prior to installation, the site will need to be prepared for restoration activities. Site preparation includes the following:

- Non-native plants, except for mature trees, will be removed from the site using hand removal methods, such as hand-held weed whips, loppers, and hoes. If hand removal is not feasible due to the characteristics of the species, such as resistance to hand removal methods, the size of the plants, or the number of plants, perennial invasive non-native species may be treated with herbicides. Herbicide conditions are as follows:
  - Only individual plants will be treated; no blanket spraying efforts will be allowed.
  - If herbicide is applied, it will be applied during dry and low wind conditions in order to prevent conveyance of herbicide into drainages or other non-targeted areas.
  - Herbicide application must be performed by a licensed applicator that can identify the species to be treated and is experienced in the handling and application of herbicides.
  - Herbicides must be approved for use by the City and allowed under permit and property conditions.
  - Only herbicides approved for use near or in water, such as AquaMaster™ or equivalent, will be used if necessary.
- Install temporary fencing, made of green construction mesh-like fence and t-posts (or similar), on the east side of the mitigation site. Approximately 550 feet of fencing will be needed.
- Install temporary signage, such as laminated 8.5”x11” paper signs, to alert the Project team and the public of restoration efforts. Permanent signs will be installed by the City.

Timing: The construction schedule will be designed by the General Contractor so that the on-site restoration areas are made available for restoration activities at the time outlined below, specifically fall/winter 2023. Preparation is expected to occur in early fall 2023.

Task ES2: Plant Installation

Plant installation will require specific timing and spacing between planting as described in the 2022 Mitigation Plan. Within the 0.31-acre site, a total of 854 plants will be needed for creation of habitat at

Old San Jose Creek at East Ekwill Street, see Figure 6. Table 5 provides a representative palette of native species that may be used for each habitat treatment type. The City-approved Restoration Biologist will flag the exact location of each planted area and provide field oversight while the plants are installed.

Table 5 Plant Palette – Old San Jose Creek at East Ekwill Street

Scientific Name	Common Name	Number of Plants
Arroyo Willow Woodland Understory (0.31 ac; 4-foot spacing for forbs/grasses/shrubs, 8-foot spacing for trees; forbs, grasses, shrubs, and trees)		
Artemisia douglasiana	Mugwort	40
Baccharis salicifolia	Mule fat	40
Bromus carinatus	California brome	35
Distichlis spicata	Saltgrass	50
Elymus condensatus	Giant wild rye	30
Elymus triticoides	Alkali ryegrass	50
Hordeum brachyantherum	California barley	30
Juncus patens	Common California rush	40
Phacelia ramosissima	Branching phacelia	30
Platanus racemosa	Western sycamore	50
Populus trichocarpa	Black cottonwood	100
Rosa californica	California rose	30
Rubus ursinus	California blackberry	35
Salix exigua	sandbar willow	12
Salix laevigata	Red willow	50
Salix lasiolepis	Arroyo willow	100
Salvia spathacea	Hummingbird sage	30
Sambucus nigra	blue elderberry	12
Solanum douglasii	Douglas nightshade	30
Solidago velutina ssp. *californica*	Velvety goldenrod	30
Verbena lasiostachys	Verbena	30
Total		**854**

Installation of plants in the tables above will involve the following:

- Shrubs, grasses, and wetland plants will be installed at 4- to 5-foot spacing and trees will be installed at 8-foot spacing.
- Most non-tree species will be installed as 5-gallon containers and with some being installed as 1-gallon contains in select areas determined in the field by the City-approved Restoration Biologist.
- Any trees installed as an addition to the replacement trees will be installed as 1-gallon containers.
- The rootball, stems or branches of container plants shall not be disturbed.
- Planting pits will be backfilled with native soil and wood mulch will be placed round each plant. Mulch will be placed around each container plant at a depth of at least 3 inches, and at least a 2-foot radius for trees and a 1-foot radius for other species. Mulch originating from Santa Barbara may be acquired as needed, such as mulch available from the County's South Coast Recycling and Transfer Station. All purchased mulch will be free of Argentine ants.

- Each container plant will be immediately watered by a drip emitter system or by hand as conditions allow. Long term irrigation will be applied and discussed in Task ES4 below.
- Erosion control materials will be installed as needed and may include low silt fences, hay bales at the base of slopes, and/or straw wattle only. The quantity of erosion control materials that is expected to be needed is minimal; materials would only be used within the mitigation areas and not for the construction portion of the project.
- Signage and temporary construction fencing will be placed around the mitigation sites to inform people to stay out of the restoration area as described in ES1.

Timing: Will coincide with the first major winter storm when soil conditions are moist. Adjacent construction may need to be accounted for access and safety purposes. Installation is expected to occur in late fall/early winter 2023.

Task ES3: Plant Procurement

The native plant materials in Table 5 have already been contracted through Santa Barbara Natives. A deposit has already been paid for by the City. The Restoration Contractor would be responsible for paying for the reminder of the cost. The cost has been accounted for herein as a combined total for both the Fowler Road Drainage Ditch and East Ekwill Street in Task FR4. See Attachment B for the Santa Barbara Natives cost proposal. Although the current bid that the City has obtained for the native container plants includes a delivery charge, assume that the Restoration Contractor will need to pick up the plants at the nursery on a daily or regular basis and bring them to the site. Assume that only a very limited number of plants can be stored safely on-site overnight. If plants remain on-site longer than the day on which they are installed, they must be watered daily.

Timing: The final payment installment must be made at the time of plant delivery. Plant procurement will occur in early fall 2023.

Task ES4: Irrigation Design and Installation

The Restoration Contractor will design and install a temporary above ground drip irrigation system. The irrigation system should be set up to target individual plants and should avoid watering in between the plants to help prevent the growth of non-natives.

A maximum of 0.29 acre will require a temporary irrigation system to be designed and installed by the Restoration Contractor. The design of the irrigation system is up to the Restoration Contractor based on their experience and site conditions observed during the site walk. The irrigation system will be designed by a qualified irrigation specialist as an aboveground temporary drip irrigation system, which will persist for 5 years with regular maintenance, and can be easily removed at the end of 5 years. The irrigation system will be designed so that it is automated, powered by either batteries or solar operated controllers, and will be weather sensor compatible. Primary lines will be of 2-inch-diameter schedule (or larger diameter if deemed necessary by the Restoration Contractor) 40 polyvinyl chloride (PVC). Any variations from these materials specifications must be indicated in the bid estimate. The irrigation design will be schematic and does not require an architect or engineer stamp.

Water to be used during the restoration preparation, installation, and maintenance will be furnished on-site for the Restoration Contractor and shall be of suitable quality for irrigation. The location of the irrigation connection point is a permanent hookup/riser represented on the Project Plans (Dewberry|Drake Haglan 2022), see Mitigation Planting Plan sheet E-MP-1, which is also included as herein as Figure 7. The Restoration Contractor will have the authority to use water as needed to fulfill

the irrigation tasks through the General Contractor's closeout. The associated meter will be provided by the City.

Following award of the contract, the City will supply the Restoration Contractor with site specifications needed to complete the irrigation system design (e.g., water pressure details, etc.). The Restoration Contractor will work with the City-approved Restoration Biologist to ensure that the design meets all materials and site specifications and will submit a draft irrigation design to the City for approval by early summer 2023. The irrigation design shall be prepared in CADD, or similar program that is acceptable in the landscape industry. The City will provide comments to be incorporated into the final irrigation design so that it can be installed (in part) in late summer/early fall 2023 prior to plant installation.

Timing: The Restoration Contractor finalize the irrigation design so that it can be installed (in part) in late summer/early fall 2023 prior to plant installation. The Restoration Contractor will install the irrigation system on-site before or after initial non-native vegetation removal, depending on a mutual agreement between the Restoration Contractor and City. The City-approved Restoration Biologist will provide oversight in the field. The irrigation system will be installed in late summer/early fall 2023, prior to plant/seed installation in late fall/early winter 2023.

2.5.2 Maintenance Phase

The Restoration Contractor will maintain the restoration site throughout the Installation Phase and 90-day PEP. Once the City deems the restoration installation complete, the 90-day PEP will begin. Maintenance will include non-native plant removal, watering, replanting, and repairing of damage to plants, erosion control devices, fencing, and/or signs that are a result of erosion or vandalism. The Restoration Contractor will also be adhered to the following measures during the Maintenance Phase:

- Large plants with potential to contain bird nests will not be removed during the breeding bird season (March 1 to September 15) unless a City-approved Restoration Biologist determines that it does not contain active bird nests.

Task ES5: Weed Removal

Weed removal at the restoration site will include the following:

- Non-native plants will be removed primarily using hand removal methods throughout the year with a focus on peak growing season in the winter and spring. If hand removal is not feasible due to species resistance to hand removal methods, the size of the plant, or the number of plants, perennial invasive non-native species may be treated with herbicides. Herbicide application requirements are described in Task ES1.
- All tools, equipment, vehicles, clothing and footwear, and other gear shall be cleaned to remove soil, seeds, and other plant parts before accessing the restoration area.
- Frequency: One "event" or site visit will be equal to 1 day (or more if necessary) and include a crew of an appropriate size to remove weeds in one event. During the Installation Phase, weeding must be conducted so that the site and installed native plants do not become overrun or dominated by weeds, the frequency will be dependent upon site conditions. A minimum of one event per month is required. Assume a minimum of 4 events will be required during the 90-day PEP, spaced a maximum of 1 month and a minimum of 2 weeks apart over the 90-day PEP.

Timing: Weed removal will occur throughout the Installation Phase, with a focus on the peak growing season in the winter and spring. Weed removal will be conducted during the Installation Phase, as well as through the 90-day PEP in approximately winter 2023 through spring 2024.

Task ES6: General Maintenance

Once the City deems the restoration installation complete, the 90-day PEP will begin. Maintenance will be performed during the 90-day PEP. Maintenance at the restoration site will include the following:

- The Restoration Contractor will be responsible to install a temporary aboveground irrigation system (see Task ES4 above), maintain the system, and water the plants immediately after installation and for the duration of the 90-day PEP.
- The City-approved Restoration Biologist will establish an irrigation schedule in conjunction with the Restoration Contractor. Irrigation will be scheduled to maximize growth of native species and will account for natural rainfall, while minimizing growth of invasive non-native plants. Generally, if irrigation is needed, more irrigation will be provided during the growing season (winter and spring) to mimic seasonal weather patterns, and minimal irrigation will be provided during the summer and fall as needed to keep plants alive.
- Conduct routine activities to maintain the plantings in a healthy condition.
  - If plants die or seeds do not germinate during the 90-day PEP due to the techniques employed by the Restoration Contractor, i.e., not due to natural causes, the Restoration Contractor will be responsible for replacement planting and/or seeding.
- Maintain fencing and signage.
- Remove trash.
- Control erosion of the mitigation site.
- Ensure performance criteria are being achieved.

Timing: General maintenance will be conducted during the Installation Phase, as well as through the 90-day PEP in approximately winter 2023 through spring 2024.

2.6 On-site Temporary Riparian Impact Areas (Ekwill Street and Hollister Avenue)

Restoration of approximately 0.13 acre will occur at Ekwill Street and 0.05 acre will occur at Hollister Avenue Bridge to mitigate for temporary impacts to riparian habitat (arroyo willow thickets, black cottonwood forest, and red willow thickets located within jurisdictional waters) due to project-related activities, see Figure 8 and Figure 9. Approximate areas are known at this time, the final restoration areas will depend upon final construction impact limits. Therefore, a maximum restoration extent is detailed herein. A majority of these restoration activities will occur at Ekwill Street. Temporary impacts to upland habitat will not be restored.

The following outlines the scope of work by installation and maintenance phases, then by task. Tasks are named as T for temporary impact area.

2.6.1 Installation Phase

Task T1: Site Preparation

The City-approved Restoration Biologist will work with the General Contractor and Restoration Contractor to stake the limits of restoration. Prior to installation, the site will need to be prepared for restoration activities. Site preparation includes the following:

- Non-native plants, except for mature trees, will be removed from the site using hand removal methods, such as hand-held weed whips, loppers, and hoes. If hand removal is not feasible due to the characteristics of the species, such as resistance to hand removal methods, the size of the plants, or the number of plants, perennial invasive non-native species may be treated with herbicides. Herbicide conditions are as follows:
  - Only individual plants will be treated; no blanket spraying efforts will be allowed.
  - If herbicide is applied, it will be applied during dry and low wind conditions in order to prevent conveyance of herbicide into drainages or other non-targeted areas.
  - Herbicide application must be performed by a licensed applicator that can identify the species to be treated and is experienced in the handling and application of herbicides.
  - Herbicides must be approved for use by the City and allowed under permit and property conditions.
  - Only herbicides approved for use near or in water, such as AquaMaster™ or equivalent, will be used if necessary.
- Install temporary fencing, made of green construction mesh-like fence and t-posts (or similar), on the east side of the mitigation site. An approximate length of fence is not known at this time.
- Install temporary signage, such as laminated 8.5”x11” paper signs, to alert the Project team and the public of restoration efforts. Permanent signs will be installed by the City.

Timing: Preparation is expected to occur in early fall 2024, depending on the construction schedule and will be phased.

Task T2: Plant Installation

Approximate areas are known at this time, the final restoration areas will depend upon final construction impact limits. Therefore, a maximum restoration extent is detailed herein. A majority of these restoration activities will occur at Ekwill Street, see Figure 8 and Figure 9. The City-approved Restoration Biologist will flag the exact location of each planted area and provide field oversight while the plants are installed.

Installation of plants in the tables above will involve the following:

- A maximum of 355 plants will be installed in a maximum of 0.13 acre at Ekwill Street and 135 plants will be installed in a maximum of 0.05 acre at Hollister Avenue.
- Shrubs, grasses, and/or forbs will be installed at 4-foot spacing. Species will be similar to those wetland and understory species listed above. No trees will be installed.
- All species will be installed as 1-gallon containers.
- The rootball, stems or branches of container plants shall not be disturbed.
- Planting pits will be backfilled with native soil and wood mulch will be placed round each plant. Mulch will be placed around each container plant at a depth of at least 3 inches, and at least a 2-foot radius for trees and a 1-foot radius for other species. Mulch originating from Santa Barbara may be acquired as needed, such as mulch available from the County’s South Coast Recycling and Transfer Station. All purchased mulch will be free of Argentine ants.
- Each container plant will be immediately watered by hand as conditions allow. Long-term irrigation will not be applied.

- Erosion control materials will be installed as needed and may include low silt fences, hay bales at the base of slopes, and/or straw wattle only. The quantity of erosion control materials that is expected to be needed is minimal; materials would only be used within the mitigation areas and not for the construction portion of the project.
- Signage and temporary construction fencing will be placed around the mitigation sites to inform people to stay out of the restoration area as described in T1.

Timing: Will coincide with the first major winter storm when soil conditions are moist. Preparation is expected to occur in late fall 2024, depending on the construction schedule and will be phased.

Task T3: Plant Procurement

The native plant materials will need to be contracted by the Restoration Contractor through Santa Barbara Natives in coordination with the City-approved Restoration Contractor. An order will need to be placed by the Restoration Contractor in coordination with the City-approved Restoration Biologist in early spring 2023 if installation is expected to occur in late fall 2023. A 40% deposit will need to be paid at the time of the order, the remaining 60% will need to be paid at the time for delivery. The estimated total cost for the plant order is $3,200. Assume that the Restoration Contractor will need to pick up the plants at the nursery on a daily or regular basis and bring them to the site. Assume that only a very limited number of plants can be stored safely on-site overnight. If plants remain on-site longer than the day on which they are installed, they must be watered daily.

Timing: An order will need to be placed by the Restoration Contractor in early spring 2024 if installation is expected to occur in late fall 2024. A 40% deposit will need to be paid at the time of the order, the remaining 60% will need to be paid at the time for delivery.

2.6.2 Maintenance Phase

The Restoration Contractor will maintain the restoration site throughout the Installation Phase and 90-day PEP. Once the City deems the restoration installation complete, the 90-day PEP will begin. Maintenance will include non-native plant removal, watering, replanting, and repairing of damage to plants, erosion control devices, fencing, and/or signs that are a result of erosion or vandalism. The Restoration Contractor will also be adhered to the following measures during the Maintenance Phase:

- Large plants with potential to contain bird nests will not be removed during the breeding bird season (March 1 to September 15) unless the City-approved Restoration Biologist determines that it does not contain active bird nests.

Task T4: Weed Removal

Weed removal at the restoration site will include the following:

- Non-native plants will be removed primarily using hand removal methods. If hand removal is not feasible due to species resistance to hand removal methods, the size of the plant, or the number of plants, perennial invasive non-native species may be treated with herbicides. Herbicide application requirements are described in Task FR1.
- All tools, equipment, vehicles, clothing and footwear, and other gear shall be cleaned to remove soil, seeds, and other plant parts before accessing the restoration area.
- Frequency: One “event” or site visit will be equal to 1 day (or more if necessary) and include a crew of an appropriate size to remove weeds in one event. During the Installation Phase, weeding must be conducted so that the site and installed native plants do not become overrun or dominated by

weeds, the frequency will be dependent upon site conditions. A minimum of one event per month is required. Assume a minimum of 4 events will be required during the 90-day PEP, spaced a maximum of 1 month and a minimum of 2 weeks apart over the 90-day PEP.

Timing: Weed removal will occur throughout the Installation Phase, with a focus on the peak growing season in the winter and spring. Weed removal will be conducted during the Installation Phase, as well as through the 90-day PEP in approximately winter 2024 through spring 2025.

Task T5: General Maintenance

Once the City deems the restoration installation complete, the 90-day PEP will begin. Maintenance will be performed during the 90-day PEP. Maintenance at the restoration site will include the following:

- Long-term irrigation will not be applied unless the plants are significantly stressed at the discretion of the City-approved Restoration Contractor. If irrigation is needed, it will be applied by hand in a manner feasible according to site conditions.
- The City-approved Restoration Biologist will establish an irrigation schedule in conjunction with the Restoration Contractor. Irrigation will be scheduled to maximize growth of native species and will account for natural rainfall, while minimizing growth of invasive non-native plants. Generally, if irrigation is needed, more irrigation will be provided during the growing season (winter and spring) to mimic seasonal weather patterns, and minimal irrigation will be provided during the summer and fall as needed to keep plants alive.
- Conduct routine activities to maintain the plantings in a healthy condition.
  - If plants die or seeds do not germinate during the 90-day PEP due to the techniques employed by the Restoration Contractor, i.e., not due to natural causes, the Restoration Contractor will be responsible for replacement planting and/or seeding.
- Maintain fencing and signage.
- Remove trash.
- Control erosion of the mitigation site.
- Ensure performance criteria are being achieved.

Timing: General maintenance will be conducted during the Installation Phase, as well as through the 90-day PEP in approximately winter 2024 through spring 2025.

3 References

For a complete list of all references used in the figures included herein, see Attachment A.

City of Goleta (City). 2011. Final Environmental Impact Report. Ekwill Street and Fowler Road Extension Project. Goleta, California. SCH No. 2004061072. November 16.

_____. 2011b. Conditions of Approval, Ekwill Street and Fowler Road Extensions Project; Case #04-121-DP. Issued November 2011.

Dewberry|Drake Haglan. 2022. Project Plans for the Ekwill Street and Fowler Road Extensions Project. Prepared for the City of Goleta.

MNS Engineers. 2022. Project Plans for the Ekwill Street and Fowler Road Extensions Projects. Prepared for the City of Goleta.

Rincon Consultants, Inc. (Rincon). 2022. Biological Mitigation and Monitoring Plan for the Ekwill Street and Fowler Road Extensions Project. Prepared for the City of Goleta. Revised August 2022.

Figures

Figure 1 Project Location and Mitigation Areas

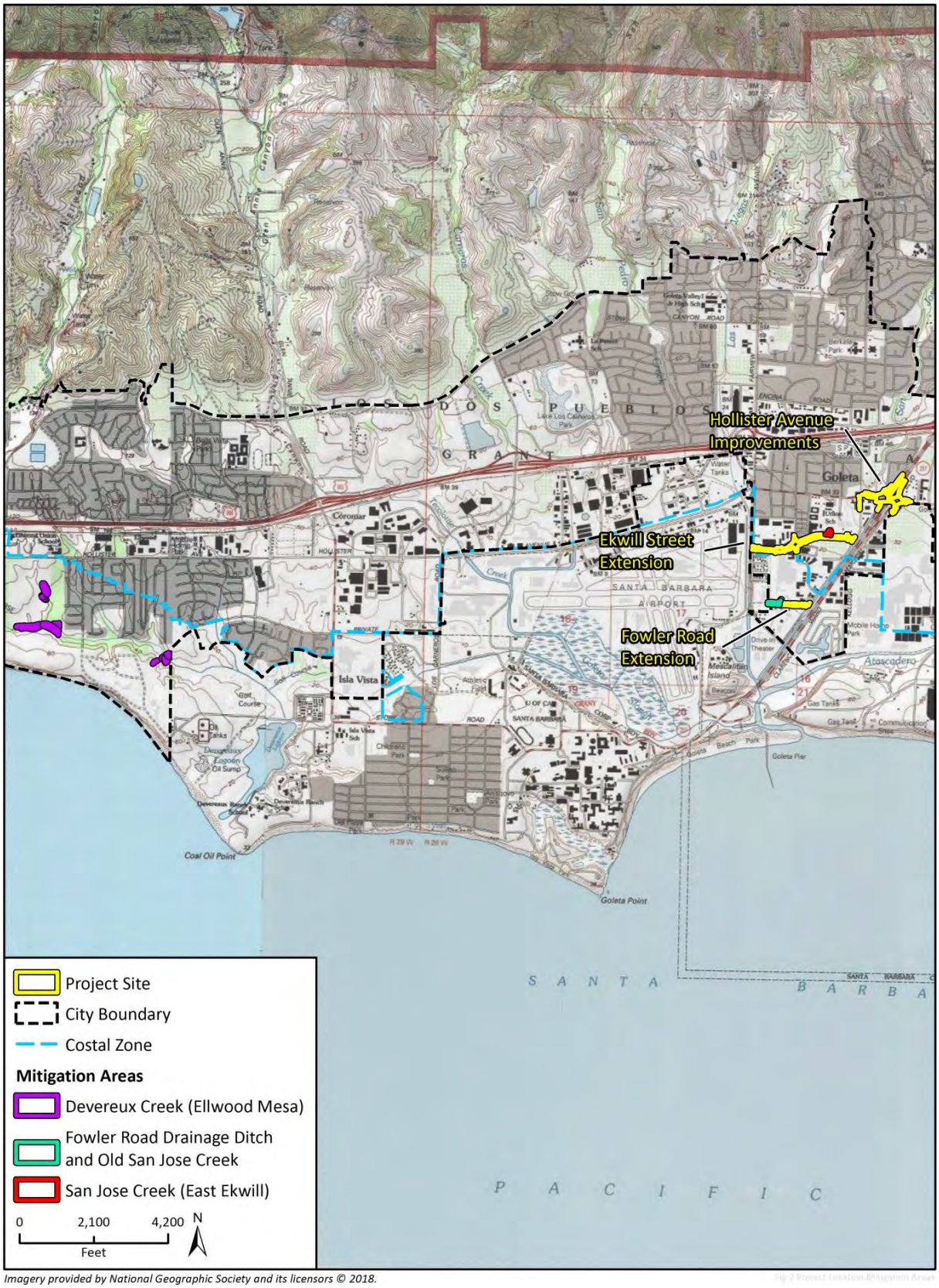

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Figure 2 Fowler Road Drainage Ditch and Old San Jose Creek - Restoration Layout

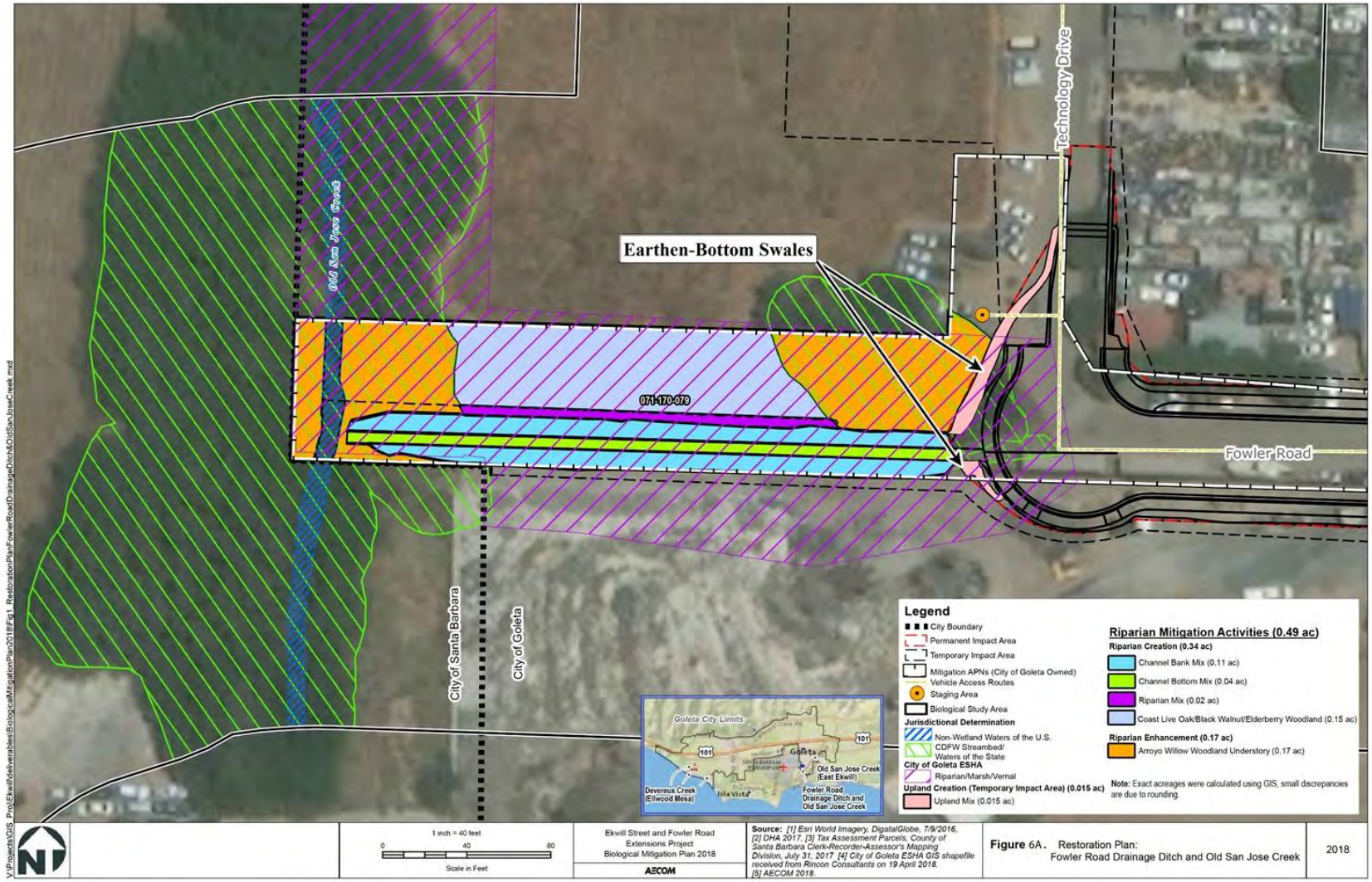
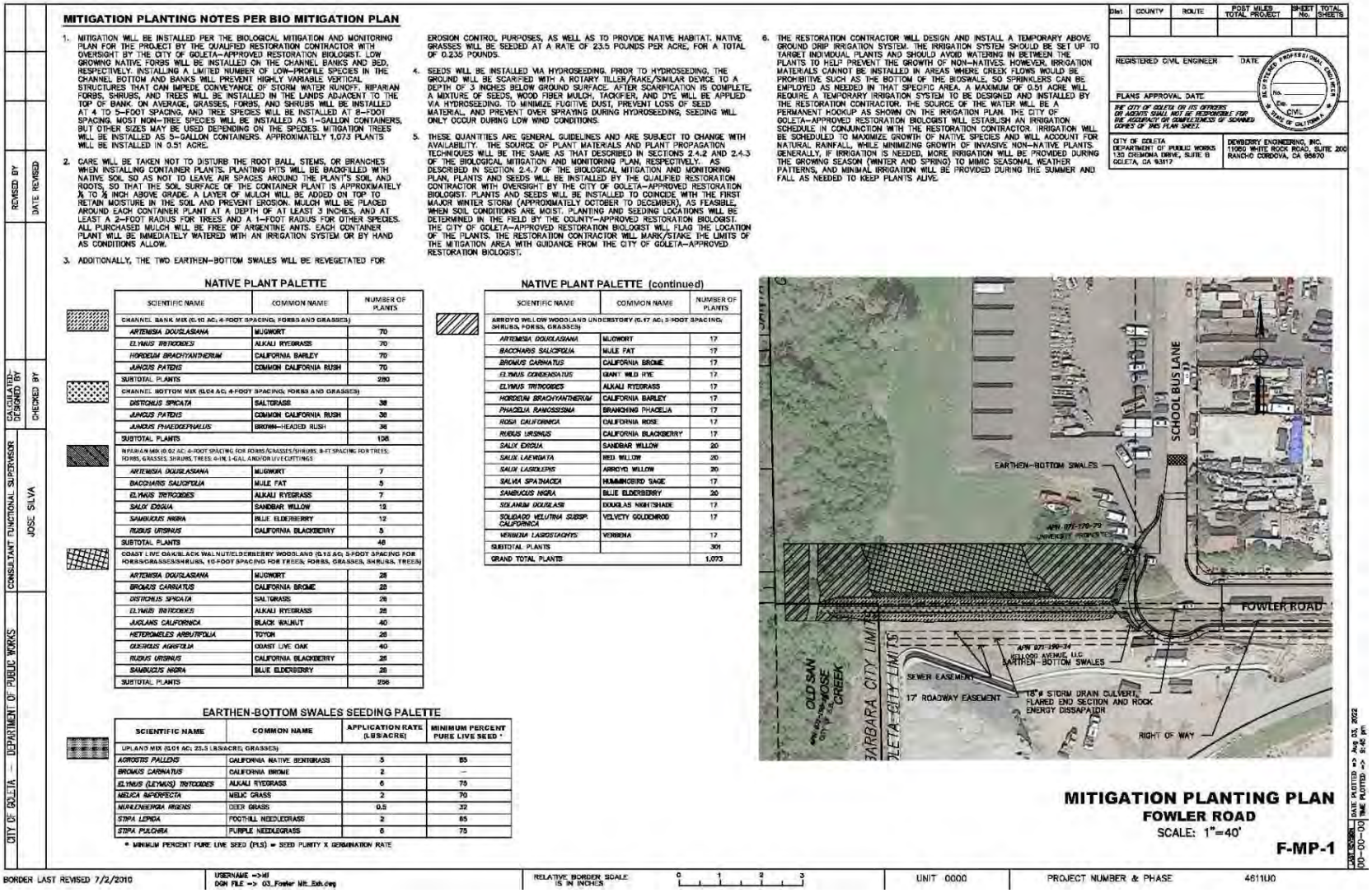


Figure 3 Fowler Road Drainage Ditch and Old San Jose Creek - Engineering Planting Plan (Dewberry | **Drake Haglan** 2022)



MITIGATION PLANTING NOTES PER BIO MITIGATION PLAN

1. MITIGATION WILL BE INSTALLED PER THE BIOLOGICAL MITIGATION AND MONITORING PLAN FOR THE PROJECT BY THE QUALIFIED RESTORATION CONTRACTOR WITH OVERSIGHT BY THE CITY OF GOLETA–APPROVED RESTORATION BIOLOGIST. LOW GROWING NATIVE FORBS WILL BE INSTALLED ON THE CHANNEL BANKS AND BED, RESPECTIVELY. INSTALLING A LIMITED NUMBER OF LOW–PROFILE SPECIES IN THE CHANNEL BOTTOM AND BANKS WILL PREVENT HIGHLY VARIABLE VERTICAL STRUCTURES THAT CAN IMPEDE CONVEYANCE OF STORM WATER RUNOFF. RIPARIAN FORBS, SHRUBS, AND TREES WILL BE INSTALLED IN THE LANDS ADJACENT TO THE TOP OF BANK. ON AVERAGE, GRASSES, FORBS, AND SHRUBS WILL BE INSTALLED AT 4 TO 5–FOOT SPACING, AND TREE SPECIES WILL BE INSTALLED AT 8–FOOT SPACING. MOST NON–TREE SPECIES WILL BE INSTALLED AS 1–GALLON CONTAINERS, BUT OTHER SIZES MAY BE USED DEPENDING ON THE SPECIES. MITIGATION TREES WILL BE INSTALLED AS 5–GALLON CONTAINERS. APPROXIMATELY 1,073 PLANTS WILL BE INSTALLED IN 0.51 ACRE.
2. CARE WILL BE TAKEN NOT TO DISTURB THE ROOT BALL, STEMS, OR BRANCHES WHEN INSTALLING CONTAINER PLANTS. PLANTING PITS WILL BE BACKFILLED WITH NATIVE SOIL SO AS NOT TO LEAVE AIR SPACES AROUND THE PLANT'S SOIL AND ROOTS, SO THAT THE SOIL SURFACE OF THE CONTAINER PLANT IS APPROXIMATELY ¾ TO 1½ INCH ABOVE GRADE. A LAYER OF MULCH WILL BE ADDED ON TOP TO RETAIN MOISTURE IN THE SOIL AND PREVENT EROSION. MULCH WILL BE PLACED AROUND EACH CONTAINER PLANT AT A DEPTH OF AT LEAST 3 INCHES, AND AT LEAST A 2–FOOT RADIUS FOR TREES AND A 1–FOOT RADIUS FOR OTHER SPECIES. ALL PURCHASED MULCH WILL BE FREE OF ARGENTINE ANTS. EACH CONTAINER PLANT WILL BE IMMEDIATELY WATERED WITH AN IRRIGATION SYSTEM OR BY HAND AS CONDITIONS ALLOW.
3. ADDITIONALLY, THE TWO EARTHEN–BOTTOM SWALES WILL BE REVEGETATED FOR EROSION CONTROL PURPOSES, AS WELL AS TO PROVIDE NATIVE HABITAT. NATIVE GRASSES WILL BE SEEDED AT A RATE OF 23.5 POUNDS PER ACRE, FOR A TOTAL OF 0.235 POUNDS.
4. SEEDS WILL BE INSTALLED VIA HYDROSEEDING. PRIOR TO HYDROSEEDING, THE GROUND WILL BE SCARIFIED WITH A ROTARY TILLER/RAKE/SIMILAR DEVICE TO A DEPTH OF 3 INCHES BELOW GROUND SURFACE. AFTER SCARIFICATION IS COMPLETE, A MIXTURE OF SEEDS, WOOD FIBER MULCH, TACKIFIER, AND DYE WILL BE APPLIED VIA HYDROSEEDING. TO MINIMIZE FUGITIVE DUST, PREVENT LOSS OF SEED MATERIAL, AND PREVENT OVER SPRAYING DURING HYDROSEEDING, SEEDING WILL ONLY OCCUR DURING LOW WIND CONDITIONS.
5. THESE QUANTITIES ARE GENERAL GUIDELINES AND ARE SUBJECT TO CHANGE WITH AVAILABILITY. THE SOURCE OF PLANT MATERIALS AND PLANT PROPAGATION TECHNIQUES WILL BE THE SAME AS THAT DESCRIBED IN SECTIONS 2.4.2 AND 2.4.3 OF THE BIOLOGICAL MITIGATION AND MONITORING PLAN, RESPECTIVELY. AS DESCRIBED IN SECTION 2.4.7 OF THE BIOLOGICAL MITIGATION AND MONITORING PLAN, PLANTS AND SEEDS WILL BE INSTALLED BY THE QUALIFIED RESTORATION CONTRACTOR WITH OVERSIGHT BY THE CITY OF GOLETA–APPROVED RESTORATION BIOLOGIST. PLANTS AND SEEDS WILL BE INSTALLED TO COINCIDE WITH THE FIRST MAJOR WINTER STORM (APPROXIMATELY OCTOBER TO DECEMBER), AS FEASIBLE, WHEN SOIL CONDITIONS ARE MOIST. PLANTING AND SEEDING LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE COUNTY–APPROVED RESTORATION BIOLOGIST. THE CITY OF GOLETA–APPROVED RESTORATION BIOLOGIST WILL FLAG THE LOCATION OF THE PLANTS. THE RESTORATION CONTRACTOR WILL MARK/STAKE THE LIMITS OF THE MITIGATION AREA WITH GUIDANCE FROM THE CITY OF GOLETA–APPROVED RESTORATION BIOLOGIST.
6. THE RESTORATION CONTRACTOR WILL DESIGN AND INSTALL A TEMPORARY ABOVE GROUND DRIP IRRIGATION SYSTEM. THE IRRIGATION SYSTEM SHOULD BE SET UP TO TARGET INDIVIDUAL PLANTS AND SHOULD AVOID WATERING IN BETWEEN THE PLANTS TO HELP PREVENT THE GROWTH OF NON–NATIVES. HOWEVER, IRRIGATION MATERIALS CANNOT BE INSTALLED IN AREAS WHERE CREEK FLOWS WOULD BE PROHIBITIVE SUCH AS THE BOTTOM OF THE BIOSWALE. SO SPRINKLERS CAN BE EMPLOYED AS NEEDED IN THAT SPECIFIC AREA. A MAXIMUM OF 0.51 ACRE WILL REQUIRE A TEMPORARY IRRIGATION SYSTEM TO BE DESIGNED AND INSTALLED BY THE RESTORATION CONTRACTOR. THE SOURCE OF THE WATER WILL BE A PERMANENT HOOKUP AS SHOWN ON THE IRRIGATION PLAN. THE CITY OF GOLETA–APPROVED RESTORATION BIOLOGIST WILL ESTABLISH AN IRRIGATION SCHEDULE IN CONJUNCTION WITH THE RESTORATION CONTRACTOR. IRRIGATION WILL BE SCHEDULED TO MAXIMIZE GROWTH OF NATIVE SPECIES AND WILL ACCOUNT FOR NATURAL RAINFALL, WHILE MINIMIZING GROWTH OF INVASIVE NON–NATIVE PLANTS. GENERALLY, IF IRRIGATION IS NEEDED, MORE IRRIGATION WILL BE PROVIDED DURING THE GROWING SEASON (WINTER AND SPRING) TO MIMIC SEASONAL WEATHER PATTERNS, AND MINIMAL IRRIGATION WILL BE PROVIDED DURING THE SUMMER AND FALL AS NEEDED TO KEEP PLANTS ALIVE.

NATIVE PLANT PALETTE

SCIENTIFIC NAME	COMMON NAME	NUMBER OF PLANTS
CHANNEL BANK MIX (0.10 AC; 4–FOOT SPACING; FORBS AND GRASSES)		
ARTEMISIA DOUGLASIANA	MUGWORT	70
ELYMUS TRITICOIDES	ALKALI RYEGRASS	70
HORDEUM BRACHYANTHERUM	CALIFORNIA BARLEY	70
JUNCUS PATENS	COMMON CALIFORNIA RUSH	70
SUBTOTAL PLANTS		280
CHANNEL BOTTOM MIX (0.04 AC; 4–FOOT SPACING; FORBS AND GRASSES)		
DISTICHLIS SPICATA	SALTGRASS	38
JUNCUS PATENS	COMMON CALIFORNIA RUSH	38
JUNCUS PHAEOCEPHALUS	BROWN–HEADED RUSH	36
SUBTOTAL PLANTS		136
RIPARIAN MIX (0.02 AC; 4–FOOT SPACING FOR FORBS/GRASSES/SHRUBS; 8–FT SPACING FOR TREES; FORBS, GRASSES, SHRUBS, TREES; 4–IN; 1–GAL AND/OR LIVE CUTTINGS		
ARTEMISIA DOUGLASIANA	MUGWORT	7
BACCHARIS SALICIFOLIA	MULE FAT	5
ELYMUS TRITICOIDES	ALKALI RYEGRASS	7
SALIX EXIGUA	SANDBAR WILLOW	12
SAMBUCUS NIGRA	BLUE ELDERBERRY	12
RUBUS URSINUS	CALIFORNIA BLACKBERRY	5
SUBTOTAL PLANTS		48
COAST LIVE OAK/BLACK WALNUT/ELDERBERRY WOODLAND (0.13 AC; 5–FOOT SPACING FOR FORBS/GRASSES/SHRUBS, 10–FOOT SPACING FOR TREES; FORBS, GRASSES, SHRUBS, TREES)		
ARTEMISIA DOUGLASIANA	MUGWORT	28
BROMUS CARINATUS	CALIFORNIA BROME	28
DISTICHLIS SPICATA	SALTGRASS	28
ELYMUS TRITICOIDES	ALKALI RYEGRASS	28
JUGLANS CALIFORNICA	BLACK WALNUT	40
HETEROMELES ARBUTIFOLIA	TOYON	28
QUERCUS AGRIFOLIA	COAST LIVE OAK	40
RUBUS URSINUS	CALIFORNIA BLACKBERRY	28
SAMBUCUS NIGRA	BLUE ELDERBERRY	28
SUBTOTAL PLANTS		256

NATIVE PLANT PALETTE (continued)

SCIENTIFIC NAME	COMMON NAME	NUMBER OF PLANTS
ARROYO WILLOW WOODLAND UNDERSTORY (0.17 AC; 5–FOOT SPACING; SHRUBS, FORBS, GRASSES)		
ARTEMISIA DOUGLASIANA	MUGWORT	17
BACCHARIS SALICIFOLIA	MULE FAT	17
BROMUS CARINATUS	CALIFORNIA BROME	17
ELYMUS CONDENSATUS	GIANT WILD RYE	17
ELYMUS TRITICOIDES	ALKALI RYEGRASS	17
HORDEUM BRACHYANTHERUM	CALIFORNIA BARLEY	17
PHACELIA RAMOSISSIMA	BRANCHING PHACELIA	17
ROSA CALIFORNICA	CALIFORNIA ROSE	17
RUBUS URSINUS	CALIFORNIA BLACKBERRY	17
SALIX EXIGUA	SANDBAR WILLOW	20
SALIX LAEVIGATA	RED WILLOW	20
SALIX LASIOLEPIS	ARROYO WILLOW	20
SALVIA SPATHACEA	HUMMINGBIRD SAGE	17
SAMBUCUS NIGRA	BLUE ELDERBERRY	20
SOLANUM DOUGLASII	DOUGLAS NIGHTSHADE	17
SOLIDAGO VELUTINA SUBSP. CALIFORNICA	VELVETY GOLDENROD	17
VERBENA LASIOSTACHYS	VERBENA	17
SUBTOTAL PLANTS		301
GRAND TOTAL PLANTS		1,073

EARTHEN–BOTTOM SWALES SEEDING PALETTE

SCIENTIFIC NAME	COMMON NAME	APPLICATION RATE (LBS/ACRE)	MINIMUM PERCENT PURE LIVE SEED *
UPLAND MIX (0.01 AC; 23.5 LBS/ACRE; GRASSES)			
AGROSTIS PALLENS	CALIFORNIA NATIVE BENTGRASS	5	85
BROMUS CARINATUS	CALIFORNIA BROME	2	–
ELYMUS (LEYMUS) TRITICOIDES	ALKALI RYEGRASS	6	75
MELICA IMPERFECTA	MELIC GRASS	2	70
MUHLENBERGIA RIGENS	DEER GRASS	0.5	32
STIPA LEPIDA	FOOTHILL NEEDLEGRASS	2	65
STIPA PULCHRA	PURPLE NEEDLEGRASS	6	75

* MINIMUM PERCENT PURE LIVE SEED (PLS) = SEED PURITY X GERMINATION RATE

MITIGATION PLANTING PLAN
FOWLER ROAD
SCALE: 1"=40'
F-MP-1

CITY OF GOLETA – DEPARTMENT OF PUBLIC WORKS | CONSULTANT FUNCTIONAL SUPERVISOR: JOSE SILVA | CALCULATED–DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

REGISTERED CIVIL ENGINEER | DATE | PLANS APPROVAL DATE

THE CITY OF GOLETA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

CITY OF GOLETA DEPARTMENT OF PUBLIC WORKS 130 CREMONA DRIVE, SUITE B GOLETA, CA 93117

DEWBERRY ENGINEERS, INC. 11080 WHITE ROCK ROAD, SUITE 200 RANCHO CORDOVA, CA 95670

BORDER LAST REVISED 7/2/2010 | USERNAME => MI | DGN FILE => 03_Fowler Mit_Esh.dwg | RELATIVE BORDER SCALE IS IN INCHES | UNIT 0000 | PROJECT NUMBER & PHASE 461100

Figure 4 Fowler Road Drainage Ditch and Old San Jose Creek - Engineering Drainage Details (Dewberry | **Drake Haglan** 2022)

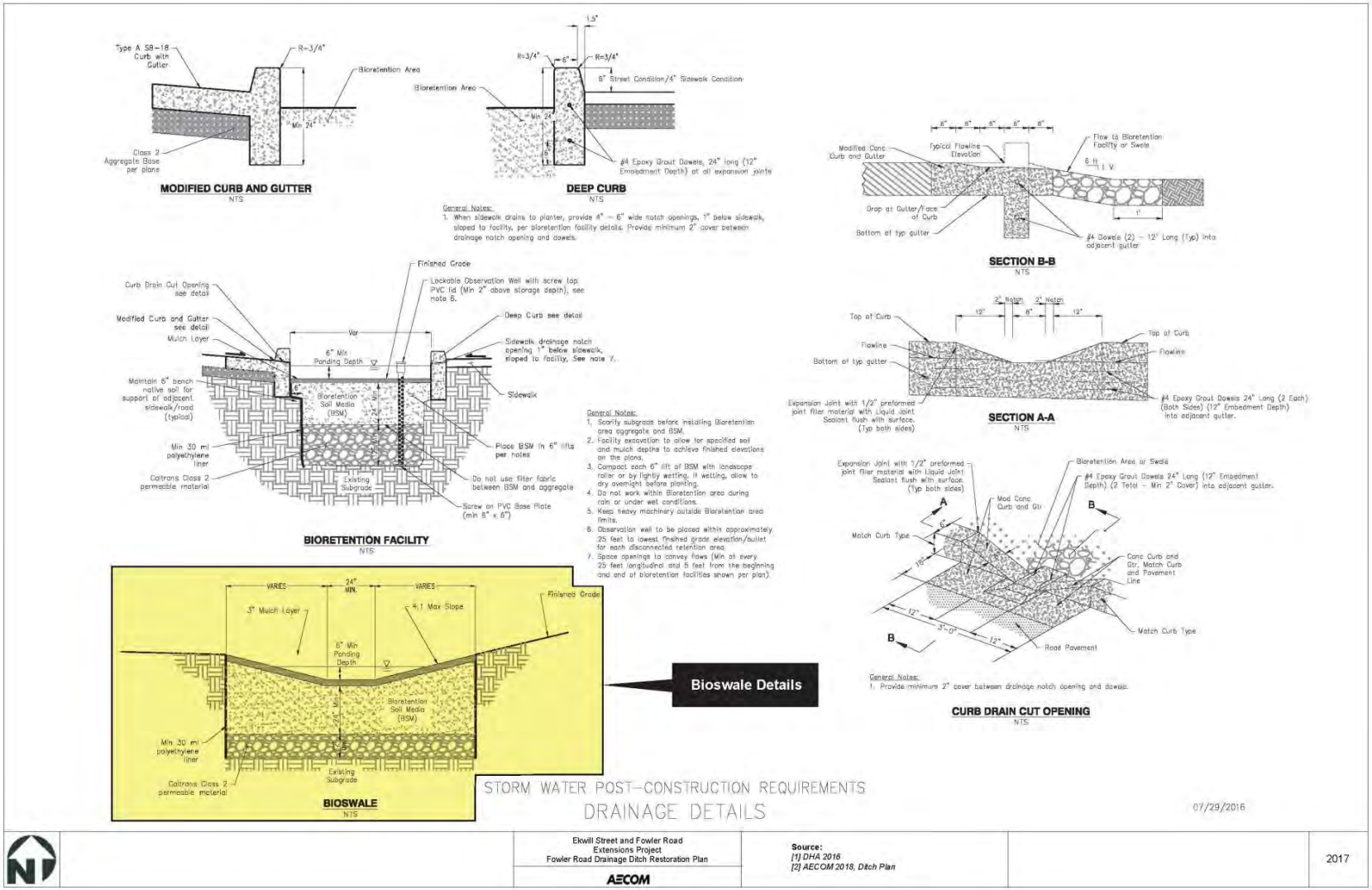


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Figure 5 Fowler Road Drainage Ditch and Old San Jose Creek - Engineering Irrigation Plan (Dewberry | **Drake Haglan** 2022)

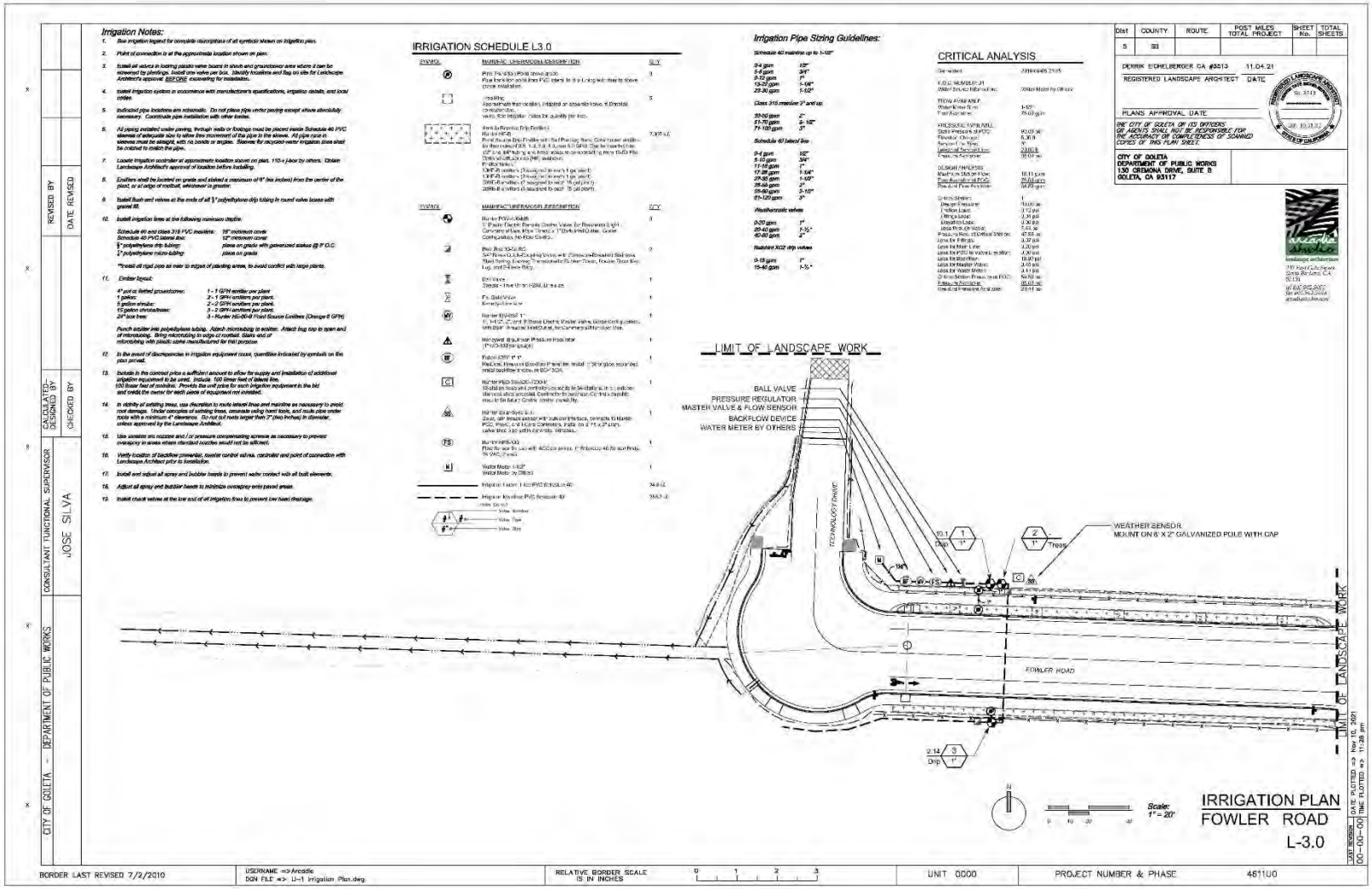

Figure 6 Old San Jose Creek at East Ekwill Street – Restoration Layout

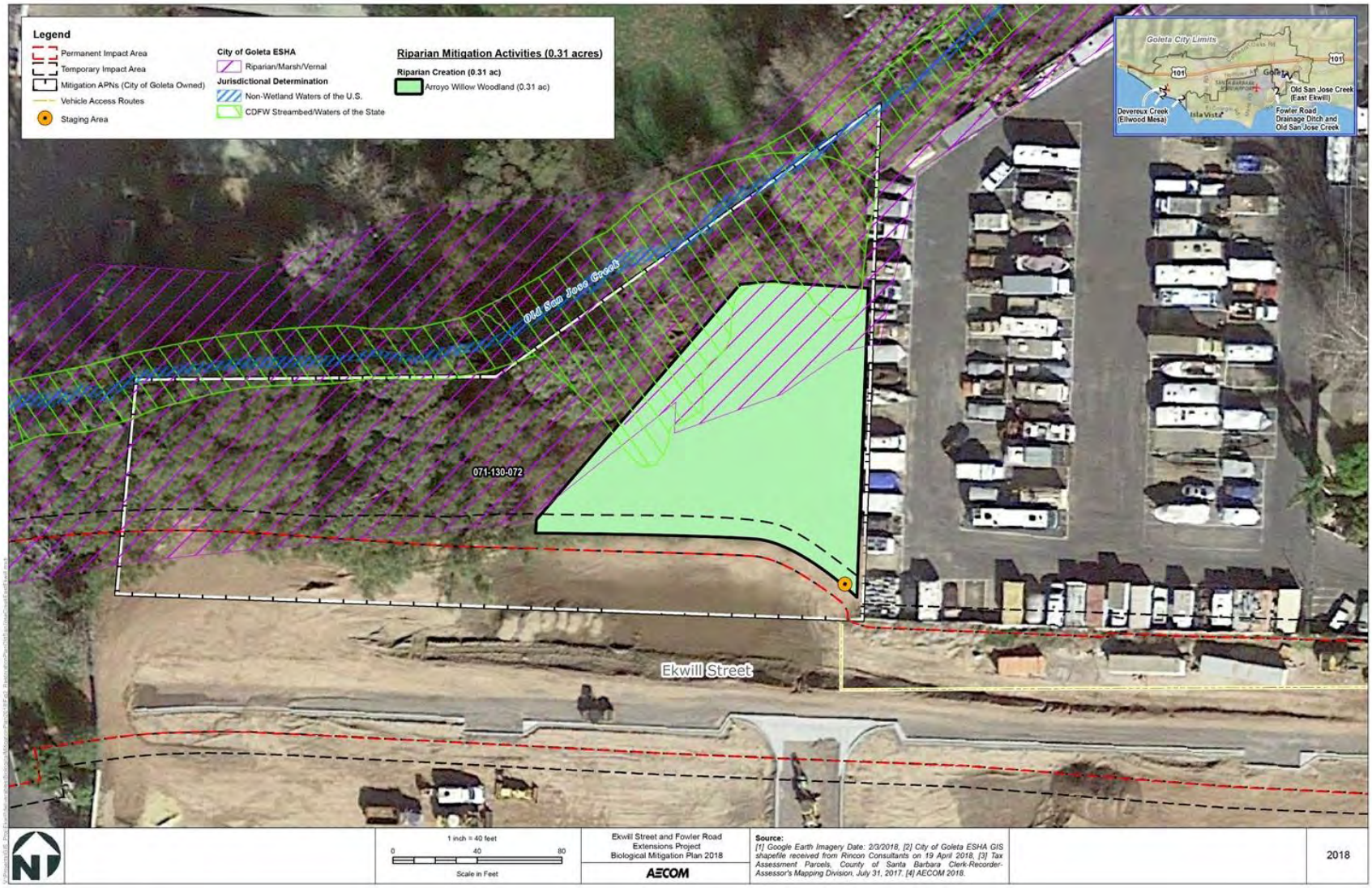

Figure 7 Old San Jose Creek at East Ekwill Street - Engineering Planting Plan (MNS 2022)

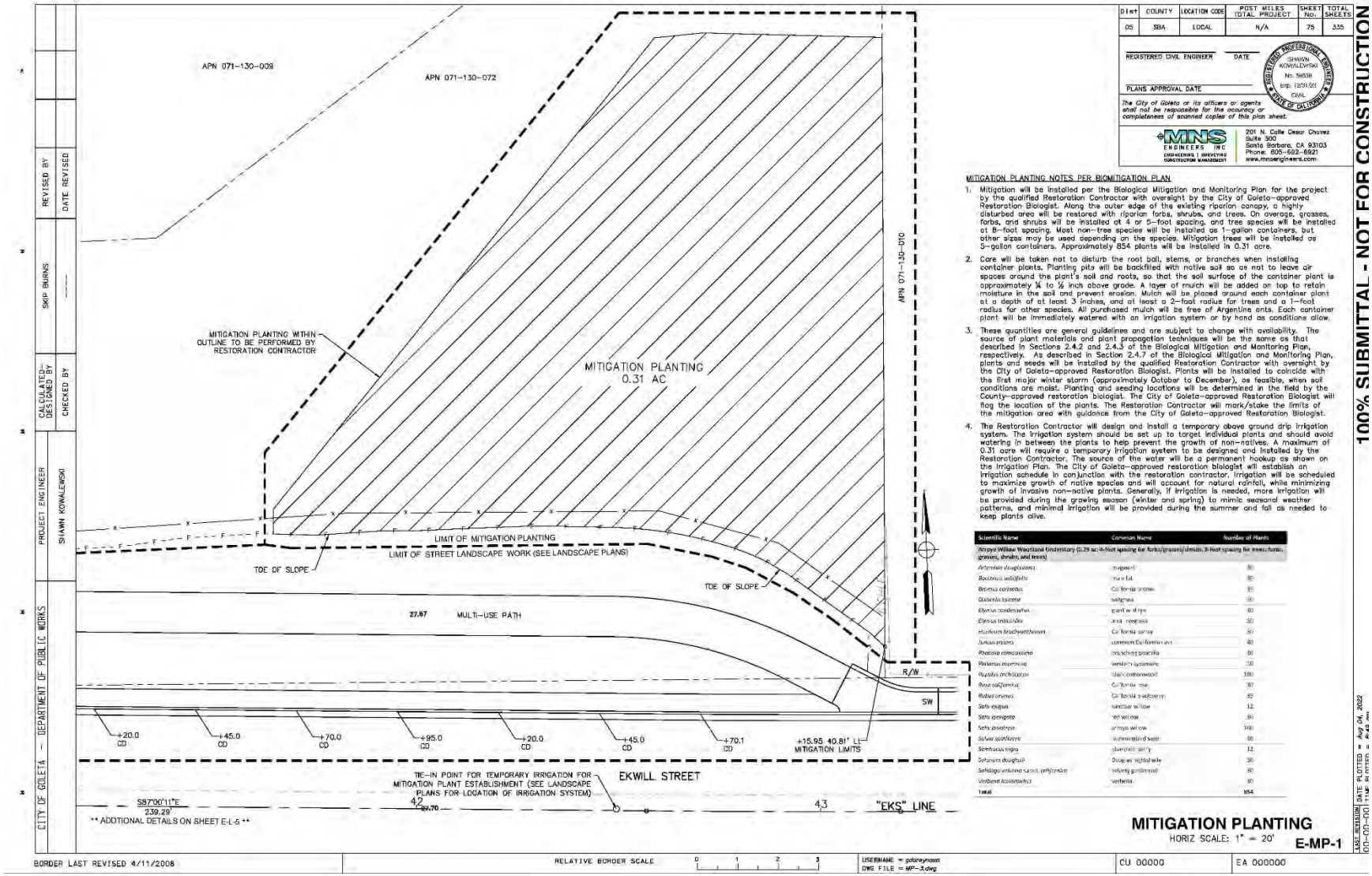

Figure 8 Ekwill Street - On-site Temporary Riparian Impact Area

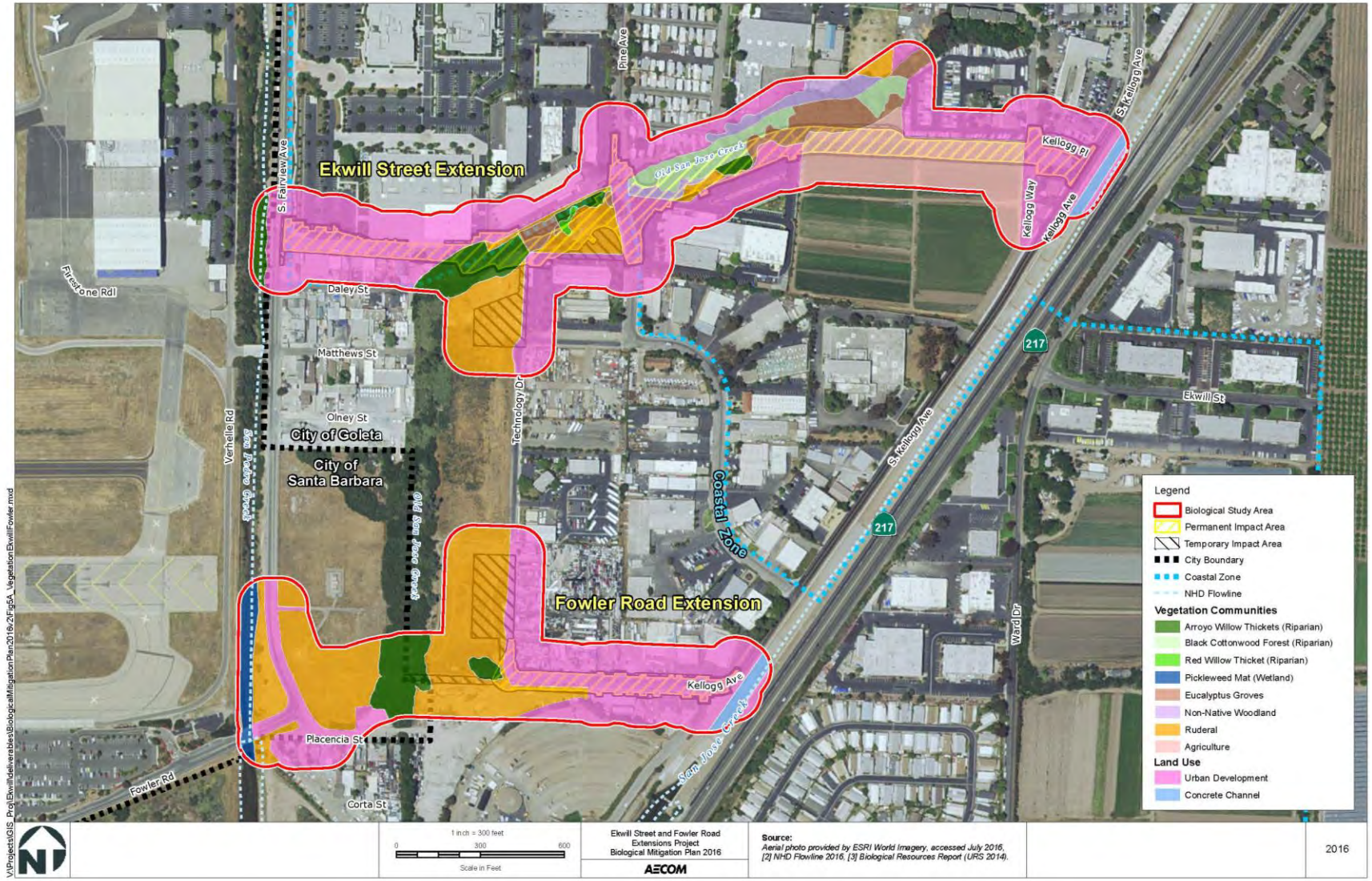

Figure 9 Hollister Avenue - On-site Temporary Riparian Impact Area