ATTACHMENT A

MITIGATION MONITORING AND REPORTING PROGRAM

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Attachment A
Ritz Carlton Bacara, Santa Barbara Hotel, Beach House Replacement and Demolition
MITIGATION MONITORING AND REPORTING PROGRAM

Final Mitigated Negative Declaration for
Case No. 16-02-DPAM-CDPAM-DRB

Environmental Conditions of Approval/Mitigation Measures	Responsible Party	Plan Requirements and Timing	Monitoring
Biological Resources			
Mitigation Measure BIO-1: Tree Replacement. All Monterey cypress trees to be removed during implementation of the project shall be identified on the building plans and replaced in kind with minimum 10-gallon size replacement trees. The replacement planting shall be located within close proximity to the existing Monterey cypress grove and selected by a certified arborist or with a suitable native tree species selected by the City Planning and Environmental Review Department at a 1:1 ratio consistent with the City of Goleta requirements for tree replacement planting. Tree health shall be monitored, and survival shall be ensured at a rate of 100% for the life of the project.	Applicant	Plan Requirements: The tree replacement planting locations and species must be depicted on final building plans and approved by the Planning and Environmental Review Director, or designee, prior to the issuance of Grading/Building permits. Timing: Funding of tree health and monitoring services and of tree health will be included in the hotel permit conditions.	Monitoring: The monitoring biologist and compliance monitor shall perform site inspections throughout the construction phases.

Environmental Conditions of Approval/Mitigation Measures	Responsible Party	Plan Requirements and Timing	Monitoring
Mitigation Measure-BIO-2: Nesting Birds. At the permittee/applicant's expense, a City-approved biologist shall be retained to conduct a survey to determine if nesting birds exist on the project site. The survey must be conducted prior to commencement of any demolition, grading, and/or construction activities. The survey must establish the breeding and roosting status of any nesting birds found throughout the subject property and adjacent trees and designate a 300-foot buffer from any nest if found. The survey must include recommendations to minimize impacts to nesting birds during construction, including but not limited to, imposing setbacks, installing fence protection, and restricting the construction schedule. The survey must take into account expected increases and decreases in nesting birds over the construction period and must include a map showing known roosting and nesting sites. Construction within the 300-foot buffer must be avoided during the bird nesting season (e.g., February 1st through August 31st). In addition, construction must not occur until the City-approved biologist has notified the City in writing that all young birds have successfully fledged, and the nests are no longer active.	Applicant	Plan Requirements and Timing: The 300-foot buffer(s) must be shown on all final grading, drainage, and construction plans where applicable. The survey must be conducted no more than 14 days prior to commencement of any demolition, grading, and/or construction activities. Timing: Survey conclusions must be reviewed and approved by the Planning and Environmental Review Director, or designee, prior to the issuance of Grading/Building permits.	Monitoring: The Planning and Environmental Review Director, or designee, will review any biological reports in consultation with any resource/trustee agency as needed, as well as conduct periodic site inspections to verify compliance with survey recommendations in the field.

Environmental Conditions of Approval/Mitigation Measures	Responsible Party	Plan Requirements and Timing	Monitoring
Mitigation Measure BIO-3: Biological Monitoring, Equipment Maintenance, Protective Fencing and Signs. All construction fleet vehicles and equipment shall be inspected, lubricated, and fueled at designated staging areas ensuring such materials are contained and disposed at approved waste facilities. Construction staged from the beach shall not coincide with high tides. At the permittee/applicant's expense, all construction and demolition activities adjacent to or within ESHA setbacks shall only be conducted under supervision of a City approved biologist who shall survey the site and direct placement of habitat protective fencing and signs prior to commencement of each construction phase. All equipment and vehicles shall be inspected prior to accessing the beach and fencing and signs placed clearly separating construction areas from public and emergency access areas. The monitoring biologist shall have the authority to stop construction should a potential for an impact to habitat or important species be deemed imminent. All ESHA shall be fenced with a fencing type and in locations acceptable to City planning staff and the biological monitor. Public and emergency access to the beach and temporary restrooms, if necessary, must be provided during all project phases along with directional signs to ensure that beach users do not stray into habitat or construction areas.	Applicant	Plan Requirements: Prior to issuance of a Grading Permit an equipment list and maintenance plan and fencing and sign plan identifying placement and post-construction removal of all fencing and temporary construction signs must be submitted to the City Planning and Environmental Review Department for approval. All ESHA locations to be protected and placement of construction fencing, and temporary signs shall be shown on all Grading and Building plans. Timing: All required fencing and signs shall be installed prior to any earth movement.	Monitoring: The monitoring biologist and compliance monitor shall perform site inspections funded by the Applicant/Permittee throughout the construction phase.

Environmental Conditions of Approval/Mitigation Measures	Responsible Party	Plan Requirements and Timing	Monitoring
Cultural Resources and Tribal Cultural Resources			
Mitigation Measure CUL-1: A City-qualified archaeologist and Chumash observer must monitor all initial (first movement of soils within each ground disturbance location at complete horizontal and vertical extents) ground disturbances throughout the proposed Project site to ensure that prehistoric materials important to the Native American community are identified and assessed consistent with City of Goleta Cultural Resources Guidelines. In the unlikely event human remains are encountered during grading, excavation must be immediately suspended, and the protocol identified in CEQA Guidelines section 15065.4(e) and the State Public Resources Code section 5097.98 shall be followed. Any diagnostic prehistoric artifacts that are identified must be recovered and either curated at the Repository for Archaeological and Ethnographic Collections located at University of California, Santa Barbara or reburied at a location determined through consultation between the City of Goleta and tribal representatives.	Applicant	Plan Requirements and Timing: This requirement must be printed on all plans submitted for any land use, building, grading, or demolition permits. Before the City issues permits for any ground disturbance, the Applicant/Permittee must provide the City Planning and Environmental Review Director the contact information of the Chumash consultant and the agreed upon procedures to be followed. If remains are found and if the remains are found to be of Chumash origin, the County Coroner will notify the Native American Heritage Commission and the Commission will name the Most Likely Descendant (MLD). The MLD, City-retained archaeologist, Applicant/Permittee, and City Planning and Environmental Review staff will consult as to the disposition of the remains. If the remains are identified as	Monitoring/Reporting Party(ies): The Planning and Environmental Review Director, or designee, must confirm that the County Coroner is notified in the event human remains are found, and that the Native American Heritage Commission is contacted if the remains are of Chumash origin.

Environmental Conditions of Approval/Mitigation Measures	Responsible Party	Plan Requirements and Timing	Monitoring
		non-Chumash, the County Coroner will take possession of the remains and comply with all state and local requirements in the treatment of the remains.	
Mitigation Measure CUL-2: Within the proposed restroom/shower facility disturbance footprint, a precautionary excavation will occur as follows to determine absence/presence of cultural material from the depth of 200 cm (6.6 ft.) 274 cm (9 ft.): a. All movement of soils within the proposed restroom/shower facility footprint must be observed by a City-qualified archaeologist and a Chumash observer. b. Once the ground disturbances have reached 200 cm (6.6 ft.), all mechanical activities must halt. c. A qualified archaeologist, observed by a Chumash monitor, will then excavate two shovel test pits (STPs) (25 x 50 cm) at opposite portions along the length of the facility footprint (approximately 30 ft. apart and to the proposed excavation depth of 274 cm (9 ft.) below ground surface (bgs). This will require the STPs to be excavated to a depth of 74 cm (2.4 cm). All excavated soils must be screen through 1/8-inch screen. d. If cultural material is discovered, further study may be required as outlined in the CMTP**.** e. Installation of protective fencing, signs, and Artemisia plants along the east hillside slope.	Applicant	Timing: This requirement must be printed on all plans submitted for any land use, building, grading, or demolition permits. The Applicant/Permittee must enter into a contract with a City-approved archaeologist and Applicant/Permittee-selected Chumash consultant and must fund the provision of on-site archaeological/cultural resource monitoring during initial grading and excavation activities before issuance of a Land Use Permit (LUP). Plan specifications for the monitoring must be printed on all plans submitted for grading and building permits. The contract should be executed at least two	Monitoring/Reporting Party(ies): The Planning and Environmental Review Director, or designee, must conduct periodic field inspections to verify compliance during ground-disturbing activities.

Environmental Conditions of Approval/Mitigation Measures	Responsible Party	Plan Requirements and Timing	Monitoring
		weeks prior to the LUP issuance for grading.	
Mitigation Measure CUL-3: A Construction Monitoring and Treatment Plan (CMTP) must be developed by a qualified archaeologist and authorized by the City of Goleta Environmental Director (or representative) prior to any ground disturbance. The CMTP must include the following: a. Methodology and Testing Plan for the additional excavations to occur within the restroom/shower facility; b. Treatment Plan for any cultural material encountered both as a result of the additional excavations and monitoring efforts; c. Qualifications of both archaeologist and Chumash observer; and d. Contact Protocol Requirements/instructions for preconstruction meeting. e. Should any tribal artifact be discovered, all tribes on the Native American Heritage Commission (NAHC) Tribal Consultation List, as well as the Barbareño Band of Chumash Indians and any tribes who have expressed interest regarding the project will be notified.		Timing: The contract for a CMTP of the entire site during construction, including identification of the City-qualified archaeologist and Chumash Native American observer, shall be submitted to the City for review and approval prior to and as a condition precedent to issuance of any Land Use Permit for the project. The CMTP shall be written in consultation with the tribal leaders/representatives and approved by the City of Goleta.	Monitoring/Reporting Party(ies): The Planning and Environmental Review Director, or designee, shall verify compliance before issuance of the Land Use Permit and shall periodically perform site inspections to verify compliance with the approved work program.

Environmental Conditions of Approval/Mitigation Measures	Responsible Party	Plan Requirements and Timing	Monitoring
Mitigation Measure CUL-4: A brief pre-construction workshop must be conducted by a City-qualified archaeologist and a Chumash observer. Attendees must at the least include construction supervisors and equipment operators. The workshop should include the following topics: a. Types of archaeological artifacts that may be found during construction of the proposed project; b. Examples of common archaeological artifacts to examine; c. Prohibited activities, including unauthorized collecting of artifacts; d. Procedures to follow if cultural materials and human remains are encountered; and. e. Installation of protective fencing, signs, and Artemisia plants along the eastern hillside slope.		Timing: This requirement must be printed on all plans submitted for any land use, building, grading, or demolition permits. The Applicant/Permittee must enter into a contract with a City-approved archaeologist and Applicant/Permittee-selected Chumash consultant and must fund the provision of on-site archaeological/cultural resource monitoring during initial grading and excavation activities before issuance of a Land Use Permit (LUP). Plan specifications for the monitoring must be printed on all plans submitted for grading and building permits. The contract should be executed at least two weeks prior to the LUP issuance for grading.	Monitoring/Reporting Party(ies): The Planning and Environmental Review Director, or designee, must conduct periodic field inspections to verify compliance during ground-disturbing activities.

Environmental Conditions of Approval/Mitigation Measures	Responsible Party	Plan Requirements and Timing	Monitoring
Hazardous Materials			
Mitigation Measure HAZ-1. Soils Management Plan. Prior to issuance of grading or building permits, whichever occurs first for the project, the project Applicant/Permittee must obtain documentation from the Santa Barbara County Public Health Department, the Santa Barbara County Air Pollution Control District, and the County of Santa Barbara Fire Department confirming a review of the project grading and building plans for compliance with, (1)the January 2013 *Soils Management Plan, Bacara Resort and Spa, 8301 Hollister Avenue, Santa Barbara (Goleta), California, 93117*, (2) the January 2018 *Voluntary Remediation Oversight Program, Remedial Action Program*, and (3) the February 2013 *Covenant to Restrict Use of the Property, Environmental Restriction* The Applicant/Permittee must enter an agreement and fund the services of a qualified provider of Soils Management Plan site monitoring and employee safety training encompassing the documented presence and potential for unknown hazardous materials onsite, including the potential for underground contamination and generation of airborne dust hazards. The training shall encompass the detection, handling, transport, disposal, and onsite abatement of hazardous materials, including the location of former sewage leaks at the Beach House. The onsite monitor must be approved by the City of Goleta and the Santa Barbara County Public Health Department Environmental Health Hazardous Materials Division. Said monitor must be onsite during all construction, demolition, and restoration phases. Should hazardous materials be disturbed during any	Applicant and City of Goleta	Timing: Prior the issuance of the of grading or building permits, whichever occurs first for the project, the City of Goleta Building Official or designee must receive the appropriate documentation confirming implementation of the SMP during construction activities at the project site. Construction worker training must be completed and verified by the Santa Barbara County Public Health Department Environmental Health Hazardous Materials Division in a letter to submitted to the City Building Official or designee must receive the appropriate documentation confirming compliance with training and abatement procedures prior to project commencement and the issuance of grading and building permits. A report of the removal of soils from ARI and the project site and compliance with the	Monitoring/Reporting Party(ies): The City of Goleta Building Official, or designee, must verify compliance before issuance of the grading permit or building permit, whichever comes first.

Environmental Conditions of Approval/Mitigation Measures	Responsible Party	Plan Requirements and Timing	Monitoring
project phase, all work shall stop until the site and potentially hazardous materials are secured and abatement is completed as confirmed by the City of Goleta and the Santa Barbara County Public Health Department Environmental Health Hazardous Materials Division. For areas with documented or suspected soil or groundwater contamination, appropriate worker and community health and safety measures (e.g., dust control and air monitoring) shall be implemented during soil disturbance activities. Should construction activities extend to depths of 10 to 15 below ground surface, the potential for encountering petroleum-contaminated groundwater shall be evaluated. Should elevated levels of methane or hydrogen sulfide be encountered near the proposed new building(s), use of a subslab venting system and vapor barrier shall be evaluated by Santa Barbara County Public Health Department Environmental Health Hazardous Materials Division and the City Building Official.		SMP shall be submitted to the PHD and City Building Official.	
Mitigation Measure HAZ-2. Former Oil and Gas Pipes and Infrastructure Removal. A geophysical survey shall be conducted prior to soil disturbance to evaluate the potential for unknown pipelines. Above the mean high tideline, all former oil and gas pipes and other structural infrastructure remnants revealed by erosion, during ground disturbance activity, or occupancy of the project shall be removed by the Applicant/Owner/Permittee. Should oil and gas pipes or infrastructure be encountered during any phase of the project, work shall stop and the City of Goleta Planning	Applicant	Timing: Prior the issuance of the grading permit or building permit, whichever comes first. The City of Goleta Building Official or designee must receive the appropriate documentation confirming the results of the required geophysical survey.	Monitoring/Reporting Party(ies): The Planning and Environmental Review Director, or designee, must verify compliance before issuance of the Land Use Permit. The environmental monitor shall monitor

Environmental Conditions of Approval/Mitigation Measures	Responsible Party	Plan Requirements and Timing	Monitoring
and Environmental Review Department, Santa Barbara County Public Health Department Environmental Health Hazardous Materials Division (EHHMD), California Coastal Commission, and any other government entity with jurisdiction over the matter shall be contacted for consultation and assessment, including testing of the soil for detection, hazardous gas emissions, handling and abatement of potentially hazardous materials, and assistance obtaining any required permits.			for disturbance of oil pipelines, storage tanks, or soils contamination (re: seeps, stained soils, odors, or detected CO emissions, etc.) in concert with implementation of the Soils Management Plan. Should contamination or evidence of potential soils contamination. The grading and building plans must include verbatim all the above Hazards and Hazardous Materials Mitigation Measures under the title “Notice of the Presence of Hazardous Materials, Infrastructure, and Soils Management Plan.”

Environmental Conditions of Approval/Mitigation Measures	Responsible Party	Plan Requirements and Timing	Monitoring
Mitigation Measure HAZ-3. Asbestos. Before the City of Goleta issues a demolition permit for the existing Beach House and associated structures, the Applicant/Permittee must notify the Santa Barbara Air Pollution Control District and test for asbestos. The results of the asbestos test must be submitted to the City of Goleta Building Official. If asbestos is found, then the Applicant/Permittee must abate and dispose of the materials in a manner consistent with the California Building Code, Santa Barbara County Air Pollution Control District requirements, and any other regulatory requirements.	Applicant	Timing: Prior the issuance of the demolition permit, The City of Goleta Building Official or designee must receive the appropriate documentation confirming the asbestos survey results and required abatement actions.	Monitoring/Reporting Party(ies): The Planning and Environmental Review Director, or designee, must verify compliance before issuance of the Land Use Permit.
Mitigation Measure HAZ-4. Hydrogen Sulfide Detection. The project utility plan shall be revised to depict the existing Hydrogen Sulfide (H2S) detection system and identify a new location for the H2S detection system pursuant to Coastal Development Plan (CDP) Condition of Approval #126 sensors and the 1997 H2S Detection Plan. The H2S monitoring system ensures public and worker safety in the event of a H2S release and must be installed and the results of the sensor testing shall be submitted to the Planning and Environmental Review Department prior to removal of the existing system or implementation of other project phases.	Applicant	Timing: The revised Utility Plan shall be submitted prior the issuance of the Land Use Permit. Installation of the H2S monitoring system and testing results must be submitted to the Goleta Building Official prior to issuance of an occupancy permit for the restroom building.	Monitoring/Reporting Party(ies): The Planning and Environmental Review Director, or designee, must verify Utility Plan Mitigation Measure compliance before issuance of the Land Use Permit. The City of Goleta Building Official or designee must receive the appropriate documentation that the H2S system has been installed and is operational.

Environmental Conditions of Approval/Mitigation Measures	Responsible Party	Plan Requirements and Timing	Monitoring
Tribal Cultural Resources			
Mitigation Measures regarding Tribal Cultural Resources are listed under Cultural Resources. Please refer to Mitigation Measures CUL-1 through CUL-4.			

I have read and agree to the conditions and mitigation measures in this document:

_____ _____

Applicant's Name Signature Date

ATTACHMENT B

RESERVED FOR
PUBLIC COMMENTS RECEIVED
DURING PUBLIC REVIEW PERIOD

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ATTACHMENT C

PROJECT PLANS

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NOTE: EXISTING UTILITY LOCATIONS ARE APPROXIMATE.
EXISTING UTILITIES TO BE VERIFIED PRIOR TO DEMOLITION.

ABBREVIATIONS

AC	ASPHALT CONCRETE	FL	FLOW LINE
CB	CATCH BASIN	FOC	FIBER OPTIC CABLE
CD	CURB DRAIN	FS	FINISHED SURFACE
CL	CENTERLINE	HDPE	HIGH DENSITY
CMP	CORRUGATED METAL PIPE	POLYETHYLENE (PIPE)	
CO	CLEAN OUT	PB	PULLBOX
COMM	COMMUNICATIONS	PVC	POLYVINYL CHLORIDE (PIPE)
CONC	CONCRETE	RCP	REINFORCED CONCRETE
CYP	CYPRESS TREE	PIPE	
DI	DRAIN INLET	SS	SANITARY SEWER
DS	DOWN SPOUT	SD	STORM DRAIN
EP	EDGE OF PAVEMENT	TC	TOP OF CURB
ELEC	ELECTRICITY	TG	TOP OF GRATE
FC	FACE OF CURB	TW	TOP OF WALL
FF	FINISHED FLOOR		

SYMBOLS

AD	– BACK FLOW PREVENTER
BFP	– BOLLARD
B	– DRAIN INLET
DI	– FIRE DEPARTMENT CONNECTION
FDC	– FIRE HYDRANT
FH	– HOSE BIB
HB	– MAILBOX
MB	– GAS METER
GM	– WATER METER
WM	– TELEPHONE MANHOLE
TMH	– FIBER OPTIC CABLE MANHOLE
FOMH	– STORM DRAIN MANHOLE
SDMH	– SEWER MANHOLE
SMH	– MANHOLE (UNSPECIFIED)
MH	– CABLE TV PULLBOX
CATV	– COMMUNICATION PULLBOX
COMM	– ELECTRIC PULLBOX
ELEC	– GAS PULLBOX
GAS	– WATER PULLBOX
WPB	

PIV	– POST INDICATOR VALVE
	– POLE – LIGHT
UP	– POLE – UTILITY
RISER	– UTILITY RISER – TYPE SPECIFIED
SCO	– SEWER CLEAN OUT
SIGN	– SIGN
SIGN	– SIGN W/ DOUBLE POST
	– TREE
	– UTILITY MARK
GV	– GAS VALVE
ICV	– IRRIGATION CONTROL VALVE
V	– VALVE (UNSPECIFIED)
WV	– WATER VALVE
CP 1	– CONTROL POINT
MP 1	– MONITORING POINT
2529.43 TC	– LEADERED SPOT ELEVATION
2529.4	– SPOT ELEVATION
×382.2	– SPOT ELEVATION (FROM AERIAL SURVEY)
	– CONCRETE SURFACE

LINETYPES

	– BOUNDARY LINE
	– EASEMENT LINE
	– RIGHT OF WAY LINE
	– FLOWLINE
	– GROUND BREAKLINE
2527	– CONTOUR LINE
	– CURB
	– CENTERLINE
	– EDGE OF PAVEMENT
	– FENCE
	– GUARD RAIL
	– WALL
CTV	– CABLE TV
COMM	– COMMUNICATIONS
E	– ELECTRIC
FW	– FIRE WATER
IRR	– IRRIGATION
G	– NATURAL GAS
S	– SEWER FORCE MAIN
RW	– RECLAIMED WATER
SD	– STORM DRAIN
W	– WATER
OHW	– OVERHEAD WIRE

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

SCALE: 1"=30'
0 30 60 90

DEDICATION AND EASEMENT NOTES

PREPARED IN CONJUNCTION WITH A PRELIMINARY REPORT OF TITLE ISSUED BY FIDELITY NATIONAL TITLE COMPANY AS REPORT NO. 008-23045039-C-TC1 DATED JUNE 20, 2014. SAID REPORT IS PRESUMED TO COMPLETE AND ACCURATE. STANTEC CANNOT WARRANT THE ACCURACY OR COMPLETENESS OF SAID REPORT. ITEM NUMBERS IN SYMBOL, e.g. ⟨1⟩ CORRESPOND TO EXCEPTION ITEMS IN SAID REPORT:

⟨4⟩ AN EASEMENT FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES, RECORDED FEBRUARY 10, 1932 AS INSTRUMENT NO. 965, BOOK 216, PAGE 576 OF OFFICAL RECORDS. IN FAVOR OF: SOUTHERN COUNTIES GAS COMPANY OF CALIFORNIA AFFECTS: AS DESCRIBED THEREIN.

PREPARED IN CONJUNCTION WITH A PRELIMINARY REPORT OF TITLE ISSUED BY FIDELITY NATIONAL TITLE COMPANY AS REPORT NO. FSBA-425180059-SA DATED APRIL 16, 2018. SAID REPORT IS PRESUMED TO COMPLETE AND ACCURATE. STANTEC CANNOT WARRANT THE ACCURACY OR COMPLETENESS OF SAID REPORT. ITEM NUMBERS IN SYMBOL, e.g. ⟨10⟩, CORRESPOND TO EXCEPTION ITEMS IN SAID REPORT:

⟨11⟩ AN UNRECORDED AGREEMENT AFFECTING PORTIONS OF SAID LAND DATED MARCH 2, 1931 BY AND BETWEEN LOUIS G. DREYFUS AND SIGNAL OIL AND GAS COMPANY, A CORPORATION AS DISCLOSED BY THE AMENDMENT OF OIL AND GAS LEASE RECORDED DECEMBER 21, 1953 AS INSTRUMENT NO. 20467 IN BOOK 1203, PAGE 85 OF OFFICIAL RECORDS.

⟨19⟩ AN IRREVOCABLE OFFER OF DEDICATION FOR COASTAL ACCESS AND INCIDENTAL PURPOSES, RECORDED MAY 07, 1997 AS INSTRUMENT NO. 97-25648 OF OFFICIAL RECORDS. TO: COUNTY OF SANTA BARBARA

⟨20⟩ AN IRREVOCABLE OFFER OF DEDICATION FOR EQUESTRIAN AND HIKING AND INCIDENTAL PURPOSES, RECORDED MAY 07, 1997 AS INSTRUMENT NO. 97-25649 OF OFFICIAL RECORDS. TO: COUNTY OF SANTA BARBARA. SEE SHEET 4 FOR CONTINUATION OF OFFER OF DEDICATION.

⟨23⟩ THE TERMS AND PROVISIONS CONTAINED IN THE DOCUMENT ENTITLED "APPLICANT'S AGREEMENT FOR DRAINAGE IMPROVEMENTS" RECORDED MAY 07, 1997 AS INSTRUMENT NO. 97-25652 OF OFFICIAL RECORDS.

⟨24⟩ THE TERMS, PROVISIONS AND EASEMENT(S) CONTAINED IN THE DOCUMENT ENTITLED "AGREEMENT TO PRESERVE ARCHAEOLOGICAL RESOURCES AND GRANT OF EASEMENT" RECORDED MAY 07, 1997 AS INSTRUMENT NO. 97-25653 OF OFFICIAL RECORDS.

⟨25⟩ AN EASEMENT FOR CONSERVATION AND INCIDENTAL PURPOSES, RECORDED MAY 07, 1997 AS INSTRUMENT NO. 97-25654 OF OFFICIAL RECORDS.
IN FAVOR OF: COUNTY OF SANTA BARBARA
AFFECTS: AS DESCRIBED THEREIN

⟨28⟩ THE TERMS AND PROVISIONS CONTAINED IN THE DOCUMENT ENTITLED "OFFER TO ALLOW COUNTY TO MANAGE AND MAINTAIN PUBLIC BEACH AREA" RECORDED NOVEMBER 24, 1997 AS INSTRUMENT NO. 97-71160 OF OFFICIAL RECORDS.

⟨32⟩ THE TERMS, PROVISIONS AND EASEMENT(S) CONTAINED IN THE DOCUMENT ENTITLED "SECOND AMENDED IRREVOCABLE OFFER TO DEDICATE 8' WIDE PUBLIC ACCESS EASEMENT AND DECLARATION OF RESTRICTIONS" RECORDED JUNE 10, 2008 AS INSTRUMENT NO. 2008-0034569 OF OFFICIAL RECORDS.

SURVEYOR'S NOTES

1. MAPPING

TOPOGRAPHIC MAPPING WAS COMPILED AT A SCALE OF 1"=20', WITH A ONE FOOT CONTOUR INTERVAL, USING STANDARD PHOTOGRAMMETRIC METHODS AND PROCEDURES BY STANTEC CONSULTING FROM AERIAL PHOTOGRAPHY NOVEMBER 30, 2016.

2. BASIS OF BEARINGS AND COORDINATES

BEARINGS SHOWN ON THIS MAP ARE REFERENCED TO THE CALIFORNIA COORDINATE SYSTEM, NAD 83, ZONE 5 GRID, EPOCH 2011.00, DEFINED LOCALLY BY CONTINUOUSLY OPERATING REFERENCE STATIONS OPERATED BY THE CALIFORNIA SPATIAL REFERENCE CENTER (CSRC). THIS SURVEY TIED TO STATIONS COPR, UCSB, AND P519.

ALL DISTANCES AND COORDINATES ARE REFERENCED TO SAID CALIFORNIA COORDINATE SYSTEM AND ARE EXPRESSED IN US SURVEY FOOT UNITS.

3. ELEVATIONS

ELEVATIONS SHOWN HEREON ARE EXPRESSED IN U.S. SURVEY FEET AND ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), DEFINED LOCALLY BY THE CSRC. THIS SURVEY TIED TO BENCHMARK COPR, A WYATT-AGNEW DRILLED BRACED MONUMENT. ELEVATION = 45.35 FEET.

SHEET INDEX

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	PRELIMINARY RESTORATION GRADING PLAN
6	PRELIMINARY RESTORATION GRADING PLAN SECTIONS
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EXISTING CONDITIONS
BEACH HOUSE RELOCATION

RITZ-CARLTON BACARA RESORT & SPA

CITY OF GOLETA, CALIFORNIA
SEPTEMBER 16, 2019

Stantec
111 East Victoria Street, Santa Barbara, CA 93101
Phone: (805) 963-9532

ATTENTION: IF THIS DOCUMENT IS PROVIDED AS A COURTESY IN AN ELECTRONIC FORMAT, THE DELIVERY OF THE ELECTRONIC FILE DOES NOT CONSTITUTE THE DELIVERY OF THE PROFESSIONAL WORK PRODUCT. ONLY A HARD COPY DOCUMENT THAT IS SIGNED AND SEALED BY AN AUTHORIZED PROFESSIONAL EMPLOYEE OF STANTEC CONSTITUTES THE PROFESSIONAL WORK PRODUCT. IN THE EVENT THE ELECTRONIC FILE IS ALTERED, THE HARD COPY MUST BE REFERRED TO FOR THE ORIGINAL AND CORRECT INFORMATION. STANTEC SHALL NOT BE RESPONSIBLE FOR ANY MODIFICATIONS MADE TO THE ELECTRONIC FILE, OR ANY PRODUCTS DERIVED FROM THE ELECTRONIC FILE WHICH ARE NOT REVIEWED, SIGNED AND SEALED BY AN AUTHORIZED PROFESSIONAL EMPLOYEE OF STANTEC. COPYRIGHT 2016, STANTEC CONSULTING SERVICES INC

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SAVE DATE: 9/16/2019 9:51:34 PM
36-EXB
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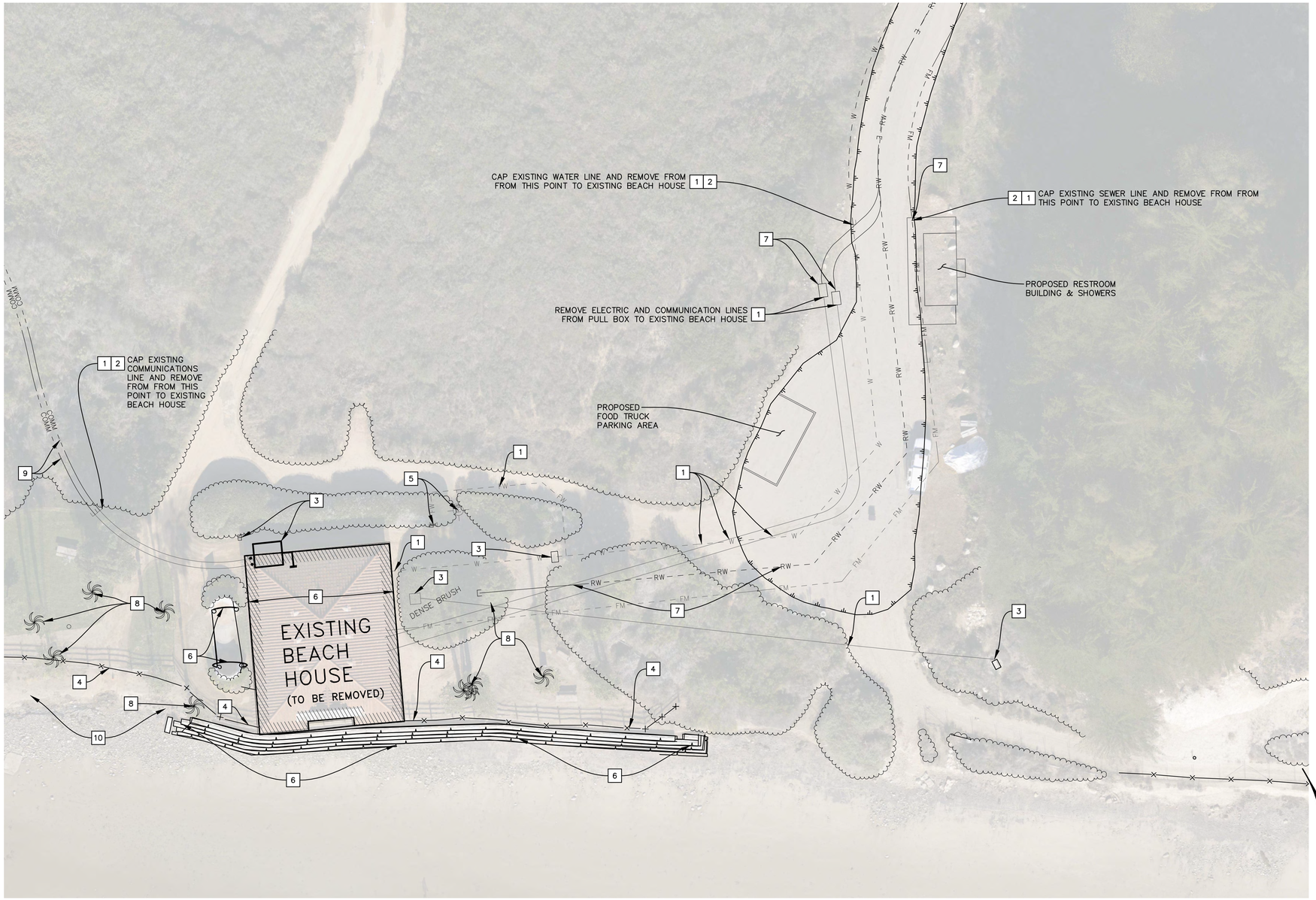

NOTE: EXISTING UTILITY LOCATIONS ARE APPROXIMATE.
EXISTING UTILITIES TO BE VERIFIED PRIOR TO DEMOLITION.

SCALE: 1"=20'
0 20 40 60

GENERAL NOTES

1. DEMOLISH EXISTING BEACH HOUSE BUILDING IN ITS ENTIRETY, INCLUDING ALL FOOTINGS AND UTILITIES.
2. DEMOLISH ALL UTILITIES, INCLUDING THOSE SHOWN, EXCEPT FOR IRRIGATION LINES.
3. ALL DEMOLITION TO BE DISPOSED OFFSITE PER DEMOLITION PERMIT.
4. PUBLIC RESTROOMS, SHOWERS, AND SNACK BAR SHALL BE AVAILABLE DURING RELOCATED BEACH HOUSE CONSTRUCTION PER ORIGINAL PERMIT CONDITIONS.
5. THERE EXISTS A POTENTIAL TO ENCOUNTER CONTAMINATED SOILS ON SITE DURING EXCAVATION AND DEMOLITION. PLEASE REFER TO SBCPHD–APPROVED SOIL MANAGEMENT PLAN FOR CONTAINMENT CONTINGENCIES, SOIL REMEDIATION, AND WORKER SAFETY.

DEMOLITION NOTES

1. REMOVE EXISTING UTILITY. DISPOSE OFFSITE.
2. CUT AND CAP EXISTING UTILITY.
3. REMOVE UTILITY VAULT INCLUDING FOUNDATION. DISPOSE OFFSITE.
4. REMOVE EXISTING FENCE. DISPOSE OFFSITE. SEE PRELIMINARY RESTORATION PLAN
5. RELOCATE EXISTING HYDRANT / FIRE DEPARTMENT CONNECTION SEE PRELIMINARY UTILITY PLAN
6. REMOVE EXISTING CONCRETE YARD BLOCKS, FOUNDATION, AND SHOWER FACILITY AND DISPOSE OFFSITE.
7. PROTECT EXISTING UTILITY IN PLACE.
8. PROTECT EXISTING TREE IN PLACE.
9. ABANDON EXISTING UTILITY IN PLACE.
10. REMOVE EXISTING EROSION CONTROL DEVICES (SANDBAGS, PLASTIC, JUTE MAT, ETC.) AND DISPOSE OFFSITE.

EXISTING UTILITIES LEGEND

- W — WATER MAIN
- FW — FIRE WATER LINE
- RW — RECLAIMED WATER LINE (IRRIGATION)
- FM — SEWER FORCE MAIN
- E — ELECTRIC LINES
- COMM — COMMUNICATION LINES

PRELIMINARY DEMOLITION PLAN
BEACH HOUSE RELOCATION

RITZ–CARLTON BACARA RESORT & SPA

CITY OF GOLETA, CALIFORNIA
SEPTEMBER 16, 2019

Stantec
111 East Victoria Street, Santa Barbara, CA 93101
Phone: (805) 963-9532

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

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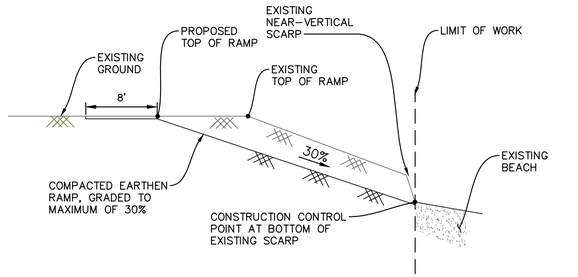
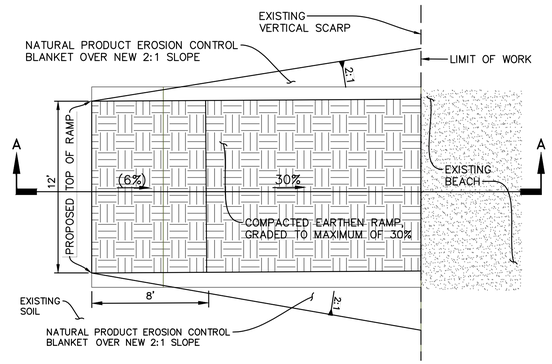


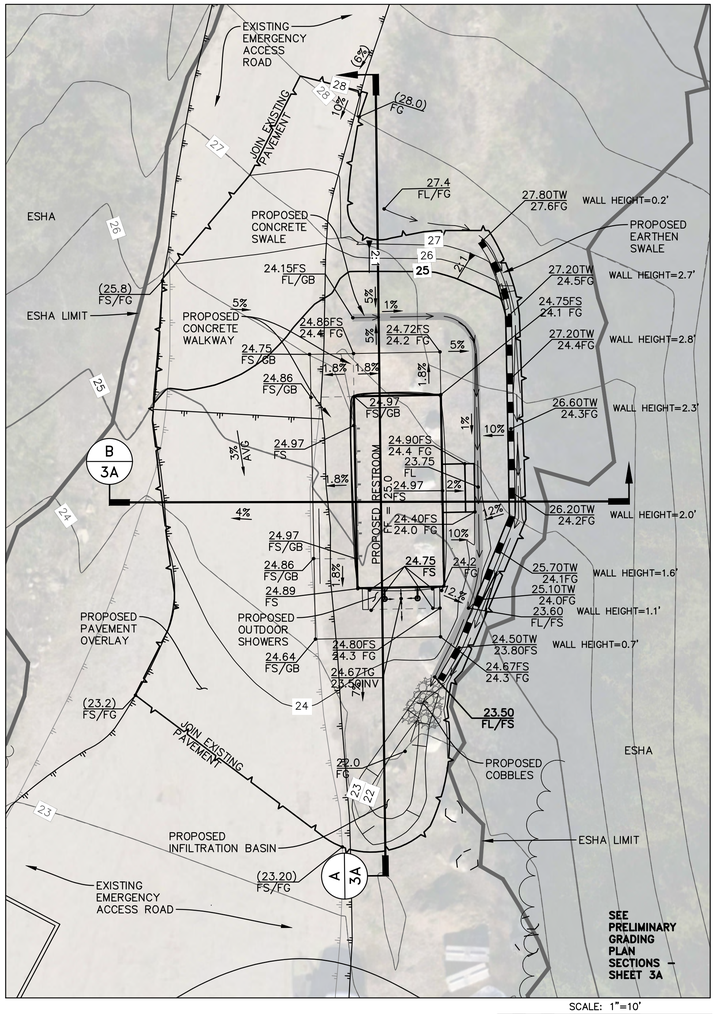
PROPOSED EMERGENCY VEHICLE ACCESS RAMP DETAIL – SECTION A

SCALE: 1"=5'



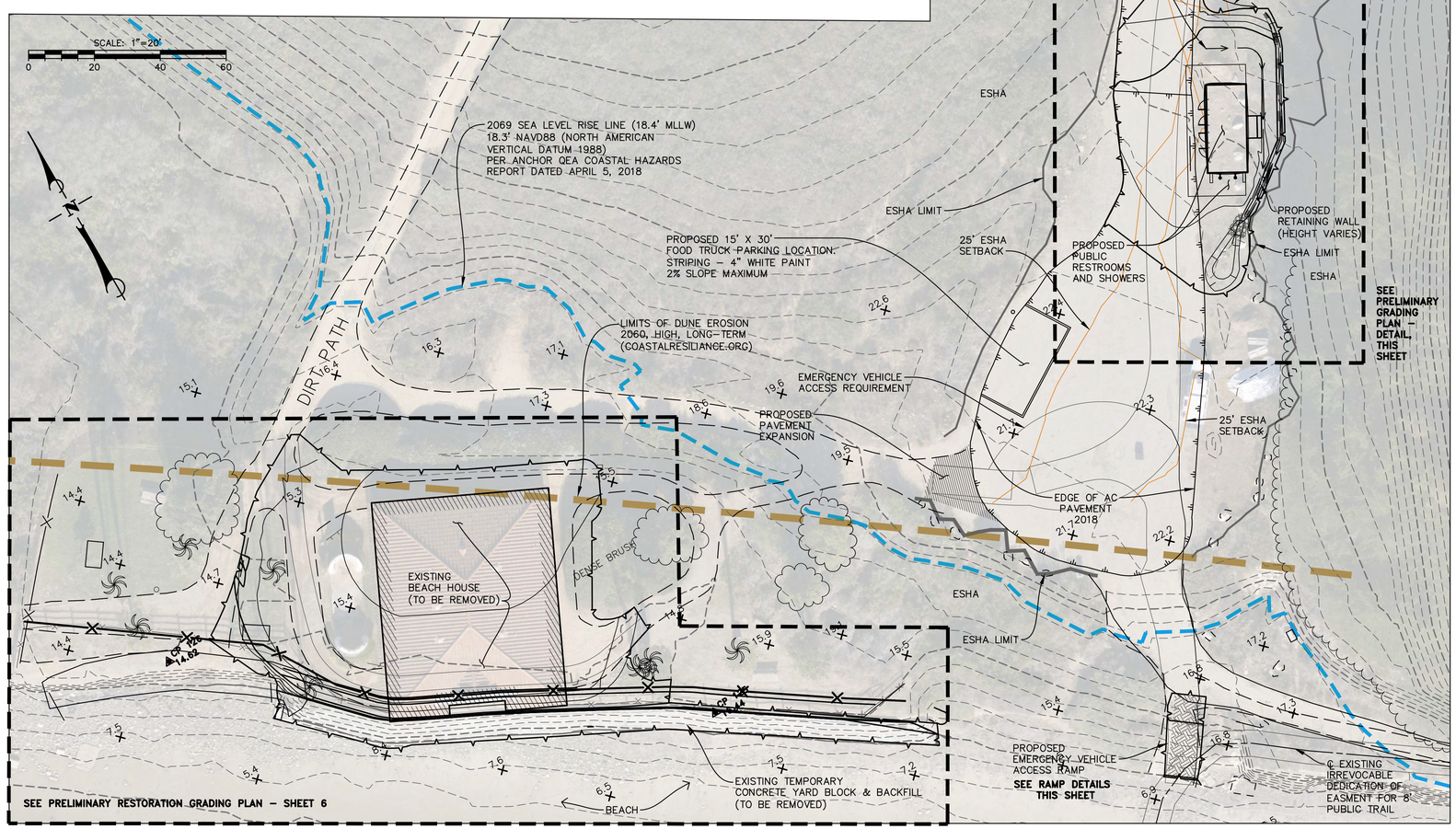
PROPOSED EMERGENCY VEHICLE ACCESS RAMP DETAIL – PLAN

SCALE: 1"=5'



PRELIMINARY GRADING PLAN – DETAIL

SCALE: 1"=10'



LEGEND

- STEP LOCATION
- SD CATCH BASIN/INLET
- 3 / 4 CONSTRUCTION NOTE
- 92.43 FS PROPOSED GRADE
- (88.42) EXISTING/MATCH GRADE
- 2% PROPOSED GRADIENT
- PROPERTY LINE
- BUILDING SETBACK LINE
- ROAD CENTERLINE
- GRADING LIMIT LINE
- FLOWLINE/ SWALE
- 495' EXISTING CONTOUR
- 500 PROPOSED CONTOUR
- SD PROPOSED STORM DRAIN PIPE
- GRADE BREAK
- SAWCUT LINE
- U PROPOSED DRY UTILITY TRENCH
- FENCE

PRELIMINARY GRADING PLAN
BEACH HOUSE RELOCATION

RITZ-CARLTON BACARA RESORT & SPA

CITY OF GOLETA, CALIFORNIA
SEPTEMBER 16, 2019

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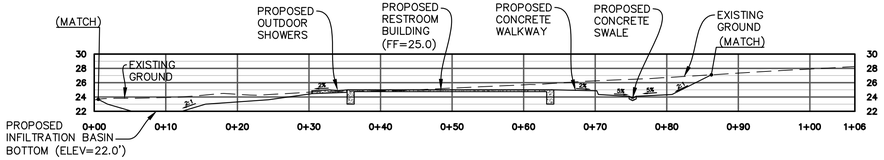
ESTIMATED EARTHWORK – RAW QUANTITIES

ACCESS RAMP	CUT = 10 C.Y.	FILL = 5 C.Y.
PROPOSED BEACH HOUSE	CUT = 110 C.Y.	FILL = 10 C.Y.
RESTORATION GRADING	CUT = 10 C.Y.	FILL = 460 C.Y.
TOTAL	CUT = 130 C.Y.	FILL = 475 C.Y.

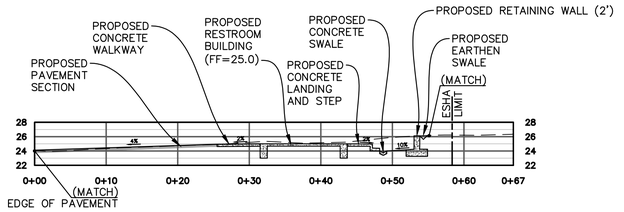
THE ABOVE QUANTITIES ARE APPROXIMATE IN PLACE VOLUMES CALCULATED FROM THE EXISTING GROUND TO THE PROPOSED FINISH GRADE OR SUBGRADE. EXISTING GROUND IS DEFINED BY THE TOPOGRAPHIC CONTOURS AND/OR SPOT ELEVATIONS ON THE PLAN. PROPOSED FINISH GRADE IS DEFINED AS THE DESIGN SURFACE ELEVATION OF EARTH TO BE CONSTRUCTED. PROPOSED SUBGRADE ELEVATION IS DEFINED AS THE DESIGN SURFACE ELEVATION OF EARTH TO BE CONSTRUCTED BENEATH PAVEMENTS OR STRUCTURES.

THE ABOVE QUANTITIES ARE FOR PERMIT PURPOSES ONLY AND HAVE NOT BEEN FACTORED TO INCLUDE ALLOWANCES FOR BULKING, CLEARING AND GRUBBING, SUBSIDENCE, SHRINKAGE, OVER EXCAVATION AND RECOMPACTION, UNDERGROUND UTILITY AND SUBSTRUCTURE SPOILS AND CONSTRUCTION METHODS.



A SECTION A

SCALE: 1"=10'



B SECTION B

SCALE: 1"=10'

PRELIMINARY GRADING PLAN SECTIONS
BEACH HOUSE RELOCATION

RITZ–CARLTON BACARA RESORT & SPA

CITY OF GOLETA, CALIFORNIA
SEPTEMBER 16, 2019

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HOLLISTER AVE

ACCESS ROAD

PROPOSED COMMUNICATION LINES 2–2" CONDUIT

NEW COMMUNICATION LINE PULL BOX

CAUTION – EXISTING GAS LINE

EMERGENCY ACCESS ROAD

PROPOSED COMMUNICATION LINES – 2–2" CONDUIT

ABANDON EXISTING COMMUNICATION LINES IN PLACE

SEE PRELIMINARY UTILITY PLAN – DETAIL – SHEET 5

PROPOSED RESTROOM BUILDING, AND SHOWERS

PROPOSED FOOD TRUCK PARKING AREA

SEE SHEET #1 FOR OFFER TO DEDICATE DESCRIPTION

EXISTING BEACH HOUSE

PROPOSED EMERGENCY VEHICLE ACCESS RAMP

GENERAL NOTES

1. ALL EXISTING UTILITIES SERVING EXISTING BEACH HOUSE TO BE ADAPTED / EXTENDED TO NEW BEACH HOUSE.
2. UTILITY CONNECTION 5' FROM PROPOSED BEACH HOUSE (TYPICAL).
3. PUBLIC SHOWERS AND RESTROOMS TO BE PROVIDED THROUGHOUT CONSTRUCTION.
4. FIRE, POTABLE, AND RECLAIMED IRRIGATION WATER TO BE PROVIDED BY GWD.

LEGEND

- RETAINING WALL
- SD — PROPOSED STORM DRAIN
- SD — EXISTING STORM DRAIN
- S — PROPOSED SEWER MAIN
- FM — EXISTING SEWER FORCE MAIN
- W — PROPOSED WATER MAIN
- W — EXISTING WATER MAIN
- FW — PROPOSED FIRE WATER LINE
- RW — EXISTING RECLAIMED WATER
- COMM — PROPOSED COMMUNICATIONS LINE
- COMM — EXISTING COMMUNICATIONS LINE
- E — PROPOSED ELECTRICAL LINE
- E — EXISTING ELECTRICAL LINE
- U — PROPOSED JOINT UTILITY TRENCH
- FH — RELOCATED FIRE HYDRANT
- FDC — RELOCATED FIRE DEPARTMENT CONNECTION
- PROPOSED GWD FIRE LINE WITH DCDA (ABOVEGROUND)

SCALE: 1"=50'
0 50 100 150

PRELIMINARY UTILITY PLAN
BEACH HOUSE RELOCATION

RITZ–CARLTON BACARA RESORT & SPA

CITY OF GOLETA, CALIFORNIA
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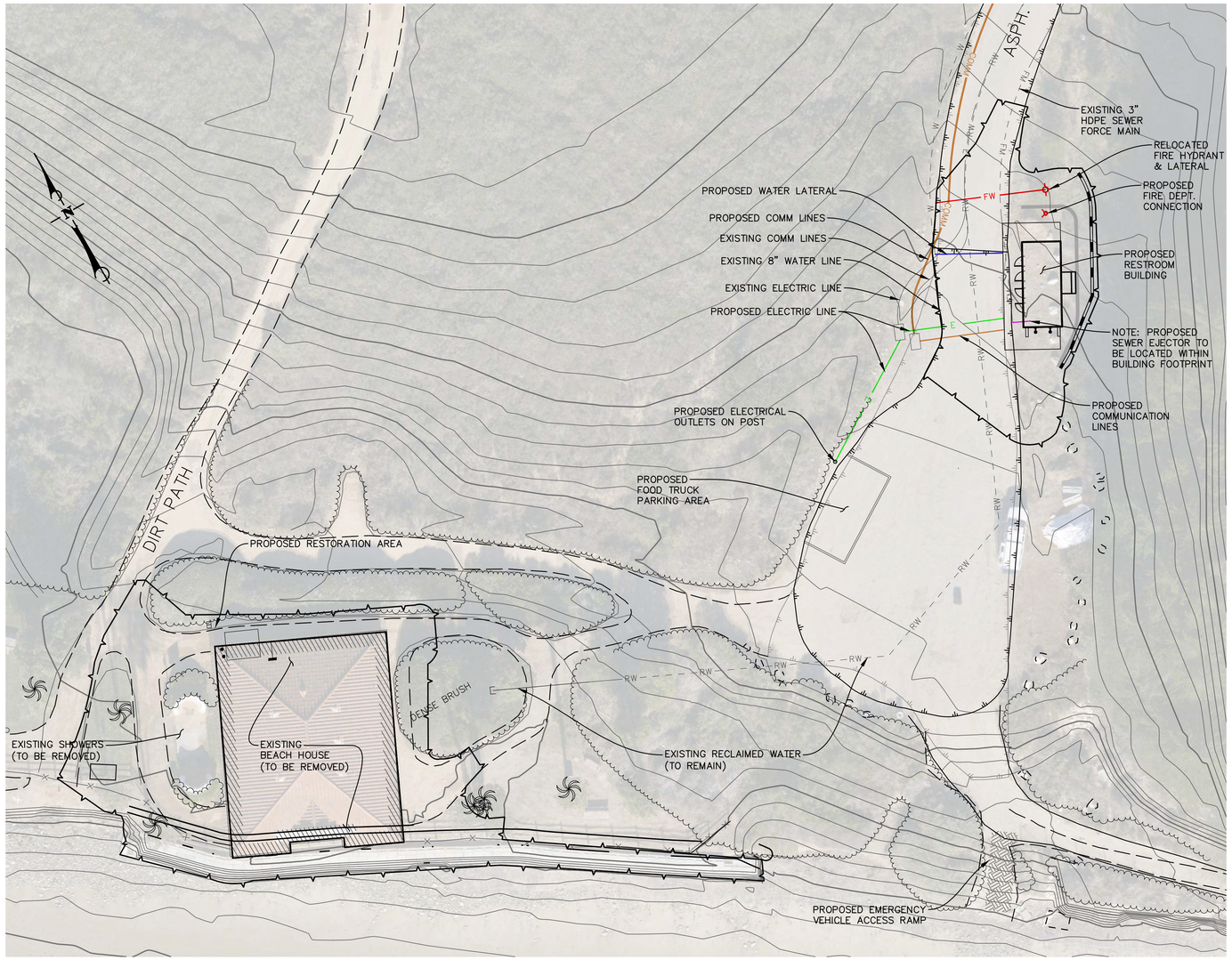
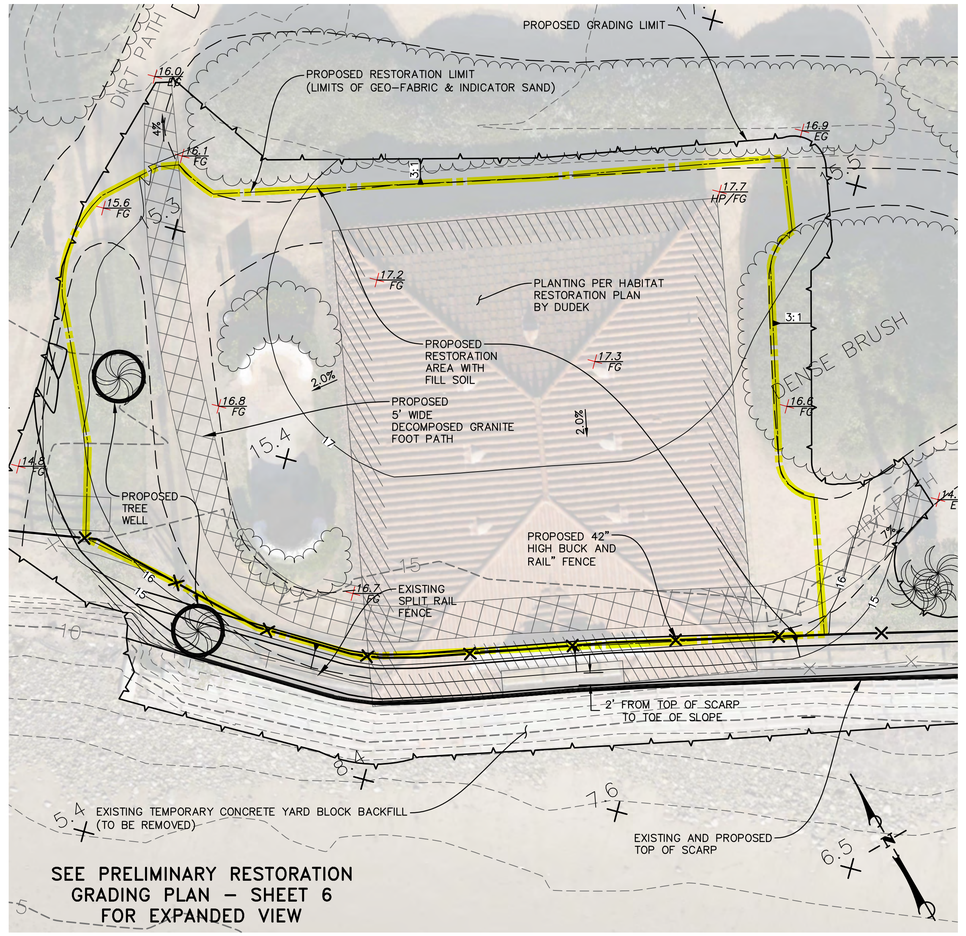
UITILITY NOTES

1. ALL EXISTING UTILITIES SERVING EXISTING BEACH HOUSE TO BE ADAPTED / EXTENDED TO NEW BEACH HOUSE.
2. UTILITY CONNECTION 5' FROM PROPOSED BEACH HOUSE (TYPICAL).
3. PUBLIC SHOWERS AND RESTROOMS TO BE PROVIDED THROUGHOUT CONSTRUCTION.
4. FIRE, POTABLE, AND RECLAIMED IRRIGATION WATER TO BE PROVIDED BY GWD.



PRELIMINARY UTILITY PLAN – DETAIL

SCALE: 1"=20'
0 20 40 60



PRELIMINARY RESTORATION GRADING PLAN

SCALE: 1"=10'
0 10 20 30

LEGEND

RETAINING WALL	PROPOSED COMMUNICATIONS LINE
SD PROPOSED STORM DRAIN	COMM EXISTING COMMUNICATIONS LINE
SD EXISTING STORM DRAIN	E PROPOSED ELECTRICAL LINE
S PROPOSED SEWER MAIN	E EXISTING ELECTRICAL LINE
FM EXISTING SEWER FORCE MAIN	U PROPOSED JOINT UTILITY TRENCH
W PROPOSED WATER MAIN	FH RELOCATED FIRE HYDRANT
W EXISTING WATER MAIN	FDC RELOCATED FIRE DEPARTMENT CONNECTION
FW PROPOSED FIRE WATER LINE	PROPOSED GWD FIRE LINE WITH DCDA (ABOVEGROUND)
RW EXISTING RECLAIMED WATER	PROPOSED RESTORATION LIMIT

PRELIMINARY UTILITY PLAN – DETAIL
PRELIMINARY RESTORATION GRADING PLAN
BEACH HOUSE RELOCATION

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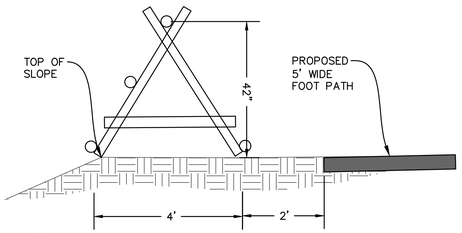
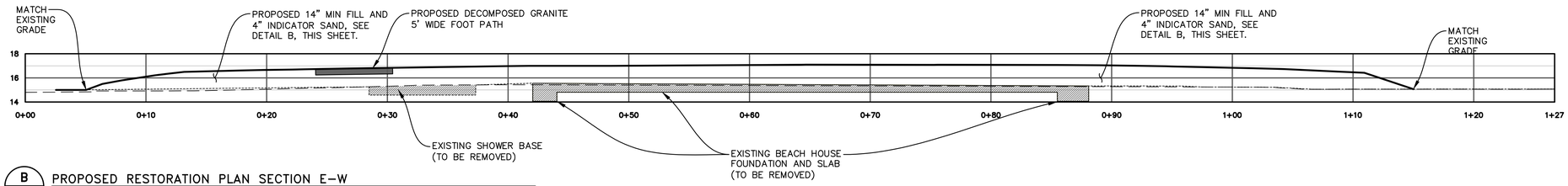
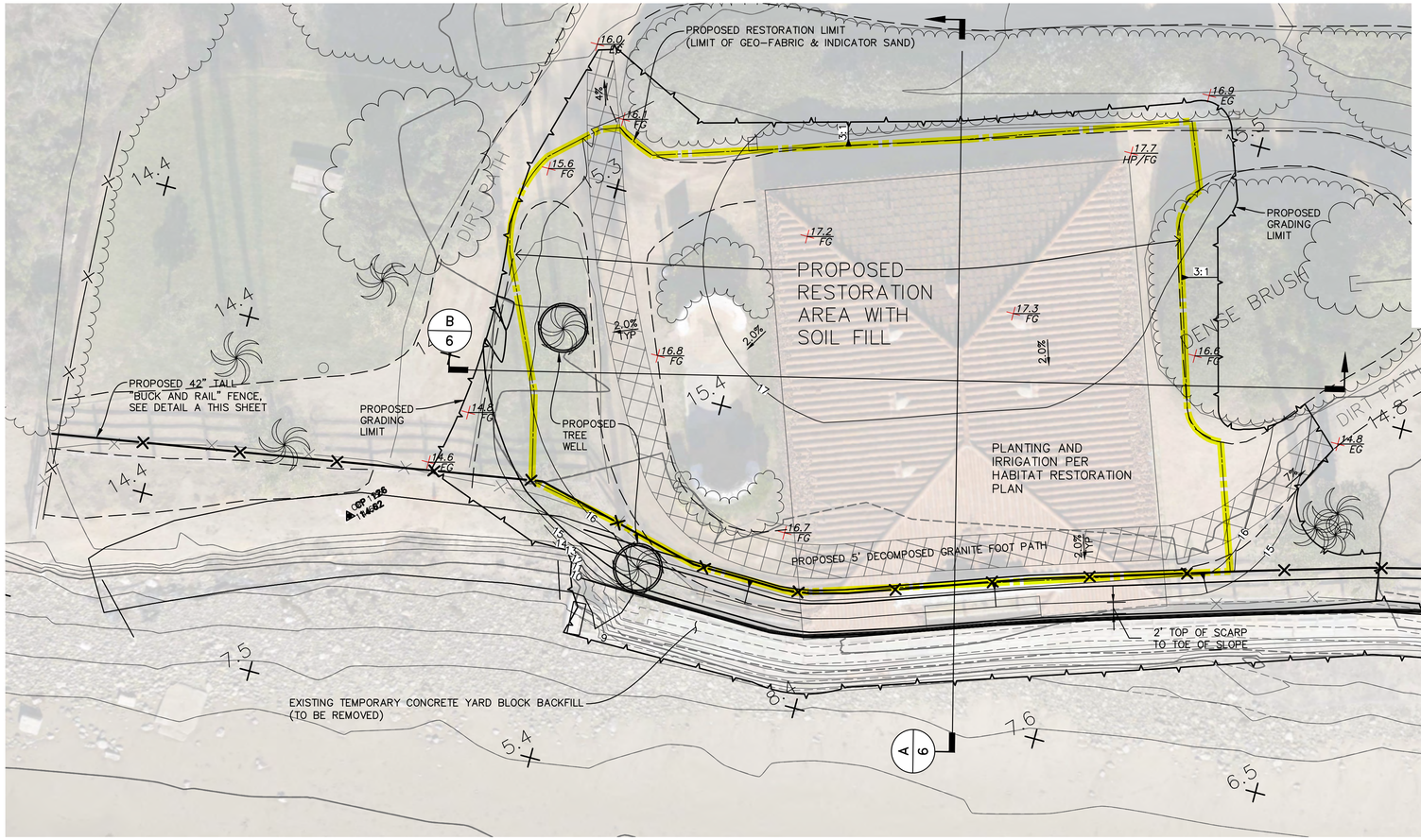
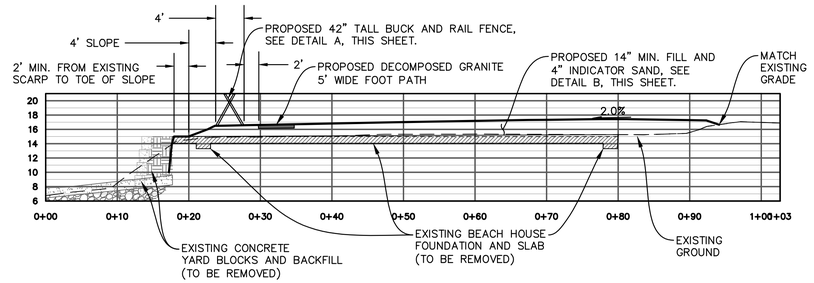


A/6 PROPOSED BUCK AND RAIL WOOD FENCE – DETAIL
N.T.S.

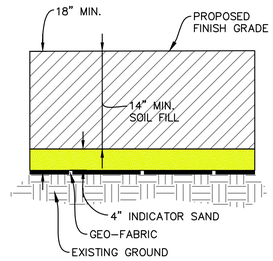


B/6 PROPOSED RESTORATION PLAN SECTION E–W
SCALE 1"=5'





A/6 PROPOSED RESTORATION PLAN SECTION N–S
SCALE 1"=10'



B/6 18" FILL DETAIL
N.T.S.

PRELIMINARY RESTORATION GRADING PLAN
REFERENCE: HASKELL'S BEACH HOUSE DEMOLITION HABITAT RESTORATION PLAN BY DUDEK

LEGEND:
- 10 — EXISTING CONTOUR ELEVATION
- 9 —
- 15 — PROPOSED CONTOUR ELEVATION
- 14 —
- PROPOSED RESTORATION LIMIT
- PROPOSED BUCK AND RAIL FENCE

PRELIMINARY RESTORATION GRADING PLAN
BEACH HOUSE RELOCATION

RITZ–CARLTON BACARA RESORT & SPA

CITY OF GOLETA, CALIFORNIA
SEPTEMBER 16, 2019

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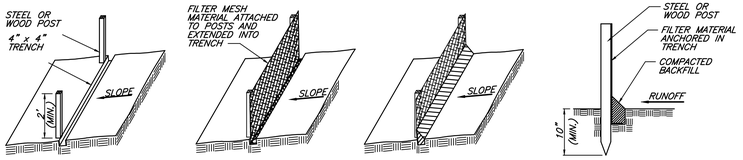


1 – SET POSTS & EXCAVATE TRENCH | 2 – INSTALL FILTER FABRIC | 3 – BACKFILL TRENCH | 4 – CROSS SECTION OF INSTALLED FILTER FABIC

SILT FENCE (A 7)

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS:

1. THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES. STORAGE HEIGHT AND PONDING HEIGHT SHALL NEVER EXCEED 18 INCHES.
2. THE FENCE LINE SHALL FOLLOW THE CONTOUR AS CLOSELY AS POSSIBLE. IF POSSIBLE, THE FILTER FABRIC SHALL BE CUT FROM A CONTINUOUS ROLL TO AVOID THE USE OF JOINTS.
3. JOINTS, WHEN NECESSARY, SHALL BE SPLICED ONLY AT A SUPPORT POST, WITH A MINIMUM 6 INCH OVERLAP AND BOTH ENDS SECURELY FASTENED TO THE POST.
4. POSTS SHALL BE SPACED A MAXIMUM OF 10 FEET APART AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 12 INCHES). WHEN EXTRA–STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL NOT EXCEED 6 FEET.
5. TURN THE ENDS OF THE FENCE UPHILL.
6. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 6 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
7. WHEN STANDARD–STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1INCH LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
8. THE STANDARD–STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 6 INCHES OF THE FABRIC SHALL EXTEND INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
9. WHEN EXTRA–STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS.
10. THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE TOE OF THE FILTER FABRIC.
11. SILT FENCES PLACED AT THE TOE OF A SLOPE SHALL BE SET AT LEAST 6 FEET FROM THE TOE IN ORDER TO INCREASE PONDING VOLUME.
12. SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED AND ANY SEDIMENT STORED BEHIND THE SILT FENCE HAS BEEN REMOVED.

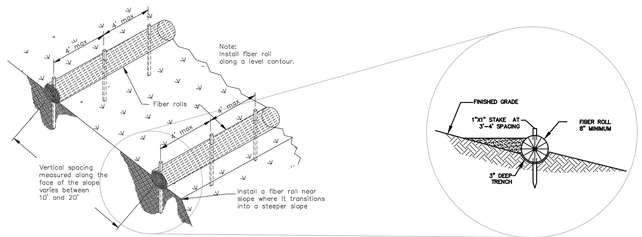
INSPECTION AND MAINTENANCE:

1. SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED WEEKLY AFTER EACH SIGNIFICANT STORM (1 INCH IN 24 HOUR). ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. SEDIMENT SHOULD BE REMOVED WHEN IT REACHES 1/3 HEIGHT OF THE FENCE OR 9 INCHES MAXIMUM.
3. THE REMOVED SEDIMENT SHALL CONFORM WITH THE EXISTING GRADE AND BE VEGETATED OR OTHERWISE STABILIZED.

FILL GRAVEL BAGS ONE HALF FULL WITH GRAVEL. | GATHER TOP OF GRAVEL BAG AND TIE SECURELY WITH HEAVY STRING. | CARE SHOULD BE TAKEN TO STACK GRAVEL BAGS IN ACCORDANCE WITH THE ILLUSTRATIONS. STAMP EACH GRAVEL BAG INTO PLACE, COMPLETING EACH LAYER PRIOR TO STARTING THE NEXT LAYER.

GRAVEL BAG BERM (B 7)

NOT TO SCALE



FIBER ROLLS (C 7)

NOT TO SCALE

CONSTRUCTION SPECFICATIONS:

1. FIBER ROLLS SHALL BE SPACED WITH NO GREATER THAN 20 FOOT INTERVALS FOR 4:1 (H:V) SLOPE AT LEVEL CONTOURS, OR 10 FOOT INTERVALS FOR SLOPE OF 2:1 (H:V) AT LEVEL CONTOURS.
2. TURN THE ENDS OF THE FIBER ROLLS UPHILL.
3. DIG 8 INCH WIDE TRENCHES AT 3 INCH DEPTH ACROSS THE SLOPE ON THE CONTOUR. INSTALL FIBER ROLLS AND STAKE EVERY 4 FEET PER MANUFACTURER'S RECOMMENDATION.

GENERAL NOTES

1. SILT FENCE TO BE INSTALLED 5' NORTH FROM REMOVED CONCRETE YARD BLOCKS FOLLOWING REMOVAL OF EXISTING BEACH HOUSE.

EROSION CONTROL NOTES

1. INSTALL SILT FENCING PER DETAIL A, THIS SHEET.
2. CONSTRUCT GRAVEL BAG BERM PER DETAIL B, THIS SHEET.
3. INSTALL FIBER ROLLS PER DETAIL C THIS SHEET.

LEGEND

- INDICATES DIRECTION OF DRAINAGE FLOW
- STORM EVENT SAMPLING LOCATION

PRELIMINARY EROSION CONTROL PLAN
BEACH HOUSE RELOCATION

RITZ–CARLTON BACARA RESORT & SPA

CITY OF GOLETA, CALIFORNIA
SPETEMBER 16, 2019

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111 East Victoria Street, Santa Barbara, CA 93101
Phone: (805) 963–9532

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36–EXB SAVE DATE: 9/17/2019 12:29:50 PM PLOT BY:Hendren, Matthew PLOT DATE:9/17/2019 1:43:35 PM
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REMOVED IMPERVIOUS SURFACE
(−5,367 SF)

NEW IMPERVIOUS SURFACE
(1,826 SF)

REPLACED IMPERVIOUS SURFACE
(+2,020 SF)

NEW PERVIOUS SURFACE
(200 SF)

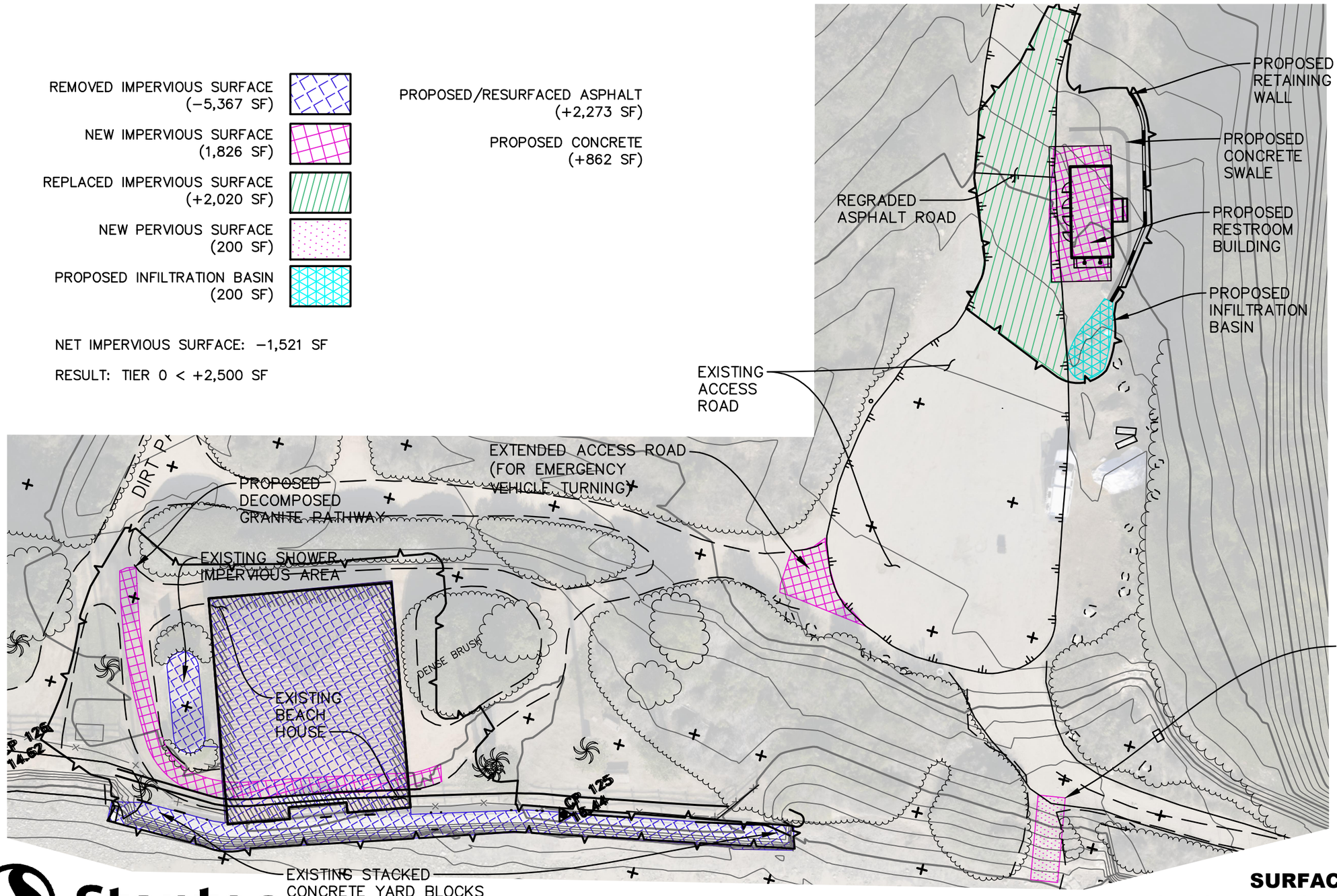
PROPOSED INFILTRATION BASIN
(200 SF)

PROPOSED/RESURFACED ASPHALT
(+2,273 SF)

PROPOSED CONCRETE
(+862 SF)

NET IMPERVIOUS SURFACE: −1,521 SF

RESULT: TIER 0 < +2,500 SF



Stantec

111 East Victoria Street, Santa Barbara, CA 93101
Phone: (805) 963-9532

1"=30'

SURFACE ANALYSIS EXHIBIT
PROPOSED BEACH HOUSE RELOCATION
RITZ CARLTON - BACARA RESORT & SPA

GOLETA, CALIFORNIA

NOVEMBER 11, 2019

DRAWING: v:\2064\active\2064160400\engineering\drawing\prelim_eng\2064160400-gp-20190916.dwg

ATTACHMENT D

CalEEMod Version 2016.3.2 Modeling Results

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Bacara Beach House Replace and Remove with Alternative Snack Shack

Santa Barbara County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant w/o Drive Thru	0.61	1000sqft	0.01	607.00	0
Other Asphalt Surfaces	2.50	1000sqft	0.06	2,500.00	0
Other Non-Asphalt Surfaces	1.45	1000sqft	0.03	1,450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.9	**Precipitation Freq (Days)**	37
Climate Zone	8			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project includes an electric food truck with a new 325 SF building with 4 restrooms, 2 outdoor showers, and an alternative to construct a 282 snack shack instead of the food truck. The project includes demolition of a 2350 SF exisiting building and outdoor showers and the addition of 2500 SF of new asphalt.

Land Use -

Demolition -

Energy Use -

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	610.00	607.00
tblSequestration	NumberOfNewTrees	0.00	8.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	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
Year	tons/yr										MT/yr					
2020	0.0606	0.5241	0.4469	7.1000e-004	3.8700e-003	0.0304	0.0343	1.0700e-003	0.0281	0.0292	0.0000	62.3327	62.3327	0.0184	0.0000	62.7926
Maximum	**0.0606**	**0.5241**	**0.4469**	**7.1000e-004**	**3.8700e-003**	**0.0304**	**0.0343**	**1.0700e-003**	**0.0281**	**0.0292**	**0.0000**	**62.3327**	**62.3327**	**0.0184**	**0.0000**	**62.7926**

Mitigated Construction

	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
Year	tons/yr										MT/yr					
2020	0.0606	0.5241	0.4469	7.1000e-004	2.6600e-003	0.0304	0.0331	7.3000e-004	0.0281	0.0288	0.0000	62.3327	62.3327	0.0184	0.0000	62.7926
Maximum	**0.0606**	**0.5241**	**0.4469**	**7.1000e-004**	**2.6600e-003**	**0.0304**	**0.0331**	**7.3000e-004**	**0.0281**	**0.0288**	**0.0000**	**62.3327**	**62.3327**	**0.0184**	**0.0000**	**62.7926**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**31.27**	**0.00**	**3.53**	**31.78**	**0.00**	**1.20**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2020	8-31-2020	0.3188	0.3188
2	9-1-2020	9-30-2020	0.1054	0.1054
		Highest	0.3188	0.3188

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	3.4700e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005
Energy	8.5000e-004	7.7200e-003	6.4800e-003	5.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	15.4552	15.4552	4.5000e-004	2.1000e-004	15.5304
Mobile	0.1213	0.3968	1.0853	2.3000e-003	0.1977	2.4400e-003	0.2001	0.0531	2.2900e-003	0.0554	0.0000	211.0298	211.0298	0.0121	0.0000	211.3329
Waste						0.0000	0.0000		0.0000	0.0000	1.4599	0.0000	1.4599	0.0724	0.0000	3.2696
Water						0.0000	0.0000		0.0000	0.0000	0.0655	0.3324	0.3979	2.4000e-004	1.5000e-004	0.4472
Total	**0.1256**	**0.4045**	**1.0918**	**2.3500e-003**	**0.1977**	**3.0300e-003**	**0.2007**	**0.0531**	**2.8800e-003**	**0.0560**	**1.5254**	**226.8174**	**228.3428**	**0.0852**	**3.6000e-004**	**230.5802**

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	3.4700e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005
Energy	8.5000e-004	7.7200e-003	6.4800e-003	5.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	15.4552	15.4552	4.5000e-004	2.1000e-004	15.5304
Mobile	0.1213	0.3968	1.0853	2.3000e-003	0.1977	2.4400e-003	0.2001	0.0531	2.2900e-003	0.0554	0.0000	211.0298	211.0298	0.0121	0.0000	211.3329
Waste						0.0000	0.0000		0.0000	0.0000	1.4599	0.0000	1.4599	0.0724	0.0000	3.2696
Water						0.0000	0.0000		0.0000	0.0000	0.0655	0.3324	0.3979	2.4000e-004	1.5000e-004	0.4472
Total	**0.1256**	**0.4045**	**1.0918**	**2.3500e-003**	**0.1977**	**3.0300e-003**	**0.2007**	**0.0531**	**2.8800e-003**	**0.0560**	**1.5254**	**226.8174**	**228.3428**	**0.0852**	**3.6000e-004**	**230.5802**

	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	N20	CO2e
Percent Reduction	**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**	**0.00**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	5.6640
Vegetation Land Change	0.6422
Total	**6.3062**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	11/12/2020	11/18/2020	5	5	
2	Building Construction	Building Construction	6/18/2020	11/4/2020	5	100	
3	Demolition	Demolition	6/1/2020	6/12/2020	5	10	
4	Grading	Grading	6/16/2020	6/17/2020	5	2	
5	Paving	Paving	11/5/2020	11/11/2020	5	5	
6	Site Preparation	Site Preparation	6/13/2020	6/15/2020	5	1	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.09

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 911; Non-Residential Outdoor: 304; Striped Parking Area: 237 (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	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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
Architectural Coating	1	0.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	2.00	1.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	11.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

3.2 Architectural Coating - 2020

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	8.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1000e-004	4.2100e-003	4.5800e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6396
Total	**9.0200e-003**	**4.2100e-003**	**4.5800e-003**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**5.0000e-005**	**0.0000**	**0.6396**

3.2 Architectural Coating - 2020

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	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
Total	**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**

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	8.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1000e-004	4.2100e-003	4.5800e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6396
Total	**9.0200e-003**	**4.2100e-003**	**4.5800e-003**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**5.0000e-005**	**0.0000**	**0.6396**

3.2 Architectural Coating - 2020

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	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
Total	**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**

3.3 Building Construction - 2020

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	0.0431	0.4426	0.3694	5.7000e-004		0.0261	0.0261		0.0240	0.0240	0.0000	50.0302	50.0302	0.0162	0.0000	50.4348
Total	**0.0431**	**0.4426**	**0.3694**	**5.7000e-004**		**0.0261**	**0.0261**		**0.0240**	**0.0240**	**0.0000**	**50.0302**	**50.0302**	**0.0162**	**0.0000**	**50.4348**

3.3 Building Construction - 2020

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	2.0000e-004	5.5500e-003	1.9400e-003	1.0000e-005	2.9000e-004	3.0000e-005	3.2000e-004	8.0000e-005	3.0000e-005	1.1000e-004	0.0000	1.1663	1.1663	9.0000e-005	0.0000	1.1685
Worker	3.2000e-004	2.7000e-004	2.3700e-003	1.0000e-005	6.2000e-004	0.0000	6.2000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5044	0.5044	2.0000e-005	0.0000	0.5049
Total	**5.2000e-004**	**5.8200e-003**	**4.3100e-003**	**2.0000e-005**	**9.1000e-004**	**3.0000e-005**	**9.4000e-004**	**2.4000e-004**	**3.0000e-005**	**2.8000e-004**	**0.0000**	**1.6707**	**1.6707**	**1.1000e-004**	**0.0000**	**1.6733**

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	0.0431	0.4426	0.3694	5.7000e-004		0.0261	0.0261		0.0240	0.0240	0.0000	50.0302	50.0302	0.0162	0.0000	50.4347
Total	**0.0431**	**0.4426**	**0.3694**	**5.7000e-004**		**0.0261**	**0.0261**		**0.0240**	**0.0240**	**0.0000**	**50.0302**	**50.0302**	**0.0162**	**0.0000**	**50.4347**

3.3 Building Construction - 2020

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	2.0000e-004	5.5500e-003	1.9400e-003	1.0000e-005	2.9000e-004	3.0000e-005	3.2000e-004	8.0000e-005	3.0000e-005	1.1000e-004	0.0000	1.1663	1.1663	9.0000e-005	0.0000	1.1685
Worker	3.2000e-004	2.7000e-004	2.3700e-003	1.0000e-005	6.2000e-004	0.0000	6.2000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5044	0.5044	2.0000e-005	0.0000	0.5049
Total	**5.2000e-004**	**5.8200e-003**	**4.3100e-003**	**2.0000e-005**	**9.1000e-004**	**3.0000e-005**	**9.4000e-004**	**2.4000e-004**	**3.0000e-005**	**2.8000e-004**	**0.0000**	**1.6707**	**1.6707**	**1.1000e-004**	**0.0000**	**1.6733**

3.4 Demolition - 2020

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					1.1800e-003	0.0000	1.1800e-003	1.8000e-004	0.0000	1.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3400e-003	0.0394	0.0381	6.0000e-005		2.3400e-003	2.3400e-003		2.2300e-003	2.2300e-003	0.0000	5.2038	5.2038	9.8000e-004	0.0000	5.2284
Total	**4.3400e-003**	**0.0394**	**0.0381**	**6.0000e-005**	**1.1800e-003**	**2.3400e-003**	**3.5200e-003**	**1.8000e-004**	**2.2300e-003**	**2.4100e-003**	**0.0000**	**5.2038**	**5.2038**	**9.8000e-004**	**0.0000**	**5.2284**

3.4 Demolition - 2020

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	5.0000e-005	1.6800e-003	4.9000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	3.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.4305	0.4305	4.0000e-005	0.0000	0.4315
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	1.6000e-004	1.4000e-004	1.1900e-003	0.0000	3.1000e-004	0.0000	3.1000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2522	0.2522	1.0000e-005	0.0000	0.2524
Total	**2.1000e-004**	**1.8200e-003**	**1.6800e-003**	**0.0000**	**4.0000e-004**	**1.0000e-005**	**4.1000e-004**	**1.1000e-004**	**1.0000e-005**	**1.1000e-004**	**0.0000**	**0.6827**	**0.6827**	**5.0000e-005**	**0.0000**	**0.6839**

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					5.3000e-004	0.0000	5.3000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3400e-003	0.0394	0.0381	6.0000e-005		2.3400e-003	2.3400e-003		2.2300e-003	2.2300e-003	0.0000	5.2038	5.2038	9.8000e-004	0.0000	5.2284
Total	**4.3400e-003**	**0.0394**	**0.0381**	**6.0000e-005**	**5.3000e-004**	**2.3400e-003**	**2.8700e-003**	**8.0000e-005**	**2.2300e-003**	**2.3100e-003**	**0.0000**	**5.2038**	**5.2038**	**9.8000e-004**	**0.0000**	**5.2284**

3.4 Demolition - 2020

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	5.0000e-005	1.6800e-003	4.9000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	3.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.4305	0.4305	4.0000e-005	0.0000	0.4315
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	1.6000e-004	1.4000e-004	1.1900e-003	0.0000	3.1000e-004	0.0000	3.1000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2522	0.2522	1.0000e-005	0.0000	0.2524
Total	**2.1000e-004**	**1.8200e-003**	**1.6800e-003**	**0.0000**	**4.0000e-004**	**1.0000e-005**	**4.1000e-004**	**1.1000e-004**	**1.0000e-005**	**1.1000e-004**	**0.0000**	**0.6827**	**0.6827**	**5.0000e-005**	**0.0000**	**0.6839**

3.5 Grading - 2020

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					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7000e-004	7.8700e-003	7.6200e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.5000e-004	4.5000e-004	0.0000	1.0408	1.0408	2.0000e-004	0.0000	1.0457
Total	**8.7000e-004**	**7.8700e-003**	**7.6200e-003**	**1.0000e-005**	**7.5000e-004**	**4.7000e-004**	**1.2200e-003**	**4.1000e-004**	**4.5000e-004**	**8.6000e-004**	**0.0000**	**1.0408**	**1.0408**	**2.0000e-004**	**0.0000**	**1.0457**

3.5 Grading - 2020

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	3.0000e-005	3.0000e-005	2.4000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0504	0.0504	0.0000	0.0000	0.0505
Total	**3.0000e-005**	**3.0000e-005**	**2.4000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0504**	**0.0504**	**0.0000**	**0.0000**	**0.0505**

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					3.4000e-004	0.0000	3.4000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7000e-004	7.8700e-003	7.6200e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.5000e-004	4.5000e-004	0.0000	1.0408	1.0408	2.0000e-004	0.0000	1.0457
Total	**8.7000e-004**	**7.8700e-003**	**7.6200e-003**	**1.0000e-005**	**3.4000e-004**	**4.7000e-004**	**8.1000e-004**	**1.9000e-004**	**4.5000e-004**	**6.4000e-004**	**0.0000**	**1.0408**	**1.0408**	**2.0000e-004**	**0.0000**	**1.0457**

3.5 Grading - 2020

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	3.0000e-005	3.0000e-005	2.4000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0504	0.0504	0.0000	0.0000	0.0505
Total	**3.0000e-005**	**3.0000e-005**	**2.4000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0504**	**0.0504**	**0.0000**	**0.0000**	**0.0505**

3.6 Paving - 2020

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	1.9300e-003	0.0181	0.0178	3.0000e-005		9.9000e-004	9.9000e-004		9.2000e-004	9.2000e-004	0.0000	2.3482	2.3482	6.8000e-004	0.0000	2.3653
Paving	8.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0100e-003**	**0.0181**	**0.0178**	**3.0000e-005**		**9.9000e-004**	**9.9000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**2.3482**	**2.3482**	**6.8000e-004**	**0.0000**	**2.3653**

3.6 Paving - 2020

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	1.4000e-004	1.2000e-004	1.0700e-003	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2270	0.2270	1.0000e-005	0.0000	0.2272
Total	**1.4000e-004**	**1.2000e-004**	**1.0700e-003**	**0.0000**	**2.8000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2270**	**0.2270**	**1.0000e-005**	**0.0000**	**0.2272**

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	1.9300e-003	0.0181	0.0178	3.0000e-005		9.9000e-004	9.9000e-004		9.2000e-004	9.2000e-004	0.0000	2.3482	2.3482	6.8000e-004	0.0000	2.3653
Paving	8.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0100e-003**	**0.0181**	**0.0178**	**3.0000e-005**		**9.9000e-004**	**9.9000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**2.3482**	**2.3482**	**6.8000e-004**	**0.0000**	**2.3653**

3.6 Paving - 2020

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	1.4000e-004	1.2000e-004	1.0700e-003	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2270	0.2270	1.0000e-005	0.0000	0.2272
Total	**1.4000e-004**	**1.2000e-004**	**1.0700e-003**	**0.0000**	**2.8000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2270**	**0.2270**	**1.0000e-005**	**0.0000**	**0.2272**

3.7 Site Preparation - 2020

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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4000e-004	4.2200e-003	2.0500e-003	0.0000		1.7000e-004	1.7000e-004		1.5000e-004	1.5000e-004	0.0000	0.4280	0.4280	1.4000e-004	0.0000	0.4314
Total	**3.4000e-004**	**4.2200e-003**	**2.0500e-003**	**0.0000**	**2.7000e-004**	**1.7000e-004**	**4.4000e-004**	**3.0000e-005**	**1.5000e-004**	**1.8000e-004**	**0.0000**	**0.4280**	**0.4280**	**1.4000e-004**	**0.0000**	**0.4314**

3.7 Site Preparation - 2020

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-005	1.0000e-005	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0126	0.0126	0.0000	0.0000	0.0126
Total	**1.0000e-005**	**1.0000e-005**	**6.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0126**	**0.0126**	**0.0000**	**0.0000**	**0.0126**

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					1.2000e-004	0.0000	1.2000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4000e-004	4.2200e-003	2.0500e-003	0.0000		1.7000e-004	1.7000e-004		1.5000e-004	1.5000e-004	0.0000	0.4280	0.4280	1.4000e-004	0.0000	0.4314
Total	**3.4000e-004**	**4.2200e-003**	**2.0500e-003**	**0.0000**	**1.2000e-004**	**1.7000e-004**	**2.9000e-004**	**1.0000e-005**	**1.5000e-004**	**1.6000e-004**	**0.0000**	**0.4280**	**0.4280**	**1.4000e-004**	**0.0000**	**0.4314**

3.7 Site Preparation - 2020

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-005	1.0000e-005	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0126	0.0126	0.0000	0.0000	0.0126
Total	**1.0000e-005**	**1.0000e-005**	**6.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0126**	**0.0126**	**0.0000**	**0.0000**	**0.0126**

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	0.1213	0.3968	1.0853	2.3000e-003	0.1977	2.4400e-003	0.2001	0.0531	2.2900e-003	0.0554	0.0000	211.0298	211.0298	0.0121	0.0000	211.3329
Unmitigated	0.1213	0.3968	1.0853	2.3000e-003	0.1977	2.4400e-003	0.2001	0.0531	2.2900e-003	0.0554	0.0000	211.0298	211.0298	0.0121	0.0000	211.3329

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant w/o Drive Thru	436.76	424.56	305.00	520,948	520,948
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	436.76	424.56	305.00	520,948	520,948

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
Fast Food Restaurant w/o Drive	6.60	5.50	6.40	1.50	79.50	19.00	51	37	12
Other Asphalt Surfaces	6.60	5.50	6.40	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	6.60	5.50	6.40	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant w/o Drive Thru	0.558685	0.029655	0.204806	0.126479	0.022344	0.005812	0.017312	0.018953	0.002773	0.002377	0.007053	0.002677	0.001077
Other Asphalt Surfaces	0.558685	0.029655	0.204806	0.126479	0.022344	0.005812	0.017312	0.018953	0.002773	0.002377	0.007053	0.002677	0.001077
Other Non-Asphalt Surfaces	0.558685	0.029655	0.204806	0.126479	0.022344	0.005812	0.017312	0.018953	0.002773	0.002377	0.007053	0.002677	0.001077

5.0 Energy Detail

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	7.0554	7.0554	2.9000e-004	6.0000e-005	7.0806
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	7.0554	7.0554	2.9000e-004	6.0000e-005	7.0806
NaturalGas Mitigated	8.5000e-004	7.7200e-003	6.4800e-003	5.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	8.3999	8.3999	1.6000e-004	1.5000e-004	8.4498
NaturalGas Unmitigated	8.5000e-004	7.7200e-003	6.4800e-003	5.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	8.3999	8.3999	1.6000e-004	1.5000e-004	8.4498

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					
Fast Food Restaurant w/o Drive Thru	157407	8.5000e-004	7.7200e-003	6.4800e-003	5.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	8.3999	8.3999	1.6000e-004	1.5000e-004	8.4498
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
Other Non-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
Total		**8.5000e-004**	**7.7200e-003**	**6.4800e-003**	**5.0000e-005**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**	**0.0000**	**8.3999**	**8.3999**	**1.6000e-004**	**1.5000e-004**	**8.4498**

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					
Fast Food Restaurant w/o Drive Thru	157407	8.5000e-004	7.7200e-003	6.4800e-003	5.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	8.3999	8.3999	1.6000e-004	1.5000e-004	8.4498
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
Other Non-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
Total		**8.5000e-004**	**7.7200e-003**	**6.4800e-003**	**5.0000e-005**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**	**0.0000**	**8.3999**	**8.3999**	**1.6000e-004**	**1.5000e-004**	**8.4498**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant w/o Drive Thru	22143.4	7.0554	2.9000e-004	6.0000e-005	7.0806
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**7.0554**	**2.9000e-004**	**6.0000e-005**	**7.0806**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant w/o Drive Thru	22143.4	7.0554	2.9000e-004	6.0000e-005	7.0806
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**7.0554**	**2.9000e-004**	**6.0000e-005**	**7.0806**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	3.4700e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005
Unmitigated	3.4700e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005

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	8.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.6300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005
Total	**3.4700e-003**	**0.0000**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0000**	**9.0000e-005**

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	8.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.6300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005
Total	**3.4700e-003**	**0.0000**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0000**	**9.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.3979	2.4000e-004	1.5000e-004	0.4472
Unmitigated	0.3979	2.4000e-004	1.5000e-004	0.4472

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant w/o Drive Thru	0.185156 / 0.0118184	0.3979	2.4000e-004	1.5000e-004	0.4472
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.3979**	**2.4000e-004**	**1.5000e-004**	**0.4472**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant w/o Drive Thru	0.185156 / 0.0118184	0.3979	2.4000e-004	1.5000e-004	0.4472
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.3979**	**2.4000e-004**	**1.5000e-004**	**0.4472**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.4599	0.0724	0.0000	3.2696
Unmitigated	1.4599	0.0724	0.0000	3.2696

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant w/o Drive Thru	7.03	1.4599	0.0724	0.0000	3.2696
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**1.4599**	**0.0724**	**0.0000**	**3.2696**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant w/o Drive Thru	7.03	1.4599	0.0724	0.0000	3.2696
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**1.4599**	**0.0724**	**0.0000**	**3.2696**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	6.3062	0.0000	0.0000	6.3062

11.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Grassland	0 / 0.149	0.6422	0.0000	0.0000	0.6422
Total		**0.6422**	**0.0000**	**0.0000**	**0.6422**

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	8	5.6640	0.0000	0.0000	5.6640
Total		**5.6640**	**0.0000**	**0.0000**	**5.6640**

Bacara Beach House Replace and Remove with Alternative Snack Shack

Santa Barbara County APCD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00
Cement and Mortar Mixers	Diesel	No Change	0	4	No Change	0.00
Concrete/Industrial Saws	Diesel	No Change	0	2	No Change	0.00
Cranes	Diesel	No Change	0	1	No Change	0.00
Forklifts	Diesel	No Change	0	2	No Change	0.00
Graders	Diesel	No Change	0	1	No Change	0.00
Pavers	Diesel	No Change	0	1	No Change	0.00
Rollers	Diesel	No Change	0	1	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	2	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	8	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	6.10000E-004	4.21000E-003	4.58000E-003	1.00000E-005	2.80000E-004	2.80000E-004	0.00000E+000	6.38310E-001	6.38310E-001	5.00000E-005	0.00000E+000	6.39550E-001
Cement and Mortar Mixers	4.40000E-004	2.76000E-003	2.31000E-003	1.00000E-005	1.10000E-004	1.10000E-004	0.00000E+000	3.43710E-001	3.43710E-001	4.00000E-005	0.00000E+000	3.44600E-001
Concrete/Industrial Saws	2.51000E-003	1.97900E-002	2.21200E-002	4.00000E-005	1.19000E-003	1.19000E-003	0.00000E+000	3.22594E+000	3.22594E+000	2.00000E-004	0.00000E+000	3.23105E+000
Cranes	1.13300E-002	1.34790E-001	5.28800E-002	1.40000E-004	5.56000E-003	5.11000E-003	0.00000E+000	1.26731E+001	1.26731E+001	4.10000E-003	0.00000E+000	1.27756E+001
Forklifts	1.08000E-002	9.73100E-002	8.85200E-002	1.10000E-004	7.25000E-003	6.67000E-003	0.00000E+000	1.00719E+001	1.00719E+001	3.26000E-003	0.00000E+000	1.01533E+001
Graders	2.40000E-004	3.16000E-003	9.10000E-004	0.00000E+000	1.00000E-004	9.00000E-005	0.00000E+000	2.91530E-001	2.91530E-001	9.00000E-005	0.00000E+000	2.93890E-001
Pavers	5.70000E-004	6.15000E-003	6.34000E-003	1.00000E-005	3.00000E-004	2.70000E-004	0.00000E+000	9.03470E-001	9.03470E-001	2.90000E-004	0.00000E+000	9.10780E-001
Rollers	4.60000E-004	4.55000E-003	4.14000E-003	1.00000E-005	2.90000E-004	2.70000E-004	0.00000E+000	5.04190E-001	5.04190E-001	1.60000E-004	0.00000E+000	5.08260E-001
Rubber Tired Dozers	8.10000E-004	8.50000E-003	3.10000E-003	1.00000E-005	4.20000E-004	3.80000E-004	0.00000E+000	5.62910E-001	5.62910E-001	1.80000E-004	0.00000E+000	5.67470E-001
Tractors/Loaders/Backhoes	2.34000E-002	2.35120E-001	2.54610E-001	3.50000E-004	1.48700E-002	1.36800E-002	0.00000E+000	3.04742E+001	3.04742E+001	9.86000E-003	0.00000E+000	3.07206E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	6.10000E-004	4.21000E-003	4.58000E-003	1.00000E-005	2.80000E-004	2.80000E-004	0.00000E+000	6.38310E-001	6.38310E-001	5.00000E-005	0.00000E+000	6.39550E-001
Cement and Mortar Mixers	4.40000E-004	2.76000E-003	2.31000E-003	1.00000E-005	1.10000E-004	1.10000E-004	0.00000E+000	3.43710E-001	3.43710E-001	4.00000E-005	0.00000E+000	3.44600E-001
Concrete/Industrial Saws	2.51000E-003	1.97900E-002	2.21200E-002	4.00000E-005	1.19000E-003	1.19000E-003	0.00000E+000	3.22593E+000	3.22593E+000	2.00000E-004	0.00000E+000	3.23104E+000
Cranes	1.13300E-002	1.34790E-001	5.28800E-002	1.40000E-004	5.56000E-003	5.11000E-003	0.00000E+000	1.26731E+001	1.26731E+001	4.10000E-003	0.00000E+000	1.27756E+001
Forklifts	1.08000E-002	9.73100E-002	8.85200E-002	1.10000E-004	7.25000E-003	6.67000E-003	0.00000E+000	1.00718E+001	1.00718E+001	3.26000E-003	0.00000E+000	1.01533E+001
Graders	2.40000E-004	3.16000E-003	9.10000E-004	0.00000E+000	1.00000E-004	9.00000E-005	0.00000E+000	2.91530E-001	2.91530E-001	9.00000E-005	0.00000E+000	2.93890E-001
Pavers	5.70000E-004	6.15000E-003	6.34000E-003	1.00000E-005	3.00000E-004	2.70000E-004	0.00000E+000	9.03470E-001	9.03470E-001	2.90000E-004	0.00000E+000	9.10780E-001
Rollers	4.60000E-004	4.55000E-003	4.14000E-003	1.00000E-005	2.90000E-004	2.70000E-004	0.00000E+000	5.04190E-001	5.04190E-001	1.60000E-004	0.00000E+000	5.08260E-001
Rubber Tired Dozers	8.10000E-004	8.50000E-003	3.10000E-003	1.00000E-005	4.20000E-004	3.80000E-004	0.00000E+000	5.62910E-001	5.62910E-001	1.80000E-004	0.00000E+000	5.67470E-001
Tractors/Loaders/Backhoes	2.34000E-002	2.35120E-001	2.54610E-001	3.50000E-004	1.48700E-002	1.36800E-002	0.00000E+000	3.04742E+001	3.04742E+001	9.86000E-003	0.00000E+000	3.07206E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	3.09987E-006	3.09987E-006	0.00000E+000	0.00000E+000	3.09497E-006
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.57814E-006	1.57814E-006	0.00000E+000	0.00000E+000	7.82742E-007
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	9.92866E-007	9.92866E-007	0.00000E+000	0.00000E+000	9.84903E-007
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	9.84439E-007	9.84439E-007	0.00000E+000	0.00000E+000	9.76543E-007

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day)	2.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	Fugitive Dust	0.00	0.00	0.00	0.00	0.55	0.56
Demolition	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Grading	Fugitive Dust	0.00	0.00	0.00	0.00	0.55	0.54
Grading	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.00	0.00	0.00	0.00	0.56	0.67
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Low Density Suburban

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.08	0.28		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	3.00			
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program	5.00			
	Commute	Commute Subtotal	0.00			

No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	50.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	Use Low VOC Paint (Parking)	250.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

Solid Waste Mitigation

Mitigation Measures	Input Value

Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

Bacara Beach House Replace and Remove with Alternative Snack Shack

Santa Barbara County APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant w/o Drive Thru	0.61	1000sqft	0.01	607.00	0
Other Asphalt Surfaces	2.50	1000sqft	0.06	2,500.00	0
Other Non-Asphalt Surfaces	1.45	1000sqft	0.03	1,450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.9	**Precipitation Freq (Days)**	37
Climate Zone	8			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project includes an electric food truck with a new 325 SF building with 4 restrooms, 2 outdoor showers, and an alternative to construct a 282 snack shack instead of the food truck. The project includes demolition of a 2350 SF exisiting building and outdoor showers and the addition of 2500 SF of new asphalt.

Land Use -

Demolition -

Energy Use -

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	610.00	607.00
tblSequestration	NumberOfNewTrees	0.00	8.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	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
Year	lb/day										lb/day					
2020	3.6072	8.9667	7.9530	0.0134	0.8159	0.5230	1.2835	0.4305	0.4812	0.8766	0.0000	1,299.5219	1,299.5219	0.3590	0.0000	1,305.2079
Maximum	**3.6072**	**8.9667**	**7.9530**	**0.0134**	**0.8159**	**0.5230**	**1.2835**	**0.4305**	**0.4812**	**0.8766**	**0.0000**	**1,299.5219**	**1,299.5219**	**0.3590**	**0.0000**	**1,305.2079**

Mitigated Construction

	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
Year	lb/day										lb/day					
2020	3.6072	8.9667	7.9530	0.0134	0.4019	0.5230	0.8695	0.2030	0.4812	0.6490	0.0000	1,299.5219	1,299.5219	0.3590	0.0000	1,305.2079
Maximum	**3.6072**	**8.9667**	**7.9530**	**0.0134**	**0.4019**	**0.5230**	**0.8695**	**0.2030**	**0.4812**	**0.6490**	**0.0000**	**1,299.5219**	**1,299.5219**	**0.3590**	**0.0000**	**1,305.2079**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**50.74**	**0.00**	**32.26**	**52.86**	**0.00**	**25.96**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	0.0190	0.0000	4.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.0000e-003	1.0000e-003	0.0000		1.0600e-003
Energy	4.6500e-003	0.0423	0.0355	2.5000e-004		3.2100e-003	3.2100e-003		3.2100e-003	3.2100e-003		50.7356	50.7356	9.7000e-004	9.3000e-004	51.0371
Mobile	0.7220	2.2143	5.9310	0.0135	1.1651	0.0140	1.1791	0.3124	0.0131	0.3255		1,368.0202	1,368.0202	0.0753		1,369.9035
Total	**0.7457**	**2.2566**	**5.9670**	**0.0138**	**1.1651**	**0.0172**	**1.1823**	**0.3124**	**0.0163**	**0.3287**		**1,418.7568**	**1,418.7568**	**0.0763**	**9.3000e-004**	**1,420.9417**

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	0.0190	0.0000	4.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.0000e-003	1.0000e-003	0.0000		1.0600e-003
Energy	4.6500e-003	0.0423	0.0355	2.5000e-004		3.2100e-003	3.2100e-003		3.2100e-003	3.2100e-003		50.7356	50.7356	9.7000e-004	9.3000e-004	51.0371
Mobile	0.7220	2.2143	5.9310	0.0135	1.1651	0.0140	1.1791	0.3124	0.0131	0.3255		1,368.0202	1,368.0202	0.0753		1,369.9035
Total	**0.7457**	**2.2566**	**5.9670**	**0.0138**	**1.1651**	**0.0172**	**1.1823**	**0.3124**	**0.0163**	**0.3287**		**1,418.7568**	**1,418.7568**	**0.0763**	**9.3000e-004**	**1,420.9417**

	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	N20	CO2e
Percent Reduction	**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**	**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	Architectural Coating	Architectural Coating	11/12/2020	11/18/2020	5	5	
2	Building Construction	Building Construction	6/18/2020	11/4/2020	5	100	
3	Demolition	Demolition	6/1/2020	6/12/2020	5	10	
4	Grading	Grading	6/16/2020	6/17/2020	5	2	
5	Paving	Paving	11/5/2020	11/11/2020	5	5	
6	Site Preparation	Site Preparation	6/13/2020	6/15/2020	5	1	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.09

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 911; Non-Residential Outdoor: 304; Striped Parking Area: 237 (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	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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
Architectural Coating	1	0.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	2.00	1.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	11.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

3.2 Architectural Coating - 2020

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	3.3650					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**3.6072**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.2 Architectural Coating - 2020

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	0.0000	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
Total	**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**

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	3.3650					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**3.6072**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.2 Architectural Coating - 2020

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	0.0000	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
Total	**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**

3.3 Building Construction - 2020

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	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806		1,102.9781	1,102.9781	0.3567		1,111.8962
Total	**0.8617**	**8.8523**	**7.3875**	**0.0114**		**0.5224**	**0.5224**		**0.4806**	**0.4806**		**1,102.9781**	**1,102.9781**	**0.3567**		**1,111.8962**

3.3 Building Construction - 2020

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	3.9200e-003	0.1096	0.0369	2.4000e-004	5.9200e-003	5.9000e-004	6.5100e-003	1.7000e-003	5.6000e-004	2.2700e-003		25.9663	25.9663	1.9000e-003		26.0138
Worker	6.2500e-003	4.8500e-003	0.0469	1.1000e-004	0.0126	8.0000e-005	0.0127	3.3500e-003	7.0000e-005	3.4300e-003		11.3686	11.3686	3.8000e-004		11.3781
Total	**0.0102**	**0.1144**	**0.0838**	**3.5000e-004**	**0.0186**	**6.7000e-004**	**0.0192**	**5.0500e-003**	**6.3000e-004**	**5.7000e-003**		**37.3349**	**37.3349**	**2.2800e-003**		**37.3919**

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	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806	0.0000	1,102.9781	1,102.9781	0.3567		1,111.8962
Total	**0.8617**	**8.8523**	**7.3875**	**0.0114**		**0.5224**	**0.5224**		**0.4806**	**0.4806**	**0.0000**	**1,102.9781**	**1,102.9781**	**0.3567**		**1,111.8962**

3.3 Building Construction - 2020

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	3.9200e-003	0.1096	0.0369	2.4000e-004	5.9200e-003	5.9000e-004	6.5100e-003	1.7000e-003	5.6000e-004	2.2700e-003		25.9663	25.9663	1.9000e-003		26.0138
Worker	6.2500e-003	4.8500e-003	0.0469	1.1000e-004	0.0126	8.0000e-005	0.0127	3.3500e-003	7.0000e-005	3.4300e-003		11.3686	11.3686	3.8000e-004		11.3781
Total	**0.0102**	**0.1144**	**0.0838**	**3.5000e-004**	**0.0186**	**6.7000e-004**	**0.0192**	**5.0500e-003**	**6.3000e-004**	**5.7000e-003**		**37.3349**	**37.3349**	**2.2800e-003**		**37.3919**

3.4 Demolition - 2020

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					0.2365	0.0000	0.2365	0.0358	0.0000	0.0358			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457		1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.2365**	**0.4672**	**0.7037**	**0.0358**	**0.4457**	**0.4815**		**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

3.4 Demolition - 2020

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	8.9400e-003	0.3293	0.0961	8.6000e-004	0.0191	1.3500e-003	0.0205	5.2300e-003	1.2900e-003	6.5200e-003		95.4438	95.4438	8.6300e-003		95.6596
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	0.0313	0.0242	0.2343	5.7000e-004	0.0632	4.0000e-004	0.0636	0.0168	3.7000e-004	0.0171		56.8429	56.8429	1.9000e-003		56.8905
Total	**0.0402**	**0.3535**	**0.3304**	**1.4300e-003**	**0.0823**	**1.7500e-003**	**0.0840**	**0.0220**	**1.6600e-003**	**0.0237**		**152.2867**	**152.2867**	**0.0105**		**152.5501**

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					0.1064	0.0000	0.1064	0.0161	0.0000	0.0161			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457	0.0000	1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.1064**	**0.4672**	**0.5736**	**0.0161**	**0.4457**	**0.4618**	**0.0000**	**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

3.4 Demolition - 2020

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	8.9400e-003	0.3293	0.0961	8.6000e-004	0.0191	1.3500e-003	0.0205	5.2300e-003	1.2900e-003	6.5200e-003		95.4438	95.4438	8.6300e-003		95.6596
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	0.0313	0.0242	0.2343	5.7000e-004	0.0632	4.0000e-004	0.0636	0.0168	3.7000e-004	0.0171		56.8429	56.8429	1.9000e-003		56.8905
Total	**0.0402**	**0.3535**	**0.3304**	**1.4300e-003**	**0.0823**	**1.7500e-003**	**0.0840**	**0.0220**	**1.6600e-003**	**0.0237**		**152.2867**	**152.2867**	**0.0105**		**152.5501**

3.5 Grading - 2020

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					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457		1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.7528**	**0.4672**	**1.2200**	**0.4138**	**0.4457**	**0.8595**		**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

3.5 Grading - 2020

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	0.0313	0.0242	0.2343	5.7000e-004	0.0632	4.0000e-004	0.0636	0.0168	3.7000e-004	0.0171		56.8429	56.8429	1.9000e-003		56.8905
Total	**0.0313**	**0.0242**	**0.2343**	**5.7000e-004**	**0.0632**	**4.0000e-004**	**0.0636**	**0.0168**	**3.7000e-004**	**0.0171**		**56.8429**	**56.8429**	**1.9000e-003**		**56.8905**

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					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457	0.0000	1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.3387**	**0.4672**	**0.8059**	**0.1862**	**0.4457**	**0.6319**	**0.0000**	**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

3.5 Grading - 2020

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	0.0313	0.0242	0.2343	5.7000e-004	0.0632	4.0000e-004	0.0636	0.0168	3.7000e-004	0.0171		56.8429	56.8429	1.9000e-003		56.8905
Total	**0.0313**	**0.0242**	**0.2343**	**5.7000e-004**	**0.0632**	**4.0000e-004**	**0.0636**	**0.0168**	**3.7000e-004**	**0.0171**		**56.8429**	**56.8429**	**1.9000e-003**		**56.8905**

3.6 Paving - 2020

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	0.7716	7.2266	7.1128	0.0113		0.3950	0.3950		0.3669	0.3669		1,035.3926	1,035.3926	0.3016		1,042.9323
Paving	0.0314					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8030**	**7.2266**	**7.1128**	**0.0113**		**0.3950**	**0.3950**		**0.3669**	**0.3669**		**1,035.3926**	**1,035.3926**	**0.3016**		**1,042.9323**

3.6 Paving - 2020

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	0.0563	0.0436	0.4218	1.0300e-003	0.1137	7.2000e-004	0.1144	0.0302	6.7000e-004	0.0308		102.3172	102.3172	3.4200e-003		102.4028
Total	**0.0563**	**0.0436**	**0.4218**	**1.0300e-003**	**0.1137**	**7.2000e-004**	**0.1144**	**0.0302**	**6.7000e-004**	**0.0308**		**102.3172**	**102.3172**	**3.4200e-003**		**102.4028**

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	0.7716	7.2266	7.1128	0.0113		0.3950	0.3950		0.3669	0.3669	0.0000	1,035.3926	1,035.3926	0.3016		1,042.9323
Paving	0.0314					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8030**	**7.2266**	**7.1128**	**0.0113**		**0.3950**	**0.3950**		**0.3669**	**0.3669**	**0.0000**	**1,035.3926**	**1,035.3926**	**0.3016**		**1,042.9323**

3.6 Paving - 2020

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	0.0563	0.0436	0.4218	1.0300e-003	0.1137	7.2000e-004	0.1144	0.0302	6.7000e-004	0.0308		102.3172	102.3172	3.4200e-003		102.4028
Total	**0.0563**	**0.0436**	**0.4218**	**1.0300e-003**	**0.1137**	**7.2000e-004**	**0.1144**	**0.0302**	**6.7000e-004**	**0.0308**		**102.3172**	**102.3172**	**3.4200e-003**		**102.4028**

3.7 Site Preparation - 2020

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.6853	8.4307	4.0942	9.7400e-003		0.3353	0.3353		0.3085	0.3085		943.4872	943.4872	0.3051		951.1158
Total	**0.6853**	**8.4307**	**4.0942**	**9.7400e-003**	**0.5303**	**0.3353**	**0.8656**	**0.0573**	**0.3085**	**0.3658**		**943.4872**	**943.4872**	**0.3051**		**951.1158**

3.7 Site Preparation - 2020

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	0.0156	0.0121	0.1172	2.9000e-004	0.0316	2.0000e-004	0.0318	8.3800e-003	1.9000e-004	8.5600e-003		28.4215	28.4215	9.5000e-004		28.4452
Total	**0.0156**	**0.0121**	**0.1172**	**2.9000e-004**	**0.0316**	**2.0000e-004**	**0.0318**	**8.3800e-003**	**1.9000e-004**	**8.5600e-003**		**28.4215**	**28.4215**	**9.5000e-004**		**28.4452**

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					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.6853	8.4307	4.0942	9.7400e-003		0.3353	0.3353		0.3085	0.3085	0.0000	943.4872	943.4872	0.3051		951.1158
Total	**0.6853**	**8.4307**	**4.0942**	**9.7400e-003**	**0.2386**	**0.3353**	**0.5740**	**0.0258**	**0.3085**	**0.3343**	**0.0000**	**943.4872**	**943.4872**	**0.3051**		**951.1158**

3.7 Site Preparation - 2020

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	0.0156	0.0121	0.1172	2.9000e-004	0.0316	2.0000e-004	0.0318	8.3800e-003	1.9000e-004	8.5600e-003		28.4215	28.4215	9.5000e-004		28.4452
Total	**0.0156**	**0.0121**	**0.1172**	**2.9000e-004**	**0.0316**	**2.0000e-004**	**0.0318**	**8.3800e-003**	**1.9000e-004**	**8.5600e-003**		**28.4215**	**28.4215**	**9.5000e-004**		**28.4452**

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	0.7220	2.2143	5.9310	0.0135	1.1651	0.0140	1.1791	0.3124	0.0131	0.3255		1,368.0202	1,368.0202	0.0753		1,369.9035
Unmitigated	0.7220	2.2143	5.9310	0.0135	1.1651	0.0140	1.1791	0.3124	0.0131	0.3255		1,368.0202	1,368.0202	0.0753		1,369.9035

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant w/o Drive Thru	436.76	424.56	305.00	520,948	520,948
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	436.76	424.56	305.00	520,948	520,948

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
Fast Food Restaurant w/o Drive	6.60	5.50	6.40	1.50	79.50	19.00	51	37	12
Other Asphalt Surfaces	6.60	5.50	6.40	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	6.60	5.50	6.40	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant w/o Drive Thru	0.558685	0.029655	0.204806	0.126479	0.022344	0.005812	0.017312	0.018953	0.002773	0.002377	0.007053	0.002677	0.001077
Other Asphalt Surfaces	0.558685	0.029655	0.204806	0.126479	0.022344	0.005812	0.017312	0.018953	0.002773	0.002377	0.007053	0.002677	0.001077
Other Non-Asphalt Surfaces	0.558685	0.029655	0.204806	0.126479	0.022344	0.005812	0.017312	0.018953	0.002773	0.002377	0.007053	0.002677	0.001077

5.0 Energy Detail

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	lb/day										lb/day					
NaturalGas Mitigated	4.6500e-003	0.0423	0.0355	2.5000e-004		3.2100e-003	3.2100e-003		3.2100e-003	3.2100e-003		50.7356	50.7356	9.7000e-004	9.3000e-004	51.0371
NaturalGas Unmitigated	4.6500e-003	0.0423	0.0355	2.5000e-004		3.2100e-003	3.2100e-003		3.2100e-003	3.2100e-003		50.7356	50.7356	9.7000e-004	9.3000e-004	51.0371

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					
Fast Food Restaurant w/o Drive Thru	431.253	4.6500e-003	0.0423	0.0355	2.5000e-004		3.2100e-003	3.2100e-003		3.2100e-003	3.2100e-003		50.7356	50.7356	9.7000e-004	9.3000e-004	51.0371
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
Other Non-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
Total		**4.6500e-003**	**0.0423**	**0.0355**	**2.5000e-004**		**3.2100e-003**	**3.2100e-003**		**3.2100e-003**	**3.2100e-003**		**50.7356**	**50.7356**	**9.7000e-004**	**9.3000e-004**	**51.0371**

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					
Fast Food Restaurant w/o Drive Thru	0.431253	4.6500e-003	0.0423	0.0355	2.5000e-004		3.2100e-003	3.2100e-003		3.2100e-003	3.2100e-003		50.7356	50.7356	9.7000e-004	9.3000e-004	51.0371
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
Other Non-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
Total		**4.6500e-003**	**0.0423**	**0.0355**	**2.5000e-004**		**3.2100e-003**	**3.2100e-003**		**3.2100e-003**	**3.2100e-003**		**50.7356**	**50.7356**	**9.7000e-004**	**9.3000e-004**	**51.0371**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	0.0190	0.0000	4.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.0000e-003	1.0000e-003	0.0000		1.0600e-003
Unmitigated	0.0190	0.0000	4.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.0000e-003	1.0000e-003	0.0000		1.0600e-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	lb/day										lb/day					
Architectural Coating	4.6100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0144					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	4.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.0000e-003	1.0000e-003	0.0000		1.0600e-003
Total	**0.0190**	**0.0000**	**4.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.0000e-003**	**1.0000e-003**	**0.0000**		**1.0600e-003**

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	4.6100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0144					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	4.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.0000e-003	1.0000e-003	0.0000		1.0600e-003
Total	**0.0190**	**0.0000**	**4.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.0000e-003**	**1.0000e-003**	**0.0000**		**1.0600e-003**

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 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Bacara Beach House Replace and Remove with Alternative Snack Shack

Santa Barbara County APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant w/o Drive Thru	0.61	1000sqft	0.01	607.00	0
Other Asphalt Surfaces	2.50	1000sqft	0.06	2,500.00	0
Other Non-Asphalt Surfaces	1.45	1000sqft	0.03	1,450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.9	**Precipitation Freq (Days)**	37
Climate Zone	8			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project includes an electric food truck with a new 325 SF building with 4 restrooms, 2 outdoor showers, and an alternative to construct a 282 snack shack instead of the food truck. The project includes demolition of a 2350 SF exisiting building and outdoor showers and the addition of 2500 SF of new asphalt.

Land Use -

Demolition -

Energy Use -

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	610.00	607.00
tblSequestration	NumberOfNewTrees	0.00	8.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	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
Year	lb/day										lb/day					
2020	3.6072	8.9671	7.9664	0.0134	0.8159	0.5231	1.2835	0.4305	0.4812	0.8766	0.0000	1,296.9232	1,296.9232	0.3591	0.0000	1,302.6137
Maximum	**3.6072**	**8.9671**	**7.9664**	**0.0134**	**0.8159**	**0.5231**	**1.2835**	**0.4305**	**0.4812**	**0.8766**	**0.0000**	**1,296.9232**	**1,296.9232**	**0.3591**	**0.0000**	**1,302.6137**

Mitigated Construction

	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
Year	lb/day										lb/day					
2020	3.6072	8.9671	7.9664	0.0134	0.4019	0.5231	0.8695	0.2030	0.4812	0.6490	0.0000	1,296.9232	1,296.9232	0.3591	0.0000	1,302.6137
Maximum	**3.6072**	**8.9671**	**7.9664**	**0.0134**	**0.4019**	**0.5231**	**0.8695**	**0.2030**	**0.4812**	**0.6490**	**0.0000**	**1,296.9232**	**1,296.9232**	**0.3591**	**0.0000**	**1,302.6137**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**50.74**	**0.00**	**32.26**	**52.86**	**0.00**	**25.96**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	0.0190	0.0000	4.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.0000e-003	1.0000e-003	0.0000		1.0600e-003
Energy	4.6500e-003	0.0423	0.0355	2.5000e-004		3.2100e-003	3.2100e-003		3.2100e-003	3.2100e-003		50.7356	50.7356	9.7000e-004	9.3000e-004	51.0371
Mobile	0.7105	2.2823	6.5406	0.0132	1.1651	0.0142	1.1793	0.3124	0.0133	0.3258		1,335.6106	1,335.6106	0.0789		1,337.5836
Total	**0.7342**	**2.3246**	**6.5766**	**0.0135**	**1.1651**	**0.0174**	**1.1825**	**0.3124**	**0.0166**	**0.3290**		**1,386.3472**	**1,386.3472**	**0.0799**	**9.3000e-004**	**1,388.6218**

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	0.0190	0.0000	4.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.0000e-003	1.0000e-003	0.0000		1.0600e-003
Energy	4.6500e-003	0.0423	0.0355	2.5000e-004		3.2100e-003	3.2100e-003		3.2100e-003	3.2100e-003		50.7356	50.7356	9.7000e-004	9.3000e-004	51.0371
Mobile	0.7105	2.2823	6.5406	0.0132	1.1651	0.0142	1.1793	0.3124	0.0133	0.3258		1,335.6106	1,335.6106	0.0789		1,337.5836
Total	**0.7342**	**2.3246**	**6.5766**	**0.0135**	**1.1651**	**0.0174**	**1.1825**	**0.3124**	**0.0166**	**0.3290**		**1,386.3472**	**1,386.3472**	**0.0799**	**9.3000e-004**	**1,388.6218**

	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	N20	CO2e
Percent Reduction	**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**	**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	Architectural Coating	Architectural Coating	11/12/2020	11/18/2020	5	5	
2	Building Construction	Building Construction	6/18/2020	11/4/2020	5	100	
3	Demolition	Demolition	6/1/2020	6/12/2020	5	10	
4	Grading	Grading	6/16/2020	6/17/2020	5	2	
5	Paving	Paving	11/5/2020	11/11/2020	5	5	
6	Site Preparation	Site Preparation	6/13/2020	6/15/2020	5	1	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.09

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 911; Non-Residential Outdoor: 304; Striped Parking Area: 237 (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	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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
Architectural Coating	1	0.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	2.00	1.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	11.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

3.2 Architectural Coating - 2020

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	3.3650					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**3.6072**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.2 Architectural Coating - 2020

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	0.0000	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
Total	**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**

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	3.3650					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**3.6072**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.2 Architectural Coating - 2020

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	0.0000	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
Total	**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**

3.3 Building Construction - 2020

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	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806		1,102.9781	1,102.9781	0.3567		1,111.8962
Total	**0.8617**	**8.8523**	**7.3875**	**0.0114**		**0.5224**	**0.5224**		**0.4806**	**0.4806**		**1,102.9781**	**1,102.9781**	**0.3567**		**1,111.8962**

3.3 Building Construction - 2020

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	4.1300e-003	0.1093	0.0405	2.3000e-004	5.9200e-003	6.1000e-004	6.5300e-003	1.7000e-003	5.8000e-004	2.2800e-003		25.3607	25.3607	1.9900e-003		25.4105
Worker	7.0500e-003	5.5400e-003	0.0487	1.1000e-004	0.0126	8.0000e-005	0.0127	3.3500e-003	7.0000e-005	3.4300e-003		11.1057	11.1057	3.8000e-004		11.1152
Total	**0.0112**	**0.1148**	**0.0892**	**3.4000e-004**	**0.0186**	**6.9000e-004**	**0.0192**	**5.0500e-003**	**6.5000e-004**	**5.7100e-003**		**36.4664**	**36.4664**	**2.3700e-003**		**36.5257**

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	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806	0.0000	1,102.9781	1,102.9781	0.3567		1,111.8962
Total	**0.8617**	**8.8523**	**7.3875**	**0.0114**		**0.5224**	**0.5224**		**0.4806**	**0.4806**	**0.0000**	**1,102.9781**	**1,102.9781**	**0.3567**		**1,111.8962**

3.3 Building Construction - 2020

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	4.1300e-003	0.1093	0.0405	2.3000e-004	5.9200e-003	6.1000e-004	6.5300e-003	1.7000e-003	5.8000e-004	2.2800e-003		25.3607	25.3607	1.9900e-003		25.4105
Worker	7.0500e-003	5.5400e-003	0.0487	1.1000e-004	0.0126	8.0000e-005	0.0127	3.3500e-003	7.0000e-005	3.4300e-003		11.1057	11.1057	3.8000e-004		11.1152
Total	**0.0112**	**0.1148**	**0.0892**	**3.4000e-004**	**0.0186**	**6.9000e-004**	**0.0192**	**5.0500e-003**	**6.5000e-004**	**5.7100e-003**		**36.4664**	**36.4664**	**2.3700e-003**		**36.5257**

3.4 Demolition - 2020

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					0.2365	0.0000	0.2365	0.0358	0.0000	0.0358			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457		1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.2365**	**0.4672**	**0.7037**	**0.0358**	**0.4457**	**0.4815**		**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

3.4 Demolition - 2020

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	9.1800e-003	0.3314	0.1004	8.4000e-004	0.0191	1.3800e-003	0.0205	5.2300e-003	1.3200e-003	6.5500e-003		94.1597	94.1597	8.8100e-003		94.3799
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	0.0353	0.0277	0.2434	5.6000e-004	0.0632	4.0000e-004	0.0636	0.0168	3.7000e-004	0.0171		55.5283	55.5283	1.9100e-003		55.5760
Total	**0.0444**	**0.3591**	**0.3438**	**1.4000e-003**	**0.0823**	**1.7800e-003**	**0.0841**	**0.0220**	**1.6900e-003**	**0.0237**		**149.6880**	**149.6880**	**0.0107**		**149.9559**

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					0.1064	0.0000	0.1064	0.0161	0.0000	0.0161			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457	0.0000	1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.1064**	**0.4672**	**0.5736**	**0.0161**	**0.4457**	**0.4618**	**0.0000**	**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

3.4 Demolition - 2020

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	9.1800e-003	0.3314	0.1004	8.4000e-004	0.0191	1.3800e-003	0.0205	5.2300e-003	1.3200e-003	6.5500e-003		94.1597	94.1597	8.8100e-003		94.3799
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	0.0353	0.0277	0.2434	5.6000e-004	0.0632	4.0000e-004	0.0636	0.0168	3.7000e-004	0.0171		55.5283	55.5283	1.9100e-003		55.5760
Total	**0.0444**	**0.3591**	**0.3438**	**1.4000e-003**	**0.0823**	**1.7800e-003**	**0.0841**	**0.0220**	**1.6900e-003**	**0.0237**		**149.6880**	**149.6880**	**0.0107**		**149.9559**

3.5 Grading - 2020

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					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457		1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.7528**	**0.4672**	**1.2200**	**0.4138**	**0.4457**	**0.8595**		**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

3.5 Grading - 2020

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	0.0353	0.0277	0.2434	5.6000e-004	0.0632	4.0000e-004	0.0636	0.0168	3.7000e-004	0.0171		55.5283	55.5283	1.9100e-003		55.5760
Total	**0.0353**	**0.0277**	**0.2434**	**5.6000e-004**	**0.0632**	**4.0000e-004**	**0.0636**	**0.0168**	**3.7000e-004**	**0.0171**		**55.5283**	**55.5283**	**1.9100e-003**		**55.5760**

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					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457	0.0000	1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.3387**	**0.4672**	**0.8059**	**0.1862**	**0.4457**	**0.6319**	**0.0000**	**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

3.5 Grading - 2020

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	0.0353	0.0277	0.2434	5.6000e-004	0.0632	4.0000e-004	0.0636	0.0168	3.7000e-004	0.0171		55.5283	55.5283	1.9100e-003		55.5760
Total	**0.0353**	**0.0277**	**0.2434**	**5.6000e-004**	**0.0632**	**4.0000e-004**	**0.0636**	**0.0168**	**3.7000e-004**	**0.0171**		**55.5283**	**55.5283**	**1.9100e-003**		**55.5760**

3.6 Paving - 2020

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	0.7716	7.2266	7.1128	0.0113		0.3950	0.3950		0.3669	0.3669		1,035.3926	1,035.3926	0.3016		1,042.9323
Paving	0.0314					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8030**	**7.2266**	**7.1128**	**0.0113**		**0.3950**	**0.3950**		**0.3669**	**0.3669**		**1,035.3926**	**1,035.3926**	**0.3016**		**1,042.9323**

3.6 Paving - 2020

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	0.0635	0.0499	0.4381	1.0000e-003	0.1137	7.2000e-004	0.1144	0.0302	6.7000e-004	0.0308		99.9509	99.9509	3.4400e-003		100.0369
Total	**0.0635**	**0.0499**	**0.4381**	**1.0000e-003**	**0.1137**	**7.2000e-004**	**0.1144**	**0.0302**	**6.7000e-004**	**0.0308**		**99.9509**	**99.9509**	**3.4400e-003**		**100.0369**

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	0.7716	7.2266	7.1128	0.0113		0.3950	0.3950		0.3669	0.3669	0.0000	1,035.3926	1,035.3926	0.3016		1,042.9323
Paving	0.0314					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8030**	**7.2266**	**7.1128**	**0.0113**		**0.3950**	**0.3950**		**0.3669**	**0.3669**	**0.0000**	**1,035.3926**	**1,035.3926**	**0.3016**		**1,042.9323**

3.6 Paving - 2020

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	0.0635	0.0499	0.4381	1.0000e-003	0.1137	7.2000e-004	0.1144	0.0302	6.7000e-004	0.0308		99.9509	99.9509	3.4400e-003		100.0369
Total	**0.0635**	**0.0499**	**0.4381**	**1.0000e-003**	**0.1137**	**7.2000e-004**	**0.1144**	**0.0302**	**6.7000e-004**	**0.0308**		**99.9509**	**99.9509**	**3.4400e-003**		**100.0369**

3.7 Site Preparation - 2020

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.6853	8.4307	4.0942	9.7400e-003		0.3353	0.3353		0.3085	0.3085		943.4872	943.4872	0.3051		951.1158
Total	**0.6853**	**8.4307**	**4.0942**	**9.7400e-003**	**0.5303**	**0.3353**	**0.8656**	**0.0573**	**0.3085**	**0.3658**		**943.4872**	**943.4872**	**0.3051**		**951.1158**

3.7 Site Preparation - 2020

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	0.0176	0.0139	0.1217	2.8000e-004	0.0316	2.0000e-004	0.0318	8.3800e-003	1.9000e-004	8.5600e-003		27.7641	27.7641	9.6000e-004		27.7880
Total	**0.0176**	**0.0139**	**0.1217**	**2.8000e-004**	**0.0316**	**2.0000e-004**	**0.0318**	**8.3800e-003**	**1.9000e-004**	**8.5600e-003**		**27.7641**	**27.7641**	**9.6000e-004**		**27.7880**

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					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.6853	8.4307	4.0942	9.7400e-003		0.3353	0.3353		0.3085	0.3085	0.0000	943.4872	943.4872	0.3051		951.1158
Total	**0.6853**	**8.4307**	**4.0942**	**9.7400e-003**	**0.2386**	**0.3353**	**0.5740**	**0.0258**	**0.3085**	**0.3343**	**0.0000**	**943.4872**	**943.4872**	**0.3051**		**951.1158**

3.7 Site Preparation - 2020

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	0.0176	0.0139	0.1217	2.8000e-004	0.0316	2.0000e-004	0.0318	8.3800e-003	1.9000e-004	8.5600e-003		27.7641	27.7641	9.6000e-004		27.7880
Total	**0.0176**	**0.0139**	**0.1217**	**2.8000e-004**	**0.0316**	**2.0000e-004**	**0.0318**	**8.3800e-003**	**1.9000e-004**	**8.5600e-003**		**27.7641**	**27.7641**	**9.6000e-004**		**27.7880**

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	0.7105	2.2823	6.5406	0.0132	1.1651	0.0142	1.1793	0.3124	0.0133	0.3258		1,335.6106	1,335.6106	0.0789		1,337.5836
Unmitigated	0.7105	2.2823	6.5406	0.0132	1.1651	0.0142	1.1793	0.3124	0.0133	0.3258		1,335.6106	1,335.6106	0.0789		1,337.5836

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant w/o Drive Thru	436.76	424.56	305.00	520,948	520,948
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	436.76	424.56	305.00	520,948	520,948

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
Fast Food Restaurant w/o Drive	6.60	5.50	6.40	1.50	79.50	19.00	51	37	12
Other Asphalt Surfaces	6.60	5.50	6.40	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	6.60	5.50	6.40	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant w/o Drive Thru	0.558685	0.029655	0.204806	0.126479	0.022344	0.005812	0.017312	0.018953	0.002773	0.002377	0.007053	0.002677	0.001077
Other Asphalt Surfaces	0.558685	0.029655	0.204806	0.126479	0.022344	0.005812	0.017312	0.018953	0.002773	0.002377	0.007053	0.002677	0.001077
Other Non-Asphalt Surfaces	0.558685	0.029655	0.204806	0.126479	0.022344	0.005812	0.017312	0.018953	0.002773	0.002377	0.007053	0.002677	0.001077

5.0 Energy Detail

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	lb/day										lb/day					
NaturalGas Mitigated	4.6500e-003	0.0423	0.0355	2.5000e-004		3.2100e-003	3.2100e-003		3.2100e-003	3.2100e-003		50.7356	50.7356	9.7000e-004	9.3000e-004	51.0371
NaturalGas Unmitigated	4.6500e-003	0.0423	0.0355	2.5000e-004		3.2100e-003	3.2100e-003		3.2100e-003	3.2100e-003		50.7356	50.7356	9.7000e-004	9.3000e-004	51.0371

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					
Fast Food Restaurant w/o Drive Thru	431.253	4.6500e-003	0.0423	0.0355	2.5000e-004		3.2100e-003	3.2100e-003		3.2100e-003	3.2100e-003		50.7356	50.7356	9.7000e-004	9.3000e-004	51.0371
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
Other Non-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
Total		**4.6500e-003**	**0.0423**	**0.0355**	**2.5000e-004**		**3.2100e-003**	**3.2100e-003**		**3.2100e-003**	**3.2100e-003**		**50.7356**	**50.7356**	**9.7000e-004**	**9.3000e-004**	**51.0371**

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					
Fast Food Restaurant w/o Drive Thru	0.431253	4.6500e-003	0.0423	0.0355	2.5000e-004		3.2100e-003	3.2100e-003		3.2100e-003	3.2100e-003		50.7356	50.7356	9.7000e-004	9.3000e-004	51.0371
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
Other Non-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
Total		**4.6500e-003**	**0.0423**	**0.0355**	**2.5000e-004**		**3.2100e-003**	**3.2100e-003**		**3.2100e-003**	**3.2100e-003**		**50.7356**	**50.7356**	**9.7000e-004**	**9.3000e-004**	**51.0371**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	0.0190	0.0000	4.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.0000e-003	1.0000e-003	0.0000		1.0600e-003
Unmitigated	0.0190	0.0000	4.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.0000e-003	1.0000e-003	0.0000		1.0600e-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	lb/day										lb/day					
Architectural Coating	4.6100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0144					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	4.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.0000e-003	1.0000e-003	0.0000		1.0600e-003
Total	**0.0190**	**0.0000**	**4.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.0000e-003**	**1.0000e-003**	**0.0000**		**1.0600e-003**

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	4.6100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0144					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	4.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.0000e-003	1.0000e-003	0.0000		1.0600e-003
Total	**0.0190**	**0.0000**	**4.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.0000e-003**	**1.0000e-003**	**0.0000**		**1.0600e-003**

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 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

ATTACHMENT E:

E-1. Biological Resources Assessment for the Bacara Beach House Relocation Project, Goleta, Santa Barbara County, California.
Kevin Merk Associates, LLC, July 10, 2017

E-2. Supplemental Biological Technical Report for the Ritz-Carlton Bacara Beach House Demolition and Replacement Project, Santa Barbara County, California.
Dudek May 11, 2018

E-3. Memorandum Review of "Biological Resource Assessment for the Bacara Beach House Relocation Project, Goleta, Santa Barbara County, California" and "Supplemental Biological Technical Report for the Ritz-Carlton Bacara Beach House Demolition and Replacement Project, Santa Barbra County, California."
Storrer Environmental Services, July 4, 2018

E-4. Addendum to the Supplemental Biological Technical Report for the Beach Facilities Project at the Ritz-Carlton Bacara,
Dudek, January 30, 2019

E-5. Haskell's Beach House Demolition Habitat Restoration Plan
Dudek, October 2019

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ATTACHMENT E:

E-1. Biological Resources Assessment for the Bacara Beach House Relocation Project, Goleta, Santa Barbara County, California. Kevin Merk Associates, LLC, July 10, 2017

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Kevin Merk Associates, LLC P.O. Box 318, San Luis Obispo, CA 93406 805-748-5837(o)/439-1616(f)

July 10, 2017

Ms. Shawna Schaffner
CAA Planning, Inc.
65 Enterprise, Suite 130
Aliso Viejo, CA 92656

Subject: Biological Resources Assessment for the Bacara Beach House Relocation Project, Goleta, Santa Barbara County, California

Dear Ms. Shaffner:

Kevin Merk Associates, LLC (KMA) at your request, prepared this biological resources assessment to characterize existing conditions within the study area and identify potential impacts associated with the proposed Bacara Beach House Relocation Project. The project is located on a portion of the Bacara Resort & Spa property (APN 079-200-006 and -009) in the City of Goleta, Santa Barbara County, California. The approximately 6.6-acre study area developed for the project is situated to the east of the Bacara Resort, south of Tennis Facility on Hollister Avenue, and covers the existing Beach House site, proposed relocation site, and surrounding area. The study area also extends to the east along the coastline to include the eroded bluff undermining an existing trail. Please refer to the attached Figures 1 and 2 for site location and aerial overview maps.

Project Summary

Haskell's Beach House at Bacara Resort is proposed to be relocated in response to significant erosion caused by wave run up undercutting the slope on which the beach house sits. During the 2015 winter storm season, the structural integrity of the Beach House was severely compromised by ocean run up generated by multiple large winter storms. Immediate action was taken to close the Beach House and secure the area using caution tape, temporary fencing and signage. In addition, the property owner, in conjunction with the City of Goleta and Coastal Commission, took measures to reinforce the slope area under the Beach House with approximately 850 linear feet of yard block, sand bags, and polyethylene plastic sheeting. The yard block was installed as a temporary measure to prevent the Beach House from falling into the ocean while a plan for either permanent protection or relocation could be developed by the property owner, City and Coastal Commission. The final resolution is that the Beach House and its amenities, including showers, restrooms, and a snack bar, will be demolished and reconstructed in an inland location away from potential ocean surge and wave run up. The relocated Beach House would be generally the same size and overall footprint and provide substantially the same function as the existing Beach House.

The following details the methods and results of the investigation.

METHODS

KMA conducted a review of available background information including historic aerial photographs

and previous biological studies conducted in the region. As part of the background review, the California Natural Diversity Database (CNDDB, March and June 2017) maintained by the California Department of Fish and Wildlife (CDFW) was reviewed for documented special status resources within a five-mile radius of the study area. This search distance was sufficient to identify those special status species and plant communities with potential to occur in the immediate vicinity of the study area. The database was used to evaluate nearby documented occurrences of special-status plant and wildlife and compare the recorded habitat attributes with those present onsite to make a determination if a particular species was expected to occur onsite.

The Natural Resources Conservation Service (NRCS) Web Soil Survey was reviewed to determine the soil mapping units present within the study area (U.S. Department of Agriculture 2017). The U. S. Fish and Wildlife Service's online National Wetland Inventory and Critical Habitat Mappers (http://www.fws.gov/wetlands/Data/Mapper.html; http://criticalhabitat.fws.gov/crithab/) were also reviewed to evaluate the extent of documented wetlands and designated critical habitat defined in the region.

For the purpose of this report, special status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the U.S. Fish and Wildlife Service (USFWS) under the federal Endangered Species Act (ESA); those listed or proposed for listing as Rare, Threatened, or Endangered by the California Department of Fish and Wildlife (CDFW) under the California Endangered Species Act (CESA); animals designated as "Species of Special Concern," "Fully Protected," or "Watch List" by the CDFW; and plants occurring on California Rare Plant Rank lists 1, 2, 3 and 4 developed by the CDFW working in concert with the California Native Plant Society. The specific code definitions are as follows:

- *1A = Plants presumed extinct in California;*
- *1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat);*
- *1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened);*
- *1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known);*
- *2 = Rare, threatened or endangered in California, but more common elsewhere;*
- *3 = Plants needing more information (most are species that are taxonomically unresolved; some species on this list meet the definitions of rarity under CNPS and CESA); and*
- *4.2 = Plants of limited distribution (watch list), fairly endangered in California (20-80% occurrences threatened).*
- *4.3= Plants of limited distribution (watch list), not very endangered in California.*

In addition, sensitive or special status natural communities are those habitat types listed in the CNDDB or identified as S1, S2 or S3 in the Manual of California Vegetation (Sawyer et al., 2009).

KMA Principal Biologist, Kevin Merk, conducted field work on the study area on March 30, May 10, and May 26, 2017. Weather during the surveys was generally clear with varying levels of marine low clouds that burned off by midday. Temperatures ranged from approximately 60-70 degrees

Fahrenheit. The entire study area was walked using existing trails and open areas within the native coastal scrub to identify plants, observe wildlife (including their sign), and characterize the vegetation types present. Existing plant communities were mapped on an aerial photograph obtained from Google Earth. Vegetation classification generally followed Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California* (1986) and was cross-referenced with *A Manual of California Vegetation, Second Edition* (Sawyer et al., 2009) for consistency. Plant taxonomy followed the *Jepson Manual, Second Edition* (Baldwin et al., 2012).

Since the field work occurred in the spring of 2017, focused surveys for special status plants to determine their presence or absence from the site were conducted and the results are included herein. The evaluation of special status animal species presence or absence and identification of habitat that could support these species was based on our field observations, knowledge of the particular species biology, and review of documented records included in the CNDDB. Definitive surveys for the presence or absence of the wildlife species identified in the region during the background review were not conducted. Wildlife species generally require specific survey protocols with extensive field survey time to be conducted only at certain times of the year.

RESULTS

The study area is located along the Pacific Ocean south of Hollister Avenue and Highway 101 in an area bounded by the existing Beach House to the south and the Tennis Facility to the north. The Tecolote Creek corridor and a large hill generally form the western and eastern site boundaries (please refer to Figures 1 and 2 for site location information). Elevation on the study area ranges from approximately 11 feet at the existing Beach House to approximately 31 feet in the northern limits of the study area near the Tennis Facility. The investigation included sufficient area to characterize biological resources present along the beach and bluff area where the Beach House would be demolished and extended inland to the Tennis Facility. The hillside to the east was also included to assess biological resources present in this location to determine if the proposed relocation activities could indirectly affect special status biological resources that may be present in the area.

The spring 2017 surveys identified two native habitats (coastal sage scrub and sandy beach) within the study area along with developed/landscaped areas and planted non-native trees. Focused spring surveys did not identify any special status plants within the study area, and the habitat suitability analysis did not identify any special status animals that could potentially occur within the proposed disturbance footprint.

A series of maps are provided as attachments to this report. Figure 1 is a site location map, and Figure 2 is an aerial overview map to show the site in its geographic context. Figure 3, the habitat map, documents observed habitat conditions within the study area, and Figure 4 illustrates the soil mapping units as defined by the USDA. Figures 5 and 6, the CNDDB occurrence maps, identify the recorded or known occurrences of special status biological resources and federal critical habitat from the project vicinity. Figure 7 is an aerial photograph overlaid with the City of Goleta's Environmentally Sensitive Habitat Areas (ESHA) information. Finally, photos of notable features were taken, and a photo plate is also included as an attachment to this report.

Below provides further detail of the biological resources observed within the study area, and includes an analysis of the potential for special status resources to occur onsite. Impact statements for biological resources that may be affected by the project are also included. For potentially significant impacts, mitigation measures to reduce project related impacts to a less than significant level pursuant to the California Environmental Quality Act (CEQA) are also provided.

Habitat Types

Natural habitat types within the Beach House Relocation Project study area consisted of Venturan Coastal Sage Scrub, and Sandy Beach (with some patchy cobble occurrences). Non-native habitats and features included the Developed/Landscaped (including ruderal/disturbed areas, lawn and palm tree plantings), Monterey cypress grove, and constructed trails and roadways. To the west of the study area is Tecolote Creek and its associated riparian corridor and wetland/estuary system at the creek mouth and ocean interface. Please refer to attached Figure 2, the aerial overview map, and Figure 3, the habitat map, for further detail.

Coastal Sage Scrub

The coastal sage scrub habitat observed onsite consisted primarily of woody shrubs planted as part of a restoration project implemented during the construction of the Bacara Resort. This habitat type is generally consistent with the Venturan Coastal Sage Scrub habitat described by Holland (1986) and the more recently described California Sagebrush Scrub described by Sawyer et al. (2009). Within the study area, it was dominated by a mix of shrubs including California sagebrush (*Artemisia californica*), bush sunflower (*Encelia californica*), and black sage (*Salvia mellifera*). Patches of giant wild rye (*Elymus condensatus*) were also present.

Since this habitat area was part of a restoration project, it intergrades with landscaping (with both native and non-native plants) of the resort facility. Regular maintenance of trails includes trimming, weed removal, and watering vegetation. In addition, irrigation tubing was still present onsite. Although it appears that the irrigation system had been turned off, moisture tolerant shrubs such as mulefat (*Baccharis salicifolia*) were present mixed in with the drier coastal sage scrub species. Non-native weeds were also observed in this habitat type and included invasive species such as Cape ivy (*Delairea odorata*) and sticky eupatorium (*Ageratina adenophora*), both of which are adapted to moist conditions created by landscape irrigation. A small constructed swale feature was also present just north of the Beach House to help direct surface runoff to the west towards Tecolote Creek. While it was a minor topographic swale primarily composed of the coastal sage scrub species listed above, several clumps of common rush (*Juncus patens*) and rabbits foot grass (*Polypogon monspeliensis*) were observed in the area indicating the presence of increased seasonal moisture.

Coastal scrub communities provide cover and nesting habitat for a variety of animals such as western fence lizard (*Sceloporus occidentalis*), blue-gray gnatcatcher (*Polioptila caerulea*), wrentit (*Chamae fasciata*), California towhee (*Melazone crissalis*), and California mouse (*Peromyscus californicus*). Since this habitat type was restored in a degraded portion of the site during project construction activities, it is not yet expected to have the species richness compared to intact native stands of coastal scrub habitat present in the general region. In addition, the existing development

and regular human presence on the site is expected to adversely affect the distribution and diversity of wildlife in the general area.

Beach

The thin strip of sandy beach habitat below the existing Beach House is classified as marine, intertidal, unconsolidated shore, consisting of regularly flooded sand (Cowardin et al. 1979). This habitat is characterized by sandy substrate lacking vegetation except for occasional pioneering plants such as sea rocket (*Cakile maritima*). Common shorebirds including long-billed curlew (*Numenius americanus*), sanderling (*Calidris alba*), and willet (*Catoptrophorus semipalmatus*) frequently forage on sandy beach habitats. Sandy beaches provide habitat for a variety of macro-invertebrates that are an important food source for shorebirds, including sand crabs (*Emerita analoga*), isopods (*Excirolana chiltoni* and *Tylos punctata*), and several species of polychaete worms (*Euzonus mucronata*, *Excirolana chiltoni*, and *Hemipodus borealis*). Given the narrow strip of sandy beach within the study area, it is unlikely that the western snowy plover could use the site for breeding.

Monterey Cypress Plantings (including Eucalyptus trees)

Both Monterey cypress and various species of Eucalyptus trees have been planted throughout the Bacara Resort area. Within the eastern study area on the hill above the coastal plain, a dense grove of Monterey cypress (*Hesperocyparis macrocarpa*) is present. Several young plantings were also noted along the east side of the existing paved access road. While blue gum eucalyptus (*Eucalyptus globulus*) is also present on the hillside to the east and north of the study area, only one tree extended into the study area along a trail leading up the hill.

The eucalyptus occurrences to the east of the study area along Hollister Avenue and the railroad tracks historically supported a Monarch butterfly (*Danaus plexippus*) overwintering site. However, the structure of the historic site appears to have been impacted by road construction, railroad maintenance and trees falling over. As a result, Monarch butterflies have not been observed using the site in recent years (CNDDB, 2017). Large trees in the area including both Monterey cypress and blue gum Eucalyptus, could support foraging activities by the Monarch butterfly, but appear to lack sufficient structure as an overwintering site. They are expected to provide habitat for a suite of native and non-native birds, and could also support nesting raptors. No nest sites or bird nesting behavior was noted in the Monterey cypress grove or nearby Eucalyptus trees within the study area during the site visits conducted in March and May 2017.

Developed/Landscaped

Developed/Landscaped areas identified on Figure 3 are not native plant communities, and as such, are not described by vegetation classification systems used in this analysis since they are anthropogenic influenced land types. The developed/landscaped land type also is generally consistent with ruderal or disturbed land type, which typically occurs on heavily used and/or frequently disturbed sites. It includes weedy non-native species that are especially successful as colonizers of road edges and where the regular cycle of disturbance from weed eating and maintenance activities occur. The Beach House and surrounding areas, including along the trails and paved access road leading to the beach supported ruderal vegetation as the result of continual

disturbance by resort staff, vehicles and beachgoers. Typical ruderal species are primarily non-natives, such as various bromes (*Bromus* spp.), bur clover (*Medicago polymorpha*), and the native telegraph weed (*Heterotheca grandiflora*).

Although developed/landscaped areas are typically of marginal value to wildlife, its proximity to natural plant communities allow common and opportunistic species such as the western fence lizard and California ground squirrel (*Spermophilus beecheyi*) to utilize these areas for basking in the sun and foraging.

Soils

The USDA Natural Resources Conservation Service (NRCS; Soil Conservation Service) identified Goleta loam, 0-2% slopes as the primary soil map unit present within the study area. Other soil map units identified onsite included: Milpitas-Positas fine sandy loams, 2-9% slopes; Milpitas-Positas find sandy loams, 30-50% slopes, eroded; and Gullied Land. Generally speaking, these soils have formed on old terraces along the coastal plain in the region. They are typically well drained, and occupy low, rolling or gently undulating terraces that are dissected by small creeks. They are also subject to erosion, which is the case with the Gullied Land type mapped in the area.

Natural Drainage Features and Hydrology

No natural drainage features were present within the study area. As stated above, A small constructed drainage swale was observed onsite just to the north of the existing Beach House, and would also not likely be impacted during Beach House relocation activities. Tecolote Creek is located further west of the Beach House study area and would not be affected by the proposed project.

Special Status Biological Resources

The Goleta coastal region is known to provide habitat for numerous special status, or rare, plant communities, and species of plants and animals. Figures 5 and 6 identify the documented occurrences of these resources within a five-mile search radius of the study. Table 1 included as an attachment, contains a table of the CNDDB occurrence data and listing status for all special status species and habitats documented within the five mile search area. Also included in the table is analysis as to whether or not these species or habitats are expected to occur in the study area and be affected by the proposed project. Based on this investigation, no special status plant communities, plants or wildlife are expected to occur in the proposed disturbance footprint and be affected by the proposed Beach House Relocation Project.

Special Status Natural Communities

The CNDDB search identified the occurrence of one (1) special status plant community, Southern Coastal Salt Marsh, within the five mile search area. Our knowledge of the area identified other special status plant communities known to occur in the area, which included Coastal Bluff Scrub, Riparian Scrub/Woodland, and Wetland. While riparian scrub and wetland habitats were observed along Tecolote Creek to the west, no special status plant communities were observed onsite.

Special Status Plants

The CNDDB search identified ten (10) special status plants from the general site vicinity. Species that are known to occur in coastal sage scrub habitat such as Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), mesa horkelia (*Horkelia cuneata* var. *puberula*) and black flowered figwort (*Scrophularia atrata*), were searched for during spring surveys to determine if they were present onsite. Please refer to the attached Table 1 - Special Status Biological Resources Occurrence Information for further detail. The ten species identified in the CNDDB as occurring within five miles of the site include:

- Black flowered figwort;
- Contra Costa goldfields (*Lasthenia conjugens*);
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*);
- Coulter's saltbush (*Atriplex coulteri*);
- Davidson's saltscale;
- Estuary seablite (*Suaeda esteroa*);
- Mesa horkelia;
- Santa Barbara honeysuckle (*Lonicera subspicata* var. *subspicata*);
- Sonoran maiden fern (*Thelypteris puberula* var. *sonorensis*); and
- Southern tarplant (*Centromadia parryi* ssp. *australis*).

While these species have been observed in the region, they are not expected to occur onsite based on the results of the spring 2017 surveys or the lack of suitable habitat.

Special Status Animals

The CNDDB contains records of 15 special status animal species within five miles of the site. Based on the habitat suitability analysis, these special status animals are not expected to occur on the study area due to a lack of suitable habitat. Special status wildlife identified in the CNDDB as occurring within five miles of the site, included:

- Belding's savannah sparrow (*Passerculus sandwichensis beldingi*);
- California red-legged frog (*Rana* draytonii);
- Crotch bumble bee (*Bombus crotchii*);
- Ferruginous hawk (*Buteo regalis*);
- Globose dune beetle (*Coelus globosus*);
- Light-footed clapper rail (*Rallus longirostris levipes*);
- Mimic Tryonia (=California brackishwater snail) (*Tryonia imitator*);
- Monarch butterfly;
- Sandy beach tiger beetle (*Cicindela hirticollis gravida*);
- Tidewater goby (*Eucyclogobius newberryi*);
- Townsend's western big-eared bat (*Corynorhinus townsendii*);
- Tri-colored blackbird (*Agelaius tricolor*);
- Western pond turtle (*Emys marmorata*);
- Western snowy plover (*Charadrius alexandrinus nivosus*); and
- White-tailed kite.

The California red-legged frog, mimic Tryonia, tidewater goby, and western pond turtle, for instance, are aquatic species known to occur in the general region. The site does not include any natural drainage features with aquatic habitat, and therefore, these aquatic species are not expected to occur onsite. While they could potentially occur in nearby drainage features such as Tecolote Creek to the west or Bell Canyon Creek to the east, project activities would not result in direct or indirect impacts to these species.

Other special status species identified in the CNDDB are primarily associated with coastal dunes (i.e., globose dune and sandy beach tiger beetles) and salt marsh habitats (i.e., Belding's savanna sparrow and light-footed clapper rail) that are not present onsite. The narrow strip of sandy beach habitat would also not be expected to support potential nesting activities for the western snowy plover due to high tides extending up to the toe of the coastal bluff. Non-native tree habitats in the region are known to support overwintering sites for the Monarch butterfly, and no potentially suitable overwintering habitat is present in the study area. The Monterey cypress trees and scattered eucalyptus trees in the area could potentially provide nesting opportunities for a variety of song birds and raptors known to occur in the region. For special status raptors such as the white-tailed kite (*Elanus leucurus*), no evidence of stick nests or direct observations of foraging individuals were made during the surveys.

Other special status wildlife that are known to occur in the region, and that are highly mobile species with the potential to occur onsite during foraging activities include a variety of birds protected under the Migratory Bird Treaty Act. As stated above, no large stick nests characteristic of raptors were observed in the study area, but small songbirds could utilize the various trees and shrub habitats for nesting. No signs of large wildlife activity were noted during the surveys. Due to regular human presence from visitors as well as maintenance personnel, wildlife activity other than small songbirds and western fence lizards, was low.

IMPACT ANALYSIS AND RECOMMENDED MITIGATION MEASURES

The following discussion, impact analysis and recommended mitigation measures are intended to help guide future development planning, and support the California Environmental Quality Act (CEQA) review process. The impact discussion addresses the range of impacts that would be expected to result from implementation of the proposed project. Review of the Beach Facilities Design Review Plan prepared by WATG (June 2017) coupled with the 2017 survey results provided the basis for this analysis.

The project as proposed would demolish the existing Beach House and construct a new similar facility to the east along the existing roadway. The footprint of the proposed new beach facilities as shown in the project plans prepared by WATG would be sited just outside the limits of mapped ESHA per the City of Goleta's ESHA map. Field work for this investigation confirmed that the existing paved road and immediately adjacent areas (i.e., the road shoulder) is disturbed and does not have contiguous cover of native plants. Still a small amount of the restored coastal sage scrub habitat would likely be impacted during construction. The existing Beach House footprint would be maintained similar to surrounding areas for continued beach visitor access, and select areas along the restored bluff would be restored with native habitat characteristic of surrounding areas.

Bio Impact 1. Demolition of the Beach House is expected to impact developed and landscaped areas. This is expected to be a less than significant impact pursuant to CEQA and no mitigation is required.

The proposed project would result in the removal of landscaping composed of trees and shrubs and the existing infrastructure associated with demolition of the Beach House. This is considered a less than significant impact from a biological resources perspective. Disturbed areas from those areas dominated by non-native species are not considered sensitive plant communities by the CDFW and are common throughout the region. Therefore, any loss of the existing developed or landscaped areas would be considered a less than significant impact pursuant to CEQA and mitigation would not be required to offset these impacts to a less than significant level.

In many instances, mitigation required for a separate potentially significant impact would further reduce impacts to developed and landscaped areas deemed less than significant during CEQA review. Such would be the case with the below discussion in Bio Impact 3 related to potential impacts to nesting birds.

Bio Impact 2. Construction of the new Beach House facility could impact the outer limits of restored coastal sage scrub habitat. This is a potentially significant impact that can be reduced to less than significant with the incorporation of mitigation.

The construction of the new Beach House facility would remove a thin band of coastal sage scrub estimated to be approximately 500 square feet of marginal habitat. Although the road edge and ongoing maintenance activities create a disturbance zone along the restored coastal sage scrub habitat, the edge effect of the new structure footprint and associated fuel management zone that may be required could create a larger area of disturbance. As such, defining the limits of construction activities and post-project habitat restoration would be required to offset the loss of coastal sage scrub habitat resulting from project implementation.

Prior to construction, a qualified biologist working with the project construction team shall delineate the limits of construction. Orange protective fencing or similar equivalent shall be installed along the perimeter of the native habitat areas to be preserved and protected.

Coastal sage scrub and native grassland restoration should occur in select areas where the Beach House is removed as well as any other temporary disturbance areas associated with construction of the new facility. Restoration activities shall be performed post grading to restore disturbance areas to native habitats. Habitat restoration and biotechnical erosion controls shall be an integral part of the project and restoration areas shall be identified on project plans.

All bare soils areas shall have appropriate erosion controls and other Best Management Practices (BMPs) installed to prevent erosion. The following seed mix or similar equivalent as evaluated by a qualified biologist shall be applied to the graded areas through either direct hand seeding or hydroseeding methods:

Native Grassland Erosion Control Seed Mix

Species	Application Rate (lbs/acre)
Bromus carinatus (California brome)	5
Hordeum brachyantherum (meadow barley)	5
Vulpia microstachys (six weeks fescue)	3
Stipa pulchra (purple needlegrass)	10
Trifolium wildenovii (tomcat clover)	5
Total	**28**

As part of the impacts to coastal sage scrub, a habitat mitigation and monitoring plan shall be prepared detailing the methods and techniques to restore areas impacted by the proposed project. The plan shall be developed by a qualified restoration ecologist and submitted to the City for their review and approval. The plan shall include at a minimum the goals and objectives of the program, the areas to be planted or seeded following grading and any weed abatement activities, planting and weed control methodologies, measures to protect plantings during the establishment period, irrigation methods and timing, monitoring methods and timing, success criteria, and reporting requirements. The plan shall be implemented concurrent with or immediately following construction. The plan shall also include contingency measures to cover unforeseen circumstances. An education program shall also be developed to inform the construction personnel of the important biological resources on the project site, and the importance of protecting these resources during construction.

Hydroseeding, hand seeding and installation of container plants shall be completed during the late fall or winter months to ensure success of the program. Should erosion controls be needed within the mitigation area, they shall be biodegradable. During construction, all appropriate stormwater Best Management Practices (BMPs) shall be employed to protect the beach from inadvertent impacts that could occur during construction.

Implementation of the above mitigation measure would reduce impacts to native bunchgrass grassland to a less than significant level.

Bio Impact 3. Future development of the site could adversely affect wildlife including nesting birds during construction. This is a potentially significant impact that can be reduced to less than significant with the incorporation of mitigation.

Because of the size of the site and degree of habitat diversity in the region, the loss of a small strip of scrub vegetation and developed/landscaped areas for the construction of the proposed project is anticipated to be less than significant. Further, the site does not provide a known wildlife movement corridor, and therefore construction of the new facility would not be expected to adversely affect wildlife migration or movement in the region. Considering the extent of current development in the region in relation to the amount of open space nearby, development would be considered a less than significant impact to wildlife resources.

Night Lighting. Existing development in the area already contributes to the light pollution at night, and any future development proposal of the site is not anticipated to increase the existing condition. Certain species of aerial-foraging bats may actually be helped by night lighting because

of their attraction to prey items such as flying insects. Night lighting should be kept to the minimum necessary for safety purposes and should comply with current City standards. Decorative lighting should be of as low intensity as possible.

Non-Native Species. The proposed project is not expected to further increase non-native animals such as house sparrows, European starlings, Norway and black rats, and house mice at the site. Given the site currently supports human activities, these species are present already. Future development could potentially introduce or maintain non-native invasive plants through landscaping, thereby promoting the spread of non-native plants and escape of ornamentals. This has been shown to impact wildlife, including special-status species in the region due to loss of food resources and cover. The landscaping plan developed for the project should be consistent with the project's restoration plan discussed under Impact Bio-2 above, and all previous restoration work conducted onsite to date.

Nesting Birds. To minimize impacts to nesting bird species, including species protected by the Migratory Bird Treaty Act, all shrub/tree trimming and removal shall be limited to outside the nesting season and focused during the time period between September 1 and February 1 as feasible. If initial site disturbance, grading, and shrub removal cannot be conducted during this time period, a pre-construction survey for active bird nests onsite shall be conducted by a qualified biologist.

Surveys shall be conducted within two weeks prior to any construction activities. If no active nests are located, ground disturbing/construction activities can proceed. If active nests or roosts are located, then all construction work shall be conducted outside a non-disturbance buffer zone to be developed by the qualified biologist based on the species (i.e., 50 feet for common species and upwards of 250 feet for raptors), slope aspect and surrounding vegetation. No direct disturbance to nests shall occur until the young are no longer reliant on the nest site as determined by the qualified biologist. The biologist shall conduct monitoring of any active nest identified during the survey until all young have fledged or the nest has been confirmed abandoned.

Worker Education. Before any construction activities commence on the project, the approved biologist shall conduct an environmental awareness training for all construction personnel. At a minimum, the training shall include a description of the biological resources present onsite and the general measures in place to avoid and protect them. Handouts may be used in the training session as appropriate.

CONCLUSION

The proposed demolition of the Bacara Resort Beach House would impact developed and landscaped areas. Construction of the new facility would be sited primarily on an existing paved road, and would extend onto the road shoulder and into a thin band of restored coastal sage scrub habitat. No special status habitats, plants or wildlife were identified within the study area during surveys conducted in the spring of 2017, and no state or federal listed species are expected to be impacted by the proposed project. The demolition of the existing Beach House and construction of the new facility would require removal of landscape vegetation and some native restored coastal sage scrub habitat. As a result, project activities could potentially affect nesting birds if construction occurs during the nesting bird season (defined as between February 1 and August 31).

In addition, the new facility would be in close proximity to restored coastal scrub habitat, some of which is defined as ESHA by the City of Goleta. Although City mapped ESHA would not be directly impacted by the project, and removal of common shrubs such as California sagebrush would not be a significant impact from a biological perspective, edge effects (i.e., the spread of non-native plants) once the project is constructed could further disrupt plant distribution and wildlife activities near the new facility. As such, mitigation measures identified above implemented prior to and during construction would reduce potential impacts to biological resources to a less than significant level pursuant to CEQA.

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Thank you for the opportunity to provide environmental consulting services for this project. I trust the above information is sufficient for your reporting requirements at this time. If you have any questions regarding the information contained herein, please contact me at the phone number listed above or via email at kmerk@kevinmerkassociates.com.

Sincerely,
KEVIN MERK ASSOCIATES, LLC

Kevin B. Merk
Principal Biologist

Attachments: *Table 1 – Special Status Biological Resources Occurrence Information*
Photo Plate
Figure 1 – Site Location Map
Figure 2 – Aerial Overview Map with NWI Data
Figure 3 – Habitat Map
Figure 4 – Soils Map
Figure 5- CNDDB Map (Plants)
Figure 6 – CNNDB Map (Wildlife)
Figure 7 – City of Goleta ESHA Map

Table 1. Special Status Biological Resources Occurrence Information.

Species	Status* Fed/CA/CNPS	Habitat Requirements	Project Site Suitability/Observations
PLANTS			
Black-flowered figwort *Scrophularia atrata*	--/--/1B.2	Perennial herb; blooms April through July; ranges from 10 to 500 meters in elevation; occurs in closed-cone coniferous forest, chaparral, coastal dunes, coastal scrub, and riparian scrub habitats, typically on sandy or diatomaceous shale soils.	**Not expected.** Site contains suitable coastal scrub habitats, but no black-flowered figwort individuals were observed during site surveys conducted during the appropriate bloom period (March – June). Only the common *Scrophularia californica* was observed onsite. Nearest recorded occurrences in the CNDDB are to the west along the Union Pacific Railroad, and east near Devereux Slough and Coal Oil Point.
Contra Costa goldfields *Lasthenia conjugens*	FE/--/1B.1	Annual herb, occurs in association with vernal pools, wet meadows, and depressions, between 4 and 180 meters in elevation. Typically blooms from March through June.	**Not expected.** No suitable habitat present onsite for this species. While a small constructed swale was observed along the trail system in the southern part of the site, no Contra Costa goldfields or any other species of *Lasthenia* was observed. A single record of this species exists from 1973 when it was documented in a depression in a grain field in the vicinity of Isla Vista; however, it is since thought to be extirpated in the region and is not expected to occur in the project area.
Coulter's goldfields *Lasthenia glabrata* ssp. *coulteri*	--/--/1B.1	Annual herb that grows in coastal salt marshes, playas, valley and foothill grassland, and vernal pools usually on alkaline soils from 1- 1,400 meters in elevation.	**Not expected.** No suitable habitat present onsite for this species. While a small constructed swale was observed along the trail system in the southern part of the site, no species of *Lasthenia* was observed. Historically reported from Goleta Slough, and could occur further east of the site in the more developed salt marsh of Bell Canyon.
Coulter's saltbush *Atriplex coulteri*	--/--/1B.2	Perennial herb known from coastal bluff scrub, coastal dunes, coastal scrub and grassland habitats between 2 and 460 meters in elevation. Typically blooms from March through October.	**Not expected.** While potentially suitable coastal sage scrub is present within the study area, this species was not observed onsite during the field surveys. CNDDB record for this species in the region is from 1950's along the railroad right of way, and it questions whether it was an introduced occurrence.

Table 1. Special Status Biological Resources Occurrence Information.

Species	Status* Fed/CA/CNPS	Habitat Requirements	Project Site Suitability/Observations
Davidson's saltscale *Atriplex serenana* var. *davidsonii*	--/--/1B.2	Annual herb known to occur on alkaline soils in coastal sage scrub, wetland and riparian habitats, between 0 and 470 meters in elevation. Typically blooms from April through October.	**Not expected.** No suitable alkaline soils present within the study area. Not observed onsite. Species would have been in identifiable condition if observed during field surveys. CNDDB has 1947 record from general vicinity of Arroyo Burro/Hendry's Beach further east of the site, and it is uncertain if this species is still present in the area.
Estuary Seablite *Suaeda esteroa*	--/--/1B.2	Coastal salt marshes and swamps in southern California; elevation 0-120 meters. Typically blooms from May through October.	**Not expected.** No suitable habitat present in the project area. Historically reported from Goleta Slough near the beach. Not observed during field surveys.
Mesa horkelia *Horkelia cuneata* var. *puberula*	--/--/1B.1	Perennial herb that grows in sandy or gravelly sites in chaparral, coastal scrub and cismontane woodland; 15 to 1,645 meter elevation range. Typically blooms from February through July.	**Not expected.** While marginal habitat is present in the restored coastal sage scrub habitat within the project area, no species of *Horkelia* was observed during surveys. This herbaceous perennial would have been in identifiable condition if present. Further, nearest known occurrences in CNDDB are over 50 years old.
Santa Barbara honeysuckle *Lonicera subspicata* var. *subspicata*	--/--/1B.2	A shrub known to occur in chaparral, cismontane and coastal scrub habitats from 5 to 825 meters in elevation. Typically blooms from May through August.	**Not expected.** Although suitable coastal sage scrub habitat is present within the study area, it consisted of a dense stand of California sagebrush, *Encelia*, and coyote brush, and no honeysuckle plants were observed during the field surveys. Further, this species is typically found away from the immediate shoreline.
Sonoran maiden fern *Thelypteris puberula* var. *sonorensis*	--/--/2B.2	Rhizomatous fern that grows along streams, meadows and freshwater seeps typically in cool, shaded locations under riparian trees, between 40 and 790 meters in elevation. Typically blooms from January through September.	**Not expected.** No suitable habitat present. Not observed during surveys. Not expected to occur within the site or be affected by any project activities. Majority of occurrences in the region are at higher elevation sites in the Santa Ynez Mountains to the north.
Southern tarplant *Centromadia parryi* ssp. *australis*	--/--/1B.1	Annual herb found primarily on margins of marshes and swamps, and within valley and foothill annual grassland habitats containing vernal pools. Elevations range from 200 to 1320 meters. Often found in disturbed sites near the coast, and in alkaline soils. Typically blooms from May through November.	**Not expected.** Marginal habitat present within the restored coastal sage scrub and along road and trail margins. Not observed during field surveys, and closest known occurrences of this species are on the UCSB campus to the east and to the west of the site along the south side of Highway 101 between Eagle Canyon and Dos Pueblos Canyon.

Table 1. Special Status Biological Resources Occurrence Information.

Species	Status* Fed/CA/CNPS	Habitat Requirements	Project Site Suitability/Observations
WILDLIFE			
Belding's savannah sparrow *Passerculus sandwichensis beldingi*	--/SE/--	Coastal salt marshes from Santa Barbara County to the Mexican border. Nests on the ground in natural depression or scrape, primarily in pickleweed habitat above the reach of the highest spring tides.	**Not expected.** No suitable salt marsh and pickleweed habitat present in the study area.
California red-legged frog *Rana draytonii*	T/SSC/--	Lowlands and foothills in or near permanent or semi-permanent sources of deep water (at least 0.5 meter) bordered by emergent wetland and/or riparian vegetation. May use a variety of aquatic and upland habitats during the year for refugia and dispersal.	**Not expected.** No suitable habitat present in the study area. Suitable habitat and known occurrences of CRLF are present in Tecolote Creek to the west and Bell Canyon Creek to the east.
Crotch bumble bee *Bombus crotchii*	--/ SSC / --	Open grassland and scrub habitats from central California to Baja California del Norte, Mexico, including the western edges of the deserts and the Central Valley. Not found in the mountains or cool north coastal areas of California	**Unlikely**. Sites appear to be too close to the immediate coastline (i.e., cool coastal area). Scrub habitat onsite may provide sufficient pollen sources and the general vegetative diversity to attract or support the species, but unlikely to be affected by the proposed relocation of the Beach House on the site.
Ferruginous hawk *Buteo regalis*	--/WL/-- (nonbreeding/ wintering)	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon-juniper habitats. Eats mostly lagomorphs, ground squirrels and mice.	**Not expected.** No suitable grassland foraging habitat present on-site. This species typically does not nest in California. Could occur as a seasonal transient during fall/winter months that would not be affected by the proposed project.
Globose dune beetle *Coelus globosus*	--/SA/--	Foredunes and sand hummocks immediately bordering the coast from Bodega Bay Head to Ensenada, Baja California, and all of the Channel Islands except San Clemente Island.	**Not expected.** No suitable sand dune habitat present in the study area. Previous surveys of Tecolote Creek and Bell Canyon Creek dune areas have observed the species outside of the study area.
Light-footed clapper rail *Rallus longirostris levipes*	FE/SE	Saltwater tidal marshes dominated by pickleweed and cordgrass, from Santa Barbara County to San Diego County.	**Not expected.** No suitable salt marsh and pickleweed habitat present in the study area.

Table 1. Special Status Biological Resources Occurrence Information.

Species	Status* Fed/CA/CNPS	Habitat Requirements	Project Site Suitability/Observations
Mimic tryonia (=California brackishwater snail) *Tryonia imitator*	--/SA/--	Found only in permanently submerged areas in coastal lagoons.	**Not expected.** No suitable habitat present in study area.
Monarch butterfly *Danaus plexippus*	--/SA/--	Wind-protected tree groves of eucalyptus, Monterey pine and cypress with nectar and water sources nearby.	**Not expected.** No suitable overwintering habitat present within the study area. Species is known to historically overwinter in eucalyptus groves to the north and could potentially forage in study area, but recent analysis by Meade et al considered the historic overwintering site adversely affected by infrastructure development and tree removal.
Sandy beach tiger beetle *Cicindela hirticollis gravida*	--/SA/--	Inhabits area adjacent to non-brackish water along the coast of California from San Francisco Bay to Northern Mexico.	**Not expected.** No suitable habitat present within the study area. Potentially present in dunes located at the mouth of Tecolote and Bell Canyon Creeks.
Tidewater goby *Eucyclogobius newberryi*	E/SSC/--	Brackish water and lagoon habitats along the California coast from San Diego county to Del Norte county.	**Not expected.** No suitable aquatic habitat present in the study area. Documented in aquatic/brackish habitat within the lower reach of Tecolote and Bell Canyon Creeks, which is outside the disturbance area for this project.
Townsend's western big-eared bat *Corynorhinus townsendii*	--/-SSC/--	Requires caves, tunnels, mines, or similar man-made structures for roosting. This bat feeds primarily on moths, but will eat a variety of soft-bodied insects.	**Not expected.** No suitable roosting habitat present onsite. Could potentially forage over the study area, but not expected to adversely affected by the project.
Tri-colored blackbird *Agelaius tricolor*	CE/--/SSC (nesting)	Nests in freshwater marshes with tules or cattails, or in other dense vegetation such as thistle, blackberry, thickets, etc., in close proximity to open water. Forages in a variety of habitats including pastures, agricultural.	**Not expected.** No suitable nesting habitat present onsite. Could potentially forage over the study area, and nest in the Tecolote and Bell Canyon Creek lagoon areas. Not expected to adversely affected by the project.
Western pond turtle *Emys marmorata*	--/SSC/--	Permanent or nearly permanent water bodies in many habitats. Basking sites such as partially submerged logs, vegetation mats, or open mud banks.	**Not expected.** No suitable habitat present in the study area. Suitable habitat present in Tecolote Creek to the west and Bell Canyon Creek to the east, but no documented sightings in the immediate project vicinity.

Table 1. Special Status Biological Resources Occurrence Information.

Species	Status* Fed/CA/CNPS	Habitat Requirements	Project Site Suitability/Observations
Western snowy plover *Charadrius alexandrinus nivosus*	T/SSC/-- (nesting)	Sandy beaches, salt pond levees or shores of large alkali lakes. Sandy, gravelly or friable soils required for nesting. Federal listing refers only to the Pacific coastal population.	**Not expected.** No coastal dunes that could provide suitable nesting or foraging habitat present onsite. Could potentially forage along the immediate shoreline in close proximity to the study area, but not expected to nest in close proximity to the Beach House relocation site or be affected by the project.
White-tailed kite *Elanus leucurus*	--/FP/-- (nesting)	Riparian woodlands near agricultural fields; forages over open grasslands and scrub.	**Not expected**. No suitable nesting habitat within the proposed Beach House relocation site. While Monterey cypress and eucalyptus plantings are present in the general area, no large stick nests were observed onsite during surveys. Species is known to forage in grassland habitats to the west and east of the site, but would not be affected by the proposed project.
SPECIAL STATUS NATURAL COMMUNITIES and CRITICAL HABITATS			
Coastal Bluff Scrub			Not present in study area.
Riparian Scrub			Not present in study area
Southern Coastal Salt Marsh			Not present in study area.
Tidwater goby			Not present in study area.
Western snowy plover			Not present in study area.
Wetland			Not present in study area.

**E = Endangered; T = Threatened; R = Rare CE = Candidate for Endangered Status; SSC = California Species of Special Concern; FP = Fully Protected; WL = Watch List; SA – Special Animal; '—' = no status; List 1A – presumed extinct; List 1B – Rare, threatened, or endangered in California and elsewhere; List 2 – Rare, threatened or endangered in California, but more common elsewhere; List 4 – Limited distribution (Watch List). Source: California Natural Diversity Database (California Department of Fish and Wildlife 2017); California Native Plant Society Online Inventory of Rare Plants, accessed April 2017 (online at www.cnps.org); Special Animals List* (*California Department of Fish and Wildlife 2017); Special Vascular Plants, Bryophytes, and Lichens List (California Department of Fish and Wildlife 2017).*

Photo Plate

Photo 1. 1994 aerial of the site prior to construction.

Photo 2. 2002 aerial showing Beach House and Tennis Facility. Note the line demarcating the limits of landscaping in regards to coastal sage scrub habitat restoration.

Photo 3. 2003 aerial showing coastal sage scrub plantings establishing (circular vegetation pattern between Beach House and Tennis Facility).

Photo 4. 2007 aerial with coastal sage scrub habitat establishing with areas of grassland still visible (beige color pattern). Note amount of bluff present between Beach House/trails and ocean.

Photo 5. 2016 aerial with restored coastal sage scrub habitat established between Beach House and Tennis Facility. Note erosion of bluff at Beach House and trails.

Photo 6. Close up view of Beach House with temporary wall protecting tidal surge and bluff erosion. Note the ruderal/disturbed area along the road edges.

Photo 7. Easterly view of eroding bluff. The extent of exposed cobble varies throughout the season and becomes covered in sand later in the summer season.

Photo 8. Close up view of the temporary wall protecting the Beach House. Note sand with no exposed cobble in this location.

Photo 9. Westerly view of eroded bluff face below trail. Note fence near edge of bluff.

Photo 10. Westerly view looking toward Bell Canyon Creek mouth showing eroded bluff face with old exposed pipes.

Photo 11. Existing paved road and fire truck turn-around. Note actively used road margins with stockpiles of landscape materials to the right under the Monterey cypress plantings on hill.

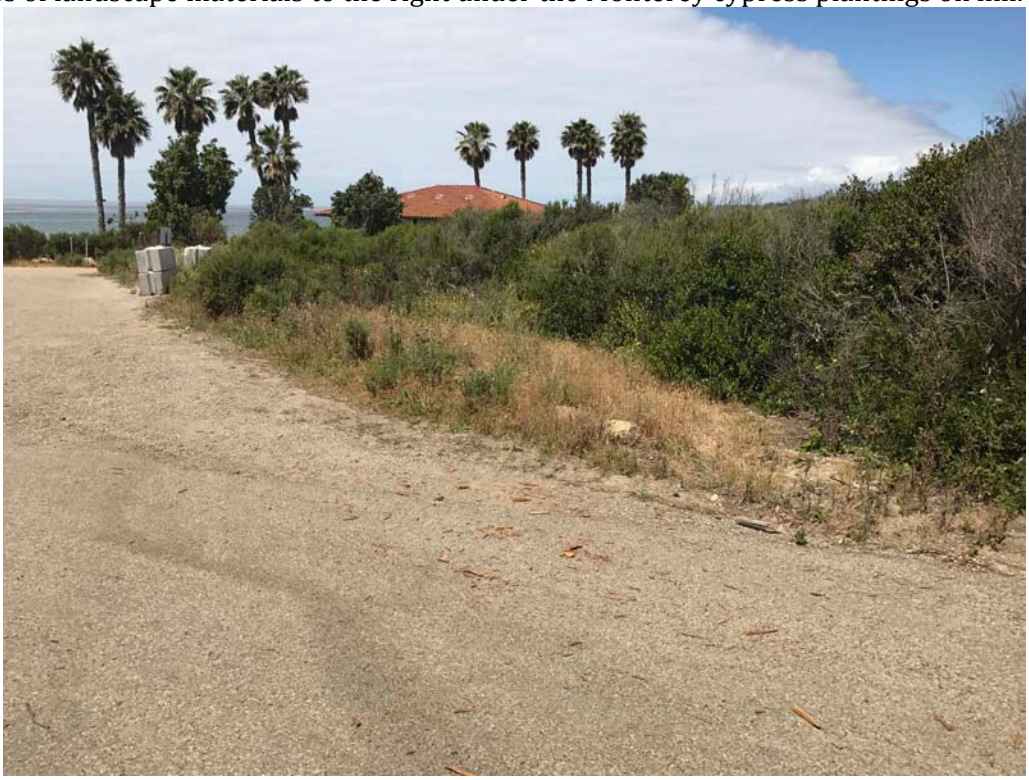
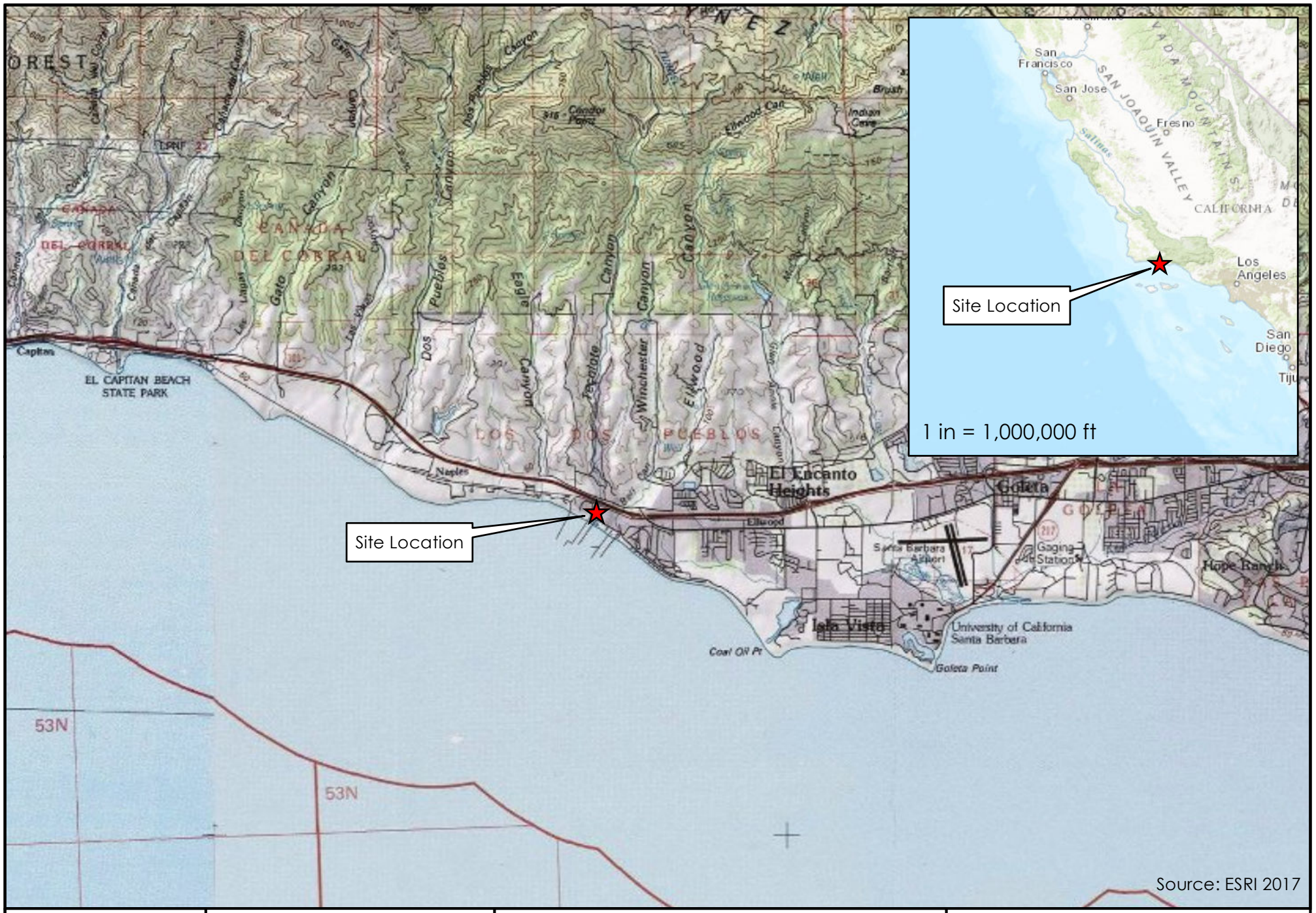


Photo 12. Proposed Beach House relocation site composed of pavement and disturbed road margin with non-native weeds that transition into coastal sage scrub restoration plantings.

Photo 13. Close up view of ruderal/disturbed area adjacent to road. Beach House relocation would reposition the road into this existing disturbed area.

Photo 14. Representative view of intact coastal sage scrub restored between the Beach House (visible to the left) and Tennis Facility. Resort is visible in the distance.



KEVIN MERK ASSOCIATES

1 in = 10,000 ft

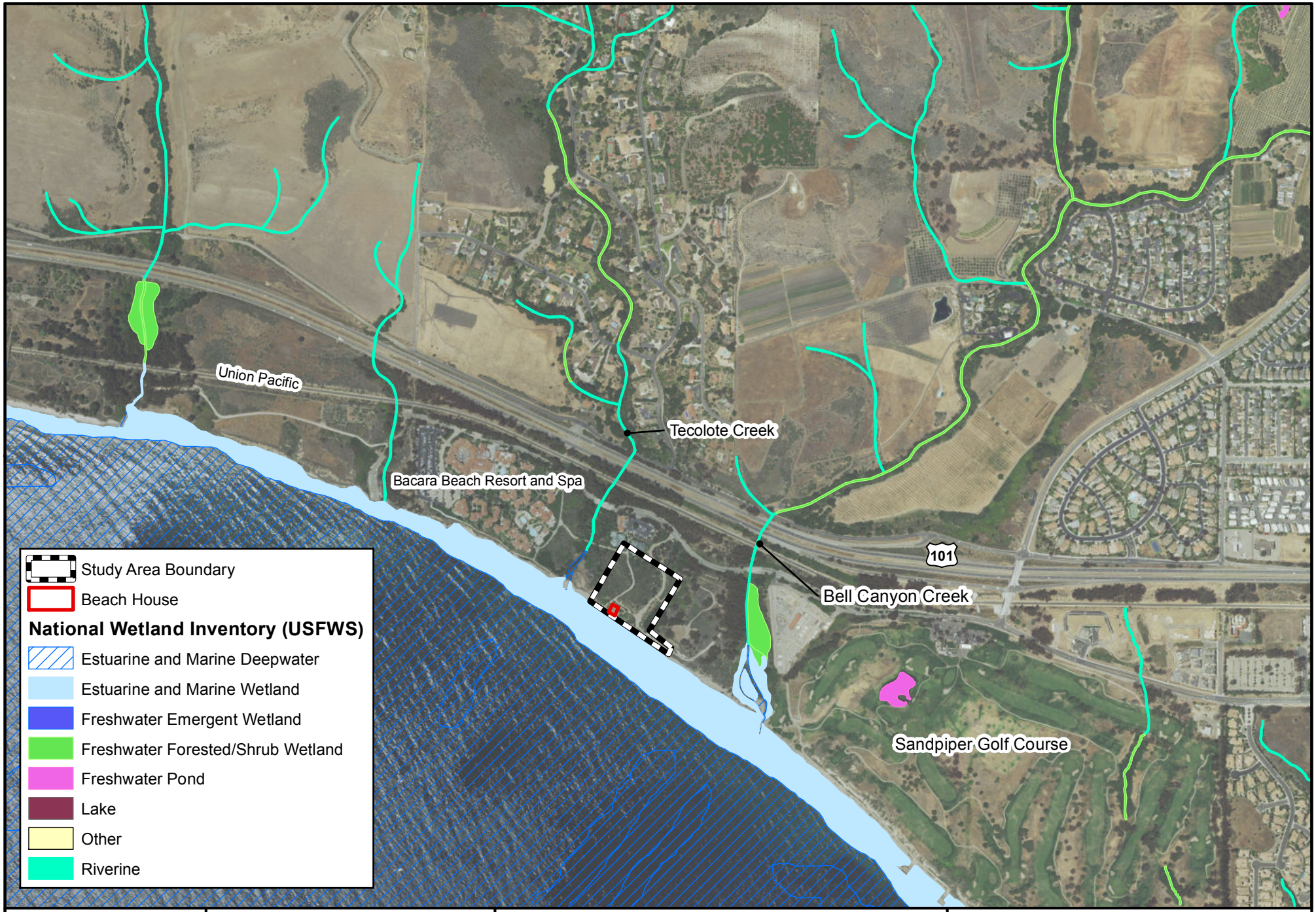
0 0.5 1 2 Miles

The Beach House Relocation Project

Bacara Resort and Spa

Figure 1

Site Location



KEVIN MERK ASSOCIATES

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1 in = 1,000 ft

0 335 670 1,340 Feet

The Beach House Relocation Project

Bacara Resort and Spa

Figure 2

Aerial Overview

KEVIN MERK ASSOCIATES

1 in = 150 ft

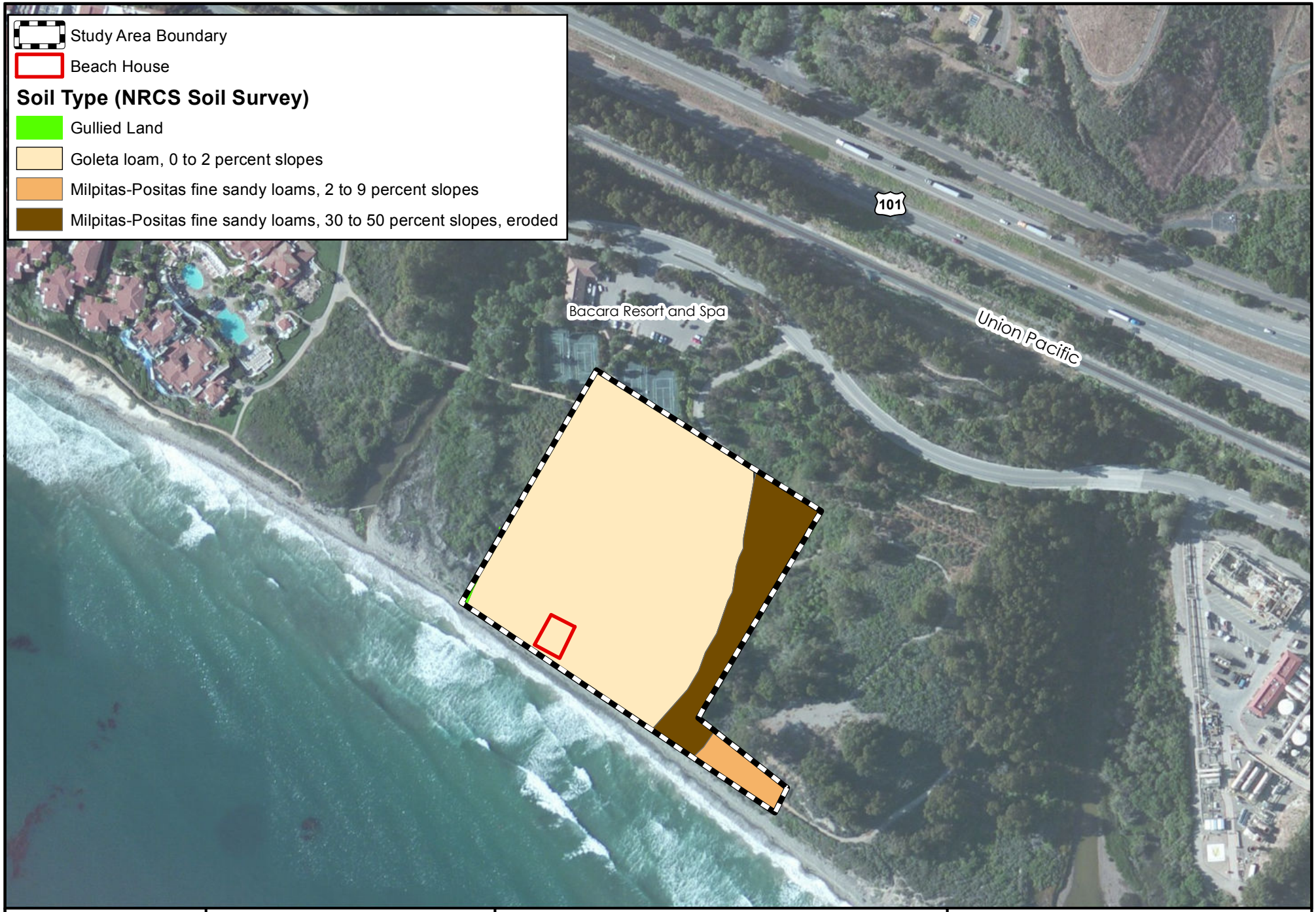
0 50 100 200 Feet

The Beach House Relocation Project

Bacara Resort and Spa

Figure 3

Habitat Map



KEVIN MERK ASSOCIATES

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1 in = 250 ft

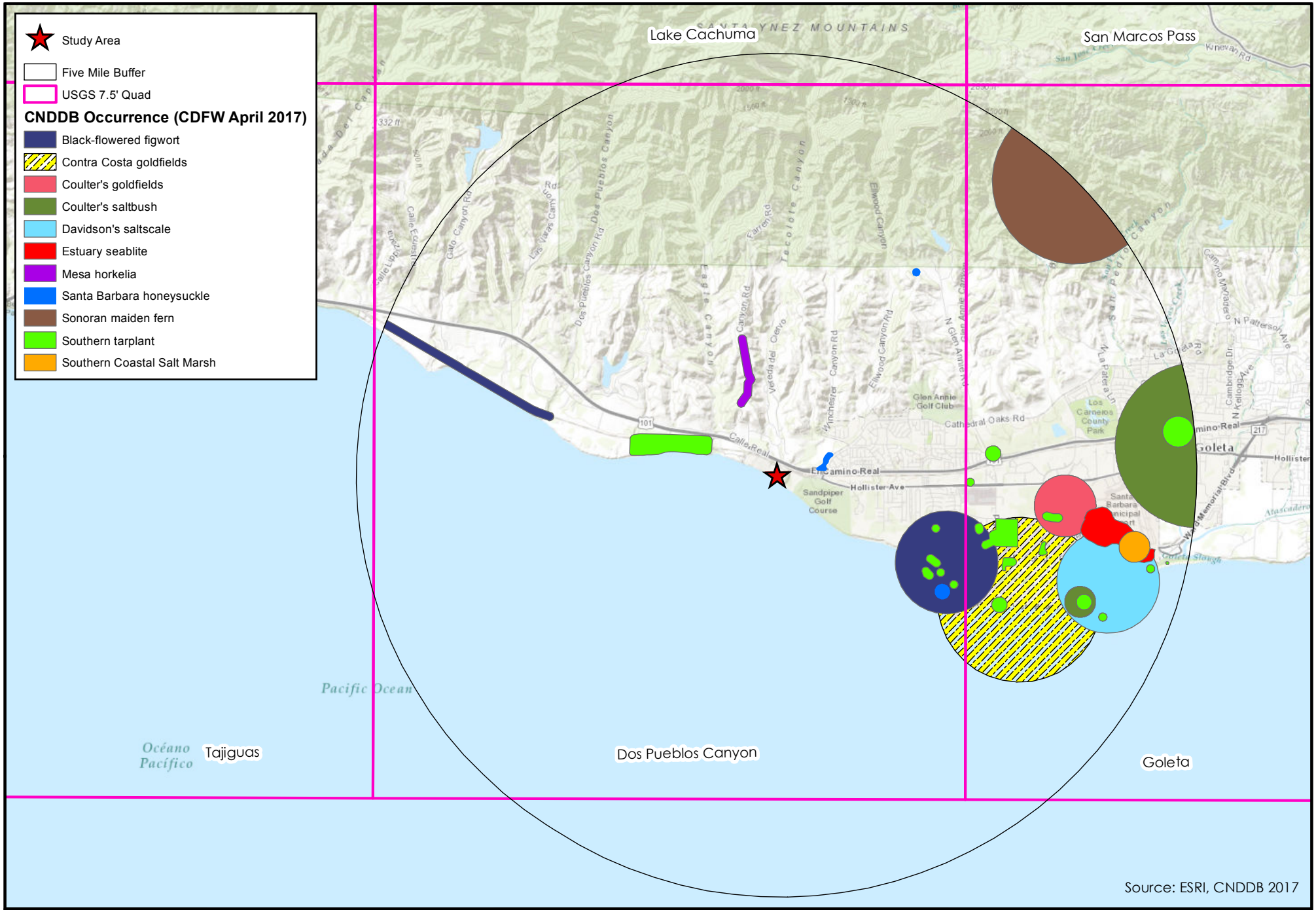
0 80 160 320 Feet

The Beach House Relocation Project

Bacara Resort and Spa

Figure 4

Soil Map



KEVIN MERK ASSOCIATES

1 in = 8,000 ft

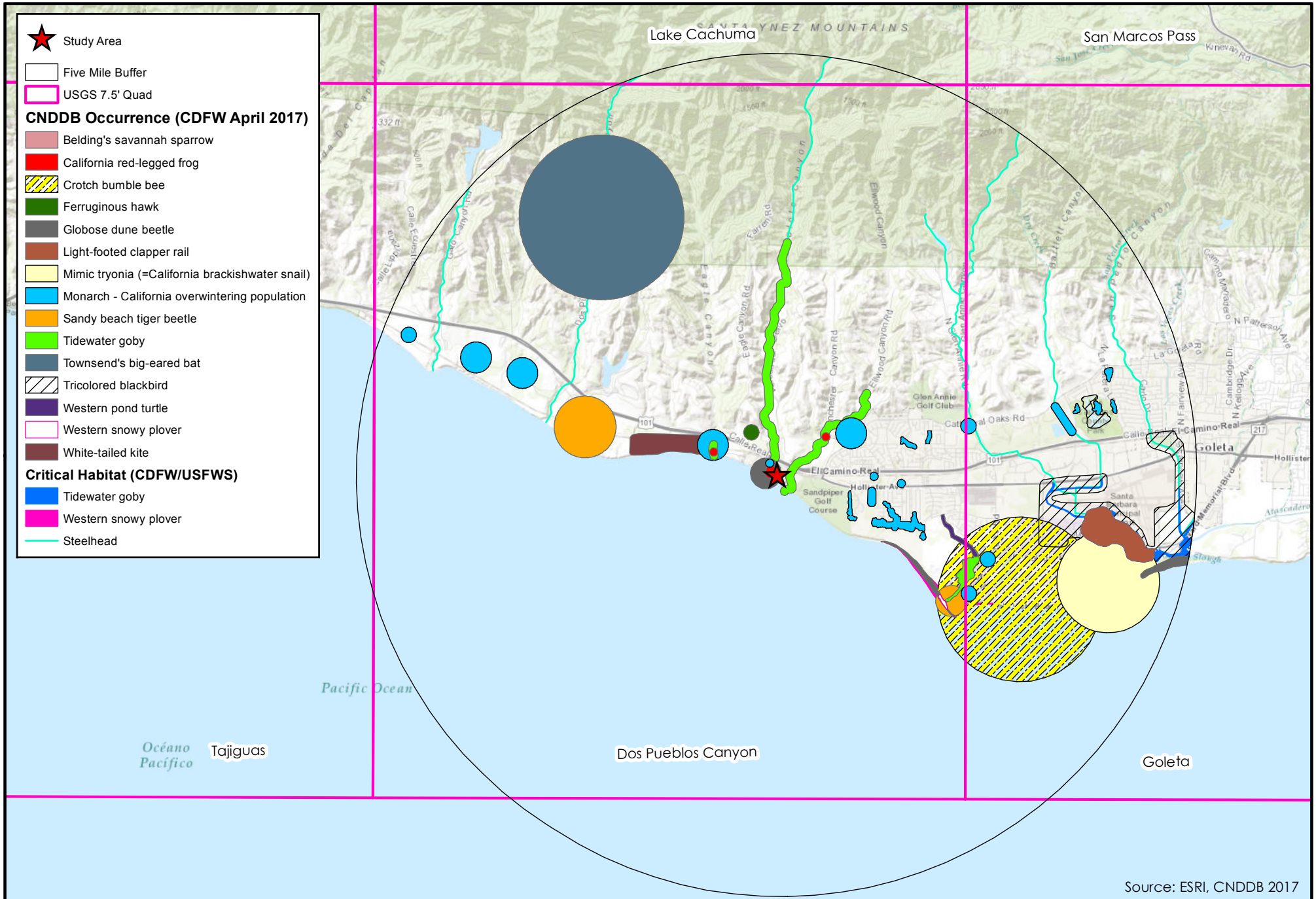
0 2,650 5,300 10,600 Feet

The Beach House Relocation Project

Bacara Resort and Spa

Figure 5

CNDDB Occurrence Map



KEVIN MERK ASSOCIATES

N W E S

1 in = 8,000 ft

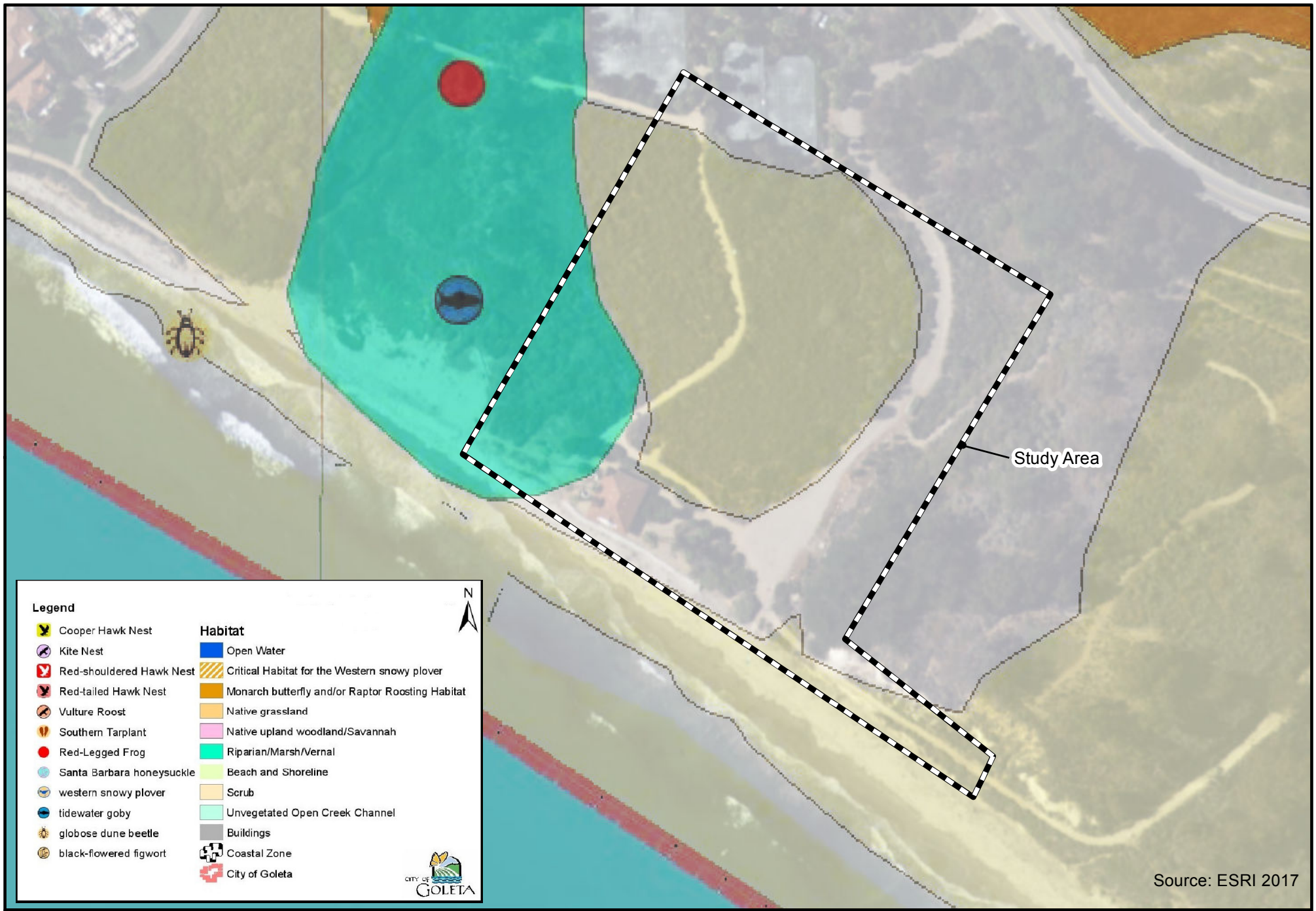
0 2,650 5,300 10,600 Feet

The Beach House Relocation Project

Bacara Resort and Spa

Figure 6

CNDDB Animal Occurrence Map



KEVIN MERK ASSOCIATES

1 in = 150 ft

0 50 100 200 Feet

The Beach House Relocation Project

Bacara Resort and Spa

Figure 7

ESHA Delineation Map

ATTACHMENT E:

E-2. Supplemental Biological Technical Report for the Ritz-Carlton Bacara Beach House Demolition and Replacement Project, Santa Barbara County, California.
Dudek May 11, 2018

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DUDEK

621 CHAPALA STREET
SANTA BARBARA, CALIFORNIA 93101
T 805.963.0651 F 805.963.2074

May 11, 2018 10786

Paul Finstad
Watermark Capital Partners, LLC
150 North Riverside Plaza, Suite 4200
Chicago, IL 60606

Subject: Supplemental Biological Technical Report for the Ritz-Carlton Bacara Beach House Demolition and Replacement Project, Santa Barbara County, California

Dear Mr. Finstad:

The purpose of this Supplemental Biological Technical Report is to describe the existing biological resources (including vegetation, flora, fauna, jurisdictional features, and wildlife habitats/movement corridors), potential project impacts, and recommended avoidance, minimization, and mitigation measures associated with the Ritz-Carlton Bacara Beach House Demolition and Replacement Project (project) (*Appendix A - Figure 1*). This report has been provided as a supplement to the *Biological Resources Assessment for the Bacara Beach House Relocation Project* (KMA 2017). The *Biological Resources Assessment* (KMA 2017) provides details on the existing conditions, an impact assessment associated with the overall demolition and relocation project site, and includes recommended mitigation measures to avoid and minimize impacts to biological resources during project implementation.

At the time the *Biological Resources Assessment* (KMA 2017) was produced the exact location of the new proposed beach house was not clearly defined. The proposed beach house location has now been defined and, as a result, this report provides a supplemental analysis of the project site. In addition, this report references the findings of the *Biological Resources Assessment* (KMA 2017) and provides a breakdown of where Dudek's analysis concurs or deviates from Kevin Merk Associates, LLC. (KMA) findings based on Dudek's previous reports for the Bacara Resort (Dudek 2010a,b, 2013, and 2018a,b,c) . Dudek biologists have over 10 years' experience working at the Bacara Resort for the City of Goleta and past and present resort ownerships.

1.0 PROJECT DESCRIPTION AND LOCATION

The Ritz-Carlton Bacara is a hotel and conference center located inland of Haskell's Beach, and half a mile west (seaward) of the intersection of US 101 and Hollister Avenue, in the City of Goleta, Santa Barbara County (*Appendix A - Figure 1*). The current location of the Bacara Beach House at Haskell's Beach (i.e., beach facility, Haskell's Beach House) is on an elevated terrace above the cobble-lined beach. The proposed beach facility is positioned further inland, to the east of the fire access road and adjacent to the northwestern slope of East Terrace (*Appendix A - Figure 2*). The existing Bacara Beach House was undercut by ocean waves which required immediate action and the

construction of temporary measures to prevent the house from falling into the ocean. As a result, the project proposes to demolish the existing Bacara Beach House and construct a new beach facility farther inland. This new Beach House would include two separate structures comprised of a new shower, restroom, and a snack bar building (project site).

2.0 REGULATORY SETTING

This section outlines the local regulations pertinent to the biological resources located on the project site. A review of the general applicable policies described in the City of Goleta General Plan (City of Goleta 2006) is provided below. Additional federal and state regulations that are pertinent to the project site include, but may not be limited to, the California Endangered Species Act, Federal Endangered Species Act, Migratory Bird Treaty Act, California Fish and Game Code, and California Coastal Act. Some of the biological resources that could be affected by the project are regulated by resource agencies, which often overlap in jurisdiction.

2.1 City of Goleta's General Plan

Policy CE 1.1 **Definition of Environmentally Sensitive Habitat Areas. [GP/CP]** ESHAs shall include, but are not limited to, any areas that through professional biological evaluation are determined to meet the following criteria:

a. Any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and that could be easily disturbed or degraded by human activities and developments.

b. Any area that includes habitat for species and plant communities recognized as threatened or endangered by the state or federal governments; plant communities recognized by the State of California (in the Terrestrial Natural Communities Inventory) as restricted in distribution and very threatened; and those habitat types of limited distribution recognized to be of particular habitat value, including wetlands, riparian vegetation, eucalyptus groves associated with monarch butterfly roosts, oak woodlands, and savannas.

c. Any area that has been previously designated as an ESHA by the California Coastal Commission, the California Department of Fish and Game, City of Goleta, or other agency with jurisdiction over the designated area.

Policy CE 1.2 **Designation of Environmentally Sensitive Habitat Areas. [GP/CP]** ESHAs in Goleta are generally shown in Figure 4-1, and Table 4-2 provides examples of the ESHAs and some locations of each. The provisions of this policy shall apply to all designated ESHAs. ESHAs generally include but are not limited to the following:

a. Creek and riparian areas.

b. Wetlands, such as vernal pools.

c. Coastal dunes, lagoons or estuaries, and coastal bluffs/coastal bluff scrub.

d. Beach and shoreline habitats.

e. Marine habitats.

f. Coastal sage scrub and chaparral.

g. Native woodlands and savannahs, including oak woodlands.

h. Native grassland.

i. Monarch butterfly aggregation sites, including autumnal and winter roost sites, and related habitat areas.

j. Beach and dune areas that are nesting and foraging locations for the western snowy plover.

k. Nesting and roosting sites and related habitat areas for various species of raptors.

l. Other habitat areas for species of wildlife or plants designated as rare, threatened, or endangered under state or federal law.

m. Any other habitat areas that are rare or especially valuable from a local, regional, or statewide perspective.

Policy CE 1.6 **Protection of ESHAs. [GP/CP]** ESHAs shall be protected against significant disruption of habitat values, and only uses or development dependent on and compatible with maintaining such resources shall be allowed within ESHAs or their buffers. The following shall apply:

a. No development, except as otherwise allowed by this element, shall be allowed within ESHAs and/or ESHA buffers.

b. A setback or buffer separating all permitted development from an adjacent ESHA shall be required and shall have a minimum width as set forth in subsequent policies of this element. The purpose of such setbacks shall be to prevent any degradation of the ecological functions provided by the habitat area.

c. Public accessways and trails are considered resource-dependent uses and may be located within or adjacent to ESHAs. These uses shall be sited to avoid or minimize impacts on the resource to the maximum extent feasible. Measures—such as signage, placement of boardwalks, and limited fencing or other barriers—shall be implemented as necessary to protect ESHAs.

d. The following uses and development may be allowed in ESHAs or ESHA buffers only where there are no feasible, less environmentally damaging alternatives and will be subject to requirements for mitigation measures to avoid or lessen impacts to the maximum extent feasible: 1) public road crossings, 2) utility lines, 3) resource restoration and enhancement

projects, 4) nature education, 5) biological research, and 6) Public Works projects as identified in the Capital Improvement Plan, only where there are no feasible, less environmentally damaging alternatives.

e. If the provisions herein would result in any legal parcel created prior to the date of this plan being made unusable in its entirety for any purpose allowed by the land use plan, exceptions to the foregoing may be made to allow a reasonable economic use of the parcel. Alternatively, the City may establish a program to allow transfer of development rights for such parcels to receiving parcels that have areas suitable for and are designated on the Land Use Plan map for the appropriate type of use and development.

3.0 METHODS

The analysis of existing biological resources on the project site consisted of a review of the *Biological Assessment Report* (KMA 2017) and a site visit to verify existing vegetation mapping. Vegetation mapping was analyzed using the vegetation community labels identified by KMA to allow for direct comparison of survey results and impact calculations. Dudek has also mapped vegetation in the past for the Bacara Resort Completion EIR for the City (Dudek 2010a,b) as well as the Consent Restoration Plan (Dudek 2013), which was also used as a comparison to KMA vegetation mapping and our recent verification. Additionally, ESHA was mapped in the field by Dudek based on the City of Goleta's GP/CLUP, Dudek's biological technical report (2010), and existing vegetation communities. In support of this project, Dudek recently completed *Monarch Butterfly Surveys for the Beach Facilities Project at the Ritz-Carlton Bacara* (Attachment D; Dudek 2018a); *Environmental Sensitive Habitat Area Review and Proposed Setback Reduction for the Ritz-Carlton Bacara Beach House Demolition and Replacement Project and Emergency Permit (16-002 EMP)* (Attachment E; Dudek 2018c); and, *Haskell's Beach House Demolition Conceptual Restoration Plan* (Attachment F; Dudek 2018b). The survey areas investigated by Dudek in 2018 included a buffer of 100 feet to the east and 25 feet on all other sides of the project site, which was determined to be appropriate to display the project site in the context of the native vegetation and human altered areas surrounding the project site. In addition, the survey area included a 25-foot buffer of the existing Beach House facility to map vegetation in the vicinity of the demolition area.

3.1 Literature Review

Prior to conducting the site visit, Dudek conducted a review of the *Biological Assessment Report* (KMA 2017) and existing biological resources and species documented within the survey area using the CDFW California Natural Diversity Database (CNDDB) (CDFW 2018), the California Native Plant Society Inventory of Rare and Endangered Plants (CNPS 2018), and USFWS Critical Habitat and Occurrence Data (USFWS 2018). Dudek obtained special-status species occurrence data from the above sources by querying records within the surrounding six USGS quadrangles, including Santa Ynez, Lake Cachuma, San Marcos Pass, Tajiguas, Dos Pueblos Canyon, and Goleta. U.S. Fish and Wildlife Service (USFWS) Critical Habitat and Occurrence Data (USFWS 2018a) also assisted in determining

other species present in the region with potential to occur on site. In addition, Dudek reviewed the following available resources to assess the potential for biological and wetland resources within the Project site and vicinity:

- List of potentially occurring listed species generated from a review of the U.S. Fish and Wildlife Service's (USFWS's) IPaC Trust Resources Report (USFWS 2018b) list of federal and threatened species;
- U.S. Geological Survey (USGS) National Hydrography Dataset (NHD; USGS 2018a);
- USFWS National Wetlands Inventory (NWI; USFWS 2018c);
- StreamStats (USGS 2018b); and
- U.S. Department of Agriculture, Natural Resources Conservation Service Web Soil Survey (USDA-NRCS 2018).

This report follows the same plant and wildlife special-status definitions provided in KMA (2017).

3.2 Site Visit

Dudek biologist visited the survey area on April 19, 2018, to confirm vegetation mapping. All mapping was performed in the field, through interpretation of field maps with a high quality aerial photographic base. The maximum scale of the field map was 200 scale (1 inch = 200 foot) base. The GPS data was downloaded into GIS ArcView for placement onto an aerial figure. In combination with the GPS data, GIS technicians digitized the delineated vegetation boundaries from field maps using ArcView to create the vegetation community map.

4.0 EXISTING CONDITIONS

4.1 Vegetation Communities and Land Covers

The KMA *Biological Resources Assessment* (KMA 2017) provides details on the vegetation communities and land cover types identified within the survey area. The results of the field assessment completed by Dudek are presented below and are displayed on *Figure 2 (Appendix A)*.

Coastal Sage Scrub

In a regional context, this vegetation community contains coastal sagebrush (*Artemisia californica*) as the sole or dominant shrub species. It has a continuous or intermittent shrub canopy of less than 2 meters (7 feet) in height with a variable ground layer. This vegetation community often occurs on steep, north-facing slopes and rarely in flooded low-gradient deposits along streams in shallow alluvial or colluvial-derived soils. Within the survey area, this vegetation community is found to be comprised of several native shrub species including California sagebrush, bush sunflower (*Encelia californica*), black sage (*Salvia mellifera*), Menzies' goldenbush (*Isocoma menziesii*), and coyotebrush (*Baccharis pilularis*). California sagebrush scrub is present surrounding the project site, outside of the impact area as

shown on *Figure 2 (Appendix A)*. Dudek coastal sage scrub mapping is largely consistent with mapping completed by KMA (2017). According to A Manual of California Vegetation Second Edition, California Sage Scrub is a common vegetation type in California, and wouldn't necessarily qualify as ESHA unless occupied by a special-status species. However, the City of Goleta's GP/CLUP identifies coastal scrub growing on bluffs as ESHA and Dudek (2010a,b followed this designation, including the East Terrace and the restored area to the west of the fire road. In 2018, Dudek remapped the boundaries of coastal sage scrub and other scrub ESHA near the project site. For a further discussion on ESHA, please refer to *Appendix E: Environmental Sensitive Habitat Area Review and Proposed Setback Reduction for the Ritz-Carlton Bacara Beach House Demolition and Replacement Project and Emergency Permit (16-002 EMP)* (Dudek 2018b).

Monterey Cypress

This vegetation community, including planted areas, includes Monterey cypress (*Hesperocyparis macrocarpa*) as the dominant species in the canopy. Monterey cypress is not native to the project region and has been planted on-site. Monterey cypress occurs in two stands within the project site, including a long established stand to the east of the project site and a more recently planted area to the north of the project site, as shown in *Figure 2 (Appendix A)*. Shading by Monterey cypress in this community limits the growth of shrubs. Black mustard and bromes are among the species that make up the relatively sparse herbaceous layer. Dudek vegetation community mapping is largely consistent with mapping completed by KMA (2017); however, Dudek included the planted Monterey cypress as a vegetation community as opposed to a developed/ landscaped area as indicated by KMA (2017).

Beach

Beaches are characterized as narrow, sandy, and stony areas along the ocean that are partly or completely covered by water during high tide and exposed during low tide. The stony stretches of beach are mainly at the mouths of drainage ways and the bases of cliffs, though beaches may change from sandy to stony, or stony to sandy, during storms. Where beach materials (sand, pebble, and cobble) occur above the mean high tide line they may become stabilized over time with the establishment of saline-tolerant perennial plant species. Dudek beach mapping is consistent with mapping completed by KMA (2017). Beaches are displayed on *Figure 2 (Appendix A)*.

Disturbed

Disturbed area consists of the lands that have experienced physical anthropogenic disturbance, and as a result cannot be identified as native or naturalized vegetation communities. However, these areas do have a recognizable soil substrate. The existing vegetation is typically composed of non-native ornamental or exotic species. There can also be impacts from animal uses, grading, or repeated clearing for fuel management on disturbed lands, which leave the land incapable of providing a suitable or sustainable habitat for in which native species can persist. Disturbed areas were not mapped by KMA; however, these areas were determined by Dudek to differ from developed/landscaped areas

due to the lack of clearly defined development (e.g. paving) or landscape (e.g. irrigation) components. Disturbed areas are displayed on *Figure 2 (Appendix A)*.

Developed/ Landscaped

Areas mapped as developed/landscaped in the survey area include roads (i.e., beach access trail, maintenance/access road), buildings, and structures. Vegetation in these areas, if present at all, is usually sparse, dominated by weedy herbaceous species, or part of the landscaping associated with development. The Dudek mapping results differ from the KMA mapping results slightly in that the trails and roads were described by Dudek as developed/landscaped areas. Developed/landscaped areas are displayed on *Figure 2 (Appendix A)*.

4.2 Special-Status Plant Species

A search of the CNDDB (CDFW 2018) and CNPS Inventory of Rare and Endangered Plants (CNPS 2018) resulted in the identification of forty-two (42) special-status plant species known to occur in the region. Of these forty-two species, twenty-nine (29) special-status plants were not described in the *Biological Resources Assessment* (KMA 2017). The KMA biological surveys included spring botanical surveys, which were negative for special-status plants. However, the expanded literature review resulted in the identification of these 29 additional special-status plants known from the region. *Appendix B* provides a review of the habitat requirements for these 29 special-status plant species and their potential to occur in the project site. Based on the habitat present within the project site, the results of previous botanical surveys, and the past and on-going disturbance to the project site, no special-status plant species are expected to occur.

4.3 Special-Status Wildlife Species

A search of the CNDDB (CDFW 2018) and USFWS Critical Habitat and Occurrence Data (USFWS 2018) resulted in the identification of forty-three (43) special-status wildlife species known to occur in the region. Of these forty-three species, twenty-eight (28) special-status wildlife were not described in the *Biological Resources Assessment* (KMA 2017). The KMA *Biological Resource Assessment* included an analysis of special-status wildlife species potential to occur. Based on their analysis, no special-status wildlife were anticipated to occur within the project site, with the exception of nesting birds protected under the Migratory Bird Treaty Act (MBTA) and California Department of Fish and Game Code (DFG Code). Based on Dudek's analysis of special-status wildlife species known to occur in the region, one species, southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) has potential to occur in the vicinity. Based on the habitat present within the project site and the past and on-going disturbance to the project site, no other special-status wildlife species are expected to occur. *Appendix C* provides a review of the habitat requirements for these 28 special-status wildlife species and their potential to occur in the project site. Per a request from the City, Dudek surveyed for the monarch butterfly in 2018 and determined absence of overwintering habitat within or adjacent to the project site (Dudek 2018a). Please refer to *Appendix D* for the technical memorandum: *Monarch Butterfly Surveys for the Beach Facilities Project at the Ritz-Carlton Bacara.*

4.4 Jurisdictional Features

No jurisdictional waters were identified within the survey area. The Pacific Ocean is present immediately south of the project site and Tecolote Creek is located to the west and Bell's Canyon to the east; however, no project components, equipment, or materials will be located in the vicinity of these waterbodies.

4.5 Wildlife Corridors

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Wildlife corridors contribute to population viability by assuring continual exchange of genes between populations, providing access to adjacent habitat areas for foraging and mating, and providing routes for recolonization of habitat after local extirpation or ecological catastrophes (e.g., fires).

Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals and may also serve as primary habitat for smaller animals, such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as stepping stones for dispersal.

To function effectively, a wildlife corridor must link two or more patches of habitat for which connectivity is desired, and it must be suitable for the focal target species to achieve the desired demographic and genetic exchange between populations. Natural areas that link habitat, or larger blocks of habitat on a more local level provide food, shelter, water, breeding areas, and other wildlife resources. Local corridors and linkages facilitate wildlife movement between habitats; in the case of inter-mountain/forest linkages, from larger habitat blocks to another, thus providing critical open space for the dispersal of young to locate breeding territory, for animals to access food or other life needs, and to keep populations from declining due to habitat disturbances (City of Goleta 2006).

The project site is located in the southeastern portion of the Ritz-Carlton Bacara property. The Ritz-Carlton Bacara northern property line is adjacent to and south of Hollister Avenue, Union Pacific Railroad, and Highway 101 and as such is relatively discontinuous from the larger blocks of higher quality habitat associated with the Santa Ynez Mountains and foothills, located off-site and north of the project site. Because the Bacara Resort is approximately 0.18 miles to the west of the project site and is built out between the Pacific Ocean and Hollister Avenue, terrestrial wildlife movement to the west of the project site is also severely restricted; therefore, it is unlikely that wildlife would use the property as a habitat linkage or movement corridor to directly access off-site habitat patches to the north or west. Located to the east are Bell's Canyon, Onshore Ellwood Facility (Venoco, Inc.), Sandpiper Golf Course, Ellwood Mesa, Deveraux Slough, and UCSB's North Campus Open Space, all bound by Hollister Avenue, Union Pacific Railroad, and Highway 101 to the north and further to the north and east dense residential and commercial development. While coastal plain and wetland habitats are available further to the east along the coast and certainly qualifies as a habitat patch for terrestrial wildlife species tolerant of human presence, the project site is not a linkage between these habitats and habitats to the north (Santa Ynez Mountains and foothills) and west (Gaviota Coast) of

the site. Tecolote Canyon to the west and Bell's Canyon to the east of the project site provides narrow, constricted linkages between habitats south and north of Highway 101 and are discussed below.

Tecolote Creek is a north to south trending intermittent stream channel that is located approximately 370 feet northwest of the survey area. Tecolote Creek has an opportunity to provide, on a limited basis, potential dispersal habitat for resident breeding birds and larger mammals such as coyote and mule deer. Riparian habitat south of Hollister Avenue is separated from other suitable habitat along Tecolote Creek north of Highway 101 by an approximately 575-foot long, approximately 15-foot high, arched, and concrete-floored culvert. The inhospitable conditions of this crossing (i.e., length of culvert and lack of light) likely restrict wildlife use and preclude terrestrial species from accessing the project site via Tecolote Canyon. Wildlife species that traverse the project site likely do so in an east to west fashion travelling to and from Tecolote and Bell Canyon Creek using the shorelines or existing trails within the larger Bacara Resort property.

It is possible that wildlife would traverse the survey area; wildlife may utilize the adjacent Monterey cypress for cover and the existing trails/access roads. However, this project does not propose to disturb the existing native vegetation that may be used as cover by wildlife species traversing the site. All project components will be located on disturbed, landscaped, or developed land. Therefore, any wildlife traversing the area may temporarily encounter exclusion fencing during construction. Any wildlife traversing the area during construction will still have opportunities to cross the property along the shoreline, in gaps of vegetation near the tennis courts, or directly through the existing coastal sage scrub habitat on site. Therefore, although construction may temporarily re-route any wildlife traversing the site, there is suitable habitat and cover that wildlife may use to cross the site.

5.0 PROJECT IMPACTS AND RECOMMENDED AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES

5.1 Impact Definitions

This section defines the types of impacts considered in this report to analyze the potential effects of the Proposed Project on biological resources. These impacts are discussed in more detail as follows.

Direct Impacts refer to 100% permanent loss of a biological resource. For purposes of this report, it refers to the area where the limits of grading and fuel modification are proposed (i.e., Development Footprint). Direct impacts were quantified by overlaying the limits of grading on geographic information system (GIS)-located biological resources (*Appendix A - Figure 3*).

Indirect impacts are reasonably foreseeable effects caused by project implementation on remaining or adjacent biological resources outside the direct limits of grading. Indirect impacts may affect areas within the defined project area but outside the limits of grading, including non-impacted areas and areas outside the project area, such as downstream effects. Indirect impacts include short-term effects immediately related to construction activities and

long-term or chronic effects. In most cases, indirect effects are not quantified, but in some cases quantification might be included, such as using a noise contour to quantify indirect impacts to nesting birds.

Cumulative impacts refer to the combined environmental effects of the Proposed Project and other relevant projects. In some cases, the impact from a single project may not be significant, but when combined with other projects, the cumulative impact may be significant.

As shown in *Figure 3 (Appendix A)*, the project will not impact native vegetation with the survey area.

5.2 Vegetation Communities and Land Covers

Impacts to vegetation communities and land covers are based on the mapping provided in *Figure 3 (Appendix A)* and are summarized in *Table 1* below.

Table 1. Project Impacts to Vegetation Communities and Land Covers

Vegetation Communities/ Land Cover Type	New Building Related Impacts (acres)	Demolition Related Impacts (acres)
Coastal Sage Scrub	0.0	0.0
Monterey Cypress (including planted areas)	0.0	0.0
Beach	0.0	0.0
Disturbed	0.013	0.0
Developed/ Landscaped	0.0004	0.14

As shown in *Table 1,* no impacts to native vegetation communities, including Monterey cypress, will occur from the implementation of the project. Consistent with this assessment, it has been determined that no Environmentally Sensitive Habitat Areas (ESHA) will be impacted by the project (see *Appendix E* - Environmental Sensitive Habitat Area Review and Proposed Setback Reduction). The KMA *Biological Resources Assessment* (KMA 2017) concluded that the project would impact approximately 500-square feet of coastal sage scrub vegetation; however, with the changes to the project footprint, these potential impacts have been eliminated. Impacts resulting from project will now be limited to currently disturbed and developed/landscaped areas and subsequent to the implementation of the project, the existing Beach House demolition area will be revegetated with native species and restored to public open space (see *Appendix F* – Haskell's Beach House Demolition Restoration Plan). The beach facilities are located within a 25-foot ESHA buffer; however, this area is disturbed and directly adjacent to the existing dirt fire road. Please also refer to *Appendix E: Environmental Sensitive Habitat Area Review and Proposed Setback Reduction for the Ritz-Carlton Bacara Beach House Demolition and Replacement Project and Emergency Permit (16-002 EMP)* (Dudek 2018b).

5.3 Special-Status Plant Species

As no special-status plants are expected to occur within the project site, no impacts are anticipated.

5.4 Special-Status Wildlife Species

Although special-status wildlife species are not expected to occur within the project site, nesting birds may utilize the surrounding habitat during the bird breeding season. The assessment of impacts to special-status wildlife identified in the KMA *Biological Resources Assessment* (KMA 2017) are determined to be appropriate and the mitigation measures contained therein (Bio Impact 3) are recommended for implementation. No further mitigation measures are recommended.

5.5 Jurisdictional Features

No jurisdictional waters are present within the project site; however, the Pacific Ocean is located immediately south of the project site and must be completely avoided during project implementation. Best Management Practices (BMPs) for erosion and sediment control during and following completion of all project activities must be incorporated into project plans and implemented accordingly. BMPs will need to be maintained to ensure proper function and replaced if determined to be insufficient.

5.6 Wildlife Corridors

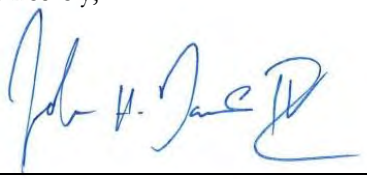
This project does not propose to disturb the existing native vegetation that may be used as cover by wildlife species traversing the site or considered as part of a larger wildlife corridor. Although construction may temporarily re-route any wildlife traversing the site, there is suitable habitat and cover that wildlife may use to cross the site. Therefore, impacts to potential wildlife movement routes or corridors would not occur.

6.0 CONCLUSIONS

Overall, Dudek's supplemental impact assessment concurs with that provided by KMA (2017). Although there were some discrepancies between the vegetation mapping provided Dudek and described by KMA (2017), the overall project design was refined to avoid any impacts occurring to Environmentally Sensitive Habitat Area (ESHA) that was reported by KMA (2017, see Bio Impact 2). As shown in *Table 1*, any new impacts would occur on disturbed or developed/landscape land, but within the 25-foot ESHA buffer. In Dudek's opinion, a buffer reduction to accommodate the beach facilities is warranted due to the disturbed nature of the site, location adjacent to the dirt fire road, and the common vegetation type, California sage scrub, which may not qualify as ESHA unto itself; thereby not requiring a buffer. In fact, the City did not map the East Terrace as ESHA in their GP/CLUP. Lastly, Dudek has reviewed the mitigation measure provided by KMA (2017) and conclude that the assessment of impacts to special-status wildlife identified in the KMA *Biological Resources Assessment* (KMA 2017) are appropriate and the mitigation measures contained therein (Bio Impact 3) continue to be recommended for implementation.

Please feel free to contact me at 805.308.8524 (office) or 805.252.7996 (cell) if you have any questions regarding this letter report.

Sincerely,



John H. Davis IV, MS, CE
Project Manager/Senior Coastal Ecologist

App.: *A - Figures*
B - Special-Status Plants Species Potential to Occur
C - Special-Status Wildlife Species Potential to Occur
D - Monarch Butterfly Surveys for the Beach Facilities Project at the Ritz-Carlton Bacara
E - Environmentally Sensitive Habitat Area Review and Proposed Setback Reduction for the Ritz-Carlton Bacara Beach House Demolition and Replacement Project and Emergency Permit (16-002 EMP) (Dudek 2018)
F - Haskell's Beach House Demolition Restoration Plan (Dudek 2018)

cc: *Anne Blemker, McCabe & Company*

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APPENDIX A

Figures

SOURCE: NAIP 2016

FIGURE 1

Project Location

DUDEK

0 500 1,000 Feet

Supplemental Biological Technical Report for the Ritz Carlton Bacara Beach House Demolition and Replacement Project

Survey Area

Project Componets

New Building

Proposed Restoration Grading Limits

cypress

ESHA Boundary

Monterey Cypress

Vegetation and Land Cover

B - Beach

CSS - Coastal Sage Scrub

D - Disturbed

D/L - Developed/Landscaped

MC - Monterey Cypress

MC(P) - Monterey Cypress (Planted)

SOURCE: CIRGIS 2010

DUDEK

0 20 40 Feet

FIGURE 2

Biological Survey Results

Supplemental Biological Technical Report for the Ritz Carlton Bacara Beach House Demolition and Replacement Project

Survey Area

Project Componets

New Building

Proposed Restoration Grading Limits

Monterey Cypress

ESHA Boundary (Dudek)

City of Goleta ESHA

Beach and Shoreline

Riparian/Marsh/Vernal

Scrub

25-foot ESHA Buffer

Vegetation and Land Cover

B - Beach

CSS - Coastal Sage Scrub

D - Disturbed

D/L - Developed/Landscaped

MC - Monterey Cypress

MC(P) - Monterey Cypress (Planted)

SOURCE: CIRGIS 2010; Stantec 2018

DUDEK

0 20 40 Feet

FIGURE 3

Impact Analysis

Supplemental Biological Technical Report for the Ritz Carlton Bacara Beach House Demolition and Replacement Project

APPENDIX B

Special-Status Plant Species Potential to Occur

Scientific Name	Common Name	Status[1] (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Abronia maritima	red sand-verbena	None/None/4.2	Coastal dunes/perennial herb/Feb–Nov/0–330	Not expected to occur. No suitable sand dunes are present on site.
Amsinckia douglasiana	Douglas' fiddleneck	None/None/4.2	Cismontane woodland, Valley and foothill grassland; Monterey shale, dry/annual herb/Mar–May/0–6400	Not expected to occur. No suitable vegetation is present in the survey area.
Anomobryum julaceum	slender silver moss	None/None/4.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest; damp rock and soil on outcrops, usually on roadcuts/moss/N.A./325–3280	Not expected to occur. The site is outside of the species' known elevation range.
Arctostaphylos refugioensis	Refugio manzanita	None/None/1B.2	Chaparral (sandstone)/perennial evergreen shrub/Dec–Mar(May)/895–2690	Not expected to occur. The site is outside of the species' known elevation range.
Arenaria paludicola	marsh sandwort	FE/SE/1B.1	Marshes and swamps (freshwateror brackish); sandy, openings/perennial stoloniferous herb/May–Aug/5–560	Not expected to occur. No suitable marshes, swamps, or suitable sandy openings are present on site.
Calandrinia breweri	Brewer's calandrinia	None/None/4.2	Chaparral, Coastal scrub; sandy or loamy, disturbed sites and burns/annual herb/(Jan)Mar–June/30–4005	Not expected to occur. Although there are disturbed areas on site, the closest known occurrence of this species is over 5 miles northeast of the survey area (Jepson Flora Project 2018).
Calochortus catalinae	Catalina mariposa lily	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/perennial bulbiferous herb/(Feb)Mar–June/45–2295	Not expected to occur. The site is outside of the species' known elevation range.
Calochortus fimbriatus	late-flowered mariposa lily	None/None/1B.3	Chaparral, Cismontane woodland, Riparian woodland; often serpentinite/perennial bulbiferous herb/June–Aug/900–6250	Not expected to occur. The site is outside of the species' known elevation range.
Chloropyron maritimum ssp. maritimum	salt marsh bird's-beak	FE/SE/1B.2	Coastal dunes, Marshes and swamps (coastal salt)/annual herb (hemiparasitic)/May–Oct(Nov)/0–100	Not expected to occur. No suitable vegetation is present on site.
Chorizanthe palmeri	Palmer's spineflower	None/None/4.2	Chaparral, Cismontane woodland, Valley and foothill grassland; rocky, serpentinite/annual herb/Apr–Aug/180–3100	Not expected to occur. The site is outside of the species' known elevation range.

Scientific Name	Common Name	Status[1] (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Cordylanthus rigidus ssp. littoralis	seaside bird's-beak	None/SE/1B.1	Closed-cone coniferous forest, Chaparral (maritime), Cismontane woodland, Coastal dunes, Coastal scrub; sandy, often disturbed sites/annual herb (hemiparasitic)/Apr–Oct/0–1690	Not expected to occur. No suitable vegetation is present on site.
Deinandra paniculata	paniculate tarplant	None/None/4.2	Coastal scrub, Valley and foothill grassland, Vernal pools; usually vernally mesic, sometimes sandy/annual herb/(Mar)Apr–Nov/80–3085	Not expected to occur. No suitable vegetation or vernal pool habitat is present on site.
Delphinium umbraculorum	umbrella larkspur	None/None/1B.3	Chaparral, Cismontane woodland/perennial herb/Apr–June/1310–5250	Not expected to occur. The site is outside of the species' known elevation range.
Eriodictyon capitatum	Lompoc yerba santa	FE/SR/1B.2	Coastal bluff scrub, Closed-cone coniferous forest, Chaparral (maritime); sandy/perennial evergreen shrub/May–Sep/130–2955	Not expected to occur. The site is outside of the species' known elevation range.
Eriogonum elegans	elegant wild buckwheat	None/None/4.3	Cismontane woodland, Valley and foothill grassland; Usually sandy or gravelly, often washes, sometimes roadsides/annual herb/May–Nov/655–5005	Not expected to occur. The site is outside of the species' known elevation range.
Fritillaria ojaiensis	Ojai fritillary	None/None/1B.2	Broadleafed upland forest (mesic), Chaparral, Cismontane woodland, Lower montane coniferous forest; rocky/perennial bulbiferous herb/Feb–May/735–3275	Not expected to occur. The site is outside of the species' known elevation range.
Juncus luciensis	Santa Lucia dwarf rush	None/None/1B.2	Chaparral, Great Basin scrub, Lower montane coniferous forest, Meadows and seeps, Vernal pools/annual herb/Apr–July/980–6695	Not expected to occur. The site is outside of the species' known elevation range.
Layia heterotricha	pale-yellow layia	None/None/1B.1	Cismontane woodland, Coastal scrub, Pinyon and juniper woodland, Valley and foothill grassland; alkaline or clay/annual herb/Mar–June/980–5595	Not expected to occur. The site is outside of the species' known elevation range.
Micropus amphibolus	Mt. Diablo cottonweed	None/None/3.2	Broadleafed upland forest, Chaparral, Cismontane woodland, Valley and foothill grassland; rocky/annual herb/Mar–May/145–2705	Not expected to occur. The site is outside of the species' known elevation range.
Monardella hypoleuca ssp. hypoleuca	white-veined monardella	None/None/1B.3	Chaparral, Cismontane woodland/perennial herb/(Apr)May–Aug(Sep–Dec)/160–5005	Not expected to occur. The site is outside of the species' known elevation range.

Scientific Name	Common Name	Status[1] (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Monardella sinuata ssp. sinuata	southern curly-leaved monardella	None/None/1B.2	Chaparral, Cismontane woodland, Coastal dunes, Coastal scrub (openings); Sandy./annual herb/Apr–Sep/0–985	Not expected to occur. No suitable vegetation is present on site.
Nasturtium gambelii	Gambel's water cress	FE/ST/1B.1	Marshes and swamps (freshwater or brackish)/perennial rhizomatous herb/Apr–Oct/15–1085	Not expected to occur. No suitable vegetation is present on site.
Phacelia hubbyi	Hubby's phacelia	None/None/4.2	Chaparral, Coastal scrub, Valley and foothill grassland; gravelly, rocky, talus/annual herb/Apr–July/0–3280	Not expected to occur. No suitable vegetation is present on site.
Phacelia ramosissima var. austrolitoralis	south coast branching phacelia	None/None/3.2	Chaparral, Coastal dunes, Coastal scrub, Marshes and swamps (coastal salt); sandy, sometimes rocky/perennial herb/Mar–Aug/15–985	Not expected to occur. No suitable vegetation is present on site.
Pleuridium mexicanum	Mexican earthmoss	None/None/2B.1	Chaparral; Sandstone/moss/N.A./1440–1445	Not expected to occur. The site is outside of the species' known elevation range.
Ribes amarum var. hoffmannii	Hoffmann's bitter gooseberry	None/None/3	Chaparral, Riparian woodland/perennial deciduous shrub/Mar–Apr/15–3905	Not expected to occur. No suitable vegetation is present on site.
Senecio aphanactis	chaparral ragwort	None/None/2B.2	Chaparral, Cismontane woodland, Coastal scrub; sometimes alkaline/annual herb/Jan–Apr(May)/45–2625	Not expected to occur. The site is outside of the species' known elevation range.
Senecio astephanus	San Gabriel ragwort	None/None/4.3	Coastal bluff scrub, Chaparral; rocky slopes/perennial herb/May–July/1310–4920	Not expected to occur. The site is outside of the species' known elevation range.
Thermopsis macrophylla	Santa Ynez false lupine	None/SR/1B.3	Chaparral (sandy, granitic, disturbed areas)/perennial rhizomatous herb/Apr–June/1390–4595	Not expected to occur. The site is outside of the species' known elevation range.

[1] Status Legend:
FE: Federally listed as endangered
FT: Federally listed as threatened
FC: Federal Candidate for listing
DL: Delisted
SE: State listed as endangered
ST: State listed as threatened
SR: State Rare
CRPR 1A: Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
CRPR 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere
CRPR 2A: Plants Presumed Extirpated in California, But More Common Elsewhere

CRPR 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
CRPR 3: Plants About Which More Information is Needed - A Review List
CRPR 4: Plants of Limited Distribution - A Watch List
.1 Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
.3 Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

APPENDIX C

Special-Status Wildlife Species Potential to Occur

Scientific Name	Common Name	Status[1] (Federal/State)	Associated Habitats	Potential to Occur
Amphibians				
Rana boylii	foothill yellow-legged frog	None/PST, SSC	Rocky streams and rivers with open banks in forest, chaparral, and woodland	Not expected to occur within the project site due to a lack of suitable vegetation. Low potential to occur in the vicinity of the project site.
Taricha torosa (Monterey Co. south only)	California newt	None/SSC	Wet forests, oak forests, chaparral, and rolling grassland	Not expected to occur within the project site due to a lack of suitable vegetation. Low potential to occur in the vicinity of the project site.
Reptiles				
Anniella pulchra	northern California legless lizard	None/ SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and sandy or loose, loamy soils	Not expected to occur within the project site due to a lack of suitable vegetation and soils. Low potential to occur in the vicinity of the project site.
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	Not expected to occur within the project site due to a lack of suitable vegetation and soils. Low potential to occur in the vicinity of the project site as this species is not typically found on the immediate coast of southern Santa Barbara County.
Salvadora hexalepis virgultea	coast patch-nosed snake	None/SSC	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	Not expected to occur within the project site due to a lack of suitable vegetation. Low potential to occur in the vicinity of the project site.
Thamnophis hammondii	two-striped gartersnake	None/SSC	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Not expected to occur within the project site due to a lack of suitable vegetation. Low potential to occur in the vicinity of the project site.
Birds				
Accipiter cooperii (nesting)	Cooper's hawk	None/WL	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	Moderate potential to forage within and adjacent to the project site. Not expected to nest within the project site

Scientific Name	Common Name	Status[1] (Federal/State)	Associated Habitats	Potential to Occur
				or in the immediate vicinity due to a lack of suitable vegetation.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	None/WL	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	Moderate potential to forage within and adjacent to the project site. Not expected to nest within the project site due to a lack of suitable vegetation; however, moderate potential to nest in the vicinity of the project site.
Ammodramus savannarum (nesting)	grasshopper sparrow	None/SSC	Nests and forages in moderately open grassland with tall forbs or scattered shrubs used for perches	Not expected to nest or forage within the project site or in the immediate vicinity due to a lack of suitable vegetation.
Aquila chrysaetos (nesting & wintering)	golden eagle	BCC/FP, WL	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	Not expected to nest or forage within the project site or in the immediate vicinity due to a lack of suitable vegetation.
Ardea herodias (nesting colony)	great blue heron	None/None	Nests in large trees or snags; forages in wetlands, water bodies, watercourses, and opportunistically in uplands, including pasture and croplands	Not expected to nest within the project site or in the immediate vicinity as no known rookeries are present. Low potential for this species to forage due to a lack of suitable vegetation.
Artemisiospiza belli belli	Bell's sage sparrow	BCC/WL	Nests and forages in coastal scrub and dry chaparral; typically in large, unfragmented patches dominated by chamise; nests in more dense patches but uses more open habitat in winter	Low potential to forage within and adjacent to the project site. Not expected to nest within the project site or in the immediate vicinity as this species is a rare visitor to the south coast of Santa Barbara.
Brachyramphus marmoratus (nesting)	marbled murrelet	FT/SE	Nests in old-growth coastal forests, forages in subtidal and pelagic habitats	Not expected to nest or forage within the project site or in the vicinity due to a lack of suitable vegetation.
Empidonax traillii extimus (nesting)	southwestern willow flycatcher	FE/SE	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during	Low potential to forage within and adjacent to the project site during migration. Not expected to nest within

Scientific Name	Common Name	Status[1] (Federal/State)	Associated Habitats	Potential to Occur
			migration	the project site or in the vicinity due to a lack of suitable vegetation.
Falco mexicanus (nesting)	prairie falcon	BCC/WL	Forages in grassland, savanna, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs	Moderate potential to forage within and adjacent to the project site. Not expected to nest within the project site or the immediate vicinity due to a lack of suitable cliff or bluff habitat.
Haliaeetus leucocephalus (nesting & wintering)	bald eagle	FDL, BCC/SE, FP	Nests in forested areas adjacent to large bodies of water, including seacoasts, rivers, swamps, large lakes; winters near large bodies of water in lowlands and mountains	Not expected to occur within the project site. Moderate potential to forage adjacent to the project site. Species is not known to nest within the region.
Progne subis (nesting)	purple martin	None/SSC	Nests and forages in woodland habitats including riparian, coniferous, and valley foothill and montane woodlands; in the Sacramento region often nests in weep holes under elevated freeways	Moderate potential to forage within and adjacent to the project site. Not expected to nest within the project site due to a lack of suitable vegetation; however, moderate potential to nest in the vicinity of the project site.
Riparia riparia (nesting)	bank swallow	None/ST	Nests in riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with sandy soils; open country and water during migration	Not expected to forage within the project site or in the immediate vicinity due to a lack of suitable habitat. A rare migrant; the project site is outside of current breeding range.
Sternula antillarum browni (nesting colony)	California least tern	FE/SE, FP	Forages in shallow estuaries and lagoons; nests on sandy beaches or exposed tidal flats	Not expected to nest or forage within the project site due to a lack of suitable habitat; however, moderate potential to nest and forage in the vicinity of the project site.
Vireo bellii pusillus (nesting)	least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	Low potential to forage within and adjacent to the project site. Not expected to nest within the project site or in the immediate vicinity due to a lack of suitable vegetation.
Fishes				
Oncorhynchus mykiss irideus	southern steelhead -	FE/None	Clean, clear, cool, well-oxygenated streams;	Absent within the project site and

Scientific Name	Common Name	Status[1] (Federal/State)	Associated Habitats	Potential to Occur
	southern California DPS		needs relatively deep pools in migration and gravelly substrate to spawn	immediate vicinity. No streams supporting any spawning habitat occur on the project site.
Mammals				
Antrozous pallidus	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	Not expected to roost. Low potential to forage over the project site.
Eumops perotis californicus	western mastiff bat	None/SSC	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	Not expected to roost. Low potential to forage over the project site.
Lasiurus blossevillii	western red bat	None/SSC	Forest, woodland, riparian, mesquite bosque, and orchards, including fig, apricot, peach, pear, almond, walnut, and orange; roosts in tree canopy	Not expected to roost. Low potential to forage over the project site.
Neotoma lepida intermedia	San Diego desert woodrat	None/SSC	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	Not expected to occur within the project site. Low potential to occur in the immediate vicinity.
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Not expected to occur within the project site. Low potential to occur in the immediate vicinity.
Invertebrates				
Branchinecta lynchi	vernal pool fairy shrimp	FT/None	Vernal pools, seasonally ponded areas within vernal swales, and ephemeral freshwater habitats	Not expected to occur within the project site or in the immediate vicinity. No vernal pool habitat present.

[1] Status Abbreviations
FE: Federally Endangered
FT: Federally Threatened
PFE: Proposed Federally Endangered
PFT: Proposed Federally Threatened
FC: Federal Candidate
FDL: Federally Delisted
BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern

BLM: Bureau of Land Management Sensitive Species
USFS: U.S. Forest Service Sensitive Species
SSC: California Species of Special Concern
FP: California Fully Protected Species
WL: California Watch List Species
SE: State Endangered
ST: State Threatened
PSE: Proposed State Endangered
PST: Proposed State Threatened
SDL: State Delisted
SS: List Special Animals List, but no other status
CDF: California Department of Forestry Sensitive Species
HCP: Habitat Conservation Plan
NCCP: Natural Community Conservation Plan

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APPENDIX D

Monarch Butterfly Surveys for the Beach Facilities Project at the Ritz-Carlton Bacara

DUDEK

621 CHAPALA STREET
SANTA BARBARA, CALIFORNIA 93101
T 805.963.0651 F 805.963.2074

TECHNICAL MEMORANDUM

To:	Paul Finstad, Watermark Capital Partners, LLC.
From:	John H. Davis IV, MS, CE, Senior Coastal Ecologist, Dudek
Subject:	Monarch Butterfly Surveys for the Beach Facilities Project at the Ritz-Carlton Bacara
Date:	April 11, 2018
cc:	Anne Blemker, Coastal Planner, McCabe and Company Ginger Andersen, MCRP AICP, Stantec Melissa Blundell, Biologist, Dudek
Attachment(s):	Figure 1 – Regional/Vicinity Map Figure 2 – Monarch Butterfly Survey Results A - Photo Documentation

This technical memorandum (memo) documents the overwintering monarch (*Danaus plexippus*) butterfly surveys that were conducted by Dudek biologists for Beach Facilities Project at the Ritz-Carlton Bacara (project) in Goleta, Santa Barbara County, California (*Figure 1*). These surveys were conducted at the request of the City of Goleta (City) in support of future California Environmental Quality Act (CEQA) project review per the City's General Plan and Local Coastal Plan (LCP) standards and policies. This memo provides a description of the monarch butterfly's natural history, policies protecting monarch overwintering habitat, methods, and results of the monarch habitat assessment and survey.

MONARCH BUTTERFLY NATURAL HISTORY

The monarch butterfly follows a pattern of seasonal migration. The summer grounds of the species are found in New England, the Great Lakes region, and the northern Rocky Mountains. These areas are occupied from May through late August to mid-September (Urquhart 1987). The New England and Great Lakes populations migrate southwest to wintering grounds in the Sierra Madre mountain range of Mexico. The Rocky Mountains population migrates southwest to wintering grounds along the California coast.

In spring and summer, the species' distribution is controlled by the distribution of its larval host plant (i.e., various milkweeds, genus *Asclepias*) for egg deposition/larval development and nectar plants for fuel. Eggs are deposited and hatch on the underside of leaves of the milkweed plant. Upon hatching, the larvae feed upon the fine hairs on the leaves of the plant and stay on

the same plant throughout its molting stages. After molting, the larvae leave the milkweed and construct its chrysalis elsewhere. However, once an adult monarch butterfly emerges from the chrysalis, it soon returns to a milkweed plant for foraging and shelter (Urquhart 1987). Multiple generations are produced during spring and summer. During the fall, the last generation of monarchs migrate to overwintering sites and live for 6-9 months (Xerces Society 2016).

REGULATORY PROTECTION

Monarch butterfly overwintering sites are considered special status by the California Department of Fish and Wildlife (CDFW; CDFW 2017a). Overwintering sites in California are associated with wind-protected groves of large trees (primarily eucalyptus or pine) with nectar and water sources nearby, generally near the coast. In addition, the City of Goleta General Plan/Coastal Land Use Plan (City of Goleta 2006) Chapter 4.0 Conservation Element sets forth the following policies protecting monarch butterfly habitat areas:

> **Policy CE 4.1: Definition of Habitat Area. [GP/CP]** The monarch butterfly is recognized as a California and Goleta special resource. Although the species is not threatened with extinction, its autumnal and winter aggregation sites, or roosts, are especially vulnerable to disturbance. Sites that provide the key elements essential for successful monarch butterfly aggregation areas and are locations where monarchs have been historically present shall be considered ESHAs [Environmentally Sensitive Habitat Areas]. These elements include stands of eucalyptus or other suitable trees that offer shelter from strong winds and storms, provide a microclimate with adequate sunlight, are situated near a source of water or moisture, and that provide a source of nectar to nourish the butterflies.
>
> **Policy CE 4.2: Designation of Monarch Butterfly ESHAs. [GP/CP]** Existing and known historical monarch roost sites, as shown on Figure 4-1, are hereby designated as ESHAs. These include about 20 known roosts, eight of which comprise the Ellwood Complex, a series of sites within a network consisting of eucalyptus groves and windrows interspersed by open fields and crossed by small creeks. This network includes several separate but interconnected autumnal and winter roost sites. The Ellwood Main site, the largest roost in Santa Barbara County and one of the largest in the state, occupies a site along Devereux Creek in the Sperling Preserve, a City-owned tract situated near the coastal bluffs in western Goleta.
>
> **Policy CE 4.3: Site-Specific Studies and Unmapped Monarch ESHAs. [GP/CP]** Any area not designated on Figure 4-1 that is determined by a site-

specific study to contain monarch habitats, including autumnal and winter roost sites, shall be granted the same protections as if the area was shown on the figure. Proposals for development on sites shown on this figure or where there is probable cause to believe that monarch habitats may exist shall be required to provide a site-specific study.

Policy CE 4.4: Protection of Monarch Butterfly ESHAs. [GP/CP] Monarch butterfly ESHAs shall be protected against significant disruption of habitat values, and only uses or development dependent on and compatible with maintaining such resources shall be allowed within these ESHAs or their buffer areas. The following standards shall apply:

a. No development, except as otherwise allowed by this policy, shall be allowed within monarch butterfly ESHAs or ESHA buffers.

b. Since the specific locations of aggregation sites may vary from one year to the next, the focus of protection shall be the entire grove of trees rather than individual trees that are the location of the roost.

c. Removal of vegetation within monarch ESHAs shall be prohibited, except for minor pruning of trees or removal of dead trees and debris that are a threat to public safety.

d. Public accessways are considered resource-dependent uses and may be located within a monarch ESHA or its buffer; however, such accessways shall be sited to avoid or minimize impacts to aggregation sites.

e. Interpretative signage is allowed within a monarch ESHA or its buffer, but shall be designed to be visually unobtrusive.

f. Butterfly research, including tree disturbance or other invasive methods, may be allowed subject to City approval of a permit.

Policy CE 4.5: Buffers Adjacent to Monarch Butterfly ESHAs. [GP/CP] A buffer of a sufficient size to ensure the biological integrity and preservation of the monarch butterfly habitat, including aggregation sites and the surrounding grove of trees, shall be required. Buffers shall not be less than 100 feet around existing and historic roost sites as measured from the outer extent of the tree canopy. The buffer area shall serve as transitional habitat with native vegetation and shall

provide physical barriers to human intrusion. The buffer may be reduced to 50 feet in circumstances where the trees contribute to the habitat but are not considered likely to function as an aggregation site, such as along narrow windrows. Grading and other activities that could alter the surface hydrology that sustains the groves of trees are prohibited within or adjacent to the buffer area.

Policy CE 4.6: Standards Applicable to New Development Adjacent to Monarch ESHAs. [GP/CP] The following standards shall apply to consideration of proposals for new development adjacent to monarch ESHAs or ESHA buffers:

a. A site-specific biological study, prepared by an expert approved by the City who is qualified by virtue of education and experience in the study of monarch butterflies, shall be required to be submitted by the project proponent.

b. The study shall include preparation of a Monarch Butterfly Habitat Protection Plan, which at a minimum shall include: 1) the mapped location of the cluster of trees where monarchs are known, or have been known, to roost in both autumnal and over-wintering aggregations; 2) an estimate of the size of the population within the colony; 3) the mapped extent of the entire habitat area; and 4) the boundaries of the buffer zone around the habitat area.

c. A temporary fence shall be installed along the outer boundary of the buffer zone prior to and during any grading and construction activities on the site.

d. If an active roost or aggregation is present on the project site, any construction grading, or other development within 200 feet of the active roost, shall be prohibited between October 1 and March 1.

METHODS

Literature Review

Prior to conducting field surveys, a literature review for monarch overwintering sites was conducted. The California Natural Diversity Database (CNDDB) includes one occurrence in Tecolote Canyon creek located approximately 600 feet northwest of the project site, directly northwest of the tennis courts, south of the Hollister Avenue Bridge and east of the of the tennis courts (CDFW 2017b, Xerces Site #2744, *Figure 2*). At this location 445 individuals were

counted in 2016 and 2,170 individuals were counted in 2017 in and around this general area (Xerces Society 2018a, Site #2477). This location is also documented as a transitory overwintering site by Meade (1999)(Site #57). This grove is dominated by blue gum eucalyptus (*Eucalyptus globulus*).

A second occurrence is located along Bell Canyon creek approximately 400 feet east of the project site near the eastern edge of the Bacara Resort and Spa and the western edge of the Ellwood Onshore Veneco property (Xerces Site #2745). This location is also dominated by eucalyptus. At this location six individual monarchs were counted in 2016. This location was documented by Meade (1999, Site #58) as an area used by monarchs for patrolling.

Aside from Tecolote Canyon and Bell Canyon, addition suitable overwintering habitat occurs throughout the project area and includes groves of Monterey cypress (*Cupressus macrocarpa*) and eucalyptus. Generally, monarchs begin to arrive at overwintering sites along the Pacific coast in September and first half of October and by mid-November have formed more stable aggregations that persist into January or February (Xerces Society 2016). During a project meeting that occurred on January 24, 2018, which included the City and the California Coastal Commission, a request by the agencies was made for a biologist to survey suitable overwintering habitat for the Monarch butterfly. The Monarch butterfly surveys were conducted shortly thereafter, in early February, as described below.

Field Surveys

A total of two focused monarch butterfly surveys were conducted by Dudek biologist Melissa Blundell and Andrea Dransfield. *Table 1* provides the dates and weather conditions for these surveys. The survey methodology generally followed monitoring guidelines produced by the Xerces Society that are used for state wide regional monarch counts (Xerces Society 2018b). Surveys were conducted two times in the early morning starting when temperatures were low (below 55°F) and monarchs still clustered. Surveys were not conducted during heavy precipitation or strong winds.

Monarch butterfly surveys were conducted both at the project site and at a reference location (*Figure 2*) in order to understand the project survey results within the larger regional context of monarch activity. The Ellwood Butterfly Grove served as a reference site for the project site surveys and is located approximately 1.0 mile southeast of the project survey area (*Figure 2*). Ellwood contains a large complex of eucalyptus groves and is a well-documented monarch aggregation site (Meade 1999). Dudek biologists generally surveyed Xerces Society Site #2749 through #2752 to serve as reference locations (see *Figure 2*).

For each visit, the biologist walked the survey areas and used binoculars to examine all potentially suitable overwintering trees. Areas difficult to access were surveyed using binoculars. Biologists used binoculars (8×42 and 10×42) to record all occurrences of monarch individuals and/or clusters. The locations and number of individuals were counted and recorded on an aerial map. In addition, a brief habitat assessment was conducted for the survey area. This brief assessment included noting down tree clusters, fresh water locations, and possible nectaring plants.

Table 1
Dates and Conditions for Focused Overwintering Monarch Butterfly Surveys

Survey Date	Time[1]	Personnel[2]	Project Site Survey Conditions
02/01/2017	0713-0903 (P) 0915-1020 (R)	MB	48-62 degrees Fahrenheit (°F); 0-10 percent cloud cover (%cc); 0-2 miles per hour (mph) north winds
02/14/2017	0635-0745 (R) 0800-0930 (P)	AD	51-57°F; 30-55%cc; 0-1 mph south to southwest winds

Notes:
[1] P = Project Site; R = Reference Site
[2] Biologists' Initials: MB = Melissa Blundell; AD = Andrea Dransfield

RESULTS AND DISCUSSION

In the project survey area a maximum of five individuals were observed approximately 760 feet northwest of the project area directly north of Hollister Avenue Bridge (*Figure 2*). On the first visit, five individuals were observed flying and sunning (wings open) throughout the eucalyptus grove. On the second visit, one individual was observed sunning within the grove at this same location. No additional individuals or overwintering clusters were observed within any areas of the project survey area.

A similar pattern of general low monarch presence has been observed by Dudek staff working around the project area. Over a period of over three years, multiple Dudek biologists have regularly visited the project site and have not noticed abundant numbers of monarchs or any clustering in or near the project area. Similarly, only six individuals were documented at the large eucalyptus grove approximately 400 feet east of the project area in 2016 (Site #2745, *Figure 2*) and Meade (1999) documented this site as area used for monarch patrolling (not overwintering). In November 2017 a total of 2,170 individuals were recorded in eucalyptus groves around the Hollister Avenue Bridge (Site# 2744, Xerces Society 2018a). It is likely that monarch individuals traversing through the area seeking overwintering shelter are more likely to be attracted to the microhabitat conditions provided in Site #2744 than the cypress trees adjacent to the project area. The cypress trees directly east of the project area were planted approximately three years ago and have not yet formed microhabitat conditions that monarchs require for

overwintering including appropriate levels of sunlight, canopy cover, wind protection, humidity, and temperature. There is a large grove of Monterey cypress east of the project area that may provide suitable overwintering conditions, but no clusters have been documented here or observed in the past three years of Dudek staff regularly visiting the site. In addition, this Monterey cypress grove is not documented as an overwintering site by Meade (1999) and may experience heavy onshore winds as they are located on a bluff and exposed to direct winds influenced by the Pacific Ocean.

However, monarchs would still likely be attracted to the general area due to the abundant nectar sources within the survey area. The habitat surrounding the project area consists of a mixture of scrub habitats, including coastal sage scrub. The scrub habitats provide a variety of nectar plants for monarchs such as California brittlebrush (*Encelia californica*), coyotebrush (*Baccharis pilularis*), California sagebrush (*Artemisia californica*), black sage, (*salvia mellifera*). In addition, Tecolote Canyon and Bell Canyon creeks along coastal fog and precipitation may provide freshwater for drinking opportunities.

Overwintering Monarch butterfly individuals were still clustering in the larger Goleta area. On the first visit at the Ellwood reference site single monarch individuals were observed flying at the four westernmost observation points in Site #2749 and approximately 30-45 individuals (assumed to be clustering earlier in the day) were observed flying and sunning at the easternmost observation point in Site 2751 (*Figure 2*). However, no monarch individuals were observed on the second site visit in Ellwood.

It should also be noted that these surveys are occurring during a time that is towards the end of the typical time period when monarchs are observed overwintering at Ellwood. Monarchs are typically observed overwintering in Ellwood from November through February. Although our surveys were conducted in early and mid-February, monarchs were still present. Our observation numbers were less than those documented in November 2017 with a total of 4,367 individuals counted across the four references sites shown in *Figure 2*; nevertheless, it appears some individuals were still present.

In summary, it is unlikely that monarch butterflies traversing through the area would overwinter in habitat adjacent to the project site. No overwintering clusters have been observed by Dudek staff adjacent to the project site in the past three years of regular visits to the site and the Monterey cypress trees directly adjacent to the project area were planted only three years ago. Any monarchs traversing through the project site are more likely to overwinter in the protected groves of eucalyptus over 400 feet from the project area.

Should you have any questions regarding this technical memorandum, please feel free to contact Melissa Blundell at 805.308.8539 (office), 760.214.1878 (cell), or mblundell@dudek.com; or, John Davis IV at 805.308.8524 (office), 805.252.7996 (cell), or jdavis@dudek.com.

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SOURCE: NAIP 2016

DUDEK

0 1,150 2,300 Feet

FIGURE 1

Project Location

Bacara Resort and Spa Beach Facilities Project

SOURCE: NAIP 2016, Meade 1999, Xerces Society, DUDEK 2018

DUDEK

0 550 1,100 Feet

FIGURE 2

Monarch Butterfly Survey Area and Results

Bacara Resort and Spa Beach Facilities Project

Attachment A – Photo Documentation

Photo 1. Eucalyptus grove north of Hollister Ave. February 14, 2018.

Photo 2. Eucalyptus grove north of Hollister Ave. February 14, 2018.

Photo 3. Monarch observed north of Hollister Ave. February 14, 2018.

Photo 4. Ellwood location where monarchs observed. February 1, 2018.

APPENDIX E

Environmentally Sensitive Habitat Area Review and Proposed Setback Reduction for the Ritz-Carlton Bacara Beach House Demolition and Replacement Project and Emergency Permit (16-002 EMP)

DUDEK

May 14, 2018 10786

Bret McNulty
City of Goleta
Planning and Environmental Review Department
130 Cremona Drive, Suite B
Goleta, CA 93117
bmcnulty@cityofgoleta.org

Subject: ***Environmental Sensitive Habitat Area Review and Proposed Setback Reduction for the Ritz-Carlton Bacara Beach House Demolition and Replacement Project and Emergency Permit (16-002 EMP)***

Dear Mr. McNulty:

It is our understanding that the City of Goleta (City) has requested the applicant and owners of the Ritz-Carlton Bacara (resort), Watermark Capital, to review the Environmental Sensitive [Habitat] Area (ESHA) setback for the replacement project (i.e., proposed beach facilities or proposed project) in the eastern portion of the resort. The resort and proposed beach facilities are located entirely in the coastal zone within the City of Goleta, Santa Barbara County, California (*see attached Figure 1*). Dudek prepared the Bacara Complete Project Phase EIR and Biological Technical Report in 2010 for the City of Goleta, and the Consent Restoration Plan in 2013 for previous ownership and provided Resource Specialist oversight of restoration through 2018. Dudek has extensive experience working in the Coastal Zone along the Gaviota Coast, U.C. Santa Barbara, County and City of Santa Barbara, and the City of Goleta (City), and inland portions of the City outside of the Coastal Zone. Our professional opinions herein reflect current environmental conditions, our experience with ESHA, and the proposed project.

PROJECT LOCATION

The Ritz-Carlton Bacara is a hotel and conference center located inland of Haskell's Beach, and half a mile west (seaward) of the intersection of US 101 and Hollister Avenue, in the City of Goleta, Santa Barbara County. The current location of the beach facilities is on an elevated terrace above the cobble lined beach. The proposed beach facility is positioned further inland, to the east of the fire access road and adjacent to the northwestern slope of East Terrace (see *attached Figures 1 and 2*).

ESHA POLICIES UNDER THE GENERAL PLAN

2.1 City of Goleta's General Plan

Policy CE 1.1 Definition of Environmentally Sensitive Habitat Areas. [GP/CP] ESHAs shall include, but are not limited to, any areas that through professional biological evaluation are determined to meet the following criteria:

a. Any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and that could be easily disturbed or degraded by human activities and developments.

b. Any area that includes habitat for species and plant communities recognized as threatened or endangered by the state or federal governments; plant communities recognized by the State of California (in the Terrestrial Natural Communities Inventory) as restricted in distribution and very threatened; and those habitat types of limited distribution recognized to be of particular habitat value, including wetlands, riparian vegetation, eucalyptus groves associated with monarch butterfly roosts, oak woodlands, and savannas.

c. Any area that has been previously designated as an ESHA by the California Coastal Commission, the California Department of Fish and Game, City of Goleta, or other agency with jurisdiction over the designated area.

Policy CE 1.2 Designation of Environmentally Sensitive Habitat Areas. [GP/CP] ESHAs in Goleta are generally shown in Figure 4-1, and Table 4-2 provides examples of the ESHAs and some locations of each. The provisions of this policy shall apply to all designated ESHAs. ESHAs generally include but are not limited to the following:

a. Creek and riparian areas.

b. Wetlands, such as vernal pools.

c. Coastal dunes, lagoons or estuaries, and coastal bluffs/coastal bluff scrub.

d. Beach and shoreline habitats.

e. Marine habitats.

f. Coastal sage scrub and chaparral.

g. Native woodlands and savannahs, including oak woodlands.

h. Native grassland.

i. Monarch butterfly aggregation sites, including autumnal and winter roost sites, and related habitat areas.

j. Beach and dune areas that are nesting and foraging locations for the western snowy plover.

k. Nesting and roosting sites and related habitat areas for various species of raptors.

l. Other habitat areas for species of wildlife or plants designated as rare, threatened, or endangered under state or federal law.

m. Any other habitat areas that are rare or especially valuable from a local, regional, or statewide perspective.

Policy CE 1.6 Protection of ESHAs. [GP/CP] ESHAs shall be protected against significant disruption of habitat values, and only uses or development dependent on and compatible with maintaining such resources shall be allowed within ESHAs or their buffers. The following shall apply:

a. No development, except as otherwise allowed by this element, shall be allowed within ESHAs and/or ESHA buffers.

b. A setback or buffer separating all permitted development from an adjacent ESHA shall be required and shall have a minimum width as set forth in subsequent policies of this element. The purpose of such setbacks shall be to prevent any degradation of the ecological functions provided by the habitat area.

c. Public accessways and trails are considered resource-dependent uses and may be located within or adjacent to ESHAs. These uses shall be sited to avoid or minimize impacts on the resource to the maximum extent

feasible. Measures—such as signage, placement of boardwalks, and limited fencing or other barriers—shall be implemented as necessary to protect ESHAs.

d. The following uses and development may be allowed in ESHAs or ESHA buffers only where there are no feasible, less environmentally damaging alternatives and will be subject to requirements for mitigation measures to avoid or lessen impacts to the maximum extent feasible: 1) public road crossings, 2) utility lines, 3) resource restoration and enhancement projects, 4) nature education, 5) biological research, and 6) Public Works projects as identified in the Capital Improvement Plan, only where there are no feasible, less environmentally damaging alternatives.

e. If the provisions herein would result in any legal parcel created prior to the date of this plan being made unusable in its entirety for any purpose allowed by the land use plan, exceptions to the foregoing may be made to allow a reasonable economic use of the parcel. Alternatively, the City may establish a program to allow transfer of development rights for such parcels to receiving parcels that have areas suitable for and are designated on the Land Use Plan map for the appropriate type of use and development.

RECENT HISTORY OF VEGETATOIN MAPPING OF BACARA (2006 TO 2018)

In the City's General Plan/Coastal Land Use Plan, Figure 4-1, scrub is broadly mapped as ESHA along the coast and valley between Bell and Tecolote Creek within the property (City 2006). The western slope of the East Terrace and existing emergency access road are not included in the City's mapping of ESHA. In 2010, Dudek further refined ESHA mapping on-site identifying the portions of the western slope, primarily comprised of coastal sage scrub, as ESHA (*See attached Figure 2*). The East Terrace is also comprised of poison oak, mixed woodland, and Eucalyptus trees/woodland (Dudek 2010a,b). Project impacts under the Bacara Completion EIR included the area where the current project is proposed and where a portion of coastal sage scrub ESHA had previously existed. During mitigation efforts for the Bacara Consent Orders, Dudek identified several suitable areas that were disturbed, including the area between the East Terrace and emergency access road, for installation of Monterey cypress per the plan (Dudek 2013). In an early siting alternative for this project, Kevin Merk and Associates, LLC (KMA) generally confirmed Dudek's 2010 vegetation mapping with the exception of the developed/landscape

designation at the base of the East Terrace where approved project impacts occurred (KMA 2017). As mentioned, a portion of the developed/landscape area included the mitigation site for the Monterey cypress, hence the landscape designation. ESHA was not delineated as part of KMA's report; however, an ESHA delineation map was included in the appendices using the City's ESHA GIS layer overlaid onto an aerial image. Dudek recently conducted a site visit to verify vegetation mapping for the proposed new beach facilities (Dudek 2018).

EXISTING CONDITIONS

The existing Haskell's Beach House will be demolished and replaced with a new proposed beach facilities positioned inland of the project sea-level rise and coastal hazards. An existing emergency access road connects Hollister Avenue to Haskell's Beach at the Pacific Ocean. The road is compact dirt and is also used by resort maintenance and vendors. To the west of the road is vigorous and healthy coastal scrub, designated as ESHA by the City (2006) and Dudek (2010a,b and 2018). To the east of the road is a maintained 20 to 45 foot wide strip of mainly barren land separated by the road by strategical placed boulders. Vegetation in this disturbed and maintained area consists of a sparse mixture of invasive non-native annual plants (i.e., weeds) and colonizing coastal scrub (i.e., coyote brush and California sage). Six Monterey cypress trees were planted north to south in this area to mitigate for unpermitted activities on the adjacent hill to the east known as the East Terrace, where an unpermitted event venue was placed by previous ownership. The western slope of the East Terrace primarily contains Monterey cypress and eucalyptus trees (i.e., mixed woodland), poison oak, Eucalyptus trees/woodland, and of coastal sage scrub. No special-status species have been documented on the East Terrace or adjacent valley to the west.

ESHA DESCRIPTION

ESHA on the Bacara property includes Tecolote Creek, Monarch butterfly overwintering roost, coastal sage scrub, and the beach and shoreline. The proposed project is located closest to coastal sage scrub on the East Terrace and is distant to other ESHA types. Coastal sage scrub is found to be comprised of several native shrub species including California sagebrush, bush sunflower (*Encelia californica*), black sage (*Salvia mellifera*), Menzies' goldenbush (*Isocoma menziesii*), and coyotebrush (*Baccharis pilularis*). Coastal sage scrub is present surrounding the proposed project site and further outside of the impact area as shown on *Figure 2*. Dudek coastal sage scrub mapping is largely consistent with mapping completed by Dudek (2010a,b) and KMA (2017) with the exception that KMZ (2017) and Dudek (2018) recognized the proposed project site as disturbed, again modified during the approved Bacara Completion project and partly used for Monterey cypress mitigation.

According to A Manual of California Vegetation, Second Edition, California [Coastal] Sage Scrub vegetation alliance is a common vegetation type in California, and wouldn't necessarily qualify as ESHA. However, the City of Goleta's GP/CLUP **Policy CE 1.2** identifies California [coastal] sage scrub and scrub growing on coastal bluffs as ESHA, including the California Sage Scrub vegetation alliance. Dudek (2010a,b) followed the City's policy and definition, including the scrub on the East Terrace and the restored area to the west of the emergency access road and included it as ESHA. In 2018, Dudek remapped the boundaries of California [Coastal] sage scrub and other scrub ESHA near the proposed project site as displayed in the attached *Figure 2*.

ESHA AND ESHA SETBACK ANALYSIS

The proposed project will not impact coastal sage scrub ESHA or any other ESHA types within Bacara's property. However, the relocation site of the beach house is within an ESHA setback or buffer of 25-feet. As mentioned, the nearest ESHA is comprised of California [Coastal] Sage Scrub situated on the western slope of the East Terrace above the flat disturbed area where the new beach house is proposed. The City GP/CLUP **Policy CE 1.6** requires a sufficient setback or buffer from ESHA to ensure habitat value and function isn't degraded directly or indirectly by development of a project. The beach facilities are public serving structures for hotel guests and the general public. The current location of the beach facilities is between two ESHA types, beach and shoreline and [coastal sage] scrub. With approval of this project, the existing facilities will be demolished and restored to native habitat, thereby providing quality habitat along the shoreline. The proposed location of the new beach facilities is properly situated on disturbed land just west of the existing emergency access road that extends down to the beach for in-shore water rescues. The siting of the beach facilities also avoids the Monterey cypress mitigation site to the north. California [Coastal] sage scrub is abundant on the Bacara property, including enhanced scrub habitat through previously project mitigation along the pedestrian trails from the resort and tennis courts to the beach. No special-status species are known to occur within the scrub on the property, nor is the habitat unique for the area. Although common wildlife species use California [Coastal] Sage Scrub, particularly birds, reptiles, and small mammals, moving the structure inland to the proposed site will not affect the availability of food, shelter, or nesting, or movement between other habitats. A reduction of the ESHA buffer to accommodate the beach facilities is indeed warranted since the California [Coastal] Sage Scrub ESHA and its inhabitants will not be negatively affected by development or operation of the beach facilities.

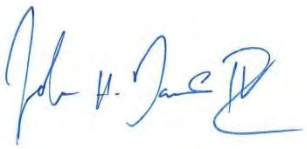
CONCLUSION

Development of the Haskell's Beach House project will not impact Environmental Sensitive Habitat Areas (ESHA) located on the Ritz-Carlton Bacara property. The placement of the beach facility structures on disturbed land between the emergency access road and the East Terrace

avoids ESHA, but is within a 25-foot ESHA buffer comprised of the California [coastal] sage scrub vegetation alliance situated on the slopes of the East Terrace. The construction and operation of the beach facilities will not impact the functioning of ESHA on the Bacara property, specifically the coastal scrub on the west slope of the East Terrace. We, therefore, support a reduction of the ESHA buffer to accommodate the proposed beach facilities.

Should you have any questions regarding this letter, please feel free to contact me at 805.308.8524 (office), 805.252.7996 (cell), or jdavis@dudek.com.

Sincerely,



John Davis IV, MS, CE
Senior Coastal Ecologist

Att.: *Figure 1*
Figure 2

cc: *Paul Finstad, Watermark*
Anne Blemker, McCabe and Co
Ginger Anderson, Stantec

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SOURCE: NAIP 2016

FIGURE 1

Project Location

DUDEK

0 500 1,000 Feet

Supplemental Biological Technical Report for the Ritz Carlton Bacara Beach House Demolition and Replacement Project

Survey Area

Project Componets

New Building

Proposed Restoration Grading Limits

Monterey Cypress

ESHA Boundary (Dudek)

City of Goleta ESHA

Beach and Shoreline

Riparian/Marsh/Vernal

Scrub

25-foot ESHA Buffer

Vegetation and Land Cover

B - Beach

CSS - Coastal Sage Scrub

D - Disturbed

D/L - Developed/Landscaped

MC - Monterey Cypress

MC(P) - Monterey Cypress (Planted)

SOURCE: CIRGIS 2010; Stantec 2018

DUDEK

0 20 40 Feet

FIGURE 2

Impact Analysis

ESHA Review for the Ritz-Carlton Bacara Beach House Demolition and Replacement Project and Emergency Permit (16-002 EMP)

APPENDIX F

Haskell's Beach House Demolition Restoration Plan

Haskell's Beach House Demolition

Conceptual Restoration Plan

Prepared for:

Watermark Capital Partners, LLC.
Contact: Paul Finstad
150 North Riverside Plaza, Suite 4200
Chicago, IL 60606

Prepared by:

DUDEK
621 Chapala Street
Santa Barbara, California 93101
Contact: John Davis IV, MS, CE
jdavis@dudek.com
805.252.7996

MAY 2018

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1. INTRODUCTION

1.1 Background, Purpose, Participants and Responsibilities

1.1.1 Background

Haskell's beach house at The Ritz-Carlton Bacara (Bacara) is proposed to be demolished and relocated due to erosion damage, which has compromised the structural integrity of the current building. A new snack bar and bathrooms will be constructed in a location further inland and outside of the potential erosion zone. The portion of the project described herein involves the demolition of the current Haskell's beach house, complete removal of the building structure including the foundation, re-grading of the building pad, and the restoration of the project site with native species. Once restored, the restoration project site will be utilized as a recreation area for the general public.

In response to CDP application number 4-16-0479 regarding the demolition of the existing beach house at Haskell's Beach and construction of a new snack bar and bathrooms, the CCC issued an incomplete letter dated August 9, 2017, which requested the following:

> **Restoration Description and Plans.** In addition to the project description and plans for the demolition of the beach house and temporary protection device, please provide plans for the restoration of the demolition site. Please include cross-sections of the restored site, the proposed final contours, proposed grading, and the plant palette that will be needed to restore the site.

1.1.2 Purpose

The purpose of this Restoration Plan is to fulfill the requirements of the incomplete letter issued by the CCC, including the specifications for restoration project implementation. Prior to project implementation, landscape design plans will be developed based on the specification provided herein and following a meeting with CCC on May 23, 2018, which may include comments on the design and specifications. The landscape design plans are anticipated to provide sufficient detail on the project specifications, planting and irrigation system details for the contractor bidding process and final installation of the restoration project, pending approval of the CCC.

1.1.3 Participants and Responsibilities

Bacara is, and shall remain jointly and severally financially responsible for all negotiations and costs associated with the implementation of this Restoration Plan, and the monitoring and protection of the restored vegetation on the restoration project site.

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Bacara will select a qualified Project Biologist(s) to implement the restoration monitoring and long-term maintenance monitoring of the mitigation areas. The Project Biologist, in coordination with Bacara, will review all aspects of pertinent contract documents, including, but not limited to, site protection, material submittals, formal site observation schedule, lines of communication, and persons with stop-work authority, prior to project implementation. The Project Biologist will oversee and coordinate implementation of this conceptual plan, including landscape design drawings (Appendix A) and interpretation of said drawings, and will conduct field monitoring of restoration project installation and monitoring during the 120-day initial maintenance period, and biological monitoring throughout the three (3)-year maintenance and monitoring period. The Project Biologist will possess specific knowledge and project-level experience with habitat restoration projects. The Project Biologist will possess at least 5 years of habitat restoration experience in Southern California.

Baraca will hire a project installation contractor and maintenance contractor (Restoration Contractor). Baraca may choose to hire a maintenance contractor separately from the installation contractor. The Restoration Contractor will be a qualified, licensed company, preferably one that has experience in habitat restoration and maintenance. During the implementation phase, the Restoration Contractor will be responsible for performing project installation, including irrigation, planting, any necessary grading, erosion control, and other tasks as directed by the Project Biologist and as described in this document and construction drawings. During the long-term monitoring phase, the Restoration Contractor will be responsible for maintenance and operation of the irrigation system, weed control, erosion control, trash removal, replanting, and other tasks as directed by the Project Biologist and as described in this document.

1.2 Site Location and Existing Conditions

1.2.1 Site Location

The Ritz-Carlton Bacara was constructed in 2000 and is located at 8301 Hollister Avenue, in the city of Goleta, in Santa Barbara County. The 73-acre property runs east and west for approximately 3,000 feet immediately inland of Haskell's beach, which constitutes the southern boundary, with US Highway 101 and the southern boundary of the Southern Pacific railroad right of way making up the northern boundary. The project site is located at Haskell's beach, immediately inland of the mean high tide line and is centered at approximately 34º 25' 52.93"N 119º 54' 59.40"W (Figures 1 and 2). The restoration project site is currently utilized as recreational land accessible to the general public.

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1.2.2 Existing Conditions

The Biological Resources Assessment for the Bacara Beach House Relocation Project prepared by Kevin Merk Associates, LLC (KMA 2017) provides details on the existing conditions within the restoration project site as well as the overall demolition and relocation project site. This report includes an assessment of impacts associated with the overall project and includes recommended mitigation measures to avoid and minimize impacts to biological resources during demolition project implementation.

1.3 Goals of the Restoration Plan

The primary goal of this restoration plan is to successfully establish native vegetation within the Haskell's beach house demolition area that is consistent with the long-term use of the site as a recreational area for the general public. Integral to this goal is the establishment of native vegetation that is self-sustaining in the long-term. The restoration methodology and specifications provided in this Restoration Plan are targeted to achieve this goal while also providing the information required by the CCC in the incomplete letter noted above. Detailed landscape design plans and specifications will incorporate the overall methodology into construction documents to be utilized by the Restoration Contractor during site preparation and installation to ensure that the restoration project site is constructed in conformance with the intent of the Restoration Plan. Long-term maintenance and monitoring detailed herein will guide the Restoration Contractor and Project Biologist in the management of the restoration project site to achieve the primary goal.

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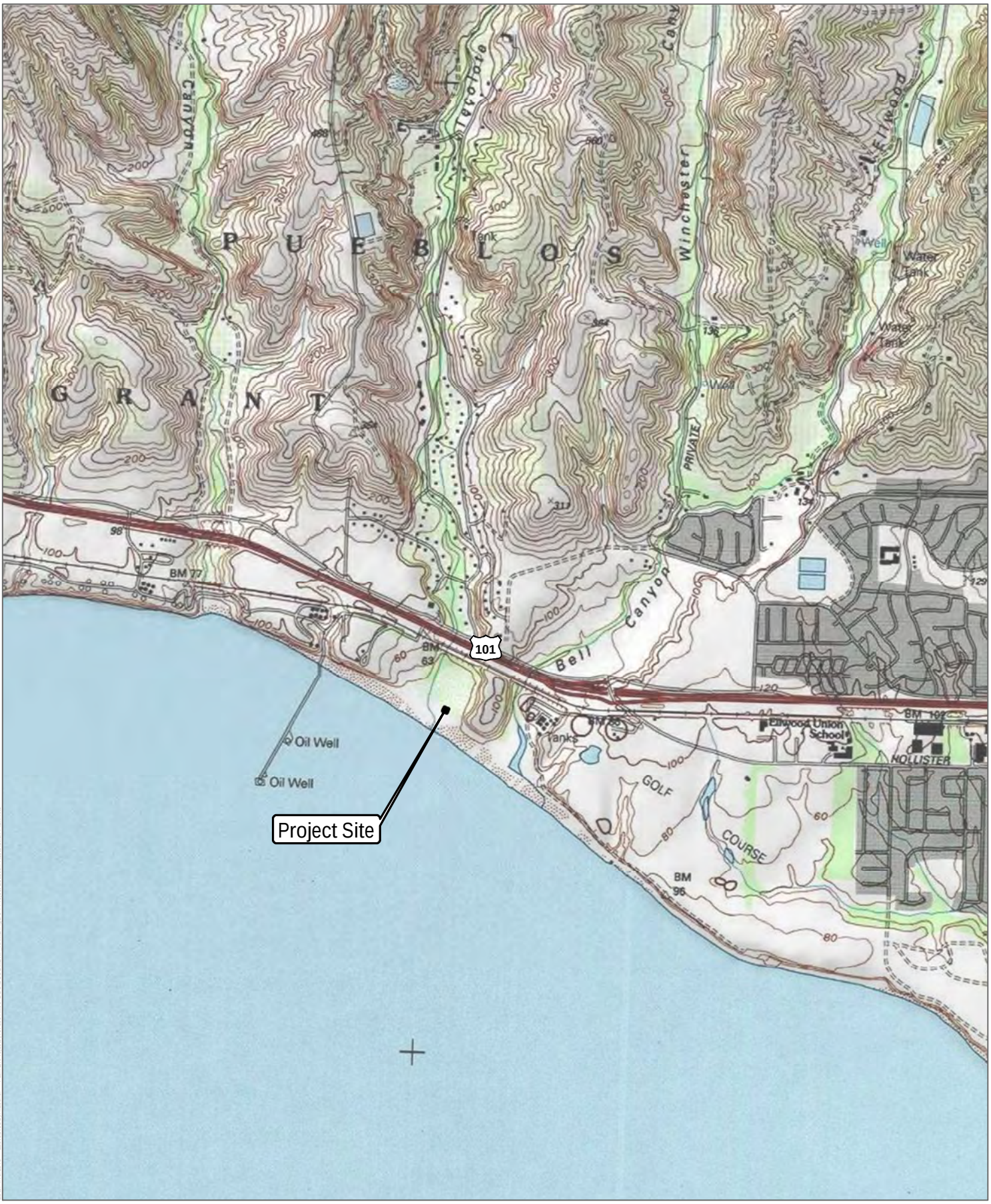

SOURCE: USGS 7.5-Minute Series Dos Pueblos Canyon Quadrangle

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Haskell's Beach House Demolition Restoration Plan

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SOURCE: USGS 7.5-Minute Series Dos Pueblos Canyon Quadrangle

DUDEK

0 12.5 25 Feet

FIGURE 2

Restoration Project Site

Haskell's Beach House Demolition Restoration Plan

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2. RESTORATION IMPLEMENTATION

The implementation of the restoration project will include three main components; (1) grading following demolition, (2) irrigation system installation, and (3) revegetation with native species. The sub-sections below provide details on implementation of each component of the restoration project.

2.1 Grading to Establish Restoration Plantings

Following removal of the existing structure and foundation, grading will be necessary to match the existing elevations adjacent to the restoration project site. Grading will involve the movement of native soil to the greatest extent possible; however, import of additional soil may be necessary based on the deficit created by the removal of the existing structure and foundation. The grading and restoration will take place within approximately 0.14 acre as shown on Figure 2. Grading activities will be completed in conformance with the following specification:

1. Grading will be completed with tracked equipment to minimize over compaction of the soil and will be deemed complete when the elevations match those on the landscape design plans.

Imported fill material will adhere to the following specifications:

1. Any imported fill material will consist of Goleta loam or similar loam soil type sourced from the Santa Barbara region;

2. Shall be free of large organic debris (e.g. woody material) and have similar chemical composition and pH to the native soil present within the project site. Soil suitability analysis conducted by a qualified laboratory will be necessary to confirm the chemical composition of the native and imported soil material to ensure compliance with these specifications.

3. Any soil amendments added to the restoration area will consist of organic material for incorporation into soil including compost, humus (wood based), and rice hulls.

2.2 Irrigation System Installation

A temporary irrigation system will be constructed prior to the installation of native plantings. The irrigation system will consist of a below ground mainline and lateral lines with pop-up overhead spray heads for 100% head-to-head coverage. Prior to burial of the below ground portions of the irrigation system, the entire system will be pressure tested to ensure that all connections are stable.

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To reduce the potential for unnecessary damage to the irrigation system, irrigation spray heads will be demarcated with highly visible flagging. Additionally, the irrigation system shall be frequently inspected by the Restoration Contractor for line breaks, leaks, and other incidents that could cause a release of water. The irrigation system will be temporary in nature and removed once the plantings are established, or after two (2) years of the long-term monitoring timeline.

2.3 Restoration Plantings

Following completion of grading and installation of the temporary irrigation system, the revegetation component of the restoration project will begin. As the restoration project site will have been recently graded, non-native species are not anticipated to be present; however, should a time lapse occur between grading and revegetation, and non-native species begin to recruit within the restoration project site, selective weed removal may be necessary. Any weeding will be accomplished primarily by hand pulling due to the small overall size of the restoration project site. Particularly problematic non-native species may be controlled via herbicide spot-spraying, if determined to be necessary by the Restoration Contractor in coordination with the Project Biologist.

The revegetation will consist of a limited plant palette based on the anticipated use of the restoration project site as a public recreation area. Low-growing, hardy native herbaceous species are included in the revegetation portion of the restoration project as they will be subject to human use including trampling and mowing activities. It is anticipated that the restoration project site will be restricted from human use until the point at which the native vegetation has sufficiently established, as determined by the Project Biologist. Depending on the timing of the revegetation installation, this establishment may take up to one year. These species are identified in Table 1. Planting will be accomplished via installation of liner grown individuals, as opposed to seed, and are anticipated to establish more readily and outcompete non-native recruits. Plantings will be installed by hand by the Restoration Contractor and under the supervision of the Project Biologist based on the specifications included below and in the landscape design drawings (Appendix A). Plant quantities will be determined during the development of the landscape design plans.

Table 1
Revegetation Plant Palette

Scientific Name	Common Name	Container Size	Average Spacing	Percent Composition
Distichlis spicata	saltgrass	liner or 2-inch pot	2 feet	80
Frankenia salina	alkali heath	liner or 2-inch pot	random	20

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A contracting nursery will legally obtain plant materials (propagules and seed) from plant materials originating naturally within the Santa Barbara region for all plants used within the restoration project site. The genetic stock will be pure; no hybrids or nursery varieties will be accepted. The contracting nursery will propagate native plants under a contract-growing agreement per the plant palettes and source material specifications. The contracting nursery will be given prior notice so as to allow for sufficient lead time to provide for successful propagation and preparation of locally genetic stock plant materials for transport to the restoration project site for installation.

The Restoration Contractor will enter into the contract growing arrangement with an experienced, qualified, and licensed nursery immediately upon approval of this Restoration Plan by the CCC. The contracting nursery may also propagate from locally, legally collected seed and propagules (i.e. cuttings). All seed and propagules will be certified as originating from Santa Barbara County genetic stock.

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3. EROSION CONTROL

Soil disturbance will be kept to the minimum necessary during demolition of Haskell's beach house and grading of the restoration project site. It is anticipate that an erosion control plan or stormwater pollution prevention plan (SWPPP) will be prepared for the demolition and initial grading and revegetation portions of the project. Following revegetation installation, limited erosion control devices may be necessary to control minimize erosion and sediment transport. The primary erosion control device is anticipated to be straw wattles, which are anticipated to be necessary around the perimeter of the restoration project site. Once the native plantings have established and stabilized the restoration project site, the erosion control devices will no longer be necessary. The Restoration Contractor, in coordination with the Project Biologist, will be responsible for installing and maintaining erosion control devices throughout the duration of the installation and long-term monitoring period.

Erosion control materials will be bio-degradable. Erosion and sediment control devices will be checked and maintained prior to, during, and after all rainfall events. Temporary erosion control measures will be the minimum necessary to control erosion and will not bury or otherwise destroy native plant species or their habitats.

3.1 Best Management Practices

The following BMPs will be implemented during all revegetation efforts:

- The hours of operation of equipment and contractors will be limited to 8:00 am to 6:00 pm, Monday to Saturday.
- All ingress and egress routes for the equipment and contractors will be limited to previously disturbed areas.
- During removal efforts, no heavy equipment will be parked or serviced within 20 feet of native habitats or sensitive biological resources to avoid the accidental spilling or leaking of hazardous materials (e.g., oil, fuel, hydraulic fluid, etc.) into these areas.
- All equipment will be removed from the sites at the end of each day and/or stored in the designated staging areas at a minimum of 20 feet away from native vegetation or sensitive biological resources. All equipment to be temporarily stored on the sites will be placed inside gated and locked fences. Equipment left overnight will have standard BMPs in place (i.e. drip trays, spill kits, etc.).

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- All non-native plant materials or debris will be removed from the sites at the end of each week. All materials will be disposed of in areas officially designated and properly equipped for the processing of such organic materials.
- The ultimate disposal of landscaped components will be a recycling facility located outside of the Coastal Zone; the County of Santa Barbara South Coast Recycling and Transfer Station located at 4430 Calle Real in Santa Barbara, California.

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4. AVOIDANCE OF SENSITIVE BIOLOGICAL RESOURCES

4.1 Adjacent Native Habitat

In accordance with the mitigation measures included in the Biological Resources Assessment for the Bacara Beach House Relocation Project prepared by Kevin Merk Associates, LLC (KMA 2017), prior to construction, the Project Biologist working with the project construction team shall delineate the limits of construction and restoration. Orange protective fencing or similar equivalent shall be installed along the perimeter of the native habitat areas to be preserved and protected.

4.2 Nesting Birds

Nesting birds are protected by the Federal Migratory Bird Treaty Act and Sections 3503, 3503.5, and 3513 of the Fish and Game Code. Although project restoration/construction activities, including but not limited to initial ground disturbance, are not anticipated to occur within the bird breeding season (February 1 through September 1), should project activities commence during the breeding season, the following standard measure will be implemented to minimize impacts to nesting birds:

- In accordance with the mitigation measures included in the Biological Resources Assessment for the Bacara Beach House Relocation Project prepared by Kevin Merk Associates, LLC (KMA 2017), no more than two weeks prior to initiation of ground disturbance and vegetation removal, a nesting bird pre-construction survey will be conducted by a Project Biologist within the disturbance footprint and a 200-foot buffer. If nests are found, a buffer ranging in size from 50 to 250 feet, depending upon the species and the proposed work activity will be determined and demarcated by the Project Biologist with bright orange construction fencing. No ground disturbing activities will occur within this buffer until the Project Biologist has confirmed that breeding/nesting is completed and the young have fledged the nest. Nesting birds surveys are not required for construction activities occurring between September 2 and January 31.

4.3 Additional Restrictions During Revegetation Implementation

During revegetation, the following activities will be prohibited:

- Pets or domesticated animals are not allowed on the restoration project site.
- No machinery fluids will be added or changed on the revegetation site; refueling of machinery will occur within designated areas, and only over areas with a non-permeable membrane installed.

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- Only machinery necessary to perform the removal of non-native species and the installation of native species will be allowed on-site, and each machine will be removed immediately after its task is complete.
- Preparation of the Restoration Area will be limited to areas designated by the Project Biologist as containing weedy, non-native, or invasive plants, which will be removed.
- All onsite features to be preserved (including adjacent native habitat areas) will be protected and avoided at all times.

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5. MONITORING DURING GRADING AND REVEGETATION

5.1 Restoration Area Installation Inspections by Project Biologist

The Project Biologist will make regular site observations of revegetation activities throughout the duration of revegetation installation. The Project Biologist will visit the restoration project site not less than once per week during grading and plant installation activities and will review all such activities for conformance to this Restoration Plan and the requirements of landscape design drawings (Appendix A). Each site visit will be documented in an observation report. Photo-documentation of site conditions will be conducted on not less than a quarterly basis.

5.2 Quality Control Procedures

The Restoration Contractor will be responsible for conformance with this Restoration Plan. The contract documents include detailed graphical construction plans and written specifications that are in substantial conformance with the information and direction contained herein. The contractor's responsibility will continue through the post-installation, 120-day plant establishment period, as well as the maintenance and warranty period. Final acceptance of the work of the Restoration Contractor will not be granted by the Owners/Respondents until written notification is received from the Project Biologist, certifying satisfactory completion of all required installation and establishment tasks as prescribed in Section 2 and defined in the Revegetation Contract documents.

Actual on-the-ground soil placement, planting, irrigation, and weeding activities may be performed by non-licensed persons. However, a person holding a valid California landscape contractor's license will be present to oversee all restoration work other than routine hand watering and general observation of plant status.

After initial installation and completion of the 120-day plant establishment period, the Revegetation Contractor will, upon the request of the Owners, enter into a Landscape Maintenance Agreement for a period of up to three (3) years, under which the Restoration Contractor will provide landscape maintenance services as directed by the Project Biologist. Upon approval by the CCC Executive Director, the Owners may choose to hire a maintenance contractor that is separate from the Restoration Contractor.

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6. SUCCESS CRITERIA AND PERFORMANCE STANDARDS

The Restoration Site vegetation will be evaluated in relation to performance standards established and listed below in Table 2. Due to the goal of the Restoration Plan to establish native vegetation consistent with recreational use by the general public, the success criteria are limited to native and non-native species cover targets. The annual performance standards will be utilized to assess the year-over-year progress and development of the restoration project, and are regarded as interim project objectives designed to achieve the final goals. Fulfillment of these criteria will indicate that the habitat restoration efforts are progressing toward the values that constitute the long-term goals of the Restoration Plan. If restoration efforts fail to meet the performance standards in any one year, the Project Biologist will recommend remedial actions, including additional plantings, as needed, to be implemented during the following fall/winter that will improve the vegetation coverage to a level in conformance with the ultimate success criteria.

Table 2
Restoration Project Performance Standards and Success Criteria

Year	Percent Native Cover	Percent Non-Native Cover
1	30%	10%
2	50%	10%
3	70%	10%

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7. MONITORING PLAN

The purpose of the Monitoring Plan is to provide guidelines for maintenance and biological monitoring of the restoration project site. Maintenance activities will be completed by the Restoration Contractor. Because a goal of the Restoration Plan is to establish a natural system that can support itself with little or no maintenance, the primary effort of the Restoration Plan is concentrated in the first two seasons of plant growth following the revegetation effort, when weeds (non-native invasive plant species) can easily out-compete native plants. The intensity of maintenance activity is expected to subside each year as the native plant materials become more established and local competition from non-native plants for resources on the site is minimized through direct removal of non-natives from the site. However, maintenance will include periodic weeding as outlined herein. The risk of large-scale invasion of weedy non-native plants onto the site can be adequately minimized during the first two to three years (approximate) by adhering to the specific maintenance and management guidelines that are presented below.

7.1 Habitat Monitoring

All native vegetation planted in the restoration project site will be subject to the requirements of this Restoration Plan. The Project Biologist will conduct the monitoring and direct the maintenance activities required by this Plan for three (3) years following the initial planting of the native species, or until the CCC acknowledges the successful completion of the Restoration Plan.

Monitoring will consist of quarterly qualitative field monitoring visits conducted by the Project Biologist to determine percent cover of native container plant species as well as non-native recruits. Evaluation will be based on quarterly qualitative visual assessments for years one (1) through three (3). Annual point-line transect analysis will be used for the quantitative sampling in years two (2) and three (3). Quarterly qualitative monitoring will occur in January, April, July, and October; annual quantitative monitoring (i.e., point intercept transects) will occur in April. Monitoring during year two (2) will be expected to indicate a recommendation to discontinue irrigation. As with qualitative field sampling, transects will be used to determine compliance and achievement of the restoration performance and success criteria (percent cover). Remedial measures will be recommended if vegetation cover do not achieve the established performance standards in any year of the long-term monitoring period. However, the Project Biologist may also recommend remedial measures if it is determined that the restoration project is not on track to achieve the final success criteria. Permanent photo-documentation stations will be established to record the progress and plant establishment over the three-year monitoring period.

The Project Biologist will also note biotic or abiotic factors that may affect the restoration project site's performance, positively or negatively. For container plants, the presence/absence of new

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shoots and floral inflorescences will be recorded, especially during spring monitoring. Visual evidence of use of the site by wildlife species will also be recorded. As the restoration site is ultimately anticipated to be utilized as a recreation area by the general public, the Project Biologist will take note of human disturbances to the restoration plantings. Any damage or deficiencies (e.g. decline in cover of native species) will be noted in site observation reports and appropriate remediation will be implemented.

Quantitative field monitoring consists of collecting plant occurrence data (plant species present) along point-intercept transects to be established at representative locations within the restoration project site. The number and length of transects will be based on the overall restoration site size to achieve representative sampling.

Transect locations (start and end points) and orientation (i.e., direction) will be determined through randomly (non-biased) selection using GIS tools (adjusted, as necessary, in the field). Transects will also be positioned in non-random locations and orientations, selected by the Project Biologist in the field, that best captures site conditions and revegetation. The goal is to ensure the data collected is indicative or truly represents the status of revegetation; it is also that transects are placed in appropriate locations that will capture the progression of plant cover over three years to demonstrate, without doubt, that the performance standards and success criteria have been met. Transect lengths will run the length and of the restoration project site.

All qualitative and quantitative analyses will be included in annual monitoring reports, discussed in section 7.4, below.

7.1.1 Replacement Actions

If container stock experiences greater than 20 percent mortality, the Project Biologist may recommend, and the Owners may require, additional container stock plantings, so as to achieve the relevant success criteria as specified below.

7.2 Habitat Maintenance Activities

The following maintenance activities will be conducted during implementation and monitoring of the restoration project site:

- Following initial container plant establishment, irrigation from June to November shall be minimized to allow plants to experience normal drought cycles and to promote appropriate root growth. Irrigation may be used in winter months to simulate a normal or above normal rain season if natural precipitation is lacking. Irrigation volume will be gradually reduced over time to acclimate plants to a non-irrigated condition prior to complete cessation of

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irrigation. Irrigation shall last for a maximum of two years and be phased out per the direction of the Project Biologist.

- Natural recruitment of native species and installed native plants will not be cleared in the restoration project site during weeding activities.
- Trash and inorganic debris blown onto the site will be removed during regular maintenance visits.
- The site will not be fertilized during the maintenance period.
- Weedy non-native species may invade the restoration project site and become a problem before or during the establishment of native plants. Weedy non-native species will be hand removed as soon as they begin to invade and before they become too dense for hand extraction. Herbicide treatments may be necessary if the total removal of some plants is not possible, and shall only be performed with approval from the Project Biologist and any and all herbicides shall be applied by a licensed person in accordance with the manufacturer's instructions.
- No service vehicles will be allowed in the restoration project site at any time.
- Remedial container planting may be necessary following each monitoring stage, as directed by the Project Biologist.

7.3 Habitat Maintenance Guidelines

7.3.1 Dead Plant Replacement

Dead container plant materials will be replaced, as needed, with the same species and in the same size containers as originally specified in fall/winter each year. Replacement plantings will be installed at the recommendation of the Project Biologist and based on an assessment of the restoration project site in comparison to the native cover performance standards as detailed in Section 6.

7.3.2 Weed Control

The initial clearing and grading work will effectively remove invasive non-native plant species and is expected to dilute the existing weed seed bank to a level that will temporarily minimize weed species. Ongoing weed control activities will occur during the 120-day establishment period, and the three (3)-year maintenance period. Weed eradication will consist of the removal of selected non-native invasive plant species (i.e., seed heads, stems, roots), and all debris and slash generated

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from weed removal activities will be securely transported and disposed of offsite as described in Section 3.1.

Weed control measures will include the following: (1) hand removal and (2) herbicide application. Hand removal of weeds is the most desirable method of control and will be used around individual plant installations. Hand removal shall occur every other week during the 120 day plant establishment period. Weed plants shall be pulled when plants are less than 12 inches tall and/or prior to the formation of seed heads. Weeding shall be done once per month during the growing season and every three months outside of the growing season during years one through three. More frequent weeding may be conducted as directed by the Project Biologist to keep any weeds establishing on the site at manageable levels.

Chemical herbicide application can be used for invasive perennial species that are difficult to control by hand pulling. The Restoration Contractor will coordinate with the Project Biologist to identify specific sites where the systemic herbicide may be used. Any herbicide treatment must be applied by a licensed pest control applicator and in accordance with the manufacturer's instructions.

7.3.3 Clearing and Trash Removal

Cutting or clearing of any native vegetation will not be allowed within the restoration project site, except as directed by the Project Biologist. As the site will ultimately be used as recreation area for the general public, deadwood and leaf litter will be removed, as needed, to allow for human use of the site following initial native vegetation establishment. Trash will be removed from the restoration project site by hand on a regular basis, meaning no less than one-month intervals for the first year and quarterly thereafter. Trash consists of all man-made materials, equipment, or debris dumped, thrown, washed, blown, and left within the restoration project site.

7.3.4 Schedule of Maintenance Inspections

Maintenance activities will begin upon the installation of the container plant materials and will continue throughout the entire three (3)-year monitoring period, concluding after three years or when the Owners and CCC agree that the implementation of the Restoration Plan has been completed.

After the first summer following installation, all plants on the restoration project site will be checked for viability. If more than 20 percent of the container stock has not survived, the dead plant material will be removed and replaced with the same size material as was planted originally, based on the recommendation of the Project Biologist. Replacement planting will be implemented to expedite native plant establishment on the restoration project site. The Project Biologist will

conduct inspections on a quarterly basis for the duration of the three (3)-year monitoring period. Recommendations for maintenance needs will be based upon site observations and will include items such as irrigation, weed control, and trash and debris removal.

7.4 Annual Reports

Monitoring reports will be submitted annually to the CCC, during the same one-month period of each year, for the three (3)-year monitoring phase. The annual monitoring reports will describe the existing conditions of the restoration project site, identify all issues observed as they apply to site conditions and the performance standards, and recommend remedial measures necessary for the successful completion and compliance of the Restoration Plan. Annual reports will be submitted on the anniversary of installation for the three (3)-year maintenance and monitoring period, currently estimated to be no later than December 31 of each year commencing in 2018 and ending by 2021 in accordance with the anticipated implementation schedule. Each yearly report will provide a summary of the accumulated data. Annual reports also will include the following:

- A list of names, titles, and companies of all persons who prepared the content of the annual report and participated in monitoring activities;
- A copy of the Restoration Plan and any subsequent modifications approved by the CCC;
- A description of the monitoring and maintenance methodology, including sampling procedures and frequency;
- Contingency plans to address potential problems with any of the Restoration Sites;
- Prints of biological monitoring photographs taken annually; and
- Maps identifying monitoring areas and weed removal areas as appropriate.

All annual reports will be sent to the following addresses and contacts:

California Coastal Commission
Attn: Michelle Kubran
Coastal Program Analyst
89 S. California Street, Suite 200
Ventura, CA 93001

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7.5 Contingency Measures

If an annual performance standard is not met for the restoration project in any year, or if the final success criteria are not met, the Project Biologist will prepare an analysis of cause(s) of failure and will submit a Supplemental Restoration Plan for review and approval by the CCC. The Supplemental Restoration Plan will identify remedial contingency measures required to correct those portions of the restoration that have failed or are not in conformance with the original, approved Restoration Plan. The contingency measures may include financial assurances to provide a cushion to account for unforeseen costs of management activities to be carried out in the event that a fire, landslide, extreme weather conditions, or other natural disaster should have a negative impact on the restored habitat during the monitoring period. Remedial actions will be carried out during the monitoring period if habitat quality is reduced due to the occurrence of fire and/or other natural disasters. Actions for habitat remediation may consist of minor restoration of habitat from the effects of erosion, replacement of mitigation planting mortality, unauthorized access, and/or removal of invasive plants; it is not considered ecological habitat restoration or creation. This task may include additional native planting soil preparation, BMPs, and/or weed removal, depending on the condition of remaining and adjacent habitats.

Following approval of the Supplemental Restoration Plan by the CCC, the identified remedial contingency measures will be implemented until the goals of the original, approved Restoration Plan have been met to the satisfaction of the CCC. If the site has not met the final success criteria, the Owner's maintenance and monitoring obligations will continue for at least a period of time equal to that during which the project remained out of compliance, or alternative contingency measures implemented until the CCC gives final project compliance/approval. At the end of the three (3)-year monitoring period, a final detailed report prepared by the Project Biologist will be submitted to the CCC for final review and approval.

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8. DOCUMENT PREPARERS

Dudek

John Davis, IV, MS, CE. Project Manager / Senior Coastal Ecologist.

Randall McInvale, Restoration Ecologist

John Minchin, RLA. Landscape and Irrigation Construction Documents.

Kirsten Zecher. Cartography and Data Management.

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APPENDIX A

Landscape Design Drawings

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ATTACHMENT E:

E-3. Memorandum Review of "Biological Resource Assessment for the Bacara Beach House Relocation Project, Goleta, Santa Barbara County, California" and "Supplemental Biological Technical Report for the Ritz-Carlton Bacara Beach House Demolition and Replacement Project, Santa Barbra County, California."
Storrer Environmental Services, July 4, 2018

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STORRER
ENVIRONMENTAL
SERVICES

2565 Puesta Del Sol Road #3
Santa Barbara, CA 93105
(805) 682-2065
storrer.john@verizon.net

MEMORANDUM

To: Mary Chang, City of Goleta Planning and Environmental Review

From: Justine Cooper and John Storrer, Consulting Biologists

Date: July 4, 2018

Re: Review of "Biological Resource Assessment for the Bacara Beach House Relocation Project, Goleta, Santa Barbara County, California" and "Supplemental Biological Technical Report for the Ritz-Carlton Bacara Beach House Demolition and Replacement Project, Santa Barbra County, California"

Per your request, we reviewed the referenced Supplemental Technical Report (Supplemental Report) prepared by Dudek for Watermark Capital Partners, LLC (Watermark) dated May 11, 2018. The Supplemental Report was submitted in support of Watermark's application for a permit to demolish and replace the existing Beach House on Ritz-Carlton's Bacara Resort property in western Goleta (Project). The Biological Resource Assessment (Assessment) prepared for previous landowners by Kevin Merk Associates, LLC (KMA) dated 10 July 2017, was also reviewed. Our review and comments focus on information concerning biological resources in the Project vicinity, potential for impacts to these resources, and adequacy and practicality of proposed minimization and avoidance measures.

Please consider the following comments:

The KMA Assessment provides details on the existing conditions, a Project impact assessment, and recommended mitigation measures. However, the precise location for the new Beach House had not been defined when the Assessment was prepared. The Dudek Supplemental Report provides a more relevant analysis of the existing conditions and potential Project impacts. The Assessment will only be referenced in this review in regard to its recommended mitigation measures - these are supported by Dudek in their Supplemental Report.

The current location of the Bacara Beach House at Haskell's Beach is on an elevated terrace above the cobble-lined shoreline. The proposed facility is situated further inland, to the east of the fire access road and adjacent to the northwestern slope of the "East Terrace" (Appendix A – Figure 1) (Site).

The Supplemental Report consisted of both background review and field survey. The field survey was performed on April 19, 2018. The Supplemental Report is intended to "describe the existing biological resources (including vegetation, flora, fauna, jurisdictional features, and wildlife habitats/movement corridors), potential project impacts, and recommended avoidance, minimization, and mitigation measures associated with Project".

Sources regarding presence or potential for occurrence of special-status biotic communities and plant and wildlife species were consulted. These included a query of the California Natural Diversity Data Base (CNDDB), U.S. Fish and Wildlife Service (USFWS) critical habitat information, and the National Wetlands Inventory, and City of Goleta Environmentally Sensitive Habitat (ESHA) overlay. The database information focused on special-status species known to occur in the six surrounding USGS quadrangles (Santa Ynez, Lake Cachuma, San Marcos Pass, Tajiguas, Dos Pueblos Canyon, and Goleta). Lists generated from the database query are provided in Appendices B and C.

Descriptions and classifications of plant communities and species conform to accepted sources and nomenclature (e.g., Baldwin et al. 2012). Primary vegetation types were mapped and described (Appendix A – Figure 2). Field surveys included mapping of vegetation within the Site and sensitive wildlife surveys. Sensitive wildlife surveys specific for the Monarch butterfly were performed in February 2017 (Appendix D). Inventories of plant and animal species observed on the Site are not provided. However, given the relatively narrow scope of the project and the level of associated impacts, the evaluation of habitat value provided is sufficient.

No special-status plant or animal species were detected during field surveys and no rare plant species are expected to occur within the Site boundaries. The Project is not expected to impact potential wildlife movement routes or corridors. These conclusions seem valid in consideration of the Site context and prior level of disturbance within the development footprint.

All Project impacts are limited to disturbed or developed/landscaped areas. However, the proposed beach facilities are within a 25-foot Coastal Sage Scrub ESHA buffer. The City of Goleta's General Plan (City GP)/County Coastal Land Use Plan (CLUP) Policy CE 1.6 requires a sufficient setback or buffer from ESHA to ensure that habitat value and function isn't degraded directly or indirectly by development of a project.

The analysis of the proposed reduction of the ESHA buffer (Appendix E) concluded that it will not result in significant impacts to the Coastal Sage Scrub ESHA because:

- The proposed location of the new beach facilities is situated on previously disturbed land just west of the existing emergency access road.
- The proposed location of the new beach facilities avoids impacts to existing enhanced coastal sage scrub habitat from previous project mitigation and the Monterey cypress mitigation site to the north.
- No special-status species are known to occur within the scrub on the property, nor is the habitat unique for the area.
- The development of the new beach facilities will not affect the availability of food, shelter, nesting, or movement between other habitats.
- The current location of the beach facilities is between two ESHA types (beach/shoreline and coastal sage scrub). If the Project is approved the existing facilities could be demolished and restored at least in part to native habitat.
- The City did not map the East Terrace as ESHA in their CP/CLUP.

The only potentially significant impact identified in the KMA Report that was relevant to the current Project and supported by Dudek, was the potential for the future development of the site

to adversely affect nesting birds during construction (Bio Impact 3). The mitigation measures provided in the KMA Report are reasonable and would successfully minimize impacts to nesting bird species.

A restoration plan for the Haskell's Beach House Demolition was included in the Report (Appendix F). Implementation strategies outlined in the Plan, including planting palettes, planting specifications, site preparation, and irrigation requirements are thorough and appropriate to the Site. A comprehensive list of Best Management Practices (BMPs) to be implemented during restoration is also included.

The implementation and maintenance schedules are accurate and provide sufficient detail. The Plan also includes contingencies for plant replacement, re-seeding, and irrigation for each restoration area. Maintenance activities include weed control using a combination of hand weeding and herbicide treatment, mowing, plant replacement, and Site protection (e.g., fencing).

Success criteria and performance standards are reasonable and fitting for the habitat types being restored. A combination of qualitative and quantitative methods will be used to evaluate progress toward attainment of performance standards. Monitoring methods, frequency of monitoring, and reporting requirements are adequately described. Appropriate adaptive management techniques and corrective measures are also outlined.

In summary, the Supplemental Report provides an accurate description of wildlife habitat and vegetation types within and adjacent to the Site. The general evaluation of the potential for special-status plant and animal species is appropriate for the size and scope of the Project. The proposed restoration plan for the demolition of the Beach House was found to be thorough and appropriate to the Site. Rationale for development within the degraded 25-foot ESHA buffer is provided and the conclusion that no significant adverse effects to the Coastal Sage Scrub ESHA will result from Project implementation is well reasoned. The recommended mitigation measure to minimize impacts to nesting bird species is also reasonable. Please call me if you have any questions concerning our comments.

Sincerely,

Justine Cooper
Storrer Environmental Services, LLC

John Storrer
Storrer Environmental Services, LLC

References

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. *The Jepson Manual: Vascular Plants of California, Second Edition*, Revised. University of California Press, Berkeley and Los Angeles.

Dudek. 2018. Supplemental Biological Technical Report for the Ritz-Carlton Bacara Beach House Demolition and Replacement Project, Santa Barbra County, California. Prepared by Dudek, Santa Barbara, CA. Prepared for Watermark Capital Partners, LLC., Chicago, IL. May 11.

KMA (Kevin Merk Associates, LLC). 2017. Biological Resources Assessment for the Bacara Beach House Relocation Project, Goleta, Santa Barbara County, California. Prepared by Kevin Merk Associates, LLC, San Luis Obispo, CA. Prepared for CAA Planning, Inc., Aliso Viejo, CA. July 10.

ATTACHMENT E:

E-4. Addendum to the Supplemental Biological Technical Report for the Beach Facilities Project at the Ritz-Carlton Bacara, Dudek, January 30, 2019

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DUDEK

621 CHAPALA STREET
SANTA BARBARA, CALIFORNIA 93101
T 805.963.0651 F 805.963.2074

TECHNICAL MEMORANDUM

To:	Paul Finstad, Watermark Capital Partners, LLC.
From:	John H. Davis IV, MS, CE, Senior Coastal Ecologist, Dudek
Subject:	Addendum to the Supplemental Biological Technical Report for the Beach Facilities Project at the Ritz-Carlton Bacara
Date:	January 30, 2019
cc:	Anne Blemker, Coastal Planner, McCabe and Company Ginger Andersen, MCRP AICP, Stantec
Attachment(s):	Figure 1 – Regional/Vicinity Map Figure 2 – Vegetation Community Photograph Documentation

The purpose of this technical memorandum (memo) is to document and confirm the existing biological resources of the Beach Facilities Project at the Ritz-Carlton Bacara (Project) in Goleta, Santa Barbara County, California (Figure 1). This memo provides a description of the existing biological resources supported by recent photographic documentation of the revised beach snack bar and bathroom (i.e., beach facilities) locations. We recommend submitting this memo to the City of Goleta (City) in support of future California Environmental Quality Act project review and the City and California Coastal Commission in support of a Coastal Development Permit.

On December 3, 2018, Dudek was provided with a revised Project site plan for the relocation of the impacted beach facilities. Essentially, the revised beach facilities locations are situated approximately 30-feet north (i.e., inland) of the originally proposed locations to avoid future ocean intrusion from the projected sea level rise. Dudek visited the site on January 25, 2019 to confirm current biological conditions and consistency with the *Supplemental Biological Technical Report for the Ritz-Carlton Bacara Beach House Demolition and Replacement Project, Santa Barbara County, California* (Supplemental Biology Report; Dudek 2018). Prior to the site visit, Stantec surveyed and clearly staked the locations of the two beach facilities; therefore, the Project boundaries were easily identifiable during Dudek's biological survey.

The result of the field survey confirmed that the majority of revised Project, specifically the beach snack bar and bathrooms, are still located within a disturbed/landscape area previously identified by Dudek (Dudek 2018). Additionally, a sliver of the snack bar footprint is now within the developed area to the west (i.e., secondary emergency road). Dudek noticed that wood chips (i.e.,

mulch) placed in the area of interest were moved to the east near the existing boulders ahead of the survey crews arrival, thereby exposing a large patch of underlying sediment. The remainder of the area is heavily mulched with wood chips. In fact, this entire area has remained disturbed/landscaped for years and does not contain native vegetation within the footprints of the revised Project. Native vegetation, comprised of coastal sage scrub, is located near the base of the East Terrace as close as 5-feet from the snack bar. Also, the revised beach facilities are closer to the installed Monterey cypress trees to the north, however, a comfortable approximately 25-foot buffer still remains. Lastly, large boulders separate the developed/landscaped area from the proposed location of the beach facilities. Since access to the proposed location of the beach facility is readily available to contractors and boulders separate the coastal sage scrub from the developed area, it is very unlikely that native vegetation will be directly impacted during construction of the proposed Project.

These two landforms (unnatural anthopogenically-modified areas) are described below and displayed on the attached Figure 2:

Disturbed

Disturbed area consists of the lands that have experienced physical anthropogenic disturbance, and as a result cannot be identified as native or naturalized vegetation communities. However, these areas do have a recognizable soil substrate. The existing vegetation is typically composed of non-native ornamental or exotic species. There can also be impacts from animal uses, grading, or repeated clearing for fuel management on disturbed lands, which leave the land incapable of providing a suitable or sustainable habitat for in which native species can persist. Disturbed areas were not mapped by KMA; however, these areas were determined by Dudek to differ from developed/landscaped areas due to the lack of clearly defined development (e.g. paving) or landscape (e.g. irrigation) components.

Developed/ Landscaped

Areas mapped as developed/landscaped in the survey area include roads (i.e., beach access trail, maintenance/access road), buildings, and structures. Vegetation in these areas, if present at all, is usually sparse, dominated by weedy herbaceous species, or part of the landscaping associated with development. The Dudek mapping results differ from the KMA mapping results slightly in that the trails and roads were described by Dudek as developed/landscaped areas.

In conclusion, the existing conditions of biological resources on the Project site, specifically, between the secondary emergency access road and East Terrace, has not changed since Dudek conducted a biological survey of the Project site plan in April of 2018. The revised locations of the beach facilities are still within the disturbed/landscape area and slightly within the developed area (i.e., secondary emergency road), thereby avoiding direct impacts to natural biological resources including Environmental Sensitive Habitat Areas. Please refer to the Supplemental Biology Report for additional information.

Should you have any questions regarding this technical memorandum, please feel free to contact me at 805.308.8524 (office), 805.252.7996 (cell), or jdavis@dudek.com.

SOURCE: NAIP 2016

FIGURE 1

Project Location

DUDEK

0 500 1,000 Feet

Supplemental Biological Technical Report for the Ritz Carlton Bacara Beach House Demolition and Replacement Project

Survey Area

Project Components

New Building

Proposed Restoration Grading Limits

Biological Survey Results

ESHA Boundary (Dudek)

25-foot ESHA Buffer

Monterey Cypress

Vegetation and Land Cover

B - Beach

CSS - Coastal Sage Scrub

D - Disturbed

D/L - Developed/Landscaped

MC - Monterey Cypress

MC(P) - Monterey Cypress (Planted)

SOURCE: CIRGIS 2010

DUDEK

0 20 40 Feet

FIGURE 2

Biological Survey Results

Supplemental Biological Technical Report for the Ritz Carlton Bacara Beach House Demolition and Replacement Project

Photographic Documentation

Photograph 1. View facing south showing the adjusted location of the new beach facility locations. January 24, 2019.

Photograph 2. View north showing the adjusted location and adjacent vegetation. January 24, 2019.

Photograph 3. View facing east showing the two demarcated areas for the snack bar to the left and bathrooms to the right. January 24, 2019.

Photograph 4. View facing southeast showing the demarcated areas and hillside vegetation. January 24, 2019.

ATTACHMENT E:

E-5. Haskell's Beach House Demolition Habitat Restoration Plan
Dudek, October 2019

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Haskell's Beach House Demolition

Habitat Restoration Plan

Prepared for:

Watermark Capital Partners, LLC.
Contact: Paul Finstad
150 North Riverside Plaza, Suite 4200
Chicago, IL 60606

Prepared by:

DUDEK
621 Chapala Street
Santa Barbara, California 93101
Contact: John Davis IV, MS, CE
jdavis@dudek.com
805.252.7996

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1. INTRODUCTION

1.1 Background, Purpose, Participants and Responsibilities, Project Description

1.1.1 Background

Haskell's beach house at The Ritz-Carlton Bacara (Bacara) is proposed to be demolished and relocated due to erosion damage, which has compromised the structural integrity of the current building. A new food truck and bathrooms will be constructed in a location further inland and outside of the potential erosion zone. The portion of the project described herein involves the demolition of the current Haskell's beach house, complete removal of the building structure including the foundation, re-grading of the building pad, and the restoration of the project site with native species. These components comprise the overall Restoration Plan referenced throughout this document. Once restored, the restoration project site will be utilized as a recreation area for the general public.

In response to CDP application number 4-16-0479 regarding the demolition of the existing beach house at Haskell's Beach and construction of a new snack bar and bathrooms, the California Coastal Commission (CCC) issued an incomplete letter dated August 9, 2017 (further clarified in a letter dated March 1, 2019), which requested the following:

> **Restoration Description and Plans.** In addition to the project description and plans for the demolition of the beach house and temporary protection device, please provide plans for the restoration of the demolition site. Please include cross-sections of the restored site, the proposed final contours, proposed grading, and the plant palette that will be needed to restore the site.

This restoration plan is intended to satisfy the request above for a timeframe of five (5) years following issuance of the CDP. Since the nature of this project originates from the need to address bluff erosion caused by the continuation of sea-level rise and other natural environmental factors, the duration of this restoration plan beyond five (5) years is currently unknown. Modification to the restoration area, including the fence and trail is expected in the future.

1.1.2 Purpose

The purpose of this Restoration Plan is to fulfill the requirements of the incomplete letter issued by the CCC, including the specifications for restoration project implementation. Additionally, this revised draft of the Restoration Plan incorporates changes based on comments received from the CCC. The Restoration Plan will be finalized following CCC review and development of the landscape installation drawings. Prior to project implementation, landscape design plans will be

developed based on the specification provided herein. The landscape design plans are anticipated to provide sufficient detail on the project specifications, plant installation and above-ground temporary irrigation system details for the contractor bidding process and final installation of the restoration project, pending approval of the CCC.

1.1.3 Participants and Responsibilities

Bacara is, and shall remain, jointly and severally financially responsible for all negotiations and costs associated with the implementation of this Restoration Plan, and the monitoring and protection of the restored vegetation on the restoration project site.

Bacara will select a qualified Project Biologist(s) to implement the restoration monitoring and long-term maintenance monitoring of the mitigation areas. The Project Biologist, in coordination with Bacara, will review all aspects of pertinent contract documents, including, but not limited to, site protection, material submittals, formal site observation schedule, lines of communication, and persons with stop-work authority, prior to project implementation. The Project Biologist will oversee and coordinate implementation of this conceptual plan, including landscape design drawings (Appendix A) and interpretation of said drawings, and will conduct field monitoring of restoration project installation and monitoring during the 120-day initial maintenance period, and biological monitoring throughout the five (5)-year maintenance and monitoring period. The Project Biologist will possess specific knowledge and project-level experience with habitat restoration projects. The Project Biologist will possess at least 5 years of habitat restoration experience in Southern California.

Bacara will hire a project installation contractor and maintenance contractor (Restoration Contractor). Bacara may choose to hire a maintenance contractor separately from the installation contractor. The Restoration Contractor will be a qualified, licensed company, preferably one that has experience in habitat restoration and maintenance. During the implementation phase, the Restoration Contractor will be responsible for performing project implementation, including the above-ground temporary irrigation, plant installation, any necessary grading, erosion control, and other tasks as directed by the Project Biologist and as described in this document and construction drawings. During the long-term monitoring phase, the Restoration Contractor will be responsible for maintenance and operation of the irrigation system, weed control, erosion control, trash removal, replanting, and other tasks as directed by the Project Biologist and as described in this document.

1.2 Project Description

As part of the original permitting of the resort, the project was required to provide certain public amenities adjacent to the beach on the southeastern portion of the property, east of Tecolote Creek. Included in the public amenities are public trails to and along the beach, and a 2,050 Square Foot

(SF) Haskell's Beach House, which is comprised of approximately 400 SF of public restrooms and approximately 1,640 SF storage/snack bar uses. An outdoor shower area of approximately 300 SF near the restroom/snack bar building.

Ongoing beach erosion at the location of Haskell's Beach House, particularly the winter storms of 2015-2016, significantly eroded the beach bluff, exposing the southerly edge of the Beach House and its foundation to the ocean. In order to protect the Beach House from destruction, the City and the Coastal Commission issued emergency permits for installation of 190 lineal feet of temporary shoreline protection device, consisting of 2 foot wide by 2 foot high by 5.5 foot long precast concrete rectangular blocks placed in five tiers, with 600 sandbags and plastic sheeting, and protective fencing, to protect the existing Beach House while permits are processed for the new Beach House facilities.

In order to satisfy the requirements of the original permit for the hotel and continue providing public amenities at Haskell's Beach, the facility must now be relocated.

The project therefore includes the following:

(1) New Beach House construction

The new Beach House will be comprised of one (1) single-story structure of 325 SF in size which will contain 4 public restrooms and storage. The outdoor shower will occur on one end of the building, and drinking fountain on the other.

The new facility is proposed to be located east of the current location and further inland, acknowledging potential sea level rise concerns. Specifically, it will be sited adjacent to the eastern edge of the pavement along the existing paved emergency access road.

To properly drain the site, and minimize the area of disturbance, a small retaining wall is proposed east of the proposed structure. The wall is proposed to be approximately 65 feet long, ranging in height from 0', or existing grade, to a maximum of 3 feet. Between the retaining wall and the structure, a 60 linear-foot (LF) concrete v-ditch will be installed.
Estimated earthwork for the new restroom structure is 110 CY cut and 10 CY fill. The footprint of the concrete pad housing the proposed structure, showers, drinking fountain and foundation is approximately 750 SF.

(2) Food Truck

In order to continue to provide food offerings consistent with the current Snack Bar operation, a resort-operated Food Truck is proposed. The Food Truck will provide the same food and beverage offerings as the existing Snack Bar.

No new pavement or disturbance is proposed to accommodate the Food Truck. The Food Truck will be parked on the existing paved surface of, and in a striped parking space of approximately 15x30 feet on the existing emergency access road. It will be available during the required hours and times of the year, and be returned to the main hotel area to be restocked and stored in an existing improved staging area near the hotel's in-room dining kitchen which occurs in the existing development area of the hotel property. It will be stored there overnight and when not in use. The Food Truck parking spot will be clearly marked and occur in the location shown on the accompanying plans.

The Food Truck would be restocked on a daily basis. The Food Truck will be "marked with signs designating that it is open and available to the public when open to any customer", and "appropriately stocked to serve customers and open at all reasonable hours, at a minimum during all days between Memorial Day and Labor Day, and Holiday weeks such as Christmas and Spring Break, and Holiday weekends," consistent with the requirements of the current approvals by the City and Coastal Commission.

Replacing the existing Snack Bar with a Food Truck minimizes the total amount of new disturbance and new impervious area associated with the replacement project. The utilization of a removable Food Truck is consistent with Sea Level Rise guidance policies that discourage construction of new permanent structures in potential hazardous areas.

One or more employees will be inside the food truck to serve visitors to the beach (the general public and hotel guests). The Food Truck would be attended by hotel staff at all times and would be immediately moved or removed if required or needed for emergency response vehicles and personnel.

(3) ADA and Public Accessibility

The existing public parking lot for Haskell's Beach includes ADA Accessible parking spaces with a ramp up to the start of the dirt path which leads through the tennis courts and to the beach. In addition, there are several existing dirt paths around the existing Beach House. Given the sensitive habitat and resources, these paths are not able to be graded to strictly adhere to ADA accessibility standards. Instead, the hotel provides carts driven by hotel staff along the paths to assist guests and members of the public who may need additional assistance accessing the beach from the parking lot or from the hotel.

The path from the public parking lot to the beach area occurs in a north-south direction. No change to this segment is proposed. Two main paths, and a few less formal paths, exist around the existing beach house more or less in the east-west orientation connecting the north-south path to the existing emergency access road to the east. The main east-west path occurs north of the demolition/restoration area and will not be affected by the project.

Replacement of the segment of east-west path on the southern (ocean front) side of the existing Beach House is proposed to occur across the restoration area. This segment will be not be less than

5.0 feet wide and will have informational signage in two locations. The path will be approximately 2.0 feet northward of a buck and rail fence described separately. Access from the path/structure elevation down to the sandy beach currently occurs in two locations at the west and east ends of the beachfront area. No change to these points is proposed. The western access is an informal walking path down the scarp. This point regularly erodes and changes with the tide and storm events. The eastern access occurs down the emergency access ramp area which is regularly maintained to accommodate emergency vehicle use and used by the public.

The proposed replacement bathroom structure, shower and drinking fountains meet ADA accessibility standards. Access to the facility will occur via the existing and replacement segments of dirt path, and across the existing emergency access road. Hotel employees will continue to be available to assist guests and members of the public needing assistance across the paths. Employees within the proposed Food Truck will be able to exit the Truck and assist the public and hotel guests as needed. Only employees will be allowed inside the proposed Food Truck.

(4) Utility connections to the new restrooms and food truck

Utilities to the existing Beach House occur primarily under the existing paved emergency access road. There are also communications lines that run from the general location of the tennis courts, south to the NW corner of the existing beach house. These lines will be abandoned. The new communications lines will run from Hollister Avenue within the existing paved emergency access road. The other new utility laterals are anticipated to connect from the existing lines in the paved access road. With the exception of the existing reclaimed water line, the existing utilities serving the existing Beach House location will be removed. The reclaimed water will be used for the restoration planting.

Utilities provided to the food truck parking area include electric service.

(5) Fire Department access improvements

The Santa Barbara County Fire Department uses an area south of the existing paved emergency access lane as a Water Rescue Attack Point for emergency access to the beach. This access is also used by the State Lands Commission and City for beach hazard removal activities that occur on an almost annual basis. The project proposes to continue maintaining the earthen slope for these purposes. Estimated earthwork to regrade the slope would be approximately 10 CY of cut and 5 CY of fill, and would vary depending on site conditions at the time of maintenance.

(6) Maintain emergency and public access during construction

Public beach access and emergency access will be maintained during construction and demolition. Construction fencing will be erected to ensure public safety during construction and demolition activities, while not unreasonably interfering with beach and bluff trail access.

(7) Demolition of existing structure

Once the new Beach House is completed and operational, demolition of the existing facilities will begin. The showers, the Beach House structure, and its foundation along with underground utilities (domestic water, sewer, etc.) and associated infrastructure (e.g. electrical vault) in the immediate area will be removed, with the exception of the existing reclaimed water line.

(8) Potential to encounter contaminated soils during demolition or construction

The hotel property was historically used for oil and gas uses and the area proposed for demolition and construction is also currently used as a restroom facility. Although additional study has been done and no evidence of contamination is known or expected to occur or be encountered in this area, the potential--however low--still exists to encounter contaminated soils during construction and demolition.

During construction, a Santa Barbara County Public Health Division-approved Soil Management Plan will be implemented under the supervision and direction of a California Professional Geologist or Engineer. The demolition and grading plans include a note that the project is subject to special requirements for the purpose of worker and environmental safety and protection, and directing the contractor and employees to the Plan.

(9) Installation of fill material to avoid potential resources

In order to limit ground disturbing activity and avoid any possible impacts to potential cultural resources, fill soil will be placed in the area formerly occupied by the Beach House facilities and proposed for restoration planting (approximately 6,500 square feet). The proposed fill soil consists of a geofabric layer base, with 4" of indicator soil on top. Where needed for plant material, another 4" to 14" of fill soil will be provided. The depth of fill soil will transition at the edges to meet existing grade and to maintain connectivity to existing trails, minimizing impacts to existing vegetation. The limits of the fill area and detail are shown on sheet 6 of the Civil plans by Stantec dated September 16, 2019. Approximately 10 CY of cut and 460 CY of fill is estimated for this purpose.

All construction activity in native soil will be monitored by a qualified Archeologist and Native American monitor consistent with the recommendations in the Extended Phase I Archeology Investigation Report (Dudek 2019).

(10) Demolition Habitat Restoration Plan for the existing Beach House

After the existing Beach House is demolished and local native fill soil and liner is in place, native habitat and informational signage is proposed to be installed. A trail will be placed near the bluff to connect to the existing east-west bluff trail and beach access trail from the public parking adjacent to the tennis courts. The new trail segments will be consistent in material to existing trail segments. Please refer to the Haskell's Beach House Demolition Habitat Restoration Plan by Dudek dated October 2019 for additional details.

The existing picnic area to the west of the restoration area, and all other areas outside the project limits shown on the proposed project plans will remain as-is.

(11) Installation of a buck and rail fence near the scarp edge.

As a public safety measure, a buck and rail fence is proposed along the bluff's edge located seaward and directly adjacent to the habitat restoration area. The fence is designed to sit on top of the ground, as opposed to utilizing a typical fence post foundation with concrete footings. Informational signage will be affixed to the buck and rail fence as well, further avoiding ground disturbance. The buck and rail fence detail is shown on sheet 6 of the Civil plans by Stantec dated September 16, 2019. This fence can be relocated inland in the future as necessary due to sea level rise or in response to coastal erosion processes.

(12) Removal of the temporary shoreline protection

Upon completion of construction of the new restroom facility, and the demolition of the existing Beach House area, the temporary shoreline protection device will be removed. Removal of the temporary protection is expected to require approximately 3-4 weeks of work. In order to prevent additional slope damage or erosion, some equipment will need to operate from the dry sandy beach. The total amount of work performed with equipment on the beach is anticipated to be less than 15 working days which may occur over a period of 4-6 weeks depending on weather and tides.
Once the device is removed, the exposed scarp will be left to erode naturally. Removal is proposed to occur in the spring in order to avoid winter storm surge conditions and give the restoration planting the best opportunity to be established before the next winter storm season.

1.2.1 Site Location

The Ritz-Carlton Bacara was constructed in 2000 and is located at 8301 Hollister Avenue, in the city of Goleta, in Santa Barbara County. The 73-acre property runs east and west for approximately 3,000 feet immediately inland of Haskell's beach, which constitutes the southern boundary, with US Highway 101 and the southern boundary of the Southern Pacific railroad right of way making up the northern boundary. The project site is located at Haskell's beach, immediately inland of the mean high tide line and is centered at approximately 34º 25' 52.93"N 119º 54' 59.40"W (Figures 1 and 2). The restoration site is currently developed with a beach house structure consisting of public restrooms and private space used for storage and snack bar purposes, showers surrounded by an area used for recreational purposes by the public and hotel guests. as recreational land accessible to the general public.

1.2.2 Existing Conditions

The Biological Resources Assessment for the Bacara Beach House Relocation Project prepared by Kevin Merk Associates, LLC (KMA 2017) provides details on the existing conditions within the

restoration project site as well as the overall demolition and relocation project site. This report includes an assessment of impacts associated with the overall project and includes recommended mitigation measures to avoid and minimize impacts to biological resources during demolition project implementation.

Dudek. 2010a. Biological Resources Technical Report for the Bacara Resort and Spa Phase Completion, City of Goleta, California

Dudek. 2010b. Bacara Completion Phase I Environmental Impact Report.

Dudek. 2013. Bacara Consent Restoration Plan. August.

Dudek. 2018a. Supplemental Biological Technical Report for the Ritz-Carlton Bacara Beach House Demolition and Replacement Project, Santa Barbara County, California

Dudek. 2018b. Monarch Butterfly Surveys for the Beach Facilities Project at the Ritz-Carlton Bacara.

Dudek. 2018c. Environmental Sensitive Habitat Area Review and Proposed Setback Reduction for the Ritz-Carlton Bacara Beach House Demolition and Replacement Project and Emergency Permit (16-002 EMP)

1.3 Goals of the Restoration Plan

The primary goal of this restoration plan is to successfully establish native vegetation within the Haskell's beach house demolition area that is consistent with the continual use of the site as a recreational area for the general public with the understanding that the project is part of an adaptive managed retreat from the eroding shoreline. Integral to this goal is the establishment of native vegetation that is self-sustaining in the near future, but will eventually be overtaken by sea-level rise and storm surf that contribute to the shoreline retreat. The restoration methodology and specifications provided in this Restoration Plan are targeted to achieve this goal while also providing the information required by the CCC in the incomplete letter and subsequent comments noted above. As requested, the restoration plan includes the establishment of coastal dune habitat in the southern and western low-lying portions of the site, salt grass flats in the northern and northeastern portions of the site, as well as a transition zone between these two distinct habitat types. In addition to the native habitat establishment, the restoration plan also includes a foot path and interpretive signage that will be installed between the salt grass flats and transitional habitat to promote public access. Landscape design plans and specifications will incorporate the overall methodology into construction documents to be utilized by the Restoration Contractor during site preparation and installation to ensure that the restoration project site is constructed in conformance

with the intent of the Restoration Plan. Long-term maintenance and monitoring detailed herein will guide the Restoration Contractor and Project Biologist in the management of the restoration project site to achieve the primary goal.

SOURCE: NAIP 2016

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Haskell's Beach House Demolition Restoration Plan

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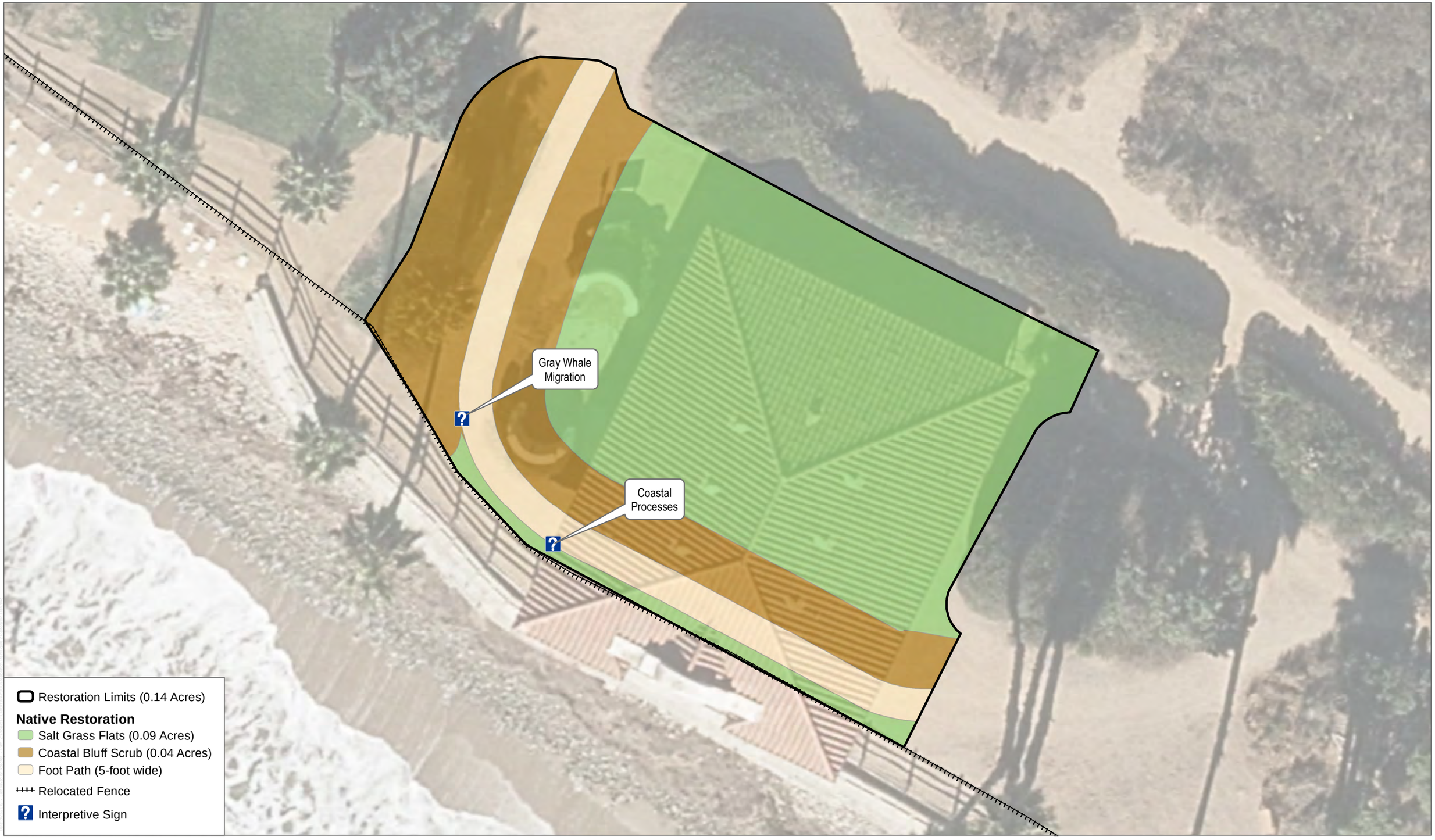

SOURCE: SOURCE: CIRGIS 2017

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FIGURE 2

Restoration Project Site

Haskell's Beach House Demolition Restoration Plan

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2. RESTORATION IMPLEMENTATION

The implementation of the restoration project will include four main components; (1) grading following demolition, (2) import of sand and fill material (i.e., 460 cy of fill to the restoration area), (3) above-ground temporary irrigation system installation, and (4) revegetation with native species. The sub-sections below provide details on implementation of each component of the restoration project.

2.1 Grading to Establish Restoration Site and Plantings

Following removal of the existing structure and foundation, grading and import of local fill soil will be necessary to match the existing elevations adjacent to the restoration project site. Salvaged quality soil from excavation and grading will involve the temporary stockpiling of native soil to the greatest extent possible; however, import of additional soil may be necessary from local source(s) based on the deficit created by the removal of the existing structure and foundation. Since the beach house relocation site will be prepared simultaneous with the demolition of the existing structure, it is estimated that sufficient soil will be excavated and transported from the new building pad to the demolition site. The grading and restoration will take place within approximately 0.14 acre including a 5-foot wide path, as shown on Figure 2. Grading activities will be completed in conformance with the following specification:

1. Grading will be completed with tracked equipment to minimize over compaction of the soil and will be deemed complete when the elevations match those on the landscape design plans.

Fill material will adhere to the following specifications:

1. The preferred fill is from an on-site source. Preparation of building pad for the relocated beach house is expected remove native enough soil to fill the void left from removal of the foundation of the existing beach house and is suitable for native habitat restoration.

2. Any imported soil material will consist of Goleta loam or similar loam soil type will be sourced from the Santa Barbara region. Any imported sand material will be sourced from the Santa Barbara Region.

3. Imported soil and sand material shall be free of large organic debris (e.g. woody material) and have similar chemical composition and pH to the native soil present within the project site. Soil suitability analysis conducted by a qualified laboratory will be necessary to confirm the chemical composition of the native and imported soil material to ensure compliance with these specifications.

4. Any soil amendments added to the restoration area will consist of organic material for incorporation into soil including compost, humus (wood based), and rice hulls.

2.2 Irrigation System Installation

An above-ground temporary irrigation system will be constructed prior to the installation of native plantings. The irrigation system will consist of an above ground mainline and lateral lines with pop-up overhead spray heads for 100% head-to-head coverage of the salt grass flats and coastal bluff scrub portions of the restoration project site. The mainline of the temporary irrigation system will be connected with the existing recycled water line at the Ritz-Carlton Bacara. Prior to plant installation, the entire irrigation system will be pressure tested to ensure that all connections are stable. To reduce the potential for unnecessary damage to the irrigation system, irrigation spray heads will be demarcated with highly visible flagging. Additionally, the irrigation system shall be frequently inspected by the Restoration Contractor for line breaks, leaks, and other incidents that could cause a release of water. The above-ground irrigation system will be temporary in nature and removed once the plantings are established, or after two (2) years of the long-term monitoring timeline.

2.3 Restoration Plantings

Following completion of grading and installation of the above-ground temporary irrigation system, the revegetation component of the restoration project will begin. As the restoration project site will have been recently graded, non-native species are not anticipated to be present; however, should a time lapse occur between grading and revegetation, and non-native species begin to recruit within the restoration project site, selective weed removal may be necessary. Any weeding will be accomplished primarily by hand pulling due to the small overall size of the restoration project site. Particularly problematic non-native species may be controlled via herbicide spot-spraying, if determined to be necessary by the Restoration Contractor in coordination with the Project Biologist.

The revegetation will consist of two zones: salt grass flats and coastal bluff scrub. The salt grass flats will consist of a very limited plant palette based on the anticipated use of the restoration project site as a public recreation area consistent with adjacent recreational areas. Low-growing, hardy native grass and herbaceous species are included in this portion of the restoration project as they will be subject to human use including trampling and mowing activities. The coast bluff scrub will consist of a diverse assemblage of common shrubs found in coastal bluff and terrace habitats along the Ritz-Carlton Bacara and Santa Barbara's Gaviota Coast and beyond. It is anticipated that the restoration project site will be temporarily fenced until native vegetation has sufficiently established, as determined by the Project Biologist. However, a trail will allow movement of visitors through the restoration site to view the habitat and informative signs and provide access to

the beach via the existing connecting trails. Depending on the timing of the revegetation installation, this establishment may take up to one year. These species are identified in Table 1. Planting will be accomplished via installation of liner grown individuals, as opposed to seed, and are anticipated to establish more readily and outcompete non-native recruits. Plantings will be installed by hand by the Restoration Contractor and under the supervision of the Project Biologist based on the specifications included below and in the landscape design drawings (Appendix A). Plant quantities will be determined during the development of the landscape design plans.

Table 1
Revegetation Plant Palette

Scientific Name	Common Name	Recommended Container Size	Average Spacing	Percent Relative Composition
Salt Grass Flats (0.09 acre)				
Distichlis spicata	saltgrass	liner or 2-inch pot	2 feet	80
Frankenia salina	alkali heath	liner or 2-inch pot	random	20
			Total Plant Composition	*100%*
Coastal Bluff Scrub (0.04 acre)[1]				
Artemisia californica	California sage	4-inch or 1-gallon	4 feet	20
Atriplex lentiformis	big saltbush	4-inch or 1-gallon	3 feet	20
Baccharis pilularis	coyote brush	4-inch or 1-gallon	4 feet	5
Encelia californica	California brittlebush	4-inch or 1-gallon	4 feet	20
Eriogonum parvifolium	seacliff buckwheat	4-inch or 1-gallon	3 feet	10
Isocoma menziesii	coastal goldenbush	4-inch or 1-gallon	2 feet	15
Rhus integrifolia	lemonade berry	4-inch or 1-gallon	5 feet	10
			Total Plant Composition	*100%*

[1] All species found naturally along the coastal bluffs of Haskell's Beach and the East Terrace at the Ritz-Carlton Bacara and are common along Santa Barbara County's Gaviota Coast.

A contracting nursery will legally obtain plant materials (propagules and seed) from plant materials preferably originating naturally within Santa Barbara County for all plants used within the restoration project site. However, should plant material from Santa Barbara County not be available, materials originating from San Luis Obispo County or Ventura County may be utilized as an alternative. The genetic stock will be pure; no hybrids or nursery varieties will be accepted. The contracting nursery will propagate native plants under a contract-growing agreement per the plant palettes and source material specifications. The contracting nursery will be given prior notice so as to allow for sufficient lead time to provide for successful propagation and preparation of locally genetic stock plant materials for transport to the restoration project site for installation.

The Restoration Contractor will enter into the contract growing arrangement with an experienced, qualified, and licensed nursery immediately upon approval of this Restoration Plan by the CCC. The contracting nursery may also propagate from locally, legally collected seed and propagules (i.e. cuttings). All seed and propagules will be certified as originating from Santa Barbara County genetic stock.

2.4 Public Access and Signage

The signage component of the restoration project is designed to be consistent with the existing public access and signage plan for the Ritz-Carlton Bacara. The interpretive signs prescribed in this section will be installed at two (2) distinct locations, as shown on Figure 2. The interpretive signage to be installed will describe coastal processes and gray whale migration. The signage will be designed to appear similar to the existing signage to ensure continuity throughout the public access areas. An example of the gray whale migration from a project in the City of Pacifica is included below. This example will be adapted for use on the restoration project site.

3. EROSION CONTROL

Soil disturbance will be kept to the minimum necessary during demolition of Haskell's beach house and grading of the restoration project site. It is anticipated that an erosion control plan or stormwater pollution prevention plan (SWPPP) will be prepared for the demolition and initial grading, snack bar and bathroom relocation, and revegetation portions of the project. Following revegetation installation, limited erosion control devices may be necessary to control minimize erosion and sediment transport. The primary erosion control device is anticipated to be straw wattles, which are expected to be placed around the perimeter of the restoration project site to preclude sediment transport into adjacent areas. Once the native plantings have established and stabilized the restoration project site, the erosion control devices will no longer be necessary. The Restoration Contractor, in coordination with the Project Biologist, will be responsible for installing and maintaining erosion control devices throughout the duration of the installation and long-term monitoring period.

Erosion control materials will be bio-degradable. Erosion and sediment control devices will be checked and maintained prior to and after all rainfall events. Temporary erosion control measures will be the minimum necessary to control erosion and will not bury or otherwise destroy native plant species or their habitats.

3.1 Best Management Practices

The following BMPs are proposed for implementation of the habitat restoration and are subject to change once permits are received from the City of Goleta and California Coastal Commission:

- The hours of operation of equipment and contractors will be limited to 8:00 am to 6:00 pm, Monday to Saturday.
- All ingress and egress routes for the equipment and contractors will be limited to previously disturbed areas.
- During removal efforts, no heavy equipment will be parked or serviced within 20 feet of native habitats or sensitive biological resources to avoid the accidental spilling or leaking of hazardous materials (e.g., oil, fuel, hydraulic fluid, etc.) into these areas.
- All equipment will be removed from the sites at the end of each day and/or stored in the designated staging areas at a minimum of 20 feet away from native vegetation or sensitive biological resources. All equipment to be temporarily stored on the sites will be placed inside gated and locked fences. Equipment left overnight will have standard BMPs in place (i.e. drip trays, spill kits, etc.).

- All non-native plant materials or debris will be removed from the sites at the end of each week. All materials will be disposed of in areas officially designated and properly equipped for the processing of such organic materials.
- The ultimate disposal of landscape components will be a recycling facility located outside of the Coastal Zone; the County of Santa Barbara South Coast Recycling and Transfer Station located at 4430 Calle Real in Santa Barbara, California.

4. AVOIDANCE OF SENSITIVE BIOLOGICAL AND CULTURAL RESOURCES

4.1 Biological Resources Avoidance Measures

4.1.1 Adjacent Native Habitat

In accordance with the mitigation measures included in the *Biological Resources Assessment for the Bacara Beach House Relocation Project* (Kevin Merk Associates, LLC 2017) and *Supplemental Biological Technical Report for the Ritz-Carlton Bacara Beach House Demolition and Replacement Project, Santa Barbara County, California* (Dudek 2018), prior to construction, the Project Biologist working with the project construction team shall delineate the limits of construction and restoration. Orange protective fencing or equivalent shall be installed along the perimeter of the native habitat areas to be preserved and protected.

4.1.2 Nesting Birds

Nesting birds are protected by the Federal Migratory Bird Treaty Act and Sections 3503, 3503.5, and 3513 of the Fish and Game Code. Although project restoration/construction activities, including but not limited to initial ground disturbance, are not anticipated to occur within the bird breeding season (February 1 through September 1), should project activities commence during the breeding season, the following standard measure will be implemented to minimize impacts to nesting birds:

- In accordance with the mitigation measures included in the Biological Resources Assessment for the Bacara Beach House Relocation Project prepared by Kevin Merk Associates, LLC (KMA 2017), no more than two weeks prior to initiation of ground disturbance and vegetation removal, a nesting bird pre-construction survey will be conducted by a Project Biologist within the disturbance footprint and a 200-foot buffer. If nests are found, a buffer ranging in size from 50 to 250 feet, depending upon the species and the proposed work activity will be determined and demarcated by the Project Biologist with bright orange construction fencing. No ground disturbing activities will occur within this buffer until the Project Biologist has confirmed that breeding/nesting is completed and the young have fledged the nest. Nesting bird surveys are not required for construction activities occurring between September 2 and January 31.

4.1.3 Additional Restrictions During Revegetation Implementation

During revegetation, the following activities will be prohibited:

- Pets or domesticated animals are not allowed on the restoration project site.

- No machinery fluids will be added or changed on the restoration project site; refueling of machinery will occur within designated areas, and only over areas with a non-permeable membrane installed.
- Only machinery necessary to perform the removal of non-native species and the installation of native species will be allowed on-site, and each machine will be removed immediately after its task is complete.
- Preparation of the restoration area will be limited to areas designated by the Project Biologist as containing weedy, non-native, or invasive plants, which will be removed.
- All onsite features to be preserved (including adjacent native habitat areas) will be protected and avoided at all times.

4.2 Cultural Resources Avoidance Measures

An Archaeological Specialist and a Native American Monitor will be present at the location of any activities to be conducted pursuant to this Restoration Plan which are likely to result in the excavation and movement of soils currently on-site or which includes the any materials from within the Restoration Area to be removed from the site.

Additional avoidance measures for cultural resources are expected as an outcome of consultation between the Tribe, Archeological Specialist, and permitting agencies.

5. MONITORING DURING GRADING AND REVEGETATION

5.1 Restoration Area Installation Inspections by Project Biologist

The Project Biologist will make regular site observations of revegetation activities throughout the duration of revegetation installation. The Project Biologist will visit the restoration project site not less than once per week during grading and plant installation activities and will review all such activities for conformance to this Restoration Plan and the requirements of landscape design drawings (Appendix A). Each site visit will be documented in an observation report. Photo-documentation of site conditions will be conducted on not less than a quarterly basis.

5.2 Quality Control Procedures

The Restoration Contractor will be responsible for conformance with this Restoration Plan. The contract documents include detailed graphical construction plans and written specifications that are in substantial conformance with the information and direction contained herein. The contractor's responsibility will continue through the post-installation, 120-day plant establishment period, as well as the maintenance and warranty period. Final acceptance of the work of the Restoration Contractor will not be granted by the Owners/Respondents until written notification is received from the Project Biologist, certifying satisfactory completion of all required installation and establishment tasks as prescribed in Section 2 and defined in the Revegetation Contract documents.

Actual on-the-ground soil/sand placement, planting, irrigation, and weeding activities may be performed by non-licensed persons. However, a person holding a valid California landscape contractor's license will be present to oversee all restoration work other than routine hand watering and general observation of plant status.

After initial installation and completion of the 120-day plant establishment period, the Revegetation Contractor will, upon the request of the Owners, enter into a Landscape Maintenance Agreement for a period of up to five (5) years, under which the Restoration Contractor will provide landscape maintenance services as directed by the Project Biologist. Upon approval by the CCC Executive Director, the Owners may choose to hire a maintenance contractor that is separate from the Restoration Contractor.

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6. SUCCESS CRITERIA AND PERFORMANCE STANDARDS

The Restoration Site vegetation will be evaluated in relation to performance standards established and listed below in Table 2. Due to the goal of the Restoration Plan to establish native vegetation consistent with recreational use by the general public, the success criteria are limited to native and non-native species cover targets. Performance standards and success criteria are separated by habitat type and are based on cover values of similar intact native habitat. As the salt grassland flats are anticipated to be utilized by the public as a picnic/ recreation area, no specific reference sites were identified. However, the coastal dune habitat is intended to support dune mat vegetation as described in *A Manual of California Vegetation, 2nd Ed.* (Sawyer et al. 2009) and reference sites for this vegetation community include Sands Beach northwest of Coal Oil Point, McGrath State Beach, Rancho Guadalupe Dunes Preserve, and Morro Dunes Natural Preserve. Transitional habitat contains a mix of species from the other installed habitat types and is intended to buffer the more heavily utilized salt grassland flats and less utilized coastal dunes; however, the entirety of the restoration project site will be accessible to the public and some degree of human intrusion is expected. The annual performance standards will be utilized to assess the year-over-year progress and development of the restoration project, and are regarded as interim project objectives designed to achieve the final goals. Fulfillment of these criteria will indicate that the habitat restoration efforts are progressing toward the values that constitute the long-term goals of the Restoration Plan. If restoration efforts fail to meet the performance standards in any one year, the Project Biologist will recommend remedial actions, including additional plantings, as needed, to be implemented during the following fall/winter that will improve the vegetation coverage to a level in conformance with the ultimate success criteria.

Table 2
Restoration Project Performance Standards and Success Criteria

Year	Percent Absolute Native Cover	Percent Absolute Non-Native Cover
Salt Grassland Flats		
1	30%	10%
2	50%	10%
3	70%	10%
4	75%	5%
5	75%	5%
Coastal Bluff Scrub		
1	30%	10%
2	50%	10%
3	70%	5%
4	80%	5%
5	90%	5%

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7. MONITORING PLAN

The purpose of the Monitoring Plan is to provide guidelines for maintenance and biological monitoring of the restoration project site. Maintenance activities will be completed by the Restoration Contractor. Because a goal of the Restoration Plan is to establish a natural system that can support itself with little or no maintenance, the primary effort of the Restoration Plan is concentrated in the first two seasons of plant growth following the revegetation effort, when weeds (non-native invasive plant species) can easily out-compete native plants. The intensity of maintenance activity is expected to subside each year as the native plant materials become more established and local competition from non-native plants for resources on the site is minimized through direct removal of non-natives from the site. However, maintenance will include periodic weeding as outlined herein. The risk of large-scale invasion of weedy non-native plants onto the site can be adequately minimized during the first two to three years (approximate) by adhering to the specific maintenance and management guidelines that are presented below.

7.1 Habitat Monitoring

All native vegetation planted in the restoration project site will be subject to the requirements of this Restoration Plan. The Project Biologist will conduct the monitoring and direct the maintenance activities required by this Plan for five (5) years following the initial planting of the native species, or until the CCC acknowledges the successful completion of the Restoration Plan.

Monitoring will consist of quarterly qualitative field monitoring visits conducted by the Project Biologist to determine percent cover of native container plant species as well as non-native recruits. Evaluation will be based on quarterly qualitative visual assessments for years one (1) through five (5). Annual point-line transect analysis will be used for the quantitative sampling in years two (2) through five (5). Quarterly qualitative monitoring will occur in January, April, July, and October; annual quantitative monitoring (i.e., point intercept transects) will occur in April. Monitoring during year two (2) will be expected to indicate a recommendation to discontinue irrigation. As with qualitative field sampling, transects will be used to determine compliance and achievement of the restoration performance and success criteria (percent cover). Remedial measures will be recommended if vegetation cover do not achieve the established performance standards in any year of the long-term monitoring period. However, the Project Biologist may also recommend remedial measures if it is determined that the restoration project is not on track to achieve the final success criteria. Permanent photo-documentation stations will be established to record the progress and plant establishment over the five-year monitoring period.

The Project Biologist will also note biotic or abiotic factors that may affect the restoration project site's performance, positively or negatively. For container plants, the presence/absence of new shoots and floral inflorescences will be recorded, especially during spring monitoring. Visual

evidence of use of the site by wildlife species will also be recorded. As the restoration project site is ultimately anticipated to be utilized as a recreation area by the general public, the Project Biologist will take note of human disturbances to the restoration plantings. Any damage or deficiencies (e.g. decline in cover of native species) will be noted in site observation reports and appropriate remediation will be implemented.

Quantitative field monitoring consists of collecting plant occurrence data (plant species present) along point-intercept transects to be established at representative locations within the restoration project site. The number and length of transects will be based on the overall restoration site size to achieve representative sampling.

Transect locations (start and end points) and orientation (i.e., direction) will be determined through randomly (non-biased) selection using GIS tools (adjusted, as necessary, in the field). Transects will also be positioned in non-random locations and orientations, selected by the Project Biologist in the field, that best captures site conditions and revegetation. The goal is to ensure the data collected is indicative or truly represents the status of revegetation; it is also that transects are placed in appropriate locations that will capture the progression of plant cover over five years to demonstrate, without doubt, that the performance standards and success criteria have been met. Transect lengths will run the length and of the habitat types within the restoration project site.

All qualitative and quantitative analyses will be included in annual monitoring reports, discussed in section 7.4, below.

7.1.1 Replacement Actions

If container stock experiences greater than 20-percent mortality, the Project Biologist may recommend, and the Owners may require, additional container stock plantings, so as to achieve the relevant success criteria as specified below.

7.2 Habitat Maintenance Activities

The following maintenance activities will be conducted during implementation and monitoring of the restoration project site:

- Following initial container plant establishment, irrigation from May to November shall be minimized to allow plants to experience normal drought cycles and to promote appropriate root growth. Irrigation may be used in winter months to simulate a normal or above normal rain season if natural precipitation is lacking. Irrigation volume will be gradually reduced over time to acclimate plants to a non-irrigated condition prior to complete cessation of irrigation. Irrigation shall last for a maximum of two years and be phased out per the direction of the Project Biologist.

- Natural recruitment of native species and installed native plants will not be cleared in the restoration project site during weeding activities.
- Trash and inorganic debris blown onto the site will be removed during regular maintenance visits.
- The site will not be fertilized during the maintenance period.
- Weedy non-native species may invade the restoration project site and become a problem before or during the establishment of native plants. Weedy non-native species will be hand removed as soon as they begin to invade and before they become too dense for hand extraction. Herbicide treatments may be necessary if the total removal of some plants is not possible, and shall only be performed with approval from the Project Biologist and any and all herbicides shall be applied by a licensed person in accordance with the manufacturer's instructions.
- No service vehicles will be allowed in the restoration project site at any time.
- Remedial container planting may be necessary following each monitoring stage, as directed by the Project Biologist.

7.3 Habitat Maintenance Guidelines

7.3.1 Dead Plant Replacement

Dead container plant materials will be replaced, as needed, with the same species and in the same size containers as originally specified in fall/winter each year. Replacement plantings will be installed at the recommendation of the Project Biologist and based on an assessment of the restoration project site in comparison to the native cover performance standards as detailed in Section 6.

7.3.2 Weed Control

The initial clearing and grading work will effectively remove invasive non-native plant species and is expected to dilute the existing weed seed bank to a level that will temporarily minimize weed species. Ongoing weed control activities will occur during the 120-day establishment period, and the five (5)-year maintenance period. Weed eradication will consist of the removal of selected non-native invasive plant species (i.e., seed heads, stems, roots), and all debris and slash generated from weed removal activities will be securely transported and disposed of offsite as described in Section 3.1.

Weed control measures will include the following: (1) hand removal and (2) herbicide application. Hand removal of weeds is the most desirable method of control and will be used around individual plant installations. Hand removal shall occur every other week during the 120-day plant establishment period. Weed plants shall be pulled when plants are less than 12 inches tall and/or prior to the formation of seed heads. Weeding shall be done once per month during the growing season and every three months outside of the growing season during years one through five. More frequent weeding may be conducted as directed by the Project Biologist to keep any weeds establishing on the site at manageable levels.

Chemical herbicide application can be used for invasive perennial species that are difficult to control by hand pulling. The Restoration Contractor will coordinate with the Project Biologist to identify specific sites where the systemic herbicide may be used. Any herbicide treatment must be applied by a licensed pest control applicator and in accordance with the manufacturer's instructions.

7.3.3 Clearing and Trash Removal

Cutting or clearing of any native vegetation will not be allowed within the restoration project site, except as directed by the Project Biologist. As the site will ultimately be used as recreation area for the general public, deadwood and leaf litter will be removed, as needed, to allow for human use of the site following initial native vegetation establishment. Trash will be removed from the restoration project site by hand on a regular basis, meaning no less than one-month intervals for the first year and quarterly thereafter. Trash consists of all man-made materials, equipment, or debris dumped, thrown, washed, blown, and left within the restoration project site.

7.3.4 Schedule of Maintenance Inspections

Maintenance activities will begin upon the installation of the container plant materials and will continue throughout the entire five (5)-year monitoring period, concluding after five years or when the Owners and CCC agree that the implementation of the Restoration Plan has been completed.

After the first summer following installation, all plants on the restoration project site will be checked for viability. If more than 20 percent of the container stock has not survived, the dead plant material will be removed and replaced with the same size material as was planted originally, based on the recommendation of the Project Biologist. Replacement planting will be implemented to expedite native plant establishment on the restoration project site. The Project Biologist will conduct inspections on a quarterly basis for the duration of the five (5)-year monitoring period. Recommendations for maintenance needs will be based upon site observations and will include items such as irrigation, weed control, and trash and debris removal.

7.4 Annual Reports

Monitoring reports will be submitted annually to the CCC, during the same one-month period of each year, for the five (5)-year monitoring phase. The annual monitoring reports will describe the existing conditions of the restoration project site, identify all issues observed as they apply to site conditions and the performance standards, and recommend remedial measures necessary for the successful completion and compliance of the Restoration Plan. Annual reports will be submitted on the anniversary of installation for the five (5)-year maintenance and monitoring period, currently estimated to be no later than December 31 of each year commencing in 2019 and ending by 2024, in accordance with the anticipated implementation schedule. Each yearly report will provide a summary of the accumulated data. Annual reports also will include the following:

- A list of names, titles, and companies of all persons who prepared the content of the annual report and participated in monitoring activities;
- A copy of the Restoration Plan and any subsequent modifications approved by the CCC;
- A description of the monitoring and maintenance methodology, including sampling procedures and frequency;
- Contingency plans to address potential problems with any of the Restoration Sites;
- Prints of biological monitoring photographs taken annually; and
- Maps identifying monitoring areas and weed removal areas as appropriate.

All annual reports will be sent to the following addresses and contacts:

California Coastal Commission
Attn: Michelle Kubran
Coastal Program Analyst
89 S. California Street, Suite 200
Ventura, CA 93001

7.5 Contingency Measures

If an annual performance standard is not met for the restoration project in any year, or if the final success criteria are not met, the Project Biologist will prepare an analysis of cause(s) of failure and will submit a Supplemental Restoration Plan for review and approval by the CCC. The Supplemental Restoration Plan will identify remedial contingency measures required to correct those portions of the restoration that have failed or are not in conformance with the original,

approved Restoration Plan. The contingency measures may include financial assurances to provide a cushion to account for unforeseen costs of management activities to be carried out in the event that a fire, landslide, extreme weather conditions, or other natural disaster should have a negative impact on the restored habitat during the monitoring period. Remedial actions will be carried out during the monitoring period if habitat quality is reduced due to the occurrence of fire and/or other natural disasters. Actions for habitat remediation may consist of minor restoration of habitat from the effects of erosion, replacement of mitigation planting mortality, unauthorized access, and/or removal of invasive plants; it is not considered ecological habitat restoration or creation. This task may include additional native planting soil preparation, BMPs, and/or weed removal, depending on the condition of remaining and adjacent habitats. Shoreline retreat is expected to continue below the restoration site where erosion of the beach and bluff is an ongoing process. No remedial action(s) will be necessary from the on-going shoreline retreat as this is an expected outcome long-term for the shoreline at Haskell's Beach.

Following approval of the Supplemental Restoration Plan by the CCC, the identified remedial contingency measures will be implemented until the goals of the original, approved Restoration Plan have been met to the satisfaction of the CCC. If the site has not met the final success criteria, the Owner's maintenance and monitoring obligations will continue for at least a period of time equal to that during which the project remained out of compliance, or alternative contingency measures implemented until the CCC gives final project compliance/approval. At the end of the five (5)-year monitoring period, a final detailed report prepared by the Project Biologist will be submitted to the CCC for final review and approval.

8. DOCUMENT PREPARERS

Dudek

John Davis, IV, MS, CE. Project Manager / Senior Coastal Ecologist

Randall McInvale, Restoration Ecologist

Kirsten Zecher. Cartography and Data Management.

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9. REFERENCES

Dudek. 2010a. Biological Resources Technical Report for the Bacara Resort and Spa Phase Completion, City of Goleta, California

Dudek. 2010b. Bacara Completion Phase I Environmental Impact Report.

Dudek. 2013. Bacara Consent Restoration Plan. August.

Dudek. 2018a. Supplemental Biological Technical Report for the Ritz-Carlton Bacara Beach House Demolition and Replacement Project, Santa Barbara County, California

Dudek. 2018b. Monarch Butterfly Surveys for the Beach Facilities Project at the Ritz-Carlton Bacara.

Dudek. 2018c. Environmental Sensitive Habitat Area Review and Proposed Setback Reduction for the Ritz-Carlton Bacara Beach House Demolition and Replacement Project and Emergency Permit (16-002 EMP)

Dudek. 2019. Extended Phase I Archeological Investigation Report for Ritz-Carlton Bacara Beach Facilities Relocation and Improvement Project

KMA (Kevin Merk Associates, LLC). 2017. Biological Resources Assessment for the Bacara Beach House Relocation Project, Goleta, Santa Barbara County, California.

Sawyer, John O., Todd Keeler-Wolf, and Julie Evens. 2009. *A Manual of California Vegetation*. 2nd edition. Sacramento, California: California Native Plant Society.

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ATTACHMENT F

— The Cultural Resources studies listed below are considered confidential. Confidential file access is only provided by appointment and demonstrated need only.—

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ATTACHMENT G

G-1. Removal of Temporary Shoreline Protection at the Bacara Beach House, Coastal Bluff Failure and Retreat Bacara Resort and Spa, Goleta, California.
Campbell Geo Inc.
May 18, 2016

G-2. Geotechnical Engineering Report, Ritz Carlton Bacara Beach House Relocation, 8301 Hollister Avenue, Goleta, California.
Earth Systems Pacific,
May 11, 2018.

G-3. Third Party Geotechnical Engineering Review Services, Proposed Beach House Replacement Project
Bacara Resort, Goleta, California.
Fugro
September 13, 2018.

G-4. Response to Third Party Geotechnical Review Comments,
Earth Systems Pacific
February 20, 2019

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ATTACHMENT G

G-1. Removal of Temporary Shoreline Protection at the Bacara Beach House, Coastal Bluff Failure and Retreat Bacara Resort and Spa, Goleta, California.

Campbell Geo Inc.

May 18, 2016

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CAMPBELL·GEO, INC.
ENGINEERING AND ENVIRONMENTAL GEOSCIENCE

May 18, 2016

CAA Planning, Inc.
65 Enterprise, Suite 130
Irvine, CA 92056

Attention: Ms. Shawna Schaffner

Subject: Removal of Temporary Shoreline Protection at the Bacara Beach House
Coastal Bluff Failure and Retreat
Bacara Resort and Spa
Goleta, California

Dear Shawna:

As you requested, here are a few comments pertaining to removal of the temporary shoreline protection at the Bacara Beach House at Haskell's Beach in Goleta.

In general, building foundations should be set back from adjacent slopes. The California Building Code (Chapter 18) provides a guideline that requires a foundation to be setback a minimum distance horizontally from the top of an adjacent slope, which should be shown to be in a stable configuration. Fill slopes are typically engineered to stand at 2:1, horizontal to vertical.

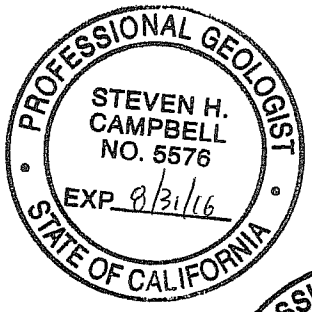
The attached photos show the shoreline erosion that occurred in late December/early January created a roughly 8 foot high, near vertical scarp that retreated back to within a few inches of the building columns at the Beach House. Also attached is a profile illustration with elevations based on the overall site survey conducted by the project land surveying/engineering firm, Stantec. From the photos and the profile, it is clearly evident that removing the concrete yard block shoring protection would remove the buttressing that is now supporting the foundations for the building columns.

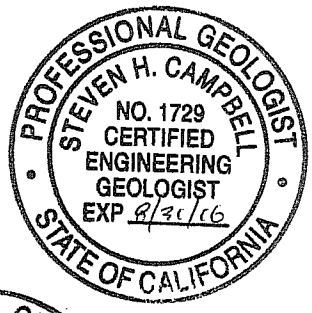
Without installing a fill slope, a wedge of beach cobbles, beach sand or some feature to buttress the erosion scarp, removing the yard blocks will create an unstable condition that

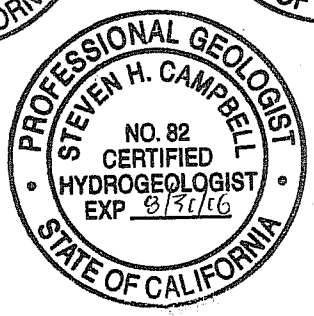
327-A EAST HALEY STREET SANTA BARBARA CALIFORNIA 93101-1712
TELEPHONE: (805) 965-5003 FACSIMILE: (805) 963-5371

could undermine the column foundations, lead to building failure, and create an unsafe condition for beach users.

Please contact me if you have any questions.







Sincerely,
Campbell·Geo, Inc.

Steve Campbell
Professional Geologist
State of California, #5576
Certified Engineering Geologist
State of California, #1729
Certified Hydrogeologist
State of California, #82

Attachments: photos (2)
plate (1)

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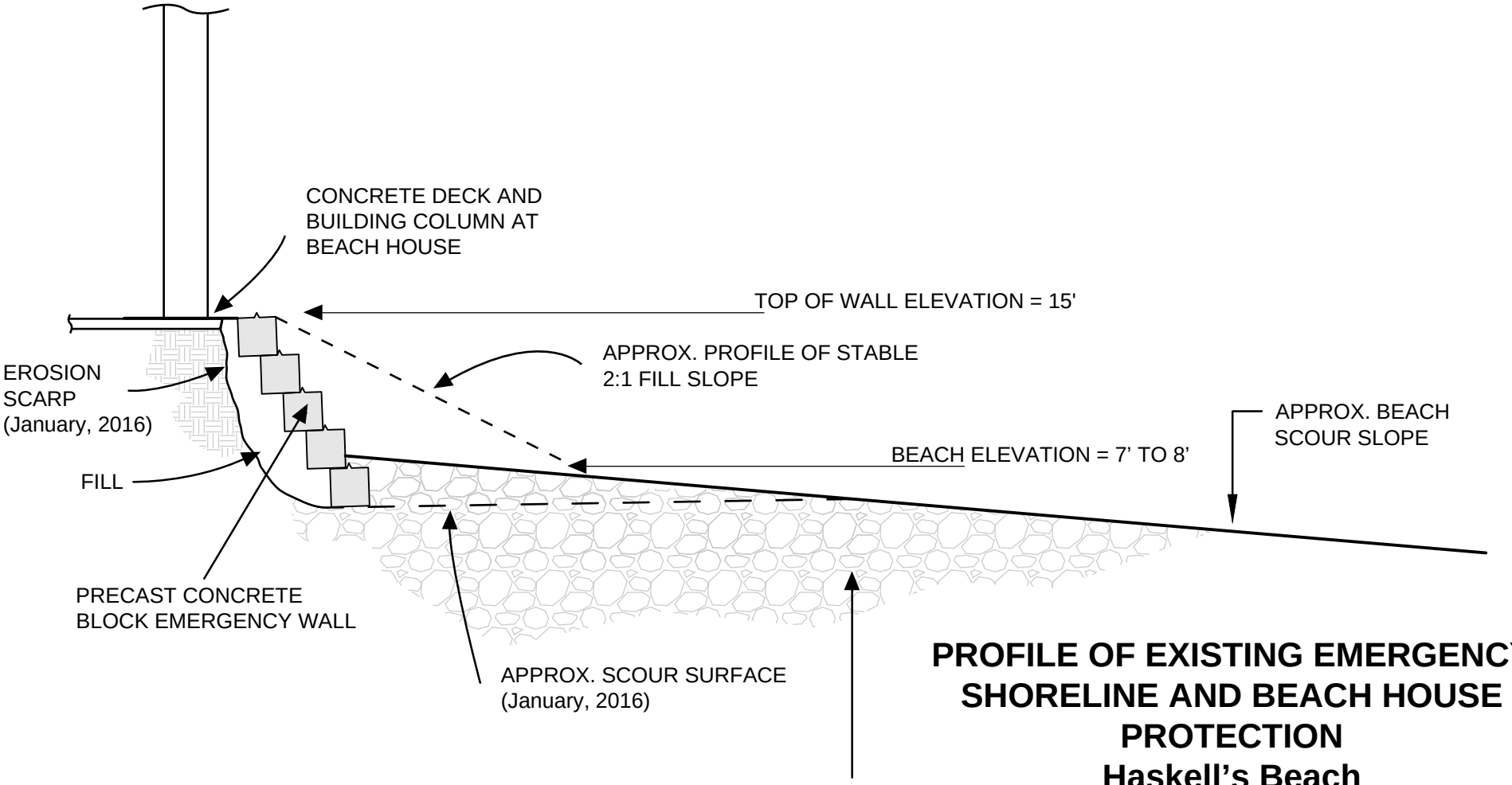

PROFILE OF EXISTING EMERGENCY SHORELINE AND BEACH HOUSE PROTECTION

Haskell's Beach

Bacara Resort
Goleta, California
March, 2016

Notes: Removal of concrete blocks will expose oversteepened slope and undermine the Beach House building columns

ELEVATION FROM STANTEC SURVEY CONDUCTED MARCH 16, 2016

CAMPBELL·GEO, INC.
ENGINEERING AND ENVIRONMENTAL GEOSCIENCE

Plate 1

January 8, 2016

January 19, 2016

Shoreline Retreat and Temporary Protection at the Haskell's Beach House Bacara Resort and Spa Goleta, California

Campbell Geo, Inc.

ATTACHMENT G

G-2. Geotechnical Engineering Report, Ritz Carlton Bacara Beach House Relocation, 8301 Hollister Avenue, Goleta, California. Earth Systems Pacific, May 11, 2018.

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GEOTECHNICAL ENGINEERING REPORT
RITZ CARLTON BACARA BEACH HOUSE RELOCATION
8301 HOLLISTER AVENUE
GOLETA, CALIFORNIA

May 11, 2018

Prepared for
Mr. Lorcan Drew
CWI RSCB Hotel, LLC

Prepared by

Earth Systems Pacific
4378 Old Santa Fe Road
San Luis Obispo, CA 93401

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Earth Systems
4378 Old Santa Fe Road | San Luis Obispo, CA 93401 | Ph: 805.544.3276 | www.earthsystems.com

May 11, 2018

FILE NO.: 301967-001

Mr. Lorcan Drew
CWI RSCB Hotel, LLC
150 North Riverside Plaza, Suite 4200
Chicago, IL 60606

PROJECT: RITZ CARLTON BACARA BEACH HOUSE RELOCATION
8301 HOLLISTER AVENUE
GOLETA, CALIFORNIA

SUBJECT: Geotechnical Engineering Report

CONTRACT REF: *Revised* Proposal for a Geotechnical Engineering Report, Ritz Carlton Bacara Beach House Relocation and Executive Conference Center Expansion 8301 Hollister Avenue, Santa Barbara California, by Earth Systems Pacific, Doc. No. 1803-043.PRP.REV2, dated March 27, 2018

Dear Mr. Drew:

Per your authorization of the referenced proposal, this geotechnical engineering report has been prepared for use in the development of plans and specifications for the proposed Beach House Relocation project at the Ritz Carlton Bacara Resort in Goleta, California. Preliminary geotechnical engineering recommendations for site preparation, grading, utility trenches, foundations, interior slabs-on-grade and exterior pedestrian flatwork, sitework retaining walls, pavement sections, drainage and maintenance, and observation and testing are presented herein. One electronic and two paper copies of this report have been provided to you. An additional electronic copy has been forwarded as indicated below. The Executive Conference Center Expansion will be addressed under separate cover.

We appreciate the opportunity to have provided professional services for this project and look forward to working with you again in the future. If there are any questions concerning this report, please do not hesitate to contact the undersigned.

Sincerely,
Earth Systems Pacific

REGISTERED PROFESSIONAL ENGINEER
ROBERT W. DOWN
No. 70206
Exp. 9/31/18
CIVIL
STATE OF CALIFORNIA

Robert Down, PE
Senior Engineer
5/11/18

Copy to: Stantec, Attn.: Ms. Ginger Andersen

Doc. No.: 1805-045.SER/pm

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1.0 INTRODUCTION AND SITE SETTING

The Beach House Relocation project will involve the construction of a new single story building near the terminus of the beach access road. The beach house building will be masonry and/or timber construction with conventional continuous foundations and a Portland cement concrete (PCC) slab-on-grade. Maximum continuous loads of 2 kips per lineal foot (klf) and maximum isolated loads of 20 kips have been assumed. PCC pedestrian flatwork is also anticipated around the new building. Sitework retaining walls less than 6 feet in height may also be constructed.

The access road is currently paved with asphalt with a circular turn-around area; however, the terminus will be reconstructed with a new hammerhead alignment and paved with Hot Mix Asphalt (HMA).

The site is located near the toe of a bluff located east of the building site and is shown on Figure 1, Site Vicinity Map, in Appendix A. The Pacific Ocean is to the south and the main portion of the resort is to the west across the landscaped valley floor and beach access road. The site is relatively flat and therefore cuts and fills of 1 foot or less are anticipated. Underground utility lines in the vicinity will be relocated to serve the structure. This area was graded during the original construction of the resort approximately 18 years ago.

2.0 SCOPE OF SERVICES

The scope of work included a general site reconnaissance, field exploration, laboratory testing, geotechnical analysis of the data gathered, and preparation of this report. The analysis and subsequent recommendations were based on correspondence and preliminary plans provided by Stantec.

This report and recommendations are intended to comply with the considerations of Sections 1803.1 through 1803.6, J104.3 and J104.4, as applicable, of the 2016 California Building Code (CBC) and common geotechnical engineering practice in this area under similar conditions at this time. The test procedures were accomplished in general conformance with the standards noted, as modified by common geotechnical engineering practice in this area under similar conditions at this time.

Preliminary geotechnical engineering recommendations for site preparation, grading, utility trenches, foundations, interior slabs-on-grade and exterior pedestrian flatwork, sitework retaining walls, pavement sections, drainage and maintenance, and observation and testing are presented

to guide the development of project plans and specifications. As there may be geotechnical issues yet to be resolved, the geotechnical engineer should be retained to provide consultation as the design progresses, and to review project plans as they near completion to assist in verifying that pertinent geotechnical issues have been addressed and to aid in conformance with the intent of this report.

It is our intent that this report be used exclusively by the client to form the geotechnical basis of the design of the project and in the preparation of plans and specifications. Application beyond this intent is strictly at the user's risk.

This report does not address issues in the domain of contractors such as, but not limited to, site safety, loss of volume due to stripping of the site, shrinkage of soils during compaction, excavatability, dewatering, temporary slope angles, construction means and methods, etc. Analyses of aerial or site geology, or of the soil for corrosivity, radioisotopes, asbestos (either naturally occurring or in man-made products), lead or mold potential, hydrocarbons, or chemical properties is beyond the scope of this report. Any ancillary features such as flag or light poles, temporary access roads, LID features such as retention basins and bio swales, and non-structural fills are not within our scope and are also not addressed.

In the event that there are any changes in the nature, design, or location of improvements, or if any assumptions used in the preparation of this report prove to be incorrect, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions of this report modified or verified by the geotechnical engineer in writing. The criteria presented in this report are considered preliminary until such time as any peer review or review by any jurisdiction has been completed, conditions have been observed by the geotechnical engineer in the field during construction, and the recommendations have been verified as appropriate, or modified by the geotechnical engineer in writing.

3.0 FIELD INVESTIGATION AND LABORATORY ANALYSIS

On April 12, 2018, two exploratory borings were drilled to depths of 16.5 to 31.5 feet below the existing ground surface (bgs) on the site in the approximate location of the proposed building pad. The borings were drilled with a Mobile Drill rig, Model B-53 equipped with 6-inch outside diameter hollow stem auger and an automatic hammer for sampling. As the exploratory borings were drilled, soil samples were obtained using a ring-lined barrel sampler (ASTM D3550-17 with shoe similar to ASTM D2937-17). Standard Penetration Tests (SPT) (ASTM D1586-11) were also

conducted at selected depths in the borings and bulk samples were obtained from the auger cuttings. The approximate locations of the borings are shown on Figure 2 - Exploration Location Map in Appendix A.

Soils encountered in the borings were categorized and logged in general accordance with the Unified Soil Classification System and ASTM D 2488-17. Logs of the borings are presented in Appendix A, along with a Boring Log Legend. In reviewing the boring logs and legend, the reader should recognize that the legend is intended as a guideline only, and there are a number of conditions that may influence the characteristics observed during drilling. These include, but are not limited to, the presence of cobbles or boulders, cementation, variations in soil moisture, presence of groundwater, and other factors. Consequently, the logger must exercise judgment in interpreting soil characteristics, possibly resulting in soil descriptions that vary from the legend.

Three bulk samples were tested for maximum density and optimum moisture content (ASTM D 1557-12, modified); two of the three were also tested for expansion index (ASTM D 4829-11). Six ring samples were tested for bulk density (ASTM D 2937-17, modified for ring liners) and moisture (ASTM D 2216-10). One ring sample tested for direct shear (ASTM D 3080/D 3080M-11) and two were tested of one dimensional consolidation (ASTM D 2435/2435M-11). The results of the laboratory tests are presented in Appendix B.

4.0 GENERAL SUBSURFACE PROFILE

Similar conditions were found in both borings. Fill soils were encountered in the upper 9.5 to 12.5 feet bgs and were underlain by alluvium to the maximum depth explored. The fill consisted of sandy lean clay, clayey sand, clayey gravel, and silty sand. The sand and gravel fill soils had a medium dense consistency; the clay soils were medium stiff to stiff. The alluvium below the fill consisted of clayey sand and sandy lean clay. The sand was loose to medium dense and the clay was soft to stiff. The fill and alluvium were logged as being moist to wet with subsurface water being encountered in Boring 2 at a depth of 25.5 feet bgs during the drilling operations.

5.0 CONCLUSIONS

In our opinion, the site is suitable, from a geotechnical engineering standpoint, for the proposed improvements described in the "Introduction and Site Setting" section of this report, provided the recommendations contained herein are implemented in the design and construction. In our opinion, the primary geotechnical engineering concerns are the potential for differential settlement due to non-uniform soil conditions and the presence of expansive surficial soils.

Discussion of liquefaction, seismic analysis, and the erodible nature of the site soils are also presented below.

Potential for Differential Settlement Due to Non-Uniform Soil Conditions

Based upon the subsurface profile, the building pad is underlain by 9.5 to 12.5 feet of fill soils which are believed to have been placed during the original construction of the site. However, at the time of placement, this area was not intended as a building site. Therefore, the attention to the fill placement would have been less that paid during the earthwork intended for building sites. This is evidenced by variable thickness of the soil layers in a relatively small area and the presence of brick and concrete debris. Where foundations, slabs and other improvements are supported by non-uniform soil conditions, such as the variable soil types and thicknesses, there is the potential for differential settlement of these improvements. Differential settlement can stress and damage foundations, often resulting in severe cracks and displacement. Given the potential for differential settlement, a program of overexcavation and recompaction and the placement of a geotextile layer is recommended at this site to create sufficiently uniform bearing and building pad conditions.

Presence of Expansive Surficial Soils

Expansion index testing performed on bulk samples of the near surface soils resulted in values of 25 and 44, which indicated the soils are expansive. Expansive soils tend to swell with seasonal increases in moisture and shrink during the dry season as subsurface moisture decreases. The volume changes that these materials undergo in this cyclical pattern can stress and damage slabs and foundations if precautionary measures are not incorporated into the design and construction procedures. Footings are typically deepened and additional reinforcement is added. Imported non-expansive soils are recommended to be placed beneath slabs-on-grade and exterior flatwork.

Seismic Analysis

A seismic analysis was undertaken to provide seismic acceleration design parameters. The 2010 ASCE 7 method with 2013 updates, available on the United States Geological Survey Earthquake Hazards Program website (USGS 2018), was used. The project was considered to be a "nonessential" facility from the perspective of risk category as described by the CBC. Site coordinates of 34.4312 degrees north and 119.9158 degrees west as taken from the Google Earth website (Google 2018) were used in the analysis. Based upon the subsurface conditions encountered during our investigation, the site should be classified as Site Class D (Stiff Soil). The results of the seismic hazard analysis are presented in the "Foundations" section of this report.

Liquefaction

The term liquefaction refers to a phenomenon that tends to occur in saturated soils of low density and that have grain sizes within a certain range, usually fine- to medium-grained poorly graded sands, silty sands, and silts. A sufficiently strong earthquake and free subsurface water are also required to cause liquefaction. The soils encountered at the site were classified as clayey sand, clayey gravel, silty sand, and sandy lean clay. Groundwater was encountered at a depth of 25.5 feet in Boring 2. Clay soils such as those encountered below groundwater at the site are considered unlikely to liquefy. Accordingly, it is our opinion that the potential for significant settlement resulting from liquefaction at the building site is low, due to the presence of these clay soils combined with the proposed grading and geotextile stabilization fabric.

Erosion Potential

The soils at the site are considered to be highly erodible; therefore, caution should be exercised to protect the soils from erosion during and following construction.

6.0 PRELIMINARY GEOTECHNICAL RECOMMENDATIONS

These recommendations are applicable for the proposed project as described in the "Introduction and Site Setting" section of this report. If locations, elevations, structural loads, etc., change, or if other improvements not previously mentioned are included, the geotechnical engineer should be contacted for revised recommendations.

Unless otherwise noted, the following definitions are used in the recommendations presented below. Where terms are not defined, definitions commonly used in the construction industry are intended.

- **Building Area:** The building area is defined as the area within and extending a minimum of 5 feet beyond the perimeter of the foundations of the proposed building. The building area also includes the footprint of any improvements which are rigidly connected to the structures and that are expected to perform in a similar manner.
- **Sitework Retaining Wall Area:** The area within the footprint of any sitework retaining wall foundation.
- **Flatwork Area:** The area within and extending a minimum of 1 foot beyond the limits of exterior pedestrian flatwork.

- **Pavement Area:** The area within and extending a minimum of 1 foot beyond the limits of any areas to receive new pavement.
- **Grading Area:** The entire area to be graded, including the building areas, sitework retaining wall areas, flatwork areas, pavement areas, and any areas where surface improvements will be constructed or fill will be placed.
- **Subgrade:** The elevation of the surface upon which a sand cushion/non-expansive imported material or aggregate base will be placed for flatwork or pavement, respectively.
- **Existing Grade:** Elevations of the site that existed as of the date of this report.
- **Finish Pad Grade:** The elevation in the building area where earthwork operations are typically considered to be complete. It does not include any sand or gravel that might be placed below slabs-on-grade in association with vapor protection for the slabs.
- **Scarified:** Thoroughly plowed or ripped in two orthogonal directions to a depth of not less than 8 inches.
- **Moisture Conditioned:** Soil moisture content adjusted to optimum moisture content, or just above, prior to application of compactive effort.
- **Compacted/Recompacted:** Soils placed in level lifts not exceeding 8 inches in loose thickness and compacted to a minimum of 95 percent of maximum dry density, unless specified otherwise. The standard tests used to establish maximum dry density and field density should be ASTM D 1557-12 and ASTM D 6938-17, respectively, or other methods acceptable to the geotechnical engineer and jurisdiction.

Site Preparation

1. The ground surface in the grading area should be prepared for construction by removing all existing improvements, vegetation, debris, and other deleterious materials. Any existing utility lines that will not remain in service should be either removed or abandoned. The appropriate method of utility abandonment will depend upon the type and depth of the utility. Recommendations for abandonment during construction can be made as necessary.

2. Voids created by the removal of materials or utilities described above should be called to the attention of the geotechnical engineer. No fill should be placed unless the underlying soil has been observed by the geotechnical engineer.

Grading

Building Area

1. Following site preparation, overexcavation of the soils within the building area should be performed to a minimum depth of 4 feet below the deepest planned foundation element.

2. The exposed soil surfaces resulting from the over-excavation should then be scarified, moisture conditioned, and recompacted. A layer of a geotextile stabilization fabric such as Mirafi HP380a, or equivalent should be placed on the compacted overexcavation bottom.

3. The excavation should then be backfilled with moisture conditioned, properly compacted, site soil up to 18 inches below the planned bottom of slab elevation. Imported non-expansive soil should then be placed in compacted lifts to finish pad grade. Non-expasive soil is defined below in paragraph 9.

Sitework Retaining Wall Areas

4. Following site preparation, overexcavation of the soils within the sitework retaining wall areas should be performed to a minimum depth of 2 feet below the planned bottom of footing, not including any keyway.

5. The exposed soil surfaces resulting from the over-excavation should then be scarified, moisture conditioned, and recompacted. The excavation should then be backfilled with moisture conditioned, properly compacted, site soil up to finish grade.

Flatwork and Pavement Areas

6. Following site preparation, overexcavation of the soils within the flatwork and pavement areas should be performed to a minimum depth of 1 foot below the planned subgrade elevation.

7. The exposed soil surfaces resulting from the over-excavation should then be scarified, moisture conditioned, and recompacted. The excavation should then be backfilled with moisture conditioned, properly compacted, site soil up to subgrade. Once subgrade is established and compacted, the placement, moisture conditioning, and compaction of aggregate base and any non-expansive soil can proceed.

General

8. Voids created by dislodging rocks and/or debris during scarification should be backfilled and replaced with appropriate fill material, and the dislodged materials should be removed from the work area.

9. Non-expansive materials are defined as materials that fall in the GW, GP, GM, GC, SP, SW, SC and SM categories per ASTM D 2487-17, and that have an expansion index of 10 or less (ASTM D 4829-11). Proposed non-expansive materials should be reviewed by the geotechnical engineer before being brought to the site, and on an intermittent basis during placement. The clean sand layer described in the "Interior Slabs-on-Grade" section of this report (if utilized) is considered to be part of the minimum recommended depth of non-expansive material, not in addition to it.

10. All materials used as fill should be cleaned of all debris and any rocks larger than 3 inches in maximum dimension. When fill material includes rocks, the rocks should be placed in a sufficient soil matrix to ensure that voids caused by nesting of the rocks will not occur and that the fill can be properly compacted.

11. If the soils become unstable, or if the recommended compaction cannot be readily achieved, drying the soil to optimum moisture content, or just above, may be necessary. Placement of gravel layers or geotextiles may also be necessary to help stabilize unstable soils.

12. The recommended soil moisture content should be maintained throughout construction. Failure to maintain the soil moisture content can result in cracks and disturbance, which are an indication of degradation of the soil compaction. If cracks are allowed to develop, or if soils near improvements such as foundations, flatwork, pavement, curbs, etc. are otherwise disturbed, damage to those improvements may result. Soils that have been or are otherwise disturbed should be removed, moisture conditioned, and compacted.

13. Generally, permanent cut and fill slopes should not exceed 2:1 (horizontal: vertical) gradient, unless otherwise recommended by the geotechnical engineer.

Utility Trenches

1. Unless otherwise recommended, utility trenches adjacent to foundations should not be excavated within the zone of foundation influence, as shown in Typical Detail A in Appendix C.

2. Utilities that must pass beneath a foundation should be placed with properly compacted utility trench backfill and the foundation should be designed to span the trench.

3. A select, non-corrosive, easily compacted sand should be used as bedding and shading immediately around utilities. The site soils may be used for trench backfill above the select material up to the non-expansive fill layer in the building area and to finish grade outside the building area.

4. In general, trench backfill should be compacted to a minimum of 95 percent of maximum dry density above the select backfill.

5. Trench backfill should be placed in level lifts, moisture conditioned, and compacted to the minimums noted above.

6. Compaction of trench backfill by jetting or flooding is not recommended except under extraordinary circumstances. However, to aid in *encasing* utility conduits, particularly corrugated drain pipes, and multiple, closely spaced conduits in a single trench, jetting or flooding may be useful. Flooding or jetting should only be attempted with extreme caution, and any jetting operation should be subject to review by the geotechnical engineer.

7. The recommendations of this section are minimums only, and may be superseded by the requirements of the architect/engineer, the recommendations of pipe manufacturers or utility companies, or the requirements of the governing jurisdiction based upon soil corrosivity or other factors.

Foundations

1. Continuous and spread footings having a minimum overall depth of 24 inches below lowest adjacent grade and bearing in compacted fill as described in the "Grading" section, may be used to support the proposed structure. Spread footings should be connected on a minimum of two sides with grade beams to create a foundation that acts as one integral unit. Footing and gradebeam excavation bottoms should be horizontal.

2. Continuous footings should be reinforced, at a minimum, by two No. 5 rebar, one at the top and one at the bottom, or as required by the architect/engineer. Spread footings should be reinforced in accordance with the requirements of the architect/engineer.

3. Footings bearing in firm compacted soil may be designed using maximum allowable bearing capacities of 1,800 psf for dead loads and 2,500 psf for dead plus live loads. Using these criteria, maximum settlement and differential settlement under static conditions are expected to be on the order of ¾ inch, and ½ inch in 25 feet, respectively.

4. Allowable bearing capacities may be increased by one-third when transient loads such as wind or seismicity are included. Foundations may be designed using the following 2016 CBC seismic parameters.

SEISMIC ACCELERATION SITE PARAMETERS

Mapped Spectral Response Acceleration for Site Class B		**Site Coefficients for Site Class D**		**Adjusted MCE Spectral Response Accelerations for Site Class D**		**Design Spectral Response Accelerations for Site Class D**	
Seismic Parameter	Value (g)	Site Coefficient	Value	Seismic Parameter	Value (g)	Seismic Parameter	Value (g)
S_S	2.860	F_a	1.00	S_{MS}	2.860	S_{DS}	1.907
S_1	1.022	F_v	1.50	S_{M1}	1.533	S_{D1}	1.022
Peak Mean Ground Acceleration (PGA_m) : 1.176 g							
Seismic Design Category: E							

5. For resistance to lateral loads, conventional foundations may be designed using a passive equivalent fluid pressure of 300 pcf and a friction factor of 0.30. Passive and friction components may be combined in the analysis without reduction to either value. Lateral capacity is based on the assumption that any backfill adjacent to foundations has been properly compacted.

6. Foundation excavations should be observed by the geotechnical engineer prior to placement of reinforcing steel. Soils in foundation excavations should be moistened to optimum moisture content, or just above, prior to application of compactive effort, and no desiccation cracks should be present prior to concrete placement.

Interior Slabs-on-Grade and Exterior Pedestrian Flatwork

Interior Slabs-on-Grade

1. Interior slabs-on-grade should have a minimum thickness of 4 inches. They should be reinforced and doweled to foundations per the specifications of the architect/engineer. At a minimum, interior slabs should be reinforced with No. 4 rebar at 18 inches on center each way. All structural slabs should contain minimum rebar meeting the criteria of ACI 318, Section 24.4 (ACI 2014). At a minimum, foundation dowels should be lap spliced to the slab rebar. The size and spacing of the dowels should match the size and spacing of the slab rebar.

2. Due to the current use of impermeable floor coverings, water-soluble flooring adhesives, and the speed at which buildings are now constructed, moisture vapor transmission through slabs is a much more common problem than in past years. Where moisture vapor transmitted from the underlying soil would be undesirable, such as where interior slabs are planned, the slabs should be protected from subsurface moisture vapor. A number of options for vapor protection are discussed below; however, the means of vapor protection, including the type and thickness of the vapor retarder, if specified, are left to the discretion of the architect/engineer.

3. Where specified, vapor retarders should conform to ASTM E 1745-17. This standard specifies properties for three performance classes; Class A, B and C. The appropriate class should be selected based on the sensitivity of floor coverings to moisture intrusion and the potential for damage to the vapor retarder during placement of slab reinforcement and concrete. Installation of vapor retarders should conform to ASTM E 1643-11/17.

4. Several recent studies, including those of ACI Committee 302, have concluded that excess water above the vapor retarder increases the potential for moisture damage to floor coverings and could increase the potential for mold growth or other microbial contamination. The studies also concluded that it is preferable to eliminate the typical sand layer beneath the slab and place the slab concrete in direct contact with a Class A vapor retarder, particularly during wet weather construction. However, placing the concrete directly on the vapor retarder requires special attention to using the proper vapor retarder (see discussion below), a very low water-cement ratio in the concrete mix, and special finishing and curing techniques.

5. Probably the next most effective option would be vapor-inhibiting admixtures and/or surface sealers. This would also require special concrete mixes and placement procedures, depending upon the recommendations of the admixture or sealer manufacturer.

6. Another option that may be a reasonable compromise between effectiveness and cost considerations is the use of a subslab vapor retarder protected by a sand layer. If a Class A vapor retarder is specified, the retarder can be placed directly on the non-expansive layer in the building areas. The retarder should be covered with a minimum 2 inches of *clean* sand. If a less durable vapor retarder is specified (i.e. ASTM E 1745-17, Class B or C), a minimum of 4 inches of clean sand should be provided, and the retarder should be placed in the center of the clean sand layer. Clean sand is defined as a well or poorly graded sand (ASTM D 2487-11) of which less than 3 percent passes the No. 200 sieve. If utilized, the clean sand may be considered part of the nonexpansive section discussed in the "Grading" section, and not in addition to it.

7. Regardless of the underslab vapor retarder selected, proper installation of the retarder is critical for optimum performance. If practicable, the vapor retarder should be placed a minimum of 1 inch above the flow line of any drainage path surrounding the structure, 2 inches above any retaining wall drains, or 1 inch above the area drain grates if area drains are used to collect runoff around the structure, whichever is higher. Care should be taken to properly lap and seal the retarder, particularly around utilities, and to protect it from damage during construction.

8. The sand between the vapor retarder and the slab (if utilized) should be moistened only as necessary to promote concrete curing; saturation of any sand that lies above the vapor retarder should be avoided, as the excess moisture atop the vapor retarder could result in vapor transmission through the slab for a period of months or years.

Exterior Pedestrian Flatwork

9. Exterior pedestrian flatwork should have minimum thickness and reinforcement of 4 inches and No. 4 rebar placed at 18 inches on-center each way, respectively.

10. In conventional construction, it is common to use 4 to 6 inches of sand beneath exterior pedestrian flatwork. However, due to the expansion potential of the site soils, there will be a risk of movement and damage to the flatwork if conventional measures are used. Heaving and cracking could occur. This movement could be reduced by the placement of additional non-expansive material beneath the flatwork. If it is desired to reduce the effects of expansive soil conditions, then at least 18 inches of imported nonexpansive material should be provided below the flatwork. If it is acceptable for the flatwork to experience movement due to expansive soils, then the thickness of the non-expansive soil can be reduced; however, the thicker the non-expansive layer, the better the protection from expansive soils.

11. Another measure that can be taken to reduce the risk of movement of flatwork due to expansive soils is to provide thickened edges or grade beams around the perimeters of the flatwork. The thickened edges or grade beams could be up to 24 inches deep. If it is acceptable for the flatwork to experience movement, then the thickened edge or grade beam depths can be reduced. At a minimum, any thickened edge or grade beam should be reinforced by two No. 4 rebar, one at the top and one at the bottom.

12. It is recognized that the measures discussed above for protecting exterior flatwork from expansive soils are expensive, possibly more expensive than simply replacing flatwork that has heaved and/or cracked. Consequently, the above measures for protecting exterior flatwork are only suggestions for consideration. The degree to which exterior flatwork is protected from expansive soil damage is left to the discretion of the owner and/or architect/engineer.

13. Flatwork should be constructed with frequent joints to allow articulation as the flatwork moves in response to seasonal soil temperature and moisture variations. The expansive soil underlying any nonexpansive material placed below flatwork should be moisture conditioned, and no desiccation cracks should be present, prior to casting the flatwork.

14. Flatwork at doorways, and at other areas where maintaining the elevation of the flatwork is desired, should be doweled to the perimeter foundation, at a minimum, by No. 4 dowels lapped to the flatwork rebar. In other areas, the flatwork may be doweled to the foundation or the flatwork may be allowed to "float free," at the discretion of the architect/engineer. Flatwork that is intended to float free should be separated from foundations by a felt joint or other means.

Interior Slabs-on-Grade and Exterior Pedestrian Flatwork - General

15. To reduce shrinkage cracks in concrete, the concrete aggregates should be of appropriate size and proportion, the water/cement ratio should be low, the concrete should be properly placed and finished, contraction joints should be installed, and the concrete should be properly cured. This is particularly applicable to slabs that will be cast directly upon a vapor retarder and those that will be protected from transmission of vapor by use of admixtures or surface sealers. Concrete materials, placement, and curing specifications should be at the direction of the architect/engineer; ACI 302.1R-15 is suggested as a resource for the architect/engineer in preparing such specifications.

Sitework Retaining Walls

1. Footings for all retaining walls should be at least 27 inches below lowest adjacent grade and should be supported by firm soils recompacted as per the "Grading" section of this report. Footings should also have a minimum setback from any descending slopes of at least 10 feet from bottom edge of footing that is closest to the slope.

2. Retaining wall foundation excavations should be observed by the geotechnical engineer prior to placing reinforcing steel in the excavations.

3. The following parameters may be used in the design of retaining walls:

Active equivalent fluid pressure (native soil)	45 pcf
Active equivalent fluid pressure (imported sand or gravel backfill)	35 pcf
At-rest equivalent fluid pressure (native soil)	60 pcf
At-rest equivalent fluid pressure (imported sand or gravel backfill)	50 pcf
Passive equivalent fluid pressure (compacted fill)	300 pcf
Maximum toe pressure	2,000 psf
Coefficient of sliding friction	0.30

4. No surcharges are taken into consideration in the values presented above. The maximum toe pressure is an allowable value; no factors of safety, load factors or other factors have been applied to the remaining values.

5. If retaining walls are designed using the values for sand or gravel backfill stated in Paragraph 3 above, only imported sand or gravel backfill should be used exclusively above a 1:1 plane extended upward from the back of the wall footing to daylight in the subfloor area. It is not anticipated that retaining walls will have slabs-on-grade or other improvements at the top of the backfill, nor will they have backfill exposed to the exterior.

6. If gravel is utilized as retaining wall backfill, a permeable synthetic filter fabric conforming to the Caltrans Standard Specifications, Section 96-1.02B – Class C (Caltrans 2015), should be placed between the gravel and the soil to reduce the infiltration of soil into the gravel.

7. The active and at-rest pressures presented above are applicable to a horizontal retained surface behind the wall. Walls having a retained surface that slopes upward from the wall should be designed for an additional equivalent fluid pressure of 1 pcf for the active case and 1.5 pcf for the at-rest case, for every degree of slope inclination.

8. Section 1803.5.12.1 of the 2016 CBC requires that dynamic seismic lateral earth pressures be provided by the geotechnical engineer for walls retaining more than 6 feet of backfill. As the assumed retaining wall heights for this project will not exceed 6 feet, this is not considered to be necessary. If retaining walls are planned to be taller than 6 feet, the geotechnical engineer should be notified to provide revised recommendations.

9. Long-term settlement of properly compacted on-site soils or imported sand/gravel retaining wall backfill should be assumed to be about 0.3 to 0.5 and 0.25 to 0.3 percent of the depth of the backfill, respectively. Any improvements that are constructed near the tops of retaining walls should be designed to accommodate the long-term settlement. Additionally, the geotechnical engineer should be notified if improvements are to be constructed adjacent to retaining walls so that appropriate recommendations can be applied for additional lateral earth pressures resulting from the improvements.

10. All retaining walls should be drained with perforated pipe encased in a free-draining gravel blanket. The pipe should be placed atop the wall foundation with perforations downward, and should discharge in a non-erosive manner away from foundations and other improvements. In addition, the pipe should be at least 4 inches below the bottom of any adjacent slabs. If such a placement cannot be achieved, a subslab gravel drain should be provided. The geotechnical engineer should be contacted for additional recommendations for the subslab drain layer, as needed. The gravel blanket behind the retaining wall should have a width of approximately 1 foot and should extend upward to

the top of the wall backfill in subfloor areas. It is anticipated that retaining walls will not have slabs-on-grade or other improvements at the top of the backfill, nor will they have backfill exposed to the exterior. Where sand will be utilized for backfill, a permeable synthetic filter fabric should be placed between the gravel and sand, as stated above. Manufactured synthetic drains, such as Miradrain or Enkadrain are acceptable alternatives to the use of gravel, provided that they are installed in accordance with the recommendations of the manufacturer.

11. Where weep hole drainage can be properly discharged, the perforated pipe may be omitted in lieu of weep holes on maximum 4-foot centers. A filter fabric as described above should be placed between the weep holes and the drain gravel.

12. Walls facing areas where moisture transmission through the wall would be undesirable should be thoroughly waterproofed in accordance with the specifications of the architect/engineer.

13. The architect/engineer should bear in mind that retaining walls by their nature are flexible structures, and that surface treatments on walls often crack. Where walls are to be plastered or otherwise have a finish applied, the flexibility should be considered in determining the suitability of the surfacing material, spacing of horizontal and vertical control joints, etc. The flexibility should also be considered where a retaining wall will abut or be connected to a rigid structure, and where the geometry of the wall is such that its flexibility will vary along its length.

Pavement Sections

The following Hot Mix Asphalt HMA pavement sections are based upon an estimated R-value, or resistance to deformation under repeated loading, of 10, which is based on our experience in the area and the subsurface conditions encountered. The pavement sections are based on assumed Traffic Indices (TI) of 4.0 through 7.0. Determination of the appropriate TI for specific areas of the project is left to others. The AC sections were calculated in accordance with the method presented in the *Caltrans Highway Design Manual* (Caltrans 2017). The calculated aggregate base and AC thicknesses are for compacted material. Normal Caltrans construction tolerances should apply.

R-value	Traffic Index	AC (in)	Class 2 Base (in)
10	4.0	2.25	7.5
10	4.5	2.50	8.5

10	5.0	2.75	9.5
10	5.5	3.00	11.0
10	6.0	3.25	12.0
10	6.5	3.75	13.5
10	7.0	4.00	14.5

1. The upper 12 inches of subgrade and all aggregate base should be compacted to a minimum of 95 percent of maximum dry density. Subgrade and aggregate base should be firm and unyielding when proofrolled with heavy, rubber-tired grading equipment prior to continuing construction.

2. Finished pavement surfaces should be sloped to freely drain toward appropriate drainage facilities. Pervious paver surfaces should be similarly sloped so that any water that does not infiltrate the pavers will be directed away from structures and other improvements. Water should not be allowed to stand or pond on or adjacent to pavement or other improvements as it could infiltrate into the aggregate base and/or subgrade, causing premature pavement deterioration.

3. The local jurisdiction may have additional requirements for pavement that could take precedence over the above recommendations.

Drainage and Maintenance

1. Unpaved ground surfaces should be *graded during construction* and, per Section 1804.3 of the CBC, *finish graded* to direct surface runoff away from foundations, slopes, and other improvements at a minimum 5 percent grade for a minimum distance of 10 feet. If this is not feasible due to the terrain, property lines, or other factors, swales with improved surfaces, area drains, or other drainage features should be provided to divert drainage away from these areas.

2. Paved surfaces should provide positive drainage away from foundations, slopes and other improvements.

3. To reduce the potential for planter drainage gaining access to subslab areas, any raised planter boxes adjacent to foundations should be installed with drains and sealed sides and bottoms. Drains should also be provided for areas adjacent to the structures that would not otherwise freely drain.

4. The eaves of the building should be provided with roof gutters. Runoff from roof gutters, downspouts, area drains, weep holes, etc., should discharge to an appropriate outlet in a nonerosive manner away from foundations and other improvements in accordance with the requirements of the governing agencies. Erosion protection should be placed at all discharge points unless the discharge is to a pavement surface.

5. The site soils are erodible. To reduce the potential for damage due to erosion it is essential that the surface soils, particularly those disturbed during construction, be stabilized by vegetation or other means *during and following construction.* Care should be taken to establish and maintain vegetation. The landscaping and exterior flatwork should be installed to maintain the surface drainage recommended above.

6. To reduce the potential for disruption of drainage patterns and undermining of foundations and other improvements, rodent activity should be aggressively controlled.

Observation and Testing

1. It must be recognized that the recommendations contained in this report are based on a limited number of exploratory borings and rely on continuity of the subsurface conditions encountered. Therefore, the geotechnical engineer should be retained to provide consultation during the design phase, to review plans as they near completion, to interpret this report during construction, and to provide construction monitoring in the form of testing and observation.

2. At a minimum, the following items should be reviewed, tested, or observed by the geotechnical engineer:

    - Site preparation
    - Overexcavation, scarification, moisture conditioning, and recompaction
    - Fill quality, placement, moisture conditioning, and compaction
    - Utility trench backfill
    - Foundation excavations
    - Retaining wall drainage and backfill

3. A program of quality control should be developed prior to beginning grading. The contractor or project manager should determine any additional inspection items required by the architect/engineer or the governing jurisdiction.

4. Special inspection of grading should be provided as per Section 1705.6 and Table 1705.6 of the CBC; the special inspector should be under the direction of the geotechnical engineer. In our opinion, there are no operations that are sufficiently critical as to warrant *continuous* special inspection; periodic special inspection should suffice. Subject to the approval of the building authority, the exception to continuous special inspection (Section 1704.2, Subparagraph 1) should be specified by the architect/engineer and *periodic* special inspection of the following should be provided by the special inspector:

    - Site preparation
    - Overexcavation as recommended
    - Utility trench backfill
    - Fill quality, placement, moisture conditioning, and compaction
    - Foundation excavations

5. Locations and frequency of compaction tests should be as per the recommendation of the geotechnical engineer at the time of construction. The recommended test location and frequency may be subject to modification by the geotechnical engineer, based upon soil and moisture conditions encountered, size and type of equipment used by the contractor, the general trend of the results of compaction tests, or other factors.

6. A preconstruction conference among the owner, the geotechnical engineer, the City, the soil special inspector, the architect/engineer, and contractors is recommended to discuss planned construction procedures and quality control requirements.

7. The geotechnical engineer should be notified at least 48 hours prior to beginning construction operations. If Earth Systems Pacific is not retained to provide construction observation and testing services, it shall not be responsible for the interpretation of the information by others or any consequences arising therefrom.

7.0 CLOSURE

Our intent was to perform the investigation in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the locality of this project and under similar conditions. No representation, warranty, or guarantee is either expressed or implied. This report is intended for the exclusive use by the client as discussed in the "Scope of Services" section. Application beyond the stated intent is strictly at the user's risk.

This report is valid for conditions as they exist at this time for the type of project described herein. The conclusions and recommendations contained in this report could be rendered invalid, either in whole or in part, due to changes in building codes, regulations, standards of geotechnical or construction practice, changes in physical conditions, or the broadening of knowledge.

If changes with respect to project type or location become necessary, if items not addressed in this report are incorporated into plans, or if any of the assumptions used in the preparation of this report are not correct, this firm shall be notified for modifications to this report. Any items not specifically addressed in this report should comply with the CBC and the requirements of the governing jurisdiction.

The preliminary recommendations of this geotechnical report are based upon the geotechnical conditions encountered at the site and may be augmented by additional requirements of the architect/engineer, or by additional recommendations provided by the geotechnical engineer based on conditions exposed at the time of construction.

This document, the data, conclusions, and recommendations contained herein are the property of Earth Systems Pacific. This report shall be used in its entirety, with no individual sections reproduced or used out of context. Copies may be made only by Earth Systems Pacific, the client, and the client's authorized agents for use exclusively on the subject project. Any other use is subject to federal copyright laws and the written approval of Earth Systems Pacific.

Thank you for this opportunity to have been of service. If you have any questions, please feel free to contact this office at your convenience.

End of Text.

Technical Reference List

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APPENDIX A

Figure 1 – Site Vicinity Map
Figure 2 - Exploration Location Map
Boring Log Legend
Boring Logs

N

NOT TO SCALE

Earth Systems Pacific
4378 Old Santa Fe Road, San Luis Obispo, CA 93401
www.earthsystems.com
(805) 544-3276 • Fax (805) 544-1786

SITE VICINITY MAP

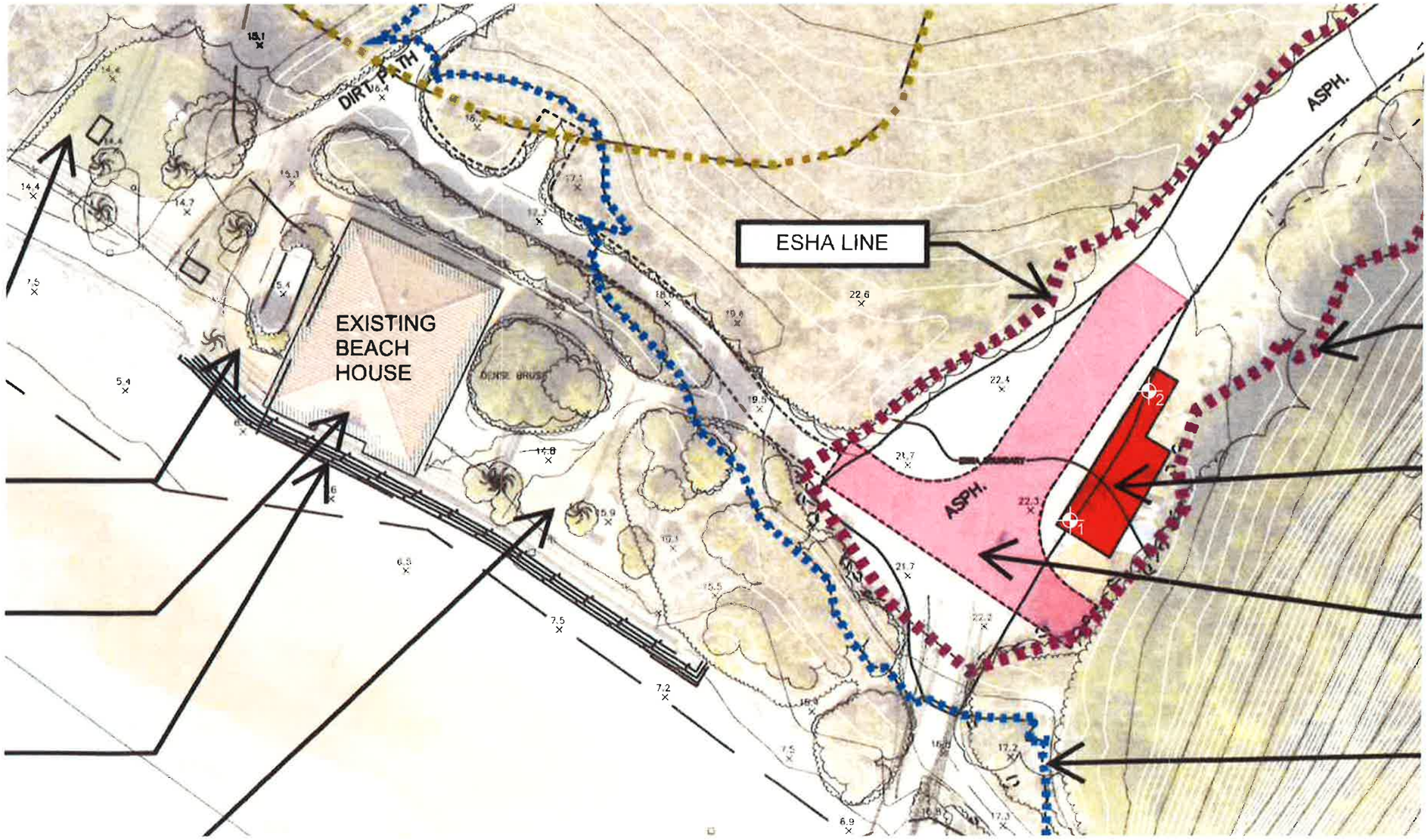
Ritz Carlton Bacara Beach House Relocation
8301 Hollister Avenue
Goleta, California

Date
April, 2018

Project No.
301967-001

Figure 1

RITZ CARLTON BACARA BEACH HOUSE RELOCATION-041818mcps



LEGEND

2 Boring Location (Approx.)

BASE MAP PROVIDED BY: WATG

N

NOT TO SCALE

Earth Systems Pacific
4378 Old Santa Fe Road, San Luis Obispo, CA 93401
www.earthsystems.com
(805) 544-3276 • Fax (805) 544-1786

EXPLORATION LOCATION MAP

Ritz Carlton Bacara Beach House Relocation
8301 Hollister Avenue
Goleta, California

Date
April, 2018

Project No.
301967-001

Figure 2

RITZ CARLTON BACARA BEACH HOUSE RELOCATION–041318maps

Earth Systems Pacific

BORING LOG LEGEND

SAMPLE / SUBSURFACE WATER SYMBOLS	GRAPH. SYMBOL
CALIFORNIA MODIFIED	
STANDARD PENETRATION TEST (SPT)	
SHELBY TUBE	
BULK	
SUBSURFACE WATER DURING DRILLING	
SUBSURFACE WATER AFTER DRILLING	

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487)

MAJOR DIVISIONS	GROUP SYMBOL	TYPICAL DESCRIPTIONS	GRAPH. SYMBOL
COARSE GRAINED SOILS (MORE THAN HALF OF MATERIAL IS LARGER THAN #200 SIEVE SIZE)	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	
	GP	POORLY GRADED GRAVELS, OR GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	
	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES, NON-PLASTIC FINES	
	GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES, PLASTIC FINES	
	SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	
	SP	POORLY GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES	
	SM	SILTY SANDS, SAND-SILT MIXTURES, NON-PLASTIC FINES	
	SC	CLAYEY SANDS, SAND-CLAY MIXTURES, PLASTIC FINES	
FINE GRAINED SOILS (HALF OR MORE OF MATERIAL IS SMALLER THAN #200 SIEVE SIZE)	ML	INORGANIC SILTS AND VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY	
	CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
	OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	
	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS	
	CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	
	OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS	
	PT	PEAT AND OTHER HIGHLY ORGANIC SOILS	

OBSERVED MOISTURE CONDITION

DRY	SLIGHTLY MOIST	MOIST	VERY MOIST	WET (SATURATED)

CONSISTENCY

COARSE GRAINED SOILS			FINE GRAINED SOILS		
BLOWS/FOOT		DESCRIPTIVE TERM	BLOWS/FOOT		DESCRIPTIVE TERM
SPT	CA SAMPLER		SPT	CA SAMPLER	
0-10	0-16	LOOSE	0-2	0-3	VERY SOFT
11-30	17-50	MEDIUM DENSE	3-4	4-7	SOFT
31-50	51-83	DENSE	5-8	8-13	MEDIUM STIFF
OVER 50	OVER 83	VERY DENSE	9-15	14-25	STIFF
			16-30	26-50	VERY STIFF
			OVER 30	OVER 50	HARD

GRAIN SIZES

U.S. STANDARD SERIES SIEVE				CLEAR SQUARE SIEVE OPENING		
# 200	# 40	# 10	# 4	3/4"	3"	12"

SILT & CLAY	SAND			GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		

TYPICAL BEDROCK HARDNESS

MAJOR DIVISIONS	TYPICAL DESCRIPTIONS
EXTREMELY HARD	CORE, FRAGMENT, OR EXPOSURE CANNOT BE SCRATCHED WITH KNIFE OR SHARP PICK; CAN ONLY BE CHIPPED WITH REPEATED HEAVY HAMMER BLOWS
VERY HARD	CANNOT BE SCRATCHED WITH KNIFE OR SHARP PICK; CORE OR FRAGMENT BREAKS WITH REPEATED HEAVY HAMMER BLOWS
HARD	CAN BE SCRATCHED WITH KNIFE OR SHARP PICK WITH DIFFICULTY (HEAVY PRESSURE); HEAVY HAMMER BLOW REQUIRED TO BREAK SPECIMEN
MODERATELY HARD	CAN BE GROOVED 1/16 INCH DEEP BY KNIFE OR SHARP PICK WITH MODERATE OR HEAVY PRESSURE; CORE OR FRAGMENT BREAKS WITH LIGHT HAMMER BLOW OR HEAVY MANUAL PRESSURE
SOFT	CAN BE GROOVED OR GOUGED EASILY BY KNIFE OR SHARP PICK WITH LIGHT PRESSURE, CAN BE SCRATCHED WITH FINGERNAIL; BREAKS WITH LIGHT TO MODERATE MANUAL PRESSURE
VERY SOFT	CAN BE READILY INDENTED, GROOVED OR GOUGED WITH FINGERNAIL, OR CARVED WITH KNIFE; BREAKS WITH LIGHT MANUAL PRESSURE

TYPICAL BEDROCK WEATHERING

MAJOR DIVISIONS	TYPICAL DESCRIPTIONS
FRESH	NO DISCOLORATION, NOT OXIDIZED
SLIGHTLY WEATHERED	DISCOLORATION OR OXIDATION IS LIMITED TO SURFACE OF, OR SHORT DISTANCE FROM, FRACTURES; SOME FELDSPAR CRYSTALS ARE DULL
MODERATELY WEATHERED	DISCOLORATION OR OXIDATION EXTENDS FROM FRACTURES, USUALLY THROUGHOUT; Fe-Mg MINERALS ARE "RUSTY", FELDSPAR CRYSTALS ARE "CLOUDY"
INTENSELY WEATHERED	DISCOLORATION OR OXIDATION THROUGHOUT; FELDSPAR AND Fe-Mg MINERALS ARE ALTERED TO CLAY TO SOME EXTENT, OR CHEMICAL ALTERATION PRODUCES IN SITU DISAGGREGATION
DECOMPOSED	DISCOLORATION OR OXIDATION THROUGHOUT, BUT RESISTANT MINERALS SUCH AS QUARTZ MAY BE UNALTERED; FELDSPAR AND Fe-Mg MINERALS ARE COMPLETELY ALTERED TO CLAY

drafting\masters\Boring Log Legend121714.dwg

Earth Systems Pacific

Boring No. 1
PAGE 1 OF 1

LOGGED BY: R. Wagner
DRILL RIG: Mobile B-53 with Automatic Hammer
AUGER TYPE: 6" Hollow/Solid Stem Auger

JOB NO.: 301967-001
DATE: 4/12/18

RITZ CARLTON BACARA
BEACH HOUSE RELOCATION
8301 Hollister Avenue
Goleta, California

DEPTH (feet)	USCS CLASS	SYMBOL	SOIL DESCRIPTION	SAMPLE DATA: INTERVAL (feet)	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.
0 - 1	GC		CLAYEY GRAVEL W/ SAND: brown, medium dense, moist (Fill)					
1 - 4	SC		CLAYEY SAND: brown, medium dense, moist, trace gravel, trace brick, concrete debris	1.0 - 4.0	○			
4 - 8	CL		SANDY LEAN CLAY: brown, stiff, moist, trace gravel, trace organic material	5.0 - 6.5	■	113.6	17.8	6, 7, 13
				4.0 - 8.0	○			
8 - 9	SM		SILTY SAND: dark gray to black, medium dense, moist					
9 - 13	SC		CLAYEY SAND: dark gray brown, loose, moist, trace organic material (Alluvium)	10.0 - 11.5	■	89.7	19.1	1, 4, 5
13 - 16.5	CL		SANDY LEAN CLAY: dark gray brown, stiff, moist	15.0 - 16.5	■	101.1	18.7	2, 8, 11
16.5			End of Boring @ 16.5' No subsurface water encountered					

LEGEND: ■ Ring Sample ○ Grab Sample ▭ Shelby Tube Sample ● SPT

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered It applies at the location and time of drilling
Subsurface conditions may differ at other locations and times

Earth Systems Pacific

Boring No. 2
PAGE 1 OF 2
JOB NO.: 301967-001
DATE: 4/12/18

LOGGED BY: R. Wagner
DRILL RIG: Mobile B-53 with Automatic Hammer
AUGER TYPE: 6" Hollow/Solid Stem Auger

RITZ CARLTON BACARA
BEACH HOUSE RELOCATION
8301 Hollister Avenue
Goleta, California

DEPTH (feet)	USCS CLASS	SYMBOL	SOIL DESCRIPTION	SAMPLE DATA: INTERVAL (feet)	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.
0	SC		CLAYEY SAND: brown, medium dense, moist, trace to some gravel (Fill)					
2				2.0 - 5.0	○			
2	CL		SANDY LEAN CLAY: brown, medium stiff, mist, trace gravel, trace brick debris					
5				5.0 - 6.5	■	114.4	16.1	3, 10, 20
5	SC		CLAYEY SAND: gray brown, medium dense, moist, some gravel					
8			dark gray, trace organics, trace shells					
10			brown / dark brown mottled	10.0 - 11.5	■	123.7	5.2	3, 20, 22
13	SC		CLAYEY SAND: dark gray brown, medium dense, moist (Alluvium)					
15				15.0 - 16.5	■	101.8	22.4	3, 8, 15
20	CL		SANDY LEAN CLAY: gray brown, soft, moist to very moist	20.0 - 21.5	●			1, 2, 2
25				25.0 - 26.5	●	N	R	1, 3, 5
25			medium stiff, wet ▼					

LEGEND: ■ Ring Sample ○ Grab Sample ▭ Shelby Tube Sample ● SPT

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

Earth Systems Pacific

Boring No. 2

LOGGED BY: R. Wagner
DRILL RIG: Mobile B-53 with Automatic Hammer
AUGER TYPE: 6" Hollow/Solid Stem Auger

JOB NO.: 301967-001
DATE: 4/12/18

RITZ CARLTON BACARA
BEACH HOUSE RELOCATION
8301 Hollister Avenue
Goleta, California

DEPTH (feet)	USCS CLASS	SYMBOL	SOIL DESCRIPTION	SAMPLE DATA: INTERVAL (feet)	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.
27	CL		SANDY LEAN CLAY: as above	30.0 - 31.5	●	N	R	1 2 5
32			End of Boring @ 31.5' Subsurface Water Encountered @ 25.5'					

LEGEND: ■ Ring Sample ○ Grab Sample ▭ Shelby Tube Sample ● SPT

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered It applies at the location and time of drilling
Subsurface conditions may differ at other locations and times

APPENDIX B

Laboratory Test Results

Ritz Carlton
Bacara Beach House Relocation

301967-001

BULK DENSITY TEST RESULTS

ASTM D 2937-17 (modified for ring liners)

April 24, 2018

BORING NO.	DEPTH feet	MOISTURE CONTENT, %	WET DENSITY, pcf	DRY DENSITY, pcf
1	6.0 - 6.5	17.8	133.8	113.6
1	11.0 - 11.5	19.1	106.8	89.7
1	16.0 - 16.5	18.7	120.0	101.1
2	6.0 - 6.5	16.1	132.8	114.4
2	11.0 - 11.5	5.2	130.0	123.7
2	16.0 - 16.5	22.4	124.6	101.8

EXPANSION INDEX TEST RESULTS

ASTM D 4829-11

BORING NO.	DEPTH feet	EXPANSION INDEX
1	1.0 - 4.0	25
2	2.0 - 5.0	44

Ritz Carlton
Bacara Beach House Relocation

301967-001

MOISTURE-DENSITY COMPACTION TEST

ASTM D 1557-12 (Modified)

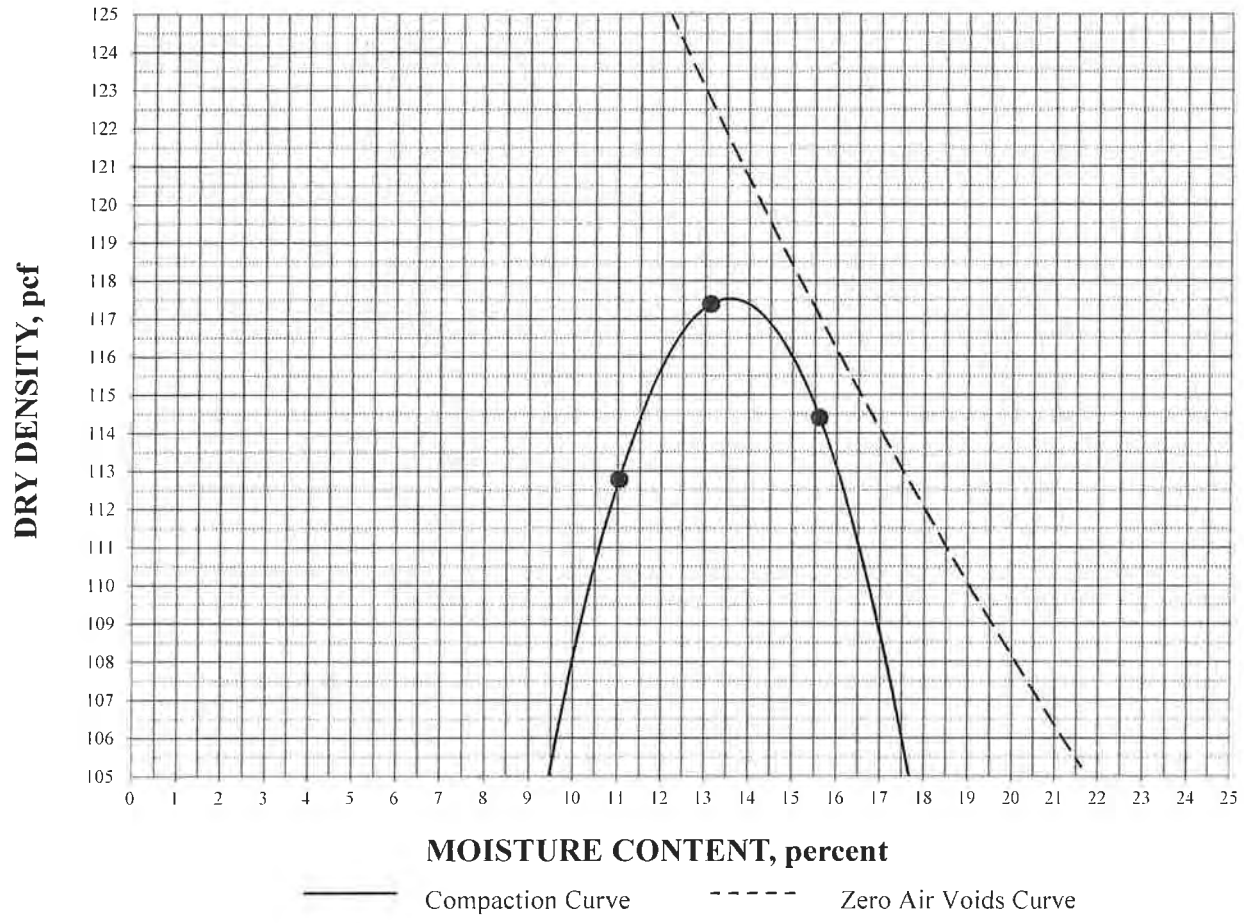
PROCEDURE USED: A
PREPARATION METHOD: Moist
RAMMER TYPE: Mechanical
SPECIFIC GRAVITY: 2.65 (assumed)

April 24, 2018
Boring #1 @ 1.0 - 4.0'
Brown Clayey Sand (SC)

SIEVE DATA:

Sieve Size	% Retained (Cummulative)
3/4"	0
3/8"	0
#4	0

MAXIMUM DRY DENSITY: 117.5 pcf
OPTIMUM MOISTURE: 13.6%



Ritz Carlton
Bacara Beach House Relocation

301967-001

MOISTURE-DENSITY COMPACTION TEST

ASTM D 1557-12 (Modified)

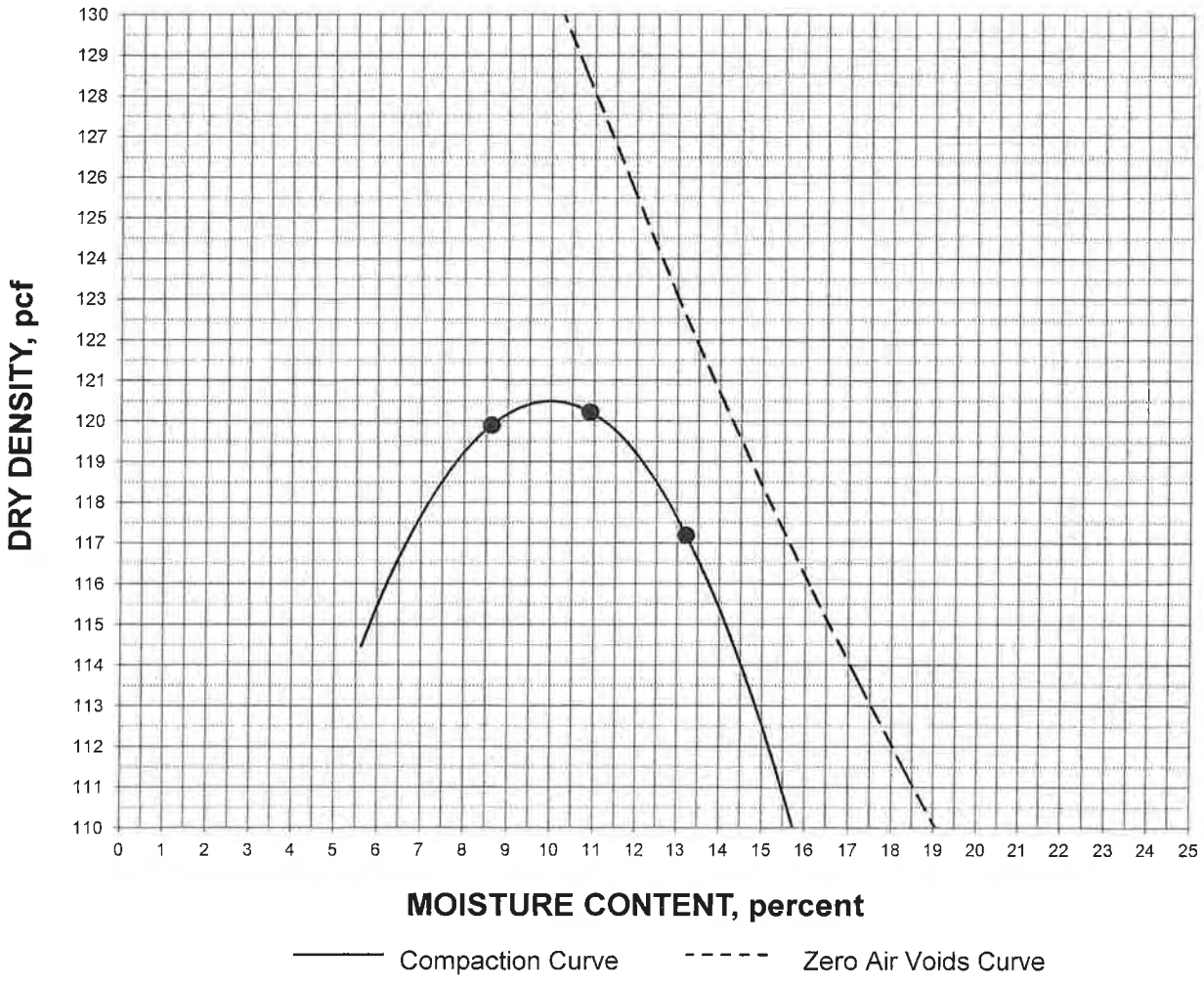
PROCEDURE USED: A
PREPARATION METHOD: Moist
RAMMER TYPE: Mechanical
SPECIFIC GRAVITY: 2.65 (assumed)

April 24, 2018
Boring #1 @ 4.0 - 8.0'
Brown Sandy Lean Clay (CL)

SIEVE DATA:

Sieve Size	% Retained (Cummulative)
3/4"	0
3/8"	0
#4	0

MAXIMUM DRY DENSITY: 120.5 pcf
OPTIMUM MOISTURE: 10.0%



Ritz Carlton
Bacara Beach House Relocation

301967-001

MOISTURE-DENSITY COMPACTION TEST

ASTM D 1557-12 (Modified)

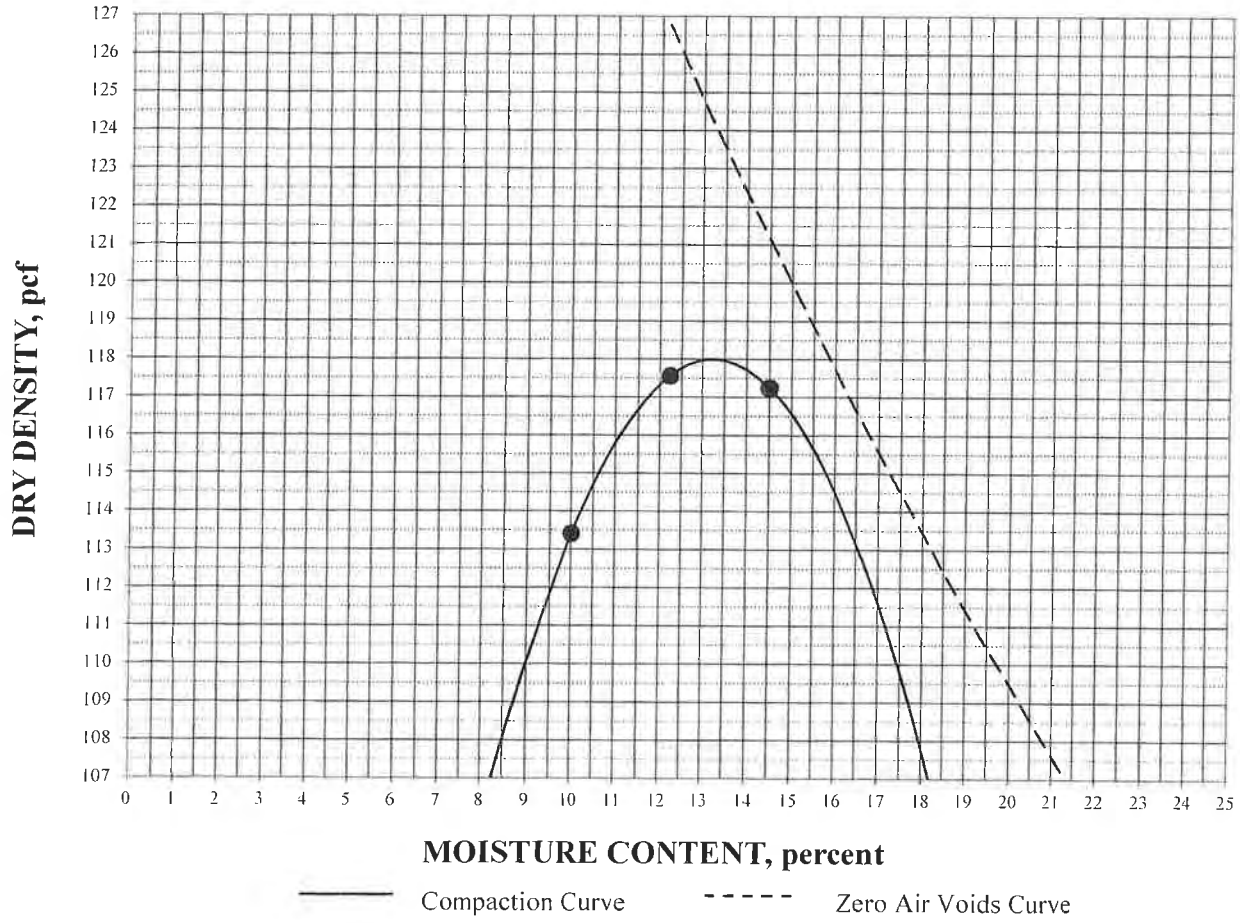
PROCEDURE USED: A
PREPARATION METHOD: Moist
RAMMER TYPE: Mechanical
SPECIFIC GRAVITY: 2.70 (assumed)

April 24, 2018
Boring #2 @ 2.0 - 5.0'
Brown Sandy Lean Clay (CL)

SIEVE DATA:

Sieve Size	% Retained (Cummulative)
3/4"	0
3/8"	0
#4	0

MAXIMUM DRY DENSITY: 118.0 pcf
OPTIMUM MOISTURE: 13.2%



Ritz Carlton
Bacara Beach House Relocation

301967-001

DIRECT SHEAR

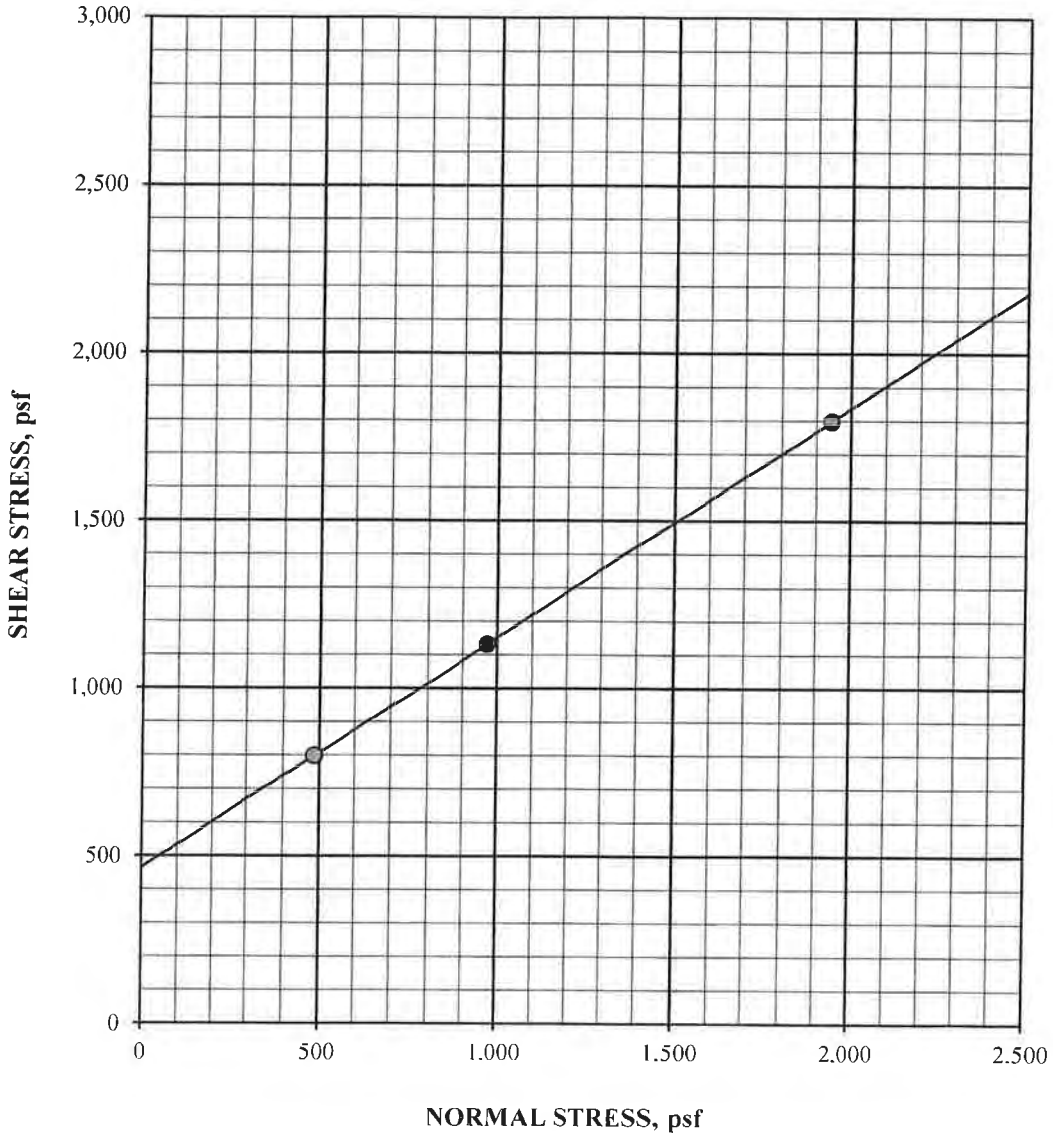
ASTM D 3080/D3080M-11 (modified for consolidated, undrained conditions)

April 24, 2018

Boring #1 @ 1.0 - 4.0'
Clayey Sand (SC)
Compacted to 90% RC, saturated

INITIAL DRY DENSITY: 106.5 pcf
INITIAL MOISTURE CONTENT: 13.6 %
PEAK SHEAR ANGLE (Ø): 34°
COHESION (C): 466 psf

SHEAR vs. NORMAL STRESS



Ritz Carlton
Bacara Beach House Relocation

301967-001

DIRECT SHEAR continued

ASTM D 3080/D3080M-11 (modified for consolidated, undrained conditions)

Boring #1 @ 1.0 - 4.0'

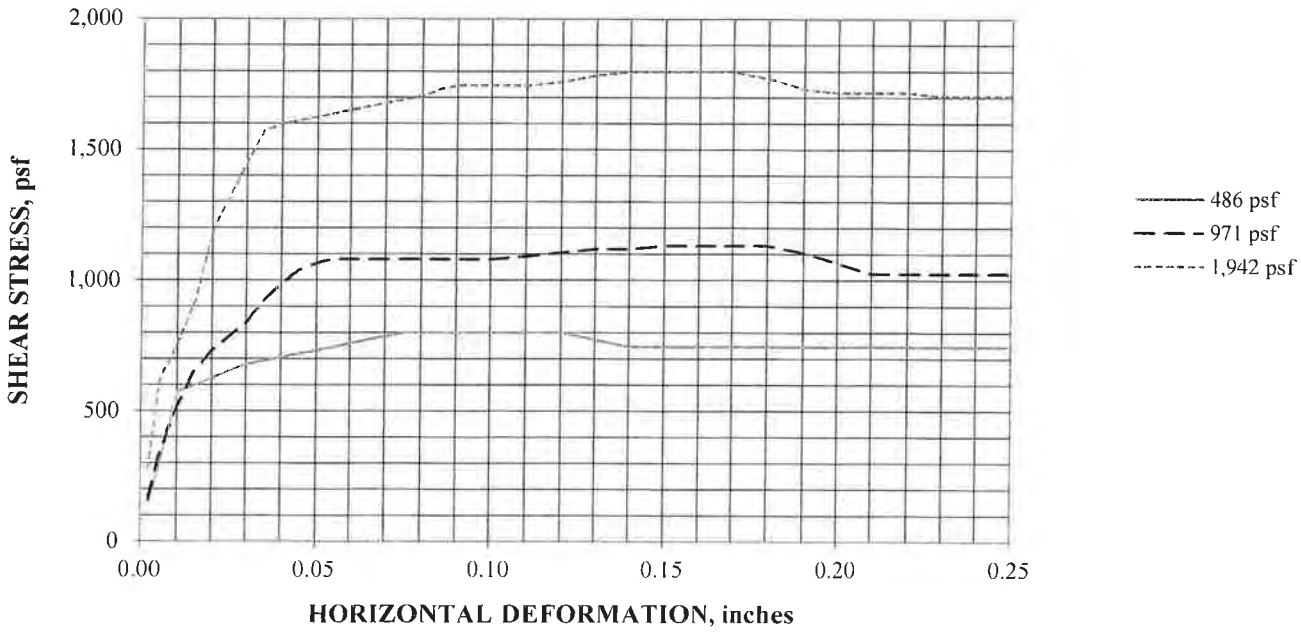
April 24, 2018

Clayey Sand (SC)

Compacted to 90% RC, saturated

SPECIFIC GRAVITY: 2.65 (assumed)

SAMPLE NO.:	1	2	3	AVERAGE
INITIAL				
WATER CONTENT, %	13.6	13.6	13.6	13.6
DRY DENSITY, pcf	107.1	105.7	106.6	106.5
SATURATION, %	66.3	63.9	65.4	65.2
VOID RATIO	0.544	0.564	0.551	0.553
DIAMETER, inches	2.410	2.410	2.410	
HEIGHT, inches	1.00	1.00	1.00	
AT TEST				
WATER CONTENT, %	22.4	24.0	24.5	
DRY DENSITY, pcf	109.2	109.8	114.4	
SATURATION, %	100.0	100.0	100.0	
VOID RATIO	0.515	0.506	0.446	
HEIGHT, inches	0.98	0.96	0.93	



Ritz Carlton
Bacara Beach House Relocation

301967-001

CONSOLIDATION TEST

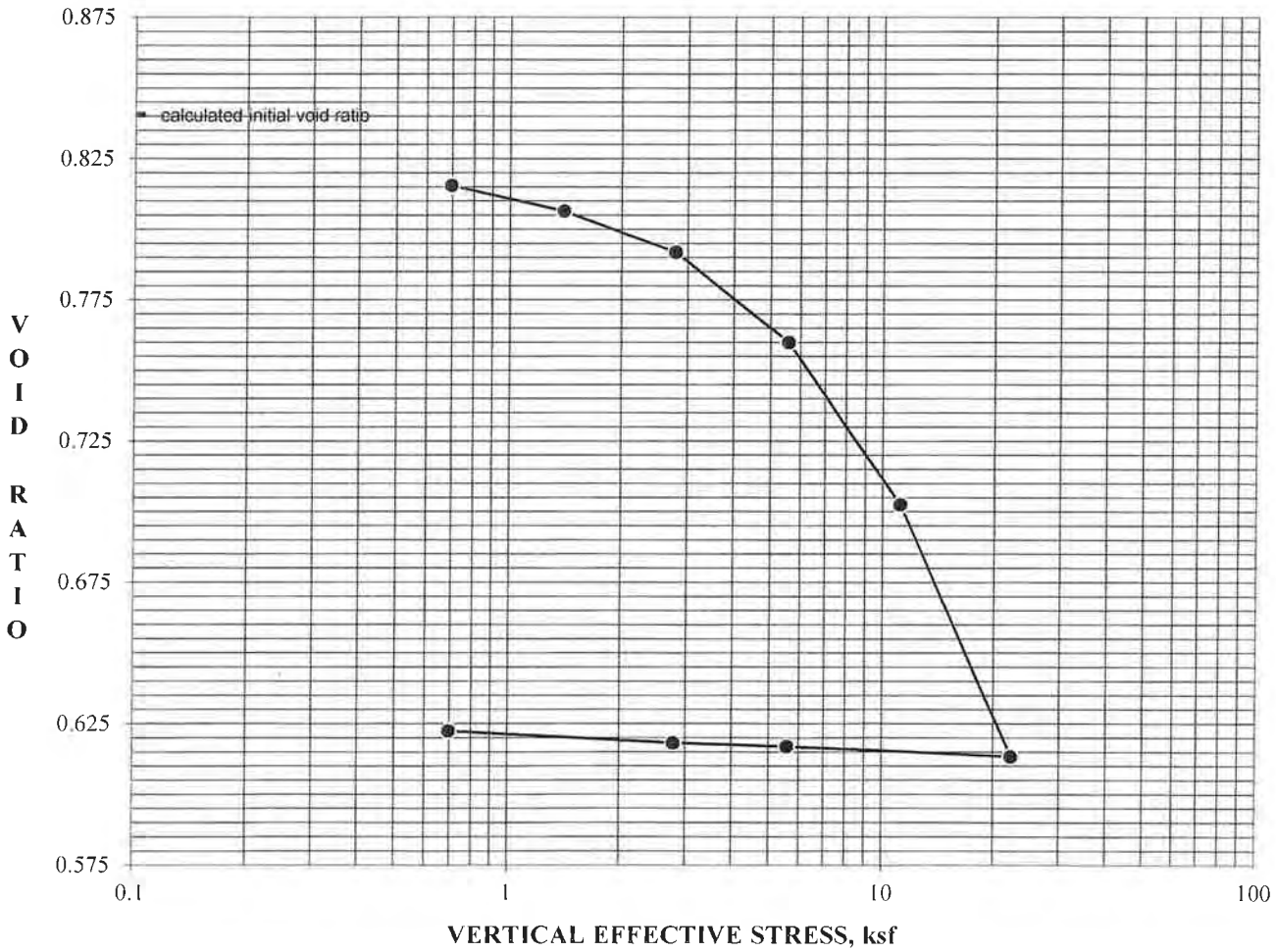
ASTM D 2435/D2435M-11

April 24, 2018

Boring #1 @ 11.0 - 11.5'
Clayey Sand (SC)
Ring Sample

DRY DENSITY: 89.9 pcf
MOISTURE CONTENT: 19.1%
SPECIFIC GRAVITY: 2.65 (assumed)
INITIAL VOID RATIO: 0.841

VOID RATIO vs. NORMAL PRESSURE DIAGRAM



Ritz Carlton
Bacara Beach House Relocation

301967-001

CONSOLIDATION TEST

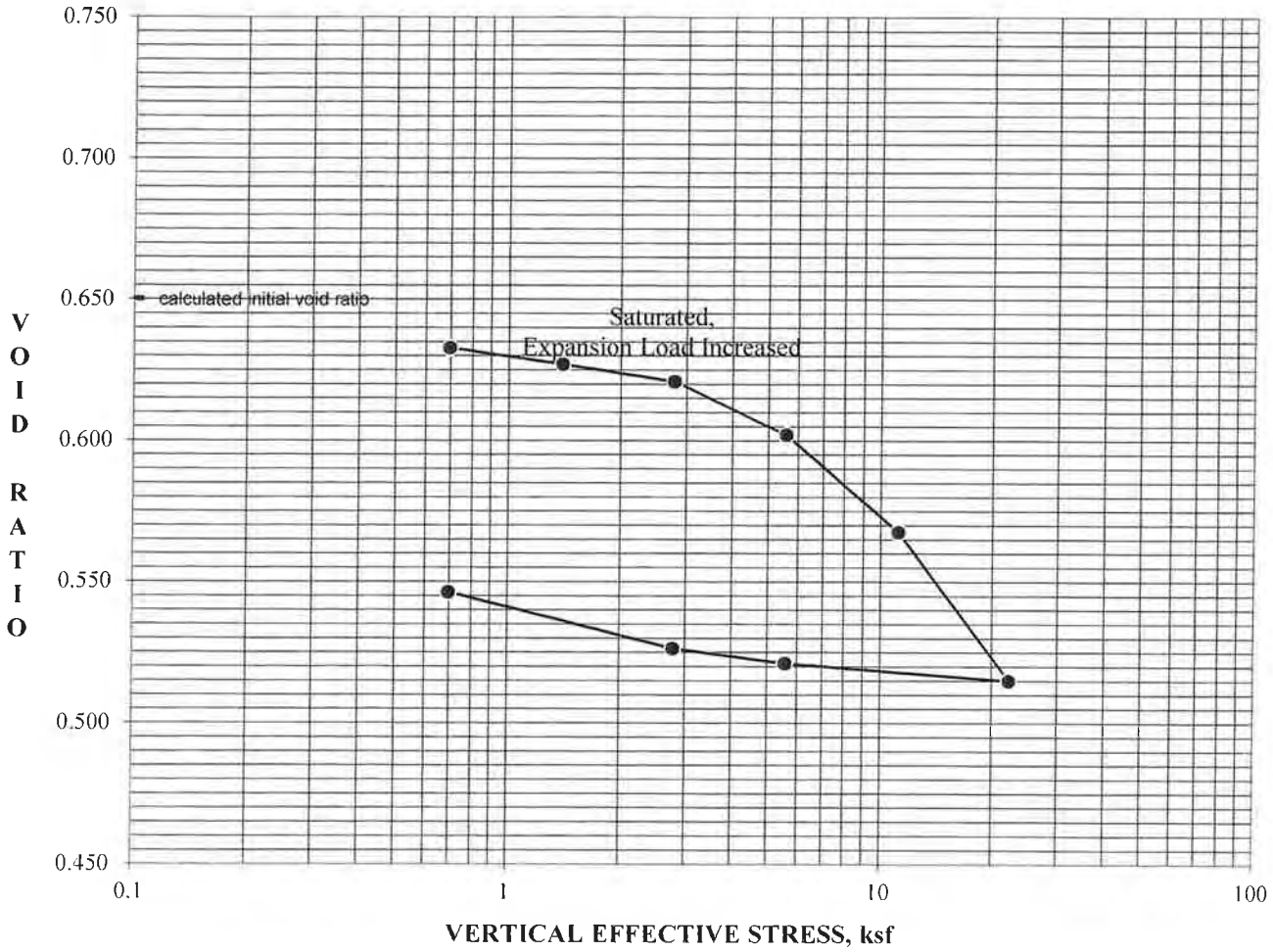
ASTM D 2435/D2435M-11

April 24, 2018

Boring #1 @ 16.0 - 16.5'
Sandy Lean Clay (CL)
Ring Sample

DRY DENSITY: 102.2 pcf
MOISTURE CONTENT: 18.7%
SPECIFIC GRAVITY: 2.70 (assumed)
INITIAL VOID RATIO: 0.650

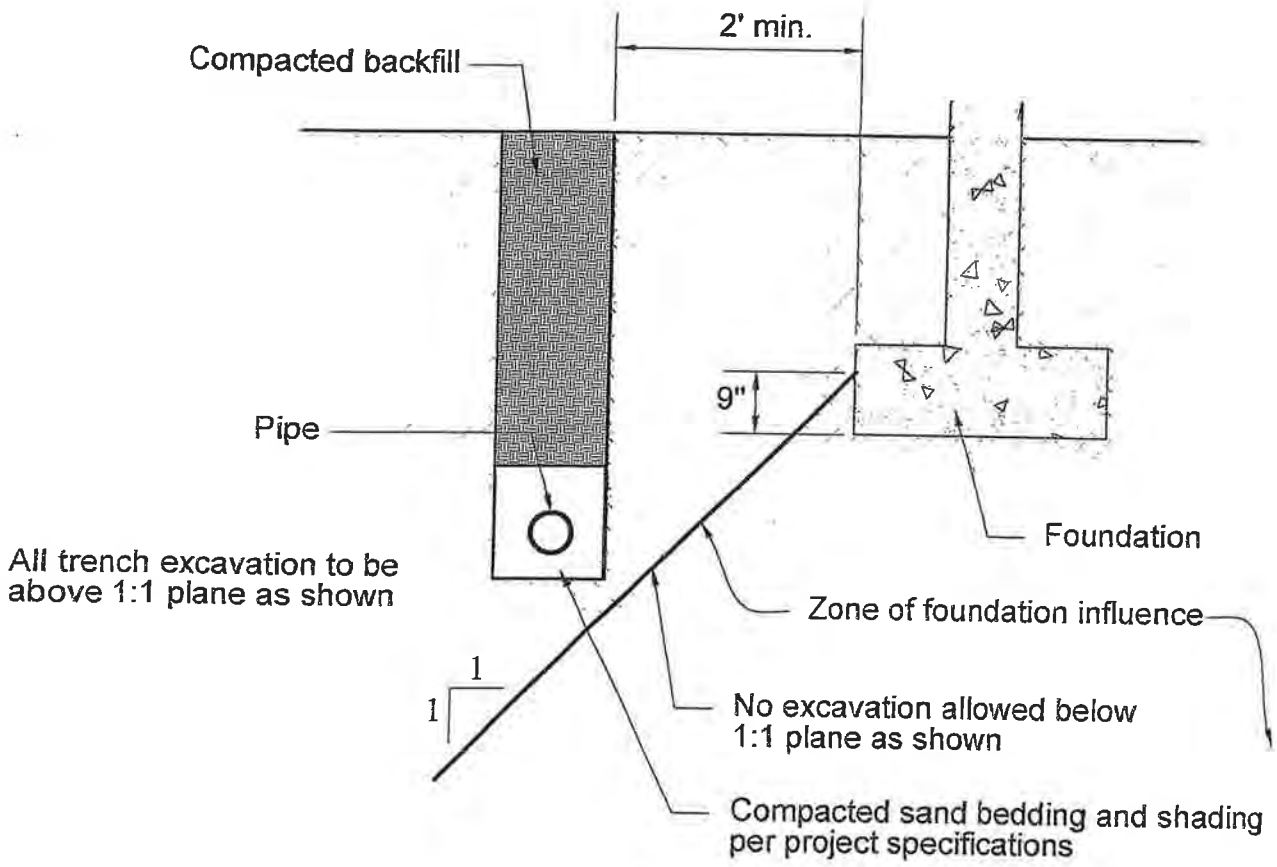
VOID RATIO vs. NORMAL PRESSURE DIAGRAM



APPENDIX C

Typical Detail A: Pipe Placed Parallel to Foundations

TYPICAL DETAIL A
PIPE PLACED PARALLEL TO FOUNDATIONS



SCHEMATIC ONLY
NOT TO SCALE

Earth Systems Pacific

4378 Old Santa Fe Road
San Luis Obispo, CA 93401-8116
(805) 544-3276 • FAX (805) 544-1786
E-mail: esp@earthsystems.com

ATTACHMENT G

G-3. Third Party Geotechnical Engineering Review Services, Proposed Beach House Replacement Project Bacara Resort, Goleta, California. Fugro September 13, 2018.

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FUGRO
4820 McGrath Street, Suite 100
Ventura, California 93003
T +1 805 650 7000
F +1 805 650 7010

Fugro Project No. 04.61189005
Document No. 04.61189005-P-001(Rev.00)
February 6, 2018

RECON Environmental
5951 Encina Road, Suite 104
Goleta, California 93117

Attention: Mr. Bret McNulty

Re: Third Party Geotechnical Engineering Review Services, Proposed Beach House Replacement Project, Bacara Resort, Goleta, California

Dear Mr. McNulty,

Fugro is pleased to submit this proposal to provide third party geotechnical review services for the proposed Beach House Replacement Project at the Bacara Resort property in Goleta, California. This proposal was prepared in response to your request of February 6, 2018.

Based on information from you, we understand that the existing beach house at the Bacara Resort is located proximal to the sandy beach and has been impacted by ocean wave action and erosion. The existing beach house will be removed and a replacement structure will be constructed about 250 feet east and a 50 to 100 feet north of the existing beach house. The replacement structure will be a single-story structure with a building footprint of about 1,000 square feet and located near the toe of an existing ascending natural slope. The project will also incorporate improvements to site utilities and the existing access road.

We note that the consultant's report was not available at the time we prepared this proposal.

SCOPE OF SERVICES

We understand that the owner's geotechnical engineering consultant has prepared a geotechnical design report for the replacement structure and that Fugro's services would consist of providing independent review of the consultant's report for compliance with the building code and typical standard of practice.

Our basic scope of work will consist of performing an initial review of the consultant's geotechnical report and preparing a letter summarizing our geotechnical review comments. We will also review the consultant's response to our initial review letter and prepare a follow up letter. Subsequent reviews will be performed and documentation provided, if required, as additional services. We will provide documentation of our work to RECON Environmental via email and in Portable Document Format.

SCHEDULE AND FEE ESTIMATE

We will provide our basic scope of services for a lump sum fee of $3,500. As noted additional reviews and documentation will be prepared, if needed as additional services. We anticipate we can complete our initial review and provide our geotechnical review letter within two weeks of receiving the consulting geotechnical report for the replacement beach house. We can perform our follow up review and comment letter within 1 week of receiving the consultant's response.

We developed our scope and fee assuming the work will be performed under Fugro's professional services agreement (attached). If work is performed under alternate contract language, revision to the scope and fee may be required. Receipt of the task order will serve as written authorization to proceed.

Thank you for the opportunity to provide this proposal for third party geotechnical review services for the proposed Bacara Beach House Replacement Project. Please contact us if you have any questions regarding our proposed work scope of fee estimate.

Sincerely,

Fugro USA Land, Inc.

Gregory Denlinger
Principal Engineer

Attachment: Fugro Professional Service Agreement
Copies Submitted: One electronic copy to Mr. McNulty

ATTACHMENT G

G-4. Response to Third Party Geotechnical Review Comments, Earth Systems Pacific February 20, 2019

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Earth Systems
4378 Old Santa Fe Road | San Luis Obispo, CA 93401 | Ph: 805.544.3276 | www.earthsystems.com

February 20, 2019

File No.: 301967-001

Mr. Lorcan Drew
Santa Barbara Hotel Operator, Inc.
150 North Riverside Plaza, Suite 4200
Chicago, IL 60606

PROJECT: RITZ CARLTON BACARA BEACH HOUSE RELOCATION AND EXECUTIVE CONFERENCE CENTER EXPANSION
8301 HOLLISTER AVENUE
SANTA BARBARA, CALIFORNIA

SUBJECT: Response to Third Party Geotechnical Review Comments

Dear Mr. Drew:

Per the request of Ms. Ginger Andersen with Stantec, and your subsequent authorization, this letter has been prepared to present our response to the comments presented in the referenced Third Party Geotechnical Review letter prepared by Fugro USA Land, Inc. (Ref. No. 1). Our comments area as follows:

Comment 1.: *The Project Geotechnical Consultant shall comment on the likelihood of encountering differing materials below the depths of the test borings as the borings do not meet the suggested depths provided in references California Division of Mines and Geology [DMG] (2008) and SCEC/ASCE (1999) regarding evaluation of liquefaction to a depth of 50 feet.*

Response: The site is in Tecolote Canyon, an incised valley that was eroded into bedrock of the Monterey formation, and subsequently infilled with alluvium as the local base level (sea level) rose following the last glaciation. The strata beneath the site are anticipated to be undocumented fill over alluvium, and bedrock of the Monterey formation at an undetermined depth. The alluvium does have stratification, as indicated on the boring logs. The characteristics of the alluvial strata are a function of the geology eroding in the source area, upstream in Tecolote Canyon. The properties of the alluvial strata are not anticipated to vary significantly from the sediments observed in the test borings. Further, we have attached a boring log from the referenced feasibility report prepared by this firm (Ref. No. 3). This boring was performed within 100 feet of the proposed Beach House. Our conclusion at the time of the feasibility report was that liquefaction would not have a significant impact. This was the same conclusion in the referenced geotechnical report (Ref. No. 2).

Comment 2.: *The Consultant should comment on the building setback from the adjacent ascending slope and potential slope stability impact to the building.*

Response: The adjacent ascending slope is considered to be globally stable. The slope consists of marine terrace sediments over bedrock of the Monterey formation. The slope is the upper part of the eastern wall of Tecolote Canyon, which was incised to an undetermined depth during the last glaciation (Pleistocene Epoch). Subsequent alluviation of this canyon, as a result of sea level rise, has buttressed this slope, leaving only the upper part exposed. The upper part is an ancient land surface covered with a mantle of colluvium and residual soil. This soil mantle may be subject to surficial soil

movements in the form of slope creep, slope wash, and soil slips. The development should include features to manage runoff and sediment flux. Based upon the current plans, it is our understanding this has been incorporated.

Comment 3.: *The geotechnical engineering consultant shall review the project plans and indicate that the plans conform to the geotechnical recommendations.*

Response: We have reviewed the project civil plans prepared by Stantec and WATG dated January 25, 2019 for general conformance with the information contained in the referenced geotechnical engineering report (Ref. No. 2). This plan review was performed specifically with respect to geotechnical factors discussed in the referenced report; factors related to civil or structural engineering, drafting and other disciplines are beyond the scope of this review. In performing this review, we attempted to verify that the concepts and recommendations presented in the report were generally incorporated into the plans. Based on this review, in our opinion, the referenced plans are in conformance with the concepts and information presented in the referenced geotechnical engineering report.

Comment 4.: *The following note must appear on the grading and foundation plans: "Tests shall be performed prior to pouring footings and slabs to evaluate corrosivity of the supporting soils, and foundation and slab plans should be reviewed by the Civil or Structural Engineer and revised, if necessary, accordingly."*

Response: Acknowledged...

Comment 5.: *An as-built geotechnical report documenting the complete grading operations must be prepared by the Project Geotechnical Consultant and submitted to the City of Goleta prior to final approval of the project. The report must include the results of all density testing and expansion testing, as well as a map showing the limits of grading and locations of all density tests. Geologic conditions exposed during grading must be depicted on an as-built geologic map. This comment shall be included as a note on the grading plan.*

Response: Acknowledged

If there are any questions concerning this letter, please do not hesitate to contact the undersigned.

Sincerely,
Earth Systems Pacific

Robert Down, PE
Senior Engineer
2/20/19

REGISTERED PROFESSIONAL ENGINEER
ROBERT W. DOWN
No. 70206
Exp. 5/31/2020
CIVIL
STATE OF CALIFORNIA

Darrin Hasham, CEG
Associate Geologist

REGISTERED GEOLOGIST
DARRIN G. HASHAM
NO. 2423
CERTIFIED ENGINEERING GEOLOGIST
02/29/20
STATE OF CALIFORNIA

Attachments: References
Boring Location Map
Boring Logs (2 pages)

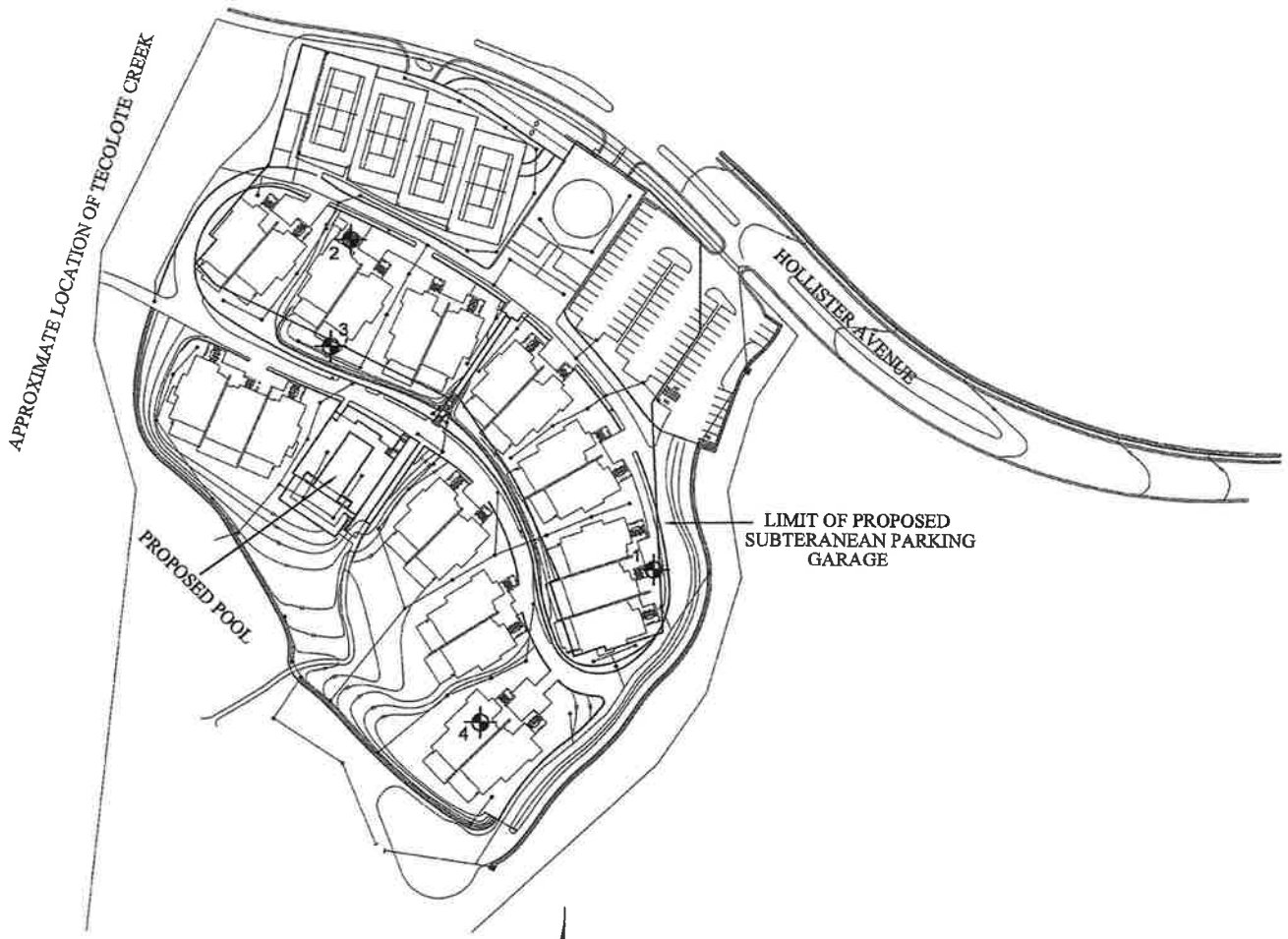
Doc. No.: 1902-042.LTR/pm

REFERENCES

1) Third Party Geotechnical Engineering Review Letter, Prepared by Fugro USA Land, Inc., dated September 13, 2018

2) Geotechnical Engineering Report, Ritz Carlton Bacara Beach House Relocation, 8301 Hollister Avenue, Santa Barbara, California, by Earth Systems Pacific, Doc. No. 1805-045.SER, dated May 11, 2018

3) Geotechnical Feasibility Study, Bacara Resort and Spa Completion Phase, Goleta, California, by Earth Systems Pacific, Doc. No. 0812.075.rpt, dated December 31, 2008



LEGEND

4 Boring Location (Approx.)

NOT TO SCALE

BORING LOCATION MAP

BACARA RESORT AND SPA
COMPLETION PHASE-FEASIBILITY

8301 Hollister Avenue
Goleta, California

Earth Systems Pacific
4378 Old Santa Fe Road
San Luis Obispo, CA 93401-8116
(805) 544-3276 • FAX (805) 544-1786
E-mail: esc@earthsys.com

November 26, 2008 KM SL-10482-SC

BACARA RESORT AND SPA-11260BBorings

Earth Systems Pacific

Boring No. 4
PAGE 1 OF 2
JOB NO.: SL-10482-SC
DATE: 10/22/08

LOGGED BY: R. Wagner
DRILL RIG: Mobile Drill, Model B-53
AUGER TYPE: 8" Hollow Stem

BACARA RESORT AND SPA
COMPLETION PHASE-FEASIBILITY
8301 Hollister Avenue
Goleta, California

SOIL DESCRIPTION

DEPTH (feet)	USCS CLASS	SYMBOL	SOIL DESCRIPTION	SAMPLE DATA: INTERVAL (feet)	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.
0	SC		CLAYEY SAND: brown, medium dense, moist, some coarse gravel (fill)	5.0–6.5	■	108.3	17.6	10, 16, 18
6			grey brown					
9	SP		POORLY GRADED SAND: dark grey to black, medium dense, moist, trace organics, trace roots (alluvium)	10.0–11.5	■	95.9	7.3	5, 9, 10
14	CL		SANDY LEAN CLAY: dark grey to black, stiff, moist, some organics					
19			brown/grey mottled, very stiff, trace organics, trace silt	20.0–21.5	●			6, 12, 10
26								

LEGEND: ■ Ring Sample ○ Grab Sample ▭ Shelby Tube Sample ● SPT

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

Earth Systems Pacific

Boring No. 4
PAGE 2 OF 2
JOB NO.: SL-10482-SC
DATE: 10/22/08

LOGGED BY: R. Wagner
DRILL RIG: Mobile Drill, Model B-53
AUGER TYPE: 8" Hollow Stem

BACARA RESORT AND SPA
COMPLETION PHASE-FEASIBILITY
8301 Hollister Avenue
Goleta, California

DEPTH (feet)	USCS CLASS	SYMBOL	SOIL DESCRIPTION	SAMPLE DATA: INTERVAL (feet)	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.
27	CL		SANDY LEAN CLAY: as above					
28								
29								
30			stiff, very moist, trace fine gravel, increasing sand content	30.0–31.5	●			4 6 8
31								
32								
33								
34								
35			dark grey, moist, decreasng sand content					
36								
37								
38								
39								
40				40.0–41.5	●			4 5 8
41								
42								
43								
44								
45								
46								
47								
48								
49								
50			6" lense of well graded sand, very moist, some silt	50.0–51.5	●			6 10 12
51			moist, decreasng sand content					
52			End of Boring @ 51.5' No subsurface water encountered.					
53								

LEGEND: ■ Ring Sample ○ Grab Sample ▭ Shelby Tube Sample ● SPT

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

ATTACHMENT H

H-1. Phase I Environmental Site Assessment (Phase I ESA), Ritz-Carlton, Bacara Resort Beach House, 8301 Hollister Avenue, Goleta, California
Stantec, April 25, 2018

H-2. Third-Party Report Review, Beach House Relocation Project, Ritz-Carlton, Bacara Resort & Spa, 8301 Hollister Avenue, Goleta, California.
Ninyo & Moore, September 14, 2018

H-3. Response to Peer Review Comments, Phase I Environmental Site Assessment Ritz-Carlton Bacara Resort Beach House, 8301 Hollister Avenue, Goleta, California.
Stantec, January 29, 2018

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ATTACHMENT H

H-1. Phase I Environmental Site Assessment (Phase I ESA), Ritz-Carlton, Bacara Resort Beach House, 8301 Hollister Avenue, Goleta, California
Stantec, April 25, 2018

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Phase I Environmental Site Assessment Ritz-Carlton Bacara Resort Beach House, 8301 Hollister Avenue, Goleta, California

Prepared for:
CWI RSCB Hotel LLC
150 N. Riverside Plaza, Suite 4200
Chicago, Illinois 60606

Prepared by:
Stantec Consulting Services Inc.
3437 Empresa Drive, Suite A
San Luis Obispo, CA 93401

Project No.: 2064160400

April 25, 2018

Sign-off Sheet and Signatures of Environmental Professionals

This document entitled Phase I Environmental Site Assessment Ritz-Carlton Bacara Resort Beach House, 8301 Hollister Avenue, Goleta, California was prepared by Stantec Consulting Services Inc. (Stantec) for the account of CWI RSCB Hotel LLC. The material in it reflects Stantec's best judgment in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. Stantec accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

All information, conclusions, and recommendations provided by Stantec in this document regarding the Phase I ESA have been prepared under the supervision of and reviewed by the professionals whose signatures appear below.

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in § 312.10 of 40 CFR 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Property. I have developed and performed all the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Prepared by _____

(signature)

Steve Little, PG, CHG
Principal Geologist

Reviewed by _____

(signature)

Kirk Henning
Senior Scientist

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Abbreviations

AAI	All Appropriate Inquiry
ACM	Asbestos containing material
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
BER	Business Environmental Risk
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulation
CREC	Controlled Recognized Environmental Conditions
CWA	Clean Water Act
ELUC	Environmental Land Use Control
EP	Environmental Professional
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
ft mall	Feet above mean sea level
HREC	Historical Recognized Environmental Conditions
HWMU	Hazardous Waste Management Unit
LBP	Lead-based Paint
LUST	Leaking Underground Storage Tank
NESHAP	National Emissions Standard for Hazardous Air Pollutants
PAHs	Polynuclear Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
pVEC	Potential Vapor Encroachment Condition
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Conditions
SWMU	Solid Waste Management Unit
TSCA	Toxic Substance Control Act
USDA	United States Department of Agriculture
USGS	United States Geological Survey
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds

1.0 SUMMARY

Stantec has completed a Phase I Environmental Site Assessment (ESA) report of the target study area located on a portion of Assessor's Parcel Number 079-002-013 at 8301 Hollister Avenue in Goleta, Santa Barbara County, California (the "Property"), on behalf of CWI RSCB Hotel LLC (the "Client"). The work was performed according to Stantec's proposal and terms and conditions dated April 2, 2018 and accepted by the Client. CWI RSCB Hotel LLC has been designated by Stantec as the User of this report. The Phase I ESA was conducted in conformance with the requirements of American Society for Testing and Materials (ASTM) Designation E 1527-13. Any exceptions to, or deletions from, the ASTM practice are described in Section 2.3.

For the purpose of this ESA, the Property consists of an approximately one-acre area that encompasses the building referred to as the Ritz-Carlton Bacara Resort Beach House located at the publicly accessible Haskell's Beach. The Property occupies a portion of Assessor's Parcel Number 079-002-013 with a street address of 8301 Hollister Avenue in Goleta, Santa Barbara County, California.

The Property is accessible by an unpaved pathway leading to the beach from the parking lot and Bacara Tennis Center on Hollister Avenue. The Property is improved with an approximately 3,600 square foot, single story commercial building (the Beach House), outdoor picnic area, outdoor beach showers, and landscaping. The building is partitioned into a seasonal snack bar for beach patrons, a storage and utility area at the rear of the building, public restrooms, and a janitorial closet. The property is accessible by foot and electric carts via the unpaved access trail. A paved emergency fire access road leads from Hollister Avenue to the Property. The Property is surrounded by undeveloped and vegetated areas of the Ritz-Carlton Bacara Resort and by the beach and Pacific Ocean to the south. A Property location map is illustrated on Figure 1. A Property map illustrating the main features of the Property is provided as Figure 2. Photographs taken during the site reconnaissance visit are provided in Appendix A. The following items of note were identified during this ESA:

- Historical sources indicate that the Property area was used for ranching as early as 1842. The railroad was constructed to the north of the Property in 1901. The property owner constructed a private beach house on or near the Property in 1926. Oil was discovered in the Ellwood Field in the late 1920's and the Property was leased to Pacific Western Oil Company circa 1930. Intensive development for oil and gas extraction occurred in the 1930's at and near the Property with five offshore piers containing oil wells along with onshore facilities located near the Property. The Property was developed with a rectangular structure and smaller structures that were likely associated with a petroleum tank farm located just north of the Property. The tank farm included 8 aboveground storage tanks (AST), 2 ponds, and one large floating-roof AST on the east side of Tecolate Creek. Oil production facilities were decommissioned beginning in the late 1950's and by

1967, the Property was vacant. The existing Bacara Beach House building and facilities were constructed in 1999-2000.

The Property and immediately surrounding area was subject to intensive oil and gas exploration and production activities between approximately 1930 and 1960. Former oil well piers and onshore petroleum production and processing facilities were located on or near the Property. As described in the following finding, residual contaminants likely associated with petroleum production have been identified on or adjacent to the Property and are considered as controlled recognized environmental conditions (CRECs).

- Environmental database search results identified the Bacara Resort and Spa Property as an open site cleanup case, a generator of hazardous wastes, and in April 2011, a reported incident of a sheen of unknown origin located 1-2 miles offshore. None of the listings for the Bacara Resort pertain to the Property, as defined herein, with the exception of the site cleanup case listed in the SWRCB Geotracker database. The site cleanup case in the Geotracker system is listed as having potential contaminants including arsenic, chromium, other metals, crude oil, diesel, kerosene, gasoline, benzene, and other hydrocarbons. Media potentially affected include soil, soil vapor, and indoor air. Site investigation and cleanup activities were conducted during development of the Bacara Resort property. Known areas of residual contamination were evaluated by a human health risk assessment and determined not to pose an unacceptable health risk to future occupants at the resort property.

  In February 2013, a land use covenant addressing the residual contaminants left in place was recorded with the County of Santa Barbara. In April 2014, the Santa Barbara County Public Health Department (SBCPHD) issued a closure letter to Pacific Hospitality Group, LLC, the owners of the Bacara Resort. The letter confirmed the completion of the site investigation and remediation at the subject site and that no further action was required at the time, other than compliance with the Land Use Covenant and the approved Soil Management Plan. In their letter, SBCPHD stated that the Soil Management Plan shall be followed during any and all soil disturbing activities. A map of residual contaminant locations in the soil management plan shows several locations on or immediately adjacent to the Property. The identified locations of residual contaminants shown in the Soil Management Plan on or immediately adjacent to the Property are considered controlled recognized environmental conditions (CRECs), as defined in Section 2.0. These areas are subject to the recorded Land Use Covenant and any soil disturbing activities in these locations are addressed by the Soil Management Plan.

  Located approximately 0.2 miles east of the Property, the Ellwood Onshore Facility previously operated by Veneco, Inc. was listed as an open site cleanup case in the SWRCB Geotracker database and in the County of Santa Barbara Leaking Underground Fuel Tank (LUFT) database. The Ellwood Onshore Facility (EOF) was idled following the

May 2015 Plains Pipeline spill near Refugio Beach and Veneco filed for bankruptcy and quitclaimed its interests in the Ellwood Field in April 2017. Review of a groundwater monitoring report for December 2016 (most recent technical report available) indicated two small areas of groundwater impact at the EOF containing low to moderate concentrations of dissolved petroleum hydrocarbons. Groundwater flow direction was westerly towards Bell Canyon Creek.

Based on review of available records, the database listings for the adjoining Bacara Resort and Spa do not constitute a REC connection with the Property. The inactive EOF formerly owned and operated by Veneco is also not considered a REC in connection with the Property.

- Inspection of the Property did not indicate the past or current presence of hazardous materials or the bulk storage or use of chemicals. The sewer lift station on the Property conveys toilet and sink wastes to the municipal sewer system and reportedly has not experienced overflows or spills. No visible evidence of historic petroleum production activities was found on the Property. On the adjoining Ritz-Carlton Bacara Resort property, abandoned steel pipes protruding from bluffs and embankments adjacent to the beach are presumably remnants of former oil field activities.

  No RECs were identified at the Property in conjunction with the existing improvements and uses. The abandoned steel pipes seen protruding from bluffs and embankments on the adjoining Ritz-Carlton Bacara Resort property are interpreted to be remnants of former oil field activities and are considered CREC's subject to the Land Use Covenant and Soil Management Plan conditions.

Stantec has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-13 of the property identified as the Bacara Resort Beach House, comprising approximately 1.0 acres on APN 079-200-013, 8301 Hollister Avenue, Goleta, California. Any exceptions to, or deletions from, this practice are described in Section 2.3 of this report. This assessment has revealed the presence of controlled recognized environmental conditions (CRECs) in connection with the Property, as follows:

- Residual contaminants attributed to former oil production activities are known to exist on or immediately adjacent to the Property. In February 2013, a land use covenant addressing the residual contaminants left in place at the Bacara Resort was recorded with the County of Santa Barbara. In April 2014, the Santa Barbara County Public Health Department (SBCPHD) issued a closure letter confirming that no further action was required, other than compliance with the Land Use Covenant and the approved Soil Management Plan. Any future ground disturbance activity at the Property could encounter residual contaminants and is subject to the approved Soil Management Plan.

PHASE I ENVIRONMENTAL SITE ASSESSMENT RITZ-CARLTON BACARA RESORT BEACH HOUSE, 8301 HOLLISTER AVENUE, GOLETA, CALIFORNIA

SUMMARY
April 25, 2018

Stantec has prepared the preceding summary for informational purposes only. Reading the full body of this report is recommended.

2.0 INTRODUCTION

The objective of this Phase I ESA was to perform appropriate inquiry into the past ownership and uses of the Property consistent with good commercial or customary practice as outlined by the ASTM in "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process", Designation E1527-13. The purpose of this Phase I ESA was to identify, to the extent feasible, adverse environmental conditions including recognized environmental conditions ("RECs") associated with the Property.

The ASTM E1527-13 standard indicates that the purpose of the Phase I ESA is to identify RECs, including historical recognized environmental conditions ("HRECs"), and controlled recognized environmental conditions ("CRECs") that may exist at a property. The term "recognized environmental conditions" means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property:

(1) Due to any release to the environment;

(2) Under conditions indicative of a release to the environment; or

(3) Under conditions that pose a material threat of a future release to the environment.

ASTM defines a "HREC" as a REC that has occurred in connection with the property but has been addressed to the satisfaction of the applicable regulatory authority and meets unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). Before calling the past release a HREC, the environmental professional (EP) must determine whether the past release is a REC when the current Phase I ESA is conducted (for example, if there has been a change in the regulations). If the EP considers the past release to be a REC at the time the Phase I ESA is conducted, the condition shall be included in the conclusions section of the report as a REC.

ASTM defines a "CREC" as a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), but with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

De minimis conditions are not RECs. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. As indicated, the term REC does not include de minimis conditions, which generally do not present a material risk to human health and would not likely be subject to enforcement action if brought to the attention of governmental agencies.

The scope of work conducted during this Phase I ESA consisted of a visual reconnaissance of the Property, interviews with key individuals, and review of reasonably ascertainable documents. The scope of work did not include an assessment for environmental regulatory compliance of any facility ever operated at the Property (past or present), or sampling and analyzing of environmental media. Stantec was not contracted to perform any independent evaluation of the purchase or lease price of the Property and its relationship to current fair market value. The conclusions presented in this ESA Report are professional opinions based on data described herein. The opinions are subject to the limitations described in Section 2.3.

ASTM E1527-13 notes that the availability of record information varies from source to source. The User or Environmental Professional is not obligated to identify, obtain, or review every possible source that might exist with respect to a property. Instead, ASTM identifies record information that is reasonably ascertainable from standard sources. "Reasonably ascertainable" means:

(1) Information that is publicly available;

(2) Information that is obtainable from its source within reasonable time and cost constraints; and

(3) Information that is practicably reviewable.

2.1 PROPERTY DESCRIPTION

For the purpose of this ESA, the Property consists of an approximately one-acre area that encompasses the building referred to as the Bacara Resort Beach House located at the publicly accessible Haskell's Beach. The Property occupies a portion of Assessor's Parcel Number 079-002-013 with a street address of 8301 Hollister Avenue in Goleta, Santa Barbara County, California.

The Property is accessible by an unpaved pathway leading to the beach from the parking lot and Bacara Tennis Center on Hollister Avenue. The Property is improved with a single story commercial building (the Beach House), outdoor picnic area, outdoor beach showers, and landscaping. The building is partitioned into a seasonal snack bar for beach patrons, a storage and utility area at the rear of the building, public restrooms, and a janitorial closet. The property is accessible by foot and electric carts via the unpaved access trail. A paved emergency fire access road leads from Hollister Avenue to the Property. The Property is surrounded by undeveloped and vegetated areas of the Ritz-Carlton Bacara Resort and by the beach and Pacific Ocean to the south. A Property location map is illustrated on Figure 1. A site map illustrating the main features of the Property is provided as Figure 2. Photographs taken during the site reconnaissance visit are provided in Appendix A.

2.2 SPECIAL TERMS, CONDITIONS, AND SIGNIFICANT ASSUMPTIONS

Commonly, the purpose of a Phase I ESA is to qualify the User, in part, for landowner protection to CERCLA liability and to facilitate the transfer of the property. The possible contaminants of

concern considered in this assessment include those hazardous compounds listed under CERCLA and petroleum products. For this Property, the propose of the Phase I ESA is specifically to identify potential environmental conditions that could affect the planned demolition and relocation of the public facilities provided at the Property. For this ESA, the Property is defined as approximately one-acre area that encompasses the building referred to as the Bacara Resort Beach House and forms a small portion of APN 079-200-013.

2.3 EXCEPTIONS AND LIMITING CONDITIONS

This report documents work that was performed in accordance with generally accepted professional standards at the time and location in which the services were provided and given the schedule and budget constraints established by the client. No other representations, warranties or guarantees are made concerning the accuracy or completeness of the data or conclusions contained within this report, including no assurance that this work has uncovered all potential and actual liabilities and conditions associated with the identified property.

This report provides an evaluation of selected environmental conditions associated with the identified portion of the Property that was assessed at the time the work was conducted and is based on information obtained by and/or provided to Stantec at that time. There are no assurances regarding the accuracy and completeness of this information. All information received from the client or third parties in the preparation of this report has been assumed by Stantec to be correct. Stantec assumes no responsibility for any deficiency or inaccuracy in information received from others.

Conclusions made within this report consist of Stantec's professional opinion as of the time of the writing of this report and are based solely on the scope of work described in the report, the limited data available and the results of the work. They are not a certification of the property's environmental condition.

The client did not provide or contract Stantec to provide recorded title records or search results for environmental liens or activity and use limitations encumbering the Property or in connection with the Property.

This report relates solely to the specific project for which Stantec was retained and the stated purpose for which this report was prepared and shall not be used or relied upon by the client identified herein for any variation or extension of this project, any other project, or any other purpose.

This report has been prepared for the exclusive use of the client identified herein and any use of or reliance on this report by any third party is prohibited, except as may be consented to in writing by Stantec or as required by law. The provision of any such consent is at Stantec's sole and unfettered discretion and will only be authorized pursuant to the conditions of Stantec's standard form reliance letter. Stantec assumes no responsibility for losses, damages, liabilities, or

claims, howsoever arising, from third party use of this report. Project-specific limiting conditions are provided in Section 2.2.

The locations of any utilities, buildings and structures, and property boundaries illustrated in or described within this report are approximate only.

The conclusions are based on the site conditions encountered by Stantec at the time the work. Accordingly, additional studies and actions may be required. As the purpose of this report is to identify selected site conditions which may pose an environmental risk; the identification of non-environmental risks to structures or people on the site is beyond the scope of this assessment. The findings, observations, and conclusions expressed by Stantec in this report are not an opinion concerning the compliance of any past or present owner or operator of the site which is the subject of this report with any Federal, state, provincial or local law or regulation.

This report presents professional opinions and findings of a scientific and technical nature. It does not and shall not be construed to offer a legal opinion or representations as to the requirements of, nor compliance with, environmental laws, rules, regulations, or policies of Federal, state, provincial or local governmental agencies. Issues raised by the report should be reviewed by client legal counsel.

Stantec specifically refuses any responsibility to update the conclusions in this report if new or different information later becomes available or if the conditions or activities on the property subsequently change.

2.4 PERSONNEL QUALIFICATIONS

This Phase I ESA was conducted by Mr. Steve Little and Mr. Kirk Henning of Stantec Consulting, both individuals that meet the ASTM definition of an Environmental Professional (EP). The credentials of the EP and other key Stantec personnel involved in conducting this Phase I ESA are provided in Appendix F.

3.0 USER-PROVIDED INFORMATION

ASTM E1527-13 describes responsibilities of the User to complete certain tasks in connection with the performance of "All Appropriate Inquiries" into the Property. The ASTM standard requires that the Environmental Professional request information from the User on the results of those tasks because that information can assist in the identification of RECs, CRECs, HRECs, or *de minimis* conditions in connection with the Property. As part of the Phase I ESA, Stantec was provided with, and reviewed current engineering plans for the Property, and previous environmental planning documents pertaining to the larger development (Ritz-Carlton Bacara Resort) that encompasses the Property. User-provided information is included in Appendix E.

4.0 RECORDS REVIEW

The objective of consulting historical sources of information is to develop the history of the Property and surrounding area to evaluate if past uses may have resulted in RECs. Physical setting records are evaluated to determine if the physical setting may have contributed to adverse environmental conditions in connection with the Property. During the review of historical records, Stantec attempted to identify uses of the Property from the present to the Property's first developed use. Stantec's research included the reasonably ascertainable and useful records described in this section.

4.1 PHYSICAL SETTING

A summary of the physical setting of the Property is provided in the table below with additional details in the following subsections

Topography:	Gently sloping alluvial surface that joins the beach face at the southwestern boundary of the Property.
Soil/Bedrock Data:	Quaternary aged alluvium dominated by silt, sand, and gravel. Underlying bedrock consists of Tertiary age Monterey formation which is dominated by shale and siltstone.
Estimated Depth to Groundwater/ Estimated Direction of Gradient:	The Property is situated between the estuarine areas of Tecolate Creek and Bell Canyon. Uppermost groundwater is likely present at depths between 10 and 15 feet below ground surface. Local flow direction is inferred to be south/southwesterly.
Note: Site-specific groundwater direction and depth can only be determined by conducting site-specific testing, which Stantec has not conducted.	

4.2 PROPERTY TOPOGRAPHY AND SURFACE WATER FLOW

Surface elevations at the Property range from approximately 10 feet above mean sea level (amsl) on the southern side of the building to approximately 20 feet amsl at the northeastern boundary of the Property. The Property slopes gently downward to the southwest to the active beach front. Surface water runoff at the Property drains to the Pacific Ocean adjacent to the southwestern boundary of the Property.

4.2.1 Regional and Property Geology

The Property is located along the Santa Barbara Coastal Plain within the Transverse Ranges Geomorphic Province of California. The Transverse Ranges are characterized by east-west trending mountain ranges and valleys separated by faults. The Transverse Ranges begin at the southern end of the California Coast Ranges and lie between Santa Barbara and San Diego counties. They derive the name Transverse Ranges due to their east–west orientation, making them transverse to the general north–south orientation of most of California's coastal mountains.

The Santa Barbara Coastal Plain is bounded by the Pacific Ocean on the south, the Santa Ynez Mountains to the north and east, and a coastal terrace toward the west. The Santa Barbara Coastal Plain is a low-lying flat structural depression partially filled with unconsolidated sediments. The major structural elements of the region include faults. The Santa Ynez fault bounds the range on the north and is the primary rupture along which the range was uplifted in late Cenozoic time. The south side of the Santa Ynez range is bounded by a series of east-west to northwest-trending high angle faults. The More Ranch Fault, classified as an active fault, is located approximately 1000 feet to the southeast of the Property.

The Property is further located on the western edge of the Goleta Valley, situated at the base of an uplifted marine terrace, adjacent to the Pacific Ocean shoreline at Haskell's Beach. The riparian corridor of Tecolate Creek is situated a short distance northwest of the Property. The property is directly underlain by Quaternary aged alluvium dominated by silt, sand and gravel. The unconsolidated alluvium is underlain by the Tertiary age Monterey formation which is dominated by shale and siltstone and forms the bedrock at the Property. Dune sand makes up the predominant geologic materials of the beach area at the southwestern boundary of the Property.

4.2.2 Regional and Property Hydrogeology

According to the California Department of Water Resources Bulletin 118, the Property lies just west of and beyond the margins of the Goleta Groundwater Basin. Average annual precipitation in the site area is about 17 inches. First-encountered groundwater in this area is primarily unconfined within the permeable alluvial sediments. Recharge of the alluvium is from infiltration of precipitation and seepage from local streams including Tecolate Creek, Bell Canyon. Due to the proximity of Tecolate Creek and the Pacific Ocean to the Property, groundwater flow direction is inferred to be southerly.

4.3 FEDERAL, STATE AND TRIBAL ENVIRONMENTAL RECORDS

A regulatory agency database search report was obtained from GeoSearch, a third-party environmental database search firm. A complete copy of the database search report, including the date the report was prepared, the date the information was last updated, and the definition of databases searched, is provided in Appendix C.

Stantec evaluated the information listed within the database relative to potential impact to the Property, assessing the potential for impacts based in part on the physical setting. As part of this process, inferences have been made regarding the likely groundwater flow direction at or near the Property. As described above, the inferred shallow groundwater flow direction is likely to be in the south/southwesterly direction. Observations about the Property and surrounding properties made during the Property reconnaissance are provided in more detail in Section 5.

4.3.1 Listings for Property

The Bacara Resort was listed in several databases as a site cleanup case, a generator of hazardous wastes, and in April 2011, a reported incident of a sheen of unknown origin located 1-2 miles offshore. None of the listings for the Bacara Resort pertain to the Property, as defined herein, with the possible exception of the site cleanup case listed in the SWRCB Geotracker database and the County of Santa Barbara Leaking Underground Fuel Tank (LUFT) database. The site cleanup case in the Geotracker system is listed as having potential contaminants including arsenic, chromium, other metals, crude oil, diesel, kerosene, gasoline, benzene, and other hydrocarbons (collectively Total Petroleum Hydrocarbons or TPH). Media potentially affected include soil, soil vapor, and indoor air. The case status was listed as Open – Verification Monitoring. This open case is discussed in further detail in Section 4.6.

4.3.2 Listings for Nearby Sites with Potential to Impact Property

The Bacara Resort at 8301 Hollister Avenue is considered an adjacent site to the Property with respect to the remaining listings identified in the GeoSearch radius report. The Bacara facility was listed as a generator of hazardous waste in the Santa Barbara County Hazardous Waste Facilities list and in the Hazardous Waste Tanner Summary for the years 1999 through 2016. Generated wastes included hydrocarbon solvents, unspecified organic liquid mixtures, organic solids, organic liquids with metals, alkaline solution with metals, oil/water separation sludge, halogenated solvents, and latex wastes. These waste streams are likely associated both with construction activities and ongoing resort maintenance activities. All wastes were reportedly disposed, destroyed, or reclaimed offsite.

The California Hazardous Material Incident Report System and Emergency Response Notification System both contained a listing for a reported sheen of unknown origin located 1-2 miles offshore on April 1, 2011.

Review of the listings for the Bacara Resort did not indicate a potential to impact the Property, as described herein.

Located approximately 0.2 miles east of the Property, the Ellwood Onshore Facility previously operated by Veneco, Inc. at 7979 Hollister Avenue was listed as a site cleanup case in the SWRCB Geotracker database and the County of Santa Barbara Leaking Underground Fuel Tank (LUFT) database. The site cleanup case in the Geotracker system is listed as having potential contaminants including crude oil and other solvent or non-petroleum hydrocarbon. Media potentially affected were not listed. The case status was listed as Open – Site Assessment. This open case is discussed in further detail in Section 4.6.

The Ellwood Onshore Facility (EOF) address was also listed in the Historical Underground Storage Tank database for three 10,000-gallon unleaded gasoline USTs previously owned by ARCO Oil & Gas Co. No dates of installation or removal of the gasoline USTs were included. The Ellwood

Onshore Facility (EOF) was also listed in the Historical UST database for a 64,621-gallon lagoon that stored vanadium pentoxide and sodium hydroxide, and for a 3,475-gallon sump that stored gasoline. Both of these listed containers were reportedly installed in 1979.

Further review of the listings for the Veneco EOF was necessary to evaluate if this site has a potential to impact the Property. This open case is discussed in further detail in Section 4.6.

A third nearby site, identified as Eagle Canyon Ranch, approximately 0.49 miles west/northwest of the Property was listed as a site cleanup case in the SWRCB Geotracker database and the County of Santa Barbara LUFT database. Based on the limited extent of hydrocarbons in soil at this site and the distance from the Property, it was not considered to potentially impact the Property.

4.4 LOCAL/REGIONAL ENVIRONMENTAL RECORDS

Stantec researched the following sources to obtain information pertaining to Property use and/or indications of RECs in connection with the Property:

4.4.1 City of Goleta

Stantec submitted a Freedom of Information Act (FOIA) request to the City of Goleta for environmental records pertaining to the Property and adjacent properties. A description of the pertinent information obtained is summarized below.

Agency Name Contact Information	Finding
City of Goleta, CUPA Program	Stantec reviewed building permits for the Bacara Resort and the Property at the Department of Building and Safety. Numerous permits were included in the paper file and included multiple buildings or units. The specific permit for the Beach House structure was not found. No environmental information had been received in response to the FOIA request at the time of report preparation.

4.4.2 County of Santa Barbara

Stantec submitted a FOIA request to the County of Santa Barbara Public Health Department (SBCPHD). A description of the pertinent information obtained is summarized below.

Agency Name Contact Information	Finding
Paul McCaw Santa Barbara County Public Health Department Phone (805) 346-8345 Date of contact: 4/12/2018	The Santa Barbara County Public Health Department (SBCPHD) no longer maintains local hard copy files for LUST sites. According to Mr. McCaw, all files have been uploaded to the Geotracker Database. Stantec reviewed Geotracker for the open case listed for the Bacara Resort and the Venoco EOF and reviewed previous investigations, cleanup reports, and related documents. The findings of the review are discussed in Section 4.6.

4.4.3 State of California

Stantec submitted a FOIA request to the California EPA, Department of Toxic Substance Control (DTSC) for environmental records pertaining to the Property. Stantec contacted the California Regional Water Quality Control Board – Central Coast via telephone and inquired about files available for the Property. A description of the pertinent information obtained is summarized below.

Agency Name, Contact Information	Findings
Department of Toxic Substance Control (DTSC) Chatsworth Regional Office 9211 Oakdale Avenue, Chatsworth, CA 91311 Phone (818) 717-6500 Date of contact: 4/12/2018 Thea Tyron Central Coast Regional Water Quality Control Board Phone (805) 549-3147 Date of contact: 4/12/2018 www.Geotracker.com	The DTSC responded that they have no environmental records pertaining to the Property or adjacent addresses and referred us to the Envirostar database. The RWQCB confirmed that the SBCPHD was the local oversight agency for the open investigation case and that all files are on Geotracker or in the local agency database. Stantec reviewed Geotracker for the open case listed for the Bacara Resort and the Venoco EOF and reviewed previous investigations, cleanup reports, and related documents. The findings of the review are discussed in Section 4.6.

4.5 HISTORICAL RECORDS REVIEW

4.5.1 Land Title Records/Deeds

Land title records and deeds were not provided by the User, and public records were not searched for this information by Stantec.

4.5.2 Aerial Photographs

Stantec reviewed historical aerial photographs provided by GeoSearch. The general type of activity on a property and land use changes can often be discerned from the type and layout of structures visible in the photographs. However, specific elements of a facility's operation usually cannot be discerned from aerial photographs alone. The following table summarizes Stantec's observations of the reviewed historical aerial photographs. Copies of aerial photographs compiled by GeoSearch are provided in Appendix B.

Year	Scale	Observations, Property and Adjoining Properties
1929	1" = 500'	A small square-shaped structure and a possible outbuilding are present on the eastern portion of the Property. An unpaved road leads southward from the railroad tracks to the structure on the property. The adjacent areas appear undeveloped. Two large above ground storage tanks (AST) are visible to the northeast, at the location of the current Veneco EOF.
1938	1" = 500'	Intensive development for oil and gas extraction has occurred at and near the Property with five offshore piers containing oil wells along with onshore facilities located near the Property. The Property is developed with a rectangular structure and smaller structures that are likely associated with a petroleum tank farm located just north of the Property. The tank farm includes 8 ASTs, 2 ponds, and one large floating-roof AST on the east side of Tecolate Creek. Nearby development includes a possible petroleum processing facility to the northwest and 4 large petroleum ASTs at the location of the current Veneco EOF.
1947	1" = 500'	The Property is seen to be developed with a rectangular building and 3 smaller structures to the east. The petroleum tank farm located just north of the Property includes 8 ASTs and 2 ponds, but the large floating-roof AST has been removed. Buildings seen previously on the hilltop east of the Property have also been removed by 1947.
1953	1" = 500'	The four structures on the Property remain similar as seen in the 1947 image but the 8 ASTs at the tank farm to the north have been removed and replaced with 4 small ASTs. The offshore oil well piers remain in the immediate vicinity of the Property.
1960	1" = 500'	The nearby offshore oil well piers have been removed by 1960 and the surface of the property is disturbed, however, it is unclear if the previously seen structures remain on the Property. At least 4 ASTs appear to remain in the former tank farm area immediately north of the Property.
1967	1" = 500'	The Property is vacant, and all structures have been removed. Ground

Year	Scale	Observations, Property and Adjoining Properties
		disturbance remains visible at and adjacent to the Property, but the vegetation has recovered to a large degree.
1976	1" = 500'	The Property appears similar to the 1967 image and is vacant with remnant ground disturbance visible.
1984	1" = 500'	The Property appears similar to the 1976 image and is vacant.
1994	1" = 500'	The Property remains vacant with evidence of previous ground disturbance.
2002	1" = 500'	The existing Beach House building has been constructed on the Property with a path leading down from the Bacara tennis facility and the current fire access road that leads to the Property from Hollister Avenue.
2005	1" = 500'	The existing Beach House building and adjacent pathways are visible on the Property.
2010	1" = 500'	No changes are noted on the Property; however, the beach face appears to have encroached closer to the south side of the Beach House building.
2016	1" = 500'	The Property and improvements appear as noted during the site visit.

4.5.3 City Directories

Stantec reviewed street address directory listings for the Property researched by GeoSearch. There is no separate address for the Property, hence, there are no specific listings for the Property. Nearby address listings are summarized below.

7686 Hollister Ave	No Listing (1955-1965); Ellwood Union School (1970); No Listing (1976-2011); Elwood School (2016)
7760 Hollister Ave	No Listing (1955-1970); Goleta Storage (1976-1984/85); Mc Dermott J Ray & Co Inc [Constn Co] (1976); Exxon Oil Building [Parking] (1984/85); No Listing (1990-2001); Dixon's Gol Storage (2006-2011); No Listing (2016)
7779 Hollister Ave	No Listing (1955-1984/85); Gol Vly Cmty Stables (1990); No Current Listing (1995-2001); No Listing (2006-2016)
7825 Hollister Ave	No Listing (1955-1965); Allison James M (1970); No Listing (1976-2016)
7865 Hollister Ave	No Listing (1955-1965); Mc Neil P G Petroleum Products [Bulk Plant] (1970); No Listing (1976-2016)
7900 Hollister Ave	No Listing (1955-1981); Sandpiper Golf Course (1984/85); No Listing (1990-2016)
7925 Hollister Ave	No Listing (1955-1970); Sandpiper Golf Course (1976-1981); Sandpiper Snack Shop (1981-1995); Mcginnis M Golf Pro (1990); Sandpiper Golf Course Golf Shp (2001-2016)
7952 Hollister Ave	No Listing (1955-1970); Ellwood Chevron [Gas Sta] (1976); Elwood Chevron (1981-1990); No Current Listing (1995-2001); No Listing (2006-2016)
7979 Hollister Ave	No Listing (1955-1970); Atlantic Richfield Co (1976-1981); Arco Oil & Gas Co [Oil Prod] (1984/85-1990); Chevron Sta Goleta (1990-1995); No Current Listing (1995-2001); No Listing (2006); Ellwood Onshore Venoco Inc (2011-2016)
8301 Hollister Ave	No Listing (1955-1995); Bacara Resort&Spa (2001-2016); Ise Inc (2001); Razook Tile Inc (2001); Valley Crest (2006); Bistro (2016); Electric Charging Station (2016)

No listings of potential environmental threat to the Property were identified, with the possible exception of 7979 Hollister (Veneco EOF), which is discussed in Section 4.6. Complete address directory listing prepared by GeoSearch are provided in Appendix B.

4.5.4 Historical Fire Insurance Maps

Stantec requested a search of the Sanborn Map collection through GeoSearch. Fire insurance maps such as the Sanborn collection were developed for use by insurance companies to depict facilities, properties, and their uses for many locations throughout the United States. These maps provide information on the history of prior land use and are useful in assessing whether there may be potential environmental contamination on or near the property. These maps, which have been periodically updated since the late 19th century, often provide valuable insight into historical property uses. However, no coverage was available for the Property area (Appendix B).

4.5.5 Historical Topographic Maps

Stantec reviewed historical topographic maps using the USGS Historical Topographic Map Explorer website (http://historicalmaps.arcgis.com/usgs) to help identify past Property usage and areas of potential environmental concern.

The following table summarizes the maps reviewed and our observations.

Year	Scale	Observations, Property and Adjoining Properties
1942	1:62,500	The Property appears similar to the 1942 aerial photograph with oil well piers near the Property and a tank farm with 9 ASTs located immediately north of the Property. Individual structures are not shown on the Property.
1951	1:62,500	The 1951 map still shows the oil production facilities adjacent to the Property. Three square-shaped structures are shown on or adjacent to the eastern portion of the Property.
1982	1:24,000	The Property and immediately adjacent areas are shown as undeveloped.
1995	1:24,000	The existing Beach House structure and nearby improvements on the Bacara Resort are not shown on the 1995 map.

4.5.6 Oil and Gas Wells

Stantec reviewed historical oil and gas well locations near the Property using the California Division of Oil, Gas, and Geothermal Resources (DOGGR) online mapping system (Well Finder). The mapping system indicated that the nearest onshore exploratory oil and gas well is the Chevron Goleta No. 2 well located approximately 600 feet southeast of the Property. The well

was plugged and abandoned in 1939. Additional abandoned oil wells are situated directly offshore of the Property.

Stantec visited the DOGGR district office in Orcutt, California and inquired regarding possible records of environmental inspections or reports for the Ellwood Lease during the years of active oil production and subsequent decommissioning of well and facilities. Mr. Bryan Norman of the DOGGR did not expect that they would have records pertaining to environmental conditions from that time period but would check their records and reply. No further information was obtained directly from the DOGGR.

4.5.7 Local Historical Society

Stantec reviewed a historical summary of the Haskell's Beach, which includes the Property, compiled by the Goleta Historical Society. The following information summarizes the history of the Property area:

- In 1842, Nicolas Den was granted the Rancho Los Dos Pueblos, a huge ranch that extended to the ocean at Tecolote Canyon. He used the coastal plain as grazing land but not much mention was made of the area during his ownership. In 1872, the Den family sold the Tecolote area to the Hayes family, who then sold it to the Sturges family.
- Under the Sturges family, Tecolote Ranch became a thriving cattle operation. The present-day Haskell's area was used to dry farm barley and corn, that was used as feed for their cattle. The Sturges family also built the first pier at Haskell's in the 1880's primarily to ship lumber.
- In 1887, Thomas Bishop acquired the Tecolote Ranch. He continued using the beach area for grazing, farming, and recreation. In the late 1890's, the area was changed drastically when the Southern Pacific Railroad cut through the Tecolote canyon. The railroad was completed in 1901.
- Around 1910, a windbreak of cypress trees was planted along the eastern bank of the Tecolote creek. A lemon orchard was later planted, but they soon died from the salt air. In 1918, a kelp harvesting factory was built with the intention of producing chemicals for the World War I effort. Multiple buildings were built, but the project quickly failed.
- From 1922 to 1924, the beach area was rented to a local fisherman named John Traves who built a shack near the creek.
- In 1926, the Tecolote Ranch was purchased by Silsby Spalding, a prominent businessman and the first mayor of Beverly Hills. He transformed the Tecolote Ranch into one of the most attractive and successful thoroughbred horse ranches in Santa Barbara County. Spalding built an opulent Spanish hacienda up the canyon and a beach house that became a social hub for picnics, horseback riding and swim parties.
- The discovery of oil in the late 1920's created a frenzy of construction along the coast of Ellwood. Spalding leased his coastal property to Pacific Western Oil Company and soon beachfront area was developed with piers, storage tanks, buildings, pipelines, and roads.

- In the early 1960's a local surfer, Mike Haskell, gained access to the beach at Tecolate Creek. Throughout the 60's and 70's, Haskell's beach became a fairly well-known surf spot to locals.
- After two decades of vicious legal wrangling and fierce public relations battles with Surfrider and other conservation groups, construction began on a Hyatt resort at Haskell's Beach in 1999.

4.6 PREVIOUS INVESTIGATIONS

4.6.1 Bacara Resort

Stantec reviewed the open cleanup case for the Bacara Resort in the Geotracker database. Approximately 100 documents pertaining to the investigation and cleanup of the Bacara Resort have been uploaded. Stantec reviewed several key documents to gain a better understanding of environmental conditions in existence prior to development of the resort.

In February 2008, IVI Due Diligence Services, Inc. (IVI) conducted a Phase I ESA of the approximately 73-acre Bacara Resort and Spa. IVI's site history research determined that the subject property was utilized for oil and gas exploration and processing activities related to the Ellwood Oil Field which began in 1928 and operated until the 1960s. Activities and features included pipelines from offshore wells to storage in onshore, above ground storage tanks; transfer of petroleum products to offshore tankers via flexible buoy system; a gasoline absorption plant for the processing of white gas from natural gas; an electric dehydration plant for wet oil treatment; and earthen sumps for holding oily water wastes. The former oil operations were dismantled in the 1960s.

Prior to site development of the existing Bacara Resort and Spa, several investigations and environmental impacts studies were conducted to assess potential environmental impacts associated with the historical oil production operations. This included subsurface sampling and a risk assessment that concluded the proposed development does not pose a threat to human health. The Regional Water Quality Control Board (RWQCB) determined that there are no useful groundwater resources and groundwater is not a concern at the site.

The ESA report by IVI stated that, over a 2-year period during site development activities, a post grading soil sampling program was performed to assess potential risks associated with subsurface soils. The results of investigation did not identify significant concentrations of petroleum constituents or metals in soils that would require capping or remedial activities. Previous investigations identified elevated concentrations of methane gas in portions of the site that were suspected to be attributed to naturally occurring seeps from oil deposits. Additionally, previous studies noted potential subsurface impacts from hydrogen sulfide gas, a constituent of oil and gas processes, from the adjacent Venoco Ellwood facility. A letter prepared by Sepich Associates on September 18, 2000 and submitted to the County of Santa Barbara certifies that all the Bacara Resort buildings were provided with sub slab vent piping and barrier membranes to prevent the intrusion of methane and hydrogen sulfide gases into building structures.

As part of their 2008 ESA, IVI reviewed a previous ESA conducted in 1998 entitled *Phase I Environmental Site Assessment, Santa Barbara Club Resort and Spa Site (Formerly Hyatt), Santa Barbara County, California*, prepared by Arcadis Geraghty & Miller, Inc., dated March 3, 1998. Arcadis Geraghty & Miller also determined that historically, the Bacara Resort area was utilized for oil and gas exploration and processing activities related to the Ellwood Oil Field which began in 1928. Arcadis Geraghty & Miller reported that several investigations and environmental impacts studies were conducted to assess potential environmental impacts. These included subsurface sampling, compliance with requirements of Santa Barbara County, and a risk assessment. The 1998 ESA concluded that the proposed development would not pose a threat to human health.

Two on-site recognized environmental conditions (REC) were identified by Arcadis Geraghty & Miller. The first included possible soil and groundwater impacts in low lying areas east of Tecolote Creek in areas were tank farms associated with former oil production operations were located. Previous soil sampling indicated elevated levels of metals and hydrocarbons. The second REC was the biological impacts from the banks of Tecolote Creek. One off-site REC was identified from the adjacent Venoco Ellwood facility with impacts from hydrogen sulfide gas. Several potential RECs were identified, including the Western Bluff where a gasoline absorption plant and associated above ground storage tanks were located. Methane gas was detected on the western bluff during survey conducted in 1988 and 1998. Another potential REC was the presence of a former buried oil pipeline running east-west along the northern portion of the site that was relocated as part of the development plan. A former above ground oil pipeline existed along the southern border of the facility. Off-site potential RECs included offshore oil production wells and former oil operations located west of the Property.

IVI also reviewed the *Report of Post-Grading Soil Sampling Program, Bacara Resort and Spa, 8301 Hollister Avenue, Goleta, California* dated November 30, 2000, prepared by Arcadis Geraghty & Miller. The purpose of this investigation was to collect soil samples from 1998 to 2000 during the post-grading activities for the proposed hotel. The soil sampling was conducted over a period of nearly two years and a total of 106 soil samples were collected. Soil samples were collected at the surface (0.5 feet) and 5.0 feet below ground surface. The soil samples were analyzed for metals using EPA Methods 6010 and EPA Method 7471 for Mercury (Title 22, 17 metals), 8015M (fuel fingerprint), and 8020 (aromatic hydrocarbons- benzene, toluene, ethylbenzene, and xylenes [BTEX]). Following the metal analysis, selected samples were analyzed by the Synthetic Precipitation Leaching Procedure (EPA Method 1312) for particular metals, which had relatively elevated metals concentrations. None of analytical results of the soils samples exceeded the California hazardous waste criteria of Total Threshold Concentration (TTLC) or ten times the Soluble Threshold Limit Concentration (STLC) for metals.

Arcadis Geraghty & Miller also compared the soil sample analytical results to the USEPA Preliminary Remediation Goals (PRGs). Arsenic exceeded the “Residential cancer” PRG for every sample analyzed except for one. In addition, the arsenic concentration exceeded the “Industrial cancer” threshold for all samples except eight, four of which had concentrations

equal to the PRG. Overall, the arsenic concentrations were fairly low, the highest being 17 milligrams per kilogram (mg/kg) and all other lower than 10 mg/kg. A soil sample was also analyzed for arsenic and three other metals (chromium, nickel, and zinc) by the Synthetic Precipitation Leaching Procedure, which simulated leachability in rainwater. All results were "non-detect" in this sample.

Approximately two-thirds of the soil samples had detectible concentrations of total petroleum hydrocarbons (TPH) and results for BTEX analysis were nearly all "non-detect". The TPH values were interpreted to be heavy oil and a refined petroleum product, which is similar to kerosene. The soil samples which exhibited concentrations of greater than 1,000 mg/kg TPH were further studied. The four samples with concentrations ranging from 1,000 mg/kg to 1,400 mg/kg were located in areas which are not accessible to the public or covered with an asphalt paved parking lot.

In their report, Arcadis Geraghty & Miller concluded that the reported concentrations of the various constituents are acceptable to be left in place for the intended use of the property.

IVI concluded, given that the previous investigations were conducted to address potential impacts from the historical site usage and that redevelopment activities were conducted with the oversight of various regulatory authorities, that no further investigation was recommended at the time (2008).

In addition to the previous Phase I ESA reports, Stantec reviewed a closure letter dated April 29, 2014 from the Santa Barbara County Public Health Department (SBCPHD) to Pacific Hospitality Group, LLC. The letter confirmed the completion of the site investigation and remediation at the subject site. It was the position of SBCPHD that no further action was required at the time, other than compliance with the land use covenant (document #2013-0013134) as recorded by the Santa Barbara County Recorder on February 26, 2013 and the soil management plan approved on February 20, 2013. In their letter, SBCPHD stated that:

"The soil management plan shall be followed during any and all soil disturbing activities. Changes in the present or proposed use of the site may require further site characterization and mitigation activity. It is the property owner's responsibility to notify this agency of any changes in report content, future contamination findings, or site usage." A copy of the closure letter is included in Appendix D.

Stantec also reviewed the Soil Management Plan (SMP) referenced in the SBCPHD closure letter. The SMP was prepared by Geosyntec Consultants and dated January 2013. The purpose of the SMP is to outline the procedures to mitigate the risks associated with the potential presence of residual hazardous materials and petroleum hydrocarbon-impacted subsurface soils at the Site, if encountered during general construction or maintenance activities. The SMP is applicable to those activities that involve excavation and/or earth moving activities within those certain areas of the Site where residual contaminants were permitted to remain in subsurface soils at concentrations exceeding unrestricted use cleanup standards (the "Areas of Residual Impact").

The Areas of Residual Impact are described and depicted in the Figures and Tables attached to the SMP. The SMP was prepared in response to a request by the Site Mitigation Unit of the Santa Barbara County Fire Department.

The SMP requires a site-specific Health & Safety Plan, stormwater management, notification of the SBCPHD if suspected contaminated materials are encountered, monitoring of hazardous vapors, containment of excavated impacted material, waste characterization of excavated material, and (if warranted), offsite transport of wastes and disposal at a permitted facility, along with necessary recordkeeping and documentation.

Figure 3 of the SMP shows the Location of Residual Contaminants. Three of the areas of residual impact (Areas 2, 3, and 4) are located on, or adjacent to the Bacara Beach House (the Property). These areas are considered a controlled recognized environmental condition (CREC) in connection with the Property, as defined in Section 2.0 of this report. A copy of the SMP is included in Appendix D.

Finally, Stantec also reviewed the most recent report in the Geotracker file, entitled Summary of Environmental Covenant Site Inspection – 2017, 8301 Hollister Avenue, Santa Barbara, California by Geosyntec dated June 7, 2017. This work was performed to comply with the monitoring and reporting obligation in Bacara's Environmental Restriction Covenant (Covenant) dated 20 February 2013. The Covenant included provisions for annual monitoring and completion of an inspection report per the following wording:

"Section 4.03. Periodic Monitoring. The owner shall conduct an inspection of the Areas of Residual Impact annually or otherwise upon the request of the Department, to verify compliance with the Covenant and to ensure that the Areas of Residual Impact remain undisturbed and that Contaminants of Concern do not otherwise pose an unacceptable risk to human health and safety or the environment. Such monitoring shall continue until such time as the Department determines that no further monitoring of the areas of residual impact is required.

4.04. Reporting Obligations. The owner shall prepare a report documenting each annual inspection and shall provide a copy of such report to the Department upon the Department's request. The annual inspection report must include the dates, times, and names of those who conducted the inspection and their observations regarding the Areas of Residual Impact. If any Contaminants of Concern are exposed the annual inspection report must detail the steps taken to return such area to compliance. If the owner identifies any violations of this Covenant during the annual inspections or at any other time, the Owner must within 30 days of identifying the violation: (i) determine the identity of the party in violation, if any; (ii) send a letter advising such party of the violation of the Covenant; and (iii) demand that the violation cease and be corrected immediately. Copies of correspondence related to the violation of this Covenant shall be sent to the Department within 10 days of its original transmission."

During their inspection, Geosyntec noted the condition of each of the 17 locations and provided the information in a summary table. In addition, a photolog was prepared that

documents the condition at each location. Based on their observations, the 17 locations of residual contaminants had not been disturbed and no corrective actions were warranted for compliance with the Covenant.

4.6.2 Veneco Ellwood Facility

Veneco assumed ownership of the Ellwood Onshore Facility (EOF) that serves Platform Holly in 1997. Stantec obtained and reviewed a Summary of Reported Incidents from Veneco's Ellwood Facilities (1994-Present). The summary spreadsheet listed 62 reported events between 1994 and 2002. The incidents were associated with the offshore platform, the onshore facilities, and the beach/pier area. Some events were alarm conditions and did not result in a chemical release. The largest reported spill was 170 barrels leaked from a crude oil transfer line in 1994 followed by a 10-barrel spill of crude oil at the EOF in 1995.

In response to the May 2015 leak from the Plains All American Pipeline Lines 901 and 903, Platform Holly was shut in and the Ellwood onshore facility was idled. In April 2017, Veneco filed for Chapter 11 bankruptcy and quitclaimed its interests in the South Ellwood Field leases. The State Lands Commission assumed operational control of the former Veneco assets.

Stantec reviewed the most recent technical report for the EOF in the Geotracker database entitled *2016 Annual Groundwater Monitoring Report (December 2016), Veneco Ellwood Onshore Facility* by JHA Environmental dated January 6, 2017. Six groundwater monitoring wells at the EOF were gauged and sampled. Depth to groundwater in the wells ranged from 11.76 to 15.75 feet below top of casing. Based on the calculated groundwater elevations, groundwater flow direction was determined to be westerly (towards Bell Canyon Creek).

Groundwater analytical results for volatile TPH ranged in concentration from <0.05 to 2.5 milligrams per liter (mg/l) in the six wells. Benzene concentrations in groundwater ranged from <0.097 to 13.8 micrograms per liter (ug/l). Concentrations of xylenes in groundwater ranged from below the laboratory detection limit to 19.14 ug/l. Off-site migration of hydrocarbons in groundwater was not indicated by these results.

Based on the December 2016 groundwater monitoring results, JHA concluded that the two small groundwater contamination plumes at the EOF werestable and most concentrations had declined since last sampled in December 2015.

Based on the information reviewed by Stantec, the EOF does not appear to be a direct environmental threat to the Property, as defined herein.

5.0 SITE RECONNAISSANCE

A visit to the Property and its vicinity was conducted by Mr. Steve Little of Stantec on April 17, 2018. Stantec met with Ms. Lupita Gomez of the Bacara Resort Engineering Department and was escorted by one of the engineering staff during the tour. Figure 2 provides a site map of the Property. Selected photographs collected during the Property visit are included in Appendix A.

5.1 SITE RECONNAISSANCE METHODOLOGY

The Property reconnaissance focused on observation of current conditions and observable indications of past uses and conditions that may indicate the presence of a REC. The Property reconnaissance was conducted on foot and Stantec utilized the following methodology to observe the Property:

- Traverse all accessible exterior portions of the Property.
- Traverse the periphery of all structures on the Property.
- If present, visually observe accessible interior areas, maintenance and repair areas, utility areas, and a representative portion of currently or formerly occupied spaces.

Weather conditions during the visit to the Property were clear and sunny. There were no weather-related property access restrictions encountered during the reconnaissance visit.

5.2 GENERAL DESCRIPTION

Property and Area Description:	The Property is located at the publicly accessible Haskell's Beach and is situated just southeast of Tecolate Creek. The Property is accessible by an unpaved pathway leading to the beach from the parking lot and Bacara Tennis Center on Hollister Avenue. A paved emergency fire access road leads from Hollister Avenue to the Property. The Property is improved with a single story commercial building (the Beach House), outdoor picnic area, outdoor beach showers, and landscaping. The building is partitioned into a seasonal snack bar for beach patrons, a storage and utility area at the rear of the building, public restrooms, and a janitorial closet. The Property is surrounded by undeveloped and vegetated areas of the Ritz-Carlton Bacara Resort and by the beach and Pacific Ocean to the south.
Property Operations:	The building on the Property is operated as a seasonal snack bar, for storage, and provides public restrooms. The property includes beach showers and a picnic area.
Structures, Roads, Other Improvements:	The Property is improved with a single story commercial building referred to as the Beach House (Bacara Resort Building 40). A temporary sea wave protection system is located adjacent to the south side of the building, adjacent to the beach. A paved fire access road terminates

	on the eastern portion of the Property.
Property Size (acres):	Approximately one acre, as defined for the Phase I ESA.
Estimated % of Property Covered by Buildings and/or Pavement:	The footprint of the building and paved fire access road covers approximately 20% of the surface area of the Property.
Observed Current Property Use/Operations:	The Property was observed to be used for beach recreational activities. The snack bar in the building was closed for the season. Various beach-related or event-related supplies were stored in the building.
Observed Evidence of Past Property Use(s):	No evidence of prior uses was noted during the site visit.
Sewage Disposal Method (and age):	All drains in the building are connected to a sewer lift system connected to the Goleta Sanitation District municipal sewer system.
Potable Water Source:	The Property is connected to the City of Goleta municipal water system.
Electric Utility:	Electrical service to the Property is provided by Southern California Edison.

5.3 HAZARDOUS SUBSTANCES AND PETROLEUM PRODUCTS

The following table summarizes Stantec's observations during the Property reconnaissance.

Observations	Description/Location
Hazardous Substances and Petroleum Products as Defined by CERCLA 42 U.S.C. § 9601(14):	None observed.
Drums and Containers (≥ 5 gallons):	None observed.
Strong, Pungent, or Noxious Odors:	None detected.
Pools of Liquid:	None observed.
Unidentified Substance Containers:	None observed.
PCB-Containing Equipment:	None identified. A transformer is located within the building. Exterior electrical utilities are underground.
Other Observed Evidence of Hazardous Substances or Petroleum Products:	Small, household size containers of spray lubricant and cleaning products were noted in the storage room and in the janitorial closet located between the public restrooms.

5.4 INTERIOR OBSERVATIONS

The approximately 3,600 square foot Beach House building contains a partitioned space developed as a seasonal snack bar and the remainder of the building is used for storage and

utilities including a water heater, a sewer lift station control panel, an electrical transformer, and electrical panels. The snack bar contains stainless steel sinks and counters, a refrigerated food storage case, commercial icemaker, coffee maker, and toaster oven. No cooking facilities are present. The snack bar was not in use at the time of the site visit.

A portion of the storage area, located west of the snack bar, contains beach recreation supplies and metal shelving units, and is divided by a chain-link fence barrier from the remainder of the storage space. Two public restrooms separated by a janitorial closet are built into the north side of the building.

Stantec made the following observations during the Property reconnaissance and/or identified the following information during the interview or records review portions of the assessment:

Observations	Description
Heating/Cooling Method:	None observed.
Surface Stains or Corrosion:	Several small minor stains on concrete floor in rear storage area of building. No corrosion noted.
Floor Drains and Sumps:	The sink in the snack bar is connected to a floor drain. The restroom sinks and toilets drain to an exterior sewer lift station sump located on the east side of the building.
Other Interior Observations:	A few small containers (less than one gallon) of cleaners, lubricants, paint, spray chemicals and maintenance/repair supplies.

5.5 EXTERIOR OBSERVATIONS

The area surrounding the Beach House building is landscaped and provides outdoor beach showers and a picnic area. An unpaved path leads to the Property from the Bacara Resort Tennis Center and parking lot. A paved fire access load leads to the Property from Hollister Avenue. The Beach House building is constructed on a concrete slab on grade foundation, masonry block walls with stucco exterior, and Spanish tile roof.

Stantec made the following observations during the site reconnaissance of exterior areas of the Property and/or identified the following information during the interview or records review portions of the assessment:

Observations	Description
On-site Pits, Ponds, or Lagoons:	None observed.
Stained Soil or Pavement:	None observed
Stressed Vegetation:	None observed.
Waste Streams and Waste Collection Areas:	Wastewater from the building flows to an exterior sewer lift station sump located on the east side of the building.

Observations	Description
Solid Waste Disposal:	Trash cans are available for non-hazardous solid waste disposal.
Potential Areas of Fill Placement:	None observed, but historical site disturbance known.
Wastewater:	No exterior wastewater discharge was observed.
Stormwater:	Stormwater runoff from the property is conveyed by surface slope to the Pacific Ocean located on the south side of the building.
Wells:	None observed on-site.
Septic Systems:	Building is connected to the Goleta Sanitation District municipal sewer system.
Other Exterior Observations:	Property improvements are in good condition and housekeeping is very good.

5.6 UNDERGROUND STORAGE TANKS/STRUCTURES

Existing USTs:	No visible evidence (fill pipes, vent pipes, dispensers, surface patches), which would indicate the presence of USTs, was discovered during the site reconnaissance.
Former USTs:	No visible evidence (fill pipes, vent pipes, dispensers, surface patches), permits, or other evidence of the former presence of USTs was discovered during this Phase I ESA.
Other Underground Structures:	Sewer lift station vault (concrete with steel cover) located on east side of building.

5.7 ABOVEGROUND STORAGE TANKS (AST)

Existing ASTs:	Propane stored in horizontal AST. No petroleum products stored in ASTs.
Former ASTs:	No evidence of former ASTs.

5.8 ADJOINING PROPERTIES

5.8.1 Current Uses of Adjoining Properties

As viewed from the Property and/or from public rights-of-way, Stantec made the following observations about use and activities on adjoining properties:

NORTH	Undeveloped property and the Bacara Resort Tennis Center located on the south side of Hollister Avenue.
SOUTH	Haskell's Beach and Pacific Ocean.
EAST	Currently vegetated undeveloped land and Bell Canyon creek.

WEST	Haskell's Beach and vegetated area including riparian corridor of Tecolate Creek.

5.8.2 Observed Evidence of Past Uses of Adjoining Properties

Observations of adjoining properties providing indications of past use and activities, if any, are described below.

NORTH	Currently a portion of the Bacara Resort property; no visible evidence of past uses.
SOUTH	Pacific Ocean; no evidence of past uses other than abandoned steel pipes protruding from bluff.
EAST	Currently a portion of the Bacara Resort property; no visible evidence of past uses other than abandoned steel pipes protruding from bluff.
WEST	Currently a portion of the Bacara Resort property; no visible evidence of past uses.

5.8.3 Pits, Ponds or Lagoons on Adjoining Properties

As viewed from the Property and/or from public rights-of-way, Stantec made the following observations about the presence of pits, ponds and lagoons on adjoining properties:

NORTH	None observed.
SOUTH	None observed.
EAST	None observed.
WEST	None observed.

5.9 OBSERVED PHYSICAL SETTING

Topography of the Property and Surrounding Area:	Property and surrounding area is relatively level and slopes gently southwesterly to the adjoining beach and Pacific Ocean.

6.0 INTERVIEWS

During the ESA, Stantec conducted interviews with the following individuals:

6.1 FINDINGS FROM INTERVIEWS WITH MAJOR OCCUPANTS/OTHERS

Name and contact information	Relationship to Property	Key findings:
Lupita Gomez Engineering Department Ritz-Carlton Bacara (805) 968-0100	Engineering supervisor for Ritz-Carlton Bacara, owner of the Property.	Ms. Gomez and her staff were interviewed regarding the history of the Beach House on the Property. The building was constructed in 1999-2000 for its current purposes. No previous uses other than the current use as recreational facilities have occurred at the Property. When asked about the septic system at the Property, Ms. Gomez explained that there was no previous septic system prior to the building. The sewer lift station was installed in conjunction with construction and connected to the municipal sewer main under Hollister Avenue to the north. The sewer lift station has a primary pump and a backup pump, with a high-level alarm system. No sewage spills or overflows have occurred at the Property.

6.2 FINDINGS FROM INTERVIEWS WITH PROPERTY NEIGHBORS

Adjoining and nearby surrounding properties are owned by the Ritz-Carlton Bacara. No neighbors were identified for interview as part of the ESA process.

7.0 EVALUATION

This section provides a summary overview of Findings, Opinions, and Conclusions.

7.1 FINDINGS AND OPINIONS

Information gathered from interviews, reviews of existing data, and a property inspection was evaluated to determine if RECs are present in connection with the Property. Based on this information, Stantec made the following environmental findings and developed the following opinions.

Finding 1: Historical sources indicate that the Property area was used for ranching as early as 1842. The railroad was constructed to the north of the Property in 1901. The property owner constructed a private beach house on or near the Property in 1926. Oil was discovered in the Ellwood Field in the late 1920's and the Property was leased to Pacific Western Oil Company circa 1930. Intensive development for oil and gas extraction occurred in the 1930's at and near the Property with five offshore piers containing oil wells along with onshore facilities located near the Property. The Property was developed with a rectangular structure and smaller structures that were likely associated with a petroleum tank farm located just north of the Property. The tank farm included 8 aboveground storage tanks (AST), 2 ponds, and one large floating-roof AST on the east side of Tecolate Creek. Oil production facilities were decommissioned beginning in the late 1950's and by 1967, the Property was vacant. The existing Bacara Beach House building and facilities were constructed in 1999-2000.

Opinion 1: The Property and immediately surrounding area was subject to intensive oil and gas exploration and production activities between approximately 1930 and 1960. Former oil well piers and onshore petroleum production and processing facilities were located on or near the Property. As described in the following finding, residual contaminants likely associated with petroleum production have been identified on or adjacent to the Property and are considered as controlled recognized environmental conditions (CRECs).

Finding 2: Environmental database search results identified the Bacara Resort and Spa Property as an open site cleanup case, a generator of hazardous wastes, and in April 2011, a reported incident of a sheen of unknown origin located 1-2 miles offshore. None of the listings for the Bacara Resort pertain to the Property, as defined herein, with the exception of the site cleanup case listed in the SWRCB Geotracker database. The site cleanup case in the Geotracker system is listed as having potential contaminants including arsenic, chromium, other metals, crude oil, diesel, kerosene, gasoline, benzene, and other hydrocarbons. Media

potentially affected include soil, soil vapor, and indoor air. Site investigation and cleanup activities were conducted during development of the Bacara Resort property. Known areas of residual contamination were evaluated by a human health risk assessment and determined not to pose an unacceptable health risk to future occupants at the resort property.

In February 2013, a land use covenant addressing the residual contaminants left in place was recorded with the County of Santa Barbara. In April 2014, the Santa Barbara County Public Health Department (SBCPHD) issued a closure letter to Pacific Hospitality Group, LLC, the owners of the Bacara Resort. The letter confirmed the completion of the site investigation and remediation at the subject site and that no further action was required at the time, other than compliance with the Land Use Covenant and the approved Soil Management Plan. In their letter, SBCPHD stated that the Soil Management Plan shall be followed during any and all soil disturbing activities. A map of residual contaminant locations in the soil management plan shows several locations on or immediately adjacent to the Property.

Located approximately 0.2 miles east of the Property, the Ellwood Onshore Facility previously operated by Veneco, Inc. was listed as an open site cleanup case in the SWRCB Geotracker database and in the County of Santa Barbara Leaking Underground Fuel Tank (LUFT) database. The Ellwood Onshore Facility (EOF) was idled following the May 2015 Plains Pipeline spill near Refugio Beach and Veneco filed for bankruptcy and quitclaimed its interests in the Ellwood Field in April 2017. Review of a groundwater monitoring report for December 2016 (most recent technical report available) indicated two small areas of groundwater impact at the EOF containing low to moderate concentrations of dissolved petroleum hydrocarbons that do not appear to extend off-site. Groundwater flow direction was westerly towards Bell Canyon Creek.

Opinion 2: The identified locations of residual contaminants shown in the Soil Management Plan on or immediately adjacent to the Property are considered controlled recognized environmental conditions (CRECs), as defined in Section 2.0. These areas are subject to the recorded Land Use Covenant and any soil disturbing activities in these locations are addressed by the Soil Management Plan.

Based on review of available records, the database listings for the adjoining Bacara Resort and Spa do not constitute a REC connection with the Property. The inactive EOF formerly owned and operated by Veneco is also not considered a REC in connection with the Property.

Finding 3: Inspection of the Property did not indicate the past or current presence of hazardous materials or the bulk storage or use of chemicals. The sewer lift station on the Property conveys toilet and sink wastes to the municipal sewer system and reportedly has not experienced overflows or spills. No visible evidence of historic

petroleum production activities was found on the Property. On the adjoining Ritz-Carlton Bacara Resort property, abandoned steel pipes protruding from bluffs and embankments adjacent to the beach are presumably remnants of former oil field activities.

Opinion 3: No RECs were identified at the Property in conjunction with the existing improvements and uses. The abandoned steel pipes seen protruding from bluffs and embankments on the adjoining Ritz-Carlton Bacara Resort property are interpreted to be remnants of former oil field activities and are considered CREC's subject to the Land Use Covenant and Soil Management Plan conditions.

7.2 DATA GAPS

The federal AAI rule [40 CFR 312.10(a)] and ASTM E1527-13 identify a "data gap" as the lack or inability to obtain information required by the standards and practices of the rule despite good faith efforts by the Environmental Professional or the User.

Any data gaps resulting from the Phase I ESA described in this report are listed and discussed below.

Data Gap	Discussion
Deletions or Exceptions From Scope of Work:	None
Weather-Related Restrictions To Site Reconnaissance:	None
Facility Access Restrictions to Site Reconnaissance:	None
Other Site Reconnaissance Restrictions:	None
Data Gaps from Environmental Records Review:	The City of Goleta did not respond to the FOIA request for environmental information. However, the lead agency for oversight of hazardous materials and petroleum releases is the County of Santa Barbara Public Health Department, whose records were reviewed. The lack of this historical information source is not considered to significantly affect the Environmental Professional's ability to identify Recognized Environmental Conditions in conjunction with the Property.
Data Gaps From Historical Records Review:	Historical Sanborn Map coverage was not available for the Property area. The lack of this historical information source is not considered to significantly affect the Environmental Professional's ability to identify Recognized Environmental Conditions in conjunction with the Property.
Other Data Gaps:	None

7.3 CONCLUSIONS

Stantec has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-13 of the property identified as the Bacara Resort Beach House, comprising approximately 1.0 acres on APN 079-200-013, 8301 Hollister Avenue, Goleta, California. Any exceptions to, or deletions from, this practice are described in Section 2.3 of this report. This assessment has revealed the presence of controlled recognized environmental conditions (CRECs) in connection with the Property, as follows:

- Residual contaminants attributed to former oil production activities are known to exist on or immediately adjacent to the Property. In February 2013, a land use covenant addressing the residual contaminants left in place at the Bacara Resort was recorded with the County of Santa Barbara. In April 2014, the Santa Barbara County Public Health Department (SBCPHD) issued a closure letter confirming the completion of the site investigation and remediation at the Bacara Resort and Spa and that no further action was required, other than compliance with the Land Use Covenant and the approved Soil Management Plan. Any future ground disturbance activity at the Property could encounter residual contaminants and is subject to the approved Soil Management Plan.

8.0 NON-SCOPE CONSIDERATIONS

The scope of work completed was limited solely to those items in the ASTM E1527-13 standard. No ASTM E1527-13 non-scope services were performed as part of this Phase I ESA.

9.0 REFERENCES

American Society for Testing and Materials, Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process, Designation: E 1527-13, November 2013.

California Division of Oil, Gas, and Geothermal Resources (DOGGR) Well Finder online mapping system, 2018.

California State Water Resources Control Board, Geotracker database, 2018.

GeoSearch, Radius Report, Bacara Resort Beach House, 8301 Hollister Avenue, Goleta, California, April 12, 2018.

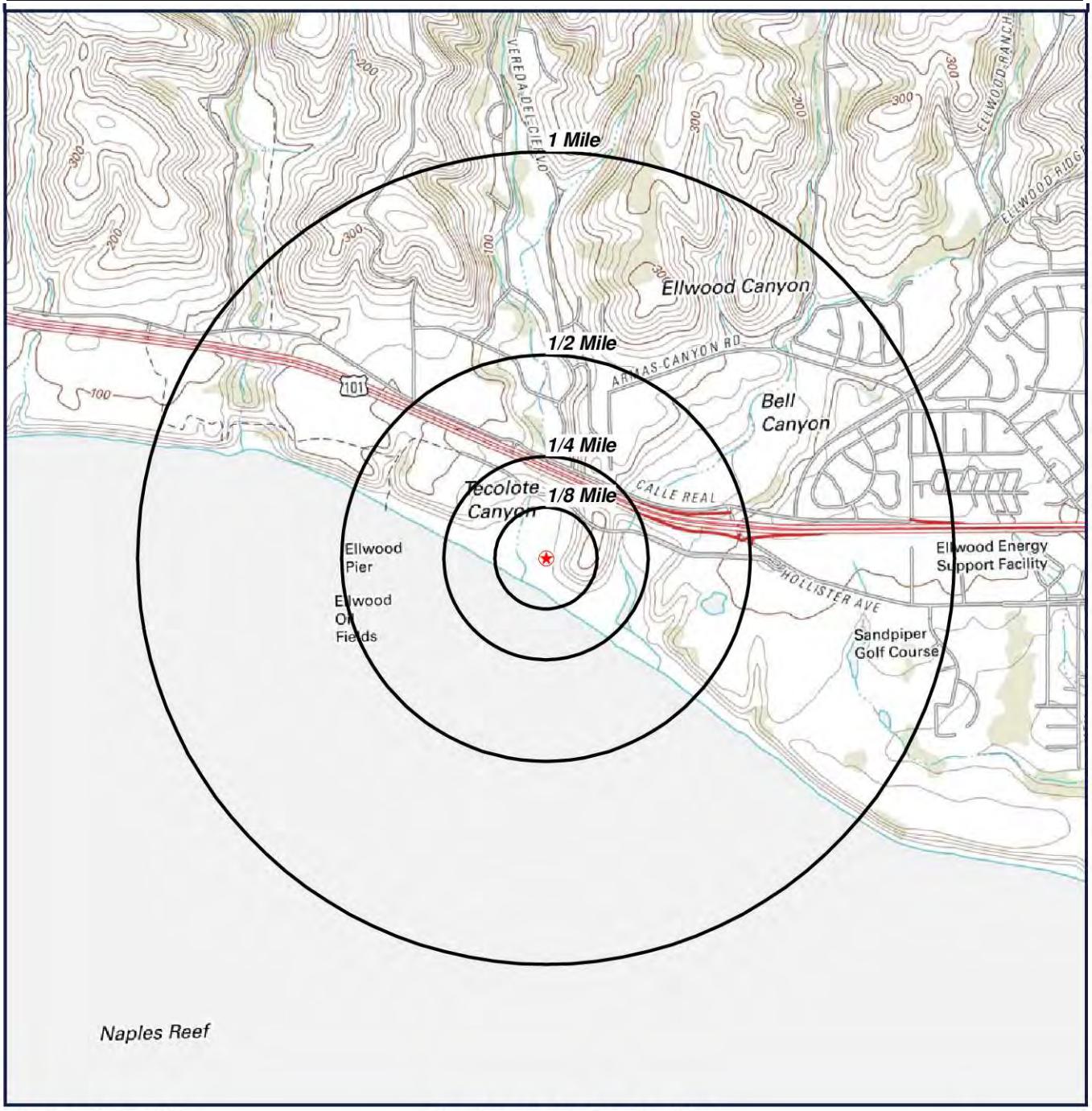
GeoSearch, Historical Aerials Package, Bacara Resort Beach House, 8301 Hollister Avenue, Goleta, California, April 11, 2018.

GeoSearch, City Directory Target Property Address Report, Bacara Resort Beach House, 8301 Hollister Avenue, Goleta, California, April 12, 2018.

USGS Historical Topographic Maps, Dos Pueblos, California Quadrangle.

FIGURES

Topographic Map



Target Property (TP)

Quadrangle(s): Dos Pueblos Canyon
Source: USGS, 04/05/2012
Bacara Beach House
8301 Hollister Ave
Goleta, California
93117

N
W E
S

0' 1000' 2000' 3000'
SCALE: 1" = 2000'

Stantec

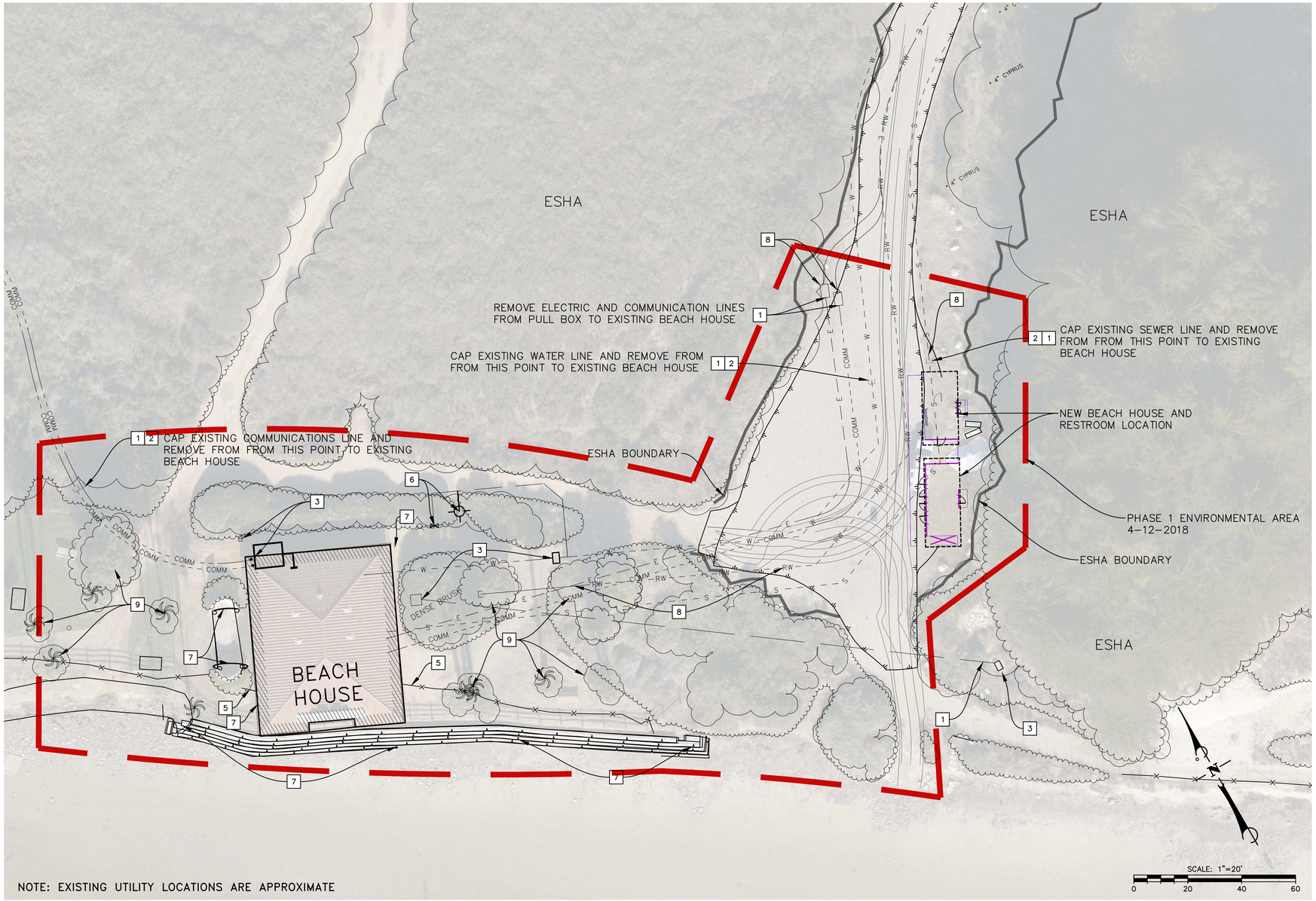
FIGURE 1. SITE VICINITY MAP
BACARA RESORT BEACH HOUSE
GOLETA, CALIFORNIA

GENERAL NOTES

DEMOLISH EXISTING BEACH HOUSE BUILDING IN ITS ENTIRETY, INCLUDING ALL FOOTINGS AND UTILITIES, CAP EXISTING UTILITIES 5' OUTSIDE OF STRUCTURE. ALL DEMOLITION TO BE DISPOSED OFFSITE PER DEMOLITION PERMIT. DEMOLITION AND SERVICE CONNECTION SHALL BE COORDINATED TO MAINTAIN PUBLIC SHOWER AND SEWER SERVICE THROUGH CONSTRUCTION.

DEMOLITION NOTES

1. REMOVE EXISTING UTILITY. DISPOSE OFFSITE.
2. CUT AND CAP EXISTING UTILITY.
3. REMOVE UTILITY VAULT INCLUDING FOUNDATION. DISPOSE OFFSITE.
4. REMOVE EXISTING TREES, BUSHES, AND SHRUBS. DISPOSE OFFSITE.
5. REMOVE EXISTING FENCE. DISPOSE OFFSITE.
6. REMOVE EXISTING HYDRANT / VALVES AND SAVE.
7. REMOVE EXISTING CONCRETE AND DISPOSE OFFSITE.
8. PROTECT EXISTING UTILITY IN PLACE.
9. PROTECT EXISTING TREE IN PLACE.



EXISTING UTILITIES LEGEND

- WATER MAIN
- FIRE WATER LINE
- RECLAIMED WATER LINE
- SEWER FORCE MAIN
- ELECTRIC LINES
- COMMUNICATION LINES

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

FIGURE 2. SITE MAP
BACARA BEACH HOUSE
RITZ-CARLTON BACARA RESORT
GOLETA, CALIFORNIA

Stantec
111 East Victoria Street, Santa Barbara, CA 93101
Phone: (805) 963-9532

36-EXB SAVE DATE: 4/11/2018 4:34:08 PM PLOT BY:Hendren, Matthew PLOT DATE:4/12/2018 10:45:18 AM

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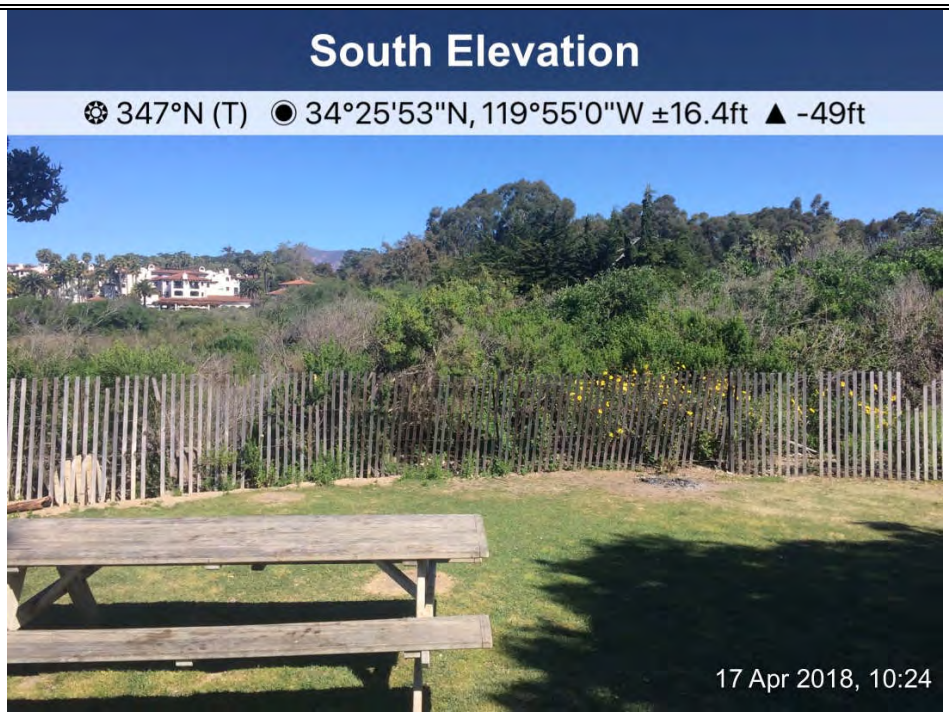
Appendix A
PHOTOGRAPHS OF THE PROPERTY AND VICINITY

1. View northwesterly of Beach House and temporary sea wave protection.

2. Vault for sewer lift station located on east side of Beach House building.

Project No. 2064160400	**Site Photographs**	Stantec
Bacara Beach House **APN 079-200-013** **Goleta, California**	**Date Taken:** **April 17, 2018**	



3. View of picnic area west of Beach House, looking towards Tecolate Creek.

4. View of interior of seasonal snack bar inside Beach House.

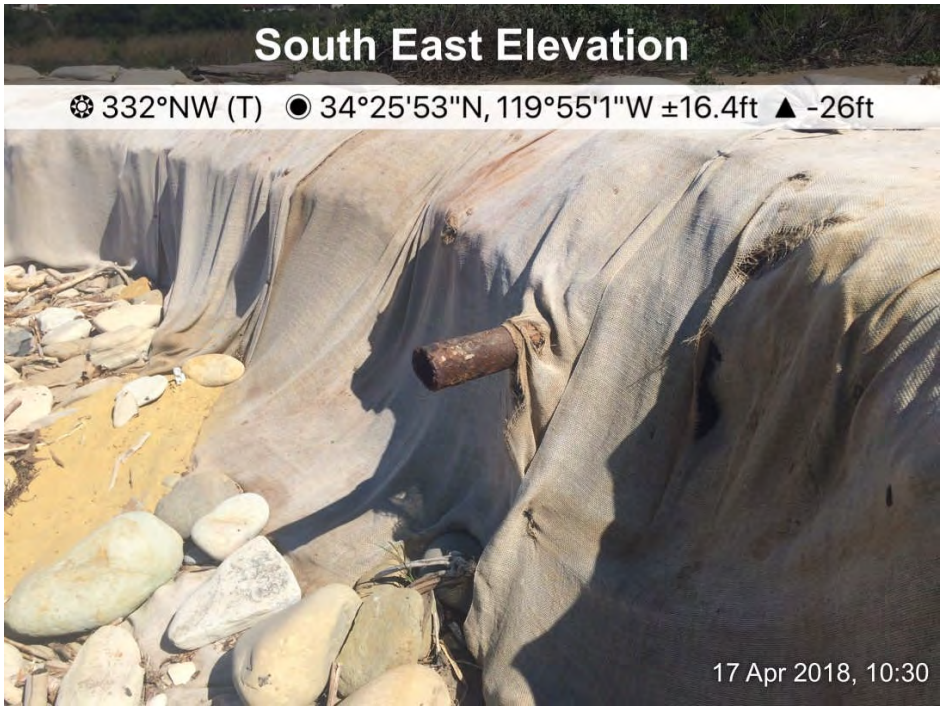
Project No. 2064160400	**Site Photographs**	Stantec
Bacara Beach House **APN 079-200-013** **Goleta, California**	**Date Taken:** **April 17, 2018**	

5. View of sewer lift station pump panel in rear storage room of Beach House.

6. View of utilities and panels inside rear storage room of Beach House.

Project No. 2064160400	Site Photographs	Stantec
Bacara Beach House APN 079-200-013 Goleta, California	Date Taken: April 17, 2018	

7. View of janitorial closet located between the restrooms on north side of building.



8. View of abandoned steel pipe in embankment near Beach House.

Project No. 2064160400	Site Photographs	Stantec
Bacara Beach House APN 079-200-013 Goleta, California	Date Taken: April 17, 2018	

9. View of abandoned pipe exposed in embankment west of Beach House.

10. View of abandoned steel pipe in eroded slope east of Beach House.

Project No. 2064160400	Site Photographs	Stantec
Bacara Beach House APN 079-200-013 Goleta, California	Date Taken: April 17, 2018	

11. View of paved fire access road that terminates on the east side of Beach House.

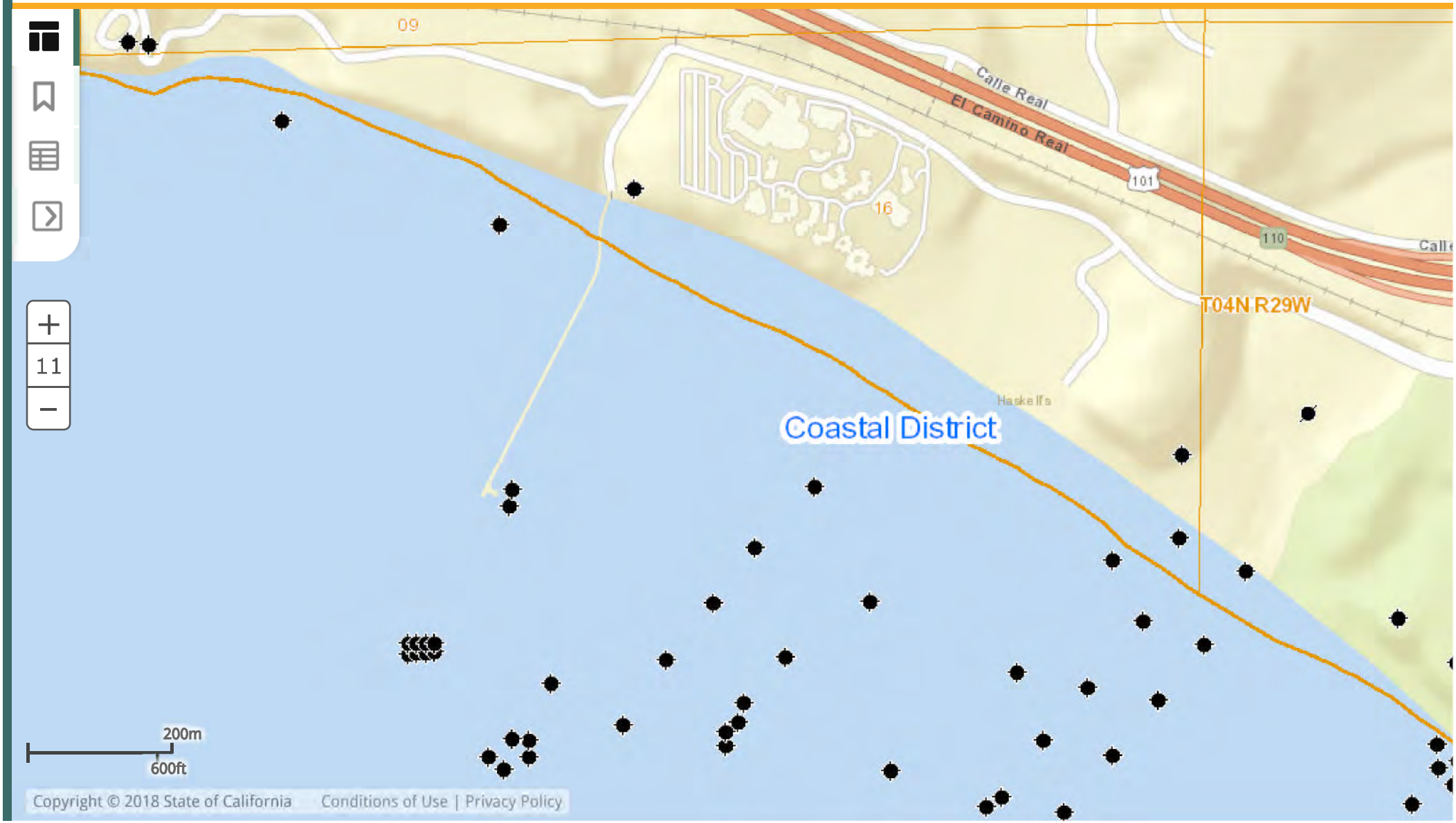
12. View of undeveloped area on east side of fire access road.

Project No. 2064160400	Site Photographs	Stantec
Bacara Beach House APN 079-200-013 Goleta, California	Date Taken: April 17, 2018	

Appendix B
HISTORICAL RECORDS

Department of Conservation

Division of Oil, Gas & Geothermal Resources - Well Finder



GeoSearch
On time. On target. In touch.™

FIM Abstract

Target Property:

Bacara Beach House
8301 Hollister Ave
Goleta, Santa Barbara County, California 93117

Prepared For:

Stantec-San Luis Obispo

Order #: 106571
Job #: 232438
Project #: 2064160400
Date: 04/11/2018

phone: 888-396-0042 · fax: 512-472-9967 · www.geo-search.com

TARGET PROPERTY SUMMARY

Bacara Beach House
8301 Hollister Ave
Goleta, Santa Barbara County, California 93117

USGS Quadrangle: ***Dos Pueblos Canyon, CA***
Target Property Geometry: ***Point***

Target Property Longitude(s)/Latitude(s):
(-119.916182, 34.431294)

County/Parish Covered:
Santa Barbara (CA)

Zipcode(s) Covered:
Goleta CA: 93117

State(s) Covered:
CA

****Target property is located in Radon Zone 1.***
Zone 1 areas have a predicted average indoor radon screening level greater than 4 pCi/L (picocuries per liter).

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GeoSearch FIM

Date: 04/11/18

GS Job Number: 106571

Company Name: Stantec-San Luis Obispo

Project Number: 2064160400

Site Information: Bacara Beach House
8301 Hollister Ave, Goleta, Santa Barbara, California, 93117

The collections of fire insurance maps listed below were reviewed according to the site information supplied by client. Based on the information provided, no coverage is available.

Library of Congress
University Publications of America
Other Libraries (universities, state, local, etc.).

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Historical Aerials Package

Target Property:

Bacara Beach House
8301 Hollister Ave
Goleta, Santa Barbara, California 93117

Prepared For:

Stantec-San Luis Obispo

Order #: 106571
Job #: 232439
Project #: 2064160400
Date: 4/11/2018

Target Property Summary

Bacara Beach House
8301 Hollister Ave
Goleta, Santa Barbara, California 93117

USGS Quadrangle: ***Dos Pueblos Canyon***
Target Property Geometry: ***Point***

Target Property Longitude(s)/Latitude(s):
(-119.916182037, 34.431294073)

Aerial Research Summary

Date	Source	Scale	Frame
2016	USDA	1" = 500'	N/A
2014	USDA	1" = 500'	N/A
2012	USDA	1" = 500'	N/A
2010	USDA	1" = 500'	N/A
2009	USDA	1" = 500'	N/A
2005	USDA	1" = 500'	N/A
2004	USDA	1" = 500'	N/A
2003	USDA	1" = 500'	N/A
06/13/2002	USGS	1" = 500'	N/A
06/01/1994	USGS	1" = 500'	N/A
06/09/1984	USGS	1" = 700'	129-62
05/31/1976	USGS	1" = 500'	1-38
08/12/1967	USGS	1" = 500'	1-53
04/01/1960	USAF	1" = 500'	6-386
06/29/1953	USGS	1" = 500'	2-37
08/21/1947	USGS	1" = 500'	6-103
01/11/1938	FAIRCHILD	1" = 500'	E-167
02/28/1929	FAIRCHILD	1" = 500'	B-21

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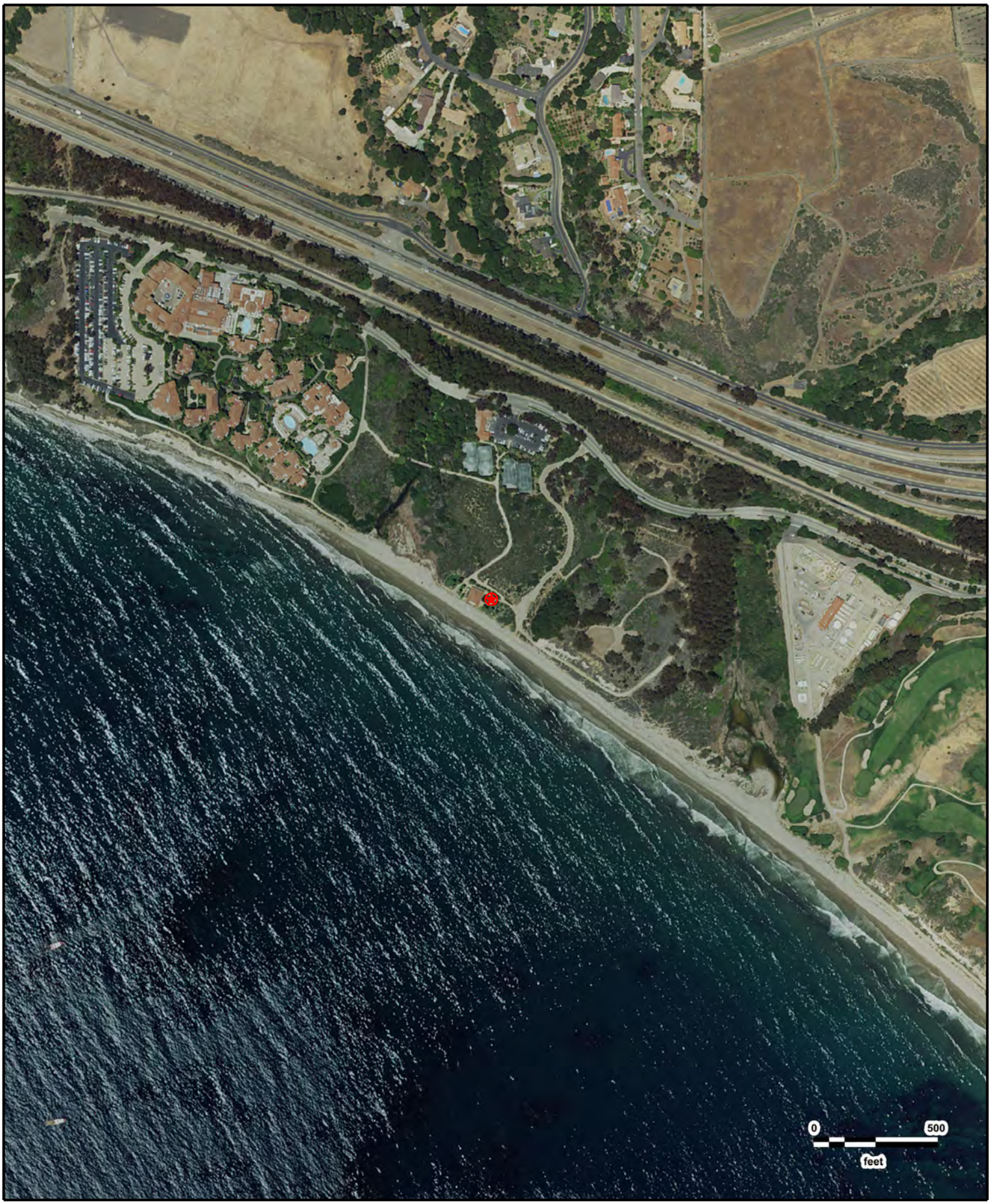
N
W E
S

Bacara Beach House
USDA
2016

GeoSearch

JOB #: 232439 - 04/11/2018



N
W E
S

Bacara Beach House
USDA
2014

GeoSearch

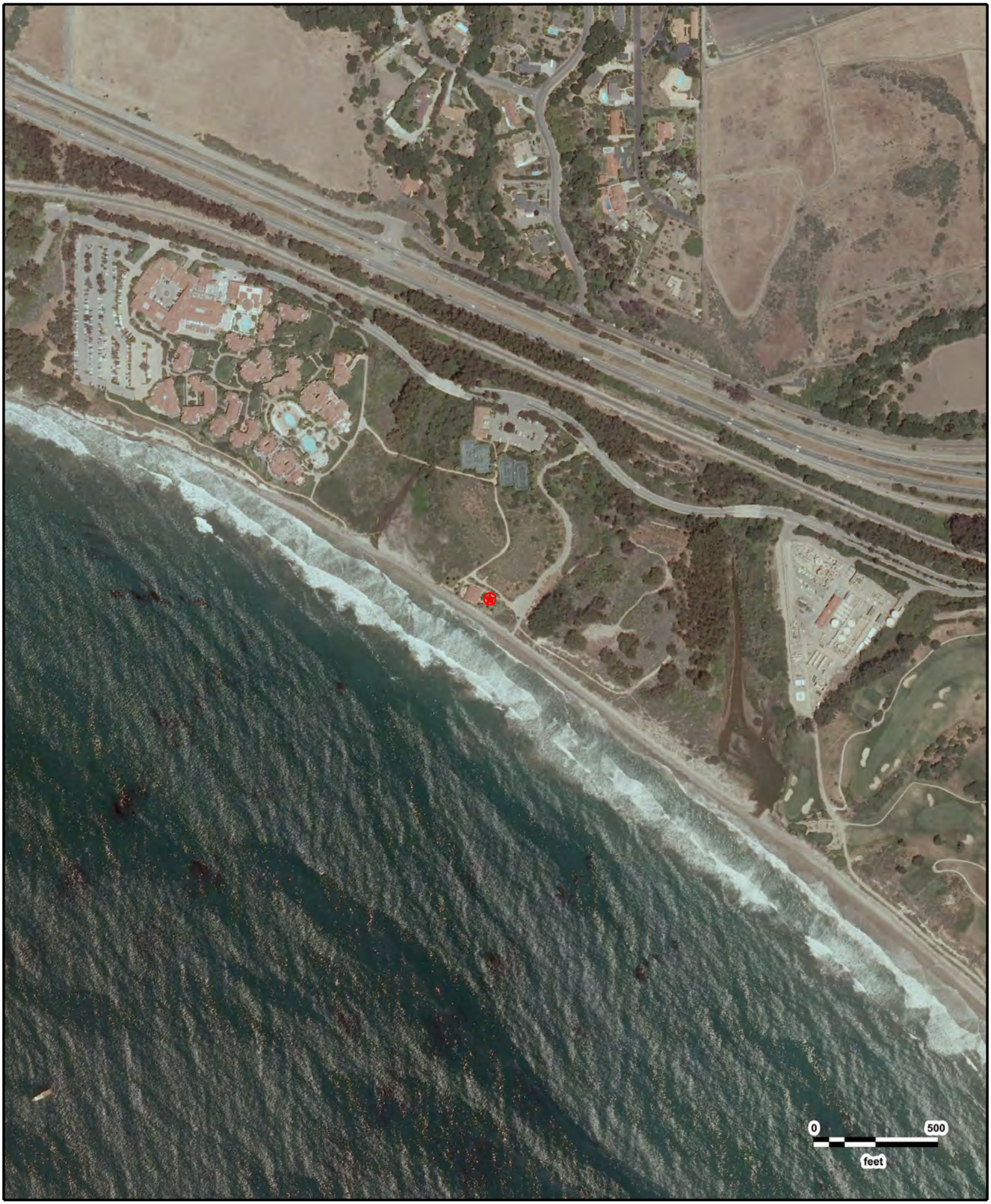
JOB #: 232439 - 04/11/2018

N
W E
S

Bacara Beach House
USDA
2012

GeoSearch

JOB #: 232439 - 04/11/2018

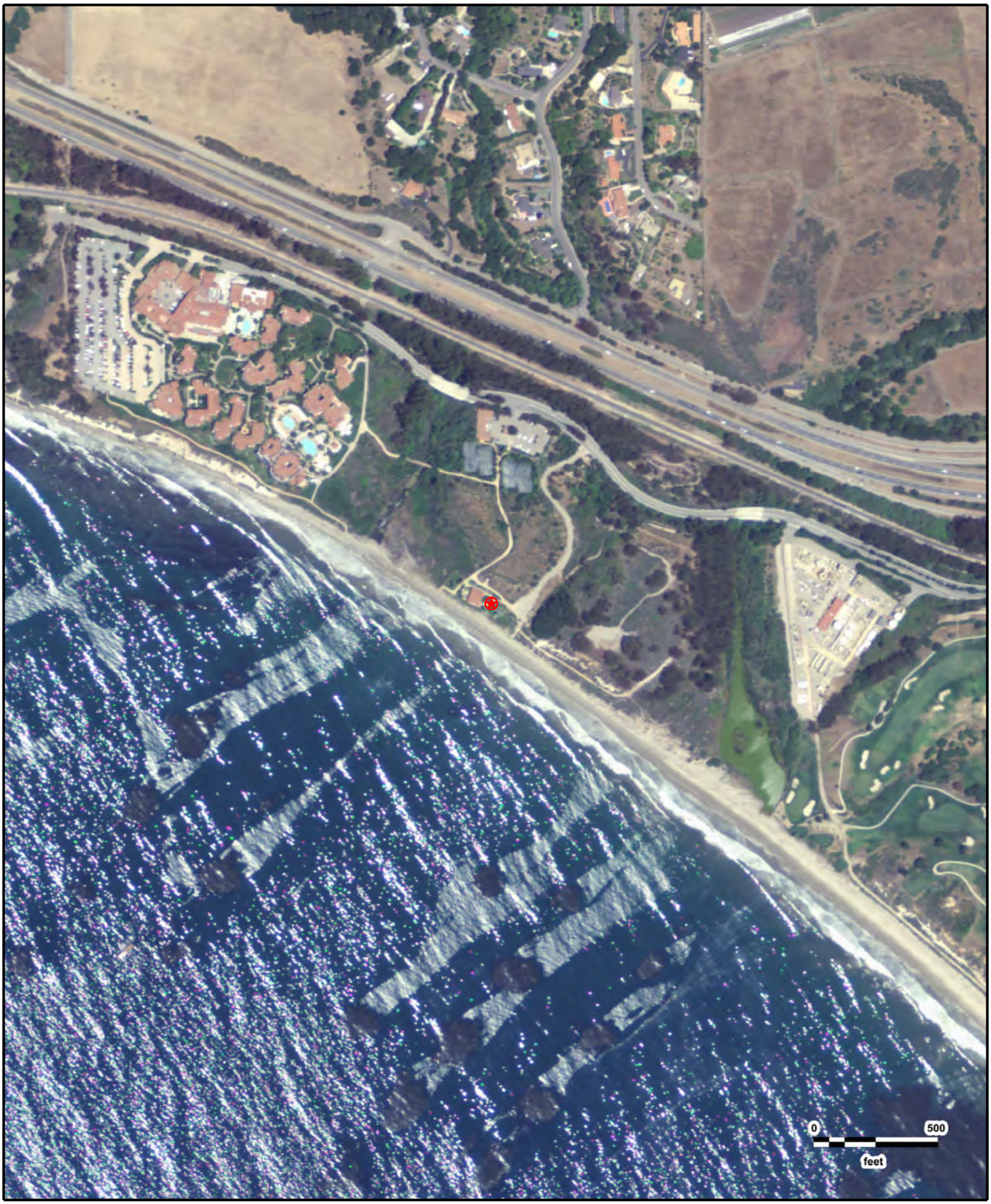


N
W E
S

Bacara Beach House
USDA
2010

GeoSearch

JOB #: 232439 - 04/11/2018



N
W E
S

Bacara Beach House
USDA
2009

GeoSearch

JOB #: 232439 - 04/11/2018

N
W E
S

Bacara Beach House
USDA
2005

GeoSearch

JOB #: 232439 - 04/11/2018

N
W E
S

Bacara Beach House
USDA
2004

GeoSearch

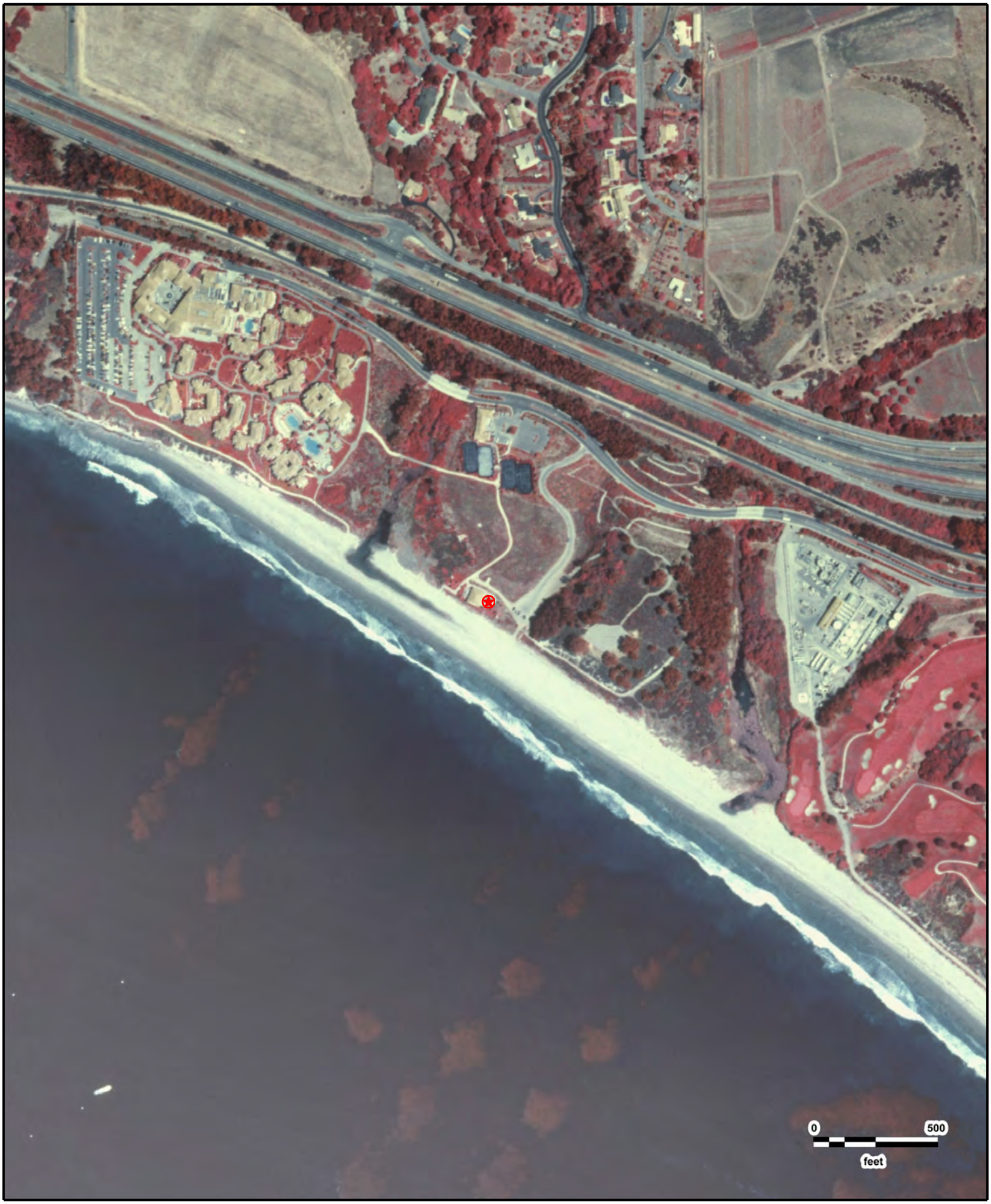
JOB #: 232439 - 04/11/2018

N
W E
S

Bacara Beach House
USDA
2003

GeoSearch

JOB #: 232439 - 04/11/2018



N
W E
S

Bacara Beach House
USGS
06/13/2002

GeoSearch

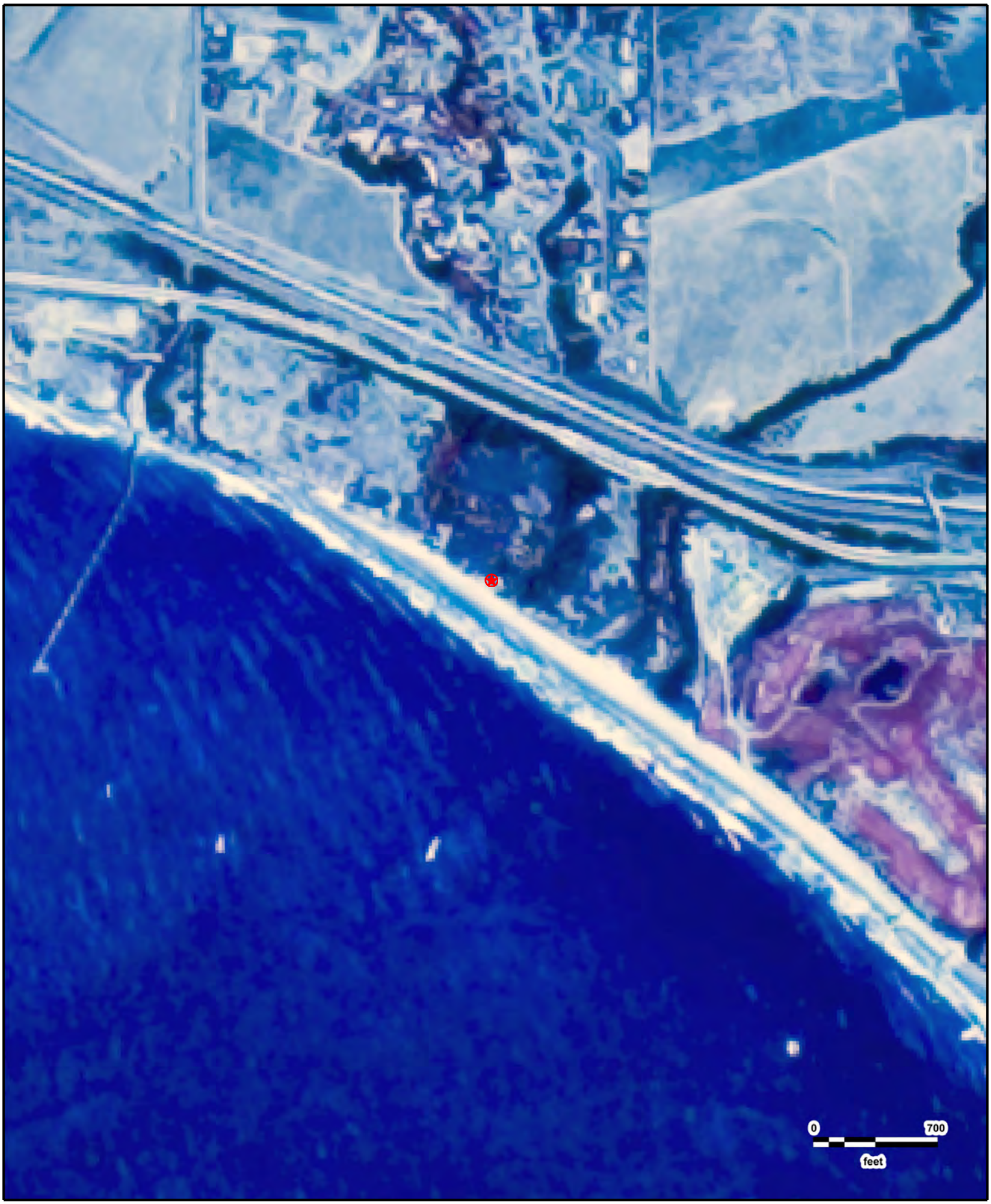
JOB #: 232439 - 04/11/2018

N
W E
S

Bacara Beach House
USGS
06/01/1994

GeoSearch

JOB #: 232439 - 04/11/2018



N
W E
S

Bacara Beach House
USGS
06/09/1984

GeoSearch

JOB #: 232439 - 04/11/2018

N
W E
S

Bacara Beach House
USGS
05/31/1976

GeoSearch

JOB #: 232439 - 04/11/2018

N
W E
S

Bacara Beach House
USGS
08/12/1967

GeoSearch

JOB #: 232439 - 04/11/2018

N
W E
S

Bacara Beach House
USAF
04/01/1960

GeoSearch

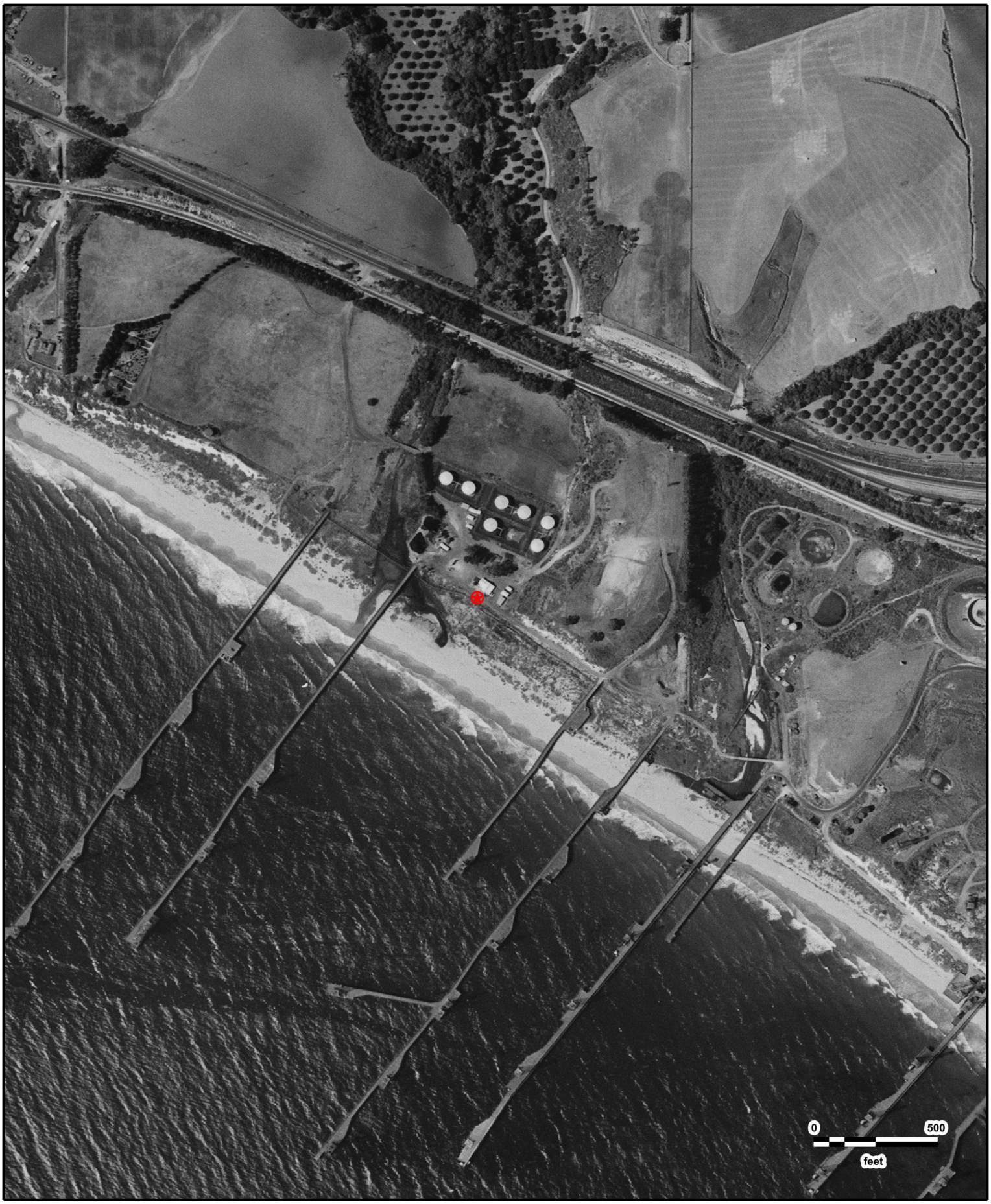
JOB #: 232439 - 04/11/2018

N
W E
S

Bacara Beach House
USGS
06/29/1953

GeoSearch

JOB #: 232439 - 04/11/2018



N
W E
S

Bacara Beach House
USGS
08/21/1947

GeoSearch

JOB #: 232439 - 04/11/2018

N
W E
S

Bacara Beach House
FAIRCHILD
01/11/1938

GeoSearch

JOB #: 232439 - 04/11/2018

N
W E
S

Bacara Beach House
FAIRCHILD
02/28/1929

GeoSearch

JOB #: 232439 - 04/11/2018

Appendix C
ENVIRONMENTAL AGENCY DATABASE SEARCH REPORT

GeoSearch
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Radius Report

Satellite view

Target Property:

Bacara Beach House
8301 Hollister Ave
Goleta, Santa Barbara County, California 93117

Prepared For:

Stantec-San Luis Obispo

Order #: 106571
Job #: 232436
Project #: 2064160400
Date: 04/12/2018

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Unlocatable Report . . . . . See Attachment

Zip Report . . . . . See Attachment

Disclaimer

This report was designed by GeoSearch to meet or exceed the records search requirements of the All Appropriate Inquiries Rule (40 CFR §312.26) and the current version of the ASTM International E1527, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process or, if applicable, the custom requirements requested by the entity that ordered this report. The records and databases of records used to compile this report were collected from various federal,state and local governmental entities. It is the goal of GeoSearch to meet or exceed the 40 CFR §312.26 and E1527 requirements for updating records by using the best available technology. GeoSearch contacts the appropriate governmental entities on a recurring basis. Depending on the frequency with which a record source or database of records is updated by the governmental entity, the data used to prepare this report may be updated monthly, quarterly, semi-annually, or annually.

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Target Property Summary

Target Property Information

Bacara Beach House
8301 Hollister Ave
Goleta, California 93117

Coordinates
Point (-119.91618, 34.431294)
16 feet above sea level

USGS Quadrangle
Dos Pueblos Canyon, CA

Geographic Coverage Information

County/Parish: Santa Barbara (CA)
ZipCode(s):
Goleta CA: 93117

Radon
* Target property is located in Radon Zone 1.
Zone 1 areas have a predicted average indoor radon screening level greater than 4 pCi/L (picocuries per liter).

Database Summary

FEDERAL LISTING

Standard Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
EMERGENCY RESPONSE NOTIFICATION SYSTEM	ERNSCA	1	0	TP/AP
FEDERAL ENGINEERING INSTITUTIONAL CONTROL SITES	EC	0	0	TP/AP
LAND USE CONTROL INFORMATION SYSTEM	LUCIS	0	0	TP/AP
RCRA SITES WITH CONTROLS	RCRASC	0	0	TP/AP
RESOURCE CONSERVATION & RECOVERY ACT - GENERATOR	RCRAGR09	0	0	0.1250
RESOURCE CONSERVATION & RECOVERY ACT - NON-GENERATOR	RCRANGR09	0	0	0.1250
FEMA OWNED STORAGE TANKS	FEMAUST	0	0	0.2500
BROWNFIELDS MANAGEMENT SYSTEM	BF	0	0	0.5000
DELISTED NATIONAL PRIORITIES LIST	DNPL	0	0	0.5000
NO LONGER REGULATED RCRA NON-CORRACTS TSD FACILITIES	NLRRCRAT	0	0	0.5000
RESOURCE CONSERVATION & RECOVERY ACT - NON-CORRACTS TREATMENT, STORAGE & DISPOSAL FACILITIES	RCRAT	0	0	0.5000
SUPERFUND ENTERPRISE MANAGEMENT SYSTEM	SEMS	0	0	0.5000
SUPERFUND ENTERPRISE MANAGEMENT SYSTEM ARCHIVED SITE INVENTORY	SEMSARCH	0	0	0.5000
NATIONAL PRIORITIES LIST	NPL	0	0	1.0000
NO LONGER REGULATED RCRA CORRECTIVE ACTION FACILITIES	NLRRCRAC	0	0	1.0000
PROPOSED NATIONAL PRIORITIES LIST	PNPL	0	0	1.0000
RESOURCE CONSERVATION & RECOVERY ACT - CORRECTIVE ACTION FACILITIES	RCRAC	0	0	1.0000
RESOURCE CONSERVATION & RECOVERY ACT - SUBJECT TO CORRECTIVE ACTION FACILITIES	RCRASUBC	0	0	1.0000

SUB-TOTAL		1	0	

Additional Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
AEROMETRIC INFORMATION RETRIEVAL SYSTEM / AIR FACILITY SUBSYSTEM	AIRSAFS	0	0	TP/AP
BIENNIAL REPORTING SYSTEM	BRS	0	0	TP/AP
CERCLIS LIENS	SFLIENS	0	0	TP/AP
CLANDESTINE DRUG LABORATORY LOCATIONS	CDL	0	0	TP/AP
EPA DOCKET DATA	DOCKETS	0	0	TP/AP
ENFORCEMENT AND COMPLIANCE HISTORY INFORMATION	ECHOR09	0	0	TP/AP

Database Summary

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
FACILITY REGISTRY SYSTEM	FRSCA	1	0	TP/AP
HAZARDOUS MATERIALS INCIDENT REPORTING SYSTEM	HMIRSR09	0	0	TP/AP
INTEGRATED COMPLIANCE INFORMATION SYSTEM (FORMERLY DOCKETS)	ICIS	0	0	TP/AP
INTEGRATED COMPLIANCE INFORMATION SYSTEM NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	ICISNPDES	0	0	TP/AP
MATERIAL LICENSING TRACKING SYSTEM	MLTS	0	0	TP/AP
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	NPDESR09	0	0	TP/AP
PCB ACTIVITY DATABASE SYSTEM	PADS	0	0	TP/AP
PERMIT COMPLIANCE SYSTEM	PCSR09	0	0	TP/AP
SEMS LIEN ON PROPERTY	SEMSLIENS	0	0	TP/AP
SECTION SEVEN TRACKING SYSTEM	SSTS	0	0	TP/AP
TOXIC SUBSTANCE CONTROL ACT INVENTORY	TSCA	0	0	TP/AP
TOXICS RELEASE INVENTORY	TRI	0	0	TP/AP
ALTERNATIVE FUELING STATIONS	ALTFUELS	1	0	0.2500
HISTORICAL GAS STATIONS	HISTPST	0	0	0.2500
INTEGRATED COMPLIANCE INFORMATION SYSTEM DRYCLEANERS	ICISCLEANERS	0	0	0.2500
MINE SAFETY AND HEALTH ADMINISTRATION MASTER INDEX FILE	MSHA	0	0	0.2500
MINERAL RESOURCE DATA SYSTEM	MRDS	0	0	0.2500
OPEN DUMP INVENTORY	ODI	0	0	0.5000
SURFACE MINING CONTROL AND RECLAMATION ACT SITES	SMCRA	0	0	0.5000
URANIUM MILL TAILINGS RADIATION CONTROL ACT SITES	USUMTRCA	0	0	0.5000
DEPARTMENT OF DEFENSE SITES	DOD	0	0	1.0000
FORMER MILITARY NIKE MISSILE SITES	NMS	0	0	1.0000
FORMERLY USED DEFENSE SITES	FUDS	0	0	1.0000
FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM	FUSRAP	0	0	1.0000
RECORD OF DECISION SYSTEM	RODS	0	0	1.0000
SUB-TOTAL		2	0	

Database Summary

STATE (CA) LISTING

Standard Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
DTSC DEED RESTRICTIONS	DTSCDR	0	0	TP/AP
ABOVE GROUND STORAGE TANKS	ABST	0	0	0.2500
HISTORICAL UNDERGROUND STORAGE TANKS	HISTUST	1	0	0.2500
STATEWIDE ENVIRONMENTAL EVALUATION AND PLANNING SYSTEM	SWEEPS	0	0	0.2500
UNDERGROUND STORAGE TANKS	USTCUPA	0	0	0.2500
BROWNFIELD SITES	BF	0	0	0.5000
CALSITES DATABASE	CALSITES	0	0	0.5000
GEOTRACKER CLEANUP SITES	CLEANUPSITES	3	0	0.5000
LEAKING UNDERGROUND STORAGE TANKS	LUST	0	0	0.5000
SOLID WASTE INFORMATION SYSTEM SITES	SWIS	0	0	0.5000
VOLUNTARY CLEANUP PROGRAM	VCP	0	0	0.5000
ENVIROSTOR CLEANUP SITES	ENVIROSTOR	0	0	1.0000
ENVIROSTOR PERMITTED AND CORRECTIVE ACTION SITES	ENVIROSTORPCA	0	0	1.0000

SUB-TOTAL		4	0	

Additional Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
CALIFORNIA HAZARDOUS MATERIAL INCIDENT REPORT SYSTEM	CHMIRS	1	0	TP/AP
CLANDESTINE DRUG LABS	CDL	0	0	TP/AP
EMISSIONS INVENTORY DATA	EMI	1	0	TP/AP
HAZARDOUS WASTE TANNER SUMMARY	HWTS	3	0	TP/AP
LAND DISPOSAL SITES	LDS	0	0	TP/AP
MILITARY CLEANUP SITES	MCS	0	0	TP/AP
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM FACILITIES	NPDES	0	0	TP/AP
RECORDED ENVIRONMENTAL CLEANUP LIENS	LIENS	0	0	TP/AP
CALIFORNIA MEDICAL WASTE MANAGEMENT PROGRAM FACILITY LIST	MWMP	0	0	0.2500
DTSC REGISTERED HAZARDOUS WASTE TRANSPORTERS	DTSCHWT	0	0	0.2500
DRY CLEANER FACILITIES	CLEANER	0	0	0.2500
MINES LISTING	MINES	0	0	0.2500
SPILLS, LEAKS, INVESTIGATION & CLEANUP RECOVERY LISTING	SLIC	0	0	0.2500

Database Summary

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
CORTESE LIST	CORTESE	0	0	0.5000
EXPEDITED REMOVAL ACTION PROGRAM SITES	ERAP	0	0	0.5000
HISTORICAL CORTESE LIST	HISTCORTESE	0	0	0.5000
LISTING OF CERTIFIED DROPOFF, COLLECTION, AND COMMUNITY SERVICE PROGRAMS	DROP	0	0	0.5000
LISTING OF CERTIFIED PROCESSORS	PROC	0	0	0.5000
NO FURTHER ACTION DETERMINATION	NFA	0	0	0.5000
RECYCLING CENTERS	SWRCY	0	0	0.5000
REFERRED TO ANOTHER LOCAL OR STATE AGENCY	REF	0	0	0.5000
SITES NEEDING FURTHER EVALUATION	NFE	0	0	0.5000
WASTE MANAGEMENT UNIT DATABASE	WMUDS	0	0	0.5000
TOXIC PITS CLEANUP ACT SITES	TOXPITS	0	0	1.0000

SUB-TOTAL		5	0	

Database Summary

LOCAL LISTING

Additional Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
SANTA BARBARA COUNTY HAZARDOUS WASTE FACILITIES	SBHWF	1	0	TP/AP
SANTA BARBARA COUNTY FIRE DEPARTMENT LEAKING UNDERGROUND FUEL TANKS	SBFDLUFT	3	0	0.5000

SUB-TOTAL		4	0	

Database Summary

TRIBAL LISTING

Standard Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
UNDERGROUND STORAGE TANKS ON TRIBAL LANDS	USTR09	0	0	0.2500
ILLEGAL DUMP SITES ON THE TORRES MARTINEZ RESERVATION	TORRESDUMPSITES	0	0	0.5000
LEAKING UNDERGROUND STORAGE TANKS ON TRIBAL LANDS	LUSTR09	0	0	0.5000
OPEN DUMP INVENTORY ON TRIBAL LANDS	ODINDIAN	0	0	0.5000
SUB-TOTAL		0	0	

Additional Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
INDIAN RESERVATIONS	INDIANRES	0	0	1.0000
SUB-TOTAL		0	0	

TOTAL		16	0	

Database Radius Summary

FEDERAL LISTING

*Standard environmental records are displayed in **bold**.*

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
AIRSAFS	0.0200	0	NS	NS	NS	NS	NS	0
BRS	0.0200	0	NS	NS	NS	NS	NS	0
CDL	0.0200	0	NS	NS	NS	NS	NS	0
DOCKETS	0.0200	0	NS	NS	NS	NS	NS	0
EC	**0.0200**	**0**	**NS**	**NS**	**NS**	**NS**	**NS**	**0**
ECHOR09	0.0200	0	NS	NS	NS	NS	NS	0
ERNSCA	**0.0200**	**1**	**NS**	**NS**	**NS**	**NS**	**NS**	**1**
FRSCA	0.0200	1	NS	NS	NS	NS	NS	1
HMIRSR09	0.0200	0	NS	NS	NS	NS	NS	0
ICIS	0.0200	0	NS	NS	NS	NS	NS	0
ICISNPDES	0.0200	0	NS	NS	NS	NS	NS	0
LUCIS	**0.0200**	**0**	**NS**	**NS**	**NS**	**NS**	**NS**	**0**
MLTS	0.0200	0	NS	NS	NS	NS	NS	0
NPDESR09	0.0200	0	NS	NS	NS	NS	NS	0
PADS	0.0200	0	NS	NS	NS	NS	NS	0
PCSR09	0.0200	0	NS	NS	NS	NS	NS	0
RCRASC	**0.0200**	**0**	**NS**	**NS**	**NS**	**NS**	**NS**	**0**
SEMSLIENS	0.0200	0	NS	NS	NS	NS	NS	0
SFLIENS	0.0200	0	NS	NS	NS	NS	NS	0
SSTS	0.0200	0	NS	NS	NS	NS	NS	0
TRI	0.0200	0	NS	NS	NS	NS	NS	0
TSCA	0.0200	0	NS	NS	NS	NS	NS	0
RCRAGR09	**0.1250**	**0**	**0**	**NS**	**NS**	**NS**	**NS**	**0**
RCRANGR09	**0.1250**	**0**	**0**	**NS**	**NS**	**NS**	**NS**	**0**
ALTFUELS	0.2500	1	0	0	NS	NS	NS	1
FEMAUST	**0.2500**	**0**	**0**	**0**	**NS**	**NS**	**NS**	**0**
HISTPST	0.2500	0	0	0	NS	NS	NS	0
ICISCLEANERS	0.2500	0	0	0	NS	NS	NS	0
MRDS	0.2500	0	0	0	NS	NS	NS	0
MSHA	0.2500	0	0	0	NS	NS	NS	0
BF	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
DNPL	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
NLRRCRAT	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
ODI	0.5000	0	0	0	0	NS	NS	0
RCRAT	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**

Database Radius Summary

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
SEMS	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
SEMSARCH	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
SMCRA	0.5000	0	0	0	0	NS	NS	0
USUMTRCA	0.5000	0	0	0	0	NS	NS	0
DOD	1.0000	0	0	0	0	0	NS	0
FUDS	1.0000	0	0	0	0	0	NS	0
FUSRAP	1.0000	0	0	0	0	0	NS	0
NLRRCRAC	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**
NMS	1.0000	0	0	0	0	0	NS	0
NPL	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**
PNPL	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**
RCRAC	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**
RCRASUBC	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**
RODS	1.0000	0	0	0	0	0	NS	0
SUB-TOTAL		3	0	0	0	0	0	3

Database Radius Summary

STATE (CA) LISTING

*Standard environmental records are displayed in **bold**.*

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
CDL	0.0200	0	NS	NS	NS	NS	NS	0
CHMIRS	0.0200	1	NS	NS	NS	NS	NS	1
DTSCDR	**0.0200**	**0**	**NS**	**NS**	**NS**	**NS**	**NS**	**0**
EMI	0.0200	1	NS	NS	NS	NS	NS	1
HWTS	0.0200	3	NS	NS	NS	NS	NS	3
LDS	0.0200	0	NS	NS	NS	NS	NS	0
LIENS	0.0200	0	NS	NS	NS	NS	NS	0
MCS	0.0200	0	NS	NS	NS	NS	NS	0
NPDES	0.0200	0	NS	NS	NS	NS	NS	0
ABST	**0.2500**	**0**	**0**	**0**	**NS**	**NS**	**NS**	**0**
CLEANER	0.2500	0	0	0	NS	NS	NS	0
DTSCHWT	0.2500	0	0	0	NS	NS	NS	0
HISTUST	**0.2500**	**0**	**0**	**1**	**NS**	**NS**	**NS**	**1**
MINES	0.2500	0	0	0	NS	NS	NS	0
MWMP	0.2500	0	0	0	NS	NS	NS	0
SLIC	0.2500	0	0	0	NS	NS	NS	0
SWEEPS	**0.2500**	**0**	**0**	**0**	**NS**	**NS**	**NS**	**0**
USTCUPA	**0.2500**	**0**	**0**	**0**	**NS**	**NS**	**NS**	**0**
BF	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
CALSITES	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
CLEANUPSITES	**0.5000**	**1**	**0**	**1**	**1**	**NS**	**NS**	**3**
CORTESE	0.5000	0	0	0	0	NS	NS	0
DROP	0.5000	0	0	0	0	NS	NS	0
ERAP	0.5000	0	0	0	0	NS	NS	0
HISTCORTESE	0.5000	0	0	0	0	NS	NS	0
LUST	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
NFA	0.5000	0	0	0	0	NS	NS	0
NFE	0.5000	0	0	0	0	NS	NS	0
PROC	0.5000	0	0	0	0	NS	NS	0
REF	0.5000	0	0	0	0	NS	NS	0
SWIS	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
SWRCY	0.5000	0	0	0	0	NS	NS	0
VCP	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
WMUDS	0.5000	0	0	0	0	NS	NS	0
ENVIROSTOR	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**

Database Radius Summary

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
ENVIROSTORPCA	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**
TOXPITS	1.0000	0	0	0	0	0	NS	0
SUB-TOTAL		6	0	2	1	0	0	9

Database Radius Summary

LOCAL LISTING

*Standard environmental records are displayed in **bold**.*

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
SBHWF	0.0200	1	NS	NS	NS	NS	NS	1
SBFDLUFT	0.5000	1	0	1	1	NS	NS	3
SUB-TOTAL		2	0	1	1	0	0	4

Database Radius Summary

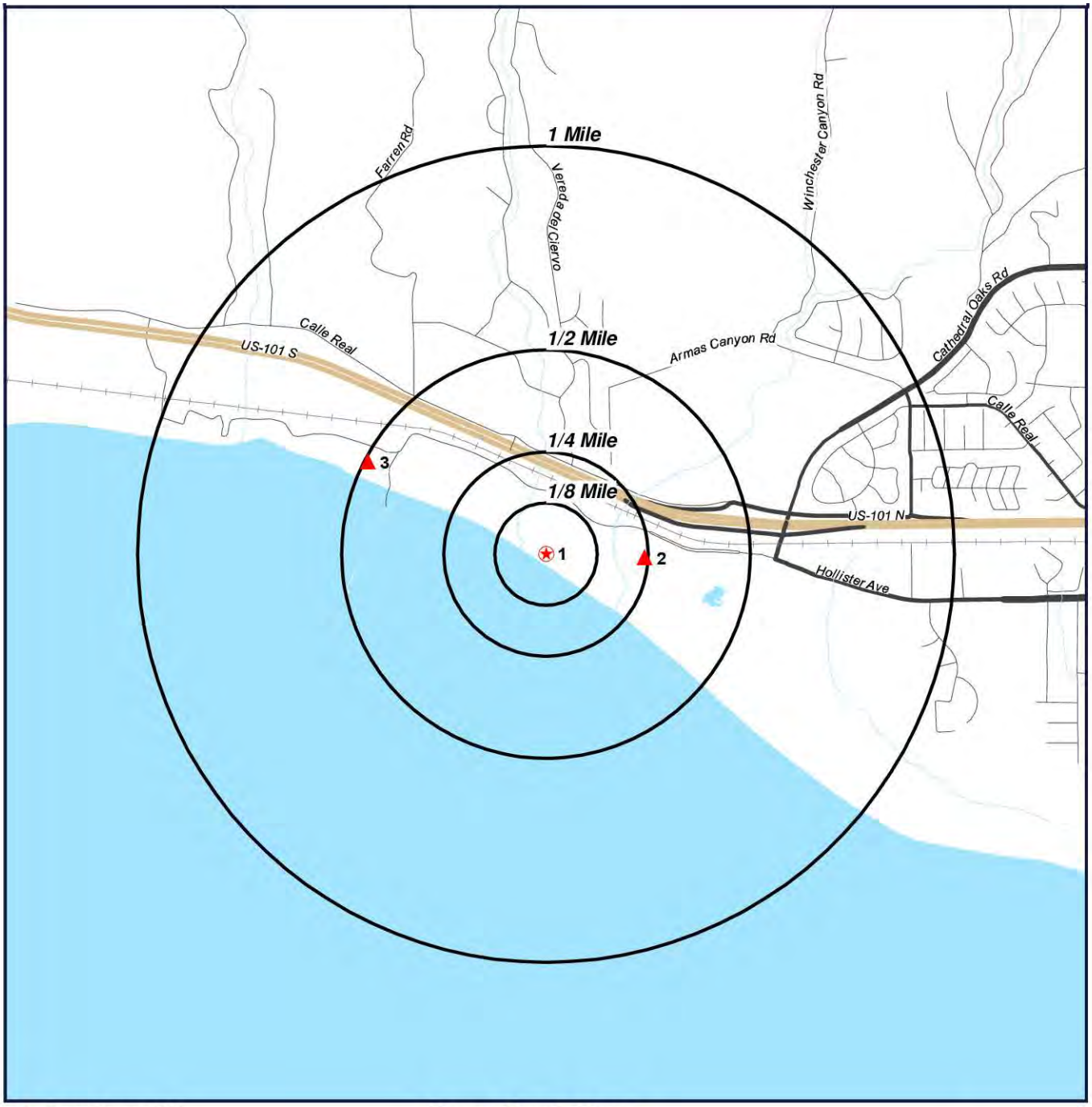
TRIBAL LISTING

*Standard environmental records are displayed in **bold**.*

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
USTR09	**0.2500**	**0**	**0**	**0**	**NS**	**NS**	**NS**	**0**
LUSTR09	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
ODINDIAN	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
TORRESDUMPSITES	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
INDIANRES	1.0000	0	0	0	0	0	NS	0
SUB-TOTAL		0	0	0	0	0	0	0
TOTAL		11	0	3	2	0	0	16

NOTES:
NS = NOT SEARCHED
TP/AP = TARGET PROPERTY/ADJACENT PROPERTY

Radius Map 1



Target Property (TP)
CLEANUPSITES

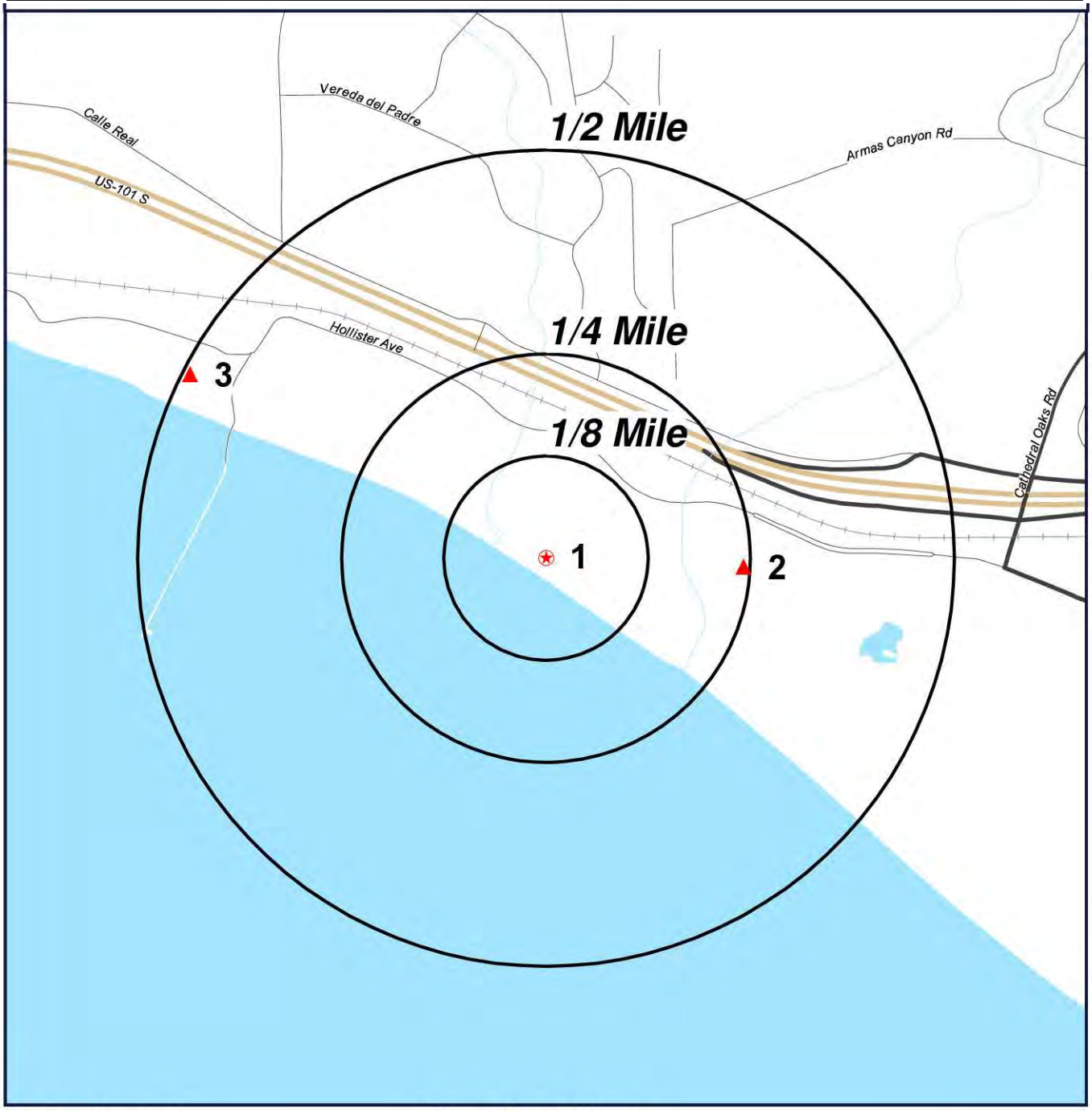
Bacara Beach House
8301 Hollister Ave
Goleta, California
93117

N
W E
S

0' 1000' 2000' 3000'
SCALE: 1" = 2000'

[Click here to access Satellite view]

Radius Map 2



Target Property (TP)
CLEANUPSITES

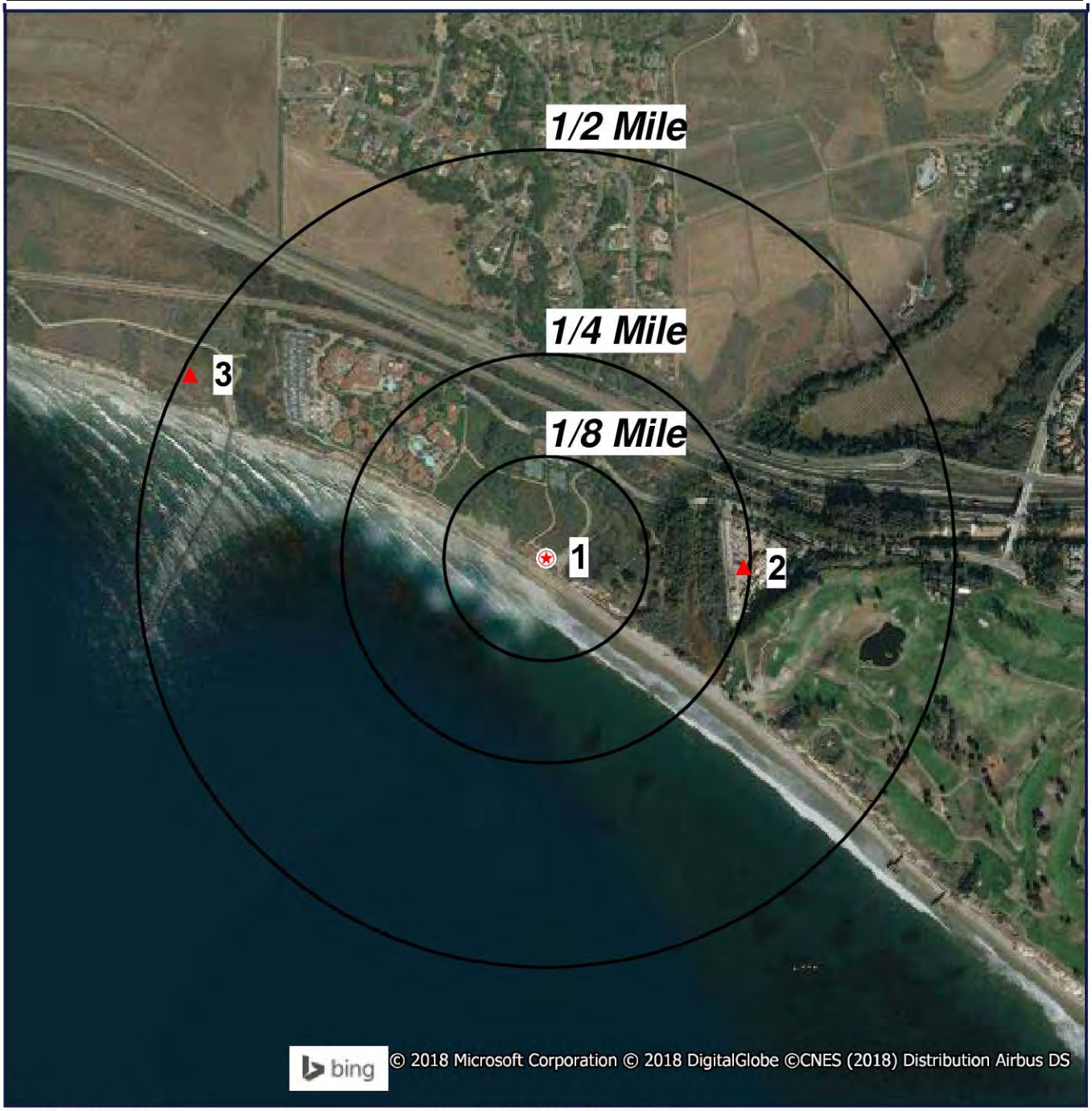
Bacara Beach House
8301 Hollister Ave
Goleta, California
93117

N
W E
S

0' 500' 1000' 1500'
SCALE: 1" = 1000'

[Click here to access Satellite view]

Ortho Map



Target Property (TP)
CLEANUPSITES

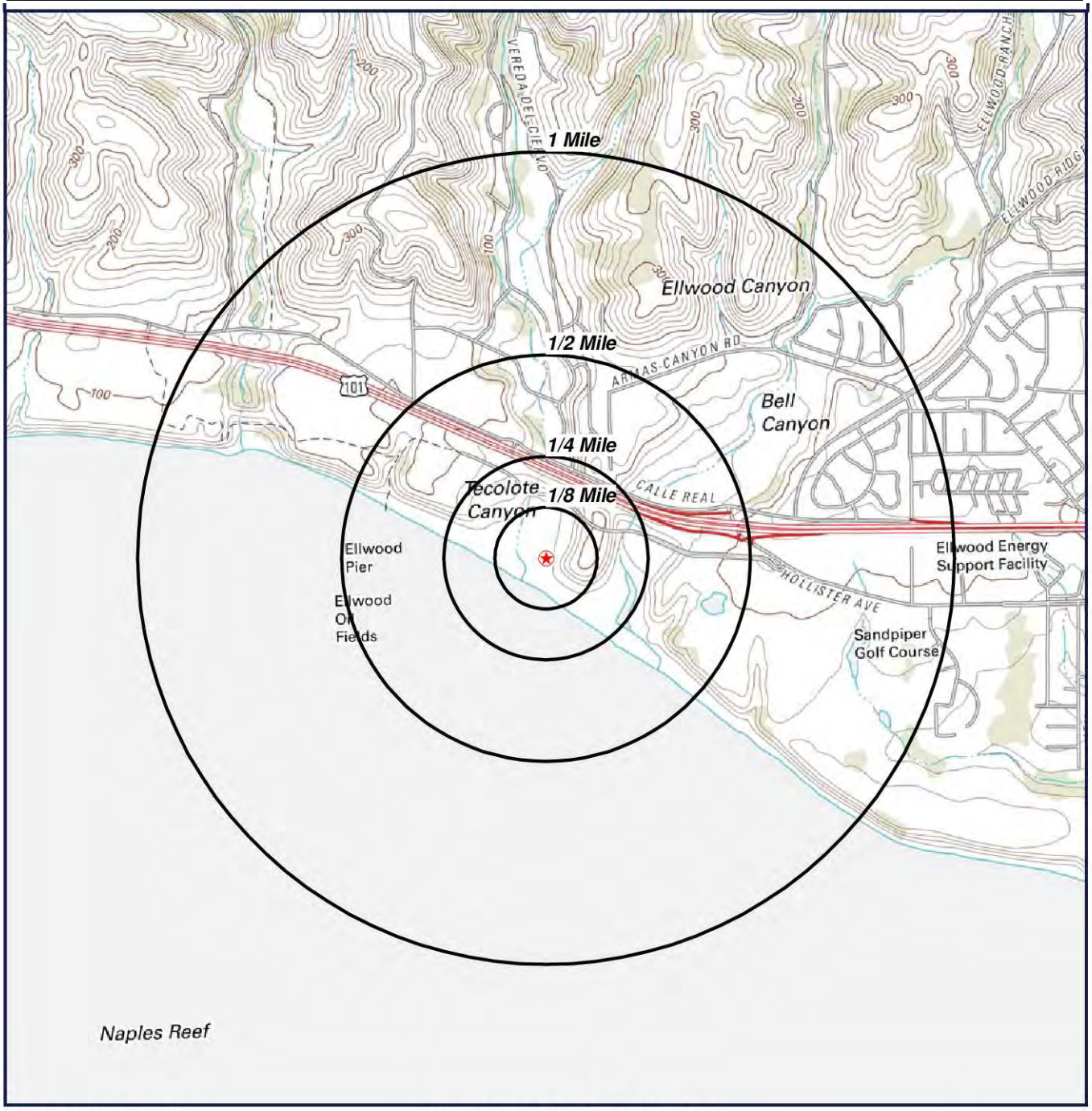
Quadrangle(s): Dos Pueblos Canyon
Bacara Beach House
8301 Hollister Ave
Goleta, California
93117

N
W E
S

0' 500' 1000' 1500'
SCALE: 1" = 1000'

Click here to access Satellite view

Topographic Map



Target Property (TP)

Quadrangle(s): Dos Pueblos Canyon
Source: USGS, 04/05/2012
Bacara Beach House
8301 Hollister Ave
Goleta, California
93117

N
W E
S

0' 1000' 2000' 3000'
SCALE: 1" = 2000'

Click here to access Satellite view

Located Sites Summary

*NOTE: Standard environmental records are displayed in **bold**.*

Map ID#	Database Name	Site ID#	Relative Elevation	Distance From Site	Site Name	Address	PAGE #
1	ALTFUELS	68905	Equal (16 ft.)	TP	BACARA RESORT AND SPA - TESLA	8301 HOLLISTER AVE, GOLETA, CA 93117	20
1	CHMIRS	11-2113	Equal (16 ft.)	TP	PACIFIC OCEAN	8301 HOLLISTER AVE, 1-2 MILES OFFSHORE, GOLETA, CA	21
1	***CLEANUPSITES***	***T10000004585***	***Equal (16 ft.)***	***TP***	***THE BACARA RESORT***	***8301 HOLLISTER AVENUE, GOLETA, CA 93117***	***22***
1	EMI	703943671	Equal (16 ft.)	TP	BACARA RESORT & SPA	8301 HOLLISTER AVENUE, GOLETA, CA 93117	26
1	***ERNSCA***	***971772***	***Equal (16 ft.)***	***TP***	***UNKNOWN SHEEN INCIDENT - IN PACIFIC OCEAN, SOUTH OF ADDRESS***	***8301 HOLLISTER AVE 1-2 MILES OFFSHORE, GOLETA, CA***	***27***
1	FRSCA	110054204384	Equal (16 ft.)	TP	BACARA RESORT & SPA	8301 HOLLISTER AVENUE, GOLETA, CA 93117	28
1	HWTS	CAC002230713	Equal (16 ft.)	TP	HT SANTA BARABRA INC	8301 HOLLISTOR AVE, GOLETA, CA 93117	29
1	HWTS	CAL000183159	Equal (16 ft.)	TP	BCRA RESORT SERVICES INC DBA BACARA RESORT & SPA	8301 HOLLISTER AVE, SANTA BARBARA, CA 93117	30
1	HWTS	CAL000383279	Equal (16 ft.)	TP	BRS INVESTMENT PROPERTIES LLC DBA BACARA RESORT AND SPA	8301 HOLLISTER AVE, GOLETA, CA 93117	40
1	SBFDLUFT	30	Equal (16 ft.)	TP	BACARA RESORT	8301 HOLLISTER AVE, GOLETA, CA	41
1	SBHWF	FA0012543	Equal (16 ft.)	TP	BACARA RESORT & SPA	8301 HOLLISTER AVE, GOLETA, CA 93117	42
2	***CLEANUPSITES***	***T10000003759***	***Higher (26 ft.)***	***0.242 mi. E (1278 ft.)***	***VENOCO, INC.***	***7979 HOLLISTER AVENUE, GOLETA, CA 93117***	***43***
2	***HISTUST***	***0002C4BC***	***Higher (26 ft.)***	***0.242 mi. E (1278 ft.)***	***ELLWOOD ONSHORE***	***7979 HOLLISTER AVENUE, GOLETA, CA 93117***	***45***
2	SBFDLUFT	371	Higher (26 ft.)	0.242 mi. E (1278 ft.)	VENOCO, INC.	7979 HOLLISTER AVE, GOLETA, CA	47
3	***CLEANUPSITES***	***T10000003751***	***Higher (108 ft.)***	***0.489 mi. WNW (2582 ft.)***	***EAGLE CANYON RANCH***	***8501 HOLLISTER AVENUE, GOLETA, CA 93117***	***48***
3	SBFDLUFT	20214	Higher (108 ft.)	0.489 mi. WNW (2582 ft.)	EAGLE CANYON RANCH	8555 HWY 101, GOLETA, CA	50

Elevation Summary

Elevations are collected from the USGS 3D Elevation Program 1/3 arc-second (approximately 10 meters) layer hosted at the NGTOC. .

Target Property Elevation: 16 ft.

*NOTE: Standard environmental records are displayed in **bold**.*

EQUAL/HIGHER ELEVATION

Map ID#	Database Name	Elevation	Site Name	Address	Page #
1	ALTFUELS	16 ft.	BACARA RESORT AND SPA - TESLA	8301 HOLLISTER AVE, GOLETA, CA 93117	20
1	CHMIRS	16 ft.	PACIFIC OCEAN	8301 HOLLISTER AVE, 1-2 MILES OFFSHORE, GOLETA, CA	21
1	***CLEANUPSITES***	***16 ft.***	***THE BACARA RESORT***	***8301 HOLLISTER AVENUE, GOLETA, CA 93117***	***22***
1	EMI	16 ft.	BACARA RESORT & SPA	8301 HOLLISTER AVENUE, GOLETA, CA 93117	26
1	***ERNSCA***	***16 ft.***	***UNKNOWN SHEEN INCIDENT - IN PACIFIC OCEAN, SOUTH OF ADDRESS***	***8301 HOLLISTER AVE 1-2 MILES OFFSHORE, GOLETA, CA***	***27***
1	FRSCA	16 ft.	BACARA RESORT & SPA	8301 HOLLISTER AVENUE, GOLETA, CA 93117	28
1	HWTS	16 ft.	HT SANTA BARABRA INC	8301 HOLLISTOR AVE, GOLETA, CA 93117	29
1	HWTS	16 ft.	BCRA RESORT SERVICES INC DBA BACARA RESORT & SPA	8301 HOLLISTER AVE, SANTA BARBARA, CA 93117	30
1	HWTS	16 ft.	BRS INVESTMENT PROPERTIES LLC DBA BACARA RESORT AND SPA	8301 HOLLISTER AVE, GOLETA, CA 93117	40
1	SBFDLUFT	16 ft.	BACARA RESORT	8301 HOLLISTER AVE, GOLETA, CA	41
1	SBHWF	16 ft.	BACARA RESORT & SPA	8301 HOLLISTER AVE, GOLETA, CA 93117	42
2	***CLEANUPSITES***	***26 ft.***	***VENOCO, INC.***	***7979 HOLLISTER AVENUE, GOLETA, CA 93117***	***43***
2	***HISTUST***	***26 ft.***	***ELLWOOD ONSHORE***	***7979 HOLLISTER AVENUE, GOLETA, CA 93117***	***45***
2	SBFDLUFT	26 ft.	VENOCO, INC.	7979 HOLLISTER AVE, GOLETA, CA	47
3	***CLEANUPSITES***	***108 ft.***	***EAGLE CANYON RANCH***	***8501 HOLLISTER AVENUE, GOLETA, CA 93117***	***48***
3	SBFDLUFT	108 ft.	EAGLE CANYON RANCH	8555 HWY 101, GOLETA, CA	50

LOWER ELEVATION

No Records Found

Alternative Fueling Stations (ALTFUELS)

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 16 ft. (Equal to TP)

FACILITY INFORMATION

GEOSEARCH ID: **68905**
UNIQUE IDENTIFIER FOR THIS SPECIFIC STATION: **68905**
STATION NAME: **BACARA RESORT AND SPA - TESLA**
ADDRESS: **8301 HOLLISTER AVE**
GOLETA, CA 93117
INTERSECTION DIRECTIONS: **NOT REPORTED**
STATION PHONE: **855-502-2073 877-798-3752**
STATION CURRENT STATUS: **OPEN: THE STATION IS OPEN.**
TYPE OF ALTERNATIVE FUEL THE STATION PROVIDES: **ELECTRIC**
OWNER TYPE: **PRIVATELY OWNED**
FEDERAL AGANCY ID: **NOT REPORTED**
FEDERAL AGENCY NAME: **NOT REPORTED**
DATE THAT THE STATION BEGAN OFFERING THE FUEL: **5/1/2015**
DATE THE STATION'S DETAILS WERE LAST CONFIRMED: **12/5/2017**
TIME THE STATION'S DETAILS WERE LAST UPDATED (ISO 8601 FORMAT).: **2018-01-09 07:16:47 UTC**

Back to Report Summary

California Hazardous Material Incident Report System (CHMIRS)

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 16 ft. (Equal to TP)

INCIDENT INFORMATION

CONTROL #: **11-2113**
NOTIFIED: **04/01/11**
AGENCY: **NRC**
ADMINISTRATION: **SANTA BARBARA COUNTY FIRE DEPARTMENT**
INCIDENT LOCATION: **8301 HOLLISTER AVE, 1-2 MILES OFFSHORE**
GOLETA, CA
INCIDENT COUNTY: **SANTA BARBARA**

SUBSTANCE INFORMATION

SUBSTANCE: **SHEEN**
QUANTITY: **UNKNOWN**
TYPE: **SHEEN**

INCIDENT DESCRIPTION

PER THE NRC REPORT: ""CALLER RECEIVED A REPORT ABOUT A SHEEN OF UNKNOWN ORIGIN."" THE SHEEN IS OF UNSPECFIED/UNKNOWN SIZE AND IS 1 TO 2 MILES OFFSH
CONTAINED: **UNKNOWN**
WATER INVOLVED / WATERWAY: **YES / PACIFIC OCEAN**
DATE AND TIME: **4/1/2011**
SITE: **OTHER**
INJURIES: **NOT REPORTED**
FATALITIES: **NOT REPORTED**
EVACUATIONS: **NOT REPORTED**
CLEANUP BY: **UNRECOVERABLE**

Back to Report Summary

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 16 ft. (Equal to TP)

FACILITY INFORMATION

GLOBAL ID: **T10000004585**
URL LINK: CLICK HERE
BUSINESS NAME: **THE BACARA RESORT**
ADDRESS: **8301 HOLLISTER AVENUE**
GOLETA, CA 93117
COUNTY: **SANTA BARBARA**

FACILITY DETAILS

CASE TYPE: **CLEANUP PROGRAM SITE**
CASE NUMBER: **NOT REPORTED**
STATUS: **OPEN - VERIFICATION MONITORING 04/29/2014**
POTENTIAL CONTAMINATION:
ARSENIC, CHROMIUM, COPPER, OTHER METAL, BENZENE, CRUDE OIL, DIESEL, GASOLINE, KEROSENE, METHANE, OTHER PETROLEUM, TOTAL PETROLEUM HYDROCARBONS (TPH)
POTENTIAL MEDIA AFFECTED:
INDOOR AIR, SOIL, SOIL VAPOR
SITE HISTORY:
COMPLETE FILE HAS BEEN UPLOADED TO GEOTRACKER WEBSITE - HARD COPIES NO LONGER EXIST IN SBC EHS/FPD FILES

REGULATORY ACTIVITIES

TYPE OF ACTION:	DATE:	ACTION:
RESPONSE	**06/09/2017**	**MONITORING REPORT - ANNUALLY**
RESPONSE	**08/01/2016**	**MONITORING REPORT - ANNUALLY**
RESPONSE	**09/17/2015**	**MONITORING REPORT - ANNUALLY**
RESPONSE	**06/17/2014**	**OPERATION AND MAINTENANCE PLAN/MONITORING REPORT - REGULATOR RESPONDED**
ENFORCEMENT	**04/29/2014**	**CLOSURE/NO FURTHER ACTION LETTER**
RESPONSE	**01/01/2014**	**OTHER REPORT / DOCUMENT**
ENFORCEMENT	**12/16/2013**	**FILE REVIEW**
ENFORCEMENT	**12/05/2013**	**FILE REVIEW**
ENFORCEMENT	**12/05/2013**	**FILE REVIEW**
ENFORCEMENT	**12/05/2013**	**FILE REVIEW**
ENFORCEMENT	**02/26/2013**	**DEED RESTRICTION / LAND USE RESTRICTION / COVENANT**
RESPONSE	**02/26/2013**	**OTHER REPORT / DOCUMENT**
RESPONSE	**02/26/2013**	**OTHER REPORT / DOCUMENT**
RESPONSE	**01/29/2013**	**CORRESPONDENCE**
RESPONSE	**01/22/2013**	**OTHER REPORT / DOCUMENT**
RESPONSE	**01/01/2013**	**OTHER REPORT / DOCUMENT**
RESPONSE	**10/05/2012**	**OTHER REPORT / DOCUMENT**
RESPONSE	**04/09/2009**	**OTHER REPORT / DOCUMENT**
RESPONSE	**11/25/2008**	**OTHER REPORT / DOCUMENT**
RESPONSE	**03/03/2008**	**SITE ASSESSMENT REPORT**
RESPONSE	**07/01/2004**	**OTHER REPORT / DOCUMENT**
RESPONSE	**09/25/2003**	**OTHER REPORT / DOCUMENT**

TYPE OF ACTION:	DATE:	ACTION:
RESPONSE	11/30/2000	SITE ASSESSMENT REPORT
RESPONSE	11/09/2000	OTHER REPORT / DOCUMENT
RESPONSE	10/24/2000	SITE INVESTIGATION
RESPONSE	10/17/2000	RESPOND TO PETITION
RESPONSE	10/05/2000	OTHER REPORT / DOCUMENT
RESPONSE	10/03/2000	OTHER REPORT / DOCUMENT
RESPONSE	09/01/2000	OTHER REPORT / DOCUMENT
RESPONSE	10/04/1999	OTHER REPORT / DOCUMENT
RESPONSE	05/03/1999	OTHER REPORT / DOCUMENT
RESPONSE	01/27/1999	OTHER REPORT / DOCUMENT
RESPONSE	01/22/1999	OTHER REPORT / DOCUMENT
RESPONSE	12/16/1998	OTHER REPORT / DOCUMENT
RESPONSE	11/30/1998	OTHER REPORT / DOCUMENT
RESPONSE	11/30/1998	OTHER WORKPLAN
RESPONSE	11/13/1998	OTHER REPORT / DOCUMENT
RESPONSE	10/30/1998	SITE ASSESSMENT REPORT
RESPONSE	10/30/1998	OTHER REPORT / DOCUMENT
RESPONSE	10/23/1998	OTHER REPORT / DOCUMENT
RESPONSE	10/09/1998	OTHER REPORT / DOCUMENT
RESPONSE	10/08/1998	OTHER REPORT / DOCUMENT
RESPONSE	10/02/1998	OTHER REPORT / DOCUMENT
RESPONSE	09/28/1998	OTHER REPORT / DOCUMENT
RESPONSE	09/23/1998	OTHER REPORT / DOCUMENT
RESPONSE	09/22/1998	OTHER REPORT / DOCUMENT
RESPONSE	09/15/1998	OTHER REPORT / DOCUMENT
RESPONSE	09/04/1998	OTHER REPORT / DOCUMENT
RESPONSE	09/04/1998	OTHER REPORT / DOCUMENT
RESPONSE	09/04/1998	OTHER REPORT / DOCUMENT
RESPONSE	09/03/1998	OTHER REPORT / DOCUMENT
RESPONSE	09/01/1998	OTHER REPORT / DOCUMENT
RESPONSE	08/31/1998	OTHER REPORT / DOCUMENT
RESPONSE	08/18/1998	OTHER REPORT / DOCUMENT
RESPONSE	08/17/1998	OTHER REPORT / DOCUMENT
RESPONSE	08/14/1998	OTHER REPORT / DOCUMENT
RESPONSE	08/12/1998	OTHER WORKPLAN
RESPONSE	08/07/1998	OTHER WORKPLAN
RESPONSE	05/22/1998	REMEDIAL ACTION COMPLETE
RESPONSE	04/24/1998	SITE ASSESSMENT REPORT
RESPONSE	04/13/1998	SITE INVESTIGATION WORKPLAN
RESPONSE	04/13/1998	OTHER WORKPLAN
RESPONSE	11/01/1997	OTHER REPORT / DOCUMENT
RESPONSE	10/17/1997	OTHER REPORT / DOCUMENT
RESPONSE	09/15/1997	OTHER REPORT / DOCUMENT
RESPONSE	08/01/1997	OTHER REPORT / DOCUMENT

TYPE OF ACTION:	DATE:	ACTION:
RESPONSE	**07/24/1997**	**OTHER REPORT / DOCUMENT**
RESPONSE	**05/08/1997**	**OTHER REPORT / DOCUMENT**
RESPONSE	**04/14/1997**	**OTHER REPORT / DOCUMENT**
RESPONSE	**02/12/1997**	**OTHER REPORT / DOCUMENT**
RESPONSE	**02/01/1997**	**OTHER REPORT / DOCUMENT**
RESPONSE	**08/01/1989**	**OTHER REPORT / DOCUMENT**
RESPONSE	**02/27/1989**	**OTHER REPORT / DOCUMENT**
RESPONSE	**02/09/1989**	**OTHER REPORT / DOCUMENT**
RESPONSE	**08/12/1988**	**OTHER REPORT / DOCUMENT**
RESPONSE	**06/05/1988**	**OTHER REPORT / DOCUMENT**
RESPONSE	**11/01/1987**	**OTHER REPORT / DOCUMENT**
RESPONSE	**07/01/1987**	**RISK ASSESSMENT REPORT**
RESPONSE	**04/30/1987**	**OTHER REPORT / DOCUMENT**
RESPONSE	**03/24/1987**	**SITE ASSESSMENT REPORT**
RESPONSE	**12/18/1986**	**CORRESPONDENCE**
RESPONSE	**11/26/1986**	**OTHER REPORT / DOCUMENT**
RESPONSE	**11/20/1986**	**OTHER REPORT / DOCUMENT**
RESPONSE	**11/01/1986**	**OTHER REPORT / DOCUMENT**
RESPONSE	**11/01/1986**	**OTHER REPORT / DOCUMENT**
RESPONSE	**10/06/1986**	**OTHER REPORT / DOCUMENT**
RESPONSE	**09/17/1986**	**OTHER REPORT / DOCUMENT**
RESPONSE	**09/15/1986**	**OTHER REPORT / DOCUMENT**
RESPONSE	**09/15/1986**	**OTHER REPORT / DOCUMENT**
RESPONSE	**09/15/1986**	**OTHER REPORT / DOCUMENT**
RESPONSE	**09/01/1986**	**PRELIMINARY SITE ASSESSMENT REPORT**
RESPONSE	**08/29/1986**	**OTHER REPORT / DOCUMENT**
RESPONSE	**08/21/1986**	**OTHER REPORT / DOCUMENT**
RESPONSE	**08/08/1986**	**OTHER REPORT / DOCUMENT**
RESPONSE	**08/01/1986**	**OTHER REPORT / DOCUMENT**
RESPONSE	**06/27/1986**	**OTHER REPORT / DOCUMENT**
RESPONSE	**06/26/1986**	**OTHER REPORT / DOCUMENT**
RESPONSE	**10/01/1979**	**OTHER REPORT / DOCUMENT**

STATUS HISTORY

STATUS:	DATE:
OPEN - REOPEN CASE	**04/29/2014**
OPEN - VERIFICATION MONITORING	**04/29/2014**
COMPLETED - CASE CLOSED	**04/28/2014**
OPEN - CASE BEGIN DATE	**02/06/2013**
OPEN - VERIFICATION MONITORING	**02/06/2013**

CONTACT DETAILS

ORGANIZATION: **SANTA BARBARA COUNTY**

ADDRESS: **4410 CATHEDRAL OAKS ROAD**

CITY: **SANTA BARBARA**
CONTACT NAME: **KATE SULKA**
CONTACT TYPE: **LOCAL AGENCY CASEWORKER**
CONTACT PHONE: **805-686-8169**
EMAIL: **KATE.SULKA@SBCFIRE.COM**

Back to Report Summary

Emissions Inventory Data (EMI)

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 16 ft. (Equal to TP)

SITE INFORMATION

GSID#: **703943671**
ID#: **9938**
NAME: **BACARA RESORT & SPA**
ADDRESS: **8301 HOLLISTER AVENUE**
GOLETA, CA 93117
DISTRICT: **SANTA BARBARA COUNTY APCD**
STANDARD INDUSTRIAL CLASSIFICATION CODE (SIC):
7011 - HOTELS AND MOTELS
EMISSIONS DATA
TOTAL ORGANIC GASES (Tons/Yr): **0.023498**
REACTIVE ORGANIC GASES (Tons/Yr): **0.012879351**
CARBON MONOXIDE (Tons/Yr): **0.019718**
NITOGEN OXIDES (Tons/Yr): **0.130143**
SULFUR OXIDES (Tons/Yr): **0.074375**
PARTICULATE MATTER (Tons/Yr): **0.045258**
FINE PARTICULATE MATTER (Tons/Yr): **0.045148944**

Back to Report Summary

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 16 ft. (Equal to TP)

INCIDENT INFORMATION

GSID#: **971772**

NRC ID#: **971772**

INCIDENT LOCATION: **UNKNOWN SHEEN INCIDENT - IN PACIFIC OCEAN, SOUTH OF ADDRESS**

INCIDENT ADDRESS: **8301 HOLLISTER AVE 1-2 MILES OFFSHORE**
GOLETA, CA

INCIDENT COUNTY: **SANTA BARBARA**

INCIDENT DETAILS

INCIDENT DATE: **4/1/2011 4:20:00 PM**

INCIDENT CAUSE: **UNKNOWN**

INCIDENT TYPE: **UNKNOWN SHEEN**

INCIDENT OCCURED/DISCOVERED: **DISCOVERED**

INCIDENT DESCRIPTION: **CALLER RECEIVED A REPORT ABOUT A SHEEN OF UNKNOWN ORIGIN.**

RESPONSIBLE PARTY

RESPONSIBLE COMPANY: **NOT REPORTED**

ADDRESS: **ADDRESS NOT REPORTED**
CITY NOT REPORTED

RESPONSIBLE COMPANY ORGANIZATION TYPE: **UNKNOWN**

MATERIALS INVOLVED

CHRIS CODE: **OUN**

MATERIAL REACHED WATER: **YES**

WATER AMOUNT: **UNKNOWN AMOUNT / NOT REPORTED**

MATERIAL RELEASED/AMOUNT: **UNKNOWN OIL / UNKNOWN AMOUNT**

OTHER MATERIALS INVOLVED

- NO OTHER MATERIALS INVOLVED -

REMEDIAL ACTION

REMEDIAL ACTION: **NONE**

Back to Report Summary

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 16 ft. (Equal to TP)

FACILITY INFORMATION

REGISTRY ID: **110054204384**

NAME: **BACARA RESORT & SPA**

LOCATION ADDRESS: **8301 HOLLISTER AVENUE**
GOLETA, CA 93117

COUNTY: **SANTA BARBARA**

EPA REGION: **09**

FEDERAL FACILITY: **NOT REPORTED**

TRIBAL LAND: **NOT REPORTED**

ALTERNATIVE NAME/S:

THE BACARA RESORT
BACARA RESORT & SPA
BACARA RESORT AND SPA

PROGRAM/S LISTED FOR THIS FACILITY

EIS - EIS
CA-ENVIROVIEW - CA-ENVIROVIEW

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

7011 - HOTELS AND MOTELS

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

721110 - HOTELS (EXCEPT CASINO HOTELS) AND MOTELS.
721110 - HOTELS (EXCEPT CASINO HOTELS) AND MOTELS.

Back to Report Summary

Hazardous Waste Tanner Summary (HWTS)

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 16 ft. (Equal to TP)

SITE INFORMATION

EPA ID: **CAC002230713**
NAME: **HT SANTA BARABRA INC**
COUNTY: **NOT REPORTED**
ADDRESS: **8301 HOLLISTOR AVE**
GOLETA, CA 93117
FACILITY LINK: *Department of Toxic Substances Control*

CONTACT INFORMATION

CONTACT: **HT SANTA BARABRA INC**
PHONE: **(805) 399-0361**
ADDRESS: **NOT REPORTED**
NOT REPORTED NOT REPORTED

MANIFEST SUMMARY INFORMATION

YEAR: **1999**
TSD ID: **CAD028409019**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **UNSPECIFIED OIL-CONTAINING WASTE**
AMOUNT DISPOSED(TONS): **2.8356**
DISPOSAL METHOD: **TREATMENT, TANK**

YEAR: **1999**
TSD ID: **CAD982030173**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **OTHER EMPTY CONTAINERS 30 GALLONS OR MORE**
AMOUNT DISPOSED(TONS): **0.2500**
DISPOSAL METHOD: **RECYCLER**

YEAR: **1999**
TSD ID: **CAD982484933**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **CONTRA COSTA**
WASTE CATEGORY: **BLANK OR UNKNOWN**
AMOUNT DISPOSED(TONS): **0.7500**
DISPOSAL METHOD: **BLANK**

Back to Report Summary

Hazardous Waste Tanner Summary (HWTS)

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 16 ft. (Equal to TP)

SITE INFORMATION

EPA ID: **CAL000183159**
NAME: **BCRA RESORT SERVICES INC DBA BACARA RESORT & SPA**
COUNTY: **SANTA BARBARA**
ADDRESS: **8301 HOLLISTER AVE**
SANTA BARBARA, CA 93117
FACILITY LINK: *Department of Toxic Substances Control*

CONTACT INFORMATION

CONTACT: **RON PARKER/DIRECTOR OF ENGR'G**
PHONE: **805-571-3191**
ADDRESS: **8301 HOLLISTER AVE**
SANTA BARBARA CA 931170000

MANIFEST SUMMARY INFORMATION

YEAR: **2016**
TSD ID: **CAD044429835**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **NOT REPORTED**
WASTE CATEGORY: **OTHER ORGANIC SOLIDS**
AMOUNT DISPOSED(TONS): **0.6**
DISPOSAL METHOD: **STORAGE, BULKING, AND/OR TRANSFER OFF SITE--NO TREATMENT/REOVERY (H010-H129) OR (H131-H135)**

YEAR: **2015**
TSD ID: **CAD044429835**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **HYDROCARBON SOLVENTS (BENZENE, HEXANE, STODDARD, ETC.)**
AMOUNT DISPOSED(TONS): **0.55**
DISPOSAL METHOD: **STORAGE, BULKING, AND/OR TRANSFER OFF SITE--NO TREATMENT/REOVERY (H010-H129) OR (H131-H135)**

YEAR: **2014**
TSD ID: **CAD044429835**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **HYDROCARBON SOLVENTS (BENZENE, HEXANE, STODDARD, ETC.)**
AMOUNT DISPOSED(TONS): **0.2**
DISPOSAL METHOD: **STORAGE, BULKING, AND/OR TRANSFER OFF SITE--NO TREATMENT/REOVERY (H010-H129) OR (H131-H135)**

YEAR: **2013**
TSD ID: **NED981723513**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **UNSPECIFIED ORGANIC LIQUID MIXTURE**
AMOUNT DISPOSED(TONS): **0.1000**
DISPOSAL METHOD: **INCINERATION--THERMAL DESTRUCTION OTHER THAN USE AS A FUEL**

YEAR: **2012**
TSD ID: **CAT000613893**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **LOS ANGELES**

WASTE CATEGORY: **SOLIDS OR SLUDGES WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.1000**
DISPOSAL METHOD: **STORAGE, BULKING, AND/OR TRANSFER OFF SITE--NO TREATMENT/REOVERY (H010-H129) OR (H131-H135)**

YEAR: **2012**
TSD ID: **NVT330010000**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **OIL/WATER SEPARATION SLUDGE**
AMOUNT DISPOSED(TONS): **0.2000**
DISPOSAL METHOD: **OTHER RECOVERY OF RECLAMATION FOR REUSE INCLUDING ACID REGENERATION, ORGANICS RECOVERY ECT**

YEAR: **2012**
TSD ID: **TXD077603371**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **UNSPECIFIED ORGANIC LIQUID MIXTURE**
AMOUNT DISPOSED(TONS): **0.1000**
DISPOSAL METHOD: **FUEL BLENDING PRIOR TO ENERGY RECOVERY AT ANOTHER SITE**

YEAR: **2011**
TSD ID: **CAT000613893**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **SANTA BARBARA**
WASTE CATEGORY: **SOLIDS OR SLUDGES WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.4950**
DISPOSAL METHOD: **STORAGE, BULKING, AND/OR TRANSFER OFF SITE--NO TREATMENT/REOVERY (H010-H129) OR (H131-H135)**

YEAR: **2011**
TSD ID: **NVT330010000**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **SANTA BARBARA**
WASTE CATEGORY: **ORGANIC LIQUIDS WITH METALS (SEE 121)**
AMOUNT DISPOSED(TONS): **0.3000**
DISPOSAL METHOD: **OTHER RECOVERY OF RECLAMATION FOR REUSE INCLUDING ACID REGENERATION, ORGANICS RECOVERY ECT**

YEAR: **2011**
TSD ID: **TXD077603371**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **SANTA BARBARA**
WASTE CATEGORY: **HALOGENATED SOLVENTS (CHLOROFORMS, METHYL CHLORIDE, PERCHLOROETHYLENE, ETC)**
AMOUNT DISPOSED(TONS): **0.4300**
DISPOSAL METHOD: **STORAGE, BULKING, AND/OR TRANSFER OFF SITE--NO TREATMENT/REOVERY (H010-H129) OR (H131-H135)**

YEAR: **2010**
TSD ID: **CAT000613893**
GENERATOR COUNTY: **SANTA BARBARA**

DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **SOLIDS OR SLUDGES WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.7100**
DISPOSAL METHOD: **STORAGE, BULKING, AND/OR TRANSFER OFF SITE--NO TREATMENT/REOVERY (H010-H129) OR (H131-H135)**

YEAR: **2010**
TSD ID: **NVT330010000**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **ALKALINE SOLUTION WITHOUT METALS PH >= 12.5**
AMOUNT DISPOSED(TONS): **0.0500**
DISPOSAL METHOD: **DEEPWELL OR UNDERGROUND INJECTION(WITH OR WITHOUT TREATMENT)**

YEAR: **2010**
TSD ID: **NVT330010000**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **ALKALINE SOLUTION WITHOUT METALS PH >= 12.5**
AMOUNT DISPOSED(TONS): **0.0500**
DISPOSAL METHOD: **DISCHARGE TO SEWER/POTW OR NPDES(WITH PRIOR STORAGE--WITH OR WITHOUT TREATMENT)**

YEAR: **2010**
TSD ID: **NVT330010000**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **ALKALINE SOLUTION WITHOUT METALS PH >= 12.5**
AMOUNT DISPOSED(TONS): **0.0500**
DISPOSAL METHOD: **LAND TREATMENT OR APPLICATION(TO INCLUDE ON-SITE TREATMENT AND/OR STABILIZATION)**

YEAR: **2010**
TSD ID: **NVT330010000**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **ALKALINE SOLUTION WITHOUT METALS PH >= 12.5**
AMOUNT DISPOSED(TONS): **0.0500**
DISPOSAL METHOD: **LANDFILL OR SURFACE IMPOUNDMENT THAT WILL BE CLOSED AS LANDFILL(TO INCLUDE ON-SITE TREATMENT AND/OR STABILIZATION)**

YEAR: **2010**
TSD ID: **TXD077603371**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **HALOGENATED SOLVENTS (CHLOROFORMS, METHYL CHLORIDE, PERCHLOROETHYLENE, ETC)**
AMOUNT DISPOSED(TONS): **0.1250**
DISPOSAL METHOD: **STORAGE, BULKING, AND/OR TRANSFER OFF SITE--NO TREATMENT/REOVERY (H010-H129) OR (H131-H135)**

YEAR: **2010**
TSD ID: **TXD077603371**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**

WASTE CATEGORY: **OFF-SPECIFICATION, AGED OR SURPLUS ORGANICS**
AMOUNT DISPOSED(TONS): **0.3500**
DISPOSAL METHOD: **FUEL BLENDING PRIOR TO ENERGY RECOVERY AT ANOTHER SITE**

YEAR: **2009**
TSD ID: **CAT000613893**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **SOLIDS OR SLUDGES WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.7100**
DISPOSAL METHOD: **STORAGE, BULKING, AND/OR TRANSFER OFF SITE--NO TREATMENT/REOVERY (H010-H129) OR (H131-H135)**

YEAR: **2009**
TSD ID: **NVT330010000**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **ALKALINE SOLUTION WITHOUT METALS PH >= 12.5**
AMOUNT DISPOSED(TONS): **0.0500**
DISPOSAL METHOD: **DEEPWELL OR UNDERGROUND INJECTION(WITH OR WITHOUT TREATMENT)**

YEAR: **2009**
TSD ID: **NVT330010000**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **ALKALINE SOLUTION WITHOUT METALS PH >= 12.5**
AMOUNT DISPOSED(TONS): **0.0500**
DISPOSAL METHOD: **DISCHARGE TO SEWER/POTW OR NPDES(WITH PRIOR STORAGE--WITH OR WITHOUT TREATMENT)**

YEAR: **2009**
TSD ID: **NVT330010000**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **ALKALINE SOLUTION WITHOUT METALS PH >= 12.5**
AMOUNT DISPOSED(TONS): **0.0500**
DISPOSAL METHOD: **LAND TREATMENT OR APPLICATION(TO INCLUDE ON-SITE TREATMENT AND/OR STABILIZATION)**

YEAR: **2009**
TSD ID: **NVT330010000**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **ALKALINE SOLUTION WITHOUT METALS PH >= 12.5**
AMOUNT DISPOSED(TONS): **0.0500**
DISPOSAL METHOD: **LANDFILL OR SURFACE IMPOUNDMENT THAT WILL BE CLOSED AS LANDFILL(TO INCLUDE ON-SITE TREATMENT AND/OR STABILIZATION)**

YEAR: **2009**
TSD ID: **TXD077603371**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **HALOGENATED SOLVENTS (CHLOROFORMS, METHYL CHLORIDE, PERCHLOROETHYLENE, ETC)**
AMOUNT DISPOSED(TONS): **0.1250**

DISPOSAL METHOD: **STORAGE, BULKING, AND/OR TRANSFER OFF SITE--NO TREATMENT/REOVERY (H010-H129) OR (H131-H135)**

YEAR: **2009**
TSD ID: **TXD077603371**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **OFF-SPECIFICATION, AGED OR SURPLUS ORGANICS**
AMOUNT DISPOSED(TONS): **0.3500**
DISPOSAL METHOD: **FUEL BLENDING PRIOR TO ENERGY RECOVERY AT ANOTHER SITE**

YEAR: **2008**
TSD ID: **CAT000613893**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **SOLIDS OR SLUDGES WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **1.3800**
DISPOSAL METHOD: **STORAGE, BULKING, AND/OR TRANSFER OFF SITE--NO TREATMENT/REOVERY (H010-H129) OR (H131-H135)**

YEAR: **2008**
TSD ID: **NVT330010000**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **LATEX WASTE**
AMOUNT DISPOSED(TONS): **2.6000**
DISPOSAL METHOD: **OTHER RECOVERY OF RECLAMATION FOR REUSE INCLUDING ACID REGENERATION, ORGANICS RECOVERY ECT**

YEAR: **2008**
TSD ID: **NVT330010000**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **LATEX WASTE**
AMOUNT DISPOSED(TONS): **0.6750**
DISPOSAL METHOD: **DEEPWELL OR UNDERGROUND INJECTION(WITH OR WITHOUT TREATMENT)**

YEAR: **2008**
TSD ID: **NVT330010000**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **LATEX WASTE**
AMOUNT DISPOSED(TONS): **0.6750**
DISPOSAL METHOD: **DISCHARGE TO SEWER/POTW OR NPDES(WITH PRIOR STORAGE--WITH OR WITHOUT TREATMENT)**

YEAR: **2008**
TSD ID: **NVT330010000**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **LATEX WASTE**
AMOUNT DISPOSED(TONS): **0.6750**
DISPOSAL METHOD: **LAND TREATMENT OR APPLICATION(TO INCLUDE ON-SITE TREATMENT AND/OR STABILIZATION)**

YEAR: **2008**
TSD ID: **NVT330010000**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **LATEX WASTE**
AMOUNT DISPOSED(TONS): **0.6750**
DISPOSAL METHOD: **LANDFILL OR SURFACE IMPOUNDMENT THAT WILL BE CLOSED AS LANDFILL(TO INCLUDE ON-SITE TREATMENT AND/OR STABILIZATION)**

YEAR: **2008**
TSD ID: **TXD077603371**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **HALOGENATED SOLVENTS (CHLOROFORMS, METHYL CHLORIDE, PERCHLOROETHYLENE, ETC)**
AMOUNT DISPOSED(TONS): **0.1250**
DISPOSAL METHOD: **STORAGE, BULKING, AND/OR TRANSFER OFF SITE--NO TREATMENT/REOVERY (H010-H129) OR (H131-H135)**

YEAR: **2008**
TSD ID: **TXD077603371**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **OXYGENATED SOLVENTS (ACETONE, BUTANOL, ETHYL ACETATE, ETC.)**
AMOUNT DISPOSED(TONS): **0.3250**
DISPOSAL METHOD: **FUEL BLENDING PRIOR TO ENERGY RECOVERY AT ANOTHER SITE**

YEAR: **2007**
TSD ID: **CAT000613893**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **LIQUIDS WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.7800**
DISPOSAL METHOD: **STORAGE, BULKING, AND/OR TRANSFER OFF SITE--NO TREATMENT/REOVERY (H010-H129) OR (H131-H135)**

YEAR: **2007**
TSD ID: **CAT000613893**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **SOLIDS OR SLUDGES WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.1000**
DISPOSAL METHOD: **NOT REPORTED**

YEAR: **2007**
TSD ID: **CAT000613893**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **SOLIDS OR SLUDGES WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.4300**
DISPOSAL METHOD: **STORAGE, BULKING, AND/OR TRANSFER OFF SITE--NO TREATMENT/REOVERY (H010-H129) OR (H131-H135)**

YEAR: **2007**
TSD ID: **OHD980587364**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **LIQUIDS WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.2000**
DISPOSAL METHOD: **SOLVENTS RECOVERY**

YEAR: **2007**
TSD ID: **TXD077603371**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **WASTE OIL AND MIXED OIL**
AMOUNT DISPOSED(TONS): **0.1000**
DISPOSAL METHOD: **FUEL BLENDING PRIOR TO ENERGY RECOVERY AT ANOTHER SITE**

YEAR: **2006**
TSD ID: **CAT000613893**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **LIQUIDS WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.0500**
DISPOSAL METHOD: **METALS RECOVERY INCLUDING RETORING,SMELTING,CHEMICALS,ECT**

YEAR: **2006**
TSD ID: **CAT000613893**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **LIQUIDS WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.0500**
DISPOSAL METHOD: **TRANSFER STATION**

YEAR: **2006**
TSD ID: **TXD077603371**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **UNSPECIFIED ORGANIC LIQUID MIXTURE**
AMOUNT DISPOSED(TONS): **0.2200**
DISPOSAL METHOD: **STORAGE, BULKING, AND/OR TRANSFER OFF SITE--NO TREATMENT/REOVERY (H010-H129) OR (H131-H135)**

YEAR: **2005**
TSD ID: **CAT000613893**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **LIQUIDS WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.5400**
DISPOSAL METHOD: **TRANSFER STATION**

YEAR: **2004**
TSD ID: **CAT000613893**
GENERATOR COUNTY: **SANTA BARBARA**

DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **BLANK OR UNKNOWN**
AMOUNT DISPOSED(TONS): **0.0000**
DISPOSAL METHOD: **TRANSFER STATION**

YEAR: **2004**
TSD ID: **CAT000613893**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **LIQUIDS WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.6200**
DISPOSAL METHOD: **TRANSFER STATION**

YEAR: **2004**
TSD ID: **KYD053348108**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **WASTE OIL AND MIXED OIL**
AMOUNT DISPOSED(TONS): **0.1000**
DISPOSAL METHOD: **TRANSFER STATION**

YEAR: **2003**
TSD ID: **CAT000613893**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **BLANK OR UNKNOWN**
AMOUNT DISPOSED(TONS): **0.1200**
DISPOSAL METHOD: **BLANK**

YEAR: **2003**
TSD ID: **CAT000613893**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **LIQUIDS WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.9200**
DISPOSAL METHOD: **TRANSFER STATION**

YEAR: **2003**
TSD ID: **IND000646943**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **UNKNOWN**
WASTE CATEGORY: **OFF-SPECIFICATION, AGED OR SURPLUS ORGANICS**
AMOUNT DISPOSED(TONS): **0.1400**
DISPOSAL METHOD: **DISPOSAL, OTHER**

YEAR: **2002**
TSD ID: **CAT000613893**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **LIQUIDS WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.0200**
DISPOSAL METHOD: **TRANSFER STATION**

YEAR: **2002**
TSD ID: **CAT000613893**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **LIQUIDS WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.0300**
DISPOSAL METHOD: **TRANSFER STATION**

YEAR: **2002**
TSD ID: **CAT000613893**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **LIQUIDS WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.0700**
DISPOSAL METHOD: **TRANSFER STATION**

YEAR: **2002**
TSD ID: **CAT000613893**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **LOS ANGELES**
WASTE CATEGORY: **LIQUIDS WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.1500**
DISPOSAL METHOD: **TRANSFER STATION**

YEAR: **2002**
TSD ID: **CAT000613976**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **ORANGE**
WASTE CATEGORY: **BLANK OR UNKNOWN**
AMOUNT DISPOSED(TONS): **0.0000**
DISPOSAL METHOD: **TRANSFER STATION**

YEAR: **2002**
TSD ID: **CAT000613976**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **ORANGE**
WASTE CATEGORY: **LIQUIDS WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.0100**
DISPOSAL METHOD: **TRANSFER STATION**

YEAR: **2002**
TSD ID: **CAT000613976**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **ORANGE**
WASTE CATEGORY: **LIQUIDS WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.0200**
DISPOSAL METHOD: **TRANSFER STATION**

YEAR: **2002**
TSD ID: **CAT000613976**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **ORANGE**

WASTE CATEGORY: **LIQUIDS WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.0700**
DISPOSAL METHOD: **TRANSFER STATION**

YEAR: **2002**
TSD ID: **CAT000613976**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **ORANGE**
WASTE CATEGORY: **LIQUIDS WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.1200**
DISPOSAL METHOD: **TRANSFER STATION**

YEAR: **2002**
TSD ID: **CAT000613976**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **ORANGE**
WASTE CATEGORY: **LIQUIDS WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.1500**
DISPOSAL METHOD: **TRANSFER STATION**

YEAR: **2002**
TSD ID: **CAT000613976**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **ORANGE**
WASTE CATEGORY: **LIQUIDS WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.2000**
DISPOSAL METHOD: **TRANSFER STATION**

YEAR: **2002**
TSD ID: **CAT000613976**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **ORANGE**
WASTE CATEGORY: **LIQUIDS WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.2800**
DISPOSAL METHOD: **TRANSFER STATION**

YEAR: **2002**
TSD ID: **CAT000613976**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **ORANGE**
WASTE CATEGORY: **LIQUIDS WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **0.3500**
DISPOSAL METHOD: **TRANSFER STATION**

YEAR: **2001**
TSD ID: **CAT000613976**
GENERATOR COUNTY: **SANTA BARBARA**
DISPOSAL COUNTY: **ORANGE**
WASTE CATEGORY: **LIQUIDS WITH HALOGENATED ORGANIC COMPOUNDS >= 1,000 MG./L**
AMOUNT DISPOSED(TONS): **2.2300**
DISPOSAL METHOD: **TRANSFER STATION**

Back to Report Summary

Hazardous Waste Tanner Summary (HWTS)

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 16 ft. (Equal to TP)

SITE INFORMATION

EPA ID: **CAL000383279**

NAME: **BRS INVESTMENT PROPERTIES LLC DBA BACARA RESORT AND SPA**

COUNTY: **SANTA BARBARA**

ADDRESS: **8301 HOLLISTER AVE**
GOLETA, CA 93117

FACILITY LINK: *Department of Toxic Substances Control*

CONTACT INFORMATION

CONTACT: **RON PARKER**

PHONE: **(805) 571-3191**

ADDRESS: **8301 HOLLISTER AVE**
GOLETA CA 93117

MANIFEST SUMMARY INFORMATION

YEAR: **2013**

TSD ID: **CAD980675276**

GENERATOR COUNTY: **SANTA BARBARA**

DISPOSAL COUNTY: **KERN**

WASTE CATEGORY: **LATEX WASTE**

AMOUNT DISPOSED(TONS): **0.6250**

DISPOSAL METHOD: **LANDFILL OR SURFACE IMPOUNDMENT THAT WILL BE CLOSED AS LANDFILL(TO INCLUDE ON-SITE TREATMENT AND/OR STABILIZATION)**

Back to Report Summary

Santa Barbara County Fire Department Leaking Underground Fuel Tanks (SBFDLUFT)

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 16 ft. (Equal to TP)

SITE INFORMATION

ID#: **30**
NAME: **BACARA RESORT**
ADDRESS: **8301 HOLLISTER AVE**
GOLETA, CA
COUNTY: **SANTA BARBARA**
STATUS: **NOT REPORTED**
CLOSED DATE: **OPEN**
COMMENTS: **NOT REPORTED**

Back to Report Summary

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 16 ft. (Equal to TP)

FACILITY INFORMATION

FACILITY ID#: **FA0012543**
NAME: **BACARA RESORT & SPA**
ADDRESS: **8301 HOLLISTER AVE**
GOLETA, CA 93117
COUNTY: **SANTA BARBARA**
PHONE: **8059680100**

FACILITY DETAILS

LAST BUSINESS PLAN CERTIFICATION DATE: **03/01/11**
PROGRAM: **2163 - BUSINESS PLAN 7-10 CHEMICALS $323**
STATUS: **ACTIVE**
CURRENT INSPECTION DATE: **10/02/10**
COMMENTS: **7 @ 5,280 FT3**
PROGRAM: **2202 - HAZARDOUS WASTE 1.00 - 4.99 TONS $387.00**
STATUS: **ACTIVE**
CURRENT INSPECTION DATE: **10/02/10**
COMMENTS: **3 @ 002.2500 TONS**

Back to Report Summary

MAP ID# 2

Distance from Property: 0.242 mi. (1,278 ft.) E
Elevation: 26 ft. (Higher than TP)

FACILITY INFORMATION

GLOBAL ID: **T10000003759**
URL LINK: CLICK HERE
BUSINESS NAME: **VENOCO, INC.**
ADDRESS: **7979 HOLLISTER AVENUE**
GOLETA, CA 93117
COUNTY: **SANTA BARBARA**

FACILITY DETAILS

CASE TYPE: **CLEANUP PROGRAM SITE**
CASE NUMBER: **NOT REPORTED**
STATUS: **OPEN - SITE ASSESSMENT 05/19/2012**
POTENTIAL CONTAMINATION:
OTHER SOLVENT OR NON-PETROLEUM HYDROCARBON, CRUDE OIL
POTENTIAL MEDIA AFFECTED:
NOT REPORTED
SITE HISTORY:
COMPLETE LOP FILE HAS BEEN UPLOADED TO GEOTRACKER WEBSITE - HARD COPIES NO LONGER EXIST IN LOP FILES

REGULATORY ACTIVITIES

TYPE OF ACTION:	DATE:	ACTION:
OTHER	01/01/50	LEAK DISCOVERY
OTHER	01/01/50	LEAK REPORTED
OTHER	01/01/50	LEAK STOPPED
ENFORCEMENT	03/13/2017	EMAIL CORRESPONDENCE
RESPONSE	02/17/2017	CORRESPONDENCE - REGULATOR RESPONDED
ENFORCEMENT	01/13/2016	STAFF LETTER
ENFORCEMENT	01/13/2016	TECHNICAL CORRESPONDENCE / ASSISTANCE / OTHER
ENFORCEMENT	08/22/2014	COST RECOVERY AGREEMENT SETTLEMENTS / DECREES
ENFORCEMENT	08/11/2014	TECHNICAL CORRESPONDENCE / ASSISTANCE / OTHER
ENFORCEMENT	08/13/2013	COST RECOVERY AGREEMENT
RESPONSE	08/15/2012	PROGRESS REPORT (SOIL/GW/ UPDATES)
RESPONSE	07/12/2012	MONITORING REPORT - SEMI-ANNUALLY
RESPONSE	08/04/2006	MONITORING REPORT - SEMI-ANNUALLY
RESPONSE	01/20/2006	MONITORING REPORT - ANNUALLY
RESPONSE	11/01/2005	MONITORING REPORT - QUARTERLY
RESPONSE	07/27/2005	MONITORING REPORT - QUARTERLY
RESPONSE	04/12/2005	MONITORING REPORT - QUARTERLY
RESPONSE	01/28/2005	MONITORING REPORT - ANNUALLY
RESPONSE	01/25/2005	MONITORING REPORT - QUARTERLY
RESPONSE	11/12/2004	MONITORING REPORT - QUARTERLY
RESPONSE	08/09/2004	MONITORING REPORT - QUARTERLY
RESPONSE	05/11/2004	MONITORING REPORT - QUARTERLY
RESPONSE	02/24/2004	MONITORING REPORT - QUARTERLY
ENFORCEMENT	01/01/2004	TECHNICAL CORRESPONDENCE / ASSISTANCE / OTHER

TYPE OF ACTION:	DATE:	ACTION:
RESPONSE	**08/18/2003**	**MONITORING REPORT - ANNUALLY**
RESPONSE	**05/31/2002**	**OTHER REPORT / DOCUMENT**
RESPONSE	**05/02/2002**	**OTHER REPORT / DOCUMENT**
RESPONSE	**03/20/2002**	**OTHER REPORT / DOCUMENT**
RESPONSE	**03/20/2002**	**OTHER REPORT / DOCUMENT**
ENFORCEMENT	**02/04/2002**	**TECHNICAL CORRESPONDENCE / ASSISTANCE / OTHER**
OTHER	**11/01/2000**	**LEAK REPORTED**
RESPONSE	**06/15/2000**	**REMEDIAL PROGRESS REPORT**
RESPONSE	**06/13/2000**	**OTHER REPORT / DOCUMENT**
ENFORCEMENT	**06/09/2000**	**TECHNICAL CORRESPONDENCE / ASSISTANCE / OTHER**
OTHER	**01/01/2000**	**LEAK DISCOVERY**
OTHER	**01/01/2000**	**LEAK STOPPED**
RESPONSE	**01/01/2000**	**OTHER REPORT / DOCUMENT**
ENFORCEMENT	**04/08/1999**	**TECHNICAL CORRESPONDENCE / ASSISTANCE / OTHER**

STATUS HISTORY

STATUS:	DATE:
OPEN - INACTIVE	**05/19/2012**
OPEN - SITE ASSESSMENT	**05/19/2012**
OPEN - CASE BEGIN DATE	**01/01/2000**

CONTACT DETAILS

ORGANIZATION: **SANTA BARBARA COUNTY**
ADDRESS: **2125 S. CENTERPOINTE PARKWAY, SUITE 333**
CITY: **SANTA MARIA**
CONTACT NAME: **TOM REJZEK**
CONTACT TYPE: **LOCAL AGENCY CASEWORKER**
CONTACT PHONE: **8053468216**
EMAIL: **TOM.REJZEK@SBCPHD.ORG**

Back to Report Summary

MAP ID# 2

Distance from Property: 0.242 mi. (1,278 ft.) E
Elevation: 26 ft. (Higher than TP)

ELLWOOD ONSHORE, 7979 HOLLISTER AVENUE, GOLETA, CA 93117
UNIQUE ID: **0002C4BC**

*** F04 ***

PAGE 53 STATE WATER RESOURCES CONTROL BOARD 06/01/88
HAZARDOUS SUBSTANCE STORAGE CONTAINER INFORMATION FOR SANTA BARBARA COUNTY
CONTAINER TYPES: 1,2,3,4,5
(1=FARM MOTOR VEHICLE FUEL TANKS, 2=ALL OTHER PRODUCT TANKS, 3=WASTE TANKS, 4=SUMPS, 5=PITS, PONDS, LAGOONS & OTHERS)

I OWNER
ARCO OIL & GAS COMPANY
4201 NEW STINE ROAD BAKERSFIELD CA 93309

II FACILITY

	MAILING ADDRESS / TOWNSHIP/RANGE/SECTION	DEALER/FOREMAN/SUPERVISOR / TELEPHONE	TYPE OF BUSINESS / NO. OF CONTAINERS
ELLWOOD ONSHORE 7979 HOLLISTER AVENUE GOLETA CA 93117	P.O. BOX 2540 GOLETA CA 93116	FRANK GREEN (805) 968-6312	GASOLINE STATION 3

CROSS STREET :
WINCHESTER CANYON RD.

III 24-HR. CONTACT PERSON / TELEPHONE
DAY: GREEN, FRANK (805) 968-6312 NIGHT: GREEN, FRANK (805) 659-5128

********** OWNER ASSIGNED CONTAINER NUMBER: ELL-01 ********** STATE BOARD ASSIGNED CONTAINER ID NUMBER: 00000028176001 **********

IV DESCRIPTION
A. CONTAINER TYPE : TANK
B. MANUFACTURER/YR OF MFG: /
C. YEAR INSTALLED : UNK
D. CAPACITY (GALLONS) : 10,000
E. REPAIRS : UNKN IF YES WHEN :
F. CURRENTLY USED : YES IF NO, YEAR OF LAST USE:
G. STORES : PRODUCT
H. MOTOR VEHICLE FUEL/WASTE OIL : YES CONTAINS: UNLEADED

IS CONTAINER LOCATED ON A FARM : NO

V CONTAINER CONSTRUCTION
A. THICKNESS: B. VAULTING: UNKNOWN C. WALLING: UNKNOWN
D. MATERIAL : UNKNOWN
E. LINING : UNKNOWN
F. WRAPPING : UNKNOWN

VI PIPING
A. ABOVEGROUND PIPING B. UNDERGROUND PIPING : SUCTION
C. REPAIRS : UNKN IF YES, YEAR OF MOST RECENT REPAIR:

VII LEAK DETECTION
VISUAL STOCK INVENTORY

URE TEST COMPOSITION OF SUBSTANCES CURRENTLY STORED IN CONTAINER
12031 UNLEADED MOTOR VEHICLE FUEL

*** G04 ***

*** 004 ***

PAGE 54 STATE WATER RESOURCES CONTROL BOARD 06/01/88
HAZARDOUS SUBSTANCE STORAGE CONTAINER INFORMATION FOR SANTA BARBARA COUNTY
CONTAINER TYPES: 1,2,3,4,5
(1=FARM MOTOR VEHICLE FUEL TANKS, 2=ALL OTHER PRODUCT TANKS, 3=WASTE TANKS, 4=SUMPS, 5=PITS, PONDS, LAGOONS & OTHERS)

********** OWNER ASSIGNED CONTAINER NUMBER: ELL-12-310 ********** STATE BOARD ASSIGNED CONTAINER ID NUMBER: 00000028176002 *********

IV DESCRIPTION
A. CONTAINER TYPE : LAGOON
B. MANUFACTURER/YR OF MFG: NORCROSS /1979
C. YEAR INSTALLED : 1979
D. CAPACITY (GALLONS) : 64,621
E. REPAIRS : YES IF YES WHEN : 1983
F. CURRENTLY USED : YES IF NO, YEAR OF LAST USE:
G. STORES : PRODUCT
H. MOTOR VEHICLE FUEL/WASTE OIL : NO CONTAINS:

IS CONTAINER LOCATED ON A FARM : NO

V CONTAINER CONSTRUCTION
A. THICKNESS: 12 GAUGE B. VAULTING: NON-VAULTED C. WALLING: SINGLE
D. MATERIAL : CONCRETE
E. LINING : EPOXY
F. WRAPPING : NONE

VI PIPING
A. ABOVEGROUND PIPING : UNKNOWN B. UNDERGROUND PIPING :
C. REPAIRS : NONE IF YES, YEAR OF MOST RECENT REPAIR:

VII LEAK DETECTION
VISUAL P

URE TEST COMPOSITION OF SUBSTANCES CURRENTLY STORED IN CONTAINER
1314621 VANADIUM PENTOXIDE
1310732 SODIUM HYDROXIDE

********** OWNER ASSIGNED CONTAINER NUMBER: ELL-S-202 ********** STATE BOARD ASSIGNED CONTAINER ID NUMBER: 00000028176003 *********

IV DESCRIPTION
A. CONTAINER TYPE : SUMP
B. MANUFACTURER/YR OF MFG: MODERN WELDING CO. /1977
C. YEAR INSTALLED : 1979
D. CAPACITY (GALLONS) : 3,475
E. REPAIRS : NONE IF YES WHEN :
F. CURRENTLY USED : YES IF NO, YEAR OF LAST USE:
G. STORES : PRODUCT
H. MOTOR VEHICLE FUEL/WASTE OIL : NO CONTAINS:

IS CONTAINER LOCATED ON A FARM : NO

V CONTAINER CONSTRUCTION
A. THICKNESS: 0.3125 INCHES B. VAULTING: NON-VAULTED C. WALLING: SINGLE
D. MATERIAL : CARBON STEEL
E. LINING : UNLINED
F. WRAPPING : CATHODIC

VI PIPING
A. ABOVEGROUND PIPING : UNKNOWN B. UNDERGROUND PIPING : GRAVITY PRESSURE
C. REPAIRS : NONE IF YES, YEAR OF MOST RECENT REPAIR:

VII LEAK DETECTION
VISUAL VAPOR SNIFF WELLS P

URE TEST COMPOSITION OF SUBSTANCES CURRENTLY STORED IN CONTAINER
8006619 GASOLINE

*** H04 ***

Back to Report Summary

Santa Barbara County Fire Department Leaking Underground Fuel Tanks (SBFDLUFT)

MAP ID# 2

Distance from Property: 0.242 mi. (1,278 ft.) E
Elevation: 26 ft. (Higher than TP)

SITE INFORMATION

ID#: **371**
NAME: **VENOCO, INC.**
ADDRESS: **7979 HOLLISTER AVE**
GOLETA, CA
COUNTY: **SANTA BARBARA**
STATUS: **NOT REPORTED**
CLOSED DATE: **OPEN**
COMMENTS: **NOT REPORTED**

Back to Report Summary

MAP ID# 3

Distance from Property: 0.489 mi. (2,582 ft.) WNW
Elevation: 108 ft. (Higher than TP)

FACILITY INFORMATION

GLOBAL ID: **T10000003751**
URL LINK: CLICK HERE
BUSINESS NAME: **EAGLE CANYON RANCH**
ADDRESS: **8501 HOLLISTER AVENUE**
GOLETA, CA 93117
COUNTY: **SANTA BARBARA**

FACILITY DETAILS

CASE TYPE: **CLEANUP PROGRAM SITE**
CASE NUMBER: **NOT REPORTED**
STATUS: **OPEN - SITE ASSESSMENT 04/01/2017**
POTENTIAL CONTAMINATION:
OTHER SOLVENT OR NON-PETROLEUM HYDROCARBON, OTHER METAL, TOTAL PETROLEUM HYDROCARBONS (TPH)
POTENTIAL MEDIA AFFECTED:
NOT REPORTED
SITE HISTORY:
NOT REPORTED

REGULATORY ACTIVITIES

TYPE OF ACTION:	DATE:	ACTION:
OTHER	01/01/50	LEAK DISCOVERY
OTHER	01/01/50	LEAK REPORTED
OTHER	01/01/50	LEAK STOPPED
ENFORCEMENT	08/03/2017	STAFF LETTER
RESPONSE	07/23/2017	SITE INVESTIGATION - REGULATOR RESPONDED
RESPONSE	06/18/2017	SITE INVESTIGATION WORKPLAN
ENFORCEMENT	05/19/2017	EMAIL CORRESPONDENCE
ENFORCEMENT	05/15/2017	SITE VISIT / INSPECTION / SAMPLING
ENFORCEMENT	05/12/2017	EMAIL CORRESPONDENCE
ENFORCEMENT	05/09/2017	STAFF LETTER
RESPONSE	05/02/2017	SITE INVESTIGATION WORKPLAN - REGULATOR RESPONDED
RESPONSE	03/09/2011	OTHER REPORT / DOCUMENT
RESPONSE	10/31/2010	FEASIBILITY STUDY REPORT
RESPONSE	03/31/2010	CORRESPONDENCE
RESPONSE	11/13/2009	CAP/RAP - OTHER REPORT
RESPONSE	03/26/2009	CORRESPONDENCE
RESPONSE	03/26/2009	CORRESPONDENCE
RESPONSE	01/13/2009	FINAL REMEDIAL ACTION REPORT / CORRECTIVE ACTION REPORT
RESPONSE	08/06/2008	CAP/RAP - OTHER REPORT
RESPONSE	02/29/2008	CORRESPONDENCE
RESPONSE	11/26/2007	OTHER REPORT / DOCUMENT
OTHER	10/08/2007	LEAK REPORTED
RESPONSE	09/21/2007	OTHER REPORT / DOCUMENT
RESPONSE	09/14/2007	CAP/RAP - OTHER REPORT

TYPE OF ACTION:	DATE:	ACTION:
RESPONSE	**09/14/2007**	**OTHER WORKPLAN**
OTHER	**01/01/2007**	**LEAK DISCOVERY**
OTHER	**01/01/2007**	**LEAK STOPPED**

STATUS HISTORY

STATUS:	DATE:
OPEN - SITE ASSESSMENT	**04/01/2017**
OPEN - INACTIVE	**07/29/2014**
OPEN - INACTIVE	**05/19/2012**
OPEN - SITE ASSESSMENT	**05/19/2012**
OPEN - CASE BEGIN DATE	**01/01/2007**

CONTACT DETAILS

ORGANIZATION: **SANTA BARBARA COUNTY**
ADDRESS: **2125 SOUTH CENTERPOINTE PARKWAY, ROOM 333**
CITY: **SANTA MARIA**
CONTACT NAME: **PAUL MCCAW**
CONTACT TYPE: **LOCAL AGENCY CASEWORKER**
CONTACT PHONE: **NOT REPORTED**
EMAIL: **PAUL.MCCAW@SBCPHD.ORG**

Back to Report Summary

Santa Barbara County Fire Department Leaking Underground Fuel Tanks (SBFDLUFT)

MAP ID# 3

Distance from Property: 0.489 mi. (2,582 ft.) WNW
Elevation: 108 ft. (Higher than TP)

SITE INFORMATION

ID#: **20214**
NAME: **EAGLE CANYON RANCH**
ADDRESS: **8555 HWY 101**
GOLETA, CA
COUNTY: **SANTA BARBARA**
STATUS: **NOT REPORTED**
CLOSED DATE: **OPEN**
COMMENTS: **NOT REPORTED**

Back to Report Summary

Unlocated Sites Summary

This list contains sites that could not be mapped due to limited or incomplete address information.

No Records Found

AIRSAFS Aerometric Information Retrieval System / Air Facility Subsystem

VERSION DATE: 10/20/14

The United States Environmental Protection Agency (EPA) modified the Aerometric Information Retrieval System (AIRS) to a database that exclusively tracks the compliance of stationary sources of air pollution with EPA regulations: the Air Facility Subsystem (AFS). Since this change in 2001, the management of the AIRS/AFS database was assigned to EPA's Office of Enforcement and Compliance Assurance.

BRS Biennial Reporting System

VERSION DATE: 12/31/11

The United States Environmental Protection Agency (EPA), in cooperation with the States, biennially collects information regarding the generation, management, and final disposition of hazardous wastes regulated under the Resource Conservation and Recovery Act of 1976 (RCRA), as amended. The Biennial Report captures detailed data on the generation of hazardous waste from large quantity generators and data on waste management practices from treatment, storage and disposal facilities. Currently, the EPA states that data collected between 1991 and 1997 was originally a part of the defunct Biennial Reporting System and is now incorporated into the RCRAInfo data system.

CDL Clandestine Drug Laboratory Locations

VERSION DATE: 07/01/16

The U.S. Department of Justice ("the Department") provides this information as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments. The Department does not establish, implement, enforce, or certify compliance with clean-up or remediation standards for contaminated sites; the public should contact a state or local health department or environmental protection agency for that information.

DOCKETS EPA Docket Data

VERSION DATE: 12/22/05

The United States Environmental Protection Agency Docket data lists Civil Case Defendants, filing dates as far back as 1971, laws broken including section, violations that occurred, pollutants involved, penalties assessed and superfund awards by facility and location. Please refer to ICIS database as source of current data.

EC Federal Engineering Institutional Control Sites

VERSION DATE: 08/03/15

This database includes site locations where Engineering and/or Institutional Controls have been identified as part

of a selected remedy for the site as defined by United States Environmental Protection Agency official remedy decision documents. A site listing does not indicate that the institutional and engineering controls are currently in place nor will be in place once the remedy is complete; it only indicates that the decision to include either of them in the remedy is documented as of the completed date of the document. Institutional controls are actions, such as legal controls, that help minimize the potential for human exposure to contamination by ensuring appropriate land or resource use. Engineering controls include caps, barriers, or other device engineering to prevent access, exposure, or continued migration of contamination.

ECHOR09 Enforcement and Compliance History Information

VERSION DATE: 08/26/17

The EPA's Enforcement and Compliance History Online (ECHO) database, provides compliance and enforcement information for facilities nationwide. This database includes facilities regulated as Clean Air Act stationary sources, Clean Water Act direct dischargers, Resource Conservation and Recovery Act hazardous waste handlers, Safe Drinking Water Act public water systems along with other data, such as Toxics Release Inventory releases.

ERNSCA Emergency Response Notification System

VERSION DATE: 10/15/17

This National Response Center database contains data on reported releases of oil, chemical, radiological, biological, and/or etiological discharges into the environment anywhere in the United States and its territories. The data comes from spill reports made to the U.S. Environmental Protection Agency, U.S. Coast Guard, the National Response Center and/or the U.S. Department of Transportation.

FRSCA Facility Registry System

VERSION DATE: 09/06/17

The United States Environmental Protection Agency's Office of Environmental Information (OEI) developed the Facility Registry System (FRS) as the centrally managed database that identifies facilities, sites or places subject to environmental regulations or of environmental interest. The Facility Registry System replaced the Facility Index System or FINDS database.

HMIRSR09 Hazardous Materials Incident Reporting System

VERSION DATE: 03/27/18

The HMIRS database contains unintentional hazardous materials release information reported to the U.S. Department of Transportation located in EPA Region 9. This region includes the following states: Arizona, California, Hawaii, Nevada, and the territories of Guam and American Samoa.

ICIS Integrated Compliance Information System (formerly DOCKETS)

VERSION DATE: 09/23/17

ICIS is a case activity tracking and management system for civil, judicial, and administrative federal Environmental Protection Agency enforcement cases. ICIS contains information on federal administrative and federal judicial cases under the following environmental statutes: the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, the Emergency Planning and Community Right-to-Know Act - Section 313, the Toxic Substances Control Act, the Federal Insecticide, Fungicide, and Rodenticide Act, the Comprehensive Environmental Response, Compensation, and Liability Act, the Safe Drinking Water Act, and the Marine Protection, Research, and Sanctuaries Act.

ICISNPDES Integrated Compliance Information System National Pollutant Discharge Elimination System

VERSION DATE: 07/09/17

Authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States.

LUCIS Land Use Control Information System

VERSION DATE: 09/01/06

The LUCIS database is maintained by the U.S. Department of the Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

MLTS Material Licensing Tracking System

VERSION DATE: 06/29/17

MLTS is a list of approximately 8,100 sites which have or use radioactive materials subject to the United States Nuclear Regulatory Commission (NRC) licensing requirements.

NPDESR09 National Pollutant Discharge Elimination System

VERSION DATE: 04/01/07

Authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. The NPDES database was collected from December 2002 until April 2007. Refer to the PCS and/or ICIS-NPDES database as source of current data.This database includes permitted facilities located in EPA Region 9. This region includes the following states: Arizona, California, Hawaii, Nevada, and the territories of Guam and American Samoa.

PADS PCB Activity Database System

VERSION DATE: 07/18/17

PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are

required to notify the EPA of such activities.

PCSR09 Permit Compliance System

VERSION DATE: 08/01/12

The Permit Compliance System is used in tracking enforcement status and permit compliance of facilities controlled by the National Pollutant Discharge Elimination System (NPDES) under the Clean Water Act and is maintained by the United States Environmental Protection Agency's Office of Compliance. PCS is designed to support the NPDES program at the state, regional, and national levels. This database includes permitted facilities located in EPA Region 9. This region includes the following states: Arizona, California, Hawaii, Nevada, and the territories of Guam and American Samoa. PCS has been modernized, and no longer exists. National Pollutant Discharge Elimination System (ICIS-NPDES) data can now be found in Integrated Compliance Information System (ICIS).

RCRASC RCRA Sites with Controls

VERSION DATE: 03/21/18

The Resource Conservation and Recovery Act (RCRA) gives EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities with institutional controls in place.

SEMSLIENS SEMS Lien on Property

VERSION DATE: 12/11/17

The U.S. Environmental Protections Agency's (EPA) Office of Solid Waste and Emergency Response, Office of Superfund Remediation and Technology Innovation (OSRTI), has implemented The Superfund Enterprise Management System (SEMS), formerly known as CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System) to track and report on clean-up and enforcement activities taking place at Superfund sites. SEMS represents a joint development and ongoing collaboration between Superfund's Remedial, Removal, Federal Facilities, Enforcement and Emergency Response programs. This is a listing of SEMS sites with a lien on the property.

SFLIENS CERCLIS Liens

VERSION DATE: 06/08/12

A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which United States Environmental Protection Agency has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties. This database contains those CERCLIS sites where the Lien on Property action is complete.

SSTS Section Seven Tracking System

VERSION DATE: 02/01/17

The United States Environmental Protection Agency tracks information on pesticide establishments through the Section Seven Tracking System (SSTS). SSTS records the registration of new establishments and records pesticide production at each establishment. The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) requires that production of pesticides or devices be conducted in a registered pesticide-producing or device-producing establishment. ("Production" includes formulation, packaging, repackaging, and relabeling.)

TRI Toxics Release Inventory

VERSION DATE: 12/31/16

The Toxics Release Inventory, provided by the United States Environmental Protection Agency, includes data on toxic chemical releases and waste management activities from certain industries as well as federal and tribal facilities. This inventory contains information about the types and amounts of toxic chemicals that are released each year to the air, water, and land as well as information on the quantities of toxic chemicals sent to other facilities for further waste management.

TSCA Toxic Substance Control Act Inventory

VERSION DATE: 12/31/12

The Toxic Substances Control Act (TSCA) was enacted in 1976 to ensure that chemicals manufactured, imported, processed, or distributed in commerce, or used or disposed of in the United States do not pose any unreasonable risks to human health or the environment. TSCA section 8(b) provides the United States Environmental Protection Agency authority to "compile, keep current, and publish a list of each chemical substance that is manufactured or processed in the United States." This TSCA Chemical Substance Inventory contains non-confidential information on the production amount of toxic chemicals from each manufacturer and importer site.

RCRAGR09 Resource Conservation & Recovery Act - Generator

VERSION DATE: 10/17/17

The Resource Conservation and Recovery Act (RCRA) gives EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities currently generating hazardous waste. EPA Region 9 includes the following states: Arizona, California, Hawaii, Nevada, and the territories of Guam and American Samoa.

RCRANGR09 Resource Conservation & Recovery Act - Non-Generator

VERSION DATE: 10/17/17

The Resource Conservation and Recovery Act (RCRA) gives EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities classified as non-generators. Non-Generators do not presently generate hazardous waste. EPA Region 9 includes the following states: Arizona, California, Hawaii, Nevada, and the territories of Guam and American Samoa.

ALTFUELS Alternative Fueling Stations

VERSION DATE: 01/22/18

Nationwide list of alternative fueling stations made available by the US Department of Energy's Office of Energy Efficiency & Renewable Energy. Includes Biodiesel stations, Ethanol (E85) stations, Liquefied Petroleum Gas (Propane) stations, Ethanol (E85) stations, Natural Gas stations, Hydrogen stations, and Electric Vehicle Supply Equipment (EVSE).

FEMAUST FEMA Owned Storage Tanks

VERSION DATE: 12/01/16

This is a listing of FEMA owned underground and aboveground storage tank sites. For security reasons, address information is not released to the public according to the U.S. Department of Homeland Security.

HISTPST Historical Gas Stations

VERSION DATE: NR

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

ICISCLEANERS Integrated Compliance Information System Drycleaners

VERSION DATE: 09/23/17

This is a listing of drycleaner facilities from the Integrated Compliance Information System (ICIS). The Environmental Protection Agency (EPA) tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

MRDS Mineral Resource Data System

VERSION DATE: 03/15/16

MRDS (Mineral Resource Data System) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS.

MSHA Mine Safety and Health Administration Master Index File

VERSION DATE: 09/01/17

The Mine dataset lists all Coal and Metal/Non-Metal mines under MSHA's jurisdiction since 1/1/1970. It includes such information as the current status of each mine (Active, Abandoned, NonProducing, etc.), the current owner and operating company, commodity codes and physical attributes of the mine. Mine ID is the unique key for this data. This information is provided by the United States Department of Labor - Mine Safety and Health Administration (MSHA).

BF Brownfields Management System

VERSION DATE: 03/26/18

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. The United States Environmental Protection Agency maintains this database to track activities in the various brown field grant programs including grantee assessment, site cleanup and site redevelopment. This database included tribal brownfield sites.

DNPL Delisted National Priorities List

VERSION DATE: 12/11/17

This database includes sites from the United States Environmental Protection Agency's Final National Priorities List (NPL) where remedies have proven to be satisfactory or sites where the original analyses were inaccurate, and the site is no longer appropriate for inclusion on the NPL, and final publication in the Federal Register has occurred.

NLRRCRAT No Longer Regulated RCRA Non-CORRACTS TSD Facilities

VERSION DATE: 10/17/17

This database includes RCRA Non-Corrective Action TSD facilities that are no longer regulated by the United States Environmental Protection Agency or do not meet other RCRA reporting requirements. This listing includes facilities that formerly treated, stored or disposed of hazardous waste.

ODI Open Dump Inventory

VERSION DATE: 06/01/85

The open dump inventory was published by the United States Environmental Protection Agency. An “open dump” is defined as a facility or site where solid waste is disposed of which is not a sanitary landfill which meets the criteria promulgated under section 4004 of the Solid Waste Disposal Act (42 U.S.C. 6944) and which is not a facility for disposal of hazardous waste. This inventory has not been updated since June 1985.

RCRAT Resource Conservation & Recovery Act - Non-CORRACTS Treatment, Storage & Disposal Facilities

VERSION DATE: 10/17/17

The Resource Conservation and Recovery Act (RCRA) gives EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities recognized as hazardous waste treatment, storage, and disposal sites (TSD).

SEMS Superfund Enterprise Management System

VERSION DATE: 12/11/17

The U.S. Environmental Protections Agency's (EPA) Office of Solid Waste and Emergency Response, Office of Superfund Remediation and Technology Innovation (OSRTI), has implemented The Superfund Enterprise Management System (SEMS), formerly known as CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System) to track and report on clean-up and enforcement activities taking place at Superfund sites. SEMS represents a joint development and ongoing collaboration between Superfund's Remedial, Removal, Federal Facilities, Enforcement and Emergency Response programs.

SEMSARCH Superfund Enterprise Management System Archived Site Inventory

VERSION DATE: 12/11/17

The Superfund Enterprise Management System Archive listing (SEMS-ARCHIVE) has replaced the CERCLIS NFRAP reporting system in 2015. This listing reflect sites that have been assessed and no further remediation is planned and is of no further interest under the Superfund program.

SMCRA Surface Mining Control and Reclamation Act Sites

VERSION DATE: 08/25/17

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

USUMTRCA Uranium Mill Tailings Radiation Control Act Sites

VERSION DATE: 03/04/17

The Legacy Management Office of the Department of Energy (DOE) manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The L.M. Office manages this database of sites registered under the Uranium Mill Tailings Control Act (UMTRCA).

DOD Department of Defense Sites

VERSION DATE: 12/01/14

This information originates from the National Atlas of the United States Federal Lands data, which includes lands owned or administered by the Federal government. Army DOD, Army Corps of Engineers DOD, Air Force DOD, Navy DOD and Marine DOD areas of 640 acres or more are included.

FUDS Formerly Used Defense Sites

VERSION DATE: 06/01/15

The Formerly Used Defense Sites (FUDS) inventory includes properties previously owned by or leased to the United States and under Secretary of Defense Jurisdiction, as well as Munitions Response Areas (MRAs). The remediation of these properties is the responsibility of the Department of Defense. This data is provided by the U.S. Army Corps of Engineers (USACE), the boundaries/polygon data are based on preliminary findings and not all properties currently have polygon data available. DISCLAIMER: This data represents the results of data collection/processing for a specific USACE activity and is in no way to be considered comprehensive or to be used in any legal or official capacity as presented on this site. While the USACE has made a reasonable effort to insure the accuracy of the maps and associated data, it should be explicitly noted that USACE makes no warranty, representation or guaranty, either expressed or implied, as to the content, sequence, accuracy, timeliness or completeness of any of the data provided herein. For additional information on Formerly Used Defense Sites please contact the USACE Public Affairs Office at (202) 528-4285.

FUSRAP Formerly Utilized Sites Remedial Action Program

VERSION DATE: 03/04/17

The U.S. DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from the Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations. The DOE Office of Legacy Management (LM) established long-term surveillance and maintenance (LTS&M) requirements for remediated FUSRAP sites. DOE evaluates the final site conditions of a remediated site on the basis of risk for different future uses. DOE then confirms that LTS&M requirements will maintain protectiveness.

NLRRCRAC No Longer Regulated RCRA Corrective Action Facilities

VERSION DATE: 10/17/17

This database includes RCRA Corrective Action facilities that are no longer regulated by the United States Environmental Protection Agency or do not meet other RCRA reporting requirements.

NMS Former Military Nike Missile Sites

VERSION DATE: 12/01/84

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites.
During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

NPL National Priorities List

VERSION DATE: 12/11/17

This database includes United States Environmental Protection Agency (EPA) National Priorities List sites that fall under the EPA's Superfund program, established to fund the cleanup of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action.

PNPL Proposed National Priorities List

VERSION DATE: 12/11/17

This database contains sites proposed to be included on the National Priorities List (NPL) in the Federal Register. The United States Environmental Protection Agency investigates these sites to determine if they may present long-term threats to public health or the environment.

RCRAC Resource Conservation & Recovery Act - Corrective Action Facilities

VERSION DATE: 10/17/17

The Resource Conservation and Recovery Act (RCRA) gives EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities with corrective action activity.

RCRASUBC Resource Conservation & Recovery Act - Subject to Corrective Action Facilities

VERSION DATE: 10/17/17

The Resource Conservation and Recovery Act (RCRA) gives EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities subject to corrective actions.

RODS Record of Decision System

VERSION DATE: 12/11/17

These decision documents maintained by the United States Environmental Protection Agency describe the chosen remedy for NPL (Superfund) site remediation. They also include site history, site description, site characteristics, community participation, enforcement activities, past and present activities, contaminated media, the contaminants present, and scope and role of response action.

CDL Clandestine Drug Labs

VERSION DATE: 06/30/17

The California Department of Toxic Substance Control (DTSC) provides this listing of illegal drug laboratories. Pursuant to Section 25354.5 of the California Health and Safety Code, DTSC conducts emergency removal actions at clandestine drug labs at the request of State and local law enforcement agencies. DTSC's contractors typically remove hazardous substances that may pose an immediate threat to public health and the environment while the enforcement officials are on scene. During the emergency removal actions, contractors remove and properly dispose of contaminated lab equipment, chemicals used to make the illegal drugs (usually methamphetamine), lab chemical wastes, and other grossly contaminated materials. DTSC does not perform additional assessment work beyond standard emergency removal actions and makes no further determination regarding the need for future cleanup work at the emergency removal location. The reported location information may or may not include the actual location of the illegal drug lab. The DTSC does not guarantee the accuracy of the address or location information or the condition of the location listed.

CHMIRS California Hazardous Material Incident Report System

VERSION DATE: 05/09/17

The California Hazardous Material Incident Report System database is provided by the California Emergency Management Agency. This database contains accidental or spill release information from reported hazardous material incidents since 1993.

DTSCDR DTSC Deed Restrictions

VERSION DATE: 01/21/18

The California Department of Toxic Substances Control (DTSC) maintains this listing of sites with deed restrictions. According to the DTSC, restricted land use indicates whether the site or area within the site has an environmental restriction recorded and/or other institutional control preventing certain types of land use or activities. The land use restrictions listed under the site management requirements are only an abbreviated summary of the land use restrictions, and may not encompass all restrictions and notification requirements placed on a property. For complete land use restriction information please contact the DTSC to review associated Land Use Restriction documents.

EMI Emissions Inventory Data

VERSION DATE: 12/31/15

The Air Resources Board's Emissions Inventory Database contains criteria pollutant data and toxic data on facilities throughout the state of California for the 2012-2000 inventory years.

HWTS Hazardous Waste Tanner Summary

VERSION DATE: 12/31/16

This data is prepared from information extracted from copies of hazardous waste manifests received each year by the Department of Toxic Substances Control. The Hazardous Waste Summary Report (Tanner Report) currently includes manifest data from the 1993 through the 2016 reporting years.

LDS Land Disposal Sites

VERSION DATE: 01/21/18

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

LIENS Recorded Environmental Cleanup Liens

VERSION DATE: 02/20/18

The California Department of Toxic Substance Control (DTSC) maintains this listing of liens placed upon real properties. A lien is utilized by the DTSC to obtain reimbursement from responsible parties for costs associated with the remediation of contaminated properties.

MCS Military Cleanup Sites

VERSION DATE: 01/21/18

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater

NPDES National Pollutant Discharge Elimination System Facilities

VERSION DATE: 03/12/18

Authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States.

ABST Above Ground Storage Tanks

VERSION DATE: 03/22/18

This database contains aboveground storage tank facilities registered with the California State Water Resources Control Board (SWRCB). Since 2006, tanks were required to contain a minimum (even as cumulative) of 1320 gallons to be in the program. As of January 1, 2008, the SWRCB no longer maintains a list of registered aboveground storage tanks, due to effective Assembly Bill No. 1130 (Laird) of the Aboveground Petroleum Storage Act (APSA). This Bill authorized the Certified Unified Program Agencies to implement and administer the requirements of the APSA.

CLEANER Dry Cleaner Facilities

VERSION DATE: 03/13/18

This database, created by accessing the California Department of Toxic Substances Control's (DTSC) Hazardous Waste Tracking System, includes dry cleaner facilities that have registered EPA identification numbers. These facilities are categorized with one of the following NAICS Codes: 81231 or 81232. This database may also include facilities other than dry cleaners who also register with these same NAICS Codes. Not all companies report their NAICS/SIC Codes to the DTSC and therefore this database may exclude registered dry cleaner facilities with incomplete classification information.

DTSCHWT DTSC Registered Hazardous Waste Transporters

VERSION DATE: 02/06/18

The Department of Toxic Substances Control provides this list of Registered Hazardous Waste Transporters.

HISTUST Historical Underground Storage Tanks

VERSION DATE: 12/31/87

The Hazardous Substance Storage Container Database is a historical list of Underground Storage Tank sites, compiled from tank survey and registration information collected at one time between 1984 and 1987 by the State Water Resources Control Board. The hazardous substances stored within these tanks includes, but not restricted to, petroleum products, industrial solvents, and other materials.

MINES Mines Listing

VERSION DATE: 02/11/18

This database includes mine site locations from the California Office of Mine Reclamation.

MWMP California Medical Waste Management Program Facility List

VERSION DATE: 02/07/18

To protect the public and the environment from potential infectious exposure to disease causing agents, the Medical Waste Management Program (MWMP), in the Environmental Management Branch of the California Department of Public Health, regulates the generation, handling, storage, treatment, and disposal of medical waste by providing oversight for the implementation of the Medical Waste Management Act (MWMA). The MWMP permits and inspects all medical waste off-site treatment facilities, medical waste transporters, and medical waste transfer stations.

SLIC Spills, Leaks, Investigation & Cleanup Recovery Listing

VERSION DATE: 06/16/08

Environmental Records Definitions - STATE (CA)

These records are maintained by the California Regional Water Quality Control Board (RWQCB). This list includes contaminated sites that impact groundwater or have the potential to impact ground water. Please refer to CLEANUPSITES database as source of current data.

SWEEPS Statewide Environmental Evaluation and Planning System

VERSION DATE: 10/01/94

The Statewide Environmental Evaluation and Planning System (SWEEPS) contains a historical listing of active and inactive underground storage tank locations from the State Water Resources Control Board. The hazardous substances stored within these tanks includes, but not restricted to, petroleum products, industrial solvents, and other materials. Refer to CUPA listing for source of current data.

USTCUPA Underground Storage Tanks

VERSION DATE: 02/11/18

An underground storage tank is an individual tank or group of tanks that store hazardous substances. Underground storage tanks are completely or considerably below the ground surface. This database contains UST permit data submitted from the Certified Unified Program Agencies (CUPA) directly to the State Water Resources Control Board. CUPA's are local agencies that have been certified by the California EPA to implement state environmental programs within the local agency's jurisdiction.

BF Brownfield Sites

VERSION DATE: 03/06/18

This database includes Brownfield sites from the State Water Resources Control Board. These are sites that have gone through the Moratorium of Agreement (MOA) process.

CALSITES CALSITES Database

VERSION DATE: 05/01/04

This historical database was maintained by the Department of Toxic Substance Control for more than a decade. CALSITES contains information on Brownfield properties with confirmed or potential hazardous contamination. In 2006, DTSC introduced EnviroStor as the latest Brownfields site database.

CLEANUPSITES GeoTracker Cleanup Sites

VERSION DATE: 01/21/18

This GeoTracker Cleanup Sites database is maintained by the California Regional Water Quality Control Board (RWQCB). The database contains contaminated sites that impact groundwater or have the potential to impact ground water, including spills, investigations, cleanup recoveries and reported leaking underground storage tank incidents.

CORTESE Cortese List

VERSION DATE: 02/11/18

This active listing includes hazardous waste and substances sites designated by the State Water Resources Control Board , the Integrated Waste Board, and the Department of Toxic Substance Control. The Cortese List is utilized by the State, local agencies and developers to comply with the California Environmental Quality Act requirements in providing information about the location of hazardous materials release sites.

DROP Listing of Certified Dropoff, Collection, and Community Service Programs

VERSION DATE: 02/06/18

Listing of Certified Dropoff, Collection, and Community Service Programs (non-buyback) operating under the state of California's Beverage Container Recycling Program. This list is maintained by the Department of Conservation.

ERAP Expedited Removal Action Program Sites

VERSION DATE: 01/29/18

The Expedited Remedial Action Program is a pilot project administered by the Department of Toxic Substances Control's Site Mitigation and Brownfields Reuse Program to promote the cleanup of up to 30 hazardous substance release sites. ERAP provides significant incentives for redevelopment of contaminated properties by promoting cleanups based on the planned land use, by providing a covenant not to sue, and by outlining a fair and equitable liability scheme.

HISTCORTESE Historical Cortese List

VERSION DATE: 11/02/02

This historical listing includes hazardous waste and substances sites designated by the State Water Resources Control Board, the Integrated Waste Board, and the Department of Toxic Substance Control. The Cortese List was utilized by the State, local agencies and developers to comply with the California Environmental Quality Act requirements in providing information about the location of hazardous materials release sites. See CACORTESE for an updated version of this database.

LUST Leaking Underground Storage Tanks

VERSION DATE: 01/21/18

This database is maintained by the State Water Resources Control Board. LUST records contain an inventory of reported leaking underground storage tank incidents. Please refer to the CLEANUPSITES database as source of current data.

NFA No Further Action Determination

VERSION DATE: 07/01/05

The NFA listing contains properties at which the Department of Toxic Substance Control has made a clear determination that the property does not pose a problem to the environment or to public health.

NFE Sites Needing Further Evaluation

VERSION DATE: 07/01/05

The NFE listing contains properties that the Department of Toxic Substance Control suspects with possible contamination. These are unconfirmed contaminated properties that need further assessment.

PROC Listing of Certified Processors

VERSION DATE: 02/19/18

Listing of Certified Processors that are operating under the state of California's Beverage Container Recycling Program. This list is maintained by the Department of Conservation.

REF Referred to Another Local or State Agency

VERSION DATE: 07/01/05

The REF listing contains properties where contamination has not been confirmed and which were determined as not requiring direct Department of Toxic Substance Control Site Mitigation Program action or oversight. Accordingly, these sites have been referred to another state or local regulatory agency.

SWIS Solid Waste Information System Sites

VERSION DATE: 01/24/18

The Solid Waste Information System (SWIS) database includes information on solid waste facilities, operations, and disposal sites located in California. This database is maintained by the California Department of Resources Recycling and Recovery.

SWRCY Recycling Centers

VERSION DATE: 02/20/18

Listing of Certified Recycling Centers that are operating under the state of California's Beverage Container Recycling Program. This list is maintained by the Department of Conservation.

VCP Voluntary Cleanup Program

VERSION DATE: 01/29/18

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

WMUDS Waste Management Unit Database

VERSION DATE: 01/01/00

The Waste Management Unit Database System tracks and inventories waste management units. CCR Title 27 contains criteria stating that Waste Management Units are classified according to their ability to contain wastes. Containment shall be determined by geology, hydrology, topography, climatology, and other factors relating to the ability of the Unit to protect water quality. Water Code Section 13273.1 requires that operators submit a water quality solid waste assessment test (SWAT) report to address leak status. The WMUDS was last updated by the State Water Resources control board in 2000.

ENVIROSTOR EnviroStor Cleanup Sites

VERSION DATE: 01/29/18

The Department of Toxic Substances Control (DTSC) has developed the EnviroStor database system to evaluate and track sites with confirmed or potential contamination and sites where further investigation may be necessary. This EnviroStor database of cleanup sites contains the following: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. Sites where DTSC has made a "No Action Required" determination are not included in this database, as these sites had assessments that revealed no evidence of recognized environmental conditions in connection with the property.

ENVIROSTORPCA EnviroStor Permitted and Corrective Action Sites

VERSION DATE: 02/05/18

The Department of Toxic Substances Control (DTSC) has developed the EnviroStor database system to evaluate and track sites with confirmed or potential contamination and sites where further investigation may be necessary. This EnviroStor database contains detailed information on hazardous waste permitted and corrective action facilities. Investigation and cleanup activities at hazardous waste facilities (either Resource Conservation and Recovery Act (RCRA) or State-only) that either were eligible for a permit or received a permit are called "corrective action." These facilities treated stored, disposed and/or transferred hazardous waste.

TOXPITS Toxic Pits Cleanup Act Sites

VERSION DATE: 07/01/95

Toxic Pits are sites with possible contamination of hazardous substances where cleanup is necessary. This listing is no longer updated by the State Water Resources Control Board.

SBHWF Santa Barbara County Hazardous Waste Facilities

VERSION DATE: 04/01/11

This listing of CUPA facilities within Santa Barbara County is provided by the County Fire Department's Hazardous Materials Unit (SBCFD HMU). These facilities include those that store, utilize, generate and/or dispose of hazardous materials and waste. The SBCFD HMU has jurisdiction over the unincorporated areas of the county in addition to working with the Carpinteria-Summerland Fire District, Montecito Fire District, Santa Barbara City Fire Department, Lompoc City Fire Department, Santa Maria City Fire Department, and Vandenberg Air Force Base Fire Department as Participating Agencies.

SBFDLUFT Santa Barbara County Fire Department Leaking Underground Fuel Tanks

VERSION DATE: 08/29/12

The Santa Barbara County Fire Department oversees the cleanup of unauthorized releases from Leaking Underground Fuel Tanks with the LUFT Program and non-LUFT spills with the Site Mitigation Unit (SMU) Program. The LUFT sites included on this list are current through May 2010, and the non-LUFT sites included on this list are current through August 2012. This list is for general reference only. This list shall not be used for development/planning purposes without input from Santa Barbara County Fire Department, Fire Prevention Division.

Environmental Records Definitions - TRIBAL

USTR09 Underground Storage Tanks On Tribal Lands

VERSION DATE: 10/13/17

This database, provided by the United States Environmental Protection Agency (EPA), contains underground storage tanks on Tribal lands located in EPA Region 9. This region includes the following states: Arizona, California, Hawaii, Nevada, and the territories of Guam and American Samoa.

LUSTR09 Leaking Underground Storage Tanks On Tribal Lands

VERSION DATE: 10/13/17

This database, provided by the United States Environmental Protection Agency (EPA), contains leaking underground storage tanks on Tribal lands located in EPA Region 9. This region includes the following states: Arizona, California, Hawaii, Nevada, and the territories of Guam and American Samoa.

ODINDIAN Open Dump Inventory on Tribal Lands

VERSION DATE: 11/08/06

This Indian Health Service database contains information about facilities and sites on tribal lands where solid waste is disposed of, which are not sanitary landfills or hazardous waste disposal facilities, and which meet the criteria promulgated under section 4004 of the Solid Waste Disposal Act (42 U.S.C. 6944).

TORRESDUMPSITES Illegal Dump Sites on the Torres Martinez Reservation

VERSION DATE: 10/29/07

This listing of illegal dump site locations on the Torres Martinez Reservation is maintained by the United States Environmental Protection Agency, Region IX. These dump sites contain unlawfully discarded household waste such as landscaping and wood wastes with no known soil or groundwater contamination. A majority of the sites have already been cleaned up through the collaborative efforts of the EPA, The California Integrated Waste Management Board and the Torres Martinez Tribe.

INDIANRES Indian Reservations

VERSION DATE: 01/01/00

The Department of Interior and Bureau of Indian Affairs maintains this database that includes American Indian Reservations, off-reservation trust lands, public domain allotments, Alaska Native Regional Corporations and Recognized State Reservations.

Appendix D
AGENCY RECORDS

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER

THE BACARA RESORT (T10000004585) - (MAP)

SIGN UP FOR E

8301 HOLLISTER AVENUE
GOLETA, CA 93117
SANTA BARBARA COUNTY
CLEANUP PROGRAM SITE (INFO)

PRINTABLE CASE SUMMARY / CSM REPORT

CLEANUP OVERSIGHT AGEN
SANTA BARBARA COUNTY (L
CENTRAL COAST RWQCB (R

Summary | Cleanup Action Report | Regulatory Activities | *Environmental Data (ESI)* | Site Maps / Documents | *Community Involvement* | *Related Cases*

Regulatory Activities

Action Type Filter: Show All Activities ▼ Go

* Indicates a revise

	ACTION TYPE	ACTION	ACTION DATE	RECEIVED / ISSUE DATE	TITLE / DESCRIPTION / COMMENTS
[VIEW DOCS]	*Response Requested - Reports*	Monitoring Report - Annually	6/9/2017	6/9/2017	Summary of Environmental Covenant Site Inspection - 2017
[VIEW DOCS]	*Response Requested - Reports*	Monitoring Report - Annually	8/1/2016	7/2/2016	Summary of Environmental Covenant Site Inspection
[VIEW DOCS]	*Response Requested - Reports*	Monitoring Report - Annually	9/17/2015	9/17/2015	Summary of Environmental Covenant Site Inspection
[VIEW DOCS]	*Response Requested - Reports*	Operation and Maintenance Plan/Monitoring Report - Regulator Responded	6/17/2014	6/17/2014	Summary of Environmental Covenant Site Inspection
[VIEW DOCS]	*Other Regulatory Actions*	Closure/No Further Action Letter	4/29/2014	4/29/2014	EHS Closure Documents
	Response Requested - Other	Other Report / Document	1/1/2014	1/1/2014	Closure Letter
[VIEW DOCS]	*Other Regulatory Actions*	File review	12/16/2013	12/16/2013	EHS/FPD FILE
[VIEW DOCS]	*Other Regulatory Actions*	File review	12/5/2013	12/5/2013	EHS/FPD File
[VIEW DOCS]	*Other Regulatory Actions*	File review	12/5/2013	12/5/2013	EHS/FPD FILE
[VIEW DOCS]	*Other Regulatory Actions*	File review	12/5/2013	12/5/2013	EHS/FPD File
[VIEW DOCS]	*Other Regulatory Actions*	Deed Restriction / Land Use Restriction / Covenant	2/26/2013	2/26/2013	Soil Contamination Notice
	Response Requested - Other	Other Report / Document	2/26/2013	2/26/2013	COVENANT TO RESTRICT USE OF PROPERTY
	Response Requested - Other	Other Report / Document	2/26/2013	2/26/2013	CASE CLOSURE SUMMARY
[VIEW DOCS]	*Response Requested - Other*	Correspondence	1/29/2013	1/29/2013	Bacara Hotel Site Mitigation Unit Site - Correspondence: Information required for Si
	Response Requested - Other	Other Report / Document	1/22/2013	1/22/2013	Consultant Letter - Additional Information for Closure
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	1/1/2013	1/1/2013	Soil Management Plan
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	10/5/2012	10/5/2012	BACARA HOTEL SITE MITIGATION UNIT SITE
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	4/9/2009	4/9/2009	COMPLETION PHASE PROJECT
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	11/25/2008	11/25/2008	BUILDING AND PIPING MAPS
[VIEW DOCS]	*Response Requested - Reports*	Site Assessment Report	3/3/2008	3/3/2008	Phase 1 Environmental Site Assessment
	Response Requested - Other	Other Report / Document	7/1/2004	7/1/2004	RESPONSE LETTER INCREASE OCCUPANCY FOR "BALLROOM"
	Response Requested - Other	Other Report / Document	9/25/2003	9/25/2003	INSPECTION REPORT/PERMIT APPLICATION
[VIEW DOCS]	*Response Requested - Reports*	Site Assessment Report	11/30/2000	11/30/2000	Report of Post-Grading Soil Sampling Program
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	11/9/2000	11/9/2000	AIR SAMPLING SUMMARY- BUILDING 1
[VIEW DOCS]	*Response Requested - Reports*	Site Investigation	10/24/2000	10/24/2000	Hydrogen Sulfide Investigation
[VIEW DOCS]	*Response Requested - Other*	Respond to Petition	10/17/2000	10/17/2000	HYDROGEN SULFIDE INVESTIGATION
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	10/5/2000	10/5/2000	RESULTS OF ANALYSIS / NOTES
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	10/3/2000	10/3/2000	RESULTS OF METHANE ANAYLSIS
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	9/1/2000	9/1/2000	METHANE WATCH
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	10/4/1999	10/4/1999	CLOSURE REPORT UNDERGROUND STORAGE TANK ABANDONMENT
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	5/3/1999	5/3/1999	BUILDING 1 MAP
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	1/27/1999	1/27/1999	CONFIRMATION OF COMPLETION OF BIOREMEDIATION AT SOIL PILES D, E, /
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	1/22/1999	1/22/1999	TRANSMITTAL OF RESULTS FOR SECOND ROUND OF CONFIRMATORY SOIL AND ANALYSIS OF SOIL PILES
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	12/16/1998	12/16/1998	ADDITIONAL EXCAVATION ON DECEMBER 10, 1998
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	11/30/1998	11/30/1998	TRANSMITTAL OF RESULTS FOR FIRST ROUND OF CONFIRMITORY SOIL SAI ANALYSIS OF SPOIL PILES
[VIEW DOCS]	*Response Requested - Workplans*	Other Workplan	11/30/1998	11/30/1998	RESULTS OF SOIL SAMPLING NEAR FORMER KEROSENE EXCAVATION AND FOR ADDITIONAL EXCAVATION
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	11/13/1998	11/13/1998	RECOMMENDATIONS FOR METHANE SOIL GAS CONTROL
[VIEW DOCS]	*Response Requested - Reports*	Site Assessment Report	10/30/1998	10/30/1998	Report of Sump TP-1 Characterization
	Response Requested - Other	Other Report / Document	10/30/1998	10/30/1998	Appendix F Pipeline Relocation Mitigation Program
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	10/23/1998	10/23/1998	TRANSMITTAL OF RESULTS FOR BASELINE SAMPLING AND ANALYSIS OF SF BIOREMEDIATION OF SOIL CONTAMINATION
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	10/9/1998	10/9/1998	TEST RESULTS FROM SOIL SAMPLING
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	10/8/1998	10/8/1998	PROJECT SCHEDULE FOR SOIL SAMPLING
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	10/2/1998	10/2/1998	REQUEST FOR EXEMPTION FROM PERMIT REQUIREMENT, BIOREMEDIATIOI CONTAMINATION
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	9/28/1998	9/28/1998	SITE HEALTH AND SAFETY PLAN FOR POST-GRADING SOIL SAMPLING PLAN
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	9/23/1998	9/23/1998	REMEDIAL ACTION PLAN KEROSENE IMPACTED SOIL
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	9/22/1998	9/22/1998	SUMMARY OF METALS

[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	9/15/1998	9/15/1998	ABANDONMENT OF SOIL GAS WELLS
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	9/4/1998	9/4/1998	SITE SAFETY PLAN
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	9/4/1998	9/4/1998	HAZARDOUS WASTE ANALYSIS/NOTES
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	9/4/1998	9/4/1998	REMEDIAL EXCAVATION REPORT ELEVATOR SHAFT AREA
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	9/3/1998	9/3/1998	SYNOPSIS OF HISTORICAL SOIL AND GROUNDWATER SAMPLING
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	9/1/1998	9/1/1998	POST-GRADING SOIL SAMPLING PLAN
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	8/31/1998	8/31/1998	RESPONSE TO COUNTY OF SANTA BARBARA PROTECTION SERVICES DIVIS OF AUGUST 25, 1998
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	8/18/1998	8/18/1998	GEOPROBE SOIL GAS SURVEY (EXISTING VAPOR WELL AREA)
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	8/17/1998	8/17/1998	GEOPROBE SOIL ASSESSMENT ELEVATOR SHAFT AREA
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	8/14/1998	8/14/1998	OIL ACTIVITY/GEOLOGY OF THE CENTRAL SANTA YNEZ MOUNTAINS
[VIEW DOCS]	*Response Requested - Workplans*	Other Workplan	8/12/1998	8/12/1998	WORKPLAN FOR GEOPROBE SOIL GAS SURVEY
[VIEW DOCS]	*Response Requested - Workplans*	Other Workplan	8/7/1998	8/7/1998	WORK PLAN FOR GEOPROBE SOIL ASSESSMENT
[VIEW DOCS]	*Response Requested - Reports*	Remedial Action Complete	5/22/1998	5/22/1998	Remediation and Site Closure Report, Roadway and Utility Easement for Santa Bar Resort and Spa, Santa Barbara County, California
[VIEW DOCS]	*Response Requested - Reports*	Site Assessment Report	4/24/1998	4/24/1998	Soil Sampling Assessment, Roadway and Utility Easement for Santa Barbara Club Spa, Goleta, California
[VIEW DOCS]	*Response Requested - Workplans*	Site Investigation Workplan	4/13/1998	4/13/1998	Workplan for Soil Sampling Assessment, Roadway and Utility Easement for Santa E Resort and Spa, Santa Barbara County, California
	Response Requested - Workplans	Other Workplan	4/13/1998	4/13/1998	WORK PLAN FOR SOIL SAMPLING ASSESSMENT
	Response Requested - Other	Other Report / Document	11/1/1997	11/1/1997	EMERGENCY RESPONSE PLAN
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	10/17/1997	10/17/1997	GRADING SOIL SAMPLING PLAN
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	9/15/1997	9/15/1997	SANTA BARBARA CLUB RESORT AND SPA MEETING AGENDA
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	8/1/1997	8/1/1997	HYDROGEN SULFIDE DETECTION PLAN
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	7/24/1997	7/24/1997	SPECTRACE 9000 LITERATURE
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	5/8/1997	5/8/1997	BIOLOGICAL OPINION FOR TEMPORARY DEWATERING OF BELL CANYON AN TECOLOTE CREEKS FOR CONSTRUCTION OF TWO NEW BRIDGES
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	4/14/1997	4/14/1997	Appendix F Pipeline Relocation Mitigation Program
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	2/12/1997	2/12/1997	HYATT HOTEL PROJECT TIME EXTENSION
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	2/1/1997	2/1/1997	SELECTING INORGANIC CONSTITUENTS AS CHEMICALS OF POTENTIAL CO RISK ASSESSMENT AT HAZARDOUS WASTE SITES AND PERMITTED FACILIT
	Response Requested - Other	Other Report / Document	8/1/1989	8/1/1989	ENVIRONMENTAL ASSESSMENT SAMPLING PLAN/NOTES/CONTAMINANT LE
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	2/27/1989	2/27/1989	HASKELL'S BEACH METHANE PROGRESS REPORT
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	2/9/1989	2/9/1989	METHANE GAS SURVEY
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	8/12/1988	8/12/1988	SOIL SAMPLING AND ANALYSIS SUMP TP-1 CHARACTERIZATION HEALTH AN PLAN
	Response Requested - Other	Other Report / Document	6/5/1988	6/5/1988	HAZARDOUS WASTE TESTING LABORATORY CERTIFICATE
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	11/1/1987	11/1/1987	APPENDIX B HAZARDOUS MATERIALS ASSESSMENT (From: Westec final EIR)
[VIEW DOCS]	*Response Requested - Reports*	Risk Assessment Report	7/1/1987	7/1/1987	RISK ASSESSMENT
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	4/30/1987	4/30/1987	HEALTH RISK ASSESSMENT
[VIEW DOCS]	*Response Requested - Reports*	Site Assessment Report	3/24/1987	3/24/1987	Supplemental Santa Barbara Site Assessment
[VIEW DOCS]	*Response Requested - Other*	Correspondence	12/18/1986	12/18/1986	STAAL, GARDNER, AND DUNNE PRELIMINARY SITE ASSESSMENT PLAN Cor
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	11/26/1986	11/26/1986	COMMENTS OF ASSESSMENT REPORTS
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	11/20/1986	11/20/1986	STAAL, GARDNER, AND DUNNE SAMPLING PLAN
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	11/1/1986	11/1/1986	MAPS/PLANS
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	11/1/1986	11/1/1986	MAPS AND TESTING RESULTS
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	10/6/1986	10/6/1986	LOG OF DRILL HOLE
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	9/17/1986	9/17/1986	TELEPHONE CONTACT FILE MEMO
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	9/15/1986	9/15/1986	ENVIRONMENTAL ASSESSMENT SAMPLING
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	9/15/1986	9/15/1986	LAND USE PERMIT
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	9/15/1986	9/15/1986	COASTAL DEVELOPMENT PLAN
[VIEW DOCS]	*Response Requested - Reports*	Preliminary Site Assessment Report	9/1/1986	9/1/1986	Preliminary Environmental Assessment
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	8/29/1986	8/29/1986	PROPOSED SG AND D ENVIRONMENTAL ASSESSMENT
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	8/21/1986	8/21/1986	CHRONOLOGY OF EVENTS
	Response Requested - Other	Other Report / Document	8/8/1986	8/8/1986	SITE ASSESSMENT
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	8/1/1986	8/1/1986	ENVIRONMENTAL ASSESSMENT SAMPLING PLAN/NOTES/CONTAMINANT LE
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	6/27/1986	6/27/1986	MEMO TO FILE
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	6/26/1986	6/26/1986	ENVIRONMENTAL ASSESSMENT
[VIEW DOCS]	*Response Requested - Other*	Other Report / Document	10/1/1979	10/1/1979	MAPS

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Santa Barbara County
PUBLIC Health
DEPARTMENT

Environmental Health Services

225 Camino del Remedio • Santa Barbara, CA 93110
805/681-4900 • FAX 805/681-4901

2125 S. Centerpointe Pkwy. #333 • Santa Maria, CA 93455-1340
805/346-8460 • FAX 805/346-8485

Takashi M. Wada, MD, MPH *Director/Health Officer*
Anne M. Fearon *Deputy Director*
Suzanne Jacobson, CPA *Chief Financial Officer*
Susan Klein-Rothschild, MSW *Deputy Director*
Elizabeth Snyder, MHA *Deputy Director*
Peter Hasler, MD *Medical Director*

Lawrence D. Fay, Jr. *Director of Environmental Health*

APR 2 9 2014

Pacific Hospitality Group, LLC
c/o The Busch Firm
Attn: Kory J. Kramer
2532 Dupont Drive
Irvine, California 92612

Subject: Closure Letter
Bacara Resort and Spa
8301 Hollister Avenue
Goleta, CA 93117
SMU Site #30

Dear Mr. Kramer:

This letter confirms the completion of the site investigation and remediation at the above subject site. With the provision that the information provided to this agency is accurate and representative of existing conditions, it is our position that no further action is required at this time, other than compliance with the **land use covenant (document #2013-0013134)** as recorded by the Santa Barbara County Recorder on February 26, 2013 and the soil management plan approved on February 20, 2013. **The soil management plan shall be followed during any and all soil disturbing activities**.

Please be advised that this letter does not relieve you of any liability under the California Health and Safety Code or Water Code for past, present, or future conditions at the site. Nor does it relieve you of the responsibility to clean up existing, additional, or previously unidentified conditions at the site, which cause or threaten to cause pollution or nuisance or otherwise pose a threat to water quality or public health.

Changes in the present or proposed use of the site may require further site characterization and mitigation activity. It is the property owner's responsibility to notify this agency of any changes in report content, future contamination findings, or site usage.

Additionally, you may receive a final invoice. This billing would be for the specialist's time in processing the site closure paperwork. Due to our accounting process, it my take a few months before you receive your final invoice.

Please contact our office if you have any questions regarding this matter.

Sincerely,

Larwence Fay
Environmental Health Services Director

cc: GeoTracker (Global ID: T10000004585)

JJ: 30_SMU Closure Ltr_01-2014.doc

Legend

Site Boundary

Note:

Numbers shown on this Figure correlate with Table 1 of this report.

N

0 600 Feet

Location of Residual Contaminants

8301 Hollister Avenue
Goleta, California 93117

Geosyntec consultants

Santa Barbara | February 2013

Figure 1

Location of Residual Contaminants.ai

Oakland: P:\GIS\Bacara\Project\Contaminants.mxd

Geosyntec consultants

924 Anacapa Street
Suite 4A
Santa Barbara, California 93101
PH 805.897.3800
FAX 805.899-8689
www.geosyntec.com

7 June 2017

Ms. Shashi Poudyal
Bacara Resort and Spa
8301 Hollister Avenue
Santa Barbara, California 93117

Subject: **Summary of Environmental Covenant Site Inspection - 2017**
8301 Hollister Avenue
Santa Barbara, California 93117

Dear Ms. Poudyal,

Geosyntec Consultants, Inc. (Geosyntec) is pleased to submit this summary of the Environmental Covenant Site Inspection (Covenant Site Inspection) for the property located at 8301 Hollister Avenue, Santa Barbara, California ("the Site"). This work was performed in accordance with our proposal dated 11 April 2017 to comply with the monitoring and reporting obligation in Bacara's Environmental Restriction Covenant (Covenant) dated 20 February 2013. The scope of work covering the Covenant inspection is outlined below. This inspection was consistent with the one performed on 17 June 2014, 17 June 2015, and 7 June 2016.

SCOPE OF WORK AND INSPECTION RESULTS

On 17 May 2017, Derek Fisher from Geosyntec and Jim Pettit, Bacara's Chief Engineer, performed a visual inspection of the areas specified in the covenant (Figure 1). These areas are identified as 17 "locations of residual contaminants" in the Covenant for the Site. The Covenant included provisions for annual monitoring and completion of an inspection report per the following wording:

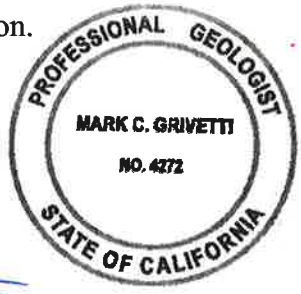
Section 4.03. Periodic Monitoring. The owner shall conduct an inspection of the Areas of Residual Impact annually or otherwise upon the request of the Department, to verify compliance with the Covenant and to ensure that the Areas of Residual Impact remain undisturbed and that Contaminants of Concern do not otherwise pose an unacceptable risk to human health and safety or the environment. Such monitoring shall continue until such time as the Department determines that no further monitoring of the areas of residual impact is required.

4.04. Reporting Obligations. The owner shall prepare a report documenting each annual inspection and shall provide a copy of such report to the Department upon the Department's request. The annual inspection report must include the dates, times, and names of those who conducted the inspection and their observations regarding the Areas of Residual Impact. If any Contaminants of Concern are exposed the annual inspection report must detail the steps taken to return such area to compliance. If the owner identifies any violations of this Covenant during the annual inspections or at any other time, the Owner must within 30 days of identifying the violation: (i) determine the identity of the party in violation, if any; (ii) send a letter advising such party of the violation of the Covenant; and (iii) demand that the violation cease and be corrected immediately. Copies of correspondence related to the violation of this Covenant shall be sent to the Department within 10 days of its original transmission.

Geosyntec noted the condition of each of the 17 locations and provided the information in a summary table (Table 1). This table also includes the locations, chemicals of concern, and the concentrations (which correspond with Figure 1) as was specified in the Covenant. In addition, a photolog was prepared that documents the condition at each location.

Based on our observations, the 17 locations of residual contaminants had not been disturbed as observed during the Site walk conducted on 17 May 2017. Therefore, it is concluded that no corrective actions are warranted for compliance with the Covenant.

Geosyntec appreciates the opportunity to work with you on this project. Please call the undersigned at 805-897-3800 if you have questions regarding the inspection.



Sincerely,

Derek Fisher
Scientist

Mark Grivetti, P.G. 4272 exp. Oct. 31, 2017
Senior Principal

engineers | scientists | innovators

FIGURE

Legend

Site Boundary

Note:

Numbers shown on this Figure correlate with Table 1 of this report.

N

0 600 Feet

Location of Residual Contaminants

8301 Hollister Avenue
Goleta, California 93117

Geosyntec consultants

Santa Barbara | February 2013

Figure 1

Location of Residual Contaminants.ai

Oakland: P:\GIS\Bacara\Project\Contaminants.mxd

TABLE

Table 1
Summary of Residual Contaminants and Field Observations
8301 Hollister Road, Santa Barbara (Goleta), California

Location on Figure	Location	Boring Number	Constituent with Maximum Concentration mg/kg*	Depth	Year	Observations May 17, 2017
1	West Parking Lot[1]	F-5	TPH/Hyd-Motor Oil – 1,400	0.5’	1999	Area is paved and undisturbed.
2	Northeast of Beach Shack[1]	F-31	TPH/Crude – 1,000	0.5’	1999	Undeveloped brush area; no sign of disturbance.
3	West of Beach Shack[1]	C-32	TPH/Crude – 1,100	0.5’	1999	Undeveloped brush area; no sign of disturbance.
4	Southeast part of Site; adjacent to east of Emergency Access Road[1]	C-37	TPH/Crude – 1,400	0.5’	1999	Area has low brush and dirt. Mulch nearby and hiking trail to the north. No evidence of disturbance.
5	Elevator Shaft Area – Formerly Building 23, now Building 19 (Formerly named Pad 20)[2]	BNE	Kerosene – 3,520 Gasoline – 4,000	19’	1998	Building is present in the area with adjacent landscaping. No sign of disturbance in the area.
6	Southeast Corner of Site[3]	TPS1	TPH/Crude – 4,400 TPH/Crude – 2,400	3’ 6’	1998	Bluff area near beach with brush-type vegetation and paths in area. No sign of disturbance at depth.
7	Southeast Corner of Site[3]	TPS3	TPH/Crude – 1,400	3’	1998	Bluff area near beach with groundcover. No

Table 1
Summary of Residual Contaminants and Field Observations
8301 Hollister Road, Santa Barbara (Goleta), California

Location on Figure	Location	Boring Number	Constituent with Maximum Concentration mg/kg*	Depth	Year	Observations May 17 2017
						sign of disturbance.
8	Southeast Corner of Site[3]	TPS4	TPH/Crude – 6,200 TPH/Crude – 2,400	3' 6'	1998	Brush and trees with paths in area. No sign of disturbance at depth.
9	Northwest Property Boundary – Fifty feet from Western Boundary[4]	SB1	Chromium – 236 Chromium – 288	25' 30'	1987	Area is paved and undisturbed. Materials are being stored in this location.
10	Northeast of Building 19[4]	EA-1	Arsenic – 354	20'	1986	Landscaped area; no sign of disturbance.
11	Southeast of Current Location of the Pool[4]	EA-7	Selenium – 539 Arsenic – 727	18'	1986	Heavy brush area; no sign of disturbance.
12	Parking Lot North of Tennis Courts[4]	EA-14	Barium – 8734 Vanadium – 732 Arsenic – 214 TPH – 4,000**	8'	1986	Paved area with parking lot and pathway and landscaped area with large tree. No sign of disturbance in this area.
13	Southwest of Building 19 (Formerly Building 23)[4]	EA 28	Toluene – 190	29'	1986	Landscaped area and existing building; no sign of disturbance.

Table 1
Summary of Residual Contaminants and Field Observations
8301 Hollister Road, Santa Barbara (Goleta), California

Location on Figure	Location	Boring Number	Constituent with Maximum Concentration mg/kg*	Depth	Year	Observations May 17, 2017
14	Northeast of Current Pool [4]	EA-31	Vanadium – 712 Arsenic –204	15'	1986	Landscaped area between buildings; no sign of disturbance.
15	Northwest of Beach Shack [4]	EA-32	TPH – 4,000**	2.5	1986	Undeveloped brush area; no sign of disturbance.
16	Northwest of Beach Shack [4]	EA-33	TPH – 1,500**	4.5	1986	Undeveloped brush area; no sign of disturbance.
17	Southeastern corner of Site [4]	TP-1	TPH – 7,000**	6	1986	Brush area with path; no sign of disturbance to depth.

Notes:

* Constituent concentrations used in summary as approved by Santa Barbara Fire Department are as follows (mg/kg): TPH – 1,000; Benzene – 0.1; Toluene – 15; Xylenes – 175; Ethylbenzenes – 70; Arsenic – 19; Barium – 5,200; Chromium – 210; Copper – 2,800; Lead – 400; Mercury – 220; Nickel – 1500; Selenium – 370; Vanadium – 520; Zinc – 22,000.

** Listed as sump waste residue – may have been removed.

References:

1. Arcadis, Report of Post-Grading Soil Sampling Program, 20 December 2000.
2. Rincon Consultants, Remedial Excavation Report, Elevator Shaft Area, Santa Barbara Club Resort and Spa, 4 September 1998.
3. Arcadis, Report of Sump TP-1 Characterization, Santa Barbara Club Resort and Spa, 30 October 1998.
4. Kaman Sciences Corporation, Supplemental Santa Barbara Site Assessment, March 1987. Data summarized by WESTEC Services Inc. in Appendix B of Environmental impact Report – Date unknown. Other Sources include same Table and Figure.

PHOTOLOG

GEOSYNTEC CONSULTANTS
Environmental Covenant Site Inspection

Client: Bacara Resort and Spa | **Project Number:** SB0824

Site Name: Bacara Resort and Spa | **Site Location:** Santa Barbara, CA

Photograph: Location 1 **Date:** 5/17/17 **Direction:** Northeast **Comments:** Paved area to the west of the Main building	
Photograph: Location 1 **Date:** 5/17/17 **Direction:** South **Comments:** Paved area and parking to the west of the Main building	

GEOSYNTEC CONSULTANTS
Environmental Covenant Site Inspection

Client: Bacara Resort and Spa | **Project Number:** SB0824

Site Name: Bacara Resort and Spa | **Site Location:** Santa Barbara, CA

Photograph: Location 2

Date: 5/17/17

Direction: Northwest

Comments:
Location 2 is in the brush area behind the path

Photograph: Location 3

Date: 5/17/17

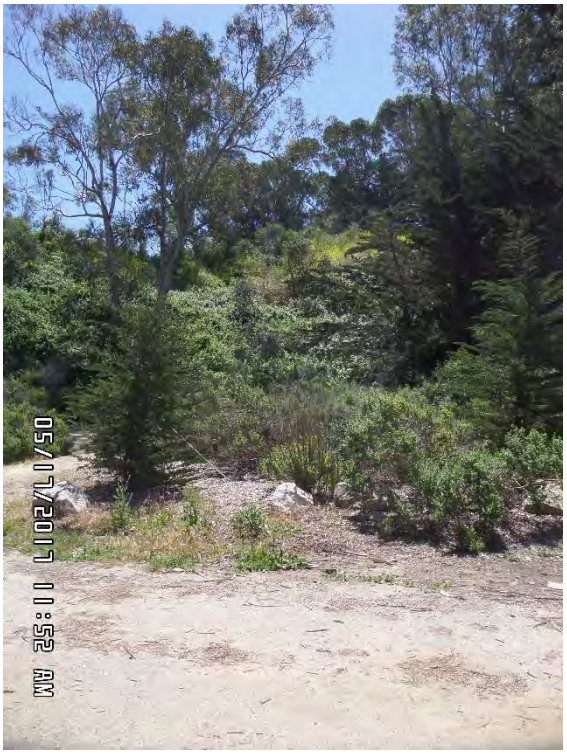
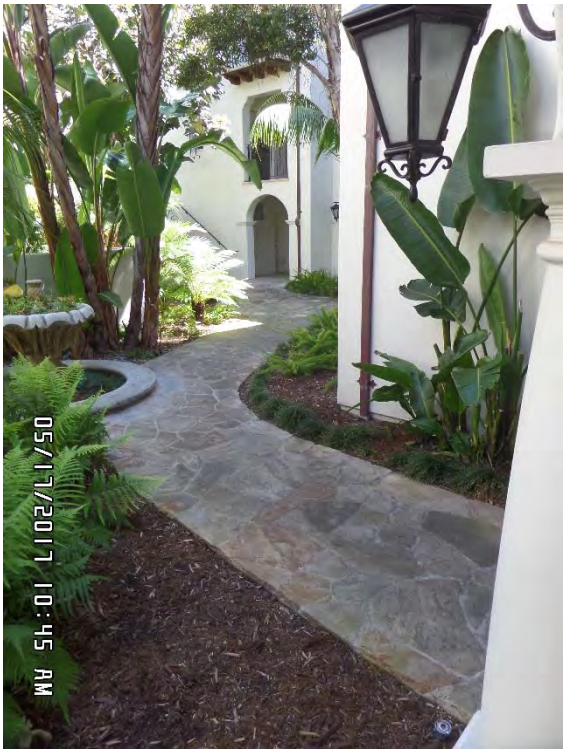
Direction: Northwest

Comments:
Location 3 is in the undeveloped brush area located to the northwest of the Beach Shack. Area behind fence only.

GEOSYNTEC CONSULTANTS
Environmental Covenant Site Inspection

Client: Bacara Resort and Spa | **Project Number:** SB0824

Site Name: Bacara Resort and Spa | **Site Location:** Santa Barbara, CA

Photograph: Location 4 **Date:** 5/17/17 **Direction:** East **Comments:** Location 4 is in the mulch area just south of the path adjacent to the east of the emergency access road.	
Photograph: Location 5 **Date:** 5/17/17 **Direction:** Northwest **Comments:** Elevator Shaft area of Former Building 23 (now near Building 19)	

GEOSYNTEC CONSULTANTS
Environmental Covenant Site Inspection

Client: Bacara Resort and Spa | **Project Number:** SB0824

Site Name: Bacara Resort and Spa | **Site Location:** Santa Barbara, CA

Photograph: Location 6 **Date:** 5/17/17 **Direction:** Southeast **Comments:** Location 6 is in the bluff area near the beach with brush-type vegetation on the southeast corner of Site.	
Photograph: Location 7 **Date:** 5/17/17 **Direction:** West **Comments:** Bluff area near beach with groundcover on the southeast corner of Site.	

GEOSYNTEC CONSULTANTS
Environmental Covenant Site Inspection

Geosyntec consultants

Client: Bacara Resort and Spa	**Project Number:** SB0824
Site Name: Bacara Resort and Spa	**Site Location:** Santa Barbara, CA

Photograph: Location 8 **Date:** 5/17/17 **Direction:** Northeast **Comments:** Brush area on the southeast corner of Site.	
Photograph: Location 9 **Date:** 5/17/17 **Direction:** North **Comments:** Parking area at the northwest property boundary. Materials are being stored in this location.	

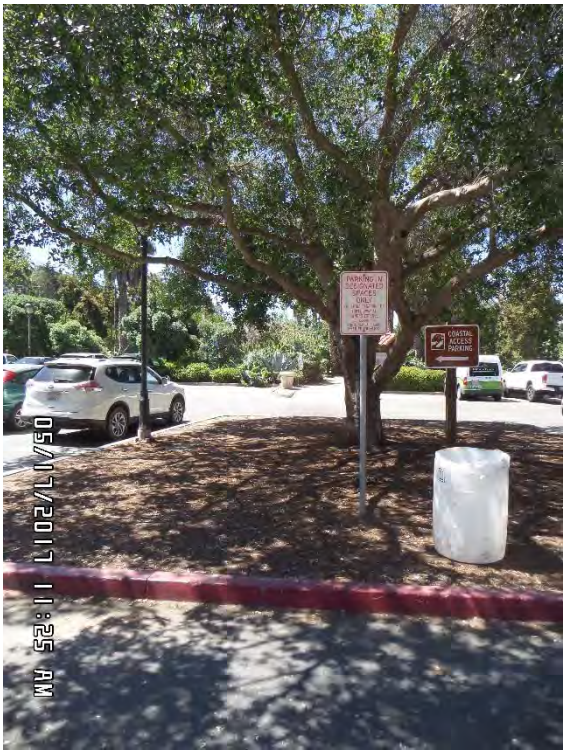
GEOSYNTEC CONSULTANTS
Environmental Covenant Site Inspection

Geosyntec consultants

Client: Bacara Resort and Spa	**Project Number:** SB0824
Site Name: Bacara Resort and Spa	**Site Location:** Santa Barbara, CA

Photograph: Location 10 **Date:** 5/17/17 **Direction:** Southeast **Comments:** Location 10 is in the landscaped area north of Building 19	
Photograph: Location 11 **Date:** 5/17/17 **Direction:** Southeast **Comments:** Location 11 is in the brush area southeast of the main pool.	

GEOSYNTEC CONSULTANTS Environmental Covenant Site Inspection	
Client: Bacara Resort and Spa	**Project Number:** SB0824
Site Name: Bacara Resort and Spa	**Site Location:** Santa Barbara, CA

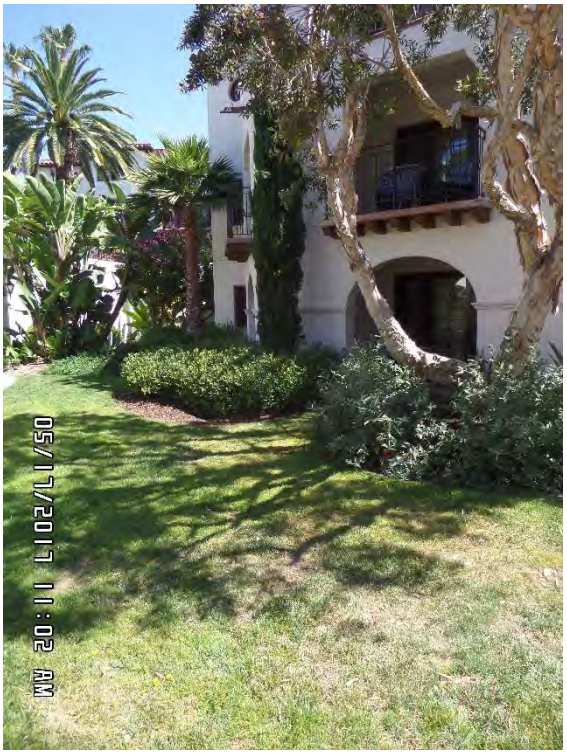
Photograph: Location 12 **Date:** 5/17/17 **Direction:** South **Comments:** Parking lot area north of tennis courts.	
Photograph: Location 13 **Date:** 5/17/17 **Direction:** North **Comments:** Location 13 is located within the landscaped area and existing building footprint.	

GEOSYNTEC CONSULTANTS
Environmental Covenant Site Inspection

Geosyntec consultants

Client: Bacara Resort and Spa | **Project Number:** SB0824

Site Name: Bacara Resort and Spa | **Site Location:** Santa Barbara, CA

Photograph: Location 13 **Date:** 5/17/17 **Direction:** Northeast **Comments:** Location 13 is located within the landscaped area and existing building footprint.	
Photograph: Location 14 **Date:** 5/17/17 **Direction:** Southeast **Comments:** Area of Location 14 northeast of pool and adjacent to Building 17	

GEOSYNTEC CONSULTANTS
Environmental Covenant Site Inspection

Client: Bacara Resort and Spa | **Project Number:** SB0824

Site Name: Bacara Resort and Spa | **Site Location:** Santa Barbara, CA

Photograph: Location 15

Date: 5/17/17

Direction: Northwest

Comments:
Location 15 is in the brush area northwest of the Beach Shack

Photograph: Location 16

Date: 5/17/17

Direction: Northwest

Comments:
Location 16 is in the brush area northwest of the Beach Shack.

GEOSYNTEC CONSULTANTS
Environmental Covenant Site Inspection

Client: Bacara Resort and Spa	**Project Number:** SB0824
Site Name: Bacara Resort and Spa	**Site Location:** Santa Barbara, CA

Photograph: Location 17

Date: 5/17/17

Direction: Northwest

Comments:
Brush area with path on the southeast corner of the Site.

Prepared for

SB Luxury Resort LLC
c/o Ohana Real Estate Investors
1991 Broadway Street, Suite 140
Redwood City, California 94063

SOIL MANAGEMENT PLAN

BACARA RESORT AND SPA
8301 HOLLISTER AVENUE
SANTA BARBARA (GOLETA), CALIFORNIA 93117

Prepared by

Geosyntec consultants

engineers | scientists | innovators

924 Anacapa Street, Suite 4A
Santa Barbara, California 93101

Project Number: SB0594

January 2013

Soil Management Plan
BACARA RESORT AND SPA
8301 HOLLISTER AVENUE
SANTA BARBARA (GOLETA), CALIFORNIA
93117

Prepared by

Geosyntec Consultants, Inc.
924 Anacapa Street, Suite 4A
Santa Barbara, California 93101

Tracey Schwartz
Senior Scientist

Mark Grivetti P.G., C.Hg., C.E.G
Principal Geologist

Project Number: SB0594
January 2013

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1. INTRODUCTION

This Soil Management Plan (SMP) has been prepared by Geosyntec Consultants (Geosyntec) for the Bacara Resort and Spa property located at 8301 Hollister Avenue, in Santa Barbara (Goleta), Santa Barbara County, California (the "Site"). The SMP describes procedures to mitigate the risks associated with the potential presence of residual hazardous materials and petroleum hydrocarbon-impacted subsurface soils at the Site, if encountered during general construction or maintenance activities. This SMP is applicable to those activities that involve excavation and/or earth moving activities within those certain areas of the Site where residual contaminants were permitted to remain in subsurface soils at concentrations exceeding unrestricted use cleanup standards (the "Areas of Residual Impact"). The Areas of Residual Impact are described and depicted in the Figures and Tables attached hereto. This SMP was prepared in response to a request by the Site Mitigation Unit of the Santa Barbara County Fire Department (Fire Department).

The overall objective of the SMP is to provide for the protection of human health and the environment in the event that residual hazardous materials and/or petroleum hydrocarbon-impacted soils are uncovered or exposed in the Areas of Residual Impact. This SMP has been prepared based upon environmental investigations and remediation conducted at the Site prior to and during development of the Resort in 2000-2002. If future development plans for the Site require additional or different protocols to manage soil other than those presented here, this SMP may be modified accordingly.

This SMP:

- Summarizes the Areas of Residual Impact;
- Provides management standards for soil disturbed during Site maintenance and/or construction activities within the Areas of Residual Impact in a manner that protects human health and the environment.
- Provides guidance on conditions under which the Fire Department needs to be notified before continuing work.

Terms used in this SMP include the following:

- Owner – Property owner at any given time.
- Contractor – Party conducting on-site activities as engaged by the Owner or other parties.

1.1 Report Organization

The remainder of this report is organized into the following sections:

- Section 2 provides background information for the Site;
- Section 3 provides a description of known existing environmental conditions at the Site;
- Section 4 presents guidelines for health and safety during construction;
- Section 5 describes soil management procedures;
- Section 6 presents the reporting requirements;
- Section 7 presents the protocol for management of the SMP;
- Section 8 presents the scope, representations, and limitations of the SMP; and
- Section 9 presents the references used in this report.

2. BACKGROUND

2.1 Site Description

The Site is located within the boundaries of the City of Goleta, Santa Barbara County, California (**Figure 1**). Topographic map coverage of the Site and vicinity is provided by the United States Geologic Survey (USGS), 7.5 minute series Dos Pueblos Canyon, California quadrangle (1995). The latitude and longitude coordinates for the Site are approximately 34° 26' 2.8''•N /119° 55' 9.8''°W.

The Site consists of two parcels of land totaling approximately 72.7 acres. According to the County of Santa Barbara, Office of the Assessor Parcel Number Database (APN database), the Site is identified as Parcel Nos. 079-200-012 and 079-200-013.

The Site is developed with a resort-type hotel and spa constructed between 2000-2002, and is bounded on the north by Hollister Avenue, on the south by the Pacific Ocean, on the east by Bell Canyon Creek, and on the west by vacant land and the access road to the Ellwood Pier (**Figure 2**). It is located between the Pacific Ocean and the Santa Ynez Mountains.

2.2 Site Improvements

The resort is developed in a Mediterranean style and consists of twenty five separate buildings including seven public buildings and nineteen separate guest room buildings. There are 360 guestrooms provided in one-to four story buildings. The Site has three saline-filled swimming pools, twenty-six pool cabanas and two outdoor whirlpools. There is a three-story 42,000 sq/ft spa facility and fitness center, three restaurants, a bar, four retail shops, four clay tennis courts, 27,000 sq/ft of indoor and outdoor meeting space, and extensive service/maintenance facilities. The main parking lot for the Site is present along the western property boundary. The buildings are primarily slab-on-grade with exterior stucco walls and Spanish clay tiles.

Most of the resort buildings and services are located on the western portion of the Site. The tennis courts, the maintenance building (which includes a small tennis shop), and beach access are located in the central portion of the Site. Adjacent to the maintenance building is a parking lot for public beach access. The path for beach access has a small bridge that crosses Tecolote Creek. A building housing a beach-grill restaurant and restrooms is present at the beach. Except for these features, the remainder of the central and eastern portion of the Site is undeveloped and densely-vegetated. According to Site personnel, access to much of this area is restricted for habitat protection.

2.3 Site History

Historically, the Site was used for oil and gas exploration and processing activities related to the Ellwood Oil Field from some time prior to 1938 until the 1960s. Reportedly, activities included pipelines from offshore wells to storage in onshore, aboveground storage tanks, transfer of petroleum products to offshore tankers via a flexible buoy system, a gasoline absorption plant for the processing of white gas from natural gas, an electronic dehydration plant for wet oil treatment, and earthen sumps for holding oily water wastes. The former oil operations were concentrated mostly in the central portion of the site and were dismantled in the 1960s. The land was undeveloped between then and construction of the resort in 2000. Due to the industrial nature of historic site operations, environmental investigations and soil removal activities were performed at the Site from 1986 to 1999 as detailed in Section 3.1 below.

2.4 Geology, Hydrogeology, and Existing Utilities

The Site vicinity is underlain by Quaternary alluvium with a thickness of less than 200 feet as well as organic shales of the Monterey Formation. The alluvium is derived from the erosion of the Santa Ynez Mountains to the north. The alluvium overlies consolidated bedrock of the Monterey Formation (Dibblee, 1987). Based on the EDR Geocheck report, soils at the Site mainly consist of Milpitas soil which includes moderately well drained fine sandy loam underlain by clay and very gravelly sandy loam.

The Site is located west of and outside the Goleta Groundwater Basin. Groundwater, if present at the Site, is expected to be present with the alluvium of Tecolote Creek and/or within the fractured bedrock of the Monterey Formation. Based on a review of the topography shown on the USGS quadrangle map, and the location of area surface-water bodies, the dominant shallow local groundwater flow direction in this area is projected to be predominantly to the south or southeast toward the Pacific Ocean. Based on a previous investigation at a nearby site approximately 0.75 of a mile to the east, groundwater was reported at greater than 100 feet below ground surface (HFA, 2010), although groundwater conditions are known to vary laterally in this area.

A 6" active gas pipeline currently owned by Venoco is present at the Site. It runs along the northern portion of the Site from the eastern property boundary to just north of the tennis court and then it runs further north along Hollister Avenue. It connects to a pipeline owned by The Gas Company to the west of the Site. In addition, Venoco installed a new 6" oil pipeline adjacent to its existing gas pipeline in 2011.

3. ENVIRONMENTAL CONDITIONS

3.1 Existing Conditions

Due to the industrial nature of historic Site operations, environmental investigations and soil removal activities were performed from 1986 to 1999 under the oversight of environmental agencies including the Site Mitigation Unit of the Santa Barbara County Fire Department. Table 1 of this report provides a summary of the Areas of Residual Impact where residual contaminants were permitted by the Fire Department to be left-in-place in subsurface soils, and identifies the constituent of concern ("COCs") and the concentrations detected at that time. Table 1 also provides a summary of the depth, location, and year that the residual contaminant was detected. The soil sample locations are illustrated on Figure 3. As noted in Table 1, the COCs in the Areas of Residual Impact are located at depths ranging from just below the ground surface (0.5 ft) to thirty feet below the existing ground surface.

As noted above, this SMP has been prepared to protect human health and the environment during any future Site related maintenance or construction activities that could expose the residual subsurface COCs In the Areas of Residual Impact.

3.2 Potential Methane and Hydrogen Sulfide

Methane and other flammable or toxic gases (notably hydrogen sulfide) are often associated with naturally occurring petroleum deposits on former or active oilfields. Previous investigations of the Site identified elevated methane gas in certain areas and were attributed to naturally occurring seeps from oil deposits beneath the Site. In addition previous studies noted potential subsurface impacts from hydrogen sulfide gas from the adjacent Venoco Ellwood facility. Reportedly all hotel room structures at the Site were provided with sub-slab vent piping and barrier membranes to prevent the intrusion of methane and hydrogen sulfide into building structures. However, these gases may be present in undeveloped areas of the Site.

3.3 Location of Nearest Oil and Gas Fields and Wells

According to a review of the California Department of Conservation Division of Oil, Gas, and Geothermal Resources (DOGGR) on-line mapping systems (DOMS) maps (http://www.conservation.ca.gov/dog/maps/Pages/d1_index_map1.aspx) and the EDR Geologic Report located at the end of the Radius Report, the Site is not located within the designated boundaries of an oil field and no oil/gas wells are abandoned on the property. The nearest oil field is the Elwood Oil Field which is located less than 0.25

miles to the west, east, and south of the Site. The DOGGR website indicates the area surrounding the Site has a high number of oil wells; approximately 45 plugged oil wells are located in the vicinity of the Site to the south in the Pacific Ocean. The nearest oil wells identified on the land portion of the Site are as follows:

API Number #	Distance (miles)/ Direction from Subject Property	Operator	Status	Date	Well Depth	EDR ID No.
28303500	Adjacent/West	Phillips Petroleum Co.	Plugged	NL	NL	1
28303488	Adjacent/East	Chevron USA, Inc.	Plugged	NL	NL	2

4. HEALTH AND SAFETY GUIDELINES DURING CONSTRUCTION AND MAINTENANCE REQUIRING EXCAVATION

As detailed in Table 1 and shown in Figure 3 of this report, residual contaminants were permitted by the Fire Department to be left-in-place in subsurface soils at the Areas of Residual Impact. The following guidelines should be implemented when working locations identified in Figure 3. As with most former industrial properties, the possibility also exists for hazardous materials and/or petroleum hydrocarbon-impacted soils to be encountered at other areas of the Site. If this occurs, work in the impacted area should stop and the Fire Department should be notified of the discovery of hazardous materials to determine whether and to what extent additional investigation and/or remediation is required.

The primary routes of potential exposure to residual contamination are through direct contact with the soil or inhalation of air surrounding the contaminated soil when exposed. Exposure to contaminated soils would most likely result from excavation during construction or general maintenance activities that require contact with subsurface soils on the Site. The following health and safety guidelines should be implemented to protect on-site workers and potential off-site receptors during such activities.

4.1 Site-Specific Health and Safety Plan

During planned construction requiring excavation in the Areas of Residual Impact, the Contractor will prepare a site-specific Health and Safety Plan (HASP) that conforms to the general requirements of Occupational Safety and Health Administration (OSHA) standards. The Contractor will take responsibility for all job-site safety issues as required by the general industry safety orders and all applicable laws and regulations.

The site-specific HASP shall include provisions for worker exposure monitoring in connection with hazardous materials and petroleum hydrocarbon-impacted subsurface soils as outlined in this SMP.

Applicable requirements of the HASP shall include:

- An Injury and Illness Prevention Program;
- The name and contact information of individual(s) who has been designated as the Contractor's Project Manager and Project Site Safety Officer;

- Site controls to be implemented during excavation activities to prevent the public from entering the work area;
- Identification of potential physical and chemical hazards;
- Requirements for personal protective equipment (PPE); and
- An emergency action plan in the event of an accident, or serious unplanned event (e.g. fire, structure collapse, etc.) that requires notifying any response agencies (e.g., fire departments, rescue teams, etc.), including emergency telephone numbers and hospital routes.

The Contractor's HASP will reflect a commitment to exercise care when handling or disposing of materials or substances that are identified as hazardous substances.

A copy of the Contractor's HASP will be available within the work area at all times and will apply to all personnel working at, or visiting the work area including, but not limited to, Contractor's employees, suppliers, vendors, and truckers.

The Contractor's Project Site Safety Officer will verify that on-site workers and visitors are in compliance with applicable health and safety requirements, and take action to ensure compliance where deficiencies are identified.

4.2 Stormwater Management

During planned construction activities within or affecting the Areas of Residual Impact, where more than one acre may be disturbed, stormwater pollution controls shall be implemented by the Contractor to minimize runoff of sediment in stormwater. Depending on the construction activities planned, a Stormwater Pollution Prevention Plan (SWPPP) may be required as referenced in the National Pollution Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction Activity (2009-0009-DWQ, General Permit).

Stormwater pollution controls implemented at the Site by the Contractor shall be based on Best Management Practices (BMPs). Specific practices that shall be implemented to reduce the sediment load of stormwater runoff from the Site include but are not limited to the following:

- Grading the Site to prevent stormwater from running off-site;
- Installing stormwater control devices (e.g., earth berms, silt fences, or hay bale barriers) around the perimeter of unpaved portions of the Site; and

- Protecting existing catch basins with silt fences, hay bales, or gravel bags.

In addition, all Contractors shall store fuel and chemicals in such a manner that prevents accidental spills from impacting stormwater.

4.3 Potential Methane, Hydrogen Sulfide and Volatile Organics

Prior to construction involving excavation activities within or affecting the Areas of Residual Impact, potential exposure to methane and other flammable or toxic gases (notably hydrogen sulfide) that may be present in naturally occurring petroleum deposits should be evaluated. For soil excavation activities in areas with the potential for elevated methane, a methane meter will be used to monitor inside the excavation area. In the event that methane concentrations exceed 500 ppmv (1% LEL) inside the excavation area, upgrade of the protective equipment will be evaluated and additional mitigation measures (e.g., forced ventilation) will be implemented.

If odors of an organic nature are detected during field activities, they will be assessed with a Photoionization Detection (PID), organic vapor analyzer (OVA), or equivalent to verify that concentrations of VOCs remain below 10 ppmv. In the event PID readings exceed 10 ppmv in the work exclusion areas, an upgrade of protective equipment will be evaluated. In the event the PID readings exceed 50 ppmv, appropriate mitigation measures will be implemented and verification soil samples will be analyzed for VOCs and TPH.

Hydrogen sulfide is a colorless, flammable gas that is heavier than air and, at low concentrations, has a characteristic odor of rotten eggs. Air must be tested for the presence and concentration of hydrogen sulfide using air monitoring equipment, such as hydrogen sulfide detector tubes or a multi-gas meter. Testing should also determine if fire/explosion precautions are necessary.

5. SOIL MANAGEMENT PROTOCOL

During maintenance and construction activities involving excavation in or affecting the Areas of Residual Impact, at the Site, there is potential for exposing hazardous materials or petroleum products to the environment and to maintenance/construction workers at the Site. If, during maintenance or construction activities in these areas, hazardous materials or petroleum-impacted soils are encountered, the following measures should be followed for safe handling and management of any impacted soils. The Contractor is responsible for coordinating the following tasks with the appropriate personnel. During general maintenance activities within or affecting the Areas of Residual Impact, the Owner of the Site will implement the following tasks with assistance from the County of Santa Barbara Fire Department as needed:

- Indications that the soil is impacted include but are not limited to: hydrocarbon odor, visual staining or discoloration or, liquid petroleum product in soil.

- Upon discovery of any impacted soil, the Site Mitigation Unit of the Santa Barbara County Fire Department should be contacted and consulted regarding the extent and depth of detected impacts.

- If it is determined that the volume of the impacted soil exceeds 1,000 cubic yards, a permit could be required from the Santa Barbara County Air Pollution Control District (APCD). If the volume of impacted soil is less than 1,000 cubic yards, an exemption letter will be required (http://sbcapcd.org/eng/compliance/esc/dhsmall24.pdf).

- Monitoring of the excavated soil will be conducted with a photoionization detector (PID).

- Excavated soil will be placed on plastic sheeting. Clean soils will be segregated from impacted soil to the extent possible. Soil stockpiles will be covered with plastic sheeting during non-working hours. The edges of the plastic will have an overlap of at least 24 inches. The plastic will be secured at the base of the stockpile and along the seams of overlapping plastic sheeting with sandbags or equivalent means. The stockpiles will remain covered until load-out.

- If during excavation concentrations of Volatile Organic Compounds (VOCs) exceeding 100 parts per million by volume (ppmv) as measured with a PID are detected in the air directly above the soil stockpile or in the breathing air of workers, the stockpile and exposed impacted soils will be sprayed with water or suppressant and placed in a sealed container (roll-off bin).

- Each piece of equipment used for excavation of hazardous soil will have a clean-out bucket or continuous edge across the cutting face of its bucket. Entry to any contaminated areas should be limited to avoid unnecessary exposure and related transfer of contaminants. In unavoidable circumstances, any equipment or truck(s) should be decontaminated in a designated decontamination area by brushing off equipment surfaces onto plastic sheeting.

- Daily inspection of the stockpiles will be conducted to verify the integrity of stockpile cover. Any gaps, tears, or other deficiencies will be corrected immediately. Daily records will be kept of stockpile inspections and any repairs made.

- During stockpile generation and removal, only the working face of the stockpile will be uncovered.

- Depending on the volume of impacted soil excavated, a minimum of one composite soil sample will be collected for waste profiling purposes. If required by the disposal facility, additional sampling will be conducted to further characterize the impacted soil for disposal or recycling purposes.

- In general licensed disposal facilities will require that the stockpiled soils be sampled at a rate of one sample per 1,000 cubic yards, and analyzed for total petroleum hydrocarbons carbon chain characterization (TPH-CC) by EPA Method 8015M, volatile organic compounds by EPA Method 5035/8260B, and Title 22 metals by EPA Method 6010B.

- Soil samples for profiling purposes will be composited so that a representative soil composite sample can be collected in laboratory supplied 8-ounce glass sampling jars and with discrete EnCore or equivalent sub-samplers in accordance with EPA Method 5035.

- Once the profile is accepted at a licensed disposal facility the stockpiled soil can be transported off the Site under waste transport manifest. Depending on the profile results, the soil may be removed as hazardous or non-hazardous waste.

- The driver of each truck load transported off the Site will sign the manifest and a copy of the transport manifest will be maintained by the contractor and/or owner.

- During loading for transport, trucks that come into direct contact with potentially contaminated soil will be decontaminated prior to leaving the Site to prevent the offsite tracking of contaminated soil. The truck loads will be wetted and tarped prior to exiting the Site.

- Trucks will be visually inspected before leaving the Site and any dirt adhering to the exterior surfaces will be brushed off and collected on plastic sheeting. The storage bins or beds of the trucks will be inspected to ensure the loads are properly covered and secured. Excavation equipment surfaces will also be brushed off prior to removing it from the contaminated areas.

As stated previously, if hazardous materials and/or petroleum hydrocarbon-impacted soils are encountered at areas of the Site other than those identified in Figure 3, work should stop in the affected area and the Fire Department should be contacted to notify them of the presence of hazardous materials and to discuss additional environmental investigation and/or remediation requirements that may apply.

6. REPORTING

Following completion of any impacted soil removal activities from the Areas of Residual Impact, a report summarizing the soil removal, stockpiling, and disposal activities will be prepared. The report will include, as applicable, profile soil sampling results, profile acceptance documentation, and copies of signed manifests including the total weight of soil material that was transported to the disposal facility. The report will be presented to the Fire Department.

7. IMPLEMENTATION OF THE SOIL MANAGEMENT PLAN

This section discusses responsibilities for implementation of this SMP and the circumstances under which this SMP may be modified.

7.1 Responsibilities

The Owner (or Owner's representative) shall oversee implementation of this SMP whenever residual impacted subsurface soils may be disturbed in the Areas of Residual Impact. In addition, the Owner or Owner's representative shall make available a copy of the SMP to Contractors working at the Site. The Contractor shall be responsible for adhering to this SMP, following project specifications, and ensuring job and Site safety. The Contractor is also responsible for providing a copy of the SMP to all of its subcontractors.

7.2 Modifications to Soil Management Plan

This SMP was developed based on an understanding of known conditions at the Site and applicable regulations. It may be necessary to modify this SMP for any of several reasons, including, but not limited to:

- Change in understanding of environmental conditions;
- Intrusive activity that is not addressed by this SMP;
- The Owner, Owner's representative, or Contractor wishing to utilize different or additional Site controls; or
- New legal requirements.

8. SCOPE, REPRESENTATIONS, AND LIMITATIONS

This SMP was developed exclusively to address previously detected and potentially present COCs in subsurface soil and soil gas within the Areas of Residual Impact at the Site. If other or previously unknown COCs are encountered during a construction project subject to this SMP, or otherwise, Contractors are responsible for complying with all applicable regulatory requirements pertaining to the handling and disposal of these materials.

No representation is made to any present or future developer or Site Owner with respect to future Site conditions, other than those specifically identified within this report.

Geosyntec disclaims any responsibility for any unintended or unauthorized use of this SMP. Geosyntec has not made any commitment to, or assumed any obligation or liability to, any present or future developer, property Owner, tenant, consultant, agent, Contractor, user, or other party owning or visiting the Site or portion of the Site based upon or arising out of implementation of this SMP. It is expressly understood that while this SMP is intended to provide guidance and establish a framework for the management of residual COCs in subsurface soil and soil gas at the Areas of Residual Impact to protect human health and the environment, this SMP shall not create any warranties or obligations to Geosyntec as to implementation, adequacy, or success of protective measures under this SMP.

9. REFERENCES

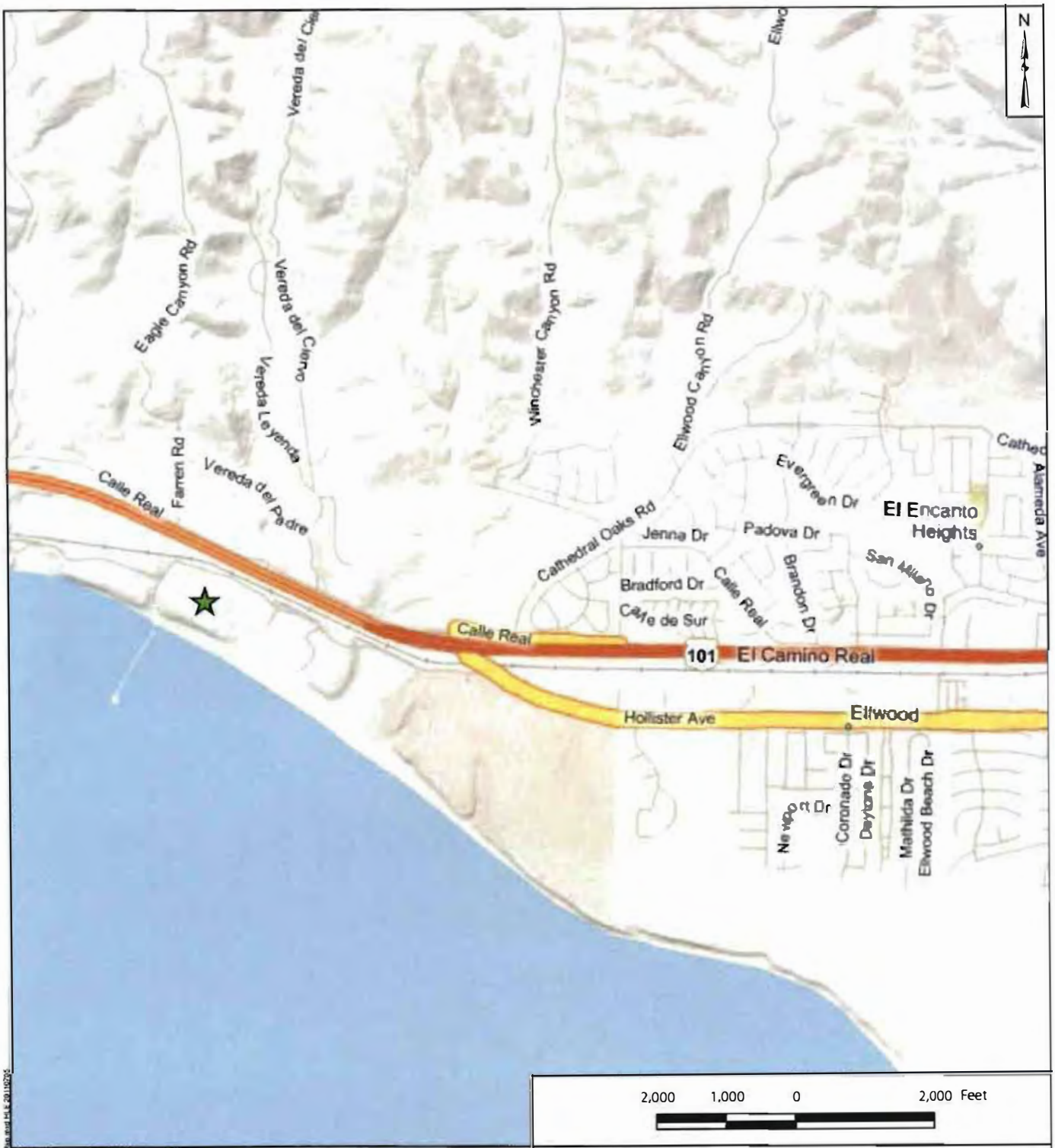
County of Santa Barbara Assessors Office. Website: http://www.sbcvote.com/assessor/AssessorParcelMap.aspx

Dibblee, T.W., 1987. Geologic Map of the Dos Pueblos Quadrangle, April 1987.

Holguin, Fahan & Associates, Inc., 2010. Corrective Action Plan for Chevron Former Service Station #9-4268, May 3.

IVI, Inc., 2008. Phase 1 Environmental Site Assessment, Bacara Resort and Spa. March 3.

FIGURES



Legend

★ Site Location

Notes

Location is approximate.

Site Location Map

8301 Hollister Avenue
Goleta, California 93117

Geosyntec consultants

Santa Barbara | July 2011

Figure 1

N
Entry / Lobby / Laundry & Engineering in Basement
Parking Lot
101
Waste Storage Area
Maintenance Building
Ellwood Pier
Tecolote Creek
Hollister Avenue
Beach Food Service and Restrooms
Venoco Ellwood Oil and Gas Processing Facility
Bell Canyon Creek
Sandpiper Golf Course
Legend
Approximate Site Boundary
Notes
0 150 300 600 Feet
Site Layout
8301 Hollister Avenue
Goleta, California 93117
Geosyntec consultants
Santa Barbara
July 2011
Figure
2

Legend

Site Boundary

Note: Numbers shown on this Figure correlate with Table 1 of this report.

0 600 Feet

N

Location of Residual Contaminants

8301 Hollister Avenue
Goleta, California 93117

Geosyntec consultants

Santa Barbara | September 2012

Figure 3

TABLES

Table 1
Preliminary Summary of Residual Contaminants
8210 Hollister Road, Santa Barbara (Goleta), California

Location on Figure	Location	Boring Number	Constituent with Maximum Concentration mg/kg*	Depth	Year
1	West Parking Lot[1]	F-5	TPH/Hyd-Motor Oil – 1,400	0.5'	1999
2	Northeast of Beach Shack[1]	F-31	TPH/Crude – 1,000	0.5'	1999
3	West of Beach Shack[1]	C-32	TPH/Crude – 1,100	0.5'	1999
4	Southeast part of Site; adjacent to east of Emergency Access Road[1]	C-37	TPH/Crude – 1,400	0.5'	1999
5	Elevator Shaft Area – Building 23 (Formerly named Pad 20)[2]	BNE	Kerosene – 3,520 Gasoline – 4,000	19'	1998
6	Southeast Corner of Site[3]	TPS1	TPH/Crude – 4,400 TPH/Crude – 2,400	3' 6'	1998
7	Southeast Corner of Site[3]	TPS3	TPH/Crude – 1,400	3'	1998
8	Southeast Corner of Site[3]	TPS4	TPH/Crude – 6,200 TPH/Crude – 2,400	3' 6'	1998
9	Northwest Property Boundary – Fifty feet from Western Boundary[4]	SB1	Chromium – 236 Chromium – 288	25' 30'	1987
10	Northeast of Building 23[4]	EA-1	Arsenic – 354	20'	1986
11	Southeast of Current Location of the Pool[4]	EA-7	Selenium – 539 Arsenic – 727	18'	1986
12	Parking Lot North of Tennis Courts[4]	EA-14	Barium – 8734 Vanadium – 732 Arsenic – 214 TPH – 4,000**	8'	1986
13	Southwest of Building 23[4]	EA 28	Toluene – 190	29'	1986

Table 1
Preliminary Summary of Residual Contaminants
8210 Hollister Road, Santa Barbara (Goleta), California

Location on Figure	Location	Boring Number	Constituent with Maximum Concentration mg/kg*	Depth	Year
14	Northeast of Current Pool [4]	EA-31	Vanadium – 712 Arsenic –204	15'	1986
15	Northwest of Beach Shack [4]	EA-32	TPH – 4,000**	2.5	1986
16	Northwest of Beach Shack [4]	EA-33	TPH – 1,500**	4.5	1986
17	Southeastern corner of Site [4]	TP-1	TPH – 7,000**	6	1986

Notes:

* Constituent concentrations used in summary as approved by Santa Barbara Fire Department are as follows (mg/kg): TPH – 1,000; Benzene – 0.1; Toluene – 15; Xylenes – 175; Ethylbenzenes – 70; Arsenic – 19; Barium – 5,200; Chromium – 210; Copper – 2,800; Lead – 400; Mercury – 220; Nickel – 1500; Selenium – 370; Vanadium – 520; Zinc – 22,000.

** Listed as sump waste residue – may have been removed.

References:

1. Arcadis, Report of Post-Grading Soil Sampling Program, 20 December 2000.
2. Rincon Consultants, Remedial Excavation Report, Elevator Shaft Area, Santa Barbara Club Resort and Spa, 4 September 1998.
3. Arcadis, Report of Sump TP-1 Characterization, Santa Barbara Club Resort and Spa, 30 October 1998.
4. Kaman Sciences Corporation, Supplemental Santa Barbara Site Assessment, March 1987. Data summarized by WESTEC Services Inc. in Appendix B of Environmental impact Report – Date unknown. Other Sources include same Table and Figure.

Appendix E
USER PROVIDED RECORDS

Site Information	
Utilities & Public Services	Water Supply: Goleta Water District Sewage: Goleta West Sanitary District Power: Southern California Edison Natural Gas: Southern California Gas Company Cable: Cox Communications Telephone: Verizon Fire: Santa Barbara County Fire Department Police: Santa Barbara County Sheriff's Department School Districts: Goleta Union/Santa Barbara High School Solid Waste Collection: Marborg Industries

9. ENVIRONMENTAL SETTING

The following Environmental Setting description includes both aspects of the entire 72.73-acre Bacara Resort and Spa property, and the proposed Completion Phase Lot 2 project site. The former project vicinity discussion provides context for understanding the relationship of the proposed Completion Phase project to the previously permitted and approved Initial Phase Resort and Spa.

Slope, Topography, Soils & Seismology

The project area is located on the western edge of the Goleta Valley, situated on an uplifted marine terrace between the Santa Ynez Mountains to the north and the Pacific shoreline to the south. The Bacara Resort and Spa property ranges in elevation from sea level to approximately 104 feet above mean sea level, and consists of five primary topographic features commonly referred to the Valley Floor, the Eastern Terrace, the riparian corridor of Tecolote Creek (directly west of the proposed Completion Phase project site), and the Haskell's Beach shoreline that includes sandy beach area and coastal bluffs. A grading plan was prepared for the Initial Phase of the resort which covered the entire 72.73 acre property. As a part of the initial phase of the resort, approvals that were granted for the Initial Phase of the resort and as required by the cultural resources study that was undertaken for the entire 72.73 acre site, certain improvements were completed within the area known as the Valley Floor or Lot 2 as designated in the proposed Vesting Tentative Map to protect cultural resources. First, a layer of geo-tech fabric was laid over the majority of the Valley Floor. Then, approximately two feet of yellow sand was placed above this membrane as an identification marker. Following the yellow sand, new layers of soil were placed above the majority of the Valley Floor, ranging from three to fifteen feet in height. Areas of the Valley Floor below the existing maintenance building, and parking lots were placed in compacted lifts, suitable for building and/or parking support. At the conclusion of the initial phase improvements and rough grading of the Valley Floor, there was an additional approximately 65,000 cubic yards of fill material gathered within the southern area of the Valley Floor from the initial phase improvements. This additional fill material was distributed within the southern portion of the Valley Floor,

south of the tennis courts and parking area in anticipation of its' potential use within the Completion Phase improvements.

Slopes on the project site range from relatively level (less than 3%) with locally confined slopes approaching 25% along the Valley Floor, within the Tecolote Riparian Corridor, and along the shoreline, with nearly level terrain at the summit of the Eastern Terrace that gives way to steep slopes of 40-70% where the terrace descends approximately 75 feet to the Valley Floor, and near vertical slopes at the 85 foot coastal bluff at the southernmost portion of terrace (adjacent and east of the Completion Phase project site).

Monterey shale rocks forms the majority of the Eastern Terrace which is capped by older alluvium. Younger alluvium is found in the Tecolote Creek corridor, as well as on the Valley Floor which also consists largely of artificial fill. Dune sand makes up the predominant geologic materials of the beach area.

Soils of the Eastern Terrace consist primarily of fine sandy loams underlain by loam and clay subsoil, and other loamy and gravelly material. Soils in the Valley Floor and Tecolote Creek corridor consists of recent alluvium layered with sandy loam, loam and loamy sand; however, soils on the Valley Floor have been modified substantially by fill grading associated with the previous oil and gas facilities, and engineered fill later provided for protection of environmentally sensitive resources.

The project area is a seismically active area but no known faults have been identified on the project site. The Moore Ranch Fault, classified as an active fault, is located approximately 1000 feet to the southeast of the site.

Fauna, Flora & Surface Water Bodies

The Tecolote Creek and associated riparian habitat (located west of the proposed Completion Phase project site on Lot 1), beach and dune habitat, coastal sage scrub and chaparral, and tree habitat potentially supporting monarch butterfly and/or raptor roost sites are identified as an Environmentally Sensitive Habitat Area (ESHA) in the City General Plan/Coastal Land Use Plan.

Archaeological Sites

Historically, the Valley Floor is within an archaeological sensitive area due to the presence of recorded prehistoric archaeological sites. Based on the 84-EIR-4, 87-EIR-11, 87-EIR-19 and the 91-EIR-13 and subsequent revisions as enumerated in the entitlement history below, the Valley Floor area has been analyzed and impacts mitigated, consistent with Initial Phase Conditions of Approval. A cultural resource management plan was developed to monitor and report the progress and completion of all required mitigations. All archaeologically sensitive areas noted in the EIR within the

Valley Floor were capped or filled with a protective geo-tech membrane, an identifiable two-foot layer of yellow sand and fill materials from three to twenty feet in height.

Prior to the installation of the geo-tech membrane and site capping, the local Chumash Native American Community, under the direction and monitoring of Jon Erlandson, PhD, a City-qualified archaeologist, performed a Phase II significance assessment and Phase III data recovery program. Non-burial remains and a collection of artifacts were recovered from these Phase III and II programs. The artifacts have been analyzed and curated at UC Santa Barbara.

Surrounding Land Uses

The project site is located on the western boundary of the City of Goleta. The site is surrounded by a range of land uses. Land uses to the immediate east of the site consist of the Venoco Oil and Gas processing facility, the Sandpiper Golf Course, and generally residential and commercial uses along the Hollister Avenue corridor. Land uses to the north of the site include the Union Pacific Railroad, US Highway 101, and farther north, the 248-acre Rancho Embarcadero residential subdivision located in Tecolote Canyon. Land uses directly west and adjacent to the project consist of the Initial Phase Bacara Resort and Spa and associated improvements, with land farther west consisting of rural agricultural uses. Haskell's Beach and the Pacific Ocean occur immediate south of the site. The Ellwood Pier is located approximately 150 feet to the west of the Bacara Resort.

Existing Development/Historic Site Uses

The Valley Floor project site is currently developed with a tennis facility and maintenance building, four (4) tennis courts, maintained landscaping, a public parking lot and vertical beach access trail to the beach, and beach house (snack bar and public restrooms), all associated with and developed concurrent with the Initial Phase Bacara Resort and Spa adjacent parcel to the west.

The project site was formerly used for petroleum drilling, storage and processing facilities that were abandoned in the1950s. Subsequent to the abandonment of the oil and gas facilities, the site was considered and analyzed for potential residential development (Embarcadero Residential Development, 79-EIR-16), and later for resort/visitor serving commercial facilities associated with the Hyatt Resort and Hotel (84-EIR-4) which ultimately resulted in permitting and development of the existing Bacara Resort and Spa (see a detailed discussion in *Permitting and Entitlement Background* below).

Permitting and Entitlement Background:

In 1983, Wallover Inc. (with Hyatt Corporation as the future proposed manager) filed a Preliminary Development Plan application with the County of Santa Barbara for

Required/Recommended Mitigation Measures

- Standard City of Goleta Best Management Practices (BMP) short-term erosion control measures and long-term grading ordinance and State Building Code operational standards.

Residual Impact

- Less than significant.

EIR Scope of Work

- Review all previous and present geotechnical analyses to determine the existence and extent of any expansive soils on the project site.
- Discuss all standard short-term and long-term conditions to address geologic hazards.

HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact.	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	See Prior Document
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓		
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?	✓				
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓	
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and , as a result, would it create a significant hazard to the public or the environment?	✓				
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?				✓	
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?				✓	

Would the project:	Potentially Significant Impact.	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	See Prior Doc-ument
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			✓		
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?		✓			

Existing Setting

- Proposed project is located adjacent to Venoco Ellwood Onshore Facility (EOF) oil and gas processing plant that treats crude oil and gas produced from offshore oil and gas platforms.
- The site is located in proximity to a major transportation corridor and the Venoco facility that transport and store hazardous materials.
- The project site was once occupied by petroleum drilling, storage and processing facilities abandoned in the1950s. The site may contain remnant oil and gas production materials associated with previous oil and gas operations. The entire site, including the areas of the site that were once occupied by petroleum drilling was studied as part of the original entitlement history. These studies include methane and hydrogen sulphide studies, with methane and hydrogen sulphide detection systems in place for the initial phase of the resort.
- The project area has been designated by the City of Goleta Safety Element as a high wildland fire hazards area due to the relatively steep slopes and ample vegetation that occur in the area.
- The site is located approximately one mile from the closest school (Ellwood Elementary School).
- The project area is located over two miles from the closest public airport and no private airstrips exist within the region.
- An Emergency Response Plan was developed pursuant to the initial improvements of the resort that addressed the measures that would be undertaken in the event of an event at the Venoco Ellwood Onshore Facility (EOF).
- A Hydrogen Sulfide Monitoring Plan was developed during the initial phase of the resort and approved by the Fire Department. There are current hydrogen sulfide monitors within the area of the completion phase.

Thresholds of Significance

A significant impact with regard to Hazards & Hazardous Materials would be expected to occur if the proposed project resulted in any of the impacts noted in the above checklist. In addition, the City's *Environmental Thresholds & Guidelines Manual* addresses public safety impacts resulting from involuntary exposure to hazardous materials. These thresholds focus on the activities that include the installation or modification to facilities that handle hazardous materials, transportation of hazardous materials, or non-hazardous land uses in proximity to hazardous facilities. Since the proposed project is not a hazardous materials facility, the City's risk based thresholds are not particularly applicable. However, for the purposes of this analysis, the proposed project would be considered to pose a significant impact if it results in the exposure of people to a variety of hazards or hazardous materials as listed above.

Project-Specific Impacts

(a.)

- The proposed project would not create a significant hazard to the public or environment from routine transport, use or disposal of hazardous materials.
- Small amounts of hazardous materials may be found in solvents similar to those found in common household products, such as cleaning products or pesticides.
- Hazardous materials used in construction and operation of the proposed project would be subject to City, State, and federal regulations, reducing impacts to a less than significant level.

(b.)

- The transport and storage of hazardous materials associated with the adjacent major highway transportation corridor, Union Pacific Railroad and Venoco, Inc. Oil and Gas processing facility may create a significant hazard for people residing or working in the project area and/or the environment.
- A Hydrogen Sulfide Monitoring Plan, developed during the initial phase of the resort, will be reconfigured, where required, to accommodate the proposed completion phase improvements
- An Emergency Response Plan, developed during the initial phase of the resort. The proposed project would not interfere with an adopted emergency response or evacuation plan.

(c.)

- The project site is located approximately one mile from Ellwood Elementary School on Hollister Avenue.
- The project would not result in hazardous emissions or the handling of hazardous or acutely hazardous materials.
- No impacts would occur in this regard.

(d.)

- The project site is currently developed with a tennis facility and maintenance building, four (4) tennis courts, maintained landscaping, a public parking lot and vertical beach access trail to the beach, beach house (snack bar and public

restrooms), all associated with and developed concurrent with the existing Bacara Resort and Spa located on the adjacent parcel to the east.

- A search of regulatory databases for sites with known or suspected hazardous material contamination, use of hazardous or toxic materials and regulated wastes, discharge or spillage incidents, discharge permits, landfills, and storage tanks for the project site has not been conducted to determine the presence of any known contamination or hazardous conditions on the property.
- In accordance with CEQA 1988 Findings and pursuant to Condition Numbers 97 & 105 of the Conditions of Approval and the Environmental Health Services Letter of 11/10/87, an Environmental Quality Assurance Program (EQAP) was required and instituted that provided for the monitoring and reporting for the investigation and removal of hazardous materials during the installation of the initial phase of the resort and included follow up reports. The Completion Phase project site has been fully explored, capped and sealed with layers of fill soils brought in from the Initial Phase of the construction.

(e.)

- The project site is not located within an airport land use plan.
- The City of Santa Barbara Municipal Airport is located approximately 4.5 miles south of the project site.
- The proposed project would not create a safety hazard for the people residing or working in the project area.

(f.)

- Refer to Response (e.) above.

(g.)

- The proposed project would not interfere with an adopted emergency response or evacuation plan.
- The project would provide adequate access for emergency vehicles, and appropriate evacuation routes, as well as regulate the storage of any flammable and explosive materials and their transport within the Plan area.
- A new/relocated emergency access road is proposed adjacent to the new/relocated vertical beach access trail. The emergency access road would be available for emergency responders to access the coast during emergency situations. The emergency access road would terminate with a fire department turnaround and staging area adjacent to the beach and would provide for the launch of amphibious vehicles, currently the only location in the City where this operation can occur.
- All internal jitney paths within the proposed project area have also been designed to accommodate emergency response vehicles.
- The project would comply with applicable Uniform Fire Code regulations for issues such as fire protection systems and equipment, general safety precautions, water supplies and distances from fire hydrants.
- During construction of the proposed improvements, temporary road or lane closures, which could potentially block emergency access and/or evacuation routes, are not anticipated to occur.

(h.)

- The Completion Phase improvements are proposed to be constructed in Type 1"B" construction, a non-combustible, fire proof form of construction. In addition, all areas would be fire sprinkled. The site plan landscaping has been configured to meet the requirements of the Fire Department for fire spread.
- The proposed project is located in an area designated as a high wildland fire hazard area per the City of Goleta Safety Element.
- The project includes new development and associated and visitors into a high fire hazard area.
- The proposed uses, programs, and facility improvements must ensure that all development and uses minimize risks to life and property in areas of high fire hazards.
- A Fire Protection Plan, developed during the initial phase of the resort, will be updated to include the improvements proposed within the completion phase.
- The project is planned to be constructed in conformance to a Type 1B fire proof construction, as well as being fully sprinkled.

Cumulative Impacts

- All related projects would be required to implement standard County of Santa Barbara Fire Department hazardous material use and storage and fire suppression conditions to reduce hazards from project occupancy. The project's contribution to cumulative hazardous materials impacts would be adverse, but less than significant.

Required/Recommended Mitigation Measures

- County of Santa Barbara Fire Department hazardous material use and storage conditions.

Residual Impact

- To be determined through EIR analysis

EIR Scope of Work

- Review fire protection plans for compliance with Santa Barbara County Fire Department standards.
- Discuss all standard short-term and long-term conditions to address hazardous materials storage and use.
- Consult with Santa Barbara County Fire Department Hazardous Materials Section staff regarding compliance.

Appendix F
STANTEC RESUMES

Steve Little RG, CHG

Principal Geologist

Steve has more than 30 years of professional environmental experience and is experienced in managing professionals, as well as complex environmental projects. He has managed and provided quality assurance oversight on numerous projects involving soil, groundwater, and surface water impacts from petroleum hydrocarbons, industrial solvents, agricultural chemicals, and mining wastes. Steve specializes in the development of compliance strategies and regulatory negotiation. He has negotiated extensively with the California Regional Water Quality Control Board and local environmental oversight agencies in California. Steve has successfully negotiated for site-specific cleanup goals, limited action stances, and passive remediation programs including containment, capping and monitoring.

EDUCATION

MS, Geology, Oregon State University, Corvallis, OR, 1986

BS, Geology, University of Idaho, Moscow, Idaho, 1984

REGISTRATIONS

Certified Hydrogeologist #320, State of California

Registered Geologist #4843, State of California

PROJECT EXPERIENCE

Due Diligence Projects

•Over the past 29 years, managed or conducted over 500 Phase I Assessments of commercial, industrial, and agricultural properties in California, Texas, Oklahoma, and Kansas. The Phase I assessments were conducted in accordance with standards established by the American Society for Testing and Materials (ASTM). The assessment reports clearly identified Recognized Environmental Concerns on the properties and provided recommendations for Phase II assessments when appropriate.

•Managed and conducted Environmental Property Transaction Screens for low risk properties in Santa Barbara, San Luis Obispo, and Monterey Counties in accordance with standards established by the American Society for Testing and Materials (ASTM). The Transaction Screens were conducted for retail commercial, non-industrial commercial, and agricultural properties. The scope of work included site reconnaissance, completion of the ASTM Transaction Screen Questionnaire, regulatory agency databases search, and review of historical land use. The results of the Transaction Screen, identifying any Recognized Environmental Conditions, were summarized in an executive summary with attachments.

•Managed a program of over one hundred Phase I Environmental Site assessments of oil and gas properties in support of planned divestiture by a major oil company. Assisted in the development of standardized work scopes for Phase I Site Assessments and Baseline Divestiture Assessments, including detailed field checklists and protocols for identification and description of environmental conditions related to exploration and production activities. Over an approximately one year period, Mr. Little managed environmental assessments of 106 oil and gas properties in accordance with ASTM standards, including an evaluation of regional issues associated with naturally occurring radioactive material (NORM). Conducted state and regional regulatory research and developed protocols for estimating remediation, decommissioning, and site restoration costs for oil and gas properties.

** denotes projects completed with other firms*

Steve Little RG, CHG

Senior Geologist

•Managed historical research activities to identify or confirm the location of 27 former oil refinery sites in California, New Mexico, Oklahoma, Texas, Kansas, Kentucky, Louisiana and Pennsylvania. Once the site locations were confirmed, Phase I assessments were conducted to evaluate recognized environmental concerns and current land use. For sites exhibiting environmental concerns, detailed historical investigations were conducted to identify past owners, operators and industrial activities on the property.

Environmental Site Remediation

Vegetable Cooling Facility, Salinas, California (Project Manager)

Steve is conducting site assessments and soil and groundwater remediation at a fleet fueling facility at a commercial site. A free product recovery program for monitoring wells containing up to 6 feet of floating product has been implemented. Steve's tasks include preparation of air emissions permits, selection of skimmer pump equipment, supervision of field installation and testing, management and disposal of recovered product, and preparation of remediation progress reports for regulatory submittal. The free product recovery phase has been completed and in-situ remediation has now been implemented using a combination air-sparging/vapor extraction system.

School Bus Fueling Facility, Santa Maria, California (Project Manager)

Steve served as the project manager for a bus fueling facility at a public school with releases to soil and groundwater from former USTs. Following the assessment of vadose zone impacts, the former UST location and surrounding area was excavated. Gasoline-impacted soil was treated onsite during the summer months using controlled aeration. The groundwater plume was delineated using direct-push borings, hydropunch sampling, and conventional monitoring wells. Dissolved-phase hydrocarbons were treated using down-well oxygen emitters.

Active Service Station, San Luis Obispo County, California (Technical Expert)

Steve served as the technical expert on a portfolio of active service stations with historic releases to shallow groundwater. Assessment techniques included hollow-stem auger, direct-push, and continuous soil sampling. Well installation included conventional monitoring wells, oxygen-sparging wells, and small-diameter direct-push monitoring wells. Interim remediation of groundwater was implemented using oxygen sparging. Oxygen sparging was accomplished on a biweekly schedule using portable oxygen bottles connected to the sparge wells. Oxygen pressure and flow rate was recorded for the sparge wells and depth to water and dissolved oxygen was monitored in nearby observation wells. Biologic degradation of dissolved-phase hydrocarbons and fuel oxygenates was evaluated during quarterly groundwater monitoring.

Former Service Station – UST Release Site, San Luis Obispo, California (Project Manager)

Steve served as the project manager on a UST release site located at a busy downtown intersection with multiple historic releases in the area. He assessed both the recent and historical UST cluster locations and dispenser islands to delineate soil and groundwater impacts. In-situ remediation was implemented using a combination air-sparging/vapor extraction system. Offsite sources and commingled plumes were documented using site history research and forensic chemical analysis.

Active Service Station – Expedited Site Assessment, Cambria, California (Project Manager)

Steve served as the project manager on a highly publicized MTBE release site that threatened a nearby creek and two municipal supply wells. The plume was investigated using expedited site assessment techniques to delineate the extent of groundwater impact within the shallow and deep alluvium. Bedrock was evaluated as a migration pathway using surface fracture mapping, rock coring, subsurface geophysical methods, and constant-head infiltration testing. Remediation was accomplished using dual-phase extraction for source removal, groundwater extraction, and biological treatment for hydrologic plume containment.

** denotes projects completed with other firms*

Steve Little RG, CHG

Senior Geologist

Mining

Buckeye Mine, San Simeon, California (Project Manager)

Mr. Little implemented interim reclamation measures at a historic mercury mine in advance of the upcoming rainy season and pending design and permitting of final reclamation measures. Interim controls included surface water interceptor and diversion channels to prevent further erosion of the over-steepened mining pit walls and installation of erosion controls. He also conducted subsurface geologic investigations to identify nearby sources of unmineralized borrow soil to be utilized for fill and final cover. Final reclamation measures included sealing openings to underground workings, re-grading the open mine pit and butressing the pit walls with clean fill. Surface water conveyance and erosion controls including drainage channels, culverts, and a riprap-lined discharge structure were constructed. Following placement and compaction of the clean soil cover, the entire disturbed area was hydroseeded and covered with erosion control matting. The final reclamation work was completed before the heavy El Nino rains of 1997/98. This portion of the Pine Mountain Mining District receives average annual precipitation of approximately 50 inches. Follow-up inspections during the spring indicated excellent establishment of the vegetative cover with virtually no erosion damage following mine reclamation.

Buena Vista and Klau Mines, Paso Robles, California (Project Manager)

Mr. Little developed, designed, and implemented mine reclamation measures in response to a CERCLA Section 106 Unilateral Administrative Order issued by the U.S. EPA Region 9. The reclamation work included drainage improvements to reduce surface water infiltration, elimination of surface water conduits leading to collapsed underground workings, erosion controls, installation of four sediment retention basins to reduce loadings of mineralized sediments to nearby creeks, and revegetation of disturbed areas. Based on an aggressive implementation schedule, the reclamation work was completed within three months following EPA approval of the reclamation plan.

Ocean View and Buckeye Mines, San Simeon, California (Project Manager)

Mr. Little conducted a sediment sampling program in a major tributary to Lake Nacimiento to evaluate the lateral distribution of sediment mercury concentrations downstream of two abandoned mercury mines. The survey included detailed field observations of stream conditions, monitoring of surface water quality and collection of sediment samples along a 10-mile transect of the stream in rugged terrain. The survey results indicated that the two abandoned mines, which are located high in the watershed, were not a significant contribution to mercury loadings in lake bottom sediments.

Ocean View and Buckeye Mines, San Simeon, California (Project Manager)

Mr. Little conducted reconnaissance geologic mapping and sampling of two abandoned mercury mines in the California Coast Ranges to identify mining wastes and potential water quality impacts. He identified former open pit and underground workings, ore piles, overburden dumps and retort piles. Mr. Little detailed aerial photograph review and diligent field mapping in rugged terrain identified the presence of several historical retort waste piles, which were highly mineralized and deeply eroded. He collected samples of mining wastes, surface waters, storm water and creek sediments. Implemented interim reclamation measures to reduce erosion and downstream transport of mining wastes. Mr. Little also assisted in the design and permitting of final reclamation measures including re-grading, capping, erosion controls, drainage diversion and improvements, and revegetation.

Rinconada Mine, Paso Robles, California (Project Manager)

Mr. Little conducted exploratory subsurface assessment of acidic seeps at an abandoned mercury mine and supervised the installation of collection sumps to capture acid mine drainage (AMD). The collection sumps effectively eliminated the uncontrolled seepage of AMD and contamination of surface water. The collected AMD was conveyed to a surface impoundment for lime treatment to raise the pH and precipitate dissolved metals.

** denotes projects completed with other firms*

Kirk A. Henning

Senior Scientist

Mr. Henning has over 25 years of professional experience in the environmental consulting field. This experience has involved conducting and managing Phase I and Phase II type site assessment projects, waste management and compliance associated with assessment activities, data verification/validation, and groundwater monitoring projects. His project involvement has included project management, analytical data validation, laboratory coordination, data analysis and data management, report preparation, environmental sampling (groundwater, soil, soil gas, and air), waste management, and site assessments. Mr. Henning's project participation has included determining the nature and extent of such contaminants as volatile organic compounds (VOCs) and semi-volatile organic compounds, petroleum hydrocarbons, metals, and pesticides.

EDUCATION

Bachelor of Arts, Aquatic Biology, University of California, Santa Barbara, California, 1984

Shipping of Hazardous Materials Course, Federal Express, -, -, 1988

MEMBERSHIPS

8-Hour OSHA Health & Safety Annual Update Certification, 2001, Occupational Safety & Health Administration

40-Hour OSHA Health & Safety Certification (29 CFR 1910.120), 1987, Occupational Safety & Health Administration

PROJECT EXPERIENCE

Aquifer Delineation and Characterization

Aquifer Tests, Central Coast, California

Coordinated and implemented pump tests and slug tests for several sites throughout San Luis Obispo County, Monterey County, and Santa Barbara County.

Environmental Site Assessments Phase I, II, III

Phase II Environmental Site Investigations, Central Coast, California,

Performed Phase II site assessments of approximately 50 commercial and industrial properties throughout San Luis Obispo County, Monterey County, and Santa Barbara County. Prepared sampling plans, coordinated sampling activities, coordinated waste management, analyzed data, and prepared reports.

Phase I Environmental Site Assessments, Central Coast, California

Performed Phase I site assessments of approximately 150 commercial and industrial properties throughout San Luis Obispo County, Monterey County, and Santa Barbara County. Conducted site visits, conducted interviews, collected historical data, interpreted aerial photographs, and prepared reports.

Multiple Projects, Multiple Locations, California

Performed research for three Phase I site assessments for PG&E properties in Buellton, Salinas, and Cambria, California.

Multiple Projects

Performed Phase I site assessments of approximately 30 commercial and industrial properties throughout San Luis Obispo County, Monterey County, and Santa Barbara County. Conducted site visits, conducted interviews, collected historical data, interpreted aerial photographs, and prepared reports.

Environmental Site Remediation

Multiple Projects, Sacramento, California

Prepared Sampling and Analysis Plans (SAPs) for potentially hazardous waste sites located at an Air Force base near Sacramento. Researched historical data, determined sampling locations and analytical methods, and prepared SAP reports.

Unknown Project, Sacramento, California

Participated in writing the final report for a groundwater investigation at a large Air Force base near Sacramento. Specifically, performed the data analysis and writing of the sections describing types and extent of groundwater contamination.

** denotes projects completed with other firms*

Kirk A. Henning

Associate Scientist

Groundwater Monitoring and Reporting

Unknown Project, Arroyo Grande, California

Performed groundwater sampling for a groundwater monitoring program at a petroleum refinery. Prepared equipment, collected groundwater samples using portable groundwater extraction methods, completed documentation, and shipped samples.

Unknown Project, Sacramento, California

Performed groundwater sampling for an extensive groundwater monitoring program at an Air Force base. Prepared equipment, measured groundwater elevations, collected groundwater samples using dedicated and portable groundwater extraction methods, completed documentation, and shipped samples.

Natural Resource Damage Assessment and Oil Spill Response

BP Gulf of Mexico MC252 Spill Response

As a Branch Team Leader and member of the Rapid Response Environmental Site Support Team (RRESST), performed waste management assessments at Venice, Louisiana and Grand Isle, Louisiana from August 2010 to January 2011. Duties included daily on shore and near shore facility inspections to document waste management practices in conformance with the BP MC252 Waste Management Plan and preparation of daily reports. As a Branch Team Leader, acted as a liaison between the branch and the Section Leaders, coordinated daily team member activities, and provided information regarding waste management to branch leaders.

Project Management

Unknown Project, Sacramento, California

Coordinated field activities including preparation, sample collection, sample handling, and field documentation for an extensive groundwater monitoring program at an Air Force base. Ensured the quality and integrity of samples collected by three field sampling teams. Participated in the preparation of quarterly technical reports describing results of the groundwater monitoring program and the installation of dedicated pumping systems for over 50 monitoring wells.

Unknown Project, Sacramento, California

Coordinated the off-site analytical requirements for a remedial investigation at an Air Force base. Specifically, managed communications between the laboratories and the project coordinator, supported project scheduling, monitored laboratory capacities and turnaround times, processed analytical reports, and reviewed QA/QC documents.

Unknown Project, Sacramento, California

Managed an extensive groundwater monitoring program for an Air Force base. Performed budget tracking, scheduling, quality assurance/quality control (QA/QC) review, and task supervision for quarterly monitoring of 100 to 150 wells. Prepared monthly status reports and project correspondence with regard to well sampling locations, sample analysis, and required QA/QC. Prepared quarterly reports for presentation to the Air Force. Coordinated staffing, peer review, and status meetings.

Unknown Project, Arroyo Grande, California

Managed a groundwater monitoring program for an oil refinery. Performed budget tracking, scheduling, quality assurance/quality control (QA/QC) review, and task supervision for quarterly monitoring of 19 wells. Prepared quarterly data reports and chemical contour maps.

Quality Assurance / Quality Control

Unknown Project, Sacramento, California

Performed assessments of analytical data quality for an extensive groundwater monitoring program for an Air Force base. Reviewed analytical laboratory reports, communicated with laboratory, and participated in the preparation of QA/QC summary reports.

Unknown Project, Arroyo Grande, California

Performed assessments of analytical data quality for a groundwater monitoring program for an oil refinery. Reviewed analytical laboratory reports, communicated with laboratory, and participated in the preparation of QA/QC summary reports.

Site Assessment

Multiple Projects, Sacramento, California

Performed PSAs of approximately 30 potentially hazardous waste sites for a large Air Force base near Sacramento. Conducted site visits, conducted interviews, collected historical data, interpreted aerial photographs, and prepared reports.

** denotes projects completed with other firms*

Kirk A. Henning

Associate Scientist

Multiple Projects

Performed Preliminary Site Assessments (PSAs) of approximately 30 potential hazardous waste sites in California and Nevada for the U. S. Army Corps of Engineers. Conducted site visits, conducted interviews, collected historical data, and prepared reports.

** denotes projects completed with other firms*

ATTACHMENT H

H-2. Third-Party Report Review, Beach House Relocation Project, Ritz-Carlton, Bacara Resort & Spa, 8301 Hollister Avenue, Goleta, California.
Ninyo & Moore, September 14, 2018

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Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

September 14, 2018
Project No. 108643001

Mr. Bret McNulty
Contract Project Manager
City of Goleta, Planning & Environmental Review Department
130 Cremona Drive, Suite B
Goleta, California 93117

Subject: Third-Party Report Review
Beach House Relocation Project
Ritz-Carlton Bacara Resort & Spa
8301 Hollister Avenue
Goleta, California

Reference: Stantec, 2018, Phase I Environmental Site Assessment, Ritz-Carlton Bacara Resort Beach House, 8301 Hollister Avenue, Goleta, California: dated April 25.

Dear Mr. McNulty:

In accordance with your request and authorization to proceed, Ninyo & Moore has completed a review of the above-referenced report for the subject property (the site). The Phase I Environmental Site Assessment (ESA) report, prepared by Stantec Consulting Services, Inc. (Stantec) was reviewed for consistency with the ASTM International E 1527-13, United States Environmental Protection Agency (USEPA) 40 Code of Federal Regulations (CFR) Part 312 titled "Standards and Practices for all Appropriate Inquiries (AAI)," and for adherence to the general standard of care practiced by environmental professionals.

Our scope of services included a discussion of opinions regarding whether the conclusions and/or recommendations given in the report are supported by the findings of the Phase I ESA, and discussion of opinions regarding whether additional mitigation measures may be necessary to resolve environmental issues for the proposed Beach House Relocation Project (Project).

SITE DESCRIPTION

The site is comprised of approximately 1 acre of land within a larger approximately 39-acre parcel and approximately 73-acre Ritz-Carlton Bacara Resort & Spa (Bacara Resort). The site is located primarily along Haskell's Beach and is surrounded by open-space portions of the Bacara Resort. For the purposes of the Phase I ESA, the site boundary included an existing beach house on the

northwestern portion of the site, proposed beach house and restroom facilities on the northeast portion, and emergency water rescue vehicle launch ramp on the southeastern portion.

REVIEW OF PHASE I ESA

The site is developed with a single-story 3,600 square-foot beach house building, which is used as a seasonal snack shop, restrooms, and storage and utility areas. The site building was constructed in 1999-2000. Other improvements include outdoor picnic and shower areas, and landscaped areas. Access to the site is from an unpaved path leading from the beach to a public parking lot to the north of the existing beach house. A sewer lift station vault is located on the east side of the building and pumps sewage to the Goleta Sanitation District municipal sewer system. A paved emergency fire road is located along the eastern portion of the site and extends north-northeasterly to Hollister Avenue.

According to Stantec's historical review and review of previous assessments, the 73-acre Bacara Resort property (which includes the site) was part of the Ellwood Oil Field. Oil and gas exploration and production activities began in 1928 and continued until the 1960s. The following oil field support structures were used on or near the Bacara Resort property: pipelines, nine aboveground storage tanks (ASTs), a gasoline absorption plant, electric dehydration plant, oil well piers, and two ponds for storing oily water wastes. Several environmental investigations and remediation were performed prior to the development of the Bacara Resort. Groundwater was estimated to be present at 10 to 15 feet below ground surface (bgs); however, the Phase I ESA found that there were no beneficial uses of groundwater and groundwater was not a concern at the site. Methane and hydrogen sulfide gas associated with naturally occurring seeps from oil deposits were found in some portions of the Bacara Resort property. The County of Santa Barbara required that all the resort building be equipped with subslab venting and vapor barrier membranes to prevent subsurface vapor from entering the structures through the foundation.

In 2014, the Santa Barbara County, Public Health Department (SBCPHD), Site Mitigation Unit (SMU) issued a closure letter confirming completion of the investigation and remediation at the Bacara Resort property. The closure letter required a land use covenant (LUC) and implementation of a soil management plan (SMP) (Geosyntec Consultants, 2013) during any and all soil disturbance activities. According to the closure letter, changes in the present or proposed use of the property may require further site characterization, mitigation activities, and requires notification to the SBCPHD.

According to the Phase I ESA, three areas (Areas 2, 3, and 4) of residual impacts are located at the site, where concentrations exceed unrestricted use cleanup standards. The areas contained elevated levels of petroleum (crude oil at or above 1,000 milligrams per kilograms [mg/kg]) at a depth of approximately 6 inches bgs.

During Stantec's site reconnaissance, abandoned steel pipes were seen protruding from bluffs and embankments on the adjoining resort property. Stantec interpreted the pipes to be remnants of the former oil fields that are subject to the covenant and SMP conditions.

Stantec identified the residual contaminants from the former oil production activities that are present on or immediately adjacent to the site as a controlled recognized environmental condition (CREC). In February 2013, a LUC addressing the residual contaminants was recorded with the County of Santa Barbara. In April 2014, the SBCPHD issued a closure letter confirming the completion of the site investigation and remediation at the Bacara Resort and that no further action was required, other than compliance with the LUC and the approved SMP. Stantec noted that any future ground disturbance activity at the site could encounter residual contaminants and is subject to the requirements in the approved SMP.

No recommendations were provided in the Phase I ESA.

ASTM/STANDARD OF CARE COMPLIANCE – PHASE I ESA

It is our opinion that the 2018 Stantec report was prepared in general accordance with ASTM E 1527-13 standard and the general standard of care practiced by environmental professionals in the region in which the site is located. The following minor inconsistencies were noted during our review that would likely not affect the findings and conclusions of the report:

- In the Local/Regional Environmental Records section (Section 4.4), the City of Goleta is incorrectly identified as the Certified Unified Program Agency (CUPA). The CUPA for the region is the County of Santa Barbara. The SBCPHD regulates businesses that handle hazardous materials, generate or treat hazardous waste, or operate aboveground or underground storage tanks. In the Data Gaps section (Section 7.2), the report correctly identifies the CUPA.

- At the time of the Phase I ESA report preparation, a response to Stantec's request for information had not been received from the City of Goleta and was considered a data gap. According to information provided by the City of Goleta, records pertaining to hazardous materials were not found. The only information available was related to the original Environmental Impact Report (EIR) provided by the County of Santa Barbara, which was conducted prior to the incorporation of the Bacara Resort property into the City (2002).

- It does not appear that records pertaining to hazardous materials handing / hazardous waste generation were reviewed at the SBCPHD. Records pertaining to the assessment and remediation were reviewed online via the State Water Resources Control Board's GeoTacker website; however, those records do not contain compliance related inspections associated with CUPA oversight.

- The Santa Barbara County Air Pollution Control District (APCD) records were not reviewed. Review of certain local regulatory agency records are left to the judgement of the environmental professional. According to ASTM International E 1527-13, the Environmental Professional shall review records if they are: 1) reasonably ascertainable; 2) sufficiently useful, accurate, and complete; and 3) are generally obtained, pursuant to local good commercial and customary practice. In our experience, review of APCD records is the general standard of care practiced by environmental professionals in the area.

CONCLUSIONS AND RECOMMENDATIONS

It is our opinion that the 2018 Stantec Phase I ESA may be considered to be in general compliance with ASTM E1527-13, USEPA 40 CFR Part 312. Ninyo & Moore generally concurs with the findings and conclusions of the report. Based on our understanding of the proposed Project, Ninyo & Moore recommends the following changes/additions to the proposed mitigation measures (Bacara Resort and Spa Completion Phase Project EIR):

- The SBCPHD should be notified of the proposed relocation of the Beach House / change in land use.

- During soil disturbance activities, the SMP should be implemented, including:

    - Preparation and implementation of a worker health and safety plan in general accordance with Federal Occupational Safety and Health Administration Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120) and Title 8 CCR Section 5192. The plan should be reviewed and approved by a Certified Industrial Hygienist.

    - During planned construction activities at areas of residual impact, storm water pollution prevention controls should be implemented by the Contractor.

    - Potential exposure to methane and other flammable gases, as well as hydrogen sulfide should be evaluated prior to and during soil disturbance activities.

    - Sewer odors from a sewer lift pump were noted at the existing beach house. The potential to encounter sewage-contaminated soil during soil disturbance activities should be added to the SMP.

    - Implement SMP protocols and procedures including the storage, management, notifications, analytical testing, and disposal of contaminated or potentially contaminated soil during construction activities.

    - Following completion of construction activities involving the removal of soil from areas with residual impact, a report summarizing the implementation and compliance with the SMP should be prepared and submitted to the SBCPHD.

- For areas with documented or suspected impacts to soil and/or groundwater, appropriate worker and community health and safety measures (e.g., dust control and air monitoring) should be implemented during soil disturbance activities.

- Groundwater is estimated to be found at depths of 10 to 15 feet bgs. If proposed construction activities are planned to extend to this depth, the potential for encountering petroleum-impacted groundwater should be evaluated.

- If elevated levels of methane and/or hydrogen sulfide are encountered near the proposed beach house, a subslab venting system and vapor barrier should be evaluated.

- If previously unknown oil support features (e.g., pipelines) are encountered during construction activities, notification to regulatory agencies may be required prior to removing the feature, particularly if there is the potential to affect public health, safety, and/or the environment. Geophysical surveys should be conducted prior to soil disturbance to evaluate the potential for unknown pipelines.

LIMITATIONS

Ninyo & Moore's opinions regarding environmental conditions, as presented in this report, are based solely on the information contained in the referenced report. No effort has been made to independently verify the accuracy of the information contained in the report. No site reconnaissance or subsurface testing was conducted as part of this limited third party review.

The third party review described in this report has been conducted in general accordance with the standard-of-care exercised by environmental consultants performing similar work in the project area. No warranty, expressed or implied, is made regarding the professional opinions presented in this report. Variations in site conditions may exist and conditions not observed or described in this report may be encountered during subsequent activities. Please also note that this study did not include an evaluation of geotechnical conditions or potential geologic hazards.

Our conclusions, recommendations, and opinions are based on the review of referenced reports for this limited assessment. It should be understood that the conditions of a site could change with time as a result of natural processes or the activities of man at the site or nearby properties. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information, or has questions regarding content, interpretations presented, or completeness of this document. This report is intended exclusively for

use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.

We appreciate the opportunity to be of service.

Respectfully submitted,
NINYO & MOORE

Adrian Olivares
Senior Project Environmental Scientist

Stephan A. Beck, PG 4375
Manager, Environmental Sciences Division

AO/SB/gg

Distribution: (1) Addressee (via e-mail)

ATTACHMENT H

H-3. Response to Peer Review Comments, Phase I Environmental Site Assessment Ritz-Carlton Bacara Resort Beach House, 8301 Hollister Avenue, Goleta, California. Stantec, January 29, 2018

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Stantec Consulting Services Inc.
3437 Empresa Drive, Suite A
San Luis Obispo CA 93401-7355
Tel: (805) 546-0455
Fax: (805) 546-0583

January 29, 2019

Mr. Bret McNulty
Contract Project Manager
City of Goleta, Planning & Environmental Review Department
130 Cremona Drive, Suite B
Goleta, California 93117

Subject: **Response to Peer Review Comments, Phase I Environmental Site Assessment Ritz-Carlton Bacara Resort Beach House, 8301 Hollister Avenue, Goleta, California**

Reference: **Third-Party Report Review, Beach House Relocation Project, Ritz-Carlton Bacara Resort & Spa by Ninyo & Moore, September 14, 2018**

Dear Mr. McNulty

On behalf of CWI RSCB Hotel LLC, Stantec Consulting Services Inc. (Stantec) has prepared this response to the comments and recommendations provided by Ninyo & Moore in their third-party review of the above referenced Phase I Environmental Site Assessment Report prepared by Stantec dated April 25, 2018. Also provided is an updated opinion by the Environmental Professional (EP, as defined by ASTM Standard E1527-13) as to the environmental conditions associated with the currently planned location for the new beach facility structure at the Property.

For ease of response, the comments and recommendations provided by Ninyo & Moore are reproduced below in italics and followed by Stantec's response:

- *In the Local/Regional Environmental Records section (Section 4.4), the City of Goleta is incorrectly identified as the Certified Unified Program Agency (CUPA). The CUPA for the region is the County of Santa Barbara. The SBCPHD regulates businesses that handle hazardous materials, generate or treat hazardous waste, or operate aboveground or underground storage tanks. In the Data Gaps section (Section 7.2), the report correctly identifies the CUPA.*

  Correction noted; the SBCPHD should be identified as the CUPA in Section 4.4 of the report.

- *At the time of the Phase I ESA report preparation, a response to Stantec's request for information had not been received from the City of Goleta and was considered a data gap. According to information provided by the City of Goleta, records pertaining to hazardous materials were not found. The only information available was related to the original Environmental Impact Report (EIR) provided by the County of Santa Barbara, which was conducted prior to the incorporation of the Bacara Resort property into the City (2002).*

  A response was received by Stantec from the City of Goleta after the report was released, indicating that no records relating to the request were found.

- *It does not appear that records pertaining to hazardous materials handing / hazardous waste generation were reviewed at the SBCPHD. Records pertaining to the assessment and remediation were reviewed online via the State Water Resources Control Board's GeoTracker website; however, those records do not contain compliance related inspections associated with CUPA oversight.*

  The Bacara Beach House (the Property) was not identified as a generator of hazardous waste in the environmental database search report reviewed by Stantec or noted during the site inspection. The Bacara Resort at 8301 Hollister Avenue is considered an adjacent site to the Property and was listed as a generator of hazardous waste in the Santa Barbara County Hazardous Waste Facilities list and in the Hazardous Waste Tanner Summary for the years 1999 through 2016. All wastes were reportedly disposed, destroyed, or reclaimed offsite. Based on the information reviewed, lack of violations noted, and the distance from the Property, the listings for the Bacara Resort did not indicate a potential to impact the Property. Accordingly, hazardous waste compliance inspection records for this adjacent site were not reviewed at the SBCPHD.

- *The Santa Barbara County Air Pollution Control District (APCD) records were not reviewed. Review of certain local regulatory agency records are left to the judgement of the environmental professional. According to ASTM international E 1527-13, the Environmental Professional shall review records if they are: 1) reasonably ascertainable; 2) sufficiently useful, accurate, and complete; and 3) are generally obtained, pursuant to local good commercial and customary practice. In our experience, review of APCD records is the general standard of care practiced by environmental professionals in the area.*

  Air emissions for the Bacara Resort & Spa listed in the Emissions Inventory (EMI) database were not considered an environmental threat to the Property. No EMI data was reported for the Ellwood Onshore Facility (EOF) previously operated by Veneco and located approximately 0.2 miles east of the Property. The EOF was idled following the May 2015 leak from the Plains All American Pipeline Lines 901 and 903. In April 2017, Veneco filed for Chapter 11 bankruptcy and quitclaimed its interests in the EOF to the State Lands Commission. Based on the EP's opinion that past or current emissions were not considered a threat to the Property, files potentially available at the APCD were not reviewed.

- *The SBCPHD should be notified of the proposed relocation of the Beach House / change in land use.*

  The SBCPHD will be notified of the relocation project and Soil Management Plan (SMP) implementation once all permits and approvals have been obtained and a construction schedule has been developed.

- *During soil disturbance activities, the SMP should be implemented, including:*

  - *Preparation and implementation of a worker health and safety plan in general accordance with Federal Occupational Safety and Health Administration Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120) and Title 8 CCR*

Section 5192. The plan should be reviewed and approved by a Certified Industrial Hygienist.

- *During planned construction activities at areas of residual impact, storm water pollution prevention controls should be implemented by the Contractor.*
- *Potential exposure to methane and other flammable gases, as well as hydrogen sulfide should be evaluated prior to and during soil disturbance activities.*
- *Sewer odors from a sewer lift pump were noted at the existing beach house. The potential to encounter sewage-contaminated soil during soil disturbance activities should be added to the SMP.*
- *Implement SMP protocols and procedures including the storage, management, notifications, analytical testing, and disposal of contaminated or potentially contaminated soil during construction activities.*
- *Following completion of construction activities involving the removal of soil from areas with residual impact, a report summarizing the implementation and compliance with the SMP should be prepared and submitted to the SBCPHD.*

Stantec is prepared to implement the SBCPHD-approved SMP under the direction and supervision of a California Professional Geologist or Engineer. The EP responsible for the Phase I report is a Professional Geologist, Certified Hydrogeologist, and Qualified SWPPP Developer with over 30 years of professional environmental experience in Santa Barbara County.

- *For areas with documented or suspected impacts to soil and/or groundwater, appropriate worker and community health and safety measures (e.g., dust control and air monitoring) should be implemented during soil disturbance activities.*

  Duly noted; these are standard requirements of the Stantec Helath & Safety Plan (HASP) for this type of project.

- *Groundwater is estimated to be found at depths of 10 to 15 feet bgs. If proposed construction activities are planned to extend to this depth, the potential for encountering petroleum-impacted groundwater should be evaluated.*

  Duly noted; final construction plans will be reviewed to evaluate the maximum depth of ground disturbance.

- *If elevated levels of methane and/or hydrogen sulfide are encountered near the proposed beach house, a subslab venting system and vapor barrier should be evaluated.*

  Duly noted; should elevated soil vapors be encountered, potential vapor intrusion risks to human health would be reviewed to evaluate whether mitigation measures are warranted for this very limited occupancy structure.

- *If previously unknown oil support features (e.g., pipelines) are encountered during construction activities, notification to regulatory agencies may be required prior to removing the feature, particularly if there is the potential to affect public health, safety, and/or the environment. Geophysical surveys should be conducted prior to soil disturbance to evaluate the potential for unknown pipelines.*

Duly noted; these are standard requirements of the HASP and SMP implementation procedures for this type of project.

Current Location for Replacement Beach Facilities

Stantec understands that since our original Phase I report for this project was issued, a peer review prepared by Revell Coastal for a Coastal Hazards Analysis by AnchorQEA recommended moving the new beach facilities structure 30+ feet further inland (northeast) of the originally proposed location. The revised location, as depicted on the updated Stantec plans dated January 2019 and attached for reference, is within the study area defined as the Property during the Phase I ESA. Accordingly, the findings and conclusions presented in the Phase I report remain valid with respect to the currently planned location of the replacement facilities.

It is hoped that this information will be of assistance to the City of Goleta. Thank you for your cooperation on this project. Should you have any questions or need additional information, please do not hesitate to contact Ginger Anderson of Stantec at (805) 308-9170 or Ginger.Andersen@stantec.com.

Respectfully submitted,

STANTEC CONSULTING SERVICES

Steve Little, PG, CHG
Principal Geologist

Attachments: Stantec. Grading & Drainage Plans. January 2019

ATTACHMENT I

I-1. Bacara Water Quality Memorandum,
Stantec, May 1, 2018

I-2. Revised Surface Analysis Exhibit, Proposed Beach House Relocation, Ritz Carlton Bacara Resort & Spa,
Stantec, November 11, 2019

I-3. Ocean Hazards Study,
Anchor QEA, 2017

I-4. Third Party Review of the Ocean Hazards Study.
Revell Coastal, 2018.

I-5. Response to Revell Coastal's review of Anchor QEA's Coastal Hazards Analysis for Bacara Resort & Spa. Anchor QEA,
January 28, 2019.

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ATTACHMENT I

I-1. Bacara Water Quality Memorandum, Stantec, May 1, 2018

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Stantec

To: Everett King
City of Goleta

From: Pete Silvia, P.E.
Stantec

File: 20180501_bacara_waterquality_tier_determinations.docx

Date: May 1, 2018

Reference: Ritz Carlton - Bacara Resport & Spa

The purpose of this memorandum is to provide the City of Goleta with the methodology used in determining the project's water quality requirements for your use in initial application review.

1. County NPDES map 1 was used to determine if the Ritz Carlton - Bacara Resort & Spa is within an NPDES permit area. Based on that map, the application is within a NPDES permit area. See Site Map for reference to County NPDES limits.
2. Based on the County of Santa Barbara's Stormwater Technical Guide, the net impervious area for the application is as follows:

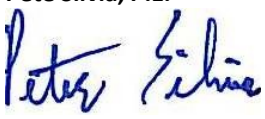
Removed Impervious:	-5,367 S.F.
Replaced Impervious:	+1,386 S.F.
New Impervious:	+1,280 S.F.
New Pervious:	250 S.F.
Net Impervious	**-2,701 S.F.**

The application proposes **less than** 2,500 square feet of net impervious surface. Therefore, it does not require the County Stormwater Technical Guide's Tier 1 standards.

Please feel free to contact me with any questions.

Sincerely,

Pete Silvia, P.E.



Project Manager Phone: (805) 308-9185
Fax: (805) 966-9801
Pete.silvia@stantec.com

Ritz Carlton - Bacara Site Map

REMOVED IMPERVIOUS SURFACE
(−5,367 SF)

NEW IMPERVIOUS SURFACE
(1,826 SF)

REPLACED IMPERVIOUS SURFACE
(+2,020 SF)

NEW PERVIOUS SURFACE
(200 SF)

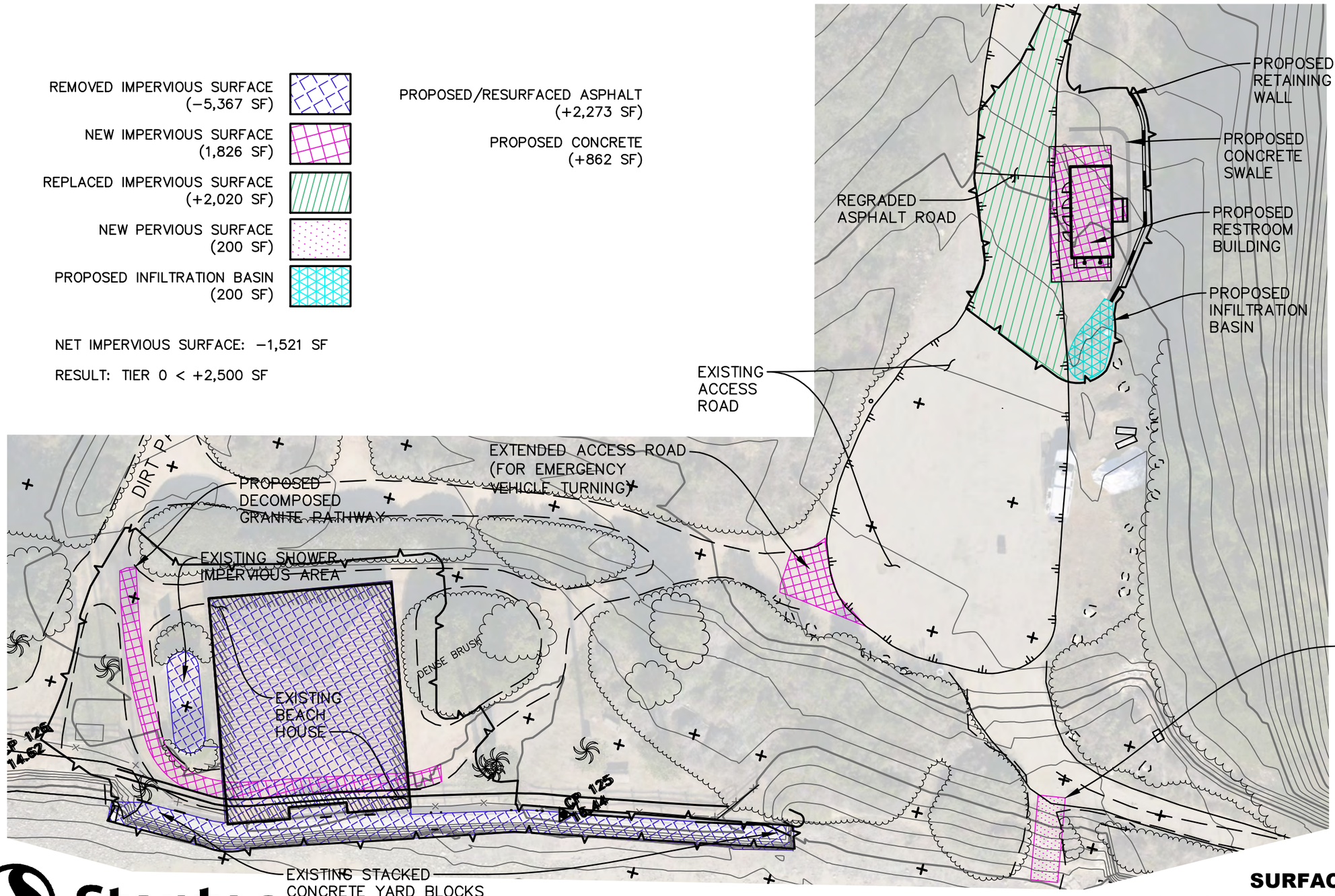
PROPOSED INFILTRATION BASIN
(200 SF)

PROPOSED/RESURFACED ASPHALT
(+2,273 SF)

PROPOSED CONCRETE
(+862 SF)

NET IMPERVIOUS SURFACE: −1,521 SF

RESULT: TIER 0 < +2,500 SF



Stantec

111 East Victoria Street, Santa Barbara, CA 93101
Phone: (805) 963-9532

N

1"=30'

SURFACE ANALYSIS EXHIBIT
PROPOSED BEACH HOUSE RELOCATION
RITZ CARLTON - BACARA RESORT & SPA

GOLETA, CALIFORNIA

NOVEMBER 11, 2019

DRAWING: v:\2064\active\2064160400\engineering\drawing\prelim_eng\2064160400-gp-20190916.dwg

ATTACHMENT I

I-3. Ocean Hazards Study, Anchor QEA, 2017

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27201 Puerta Real, Suite 350
Mission Viejo, California 92691
949.347.2780

ANCHOR QEA

Memorandum

April 5, 2018

To: Paul Finstad, Watermark Capital Partners, LLC

From: Alyssa Cannon and Randy Mason, PE, Anchor QEA, LLC

Re: Coastal Hazards Analysis for Bacara Resort & Spa

The Bacara Resort & Spa (Site) is relocating its Beach House due to beach erosion encroachment. At the request of McCabe & Company, Anchor QEA, LLC, completed a coastal hazards study to evaluate current coastal hazards associated with the proposed Beach House location, as well as future coastal hazards due to sea level rise (SLR). The study was completed in accordance with the California Coastal Commission's (CCC's) *Sea Level Rise Policy Guidance* (2015).

This evaluation includes the following:

- Description of the Site and coastal setting
- Identification of current coastal hazards at the Site, including high tides, storm waves, and shoreline erosion
- Identification of potential future coastal hazards at the Site based on local predicted SLR estimates
- Discussion of minimizing impacts from coastal hazards, both existing and future (potential)

This memorandum presents the analysis and results of the focused coastal hazards evaluation that was conducted for the proposed Beach House relocation.

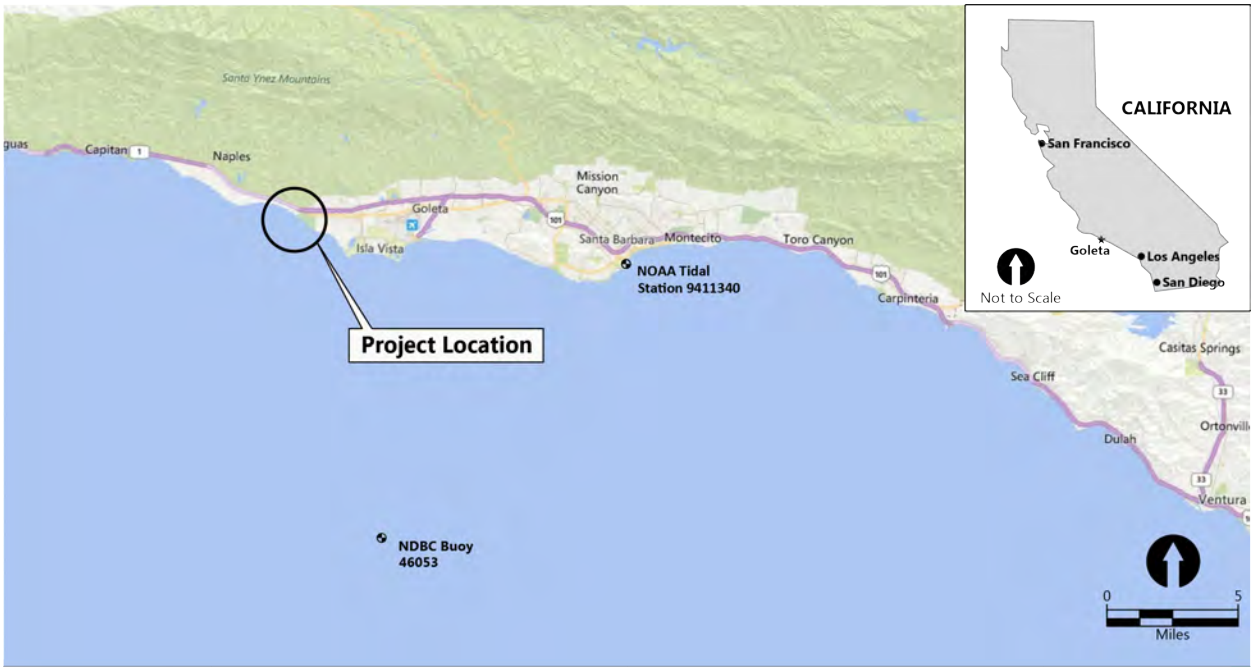
Site Description

The Site is located in Goleta, California, approximately 11 miles west of Santa Barbara, on the Pacific Ocean (Figure 1). The proposed Beach House location is to the east of the Tecolote Canyon Creek, as shown in Attachment 1[1] provided by Stantec.[2] The foundation elevations for the two proposed buildings are +23.3 feet North American Vertical Datum of 1988 (NAVD88) and +25.5 feet NAVD88 (+23.4 and +23.6 feet mean lower low water [MLLW]).

To define the specific coastal hazards for this project, a design life of 50 years will be assumed for the new Beach House, and the proposed seaward building foundation (elevation of +23.3 feet NAVD88) will be used for hazard elevation comparisons.

[1] Attachment 1 topography is in NAVD88 feet.
[2] Stantec is the civil engineering firm for the project.

Figure 1
Vicinity Map



Source: Image from Bing Maps. Buoy locations from National Data Buoy Center and National Oceanic and Atmospheric Association. Horizontal Datum: California State Plane, Zone 5, North American Datum 1983, U.S. feet.

Coastal Setting

The Site beach is oriented south, with possible waves coming from directions ranging from the east to the west (clockwise). Due to its ocean location, the Site can be impacted by ocean swell as well as storm waves.

The existing Beach House was built on a low bluff off the beach. That low bluff has been eroded in recent years due to storm waves and is one of the reasons for the Beach House relocation.

The Site is subject to changing water levels due to tides, ocean storm surge, and ocean waves, as well as locally generated wind waves.

Tidal Information (Water Levels)

Tidal information (water levels) at the Site was taken from National Oceanic and Atmospheric Administration Station No. 9411340 in Santa Barbara (Figure 1). Table 1 shows benchmark tidal elevations for the Santa Barbara Station.

Table 1
Tidal Datums at Site (Santa Barbara Station 9411340)[1]

Tidal Datum	Elevation Relative to MLLW at Gage Location (feet)
Highest observed water level (12/13/2012)	7.6
Highest astronomical tide[2]	7.2
Mean higher high water	5.4
Mean high water	4.6
Mean sea level	2.8
Mean low water	1.0
North American Datum of 1988	0.1
Mean lower low water (MLLW)	0.0

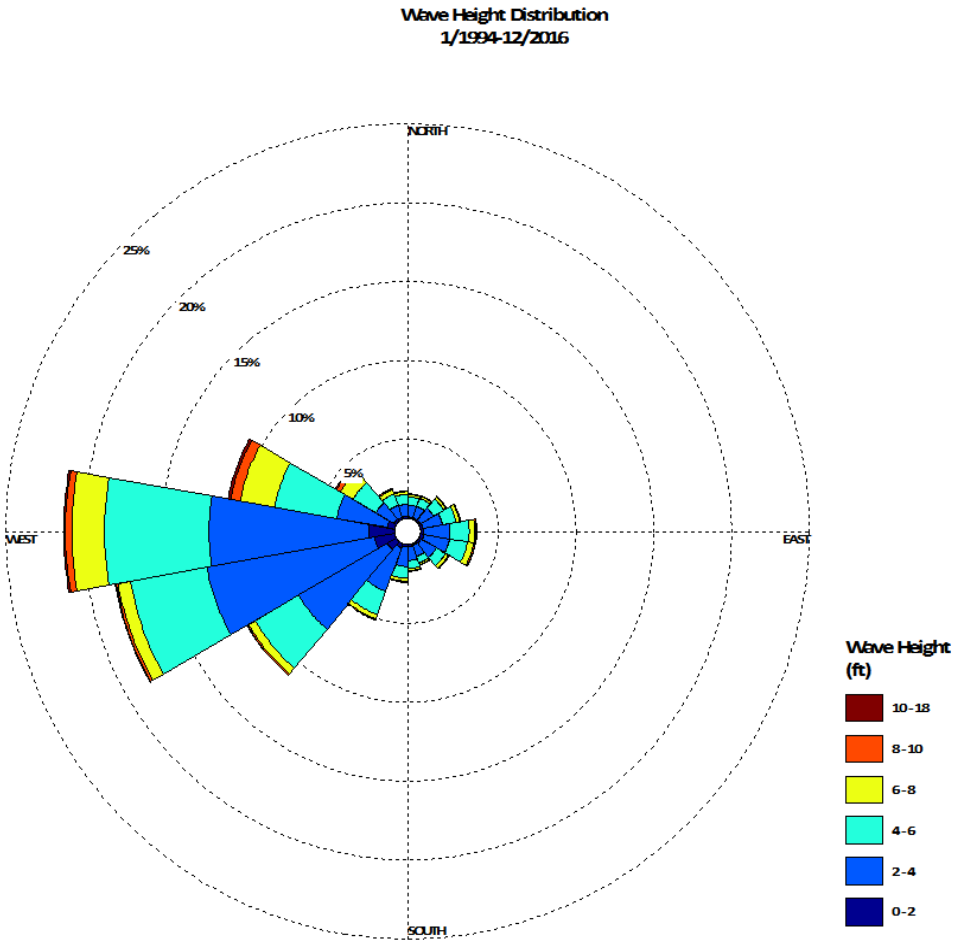
Notes:
1. The Santa Barbara station uses the Los Angeles Outer Harbor station (9410660) as a control station.
2. Highest astronomical tide is the elevation of the highest predicted astronomical tide expected to occur over the National Tidal Datum Epoch (1983 to 2001).

Wave Data

Long-term wave data were obtained from the National Data Buoy Center for a buoy in Santa Barbara Channel (Station 46053), with data from 1994 to 2016 (NDBC 2017). This station is located approximately 12 miles south of the Site (Figure 1). The wave rose in Figure 2 shows the distribution of wave directions and heights over the full data record of the buoy station[3]. Waves and storm waves are predominantly from the southwest to west direction.

[3] Data are unavailable for January 1, 1997, through April 27, 1998, as well as February 17, 2014, through May 21, 2015.

Figure 2
Wave Distribution (Station 46053)



Data are unavailable for January 1, 1997, through April 27, 1998, as well as February 17, 2014, through May 21, 2015.

Existing Coastal Hazards

Existing coastal hazards that can impact the Site include extreme astronomical tides, storm surge (due to wind and wave set up during storms), and bluff or shoreline erosion.

Extreme Tidal Levels

The highest astronomical tide at the Santa Barbara Station is 7.2 feet above MLLW (NOAA 2017), which is almost 2 feet above mean higher high water (MHHW). This tidal elevation can occur a few times per year. However, the highest astronomical tidal elevation is 16.2 feet below the proposed Beach House foundation (+23.3 feet NAVD88; +23.4 feet MLLW).

Extreme Waves

Wave data shown in Figure 2 for the directions of interest (east to west; clockwise) were used to estimate extreme wave heights for return periods of 25, 50, 75, and 100 years. The results of the extreme value analysis are shown in Table 2.

Table 2
Extreme Deepwater Waves at Santa Barbara Buoy (Station 46053)

Direction	Storm Return Year			
	25-year Wave Height (feet)	50-year Wave Height (feet)	75-year Wave Height (feet)	100-year Wave Height (feet)
91 to 120 degrees	14.6	14.9	15.1	15.2
121 to 150 degrees	14.0	14.4	14.5	14.6
151 to 180 degrees	16.7	17.5	18.0	18.2
181 to 210 degrees	15.5	16.1	16.3	16.4
211 to 240 degrees	16.6	17.2	17.5	17.7
241 to 270 degrees	17.7	18.4	18.7	18.8

Shoreline Erosion

Attachment 1 shows the proposed Beach House relocation, which sits approximately 100 feet back from the existing beach. Historically, a 0.3-foot per year shoreline retreat has been estimated based on data available through the California Natural Resources Agency Data Portal (CNRA 2017), which uses shoreline data from 1852 to 1998. This results in a 50-year shoreline retreat of approximately 15 feet.

The estimated 15-foot shoreline retreat will not reach the proposed site. However, this erosion rate is an average over a long period of time and may not reflect possible shoreline retreat due to extreme storm surge and wave events.

The U.S. Geological Survey (USGS) Coastal Storm Modeling System (CoSMoS; Barnard et al. 2014) estimates the shoreline change based on two storm events:

- January 2010 El Niño: A hindcast projection of the El Niño-fueled storm from January 18 to 25, 2010
- ARkStorm: A stitched-together storm based on two powerful West Coast storms that occurred in 1969 and 1986, representing a recurrence interval of at least 100 years

Based on the two storm events modeled with CoSMoS, the Site could experience shoreline erosion ranging from 26.8 meters (January 2010 El Niño) to 30.5 meters (ARkStorm), or 87.9 to 100.1 feet. As the design life of the structures is expected to be 50 years, the 100-year ARkStorm (with 100.1 feet of potential erosion) is beyond the structures' lifespan.

FEMA Flood Zones and Storm Surge

Tecolote Canyon Creek, to the west of the Site, could pose a flooding risk for the Site. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Study (FIS) and Flood Insurance Rate Map (FIRM; Attachment 2), the proposed Beach House site is above the 0.2% annual chance flood area. Therefore, there is very little chance of the proposed site being flooded due to the creek flooding.

The Flood Insurance Study also states the wave runup elevations for various flood chances near the Site:

- 10% annual chance: 8.3 feet North American Datum of 1988 (NAVD88; 8.4 feet MLLW)
- 1% annual chance: 9.6 feet NAVD88 (9.7 feet MLLW)
- 0.2% annual chance: 11.5 feet NAVD88 (11.6 feet MLLW)

A Preliminary FEMA FIS is expected to be approved for the area. The Preliminary FIS was published December 15, 2016, and increases the runup elevations for the various flood chances near the Site:

- 10% annual chance: 13.9 feet NAVD88 (14 feet MLLW)
- 1% annual chance: 16.2 feet NAVD88 (16.3 feet MLLW)
- 0.2% annual chance: 18.1 feet NAVD88 (18.2 feet MLLW)

Summary

The design life of the proposed Beach House and associated structures is approximately 50 years; therefore, existing (present-day) coastal hazards for the Site are estimated using return period events similar in duration to the design life of the structures. The specific coastal hazards for this project are summarized in Table 3.

Table 3
Summary of Existing Coastal Hazards

Existing Coastal Hazard	Value
50-year significant deep water wave height	18.4 feet
Peak wave period	25 seconds[1]
Mean higher high water	5.4 feet MLLW
Highest astronomical tide	7.2 feet MLLW
FEMA 1% annual chance wave runup elevation	9.7 feet, MLLW
FEMA 1% annual chance wave runup elevation (Preliminary FIS)	16.3 feet, MLLW
Historic shoreline erosion rate (CNRA 2017)	0.3 foot/year
Storm shoreline erosion potential (January 2010 El Niño; CoSMoS)	87.9 feet

Note:
1. The largest observed dominate wave period (period with the maximum wave energy) over the data period was used.

As Table 3 shows, it is unlikely that any extreme tide event, surge, or storm waves will directly impact the proposed Site elevation of +23.3 feet NAVD88 (23.4 feet MLLW) .

Future Coastal Hazards

Future coastal hazards that can impact the Site include the current coastal hazards identified above with the addition of increased water levels due to predicted SLR. SLR estimates for the Site were taken from the CCC's *Sea Level Rise Policy Guidance* (2015) for areas south of Cape Mendocino. The SLR guidance uses 2000 as the starting point and denotes several future years as endpoints when estimating the possible range of SLR that could occur:

- Year 2030: 2 to 12 inches
- Year 2050: 5 to 24 inches
- Year 2100: 17 to 66 inches

Uncertainties exist in estimates for SLR due to numerous issues related to understanding the physics and assumptions associated with predictive modeling (NRC 2012). These uncertainties increase as the projection period increases with large uncertainties in predictions of SLR at 2100. For the purposes of the future coastal hazards evaluation, an intermediate SLR estimate was used for each predicted year, which was computed as the average of the upper and lower bound SLR estimates. The intermediate SLR projections for 2030, 2050, and 2100 are 7, 15, and 42 inches, respectively.

The time frame used to evaluate impacts to the Site due to predicted SLR is based on the design life of the proposed structures (CCC 2015). As discussed above, the design life of the proposed Beach House is estimated as 50 years. If the structures are constructed as planned in 2019, then sea level estimates for 2069 should be used for the future hazards evaluation. Because estimates are not explicitly available for 2069, interpolated values were used to evaluate future coastal hazards for the proposed work.

Linear interpolation was used to estimate SLR values in 2069 for the available upper and lower bound predictions, as well as the computed intermediate values, for 2050 and 2100. Table 4 provides a summary of the SLR projections used for this evaluation.

Table 4
Sea Level Rise Projections (inches)

Year	Lower Bound	Intermediate	Upper Bound
2030	2	7	12
2050	5	15	24
2069	10	25	40
2100	17	42	66

The SLR projections in Table 4 were added to the projected tidal elevations from Table 1. The projected tidal elevations at the Site based on intermediate SLR estimates for 2069 are summarized in Table 5. For comparison, the range of projected tidal elevations based on the upper and lower bound SLR estimates are also provided in Table 5.

Table 5
Potential Future Tidal Datums at the Site[1]

Tidal Datum	Current Conditions[2]	2069	
		Intermediate	Range
Highest astronomical tide	7.2	9.3	8.0 to 10.5
Mean higher high water	5.4	7.5	6.2 to 8.7
Mean sea level	2.8	4.9	3.6 to 6.1
North American Datum of 1988	0.1	2.2	0.9 to 3.4
MLLW	0.0	2.1	0.8 to 3.3

Notes:
1. All elevations are in feet, relative to current MLLW elevation.
2. Existing tidal datums are provided in Table 1.

Future coastal hazards for the Site combine current coastal hazards due to storm events (50-year return period) and increases in water level due to projected SLR. The 50-year wave height and period is considered to be the same for existing conditions and future conditions. Table 6 outlines the predicted future coastal hazards for the Site.

Table 6
Summary of Future Coastal Hazards

Future Coastal Hazard	Value[1]	Range
50-year significant deep water wave height	18.4 feet	N/A
50-year peak wave period	25 seconds[1]	N/A
2069 mean higher high water	7.5 feet MLLW	6.2 to 8.7 feet MLLW
2069 highest astronomical tide	9.3 feet MLLW	8.0 to 10.5 feet MLLW
2069 FEMA 1% annual chance wave runup elevation	11.8 feet MLLW	10.5 to 13.0 feet MLLW
2069 FEMA 1% annual chance wave runup elevations (Preliminary FIS)	18.4 feet MLLW	17.1 to 19.6 feet MLLW
Shoreline erosion rate	0.3 foot/year	N/A
Storm shoreline erosion potential (January 2010 El Niño; CoSMoS)	87.9 feet	N/A

Note:
1. The largest observed dominate wave period (period with the maximum wave energy) over the data period was used.

Summary of Potential Impacts

Based on best available estimates for the region (NRC 2012) adopted by the CCC (2015), sea levels at the Site are expected to increase between 0.8 and 3.3 feet by 2069 (interpolated), with an intermediate value for increase of 2.1 feet. A high degree of uncertainty exists in the magnitude of future SLR estimates, which is represented by the large range in predicted sea level increase considered (NRC 2012).

For the intermediate SLR predictions for 2069 (increase of 2.1 feet), the predicted MHHW elevation will be 7.5 feet MLLW, which is 15.9 feet lower than the proposed site foundation (+23.4 feet MLLW). During the highest astronomical tides, which could occur a few times per year, the still water elevation could reach 9.3 feet MLLW, which is 14.1 feet below the proposed site. The FEMA 1% annual chance wave runup elevation in 2069 (+11.8 feet MLLW) is not expected to reach the proposed site but could result in an increase in shoreline erosion. The Preliminary FEMA FIS (FEMA 2016) has a higher 1% annual chance wave runup elevation in 2069 (+18.4 feet MLLW), which is also below the proposed site foundation elevation.

Similar impacts would apply to adjacent shorelines (not located on the property) and are independent of the proposed work at the Site.

USGS's CoSMoS estimates the potential storm erosion for the Site to range from 26.8 to 30.5 meters (87.9 to 100.1 feet); with 100.1 feet representing a storm with over a 100-year return period. The Site has an offset of approximately 100 feet from the existing shoreline, and the 100-year storm is beyond the structures' lifespan. Future shoreline and bluff erosion are difficult to predict with rising sea levels and expected increased storm activity; therefore, the shoreline should be monitored to assess the rate of erosion and predict future potential hazards.

While the Site is near Tecolote Canyon Creek, according to the currently accepted FIRM (FEMA 2012) and the preliminary FIRM (FEMA 2016), the proposed Beach House Site is outside of the 0.2% annual flood area and, therefore, unlikely to experience flooding from the creek.

Based on evaluation of intermediate SLR estimates for 2069, the proposed Beach House site will not be impacted by SLR over the 50-year lifetime of the structures.

References

Barnard, P.L., M. van Ormondt, L.H. Erikson, J. Eshleman, C. Hapke, P. Ruggiero, P.N., Adams, and A. Foxgrover, 2014. Coastal Storm Modeling System: CoSMoS. Southern California 1.0, Projected Flooding Hazards. DOI: 10.5066/F74B2ZB4. Available at: http://walrus.wr.usgs.gov/coastal_processes/cosmos/socal1.0/.

CCC (California Coastal Commission), 2015. *Sea Level Rise Policy Guidance*. *Interpretive Guidelines for Addressing Sea Level Rise in Local Coastal Programs and Coastal Development Permits*. August 2015.

CNRA (California Natural Resources Agency Data Portal), 2017. Accessed: April 28, 2017. Available from: https://gis.cnra.ca.gov/arcgis/rest/services/GeoScience/CSMW_Sym/MapServer

FEMA (Federal Emergency Management Agency), 2012. Flood Insurance Rate Map Panel 1341 of 1835. Map Number 06083C1341G. December 4, 2012.

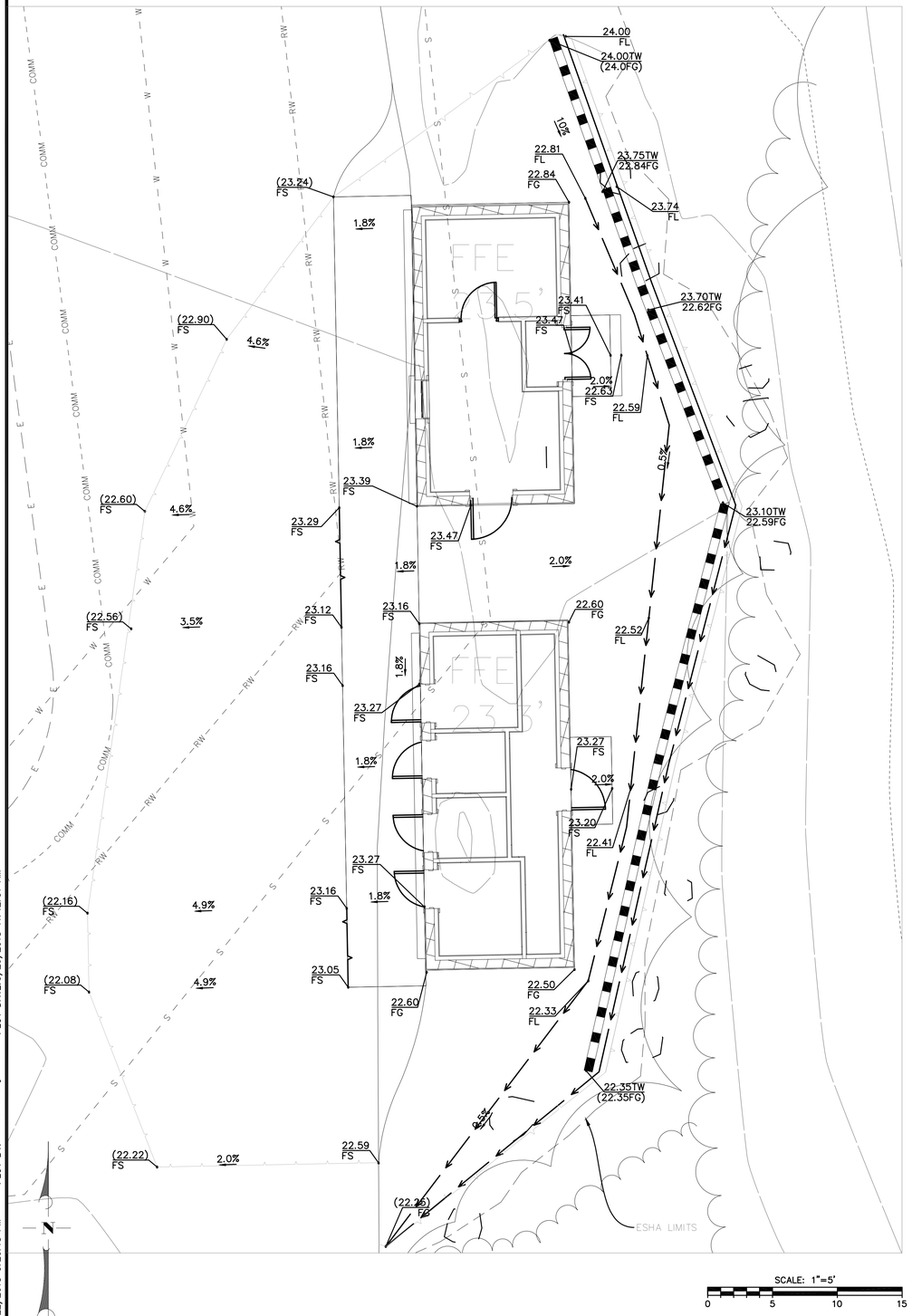
FEMA, 2016. Preliminary Flood Insurance Rate Map Panel 1341 of 1835. Map Number 06083C1341H. December 15, 2016.

NDBC (National Data Buoy Center), 2017. Accessed: April 5, 2017. Available from: http://www.ndbc.noaa.gov/station_page.php?station=46053.

NOAA (National Oceanic and Atmospheric Administration), 2017. Tides and Currents. Accessed: April 5, 2017. Available from: https://tidesandcurrents.noaa.gov/datums.html?id=9410580.

NRC (National Research Council), 2012. *Sea-Level Rise for the Coasts of California, Oregon, and Washington, Past, Present, and Future*.

Attachment 1
Proposed Beach House Site Location



PRELIMINARY GRADING PLAN

BEACH HOUSE RELOCATION

RITZ CARLTON–BACARA RESORT & SPA
GOLETA, CA

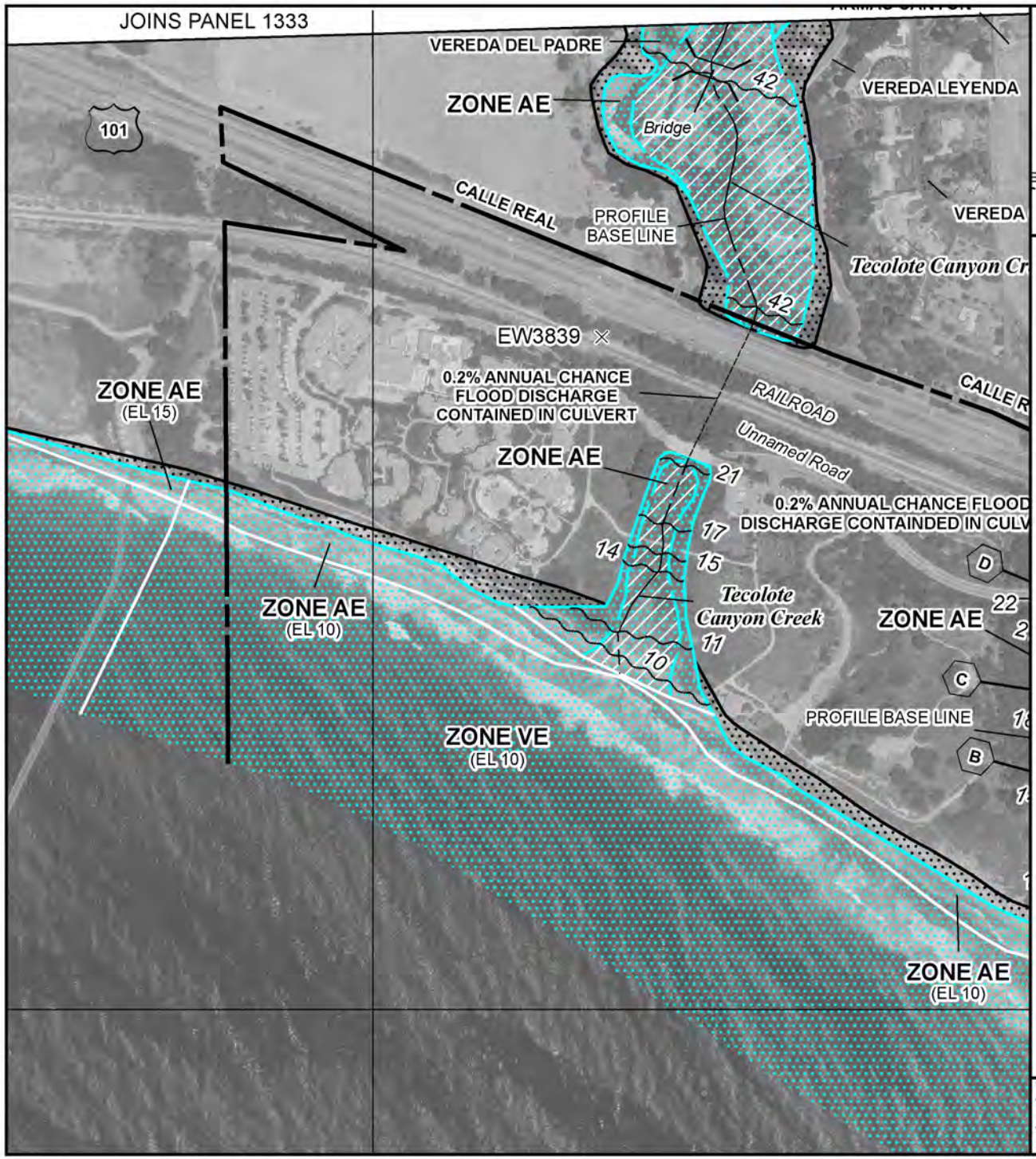
MARCH 22, 2018
SHEET 3 OF 4

Stantec
111 East Victoria Street, Santa Barbara, CA 93101
Phone: (805) 963-9532

36-EXB SAVE DATE: 3/22/2018 3:20:18 PM PLOT BY:Michael Chang PLOT DATE:3/26/2018 11:42:31 AM

ATTENTION: IF THIS DOCUMENT IS PROVIDED AS A COURTESY IN AN ELECTRONIC FORMAT, THE DELIVERY OF THE ELECTRONIC FILE DOES NOT CONSTITUTE THE DELIVERY OF THE PROFESSIONAL WORK PRODUCT. ONLY A HARD COPY DOCUMENT THAT IS SIGNED AND SEALED BY AN AUTHORIZED PROFESSIONAL EMPLOYEE OF STANTEC CONSTITUTES THE PROFESSIONAL WORK PRODUCT. IN THE EVENT THE ELECTRONIC FILE IS ALTERED, THE HARD COPY MUST BE REFERRED TO FOR THE ORIGINAL AND CORRECT INFORMATION. STANTEC SHALL NOT BE RESPONSIBLE FOR ANY MODIFICATIONS MADE TO THE ELECTRONIC FILE, OR ANY PRODUCTS DERIVED FROM THE ELECTRONIC FILE WHICH ARE NOT REVIEWED, SIGNED AND SEALED BY AN AUTHORIZED PROFESSIONAL EMPLOYEE OF STANTEC. COPYRIGHT 2016, STANTEC CONSULTING SERVICES INC

Attachment 2
Flood Insurance Rate Map



MAP SCALE 1" = 500'

250 0 250 500 750 1,000 FEET

METE

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1341G

FIRM

FLOOD INSURANCE RATE MAP

SANTA BARBARA COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 1341 OF 1835

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
GOLETA, CITY OF	060771	1341	G
SANTA BARBARA COUNTY	060331	1341	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 06083C1341G

MAP REVISED DECEMBER 4, 2012

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations (BFEs) shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) Zone 10. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the Local Tidal Datum. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242** or visit its website at http://www.ngs.noaa.gov/.

Base map information shown on this FIRM was derived from digital orthophotography collected by the U.S. Department of Agriculture Farm Service Agency under its National Agriculture Imagery Program (NAIP). This imagery was flown in 2005 and was produced with a 1-meter ground sample distance.

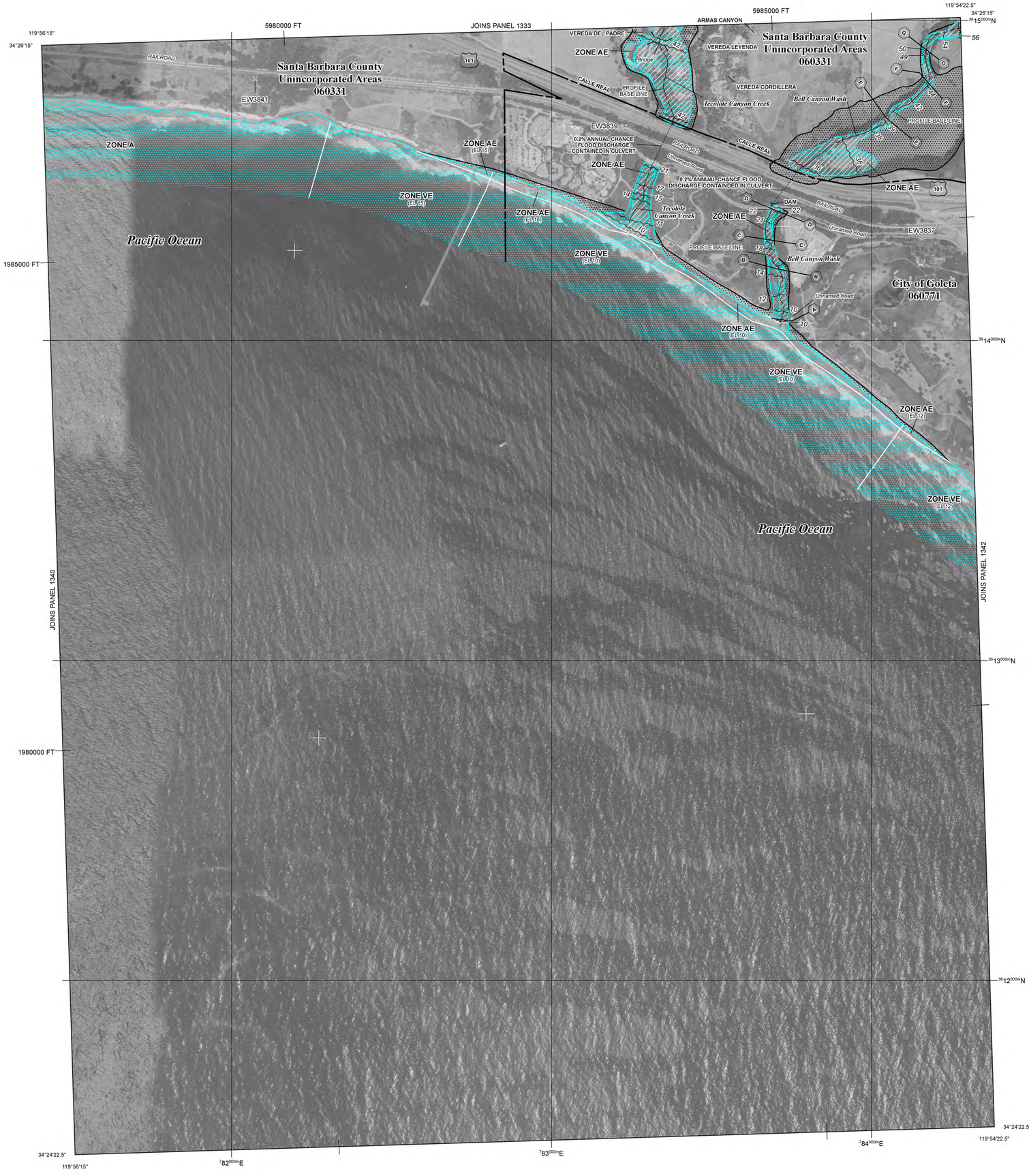
This map may reflect more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Information eXchange (FMIX)** at 1-877-336-2627 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FMIX may also be reached at its website at http://www.msc.fema.gov/.

If you have **questions about this map**, or questions concerning the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at **1-877-FEMA MAP** or visit the FEMA website at http://www.fema.gov/business/nfip/.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

- A — A — Cross section line
- 23 — 23 — Transect line
- 97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4275 000m E — 1000-meter Universal Transverse Mercator grid values, zone 10
- 6000000 FT — 5000-foot grid ticks: California State Plane coordinate system, Zone V (FIPSZONE = 0405), Lambert projection
- DX5510 × — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories List on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
SEPTEMBER 30, 2005

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
December 4, 2012 - to update map elevations to North American Vertical Datum of 1988.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 250 500 750 1,000 FEET
150 0 150 300 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1341G

FIRM

FLOOD INSURANCE RATE MAP

SANTA BARBARA COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 1341 OF 1835

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
GOLETA, CITY OF	060771	1341	G
SANTA BARBARA COUNTY	060331	1341	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06083C1341G

MAP REVISED
DECEMBER 4, 2012

Federal Emergency Management Agency

ATTACHMENT I

I-4. Third Party Review of the Ocean Hazards Study. Revell Coastal, 2018.

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Surf. Sand. Sustainability.

568 Bethany Curve
Santa Cruz, CA 95060
Phone: 831-854-7873
Email: revellcoastal@gmail.com
Website: *www.revellcoastal.com*

MEMORANDUM

Date: September 24, 2018

To: Bret McNulty, City of Goleta Planning Department

From: David Revell, PhD

Subject: Review of Coastal Hazards Analysis for Bacara Resort and Spa

---

Summary of Key Findings

In general, the new proposed location is in a much better location and elevation to minimize exposure to future coastal hazards for the 50year life of the project. However, the proposed relocation site may still be exposed to coastal erosion during the life of the project.

The Coastal Hazards Analysis for the Bacara Resort and Spa contains the following shortcomings:

1. Coastal Hazard Analysis does not appropriately include potential coastal erosion caused by an acceleration of historic erosion rates from sea level rise or storm induced erosion associated with a 100 year wave event.
2. Only uses a 2% annual chance storm (~50 year wave event) as opposed to the regulatory 1% annual chance storm (~100 year event).
3. Coastal Hazard Analysis does not include latest scientific information on sea level rise
4. Coastal Hazard Analysis does not consider the City of Goleta Vulnerability and Fiscal Impact Report.
5. Extreme wave analysis in Table 2 is flawed for many of the directions. It is not possible to generate some of the wave heights from certain directions given the presence of the Channel Islands to the South and East.

Project Description

The proposed site is located in Goleta, California, approximately 11 miles west of Santa Barbara, on the Santa Barbara Channel. The proposed Beach House location is to the east of the Tecolote Canyon Creek under a Monterey Shale formation bluff along an existing access road. The proposed site is setback approximately 100 feet from the back of the beach and foundation elevations for the two proposed buildings are +23.3 feet North American Vertical Datum of 1988 (NAVD88) and +25.5 feet NAVD88. The analysis used the lower elevation of 23.3 NAVD for analysis of potential impacts.

For the analysis a project design life of 50 years was assumed which is reasonable for this size project.

Identified Issues

Consideration of FEMA

While the Anchor QEA report mentions the new production FEMA FIRM maps, it is important to note that FEMA does not consider sea level rise in the Flood Insurance Rate Maps (FIRMs) mapping nor do they include coastal storm erosion in the mapping of the new high velocity (VE) zones (FEMA 2005).

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568 Bethany Curve
Santa Cruz, CA 95060
Phone: 831-854-7873
Email: revellcoastal@gmail.com
Website: *www.revellcoastal.com*

Lack of Coastal Erosion Analysis

The Anchor study only provides estimates of long term coastal erosion based on extrapolation of historic erosion from a limited statewide study by USGS (Hapke et al 2006 referenced in the Anchor QEA report as CNRA 2017 - link in references is broken). The published USGS shoreline change rates referenced calculated a long term erosion trend between 1852 and 1998. This study does not include any acceleration of erosion from sea level rise or potential storm induced erosion. More recent studies of coastal erosion and beach change (Revell 2007, Revell et al 2011, Barnard et al 2009, ESA 2015, and City of Goleta 2015), show that this stretch of coast has experienced higher longer term erosion than those presented in the Anchor analysis. The most recent study updated the USGS study to 2009 and calculated long term erosion rates of 0.65 feet/year at the site (ESA 2015) which do not include acceleration for sea level rise.

The Anchor analysis states that the 100 year storm is beyond the structure's lifespan, however a 100 year storm has a 1% chance of occuring in any given year and the occurrence of such a storm in one year does not mean that a similar storm could not occur in any other year. FEMA maps the wave run up elevation associated with the 1% annual chance storm event, but not the erosion. The existing study also does not provide any actual calculation of storm induced coastal erosion from a FEMA 1% annual chance storm event (16 ft NAVD total water level identified to reach an elevation in 2069 of 18.4 feet in Table 6). Wave run up causes coastal erosion, but the two are separate processes. Wave run up causes temporary flooding and can be cleaned up, while erosion usually results in the permanent loss of land. The Anchor analysis references COSMOS 1.0[1] potential erosion distance of 87.9' to 100.1 feet. As the COSMOS model does not explicitly map coastal erosion, it is unclear how this number was arrived upon.

Coastal erosion hazard modeling conducted as part of the County of Santa Barbara Coastal Resiliency project projected accelerated historic erosion caused by 27.2 inches of sea level rise and the potential extent of storm erosion caused by a wave run up associated with a 100 year wave event[2]. This model was used in both the Santa Barbara County Vulnerability Assessment and the City of Goleta Vulnerability Assessment and Fiscal Impact report. The results are shown for 27.2 inches of sea level rise in Figure 1 for this site. These recent models show that the Project may be subject to additional long term and storm induced coastal erosion within the project life expectancy.

Latest State guidance on sea level rise

The Anchor QEA report does not include discussion of much of the more recent literature on sea level rise, including the 2018 State guidance on Sea Level Rise (OPC 2018). The modeling of coastal hazards for Santa Barbara County (Revell Coastal and ESA 2016) as used in the City of Goleta Sea Level Rise Vulnerability and Fiscal Impact Report (City of Goleta 2015). This results in an underestimation of the potential level of sea level rise by 2070.

Extreme Wave Height Analysis

Results from the extreme wave height analysis found in Table 2 of the Anchor QEA report is misleading. While details of the extreme value analysis methodology are lacking, the results shown in Table 2 are not possible for 4 of the 6 wave wave directions reported in the table. The possibility of waves from the east or south of the reported magnitude are not possible given the presence of the Channel Islands to the south, sheltering most of these directions. The most easterly direction is also highly unlikely given the limited fetch distance between the Ventura County Coast and the study site. While these directions are not particularly relevant to the proposed study site, the discrepancy is noted here.

[2] http://longrange.sbcountyplanning.org/programs/coastalresiliencyproject/documents/FinalVulnAssessmentTechnicalReport.pdf

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Santa Cruz, CA 95060
Phone: 831-854-7873
Email: revellcoastal@gmail.com
Website: *www.revellcoastal.com*

Figure 1. Projected long term and storm induced coastal erosion with 27.2 inches of sea level rise http://maps.coastalresilience.org/california)

Project Considerations

1. Additional setback of at least 30 feet to avoid future coastal erosion impacts is recommended.
2. Retaining wall for the eastern bluff slope should be carefully engineered not to contribute to landsliding on the adjacent slope.
3. Any excavated sediments from construction should be tested for contamination and sediment grain size compatibility with the beach. Suitable clean sediments should be allowed to be placed on the beach in front of the development. Contaminated sediments should be off hauled to an appropriate offsite disposal site.
4. Complete removal of the existing emergency revetment should be required.

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568 Bethany Curve
Santa Cruz, CA 95060
Phone: 831-854-7873
Email: revellcoastal@gmail.com
Website: *www.revellcoastal.com*

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ATTACHMENT I

I-5. Response to Revell Coastal's review of Anchor QEA's Coastal Hazards Analysis for Bacara Resort & Spa. Anchor QEA, January 28, 2019.

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One Pacific Plaza, 7755 Center Avenue, Suite 1060
Huntington Beach, California 92647
657.227.7430

ANCHOR QEA

January 28, 2019

Mabry Lulli
Carey Watermark Investors, Inc.
150 North Riverside Plaza, Suite 4200
Chicago, Illinois 60606

Re: Response to Revell Coastal's review of Anchor QEA's Coastal Hazards Analysis for Bacara Resort & Spa

Dear Ms. Lulli,

Anchor QEA, LLC, conducted a Coastal Hazards Analysis for the Bacara Resort & Spa for proposed improvements to support permitting efforts on April 5, 2018 (Attachment 1). Revell Coastal reviewed this analysis at the request of the City of Goleta (City) and provided review comments on September 24, 2018 (Attachment 2). The comments are summarized as follows:

1. *Coastal Hazard Analysis does not appropriately include potential coastal erosion caused by an acceleration of historic erosion rates from sea level rise or storm induced erosion associated with a 100-year wave event.*
2. *Only uses a 2% annual chance storm (~50-year wave event) as opposed to the regulatory 1% annual chance storm (~100-year event).*
3. *Coastal Hazard Analysis does not include latest scientific information on sea level rise*
4. *Coastal Hazard Analysis does not consider the City of Goleta Vulnerability and Fiscal Impact Report.*
5. *Extreme wave analysis in Table 2 is flawed for many of the directions. IT is not possible to generate some of the wave heights from certain directions given the presence of the Channel Islands to the South and East.*

This letter addresses these concerns and provides additional information or clarification in response to Revell Coastal's comments. Each of the comments above is addressed in a separate section of this letter, the number of the section corresponding to the number of the comment listed above.

1. Coastal Erosion

Two sources for coastal erosion were presented in Anchor QEA's Coastal Hazards Analysis: a historic prediction from the California Natural Resources Agency Data Portal and a predictive model from U.S. Geological Survey (USGS) (as required by the California Coastal Commission [CCC]). The USGS Coastal Storm Modeling System (CoSMoS) models erosion potential for a projected 100-year storm and a smaller El Niño storm. The smaller storm was used for the potential coastal erosion in

Anchor QEA's Coastal Hazards Analysis, as the 100-year storm is beyond the lifetime of the structure (as required by the CCC). However, the 100-year storm was presented in Anchor QEA's discussion of coastal erosion potential. Potential shoreline erosion predicted by the CoSMoS model for a 100-year storm at the Bacara Resort & Spa proposed beach house location (Site) is 30.5 meters (100.1 feet). Figure 1 shows the CoSMoS cross section closest to the Site and the resulting 100-year storm wave height, water level, and predicted shoreline change (taken from https://www.usgs.gov/centers/pcmsc/science/coastal-storm-modeling-system-cosmos).

The 100-year shoreline erosion predicted by the CoSMoS model (approximately 100 feet from the existing bluff) is similar to the shoreline erosion estimated by the source suggested for use in the Revell Coastal review (http://maps.coastalresilience.org/california), which was approximately 100 feet from the existing shoreline bluff for the "Dune Erosion 2060 High Long Term" scenario, based on a figure provided by Revell Coastal (Figure 1 of Attachment 2). This estimate was based on the 2016 County of Santa Barbara Sea Level Rise Coastal Resiliency Project conducted by Revell Coastal.

The latest Site location (Attachment 3) was set back an additional 30 feet, as suggested by the Revell Coastal review, placing the Site more than 105 feet from the existing shoreline bluff.

Figure 1
CoSMoS Shoreline Change Results

Notes:
The seaward black line is the Starting MHW (mean high water), and the nearshore black line is the Ending MHW representing the 100 feet of erosion. Erosion has occurred since this model was created. The 100 feet of erosion predicted from a 100-year storm was considered to start at the existing beach bluff.
(https://www.usgs.gov/centers/pcmsc/science/coastal-storm-modeling-system-cosmos)

2. 100-Year Storm Event

While the 50-year offshore wave height[1] was reported as a coastal hazard in Anchor QEA's Coastal Hazards Analysis, the Federal Emergency Management Agency (FEMA) 1% annual chance wave runup elevation was used to inform the elevations of concern for the Site location. Both the Effective Flood Insurance Study (FIS) (at the time) and Preliminary (Effective as of September 28, 2018) FIS were outlined in the Coastal Hazards Analysis.[2] Based on the now Effective FIS, the 1% annual chance runup elevation is +16.3 feet mean lower low water (MLLW), which is below the originally proposed Site location (+23.4 feet MLLW) and the latest proposed Site location (+23.6 feet MLLW; 23.5 feet North American Vertical Datum of 1988 [NAVD88]; see Attachment 3, Sheet 3). Additional effects of SLR are discussed in Section 3.

3. Latest Sea Level Rise Data

Anchor QEA's Coastal Hazards Analysis was provided on April 5, 2018, before the California Ocean Protection Council's (OPC's) update to the State of California Sea-Level Rise Guidance Document[3] was incorporated into the CCC's science update to the Sea Level Rise Policy Guidance[4] (adopted in November 2018). A comparison of the previous sea level rise estimates (as presented in Attachment 1) to the updated sea level rise estimates is presented in Table 1.

Table 1
2013 Sea Level Rise Projections[1] Compared to 2018 Projections[2]

Year	Lower Bound 2013; 2018 (feet)	Intermediate 2013; 2018 (feet)	Upper Bound 2013; 2018 (feet)
2030	0.2; 0.4	0.6; 0.7	1.0; 1.0
2050	0.4; 1.0	1.3; 1.8	2.0; 2.5
2069[3]	0.8; 1.8	2.1; 3.6	3.3; 5.3
2100	1.4; 3.1	3.5; 6.6	5.5; 9.8

Notes:
1. 2013 sea level rise projections from original CCC guidance (August 2015); projections by OPC.
2. 2018 sea level rise projections from Table G-8 of the CCC's 2018 Sea Level Rise Policy Guidance Science Update; projections by OPC.
3. 2069 sea level rise estimates were linearly interpolated as an estimate for the sea level rise projection for the 50-year lifetime of the Site.

The intermediate sea level rise projection was used in the original analysis; therefore for 2069, a sea level rise of 2.1 feet (25 inches) was used. The updated sea level rise projection is 1.5 feet higher at 3.6 feet (43 inches).

[1] See Section 5, Extreme Wave Heights, for more details
[2] Under the "FEMA Flood Zones and Storm Surge" section
[3] California Ocean Protection Council, 2018. *State of California Sea-Level Rise Guidance 2018 Update.*
[4] California Coastal Commission, 2018. *California Coastal Commission Sea Level Rise Policy Guidance.* Science Update. November 7, 2018.

Using this updated sea level rise, the FEMA 1% annual chance wave runup elevation is increased from Anchor QEA's originally reported +18.4 to +19.9 feet MLLW.

The updated Site location (Attachment 3, Sheet 3) has the lowest foundation elevation at +23.6 feet MLLW, well above +19.9 feet MLLW.

4. City of Goleta Coastal Hazards Vulnerability and Fiscal Impact Report

Revell Coastal suggested that Anchor QEA consider the *City of Goleta Coastal Hazards Vulnerability and Fiscal Impact Report* in our Coastal Hazards Analysis. However, the City's analysis uses and references the same sources used and discussed in Anchor QEA's Coastal Hazards Analysis (e.g., the CCC's Sea Level Rise Policy Guidance; as discussed in Section 3).

Additionally, the City's report references FEMA 100-year flooding for the nearby Tecolote Canyon Creek, which is shown in the Flood Insurance Rate Map—included with Anchor QEA's Coastal Hazards Analysis—not to impact the Site. The FEMA FIS was also referenced in Anchor QEA's analysis for the 100-year annual chance of wave runup (as discussed in Sections 3 and 5).

5. Extreme Wave Heights

As required by the CCC, Anchor QEA used a 50-year wave event in the Coastal Hazards Analysis, as the Site was determined to have a lifetime of 50 years. We conducted an extreme wave analysis using buoy wave data from the Santa Barbra Channel Buoy (Station 46053).[5] For completeness, wave heights from all directions reported in the wave data were provided in our analysis in summary tables. However, we focused our discussion of coastal hazards at the Site on the 241- to 270-degree directional bin. This location has the highest waves from a direction that could impact the Site. Based on the measured wave data from this direction of concern, a 50-year offshore wave has a height of 18.4 feet. While we did not focus on the 100-year wave in the 241- to 270-degree directional bin in our summary of potential coastal hazards, it is provided in our summary of predicted wave conditions at the Site as shown in Table 2 of Attachment 1.[6]

These reported wave heights represent offshore deep-water waves that could impact the Site. At the Site location, these wave heights would be reduced due to depth-limiting effects. Because both the 100-year and 50-year wave heights are larger than the expected depth-limited wave height at the Site location, there would be little to no difference in extreme wave heights at the Site between those two storm events.

[5] Results are outlined in Table 2 of Attachment 1.

[6] The 100-year wave height from the 241- to 270-degree direction bin is 18.8 feet, which is 0.4 foot higher than the 50-year wave height from that direction.

As wave modeling was not conducted for this Site, FEMA's 100-year wave analysis was used, as discussed in Section 1, and resulted in a 100-year wave runup elevation of +16.3 feet MLLW, or +19.9 feet MLLW with the updated 50-year sea level rise projection (3.6 feet).

Revell Coastal's Proposed Project Considerations

In addition to comments on Anchor QEA's Coastal Hazards Analysis, Revell Coastal also provided the following suggestions for additional project considerations:

1. *Additional setback of at least 30 feet to avoid future coastal erosion impacts is recommended.*
2. *Retaining wall for the eastern bluff slope should be carefully engineered not to contribute to landsliding on the adjacent slope.*
3. *Any excavated sediments from construction should be tested for contamination and sediment grain size compatibility with the beach. Suitable clean sediments should be allowed to be placed on the beach in front of the development. Contaminated sediments should be off hauled to an appropriate offsite disposal site.*
4. *Complete removal of the existing emergency revetment should be required.*

The Site has been set back an additional 30 feet as recommended by project consideration 1 (see Attachment 3). Project considerations 2, 3, and 4 are not relevant to Anchor QEA's Coastal Hazards Analysis and are not addressed by this letter.

Sincerely,

Randy Mason, PE
Principal

Alyssa Cannon
Professional Staff

cc: Ginger Anderson, MCRP AIP, Stantec
Anne Blemker, McCabe & Company

Attachments

Attachment 1 Anchor QEA Coastal Hazards Analysis for Bacara Resort & Spa (April 2018)
Attachment 2 Revell Coastal Memorandum: Review of Coastal Hazards Analysis for Bacara Resort and Spa (September 2018)
Attachment 3 Stantec Updated Beach House Relocation Drawings (January 2019)

Attachment 1
Anchor QEA Coastal Hazards Analysis for Bacara Resort & Spa (April 2018)

27201 Puerta Real, Suite 350
Mission Viejo, California 92691
949.347.2780

ANCHOR QEA

Memorandum

April 5, 2018

To: Paul Finstad, Watermark Capital Partners, LLC

From: Alyssa Cannon and Randy Mason, PE, Anchor QEA, LLC

Re: Coastal Hazards Analysis for Bacara Resort & Spa

The Bacara Resort & Spa (Site) is relocating its Beach House due to beach erosion encroachment. At the request of McCabe & Company, Anchor QEA, LLC, completed a coastal hazards study to evaluate current coastal hazards associated with the proposed Beach House location, as well as future coastal hazards due to sea level rise (SLR). The study was completed in accordance with the California Coastal Commission's (CCC's) *Sea Level Rise Policy Guidance* (2015).

This evaluation includes the following:

- Description of the Site and coastal setting
- Identification of current coastal hazards at the Site, including high tides, storm waves, and shoreline erosion
- Identification of potential future coastal hazards at the Site based on local predicted SLR estimates
- Discussion of minimizing impacts from coastal hazards, both existing and future (potential)

This memorandum presents the analysis and results of the focused coastal hazards evaluation that was conducted for the proposed Beach House relocation.

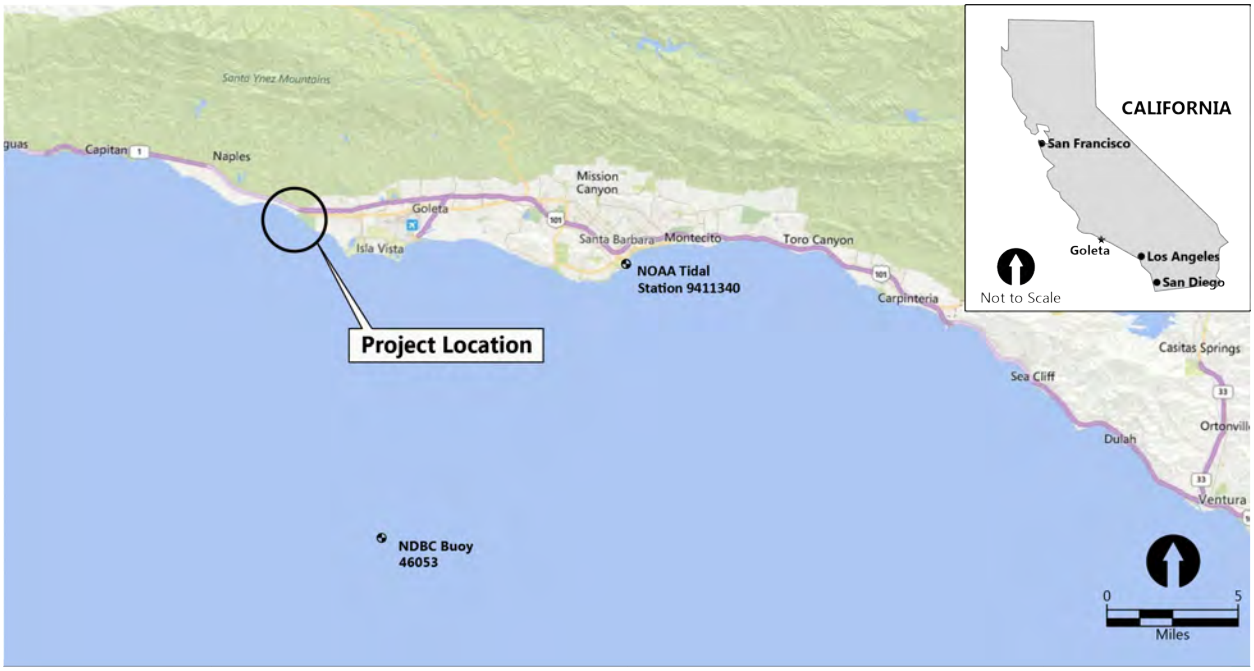
Site Description

The Site is located in Goleta, California, approximately 11 miles west of Santa Barbara, on the Pacific Ocean (Figure 1). The proposed Beach House location is to the east of the Tecolote Canyon Creek, as shown in Attachment 1[1] provided by Stantec.[2] The foundation elevations for the two proposed buildings are +23.3 feet North American Vertical Datum of 1988 (NAVD88) and +25.5 feet NAVD88 (+23.4 and +23.6 feet mean lower low water [MLLW]).

To define the specific coastal hazards for this project, a design life of 50 years will be assumed for the new Beach House, and the proposed seaward building foundation (elevation of +23.3 feet NAVD88) will be used for hazard elevation comparisons.

[1] Attachment 1 topography is in NAVD88 feet.
[2] Stantec is the civil engineering firm for the project.

Figure 1
Vicinity Map



Source: Image from Bing Maps. Buoy locations from National Data Buoy Center and National Oceanic and Atmospheric Association. Horizontal Datum: California State Plane, Zone 5, North American Datum 1983, U.S. feet.

Coastal Setting

The Site beach is oriented south, with possible waves coming from directions ranging from the east to the west (clockwise). Due to its ocean location, the Site can be impacted by ocean swell as well as storm waves.

The existing Beach House was built on a low bluff off the beach. That low bluff has been eroded in recent years due to storm waves and is one of the reasons for the Beach House relocation.

The Site is subject to changing water levels due to tides, ocean storm surge, and ocean waves, as well as locally generated wind waves.

Tidal Information (Water Levels)

Tidal information (water levels) at the Site was taken from National Oceanic and Atmospheric Administration Station No. 9411340 in Santa Barbara (Figure 1). Table 1 shows benchmark tidal elevations for the Santa Barbara Station.

Table 1
Tidal Datums at Site (Santa Barbara Station 9411340)[1]

Tidal Datum	Elevation Relative to MLLW at Gage Location (feet)
Highest observed water level (12/13/2012)	7.6
Highest astronomical tide[2]	7.2
Mean higher high water	5.4
Mean high water	4.6
Mean sea level	2.8
Mean low water	1.0
North American Datum of 1988	0.1
Mean lower low water (MLLW)	0.0

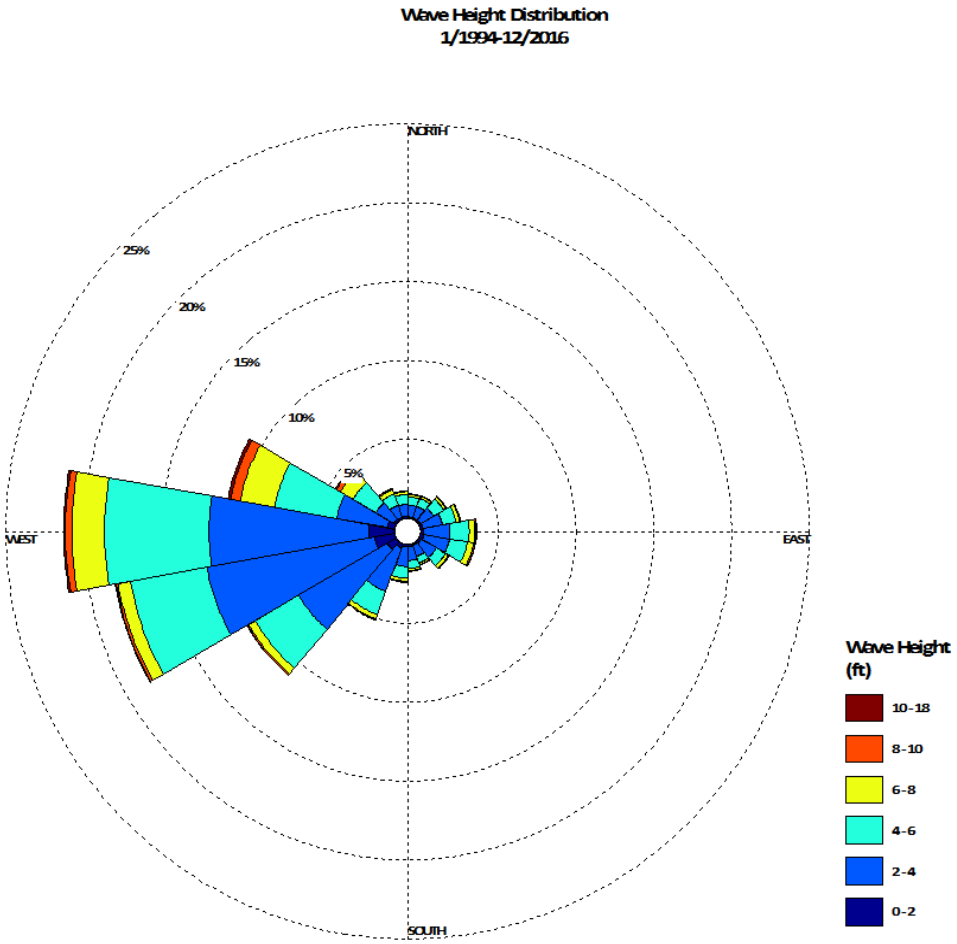
Notes:
1. The Santa Barbara station uses the Los Angeles Outer Harbor station (9410660) as a control station.
2. Highest astronomical tide is the elevation of the highest predicted astronomical tide expected to occur over the National Tidal Datum Epoch (1983 to 2001).

Wave Data

Long-term wave data were obtained from the National Data Buoy Center for a buoy in Santa Barbara Channel (Station 46053), with data from 1994 to 2016 (NDBC 2017). This station is located approximately 12 miles south of the Site (Figure 1). The wave rose in Figure 2 shows the distribution of wave directions and heights over the full data record of the buoy station[3]. Waves and storm waves are predominantly from the southwest to west direction.

[3] Data are unavailable for January 1, 1997, through April 27, 1998, as well as February 17, 2014, through May 21, 2015.

Figure 2
Wave Distribution (Station 46053)



Data are unavailable for January 1, 1997, through April 27, 1998, as well as February 17, 2014, through May 21, 2015.

Existing Coastal Hazards

Existing coastal hazards that can impact the Site include extreme astronomical tides, storm surge (due to wind and wave set up during storms), and bluff or shoreline erosion.

Extreme Tidal Levels

The highest astronomical tide at the Santa Barbara Station is 7.2 feet above MLLW (NOAA 2017), which is almost 2 feet above mean higher high water (MHHW). This tidal elevation can occur a few times per year. However, the highest astronomical tidal elevation is 16.2 feet below the proposed Beach House foundation (+23.3 feet NAVD88; +23.4 feet MLLW).

Extreme Waves

Wave data shown in Figure 2 for the directions of interest (east to west; clockwise) were used to estimate extreme wave heights for return periods of 25, 50, 75, and 100 years. The results of the extreme value analysis are shown in Table 2.

Table 2
Extreme Deepwater Waves at Santa Barbara Buoy (Station 46053)

Direction	Storm Return Year			
	25-year Wave Height (feet)	50-year Wave Height (feet)	75-year Wave Height (feet)	100-year Wave Height (feet)
91 to 120 degrees	14.6	14.9	15.1	15.2
121 to 150 degrees	14.0	14.4	14.5	14.6
151 to 180 degrees	16.7	17.5	18.0	18.2
181 to 210 degrees	15.5	16.1	16.3	16.4
211 to 240 degrees	16.6	17.2	17.5	17.7
241 to 270 degrees	17.7	18.4	18.7	18.8

Shoreline Erosion

Attachment 1 shows the proposed Beach House relocation, which sits approximately 100 feet back from the existing beach. Historically, a 0.3-foot per year shoreline retreat has been estimated based on data available through the California Natural Resources Agency Data Portal (CNRA 2017), which uses shoreline data from 1852 to 1998. This results in a 50-year shoreline retreat of approximately 15 feet.

The estimated 15-foot shoreline retreat will not reach the proposed site. However, this erosion rate is an average over a long period of time and may not reflect possible shoreline retreat due to extreme storm surge and wave events.

The U.S. Geological Survey (USGS) Coastal Storm Modeling System (CoSMoS; Barnard et al. 2014) estimates the shoreline change based on two storm events:

- January 2010 El Niño: A hindcast projection of the El Niño-fueled storm from January 18 to 25, 2010
- ARkStorm: A stitched-together storm based on two powerful West Coast storms that occurred in 1969 and 1986, representing a recurrence interval of at least 100 years

Based on the two storm events modeled with CoSMoS, the Site could experience shoreline erosion ranging from 26.8 meters (January 2010 El Niño) to 30.5 meters (ARkStorm), or 87.9 to 100.1 feet. As the design life of the structures is expected to be 50 years, the 100-year ARkStorm (with 100.1 feet of potential erosion) is beyond the structures' lifespan.

FEMA Flood Zones and Storm Surge

Tecolote Canyon Creek, to the west of the Site, could pose a flooding risk for the Site. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Study (FIS) and Flood Insurance Rate Map (FIRM; Attachment 2), the proposed Beach House site is above the 0.2% annual chance flood area. Therefore, there is very little chance of the proposed site being flooded due to the creek flooding.

The Flood Insurance Study also states the wave runup elevations for various flood chances near the Site:

- 10% annual chance: 8.3 feet North American Datum of 1988 (NAVD88; 8.4 feet MLLW)
- 1% annual chance: 9.6 feet NAVD88 (9.7 feet MLLW)
- 0.2% annual chance: 11.5 feet NAVD88 (11.6 feet MLLW)

A Preliminary FEMA FIS is expected to be approved for the area. The Preliminary FIS was published December 15, 2016, and increases the runup elevations for the various flood chances near the Site:

- 10% annual chance: 13.9 feet NAVD88 (14 feet MLLW)
- 1% annual chance: 16.2 feet NAVD88 (16.3 feet MLLW)
- 0.2% annual chance: 18.1 feet NAVD88 (18.2 feet MLLW)

Summary

The design life of the proposed Beach House and associated structures is approximately 50 years; therefore, existing (present-day) coastal hazards for the Site are estimated using return period events similar in duration to the design life of the structures. The specific coastal hazards for this project are summarized in Table 3.

Table 3
Summary of Existing Coastal Hazards

Existing Coastal Hazard	Value
50-year significant deep water wave height	18.4 feet
Peak wave period	25 seconds[1]
Mean higher high water	5.4 feet MLLW
Highest astronomical tide	7.2 feet MLLW
FEMA 1% annual chance wave runup elevation	9.7 feet, MLLW
FEMA 1% annual chance wave runup elevation (Preliminary FIS)	16.3 feet, MLLW
Historic shoreline erosion rate (CNRA 2017)	0.3 foot/year
Storm shoreline erosion potential (January 2010 El Niño; CoSMoS)	87.9 feet

Note:
1. The largest observed dominate wave period (period with the maximum wave energy) over the data period was used.

As Table 3 shows, it is unlikely that any extreme tide event, surge, or storm waves will directly impact the proposed Site elevation of +23.3 feet NAVD88 (23.4 feet MLLW) .

Future Coastal Hazards

Future coastal hazards that can impact the Site include the current coastal hazards identified above with the addition of increased water levels due to predicted SLR. SLR estimates for the Site were taken from the CCC's *Sea Level Rise Policy Guidance* (2015) for areas south of Cape Mendocino. The SLR guidance uses 2000 as the starting point and denotes several future years as endpoints when estimating the possible range of SLR that could occur:

- Year 2030: 2 to 12 inches
- Year 2050: 5 to 24 inches
- Year 2100: 17 to 66 inches

Uncertainties exist in estimates for SLR due to numerous issues related to understanding the physics and assumptions associated with predictive modeling (NRC 2012). These uncertainties increase as the projection period increases with large uncertainties in predictions of SLR at 2100. For the purposes of the future coastal hazards evaluation, an intermediate SLR estimate was used for each predicted year, which was computed as the average of the upper and lower bound SLR estimates. The intermediate SLR projections for 2030, 2050, and 2100 are 7, 15, and 42 inches, respectively.

The time frame used to evaluate impacts to the Site due to predicted SLR is based on the design life of the proposed structures (CCC 2015). As discussed above, the design life of the proposed Beach House is estimated as 50 years. If the structures are constructed as planned in 2019, then sea level estimates for 2069 should be used for the future hazards evaluation. Because estimates are not explicitly available for 2069, interpolated values were used to evaluate future coastal hazards for the proposed work.

Linear interpolation was used to estimate SLR values in 2069 for the available upper and lower bound predictions, as well as the computed intermediate values, for 2050 and 2100. Table 4 provides a summary of the SLR projections used for this evaluation.

Table 4
Sea Level Rise Projections (inches)

Year	Lower Bound	Intermediate	Upper Bound
2030	2	7	12
2050	5	15	24
2069	10	25	40
2100	17	42	66

The SLR projections in Table 4 were added to the projected tidal elevations from Table 1. The projected tidal elevations at the Site based on intermediate SLR estimates for 2069 are summarized in Table 5. For comparison, the range of projected tidal elevations based on the upper and lower bound SLR estimates are also provided in Table 5.

Table 5
Potential Future Tidal Datums at the Site[1]

Tidal Datum	Current Conditions[2]	2069	
		Intermediate	Range
Highest astronomical tide	7.2	9.3	8.0 to 10.5
Mean higher high water	5.4	7.5	6.2 to 8.7
Mean sea level	2.8	4.9	3.6 to 6.1
North American Datum of 1988	0.1	2.2	0.9 to 3.4
MLLW	0.0	2.1	0.8 to 3.3

Notes:
1. All elevations are in feet, relative to current MLLW elevation.
2. Existing tidal datums are provided in Table 1.

Future coastal hazards for the Site combine current coastal hazards due to storm events (50-year return period) and increases in water level due to projected SLR. The 50-year wave height and period is considered to be the same for existing conditions and future conditions. Table 6 outlines the predicted future coastal hazards for the Site.

Table 6
Summary of Future Coastal Hazards

Future Coastal Hazard	Value[1]	Range
50-year significant deep water wave height	18.4 feet	N/A
50-year peak wave period	25 seconds[1]	N/A
2069 mean higher high water	7.5 feet MLLW	6.2 to 8.7 feet MLLW
2069 highest astronomical tide	9.3 feet MLLW	8.0 to 10.5 feet MLLW
2069 FEMA 1% annual chance wave runup elevation	11.8 feet MLLW	10.5 to 13.0 feet MLLW
2069 FEMA 1% annual chance wave runup elevations (Preliminary FIS)	18.4 feet MLLW	17.1 to 19.6 feet MLLW
Shoreline erosion rate	0.3 foot/year	N/A
Storm shoreline erosion potential (January 2010 El Niño; CoSMoS)	87.9 feet	N/A

Note:
1. The largest observed dominate wave period (period with the maximum wave energy) over the data period was used.

Summary of Potential Impacts

Based on best available estimates for the region (NRC 2012) adopted by the CCC (2015), sea levels at the Site are expected to increase between 0.8 and 3.3 feet by 2069 (interpolated), with an intermediate value for increase of 2.1 feet. A high degree of uncertainty exists in the magnitude of future SLR estimates, which is represented by the large range in predicted sea level increase considered (NRC 2012).

For the intermediate SLR predictions for 2069 (increase of 2.1 feet), the predicted MHHW elevation will be 7.5 feet MLLW, which is 15.9 feet lower than the proposed site foundation (+23.4 feet MLLW). During the highest astronomical tides, which could occur a few times per year, the still water elevation could reach 9.3 feet MLLW, which is 14.1 feet below the proposed site. The FEMA 1% annual chance wave runup elevation in 2069 (+11.8 feet MLLW) is not expected to reach the proposed site but could result in an increase in shoreline erosion. The Preliminary FEMA FIS (FEMA 2016) has a higher 1% annual chance wave runup elevation in 2069 (+18.4 feet MLLW), which is also below the proposed site foundation elevation.

Similar impacts would apply to adjacent shorelines (not located on the property) and are independent of the proposed work at the Site.

USGS's CoSMoS estimates the potential storm erosion for the Site to range from 26.8 to 30.5 meters (87.9 to 100.1 feet); with 100.1 feet representing a storm with over a 100-year return period. The Site has an offset of approximately 100 feet from the existing shoreline, and the 100-year storm is beyond the structures' lifespan. Future shoreline and bluff erosion are difficult to predict with rising sea levels and expected increased storm activity; therefore, the shoreline should be monitored to assess the rate of erosion and predict future potential hazards.

While the Site is near Tecolote Canyon Creek, according to the currently accepted FIRM (FEMA 2012) and the preliminary FIRM (FEMA 2016), the proposed Beach House Site is outside of the 0.2% annual flood area and, therefore, unlikely to experience flooding from the creek.

Based on evaluation of intermediate SLR estimates for 2069, the proposed Beach House site will not be impacted by SLR over the 50-year lifetime of the structures.

References

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CNRA (California Natural Resources Agency Data Portal), 2017. Accessed: April 28, 2017. Available from: https://gis.cnra.ca.gov/arcgis/rest/services/GeoScience/CSMW_Sym/MapServer

FEMA (Federal Emergency Management Agency), 2012. Flood Insurance Rate Map Panel 1341 of 1835. Map Number 06083C1341G. December 4, 2012.

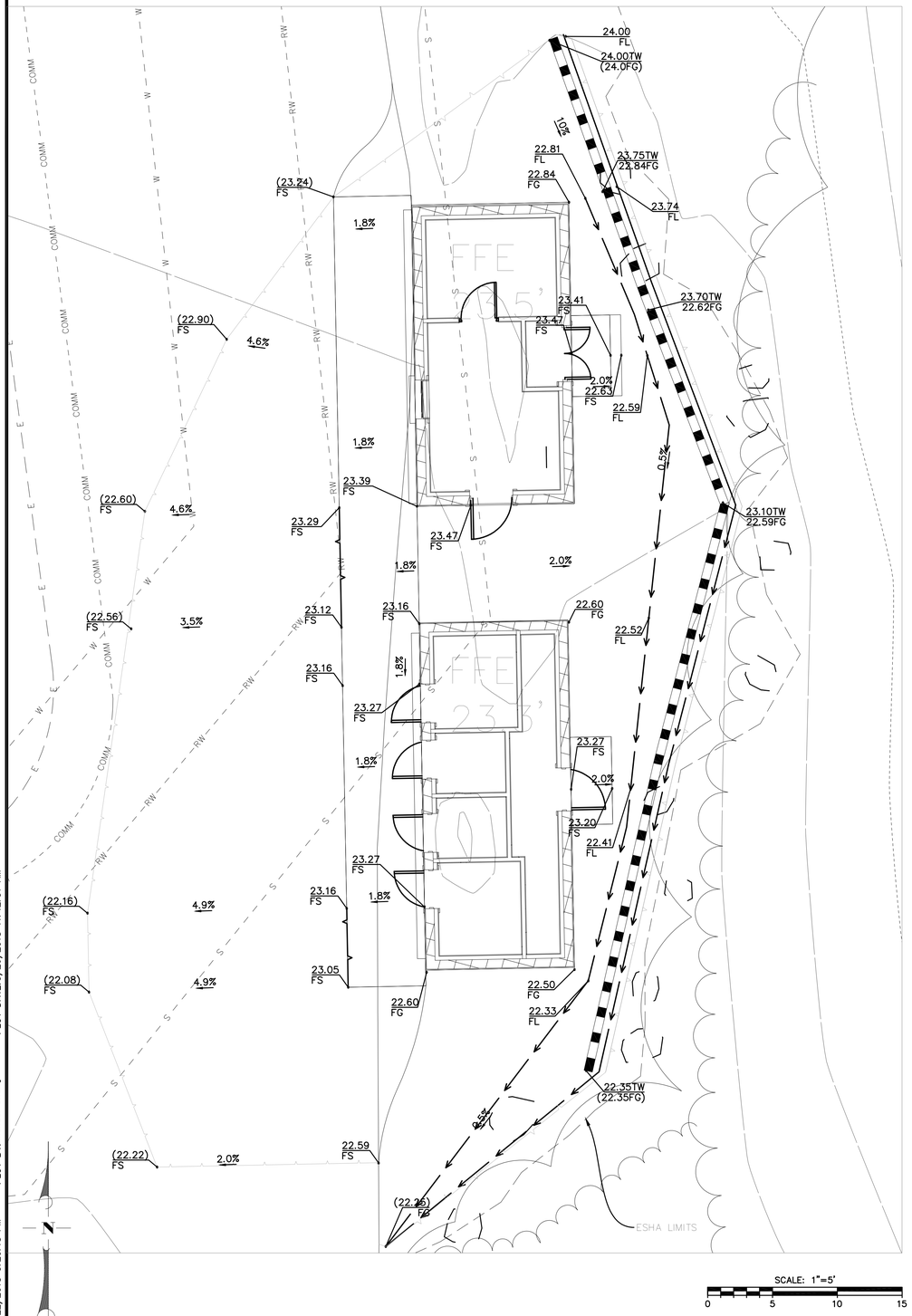
FEMA, 2016. Preliminary Flood Insurance Rate Map Panel 1341 of 1835. Map Number 06083C1341H. December 15, 2016.

NDBC (National Data Buoy Center), 2017. Accessed: April 5, 2017. Available from: http://www.ndbc.noaa.gov/station_page.php?station=46053.

NOAA (National Oceanic and Atmospheric Administration), 2017. Tides and Currents. Accessed: April 5, 2017. Available from: https://tidesandcurrents.noaa.gov/datums.html?id=9410580.

NRC (National Research Council), 2012. *Sea-Level Rise for the Coasts of California, Oregon, and Washington, Past, Present, and Future*.

Attachment 1
Proposed Beach House Site Location



PRELIMINARY GRADING PLAN

BEACH HOUSE RELOCATION

RITZ CARLTON–BACARA RESORT & SPA
GOLETA, CA

MARCH 22, 2018
SHEET 3 OF 4

Stantec
111 East Victoria Street, Santa Barbara, CA 93101
Phone: (805) 963-9532

36-EXB SAVE DATE: 3/22/2018 3:20:18 PM PLOT BY:Michael Chang PLOT DATE:3/26/2018 11:42:31 AM

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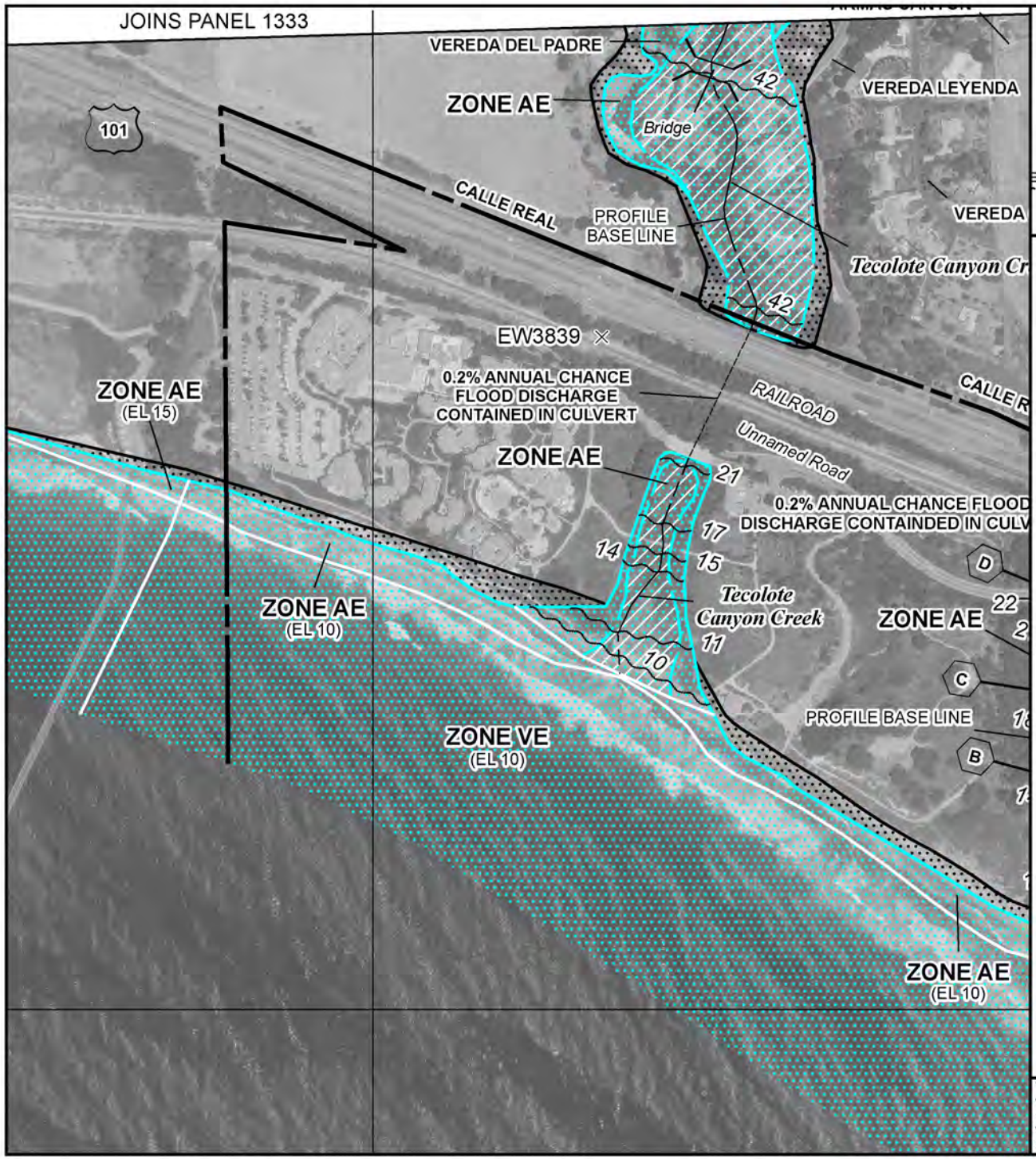
Attachment 2
Flood Insurance Rate Map



MAP SCALE 1" = 500'

250 0 250 500 750 1,000 FEET

METE

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1341G

FIRM

FLOOD INSURANCE RATE MAP

SANTA BARBARA COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 1341 OF 1835

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
GOLETA, CITY OF	060771	1341	G
SANTA BARBARA COUNTY	060331	1341	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 06083C1341G

MAP REVISED DECEMBER 4, 2012

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations (BFEs) shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) Zone 10. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the Local Tidal Datum. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242** or visit its website at http://www.ngs.noaa.gov/.

Base map information shown on this FIRM was derived from digital orthophotography collected by the U.S. Department of Agriculture Farm Service Agency under its National Agriculture Imagery Program (NAIP). This imagery was flown in 2005 and was produced with a 1-meter ground sample distance.

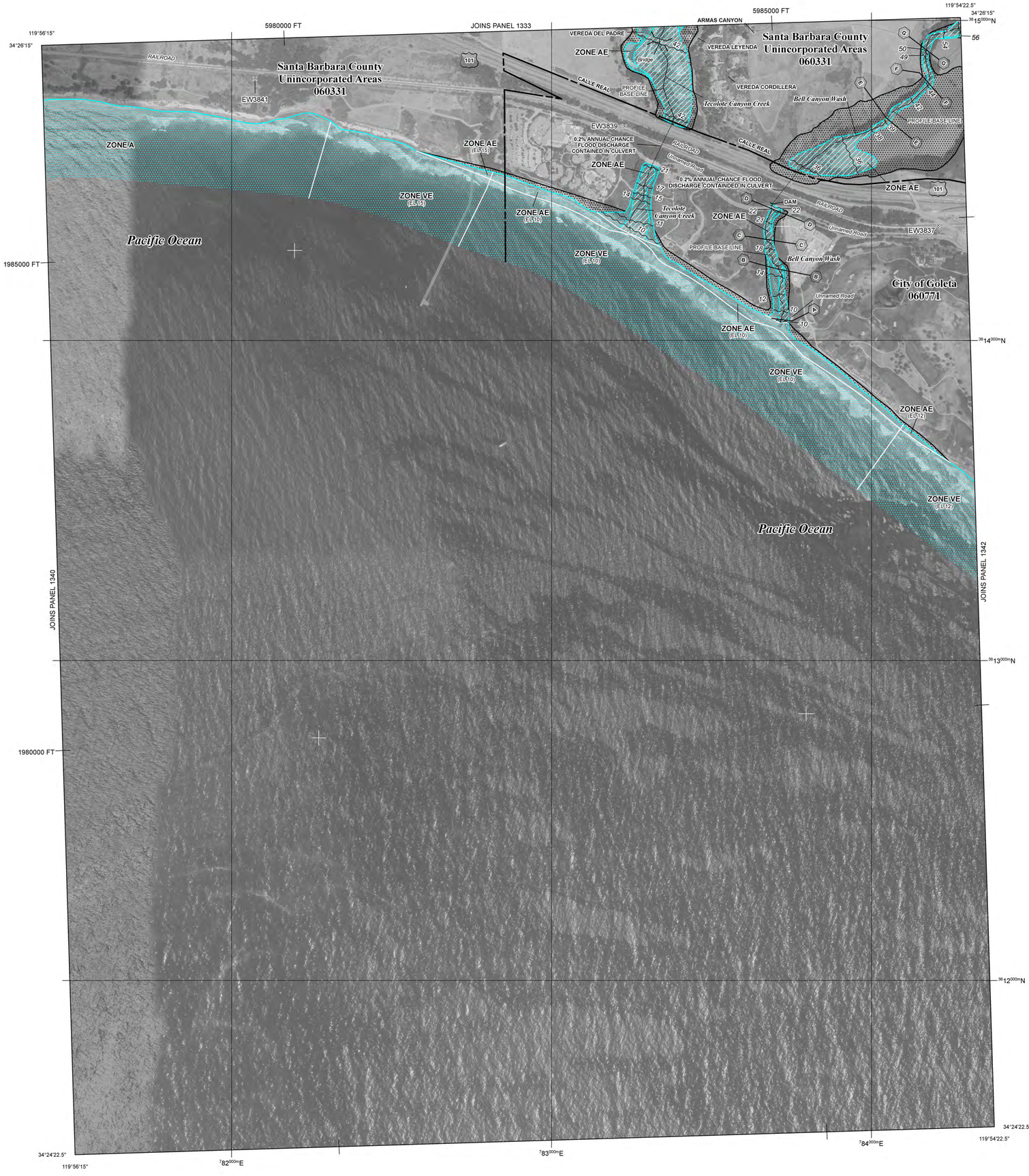
This map may reflect more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Information eXchange (FMIX)** at 1-877-336-2627 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FMIX may also be reached at its website at http://www.msc.fema.gov/.

If you have **questions about this map**, or questions concerning the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at **1-877-FEMA MAP** or visit the FEMA website at http://www.fema.gov/business/nfip/.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

- A — A — Cross section line
- 23 — 23 — Transect line
- 97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4275 000m E — 1000-meter Universal Transverse Mercator grid values, zone 10
- 6000000 FT — 5000-foot grid ticks: California State Plane coordinate system, Zone V (FIPSZONE = 0405), Lambert projection
- DX5510 × — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories List on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
SEPTEMBER 30, 2005

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
December 4, 2012 - to update map elevations to North American Vertical Datum of 1988.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 250 500 750 1,000 FEET
150 0 150 300 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1341G

FIRM

FLOOD INSURANCE RATE MAP

SANTA BARBARA COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 1341 OF 1835

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

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Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06083C1341G

MAP REVISED
DECEMBER 4, 2012

Federal Emergency Management Agency

Attachment 2
Revell Coastal Memorandum: Review of Coastal Hazards Analysis for Bacara Resort and Spa (September 2018)

REVELL COASTAL
Surf. Sand. Sustainability.

568 Bethany Curve
Santa Cruz, CA 95060
Phone: 831-854-7873
Email: revellcoastal@gmail.com
Website: *www.revellcoastal.com*

MEMORANDUM

Date: September 24, 2018

To: Bret McNulty, City of Goleta Planning Department

From: David Revell, PhD

Subject: Review of Coastal Hazards Analysis for Bacara Resort and Spa

---

Summary of Key Findings

In general, the new proposed location is in a much better location and elevation to minimize exposure to future coastal hazards for the 50year life of the project. However, the proposed relocation site may still be exposed to coastal erosion during the life of the project.

The Coastal Hazards Analysis for the Bacara Resort and Spa contains the following shortcomings:

1. Coastal Hazard Analysis does not appropriately include potential coastal erosion caused by an acceleration of historic erosion rates from sea level rise or storm induced erosion associated with a 100 year wave event.
2. Only uses a 2% annual chance storm (~50 year wave event) as opposed to the regulatory 1% annual chance storm (~100 year event).
3. Coastal Hazard Analysis does not include latest scientific information on sea level rise
4. Coastal Hazard Analysis does not consider the City of Goleta Vulnerability and Fiscal Impact Report.
5. Extreme wave analysis in Table 2 is flawed for many of the directions. It is not possible to generate some of the wave heights from certain directions given the presence of the Channel Islands to the South and East.

Project Description

The proposed site is located in Goleta, California, approximately 11 miles west of Santa Barbara, on the Santa Barbara Channel. The proposed Beach House location is to the east of the Tecolote Canyon Creek under a Monterey Shale formation bluff along an existing access road. The proposed site is setback approximately 100 feet from the back of the beach and foundation elevations for the two proposed buildings are +23.3 feet North American Vertical Datum of 1988 (NAVD88) and +25.5 feet NAVD88. The analysis used the lower elevation of 23.3 NAVD for analysis of potential impacts.

For the analysis a project design life of 50 years was assumed which is reasonable for this size project.

Identified Issues

Consideration of FEMA

While the Anchor QEA report mentions the new production FEMA FIRM maps, it is important to note that FEMA does not consider sea level rise in the Flood Insurance Rate Maps (FIRMs) mapping nor do they include coastal storm erosion in the mapping of the new high velocity (VE) zones (FEMA 2005).

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Phone: 831-854-7873
Email: revellcoastal@gmail.com
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Lack of Coastal Erosion Analysis

The Anchor study only provides estimates of long term coastal erosion based on extrapolation of historic erosion from a limited statewide study by USGS (Hapke et al 2006 referenced in the Anchor QEA report as CNRA 2017 - link in references is broken). The published USGS shoreline change rates referenced calculated a long term erosion trend between 1852 and 1998. This study does not include any acceleration of erosion from sea level rise or potential storm induced erosion. More recent studies of coastal erosion and beach change (Revell 2007, Revell et al 2011, Barnard et al 2009, ESA 2015, and City of Goleta 2015), show that this stretch of coast has experienced higher longer term erosion than those presented in the Anchor analysis. The most recent study updated the USGS study to 2009 and calculated long term erosion rates of 0.65 feet/year at the site (ESA 2015) which do not include acceleration for sea level rise.

The Anchor analysis states that the 100 year storm is beyond the structure's lifespan, however a 100 year storm has a 1% chance of occuring in any given year and the occurrence of such a storm in one year does not mean that a similar storm could not occur in any other year. FEMA maps the wave run up elevation associated with the 1% annual chance storm event, but not the erosion. The existing study also does not provide any actual calculation of storm induced coastal erosion from a FEMA 1% annual chance storm event (16 ft NAVD total water level identified to reach an elevation in 2069 of 18.4 feet in Table 6). Wave run up causes coastal erosion, but the two are separate processes. Wave run up causes temporary flooding and can be cleaned up, while erosion usually results in the permanent loss of land. The Anchor analysis references COSMOS 1.0[1] potential erosion distance of 87.9' to 100.1 feet. As the COSMOS model does not explicitly map coastal erosion, it is unclear how this number was arrived upon.

Coastal erosion hazard modeling conducted as part of the County of Santa Barbara Coastal Resiliency project projected accelerated historic erosion caused by 27.2 inches of sea level rise and the potential extent of storm erosion caused by a wave run up associated with a 100 year wave event[2]. This model was used in both the Santa Barbara County Vulnerability Assessment and the City of Goleta Vulnerability Assessment and Fiscal Impact report. The results are shown for 27.2 inches of sea level rise in Figure 1 for this site. These recent models show that the Project may be subject to additional long term and storm induced coastal erosion within the project life expectancy.

Latest State guidance on sea level rise

The Anchor QEA report does not include discussion of much of the more recent literature on sea level rise, including the 2018 State guidance on Sea Level Rise (OPC 2018). The modeling of coastal hazards for Santa Barbara County (Revell Coastal and ESA 2016) as used in the City of Goleta Sea Level Rise Vulnerability and Fiscal Impact Report (City of Goleta 2015). This results in an underestimation of the potential level of sea level rise by 2070.

Extreme Wave Height Analysis

Results from the extreme wave height analysis found in Table 2 of the Anchor QEA report is misleading. While details of the extreme value analysis methodology are lacking, the results shown in Table 2 are not possible for 4 of the 6 wave wave directions reported in the table. The possibility of waves from the east or south of the reported magnitude are not possible given the presence of the Channel Islands to the south, sheltering most of these directions. The most easterly direction is also highly unlikely given the limited fetch distance between the Ventura County Coast and the study site. While these directions are not particularly relevant to the proposed study site, the discrepancy is noted here.

[2] http://longrange.sbcountyplanning.org/programs/coastalresiliencyproject/documents/FinalVulnAssessmentTechnicalReport.pdf

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Phone: 831-854-7873
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Figure 1. Projected long term and storm induced coastal erosion with 27.2 inches of sea level rise http://maps.coastalresilience.org/california)

Project Considerations

1. Additional setback of at least 30 feet to avoid future coastal erosion impacts is recommended.
2. Retaining wall for the eastern bluff slope should be carefully engineered not to contribute to landsliding on the adjacent slope.
3. Any excavated sediments from construction should be tested for contamination and sediment grain size compatibility with the beach. Suitable clean sediments should be allowed to be placed on the beach in front of the development. Contaminated sediments should be off hauled to an appropriate offsite disposal site.
4. Complete removal of the existing emergency revetment should be required.

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568 Bethany Curve
Santa Cruz, CA 95060
Phone: 831-854-7873
Email: revellcoastal@gmail.com
Website: *www.revellcoastal.com*

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Attachment 3
Stantec Updated Beach House Relocation Drawings (January 2019)

DEDICATION AND EASEMENT NOTES:

PREPARED IN CONJUNCTION WITH A PRELIMINARY REPORT OF TITLE ISSUED BY FIDELITY NATIONAL TITLE COMPANY AS REPORT NO. 008-23045039-C-TC1 DATED JUNE 20, 2014. SAID REPORT IS PRESUMED TO COMPLETE AND ACCURATE. STANTEC CANNOT WARRANT THE ACCURACY OR COMPLETENESS OF SAID REPORT. ITEM NUMBERS IN SYMBOL, e.g. 1 CORRESPOND TO EXCEPTION ITEMS IN SAID REPORT:

4 AN EASEMENT FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES, RECORDED FEBRUARY 10, 1932 AS INSTRUMENT NO. 965, BOOK 216, PAGE 576 OF OFFICAL RECORDS. IN FAVOR OF: SOUTHERN COUNTIES GAS COMPANY OF CALIFORNIA AFFECTS: AS DESCRIBED THEREIN.

PREPARED IN CONJUNCTION WITH A PRELIMINARY REPORT OF TITLE ISSUED BY FIDELITY NATIONAL TITLE COMPANY AS REPORT NO. FSBA-425180059-SA DATED APRIL 16, 2018. SAID REPORT IS PRESUMED TO COMPLETE AND ACCURATE. STANTEC CANNOT WARRANT THE ACCURACY OR COMPLETENESS OF SAID REPORT. ITEM NUMBERS IN SYMBOL, e.g. 10, CORRESPOND TO EXCEPTION ITEMS IN SAID REPORT:

11 AN UNRECORDED AGREEMENT AFFECTING PORTIONS OF SAID LAND DATED MARCH 2, 1931 BY AND BETWEEN LOUIS G. DREYFUS AND SIGNAL OIL AND GAS COMPANY, A CORPORATION AS DISCLOSED BY THE AMENDMENT OF OIL AND GAS LEASE RECORDED DECEMBER 21, 1953 AS INSTRUMENT NO. 20467 IN BOOK 1203, PAGE 85 OF OFFICIAL RECORDS.

19 AN IRREVOCABLE OFFER OF DEDICATION FOR COASTAL ACCESS AND INCIDENTAL PURPOSES, RECORDED MAY 07, 1997 AS INSTRUMENT NO. 97-25648 OF OFFICIAL RECORDS. TO: COUNTY OF SANTA BARBARA

20 AN IRREVOCABLE OFFER OF DEDICATION FOR EQUESTRIAN AND HIKING AND INCIDENTAL PURPOSES, RECORDED MAY 07, 1997 AS INSTRUMENT NO. 97-25649 OF OFFICIAL RECORDS. TO: COUNTY OF SANTA BARBARA

23 THE TERMS AND PROVISIONS CONTAINED IN THE DOCUMENT ENTITLED "APPLICANT'S AGREEMENT FOR DRAINAGE IMPROVEMENTS" RECORDED MAY 07, 1997 AS INSTRUMENT NO. 97-25652 OF OFFICIAL RECORDS.

24 THE TERMS, PROVISIONS AND EASEMENT(S) CONTAINED IN THE DOCUMENT ENTITLED "AGREEMENT TO PRESERVE ARCHAEOLOGICAL RESOURCES AND GRANT OF EASEMENT" RECORDED MAY 07, 1997 AS INSTRUMENT NO. 97-25653 OF OFFICIAL RECORDS.

25 AN EASEMENT FOR CONSERVATION AND INCIDENTAL PURPOSES, RECORDED MAY 07, 1997 AS INSTRUMENT NO. 97-25654 OF OFFICIAL RECORDS.
IN FAVOR OF: COUNTY OF SANTA BARBARA
AFFECTS: AS DESCRIBED THEREIN

28 THE TERMS AND PROVISIONS CONTAINED IN THE DOCUMENT ENTITLED "OFFER TO ALLOW COUNTY TO MANAGE AND MAINTAIN PUBLIC BEACH AREA" RECORDED NOVEMBER 24, 1997 AS INSTRUMENT NO. 97-71160 OF OFFICIAL RECORDS.

32 THE TERMS, PROVISIONS AND EASEMENT(S) CONTAINED IN THE DOCUMENT ENTITLED "SECOND AMENDED IRREVOCABLE OFFER TO DEDICATE 8' WIDE PUBLIC ACCESS EASEMENT AND DECLARATION OF RESTRICTIONS" RECORDED JUNE 10, 2008 AS INSTRUMENT NO. 2008-0034569 OF OFFICIAL RECORDS.

SURVEYOR'S NOTES

1. MAPPING

TOPOGRAPHIC MAPPING WAS COMPILED AT A SCALE OF 1"=20', WITH A ONE FOOT CONTOUR INTERVAL, USING STANDARD PHOTOGRAMMETRIC METHODS AND PROCEDURES BY STANTEC CONSULTING FROM AERIAL PHOTOGRAPHY NOVEMBER 30, 2016.

2. BASIS OF BEARINGS AND COORDINATES

BEARINGS SHOWN ON THIS MAP ARE REFERENCED TO THE CALIFORNIA COORDINATE SYSTEM, NAD 83, ZONE 5 GRID, EPOCH 2011.00, DEFINED LOCALLY BY CONTINUOUSLY OPERATING REFERENCE STATIONS OPERATED BY THE CALIFORNIA SPATIAL REFERENCE CENTER (CSRC). THIS SURVEY TIED TO STATIONS COPR, UCSB, AND P519.

ALL DISTANCES AND COORDINATES ARE REFERENCED TO SAID CALIFORNIA COORDINATE SYSTEM AND ARE EXPRESSED IN US SURVEY FOOT UNITS.

3. ELEVATIONS

ELEVATIONS SHOWN HEREON ARE EXPRESSED IN U.S. SURVEY FEET AND ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), DEFINED LOCALLY BY THE CSRC. THIS SURVEY TIED TO BENCHMARK COPR, A WYATT-AGNEW DRILLED BRACED MONUMENT. ELEVATION = 45.35 FEET.

SHEET INDEX

SHEET NO.	DESCRIPTION
1	EXISTING CONDITIONS
2	PRELIMINARY DEMOLITION PLAN
3	PRELIMINARY GRADING PLAN
4	PRELIMINARY UTILITY PLAN
5	PRELIMINARY UTILITY PLAN – DETAIL
	PRELIMINARY RESTORATION GRADING PLAN
6	PRELIMINARY EROSION CONTROL PLAN

NOTE: EXISTING UTILITY LOCATIONS ARE APPROXIMATE

ABBREVIATIONS

AC	ASPHALT CONCRETE	FL	FLOW LINE
CB	CATCH BASIN	FOC	FIBER OPTIC CABLE
CD	CURB DRAIN	FS	FINISHED SURFACE
CL	CENTERLINE	HDPE	HIGH DENSITY
CMP	CORRUGATED METAL PIPE	POLYETHYLENE (PIPE)	
CO	CLEAN OUT	PB	PULLBOX
COMM	COMMUNICATIONS	PVC	POLYVINYL CHLORIDE (PIPE)
CONC	CONCRETE	RCP	REINFORCED CONCRETE
CYP	CYPRESS TREE	PIPE	
DI	DRAIN INLET	SS	SANITARY SEWER
DS	DOWN SPOUT	SD	STORM DRAIN
EP	EDGE OF PAVEMENT	TC	TOP OF CURB
ELEC	ELECTRICITY	TG	TOP OF GRATE
FC	FACE OF CURB	TW	TOP OF WALL
FF	FINISHED FLOOR		

SYMBOLS

AD	– BACK FLOW PREVENTER
BFP	– BOLLARD
B	– DRAIN INLET
DI	– FIRE DEPARTMENT CONNECTION
FDC	– FIRE HYDRANT
FH	– HOSE BIB
HB	– MAILBOX
MB	– GAS METER
GM	– WATER METER
WM	– TELEPHONE MANHOLE
TMH	– FIBER OPTIC CABLE MANHOLE
FOMH	– STORM DRAIN MANHOLE
SDMH	– SEWER MANHOLE
SMH	– MANHOLE (UNSPECIFIED)
MH	– CABLE TV PULLBOX
CATV	– COMMUNICATION PULLBOX
COMM	– ELECTRIC PULLBOX
ELEC	– GAS PULLBOX
GAS	– WATER PULLBOX
WPB	
PIV	– POST INDICATOR VALVE
	– POLE – LIGHT
UP	– POLE – UTILITY
RISER	– UTILITY RISER – TYPE SPECIFIED
SCO	– SEWER CLEAN OUT
SIGN	– SIGN
SIGN	– SIGN W/ DOUBLE POST
	– TREE
	– UTILITY MARK
GV	– GAS VALVE
ICV	– IRRIGATION CONTROL VALVE
V	– VALVE (UNSPECIFIED)
WV	– WATER VALVE
CP 1	– CONTROL POINT
MP 1	– MONITORING POINT
2529.43 TC	– LEADERED SPOT ELEVATION
2529.4	– SPOT ELEVATION
×382.2	– SPOT ELEVATION (FROM AERIAL SURVEY)
	– CONCRETE SURFACE

LINETYPES

	– BOUNDARY LINE
	– EASEMENT LINE
	– RIGHT OF WAY LINE
	– FLOWLINE
	– GROUND BREAKLINE
2527	– CONTOUR LINE
	– CURB
	– CENTERLINE
	– EDGE OF PAVEMENT
	– CHAINLINK/BARBWIRE FENCE
	– POST FENCE
	– WOOD FENCE
	– GUARD RAIL
	– WALL
CTV	– CABLE TV
COMM	– COMMUNICATIONS
E	– ELECTRIC
FW	– FIRE WATER
IRR	– IRRIGATION
G	– NATURAL GAS
S	– SEWER FORCE MAIN
RW	– RECLAIMED WATER
SD	– STORM DRAIN
W	– WATER
OHW	– OVERHEAD WIRE

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

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EXISTING CONDITIONS
BEACH HOUSE RELOCATION

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JANUARY 25, 2019

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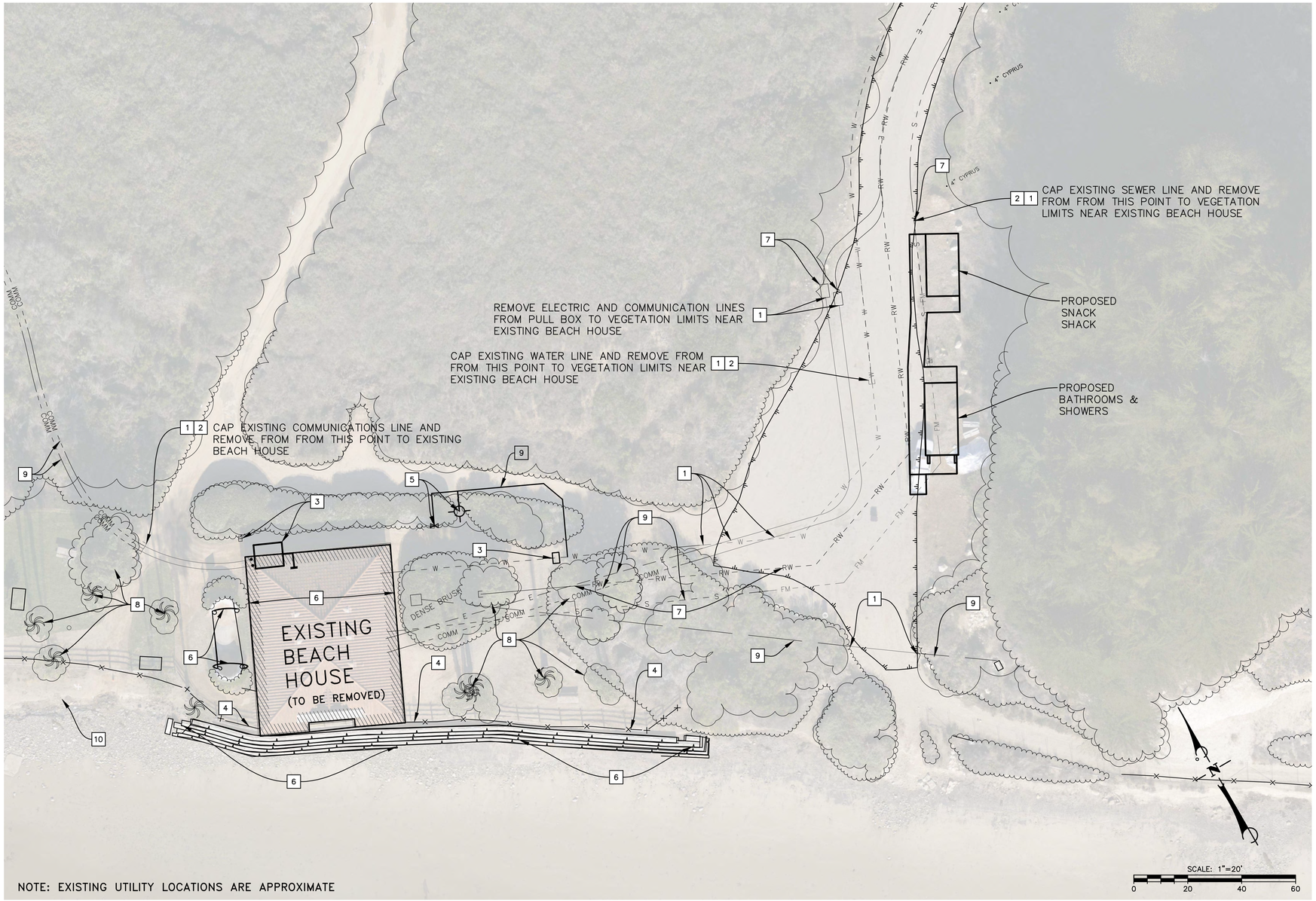

GENERAL NOTES

1. DEMOLISH EXISTING BEACH HOUSE BUILDING IN ITS ENTIRETY, INCLUDING ALL FOOTINGS AND UTILITIES,
2. CAP EXISTING UTILITIES 5' OUTSIDE OF STRUCTURE.
3. ALL DEMOLITION TO BE DISPOSED OFFSITE PER DEMOLITION PERMIT.
4. PUBLIC BATHROOMS, SHOWERS, AND SNACK BAR SHALL BE AVAILABLE DURING RELOCATED BEACH HOUSE CONSTRUCTION PER ORIGINAL PERMIT CONDITIONS

DEMOLITION NOTES

1. REMOVE EXISTING UTILITY. DISPOSE OFFSITE.
2. CUT AND CAP EXISTING UTILITY.
3. REMOVE UTILITY VAULT INCLUDING FOUNDATION. DISPOSE OFFSITE.
4. REMOVE EXISTING FENCE. DISPOSE OFFSITE.
5. RELOCATE EXISTING HYDRANT / FIRE DEPARTMENT CONNECTION SEE PRELIMINARY UTILITY PLAN
6. REMOVE EXISTING CONCRETE YARD BLOCKS / FOUNDATION AND DISPOSE OFFSITE.
7. PROTECT EXISTING UTILITY IN PLACE.
8. PROTECT EXISTING TREE IN PLACE.
9. ABANDON EXISTING UTILITY IN PLACE.
10. REMOVE EXISTING EROSION CONTROL DEVICES (SANDBAGS, PLASTIC, JUTE MAT, ETC.) AND DISPOSE OFFSITE.

EXISTING UTILITIES LEGEND

- W — WATER MAIN
- FW — FIRE WATER LINE
- RW — RECLAIMED WATER LINE
- S — SEWER FORCE MAIN
- E — ELECTRIC LINES
- COMM — COMMUNICATION LINES

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PRELIMINARY DEMOLITION PLAN
BEACH HOUSE RELOCATION

RITZ CARLTON BACARA RESORT & SPA

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JANUARY 25, 2019

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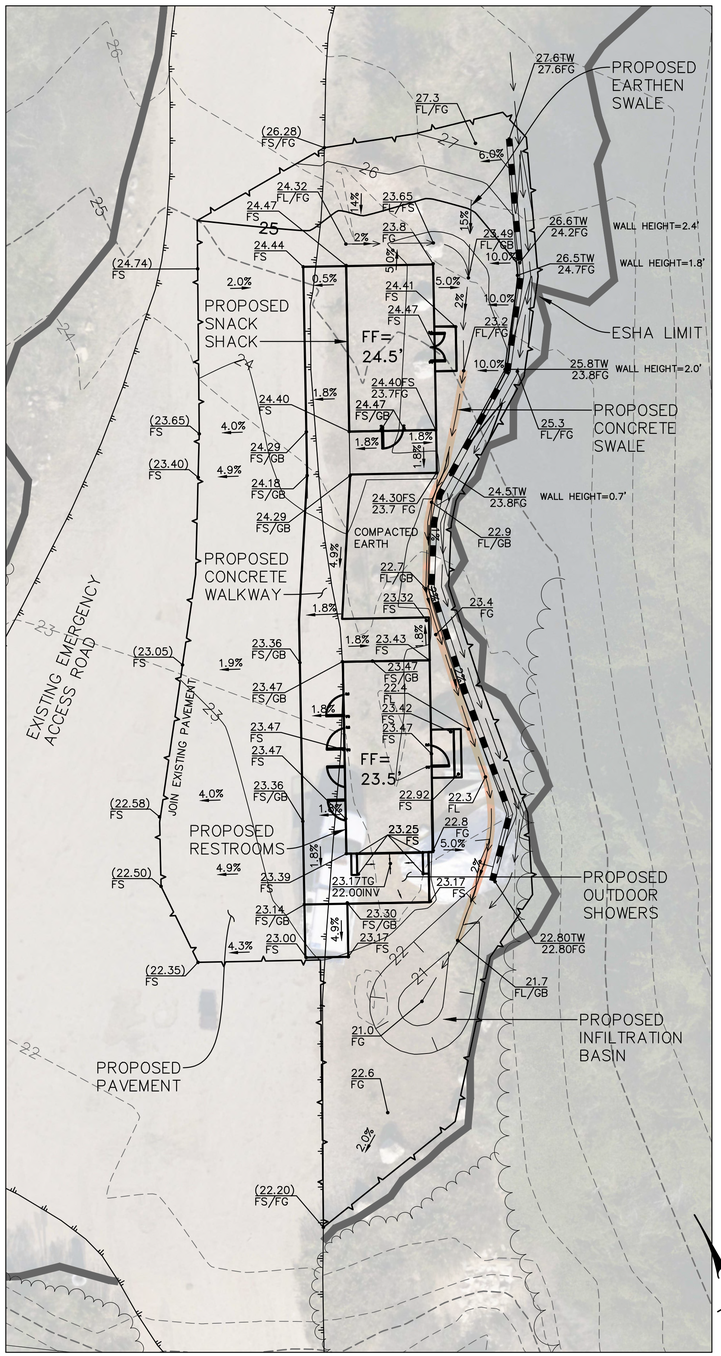

PRELIMINARY GRADING PLAN – DETAIL

ESTIMATED EARTHWORK – RAW QUANTITIES

ACCESS RAMP	CUT = 35 C.Y.	FILL = 30 C.Y.
PROPOSED BEACH HOUSE	CUT = 100 C.Y.	FILL = 30 C.Y.
RESTORATION GRADING	CUT = 480 C.Y.	FILL = 100 C.Y.
TOTAL	CUT = 615 C.Y.	FILL = 160 C.Y.

THE ABOVE QUANTITIES ARE APPROXIMATE IN PLACE VOLUMES CALCULATED FROM THE EXISTING GROUND TO THE PROPOSED FINISH GRADE OR SUBGRADE. EXISTING GROUND IS DEFINED BY THE TOPOGRAPHIC CONTOURS AND/OR SPOT ELEVATIONS ON THE PLAN. PROPOSED FINISH GRADE IS DEFINED AS THE DESIGN SURFACE ELEVATION OF EARTH TO BE CONSTRUCTED. PROPOSED SUBGRADE ELEVATION IS DEFINED AS THE DESIGN SURFACE ELEVATION OF EARTH TO BE CONSTRUCTED BENEATH PAVEMENTS OR STRUCTURES.

THE ABOVE QUANTITIES ARE FOR PERMIT PURPOSES ONLY AND HAVE NOT BEEN FACTORED TO INCLUDE ALLOWANCES FOR BULKING, CLEARING AND GRUBBING, SUBSIDENCE, SHRINKAGE, OVER EXCAVATION AND RECOMPACTION, UNDERGROUND UTILITY AND SUBSTRUCTURE SPOILS AND CONSTRUCTION METHODS.

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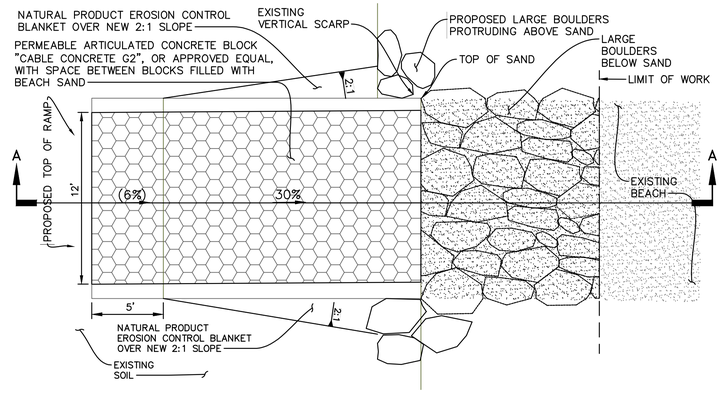
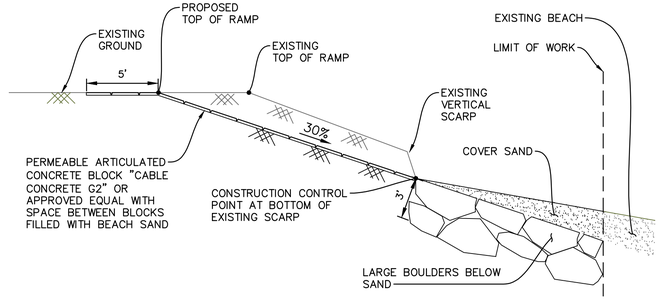


PROPOSED EMERGENCY VEHICLE ACCESS RAMP DETAIL – PLAN

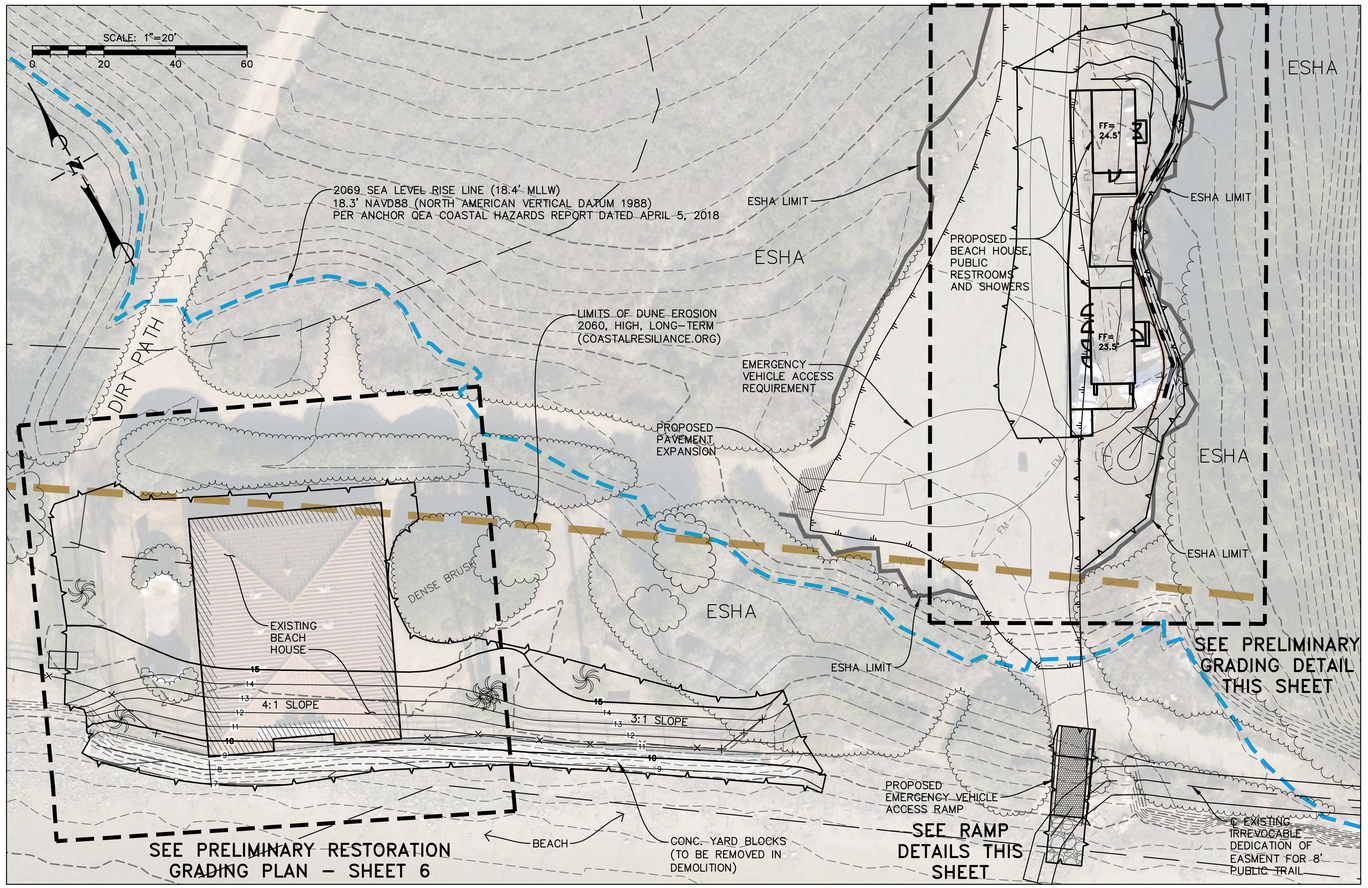
SCALE 1"=5'



BOULDER AREA = 225 SQUARE FEET
BOULDER VOLUME = 25 CUBIC YARDS

PROPOSED EMERGENCY VEHICLE ACCESS RAMP DETAIL – SECTION A

SCALE 1"=5'



LEGEND

- STEP LOCATION
- SD CATCH BASIN/INLET
- 3 (4) CONSTRUCTION NOTE
- 92.43 FS PROPOSED GRADE
- (88.42) EXISTING/MATCH GRADE
- 2.0% PROPOSED GRADIENT
- PROPERTY LINE
- BUILDING SETBACK LINE
- ROAD CENTERLINE
- GRADING LIMIT LINE
- FLOWLINE/ SWALE
- 495' EXISTING CONTOUR
- 500 PROPOSED CONTOUR
- SD PROPOSED STORM DRAIN PIPE
- GRADE BREAK
- SAWCUT LINE
- U PROPOSED DRY UTILITY TRENCH

PRELIMINARY GRADING PLAN
BEACH HOUSE RELOCATION

RITZ CARLTON BACARA RESORT & SPA

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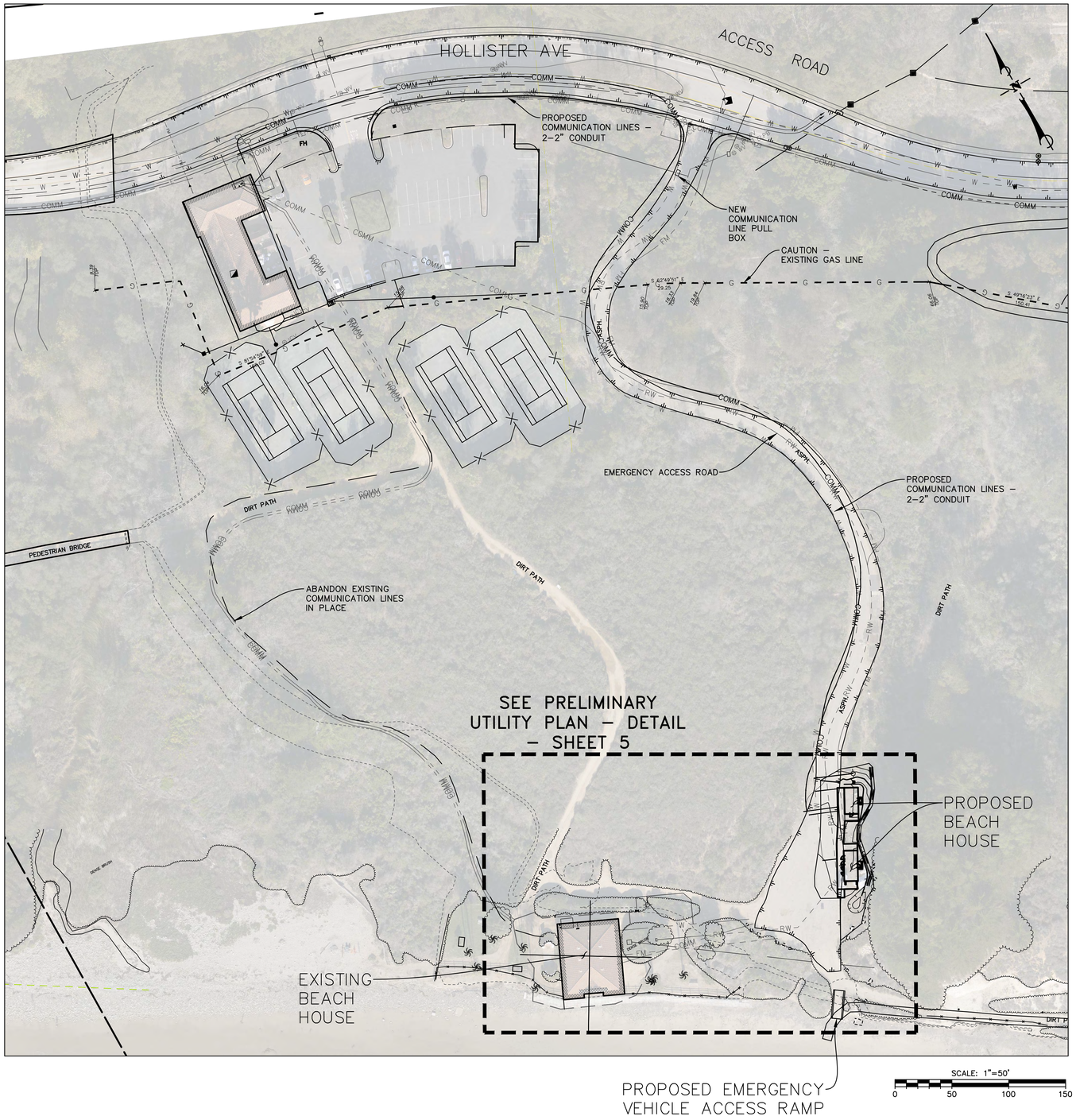

UTILITY NOTES:

1. ALL EXISTING UTILITIES SERVING EXISTING BEACH HOUSE TO BE ADAPTED / EXTENDED TO NEW BEACH HOUSE.
2. UTILITY CONNECTION 5' FROM PROPOSED BEACH HOUSE (TYPICAL).
3. PUBLIC SHOWERS AND RESTROOMS TO BE PROVIDED THROUGHOUT CONSTRUCTION.
4. FIRE, POTABLE, AND RECLAIMED IRRIGATION WATER TO BE PROVIDED BY GWD.

LEGEND:

- RETAINING WALL
- SD — PROPOSED STORM DRAIN
- SD — EXISTING STORM DRAIN
- S — PROPOSED SEWER MAIN
- FM — EXISTING SEWER FORCE MAIN
- W — PROPOSED WATER MAIN
- RW — EXISTING RECLAIMED WATER
- FW — PROPOSED FIRE WATER LINE
- W — EXISTING WATER MAIN
- U — PROPOSED JOINT UTILITY TRENCH
- FH — PROPOSED FIRE HYDRANT
- FDC — PROPOSED FIRE DEPARTMENT CONNECTION
- PROPOSED GWD FIRE LINE WITH DCDA (ABOVEGROUND)

PRELIMINARY UTILITY PLAN BEACH HOUSE RELOCATION

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UTILITY NOTES:

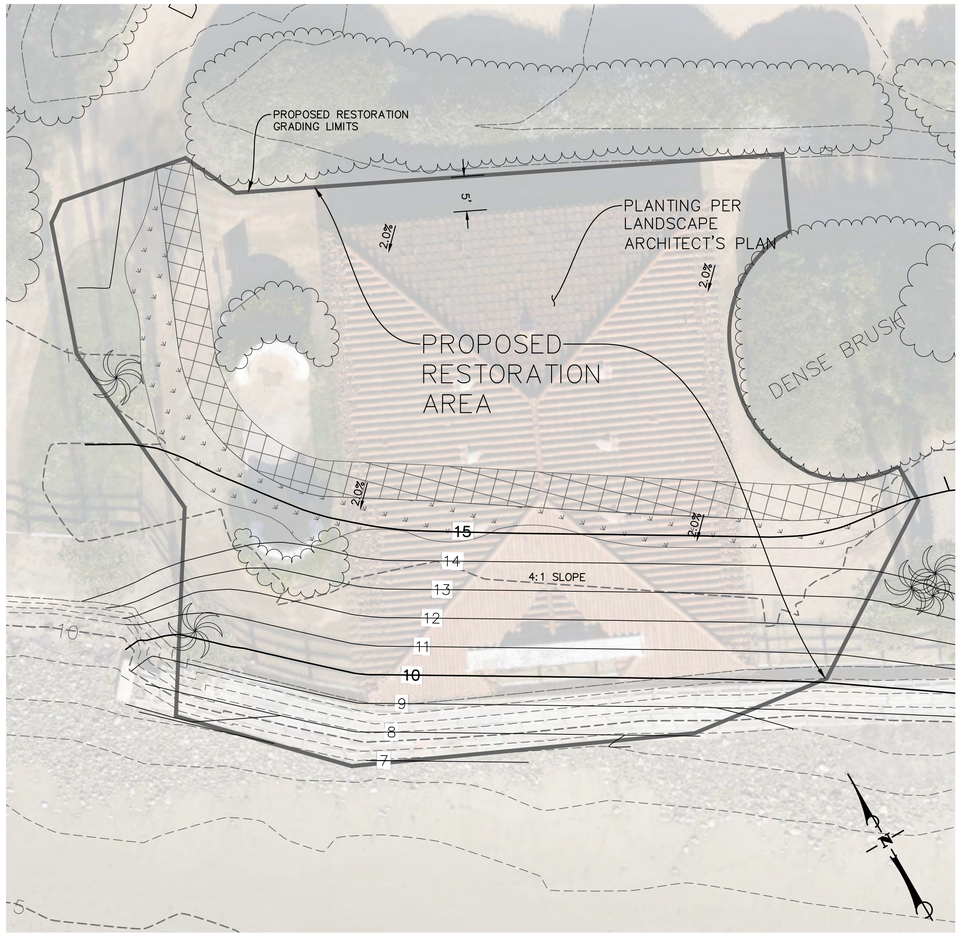
1. ALL EXISTING UTILITIES SERVING EXISTING BEACH HOUSE TO BE ADAPTED / EXTENDED TO NEW BEACH HOUSE.
2. UTILITY CONNECTION 5' FROM PROPOSED BEACH HOUSE (TYPICAL).
3. PUBLIC SHOWERS AND RESTROOMS TO BE PROVIDED THROUGHOUT CONSTRUCTION.
4. FIRE, POTABLE, AND RECLAIMED IRRIGATION WATER TO BE PROVIDED BY GWD.

LEGEND:

- PROPOSED RETAINING WALL
- COMM — PROPOSED COMMUNICATION LINE
- COMM — EXISTING COMMUNICATION LINE
- S — PROPOSED SEWER MAIN
- FM — EXISTING SEWER FORCE MAIN
- W — PROPOSED WATER MAIN
- RW — EXISTING RECLAIMED WATER
- FW — PROPOSED FIRE WATER LINE
- W — EXISTING WATER MAIN
- FH — PROPOSED FIRE HYDRANT
- FDC — PROPOSED FIRE DEPARTMENT CONNECTION
- PROPOSED GWD FIRE LINE WITH DCDA (ABOVEGROUND)

PRELIMINARY UTILITY PLAN – DETAIL

SCALE: 1"=20'
0 20 40 60



PRELIMINARY RESTORATION GRADING PLAN

SCALE: 1"=10'
0 10 20 30

PRELIMINARY UTILITY PLAN – DETAIL
PRELIMINARY RESTORATION GRADING PLAN
BEACH HOUSE RELOCATION

RITZ CARLTON BACARA RESORT & SPA

CITY OF GOLETA, CALIFORNIA
JANUARY 25, 2019

Stantec
111 East Victoria Street, Santa Barbara, CA 93101
Phone: (805) 963-9532

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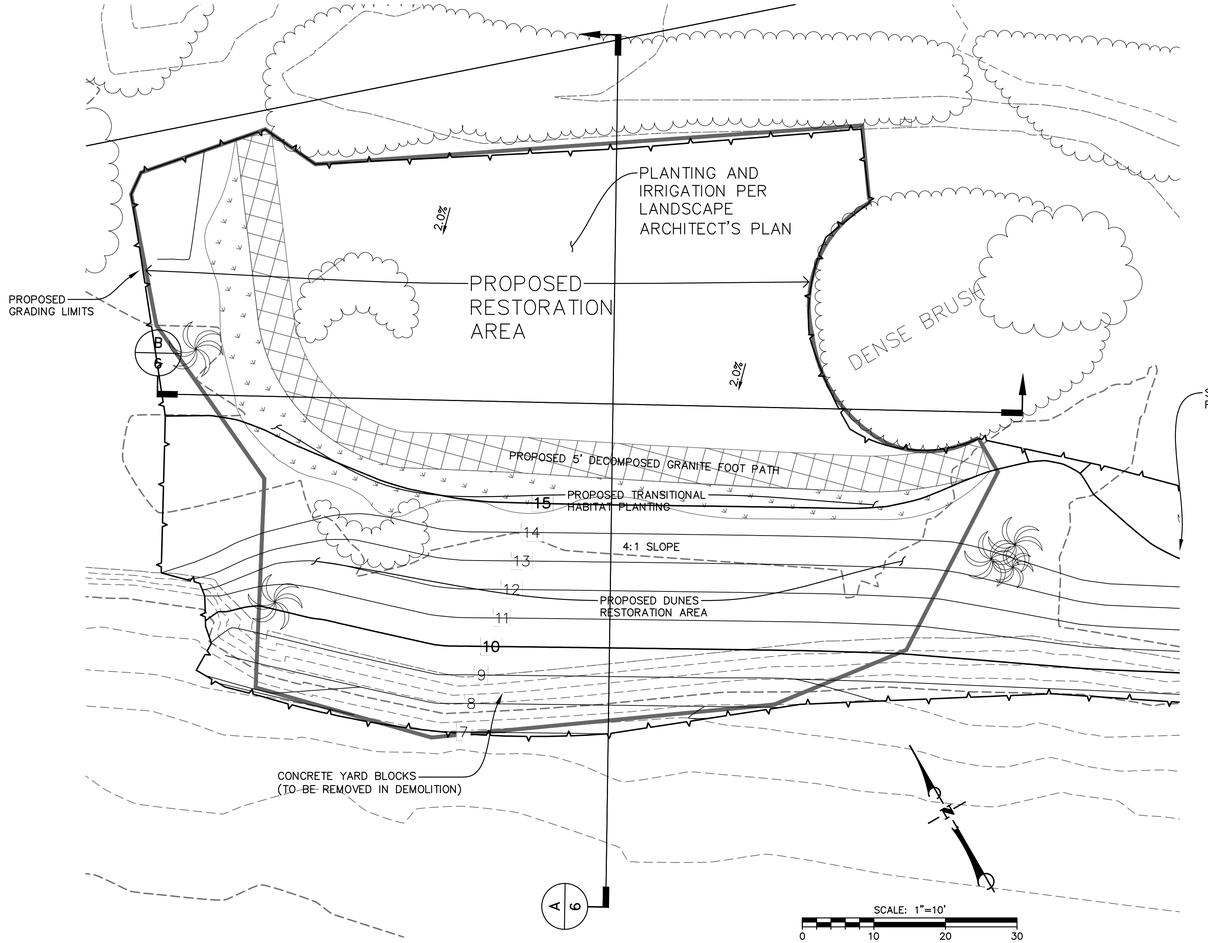
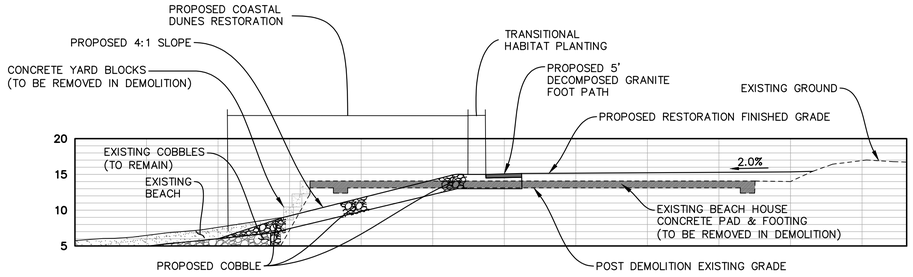


PRELIMINARY RESTORATION GRADING PLAN

REFERENCE: HASKELL'S BEACH HOUSE DEMOLITION RESTORATION PLAN BY DUDEK

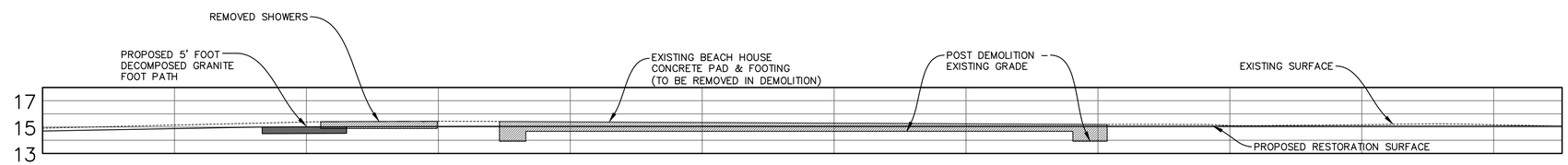
LEGEND:

- 10 — EXISTING CONTOUR ELEVATION
- 9
- 15 — PROPOSED CONTOUR ELEVATION
- 14



A/6 PROPOSED RESTORATION PLAN SECTION

SCALE 1"=10'



B/6 PROPOSED RESTORATION PLAN SECTION

SCALE 1"=5'

PRELIMINARY RESTORATION GRADING PLAN
BEACH HOUSE RELOCATION

RITZ CARLTON BACARA RESORT & SPA

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111 East Victoria Street, Santa Barbara, CA 93101
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