



PLANNING AND BUILDING DEPARTMENT

PLANNING SERVICES DIVISION

<http://www.edcgov.us/DevServices/>

PLACERVILLE OFFICE:

2850 Fairlane Court, Placerville, CA 95667

BUILDING

(530) 621-5315 / (530) 622-1708 Fax

bldgdept@edcgov.us

PLANNING

(530) 621-5355 / (530) 642-0508 Fax

planning@edcgov.us

LAKE TAHOE OFFICE:

924 B Emerald Bay Rd

South Lake Tahoe, CA 96150

(530) 573-3330

(530) 542-9082 Fax

PUBLIC NOTICE

County of El Dorado Planning Services has prepared a Mitigated Negative Declaration on the following:

Design Review DR16-0001/Leave It To Us Self Storage submitted by MARLENE A. CARTER request for a Design Review Permit for the construction and operation of a new self-storage facility consisting of nine (9) new storage buildings, two employee-housing units, along with parking lot and associated site improvements such as landscaping, perimeter fencing, and on-site signs. Building one (1) would be approximately 13,200 square foot building with retail office space (2,700 SF) and storage (7,800 SF) on the ground level, and manager apartments on the second floor (2,700 SF). Buildings 2-9 would be approximately 8,700 square feet each and the total proposed building development for all nine buildings is approximately 82,800 square feet. The project site would also include 10,368 square feet of uncovered Recreational Vehicles (RV) storage space for a total of 30 RV's. Parking would include seven (7) parking spaces of which one will be a handicapped space, located near building 1 at the entrance of the self-storage facility. The property, identified by Assessor's Parcel Number 109-480-007, is zoned Industrial Light - Design Review Community Combining Zone District (IL-DC), consists of 7.2 acres, and is located on southeast side of Business Drive, south of the intersection with Durock Road, in the Barnett Business Park area of Shingle Springs, Supervisorial District 2 (County Planner: Efren Sanchez, 530-621-6591) (Mitigated Negative Declaration prepared)**

The draft mitigated negative declaration for DR16-0001 addresses environmental issues including Aesthetic/Visual, Agricultural Land, Air Quality, Archeological/Historical, Biological Resources, Drainage/Absorption, Forest Land/Fire Hazard, Geologic/Seismic, Minerals, Noise, Population/Housing Balance, Public Services/Facilities, Recreation/Parks, Schools/Universities, Sewer Capacity, Soil Erosion/Compaction/Grading, Solid Waste, Toxic/Hazardous, Traffic/Circulation, Vegetation, Water Quality, Water Supply/Groundwater, Wetland/Riparian, Growth Inducement, Land Use, and Cumulative Effects. No hazardous waste sites are located within the vicinity of the project. Mitigation has been identified which would reduce potentially significant impacts to a level of insignificance.

**This is a notice of intent to adopt the negative declaration or mitigated negative declaration that has been prepared for this project and which may be reviewed and/or obtained in the County of El Dorado Planning and Building Department, 2850 Fairlane Court, Placerville, CA 95667, during normal business hours or online at <https://edcgov.trakit.net/eTRAKiT/Search/project.aspx> by typing the first word of the project name in the search box. A negative declaration or mitigated negative declaration is a document filed to satisfy CEQA (California Environmental Quality Act). This document states that there are no significant environmental effects resulting from the project, or that conditions have been proposed which would mitigate or reduce potential negative effects to an insignificant level. The public review period for the negative declaration or mitigated negative declaration set forth in CEQA for this project is thirty days, beginning August 13, 2019, and ending September 11, 2019.

Any written correspondence should be directed to the County of El Dorado Community Development Services, Planning and Building Department, 2850 Fairlane Court, Placerville, CA 95667 or via e-mail: planning@edcgov.us.

COUNTY OF EL DORADO PLANNING SERVICES

TIFFANY SCHMID, Planning and Building Department Director

August 12, 2019

MITIGATED NEGATIVE DECLARATION

FILE: DR16-0001

PROJECT NAME: Leave It To Us Self Storage

NAME OF APPLICANT: Marlene A. Carter

ASSESSOR'S PARCEL NO.: 109-480-007

SECTION: 11 T: 9N R: 9E

LOCATION: The property is located on the Southeast side of Business Drive, South of the intersection with Durock Road in the Burnett Business Park area of Shingle Springs.

- GENERAL PLAN AMENDMENT:** **FROM:** **TO:**
- REZONING:** **FROM:** **TO:**
- TENTATIVE PARCEL MAP**
SUBDIVISION (NAME):
- SPECIAL USE PERMIT TO ALLOW:**
- OTHER:** Design Review Permit

REASONS THE PROJECT WILL NOT HAVE A SIGNIFICANT ENVIRONMENTAL IMPACT:

- NO SIGNIFICANT ENVIRONMENTAL CONCERNS WERE IDENTIFIED DURING THE INITIAL STUDY.**
- MITIGATION HAS BEEN IDENTIFIED WHICH WOULD REDUCE POTENTIALLY SIGNIFICANT IMPACTS.**
- OTHER:**

In accordance with the authority and criteria contained in the California Environmental Quality Act (CEQA), State Guidelines, and El Dorado County Guidelines for the Implementation of CEQA, the County Environmental Agent analyzed the project and determined that the project will not have a significant impact on the environment. Based on this finding, the Planning Department hereby prepares this MITIGATED NEGATIVE DECLARATION. A period of thirty (30) days from the date of filing this mitigated negative declaration will be provided to enable public review of the project specifications and this document prior to action on the project by COUNTY OF EL DORADO. A copy of the project specifications is on file at the County of El Dorado Planning Services, 2850 Fairlane Court, Placerville, CA 95667.

This Mitigated Negative Declaration was adopted by the Planning and Building Department Director on
_____.

Executive Secretary



**EL DORADO COUNTY PLANNING SERVICES
2850 FAIRLANE COURT
PLACERVILLE, CA 95667**

**INITIAL STUDY
ENVIRONMENTAL CHECKLIST**

Project Title: Design Review Permit DR16-0001/Leave It To Us Self Storage

Lead Agency Name and Address: El Dorado County, 2850 Fairlane Court, Placerville, CA 95667

Contact Person: Efren Sanchez, Associate Planner

Phone Number: (530) 621-6591

Applicant's Name and Address: Marlene A. Carter, 2260 Talon Drive, Shingle Springs, CA 95682

Project Agent's Name and Address: Marlene A. Carter, 2260 Talon Drive, Shingle Springs, CA 95682

Project Engineer's Name and Address: Barbara Lebeck, P.E., 3430 Robin Lane #2, Cameron Park, CA 95682

Project Location: The property is located on the Southeast side of Business Drive, South of the intersection with Durock Road in the Burnett Business Park area of Shingle Springs.

Assessor's Parcel Number: 109-480-007

Acres: 7.2 acres

Sections: Sec. 11
9E

T: 9N R:

Latitude/Longitude Coordinates: 38.655066^o/
-121.072147^o

General Plan Designation: Industrial (I)

Zoning: Industrial Low- Design Review-Community(IL-DC)

Description of Project: Design Review Permit for the proposed construction and operation of a 82,800 square feet (SF) self-storage facility with 10,368 square feet (SF) of uncovered Recreation Vehicle (RV) storage in the Barnett Business Park consisting of nine storage buildings (77,400 SF), two employee-housing units, parking lot improvements, and associated site improvements.

Surrounding Land Uses and Setting:

	Zoning	General Plan	Land Use/Improvements
Site	Industrial Light (IL) with Design Review Community (-DC) Combining Zone	Industrial (I)	Undeveloped
North	Multi-unit Residential (RM) with Planning Development (-PD) Combining Zone	Multi-family Residential (MFR)	Undeveloped
South	Industrial Light (IL) with Design Review Community (-DC) Combining Zone	Industrial (I)	Undeveloped
East	Transportation Corridor (TC) with Design Review Community (-DC) Combining Zone, and Two-Acre Residential (R2A)	Industrial(I), Multi-family Residential (MFR), and Low-Density Residential (LDR)	Rail Road, Single-family Residential
West	Industrial Light (IL) with Design Review Community (-DC) Combining Zone (-IL)	I (Industrial)	Undeveloped

Briefly describe the environmental setting: The topography of the project site area is primarily flat with elevation ranges from approximately 1370 feet to 1390 feet above mean sea level from southeast to northwest. The primary vegetation community of this site is classified as blue oak woodland and is covered with grasses, brush, and oak trees. The site contains rare plant habitat; however, none of the special-status plant species with the potential to occur were observed during the botanical survey on May 23, 2017. The subject property is at the

east side of Business Drive, within the Barnett Business Park in the Community Region of Shingle Springs area. Currently, the site is vacant and is accessed from Business Drive. Although habitat exists, no sensitive plant or animal species were found on site. The project site is located in Rare Plant Mitigation Area 1.

Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement)

1. Community Development Services: Planning and Building Department– Building Services (Building and Grading Permits)
2. El Dorado County Air Quality Management District (Building and Grading Permits)
3. El Dorado County Department of Transportation (Encroachment, Building, and Grading Permits)
4. El Dorado County Fire Department (Building and Grading Permits)
5. El Dorado Irrigation District (Building Permit, Water Meter)

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED


The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

	Aesthetics		Agriculture and Forestry Resources		Air Quality
X	Biological Resources		Cultural Resources		Geology / Soils
	Greenhouse Gas Emissions		Hazards & Hazardous Materials		Hydrology / Water Quality
	Land Use / Planning		Mineral Resources		Noise
	Population / Housing		Public Services		Recreation
	Transportation/Traffic		Tribal Cultural Resources		Utilities / Service Systems


DETERMINATION

On the basis of this initial evaluation:

- I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
- I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.
- I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect: 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards; and 2) has been addressed by Mitigation Measures based on the earlier analysis as described in attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects: a) have been analyzed adequately in an earlier EIR or **NEGATIVE DECLARATION**, pursuant to applicable standards; and b) have been avoided or mitigated pursuant to that earlier EIR or **NEGATIVE DECLARATION**, including revisions or Mitigation Measures that are imposed upon the proposed project, nothing further is required.

Signature:  Date: 8/1/19

Printed Name: Efren Sanchez, Associate Planner For: El Dorado County

Signature:  Date: 8/1/19

Printed Name: Rommel Pabalinas, Principal Planner For: El Dorado County

PROJECT DESCRIPTION

This Initial Study has been prepared in accordance with Section 15070 to 15075 of the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts resulting from the proposed project. The applicant is requesting a Design Review permit for the construction and operation of a new self-storage facility consisting of nine (9) new storage buildings, two employee-housing units, along with parking lot and associated site improvements such as landscaping, perimeter fencing, and on-site signs. Building one (1) would be approximately 13,200 square foot building with retail office space (2,700 SF) and storage (7,800 SF) on the ground level, and manager apartments on the second floor (2,700 SF). Buildings 2-9 would be approximately 8,700 square feet each and the total proposed building development for all nine buildings is approximately 82,800 square feet. The project site would also include 10,368 square feet of uncovered Recreational Vehicles (RV) storage space for a total of 30 RV's. Parking would include seven (7) parking spaces of which one will be a handicapped space, located near building 1 at the entrance of the self-storage facility (Attachment 1: Site Plan). The applicant will construct all on-site and off-site facility stub connections necessary to supply adequate water and sewer capacity required along Business Drive.

The subject property (Parcel 7) was created under Parcel Map 48-141, which was recorded on February 24, 2005 (Attachment 2: PM 48-141) based on the Barnett Business Park Tentative Parcel Map P99-0013. The recorded map also established individual building envelopes per parcel, intended to comply with the oak canopy retention standards under the previous General Plan Policy 7.4.4.4. (Option A) of the *Oak Woodlands Management Plan*. The project site has an existing building envelope of 73,494 square feet (SF) on a 314,198 SF or 7.213-acre parcel. The proposed project would revise the building envelope from 73,494 SF to 246,177 SF and mitigate the removal of the existing oak trees in accordance with the new *Oak Resources Management Plan (ORMP)* under *Chapter 130.39—Oak Resources Conservation* of the County Zoning Ordinance. The building envelope may be revised through a design review process as noted on Parcel Map 48/141 (Attachment 2: PM48-141).

The proposed project buildings will be of stucco wall finish with composition shingle roof. The stucco wall colors will blend with earth tone tan colors and the shingle roof will be of a neutral grey. Building one (1), a two-story building, will be the tallest building at the project site with a max height of 31-feet and situated parallel to business drive. The building pad elevation ranges from approximately 1384 to 1377 feet above sea level in a southeastern direction. The rest of the buildings at the project site will be of a lesser height (approximately 12 feet, 2 inches) as single-story buildings and the layout of these building will be perpendicular to business drive and screened from view behind building one (1). The project has been designed for consistency with the applicable development standards and zoning district standards. The buildings will conform to the prescribed setback and landscaping requirements.

The project site proposes to include a seven-foot chain-link perimeter fence with sliding gate that separates the parking lot from storage building number two (2) through nine (9). The landscaping plan illustrates what would be installed along the perimeter of the self-storage facility to provide additional vegetation screening. The landscape would include a variety of ornamental plants and preservation of some oak trees that already exists at the perimeter of the proposed development. The project site will include an irrigation drip lines to complement the proposed landscaping. The project will include a 40 square-foot monument sign, externally illuminated with up lighting near the entrance to the facility. The trash enclosure will be six-foot tall concrete masonry unit (CMU) wall with a painted metal gate at the front of the enclosure, located at the southwest corner of the project site.

Project Location and Surrounding Land Uses

As noted above, the property is located on the east side of Business Drive, approximately 0.63 miles south at the intersection with Durock Road in the Burnett Business Park Area of Shingle Springs. This site is in the Shingle Springs community region and is within an industrial district known as the Barnett Business Park. The surrounding land uses are undeveloped industrial zoned parcels to the west and south, residential development to the east, and undeveloped multifamily residential zoned parcel to the north. The Barnett Business Park has a variety of existing land uses such as business support services, manufacturing, tech, and RV storage. The proposed project's land use is compatible with the surrounding land uses of the Barnett Business Park.

Project Characteristics

1. Transportation/Circulation

The primary access to the site would be from a proposed full access encroachment onto Business Drive, a privately maintained road fronting the project site. The project would construct Type 2 vertical Curb and Gutter along the project frontage of the property to match the improvements to the northeast of the site. The primary public driveway entrance would be located at the southwest corner of the site. A new two-lane paved driveway extending from the southwest corner to the proposed encroachment would be constructed for emergency vehicle access. Access beyond the parking lot to the entire storage facility would be gated. The El Dorado County Department of Transportation (DOT) and the El Dorado County Fire Protection District has reviewed the proposed access and circulation for the project. The DOT analyzed the submitted On-site Transportation Review, which is a document prepared by a certified transportation engineer to analyze potential impacts to traffic based on the site configuration and proposed land use. Both DOT and El Dorado County Fire Protection District recommended conditions of approval, based on the submitted On-site Transportation Review. The applicant shall obtain approval of the final design of this driveway from the Department of Transportation prior to issuance of any building permit.

2. Parking

Pursuant to Section 130.35.030.1 of the El Dorado county ordinance code, the proposed development would require seven (7) parking spaces and that one of the seven be designated as an ADA compliant accessible space. As currently designed, the proposed project would meet the minimum required seven parking spaces. The parking lot will be located at the entrance of the project site in the southwest corner right before the sliding gate that gives access to the self-storage buildings two (2) through seven (7).

3. Site Improvements, Utilities and Infrastructure

The project site is currently vacant land with no water or sewer utilities. The El Dorado Irrigation District (EID) reviewed the project as part of a Facility Improvement Letter (FIL) and determined that the project would be required to obtain water and sewer service via connection to existing utilities in the area. An 8-inch water line exists in Business Drive and a 12-inch water line is located along the northern property line of the parcel. The minimum fire flow for this project will range from 1,625 GPM for three-hour duration while maintaining a 20-psi residual pressure. EID has determined that the existing system in the area can deliver the required fire flow necessary for sufficient fire suppression. In order to provide the 1,625 GPM fire flow, the applicant must construct a water line extension connecting to the existing 8-inch water line on Business Drive, which has the adequate capacity to serve the project. There is an 8-inch gravity sewer line located in Business Drive that has adequate capacity to serve the proposed project. The sewer line stub is located near the western corner of the parcel to be developed. There is an existing 4-inch sewer force main located in the easement along the northern property line of the parcel. The location of this force main will need to be potholed prior to approving any grading in the vicinity.

A preliminary grading and drainage report were submitted, documenting the project's impacts on potential water run-off and storm water discharge. The *Revised Preliminary Drainage Report for Leave It To Us Self-Storage 2018* (Attachment 3: Preliminary Drainage Report), was drafted to determine if the proposed building envelope modification would result in an impact to the drainage of the entire Burnett Business Park. The proposed envelope modification takes the current 1.7-acres of building envelope and expands it to 5.7-acres for the entire 7.2-acre site. The drainage in this area of the Barnett Business Park flows from the northeast, through the project site, to the southwest part of the Barnett Business Park, and into an existing detention pond located adjacent to the east of Shingle Lime Mine Road. The existing detention pond was prescribed by the *Barnett Business Park—Unit 2, Phase 2 Drainage Study of 2010*, and implemented the Detention Pond 1 as part of Parcel Map 48-141. The additional surfacing and post development of the project site will not affect the entire Barnett Business Park with a significant amount of

storm water runoff, as the detention pond was designed to store the run-off and keep discharge at or below pre-development levels.

The project's proposed construction and grading will involve cut and fill earthwork movement of the soil. As indicated in the grading plan (Attachment 4), grading of the site will involve 23,996 cubic yards (cy) of excavation (cut) and 21,473 cy of embankment (fill). This earthwork movement accounts for 10% shrinkage loss, which is estimated at 2,400 cy and would result in 21,596 total cut. The estimated difference between the total fill and cut is approximately 125 cy. This earthwork movement of the soil would occur to prepare and establish building pads, drainage, and utilities for the proposed facility. Consequently, the earthwork would also involve the removal of the project site's vegetation and oak trees as analyzed in section IV—Biological Resources of this Initial Study: Mitigated Negative Declaration.

The County Department of Transportation reviewed and provided comments to the preliminary grading and drainage report. A final complete drainage plan and detailed report will be submitted with the project's improvements during building permits to confirm the recommended plan for grading and drainage. Dry utilities such as power and phone would be extended from existing development from neighboring properties.

4. Construction Considerations

Construction of the project would consist of on-site road encroachment, sidewalks, grading improvements; utility trenching and drainage system installation; erosion control measures; construction of facility structures, parking lot paving, landscaping, and associated improvements. Construction of all nine buildings and pavements of parking facilities would take place following compliance with all conditions of approval. The construction of the self-storage development is anticipated to occur simultaneously and will not be phased.

Project Schedule and Approvals

This Initial Study is being circulated for public and agency review for a 30-day period. Written comments on the Initial Study should be submitted to the project planner indicated in the summary section, above. Following the close of the written comment period, the Initial Study will be considered by the Lead Agency in a public meeting and will be certified if it is determined to be in compliance with CEQA. The Lead Agency will also determine whether to approve the project.

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. If the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is a fair argument that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of Mitigation Measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the Mitigation Measures, and briefly explain how they reduce the effect to a less than significant level.
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:
 - a. Earlier Analysis Used. Identify and state where they are available for review.
 - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c. Mitigation Measures. For effects that are "Less Than Significant with Mitigation Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
 - d. Setting: CEQA Guidelines Section 15125—*Environmental Setting* states that, "Generally, the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective." This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The proposed development under application DR16-0001 was submitted on February 22, 2016 and the application was deemed complete by County of El Dorado Planning Staff on March 22, 2016. Environmental analysis therefore commenced on March 22, 2016, establishing the environmental baseline. For this project, with respect to biological resources, the baseline is as documented in the 2016 and 2017 reports in support of the application DR16-0001.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
 - a. the significance criteria or threshold, if any, used to evaluate each question; and
 - b. the mitigation measure identified, if any, to reduce the impact to less than significant.

ENVIRONMENTAL IMPACTS

I. AESTHETICS. <i>Would the project:</i>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?			X	
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c. Substantially degrade the existing visual character quality of the site and its surroundings?			X	
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

Discussion

A substantial adverse effect to Visual Resources would result in the introduction of physical features that are not characteristic of the surrounding development, substantially change the natural landscape, or obstruct an identified public scenic vista.

CEQA Checklist Questions

- a. **Scenic Vista:** The project site is located in a partially developed business park surrounded by industrial commercial land, residential development, and undeveloped multi-family residential land. No scenic vistas, as designated by the county General Plan EIR are located near the site (El Dorado County, 2003, p. 5.3-3 through 5.3-5). While the project is near US Highway 50, it is not visible from the roadway and is west of the State Scenic Highway designated portion. The project site would not be visible from any other identified public scenic vista; therefore, the proposed project would have a less than significant impact on scenic vistas.
- b. **Scenic Resources:** The project site is not visible from an officially designated State Scenic Highway or county-designated scenic highway, or any roadway that is part of a corridor protection program (Caltrans, 2013). There are no views of the site from public parks or scenic vistas. There are no historic buildings in the project vicinity that are identified by the County, as contributing to exceptional aesthetic value at the project site. Impacts would be less than significant.
- c. **Visual Character:** The project would change the existing visual character from vacant land to developed commercial land with associated buildings, parking, landscaping, signage, and lighting. This change would result in a less than significant change in visual character as seen from surrounded commercial, residential, and vacant lots. The neighboring parcels would no longer have unimproved views across the oak woodland vacant site. Nevertheless, the El Dorado County General Plan and Zoning Ordinance have designated this land as industrial, which future development was previously anticipated when the property was designated for industrial use. A self-storage facility on the 7.2-acre property is proposed for the project site, which is an allowed zoning use and consistent with its industrial land use designation. The potential impacts related to loss of oak woodland have already been analyzed in both the Tentative Parcel Map P99-0013 project and the *Draft Biological Resources Policy Update and Oak Resources Management Plan Environmental Impact Report (2016)* document (available for review online at

<https://www.edcgov.us/government/longrangeplanning/environmental/biopolicydeirjune2016/documents/Bio-Policy-DEIR-June-2016-Ch-1-thru-13.pdf>). For instance, the EIR for the Oak Resources Management Plan specifies that properties, which currently support oak woodland habitats within Community Regions such as Shingle Springs are projected for development under both 2025 and 2035 scenarios. The expected development in El Dorado County through 2025 would result in a conversion of a maximum of 4,071 acres from oak woodland to developed land uses. Development through 2035 would result in a conversion of an additional 2,433 acres of oak woodland to developed land uses. The conversion of oak woodland to development would primarily affect the County-identified scenic resources and scenic vistas in a given community by decreasing the prevalence of natural habitat and resources, and increasing the presence of built environment and ornamental landscaping elements. This project site is neither a scenic resource or scenic vista. The visual impact of removing 0.50 acres of oak woodland from the project site was previously accounted for through the approval of the Barnett Business Park Tentative Map P99-0013. The remaining acreage of oak woodland (4.47-acres of proposed removal) will be mitigated by adhering to *Title 130, Article 3 Chapter 130.39—Oak Resources Conservation*, as indicated in the Biological Resources section of this Initial Study Mitigated Negative Declaration document.

Design elements have been incorporated into the project to soften views of the project from surrounding residential properties, and to ensure that the project is consistent with surrounding industrial commercial development. The 100-foot wide non-building buffer from the eastern property line will remain in effect from Parcel Map 48/141 and perimeter landscaping will help soften the project's aesthetics from the adjacent residential development. These design elements include landscaping and building elevations that use colors and hues consistent with surrounding residential and commercial development. The project perimeter landscape will include trees such as Interior Live Oaks, Dynamite Crape Myrtles, Oklahoma Redbud, Deodar Cedar, and Incense Cedar (Attachment 5). Thus, existing residents to the east and future residents to the north would not be looking at flat, unarticulated walls devoid of character or landscaping.

The proposed project would not be anticipated to significantly degrade the visual character or quality of the site and its surroundings in ways not anticipated for lands designated by the General Plan for industrial land uses. The project site is designated with a Design Community (-DC) combing overlay zone to ensure architectural supervision and consistency with the community design guidelines and standards. The project design, through incorporation of architectural features and styling, proposed construction materials, and colors of the physical elements, were analyzed for consistency. The project was determined to be substantially consistent with the Community Design Standards, and was reviewed for consistency with General Plan Policies as well as substantial conformance. The project impacts would be less than significant with proposed design and conditions.

- d. **Light and Glare:** The lighting associated with industrial development on this site would create new sources of light and glare that would have an impact on residential development to the east. Based on the submitted lighting and photometric plan (Attachment 6: Lighting Plan), the project proposes exterior lighting that does not exceed the maximum lumen output allowed. As it relates to changing the character of this parcel from vacant land that generates no light to a lighted industrial parcel, which is similar to existing industrial development in the Burnett Business Park Area. Future outdoor lighting for new development is required conformance to Section 130.34 of the El Dorado County Zoning Ordinance and be fully shielded pursuant to the Illumination Engineering Society of Northern America's (IESNA) full cut-off designation. This ordinance requires that no light spills over onto adjacent properties as demonstrated by a photometric study that would be reviewed for compliance during the building permit process. The impacts would be less than significant.

Finding: The proposed project has the potential to result in the construction of 82,800 square feet of industrial/commercial/residential development consisting of buildings, landscape, lighting, and parking. This development is entirely consistent with the character of surrounding industrial development within the Barnett Ranch Business Park. Although, the proposed project would result in a change in the current character of the property, the property is designated and zoned for the proposed use and has incorporated design features to ensure compatibility with surrounding industrial development and soften impacts to surrounding residential development. For the "Aesthetics" category, the thresholds of significance have not been exceeded. As conditioned and with adherence to El Dorado County Code of Ordinances (County Code), applicable General Plan Policies, and the Community Design Standards, no significant environmental impacts to aesthetics would be anticipated to result from the project.

II. AGRICULTURE AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by California Department of forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Locally Important Farmland (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b. Conflict with existing zoning for agricultural use, or a Williamson Act Contract?				X
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d. Result in the loss of forest land or conversion of forest land to non-forest use?				X
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

Discussion

A substantial adverse effect to Agricultural Resources would occur if:

- There is a conversion of choice agricultural land to non-agricultural uses, or impairment of the agricultural productivity of agricultural land;
- The amount of agricultural land in the County is substantially reduced; or
- Agricultural uses are subjected to impacts from adjacent incompatible land uses.

CEQA Checklist Questions

- a. **Conversion of Prime Farmland.** The proposed project would not convert any prime farmland, unique farmland, farmland of statewide importance, or locally important farmland to non-agricultural use. The El Dorado County Resource Conservation District has reviewed the project and did not identify important Agricultural Preserves or Districts within the project area. This property is located within a community region, business park, and is designated and zoned for the proposed use. There would be no impact.

- b. **Williamson Act Contract.** The project site is not currently under Williamson Act Contract, nor would the site qualify for a contract under the Williamson Act. There are no agricultural activities within the vicinity of the project site, nor are any lands in the vicinity of the project designated or zoned for agricultural. There would be no impact.
- c-d. **Non-agricultural Use or Conversion of Forest Land.** This project is located in an area designated for industrial uses. There are no agricultural opportunities available in close proximity to the project site which may be impacted by development of the proposed property. The site is not designed as Timberland Preserve Zone (TPZ) or other forestland according to the General Plan and Zoning Ordinance. As such, there would be no impact.
- e. **Conversion of Prime Farmland or Forest Land:** The project is not within an agricultural district or located on forest land and would not convert farmland or forest land to non-agriculture use. There would be no impact.

Findings: No impacts to agricultural land are expected and no mitigation is required. For this “Agriculture” category, there would be no impact.

III. AIR QUALITY. <i>Would the project:</i>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?			X	
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d. Expose sensitive receptors to substantial pollutant concentrations?			X	
e. Create objectionable odors affecting a substantial number of people?			X	

Regulatory Setting:

Federal Laws, Regulations, and Policies

The Clean Air Act is implemented by the U.S. Environmental Protection Agency (USEPA) and sets ambient air limits, the National Ambient Air Quality Standards (NAAQS), for six criteria pollutants: particulate matter of aerodynamic radius of 10 micrometers or less (PM10), particulate matter of aerodynamic radius of 2.5 micrometers or less (PM2.5), carbon monoxide (CO), nitrogen dioxide (NO2), ground-level ozone, and lead. Of these criteria pollutants, particulate matter and ground-level ozone pose the greatest threats to human health.

State Laws, Regulations, and Policies

The California Air Resources Board (CARB) sets standards for criteria pollutants in California that are more stringent than the NAAQS and include the following additional contaminants: visibility-reducing particles, hydrogen sulfide, sulfates, and vinyl chloride. The proposed project is located within the Mountain Counties Air Basin, which is comprised of seven air districts: the Northern Sierra Air Quality Management District (AQMD), Placer County Air Pollution Control District (APCD), Amador County APCD, Calaveras County APCD, the Tuolumne County APCD, the Mariposa County APCD, and a portion of the El Dorado County AQMD, which consists of the western portion of El Dorado County. The El Dorado County Air Pollution Control District manages air quality for attainment and permitting purposes within the west slope portion of El Dorado County.

USEPA and CARB regulate various stationary sources, area sources, and mobile sources. USEPA has regulations involving performance standards for specific sources that may release toxic air contaminants (TACs), known as hazardous air pollutants (HAPs) at the federal level. In addition, USEPA has regulations involving emission criteria for off-road sources such as emergency generators, construction equipment, and vehicles. CARB is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB also establishes passenger vehicle fuel specifications.

USEPA and CARB designate regions as “attainment” (within standards) or “nonattainment” (exceeds standards) based on their respective ambient air quality standards. The County is in nonattainment of both federal and state ozone standards and

for the state PM10 standard, and is in attainment or unclassified status for other pollutants (California Air Resources Board 2017).

Local Laws, Regulations, and Policies

The El Dorado County Air Quality Management District (EDCAQMD) is responsible for developing and administering programs to reduce air pollution levels below the health-based ambient air quality standards established by the state and federal governments. EDCAQMD is responsible for enforcing district rules, regulating stationary source emissions, approving permits, maintaining emissions inventories, issuing burn permits, administering grant programs, and reviewing air quality-related sections of environmental documents required to comply with CEQA. EDCAQMD regulates air quality through the federal and state Clean Air Acts, district rules, and its permit authority.

EDCAQMD has developed a Guide to Air Quality Assessment (2002) to evaluate project specific impacts and help determine if air quality mitigation measures are needed, or if potentially significant impacts could result. The Guide provides quantitative and qualitative significance criteria for both construction and operational emissions from a project.

A project would have a significant impact on air quality if quantified emissions exceed the following:

- Emissions of ROG and NO_x will result in construction or operation emissions greater than 82lbs/day
- Emissions of PM₁₀, CO, SO₂ and NO_x, as a result of construction or operation emissions, will result in ambient pollutant concentrations in excess of the applicable National or State Ambient Air Quality Standard (AAQS). Special standards for ozone, CO, and visibility apply in the Lake Tahoe Air Basin portion of the County; or
- Emissions of toxic air contaminants cause cancer risk greater than 1 in 1 million (10 in 1 million if best available control technology for toxics is used) or a non-cancer Hazard Index greater than 1. In addition, the project must demonstrate compliance with all applicable District, State and U.S. EPA regulations governing toxic and hazardous emissions.

A project would have a significant impact on air quality if a qualitative analysis indicates:

- The project triggers any of the air quality significance criteria in Appendix G of the CEQA Guidelines.
- The project results in excessive odors, as defined under the Health & Safety Code definition of an air quality nuisance.
- The project results in land use conflicts with sensitive receptors, such as schools, elderly housing, hospitals or clinics, etc.
- The project, as proposed, is not in compliance with all applicable District rules and regulations.
- The project does not comply with U.S. EPA general and transportation “conformity” regulations.

A project would have a cumulatively significant impact if:

- The project requires a change in the land use designation (e.g., general plan amendment or rezone) that increases ROG and NO_x emissions compared to the prior approved use, and the increase in emissions exceeds the “project alone” significance levels shown above for ROG or NO_x.
- Project CO emissions, if combined with CO emissions from other nearby projects, result in a “hotspot” that violates a state or national AAQS.
- The project is primarily an industrial project and a modeling analysis indicates that the project’s impacts would exceed Class III Prevention of Significant Deterioration (PSD) increments (Class II in Lake Tahoe) for PM₁₀, SO₂, or NO₂; or, the project is primarily a development project, and the emissions of ROG, NO_x, or CO exceed the “project alone” significance criteria for those three pollutants noted above.
- The project causes the risk analysis criteria above for “project alone” Toxic Air Contaminants (TACs) to be exceeded when project emissions of TACs are considered in conjunction with TACs from other nearby projects.

For Fugitive dust (PM10), if dust suppression measures will prevent visible emissions beyond the boundaries of the project, further calculations to determine PM emissions are not necessary. All proposed development must comply with District Rule 223-1 Fugitive Dust.

Naturally occurring asbestos (NOA) is also a concern in El Dorado County because it is known to be present in certain soils and can pose a health risk if released into the air. The AQMD has adopted an El Dorado County Naturally Occurring Asbestos Review Area Map that identifies those areas more likely to contain NOA (El Dorado County 2005). All proposed development in a NOA area must comply with District Rule 223-2 Fugitive Dust – Asbestos Hazard Mitigation.

Discussion: The El Dorado County Air Pollution Control District (APCD) has developed a Guide to Air Quality Assessment to evaluate project specific impacts and help determine if air quality mitigation measures are needed, or if potentially significant impacts could result.

CEQA Checklist Questions

- a. **Air Quality Plan:** El Dorado County has adopted the Rules and Regulations of the El Dorado County Air Quality Management District (2000) establishing rules and standards for the reduction of stationary source air pollutants (ROG/VOC, NOx, and O3). The project does not trip thresholds except for Reactive Organic Gases (ROG) also known as Volatile Organic Compounds (VOC). The ROG impact is almost exclusively coming from the paint used in the construction phase. Correspondence with El Dorado County Air Quality Management District (AQMD) identifies that standard conditions and the condition to paint with low VOC paints (50 g/l VOC content or less) would bring thresholds of ROG and VOC to a less than significant level. AQMD ran emission models and made the determination that no additional Air Quality analysis will be required (Attachment 7: Air Quality Analysis). The EDC/State Clean Air Act Plan has set a schedule for implementing and funding transportation contract measures to limit mobile source emissions. The project would not conflict with or obstruct implementation of either plan. Roadway improvements will require an encroachment permit and grading permit and will undergo review to determine if any further actions or approvals are needed, including any measures for sediment control. Any activities associated with future plans for grading and construction would require a Fugitive Dust Mitigation Plan (FDMP) for grading and construction activities. Such a plan would address grading measures and operation of equipment to minimize and reduce the level of defined particulate matter exposure and/or emissions to a less than significant level. Therefore, the potential impacts of the project would be anticipated to be less than significant.
- b-c. **Air Quality Standards and Cumulative Impacts:** Minor roadway improvements and industrial/commercial building construction are proposed as part of the project. Although this would contribute air pollutants due to construction and possible additional vehicle trips to and from the site, these impacts would be minimal. Existing regulations implemented at issuance of building and grading permits would ensure that any construction related PM10 dust emissions would be reduced to acceptable levels. The El Dorado County AQMD reviewed the application material for this project and determined that by implementing typical conditions including Rule 215 (Architectural Coating) and 501 and 523 (New Paint Source), which are included in the list of recommended conditions, the project would have a less than significant impact. The conditions would be implemented, reviewed, and approved by the AQMD prior to and concurrently with any grading, improvement, or building permit approvals. With full review for consistency with General Plan Policies, impacts would be anticipated to be less than significant.
- d. **Sensitive Receptors:** The CEQA Guidelines identify sensitive receptors as facilities that house or attract children, the elderly, people with illnesses, or others that are especially sensitive to the effects of air pollutants. Hospitals, schools, and convalescent hospitals are examples of sensitive receptors. Near the project, there are no nearby sensitive receptors. No sources of substantial pollutant concentrations will be emitted by the commercial development, during construction or following construction. There would be no impact.
- e. **Objectionable Odors:** Table 3-1 of the Guide to Air Quality Assessment (AQMD, 2002) does not list the proposed use of the parcels as a use known to create objectionable odors. The self-storage facility is not anticipated generate or produce objectionable odors as it would create nine new buildings that would enclose items typically associated with residential storage. Impacts would be less than significant.

FINDING: The proposed project would not affect the implementation of regional air quality regulations or management plans. The proposed project would not be anticipated to cause substantial adverse effects to air quality, nor exceed established significance thresholds for air quality impacts with standard conditions of approval.

IV. BIOLOGICAL RESOURCES. <i>Would the project:</i>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			X	
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

Data Source/Methodology

The following analysis of Biological Resources information is sourced directly from technical documents prepared for the proposed project. The technical documents used to evaluate Biological Resources include a Botanical Survey (Sycamore Environmental Consultants, Inc. 2017), a Botanical Resources Survey and Special-Status Wildlife Species Report (Foothill Tree Service 2016), and a Special-Status Wildlife Species Report (Foothill Tree Service 2015). These reports are incorporated by reference and appended to this document.

Regulatory Framework Related to Biological Resources

El Dorado County regulates urban development through standard construction conditions and through mitigation, building, and construction requirements set forth in the County’s Municipal Code. Required of all projects constructed throughout the County, compliance with the requirements of the County’s standard conditions and the provisions of the Municipal Code avoids or reduces many potential environmental effects.

State and Federal Endangered Species Acts

Special status species are protected by state and federal laws. The California Endangered Species Act (CESA; California Fish and Game Code Sections 2050 to 2097) protects species listed as threatened and endangered under CESA from harm or

harassment. This law is similar to the Federal Endangered Species Act of 1973 (FESA; 16 USC 1531 et seq.) which protects federally threatened or endangered species (50 CFR 17.11, and 17.12; listed species) from take. For both laws, take of the protected species may be allowed through consultation with and issuance of a permit by the agency with jurisdiction over the protected species.

California Code of Regulations and California Fish and Game Code

The official listing of endangered and threatened animals and plants is contained in the California Code of Regulations Title 14 § 670.5. A state candidate species is one that the California Fish and Game Code has formally noticed as being under review by the California Department of Fish and Wildlife (CDFW) for inclusion on the state list pursuant to Sections 2074.2 and 2075.5 of the California Fish and Game Code. CDFW also designates Species of Special Concern that are not currently listed or candidate species.

Legal protection is also provided for wildlife species in California that are identified as “fully protected animals.” These species are protected under Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fishes) of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species at any time. The CDFW is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by these species. The CDFW has informed non-federal agencies and private parties that they must avoid take of any fully protected species. However, Senate Bill (SB) 618 (2011) allows the CDFW to issue permits authorizing the incidental take of fully protected species under the CESA, so long as any such take authorization is issued in conjunction with the approval of a Natural Community Conservation Plan that covers the fully protected species (California Fish and Game Code Section 2835).

California Native Plant Protection Act

The California Native Plant Protection Act of 1977 (California Fish and Game Code Sections 1900 to 1913) requires all state agencies to use their authority to implement programs to conserve endangered and otherwise rare species of native plants. Provisions of the act prohibit the taking of listed plants from the wild and require notification of CDFW at least 10 days in advance of any change in land use other than changing from one agricultural use to another, which allows CDFW to salvage listed plants that would otherwise be destroyed.

Nesting and Migratory Birds

Nesting birds are protected by state and federal laws. California Fish and Game Code (§3503, 3503.5, and 3800) prohibits the possession, incidental take, or needless destruction of any bird nests or eggs; Fish and Game Code §3511 designates certain bird species “fully protected” (including all raptors), making it unlawful to take, possess, or destroy these species except under issuance of a specific permit. Under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USF §703-711), migratory bird species and their nests and eggs that are on the federal list (50 CFR §10.13) are protected from injury or death, and project-related disturbance must be reduced or eliminated during the nesting cycle.

Jurisdictional Waters

Any person, firm, or agency planning to alter or work in “waters of the U.S.,” including the discharge of dredged or fill material, must first obtain authorization from the US Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA). Section 401 requires an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. must obtain a state certification that the discharge complies with other provisions of the CWA. The Regional Water Quality Control Board (RWQCB) administers the certification program in California. The RWQCB also regulates discharges of pollutants or dredged or fill material to waters of the State which is a broader definition than waters of the U.S.

California Fish and Game Code Section 1602 – Lake and Streambed Alteration Program

Diversions or obstructions of the natural flow of, or substantial changes or use of material from the bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW, pursuant to Section 1602 of the California Fish and Game Code. The CDFW requires notification prior to commencement of any such

activities, and a Lake and Streambed Alteration Agreement (SAA) pursuant to Fish and Game Code Sections 1601-1603, if the activity may substantially adversely affect an existing fish and wildlife resource.

El Dorado County Oak Resources Conservation Ordinance No. 5061

El Dorado County adopted an oak resources conservation ordinance on October 24, 2017 to implement the County's Oak Resources Management Plan in compliance with General Plan Policy 7.4.4.4. With the exception of exempt activities listed in Section 130.39.050 of the ordinance, the requirements of this ordinance apply to both ministerial and discretionary development resulting in impacts to oak resources. For this ordinance, oak resources include oak woodlands, individual native oak trees, and heritage trees, collectively and are further defined in section 130.39.030 of this ordinance. An Oak Tree and/or Oak Woodland Removal Permit shall be a component of all discretionary projects and all nonexempt ministerial development activities with impacts to oak resources.

Methods

Sycamore Environmental completed a protocol botanical survey for APN 109-480-07 on Business Drive, El Dorado County on May 23, 2017. The survey was conducted by a qualified botanist at a time when all special-status plants with potential to occur would be expected to be evident and identifiable. The purpose of the study was to document the presence or absence of special-status plant species. The area where Layne's butterweed (*Packera layneae*) was documented on the site in 2009 was thoroughly searched. The area where 36 Layne's butterweed plants were documented in 2009 was thoroughly searched during the May 23, 2017 survey and no Layne's butterweed plants were found.

Project Setting

APN 109-480-07 (the site) is located south of Highway 50 in the community of Shingle Springs. The site is undeveloped. The site is bound by Business Drive to the northwest, an unpaved road and undeveloped land to the northeast, railroad tracks to the southeast, and undeveloped land to the southwest. The General Plan land use designation and zoning for the parcel are both Industrial. The General Plan land use designations for the surrounding APNs are multi-family residential (to the northeast), medium density residential (to the southeast), and industrial (the railroad to the southwest and northwest).

The site is in a region where oak woodlands and chaparral vegetation predominate. Vegetation on the site is blue oak woodland (Sycamore Environmental Consultants, Inc. 2017). The County has designated "rare plant mitigation areas" to protect and mitigate for a group of special-status plants known collectively as the "Pine Hill Plants." The project site is in County rare plant Mitigation Area 1, which is defined as the rare plant soils study area. Soils included in the gabbro soils classification support the growth of pine hill endemic special status plant species. Botanical studies are required to be completed during the blooming period of March 15 to August 15 to best identify special status species. The presence of species may vary from year to year and during blooming period. The gabbro soils that provide potential habitat for the Pine Hill Plants occur on the project site.

The site provides suitable habitat for 14 special-status plant species; however, none of the special-status plant species with potential to occur were observed during the protocol botanical survey on May 23, 2017 (Sycamore Environmental Consultants, Inc. 2017) or during an earlier biological survey on July 2, 2015 (Foothill Tree Service 2016). Layne's butterweed (*Packera layneae*) is known to have occurred on the site in 2009 (Sycamore Environmental Consultants, Inc. 2017). As described in the 2017 botanical survey report, 36 Layne's butterweed plants were observed in the eastern portion of the site in 2009. The 2009 survey (Attachment 9) was conducted for a different owner, in support of a separate development project that did not proceed. These plants are no longer present based on the botanical surveys in 2015 and 2017.

CEQA Guideline Section 15125—*Environmental Setting* states that, "Generally, the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant..." The proposed development under application DR16-0001 was submitted on February 22, 2016 and the application was deemed complete by County of El Dorado Planning Staff on March 22, 2016. Environmental analysis

therefore commenced on March 22, 2016, establishing the environmental baseline. For this project, with respect to biological resources, the baseline is as documented in the 2016 and 2017 reports in support of the application DR16-0001.

Special-Status Plants

The project site is located in an area defined as a Rare Plant Mitigation Area 1. Sycamore Environmental conducted a special status plant survey for the site on May 23, 2017. The report identified special-status species that had the potential to exist onsite and targeted those species during the onsite survey. The survey did not identify any special-status species on the project site.

Discussion: A substantial adverse effect on Biological Resources would occur if the implementation of the project would:

- Substantially reduce or diminish habitat for native fish, wildlife or plants;
- Cause a fish or wildlife population to drop below self-sustaining levels;
- Threaten to eliminate a native plant or animal community;
- Reduce the number or restrict the range of a rare or endangered plant or animal;
- Substantially affect a rare or endangered species of animal or plant or the habitat of the species; or
- Interfere substantially with the movement of any resident or migratory fish or wildlife species.

CEQA Checklist Questions

- a. **Special Status Species:** A review of the County Geographic Information System (GIS) soil data demonstrates the project is Rescue and Argonaut soils, which are similar soils derived from gabbro parent material that have the potential to support special-status species rare plants. The project site is located in an area defined as a Rare Plant Mitigation Area 1. The project applicant would be required to pay the Mitigation Fee as required by Section 130.71 of the Zoning Ordinance prior to building permit final inspection or certificate of occupancy.

Sycamore Environmental conducted a special-status plant survey for the site on May 23, 2017 (Sycamore Environmental Consultants, Inc. 2017; Attachment 8). Their report identified 14 special-status species with the potential to occur onsite. The survey was conducted at a time of year when all special-status species with potential to occur would be evident and identifiable. All plants encountered during the survey were identified to the taxonomic level necessary to determine rarity and listing status. The 2017 survey did not identify any special-status plant species on the project site. A botanical survey was also conducted on July 2, 2015 (Foothill Tree Service 2016; Attachment 10). The 2015 survey did not identify any special-status plants species on the project site.

Biological field surveys were conducted on July 16 and July 18, 2015 (Foothill Tree Service 2016: Attachment 11). The biological survey was conducted to determine the presence or absence of special-status species or special habitats on the site, and to evaluate the project's potential impacts on these species and habitats. The survey included an inventory of wildlife species observed on the parcel. No aquatic resources such as ephemeral streams were observed during the survey. Four special-status wildlife species were identified as occurring near the project area. These species were all considered unlikely to occur on the parcel. No special-status wildlife species were found during the survey. No special-status wildlife species such as birds listed under the Migratory Bird Treaty Act (MBTA) and/or regulated by the California Fish and Game Code were observed on the site. Birds may nest in trees, shrubs, or on the ground within the project site. The nests of raptors and most other birds are protected under the MBTA. Raptors are also protected by Section 3503.5 of the California Fish and Game Code, which makes it illegal to destroy any active raptor nest. Additionally, the USFWS and CDFW identified a number of avian species of conservation concern that do not have specific statutory protection. Avian species forage and nest in a variety of habitats throughout El Dorado County. While the trees and vegetation on and surrounding the site may provide nesting and foraging habitat for raptors and other protected birds, according to a records search and a biological field survey conducted on July 15, 2015, no active bird nests were observed on the site. A pre-construction survey as a mitigation measure (listed below) would help decrease and avoid any impacts to special-status wildlife bird species to a **less than significant level**.

Mitigation Measure BIO-1: If any grading or construction activities occur during the nesting season (February 15 to August 31), a preconstruction survey for the presence of special-status bird species or any nesting bird species shall be conducted by a qualified biologist within 500 feet of proposed construction areas, no more than three days prior to construction activities. The survey shall be submitted to Planning Services for review. If active nests are identified in these areas, CDFW and/or USFWS shall be consulted to develop measures to avoid “take” of active nests prior to the initiation of any construction activities. Avoidance measures may include establishment of a 40-foot, fenced buffer zone using construction fencing or the postponement of vegetation removal until after the nesting season, or until after a qualified biologist has determined the young have fledged and are independent of the nest site.

Monitoring Requirement: The applicant shall conduct all construction activities outside the nesting season or perform a pre-construction survey and the necessary avoidance measures prior to initiation of construction activities. This mitigation measure shall be noted on future grading and residential construction plans. If a pre-construction survey is required, the applicant shall provide evidence of the survey with the Planning and Building Department to verify prior to issuance of grading permit.

Monitoring Responsibility: El Dorado County Planning and Building Department Planning Services

The County of El Dorado Zoning Ordinance Title 130, Article 7 Chapter 130.71—Ecological Preserve Fee, requires payment of the Rare Plant Mitigation Area 1 fee. The mitigation measure for disturbance of rare plant habitat is the same for either the presence or absence of special-status plant species on the project site. The disturbance of rare plant habitat can be mitigated by paying the standard rare plant mitigation fee. The current fee for commercial and industrial development in Mitigation Area 1 is \$0.59 per square foot. With the payment of the fee, impacts to rare plants will decrease. Also, as a conservative precaution, a pre-construction survey as a mitigation measure (listed below) would help decrease and avoid any impacts to rare plants habitat to a **less than significant level**.

Mitigation Measure BIO-2: A qualified biologist shall conduct a pre-construction survey within 14 days prior to clearing or grading operations to look for potential Layne’s butterweed (*Packera Layneae*) plants or other rare plants species. If no Layne’s butterweed plants or rare plants are observed, a letter report shall be prepared to document the results of the survey, and no additional measures are recommended. If Layne’s butterweed plants or rare plants are present, then the applicant shall coordinate with the Pine Hill Ecological Preserve Manager and staff to facilitate collection of seeds and plants on site. The collected material shall be transplanted under the discretion of the Pine Hill Ecological Preserve Manager or a qualified professional to the Pine Hill Ecological Preserve land.

Monitoring Requirement: Planning Services shall verify the completion of the requirement prior to the issuance of grading and building permits in coordination with the applicant and Pine Hill Ecological Preserve Manager.

Monitoring Responsibility: El Dorado County Planning and Building Department, Planning Services.

- b. **Riparian Habitat and Other Sensitive Natural Communities:** No riparian habitat, waters, or wetlands were observed on the parcel during the botanical and biological surveys conducted in 2015 and 2017. There is no aquatic habitat on the site to support amphibians or fish. Vegetation on the site consists of blue oak woodland. The County

regulates oak canopy removal, as described below in the *Local Policies* section. With implementation of the In-lieu Fee payment for removal of oak canopy, impacts to sensitive natural community would be less than significant.

- c. **Federally Protected Wetlands:** No riparian habitat, waters, or wetlands were observed on the parcel during the botanical and biological surveys conducted in 2015 and 2017. There are no waters or wetlands shown on the USGS quad map or the USFWS National Wetlands Inventory map. No waters or wetlands are visible on aerial or ground level photographs. No federally protected wetlands or waters regulated under Section 404 of the Clean Water Act occur on the site. The Project will have no impact on protected wetlands and waters.
- d. **Migration Corridors:** Migratory Deer Herd Habitats occur within some areas of El Dorado County. The project site does not include, nor is it adjacent to any migratory deer herd habitats as shown in the El Dorado County General Plan. This project site is located in an urbanized area, adjacent to roadways, industrial/commercial, and residential development. Wildlife does not generally have access to this area given the project site is within an established business park, and thus it is devoid of wildlife corridors. As such, impacts to wildlife corridors is considered to be less than significant.
- e. **Local Policies:** Local protection of biological resources includes oak woodland preservation, rare plants and special-status species, and wetland preservation with the goal to preserve and protect sensitive natural resources within the County. The biological resource report for this project reveals that the natural community at the site contains 4.82 acres of Oak Woodland canopy, and that the Project will remove 92.7% of the canopy (4.47 acres).

California Tree and Landscape Consulting, Inc. prepared an Arborist Report for Oak Woodland Resources dated February 14, 2018 (Attachment 10) that demonstrates project consistency with the Oak Resources Conservation Ordinance 5061 and the County's Oak Resources Management Plan (ORMP) adopted October 24, 2017, which regulates removal of individual oak woodlands and oak canopy. The total impacted oak woodland area that requires mitigation is 3.97 acres (4.47 acres minus 0.50), because 0.50 acres of oak woodland area has been pre-mitigated with the implementation of Parcel Map 48/141 (Attachment 2). The total Oak Woodland disturbance mitigation fee requires mitigation is 3.97 acres x 2 = 7.94 total acres required for Oak Mitigation. The 7.94 acres will require mitigation at the cost of \$8,285.00 per acre, for a total mitigation fee of \$65,782.90.

Additionally, there is one Heritage Tree with a 39-inch diameter Blue Oak that meets the definition of a Heritage Tree, which was found to be in fair condition and is proposed to be removed. The mitigation fee for Heritage trees is \$459 per diameter inch. The mitigation fee for this tree is \$17,901.00.

The total mitigation fee required for the proposed oak woodland disturbance and Heritage Tree on the site is **\$83,683.90**. With the implementation of the prescribed Conditions of Approval, the impacts would be less than significant. The project would be subject to ORMP and compliance with the ORMP program will be applied as a Condition of Approval.

- f. **Adopted Plans:** This project would not conflict with the provisions of an adopted Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The Project's mitigation for impacts to oak resources is in accordance with the El Dorado County Oak Resources Conservation Ordinance No. 5061. Protected and sensitive and natural resources/areas within El Dorado County include: Recovery Plan Area for California Red-legged Frog, Pine Hill Preserve, Migratory Deer Herd Habitats and Sensitive Terrestrial Communities as listed in the California Natural Diversity Database. The project site does not include, nor is it adjacent to any of these Protected and Sensitive Natural Habitat areas. There would be no impact.

FINDING: No jurisdictional wetland or riparian areas are present at the project site. There are no special-status plants or wildlife species detected at the project site. This project would be anticipated to have less than significant impact on Biological Resources with the proposed mitigation measure for special status species. The project is subject to applicable conditions of approval.

V. CULTURAL RESOURCES. Would the project:					
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact	
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?			X		
b. Cause a substantial adverse change in the significance of archaeological resource pursuant to Section 15064.5?			X		
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X		
d. Disturb any human remains, including those interred outside of formal cemeteries?			X		

Data Source/Methodology:

The following analysis of cultural resources information is taken directly from technical documents prepared for the proposed project. The technical documents used to evaluate cultural resources include a cultural resources records search performed at the North Central Information Center (2015). The record search conducted looked at maps for cultural resource records and survey reports in El Dorado County within a 1/8-mile radius of the proposed project area.

Regulatory Setting

Federal Laws, Regulations, and Policies

The National Register of Historic Places

The National Register of Historic Places (NRHP) is the nation’s master inventory of known historic resources. The NRHP is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. The criteria for listing in the NRHP include resources that:

- A. Are associated with events that have made a significant contribution to the broad patterns of history (events);
- B. Are associated with the lives of persons significant in our past (persons);
- C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction (architecture); or
- D. Have yielded or may likely yield information important in prehistory or history (information potential).

State Laws, Regulations, and Policies

California Register of Historical Resources

Public Resources Code Section 5024.1 establishes the CRHR. The register lists all California properties considered to be significant historical resources. The CRHR includes all properties listed as or determined to be eligible for listing in the National Register of Historic Places (NRHP), including properties evaluated under Section 106 of the National Historic Preservation Act. The criteria for listing are similar to those of the NRHP. Criteria for listing in the CRHR include resources that:

1. Are associated with the events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Are associated with the lives of persons important in our past;
3. Embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values; or
4. Have yielded, or may be likely to yield, information important in prehistory or history.

The regulations set forth the criteria for eligibility as well as guidelines for assessing historical integrity and resources that have special considerations.

The California Register of Historic Places

The California Register of Historic Places (CRHP) program encourages public recognition and protection of resources of architectural, historical, archeological and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding and affords certain protections under the California Environmental Quality Act. The criteria for listing in the CRHP include resources that:

- A. Are associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.
- B. Are associated with the lives of persons important to local, California or national history.
- C. Embody the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values.
- D. Have yielded, or have the potential to yield, information important to the prehistory or history of the local area, California or the nation.

The State Office of Historic Preservation sponsors the California Historical Resources Information System (CHRIS), a statewide system for managing information on the full range of historical resources identified in California. CHRIS provides an integrated database of site-specific archaeological and historical resources information. The State Office of Historic Preservation also maintains the California Register of Historical Resources (CRHR), which identifies the State's architectural, historical, archeological and cultural resources. The CRHR includes properties listed in or formally determined eligible for the National Register and lists selected California Registered Historical Landmarks.

Public Resources Code (Section 5024.1[B]) states that any agency proposing a project that could potentially impact a resource listed on the CRHR must first notify the State Historic Preservation Officer, and must work with the officer to ensure that the project incorporates "prudent and feasible measures that will eliminate or mitigate the adverse effects."

California Health and Safety Code Section 7050.5 requires that, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

Section 5097.98 of the California Public Resources Code stipulates that whenever the commission receives notification of a discovery of Native American human remains from a county coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The decedents may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make their recommendation within 24 hours of their notification by the Native American Heritage Commission. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

CEQA and CEQA Guidelines

Section 21083.2 of CEQA requires that the lead agency determine whether a project may have a significant effect on unique archaeological resources. A unique archaeological resource is defined in CEQA as an archaeological artifact, object, or site about which it can be clearly demonstrated that there is a high probability that it:

- Contains information needed to answer important scientific research questions, and there is demonstrable public interest in that information;
- Has a special or particular quality, such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.
- Although not specifically inclusive of paleontological resources, these criteria may also help to define “a unique paleontological resource or site.”

Measures to avoid, conserve, preserve, or mitigate significant effects on these resources are also provided under CEQA Section 21083.2.

Section 15064.5 of the CEQA Guidelines notes that “a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.” Substantial adverse changes include physical changes to the historic resource or to its immediate surroundings, such that the significance of the historic resource would be materially impaired. Lead agencies are expected to identify potentially feasible measures to mitigate significant adverse changes in the significance of a historic resource before they approve such projects. Historic resources are those that are:

- listed in, or determined to be eligible for listing in, the California Register of Historical Resources (CRHR) (Public Resources Code Section 5024.1[k]);
- included in a local register of historic resources (Public Resources Code Section 5020.1) or identified as significant in an historic resource survey meeting the requirements of Public Resources Code Section 5024.1(g); or
- determined by a lead agency to be historically significant.

CEQA Guidelines Section 15064.5 also prescribes the processes and procedures found under Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.95 for addressing the existence of, or probable likelihood of, Native American human remains, as well as the unexpected discovery of any human remains within the project site. This includes consultation with the appropriate Native American tribes.

CEQA Guidelines Section 15126.4 provides further guidance about minimizing effects to historical resources through the application of mitigation measures. Mitigation measures must be legally binding and fully enforceable.

The lead agency having jurisdiction over a project is also responsible to ensure that paleontological resources are protected in compliance with CEQA and other applicable statutes. Paleontological and historical resource management is also addressed in Public Resources Code Section 5097.5, “Archaeological, Paleontological, and Historical Sites.” This statute defines as a misdemeanor any unauthorized disturbance or removal of a fossil site or remains on public land and specifies that state agencies may undertake surveys, excavations, or other operations as necessary on state lands to preserve or record paleontological resources. This statute would apply to any construction or other related project impacts that would occur on state-owned or state-managed lands. The County General Plan contains policies describing specific, enforceable measures to protect cultural resources and the treatment of resources when found.

Record Searches

This section describes the existing cultural resource setting and potential effects from project implementation within the project area and the surrounding areas. The results are based on a records search at the North Central Information Center (NCIC) conducted on June 10, 2015. To identify historic properties and/or resources, a review of the State of California Office of Historic Preservation records, base maps, historic maps, and literature for El Dorado County on file was conducted. The review of information indicates that the proposed project area and adjacent area contains no recorded prehistoric archaeological sites and no historic-period resources listed with the California Historical Resources Information System (CHRIS).

The NCIC results indicate that four (4) cultural resources study reports on file at their office cover a portion of the search area.

In this part of the El Dorado County, archaeologists locate prehistoric-period habitation sites adjacent to streams or ridges or knolls, especially those with southern exposure (Moratto 1984:290). This region is known as the ethnographic-period territory of the Nisenan, also called the Southern Maidu. The Nisenan maintained permanent settlements along major rivers in the Sacramento Valley and foothills; they also periodically traveled to higher elevations to hunt or gather plants (Wilson and Towne 1978: 387:389). The proposed project search area is situated in the Sierra Nevada foothills about one mile west of Shingle Creek. Given the extent of known cultural resources and environmental setting, there is low potential for locating prehistoric-period cultural resources in the vicinity of the proposed project area.

Discussion: In general, significant impacts are those that diminish the integrity, research potential, or other characteristics that make a historical or cultural resource significant or important. A substantial adverse effect on Cultural Resources would occur if the implementation of the project would:

- Disrupt, alter, or adversely affect a prehistoric or historic archaeological site or property that is historically or culturally significant to a community or ethnic or social group; or a paleontological site except as a part of a scientific study;
- Affect a landmark of cultural/historical importance;
- Conflict with established recreational, educational, religious or scientific uses of the area; or
- Conflict with adopted environmental plans and goals of the community where it is located.

CEQA Checklist Questions

- a.-b. **Historic and Archeological Resources.** A complete records search of the California Historic Resources Information System (CHRIS) found no prehistoric-period cultural resources and zero (0) historic-period cultural resources in the project area. Neither historic or Archeological resources are currently on the project site, based on four (4) other cultural resources study reports on file at the CHRIS office that covers portions of the search area. Impacts would be less than significant.
- c. **Paleontological Resources.** The proposed project area is not located in an area that is considered likely to have paleontological resources present. Fossils of plants, animals, or other organisms of paleontological significance have not been discovered within the project area. In this context, the project would not result in impacts to paleontological resources or unique geologic features. In the event subsurface paleontological sites are disturbed during grading activities on the site, standard conditions of approval requiring that all work activities shall be stopped in the event of an unanticipated discovery would ensure that impacts are less than significant.
- d. **Human Remains.** No human remains are known to exist within the project site. However, there is the possibility that subsurface construction activities associated with the proposed project, such as grading, could potentially damage or destroy previously undiscovered human remains. Accordingly, this is a potentially significant impact. However, if human remains were discovered, implementation of standard conditions of approval to address accidental discovery of human remains would reduce this potential impact to a less-than-significant level.

FINDING: No significant cultural resources have been identified on the project site. Due to the lack of any identified prehistoric-period or historic-period cultural resources and paleontological sites on the project site, impacts to cultural resources would be less than significant. Also See Tribal Cultural Resources section.

VI. GEOLOGY AND SOILS. <i>Would the project:</i>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides?				X
b. Result in substantial soil erosion or the loss of topsoil?			X	
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) creating substantial risks to life or property?			X	
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X

Data Source/Methodology

The following analysis of Geology and Soils is derived directly from technical documents prepared for the proposed project. The technical documents used to evaluate Geology and Soils include a Phase I Environmental Site Assessment (Environmental Solutions 2017) and a Geotechnical Engineering Report and Geotechnical Engineering Report Update (Wallace Kuhl and Associates 2008). These reports are incorporated by reference and appended to this document.

Environmental Setting

An updated Geotechnical Soils Report was completed by Wallace Kuhl and Associates Inc (2008). The report analyzed geologic and soil and rock conditions on the proposed project site. The following information is based off their Geotechnical Report.

Geology

The property is underlain by volcanic and metavolcanic rock formation as identified by the California Department of Conservation: Mines and Geology publication, "Generalized Geologic Map of the Folsom 15-Minute Quadrangle." Based on the map, the Copper Hill Volcanics formation is exposed on the property, consisting of mostly mafic to andesitic pyroclastic

and metavolcanic rocks, lava, and pillow lava, with subordinate felsic porphyritic and pyroclastic rocks (Wallace Kuhl and Associates Inc 2008)

The Generalized Geology Map of the Folsom 15-Minute Quadrangle indicates the west branch of the Bear Mountains Fault is located approximately 1000 feet east of the proposed El Dorado Hills Shopping Center site and represents the westernmost fault within the "Foothills Fault Zone." The site is not identified within Alquist-Priolo Fault Study Zone, meaning that the State has not identified this portion of the Foothills Fault Zone as being active within the last 11,000 years. The Bear Mountains Fault is mapped as a pre-Quaternary fault (not active within the last 1.6 million years), except for the "Rescue Lineament," which may have been active in late Quaternary time. The Rescue Lineament is located about eight miles northeast of the eastern boundary of the site. (Wallace Kuhl and Associates 2008)

Soil and Rock Conditions

On March 15, 2007 an engineering geologist from Wallace Kuhl and Associates observed test pits excavated with a Caterpillar 325 D excavator. Our site reconnaissance and test pits indicate that in general the northern half of the site and the western frontage of the site have a surface layer of rocky artificial fill material. The fill material consists of silty sandy cobbles and gravels extending to a depth of approximately one to five feet and is underlain by Copper Hills Volcanics Rock of the Copper Hills Volcanics formation are exposed at the southeaster portion of the site. The Copper Hills Volcanics consist of moderately fractured, slightly weathered to hard fine to medium grained rock. The fractures observed were filled with sandy clay material.

The test pits excavated on March 15, 2007 on the southeastern portion of the site (Test pit 5 and 6), and the northern most test pit (Test Pit 1), encountered very hard rock conditions at a depth of approximately eight to ten feet below existing grade. These test pits were terminated at that depth due to difficult excavation conditions. Rock exposed in Test Pits 5 and 6 was intensely fractured and portions of the sidewalls caved into the excavation (Wallace Kuhl and Associates Inc 2008)

Discussion:

A substantial adverse effect on Geologic Resources would occur if the implementation of the project would:

- Allow substantial development of structures or features in areas susceptible to seismically induced hazards such as groundshaking, liquefaction, seiche, and/or slope failure where the risk to people and property resulting from earthquakes could not be reduced through engineering and construction measures in accordance with regulations, codes, and professional standards;
- Allow substantial development in areas subject to landslides, slope failure, erosion, subsidence, settlement, and/or expansive soils where the risk to people and property resulting from such geologic hazards could not be reduced through engineering and construction measures in accordance with regulations, codes, and professional standards; or
- Allow substantial grading and construction activities in areas of known soil instability, steep slopes, or shallow depth to bedrock where such activities could result in accelerated erosion and sedimentation or exposure of people, property, and/or wildlife to hazardous conditions (e.g., blasting) that could not be mitigated through engineering and construction measures in accordance with regulations, codes, and professional standards.

CEQA Checklist Questions

a. Seismic Hazards:

i) According to the California Department of Conservation Division of Mines and Geology, there are no Alquist-Priolo fault zones within the west slope of El Dorado County (DOC, 2007). However, a fault zone has been identified in the Tahoe Basin and Echo Lakes area. The West Tahoe Fault extends onshore as two parallel strands. In the lake, the fault has clearly defined scarps that offset submarine fans, lake-bottom sediments, and the McKinney Bay slide deposits (DOC, 2016). There is clear evidence that the discussed onshore portion of the West Tahoe Fault is active with multiple events in the Holocene era and poses a surface rupture hazard. However, because of the distance, approximately 75 miles, between the project site and these faults, there would be no impact.

ii) The potential for seismic ground shaking in the project area would be considered remote for the reason stated in Section i) above. Any potential impacts due to seismic impacts would be addressed through compliance with the Uniform Building Code. All structures would be built to meet the construction standards of the UBC for the appropriate seismic zone. Impacts would be less than significant.

iii) El Dorado County is considered an area with low potential for seismic activity. There are no landslide, liquefaction, or fault zones (Wallace Kuhl and Associates Inc 2008). There would be no impact.

iv) All grading activities onsite would be required to comply with the El Dorado County Grading, Erosion Control and Sediment Ordinance. Compliance with the Ordinance would reduce potential landslide impacts to a less than significant level.

- b. **Soil Erosion:** For development proposals, all grading activities onsite would comply with the El Dorado County Grading, Erosion, and Sediment Control Ordinance including the implementation of pre- and post-construction Best Management Practices (BMPs). Implemented BMPs are required to be consistent with the County's California Stormwater Pollution Prevention Plan (SWPPP) issued by the State Water Resources Control Board to eliminate run-off and erosion and sediment controls. Any grading activities exceeding 250 cubic yards of graded material or grading completed for the purpose of supporting a structure must meet the provisions contained in the County of El Dorado Grading, Erosion, and Sediment Control Ordinance. Any future construction would require similar review for compliance with the County SWPPP. Impacts would be less than significant.
- c. **Geologic Hazards:** Based on the Seismic Hazards Mapping Program administered by the California Geological Survey, no portion of El Dorado County is located in a Seismic Hazard Zone or those areas prone to liquefaction and earthquake-induced landslides (DOC, 2013). Therefore, El Dorado County is not considered to be at risk from liquefaction hazards. Lateral spreading is typically associated with areas experiencing liquefaction. Because liquefaction hazards are not present in El Dorado County, the county is not at risk for lateral spreading. All grading activities would comply with the El Dorado County Grading, Erosion Control and Sediment Ordinance. Impacts would be less than significant.
- d. **Expansive Soils:** Expansive soils are those that greatly increase in volume when they absorb water and shrink when they dry out. When buildings are placed on expansive soils, foundations may rise each wet season and fall each dry season. This movement may result in cracking foundations, distortion of structures, and warping of doors and windows. The central portion of the county has a moderate expansiveness rating while the eastern and western portions have a low rating. Linear extensibility is used to determine the shrink-swell potential of soils. All development is required to comply with the El Dorado County Grading, Erosion, and Sediment Control Ordinance and development plans have implemented Seismic construction standards. Impacts would be less than significant.
- e. **Septic Capability:** Public sewer would serve the proposed project. The El Dorado Irrigation District would provide sewer service. There would be no impact resulting from septic systems.

FINDING: No significant geophysical impacts are expected from the design review request either directly or indirectly. For this "Geology and Soils" category, the thresholds of significance have not been exceeded.

VII. GREENHOUSE GAS EMISSIONS. <i>Would the project:</i>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Background/Science

Cumulative greenhouse gases (GHG) emissions are believed to contribute to an increased greenhouse effect and global climate change, which may result in sea level rise, changes in precipitation, habitat, temperature, wildfires, air pollution levels, and changes in the frequency and intensity of weather-related events. While criteria pollutants and toxic air contaminants are pollutants of regional and local concern (see Section III. Air Quality above); GHG are global pollutants. The primary land-use related GHG are carbon dioxide (CO₂), methane (CH₄) and nitrous oxides (N₂O). The individual pollutant’s ability to retain infrared radiation represents its “global warming potential” and is expressed in terms of CO₂ equivalents; therefore CO₂ is the benchmark having a global warming potential of 1. Methane has a global warming potential of 21 and thus has a 21 times greater global warming effect per metric ton of CH₄ than CO₂. Nitrous Oxide has a global warming potential of 310. Emissions are expressed in annual metric tons of CO₂ equivalent units of measure (i.e., MTCO₂e/yr). The three other main GHG are Hydroflourocarbons, Perflourocarbons, and Sulfur Hexaflouride. While these compounds have significantly higher global warming potentials (ranging in the thousands), all three typically are not a concern in land-use development projects and are usually only used in specific industrial processes.

GHG Sources

The primary man-made source of CO₂ is the burning of fossil fuels; the two largest sources being coal burning to produce electricity and petroleum burning in combustion engines. The primary sources of man-made CH₄ are natural gas systems losses (during production, processing, storage, transmission and distribution), enteric fermentation (digestion from livestock) and landfill off-gassing. The primary source of man-made N₂O is agricultural soil management (fertilizers), with fossil fuel combustion a very distant second. In El Dorado County, the primary source of GHG is fossil fuel combustion mainly in the transportation sector (estimated at 70 percent of countywide GHG emissions). A distant second are residential sources (approximately 20 percent), and commercial/industrial sources are third (approximately 7 percent). The remaining sources are waste/landfill (approximately 3 percent) and agricultural (<1 percent).

Regulatory Setting

Federal Laws, Regulations, and Policies

At the federal level, USEPA has developed regulations to reduce GHG emissions from motor vehicles and has developed permitting requirements for large stationary emitters of GHGs. On April 1, 2010, USEPA and the National Highway Traffic Safety Administration (NHTSA) established a program to reduce GHG emissions and improve fuel economy standards for new model year 2012-2016 cars and light trucks. On August 9, 2011, USEPA and the NHTSA announced standards to reduce GHG emissions and improve fuel efficiency for heavy-duty trucks and buses.

Federal Laws, Regulations, and Policies

In September 2006, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the *California Climate Solutions Act of 2006* (Stats. 2006, ch. 488) (Health & Safety Code, Section 38500 et seq.). AB 32 requires a statewide GHG emissions

reduction to 1990 levels by the year 2020. AB 32 requires the California Air Resources Board (CARB) to implement and enforce the statewide cap. When AB 32 was signed, California's annual GHG emissions were estimated at 600 million metric tons of CO₂ equivalent (MMTCO₂e) while 1990 levels were estimated at 427 MMTCO₂e. Setting 427 MMTCO₂e as the emissions target for 2020, current (2006) GHG emissions levels must be reduced by 29 percent. CARB adopted the AB 32 Scoping Plan in December 2008 establishing various actions the state would implement to achieve this reduction (CARB, 2008). The Scoping Plan recommends a community-wide GHG reduction goal for local governments of 15 percent.

In June 2008, the California Governor's Office of Planning and Research's (OPR) issued a Technical Advisory (OPR, 2008) providing interim guidance regarding a proposed project's GHG emissions and contribution to global climate change. In the absence of adopted local or statewide thresholds, OPR recommends the following approach for analyzing GHG emissions: Identify and quantify the project's GHG emissions, assess the significance of the impact on climate change; and if the impact is found to be significant, identify alternatives and/or Mitigation Measures that would reduce the impact to less than significant levels (CEC 2006).

Analysis Methodology

El Dorado County Air Quality Management District (EDCAQMD) prefers the use of the California Emissions Estimator Model (CalEEMod) for quantification of project-related GHG and criteria pollutant emissions. CalEEMod is a statewide model providing a uniform GHG analysis platform for government agencies, land use planners, and environmental professionals. It quantifies direct emissions from construction and operation (including vehicle use), and indirect emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The software incorporates the most recent vehicle emission factors from the Emission Factors (EMFAC) model provided by CARB, and average trip generation factors published by the Institute of Transportation Engineers (ITE). The model uses and quantifies mitigation measures reduction benefits found in the California Air Pollution Control Officers Association's (CAPCOA) document *Quantifying Greenhouse Gas Mitigation Measure (2010)*, and is accepted by CARB.

Impact Significance Criteria

CEQA does not provide clear direction on addressing climate change. It requires lead agencies identify project GHG emissions impacts and their "significance," but is not clear what constitutes a "significant" impact. As stated above, GHG impacts are inherently cumulative, and since no single project could cause global climate change, the CEQA test is if impacts are "cumulatively considerable." Not all projects emitting GHG contribute significantly to climate change. CEQA authorizes reliance on previously approved plans (i.e., a Climate Action Plan (CAP), etc.) and mitigation programs adequately analyzing and mitigating GHG emissions to a less than significant level. "Tiering" from such a programmatic-level document is the preferred method to address GHG emissions. El Dorado County does not have an adopted CAP or similar program-level document; therefore, the project's GHG emissions must be addressed at the project-level.

Unlike thresholds of significance established for criteria air pollutants in EDCAQMD's *Guide to Air Quality Assessment* (February 2002) ("CEQA Guide"), the District has not adopted GHG emissions thresholds for land use development projects. In the absence of County adopted thresholds, EDCAQMD recommends using the adopted thresholds of other lead agencies which are based on consistency with the goals of AB 32. Since climate change is a global problem and the location of the individual source of GHG emissions is somewhat irrelevant, it's appropriate to use thresholds established by other jurisdictions as a basis for impact significance determinations. Projects exceeding these thresholds would have a potentially significant impact and be required to mitigate those impacts to a less than significant level. Until the County adopts a CAP consistent with CEQA Guidelines Section 15183.5, and/or establishes GHG thresholds, the County will follow an interim approach to evaluating GHG emissions utilizing significance criteria adopted by the Sacramento Metropolitan Air Quality Management District (SMAQMD) to determine the significance of GHG emissions.

The Sacramento Metropolitan Air Quality Management District (SMAQMD) was utilized due to the close proximity to the County of El Dorado.

Discussion

CEQA does not provide clear direction to addressing climate change. It requires lead agencies identify project GHG emissions impacts and their "significance," but is not clear what constitutes a "significant" impact. As stated above, GHG

impacts and inherently cumulative, and because no single project could cause global climate change, the CEQA test is if impacts are “cumulatively considerable.” Not all projects emitting GHG contribute significantly to climate change. CEQA authorizes reliance on previously approved plans (i.e., a Climate Action Plan (CAP), etc.) and mitigation programs adequately analyzing and mitigating GHG emissions to a less than significant level. “Tiering” from such a programmatic-level document is the preferred method to address GHG emissions. El Dorado County does not have an adopted CAP or similar program-level document; therefore, the project’s GHG emissions must be address at the project-level.

Unlike thresholds of significance established for criteria air pollutants in EDCAQMD’s *Guide to Air Quality Assessment* (February 2002) (“CEQA Guide”), the District has not adopted GHG emissions thresholds for land use development projects. In the absence of County adopted thresholds, EDCAQMD recommends using the adopted thresholds of other lead agencies, which are based on consistency with the goals of AB 32. Since climate change is a global problem and the location of the individual source of GHG emissions is somewhat irrelevant, it is appropriate to use thresholds established by other jurisdictions as a basis for impact significance determinations. Projects exceeding these thresholds would have a potentially significant impact and be required to mitigate those impacts to a less than significant level. Until the County adopts a CAP consistent with CEQA Guidelines Section 15183.5, and/or establishes GHG thresholds, the County will follow an interim approach to evaluating GHG emissions utilizing significance criteria adopted by the San Luis Obispo Air Pollution Control District (SLOAPCD) to determine the significance of GHG emissions.

SLOAPCD developed a screening table using CalEEMod, which allows quick assessment of projects to “screen out” those below the thresholds as their impacts would be less than significant.

These thresholds are summarized below:

Significance Determination Thresholds	
GHG Emission Source Category	Operational Emissions
Non-stationary Sources	1,150 MTCO ₂ e/yr OR 4.9 MT CO ₂ e/SP/yr
Stationary Sources	10,000 MTCO ₂ e/yr

SP = service population, which is resident population plus employee population of the project

Projects below screening levels identified in Table 1-1 of SLOAPCD’s CEQA Air Quality Handbook (pp. 1-3, SLOAPCD, 2012) are estimated to emit less than the applicable threshold. For projects below the threshold, no further GHG analysis is required.

- a. The proposed Design Review that would allow for the construction and operation of a self-storage facility. Structures would include nine (9) new storage buildings, two employee-housing units, parking lot improvements, and associated site improvements. Building 1 would be approximately 13,200 square foot building with retail office space (2,700 SF) and storage (7,800 SF) on the ground level, and manager apartments on the second floor (2,700 SF). Buildings 2-9 would be approximately 8,700 square feet each and the total proposed building development for all nine buildings is approximately 82,800 square feet. The project site would also include 10,368 square feet for RV storage space for a total of 30 RV storage spaces. Parking would include seven (7) spaces, located near building 1 at the entrance of the self-storage facility. The applicant provided an Air Quality Analysis (Attachment 7: Air Quality Analysis) that was prepared using the California Emissions Estimator Model (CalEEMod, v 2013.2.2). The model concluded the daily construction emissions would not exceed 59 lbs/day for Reactive Organic Gases (ROG) and 29 lbs/day for Nitrogen Oxides (NOx). This is below the 82 lbs/day threshold for each as detailed in the AQMD’s *Guide to Air Quality Assessment: Determining Significance of Air Quality Impacts under the California Environmental Quality Act, February 2002* (“CEQA Guide”). Additionally, the model concluded operational emissions of ROG would be less than 5 lbs/day and NOx would be less than 2 lbs/day; which is also below the 82 lbs/day threshold from the CEQA Guide.

The Analysis also indicated the annual construction GHG emissions would not exceed 337 metric tons of CO₂ equivalent/year (MTCO₂e/yr). This is below the Sacramento Regional GHG Thresholds for annual construction emissions of 1,100 MTCO₂e/yr. Additionally, the model concluded operational GHG emissions would be less than 329 MTCO₂e/yr, which is below the annual GHG operational threshold of 1,100 MTCO₂e/yr. Because data from

projects in El Dorado County, along with the other counties in the Sacramento region, were used to develop the regional thresholds, it is AQMD's opinion that these regional GHG thresholds represent "substantial evidence" for CEQA purposes and are appropriate for use as CEQA thresholds of significance. Impacts would be less than significant.

- b. Because any construction-related emissions would be temporary and below the minimum standard for reporting requirements under AB 32, the proposed project's GHG emissions would have a negligible cumulative contribution towards statewide and global GHG emissions. The proposed project would not conflict with the objectives of AB 32 or any other applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions. Cumulative GHG emissions impacts are considered to be less than significant. Therefore, the proposed project would have a less than significant impact.

FINDING: The project would result in less than significant impacts to greenhouse gas emissions. For this Greenhouse Gas Emissions category, there would be no significant adverse environmental effect as a result of the project.

VIII. HAZARDS AND HAZARDOUS MATERIALS. <i>Would the project:</i>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			X	

Discussion

EMSL Analytical, Inc prepared a Project Lifecycle Management analysis for naturally occurring asbestos on-site on April 22, 2010. The Analysis evaluated levels of naturally occurring Asbestos on-site. The analysis states that no asbestos was detected on-site (EMSL Analytical 2010)

Additionally, a Phase I Environmental Site Assessment was completed by Environmental Solutions (2017). The assessment analyzed a variety a potential environmental concerns. Within their analysis they reviewed records from the Department of Toxic Substances Control and the California USEPA sites. The analysis found no significant hazard and hazardous waste impact that the project could create or expose (Environmental Solutions 2017).

A substantial adverse effect due to hazardous materials would occur if implementation of the project would:

- Expose people and property to hazards associated with the use, storage, transport, and disposal of hazardous materials where the risk of such exposure could not be reduced through implementation of Federal, State, and local laws and regulations;

- Expose people and property to risks associated with wildland fires where such risks could not be reduced through implementation of proper fuel management techniques, buffers and landscape setbacks, structural design features, and emergency access; or
- Expose people to safety hazards as a result of former on-site mining operations.

CEQA Checklist

- a-b. **Hazardous Materials:** The project proposes the construction and operation of a self-storage facility. Nine (9) new storage building structures with a total proposed building development of 82,000 square foot (SF) would include two employee-housing units, parking lot improvements, and associated site improvements. Building 1 would be approximately 13,200 square foot building with retail office space (2,700 SF) and storage (7,800 SF) on the ground level, and manager apartments on the second floor (2,700 SF). Buildings 2-9 would be approximately 8,700 square feet each and the total proposed building development for all nine buildings is approximately 82,800 square feet. The project site would also include 10,368 square feet for RV storage space for a total of 30 RV spaces. Construction may involve the transportation, use, and disposal of hazardous materials such as construction materials, paint, fuels, and landscaping materials. The majority of these hazardous materials would occur primarily during construction and/or routine intermittent maintenance. Any uses of hazardous materials would be required to comply with all applicable federal, state, and local standards associated with the handling and storage of hazardous materials. However, the project would not be anticipated to introduce, transport, store, or dispose of hazardous materials in such quantities that would create a hazard to people or the environment. As such, impacts would be less than significant.
- c. **Hazardous Material near Schools:** There are no public schools within ¼ mile of the project site. Buckeye Elementary School is located within 2.32 miles of the project site; however, the proposed project would not include any operation that would use acutely hazardous materials in such quantities that would create a hazard to people or the environment. As such, impacts would be less than significant.
- d. **Hazardous Sites:** No parcels within EDC are included on the Cortese List, which lists known hazardous sites in California. The project site is not included on a list of hazardous materials sites pursuant to Government Code section 65962.5 (DTSC, 2015). There would be no impact with the approval of the proposed project.
- e-f. **Aircraft Hazards, Private Airstrips:** According to the County of El Dorado Airport Land Use Compatibility Plan, the project site is not within any airport safety zone or airport land use plan area. The project is not located near a public or private airstrip. As such, the project would not be subject to any land use limitations contained within any adopted Comprehensive Land Use Plan and there would be no immediate hazard for people working in the project area or safety hazard resulting from airport operations and aircraft over-flights in the vicinity of the project site. No impacts would be anticipated to occur within these categories.
- g. **Emergency Plan:** The project was reviewed by the El Dorado County Transportation District and El Dorado County Fire Protection District. The proposed project would not impair implementation of any emergency response plan or emergency evacuation plan. All businesses would be required to implement individual emergency response plans as part of their normal operations. This impact would be considered less than significant.
- h. **Wildfire Hazards:** The project site is in an area of high fire hazard for wildland fire pursuant to Figure 5.8-4 of the 2004 General Plan Draft EIR. The El Dorado County General Plan Safety Element precludes development in area of high wildland fire hazard unless such development can be adequately protected from wildland fire hazards as demonstrated in a Fire Safe Plan prepared by a Registered Professional Forester (RPF) and approved by the local Fire Protection District and/or California Department of Forestry and Fire Protection. Both the El Dorado County Fire Protection District and the California Department of Forestry and Fire Protection (CALFIRE) have jurisdiction of reviewing the application. A Wildland Fire Safe Plan is required for the project to demonstrate an adequate fire system for purpose of fire protection with items such as, fire sprinkler and firefighter water, fire hydrants, sprinkler systems, and specific building materials, as needed. With the incorporation of these requirements, the impacts of wildland fire would be less than significant.

FINDING: The proposed project would not be anticipated to expose the area to significant hazards relating to the use, storage, transport, or disposal of hazardous materials. Any proposed future use of hazardous materials would be subject to review and approval of a Hazardous Materials Business Plan issued by the Environmental Management — Solid Waste and Hazardous Materials Division. The project would not be anticipated to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, nor is it anticipated to expose people or structures to a significant risk of loss, injury, or death involving wildland fires. For this “Hazards and Hazardous Materials” category, impacts would be less than significant.

IX. HYDROLOGY AND WATER QUALITY. Would the project:				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?			X	
a. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or -off-site?			X	
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
f. Otherwise substantially degrade water quality?			X	
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?			X	
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?			X	
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	
j. Inundation by seiche, tsunami, or mudflow?			X	

Data Source/Methodology

The following analysis of hydrology and water quality is based off technical documents prepared for the proposed project. The technical documents used to evaluate hydrology and water quality include a Phase I Environmental Site Assessment (Environmental Solutions 2017), and a Geotechnical Engineering Report and Geotechnical Engineering Report Update (Wallace Kuhl and Associates 2008).

Discussion

A Preliminary Drainage Report for Leave It To Us Self-Storage was completed by Lebeck Young Engineering, Inc (2018). The purpose of the report was to determine what if any environmental hydrology and water quality impacts would result from the project with the proposed building envelope modification. The assessment analyzed the previously mitigated original building envelope of 1.7 acres (23%) of the property and compared it to the increased proposed building envelope of 5.7 acres (78%). The 5.7 acres is 78% of the existing 7.2-acre property. The existing building envelope (1.7 acres) was already analyzed and mitigated via the Barnett Business Park Unit 2—Parcel Map 48/141 with the construction of detention pond 1 located downstream from the subject property on the east side of Shingle Lime Mine Road. The Preliminary Drainage Report (2018) takes into consideration the new proposed 5.7 acres of building envelope. The results from the Preliminary Drainage Report (2018) show an insignificant increase in storm water run-off; therefore, no on-site detention pond should be required.

A substantial adverse effect on Hydrology and Water Quality would occur if the implementation of the project would:

- Expose residents to flood hazards by being located within the 100-year floodplain as defined by the Federal Emergency Management Agency;
- Cause substantial change in the rate and amount of surface runoff leaving the project site ultimately causing a substantial change in the amount of water in a stream, river or other waterway;
- Substantially interfere with groundwater recharge;
- Cause degradation of water quality (temperature, dissolved oxygen, turbidity and/or other typical stormwater pollutants) in the project area; or
- Cause degradation of groundwater quality in the vicinity of the project site.

CEQA Checklist

- a. **Water Quality Standards:** Erosion control would be required as part of the building and grading permit. Operation of the proposed project would not involve any uses that would generate wastewater. Storm water runoff from potential development would contain water quality protection features in accordance with a potential National Pollutant Discharge Elimination System (NPDES) stormwater permit, as deemed applicable. The project would not be anticipated to violate water quality standards. Impacts would be less than significant.
- b. **Groundwater Supplies:** The geology of the Western Slope portion of El Dorado County is principally hard, crystalline, igneous, or metamorphic rock overlain with a thin mantle of sediment or soil. Groundwater in this region is found in fractures, joints, cracks, and fault zones within the bedrock mass. These discrete fracture areas are typically vertical in orientation rather than horizontal as in sedimentary or alluvial aquifers. Recharge is predominantly through rainfall infiltrating into the fractures. Movement of this groundwater is very limited due to the lack of porosity in the bedrock. Wells are typically drilled to depths ranging from 80 to 300 feet in depth. There is no evidence that the project will substantially reduce or alter the quantity of groundwater in the vicinity, or materially interfere with groundwater recharge in the area of the proposed project. Existing public water infrastructure would support the project. The project is not anticipated to affect potential groundwater supplies above pre-project levels. Impacts would be less than significant.
- c-f. **Drainage Patterns:** The site is currently vacant. A grading permit through the Planning and Building Department will be required to address grading, erosion and sediment control for any future construction. Construction activities would be required to adhere to the El Dorado County Grading, Erosion Control, and Sediment Ordinance. This includes the use of Best Management Practices (BMPs) to minimize degradation of water quality during construction. Impacts would be less than significant.
- g-j. **Flood-related Hazards:** The project site is not located within any mapped 100-year flood areas as shown on Firm Panel Number 06017C0725E, revised September 26, 2008, and would not result in the construction of any structures that would impede or redirect flood flows (FEMA, 2008). No dams that would result in potential hazards related to dam failures are located in the project area. The risk of exposure to seiche, tsunami, or mudflows would be remote. Impacts would be less than significant.

FINDING: The proposed project would be required to address any potential erosion and sediment control. As conditioned and with adherence to County Code Section 110.14, no significant hydrological impacts are expected with the development of the project either directly or indirectly. For this “Hydrology” category, impacts would be less than significant.

X. LAND USE PLANNING. Would the project:				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Physically divide an established community?				X
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

Discussion

A substantial adverse effect on Land Use would occur if the implementation of the project would:

- Result in the conversion of Prime Farmland as defined by the State Department of Conservation;
- Result in conversion of land that either contains choice soils or which the County Agricultural Commission has identified as suitable for sustained grazing, provided that such lands were not assigned urban or other nonagricultural use in the Land Use Map;
- Result in conversion of undeveloped open space to more intensive land uses;
- Result in a use substantially incompatible with the existing surrounding land uses; or
- Conflict with adopted environmental plans, policies, and goals of the community.

CEQA Checklist

- Established Community:** The project would not divide an established community. The proposed use for the site is consistent with the adjacent uses in the business park. The project is proposed on property designated by the County’s General Plan as industrial and all impacts associated with industrial projects at this location have been considered in the General Plan EIR, therefore, there would be no impact to an established community.
- Land Use Consistency:** The parcel is zoned Industrial Light with a Design Community (IL-DC) combining zone. The intent of the –DC combining zone is to ensure architectural supervision and consistency with the EDC Community Design Standards, which is used to evaluate the architectural and site design in industrial districts. This Design Review Permit Application DR16-0001 is the process used by Planning Services for verifying conformance with El Dorado County Standards. As conditioned, impacts would be less than significant.
- Habitat Conservation Plan:** The project site is not within the boundaries of an adopted Natural Community Conservation Plan or any other conservation plan. As such, the proposed project would not conflict with an adopted conservation plan. There would be no impact.

FINDING: The proposed use of the land would be consistent with the Zoning Ordinance and General Plan. There would be no impact to land use goals or standards resulting from the project.

XI. MINERAL RESOURCES. <i>Would the project:</i>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Data Source/Methodology

The following analysis of mineral resources is based off technical documents prepared for the proposed project. The technical documents used to evaluate mineral resources include a Phase I Environmental Site Assessment (Environmental Solutions 2017) and a Geotechnical Engineering Report and a Geotechnical Engineering Report Update (Wallace Kuhl and Associates 2008).

Discussion

A substantial adverse effect on Mineral Resources would occur if the implementation of the project would:

- Result in obstruction of access to, and extraction of mineral resources classified MRZ-2x, or result in land use compatibility conflicts with mineral extraction operations.

CEQA Checklist

a-b. **Mineral Resources:** The project site is not in an area where mineral resources classified as MRZ-2a or MRZ-2b by the State Geologist is present (El Dorado County General Plan, Figure CO-1). Review of the California Department of Conservation Geologic Map data showed that the project site is not within a mineral resource zone district. There would be no impact.

FINDING: No impacts to energy and mineral resources are expected with the proposed project either directly or indirectly. For this “Mineral Resources” category, there would be no impacts.

XII.NOISE. <i>Would the project result in:</i>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise level?				X
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

Regulatory Setting:

No federal or state laws, regulations, or policies for construction-related noise and vibration that apply to the Proposed Project. However, the Federal Transit Administration (FTA) Guidelines for Construction Vibration in Transit Noise and Vibration Impact Assessment state that for evaluating daytime construction noise impacts in outdoor areas, a noise threshold of 90 dBA Leq and 100 dBA Leq should be used for residential and commercial/industrial areas, respectively (FTA 2006).

For construction vibration impacts, the FTA guidelines use an annoyance threshold of 80 VdB for infrequent events (fewer than 30 vibration events per day) and a damage threshold of 0.12 inches per second (in/sec) PPV for buildings susceptible to vibration damage (FTA 2006).

Determination of Significance

A substantial adverse effect due to Noise would occur if the implementation of the project would:

- Result in short-term construction noise that creates noise exposures to surrounding noise sensitive land uses in excess of 60dBA CNEL;
- Result in long-term operational noise that creates noise exposures in excess of 60 dBA CNEL at the adjoining property line of a noise sensitive land use and the background noise level is increased by 3dBA, or more; or
- Results in noise levels inconsistent with the performance standards contained in Table 6-1 and Table 6-2 in the El Dorado County General Plan.

TABLE 6-2 NOISE LEVEL PERFORMANCE PROTECTION STANDARDS FOR NOISE SENSITIVE LAND USES AFFECTED BY NON-TRANSPORTATION* SOURCES						
Noise Level Descriptor	Daytime 7 a.m. - 7 p.m.		Evening 7 p.m. - 10 p.m.		Night 10 p.m. - 7 a.m.	
	Community	Rural	Community	Rural	Community	Rural
Hourly L_{eq} , dB	55	50	50	45	45	40
Maximum level, dB	70	60	60	55	55	50

Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

The County can impose noise level standards which are up to 5 dB less than those specified above based upon determination of existing low ambient noise levels in the vicinity of the project site.

In Community areas the exterior noise level standard shall be applied to the property line of the receiving property. In Rural Areas the exterior noise level standard shall be applied at a point 100' away from the residence. The above standards shall be measured only on property containing a noise sensitive land use as defined in Objective 6.5.1. This measurement standard may be amended to provide for measurement at the boundary of a recorded noise easement between all effected property owners and approved by the County.

*Note: For the purposes of the Noise Element, transportation noise sources are defined as traffic on public roadways, railroad line operations and aircraft in flight. Control of noise from these sources is preempted by Federal and State regulations. Control of noise from facilities of regulated public facilities is preempted by California Public Utilities Commission (CPUC) regulations. All other noise sources are subject to local regulations. Non-transportation noise sources may include industrial operations, outdoor recreation facilities, HVAC units, schools, hospitals, commercial land uses, other outdoor land use, etc.

CEQA Checklist

- a. **Noise Exposures:** The proposed project will not expose people to noise levels in excess of standards established in the General Plan or Zoning Ordinance. The construction of new structures would require the use of trucks and minor fill and grading, which may result in short-term noise impacts to surrounding neighbors. These activities require an encroachment permit and restricted to construction hours per the General Plan. The project is not expected to generate noise levels exceeding the performance standard contained within Chapter 6 of the 2004 General Plan. The noise associated with the project would be less than significant.
- b. **Groundborne Shaking:** Future construction may generate short-term ground borne vibration or shaking events during project construction, which includes grading activities and building construction. Adherence to the time limitations of construction activities, which would be incorporated as a condition of the project, to 7:00 AM to 7:00 PM Monday through Friday 8:00 AM to 5:00 PM on weekends and federally recognized holidays would limit the ground shaking effects in the project area. The future daily operations of the project is anticipated to produce minimal vibration or shaking events. Impacts are anticipated to be less than significant.
- c. **Permanent Noise Increases:** The project would not significantly increase the ambient noise levels in the area in excess of the established noise thresholds. Any permanent ongoing noise would be intermittent and within confined areas (indoor and outdoor) of the property, and, as such, would not be anticipated to exceed established General Plan noise thresholds. Impacts would be less than significant.

- d. **Temporary Increase in Ambient Noise Levels:** The project would include construction activities for the grading, construction, and implementation of Best Management Practice (BMP). The short-term noise increases would potentially exceed the thresholds established by the General Plan. Standard Conditions of Approval would limit the hours of construction activities to 7:00am to 7:00pm Monday through Friday and 8:00am to 5:00pm on weekends and federally recognized holidays. Adherence to the limitations of construction would be anticipated to reduce potentially significant impacts to a less than significant level.
- e-f. **Aircraft Noise:** The project site is not located within an airport land use plan or in the immediate vicinity of a private airstrip. The nearest airport is the Cameron Park Airport, which is located approximately 3.20 miles northwest of the project site. There would be no impacts.

FINDING: With adherence to the County of El Dorado General Plan Policy and Zoning Ordinance Chapter 130.37 (Noise Standards), no significant direct or indirect impacts to noise levels are expected either directly or indirectly. For this Noise category, the thresholds of significance would not be exceeded.

XIII. POPULATION AND HOUSING. <i>Would the project:</i>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (i.e., by proposing new homes and businesses) or indirectly (i.e., through extension of roads or other infrastructure)?			X	
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

Discussion

A substantial adverse effect on Population and Housing would occur if the implementation of the project would:

- Create substantial growth or concentration in population;
- Create a more substantial imbalance in the County’s current jobs to housing ratio; or
- Conflict with adopted goals and policies set forth in applicable planning documents.

CEQA Checklist

- a. **Population Growth:** The proposed project includes the construction of two employee-housing units. The project may induce some population growth in the area directly by proposing commercial/industrial development that would generate employment. However, potential employees would most likely come from the community of Shingle Springs or nearby communities. Few employees are likely to come from areas farther away. The project is consistent with the land use designation under the County General Plan, which anticipates population growth in the County based on these designations. Therefore, anticipated population growth would not be altered by this project. The project would utilize existing infrastructure, and therefore would not require new infrastructure that may indirectly induce population growth. Impacts related to population growth would be less than significant.
- b. **Housing Displacement:** The project site is currently vacant. No existing housing stock would be displaced by the proposed project. There would be no impact.
- c. **Replacement Housing:** The proposed project will not displace any people. There would be no impact.

FINDING: The project would not displace housing. There is no potential for a significant impact due to substantial growth with the proposed design review request, as this industrial/commercial land use was considered in the 2004 General Plan. For this “Population and Housing” category, the thresholds of significance have not been exceeded.

XIV. PUBLIC SERVICES. <i>Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:</i>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Fire protection?			X	
b. Police protection?			X	
c. Schools?			X	
d. Parks?			X	
e. Other government services?				X

Discussion

A substantial adverse effect on Public Services would occur if the implementation of the project would:

- Substantially increase or expand the demand for fire protection and emergency medical services without increasing staffing and equipment to meet the Department’s/District’s goal of 1.5 firefighters per 1,000 residents and 2 firefighters per 1,000 residents, respectively;
- Substantially increase or expand the demand for public law enforcement protection without increasing staffing and equipment to maintain the Sheriff’s Department goal of one sworn officer per 1,000 residents;
- Substantially increase the public school student population exceeding current school capacity without also including provisions to adequately accommodate the increased demand in services;
- Place a demand for library services in excess of available resources;
- Substantially increase the local population without dedicating a minimum of 5 acres of developed parklands for every 1,000 residents; or
- Be inconsistent with County adopted goals, objectives or policies.

CEQA Checklist

- Fire Protection:** The El Dorado County Fire Protection provides structural fire protection services to the project area. Planning Staff requested comments or conditions of approval from the El Dorado County Fire Protection, yet the Fire District did not respond with any concerns or comments. Development of the project would result in a minor increase in the demand for fires protection services, but would not prevent them from meeting their response times for the project or its designated service area any more than exists today. The Fire District would review the project improvement plans for conformance with their regulation regarding adequate fire flow, vegetation and fuel modification, potential use of hazardous materials, and sprinkler and fire alarm requirements prior to issuance of final occupancy for a building permit. Upon fulfillment of their regulations, impacts would be less than significant.
- Police Protection:** The El Dorado County Sheriff’s Department would provide law enforcement services to the proposed development. The development of commercial square footage on the project site may result in a small increase in calls for service but would not significantly affect the Department. The project applicant would be responsible for the payment of development fees to the Department to offset any project impacts. As a result, impacts would be considered less than significant.

- c. **Schools:** School services in the Shingle Springs area are provided by the Buckeye Union Elementary School District and the El Dorado Union High School District. The proposed project is a commercial development with two employee-housing units, which by itself would not generate an increase in student population requiring additional facilities. As discussed in the Population and Housing section, the project may attract new employees, but most would come from the surrounding area. The project is not expected to attract a significant number of new residents. Future development would be required to pay impact fees for new facilities adopted by both districts, which would mitigate any potential impacts of the project. The impact would be less than significant.
- d. **Parks:** The proposed project is a commercial project with two employee-housing units and would not generate a need for parks. As such, impacts are considered to be less than significant.
- e. **Other Government Services:** No other government services would be required because of the proposed commercial project. There would be no impact.

FINDING: Adequate public services are available to serve the project. There would be insignificant levels of increased demands to services anticipated as a result of the project. For this Public Services category, impacts would be less than significant.

XV. RECREATION.				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

Discussion

A substantial adverse effect on Recreational Resources would occur if the implementation of the project would:

- Substantially increase the local population without dedicating a minimum of 5 acres of developed parklands for every 1,000 residents; or
- Substantially increase the use of neighborhood or regional parks in the area such that substantial physical deterioration of the facility would occur.

CEQA Checklist

a-b. **Parks and Recreational Services:** The project does not include any increase in permanent population that would contribute to increased demand on recreation facilities or contribute to increased use of existing facilities such that physical deterioration of the facility would occur. The commercial development with two employee-housing units would not generate an increase demand for park services; therefore, it would not require construction or expansion of additional facilities. Impacts would be less than significant.

FINDING: Less than significant impacts to open space or park facilities would result as part of the project. For this Recreation category, impacts would be less than significant.

XVI. TRANSPORTATION/TRAFFIC. <i>Would the project:</i>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			X	
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			X	
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e. Result in inadequate emergency access?			X	
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?			X	

Regulatory Setting:

Federal Laws, Regulations, and Policies

No federal laws, regulations, or policies apply to transportation/traffic and the Proposed Project.

State Laws, Regulations, and Policies

Caltrans manages the state highway system and ramp interchange intersections. This state agency is also responsible for highway, bridge, and rail transportation planning, construction, and maintenance.

Local Laws, Regulations, and Policies

According to the transportation element of the County General Plan, Level of Service (LOS) for County-maintained roads and state highways within the unincorporated areas of the county shall not be worse than LOS E in the Community Regions or LOS D in the Rural Centers and Rural Regions. Level of Service is defined in the latest edition of the Highway Capacity Manual (Transportation Research Board, National Research Council). There are some roadway segments that are excepted from these standards and are allowed to operate at LOS F, and the closest road segment is located 1.19 miles away on Cameron Park Drive from Robin Lane to Coach Lane. According to Policy TC-Xe, “worsen” is defined as any of the following number of project trips using a road facility at the time of issuance of a use and occupancy permit for the development project:

- A. A two percent increase in traffic during a.m., p.m. peak hour, or daily
- B. The addition of 100 or more daily trips, or
- C. The addition of 10 or more trips during the a.m. or p.m. peak hour.

Parking

Pursuant to the El Dorado County ordinance code, the project is required to provide 7 parking spaces. The proposed project will meet the parking requirement and provide 7 parking spaces. The project will include 6 standard parking spaces, and (1) handicap accessible spaces.

Traffic Assessment

An On-site Transportation Review of the Leave It To us Self Storage project was conducted by T. Kear Transportation Planning and Management, Inc. (TKTPMP) dated February 29, 2018 (Attachment 12). The purpose of this study is to identify potential environmental impacts to transportation facilities as required by the California Environmental Quality Act and to test if the project is consistent with the El Dorado County's requirements for approval.

Level of Service

Analysis of transportation facility significant environmental impacts is based on the concept of Level of Service (LOS). The LOS of a facility is a qualitative measure used to describe operational conditions. LOS ranges from A (best), which represents minimal delay, to F (worst), which represents heavy delay and a facility that is operating at or near its functional capacity. Levels of Service for this study were determined using methods defined in the *Highway Capacity Manual (HCM) 2010*.

Project impacts were determined by comparing conditions with the proposed project to those without the project and the cumulative impacts of the proposed projects in the area. The Transportation and Circulation Policies contained in the County General Plan establish a framework for review of thresholds of significance and identification of potential impacts of new development on the County's road system. These policies are enforced by the application of the Transportation Impact Study (TIS) Guidelines, the County Design and Improvements Standards Manual, and the County Encroachment Ordinance, with review of individual development projects by the Transportation and Long Range Planning Divisions of the Community Development Agency. A substantial adverse effect to traffic would occur if the implementation of the project would:

- Generate traffic volumes which cause violations of adopted level of service standards (project and cumulative); or Result in or "worsen" Level of Service (LOS) F traffic congestion during weekday, peak-hour periods on any highway, road, interchange or intersection in the unincorporated areas of the county.
- According to General Plan Policy TC-Xe, The term "worsen" is defined as any of the following number of project trips using a road facility at the time of issuance of a use of occupancy permit for the development project:
 - A 2 percent increase in traffic during the a.m. peak hour or p.m. peak hour or daily, or
 - The addition of 100 or more daily trips, or
 - The addition of 10 or more trips during the a.m. peak hour or the p.m. peak hour.

Discussion: The Transportation and Circulation Policies contained in the County General Plan establish a framework for review of thresholds of significance and identification of potential impacts of new development on the County's road system. These policies are enforced by the application of the Transportation Impact Study (TIS) Guidelines, the County Design and Improvements Standards Manual, and the County Encroachment Ordinance, with review of individual development project by the Transportation and Long Range Planning Division of the Community Development Agency. A substantial adverse effect to traffic would occur if the implementation of the project would:

- Result in an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system;
- Generate traffic volumes which cause violations of adopted level of service standards (project and cumulative); or

- Result in or worsen Level of Service (LOS) F traffic congestion during weekday, peak-hour periods on any highway, road, interchange or intersection in the unincorporated areas of the county as a result of a residential development project of 5 or more units.

CEQA Checklist

- a. **Traffic Increases:** No substantial traffic increases would result from the proposed project, as determined by the projected number of new trips to the site. Transportation consultant firm T. Kear Transportation Planning and Management, Inc. (TKTPM) completed an on-site and off-site transportation review (Attachment 11), which found that the daily trips generated by the proposed use during AM and PM Peak hours would be within the acceptable levels set by the Transportation Impact Study (TIS) Guidelines. Impacts would be less than significant.
- b. **Levels of Service Standards:** Level of service standards during AM and PM peak hours were found to be acceptable by the on-site transportation review conducted by T. Kear Transportation Planning & Management, Inc. The project is anticipated to generate 142 daily vehicle trips, and 16 PM peak-hour vehicle trips. The project is situated south of US 50 between the Cameron Park Drive and South Shingle Road interchange, and the project is expected to disperse its trips east and west via Durock Road by multiple connecting intersections. Subsequently, none of these intersections are expected to experience more than 10 peak hour trips or 100 daily trips. The addition of project traffic will not change the level of service at the intersections and the intersections would continue to operate acceptably. Impacts would be less than significant.
- c. **Air Traffic:** The project site is not within an airport safety zone. No changes in air traffic patterns would occur or be affected by the proposed project. There would be no impact.
- d. **Design Hazards:** T. Kear Transportation Planning & Management, Inc. evaluated the project for potential hazards in their traffic analysis, which included a sight distance evaluation and a preliminary traffic safety evaluation. The study found that the project would not create or exacerbate hazards in the area, nor were there any hazards that might impact the project, site distance was checked in the field and found to be more than adequate. It is recommended that the county approve the project without any transportation or traffic related conditions beyond the payment of applicable fees. According to the project site plan there appears to be adequate sight distance on-site to facilitate safe and orderly circulation. Impacts would be less than significant.
- e. **Emergency Access:** The project has one ingress/egress point. The primary public driveway entrance would be located at the southwest corner of the site, which would connect to Business Drive, which is currently a privately maintained road. The entrance to the self-storage facility will be gated. The internal turning radius were designed to meet the El Dorado County Fire Department requirements (40' inner and 56' outer radius); the turning radius for RV's (26' inner and 41.4' outer radius) was also checked and found to be adequate. Impacts would be less than significant.
- f. **Alternative Transportation.** The project would not conflict with adopted plans, policies, or programs relating to alternative transportation. There are no public transit or bicycle lanes at this property or along Business Drive. The proposed project will have no impact on adopted polices, plans, or programs regarding public transit or otherwise decrease the performance or safety of such facilities. Impacts would be less than significant.

FINDING: The project would not exceed the thresholds for traffic identified within the General Plan. For this Transportation/Traffic category, the thresholds of significance would not be exceeded and impacts would be less than significant.

XVII. TRIBAL CULTURAL RESOURCES. <i>Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</i>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1 (k), or			X	
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.			X	

Data Source/Methodology

The following analysis of tribal cultural resources is derived from technical documents prepared for the proposed project. The technical documents used to evaluate tribal cultural resources include a cultural resources records search performed at the North Central Information Center (2007) and a Phase I Environmental Site Assessment (Environmental Solutions 2017). These documents are incorporated by reference and attached to this document.

Discussion

In general, significant impacts are those that diminish the integrity, research potential, or other characteristics that make a TCR significant or important. To be considered a TCR, a resource must be either: (1) listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or: (2) a resource that the lead agency chooses, in its discretion, to treat as a TCR and meets the criteria for listing in the state register of historic resources pursuant to the criteria set forth in Public Resources Code Section 5024.1(c). A substantial adverse change to a TCR would occur if the implementation of the project would:

- Disrupt, alter, or adversely affect a TCR such that the significance of the resource would be materially impaired

CEQA Checklist

a, b. **Tribal Cultural Resources:** The United Auburn Indian Community of the Auburn Rancheria (UAIC) was notified of the proposed project and given access to all project documents on March 23, 2016, via certified mail. No other tribes requested to be notified of proposed projects for consultation in the project area at the time. In response to a request from Marcos Guerrero of the UAIC, dated June 2, 2016, the Cultural Resources Study for the project was sent to the tribe via email. No further information or other requests were received from the UAIC, and no other requests for formal consultation were received for this project. Pursuant to the Cultural Resources Study prepared by Historic Resources Associates (2015), the geographic area of the project site is not known to contain any resources listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or considered significant by a California Native American tribe. Impacts would be less than significant.

FINDING: No significant TCRs are known to exist on the project site. As a result, the proposed project would not cause a substantial adverse change to a TCR and impacts would be less than significant with standards conditions of approval for potential discovery of cultural resources.

XVIII. UTILITIES AND SERVICE SYSTEMS. <i>Would the project:</i>				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g. Comply with federal, state, and local statutes and regulations related to solid waste?			X	

Discussion

A substantial adverse effect on Utilities and Service Systems would occur if the implementation of the project would:

- Breach published national, state, or local standards relating to solid waste or litter control;
- Substantially increase the demand for potable water in excess of available supplies or distribution capacity without also including provisions to adequately accommodate the increased demand, or is unable to provide an adequate on-site water supply, including treatment, storage and distribution;
- Substantially increase the demand for the public collection, treatment, and disposal of wastewater without also including provisions to adequately accommodate the increased demand, or is unable to provide for adequate on-site wastewater system; or
- Result in demand for expansion of power or telecommunications service facilities without also including provisions to adequately accommodate the increased or expanded demand.

a. **Wastewater Requirements:** Wastewater treatment would be provided for the site by El Dorado Irrigation District (EID). The Regional Water Quality Control Board sets treatment requirements for the collection, processing, and disposal of waste, which EID must comply. It has been determined that the proposed project would not require any additional equivalent dwelling units (EDUs) of wastewater treatment. There is an 8-inch gravity sewer line located in Business Drive. This sewer line has adequate capacity at this time. A service stub is located near the western corner of the parcel to be developed. There is an existing 4-inch sewer force main located in an easement along the northern property line of the parcel. To receive service from this line, the location of this force main will need to be potholed prior to approving any grading in the vicinity. EID will need to review and approve any proposed grading

and/or structures that are proposed in the vicinity of this sewer line. As the project would utilize EDUs already accounted for by the EID, the project would not lead to the EID's wastewater treatment plant (WWTP) exceeding treatment requirements. Impacts would be less than significant.

- b. **Construction of New Facilities:** An 8-inch water line exists in Business Drive and a 12-inch water line is located along the northern property line of the project site. The El Dorado County Fire Protection District has determined that the minimum fire flow for this project is 1,625 GPM for three-hour duration while maintaining a 20-psi residual pressure. According to the District's hydraulic model, the existing system can deliver the required fire flow. To provide this fire flow and receive service, the project applicants must construct a water line extension connecting to the water line. There is an 8-inch gravity sewer line located in Business Drive that has adequate capacity to serve the project. The location of the force main will need to be potholed prior to approving any grading in the vicinity. The project would connect to this sewer line with appropriate pressure reduction as determined by the EID; no facilities expansion would be required as a result of this connection. Given this fact, there will not be a need to expand water or wastewater facilities as a result of this project. Impacts would be less than significant.
- c. **New Stormwater Facilities:** Any drainage facilities needed for future construction would be built in conformance with the County of El Dorado Drainage Manual, as determined by departmental standards, during the grading and building permit process. Impacts would be less than significant.
- d. **Sufficient Water Supply:** The El Dorado Irrigation District (EID) reviewed the project as part of a Facility Improvement Letter (FIL) and determined that water and sewer utilities are available to serve the site. The project as proposed would not require any additional EDUs of water supply. The minimum fire flow for this project is 1,625 GPM for three-hour duration while maintaining a 20-psi residual pressure. According the District's hydraulic model, the existing system can deliver the required fire flow. In order to provide this fire flow and receive service, the project applicant must construct a water line extension to the identified water lines. With these on-site and off-site improvements impacts would be less than significant.
- e. **Adequate Wastewater Capacity:** The existing EID facilities are adequate to serve the proposed project with no expansion of either the infrastructure or the wastewater treatment plant. Impacts to wastewater facilities would be less than significant.
- f-g. **Solid Waste Disposal and Requirements:** El Dorado Disposal distributes municipal solid waste to Forward Landfill in Stockton and Kiefer Landfill in Sacramento. Pursuant to El Dorado County Environmental Management Solid Waste Division staff, both facilities have sufficient capacity to serve the County. Recyclable materials are distributed to a facility in Benicia and green wastes are sent to a processing facility in Sacramento. County Ordinance No. 4319 requires that new development provide areas for adequate, accessible, and convenient storing, collecting and loading of solid waste and recyclables. This project does not propose to add any activities that would generate additional solid waste. Impacts would be less than significant.

FINDING: No significant utility and service system impacts would be expected with the project, either directly or indirectly. For this Utilities and Service Systems category, impacts would be less than significant.

XIX. MANDATORY FINDINGS OF SIGNIFICANCE. Does the project:				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?			X	
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

Discussion

- a. No substantial evidence contained in the project record has been found that would indicate that this project would have the potential to significantly degrade the quality of the environment. As conditioned or mitigated, and with adherence to County permit requirements, this project would not have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of California history, pre-history, or tribal cultural resources. Any impacts from the project would be less than significant due to the design of the project and required standards that would be implemented prior to DR16-0001 or with the building permit processes and/or any required project specific improvements on the property.
- b. Cumulative impacts are defined in Section 15355 of the California Environmental Quality Act (CEQA) Guidelines as *two or more individual effects, which when considered together, would be considerable or which would compound or increase other environmental impacts.*

The project would not involve development or changes in land use that would result in an excessive increase in population growth. Impacts due to increased demand for public services associated with the project would be offset by the payment of fees as required by service providers to extend the necessary infrastructure services. The project would not be anticipated to contribute substantially to increased traffic in the area and the project would not require an increase in the wastewater treatment capacity of the County. Due to the size of the proposed project, types of activities proposed, and site-specific environmental conditions, which have been disclosed in the Project Description and analyzed in Items I through XVI, there would be no significant impacts anticipated related to agriculture resources, air quality, biological resources, cultural resources, geology/soils, hazards/hazardous materials, hydrology/water quality, land use/planning, mineral resources, noise, population/housing, public services, recreation, traffic/transportation, or utilities/service systems that

would combine with similar effects such that the project's contribution would be cumulatively considerable. For these issue areas, either no impacts, or less than significant impacts would be anticipated.

As outlined and discussed in this document, as conditioned and with compliance with County Codes, this project would be anticipated to have a less than significant project-related environmental effect which would cause substantial adverse effects on human beings, either directly or indirectly. Based on the analysis in this study, it has been determined that the project would have less than significant cumulative impacts.

- c. Based on the discussion contained in this document, no potentially significant impacts to human beings are anticipated to occur with respect to potential project impacts. The project would not include any physical changes to the site, and any future development or physical changes would require review and permitting through the County. Adherence to these standard conditions would be expected to reduce potential impacts to a less than significant level.

FINDINGS: It has been determined that the proposed project would not result in significant environmental impacts. The project would not exceed applicable environmental standards, nor significantly contribute to cumulative environmental impacts.

INITIAL STUDY ATTACHMENTS

Attachments: (1) Site Plan; (2) Parcel Map PM 48-141; (3) Preliminary Drainage Report; (4) Preliminary Grading and Utility Plan; (5) Landscape Plan; (6) Lighting Plan; (7) Air Quality Analysis; (8) Biological Site Assessment 2017; (9) Biological Site Assessment 2009; (10) Biological Survey 2016; (11) Arborist Report for Oak Woodland Resources 2018; and (12) On-site Transportation Review of the Leave It To us Self Storage

SUPPORTING INFORMATION SOURCE LIST

- CAPCOA Guide (August 2010). Available at: <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-QuantificationReport-9-14-Final.pdf>
- California Air Resources Board (CARB). (2008). *Climate Change Scoping Plan*. Available at: http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf
- California Air Resources Board (CARB). (2017). *Area Designations Maps/State and National*. Available at: <https://www.arb.ca.gov/desig/adm/adm.htm>.
- California Attorney General's Office. (2010). Addressing Climate Change at the Project Level. Available at: http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf
- California Department of Conservation (CDC). (2008). *Farmland Mapping and Monitoring Program: El Dorado County Important Farmland 2008*. Available at: <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2008/eld08.pdf>.
- California Department of Conservation (CDC). (2013a). Important Farmland Categories webpage. Available at: www.conservation.ca.gov/dlrp/fmmp/mccu/Pages/map_categories.aspx.
- California Department of Conservation (CDC). (2013b). The Land Conservation Act. Available at: www.conservation.ca.gov/dlrp/lca/Pages/Index.aspx.
- California Department of Toxic Substances Control (DTSC). (2015). *DTSC's Hazardous Waste and Substances Site List - Site Cleanup (Cortese List)*. Available at: http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm.
- California Energy Commission. (2006). *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004, Staff Final Report*. Publication CEC-600-2006-013-SF.
- California Department of Transportation (Caltrans). (2015). Scenic Highway Program FAQs: Caltrans Landscape Architecture Program. Available at: www.dot.ca.gov/hq/LandArch/scenic/faq.htm.
- California Department of Transportation (Caltrans). (2013). *California Scenic Highway Program, Officially Designated State Scenic Highways*. Available at: <http://www.dot.ca.gov/hq/LandArch/scenic/schwly.htm>.
- California Geological Survey. (2007). Alquist-Priolo Earthquake Fault Zone Maps. Available at: <http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm>.
- California Geological Survey. (2013). Seismic Hazards Zonation Program. Retrieved April 15, 2015 available at: <http://www.conservation.ca.gov/cgs/shzp/Pages/affected.aspx>.
- California Code of Regulations. *Guidelines for Implementation of the California Environmental Quality Act*. Title 14, Section 15000, et seq. 14 CCR 15000
- California Office of Emergency Services. 2015. Business Plan/EPCRA 312. Available at: www.caloes.ca.gov/for-businesses-organizations/plan-prepare/hazardousmaterials/hazmat-business-plan.
- El Dorado County. (2016). *Draft Biological Resources Policy Update and Oak Resources Management Plan Environmental Impact Report*. State Clearinghouse No. 2015072031. Placerville, CA: El Dorado County Planning Services.
- El Dorado County. (2003). *El Dorado County General Plan Draft Environmental Impact Report*. State Clearinghouse No. 2001082030. Placerville, CA: El Dorado County Planning Services.

- El Dorado County. (2004, July 19). *El Dorado County General Plan: A Plan for Managed Growth and Open Roads; A Plan for Quality Neighborhoods and Traffic Relief*. Placerville, CA: El Dorado County Planning Services.
- El Dorado County Air Pollution Control District. (2002). *El Dorado County APCD- CEQA Guide*. Available at: https://www.edcgov.us/Government/AirQualityManagement/documents/Chapter2_RF6.pdf
- El Dorado County. (2005, July 21). Asbestos Review Areas, Western Slope, El Dorado County, California. Available at: <http://www.edcgov.us/Government/AirQualityManagement/Asbestos.aspx>.
- El Dorado County Air Quality Management District (AQMD). (2000). *Rules and Regulations of the El Dorado County Air Quality Management District*. Available at: <http://www.arb.ca.gov/DRDB/ED/CURHTML/R101.HTM>.
- El Dorado County Air Quality Management District (AQMD). (2002). *Guide to Air Quality Assessment: Determining the Significance of Air Quality Impacts Under the California Environmental Quality Act*. Available at: http://www.edcgov.us/Government/AirQualityManagement/Guide_to_Air_Quality_Assessment.aspx.
- El Dorado County Geographic Information System (GIS) Data. Placerville, CA: Esri ArcGIS. Available at: El Dorado County controlled access data GISDATA\LIBRARIES.
- Federal Emergency Management Agency (FEMA). (2008). FEMA Map Service Center, Current FEMA Issued Flood Maps: El Dorado County, California, unincorporated area, no. 06017C1025E. Available at: <http://map1.msc.fema.gov/idms/IntraView.cgi?KEY=94926033&IFIT=1>.
- Governor's Office of Planning and Research (OPR). (2008, June 19). *Technical advisory: CEQA and climate change: Addressing climate change through California Environmental Quality Act Review*. Sacramento, CA. Available at: <http://www.opr.ca.gov/ceqa/pdfs/june08-ceqa.pdf>.
- Kroeber, A.L. (1925). *Handbook of the Indians of California. Bulletin 78*. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
- Sacramento Metropolitan Air Quality Management District (SMAQMD). (2010). Construction GHG Emissions Reductions. Available at: <http://airquality.org/ceqa/cequguideupdate/Ch6FinalConstructionGHGReductions.pdf>
- State Water Resources Control Board (SWRCB). (2013). Storm Water Program, Municipal Program. Available at: www.waterboards.ca.gov/water_issues/programs/stormwater/municipal.shtml.
- National Earthquake Hazards Reduction Program (NEHRP). (2009). Background and History. Available at: www.nehrp.gov/about/history.htm.
- North Central Information Center. (June 2015). *Record search Results for 109-480-07*. Sacramento, CA.
- San Luis Obispo County Air Pollution Control District (SLOAPCD). (2012, April). A Guide for Assessing The Air Quality Impacts For Projects Subject To CEQA Review. Available at: http://www.slocleanair.org/images/cms/upload/files/CEQA_Handbook_2012_v1.pdf.
- Sycamore Environmental Consulting, Inc. (June 2017). *Botanical Survey Results for APN 109-480-07 on Business Drive, Shingle Springs, El Dorado County, CA*.
- T. Kear Transportation Planning & Management, Inc. (February 29, 2018). *Technical Memo, Leave It To Us Self Storage On-site Transportation Review*. Available at: El Dorado County Planning Commission Legistar
- U.S. Department of Agriculture (USDA) Soil Conservation Service and Soil Service. (1974). *Soil Survey of El Dorado Area, California*. Available at: http://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/california/el_doradoCA1974/EDA.pdf

U.S. Department of the Army (2007). *Corps of Engineers Regulation*. Sacramento, CA.

U.S. Environmental Protection Agency. (2014). Summary of the Energy Policy Act. Available at: www2.epa.gov/laws-regulations/summary-energy-policy-act.

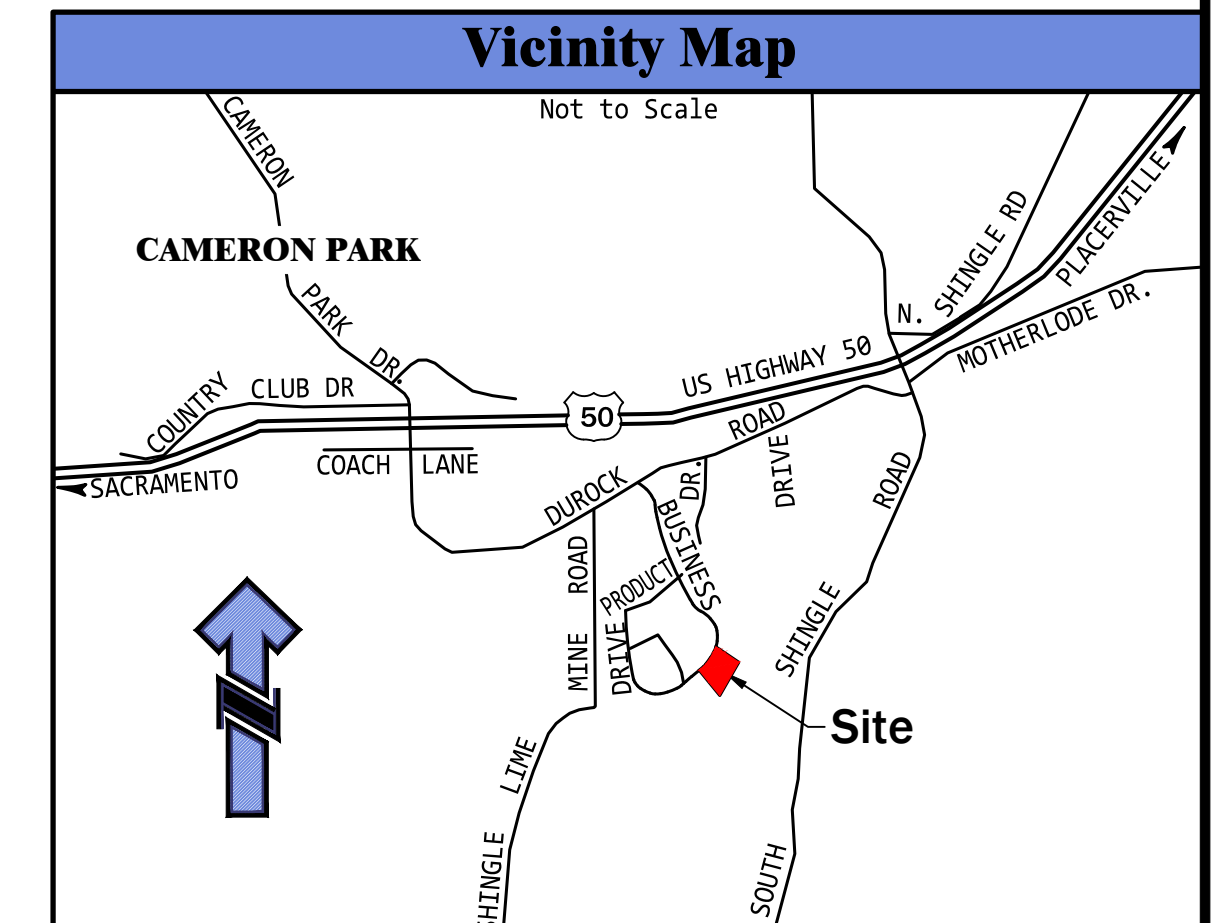
U.S. Environmental Protection Agency. (2015). The Green Book Nonattainment Areas for Criteria Pollutants. Available at: www.epa.gov/airquality/greenbook.

U.S. Green Building Council (USGBC). (2014). LEED v4 for Building Design and Construction Addenda. Updated October 1, 2014. Available at: www.usgbc.org/resources/leed-v4-building-design-and-construction-redline-current-version.

U.S. Green Building Council (USGBC). (2015). LEED Overview. Available at: www.usgbc.org/leed

REVISED PRELIMINARY SITE PLAN FOR Leave It To Us Self Storage

APN: 109-480-07, EL DORADO COUNTY, CA
 March 2018



Project Data	
OWNER	The Lyle A. Hintz Family Trust Marlene A. Carter, Trustee 2260 Talon Drive Shingle Springs, CA 95682 Ph: 530-672-2666 Email: cmolyc@yahoo.com
APPLICANT	LEBECK • YOUNG ENGINEERING, INC. 3430 ROBIN LANE, BLDG. #2 CAMERON PARK, CA 95682 Ph: 530-677-4080 Fax: 530-677-4096
PREPARED BY	LEBECK YOUNG ENGINEERING, INC.
SCALE	AS SHOWN
CONTOUR INTERVAL	2 FEET
SOURCE OF TOPOGRAPHY	FIELD SURVEY BY ALAN DIVERS P.L.S.
SECTION, TOWNSHIP & RANGE	PORTION OF SEC. 11, T.9N., R.9E., M.D.M.
ASSESSOR'S PARCEL NO.	APN: 109-480-07
ZONING	I-DC
TOTAL AREA	7.213± ACRES
TOTAL NUMBER OF PARCELS	1-EXISTING
WATER SUPPLY	EID
SEWAGE DISPOSAL	EID
FIRE PROTECTION	EL DORADO COUNTY FIRE PROTECTION DISTRICT

Abbreviations			
BSBL	BUILDING SETBACK LINE	GT	GRATE ELEVATION
BFP	BACKFLOW PREVENTER	LF	LEFT
BF	BOTTOM OF WALL AT FG	LPG	PROPANE TANK
CH	CHORD BEARING	(P)	PROPOSED
CN	CONCRETE ELEVATION	PAD	FINISHED PAD
CO	CLEANOUT	PIV	POST INDICATOR VALVE
CV	CHECK VALVE	PP	POWER POLE
DCV	DOUBLE DETECTOR CHECK VALVE	POC	POINT OF CONNECTION
DI	DRAIN INLET	PUE	PUBLIC UTILITIES EASEMENT
DWY	DRIVEWAY	R	RADIUS
(E)	EXISTING	R/W	RIGHT OF WAY
E.D.C.	EL DORADO COUNTY	RT	RIGHT
EL	ELEVATION	SD	STORM DRAIN
EP	EDGE OF PAVEMENT	SS	SEWER SERVICE
FC	FACE OF CURB	SG	SUBGRADE
FF	FINISHED FLOOR	TBC	TOP BACK OF CURB
FG	FINISHED GRADE	TC	TOP OF CURB ELEVATION
FH	FIRE HYDRANT	TW	TOP OF WALL ELEVATION
FL	FLOWLINE	UPC	UNIVERSAL PLUMBING CODE
FND.	FOUND	WM	WALL MOUNT LUMINAIRE
FDC	FIRE DEPT. CONNECTION	WM	WATER METER
GB	GRADE BREAK	WL	WATER LINE

Project Summary	
Building Construction Type	
Blgd. 1	TYPE VB (SPRINKLERED)
Blgd. 2-9	TYPE IIB OR VB (SPRINKLERED)
Building Area Summary	
Blgd. 1	30' x 90' = 2,700 SF (GROUND FLOOR) RETAIL STORAGE
	30' x 260' = 7,800 SF (GROUND FLOOR) MGR. APTS.
Blgd. 2	30' x 90' = 2,700 SF (SECOND FLOOR) STORAGE
Blgd. 3	30' x 290' = 8,700 SF STORAGE
Blgd. 4	30' x 290' = 8,700 SF STORAGE
Blgd. 5	30' x 290' = 8,700 SF STORAGE
Blgd. 6	30' x 290' = 8,700 SF STORAGE
Blgd. 7	30' x 290' = 8,700 SF STORAGE
Blgd. 8	30' x 290' = 8,700 SF STORAGE
Blgd. 9	30' x 290' = 8,700 SF STORAGE
TOTAL	82,800 SF
RV Storage Summary	
Spaces	30 Each
	12' x 32' = 384 SF
TOTAL	10,368 SF
Parking Summary	
	1 HC + 6 STANDARD = 7 STALLS
Building Envelope	
	EXISTING, PER PM 48-141 = 73,494 SF (1.69 Acres)
	PROPOSED, PER REQUESTED REVISION = 246,177 SF (5.65 Acres)
Revision to Building Envelope	
	THE DEVELOPER IS REQUESTING A REVISION TO THE EXISTING BUILDING ENVELOPE AS SHOWN ON PARCEL 7 OF PARCEL MAP 48-141 AS ALLOWED BY NOTE #1 OF SAID PARCEL MAP.

ZONING ADMINISTRATOR: _____ APPROVAL/DENIAL DATE: _____
 BOARD OF SUPERVISORS: _____ APPROVAL/DENIAL DATE: _____

141-84

48-141

PARCEL MAP BARNETT BUSINESS PARK UNIT NO. 2 PHASE 2

BEING PORTIONS OF THE S 1/2 OF SECTION 11 AND
THE SW 1/4 OF SECTION 12, T.9N.,R.9 E. M.D.M.

COUNTY OF EL DORADO, STATE OF CALIFORNIA
JANUARY, 2005 SCALE 1"=200'

DIMENSION CONTROL—LAND SURVEYORS

SHEET 1 OF 4

NOTES

- REFER TO DOCUMENT # 2005-0015203 FOR THE CONSENT OF ALL PARTIES HAVING RECORD TITLE INTEREST.
- REFER TO DOCUMENT # 2005-0015204 FOR COVENANTS, CONDITIONS AND RESTRICTIONS THAT EFFECT THIS SUBDIVISION.
- REFER TO DOCUMENT # 2005-0015205 FOR CREATION AND RULES OF THE PROPERTY OWNERS ASSOCIATION THAT EFFECT THIS PROJECT.
- SEE SHEET 4 FOR INFORMATION ON SET BACKS, RESTRICTIONS AND FOR OTHER NOTES.
- EASEMENTS:
 - THE PRIVATE NON-EXCLUSIVE EASEMENT FOR ROAD AND UTILITY PURPOSES RECORDED IN BOOK 2038 AT PAGE 159, OFFICIAL RECORDS HAS REVERTED TO THE ORIGINAL OWNERS AND NO LONGER EXISTS. THE ROADS AND PUBLIC UTILITIES EASEMENTS SHOWN AND OFFERED HEREBY SUPERSEDE ALL ACCESS AND UTILITY ISSUES ADDRESSED IN THE DEED.
 - THE FOLLOWING EASEMENTS REFERENCED IN THE PRELIMINARY TITLE REPORT BY INTER-COUNTY TITLE ORDER NUMBER PV-212721-JM AND DATED 12-08-2003 ARE INDEFINITE AS TO LOCATION.

PT&T	84 O.R. 405
CRAWFORD DITCH	85 O.R. 285
ROAD AND UTILITY	2238 O.R. 672

SURVEYOR'S STATEMENT

THIS MAP WAS PREPARED BY ME OR UNDER MY DIRECTION AND IS BASED UPON A FIELD SURVEY IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCE AT THE REQUEST OF KFRO INVESTMENTS, INC. ON JANUARY 7, 2004. I HEREBY STATE THAT THIS PARCEL MAP SUBSTANTIALLY CONFORMS TO THE APPROVED OF CONDITIONALLY APPROVED TENTATIVE MAP, IF ANY. ALL MONUMENTS ARE OF THE CHARACTER AND OCCUPY THE POSITIONS INDICATED AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED.

2-18-05
DATE

Earl F. Kistner
EARL F. KISTNER LS 4558
LICENSE EXPIRES 09/30/05



COUNTY SURVEYOR'S STATEMENT

I HAVE EXAMINED THE MAP. THE SUBDIVISION AS SHOWN IS SUBSTANTIALLY THE SAME AS IT APPEARED ON THE TENTATIVE MAP, IF REQUIRED, AND ANY APPROVED ALTERATIONS THEREOF. ALL PROVISIONS OF CHAPTER 2 OF THE SUBDIVISION MAP ACT AND OF ANY LOCAL ORDINANCES APPLICABLE AT THE TIME OF APPROVAL OF THE TENTATIVE MAP, IF REQUIRED, HAVE BEEN COMPLIED WITH. I AM SATISFIED THAT THE MAP IS TECHNICALLY CORRECT.

THE ROAD AND PUBLIC UTILITIES EASEMENTS WITHIN PARCELS R1, R2, AND R3 ARE HEREBY ACCEPTED AND THE UNDERLYING FEE OF PARCELS R1, R2 AND R3 ARE HEREBY REJECTED. SUCH DEDICATED ROADS AND EASEMENTS WILL NOT BE COUNTY MAINTAINED UNLESS AND UNTIL THEY HAVE BEEN ACCEPTED INTO THE COUNTY MAINTAINED ROAD SYSTEM BY RESOLUTION OF THE BOARD OF SUPERVISORS.

PARCELS A AND B AS ROAD AND PUBLIC UTILITY EASEMENTS ARE HEREBY REJECTED.

SHINGLE LIME MINE ROAD AS ROAD AND PUBLIC UTILITY EASEMENTS INCLUDING THE UNDERLYING FEE THERETO, FOR ANY AND ALL PUBLIC PURPOSES ARE HEREBY REJECTED.

THE 60' WIDE EMERGENCY ROAD AND PUBLIC UTILITY EASEMENT ARE HEREBY ACCEPTED. SUCH DEDICATED ROADS AND EASEMENTS WILL NOT BE COUNTY MAINTAINED UNLESS AND UNTIL THEY HAVE BEEN ACCEPTED INTO THE COUNTY MAINTAINED ROAD SYSTEM BY RESOLUTION OF THE BOARD OF SUPERVISORS.

EASEMENTS FOR DRAINAGE ARE HEREBY REJECTED.

FURTHER, THE COUNTY SURVEYOR HEREBY REJECTS THE OFFERS OF DEDICATION TO THE COUNTY OF EL DORADO FOR OTHER EASEMENTS AS SHOWN ON THE MAP.

DATED: 2-24-05

Daniel Russell
DANIEL S. RUSSELL LS 5017 LICENSE EXPIRES 12/31/05
COUNTY SURVEYOR
COUNTY OF EL DORADO, CALIFORNIA

BY: Richard L. Briner
RICHARD L. BRINER LS 5084 LICENSE EXPIRES 06/30/07
DEPUTY SURVEYOR
COUNTY OF EL DORADO, CALIFORNIA



COUNTY RECORDER'S CERTIFICATE

I, WILLIAM E. SCHULTZ, HEREBY CERTIFY THAT INTER-COUNTY TITLE CO. PARCEL MAP GUARANTEE NO. G1978-48764 WAS FILED WITH THIS OFFICE AND THAT THIS PARCEL MAP WAS ACCEPTED FOR RECORD AND FILED THIS 24th DAY OF February, 2005, AT 3:20:18 IN BOOK 48 OF PARCEL MAPS AT PAGE 141 AT THE REQUEST OF KFRO INVESTMENTS, INC.

DOCUMENT NO. 2005-0015202

William E. Schultz
WILLIAM E. SCHULTZ
COUNTY RECORDER, CLERK
COUNTY OF EL DORADO

BY: Cindy Gray
DEPUTY

Attachment 2

141-84

48-141

NO.	RADIUS	DELTA	LENGTH	CHORD	NO.	RADIUS	DELTA	LENGTH	CHORD
1	300.00'	18'00"10"	94.26'	N25°59'55"W 93.88'					
2	270.00'	26°09'05"	123.24'	N39°53'25"E 122.17'					
3	500.00'	16°51'23"	147.10'	N15°01'39"W 146.57'					
4	1004.93'	17°27'45"	306.28'	N78°49'19"W 305.10'					
5	530.00'	43°22'43"	401.26'	N28°17'18"W 391.75'					
6	60.00'	44°52'30"	46.99'	N44°09'42"W 45.80'					
7	60.00'	60°00'00"	62.83'	N37°02'03"W 60.00'					
8	60.00'	09°57'47"	10.43'	N72°00'56"W 10.42'					
9	300.00'	08°40'38"	45.43'	N69°20'01"E 45.39'					
10	60.00'	75°07'30"	78.67'	N15°50'18"E 73.16'					
11	60.00'	60°00'00"	62.83'	N83°24'03"E 60.00'					
12	60.00'	48°24'21"	50.69'	N29°11'53"E 49.20'					
13	60.00'	60°00'00"	62.83'	N37°02'03"W 60.00'					
14	60.00'	80°02'13"	83.81'	N32°59'03"E 77.16'					
15	60.00'	39°57'47"	41.85'	N87°00'57"W 41.01'					
16	60.00'	50°02'13"	52.40'	N17°59'04"E 50.75'					
17	60.00'	116°07'36"	121.61'	N24°52'40"E 101.84'					
18	60.00'	53°33'06"	56.08'	N60°02'19"E 54.06'					
19	60.00'	60°00'00"	62.83'	N63°11'08"W 60.00'					
20	330.00'	18°00'10"	103.69'	N25°59'55"W 103.26'					
21	270.00'	18°00'10"	84.84'	N25°59'55"W 84.49'					
22	270.00'	16°56'50"	79.86'	N81°06'06"E 79.57'					
23	300.00'	15°54'11"	83.27'	N81°37'26"E 83.00'					
24	330.00'	17°52'11"	102.92'	N80°38'25"E 102.51'					

NO.	RADIUS	DELTA	LENGTH	CHORD
22	270.00'	16°56'50"	79.86'	N81°06'06"E 79.57'
23	300.00'	15°54'11"	83.27'	N81°37'26"E 83.00'
24	330.00'	17°52'11"	102.92'	N80°38'25"E 102.51'

PARCEL MAP

BARNETT BUSINESS PARK UNIT NO. 2 PHASE 2

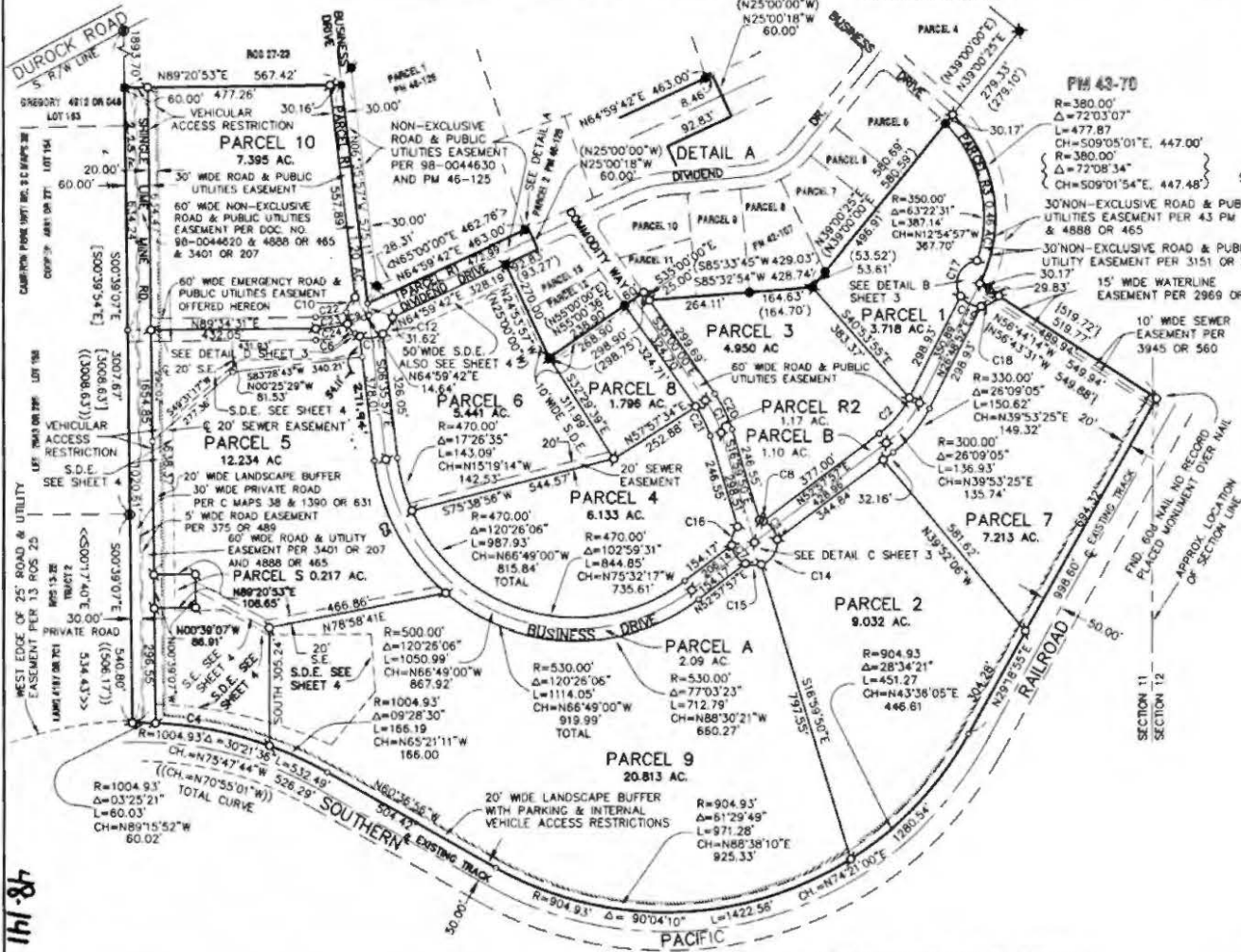
BEING PORTIONS OF THE S 1/2 OF SECTION 11 AND THE SW 1/4 OF SECTION 12, T.9N., R.9 E. M.D.M.

COUNTY OF EL DORADO, STATE OF CALIFORNIA
JANUARY, 2005 SCALE 1"=200'

DIMENSION CONTROL—LAND SURVEYORS
SHEET 2 OF 4

BASIS OF BEARINGS

THE MERIDIAN OF THIS SURVEY IS IDENTICAL WITH THAT OF THAT CERTAIN RECORD OF SURVEY RECORDED IN BOOK 24 OF SURVEYS AT PAGE 27 AND IS BASED UPON THE MONUMENTS SHOWN AS FOUND ALONG THE EAST LINE OF CAMERON PARK UNIT NO. 3 RECORDED IN BOOK C OF MAPS AT PAGE 38, EL DORADO COUNTY OFFICIAL RECORDS AND IS TAKEN AS S00°39'07"E.



- ### LEGEND
- FOUND 3/4" CIP STAMPED LS 2720
 - FOUND 3/4" CIP STAMPED LS 4663
 - FOUND 1 1/2" CIP STAMPED RCE 26342, 1988
 - FOUND 3/4" CIP STAMPED RCE 26342, 1988
 - FOUND 3/4" CIP STAMPED RCE 26342, 1991
 - FOUND 5/8" REBAR & 2" ALUM CAP
 - STAMPED LS 4558, 2003
 - SET RR SPIKE STAMPED LS 4558, 2005
 - DIMENSION POINT NOTHING FOUND OR SET

- ### REFERENCES
- PM 43-70 PM 42-107
 - PM 46-125 SD C-38
 - ROS 2-88 ROS 27-23

- ### LEGEND
- | | RECORD DATA PER 43 PM 70
 - [] RECORD DATA PER C MAPS 38
 - () RECORD DATA PER 42 PM 107
 - (()) RECORD DATA PER 2238 OR 672
 - [[] RECORD DATA PER 2038 OR 159
 - < > RECORD DATA PER 46 PM 125
 - << >> RECORD DATA PER 13 ROS 25
 - VEHICULAR ACCESS RESTRICTION
 - S.E. SEWER EASEMENT
 - S.D.E. STORM DRAIN EASEMENT

NOTES

- (1) PARCEL 5 IS TO BE DEDICATED TO EL DORADO IRRIGATION DISTRICT FOR A PUMP STATION FACILITY.
- SEE SHEET 4 FOR ADDITIONAL NOTES

48-141A

48-141A

48-141 B

48-141 B

48-141 B

48-141 B

PARCEL MAP

BARNETT BUSINESS PARK UNIT NO. 2 PHASE 2

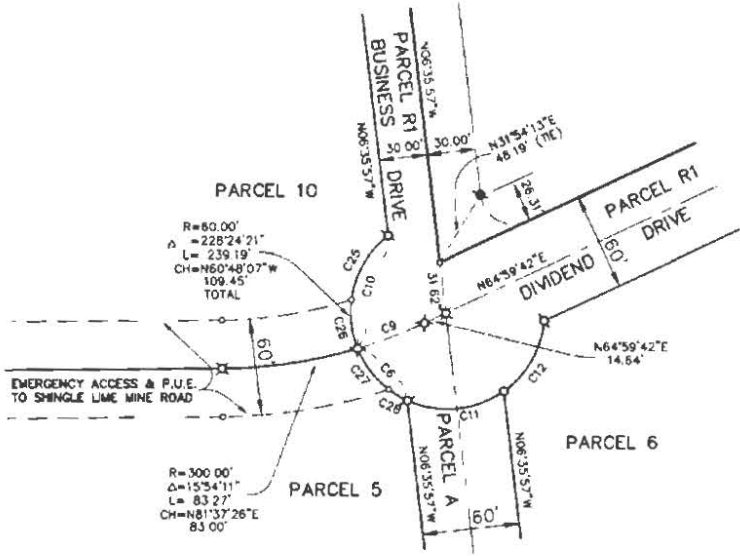
BEING PORTIONS OF THE S 1/2 OF SECTION 11 AND THE SW 1/4 OF SECTION 12, T.9N., R.9 E. M.D.M.

COUNTY OF EL DORADO, STATE OF CALIFORNIA
JANUARY, 2005

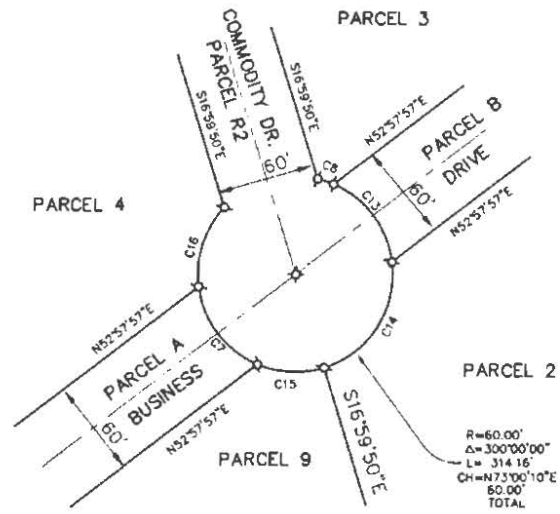
DIMENSION CONTROL-LAND SURVEYORS

SHEET 3 OF 4

CURVE TABLE					
NO.	RADIUS	DELTA	LENGTH	CHORD	
6	60.00'	44°52'30"	46.99'	N44°09'42"W	45.80'
7	60.00'	60°00'00"	62.83'	N37°02'03"W	60.00'
8	60.00'	09°57'47"	10.43'	N72°00'56"W	10.42'
9	300.00'	08°40'38"	45.43'	N69°20'01"E	45.39'
10	60.00'	75°07'30"	78.67'	N15°50'18"E	73.16'
11	60.00'	60°00'00"	62.83'	N83°24'03"E	60.00'
12	60.00'	48°24'21"	50.69'	N29°11'53"E	49.20'
13	60.00'	60°00'00"	62.83'	N37°02'03"W	60.00'
14	60.00'	80°02'13"	83.81'	N32°59'03"E	77.16'
15	60.00'	39°57'47"	41.85'	N87°00'57"W	41.01'
16	60.00'	50°02'13"	52.40'	N17°58'04"E	50.75'
17	60.00'	116°07'36"	121.61'	N24°52'40"E	101.84'
18	60.00'	53°33'08"	56.08'	N60°02'19"E	54.08'
19	60.00'	60°00'00"	62.83'	N63°11'08"W	60.00'
25	60.00'	45°43'51"	47.89'	N30°32'08"E	46.63'
26	60.00'	29°23'39"	30.78'	N07°01'37"W	30.45'
27	60.00'	30°49'04"	32.27'	N37°07'59"W	31.88'
28	60.00'	14°03'28"	14.72'	N59°34'14"W	14.68'



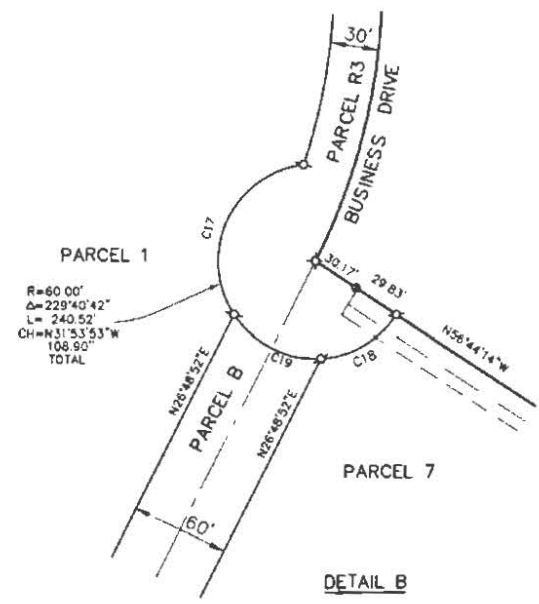
DETAIL D



DETAIL C



NOT TO SCALE



DETAIL B

- LEGEND
- ◻ SET 5/8" REBAR & 2" ALUM CAP STAMPED LS 4558 2004
 - ✱ SET RR SPIKE STAMPED LS 4558 2005
 - DIMENSION POINT NOTHING FOUND OR SET
 - FOUND 3/4" OP STAMPED LS 4663
 - FOUND 3/4" CIP STAMPED RCE 26342, 1991

48-141-C

DETAIL SHEET

PARCEL MAP BARNETT BUSINESS PARK UNIT NO. 2 PHASE 2

48-141-C

LEGEND

- DIMENSION POINT NOTHING FOUND OR SET
- P.U.E PUBLIC UTILITY EASEMENT
- S.E. SEWER EASEMENT

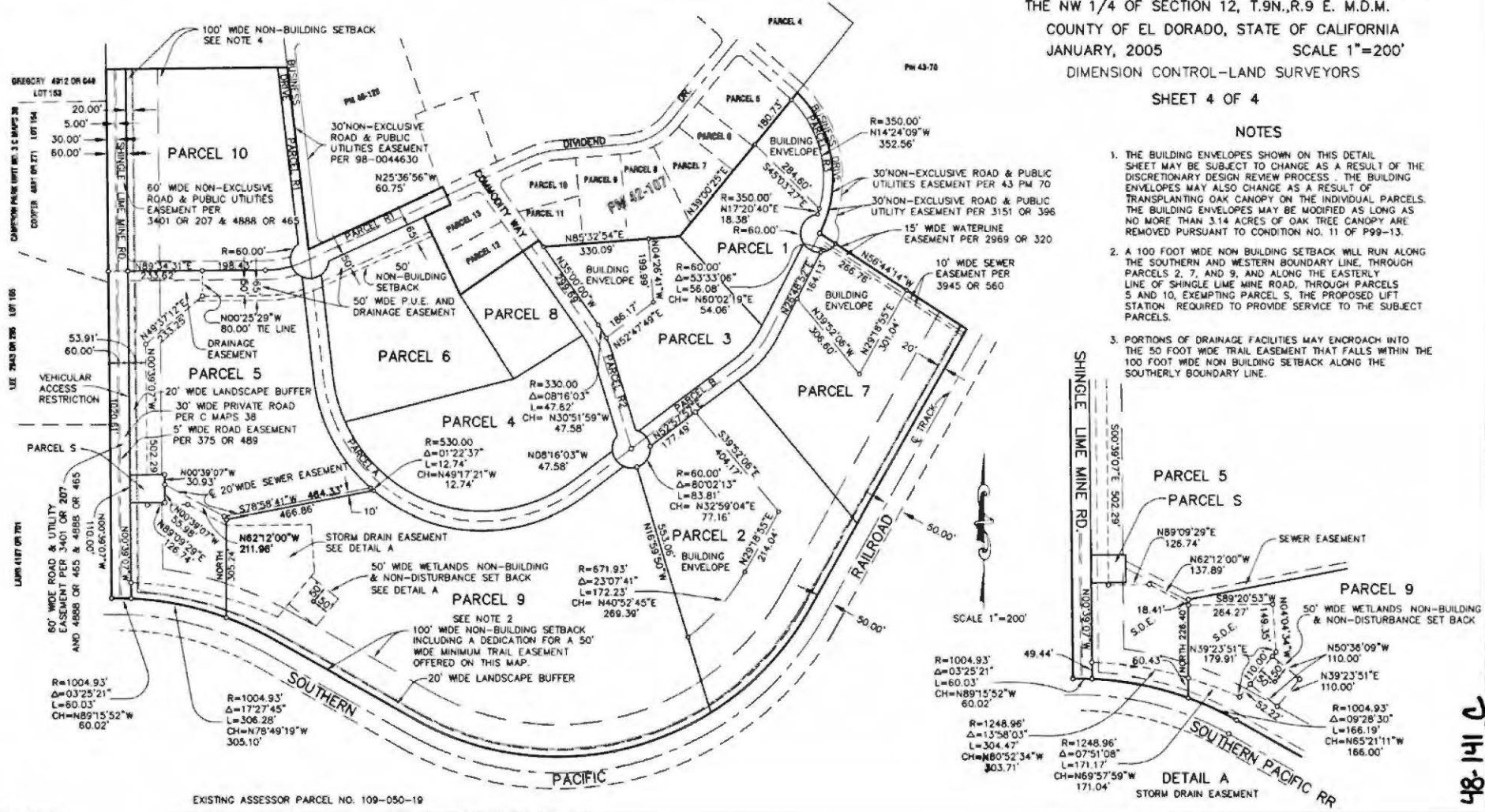
SCALE 1"=200'

BEING PORTIONS OF THE NE 1/4 OF SECTION 11 AND
THE NW 1/4 OF SECTION 12, T.9N.,R.9 E. M.D.M.
COUNTY OF EL DORADO, STATE OF CALIFORNIA
JANUARY, 2005 SCALE 1"=200'
DIMENSION CONTROL-LAND SURVEYORS

SHEET 4 OF 4

NOTES

1. THE BUILDING ENVELOPES SHOWN ON THIS DETAIL SHEET MAY BE SUBJECT TO CHANGE AS A RESULT OF THE DISCRETIONARY DESIGN REVIEW PROCESS. THE BUILDING ENVELOPES MAY ALSO CHANGE AS A RESULT OF TRANSPLANTING OAK CANOPY ON THE INDIVIDUAL PARCELS. THE BUILDING ENVELOPES MAY BE MODIFIED AS LONG AS NO MORE THAN 3.14 ACRES OF OAK TREE CANOPY ARE REMOVED PURSUANT TO CONDITION NO. 11 OF P99-13.
2. A 100 FOOT WIDE NON BUILDING SETBACK WILL RUN ALONG THE SOUTHERN AND WESTERN BOUNDARY LINE, THROUGH PARCELS 2, 7, AND 9, AND ALONG THE EASTERLY LINE OF SHINGLE LIME MINE ROAD, THROUGH PARCELS 5 AND 10, EXEMPTING PARCEL 5. THE PROPOSED LIGHT STATION REQUIRED TO PROVIDE SERVICE TO THE SUBJECT PARCELS.
3. PORTIONS OF DRAINAGE FACILITIES MAY ENCRDACH INTO THE 50 FOOT WIDE TRAIL EASEMENT THAT FALLS WITHIN THE 100 FOOT WIDE NON BUILDING SETBACK ALONG THE SOUTHERLY BOUNDARY LINE.



EXISTING ASSESSOR PARCEL NO. 109-050-19

48-141-C

48-141-C

REVISED PRELIMINARY DRAINAGE REPORT

for

LEAVE IT TO US SELF STORAGE

SHINGLE SPRINGS, CA



LEBECK • YOUNG

ENGINEERING, INC.

3430 Robin Lane, Bldg. #2, Cameron Park, CA 95682
(530) 677-4080; Fax (530) 677-4096
e-mail: bobbie@lebeckyoung.com

By: B. Lebeck, P.E.
January 2018

Attachment 3

Leave It To Us Self Storage

Shingle Springs, CA

APNs: 109-480-07



VICINITY MAP

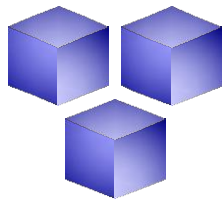
NOT TO SCALE

NAME OF APPLICANT:

Lyle A. Hintz Family Trust
Marlene Carter, Trustee
2260 Talon Drive
Shingle Springs, CA 95682
Ph: 530-672-2666
Email: cmollyc@yahoo.com

OWNER OF RECORD:

Lyle A. Hintz Family Trust
Marlene Carter, Trustee
2260 Talon Drive
Shingle Springs, CA 95682
Ph: 530-672-2666
Email: cmollyc@yahoo.com



LEBECK ■ YOUNG ENGINEERING, INC.

3430 ROBIN LANE, BLDG. #2

CAMERON PARK, CA 95682

Ph. (530) 677-4080 Fax. (530) 677-4096

Preliminary Drainage Analysis – (Revision 1 – January 2018) **for Leave It To Us Self Storage**

INTRODUCTION AND BACKGROUND

This property is located in the Barnett Business Park, Unit No. 2, Phase 2. The 7.2-acre lot (Parcel 7) was created within the business park by Parcel Map 48/141. Parcel 7 is located adjacent to and on the east side of Business Drive in Shingle Springs, California. The site is currently owned by Lyle A. Hintz Family Trust, Marlene Carter – Trustee. Adjacent to the east of the project site is the Southern Pacific railroad tracks and property.

The site and the surrounding area is covered with grasses, brush and oak trees. The drainage in the area flows from the northeast, through the site, to the southwest into an existing detention pond located adjacent to the east of Shingle Lime Mine Road. This detention pond is Detention Pond 1 from the “Barnett Business Park – Unit 2, Phase 2 Drainage Study” by CTA, September 2010. This drainage report was done more recently as the owners of Barnett Business Park retained CTA to analyze the drainage and recommend drainage related modifications. Per our field investigations, the modifications recommended to be constructed within our tributary watershed areas appear to have been constructed/implemented.

Parcel Map, 48/141, which created Parcel 7, also created Building Envelopes on Parcels 1, 2, 3 and 7 in order to preserve oak trees. At the time the parcel map (PM 48/141) was completed (2005), there was no El Dorado County (EDC) oak mitigation fee in effect, so the oak trees in the building envelope portions of Parcels 1, 2, 3 and 7 were removed and mitigated by replanting oak trees elsewhere within the Barnett Business Park.

Though the parcel map creates building envelopes on the above mentioned four lots, the parcel map also contains notes that allow for the building envelopes to be revised as long as the additional oak trees are mitigated for pursuant to EDC oak tree policies. It should be noted that currently El Dorado County has a new oak mitigation fee in place per December 2017. The developer will most likely pay the oak mitigation fee for any on-site oak removal outside of the existing building envelope.

Due to the building envelopes shown on the parcel map, the CTA Drainage Study assumed industrial development over the building envelope portion only of Parcels 1, 2, 3, and 7. Therefore, the purpose of this Preliminary Drainage Report is to determine what if any impact the proposed building envelope modification will result in. Of the 7.2-acre property, the Proposed Building Envelope is 5.7 acres or 78% of the property. The previously mitigated Original Building Envelope was 1.7 Acres or 23% of the property, so the building envelope is being increased by 4 acres.

The drainage for the site was analyzed using methodology as discussed in the El Dorado County Drainage Manual, adopted March 15, 1995.

HYDROLOGY

- **Methods**

The site was analyzed using peak runoff rates and volumes as determined by the U.S. Army Corp of Engineers Hydraulic Engineering Circular, HEC-HMS program. The HEC-HMS program was used in coordination with the Soil Conservation Service (SCS) Dimensionless Unit Hydrograph Method and the El Dorado County Drainage Manual, adopted March 15, 1995, in order to determine the peak runoff rates for both pre-development and post-development scenarios. The HEC-HMS program is the up-dated program from HEC-1.

The input data for the HEC-HMS program consists of watershed areas, curve numbers, lag time, channel dimensions, and detention pond data (where applicable). Watershed areas were determined by utilizing ACAD in combination with on-site topographical data (for on-site) and USGS (for off-site watersheds). See Exhibits W-Pre and W-Post in this report for watershed areas.

Curve numbers were developed using hydrological soil group data obtained from the 1974 USDA Soils Conservation Service and Forest Service "Soil Survey of El Dorado Area, California". Soils are rated as Type A, having high infiltration rates, through Type D, having the lowest infiltration rate. The Soil Survey Maps were overlaid onto the watershed areas in order to determine the amounts of each soil type present within each watershed area. Curve numbers were then determined using the SCS Worksheet 2 and Tables 2-2a and 2-2c.

Lag time is estimated to be 0.6 times the time of concentration for each sub-basin. The time of concentration for each sub-basin was determined using the SCS method of sheet flow, shallow concentrated flow, and channel flow.

PROCEDURE:

A. Watershed Areas:

See "U.S.G.S Exhibit Map", Exhibit 1 in the Appendix for an overview of the off-site watershed areas; See "Pre-Development Watershed Exhibit Map", W-PRE for a zoomed in pre-development view around the site; and "Post-Development Watershed Exhibit Map", W-POST for the zoomed in view of post-development watershed areas around the site.

B. Mean Annual Precipitation, Pptn:

Use Pptn = 34 inches (see Mean Annual Rainfall exhibit in the Appendix)

C. Time of Concentration, Tc:

Per Section 2.4 of the EDC Drainage Manual:

- Sheet Flow (L < 300 ft.):

$$T_t = \frac{0.007 (nL)^{0.8}}{(P2)^{0.5} S^{0.4}} ;$$

L = length of longest
watercourse (ft)

P2 = 2-yr, 24-hour rainfall depth (in-in)

S = land slope (ft/ft)

Tt = sheet flow travel time (hrs)

n = overland roughness coefficient

(per Table 2.4.3 - See Appendix)

- Shallow Concentrated Flow:

$$V = 16.1345 S_o^{0.5} \text{ (unpaved); } \quad V = \text{shallow-concentrated flow velocity (ft./s)}$$

S_o = slope (ft/ft)

$$V = 20.3283 S_o^{0.5} \text{ (paved);}$$

Tt = L/V ; Travel time is the flow path length divided by the velocity.

- Channel Flow:

Velocity is estimated by Manning's Equation, assuming discharge equal the average annual value (2-yr event). The channel flow travel time is the channel length divided by the velocity.

See attached Drainage Calculations Chart for Tt of each drainage area. A minimum time of concentration of 5 minutes was used.

D. Intensity, I:

See Figures in Appendix.

E. Runoff Coefficient, C:

Per Figures 4 & 6 of the EDC Drainage Manual (See Appendix):

- Below 1640' elevation (SCS type 1 storm)
- Hydrologic Soil Group = B, See Soil Survey Map (Figs. S-PRE & S-POST in the Appendix)
- Curve No., CN (See Drainage Chart for CN numbers used, See Table 2-2a and 2-2c. in the Appendix for determination of curve numbers used. Curve numbers are selected according to soil hydrological group, cover type and hydrologic condition.)
- (See Drainage Chart for "C" values)

This project site and the surrounding off-site watersheds lie within Hydrological soil group B (RfC soil, Rescue very stony sandy loam). Once the hydrological soil group was determined, the watershed cover type was analyzed. Utilizing Table 2-2a, a curve number of 56 was used for pre-developed watersheds which corresponds with land which is covered with brush and has less than 50% ground cover within hydrological soil group B. For watersheds that are partially developed, a composite curve number was used.

Since this project is below 1640' elevation, the SCS storm type is a Type 1. Therefore, Figures 4 (10-year) and 6 (100-year) were used along with the curve number and time of concentration to determine the runoff coefficient "C".

F. Peak Discharge, Q (cfs):

$Q = C I A$ (See Drainage Chart for Q)

G. Pipes Size Requirements:

See Drainage Chart for pipe sizes requirements.

H. Detention Pond:

The HEC-HMS program for detention ponds utilizes the elevation of the bottom of the pond, surface areas of the pond at incremental elevations, and spillway/outlet structure dimensions and hydraulic data developed into a rating curve. The pond design was checked for a 10-yr and a 100-year storm. The detention pond stores the storm water runoff during peak flows and meters the water out slowly so as to keep the runoff from the site to at or below pre-development levels. The detention pond data used for analyses is summarized in the Detention Pond portion of this report.

SUMMARY AND CONCLUSIONS:

As stated in the Introduction and Background section of this report, the development of the Building Envelope portion of Parcel 7, PM 48/141 was already mitigated for by Barnett Business Park Unit 2, Phase 2 with the construction of Detention Pond 1 located downstream of the

subject property on the east side of Shingle Lime Mine Road. The drainage calculations for Detention Pond 1 can be found in the “Barnett Business Park – Unit 2, Phase 2 Drainage Study” by CTA – September 2010.

However, we are increasing the size of the existing building envelope from 1.7 acres to 5.7 acres of the existing 7.2-acre property, so we needed to analyze the impact of the increased building envelope and impervious surfaces on the peak discharge from the property due to this increase in building envelope size. There are off-site watersheds to the northeast and east (O-1 and O-2) which drain to an existing ditch located along the westerly side of the railroad tracks. For a photo of this existing ditch, see the “Photos” section of this report. Discharge Point ‘A’ is the total off-site storm water at this ditch at the north easterly corner of our site (i.e. prior to the ditch flowing adjacent to the project site). Discharge Point ‘B’ is the total tributary areas of this same ditch as it exists past the south easterly corner of our property. Discharge Point ‘B’ contains 4 acres of our pre-development site and 5.7 acres of our post-development site. Lastly, Discharge Point ‘C’ is the remaining portion of the site which drains to the southwest, through the adjacent Parcels 2 and 9 and into Detention Pond 1 (which is located within a storm drainage easement located on Parcel 9). It should be noted that the storm water runoff from Discharge Point ‘B’ also drains down the existing ditch and into Detention Pond 1. The are tributary to Discharge Point ‘C’ was reduced from 3.2 acres (pre-development) to 1.6 acres (post-development) in order to keep the flows at or below pre-development levels.

The watershed area to Discharge Point ‘B’ was increased from pre-development, then a detention pond was designed to store the run-off and keep the flows tributary to Discharge Point ‘B’ at or below pre-development levels.

The results of our analysis are:

	Pre-Development		Post-Development without Det. Pond		Post-Development With Det. Pond	
	10-year	100-year	10-year	100-year	10-year	100-year
Discharge Pt. ‘A’	9.8	19.5	9.8	19.5	9.8	19.5
Discharge Pt. ‘B’	12.4	25.5	17.8	33.1	13.3	24.7
Discharge Pt. ‘C’	1.4	3.5	1.8	3.6	1.8	3.6

The results show that the development of a larger portion of the parcel results in the need for a detention pond. The detention pond as designed reduces the peak discharges to at or below pre-developments levels for both 10-yr and 100-year storm water events.

DRAINAGE CALCULATION CHART - 10 YEAR

Water Shed No.	Area (Ac.)	Area (sq.mi.)	Curve No.	Sheet Flow						Shallow Conc. Flow					Total Tt (min)	T (lag) Tt * 0.6 (min)	I 10-yr (in/hr)	C (10 yr)	Q 10-YR (cfs)
				L (ft)	H2-H1 (ft)	S (ft/ft)	n	P2 (in in)	Tt (min)	L (ft)	H2-H1 (ft)	S (ft/ft)	V (ft/s)	Tt (min)					
Pre-development																			SEE HEC-HMS DATA
1	4.0	0.00625	65	300	22	0.07	0.24	3.07	21	565	18	0.03	2.9	3	24	14.6	1.40	0.35	
2	3.2	0.00500	62	300	20	0.07	0.24	3.07	22	514	20	0.04	3.2	3	25	14.8	1.39	0.25	
O-1	11.3	0.01766	71	300	21	0.07	0.24	3.07	21	1050	38	0.04	3.1	6	27	16.2	1.31	0.52	
O-2	1.0	0.00156	71	300	14	0.05	0.24	3.07	25	275	20	0.07	4.4	1	26	15.6	1.34	0.52	
O-3	0.8	0.00125	71	-	-	-	-	-	5.00	695	13	0.02	2.2	5	10	6.1	2.90	0.40	
Post-Development																			
1	0.7	0.00109	56											USE	15	9.0	1.70	0.09	
2	1.6	0.00250	70											USE	10	6.0	2.07	0.47	
3	5.0	0.00781	83											USE	10	6.0	2.07	0.94	
O-1	11.3	0.01766	71	300	21	0.07	0.24	3.07	21	1050	38	0.04	3.1	6	27	16.2	1.31	0.52	
O-2	1.0	0.00156	71	300	14	0.05	0.24	3.07	25	275	20	0.07	4.4	1	26	15.6	1.34	0.52	
O-3	0.8	0.00125	71	-	-	-	-	-	5.00	695	13	0.02	2.2	5	10	6.1	2.90	0.40	

* CN Data for O-1, O-2, O-3 per CTA Drainage Report of Barnett Business Park Unit 2 - Sept 2010

DRAINAGE CALCULATION CHART - 100 YEAR

Water Shed No.	Area (Ac.)	Area (sq.mi.)	Curve No.	Sheet Flow						Shallow Conc. Flow					Total Tt (min)	T (lag) Tt * 0.6 (min.)	I 100-yr (in/hr)	C (100 yr)	Q 100-YR (cfs)
				L (ft)	H2-H1 (ft)	S (ft/ft)	n	P2 (in in)	Tt (min)	L (ft)	H2-H1 (ft)	S (ft/ft)	V (ft/s)	Tt (min)					
Pre-development																			SEE HEC-HMS DATA
1	4.0	0.00625	65	300	22	0.07	0.24	3.07	21	565	18	0.03	2.9	3	24	14.6	1.99	0.58	
2	3.2	0.00500	62	300	20	0.07	0.24	3.07	22	514	20	0.04	3.2	3	25	14.8	1.97	0.50	
O-1	11.3	0.01766	71	300	21	0.07	0.24	3.07	21	1050	38	0.04	3.1	6	27	16.2	1.87	0.78	
O-2	1.0	0.00156	71	300	14	0.05	0.24	3.07	25	275	20	0.07	4.4	1	26	15.6	1.73	0.78	
O-3	0.8	0.00125	71	-	-	-	-	-	5.00	695	13	0.02	2.2	5	10	6.1	4.11	0.58	
Post-Development																			
1	0.7	0.00109	56											USE	15	9.0	2.42	0.34	
2	1.6	0.00250	70											USE	10	6.0	2.94	0.70	
3	5.0	0.00781	83											USE	10	6.0	2.42	1.00	
O-1	11.3	0.01766	71	300	21	0.07	0.24	3.07	21	1050	38	0.04	3.1	6	27	16.2	1.87	0.78	
O-2	1.0	0.00156	71	300	14	0.05	0.24	3.07	25	275	20	0.07	4.4	1	26	15.6	1.73	0.78	
O-3	0.8	0.00125	71	-	-	-	-	-	5.00	695	13	0.02	2.2	5	10	6.1	4.11	0.58	
* CN Data for O-1, O-2, O-3 per CTA Drainage Report of Barnett Business Park Unit 2 - Sept 2010																			

Combined Areas Chart - 10 year

WTRSHD NO.	AREA (acres)	C (10 yr)	C*A	SUM C*A	SUM A (acres)	COMBINED AREAS	C (avg) (10 yr)	I (10yr) (in/hr)	Q = C I A 10yr (cfs)	REMARKS	Discharge Pt.
									SEE		
Pre-Development:										HEC-HMS	
									DATA		
O-1	11.3	0.52	5.88		11.3	O-1	0.52	1.31			
O-2	1.0	0.52	0.52		1.0	O-2	0.52	1.34			
				6.40	12.3	(O-1) + (O-2)	0.52	1.31		Pre-Development	Pt. A
O-3	0.8	0.40	0.32		0.8	O-3	0.40	2.90			
1	4.0	0.35	1.40		4.0	1	0.35	1.40			
				8.12	17.1	1 + (O-1) + (O-2) + (O-3)	0.47	1.31		Pre-Development	Pt. B
2	3.2	0.25	0.80	8.92	3.2	2	0.25	1.39		Pre-Development	Pt. C
Post-Development:											
O-1	11.3	0.52	5.88		11.3	O-1	0.52	1.31			
O-2	1.0	0.52	0.52		1.0	O-2	0.52	1.34			
				6.40	12.3	(O-1) + (O-2)	0.52	1.31		Post-Development	Pt. A
O-3	0.8	0.40	0.32		0.8	O-3	0.40	2.90			
1	0.7	0.09	0.06		0.7	1	0.09	1.70			
3	5.0	0.94	4.70		5.0	3	0.94	2.07			
				11.48	18.8	1 + 3 + (O-1) + (O-2) + (O-3)	0.61	1.31		Post-Development	Pt. B
2	1.6	0.47	0.75		1.6	2	0.47	2.07		Post-Development	Pt. C
* Note: Discharge Pt. C is actually sheet flow which flows across the adjacent lots to the southwest and into existing Detention Pond 1											

Combined Areas Chart - 100 year

WTRSHD NO.	AREA (acres)	C (100 yr)	C*A	SUM C*A	SUM A (acres)	COMBINED AREAS	C (avg) (100 yr)	I (100yr) (in/hr)	Q = C I A 100yr (cfs)	REMARKS	Discharge Pt.
									SEE		
Pre-Development:										HEC-HMS	
										DATA	
O-1	11.3	0.78	8.81		11.3	O-1	0.78	1.87			
O-2	1.0	0.78	0.78		1.0	O-2	0.78	1.73			
				9.59	12.3	(O-1) + (O-2)	0.78	1.73		Pre-Development	Pt. A
O-3	0.8	0.58	0.46		0.8	O-3	0.58	4.11			
1	4.0	0.58	2.32		4.0	1	0.58	1.99			
				12.38	17.1	1 + (O-1) + (O-2) + (O-3)	0.72	1.73		Pre-Development	Pt. B
2	3.2	0.50	1.60	5.12	3.2	2	0.50	1.97		Pre-Development	Pt. C
Post-Development:											
O-1	11.3	0.78	8.81		11.3	O-1	0.78	1.87			
O-2	1.0	0.78	0.78		1.0	O-2	0.78	1.73			
				9.59	12.3	(O-1) + (O-2)	0.78	1.73		Post-Development	Pt. A
O-3	0.8	0.58	0.46		0.8	O-3	0.58	4.11			
1	0.7	0.34	0.24		0.7	1	0.34	2.42			
3	5.0	1.00	5.00		5.0	3	1.00	2.42			
				15.30	13.8	1 + 3 + (O-1) + (O-2) + (O-3)	1.11	1.73		Post-Development	Pt. B
2	1.6	0.70	1.12	1.79	1.6	2	0.70	2.94		Post-Development	Pt. C
* Note: Discharge Pt. C is actually sheet flow which flows across the adjacent lots to the southwest and into existing Detention Pond 1											

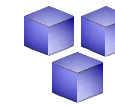
PRE-DEVELOPMENT WATERSHED EXHIBIT MAP

FOR Leave It To Us Self Storage

BUSINESS DRIVE, SHINGLE SPRINGS, CA 95682

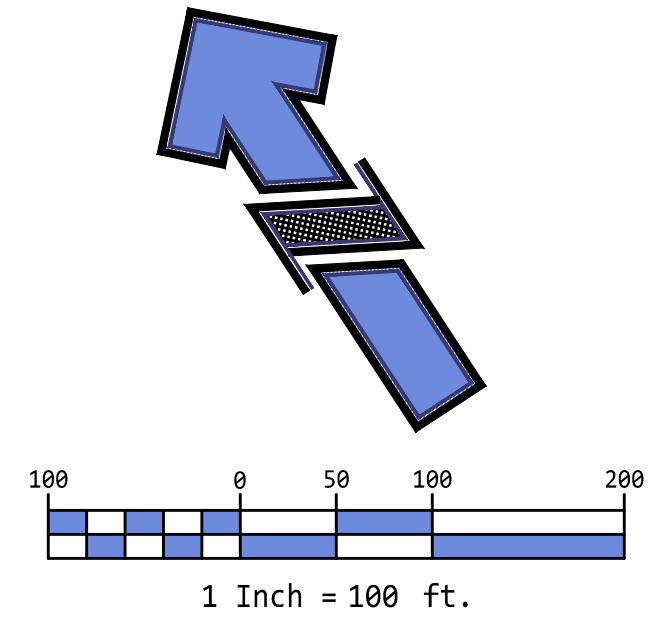
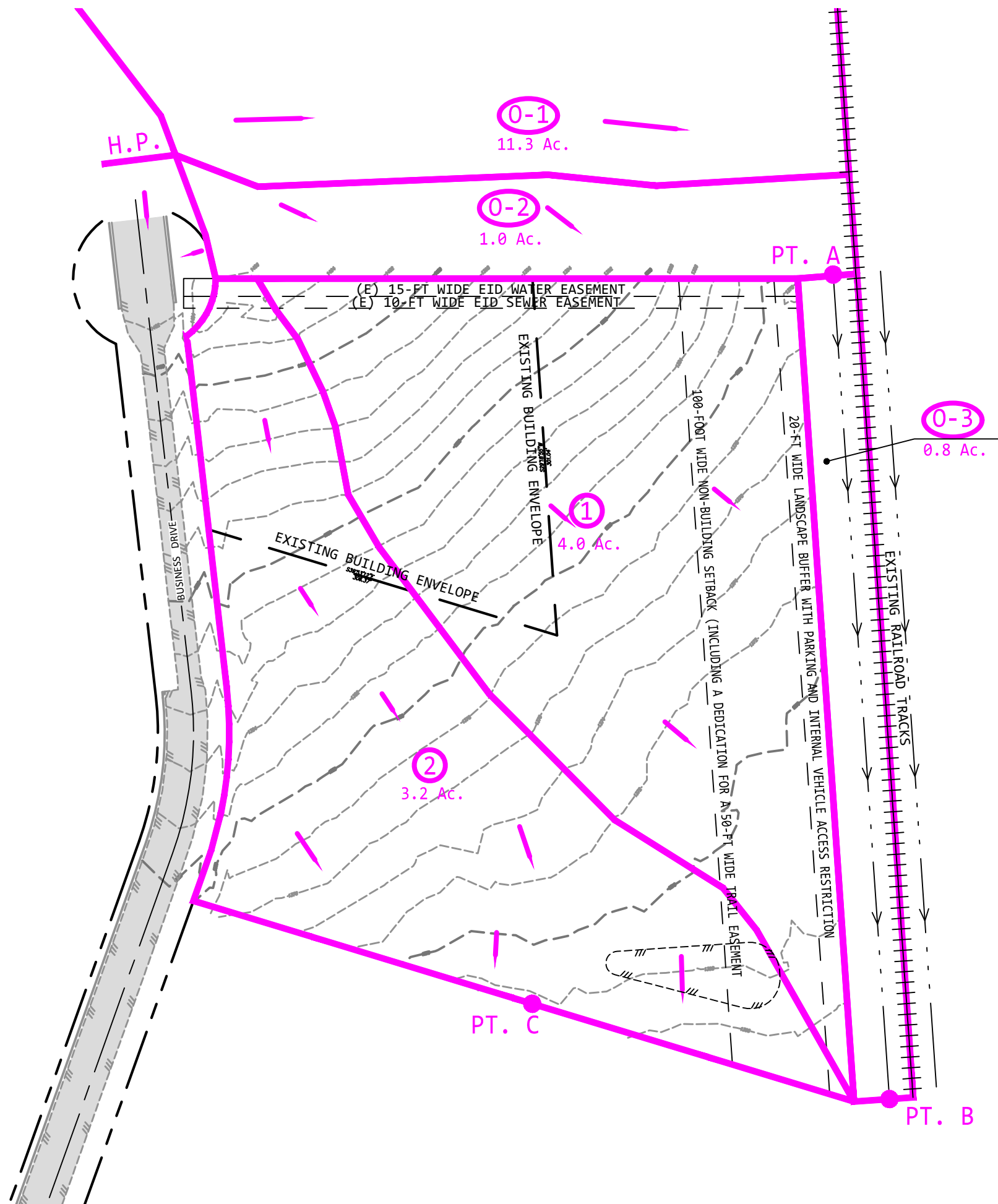
APN: 109-480-07, EL DORADO COUNTY, CA

January 2018



**LEBECK & YOUNG
ENGINEERING, INC.**

3430 ROBIN LANE, BLDG. #2
CAMERON PARK, CA 95682
Ph. (530) 677-4080 Fax. (530) 677-4096



**Leave It To Us Self Storage
Watershed
Exhibit map**

SHEET NO.
W-PRE

POST-DEVELOPMENT WATERSHED EXHIBIT MAP

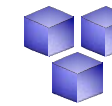
FOR

Leave It To Us Self Storage

BUSINESS DRIVE, SHINGLE SPRINGS, CA 95682

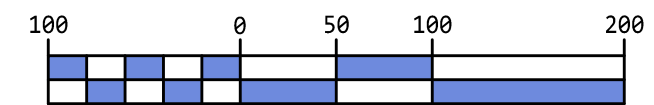
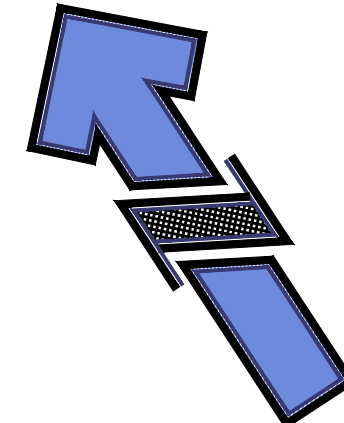
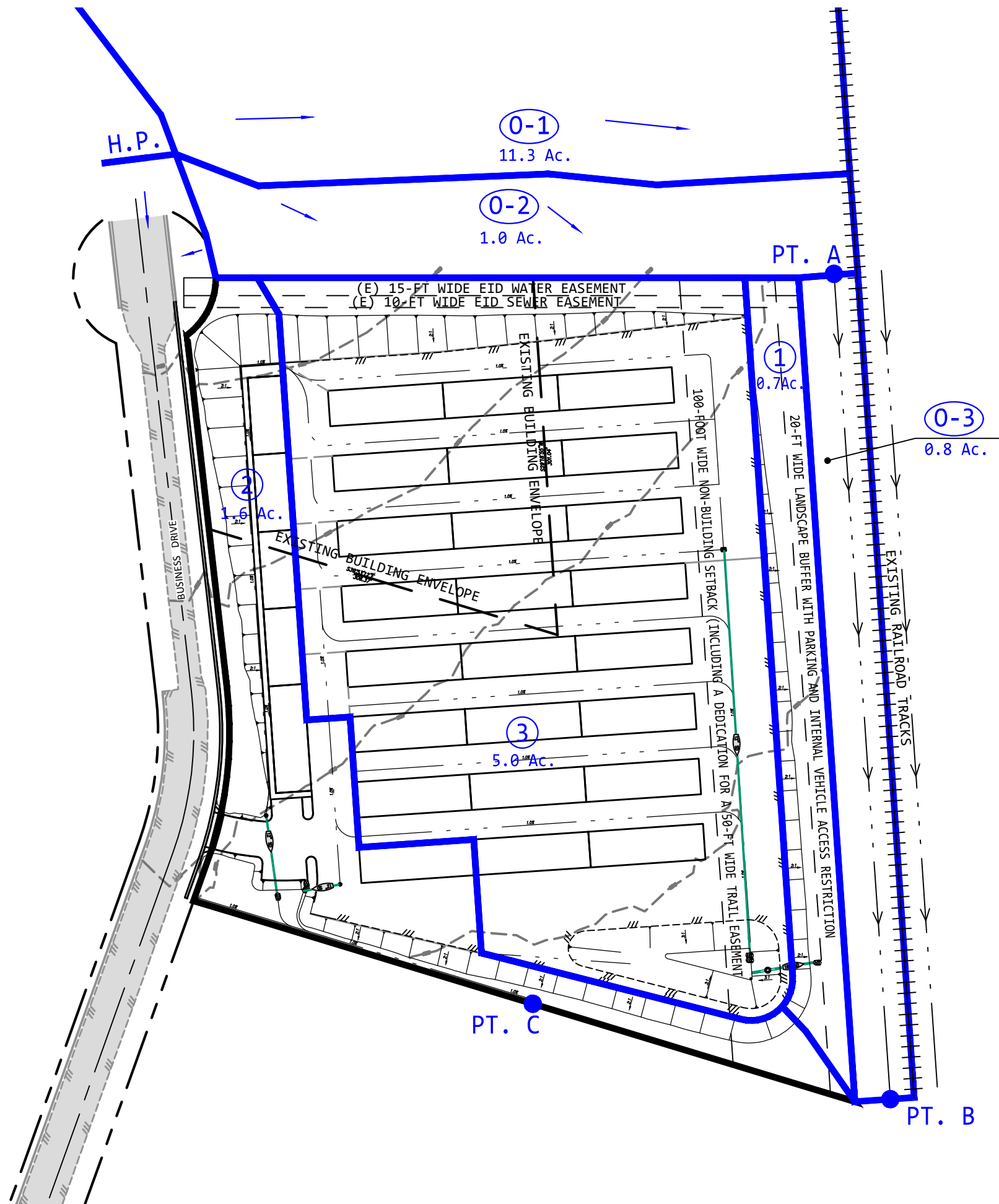
APN: 109-480-07, EL DORADO COUNTY, CA

January 2018



**LEBECK ■ YOUNG
ENGINEERING, INC.**

3430 ROBIN LANE, BLDG. #2
CAMERON PARK, CA 95682
Ph. (530) 677-4080 Fax. (530) 677-4096



1 Inch = 100 ft.

**Leave It To Us Self Storage
Watershed
Exhibit Map**

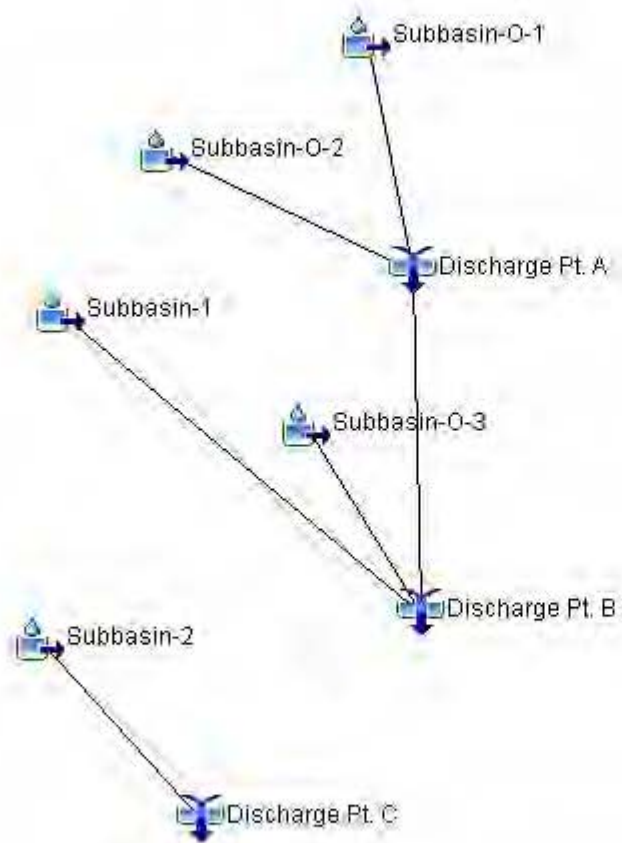
SHEET NO.

W-POST

HEC-HMS

HEC-HMS RESULTS SUMMARY TABLE

WATERSHED	PRE-DEVELOPMENT		POST-DEVELOPMENT without Pond		POST-DEVELOPMENT with Pond	
	10 YR (cfs)	100 YR (cfs)	10 YR (cfs)	100 YR (cfs)	10 YR (cfs)	100 YR (cfs)
Subbasin O-1	9.0	17.9	9.0	17.9	9.0	17.9
Subbasin O-2	0.8	1.6	0.8	1.6	0.8	1.6
Discharge Pt. A	9.8	19.5	9.8	19.5	9.8	19.5
Subbasin 3	-	-	10.1	16.7	10.1	16.7
Subbasin O-3	0.9	1.8	0.9	1.8	0.9	1.8
Subbasin 1	2.2	5.2	0.2	0.7	0.2	0.7
Discharge Pt. B	12.4	25.5	17.8	33.1	13.3	24.7
Subbasin 2	1.4	3.5	1.8	3.6	1.8	3.6
Discharge Pt. C	1.4	3.5	1.8	3.6	1.8	3.6



Project: Carter Simulation Run: Pre-Dev 10yr

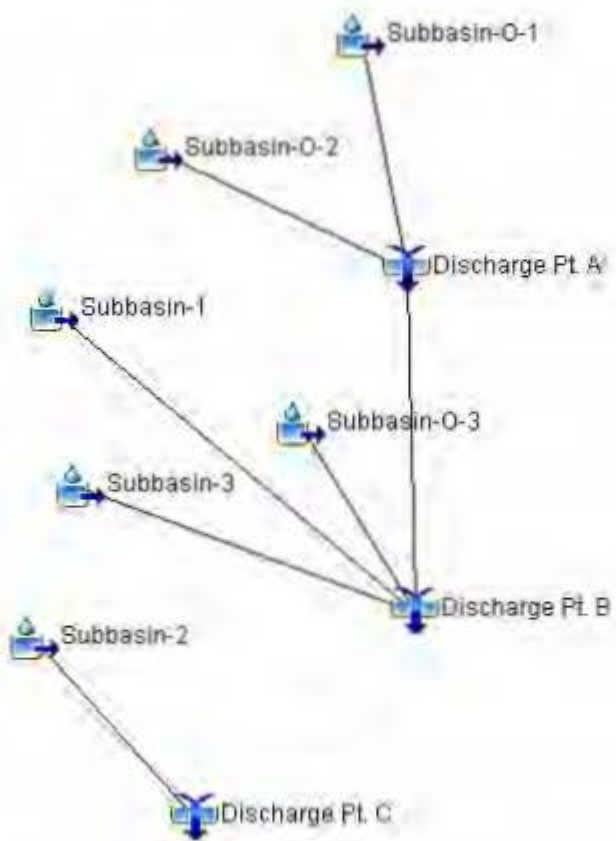
Start of Run: 01Jan2017, 00:00 Basin Model: Pre-Devel
End of Run: 03Jan2017, 00:10 Meteorologic Model: 10-yr
Compute Time: 18Jan2018, 16:39:06 Control Specifications:Pre-Devel

Hydrologic Element	Drainage Area (MI ²)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
Subbasin-O-1	0.01766	9.0	01Jan2017, 10:10	1.7
Subbasin-O-2	0.00156	0.8	01Jan2017, 10:09	0.1
Discharge Pt. A	0.01922	9.8	01Jan2017, 10:10	1.8
Subbasin-1	0.00625	2.2	01Jan2017, 10:09	0.4
Subbasin-O-3	0.00125	0.9	01Jan2017, 10:00	0.1
Discharge Pt. B	0.02672	12.4	01Jan2017, 10:09	2.4
Subbasin-2	0.005	1.4	01Jan2017, 10:10	0.3
Discharge Pt. C	0.005	1.4	01Jan2017, 10:10	0.3

Project: Carter Simulation Run: Pre-Dev 100yr

Start of Run: 01Jan2017, 00:00 Basin Model: Pre-Devel
End of Run: 03Jan2017, 00:10 Meteorologic Model: 100-yr
Compute Time: 18Jan2018, 16:39:22 Control Specifications:Pre-Devel

Hydrologic Element	Drainage Area (MI ²)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
Subbasin-O-1	0.01766	17.9	01Jan2017, 10:09	3.0
Subbasin-O-2	0.00156	1.6	01Jan2017, 10:09	0.3
Discharge Pt. A	0.01922	19.5	01Jan2017, 10:09	3.3
Subbasin-1	0.00625	5.2	01Jan2017, 10:08	0.9
Subbasin-O-3	0.00125	1.8	01Jan2017, 09:59	0.2
Discharge Pt. B	0.02672	25.5	01Jan2017, 10:09	4.4
Subbasin-2	0.005	3.5	01Jan2017, 10:09	0.6
Discharge Pt. C	0.005	3.5	01Jan2017, 10:09	0.6



Project: Carter Simulation Run: Post-Dev w-out pond 10yr

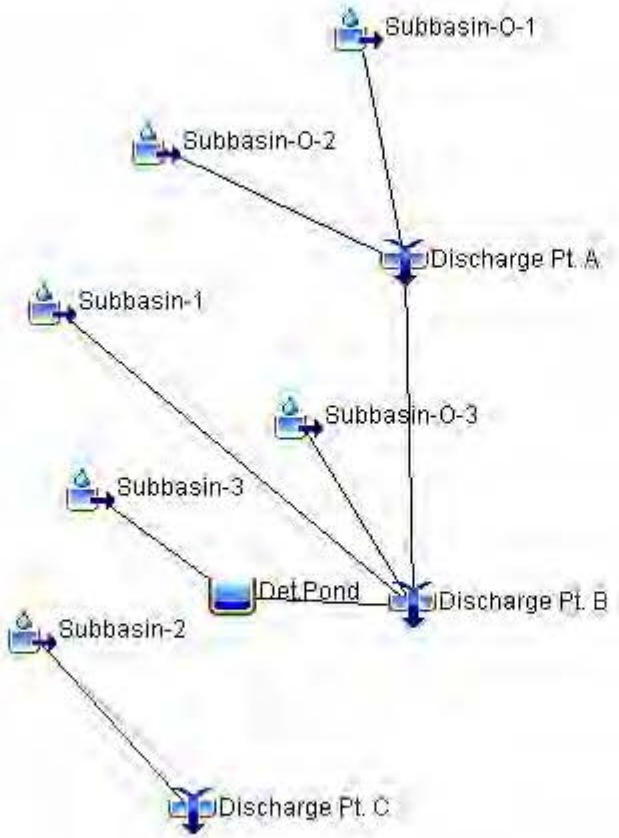
Start of Run: 01Jan2017, 00:00 Basin Model: Post-Devel without Pond
End of Run: 03Jan2017, 00:10 Meteorologic Model: 10-yr
Compute Time: 18Jan2018, 16:39:30 Control Specifications: Post-Devel without Pond

Hydrologic Element	Drainage Area (MI ²)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
Subbasin-O-1	0.01766	9.0	01Jan2017, 10:10	1.7
Subbasin-O-2	0.00156	0.8	01Jan2017, 10:09	0.1
Discharge Pt. A	0.01922	9.8	01Jan2017, 10:10	1.8
Subbasin-3	0.00781	10.1	01Jan2017, 09:59	1.1
Subbasin-O-3	0.00125	0.9	01Jan2017, 10:00	0.1
Subbasin-1	0.00109	0.2	01Jan2017, 10:05	0.0
Discharge Pt. B	0.02937	17.8	01Jan2017, 10:02	3.1
Subbasin-2	0.00250	1.8	01Jan2017, 10:00	0.2
Discharge Pt. C	0.00250	1.8	01Jan2017, 10:00	0.2

Project: Carter Simulation Run: Post-Dev w-out pond 100yr

Start of Run: 01Jan2017, 00:00 Basin Model: Post-Devel without Pond
End of Run: 03Jan2017, 00:10 Meteorologic Model: 100-yr
Compute Time: 18Jan2018, 16:39:44 Control Specifications: Post-Devel without Pond

Hydrologic Element	Drainage Area (MI ²)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Subbasin-O-1	0.01766	17.9	01Jan2017, 10:09	3.22
Subbasin-O-2	0.00156	1.6	01Jan2017, 10:09	3.22
Discharge Pt. A	0.01922	19.5	01Jan2017, 10:09	3.22
Subbasin-3	0.00781	16.7	01Jan2017, 09:59	4.46
Subbasin-O-3	0.00125	1.8	01Jan2017, 09:59	3.22
Subbasin-1	0.00109	0.7	01Jan2017, 10:03	1.83
Discharge Pt. B	0.02937	33.1	01Jan2017, 10:02	3.50
Subbasin-2	0.00250	3.6	01Jan2017, 09:59	3.12
Discharge Pt. C	0.00250	3.6	01Jan2017, 09:59	3.12



Project: Carter Simulation Run: Post-Dev w-Pond 10yr

Start of Run: 01Jan2017, 00:00

Basin Model: Post-Devel w-Det Pond

End of Run: 03Jan2017, 00:10

Meteorologic Model: 10-yr

Compute Time: 18Jan2018, 17:27:51

Control Specifications: Post-Devel with Det. Pond

Hydrologic Element	Drainage Area (MI ²)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
Subbasin-O-1	0.01766	9.0	01Jan2017, 10:10	1.7
Subbasin-O-2	0.00156	0.8	01Jan2017, 10:09	0.1
Discharge Pt. A	0.01922	9.8	01Jan2017, 10:10	1.8
Subbasin-3	0.00781	10.1	01Jan2017, 09:59	1.1
Det.Pond	0.00781	2.9	01Jan2017, 10:16	1.1
Subbasin-O-3	0.00125	0.9	01Jan2017, 10:00	0.1
Subbasin-1	0.00109	0.2	01Jan2017, 10:05	0.0
Discharge Pt. B	0.02937	13.3	01Jan2017, 10:09	3.1
Subbasin-2	0.00250	1.8	01Jan2017, 10:00	0.2
Discharge Pt. C	0.00250	1.8	01Jan2017, 10:00	0.2

Project: Carter Simulation Run: Post-Dev w-Pond 10yr
Reservoir: Det.Pond

Start of Run: 01Jan2017, 00:00 Basin Model: Post-Devel w-Det Pond
End of Run: 03Jan2017, 00:10 Meteorologic Model: 10-yr
Compute Time: 18Jan2018, 17:27:51 Control Specifications: Post-Devel with Det. Pond

Volume Units: AC-FT

Computed Results

Peak Inflow: 10.1 (CFS)	Date/Time of Peak Inflow: 01Jan2017, 09:59
Peak Discharge: 2.9 (CFS)	Date/Time of Peak Discharge: 01Jan2017, 10:16
Inflow Volume: 1.1 (AC-FT)	Peak Storage: 0.2 (AC-FT)
Discharge Volume: 1.1 (AC-FT)	Peak Elevation: 1371.6 (FT)

Project: Carter Simulation Run: Post-Dev w-Pond 100yr

Start of Run: 01Jan2017, 00:00

Basin Model: Post-Devel w-Det Pond

End of Run: 03Jan2017, 00:10

Meteorologic Model: 100-yr

Compute Time: 18Jan2018, 17:28:00

Control Specifications: Post-Devel with Det. Pond

Hydrologic Element	Drainage Area (MI ²)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
Subbasin-O-1	0.01766	17.9	01Jan2017, 10:09	3.0
Subbasin-O-2	0.00156	1.6	01Jan2017, 10:09	0.3
Discharge Pt. A	0.01922	19.5	01Jan2017, 10:09	3.3
Subbasin-3	0.00781	16.7	01Jan2017, 09:59	1.9
Det.Pond	0.00781	4.3	01Jan2017, 10:19	1.9
Subbasin-O-3	0.00125	1.8	01Jan2017, 09:59	0.2
Subbasin-1	0.00109	0.7	01Jan2017, 10:03	0.1
Discharge Pt. B	0.02937	24.7	01Jan2017, 10:09	5.5
Subbasin-2	0.00250	3.6	01Jan2017, 09:59	0.4
Discharge Pt. C	0.00250	3.6	01Jan2017, 09:59	0.4

Project: Carter Simulation Run: Post-Dev w-Pond 100yr
Reservoir: Det.Pond

Start of Run: 01Jan2017, 00:00 Basin Model: Post-Devel w-Det Pond
End of Run: 03Jan2017, 00:10 Meteorologic Model: 100-yr
Compute Time: 18Jan2018, 17:28:00 Control Specifications: Post-Devel with Det. Pond

Volume Units: AC-FT

Computed Results

Peak Inflow: 16.7 (CFS)	Date/Time of Peak Inflow: 01Jan2017, 09:59
Peak Discharge: 4.3 (CFS)	Date/Time of Peak Discharge: 01Jan2017, 10:19
Inflow Volume: 1.9 (AC-FT)	Peak Storage: 0.4 (AC-FT)
Discharge Volume: 1.9 (AC-FT)	Peak Elevation: 1373.1 (FT)

DETENTION POND DATA

DETENTION POND VOLUME

ELEVATION	X-SECTIONAL AREA (SF)	ELEVATION H2-H1 (FT)	INCREMENTAL VOLUME (CF)	TOTAL VOLUME (CF)	TOTAL VOLUME (AC-FT)
1368	1094		0	0	0.00
		1			
1369	1767		1430.5	1430.5	0.03
		1			
1370	2544		2155.5	3586	0.08
		1			
1371	3503		3023.5	6609.5	0.15
		1			
1372	4542		4022.5	10632	0.24
		1			
1373	5637		5089.5	15721.5	0.36
		1			
1374	6789		6213	21934.5	0.50
		1			
1375	7997		7393	29327.5	0.67
		1			
1376	9262		8629.5	37957	0.87

HYDRAULIC CALCULATIONS FOR POND 'A'

CULVERT DIA. (IN.)						CULVERT DIA. (IN.)					
# OF PIPES		TYPE		TYPE		# OF PIPES		TYPE		TYPE	
Low-level	1		8	HDPE		Riser	1		18	OCP	
Outlet											
ORIFICE EQ'N: $Q=CA(2GH)^{1/2}$				WEIR EQ'N: $Q=CLH^{1.5}$		ORIFICE EQ'N: $Q=CA(2GH)^{1/2}$				WEIR EQ'N: $Q=CLH^{1.5}$	
	C	0.6		C	2.6		C	0.6		C	2.6
	A	0.35		L	2.09		A	1.77		L	4.71
Note: This chart assumes no blockage of pipes											
ELEV.	H	HW/D	ORIFICE EQ'N Q (1 PIPE)	WEIR EQ'N Q (1 PIPE)	Q min. (1 PIPE)	ELEV.	H	HW/D	ORIFICE EQ'N Q (1 PIPE)	WEIR EQ'N Q (1 PIPE)	Q min. (1 Riser)
1368.5	0	0	0	0	0	1373.5	0	0	0	0	0
1369	0.5	0.75	1.2	1.9	1.2	1374.0	0.5	0.33	6.0	4.3	4.3
1369.5	1	1.50	1.7	5.4	1.7	1374.5	1	0.67	8.5	12.3	8.5
1370	1.5	2.25	2.1	10.0	2.1	1375.0	1.5	1.00	10.4	22.5	10.4
1370.5	2	3.00	2.4	15.4	2.4	1375.5	2	1.33	12.0	34.7	12.0
1371	2.5	3.75	2.7	21.5	2.7	1376.0	2.5	1.67	13.5	48.4	13.5
1371.5	3	4.50	2.9	-	2.9	1376.5	3	2.00	14.7	-	14.7
1372	3.5	5.25	3.1	-	3.1						
1372.5	4	6.00	3.4	-	3.4						
1373	4.5	6.75	3.6	-	3.6						
1373.5	5	7.50	3.8	-	3.8						
1374	5.5	8.25	3.9	-	3.9						
1374.5	6	9.00	4.1	-	4.1						
1375	6.5	9.75	4.3	-	4.3						
1375.5	7	10.50	4.4	-	4.4						
1376	7.5	11.25	4.6	-	4.6						

HYDRAULIC CALCULATIONS FOR POND 'A'

Rating Curve for 8" Low-Level Outlet & 18" Diam. Riser Pipe

Elevation	Q Low- Level Outlet (cfs)	Q Riser (cfs)	Q Both (cfs)
1368.5	0.0	0	0.0
1369.0	1.2	0	1.2
1369.5	1.7	0	1.7
1370.0	2.1	0	2.1
1370.5	2.4	0	2.4
1371.0	2.7	0	2.7
1371.5	2.9	0	2.9
1372.0	3.1	0	3.1
1372.5	3.4	0	3.4
1373.0	3.6	0	3.6
1373.5	3.8	0.0	3.8
1374.0	3.9	4.3	8.3
1374.5	4.1	8.5	12.6
1375.0	4.3	10.4	14.7
1375.5	4.4	12.0	16.5
1376.0	4.6	13.5	18.1

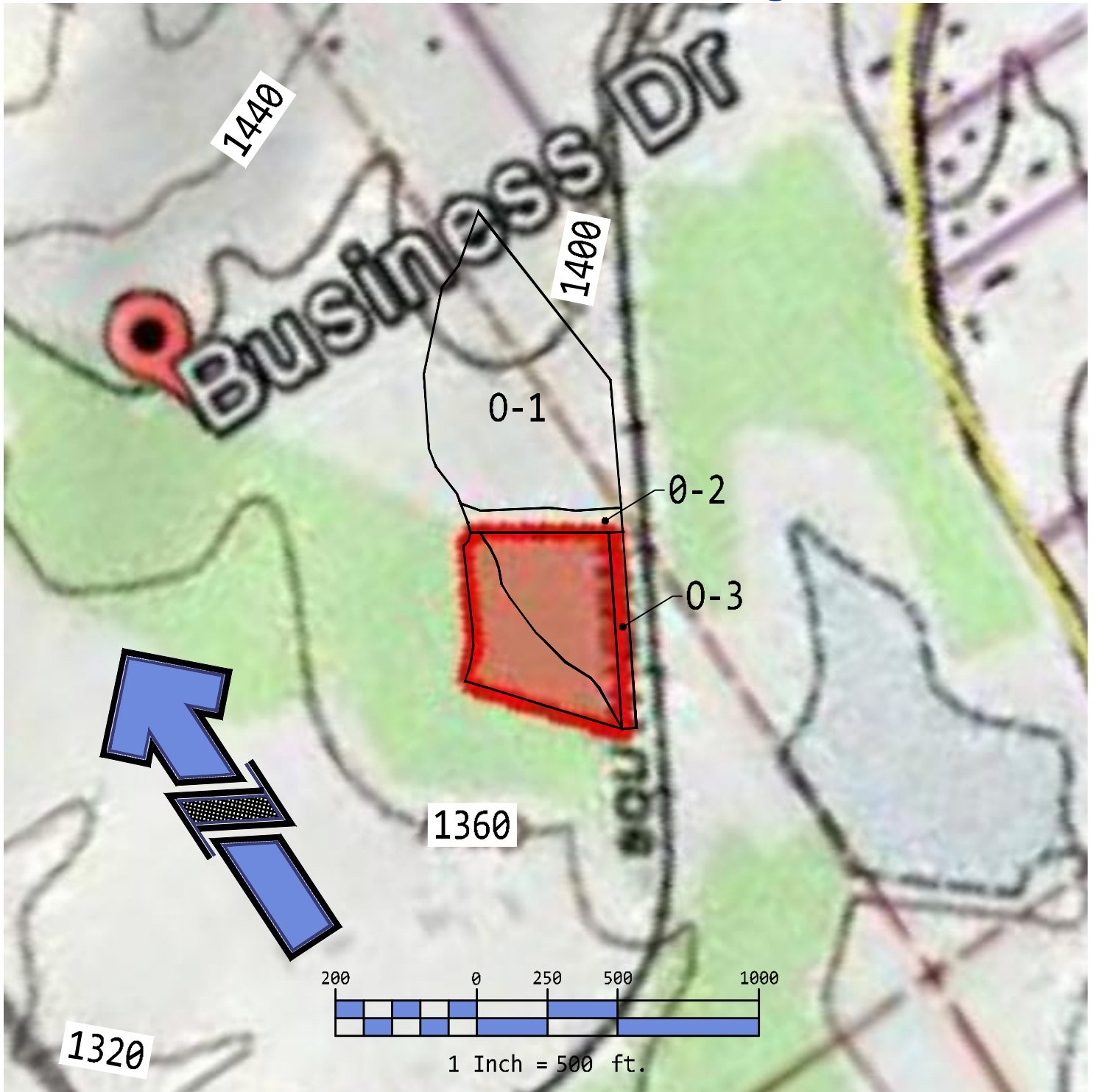
PHOTOS





APPENDIX

USGS EXHIBIT MAP
FOR
Leave It To Us Self Storage



Leave It To Us Self Storage
USGS
Exhibit Map

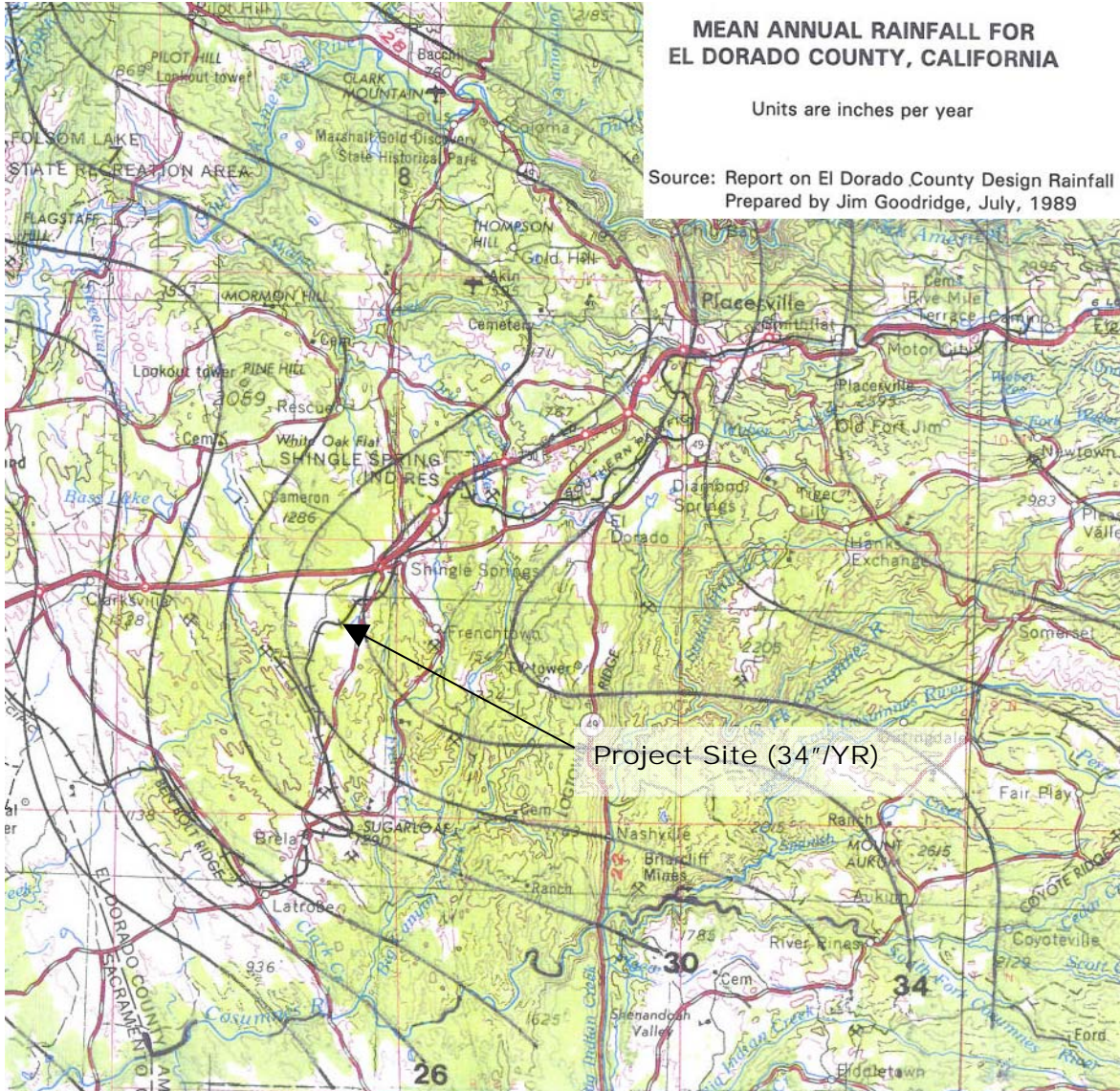
SHEET NO.

EX-1

MEAN ANNUAL RAINFALL FOR EL DORADO COUNTY, CALIFORNIA

Units are inches per year

Source: Report on El Dorado County Design Rainfall
Prepared by Jim Goodridge, July, 1989



LEBECK · YOUNG
ENGINEERING, INC.

PRE-DEVELOPMENT SOIL SURVEY EXHIBIT MAP

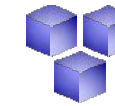
FOR

Leave It To Us Self Storage

BUSINESS DRIVE, SHINGLE SPRINGS, CA 95682

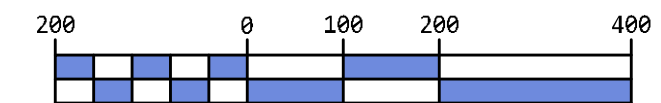
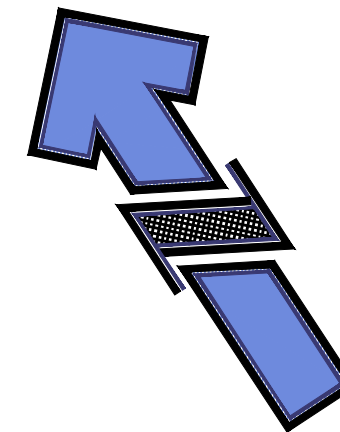
APN: 109-480-07, EL DORADO COUNTY, CA

January 2018



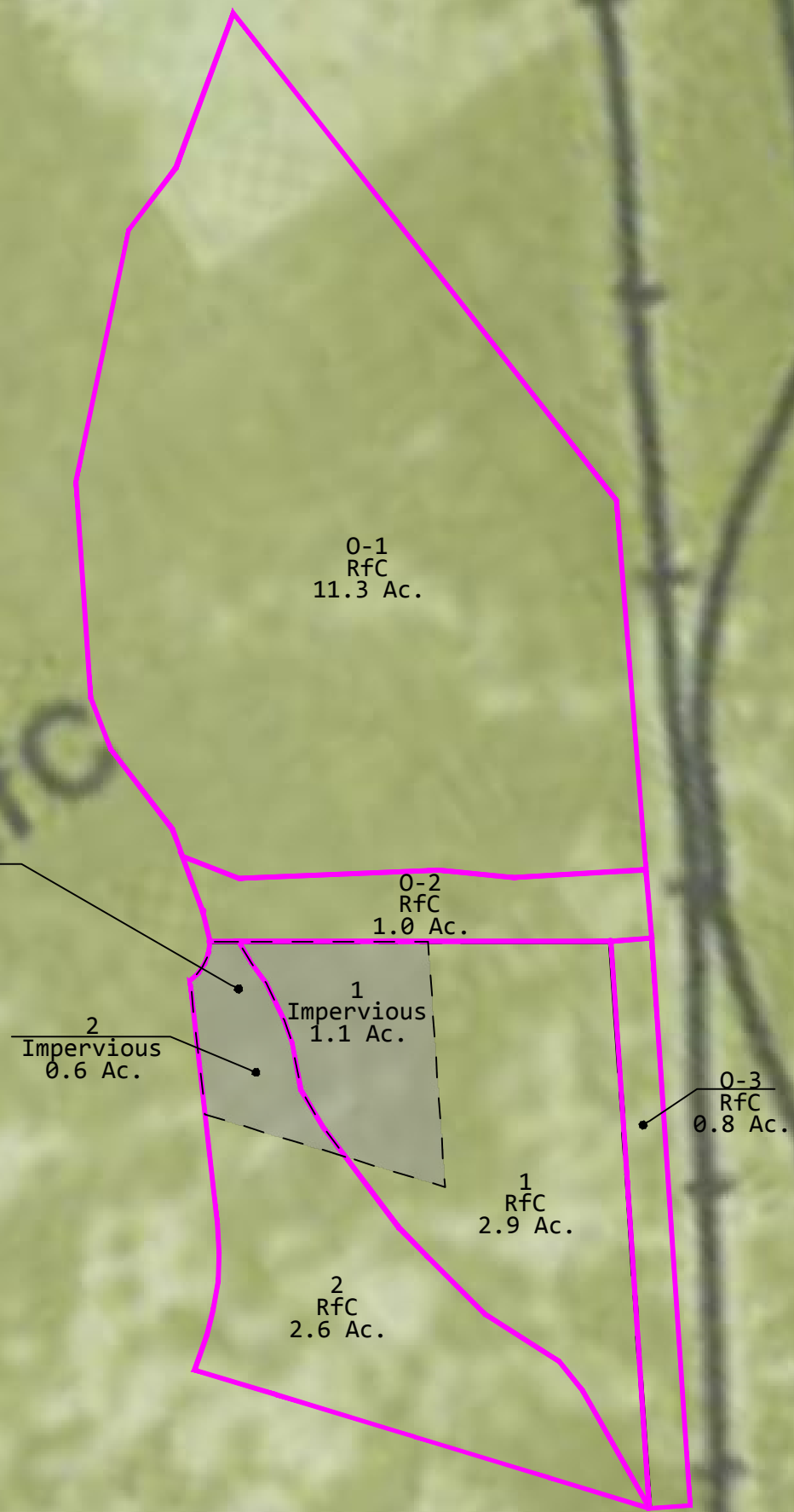
**LEBECK & YOUNG
ENGINEERING, INC.**

3430 ROBIN LANE, BLDG. #2
CAMERON PARK, CA 95682
Ph. (530) 677-4080 Fax. (530) 677-4098



1 Inch = 200 ft.

DEVELOPMENT ENVELOPE
AREA ASSUMED TO BE DEVELOPED
IN PREVIOUS DRAINAGE REPORT
FOR BARNETT BUSINESS PARK,
UNIT 2 - SEPT. 2010.



RfC = Rescue Soil Series
Hydrologic Soil Group = B

USDA-SOIL CONSERVATION SERVICE

**Leave It To Us Self Storage
Soil Survey
Exhibit Map**

SHEET NO.

S-PRE

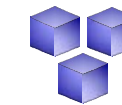
POST-DEVELOPMENT SOIL SURVEY EXHIBIT MAP

FOR **Leave It To Us Self Storage**

BUSINESS DRIVE, SHINGLE SPRINGS, CA 95682

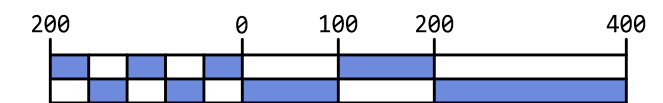
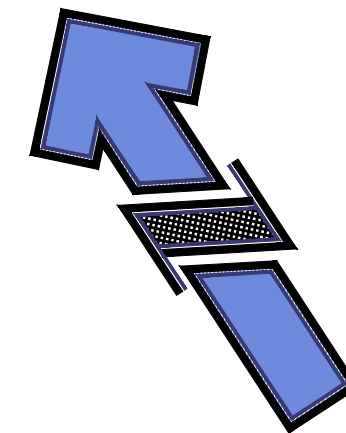
APN: 109-480-07, EL DORADO COUNTY, CA

January 2018



**LEBECK & YOUNG
ENGINEERING, INC.**

3430 ROBIN LANE, BLDG. #2
CAMERON PARK, CA 95682
Ph. (530) 677-4080 Fax. (530) 677-4096



1 Inch = 200 ft.

RfC = Rescue Soil Series
Hydrologic Soil Group = B

USDA-SOIL CONSERVATION SERVICE



Leave It To Us Self Storage Soil Survey Exhibit Map

SHEET NO.

S-POST

PRE-DEVELOPMENT WATERSHEDS - COMPOSITE CURVE NUMBERS:

Note: This spreadsheet only calculates composite curve numbers for only those watershed basins which contain multiple soil types &/or uses.

1	Total Watershed Area	4.0	acres			
		% of	Hydrol.	approx. Area		
	Soil Type	Watershed	Soil Group	(ac.)	CN	CN*A
	Rescue Series - RfC	73%	B	2.9	56	162.4
	Industrial (original Bldg Envelope)	28%	B	1.1	88	96.8
	Subtotal	100%		4.0		259.2
	CN =	65				
2	Total Watershed Area	3.2	acres			
		% of	Hydrol.	approx. Area		
	Soil Type	Watershed	Soil Group	(ac.)	CN	CN*A
	Rescue Series - RfC	81%	B	2.6	56	145.6
	Industrial (original Bldg Envelope)	19%	B	0.6	88	52.8
	Subtotal	100%		3.2		198.4
	CN =	62				

POST-DEVELOPMENT WATERSHEDS - COMPOSITE CURVE NUMBERS:

Note: This spreadsheet only calculates composite curve numbers for only those watershed basins which contain multiple soil types &/or uses.

1	Total Watershed Area	0.7	acres			
		% of	Hydrol.	approx. Area		
	Soil Type	Watershed	Soil Group	(ac.)	CN	CN*A
	Rescue Series - RfC	100%	B	0.7	56	39.2
	Subtotal	100%		0.7		39.2
	CN =	56				
2	Total Watershed Area	1.6	acres			
		% of	Hydrol.	approx. Area		
	Soil Type	Watershed	Soil Group	(ac.)	CN	CN*A
	Rescue Series - RfC	56%	B	0.9	56	50.4
	Industrial (orig Bldg Envelope) & New Devel	44%	B	0.7	88	61.6
	Subtotal	100%		1.6		112.0
	CN =	70				
3	Total Watershed Area	5.0	acres			
		% of	Hydrol.	approx. Area		
	Soil Type	Watershed	Soil Group	(ac.)	CN	CN*A
	Rescue Series - RfC	12%	B	0.6	56	34.7
	Industrial (orig Bldg Envelope) & New Developmt	87%	B	4.3	88	381.9
	Subtotal	99%		5.0		416.6
	CN =	83				

In either case, the travel time is the flow path length divided by the velocity.

Channel flow: The velocity of flow in a clearly-defined channel is estimated with Manning's equation, assuming discharge equal the average annual value (2-yr event). If this discharge is unknown, the regression equation presented in Appendix 2.5 can be used to provide an estimate. The channel-flow travel time is the channel length divided by the velocity.

Table 2.4.3 Overland-flow Roughness Coefficients
(Source: SCS, 1986)

Surface description (1)	Overland flow n (2)
Smooth surfaces (concrete, asphalt, gravel, or bare soil)	0.011
Fallow (no residue)	0.05
Cultivated soils:	
Residue cover < 20%	0.06
Residue cover > 20%	0.17
Grass:	
Short grass prairie	0.15
Dense grasses	0.24
Bermuda	0.41
Range (natural)	0.13
Woods:	
Light underbrush	0.40
Dense underbrush	0.80

When the various travel times are determined, t_c can be computed as the sum. (The UH lag is estimated as 60% t_c), and Eq. 2.4.5 is solved to find the UH peak. In the solution of Eq. 2.4.6, it is convenient to select ΔD equal the computation time step. Then the resulting UH can be used directly with rainfall excess, which is computed with this same time step, to estimate the runoff hydrograph.

Fig. 2.4.2 shows the 10-min UH developed for an example 5-sq mi catchment in which $t_c = 1$ hr. In that case, lag = 0.60 hr. Solving Eq. 2.4.6 yields $T_p = 0.68$ hr. Eq. 2.4.5 yields $q_p = 3541.5$ cfs/in. of excess rainfall. To develop the UH, values in cols. 1 and 3 of Table 2.4.2 are multiplied by T_p , and the values in cols. 2 and 4 are multiplied by q_p . To compute storm runoff, Eq. 2.4.4 is solved with the UH and excess.

El Dorado Design Rainfall

Rainfall Depth in Inches for Return Period = 2.33 years

Mean Annual Precipitation	5 Min	10 Min	15 Min	30 Min	1 Hr	2 Hrs	3 Hrs	6 Hrs	12 Hrs	24 Hrs
20	0.113	0.162	0.200	0.286	0.410	0.587	0.723	1.035	1.481	2.120
22	0.120	0.172	0.212	0.304	0.435	0.623	0.768	1.099	1.572	2.249
24	0.128	0.183	0.225	0.322	0.461	0.660	0.814	1.165	1.667	2.385
26	0.135	0.193	0.238	0.341	0.488	0.698	0.860	1.231	1.762	2.521
28	0.142	0.203	0.251	0.359	0.514	0.735	0.907	1.298	1.857	2.657
30	0.149	0.214	0.264	0.377	0.540	0.773	0.953	1.364	1.952	2.793
32	0.157	0.224	0.277	0.396	0.566	0.810	1.000	1.430	2.047	2.929
34	0.164	0.235	0.289	0.414	0.593	0.848	1.046	1.497	2.142	3.065
36	0.171	0.245	0.302	0.433	0.619	0.886	1.092	1.563	2.237	3.200
38	0.179	0.256	0.315	0.451	0.645	0.923	1.139	1.629	2.332	3.336
40	0.186	0.266	0.328	0.469	0.671	0.961	1.185	1.696	2.426	3.472
42	0.193	0.276	0.341	0.488	0.698	0.998	1.231	1.762	2.521	3.608
44	0.200	0.287	0.354	0.506	0.724	1.036	1.278	1.828	2.616	3.744
46	0.208	0.297	0.366	0.524	0.750	1.074	1.324	1.895	2.711	3.880
48	0.512	0.308	0.379	0.543	0.777	1.111	1.370	1.961	2.806	4.016
50	0.222	0.318	0.392	0.561	0.803	1.149	1.417	2.027	2.901	4.152
52	0.229	0.328	0.405	0.579	0.829	1.186	1.463	2.094	2.996	4.287
54	0.237	0.339	0.418	0.598	0.855	1.224	1.510	2.160	3.091	4.423
56	0.244	0.349	0.431	0.616	0.882	1.262	1.556	2.226	3.186	4.559
58	0.251	0.360	0.443	0.634	0.908	1.299	1.602	2.293	3.281	4.695
60	0.259	0.370	0.456	0.653	0.934	1.337	1.649	2.359	3.376	4.831
62	0.266	0.380	0.469	0.671	0.960	1.374	1.695	2.425	3.471	4.967
64	0.273	0.391	0.482	0.690	0.987	1.412	1.741	2.492	3.566	5.103
66	0.280	0.401	0.495	0.708	1.013	1.450	1.788	2.558	3.661	5.238
68	0.288	0.412	0.508	0.726	1.039	1.487	1.834	2.625	3.756	5.374
70	0.295	0.422	0.520	0.745	1.066	1.525	1.880	2.691	3.851	5.510
72	0.302	0.432	0.533	0.763	1.092	1.562	1.927	2.757	3.946	5.646
74	0.309	0.443	0.546	0.781	1.118	1.600	1.973	2.824	4.040	5.782
76	0.317	0.453	0.559	0.800	1.144	1.638	2.020	2.890	4.135	5.918
78	0.324	0.464	0.572	0.818	1.171	1.675	2.066	2.956	4.230	6.054
80	0.331	0.474	0.585	0.836	1.197	1.713	2.112	3.023	4.325	6.189
82	0.339	0.484	0.597	0.855	1.223	1.750	2.159	3.089	4.420	6.325
84	0.346	0.495	0.610	0.873	1.250	1.788	2.205	3.155	4.515	6.461
86	0.353	0.505	0.623	0.892	1.276	1.826	2.251	3.222	4.610	6.597
88	0.360	0.516	0.636	0.910	1.302	1.863	2.298	3.288	4.705	6.733
90	0.368	0.526	0.649	0.928	1.328	1.901	2.344	3.354	4.800	6.869

Source: Design Rainfall Tables for El Dorado County, prepared by Jim Goodridge, July 29, 1989

Mean Annual Precipitation	Rainfall intensity in inches per hour for Return Period = 10 years									
	5Min	10Min	15Min	30Min	1Hr	2Hrs	3Hrs	6 Hrs	12Hrs	24 Hrs
20	2.004	1.434	1.179	.843	.603	.432	.355	.254	.182	.130
22	2.127	1.522	1.251	.895	.640	.458	.377	.270	.193	.138
24	2.255	1.613	1.326	.949	.679	.486	.399	.286	.204	.146
26	2.383	1.705	1.402	1.003	.718	.514	.422	.302	.216	.155
28	2.512	1.797	1.478	1.057	.756	.541	.445	.318	.228	.163
30	2.640	1.889	1.553	1.111	.795	.569	.468	.335	.239	.171
32	2.769	1.981	1.629	1.165	.834	.597	.490	.351	.251	.180
34	2.897	2.073	1.704	1.219	.872	.624	.513	.367	.263	.188
36	3.026	2.165	1.780	1.273	.911	.652	.536	.383	.274	.196
38	3.154	2.257	1.855	1.327	.950	.680	.559	.400	.286	.205
40	3.282	2.349	1.931	1.381	.988	.707	.581	.416	.298	.213
42	3.411	2.440	2.006	1.436	1.027	.735	.604	.432	.309	.221
44	3.539	2.532	2.082	1.490	1.066	.763	.627	.449	.321	.230
46	3.668	2.624	2.157	1.544	1.104	.790	.650	.465	.333	.238
48	3.796	2.716	2.233	1.598	1.143	.818	.672	.481	.344	.246
50	3.925	2.808	2.309	1.652	1.182	.846	.695	.497	.356	.255
52	4.053	2.900	2.384	1.706	1.221	.873	.718	.514	.368	.263
54	4.181	2.992	2.460	1.760	1.259	.901	.741	.530	.379	.271
56	4.310	3.084	2.535	1.814	1.298	.929	.763	.546	.391	.280
58	4.438	3.176	2.611	1.868	1.337	.956	.786	.563	.402	.288
60	4.567	3.267	2.686	1.922	1.375	.984	.809	.579	.414	.296
62	4.695	3.359	2.762	1.976	1.414	1.012	.832	.595	.426	.305
64	4.824	3.451	2.837	2.030	1.453	1.039	.854	.611	.437	.313
66	4.952	3.543	2.913	2.084	1.491	1.067	.877	.628	.449	.321
68	5.081	3.635	2.989	2.138	1.530	1.095	.900	.644	.461	.330
70	5.209	3.727	3.064	2.192	1.569	1.122	.923	.660	.472	.338
72	5.337	3.819	3.140	2.246	1.607	1.150	.945	.676	.484	.346
74	5.466	3.911	3.215	2.300	1.646	1.178	.968	.693	.496	.355
76	5.594	4.003	3.291	2.354	1.685	1.205	.991	.709	.507	.363
78	5.723	4.095	3.366	2.409	1.723	1.233	1.014	.725	.519	.371
80	5.851	4.186	3.442	2.463	1.762	1.261	1.036	.742	.531	.380
82	5.980	4.278	3.517	2.517	1.801	1.288	1.059	.758	.542	.388
84	6.108	4.370	3.593	2.571	1.839	1.316	1.082	.774	.554	.396
86	6.236	4.462	3.668	2.625	1.878	1.344	1.105	.790	.566	.405
88	6.365	4.554	3.744	2.679	1.917	1.371	1.127	.807	.577	.413
90	6.493	4.646	3.820	2.733	1.955	1.399	1.150	.823	.589	.421

7/24/89 Note older versions are superseded
 2:08 PM Prepared by Jim Goodridge 916 345 3106

Rainfall Intensity in inches per hour for Return Period - 100 years

Mean Annual Precipitation	5Min	10Min	15Min	30Min	1Hr	2Hrs	3Hrs	6 Hrs	12Hrs	24 Hrs
20	2.840	2.032	1.671	1.195	.855	.612	.503	.360	.258	.184
22	3.014	2.157	1.773	1.269	.908	.649	.534	.382	.273	.196
24	3.196	2.287	1.880	1.345	.963	.689	.566	.405	.290	.207
26	3.378	2.417	1.987	1.422	1.017	.728	.598	.428	.306	.219
28	3.561	2.548	2.094	1.499	1.072	.767	.631	.451	.323	.231
30	3.743	2.678	2.202	1.575	1.127	.806	.663	.474	.339	.243
32	3.925	2.808	2.309	1.652	1.182	.846	.695	.497	.356	.255
34	4.107	2.938	2.416	1.728	1.237	.885	.727	.520	.372	.266
36	4.289	3.069	2.523	1.805	1.291	.924	.760	.544	.389	.278
38	4.471	3.199	2.630	1.882	1.346	.963	.792	.567	.405	.290
40	4.653	3.329	2.737	1.958	1.401	1.002	.824	.590	.422	.302
42	4.835	3.459	2.844	2.035	1.456	1.042	.856	.613	.438	.314
44	5.017	3.590	2.951	2.112	1.511	1.081	.889	.636	.455	.326
46	5.199	3.720	3.058	2.188	1.566	1.120	.921	.659	.471	.337
48	5.381	3.850	3.165	2.265	1.620	1.159	.953	.682	.488	.349
50	5.563	3.980	3.272	2.341	1.675	1.199	.985	.705	.504	.361
52	5.745	4.111	3.380	2.418	1.730	1.238	1.018	.728	.521	.373
54	5.927	4.241	3.487	2.495	1.785	1.277	1.050	.751	.537	.385
56	6.109	4.371	3.594	2.571	1.840	1.316	1.082	.774	.554	.396
58	6.291	4.501	3.701	2.648	1.895	1.356	1.114	.797	.571	.408
60	6.473	4.632	3.808	2.725	1.949	1.395	1.147	.820	.587	.420
62	6.656	4.762	3.915	2.801	2.004	1.434	1.179	.844	.604	.432
64	6.838	4.892	4.022	2.878	2.059	1.473	1.211	.867	.620	.444
66	7.020	5.022	4.129	2.954	2.114	1.512	1.243	.890	.637	.455
68	7.202	5.153	4.236	3.031	2.169	1.552	1.276	.913	.653	.467
70	7.384	5.283	4.343	3.108	2.223	1.591	1.308	.936	.670	.479
72	7.566	5.413	4.450	3.184	2.278	1.630	1.340	.959	.686	.491
74	7.748	5.544	4.558	3.261	2.333	1.669	1.372	.982	.703	.503
76	7.930	5.674	4.665	3.338	2.388	1.709	1.405	1.005	.719	.514
78	8.112	5.804	4.772	3.414	2.443	1.748	1.437	1.028	.736	.526
80	8.294	5.934	4.879	3.491	2.498	1.787	1.469	1.051	.752	.538
82	8.476	6.065	4.986	3.567	2.552	1.826	1.501	1.074	.769	.550
84	8.658	6.195	5.093	3.644	2.607	1.865	1.534	1.097	.785	.562
86	8.840	6.325	5.200	3.721	2.662	1.905	1.566	1.120	.802	.574
88	9.022	6.455	5.307	3.797	2.717	1.944	1.598	1.143	.818	.585
90	9.204	6.586	5.414	3.874	2.772	1.983	1.630	1.167	.835	.597

7/24/89 Note older versions are superseded
 12:08 PM Prepared by Jim Goodridge 916 345 3106

*Urban Hydrology for Small Watersheds, US Department of Agriculture,
Soil Conservation Service - Technical Release 55*

Table 2-2a.—Runoff curve numbers for urban areas¹

Cover description		Curve numbers for hydrologic soil group—			
Cover type and hydrologic condition	Average percent impervious area ²	A	B	C	D
<i>Fully developed urban areas (vegetation established)</i>					
Open space (lawns, parks, golf courses, cemeteries, etc.): ³					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) ⁴ ..		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	33	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	55	77	82
<i>Developing urban areas</i>					
Newly graded areas (pervious areas only, no vegetation) ⁵		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

¹Average runoff condition, and $I_p = 0.25$.

²The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

³CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

⁴Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

⁵Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4, based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

Urban Hydrology for Small Watersheds, US Department of Agriculture,
Soil Conservation Service - Technical Release 55

Table 2-2c.—Runoff curve numbers for other agricultural lands¹

Cover description		Curve numbers for hydrologic soil group—			
Cover type	Hydrologic condition	A	B	C	D
Pasture, grassland, or range—continuous forage for grazing. ²	Poor	65	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Meadow—continuous grass, protected from grazing and generally mowed for hay.	—	30	58	71	78
Brush—brush-weed-grass mixture with brush the major element. ³	Poor	48	67	77	83
	Fair	35	56	70	77
	Good	30	48	65	73
Woods—grass combination (orchard or tree farm). ⁴	Poor	57	73	82	86
	Fair	43	65	76	82
	Good	32	58	72	79
Woods. ⁴	Poor	45	68	77	83
	Fair	36	60	73	79
	Good	30	55	70	77
Farmsteads—buildings, lanes, driveways, and surrounding lots.	—	59	74	82	86

¹Average runoff condition, and $I_n = 0.2S$.

²*Poor*: < 50% ground cover or heavily grazed with no mulch.

Fair: 50 to 75% ground cover and not heavily grazed.

Good: > 75% ground cover and lightly or only occasionally grazed.

³*Poor*: < 50% ground cover.

Fair: 50 to 75% ground cover.

Good: > 75% ground cover.

⁴Actual curve number is less than 30; use $CN = 30$ for runoff computations.

⁵ CN 's shown were computed for areas with 50% woods and 50% grass (pasture) cover. Other combinations of conditions may be computed from the CN 's for woods and pasture.

⁶*Poor*: Forest litter, small trees, and brush are destroyed by heavy grazing or regular burning.

Fair: Woods are grazed but not burned, and some forest litter covers the soil.

Good: Woods are protected from grazing, and litter and brush adequately cover the soil.

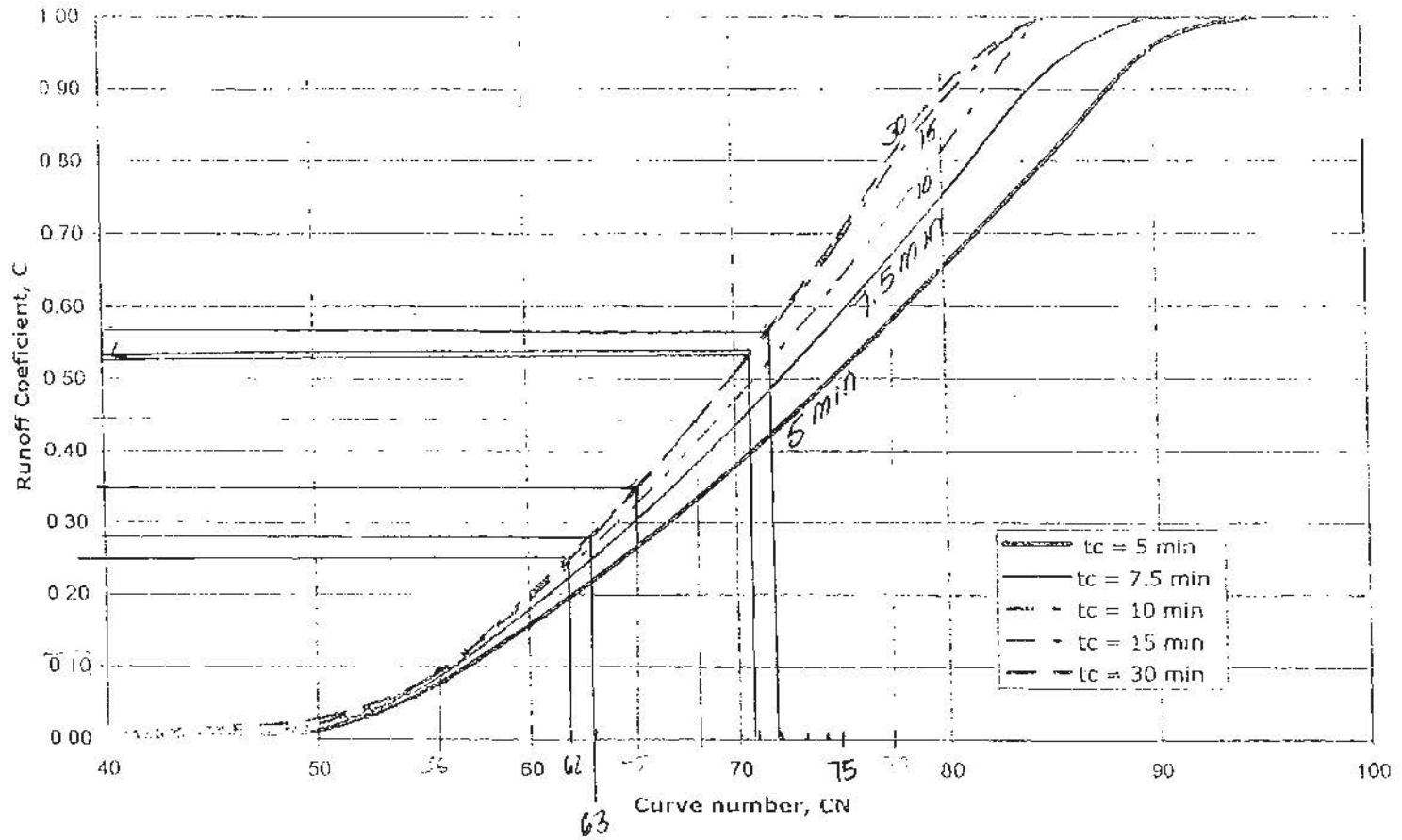


Figure 4. Runoff coefficients for 10-yr event below 1,640 ft (NRCS type 1 storm)

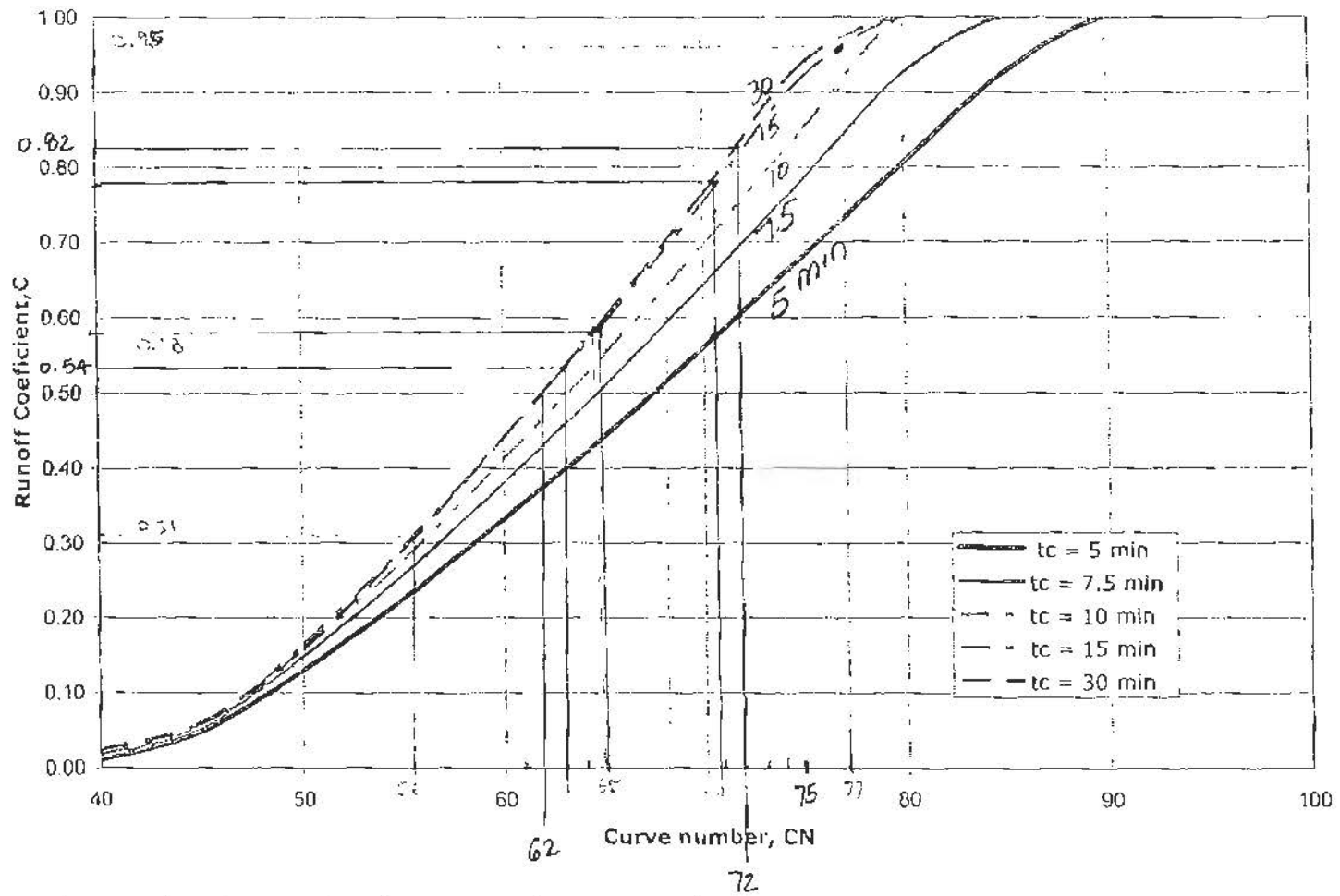


Figure 6. Runoff coefficients for 100-yr event below 1,640 ft (NRCS type 1 storm)

48-141A

NO.	RADIUS	DELTA	LENGTH	CHORD	NO.	RADIUS	DELTA	LENGTH	CHORD	NO.	RADIUS	DELTA	LENGTH	CHORD
1	300.00'	18°00'10"	94.26'	N25°59'55"W 93.88'	11	60.00'	60°00'00"	62.83'	N83°24'03"E 60.00'	22	270.00'	16°56'50"	79.86'	N81°06'06"E 79.57'
2	270.00'	26°09'05"	123.24'	N39°53'25"E 122.17'	12	60.00'	48°24'21"	50.69'	N29°11'53"E 49.20'	23	300.00'	15°54'11"	83.27'	N81°37'26"E 83.00'
3	500.00'	16°51'23"	147.10'	N15°01'39"W 146.57'	13	60.00'	60°00'00"	62.83'	N37°02'03"W 60.00'	24	330.00'	17°52'11"	102.92'	N80°38'25"E 102.51'
4	1004.93'	17°27'45"	306.28'	N78°49'19"W 305.10'	14	60.00'	80°02'13"	83.81'	N32°59'03"E 77.16'					
5	530.00'	43°22'43"	401.26'	N28°17'18"W 391.75'	15	60.00'	39°57'47"	41.85'	N87°00'57"W 41.01'					
6	60.00'	44°52'30"	46.99'	N44°09'42"W 45.80'	16	60.00'	50°02'13"	52.40'	N17°59'04"E 50.75'					
7	60.00'	60°00'00"	62.83'	N37°02'03"W 60.00'	17	60.00'	116°07'36"	121.61'	N24°52'40"E 101.84'					
8	60.00'	09°57'47"	10.43'	N72°00'56"W 10.42'	18	60.00'	53°33'06"	56.08'	N60°02'19"E 54.06'					
9	300.00'	08°40'38"	45.43'	N69°20'01"E 45.39'	19	60.00'	60°00'00"	62.83'	N63°11'08"W 60.00'					
10	60.00'	75°07'30"	78.67'	N15°50'18"E 73.16'	20	330.00'	18°00'10"	103.69'	N25°59'55"W 103.26'					
					21	270.00'	18°00'10"	84.84'	N25°59'55"W 84.49'					

PARCEL MAP

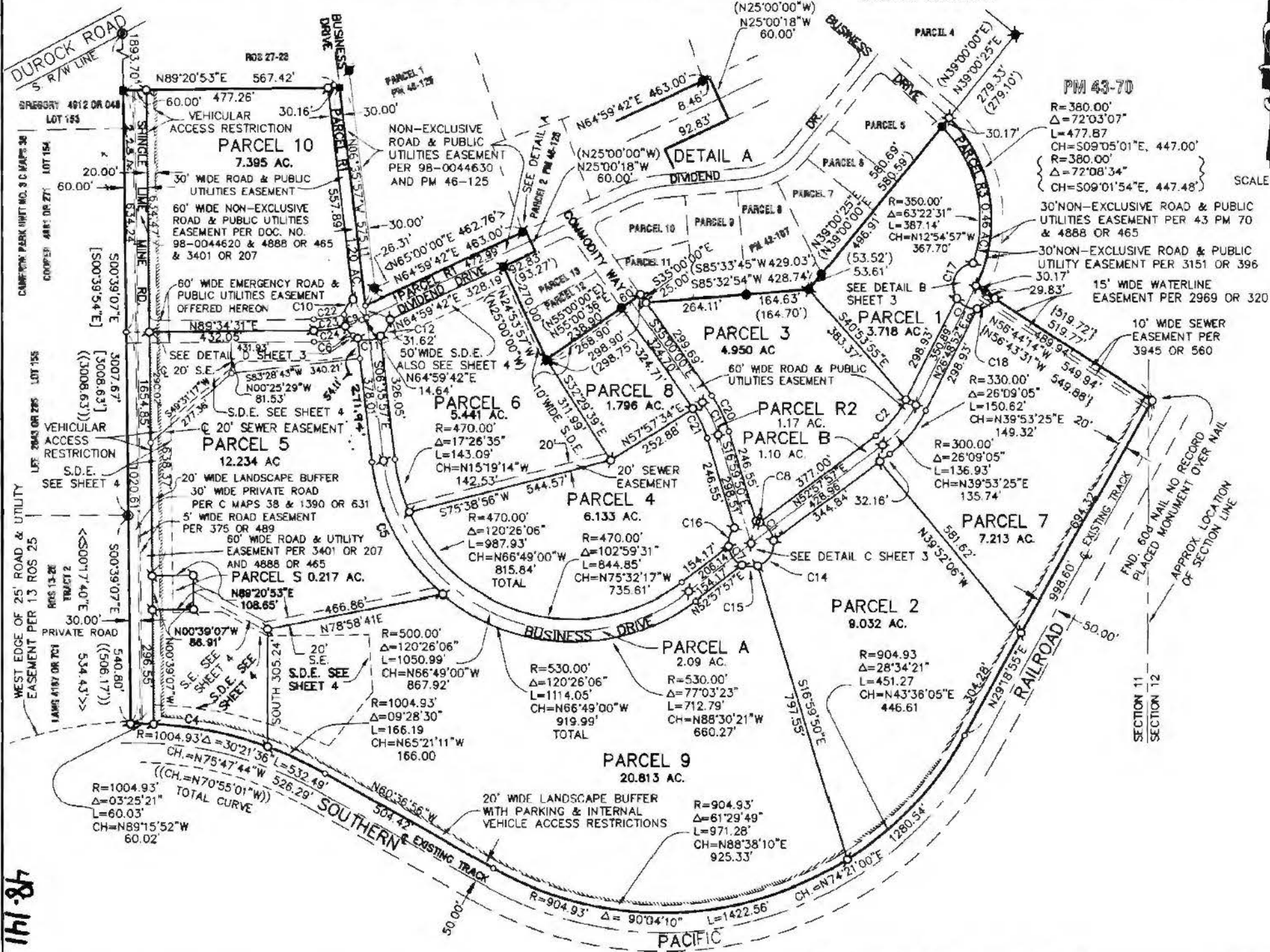
BARNETT BUSINESS PARK UNIT NO. 2 PHASE 2

BEING PORTIONS OF THE S 1/2 OF SECTION 11 AND THE SW 1/4 OF SECTION 12, T.9N., R.9 E. M.D.M.
 COUNTY OF EL DORADO, STATE OF CALIFORNIA
 JANUARY, 2005 SCALE 1"=200'
 DIMENSION CONTROL—LAND SURVEYORS

BASIS OF BEARINGS

THE MERIDIAN OF THIS SURVEY IS IDENTICAL WITH THAT OF THAT CERTAIN RECORD OF SURVEY RECORDED IN BOOK 24 OF SURVEYS AT PAGE 27 AND IS BASED UPON THE MONUMENTS SHOWN AS FOUND ALONG THE EAST LINE OF CAMERON PARK UNIT NO. 3 RECORDED IN BOOK C OF MAPS AT PAGE 38, EL DORADO COUNTY OFFICIAL RECORDS AND IS TAKEN AS S00°39'07"E.

SHEET 2 OF 4



- ### LEGEND
- FOUND 3/4" CIP STAMPED LS 2720
 - FOUND 3/4" CIP STAMPED LS 4663
 - FOUND 1 1/2" CIP STAMPED RCE 26342, 1988
 - FOUND 3/4" CIP STAMPED RCE 26342, 1988
 - FOUND 3/4" CIP STAMPED RCE 26342, 1991
 - FOUND 5/8" REBAR & 2" ALUM CAP STAMPED LS 4558, 2003
 - SET 5/8" REBAR & 2" ALUM CAP STAMPED LS 4558, 2005
 - ⊗ SET RR SPIKE STAMPED LS 4558 2005
 - DIMENSION POINT NOTHING FOUND OR SET

- ### REFERENCES
- PM 43-70 PM 42-107
 - PM 46-125 SD C-38
 - ROS 2-88 ROS 27-23

- ### LEGEND
- { } RECORD DATA PER 43 PM 70
 - [] RECORD DATA PER C MAPS 38
 - () RECORD DATA PER 42 PM 107
 - (()) RECORD DATA PER 2238 OR 672
 - [[] RECORD DATA PER 2038 OR 159
 - < > RECORD DATA PER 46 PM 125
 - << >> RECORD DATA PER 13 ROS 25
 - VEHICULAR ACCESS RESTRICTION
 - S.E. SEWER EASEMENT
 - S.D.E. STORM DRAIN EASEMENT

NOTES

- (1) PARCEL S IS TO BE DEDICATED TO EL DORADO IRRIGATION DISTRICT FOR A PUMP STATION FACILITY.
- SEE SHEET 4 FOR ADDITIONAL NOTES

48-141A

48-141A

48-141 C

48-141 C

DETAIL SHEET

PARCEL MAP BARNETT BUSINESS PARK UNIT NO. 2 PHASE 2

LEGEND

- DIMENSION POINT NOTHING FOUND OR SET
- P.U.E. PUBLIC UTILITY EASEMENT
- S.E. SEWER EASEMENT

SCALE 1"=200'

BEING PORTIONS OF THE NE 1/4 OF SECTION 11 AND THE NW 1/4 OF SECTION 12, T.9N., R.9 E. M.D.M.

COUNTY OF EL DORADO, STATE OF CALIFORNIA
JANUARY, 2005

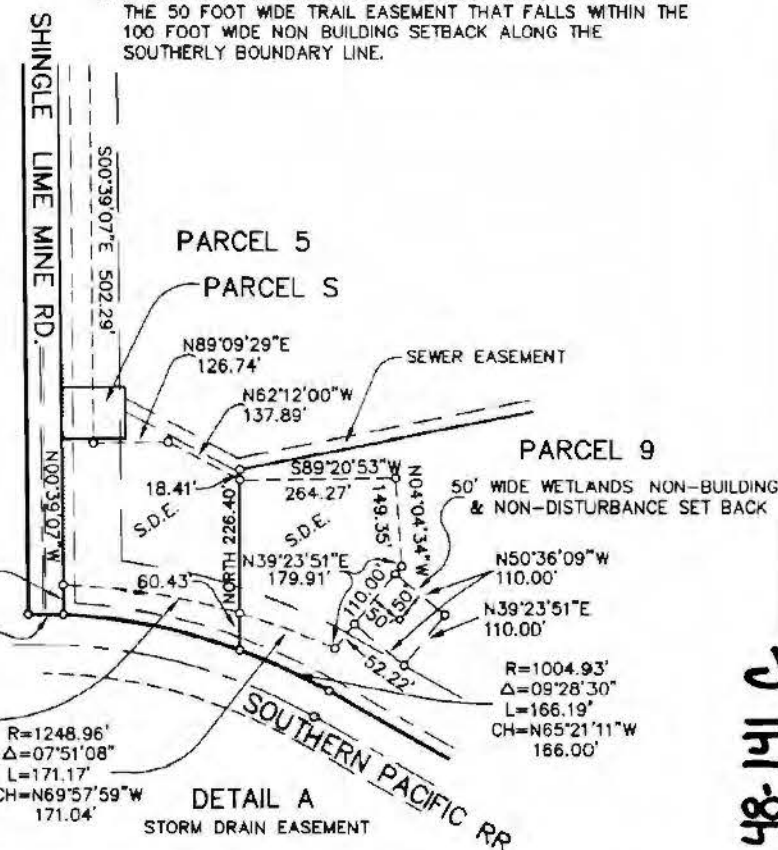
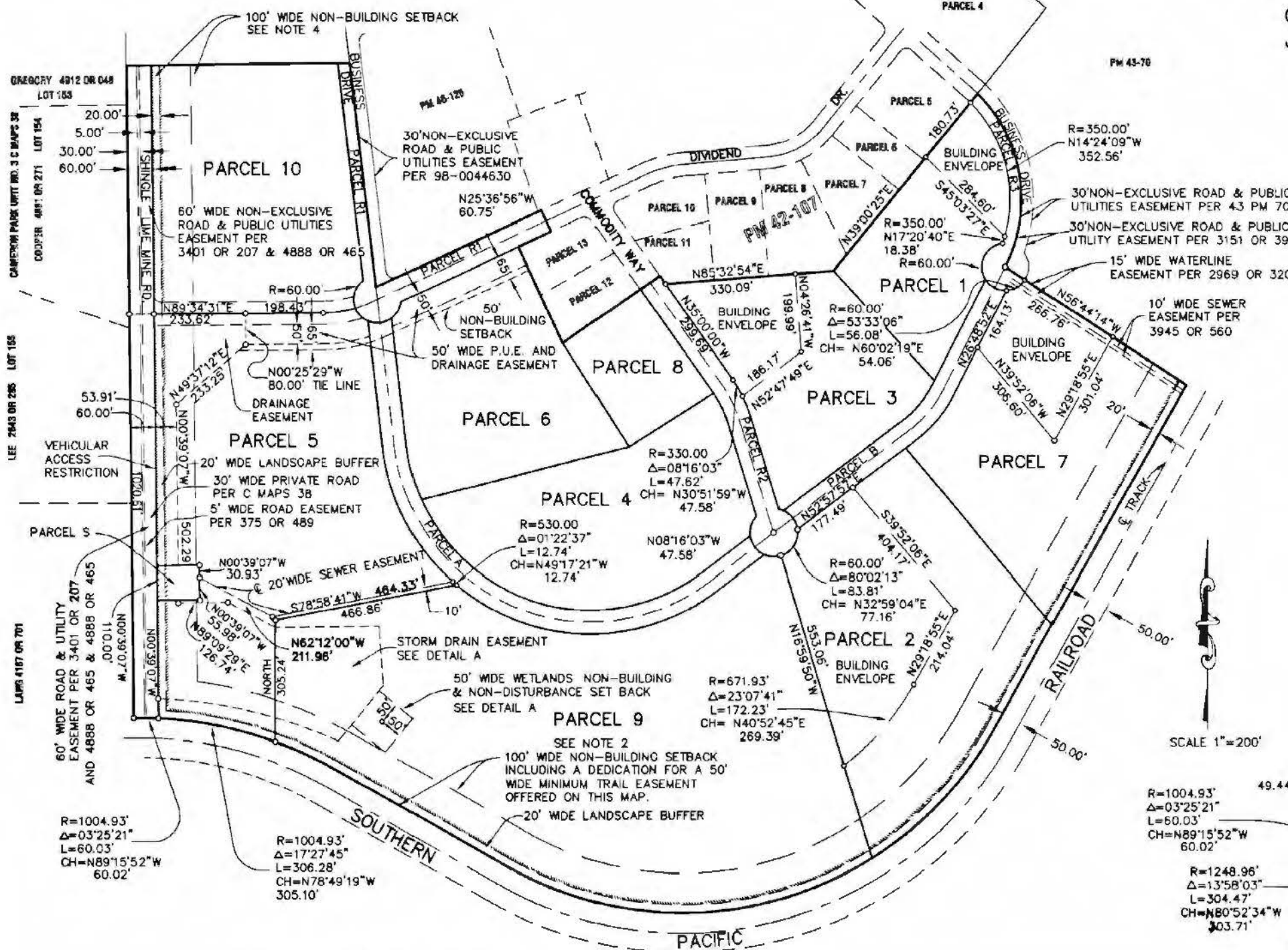
SCALE 1"=200'

DIMENSION CONTROL-LAND SURVEYORS

SHEET 4 OF 4

NOTES

1. THE BUILDING ENVELOPES SHOWN ON THIS DETAIL SHEET MAY BE SUBJECT TO CHANGE AS A RESULT OF THE DISCRETIONARY DESIGN REVIEW PROCESS. THE BUILDING ENVELOPES MAY ALSO CHANGE AS A RESULT OF TRANSPLANTING OAK CANOPY ON THE INDIVIDUAL PARCELS. THE BUILDING ENVELOPES MAY BE MODIFIED AS LONG AS NO MORE THAN 3.14 ACRES OF OAK TREE CANOPY ARE REMOVED PURSUANT TO CONDITION NO. 11 OF P99-13.
2. A 100 FOOT WIDE NON BUILDING SETBACK WILL RUN ALONG THE SOUTHERN AND WESTERN BOUNDARY LINE, THROUGH PARCELS 2, 7, AND 9, AND ALONG THE EASTERLY LINE OF SHINGLE LIME MINE ROAD, THROUGH PARCELS 5 AND 10, EXEMPTING PARCEL 5, THE PROPOSED LIFT STATION REQUIRED TO PROVIDE SERVICE TO THE SUBJECT PARCELS.
3. PORTIONS OF DRAINAGE FACILITIES MAY ENCRUCH INTO THE 50 FOOT WIDE TRAIL EASEMENT THAT FALLS WITHIN THE 100 FOOT WIDE NON BUILDING SETBACK ALONG THE SOUTHERLY BOUNDARY LINE.



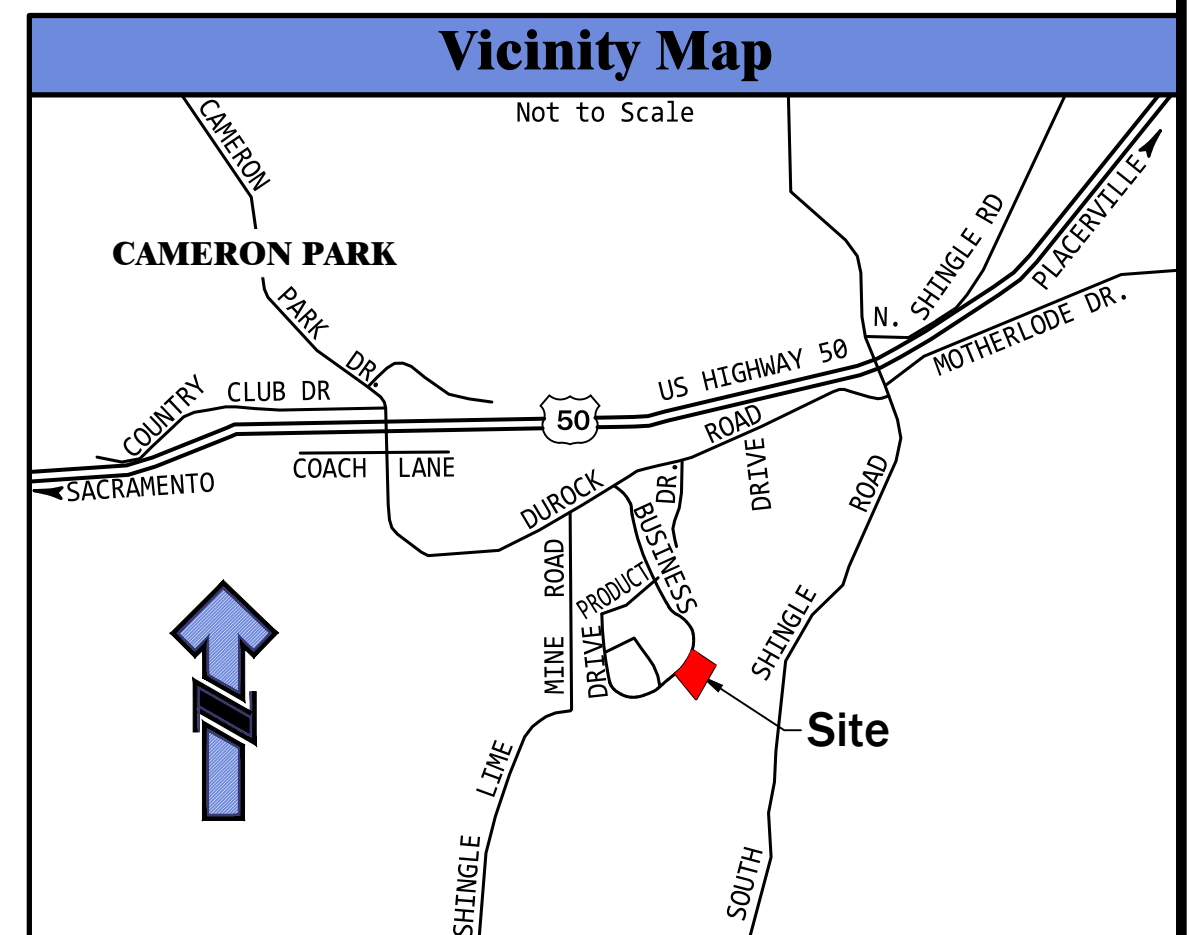
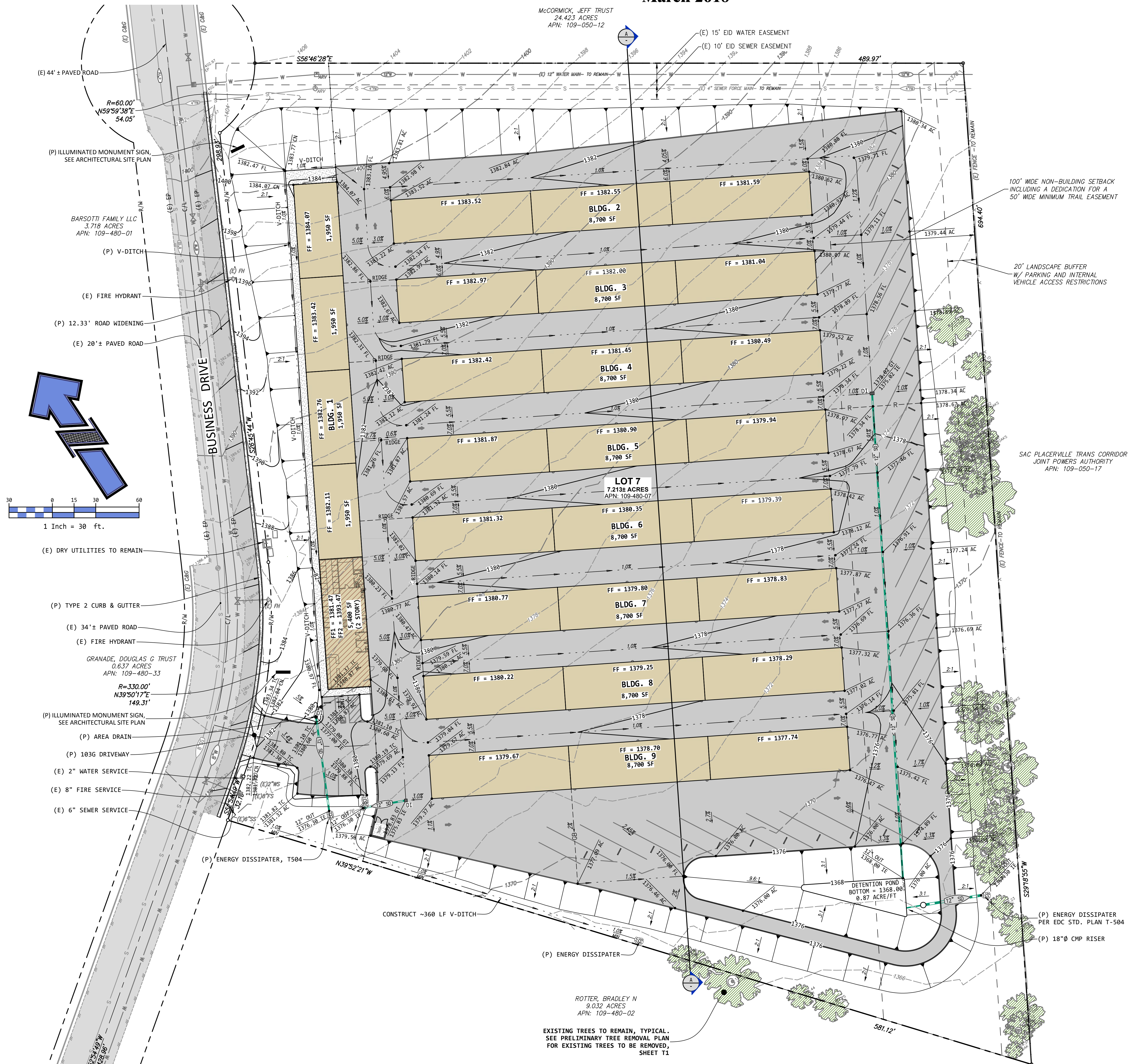
EXISTING ASSESSOR PARCEL NO. 109-050-19

48-141 C

48-141 C

REVISED PRELIMINARY GRADING & DRAINAGE PLAN FOR Leave It To Us Self Storage

APN: 109-480-07, EL DORADO COUNTY, CA
March 2018



Project Data	
OWNER	The Lyle A. Hintz Family Trust Marlene A. Carter, Trustee 2260 Talon Drive Shingle Springs, CA 95682 Ph: 530-672-2666 Email: cmolly@yahoo.com
APPLICANT	LEBECK • YOUNG ENGINEERING, INC. 3430 ROBIN LANE, BLDG. #2 CAMERON PARK, CA 95682 Ph. 530-677-4080 Fax. 530-677-4096
PREPARED BY	LEBECK YOUNG ENGINEERING, INC.
SCALE	AS SHOWN
CONTOUR INTERVAL	2 FEET
SOURCE OF TOPOGRAPHY	FIELD SURVEY BY ALAN DIVERS P.L.S.
SECTION, TOWNSHIP & RANGE	PORTION OF SEC. 11, T.9N., R.9E., M.D.M.
ASSESSOR'S PARCEL NO.	APN: 109-480-07
ZONING	I-DC
TOTAL AREA	7.213± ACRES
TOTAL NUMBER OF PARCELS	1-EXISTING
WATER SUPPLY	EID
SEWAGE DISPOSAL	EID
FIRE PROTECTION	EL DORADO COUNTY FIRE PROTECTION DISTRICT

Abbreviations			
BSBL	BUILDING SETBACK LINE	GT	GRATE ELEVATION
BFP	BACKFLOW PREVENTER	LF	LEFT
BW	BOTTOM OF WALL AT FG	LPG	PROPANE TANK
CH	CHORD BEARING	(P)	PROPOSED
CN	CONCRETE ELEVATION	PAD	FINISHED PAD
CO	CLEANOUT	PIV	POST INDICATOR VALVE
CV	CHECK VALVE	PP	POWER POLE
DCV	DOUBLE DETECTOR CHECK VALVE	POC	POINT OF CONNECTION
DI	DRAIN INLET	PUE	PUBLIC UTILITIES EASEMENT
DWY	DRIVEWAY	R	RADIUS
(E)	EXISTING	R/W	RIGHT OF WAY
E.D.C.	EL DORADO COUNTY	RT	RIGHT
EL	ELEVATION	SD	STORM DRAIN
EP	EDGE OF PAVEMENT	SS	SEWER SERVICE
FC	FACE OF CURB	SG	SUBGRADE
FF	FINISHED FLOOR	TBC	TOP BACK OF CURB
FG	FINISHED GRADE	TC	TOP OF CURB ELEVATION
FH	FIRE HYDRANT	TW	TOP OF WALL ELEVATION
FL	FLOWLINE	UPC	UNIVERSAL PLUMBING CODE
FND.	FOUND	WP	WALL MOUNT LUMINAIRE
FDC	FIRE DEPT. CONNECTION	WM	WATER METER
GB	GRADE BREAK	WL	WATER LINE

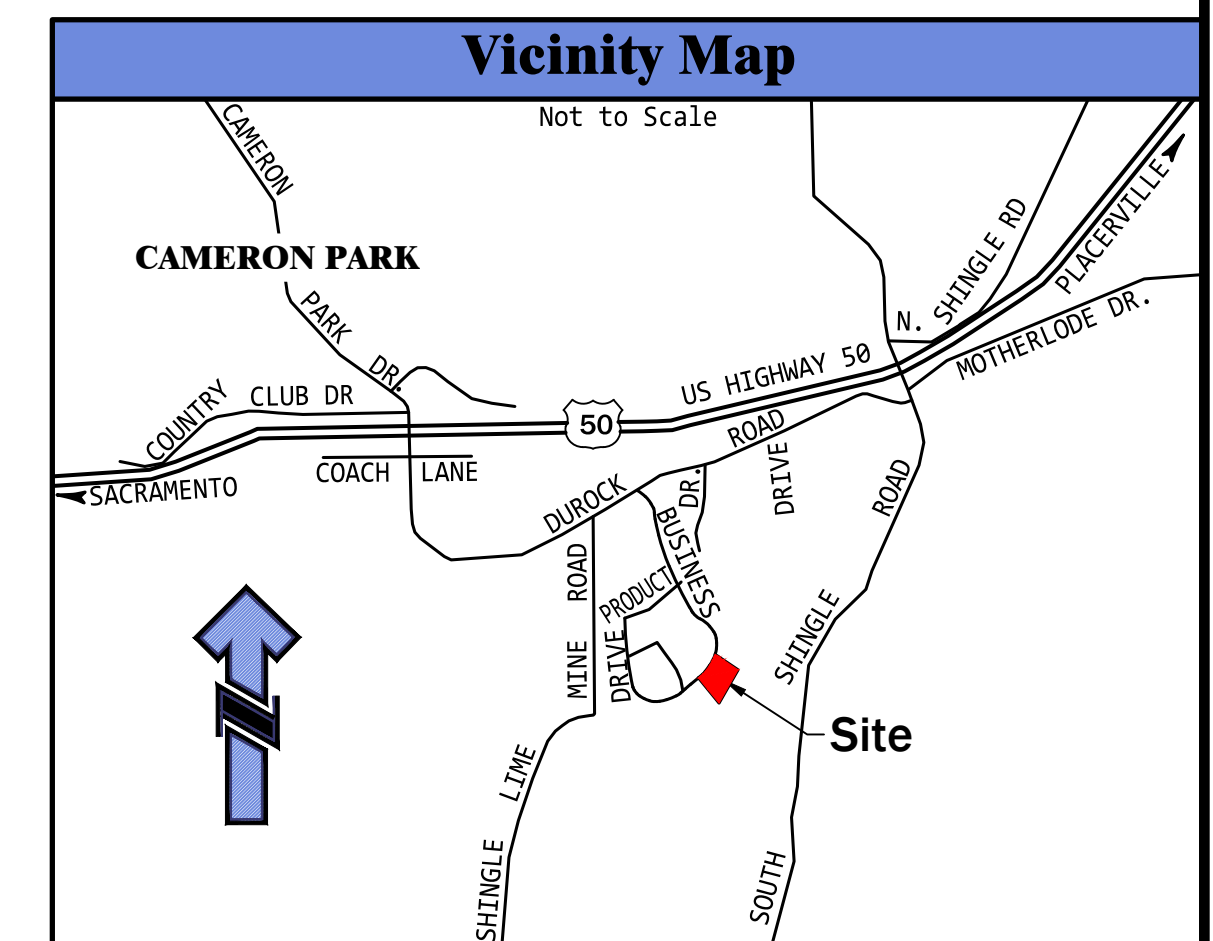
Earthwork Calculations		
EMBANKMENT (FILL)		21,473 C.Y.
EXCAVATION (CUT)	23,996 C.Y.	
LESS 18% SHRINKAGE & LOSS	2,408 C.Y.	
TOTAL CUT	21,588 C.Y.	
SITE TOTAL	BALANCE ON-SITE	+125 C.Y.

Note: earthwork calculation are approximate and may vary based upon characteristics of the soil and/or contractors methodology.

ZONING ADMINISTRATOR: _____ APPROVAL/DENIAL DATE: _____

BOARD OF SUPERVISORS: _____ APPROVAL/DENIAL DATE: _____

REVISED PRELIMINARY UTILITY PLAN FOR
Leave It To Us Self Storage
APN: 109-480-07, EL DORADO COUNTY, CA
March 2018



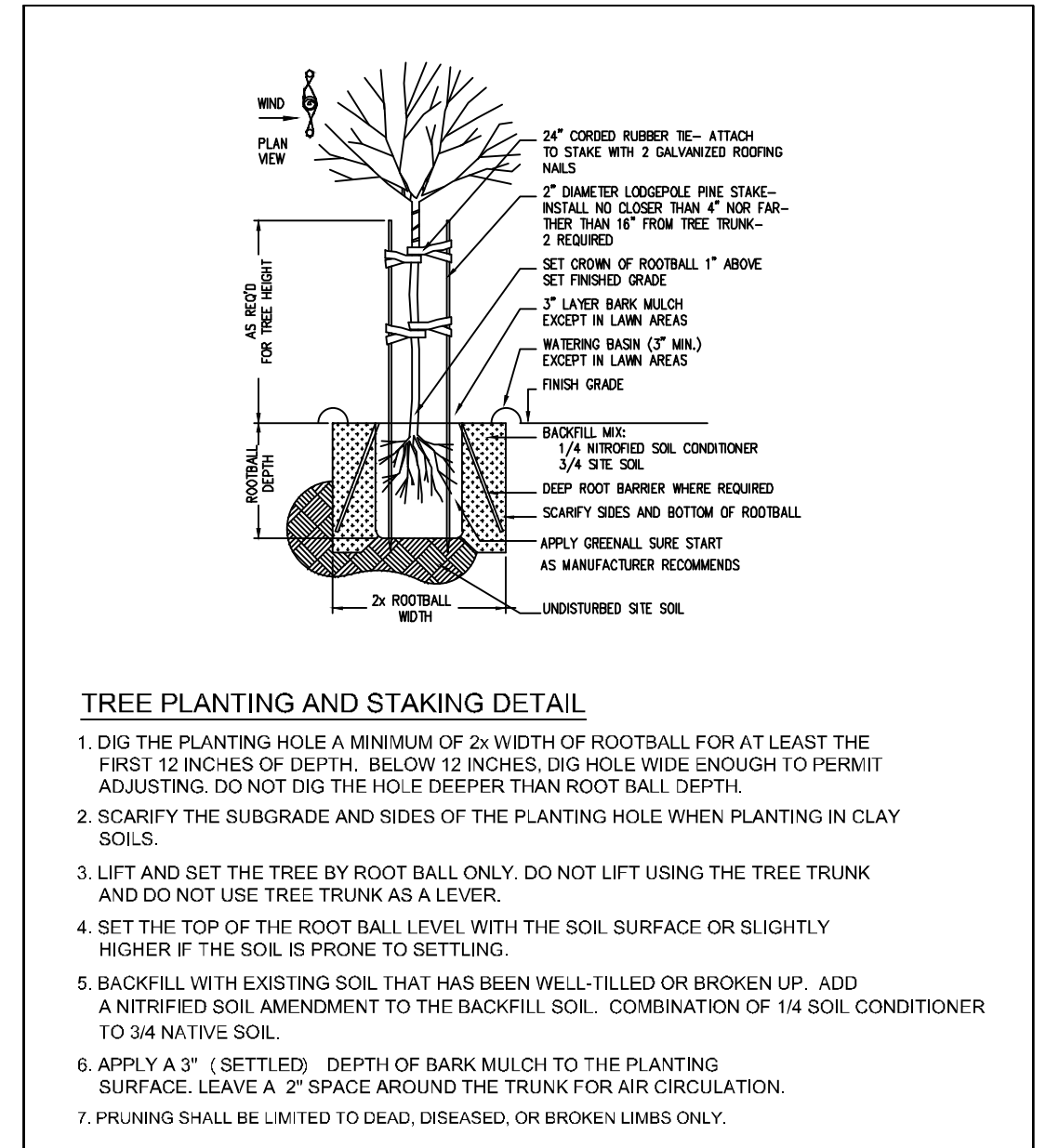
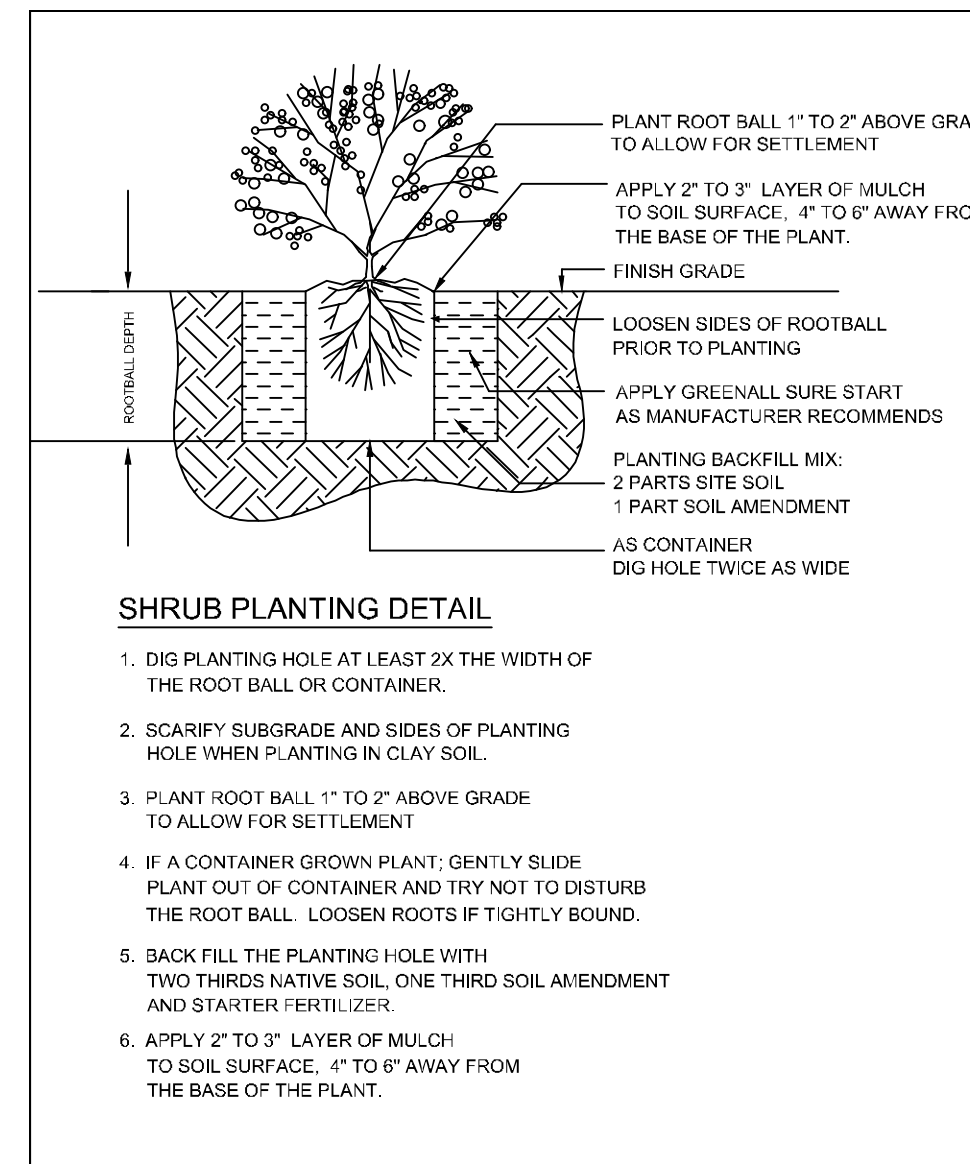
Project Data	
OWNER	The Lyle A. Hintz Family Trust Marlene A. Carter, Trustee 2260 Talon Drive Shingle Springs, CA 95682 Ph: 530-672-2666 Email: cmollyc@yahoo.com
APPLICANT	LEBECK • YOUNG ENGINEERING, INC. 3430 ROBIN LANE, BLDG. #2 CAMERON PARK, CA 95682 Ph. 530-677-4080 Fax. 530-677-4096
PREPARED BY	LEBECK YOUNG ENGINEERING, INC.
SCALE	AS SHOWN
CONTOUR INTERVAL	2 FEET
SOURCE OF TOPOGRAPHY	FIELD SURVEY BY ALAN DIVERS P.L.S.
SECTION, TOWNSHIP & RANGE	PORTION OF SEC. 11, T.9N., R.9E., M.D.M.
ASSESSOR'S PARCEL NO.	APN: 109-480-07
ZONING	I-DC
TOTAL AREA	7.213± ACRES
TOTAL NUMBER OF PARCELS	1-EXISTING
WATER SUPPLY	EID
SEWAGE DISPOSAL	EID
FIRE PROTECTION	EL DORADO COUNTY FIRE PROTECTION DISTRICT

Abbreviations			
BSBL	BUILDING SETBACK LINE	GT	GRATE ELEVATION
BFP	BACKFLOW PREVENTER	LF	LEFT
BW	BOTTOM OF WALL AT FG	LP	PROPANE TANK
CH	CHORD BEARING	(P)	PROPOSED
CN	CONCRETE ELEVATION	PAD	FINISHED PAD
CO	CLEANOUT	PIV	POST INDICATOR VALVE
CV	CHECK VALVE	PP	POWER POLE
DCV	DOUBLE DETECTOR CHECK VALVE	POC	POINT OF CONNECTION
DI	DRAIN INLET	PUE	PUBLIC UTILITIES EASEMENT
DWY	DRIVEWAY	R	RADIUS
(E)	EXISTING	R/W	RIGHT OF WAY
E.D.C.	EL DORADO COUNTY	RT	RIGHT
EL	ELEVATION	SD	STORM DRAIN
EP	EDGE OF PAVEMENT	SS	SEWER SERVICE
FC	FACE OF CURB	SG	SUBGRADE
FF	FINISHED FLOOR	TBC	TOP BACK OF CURB
FG	FINISHED GRADE	TC	TOP OF CURB ELEVATION
FH	FIRE HYDRANT	TW	TOP OF WALL ELEVATION
FL	FLOWLINE	UPC	UNIVERSAL PLUMBING CODE
FND.	FOUND	WP	WALL MOUNT LUMINAIRE
FDC	FIRE DEPT. CONNECTION	WM	WATER METER
GB	GRADE BREAK	WL	WATER LINE

PRELIMINARY LANDSCAPE PLANTING PLAN FOR Leave It To Us Self Storage

APN: 109-480-07, EL DORADO COUNTY, CA

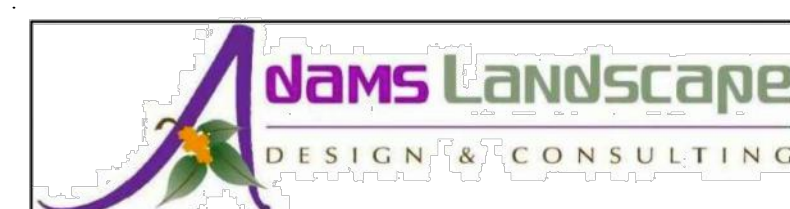
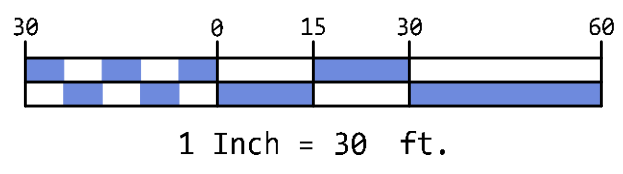
MCCORMICK, JEFF TRUST
24.423 ACRES
APN: 109-050-12

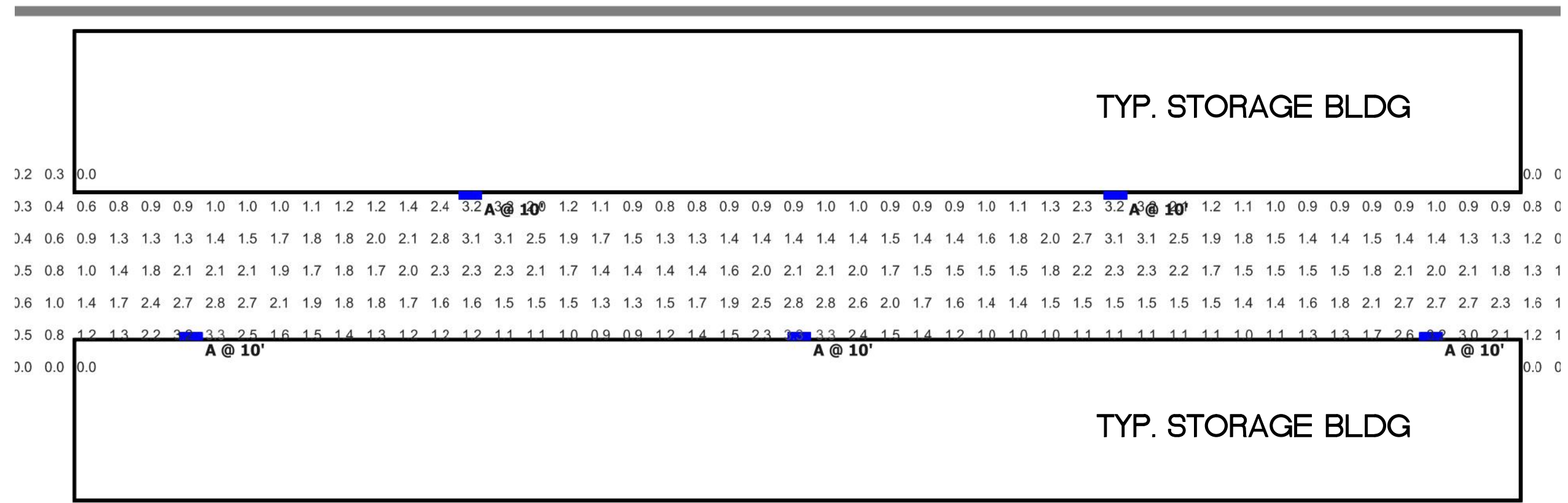


SAC PLACERVILLE TRANS CORRIDOR
JOINT POWERS AUTHORITY
APN: 109-050-17

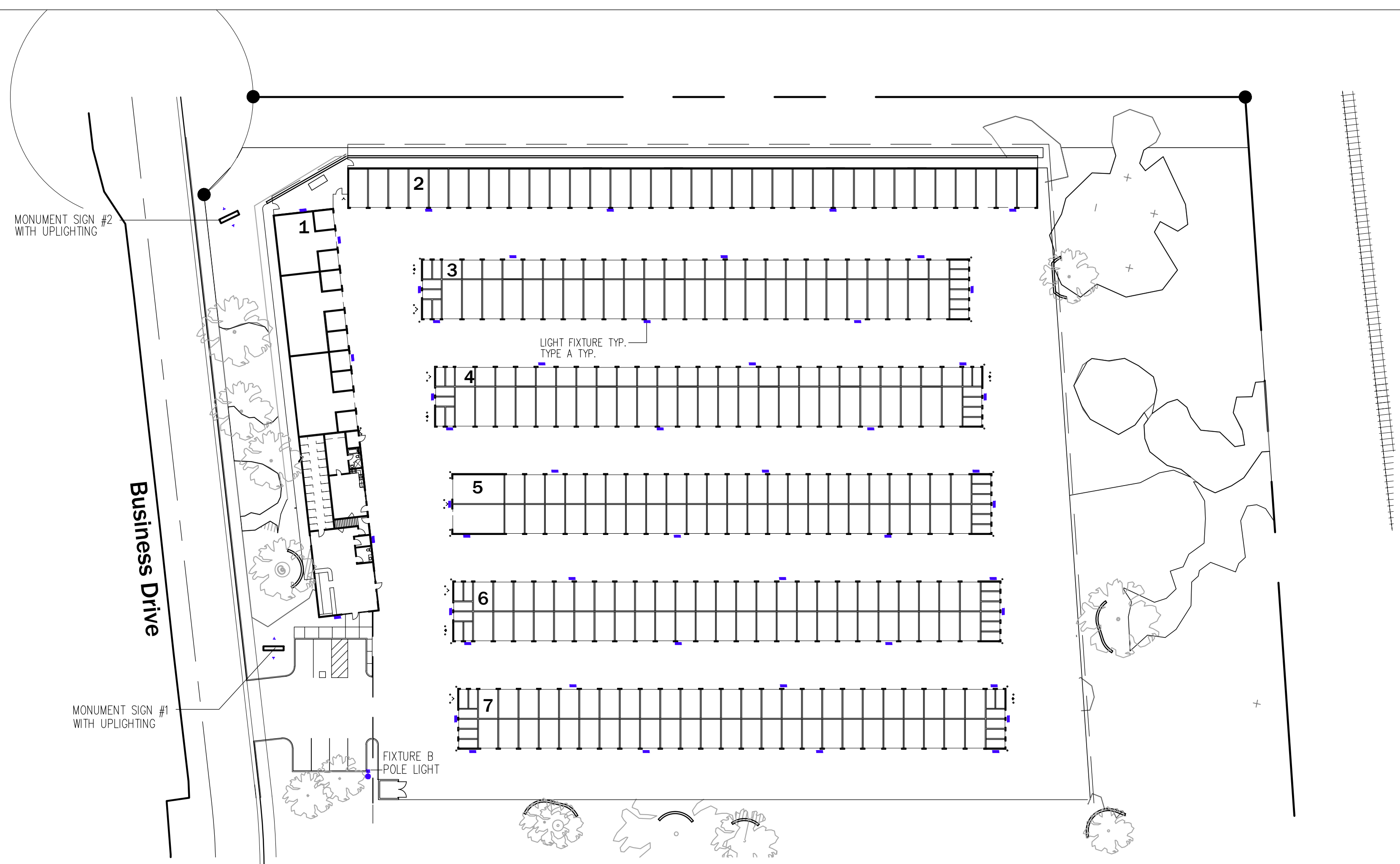
PLANT LEGEND

BOTANICAL NAME	COMMON NAME	QTY	SIZE	REMARKS
TREES				
	<i>Calocedrus deccurens</i>	Incense Cedar	2	5 Gallon
	<i>Cedrus deodara</i>	Deodar Cedar	2	5 Gallon
	<i>Cercis canadensis 'Oklahoma'</i>	Oklahoma Redbud	8	5 Gallon
	<i>Lagerstroemia indica 'Dynamite'</i>	Dynamite Crape Myrtle	11	5 Gallon
	<i>Quercus wislizenii</i>	Interior Live Oak	18	5 Gallon
SHRUBS				
	<i>Baccharis pilularis 'Twin Peaks'</i>	Dwarf Coyote Bush	50	1 Gallon
	<i>Cistus salvifolius 'Prostratus'</i>	Sageleaf Rockrose	43	1 Gallon 6' Apart
	<i>Juniperus horizontalis 'Wiltonii'</i>	Blue Rug Juniper	53	1 Gallon 8' Apart
	<i>Mahonia aquifolium 'Compacta'</i>	Compact Oregon Grape Holly	58	1 Gallon
	<i>Rhamnus californica 'Mound San Bruno'</i>	Mound San Bruno Coffeeberry	80	1 Gallon
	<i>Rosmarinus officinalis 'Blue Spire'</i>	Blue Spire Rosemary	59	1 Gallon





TYPICAL LIGHTING BETWEEN BUILDINGS



LIGHTING DIAGRAM
1" = 100'

TWH LED LED Wall Luminaire

Specifications
 Width: 16.1/4" (41.9 mm)
 Height: 15.3/4" (39.9 mm)
 Depth: 4" (101.6 mm)
 Weight: 28 lbs (12.7 kg)

Introduction
 The popular TWH luminaire is now available with LED technology. Cast in a traditional dayform, the TWH LED offers a classic appearance and is powered by advanced LEDs.

The new TWH LED luminaire is powerful yet energy efficient, capable of replacing up to a 400W metal halide luminaire while saving up to 77% in energy costs. Offering an expected service life of more than 20 years, the TWH LED eliminates frequent lamp and ballast replacements associated with traditional technologies.

Ordering Information

EXAMPLE: TWH LED 300 1000 50K T3M VOLT DBDXX

Series	LEDs	Start current (mA)	Date temperature (°K)	Mounting	Control options	Other features	Finish
TWH LED 300	1000	1000	50K	T3M	None	None	White
TWH LED 300	1000	1000	50K	T3M	None	None	White
TWH LED 300	1000	1000	50K	T3M	None	None	White

One Lithonia Way • Corning, Georgia 30512 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com
 © 2012 Lithonia Lighting, Inc. All rights reserved.

Performance Data

Lumen Output

Temp (°C)	Temp (°F)	Power (W)	Beam Angle (°)	Beam Diameter (ft)	Beam Diameter (m)	Beam Area (sq ft)	Beam Area (sq m)	Beam Area (sq ft) @ 100 ft	Beam Area (sq m) @ 100 ft
25	77	100	30	1.0	0.3	0.79	0.07	79	7.3
35	95	100	30	1.0	0.3	0.79	0.07	79	7.3
45	113	100	30	1.0	0.3	0.79	0.07	79	7.3
55	131	100	30	1.0	0.3	0.79	0.07	79	7.3
65	149	100	30	1.0	0.3	0.79	0.07	79	7.3
75	167	100	30	1.0	0.3	0.79	0.07	79	7.3

Lumen Ambient Temperature (LAT) Multipliers

Temp (°C)	Temp (°F)	Multiplier
25	77	1.00
35	95	0.95
45	113	0.90
55	131	0.85
65	149	0.80
75	167	0.75

CSX2 LED LED Area Luminaire

Specifications
 EPA: 1.2 ft² (0.11 m²)
 Length: 36.1/2" (927 mm)
 Width: 18.1/2" (468 mm)
 Height: 5.3/4" (146 mm)
 Weight: 29 lbs (13.2 kg)
 Weight (max): 59 lbs (26.8 kg)

Introduction
 The Contour® Series luminaires offer traditional square dayforms with softened edges for a versatile look that complements many applications. The CSX2 combines the latest in LED technology with the familiar aesthetic of the Contour® Series for stylish, high-performance illumination that lasts. It is ideal for replacing traditional metal halide in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: CSX2 LED 1200 1000 40K T3M MVOLT SPA DBDXX

Series	LEDs	Start current (mA)	Date temperature (°K)	Mounting	Control options	Other features	Finish
CSX2 LED 1200	1000	1000	40K	T3M	None	None	White
CSX2 LED 1200	1000	1000	40K	T3M	None	None	White
CSX2 LED 1200	1000	1000	40K	T3M	None	None	White

One Lithonia Way • Corning, Georgia 30512 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com
 © 2012 Lithonia Lighting, Inc. All rights reserved.

Performance Data

Lumen Output

Temp (°C)	Temp (°F)	Power (W)	Beam Angle (°)	Beam Diameter (ft)	Beam Diameter (m)	Beam Area (sq ft)	Beam Area (sq m)	Beam Area (sq ft) @ 100 ft	Beam Area (sq m) @ 100 ft
25	77	1200	30	1.0	0.3	0.79	0.07	790	73
35	95	1200	30	1.0	0.3	0.79	0.07	790	73
45	113	1200	30	1.0	0.3	0.79	0.07	790	73
55	131	1200	30	1.0	0.3	0.79	0.07	790	73
65	149	1200	30	1.0	0.3	0.79	0.07	790	73
75	167	1200	30	1.0	0.3	0.79	0.07	790	73

Lumen Ambient Temperature (LAT) Multipliers

Temp (°C)	Temp (°F)	Multiplier
25	77	1.00
35	95	0.95
45	113	0.90
55	131	0.85
65	149	0.80
75	167	0.75

Ordering Information

EXAMPLE: CSX2 LED 1200 1000 40K T3M MVOLT SPA DBDXX

Series	LEDs	Start current (mA)	Date temperature (°K)	Mounting	Control options	Other features	Finish
CSX2 LED 1200	1000	1000	40K	T3M	None	None	White
CSX2 LED 1200	1000	1000	40K	T3M	None	None	White
CSX2 LED 1200	1000	1000	40K	T3M	None	None	White

One Lithonia Way • Corning, Georgia 30512 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com
 © 2012 Lithonia Lighting, Inc. All rights reserved.

Performance Data

Lumen Output

Temp (°C)	Temp (°F)	Power (W)	Beam Angle (°)	Beam Diameter (ft)	Beam Diameter (m)	Beam Area (sq ft)	Beam Area (sq m)	Beam Area (sq ft) @ 100 ft	Beam Area (sq m) @ 100 ft
25	77	1500	30	1.0	0.3	0.79	0.07	975	90
35	95	1500	30	1.0	0.3	0.79	0.07	975	90
45	113	1500	30	1.0	0.3	0.79	0.07	975	90
55	131	1500	30	1.0	0.3	0.79	0.07	975	90
65	149	1500	30	1.0	0.3	0.79	0.07	975	90
75	167	1500	30	1.0	0.3	0.79	0.07	975	90

Lumen Ambient Temperature (LAT) Multipliers

Temp (°C)	Temp (°F)	Multiplier
25	77	1.00
35	95	0.95
45	113	0.90
55	131	0.85
65	149	0.80
75	167	0.75

Ordering Information

EXAMPLE: CSX2 LED 1200 1000 40K T3M MVOLT SPA DBDXX

Series	LEDs	Start current (mA)	Date temperature (°K)	Mounting	Control options	Other features	Finish
CSX2 LED 1200	1000	1000	40K	T3M	None	None	White
CSX2 LED 1200	1000	1000	40K	T3M	None	None	White
CSX2 LED 1200	1000	1000	40K	T3M	None	None	White

One Lithonia Way • Corning, Georgia 30512 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com
 © 2012 Lithonia Lighting, Inc. All rights reserved.

FIXTURE A

FIXTURE B

Leave It To Us Self Storage

Barnett Business Park, Lot 7
 Shingle Springs, CA 95682

Lyle A. Hintz Family Trust

BRIAN WICKERT
 ARCHITECT
 P.O. BOX 2106
 SHINGLE SPRINGS CA 95682
 530-401-3390

Attachment 6

2-13-16
LIGHTING
Sheet A5

- [Adam Baughman <adam.baughman@edcgov.us>](mailto:adam.baughman@edcgov.us)

-

- Jan 20 at 4:37 PM

To

- Molly Carter
Message body

Adam Baughman

Air Quality Engineer

El Dorado County Air Quality Mgmt District

330 Fair Lane

Placerville, CA, 95667

(530) 621-7571

----- Forwarded message -----

From: **Adam Baughman** <adam.baughman@edcgov.us>

Date: Wed, Jan 20, 2016 at 4:24 PM

Subject: Re: Leave It To Us Self Storage Project

To: Molly Carter <cmollyc@yahoo.com>

Thanks Molly,

OK, attached are the model printouts concerning construction and operation of the storage facility. As I suspected, the project does not trip thresholds except for Reactive Organic Gases (ROG) also known as Volatile Organic Compounds (VOC). It's almost exclusively coming from the paint used in the construction phase. So, other than our standard conditions, the only condition we would add would be to paint with low VOC paints (50 g/L VOC content or less). That's readily available in the marketplace.

So, when you submit to Planning, show them this email and let them know I already have the model runs and that no additional AQ analysis will be required.

Adam Baughman

Air Quality Engineer

El Dorado County Air Quality Mgmt District

Attachment 7

330 Fair Lane

Placerville, CA, 95667

(530) 621-7571

On Wed, Jan 20, 2016 at 1:27 PM, Molly Carter <cmollyc@yahoo.com> wrote:

Afternoon Adam,

We just talked about our project and here is the information you requested so you can run the air quality impact analysis needed for the County Planning Departments Design Review.

Thank you so much for your help - Marlene Carter

Leave it to Us Self Storage
El Dorado-Mountain County County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	56.00	1000sqft	1.29	56,000.00	0
Parking Lot	8.00	Space	0.07	3,200.00	0
Other Asphalt Surfaces	68.99	1000sqft	1.58	68,987.00	0
	0.00		0.00		0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	70
Climate Zone	2			Operational Year	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Used Climate Zone 2 because Climate Zone 1 has no energy values for Unrefrigerated Warehouse.

Land Use - Total Bldg SF = 56,008. Total Bldg Footprint = 53,308sf. Total Bldg Envelope (inc paving) = 123,295sf. Total Paving = 123,295-53,308 =68,987sf.

Construction Phase - No Demo

Grading - No Import/Export. Total grading = 13,983cy balanced onsite

Land Use Change - 7.21 acre parcel - 2.83 acres of development = 4.38 acres of remaining native vegetation.

Area Mitigation - VOC content of paint revised from 250g/L to 50 g/L

Architectural Coating - Revised VOC content from 250 g/L to 50 g/L.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	50
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	50
tblLandUse	LandUseSquareFeet	68,990.00	68,987.00
tblProjectCharacteristics	OperationalYear	2014	2017

2.0 Emissions Summary

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6457	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3800e-003	2.3800e-003	1.0000e-005	0.0000	2.5200e-003
Energy	1.9400e-003	0.0177	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	102.7929	102.7929	4.1500e-003	1.1300e-003	103.2316
Mobile	0.0996	0.2231	1.0174	2.1800e-003	0.1560	2.7800e-003	0.1588	0.0418	2.5600e-003	0.0443	0.0000	164.9417	164.9417	7.3700e-003	0.0000	165.0965
Waste						0.0000	0.0000		0.0000	0.0000	10.6854	0.0000	10.6854	0.6315	0.0000	23.9468
Water						0.0000	0.0000		0.0000	0.0000	4.1084	20.3849	24.4933	0.4229	0.0102	36.5221
Total	0.7472	0.2408	1.0334	2.2900e-003	0.1560	4.1200e-003	0.1602	0.0418	3.9000e-003	0.0457	14.7939	288.1219	302.9158	1.0659	0.0113	328.7994

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5297	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3800e-003	2.3800e-003	1.0000e-005	0.0000	2.5200e-003
Energy	1.9400e-003	0.0177	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	102.7929	102.7929	4.1500e-003	1.1300e-003	103.2316
Mobile	0.0996	0.2231	1.0174	2.1800e-003	0.1560	2.7800e-003	0.1588	0.0418	2.5600e-003	0.0443	0.0000	164.9417	164.9417	7.3700e-003	0.0000	165.0965
Waste						0.0000	0.0000		0.0000	0.0000	10.6854	0.0000	10.6854	0.6315	0.0000	23.9468
Water						0.0000	0.0000		0.0000	0.0000	4.1084	20.3849	24.4933	0.4228	0.0101	36.5155
Total	0.6313	0.2408	1.0334	2.2900e-003	0.1560	4.1200e-003	0.1602	0.0418	3.9000e-003	0.0457	14.7939	288.1219	302.9158	1.0658	0.0113	328.7929

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	15.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.09	0.00

2.3 Vegetation

Vegetation

	CO2e
Category	MT
Vegetation Land Change	0.0000
Total	0.0000

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2017	1/4/2017	5	3	
2	Grading	Grading	1/5/2017	1/12/2017	5	6	
3	Building Construction	Building Construction	1/13/2017	11/16/2017	5	220	
4	Paving	Paving	11/17/2017	11/30/2017	5	10	
5	Architectural Coating	Architectural Coating	12/1/2017	12/14/2017	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 187,625; Non-Residential Outdoor: 62,542 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Site Preparation	Graders	1	8.00	174	0.41
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	1	8.00	130	0.36
Site Preparation	Scrapers	1	8.00	361	0.48
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	54.00	21.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7900e-003	0.0429	0.0257	4.0000e-005		2.1000e-003	2.1000e-003		1.9300e-003	1.9300e-003	0.0000	3.3195	3.3195	1.0200e-003	0.0000	3.3409
Total	3.7900e-003	0.0429	0.0257	4.0000e-005	2.3900e-003	2.1000e-003	4.4900e-003	2.6000e-004	1.9300e-003	2.1900e-003	0.0000	3.3195	3.3195	1.0200e-003	0.0000	3.3409

3.2 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	5.0000e-005	5.1000e-004	0.0000	9.0000e-005	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0824	0.0824	0.0000	0.0000	0.0824
Total	4.0000e-005	5.0000e-005	5.1000e-004	0.0000	9.0000e-005	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0824	0.0824	0.0000	0.0000	0.0824

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7900e-003	0.0429	0.0257	4.0000e-005		2.1000e-003	2.1000e-003		1.9300e-003	1.9300e-003	0.0000	3.3195	3.3195	1.0200e-003	0.0000	3.3409
Total	3.7900e-003	0.0429	0.0257	4.0000e-005	2.3900e-003	2.1000e-003	4.4900e-003	2.6000e-004	1.9300e-003	2.1900e-003	0.0000	3.3195	3.3195	1.0200e-003	0.0000	3.3409

3.2 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	5.0000e-005	5.1000e-004	0.0000	9.0000e-005	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0824	0.0824	0.0000	0.0000	0.0824
Total	4.0000e-005	5.0000e-005	5.1000e-004	0.0000	9.0000e-005	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0824	0.0824	0.0000	0.0000	0.0824

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.0900e-003	0.0845	0.0569	6.0000e-005		4.6700e-003	4.6700e-003		4.2900e-003	4.2900e-003	0.0000	5.7277	5.7277	1.7500e-003	0.0000	5.7646
Total	8.0900e-003	0.0845	0.0569	6.0000e-005	0.0197	4.6700e-003	0.0243	0.0101	4.2900e-003	0.0144	0.0000	5.7277	5.7277	1.7500e-003	0.0000	5.7646

3.3 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	1.3000e-004	1.2800e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2059	0.2059	1.0000e-005	0.0000	0.2061
Total	1.0000e-004	1.3000e-004	1.2800e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2059	0.2059	1.0000e-005	0.0000	0.2061

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.0900e-003	0.0845	0.0569	6.0000e-005		4.6700e-003	4.6700e-003		4.2900e-003	4.2900e-003	0.0000	5.7277	5.7277	1.7500e-003	0.0000	5.7646
Total	8.0900e-003	0.0845	0.0569	6.0000e-005	0.0197	4.6700e-003	0.0243	0.0101	4.2900e-003	0.0144	0.0000	5.7277	5.7277	1.7500e-003	0.0000	5.7646

3.3 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	1.3000e-004	1.2800e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2059	0.2059	1.0000e-005	0.0000	0.2061
Total	1.0000e-004	1.3000e-004	1.2800e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2059	0.2059	1.0000e-005	0.0000	0.2061

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3660	2.5144	1.7874	2.7400e-003		0.1608	0.1608		0.1540	0.1540	0.0000	232.9955	232.9955	0.0518	0.0000	234.0829
Total	0.3660	2.5144	1.7874	2.7400e-003		0.1608	0.1608		0.1540	0.1540	0.0000	232.9955	232.9955	0.0518	0.0000	234.0829

3.4 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0316	0.2056	0.5427	4.8000e-004	0.0144	2.7800e-003	0.0172	4.1200e-003	2.5600e-003	6.6800e-003	0.0000	41.9222	41.9222	3.3000e-004	0.0000	41.9291
Worker	0.0201	0.0248	0.2541	5.7000e-004	0.0468	3.7000e-004	0.0471	0.0124	3.4000e-004	0.0128	0.0000	40.7614	40.7614	2.1000e-003	0.0000	40.8056
Total	0.0517	0.2304	0.7967	1.0500e-003	0.0612	3.1500e-003	0.0644	0.0166	2.9000e-003	0.0195	0.0000	82.6836	82.6836	2.4300e-003	0.0000	82.7346

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3660	2.5144	1.7874	2.7400e-003		0.1608	0.1608		0.1540	0.1540	0.0000	232.9952	232.9952	0.0518	0.0000	234.0827
Total	0.3660	2.5144	1.7874	2.7400e-003		0.1608	0.1608		0.1540	0.1540	0.0000	232.9952	232.9952	0.0518	0.0000	234.0827

3.4 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0316	0.2056	0.5427	4.8000e-004	0.0144	2.7800e-003	0.0172	4.1200e-003	2.5600e-003	6.6800e-003	0.0000	41.9222	41.9222	3.3000e-004	0.0000	41.9291
Worker	0.0201	0.0248	0.2541	5.7000e-004	0.0468	3.7000e-004	0.0471	0.0124	3.4000e-004	0.0128	0.0000	40.7614	40.7614	2.1000e-003	0.0000	40.8056
Total	0.0517	0.2304	0.7967	1.0500e-003	0.0612	3.1500e-003	0.0644	0.0166	2.9000e-003	0.0195	0.0000	82.6836	82.6836	2.4300e-003	0.0000	82.7346

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2000e-003	0.0823	0.0603	9.0000e-005		5.1100e-003	5.1100e-003		4.7100e-003	4.7100e-003	0.0000	8.0625	8.0625	2.4200e-003	0.0000	8.1134
Paving	2.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0104	0.0823	0.0603	9.0000e-005		5.1100e-003	5.1100e-003		4.7100e-003	4.7100e-003	0.0000	8.0625	8.0625	2.4200e-003	0.0000	8.1134

3.5 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	3.1000e-004	3.2100e-003	1.0000e-005	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5147	0.5147	3.0000e-005	0.0000	0.5152
Total	2.5000e-004	3.1000e-004	3.2100e-003	1.0000e-005	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5147	0.5147	3.0000e-005	0.0000	0.5152

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2000e-003	0.0823	0.0603	9.0000e-005		5.1100e-003	5.1100e-003		4.7100e-003	4.7100e-003	0.0000	8.0625	8.0625	2.4200e-003	0.0000	8.1134
Paving	2.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0104	0.0823	0.0603	9.0000e-005		5.1100e-003	5.1100e-003		4.7100e-003	4.7100e-003	0.0000	8.0625	8.0625	2.4200e-003	0.0000	8.1134

3.5 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	3.1000e-004	3.2100e-003	1.0000e-005	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5147	0.5147	3.0000e-005	0.0000	0.5152
Total	2.5000e-004	3.1000e-004	3.2100e-003	1.0000e-005	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5147	0.5147	3.0000e-005	0.0000	0.5152

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2899					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6600e-003	0.0109	9.3400e-003	1.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004	0.0000	1.2766	1.2766	1.3000e-004	0.0000	1.2795
Total	0.2915	0.0109	9.3400e-003	1.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004	0.0000	1.2766	1.2766	1.3000e-004	0.0000	1.2795

3.6 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	2.3000e-004	2.3500e-003	1.0000e-005	4.3000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3774	0.3774	2.0000e-005	0.0000	0.3778	0.3778
Total	1.9000e-004	2.3000e-004	2.3500e-003	1.0000e-005	4.3000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3774	0.3774	2.0000e-005	0.0000	0.3778	0.3778

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2899					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6600e-003	0.0109	9.3400e-003	1.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004	0.0000	1.2766	1.2766	1.3000e-004	0.0000	1.2795
Total	0.2915	0.0109	9.3400e-003	1.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004	0.0000	1.2766	1.2766	1.3000e-004	0.0000	1.2795

3.6 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	2.3000e-004	2.3500e-003	1.0000e-005	4.3000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3774	0.3774	2.0000e-005	0.0000	0.3778
Total	1.9000e-004	2.3000e-004	2.3500e-003	1.0000e-005	4.3000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3774	0.3774	2.0000e-005	0.0000	0.3778

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0996	0.2231	1.0174	2.1800e-003	0.1560	2.7800e-003	0.1588	0.0418	2.5600e-003	0.0443	0.0000	164.9417	164.9417	7.3700e-003	0.0000	165.0965
Unmitigated	0.0996	0.2231	1.0174	2.1800e-003	0.1560	2.7800e-003	0.1588	0.0418	2.5600e-003	0.0443	0.0000	164.9417	164.9417	7.3700e-003	0.0000	165.0965

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	145.04	145.04	145.04	423,446	423,446
Total	145.04	145.04	145.04	423,446	423,446

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.456704	0.078514	0.189610	0.161545	0.075051	0.010626	0.010499	0.000987	0.001369	0.000777	0.008668	0.000749	0.004900

5.0 Energy Detail

5.1 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.5777	83.5777	3.7800e-003	7.8000e-004	83.8995
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.5777	83.5777	3.7800e-003	7.8000e-004	83.8995
NaturalGas Mitigated	1.9400e-003	0.0177	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	19.2152	19.2152	3.7000e-004	3.5000e-004	19.3322
NaturalGas Unmitigated	1.9400e-003	0.0177	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	19.2152	19.2152	3.7000e-004	3.5000e-004	19.3322

5.2 Energy by Land Use - NaturalGas
Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	360080	1.9400e-003	0.0177	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	19.2152	19.2152	3.7000e-004	3.5000e-004	19.3322
Total		1.9400e-003	0.0177	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	19.2152	19.2152	3.7000e-004	3.5000e-004	19.3322

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	360080	1.9400e-003	0.0177	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	19.2152	19.2152	3.7000e-004	3.5000e-004	19.3322
Total		1.9400e-003	0.0177	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	19.2152	19.2152	3.7000e-004	3.5000e-004	19.3322

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	2816	0.8192	4.0000e-005	1.0000e-005	0.8224
Unrefrigerated Warehouse-No Rail	284480	82.7585	3.7400e-003	7.7000e-004	83.0771
Total		83.5777	3.7800e-003	7.8000e-004	83.8995

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	2816	0.8192	4.0000e-005	1.0000e-005	0.8224
Unrefrigerated Warehouse-No Paint	284480	82.7585	3.7400e-003	7.7000e-004	83.0771
Total		83.5777	3.7800e-003	7.8000e-004	83.8995

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5297	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3800e-003	2.3800e-003	1.0000e-005	0.0000	2.5200e-003
Unmitigated	0.6457	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3800e-003	2.3800e-003	1.0000e-005	0.0000	2.5200e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1449					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5006					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3800e-003	2.3800e-003	1.0000e-005	0.0000	2.5200e-003
Total	0.6457	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3800e-003	2.3800e-003	1.0000e-005	0.0000	2.5200e-003

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0290					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5006					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3800e-003	2.3800e-003	1.0000e-005	0.0000	2.5200e-003
Total	0.5297	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3800e-003	2.3800e-003	1.0000e-005	0.0000	2.5200e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	24.4933	0.4228	0.0101	36.5155
Unmitigated	24.4933	0.4229	0.0102	36.5221

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	12.95 / 0	24.4933	0.4229	0.0102	36.5221
Total		24.4933	0.4229	0.0102	36.5221

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	12.95 / 0	24.4933	0.4228	0.0101	36.5155
Total		24.4933	0.4228	0.0101	36.5155

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.6854	0.6315	0.0000	23.9468
Unmitigated	10.6854	0.6315	0.0000	23.9468

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Oil	52.64	10.6854	0.6315	0.0000	23.9468
Total		10.6854	0.6315	0.0000	23.9468

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	52.64	10.6854	0.6315	0.0000	23.9468
Total		10.6854	0.6315	0.0000	23.9468

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	0.0000	0.0000	0.0000	0.0000

10.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
	7.21 / 4.38	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Leave it to Us Self Storage
El Dorado-Mountain County County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	56.00	1000sqft	1.29	56,000.00	0
Parking Lot	8.00	Space	0.07	3,200.00	0
Other Asphalt Surfaces	68.99	1000sqft	1.58	68,987.00	0
	0.00		0.00		0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	70
Climate Zone	2			Operational Year	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Used Climate Zone 2 because Climate Zone 1 has no energy values for Unrefrigerated Warehouse.

Land Use - Total Bldg SF = 56,008. Total Bldg Footprint = 53,308sf. Total Bldg Envelope (inc paving) = 123,295sf. Total Paving = 123,295-53,308 =68,987sf.

Construction Phase - No Demo

Grading - No Import/Export. Total grading = 13,983cy balanced onsite

Land Use Change - 7.21 acre parcel - 2.83 acres of development = 4.38 acres of remaining native vegetation.

Area Mitigation - VOC content of paint revised from 250g/L to 50 g/L

Architectural Coating - Revised VOC content from 250 g/L to 50 g/L.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	50
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	50
tblLandUse	LandUseSquareFeet	68,990.00	68,987.00
tblProjectCharacteristics	OperationalYear	2014	2017

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.5387	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0291	0.0291	8.0000e-005		0.0308
Energy	0.0106	0.0967	0.0812	5.8000e-004		7.3500e-003	7.3500e-003		7.3500e-003	7.3500e-003		116.0612	116.0612	2.2200e-003	2.1300e-003	116.7676
Mobile	0.6099	1.1220	5.8136	0.0129	0.8942	0.0153	0.9095	0.2386	0.0141	0.2527		1,076.0244	1,076.0244	0.0447		1,076.9625
Total	4.1593	1.2188	5.9087	0.0135	0.8942	0.0227	0.9169	0.2386	0.0215	0.2601		1,192.1147	1,192.1147	0.0470	2.1300e-003	1,193.7609

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9034	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0291	0.0291	8.0000e-005		0.0308
Energy	0.0106	0.0967	0.0812	5.8000e-004		7.3500e-003	7.3500e-003		7.3500e-003	7.3500e-003		116.0612	116.0612	2.2200e-003	2.1300e-003	116.7676
Mobile	0.6099	1.1220	5.8136	0.0129	0.8942	0.0153	0.9095	0.2386	0.0141	0.2527		1,076.0244	1,076.0244	0.0447		1,076.9625
Total	3.5240	1.2188	5.9087	0.0135	0.8942	0.0227	0.9169	0.2386	0.0215	0.2601		1,192.1147	1,192.1147	0.0470	2.1300e-003	1,193.7609

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	15.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2017	1/4/2017	5	3	
2	Grading	Grading	1/5/2017	1/12/2017	5	6	
3	Building Construction	Building Construction	1/13/2017	11/16/2017	5	220	
4	Paving	Paving	11/17/2017	11/30/2017	5	10	
5	Architectural Coating	Architectural Coating	12/1/2017	12/14/2017	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 187,625; Non-Residential Outdoor: 62,542 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Site Preparation	Graders	1	8.00	174	0.41
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	1	8.00	130	0.36
Site Preparation	Scrapers	1	8.00	361	0.48
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	54.00	21.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	2.5289	28.6230	17.1310	0.0238		1.3967	1.3967		1.2850	1.2850		2,439.4360	2,439.4360	0.7474		2,455.1322
Total	2.5289	28.6230	17.1310	0.0238	1.5908	1.3967	2.9875	0.1718	1.2850	1.4567		2,439.4360	2,439.4360	0.7474		2,455.1322

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0315	0.0291	0.3758	8.4000e-004	0.0657	5.0000e-004	0.0662	0.0174	4.6000e-004	0.0179		66.2915	66.2915	3.1200e-003		66.3571
Total	0.0315	0.0291	0.3758	8.4000e-004	0.0657	5.0000e-004	0.0662	0.0174	4.6000e-004	0.0179		66.2915	66.2915	3.1200e-003		66.3571

3.2 Site Preparation - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	2.5289	28.6230	17.1310	0.0238		1.3967	1.3967		1.2850	1.2850	0.0000	2,439.4360	2,439.4360	0.7474		2,455.1322
Total	2.5289	28.6230	17.1310	0.0238	1.5908	1.3967	2.9875	0.1718	1.2850	1.4567	0.0000	2,439.4360	2,439.4360	0.7474		2,455.1322

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0315	0.0291	0.3758	8.4000e-004	0.0657	5.0000e-004	0.0662	0.0174	4.6000e-004	0.0179		66.2915	66.2915	3.1200e-003		66.3571
Total	0.0315	0.0291	0.3758	8.4000e-004	0.0657	5.0000e-004	0.0662	0.0174	4.6000e-004	0.0179		66.2915	66.2915	3.1200e-003		66.3571

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.6973	28.1608	18.9679	0.0206		1.5550	1.5550		1.4306	1.4306		2,104.5737	2,104.5737	0.6448		2,118.1153
Total	2.6973	28.1608	18.9679	0.0206	6.5523	1.5550	8.1074	3.3675	1.4306	4.7981		2,104.5737	2,104.5737	0.6448		2,118.1153

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0393	0.0364	0.4698	1.0500e-003	0.0822	6.3000e-004	0.0828	0.0218	5.8000e-004	0.0224		82.8644	82.8644	3.9000e-003		82.9464
Total	0.0393	0.0364	0.4698	1.0500e-003	0.0822	6.3000e-004	0.0828	0.0218	5.8000e-004	0.0224		82.8644	82.8644	3.9000e-003		82.9464

3.3 Grading - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.6973	28.1608	18.9679	0.0206		1.5550	1.5550		1.4306	1.4306	0.0000	2,104.5737	2,104.5737	0.6448		2,118.1153
Total	2.6973	28.1608	18.9679	0.0206	6.5523	1.5550	8.1074	3.3675	1.4306	4.7981	0.0000	2,104.5737	2,104.5737	0.6448		2,118.1153

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0393	0.0364	0.4698	1.0500e-003	0.0822	6.3000e-004	0.0828	0.0218	5.8000e-004	0.0224		82.8644	82.8644	3.9000e-003		82.9464
Total	0.0393	0.0364	0.4698	1.0500e-003	0.0822	6.3000e-004	0.0828	0.0218	5.8000e-004	0.0224		82.8644	82.8644	3.9000e-003		82.9464

3.4 Building Construction - 2017**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3275	22.8585	16.2492	0.0249		1.4621	1.4621		1.3998	1.3998		2,334.8503	2,334.8503	0.5189		2,345.7479
Total	3.3275	22.8585	16.2492	0.0249		1.4621	1.4621		1.3998	1.3998		2,334.8503	2,334.8503	0.5189		2,345.7479

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2560	1.7524	3.9742	4.3200e-003	0.1361	0.0251	0.1612	0.0387	0.0231	0.0618		421.6820	421.6820	3.2400e-003		421.7501
Worker	0.2124	0.1964	2.5367	5.6600e-003	0.4436	3.3900e-003	0.4470	0.1177	3.1200e-003	0.1208		447.4677	447.4677	0.0211		447.9104
Total	0.4684	1.9488	6.5109	9.9800e-003	0.5797	0.0285	0.6082	0.1563	0.0262	0.1825		869.1497	869.1497	0.0243		869.6605

3.4 Building Construction - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3275	22.8585	16.2492	0.0249		1.4621	1.4621		1.3998	1.3998	0.0000	2,334.8503	2,334.8503	0.5189		2,345.7479
Total	3.3275	22.8585	16.2492	0.0249		1.4621	1.4621		1.3998	1.3998	0.0000	2,334.8503	2,334.8503	0.5189		2,345.7479

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2560	1.7524	3.9742	4.3200e-003	0.1361	0.0251	0.1612	0.0387	0.0231	0.0618		421.6820	421.6820	3.2400e-003		421.7501
Worker	0.2124	0.1964	2.5367	5.6600e-003	0.4436	3.3900e-003	0.4470	0.1177	3.1200e-003	0.1208		447.4677	447.4677	0.0211		447.9104
Total	0.4684	1.9488	6.5109	9.9800e-003	0.5797	0.0285	0.6082	0.1563	0.0262	0.1825		869.1497	869.1497	0.0243		869.6605

3.5 Paving - 2017**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6402	16.4619	12.0566	0.0176		1.0230	1.0230		0.9423	0.9423		1,777.4745	1,777.4745	0.5344		1,788.6966
Paving	0.4323					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.0725	16.4619	12.0566	0.0176		1.0230	1.0230		0.9423	0.9423		1,777.4745	1,777.4745	0.5344		1,788.6966

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0590	0.0546	0.7046	1.5700e-003	0.1232	9.4000e-004	0.1242	0.0327	8.7000e-004	0.0336		124.2966	124.2966	5.8600e-003		124.4196
Total	0.0590	0.0546	0.7046	1.5700e-003	0.1232	9.4000e-004	0.1242	0.0327	8.7000e-004	0.0336		124.2966	124.2966	5.8600e-003		124.4196

3.5 Paving - 2017**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6402	16.4619	12.0566	0.0176		1.0230	1.0230		0.9423	0.9423	0.0000	1,777.4745	1,777.4745	0.5344		1,788.6966
Paving	0.4323					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.0725	16.4619	12.0566	0.0176		1.0230	1.0230		0.9423	0.9423	0.0000	1,777.4745	1,777.4745	0.5344		1,788.6966

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0590	0.0546	0.7046	1.5700e-003	0.1232	9.4000e-004	0.1242	0.0327	8.7000e-004	0.0336		124.2966	124.2966	5.8600e-003		124.4196
Total	0.0590	0.0546	0.7046	1.5700e-003	0.1232	9.4000e-004	0.1242	0.0327	8.7000e-004	0.0336		124.2966	124.2966	5.8600e-003		124.4196

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	57.9762					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	58.3085	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0433	0.0400	0.5167	1.1500e-003	0.0904	6.9000e-004	0.0911	0.0240	6.3000e-004	0.0246		91.1508	91.1508	4.2900e-003		91.2410
Total	0.0433	0.0400	0.5167	1.1500e-003	0.0904	6.9000e-004	0.0911	0.0240	6.3000e-004	0.0246		91.1508	91.1508	4.2900e-003		91.2410

3.6 Architectural Coating - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	57.9762					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	58.3085	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0433	0.0400	0.5167	1.1500e-003	0.0904	6.9000e-004	0.0911	0.0240	6.3000e-004	0.0246		91.1508	91.1508	4.2900e-003		91.2410
Total	0.0433	0.0400	0.5167	1.1500e-003	0.0904	6.9000e-004	0.0911	0.0240	6.3000e-004	0.0246		91.1508	91.1508	4.2900e-003		91.2410

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6099	1.1220	5.8136	0.0129	0.8942	0.0153	0.9095	0.2386	0.0141	0.2527		1,076.0244	1,076.0244	0.0447		1,076.9625
Unmitigated	0.6099	1.1220	5.8136	0.0129	0.8942	0.0153	0.9095	0.2386	0.0141	0.2527		1,076.0244	1,076.0244	0.0447		1,076.9625

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	145.04	145.04	145.04	423,446	423,446
Total	145.04	145.04	145.04	423,446	423,446

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.456704	0.078514	0.189610	0.161545	0.075051	0.010626	0.010499	0.000987	0.001369	0.000777	0.008668	0.000749	0.004900

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0106	0.0967	0.0812	5.8000e-004		7.3500e-003	7.3500e-003		7.3500e-003	7.3500e-003		116.0612	116.0612	2.2200e-003	2.1300e-003	116.7676
NaturalGas Unmitigated	0.0106	0.0967	0.0812	5.8000e-004		7.3500e-003	7.3500e-003		7.3500e-003	7.3500e-003		116.0612	116.0612	2.2200e-003	2.1300e-003	116.7676

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Pail	986.521	0.0106	0.0967	0.0812	5.8000e-004		7.3500e-003	7.3500e-003		7.3500e-003	7.3500e-003		116.0612	116.0612	2.2200e-003	2.1300e-003	116.7676
Total		0.0106	0.0967	0.0812	5.8000e-004		7.3500e-003	7.3500e-003		7.3500e-003	7.3500e-003		116.0612	116.0612	2.2200e-003	2.1300e-003	116.7676

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Pail	0.986521	0.0106	0.0967	0.0812	5.8000e-004		7.3500e-003	7.3500e-003		7.3500e-003	7.3500e-003		116.0612	116.0612	2.2200e-003	2.1300e-003	116.7676
Total		0.0106	0.0967	0.0812	5.8000e-004		7.3500e-003	7.3500e-003		7.3500e-003	7.3500e-003		116.0612	116.0612	2.2200e-003	2.1300e-003	116.7676

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.9034	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0291	0.0291	8.0000e-005		0.0308
Unmitigated	3.5387	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0291	0.0291	8.0000e-005		0.0308

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7942					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.7432					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3400e-003	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0291	0.0291	8.0000e-005		0.0308
Total	3.5387	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0291	0.0291	8.0000e-005		0.0308

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1588					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.7432					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3400e-003	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0291	0.0291	8.0000e-005		0.0308
Total	2.9034	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0291	0.0291	8.0000e-005		0.0308

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Vegetation

Leave it to Us Self Storage
El Dorado-Mountain County County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	56.00	1000sqft	1.29	56,000.00	0
Parking Lot	8.00	Space	0.07	3,200.00	0
Other Asphalt Surfaces	68.99	1000sqft	1.58	68,987.00	0
	0.00		0.00		0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	70
Climate Zone	2			Operational Year	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Used Climate Zone 2 because Climate Zone 1 has no energy values for Unrefrigerated Warehouse.

Land Use - Total Bldg SF = 56,008. Total Bldg Footprint = 53,308sf. Total Bldg Envelope (inc paving) = 123,295sf. Total Paving = 123,295-53,308 =68,987sf.

Construction Phase - No Demo

Grading - No Import/Export. Total grading = 13,983cy balanced onsite

Land Use Change - 7.21 acre parcel - 2.83 acres of development = 4.38 acres of remaining native vegetation.

Area Mitigation - VOC content of paint revised from 250g/L to 50 g/L

Architectural Coating - Revised VOC content from 250 g/L to 50 g/L.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	50
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	50
tblLandUse	LandUseSquareFeet	68,990.00	68,987.00
tblProjectCharacteristics	OperationalYear	2014	2017

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.5387	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0291	0.0291	8.0000e-005		0.0308
Energy	0.0106	0.0967	0.0812	5.8000e-004		7.3500e-003	7.3500e-003		7.3500e-003	7.3500e-003		116.0612	116.0612	2.2200e-003	2.1300e-003	116.7676
Mobile	0.5730	1.2744	5.8612	0.0118	0.8942	0.0154	0.9096	0.2386	0.0141	0.2528		981.3535	981.3535	0.0447		982.2918
Total	4.1224	1.3712	5.9563	0.0123	0.8942	0.0228	0.9170	0.2386	0.0215	0.2602		1,097.4438	1,097.4438	0.0470	2.1300e-003	1,099.0902

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9034	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0291	0.0291	8.0000e-005		0.0308
Energy	0.0106	0.0967	0.0812	5.8000e-004		7.3500e-003	7.3500e-003		7.3500e-003	7.3500e-003		116.0612	116.0612	2.2200e-003	2.1300e-003	116.7676
Mobile	0.5730	1.2744	5.8612	0.0118	0.8942	0.0154	0.9096	0.2386	0.0141	0.2528		981.3535	981.3535	0.0447		982.2918
Total	3.4871	1.3712	5.9563	0.0123	0.8942	0.0228	0.9170	0.2386	0.0215	0.2602		1,097.4438	1,097.4438	0.0470	2.1300e-003	1,099.0902

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	15.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2017	1/4/2017	5	3	
2	Grading	Grading	1/5/2017	1/12/2017	5	6	
3	Building Construction	Building Construction	1/13/2017	11/16/2017	5	220	
4	Paving	Paving	11/17/2017	11/30/2017	5	10	
5	Architectural Coating	Architectural Coating	12/1/2017	12/14/2017	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 187,625; Non-Residential Outdoor: 62,542 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Site Preparation	Graders	1	8.00	174	0.41
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	1	8.00	130	0.36
Site Preparation	Scrapers	1	8.00	361	0.48
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	54.00	21.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	2.5289	28.6230	17.1310	0.0238		1.3967	1.3967		1.2850	1.2850		2,439.4360	2,439.4360	0.7474		2,455.1322
Total	2.5289	28.6230	17.1310	0.0238	1.5908	1.3967	2.9875	0.1718	1.2850	1.4567		2,439.4360	2,439.4360	0.7474		2,455.1322

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0284	0.0361	0.3499	7.5000e-004	0.0657	5.0000e-004	0.0662	0.0174	4.6000e-004	0.0179		59.0926	59.0926	3.1200e-003		59.1582
Total	0.0284	0.0361	0.3499	7.5000e-004	0.0657	5.0000e-004	0.0662	0.0174	4.6000e-004	0.0179		59.0926	59.0926	3.1200e-003		59.1582

3.2 Site Preparation - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	2.5289	28.6230	17.1310	0.0238		1.3967	1.3967		1.2850	1.2850	0.0000	2,439.4360	2,439.4360	0.7474		2,455.1322
Total	2.5289	28.6230	17.1310	0.0238	1.5908	1.3967	2.9875	0.1718	1.2850	1.4567	0.0000	2,439.4360	2,439.4360	0.7474		2,455.1322

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0284	0.0361	0.3499	7.5000e-004	0.0657	5.0000e-004	0.0662	0.0174	4.6000e-004	0.0179		59.0926	59.0926	3.1200e-003		59.1582
Total	0.0284	0.0361	0.3499	7.5000e-004	0.0657	5.0000e-004	0.0662	0.0174	4.6000e-004	0.0179		59.0926	59.0926	3.1200e-003		59.1582

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.6973	28.1608	18.9679	0.0206		1.5550	1.5550		1.4306	1.4306		2,104.5737	2,104.5737	0.6448		2,118.1153
Total	2.6973	28.1608	18.9679	0.0206	6.5523	1.5550	8.1074	3.3675	1.4306	4.7981		2,104.5737	2,104.5737	0.6448		2,118.1153

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0355	0.0451	0.4374	9.3000e-004	0.0822	6.3000e-004	0.0828	0.0218	5.8000e-004	0.0224		73.8658	73.8658	3.9000e-003		73.9477
Total	0.0355	0.0451	0.4374	9.3000e-004	0.0822	6.3000e-004	0.0828	0.0218	5.8000e-004	0.0224		73.8658	73.8658	3.9000e-003		73.9477

3.3 Grading - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.6973	28.1608	18.9679	0.0206		1.5550	1.5550		1.4306	1.4306	0.0000	2,104.5737	2,104.5737	0.6448		2,118.1153
Total	2.6973	28.1608	18.9679	0.0206	6.5523	1.5550	8.1074	3.3675	1.4306	4.7981	0.0000	2,104.5737	2,104.5737	0.6448		2,118.1153

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0355	0.0451	0.4374	9.3000e-004	0.0822	6.3000e-004	0.0828	0.0218	5.8000e-004	0.0224		73.8658	73.8658	3.9000e-003		73.9477
Total	0.0355	0.0451	0.4374	9.3000e-004	0.0822	6.3000e-004	0.0828	0.0218	5.8000e-004	0.0224		73.8658	73.8658	3.9000e-003		73.9477

3.4 Building Construction - 2017**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3275	22.8585	16.2492	0.0249		1.4621	1.4621		1.3998	1.3998		2,334.8503	2,334.8503	0.5189		2,345.7479
Total	3.3275	22.8585	16.2492	0.0249		1.4621	1.4621		1.3998	1.3998		2,334.8503	2,334.8503	0.5189		2,345.7479

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3203	1.8970	5.7254	4.3100e-003	0.1361	0.0256	0.1617	0.0387	0.0235	0.0622		417.9217	417.9217	3.3500e-003		417.9921
Worker	0.1918	0.2435	2.3619	5.0400e-003	0.4436	3.3900e-003	0.4470	0.1177	3.1200e-003	0.1208		398.8751	398.8751	0.0211		399.3178
Total	0.5120	2.1405	8.0873	9.3500e-003	0.5797	0.0290	0.6087	0.1563	0.0266	0.1830		816.7968	816.7968	0.0244		817.3099

3.4 Building Construction - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3275	22.8585	16.2492	0.0249		1.4621	1.4621		1.3998	1.3998	0.0000	2,334.8503	2,334.8503	0.5189		2,345.7479
Total	3.3275	22.8585	16.2492	0.0249		1.4621	1.4621		1.3998	1.3998	0.0000	2,334.8503	2,334.8503	0.5189		2,345.7479

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3203	1.8970	5.7254	4.3100e-003	0.1361	0.0256	0.1617	0.0387	0.0235	0.0622		417.9217	417.9217	3.3500e-003		417.9921
Worker	0.1918	0.2435	2.3619	5.0400e-003	0.4436	3.3900e-003	0.4470	0.1177	3.1200e-003	0.1208		398.8751	398.8751	0.0211		399.3178
Total	0.5120	2.1405	8.0873	9.3500e-003	0.5797	0.0290	0.6087	0.1563	0.0266	0.1830		816.7968	816.7968	0.0244		817.3099

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6402	16.4619	12.0566	0.0176		1.0230	1.0230		0.9423	0.9423		1,777.4745	1,777.4745	0.5344		1,788.6966
Paving	0.4323					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.0725	16.4619	12.0566	0.0176		1.0230	1.0230		0.9423	0.9423		1,777.4745	1,777.4745	0.5344		1,788.6966

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0533	0.0676	0.6561	1.4000e-003	0.1232	9.4000e-004	0.1242	0.0327	8.7000e-004	0.0336		110.7987	110.7987	5.8600e-003		110.9216
Total	0.0533	0.0676	0.6561	1.4000e-003	0.1232	9.4000e-004	0.1242	0.0327	8.7000e-004	0.0336		110.7987	110.7987	5.8600e-003		110.9216

3.5 Paving - 2017**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6402	16.4619	12.0566	0.0176		1.0230	1.0230		0.9423	0.9423	0.0000	1,777.4745	1,777.4745	0.5344		1,788.6966
Paving	0.4323					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.0725	16.4619	12.0566	0.0176		1.0230	1.0230		0.9423	0.9423	0.0000	1,777.4745	1,777.4745	0.5344		1,788.6966

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0533	0.0676	0.6561	1.4000e-003	0.1232	9.4000e-004	0.1242	0.0327	8.7000e-004	0.0336		110.7987	110.7987	5.8600e-003		110.9216
Total	0.0533	0.0676	0.6561	1.4000e-003	0.1232	9.4000e-004	0.1242	0.0327	8.7000e-004	0.0336		110.7987	110.7987	5.8600e-003		110.9216

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	57.9762					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297			282.0721
Total	58.3085	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297			282.0721

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0391	0.0496	0.4811	1.0300e-003	0.0904	6.9000e-004	0.0911	0.0240	6.3000e-004	0.0246		81.2523	81.2523	4.2900e-003			81.3425
Total	0.0391	0.0496	0.4811	1.0300e-003	0.0904	6.9000e-004	0.0911	0.0240	6.3000e-004	0.0246		81.2523	81.2523	4.2900e-003			81.3425

3.6 Architectural Coating - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	57.9762					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	58.3085	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0391	0.0496	0.4811	1.0300e-003	0.0904	6.9000e-004	0.0911	0.0240	6.3000e-004	0.0246		81.2523	81.2523	4.2900e-003		81.3425
Total	0.0391	0.0496	0.4811	1.0300e-003	0.0904	6.9000e-004	0.0911	0.0240	6.3000e-004	0.0246		81.2523	81.2523	4.2900e-003		81.3425

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5730	1.2744	5.8612	0.0118	0.8942	0.0154	0.9096	0.2386	0.0141	0.2528		981.3535	981.3535	0.0447		982.2918
Unmitigated	0.5730	1.2744	5.8612	0.0118	0.8942	0.0154	0.9096	0.2386	0.0141	0.2528		981.3535	981.3535	0.0447		982.2918

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	145.04	145.04	145.04	423,446	423,446
Total	145.04	145.04	145.04	423,446	423,446

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.456704	0.078514	0.189610	0.161545	0.075051	0.010626	0.010499	0.000987	0.001369	0.000777	0.008668	0.000749	0.004900

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0106	0.0967	0.0812	5.8000e-004		7.3500e-003	7.3500e-003		7.3500e-003	7.3500e-003		116.0612	116.0612	2.2200e-003	2.1300e-003	116.7676
NaturalGas Unmitigated	0.0106	0.0967	0.0812	5.8000e-004		7.3500e-003	7.3500e-003		7.3500e-003	7.3500e-003		116.0612	116.0612	2.2200e-003	2.1300e-003	116.7676

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Pail	986.521	0.0106	0.0967	0.0812	5.8000e-004		7.3500e-003	7.3500e-003		7.3500e-003	7.3500e-003		116.0612	116.0612	2.2200e-003	2.1300e-003	116.7676
Total		0.0106	0.0967	0.0812	5.8000e-004		7.3500e-003	7.3500e-003		7.3500e-003	7.3500e-003		116.0612	116.0612	2.2200e-003	2.1300e-003	116.7676

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Pail	0.986521	0.0106	0.0967	0.0812	5.8000e-004		7.3500e-003	7.3500e-003		7.3500e-003	7.3500e-003		116.0612	116.0612	2.2200e-003	2.1300e-003	116.7676
Total		0.0106	0.0967	0.0812	5.8000e-004		7.3500e-003	7.3500e-003		7.3500e-003	7.3500e-003		116.0612	116.0612	2.2200e-003	2.1300e-003	116.7676

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.9034	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0291	0.0291	8.0000e-005		0.0308
Unmitigated	3.5387	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0291	0.0291	8.0000e-005		0.0308

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7942					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.7432					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3400e-003	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0291	0.0291	8.0000e-005		0.0308
Total	3.5387	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0291	0.0291	8.0000e-005		0.0308

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1588					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.7432					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3400e-003	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0291	0.0291	8.0000e-005		0.0308
Total	2.9034	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0291	0.0291	8.0000e-005		0.0308

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Vegetation



SYCAMORE ENVIRONMENTAL CONSULTANTS, INC.

6355 Riverside Blvd., Suite C, Sacramento, CA 95831
916/ 427-0703 www.sycamoreenv.com

2 June 2017

Ms. Marlene Carter
2260 Talon Drive
Shingle Springs, CA 95682
Phone: 530.672.2668
Email: emollyc@yahoo.com

Subject: *Botanical Survey Results for APN 109-480-07 on Business Drive, Shingle Springs, El Dorado County*

Dear Ms. Carter,

Sycamore Environmental completed a protocol botanical survey of APN 109-480-07 on Business Drive, El Dorado County on 23 May 2017. The survey was conducted by a qualified botanist at a time when all special-status plants with potential to occur would be expected to be evident and identifiable.

SUMMARY

The site is composed of 7.21 acres of blue oak woodland. No special-status plants were observed in the study area during the 23 May 2017 survey. The area where Layne's butterweed (*Packera layneae*) was documented on the site in 2009 was thoroughly searched. No Layne's butterweed was observed.

STUDY AREA

The 7.21-acre Botanical Study Area (BSA) is APN 109-480-07, located south of Highway 50 in the community of Shingle Springs (Attachment A). The BSA was also surveyed by Sycamore Environmental in 2009 (Attachment E). A project location map and soils map are included in 2009 report.

METHODS

The botanical survey was conducted on 23 May 2017 by botanist Mike Bower, M.S., in accordance with California Department of Fish and Wildlife protocol for surveying and evaluating impacts to special status native plant populations and natural communities (CDFW 2009), the U.S. Fish and Wildlife Service guidelines for conducting and reporting botanical inventories for federally listed, proposed and candidate plants (USFWS 1996), and the California Native Plant Society botanical survey guidelines (CNPS 2001).

Special-status plant species with potential to occur in the BSA were determined based on 1) queries of the California Natural Diversity Database (CDFW 2017), the USFWS database (USFWS 2017), and the CNPS Inventory of Rare and Endangered Plants (CNPS 2017); 2) habitat present in the BSA; and 3) species habitat requirements and distribution. Copies of the database queries are in Attachment C.

The survey was conducted by walking parallel transects across the BSA while looking for special-status plants. Transects were spaced roughly 25 ft apart to ensure thorough visual coverage. Approximately 2.5

person-hours were spent in the field surveying for special-status plants. Approximately 1 person-hour was spent keying specimens collected from or photographed in the field. The survey was floristic in nature. All plants encountered were identified to the taxonomic level necessary to determine rarity and listing status. Plants were keyed using *The Jepson Manual: Vascular Plants of California*, 2nd ed. (Baldwin, et al., eds. 2012). Vegetation was classified according to membership rules in *A Manual of California Vegetation*, 2nd Edition (Sawyer et al. 2009). A list of species observed on 23 May 2017 is in Attachment B.

Sycamore Environmental previously documented 36 Layne's butterweed (*Packera layneae*) plants at two locations in the eastern quarter of the BSA (Sycamore Environmental 2009; Attachment E). These locations were uploaded onto a GPS unit as a background file, located in the field, and searched extensively for Layne's butterweed. No Layne's butterweed plants were found; see Results below.

To verify that special-status plants with potential to occur would be evident and identifiable, reference populations of the seven special-status plant taxa listed below were visited on 23 May 2017, at locations between Ponte Morino Drive and Sabana Drive in the community of Cameron Park, approximately 1.6 miles northwest of the BSA. All seven species were evident and identifiable. Photographs of each are available upon request.

- Stebbins' morning-glory (*Calystegia stebbinsii*); in bud, flowering, and fruiting on 23 May 2017
- Chaparral sedge (*Carex xerophila*); vegetative on 23 May 2017
- Pine Hill ceanothus (*Ceanothus roderickii*); fruiting on 23 May 2017
- Red Hills soaproot (*Chlorogalum grandiflorum*); in bud, early flowering on 23 May 2017
- Bisbee Peak rush-rose (*Crocyanthemum suffrutescens*); in bud on 23 May 2017
- Layne's butterweed (*Packera layneae*); in bud, flower, and fruit on 23 May 2017
- El Dorado County mule ears (*Wyethia reticulata*); vegetative and in early bud on 23 May 2017

Precipitation preceding the 23 May 2017 survey was 185% of normal based on historic and observed precipitation data for the period of 1 October 2016 to 23 May 2017 at the nearby Sacramento Executive Airport Gauge (National Weather Service Forecast Office, accessed 24 May 2017). Vegetation in the BSA appeared typical for this time of year.

No problems or limitations were encountered during the survey.

RESULTS

Vegetation in the BSA was classified as blue oak woodland (7.21 acres; see map in Attachment A and photographs in Attachment D). The BSA provides suitable habitat for 14 special-status plant species (Table 1). None of the special-status plant species with potential to occur were observed during the botanical survey on 23 May 2017. The survey was conducted during the evident and identifiable period for all special-status plants with potential to occur. A list of the plants species observed during the botanical survey is in Attachment B.

Table 1. Special-status Plant Species with Potential to Occur.

Special-Status Species	Common Name	Federal Status ^a	State Status ^a & CNPS Rank ^b	Bloom Period ^c	Species Observed?
<i>Allium jepsonii</i>	Jepson's onion	--	--/ 1B.2	Apr-Aug	No
<i>Arctostaphylos nissenana</i>	Nissenan manzanita	--	--/ 1B.2	Feb-Mar	No
<i>Balsamorhiza macrolepis</i>	Big-scale balsamroot	--	--/ 1B.2	Mar-Jun	No
<i>Calystegia vanzuukiae</i>	Van Zuuk's morning glory	--	--/ 1B.3	May-Aug	No
<i>Calystegia stebbinsii</i>	Stebbins's morning-glory	E	E/ 1B.1	Apr-Jul	No
<i>Carex xerophila</i>	Chaparral sedge	--	--/ 1B.2	Mar-June	No
<i>Ceanothus roderickii</i>	Pine Hill ceanothus	E	R / 1B.2	Apr-Jun	No
<i>Chlorogalum grandiflorum</i>	Red Hills soaproot	--	--/ 1B.2	May-Jun	No
<i>Fremontodendron decumbens</i>	Pine Hill flannelbush	E	R/1B.2	Apr-Jul	No
<i>Galium californicum</i> ssp. <i>sierrae</i>	El Dorado bedstraw	E	R/ 1B.2	May-Jun	No
<i>Horkelia parryi</i>	Parry's horkelia	--	--/ 1B.2	Apr-Sep	No
<i>Packera layneae</i>	Layne's ragwort	T	R/ 1B.2	Apr-Aug	No
<i>Viburnum ellipticum</i>	Oval-leaved viburnum	--	-- / 2B.3	May-Jun	No
<i>Wyethia reticulata</i>	El Dorado County mule ears	--	--/ 1B.2	Apr-Aug	No

^a **Listing Status** Codes used in table are:

E = Endangered; T = Threatened; P = Proposed; C = Candidate; CH = Critical habitat designated; R = California Rare

^b **Other Codes** used in table are:

SC = CDFW Species of Special Concern; FP = CDFW Fully Protected;

CNPS Rank (plants only): 1A = Presumed Extinct in CA; 1B = Rare or Endangered (R/E) in CA and elsewhere; 2 = R/E in CA and more common elsewhere; 3 = Need more information; 4 = Plants of limited distribution.

CNPS Rank Decimal Extensions: .1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat); .2 = Fairly endangered in CA (20-80% of occurrences threatened); .3 = Not very endangered in CA (< 20% of occurrences threatened or no current threats known).

^c **Bloom Period** is as reported in the California Native Plant Society rare plant inventory (CNPS 2017). Although the month of May is outside the bloom period of Nissenan manzanita, this species is an evergreen shrub that is both evident and identifiable in May based on distinctive morphology. No manzanitas were observed on the parcel during the May 2017 survey.

The 23 May 2017 botanical survey updates the results of the botanical inventory report prepared in 2009 (Attachment E; Sycamore Environmental 2009). The area where 36 Layne's butterweed plants were documented in 2009 was thoroughly searched during the 23 May 2017 survey and no Layne's butterweed plants were found. Approximately 1.80 acres of gabbroic northern mixed chaparral documented in the northern portion of the site in 2009 is no longer present. The area classified as chaparral in 2009 is now dominated by species found throughout the blue oak woodland understory and does not meet membership rules for any chaparral community (Sawyer et al. 2009).

No special-status plant species were observed in the BSA during the survey conducted on 23 May 2017.

Please contact me if you have any questions.

Yours truly,



Mike Bower, M.S.
Botanist/Biologist

- Attachment A. 2017 Botanical Survey Results Map
- Attachment B. Plant Species Observed
- Attachment C. USFWS, CNDDDB, CNPS Database Queries
- Attachment D. Photographs
- Attachment E. Copy of 2009 Botanical Report

Literature Cited

- Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, eds. 2012. The Jepson manual: Vascular plants of California, 2nd ed. University of California Press, Berkeley, CA.
- California Department of Fish and Wildlife (CDFW). 24 November 2009. Protocols for surveying and evaluating impacts to special status native plant populations and natural communities. California Natural Resources Agency, California Department of Fish and Wildlife, Sacramento, CA.
- California Department of Fish and Wildlife (CDFW, formerly Department of Fish and Game). Accessed 22 May 2017 (data dated 30 April 2017). CNDDDB/ RareFind: Davis and the 8 adjacent quadrangles. Natural Heritage Division, CNDDDB, Sacramento, CA.
- California Native Plant Society (CNPS). Accessed 22 May 2017. Inventory of rare and endangered plants (online edition; v8-030.38). California Native Plant Society, Sacramento, CA.
<http://www.rareplants.cnps.org/simple.html>
- National Weather Service Forecast Office. Accessed 24 May 2017. Daily climate report for the Sacramento Executive Airport Gauge. <http://www.weather.gov/climate/index.php?wfo=sto>
- Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A manual of California vegetation, 2nd ed. California Native Plant Society, Sacramento, CA.
- Sycamore Environmental Consultants, Inc. (Sycamore Environmental). 23 September 2009. Botanical survey report for APN 109-480-07 on Business Drive, El Dorado County, CA. Prepared for Helen Graham Trust, contact: James Brunello. Sycamore Environmental, Sacramento, CA.
- U.S. Fish and Wildlife Service (USFWS). Accessed 22 May 2017. Unofficial species list for APN 109-480-07 on Business Drive. Information for Planning and Conservation (IPaC). Sacramento Fish and Wildlife Office, Sacramento, CA. <http://ecos.fws.gov/ipac>

[This page intentionally left blank]

Attachment A.

2017 Botanical Survey Results Map

[This page intentionally left blank]



Business Drive APN 109-480-07
 El Dorado County, CA
 25 May 2017

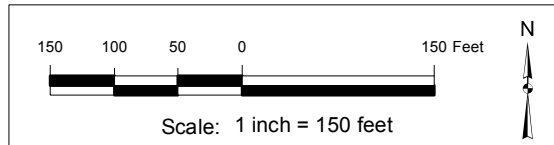


Biological Study Area (BSA; 7.21 ac)



SYCAMORE
 Environmental
 Consultants, Inc.

Botanical Resources Map



Aerial Photograph: 25 October 2016
 Google Earth Pro Imagery

Attachment B.

Plant Species Observed

[This page intentionally left blank]

Plant Species Observed. Taxonomy follows Baldwin et al. (2012).

Family	Scientific Name	Common Name	N/I ¹	Cal-IPC ²
GYMNOSPERMS				
Pinaceae	<i>Pinus sabiniana</i>	Gray, ghost, or foothill pine	N	
EUDICOTS				
Anacardiaceae	<i>Toxicodendron diversilobum</i>	Western poison oak	N	
Apiaceae	<i>Daucus pusillus</i>	Daucus	N	
	<i>Perideridia kelloggii</i>	Yampah	N	
	<i>Sanicula crassicaulis</i>	Sanicula	N	
	<i>Torilis arvensis</i>	Tall sock-destroyer	I	Moderate
Asteraceae	<i>Agoseris grandiflora</i>	Agoseris	N	
	<i>Baccharis pilularis</i>	Coyote brush	N	
	<i>Carduus pycnocephalus</i> ssp. <i>pycnocephalus</i>	Italian thistle	I	Moderate
	<i>Centaurea melitensis</i>	Tocalote	I	Moderate
	<i>Centaurea solstitialis</i>	Yellow star-thistle	I	High
	<i>Cirsium vulgare</i>	Bull thistle	I	Moderate
	<i>Eriophyllum</i> sp.	Woolly sunflower	N	
	<i>Holocarpha virgata</i> ssp. <i>virgata</i>	Tarweed, tarplant	N	
	<i>Hypochaeris radicata</i>	Rough cat's-ear	I	Moderate
	<i>Lactuca serriola</i>	Prickly lettuce	I	
	<i>Leontodon taraxacoides</i>	Hairy hawkbit	I	
	<i>Lessingia</i> sp.	Lessingia	N	
	<i>Logfia filaginoides</i>	California cottonrose	N	
	<i>Madia</i> sp.	Tarweed, tarplant	N	
	<i>Micropus</i> sp.	Micropus	N	
	<i>Pseudognaphalium</i> sp.	Cudweed, everlasting	--	
	<i>Psilocarphus tenellus</i>	Slender woolly-marbles	N	
	<i>Senecio vulgaris</i>	Common groundsel	I	
	<i>Soliva sessilis</i>	Soliva	I	
	<i>Sonchus asper</i> ssp. <i>asper</i>	Prickly sow thistle	I	
	<i>Sonchus oleraceus</i>	Common sow thistle	I	
	<i>Tragopogon dubius</i>	Yellow salsify	I	
	<i>Wyethia angustifolia</i>	Mule's ears	N	
Boraginaceae	<i>Eriodictyon californicum</i>	California yerba santa	N	
	<i>Plagiobothrys</i> sp.	Popcornflower	N	
Brassicaceae	<i>Capsella bursa-pastoris</i>	Shepherd's purse	I	
Campanulaceae	<i>Githopsis pulchella</i>	Bluecup	N	
Caprifoliaceae	<i>Lonicera</i> sp.	Honeysuckle	N	
Caryophyllaceae	<i>Cerastium glomeratum</i>	Sticky mouse-ear chickweed	I	
	<i>Silene gallica</i>	Small-flower catchfly, windmill pink	I	
	<i>Spergularia</i> sp.	Sand-spurrey	--	
Convolvulaceae	<i>Calystegia occidentalis</i>	Morning-glory	N	
Crassulaceae	<i>Crassula</i> sp. (likely <i>C. tillaea</i>)	Crassula	--	
Fabaceae	<i>Acmispon americanus</i> var. <i>americanus</i>	Deervetch, deerweed	N	
	<i>Acmispon</i> sp.	Deervetch, deerweed	N	
	<i>Lupinus</i> sp.	Lupine	N	

	<i>Medicago polymorpha</i>	California burclover	I	Limited
	<i>Trifolium dubium</i>	Little hop clover	I	
	<i>Trifolium hirtum</i>	Rose clover	I	Limited
	<i>Trifolium</i> sp.	Clover	--	
	<i>Trifolium subterraneum</i>	Subterranean clover	I	
	<i>Vicia villosa</i> ssp. <i>villosa</i>	Hairy vetch, winter vetch	I	
Fagaceae	<i>Quercus douglasii</i>	Blue oak	N	
	<i>Quercus wislizeni</i> var. <i>wislizeni</i>	Interior live oak	N	
Gentianaceae	<i>Zeltnera muehlenbergii</i>	Monterey centauray	N	
Geraniaceae	<i>Erodium botrys</i>	Storksbill, filaree	I	
	<i>Erodium cicutarium</i>	Redstem filaree	I	Limited
Hypericaceae	<i>Hypericum perforatum</i> ssp. <i>perforatum</i>	Klamathweed	I	Moderate
Lamiaceae	<i>Salvia sonomensis</i>	Sage	N	
Linaceae	<i>Linum usitatissimum</i>	Flax	I	
Lythraceae	<i>Lythrum hyssopifolia</i>	Loosestrife	I	Limited
Malvaceae	<i>Sidalcea asprella</i>	Checkerbloom	N	
Montiaceae	<i>Claytonia</i> sp.	Claytonia	N	
Myrsinaceae	<i>Anagallis arvensis</i>	Scarlet pimpernel	I	
Onagraceae	<i>Clarkia purpurea</i> ssp. <i>quadrivulnera</i>	Four-spot	N	
	<i>Epilobium ciliatum</i>	Willowherb	N	
	<i>Epilobium</i> sp.	Willowherb	--	
Orobanchaceae	<i>Castilleja attenuata</i>	Valley tassels	N	
	<i>Castilleja campestris</i> ssp. <i>campestris</i>	Paintbrush, owl's-clover	N	
	<i>Cordylanthus</i> sp.	Bird's-beak	N	
	<i>Parentucellia viscosa</i>	Parentucellia	I	Limited
Phrymaceae	<i>Mimulus guttatus</i>	Monkeyflower	N	
Plantaginaceae	<i>Kickxia elatine</i>	Kickxia	I	
	<i>Plantago erecta</i>	Plantain	N	
	<i>Plantago lanceolata</i>	English plantain	I	Limited
Polemoniaceae	<i>Linanthus</i> sp.	Linanthus	N	
	<i>Navarretia intertexta</i> ssp. <i>intertexta</i>	Navarretia	N	
	<i>Navarretia pubescens</i>	Navarretia	N	
Ranunculaceae	<i>Delphinium</i> sp.	Larkspur	N	
	<i>Ranunculus</i> sp.	Buttercup	--	
Rhamnaceae	<i>Ceanothus cuneatus</i> var. <i>cuneatus</i> (seedling only)	Buckbrush	N	
	<i>Frangula californica</i> ssp. <i>tomentella</i> (seedling only)	California coffee berry (seedling only)	N	
Rosaceae	<i>Adenostoma fasciculatum</i> (seedling only)	Chamise, greasewood	N	
Rubiaceae	<i>Galium aparine</i>	Goose grass	N	
	<i>Galium porrigens</i> var. <i>tenu</i>	Climbing bedstraw	N	
MONOCOTS				
Agavaceae	<i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i>	Soaproot	N	
Iridaceae	<i>Sisyrinchium bellum</i>	Western blue-eyed-grass	N	
Juncaceae	<i>Juncus bufonius</i> var. <i>occidentalis</i>	Western toad rush	N	
Liliaceae	<i>Calochortus luteus</i>	Calochortus	N	
	<i>Calochortus</i> sp.	Calochortus	N	
Poaceae	<i>Aegilops</i> sp.	Goat grass	I	

	<i>Aira caryophylla</i>	Silver hair grass	I	
	<i>Avena fatua</i>	Wild oat	I	Moderate
	<i>Brachypodium distachyon</i>	False brome	I	Moderate
	<i>Briza minor</i>	Annual quaking grass, small quaking grass	I	
	<i>Bromus diandrus</i>	Ripgut grass	I	Moderate
	<i>Bromus hordeaceus</i>	Soft chess	I	Limited
	<i>Bromus madritensis</i> ssp. <i>rubens</i>	Red brome	I	High
	<i>Cynosurus echinatus</i>	Bristly dogtail grass	I	Moderate
	<i>Elymus caput-medusae</i>	Medusa head	I	High
	<i>Elymus glaucus</i>	Blue or western wild-rye	N	
	<i>Festuca myuros</i>	Rattail sixweeks grass	I	Moderate
	<i>Festuca perennis</i>	Rye grass	I	Moderate
	<i>Gastridium phleoides</i>	Nit grass	I	
	<i>Hordeum marinum</i> ssp. <i>gussoneanum</i>	Mediterranean barley	I	Moderate
	<i>Hordeum murinum</i> ssp. <i>leporinum</i>	Hare barley	I	Moderate
	<i>Phalaris</i> sp.	Canary grass	--	
	<i>Poa annua</i>	Annual blue grass	I	
	<i>Stipa pulchra</i>	Purple needle grass	N	
Themidaceae	<i>Brodiaea</i> sp.	Brodiaea	N	
	<i>Dichelostemma multiflorum</i>	Wild hyacinth	N	
	<i>Dichelostemma volubile</i>	Twining brodiaea, snake lily	N	
	<i>Triteleia hyacinthina</i>	White brodiaea, fool's onion	N	

¹ N = Native to CA; I = Introduced.

² Negative ecological impact according to the California Invasive Plant Council (Cal-IPC 2006).

Attachment C.

USFWS, CNDDDB, CNPS Database Queries

[This page intentionally left blank]

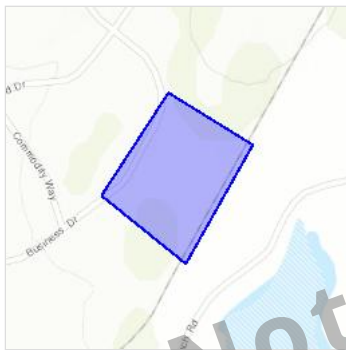
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

El Dorado County, California



Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📅 (916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ are managed by the [Endangered Species Program](#) of the U.S. Fish and Wildlife Service.

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.

The following species are potentially affected by activities in this location:

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is a final critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is a final critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/321	Threatened
Steelhead <i>Oncorhynchus (=Salmo) mykiss</i> There is a final critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/1007	Threatened

Flowering Plants

NAME	STATUS
El Dorado Bedstraw <i>Galium californicum</i> ssp. <i>sierrae</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5209	Endangered
Layne's Butterweed <i>Senecio layneae</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4062	Threatened
Pine Hill Ceanothus <i>Ceanothus roderickii</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3293	Endangered
Pine Hill Flannelbush <i>Fremontodendron californicum</i> ssp. <i>decumbens</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4818	Endangered
Stebbins' Morning-glory <i>Calystegia stebbinsii</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3991	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service³. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Conservation measures for birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Year-round bird occurrence data <http://www.birdscanada.org/birdmon/default/datasummaries.jsp>

The migratory birds species listed below are species of particular conservation concern (e.g. [Birds of Conservation Concern](#)) that may be potentially affected by activities in this location. It is not a list of every bird species you may find in this location, nor a guarantee that all of the bird species on this list will be found on or near this location. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To view available data on other bird species that may occur in your project area, please visit the [AKN Histogram Tools](#) and [Other Bird Data Resources](#). To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

NAME	SEASON(S)
Bald Eagle <i>Haliaeetus leucocephalus</i> https://ecos.fws.gov/ecp/species/1626	Year-round
Black Rail <i>Laterallus jamaicensis</i> https://ecos.fws.gov/ecp/species/7717	Breeding
Burrowing Owl <i>Athene cunicularia</i> https://ecos.fws.gov/ecp/species/9737	Year-round
California Spotted Owl <i>Strix occidentalis occidentalis</i> https://ecos.fws.gov/ecp/species/7266	Year-round
Calliope Hummingbird <i>Stellula calliope</i> https://ecos.fws.gov/ecp/species/9526	Breeding
Flammulated Owl <i>Otus flammeolus</i> https://ecos.fws.gov/ecp/species/7728	Breeding
Fox Sparrow <i>Passerella iliaca</i>	Year-round
Green-tailed Towhee <i>Pipilo chlorurus</i> https://ecos.fws.gov/ecp/species/9444	Breeding
Lewis's Woodpecker <i>Melanerpes lewis</i> https://ecos.fws.gov/ecp/species/9408	Wintering
Loggerhead Shrike <i>Lanius ludovicianus</i> https://ecos.fws.gov/ecp/species/8833	Year-round
Long-billed Curlew <i>Numenius americanus</i> https://ecos.fws.gov/ecp/species/5511	Wintering
Nuttall's Woodpecker <i>Picoides nuttallii</i> https://ecos.fws.gov/ecp/species/9410	Year-round
Oak Titmouse <i>Baeolophus inornatus</i> https://ecos.fws.gov/ecp/species/9656	Year-round

Olive-sided Flycatcher <i>Contopus cooperi</i> https://ecos.fws.gov/ecp/species/3914	Breeding
Peregrine Falcon <i>Falco peregrinus</i> https://ecos.fws.gov/ecp/species/8831	Wintering
Rufous Hummingbird <i>selasphorus rufus</i> https://ecos.fws.gov/ecp/species/8002	Migrating
Short-eared Owl <i>Asio flammeus</i> https://ecos.fws.gov/ecp/species/9295	Wintering
Snowy Plover <i>Charadrius alexandrinus</i>	Breeding
Swainson's Hawk <i>Buteo swainsoni</i> https://ecos.fws.gov/ecp/species/1098	Breeding
Western Grebe <i>aechmophorus occidentalis</i> https://ecos.fws.gov/ecp/species/6743	Wintering
Williamson's Sapsucker <i>Sphyrapicus thyroideus</i> https://ecos.fws.gov/ecp/species/8832	Year-round
Willow Flycatcher <i>Empidonax traillii</i> https://ecos.fws.gov/ecp/species/3482	Breeding
Yellow-billed Magpie <i>Pica nuttalli</i> https://ecos.fws.gov/ecp/species/9726	Year-round

What does IPaC use to generate the list of migratory bird species potentially occurring in my specified location?

Landbirds:

Migratory birds that are displayed on the IPaC species list are based on ranges in the latest edition of the National Geographic Guide, Birds of North America (6th Edition, 2011 by Jon L. Dunn, and Jonathan Alderfer). Although these ranges are coarse in nature, a number of U.S. Fish and Wildlife Service migratory bird biologists agree that these maps are some of the best range maps to date. These ranges were clipped to a specific Bird Conservation Region (BCR) or USFWS Region/Regions, if it was indicated in the 2008 list of Birds of Conservation Concern (BCC) that a species was a BCC species only in a particular Region/Regions. Additional modifications have been made to some ranges based on more local or refined range information and/or information provided by U.S. Fish and Wildlife Service biologists with species expertise. All migratory birds that show in areas on land in IPaC are those that appear in the 2008 Birds of Conservation Concern report.

Atlantic Seabirds:

Ranges in IPaC for birds off the Atlantic coast are derived from species distribution models developed by the National Oceanic and Atmospheric Association (NOAA) National Centers for Coastal Ocean Science (NCCOS) using the best available seabird survey data for the offshore Atlantic Coastal region to date. NOAA/NCCOS assisted USFWS in developing seasonal species ranges from their models for specific use in IPaC. Some of these birds are not BCC species but were of interest for inclusion because they may occur in high abundance off the coast at different times throughout the year, which potentially makes them more susceptible to certain types of development and activities taking place in that area. For more refined details about the abundance and richness of bird species within your project area off the Atlantic Coast, see the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other types of taxa that may be helpful in your project review.

About the NOAA/NCCOS models: the models were developed as part of the NOAA/NCCOS project: [Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#). The models resulting from this project are being used in a number of decision-support/mapping products in order to help guide decision-making on activities off the Atlantic Coast with the goal of reducing impacts to migratory birds. One such product is the [Northeast Ocean Data Portal](#), which can be used to explore details about the relative occurrence and abundance of bird species in a particular area off the Atlantic Coast.

All migratory bird range maps within IPaC are continuously being updated as new and better information becomes available.

Can I get additional information about the levels of occurrence in my project area of specific birds or groups of birds listed in IPaC?

Landbirds:

The [Avian Knowledge Network \(AKN\)](#) provides a tool currently called the "Histogram Tool", which draws from the data within the AKN (latest, survey, point count, citizen science datasets) to create a view of relative abundance of species within a particular location over the course of the year. The results of the tool depict the frequency of detection of a species in survey events, averaged between multiple datasets within AKN in a particular week of the year. You may access the histogram tools through the [Migratory Bird Programs AKN Histogram Tools](#) webpage.

The tool is currently available for 4 regions (California, Northeast U.S., Southeast U.S. and Midwest), which encompasses the following 32 states: Alabama, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin.

In the near future, there are plans to expand this tool nationwide within the AKN, and allow the graphs produced to appear with the list of trust resources generated by IPaC, providing you with an additional level of detail about the level of occurrence of the species of particular concern potentially occurring in your project area throughout the course of the year.

Atlantic Seabirds:

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA/COS [Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project](#) webpage.

Facilities

Wildlife refuges

Any activity proposed on [National Wildlife Refuge](#) lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGES AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria:

Quad (Pilot Hill (3812171) OR Coloma (3812078) OR Garden Valley (3812077) OR Clarksville (3812161) OR Shingle Springs (3812068) OR Placerville (3812067) OR Folsom SE (3812151) OR Latrobe (3812058) OR Fiddletown (3812057))
> AND Taxonomic Group (Dune OR Scrub OR Herbaceous OR Marsh OR Riparian OR Woodland OR Forest OR Alpine OR Inland Waters OR Marine OR Palustrine OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes)



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Allium jepsonii</i> Jepson's onion	PMLIL022V0	None	None	G2	S2	1B.2
<i>Arctostaphylos nissenana</i> Nissenan manzanita	PDERI040V0	None	None	G1	S1	1B.2
<i>Balsamorhiza macrolepis</i> big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
<i>Calystegia stebbinsii</i> Stebbins' morning-glory	PDCON040H0	Endangered	Endangered	G1	S1	1B.1
<i>Calystegia vanzuukiae</i> Van Zuuk's morning-glory	PDCON040Q0	None	None	G2Q	S2	1B.3
<i>Carex cyrtostachya</i> Sierra arching sedge	PMCYP03M00	None	None	G2	S2	1B.2
<i>Carex xerophila</i> chaparral sedge	PMCYP03M60	None	None	G2	S2	1B.2
<i>Ceanothus roderickii</i> Pine Hill ceanothus	PDRHA04190	Endangered	Rare	G1	S1	1B.1
<i>Central Valley Drainage Hardhead/Squawfish Stream</i> Central Valley Drainage Hardhead/Squawfish Stream	CARA2443CA	None	None	GNR	SNR	
<i>Chlorogalum grandiflorum</i> Red Hills soaproot	PMLIL0G020	None	None	G2	S2	1B.2
<i>Clarkia biloba ssp. brandegeae</i> Brandegee's clarkia	PDONA05053	None	None	G4G5T4	S4	4.2
<i>Crocانthemum suffrutescens</i> Bisbee Peak rush-rose	PDCIS020F0	None	None	G2Q	S2	3.2
<i>Eryngium pinnatisectum</i> Tuolumne button-celery	PDAP10Z0P0	None	None	G2	S2	1B.2
<i>Fremontodendron decumbens</i> Pine Hill flannelbush	PDSTE03030	Endangered	Rare	G1	S1	1B.2
<i>Galium californicum ssp. sierrae</i> El Dorado bedstraw	PDRUB0N0E7	Endangered	Rare	G5T1	S1	1B.2
<i>Horkelia parryi</i> Parry's horkelia	PDROS0W0C0	None	None	G2	S2	1B.2
<i>Packera layneae</i> Layne's ragwort	PDAST8H1V0	Threatened	Rare	G2	S2	1B.2
<i>Sagittaria sanfordii</i> Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
<i>Viburnum ellipticum</i> oval-leaved viburnum	PDCPR07080	None	None	G4G5	S3?	2B.3
<i>Wyethia reticulata</i> El Dorado County mule ears	PDAST9X0D0	None	None	G2	S2	1B.2

Record Count: 20

Plant List

Inventory of Rare and Endangered Plants

30 matches found. Click on scientific name for details

Search Criteria

Found in Quads 3812171, 3812078, 3812077, 3812161, 3812068, 3812067, 3812151 3812058 and 3812057;

[Modify Search Criteria](#)
[Export to Excel](#)
[Modify Columns](#)
[Modify Sort](#)
[Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Allium jepsonii	Jepson's onion	Alliaceae	perennial bulbiferous herb	Apr-Aug	1B.2	S2	G2
Allium sanbornii var. congdonii	Congdon's onion	Alliaceae	perennial bulbiferous herb	Apr-Jul	4.3	S3	G3T3
Allium sanbornii var. sanbornii	Sanborn's onion	Alliaceae	perennial bulbiferous herb	May-Sep	4.2	S4?	G3T4?
Arctostaphylos mewukka ssp. truei	True's manzanita	Ericaceae	perennial evergreen shrub	Feb-Jul	4.2	S3	G4?T3
Arctostaphylos nissenana	Nissenan manzanita	Ericaceae	perennial evergreen shrub	Feb-Mar	1B.2	S1	G1
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
Calandrinia breweri	Brewer's calandrinia	Montiaceae	annual herb	(Jan)Mar-Jun	4.2	S4	G4
Calystegia stebbinsii	Stebbins' morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jul	1B.1	S1	G1
Calystegia vanzuukiae	Van Zuurk's morning-glory	Convolvulaceae	perennial rhizomatous herb	May-Aug	1B.3	S2	G2Q
Carex cyrtostachya	Sierra arching sedge	Cyperaceae	perennial herb	May-Aug	1B.2	S2	G2
Carex xerophila	chaparral sedge	Cyperaceae	perennial herb	Mar-Jun	1B.2	S2	G2
Ceanothus fresnensis	Fresno ceanothus	Rhamnaceae	perennial evergreen shrub	May-Jul	4.3	S4	G4
Ceanothus roderickii	Pine Hill ceanothus	Rhamnaceae	perennial evergreen shrub	Apr-Jun	1B.1	S1	G1
Chlorogalum grandiflorum	Red Hills soaproot	Agavaceae	perennial bulbiferous herb	May-Jun	1B.2	S2	G2
Clarkia biloba ssp. brandegeae	Brandegee's clarkia	Onagraceae	annual herb	May-Jul	4.2	S4	G4G5T4
Claytonia parviflora ssp. grandiflora	streambank spring beauty	Montiaceae	annual herb	Feb-May	4.2	S3	G5T3
Crocotanthemum suffrutescens	Bisbee Peak rush-rose	Cistaceae	perennial evergreen shrub	Apr-Aug	3.2	S2	G2Q
Delphinium hansenii ssp. ewaniamum	Ewan's larkspur	Ranunculaceae	perennial herb	Mar-May	4.2	S3	G4T3

Erigeron miser	starved daisy	Asteraceae	perennial herb	Jun-Oct	1B.3	S3?	G3?
Eriophyllum jepsonii	Jepson's woolly sunflower	Asteraceae	perennial herb	Apr-Jun	4.3	S3	G3
Eryngium pinnatisectum	Tuolumne button-celery	Apiaceae	annual / perennial herb	May-Aug	1B.2	S2	G2
Fremontodendron decumbens	Pine Hill flannelbush	Malvaceae	perennial evergreen shrub	Apr-Jul	1B.2	S1	G1
Galium californicum ssp. sierrae	El Dorado bedstraw	Rubiaceae	perennial herb	May-Jun	1B.2	S1	G5T1
Horkelia parryi	Parry's horkelia	Rosaceae	perennial herb	Apr-Sep	1B.2	S2	G2
Lilium humboldtii ssp. humboldtii	Humboldt lily	Liliaceae	perennial bulbiferous herb	May-Jul(Aug)	4.2	S3	G4T3
Packera layneae	Layne's ragwort	Asteraceae	perennial herb	Apr-Aug	1B.2	S2	G2
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	1B.2	S3	G3
Trichostema rubisepalum	Hernandez bluecurls	Lamiaceae	annual herb	Jun-Aug	4.3	S4	G4
Viburnum ellipticum	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	May-Jun	2B.3	S3?	G4G5
Wyethia reticulata	El Dorado County mule ears	Asteraceae	perennial herb	Apr-Aug	1B.2	S2	G2

Suggested Citation

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 22 May 2017].

Search the Inventory

[Simple Search](#)

[Advanced Search](#)

[Glossary](#)

Information

[About the Inventory](#)

[About the Rare Plant Program](#)

[CNPS Home Page](#)

[About CNPS](#)

[Join CNPS](#)

Contributors

[The Calflora Database](#)

[The California Lichen Society](#)

Attachment D.

Photographs

[This page intentionally left blank]



Photo 1. View from the northern corner of APN 109-480-07 looking south toward the center of the parcel. 23 May 2017.



Photo 2. View from the eastern corner of APN 109-480-07 looking west toward the center of the parcel. 23 May 2017.



Photo 3. View from the southern corner of APN 109-480-07 looking north toward the center of the parcel. 23 May 2017.



Photo 4. View from the western corner of APN 109-480-07 looking east toward the center of the parcel. 23 May 2017.



Photo 5. View of typical blue oak woodland on the parcel. Blue oak (*Q. douglasii*) is the overstory dominant. Live oak (*Q. wislizeni*) and gray pine (*P. sabiniana*) occur in low abundance. 23 May 2017.



Photo 6. View of typical blue oak woodland understory on the parcel. Nonnative annual grasses such as *Cynosurus echinatus*, *Bromus diandrus*, *B hordeaceus*, *Elymus caput-medusae* predominate along with nonnative forbs such as *Hypochaeris radicata* and *Torilis arvensis*.

Attachment E.

Copy of 2009 Botanical Report

[This page intentionally left blank]

Botanical Survey Report
for
APN 109-480-07 on Business Drive
El Dorado County, CA



23 September 2009

SYCAMORE
ENVIRONMENTAL CONSULTANTS, INC.

6355 Riverside Blvd., Suite C., Sacramento, CA 95831
916/ 427-0703 FAX 916/ 427-2175

Botanical Survey Report
for
APN 109-480-07 on Business Drive
El Dorado County, CA

Prepared by:

Sycamore Environmental Consultants, Inc.

6355 Riverside Blvd., Suite C
Sacramento, CA 95831-1143

Phone: 916/ 427-0703

Fax: 916/ 427-2175

Contact: R. John Little, Ph.D.

Prepared for:

Helen Graham Trust

c/o Mr. James Brunello
850 Corbett Ave., Suite 6
San Francisco, CA 94131

Contact: Mr. James Brunello

Phone: 916/ 358-8585

Mobile: 916/ 470-4362

23 September 2009

Botanical Survey Report
for
APN 109-480-07 on Business Drive
El Dorado County, CA

Table of Contents

I. SUMMARY OF FINDINGS AND CONCLUSIONS.....	1
II. INTRODUCTION.....	1
A. Purpose of Report	1
B. Project Location.....	1
III. STUDY METHODS.....	7
A. Studies Conducted	7
B. Survey Dates and Personnel	7
C. Problems Encountered and Limitations That May Influence Results	7
D. Record Search.....	7
E. Botanical Survey Methods.....	8
F. Mapping.....	8
IV. ENVIRONMENTAL SETTING.....	8
A. Biological Communities	8
1. Blue Oak Woodland.....	9
2. Gabbroic Northern Mixed Chaparral	9
B. Soils	13
C. The Existing Level of Disturbance	13
V. BOTANICAL RESOURCES IN THE PROJECT STUDY AREA	17
A. Determination of Special-Status Plant Species in the PSA	17
B. Special-Status Species not in the Project Study Area.....	17
C. Evaluation of Special-Status Plants	18
D. Evaluation of Natural Communities	23
VI. LITERATURE CITED.....	25
VII. PREPARERS	26

Figures

Figure 1. Project Location Map	3
Figure 2. Aerial Photograph.....	5
Figure 3. Botanical Resources Map.....	11
Figure 4. Soils Map.....	15

Tables

Table 1. Biological Communities in the PSA.....	9
Table 2. Special-Status Plant Species and Natural Communities.....	17

Appendices

Appendix A. CNDDDB Summary Report	
Appendix B. USFWS Letter	
Appendix C. Species Evaluated Table	
Appendix D. Plant Species Observed	
Appendix E. Photographs	
Appendix F. Applicable Laws and Regulations	
Appendix G. CNDDDB Field Survey Form	

I. SUMMARY OF FINDINGS AND CONCLUSIONS

This botanical survey report was prepared for APN 109-480-07 on Business Drive Project to document plant species occurring in the project study area (PSA). The PSA provides potential habitat for 13 special-status plants. A botanical survey was conducted during the evident and identifiable period of the plants on 24 June 2009. Two occurrences of Layne's butterweed consisting of 25 and 11 plants were observed in the eastern portion of the PSA. Layne's butterweed is listed as threatened under the Federal Endangered Species Act (FESA) and listed as rare under the California Native Plant Protection Act. No other special-status plants were found in the PSA.

Two natural communities, blue oak woodland and gabbroic northern mixed chaparral, occur in the PSA. Oak woodlands under County jurisdiction are subject to California Public Resources Code (PRC) §21083.4 and the El Dorado County Oak Woodland Management Plan (adopted 6 May 2008). Gabbroic northern mixed chaparral is a sensitive natural community.

II. INTRODUCTION

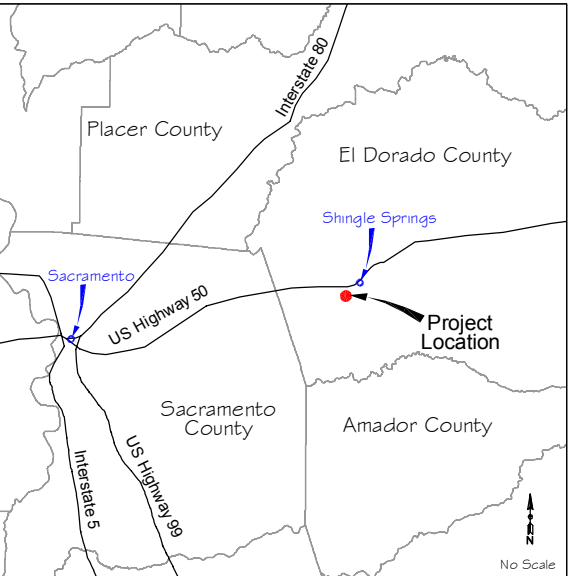
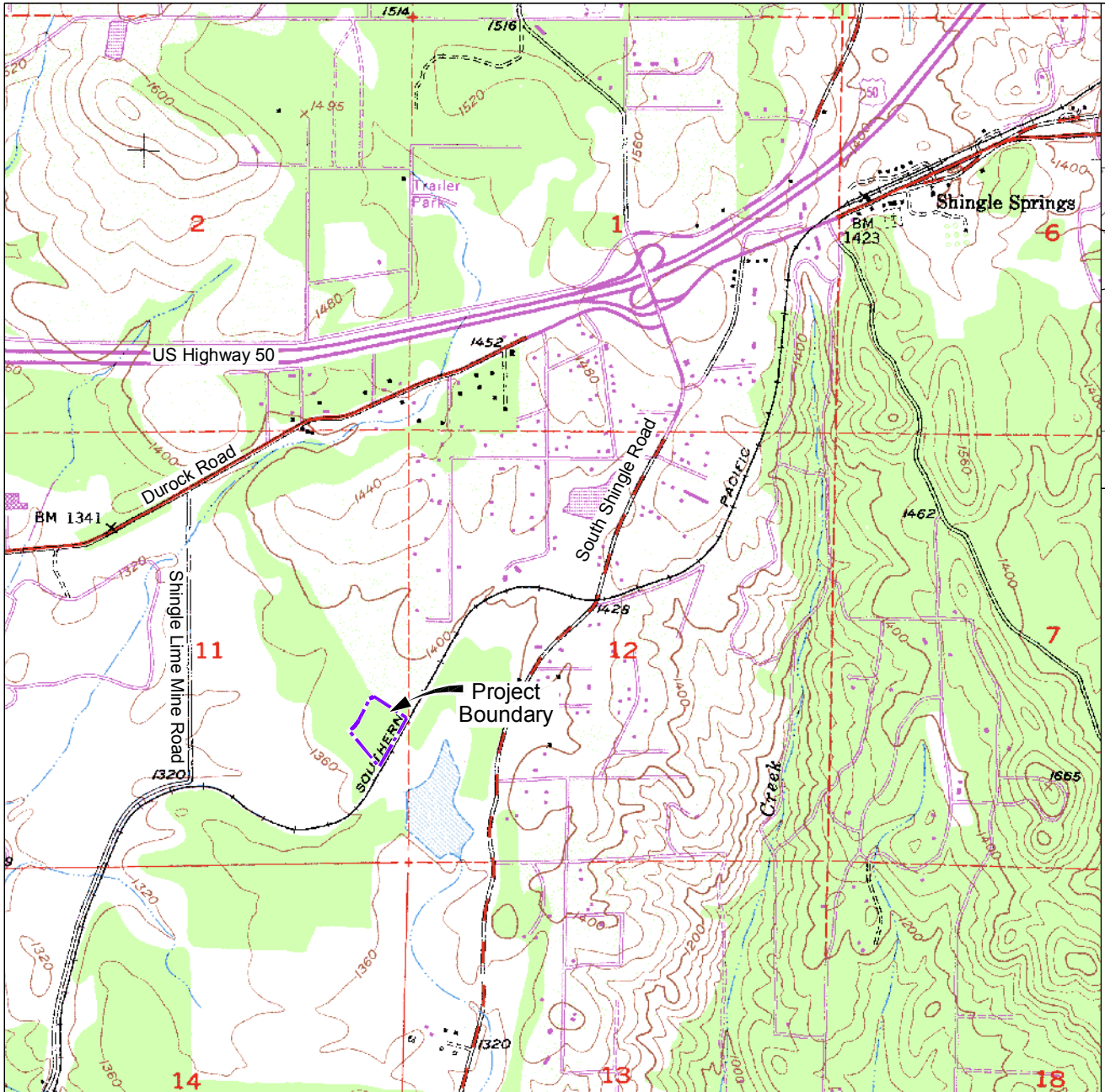
A. Purpose of Report

The purpose of this report is to document the results of the botanical survey conducted in the PSA during the evident and identifiable period of special-status plants with the potential to occur. This report may be used in support of permit applications and in the California Environmental Quality Act (CEQA) review process. Project impacts and mitigation are not included in this report because project design has not been finalized. Applicable laws and regulations are in Appendix F.

B. Project Location


The approximately 7.21-ac PSA is assessor's parcel number (APN) 109-480-07 and is located south of Highway 50 in the community of Shingle Springs in El Dorado County. The PSA occurs on the Shingle Springs USGS topographic quadrangle (T9N, R9E, Section 11; Figure 1) and is in the Upper Cosumnes hydrologic unit (hydrologic unit code 18040013). Its centroid is 38.6470° north, 120.9490° west (1983 NAD) and its UTM coordinates are 678,500 meters E, 4,279,600 meters N (Zone 10 N). Figure 2 is an aerial photograph of the PSA.

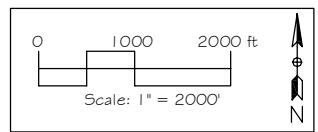
[This page intentionally blank]



APN 109-480-07
 El Dorado County, CA
 23 September 2009

Figure 1. Location Map

 = Project Boundary
 (7.21 acres)



Basemap:
 Shingle Springs, CA (Photorevised 1973) USGS 7.5'
 Topographic Quadrangle, Teale Data Center DRG


[This page intentionally blank]

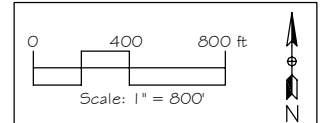


Image © 2008 DigitalGlobe

APN 109-480-07
 El Dorado County, CA
 23 September 2009

Figure 2. Aerial Photograph

 = Project Boundary
 (7.21 acres)



SYCAMORE
 Environmental
 Consultants, Inc.

Aerial Photograph:
 1 September 2008 Copyright © 2009 GlobeExplorer,
 A DigitalGlobe Company. All rights reserved.

[This page intentionally blank]

The County has designated “rare plant mitigation areas” for a group of special-status plants known collectively as the “Pine Hill Plants.” The PSA is in County rare plant Mitigation Area 1, which is defined as the rare plant soils study area. The PSA is not in the recommended preserve boundary for the Pine Hill Plants (USFWS 2002). The PSA is located outside the El Dorado County Important Biological Corridor (IBC) and Ecological Preserve (EP) overlay areas (El Dorado County 2004).

III. STUDY METHODS

A. Studies Conducted

An evaluation of biological resources was conducted to determine whether any special-status plants, or their habitat, occur in the PSA. Data on special-status plant species and habitats known in the area was obtained from state and federal agencies. Maps and aerial photographs of the PSA and surrounding areas were reviewed. A field survey was conducted to determine the habitats present. The field survey, map review, and a review of the biology of evaluated species were used to determine the special-status plant species that could occur in the PSA.

Special-status plant species in this report are those listed (or candidate or proposed) under the federal or state endangered species acts, under the California Native Plant Protection Act, or that are on List 1 or 2 of the California Native Plant Society’s Inventory of Rare and Endangered Plants of California (CNPS 2009).

B. Survey Dates and Personnel

Fieldwork was conducted by Michael Bower (M.S. in prep) and Jessica Easley on 24 June 2009.

C. Problems Encountered and Limitations That May Influence Results

No problems or limitations were encountered that may have influenced the results.

D. Record Search

The California Natural Diversity Database (CNDDDB) was queried for the Shingle Springs USGS quad and the eight surrounding quads to determine known records of special-status plants that occur in the vicinity of the PSA. The CNDDDB summary list, data dated 30 May 2009, is in Appendix A.

Sycamore Environmental obtained a letter from the U.S. Fish and Wildlife Service (USFWS), Sacramento Field Office, which identifies federal-listed species that could potentially occur in or could be affected by projects on the Shingle Springs USGS quad, or in El Dorado County. Special-status plants occurring on this list were evaluated in this report. The letter and list, data dated 29 January 2009, are in Appendix B.

E. Botanical Survey Methods

The botanical survey work for this report follows the guidelines set forth by DFG (2000) and USFWS (1996), as applicable. Scientific nomenclature follows Hickman, ed. (1993).

The botanical survey consisted of walking systematic transects through the PSA to identify plant species. Areas containing impassable patches of dense chaparral were surveyed by walking passable corridors or by occasionally crawling through sections of the understory. All plant species observed were identified and recorded. Species not readily identifiable in the field were collected for further inspection in the office.

Approximately 5 person-hours were devoted to fieldwork for the botanical survey. An additional approximately 3 hours were spent keying plant specimens collected in the field. All plants found in the PSA were identified to the taxonomic level necessary to determine legal status. A list of all plant species observed in the PSA is in Appendix D. Photographs are in Appendix E.

F. Mapping

Special-status plants encountered during the survey were mapped using a Trimble GeoXT™ sub-meter accurate GPS. The 1 September 2008 aerial photo in Figure 3 was downloaded from the GlobeXplorer® website and aligned with the GPS data. The aerial photo and field notes were used in part to map the biological communities.

IV. ENVIRONMENTAL SETTING

The PSA is located south of Highway 50 in the community of Shingle Springs in the western foothills of the Sierra Nevada. The PSA is bound by Business Drive to the northwest, an unpaved road and undeveloped land to the northeast, railroad tracks to the southeast, and undeveloped land to the southwest. The General Plan land use designation and zoning for the PSA are both Industrial (I). The General Plan land use designations for the surrounding APNs are multi-family residential (to the northeast), medium density residential (to the southeast), and industrial (to the southwest and northwest) (El Dorado County 2004). Elevation in the PSA ranges from approximately 1,372 to 1,384 ft above sea level. Topography in the PSA is relatively flat with a gentle southwest aspect.

A. Biological Communities

Biological communities are defined by species composition and relative abundance. The biological communities described below correlate where applicable with the list of California terrestrial natural communities recognized by the CNDDDB (DFG 2007) and the El Dorado County General Plan EIR (2004). Biological communities are in Table 1. Figure 3 is a botanical resources map. A list of plant species observed is in Appendix D. Photographs of the PSA are in Appendix E.

The PSA is dominated by blue oak woodland (recognized by El Dorado County as blue oak – foothill pine habitat type). Gabbroic northern mixed chaparral (recognized by El Dorado County as mixed chaparral) occurs within the PSA along the northeastern border. Biological communities encountered in the PSA are in Table 1.

Table 1. Biological Communities in the PSA

Biological Community/ (DFG Vegetation Alliance, Code) ¹	Rarity Rank ¹	El Dorado County Major Habitat Type ²	Area (ac)
Blue Oak Woodland (<i>Quercus douglasii</i> ; 71.020.00)	G4S4	Blue Oak – Foothill Pine	5.41
Gabbroic Northern Mixed Chaparral (<i>Adenostoma fasciculatum</i> ; 37.101.00)	G5S5	Mixed Chaparral	1.80
Total:			7.21

¹ DFG 2007, a community with a global rank of G1, G2, or G3 is considered to be of concern and included in CNDDDB.

² El Dorado County 2004

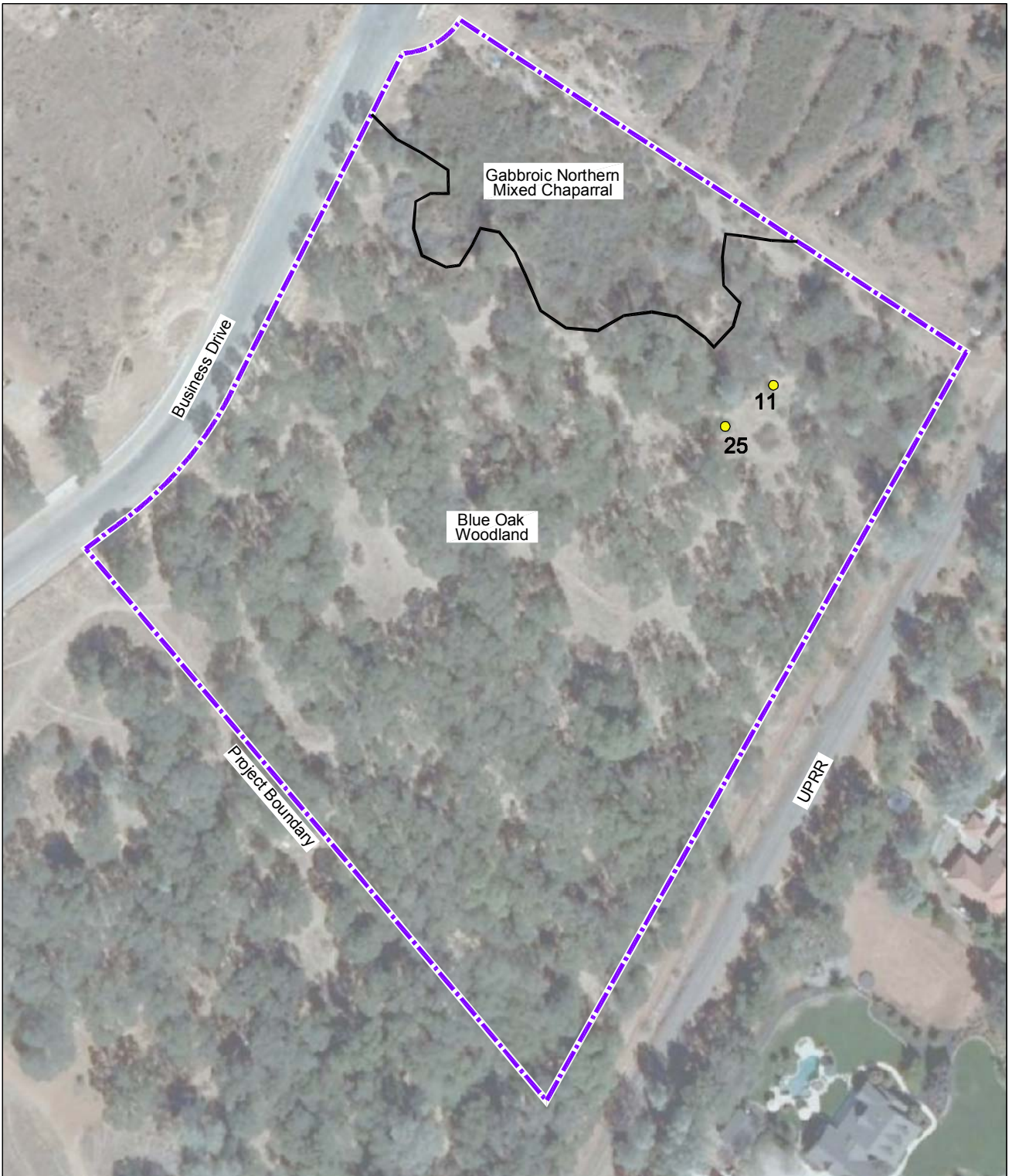
1. Blue Oak Woodland

This community occurs throughout the PSA except along the northeast border (Appendix E, photos 1-2). Blue oak (*Quercus douglasii*) is the dominant tree in this community. Interior live oak (*Quercus wislizenii* var. *wislizenii*) and gray pine (*Pinus sabiniana*) also occur in lesser abundance. Western poison oak (*Toxicodendron diversilobum*) is the dominant shrub in the understory. Buck brush (*Ceanothus cuneatus* var. *cuneatus*), manzanita (*Arctostaphylos viscida* ssp. *viscida*), and hoary coffeeberry (*Rhamnus tomentella* ssp. *tomentella*) also occur in the understory. Blue oak woodland is given no special designation by DFG (2007). Oak woodlands in unincorporated areas are subject to California Public Resources Code (PRC) §21083.4. The County regulates oak canopy removal under the Oak Woodland Management Plan (El Dorado County 2008).

2. Gabbroic Northern Mixed Chaparral


Gabbroic northern mixed chaparral occurs in the northeastern portion of the PSA along the project boundary (Appendix E, photos 3-4). Vegetation is dominated by buck brush, manzanita, and chamise (*Adenostoma fasciculatum*). Gray pine and blue oak trees are scattered throughout this community. Most of the gabbroic northern mixed chaparral in the PSA is very tall and dense with very little understory vegetation. Gabbroic northern mixed chaparral is classified by DFG (2003) as a high inventory priority for the California Natural Diversity Database (CNDDDB). Gabbroic northern mixed chaparral is a subtype of the more common chamise (*Adenostoma fasciculatum*) “alliance” identified by DFG (2007). DFG has not yet revised the vegetation communities at the “association” level, but expects to in the future (DFG 2007).

[This page intentionally blank]



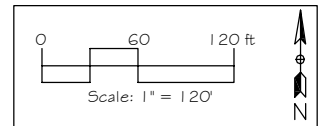
APN 109-480-07
 El Dorado County, CA
 23 September 2009

Figure 3. Botanical Resources Map

 = Project Boundary (7.21 acres)

 = Biological Community Boundary

11 ● = Layne's butterweed *Senecio layneae* (no. of plants)



SYCAMORE
 Environmental
 Consultants, Inc.

Aerial Photograph:
 1 September 2008 Copyright © 2009 GlobeExplorer,
 A DigitalGlobe Company. All rights reserved.

[This page intentionally blank]

B. Soils

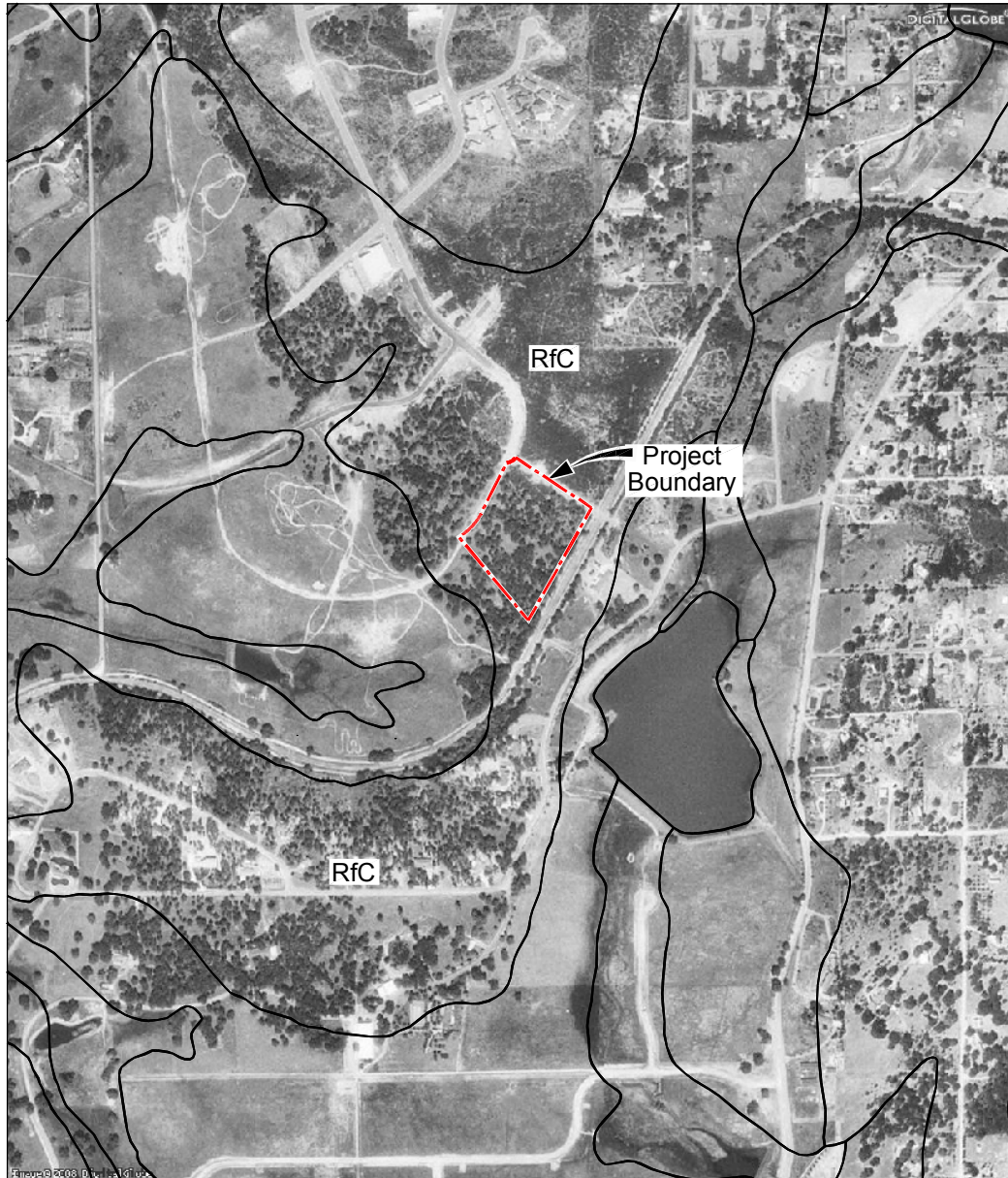
The only mapped soil unit in the PSA is Rescue very stony sandy loam, 3-15% slopes (NRCS 1974; Figure 4). The following description of the mapped soil unit in the PSA is summarized from NRCS (1974). Reported colors are for moist soil.

Rescue very stony sandy loam (3 to 15% slopes): The Rescue series is a well-drained soil underlain by gabbrodiorite rocks. A typical profile has dark reddish brown (5YR 3/4), slightly to medium acid, sandy loam from 0 to 10 inches; yellowish red (5YR 3/6), slightly acid, heavy sandy loam from 10 to 14 inches; dark red (2.5YR 3/6), slightly acidic, sandy clay loam from 14 to 26 inches, variegated reddish brown and reddish yellow (5YR 4/4, 6/6), slightly acid, heavy sandy loam from 26 to 34 inches; yellowish red (5YR 5/6) slightly acid, coarse sandy loam from 34 to 55 inches; and strong brown (7.5YR 5/6), slightly acid, loamy coarse sand from 55 to 66 inches. Weathered gabbrodiorite typically occurs at 66 inches. Permeability is moderately slow, runoff is slow to medium, and the erosion hazard is slight to moderate. Approximately 1 to 3 percent of the soil surface in Rescue very stony sandy loam, 3 to 15% slopes, is covered with stones.

C. The Existing Level of Disturbance



The PSA is relatively undisturbed. No significant recent soil disturbance was observed in the PSA. The paved and unpaved roads and railroad tracks adjacent to the PSA may have increased the abundance of weedy species occurring in the PSA.

[This page intentionally blank]

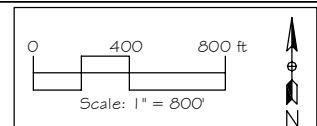


APN 109-480-07
 El Dorado County, CA
 23 September 2009

Figure 4. Soils Map

 = Project Boundary
 (7.21 acres)
 = Soil Boundaries

RfC = Rescue very stony
 sandy loam, 3-15% slopes



SYCAMORE
 Environmental
 Consultants, Inc.

Aerial Photograph:
 9 May-July 1993 Copyright © 2009 GlobeXplorer,
 A DigitalGlobe Company. All rights reserved.

[This page intentionally blank]

V. BOTANICAL RESOURCES IN THE PROJECT STUDY AREA

A. Determination of Special-Status Plant Species in the PSA

USFWS file data, CNDDDB records, and field surveys were used to determine the special-status species that could occur in the PSA. A CNDDDB summary report for the nine quads centered on the Shingle Springs quad is in Appendix A. The USFWS list of federal-listed species that could occur in or be affected by the project is in Appendix B. Field surveys were conducted to determine whether habitat for special-status plant species identified in the file data is present in the PSA. Special-status plants for which suitable habitat is present in the PSA are listed in Table 2.

Table 2. Special-Status Plant Species and Natural Communities

Special-Status Plant Species	Common Name	Federal Status ^a	State Status ^a / CNPS ^b	Source ^c	Habitat Present? / Species Observed?
<i>Allium jepsonii</i>	Jepson's onion	--	--/ 1B.2	2	Yes/ No
<i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	Big-scale balsamroot	--	--/ 1B.2	2	Yes/ No
<i>Calystegia stebbinsii</i>	Stebbins' morning-glory	E	E/ 1B.1	1, 2	Yes/ No
<i>Ceanothus roderickii</i>	Pine Hill ceanothus	E	R/ 1B.2	1, 2	Yes/ No
<i>Chlorogalum grandiflorum</i>	Red Hills soaproot	--	--/ 1B.2	2	Yes/ No
<i>Clarkia biloba</i> ssp. <i>brandegeae</i>	Brandegee's clarkia	--	--/ 1B.2	2	Yes/ No
<i>Fremontodendron californicum</i> ssp. <i>decumbens</i>	Pine Hill flannelbush	E	R/ 1B.2	1, 2	Yes/ No
<i>Galium californicum</i> ssp. <i>sierrae</i>	El Dorado bedstraw	E	R/ 1B.2	1, 2	Yes/ No
<i>Helianthemum suffrutescens</i>	Bisbee Peak rush-rose	--	--/ 3.2	2	Yes/ No
<i>Horkelia parryi</i>	Parry's horkelia	--	--/ 1B.2	2	Yes/ No
<i>Senecio</i> (= <i>Packera</i>) <i>layneae</i>	Layne's butterweed (ragwort)	T	R/ 1B.2	1, 2	Yes/ Yes
<i>Viburnum ellipticum</i>	Oval-leaved viburnum	--	--/ 2.3	2	Yes/ No
<i>Wyethia reticulata</i>	El Dorado County mule ears	--	--/ 1B.2	2	Yes/ No
Natural Communities					
Blue Oak Woodland		--	--	3	Yes/ Yes
Gabbroic Northern Mixed Chaparral		--	--	3	Yes/ Yes

^a **Status:** E = Endangered; T = Threatened; P = Proposed; C = Candidate; R = California Rare; * = Possibly extinct; SSC = DFG Species of Special Concern; FP = DFG Fully Protected; Prot = DFG Protected; CH = Critical habitat designated.

^b **CNPS:** 1A = Presumed Extinct in CA; 1B = Rare or Endangered (R/E) in CA and elsewhere; 2 = R/E in CA and more common elsewhere; 3 = Need more information; 4 = Plants of limited distribution; 0.1 = Seriously endangered in CA; 0.2 = Fairly endangered in CA; 0.3 = Not very endangered in CA.

^c **Source:** 1 = USFWS letter. 2 = CNDDDB. 3 = Observed or included by Sycamore Environmental.

B. Special-Status Species not in the Project Study Area

Special-status plants for which suitable habitat is not present, or whose distributional limits preclude the possibility of their occurrence in the PSA, are not discussed further in this report. An evaluation of these species is in Appendix C.

C. Evaluation of Special-Status Plants

The project site is in County rare plant Mitigation Area 1, which is defined as the rare plant soils study area (El Dorado County 2004). To comply with El Dorado County Ordinance 4500 (Zoning Ordinance Chapter 17.71, Ecological Preserves), projects located in rare plant Mitigation Area 1 are encouraged to either pay the County rare plant mitigation fee or participate in the rare plant off-site mitigation program (Ord. 4500, 7-28-1998). The County requires the fee or off-site mitigation regardless of whether any “Pine Hill Plants” occur in the PSA or not. If a project mitigates off-site, acquisition and restoration of rare plant habitat must be equal to 1.5 times the number of acres developed. The eight Pine Hill Plants are Stebbins’ morning-glory, Pine Hill ceanothus, Red Hills soaproot, Pine Hill flannelbush, El Dorado bedstraw, Bisbee Peak rush-rose, Layne’s butterweed, and El Dorado County mule ears.

Jepson’s onion (*Allium jepsonii*)

HABITAT AND BIOLOGY: Jepson’s onion is a bulbiferous perennial herb found in serpentine or volcanic soils of chaparral, cismontane woodland, and lower montane coniferous forest from 950 to 4,350 ft. Blooms April through August (CNPS 2009).

RANGE: Known from Butte, El Dorado, Placer, and Tuolumne counties (CNPS 2009).

KNOWN RECORDS: There are 2 CNDDDB records for Jepson’s onion on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for Jepson’s onion was reported by Sycamore Environmental and is located approximately 4.8 mi northeast of the PSA. Approximately 2,107 plants were seen on rock outcrops in serpentine foothill pine chaparral woodland in 2007.

HABITAT PRESENT IN THE PSA: The PSA provides marginal potential habitat for Jepson’s onion. Although the potential to occur cannot be ruled out, the habitat is marginal because there are no serpentine soils.

DISCUSSION: Jepson’s onion was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. Jepson’s onion is not known to occur in the PSA.

Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*)

HABITAT AND BIOLOGY: Big-scale balsamroot is a perennial herb found in chaparral, cismontane woodland, and valley and foothill grassland, sometimes on serpentine soils, from 300 to 4,600 ft. Blooms March through June (CNPS 2009).

RANGE: Known from Alameda, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Solano, Sonoma, and Tehama counties (CNPS 2009).

KNOWN RECORDS: There is one CNDDDB record for big-scale balsamroot on the Shingle Springs and eight adjacent quads. This record is located approximately 13.6 mi northwest of the PSA. The record is based on an undated collection from Rattlesnake Bend in Placer County. This site has been inundated by Folsom Lake.

HABITAT PRESENT IN THE PSA: The PSA provides potential habitat for big-scale balsamroot.

DISCUSSION: Big-scale balsamroot was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. Big-scale balsamroot is not known to occur in the PSA.

Stebbins' morning-glory (*Calystegia stebbinsii*)

HABITAT AND BIOLOGY: Stebbins' morning-glory is a perennial rhizomatous herb found in serpentine or gabbroic soils in chaparral openings and cismontane woodland from 600 to 2,400 ft. Blooms April through July (CNPS 2009).

RANGE: Known from El Dorado and Nevada counties (CNPS 2009).

KNOWN RECORDS: There are 9 CNDDDB records for Stebbins' morning-glory on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for Stebbins' morning-glory is located approximately 0.25 mi north of the PSA on the west side of Lakeview Drive, about 0.5 mi south of Hwy 50. Approximately 60 plants were observed in chaparral on Rescue series soils in 2006.

HABITAT PRESENT IN THE PSA: The PSA provides potential habitat for Stebbins' morning-glory.

DISCUSSION: Stebbins' morning-glory was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. Stebbins' morning-glory is not known to occur in the PSA.

Pine Hill ceanothus (*Ceanothus roderickii*)

HABITAT AND BIOLOGY: Pine Hill ceanothus is an evergreen shrub found in serpentine or gabbroic soils in chaparral and cismontane woodland from 850 to 2,100 ft. Blooms April through June (CNPS 2009).

RANGE: Known from approximately ten occurrences in El Dorado County (CNPS 2009).

KNOWN RECORDS: There are 9 CNDDDB records for Pine Hill ceanothus on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for Pine Hill ceanothus is located approximately 0.7 mi north of the PSA. Multiple surveys at this location from 1984 to 2008 have recorded populations greater than 1,000 plants growing in open chaparral on Rescue series soils along both sides of Hwy 50.

HABITAT PRESENT IN THE PSA: The PSA provides potential habitat for Pine Hill ceanothus.

DISCUSSION: Pine Hill ceanothus was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. Pine Hill ceanothus is not known to occur in the PSA.

Red Hills soaproot (*Chlorogalum grandiflorum*)

HABITAT AND BIOLOGY: Red Hills soaproot is a perennial bulbiferous herb found in serpentine or gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest from 800 to 3,850 ft. Blooms May through June (CNPS 2009).

RANGE: Known from Amador, Calaveras, El Dorado, Placer, and Tuolumne counties (CNPS 2009).

KNOWN RECORDS: There are 15 CNDDDB records for Red Hills soaproot on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for Red Hills soaproot is located approximately 0.25 mi to the north of the PSA. Plant colonies of various sizes were observed between Product Drive and Lakeview Drive, approximately 0.5 air mi south of Hwy 50, in 1993, 1994, and 2006.

HABITAT PRESENT IN THE PSA: The PSA provides potential habitat for Red Hills soaproot.

DISCUSSION: Red Hills soaproot was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. Red Hills soaproot is not known to occur in the PSA.

Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeae*)

HABITAT AND BIOLOGY: Brandegee's clarkia is an annual herb found in chaparral and cismontane woodland, often in road cuts, from 240 to 3,000 ft. Blooms May through July (CNPS 2009).

RANGE: Known from Butte, El Dorado, Nevada, Placer, Sacramento, Sierra, and Yuba counties (CNPS 2009).

KNOWN RECORDS: There are 10 CNDDDB records for Brandegee's clarkia on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for Brandegee's clarkia is located approximately 2.65 mi southwest of the PSA, approximately 0.4 air miles east-northeast of the junction of Marble Creek and Deer Creek, northwest of Bullard. Habitat consists of east-facing slopes above oak riparian woodland. Less than 200 plants were observed in 2005.

HABITAT PRESENT IN THE PSA: The PSA provides potential habitat for Brandegee's clarkia.

DISCUSSION: Brandegee's clarkia was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. Brandegee's clarkia is not known to occur in the PSA.

Pine Hill flannelbush (*Fremontodendron californicum* ssp. *decumbens*)

HABITAT AND BIOLOGY: Pine Hill flannelbush is an evergreen shrub found in rocky areas of serpentine or gabbroic soils in chaparral and cismontane woodland from 1,375 to 2,500 ft. Blooms April through July (CNPS 2009).

RANGE: Known from fewer than ten occurrences in the Pine Hill area in El Dorado County and one near Grass Valley in Nevada County (CNPS 2009).

KNOWN RECORDS: There are 7 CNDDDB records for Pine Hill flannelbush on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for this species is located approximately 4.8 mi northwest of the PSA on the Shingle Springs quad. An unknown number of plants were observed sometime before 1986 along an intermittent stream located approximately 0.8 mi south-southwest of Pine Hill Lookout. The only known records of Pine Hill flannelbush in El Dorado County occur on, or very near, Pine Hill, northwest of the PSA.

HABITAT PRESENT IN THE PSA: The PSA occurs outside the known range of Pine Hill flannelbush; however, due to the presence of gabbroic soil in the PSA, the potential for Pine

Hill flannelbush could not be completely ruled out. The PSA provides marginal potential habitat for Pine Hill flannelbush.

DISCUSSION: Pine Hill flannelbush was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. Pine Hill flannelbush is not known to occur in the PSA. The PSA is outside the very localized known range of Pine Hill flannelbush.

El Dorado bedstraw (*Galium californicum* ssp. *sierrae*)

HABITAT AND BIOLOGY: El Dorado bedstraw is a perennial herb found in gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest from 325 to 1,925 ft. Blooms May through June (CNPS 2009).

RANGE: Known only from El Dorado County (CNPS 2009).

KNOWN RECORDS: There are 15 CNDDDB records for El Dorado bedstraw on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for this species is located approximately 1.4 mi north of the PSA at the end of Whispering Pines Drive in Shingle Springs. Habitat consists of chaparral and oak forests on gabbro soils. Three colonies were observed in 1994. Sycamore Environmental observed El Dorado bedstraw near the CNDDDB record in June 2008.

HABITAT PRESENT IN THE PSA: The PSA provides potential habitat for El Dorado bedstraw.

DISCUSSION: El Dorado bedstraw was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. El Dorado bedstraw is not known to occur in the PSA.

Bisbee Peak rush-rose (*Helianthemum suffrutescens*)

HABITAT AND BIOLOGY: Bisbee Peak rush-rose is an evergreen shrub found in chaparral, often on serpentine, gabbroic, or Ione soils, from 125 to 2,775 ft. Blooms April through June (CNPS 2009). In the previous commonly used statewide flora (Munz 1959), Bisbee Peak rush-rose was treated as a separate species from the more common rush rose (*Helianthemum scoparium*). The newer statewide flora (*The Jepson Manual*, Hickman, ed., 1993) treats the two taxa as the same species, *Helianthemum scoparium*. The Jepson Flora Project (2009) provides current information on taxonomy and indicates that the taxa are conspecific and will both be treated as *Helianthemum scoparium* in the next edition of *The Jepson Manual*. CNPS (2009) includes *Helianthemum suffrutescens* on List 3 of the Inventory of Rare and Endangered Plants. List 3 is composed primarily of plants with uncertain taxonomy for which more information is needed.

RANGE: Known from Amador, Calaveras, El Dorado, Mariposa, Sacramento, and Tuolumne counties (CNPS 2009).

KNOWN RECORDS: There are 16 CNDDDB records for Bisbee Peak rush-rose on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for this species is located approximately 0.7 mi northwest of the PSA. Hundreds of plants were observed by Sycamore Environmental between Meder Road and Durock Road, east of Cameron Park Drive in Cameron Park growing in chaparral on Rescue series soils in 2005.

HABITAT PRESENT IN THE PSA: The PSA provides potential habitat for Bisbee Peak rush-rose.

DISCUSSION: Bisbee Peak rush-rose was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. Bisbee Peak rush-rose is not known to occur in the PSA.

Parry's horkelia (*Horkelia parryi*)

HABITAT AND BIOLOGY: Parry's horkelia is a perennial herb found in chaparral and cismontane woodland, especially on soils of the Ione formation, from 250 to 3,400 ft. Blooms April through September (CNPS 2009).

RANGE: Known from Amador, Calaveras, El Dorado, and Mariposa counties (CNPS 2009).

KNOWN RECORDS: There are 3 CNDDDB records for Parry's horkelia on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for this species is from 1923 and is located approximately 8.9 mi northeast of the PSA.

HABITAT PRESENT IN THE PSA: The PSA provides marginal potential habitat for Parry's horkelia due to the lack of Ione formation soils.

DISCUSSION: Parry's horkelia was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. Parry's horkelia is not known to occur in the PSA.

Layne's butterweed (ragwort) (*Senecio* [= *Packera*] *layneae*)

HABITAT AND BIOLOGY: Layne's butterweed is a perennial herb found in rocky areas with serpentine or gabbroic soils in chaparral and cismontane woodland from 650 to 3,300 ft. Blooms April through August (CNPS 2009).

RANGE: Known from Butte, El Dorado, Tuolumne, and Yuba counties (CNPS 2009).

KNOWN RECORDS: There are 33 CNDDDB records for Layne's butterweed on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for Layne's butterweed consists of three polygons combined from survey data from 1993, 2006, and 2008. The polygons are mapped on the west side of Lakeview Drive, south of Durock Road, and north of the railroad tracks. A portion of the southern-most polygon occurs within the PSA along the northeastern project boundary. This polygon represents 43 plants that were observed in chaparral on Rescue series soils in 2008.

HABITAT PRESENT IN THE PSA: The PSA provides habitat for Layne's butterweed.

DISCUSSION: Thirty-six Layne's butterweed plants were counted in the PSA during the botanical survey conducted during the evident and identifiable period. Two occurrences of 25 and 11 plants were observed in the northeast portion of the PSA in the ecotone between gabbroic northern mixed chaparral and blue oak woodland (Appendix E, photos 5 and 6; Figure 3). A CNDDDB field survey form for Layne's butterweed was sent to DFG (Appendix G).

Oval-leaved viburnum (*Viburnum ellipticum*)

HABITAT AND BIOLOGY: Oval-leaved viburnum is a deciduous shrub found in chaparral, cismontane woodland, and lower montane coniferous forest from 700 to 4,600 ft. Blooms May through June (CNPS 2009).

RANGE: Known from Contra Costa, El Dorado, Fresno, Glenn, Humboldt, Mendocino, Napa, Placer, Shasta, Sonoma, and Tehama counties (CNPS 2009).

KNOWN RECORDS: There is one CNDDDB record for oval-leaved viburnum on the Shingle Springs and eight adjacent quads. This record is from 1901 and is located approximately 8.9 mi northeast of the PSA. Oval-leaved viburnum was recorded in the gabbro soils area by Wilson (1986).

HABITAT PRESENT IN THE PSA: The PSA provides potential habitat for oval-leaved viburnum.

DISCUSSION: Oval-leaved viburnum was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. Oval-leaved viburnum is not known to occur in the PSA.

El Dorado County mule ears (*Wyethia reticulata*)

HABITAT AND BIOLOGY: El Dorado County mule ears is a perennial rhizomatous herb found on clay or gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest from 600 to 2,075 ft. Blooms from April through August (CNPS 2009).

RANGE: Known from El Dorado County (CNPS 2009).

KNOWN RECORDS: There are 24 CNDDDB records for El Dorado County mule ears on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for El Dorado County mule ears is located approximately 0.16 mi north of the PSA, just northeast of the intersection of Dividend Drive and Business Drive in 2006. Approximately 200 plants were observed growing in chaparral recovering from grading in 1994 and approximately 5,400 square ft of plants were observed at this location in 2006.

HABITAT PRESENT IN THE PSA: The PSA provides potential habitat for El Dorado County mule ears.

DISCUSSION: El Dorado County mule ears were not observed in the PSA during the botanical survey conducted during the evident and identifiable period. El Dorado County mule ears are not known to occur in the PSA.

D. Evaluation of Natural Communities

Oak Woodland

HABITAT PRESENT IN THE PSA: There is 5.41 ac of blue oak woodland in the PSA under County jurisdiction.

DISCUSSION: Oak woodlands under County jurisdiction are regulated by PRC §21083.4. The County regulates oak canopy removal under General Plan Policy 7.4.4.4. Mitigation may combine on- or off-site canopy replacement or payment of a fee based on the acreage of oak

canopy removed. The Oak Woodland Management Plan (El Dorado County 2008) provides guidance and specific directives to achieve compliance with General Plan Policy 7.4.4.4 and PRC §21083.4.

Gabbroic Northern Mixed Chaparral

HABITAT PRESENT IN THE PSA: There is 1.80 ac of gabbroic northern mixed chaparral in the PSA.

DISCUSSION: Gabbroic northern mixed chaparral is classified by DFG (2003) as a high inventory priority for the California Natural Diversity Database (CNDDDB). Gabbroic northern mixed chaparral is a subtype of the more common chamise (*Adenostoma fasciculatum*) “alliance” identified by DFG (2007). DFG has not yet revised the vegetation communities at the “association” level, but expects to in the near future (DFG 2007).

VI. LITERATURE CITED

- Ayres, D. R. and F. J. Ryan. 1999. Genetic diversity and structure of the narrow endemic *Wyethia reticulata* and its congener *W. bolanderi* (Asteraceae) using RAPD and allozyme techniques. *American Journal of Botany* 86(3):344-353.
- California Department of Fish and Game (DFG). 2000. Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities. Sacramento, CA.
- California Department of Fish and Game (DFG). July 2003. List of California terrestrial natural communities recognized by the California Natural Diversity Database. Natural Heritage Division, CNDDDB, Sacramento, CA.
- California Department of Fish and Game (DFG). 22 October 2007. Vegetation classification and mapping program: List of California vegetation alliances. Sacramento, CA.
<http://www.dfg.ca.gov/biogeodata/vegcamp/pdfs/NaturalCommunitiesList_Oct07.pdf>
- California Department of Fish and Game (DFG). Data dated 30 May 2009. CNDDDB/ RareFind: Shingle Springs and eight surrounding quadrangles. Natural Heritage Division, CNDDDB, Sacramento, CA.
- California Native Plant Society (CNPS). Accessed July 2009. Inventory of rare and endangered plants (online edition, v7-09b 4-10-09). California Native Plant Society, Sacramento, CA.
<<http://www.cnps.org/inventory>>
- El Dorado County. Adopted 19 July 2004. El Dorado County general plan, a plan for managed growth and open roads; plan for quality neighborhoods and traffic relief. El Dorado County Planning Department, Placerville, CA.
- El Dorado County. Adopted 6 May 2008. Oak woodland management plan. El Dorado County Development Services Department-Planning Services, Placerville, CA.
- Hickman, J., ed. 1993. The Jepson manual: Higher plants of California. University of California Press, Berkeley, CA.
- Jepson Flora Project. Accessed June 2009. Jepson Online Interchange for California floristics: *Helianthemum suffrutescens*. <<http://ucjeps.berkeley.edu/interchange.html>>
- Munz, P. 1959. A California flora. University of California Press, Berkeley, CA.
- Natural Resources Conservation Service (NRCS; formerly known as Soil Conservation Service). April 1974. Soil survey of El Dorado Area, California. USDA – Soil Conservation Service.
- U.S. Army Corps of Engineers (Corps). 1987. Corps of Engineers wetland delineation manual, Tech. Rept. Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- U.S. Army Corps of Engineers (Corps). 30 November 2001. Minimum standards for acceptance of preliminary wetlands delineations. Regulatory Branch, U.S. Army Engineer District Sacramento, Sacramento, CA.
- U.S. Army Corps of Engineers (Corps). 7 December 2005. Ordinary high water mark identification, Regulatory Guidance Letter No. 05-05.
- U.S. Army Corps of Engineers (Corps). 2006. Interim regional supplement to the Corps of Engineers wetland delineation manual: Arid West region. J. S. Wakeley, R. W. Lichvar, and C. V. Noble, Eds., Technical Report ERDC/EL TR-06-16. U.S. Army Engineer Research and Development Center, Vicksburg, MS.
- U.S. Fish and Wildlife Service (USFWS). 1996. Guidelines for conducting and reporting botanical inventories for federally listed, proposed and candidate plants. Sacramento Fish and Wildlife Office, Sacramento, CA. <http://sacramento.fws.gov/es/documents/Listed_plant_survey_guidelines.pdf>
- U.S. Fish and Wildlife Service (USFWS). 2002. Recovery plan for gabbro soil plants of the Central Sierra Nevada Foothills. Portland, OR.
- Wilson, J. L. 1986. A study of plant species diversity and vegetation patterns associated with the Pine Hill gabbro formation and adjacent substrata, El Dorado County, CA. Master's Thesis, California State University, Sacramento, CA.

VII. PREPARERS

R. John Little, Ph.D., Botany, Claremont Graduate School, Claremont, CA. Over 25 years experience managing and conducting environmental projects involving impact assessment and preparation of numerous NEPA/CEQA compliance documents, Biological Assessments, and Caltrans Natural Environmental Studies. Experience includes conducting special-status plant and wildlife species surveys, jurisdictional wetland delineations, general biological surveys, permitting and biological report preparation. Dr. Little is a trained wetland delineator, an ISA Certified Arborist (WE-1057A), holds a Fish and Wildlife Service recovery permit for vernal pool crustaceans (TE799564-2), and holds a California Department of Fish and Game Scientific Collecting Permit (#801073-04), and DFG Rare, Threatened and Endangered Plant Voucher Collecting Permit (#09054). Responsibilities: Senior technical lead.

Jeffery Little, A.A., Sacramento City College, Sacramento, CA. Sixteen years experience with preparation of NES, BA, and NEPA/CEQA compliance documents, impact analysis, agency formal and informal consultations and permitting. Project management, conducts special-status species surveys, jurisdictional delineations, and prepares mitigation and monitoring plans. CAD/ GIS Manager responsible for data collection, map creation, impact analyses, and report preparation. He holds a California Department of Fish and Game Scientific Collecting Permit (#801073-03), and a DFG Rare, Threatened and Endangered Plant Voucher Collecting Permit (#08018). Responsibilities: Project manager.

Michael Bower, M.S., Ecology (in progress), University of California, Davis, CA. Conducts plant and wildlife surveys, provides technical support for wetland delineations, biological resource evaluations, mitigation plans, and other documents used in the CEQA/NEPA process, queries the California Natural Diversity Database (CNDDDB/ RareFind), and researches special-status species for projects. He holds a California Department of Fish and Game Rare, Threatened and Endangered Plant Voucher Collecting Permit (#2081(a)-09-14-V). Responsibilities: Botanical surveys and report preparation.

Jessica Easley, B.S., Wildlife Biology, University of Montana, College of Forestry and Conservation, Missoula, MT. Conducts plant and wildlife surveys, provides technical support for wetland delineations, biological resource evaluations, mitigation plans, and other documents used in the CEQA/NEPA process, queries the California Natural Diversity Database (CNDDDB/ RareFind), and researches special-status species for projects. She is an ISA Certified Arborist (WE-7845A), holds a California Department of Fish and Game Scientific Collecting Permit (#801074-01), and a DFG Rare, Threatened and Endangered Plant Voucher Collecting Permit (#09051). Responsibilities: Botanical surveys and report preparation.

Jared Birdsall, B.S., Range Science, Brigham Young University, Provo, Utah. Prepares CAD/ GIS maps depicting project locations, waters and wetland locations, project impacts, aerial views of projects, tree locations, and other functions. Conducts plant and wildlife surveys, uses taxonomic keys for plant identification, queries the California Natural Diversity Database (CNDDDB/ RareFind), researches special-status species for projects, and assists in the preparation of reports. Responsibilities: Figure preparation.

Cynthia Little, Principal, Sycamore Environmental.
Responsibilities: Senior editor and quality control.

APPENDIX A.

CNDDDB Summary Report

**APN 109-480-07 on Business Drive
El Dorado County, CA**

California Department of Fish and Game
 Natural Diversity Database
 Summary list for Shingle Springs and 8 Adjacent quads (Plants)

Scientific Name	Common Name	Element Code	Federal Status	State Status	Global Rank	State Rank	CNPS	CDFG
1 Allium jepsonii	Jepson's onion	PMLIL022V0			G1	S1.2	1B.2	
2 Arctostaphylos nissenana	Nissenan manzanita	PDERI040V0			G2	S2.2	1B.2	
3 Balsamorhiza macrolepis var. macrolepis	big-scale balsamroot	PDAST11061			G3G4T2	S2.2	1B.2	
4 Calystegia stebbinsii	Stebbins' morning-glory	PDCON040H0	Endangered	Endangered	G1	S1.1	1B.1	
5 Ceanothus roderickii	Pine Hill ceanothus	PDRHA04190	Endangered	Rare	G2	S2.1	1B.2	
6 Central Valley Drainage Hardhead/Squawfish Stream	Central Valley Drainage Hardhead/Squawfish Stream	CARA2443CA			G?	SNR		
7 Chlorogalum grandiflorum	Red Hills soaproot	PMLIL0G020			G2	S2	1B.2	
8 Clarkia biloba ssp. brandegeae	Brandegee's clarkia	PDONA05053			G4G5T3	S3	1B.2	
9 Eryngium pinnatisectum	Tuolumne button-celery	PDAPI0Z0P0			G3	S3.2	1B.2	
10 Fremontodendron decumbens	Pine Hill flannelbush	PDSTE03030	Endangered	Rare	G1	S1.2	1B.2	
11 Galium californicum ssp. sierrae	El Dorado bedstraw	PDRUB0N0E7	Endangered	Rare	G5T1	S1.2	1B.2	
12 Helianthemum suffrutescens	Bisbee Peak rush-rose	PDCIS020F0			G2Q	S2.2	3.2	
13 Horkelia parryi	Parry's horkelia	PDROS0W0C0			G2	S2.2	1B.2	
14 Packera layneae	Layne's ragwort	PDAST8H1V0	Threatened	Rare	G2	S2.1	1B.2	
15 Pseudobahia bahiifolia	Hartweg's golden sunburst	PDAST7P010	Endangered	Endangered	G2	S2.1	1B.1	
16 Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0			G3	S3.2	1B.2	
17 Viburnum ellipticum	oval-leaved viburnum	PDCPR07080			G5	S2.3	2.3	
18 Wyethia reticulata	El Dorado County mule ears	PDAST9X0D0			G2	S2.2	1B.2	

APPENDIX B.

USFWS Letter

APN 109-480-07 on Business Drive
El Dorado County, CA



United States Department of the Interior
FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825



July 7, 2009

Document Number: 090707104201

R. John Little, Ph.D.
Sycamore Environmental Consultants, Inc.
6355 Riverside Blvd., Suite C
Sacramento, CA 95831

Subject: Species List for Business Drive APN 109-480-07

Dear: Dr. Little

We are sending this official species list in response to your July 7, 2009 request for information about endangered and threatened species. The list covers the California counties and/or U.S. Geological Survey 7½ minute quad or quads you requested.

Our database was developed primarily to assist Federal agencies that are consulting with us. Therefore, our lists include all of the sensitive species that have been found in a certain area *and also ones that may be affected by projects in the area*. For example, a fish may be on the list for a quad if it lives somewhere downstream from that quad. Birds are included even if they only migrate through an area. In other words, we include all of the species we want people to consider when they do something that affects the environment.

Please read Important Information About Your Species List (below). It explains how we made the list and describes your responsibilities under the Endangered Species Act.

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be October 05, 2009.

Please contact us if your project may affect endangered or threatened species or if you have any questions about the attached list or your responsibilities under the Endangered Species Act. A list of Endangered Species Program contacts can be found at www.fws.gov/sacramento/es/branches.htm.

Endangered Species Division



U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office

**Federal Endangered and Threatened Species that Occur in
or may be Affected by Projects in the Counties and/or
U.S.G.S. 7 1/2 Minute Quads you requested**

Document Number: 090707104201

Database Last Updated: January 29, 2009

Quad Lists

Listed Species

Invertebrates

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Fish

Hypomesus transpacificus
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Rana aurora draytonii
California red-legged frog (T)

Plants

Calystegia stebbinsii
Stebbins's morning-glory (E)

Ceanothus roderickii
Pine Hill ceanothus (E)

Fremontodendron californicum ssp. decumbens
Pine Hill flannelbush (E)

Galium californicum ssp. sierrae
El Dorado bedstraw (E)

Senecio layneae
Layne's butterweed (=ragwort) (T)

Quads Containing Listed, Proposed or Candidate Species:

SHINGLE SPRINGS (510B)

County Lists

El Dorado County

Listed Species

Invertebrates

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Lepidurus packardii
vernal pool tadpole shrimp (E)

Fish

Oncorhynchus (=Salmo) clarki henshawi
Lahontan cutthroat trout (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)

Rana aurora draytonii
California red-legged frog (T)
Critical habitat, California red-legged frog (X)

Reptiles

Thamnophis gigas
giant garter snake (T)

Plants

Calystegia stebbinsii
Stebbins's morning-glory (E)

Ceanothus roderickii
Pine Hill ceanothus (E)

Fremontodendron californicum ssp. decumbens
Pine Hill flannelbush (E)

Galium californicum ssp. sierrae
El Dorado bedstraw (E)

Senecio layneae

Layne's butterweed (=ragwort) (T)

Proposed Species

Amphibians

Rana aurora draytonii

Critical habitat, California red-legged frog (PX)

Candidate Species

Amphibians

Bufo canorus

Yosemite toad (C)

Rana muscosa

mountain yellow-legged frog (C)

Mammals

Martes pennanti

fisher (C)

Plants

Rorippa subumbellata

Tahoe yellow-cress (C)

Key:

(E) *Endangered* - Listed as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the [National Oceanic & Atmospheric Administration Fisheries Service](#). Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our [Protocol](#) and [Recovery Permits](#) pages.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are

likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [Map Room](#) page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. [More info](#)

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be October 05, 2009.

APPENDIX C.

Species Evaluated Table

APN 109-480-07 on Business Drive
 El Dorado County, CA

Special-Status Plant Species from USFWS Letter and CNDDDB Data

Special-Status Plant Species/ Common Name	Federal Status ^{a, b}	State Status ^{a, b} / CNPS ^d	Source ^c	Habitat Requirements	Potential to Occur in the PSA
<i>Allium jepsonii</i> Jepson's onion	--	--/ 1B.2	2	Bulbiferous perennial herb found on serpentine or volcanic substrate in chaparral, cismontane woodland, and lower montane coniferous forest from 950 to 4,350 ft. Known from Butte, El Dorado, Placer, and Tuolumne counties. Blooms April through August (CNPS 2009).	Yes. See text.
<i>Arctostaphylos nissenana</i> Nissenan manzanita	--	--/ 1B.2	2	Evergreen shrub found on rocky substrate in closed-cone coniferous forest and chaparral from 1,475 to 3,610 ft. Known from approximately ten occurrences in El Dorado and Tuolumne counties. Blooms February through March (CNPS 2009).	No. All known locations of this species occur in a localized area northeast of the PSA. The PSA is outside the range of this species.
<i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i> Big-scale balsamroot	--	--/ 1B.2	2	Perennial herb found in chaparral, cismontane woodland, and valley and foothill grassland, sometimes on serpentine soils from 300 to 4,600 ft. Known from Alameda, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Solano, Sonoma, and Tehama counties. Blooms March through June (CNPS 2009).	Yes. See text.
<i>Calystegia stebbinsii</i> Stebbins' morning-glory	E	E/ 1B.1	1, 2	A perennial rhizomatous herb found in serpentine or gabbroic soils in chaparral openings and cismontane woodland from 600 to 2,400 ft. Known from El Dorado and Nevada counties. Blooms April through July (CNPS 2009).	Yes. See text.
<i>Ceanothus roderickii</i> Pine Hill ceanothus	E	R/ 1B.2	1, 2	Evergreen shrub found in serpentine or gabbroic soils in chaparral and cismontane woodland from 850 to 2,100 ft. Known from approximately ten occurrences in El Dorado County. Blooms April through June (CNPS 2009).	Yes. See text.
<i>Chlorogalum grandiflorum</i> Red Hills soaproot	--	--/ 1B.2	2	Perennial bulbiferous herb found in serpentine, gabbroic, or other soils in chaparral, cismontane woodland, and lower montane coniferous forest from 800 to 3,850 ft. Known from Amador, Calaveras, El Dorado, Placer, and Tuolumne counties. Blooms May through June (CNPS 2009).	Yes. See text.
<i>Clarkia biloba</i> ssp. <i>brandegeae</i> Brandegee's clarkia	--	--/ 1B.2	2	Annual herb found in chaparral, cismontane woodland, often along roadcuts, from 240 to 3,000 ft. Known from Butte, El Dorado, Nevada, Placer, Sacramento, Sierra, and Yuba counties. Blooms May through July (CNPS 2009).	Yes. See text.

Special-Status Plant Species/ Common Name	Federal Status ^{a, b}	State Status ^{a, b} / CNPS ^d	Source ^c	Habitat Requirements	Potential to Occur in the PSA
<i>Eryngium pinnatisectum</i> Tuolumne button-celery	--	--/ 1B.2	2	An annual to perennial herb found on mesic substrate in cismontane woodland, lower montane coniferous forests, and vernal pools from 220 to 3,000 ft. Known from Amador, Calaveras, Sacramento, Sonoma, and Tuolumne counties. Blooms May through August (CNPS 2009).	No. Mesic areas do not occur in the PSA.
<i>Fremontodendron californicum</i> ssp. <i>decumbens</i> Pine Hill flannelbush	E	R/ 1B.2	1, 2	Evergreen shrub found in rocky areas of serpentine or gabbroic soils in chaparral and cismontane woodland from 1,375 to 2,500 ft. Known from fewer than ten occurrences in the Pine Hill area in El Dorado County and one near Grass Valley in Nevada County. Blooms April through July (CNPS 2009).	Yes. See text.
<i>Galium californicum</i> ssp. <i>sierrae</i> El Dorado bedstraw	E	R/ 1B.2	1, 2	Perennial herb found on gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest from 325 to 1,925 ft. Known from fewer than ten occurrences in El Dorado County. Blooms May through June (CNPS 2009).	Yes. See text.
<i>Helianthemum suffrutescens</i> Bisbee Peak rush-rose	--	--/ 3.2	2	Evergreen shrub found in chaparral, often on serpentine, gabbroic or lone soils, from 125 to 2,775 ft. Known from Amador, Calaveras, El Dorado, Mariposa, Sacramento, and Tuolumne counties. Blooms April through June (CNPS 2009).	Yes. See text.
<i>Horkelia parryi</i> Parry's horkelia	--	--/ 1B.2	2	Perennial herb found in chaparral and cismontane woodland, especially on soils of the lone formation, from 250 to 3,400 ft. Known from Amador, Calaveras, El Dorado, and Mariposa counties. Blooms April through September (CNPS 2009).	Yes. See text.
<i>Pseudobahia bahiifolia</i> Hartweg's golden sunburst	E	E/ 1B.1	2	Annual shrub found in clay, often acidic, soils of cismontane woodland and valley and foothill grasslands from 50 to 500 ft. Known from El Dorado, Fresno, Madera, Merced, Stanislaus, Tuolumne, and Yuba counties. Many occurrences are very small. Blooms March through April (CNPS 2009).	No. The PSA is above the elevation range for this species.
<i>Rorippa subumbellata</i> Tahoe yellow-cress	C	E/ 1B.1	1	Rhizomatous herb found in decomposed granitic beaches of lower montane coniferous forest and meadows and seeps from 6,200 to 6,250 ft. Known in CA only from Lake Tahoe area in El Dorado, Nevada, and Placer cos. Blooms May through September (CNPS 2009).	No. The PSA is below the elevation range for this species. Habitat for this species does not occur in the PSA.
<i>Sagittaria sanfordii</i> Valley sagittaria (Sanford's arrowhead)	--	--/ 1B.2	2	An emergent rhizomatous perennial herb found in assorted shallow freshwater marshes and swamps from 0 to 2,150 ft. Known from Butte, Del Norte, El Dorado, Fresno, Merced, Mariposa, Orange, Placer, Sacramento, Shasta, San Joaquin, Tehama, and Ventura counties. Extirpated from southern CA and mostly extirpated from the Central Valley. Blooms May through October (CNPS 2009).	No. Habitat for this species does not occur in the PSA.
<i>Senecio</i> (= <i>Packera</i>) <i>layneae</i> Layne's butterweed (ragwort)	T	R/ 1B.2	1, 2	Perennial herb found in rocky areas with serpentine or gabbroic soils in chaparral and cismontane woodland from 650 to 3,300 ft. Known from Butte, El Dorado, Tuolumne, and Yuba counties. Blooms April through August (CNPS 2009).	Yes. See text.

Special-Status Plant Species/ Common Name	Federal Status ^{a, b}	State Status ^{a, b} / CNPS ^d	Source ^c	Habitat Requirements	Potential to Occur in the PSA
<i>Viburnum ellipticum</i> Oval-leaved viburnum	--	--/ 2.3	2	Deciduous shrub found in chaparral, cismontane woodland, and lower montane coniferous forest from 700 to 4,600 ft. In CA, known from Contra Costa, El Dorado, Fresno, Glenn, Humboldt, Mendocino, Napa, Placer, Shasta, Sonoma, and Tehama counties. Blooms May through June (CNPS 2009).	Yes. See text.
<i>Wyethia reticulata</i> El Dorado County mule ears	--	--/ 1B.2	2	Perennial rhizomatous herb found on clay or gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest from 600 to 2,075 ft. Known from El Dorado County. Blooms April through August (Ayres and Ryan 1999, CNPS 2009).	Yes. See text.

- ^a **Status:** **E** = Endangered; **T** = Threatened; **P** = Proposed; **C** = Candidate; **R** = California Rare; * = Possibly extinct;
CSC = DFG Species of Special Concern; **FP** = DFG Fully Protected; **Prot** = DFG Protected; **CH** = Critical habitat designated.
- ^b **CNPS:** **1A** = Presumed Extinct in CA; **1B** = Rare or Endangered (R/E) in CA and elsewhere; **2** = R/E in CA and more common elsewhere; **3** = Need more information; **4** = Plants of limited distribution; **0.1** = Seriously endangered in CA; **0.2** = Fairly endangered in CA; **0.3** = Not very endangered in CA.
- ^c **Source:** **1** = USFWS letter. **2** = CNDDDB. **3** = Observed or included by Sycamore Environmental.

APPENDIX D.

Plant Species Observed

APN 109-480-07 on Business Drive
 El Dorado County, CA

Plant Species Observed

Family	Scientific Name	Common Name	*
CONIFERS			
Pinaceae	<i>Pinus sabiniana</i>	Gray pine	N
DICOTS			
Anacardiaceae	<i>Pistacia chinensis</i>	Chinese pistache	I
	<i>Toxicodendron diversilobum</i>	Western poison oak	N
Apiaceae	<i>Daucus pusillus</i>		N
	<i>Lomatium</i> sp.		N
	<i>Perideridia kelloggii</i>	Yampah	N
	<i>Sanicula crassicaulis</i>	Sanicle	N
	<i>Torilis arvensis</i>		I
Asteraceae	<i>Achillea millefolium</i>	Yarrow	N
	<i>Baccharis pilularis</i>	Coyote brush	N
	<i>Calycadenia</i> sp.		N
	<i>Carduus pycnocephalus</i>	Italian thistle	I
	<i>Centaurea melitensis</i>	Tocalote	I
	<i>Centaurea solstitialis</i>	Yellow star-thistle	I
	<i>Eriophyllum</i> sp.		N
	<i>Filago californica</i>	Herba impia	N
	<i>Grindelia</i> sp.	Gumplant	N
	<i>Helianthus annuus</i>	Common sunflower	N
	<i>Hemizonia fitchii</i>	Fitch's hemizonia	N
	<i>Holocarpha virgata</i>		N
	<i>Hypochaeris radicata</i>	Cat's-ear	I
	<i>Leontodon taraxacoides</i>	Hawkbit	I
	<i>Lessingia</i> sp.		N
	<i>Madia</i> sp.	Tarweed	N
	<i>Senecio layneae</i>	Layne's ragwort	N
	<i>Sonchus</i> sp.	Sow thistle	I
	<i>Tragopogon dubius</i>	Goat's beard	I
	<i>Wyethia angustifolia</i>	Mules ears	N
Caprifoliaceae	<i>Lonicera interrupta</i>	Honeysuckle	N
	<i>Lonicera subspicata</i>	Honeysuckle	N
Caryophyllaceae	<i>Minuartia douglasii</i>	Sandwort	N
	<i>Spergularia</i> sp.	Sand-spurrey	--
Ericaceae	<i>Arctostaphylos viscida</i>	Manzanita	N
Euphorbiaceae	<i>Eremocarpus setigerus</i>	Dove weed; Turkey mullein	N
	<i>Melilotus</i> sp.	Sweetclover	I
	<i>Trifolium dubium</i>	Little hop clover	I
	<i>Trifolium hirtum</i>	Rose clover	I
	<i>Vicia sativa</i> ssp. <i>sativa</i>	Common vetch	I
	<i>Vicia villosa</i> ssp. <i>villosa</i>	Hairy vetch	I
Fagaceae	<i>Quercus douglasii</i>	Blue oak	N
	<i>Quercus wislizenii</i> var. <i>wislizenii</i>	Interior live oak	N
Gentianaceae	<i>Centaureum muehlenbergii</i>	Centaury	N
Geraniaceae	<i>Erodium cicutarium</i>	Filaree	I

Hydrophyllaceae	<i>Eriodictyon californicum</i>	Yerba santa	N
Hypericaceae	<i>Hypericum perforatum</i>	Klamathweed	I
Lamiaceae	<i>Monardella</i> sp.		N
	<i>Salvia sonomensis</i>		N
Linaceae	<i>Linum usitatissimum</i>	Common flax	I
Malvaceae	<i>Sidalcea malviflora</i> ssp. <i>asprella</i>	Checker mallow	N
Onagraceae	<i>Clarkia purpurea</i> ssp. <i>quadrivulnera</i>	Four-spot	N
	<i>Epilobium</i> sp.	Fireweed, willow herb	
Plantaginaceae	<i>Plantago lanceolata</i>	English plantain	I
Polemoniaceae	<i>Navarretia intertexta</i> ssp. <i>intertexta</i>		N
	<i>Navarretia pubescens</i>		N
Polygonaceae	<i>Polygonum arenastrum</i>	Common knotweed	I
Primulaceae	<i>Anagallis arvensis</i>	Scarlet pimpernel	I
Rhamnaceae	<i>Ceanothus cuneatus</i> var. <i>cuneatus</i>	Buck brush	N
	<i>Rhamnus ilicifolia</i>	Holly-leaved redberry	N
	<i>Rhamnus tomentella</i> ssp. <i>tomentella</i>	Hoary coffeeberry	N
Rosaceae	<i>Adenostoma fasciculatum</i>	Chamise	N
	<i>Sanguisorba minor</i> ssp. <i>muricata</i>	Garden burnet	I
Rubiaceae	<i>Galium porrigens</i> var. <i>tenuis</i>	Climbing bedstraw	N
Scrophulariaceae	<i>Cordylanthus</i> sp.	Bird's-beak	N
	<i>Kickxia elatine</i>	Fluellin	I
Viscaceae	<i>Phoradendron villosum</i>	Oak mistletoe	N
MONOCOTS			
Iridaceae	<i>Iris hartwegii</i>	Iris	N
	<i>Sisyrinchium bellum</i>	Blue-eyed-grass	N
Juncaceae	<i>Juncus occidentalis</i>	Rush	N
Liliaceae	<i>Brodiaea</i> sp.		N
	<i>Calochortus albus</i>	White globe lily	N
	<i>Calochortus luteus</i>		N
	<i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i>		N
Orchidaceae	<i>Piperia elongata</i>	Piperia	N
Poaceae	<i>Aegilops triuncialis</i>	Barbed goatgrass	I
	<i>Aira caryophylla</i>	Silver European hairgrass	I
	<i>Avena fatua</i>	Wild oat	I
	<i>Avena sativa</i>	Cultivated oat	I
	<i>Brachypodium distachyon</i>		I
	<i>Briza minor</i>	Quaking grass	I
	<i>Bromus diandrus</i>	Ripgut grass	I
	<i>Bromus hordeaceus</i>	Soft brome	I
	<i>Bromus madritensis</i> ssp. <i>rubens</i>	Foxtail chess	I
	<i>Cynosurus echinatus</i>	Hedgehog dogtail	I
	<i>Elymus glaucus</i>	Blue wildrye	N
	<i>Gastridium ventricosum</i>	Nit grass	I
	<i>Lolium multiflorum</i>	Italian ryegrass	I
	<i>Melica torreyana</i>	Melic	N
	<i>Nassella pulchra</i>	Purple needlegrass	N
	<i>Phalaris</i> sp.		--
	<i>Polypogon monspeliensis</i>	Annual beard grass	I
	<i>Taeniatherum caput-medusae</i>	Medusa head	I
	<i>Vulpia myuros</i> var. <i>myuros</i>	Vulpia	I

* N = Native to CA; I = Introduced

APPENDIX E.

Photographs

APN 109-480-07 on Business Drive
El Dorado County, CA



Photo 1. 24 June 2009. View looking north in the central portion of the PSA. Blue oak woodland dominated by blue oaks in overstory and annual grasses in understory.



Photo 2. 24 June 2009. View looking south in the central portion of the PSA. Blue oak woodland dominated by blue oaks in overstory and annual grasses in understory.



Photo 3. 24 June 2009. View looking northeast in the eastern portion of the PSA. Dense vegetation in background is gabbroic northern mixed chaparral



Photo 4. 24 June 2009. Dense shrub layer with negligible herbaceous cover in the gabbroic northern mixed chaparral in northeast portion of PSA.



Photo 5. 24 June 2009. Eastern portion of PSA; view looking northeast. View of transitional habitat between chaparral and oak woodland in which Layne's butterweed was observed in PSA.



Photo 6. 24 June 2009. Eastern portion of PSA. Layne's butterweed occurs just outside the gabbroic mixed northern chaparral (arrow indicates inflorescence).

APPENDIX F.

Applicable Laws and Regulations

APN 109-480-07 on Business Drive
El Dorado County, CA

A. Summary

Studies were conducted to document baseline information in support of the analyses necessary for compliance with federal and state laws, regulations, policies, and executive orders pertaining to biological and wetlands resources. Regulations include:

- National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.);
- Section 10 of the Rivers and Harbors Act (33 U.S.C. 401 et seq.);
- Section 404 of the Clean Water Act (33 U.S.C. 1251-1376);
- Section 401 of the Clean Water Act (33 U.S.C. 1341, administered by the State of California);
- Section 402 of the Clean Water Act (33 U.S.C. 1342, administered by the State of California);
- Federal Endangered Species Act (16 U.S.C. 1531-1543);
- Fish and Wildlife Coordination Act (16 U.S.C. 661-666);
- National Wild and Scenic Rivers Act (16 U.S.C. 1271-1287);
- Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-711);
- Bald Eagle Protection Act (16 U.S.C. 668);
- Magnuson-Stevens Fishery Conservation and Management Act (as amended through 11 October 1996);
- Executive Order 11990, Protection of Wetlands (24 May 1977);
- Executive Order 13112, Invasive Species (3 February 1999);
- California Environmental Quality Act (P.R.C. 21000 et seq.);
- California Wild and Scenic Rivers Act (P.R.C. 5093.50 et seq.);
- Oak Woodlands Protection (P.R.C. 21083.4)
- California Fish and Wildlife Protection and Conservation (F.G.C. Division 2, Chapter 6 §1600-1616);
- California Endangered Species Act (F.G.C. 2050 et seq.);
- Native Plant Protection Act (F.G.C. 1900-1913);
- State Water Resources Control Board Water Quality Order 2004-0004;
- Executive Order W-59-93 California Wetlands Conservation Policy (23 August 1993).

B. Federal

1. Endangered Species Act

Provisions of the federal Endangered Species Act (FESA), as amended (16 USC 1531), protect federally listed threatened and endangered wildlife species and their habitats from unlawful take. Take under FESA includes activities that knowingly “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” The U.S. Fish and Wildlife Service’s (USFWS) regulations define harm to include some types of “significant habitat modification or degradation.” The U.S. Supreme Court ruled on 29 June 1995, that “harm” may include habitat modification “...where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.”

For projects with a federal nexus, Section 7 of the FESA requires that federal agencies, in consultation with USFWS or the National Marine Fisheries Administration (NMFS), use their authorities to further the purpose of FESA and to ensure that their actions are not likely to jeopardize the continued existence of listed plant and wildlife species or result in destruction or adverse modification of critical habitat. Section 10(a)(1)(B) allows non-federal entities to obtain permits for incidental take of

threatened or endangered wildlife species through consultation with USFWS and NMFS. Federally listed plants do not require Section 10(a)(1)(B) consultation.

2. Federal Migratory Bird Treaty Act

Migratory birds are protected under the federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10 including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). All migratory bird species are protected by the MBTA. The direct injury or death of a migratory bird, due to construction activities or any construction-related disturbance that causes nest abandonment, abandonment of nestlings, or forced fledging would be considered a take under federal law.

3. Magnuson-Stevens Fishery Conservation and Management Act

Under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), the Pacific Fisheries Management Council (PMFC) manages salmon fisheries through the designation of essential fish habitat (EFH) and monitoring threats to that habitat from both fishing and non-fishing activities. Salmon EFH includes all those streams, lakes, ponds, wetlands, and other water bodies currently or historically accessible to salmon in Washington, Oregon, Idaho, and California. Salmon EFH excludes areas upstream of longstanding naturally impassible barriers (i.e. natural waterfalls in existence for several hundred years), but includes aquatic areas above all artificial barriers except specifically named impassible dams. Essential habitat types identified by the NMFS for salmon include: juvenile rearing areas, juvenile migration corridors, areas for growth and development into adulthood, adult migration corridors, and spawning areas (65 FR 7773). Federal agencies are required to consult with NMFS if an activity authorized by the federal lead agency has the potential to adversely affect EFH. State, local agencies and private parties are not required to consult with NMFS if there is not a federal action, e.g., a permit or funding, involved with the project.

4. Section 404 Clean Water Act

The objective of the Clean Water Act (CWA 1977, as amended) is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. Discharge of fill material into "waters of the U.S.," including wetlands, is regulated by the U.S. Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act (33 USC 1251-1376). Corps regulations implementing Section 404 define "waters of the U.S." to include intrastate waters, including lakes, rivers, streams, wetlands, and natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce.

Wetlands are defined for regulatory purposes as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3; 40 CFR 230.3). The placement of structures in "navigable waters of the U.S." is also regulated by the Corps under Section 10 of the federal Rivers and Harbors Act (33 USC 401 et seq.).

In 1987 the Corps published a manual that standardized the manner in which wetlands were to be delineated nationwide. To determine whether areas that appear to be wetlands are in fact wetlands, a delineation must be performed in accordance with the methodology identified in the 1987 Corps Manual. Under normal circumstances, positive indicators from three parameters, (1) wetland hydrology, (2) hydrophytic vegetation, and (3) hydric soils must be present to classify a feature as a wetland community.

On 5 June 2007, the Corps issued a memorandum providing guidance on implementation of the Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (Corps 2007). The guidance distinguishes among traditional navigable waters (TNWs), relatively permanent waters (RPWs), non-relatively permanent waters (non-RPWs), and isolated

wetlands and waters. While the Corps will routinely exercise jurisdiction over traditional navigable waters, relatively permanent waters, and wetlands adjacent to those waters, jurisdiction will only be exerted over not relatively permanent waters and their adjacent wetlands when a significant nexus exists with a traditional navigable water. The Corps will base the significant nexus standard on such evidence as ecology, hydrology, and the influence of the water on the "chemical, physical, and biological integrity of downstream traditional navigable waters" (Corps 2007). The significant nexus standard will also depend on "whether the tributary and its adjacent wetlands are likely to have an effect [on downstream traditional navigable waters] that is more than speculative or insubstantial" (Corps 2007).

Projects that discharge into federally regulated waters require a section 404 CWA permit. The amount of discharge and the type of project determine which process the Corps will use to authorize the discharge. Nationwide Permit 29 (NWP 29) authorizes residential developments that discharge into less than 0.5 acre and NWP 39 authorizes Commercial and Institutional developments. The Individual Permit process is used for projects that exceed the discharge limit identified for each specific NWP permit. The NWP 7 authorizes discharges needed for the construction of outfall facilities. The Corps requires that projects avoid discharge to the maximum extent practicable and usually requires Compensatory Mitigation to ensure that permitted projects are consistent with its "no over all net loss" policy.

5. Section 401 Clean Water Act

Section 401 CWA requires the federal permitting agency to obtain certification from the state in which the project activities occur that the action will not result in the discharge of pollutants into waters of the state. Because permits issued by the Corps authorize discharge into waters pursuant to section 404 CWA, a section 401 Water Quality Certification is required. In California, the authority to issue Water Quality Certifications has been delegated to the State Water Resources Control Board and the local Regional Water Quality Control Board (RWQCB) processes the requests for Certification.

6. Section 402 Clean Water Act

The CWA prohibits point source discharge of pollutants into waters of the U.S., unless the discharge is in compliance with a National Pollution Discharge Elimination System Permit (NPDES). Section 402(p) of CWA establishes a permit under the NPDES program for municipal discharges of storm water. Ground disturbing construction activities, such as grading, in excess of one acre requires an NPDES Phase II permit from the RWQCB. The preparation of a Stormwater Pollution Prevention Plan (SWPPP) is a requirement of the NPDES Phase II permit. Hazardous material spill prevention and spill cleanup Best management practices (BMPs), set-forth by the California Stormwater Task Force, March 1993, are included in the SWPPP. Adherence to the SWPPP minimizes erosion during construction.

7. Bald Eagle Protection Act

The bald eagle and golden eagle are federally protected under the Bald Eagle Protection Act (16 U.S.C. 668-668c). It is illegal to take, possess, sell, purchase, barter, offer to sell or purchase or barter, transport, export or import at any time or in any manner a bald or golden eagle, alive or dead; or any part, nest or egg of these eagles unless authorized by the Secretary of the Interior. Violations are subject to fines and/or imprisonment for up to one year. Active nest sites are also protected from disturbance during the breeding season.

B. State

1. California Endangered Species Act

Under the California Endangered Species Act (CESA), the California Department of Fish and Game (DFG) has the responsibility for maintaining a list of endangered and threatened species (California Fish and Game Code 2070). The DFG maintains a list of "candidate species" which are species that DFG formally notices as being under review for addition to the list of endangered or threatened

species. DFG also maintains lists of “species of special concern” which serve as species “watch lists.” Pursuant to the requirements of CESA, the local lead agency reviewing a discretionary project within its jurisdiction must determine whether any state listed endangered or threatened species occur on the project site and determine whether the proposed activities will result in take of the species. Take of protected species incidental to otherwise lawful management activities may be authorized under California Fish and Game Code Section 2081. Authorization from DFG would be in the form of an Incidental Take Permit.

Pursuant to CEQA, the local lead agency must evaluate the significance of impacts to CESA endangered or threatened species resulting to the physical modification of their habitat. The DFG, as the Responsible Agency, reviews the evaluation of potential impacts and may comment on whether mitigation measures required by the lead agency to reduce the significance of impacts are sufficient and recommend additional mitigation measures, if necessary.

2. Water Quality Order 2004-0004

The State Water Quality Board promulgated Water Quality Order 2004-0004 (WQO 2004-0004) for activities that result in the discharge of fill into less than 0.20 acre of wetlands that are not federal jurisdictional. The WQO 2004-0004 requires that a Notice of Intent (NOI) be submitted to the Regional Water Quality Control Board (RWQCB) to be enrolled under and to comply with the General Waste Discharge Requirements (WDR). The Preliminary Jurisdictional Delineation Report is submitted with the NOI. The local lead agency must have a certified CEQA document. Compliance includes a mitigation plan to ensure that the discharge does not result in the overall net loss of wetlands. The RWQCB has 30 days to determine if the NOI is complete. The discharger may proceed after a Notice of Applicability (NOA) is received from the RWQCB or 45 days after the NOI is deemed complete. If an NOA is issued, then a copy is also sent to the Corps. The discharger must keep a copy of the NOA and general and special conditions at the construction site.

3. Executive Order W-59-93 California Wetlands Conservation Policy

Governor Pete Wilson issued Executive Order W-59-93 California Wetlands Conservation Policy on 23 August 1993. It requires that projects that are authorized by State agencies must result in no net loss of wetlands. It also calls for the State to assume stewardship of Section 404 CWA on an incremental basis, beginning with administration of the NWP program. The three stated goals of Executive Order W-59-93:

- Ensure no overall net loss and achieve a long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California in a manner that fosters creativity, stewardship and respect for private property.
- Reduce procedural complexity in the administration of State and Federal wetlands conservation programs.
- Encourage partnerships to make landowner incentive programs and cooperative planning efforts the Primary focus of wetlands conservation and restoration.

3. Section 1600-1616 Fish and Game Code

State and local public agencies are subject to Section 1602 of the California Fish and Game Code, which governs construction activities that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the DFG. Under Section 1602, a discretionary Stream Alteration Agreement permit must be issued by DFG prior to the initiation of construction activities within lands under DFG jurisdiction.

4. Native Plant Protection Act

The Native Plant Protection Act (California Fish and Game Code Section. 1900-1913) prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or

endangered (as defined by DFG). An exception to this prohibition in the Act allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify DFG and give that state agency at least 10 days to come and retrieve the plants before they are plowed under or otherwise destroyed. Fish and Game Code, § 1913 exempts from take prohibition “the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right of way.”

5. Section 3503.5 Fish and Game Code

Under Section 3503.5 of the California Fish and Game Code it is unlawful to take, possess, or destroy any birds in the orders of Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.

6. Section 3505 Fish and Game Code

California statutes also accord “fully protected” status to a number of birds, mammals, reptiles, and amphibians specifically identified in the Fish and Game Code. These species cannot be taken, even with an incidental take permit.

7. Section 21083.4 Public Resources Code

California Public Resources Code (PRC) Section 21083.4 requires counties to evaluate if the conversion of oak woodlands will result in a significant effect on the environment. If a county determines that there may be a significant effect to oak woodlands, the county shall require one or more of the following oak woodlands mitigation alternatives:

- (1) Conserve oak woodlands, through the use of conservation easements.
- (2) (A) Plant an appropriate number of trees, including maintaining plantings and replacing dead or diseased trees. (B) The requirement to maintain trees pursuant to this paragraph terminates seven years after the trees are planted. (C) Mitigation pursuant to this paragraph shall not fulfill more than one-half of the mitigation requirement for the project. (D) The requirements imposed pursuant to this paragraph also may be used to restore former oak woodlands.
- (3) Contribute funds to the Oak Woodlands Conservation Fund, as established under subdivision (a) of Section 1363 of the Fish and Game Code, for the purpose of purchasing oak woodlands conservation easements, as specified under paragraph (1) of subdivision (d) of that section and the guidelines and criteria of the Wildlife Conservation Board. A project applicant that contributes funds under this paragraph shall not receive a grant from the Oak Woodlands Conservation Fund as part of the mitigation for the project.”
- (4) Other mitigation measures developed by the county.

C. Other Special-Status Species Classifications

Plant or wildlife species on the California list of Species of Special Concern (CSC) as defined by DFG, plant species on lists 1B and 2 of the California Native Plant Society (CNPS 2005), and active raptor nests are included in this classification. The CEQA Guidelines (Section 15380) also provides that a plant or animal may be treated as rare or endangered even if it has not been placed on an official list provided that it meets the criteria for listing.

D. El Dorado County General Plan Conservation Policies

In addition to federal and state regulations, the 2004 El Dorado County General Plan defines certain goals, objectives, and policies that aim to protect natural resources:

- Objective 7.4.1 of the General Plan states that the County will protect state and federally recognized rare, threatened, or endangered species and their habitats consistent with federal and state laws.
- Policy 7.3.3.4 - Requires developments to have 50-foot setbacks from intermittent features and 100-foot setbacks from perennial waters.
- Policy 7.4.1.1 - The County shall continue to provide for the permanent protection of the eight sensitive plant species known as the Pine Hill endemics and their habitat through the establishment of ecological preserves consistent with County Code Chapter 17.71 and the USFWS's Gabbro Soil Plants for the Central Sierra Nevada Foothills Recovery Plan (USFWS 2002).
- Policy 7.4.1.5 - Species, habitat, and natural community preservation/conservation strategies shall be prepared to protect special status plant and animal species and natural communities and habitats when discretionary development is proposed on lands with such resources unless it is determined that the resources exist, and either are or can be protected, on public lands or private Natural Resource lands.
- Policy 7.4.1.6 - All development projects involving discretionary review shall be designed to avoid disturbance or fragmentation of important habitats to the extent reasonably feasible. Where avoidance is not possible, the development shall be required to fully mitigate the effects of important habitat loss and fragmentation. Mitigation shall be defined in the Integrated Natural Resources Management Plan.
- Policy 7.4.4.4: The County shall apply tree canopy coverage standards to discretionary permit review applicable to oak woodland habitats. Parcels having canopy cover by trees of at least 10 percent, as determined from base line aerial photography or by site survey performed by a qualified licensed arborist or botanist, are subject to canopy coverage retention or replacement standards shown in Table 1.
- Policy 7.4.5.2 - States that it is the County's policy to preserve native oak trees whenever possible and to that end calls for the preparation and implementation of an Oak Tree Preservation Ordinance. The Ordinance would include a permit process for ministerial, discretionary, and commercial oak tree removal. The Ordinance would identify mitigation for oak tree removal and penalties for noncompliance.
- Policy 7.5.1.4 - Proposed rare, threatened, or endangered species preserves, as approved by the County Board of Supervisors, shall be designated Ecological Preserve (-EP) overlay on the General Plan land use map.

APPENDIX G.

CNDDDB Field Survey Form

APN 109-480-07 on Business Drive
El Dorado County, CA

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDDB@dfg.ca.gov

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): _____

California Native Species Field Survey Form

Scientific Name: _____

Common Name: _____

Species Found? Yes No _____ If not, why? _____

Total No. Individuals _____ Subsequent Visit? yes no

Is this an existing NDDDB occurrence? _____ no unk.
Yes, Occ. # _____

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: _____

Address: _____

E-mail Address: _____

Phone: _____

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

# adults	# juveniles	# larvae	# egg masses	# unknown
<input type="radio"/> wintering	<input type="radio"/> breeding	<input type="radio"/> nesting	<input type="radio"/> rookery	<input type="radio"/> burrow site
<input type="radio"/> other				

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: _____ Landowner / Mgr.: _____

Quad Name: _____ Elevation: _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H M S Source of Coordinates (GPS, topo. map & type): _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H M S GPS Make & Model _____

DATUM: NAD27 NAD83 WGS84 Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 UTM Zone 11 OR Geographic (Latitude & Longitude)

Coordinates: _____

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): Excellent Good Fair Poor

Immediate AND surrounding land use:

Visible disturbances:

Threats:

Comments:

Determination: (check one or more, and fill in blanks)

Keyed (cite reference): _____
Compared with specimen housed at: _____
Compared with photo / drawing in: _____
By another person (name): _____
Other: _____

Photographs: (check one or more) Slide Print Digital

Plant / animal
Habitat
Diagnostic feature

May we obtain duplicates at our expense? yes no

Botanical Survey Report
for
APN 109-480-07 on Business Drive
El Dorado County, CA



23 September 2009

SYCAMORE
ENVIRONMENTAL CONSULTANTS, INC.

6355 Riverside Blvd., Suite C., Sacramento, CA 95831
916/ 427-0703 FAX 916/ 427-2175

Attachment 9

Botanical Survey Report
for
APN 109-480-07 on Business Drive
El Dorado County, CA

Prepared by:

Sycamore Environmental Consultants, Inc.

6355 Riverside Blvd., Suite C
Sacramento, CA 95831-1143

Phone: 916/ 427-0703

Fax: 916/ 427-2175

Contact: R. John Little, Ph.D.

Prepared for:

Helen Graham Trust

c/o Mr. James Brunello
850 Corbett Ave., Suite 6
San Francisco, CA 94131

Contact: Mr. James Brunello

Phone: 916/ 358-8585

Mobile: 916/ 470-4362

23 September 2009

Botanical Survey Report
for
APN 109-480-07 on Business Drive
El Dorado County, CA

Table of Contents

I. SUMMARY OF FINDINGS AND CONCLUSIONS.....	1
II. INTRODUCTION.....	1
A. Purpose of Report	1
B. Project Location.....	1
III. STUDY METHODS.....	7
A. Studies Conducted	7
B. Survey Dates and Personnel	7
C. Problems Encountered and Limitations That May Influence Results	7
D. Record Search.....	7
E. Botanical Survey Methods.....	8
F. Mapping.....	8
IV. ENVIRONMENTAL SETTING.....	8
A. Biological Communities	8
1. Blue Oak Woodland.....	9
2. Gabbroic Northern Mixed Chaparral	9
B. Soils	13
C. The Existing Level of Disturbance	13
V. BOTANICAL RESOURCES IN THE PROJECT STUDY AREA	17
A. Determination of Special-Status Plant Species in the PSA	17
B. Special-Status Species not in the Project Study Area.....	17
C. Evaluation of Special-Status Plants	18
D. Evaluation of Natural Communities	23
VI. LITERATURE CITED.....	25
VII. PREPARERS	26

Figures

Figure 1. Project Location Map	3
Figure 2. Aerial Photograph.....	5
Figure 3. Botanical Resources Map.....	11
Figure 4. Soils Map.....	15

Tables

Table 1. Biological Communities in the PSA.....	9
Table 2. Special-Status Plant Species and Natural Communities.....	17

Appendices

Appendix A. CNDDDB Summary Report	
Appendix B. USFWS Letter	
Appendix C. Species Evaluated Table	
Appendix D. Plant Species Observed	
Appendix E. Photographs	
Appendix F. Applicable Laws and Regulations	
Appendix G. CNDDDB Field Survey Form	

I. SUMMARY OF FINDINGS AND CONCLUSIONS

This botanical survey report was prepared for APN 109-480-07 on Business Drive Project to document plant species occurring in the project study area (PSA). The PSA provides potential habitat for 13 special-status plants. A botanical survey was conducted during the evident and identifiable period of the plants on 24 June 2009. Two occurrences of Layne's butterweed consisting of 25 and 11 plants were observed in the eastern portion of the PSA. Layne's butterweed is listed as threatened under the Federal Endangered Species Act (FESA) and listed as rare under the California Native Plant Protection Act. No other special-status plants were found in the PSA.

Two natural communities, blue oak woodland and gabbroic northern mixed chaparral, occur in the PSA. Oak woodlands under County jurisdiction are subject to California Public Resources Code (PRC) §21083.4 and the El Dorado County Oak Woodland Management Plan (adopted 6 May 2008). Gabbroic northern mixed chaparral is a sensitive natural community.

II. INTRODUCTION

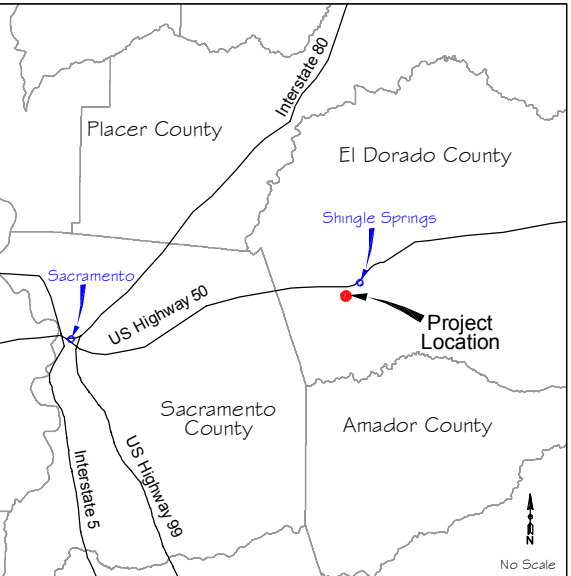
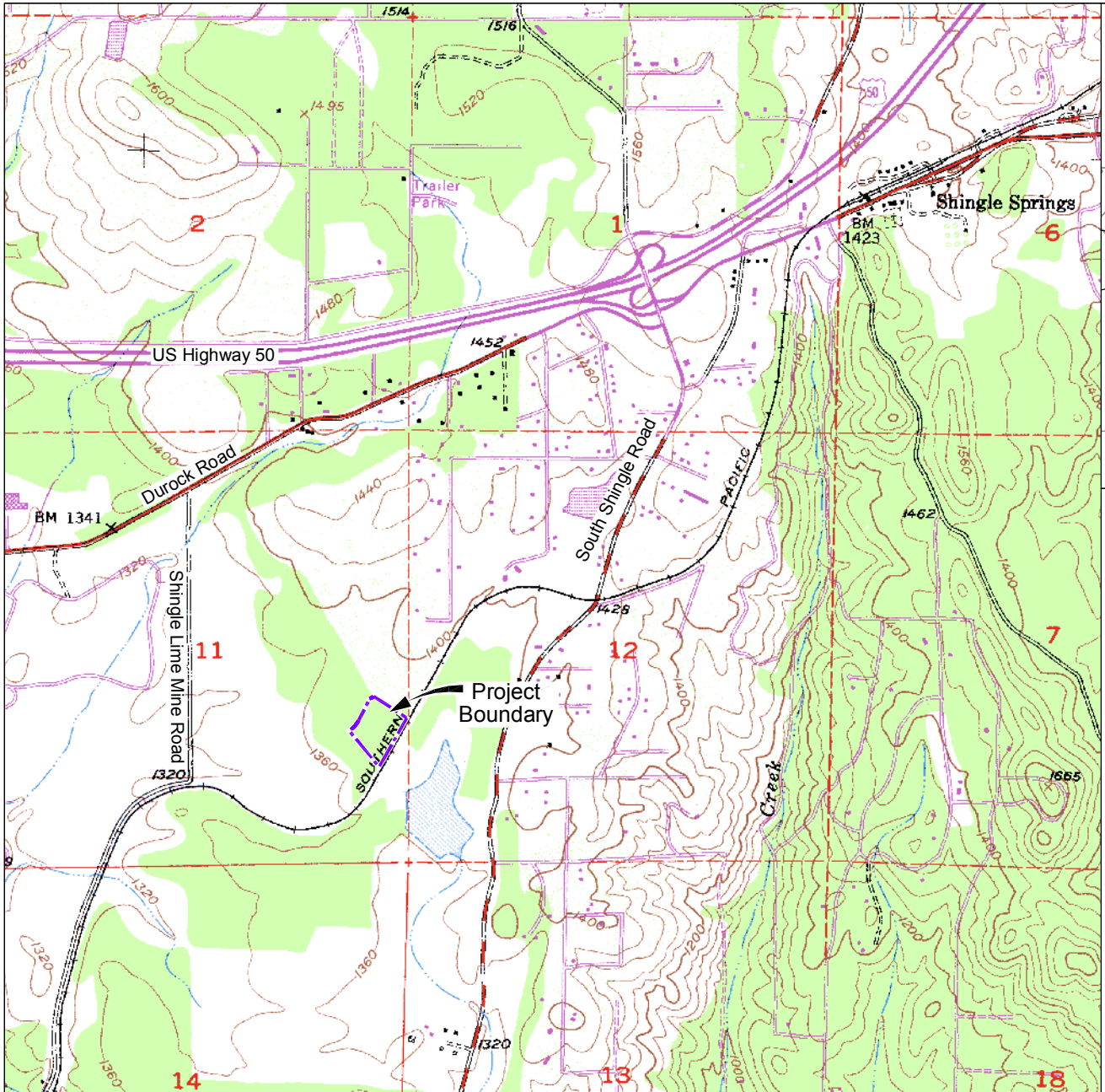
A. Purpose of Report

The purpose of this report is to document the results of the botanical survey conducted in the PSA during the evident and identifiable period of special-status plants with the potential to occur. This report may be used in support of permit applications and in the California Environmental Quality Act (CEQA) review process. Project impacts and mitigation are not included in this report because project design has not been finalized. Applicable laws and regulations are in Appendix F.

B. Project Location


The approximately 7.21-ac PSA is assessor's parcel number (APN) 109-480-07 and is located south of Highway 50 in the community of Shingle Springs in El Dorado County. The PSA occurs on the Shingle Springs USGS topographic quadrangle (T9N, R9E, Section 11; Figure 1) and is in the Upper Cosumnes hydrologic unit (hydrologic unit code 18040013). Its centroid is 38.6470° north, 120.9490° west (1983 NAD) and its UTM coordinates are 678,500 meters E, 4,279,600 meters N (Zone 10 N). Figure 2 is an aerial photograph of the PSA.

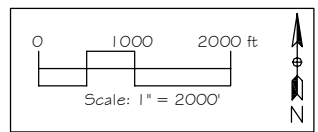
[This page intentionally blank]



APN 109-480-07
 El Dorado County, CA
 23 September 2009

Figure 1. Location Map

 = Project Boundary
 (7.21 acres)



Basemap:
 Shingle Springs, CA (Photorevised 1973) USGS 7.5'
 Topographic Quadrangle, Teale Data Center DRG


[This page intentionally blank]

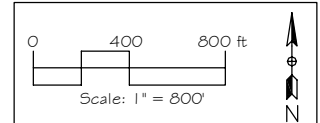


Image © 2003 DigitalGlobe

APN 109-480-07
 El Dorado County, CA
 23 September 2009

Figure 2. Aerial Photograph

 = Project Boundary
 (7.21 acres)



 **SYCAMORE**
 Environmental
 Consultants, Inc.

Aerial Photograph:
 1 September 2008 Copyright © 2009 GlobeExplorer,
 A DigitalGlobe Company. All rights reserved.

[This page intentionally blank]

The County has designated “rare plant mitigation areas” for a group of special-status plants known collectively as the “Pine Hill Plants.” The PSA is in County rare plant Mitigation Area 1, which is defined as the rare plant soils study area. The PSA is not in the recommended preserve boundary for the Pine Hill Plants (USFWS 2002). The PSA is located outside the El Dorado County Important Biological Corridor (IBC) and Ecological Preserve (EP) overlay areas (El Dorado County 2004).

III. STUDY METHODS

A. Studies Conducted

An evaluation of biological resources was conducted to determine whether any special-status plants, or their habitat, occur in the PSA. Data on special-status plant species and habitats known in the area was obtained from state and federal agencies. Maps and aerial photographs of the PSA and surrounding areas were reviewed. A field survey was conducted to determine the habitats present. The field survey, map review, and a review of the biology of evaluated species were used to determine the special-status plant species that could occur in the PSA.

Special-status plant species in this report are those listed (or candidate or proposed) under the federal or state endangered species acts, under the California Native Plant Protection Act, or that are on List 1 or 2 of the California Native Plant Society’s Inventory of Rare and Endangered Plants of California (CNPS 2009).

B. Survey Dates and Personnel

Fieldwork was conducted by Michael Bower (M.S. in prep) and Jessica Easley on 24 June 2009.

C. Problems Encountered and Limitations That May Influence Results

No problems or limitations were encountered that may have influenced the results.

D. Record Search

The California Natural Diversity Database (CNDDDB) was queried for the Shingle Springs USGS quad and the eight surrounding quads to determine known records of special-status plants that occur in the vicinity of the PSA. The CNDDDB summary list, data dated 30 May 2009, is in Appendix A.

Sycamore Environmental obtained a letter from the U.S. Fish and Wildlife Service (USFWS), Sacramento Field Office, which identifies federal-listed species that could potentially occur in or could be affected by projects on the Shingle Springs USGS quad, or in El Dorado County. Special-status plants occurring on this list were evaluated in this report. The letter and list, data dated 29 January 2009, are in Appendix B.

E. Botanical Survey Methods

The botanical survey work for this report follows the guidelines set forth by DFG (2000) and USFWS (1996), as applicable. Scientific nomenclature follows Hickman, ed. (1993).

The botanical survey consisted of walking systematic transects through the PSA to identify plant species. Areas containing impassable patches of dense chaparral were surveyed by walking passable corridors or by occasionally crawling through sections of the understory. All plant species observed were identified and recorded. Species not readily identifiable in the field were collected for further inspection in the office.

Approximately 5 person-hours were devoted to fieldwork for the botanical survey. An additional approximately 3 hours were spent keying plant specimens collected in the field. All plants found in the PSA were identified to the taxonomic level necessary to determine legal status. A list of all plant species observed in the PSA is in Appendix D. Photographs are in Appendix E.

F. Mapping

Special-status plants encountered during the survey were mapped using a Trimble GeoXT™ sub-meter accurate GPS. The 1 September 2008 aerial photo in Figure 3 was downloaded from the GlobeXplorer® website and aligned with the GPS data. The aerial photo and field notes were used in part to map the biological communities.

IV. ENVIRONMENTAL SETTING

The PSA is located south of Highway 50 in the community of Shingle Springs in the western foothills of the Sierra Nevada. The PSA is bound by Business Drive to the northwest, an unpaved road and undeveloped land to the northeast, railroad tracks to the southeast, and undeveloped land to the southwest. The General Plan land use designation and zoning for the PSA are both Industrial (I). The General Plan land use designations for the surrounding APNs are multi-family residential (to the northeast), medium density residential (to the southeast), and industrial (to the southwest and northwest) (El Dorado County 2004). Elevation in the PSA ranges from approximately 1,372 to 1,384 ft above sea level. Topography in the PSA is relatively flat with a gentle southwest aspect.

A. Biological Communities

Biological communities are defined by species composition and relative abundance. The biological communities described below correlate where applicable with the list of California terrestrial natural communities recognized by the CNDDDB (DFG 2007) and the El Dorado County General Plan EIR (2004). Biological communities are in Table 1. Figure 3 is a botanical resources map. A list of plant species observed is in Appendix D. Photographs of the PSA are in Appendix E.

The PSA is dominated by blue oak woodland (recognized by El Dorado County as blue oak – foothill pine habitat type). Gabbroic northern mixed chaparral (recognized by El Dorado County as mixed chaparral) occurs within the PSA along the northeastern border. Biological communities encountered in the PSA are in Table 1.

Table 1. Biological Communities in the PSA

Biological Community/ (DFG Vegetation Alliance, Code) ¹	Rarity Rank ¹	El Dorado County Major Habitat Type ²	Area (ac)
Blue Oak Woodland (<i>Quercus douglasii</i> ; 71.020.00)	G4S4	Blue Oak – Foothill Pine	5.41
Gabbroic Northern Mixed Chaparral (<i>Adenostoma fasciculatum</i> ; 37.101.00)	G5S5	Mixed Chaparral	1.80
Total:			7.21

¹ DFG 2007, a community with a global rank of G1, G2, or G3 is considered to be of concern and included in CNDDDB.

² El Dorado County 2004

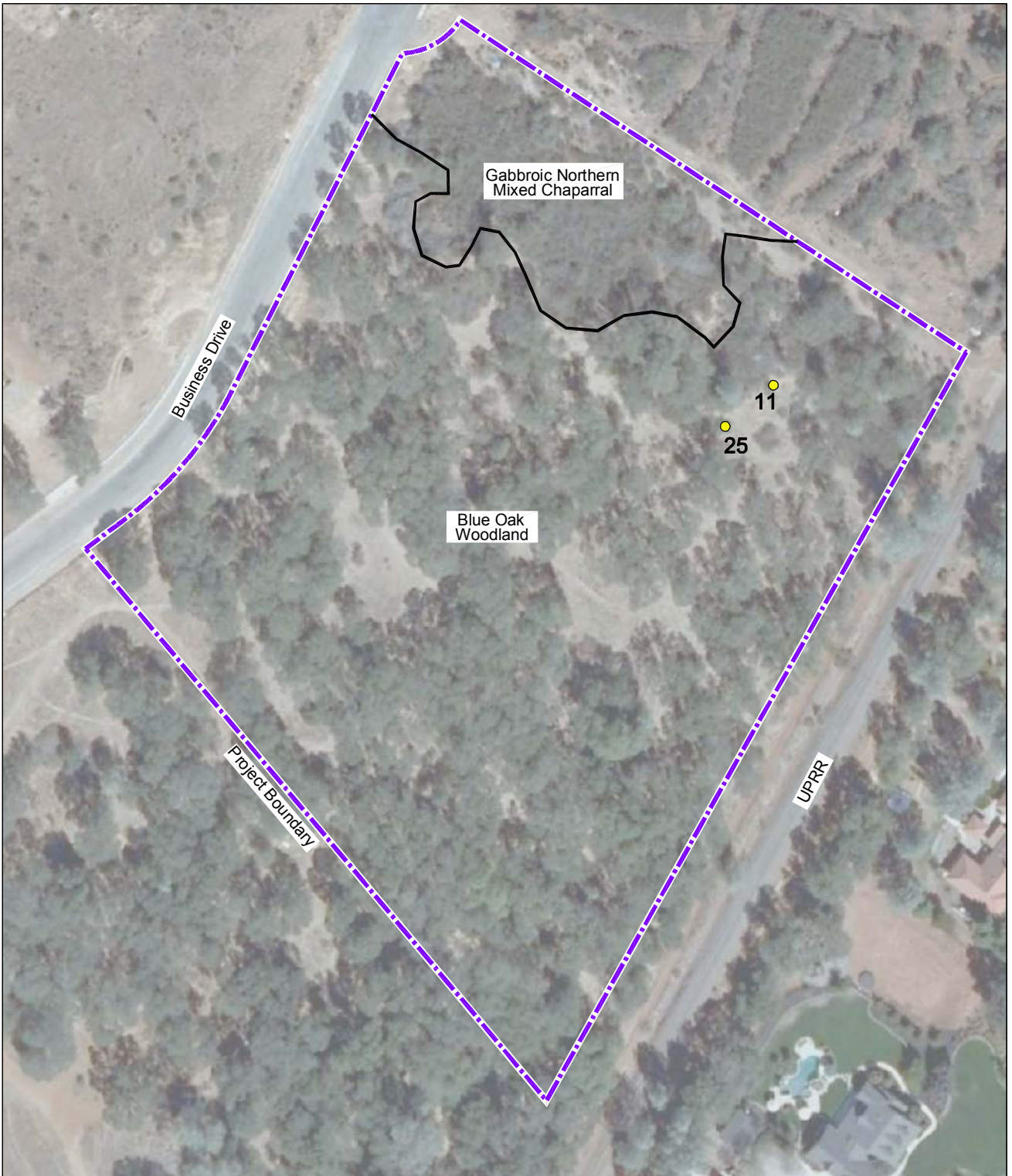
1. Blue Oak Woodland

This community occurs throughout the PSA except along the northeast border (Appendix E, photos 1-2). Blue oak (*Quercus douglasii*) is the dominant tree in this community. Interior live oak (*Quercus wislizenii* var. *wislizenii*) and gray pine (*Pinus sabiniana*) also occur in lesser abundance. Western poison oak (*Toxicodendron diversilobum*) is the dominant shrub in the understory. Buck brush (*Ceanothus cuneatus* var. *cuneatus*), manzanita (*Arctostaphylos viscida* ssp. *viscida*), and hoary coffeeberry (*Rhamnus tomentella* ssp. *tomentella*) also occur in the understory. Blue oak woodland is given no special designation by DFG (2007). Oak woodlands in unincorporated areas are subject to California Public Resources Code (PRC) §21083.4. The County regulates oak canopy removal under the Oak Woodland Management Plan (El Dorado County 2008).

2. Gabbroic Northern Mixed Chaparral


Gabbroic northern mixed chaparral occurs in the northeastern portion of the PSA along the project boundary (Appendix E, photos 3-4). Vegetation is dominated by buck brush, manzanita, and chamise (*Adenostoma fasciculatum*). Gray pine and blue oak trees are scattered throughout this community. Most of the gabbroic northern mixed chaparral in the PSA is very tall and dense with very little understory vegetation. Gabbroic northern mixed chaparral is classified by DFG (2003) as a high inventory priority for the California Natural Diversity Database (CNDDDB). Gabbroic northern mixed chaparral is a subtype of the more common chamise (*Adenostoma fasciculatum*) “alliance” identified by DFG (2007). DFG has not yet revised the vegetation communities at the “association” level, but expects to in the future (DFG 2007).

[This page intentionally blank]




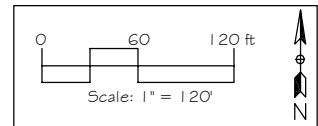
APN 109-480-07
 El Dorado County, CA
 23 September 2009

Figure 3. Botanical Resources Map

 = Project Boundary (7.21 acres)

 = Biological Community Boundary

 11
 = Layne's butterweed
Senecio layneae
 (no. of plants)



SYCAMORE
 Environmental
 Consultants, Inc.

Aerial Photograph:
 1 September 2008 Copyright © 2009 GlobeExplorer,
 A DigitalGlobe Company. All rights reserved.

[This page intentionally blank]

B. Soils

The only mapped soil unit in the PSA is Rescue very stony sandy loam, 3-15% slopes (NRCS 1974; Figure 4). The following description of the mapped soil unit in the PSA is summarized from NRCS (1974). Reported colors are for moist soil.

Rescue very stony sandy loam (3 to 15% slopes): The Rescue series is a well-drained soil underlain by gabbrodiorite rocks. A typical profile has dark reddish brown (5YR 3/4), slightly to medium acid, sandy loam from 0 to 10 inches; yellowish red (5YR 3/6), slightly acid, heavy sandy loam from 10 to 14 inches; dark red (2.5YR 3/6), slightly acidic, sandy clay loam from 14 to 26 inches, variegated reddish brown and reddish yellow (5YR 4/4, 6/6), slightly acid, heavy sandy loam from 26 to 34 inches; yellowish red (5YR 5/6) slightly acid, coarse sandy loam from 34 to 55 inches; and strong brown (7.5YR 5/6), slightly acid, loamy coarse sand from 55 to 66 inches. Weathered gabbrodiorite typically occurs at 66 inches. Permeability is moderately slow, runoff is slow to medium, and the erosion hazard is slight to moderate. Approximately 1 to 3 percent of the soil surface in Rescue very stony sandy loam, 3 to 15% slopes, is covered with stones.

C. The Existing Level of Disturbance


The PSA is relatively undisturbed. No significant recent soil disturbance was observed in the PSA. The paved and unpaved roads and railroad tracks adjacent to the PSA may have increased the abundance of weedy species occurring in the PSA.


[This page intentionally blank]



APN 109-480-07
El Dorado County, CA
23 September 2009

Figure 4. Soils Map

 = Project Boundary
(7.21 acres)

 = Soil Boundaries

RfC = Rescue very stony
sandy loam, 3-15% slopes



SYCAMORE
Environmental
Consultants, Inc.

Aerial Photograph:
9 May-July 1993 Copyright © 2009 GlobeXplorer,
A DigitalGlobe Company. All rights reserved.

[This page intentionally blank]

V. BOTANICAL RESOURCES IN THE PROJECT STUDY AREA

A. Determination of Special-Status Plant Species in the PSA

USFWS file data, CNDDDB records, and field surveys were used to determine the special-status species that could occur in the PSA. A CNDDDB summary report for the nine quads centered on the Shingle Springs quad is in Appendix A. The USFWS list of federal-listed species that could occur in or be affected by the project is in Appendix B. Field surveys were conducted to determine whether habitat for special-status plant species identified in the file data is present in the PSA. Special-status plants for which suitable habitat is present in the PSA are listed in Table 2.

Table 2. Special-Status Plant Species and Natural Communities

Special-Status Plant Species	Common Name	Federal Status ^a	State Status ^a / CNPS ^b	Source ^c	Habitat Present? / Species Observed?
<i>Allium jepsonii</i>	Jepson's onion	--	--/ 1B.2	2	Yes/ No
<i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	Big-scale balsamroot	--	--/ 1B.2	2	Yes/ No
<i>Calystegia stebbinsii</i>	Stebbins' morning-glory	E	E/ 1B.1	1, 2	Yes/ No
<i>Ceanothus roderickii</i>	Pine Hill ceanothus	E	R/ 1B.2	1, 2	Yes/ No
<i>Chlorogalum grandiflorum</i>	Red Hills soaproot	--	--/ 1B.2	2	Yes/ No
<i>Clarkia biloba</i> ssp. <i>brandegeae</i>	Brandegee's clarkia	--	--/ 1B.2	2	Yes/ No
<i>Fremontodendron californicum</i> ssp. <i>decumbens</i>	Pine Hill flannelbush	E	R/ 1B.2	1, 2	Yes/ No
<i>Galium californicum</i> ssp. <i>sierrae</i>	El Dorado bedstraw	E	R/ 1B.2	1, 2	Yes/ No
<i>Helianthemum suffrutescens</i>	Bisbee Peak rush-rose	--	--/ 3.2	2	Yes/ No
<i>Horkelia parryi</i>	Parry's horkelia	--	--/ 1B.2	2	Yes/ No
<i>Senecio</i> (= <i>Packera</i>) <i>layneae</i>	Layne's butterweed (ragwort)	T	R/ 1B.2	1, 2	Yes/ Yes
<i>Viburnum ellipticum</i>	Oval-leaved viburnum	--	--/ 2.3	2	Yes/ No
<i>Wyethia reticulata</i>	El Dorado County mule ears	--	--/ 1B.2	2	Yes/ No
Natural Communities					
Blue Oak Woodland		--	--	3	Yes/ Yes
Gabbroic Northern Mixed Chaparral		--	--	3	Yes/ Yes

^a **Status:** E = Endangered; T = Threatened; P = Proposed; C = Candidate; R = California Rare; * = Possibly extinct; SSC = DFG Species of Special Concern; FP = DFG Fully Protected; Prot = DFG Protected; CH = Critical habitat designated.

^b **CNPS:** 1A = Presumed Extinct in CA; 1B = Rare or Endangered (R/E) in CA and elsewhere; 2 = R/E in CA and more common elsewhere; 3 = Need more information; 4 = Plants of limited distribution; 0.1 = Seriously endangered in CA; 0.2 = Fairly endangered in CA; 0.3 = Not very endangered in CA.

^c **Source:** 1 = USFWS letter. 2 = CNDDDB. 3 = Observed or included by Sycamore Environmental.

B. Special-Status Species not in the Project Study Area

Special-status plants for which suitable habitat is not present, or whose distributional limits preclude the possibility of their occurrence in the PSA, are not discussed further in this report. An evaluation of these species is in Appendix C.

C. Evaluation of Special-Status Plants

The project site is in County rare plant Mitigation Area 1, which is defined as the rare plant soils study area (El Dorado County 2004). To comply with El Dorado County Ordinance 4500 (Zoning Ordinance Chapter 17.71, Ecological Preserves), projects located in rare plant Mitigation Area 1 are encouraged to either pay the County rare plant mitigation fee or participate in the rare plant off-site mitigation program (Ord. 4500, 7-28-1998). The County requires the fee or off-site mitigation regardless of whether any “Pine Hill Plants” occur in the PSA or not. If a project mitigates off-site, acquisition and restoration of rare plant habitat must be equal to 1.5 times the number of acres developed. The eight Pine Hill Plants are Stebbins’ morning-glory, Pine Hill ceanothus, Red Hills soaproot, Pine Hill flannelbush, El Dorado bedstraw, Bisbee Peak rush-rose, Layne’s butterweed, and El Dorado County mule ears.

Jepson’s onion (*Allium jepsonii*)

HABITAT AND BIOLOGY: Jepson’s onion is a bulbiferous perennial herb found in serpentine or volcanic soils of chaparral, cismontane woodland, and lower montane coniferous forest from 950 to 4,350 ft. Blooms April through August (CNPS 2009).

RANGE: Known from Butte, El Dorado, Placer, and Tuolumne counties (CNPS 2009).

KNOWN RECORDS: There are 2 CNDDDB records for Jepson’s onion on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for Jepson’s onion was reported by Sycamore Environmental and is located approximately 4.8 mi northeast of the PSA. Approximately 2,107 plants were seen on rock outcrops in serpentine foothill pine chaparral woodland in 2007.

HABITAT PRESENT IN THE PSA: The PSA provides marginal potential habitat for Jepson’s onion. Although the potential to occur cannot be ruled out, the habitat is marginal because there are no serpentine soils.

DISCUSSION: Jepson’s onion was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. Jepson’s onion is not known to occur in the PSA.

Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*)

HABITAT AND BIOLOGY: Big-scale balsamroot is a perennial herb found in chaparral, cismontane woodland, and valley and foothill grassland, sometimes on serpentine soils, from 300 to 4,600 ft. Blooms March through June (CNPS 2009).

RANGE: Known from Alameda, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Solano, Sonoma, and Tehama counties (CNPS 2009).

KNOWN RECORDS: There is one CNDDDB record for big-scale balsamroot on the Shingle Springs and eight adjacent quads. This record is located approximately 13.6 mi northwest of the PSA. The record is based on an undated collection from Rattlesnake Bend in Placer County. This site has been inundated by Folsom Lake.

HABITAT PRESENT IN THE PSA: The PSA provides potential habitat for big-scale balsamroot.

DISCUSSION: Big-scale balsamroot was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. Big-scale balsamroot is not known to occur in the PSA.

Stebbins' morning-glory (*Calystegia stebbinsii*)

HABITAT AND BIOLOGY: Stebbins' morning-glory is a perennial rhizomatous herb found in serpentine or gabbroic soils in chaparral openings and cismontane woodland from 600 to 2,400 ft. Blooms April through July (CNPS 2009).

RANGE: Known from El Dorado and Nevada counties (CNPS 2009).

KNOWN RECORDS: There are 9 CNDDDB records for Stebbins' morning-glory on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for Stebbins' morning-glory is located approximately 0.25 mi north of the PSA on the west side of Lakeview Drive, about 0.5 mi south of Hwy 50. Approximately 60 plants were observed in chaparral on Rescue series soils in 2006.

HABITAT PRESENT IN THE PSA: The PSA provides potential habitat for Stebbins' morning-glory.

DISCUSSION: Stebbins' morning-glory was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. Stebbins' morning-glory is not known to occur in the PSA.

Pine Hill ceanothus (*Ceanothus roderickii*)

HABITAT AND BIOLOGY: Pine Hill ceanothus is an evergreen shrub found in serpentine or gabbroic soils in chaparral and cismontane woodland from 850 to 2,100 ft. Blooms April through June (CNPS 2009).

RANGE: Known from approximately ten occurrences in El Dorado County (CNPS 2009).

KNOWN RECORDS: There are 9 CNDDDB records for Pine Hill ceanothus on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for Pine Hill ceanothus is located approximately 0.7 mi north of the PSA. Multiple surveys at this location from 1984 to 2008 have recorded populations greater than 1,000 plants growing in open chaparral on Rescue series soils along both sides of Hwy 50.

HABITAT PRESENT IN THE PSA: The PSA provides potential habitat for Pine Hill ceanothus.

DISCUSSION: Pine Hill ceanothus was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. Pine Hill ceanothus is not known to occur in the PSA.

Red Hills soaproot (*Chlorogalum grandiflorum*)

HABITAT AND BIOLOGY: Red Hills soaproot is a perennial bulbiferous herb found in serpentine or gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest from 800 to 3,850 ft. Blooms May through June (CNPS 2009).

RANGE: Known from Amador, Calaveras, El Dorado, Placer, and Tuolumne counties (CNPS 2009).

KNOWN RECORDS: There are 15 CNDDDB records for Red Hills soaproot on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for Red Hills soaproot is located approximately 0.25 mi to the north of the PSA. Plant colonies of various sizes were observed between Product Drive and Lakeview Drive, approximately 0.5 air mi south of Hwy 50, in 1993, 1994, and 2006.

HABITAT PRESENT IN THE PSA: The PSA provides potential habitat for Red Hills soaproot.

DISCUSSION: Red Hills soaproot was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. Red Hills soaproot is not known to occur in the PSA.

Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeae*)

HABITAT AND BIOLOGY: Brandegee's clarkia is an annual herb found in chaparral and cismontane woodland, often in road cuts, from 240 to 3,000 ft. Blooms May through July (CNPS 2009).

RANGE: Known from Butte, El Dorado, Nevada, Placer, Sacramento, Sierra, and Yuba counties (CNPS 2009).

KNOWN RECORDS: There are 10 CNDDDB records for Brandegee's clarkia on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for Brandegee's clarkia is located approximately 2.65 mi southwest of the PSA, approximately 0.4 air miles east-northeast of the junction of Marble Creek and Deer Creek, northwest of Bullard. Habitat consists of east-facing slopes above oak riparian woodland. Less than 200 plants were observed in 2005.

HABITAT PRESENT IN THE PSA: The PSA provides potential habitat for Brandegee's clarkia.

DISCUSSION: Brandegee's clarkia was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. Brandegee's clarkia is not known to occur in the PSA.

Pine Hill flannelbush (*Fremontodendron californicum* ssp. *decumbens*)

HABITAT AND BIOLOGY: Pine Hill flannelbush is an evergreen shrub found in rocky areas of serpentine or gabbroic soils in chaparral and cismontane woodland from 1,375 to 2,500 ft. Blooms April through July (CNPS 2009).

RANGE: Known from fewer than ten occurrences in the Pine Hill area in El Dorado County and one near Grass Valley in Nevada County (CNPS 2009).

KNOWN RECORDS: There are 7 CNDDDB records for Pine Hill flannelbush on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for this species is located approximately 4.8 mi northwest of the PSA on the Shingle Springs quad. An unknown number of plants were observed sometime before 1986 along an intermittent stream located approximately 0.8 mi south-southwest of Pine Hill Lookout. The only known records of Pine Hill flannelbush in El Dorado County occur on, or very near, Pine Hill, northwest of the PSA.

HABITAT PRESENT IN THE PSA: The PSA occurs outside the known range of Pine Hill flannelbush; however, due to the presence of gabbroic soil in the PSA, the potential for Pine

Hill flannelbush could not be completely ruled out. The PSA provides marginal potential habitat for Pine Hill flannelbush.

DISCUSSION: Pine Hill flannelbush was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. Pine Hill flannelbush is not known to occur in the PSA. The PSA is outside the very localized known range of Pine Hill flannelbush.

El Dorado bedstraw (*Galium californicum* ssp. *sierrae*)

HABITAT AND BIOLOGY: El Dorado bedstraw is a perennial herb found in gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest from 325 to 1,925 ft. Blooms May through June (CNPS 2009).

RANGE: Known only from El Dorado County (CNPS 2009).

KNOWN RECORDS: There are 15 CNDDDB records for El Dorado bedstraw on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for this species is located approximately 1.4 mi north of the PSA at the end of Whispering Pines Drive in Shingle Springs. Habitat consists of chaparral and oak forests on gabbro soils. Three colonies were observed in 1994. Sycamore Environmental observed El Dorado bedstraw near the CNDDDB record in June 2008.

HABITAT PRESENT IN THE PSA: The PSA provides potential habitat for El Dorado bedstraw.

DISCUSSION: El Dorado bedstraw was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. El Dorado bedstraw is not known to occur in the PSA.

Bisbee Peak rush-rose (*Helianthemum suffrutescens*)

HABITAT AND BIOLOGY: Bisbee Peak rush-rose is an evergreen shrub found in chaparral, often on serpentine, gabbroic, or Ione soils, from 125 to 2,775 ft. Blooms April through June (CNPS 2009). In the previous commonly used statewide flora (Munz 1959), Bisbee Peak rush-rose was treated as a separate species from the more common rush rose (*Helianthemum scoparium*). The newer statewide flora (*The Jepson Manual*, Hickman, ed., 1993) treats the two taxa as the same species, *Helianthemum scoparium*. The Jepson Flora Project (2009) provides current information on taxonomy and indicates that the taxa are conspecific and will both be treated as *Helianthemum scoparium* in the next edition of *The Jepson Manual*. CNPS (2009) includes *Helianthemum suffrutescens* on List 3 of the Inventory of Rare and Endangered Plants. List 3 is composed primarily of plants with uncertain taxonomy for which more information is needed.

RANGE: Known from Amador, Calaveras, El Dorado, Mariposa, Sacramento, and Tuolumne counties (CNPS 2009).

KNOWN RECORDS: There are 16 CNDDDB records for Bisbee Peak rush-rose on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for this species is located approximately 0.7 mi northwest of the PSA. Hundreds of plants were observed by Sycamore Environmental between Meder Road and Durock Road, east of Cameron Park Drive in Cameron Park growing in chaparral on Rescue series soils in 2005.

HABITAT PRESENT IN THE PSA: The PSA provides potential habitat for Bisbee Peak rush-rose.

DISCUSSION: Bisbee Peak rush-rose was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. Bisbee Peak rush-rose is not known to occur in the PSA.

Parry's horkelia (*Horkelia parryi*)

HABITAT AND BIOLOGY: Parry's horkelia is a perennial herb found in chaparral and cismontane woodland, especially on soils of the Ione formation, from 250 to 3,400 ft. Blooms April through September (CNPS 2009).

RANGE: Known from Amador, Calaveras, El Dorado, and Mariposa counties (CNPS 2009).

KNOWN RECORDS: There are 3 CNDDDB records for Parry's horkelia on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for this species is from 1923 and is located approximately 8.9 mi northeast of the PSA.

HABITAT PRESENT IN THE PSA: The PSA provides marginal potential habitat for Parry's horkelia due to the lack of Ione formation soils.

DISCUSSION: Parry's horkelia was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. Parry's horkelia is not known to occur in the PSA.

Layne's butterweed (ragwort) (*Senecio* [= *Packera*] *layneae*)

HABITAT AND BIOLOGY: Layne's butterweed is a perennial herb found in rocky areas with serpentine or gabbroic soils in chaparral and cismontane woodland from 650 to 3,300 ft. Blooms April through August (CNPS 2009).

RANGE: Known from Butte, El Dorado, Tuolumne, and Yuba counties (CNPS 2009).

KNOWN RECORDS: There are 33 CNDDDB records for Layne's butterweed on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for Layne's butterweed consists of three polygons combined from survey data from 1993, 2006, and 2008. The polygons are mapped on the west side of Lakeview Drive, south of Durock Road, and north of the railroad tracks. A portion of the southern-most polygon occurs within the PSA along the northeastern project boundary. This polygon represents 43 plants that were observed in chaparral on Rescue series soils in 2008.

HABITAT PRESENT IN THE PSA: The PSA provides habitat for Layne's butterweed.

DISCUSSION: Thirty-six Layne's butterweed plants were counted in the PSA during the botanical survey conducted during the evident and identifiable period. Two occurrences of 25 and 11 plants were observed in the northeast portion of the PSA in the ecotone between gabbroic northern mixed chaparral and blue oak woodland (Appendix E, photos 5 and 6; Figure 3). A CNDDDB field survey form for Layne's butterweed was sent to DFG (Appendix G).

Oval-leaved viburnum (*Viburnum ellipticum*)

HABITAT AND BIOLOGY: Oval-leaved viburnum is a deciduous shrub found in chaparral, cismontane woodland, and lower montane coniferous forest from 700 to 4,600 ft. Blooms May through June (CNPS 2009).

RANGE: Known from Contra Costa, El Dorado, Fresno, Glenn, Humboldt, Mendocino, Napa, Placer, Shasta, Sonoma, and Tehama counties (CNPS 2009).

KNOWN RECORDS: There is one CNDDDB record for oval-leaved viburnum on the Shingle Springs and eight adjacent quads. This record is from 1901 and is located approximately 8.9 mi northeast of the PSA. Oval-leaved viburnum was recorded in the gabbro soils area by Wilson (1986).

HABITAT PRESENT IN THE PSA: The PSA provides potential habitat for oval-leaved viburnum.

DISCUSSION: Oval-leaved viburnum was not observed in the PSA during the botanical survey conducted during the evident and identifiable period. Oval-leaved viburnum is not known to occur in the PSA.

El Dorado County mule ears (*Wyethia reticulata*)

HABITAT AND BIOLOGY: El Dorado County mule ears is a perennial rhizomatous herb found on clay or gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest from 600 to 2,075 ft. Blooms from April through August (CNPS 2009).

RANGE: Known from El Dorado County (CNPS 2009).

KNOWN RECORDS: There are 24 CNDDDB records for El Dorado County mule ears on the Shingle Springs and eight adjacent quads. The nearest CNDDDB record for El Dorado County mule ears is located approximately 0.16 mi north of the PSA, just northeast of the intersection of Dividend Drive and Business Drive in 2006. Approximately 200 plants were observed growing in chaparral recovering from grading in 1994 and approximately 5,400 square ft of plants were observed at this location in 2006.

HABITAT PRESENT IN THE PSA: The PSA provides potential habitat for El Dorado County mule ears.

DISCUSSION: El Dorado County mule ears were not observed in the PSA during the botanical survey conducted during the evident and identifiable period. El Dorado County mule ears are not known to occur in the PSA.

D. Evaluation of Natural Communities

Oak Woodland

HABITAT PRESENT IN THE PSA: There is 5.41 ac of blue oak woodland in the PSA under County jurisdiction.

DISCUSSION: Oak woodlands under County jurisdiction are regulated by PRC §21083.4. The County regulates oak canopy removal under General Plan Policy 7.4.4.4. Mitigation may combine on- or off-site canopy replacement or payment of a fee based on the acreage of oak

canopy removed. The Oak Woodland Management Plan (El Dorado County 2008) provides guidance and specific directives to achieve compliance with General Plan Policy 7.4.4.4 and PRC §21083.4.

Gabbroic Northern Mixed Chaparral

HABITAT PRESENT IN THE PSA: There is 1.80 ac of gabbroic northern mixed chaparral in the PSA.

DISCUSSION: Gabbroic northern mixed chaparral is classified by DFG (2003) as a high inventory priority for the California Natural Diversity Database (CNDDDB). Gabbroic northern mixed chaparral is a subtype of the more common chamise (*Adenostoma fasciculatum*) “alliance” identified by DFG (2007). DFG has not yet revised the vegetation communities at the “association” level, but expects to in the near future (DFG 2007).

VI. LITERATURE CITED

- Ayres, D. R. and F. J. Ryan. 1999. Genetic diversity and structure of the narrow endemic *Wyethia reticulata* and its congener *W. bolanderi* (Asteraceae) using RAPD and allozyme techniques. *American Journal of Botany* 86(3):344-353.
- California Department of Fish and Game (DFG). 2000. Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities. Sacramento, CA.
- California Department of Fish and Game (DFG). July 2003. List of California terrestrial natural communities recognized by the California Natural Diversity Database. Natural Heritage Division, CNDDDB, Sacramento, CA.
- California Department of Fish and Game (DFG). 22 October 2007. Vegetation classification and mapping program: List of California vegetation alliances. Sacramento, CA.
<http://www.dfg.ca.gov/biogeodata/vegcamp/pdfs/NaturalCommunitiesList_Oct07.pdf>
- California Department of Fish and Game (DFG). Data dated 30 May 2009. CNDDDB/ RareFind: Shingle Springs and eight surrounding quadrangles. Natural Heritage Division, CNDDDB, Sacramento, CA.
- California Native Plant Society (CNPS). Accessed July 2009. Inventory of rare and endangered plants (online edition, v7-09b 4-10-09). California Native Plant Society, Sacramento, CA.
<<http://www.cnps.org/inventory>>
- El Dorado County. Adopted 19 July 2004. El Dorado County general plan, a plan for managed growth and open roads; plan for quality neighborhoods and traffic relief. El Dorado County Planning Department, Placerville, CA.
- El Dorado County. Adopted 6 May 2008. Oak woodland management plan. El Dorado County Development Services Department-Planning Services, Placerville, CA.
- Hickman, J., ed. 1993. The Jepson manual: Higher plants of California. University of California Press, Berkeley, CA.
- Jepson Flora Project. Accessed June 2009. Jepson Online Interchange for California floristics: *Helianthemum suffrutescens*. <<http://ucjeps.berkeley.edu/interchange.html>>
- Munz, P. 1959. A California flora. University of California Press, Berkeley, CA.
- Natural Resources Conservation Service (NRCS; formerly known as Soil Conservation Service). April 1974. Soil survey of El Dorado Area, California. USDA – Soil Conservation Service.
- U.S. Army Corps of Engineers (Corps). 1987. Corps of Engineers wetland delineation manual, Tech. Rept. Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- U.S. Army Corps of Engineers (Corps). 30 November 2001. Minimum standards for acceptance of preliminary wetlands delineations. Regulatory Branch, U.S. Army Engineer District Sacramento, Sacramento, CA.
- U.S. Army Corps of Engineers (Corps). 7 December 2005. Ordinary high water mark identification, Regulatory Guidance Letter No. 05-05.
- U.S. Army Corps of Engineers (Corps). 2006. Interim regional supplement to the Corps of Engineers wetland delineation manual: Arid West region. J. S. Wakeley, R. W. Lichvar, and C. V. Noble, Eds., Technical Report ERDC/EL TR-06-16. U.S. Army Engineer Research and Development Center, Vicksburg, MS.
- U.S. Fish and Wildlife Service (USFWS). 1996. Guidelines for conducting and reporting botanical inventories for federally listed, proposed and candidate plants. Sacramento Fish and Wildlife Office, Sacramento, CA. <http://sacramento.fws.gov/es/documents/Listed_plant_survey_guidelines.pdf>
- U.S. Fish and Wildlife Service (USFWS). 2002. Recovery plan for gabbro soil plants of the Central Sierra Nevada Foothills. Portland, OR.
- Wilson, J. L. 1986. A study of plant species diversity and vegetation patterns associated with the Pine Hill gabbro formation and adjacent substrata, El Dorado County, CA. Master's Thesis, California State University, Sacramento, CA.

VII. PREPARERS

R. John Little, Ph.D., Botany, Claremont Graduate School, Claremont, CA. Over 25 years experience managing and conducting environmental projects involving impact assessment and preparation of numerous NEPA/CEQA compliance documents, Biological Assessments, and Caltrans Natural Environmental Studies. Experience includes conducting special-status plant and wildlife species surveys, jurisdictional wetland delineations, general biological surveys, permitting and biological report preparation. Dr. Little is a trained wetland delineator, an ISA Certified Arborist (WE-1057A), holds a Fish and Wildlife Service recovery permit for vernal pool crustaceans (TE799564-2), and holds a California Department of Fish and Game Scientific Collecting Permit (#801073-04), and DFG Rare, Threatened and Endangered Plant Voucher Collecting Permit (#09054). Responsibilities: Senior technical lead.

Jeffery Little, A.A., Sacramento City College, Sacramento, CA. Sixteen years experience with preparation of NES, BA, and NEPA/CEQA compliance documents, impact analysis, agency formal and informal consultations and permitting. Project management, conducts special-status species surveys, jurisdictional delineations, and prepares mitigation and monitoring plans. CAD/ GIS Manager responsible for data collection, map creation, impact analyses, and report preparation. He holds a California Department of Fish and Game Scientific Collecting Permit (#801073-03), and a DFG Rare, Threatened and Endangered Plant Voucher Collecting Permit (#08018). Responsibilities: Project manager.

Michael Bower, M.S., Ecology (in progress), University of California, Davis, CA. Conducts plant and wildlife surveys, provides technical support for wetland delineations, biological resource evaluations, mitigation plans, and other documents used in the CEQA/NEPA process, queries the California Natural Diversity Database (CNDDDB/ RareFind), and researches special-status species for projects. He holds a California Department of Fish and Game Rare, Threatened and Endangered Plant Voucher Collecting Permit (#2081(a)-09-14-V). Responsibilities: Botanical surveys and report preparation.

Jessica Easley, B.S., Wildlife Biology, University of Montana, College of Forestry and Conservation, Missoula, MT. Conducts plant and wildlife surveys, provides technical support for wetland delineations, biological resource evaluations, mitigation plans, and other documents used in the CEQA/NEPA process, queries the California Natural Diversity Database (CNDDDB/ RareFind), and researches special-status species for projects. She is an ISA Certified Arborist (WE-7845A), holds a California Department of Fish and Game Scientific Collecting Permit (#801074-01), and a DFG Rare, Threatened and Endangered Plant Voucher Collecting Permit (#09051). Responsibilities: Botanical surveys and report preparation.

Jared Birdsall, B.S., Range Science, Brigham Young University, Provo, Utah. Prepares CAD/ GIS maps depicting project locations, waters and wetland locations, project impacts, aerial views of projects, tree locations, and other functions. Conducts plant and wildlife surveys, uses taxonomic keys for plant identification, queries the California Natural Diversity Database (CNDDDB/ RareFind), researches special-status species for projects, and assists in the preparation of reports. Responsibilities: Figure preparation.

Cynthia Little, Principal, Sycamore Environmental.
Responsibilities: Senior editor and quality control.

APPENDIX A.

CNDDDB Summary Report

**APN 109-480-07 on Business Drive
El Dorado County, CA**

California Department of Fish and Game
 Natural Diversity Database
 Summary list for Shingle Springs and 8 Adjacent quads (Plants)

Scientific Name	Common Name	Element Code	Federal Status	State Status	Global Rank	State Rank	CNPS	CDFG
1 Allium jepsonii	Jepson's onion	PMLIL022V0			G1	S1.2	1B.2	
2 Arctostaphylos nissenana	Nissenan manzanita	PDERI040V0			G2	S2.2	1B.2	
3 Balsamorhiza macrolepis var. macrolepis	big-scale balsamroot	PDAST11061			G3G4T2	S2.2	1B.2	
4 Calystegia stebbinsii	Stebbins' morning-glory	PDCON040H0	Endangered	Endangered	G1	S1.1	1B.1	
5 Ceanothus roderickii	Pine Hill ceanothus	PDRHA04190	Endangered	Rare	G2	S2.1	1B.2	
6 Central Valley Drainage Hardhead/Squawfish Stream	Central Valley Drainage Hardhead/Squawfish Stream	CARA2443CA			G?	SNR		
7 Chlorogalum grandiflorum	Red Hills soaproot	PMLIL0G020			G2	S2	1B.2	
8 Clarkia biloba ssp. brandegeeeae	Brandegee's clarkia	PDONA05053			G4G5T3	S3	1B.2	
9 Eryngium pinnatisectum	Tuolumne button-celery	PDAPI0Z0P0			G3	S3.2	1B.2	
10 Fremontodendron decumbens	Pine Hill flannelbush	PDSTE03030	Endangered	Rare	G1	S1.2	1B.2	
11 Galium californicum ssp. sierrae	El Dorado bedstraw	PDRUB0N0E7	Endangered	Rare	G5T1	S1.2	1B.2	
12 Helianthemum suffrutescens	Bisbee Peak rush-rose	PDCIS020F0			G2Q	S2.2	3.2	
13 Horkelia parryi	Parry's horkelia	PDROS0W0C0			G2	S2.2	1B.2	
14 Packera layneae	Layne's ragwort	PDAST8H1V0	Threatened	Rare	G2	S2.1	1B.2	
15 Pseudobahia bahiifolia	Hartweg's golden sunburst	PDAST7P010	Endangered	Endangered	G2	S2.1	1B.1	
16 Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0			G3	S3.2	1B.2	
17 Viburnum ellipticum	oval-leaved viburnum	PDCPR07080			G5	S2.3	2.3	
18 Wyethia reticulata	El Dorado County mule ears	PDAST9X0D0			G2	S2.2	1B.2	

APPENDIX B.

USFWS Letter

APN 109-480-07 on Business Drive
El Dorado County, CA



United States Department of the Interior
FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825



July 7, 2009

Document Number: 090707104201

R. John Little, Ph.D.
Sycamore Environmental Consultants, Inc.
6355 Riverside Blvd., Suite C
Sacramento, CA 95831

Subject: Species List for Business Drive APN 109-480-07

Dear: Dr. Little

We are sending this official species list in response to your July 7, 2009 request for information about endangered and threatened species. The list covers the California counties and/or U.S. Geological Survey 7½ minute quad or quads you requested.

Our database was developed primarily to assist Federal agencies that are consulting with us. Therefore, our lists include all of the sensitive species that have been found in a certain area *and also ones that may be affected by projects in the area*. For example, a fish may be on the list for a quad if it lives somewhere downstream from that quad. Birds are included even if they only migrate through an area. In other words, we include all of the species we want people to consider when they do something that affects the environment.

Please read Important Information About Your Species List (below). It explains how we made the list and describes your responsibilities under the Endangered Species Act.

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be October 05, 2009.

Please contact us if your project may affect endangered or threatened species or if you have any questions about the attached list or your responsibilities under the Endangered Species Act. A list of Endangered Species Program contacts can be found at www.fws.gov/sacramento/es/branches.htm.

Endangered Species Division



U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office

**Federal Endangered and Threatened Species that Occur in
or may be Affected by Projects in the Counties and/or
U.S.G.S. 7 1/2 Minute Quads you requested**

Document Number: 090707104201

Database Last Updated: January 29, 2009

Quad Lists

Listed Species

Invertebrates

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Fish

Hypomesus transpacificus
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Rana aurora draytonii
California red-legged frog (T)

Plants

Calystegia stebbinsii
Stebbins's morning-glory (E)

Ceanothus roderickii
Pine Hill ceanothus (E)

Fremontodendron californicum ssp. decumbens
Pine Hill flannelbush (E)

Galium californicum ssp. sierrae
El Dorado bedstraw (E)

Senecio layneae
Layne's butterweed (=ragwort) (T)

Quads Containing Listed, Proposed or Candidate Species:

SHINGLE SPRINGS (510B)

County Lists

El Dorado County

Listed Species

Invertebrates

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Lepidurus packardii
vernal pool tadpole shrimp (E)

Fish

Oncorhynchus (=Salmo) clarki henshawi
Lahontan cutthroat trout (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)

Rana aurora draytonii
California red-legged frog (T)
Critical habitat, California red-legged frog (X)

Reptiles

Thamnophis gigas
giant garter snake (T)

Plants

Calystegia stebbinsii
Stebbins's morning-glory (E)

Ceanothus roderickii
Pine Hill ceanothus (E)

Fremontodendron californicum ssp. decumbens
Pine Hill flannelbush (E)

Galium californicum ssp. sierrae
El Dorado bedstraw (E)

Senecio layneae

Layne's butterweed (=ragwort) (T)

Proposed Species

Amphibians

Rana aurora draytonii

Critical habitat, California red-legged frog (PX)

Candidate Species

Amphibians

Bufo canorus

Yosemite toad (C)

Rana muscosa

mountain yellow-legged frog (C)

Mammals

Martes pennanti

fisher (C)

Plants

Rorippa subumbellata

Tahoe yellow-cress (C)

Key:

(E) *Endangered* - Listed as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the [National Oceanic & Atmospheric Administration Fisheries Service](#). Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our [Protocol](#) and [Recovery Permits](#) pages.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are

likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [Map Room](#) page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. [More info](#)

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be October 05, 2009.

APPENDIX C.

Species Evaluated Table

APN 109-480-07 on Business Drive
 El Dorado County, CA

Special-Status Plant Species from USFWS Letter and CNDDDB Data

Special-Status Plant Species/ Common Name	Federal Status ^{a, b}	State Status ^{a, b} / CNPS ^d	Source ^c	Habitat Requirements	Potential to Occur in the PSA
<i>Allium jepsonii</i> Jepson's onion	--	--/ 1B.2	2	Bulbiferous perennial herb found on serpentine or volcanic substrate in chaparral, cismontane woodland, and lower montane coniferous forest from 950 to 4,350 ft. Known from Butte, El Dorado, Placer, and Tuolumne counties. Blooms April through August (CNPS 2009).	Yes. See text.
<i>Arctostaphylos nissenana</i> Nissenan manzanita	--	--/ 1B.2	2	Evergreen shrub found on rocky substrate in closed-cone coniferous forest and chaparral from 1,475 to 3,610 ft. Known from approximately ten occurrences in El Dorado and Tuolumne counties. Blooms February through March (CNPS 2009).	No. All known locations of this species occur in a localized area northeast of the PSA. The PSA is outside the range of this species.
<i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i> Big-scale balsamroot	--	--/ 1B.2	2	Perennial herb found in chaparral, cismontane woodland, and valley and foothill grassland, sometimes on serpentine soils from 300 to 4,600 ft. Known from Alameda, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Solano, Sonoma, and Tehama counties. Blooms March through June (CNPS 2009).	Yes. See text.
<i>Calystegia stebbinsii</i> Stebbins' morning-glory	E	E/ 1B.1	1, 2	A perennial rhizomatous herb found in serpentine or gabbroic soils in chaparral openings and cismontane woodland from 600 to 2,400 ft. Known from El Dorado and Nevada counties. Blooms April through July (CNPS 2009).	Yes. See text.
<i>Ceanothus roderickii</i> Pine Hill ceanothus	E	R/ 1B.2	1, 2	Evergreen shrub found in serpentine or gabbroic soils in chaparral and cismontane woodland from 850 to 2,100 ft. Known from approximately ten occurrences in El Dorado County. Blooms April through June (CNPS 2009).	Yes. See text.
<i>Chlorogalum grandiflorum</i> Red Hills soaproot	--	--/ 1B.2	2	Perennial bulbiferous herb found in serpentine, gabbroic, or other soils in chaparral, cismontane woodland, and lower montane coniferous forest from 800 to 3,850 ft. Known from Amador, Calaveras, El Dorado, Placer, and Tuolumne counties. Blooms May through June (CNPS 2009).	Yes. See text.
<i>Clarkia biloba</i> ssp. <i>brandegeae</i> Brandegee's clarkia	--	--/ 1B.2	2	Annual herb found in chaparral, cismontane woodland, often along roadcuts, from 240 to 3,000 ft. Known from Butte, El Dorado, Nevada, Placer, Sacramento, Sierra, and Yuba counties. Blooms May through July (CNPS 2009).	Yes. See text.

Special-Status Plant Species/ Common Name	Federal Status ^{a, b}	State Status ^{a, b} / CNPS ^d	Source ^c	Habitat Requirements	Potential to Occur in the PSA
<i>Eryngium pinnatisectum</i> Tuolumne button-celery	--	--/ 1B.2	2	An annual to perennial herb found on mesic substrate in cismontane woodland, lower montane coniferous forests, and vernal pools from 220 to 3,000 ft. Known from Amador, Calaveras, Sacramento, Sonoma, and Tuolumne counties. Blooms May through August (CNPS 2009).	No. Mesic areas do not occur in the PSA.
<i>Fremontodendron californicum</i> ssp. <i>decumbens</i> Pine Hill flannelbush	E	R/ 1B.2	1, 2	Evergreen shrub found in rocky areas of serpentine or gabbroic soils in chaparral and cismontane woodland from 1,375 to 2,500 ft. Known from fewer than ten occurrences in the Pine Hill area in El Dorado County and one near Grass Valley in Nevada County. Blooms April through July (CNPS 2009).	Yes. See text.
<i>Galium californicum</i> ssp. <i>sierrae</i> El Dorado bedstraw	E	R/ 1B.2	1, 2	Perennial herb found on gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest from 325 to 1,925 ft. Known from fewer than ten occurrences in El Dorado County. Blooms May through June (CNPS 2009).	Yes. See text.
<i>Helianthemum suffrutescens</i> Bisbee Peak rush-rose	--	--/ 3.2	2	Evergreen shrub found in chaparral, often on serpentine, gabbroic or lone soils, from 125 to 2,775 ft. Known from Amador, Calaveras, El Dorado, Mariposa, Sacramento, and Tuolumne counties. Blooms April through June (CNPS 2009).	Yes. See text.
<i>Horkelia parryi</i> Parry's horkelia	--	--/ 1B.2	2	Perennial herb found in chaparral and cismontane woodland, especially on soils of the lone formation, from 250 to 3,400 ft. Known from Amador, Calaveras, El Dorado, and Mariposa counties. Blooms April through September (CNPS 2009).	Yes. See text.
<i>Pseudobahia bahiifolia</i> Hartweg's golden sunburst	E	E/ 1B.1	2	Annual shrub found in clay, often acidic, soils of cismontane woodland and valley and foothill grasslands from 50 to 500 ft. Known from El Dorado, Fresno, Madera, Merced, Stanislaus, Tuolumne, and Yuba counties. Many occurrences are very small. Blooms March through April (CNPS 2009).	No. The PSA is above the elevation range for this species.
<i>Rorippa subumbellata</i> Tahoe yellow-cress	C	E/ 1B.1	1	Rhizomatous herb found in decomposed granitic beaches of lower montane coniferous forest and meadows and seeps from 6,200 to 6,250 ft. Known in CA only from Lake Tahoe area in El Dorado, Nevada, and Placer cos. Blooms May through September (CNPS 2009).	No. The PSA is below the elevation range for this species. Habitat for this species does not occur in the PSA.
<i>Sagittaria sanfordii</i> Valley sagittaria (Sanford's arrowhead)	--	--/ 1B.2	2	An emergent rhizomatous perennial herb found in assorted shallow freshwater marshes and swamps from 0 to 2,150 ft. Known from Butte, Del Norte, El Dorado, Fresno, Merced, Mariposa, Orange, Placer, Sacramento, Shasta, San Joaquin, Tehama, and Ventura counties. Extirpated from southern CA and mostly extirpated from the Central Valley. Blooms May through October (CNPS 2009).	No. Habitat for this species does not occur in the PSA.
<i>Senecio</i> (= <i>Packera</i>) <i>layneae</i> Layne's butterweed (ragwort)	T	R/ 1B.2	1, 2	Perennial herb found in rocky areas with serpentine or gabbroic soils in chaparral and cismontane woodland from 650 to 3,300 ft. Known from Butte, El Dorado, Tuolumne, and Yuba counties. Blooms April through August (CNPS 2009).	Yes. See text.

Special-Status Plant Species/ Common Name	Federal Status ^{a, b}	State Status ^{a, b} / CNPS ^d	Source ^c	Habitat Requirements	Potential to Occur in the PSA
<i>Viburnum ellipticum</i> Oval-leaved viburnum	--	--/ 2.3	2	Deciduous shrub found in chaparral, cismontane woodland, and lower montane coniferous forest from 700 to 4,600 ft. In CA, known from Contra Costa, El Dorado, Fresno, Glenn, Humboldt, Mendocino, Napa, Placer, Shasta, Sonoma, and Tehama counties. Blooms May through June (CNPS 2009).	Yes. See text.
<i>Wyethia reticulata</i> El Dorado County mule ears	--	--/ 1B.2	2	Perennial rhizomatous herb found on clay or gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest from 600 to 2,075 ft. Known from El Dorado County. Blooms April through August (Ayres and Ryan 1999, CNPS 2009).	Yes. See text.

- ^a **Status:** **E** = Endangered; **T** = Threatened; **P** = Proposed; **C** = Candidate; **R** = California Rare; * = Possibly extinct;
CSC = DFG Species of Special Concern; **FP** = DFG Fully Protected; **Prot** = DFG Protected; **CH** = Critical habitat designated.
- ^b **CNPS:** **1A** = Presumed Extinct in CA; **1B** = Rare or Endangered (R/E) in CA and elsewhere; **2** = R/E in CA and more common elsewhere; **3** = Need more information; **4** = Plants of limited distribution; **0.1** = Seriously endangered in CA; **0.2** = Fairly endangered in CA; **0.3** = Not very endangered in CA.
- ^c **Source:** **1** = USFWS letter. **2** = CNDDDB. **3** = Observed or included by Sycamore Environmental.

APPENDIX D.

Plant Species Observed

APN 109-480-07 on Business Drive
 El Dorado County, CA

Plant Species Observed

Family	Scientific Name	Common Name	*
CONIFERS			
Pinaceae	<i>Pinus sabiniana</i>	Gray pine	N
DICOTS			
Anacardiaceae	<i>Pistacia chinensis</i>	Chinese pistache	I
	<i>Toxicodendron diversilobum</i>	Western poison oak	N
Apiaceae	<i>Daucus pusillus</i>		N
	<i>Lomatium</i> sp.		N
	<i>Perideridia kelloggii</i>	Yampah	N
	<i>Sanicula crassicaulis</i>	Sanicle	N
	<i>Torilis arvensis</i>		I
Asteraceae	<i>Achillea millefolium</i>	Yarrow	N
	<i>Baccharis pilularis</i>	Coyote brush	N
	<i>Calycadenia</i> sp.		N
	<i>Carduus pycnocephalus</i>	Italian thistle	I
	<i>Centaurea melitensis</i>	Tocalote	I
	<i>Centaurea solstitialis</i>	Yellow star-thistle	I
	<i>Eriophyllum</i> sp.		N
	<i>Filago californica</i>	Herba impia	N
	<i>Grindelia</i> sp.	Gumplant	N
	<i>Helianthus annuus</i>	Common sunflower	N
	<i>Hemizonia fitchii</i>	Fitch's hemizonia	N
	<i>Holocarpha virgata</i>		N
	<i>Hypochaeris radicata</i>	Cat's-ear	I
	<i>Leontodon taraxacoides</i>	Hawkbit	I
	<i>Lessingia</i> sp.		N
	<i>Madia</i> sp.	Tarweed	N
	<i>Senecio layneae</i>	Layne's ragwort	N
	<i>Sonchus</i> sp.	Sow thistle	I
	<i>Tragopogon dubius</i>	Goat's beard	I
	<i>Wyethia angustifolia</i>	Mules ears	N
Caprifoliaceae	<i>Lonicera interrupta</i>	Honeysuckle	N
	<i>Lonicera subspicata</i>	Honeysuckle	N
Caryophyllaceae	<i>Minuartia douglasii</i>	Sandwort	N
	<i>Spergularia</i> sp.	Sand-spurrey	--
Ericaceae	<i>Arctostaphylos viscida</i>	Manzanita	N
Euphorbiaceae	<i>Eremocarpus setigerus</i>	Dove weed; Turkey mullein	N
	<i>Melilotus</i> sp.	Sweetclover	I
	<i>Trifolium dubium</i>	Little hop clover	I
	<i>Trifolium hirtum</i>	Rose clover	I
	<i>Vicia sativa</i> ssp. <i>sativa</i>	Common vetch	I
	<i>Vicia villosa</i> ssp. <i>villosa</i>	Hairy vetch	I
Fagaceae	<i>Quercus douglasii</i>	Blue oak	N
	<i>Quercus wislizenii</i> var. <i>wislizenii</i>	Interior live oak	N
Gentianaceae	<i>Centaureum muehlenbergii</i>	Centaury	N
Geraniaceae	<i>Erodium cicutarium</i>	Filaree	I

Hydrophyllaceae	<i>Eriodictyon californicum</i>	Yerba santa	N
Hypericaceae	<i>Hypericum perforatum</i>	Klamathweed	I
Lamiaceae	<i>Monardella</i> sp.		N
	<i>Salvia sonomensis</i>		N
Linaceae	<i>Linum usitatissimum</i>	Common flax	I
Malvaceae	<i>Sidalcea malviflora</i> ssp. <i>asprella</i>	Checker mallow	N
Onagraceae	<i>Clarkia purpurea</i> ssp. <i>quadrivulnera</i>	Four-spot	N
	<i>Epilobium</i> sp.	Fireweed, willow herb	
Plantaginaceae	<i>Plantago lanceolata</i>	English plantain	I
Polemoniaceae	<i>Navarretia intertexta</i> ssp. <i>intertexta</i>		N
	<i>Navarretia pubescens</i>		N
Polygonaceae	<i>Polygonum arenastrum</i>	Common knotweed	I
Primulaceae	<i>Anagallis arvensis</i>	Scarlet pimpernel	I
Rhamnaceae	<i>Ceanothus cuneatus</i> var. <i>cuneatus</i>	Buck brush	N
	<i>Rhamnus ilicifolia</i>	Holly-leaved redberry	N
	<i>Rhamnus tomentella</i> ssp. <i>tomentella</i>	Hoary coffeeberry	N
Rosaceae	<i>Adenostoma fasciculatum</i>	Chamise	N
	<i>Sanguisorba minor</i> ssp. <i>muricata</i>	Garden burnet	I
Rubiaceae	<i>Galium porrigens</i> var. <i>tenuis</i>	Climbing bedstraw	N
Scrophulariaceae	<i>Cordylanthus</i> sp.	Bird's-beak	N
	<i>Kickxia elatine</i>	Fluellin	I
Viscaceae	<i>Phoradendron villosum</i>	Oak mistletoe	N
MONOCOTS			
Iridaceae	<i>Iris hartwegii</i>	Iris	N
	<i>Sisyrinchium bellum</i>	Blue-eyed-grass	N
Juncaceae	<i>Juncus occidentalis</i>	Rush	N
Liliaceae	<i>Brodiaea</i> sp.		N
	<i>Calochortus albus</i>	White globe lily	N
	<i>Calochortus luteus</i>		N
	<i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i>		N
Orchidaceae	<i>Piperia elongata</i>	Piperia	N
Poaceae	<i>Aegilops triuncialis</i>	Barbed goatgrass	I
	<i>Aira caryophylla</i>	Silver European hairgrass	I
	<i>Avena fatua</i>	Wild oat	I
	<i>Avena sativa</i>	Cultivated oat	I
	<i>Brachypodium distachyon</i>		I
	<i>Briza minor</i>	Quaking grass	I
	<i>Bromus diandrus</i>	Ripgut grass	I
	<i>Bromus hordeaceus</i>	Soft brome	I
	<i>Bromus madritensis</i> ssp. <i>rubens</i>	Foxtail chess	I
	<i>Cynosurus echinatus</i>	Hedgehog dogtail	I
	<i>Elymus glaucus</i>	Blue wildrye	N
	<i>Gastridium ventricosum</i>	Nit grass	I
	<i>Lolium multiflorum</i>	Italian ryegrass	I
	<i>Melica torreyana</i>	Melic	N
	<i>Nassella pulchra</i>	Purple needlegrass	N
	<i>Phalaris</i> sp.		--
	<i>Polypogon monspeliensis</i>	Annual beard grass	I
	<i>Taeniatherum caput-medusae</i>	Medusa head	I
	<i>Vulpia myuros</i> var. <i>myuros</i>	Vulpia	I

* N = Native to CA; I = Introduced

APPENDIX E.

Photographs

APN 109-480-07 on Business Drive
El Dorado County, CA



Photo 1. 24 June 2009. View looking north in the central portion of the PSA. Blue oak woodland dominated by blue oaks in overstory and annual grasses in understory.



Photo 2. 24 June 2009. View looking south in the central portion of the PSA. Blue oak woodland dominated by blue oaks in overstory and annual grasses in understory.



Photo 3. 24 June 2009. View looking northeast in the eastern portion of the PSA. Dense vegetation in background is gabbroic northern mixed chaparral



Photo 4. 24 June 2009. Dense shrub layer with negligible herbaceous cover in the gabbroic northern mixed chaparral in northeast portion of PSA.



Photo 5. 24 June 2009. Eastern portion of PSA; view looking northeast. View of transitional habitat between chaparral and oak woodland in which Layne's butterweed was observed in PSA.



Photo 6. 24 June 2009. Eastern portion of PSA. Layne's butterweed occurs just outside the gabbroic mixed northern chaparral (arrow indicates inflorescence).

APPENDIX F.

Applicable Laws and Regulations

APN 109-480-07 on Business Drive
El Dorado County, CA

A. Summary

Studies were conducted to document baseline information in support of the analyses necessary for compliance with federal and state laws, regulations, policies, and executive orders pertaining to biological and wetlands resources. Regulations include:

- National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.);
- Section 10 of the Rivers and Harbors Act (33 U.S.C. 401 et seq.);
- Section 404 of the Clean Water Act (33 U.S.C. 1251-1376);
- Section 401 of the Clean Water Act (33 U.S.C. 1341, administered by the State of California);
- Section 402 of the Clean Water Act (33 U.S.C. 1342, administered by the State of California);
- Federal Endangered Species Act (16 U.S.C. 1531-1543);
- Fish and Wildlife Coordination Act (16 U.S.C. 661-666);
- National Wild and Scenic Rivers Act (16 U.S.C. 1271-1287);
- Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-711);
- Bald Eagle Protection Act (16 U.S.C. 668);
- Magnuson-Stevens Fishery Conservation and Management Act (as amended through 11 October 1996);
- Executive Order 11990, Protection of Wetlands (24 May 1977);
- Executive Order 13112, Invasive Species (3 February 1999);
- California Environmental Quality Act (P.R.C. 21000 et seq.);
- California Wild and Scenic Rivers Act (P.R.C. 5093.50 et seq.);
- Oak Woodlands Protection (P.R.C. 21083.4)
- California Fish and Wildlife Protection and Conservation (F.G.C. Division 2, Chapter 6 §1600-1616);
- California Endangered Species Act (F.G.C. 2050 et seq.);
- Native Plant Protection Act (F.G.C. 1900-1913);
- State Water Resources Control Board Water Quality Order 2004-0004;
- Executive Order W-59-93 California Wetlands Conservation Policy (23 August 1993).

B. Federal

1. Endangered Species Act

Provisions of the federal Endangered Species Act (FESA), as amended (16 USC 1531), protect federally listed threatened and endangered wildlife species and their habitats from unlawful take. Take under FESA includes activities that knowingly “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” The U.S. Fish and Wildlife Service’s (USFWS) regulations define harm to include some types of “significant habitat modification or degradation.” The U.S. Supreme Court ruled on 29 June 1995, that “harm” may include habitat modification “...where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.”

For projects with a federal nexus, Section 7 of the FESA requires that federal agencies, in consultation with USFWS or the National Marine Fisheries Administration (NMFS), use their authorities to further the purpose of FESA and to ensure that their actions are not likely to jeopardize the continued existence of listed plant and wildlife species or result in destruction or adverse modification of critical habitat. Section 10(a)(1)(B) allows non-federal entities to obtain permits for incidental take of

threatened or endangered wildlife species through consultation with USFWS and NMFS. Federally listed plants do not require Section 10(a)(1)(B) consultation.

2. Federal Migratory Bird Treaty Act

Migratory birds are protected under the federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10 including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). All migratory bird species are protected by the MBTA. The direct injury or death of a migratory bird, due to construction activities or any construction-related disturbance that causes nest abandonment, abandonment of nestlings, or forced fledging would be considered a take under federal law.

3. Magnuson-Stevens Fishery Conservation and Management Act

Under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), the Pacific Fisheries Management Council (PMFC) manages salmon fisheries through the designation of essential fish habitat (EFH) and monitoring threats to that habitat from both fishing and non-fishing activities. Salmon EFH includes all those streams, lakes, ponds, wetlands, and other water bodies currently or historically accessible to salmon in Washington, Oregon, Idaho, and California. Salmon EFH excludes areas upstream of longstanding naturally impassible barriers (i.e. natural waterfalls in existence for several hundred years), but includes aquatic areas above all artificial barriers except specifically named impassible dams. Essential habitat types identified by the NMFS for salmon include: juvenile rearing areas, juvenile migration corridors, areas for growth and development into adulthood, adult migration corridors, and spawning areas (65 FR 7773). Federal agencies are required to consult with NMFS if an activity authorized by the federal lead agency has the potential to adversely affect EFH. State, local agencies and private parties are not required to consult with NMFS if there is not a federal action, e.g., a permit or funding, involved with the project.

4. Section 404 Clean Water Act

The objective of the Clean Water Act (CWA 1977, as amended) is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. Discharge of fill material into "waters of the U.S.," including wetlands, is regulated by the U.S. Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act (33 USC 1251-1376). Corps regulations implementing Section 404 define "waters of the U.S." to include intrastate waters, including lakes, rivers, streams, wetlands, and natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce.

Wetlands are defined for regulatory purposes as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3; 40 CFR 230.3). The placement of structures in "navigable waters of the U.S." is also regulated by the Corps under Section 10 of the federal Rivers and Harbors Act (33 USC 401 et seq.).

In 1987 the Corps published a manual that standardized the manner in which wetlands were to be delineated nationwide. To determine whether areas that appear to be wetlands are in fact wetlands, a delineation must be performed in accordance with the methodology identified in the 1987 Corps Manual. Under normal circumstances, positive indicators from three parameters, (1) wetland hydrology, (2) hydrophytic vegetation, and (3) hydric soils must be present to classify a feature as a wetland community.

On 5 June 2007, the Corps issued a memorandum providing guidance on implementation of the Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (Corps 2007). The guidance distinguishes among traditional navigable waters (TNWs), relatively permanent waters (RPWs), non-relatively permanent waters (non-RPWs), and isolated

wetlands and waters. While the Corps will routinely exercise jurisdiction over traditional navigable waters, relatively permanent waters, and wetlands adjacent to those waters, jurisdiction will only be exerted over not relatively permanent waters and their adjacent wetlands when a significant nexus exists with a traditional navigable water. The Corps will base the significant nexus standard on such evidence as ecology, hydrology, and the influence of the water on the "chemical, physical, and biological integrity of downstream traditional navigable waters" (Corps 2007). The significant nexus standard will also depend on "whether the tributary and its adjacent wetlands are likely to have an effect [on downstream traditional navigable waters] that is more than speculative or insubstantial" (Corps 2007).

Projects that discharge into federally regulated waters require a section 404 CWA permit. The amount of discharge and the type of project determine which process the Corps will use to authorize the discharge. Nationwide Permit 29 (NWP 29) authorizes residential developments that discharge into less than 0.5 acre and NWP 39 authorizes Commercial and Institutional developments. The Individual Permit process is used for projects that exceed the discharge limit identified for each specific NWP permit. The NWP 7 authorizes discharges needed for the construction of outfall facilities. The Corps requires that projects avoid discharge to the maximum extent practicable and usually requires Compensatory Mitigation to ensure that permitted projects are consistent with its "no over all net loss" policy.

5. Section 401 Clean Water Act

Section 401 CWA requires the federal permitting agency to obtain certification from the state in which the project activities occur that the action will not result in the discharge of pollutants into waters of the state. Because permits issued by the Corps authorize discharge into waters pursuant to section 404 CWA, a section 401 Water Quality Certification is required. In California, the authority to issue Water Quality Certifications has been delegated to the State Water Resources Control Board and the local Regional Water Quality Control Board (RWQCB) processes the requests for Certification.

6. Section 402 Clean Water Act

The CWA prohibits point source discharge of pollutants into waters of the U.S., unless the discharge is in compliance with a National Pollution Discharge Elimination System Permit (NPDES). Section 402(p) of CWA establishes a permit under the NPDES program for municipal discharges of storm water. Ground disturbing construction activities, such as grading, in excess of one acre requires an NPDES Phase II permit from the RWQCB. The preparation of a Stormwater Pollution Prevention Plan (SWPPP) is a requirement of the NPDES Phase II permit. Hazardous material spill prevention and spill cleanup Best management practices (BMPs), set-forth by the California Stormwater Task Force, March 1993, are included in the SWPPP. Adherence to the SWPPP minimizes erosion during construction.

7. Bald Eagle Protection Act

The bald eagle and golden eagle are federally protected under the Bald Eagle Protection Act (16 U.S.C. 668-668c). It is illegal to take, possess, sell, purchase, barter, offer to sell or purchase or barter, transport, export or import at any time or in any manner a bald or golden eagle, alive or dead; or any part, nest or egg of these eagles unless authorized by the Secretary of the Interior. Violations are subject to fines and/or imprisonment for up to one year. Active nest sites are also protected from disturbance during the breeding season.

B. State

1. California Endangered Species Act

Under the California Endangered Species Act (CESA), the California Department of Fish and Game (DFG) has the responsibility for maintaining a list of endangered and threatened species (California Fish and Game Code 2070). The DFG maintains a list of "candidate species" which are species that DFG formally notices as being under review for addition to the list of endangered or threatened

species. DFG also maintains lists of “species of special concern” which serve as species “watch lists.” Pursuant to the requirements of CESA, the local lead agency reviewing a discretionary project within its jurisdiction must determine whether any state listed endangered or threatened species occur on the project site and determine whether the proposed activities will result in take of the species. Take of protected species incidental to otherwise lawful management activities may be authorized under California Fish and Game Code Section 2081. Authorization from DFG would be in the form of an Incidental Take Permit.

Pursuant to CEQA, the local lead agency must evaluate the significance of impacts to CESA endangered or threatened species resulting to the physical modification of their habitat. The DFG, as the Responsible Agency, reviews the evaluation of potential impacts and may comment on whether mitigation measures required by the lead agency to reduce the significance of impacts are sufficient and recommend additional mitigation measures, if necessary.

2. Water Quality Order 2004-0004

The State Water Quality Board promulgated Water Quality Order 2004-0004 (WQO 2004-0004) for activities that result in the discharge of fill into less than 0.20 acre of wetlands that are not federal jurisdictional. The WQO 2004-0004 requires that a Notice of Intent (NOI) be submitted to the Regional Water Quality Control Board (RWQCB) to be enrolled under and to comply with the General Waste Discharge Requirements (WDR). The Preliminary Jurisdictional Delineation Report is submitted with the NOI. The local lead agency must have a certified CEQA document. Compliance includes a mitigation plan to ensure that the discharge does not result in the overall net loss of wetlands. The RWQCB has 30 days to determine if the NOI is complete. The discharger may proceed after a Notice of Applicability (NOA) is received from the RWQCB or 45 days after the NOI is deemed complete. If an NOA is issued, then a copy is also sent to the Corps. The discharger must keep a copy of the NOA and general and special conditions at the construction site.

3. Executive Order W-59-93 California Wetlands Conservation Policy

Governor Pete Wilson issued Executive Order W-59-93 California Wetlands Conservation Policy on 23 August 1993. It requires that projects that are authorized by State agencies must result in no net loss of wetlands. It also calls for the State to assume stewardship of Section 404 CWA on an incremental basis, beginning with administration of the NWP program. The three stated goals of Executive Order W-59-93:

- Ensure no overall net loss and achieve a long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California in a manner that fosters creativity, stewardship and respect for private property.
- Reduce procedural complexity in the administration of State and Federal wetlands conservation programs.
- Encourage partnerships to make landowner incentive programs and cooperative planning efforts the Primary focus of wetlands conservation and restoration.

3. Section 1600-1616 Fish and Game Code

State and local public agencies are subject to Section 1602 of the California Fish and Game Code, which governs construction activities that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the DFG. Under Section 1602, a discretionary Stream Alteration Agreement permit must be issued by DFG prior to the initiation of construction activities within lands under DFG jurisdiction.

4. Native Plant Protection Act

The Native Plant Protection Act (California Fish and Game Code Section. 1900-1913) prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or

endangered (as defined by DFG). An exception to this prohibition in the Act allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify DFG and give that state agency at least 10 days to come and retrieve the plants before they are plowed under or otherwise destroyed. Fish and Game Code, § 1913 exempts from take prohibition “the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right of way.”

5. Section 3503.5 Fish and Game Code

Under Section 3503.5 of the California Fish and Game Code it is unlawful to take, possess, or destroy any birds in the orders of Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.

6. Section 3505 Fish and Game Code

California statutes also accord “fully protected” status to a number of birds, mammals, reptiles, and amphibians specifically identified in the Fish and Game Code. These species cannot be taken, even with an incidental take permit.

7. Section 21083.4 Public Resources Code

California Public Resources Code (PRC) Section 21083.4 requires counties to evaluate if the conversion of oak woodlands will result in a significant effect on the environment. If a county determines that there may be a significant effect to oak woodlands, the county shall require one or more of the following oak woodlands mitigation alternatives:

- (1) Conserve oak woodlands, through the use of conservation easements.
- (2) (A) Plant an appropriate number of trees, including maintaining plantings and replacing dead or diseased trees. (B) The requirement to maintain trees pursuant to this paragraph terminates seven years after the trees are planted. (C) Mitigation pursuant to this paragraph shall not fulfill more than one-half of the mitigation requirement for the project. (D) The requirements imposed pursuant to this paragraph also may be used to restore former oak woodlands.
- (3) Contribute funds to the Oak Woodlands Conservation Fund, as established under subdivision (a) of Section 1363 of the Fish and Game Code, for the purpose of purchasing oak woodlands conservation easements, as specified under paragraph (1) of subdivision (d) of that section and the guidelines and criteria of the Wildlife Conservation Board. A project applicant that contributes funds under this paragraph shall not receive a grant from the Oak Woodlands Conservation Fund as part of the mitigation for the project.”
- (4) Other mitigation measures developed by the county.

C. Other Special-Status Species Classifications

Plant or wildlife species on the California list of Species of Special Concern (CSC) as defined by DFG, plant species on lists 1B and 2 of the California Native Plant Society (CNPS 2005), and active raptor nests are included in this classification. The CEQA Guidelines (Section 15380) also provides that a plant or animal may be treated as rare or endangered even if it has not been placed on an official list provided that it meets the criteria for listing.

D. El Dorado County General Plan Conservation Policies

In addition to federal and state regulations, the 2004 El Dorado County General Plan defines certain goals, objectives, and policies that aim to protect natural resources:

- Objective 7.4.1 of the General Plan states that the County will protect state and federally recognized rare, threatened, or endangered species and their habitats consistent with federal and state laws.
- Policy 7.3.3.4 - Requires developments to have 50-foot setbacks from intermittent features and 100-foot setbacks from perennial waters.
- Policy 7.4.1.1 - The County shall continue to provide for the permanent protection of the eight sensitive plant species known as the Pine Hill endemics and their habitat through the establishment of ecological preserves consistent with County Code Chapter 17.71 and the USFWS's Gabbro Soil Plants for the Central Sierra Nevada Foothills Recovery Plan (USFWS 2002).
- Policy 7.4.1.5 - Species, habitat, and natural community preservation/conservation strategies shall be prepared to protect special status plant and animal species and natural communities and habitats when discretionary development is proposed on lands with such resources unless it is determined that the resources exist, and either are or can be protected, on public lands or private Natural Resource lands.
- Policy 7.4.1.6 - All development projects involving discretionary review shall be designed to avoid disturbance or fragmentation of important habitats to the extent reasonably feasible. Where avoidance is not possible, the development shall be required to fully mitigate the effects of important habitat loss and fragmentation. Mitigation shall be defined in the Integrated Natural Resources Management Plan.
- Policy 7.4.4.4: The County shall apply tree canopy coverage standards to discretionary permit review applicable to oak woodland habitats. Parcels having canopy cover by trees of at least 10 percent, as determined from base line aerial photography or by site survey performed by a qualified licensed arborist or botanist, are subject to canopy coverage retention or replacement standards shown in Table 1.
- Policy 7.4.5.2 - States that it is the County's policy to preserve native oak trees whenever possible and to that end calls for the preparation and implementation of an Oak Tree Preservation Ordinance. The Ordinance would include a permit process for ministerial, discretionary, and commercial oak tree removal. The Ordinance would identify mitigation for oak tree removal and penalties for noncompliance.
- Policy 7.5.1.4 - Proposed rare, threatened, or endangered species preserves, as approved by the County Board of Supervisors, shall be designated Ecological Preserve (-EP) overlay on the General Plan land use map.

APPENDIX G.

CNDDDB Field Survey Form

APN 109-480-07 on Business Drive
El Dorado County, CA

Mail to:
 California Natural Diversity Database
 Department of Fish and Game
 1807 13th Street, Suite 202
 Sacramento, CA 95811
 Fax: (916) 324-0475 email: CNDDDB@dfg.ca.gov

For Office Use Only	
Source Code _____	Quad Code _____
Elm Code _____	Occ. No. _____
EO Index No. _____	Map Index No. _____

Date of Field Work (mm/dd/yyyy): _____

California Native Species Field Survey Form

Scientific Name: _____	
Common Name: _____	
Species Found? <input type="radio"/> Yes <input type="radio"/> No _____ <small>If not, why?</small> Total No. Individuals _____ Subsequent Visit? <input type="radio"/> yes <input type="radio"/> no Is this an existing NDDDB occurrence? _____ <input type="radio"/> no <input type="radio"/> unk. <small>Yes, Occ. #</small> Collection? If yes: _____ <small>Number Museum / Herbarium</small>	Reporter: _____ Address: _____ _____ E-mail Address: _____ Phone: _____

Plant Information Phenology: _____% vegetative _____% flowering _____% fruiting	Animal Information <table style="width: 100%; text-align: center;"> <tr> <td>_____ # adults</td> <td>_____ # juveniles</td> <td>_____ # larvae</td> <td>_____ # egg masses</td> <td>_____ # unknown</td> </tr> <tr> <td><input type="radio"/> wintering</td> <td><input type="radio"/> breeding</td> <td><input type="radio"/> nesting</td> <td><input type="radio"/> rookery</td> <td><input type="radio"/> burrow site</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td><input type="radio"/> other</td> </tr> </table>	_____ # adults	_____ # juveniles	_____ # larvae	_____ # egg masses	_____ # unknown	<input type="radio"/> wintering	<input type="radio"/> breeding	<input type="radio"/> nesting	<input type="radio"/> rookery	<input type="radio"/> burrow site					<input type="radio"/> other
_____ # adults	_____ # juveniles	_____ # larvae	_____ # egg masses	_____ # unknown												
<input type="radio"/> wintering	<input type="radio"/> breeding	<input type="radio"/> nesting	<input type="radio"/> rookery	<input type="radio"/> burrow site												
				<input type="radio"/> other												

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: _____ Landowner / Mgr.: _____

Quad Name: _____ Elevation: _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H M S Source of Coordinates (GPS, topo. map & type): _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H M S GPS Make & Model _____

DATUM: **NAD27** **NAD83** **WGS84** Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 UTM Zone 11 **OR** Geographic (Latitude & Longitude)

Coordinates: _____

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:
Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): Excellent Good Fair Poor

Immediate AND surrounding land use: _____

Visible disturbances: _____

Threats: _____

Comments: _____

Determination: (check one or more, and fill in blanks) Keyed (cite reference): _____ Compared with specimen housed at: _____ Compared with photo / drawing in: _____ By another person (name): _____ Other: _____	Photographs: (check one or more) Slide Print Digital Plant / animal Habitat Diagnostic feature May we obtain duplicates at our expense? yes no
---	--



California Tree and Landscape Consulting, Inc.



Arborist Report

February 14, 2018

Lisle A Hintz Family Trust

Attention: Molly Carter

Work location
Leave It To Us Self Storage
Lot 7 Business Drive
Cameron Park, CA 95682

APN 109-480-07

Arborist Report for Oak Woodland Resources

Prepared by:
Chad Dykstra, Consulting Arborist

Arborist Disclosure Statement

Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatment, pruning and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

Assignment

The subject site is an approximately 7.21 acre open site in a commercial development area. The client contacted our office and requested we provide the information required to satisfy the County of El Dorado's Oak Woodland Resources, determining the oak woodland area, identifying all trees in the woodland area 24 inches in diameter and greater, all Heritage Trees 36 inches in diameter and greater, and any individual oak trees 6 inches and greater located outside of the woodland designation for mitigation for tree removal based on the County ORMP Oak Resources requirements and Ordinance No. 5061. This report is the result of onsite inspections performed on January 30, 2018, and the use of aerial imagery.

Assignment limits

All the trees were observed while standing on the ground. Data collected is limited to a visual ground inspection and aerial drone flyover. The aerial image was taken by a drone and camera. Ground inspections and measurements were used to insure the accuracy of the inspection data.

Current Existing Tree Status (general)

The site is northeast/southwest orientation along Business Drive, and a slight slope downward towards the rear of the property. The proposed development is required to comply with the El Dorado County ORMP Oak Resources requirements and Ordinance No. 5061. The site is a total of

314,079 square feet, or 7.21 acres. The site is mostly an oak woodland with open spaces in the middle large enough to place a structure, and the open areas were not found to be oak woodland. The total oak woodland canopy was found to be 209,930 square feet, or 4.82 acres. There is a 66.84% Oak Woodland coverage. The proposed oak woodland impacted is 92.7%. There is an approximately one-half acre of the site in the northern portion of the property that has received pre-mitigation and is not included in the required oak mitigation calculations for the rest of the site.

The woodland areas are a mix of Blue Oaks, *Quercus douglasii*, and Interior Live Oak, *Quercus wislizenii*, with a few pines scattered among the oaks.

The mitigation ratio is determined by the amount of existing canopy being removed. A total of 194,786 square feet, or 4.47 acres, of the oak woodland areas is being removed from the total 209,930 square feet, or 4.82 acres of oak woodland. That equals 92.7% of the Oak Woodland being impacted.

The mitigation ratio for El Dorado County ORMP is:

Percent of Oak Woodland Impact	Oak Woodland Mitigation Ratio
0-50%	1:1
50.1 – 75%	1.5:1
75.1-100%	2:1

The proposed oak woodland impact falls into the impact range of 75.1 - 100%, and that percent woodland removal/impact requires a 2:1 mitigation ratio. The impacted oak woodland is 4.47 acres. 21,893 square feet, or 0.50 acres of oak woodland has been pre-mitigated, and is subtracted from the impacted area. The total impacted oak woodland area that requires mitigation is 3.97 acres. The total mitigation fee required is 3.97 acres X2 = 7.94 total acres required for Oak Mitigation.

7.94 acres will require mitigation at the cost of \$8,285.00 per acre, for a total mitigation fee of \$65,782.90. Additionally, there is one Heritage Tree, a 39-inch diameter Blue Oak that meets the definition of a Heritage Tree, was found to be in fair condition, and is proposed to be removed. The mitigation fee for Heritage trees is \$459 per diameter inch. The mitigation fee for this tree is \$17,901.00.

Technical Recommendations

It is recommended that all tree care follow specifications written in accordance with ANSI A-300 standards. Pruning of the trees should be performed in the outer edge of the canopy to reduce leverage and end weights and allow the center of the canopies to grow and fill in with foliage. It is also recommended that when root pruning, the smallest size roots as possible be pruned, cuts be performed with handsaws, loppers, or chainsaws appropriate for the size of the root being cut. The roots should be exposed by excavating prior to cutting. Roots should be pruned prior to root removal within the tree protection area to limit the damage and tearing of roots back towards the tree. Root pruning should be overseen by a qualified arborist.

Tree planting should follow the specifications included in Appendix A.

General Tree Care and Maintenance

The appendix information is given so that an onsite landscape manager can properly take care of the retained trees, and newly planted trees. Established native oak trees do not like to have the base of the trunk or their roots and the surrounding soil disturbed or tampered with. Applying or having unintentional landscape water in the root zone can cause catastrophic and negative affects to most species of native oak trees. Newly planted oak trees do need their root balls watered until established and then may need supplemental watering during extended periods of dry or hot weather. It is, therefore, recommended that the landscape be designed using drought tolerant plants that will require little to no watering after establishment. Irrigation should be delivered using an on-surface drip type system that does not require trenching around the oak trees to install. The plants should be spaced at least 6 feet away from the trunk of native oak trees, and the drainage from irrigation should be managed so water does not flow to the trunks of the oak trees. Trees that are growing in high use areas should be inspected by a qualified arborist for tree risk on a routine basis, the frequency depending on site use and tree condition.

Observations

The site was inspected on July 6 and 7, 2015. Based on those tree measurements, the site was re-inspected on January 30, 2018. All trees were inspected for diameter, and those trees that were 24 inches diameter or greater were measured with a diameter tape, assessed for condition, the number of stems present, and notes explaining the tree condition were recorded. A total of 36 trees were found to be 24 inches diameter and greater. Of those trees, six were found to be 36 inches and greater, and considered Heritage Trees.

Of the 36 trees greater than 24 inches diameter or greater, 10 trees were found to be 24 inches diameter or greater and found to be in fair and good condition. Of those, 1 tree was found to be 36 inches in diameter or greater and considered a Heritage Tree and will require additional mitigation. The tree was 39 inches in diameter.

Of the 36 trees greater than 24 inches diameter or greater, 26 trees were found to be 24 inches or greater and found to be in poor or very poor condition. Of those, 5 trees were found to be greater than 36 inches in diameter or greater and considered a Heritage Tree. All of the poor and very poor condition Heritage Trees were multi-trunk, with basal decay.

The data is provided on the attached Lot 7 Business Drive, El Dorado Hills, CA Tree List.

The tree condition is a combination of vigor, structure, trunk, branches, trunk flare, live tissue, and defects and decay or pests. It is described in % and range term. The rating scale is:

<u>Range</u>	<u># Rating</u>	<u>Description</u>
Excellent	81-100	Found to have none to few defects or decay, and high vigor
Good	61-80	Found to have few defects or decay, and above average vigor
Fair	41-60	Found to have mitigatable defects, limited decay, and average vigor
Poor	21-40	Found to have significant defects, decay, and lower vigor
Very poor	120	Found to have significant defects, decay, and low declining vigor
Dead	0	Found to be dead

Plus and minus symbols are included in the rating range to show the position of the % rating in the range.

The oak canopy area was calculated by Alpine Design and Drafting using aerial imagery calculating the area of the site considered Oak Woodland. The field inspection confirmed the location of the canopy as shown on the aerial image.

DBH is the industry standard for measuring trunk diameter. For trees with straight trunks and normal taper, the measurement is taken at 4.5 feet above grade. When a swollen area, flare from branching, multiple stems, or other abnormal growth is present, the measurement is taken at the most appropriate location for determining the reasonable trunk diameter, and the height of the measurement is listed. The initial measurements were taken with a Biltmore Stick. For all trees close to 24 inches diameter or greater, a second more accurate measurement was taken with a diameter tape.

The oak woodland areas are a mix of Blue Oaks, *Quercus douglasii*, and Interior Live Oak, *Quercus wislizenii*, with a few pines scattered among the oaks. The site is 314,079 square feet, or 7.21 acres, with 209,930 square feet, or 4.82 acres, of Oak Woodland area.

The mitigation ratio is determined by the amount of existing canopy being removed. A total of 194,786 square feet, or 4.47 acres, of the oak woodland areas is being removed from the total 209,930 square feet, or 4.82 acres of oak woodland. That equals 92.7% of the Oak Woodland being impacted.

There is a 0.5 acre pre-mitigated oak woodland area on the site. The total oak woodland mitigation area will be 3.97 acres.

Other testing or examination:

No additional testing or examination was requested at the time of the inspection, or found necessary.

Discussion:

The site is a commercial property with 4.82 acres of Oak Woodland areas. A total of 4.47 acres, or 92.7% of Oak Woodland is proposed to be removed. The proposed oak woodland impact falls into the impact range of 75.1 - 100%. That percent woodland removal/impact requires a 2:1 mitigation ratio. The impacted oak woodland is 4.47 acres. A pre-mitigated area of 0.50 acres is subtracted from the impacted area. The total impacted oak woodland area that requires mitigation is 3.97 acres. The total Oak Woodland disturbance mitigation fee required is 3.97 acres X2 = 7.94 total acres required for Oak Mitigation. 7.94 acres will require mitigation at the cost of \$8,285.00 per acre, for a total mitigation fee of \$65,782.90.

Additionally, there is one Heritage Tree, a 39-inch diameter Blue Oak that meets the definition of a Heritage Tree, was found to be in fair condition, and is proposed to be removed. The mitigation fee for Heritage trees is \$459 per diameter inch. The mitigation fee for this tree is \$17,901.00.

The total mitigation fee required for the proposed oak woodland disturbance and Heritage Trees on the site is **\$83,683.90**.

The mitigation proposed will meet the required mitigation based on the El Dorado County ORMP Oak Resources requirements and Ordinance No. 5061.

Conclusion:

A total of 4.47 acres of Oak Woodland is proposed to be removed. .5 acres has been pre-mitigated. The total Oak Woodland area requiring mitigation is 3.97 acres. The mitigation ratio is 2:1. The total required mitigation area required is 7.94 acres. The fee for the mitigation is 7.94 X \$8,285 per acre = \$65,782.90.

There is an additional mitigation fee required for the removal of 1 Heritage Tree, a 39-inch diameter Blue Oak. 39 X \$459 = \$17,901.00.

The total mitigation fee required for this proposed project is \$83,683.90. The mitigation proposed will meet the required mitigation based on the El Dorado County ORMP Oak Resources requirements and Ordinance No. 5061.

Please contact Chad Dykstra, of California Tree and Landscape Consulting, Inc., if there are any questions about this report.

Disclaimer: Chad Dykstra, has analyzed the situation, applied the proper method(s) utilized within the profession, and performed a reasonableness test to support the project tree related decisions. I, nor the employees or subcontractors of California Tree and Landscape Consulting, Inc., may be held liable for the misuse or misinterpretation of this report. As the author of this report, I do hereby certify that all the statements of fact in this report are true, complete, and correct to the best of my knowledge and belief, and that they are made in good faith.

Respectfully submitted,

Chad Dykstra

Chad Dykstra
ISA Certified Arborist WE-5893A
Member, American Society of Consulting Arborists, ASCA
Graduate of ASCA Consulting Academy
ISA TRAQ Qualified Tree Risk Assessor
Chad@caltlc.com
530-957-0128

Attachments:

- Appendix A Tree Planting Specifications
- Appendix B Nursery Stock and Tree Planting
- Appendix C Tree Protection
- Appendix D Avoiding Damage During Construction
- Resume for Chad Dykstra
- Lot 7 Business Drive Cameron Park, CA Tree List
- Oak Tree Woodland Retention Plan

Appendix A Tree Planting Specifications

Trees shall be free of major injury such as scrapes that remove greater than 20% of the bark circumference, a broken central leader, or constrictions from staking or support. The graft, if present, shall be consistent for the production of the cultivar or species. The trunk flare shall be at grade, not buried by soil, and adventitious roots shall not be growing from above the trunk flare.

The tree shall not be root bound in the container, and the trunk diameter relative to the container sizes, within the limits of American National Standards Institute (ANSI) Z-60 Nursery Standards.

Prior to acceptance, upon delivery, trees may be pulled from the container, so the rootball can be inspected for compliance with the specifications. An agreed upon maximum percent of trees may be checked for compliance. The nursery should provide post delivery care specifications to keep the trees in optimum condition until planting.

Tree Planting

1.0 INSPECT THE TREE

- 1.1 Carefully remove the soil at the top of the container to locate the trunk flare. Check for girdling roots and damage to the root system and lower trunk.
- 1.2 Until a relationship is established with the supplying nursery, randomly select an acceptable sample for the delivery. Inspect the root system by taking the rootball out of the container, and remove all the soil from the root system. Inspect the inner roots to verify that the roots were properly pruned when moved from the initial container to the next larger size. Keep the root system moist during the check. If the roots were properly pruned during container transfer, and the roots have been kept moist, the tree can be planted as a bare root tree.
- 1.3 If the trees are acceptable, each tree shall be removed from the container prior to digging the hole, and the depth of the rootball from the trunk flare to the bottom of the rootball shall be measured. This measurement, less 1" is the depth the pedestal in the center of the planting hole shall be excavated to.

2.0 DIG THE HOLE

- 2.1 Shave and discard grass and weeds from the planting site.
- 2.2 The hole should be a minimum 3 times the diameter of the container diameter.
 - 2.2.1 Square containers shall be dug with a circular hole 3 times the container measurement.
- 2.3 Dig the hole, leaving an undisturbed pedestal in the center that the root ball will be set on.
- 2.4 The pedestal shall be excavated to the depth measurement determined above

3.0 ROOT BALL PREPARATION

- 3.1 Loosen and straighten outside and bottom roots prior to placing the rootball on the pedestal. The trunk flare (the point where the trunk meets the roots) should be 1" above ground level.
- 3.2 Winding and girdling roots shall be pruned to either the point they are perpendicular to the root ball, or a point where they can be straightened and placed perpendicular to the rootball.
- 3.3 Keep the roots moist during this process so they do not dry out.

4.0 BACKFILL

- 4.1 Hold the tree so the trunk and central leader are in a straight upright position.
- 4.2 Backfill soil with the soil you removed around the base of the pedestal and rootball no higher than 2/3, so the tree stands in the upright position
- 4.3 Tamp the soil to remove air gaps, or fill with water and allow soil to settle and drain. Continue to fill the entire hole with existing soil in layers and tamping, up to finished grade. Backfill soil shall not be placed on top of the rootball.
- 4.4 Build a berm at the outside edge of the rootball. The berm shall be a minimum 3 inches high and wide.
- 4.5 Cover the remainder of the backfill soil outside the berm with a set level of mulch (2 to 4 inches deep).

5.0 STAKING

- 5.1 Remove the nursery stake (the thin stake tied to the trunk) that is secured to the tree.
- 5.2 Install the appropriate number of stakes – for example, two stakes on the windward and leeward side of the tree, set at least 2 feet into the native soil outside the rootball.
 - 5.2.1 If the area is exceptionally windy, high traffic, or when specified, install 3 or 4 stakes spaced evenly around the circumference, outside the rootball.
- 5.3 One tie per stake shall be placed at the lowest point on the trunk where the tree crown stands upright. Ties shall be placed using a “figure 8” crossing pattern wrapped around the trunk and firmly tied or attached to the stake.
 - 5.3.1 Ties shall be loose enough so the tree crown moves up to 3 times the trunk diameter in the wind, and taut enough that the trunk does not rub the stakes during movement.
- 5.4 The stakes shall be cut off above the tie point so branches do not rub the stake above the tie point.
- 5.5 Check the stakes and ties periodically, removing them when the tree is able to stand on its own.
- 5.6 If a leader that should be vertical is drooping, the leader may be temporarily straightened using a bamboo or small diameter wood splint approximately 25% longer than the drooping section of stem, tied to the stem at the top and bottom of the splint to hold the stem vertical. The splint shall be removed prior to girdling or constricting the stem, and may be re-installed as necessary.

6.0 MULCH

- 6.1 Apply a set depth (2 to 4 inches) of wood chips or other organic mulch over the planting hole excavated soil.
- 6.2 Mulch may be placed inside the berm and shall be kept at least 4” away from the trunk flare.
- 6.3 The soil area of the planting hole shall be kept clear of grass and landscape plantings.

7.0 WATER/IRRIGATION

- 7.1 Apply water using a low pressure application, i.e.: trickle from a hose, soaker hose, or bubbler.
- 7.2 Use low water volume to apply the water. Add water long enough to saturate the rootball and planting area.
 - 7.2.1 Lawn sprinklers shall not be considered an acceptable method of applying irrigation to newly planted trees.
- 7.3 The initial watering frequency shall be checked by monitoring the soil moisture. Based on the temperature and humidity, learn how long the soil retains the moisture.
- 7.4 After the soil is below field capacity, and before it dries out, repeat the watering process, every so determined days.
 - 7.4.1 As the weather and seasons change, the irrigation frequency may change. This will be evaluated by checking soil moisture following water application.
 - 7.4.1.1 For example: you may learn irrigation should be applied twice a week during the fall, except in cool or rainy weather. Irrigation may need to be applied every two days during hot dry summer periods.
- 7.5 Irrigation shall be continued for the first three years after planting.
 - 7.5.1 Avoiding drying out the rootball and adjacent soil is critical for tree growth and establishment.

8.0 PROTECT THE TRUNK

- 8.1 Avoid damage from mowers and string trimmers to the tender bark of the young tree.
- 8.2 Maintain a clear area free of vegetation around the trunk in the berm or basin area.
- 8.3 Keep the set depth of mulch (2 to 4 inches) coverage of the area around the tree.
- 8.4 Retain temporary low branches along the trunk to shade and feed the trunk.

9.0 PRUNING NEWLY PLANTED TREES

- 9.1 Broken and dead branches shall be pruned.
- 9.2 A central leader shall be identified and retained if present. If co-dominant leaders are present, they shall be pruned to be shorter than the central leader by 20%.
- 9.3 All low temporary branches on the lower trunk shall be retained, and if needed shortened for clearance.



Detail for #1, #5 and #15 container planting stock

10. FUTURE CARE

10.1 During subsequent years, the berm should be enlarged or removed in order to provide water to the increasing root growth. The watering area should target new root growth and projected root growth.

10.2 Pruning should retain a dominant central leader; and retain low temporary branches until trunk bark hardens or remove before branch diameter becomes too large.

Appendix B

Nursery Stock and Tree Planting

Nursery Stock purchase

Trees purchased for the subject project shall be the Genus, species, and cultivar specified in the purchase documents. Trees shall be grown to be free of bound root systems caused by winding roots or kinked roots from a previous smaller container. As trees are moved to larger containers, circling roots shall be either pruned to a point where they can grow straight, straightened in the new container, or removed. Kinked roots shall be pruned to a point where they will grow straight outward or downward.

The trunk and branches shall be of a structure where a central leader is defined, or the central leader can be easily selected. The competing leaders have a smaller diameter, and can be pruned shorter.

Appendix C

Tree Protection

The edge of the tree canopy outside of the construction area shall be fenced off with construction fencing, either temporary orange fence or chain link fence. The fence shall be placed as far from the trees as possible, targeting outside the dripline. If the fence cannot be placed outside of the dripline, the project arborist shall determine if the distance is acceptable or some other soil protection is necessary. A certified arborist must approve the placement of the tree fence. The fence will be marked with weather appropriate signage clearly stating the area as "Protected! Do not enter! Tree preservation zone." Sign(s) will be placed on every face or direction of fence line.

No storage of supplies or materials, parking, or other construction activity shall occur within the fenced area. If a construction activity is required within the construction area, specific specifications and mitigation shall be written to cover the work, and the fencing may be entered during the necessary construction activity, then the fencing shall be replaced after the activity is completed for the day.

The construction protection shall remain in place until the project is completed, including landscape activities. Landscape activities shall have specifications that protect the trees during the landscape activities.

Any bare soil around protected trees should be covered with a 4-inch layer of mulch consisting of ground-up tree parts.

If the protected trees appear to show signs of yellowing leaves, dead leaves, or other abnormal appearance, contact the project arborist for inspection and mitigation.

Long Term Landscape Maintenance Plan and Specifications

General

This plan and specifications are intended to promote the optimum landscape growth and lifespan. Individual tree planting in specific sites in the parking lot are intended to provide a large shade canopy over time covering 50% or greater of the parking lot. The border and natural screening plantings are overplanted and intended to fill the space initially, and have the weaker trees removed over time, to create the space and site resources necessary for the remaining trees. Trees initially will be planted on approximate 10 foot centers, with the long term spacing to be approximately 20 foot centers. As trees are thinned, they may be transplanted or removed, as best suited to the remaining trees on the site.

These trees shall be pruned to establish a central leader, to provide the best structure by managing size relationships between parent and subordinate trunk and branches, and to encourage growth into a large shade canopy. These trees shall not be topped or rounded over. Trees may have competing leaders headed back to promote the strong central leader necessary to eliminate co-dominant stems and weak branching.

Design Intent

The trees planted around the perimeter and alongside the sidewalk or street are intended to replicate natural areas and to screen the project and adjacent properties. The native oaks shall be more tightly spaced at planting and thinned over time to promote the growth of the final or climax trees on the site. The thinning for spacing shall be performed as the trees get larger and their crowns begin to overlap. When the desired tree crowns are being impacted by an adjacent tree, the adjacent tree should either be pruned or removed, to provide the optimum screening while enhancing the desired tree growth. Pruning shall retain a dominant central leader and for decurrent tree structures, remove competing leaders, and maintain the appropriate size relationships between parent and subordinate trunk and branches.

Pruning Small Trees

Branches are to be pruned by either reduction, thinning, or raising cuts to achieve the appropriate clearance over the area. The smallest diameter branches should be removed, working from the branch tips towards the center, removing none to minimal interior foliage inside the final outward branch cut. Trees shall be cleaned to remove dead branches, weakly attached branches, and branches where significant damage has occurred by rubbing, animals, insects, or critical disease. All pruning cuts shall be made in accordance with American National Standards Institute (ANSI) A300 Part 1 Pruning Standards and International Society of Arboriculture (ISA) Best Management Practices for Pruning.

On trees up to six inches in diameter, all dead branches greater than one-half inch diameter shall be removed. All weakly attached branches and potential co-dominant branches shall either be reduced by at least 20% or be removed, as most appropriate for the long term structure of the tree. The weakest or most damaged branch of a pair or group of rubbing branches shall be shortened to avoid rubbing, or removed. All temporary branches along the trunk should be retained and shortened to obtain necessary clearance. When either temporary branches exceed one-inch diameter, or the trunk forms mature bark, the temporary branches should be removed.

Stakes shall be installed as necessary to support a straight growing tree, and reduce crooked growth caused by high wind. The trunk shall be supported at the lowest point to keep the crown supported straight, and the portions of the stake above the tie point cut off to avoid rubbing branches. After the tree becomes firmly rooted, and the stake is no longer necessary to support the tree, the stakes shall be removed.

Depending on the location and site needs, clearance should be performed by pruning the smallest branches inward from the branch tips until the permanent branches are in place. Clearance minimums should be set, for example: 7.5' over sidewalks, 10 feet over parking spaces, and 14.5 feet over truck traffic streets. Clearance pruning shall be carefully performed until the permanent branches are identified. Up to 25% of the total foliage on any tree should be the maximum removed during any planned pruning cycle. Follow-up pruning for structure or clearance on young trees can be performed at any time if pruning small amounts of foliage (up to 10%) and retaining the central leader and branch size relationships.

Pruning Large Trees

Branches are to be pruned by either reduction, thinning, or raising cuts to achieve the appropriate clearance over the area. The smallest diameter branches should be removed, working from the branch tips towards the center, removing none to minimal interior foliage inside the final outward branch cut. Trees shall be cleaned to remove dead branches, weakly attached branches, and branches where significant damage has occurred by rubbing, animals, insects, or critical disease. All pruning cuts shall be made in accordance with American National Standards Institute (ANSI) A300 Part 1 Pruning Standards and International Society of Arboriculture (ISA) Best Management Practices for Pruning.

On trees larger than six inches in diameter, all dead branches greater than one-inch diameter shall be removed. Long heavy branches that are either growing flat or bending down shall have approximately 15% of the end weight reduced, accomplished by a combination of pruning the downward growing branches, shortening long tips, and thinning endweights. If any structural issues are observed by the climber working in the tree, they shall notify the property manager immediately to discuss the tree's needs.

Depending on the location and site needs, clearance should be performed by pruning the smallest branches inward from the branch tips until the permanent branches are in place. Clearance minimums should be set, for example: 7.5' over sidewalks, 10 feet over parking spaces, and 14.5 feet over truck traffic streets. Clearance pruning shall be carefully performed until the permanent branches are identified. Up to 25% of the total foliage on any tree should be the maximum removed during any planned pruning cycle.

Any special site issues for utility clearance or conflicts with other objects shall be managed by early pruning to direct growth away from the target lines, overhead lights, flags, or buildings.

Thinning of Dense Planting

Many landscape plantings and natural landscape areas are over-planted by installing a greater number of plants at closer spacing than optimum for the full-sized plants. Over time, plants will grow into each other, the crowns will conflict, and the spacing will need to be corrected. Correct spacing is obtained by removing the least desirable plants to meet the final spacing target, within reasonable tolerances.

If conflicting plants are all healthy, it won't matter which plants are removed to achieve the spacing distances. Spaced thinning should be performed before the foliar crowns are intertwined or overlapping. The thinning may be performed over two or three cycles as the trees grow over time, depending on the density and desired final spacing.

The trees initially will be planted on approximate 10 foot centers, with the long term spacing to be approximately 20 foot centers. The healthiest and best specimens should be retained on site. As trees are thinned, they may be transplanted or removed, as best suits the remaining trees on the site.

Appendix D

Avoiding Tree Damage During Construction

Information from the ISA

As cities and suburbs expand, wooded lands are being developed into commercial and residential sites. Homes are constructed in the midst of trees to take advantage of the aesthetic and environmental value of the wooded lots. Wooded properties can be worth as much as 20 percent more than those without trees, and people value the opportunity to live among trees.

Unfortunately, the processes involved with construction can be deadly to nearby trees. Unless the damage is extreme, the trees may not die immediately but could decline over several years. With this delay in symptom development, you may not associate the loss of the tree with the construction.

It is possible to preserve trees on building sites if the right measures are taken. The most important step is to hire a professional arborist during the planning stage. An arborist can help you decide which trees can be saved and can work with the builder to protect the trees throughout each construction phase.

How Trees Are Damaged During Construction

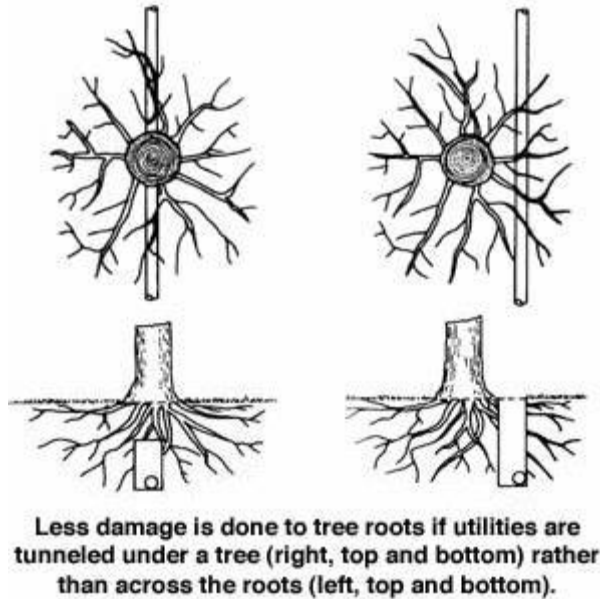
Physical Injury to Trunk and Crown. Construction equipment can injure the aboveground portion of a tree by breaking branches, tearing the bark, and wounding the trunk. These injuries are permanent and, if extensive, can be fatal.

Cutting of Roots. The digging and trenching that are necessary to construct a house and install underground utilities will likely sever a portion of the roots of many trees in the area. It is easy to appreciate the potential for damage if you understand where roots grow. The roots of a tree are found mostly in the upper 6 to 24 inches of the soil. In a mature tree, the roots extend far from the trunk. In fact, roots typically are found growing a distance of one to three times the height of the tree. The amount of damage a tree can suffer from root loss depends, in part, on how close to the tree the cut is made. Severing one major root can cause the loss of 5 to 20 percent of the root system.



The roots of a tree extend far from the trunk and are found mostly in the upper 6 to 12 inches of soil.

Another problem that may result from root loss caused by digging and trenching is that the potential for the trees to fall over is increased. The roots play a critical role in anchoring a tree. If the major support roots are cut on one side of a tree, the tree may fall or blow over.



Less damage is done to tree roots if utilities are tunneled under a tree rather than across the roots.

Soil Compaction. An ideal soil for root growth and development is about 50 percent pore space. These pores—the spaces between soil particles—are filled with water and air. The heavy equipment used in construction compacts the soil and can dramatically reduce the amount of pore space. This compaction not only inhibits root growth and penetration but also decreases oxygen in the soil that is essential to the growth and function of the roots, and water infiltration.

Smothering Roots by Adding Soil. Most people are surprised to learn that 90 percent of the fine roots that absorb water and minerals are in the upper 6 to 12 inches of soil. Roots require space, air, and water. Roots grow best where these requirements are met, which is usually near the soil surface. Piling soil over the root system or increasing the grade smothers the roots. It takes only a few inches of added soil to kill a sensitive mature tree.

Exposure to the Elements. Trees in a forest grow as a community, protecting each other from the elements. The trees grow tall, with long, straight trunks and high canopies. Removing neighboring trees or opening the shared canopies of trees during construction exposes the remaining trees to sunlight and wind. The higher levels of sunlight may cause sunscald on the trunks and branches. Also, the remaining trees are more prone to breaking from wind or ice loading.

Getting Advice

Hire a professional arborist in the early planning stage. Many of the trees on your property may be saved if the proper steps are taken. Allow the arborist to meet with you and your building contractor.

Your arborist can assess the trees on your property, determine which are healthy and structurally sound, and suggest measures to preserve and protect them.

One of the first decisions is determining which trees are to be preserved and which should be removed. You must consider the species, size, maturity, location, and condition of each tree. The largest, most mature trees are not always the best choices to preserve. Younger, more vigorous trees usually can survive and adapt to the stresses of construction better. Try to maintain diversity of species and ages. Your arborist can advise you about which trees are more sensitive to compaction, grade changes, and root damage.

Planning

Your arborist and builder should work together in planning the construction. The builder may need to be educated regarding the value of the trees on your property and the importance of saving them. Few builders are aware of the way trees' roots grow and what must be done to protect them.

Sometimes small changes in the placement or design of your house can make a great difference in whether a critical tree will survive. An alternative plan may be more friendly to the root system. For example, bridging over the roots may substitute for a conventional walkway. Because trenching near a tree for utility installation can be damaging, tunneling under the root system may be a good option.

Erecting Barriers

Because our ability to repair construction damage to trees is limited, it is vital that trees be protected from injury. The single most important action you can take is to set up construction fences around all of the trees that are to remain. The fences should be placed as far out from the trunks of the trees as possible. As a general guideline, allow 1 foot of space from the trunk for each inch of trunk diameter. The intent is not merely to protect the aboveground portions of the trees but also the root systems. Remember that the root systems extend much farther than the drip lines of the trees.

Instruct construction personnel to keep the fenced area clear of building materials, waste, excess soil, and equipment. No digging, trenching, or other soil disturbance such as driving vehicles and equipment over the soil should be allowed in the fenced area.

Protective fences should be erected as far out from the trunks as possible in order to protect the root system prior to the commencement of any site work, including grading, demolition, and grubbing.

Limiting Access

If at all possible, it is best to allow only one access route on and off the property. All contractors must be instructed where they are permitted to drive and park their vehicles. The construction access drive should be the route for utility wires; underground water, sewer, or storm drain lines; roadways; or the driveway.



Protective fences should be erected as far out from the trunks as possible in order to protect the root systems.

Specify storage areas for equipment, soil, and construction materials. Limit areas for burning (if permitted), cement wash-out pits, and construction work zones. These areas should be away from protected trees.

Specifications

Specifications are to be put in writing. All of the measures intended to protect your trees must be written into the construction specifications. The written specifications should detail exactly what can and cannot be done to and around the trees. Each subcontractor must be made aware of the barriers, limitations, and specified work zones. It is a good idea to post signs as a reminder.

Fines and penalties for violations should be built into the specifications. Not too surprisingly, subcontractors are much more likely to adhere to the tree preservation clauses if their profit is at stake. The severity of the fines should be proportional to the potential damage to the trees and should increase for multiple infractions.

Maintaining Good Communications

It is important to work together as a team. You may share clear objectives with your arborist and your builder, but one subcontractor can destroy your prudent efforts. Construction damage to trees is often irreversible.

Visit the site at least once a day if possible. Your vigilance will pay off as workers learn to take your wishes seriously. Take photos at every stage of construction. If any infraction of the specifications does occur, it will be important to prove liability.

Final Stages

It is not unusual to go to great lengths to preserve trees during construction, only to have them injured during landscaping. Installing irrigation systems and roto-tilling planting beds are two ways the root systems of trees can be damaged. Remember also that small increases in grade (as little as 2 to 6 inches) that place additional soil over the roots can be devastating to your trees. ANSI A300

Standards Part 5 states that tree protection shall be in place for the landscape phase of the site development. Landscape tree protection may be different than other construction process tree protection, and a conference with the landscape contractor should be held prior to the commencement of the landscape work. Careful planning and communicating with landscape designers and contractors is just as important as avoiding tree damage during construction.

Post-Construction Tree Maintenance

Your trees may require several years to adjust to the injury and environmental changes that occur during construction. The better construction impacts are avoided, the less construction stress the trees will experience. Stressed trees are more prone to health problems such as disease and insect infestations. Talk to your arborist about continued maintenance for your trees. Continue to monitor your trees, and have them periodically evaluated for declining health or safety hazards.

Despite the best intentions and most stringent tree preservation measures, your trees still might be injured from the construction process. Your arborist can suggest remedial treatments to help reduce stress and improve the growing conditions around your trees. In addition, the International Society of Arboriculture offers a companion to this brochure titled "Treatment of Trees Damaged by Construction".



Edited from the ISA's tree protection guidelines



California Tree and Landscape Consulting, Inc.

CHAD DYKSTRA

EDUCATION AND QUALIFICATIONS

- 2000 – 2002 Information Systems and Business Management, University of Phoenix.
- 2001 Certified as an Arborist, WE-5893A, by the International Society of Arboriculture (ISA).
- 2007 Member American Society of Consulting Arborists.
- 2007 American Society of Consulting Arborists (ASCA), Graduate of the Consulting Academy.
- 2013 ISA Qualified Tree Risk Assessor (T.R.A.Q.).



PROFESSIONAL EXPERIENCE

- 2016 – Present CALIFORNIA TREE AND LANDSCAPE CONSULTING, INC (CalTLC). Chief Financial Officer and Consulting Arborist. Placerville. Mr. Dykstra provides consultation to business, private and public clients in regards to general tree care, tree and plant health care, business development, management planning for the care of trees, tree appraisal, and risk assessment.
- 2015 - Present FOOTHILL TREE SERVICE. President and Chief Executive Officer of Dykstra Enterprises. Placerville. Mr. Dykstra is the front facing executive and provides leadership and focus for his direct reports.
- 2004 - 2015 FOOTHILL TREE SERVICE. Vice President and Consulting Arborist. Placerville. Mr. Dykstra was the responsible managing officer for Foothill Landscapes, a CSLB C-27 licensed landscaping company. He also provided oversight to other consulting arborists, the director of the plant health care program, and general arborists. As a consulting arborist, Mr. Dykstra conducted services such as disease and insect diagnosis and treatment, evaluation of tree hazards and safety, proposal estimator, tree appraisal, analytical soil testing, soil erosion control, and tree selection and planting. Mr. Dykstra has also provided consulting services for commercial, private, and governmental companies, insurance defense cases, and consulting forensic expertise for companies and agencies such as the City of Placerville, El Dorado County Department of Transportation, and City of Folsom.
- 1995 - 2004 FOOTHILL TREE SERVICE. Estimator and Foreman. Placerville. Mr. Dykstra provided sales, planning support, and direction for commercial, residential and governmental customers. Additionally, he provided and trained staff all levels in various aspects of the arboriculture field.
- 1988 - 1995 FOOTHILL TREE SERVICE. Tree Worker and Arborist. Placerville. Mr. Dykstra evaluated trees on client estates for commercial, residential and governmental customers. He performed work as a

climber, ground-person, feller, general tree worker and supported of tree work activities associated with working within a crew.

2000 WESTERN CHAPTER ISA (WCISA).

- Chairperson of the Marketing Committee (2013 - 2017)
- Chairperson of the Membership Committee (2012 - 2014)
- Member of the Membership Committee (2011 - 2012) 2001
- Present INTERNATIONAL SOCIETY OF ARBORICULTURE. Member.

2007 - Present AMERICAN SOCIETY OF CONSULTING ARBORISTS. Member.

PUBLICATIONS AND LECTURES

Mr. Dykstra has presented at the City of Placerville on numerous topics, such as plant health care, insect detection and treatment, fire prevention, fire loss evaluation, landscape design, tree selection and planting, and tree risk assessment. He has authored the Approved Plant List for Native and Non-native Plants for Use in New Commercial and Residential Developments, which was published by the City of Placerville in 2004 and revised through 2008.

Assumptions and Limiting Conditions

1. Consultant assumes that any legal description provided to Consultant is correct and that title to property is good and marketable. Consultant assumes no responsibility for legal matters. Consultant assumes all property appraised or evaluated is free and clear, and is under responsible ownership and competent management.
2. Consultant assumes that the property and its use do not violate applicable codes, ordinances, statutes or regulations.
3. Although Consultant has taken care to obtain all information from reliable sources and to verify the data insofar as possible, Consultant does not guarantee and is not responsible for the accuracy of information provided by others.
4. Client may not require Consultant to testify or attend court by reason of any report unless mutually satisfactory contractual arrangements are made, including payment of an additional fee for such Services as described in the Consulting Arborist Agreement.
5. Unless otherwise required by law, possession of this report does not imply right of publication or use for any purpose by any person other than the person to whom it is addressed, without the prior express written consent of the Consultant.
6. Unless otherwise required by law, no part of this report shall be conveyed by any person, including the Client, the public through advertising, public relations, news, sales or other media without the Consultant's prior express written consent.
7. This report and any values expressed herein represent the opinion of the Consultant, and the Consultant's fee is in no way contingent upon the reporting of a specific value, a stipulated result, the occurrence of a subsequent event or upon any finding to be reported.
8. Sketches, drawings and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys. The reproduction of any information generated by architects, engineers or other consultants and any sketches, drawings or photographs is for the express purpose of coordination and ease of reference only. Inclusion of such information on any drawings or other documents does not constitute a representation by Consultant as to the sufficiency or accuracy of the information.
9. Unless otherwise agreed, (1) information contained in this report covers only the items examined and reflects the condition of those items at the time of inspection; and (2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing or coring. Consultant makes no warranty or guarantee, express or implied that the problems or deficiencies of the plans or property in question may not arise in the future.
10. Loss or alteration of any part of this Agreement invalidates the entire report.

Certificate of Performance

I, Chad Dykstra, certify that:

I have personally inspected the trees and site referred to in this report and have stated my findings accurately. The extent of the inspection is stated in the attached report under Assignment;

I have no current or prospective interest in the vegetation, or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved;

The analysis, opinions and conclusions stated herein are my own and are based on current scientific procedures and facts;

My analysis, opinions, and conclusions were developed, and this report has been prepared according to commonly accepted arboricultural practices;

No one provided significant professional assistance to me, except as indicated within the report;

My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client, or any other party, nor upon the results of the assignment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member in good standing of the International Society of Arboriculture (ISA) and an ISA Certified Arborist and Municipal Specialist. I am also a member in good standing of the American Society of Consulting Arborists. I have been involved in the practice of arboriculture and the care and study of trees for over 29 years.

Signed:

Chad Dykstra

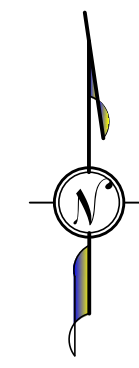
Chad Dykstra

Date: February 22, 2018



-  Oak Canopy Area To Remain
-  Oak Canopy Removal Area (Pre-mitigated)
-  Oak Canopy Removal Area (Woodland Area)
-  Oak Canopy Removal Area (Single Tree)
-  Dead / Diseased Oak
-  Replanting Area
-  Heritage Tree (No. X)

Notes:
 All work performed shall conform with all Federal, State and Local codes and, El Dorado County ORMP and Ordinance No. 5061.
 These plans and accompanying documents shall be an integral part of the project contract documents.
 These plans and accompanying documents shall be reviewed and approved by El Dorado County Planning Department and/or other agencies having jurisdiction before the commencement of work.
 The Engineer of Record, Owner, Surveyor(s) and Contractor(s) shall coordinate all work with these plans and accompanying documents.
 All errors and/or omissions within these plans and accompanying documents shall be brought to the attention of the Engineer of Record and Arborist, corrected and re-approved by El Dorado County Planning Department before the (re)commencement of work.
 Sufficient care shall be exercised to effectively protect all Oak Trees (trees of the genus Quercus) and/or any other protected tree, marker and species. Tree protection fencing shall be placed after completion of tree removal operations and prior to clearing and grubbing.
 All canopy areas used in these plans to calculate compliance with EDC OMRP and Ordinance No. 5061 are of Oak trees only. All other tree species are excluded from the calculative values. These Oak tree canopy area(s) have been determined with the use of recent aerial photography and on-site survey.
 The permitted Canopy Removal Area was calculated using Section 130.39.060 (A) of Ordinance No. 5061, the Zoning Ordinance, Section 130.52.010 and OMRP.
 Total Site Area = 314079 sq.ft. (7.21 ac);
 Total Oak Tree Canopy Area on Site = 209930 sq.ft.
 Oak woodland coverage = 66.84%;
 Oak woodland impacted (Table 3) = 93%
 Total Removal Area (Pre-mitigated) = 21893 sq.ft.;
 Total Removal Area (Mitigation required) = 172893 sq.ft.;
 Mitigation for removed Oak tree canopy area is based upon OMRP Sections 130.52.010, Administrative Permit, Relief or Waiver for ministerial projects and Tables 3 and 5. These calculations are as follows:
 Total Removed Canopy Area = 172893 sq.ft. (not counting pre-mitigated canopy)
 1 acre = 43560 sq.ft., thus 172893 sq.ft. = 3.969 acres;
 Therefore the mitigation fee shall be calculated as 3.969 ac at a 2:1 ratio per OMRP Tables 3 and 5 since 93% of the oak woodland is impacted.
 Heritage trees:
 1. Blue Oak, 39" DBH. Mitigation fee to be calculated at a 3:1 ratio as per Table 6.
 The Arborist may require the removal of additional trees if he/she warrants them to be a hazard within or outside of the construction limits and/or building sites. These trees are not subject to replacement standards if the Arborist finds them dead, diseased or dying.



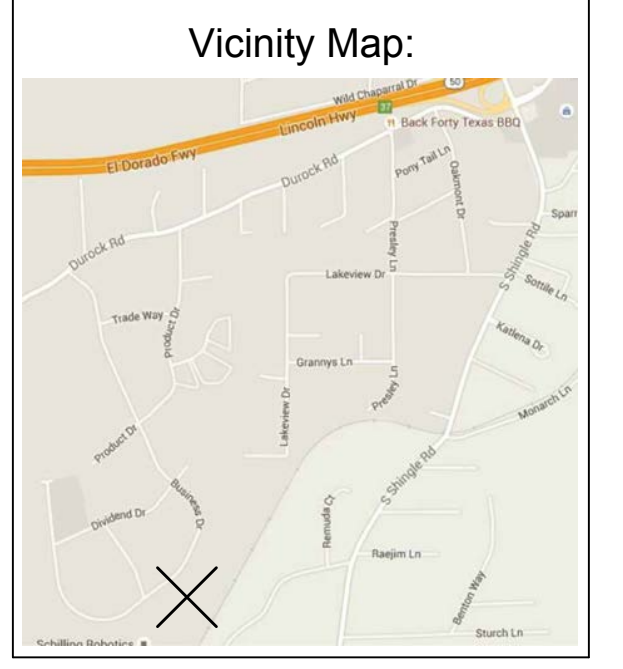
Oak Tree Woodland Retention Plan



Chad Dykstra
 Consulting Arborist
 WE-5893A
 530.957.0128

Proposed:
Leave It To Us Self Storage

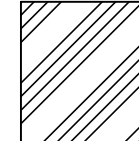
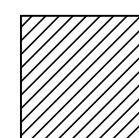
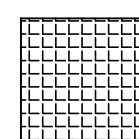
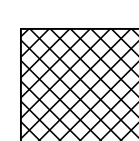
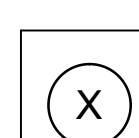
Project Info:
Lisle AHintz Family Trust
 Lot 7 Business Dr
 Cameron Park CA 95682
 APN: 109-480-07
 Lot Area: 7.21 AC



Revision:
Rev. 1 (9/4/2015)
Rev. 2 (2/9/2018)
Date: 2/9/2018

Drafted By: Alpine



-  Oak Canopy Area To Remain
-  Oak Canopy Removal Area (Pre-mitigated)
-  Oak Canopy Removal Area (Woodland Area)
-  Oak Canopy Removal Area (Single Tree)
-  Dead / Diseased Oak
-  Replanting Area
-  Heritage Tree (No. X)

Notes:
 All work performed shall conform with all Federal, State and Local codes and, El Dorado County ORMP and Ordinance No. 5061.

These plans and accompanying documents shall be an integral part of the project contract documents.

These plans and accompanying documents shall be reviewed and approved by El Dorado County Planning Department and/or other agencies having jurisdiction before the commencement of work.

The Engineer of Record, Owner, Surveyor(s) and Contractor(s) shall coordinate all work with these plans and accompanying documents.

All errors and/or omissions within these plans and accompanying documents shall be brought to the attention of the Engineer of Record and Arborist, corrected and re-approved by El Dorado County Planning Department before the (re)commencement of work.

Sufficient care shall be exercised to effectively protect all Oak Trees (trees of the genus Quercus) and/or any other protected tree, marker and species. Tree protection fencing shall be placed after completion of tree removal operations and prior to clearing and grubbing.

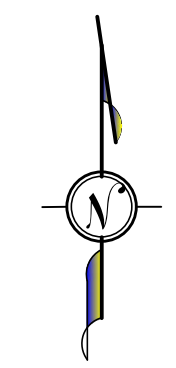
All canopy areas used in these plans to calculate compliance with EDC OMRP and Ordinance No. 5061 are of Oak trees only. All other tree species are excluded from the calculative values. These Oak tree canopy area(s) have been determined with the use of recent aerial photography and on-site survey.

The permitted Canopy Removal Area was calculated using Section 130.39.060 (A) of Ordinance No. 5061, the Zoning Ordinance, Section 130.52.010 and OMRP.
 Total Site Area = 314079 sq.ft. (7.21 ac);
 Total Oak Tree Canopy Area on Site = 209930 sq.ft.
 Oak woodland coverage = 66.84%;
 Oak woodland impacted (Table 3) = 93%
 Total Removal Area (Pre-mitigated) = 21893 sq.ft.;
 Total Removal Area (Mitigation required) = 172893 sq.ft.;

Mitigation for removed Oak tree canopy area is based upon OMRP Sections 130.52.010, Administrative Permit, Relief or Waiver for ministerial projects and Tables 3 and 5. These calculations are as follows:
 Total Removed Canopy Area = 172893 sq.ft. (not counting pre-mitigated canopy)
 1 acre = 43560 sq.ft, thus 172893 sq.ft. = 3.969 acres;
 Therefore the mitigation fee shall be calculated as 3.969 ac at a 2:1 ratio per OMRP Tables 3 and 5 since 93% of the oak woodland is impacted.

Heritage trees:
 1. Blue Oak, 39" DBH. Mitigation fee to be calculated at a 3:1 ratio as per Table 6.

The Arborist may require the removal of additional trees if he/she warrants them to be a hazard within or outside of the construction limits and/or building sites. These trees are not subject to replacement standards if the Arborist finds them dead, diseased or dying.



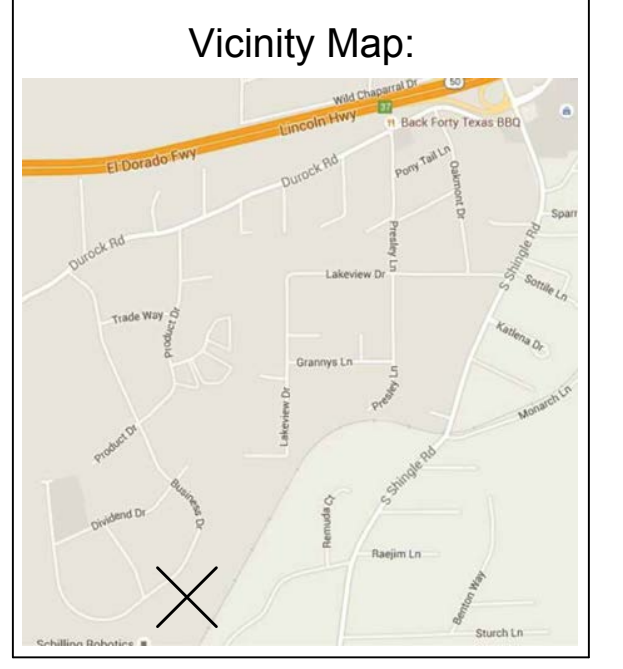
Oak Tree Woodland Retention Plan



Chad Dykstra
 Consulting Arborist
 WE-5893A
 530.957.0128

Proposed:
Leave It To Us Self Storage

Project Info:
Lisle AHintz Family Trust
 Lot 7 Business Dr
 Cameron Park CA 95682
 APN: 109-480-07
 Lot Area: 7.21 AC



Revision:

Rev. 1 (9/4/2015)
Rev. 2 (2/9/2018)

Date: 2/9/2018

Drafted By: Alpine

Lot 7 Business Drive, El Dorado Hills, CA
Tree List

Item #	Species	Common Name	DBH inches	Crown Radius feet	Condition rating	Comments	Proposed Removal	Within Bldg Area	Mitigation	Construction Impacts
Trees Within Building Area										
105	Quercus douglasii	Blue Oak	12, 12	18	Fair	co-dominant stems at 2', endweights, leans east	N	N	NA	Protect
82	Quercus douglasii	Blue Oak	11, 18, 10	22	Fair	3 stems, center trunk vertical, leans west and east, 10% dead branches	N	N	NA	Protect
94	Quercus douglasii	Blue Oak	30	24	Fair	Co-dominant stems at 3', by east property fence	N	N	NA	Protect
99	Quercus douglasii	Blue Oak	30	31	Fair	co-dominant stems, trunk wound, crowded	N	N	NA	Protect
41	Quercus douglasii	Blue Oak	29	31	Fair	leans southwest, outward, co-dominant stems,	Y	Y	by canopy	Remove
37	Quercus douglasii	Blue Oak	26	22	Fair	co-dominant leaders, end weights	Y	Y	by canopy	Remove
39	Quercus douglasii	Blue Oak	24	21	Fair	leans southwest, basal decay	Y	Y	by canopy	Remove
85	Quercus douglasii	Blue Oak	24	16	Fair	co-dominant leaders, included bark	N	N	NA	Protect
90	Quercus douglasii	Blue Oak	24	21	Fair	Growing at east fenceline, 3 leaders at 4',	N	N	NA	Protect
96	Quercus douglasii	Blue Oak	24	22	Fair	crowded, self-correcting growth, endweights	N	N	NA	Protect
67	Quercus douglasii	Blue Oak	23	24	Fair	co-dominant leaders, leans east and south, included bark, one-sided crown,	Y	Y	by canopy	Remove
60	Quercus douglasii	Blue Oak	22	28	Fair	Symmetrical crown, slight lean northwest, 10% dead branches	Y	Y	by canopy	Remove
83	Quercus douglasii	Blue Oak	22	23	Fair	symmetric crown	N	N	NA	Protect
84	Quercus douglasii	Blue Oak	22	18	Fair	crowded, symmetrical crown	N	N	NA	Protect
97	Quercus douglasii	Blue Oak	22	25	Fair	co-dominant stems lean north and west	N	N	NA	Protect
100	Quercus douglasii	Blue Oak	22	26	Fair	Basal decay, leans east	N	N	NA	Protect
40	Quercus douglasii	Blue Oak	21	20	Fair	crowded, co-dominant stems, included bark, leans south	Y	Y	by canopy	Remove
79	Quercus douglasii	Blue Oak	21	23	Fair	Co-dominant leaders, crowded	Y	Y	by canopy	Remove
23	Quercus douglasii	Blue Oak	20	20	Fair	straight trunk, swollen base	Y	Y	by canopy	Remove
6	Quercus douglasii	Blue Oak	18	16	Fair	co-dominant stems, leans west	Y	Y	by canopy	Remove
13	Quercus douglasii	Blue Oak	18	21	Fair	co-dominant leaders, 10% dead branches	Y	Y	by canopy	Remove
33	Quercus douglasii	Blue Oak	18	15	Fair	leans west	Y	Y	by canopy	Remove
43	Quercus douglasii	Blue Oak	18	18	Fair	one-sided crown, crowded	Y	Y	by canopy	Remove
48	Quercus douglasii	Blue Oak	18	17	Fair	crowded, 10% dead branches	Y	Y	by canopy	Remove
61	Quercus douglasii	Blue Oak	18	14	Fair	Symmetrical crown, trunk wound	Y	Y	by canopy	Remove
62	Quercus douglasii	Blue Oak	18	15	Fair	lean west, symmetrical crown	Y	Y	by canopy	Remove
64	Quercus douglasii	Blue Oak	18	16	Fair	Crowded, co-dominant leaders	Y	Y	by canopy	Remove

Lot 7 Business Drive, El Dorado Hills, CA
Tree List

Item #	Species	Common Name	DBH inches	Crown Radius feet	Condition rating	Comments	Proposed Removal	Within Bldg Area	Mitigation	Construction Impacts
65	Quercus douglasii	Blue Oak	18	17	Fair	leans west, end weights	Y	Y	by canopy	Remove
7	Quercus douglasii	Blue Oak	18	18	Fair	co-dominant stems, leans south	Y	Y	by canopy	Remove
9	Quercus douglasii	Blue Oak	17	17	Fair	Co-dominant leaders, trunk wound	Y	Y	by canopy	Remove
45	Quercus douglasii	Blue Oak	17	13	Fair	straight trunk, crowded	Y	Y	by canopy	Remove
57	Quercus douglasii	Blue Oak	17	12	Fair	crowded, one-sided crown, leans east	Y	Y	by canopy	Remove
17	Quercus douglasii	Blue Oak	16	15	Fair	trunk wound, crowded, leans south, & west, close to 18	Y	Y	by canopy	Remove
59	Quercus douglasii	Blue Oak	16	17	Fair	crowded, co-dominant stems, leans north, end weights	Y	Y	by canopy	Remove
71	Quercus douglasii	Blue Oak	16	19	Fair	leans north, co-dominant leaders, included bark, one-sided crown	Y	Y	by canopy	Remove
73	Quercus douglasii	Blue Oak	16	14	Fair	one-sided crown south	Y	Y	by canopy	Remove
51	Quercus douglasii	Blue Oak	15	14	Fair	crowded, one-sided crown, leans east, trunk wound	Y	Y	by canopy	Remove
63	Quercus douglasii	Blue Oak	15	12	Fair	leans south, co-dominant leaders, 15% dead branches	Y	Y	by canopy	Remove
74	Quercus douglasii	Blue Oak	15	12	Fair	Crowded	Y	Y	by canopy	Remove
78	Quercus douglasii	Blue Oak	15	11	Fair	lean west, crowded, one-sided crown	Y	Y	by canopy	Remove
10	Quercus douglasii	Blue Oak	14	10	Fair	Leans south, trunk wound	Y	Y	by canopy	Remove
16	Quercus douglasii	Blue Oak	14	15	Fair	lean south, co-dominant leaders	Y	Y	by canopy	Remove
44	Quercus douglasii	Blue Oak	14	13	Fair	leans south, crowded	Y	Y	by canopy	Remove
77	Quercus douglasii	Blue Oak	14	13	Fair	lean southwest, one-sided crown, crowded	Y	Y	by canopy	Remove
14	Quercus douglasii	Blue Oak	13	12	Fair	Narrow crown	Y	Y	by canopy	Remove
32	Quercus douglasii	Blue Oak	13	10	Fair	leans south, crowded, one-sided crown	Y	Y	by canopy	Remove
38	Quercus douglasii	Blue Oak	13	8	Fair	trunk wound, crowded, one-sided crown	Y	Y	by canopy	Remove
56	Quercus douglasii	Blue Oak	13	13	Fair	crowded, leans north, one-sided crown	Y	Y	by canopy	Remove
5	Quercus douglasii	Blue Oak	12	8	Fair	Straight trunk, narrow crown	Y	Y	by canopy	Remove
11	Quercus douglasii	Blue Oak	12	11	Fair	leans east, trunk wound	Y	Y	by canopy	Remove
47	Quercus douglasii	Blue Oak	11	8	Fair	crowded, narrow crown	Y	Y	by canopy	Remove
75	Quercus douglasii	Blue Oak	11	11	Fair	crowded, one-sided crown	Y	Y	by canopy	Remove
81	Quercus douglasii	Blue Oak	11	11	Fair	leans northwest	Y	Y	by canopy	Remove
49	Quercus douglasii	Blue Oak	10	12	Fair	crowded, lean east	Y	Y	by canopy	Remove
25	Quercus douglasii	Blue Oak	17	16	Good	straight trunk, good branching, endweights, 5% dead branches	Y	Y	by canopy	Remove

Lot 7 Business Drive, El Dorado Hills, CA
Tree List

Item #	Species	Common Name	DBH inches	Crown Radius feet	Condition rating	Comments	Proposed Removal	Within Bldg Area	Mitigation	Construction Impacts
36	Quercus wislizenii	Interior Live Oak	9, 7, 6, 5	16	Poor	4 stems at base, leans outward	Y	Y	by canopy	Remove
1	Quercus wislizenii	Interior Live Oak	6, 6, 6, 6, 5, 5	12	Poor	Old stump sprouts, crowded, basal decay, mistletoe	Y	Y	by canopy	Remove
3	Quercus wislizenii	Interior Live Oak	6, 6, 7	13	Poor	3 stems, sprouts, trunk wound, 20% dead branches, lean	Y	Y	by canopy	Remove
111	Quercus wislizenii	Interior Live Oak	18, 11, 10	23	Poor	3 stems at base, basal decay	N	N	NA	Protect
76	Quercus wislizenii	Interior Live Oak	14, 15, 12	22	Poor	3 stems at base, included bark, trunk decay, basal decay, stems lean outward	Y	Y	by canopy	Remove
102	Quercus wislizenii	Interior Live Oak	14, 12, 10, 9	23	Poor	4 stems at base, basal decay, stems lean outward	N	N	NA	Protect
104	Quercus douglasii	Blue Oak	13, 11, 9	20	Poor	3 stems at base, endweights	N	N	NA	Protect
88	Quercus douglasii	Blue Oak	11, 10, 12	19	Poor	3 stems at base, basal decay, stems lean outward	N	N	NA	Protect
46	Quercus douglasii	Blue Oak	10, 11	14	Poor	co-dominant stems lean south and east, one--sided crown, included bark, basal decay	Y	Y	by canopy	Remove
22	Quercus douglasii	Blue Oak	29	23	Poor	co-dominant stems, basal decay, included bark, lean west	Y	Y	by canopy	Remove
108	Quercus douglasii	Blue Oak	29	21	Poor	Basal decay, cavity	N	N	NA	Protect
69	Quercus douglasii	Blue Oak	27	22	Poor	leans south, co-dominant leaders, included bark, stem wound	Y	Y	by canopy	Remove
98	Quercus wislizenii	Interior Live Oak	27	29	Poor	basal decay, trunk decay, by east property fence	N	N	NA	Protect
93	Quercus douglasii	Blue Oak	24	22	Poor	basal decay, co-dominant leaders, included bark	N	N	NA	Protect
110	Quercus douglasii	Blue Oak	24	20	Poor	3 leaders at 2', crowded, dieback, leans south	N	N	NA	Protect
35	Quercus douglasii	Blue Oak	22	26	Poor	basal decay, leans west, growing away from 34	Y	Y	by canopy	Remove
95	Quercus douglasii	Blue Oak	22	24	Poor	3 leaders at 6', 1 sided crown, leans west	N	N	NA	Protect
58	Quercus douglasii	Blue Oak	21	16	Poor	co-dominant stems, basal decay, included bark, leans east, basal decay	Y	Y	by canopy	Remove
2	Quercus douglasii	Blue Oak	20	16	Poor	Trunk decay, basal decay	Y	Y	by canopy	Remove
27	Quercus douglasii	Blue Oak	19	21	Poor	basal decay, co-dominant leaders, included bark, end weights, lean away from center	Y	Y	by canopy	Remove
53	Quercus douglasii	Blue Oak	18	12	Poor	trunk decay, lean south east	Y	Y	by canopy	Remove

Lot 7 Business Drive, El Dorado Hills, CA

Tree List

Item #	Species	Common Name	DBH inches	Crown Radius feet	Condition rating	Comments	Proposed Removal	Within Bldg Area	Mitigation	Construction Impacts	
28	Quercus douglasii	Blue Oak	17	16	Poor	leans north and east, basal decay	Y	Y	by canopy	Remove	
54	Quercus douglasii	Blue Oak	17	16	Poor	crowded, basal decay	Y	Y	by canopy	Remove	
18	Quercus douglasii	Blue Oak	16	16	Poor	Trunk wound, crowded, trunk decay, basal decay, close to 17	Y	Y	by canopy	Remove	
55	Quercus douglasii	Blue Oak	15	12	Poor	crowded, leans northwest, basal decay	Y	Y	by canopy	Remove	
66	Quercus douglasii	Blue Oak	15	20	Poor	one-sided crown, suppressed, leans east, swollen base	Y	Y	by canopy	Remove	
30	Quercus douglasii	Blue Oak	14	13	Poor	significant lean south away from 28	Y	Y	by canopy	Remove	
80	Quercus douglasii	Blue Oak	14	10	Poor	suppressed, lean west	Y	Y	by canopy	Remove	
21	Quercus douglasii	Blue Oak	13	12	Poor	basal decay, trunk decay, leans northwest, crowded	Y	Y	by canopy	Remove	
50	Quercus douglasii	Blue Oak	13	10	Poor	crowded, leans south, dead leader	Y	Y	by canopy	Remove	
68	Quercus douglasii	Blue Oak	13	16	Poor	one-sided crown, lean to north, basal decay	Y	Y	by canopy	Remove	
72	Quercus douglasii	Blue Oak	13	13	Poor	leans north, basal decay, cavity, one-sided crown	Y	Y	by canopy	Remove	
4	Quercus wislizenii	Interior Live Oak	11	7	Poor	lean, basal decay, trunk decay	Y	Y	by canopy	Remove	
15	Quercus wislizenii	Interior Live Oak	11	6	Poor	Crowded, lean south, trunk decay, 40% dead branches	Y	Y	by canopy	Remove	
29	Quercus douglasii	Blue Oak	11	11	Poor	under 27, suppressed, leans west	Y	Y	by canopy	Remove	
42	Quercus douglasii	Blue Oak	1	8	Poor	Suppressed, one-sided crown	Y	Y	by canopy	Remove	
52	Quercus douglasii	Blue Oak	1	11	Poor	basal wound, decay, crowded, leans east	Y	Y	by canopy	Remove	
70	Quercus wislizenii	Interior Live Oak	stump		stump	Stump with sprouts	Y	Y	by canopy	Remove	
106	Quercus wislizenii	Interior Live Oak	19, 12, 12		22	Very Poor	3 stems at base, basal decay, trunk decay	N	N	NA	Protect
86	Quercus wislizenii	Interior Live Oak	18, 9, 7, 7		24	Very Poor	4 stems at base, basal decay, trunk decay, 25% dieback	N	N	NA	Protect
34	Quercus douglasii	Blue Oak	18, 17		19	Very Poor	significant basal decay, co-dominant stems at base, leaders lean outwards	Y	Y	by canopy	Remove
103	Quercus wislizenii	Interior Live Oak	15, 10		16	Very Poor	2 stems at base, basal decay, trunk decay, leans outward	N	N	NA	Protect
89	Quercus douglasii	Blue Oak	12, 14		14	Very Poor	2 stems at base, basal decay, trunk decay, leans north and south	N	N	NA	Protect
8	Quercus wislizenii	Interior Live Oak	11, 7		12	Very Poor	Stump sprouts, basal decay, trunk decay	Y	Y	by canopy	Remove
87	Quercus wislizenii	Interior Live Oak	11, 11, 13		18	Very Poor	basal decay, trunk decay, leans east, one-sided crown	N	N	NA	Protect

Lot 7 Business Drive, El Dorado Hills, CA
Tree List

Item #	Species	Common Name	DBH inches	Crown Radius feet	Condition rating	Comments	Proposed Removal	Within Bldg Area	Mitigation	Construction Impacts
31	Quercus douglasii	Blue Oak	10, 10	16	Very Poor	Co-dominant stems at base, basal decay, crowded, south leader leans south	Y	Y	by canopy	Remove
109	Quercus douglasii	Blue Oak	35	23	Very Poor	3 stems at base, basal decay, included bark	N	N	NA	Protect
101	Quercus wislizenii	Interior Live Oak	33	13	Very Poor	2 leaders at base, basal decay, trunk decay, lean east	N	N	NA	Protect
92	Quercus douglasii	Blue Oak	31	21	Very Poor	basal decay, trunk decay, leans east, one-sided crown	N	N	NA	Protect
24	Quercus douglasii	Blue Oak	28	23	Very Poor	basal decay, trunk decay, co-dominant stems, included bark, endweights, lean away from center	Y	Y	by canopy	Remove
107	Quercus wislizenii	Interior Live Oak	28	16	Very Poor	co-dominant stems at 3', basal decay, trunk decay, leans north	N	N	NA	Protect
91	Quercus douglasii	Blue Oak	24	20	Very Poor	by east fenceline, basal decay, trunk decay	N	N	NA	Protect
20	Quercus douglasii	Blue Oak	17	18	Very Poor	severe lean north, basal decay, trunk decay	Y	Y	by canopy	Remove
26	Quercus wislizenii	Interior Live Oak	16	10	Very Poor	basal decay, trunk decay, broken leader	Y	Y	by canopy	Remove
19	Quercus douglasii	Blue Oak	14	15	Very Poor	basal decay, trunk decay, 30% dead	Y	Y	by canopy	Remove
12	Quercus wislizenii	Interior Live Oak	12	8	Very Poor	leans south, basal decay, trunk wound, trunk decay	Y	Y	by canopy	Remove

Total trees in building area = 81

Total trees in building area 20" & > = 7

Total trees outside of building area 20" & > = 30



Dykstra Enterprises, Inc.

Biological Surveys

January 21, 2016

Hintz Family Trust
C/O Molly Carter

Work location
Leave It To Us Self Storage
Lot 7 Business Drive
Cameron Park, CA 95682

Botanical Resources Survey and Special-Status Wildlife Species Report
for proposed development

16 FEB 22 PM 3:52
RECEIVED
PLANNING DEPARTMENT

Prepared by:
Virginia Meyer
and
Matthew Claassen

Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
1807 13th Street, Suite 202
Sacramento, CA 95811

Fax: (916) 324-0475 email: CNDDDB@wildlife.ca.gov

For Office Use Only

Source Code: _____ Quad Code: _____
Elm Code: _____ Occ No.: _____
EO Index: _____ Map Index: _____

Date of Field Work (mm/dd/yyyy): 07/02/2015

Clear Form

California Native Species Field Survey Form

Print Form

Scientific Name: Adenostoma fasciculatum-Arctostaphylos viscida Association (MCV 2nd ed.)

Common Name: Chamise chaparral/gabbroic northern mixed chaparral (Holland 1986)

Species Found? Yes No If not found, why? _____

Total No. Individuals: _____ Subsequent Visit? Yes No

Is this an existing NDDDB occurrence? _____ Yes, Occ. # _____ No Unk.

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: Virginia Meyer

Address: 3821 Crosswood Dr.

Shingle Springs, CA 95682

E-mail Address: vcmeyer1@mac.com

Phone: (530) 306-6413

Plant Information

Phenology:

% vegetative _____ % flowering _____ % fruiting _____

Animal Information

adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown _____
 wintering breeding nesting rookery burrow site lek other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: El Dorado Landowner / Mgr: Lile A. Hintz Family Trust/ Marlene Carter

Quad Name: Shingle Springs Elevation: 1440 feet

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H M S Source of Coordinates (GPS, topo. map & type): GPS

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H M S GPS Make & Model: Garmin GPSmap 60CSx

DATUM: NAD27 NAD83 WGS84 Horizontal Accuracy: 20-30 feet meters/feet

Coordinate System: UTM Zone 10 UTM Zone 11 OR Geographic (Latitude & Longitude)

Coordinates: N 38 38' 52.3"
W 120 56' 50.6"

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Adenostoma fasciculatum Shrubland Alliance/Chamise chaparral contiguous with Quercus douglasii Woodland Alliance/Blue Oak woodland, on Rescue very stony loam with 3 to 15 percent slopes. No Pine Hill gabbroic sensitive plant species found on site.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): Excellent Good Fair Poor

Immediate AND surrounding land use: Industrial/office/commercial

Visible disturbances: all shrubs cleared 2014; brush burned in piles; site mowed 2015

Threats: _____

Comments: Site assessed for biological resources in connection with proposed commercial use.

Determination: (check one or more, and fill in blanks)

- Keyed (cite reference): _____
 Compared with specimen housed at: _____
 Compared with photo / drawing in: _____
 By another person (name): _____
 Other: _____

Photographs: (check one or more)

	Slide	Print	Digital
Plant / animal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diagnostic feature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

May we obtain duplicates at our expense? yes no

Botanical Resources Survey

Parcel 7, Business Drive
Shingle Springs, CA 95682
El Dorado County
Parcel # 109 480 07

Prepared for:
Foothill Tree Service
Dykstra Enterprises, Inc.
3130 Springer Road
Placerville, CA 95667

Lile A. Hintz Family Trust (Marlene Carter)
2260 Talon Drive
Shingle Springs, CA 95682

Prepared by:

Virginia Meyer, Botanist
Meyer Ecological Services
3821 Crosswood Dr.
Shingle Springs, CA 95682

July 28, 2015

1.0 INTRODUCTION

A field survey was conducted on July 2, 2015 to determine the natural communities and plant species present, and the presence or absence of special status plant species or plant communities on El Dorado County Parcel # 109 480 07, Parcel 7, Business Drive, Shingle Springs, California, 95682. This parcel encompasses an area of 7.21 A. See Figure 1 below for location of the parcel.

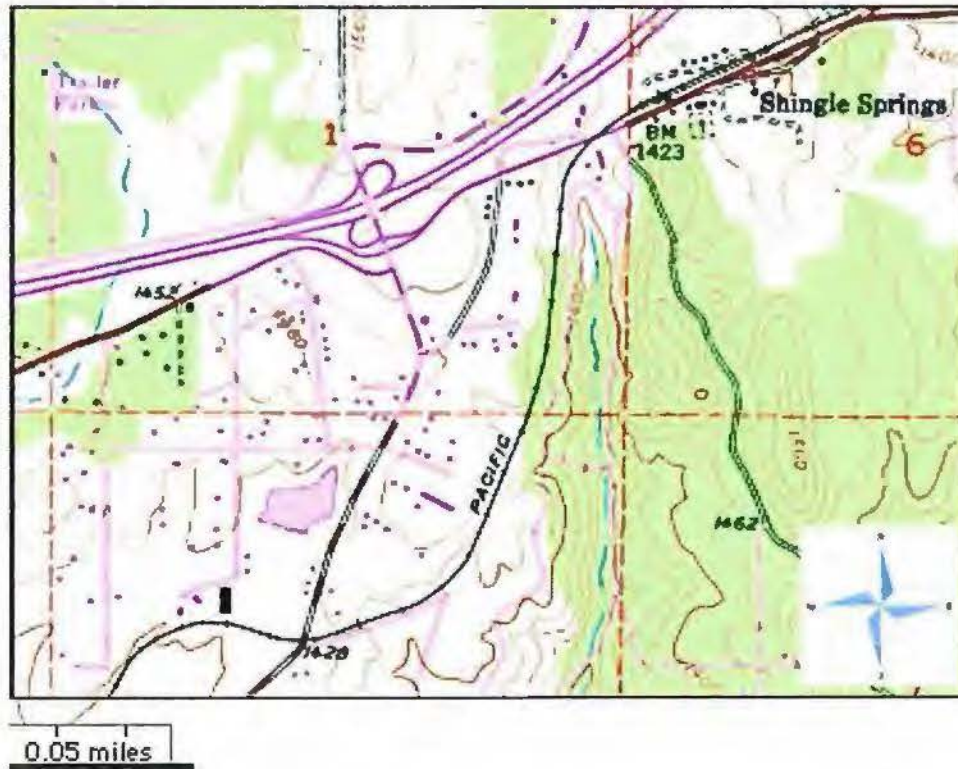


FIGURE 1. El Dorado County Parcel # 109 480 07, Parcel 7, Business Drive, Shingle Springs, California, 95682. Location of parcel shown as black rectangle.

Business Drive Parcel 7 soil consists of Rfc – Rescue very stony loam with 3 percent to 15 percent slopes (Rescue and similar soils 85 percent, Argonaut and similar soils 15 percent) – derived from gabbro parent material (NRCS [Updated 6 Dec 2013]). Vegetation found on these soils includes those community types with eight sensitive plant species, including five special status species (see section 2.0, below). Plant communities found on these soils include *Adenostoma fasciculatum* Shrubland Alliance/Chamise chaparral and *Quercus douglasii* Woodland Alliance/Blue oak woodland. Rescue and Argonaut soils are well drained with a very low to moderately low capacity of the most limiting layer to transmit water, and more than 80 inches to water table depth. The parcel is located on a bench at approximately 1440 feet in elevation, gently sloping from the northeast down toward the southwest corner.

Previous to this botanical resources survey being conducted, the parcel had been cleared of all shrubs; brush had been burned in piles; and herbaceous plants mowed. See photos in Appendix A.

2.0 METHODS

Prior to the field survey, a review of sensitive plant species and natural communities reported to occur in the Shingle Springs Quad (38120F8) - within which the project parcel is located - through the California Natural Diversity Data Base (CaDFW, CNNDDB [2015]), and the Inventory of Rare Plants by the California Native Plant Society (CNPS [2015]) was undertaken. See Table 1 for a list of sensitive plant species that are known to occur in the vicinity of the parcel. Reference sites visited included the Cameron Park Unit of the Pine Hill Preserve, Shingle Springs, California, the unit of the Preserve in closest proximity to the project parcel with occurrences of sensitive plant species and natural communities that support these species. Stebbin's morning-glory, Red Hills soaproot, Pine Hill ceanothus, El Dorado bedstraw, and Layne's ragwort were in fruit or past dispersal; Bisbee Peak rush-rose and El Dorado County mule ears were in flower; and the remaining species were not present in the reference site at the time of the field survey. Lists of taxa identified in field surveys of the Cameron Park Unit of the Pine Hill Preserve were consulted (SCC 2009-2013).

The field survey was completed by Virginia Meyer on July 2, 2015, with a total of 4.5 person-hours spent. A 100% survey of the site was conducted to determine the plant species and natural communities present, the presence or absence of special status species, and locations and population sizes of any special status species. The area surveyed was the entire 7.21 A of El Dorado County parcel # 109 480 07.

TABLE 1. Special status plant species known to occur in the vicinity of El Dorado County parcel # 109 480 07.

Species	FWS ¹	CaFW ²	CNPS ³	Habitats
Congdon's onion <i>Allium sanbornii</i> var. <i>congdonii</i>	none	none	4.2	serpentinite or volcanic chaparral, cismontane woodland
Sanborn's onion <i>Allium sanbornii</i> var. <i>sanbornii</i>	none	none	4.3	usually serpentinite, gravelly chaparral, cismontane woodland, lower montane coniferous forest
Jepson's onion <i>Allium jepsonii</i>	none	none	1B.2	serpentinite or volcanic chaparral, cismontane woodland, lower montane coniferous forest
Stebbin's morning-glory <i>Calystegia stebbinsii</i>	FE 1996	CE 1981	1B.1	chaparral, cismontane woodland/gabbroic
Fresno ceanothus <i>Ceanothus fresnensis</i>	none	none	4.3	cismontane woodland (openings), lower montane woodland
Pine Hill ceanothus <i>Ceanothus roderickii</i>	FE 1996	CR 1982	1B.1	chaparral, cismontane woodland/gabbroic or serpentinite
Red Hills soaproot <i>Chlorogalum grandiflorum</i>	none	none	1B.2	chaparral, cismontane woodland, lower montane coniferous forest/gabbroic or serpentinite
Brandegee's clarkia <i>Clarkia biloba</i> ssp. <i>brandegee</i>	none	none	4.2	often roadcuts; chaparral, cismontane woodland, lower montane coniferous forest
Bisbee Peak rush-rose <i>Crocانthemum suffrutescens</i>	none	none	3.2	chapparal, often serpentinite, gabbroic, or lone soil
Pine Hill flannelbush <i>Fremontodendron decumbens</i>	FE 1996	CE 1979	1B.2	chaparral, cismontane woodland/gabbroic or serpentinite, rocky
El Dorado bedstraw <i>Galium californicum</i> ssp. <i>sierrae</i>	FE 1996	CR 1979	1B.2	chaparral, cismontane woodland, lower montane coniferous forest/gabbroic
Layne's ragwort <i>Senecio layneae</i>	FE 1996	CR 1979	1B.2	chaparral, cismontane woodland, serpentinite or gabbroic, rocky
El Dorado Co. mule ears <i>Wyethia reticulata</i>	none	none	1B.2	chaparral, cismontane woodland, lower montane coniferous forest/clay or gabbroic

1 US Fish and Wildlife Service Federally Endangered

2 California Department of Fish and Wildlife California Endangered or Rare

3 California Native Plant Society Rare Plant Rank

3.0 RESULTS

Natural communities present on the site of parcel # 109 480 07 include Chamise chaparral alliance association *Adenostoma fasciculatum-Arctostaphylos viscida* /gabbroic northern mixed chaparral, and Blue oak woodland alliance association *Quercus douglasii-Quercus wislizeni-Pinus sabiniana* (Sawyer et al 2009). Gabbroic northern mixed chaparral is a plant community identified by Holland (1986), but included in the *Adenostoma fasciculatum* alliance associations in the Manual of California Vegetation, Second Edition (Holland 1986, Sawyer et al. 2009). Special status plant species are known to occur within these natural communities in the Shingle Springs quad and other quads of El Dorado County. See Figure 2 for the aerial photograph of the project site current conditions, as of April 2015, and Figure 3 for the aerial photograph of the project site with approximate limits of the Chamise chaparral and Blue oak woodland communities, as of April 2014 (Google Earth 2014, 2015).

No individuals or stands of special status plant species were found on parcel # 109 480 07 during the field survey of July 2, 2015.

3.1 Plant Communities

The El Dorado County parcel # 109 480 07 site surveyed is found at approximately 1440 feet in elevation, in the foothills of the western Sierra Nevada, approximately two miles south of the Cameron Park Unit of the Pine Hill Preserve and within the gabbroic intrusive complex of El Dorado County. The Pine Hill Preserve is a partnership of several governmental agencies and one non-profit organization (El Dorado County, El Dorado Irrigation District, California Department of Fish and Wildlife, California Department of Forestry and Fire Protection, US Bureau of Land Management, US Bureau of Reclamation, US Fish and Wildlife Service, and the American River Conservancy) and consists of five units, with the goal of protecting the rare plants of El Dorado County that grow on gabbroic soils (Pine Hill Preserve web site www.PineHillPreserve.org).

Plant communities found on the project parcel include *Adenostoma fasciculatum-Arctostaphylos viscida* association/gabbroic northern mixed chaparral and *Quercus douglasii-Quercus wislizeni-Pinus sabiniana* association (Holland 1986, Sawyer et al. 2009). Rare plants protected by the efforts of the Pine Hill Preserve are found within these plant communities.

These natural communities, together with the presence of gabbro parent material and gabbro derived soils, as well as the close proximity of these plant communities with occurrences of sensitive species populations within the Pine Hill Preserve, indicate appropriate habitat for the special status plant species listed in Table 1.

Prior to the field survey conducted on July 2, 2015, the entire parcel had been cleared of chaparral and woodland understory shrubs. Brush from these shrubs had been piled and burned on site. In addition, herbaceous plants (grasses and forbs) had been mowed over much of the site. Identification of the chamise chaparral community was ascertained by the presence of sprouts from cut plants, and from observations of the adjacent parcel immediately to the east of the project parcel and in a less disturbed, more natural state, and with the same soils (Rfc - Rescue very stony loam; see above).



FIGURE 2. Aerial photograph of El Dorado County parcel and surrounding lands, April, 2015 (Google Earth 2015).



Figure 3. Aerial photograph of El Dorado County parcel and surrounding lands, April, 2014, showing limits of natural communities present. (Google Earth 2014).

3.2 Sensitive Plant Species

No individuals or stands of special status plant species were found on parcel # 109 480 07 during the field survey of July 2, 2015. The potential for a false negative survey of special status plant species, however, does exist. The reasons for this potential include the clearing, burning, and mowing of the site prior to the survey; and the timing of the survey, which was conducted on July 2, 2015, past the blooming period or phenological state for positive identification, of several of the species listed on Table 1. In addition, 2015 finds California in the fourth year of a severe drought. Dry conditions may have prevented the growth of individuals or stands of one or more of the sensitive species listed on Table 1 during the growing season of the current year.

Because the parcel had been cleared prior to the survey, observations were made on adjacent parcels in a less disturbed, more natural condition. No individuals or stands of special status plant species were found on either of these adjacent parcels – that to the east with chamise chaparral, and that to the west with blue oak woodland.

A complete list of plant species found during the field survey of the parcel on July 2, 2015 is included below, Table 2. Classification used is that of The Jepson Manual, Vascular Plants of California, Second Edition (Baldwin 2012).

3.3 Mitigation of Project Impacts

Though no individuals or stands of special status plants were found on the project site during the July 2, 2015 survey, supporting habitat and natural communities are present. In order to avoid or minimize future impacts to the habitat and communities, the project should minimize the footprint of built structures and pavement as much as is feasible, and prevent negative effects on portions of the site set aside for habitat, such as the application of herbicides, pesticides, or fertilizers; clearing or mowing outside of what is necessary for fire safety; or use of vehicles and other heavy equipment.

Mitigation of unavoidable impacts of the project should include one of the options required by El Dorado County for the protection and conservation of habitat and natural communities that support the special status species listed in Table 1. Parcel # 109 480 07 is located within El Dorado County Mitigation Area 1, wherein mitigation for impacts can be fulfilled by either paying “the appropriate fee in lieu of Ecological Preserve Mitigation for the direct or indirect impacts caused by development on rare plants and rare plant habitat; or participate in the Rare Plant Off-Site Mitigation Program” (El Dorado County 2011).

TABLE 2. Plant species documented on El Dorado County parcel # 109 480 07 on July 2, 2015.

Family	Scientific Name	Common Name
AGAVACEAE	<i>Chlorogalum pomeridianum</i>	soaproot, amole
ANACARDIACEAE	<i>Toxicodendron diversilobum</i>	poison oak
APIACEAE	<i>Torilis arvensis</i>	tall sock destroyer
ASTERACEAE	<i>Achillea millefolium</i>	common yarrow
	<i>Anaphalis margaritacea</i>	pearly everlasting
	<i>Baccharis pilularis</i>	coyote bush
	<i>Calycadenia multiglandulosa</i>	calycadenia
	<i>Carduus pycnocephalus</i>	Italian thistle
	<i>Centaurea solstitialis</i>	yellow star thistle
	<i>Holocarpha virgata</i> ssp. <i>virgata</i>	tarweed, tarplant
	<i>Leontodon saxitilis</i>	hairy hawkbit
	<i>Madia elegans</i> ssp. <i>densifolia</i>	common madia
	<i>Psilocarphus tenellus</i>	slender woolly-marbles
BORAGINACEAE	<i>Eriodictyon californicum</i>	yerba santa
CAPRIFOLIACEAE	<i>Lonicera interrupta</i>	foothill honeysuckle
ERICACEAE	<i>Arctostaphylos viscida</i>	whiteleaf manzanita
EUPHORBIACEAE	<i>Croton setigerus</i>	turkey mullein
FABACEAE	<i>Lotus purshianus</i> var. <i>purshianus</i>	Spanish lotus
	<i>Trifolium hirtum</i>	rose clover
	<i>Vicia villosa</i>	winter vetch
FAGACEAE	<i>Quercus douglasii</i>	blue oak
	<i>Quercus wislizeni</i>	interior live oak
	<i>Quercus kelloggii</i>	hybrid of California
	x <i>Quercus wislizeni</i>	black oak and
		interior live oak
	<i>Quercus lobata</i>	hybrid of valley oak
	x <i>Quercus douglasii</i>	and blue oak

Family	Scientific Name	Common Name
GENTIANACEAE	<i>Centaurium tenuiflorum</i>	slender centaury
GERANIACEAE	<i>Erodium botrys</i>	broadleaf filaree
HYPERICACEAE	<i>Hypericum perforatum</i>	klamathweed
IRIDACEAE	<i>Iris macrosiphon</i>	long-tubed iris
LAMIACEAE	<i>Salvia sonomensis</i>	creeping sage
LINACEAE	<i>Linum bienne</i>	flax
MALVACEAE	<i>Sidalcea malviflora</i>	checkerbloom, checkermallow
MYRSINACEAE	<i>Anagalis arvensis</i>	scarlet pimpernel
OROBANCHACEAE	<i>Cordylanthus pilosus</i> ssp. <i>hansenii</i>	Hansen's bird's beak
PINACEAE	<i>Pinus sabiniana</i>	foothill pine
PLANTAGINACEAE	<i>Plantago lanceolata</i>	English plantain
POACEAE	<i>Aegilops triuncialis</i>	barbed goatgrass
	<i>Aira caryophyllea</i>	silver European hairgrass
	<i>Avena fatua</i>	wild oat
	<i>Briza minor</i>	little rattlesnakegrass
	<i>Bromus carinatus</i> var. <i>carinatus</i>	California brome
	<i>Bromus diandrus</i>	rippgut brome
	<i>Bromus hordeaceus</i>	soft chess
	<i>Bromus madritensis</i> ssp. <i>rubens</i>	red brome
	<i>Elymus elymoides</i>	squirreltail
	<i>Elymus glaucus</i>	blue wildrye
	<i>Elymus caput-medusae</i>	Medusa head
	<i>Cynosurus echinatus</i>	hedgehog dogtail
	<i>Festuca perennis</i>	rye grass
	<i>Festuca bromoides</i>	brome fescue
	<i>Gastridium ventricosum</i>	gastridium
	<i>Phalaris aquatica</i>	Harding grass
	<i>Stipa lepida</i>	foothill needle grass

<u>Family</u>	<u>Scientific Name</u>	<u>Common Name</u>
POLEMONIACEAE	<i>Navarretia filicaulis</i>	slender-stemmed navarretia
RHAMNACEAE	<i>Ceanothus cuneatus</i>	buckbrush
	<i>Ceanothus lemmonii</i>	Lemmon's ceanothus
	<i>Frangula californica</i>	
	<i>ssp. tomentella</i>	hoary coffeeberry
	<i>Rhamnus ilicifolia</i>	holly-leaf redberry
ROSACEAE		
	<i>Adenostoma fasciculatum</i>	chamise
	<i>Heteromeles arbutifolia</i>	toyon
RUBIACEAE		
	<i>Galium</i> sp.	bedstraw
THEMIDACEAE		
	<i>Brodiaea elegans</i>	harvest brodiaea
VISCACEAE		
	<i>Phoradendron villosum</i>	oak mistletoe

4.0 REFERENCES

- Baldwin, B. G. 2012. The Jepson Manual, Vascular Plants of California, Second Edition. University of California Press, Berkeley, California. 1568 pp.
- Brink, Chris. [Updated 15 April 2015]. Pine Hill Preserve web site. Accessed on [8 July 2015] from www.PineHillPreserve.org.
- California Department of Fish and Wildlife. BIOS. QuickView Tool. Accessed on [8 July 2015] from <https://map.dfg.ca.gov/bios/>.
- California Department of Fish and Wildlife. 2010. List of Vegetation Alliances and Associations. Vegetation Classification and Mapping Program. Accessed on [8 July 2015] from www.dfg.ca.gov/biogeodata/vegcamp/natural_comm_list.asp.
- California Department of Fish and Wildlife. 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. November 24, 2009.
- California Department of Fish and Wildlife, Natural Diversity Database. July 2015. Special Vascular Plants, Bryophytes, and Lichens List. Quarterly publication. 125 pp.
- California Department of Fish and Wildlife, Natural Diversity Database. [Updated July 2015]. State and Federally Listed Endangered, Threatened, and Rare Plants of California. Accessed [1 July 2015] from <https://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEPlants.pdf>.
- California Native Plant Society (CNPS), Rare Plant Program. [2015]. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, California. Accessed on [1 July 2015] from <http://www.rareplants.cnps.org>.
- California Native Plant Society (CNPS). [2015]. A Manual of California Vegetation, Online Edition. California Native Plant Society, Sacramento, CA. Accessed on [6 July 2015] from <http://www.cnps.org/cnps/vegetation/>.
- El Dorado County. 2011. Draft of El Dorado County Code, Chapter 17.71, Section 0.50, Off-site Mitigation or Fee Payment in Lieu of Ecological Preserve Mitigation in Mitigation Areas 1 and 2. Last Revised 29 November 2011.
- Google Earth. "Parcel 7, Business Drive, Shingle Springs". 38°38'46.84"N 120°56'53.17"W. **Google Earth**. 18 April 2014. Accessed on [8 July 2015].
- Google Earth. "Parcel 7, Business Drive, Shingle Springs". 38°38'46.84"N 120°56'53.17"W. **Google Earth**. 16 April 2015. Accessed on [8 July 2015].

4.0 REFERENCES, CONTINUED

- Holland, R. 1986. Preliminary descriptions of the terrestrial natural communities of California. Unpublished document, California Department of Fish and Game, Natural Heritage Division, Sacramento, CA.
- NRCS. Web Soil Survey. [Updated 6 December 2013]. USDA, Natural Resources Conservation Service. Online. Accessed on [6 July 2015] from www.websoilsurvey.nrcs.usda.gov.
- Sawyer, J. O., T. Keeler-Wolf, and J. M. Evans. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento, CA. 1300 pp.
- SCC Field Methods in Ecology Class. 2009-2013. Plant species list of transects conducted at the Cameron Park Unit of the Pine Hill Preserve. Unpublished documents. Sacramento City College Biology Department, Sacramento, CA.
- Wilson, J.L. 1986. A study of plant species diversity and vegetation patterns associated with the Pine Hill gabbro formation and adjacent substrata, El Dorado County, California. Master's thesis, California State University, Sacramento, California.

5.0 QUALIFICATIONS OF AUTHOR

Virginia Meyer holds a BA in biology (HSU 1976), and advanced degrees in biology (MS Biological Sciences, CSU Sacramento, 1991; PhD Ecology, UC Davis, 2011), and is a tenured professor teaching courses required for the Field Ecology Certificate Program at Sacramento Community College, including Field Botany (Biol 320), Advanced Field Botany (Biol 321), Sierra Nevada Plants (Biol 494), and Field Methods in Ecology (Biol 362).

Dr. Meyer has worked as a professional botanist since 1990, providing services including botanical, sensitive plant species surveys and populations mapping, noxious weed surveys, hydrologic and vegetation monitoring and analysis for wetland mitigation projects, and riparian restoration monitoring. These services have been provided to a wide variety of both private entities and public agencies within the Coast Ranges, Central Valley, and Sierra Nevada of California including rare plant surveys in El Dorado County.

6.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological survey, and that the facts, statements, and information presented herein are true and correct to the best of my knowledge and belief.

SIGNED: _____ DATED: _____

APPENDIX A. Project site photographs.



Photo 1. Cut and cleared chaparral shrub resprouts on east portion of Parcel 7, Business Drive, Shingle Springs, CA. 2 July 2015.



Photo 2. Remains of burn pile on Parcel 7, Business Drive, Shingle Springs. Facing east into adjacent parcel, showing natural chaparral shrubs. 2 July 2015.



Photo 3. Blue oak woodland with shrub resprouts growing on western approximate three-quarters of Parcel 7, Business Drive, Shingle Springs, CA. 2 July 2015.



Photo 4. Cleared ground of approximate eastern one-quarter of Parcel 7, Business Drive, Shingle Springs, CA 2 July 2015.

Parcel 7, Business Drive APN 109 480 07 July 19 2015
Special-Status Wildlife Species Report

1

Special-Status Wildlife Species Report

Parcel 7 Business Drive
Shingle Springs, CA 95682
El Dorado County
Parcel # 109 480 07

Prepared for:
Foothill Tree Service
Dykstra Enterprises, Inc.
3130 Springer Road
Placerville, CA 95667

and

Lile A Hintz Family Trust (Marlene Carter)
2260 Talon Drive
Shingle Springs, CA 95682

Prepared by:
Matthew Claassen
2446 Bucklebury Road
Davis, CA 95616

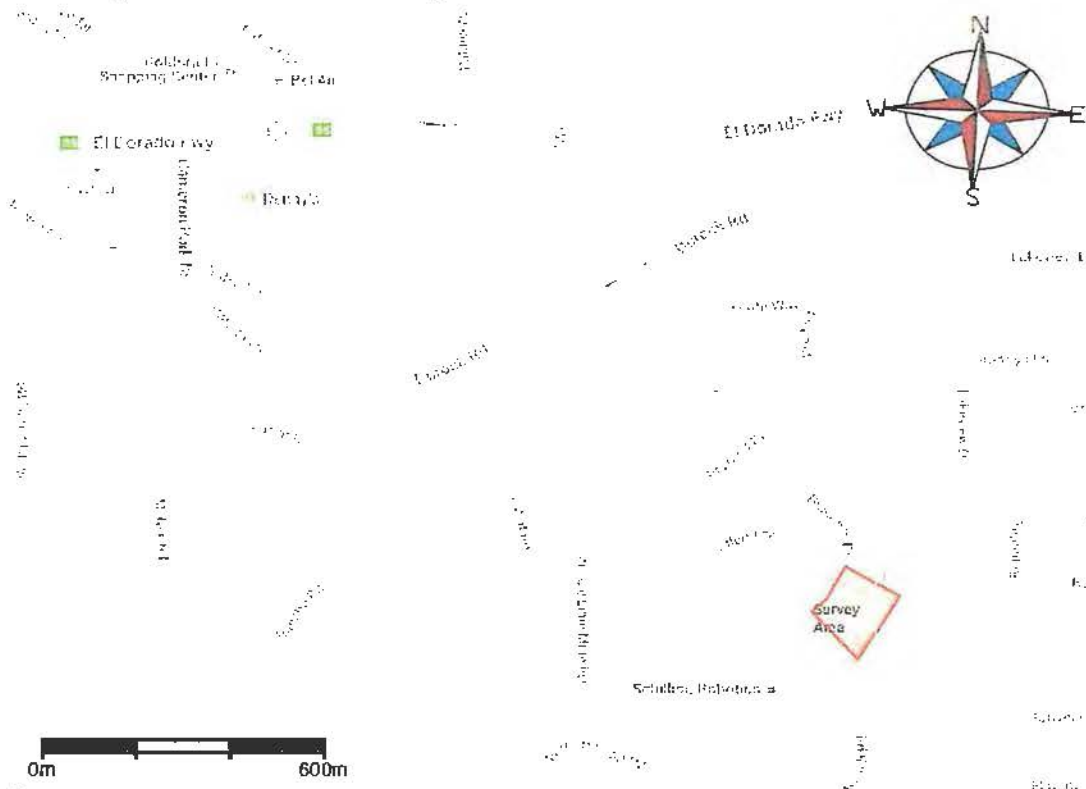
on

July 19, 2015

Introduction

A field survey was conducted at the project site on July 16, 2015 and July 18, 2015 to compile an inventory of wildlife species found on the parcel. Survey objectives were to determine the presence or absence of special-status species or special habitats on the site, and to evaluate the projects potential impact on these species and habitats. These surveys were conducted on El Dorado County Parcel # 109 480 07 which is located at Parcel 7, Business Drive, Shingle Springs, California, 95682. The location of this parcel is shown in Figure 1.

Figure 1. El Dorado County Parcel # 109 480 07 marked in red.



Parcel 7, Business Drive consists of 7.21 acres of woodland, cleared areas, and burn pile remnants with oak tree canopy covering 70% (5.03 acres) of the site (Dykstra, 2015). Natural communities present at the site include Chamise chaparral alliance association *Adenostoma fasciculatum* - *Arctostaphylos viscida* and Blue oak woodland alliance association *Quercus douglasii* - *Quercus wislizeni* - *Pinus sabiniana* (Meyer, 2015). Previous to the surveys, all understory brush and chaparral had been cleared and burned and the entirety of the site had been mowed. The site is located at approximately 1440 feet in elevation and gently slopes from the northeast to the southeast at a grade between 3 and 15 percent (Meyer, 2015). No bodies of water or obvious ephemeral stream channels were present on the site at the time of the survey.

Methods

Prior to the field surveys, a review was done of the California Natural Diversity Database (CDFW, CNDDDB) data pertaining to the presence of special-status wildlife species near the project area (defined as within Shingle Springs quad, USGSCODE 38120F8). The results of this review are listed in Table 1. A total of 4.5 person-hours of reconnaissance-level field surveys were completed by Matthew Claassen on July 16, 2015 and July 18, 2015. A 100% survey of the entire site was conducted to create an inventory of wildlife species found on the parcel, to analyze site-specific data pertaining to special-status species which might occur on the parcel, and to evaluate the project's potential impacts on special-status species and special habitats. The survey times were designed to represent the most accurate picture of wildlife activity at the site by surveying early in the day, when many bird and mammal species are active, and by including an afternoon segment when additional species may be active. Night surveys were determined to be impracticahle given the number of hours available. The equipment used to conduct the survey included a Canon 50D camera equipped with either a 400mm or a 50mm lens, a pair of Celestron binoculars, and various guidebooks used for species identification (listed under Reference section). Invertebrates were only included in the species inventory if they were listed species under the Endangered Species Act of 1973.

Table 1. Special-status wildlife species know to occur near the project area.

Species Type	Species Name	Federal Status	State Status	CDFW Status
Bird	bank swallow <i>Riparia riparia</i>	None	Threatened	-
Mammal	fisher <i>Pekania pennanti</i>	Proposed Threatened	Candidate Threatened	Species of Special Concern
Reptile	western pond turtle <i>Emys marmorata</i>	None	None	Species of Special Concern
Reptile	coast horned lizard <i>Phrynosoma blainvillii</i>	None	None	Species of Special Concern

Results

Twenty species of vertebrate wildlife species were documented on the site during the survey. A species list and additional details are listed in Table 2. No special-status wildlife species were found during the survey. Additionally, I believe it is unlikely for any of the special-status wildlife species listed for the Shingle Springs quad in the CNDDDB (CDFW, CNDDDB) to be currently present at the site. The bank swallow (*Riparia riparia*) is unlikely to be present at the site due to lack of, and distance from, suitable nesting sites which require fine-textured banks or cliffs close to water (Green, 1999). The fisher (*Pekania pennanti*) is unlikely to be present at the site due to its lack of suitable habitat which includes mature forest, large diameter trees, and dense canopy closure (YFWO). The western pond turtle (*Emys marmorata*) is unlikely to be present at the site due to its distance from, and intervening barriers to, perennial water sources as they generally reside in water and travel no more than 400 meters from it to nest (Jennings & Hayes, 1994). The coast horned lizard (*Phrynosoma blainvillii*) is unlikely to be currently present at the site due to the recent clearing of brush and chaparral and the current absence of open burrows of the correct size. However, the site could become potential habitat for the coast horned lizard if portions of the Chamise chaparral alliance on the north-eastern edge of the parcel, shown in Figure 2, were allowed to re-sprout and remnant small mammal burrows were re-excavated or new ones were created by a variety of small mammals known to be in the area (CDFW, CWHR). This conclusion is supported by the occurrence of the coast horned lizard in the area (CDFW, CNDDDB), its occurrence in chamise chaparral, and its ability to use small mammal burrows as refugia (Jennings & Hayes, 1994). That being said, the site would not be ideal habitat for the coast horned lizard (*Phrynosoma blainvillii*) due to the hardened and high clay content of the soils present in the discussed area of the site and the lizard's reported preference for loose sandy soils (DRECP, 2012). Due to the probable absence of any special-status wildlife species on the site, and the current absence of stands of chaparral suitable to the coast horned lizard (*Phrynosoma blainvillii*), I do not believe that any mitigation or monitoring measures concerning special status species need to be undertaken in the future.

Figure 2. Vegetation communities on site. Chamise chaparral alliance association marked in red. Blue oak woodland alliance association marked in green.

<http://caltopo.com/bp/6F01>



Parcel 7, Business Drive APN 109 480 07 July 19 2015
 Special-Status Wildlife Species Report

Table 2. Wildlife species documented on El Dorado County parcel # 109 480 07 on July 16, 2015 and July 18, 2015

Species Type	Scientific Name	Common Name	Sex	Notes
Mammal	<i>Odocoileus hemionus</i> ssp. <i>columbianus</i>	Columbian black-tailed deer	male & female	TER
Mammal	<i>Lepus californicus</i>	black-tailed jackrabbit	unknown	TER
Mammal	<i>Sciurus griseus</i>	western gray squirrel	pair	ARB/TER, RES
Reptile	<i>Sceloporus occidentalis</i>	western fence lizard	unknown	ARB
Bird	<i>Sialia mexicana</i>	western bluebird	male & female	ARB/TER, RES
Bird	<i>Calypte anna</i>	Anna's hummingbird	male & female	ARB
Bird	<i>Carduelis psaltria</i>	lesser goldfinch	male & female	ARB/TER, RES
Bird	<i>Myiarchus cinerascens</i>	ash-throated flycatcher	unknown	ARB
Bird	<i>Baeolophus inornatus</i>	oak titmouse	unknown	ARB
Bird	<i>Cathartes aura</i>	turkey vulture	unknown	AIR
Bird	<i>Picoides nuttallii</i>	Nuttall's woodpecker	male & female	ARB
Bird	<i>Psaltriparus minimus</i>	bushtit	group	ARB
Bird	<i>Aphelocoma californica</i>	western scrub-jay	pair & juvenile	ARB/TER
Bird	<i>Toxostoma redivivum</i>	California thrasher	pair	TER, edge of site
Bird	<i>Sitta carolinensis</i>	white-breasted nuthatch	unknown	ARB
Bird	<i>Circus cyaneus</i>	northern harrier	unknown	AIR
Bird	<i>Melanerpes formicivorus</i>	acorn woodpecker	unknown	ARB
Bird	<i>Zenaida macroura</i>	mourning dove	pair	ARB
Bird	<i>Polioptila caerulea</i>	blue-gray gnatcatcher	female	ARB
Bird	<i>Piranga ludoviciana</i>	western tanager	male	ARB

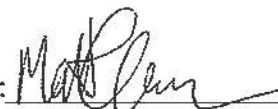
AIR- species seen flying through or above site

ARB- species seen in vegetation

TER- species seen on ground

RES- possible resident population

pair/flock- species seen in group or pair possibly containing both sexes

SIGNED:  DATED: 02-01-2016

References

California Department of Fish and Wildlife. BIOS. California Wildlife Habitat Relationships-Mammals overlay tool. Retrieved July 19, 2015, from <https://map.dfg.ca.gov/bios/>

California Department of Fish and Wildlife. BIOS. California Natural Diversity Database quick-view tool. Retrieved July 14, 2015, from <https://map.dfg.ca.gov/bios/>

Green, M. (1999) *California wildlife habitat relationships system: Life history account for bank swallow*. Sacramento, CA: California Department of Fish and Game.

CalTopo. "Business Drive, Shingle Springs, California". Retrieved July 17, 2015, from <http://caltopo.com/>

Desert Renewable Energy Conservation Plan (2012). *Baseline biology report: Reptiles_coast horned lizard* (*Phrynosoma blainvillii*). Retrieved July 19, 2015 from http://www.drecp.org/documents/docs/baseline_biology_report/10_Appendix_B_Species_Profiles/10a_Reptile_Amphibian/Coast_Horned_Lizard.pdf

Dykstra, C. (2015). *Oak tree canopy retention plan*. Placerville, CA: Dykstra Enterprises

Jennings, M. R. & Hayes, M. P. (1994). *Amphibian and reptile species of special concern in California* (pp. 101, 132). Rancho Cordova, CA: California Department of Fish and Game.

Parcel 7, Business Drive APN 109 480 07 July 19 2015
Special-Status Wildlife Species Report

8

Laws, J. M. (2007). *The laws field guide to the Sierra Nevada*. Berkeley, CA: Heyday.

Meyer, V. (2015). *Botanical resources survey*. Shingle Springs, CA: Meyer Ecological Services.

Reid, F. A. (2006). *A field guide to mammals of North America* (4th ed.). New York, NY: Houghton
Mifflin Company.

Sibley, D. A. (2003). *The Sibley field guide to birds of Western North America*. New York, NY: Alfred
A. Knopf.

Stebbins, R. C. (2003). *A field guide to western reptiles and amphibians* (3rd ed.). New York, NY:
Houghton Mifflin Company.

Yreka Fish and Wildlife Office. *Local species information - fisher* (*Pekania pennanti*). Retrieved on
July 19, 2105 from <http://www.fws.gov/yreka/fisher.html>

Matt Claassen

(530)-902-4359

mc.claassen@outlook.com

Statement of Qualifications

- Education

Degrees Earned:

Certificate of Achievement in Field Ecology from Sacramento City College with a GPA of 3.61

Classes taken at Sacramento City College:

Field Methods in Ecology: Orienteering, ecological survey techniques, wildlife management

Environmental Regulations: Local and Federal environmental law, wetland delineation

Field Botany: Plant anatomy, ecology, taxonomy, identification, specimen collection

Advanced Field Botany: As above with identification using The Jepson Manual emphasized

Natural History: Plant and animal species and communities in California

Introduction to Entomology: Insect ecology, taxonomy, identification, specimen collection

Restoration Ecology: Habitat restoration techniques, challenges, project design

Environmental Biology: Natural systems and process and environmental challenges

Natural History - Mojave Desert: Ecology, geology, zoology, & botany of the Mojave Desert

Classes taken at the University of California at Davis Extension:

Conservation Biology: Wildlife monitoring and conservation techniques and challenges

Classes taken at Sonoma State University:


Tropical Biodiversity: Ecology, zoology, botany, research techniques of sub-tropical Belize

- Knowledge of Wildlife Techniques

Familiar with the wide range of wildlife found in California and experienced in the techniques used to identify them including surveys, field guides, photography, dichotomous keys.

Knowledge of, and limited experience with, the following techniques used to gather data and track the location of various groups of wildlife.

- Birds: catch and release*, banding, visual/auditory transects and point counts
- Bats: catch and release*, sonograms, light tags, white nose protocol, parasite collection
- Small mammals: catch and release*, tranquilization, radio-telemetry, ear tagging
- Frogs: catch and release*, dye tagging, Chytridiomycosis swabbing
- Turtles: catch and release*, carapace notching, radio-telemetry
- Insects: capture, specimen preservation

SIGNED:  DATED: 02-01-2016

5.0 QUALIFICATIONS OF AUTHOR

Virginia Meyer holds a BA in biology (HSU 1976), and advanced degrees in biology (MS Biological Sciences, CSU Sacramento, 1991; PhD Ecology, UC Davis, 2011), and is a tenured professor teaching courses required for the Field Ecology Certificate Program at Sacramento Community College, including Field Botany (Biol 320), Advanced Field Botany (Biol 321), Sierra Nevada Plants (Biol 494), and Field Methods in Ecology (Biol 362).

Dr. Meyer has worked as a professional botanist since 1990, providing services including botanical, sensitive plant species surveys and populations mapping, noxious weed surveys, hydrologic and vegetation monitoring and analysis for wetland mitigation projects, and riparian restoration monitoring. These services have been provided to a wide variety of both private entities and public agencies within the Coast Ranges, Central Valley, and Sierra Nevada of California including rare plant surveys in El Dorado County.

6.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological survey, and that the facts, statements, and information presented herein are true and correct to the best of my knowledge and belief.

SIGNED: Virginia C. Meyer DATED: 28 Jul 2015


Chad Dystra
ISA Certified Arborist
WE-5833A



T. KEAR

TRANSPORTATION PLANNING
& MANAGEMENT, INC.

Memorandum

TO: Marlene A Carter, Lyle A Hintz Family Trust
Katie Jackson, El Dorado County

FROM: Tom Kear, PhD, PE

Date: February 29, 2018

RE: Leave It To Us Self Storage On-site Transportation Review



Summary and Recommendations

As detailed in the body of this memorandum, the On-site Transportation Review of the Leave It To Us Self Storage project (the project) finds:

- The project site plan adequately addresses all El Dorado County Department of Transportation requirements, including safety (accident history), driveway spacing, parking, throat depth, internal circulation, and site distance.
- Two-way stop control should be considered on Dividend Drive where it intersects Business Drive west of the project due to its accident history. Note that this is not a County maintained Intersection.

It is recommended that the project applicant discuss the potential need for two-way stop control at the western intersection of Dividend Drive/Business Drive with the Barnett Business Park, and request the business park evaluate the need for and install two-way stop control as necessary. This is a private intersection, outside El Dorado county's jurisdiction. It is recommended that the county approve the project without any transportation or traffic related conditions beyond the payment of applicable fees.

Introduction

This memorandum presents results of an On-site Transportation Review conducted by T. Kear Transportation Planning and Management, Inc. (TKTPM); consistent with the El Dorado County's requirements for approval of the proposed Leave It To Us Self Storage project (the project).

Project Description and Access:

The project consists of a self-storage facility with two caretaker units and a small office/retail counter area for customer service. A site plan is provided as **Figure 1**. The project includes 94,320 sqft of space apportioned approximately as:

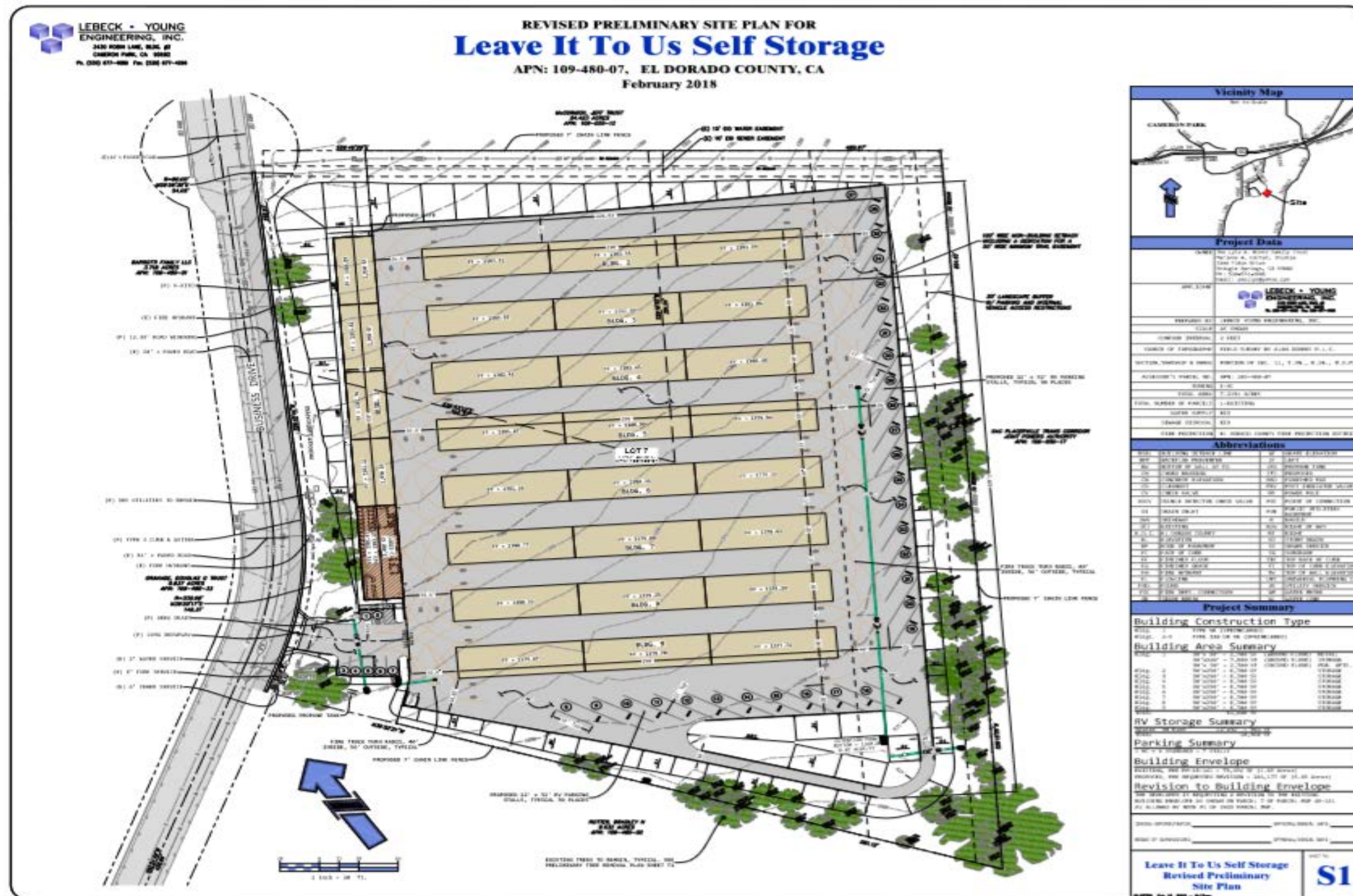


Figure 1. Site Plan

- Storage units: 77,400 sqft;
- RV Storage: 11,520 sqft
- Two apartments for caretakers: 2,700 sqft;
- Auxiliary space: 1,800 sqft; and
- Retail (customer service): 900 sqft.

The project is located on Lot 7 of the Barnett Business Park in Shingle Springs, California (APN: 109-480-07). Access will be via Business Drive, which is currently a privately maintained road where it fronts the project site. As shown in **Table 1**, the project is anticipated to generate 142 daily vehicle trips, 9 AM peak-hour vehicle trips, and 16 PM peak-hour vehicle trips¹. Situated south of and in between two US 50 interchanges – Cameron Park Drive and S Shingle Road, the project is expected to disperse its trips east and west via Durock Rd by multiple connecting intersections. Consequently, none of these intersections is expected to experience more than 10 peak hour trips or 100 daily trips. The General Plan land use designation for the parcel is Industrial (I), and the zoning is Industrial Low (IL) with a Design Review – Community (DC) overlay.

Table 1. Trip Generation

Land Use	ITE LU Code	Units	AM Peak Hour			PM Peak Hour			Daily
			Rate	In %	Out %	Rate	In %	Out %	
Mini-Warehouse	151	KSF	0.1	60%	40%	0.17	60%	40%	1.51
Project	Quantity	Units	AM Peak Hour			PM Peak Hour			Daily Total
			Total	In	Out	Total	In	Out	
Leave It To Us Self Storage	94.32	KSF	9	6	3	16	10	6	142

Note that RV parking spaces were treated as addition mini-wheelhouse space for purposes if trip

On-Site Transportation Review Requirement

An On-Site Transportation Review considers the site access, parking and safety characteristics of a proposed project. To facilitate the timely approval of the proposed project, this review must be stamped by a registered Traffic Engineer or Civil Engineer and address items 1-8 below, where applicable².

1. Existence of any current traffic problems in the local area such as a high-accident location, non-standard intersection or roadway, or an intersection in need of a traffic signal.
2. Proximity of proposed site driveway(s) to other driveways or intersections.
3. Adequacy of vehicle parking relative to both the anticipated demand and zoning code requirements.
4. Adequacy of the project site design to fully satisfy truck loading demand on-site, when the anticipated number of deliveries and service calls may exceed 10 per day.
5. Adequacy of the project site design to provide at least a 25' minimum required throat depth (MRTD) at project driveways. Include calculation of the MRTD.
6. Adequacy of the project site design to convey all vehicle types.

¹ ITE (2017) Trip Generation Manual: 10th Edition, Institute of Transportation Engineers, Washington DC.

² El Dorado County (2014) Transportation Impact Study Guidelines, <http://www.edcgov.us/Government/LongRangePlanning/Transportation/TIS-Guidelines/transportation-impact-study-guidelines.aspx>.

7. *Adequacy of sight distance on-site.*
8. *Queueing analysis of drive-through facilities.*

The review can be conducted as either a portion of a traffic impact study, or as a stand-alone document, depending on the size and requirements of the project. For the Leave It To Us Self Storage project, the county requested an On-Site Transportation Review as part of the project's application in 2016. This memorandum updates that analysis to reflect the revised site plan, and to update data on accidents at nearby intersections.

Methods

Characteristics of the project were checked against standards established by El Dorado County, the Caltrans Highway Design Manual (HDM), the AASHTO Green Book³, and the California MUTCD 2014 Edition. TKTPM performed a site visit to assess existing access to the project and existing roadway geometry, including site distance at the driveway location.

Analysis

Each of the eight required elements of the On-site Transportation review are addressed below.

1. Existence of any current traffic problems in the local area such as a high-accident location, non-standard intersection or roadway, or an intersection in need of a traffic signal.

The Statewide Integrated Traffic Records System (SWITRS) maintained by the California Highway Patrol was used to identify accidents near the project. Seven accidents within the last five years were reported at the uncontrolled intersection of Business Drive and Dividend Drive, four-tenths of a mile west of the project. There was a two-year period (2014-2015) where three STOP-sign correctable accidents were reported at this location. Therefore, a two-way STOP sign should be considered on Dividend Drive at this location⁴. However, No conditions of approval are necessary because the uncontrolled intersection of Business Drive and Dividend Drive is a private intersection, not under El Dorado County jurisdiction. The applicant should discuss this finding with the Barnett Business Park. A site visit was conducted to evaluate roadway geometry and identify any existing traffic concerns. No existing traffic problems were identified on County maintained roadways.

2. Proximity of proposed site driveway(s) to other driveways or intersections.

The proposed driveway to Business Drive was reviewed for intersection spacing and found to be consistent with El Dorado County requirements. El Dorado County Zoning Ordinance⁵ requires that parking area ingress and egress driveways be located a minimum of one hundred fifty feet from the intersection of two major arterials; one hundred feet from the intersection of a major arterial and collector street; and seventy feet from the intersection of two collector streets or a collector and local street. Measurements are taken from the centerline of the nearest travel lane of the intersecting streets

³ American Association of State Highway and Transportation Officials (AASHTO) (2011) A Policy on Geometric Design of Highways and Streets, 6th Edition.

⁴ California MUTCD 2014 Edition Section 2B.04 Right-of-Way at Intersections.

⁵ El Dorado County Zoning Ordinance (revised September 2013) Section 17.18.030 (B) 4.

and the centerline of the driveway. The centerline of the proposed driveway to Business Drive is located more than four hundred feet from the centerline of Commodity Way where it intersects Business Drive and more than one thousand feet from the centerline of Dividend Drive where it intersects Business Drive.

3. Adequacy of vehicle parking relative to both the anticipated demand and zoning code requirements.

Parking standards were updated when the Targeted General Plan Amendment & Zoning Ordinance Update (TGPA-ZOU) was adopted by the Board of Supervisors on December 15, 2015. Specifically, Ordinance 5030, section 130.35.030 designates off-street parking requirements; and requires that where a combination of uses or activities are developed on a single parcel, that parking be estimated for each separate use. **Table 2** shows estimated parking requirements for the project.

Table 2. Parking requirements

Use	Basis	Required Parking
<u>Industrial:</u> Self-Storage with outdoor access to units by vehicle drive aisles	2 spaces	2 spaces
<u>Residential:</u> Caretaker, employee housing	1 per unit	2 spaces
<u>Retail Sales and Service:</u> General, indoor.	1 per 300 sqft	3 spaces
		Total: 7 spaces

Parking requirements⁶ specify that one of the seven required parking spaces be designated as a handicapped parking space. The site plan provides for seven parking spaces, including one handicapped space.

The provided parking is adequate relative to both anticipated demand and zoning code requirements.

4. Adequacy of the project site design to fully satisfy truck loading demand on-site, when the anticipated number of deliveries and service calls may exceed 10 per day.

The anticipated number of deliveries and service calls is not expected to exceed 10 per day.

5. Adequacy of the project site design to provide at least a 25' minimum required throat depth (MRTD) at project driveways. Include calculation of the MRTD.

The latest site plan considers the future widening of Business Drive (**Figure 1**). The provided throat depth exceeds 25 feet from the existing and future edge of payment.

6. Adequacy of the project site design to convey all vehicle types.

The on-site parking lot aisle design is unlikely to accommodate the swept path for the turning movements of a California legal truck (CA Legal-65). Full size commercial vehicles may need to park on Business Drive

⁶ El Dorado County Zoning Ordinance (revised November 2010) Section 17.18.040 (B)

to service the project. This limitation is common and is not anticipated to be a problem. The internal turning radius were designed to meet the El Dorado County Fire Department requirements (40' inner and 56' outer radius⁷); The turning radius for RV's (26' inner and 41.4' outer radius) was also checked and found to be adequate.

7. Adequacy of sight distance on-site.

Site distance was checked in the field and found to be more than adequate.

8. Queueing analysis of drive-through facilities.

This check is not applicable.

Findings and Recommendations

Findings and recommendations are reported in the summary at the beginning of this memorandum.

⁷ Personal communication February 15, 2016.