RECON

An Employee-Owned Company

Goleta West Sanitary District New Administration Building Mitigated Negative Declaration

Prepared for
Goleta West Sanitary District.
Mark Nation
General Manager/Superintendent
PO Box 4
Goleta, CA 93116-0004

Prepared by
RECON Environmental, Inc
5951 Encina Road, Suite 104
Goleta, CA 93117
P 805.928.7907

RECON Number 8165
October 2017

GOLETA WEST SANITARY DISTRICT

MITIGATED NEGATIVE DECLARATION

SCH Number 2017091003

PROJECT: GOLETA WEST SANITARY DISTRICT NEW ADMINISTRATION BUILDING

October 31, 2017

LEAD AGENCY
Goleta West Sanitary District
P.O. Box 4
Goleta, CA 93116

PROJECT PROPONENT/PROPERTY OWNER

Project Proponent:	Goleta West Sanitary District P.O. Box 4 Goleta, CA 93116
Proponent's Representative:	Patsy Stadelman Price, AICP Brownstein Hyatt Farber Schreck LLP 1020 State Street Santa Barbara, CA 93101
Property Owner:	City of Santa Barbara 601 Firestone Road Santa Barbara, CA 93117

PROJECT ADDRESS/LOCATION
Santa Barbara Municipal Airport (SBA)
North of intersection of Mesa Road and J Road
Adjacent to University of California, Santa Barbara (UCSB) Campus Parking Lot 32
Santa Barbara, CA 93106

PROJECT SUMMARY

The Goleta West Sanitary District (District) is the lead agency under the California Environmental Quality Act (CEQA) for their new Administration Building project (project). The District has conducted administrative activities in a converted garage since the mid-1960s and is now looking to modernize its operations by constructing a new 3,298-square-foot Administration Building. The project site is located on the District's headquarters complex at the southwestern edge of the Santa Barbara Municipal Airport (SBA), on an easement over City of Santa Barbara (City) property. The District headquarters site encompasses approximately 1.07 acres on a portion of assessor's parcel number (APN) 073-450-003.

The project site is located adjacent to the Goleta Slough Natural Reserve, the University of California, Santa Barbara (UCSB) Parking Lot 32, and approximately 150 feet north of the intersection of Mesa Road and J Road. See Figure 1in the attached Final Initial Study for the project's regional location and Figure 2 for the project site, outlined in red on an aerial photograph.

IDENTIFIED MITIGATION

The Final MND identifies potential significant impacts related to biological and cultural resources. The Final MND includes resource protective mitigation measures to reduce these impacts to a less than significant level. Mitigation measures identified herein ensure that no indirect impacts to adjacent jurisdictional waters or wetlands shall occur during project construction (MM-BIO-1); no direct impacts shall occur to nesting birds (MM-BIO-2); ~~and~~ potential impacts to historic, prehistoric, archaeological, tribal and human remains would be potentially significant but mitigated through implementation of protective measures during construction of the project (MM-CUL-1 and MM-CUL-2); potentially significant impacts from unstable geologic conditions and soil erosion would be mitigated through compliance with the geotechnical assessment recommendations, which would ensure that proper foundation and structural design criteria are met (MM-GEO-1); and potential impacts related to future sea level rise would be potentially significant but mitigated through the implementation of a flood protection wall and would use all feasible management options as new information becomes available to ensure sea level rise and flood protection is maintained throughout the life of the project (MM-HYD-1).

PUBLIC REVIEW

The Draft MND was circulated for public review from September 1, 2017 to October 2, 2017. Comments and responses are included in the attached Initial Study, Attachment G.

MITIGATED NEGATIVE DECLARATION FINDING

Based on the findings in the attached Initial Study and mitigation measures identified, it has been determined that the Goleta West Sanitary District New Administration Building Project will not have a significant effect on the environment.

Patsy Stadelman Price, AICP
Project Manager
Goleta West Sanitary District

10/31/2017
Date

GOLETA WEST SANITARY DISTRICT

FINAL INITIAL STUDY/ENVIRONMENTAL CHECKLIST

SCH Number 2017091003

PROJECT: GOLETA WEST SANITARY DISTRICT NEW ADMINISTRATION BUILDING

October 31, 2017

LEAD AGENCY
Goleta West Sanitary District
P.O. Box 4
Goleta, CA 93116

PROJECT PROPONENT/PROPERTY OWNER

Project Proponent:	Goleta West Sanitary District P.O. Box 4 Goleta, CA 93116
Proponent's Representative:	Patsy Stadelman Price, AICP Brownstein Hyatt Farber Schreck LLP 1020 State Street Santa Barbara, CA 93101
Property Owner:	City of Santa Barbara 601 Firestone Road Santa Barbara, CA 93117

PROJECT ADDRESS/LOCATION
Santa Barbara Municipal Airport (SBA)
North of intersection of Mesa Road and J Road
Adjacent to University of California, Santa Barbara (UCSB) Campus Parking Lot 32
Santa Barbara, CA 93106

TABLE OF CONTENTS

FIGURES

TABLES

PHOTOGRAPHS

ATTACHMENTS

A: Project Plans dated January 25, 2017
B: Biological Resources Report for the Goleta West Sanitary District Administration Building Project, Santa Barbara, California prepared by RECON Environmental, Inc. Dated April 2017.
B-1: Wetland Delineation Report for the Goleta West Sanitary District prepared by Rachel Tierney Consulting. Dated January 26, 2016.
C: Geotechnical Study, Proposed Administration Building Goleta West Sanitary District prepared by Fugro Consultants Inc. Dated April 2015.
C-1: Geotechnical Study Addendum 1, Proposed Administration Building Goleta West Sanitary District prepared by Fugro Consultants Inc. Dated April 2017.
D: California Emissions Estimator Model (CalEEMod) Output Sheets.
E: Drainage and Storm Water Quality Analysis. Goleta West Sanitary District Headquarters Improvements Project. Stantec. Dated June 2016.
F: County of Santa Barbara Air Pollution Control District (APCD) Recommended Project Conditions, Fugitive Dust Control Measures, and Diesel Particulate and NOx Emission Reduction Measures
G: Letters of Comment on the Draft Initial Study and Mitigated Negative Declaration and Responses

ACRONYMS

%	percent
AIA	Airport Influence Area
ALUCP	Airport Land Use Compatibility Plan
ALUP	Airport Land Use Plan
AMP	Airport Master Plan
AMSL	above mean sea level
APN	Assessor's Parcel Number
BFE	base flood elevation
BRR	Biological Resources Report
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Cal-OSHA	California Occupational Health and Safety Agency
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCRWQCB	Central Coast Regional Water Quality Control Board
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CH4	methane
CHVA Report	Coastal Hazards Vulnerability Assessment and Fiscal Impact Report
City	City of Santa Barbara
CLUP	Coastal Land Use Plan
CMP	Congestion Management Plan
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO2	carbon dioxide
CPTs	cone penetration tests
CRHR	California Register of Historical Resources
CWA	Clean Water Act
cy	cubic yards
dB(A)	A-weighted decibels
District	Goleta West Sanitary District
DOC	Department of Conservation
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FAA	Federal Aviation Authority
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FFE	finished floor elevation
GHG	greenhouse gas
GMP	Growth Management Plan
GSD	Goleta Sanitary District
GSEMP	Goleta Slough Ecosystem Management Plan
GSMC	Goleta Slough Management Committee
H2S	hydrogen sulfide
HAZCOM	Hazard Communication Program
HFCs	hydrofluorocarbons
LCP	Local Coast Plan
Ldn	day-night equivalent level
L_{eq}	one-hour equivalent noise level

ACRONYMS (cont.)

LOS	Level of Service
L_{pw}	sound power level
LTWSP	Long Term Water Supply Program
mgd	million gallons per day
MT CO_2E	metric tons of carbon dioxide equivalent
MTD	Metropolitan Transit District
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Historical Commission
NAVD	North American Vertical Datum
NF_3	nitrogen trifluoride
NO_2	nitrogen dioxide
NO_X	nitrogen oxide
NPDES	National Discharge Elimination System
NRHP	National Register of Historic Places
NRHP	National Register of Historic Places
O_3	ozone
OSHA	Occupational Safety and Health Administration
PFCs	perfluorocarbons
PM_{10}	10-micron particulate matter
$PM_{2.5}$	2.5-micron particulate matter
project	Goleta West Sanitary District New Administration Building Project
PSM	Process Safety Management
ROC	reactive organic compounds
RPS	Renewable Portfolio Standard
SBA	Santa Barbara Municipal Airport
SBAPCD	Santa Barbara County Air Pollution Control District
SBCAG	Santa Barbara County Association of Governments
SBCFD	Santa Barbara County Fire Department
SCCAB	South Central Coast Air Basin
SF	square feet
SF_6	sulfur hexafluoride
SLR	sea level rise
SO_X	Sulfur dioxide
SR-154	State Route 154
TMDL	total maximum daily load
TPY	tons per year
UCSB	University of California Santa Barbara
V/C	volume-to-capacity

PROJECT SUMMARY

The Goleta West Sanitary District (District) is the lead agency under the California Environmental Quality Act (CEQA) for their new Administration Building project (project). The District has conducted administrative activities in a converted garage since the mid-1960s and is now looking modernize its operations by constructing a new 3,298-square-foot (SF) Administration Building. The project site is located on the District's headquarters complex at the southwestern edge of the Santa Barbara Municipal Airport (SBA), on an easement over City of Santa Barbara (City) property. The District headquarters site encompasses approximately 1.07 acres on a portion of Assessor's Parcel Number (APN) 073-450-003.

The project site is located adjacent to the Goleta Slough Natural Reserve, the University of California, Santa Barbara (UCSB) Parking Lot 32, and approximately 150 feet north of the intersection of Mesa Road and J Road. See Figure 1 for the project's regional location and Figure 2 for the project site, outlined in red on an aerial photograph.

Project Location

RECON

M:\JOBS5\8165\common_gis\fig1_NCS.mxd 3/15/2016 ccn

FIGURE 1
Regional Location

Image Source: USDA FSA (flown June 2014)

Project Boundary

FIGURE 2

Project Location on Aerial Photograph

RECON

M:\JOBS5\8165\common_gis\fig2_mnd.mxd 3/15/2016 ccn

PROJECT DESCRIPTION (see Attachment A, Project Plans)

The District currently has five operations buildings at its headquarters complex, including the existing administration building/pump station #1, an equipment garage, an emergency generator/former pump station #2 building, a garage, and small shop building (Table 1). The existing administration building/pump station #1 was constructed in 1964. The District has determined that although their facilities are well maintained, the buildings are outdated, inefficient, and in need of renovation and replacement.

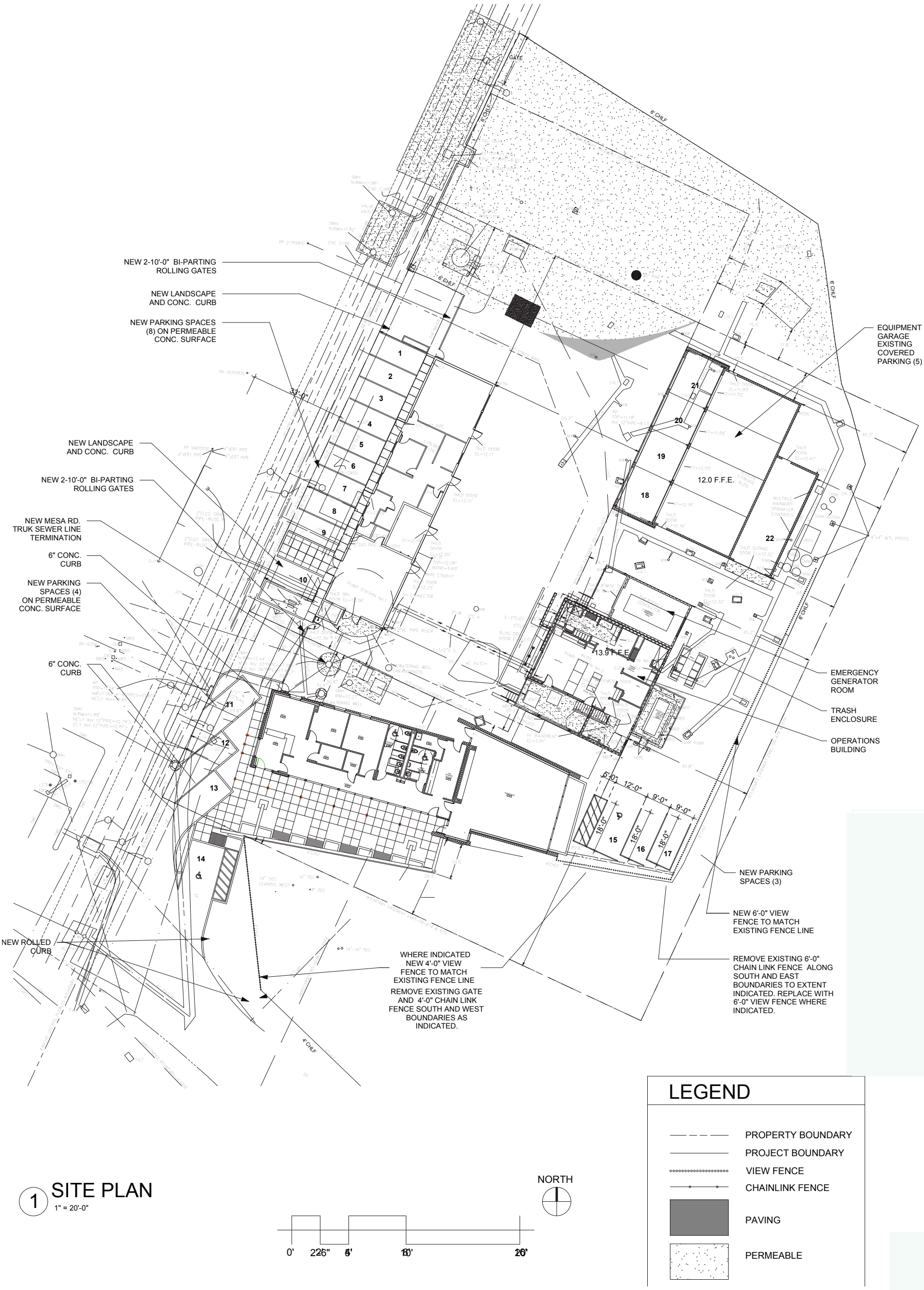
Two buildings at the District headquarters site (Figure 3) are planned for future renovation projects to be scheduled pending approval of entitlements from the City (Case No. MST2013-00379). The existing 2,400 SF equipment garage is proposed to be expanded by 900 SF to accommodate large equipment and improve internal site circulation. The existing 4,297 SF emergency generator/former pump station #2 building is proposed to be partially demolished and reconstructed to provide a modernized work area for operations staff while maintaining the existing emergency generator (new operations building). Two existing below grade levels of the operations building (2,784 SF) will be permanently sealed off and the main level expanded by 396 SF resulting in a new total floor area of 1,909 SF (a net reduction of 2,388 SF). The architectural style of these renovations would be consistent with the new Administration Building. The District, as lead agency for the renovation projects, determined no significant environmental impacts would result and filed CEQA Notices of Exemption for each building on April 29, 2015 (Class 1, Existing Facilities (CEQA Guidelines Section 15301(e) for the equipment garage and Class 2, Replacement or Reconstruction (CEQA Guidelines Section 15302(c) for the operations building). Figure 3 shows the new Administration Building project site plan.

The proposed project under evaluation in this Initial Study consists of demolition of the existing single-story 1,353 SF garage and shop buildings (Figure 4; Photographs 1–4) located adjacent to a paved access driveway along the southern edge of the project site, and construction of a new 3,298 SF single-story Administration Building. The garage and shop buildings are located next to each other on the south property line and are separated by a small walk space (see Photograph 2). For the purposes of this analysis they are discussed as one building that will be demolished to make way for the new Administration Building. Existing administration uses will be transferred from the existing administration building to the new structure. Existing operations in the garage and shop buildings to be demolished will be moved into other existing facilities on the site. The District currently has a total of seven on-site staff. Three managerial staff, including the District General Manager, Assistant General Manager, and Office Manager currently working in the existing administration building would work in the new Administration Building offices.

No expansion of operations or additional staff will be added on-site as part of this project. In addition, no changes to the existing administration building are proposed by this project. Following completion of the new Administration Building, the District anticipates obtaining future entitlements for renovations that would return the portion of the existing administration building not used as a pump station to its former garage/shop use.

Retaining the administrative office uses on-site with the three aforementioned managers at the District is critical for efficient operations at the project site due to the small number of staff and functionality of the District as a public utility facility wastewater purveyor, which serves residents and businesses in the Western Goleta Valley and Isla Vista. The three managers working on-site in the existing administration building provide integral services to the District's operational staff, which can respond immediately in the event of an emergency at the District headquarters site and convey the District's Operational and Emergency Response Plan. Relocating the District's management staff to an off-site administrative building would cause daily constraints and inefficiencies in the routine operation, management, and maintenance of the District's wastewater system.

Map Source: Eduardo Galindo, Architect



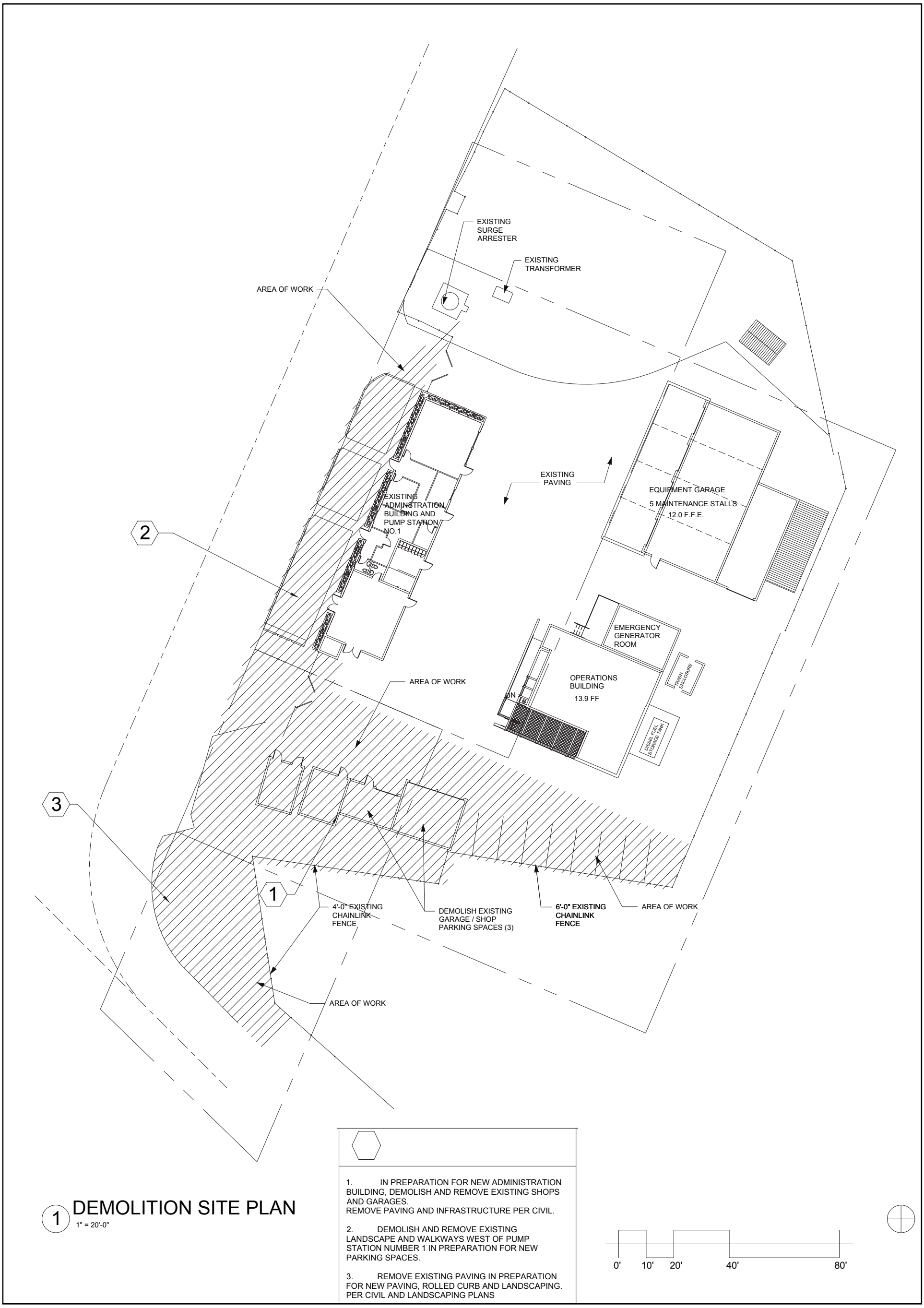
1 SITE PLAN
1" = 20'-0"

FIGURE 3
Site Plan

RECON

M:\JOBS5\8165\env\graphics\MND\fig3.ai 08/16/17 fmm

Map Source: Eduardo Galindo, Architect



1 DEMOLITION SITE PLAN
1" = 20'-0"

RECON

M:\JOBS5\8165\env\graphics\MND\fig4.ai 08/16/17 fmm

FIGURE 4
Demolition Plan

PHOTOGRAPH 1
Existing Buildings with Existing Administration Building on Left and Buildings to be Removed on Right, Looking Northeast

PHOTOGRAPH 2
Buildings to be Removed, Looking South

PHOTOGRAPH 3
Buildings to be Removed and South Driveway, Looking East

PHOTOGRAPH 4
Project Site South Boundary with Existing Parking
and Buildings to be Removed, Looking Northwest

RECON

The new Administration Building will include a public lobby, board conference room, restrooms, offices, and office support spaces. The architectural style of the new Administration Building is modern (Figures 5 and 6). The exterior materials of the new Administration Building will include horizontal insulated metal panels with a brown tone finish; horizontal standing seam, raw zinc panels; single-score concrete masonry to match the existing masonry on other buildings on the site; and glass with colored, anodized aluminum frames. A structural steel veranda and solar screen lattice which incorporates aluminum "egg crate" grating, accented with colored polycarbonate material will be attached to the south side of the building. The new Administration Building will be constructed to meet or exceed current, energy efficient building standards (Title 24). Installation of solar photovoltaic arrays and wiring for future electric vehicle charging stations are included as part of the proposed project consistent with the City's General Plan Policy ER6 and the City Solar Energy System Design Guidelines.

The existing paved portion of the access driveway along the southern property line west of the existing gate will be removed and a new, open courtyard (1,058 SF) will be constructed on the south side of the new Administration Building. The proposed project will feature new landscaping, including the removal of all existing turf within the project construction area consistent with the City Landscape Design Standards for Water Conservation (City of Santa Barbara Municipal Code Chapter 22.80). The new courtyard will incorporate permeable paving and native, drought-tolerant landscaping, and will be bordered by 8-inch-wide, 3-foot-high concrete walls, with raised planters and seating on the interior north wall side. The western end of the courtyard will be capable of being closed with an aluminum flood resistant panel system. The exterior wall of the new Administration Building will be similarly configured, to provide flood protection in compliance with the City of Santa Barbara Municipal Code Section 22.24.160: General Standards for Flood Hazard Reduction Sections A–C.

Table 1 details the lot coverage data of the District's existing buildings and the new proposed Administration Building.

Table 1
Proposed Project and Existing Lot Coverage Summary

	Existing		**Proposed**		**Proposed Change**
	SF	%	SF	%	
Buildings					
New Administration Building (project)	--	--	3,298	7%	New construction
Garage and small shop buildings	1,353	3%	-	-	Demolish
Total project construction footprint (includes 1,058 SF New Administration Building courtyard)	--	--	4,356	9%	
Existing Structures					***Separately Planned Projects***
Existing Administration/Pump Station #1 Building	2,376	5%	2,376	5%	No change
Equipment Garage	2,400	5%	2,400	5%	
with future addition*	--	--	900	2%	Addition under separate permit
Operations Building	2,134	5%	2,134	5%	
with future renovation/increased footprint**	--	--	536	<1%	Renovation under separate permit
Total Building Area	**8,263**	**18%**	**11,644**	**25%**	
Impermeable Surfaces/Paving/Veranda	25,202	54%	19,932	43%	Remove impermeable paving for new building and add permeable paving
Permeable Surfaces/Landscaping/ Permeable Paving/ Courtyard	13,198	28%	15,570	32%	Install new permeable paving, landscaping, courtyard
Total Lot Area	**46,663**	**100%**	**46,663**	**100%**	

SF = square feet; % = percent
*City of Santa Barbara Case No. MST2013-00379 (http://www.santabarbaraca.gov/services/licenses/casestatus/status.asp?Case=MST2013-00379&Direction=ASC). Renovations are not included as part of this project and have been filed as Categorical Exemptions under CEQA (Secs. 15301(e): additions to existing structures of less than 2,500 SF involving negligible or no expansion of the existing use and 15302(c)): the replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity.
**See Footnote above for details. Lot coverage for the Operations Building includes existing exterior deck and dock areas and proposed exterior deck, dock, ramp and raised planter areas which are not part of the building floor area.

FIGURE 5
New Administration Building, South Elevation

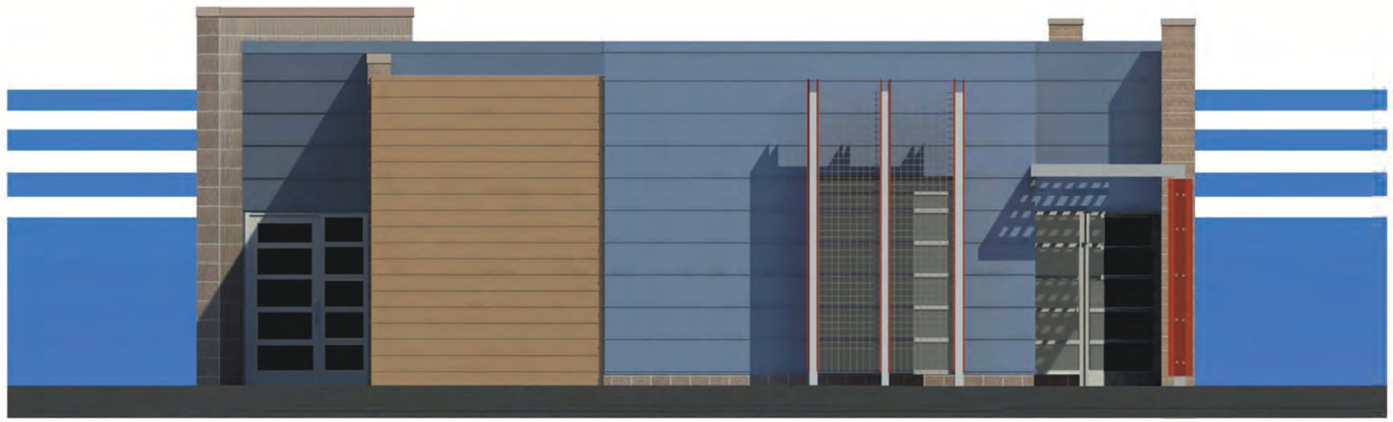


FIGURE 6
New Administration Building, West Elevation

Parking: There are currently four marked and eight unmarked uncovered parking spaces and eight covered parking spaces in garages on the project site for a total of 20 parking spaces. Proposed parking on the project site will include a total of 22 spaces and 4 bicycle parking spaces (Table 2). Four new diagonal parking spaces will be located immediately west of the new Administration Building, and include one disabled space. Ten new parking spaces will replace the existing landscaping, located immediately west of the existing administration building. Five existing covered parking spaces in the equipment garage and three uncovered spaces, including one disabled space at the southeast corner of the project site, will remain. The landscape and walkways west of the existing administration building will be replaced with new landscaping and permeable paving to accommodate the new parking spaces.

Table 2
Existing and Proposed Parking

	Proposed Areas Requiring Parking	Parking Requirement	Number of Parking Spaces Required
Former Administration Building/pump station #1*	2,376 SF	1/500 SF (industrial use)	5
Emergency Generator/ Operations Building	1,909 SF	1/500 SF (industrial use)	4
New Administration Building	3,298 SF	1/250 SF (office use)	13
Subtotal			22
Total Parking Required**			20
Total Bicycle Parking Required***			4
Total Existing Parking			20 (8 covered, 12 uncovered) 0 Bicycle
Total Proposed Parking			22 (5 covered, 17 uncovered) 4 Bicycle

SF = square feet
*Approximately 908 SF of the former administration building is planned to be converted to garage/covered parking spaces under a separate permit following completion of new Administration Building. This area will temporarily be used for storage and maintenance purposes prior to conversion.
**Includes reduction to 90% of required parking for industrial and office complexes containing 10,000–30,000 SF of net floor area per Santa Barbara Municipal Code §28.90.100.D.
***One bicycle parking space shall be required for each seven vehicle parking spaces per Santa Barbara Municipal Code §28.90.100.L.

In addition, the existing pavement and 4-foot-high chain-link fence along the southernmost project site boundary will be replaced with native, drought-tolerant landscaping and 4-foot-high view fencing. A rolled asphalt curb will border new street paving at the southwest corner of the project site. The existing 6-foot-high chain-link fence along the southeastern corner of the site will be replaced with a 6-foot-high view fence in the same location.

Project Phasing: It is anticipated that construction of the new Administration Building would occur in the dry season after the District completes environmental review and obtains permits for construction from the City. The construction period is anticipated to last approximately 12 months (Stantec 2016). The first construction phase would include demolition of the existing garage and shop building and removal of existing pavement, concrete foundations, utility infrastructure, parking, and landscaping from the project site. The second phase would include grading and site preparation followed by installation of utility infrastructure for the new Administration Building. The last phase would result in construction of the new Administration Building, including concrete, paving, parking, floodwalls, fencing, and new landscaping. The portion of the existing administration building not utilized as a pump station is intended to revert to a garage/shop under a separate, future permit.

Required Discretionary Permits: The environmental review for this project would be certified by the Goleta West Sanitary District as the Lead Agency.

Required discretionary approvals by the City include:

1. A Coastal Development Permit to allow the proposed development in the Coastal Commission appealable jurisdiction of the City's Coastal Zone;
2. A Development Plan to allow the construction of 457 SF net new SF of nonresidential development on APN 073-450-003[1]
3. Design Review by the Architectural Board of Review.

Advisory review by the City's Pre-Application Review Team was conducted on May 24, 2016. The project was also reviewed by the advisory Goleta Slough Management Committee (GSMC) on May 19, 2016 and April 20, 2017. The Pre-Application Review Team and GSMC staff provided review and comments to assist in refining the project to comply with City policies and regulations and preparing this Initial Study.

Related Permits: Additional improvements and upgrades to other existing District facilities may also occur under separate project applications and permits (e.g., City of Santa Barbara Case No. MST2013-00379).

Responsible Agencies:
City of Santa Barbara
County of Santa Barbara Flood Control District
University of California, Santa Barbara

ENVIRONMENTAL SETTING

Existing Site Characteristics

The District was formed in the 1950s and buildings were constructed as needed from the late 1950s through 1986. The existing building, housing the District's administrative uses, was originally designed to be a workshop/garage and was constructed in 1964. The District's buildings sit upon a level pad of fill rising approximately 12 feet above mean sea level (AMSL). For the purposes of this analysis, unless otherwise stated (e.g., in the biological impact analysis), the terms headquarters site and project site are used interchangeably. The project site captures stormwater runoff generated on-site with storm drain inlets, and drains to a wet well in the existing administration building/pump station #1 which is then pumped to the Goleta Sanitary District (GSD) treatment plant. There is no existing or proposed drainage into the Goleta Slough. The existing buildings are set upon an asphalt base and enclosed by a chain-link fence of varying height from 4 to 6 feet. A paved driveway is located along the south headquarters site boundary. The driveway extends, unpaved, through a 4-foot-high gate and east along the south end of the Goleta Slough. This driveway provides access to a standpipe used to fill the District's vacuum truck. The driveway was formerly used by the Santa Barbara County Mosquito Abatement District to access the Goleta Slough. An existing chain-link fence is located between the existing garage and shop building and the south driveway. In addition, a grass lawn is located in front of the existing administration building to the west. An approximately 560 SF grass area with several trees is located at the northern end of the site.

Air Quality: The project site is located in the South Central Coast Air Basin (SCCAB) and is regulated by the Santa Barbara County Air Pollution Control District (SBAPCD). The SCCAB currently exceeds both the 24-hour and annual state PM_{10} (10-micron particulate matter) standards.

[1]The proposed project includes demolition of 1,353 SF of existing nonresidential development. City of Santa Barbara Case No. MST2013-00379 will result in a net reduction of 1,488 SF (see footnote under Table 1 for details). Therefore, the net nonresidential floor area resulting from the construction of the new 3,298 SF Administration Building would be 457 SF.

Aesthetics/Visual Resources: The project site is located in the Goleta Valley on the south coast of Santa Barbara County. Views in the area are dominated by the Santa Ynez Mountains, which form the backdrop for all viewsheds to the north. The project site is surrounded by urban development to the south and west with County Fire and UCSB Police and Communications Services facilities and a parking lot. The Goleta Slough is located immediately east and north of the District headquarters site, offering views of wildlife habitat and natural ecosystems. The Santa Barbara Municipal Airport (SBA) terminal is located approximately 0.85 mile east of the project site. The SBA administration buildings, hangars, and facilities are located 0.70 mile northwest of the project site. The Pacific Ocean and its coastline are not visible from the project site. No designated scenic corridors are located near the project site. The project is located on a site constructed on fill to elevate the existing buildings above the adjacent Goleta Slough. The site is flat with a slope of less than 2 percent (%). The project site and surrounding properties have expansive views of the Santa Ynez Mountains in the distance. Mid-distant views are of industrial areas north of the SBA. The SBA runways, terminal buildings, hangars, and control tower are visible across the Goleta Slough Preserve wetlands to the immediate north and east of the project site. The District's existing buildings are partially shielded from view from the industrial areas and airport to the north and east by several trees in the grass area on the north end of the headquarters site. The south side of the project site is bounded by a mix of native and non-native riparian vegetation in the vicinity of the project site consisting of ruderal semi natural stands, iceplant mats, cattail marsh, pickleweed mats, jaumea mixed meadow, and arroyo willow thickets. Mature trees block views of the project site from UCSB campus areas to the south.

Archaeological Resources: Two documents were reviewed for information on prehistoric and historic archaeological resources and historic structure information in and adjacent to the project: The Archaeological survey for the Goleta West Sanitary District, Trunk Improvement Project, Mesa Road Trunk Sewer Santa Barbara County, California (Pacific Legacy, Inc. 2011); and the Master Archaeological Resource Assessment for the SBA (City of Santa Barbara 2009). The Project is within the study boundary of both projects and its location was covered in the documents. Archaeological sites and cultural resources are known to be located in the vicinity of the Goleta Slough and Goleta Valley. The area was historically used by the Chumash tribe; however, the project site has been previously graded, filled, paved, and developed with existing buildings since the 1950s. The project area was greatly disturbed during construction of the airport during World War II and the UCSB Campus in the 1950s to 1960s.

Biological Resources: The Biological Resources Report for the Goleta West Sanitary District Administration Building was prepared for the project area in April 2017 (RECON Environmental 2017; Attachment B). General and focused botanical surveys and a wetland delineation of the project study area were conducted during the spring of 2015. The biological resources report describes the environmental setting and methodology used for the wildlife, vegetation, and sensitive plant and wildlife species surveys.

Flooding/Water Quality: The Goleta Valley watershed is approximately 8 miles in length and 10 miles in width and drains into the Goleta Slough. The watershed includes the following creeks: Atascadero, Maria Ygnacio, San Jose, San Pedro, Cienquitas, Hospital, and the Tecolotito (Glen Annie) and Carneros creeks, which combine to form the major Goleta Slough channel.

The project site is located in a 100-year flood zone, and identified by the Federal Emergency Management Agency (FEMA) as Special Flood Hazard Area Zone AE. The Santa Barbara County Flood Control and Water Conservation District is the responsible agency for the Goleta Slough's maintenance and flood-carrying capacity. The U.S. Environmental Protection Agency's (EPA) Clean Water Act (CWA) Section 303(d) List of Impaired Waters (reporting year 2012) includes Goleta Slough and some of its tributary creeks. The Goleta Slough/Estuary is listed on the state's 2012 CWA Section 303(d) impaired waters for pathogens and priority organics. Urban runoff contributes to the impairment. Other impaired

Section 303(d) 2012 creeks that flow and discharge into the Goleta Slough include the Cienenguitas, Atascadero, Maria Ygnacio, San Antonio, San Pedro, and San Jose creeks.

Fire Hazard: The District receives first response fire services from the Santa Barbara County Fire Department (SBCFD) and County Station 17 is located adjacent to UCSB Parking Lot 32. The City of Santa Barbara Fire Department Station 8 serves aviation-related emergencies occurring at the adjacent Santa Barbara Airport. The County and City of Santa Barbara Fire Departments provide secondary back-up emergency response services. The project site is not located in a High Fire Hazard Zone (State of California 2008).

Hazardous Materials: As of ~~February 2016~~October 2017, the State of California GeoTracker website at geotracker.waterboards.ca.gov identified the project site as having no active hazardous material cases. Additionally, the District has a Hazard Communication Program and Disaster Operations/Business Continuity Plan that guides staff preparation for emergency response events.

Topography/Drainage: The project site is relatively flat (less than 2% slope). The entire project site will continue to drain via storm drain inlets to an on-site wet well in the existing administration building/pump station #1 on the western end of the project site, which is then pumped to the District treatment plant. There is no current or proposed drainage from the site to the adjacent Goleta Slough wetlands.

Noise: Existing noise sources around the project site include automobiles passing by on J Road, Mesa Road, and in Parking Lot 32. Sirens from the adjacent UCSB Police Department and County Fire Department vehicles and overhead flight noise from airplanes at the SBA are sources of occasional noise disturbances at the project site. Service vehicles used by the District which are housed on the project site and used daily also contribute to the ambient noise on the site. However, because the site is not located near any busy streets, the site's ambient noise level would generally be below 60 CNEL because the site is located just outside the 60/65 dB CNEL noise exposure range for the SBA.

Public Services & Utilities: The project site receives water from the Goleta Water District. The District pumps its wastewater and stormwater to Goleta Sanitary District's treatment plant where it is treated and released, meeting all standards. Emergency fire and police services are provided by the Santa Barbara County and UCSB campus emergency facilities, respectively.

Seismic/Geologic Conditions: A Geotechnical Study for the project site was prepared by Fugro Consultants, Inc. in April 2015 and addendum dated April 2016 (Attachments C and C-1). The project site is located on the coastal plain south of the Santa Ynez Valley Mountain Range, in the western portion of the Transverse Ranges Geomorphic and Structural Province. The Santa Ynez Mountains and adjacent alluvial plain are composed almost entirely of sedimentary rocks ranging from Late Jurassic to Recent. The Goleta Valley is historically in a seismically active region. The north branch of the More Ranch fault is closest to the project site, trending east-northeast across the southern half of the Goleta Slough in the immediate vicinity south of the project site. Other faults in the area include the Mission Ridge Fault (0.38 mile) and the Red Mountain Fault (2.8 miles). The site is not within an Alquist-Priolo Earthquake Zone. Soil layers in the site may potentially be susceptible to liquefaction and seismic settlement (see Attachments C and C-1).

Existing Land Use

Existing Facilities and Uses: The District headquarters property currently includes the following four main buildings:

- 2,376 SF existing administration building/pump station #1;
- 1,353 SF garage/shop building;

- 4,297 SF emergency generator/former pump station #2 building (includes two below grade levels, one platform level, an emergency generator); and
- 2,400 SF equipment garage.

Access and Parking: The site is accessed by Clyde Adams Road, a driveway off J Road, north of Mesa Road. An unfinished segment of Clyde Adams Road, originally designed to connect to the SBA and Hollister Avenue to the north is located on UCSB property along the west side of the project site. The driveway access is nearby utility lines and terminates just north of the project site. Gated access to the District's facilities is located at both the north and south ends of the existing administration/pump station #1 building. Both access points are to remain. There are a total of 20 existing parking spots on the project site. The proposed design for the project will include 22 parking spots, including 5 covered and 17 uncovered parking spots, and 4 bicycle parking spots (see Table 2 above). Parking spaces along Clyde Adams Road would require that vehicles back onto this driveway. The District received a letter from UCSB verifying that this parking configuration is acceptable to the University (pers. comm., Lee, letter June 2016).

Neighboring Land Use and Characteristics: The Goleta Slough is located north and east of the project site. UCSB Parking Lot 32 and UCSB's Communication Services and Police Department facilities and County Fire Station 17 are located west and southwest of the project site. To the south of the southern driveway is an off-site riparian area and J Road, which intersects with Mesa Road, and a mix of UCSB Campus facilities including recreational sports fields.

PROPERTY CHARACTERISTICS

Assessor's Parcel Number:	073-450-003 (project covers portion of parcel)
City of Santa Barbara General Plan Designation:	Goleta Slough Natural Reserve
Airport Coastal Land Use Plan:	Recreational Open Space
Zoning:	Airport Facilities (A-F)/ Special District 3 Coastal Overlay (S-D-3)
Parcel Size:	826.24 acres
District Easement Site Size:	1.07 acres
Proposed Project Footprint:	5,912SF Total including: 3,298 SF New Administration Building and 2,614 SF New Hardscape and Landscaped Areas
Existing/Proposed Parking:	Existing Parking: 20 spaces (8 covered, 12 uncovered) Proposed Parking: 22 spaces (5 covered, 17 uncovered), 4 bicycle parking spaces
Existing/Proposed Landscaping:	Existing Landscaping/Permeable Surfaces: 13,198 SF (28%) (turf) Proposed Landscaping/Permeable Surfaces: 15,087 SF (32%) (includes native, drought-tolerant species and turf removal)
Existing Land Use:	Goleta West Sanitary District headquarters facilities (includes pump station, garage, shops, and administrative offices)
Proposed Land Use:	Goleta West Sanitary District headquarters facilities, with a new Administration Building
Slope:	Less than 2% (flat)
Cut/Fill:	Approximately 640 cubic yards (cy) cut / 640 cy fill
Surrounding Land Uses:	
North:	Goleta Slough Natural Reserve/SBA
South:	UCSB – Educational Facility, County Fire Department Station 17
East:	Goleta Slough Natural Preserve/SBA
West:	UCSB – Educational Facility

PLANS AND POLICY DISCUSSION

California Coastal Act Policies

The Coastal Act describes the role of public works facilities that provide services to coastal-dependent land use and essential public services. California Public Resources Code section:

30254 New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of the division; provided, however, that it is the intent of the Legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road. Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal-dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.

The project as proposed supports coastal land uses with wastewater treatment and is consistent with this policy.

City of Santa Barbara General Plan Policies

Two documents establish allowable land uses and a policy framework applicable to the project site: the City of Santa Barbara General Plan (City General Plan; 2011) and the City of Santa Barbara Coastal Land Use Plan: Airport and Goleta Slough (Airport CLUP; May 2003). The City's General Plan land use designation for the project site is Goleta Slough Natural Reserve. Under the Airport CLUP, the project site is designated Recreational Open Space. No land use designation changes are proposed as a part of the proposed project.

The City General Plan measures applicable to land use proposals at the SBA include those related to its urban design and role in promoting jobs and economic health in the City. When analyzing the environmental effects of the City General Plan, the certified General Plan Final Environmental Impact Report (EIR) assumed "continued moderate growth of the City's Airport and adjacent specific plan area" (City of Santa Barbara 2010). There are also numerous policies and programs incorporated into the updated General Plan that address energy conservation, and thus greenhouse gas (GHG) reduction.

The project's consistency with specific elements and policies of the City General Plan is detailed below.

1. Land Use Element

As identified in the City's General Plan and Airport Master Plan (AMP), the project site is located on land designated as Goleta Slough Natural Reserve; however, the project site is zoned as Airport Facilities (A-F) in the City's Zoning Ordinance and AMP. The project site is identified as a facility that would retain an airport facility permitted use in City Code 29.15.030(T). No land use designation changes or rezones would be required under the proposed project. Therefore, the project could be found consistent with the Land Use Element.

2. Housing Element

Although the construction of housing, and particularly community benefit housing, is a priority of the General Plan and specifically the Housing Element, the project site's Airport Facilities (A-F) zoning does not permit residential use or propose residential development. Existing employment levels at the project

site will remain the same as before. The project and will not create the need for new housing. Therefore, the Housing Element is not affected by the project.

3. Open Space, Parks and Recreation Element

The purpose of the City's Open Space, Parks, and Recreation Element is to protect and enhance the City's livability, accessibility, and character, and the community's health through the generous provision of a variety of accessible public open space opportunities. The project would not change or adversely affect the City's recreational open space and construction would occur on existing developed land and access driveways. Therefore, the project could be found consistent with the Open Space, Parks, and Recreation Element of the City General Plan.

4. Historic Resources Element

The City's Historic Resources Element contains policies to protect, enhance, and increase awareness and appreciation of Santa Barbara's historical and cultural resources. No significant historic resources are located at the project site that would be affected by this project.

5. Environmental Resources Element

City Environmental Resources Element policies provide the City's natural resources (including air quality, biology, surface and ground water resources, noise, visual resources, climate change, energy and food and agriculture) be preserved, protected and enhanced. Policies that can be implemented in the project are listed below:

> ER1. Climate Change. As applicable, private development and public facilities and services may be required to incorporate measures to minimize contributions to climate change and to adapt to climate changes anticipated to occur within the life of each project.
>
> ER4. Incorporation of Adaptation in Development. New public and private development or substantial redevelopment or reuse projects shall estimate the useful life of proposed structures, and, in conjunction with available information about established hazard potential attributable to climate change, incorporate adaptation measures in the design, siting, and location of the structures.
>
> ER5. Local and Regional Renewable Energy Sources. Provide both within the city, and regionally through working with the County and other local jurisdictions or parties, opportunities to preserve, promote, and anticipate in the development of local renewable energy sources such as solar, wind, geothermal, wave, hydro, methane and waste conversion.
>
> ER 6.6. Solar Energy. Encourage the use of solar photo-voltaic arrays on new construction, redevelopment, and significant remodel projects, as appropriate, taking into consideration project scale and budgeted, building size, orientation, roof type, and current energy use.
>
> > c. For commercial projects and industrial projects provide a minimum of 5 watts of photovoltaic panel systems for every new square foot of building net floor area, or a photovoltaic system sized to meet a minimum of 30% of the average projected energy demand for the structure, whichever is lower.
>
> ER8. Low-Emission Vehicles and Equipment. Expand infrastructure and establish incentives for use of lower emission vehicles and equipment (e.g., parking priority, electric vehicle plug-ins).

ER11. Native and Other Trees and Landscaping. Protect and maintain native and other urban trees, and landscaped spaces, and promote the use of native or Mediterranean drought-tolerant species in landscaping to save energy and water, incorporate habitat, and provide shade.

ER12. Wildlife, Coastal and Native Plant Habitat Protection and Enhancement. Protect, maintain, and to the extent reasonably possible, expand the City's remaining diverse native plant and wildlife habitats, including ocean, wetland, coastal, creek, foothill, and urban-adapted habitats.

Environmental issues associated with the Environmental Resources Element are discussed in the Aesthetics, Biological Resources, and Water Quality and Hydrology Sections of this Initial Study. Based on this analysis, the project could be found consistent with the Environmental Resources Element of the General Plan.

6. Circulation Element

The City's Circulation Element contains goals and implementing measures to reduce adverse impacts to the City's street system and parking by reducing reliance on the automobile, encouraging alternative forms of transportation, reviewing traffic impact standards, and applying land use and planning strategies that support the City's mobility goals. There will be no increase in the number of employees that would result in additional traffic impacts and parking would continue to be addressed on-site.

Policy CE 1.1.3 Enhance alternative transportation services and infrastructure access between residential, recreational, educational, institutional and commercial areas.

Policy CE 4.2.3 Encourage facilities for bicycle travel and parking in any future development, construction, or reconstruction projects during the review of new development and infrastructure improvements. Bicycle facilities can be achieved through methods such as: purchase, dedication, and other means of property acquisition, conditions of approval, expanding the scope of maintenance projects, and enforcement of the Santa Barbara Municipal Code, Parking Section.

Policy CE 4.2.6 Increase attractive, convenient, and secure bike parking and storage facilities on public property and encourage the provision of the same on private property. Continue to consider fully enclosed individual lockers and/or bicycle racks.

By providing additional on-site vehicle and bicycle parking, the project is potentially consistent with these policies and the proposed project could be found consistent with the Circulation Element.

7. Safety Element

The City's Safety Element requires that development be sited, designed, and maintained to protect life, property and public well-being from seismic and other geologic hazards, and to reduce or avoid adverse economic, social, and environmental impacts caused by hazardous geologic conditions (City of Santa Barbara 2013a). The Safety Element addresses a number of potential hazards including, geology, seismicity, flooding, liquefaction, tsunamis, high groundwater, and erosion. The project site is subject to geologic and environmental constraints. As discussed below in Section 6, Geology and Soils, potential impacts associated with these types of hazards would be adequately addressed by adhering to the California Building Code (CBC) and project recommendations in the Geotechnical Study, prepared by Fugro Consultants (see Attachment C and C-1). Therefore, the proposed project could be found consistent with the Safety Element.

8. Economy and Fiscal Health Element

The City's Economy and Fiscal Health Element covers both local and regional economic considerations and offers policies that promote economic resiliency and equity and support green businesses, local small businesses, and employment for local residents. The proposed project incorporates energy efficiency with solar and water conservation measures and innovation with building renovations updated to comply with recently adopted building codes. The project will also allow the continued functioning of the public wastewater district, ensuring that public health and safety is maintained. Therefore, the proposed project could be found consistent with the Economy and Fiscal Health Element.

City of Santa Barbara Municipal Code – Airport Zoning

The City of Santa Barbara Municipal Code –Title 28 (Zoning Ordinance) and Title 29 (Airport Zoning Ordinance) implement the City General Plan and Airport CLUP policies at the SBA area and are relevant to the proposed project site since the project is located within the boundaries of the SBA. The SBA property encompasses about 900 acres of which 600 are dedicated to the SBA and aviation support facilities and approximately 300 acres include the Goleta Slough Reserve. The project site is zoned Airport Facilities (A-F) and Special District 3 Coastal Overlay Zone (S-D-3) in the Airport CLUP (Figure 7).

Airport Facilities (A-F) Zone: According to Title 29 of the City of Santa Barbara Municipal Code– Airport Zoning Ordinance, the intent of the A-F zone is to establish an area in the immediate vicinity of the flight facilities at the airport for aircraft and airport related uses and activities and to exclude from this area activities that do not use the flight facilities as an integral and necessary part of their function.

Uses expressly permitted in the A-F Zone generally include aviation related uses and activities. In addition:

> "Non-aviation related uses consistent with the applicable regulations of the Federal Aviation Administration and determined to not be in conflict with the use of the adjacent Airport buildings as may be determined by the Community Development Director and the Airport Director" (City Code 29.15.030.T).

The proposed project involves the construction of a new building for an existing use at the site (District Administration Offices), a non-aviation related use that has been continually operating at the project site since the mid-1960s. In a letter dated December 21, 2015, the City Community Development Director and Airport Director confirmed the proposed project would not be in conflict with aviation or adjacent airport buildings pursuant to the Federal Aviation Administration Guidelines. Therefore, the proposed use may be determined consistent with the non-aviation uses permitted in the A-F Zone.

The Airport Zoning Ordinance parking requirement for office uses is 1 space/250 SF. Bicycle parking requirements include one space for every seven automobile parking spaces (City Code 29.90). The proposed project is consistent with this provision (see Table 2 for existing and proposed parking data).

The Airport Facilities (A-F) Zone (City Code 29.15.131) zone also requires that an application for a land use permit for a nonresidential construction project must comply with the City's Nonresidential Growth Management Program. The City's Nonresidential Growth Management Program was adopted in 2013 to manage 1.35 million SF of nonresidential floor area allowed under the General Plan through 2033. Under the GMP, any nonresidential construction project that proposes an additional 1,000–3,000 SF of development requires a Development Plan approval. The existing garage and shop building to be

Image source: USDA FSA (flown July 2016)

0 Feet 100

Project Boundary

County of Santa Barbara Zoning

RES-40: Open Space

University of California Santa Barbara

City of Santa Barbara Zoning

A-F/S-D-3: Airport Facilities, Special District 3 - Coastal Zone Overlay

G-S-R/S-D-3 : Goleta Slough Reserve, Special District 3 - Coastal Zone Overlay

RECON

M:\JOBS5\8165\common_gis\fig7_mnd.mxd 8/22/2017 sab

FIGURE 7

Project Zoning

demolished is 1,353 SF and the proposed new Administration Building is 3,298 SF. This will result in 1,945 nonresidential SF of new building area.[2] As such, the proposed project must obtain approval of a Development Plan from the City.

Special District 3 Coastal (S-D-3) Overlay Zone: The project site is located within the Coastal Zone and is therefore within the City's S-D-3 overlay. According to Title 28 of the City of Santa Barbara Municipal Code (Zoning Ordinance), the intent of the S-D-3 overlay is to implement the Coastal Act of 1976 (Division 20 of the California Public Resources Code) and to insure that all public and private development in the coastal zone of the City of Santa Barbara is consistent with the City's Certified Local Coastal Program and the Coastal Act (City Code 28.44.010).

Compliance with the S-D-3 overlay requires an application and approval of a coastal development permit prior to commencement of any development in the coastal zone of the City. The proposed project will require approval of a Coastal Development Permit from the City.

The City's Zoning Ordinance (Titles 28 and 29) addresses any short-term impacts from construction, such as hours of operation, noise, and glare. Existing land uses, which are not proposed to change as part of the project, are consistent with the existing land use and zoning designations for the property.

Airport Master Plan

The Santa Barbara AMP was prepared June 2014 and is currently in draft form. The AMP is intended to evaluate the Airport's capabilities and role, to review forecasts of future aviation demand, and to plan for the timely improvement of facilities that may best meet that demand and maintain compatibility with the environs. The AMP will provide systematic long-range guidelines for the Airport's overall development, maintenance, and operation for the next 20 years. The AMP will aid environmental reviews, project approvals, design, financing, and construction to minimize the effects of maintaining and operating inadequate or inefficient facilities.

Santa Barbara County Airport Land Use Plan and Draft Airport Land Use Compatibility Plan

The project site is located approximately one mile west of the SBA terminal, within the adopted 1993 Santa Barbara County Airport Land Use Plan (ALUP). The City and the Santa Barbara County Association of Governments (SBCAG) are currently working on a Draft Airport Land Use Compatibility Plan (ALUCP; 2012), which provides a comprehensive update to the outdated ALUP. If adopted, the ALUCP will replace the ALUP. The ALUP defines an Airport Influence Area (AIA), within which land use restrictions and requirements apply to areas located in close proximity to Santa Barbara County municipal airports, including review by the Airport Land Use Commission. All new development, including remodeling or additions to existing structures, should conform to the Airport Land Use Commission Policy discussed in Chapter 5 of the ALUP. According to the 1993 ALUP Table 4-1, Land Use Guidelines for Safety and Compatibility, the utilities land use category was determine to be compatible with Safety Areas 1 (Clear Zone), 2 (Approach Zone), and 3 (General Traffic Pattern Area). Under the proposed ALUCP, the project site is located within the SBA AIA Review Area 1 – Height Restrictions, which is the Federal Aviation Authority (FAA) Part 77 height criteria of 200 feet above ground level The project would be limited to one-story with a finished floor elevation (FFE) of 12 feet AMSL at existing grade, and would not present a conflict to the FAA guidelines regarding height because it is below the FAA height criteria. Although the draft ALUCP has not been adopted, the project would be consistent with ALUCP provisions currently as proposed.

[2] On September 1, 2016, the City Planning Commission approved renovation projects proposed for the District headquarters site(MST # 2013-00379) which would result in a 1,488 SF net reduction in nonresidential square footage which may be credited toward this project, thereby reducing the net new non-residential square footage proposed under the GMP to 457 SF.

EVALUATION OF ENVIRONMENTAL IMPACTS

This Initial Study has been prepared pursuant to CEQA (Public Resources Code §21000, et seq.) and the 2017 State CEQA Guidelines (California Code of Regulations §15000, et seq.) and the City of Santa Barbara Environmental Impact Evaluation Guidelines. According to CEQA Guidelines Section 15063(c), the purpose of an Initial Study is to provide a preliminary analysis of a proposed action to determine whether a Negative Declaration or an EIR should be prepared. An Initial Study also enables the Lead Agency to modify a project, mitigating adverse impacts in lieu of preparing an EIR, thereby potentially enabling the project to qualify for a Negative Declaration. The Initial Study provides a factual basis for the Negative Declaration, or serves to focus an EIR on the significant effects of a project.

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses", as described in (5) below, may be cross-referenced).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or (mitigated) negative declaration pursuant to Section 15063(c)(3)(D) of the CEQA Guidelines. In this case, a brief discussion should identify the following:

    a. Earlier Analysis Used. Identify and state where they are available for review.

    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c. Mitigation Measures. For effects that are "Less Than Significant With Mitigation Measures Incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or

outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:

   a. The significance criteria or threshold, if any, used to evaluate each question; and

   b. The mitigation measure identified, if any, to reduce the impact to less than significant.

ENVIRONMENTAL CHECKLIST

This Initial Study uses a checklist format consistent with the CEQA Guidelines that contains questions concerning potential changes to the environment that may result if this project is implemented. The following terminology is used to describe the potential level of significance of impacts:

Significant: Known substantial environmental impacts. Further review needed to determine if there are feasible mitigation measures and/or alternatives to reduce the impact.

Potentially Significant, Unknown: Potentially significant impacts that need further review to determine significance level and ~~whether mitigable~~mitigation.

Less than Significant with Mitigation~~Potentially Significant, Mitigable~~: Potentially significant impacts that can be avoided or reduced to less than significant levels with identified mitigation measures agreed-to by the applicant.

Less than Significant: Impacts that are not substantial or significant.

Beneficial Impact: Impacts would improve environmental conditions.

No Impact: Project would not cause any impact.

1. AESTHETICS AND VISUAL RESOURCES Would the project:	**Level of Significance**
a) Have a substantial adverse effect on a public scenic vista or a private scenic vista enjoyed by a large portion of the community?	No impact
b) Substantially damage scenic resources including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	No impact
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	Less than significant
d) Result in substantial grading on steep slopes or permanent substantial changes in topography?	Less than significant
e) Create a new source of substantial light or glare which would adversely affect day and nighttime views in the area?	Less than significant

Aesthetics and Visual Resources – Discussion

Issues: Issues associated with visual aesthetics include the potential blockage of important public scenic views, project on-site visual aesthetics, and compatibility with the surrounding area, and changes in exterior lighting.

Impact Evaluation Guidelines: Aesthetic quality, whether a project is visually pleasing or unpleasing, may be perceived and valued differently from one person to the next, and depends in part on the context of the environment in which a project is proposed. The significance of visual changes is assessed qualitatively based on consideration of the proposed physical change and project design within the context of the surrounding visual setting. First, the existing visual setting is reviewed to determine whether important existing visual aesthetics are involved, based on consideration of existing views, existing visual aesthetics on and around the site, and existing lighting conditions. Under CEQA, the evaluation of a project's potential impacts to scenic views is focused on views from public (as opposed to private) viewpoints and larger community wide views (those things visible by a larger community, as opposed to select individuals). The importance of existing views is assessed qualitatively based on whether important visual resources such as mountains, skyline trees, or the coastline, can be seen, the extent and scenic quality of the views, and whether the views are experienced from public viewpoints, and how many people can see the views. The visual changes associated with the project are then assessed qualitatively to determine whether the project would result in substantial effects associated with important public scenic views, on-site visual aesthetics, and lighting.

Significant visual aesthetics impacts may potentially result from:

- Substantial obstruction or degradation of important public or community-wide scenic views, including extensive grading and/or removal of substantial amounts of vegetation and trees visible from public areas without adequate landscaping; or substantial loss of important public open space.

- Substantially damage scenic resources within a state scenic highway (Highway 154) or within an eligible or potential scenic highway (Highway 101; Cabrillo Blvd between Highway 101 and Castillo Street; Sycamore Canyon Road (144)/Stanwood Drive (192)/Mission Ridge Road (192)/Mountain Drive to the Old Mission on Los Olivos Street); or a potential City scenic route (Shoreline Drive from Castillo Street to the end of Shoreline Park).

- Substantial negative aesthetic effect or incompatibility with surrounding land uses or structures due to project size, massing, scale, density, architecture, signage, or other design features.

- Substantial light and/or glare that pose a hazard, disrupts sensitive wildlife, or substantially affects day or nighttime views.

Existing Setting

The project site is located on the approximately 1.07 acres portion of APN 073-450-003 that has been used as the District's operations, maintenance, and administration headquarters since the 1950s. As described above, the District site currently includes five existing one-story buildings with beige-painted cinder block structures with teal accents, as well as landscaping and parking areas (see Photographs 1–4).

The project site is publicly visible primarily from the one-story buildings housing the County Fire Department Station 17 and UCSB Police Department and educational facilities. Emergency vehicles and UCSB Parking Lot 32 are located immediately west of the site (see Figure 2; Photographs 5–10). The Goleta Slough Natural Preserve is located north and east of the project site, offering views of wetland habitat and a natural area environment from the project site. Public access to the Goleta Slough Natural Preserve is not provided in the area surrounding the project site.

State Route 154, San Marcos Pass Road, is the nearest scenic highway. It winds northerly through the Santa Ynez Mountains and begins approximately seven miles northeast of the project site. The project site is not visible from State Route 154 as it is seven miles northeast of the project site. Highway 101, the primary transportation corridor in the region, runs approximately one mile north of the project site. The project site is not visible from Highway 101. SR-217 runs from Highway 101 to Goleta Beach and UCSB and the project site cannot be glimpsed from this route.

Project-Specific Impacts

1.a-b) Have a substantial adverse effect on a public scenic vista or a private scenic vista enjoyed by a large portion of the community? Or substantially damage scenic resources including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

A scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. In addition, some scenic vistas are designated by public agencies. A substantial adverse effect to such a scenic vista is one that degrades the view from such a designated view spot.

The primary scenic resources in the project area are the Santa Ynez mountain range and the Goleta Slough Natural Reserve. Public views of these scenic vistas are available from the project site, UCSB campus, public roads and recreational areas, and the SBA. The project site is visible upon entering UCSB Campus Parking Lot 32 from J Road and from the adjacent UCSB Department buildings (Fire, Police, and Communications). Dense vegetation along the north side of Mesa Road and J Road obstruct immediate views of the project site by motorists or pedestrians. The project site is not visible from the beach or the Pacific Ocean (approximately 1 mile east) due to topography and distance. The project site is located between an urban and natural environment. UCSB facilities surround the project site to the west and south, and the Goleta Slough Natural Reserve is located to the immediate north and east of the site. The existing character of the project site is categorized as industrial/public facilities and is not considered "open space."

The project site is not located within a designated scenic vista or scenic highway. State scenic highways are designated by the California Department of Transportation (Caltrans) and are highways that maintain sensitive landscapes or valuable scenic resources within the highway view shed. According to the Caltrans Scenic Highway Program Map, there are no state scenic highways within the project vicinity (Caltrans 2011). The County of Santa Barbara Scenic Highway General Plan Element (republished May 2009) designates State Route 154 (SR-154) as a State Scenic Highway; however, SR-154 is approximately seven miles northeast of the project site and is not visible from SR-154. Therefore, the

PHOTOGRAPH 5
View of Project Site From UCSB Facilities Building

PHOTOGRAPH 6
UCSB Facilities Building Located Southwest of Project Site

PHOTOGRAPH 7
View of Project Site from UCSB Police Department

PHOTOGRAPH 8
UCSB Police Department Located Southwest of Project Site

PHOTOGRAPH 9
View of the Project Site from UCSB Communications Department

PHOTOGRAPH 10
UCSB Communications Department Located West of Project Site

project would have *no impact* to a scenic resource within a State or County designated scenic highway due to the distance and similar scale of proposed development that would not substantially change the existing views to or from the project site.

There are no private scenic vistas enjoyed by a large portion of the community at or around the project site. There are no significant rock outcroppings due to the developed nature of the site, and existing buildings are not identified as having architectural significance in the City's historic resources inventory. No trees are proposed to be removed as part of the project. The demolition of the existing garage/shop building and construction of a new Administration Building would include modern, aesthetically improved architecture, and landscaping. The project would be of a similar size and scale to surrounding development and would not introduce any structures that would significantly obstruct public and private views of the surrounding scenic vistas. The project would also provide the new Administration Building users with new opportunities to enjoy views of the Goleta Slough Natural Preserve from the project site. Thus, the project would have *no adverse impact* on scenic resources and scenic vistas.

1.c) Substantially degrade the existing visual character or quality of the site and its surroundings?

The existing visual character of the project site consists of the District headquarters' aging cinderblock buildings and grass area, as described above. While the buildings are well maintained, they show their age having been constructed from the 1950s to the 1980s (see Photographs 1–5). The visual character of the surrounding area is dominated by a parking lot, County Fire Station, and UCSB Police and Communications buildings to the west and south, and by the Goleta Slough Natural Reserve to the north and east. The SBA is located north and east of the project site and the Santa Ynez Mountains further to the north. The existing structures in the project vicinity include a mix of one-story and portable buildings without a consistent architectural theme.
The proposed project would not degrade the existing visual character and quality of the surrounding area, because it involves construction of a new Administration Building, which will replace an existing building at the District headquarters property. The project would be limited to one story and would be consistent with the scale and height of surrounding UCSB facilities. The proposed project will include modern architectural design that will establish a consistent theme that will be applied to the renovation of other District buildings. Project construction would occur on existing fill within the District's property boundary and would not require extensive grading. The project will also include a small open courtyard in front of the new Administration Building with native and drought-tolerant landscaping and new parking area with adjacent enhanced landscaping that will improve and modernize the visual character of the site. Overall, the proposed project would not contrast with the surrounding character of the area, or be of excessive height or scale. Additionally, the project architecture, signs, and lighting would undergo design review under the Architectural Board of Review. This review will ensure that the proposed project would be consistent with the visual character and quality of the site and its surroundings. As a result, the project would not substantially degrade the existing visual character or quality of the site and its surroundings.

Short-term construction-related aesthetic impacts would consist primarily of the presence of construction equipment and vehicles during grading and construction activities. Standard construction conditions of approval may be imposed on the building permit as deemed appropriate to ensure that protective fencing and signs would also be present during construction. The fencing would partially shield near views of the construction site. The visual effects of construction at the project site will be temporary and would cease upon project completion. Therefore, the project would have a *less than significant* visual character and quality impact.

1.d) Result in substantial grading on steep slopes or permanent substantial changes in topography?

The topography of the project site is flat and no significant grading or topographical changes would be necessary to construct the proposed project. Grading would consist of 640 cy of cut and 640 cy of fill leaving no net change in the site's overall topography that would change the visual aspect of the site. The

minimal need for grading and topographical changes would ensure that views of existing public scenic vistas (i.e., Santa Ynez Mountains) are not obstructed by the proposed project. As such, impacts related to grading or topographical changes would be *less than significant*.

1.e) Create a new source of substantial light or glare which would adversely affect day and nighttime views in the area?

The proposed project consists of demolition of the existing garage/shop structures and construction of a new Administration Building, which would result in a new source of outdoor lighting associated with security lighting and lighting at the building entrance. Proposed lighting would be subject to compliance with the requirements of the Santa Barbara Municipal Code Chapter 22.75, the City's Outdoor Lighting and Design Ordinance. This ordinance provides that exterior lighting be shielded and directed to the ground such that no undue lighting or glare would affect surrounding residents, roads, or habitat areas. Outdoor lighting would be primarily for safety and security purposes. Additionally, the proposed building materials would not include materials with the potential for significant glare. Therefore, impacts on lighting and glare would be *less than significant*.

Mitigation
None necessary.

Residual Impacts
Less than significant.

2. AGRICULTURAL AND FORESTRY RESOURCES In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and City Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agricultural land and farmland. Would the project:	**Level of Significance**
a) Convert prime farmland, unique farmland, or farmland of statewide importance (farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	No impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	No impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	No impact
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to a non-forest use?	No impact

Agricultural and Forestry Resources – Discussion

Existing Setting

The California Department of Conservation (DOC), Farmland Mapping and Monitoring Program designates the project site as "Urban and Built-Up Land" (DOC 2012). The Urban and Built-Up Land category is defined as "[l]and occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, construction, institutional, public administration, railroad, and other transportation yards, cemeteries, airports golf courses, sanitary landfills, sewage treatment, water control features, and other developed purposes" (DOC 2012).

No agricultural land is present within or in the vicinity of the project area. The nearest areas of agricultural land are approximately 1 mile north in the Santa Ynez foothills and approximately 2 miles to the west.

Project-Specific Impacts

2.a-b) Convert Prime Farmland as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program or conflict with existing zoning for agricultural use, or a Williamson Act contract?

The project is designated as Urban and Built-Up Land according to the 2012 Santa Barbara County Important Farmland Map prepared pursuant to the Farmland Mapping and Monitoring Program (DOC 2012). Areas in the Urban and Built-Up Land designation are not suitable for agriculture and do not have prime soils or potential soils for agricultural use as they have been previously disturbed with development. The project site does not contain any agricultural operations and has no recent history of agricultural production. As a result, the project does not meet the definition of Farmland of Local Importance, which requires that the land have a history of good production for locally adapted crops. The project site is also not within an Agricultural Preserve and is not subject to a Williamson Act Contract, nor is the site zoned for agricultural purposes. Therefore, the project would not result in the conversion of agricultural land or any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use and would not conflict with agricultural zoning or Williamson Act lands. As such, *no impact* would occur.

2.c-d) Conflict with existing zoning for, cause rezoning of forest land, or result in the loss of forest land or conversion of forest land to non-forest use?

As discussed above in Sections 2(a)-2(b), the project site is disturbed and contains an existing administration building, equipment garage, operations building, and a garage/shop building. It does not contain any forest or timberland as defined by Public Resource Code Section 4526 or Government Code Section 51104(g). Zoning for the project site is airport facilities (A-F), which has no forestry use or designation. Thus, *no impact* would occur.

2.e) Involve other changes in the existing environment, which could result in the conversion of farmland to non-agricultural use or conversion of forest land to a non-forest use?

There are no agricultural uses, aquaculture, or forest lands on-site or in the vicinity of the site. Therefore, the project would not result in the conversion of farmland or forest land to non-agricultural use. As a result, *no impact* would occur.

Mitigation

None necessary.

Residual Impacts
Less than significant.

3. AIR QUALITY AND GREENHOUSE GAS EMISSIONS Would the project:	**Level of Significance**
a) Conflict with or obstruct implementation of the applicable air quality plan?	Less than significant
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	Less than significant
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	Less than significant
d) Expose sensitive receptors to substantial pollutant concentrations?	Less than significant
e) Create objectionable odors affecting a substantial number of people?	Less than significant
f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less than significant
g) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of greenhouse gases?	Less than significant

Air Quality and Greenhouse Gas Emissions – Discussion

The California Clean Air Act requires areas that are designated non-attainment of state ambient air quality standards for ozone, carbon monoxide, sulfur dioxide, and nitrogen dioxide to prepare and implement plans to attain the standards by the earliest practicable date. The SBCAPCD 2016 Ozone~~2013 Clean Air~~ Plan provides an overview of air quality and sources of pollution, and identifies the pollution-control measures needed to meet clean air standards. The ~~Clean Air~~ 2016 Ozone Plan goal is to reduce ozone precursor emissions from a wide variety of stationary and mobile sources. The ~~Clean Air~~ 2016 Ozone Plan has implemented "an all feasible measures" strategy to ensure continued progress towards attainment of the state ozone standards.

Air Quality Issues. Air quality issues involve pollutant emissions from vehicle exhaust, stationary sources (i.e. gas stations, boilers, diesel generators, dry cleaners, oil and gas processing facilities, etc.), and minor stationary sources called "area sources" (i.e. residential heating and cooling, fireplaces, etc.) that contribute to smog, particulates and nuisance dust associated with grading and construction processes, and nuisance odors. Stationary sources of air emissions are of particular concern to sensitive receptors, as is construction dust and particulate matter. Sensitive receptors are defined as children, elderly, or ill people that can be more adversely affected by air quality emissions. Land uses typically associated with sensitive receptors include schools, parks, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and clinics.

GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6), and nitrogen trifluoride (NF_3). The largest source of GHG emissions from human activities in the United States is from fossil fuel combustion for electricity, heat, and transportation. Specifically, the Inventory of U.S. GHG Emissions and Sinks (U.S. Environmental Protection Agency [U.S. EPA] April 2015) states that the primary sources of greenhouse gas emissions in 2013 included electricity production (31%), transportation (27%), industry (21%), commercial and residential (12%), and agriculture (9%). This release of gases creates a blanket around

the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as "the greenhouse effect," there is strong evidence to support that human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to a warming of the earth and has the potential to severely impact the Earth's climate system.

Greenhouse Gas and Climate Change Issues. Global climate change refers to accelerated changes occurring in average worldwide weather patterns, measurable by factors such as air and ocean temperatures, wind patterns, storms, and precipitation. Climate changes are forecasted to result in increasingly serious effects to human health and safety and the natural environment in coming decades, such as from more extreme weather, sea level rise effects on flooding and coastal erosion, and impacts on air and water quality, habitats and wildlife, and agriculture.

There is substantial evidence that accelerated climate change is due to emissions of carbon dioxide and other heat trapping GHGs from human activities. Natural processes emit GHG to regulate the earth's temperature; however, substantial increases in emissions, particularly from fossil fuel combustion for electricity production and vehicle use, have substantially elevated the concentration of these gases in the atmosphere well beyond naturally occurring concentrations.

Carbon dioxide accounts for 85% of GHG emissions within the United States. California is a substantial contributor of GHG (second largest contributor in the U.S. and the sixteenth largest in the world), with transportation and electricity generation representing the largest sources (41% and 22%, respectively). In Santa Barbara, direct sources of GHG emissions are on-road vehicles, natural gas consumption, and off-road vehicles and equipment. Indirect sources (emissions removed in location or time) are electricity consumption (power generation), landfill decomposition (methane releases), and State Water Project transport (electricity use).

California Assembly Bill 32 (2006 Global Warming Solutions Act) required the California Air Resources Board (CARB) to create a program to reduce statewide greenhouse gas emissions to 1990 levels by the year 2020. Senate Bill 375 (2008 Sustainable Communities and Climate Protection Act) required regional coordination of transportation and land use planning throughout the State to reduce vehicle GHG emissions. CARB established targets for Santa Barbara County to not exceed 2005 per capita vehicle emissions in the years 2020 and 2035. State Senate Bill 97 (enacted in 2007 and amended in 2010) required that project environmental reviews include analysis of GHG impacts and mitigation, and established that public agencies may provide for a communitywide GHG emissions mitigation program through an adopted climate action plan. The City of Santa Barbara Climate Action Plan was adopted in September 2012. Past, present, and forecasted future citywide GHG emissions were analyzed in the Climate Action Plan and associated Addendum to the 2010 Final Program EIR City General Plan Update in comparison to the State and City GHG emissions targets (2020 total emissions at 1990 level; 2020 and 2035 per capita vehicle emissions at 2005 level). The analysis demonstrates that citywide emissions are decreasing. With continued implementation of existing State and City legislative measures, citywide emissions associated with growth under the General Plan would meet and surpass these State and City emissions targets. Additional Climate Action Plan measures would further reduce citywide emissions. The City Climate Action Plan constitutes a citywide mitigation program for greenhouse gas emissions in accordance with Senate Bill 97.

Existing Setting

The climate in and around, the city of Santa Barbara, as well as most of Southern California, is controlled largely by the strength and position of the subtropical high-pressure cell over the Pacific Ocean. This high-pressure cell typically produces a Mediterranean climate with warm summers, mild winters, and moderate rainfall. This pattern is periodically interrupted by periods of extremely hot weather brought on by Santa Ana winds from the northeast. Almost all precipitation occurs between November and April, although during these months, the weather is sunny or partly sunny a majority of the time. Cyclic land and sea breezes are the primary factors affecting the region's mild climate. The daytime winds are normally sea breezes, predominantly from the west, that flow at relatively low velocities. Additionally,

cool, humid, marine air causes frequent fog and low clouds along the coast, usually during the night and morning hours in the late spring and early summer. The effect of wind patterns on air pollution is that loally generated emissions are carried offshore at night and toward inland Santa Barbara County by day. Dispersion of pollutants is restricted when the wind velocity for nighttime breezes is low.

The Federal Government and the State of California have established air quality standards and emergency episode criteria for various pollutants. Generally, State regulations have stricter standards than those at the Federal level. Air quality standards are set at concentrations that provide a sufficient margin of safety to protect public health and welfare. Air quality at a given location can be described by the concentration of various pollutants in the atmosphere. The significance of a pollutant concentration is determined by comparing the concentration to an appropriate Federal and/or State ambient air quality standard.

Federal standards are established by the U.S. EPA and are termed the National Ambient Air Quality Standards (NAAQS). The State standards are established by CARB and are called the California Ambient Air Quality Standards (CAAQS). The Santa Barbara County region generally has good air quality, as it attains or is considered in maintenance status for most ambient air quality standards. The SBCAPCD is required to monitor air pollutant levels to assure that Federal and State air quality standards are being met.

Criteria Air Quality Pollutants
The air quality pollutants of primary concern include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), PM_{10}, and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). Also regulated are sulfates, lead, hydrogen sulfide (H_2S), and vinyl chloride.

Ozone air pollution is formed when nitrogen oxides (NO_X) and reactive organic compounds/gases (ROC/ROG) react in the presence of sunlight. According to the SBCAPCD, the major sources of ozone precursor emissions in Santa Barbara County are motor vehicles, the petroleum industry, and solvent usage (paints, consumer products, and certain industrial processes). Sources of PM_{10} include grading, demolition, agricultural tilling, road dust, mineral quarries, and vehicle exhaust. A fraction of the PM_{10} is comprised of ultra-small particulates capable of being inhaled deep into the lungs ($PM_{2.5}$).

Existing Air Quality
The proposed project is located in the city of Santa Barbara in Santa Barbara County and is part of the South Central Coast Air Basin (SCCAB or Basin). SBCAPCD is the regional agency responsible for air quality regulations within the SCCAB including enforcing the CAAQS and implementing strategies to improve air quality and to mitigate effects from new growth. The SBCAPCD area was designated unclassifiable/attainment for the 2008 federal 8-hour ozone standard on April 30, 2012. The County-wide region violates the 8-hour ozone standard and the State PM_{10} standard, and is also unclassifiable/attainment for the federal $PM_{2.5}$ standard and unclassified for the State $PM_{2.5}$ Standard. SBCAPCD operates twelve stations monitoring ozone and particulates, with the Goleta location nearest to the project site at North Fairview Avenue. As of August 2016, exceedances of air quality standards in 2016 is one day for the state 8-hour ozone standard and 21 State counts (5 Federal) for violation of the PM_{10} 24-hour standard as a result of recently occurring fires causing additional smoke in the air, resulting in higher particulate matter measurements (Sherpa Fire).

Sensitive Receptors
Pollutant-sensitive members of the population are “sensitive receptors.” These sensitive receptors include outdoor workers, children, elderly, as well as other members of the population that are more likely to be negatively affected by poor air quality. Sensitive receptors in the project vicinity could include those working at the District headquarters and adjacent facilities (UCSB Police/Communications buildings and County Fire Station 17).

Project-Specific Impacts

3.a) Conflict with or obstruct implementation of the applicable air quality plan?

The criteria pollutant emission projections used to develop the SBCAPCD 2016 Ozone~~2013 Clean Air~~ Plan are based on population, vehicle trends, and planned land use. As such, projects that propose development that is consistent with the growth anticipated by the City's General Plan would be consistent with the ~~Clean Air~~ 2016 Ozone Plan. The proposed project would be consistent with the existing land use designation. Existing administration uses will be transferred from the existing on-site administration building to the new structure. No expansion of operations or additional staff will be added on-site as part of the project. Therefore, direct and indirect impacts associated with the project are accounted for in the 2016 Ozone~~2013 Clean Air~~ Plan emissions growth assumptions. As such, the project can be found consistent with the 2016 Ozone~~2013 Clean Air~~ Plan; and impacts would be *less than significant.*

3.b, 3.d) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? Expose sensitive receptors to substantial pollutant concentrations?

Emissions associated with construction and operation of the project were calculated using the California Emissions Estimator Model (CalEEMod) Version ~~2013.2.2~~2016.3.2 (California Air Pollution Control Officers Association [CAPCOA] ~~2013~~2017). The modeling results are included in Attachment D.

Short-Term (Construction) Emissions

Construction of the proposed project could result in emissions of pollutants due to limited ground disturbance, fumes, and vehicle exhaust. Sensitive receptors include those at District Headquarters, which currently include a total of seven on-site staff (three managerial and four operational). The three managerial staff members work in the existing administrative building, while the four operations staff work on-site and off-site, responding to various tasks. Other potential nearby sensitive receptors in the surrounding project area are located adjacent to UCSB Parking Lot 32 including County Fire Station 17, and the UCSB Police Department and Communications buildings. Dust and particulates could be emitted from the construction equipment during vegetation and paving removal. Additional sources of construction-related air emissions also include fugitive dust from grading activities; construction equipment exhaust; construction-related trips by workers, delivery trucks, and material-hauling trucks; and construction-related power consumption.

Diesel and gasoline powered construction equipment also emit particulate matter, NO_X and ROC. While SBCAPCD only has thresholds related to construction of stationary sources, SBCAPCD recommends quantifying emissions from construction equipment if the project exceeds the SBCAPCD Screening Table for operations to see if emissions from all construction equipment would exceed 25 pounds per day of any pollutant (except CO) within a 12-month period. In this case, the project does not involve the construction of a stationary source and does not exceed 25 pounds per year of any pollutant (Tables 3 and 4).

However, the project would involve limited ground disturbance related to vegetation and paving removal which could cause localized dust related impacts, resulting in increases in particulate matter (PM_{10}). Grading for the project is projected to be minor at 640 cubic yards of cut and 640 cubic yards of fill, and the temporary construction period is anticipated to last approximately 12 months (Stantec 2016). Although the City has not adopted quantitative thresholds of significance for temporary construction emissions, the SBCAPCD recommends discussion and quantification of construction-related emissions for all projects involving ground disturbance. In addition, as required by Santa Barbara Municipal Code Title 22, Section J112 Dust Control, the project would be required to implement dust control measures, which would help minimize short-term dust and construction impacts to sensitive receptors. Construction emissions were calculated for informational purposes only and are summarized in Table 3. Because the project would not generate substantial construction emissions and would be required to implement

standard dust control measures as part of the conditions of approval, the temporary exposure of sensitive receptors to pollutant concentrations and short-term construction impacts would be *less than significant.*

Table 3
Construction Emissions
(pounds per day)

	Emissions		
	ROC	**NO_X**	**PM_{10}**
Demolition	~~1.3~~1.1	~~10.7~~9.6	~~1.0~~0.8
Site Preparation	~~1.3~~0.8	~~12.7~~9.8	~~1.3~~1.0
Grading	~~1.2~~1.1	~~10.5~~9.5	~~1.6~~1.4
Building Construction	~~1.3~~1.1	~~12.7~~11.2	~~0.9~~0.7
Paving	~~1.1~~1.0	~~9.9~~8.8	~~0.8~~0.6
Architectural Coatings	~~17.6~~8.9	~~2.2~~2.0	~~0.2~~0.2
Maximum Daily	**~~17.6~~8.9**	**~~12.7~~11.2**	**~~1.6~~1.4**
*Construction vehicle trip emissions are included in the estimated emissions (CalEEMod Version ~~2013.2.2~~2016.3.2) (see Attachment D)			

Table 4
Operational Emissions (pounds per day)[1]

	Emissions		
	ROC[2]	**NO_X[2]**	**PM_{10}[2]**
Area	0.1	0.0	0.0
Mobile	0.0	0.0	0.0
Total	**0.1**	**0.0**	**0.0**
SBCAPCD Threshold (All Sources)	55	55	80
Exceed Threshold (All Sources)?	*No*	*No*	*No*
SBCAPCD Threshold (Vehicles Only)	25	25	--
Exceed Threshold (Vehicles Only)?	*No*	*No*	--
[1]The summer emissions were reported per SBCAPCD Guidance. [2]As the SBCAPCD is in non-attainment for the federal and state standards for ozone (precursor NO_x and ROC) and the state standard for PM_{10}, the established air quality thresholds are focused on these three pollutants.			

Long-term (Area Source & Operational) Emissions:

Operational sources of emissions include mobile and area sources. Mobile source emissions originate from vehicular traffic generated by a project. However, in the case of this project, no expansion of operations or additional staff would be added on-site, and there would be no increase in mobile source emissions. Area source emissions would result from architectural coatings and ongoing landscaping maintenance activities. Table 4 summarizes the project's operational emissions.

Overall, the project would not expose sensitive receptors to substantial concentrations of pollutants as the long-term operational impacts are primarily associated with traffic generated by the project. However, as the project would not cause expansion of operations and would not add additional staff on-site, the concentrations of pollutants would be similar to the existing condition. The operational emissions do not exceed SBCAPCD thresholds and would not be considered significant. Additionally, the project would not result in additional traffic on area roadways; thus, it would not result in localized carbon monoxide hot spot impacts at intersections. The number of peak AM and PM trips would also be similar or the same as the existing condition. As shown in Table 4, operational emissions would be below the applicable thresholds; therefore, impacts would be *less than significant.*

3.c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?

The SCCAB is non-attainment for ozone and PM_{10} standards. Ozone is not emitted directly, but is a result of atmospheric activity on precursors. NO_X and ROG are known as the chief "precursors" of ozone. These compounds react in the presence of sunlight to produce ozone.

As shown in Table 4, emissions of ozone precursors (ROG and NO_X) and PM_{10} would be below the applicable thresholds. Therefore, the project would not generate emissions in quantities that would result in an exceedance of the NAAQS or CAAQS for ozone or PM_{10}. Impacts would be *less than significant.*

3.e) Create objectionable odors affecting a substantial number of people?

The project is limited to administrative building uses with three offices, two bathrooms, a small kitchen, and a boardroom and would not include land uses involving objectionable odors or smoke. The project would not contain features with the potential to emit odorous emissions from sources such as commercial cooking equipment, combustion or evaporation of fuels, or solvents and surface coatings. As such, impacts would be *less than significant.*

3.fg) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Annual GHG emissions due to construction and operation of the project were calculated using CalEEMod Version ~~2013.2.2~~2016.3.2. The emissions sources include construction (off-road vehicles), mobile (on-road vehicles), area (landscape maintenance equipment), water and wastewater, and solid waste sources. GHG emissions are estimated in terms of metric tons of CO_2 equivalent (MT CO_2E). Indirect emissions are associated with power generation for electricity consumption and electricity and travel associated with production, transport, and use; solid waste disposal/decompositions; and wastewater treatment. As discussed under 3.b above, no expansion of operations or additional staff would be added on-site, and there would be no increase in mobile source emissions. Table 5 summarizes the project annual GHG emissions.

Project-generated GHG emissions, based on direct emissions and electricity usage are estimated at ~~23.9~~27.8 MT CO_2E/year, a minor contribution to citywide emissions generation.

Table 5
Project GHG Emissions
(MT CO_2E per Year)

Emission Source	Project GHG Emissions
Mobile	0.0
Energy use	~~18.8~~20.3
Area sources	0.0
Water use	~~1.3~~1.4
Solid waste disposal	1.6
Construction	~~2.2~~4.5
TOTAL	**~~23.9~~27.8**

The project would be subject to existing regulations and design guidelines that reduce GHG emissions in the areas of energy efficiency and green building, renewable energy, travel and land use, vegetation, waste management, and water conservation. Additionally, as noted, the project would not result in any increase in mobile-source emissions because there would be no expansion of operations or additional staff. Area source emissions were also identified to have a negligible amount of MT CO_2E emissions per year due to the small-scale size of the project (see Attachment D).

Project GHG emissions were included in the citywide emissions estimates identified in the City's Climate Action Plan (City of Santa Barbara 2012) and General Plan Program EIR Addendum (City of Santa Barbara 2011) which assumed "continued moderate growth at the City's Airport and adjacent specific plan area." Projected citywide emissions were determined to comply with State and City emission reduction targets and thereby constitute a less than significant impact and contribution to global climate change. The project would be consistent with applicable plans, policies, and regulations for reducing GHG emissions, and project GHG emissions would not constitute a significant impact on the environment. Impacts would be *less than significant.*

3.g~~f~~) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of greenhouse gases?

Numerous international, national, and State plans and regulations have been developed to address climate change concerns. Executive Order S-3-05 established a state goal of reducing GHG emissions to 1990 levels by the year 2020. Assembly Bill 32 codified the 2020 goal of Executive Order S-3-05 and launched the Climate Change Scoping Plan (CARB 2008) that outlined the reduction measures needed to reach these targets. Subsequent to the adoption of Assembly Bill 32 and the development of the Scoping Plan, several levels of government have implemented regulatory programs to reduce GHG emissions. State agencies, including CARB, California Energy Commission, California Public Utilities Commission, California Department of Resources Recycling and Recovery, Caltrans, California Department of Forestry and Fire Protection, the Department of Water Resources, the Department of Food and Agriculture, and the Department of Goods and Services have developed regulatory and incentive programs to reduce GHG emissions. Many of the measures are generally beyond the ability of any future development to implement, such as the Renewable Portfolio Standard (RPS), which is implemented at the utility provider or the manufacturer level. However, the project would not conflict with these measures nor block their implementation. There would be no increase in mobile source emissions. Additionally, compliance with ~~2013~~ 2016 Title 24 regulations would reduce GHG emissions associated with energy and water use. As discussed under 3.f~~g~~, the project's GHG emissions are accounted for in the citywide emissions identified in the City's Climate Action Plan and General Plan Program EIR Addendum, which were determined to comply with State and City emission reduction target and thereby constitute a less than significant impact and contribution to global climate change. The City's Climate Action Plan requires new development to reduce carbon through many City ordinances and programs that would reduce energy, encourage alternative means of travel, preserve trees, reduce waste, conserve water, decrease wildfire hazards, and protect biological resources. Therefore, the project would not conflict with the state reduction targets for transportation, energy, and other emissions associated with land use and development, and would not conflict with the Scoping Plan. Thus, the project would have a *less than significant* impact related to applicable plans, policies, and regulations adopted for the purpose of reducing the emission of GHGs.

Mitigation
None necessary.

Residual Impacts
Less than significant.

4. BIOLOGICAL RESOURCES Would the project:	**Level of Significance**
a) Have a substantial adverse effect on any riparian habitat or other sensitive natural community?	Less than significant with mitigation
b. Have a substantial adverse effect on protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Less than significant with mitigation ~~significant, but mitigable~~
c. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Less than significant
d. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Less than significant
e) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species?	Less than significant with mitigation ~~significant, but mitigable~~
f) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Less than significant

Biological Resources – Discussion

Issues: Biological resources issues may involve the potential for a project to substantially affect biologically important vegetation, wildlife, and habitats, particularly species that are protected as rare, threatened, or endangered by federal or state regulations.

Impact Evaluation Guidelines: Existing native wildlife and vegetation on a project site are assessed to identify whether they constitute important biological resources, based on the types, amounts, and quality of the resources within the context of the larger ecological community. If important or sensitive biological resources exist, project effects on the resources are qualitatively evaluated to determine whether the project would substantially affect these important biological resources. Significant biological resource impacts may potentially result from substantial disturbance to important wildlife and vegetation in the following ways:

- Elimination, substantial reduction or disruption of important natural vegetative communities, wildlife habitat, migration corridors, or habitats supporting sensitive species such as oak woodlands, costal strand, riparian, and wetlands.

- Substantial effect on a protected plant or animal species listed or otherwise identified or protected as endangered, threatened, or rare.

- Substantial loss or damage to biologically important native trees such as oak or sycamore trees (note that, if applicable, historic or landmark trees are discussed in Section 4, Cultural Resources, and other trees are discussed in Section 1. Visual Resources).

Existing Setting

The biological resources analysis is based upon the Biological Resources Report for the Goleta West Sanitary District Administration Building Project (see Attachment B). General and focused botanical

surveys and a wetland delineation of the project study area and study area vicinity were conducted during the spring of 2015. The Biological Resources Report (BRR) details applicable Federal, State, and local regulations and describes the project study area (defined as the District headquarters site), the project site (defined as the area within the study area where construction will occur), and the study area vicinity (defined as an off-site area mapped within a 100-foot radius and with observations noted up to 300 to 600 feet from the project study area). A botanical survey and wetland delineation of the project study area was conducted on March 23, 2015, April 2, 2015 and May 3, 2015. A wildlife survey of the project site and vicinity was conducted on March 23 and April 10, 2015.

Characteristics of the Project Study Area and Vicinity

A contrast of relatively pristine habitat and high-use public facilities exists around the District headquarters ranging from the sensitive saltwater marsh and associated habitats of the Goleta Slough, which surrounds the study area on three sides. The various native habitats of the adjacent study area vicinity within the Goleta Slough provide quality habitat for a number of wildlife species, including amphibians, reptiles, birds, and mammals. A number of sensitive plant and wildlife species have the potential to occur within the off-site surrounding study area vicinity associated with the Goleta Slough are addressed in Attachments 2, 3, and 4 of the BRR (see Attachment B). Figure 3 in the BRR shows the vegetation communities and land cover types of the study area and vicinity.

As identified in the BRR conducted for the project, the study area itself contains no significant biological resources overall and does not support any native vegetation plant communities (see Attachment B). There is very little unpaved ground, with disturbed land comprising approximately 0.26 acre and developed land comprising 0.81 acre of the 1.07-acre project study area. Disturbed lands exist on the northern and southern portions of the study area. No sensitive flora and fauna were observed or expected to occur within the study area due to the level of disturbance, development, and general lack of suitable native habitats. (see Attachment B).

Adjacent Habitats
Six vegetation communities occur in the study area vicinity. These include arroyo willow thicket, pickleweed mat, cattail marsh, Jamuea mixed meadow, annual/perennial ruderals, and iceplant mat. The annual and perennial ruderal area is comprised of mostly non-native annual and perennial plant species that have become established on past disturbed areas below the driveway on the south side of the site and continuing to the east off-site area within the study area vicinity (see Attachment B). Plant species occurring in this vegetation type include iceplant (*Carpobrotus edulis*), rice grass (*Oryzopsis miliacea*), Italian thistle (*Carduus pycnocephalus*), fennel (*Foeniculum vulgare*) and coyote bush (*Baccharis pilularis*).

No jurisdictional waters or wetlands occur within the project study area. Federal and state jurisdictional waters are present within the off-site study area vicinity to the south and east adjacent to the project study area associated with the Goleta Slough area. The off-site jurisdictional waters/wetlands include the arroyo willow thicket, cattail marsh, pickleweed mats, and Jamuea mixed meadow vegetation communities.

Fauna
The study area is comprised of primarily developed land with small landscaped areas that provide poor quality habitat for wildlife. Wildlife species of birds and small mammals (rodents) common in developed areas likely use the study area to some extent. The overall developed and disturbed character of the District headquarters, coupled with the existing levels of development, makes the study area poor quality habitat for wildlife.

No amphibians were observed in the study area or vicinity during field surveys in Spring 2015. The diversity and abundance of reptile species vary with habitat type and one reptile species observed in the

project study area is the western fence lizard (*Sceloporus occidentalis*). The most commonly observed bird species within the project study area included the house finch (*Haemorhous mexicanus frontalis)*, mouring dove *(Zenaida macroura marginella)*, and northern mockingbird (*Mimus polyglottos)* (see Attachment B).

Two mammals primarily observed in the study area vicinity include the black rat (*Rattus rattus)* and feral cat (*Felis catus*). Other mammal species such as the coyote (*Canis latrans*), desert cottontail (*Sylviagus audubonii*), California ground squirrel (*Spermophilus beechyi*), and Botta's pocket gopher (*Thomomys bottae*) also occur in the study area vicinity.

Project-Specific Impacts

4.a) Have a substantial adverse effect on any riparian habitat or other sensitive natural community?

The BRR concluded that the potential for sensitive flora and fauna is extremely low in the project site due to the level of disturbance, development, and general lack of suitable native habitats (see Attachment B). In addition, the proposed demolition of existing structures, construction of the new Administration Building, courtyard, and chain-link fence replacement will all occur within the existing District headquarters site.

As shown in Table 6, project impacts would ~~only~~ occur in~~to~~ disturbed and developed areas of the existing project site. ~~Additionally, n~~No direct impacts would occur to any sensitive vegetation communities or habitat in the adjacent off-site study area vicinity. However, potential indirect impacts to the off-site adjacent sensitive vegetation communities located south and east of the project shall be avoided to the maximum extent feasible and protected during project construction. In order to ensure no indirect impacts to adjacent sensitive vegetation communities occur, MM-BIO-1, Jurisdictional Waters Protective Measures, is required. Therefore, project impacts associated with riparian habitats or other sensitive natural communities would be *less than significant with mitigation.*

Table 6
Impacts to Vegetation Communities and Land Cover Types for the Project Study Area* (acres)

Vegetation Community/Land Cover Type	Existing Acreage	Impact Acreage
Disturbed Land	0.26	0
Developed	0.81	0.18
TOTAL	**1.07**	**0.18**
*No impacts to vegetation communities within the off-site study vicinity area would occur.		

4.b) Have a substantial adverse effect on protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No direct impacts to jurisdictional waters or wetlands within the adjacent off-site study area vicinity would occur from the proposed project. Federal and state jurisdictional waters are present within the off-site study area vicinity to the south and east adjacent to the project site associated with the Goleta Slough area. In order to ensure no indirect impacts to adjacent jurisdictional waters or wetlands occur during project construction, MM-BIO-1, *Jurisdictional Waters Protective Measures,* is required~~commended~~. Therefore, impacts would be *less than significant with mitigation.*

4.c-d) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The project site is not located within an adopted Habitat Conservation Plan or Natural Community Conservation Plan area and will have no impact on such a plan. Local Coastal Plan (LCP) Policy C-4 calls for a buffer strip a minimum of 100 feet in width to be maintained in a natural condition along the periphery of all wetland communities. The District headquarters buildings were constructed immediately adjacent to the Goleta Slough on a base of asphalt and crushed rock. The project would not alter the existing buffer as all new development will occur within the existing developed District headquarters site.

Airport CLUP Policy C-8 states no uses incompatible with the protection and maintenance of the wetland habitat and its open space character will be allowed in areas under City jurisdiction. However, the project would not alter the protection and maintenance of the off-site wetland habitat or open space character as all new development will occur within the existing District headquarters site. Airport CLUP Policy C-12 calls for new development to be sited and designed to protect water quality and minimize impacts to coastal waters. The project would not conflict with Airport CLUP Policy C-12 as the entire project site will continue to drain via storm drain inlets to an on-site wet well in the existing administration building/pump station #1 on the western end of the project site, which is then pumped to the GSD treatment plant. There is no current or proposed drainage from the site to the adjacent Goleta Slough wetlands. The proposed project will protect water quality and minimize impacts to coastal waters through the implementation of best management practices that will treat and reduce pollutant loading to the maximum extent feasible.

Airport CLUP Policy C-15 calls for special status plant and wildlife protection measures to be implemented for all development projects that will potentially impact sensitive plant and wildlife species and/or that will result in disturbance or degradation of habitat areas that contribute to the viability of plant or wildlife species designated as rare, threatened, or endangered under state or federal law. As discussed above in 4.a, the proposed project would not result in any direct impacts to special status plants or wildlife, or result in any disturbance or degradation of off-site native habitat areas. Therefore, as the proposed project would not conflict with the adopted LCP or any other local policies and is not located within an adopted Habitat Conservation Plan, impacts would be *less than significant.*

4.e) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species?

The proposed demolition of existing structures, construction of the new Administration Building, courtyard, and chain link fence replacement will all occur within the existing District headquarters site. No sensitive plant or wildlife species (Federal or State listed or candidates, sensitive or special status species) were detected within the project site as identified by the BRR (see Attachment B), and therefore, no significant direct impacts are anticipated to sensitive plant or wildlife species.

However, there is the potential for indirect impacts on listed and sensitive bird species including the White-tailed kite (*Elanus leucurus*) using native habitats within the off-site study area vicinity for breeding due to noise levels generated during project construction. Noise from temporary heavy equipment and project construction could result in short-term impacts to several sensitive avifauna that frequent wetland habitats bordering the property boundary of the District headquarters site. Although large trucks move in and out of the southernmost driveway several times a day, varied noise from construction could affect sensitive birds known to nest in the nearby riparian woodland and the Goleta Slough. Therefore, indirect impacts to sensitive wildlife ~~may~~ would be ~~potentially~~ *less than significant with mitigation* ~~*significant, but mitigatable* with~~ MM-BIO-2.

4.f) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Indirect Disturbance to Wildlife and their Habitat during Operations.

The new Administration Building would feature an open courtyard for use by the public, employees, and District board members on the south side of the building. The courtyard's southern boundary would line up with the existing chain link fence. Anticipated use of the small open courtyard would be light, given the small number of District personnel who currently work at the District headquarters (four operations/maintenance staff) and personnel that would use the new Administration Building daily (three management staff), minimal regular public visitors, and typically low numbers of public attendance at monthly board meetings. The proposed project would not increase the number of District personnel working on-site as the three management staff would transfer work space from the existing administration building. Coupled with the police and fire department buildings across the road, the potential indirect effects of project operations at the new Administration Building are not likely to meaningfully add to the ambient noise and human activity at the District headquarters.

Overall under the existing conditions, an east-west wildlife movement corridor is present within the Goleta Slough which is located to the north and east of the project site. The UCSB campus is directly south and west of the project site and the SBA is to the north of the project site. The proposed new Administration Building would not significantly alter this existing east-west wildlife movement corridor within the Goleta Slough, as project construction would occur on existing paved and filled land. As discussed above, the use of the open courtyard is not anticipated to adversely impact sensitive or resident species. Thus, the proposed project would have a *less than significant* impact on the movement of any native resident or migratory fish or wildlife species; or with established native resident or migratory wildlife corridors; nor impede the use of native wildlife nursery sites.

Mitigation

MM-BIO-1: Jurisdictional Waters Protective Measures
In order to ensure that no indirect impacts to the adjacent jurisdictional waters or wetlands occur during project construction, the following measures are recommended:

- The wetland, riparian, and slough areas located to the south and east sides of the project shall be protected during construction by establishing a Limit to Construction Disturbance on all construction plans. This limit shall equal the development footprint plus two (2) feet. All construction shall be conducted within the Construction Limit of Disturbance and not outside of this disturbance limit.
- Prior to construction, a temporary limit fence shall be installed at the south and east sides of the outer edge of the Construction Limit of Disturbance. The temporary fencing shall be at least four (4) feet high and shall be installed around the entire perimeter of the project that borders vegetation. The temporary fencing shall remain in place during the entire duration of project construction. Signs stating the following: "Sensitive Environmental Area. Do Not Enter. No Dumping." shall be affixed to the fencing and shall also remain in place for the duration of project construction. The temporary fence and signs shall be kept tightly in place during the entire construction process.
- The project biological monitor shall confirm the establishment of the Construction Limit of Disturbance on the construction plans and verify the placement of the temporary fencing and signs prior to the commencement of construction activities.

- All construction contractor crew personnel shall be notified regarding the not to disturb areas outside of the temporary limit fence and no materials or equipment are to be placed outside of the Construction Limit of Disturbance.
- All areas immediately outside of the temporary limit fencing shall be checked daily for debris.
- In the event of any unexpected disturbance beyond the Construction Limit of Disturbance, the Construction Manager shall notify project biological monitor who shall assess the disturbance and identify remedial measures to address the situation.

MM-BIO-2: Nesting Birds Protective Measures

The project may indirectly impact nesting birds using habitats associated with the Goleta Slough within the adjacent off-site study area vicinity if construction occurs during the typical bird breeding season (i.e., February 1 to July 31). The following measures are recommended to avoid or mitigate potential impacts to nesting birds.

1. No direct impacts shall occur to any nesting birds or their eggs, chicks, or nests during the breeding season as mentioned above. If project grading/brush management is proposed in or adjacent to native habitat during the bird breeding season, stated above, or an active nest is noted, the project biologist shall conduct a pre-grading survey for active nests in the development area and within 300 feet of it, and submit a letter report to the City for review.

A. If active nests are detected, or considered likely, the report shall include mitigation in conformance with applicable state and federal law (i.e., appropriate follow-up surveys, monitoring schedules, construction, and noise barriers/buffers, etc.) to the satisfaction of the City of Santa Barbara. Mitigation requirements determined by the project biological monitor shall be incorporated into the project and monitoring results incorporated in to the final biological construction monitoring report.

B. If no nesting birds are detected per "A" above, mitigation under "A" is not required.

Residual Impacts

Implementation of mitigation measures for the impacts identified reduces the project biological resources residual impacts to less than significant.

5. CULTURAL RESOURCES Would the project:	**Level of Significance**
a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Section 15064.5?	Less than significant
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Section 15064.5?	Less than significant with mitigation ~~Potentially significant, but mitigable~~
c) Disturb any human remains, including those interred outside of formal cemeteries?	Less than significant with mitigation ~~Potentially significant, but mitigable~~
d) Directly or indirectly destroy a unique paleontological resource of site or unique geologic feature?	Less than significant with mitigation ~~No impact~~

Cultural Resources – Discussion

Existing Setting

The project site is located on the Santa Barbara coastal plain south of the Santa Ynez Mountain Range, on the west margin of the Goleta Slough. The site is underlain by a combination of Holocene Estuarine deposits and recent fill.

Two documents were reviewed for information on prehistoric and historic archaeological resources and historic structure information in and adjacent to the project: The Archaeological survey for the Goleta West Sanitary District, Trunk Improvement Project, Mesa Road Trunk Sewer Santa Barbara County, California (Pacific Legacy, Inc. 2011); and the Master Archaeological Resource Assessment for the SBA (Applied Earthworks 2009). The project is within the study boundary of both projects and its location was covered in the documents.
No cultural resources field survey was conducted for the project as the project footprint is currently covered by either buildings or asphalt/concrete paving and fill.

Listings for the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), California Historical Landmarks, and California Points of Historical Interest were checked for information on resources within or adjacent to the project site.

Project-Specific Impacts

5.a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Section 15064.5?

There are no buildings within the project site that have previously been determined eligible for NRHP or the CRHR. The two buildings to be demolished are the original pump house, constructed in the late 1950s, and the garage/shop building, constructed between 1955 and 1965. Both are utilitarian single-story cinderblock buildings with flat roofs. The pump house is approximately 14 feet square, with two doors and narrow shed roof overhang on the façade. The sides of the building are blank, and the rear wall has a small attached room. The garage/shop building is approximately 58 feet long and varies between 17 and 22 feet wide. There are break rooms are on the south side and garages on the north side. The break room section façade has two doors and two windows. The garage portion has three large, roll-up doors. The building sides are blank, and the rear wall has a window and a small metal awning on the south end.

Neither building qualifies under any of the four criteria for listing on the NRHP or under any of the four criteria for listing on the CRHR. Both buildings are strictly utilitarian and exhibit no design features characteristic of a particular style or period of architecture. Both are rectangular boxes with no unique or unusual design characteristics specific to their usage. They were built by the District and have served no other function than what they do now. They are not associated with significant events or significant persons in Goleta, Santa Barbara, County, or California history. They do not embody distinctive characteristics of a type, period, or construction, represent the work of an important creative individual, or possess high artistic values. They are not likely to yield information important in prehistory or history. Potential impacts to a significant historical resource associated with the demolition of these two buildings would be *less than significant*.

5.b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Section 15064.5?

No archaeological resources listed on the NRHP are found within the project boundaries and no properties that have been determined eligible and listed on the Archaeological Determinations of Eligibility at the Office of Historic Preservation are within the existing District headquarters. There are no archaeological resources recorded within the District headquarters site. The closest recorded

archaeological resource is SBA-49, a prehistoric shell midden. SBA-49 is approximately 250 feet to the southeast of the project. A second archaeological site, SBA-3392, is mapped approximately 300 feet to the south of the project. SBA-3392 is a light density shell midden and lithic scatter. The project would not result in the disturbance of any archaeological sites that have been determined to be eligible or appear to be eligible for listing on the NRHP or the CRHR.

The entire project site is developed and covered by buildings, asphalt, cement, and fill. There is no potential for surface archaeological resources to exist on the project site. The proposed project site sits on fill used to level the District headquarters site for construction of the buildings. This fill varies in depth between five and nine feet, and east of the east end of the garage/shop building may be up to 30 feet deep. Plans include a three foot over excavation depth below surface as well as cast-in-drill holes to be constructed into the bedrock underlying and native soils. Therefore, the potential for impacts to archaeological deposits is assumed to be low. However, due to the location of the project in an area of alluvial deposition and fill, there is the potential for the presence of buried cultural resources to be present in the project footprint that could be uncovered during ground disturbing activities. As such, a program of archaeological monitoring for all project related ground disturbing activities is recommended. With the implementation of MM-CUL-1, project impacts would be ~~*potentially significant but mitigable*~~*less than significant with mitigation*.

Tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources as defined in subdivision (k) of the Public Resources Code Section 5020.1. As discussed above, no documented historic and cultural resources are located on-site. The site, however, would be monitored for subsurface cultural resources during ground disturbing activities through implementation of MM-CUL-1. In accordance with Assembly Bill 52, the Native American Heritage Commission will be notified at the time of the release of this environmental document for public review. This will allow the Barbareño Chumash and other interested tribes an opportunity to request consultation with the District or identify any tribal cultural resources that would be affected by the project. Thus, the project would not cause a substantial adverse change in the significance of a known tribal cultural resource. However, due to the potential presence of buried tribal cultural resources that could be discovered during grading and construction, a significant impact to an unknown tribal cultural resources could occur. With the implementation of MM-CUL-1, project impacts to tribal cultural resources would be *less than significant with mitigation*~~*potentially significant but mitigable*~~.

5.c) Disturb any human remains, including those interred outside of formal cemeteries?

Based on a review of the Master Archaeological Resources Assessment for the SBA (Applied Earthworks 2009), there is no evidence that human remains are present on the project site. However, given the historic presence of Chumash in the local area, there remains the potential for cultural resources and human remains to be uncovered during construction activities. While the potential for disturbance of cultural resources and human remains on-site is low, as the existing District site has been previously graded and developed, unknown resources and human remains may be encountered during project construction. In the unlikely event of a discovery of human remains during project construction, the remains would be handled in accordance with procedures of the California Public Resources Code (Section 5097.98), State Health and Safety Code (Section 7050.5), and California Government Code Section 27491 ~~As such, impacts would be *potentially significant but mitigable* with implementation of MM-CUL-2~~ that would require~~ing that~~ work to stop ~~in event~~ if resources are encountered during construction (MM-CUL-2). As such, impacts would be *less than significant with mitigation* (MM-CUL-2).

5.d) Directly or indirectly destroy a unique paleontological resource of site or unique geologic feature?

The Geotechnical Study (Attachment C), found the underlying soils and formations to consist of artificial fill, undifferentiated younger alluvium, and Pico formation siltstone to claystone bedrock. Grading for the building foundation would require excavation of the existing artificial fill, alluvial soils, and Pico Formation bedrock (for the recommended cast-in-drill holes). Cut and fill grading for the proposed project would both be limited to approximately 640 cubic yards. The drilled piers or cast-in-drill holes are to be constructed into the bedrock underlying the existing building pad and into native soils in order to support a structural foundation for the proposed Administrative Building. Due to the potential presence of paleontological resources that could be discovered during excavation below the existing building pad, a significant impact to paleontological resources could occur. With the implementation of MM-CUL-1, project impacts to paleontological resources would be *less than significant with mitigation*~~*potentially significant but mitigable*~~.

Mitigation

MM-CUL-1: Cultural and Archaeological Resource Discovery and Recovery
This measure shall be implemented to reduce potential impacts to buried historic and prehistoric archaeological or paleontological resources discovered during any ground disturbing activities. Prior to the initiation of vegetation or paving removal, demolition, trenching, or grading, contractors and construction personnel shall be alerted to the possibility of uncovering unanticipated subsurface archaeological features or artifacts. Personnel should be instructed that if such archaeological resources are encountered or suspected, work shall be halted immediately, and the District and its Environmental Analyst shall be notified immediately. Prior to construction, the District shall retain a qualified archaeologist and paleontologist who shall be employed to monitor construction and assess the nature, extent and significance of any discoveries and to develop appropriate management recommendations for archaeological resource treatment which may include, but are not limited to, redirection of grading and/or excavation activities, consultation and or monitoring with a Barbareño Chumash representative who shall be retained by the District and who is a qualified Barbareño Chumash Site Monitor. If significance criteria are met, then the project archaeologist shall be required to perform data recovery, radiocarbon dating or other special studies if appropriate material is recovered, submit materials to a museum for permanent curation; and provide a comprehensive final report to be submitted to the Central Coast Information Center at UCSB.

Confidential information shall be restricted to a separate report that will be held by the District, submitted to the Central Coast Information Center, and forwarded to relevant Native American tribes, but not made publicly available. Prehistoric or historic cultural materials that may be encountered during ground disturbing include the following:

- historic artifacts, such as glass bottles and fragments, tin cans, nails, ceramic and pottery shreds, and other metal objects;
- historic structural or building foundations, walkways, cisterns, pipes, and other structural elements;
- prehistoric flaked-stone artifacts and debitage, consisting of obsidian, basalt, and/or cryptocrystalline silicate stone;
- groundstone artifacts, such as mortars, pestles, and grinding slabs;
- dark, almost black soil, with a “greasy” texture that may be associated with charcoal, ash, bone, shell, flaked stone, groundstone, and fire affected rock; and,
- human remains (see MM-CUL-2 below).

MM-CUL-2: Human Remains

According to State Health and Safety Code Section 7050.5, in the event that human remains (or remains that may be human) are discovered at the project site during grading, ground disturbance, earthmoving, the construction contractors shall immediately stop all activities in the immediate area of the find. The project proponent shall then inform the Santa Barbara County Coroner and the District and the coroner would be permitted to examine the remains. If the Coroner determines the remains are prehistoric or of Native American origin, the coroner would notify the Native American Historical Commission within 24 hours as required by Public Resources Code 5097. The Commission would identify the "Most Likely Descendent."

The Most Likely Descendent, likely from the Barbareño Chumash, will provide recommendations and ensure for the treatment of the remains within 48 hours being granted access to the find. The District should take steps to ensure that the site of discovery is not disturbed until all plans for treatment are agreed upon by all parties. A Barbareño Chumash representative who is a qualified Barbareño Chumash Site Monitor shall be retained by the District to monitor all further subsurface disturbance in the area of the find. Work in the area may only proceed after the District and its Environmental Analyst grants authorization.

A final report on the results of the archaeological and paleontological monitoring shall be submitted by the District's archaeologist and paleontologist within 180 days of completion of the monitoring and included in the final report prepared as part of MM-CUL-1 above.

Residual Impacts

Less than significant.

6. GEOLOGY AND SOILS Would the project:	**Level of Significance**
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: i. Rupture of a known earthquake fault? ii. Strong seismic ground shaking? iii. Seismic-related ground failure, including liquefaction? iv. Expansive soils? v. Landslides? vi. Sea cliff retreat?	i. Less than significant with mitigation ~~Potentially significant, but mitigable~~ ii. Less than significant with mitigation ~~Potentially significant, but mitigable~~ iii. Less than significant with mitigation ~~Potentially significant, but mitigable~~ iv. Less than significant with mitigation ~~Potentially significant, but mitigable~~ v. Less than significant with mitigation ~~Potentially significant, but mitigable~~ vi. No impact
b) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, collapse or sea cliff failure?	Less than significant with mitigation ~~Potentially significant, but mitigable~~
c) Result in substantial soil erosion or the loss of topsoil?	Less than significant with mitigation ~~Potentially significant, but mitigable~~
d) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No impact

Geology and Soils – Discussion

Issues: Geophysical impacts involve geologic and soil conditions and their potential to create physical hazards affecting persons or property; or substantial changes to the physical condition of the site. Included are earthquake-related conditions, such as fault rupture, groundshaking, liquefaction (a condition in which saturated soil loses shear strength during earthquake shaking); or seismic sea waves; unstable soil or slope conditions, such as landslides, subsidence, expansive or compressible/collapsible soils; or erosion; and extensive grading or topographic changes.

Impact Evaluation Guidelines: Potentially significant geophysical impacts may result from:

- Exposure of people or structures to risk of loss, injury, or death involving unstable earth conditions due to seismic conditions, such as earthquake faulting, groundshaking, liquefaction, or seismic waves.
- Exposure to or creation of unstable earth conditions due to geologic or soil conditions, such as landslides, settlement, or expansive, collapsible/compressible, or expansive soils.
- Extensive grading on slopes exceeding 30%, substantial topographic change, destruction of unique physical features; or substantial erosion of soils.

Existing Setting

This analysis draws from the Geotechnical Study for the Proposed Administration Building, Goleta West Sanitary District, Goleta, Santa Barbara County, prepared by Fugro in April 2015 and addendum prepared

by Fugro in April 2016 (see Attachments C and C-1). The initial field exploration program was performed by Fugro on December 17, 2014, and consisted of the excavation, sampling and logging of two stem auger drill holes adjacent to the proposed building footprint. A supplemental field exploration program was performed on February 9, 2015, and consisted of the advancement of seven cone penetration tests (CPTs) in or adjacent to the building footprint.

In addition, on March 1, 2016, a field review of the southern access driveway revealed that the driveway was constructed on an existing base of crushed sandstone rock likely laid down during or subsequent to construction of the District headquarters site. This fill is evidenced by its topographic expression and extends to the edge of the riparian vegetation near the southern boundary of the project site and slopes into the wetland adjacent to the site's southern edge. This driveway extends east off the project site and runs along the Goleta Slough southern boundary (Greg Denlinger, pers. comm., March 1, 2016) (refer to Photographs 3 and 4).

Project construction would take place within the District's easement area boundary lines. The proposed project would involve the demolition of the District's garage/shop building to make room for the construction of a new Administration Building. Administrative uses from the existing administration building will transfer to the new building. Staff numbers would not change as a result of the new Administration Building.

Geology and Soil Conditions

Subsurface Conditions

Based on the drill holes and CPTs advanced during the field exploration conducted by Fugro, the project site is underlain by artificial fill and undifferentiated younger alluvium extending to depths ranging from about 20 to 35 feet below the ground surface (bgs). Bedrock materials of the Pico Formation were encountered below the artificial fill and alluvium to the maximum depth explored of about 75 feet bgs.

Artificial Fill (Af)

Artificial fill was encountered in the drill holes and CPTs excavated for the Geotechnical Study. Fugro estimates that the artificial fill ranges from about 5 to about 9 feet thick and consists of loose to medium dense silty and medium stiff sandy clay (see Attachment C). However, based on information provided by GWSD staff, a relatively deep excavation may have previously occurred in the area of drill hole DH-1 and CPT-2 (see Attachment D). The excavation may have resulted in a deep section of fill in this area and lowering the bedrock surface elevation relative to the elevation encountered in the adjacent explorations. The limits of the reported excavation are not known. Fugro concluded it can be difficult to distinguish artificial fill from in-place soils, however, on a qualitative basis the soil samples retrieved from drill hole DH-1 above the bedrock surface appeared to be fill. In addition, the yellowish brown sand silty sand encountered at a depth of 23 to 34 feet appeared similar to imported sand locally referred to as "yellow sand" or "Santa Barbara sand."

Undifferentiated Younger Alluvium (Qal)

Undifferentiated younger alluvium was encountered in drill hole DH-2 below the artificial fill at an estimated depth of about 7 feet. The alluvial soils in DH-2 consist of soft sandy clay to fat clay and loose to very loose silty sand. On the basis of Fugro's interpretation of the CPT data, it is estimated that similar materials consisting of loose to medium dense silty sand and soft to medium stiff clay alluvial soils are present below the artificial fill and extend to the bedrock surface at depth (see Attachment C).

Seismicity

The project site is located on the coastal plain south of the Santa Ynez Mountain Range, north of Mesa Road and adjacent to UCSB Parking Lot 32. The Santa Ynez Mountain Range is part of the western Transverse Ranges, a predominantly east-west trending mountain block extending from Point Arguello eastward into Ventura County. The Santa Ynez Mountains and adjacent alluvial plain are composed

almost entirely of sedimentary rocks ranging from late Jurassic to Recent. The project site is not located in an Alquist-Priolo Earthquake Fault Zone as determined by the California Geological Survey. The only Alquist-Priolo fault zone in the County is Zaca Creek, located approximately 20 miles northeast of the project site. Despite not being located directly in an Alquist-Priolo fault zone, there are numerous faults throughout the Santa Barbara region and include both major faults and a number of smaller faults. Located on the coastal plain south of the Santa Ynez Mountain Range, the principal fault systems in the project area are the More Ranch/Mission Ridge faults (see Attachment C). In the immediate vicinity of the proposed project, the More Ranch Fault (component of the Mission Ridge Fault; Figure 8) is the closest fault approximately 0.36 mile away north of the project site and runs through the SBA property. Additional proximal faults in the area include the offshore North Channel fault, Red Mountain, and Pitas Point faults (see Attachment C).

Project-Specific Impacts

6.a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault?

The Geotechnical Study (see Attachment C) prepared for the project and the City's 2013 General Plan Appendix J: Safety Element Technical Background Report indicates that the site is not within an Alquist-Priolo Earthquake Zone, which is a zone that delineates areas of known active faults that may be subject to surface displacement from future faulting as determined by the California Geological Society.

As described above, the project is located in a seismically active region of the State and is in the vicinity of several active or potentially active faults. Although the immediate project site is not in an Alquist-Priolo Earthquake Fault Zone, the north branch of the More Ranch fault (part of the Mission Ridge fault) is located 0.36 miles north from the project site. Existing subsurface data obtained at the project site by Fugro indicated no obvious historical signs of bedrock offset or displacement from faulting. Although the potential for ground rupture is considered low due to the absence of active faults at the project site, it is located in the proximity of nearby active faults which could potentially affect structures and people at the District Headquarters during an earthquake. The Geotechnical Study (see Attachments C and C-1) provides seismic design and foundational design parameters for the proposed project designed in compliance with the 2016 CBC to ensure the new Administration Building can withstand future earthquakes. Therefore, project impacts associated with the rupture of a known earthquake fault would be *less than significant with mitigation* (MM-GEO-1) ~~be *potentially significant, but mitigable*~~.

ii. Strong seismic ground shaking?

As described above, the project site is located in an actively seismic region. According to the Geotechnical Study prepared for the project site, there are seven known faults within a search radius of 25 miles from the property with potential to cause seismic ground shaking (see Attachment C). The closest faults from the project site would be the Mission Ridge (0.36 mile), Red Mountain (2.8 miles), North Channel (5.2 miles), and Pitas Point (5.8 miles). The Mission Ridge fault is designated as "potentially active" on the City General Plan Fault Hazard Zones map (City of Santa Barbara 2013b) and has an estimated earthquake magnitude of 6.8 (see Attachment C). The proposed project would be required to be designed and constructed to withstand the effects of seismic ground motion, as provided in Section 1613 of the 2016 CBC which is also adopted by the City. However, the Geotechnical Study provides additional design standards and recommendations specifically for the project based on site and soil conditions to withstand peak horizontal ground acceleration caused by a maximum magnitude earthquake. Therefore,

RECON

M:\JOBS5\8165\common_gis\fig8_mnd.mxd 8/22/2017 sab

FIGURE 8

Regional Earthquake Fault Map

adherence and compliance with the CBC, City regulations, and foundational design standards within the Geotechnical Study recommendations would ensure that impacts related to seismic ground shaking would be *less than significant with mitigation*~~*potentially significant, but mitigable* with~~ (MM-GEO-1).

iii. Seismic-related ground failure, including liquefaction?

Soil liquefaction occurs within relatively loose, cohesionless sands located below the water table that are subject to ground accelerations from earthquakes. The majority of the alluvial soils encountered at the project site in the Geotechnical Study (see Attachment C) were loose to medium dense granular soils, indicating that the soil layers are subject to liquefaction. The City's Potential Liquefaction Hazard Zones Map in the General Plan also identifies the area as potentially having a high liquefaction potential. Although project construction would occur on existing disturbed land at the District headquarters that has been paved and developed since the 1950s, adherence to the grading and fill recommendations and suggested materials specifications detailed within the Geotechnical Study (see Attachment C), and grading performed in accordance with the City's 2012 Erosion/Sediment Control Program would ensure project impacts associated with seismic-related ground failure, including liquefaction would be ~~*potentially*~~ *less than significant with mitigation* (MM-GEO-1)~~*significant but mitigable* with~~.

iv. Expansive soils?

The majority of the project site is located in an area with high potential for expansive soils per the City General Plan Expansive Soil Hazard Zones map (City of Santa Barbara 2013b). The Geotechnical Study (see Attachment C) found that the on-site clayey soils are expansive. As a result, the Geotechnical Study includes recommendations to ensure that there is no risk to life or property due to expansive soils. The foundation and material recommendations provided in the report are based on the existing geotechnical conditions at the site consisting of artificial fill and alluvial soils overlying Pico Formation siltstone and claystone. The recommendations specified in the Geotechnical Study include requirements to be adhered to during earthwork, grading, and preparation for and construction of foundations. Thus, adherence to the Geotechnical Study recommendations required as MM-GEO-1 and the 2016 CBC would minimize substantial risks to life or property from expansive soils. Thus, impacts would be *less than significant with mitigation* (MM-GEO-1)~~*potentially significant, but mitigatable* with~~.

v. Landslides?

Landslides are mass movements of the ground that include rock falls, relatively shallow slumping and sliding of soil, and deeper rotational or transitional movement of soil or rock. No landslides or indications of deep-seated landsliding were indicated at the project site during field exploration or review of available geologic literature (see Attachment C). In addition, based on available literature and maps in the Safety Element in the General Plan (City of Santa Barbara 2013b), the site is not vulnerable to landslides and is designated as having very low to low landslide potential. However, project compliance with the City's grading requirements and implementation of the excavation recommendations within the Geotechnical Study required as MM-GEO-1 would ensure that any impacts associated with landslides are *less than significant with mitigation* (MM-GEO-1)~~*less than significant with mitigation* with~~.

vi. Sea cliff retreat?

The proposed project is not located on or adjacent to a sea cliff. Project construction would occur on existing disturbed and developed land. Additionally, the project site is not designated within the City's 75 Year Coastal Bluff Retreat Zone in the Appendix J: Safety Element Technical Background Report of the General Plan (City of Santa Barbara 2013b). As such, *no impact* would occur in this regard.

6.b) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, collapse or sea cliff failure?

Refer to response 6(a). The proposed project is located at a site with the potential for liquefaction, seismicity, and expansive soils that could potentially cause geologic hazards. However, adherence to existing building regulations, standard grading, and engineering practices in addition to compliance with the recommended foundational design parameters in the Geotechnical Study (see Attachment C), would ensure impacts related to unstable geologic units or soils would be *less than significant with mitigation* (MM-GEO-1)~~*potentially significant, but mitigable* with~~.

6.c) Result in substantial soil erosion or the loss of topsoil?

The City General Plan Erosion Potential Hazard Zones Map identifies the project site as having slight erosion potential (City of Santa Barbara 2013b). However, the project site is flat and has been previously graded, which limits the potential for substantial soil erosion. Grading and construction activities during the construction phase of the project would temporarily displace soils and increase the potential for soils to be subject to wind and water erosion. The proposed cut and fill for the project is anticipated to be equal at 640 cubic yards. The project is required to comply with the City's Erosion/Sediment Control Program requirements, and construction recommendations provided in the Geotechnical Study as MM-GEO-1 would minimize impacts from soil erosion. Additionally, the project would include new native, drought tolerant landscaping, which would further minimize erosion potential. Compliance with existing regulations and standard grading practices in addition to adherence to MM-GEO-1 would ensure impacts are *less than significant with mitigation.*~~*potentially significant, but mitigable.*~~

6.d) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

The proposed project is in an urbanized area served by an existing public sewer system. Therefore, no septic tanks or alternative wastewater disposal systems are proposed. As such, *no impact* would occur.

Mitigation

MM-GEO-1: Geotechnical Study Recommendations
The District and project contractor shall follow the recommendations contained in the Geotechnical Study prepared by Fugro Consultants, Inc. (April 2015). Compliance with this report would ensure that proper foundational design and structural design criteria for proposed new Administration Building project are met. These measures are described in detail in the study and address (1) foundation design; (2) CIDH Piles; (3) structural floor slabs; (4) asphalt concrete pavements; (5) general site clearing and grubbing; (6) grading for foundations and pavements; (7) corrosion; (8) construction considerations; (9) plan review; (10) and field observations and testing.

Residual Impacts
Less than significant.

7. HAZARDS AND HAZARDOUS MATERIALS Would the project:	**Level of Significance**
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less than significant
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?	Less than significant
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Less than significant
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Less than significant
e) For a project located within the SBCAG Airport Land Use Plan, Airport Influence Area, would the project result in a safety hazard for people residing or working in the project area?	Less than significant
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less than significant
g) 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?	No impact

Hazards and Hazardous Materials – Discussion

Issues: Hazardous materials issues involve the potential for public health or safety impacts from exposure of persons or the environment to hazardous materials or risk of accidents involving combustible or toxic substances.

Impact Evaluation Guidelines: Significant impacts may result from the following:

- Siting of incompatible projects in close proximity to existing sources of safety risk, such as pipelines, industrial processes, railroads, airports, etc.
- Exposure of project occupants or construction workers to unremediated soil or groundwater contamination.
- Exposure of persons or the environment to hazardous substances due to improper use, storage, or disposal of hazardous materials.
- Siting of development in a high fire hazard areas or beyond adequate emergency response time, with inadequate access or water pressure, or otherwise in a manner that creates a fire hazard.

Emergency evacuation is discussed in the Transportation Section below.

Existing Setting

At the Federal level, the U.S. EPA is responsible for implementation and enforcement for federal laws, including the Resource Conservation and Recovery Act of 1986 (RCRA), the Superfund Amendments and Reauthorization Act of 1986, and the Comprehensive Environmental Response, Compensation, and

Liability Act of 1980 (CERCLA). At the State level, the California EPA Department of Toxic Substances Control (DTSC) is responsible for enforcement of the Hazardous Waste Control Act, a statute that primarily regulates the management of hazardous waste; and the Hazardous Substance Account Act, a statute that governs the cleanup of contaminated property and is modeled after CERCLA. In addition, worker safety is regulated by Occupational Safety & Health Administration (OSHA) through the Process Safety Management (PSM) Standard (29 Code of Federal Regulations 1910.119) with requirements for preventing or minimizing the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals. Worker protection is also regulated by the California Occupational Health and Safety Agency (Cal-OSHA). Cal-OSHA specifies lower quantities than the Federal PSM of hazardous materials handled that would trigger the PSM requirements at a facility.

Land use surrounding the proposed project site consists predominantly of residential, and commercial developments as well as educational facilities. The site has been operating as a public sanitary district providing wastewater collection services for residents and businesses in the western Goleta Valley and Isla Vista in southern Santa Barbara County since the late 1950s. The existing Administration Building was constructed in 1964. The project site has historically been listed on the Cortese List pursuant to Government Code Section 65962.5 as a hazardous material site; however, the case was closed in 2014.

The District is located on SBA property on an easement. The SBA is the closest local airport to the project site, the District site is located approximately 0.25 miles south of SBA's west elevation runways, with SBA terminal facilities located approximately one mile east of the District headquarters. The project site is within the SBCAG adopted 1993 ALUP AIA. Utilities are identified as a compatible land use in the AIA within all Safety Compatibility Areas as listed in Table 4-1 of the ALUP (SBCAG 1993). A draft SBCAG ALUCP was released in 2012 and is intended to provide a comprehensive update to the 1993 ALUP. Although the ALUCP has not been adopted, the District headquarters and existing land use as a public utility service provider would remain consistent with the provisions in the draft 2012 ALCUP and adopted 1993 ALUP. In addition, the District is not located within a fire hazard area as identified by the City of Santa Barbara General Plan's Safety Element (City of Santa Barbara2013).

Project-Specific Impacts

7.a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The proposed project would involve the routine use of hazardous materials (i.e., small amounts of cleaners, degreasers, etc.). However, such materials are ubiquitous and must be handled according to manufacturer labeling and applicable regulations. As an Administrative Building for office and staff operations, the proposed project is not anticipated to generate hazardous waste or pose an immediate threat for the release of hazardous materials through the use or transit of such materials.

During construction of the proposed project, construction workers and the environment could be exposed to hazardous materials such as fuels, oils, solvents, lead solder, and glues. Additionally, during operation of the proposed project, hazardous materials handling at the site, though minimal as only associated with regular maintenance, could include minor amounts of lubricant and paints. Exposure could occur through normal use and/or if these materials were accidentally spilled or released. Proper handling of hazardous materials is required by existing federal, state, and local regulations as discussed above under existing setting.

The project would be required to comply with all applicable state and local regulations for disposal of hazardous materials, including the Clean Air Act, Clean Water Act, Comprehensive Environmental Response, Compensation and Liability Act, the Toxic Substances Control Act, and the County Health Department. During demolition, all potentially hazardous materials (lead-based paints, asbestos) would be handled in accordance with California Occupational Safety and Health Administration requirements for

employee safety and disposed of in accordance with state and local regulations. ~~that may exist in the existing buildings to be demolished (asbestos, lead) and waste management during project construction~~. However, the presence and handling of hazardous material during the construction, and on occasion during operation could pose a significant impact to the environment and public if appropriate handling measures, as required by the regulations identified, are not followed. Additionally, potentially significant impacts could result if unknown contaminants are discovered on site at the time of construction.

The District has developed their own Hazard Communication Program (HAZCOM) (2015), that ensures employees and contractors are made aware of and properly trained in the safe use of hazardous chemicals with which they come into contact, and covers hazardous chemical use in all District working areas. The District also has a Disaster Operations & Business Continuity Plan (2015) intended to provide procedures pertinent to continuation of operations in the event of a disaster or other major event affecting the District and/or surrounding areas, and includes procedures on District operations and contractor operations. Implementation of the District's HAZCOM & Disaster Operations and Business Continuity Plans ensure that potential hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials at the project site will be *less than significant.*

7.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?

As a new Administration Building, the project post-construction would not involve a use that would result in foreseeable upset and accident conditions from the release of hazardous materials into the environment. Uses and materials on-site would be primarily related to the office and boardroom use for staff. The proposed building uses would be associated with the routine use of common cleaning materials (see response to 7(a). As discussed above, construction activities would involve use of hazardous materials such as fuels, oils, solvents, and glues. These materials would be contained within vessels inside excavation equipment, generators, and other construction equipment. Accidental spills that may occur during on-site fueling of equipment would be small and would not create a significant hazard to the public or the environment. In addition, compliance with the requirements of the Central Coast Regional Water Quality Control Board (CCRWQCB) General Construction Permit would ensure that hazardous materials do not reach surface waters. During the operations period, hazardous materials at the site would be minimal due to the small-scale of the project and would entail small amounts of lubricants and paints associated with periodic maintenance of the building. Compliance with existing federal, State, and local regulations and District programs, and adherence to the District's HAZCOM & Disaster Operations and Business Continuity Plans ensure that would ensure impacts from potential release of hazardous materials are *less than significant.*

7.c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The project site is within 0.25 mile of an existing school (UCSB); however, the project construction and operations would not result in emissions of hazardous materials that would affect the nearby school. The project involves demolition of existing garage/shop facilities and construction of a new Administration Building with three offices. Associated use of the new building would not emit hazardous materials or handle hazardous or acutely hazardous materials, substances, or waste.

Additionally, as described above in 7.a, the District has two safety response plans in the event of an emergency for its facilities. The District's HAZCOM intended to ensure that employees are made aware of and property trained in the safe use of hazardous chemicals with which they may come in contact. The District also has a Disaster Operations & Business Continuity Plan to provide procedures in the event of a disaster or other major event affecting the District individually and/or the greater area. Compliance with the aforementioned District plans, ~~and~~ policies, and regulations would minimize impacts. As a result,

impacts associated with hazardous emissions or releases near an existing or future school would be *less than significant.*

7.d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

A hazardous waste site record search was completed in ~~February 2016~~October 2017, using Geotracker, an online database of hazardous site records maintained by the California State Water Resources Control Board (Table 7). Two sites in the immediate project vicinity (within 0.25 mile) and one on the project site came up during the record search. The case on the project site was opened in June 2004 for a small gasoline tank leak and subsequent soil contamination. The contaminated soil was excavated, the tank was closed and replaced, and the groundwater was monitored on a quarterly basis. In April 2014 the case was closed because the area ~~has been remediated and~~ no longer pose~~d~~s a potential threat to human health or safety. ~~This case was closed as of April 11, 2014.~~ No significant impact related to an identified hazardous material site is expected to occur with project implementation, due to the distance of the other two cases on UCSB property from the project site (over 660 feet south across Mesa Road). As such, potential impacts associated with hazards to the public or the environment would be *less than significant.*

Table 7
Hazardous Site Record Search

Site	Description	Location
Goleta West Sanitary District	LUST Cleanup Site (benzene, diesel, gasoline) Cleanup site – aquifer used for drinking water supply, soil, surface water. Case Closed 4/11/2014	UCSB Parking Lot 32
UCSB Building 510, Tank 10	LUST Cleanup site. (gasoline) Cleanup site – Other groundwater (uses other than drinking water), soil, soil vapor affected. Open case, eligible for closure as of 5/19/2015.	UCSB Building 510 (681 feet south from District)
UCSB Building 336, Tank 2	LUST (diesel, gasoline) Cleanup site—Other groundwater (uses other than drinking water), soil, soil vapor affected. Open case, eligible for closure as of 6/5/2015.	UCSB Building 336 (661 feet south from District)
SOURCE: California State Water Resources C ontrol Board (2016). LUST = Leaking Underground Storage Tank		

7.e) For a project located within the SBCAG Airport Land Use Plan, Airport Influence Area, would the project result in a safety hazard for people residing or working in the project area?

The project site is within the adopted 1993 SBCAG ALUP AIA for the SBA. Per Table 4-1 of the 1993 SBCAG ALUP, the utilities land use category is compatible with all three safety compatibility areas, including zone 1 (clear), zone 2 (approach), and zone 3 (general traffic pattern area). Additionally, the proposed height of the project would be approximately 20 feet and would not exceed the FAA Part 77 height criteria of 200 feet above ground level. Additionally, plans for an updated ALUCP are currently underway, with its draft produced in 2012. The pending ALUCP would provide guidance for future land uses within the AIA to ensure that public safety and airport compatibility is maintained with updated forecasts and safety information. Although the draft ALUCP has not been adopted, the project under evaluation would be consistent with ALUCP provisions as currently proposed. Considering this, the potential safety hazard for people residing or working at this project area near the airport would be *less than significant.*

7.f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The project would not negatively impact an adopted emergency response plan or evacuation plan. The project construction and operations would not affect traffic flow through Mesa Road or J Road or physically interfere with an adopted emergency response plan, and no road closures in the surrounding area would be necessary as a result of the proposed project that would physically interfere with emergency routes. Additionally, the District is located adjacent to County Fire Station 17 (less than 0.05 mile southwest from the project site) that would provide the first-line of emergency response. The District also has two safety response plans in the event of an emergency for its facilities (see response 7(a) and 7(c) above). Thus, impacts would be *less than significant.*

7.g) 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?

The project site is not located in an area designated as a High Fire Hazard Zone by California Department of Forestry and Fire Protection (CalFire; State of California 2008), or in a wildfire severity zone in the City's General Plan Safety Element (City of Santa Barbara 2013a). The project site is also located in an area that has been paved or filled for development since the 1950s. In addition, the project site is situated on a coastal plain, and is not located in an area susceptible to wildland fires. Adequate emergency access would be provided and the project would comply with State and local fire safety building code requirements. Additionally, County Fire Station 17 is located adjacent to the project site in the event of an emergency. Thus, there would be *no impact* related to wildland fire hazards.

Mitigation
None necessary.

Residual Impacts
Less than significant.

8. HYDROLOGY AND WATER QUALITY Would the project:	**Level of Significance**
a) Impact groundwater by: i. Substantially depleting groundwater supplies or interfering substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby well would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? ii. Violating any groundwater quality standards/requirements or otherwise substantially degrading groundwater quality?	No impact
b) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	Less than significant
c) Substantially alter the existing drainage pattern of the site or area or substantially increase the rate or amount of surface runoff in a manner which would result in substantial erosion, siltation, or flooding on- or off-site?	Less than significant
d) Violate any surface water quality standards/requirements or otherwise substantially degrade surface water quality?	Less than significant
e) Substantially alter a stream or river (either directly or indirectly through encroachment into buffer areas) in a manner which would result in substantial on- or off-site erosion, siltation, flooding, water quality degradation, or impacts to sensitive biological resources?	Less than significant
f) Expose people or structures to a significant risk of loss, injury or death involving flooding (including flooding as a result of the failure of a levee or dam), wave action, or surface water erosion?	Less than significant with mitigation ~~Potentially significant, mitigable~~
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	No impact
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	Less than significant
i) Expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow?	Less than significant

Hydrology and Water Quality – Discussion

The hydrology, water quality, and flood control analyses in this section are informed by the technical Drainage and Stormwater Quality Analysis for the Goleta Sanitary District Headquarters Improvements (Attachment E). The assessment of potential sea level rise affecting the project and adjacent area are based upon the three following local studies: Santa Barbara AMP Draft Program Environmental Impact Report (July 2016); the City of Goleta Sea Coastal Hazards Vulnerability Assessment and Fiscal Impact

Report (December 2015); and the Goleta Slough Area Sea Level Rise and Management Plan August 2015. Each of these studies are briefly summarized below.

Existing Setting

The project site is within the Goleta Slough Watershed (Goleta Hydrologic Subarea) within the larger South Coast Hydrologic Unit (CCRWQCB 2009). The South Coast Hydrologic Unit is about 416 square miles that is comprised of seven creeks with a drainage area of approximately 30,880 acres (Draft AMP 2012).

Of the seven sub-drainages, three discharge directly into the Goleta Slough on the Santa Barbara Airport property: Tecoloito Creek, Carneros Creek, and San Pedro Creek/Las Vegas Creek (Draft AMP 2012). The portions of Goleta Slough within the SBA property currently consist of several channels that support tidal flow, as well as formerly tidal areas that are now engineered basins.

The drainage on-site currently is captured via storm drain inlets and drains to an on-site wet well that is pumped to the District's treatment plant. There is no existing drainage into the Goleta Slough.

The U.S. EPA CWA 303(d) List of Impaired Waters (reporting year 2012) includes the Goleta Slough and several of its tributary creeks for pathogens and toxic organics (U.S. EPA 2012). In addition, the Goleta Slough/Estuary is listed on the State of California's 2012 CWA 303(d) impaired waters for pathogens (natural sources, unknown, and urban runoff/storm sewers) and priority organics (nonpoint sources) with a Category 5 listing (State of California 2012). Category 5 listings apply where a water segment has not met standards and a total maximum daily load (TMDL) is required but not yet completed for one of the pollutants being listed in this segment. The Goleta Slough/Estuary was listed since 1990 with an estimated 196 acres assessed. Other impaired Section 303(d) 2012 creeks that flow and discharge into the Goleta Slough where it filters pollutants include the Atascadero, Maria Ygnacio, San Antonio, San Pedro, and San Jose Creeks (State of California 2012).

Flooding

The project site is located in a 100-year flood zone mapped by FEMA, FEMA Zone AE, which has the potential to expose people and structures to substantial flood hazards (Figure 9). The Zone AE maps areas of inundation by the 1-percent-annual-chance flood, including areas with wave heights less than 3.0 feet and runup elevations less than 3.0 feet above the ground. These areas are subdivided into elevation zones, and base flood elevation (BFEs) are assigned. The AE Zone will generally extend inland to the limit of the 1-percent-annual-chance flood stillwater elevation. New coastal studies will also typically subdivide the AE Zone by identifying the Limit of Moderate Wave Action (FEMA, November 2015)[3]. The project site received its 13.7 BFE determination by the City of Santa Barbara (included in Attachment E). As such, potential effects of sea level rise (SLR) and climate change in the long-term planning horizon, including impacts from flooding in the Goleta Slough have been evaluated.

Draft Program Environmental Impact Report for the Santa Barbara Airport Master Plan (2015)

The AMP Draft Program EIR was completed in August 2015. Although the SBA is located within FEMA mapped flood zones, the AMP Draft EIR does not contain specific SLR modeling assumptions or forecast data for the SBA. AMP Draft EIR states that the proposed AMP recommends the removal of several existing structures from floodway areas; thus, the AMP would reduce future structural risks of flooding

[3] According to the City of Goleta 2015 Coastal Hazards and Vulnerability and Fiscal Impact Report, in 2018 FEMA updates to the region's flood hazard maps will be released.

Image Source: USDA FSA (flown July 2016)

0 Feet 1,000

Project Boundary

FEMA/FIRM 100-year Flood Zone (Zone AE)

FIGURE 9

Project in Relation to 100-year Flood Zone

RECON

M:\JOBS5\8165\common_gis\fig9_mnd.mxd 8/22/2017 sab

and SLR impacts. Any new development at the SBA would be limited, and mostly remain within FEMA Zone AE, but mapped outside floodways. Additionally, risks to people and structures at the SBA would be reduced by the recommended relocation of the existing maintenance yard and two historic structures out of the floodway (AMP Draft EIR 2015).

The AMP Draft EIR utilizes the analysis from the 2015 Goleta SLR and Management Plan (Goleta Slough SLR Plan), to apply their SLR adaptation strategy. The Goleta Slough SLR Plan recommends that current planning efforts identify adaptation strategies to accommodate at least five feet of sea level rise. Moderate sea level rise scenarios indicate that this is approximately the amount of sea level rise that is expected to occur by the year 2100 (AMP Draft EIR 2015). The Goleta Slough SLR Plan assumes that the SBA infrastructure would be protected in all SLR scenarios (low, moderate, or high) and include design recommendations. The SBA Draft EIR incorporated the Goleta Slough SLR Plan suggestions, which resulted in the following two mitigation measures in the SBA Draft EIR to address flooding and SLR:

- HYD/mm-1: The potential impact of local sea level rise associated with global climate change shall be considered in the planning and design of recommended Master Plan projects. Project-specific Coastal Development Permit submittals for projects that may be subject to tidal inundation and flooding shall include an analysis of improvement location and design in relation to projected future changes in sea level rise, utilizing the best available science, to ensure new development is located and designed to eliminate or minimize, to the maximum extent feasible, hazards associated with anticipated sea level rise over the expected design life of the project (75 years).

- HYD/mm-2: The Airport shall be required to raise all new or reconstructed buildings to one foot above base flood elevations as well as apply thicker pavement lifts during regular intervals over the lifetime of the Airport to reduce the potential for flooding on the tarmac.

City of Goleta Coastal Hazards Vulnerability Assessment and Fiscal Impact Report (2015)

The City of Goleta prepared a Coastal Hazards Vulnerability Assessment and Fiscal Impact Report (CHVA Report) to address the potential impacts of SLR locally and within the Goleta Slough. The preparation of the CHVA Report involved public participation and will help the City in completing its Local Coastal Plan. The CHVA Report identifies the primary physical forces causing coastal hazards and the resulting hazardous areas, and analyzes the resources, infrastructure, and development in these areas, including the fiscal impacts on the City's infrastructure and transient occupancy tax. The CHVA Report also applies this vulnerability information to identify suitable adaptation strategies that can be feasibly implemented along with policy and regulatory recommendations.
The CHVA Report was adopted by the City of Goleta on December 1, 2015, and includes recommendations for policies the City can adopt to address potential impacts for future development. CHVA Report recommendations that the City of Goleta could consider in regards to flood hazards and SLR impacts include:

- Changes to building heights to accommodate additional freeboard elevation;
- Minimize risks through siting, design and engineering; and
- Design protection in a manner that maximizes conservation of natural resources and public access.

Although the Goleta Slough, SBA, and the District are not within the City of Goleta's jurisdiction, the Goleta Slough has an integral role in the effects of flooding and SLR in the City of Goleta in the future due to its location in proximity to significant infrastructure in the City of Goleta. As such, the CHVA Report includes SLR projections for the Goleta Slough, summarized in a low, medium, and high SLR

scenario projections through the years 2030, 2060, and 2100 using typical update cycles for the City of Goleta General Plan (Table 8).

Table 8
Goleta Slough Modeling projections, including a 1.5 Millimeter per Year Subsidence at Devereux and Goleta Slough

Year	Low SLR	Medium SLR	High SLR
2030	1.2 inches	4.7 inches	11.4 inches (0.95 feet)
2060	5.8 inches	14.8 inches	30.2 inches (2.5 feet)
2100	15.9 inches	36.0 inches	65.5 inches (5.5 feet)

SOURCE: City of Goleta 2015
Approximate estimates of SLR.

The City of Goleta anticipates analyzing future decisions based on the worst case High SLR scenario at the year 2100 (CVHA Report 2015). The CVHA Report estimates there is a potential SLR rate of 65.5 inches (approximately 5.5 feet) around the Goleta Slough area in 2100. The analysis in the CVHA Report is consistent with the CCC's 2015 Sea Level Rise Policy Guidance. The data and studies provided by the CHVA Report contain vital information that the City of Goleta's decision makers, planning staff, and residents can use to plan for future hazards in the community.

2015 Goleta Slough Sea Level Rise and Management Plan

The 2015 Goleta Slough SLR Plan updates the first Goleta Slough Ecosystem Management Plan (GSEMP) prepared by the Goleta Slough Management Committee (GSMC) and adopted by the City of Santa Barbara in 1997. The purpose of the original plan was to provide a comprehensive framework for ecosystem management and impact mitigation within the Goleta Slough Ecosystem. The updated GSEMP reevaluates the study area based on projected sea level rise, assesses vulnerability and risk to both environmental and human resources, and recommends policies and potential adaptation strategies. The recommended adaptation strategies integrate the interests of multiple stakeholders and provide long-term planning guidance to the City of Santa Barbara, Santa Barbara County, and others to inform decisions and recommendations, e.g., those that might come out of the Santa Barbara AMP that may be incorporated into the City of Santa Barbara's Local Coastal Program (GSMC 2016). The purpose of the GSEMP and Goleta Slough SLR Plan is to be used as a guideline in reviewing proposed projects and plans by the City and other appropriate agencies.

The Goleta Slough SLR Plan recommends that planners and managers evaluate Slough assets, including habitats, development areas and infrastructure, in terms of the amount of sea level rise that can be accommodated before that asset becomes at risk of impacts from sea level rise. Adaptation strategies should include the ability to accommodate an increasing amount of sea level rise over time, and should anticipate the required lead in time necessary to implement these strategies. Additionally, the Goleta Slough SLR Plan recommends current planning efforts identify adaptation strategies that can accommodate at least 5 feet of SLR (Goleta Slough Management Committee 2015). Moderate sea level rise scenarios indicate that this is approximately the amount of sea level rise expected to occur by the year 2100. Table 9 below lists the critical elevations used to evaluate the expected extent of the impacts related to SLR within the Goleta Slough from the 2015 Goleta Slough SLR Plan.

Table 9
Critical Elevations Used to Evaluate Sea Level Rise Impacts at Goleta Slough

Elevation	Physical Interpretation	Estimated Recurrence Interval 2015	Estimated Recurrence Interval with 5 feet of SLR
5' NAVD	Approx. Mean High Water Level (2014)	Daily	Almost Always
10' NAVD	Approx. elevation of beach berm crest (2014); or Approx. Mean Sea Level +5 ft. SLR	1–5 Years* (without inlet management) 5–100* (with inlet management)	Daily
15' NAVD	Approx. Elevation of beach berm crest +5 SLR	-100 years*	1-5 Years* (without inlet management) 5-50* (with inlet management)

SOURCE: Goleta Slough Management Committee. Goleta Slough Area Sea Level Rise and Management Plan: Part 3- Table 3-2. (2015).
*High level of uncertainty

The 2015 Goleta Slough SLR Plan considers the planning horizon as up to +5 feet of SLR in the next 100 years. The current elevation at the Goleta Slough daily on average is 5 feet North American Vertical Datum (NAVD)[4] at the high tide elevation. As SLR is anticipated to increase, the high tide elevation will also increase, with the 2015 Goleta Slough SLR Plan anticipating 10 feet NAVD to be the expected future daily high water level within the Goleta Slough in the mid-term horizon.

The 15-foot NAVD in Table 9 is representative of the 100-year flood elevation at the upper end of the Goleta Slough near the creek mouths, and is estimated to represent the 1 in 100 year (or 1% annual chance exceedance) flood elevation due to fluvial flooding (Goleta Slough SLR Plan 2015). Overall, the Goleta Slough SLR Plan suggests that planning efforts should accommodate at least 5 feet of SLR and that the worst-case scenario of SLR occurring in the Goleta Slough may reach up to 15 feet NAVD during a 100-year flood event. However, the Goleta Slough SLR Plan indicates there is considerable uncertainty with respect to future management of the slough inlet, which is one of the primary drivers of water levels during storm events. Consequently, the Goleta Slough SLR Plan states, inlet management is an important adaptation strategy for management of slough water levels. The scientific research and analysis conducted in the 2015 Goleta Slough SLR Plan and the City CHVA Report serve as the best available guidance documents to help plan for future SLR scenarios at the Goleta Slough. Therefore, this approach is used in the flood and sea level rise discussions for project-specific impacts below.

Project-Specific Impacts

8.a) Would the project impact groundwater by:

i. Substantially depleting groundwater supplies or interfering substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby well would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

ii. Violating any groundwater quality standards/requirements or otherwise substantially degrading groundwater quality?

[4] The elevation estimates for the Goleta Slough uses the North American Vertical Datum of 1988 (NAVD 88) which is currently being replaced by the National and Oceanic and Atmospheric Administration (NOAA) National Geodetic Survey with Navigation Satellite Systems (GNSS) such as the Global Positioning System (GPS) as well as an updated and time-tracked geoid model. The NAVD 88 is biased (by about one-half meter) and tilted (about 1 meter coast to coast) relative to the best global geoid models available today. Both of these issues derive from the fact that NAVD 88 was defined primarily using terrestrial surveying techniques at passive geodetic survey marks not accounting for land movement over time (NOAA 2017).

The project obtains potable water through existing infrastructure at UCSB that originates from the Goleta Water District's supply. The Goleta Water District uses the Goleta Groundwater Basin as a reliable source of ongoing supply, primarily for drought and emergency situations. As of 2015, the District has approximately 48,000 acre-feet of water stored in the Goleta Groundwater Basin (Goleta Water District 2016). The new Administration Building would incorporate the Title 24 water efficient fixtures resulting in more efficient on-site water use by its employees. Since no additional jobs will be created on-site, water consumption and demand would not increase due to the project. Therefore, the project would not substantially deplete groundwater resources of the Goleta Water District. The Goleta Water District currently has seven on-site staff members, three of which work in the existing administration building and will be moved to the new Administration Building. No additional staff would be added on-site as a result of project implementation that would increase water consumption beyond existing demand.

The proposed project would increase the amount of permeable surfaces by 4% at the project site through the addition of permeable paving in the new parking areas and courtyard (see Table 1). All construction would take place within existing paved surfaces and driveways. Therefore, the proposed project would not substantially interfere with groundwater recharge, and would not result in a deficit in aquifer volume, or a lowering of the local groundwater level.

Operations of the proposed project would not involve any groundwater extraction and therefore, would not impact groundwater supplies or groundwater recharge. Overall, groundwater resources would remain unchanged as a result of the proposed project. Thus, *no impact* would occur to groundwater supplies or violation of groundwater quality.

8.b-d) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff? Substantially alter the existing drainage pattern of the site or area or substantially increase the rate or amount of surface runoff in a manner which would result in substantial erosion, siltation, or flooding on- or off-site? Violate any surface water quality standards/requirements or otherwise substantially degrade surface water quality?

The City and State require that on-site capture, retention, and treatment of storm water be incorporated into the design of the project. The proposed project is subject to the City's Storm Water Management Program (SWMP), which requires retention of post construction runoff to pre-construction levels and retention of water on the site. Pursuant to the City's SWMP and the National Discharge Elimination System (NPDES) General Permit for Storm Water Discharges, the City requires that any increase in storm water runoff (based on a 25-year storm event) be retained on-site and that projects be designed to capture and treat the calculated amount of runoff from the project site for a one-inch storm event, over a 24-hour period.

The existing site drains stormwater runoff generated on-site via storm drain inlets, which will continue to be collected in a wet well in the existing administration building/pump station #1, which is then pumped to the Goleta Sanitary District. The Goleta Sanitary District continually discharges treated wastewater in accordance with a NPDES permit issued by the CCRWQCB (Goleta Sanitary District 2016). There are no proposed changes to the existing drainage system as a result of the proposed project, and there is no existing or proposed drainage to the Goleta Slough. Thus, the project would not substantially alter the existing drainage pattern of the site or area or substantially increase the rate or amount of surface runoff in a manner which would result in substantial erosion, siltation, or flooding on- or off-site. There would be a slight decrease in impervious area as a result of the proposed project. Thus, impacts to runoff and drainage would be *less than significant*.

Additionally, the project would be designed to comply with the City's requirements for storm water runoff and the City's SWMP requirements and would be subject to standard conditions of approval, building codes, and federal and State regulatory programs that have been established to minimize impacts to water quality resulting from construction operations. The project site is located adjacent to the Goleta Slough, which is an impaired water under Section 303(d) of the federal CWA; however, impacts associated with drainage, storm water, and surface water quality are considered *less than significant* through implementation of the City's and CCRWQCB's existing drainage and water quality requirements.

8.e) Substantially alter a stream or river (either directly or indirectly through encroachment into buffer areas) in a manner which would result in substantial on- or off-site erosion, siltation, flooding, water quality degradation, or impacts to sensitive biological resources?

The proposed project would not alter the existing drainage patterns of any streams or rivers in the vicinity of the project site. Additionally, there would be no increase in impervious surface as a result of the proposed project (see Attachment E). Permeable surfaces at the project site would increase by 4% as a result of project implementation. Therefore, there would not be a substantial increase in the rate or amount of surface runoff. Impacts would be *less than significant*.

8.f) Expose people or structures to a significant risk of loss, injury or death involving flooding (including flooding as a result of the failure of a levee or dam), wave action, or surface water erosion?

The proposed project is adjacent to the Goleta Slough and is located in the 100-year flood zone (FEMA Zone AE). The existing District buildings have been constructed and in operation in the same lot since the 1950s without significant cases of historical flooding. However, the rising concerns of potential future SLR which would result in higher rates of flooding and the potential for the rising water levels to inundate coastal areas and structures including the project site.

The Goleta Slough SLR Plan Infrastructure Vulnerability Summary in Appendix F (pg. 33) suggests that it is not feasible for the District to stop sewer services or relocate its pump station in the short-term due to the high relative cost, estimated lead time, and difficulty identifying suitable locations that is limited by land ownership and/or easements (Goleta Slough SLR Plan 2015). The District provides critical wastewater services for the unincorporated community of Isla Vista and to the Western Goleta Valley. The administration building will ensure that managerial staff remains onsite to provide integral supervision to the District's operational staff and, in the event of an emergency, play critical roles in the implementation of the District's Operational and Emergency Response Plan.. Therefore, the proposed adaptation strategy to address the long-term impacts of SLR and climate change of protecting infrastructure in place from flood risk and SLR by engineering flood walls is a feasible, long-term solution up to a certain point. The proposed project as designed, would install an 8 inch thick, 3-foot-high concrete "flood wall" surrounding the new Administration Building. The risk to people and structures at the District due to flooding impacts lessened following completion of the proposed project with the new flood wall barrier and compliance with 2016 CBC (Title 24).

However, given latest scientific studies and data involving SLR and flooding around the project site, the three aforementioned plans indicate a potential SLR water levels at elevations in the Goleta Slough in the moderate, elevations of 10 to 15 feet NAVD high case scenarios by 2100.

The proposed building is located in a flood plain with a base flood elvation (BFE) of 13.7 feet and as proposed would have a finished floor elevation (FFE) of 12 feet. The building is proposed to be protected at the 12-foot FFE by an 8-inch thick, 3-foot-high flood wall that would raise the flood protective level to 15 feet NAVD to protect against future flood events to be in compliance with ASCE 24-05 Flood

Resistant Design and Construction Technical Bulletin 3-93 Non-Residential Floodproof Requirements and Certifications.

Under the anticipated daily SLR scenario of 10-feet NAVD through a 5-foot rise in water levels in the mid-term planning horizon, the proposed flood wall would protect the project up to five feet above the flood level. In the year 2100, which is beyond the 75-year effective life of the project, in the event water levels rise to 15 feet NAVD in the Goleta Slough, the new Administration Building's flood wall would just be sufficient to provide adequate protection.

Given the uncertainty of SLR and climate change predictions as demonstrated in the CHVA Report estimates in Table 8 above, future planning by the District will be necessary to ensure for SLR and extreme events do not impact its facilities consistent with the California Coastal Commission Sea Level Rise Policy Guidance. Appropriate planning would ensure that the District monitors and addresses SLR and extreme events through future vulnerability and adaptation planning efforts conducted at appropriate future benchmark years as needed to ensure the new Administration Building is fully protected during the expected 75-year building life at a minimum. SLR conditions at the District site should be reassessed during these years to plan for future needs. Although the currently planned 8-inch thick, 3-foot high flood wall would be feasibly designed to minimize and eliminate future flood risks associated with sea level rise for the new Administration Building, future potentially significant~~, *but mitigable*~~ impacts from flood events would be reduced to *less than significant with mitigation* (MM-HYD-1).

Implementation of this tiered approach to reassess at future benchmark years or as a needed basis with MM-HYD-1 would allow the project to comply with the SBA Draft EIR HYD-1/mm-1 requirement of analyzing improvement location and design in relation to projected future changes in sea level rise utilizing the best available science. Although the District's buildings and the proposed project cannot be feasibly relocated in the short-term, the District can proactively prepare to relocate, enhance, or modify structures if it is determined necessary in the future horizon by proactively assessing hazards associated with sea level rise and flooding.

8.g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

The project site currently does not contain any housing sites, and the proposed project would not place housing within the 100-year flood hazard area FEMA Zone AE (see Attachment E) for the base flood determination map). The District headquarters currently has a total of seven staff, three of which primarily work on-site daily during regular business hours and would transfer administrative work into the new Administration Building. Although the new structure would be placed in FEMA Zone AE, the project does not involve the placement of housing. As such, no impacts associated with flood housing hazards would occur. Additionally, the project as proposed includes an 8-inch thick, 3-foot-high concrete flood wall to protect against future potential flood events and projected SLR up to a 15-foot NAVD. Thus, impacts would be *less than significant.*

8.h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Per the City of Santa Barbara Community Development Department BFE Determination document (dated March 26, 2014) at 13.7 feet (NAVD88 datum), the project site lies within the 100-year FEMA Zone AE flood plain, with a portion of the northern end of the District headquarters site within the floodway (see Attachment E). The results of the Floodway Encroachment Analysis for the project site concluded there would be no rise in BFE due to the proposed project, and that all structures will be elevated or flood proofed to an elevation at or above the BFE determined by the City of Santa Barbara (Attachment E). As

such, the project will be designed to meet all applicable floodplain and floodway development requirements, and would not impede or redirect flood flows. Thus, impacts would be *less than significant.*

8.i) Expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow?

There are no levees or dams between the project site and the top of its watershed. Based on recent mapping information developed by California Emergency Management Agency (CalEMA), the project site is nearby but not located within the City's Potential Tsunami Run-Up area (CalEMA 2009). Therefore, because no levees or dams are within the vicinity of the project site and it is not located within a Tsunami Run-Up area, no impacts to people and property associated with a tsunami or the failure of an upstream levee and/or dam would occur. As such, impacts would be *less than significant*.

Mitigation

MM-HYD-1: Future Sea Level Rise and Flood Protection Assessment
Sea level rise conditions at the Goleta Slough as they relate to the new Administration Building project shall be reassessed by the Goleta West Sanitary District as new information becomes available to ensure proper sea level rise and flooding protection- is maintained for a minimum 75-year life of the project. Research and technologies using the best available science, studies, and building codes shall be used. The District shall continue to participate in inter-jurisdiction planning efforts related to the Goleta Slough and explore all feasible management options, including relocation, protect in place, dredging, levees, Goleta Slough mouth flood management or additional floodwalls or improvements.

Residual Impacts
Less than significant.

9. LAND USE AND PLANNING Would the project:	**Level of Significance**
a) Physically divide an established community?	No impact
b) Conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Less than significant

Land Use and Planning – Discussion

This Initial Study provides an analysis of environmental impacts, including land use compatibility, within the primary impact sections (i.e. noise, air quality, etc.). However, in instances where an impact does not rise to a level of significance, land use compatibility concerns may still exist due to adverse (less than significant) impacts.

Existing Setting
The District headquarters has been located and in operation at the project site since the mid-1950s. The Goleta Slough is located immediately north and east of the project site, with the SBA runway and terminal facilities further north and east. UCSB Parking Lot 32 and UCSB's Communication Services and Police Department facilities and County Fire Station 17 are located immediately west and southwest of the project site. To the south of the District southern driveway is an off-site riparian area and J Road, which intersects with Mesa Road, and a mix of UCSB Campus facilities including recreational sports fields. Additional UCSB Campus facilities and roadways are located further south and east from the project site. The project site is zoned as Airport Facilities (A-F) with a Special District 3 Coastal Overlay (S-D-3) and a Goleta Slough Natural Reserve General Plan land use designation under the City of Santa Barbara General Plan. The SBA Coastal Land Use Plan designates the site as Recreational Open Space.

Project-Specific Impacts

9.a) Physically divide an established community?

The proposed project does not involve a cross-town freeway, storm channel, utility transmission lines or any other improvements that have the potential to divide the community. The project would not close any existing bridges or roadways, and would remain connected to the existing street system. Additionally, the project does not have any features that would have the potential to create any physical barriers that would divide the community. As such, *no impact* would occur.

9.b) Conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

As discussed in Section 4. Biological Resources above, the project site is located within the existing 1.07-acre District Headquarters complex that is constructed on fill building pad at the edge of the Goleta Slough. Although construction would occur as close as 10 feet from wetland/riparian areas, the project construction would occur within the existing building pad and would not expand into wetland communities of the Goleta Slough south and east of the project site. Airport CLUP Policy C-4 requires that, to the maximum extent feasible, a buffer strip a minimum of 100 feet in width shall be maintained in a natural condition along the periphery of all wetland communities. While under current conditions, the buffer adjacent to the headquarters site is less than 100 feet wide, the project will maintain the existing buffer and would therefore not conflict with Policy C-4.

Existing land uses, which are not proposed to change as part of the project, are consistent with the existing land use and zoning designations for the property. The proposed project would require City of Santa Barbara approval of a Development Plan as required by the City's Nonresidential Growth Management Program (City Code Chapter 28.85) to allow development of a new addition in excess of 1,000 SF. The proposed project would occur on a portion of the SBA parcel (APN 073-450-003) and would result in an approximate 457 SF addition after demolition of the 1,353 SF garage and shop buildings and a credit of 1,488 SF for the net reduction in square footage resulting from the building improvements approved under MST2013-00379. The SBA parcel has already used its 1,000 SF small addition allocation. Therefore, the project would need to an allocation from the Airport Demolition Bank or to be designated as a Community Priority Project by City Council.

In addition, the proposed project is also located in the S-D-3 Coastal Overlay Zone. Compliance with the S-D-3 Overlay requires City approval of a coastal development permit prior to commencement of any development in the coastal zone. The proposed project complies with the applicable provisions of the S-D-3 Overlay as the project applicant is working in conjunction with the City Community Development Department to obtain a Coastal Development Permit.

With approval of the Development Plan and Coastal Development Plan the proposed project would be consistent with the applicable City land use plans and municipal code.
As detailed above in the Plans and Policy discussion, the City's zoning regulations require the project to provide parking spaces at a rate of 1 space/250 SF of office space. The proposed project is consistent with this provision (see Table 2 for existing and proposed parking data) and would provide for a total of 22 parking spaces to serve the office and industrial uses on the site.

Because the project site is located within the SBA AIA Review Area 1 – Height Restrictions, which is the FAA Part 77 height criteria of 200 feet above ground level. The project would be limited to one-story with a FFE of 12 feet AMSL at existing grade, and would not present a conflict to the FAA guidelines regarding height because it is below the FAA height criteria.

The proposed project would also be consistent with the goals and policies of the City General Plan and CLUP for the Airport and Goleta Slough (see Plans and Policy discussion). The City's Zoning Ordinance (Titles 28 and 29) addresses any short-term impacts from construction, such as hours of operation, noise, and glare. The project would be conditioned to comply with these regulations.

Based upon the above analysis and lack of conflict with applicable land use plans, policies, and regulations of the lead agency and other agencies with jurisdiction over the project, the proposed project would result in a *less than significant* impact related to conflicts with land use plans and policies.

Mitigation
None necessary.

Residual Impacts
Less than significant.

10. MINERAL RESOURCES Would the project result in:	**Level of Significance**
a) Result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state?	No impact
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	No impact

Mineral Resources – Discussion

Existing Setting
While the County of Santa Barbara has a history of producing oil and gas, no active wells or other mineral resources occur near the project site. The project site is not located in an area historically used for mineral resource extraction or as a mineral resource recovery site. The California Department of Conservation designates the project site area as MRZ-1 in Special Report 215, Aggregate Materials in the San Luis Obispo-Santa Barbara Production-Consumption Region, indicating that there is little likelihood for the presence of significant aggregate resources (DOC 2011).

Project-Specific Impacts
10.a) Result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state?

The City's General Plan and Zoning Ordinance do not designate the site as having mineral resources nor would they permit any mineral extraction on the project site due to its proximity to educational facility uses at UCSB and to the Goleta Slough Natural Reserve. Additionally, according to the Special Report 215, the project site is within an area designated as MRZ-1. This designation indicates it is an area "where available geologic information indicates that little likelihood exists for the presence of significant aggregate resources." Therefore, there would be *no impact* from the loss of known mineral resources.

10.b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

As discussed above in Section 10(a), there are no locally important mineral resource recovery sites in the project area. Construction for the new Administration Building would occur on existing developed land within the District's property boundaries, and there has been no historic use of mineral resource recovery at the project site. Thus, *no impact* would occur.

Mitigation
None necessary.

Residual Impacts
Less than significant.

11. NOISE Would the project result in:	**Level of Significance**
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less than significant
b) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	Less than significant
c) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	Less than significant
d) For a project located within the SBCAG Airport Land Use Plan, Airport Influence Area, would the project expose people residing or working in the project area to excessive noise levels?	Less than significant
e) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	Less than significant

Noise – Discussion

Existing Setting
Existing noise sources around the project site include automobiles passing by on J Road, Mesa Road, and in Parking Lot 32. Sirens from the adjacent UCSB Police Department and Fire Department vehicles and overhead flight noise from airplanes at the SBA are sources of occasional noise disturbances at the project site. Service vehicles used by the District which are housed on the project site and used daily also contribute to the ambient noise on the site. However, because the site is not located near any busy streets, the site's ambient noise level would generally be below 60 CNEL since the site is located just outside the 60/65 dB CNEL noise exposure range for the SBA.

Project-Specific Impacts
11.a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

The noise descriptors used in this analysis are the one-hour equivalent noise level (L_{eq}), the day-night equivalent level (L_{dn}), and the community noise equivalent level (CNEL). The L_{eq} is the level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound. The L_{dn} is also a 24-hour equivalent sound level that applies an additional 10 A-weighted decibels [dB(A)] to the sound levels occurring between 10:00 p.m. and 7:00 a.m. The CNEL is similar to the L_{dn}. It is a 24-hour equivalent sound level that applies an additional 5 dB(A) to the sound levels occurring between 7:00 p.m. and 10:00 p.m, and 10 dB(A) to the sound levels occurring between 10:00 p.m. and 7:00 a.m. Additionally, in technical terms, sound levels are described as either a "sound power level" or a "sound pressure level," which while commonly confused are two distinct characteristics of sound. Both share the same unit of measure, the decibel (dB). However, sound power, expressed as L_{pw}, is the energy converted into sound by the source. The L_{pw} is used to estimate how far a noise will travel and to predict the sound levels at various distances from the source. As sound energy travels through the air, it creates a sound wave that exerts pressure on receivers such as an eardrum or

microphone and is the sound pressure level. Noise measurement instruments only measure sound pressure, and noise level limits used in standards are generally sound pressure levels.

General Plan Noise/Land Use Compatibility

According to the City's ~~Environmental Resources~~Noise Element, the ~~maximum~~ normally acceptable exterior noise level for office building use is 75 dB(A) L_{dn} (City of Santa Barbara 2011). The project site is not located adjacent to major roadways that generate a substantial amount of noise. Additionally, the project is located outside the 60 dB(A) L_{dn} contour for the SBA. Exterior noise compatibility impacts would be less than significant. Standard light-frame construction provides a 20 dB exterior to interior noise reduction (Federal Highway Administration 2011). Because exterior noise levels would be less than 60 dB(A) L_{dn}, interior noise levels would be less than 40 dB(A) L_{dn}. Interior noise impacts would also be *less than significant*.

On-Site Generated Noise

The City of Santa Barbara Noise Ordinance (Municipal Code Chapter 9.16) regulates the production of noise from mechanical equipment, where such mechanical equipment noise would have the potential to affect residential land uses. As stated:

> 9.16.050 Regulation of Noise Affecting Parcels Zoned or Used for Residential Purposes
>
> C. Noise Limitations. All mechanical equipment other than vehicles shall be insulated and sound at the property line of any adjacent parcel used or zoned for residential, institutional or park purposes shall not exceed sixty A-weighted decibels using the Community Noise Equivalent Level (60 dB(A) CNEL). All wind machines are prohibited in the City. (Ord. 4878, 1994.)

The noise sources on the project site after completion of construction would be similar to the existing on-site noise sources. However, the new Administration Building would include rooftop mechanical ventilation equipment. The project would include a 5-ton and a 4-ton Carrier packaged heat pump (Model Numbers 50TCQ-06 and 50TCQ-05) and two Cook exhaust fans (Model number GC-124). Noise levels for the rooftop equipment were obtained from manufacturer specifications. The Carrier units would each generate a sound power level of 80 sound power level (L_{pw}) and the exhaust fans would each generate a sound power level of 50 L_{pw}.

Noise levels due to on-site sources were modeled using SoundPLAN. Noise levels were modeled at a series of 12 receivers located at the property boundary. The results are shown in Table 10. As shown, with all equipment operating continuously, maximum hourly noise levels would range from approximately 34 to 47 dB(A) L_{eq}. If the equipment were to operate 24-hours a day, these noise levels would be equivalent to CNEL levels ranging from 41 to 54 CNEL. However, there are no residential or sensitive receptors located in the vicinity of the project site. The nearest residential uses are located 1,500 feet to the south. Noise levels due to on-site mechanical equipment would not exceed 60 CNEL at any residential use. Noise impacts due to on-site generated noise would be *less than significant*.

Table 10 On-Site Generated Noise Levels	
Receiver	**Hourly Noise Level [dB(A) L_{eq}]**
1	47
2	45
3	42
4	39
5	34
6	41
7	40
8	38
9	39
10	39
11	36
12	41

11.b) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Existing administration uses will be transferred from the existing on-site administration building to the new structure. No expansion of operations or additional staff will be added on-site. Thus, the project would not add additional traffic to the roadway network. Therefore, there would be no impact associated with a permanent increase in vehicle traffic noise. On-site sources of noise would include rooftop mechanical ventilation equipment. However, the noise generated by the equipment would be similar to the existing noise generated on-site. Additionally, as discussed under 11.a above, noise levels would not exceed property line noise limits. Thus, impacts associated with a permanent increase in on-site generated noise would be *less than significant.*

11.c) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Ambient noise levels in the project vicinity may increase for a temporary period due to construction. Temporary construction activity noise is regulated pursuant to the limitations established in the Municipal Code for the protection of public health, safety, and welfare of sensitive receptors. Noise from construction equipment is required to comply with Section 9.16.015 of the City Municipal Code which states "It shall be unlawful for any person, between the hours of 8:00 p.m. of any day and 7:00 a.m. of the following day to erect, construct, demolish, excavate for, alter or repair any building or structure if the noise level created thereby is in excess of the ambient noise level by 5 dB(A) at the nearest property line of a property used for residential purposes unless a special permit therefor has been applied for and granted by the Chief of Building and Zoning."

The project would not include nighttime construction activities. Daytime project construction noise would be generated by diesel engine-driven construction equipment used for site preparation and grading, removal of existing structures and pavement, loading, unloading, and placing materials and paving. Also diesel engine-driven trucks would bring materials to the site and remove the soils from excavation. During excavating, grading, and paving operations, equipment moves to different locations and goes through varying load cycles, and there are breaks for the operators and for non-equipment tasks, such as measurement. Although maximum noise levels may be 85 to 90 dB(A) at a distance of 50 feet during the loudest construction activities (Federal Transit Administration 2006), hourly average noise levels from the grading phase of construction would be 82 dB(A) L_{eq} at 50 feet from the center of construction activity when assessing the loudest pieces of equipment working simultaneously. Construction noise is considered a point source and would attenuate at approximately 6 dB(A) for every doubling of distance.

There are no residential or sensitive receptors located in the vicinity of the project site. The nearest residential uses are located 1,500 feet to the south. Construction noise levels at this distance would attenuate to 52 dB(A) L_{eq}. Although residents may hear construction noise above ambient conditions, the exposure would be temporary. Because construction activities associated with the project would comply with the applicable regulation for construction, temporary increases in noise levels from construction activities would be *less than significant.*

11.d -e) For a project located within the SBCAG Airport Land Use Plan, Airport Influence Area, would the project expose people residing or working in the project area to excessive noise levels or excessive groundborne vibration or groundborne noise levels?

The SBA is one of four public-use airports located within Santa Barbara County and addressed within SBCAG's ALUP. Future noise contours at the Airport shown on Exhibit 6-1: Noise Compatibility Policy Map in the draft ALUCP show the project site to be located just outside the 60/65 dB CNEL noise exposure range. Therefore, implementation of the proposed project is not expected to expose people residing or working at the project site to excessive noise levels that are different from what currently occurs near the Airport. Therefore, impacts related to noise impacts within the Airport Influence Area would be *less than significant.*

Mitigation
None necessary.

Residual Impacts
Less than significant.

12. POPULATION AND HOUSING Would the project:	**Level of Significance**
a) Induce substantial population growth in an area, either directly or indirectly (e.g., through extension of roads or other infrastructure)?	No impact
b) Displace substantial numbers of existing housing, especially affordable housing, or people necessitating the construction of replacement housing elsewhere?	No impact

Population and Housing – Discussion

Existing Setting
The proposed project is located on land adjacent to jurisdictional boundaries. The project site is located on land owned by the City of Santa Barbara on the SBA property pursuant to an easement agreement. The majority of the land to the west and south is owned by the UCSB. The Goleta Slough Natural Reserve and the SBA are located north and east of the project site. The project site is relatively isolated from housing. The nearest apartment complex is the UCSB San Clemente Apartments located approximately 0.30 mile southwest from the project site.

Project-Specific Impacts
12.a) Induce substantial population growth in an area, either directly or indirectly (e.g., through extension of roads or other infrastructure)?

The project does not involve an increase in major public facilities such as extension of water or sewer lines or roads that would facilitate other growth in the area. The project under evaluation involves the demolition of the existing garage/shop building and construction of a new Administration Building at the District headquarters. No expansion of the District's operations is proposed. Additionally, the project

would not involve employment growth that would increase population and housing demand. Therefore, there would be *no impact* related to growth-inducing effects.

12.b) Displace substantial numbers of existing housing, especially affordable housing, or people necessitating the construction of replacement housing elsewhere?

The project does not involve any housing or housing displacement. Thus, *no impact* related to housing displacement would result from the project.

Mitigation
None necessary.

Residual Impact
No impact.

13. PUBLIC SERVICES AND UTILITIES Would the project:	**Level of Significance**
a) Exceed waste water treatment requirements of the applicable Regional Water Quality Control Board?	No impact
b) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	No impact
c) Require or result in the construction of new or expanded waste water treatment or collection facilities, the construction of which could cause significant environmental effects?	Less than significant
d) Result in a determination by the waste water treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Less than significant
e) Require or result in the construction of new or expanded water treatment or distribution facilities, the construction of which could cause significant environmental effects?	Less than significant
f) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	Less than significant
g) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	Less than significant
h) Comply with federal, state, and local statues and regulations related to solid waste?	No impact
i) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: i. Fire Protection? ii. Police Protection? iii. Schools? iv. Other Public Facilities?	No impact

Public Service and Utilities – Discussion

Issues: This section evaluates the project's effects on fire and police protection services, schools, road maintenance and other governmental services, utilities, including electric and natural gas, water and sewer service, and solid waste disposal.
Impact Evaluation Guidelines: The following may be identified as significant public services and facilities impacts:

- Creation of a substantial need for increased police department, fire department, road maintenance, or government services staff or equipment.
- Generation of substantial numbers of students exceeding public school capacity where schools have been designated as overcrowded.
- Inadequate water, sewage disposal, or utility facilities.
- Substantial increase in solid waste disposal to area sanitary landfills.

Existing Setting

Facilities and Services: The project site is located in an urban area where all public services are available. In 2010, the City certified a Final Environmental Impact Report (FEIR) on the Santa Barbara General Plan Update. The FEIR concluded that under the projected planned development and all studied alternatives, all public services could accommodate additional growth.

Solid Waste: Most of the waste generated in the City is transported on a daily basis to seven landfills located around the County. The County, which operates the landfills, has developed impact significance thresholds related to the impacts of development on remaining landfill capacity. The County thresholds are based on the projected average solid waste generation for Santa Barbara County from 1990-2005. The County assumes a 1.2% annual increase (approximately 4000 tons per year) in solid waste generation over the 15-year period. The County's threshold for project specific operational impacts to the solid waste system is 196 tons per year (this figure represents 5% of the expected average annual increase in solid waste generation [4000 tons per year]) for project operations. Source reduction, recycling, and composting can reduce a project's waste stream by as much as 50%. If a proposed project generates 196 or more tons per year after reduction and recycling efforts, impacts would be considered significant and unavoidable. Proposed projects with a project specific impact as identified above (196 tons per year or more) would also be considered cumulatively significant, as the project specific threshold of significance is based on a cumulative growth scenario. However, as landfill space is already extremely limited, any increase in solid waste of 1% or more of the expected average annual increase in solid waste generation (4000 tons per year), which equates to 40 tons per year, is considered an adverse cumulative impact.

The County adopted revised solid waste generation thresholds and guidelines in October 2008. According to the County's thresholds of significance, any construction, demolition or remodeling project of a commercial, industrial or residential development that is projected to create more than 350 tons of construction and demolition debris is considered to have a significant impact on solid waste generation. The County's 350-ton threshold has not been formally adopted by the City; however, it provides a useful method for calculating and analyzing construction waste generated by a project.

Wastewater Treatment
The District provides sewer service surrounding the project area to Isla Vista and the western Goleta Valley. Sewage travels along gravity fed collection sewers to a main trunk line. The trunk line terminates at the GWSD pump station located on the project site, at which the waste is transferred via a pressurized line running through the SBA property, to GSD's treatment plant located on William Moffet Place next to the SBA. Treatment of the wastewater collected by the District is provided through a contract with GSD. As provided in the City's General Plan FEIR (Section 3.12, Public Services and Utilities), the GSD

treatment plant has a capacity of 9.7 million gallons per day (based on average daily flow) but is currently limited to a permitted discharge of 7.64 million gallons per day. The District is allocated 40.78% of the capacity at the sewage treatment plant, which equates to about 3.12 million gallons per day (mgd). The District currently generates approximately 1.71 mgd of sewage that is treated at the GSD plant, resulting in about 1.41 mgd of remaining capacity in the District's existing system.

Water Facilities

The GWD is the water purveyor for the City of Goleta, UCSB, and surrounding areas. The District receives water from GWD through infrastructure at UCSB that extends to the headquarters site. The GWD service area is located in the southern portion of Santa Barbara County with its western border adjacent to the El Capitan State Park, its northern border along the foothills of the Santa Ynez Mountains and the Los Padres National Forest, the City of Santa Barbara to the east, and the Pacific Ocean to the south. The service area encompasses 29,000 acres and includes the City of Goleta, University of California, and the SBA (City of Santa Barbara property); the remainder of the service area is located in the unincorporated County of Santa Barbara. GWD provides water service to approximately 86,946 people through a distribution system that includes 270 miles of pipeline, as well as eight reservoirs ranging in individual capacity from 0.3 million gallons to over 6 million gallons, with a total combined capacity of 20.2 million gallons.

Drainage Facilities

Stormwater drainage on-site is captured via storm drain inlets, and currently drains to an on-site wet well in the existing Administration Building/pump station #1, which is pumped to the Goleta Sanitary District for treatment and release, which meets all treatment requirements (Attachment E).

Fire, Police, and Schools

The UCSB police department and County Fire Station 17 are located adjacent to the project site on Mesa Road. As Mesa Road is within UCSB jurisdiction and Los Carneros Road to the west is within Santa Barbara County jurisdiction, police and fire protection services are provided by the UCSB Police Department and the Santa Barbara County Fire Department. The Goleta Union School District is the nearest public school district located by the District, and the nearest public parks are located in Isla Vista southwest of the project site, including Peoples Park, Anisq'Oyo', Greek Park, and Pardall Gardens.

Project-Specific Impacts

13.a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Wastewater collected from the project site would be transferred from the District to GSD for treatment. GSD treats all wastewater to the requirements of the Regional Water Control Board in accordance with a NPDES permit issued by the CCRWQCB (GSD 2016). The District has more than adequate allocated capacity at GSD's treatment facility. Further, the project is not anticipated to result in an increase in wastewater since no increase in the number of employees or change in operations is proposed. Thus, *no impact* would occur.

13.b) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

The proposed project would not require or result in the construction of new permanent stormwater drainage facilities or the expansion of existing facilities. As described above, the project site's stormwater runoff generated on-site currently is captured via storm drain inlets and will continue to drain to a wet well in the existing administration building/pump station #1, which is then pumped to and treated at GSD's treatment plant. This treatment method meets all treatment requirements (Attachment E). There are no proposed changes to the stormwater drainage facilities and would be no increase in stormwater

discharge as a result of the project because the area of impervious surface would be slightly reduced by 4%. Therefore, *no impact* would occur.

13.c) Require or result in the construction of new or expanded waste water treatment or collection facilities, the construction of which could cause significant environmental effects?

The proposed project would not require or result in the construction of new permanent wastewater treatment facilities or the expansion of existing facilities. The District pumps to and receives wastewater treatment by GSD. No additional staff would be added to District operations as a result of the proposed project. Three District staff members would move work location from the existing administration building into the new Administration Building. The capacity of GSD would not be negatively affected as a result of the wastewater demands of the three existing staff. As such, wastewater demand would be similar to prior conditions in the existing administration building. Therefore, impacts would be *less than significant*.

13.d) Result in a determination by the waste water treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

GSD would provide treatment of wastewater and storm water pumped from the project site. The existing sewer main infrastructure is located at the District and would not require an extension. No additional staff would be added on-site as a result of construction of the new Administration Building and no operational changes would occur. Therefore, existing wastewater capacity demands would be similar to levels of the proposed project and would not significantly impair GSD's existing commitments. Additionally, the new Administration Building would be required to be built with the 2013 California Building and Plumbing Code standards to ensure modern efficiency standards. Thus, impacts would be *less than significant.*

13.e-f) Require or result in the construction of new or expanded water treatment or distribution facilities, the construction of which could cause significant environmental effects? Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

The project site currently receives water from the GWD. The project would replace the existing administrative facility on site with the construction of a new Administration Building. Three existing on-site staff members will move into the new Administration Building and the portion of the existing administration building occupied by staff will be used for storage. No increase in staff or change in operations would occur as a result of the project. The proposed 3,298 SF office building is estimated to demand approximately 0.18-acre-foot per year of water, based on the City's Water Demand Factor Update Report (City of Santa Barbara 2009). This estimated water demand for buildings at the project site would remain the same or decrease, considering that there would be no change in staffing or operations and that new water efficient fixtures and appliances would be installed in the new Administration Building.

Further, 1,641 SF of existing high and medium water use landscaping will be replaced by 884 SF of planters with low water plants in compliance with the City's Landscape Design Standards for Water Conservation. The proposed project would result in a decrease in irrigation water demand of 0.1 acre feet per year based on the California Department of Water Resources Model Water Efficient Landscape Ordinance calculator (http://www.water.ca.gov/wateruseefficiency/landscapeordinance/).

Given the installation of water efficient fixtures and the decrease on irrigation water demand, the project would not increase the water demand. Therefore, the existing water supply, water treatment, and distribution facilities would adequately serve the proposed project. No additional or expanded water supply would be necessary as a result of the proposed project as water use and demand would not increase

relative to existing conditions. The minimal change in water demand from the proposed project would constitute a *less than significant impact* to water supply, treatment, and distribution facilities.

13.g) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Long-Term (Operational): The proposed project is not anticipated to generate a substantial amount of solid waste disposal needs and would be served by the County Tajiguas Landfill. Three staff members would be transferred from the existing administration building on the headquarters site to the new Administration Building. No additional staff members would be added on-site and no operational changes would occur as a result of the project. As such, the solid waste disposal needs would be similar to the existing conditions. Based upon the County's solid waste thresholds for the annual generation rate in tons for an office, the proposed new Administration Building is estimated to generate 4 tons per year (TPY) of solid waste as follows: 3,217 SF x 0.0013 tons per SF = 4 TPY. Additionally, after application of source reduction, reuse, and recycling efforts, landfill disposal of solid waste would be reduced to 2 TPY. Considering this and the small scale operations of the District with three on-site staff in the new Administration Building, the proposed project would not generate or exceed the significance threshold of196 TPY of solid waste. Therefore, impacts would be *less than significant.*

Short-Term (Demolition and Construction). Based upon the County thresholds for construction-related waste, generation is estimated to be 108 tons prior to any recycling or diversion as follows: demolition of existing garage/shop buildings (100 pounds/SF x 1,353 SF = 68 tons) + construction of new Administration Building (25 pounds/SF x 3,217 SF = 40 tons). Total short-term solid waste after implementation of the City's Construction and Demolition Ordinance (SBMC Ch. 7.18) requirement to divert 75% of total construction waste would be approximately 27 tons. Because the proposed project would generate less than 350 tons of construction and demolition debris, the project would have a *less than significant* impact related to short-term solid waste.

13.h) Comply with federal, state, and local statues and regulations related to solid waste?

The project would comply with the City's garbage and refuse collection and demolition ordinance (Santa Barbara Municipal Code Chapter 7), which follows state regulations for solid waste and recycling. The project would comply with all applicable regulations related to solid waste. *No impact* would occur.

13.i) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i-ii. Fire and Police Protection
County Fire Station 17 and UCSB campus police station, located adjacent to the project site, would provide immediate first-response fire and police protection services for the project site. The City of Goleta and City of Santa Barbara would provide back-up emergency services for the District. As the existing administrative uses and offices will be moved to the new Administration Building, there would be no change in the service ratio as a result of the project as no additional staff members will be added on-site. As a result, existing police and fire service levels to the projects site would be adequate, and no new fire facilities would be required. Thus, *no impact* would occur in this regard.

iii. Schools?
The nearest public school district is the Goleta Union School District. The District is not served by a school district as it does not contain or propose any residential development. Thus, the project would not

necessitate the construction of new school facilities or create the need for new school facilities. As such, *no impact* would occur.

iv. Other Public Facilities?
The proposed project is not anticipated to create a substantially different demand on other public facilities, including parks, library services, or City buildings and facilities, than that anticipated in the City General Plan Update FEIR as no additional staff would be added on-site as a result of construction of the new Administration Building. The project would be served with existing connections to public services for gas, electricity, cable, and telephone traversing the site as well as access to existing roads. As such, *no impact* would occur.

Mitigation
None necessary.

Residual Impacts
Less than significant.

14. RECREATION Would the project:	**Level of Significance**
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	No impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	No impact
c) Would the project result in substantial loss or interference with existing park space or other public recreation facilities (such as hiking, cycling or horse trails)?	No impact

Recreation – Discussion

Issues: Recreational issues are associated with increased demand for recreational facilities, or loss or impacts to existing recreational facilities.

Impact Evaluation Guidelines: Recreation impacts may be significant if they result in:

- Substantial increase in demand for park and recreation facilities in an area under-served by existing public parks and recreation facilities.
- Substantial loss or interference with existing park space or other public recreational facilities such as hiking, cycling, or horse trails.

Existing Setting
There are no existing recreational facilities at the project site. UCSB recreational fields, including soccer, tennis, and baseball fields are located approximately 0.15 mile to the south. Additional UCSB recreational facilities, including pools and a gymnasium, are located approximately 0.25 mile to the southeast. The nearest neighborhood park is Peoples Park, located approximately 0.75 mile southwest from the project site in Isla Vista. Additional nearby public parks located in Isla Vista southwest of the project site include Anisq'Oyo', Greek Park, and Pardall Gardens.

Project-Specific Impacts

14.a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The project would not adversely affect existing neighborhood park facilities or create the need for new park facilities because the project consists of demolition of existing structures and construction of a new Administration Building on existing fill and would not include any residential component that could increase demand for parks. The project would not necessitate the need for construction of new parks and would not result in a substantial deterioration of existing parks. As a result, *no impact* would occur.

14.b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

See response to 14.(a). No recreational facilities are required or proposed as part of the project. As a result, *no impact* would occur from the construction or expansion of recreational facilities.

14.c) Would the project result in substantial loss or interference with existing park space or other public recreation facilities (such as hiking, cycling or horse trails)?

See response to 14.(a). The proposed project would not result in a loss of existing parks or interference with existing park space or other public recreational facilities. As such, *no impact* would occur.

Mitigation

None necessary.

Residual Impacts

No impact.

15. TRANSPORTATION/CIRCULATION Would the project:	**Level of Significance**
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	Less than significant
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	Less than significant
c) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	Less than significant
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?	Less than significant
e) Result in inadequate emergency access?	Less than significant
f) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	Less than significant

Transportation – Discussion

Issues: Transportation issues include traffic, access, circulation and safety. Vehicle, bicycle and pedestrian, and transit modes of transportation are all considered, as well as emergency vehicle access. The City General Plan Circulation Element contains policies addressing circulation and traffic in the City.

Impact Evaluation Guidelines: A proposed project may have a significant impact on traffic and circulation if it would:

Vehicle Traffic

- Cause an increase in traffic that is substantial in relation to the existing traffic load and street system capacity (see traffic thresholds below).
- Cause insufficiency in the transit system.
- Conflict with the Congestion Management Plan (CMP) or Circulation Element or other adopted plan or policy pertaining to vehicle or transit systems.

Circulation and Traffic Safety

- Create potential hazards due to addition of traffic to a roadway that has design features (e.g., narrow width, roadside ditches, sharp curves, poor sight distance, inadequate pavement structure) or that supports uses that would be incompatible with substantial increases in traffic.
- Diminish or reduce effectiveness, adequacy, or safety of pedestrian, bicycle, or public transit circulation.
- Result in inadequate emergency access on-site or to nearby uses.
- Conflict with regional and local plans, policies, or ordinances regarding the circulation system, including all modes of transportation (vehicle, pedestrian, bicycle, and public transportation).

Vehicle Traffic Thresholds of Significance: The City uses Levels of Service (LOS) "A" through "F" to describe operating conditions at signalized intersections in terms of volume-to-capacity (V/C) ratios, with LOS A (0.50-0.60 V/C) representing free flowing conditions and LOS F (0.90+ V/C) describing conditions of substantial delay. The City General Plan Circulation Element establishes the goal for City intersections to not exceed LOS C (0.70-0.80 V/C).\

For purposes of environmental assessment, LOS C at 0.77 V/C is the threshold Level of Service against which impacts are measured. An intersection is considered "impacted" if the volume to capacity ratio is 0.77 V/C or greater.

2016 Santa Barbara County Association of Governments Congestion Management Plan Thresholds of Significance: Auto level of service (LOS) is the traditional key measure of congestion on the Santa Barbara County Association of Government's Congestion Management Plan (CMP) network. State law requires that the CMP establish LOS standards for the CMP network system. The CMP determines baseline congestion levels and determines whether deficiency plans are required where facilities are operating below the LOS E threshold. The CMP includes LOS as a performance measure (SBCAG 2016). The CMP includes project size screening criteria and states that a project should be evaluated for potential impacts to the "off-site" CMP system if total trip generation exceeds 50 peak hour trips or 500 average daily trips. Examples of projects at this threshold would be a 50-lot single-family residential project or a 20,000 square-foot office building.

Existing Setting

Mesa Road is the main roadway used to access the project site at the intersection with J Road. Mesa Road is a two-lane roadway that extends west to east along the UCSB Campus with a speed limit of 25 miles per hour (mph). Stop signs located in front of the County Fire Station 17 and UCSB Police Department on Mesa Road, Stadium Road, and along the exiting ends of J Road control traffic around the surrounding area. The project site is accessed by entering J Road on the north side of Mesa Road, which curves to the northwest prior to entering UCSB Campus Parking Lot 32. The roadways are primarily flat, paved, with some gentle curves. The project site at the District headquarters is located immediately east of the parking lot. UCSB Campus Parking Lot 32 is primarily used for UCSB employees and for UCSB emergency vehicle parking. No visitor or student parking is allowed Monday to Friday between 7:30 a.m. and 5:00 p.m. Designated pedestrian walkways or bike paths are not located along Mesa Road or J Road. Seven District staff currently work on-site and must use the Mesa Road and J Road intersection to access the project site. Santa Barbara Metropolitan Transit District (MTD) bus routes that travel on Mesa Road and have stops near the project site include Lines 11, 15x, 24x.

Project-Specific Impacts

15.a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

In 2013, a traffic study for the San Joaquin Apartments and Precienct Improvements project on USCB found the nearby Mesa Road intersection with Los Carneros Road (located in the County) and the Stadium Road intersection with El Colegio Road (located on UCSB) both operating at LOS B (UCSB 2014). No expansion of operations or additional staff will be added on-site. The proposed project would not conflict with existing plans or policies described above under setting, including the SBCAG's Countywide CMP, City's General Plan Circulation Element, or the City's Coastal Land Use Plan: Airport and Goleta Slough, as the project would not generate additional trips. Existing administration uses with three managerial staff will be transferred from the existing on-site administration building to the new structure.

Project construction would be limited to within the District's property limits (see Figure 2) and would not affect or impact alternative modes of transportation in the circulation system. The project would generate short-term construction related traffic that would occur over the construction period (approximately 6 months) and would vary depending on the stage of construction. Given the small-scale of the project, in addition to the District headquarters isolated location away from major roadways and the short duration of the construction process that would result in less than 20 trips per day, short-term construction related impacts would be *less than significant.* Standard City conditions of approval would be applied, including restrictions on the hours permitted for construction trips outside of peak traffic hours, approval of routes for construction traffic, and designation of specific construction contracting and staging areas.

Overall, the new Administration Building is intended to provide the existing District staff with a modernized facility and workplace. The proposed project as designed complies with the City of Santa Barbara's parking requirement for 1 space per 250 SF for an office use with an allowed reduction to 90% of otherwise required parking for industrial and office complexes containing 10,000–30,000 SF of net floor area (Airport Zoning Ordinance, Chapter 29.90 and City Municipal Code, Chapter 28.90.100.D). Total parking at the headquarters site would comply with this requirement by providing 22 parking spaces for the office and industrial uses on the site and 4 bicycle parking spaces (see Table 2). As such, the proposed project encourages alternative modes of transportation and provides sufficient parking spaces consistent with existing plans and policies. Additionally, the project would not result in an increased

demand for parking as no additional staff will be added on-site and no change in operations is proposed. Thus, project impacts related to conflicts with an applicable plan or ordinance establishing the performance of the circulation system would be *less than significant.*

15.b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

In 2013, a traffic study for the San Joaquin Apartments and Precienct Improvements project on USCB found the nearby Mesa Road intersection with Los Carneros Road (located in the County) and the Stadium Road intersection with El Colegio Road (located on UCSB) both operating at LOS B,(UCSB 2014). No expansion of operations or additional staff will be added on-site. The proposed project would not conflict with existing plans or policies described above under setting, including the SBCAG's Countywide CMP, City's General Plan Circulation Element, or the City's Coastal Land Use Plan: Airport and Goleta Slough, as the project would not generate additional trips. Existing administration uses with three managerial staff will be transferred from the existing on-site administration building to the new structure.

Project construction would be limited to within the District's property limits (see Figure 2) and would not affect or impact alternative modes of transportation in the circulation system. The project would generate short-term construction related traffic that would occur over the construction period (approximately 6 months) and would vary depending on the stage of construction. Given the small-scale of the project, in addition to the District headquarters isolated location away from major roadways and the short duration of the construction process that would result in less than 20 trips per day, short-term construction related impacts would be *less than significant.* Standard City conditions of approval would be applied, including restrictions on the hours permitted for construction trips outside of peak traffic hours, approval of routes for construction traffic, and designation of specific construction contracting and staging areas.

Overall, the new Administration Building is intended to provide the existing District staff with a modernized facility and workplace. The proposed project as designed complies with the City of Santa Barbara's parking requirement for 1 space per 250 SF for an office use with an allowed reduction to 90% of otherwise required parking for industrial and office complexes containing 10,000–30,000 SF of net floor area (Airport Zoning Ordinance, Chapter 29.90 and City Municipal Code, Chapter 28.90.100.D). Total parking at the headquarters site would comply with this requirement by providing 22 parking spaces for the office and industrial uses on the site and 4 bicycle parking spaces (see Table 2). As such, the proposed project encourages alternative modes of transportation and provides sufficient parking spaces consistent with existing plans and policies. Additionally, the project would not result in an increased demand for parking as no additional staff will be added on-site and no change in operations is proposed. Thus, project impacts related to conflicts with an applicable plan or ordinance establishing the performance of the circulation system would be *less than significant.*

15.c-d) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? Or substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?

The design of the proposed project would not create or modify roadways and would not otherwise include any design feature or incompatible uses that would increase traffic hazards. The proposed project would improve the District's parking design and add bicycle parking spaces. Access to the project site would be provided via existing roadways through the intersection of J Road and Mesa Road. Mesa Road is flat and gently curving. J Road is flat and curves to the northwest for a short distance (approximately 0.04 mile) prior to extending straight and parallel to the project site. J Road is not a major roadway and is accessed

occasionally, primarily by staff working at the District and the adjacent small UCSB department facilities. Speed limits and a stop sign on J Road at its intersection with Mesa Road would ensure orderly safety conditions for motorists and construction vehicles.

The Santa Barbara MTD provides public bus and transit services along Mesa Road with stops located near the project site and on the UCSB campus. The proposed project would not impede or conflict with existing bus routes or interfere with pedestrian walkways or bike lanes, as the project site and immediate project vicinity is located off an established access road that connects to Mesa Road and there are no designated bike or pedestrian routes on Mesa Road or the access road. Vehicle traffic to the project site during construction would be minimal given the small size of the project and operation of the project would not impede the existing public transit, pedestrian and bicycle circulation along Mesa Road and J Road.

As described above, project construction staging would occur within the District's property limits (see Figure 2) and would not substantially conflict with surrounding UCSB facilities, roadways, and activities. Additionally, project construction traffic would be temporary and cease upon project completion. Applicable City standard conditions of approval would be applied to the proposed project. Bicycle parking is also incorporated into the project with four spaces, consistent with the City's Zoning Ordinance (Chapter 29.90). As such, the proposed project would not affect or conflict with existing alternative transportation plans, programs, or policies in SBCAG's Countywide CMP, the City's General Plan Circulation Element, or the City'sCoastal Land Use Plan: Airport and Goleta Slough. Therefore, impacts related to traffic safety hazards and conflicts with adopted plans related to performance, safety, or design hazards would be *less than significant*.

15.e) Result in inadequate emergency access?

Access to the project site is available off the intersection of Mesa Road and J Road. Both roads are two-lane roadways. Emergency access to the project site is available from these roadways and from the nearest traffic light intersection from south Los Carneros Road. The proposed project would not change existing access points along these perimeter roadways and construction vehicles would not be parked on these roadways.

The main access to County Fire Station 17 is from Mesa Road on the south side of the department building. This access will remain open as construction limits would be retained within the District's property boundaries. Construction of the new Administration Building would not interrupt access of emergency vehicles to and from County Fire Station 17. Modern construction management practices would be applied, and pedestrian access would be maintained during project construction. Any temporary closure or blockage of the east edge of UCSB Parking Lot 32 by the project would be coordinated with the contractor and would not affect UCSB operations. After construction of the proposed project, traffic conditions would be similar to their prior condition, as operations and the numbers of District staff would not change. No permanent impacts would occur. Impacts related to inadequate emergency access would be *less than significant.*

15.f) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The District headquarters is located within the SBCAG adopted ALUP AIA, with utilities identified as a compatible land use in the AIA within all Safety Capability Areas listed in Table 4-1 of the 1993 ALUP. A draft SBCAG ALUCP was released in 2012 and is intended to provide a comprehensive update to the 1993 ALUP. Although the ALUCP has not been adopted, the District headquarters and existing land use as a public utility service provider would remain consistent with the provisions in the draft 2012 ALCUP and adopted 1993 ALUP. The project would not introduce a new land use on the project site that would

generate large concentrations of people, generate changes to existing air traffic patterns, or impact access to SBA terminals. Given the proposed project's size, height, location and lack of diffusion of traffic affecting the roadways serving the SBA, there would be a *less than significant* impact related to safety risks.

Mitigation
None necessary.

Residual Impacts
Less than significant.

MANDATORY FINDINGS OF SIGNIFICANCE Would the project:	**Level of Significance**
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	Less than significant
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulative considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	Less than significant
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	Less than significant

Mandatory Findings of Significance – Checklist Judgements

a, b, and c. Less Than Significant Impact. The new Administration Building Project would increase the total building footprint of the District headquarters but would not expand the area in which development currently exists at the District site under the City's General Plan or Zoning Ordinance. Construction of the project would occur within existing developed and disturbed land on the District's headquarters, and therefore would not degrade the quality of the environment or habitat of a sensitive wildlife or plant species. The project does not have impacts that are cumulatively considerable and all additional minor renovations to other District buildings have been disclosed and/or proposed to the City and will attain proper permits at the appropriate time. The project would allow the District to move its administrative operations into a more modern and energy efficient building that would reduce the District's overall use of energy, water, stormwater, and wastewater at the site, thereby reducing the District operations impacts on these resources. The project does not include an increase in employment or an increase operational activity at the District headquarters complex and would not have an adverse indirect or direct effect on human beings. Based on the above information, the new Administration Building would result in less than significant impacts based on the Mandatory Findings of Significance checklist questions.

DETERMINATION AND PREPARERS

CALIFORNIA DEPARTMENT OF FISH AND GAME FEE DETERMINATION
(Fish and Game Code Section 711.4, Statutes of 2006 – SB 1535)

[ ] It is hereby found that this project involves no potential for any adverse effect, either individual or cumulatively, on wildlife resources and that a "Certificate of Fee Exemption" shall be prepared for this project.

[X] It is hereby found that this project could potentially impact wildlife, individually or cumulatively, and therefore, fees in accordance with Section 711.4(d) of the Fish and Game Code shall be paid to the County Clerk.

Patsy Stadelman Price, AICP
Project Manager
Goleta West Sanitary District

September 1, 2017
Date of Draft Report
October 31, 2017
Date of Final Report

Report Preparers

RECON Environmental, Inc., 5951 Encina Road, Suite 104, Goleta, CA 93117

ATTACHMENTS

A. Project Plans dated January 25, 2017

B. Biological Resources Report for the Goleta West Sanitary District Administration Building Project, Santa Barbara, California prepared by RECON Environmental, Inc. Dated April 2017.

B-1: Wetland Delineation Report for the Goleta West Sanitary District prepared by Rachel Tierney Consulting. Dated January 26, 2016.

C. Geotechnical Study, Proposed Administration Building Goleta West Sanitary District prepared by Fugro Consultants Inc. Dated April 2015.

C-1. Geotechnical Study Addendum 1, Proposed Administration Building Goleta West Sanitary District prepared by Fugro Consultants Inc. Dated April 2017.

D. California Emissions Estimator Model (CalEEMod) Output Sheets.

E. Drainage and Storm Water Quality Analysis. Goleta West Sanitary District Headquarters Improvements Project. Stantec. Dated June 2016.

F: County of Santa Barbara Air Pollution Control District (APCD) Recommended Project Conditions, Fugitive Dust Control Measures, and Diesel Particulate and NOx Emission Reduction Measures

G: Letters of Comment on the Draft Initial Study and Mitigated Negative Declaration and Responses

REFERENCES

California Air Pollution Control Officers Association (CAPCOA). 2017. California Emissions Estimator Model (CalEEMod). Version 2016.3.2. October.

California Air Resources Board (CARB). 2008. Climate Change Scoping Plan: December 2008. A Framework for Change. http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf.

California Department of Conservation (DOC). 2012 Farmland Mapping and Monitoring Program. Accessed March 2016. Available online at http://www.conservation.ca.gov/dlrp/fmmp.

California Department of Forestry and Fire Protection (CAL FIRE). 2008. Fire Hazard Severity Zones Maps. Accessed on February 11, 2016. Available online at: http://www.fire.ca.gov/fire_prevention/fhsz_maps_santabarbara.

California Department of Transportation (Caltrans). 2011. Scenic Highway Routes, Santa Barbara County. Accessed March 2016. Available online at http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm.

California Emergency Management Agency (CalEMA). 2009. Tsunami Inundation Map for Emergency Planning: Goleta Quadrangle. January 31, 2009. Available online at: http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Inundation_Maps/SantaBarbara /Documents/Tsunami_Inundation_Goleta_Quad_SantaBarbara.pdf

California State Water Resources Control Board. 2016. Geotracker. Accessed February 2016. Available online at http://geotracker.waterboards.ca.gov/.

City of Goleta. 2006. *General Plan/Coastal Land Use Plan.*

City of Goleta. 2015. Coastal Hazards Vulnerability Assessment and Fiscal Impact Report (November).

City of Santa Barbara. 1982. *Coastal Land Use Plan: Airport and Goleta Slough*. Available online at http://www.santabarbaraca.gov/civicax/filebank/blobdload.aspx?BlobID=16924.

City of Santa Barbara. 2009. Water Demand Factor Update Report. Accessed online at http://www.santabarbaraca.gov/civicax/filebank/blobdload.aspx?BlobID=34156.

City of Santa Barbara. 2009. Master Archaeological Resources Assessment.

City of Santa Barbara. 2011.General Plan Environmental Resources Element.

City of Santa Barbara. 2012. *Climate Action Plan*.

City of Santa Barbara. 2012. *Climate Action Plan. Appendix D.*

City of Santa Barbara. 2012. 3rd Draft Santa Barbara Airport Master Plan.

City of Santa Barbara. 2012. General Plan.

City of Santa Barbara Municipal Code

City of Santa Barbara. 2013a. Safety Element. Accessed online at http://www.santabarbaraca.gov/civicax/filebank/blobdload.aspx?BlobID=38671

City of Santa Barbara. 2013b. General Plan. Appendix J Safety Element Technical Background Report. Accessed online at http://www.santabarbaraca.gov/civicax/filebank/blobdload.aspx?BlobID=38673

City of Santa Barbara. 2010. Final Program EIR for the Santa Barbara General Plan Update.

County of Santa Barbara. 2009. Scenic Highway General Plan Element (adopted 1975, republished May 2009) http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/ScenicHwys.pdf.

County of Santa Barbara Air Pollution Control District. 2017. APCD Suggested Conditions on Goleta West Sanitary District New Administration Building. October 2, 2017.

Denlinger, Greg. Personal Communication. Fugro Consultants, Inc. March 1, 2016.

Federal Transit Administration (FTA). 2006. Transit Noise and Vibration Impact Assessment. Office of Planning and Environment. FTA-VA-90-1003-06.

Federal Highway Administration (FWHA). 2011. Highway Traffic Noise: Analysis and Abatement Guidance. Goltea Slough Management Committee (GSMC). Committee. Accessed February 2016 online at http://www.goletaslough.org/committee/mission/.

Goleta Sanitary District. 2016. Wastewater Treatment. Accessed March 1, 2016. Available online at: http://www.goletasanitary.org/wwtreat.htm.

Goleta Slough Management Committee (GSMC). 2015. *2015 Goleta Slough Management Plan*. Accessed online at http://www.goletaslough.org/committee/2016-goleta-slough-management-plan/.

Goleta Water District. 2016. Groundwater. Accessed March 2016 Available online at: http://www.goletawater.com/water-supply/groundwater/.

National Oceanic and Atmospheric Administration, 2017. Accessed March 2017. Available online at: https://www.ngs.noaa.gov/datums/newdatums/FAQNewDatums.shtml#WHYSanta Barbara County Association of Governments (September 2012). Draft Santa Barbara County Airport Compatibility Land Use Plan

Stantec. 2016. Goleta West Sanitary District New Administration Building: Earthwork Calculations Memo.

State of California. 2012. State Water Resources Control Board, Impaired Water Bodies. http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml

Tierney, Rachel. Goleta West Sanitary District Biological Assessment. January 26, 2016.

U.S. Environmental Protection Agency (U.S. EPA). 2012. Monitoring, Assessment and TMDLs: California. Accessed online at https://www.epa.gov/tmdl/monitoring-assessment-and-tmdls-california#303.

University of California, Santa Barbara 2014, San Joaquin Apartments and Precinct Improvements Project EIR. Accessed online at http://www.facilities.ucsb.edu/files/docs/5.8%20Transportation%20and%20Traffic.pdf

ATTACHMENTS

ATTACHMENT A

Project Plans

Goleta West Sanitary District
New Administration Building

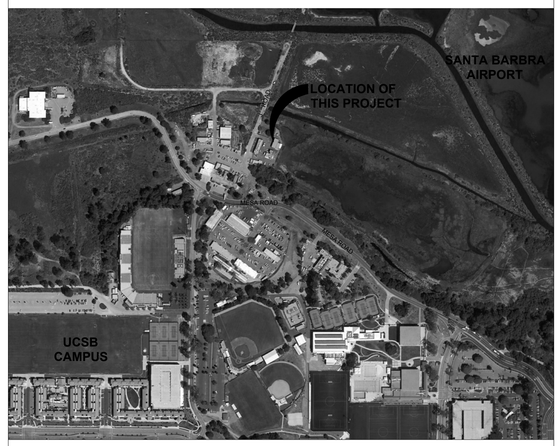
UCSB Campus Parking Lot 32
Santa Barbara, CA 93106

Architectural Board of Review
Submittal 07-03-17

Plot Date: 2/23/2017 12:41:11 PM

SHEET INDEX

VICINITY MAP



GOLETA WEST SANITARY DISTRICT

Your environmental partner since 1954

UCSB Campus
Parking Lot 32
Santa Barbara, CA 93106
(p) 805 968-2617 (f) 805 562-8987

GWSD SITE

EDUARDO GALINDO
ARCHITECT
EGA
galindoarchitecture.com
[illegible]
[illegible]

ISSUED	REV	DATE
DART Submittal		15 May 2015
Site Development Plan 1		23 June 2015
30% Schematic Design		30 Oct. 2015
Pre-App & Architectural Board of Review Submittal		23 Apr. 2016
Architectural Board of Review Submittal		25 Jan. 2017
Architectural Board of Review Submittal		03 July 2017

NOT FOR CONSTRUCTION

DRAWING
COVER SHEET

SCALE
40903

PROJECT NUMBER
A-A000

DRAWING NUMBER

LEGEND & ABBREVIATIONS

AC = ASPHALT CONCRETE
AD = AREA DRAIN
BLDG = BUILDING
BFR = BACK FLOW REGULATOR
BOTM = BOTTOM
CA = COMPRESSED AIR
CS = CHLORINE SOLUTION
CHLF = CHAIN LINK FENCE
CNC = CONCRETE
CVLT = CABLE TV VAULT
DBL = DOUBLE (ie: TREE TRUNK)
DEC = DECIDUOUS
DI = DROP INLET
ECP = ELECTRIC CONTROL PANEL
ELEC = ELECTRIC
ELPB = ELECTRIC PULL BOX
EMH = ELECTRIC MANHOLE
EMT = ELECTRIC METER
EP = EDGE OF PAVEMENT
EVLT = ELECTRIC VAULT
FF = FINISHED FLOOR ELEVATION
FH = FIRE HYDRANT
FLGP = FLAG POLE
FS = FIRE SERVICE
GEN = GENERATOR
GMT = GAS METER
GRND = GROUND
GV = GAS VALVE
GWSD = GOLETA WEST SANITARY DISTRICT
HB = HOSE BIB
HDG = HEDGE
HDRL = HAND RAIL
ICV = IRRIGATION CONTROL VALVE
IW = INDUSTRIAL WATER
LADR = LADDER
LSTD = LIGHT STANDARD
MBD = METAL BOLLARD
MTL = METAL
MW = MONITOR WELL
PP = POWER POLE
PRKG = PARKING
RFDN = ROOF DRAIN
ROH = ROOF OVERHANG
SCO = SEWER CLEANOUT
SMH = SEWER MAN HOLE
SN = SIGN
SWK = SIDEWALK
SWL = SWALE
SWS = SINGLE WHITE STRIPE
TFMR = TRANSFORMER (ELECTRIC)
THLD = THRESHOLD
TVLT = TELEPHONE VAULT
UBOX = UTILITY BOX
UGE = UNDERGROUND ELECTRIC LINE
UTIL = UTILITY
UVLT = UNDETERMINED UTILITY VAULT
VERT = VERTICAL
w/ = WITH
WM = WATER METER
WV = WATER VALVE

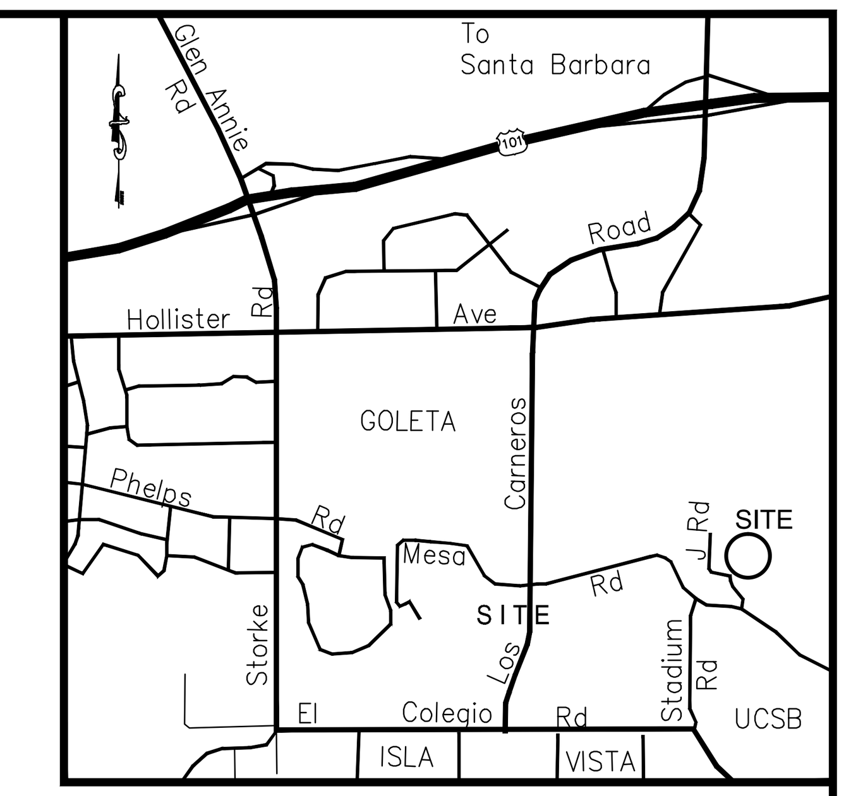
[grey box] = AC

[dotted box] = CNC

(1) = 10' WIDE EASEMENT IN FAVOR OF ISLA VISTA SANITARY DISTRICT FOR SANITARY SEWER PURPOSES PER 1865–OR–371

(2) = 10' WIDE EASEMENT IN FAVOR OF ISLA VISTA SANITARY DISTRICT FOR SANITARY SEWER PURPOSES PER 2218–OR–878

(3) = 10' WIDE EASEMENT IN FAVOR OF ISLA VISTA SANITARY DISTRICT FOR SANITARY SEWER PURPOSES PER 2017–OR–625 AND 2019–OR–639



VICINITY MAP
NO SCALE

ATTENTION:

ALL UNDERGROUND UTILITIES AND SUBSTRUCTURES SHOWN HEREON WERE OBTAINED FROM THE BEST AVAILABLE SOURCES AND ARE PRESUMED TO BE ACCURATE AND COMPLETE, BUT SINCE THE INFORMATION WAS OBTAINED FROM OTHERS, THE OFFICE OF MNS ENGINEERS, INC. CANNOT GUARANTEE SAID INFORMATION AS BEING ACCURATE AND COMPLETE. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO VERIFY, LOCATE, AND PROTECT ALL UTILITIES AND SUBSTRUCTURES SHOWN OR NOT SHOWN.

CALL UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA
TOLL FREE AT 1–800–422–4133 TWO WORKING DAYS BEFORE YOU DIG

SV-01

REV	DATE	BY

MNS ENGINEERS INC
201 N. Calle Cesar Chavez, Ste 300
Santa Barbara, CA 93103
805.692.6921 Phone
ENGINEERING
PLANNING
SURVEYING
CONSTRUCTION MANAGEMENT

HORIZONTAL DATUM: CCS83, 1991.35 EPOCH
CONTROL: STATIONS 2000 AND 2001 PER RS BOOK 170, PAGE 48 REOCRDS OF SANTA BARBARA COUNTY.
VERTICAL DATUM: NAVD88
CONTROL: NGS MONUMENT EW3791, ELE: 62.827 (U.S. SURVEY FEET)

PROFESSIONAL LAND SURVEYOR — Mark E. Reinhardt — PLS No. 6392 — STATE OF CALIFORNIA

November 2013

Mark E. Reinhardt, PLS 6392

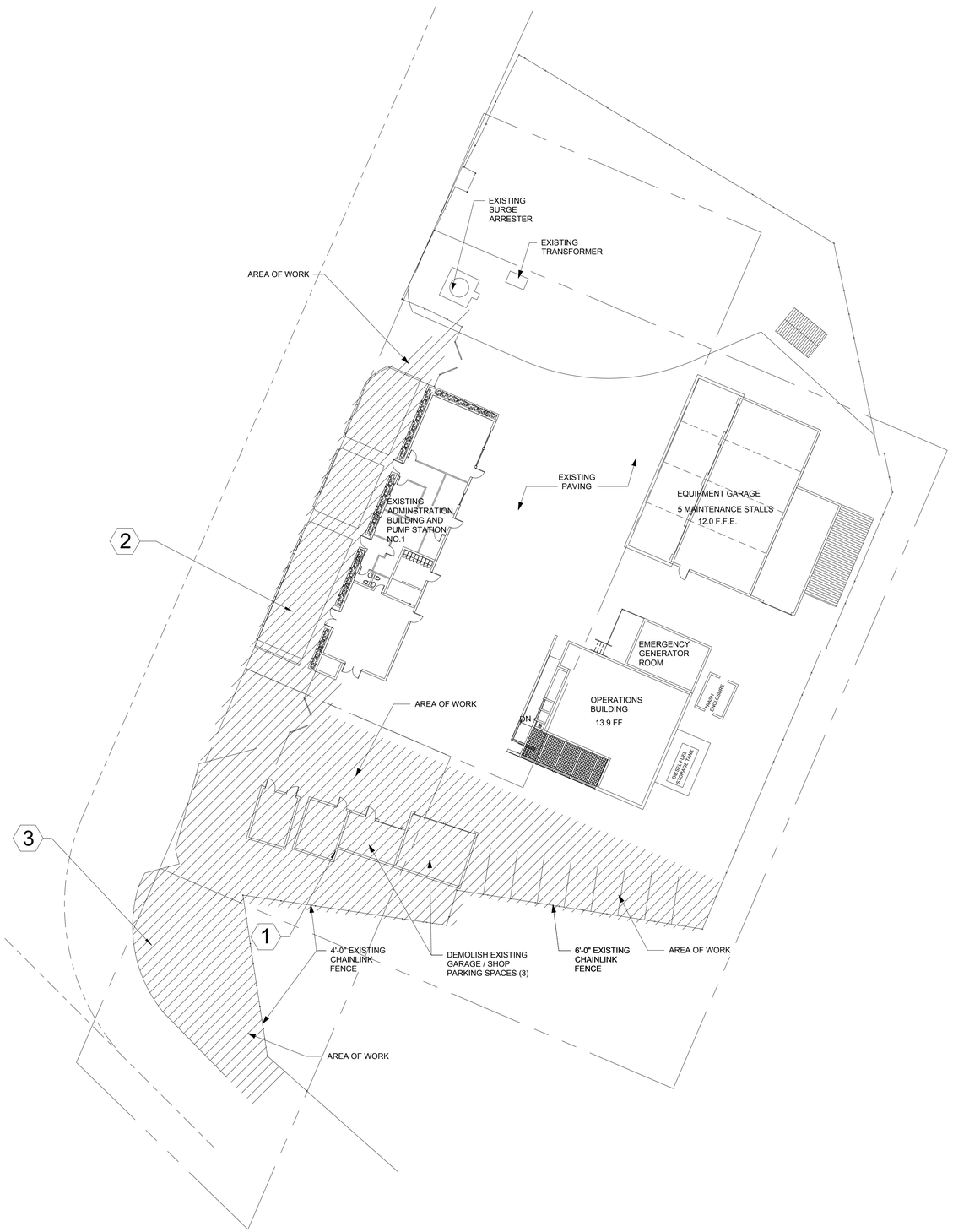
Goleta West Sanitary District

TOPOGRAPHIC MAP FOR NEW ADMINISTRATION BUILDING

1" = 20'
0 20 40 60 80

PROJECT NO.
GOWSD.131303

SHEET 1 OF 1



1 DEMOLITION SITE PLAN
1" = 20'-0"

1. IN PREPARATION FOR NEW ADMINISTRATION BUILDING, DEMOLISH AND REMOVE EXISTING SHOPS AND GARAGES.
REMOVE PAVING AND INFRASTRUCTURE PER CIVIL.

2. DEMOLISH AND REMOVE EXISTING LANDSCAPE AND WALKWAYS WEST OF PUMP STATION NUMBER 1 IN PREPARATION FOR NEW PARKING SPACES.

3. REMOVE EXISTING PAVING IN PREPARATION FOR NEW PAVING, ROLLED CURB AND LANDSCAPING. PER CIVIL AND LANDSCAPING PLANS

PROJECT ADDRESS

UCSB, PARKING LOT 32, Santa Barbra CA 93106

SCOPE OF WORK

Project Description: Existing garage and operations staff structures along south property line to be demolished. New 3,298 s.f. building to encompass Administrative offices, Public Lobby, Board Room, restrooms and office support spaces to be constructed. New 1,520 s.f. courtyard with landscaping to be located immediately south of the new building.

ZONING

CITY OF SANTA BARBARA:
AIRPORT FACILITIES (A-F) ZONE
PARCEL NUMBER: 073-450-003
LAND USE: GOLETA SLOUGH NATURAL RESERVE

SPECIAL FLOOD HAZARD AREA

BASE FLOOD ELEVATION: 13.7 NAVD 1988 DATUM

CONTACTS

PROPERTY:	CITY OF SANTA BARBARA (AIRPORT)
OWNER:	GOLETA WEST SANITARY DISTRICT P.O. BOX 4 GOLETA, CA 93116 contact: MARK NATION p:(805)968.2617
ARCHITECT:	EGA 4448 E. SLEEPY RANCH ROAD CAVE CREEK, AZ 85331 contact: ED GALINDO (480)751.8787

LOT COVERAGE DATA *

Statistics for Administration Building Plans

Lot Coverage Data

	Existing s.f.	Existing %	Proposed s.f.	Proposed %
Building Footprints				
Existing Administration & PS#1 Building	2,376	5%	2,376	5%
Equipment Garage*	2,400	5%	2,400	5%
with addition under separate permit	-	0%	900	2%
Operations Building*	2,134	5%	2,134	5%
with renovation and increase in footprint under separate permit	-	0%	536	1%
Garage/Shop	1,353	3%	-	0%
New Administration Building	-	0%	3,298	7%
Impermeable Surfaces/Paving	25,202	54%	19,932	43%
Permeable Surfaces/Landscaping/Permeable Paving	13,198	28%	15,087	32%
Total Lot Area**	46,663	100%	46,663	100%

*Existing square footage includes addition to Equipment Garage and renovation of Operations Building approved per MST2013-00379.

**Lot area defined by fence.

Parking Calculations

	Proposed Sq. Ft.	Parking Required
Office Uses @ 1/250 sf		
New Administration Building	3298	
Subtotal	3298	13
Industrial Uses @ 1/500 sf		
Former Administration/PS #1 Building		
Pump Station #1	656	
Electrical Room	188	
Storage (Future garage)*	1532	
Operations Building		
Generator Room	411	
Staff Area	1498	
Subtotal	4285	9
Total Parking Required:**		22
Total Parking Proposed:		22 (5 covered, 17 uncovered)

*Approximately 1344 sf of former administration building will be converted to garage/parking spaces under separate permit following completion of new administration building.

**Includes reduction to 90% of required parking for industrial and office complexes containing 10,000-30,000 square feet of net floor area per Santa Barbara Municipal Code §28.90.100.D.

* LOT DEFINED BY EXISTING FENCE LINE.

GOLETA WEST SANITARY DISTRICT

Your environmental partner since 1954

UCSB Campus
Parking Lot 32
Santa Barbara, CA 93106
(p) 805 968-2617 (f) 805 562-8987

GWSD SITE

EDUARDO GALINDO ARCHITECT EGA
galindoarchitecture.com
4448 E. SLEEPY RANCH ROAD
CAVE CREEK, ARIZONA 85331
contact@egadesign.net

ISSUED	REV	DATE
DART Submittal		15 May 2015
Site Development Plan 1		23 June 2015
30% Schematic Design		30 Oct. 2015
Pre-App & Architectural Board of Review Submittal		23 Apr. 2016
Architectural Board of Review Submittal		25 Jan. 2017
Architectural Board of Review Submittal		03 July 2017

NOT FOR CONSTRUCTION

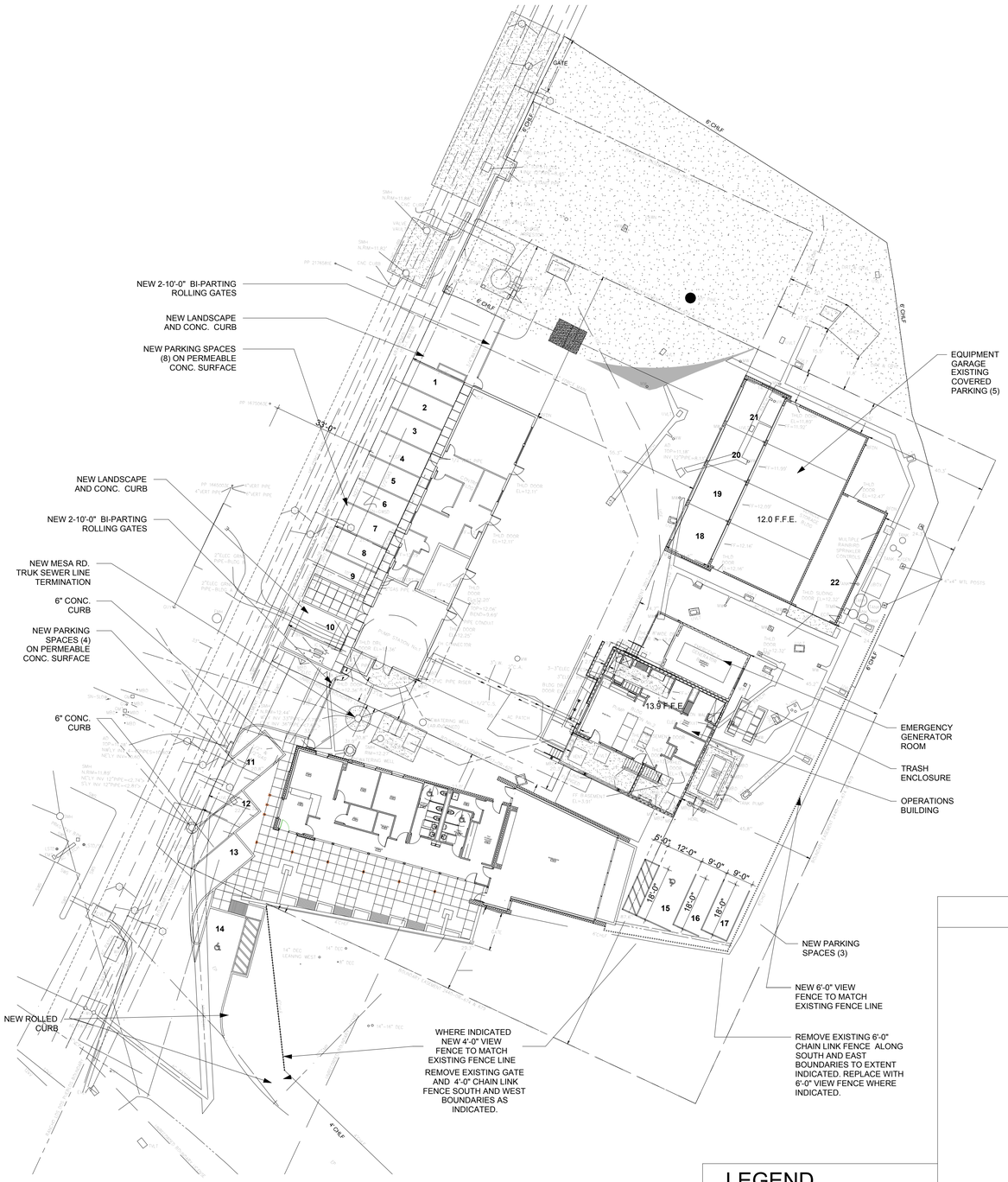
DRAWING
DEMOLITION PLAN AND SITE PLAN ANALYSIS

SCALE 1" = 20'-0"

PROJECT NUMBER 40903

DRAWING NUMBER **SA-D100**

Plot Date: 2/23/2017 12:33:31 PM



1 SITE PLAN
1" = 20'-0"

0' 2'6" 5' 10' 20'

NORTH

LEGEND

- PROPERTY BOUNDARY
- PROJECT BOUNDARY
- VIEW FENCE
- CHAINLINK FENCE
- PAVING
- PERMEABLE

CODE SUMMARY

Client: Goleta West Sanitary District
Date: January, 2017

Project: Administration Building
Location: Santa Barbara, CA

Project No.: 40903
Architect: EGA/ Eduardo Galindo

Project Description:
Existing garage and operations staff structures along south property line to be demolished and replaced with new, 3,298 SF single-story, Administration Building. New building to encompass public service lobby, Board Room, administrative offices, and office support spaces.

GOVERNING AUTHORITIES: City of Santa Barbara, CA

A. Building Department: City of Santa Barbara, CA

B. Fire District/ Department: City of Santa Barbara, CA

1. **APPLICABLE ORDINANCES, CODES, STANDARDS**

A.	**Planning and Zoning:**	City of Santa Barbara, CA Municipal Code
B.	**Building Code:**	2016 California Building Code, California Code of Regulations Title 24, Part 2, Volume 1 and 2
C.	**Mechanical Code:**	2016 California Mechanical Code Title 24, Part 4
D.	**Plumbing Code:**	2016 California Plumbing Code Title 24, Part 5
E.	**Electrical Code:**	2016 California Electric Code Title 24, Part 3
F.	**Energy Code:**	2016 California Energy Code Title 24, Part 6
G.	**Fire Code:**	2016 California Fire Code Title 24, Part 9
H.	**Green Building Standards:**	2016 California Green Building Standards Code Title 24, Part 11
I.	**Accessibility:**	2016 California Building Code, Title 24, Part 2, Volume 1, Chapter 11B ANSI A117.1-09

2. **KEY DETERMINATIONS**

A. Use Group: **Business Group B**
Section 304.1
Section 303.1.2

Small assembly spaces
A space used for assembly purposes with an occupant load of less than 50 persons shall be classified as a Group B occupancy.

B. Type of Construction: **Type VB**
Section 602.5

C. Fire Protection:
Santa Barbara Municipal Code
Title 8, Fire Protection, Chapter 8.04.020 Amendments to California Fire Code
Section 903.2.20, Local Requirements
Approved automatic sprinkler systems shall be installed throughout buildings and structures as specified…
Section 903.2.20.1, New Buildings
The construction of a new building containing… Occupancy (Group) B

D. Fire-Resistance Rating Requirements:
Table 601 — Building Elements (Type VB) — Hours
Structural Frame
Including columns, girders, trusses **0**
Bearing Walls - Exterior **0**
- Interior **0**
Non-bearing walls and partitions
- Exterior **0**
- Interior **0**
Floor construction **0**
Roofs construction and associated secondary members **0**

E. Fire-Resistance Rating Requirements Based on Fire Separation Distance: 0
Table 602

Fire Separation Distance	10 ≤ X ≤ 30
Type of Construction	VB
Occupancy	B

F. Allowable Building Height, Feet Above Grade Plane: **60'**
Table 504.3

Occupancy	B
Type of Construction	VB
Sprinklered	

G. Allowable Number of Stories Above Grade Plane: **3**
Table 504.4

Occupancy	B
Type of Construction	VB
Sprinklered	

H. Occupant Load **3,298 SF** **33**
Table 1004.1.2

Business Areas	100 gross

I. Means of Egress
Section 1005.3.2 — Required Egress Width — **79"**
Table 1017.2 — Exit Access Travel Distance — Sprinklered — **300'**

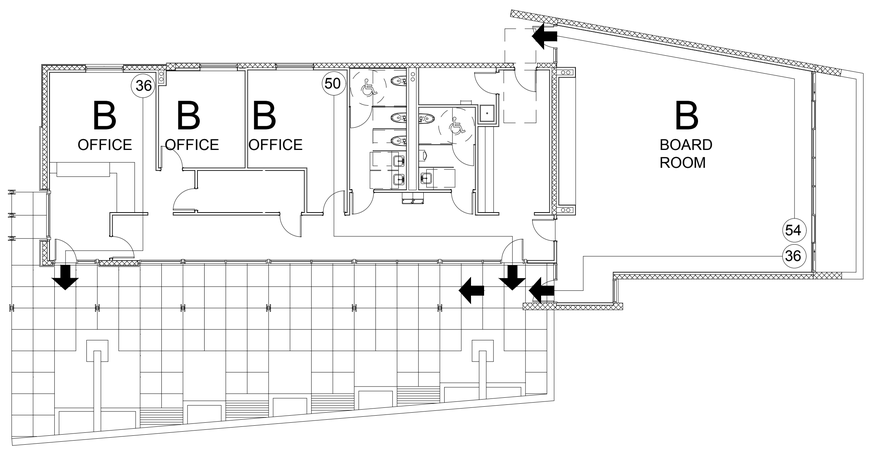
J. Other Considerations:
Base Flood Elevation (BFE):
13.7' AMSL
Building is in designated Flood Plain
Finished Floor Elevation (FFE) is 12.0' AMSL
Building Addition will be, designed, in compliance with:
- ASCE 24-05 *Flood Resistant Design*
- Technical Bulletin 3-93 *Non-Residential Floodproofing-Requirements and Certifications*

Required Fire Hydrant:
Section 507.5.1 A commercial hydrant to Santa Barbara City standards must be located within 300 feet of all portions of a facility or building as measured by an approved route around the exterior of the facility or building.

LIFE SAFETY PLAN LEGEND

- EXIT ACCESS
- PATH OF TRAVEL
- TRAVEL DISTANCE (FEET)
- COMMON PATH OF TRAVEL (FEET)

CODE - EXIT DIAGRAM



2 CODE PLAN
1" = 10'-0"

NORTH

GOLETA WEST SANITARY DISTRICT
Your environmental partner since 1954

UCSB Campus
Parking Lot 32
Santa Barbara, CA 93106
(p) 805 968-2617 (f) 805 562-8987

GWSD SITE

EDUARDO GALINDO ARCHITECT
AIA, CSI, CDT, LEED AP BD+C
EGA
4448 E. SLEEPY RANCH ROAD
CAVE CREEK, ARIZONA 85331
480.751.8780 ed@egadesign.net
egadesign.net

ISSUED	REV	DATE
DART Submittal		15 May 2015
Site Development Plan 1		23 June 2015
30% Schematic Design		30 Oct. 2015
Pre-App & Architectural Board of Review Submittal		23 Apr. 2016
Architectural Board of Review Submittal		25 Jan. 2017
Architectural Board of Review Submittal		03 July 2017

NOT FOR CONSTRUCTION

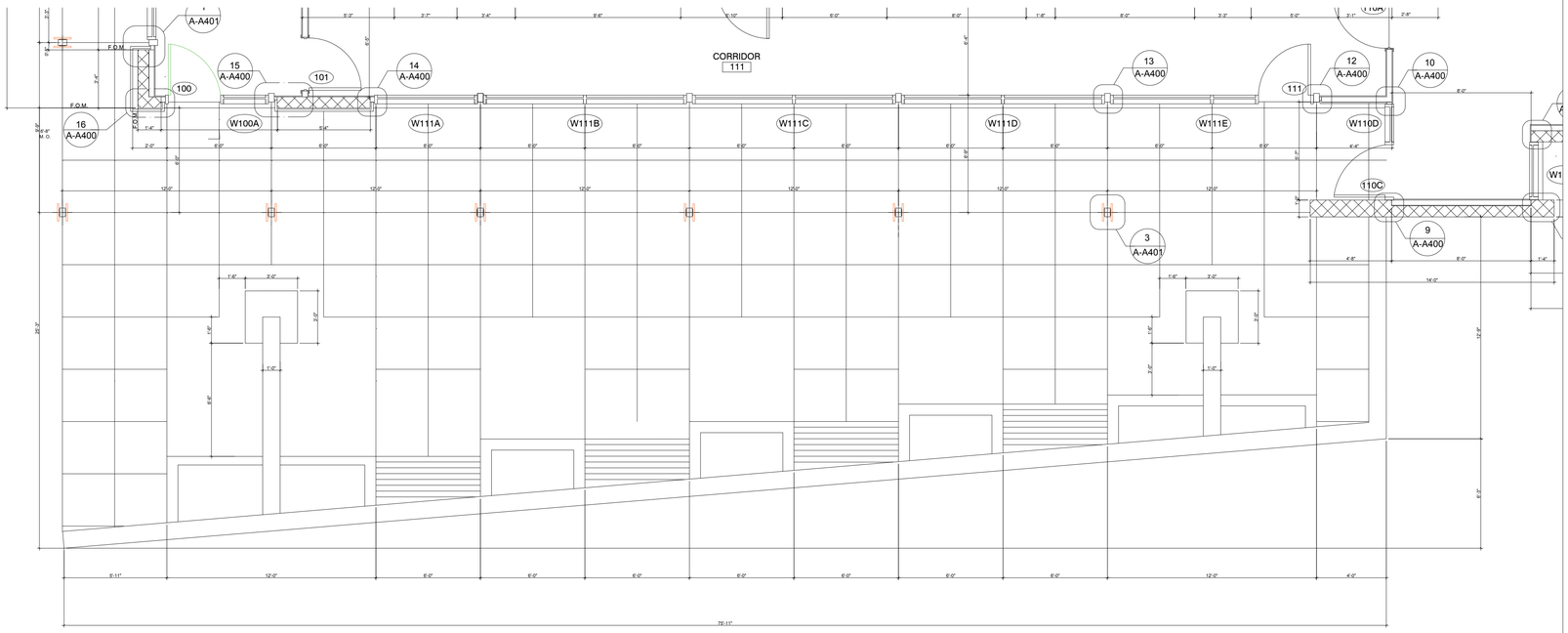
DRAWING
NEW SITE PLAN CONFIGURATION AND CODE SUMMARY

SCALE
As indicated

PROJECT NUMBER
40903

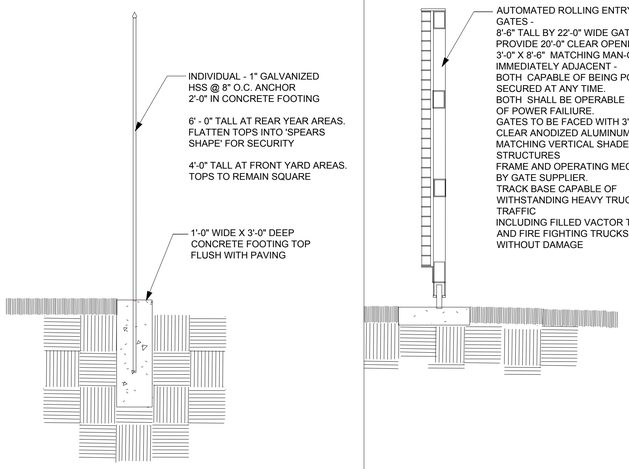
DRAWING NUMBER
SA-A100

Plot Date: 2/23/2017 12:35:07 PM



3 COURTYARD-FLOOR PLAN

1/4" = 1'-0"

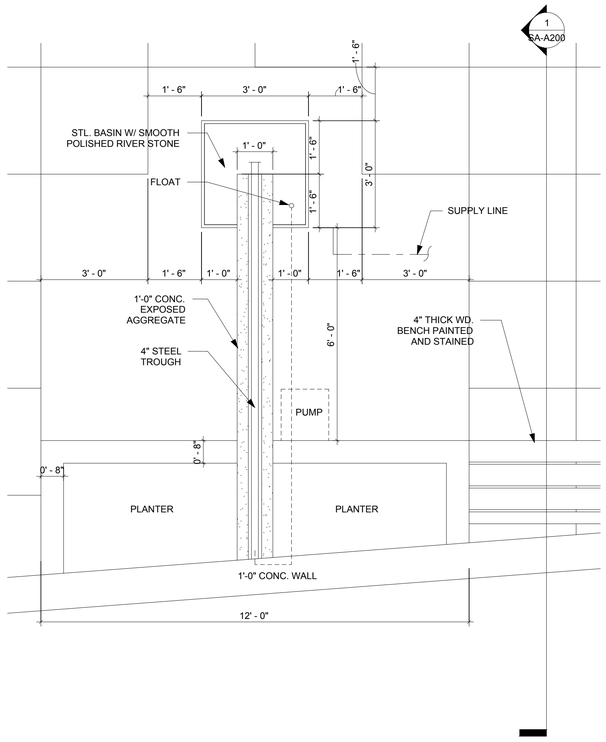


5 VIEW FENCE - SECTION

1 1/2" = 1'-0"

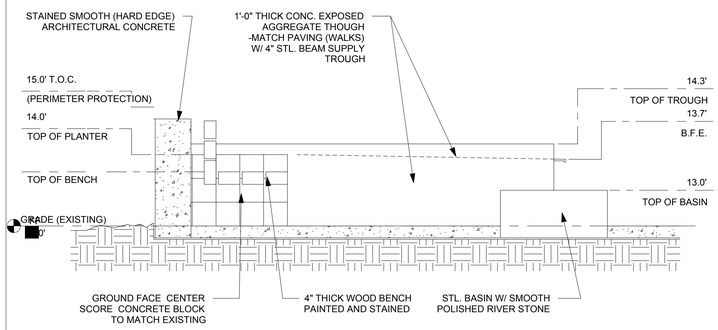
4 GATE - SECTION

1 1/2" = 1'-0"



2 WATER FEATURE-PLAN

1/2" = 1'-0"



1 WATER FEATURE-SECTION

1/2" = 1'-0"

Plot Date: 2/23/2017 12:34:32 PM

GOLETA WEST SANITARY DISTRICT
Your environmental partner since 1954
UCSB Campus
Parking Lot 32
Santa Barbara, CA 93106
(p) 805 968-2617 (f) 805 562-8987

GWSD SITE

EDUARDO GALINDO ARCHITECT
AIA, CSI, CDT, LEED AP BD+C
EGA
4448 E. SLEEPY RANCH ROAD
CAVE CREEK, ARIZONA 85331
480.751.8780 ed@egadesign.net
egadesign.net

ISSUED	REV	DATE
DART Submittal		15 May 2015
Site Development Plan 1		23 June 2015
30% Schematic Design		30 Oct. 2015
Pre-App & Architectural Board of Review Submittal		23 Apr. 2016
Architectural Board of Review Submittal		25 Jan. 2017
Architectural Board of Review Submittal		03 July 2017

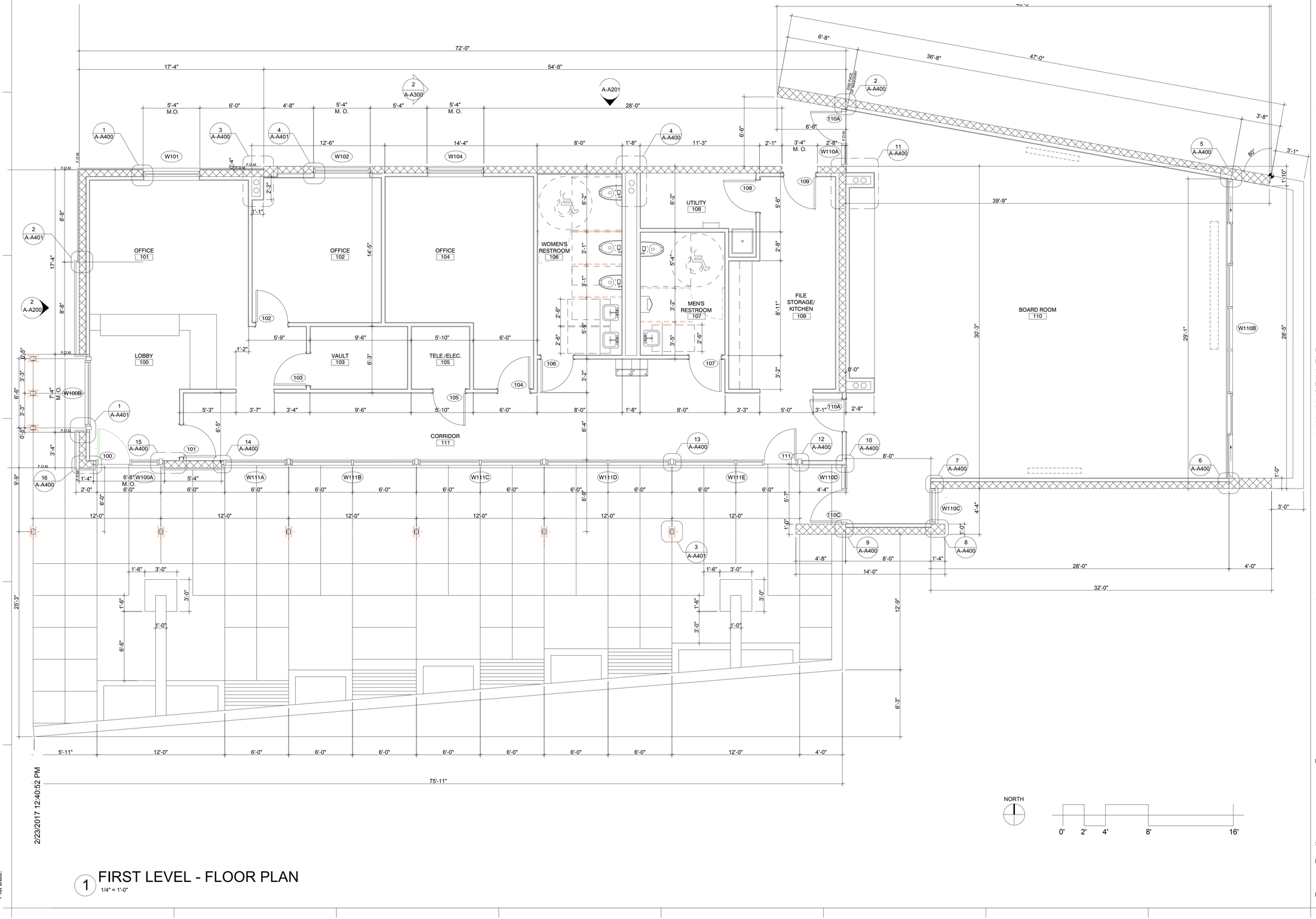
NOT FOR CONSTRUCTION

DRAWING
ENLARGED SITE PLANS AND DETAILS

As indicated
SCALE

40903
PROJECT NUMBER

SA-A200
DRAWING NUMBER



NORTH

0' 2' 4' 8' 16'

2/23/2017 12:40:52 PM

Plot Date:

1 FIRST LEVEL - FLOOR PLAN
1/4" = 1'-0"

GOLETA WEST SANITARY DISTRICT

Your environmental partner since 1954

UCSB Campus
Parking Lot 32
Santa Barbara, CA 93106
(p) 805 968-2617 (f) 805 562-8987

GWSD SITE

EDUARDO GALINDO
ARCHITECT
AIA, CSI, CDT, LEED AP BD+C
EGA

4448 E. SLEEPY RANCH ROAD
CAVE CREEK, ARIZONA 85331
480.751.8780 ed@egadesign.net

egadesign.net

ISSUED	REV	DATE
DART Submittal		15 May 2015
Site Development Plan 1		23 June 2015
30% Schematic Design		30 Oct. 2015
Pre-App & Architectural Board of Review Submittal		23 Apr. 2016
Architectural Board of Review Submittal		25 Jan. 2017
Architectural Board of Review Submittal		03 July 2017

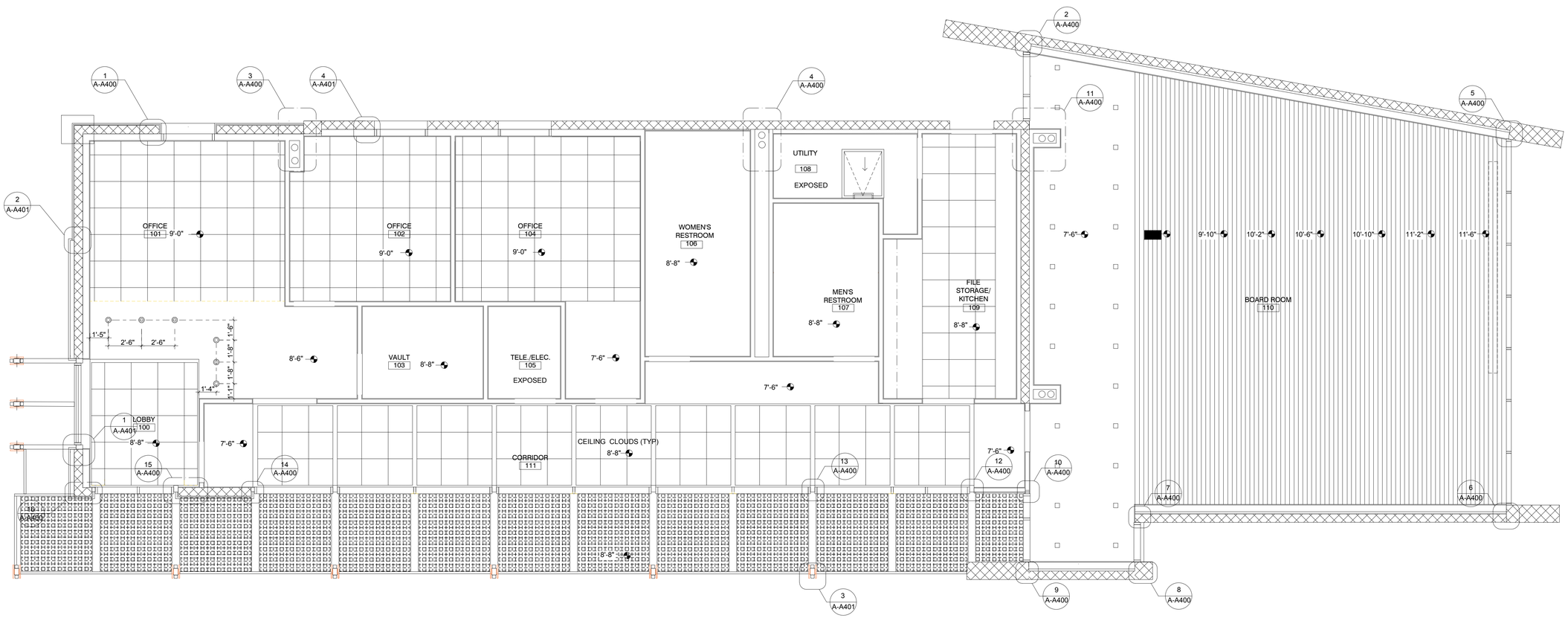
NOT FOR CONSTRUCTION

DRAWING
FLOOR PLAN

1/4" = 1'-0"
SCALE

PROJECT NUMBER

A-A100
DRAWING NUMBER



1 FIRST LEVEL - R.C.P.
1/4" = 1'-0"

GENERAL NOTES:

1. GENERAL NOTES

CEILING LEGEND

NEW

GRAPHIC DESCRIPTION

Plot Date:

NOT FOR CONSTRUCTION

GOLETA WEST SANITARY DISTRICT

Your environmental partner since 1954

UCSB Campus
Parking Lot 32
Santa Barbara, CA 93106
(p) 805 968-2617 (f) 805 562-8987

GWSD SITE

EDUARDO GALINDO
ARCHITECT
AIA, CSI, CDT, LEED AP BD+C
EGA

4448 E. SLEEPY RANCH ROAD
CAVE CREEK, ARIZONA 85331
480.751.8780 ed@egadesign.net

egadesign.net

ISSUED	REV	DATE
DART Submittal		15 May 2015
Site Development Plan 1		23 June 2015
30% Schematic Design		30 Oct. 2015
Pre-App & Architectural Board of Review Submittal		23 Apr. 2016
Architectural Board of Review Submittal		25 Jan. 2017
Architectural Board of Review Submittal		03 july 2017

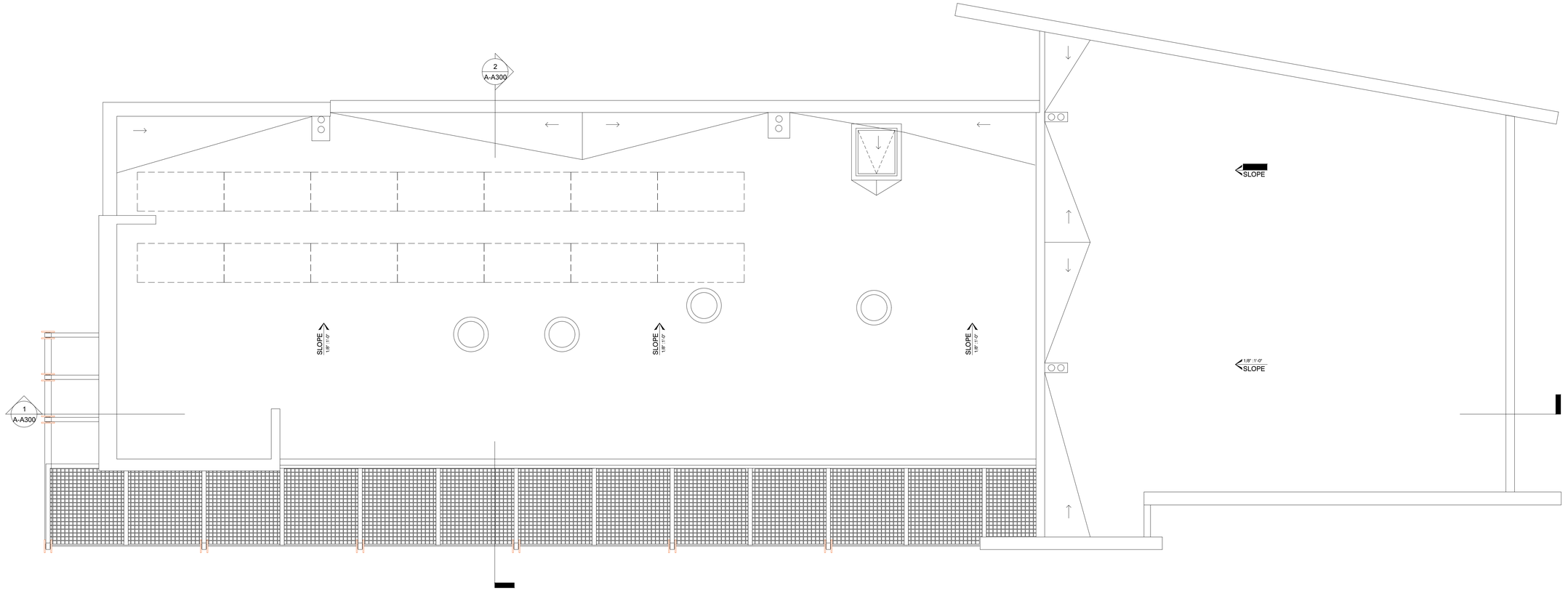
DRAWING

REFLECTED CEILING PLAN

1/4" = 1'-0"
SCALE

PROJECT NUMBER

A-A101
DRAWING NUMBER



1 FIRST LEVEL - ROOF PLAN
1/4" = 1'-0"

GENERAL NOTES:

1. GENERAL NOTES

GOLETA WEST SANITARY DISTRICT

Your environmental partner since 1954

UCSB Campus
Parking Lot 32
Santa Barbara, CA 93106
(p) 805 968-2617 (f) 805 562-8987

GWSD SITE

EDUARDO GALINDO
ARCHITECT
AIA, CSI, CDT, LEED AP BD+C
EGA
4448 E. SLEEPY RANCH ROAD
CAVE CREEK, ARIZONA 85331
480.751.8780 ed@egadesign.net
egadesign.net

ISSUED	REV	DATE
DART Submittal		15 May 2015
Site Development Plan 1		23 June 2015
30% Schematic Design		30 Oct. 2015
Pre-App & Architectural Board of Review Submittal		23 Apr. 2016
Architectural Board of Review Submittal		25 Jan. 2017
Architectural Board of Review Submittal		03 july 2017

NOT FOR CONSTRUCTION

DRAWING

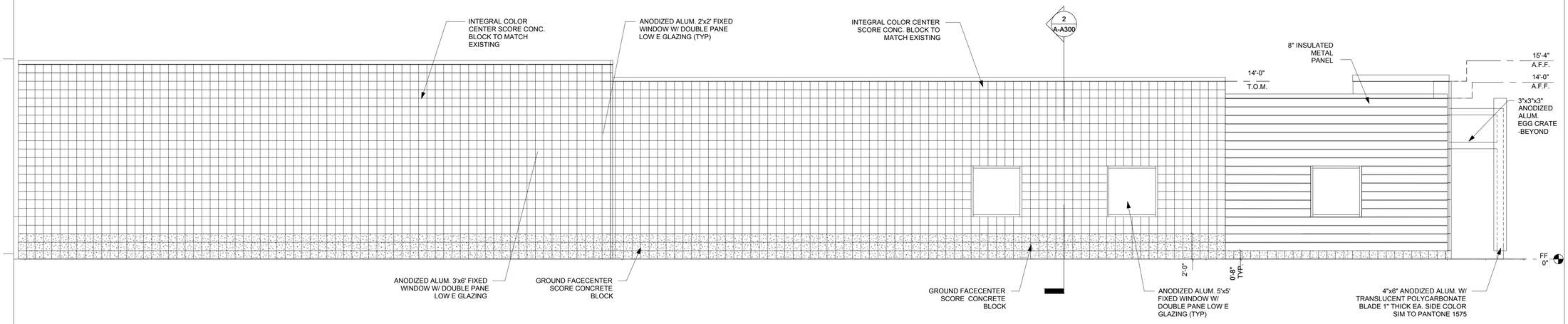
ROOF PLAN

1/4" = 1'-0"
SCALE

PROJECT NUMBER

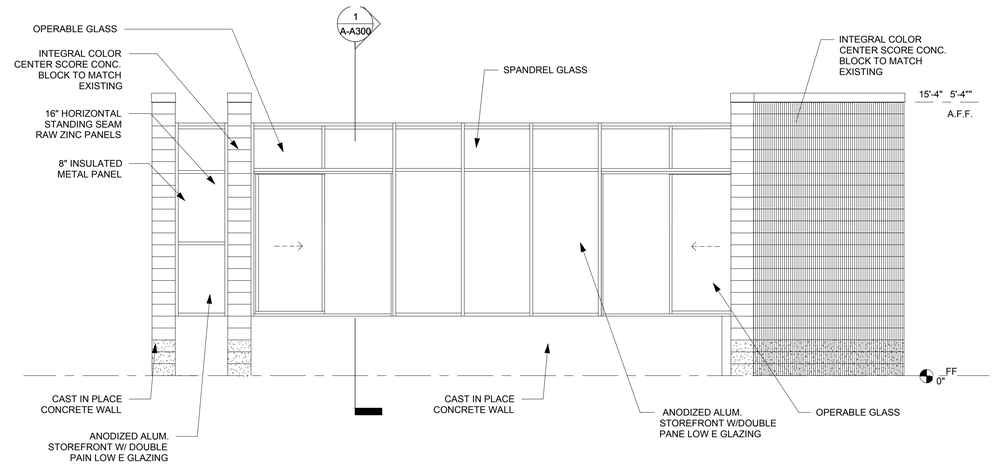
A-A102
DRAWING NUMBER

Plot Date:



1 EXTERIOR ELEVATIONS - NORTH

1/4" = 1'-0"



2 EXTERIOR ELEVATION - EAST

1/4" = 1'-0"

Plot Date: 2/23/2017 12:38:07 PM

GOLETA WEST SANITARY DISTRICT

Your environmental partner since 1954

UCSB Campus
Parking Lot 32
Santa Barbara, CA 93106
(p) 805 968-2617 (f) 805 562-8987

GWSD SITE

EDUARDO GALINDO ARCHITECT
AIA, CSI, CDT, LEED AP BD+C
EGA
4448 E. SLEEPY RANCH ROAD
CAVE CREEK, ARIZONA 85331
480.751.8780 ed@egadesign.net
egadesign.net

ISSUED	REV	DATE
DART Submittal		15 May 2015
Site Development Plan 1		23 June 2015
30% Schematic Design		30 Oct. 2015
Pre-App & Architectural Board of Review Submittal		23 Apr. 2016
Architectural Board of Review Submittal		25 Jan. 2017
Architectural Board of Review Submittal		03 July 2017

NOT FOR CONSTRUCTION

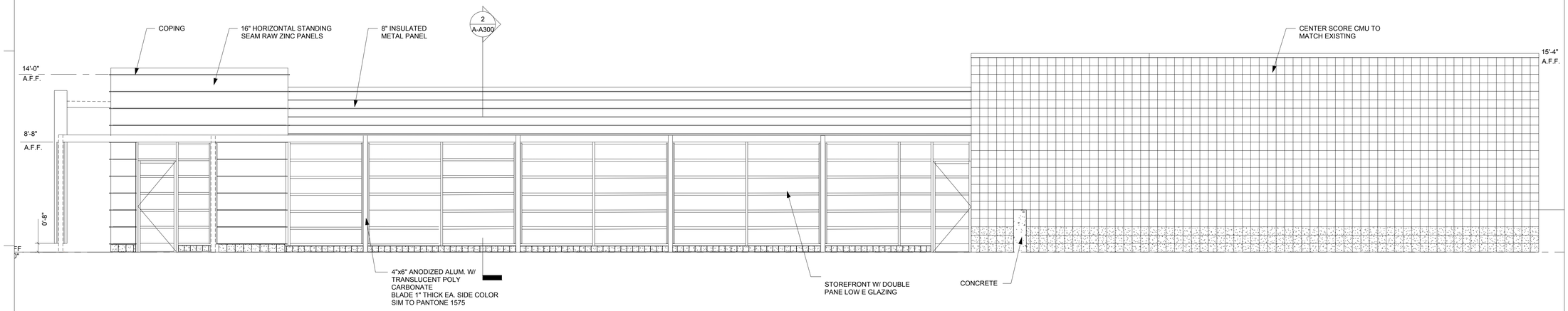
DRAWING

EXTERIOR ELEVATIONS

1/4" = 1'-0"
SCALE

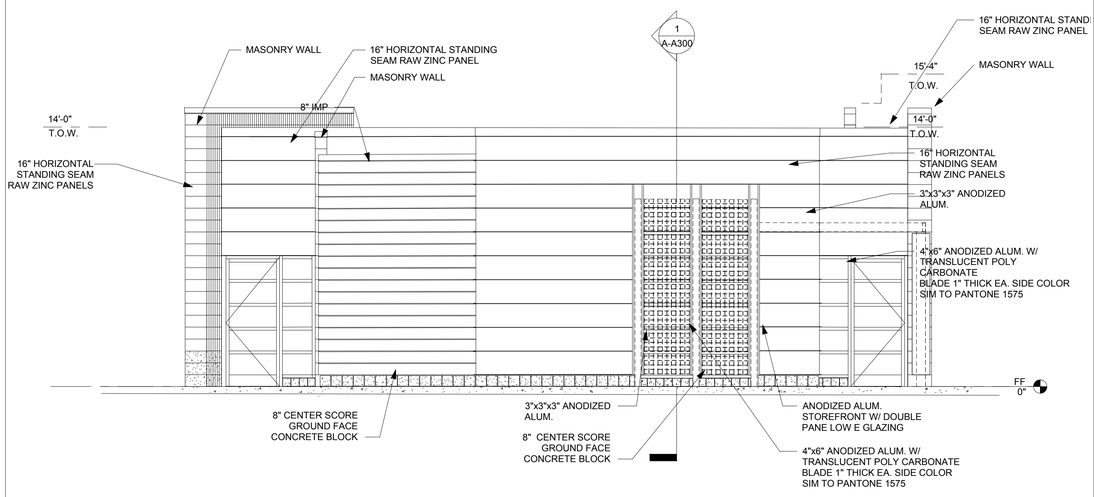
40903
PROJECT NUMBER

A-A200
DRAWING NUMBER



1 EXTERIOR ELEVATION - SOUTH

1/4" = 1'-0"



2 EXTERIOR ELEVATIONS - WEST

1/4" = 1'-0"

Plot Date: 2/23/2017 12:38:07 PM

GOLETA WEST SANITARY DISTRICT

Your environmental partner since 1954

UCSB Campus
Parking Lot 32
Santa Barbara, CA 93106
(p) 805 968-2617 (f) 805 562-8987

GWSD SITE

EDUARDO GALINDO
ARCHITECT
AIA, CSI, CDT, LEED AP BD+C
EGA
4448 E. SLEEPY RANCH ROAD
CAVE CREEK, ARIZONA 85331
480.751.8780 ed@egadesign.net
egadesign.net

ISSUED	REV	DATE
DART Submittal		15 May 2015
Site Development Plan 1		23 June 2015
30% Schematic Design		30 Oct. 2015
Pre-App & Architectural Board of Review Submittal		23 Apr. 2016
Architectural Board of Review Submittal		25 Jan. 2017
Architectural Board of Review Submittal		03 July 2017

NOT FOR CONSTRUCTION

DRAWING

EXTERIOR ELEVATIONS

1/4" = 1'-0"

SCALE

40903

PROJECT NUMBER

A-A201

DRAWING NUMBER

site key

(red dash line)	Property Line
(black dash line)	Project Boundary
(circles line)	View Fence
(line with dots)	Chainlink Fence
(dashed circle)	existing tree to remain

1 Site plan
Scale: 1/16" = 1'-0"

tree protection notes

All existing trees to remain are to be protected as follows:

1. Prior to construction, the contractor shall install fencing or protective barriers at the critical root zone of all existing trees to remain. Fencing or barrier shall be orange construction fence W/ metal stakes. Fencing or protective barriers to be maintained during construction.
2. No activities or storage of construction materials shall be allowed within the fenced areas unless approved by the project arborist.
3. Any root disturbance to any of the protected trees shall be done by hand and the project arborist alerted.
4. All roots encountered shall be cut cleanly with a sharp saw to allow for new root regeneration, backfilled immediately or kept moist to prevent drying out and dying.
5. Any tree affected by the construction process shall be deep-root fertilized to promote better health and vigor.
6. During hot, dry periods the foliage may need to be washed with high pressure water to remove construction dust.
7. Project arborist shall be notified prior to any activities within the critical root zone.
8. All trenching of utilities, irrigation and lighting shall not encroach with in the critical root zone unless approved by the project Arborist.
9. Native or Specimen trees removed or damaged shall be mitigated, utilizing the current City recommendation (See Draft Mitigation and Monitoring Plan 3/13/17 page 3)
10. Prune the trees up and away from any potential conflict with construction activities prior to commencement of the project by a qualified tree company.

City of Santa Barbara
Landscape Compliance Requirements

No turf in parkways, medians or other areas with any dimension of < 8 feet
No turf on >20% slope
For residential, mixed-use and institutional projects, 80% or > of landscape area water wise plants
For residential, <20% of area in turf of high-water using plants
Three inches of mulch specified as required
Areas of sprinkler coverage avoids overspray and runoff, including optimum distribution uniformity, head-to-head spacing and setbacks from walkways and pavement
Sprinklers have matched precipitation rates within each valve and circuit
Valves separated for individual hydrozones based on plant water needs and sun/shade requirements
Weather based irrigation controller with a rain shutoff sensor for the entire irrigation system if including an automatic irrigation system
Areas less than 8' wide irrigated only with bubblers, rotating nozzles on pop-up bodies, sub-surface, or drip irrigation
Drip/low volume irrigation system on >25% of landscaped area
Check valves at low end of irrigation lines to prevent unwanted draining of irrigation lines
Pressure regulators, unless the Public Works Director determination one is not necessary
Grading encourages water retention and infiltration by preserving open space and creating depressed areas/swales
Grading mimics natural, pre-development hydrologic flow paths and maintains and/or increases the width of flow paths in order to decrease flow rates

I state that I am familiar with the Landscape Design Standards for Water Conservation as most recently adopted by the Santa Barbara City Council and that the landscape design for this project complies with those standards.

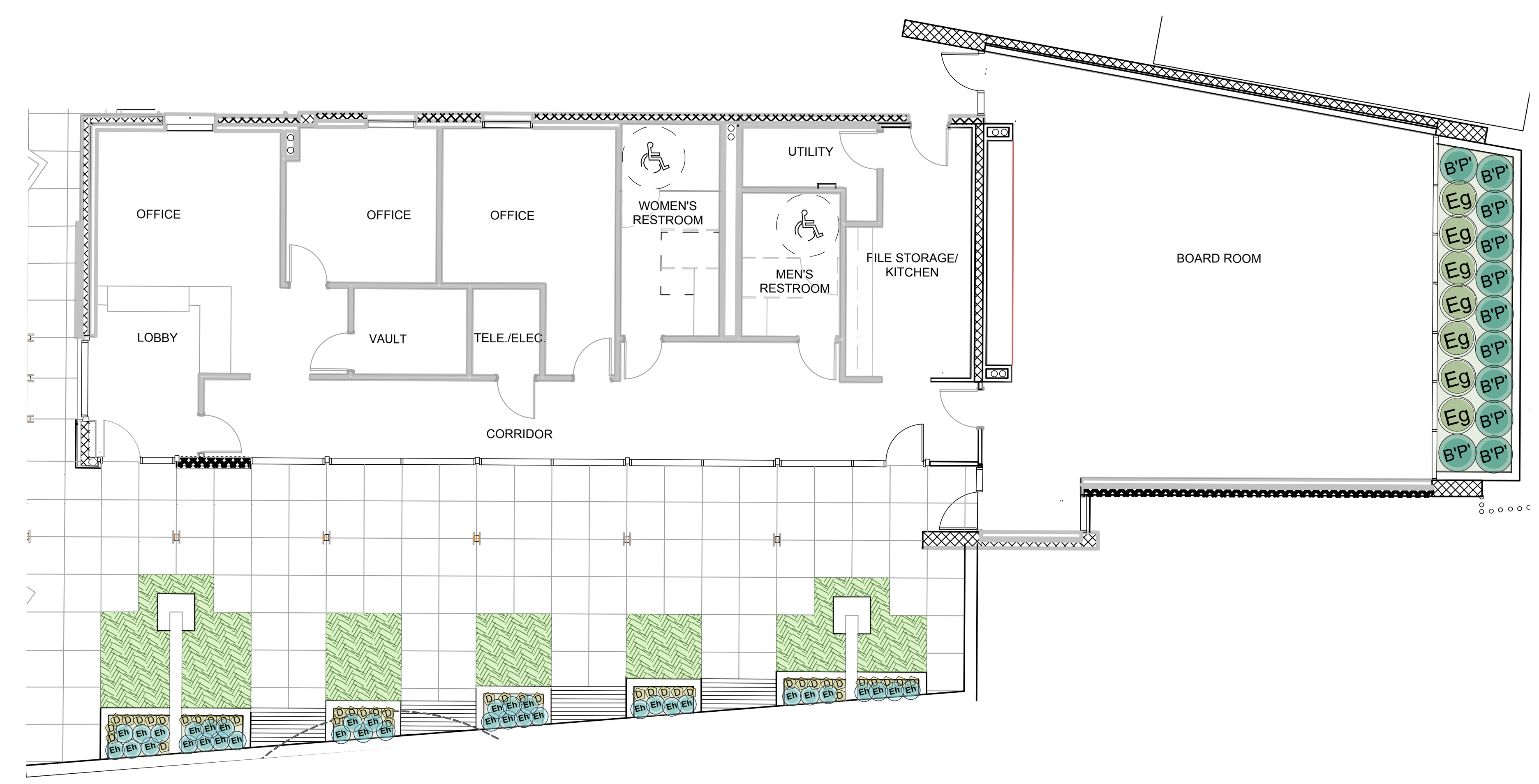
It is my understanding that verification of compliance will be necessary upon final building inspection. I shall inspect the completed installation and I will submit in writing that the installation substantially conforms to the approved plans.

Signature ____ Name____Susan VanAtta____

License # ____2928____ Exp. Date ____01/31/18______

plant legend

Symbol Botanical Name	Common Name	Quantity	Size	Notes
SHRUBS				
Al *Atriplex lentiformis Breweri*	Brewers Salt Bush	9	5 gal	
B'P' *Baccharis pilularis consanguinea Pozo Surf*	Lowly Coyote Bush	13	1 gal	
Dichondra argentea 'Silver Falls'	Silver Falls	40	1 gal	
Eh *Equisetum hyemale*	Horsetail	36	5 gal	
Eg *Erigeron glaucus*	Seaside Daisy	23	1 Gal	
Ep *Eriogonum parvifolium*	Sea Cliff Buckwheat	45	1 gal	
Hs *Hazardia squarrosa*	Sawtooth Goldenbush	42	1 gal	
S *Salvia leucophylla 'Point Sal'*	Low Purple Sage	27	1 gal	
GROUNDCOVERS				
Bouteloua gracilis	Blue Gramma	203 Sq Ft	plugs	
Carex praegracilis	California Field Sedge	231 Sq Ft	plugs	
Distichlis spicata	Saltgrass	9,248 Sq Ft	plugs	



2 Code plan
Scale: 1" = 10 ft

GOLETA WEST SANITARY DISTRICT
Your environmental partner since 1954

UCSB Campus
Parking Lot 32
Santa Barbara, CA 93106
(p) 805 968-2617 (f) 805 562-8987

GWSD SITE

EDUARDO GALINDO ARCHITECT EGA
galindoarchitecture.com
4448 E. SLEEPY RANCH ROAD
480.751.8780
CAVE CREEK, ARIZONA 85331
contact@egadesign.net

VAN ATTA ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE + PLANNING
235 Palm Ave., Santa Barbara CA.
93101
Tel. 805.730.7444

ISSUED	REV	DATE
DART Submittal		15 May 2015
Site Development Plan 1		23 June 2015
30% Schematic Design		30 Oct. 2015
Pre-App & Architectural Board of Review Submittal		23 Apr. 2016
Architectural Board of Review Submittal		25 Jan. 2017
Architectural Board of Review Submittal		30 June 2017

NOT FOR CONSTRUCTION

LICENSED LANDSCAPE ARCHITECT
Susan Van Atta #2928
Signature
01/31/18
Renewal Date
06/30/17
Date
STATE OF CALIFORNIA

DRAWING
LANDSCAPE SITE PLAN

as noted
SCALE

40903
PROJECT NUMBER

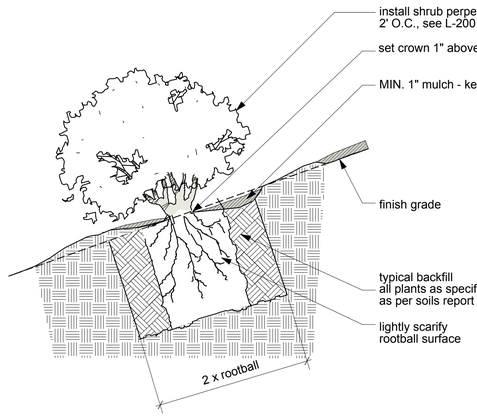
L-L200
DRAWING NUMBER

Plot Date:2/23/2017 12:35:07 PM

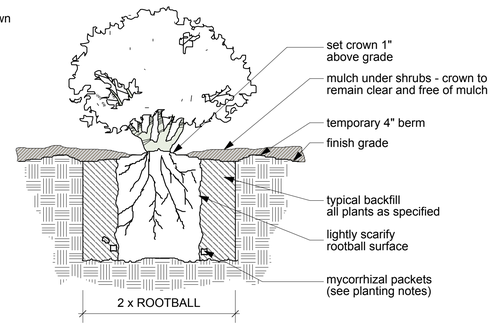
planting notes

All plant materials shall be set out as shown on plan.
Final locations shall be approved by the Landscape Architect prior to planting.

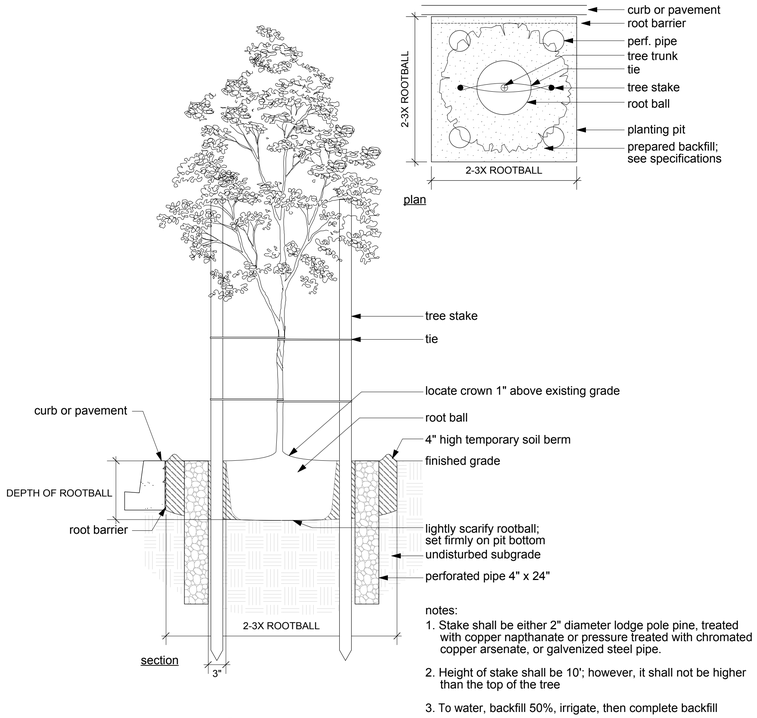
1. Landscape Contractor shall be responsible for any coordination with subcontractors as required to accomplish planting operations.
2. Do not willfully proceed with construction as designed when it is obvious that unknown obstructions and/or grade differences exist that may not have been known during design. Such conditions shall be immediately brought to the attention of the Landscape Architect, Van Atta Associates Inc. (805) 730-7444. The Landscape Contractor shall assume full responsibility for all necessary revisions due to failure to give such notification.
3. Prior to starting work, Contractor shall take soil samples where different soil types are encountered on the project site. Soil shall be analyzed by an approved commercial soil testing laboratory (Wallace Labs, www.bettersoils.com, or Fruit Growers Laboratory, 805-392-2000), or equal, for suitability for plant material as called out on plan. Landscape Contractor shall allow for the addition of soil amendments or conditioners in soil preparation and finish grading as specified in soil analysis results.
4. A copy of the results of the soil analysis shall be submitted to the Landscape Architect. Contractor shall follow the recommendations of the soils lab as to provide a suitable medium for planting. The Contractor shall notify the Owner and Landscape Architect of any potential problems which may result due to soil conditions not appropriate for plant materials. Failure to act as specified may result in the Landscape Contractor assuming financial responsibility for any damage to plants.
5. The Landscape contractor shall loosen all compacted soils to a minimum depth of 24 inches in planting areas.
6. The Landscape Contractor shall be responsible to furnish and install amended import soil in any planting areas as necessary to achieve positive drainage. Imported soil shall be free of unwanted seeds or debris.
7. The Landscape Contractor shall be responsible for positive drainage in planting areas. Low spots or ponding of surface water in planting areas will not be accepted in the final work.
8. The Landscape Architect will approve finish grades in all landscape areas prior to plant material placement. Plant material placement shall be approved by Landscape Architect prior to planting.
9. The Landscape Contractor shall provide healthy, vigorous plant stock grown under climatic conditions similar to the conditions in the locality of the project. It is the Landscape Contractor's responsibility to furnish plant material free of pests or plant diseases. Contract-grown or 'tagged' material must be inspected by the Landscape Contractor and certified disease free. It is the Landscape Contractor's obligation to warranty all shrubs for a period of at least 90 days, and trees for a period of at least 1 year.
10. Landscape Contractor is responsible for completing quantity take-offs for all plant materials shown on plans; plant quantities shown are for convenience only. Landscape Contractor shall provide a list of all plant materials, including species name and size, to be acquired, making note of any deviations from quantities, species or size shown on plans. Any substitutions of plant materials (quantity, species or size) shall be approved by Landscape Architect. Failure to act as specified may result in Landscape Contractor assuming financial responsibility for removal of non-approved plant material and supplying plant material as indicated on plans.
11. Landscape Contractor shall coordinate plant material installation with all utilities (above/below ground), wall footings, pavements, fountains, or other hardscape features. Landscape Contractor shall not damage improvements by others. Failure to act as specified may result in Landscape Contractor assuming financial responsibility for any damages.
12. See details for planting method, plant pit dimensions and backfill requirements. Plant crown elevations relative to finish grade shall be installed as shown on planting details. Proper compaction of backfill to prevent settlement will be required.
13. The Landscape Architect reserves the right to adjust the location of plant material during installation as appropriate to the project.
14. Landscape mulch shall be applied at 3 inches thick over all landscape surfaces. The mulch shall be a high quality pre-composted mulch, with pieces sized 0-1", and shall not contain debris. A representative sample of mulch must be approved by landscape architect prior to application. See detail for mulch application at ground cover, shrub, and tree planting.



5 Shrub Planting on Slope
SCALE: 1" = 1'-0"

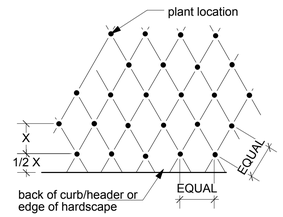


3 Shrub Planting
SCALE: 1" = 1'-0"



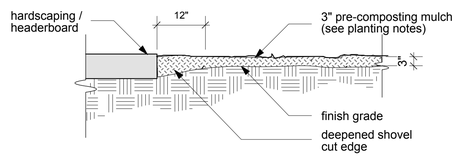
notes:
1. Stake shall be either 2" diameter lodge pole pine, treated with copper napthanate or pressure treated with chromated copper arsenate, or galvenized steel pipe.
2. Height of stake shall be 10'; however, it shall not be higher than the top of the tree
3. To water, backfill 50%, irrigate, then complete backfill

4 Tree Planting
SCALE: 1" = 1'-0"



note:
all shrubs and ground covers to be planted at equal spacing (triangular) unless otherwise indicated on the plans

2 Groundcover Spacing
SCALE: 1" = 1'-0"



note:
mulch under trees and shrubs & blend into ground cover areas

1 Mulch Installation
SCALE: 1" = 1'-0"

Plot Date: 2/23/2017 12:35:07 PM

GOLETA WEST SANITARY DISTRICT
Your environmental partner since 1954

UCSB Campus
Parking Lot 32
Santa Barbara, CA 93106
(p) 805 968-2617 (f) 805 562-8987

GWSD SITE

EDUARDO GALINDO ARCHITECT EGA
galindoarchitecture.com
4448 E. SLEEPY RANCH ROAD
480.353.8580
CAVE CREEK, ARIZONA 85331
contact@egadesign.net

VAN ATTA ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE + PLANNING
233 Palm Ave., Santa Barbara CA. 93101
Tel. 805.730.7444

ISSUED	REV	DATE
DART Submittal		15 May 2015
Site Development Plan 1		23 June 2015
30% Schematic Design		30 Oct. 2015
Pre-App & Architectural Board of Review Submittal		23 Apr. 2016
Architectural Board of Review Submittal		25 Jan. 2017
Architectural Board of Review Submittal		30 June 2017

NOT FOR CONSTRUCTION

LICENSED LANDSCAPE ARCHITECT
Edward Van Atta #2987
01/31/18
06/30/17
STATE OF CALIFORNIA

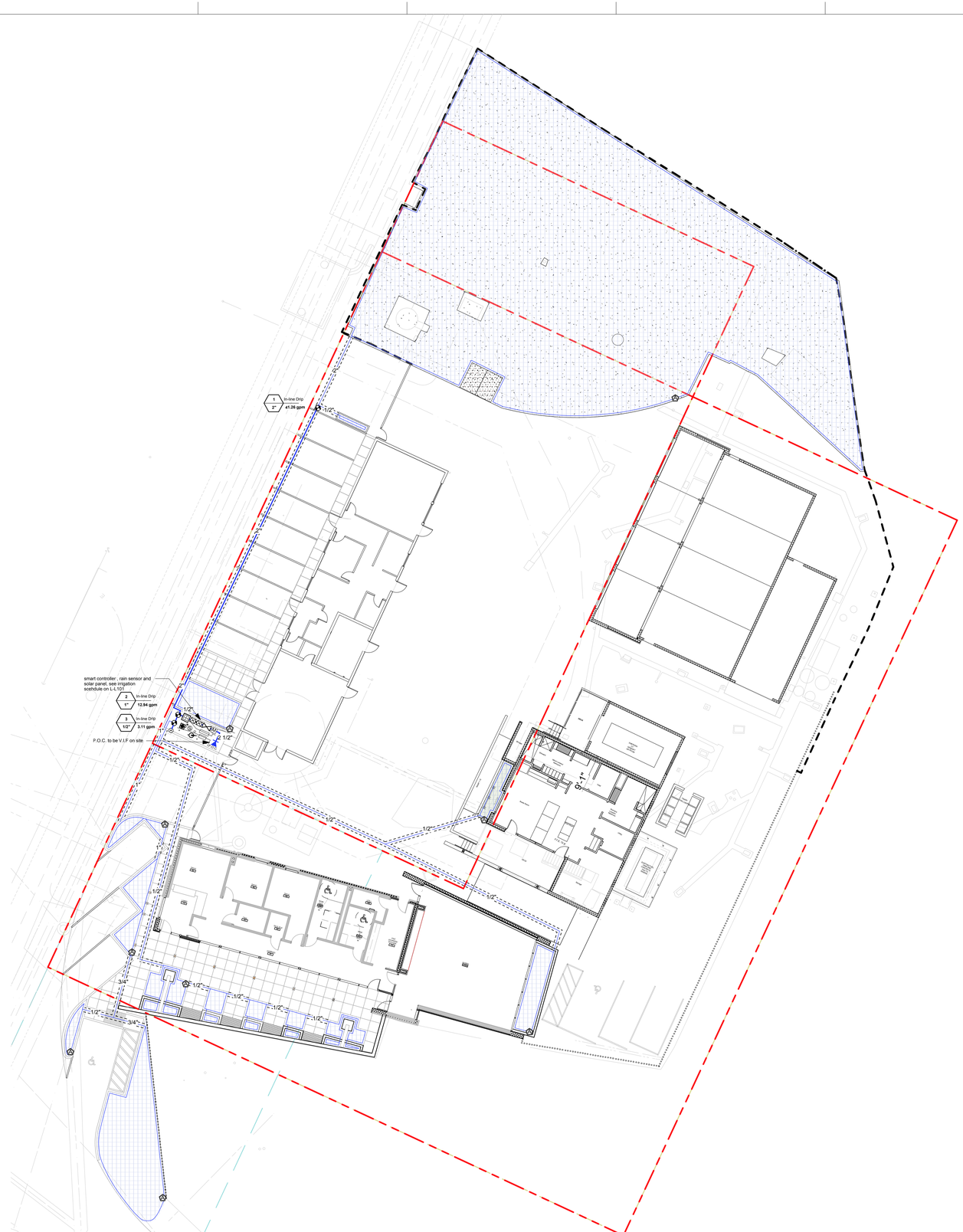
DRAWING

LANDSCAPE SITE PLAN

SCALE: as noted

PROJECT NUMBER: 40903

DRAWING NUMBER: **L-L201**



1 Irrigation plan
Scale: 1/16" = 1'-0"

Irrigation legend

- P.O.C. : connect potable irrigation system to existing irrigation mainline
- irrigation water supply main pipe
- irrigation water lateral line pipe
- sleeve pipe for main, laterals and wires under paving and through walls
- flow meter
- (N) ball valve mainline shut off
- master valve
- backflow preventer
- (N) irrigation controller; VIF
- solar panel
- rain sensor
- quick coupler
- air relief valve kit
- drip valve assembly
- in-line drip; see equipment schedule for type

Irrigation notes

Note:
Call landscape architect 48 hours in advance of all pressure testing, coverage tests, or similar onsite observations.

1. This plan is diagrammatic. All pipes, valves, etc. shown within paved areas are for design clarification only and shall be installed in planting areas wherever possible. Avoid pipe layout that will conflict with proposed tree and shrub planting.
2. It is the intent of this plan to provide adequate irrigation to all planting areas. Contractor shall be responsible for making any and all adjustments to the irrigation system necessary to insure 100% irrigation coverage of all planting areas.
3. Do not install the irrigation system as indicated on the drawings when it is obvious in the field that obstructions or grade differences exist and should be brought to the attention of the City Project Manager.
4. Install the irrigation system in accordance with all local codes.
5. Layout of (E) irrigation equipment does not necessarily represent as-built conditions. Verify irrigation and equipment size and location in the field.
6. Irrigation system is designed assuming a static water pressure of approximately 70 PSI at city mainline, verified before construction. Prior to installation of irrigation system, contractor shall verify pressure at all points-of-connection and report any discrepancies to the City Project Manager.
7. See irrigation equipment schedule for a complete description of all symbols shown on the irrigation plans.
8. Piping installed under pathways or paved areas, through walls or footings shall be placed inside schedule 40 PVC sleeves of adequate size to allow free movement of the pipe in the sleeve. provide sleeving for mainline below driveways, sidewalks, and walls.
9. Flush all lines and adjust all heads for maximum performance and to prevent over spray onto walks, streets and buildings. Selecting the best nozzle arc and radius to fit site conditions. Call City Project Manager 48 hours in advance for coverage tests.
10. Adjust flow controls for proper performance and valve longevity.
11. Install flush end valves at the ends of all 1/2" polyethylene drip pipe in round valve boxes with gravel fill, in planting area. Coordinate location with the City Project Manager.
12. Limit disturbance to rootzone of existing trees by installing piping at the edges of planters where possible. Do not trench across the rootzone of existing trees.
13. Irrigation lines shall be buried at the following minimum depths:
    PVC pressure mainline:18"
    PVC lateral line:12"
    PVC lines 2-1/2" or larger: 24"
14. Clean up on a daily basis per City Project Manager's requirements.

Use drop down menus or type in values in white cells only. Results appear in Yellow or Red highlighted cells below.

Site Information

Site Name → *Type Site Name Here*
Site Type → Commercial **Allowed ETAF:** 0.45
Annual Eto (inches/yr) → 46

Hydrozone or Planting Description	Plant Factor (PF)		Irrigation Method	Irrigation Efficiency (IE)	ETAF (PF/IE)	Hydrozone Area (sqft.)	ETAF x Area	Estimated Total Water Use (gal./yr.)
Regular Landscape Areas								
1	0.2	Low	Drip	0.81	0.2	9,264	2,287	65,237
2	0.5	Mod./Ave.	Drip	0.81	0.6	311	192	5,475
3	0.1	Low	Drip	0.81	0.1	1,294	160	4,556
					SUBTOTAL →	**10,869**	**2,639**	**75,268**
Special Landscape Areas								
9					1		0	0
10					1		0	0
11					1		0	0
12					1		0	0
					SUBTOTAL →	**0**	**0**	**0**
							Estimated Total Water Use (ETWU) →	**75,268**
							Maximum Allowed Water Allowance (MAWA) →	**139,493**

ETAF Calculations

Regular Landscape Areas
Total ETAF x Area 2,639
Total Area 10,869
Average ETAF 0.24

All Landscape Areas
Total ETAF x Area 2,639
Total Area 10,869
Sitewide ETAF 0.24

Notes:

Calculator developed to meet code effective Dec. 1, 2015
This calculator is for estimating purposes only.
Hunter assumes no liability for application of this calculator.

GOLETA WEST SANITARY DISTRICT
Your environmental partner since 1954

UCSB Campus
Parking Lot 32
Santa Barbara, CA 93106
(p) 805 968-2617 (f) 805 562-8987

GWSD SITE

EDUARDO GALINDO ARCHITECT EGA
galindoarchitecture.com
4448 E. SLEEPY RANCH ROAD CAVE CREEK, ARIZONA 85331
480.751.8180 contact@egadesign.net

VAN ATTA Associates, Inc.
landscape architecture + planning
235 Palm Ave., Santa Barbara CA. 93101
Tel. 805.730.7444

ISSUED	REV	DATE
DART Submittal		15 May 2015
Site Development Plan 1		23 June 2015
30% Schematic Design		30 Oct. 2015
Pre-App & Architectural Board of Review Submittal		23 Apr. 2016
Architectural Board of Review Submittal		25 Jan. 2017
Architectural Board of Review Submittal		30 June 2017

NOT FOR CONSTRUCTION

LICENSED LANDSCAPE ARCHITECT Steven Van Atta #2967 01/31/18 06/30/17 Date STATE OF CALIFORNIA

DRAWING

LANDSCAPE IRRIGATION PLAN

as noted
SCALE

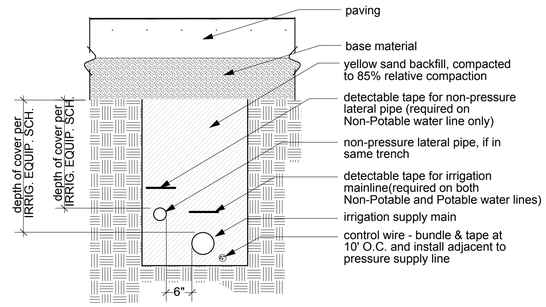
40903
PROJECT NUMBER

L-L100
DRAWING NUMBER

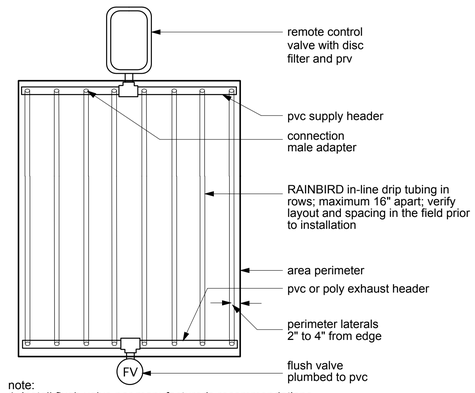
Plot Date: 2/23/2017 12:35:07 PM

Irrigation Equipment Schedule

symbol on plan	description	brand and model	requirements
	potable water; new mainline pipe with detectable color locator tape	2-1/2" and over: CL 315 PVC, W/ SCH 80 PVC fittings. 2" and under: SCH 80 PVC, W/ SCH 80 PVC fittings.	(6,7) depth of cover : 2 1/2" and smaller,18" MIN. identify pipe w/ (3") minimum width tape with one inch contrasting lettering bearing the continuous wording "Potable Water"
	potable water; new lateral line pipe	SCH 40 PVC, W/ SCH 40 PVC fittings	(6,7) depth of cover : 18" MIN; no class 200 pipe is to be used
	sleeve pipe for main, laterals and wires under paving and through walls	SCH 40 PVC, W/ SCH 40 PVC couplings	(6,7) depth of cover : same as main and laterals. glue all couplings. pipe size to allowed couplings to pass. shallow depth under paving is not permitted.
	air release valve kit	RAINBIRD ARVALVEKIT Air Relief Valve	(5) install in CARSON INDUSTRIES green 6" rounded valve box, coordinate exact location W/planting plan- conceal in planting if possible.
	ball valve mainline shut off	Wilkins 850 SH, true union, 1" threaded	coordinate exact location W/ City Project Manager - conceal in planting.
	backflow assembly	1" FEBCO backflow prevention device	(1) coordinate pressure with city representative
	master valve, normally closed	BERMAD 700 series, 1-1/2"	CARSON INDUSTRIES valve box, install in planting as shown on sheet I 1.0.
	solar operated irrigation controller	HUNTER NODE-400 W/ SPNODE	coordinate final location with City representative; install in CARSON INDUSTRIES valve box, conceal in planting as shown on sheet I 1.0.
	solar panel kit	HUNTER SPNODE	mount in area that receives direct sunlight; no more than 200' from controller
	rain sensor	HUNTER Rain-Clik	mount sensor on any surface where it will be exposed to unobstructed rainfall; no more than 1000' from receiver; mount receiver no further than 6' from controller
	drip valve assembly	RAINBIRD XCZ-100-PRF, Residential/Light Commercial Medium Flow, Zone Kit with Pressure Regulating, Basket Filter	(2) CARSON INDUSTRIES valve box, install in planting as shown on sheet I 1.0; adjust pressure to provide 30 PSI downstream
	quick coupler valve, on 1" SCH 40 PVC branch main	RAINBIRD 44 LRC 1", threaded inlet	(4) install **no** more than 2' from paving, coordinate exact location W/ planting plan - hide from view.
	in-line drip irrigation	RAINBIRD XFS-06-12-500:500 ft.	(3) space lateral lines at 18" O.C. at shrubs & 12" O.C. at groundcover; parallel to grade; depth of cover: per manufacturer's recommendations.



6 Pipe and Wire Below Pavement
N.T.S section

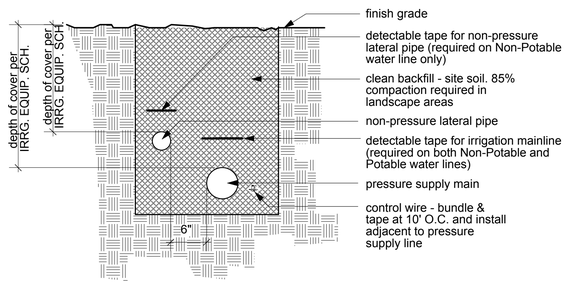


note:
1. install flush valve per manufacturer's recommendations at the end of each tubing section
2. install air relief valve per detail at high points of each tubing section

3 Typical Drip Layout
N.T.S section

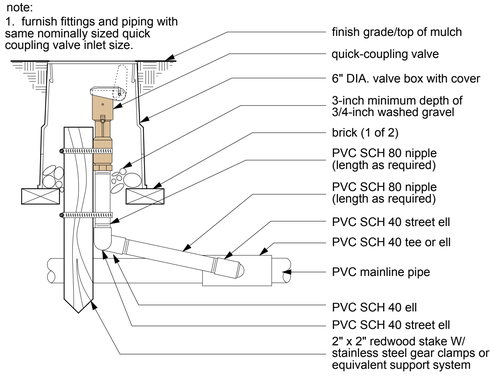
5 Air Release Valve Kit
N.T.S section

2 Drip Valve Assembly
N.T.S section

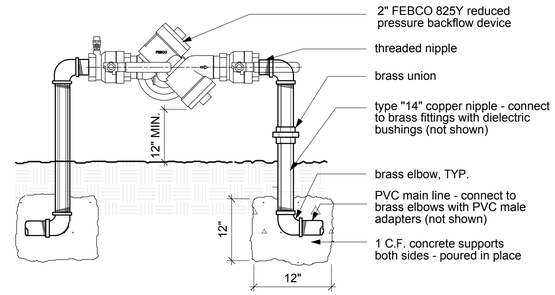


7 Pipe and Wire Below Landscape
N.T.S section

note:
1. furnish fittings and piping with same nominally sized quick coupling valve inlet size.



4 Quick Coupler
N.T.S section



1 Backflow Preventer
N.T.S section

GOLETA WEST SANITARY DISTRICT
Your environmental partner since 1954

UCSB Campus
Parking Lot 32
Santa Barbara, CA 93106
(p) 805 968-2617 (f) 805 562-8987

GWSD SITE

EDUARDO GALINDO ARCHITECT EGA
galindoarchitecture.com
4448 E. SLEEPY RANCH ROAD
480.751.8780
CAVE CREEK, ARIZONA 85331
contact@egadesign.net

VAN ATTA Associates, Inc.
landscape architecture + planning
235 Palm Ave., Santa Barbara CA. 93101
Tel. 805.730.7444

ISSUED	REV	DATE
DART Submittal		15 May 2015
Site Development Plan 1		23 June 2015
30% Schematic Design		30 Oct. 2015
Pre-App & Architectural Board of Review Submittal		23 Apr. 2016
Architectural Board of Review Submittal		25 Jan. 2017
Architectural Board of Review Submittal		30 June 2017

NOT FOR CONSTRUCTION

LICENSED LANDSCAPE ARCHITECT — Thomas Van Atta #2932 — 01/31/18 — 06/30/17 Date — STATE OF CALIFORNIA

DRAWING

LANDSCAPE IRRIGATION DETAILS

as noted
SCALE

40903
PROJECT NUMBER

L-L101
DRAWING NUMBER

Plot Date: 2/23/2017 12:35:07 PM

ATTACHMENT B

Biological Resources Report for the Goleta West Sanitary District Administration Building Project

Biological Resources Report for the Goleta West Sanitary District Administration Building Project, Santa Barbara, California

Prepared for
Goleta West Sanitary District
P.O. Box 4
Goleta, CA 93116

Representative: Patsy Stadelman Price, AICP
Brownstein Hyatt Farber Schreck LLP
1020 State Street
Santa Barbara, CA 93101

Prepared by
RECON Environmental, Inc.
5951 Encina Road, Suite 104
Goleta, CA 93117
P. 805.928.7907

RECON Number 8165
April 13, 2017

Gerry Scheid, Senior Biologist

TABLE OF CONTENTS

FIGURES

TABLES

ATTACHMENTS

1.0 Summary

The proposed project under evaluation in this report consists of a Goleta West Sanitary District (GWSD) proposal to demolish the existing single-story, 1,353-square-foot garage and shop buildings and construct a 3,298-square-foot, new single-story administration building adjacent to a paved access driveway along the southern edge of the 1.07 acre GWSD headquarters site in the city of Santa Barbara, California. The project includes a new courtyard, parking lot improvements, and replacement of the existing perimeter fence. The GWSD headquarters site is currently comprised of existing developed areas (i.e., offices and maintenance buildings, a pump station, equipment garage, and parking lot) and disturbed land. The GWSD site is adjacent to the Goleta Slough which supports four wetland/riparian vegetation community types; arroyo willow thicket, cattail marsh, Jaumea mixed meadow, and pickleweed mat.

No sensitive plant or wildlife species were observed and none are expected to occur within the GWSD headquarters site. There is the potential for sensitive plant and wildlife species to occur off-site in the habitats within the Goleta Slough.

Of the total 1.07-acre, GWSD headquarters site, a 0.18-acre project site would be affected by the construction of the new administration building and associated improvements. No native or otherwise sensitive vegetation communities would be directly impacted on-site by the proposed project. No direct impacts to any habitats located off-site within the Goleta Slough would occur. Potential significant indirect impacts to breeding bird species using the habitats located off-site in the Goleta Slough could occur if construction of the project were to occur within the general bird breeding season.

To mitigate potential indirect impacts to breeding bird species according to the Migratory Bird Treaty Act of 1918 and California Department of Fish and Wildlife Code 3503, a pre-construction nest survey is recommended to confirm the presence or absence of any breeding birds within 300-feet off-site within the Goleta Slough if construction activities are to occur or extend into the bird breeding season (February 1 to July 31).

2.0 Introduction

This report describes the results of the biological resource survey conducted within the survey area for the new GWSD Administration Building project (project). The proposed project will be constructed on the existing GWSD headquarters located in the city of Santa Barbara, on the southwest edge of the City of Santa Barbara Municipal Airport property (Figure 1). The GWSD headquarters contains five existing structures including the existing administration building/pump station #1, an equipment garage, an emergency generator/former pump station #2 building, a garage, and a small shop building. The garage and shop buildings are located next to each other, separated by a small walkway on the south side of the GWSD headquarters. For purposes of this analysis the garage/shop buildings are discussed as one building that will be demolished to make way for the new administration building. Land use surrounding the

GWSD headquarters includes the Goleta Slough Reserve and Santa Barbara Municipal Airport located to the north and east, University of California Santa Barbara (UCSB) campus to the south, and smaller UCSB facilities and open space to the west (Figure 2).

The proposed project would demolish existing single-story garage and operations staff structures along the southern border of the property and replace the garage/shop building with a new building for administration offices, a public lobby, a boardroom, restrooms, and office support spaces. In addition, a new approximately 1,100-square-foot courtyard would be constructed adjacent to and immediately south of the new building on the existing paved driveway and the existing chain link fence along the southern and eastern perimeters of the site will be replaced.

3.0 Survey Methods

3.1 Biological Resources Survey

Biologist Rachel Tierney conducted general and focused botanical surveys and a wetland delineation of the project study area (defined as the GWSD headquarters site) and study area vicinity (defined as an off-site area mapped within a 100-foot radius and with observations noted up to 300 to 600 feet from the project study area) on March 23, April 2, and May 3, 2015. Biologist Paul Collins (Curator of Vertebrate Zoology, Santa Barbara Museum of Natural History) conducted wildlife surveys for these same areas on March 23 and April 10, 2015.

Vegetation communities were mapped and all plant and wildlife species observed in the survey area were noted. The survey also included a directed search for sensitive plants that would have been apparent during the time of the survey. Limitations to the compilation of a comprehensive floral checklist were imposed by seasonal factors, such as blooming period. Animal species observed directly or detected from calls, tracks, scat, nests, or other sign were noted. A list of plant and wildlife species observed is provided in Attachments 1 and 2, respectively.

3.2 Jurisdictional Waters/Wetland Delineation

A formal delineation of jurisdictional waters was conducted to identify the extent of any federal and state jurisdictional waters, including coastal wetlands, was conducted on April 2 and May 3, 2015 by Rachel Tierney.

4.0 Existing Conditions

The GWSD headquarters site is approximately one acre in size and consists of four buildings constructed on asphalt and crushed rock base (Figure 3). The site has a perimeter chain-link fence varying in height from four to six feet. All of these facilities were constructed upon a level pad of fill material approximately 8 feet in elevation above the adjacent Goleta Slough.

Project Location

RECON

M:\JOBS5\8165\common_gis\fig1_NCS.mxd 3/15/2016 ccn

FIGURE 1
Regional Location

Image Source: Nearmap (flown July 2016)

0 Feet 1,500

GWSD Headquarters Site

FIGURE 2
Goleta West Sanitary District
Headquarters Location on Aerial Photograph

RECON

M:\JOBS5\8165\common_gis\fig2a_bio.mxd 12/20/2016 ccn

Image Source: Nearmap (flown July 2016)

Project Study Area
Project Site
Study Area Vicinity

0 Feet 60

Vegetation Communities and Land Cover Types

- Annual and Perennial Ruderals
- Arroyo Willow Thicket
- Cattail Marsh
- Developed
- Disturbed Land
- Iceplant Mat
- Jaumea Mixed Meadow
- Pickleweed Mat

RECON

M:\JOBS5\8165\common_gis\fig3_bio.mxd 12/20/2016 ccn

FIGURE 3

Vegetation Communities and Land Cover Types

4.1 Botany–Project Study Area

The GWSD headquarters site, within which the project would be constructed, does not support any native vegetation plant communities. For mapping purposes, GWSD headquarters site project study area contains two land cover types; disturbed land and developed (see Figure 3).

The acreages of vegetation communities and land cover types within the project study area are listed in Table 1.

Table 1
Existing Vegetation Communities within the Project Study Area

Vegetation Community/ Land Cover Type	Acreage
Disturbed Land	0.26
Developed	0.81
TOTAL	1.07

4.1.1 Disturbed Land

Areas characterized as disturbed land within the project study area include areas on the northern and southern part. The northern disturbed land supports no native vegetation and consists of a lawn area and a relatively small area devoid of vegetation in the northeast corner of the GWSD headquarters site. The southern disturbed land is an area along the shoulder of the existing road where no vegetation grows.

4.1.2 Developed

The majority of the study area is comprised of land that has been developed into the GWSD headquarters. The developed area includes existing buildings, parking areas, roads, and landscaped areas.

4.2 Botany–Study Area Vicinity

Six additional vegetation communities occur within the study area vicinity: arroyo willow thicket, pickleweed mat, cattail marsh, Jamuea mixed meadow, annual/perennial ruderals, and iceplant mat (see Figure 3). These vegetation communities are all outside of the project study area and associated with the Goleta Slough and areas immediately adjacent to the GWSD headquarters site.

The arroyo willow thicket is comprised of primarily arroyo willow (*Salix lasiolepis*) trees intermixed with a few coast live oak (*Quercus agrifolia*) trees and several non-native invasive Shamel ash (*Fraxinus uhdei*) trees. This vegetation community occurs in the riparian area located to the south of the project study area within the study area vicinity.

A small patch of cattail marsh dominated by a stand of cattail (*Typha* spp.) occurs in an area that ponds freshwater within the pickleweed mat vegetation community. The pickleweed mat area occupies a large portion of the area to the east of the project site within the irregularly flooded, intertidal estuarine lands of the Goleta Slough. This community supports a dense stand of perennial pickleweed (*Salicornia pacifica*) with scattered inclusions of alkali heath (*Frankenia salina*) and marsh Jamuea (*Jamuea carnosa*).

Jamuea mixed meadow is a transitional plant community that occurs along the margins of the Goleta Slough near the project site. This plant community supports a dense stand of marsh Jamuea with scattered patches of native wild celery (*Apium graveolens*) and alkali heath. Non-native species present in this plant community include prickly ox tongue (*Helminthotheca echioides*) and sweet clover (*Melilotus alba*).

The annual and perennial ruderal area is comprised of mostly non-native annual and perennial plant species that have become established on past disturbed areas below the driveway on the south side of the site and continuing to the east off-site within the study area vicinity (see Figure 3). Plant species occurring in this vegetation type include ice plant (*Aizoaceae*), rice grass (*Oryzopsis miliacea*), Italian thistle (*Carduus pycnocephalus*), fennel (*Foeniculum vulgare*), and coyote bush (*Baccharis pilularis*). Ice plant mats occupies the slope of the fill on the eastern side of the GWSD headquarters site. The slope is vegetated with a dense stand of ice plant to the exclusion of most other vegetation, except for a few shrubs that have become established.

4.3 Zoology

The project site is comprised of primarily developed land with small areas of landscaped areas that provide poor quality habitat for wildlife. Wildlife species of birds and small mammals (rodents) common in developed areas likely use the project site to some extent. The various native habitats of the adjacent study area vicinity within the Goleta Slough provide quality habitat for a number of wildlife species, including amphibians, reptiles, birds, and mammals. A list of the wildlife species detected in the vicinity of the project is provided in Attachment 2.

4.3.1 Amphibians

Most amphibians require moisture for at least a portion of their lifecycle, with many requiring a permanent water source for habitat and reproduction. Terrestrial amphibians have adapted to more arid conditions and are not completely dependent on a perennial or standing source of water. These species avoid desiccation by burrowing beneath the soil or leaf litter during the day and during the dry season. No amphibians were detected within the project study area during field surveys.

4.3.2 Reptiles

The diversity and abundance of reptile species vary with habitat type. Many reptiles are restricted to certain plant communities and soil types although some of these species will also forage in adjacent communities. Other species are more ubiquitous using a variety of

vegetation types for foraging and shelter. One reptile species was observed in the project study area; western fence lizard (*Sceloporus occidentalis*).

4.3.3 Birds

The diversity of bird species varies with respect to the character, quality, and diversity of vegetation communities present on a site. High-quality vegetation communities typically support a moderate to high variety of bird species. The scrub and woodland habitats provide foraging and shelter opportunities for a wide variety of bird species. Disturbed and developed lands are used by bird species adapted to urban settings.

The most commonly observed species within the project study area included house finch (*Haemorhous mexicanus frontalis*), mourning dove (*Zenaida macroura marginella*), and northern mockingbird (*Mimus polyglottos*).

4.3.4 Mammals

Most mammal species are nocturnal; therefore, their presence is detected during daytime surveys by observing their sign, such as tracks, scat, and burrows. Two mammal species were detected within the project study area: black rat (*Rattus rattus*) and feral cat (*Felis catus*). Other mammal species such as coyote (*Canis latrans*), desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beechyi*), and Botta's pocket gopher (*Thomomys bottae*) occur in the study area vicinity.

5.0 Sensitive Biological Resources

5.1 Sensitivity Criteria

For purposes of this report, species will be considered sensitive if they are: (1) listed by state or federal agencies as threatened or endangered or are proposed for listing; (2) on California Rare Plant Rank 1B (considered endangered throughout its range) or California Rare Plant Rank 2 (considered endangered in California but more common elsewhere) of the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California (2007); or (3) considered rare, endangered, or threatened by the California Natural Diversity Database (CNDDB; State of California 2012a), or local conservation organizations or specialists. Noteworthy plant species are considered to be those that are on California Rare Plant Rank 3 (more information about the plant's distribution and rarity needed) and California Rare Plant Rank 4 (plants of limited distribution) of the CNPS Inventory. Sensitive vegetation communities are those identified by the CNDDB (Holland 1986).

Under Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.3 of the California Fish and Game Code prohibits take, possession, or destruction of any birds in the orders Falconiformes (raptors) or

Strigiformes (owls), or of their nests and eggs (California Department of Fish and Wildlife [CDFW] 1991). The Migratory Bird Treaty Act (MBTA) was established to provide protection to the breeding activities of migratory birds throughout the U.S. The MBTA protects migratory birds and their breeding activities from take and harassment.

All wetland areas and non-wetland waters of the U.S. are considered sensitive. Wetlands and non-wetland waters are under the jurisdiction of U.S. Army Corps of Engineers (ACOE). Streambeds and associated riparian vegetation are considered waters of the State and under the jurisdiction of CDFW, the Regional Water Quality Control Board (RWQCB), and the California Coastal Commission.

Assessments for the potential occurrence of sensitive species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDB, and species occurrence records from other sites in the vicinity of the project site.

5.2 Sensitive Vegetation Communities

No sensitive vegetation communities occur within the project study area. Sensitive vegetation communities occur within the off-site study area vicinity and include arroyo willow thicket, cattail marsh, pickleweed mats, and Jamuea mixed meadow.

5.3 Sensitive Plants

No sensitive plant species were observed or are expected to occur in the project study area due to the level of disturbance, development, and general lack of suitable native habitats. A number of sensitive plant species have the potential to occur within the off-site study area vicinity associated with the Goleta Slough. Sensitive plant species known to occur within one mile of the project study area that are state or federally listed as threatened or endangered, considered a sensitive plant species as noted above, or that have potential to occur based on species range are addressed in Attachment 3.

5.4 Sensitive Wildlife Species

No sensitive wildlife species were observed or are expected to occur in the project study area due to the level of disturbance, development, and general lack of suitable native habitats. A number of sensitive wildlife species have the potential to occur within the off-site study area vicinity associated with the Goleta Slough. Sensitive wildlife species known to occur within one mile of the project study area that are federally listed threatened or endangered or that have potential to occur based on species range are addressed in Attachment 3.

5.5 Jurisdictional Waters/Wetlands

No jurisdictional waters or wetlands occur within the project study area. Federal and state jurisdictional waters are present within the off-site study area vicinity to the south and east adjacent to the project associated with the Goleta Slough area. The off-site jurisdictional waters/wetlands include the arroyo willow thicket, cattail marsh, pickleweed mats, and Jamuea mixed meadow vegetation communities.

6.0 Project Impacts

Impacts to biological resources from the proposed project are discussed below. Direct and indirect impacts to vegetation/land cover types and sensitive biological resources are addressed.

6.1 Direct Impacts

6.1.1 Vegetation Community Impacts

The proposed demolition of existing structures, construction of the new administration building, courtyard, and chain link fence replacement will all occur within the existing GWSD headquarters site (project study area). Impacts would occur only to developed areas of the site (Table 2; Figure 4). No direct impacts would occur to any sensitive vegetation communities in the adjacent off-site study area vicinity.

Table 2
Impacts to Vegetation Communities and Land Cover Types for the Project*
(acres)

Vegetation Community/ Land Cover Type	Impact Acreage
Disturbed Land	0
Developed	0.18
TOTAL	0.18
*No impacts to vegetation communities within the off-site study vicinity area would occur.	

6.1.2 Impacts to Sensitive Plants

No sensitive plant species would be impacted by the proposed project.

Image Source: Nearmap (flown July 2016)

Project Study Area

Study Area Vicinity

Fence Replacement

Proposed Project - Administration Building and Improvements

0 Feet 60

Vegetation Communities and Land Cover Types

Annual and Perennial Ruderals

Arroyo Willow Thicket

Cattail Marsh

Developed

Disturbed Land

Iceplant Mat

Jaumea Mixed Meadow

Pickleweed Mat

RECON

M:\JOBS5\8165\common_gis\fig4_bio.mxd 12/21/2016 ccn

FIGURE 4

Impacts to Vegetation Communities and Land Cover Types

6.1.3 Impacts to Sensitive Wildlife

No direct impacts to sensitive wildlife species are anticipated to occur from the proposed project.

6.1.4 Jurisdictional Waters

No impacts to jurisdictional waters or wetlands within the adjacent off-site study area vicinity would occur from the proposed project. In order to ensure that no indirect impacts to the adjacent jurisdictional waters or wetlands occur during project construction the following measures are recommended in Section 7.0 below.

6.1.5 City of Santa Barbara Coastal Plan Airport and Goleta Slough

The City of Santa Barbara Coastal Plan, Airport and Goleta Slough (Airport CP) is the City's certified coastal land use plan applicable to development in the Airport area (City of Santa Barbara 2003). Applicable City environmental Airport CP policies for this project site are listed below along with an explanation of project compliance.

> **Policy C-4**. A buffer strip a minimum of 100 feet in width shall be maintained in a natural condition along the periphery of all wetland communities, based upon wetlands delineated in the map entitled "Airport and Goleta Slough Coastal Plan Wetland Habitats, dated January 1998," and/or the most recent available wetland survey of the site prepared in accordance with the definitions of Section 13577(b) of Title 14 of the California Code of Regulations, and shall include open water, coastal saltwater marsh, freshwater marsh, swamps, salt flats, mudflats, fens, seasonal wetland meadows, riparian woodlands, shrub-scrub thickets and wetland transition habitats. Incidental Airport uses and facilities necessary for existing Airport operations and found to be consistent with PRC Section 30233 may be provided and maintained. Where development of the Airfield Safety Projects renders maintenance of a 100-foot buffer area between new development and delineated wetlands infeasible, the City shall provide the maximum amount of buffer area feasible and all impacts to wetland habitat shall be mitigated to the maximum extent feasible such that no net loss of wetland habitat occurs.

The project would not alter the existing buffer as all new development will occur within the existing developed GWSD headquarters site, and for parking, within the developed UCSB right of way.

> **Policy C-8**. No uses incompatible with the protection and maintenance of the wetland habitat and its open space character will be allowed in areas under City jurisdiction.

The project would not alter the protection and maintenance of the off-site wetland habitat or open space character as all new development will occur within the GWSD headquarters site.

> **Policy C-12**. New development shall be sited and designed to protect water quality and minimize impacts to coastal waters by incorporating measures designed to ensure the following: protect areas that provide important water quality benefits that are necessary to maintain riparian and aquatic biota, and/or that are particularly susceptible to erosion and sediment loss; limit increase of impervious surfaces; limit disturbance of natural drainage features and vegetation; and minimize, to the maximum extent feasible, the introduction of pollutants that may result in significant impacts from site runoff from impervious areas. New development shall incorporate Best Management Practices (BMPs) or a combination of BMPs best suited to reduce pollutant loading to the maximum extent feasible.

The entire project site will continue to drain via storm drain inlets to an on-site wet well in the existing Administration Building/Pump Station #1 on the western end of the project site, which is then pumped to the Goleta Sanitary District treatment plant. There is no current or proposed drainage from the site to the adjacent Goleta Slough wetlands. The project will protect water quality and minimize impacts to coastal waters through the implementation of BMP's that will treat and reduce pollutant loading to the maximum extent feasible.

> **Policy C-15**. Special-status plant and wildlife protection measures shall be implemented for all development projects that will potentially impact sensitive plant and wildlife species and/or that will result in disturbance or degradation of habitat areas that contribute to the viability of plant or wildlife species designated as rare, threatened, or endangered under state or federal law, including plant species designated as rare by the California Native Plant Society.

The GWSD administration building project would not result in any direct impacts to special status plants or wildlife, or result in any disturbance or degradation of off-site native habitat areas.

6.2 Indirect Impacts

There is a potential for the project to have indirect impacts on listed and sensitive bird species using native habitats within the off-site study area vicinity for breeding due to noise levels generated during project construction. Indirect impacts to sensitive wildlife may be significant without mitigation measures.

7.0 Mitigation

Mitigation is required for project impacts that are considered significant under California Environmental Quality Act. All impacts to sensitive biological resources should be avoided to the maximum extent feasible and minimized when possible. Mitigation associated with this project is only required to avoid indirect impacts to jurisdictional waters and to nesting birds.

Jurisdictional Waters Protective Measures

- The wetland, riparian, and slough areas located to the south and east sides of the project shall be protected during construction by establishing a Limit to Construction Disturbance on all construction plans. This limit shall equal the development footprint plus two (2) feet. All construction shall be conducted within the Construction Limit of Disturbance and not outside of this disturbance limit.

- Prior to construction, a temporary limit fence shall be installed at the south and east sides of the outer edge of the Construction Limit of Disturbance. The temporary fencing shall be at least four (4) feet high and shall be installed around the entire perimeter of the project that borders vegetation. The temporary fencing shall remain in place during the entire duration of project construction. Signs stating the following: "Sensitive Environmental Area. Do Not Enter. No Dumping." shall be affixed to the fencing and shall also remain in place for the duration of project construction. The temporary fence and signs shall be kept tightly in place during the entire construction process.

- The project biological monitor shall confirm the establishment of the Construction Limit of Disturbance on the construction plans and verify the placement of the temporary fencing and signs prior to the commencement of construction activities.

- All construction contractor crew personnel shall be notified regarding the not to disturb areas outside of the temporary limit fence and no materials or equipment are to be placed outside of the Construction Limit of Disturbance.

- All areas immediately outside of the temporary limit fencing shall be checked daily for debris.

- In the event of any unexpected disturbance beyond the Construction Limit of Disturbance, the Construction Manager shall notify project biological monitor who shall assess the disturbance and identify remedial measures to address the situation.

Nesting Birds Protective Measures

The project may indirectly impact nesting birds using habitats associated with the Goleta Slough within the adjacent off-site study area vicinity if construction occurs during the typical bird breeding season (i.e., February 1 to July 31). The following measures are recommended to avoid or mitigate potential impacts to nesting birds.

1. No direct impacts shall occur to any nesting birds or their eggs, chicks, or nests during the breeding season as mentioned above. If project grading/brush management is proposed in or adjacent to native habitat during the bird breeding season, stated above, or an active nest is noted, the project biologist shall conduct a pre-grading survey for active nests in the development area and within 300 feet of it, and submit a letter report to the City of Santa Barbara for review.
   A. If active nests are detected, or considered likely, the report shall include mitigation in conformance with applicable state and federal law (i.e., appropriate follow-up surveys, monitoring schedules, construction, and noise barriers/buffers, etc.) to the satisfaction of the City of Santa Barbara. Mitigation requirements determined by the project biological monitor shall be incorporated into the project and monitoring results incorporated in to the final biological construction monitoring report.
   B. If no nesting birds are detected per "A" above, mitigation under "A" is not required.

8.0 References Cited

California, State of
2011a Special Animals. Natural Diversity Database. Department of Fish and Game. January.
2011b State and Federally Listed Endangered, Threatened, and Rare Animals of California. Natural Diversity Database. Department of Fish and Game. January.
2012a State and Federally Listed Endangered, Threatened, and Rare Plants of California. Natural Diversity Database. Department of Fish and Game. May.
2012b Special Vascular Plants, Bryophytes, and Lichens List. Natural Diversity Database. Department of Fish and Game. May.
2012c Natural Diversity Data Base. RareFind Version 3.1.0. Department of Fish and Game.

California Department of Fish and Wildlife (CDFW)
1991 Fish and Game Code of California, Sections 3503 and 3503.3.

California Native Plant Society (CNPS)
2007 Inventory of Rare and Endangered Plants (online edition, v7-07b). California Native Plant Society. Sacramento, CA. Accessed on Thursday, June 21, 2007 from http://www.cnps.org/inventory.

Hickman, J. C., ed.
1993 *The Jepson Manual: Higher Plants of California.* University of California Press, Berkeley and Los Angeles.

Holland, R. F.
1986 Preliminary Descriptions of the Terrestrial Natural Communities of California. State of California Department of Fish and Game.

Santa Barbara, City of
2003 Coastal Land Use Plan, Airport and Goleta Slough. May.

ATTACHMENTS

ATTACHMENT 1

Wildlife Species Observed in the Project Vicinity

Attachment 1 Wildlife Species Observed in the Project Vicinity			
Species	20 Aug 2014 (Mulder 2014)	10 Apr 2015 (Current Study)	Seasonal Status
REPTILES			
Western Fence Lizard	X	4 observed	RB
BIRDS			
Canada Goose		4	OB
American Wigeon		4	WV
Gadwall		2	WV
Mallard		10	RB
Cinnamon Teal		8	OB
Green-winged Teal		3	WV
Northern Shoveler		8	WV
Snowy Egret	X		V
Great Egret	X		V
Great Blue Heron		1	V
White-faced Ibis	X		WV
Turkey Vulture	X	3	V
American Coot		20+	RB
Killdeer	X	1 pair with a chick	RB
Willet	X		WV
Sandpiper sp.	X		T
Wilson's Snipe		1	WV
Black-necked Stilt	X	12+	SB
Gull sp.	X		V
Eurasian Collared-Dove		1	IB
Mourning Dove	X	6	RB
Anna's Hummingbird	X		RB
Acorn Woodpecker		1	RB
Black Phoebe	X	1	RB
Say's Phoebe	X		WV
Cassin's Kingbird	X		SB
Western Scrub-Jay	X		RB
Violet-green Swallow		10+	SB
Northern Rough-winged Swallow		8+	SB
Cliff Swallow	X	30+	SB
Barn Swallow		3+	SB
Oak Titmouse	X	1	RB
Bushtit	X	11	RB
Blue Gray Gnatcatcher	X		SB
Northern Mockingbird	X	2	RB
European Starling		4	IB
Common Yellowthroat	X	1 singing	RB
California Towhee	X	4+ (singing)	RB
Lark Sparrow	X		T
Song Sparrow	X	3+ (2 singing)	RB
Brewer's Blackbird	X		RB
Brown-headed Cowbird		3 (1 singing)	RB
Hooded Oriole	X		SB
Purple Finch		1 (1 singing)	RB
House Finch	X	6 (1 singing)	RB

Attachment 1 Wildlife Species Observed in the Project Vicinity			
Species	20 Aug 2014 (Mulder 2014)	10 Apr 2015 (Current Study)	Seasonal Status
Scaly-breasted Munia	X		IB
MAMMALS			
Brush Rabbit	X	1 observed	RB
Desert Cottontail		2 observed + scat	RB
California Ground Squirrel	X	Active burrows	RB
Botta's Pocket Gopher		Sign observed	RB
Black Rat	X		IB
Coyote	X		RB
Domestic Cat		1	IB

SEASONAL STATUS:
RB = Resident Breeder; IB = Introduced Breeder; SB = Summer Breeder; OB = Occasional Breeder; T = Transient; V = Visitor; WV = Winter Visitor
*Wildlife surveys conducted by and species list prepared by Paul Collins (Curator of Vertebrate Zoology, Santa Barbara Museum of Natural History)

REFERENCE

Mulder, J. 2014. Results of Biological Resources Bird Surveys for the Goleta West Sanitary District Project. Unpublished letter report prepared for Brownstein Hyatt Farber Schreck, Santa Barbara, California. 6 pp.

ATTACHMENT 2

Inventory of Sensitive Plants and Plant Species of Local Concern

Attachment 2 Inventory of Sensitive Plants					
Common Name (*Scientific Name*)	Family	Status [1]	General Habitat Description	Blooming Period	Potential to Occur in the Project Area
Atriplex coulteri Coulter's Saltbush	Chenopodiaceae	CNPS:1B.1	Coastal scrub. Known from Santa Barbara, Ventura, Los Angeles, Orange counties and the Channel Islands.	March–October	Moderate. Atriplex coulteri is known from the Goleta quad. 73 extant occurrences in California.
Centromadia parryi ssp. *australis* Southern Tarplant	Asteraceae	CNPS 1B.1	Coastal sandy fields and alkaline flats. Many occurrences recently extirpated. Population threatened by urbanization, vehicles, development, foot traffic, grazing, habitat disturbance, and competition from non-native plants.	May–November	High. Found in many locations in Goleta Slough, on saline flats, drainages at estuary margins. 69 extant occurrences in California
Cordylanthus maritimus ssp. *maritimus* Salt Marsh Bird's Beak	Orobanchaceae	CNPS: 1B.2 Fed: FE State: CE	Coastal salt marshes, coastal dunes. Threatened by vehicles, road construction, hydrological alterations, recreational activities, foot traffic, non-native plants, and loss of salt marsh habitat.	May–October	Low. Occurrence at Goleta Slough not confirmed. 17 extant occurrences in California.
Lasthenia glabrata ssp. *coulteri* Coulter's Goldfields	Asteraceae	CNPS: 1B.2	Saltmarshes, vernal pools, wet alkaline areas. Seriously threatened by urbanization and agricultural development. Also threatened by road maintenance. Potentially threatened by foot traffic and drought.	February–June	Moderate. Found on saline flats in impounded area west of Tecolotito Creek. 74 extant occurrences in California.
Lonicera subspicata var *subspicata* Santa Ynez Mountains honeysuckle	Caprifoliaceae	CNPS: 1B.2	Woodlands, Scrublands. Threatened by development, road construction, and vehicles.	May–February	Moderate. Endemic to Santa Barbara County, where it is abundant in certain areas, and Catalina Island.

Attachment 2 Inventory of Sensitive Plants					
Common Name (*Scientific Name*)	Family	Status [1]	General Habitat Description	Blooming Period	Potential to Occur in the Project Area
Scrophularia atrata Black-flowered figwort	Scrophulariaceae	CNPS: 1B.2	Coastal scrub, riparian scrub, coniferous woodland, chaparral, coastal dune. True form more prevalent towards VAFB. Plants from south of Pt. Conception are probably hybrids with common *S. californica* ssp. *floribunda.*	March–April	Low. Not found in Goleta. (Flower is required to identify species, which is similar to common *S. californica* ssp. *floribunda*).
Suaeda esteroa Estuary seablite	Chenopodiaceae	CNPS: 1B.2	Coastal salt marshes and margins. Potentially threatened by development and recreation. Twenty-three known occurrences in Los Angeles, Orange, Santa Barbara, San Diego, Ventura Cos.	May–Jan	Occurs at Goleta Beach, Santa Barbara Airport, Goleta Slough (City of Santa Barbara 2012); 23 extant occurrences in California.

[1] **SENSITIVITY STATUS**
California Native Plant Society Rare Plant Ranks

In the spring of 2011, CNPS officially changed the name "CNPS List" to "California Rare Plant Rank." The definitions of the California rare plant ranks and the ranking system have not changed, and the ranks are still used to categorize the same degrees of concern, which are described as follows:

Rank 1A (formerly List 1A): Plants Presumed Extinct in California.
Rank 1B (formerly List 1B): Plants Rare, Threatened, or Endangered in California and Elsewhere.
Rank 2 (formerly List 2): Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere. Except for being common beyond the boundaries of California, plants with a California Rare Plant Rank of 2 would have been ranked 1B.
Rank 3 (formerly List 3): Plants About Which More Information is needed - A Review List. Information is needed to assign them to one of the other ranks or to reject them.
Rank 4 (formerly List 4): Plants of Limited Distribution - A Watch List. The plants in this category are of limited distribution or infrequent throughout a broader area in California.

Attachment 2
Inventory of Sensitive Plants

CNPS Threat Ranks
The CNPS Threat Rank is an extension added onto the Ranking and designates the level of endangerment by a 1 to 3 ranking, with 1 being the most endangered and 3 being the least endangered.

0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2-Fairly threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3-Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

State-Listed Plants
CE State-listed, endangered
CT State-listed, threatened
CR State-listed, rare
C Candidate for State listing

Federally-Listed Plants
FE Federally-listed, endangered
FT Federally-listed, threatened
PE Federally-proposed, endangered
PT Federally proposed, threatened

*Inventory of sensitive plants compiled by Rachel Tierney.

REFERENCE
City of Santa Barbara, 2012. Santa Barbara Airport Master Plan Update – Draft Environmental Inventory

Attachment 2 Plant Species of Local Concern from the Goleta Slough Management Committee	
Alopecurus saccatus (A. howelli) Pacific Foxtail Annual. Federal, State and California Native Plant Society (CNPS) Endangered. Margins of vernal pools; reported east of Camino Corto and south of El Colegio Road in Isla Vista also on More Mesa (Ferren 1982).	*Conyza coulteri* Coulter's Horseweed Annual. Locally rare. Saline flat upland/wetland transition. Gas Company property across from Goleta Beach (West of overpass).
Anemopsis californica Yerba Mansa Perennial. Wetland Plant. Marshes, alkaline meadows; reported from Tecolotito Creek, north of Hollister Avenue in 1986, subsequently extirpated by development of business park. Recently reported from Los Carneros wetlands.	*Crassula aquatica* Water Pygmy Weed Perennial. Wetland Plant. Vernal pools; reported from both sides of Camino Corto and south of El Colegio Road in Isla Vista (1981), and south of eastern end of airport runway and Fowler Road in 1978; also on More Mesa (Ferren 1982).
Aster subulatus var. ligulatus (A. exilis) Slim Aster Annual. Locally rare. Saline flats; abundant on berm bordering seasonally flooded impoundment north of Mesa Road; also on flats north of Atascadero Creek.	*Elatine brachysperma* Short-seeded Waterwort Perennial. Wetland Plant. Vernal pools; reported both sides of Camino Corto and south of El Colegio Road in Isla Vista in 1980s.
Atriplex argentua var. mohavensis Silverscale Annual. Locally rare. Upland-wetland transition off west end of Runway 7/25; current status uncertain.	*Equisetum telmateia var. braunii* Giant Horsetail Perennial. Locally rare. Collected on dry mud, edge of pool; ca. 0.2 mile southeast of Airport Terminal in 1978.
Atriplex californica California Saltbush Perennial. Locally rare. Upper beaches near flat marshes and dunes, occurs in upper salt marsh northwest of Goleta Beach County Park.	*Eryngium armatum* Prickly Coyote Thistle Perennial. Wetland Plant. Vernal pools; reported from east of Camino Corto and south of El Colegio Road in Isla Vista in 1981.
Atriplex watsonii Matscale Perennial. Locally rare. Upper saltmarsh: found on berm slopes on both sides of Tecolotito Creek just west of bike path.	*Eryngium vaseyi* Mature Coyote Thistle Perennial. Wetland Plant. Vernal pools; reported from east of Camino Corto and south of El Colegio Road in Isla Vista in 1981, also on More Mesa (Ferren 1982).
Batis maritima Saltwort Perennial. Locally rare. Upper saltmarsh, discovered in 1995 on upper tidal marsh sand flat south of Airfield, northwestern limit, only Santa Barbara County occurrence.	*Hordeum brachyantherum* Meadow Barley Perennial. Locally rare wetland plant. Wet meadows, vernal pools; found alongside runway and in Isla Vista.

Attachment 2 Plant Species of Local Concern from the Goleta Slough Management Committee	
Centunculus minimus (Anagalis minima) Chaffweed Annual. Wetland Plant. Vernal pools; reported from east of Camino Corto and south of El Colegio Road in Isla Vista.	*Hordeum depressum* Low Barley Annual. Regionally rare wetland plant. Saline vernal flats; regionally rare but locally abundant in Goleta Slough.
Limonium californicum Western Marsh Rosemary Perennial. Wetland Plant. Upper saltmarsh; occurs above tidal channels in several parts of Goleta Slough.	*Salicornia subterminialis (Arthrocenum subterminale)* Parish's Glasswort Perennial. Wetland plant. Upper saltmarsh; estuary margins, saline flats through Goleta Slough.
Malacothrix incana Dundelion Perennial. CNPS plant of limited distribution and Endemic plant. Dunes; reported from Goleta Slough, west of Goleta Beach County Park in 1964 but apparently extirpated.	*Scirpus americanus* Three-square Perennial. Regionally rare. Saltmarsh; found in tidal portions of Carneros Creek south of Hollister Avenue.
Monanthochloe littotalis Salt Cedar Perennial. Locally and regionally rare wetland plant. Upper saltmarsh; occurs at estuary margin south of Runway 15/22 and on the Gas Company property north of Goleta Beach.	*Scirpus microcarpus* Small-fruited bulrush Perennial. Locally rare. Freshwater marshes and boggy places along coastal creeks; locally rare, found in lower extent of riverine wetlands along Carneros Creek.
Phalaris lemmonnii Lemmon's Canary Grass Annual. Wetland plant. Vernal pools; reported from east of Camino Corto and south of El Colegio Road in Isla Vista, also on More Mesa (Ferren 1982).	*Sparganium eurycarpum* Bur-reed Perennial. Locally rare. Coastal freshwater marshes and creeks; locally rare, found in channel north of Mesa Road, adjacent to Atascadero Creek at More Mesa (Ferren 1982) and on Goleta Sanitary District property.
Pilularia americana Pillwort Annual. Wetland plant. Vernal pools; reported from west of Camino Corto and south of El Colegio Road in Isla Vista.	*Suaeda taxifolia* Woolly Seablite Shrub. CNPS plant of limited distribution. Upper estuary margins and coastal bluffs; common on bluffs at More Mesa, south slope of Mescalitan Island, frequent on berms just above tidal limits.
Plagiobothrys undulatus Coast Popcorn Flower Annual. Wetland plant. Vernal pools; reported from east of Camino Corto and south of El Colegio Road in Isla Vista (Wiskowski 1988); also on More Mesa (Ferren 1982).	*Triglochin concinna var. concinna* Arrow-grass Perennial. Locally and regionally rare. Margins of fresh and saltwater marshes; locally rare, reported from transitional habitat south of the Runway 15/33). Not found in recent searches.

Attachment 2 Plant Species of Local Concern from the Goleta Slough Management Committee	
Potamogeton pectinatus Fennel-leaf Pondweed Annual. Locally Rare. Aquatic habitats in still or moving water; reported from between Carneros Creek and Hollister Avenue.	*Veronica peregrina ssp. xalapensis* Purslane speedwell Annual. Wetland plant. Vernal flats: reported from Goleta Slough, west of Goleta Beach County Park.
Ribes amarum var. hoffmannii Bitter Gooseberry Shrub. CNPS plant of uncertain status, possibly endangered, and Endemic plant. Cool canyons; reported from adjacent to Atascadero Creek near Kellogg Avenue in 1962.	
REFERENCE Ferren, Wayne R. 1985. Carpinteria Salt Marsh: Environment, History, and Botanical Resources of a Southern California Estuary. Publication No. 4 of the Herbarium, Dept. Of Biological Sciences, University of California, Santa Barbara.	

ATTACHMENT 3

Special Status Wildlife Expected in the Project Vicinity

Attachment 3 Special Status Wildlife Expected in the Project Vicinity*		
Common Name (*Scientific Name*)	Listing Status[1] Fed/State	Likelihood Of Occurrence
AMPHIBIANS		
California red-legged frog (*Rana draytonii*)	T/CSC	**Not Present.** Red-legged frogs are known to occur in a number of watersheds that feed into the Goleta Slough including Glen Annie, Tecolotito, Carneros, San Jose and Marie Ignacio Creeks (Santa Barbara Museum of Natural History [SBMNH] Sensitive Species Database). The majority of locations are more than 3 miles from the project site and most occur north of Highway 101. The only record for this species in Goleta Slough was a photograph taken by Sean McKeown sometime in the early 1970s (SBMNH photo file). However, this record does not mention a precise location. There are two historic records of Red-legged Frogs that are within 1.1-1.4 miles of the project site. The first was a specimen (University of California, Santa Barbara [UCSB] specimen) collected in April 1979 at a site listed as Goleta Pond located about 0.25 miles southeast of the junction of Storke Road and Highway 101. The second was a sighting from September 1992 in Glen Annie Creek north of its junction with Highway 101 near the junction of Storke and Glen Annie Roads. Although suitable aquatic breeding habitat for this species occurs in the drainage channels that border the north and south sides of the Goleta West Sanitary District (GWSD) property, the species has not been recorded in any wetlands at Goleta Slough that we know of, and as such is not expected to be present in the vicinity of the project site.
REPTILES		
Southwestern pond turtle (*Actinemys marmorata*)	-/CSC	**Potentially Present Adjacent to Project Vicinity.** There are several 1972 records for the occurrence of this species in the west end of Goleta Slough (SBMNH specimens). There are also sightings from the lower reaches of Atascadero Creek east of the Goleta Slough, a dunes swale pond west of Devereux Slough, the mouth of Dos Pueblos Creek west of the slough, and from Carneros Creek near the junction of Aero Camino and Adams roads north of the slough (SBMNH Sensitive Species Database). Suitable aquatic habitat for this species does occur in drainage channels that border the north and south property boundaries of the project site. However, the lack of any recent observations of pond turtles in wetlands at the Goleta Slough makes it very unlikely that the species is present in wetlands that border the project site.
FISH		
Tidewater Goby (*Eucyclogobius newberryi*)	E/SC	**Potentially Present Adjacent to Project Vicinity.** Tidewater Gobies inhabit brackish or fresh water in bays, sounds, lagoons and creeks along the California Coast. The species was present in Goleta Slough in the 1960s but was not found during collecting efforts in the 1990s. It was presumed extirpated from the slough in 2005 (U.S Fish and Wildlife Service [USFWS] 2005). Surveys conducted in 2006 for the Airport's Creek Relocation Project recorded Tidewater Gobies

Attachment 3 Special Status Wildlife Expected in the Project Vicinity*		
Common Name (*Scientific Name*)	Listing Status[1] Fed/State	Likelihood Of Occurrence
		in creeks at the Airport (Coffman Associates 2013). Also the final environmental impact report on the County's Flood Control maintenance activities in the Goleta Slough assumed that this species was present in all of the creeks that drain into the Goleta Slough (County of Santa Barbara 2010). It is unknown whether fresh-brackish water found in drainage ditches that border the north and south sides of the GWSD property support a population of Tidewater Gobies. We know of no records for the occurrence of this species in either of these drainage ditches nor do we know of any surveys conducted in these drainage ditches for this species. Since this species prefers stream habitat, it is unlikely that it occurs in either of these two drainage ditches and as such, it is not expected to be impacted as a result of the proposed development at the GWSD property.
Southern California Steelhead (*Oncvorhynchus mykiss*)	E/SC	**Not Present.** Steelhead occurred historically in Atascadero, San Jose and San Pedro Creeks, and trout were stocked historically in upper San Jose Creek (County of Santa Barbara 2010). However, barriers (concrete-lined channels, grade stabilizers) along the lower reaches of a number of these drainages are keeping steelhead from reaching historic spawning areas higher up in these drainages. Recent sightings of trout in Maria Ygnacio Creek and Atascadero Creek suggest that steelhead are still able to migrate from the ocean into these two Goleta Slough drainages. There are no known recent records for the occurrence of this species within the Goleta Slough. However, there have been no recent focused surveys for steelhead in stream channels passing through the Goleta Slough. Drainage channels that border the north and south sides of the GWSD property do not contain habitat suitable to support this species. As such this species is not expected to occur in the immediate vicinity of the project site and would not be affected by the proposed development.
BIRDS		
White-tailed kite (*Elanus leucurus*)	SC/FP	**Present Adjacent to Project Vicinity.** White-tailed Kites occasionally forage in upland habitats at the Goleta Slough. Kites have nested in oaks located along the UCSB property boundary adjacent to Mesa Road immediately east of the Goleta West Sanitation District property in 2007–2008 and again in 2011 (M. Holmgren pers. comm.). They also nested at least once in 1999 along the north bluff near the old Laundry Road southeast of the project site (ebird sighting). Small numbers of kites have also been observed occasionally from the overlook along Mesa Road above Basin K, which is in the vicinity of where kites nested in 2007–2008 and 2011 (ebird sightings). While kites are not expected to nest or roost in trees that border the south side of the GWSD property, they are expected to occasionally forage over open habitats that border the west, north and south sides of the property and to occasionally nest in oaks situated along the slope bordering the south side of Basin K.

Attachment 3 Special Status Wildlife Expected in the Project Vicinity*		
Common Name (*Scientific Name*)	Listing Status[1] Fed/State	Likelihood Of Occurrence
Ridgway's Rail (=Light-footed Clapper Rail) (*Rallus obsoletus levipes*)	E/E	**Unlikely.** Clapper Rails inhabit coastal salt marshes with tidally influenced habitats (*Salicornia* marsh) that are bordered by estuarine vegetation (tules and cattails). This species bred historically at Devereux Slough, Goleta Slough and Carpinteria Marsh and was last observed at Goleta Slough on September 6, 1969 (Lehman 2013). It is currently believed to be extinct from the Goleta Slough estuary. As such this species is not expected to be affected by the proposed development on the GWSD property.
Western Snowy Plover (*Charadrius alexandrines nivosus*)	T/SC	**Not Present**. There are several sightings of Snowy Plovers from west Goleta Beach and from near the mouth of Goleta Slough between 1973 and 2014 (ebird sightings). There is no suitable nesting or foraging habitat at or in the immediate vicinity of the GWSD property. The species is not expected to occur on the salt flats and wetlands in Basin K adjacent to the project site and would not be affected by the proposed development.
Bank Swallow (*Riparia riparia*)	-/T	**Not Present**. Bred historically along the coastal bluffs east of the mouth of the Goleta Slough but is now a rare spring and fall transient along the south Coast (Goleta Slough Management Committee 1997). There are two spring sightings of solitary birds seen over Basin K east south of the GWSD property on April 25, 1999 and May 18, 2010 (ebird sightings). Suitable nesting habitat (vertical sand or clay banks near water) is not present in the vicinity of the project site. Bank Swallows are not expected to be adversely affected by the proposed development given their current rare seasonal status in the Goleta Slough environs.
Yellow Warbler (*Dendroica petechial*)	-/SC	**Unlikely.** Yellow Warblers breed in willow-alder dominated riparian habitats that border the foothill reaches of a number of the larger drainages on the south Coast in Santa Barbara County. The willow riparian habitat found in the ditch bordering the south side of the GWSD property is marginal for this species. Yellow Warblers are expected to occasionally forage in willows and shrubs near the project site during their annual spring and fall migration but are not expected to nest in the vicinity of the project site.
Yellow-breasted Chat (*Icteria virens*)	E/E	**Not Present.** Yellow-breasted Chat are a rare summer resident on the south Coast where they breed in dense willow riparian habitat. Their preferred breeding habitat consist of low, shrubby, dense thickets of willows, vines, and brush with a dense overstory of taller trees (e.g. cottonwoods and alders). The willow riparian habitat adjacent to the project site is marginal for this species. We know of no sightings of this species from the project vicinity.
Belding's Savannah Sparrow (*Passerculus sandwichensis beldingi*)	-/E	**Present Adjacent to Project Vicinity.** Belding's Savannah Sparrows are a year-round resident of salt marshes dominated by *Salicornia, Allenrolfea, Suaeda, Atriplex*, and saltgrass. They inhabit coastal salt marshes with this type of habitat from Goleta Slough south into southern California. Up to 117 pairs were recorded breeding at Goleta Slough in 1994 (Holmgren

Attachment 3 Special Status Wildlife Expected in the Project Vicinity*		
Common Name (*Scientific Name*)	Listing Status[1] Fed/State	Likelihood Of Occurrence
		and Burnell 1992). They are rarely seen on wet beach and upland vegetation near the mouth of the Goleta Slough and from areas of the marsh immediately adjacent to the UCSB property (Goleta Slough Management Committee 1997). Marginal Salicornia marsh breeding habitat for this species occurs in Basin K that borders the northern and eastern GWSD property boundary. There are a number of spring-summer sightings of this species heard singing in Salicornia marsh habitat in Basin K between 1987 and 2014 (ebird sightings), suggesting that a small population of Belding's Savannah Sparrows breed in marsh in Basin K.

Federal: E = listed as endangered under the federal Endangered Species Act; T = proposed for federal listing as threatened under the federal endangered species Act; SC = species of special concern that may warrant listing but for which biological information to support a proposed rule is lacking.
State: E = listed as endangered under the California Endangered Species Act; CSC= species of special concern in California; FP = Fully Protected under the California Endangered Species Act.

*Special status wildlife species list compiled by Paul Collins (Curator of Vertebrate Zoology, Santa Barbara Museum of Natural History)

REFERENCES

Coffman Associates. 2013. Appendix B Santa Barbara Airport Master Plan Update. Environmental Overview: Part 1 – Environmental Inventory. Prepared for City of Santa Barbara, CA.

County of Santa Barbara. 2010. Flood Control Maintenance Activities in the Goleta Slough Final Subsequent Environmental Impact Report (SCH No. 2000031092), prepared by Department of Public Works, Santa Barbara County Flood Control and Water Conservation District (SBFCD), October.

Goleta Slough Management Committee. 1997. Goleta Slough Ecosystem Management Plan. Prepared for City of Santa Barbara. Prepared by The Goleta Slough Management Committee and Science Applications International Corporation. http://www.goletaslough.org/gsmcplan/.

Holmgren, M., and K. Burnell. 1992. The abundance and distribution of Belding's Savannah Sparrows at Goleta Slough Santa Barbara County, California. Prepared for Santa Barbara Municipal Airport, Santa Barbara, California. Submitted to ENTRIX, Walnut Creek, California. 25 pp

Lehman, P. E. 2013. The Birds of Santa Barbara County, California. Online publication.

United States Fish and Wildlife Service (USFWS). 2005. Recovery Plan for Tidewater Goby (Eucycloglobius newberryi), Pacific Region, USFWS, Portland, Oregon.

ATTACHMENT B-1

Wetland Delineation Report for the Goleta West Sanitary District

APPENDIX B-1

Wetland Delineation Report for the Goleta West Sanitary District

Rachel Tierney Consulting

---

1. INTRODUCTION

a. Purpose of delineation.

This delineation is conducted to determine if "Waters of the U.S." (including neighboring "Waters") are present within the subject property or buffer area, and if present, to demarcate "Waters if the U.S." and the wetland/upland boundary. Areas falling within the designation of "Waters" are protected under the Clean Water Act (1972). A resent Federal ruling, initiated by the overseeing agencies (U.S. Army Corps of Engineers and the Environmental Protection Agency, 2015) altered some aspects of the definition of "Waters" and resulted in small change to their reach of jurisdiction under the Clean Water Act (See Section 3.0).

b. Personnel conducting delineation.

Rachel Tierney has a B.A. in Biology and a M.A. in Botany. She trained in 1990 with Charles Rhodes, an author of the 1989 Wetland Delineation Manual. She has attended additional seminars to delve deeper into this discipline.

c. Dates of fieldwork conducted

Precursory visits were made in April 2 and May 3, 2015. A second look at the results based the Federal Register 80 FR 37054 (June 28, 2015, effective August 8, 2015) was made on November 15, 2015 during a revision of the text.

d. Rationale for the sampling method used.

Features are less than 5 acres in size with uniform stretches.

2. SITE DESCRIPTION

a. Location.

The site is situated in Santa Barbara County, in the northernmost top of the UCSB Campus on J Road, off of Mesa Road.

b. Size of Study Area.

The Study Area is a partial circle, measured 100 feet from the edge of the proposed Administration Building within vegetated ground (see Figure 3). The Study Area encompasses regions outside the project site. The 100-foot radius was chosen to follow the City of Santa Barbara certified LCP, specific to development at the Airport, which calls for a 100-foot buffer for development from wetlands. (Appendix B Santa Barbara Airport Master Plan Update; Coffman Associates, 2013).

Policy C-4 of the LCP states that "a buffer strip a minimum of 100 feet in width shall be maintained in a natural condition along the periphery of all wetland communities, based upon wetlands delineated in the map entitled "Airport and Goleta Slough Coastal Plan Wetland Habitats, dated January 1998."

c. General Site Description.

The site contains four structures, including offices and maintenance buildings. The project under evaluation in this report includes demolition of an existing 1,353 SF single story garage and shop structure along the southern property line, and replacement with a new single story 3,298 SF Administration Building, extending to

the north and east of the existing structure. A new open courtyard (1,575 SF) with permeable pavers, landscaping and a water feature would be placed south of the proposed building with a veranda (418 SF) attached to the building on its south face. The Courtyard and Garden walls would serve as a buffer to potential 100-year flood levels, in compliance with Santa Barbara County Flood Control requirements.

The style of the building is modern, using concrete, metal and glass. The Administration Building would contain a lobby, administrative offices, a boardroom, and bathrooms. New parking would be located immediately west of the proposed Administration Building and immediately west of the existing administration building. The existing administration building is intended to revert to an equipment garage under a separate future permit. The entire Headquarters site will continue to drain to an onsite wet well, which is then pumped to the Goleta Sanitary District treatment plant. There is no current or proposed drainage from the site to the adjacent wetlands.

d. Hydrology of the Site.

The entire project site sits on a pad of fill, created to elevate the site, rising up to 8 feet above the Goleta Slough, which now surrounds the headquarters on three sides. The headquarters is located at the northernmost tip of the UCSB campus and along with a nearby cluster of buildings that house the campus police and fire departments juts into the Slough on this man-made pad.

The site is surrounded on three sides by the Goleta Slough, which contains salt marsh, brackish marsh and freshwater habitat. Tidal circulation extends from the mouth of the Slough at Goleta Beach up the tributary streams of the Slough. A wooded drainage within the study area but mostly south of the property line, derives its flows apparently from street runoff from the University campus, including the stadium.

3. DEFINITION OF "WATERS OF THE U.S. PERSUANT TO THE 2015 FEDERAL RULING

In general, the definition of "Waters of the U.S." under the Clean Water Act includes

"Waters of the U.S" includes traditional navigable waters (TNW), waters adjacent to TNW, tributaries of TNW including headwaters and other waters that have a significant nexus to TNW, evaluated on a case-by-case basis. The new ruling also spells out distance limits for "neighboring" (formerly called "adjacent") waters under examination for potential inclusion based on a significant nexus or significant biological connection. This distance can extend from 1,500 feet to up to 4,000 feet from the floodplain or the ordinary high water mark (or high tide line) of known "Waters". The new ruling also lists situations that would not fall under the jurisdiction of the CWA, which include manmade feature such as croplands dug in dry land, waste treatment and *contained* stormwater systems, some ditches, manmade pools, manmade basins, manmade lakes and irrigated uplands.

This definition is strongly abridged, leaving out important innuendoes and details. The full ruling can be found in the Federal Register / Vol. 80, No. 124 / Monday, June 29, 2015 / Rules. 37054. §230.3 definitions.

4. SAMPLING METHODS

The recent Federal ruling (effective August 8, 2015), which clarifies the definition of "Waters of the US" does not appear to affect the methodology of delineation.

a. Wetland delineation methodology:

A routine delineation was made using the ACOE Delineation Manual (1987), the Regional Supplement to the ACOE Manual: Arid West Region [(Environmental Laboratory, (2006), the Field Guide to the Identification of the OHWM in the Arid West Region of the Western U.S. (Environmental Laboratory, Cold Regions Research and Environmental Laboratory, 2008) and the Field Indicators of Hydric Soils in the United States, (NRCS, 2010)]. Sampling unit size was based on visual homogeneity of habitat.

Typically, the ordinary high water mark (OHWM) determines the upper limit of "Waters" within the feature channel. The Supplement to the Delineation Manual suggests that in the arid west, the OHWM should be identical to the active floodplain. (Cold Regions Research and Environmental Laboratory, 2008.)

To determine if wetlands are present, and to determine where the upland/wetland boundary lies, the formal methodology outlined in the delineation manual is used.

Initially, any area under investigation is examined for changes in vegetation patterns. The site is divided into sections, or plots, based on vegetation differences. Often only one plot is necessary because vegetation is homogeneous. Representative observation points and pit locations are chosen that best depict the vegetation components within each plot.

At each point, a data form is filled out. Information collected for the forms includes a list of the dominant plant species and their wetland indicator status; results of a soil pit test showing the presence or absence of field indicators of hydric soil; and evidence of wetland hydrology. The methods of determining a wetland rank for each of the three parameters are described below.

DETERMINING A POSITIVE INDICTOR FOR VEGETATION

Dominance Test.

All species are first listed, with their absolute percent cover, from each strata (tree, shrub, sapling and herb). Those that, when tallied, account for more than 50% cover are "dominant." Any other species that accounts for at least 20% cover is also added to this list (50/20 rules). After the species are added to the list of dominants, each species is weighted equally.

The National List of Plant Species That Occur in Wetlands (Lichvar, R.W., 2013) is then consulted to determine the rank of each dominant species. This list includes most, but not all, species that occur in and around wetlands, and assigns each to a category that indicates the estimated probability of the species being found in a wetland. Each dominant species found at the test plot are assigned a category. These indicator categories are:

Obligate Wetland (OBL) - Almost always occurring in wetlands (estimated probability >99%).

Facultative Wetlands (FACW) - Usually occurring in wetlands (estimated probability 67% - 99%).

Facultative (FAC) - Equally likely to occur in non-wetlands (estimated probability 34% - 66%). The former FAC modifiers of (+) or (-), indicating a wetter or drier affinity, were eliminated in the Regional Supplement (Environmental Laboratory, 2006).

Facultative Upland (FACU) - Usually occurring in non-wetlands (estimated probability 67% - 99%), but occasionally found in wetlands (estimated probability 1% - 33%).

Obligate Upland (UPL) - Almost always occurring in uplands in the California region (estimated probability >99%).

Hydrophytic vegetation is indicated when the Absolute Percent Cover[1] of more than 50% of the dominant species across all strata are rated as OBL, FACW or FAC in the

[1] **Absolute Percent Cover**. The percentage of the ground surface that is covered by aerial portions (leaves and stems) of a plant species when viewed from above. Due to overlapping plant canopies, the sum of the absolute cover values may exceed 100 percent.

National list of plant species that occur in wetlands; California region (Reed, 1988, 1996, 2008).

Prevalence Index

The Regional Supplement offers a second means of determining dominant vegetation to be used only if the sample plot fails the Dominance test, but indicators of hydric soils and hydrology are present. To use this test, at least 80% of the total vegetation (summed from all strata) must be identified species. The Prevalence Index is a weighted-average indicator status of all plant species in the sampling plot, where each indicator is given a numeric code (OBL = 1, FACW = 2, FAC = 3, FACU = 4 and UPL = 5). Weighing is by percent cover, or abundance. To conduct the test, all species in each strata are identified by indicator category and Absolute Cover is estimated (cover may be more than 100%). Species are organized into groups depending on their wetland rating and the following formula is applied:

$$PL = A\frac{(OBL) + 2A(FAC) = 3A(FAC) + 4A(UPL}{A\ (OBL) + A\ (FAC) = A\ (FAC) + A\ (UPL)}$$

Where PL = Prevalence Index
A (OBL) = Summed % cover values of obligate plant species.
A (FACW) = Summed % cover values of facultative wetland plant species.
A (FAC) = Summed % cover values of facultative plant species.
A (FACU) = Summed % cover values of facultative upland plant species.
A (UP) = Summed % cover values of upland plant species.

The Prevalence Index ranges between 1 and 5.

A positive test for hydrophytic vegetation is met when the Prevalence Index is 3.0 or lower. This test is only used when hydric soil and wetland hydrology are present and the plot failed the Dominance Test.

DETERMINING A POSITIVE INDICTOR FOR SOILS

Hydric soils (soils that develop under saturated conditions at least part of the year) exhibit unique characteristics that can be identified in the field. Soil pits are dug at each observation point to a depth of approximately 20 inches or deep enough to determine hydric indicators. The field indicators used to determine hydric soils are typically based on soil color, including the presence of gleying, mottling and/or an organic pan. Soil color is measured by comparing a wetted soil sample to the standard color chips in the 1988 version of the Munsell Soil Color Charts. A matrix chroma of less than or equal to 2 indicates hydric soil if mottling is present. A matrix chroma of 1 or less is required if mottling is not present.

The Interim Regional Supplement to the 1987 Corps of Engineers Wetland Delineation Manual: Arid West (Environmental Laboratory, 2006) provides additional assistance in recognizing hydric soils, adding many more subtleties than the general guidelines previously used. It is part of a nationwide effort to address regional wetland characteristics to improve accuracy and efficiency (Environmental Laboratory, 2006). The Regional Supplement provides clarification regarding many additional indicators for hydric soils, including redox depletions, depressions and concentrations. A determination of hydric soil is made when at least one primary or two secondary field indicators are noted.

DETERMINING A POSITIVE INDICTOR FOR HYDROLOGY

Positive indications of wetland hydrology include inundation and/or soil saturation for 7-14 consecutive days during the growing season. The soil pits, dug to determine the presence of hydric soils, are also used to determine saturation levels if the soil is not inundated. Other indicators of wetland hydrology include evidence of water flow, such as drift lines, sediment deposits or watermarks. It can be easily argued that the growing season for the Santa Barbara area continues year round. However, some wetlands, especially in the western portions of the United States, are seasonal and do not exhibit wetland hydrology year-round. The Regional Supplement includes a list of primary and secondary indicators of hydrology. Secondary indicators include the FAC neutral test, crayfish burrows and others situations. A "FAC Neutral Test" is used only if hydrophytic vegetation and hydric soils are present. Positive wetland hydrology is indicated when a primary indicator or at least two secondary indicators are noted.

DETERMINATION OF WETLAND BOUNDARY

The wetland/upland boundary is the interface between wetland and non-wetland polygons or plots. The boundary is determined by field observance and additional soil pits as required, and can be based on a change in vegetation, topography, soil characteristics or other surface features available to the delineator.

b. GWSD Delineation Details

- All plants were identified to species, except Typha sp.
- Paired sample points used at each Observation Point (OP 1a/b – 3a/b).
- Boundaries delineated based on vegetation.
- No change in standard methods.
- Number of sampling sites used: 6 observation points.
- Supporting materials used. All plants identified in situ following Hickman, J. 1993 plus name changes found online. No supporting soil survey was used, past

the Soil Survey of Santa Barbara County. (U.S. Department of Agriculture, 1981).

- The project is entirely in the Coastal Zone.
- Impacts to offsite hydrology by this project are not anticipated.

REGARDING THE USE OF THE "ONE-PARAMETER" WETLAND DEFINITION OFTEN CITED BY STATE AND CITY AGENCIES

When appropriate (for example with a dominance of OBL plants), determining a wetland by observing one parameter may result in an accurate determination of whether a site is in a wetland or not. The ACOE Delineation Manual and all Supplements were developed based on an investigation of all parameters. A single "positive" indication of plants, soils or hydrology, as described in the ACOE Manual, does not equate to "this is a wetland." The "positive indication" for vegetation means that most plants at the observation point are sometimes found in wetlands and sometimes they are not. A "positive indication" of vegetation means the site may be a wetland and one should look at other indicators (soil and hydrology) to determine if it is.

In only limited situations can one identify a wetland by simply looking at vegetation, as most plants are adaptable across large variations of soil moisture. To use the ACOE Delineation Manual as a wetland identifier (versus using it as a delineator or boundary locator) requires that all information be investigated. Disregarding the rules developed in the Manual will, as many times as not, end in erroneous results.

A paragraph-long general description of "wetlands" in the Cowardin Wetland Classification Manual (1979) is often cited as the basis of the legitimacy of the one-parameter method. However, its misuse for wetland delineations or wetland identifiers is discussed several times in the revised Cowardin Wetland Classification Manual. (Federal Geographic Data Committee. 2013.) The revised report states unequivocally that Cowardin et al. (Cowardin, L.M., W. Carter, F.C. Golet and E.T. LaRoe. 1979) intended that all available information should be used in making a wetland identification.

"If plants and soil are present at a site, then both a predominance of hydrophytes and a predominance of undrained hydric soil, as well as wetland hydrology, should be required for positive wetland identification." [Federal Geographic Data Committee (revised Cowardin report), 2013].

6. RESULTS AND CONCLUSIONS.

See sheets OP 1a to 3b for notes and data, summarized below. Table 1 lists each observation point, the results of the delineation, and brief comments. Point locations were determined based on changes in vegetation, which correlated to position on slope. The locations of the Observation Points are located on Figures 3: Vegetation Map. Six distinct plant communities were investigated: Pickleweed Mats, Cattail Marsh, Jaumea Mixed Meadow[2], Arroyo Willow Thickets, Iceplant mats and Annual and Perennial Ruderals. Also located was "waters of the United States" (included under wetlands).

Based on the methods outlined in the ACOE Wetland Delineation Manual (1987), the first two communities - Pickleweed Mats and Cattail Marsh - were found to be wetlands. Cattail Both fell within this category by vegetation alone since pickleweed and cattails, (*Salicornia, Typha* sp.) are found in wetlands 99%-100% of the time (OBL). When an OBL plant dominates an area no further investigation into soil or hydrology is necessary – the area is a wetland. The cattails were located at the lowest regions of the Study Area. (The study area included all vegetated ground located 100 feet from the edge of the proposed Administration Building).

Jaumea Mixed Meadow, iceplant mat and the mixed ruderal were found to be upland communities. Iceplant is a landscape ground cover used to stabilize the fill slope and the weedy areas did not have hydric vegetation or hydric soils. It was well upland and hydric soils were not expected. The Jaumea association contained a dominance of wetland affinity plants, however positive hydrological indicators could not be made.

A wooded drainage is noted to the south of the property line, with associated tree and understory vegetation (Arroyo Willow Thicket). Standing and flowing water present in the drainage is expected to continue through the Slough and to the ocean. Stream flow enters the drainage via a culvert running under "J" Road, from the west. The source of the water could not be determined, although it is likely derived from street runoff from the University campus, including the stadium, based on the lack of any record of natural stream tributaries in this location.

The recent ruling regarding the definition of "Waters of the U.S." under the CWA omits stormwater systems from jurisdiction. However, also under the CWA, if the system functions like a tributary, carrying flows to traditional navigable water or other jurisdictional water such as the Slough, than the stormwater system would be considered "Waters" (ACOE, 2015). This connectivity places portions of the feature under the umbrella of "Waters of the US." The ordinary high water mark (OHWM) would be the limit of "Waters" (see Figure 3). Certainly there is a "significant nexus" based on the direct connection with the Slough and ultimately the Pacific Ocean a short distance away.

[2] A unique community identity was coined as no alliance, or plant community approached the association found at this location. Its identification was pivotal to vegetation mapping and the wetland delineation.

The location of communities within the Study Area are mainly affected by either tidal processes and/or salt or saltwater intrusion: *Salicornia pacifica* and *Typha* within the low saltmarsh limited to these salt-adapted species; *Jaumea carnosa*, *Apium graveolens* and *Frankenia grandiflora* a transitional, moderately saline-adapted community found on slightly higher ground and non-native weeds located in what is likely the least saline, and certainly the driest, soils.

Arroyo Willow, although almost always found along a stream, is often not rooted in soil that is "hydric" within the top 20 inches – the region investigated during a delineation. Following the ACOE guidelines, vegetation found within the Riparian Areas (bank), for example at OP 3a, does not function as hydrophytic, even though the wetland ratings for vegetation (FACW, FAC) of the dominant trees would set them there. The consequence of this nuance places the riparian vegetation onsite outside of a wetland designation. This determination is appropriate, since the riparian habitat above the channel in other locations is decidedly upland riparian forest with addition of coast live oak (*Quercus agrifolia*), which is not a wetland species and one could say, never grows in a wetland.

Data forms attached to this report contain information regarding the particular species, soils types and hydrological information that was used to make these determinations. Table 1 lists the results from the forms. It is important to note that changes in soil characteristics followed changes in species distribution, and at this site, a visual mapping of vegetation would register with equal accuracy, the results of the delineation. For example wetlands are marked clearly by the boundaries of pickleweed and cattail, upland by the clear edges of the drainage woodland, iceplant and weeds. The *Jaumea* meadow is the only community that is not straight forward, in wetland/upland affinity and in outline, not unexpected as this association sits in the transition zone between salinity gradients.

TABLE 1: Data Forms

Observation Points	Positive Indicators			Waters?	Wetland?	Community
GWSD	Veg.	Soil	Hydro.			
OP 1a				No	No	Iceplant Mat
OP 1b	X	X	X	Yes	Yes	Pickleweed Mat
none	Ob.			Yes	Yes	Cattail Marsh
OP 2a				No	No	Annual and Perennial Ruderals
OP 2b	X	X		No	No	Jaumea Transitional Meadow
OP 3a				No	No	Arroyo Willow Thicket
OP 3b				No	No	Arroyo Willow Thicket
None			X	Yes	No	Drainage below OHWM

OP = Observation Point
X = positive indicator
Veg. = Hydrophytic vegetation
Soil = Hydric soils
Hydro. = Wetland hydrology

7. REFERENCES

Army Corps of Engineers, 2007. Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States. June 5, 2007

California Coastal Commission, 1981. Statewide Interpretive Guidelines For Wetlands And Other Wet, Environmentally Sensitive Habitats (1981) Adopted December 16, 1981.

Clean Water Act of 1972. 33 U.S.C. § 1251 et. seq. (2002)

Clean Water Act Jurisdiction, 2008. Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States, July 2008

Cold Regions Research and Environmental Laboratory, 2008. Field Guide to the Identification of the OHWM in the Arid West Region of the Western U.S. ACOE Wetland Regulatory Assistance Program. ERDC/CRREL TR-08-12

Cowardin, L.M., W. Carter, F.C. Goleta and E.T. LaRoe. 1979. Classification of Wetland and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service, Washington D.C.

Environmental Laboratory, 1987. Corps of Engineers Wetland Delineation Manual. Department of the Army. Waterway Experiment Station, January 1987

Environmental Laboratory, 2008. Regional Supplement to the ACOE Manual: Arid West Region (Version 2.0). Prepared for the ACOE. ERDC/EL TR-08-28. September 2008

Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.

Hickman, J. 1993. The Jepson Manual; Higher Plants of California. University of California Press, Berkeley and Los Angeles.

Lichvar, R.W., 2013. The National Wetland Plant List: 2013 Wetland Ratings. Phytoneron 2013-49: 1-241. ACOE Research and Development Center. Cold Regions Research and Environmental Laboratory, Hanover New Hampshire. July 17, 2013.

Natural Resource Conservation Service, 2010. Field Indicators of Hydric Soil in the United States, Version 7.0, 2010. U.S. Department of Agriculture.

U.S. Army Corps of Engineers. 2005. Technical Standard for water table monitoring of potential wetland sites. Technical note ERDC TN-WRAP-05-02. Vicksburg, MS: US Army Corps of Engineers Research and Development Center.

U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency. Clean Water Rule: Definition of "Waters of the United States" 40 CFR 230.3. Part 230—Section 404(b)(1) guidelines for specification of disposal sites for dredged or fill material. Federal Register / Vol. 80, No. 124 / Monday, June 29, 2015 / Rules. 37054. §230.3 definitions.

U.S. Department of Agriculture. 1981. Soil Survey of Santa Barbara County, California. South Coastal Part. Soil Conservation Service and Forest Service.

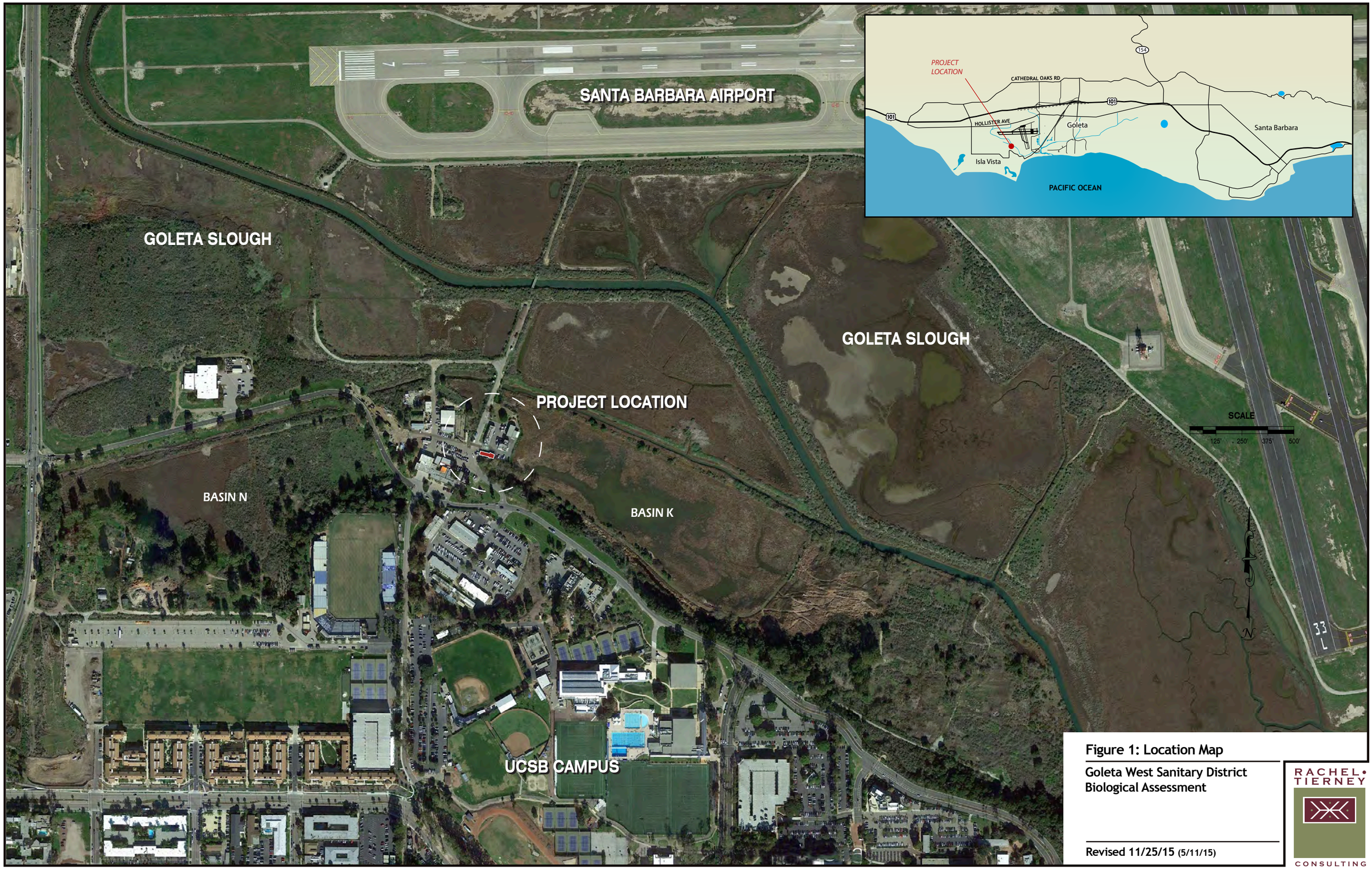


Figure 1: Location Map

Goleta West Sanitary District
Biological Assessment

Revised 11/25/15 (5/11/15)

RACHEL• TIERNEY
CONSULTING

LEGEND

- Existing Structures
- Disturbed/Bare Ground
- Lawn
- Pavement
- Chainlink Fence
- Property Line
- Proposed Project
  - (A) Administrative Building
  - (B) Courtyard & Veranda
  - (C) Sculpture Garden & Constructed Wetland Planter
    - Constructed Wetland Planter
    - Sculpture Garden
    - Low Protective Floodwall Erected for 100-Year Event

Figure 2: Site Plan

Goleta West Sanitary District
Biological Assessment

Revised 11/25/15 (6/17/15 & 5/11/15)

RACHEL• TIERNEY CONSULTING

LEGEND

Upland

- Lawn
- Disturbed/Bare Ground
- Annual and Perennial Ruderals
- Iceplant Mat
- Jaumea Mixed Meadow
- Arroyo Willow Thicket
  - ● Arroyo Willow *(Salix lasiolepis)*
  - ▲ Coast Live Oak *(Quercus agrifolia)*
  - ■ Shamel Ash *(Fraxinus uhdei)*

Wetland ("Waters of the U.S.")

- Pickleweed Mat
- Cattail Marsh

"Waters of the U.S."

Open "waters", measured at the ordinary high water mark of a stormwater drainage, functioning as a tributary to "Waters of the US".

- Existing Structures
- Pavement
- Chainlink Fence
- Property Line
- Observation Points (OP)
- Project Footprint
- Proposed New Structure
- ⇒ Photo location and direction (see Figure 4)

Figure 3: Vegetation & Wetland Delineation

Goleta West Sanitary District
Biological Assessment

Revised 11/25/15 (6/17/15 & 5/11/15)

RACHEL• TIERNEY CONSULTING

PHOTO 1 / OP#1 a and b - Iceplant and Pickleweed (looking northwest).

PHOTO 2 / OP#1 - Pickleweed (looking south).

PHOTO 3 / OP 2b - Mixed Jaumea Meadow.

PHOTO 4 / OP 2a - Annual and Perennial Ruderals (looking west).

PHOTO 5 / OP 2a - Annual and Perennial Ruderals (looking east).

PHOTO 6 / Paved access south of existing Shop/Garage. Proposed Admin. Build would extend into this area and beyond the gate to the east

PHOTO 7/ Arroyo willow thicket near OP #3.

Figure 4: Observation Point Photos

Goleta West Sanitary District
Biological Assessment

Revised 11/25/15 (5/11/15)

RACHEL• TIERNEY CONSULTING

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: 34,4222 | City/County: Santa Barbara/Santa Barbara | Sampling Date: April 3, 2015

Applicant/Owner: GWSD | State: CA | Sampling Point: OP1a

Investigator(s): R. Tierney | Section, Township, Range: S18, T4N, R28W

Landform (hillslope, terrace, etc.): FIll Pad | Local relief (concave, convex, none): none | Slope (%): 0

Subregion (LRR): Medeterraen | Lat: 34,4222 | Long: -119,8522 | Datum: _____

Soil Map Unit Name: Aquepts, flooded | NWI classification: No

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒		
Hydric Soil Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: **Planted iceplant growing on fill slope (building pad for site.)**

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:_____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
50% = _____, 20% = _____		= Total Cover	
Sapling/Shrub Stratum (Plot size:_____)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size:_____)			
1. *Carpobrotus edulis*	100	yes	UPL
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
50% = _____, 20% = 100	100	= Total Cover	
Woody Vine Stratum (Plot size:_____)			
1. _____			
2. _____			
50% = _____, 20% = _____		= Total Cover	
% Bare Ground in Herb Stratum 0	% Cover of Biotic Crust 0		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

	Total % Cover of :	Multiply by:
OBL species	_____	x1 = _____
FACW species	_____	x2 = _____
FAC species	_____	x3 = _____
FACU species	_____	x4 = _____
UPL species	100	x5 = 500
Column Totals:	100 (A)	500 (B)

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☐ No ☒**

Remarks:

Project Site: GWSD

SOIL Sampling Point: OP1a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Remarks
	10YR 3/3							

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR C)**
- ☐ 2 cm Muck (A10) **(LRR B)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (Inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks: Fill

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) **(Nonriverine)**
- ☐ Sediment Deposits (B2) **(Nonriverine)**
- ☐ Drift Deposits (B3) **(Nonriverine)**
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) **(Riverine)**
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☐ Drift Deposits (B3) **(Riverine)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches):

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: 34,4222 | City/County: Santa Barbara/Santa Barbara | Sampling Date: April 3, 2015

Applicant/Owner: GWSD | State: CA | Sampling Point: OP1b

Investigator(s): R. Tierney | Section, Township, Range: S18, T4N, R28W

Landform (hillslope, terrace, etc.): slough | Local relief (concave, convex, none): none | Slope (%): 1

Subregion (LRR): Medeterraen | Lat: 34,4222 | Long: -119,8522 | Datum: _____

Soil Map Unit Name: Aquepts, flooded | NWI classification: PEMT

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐		
Hydric Soil Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: **)NWI "PEMT"= Palustrine, emergent, semipermanent-tidal -- Site is a pickleweed dominated saltmarsh**

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:_____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
50% = _____, 20% = _____		= Total Cover	
Sapling/Shrub Stratum (Plot size:_____)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size:_____)			
1. *Sarcocornia pacificaa*	100	yes	OBL
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
50% = _____, 20% = _____	100	= Total Cover	
Woody Vine Stratum (Plot size:_____)			
1. _____			
2. _____			
50% = _____, 20% = _____		= Total Cover	
% Bare Ground in Herb Stratum 0	% Cover of Biotic Crust 0		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of :		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: Goleta Slough - Salicornia salt marsh

Project Site: GWSD

SOIL Sampling Point: OP1b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	100%					clay	roots
5-18	10YR 4/4	30-60%	10YR 5/2	20-40%	S4	M		
			10YR 3/1	10-20%				

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☒ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR C)**
- ☐ 2 cm Muck (A10) **(LRR B)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (Inches): _____

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1) **(Nonriverine)**
- ☐ Sediment Deposits (B2) **(Nonriverine)**
- ☐ Drift Deposits (B3) **(Nonriverine)**
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) **(Riverine)**
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☐ Drift Deposits (B3) **(Riverine)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	_____
Water Table Present?	Yes	☐	No	☒	Depth (inches):	_____
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	18

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: GWSD | City/County: Santa Barbara/Santa Barbara | Sampling Date: April 3, 2015

Applicant/Owner: GWSD | State: CA | Sampling Point: OP2a

Investigator(s): R. Tierney | Section, Township, Range: S18, T4N, R28W

Landform (hillslope, terrace, etc.): weedy transition area above marsh | Local relief (concave, convex, none): none | Slope (%): 0

Subregion (LRR): Medeterraen | Lat: 34,4222 | Long: -119,8522 | Datum: _____

Soil Map Unit Name: Aquepts, flooded | NWI classification: PEMT

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐ No ☐		
Hydric Soil Present?	Yes ☐ No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Wetland Hydrology Present?	Yes ☐ No ☐		

Remarks: **OP is on fill, above marsh**

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:_____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
50% = _____, 20% = _____		= Total Cover	
Sapling/Shrub Stratum (Plot size:100 sf)			
1. *Baccharis pilularis*	5	yes	NL (UPL)
2. _____			
3. _____			
4. _____			
5. _____			
50% = _____, 20% = _____	5	= Total Cover	
Herb Stratum (Plot size:20 sf)			
1. *Carpobrotus edulis*	30	yes	NL (UPL)
2. *Piptatherum miliaceum*	40	yes	UPL
3. *Carduus pycnocephalus*	2	no	
4. *Foeniculum vulgare*	10	no	
5. _____			
6. _____			
7. _____			
8. _____			
50% = _____, 20% = 70%	82%	= Total Cover	
Woody Vine Stratum (Plot size:_____)			
1. _____			
2. _____			
50% = _____, 20% = _____		= Total Cover	
% Bare Ground in Herb Stratum **0**	% Cover of Biotic Crust _____		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of :		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☐ No ☒**

Remarks:

Project Site: GWSD

SOIL Sampling Point: OP 2a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	100%					sandy	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR C)**
- ☐ 2 cm Muck (A10) **(LRR B)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (Inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) **(Nonriverine)**
- ☐ Sediment Deposits (B2) **(Nonriverine)**
- ☐ Drift Deposits (B3) **(Nonriverine)**
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) **(Riverine)**
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☐ Drift Deposits (B3) **(Riverine)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches):

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No primary or secondary wetland hydrology indecators noted.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: 34,4222 | City/County: Santa Barbara/Santa Barbara | Sampling Date: April 3, 2015

Applicant/Owner: GWSD | State: CA | Sampling Point: OP2b

Investigator(s): R. Tierney | Section, Township, Range: S18, T4N, R28W

Landform (hillslope, terrace, etc.): Edge of FIll Pad | Local relief (concave, convex, none): ____ | Slope (%): 0

Subregion (LRR): Medeterraen | Lat: 34,4222 | Long: -119,8522 | Datum: _____

Soil Map Unit Name: Aquepts, flooded | NWI classification: PEMT

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐		
Hydric Soil Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☒**
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: **Site is between salt marsh and upland weedy area. I cannot find any other indications of positive hydrology, although my take is that this is a wetland.**

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:_____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
50% = _____, 20% = _____		= Total Cover	
Sapling/Shrub Stratum (Plot size:_____)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size:_____)			
1. *Jaumea carnosa*	50	yes	OBL
2. *Apium graveolen*	20	yes	NI
3. *Helminthotheca echioides*	20	yes	FACU
4. *Frankenia grandiflora*	10	no	
5. *Salicornia pacifica*	15	no	
6. _____			
7. _____			
8. _____			
50% = _____, 20% = 90	115	= Total Cover	
Woody Vine Stratum (Plot size:_____)			
1. _____			
2. _____			
50% = _____, 20% = _____		= Total Cover	
% Bare Ground in Herb Stratum 0		% Cover of Biotic Crust 0	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	66	(A/B)

Prevalence Index worksheet:

	Total % Cover of :	Multiply by:
OBL species	_____	x1 = _____
FACW species	_____	x2 = _____
FAC species	_____	x3 = _____
FACU species	_____	x4 = _____
UPL species	_____	x5 = _____
Column Totals:	_____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks: Cannot locate celery's wetland status (?) . I am presumming it must be highter than FAC.

Project Site: GWSD

SOIL Sampling Point: OP1b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/1	100%						dark organic
3-7	10YR 3/2	95%	10YR 6/6	5%	RM			small rivines (pores?)
7-18		60%	10YR4/1	40%		M		globs w/in matrix

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☒ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR C)**
- ☐ 2 cm Muck (A10) **(LRR B)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (Inches):

Hydric Soils Present? **Yes** ☒ **No** ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) **(Nonriverine)**
- ☐ Sediment Deposits (B2) **(Nonriverine)**
- ☐ Drift Deposits (B3) **(Nonriverine)**
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) **(Riverine)**
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☐ Drift Deposits (B3) **(Riverine)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):
Water Table Present?	Yes	☐	No	☒	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: GWSD | City/County: Santa Barbara/Santa Barbara | Sampling Date: April 3, 2015

Applicant/Owner: GWSD | State: CA | Sampling Point: OP3a

Investigator(s): R. Tierney | Section, Township, Range: S18, T4N, R28W

Landform (hillslope, terrace, etc.): FIll Pad | Local relief (concave, convex, none): ____ | Slope (%): 5

Subregion (LRR): Medeterraen | Lat: 34,4222 | Long: -119,8522 | Datum: _____

Soil Map Unit Name: Aquepts, flooded | NWI classification: No

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒		
Hydric Soil Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: **D**rainage with shamel ash, arroyo willow and oak. OP on upper bank.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:_____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. *Salix lasiolepis*	70	yes	FACW
3. _____	_____	_____	_____
4. _____	_____	_____	_____
50% = _____, 20% = _____	70	= Total Cover	
Sapling/Shrub Stratum (Plot size:_____)			
1. *Quercus agrifolia*	40	yes	UPL
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
50% = _____, 20% = _____	40	= Total Cover	
Herb Stratum (Plot size:_____)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
50% = _____, 20% = _____	_____	= Total Cover	
Woody Vine Stratum (Plot size:_____)			
1. *Toxicodendron diversilobum*	15	yes	UPL
2. _____	_____	_____	_____
50% = _____, 20% = _____	15	= Total Cover	
% Bare Ground in Herb Stratum _____	% Cover of Biotic Crust _____		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: **33** (A/B)

Prevalence Index worksheet:

Total % Cover of :		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☐ No ☒**

Remarks:

Project Site: GWSD

SOIL Sampling Point: OP 3a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 4/3	100					sandy	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR C)**
- ☐ 2 cm Muck (A10) **(LRR B)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (Inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) **(Nonriverine)**
- ☐ Sediment Deposits (B2) **(Nonriverine)**
- ☐ Drift Deposits (B3) **(Nonriverine)**
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) **(Riverine)**
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☐ Drift Deposits (B3) **(Riverine)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches):

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: upper bank of drainage, south of facility.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: GWSD | City/County: Santa Barbara/Santa Barbara | Sampling Date: April 3, 2015

Applicant/Owner: GWSD | State: CA | Sampling Point: OP3b

Investigator(s): R. Tierney | Section, Township, Range: S18, T4N, R28W

Landform (hillslope, terrace, etc.): FIll Pad | Local relief (concave, convex, none): ____ | Slope (%): 0

Subregion (LRR): Medeterraen | Lat: 34,4222 | Long: -119,8522 | Datum: _____

Soil Map Unit Name: Aquepts, flooded | NWI classification: No

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐		
Hydric Soil Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: **OP 3b is at toe of bank near water edge. D**rainage with shamel ash, arroyo willow and coast live oak.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:_____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix lasilepis*	100	yes	FACW
2. _____			
3. _____			
4. _____			
50% = _____, 20% = _____	100	= Total Cover	
Sapling/Shrub Stratum (Plot size:_____)			
1. *Quercus agrifolia*	40	yes	UPL
2. _____			
3. _____			
4. _____			
5. _____			
50% = _____, 20% = _____	40	= Total Cover	
Herb Stratum (Plot size:_____)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
50% = _____, 20% = _____		= Total Cover	
Woody Vine Stratum (Plot size:_____)			
1. *Toxicodendron diversilobum*	15	yes	UPL
2. _____			
50% = _____, 20% = _____	15	= Total Cover	
% Bare Ground in Herb Stratum _____	% Cover of Biotic Crust _____		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of :		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	_____	x3 =	_____
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☐ No ☒**

Remarks:

Project Site: GWSD

SOIL Sampling Point: OP3b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2							
3-18	10YR 2/2		10YR 2/1	5%				

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR C)**
- ☐ 2 cm Muck (A10) **(LRR B)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (Inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks: verging on striped bu very faint.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) **(Nonriverine)**
- ☐ Sediment Deposits (B2) **(Nonriverine)**
- ☐ Drift Deposits (B3) **(Nonriverine)**
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) **(Riverine)**
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☐ Drift Deposits (B3) **(Riverine)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☐ Depth (inches):

Water Table Present? Yes ☐ No ☐ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☐ No ☐ Depth (inches):

Wetland Hydrology Present? **Yes** ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Above apparent ordinary high water mark.

ATTACHMENT C

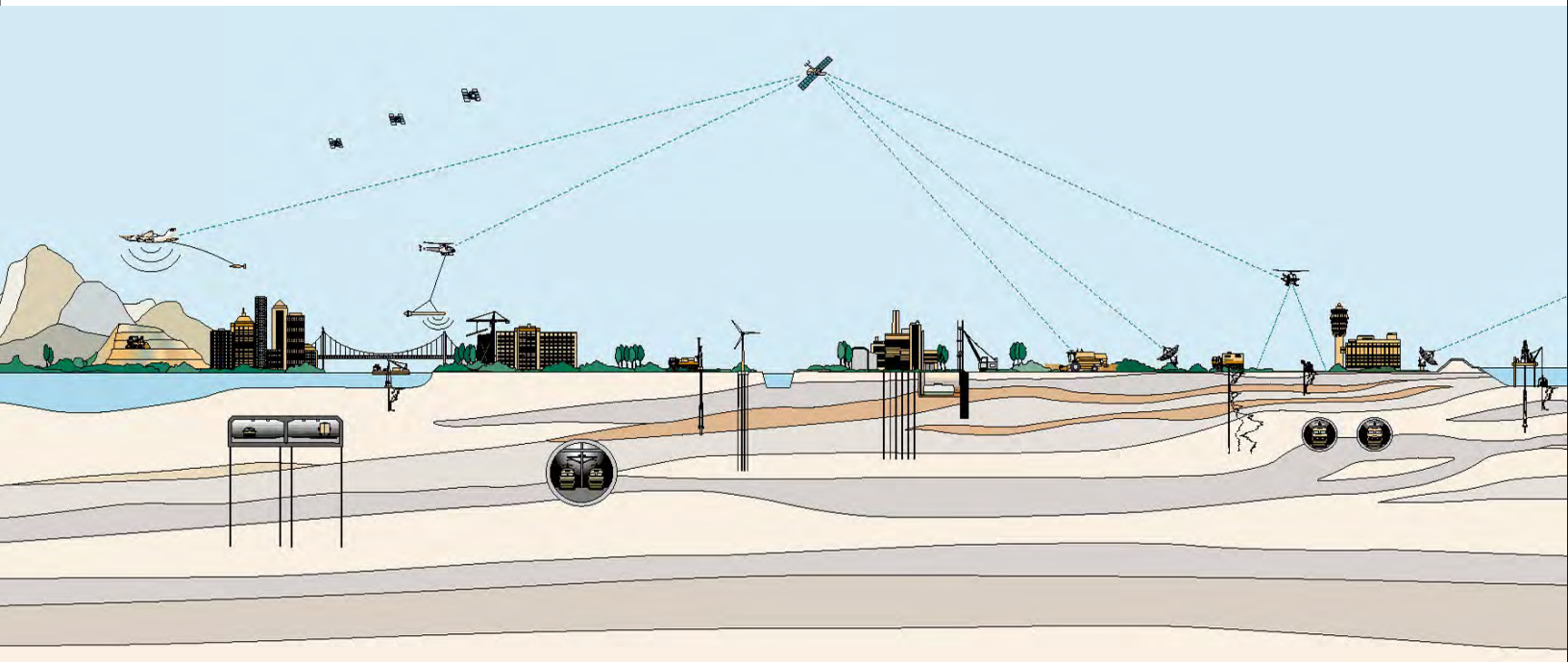
Geotechnical Study, Proposed Administration Building Goleta West Sanitary District prepared by Fugro Consultants Inc.

FUGRO CONSULTANTS, INC.

GEOTECHNICAL STUDY
PROPOSED ADMINISTRATION BUILDING
GOLETA WEST SANITARY DISTRICT
GOLETA, SANTA BARBARA COUNTY, CALIFORNIA

Prepared for:
GOLETA WEST SANITATION DISTRICT

April 2015
Fugro Project No. 04.62140143



FUGRO CONSULTANTS, INC.

4820 McGrath Street, Suite 100
Ventura, California 93003-7778
Tel: (805) 650-7000
Fax: (805) 650-7010

April 24, 2015
Project No. 04.62140143

Goleta West Sanitary District
P.O. Box 4
Goleta, CA 93116-0004

Attention: Mr. Mark Nation

Subject: Geotechnical Study, Proposed Administration Building, Goleta West Sanitary District, Goleta, Santa Barbara County, California

Dear Mr. Nation:

Fugro is pleased to submit this report for the design and construction of a new administration building proposed at the Goleta West Sanitary District facility located adjacent to the University of California Santa Barbara's Parking Lot 32 northeast of the intersection of Mesa Road and Stadium Road in Goleta, California. This report was prepared in general accordance with our proposals dated November 14, 2014, and January 27, 2015. Our services were authorized by an Agreement for Services, dated November 25, 2014, and an amendment to services, dated February 3, 2015. Our original scope of services was geared towards design of a shallow foundation system. However, after our initial field exploration in December 2014, the project team decided to design a deep foundations system.

The enclosed report provides our interpretation of the subsurface conditions in the project area and geotechnical recommendations for deep foundation design of the new administration building.

If there are any questions regarding the contents of this report please do not hesitate to contact the undersigned.

Sincerely,

FUGRO CONSULTANTS, INC.

Gregory S. Denlinger, G.E.
Principal Geotechnical Engineer

REGISTERED PROFESSIONAL ENGINEER
GREGORY S. DENLINGER
No. 2249
Exp. 3/31/16
Geotechnical
STATE OF CALIFORNIA

Copies Submitted: (1 PDF via email) Addressee

CONTENTS

TABLES

PLATES

APPENDICES

INTRODUCTION

GENERAL

This report summarizes the results of our geotechnical study performed for a new Administration Building at the Goleta West Sanitary District's (GWSD) facility in Goleta, California. The GWSD facility is located adjacent to the University of California Santa Barbara's Parking Lot 32 northeast of the intersection of Mesa Road and Stadium Road. The general project location is shown on Plate 1 – Vicinity Map. More detailed information regarding the physical features of the project area is provided on Plate 2 – Site Layout and Exploration Map.

The results of our study, as described in this report, include descriptions of our field exploration and laboratory testing programs performed for the study, interpretation of the subsurface conditions based upon previous and project-specific exploration data, and recommendations for the geotechnical design and construction of the foundation system for the new administration building. The work was performed in general accordance with our proposal dated November 14, 2014, and authorized by an Independent Contractor Agreement between Goleta West Sanitary District and Fugro, dated November 25, 2014.

PROJECT DESCRIPTION

The proposed site improvements consist of a lightly framed one-story building with slab on grade foundation. In addition, because the site is located in a flood plain, the perimeter of the building will be surrounded by a 32-inch high, 8-inch wide concrete stem walls for flood protection.

Initially, the project team anticipated that the building could be supported on a shallow foundation system. Data acquired in our initial site exploration in December 2014, suggested that the locally areas of deep loose fills are present and the native soils in the upper 20 to 30 feet are soft and/or potentially liquefiable. On the basis of those data, it was uncertain whether a shallow foundation system was feasible due to the potential effects of liquefaction and differential settlement of the footings.

Based on the input from Fugro, the project team decided to consider supporting the proposed building on a deep foundation system. Fugro performed supplemental field exploration in February 2015 in an effort to better characterize the soil, bedrock, and groundwater conditions in the building footprint.

We understand the general site grade will not change significantly and that the area surrounding the structure will consist of a combination of landscape, hardscape, and an asphalt paved parking lot. As shown on Plate 2, the site is currently occupied by several small buildings, which will be demolished to make room for the new building.

PURPOSE

The purpose of this geotechnical study is to evaluate the geotechnical conditions at the project site and provide geotechnical conclusions and recommendations for foundation and pavement design for the proposed new administration building.

WORK PERFORMED

The work performed for this study consisted of project initiation and pre-exploration services, subsurface exploration and sampling, geotechnical laboratory testing, and evaluation and reporting. Services associated with these tasks are summarized below.

Project Initiation and Pre-Exploration

For this task we initiated the project, reviewed prior geotechnical work performed by Fugro in the project area, and coordinated with the project team regarding the proposed work.

Field Exploration

Prior to initiating our field exploration program, we performed a site reconnaissance to delineate the exploration locations and contacted Underground Service Alert (USA) for marking and clearance of underground utilities in the work area. We also coordinated with facility staff regarding site access for the subsurface exploration program and potential utility conflicts.

The initial field exploration program was performed on December 17, 2014, and consisted of the excavation, sampling and logging of two stem auger drill holes within the proposed building footprint. S/G Drilling Company of Lompoc, California was our subcontractor for that work. S/G Drilling used a truck-mounted CME-75 high torque drill rig to advance the 8-inch hollow stem auger holes to depths of about 51 feet below the ground surface (bgs).

Our supplemental field exploration program was performed on February 9, 2015, and consisted of the advancement of seven cone penetration tests (CPTs) in or adjacent to the building footprint. Fugro performed the cone penetration testing work using a 20-ton truck-mounted rig to advance the CPT soundings to depths ranging from about 50 to 75 feet (bgs). Pore dissipation tests were performed at select depths to estimate groundwater levels.

The approximate locations of the drill holes and CPT soundings are shown on Plate 2. Field exploration procedures, drill hole and CPT logs, and pore dissipations test results are presented in Appendix A – Field Exploration.

Laboratory Testing

The laboratory testing program for this study included analysis of unit weight, moisture content, fines content, plasticity, direct shear, unconsolidated undrained triaxial shear, consolidation, R-value, and corrosion. Laboratory testing was performed in general accordance with the applicable California or ASTM test methods. Laboratory testing procedures and results are presented in Appendix B – Laboratory Testing.

Geotechnical Evaluation and Reporting

We prepared this report to provide the geotechnical data obtained for this project and summarize our opinions and recommendations for the following:

- Soil and groundwater conditions at current and previous exploration locations;
- Geologic hazards such as strong ground shaking and ground rupture from faulting;
- Seismic design parameters for use with the 2013 California Building Code;
- Liquefaction potential and estimated seismic settlement;
- Deep foundation design consisting of axial and lateral capacities, foundation embedment depths, and anticipated settlement;
- Recommendations for earthwork and grading, use of onsite soils as fill, dewatering, and temporary excavations;
- Recommendations for perimeter screen wall design, including overexcavation limits and compacted fill requirements;
- Construction considerations such as temporary excavations, shoring, and dewatering;
- Preliminary pavement design; and
- Corrosion potential of onsite soils.

FINDINGS

SITE CONDITIONS

The GWSD facility is located adjacent to the University of California Santa Barbara's Parking Lot 32 northeast of the intersection of Mesa Road and Stadium Road, as shown on Plate 1. The project site is located at the south end of the GWSD facility, south of two existing buildings, as shown on Plate 2. There are numerous underground utilities in the project area and currently several structures within the proposed building footprint that will be demolished in advance of the new construction.

The site is located on the margin of the Goleta Slough and existing grade in the project area varies from about elevation (el.) +10 feet to about +15 feet relative to the North American Vertical Datum of 1988 (NAVD88). The grade in the proposed building area is relatively flat and is at an elevation of about +12 feet. The site is currently accessed by an asphalt concrete access road that runs north and east from the facility's primary entrance drive.

PREVIOUS GEOTECHNICAL AND GEOLOGIC STUDIES

Geologic and geotechnical studies were performed by Fugro for projects proximal to the GWSD facility. Fugro performed a geotechnical study for Goleta West Sanitary District's Mesa Road Sewer Pipeline project, which included a boring excavated within the existing Parking Lot

32 adjacent to the current project site (Fugro, 2010). Two other borings were excavated in support of our UCSB Sewer Renewal study (Fugro, 1999a), which was located about 200 feet south of the current project site. Two borings were also excavated within Parking Lot 32 in support of our pavement rehabilitation study (Fugro, 1999b). We used data from those nearby projects to assist in our interpretation of the subsurface conditions at the project site.

LOCAL GEOLOGY

The project site is located on the coastal plain south of the Santa Ynez Mountain Range. The Santa Ynez Mountain Range is part of the western Transverse Ranges, a predominantly east-west trending mountain block extending from Point Arguello eastward into Ventura County. The Santa Ynez Mountains and adjacent alluvial plain are composed almost entirely of sedimentary rocks ranging from late Jurassic to Recent.

In the Santa Barbara and Goleta area, the structure of the Santa Ynez mountains consists of a south-dipping homocline with east-west striking faults and related folds preserved on the coastal plain (Dibblee, 1966). Late Pleistocene uplift has locally created the elevated UCSB-Isla Vista-Devereaux marine terrace. The More Ranch/Mission Ridge/Arroyo Parida faults form one of the principal fault systems on the coastal plain.

The project site is located north of the UCSB-Isla Vista-Devereaux marine terrace on the west/southwest margin of the Goleta Slough. Minor et al. (2009) map the site as underlain by estuarine deposits. Geologic conditions in the project area as mapped by Minor et al. are shown on Plate 3 – Local Geologic Map.

As shown on Plate 3, Minor et al. (2009) maps the north branch of the More Ranch fault as trending northeast through the UCSB campus police and fire station and across the project site. Work to locate or evaluate the presence or absence of the fault relative to the project site was beyond the scope of our services.

SUBSURFACE CONDITIONS

Earth Materials

Based on the drill holes and CPTs advanced during the field exploration the project site is underlain by artificial fill and undifferentiated younger alluvium extending to depths ranging from about 20 to 35 feet below the ground surface (bgs). Bedrock materials of the Pico Formation were encountered below the artificial fill and alluvium to the maximum depth explored of about 75 feet below the ground surface.

Artificial Fill (Af)

Artificial fill was encountered in the drill holes and CPTs excavated for this study. We estimate that the artificial fill ranges from about 5 to about 9 feet thick and consists of loose to medium dense silty and medium stiff sandy clay. However, based on information provided to us by GWSD staff, we understand that a relatively deep excavation may have occurred in the area of drill hole DH-1 and CPT-2. The excavation may have resulted in a deep section of fill in this

area and lowering the bedrock surface elevation relative to the elevation encountered in the adjacent explorations. The limits of the reported excavation are not known. We note that it can be difficult to distinguish artificial fill from in-place soils, however, on a qualitative basis the soil samples retrieved from drill hole DH-1 above the bedrock surface appeared to be fill. In addition, the yellowish brown sand silty sand encountered at a depth of 23 to 34 feet appeared similar to imported sand locally referred to as “yellow sand “or “Santa Barbara sand”.

Undifferentiated Younger Alluvium (Qal)

Undifferentiated younger alluvium was encountered in drill hole DH-2 below the artificial fill at an estimated depth of about 7 feet. The alluvial soils in DH-2 consist of soft sandy clay to fat clay and loose to very loose silty sand. On the basis of our interpretation of the CPT data, we estimate that similar materials consisting of loose to medium dense silty sand and soft to medium stiff clay alluvial soils are present below the artificial fill and extend to the bedrock surface at depth.

Pico Formation (QTp)

Siltstone bedrock of the Pico Formation was encountered below the artificial fill and undifferentiated alluvium in drill holes and CPTs to the maximum depth explored. The bedrock was encountered at a depth of about 20 below grade (about el. -8 feet) in DH-2 and soundings CPT-1, CPT-3, CPT-4, CPT-5, CPT-6 and CPT-7. The bedrock was encountered at a depth of about 34 feet in drill hole DH-1 and in CPT-2. As discussed above, we interpret the lower bedrock elevation at DH-2 and CPT-1 to be the related to the deep excavation that facility staff indicated occurred in that area.

In general, the Pico Formation bedrock consists of highly to extremely weathered, poorly indurated, soft greenish gray siltstone and claystone. The undrained shear strength of the siltstone materials from two unconsolidated undrained triaxial compression tests ranged from about 6 to 10 ksf and undrained strengths interpreted from the CPT soundings range from about 3 to 15 ksf.

Potential Variation of Subsurface Conditions

Between exploration and sampling locations, there is a potential for both variation in the geometry, consistency, density, and strength/hardness of the earth materials as well as the existence of oversized materials (i.e., greater than 6 inches in diameter). In addition, the boundaries between soil types shown on the logs are approximate because the transition between different soil layers may be gradual or difficult to recognize due to the sampling interval and diameter of the explorations. If significant variations in subsurface conditions are observed during construction, we recommend that the geotechnical engineer, in conjunction with the project designer, evaluate the impact of those variations on the project design.

Groundwater Conditions

Groundwater was encountered in the drill holes and CPT soundings excavated for this study. Groundwater was initially encountered in drill hole DH-1 at a depth of about 30 feet bgs

and the depth to groundwater at the completion of drilling was measured at about 24 feet bgs. Wet soil materials were encountered during drilling of drill hole DH-2 at about 8 feet bgs; however, no static free groundwater level was encountered following completion of the drill hole. The varying depths to water in the two drill holes was likely the result of clayey materials being smeared along the sides of the drill holes during drilling and extraction of the augers and reducing groundwater seepage into the drill hole. In a drill hole excavated for the nearby Mesa Road Sewer Pipeline project (about 100 feet west of the project site), groundwater was measured at about 12 feet bgs (Fugro 2010).

On the basis of the available data, we suggest a depth to groundwater of about 8 feet below the existing ground surface (or at about el. +4 feet) be assumed for planning and design of the proposed project. However, we note that the depth to groundwater can vary over time or seasonally in response to precipitation levels, irrigation, land use changes, and other factors.

GEOLOGIC HAZARDS

Faults

Regional compressive forces acting on the Santa Barbara coastal area have resulted in generally east-west trending folds and faults. Gurrola (1998) terms the coastal plain region the Santa Barbara Fold Belt (SBFB), which is characterized by active folding and buried reverse faulting. Active or potentially active faults within about a 25-mile radius of the project site and their estimated maximum earthquake magnitudes are listed in Table 1 – Significant Faults. The faults, magnitudes, and estimated distances presented in Table 1 are based on the 2008 National Seismic Hazard Maps - Fault Parameters (USGS, 2008c) website with searchable fault database.

Table 1. Significant Faults

Fault	Distance[1] From Site (miles)	Estimated Earthquake Magnitude (M_w)[2]
Mission Ridge	0.36	6.8
Red Mountain	2.8	7.4
North Channel	5.2	6.7
Pitas Point	5.8	6.8
Santa Ynez	13.4	7.2
Oak Ridge (Offshore)	15.3	6.9
Ventura-Pitas Point	17.1	6.9
Channel Islands Thrust	30.9	7.3
Oak Ridge (Onshore)	38.9	7.2
San Cayetano	39.6	7.2

1) Distances are from site to mapped surface trace based on published references.

2) Estimated Magnitude represents the average of the maximum magnitudes reported by Hanks (2002) and Ellsworth (2003)

Faults within the More Ranch fault system are the closest to the site. As discussed previously, Minor et al. (2009) maps the north branch of the More Ranch fault as roughly trending east-northeast across the southern half of the Goleta Slough in the immediate vicinity of the project site. The location of the fault as mapped by Minor et al. (2009) is shown on Plate 3.

Ground Rupture Potential

The site is not within an Alquist-Priolo Earthquake Zone (as defined by the CDMG), which is a zone that delineates areas of known active faults that may be subject to surface displacement from future faulting. However, the North Branch of the More Ranch fault is mapped trending beneath the project site by Minor et al. (2009) and the USGS fault data base maps the fault as 0.36 miles from the fault. Work to evaluate the presence or absence of the fault within the project limits was not part of this study.

However, on a qualitative basis, the bedrock surface elevation appears to be relatively consistent across the site with the exception of DH-1 and CPT-2 where we understand a deep excavation was reportedly made. On that basis, the current subsurface data for the project do not show obvious evidence of bedrock offset or displacement from faulting. However, we cannot quantify the ground rupture hazard at the site from the data. In our opinion, a more significant evaluation, likely consisting of rows of closely spaced CPT soundings oriented north-south and located west of the site would be required to better qualify the risk of ground rupture at the site from the More Ranch fault.

USGS Probabilistic Seismic Hazard Deaggregations

Ground motions were obtained from the 2008 Interactive Deaggregations (Beta) website (USGS, 2008a) and the 2013 California Building Code (CBC, 2013). California Geological Survey (CGS, 2008c), Special Publication (SP) 117A (pg. 9 and 16) defers to the USGS website to determine a uniform hazard spectrum for a specified location in terms of latitude and longitude, and is performed in lieu of using the ground shaking hazard maps included in the CGS Seismic Hazard Zone Reports. Review of USGS (2008a) website estimates probabilistic peak horizontal ground accelerations (pga) for the project area of about 0.57g for a 475-year return period (10 percent probability of exceedance in 50 years). Table 2 summarizes estimated strong ground motion parameters for the project site.

Table 2. Summary of USGS Probabilistic Seismic Hazard Deaggregations Results

Return Period (years)	Mean Magnitude (Mw)	Mean Source Distance (km)	Peak Horizontal Ground Acceleration
475	6.9	6.6	0.57g

2013 CBC Seismic Design Parameters

The proposed structures should be designed to resist the lateral forces generated by earthquake shaking in accordance with local design practice. Table 3 summarizes seismic design parameters in general accordance with Section 1613 of the 2013 CBC.

Table 3. Code-Based Seismic Design Parameters, Site Class D

2013 California Building Code Section 1613A	Seismic Parameter	Value
---	Latitude	N 34.4222°
---	Longitude	W 119.8521°
Section 1613.3.1	Mapped Acceleration Response Parameter (S_s)	2.939
Section 1613.3.1	Mapped Acceleration Response Parameter (S_1)	1.05
Section 1613.3.2	Site Class	D
Section 1613.3.3 and Table 1613.3.3(1)	Site Coefficient (F_a)	1.0
Section 1613.3.3 and Table 1613.3.3(2)	Site Coefficient (F_v)	1.5
Section 1613.3.3	Adjusted Acceleration Response Parameter for Site Class D (S_{MS})	2.939
Section 1613.3.3	Adjusted Acceleration Response Parameter for Site Class D (S_{M1})	1.569
Section 1613.3.4	Design Spectral Response Acceleration Parameter (S_{DS})	1.959
Section 1613.3.4	Design Spectral Response Acceleration Parameter (S_{D1})	1.046
ASCE 7-10 Section 11.8.3	Mapped MCE Geometric Mean (MCE_G) Peak Ground Acceleration (PGA)	1.196
ASCE 7-10 Section 11.8.3	Site Coefficient (F_{PGA})	1.0
ASCE 7-10 Section 11.8.3	Adjusted MCE_G Peak Ground Acceleration for Site Class D (PGA_M)	1.196

The S_{DS} and S_{D1} factors can be used to develop the response spectrum as described in Section 11.4.5 of ASCE Standard 7-10.

Liquefaction Potential

Liquefaction is a phenomenon where loose saturated soils lose strength due to a buildup of excess pore pressure during seismic ground shaking. Liquefaction is typically evaluated for the upper 50 feet of the soil profile for this type of lightly loaded and at-grade construction. As described above, loose to medium dense granular soils are present in the fill and alluvial deposits and in our opinion, those soils below the groundwater level are susceptible to liquefaction.

We evaluated the liquefaction potential of the on-site granular soils using the computer program CLIQ (Geologismiki, 2006) and the procedure described in Youd and Idriss, (2001) [NCEER 1998]. Our analyses focused primarily on the CPT sounding data acquired at the site and ground motion parameters used in our analysis consisted of a peak ground acceleration of 1.196g and an earthquake magnitude of 6.9.

Our analyses indicate that there are soil layers present at the site that are susceptible to liquefaction. Potential consequences of liquefaction could consist of settlement, lateral deformation, and downdrag loads on deep foundations. On the basis of our evaluations, we estimate that ground surface settlements ranging from about 2 to 5 inches could occur from liquefaction under the design earthquake parameters. The settlements are anticipated to generally result from liquefaction of the saturated soils at depths between 8 feet bgs (assumed groundwater depth) and the bedrock surface.

Southern California Earthquake Center (SCEC) (1999) suggests that differential settlements from liquefaction at sites underlain by relatively uniform conditions can be estimated as about one half the estimated total settlement. Assuming the soil conditions will be relatively uniform, preliminary estimates of differential ground settlement from liquefaction can be assumed equal to one half of the estimated total settlement, or about 1 to 2-1/2 inches.

Seismically Induced Settlement

On a qualitative basis, we estimate the potential for seismically induced settlement of unsaturated soils above the groundwater level to be less than about ½-inch.

CONCLUSIONS AND RECOMMENDATIONS

SUMMARY OF FINDINGS

- The site is underlain by artificial fill/alluvium overlying Pico Formation siltstone to claystone bedrock. The alluvium and artificial fill soils are generally loose, soft, and compressible and in our opinion, not suitable for supporting structure foundations.
- Groundwater was encountered within the artificial fill/alluvium. For design purposes, we have assumed that groundwater is present at a depth of about 8 feet below grade or about elevation +4 feet.
- The bedrock is generally at a depth of about 20 feet below grade or at an elevation of about -8 feet. However, the bedrock surface in the northeastern portion of the site (in the general vicinity of DH-1 and CPT-2) is about 32 feet below grade or at an elevation of about -20 feet. For engineering design purposes, we have modeled the bedrock as a very stiff to hard clay. We recommend that structure be supported on a deep foundation system constructed in the underlying bedrock and for this project, we have assumed the structure will be supported on cast-in-drill hole (CIDH) concrete piles.

- The site is in a seismically active area; the soil materials encountered are considered vulnerable to liquefaction and seismic settlement. Deep foundations should be designed to consider potential downdrag loads from liquefaction of the existing artificial fill and alluvial soils.
- Wet construction methods will be required to drill and construct CIDH piles and drilling slurry and temporary casing should be expected to reduce the potential for caving of the drilled hole.
- Evaluation of the presence or absence of the mapped north branch of the More Ranch fault was beyond the scope of this work.

FOUNDATION DESIGN

As discussed previously, a foundation system consisting of cast-in-drill hole (CIDH) piles and grade beams and a structural floor slab is currently the preferred foundation type for the proposed new administration building. Geotechnical conditions at the site generally consist of artificial fill and alluvial soils overlying Pico Formation siltstone and claystone. In general, we anticipate the subsurface conditions are relatively uniform across the site. However, as discussed the subsurface conditions in the northeast portion of the site near DH-1 and CPT-2 may have been modified by past grading in this area. We have interpreted that artificial fill soils extend to the bedrock surface and that the bedrock is present in this area about 32 feet below grade or at about elevation -20 feet.

We developed an idealized geotechnical engineering profile for the project site using the geotechnical data acquired from our drill holes and CPT soundings and we used this idealized profile as the basis for our geotechnical analyses and in developing our geotechnical design recommendations for the project. Our idealized profile and selected geotechnical engineering parameters assumed for the major soil units are summarized below in Tables 4a and 4b – Idealized Soil Profile. We developed two profiles for the project to represent the variable depth of fill and deeper bedrock surface elevation encountered in the northeast area of site at DH-1 and CPT-2.

A cross section showing the general soil conditions of the site is provided on Plate 4 – Subsurface Profile A-A'.

Table 4a. Idealized Subsurface Conditions – General site Conditions

Elevation (ft)	Generalized Soil Material	L-Pile Soil Type	Total Unit Weight (pcf)	Undrained Shear Strength (psf)	Friction Angle (degrees)	ε50 (in/in)	k (pci)
+12 to +4	Artificial Fill: Loose to Medium Dense Silty Sand to Clayey Sand	Sand (Reese)	120	--	32	--	25
+4 to -7	Alluvium: Soft to Medium Stiff Lean to Fat Clay	Soft Clay (Matlock)	115	500	--	0.010	--
-7 to -28	Upper Pico Formation Bedrock: Soft Siltstone/Claystone Evaluated As Very Stiff Clay	Stiff Clay without Free Water (Reese)	130	3,000	--	0.005	--
Below -28	Lower Pico Formation Bedrock: Soft Siltstone/Claystone Evaluated As Hard Clay	Stiff Clay without Free Water (Reese)	130	6,000	--	0.004	--

Table 4b. Idealized Subsurface Conditions – Northeast Portion of Site

Elevation (ft)	Generalized Soil Material	L-Pile Soil Type	Total Unit Weight (pcf)	Undrained Shear Strength (psf)	Friction Angle (degrees)	ε_{50} (in/in)	k (pci)
+12 to +4	Artificial Fill: Loose to Medium Dense Silty Sand to Silt	Sand (Reese)	120	--	32	--	40
+4 to -10	Artificial Fill: Soft to Medium Stiff Lean Clay to Clayey Sand	Soft Clay (Matlock)	120	500	--	0.010	--
-10 to -20	Artificial Fill: Loose to Medium Dense Silty Sand to Silt	Sand –liquefied (Rollins)	120	--	32	--	40
-20 to -28	Upper Pico Formation Bedrock: Soft Siltstone/Claystone Evaluated As Very Stiff Clay	Stiff Clay without Free Water (Reese)	130	3,000	--	0.005	--
Below -28	Lower Pico Formation Bedrock: Soft Siltstone/Claystone Evaluated As Hard Clay	Stiff Clay without Free Water (Reese)	130	6,000	--	0.004	--

As described above, we have assumed a design groundwater elevation of +4 feet. We note the alluvial soils in Table 4a between el. +4 and -7 feet and the fill soils in Table 4b between el. +4 and -10 contain layers of potentially liquefiable sand and soft to medium stiff clay and we modeled that condition in our lateral pile analyses assuming a soft p-y curve for those layers.

Axial Capacity of CIDH Piles

In our opinion, the new administration building can be supported by CIDH piles founded in the underlying siltstone to claystone bedrock. The recommendations for the design of deep foundations considered a cutoff elevation (bottom of pier cap) of 9 feet. For this project, we recommend that the drilled shafts have a minimum diameter of 24 inches and our recommendations provided herein reflect that assumption. However, we note that alternate pier diameters can be used and we can provide input to other pier sizes, if needed.

For evaluating the pier length, we recommend an allowable frictional resistance of 825 psf be assumed for the portion of the pier embedded in the upper Pico Formation bedrock (top of rock to el. -28) and 1,500 psf in the lower Pico Formation bedrock (below el. -28 feet). Because some of the CIDH piles will be installed below the water table, we anticipate that the contractor will likely have difficulty preventing loose material from collecting at the bottoms of the drilled holes. For this reason our analysis neglects the axial capacity contributed by end bearing.

The allowable friction capacity neglects the resistance in the fill and alluvial soils because of the potential for liquefaction and incorporates a factor of safety of 2. In addition to the structure loads, the CIDH piles should consider the potential for additional downdrag loading to occur from liquefaction. The downdrag load, in general, can be assumed to be 20 kips for the general site conditions (for a 2-foot-diameter pile and representative of the conditions in Table 4a) and about 40 kips for the conditions in the northeast portion of the site where deep fill is present (that is near DH-1 and CPT-2; also for a 2-foot-diameter pile). The downdrag load for other pile sizes can be scaled by the ratio of the selected pile diameter to a 2-foot-diameter pile.

A one-third increase in the frictional resistance can be used when considering short-term wind or seismic loads.

Uplift Resistance or CIDH Piles

Drilled shaft foundations can be designed to support vertical loads acting in compression or tension. The uplift capacity of drilled shaft foundations can be assumed equal to the allowable frictional resistance provided above. The frictional capacity can be increased by one-third when considering seismic or other transient loads.

Pile Settlement

Settlement of drilled shaft foundations will likely consist of elastic compression of the pile itself plus the settlement of the soil bearing materials. We estimate that settlements of drilled shaft foundations should be less than approximately ½-inch total and approximately ¼-inch

differential between adjacent similarly loaded pier caps or grade beams over a distance of 30 feet. Drilled piers bearing in Pico Formation bedrock are not expected to be impacted by significant seismic related settlement.

Lateral Resistance of CIDH Piles

Lateral pile load carrying capacity was estimated using the computer program LPILE 6.0 (Ensoft 2008) with a soil resistance-pile deflection model (p-y analysis). LPILE was used to estimate lateral pile deflection, shear and moment versus depth for ¼- and ½-inch head deflections. Both fixed- and free-head conditions were evaluated. Our analysis used a minimum compressive strength for concrete of 4,500 pounds per square inch and the presence of reinforcing steel in the section was ignored in our analyses. The moment of inertia (assuming plain concrete) was reduced by 50 percent to model an estimated cracked section. The presence of reinforcing steel was ignored for simplicity and because reinforcing details were not available to us at this time.

Our estimates are based on deflections at the top of the pier (ground surface) and no factor of safety has been applied to the estimated shear forces or moments. Our preliminary estimated lateral capacities and maximum moment for 24- and 30-inch diameter drilled cast-in-place piers are provided below. Plots of pile deflection, bending moment, shear as a function of depth for the cases evaluated are provided in Appendix C – Lateral Pile Capacity Results on Plates C-2a through C-2p - Lateral Capacity Results. We recommend the piles be embedded to at least a 25 feet for the general site conditions and 40 feet in the northeast portion of the site. These depths were selected in an effort to allow shear and moment forces to fully dissipate under the above described loading conditions. Resistance to lateral loads can also be provided by passive pressure acting on the sides of piers caps or grade beams. The ultimate passive resistance of the pile caps and grade beams can be assumed to be 300 pcf equivalent fluid weight. We recommend a factor of safety of 1.5 be assumed with evaluating foundation sliding resisted by passive pressure.

Pile Group Effects for Lateral Loading

Group effects generally result from shadowing of piles when the direction of loading is coincident with the alignment of the piles within the group. The lateral capacity of the pile group can be estimated by multiplying the individual pile capacity by a P-multiplier (reduction factor) that accounts for shadowing effects that occur transverse and longitudinal to the loading direction.

The lateral capacity of a pile group can be estimated by summing the lateral capacity for each individual pile after having applied the P-reduction factors. Individual piles should be designed to tolerate the maximum bending moments corresponding to the applied lateral load without considering group effects. Group effects for longitudinal loads need not be considered when the center-to-center (CTC) pile spacing between rows is greater than 8 diameters. Table 5 summarizes P-reduction factors for groups of piles subject to longitudinal loads:

Table 5. P-Reduction Factors for Laterally Loaded Pile Groups

Pile CTC Spacing in Direction of Loading	P-Reduction Factor[1]		
	Row 1	Row 2	Row 3 and Higher
3 diameters	0.8	0.4	0.3
5 diameters	1.0	0.85	0.7
8 diameters	1.0	1.0	1.0

[1] P-reduction factors are selected consistent with the loading direction being considered.

STRUCTURAL FLOOR SLABS

General

Because of the potential for significant settlement from liquefaction and static loads, we recommend the ground level floor slab for the building be designed as a structural slab to support floor loads independently of the underlying soils.

Floor Slab

General. The performance of flooring is complicated as described in ACI 302.2R-06 and depends on many factors including sub-slab relative humidity, concrete materials and water-cement ratio, internal relative humidity, and construction aspects, such as curing, length of drying, environmental conditions, pH, etc. As noted above, the architect and design engineer should review pertinent background materials and decide what measures are needed depending on the type of flooring that will be used. Recommendations presented below are not intended to resolve every issue regarding moisture vapor penetration through on-grade concrete slabs. If additional concerns need to be addressed, then additional information needs to be provided and reviewed by the geotechnical engineer and probably by an expert in vapor moisture transmission through concrete slabs.

Vapor Barrier. A vapor barrier should be provided below slabs, especially those with floor coverings, to reduce the potential for vapor moisture migration from the subgrade up through the slab. Vapor barriers are generally not used or recommended for rough, unfinished concrete floors. Preferably, the vapor barrier should extend beneath footings and grade beams; however, because of design and construction difficulties, placement of the vapor barrier beneath footings and grade beams is left to the discretion of the design engineer. The vapor barrier should conform to a Class A per Table 1 of ASTM E 1745-97 with the following modifications:

- The perm rating per ASTM E 96 should be no greater than 0.01 perms; and
- The puncture resistance per ASTM 1709 should be no less than 2,400 grams.

The recommended vapor barrier characteristics and the associated puncture resistance and tensile strength should allow placement of the vapor barrier material directly on the capillary break, described below. Vapor barrier installation procedures, including over-laps, seams, and

sealing at penetrations or service openings, should conform to ASTM E 1643-98, modified as appropriate based on written recommendations from the vapor barrier manufacturer.

A sample specification is available from http://www.stegoindustries.com/specifications, for the Option 3 Vapor Barrier (non-proprietary) case. Stego Industry products or equivalent can be used as vapor barriers.

If a vapor barrier is not used, then 2 inches of sand should be placed on the gravel layer and the concrete floor slab should be constructed on top of the sand layer.

Granular Fill Above Vapor Barrier. ACI 302.2R-06 (2011) presents advantages and disadvantages for placement of a granular fill cushion/protection layer above the vapor barrier. Issues include cushion disturbance during reinforcement placement and construction activities, concrete slab performance during curing (e.g., curling and shrinkage), and the cushion layer providing a source of moisture, as well as other factors described in ACI 302.2R-06. The architect and design engineer (structural engineer) should decide whether a granular fill cushion beneath the vapor barrier is advantageous based on their experience with on-grade concrete slab performance and information in ACI 302.2R-06 (2011, see Figure 7.1 for guidance).

If used, granular fill placed above the vapor barrier should be between 2 and 3 inches thick and consist of fine concrete aggregate conforming to ASTM C33 or, more preferably, manufactured sand or crusher-run sand materials conforming to No. 10 size material per ASTM D448 with no more than 5 percent passing the No. 200 sieve. The material should have enough moisture to be compactable and easy to trim, but still dry enough at the time of concrete placement to act as a blotter. The material should be proof-rolled such that construction equipment can pass over the material without undue disturbance.

Capillary Break and Non-Expansive Soils Below Vapor Barrier. The capillary break beneath the vapor barrier should consist of 4 inches of clean, angular, crushed gravel conforming to ASTM C33, Grade 67, placed on the select fill subgrade. The material should be lightly vibrated with three to four passes of a base-plate compactor or smooth-wheel vibratory roller. Additional granular materials should be placed below interior concrete floor slabs as described in Section 4.8.6.

Mold

Mold in buildings is a growing concern for owners and occupants. The growth and development of mold in buildings can be nurtured by moisture either from sources inside or outside the structure. Assessment of mold development potential is beyond the purview of geotechnical engineering services for this study, and any recommendations presented herein are not intended to mitigate mold potential and will not eliminate the risk of future mold problems, unless by coincidence.

To aid in reducing the risk of mold problems, we recommend the owner retain an experienced mold mitigation professional to review building and landscape plans and specifications, evaluate grading and earthwork, assess sources of fill and landscape materials, and any other aspects of the project design, construction, and building usage.

ASPHALT CONCRETE PAVEMENTS

We understand that the driveway and parking areas surrounding the proposed building will be constructed with a typical asphalt concrete over aggregate base pavement section placed directly on subgrade. The traffic loading is anticipated to generally consist of a light to moderate volume of passenger vehicles and trucks.

An R-value test was performed on a select sample of the near surface materials and yielded a value of 24. Preliminary flexible pavement design sections were estimated using the Caltrans Highway Design Manual (latest edition) design procedures for assumed traffic indices ranging from 6 to 8 using an R-value of 24. Recommended preliminary asphalt pavement sections for the access roadway are listed in Table 6 below. The final pavement design sections should be evaluated on the basis of additional R-value tests performed during rough grading in the pavement areas.

Table 6 Preliminary Asphalt Pavement Sections

Traffic Index	Thickness of Asphalt Concrete (in)	Thickness of Aggregate Base (in)
6.0	4.0	7.5
7.0	4.0	11.0
8.0	5.0	12

We recommend that overexcavation for pavements extend at least 12 inches below the bottom of pavement section and at least 1-foot below existing grade, whichever is deeper. The upper 1-foot of soil material placed below the aggregate base should be excavated and replaced as fill compacted to at least 95 percent relative compaction. If soft or unsuitable soils are exposed after the minimum 12 inches of overexcavation, additional soil removal in that area may be required.

Aggregate base material should be compacted in lifts not exceeding 6 inches in thickness to at least 95 percent of the maximum dry density as determined by ASTM D1557, latest edition. As-compacted moisture contents for aggregate base materials should be within 2 percent of the optimum moisture as determined from ASTM D1557. Asphalt concrete materials used on-site should conform to the requirements as provided in Section 39 of the Caltrans Standard Specifications (latest edition).

Pavement subgrade should consist of compacted materials placed under the observation of Fugro. Pavement materials should conform to Sections 26 and 39 of the Caltrans Standard Specifications (or equivalent) for aggregate base (AB) and asphalt concrete (AC), respectively. Subgrade and pavement materials should be compacted to at least 95 percent relative compaction.

GENERAL SITE CLEARING AND GRUBBING

Existing fills, soil containing debris, organics, trees and root systems, and other unsuitable materials should be excavated and removed from improvement areas prior to commencing grading operations. Areas should be cleared of old foundations, slabs, pavement, abandoned utilities, and soils disturbed during the demolition process. Depressions or disturbed areas left from the removal of such material should be replaced with compacted fill.

The project specifications should provide for variations in the actual thickness and aerial extent of the existing fill materials. The limits and depths of clearing and grubbing operations is anticipated to be less than about 2 feet but should be evaluated during grading. We recommend that Fugro be contacted if extensive zones or thicknesses of existing fill material are encountered during grading for the west-wing structure.

GRADING FOR FOUNDATIONS AND PAVEMENTS

The following are grading recommendations for building and foundation areas. The geotechnical engineer should review the bottom of excavations prior to placing fill materials to evaluate whether or not the artificial fill materials and other loose or unsuitable materials have been removed, and that the base of the excavation is suitable for placing compacted fill and for support of foundations. The project specifications should provide for review of the excavation by the geotechnical engineer, and for increasing the depth of the excavation to remove additional loose soil or other unsuitable materials if needed.

Overexcavation

We anticipate the new administration building will be founded on a deep foundation system consisting of cast-in-drill hole (CIDH) piles and the finished floor will be at or near the existing site grade. Planned cuts and fills for site development associated with that structure will likely be less than a few feet. Although the foundation system for that structure will be cast-in-place drilled piers, grading for slabs-on-grade will require some level of remedial grading consisting of excavating or removing the near-surface soils beneath the proposed foundation system and replacing the excavated soils as compacted fill. We recommend the existing soils in the foundation area be overexcavated and removed to a depth of at least 3 feet below existing grade or 3 feet below the floor slab system (concrete floor, vapor retarder and capillary break), whichever is deeper. The excavated surface should extend beneath the proposed building footprint at a relatively uniform elevation. As noted above, the excavation may need to be locally deepened as needed to remove soft, wet or compressible native soils or undocumented fill material.

Pavements and Exterior Slabs

Clearing and grubbing should be performed according to the recommendations of this report prior to beginning grading for pavement and hardscape areas. As a minimum, we recommend that the existing soil be removed to a depth of at least 1-foot below the existing ground surface or to the bottom of the proposed pavement structural section, whichever is

deeper. The excavation should extend at least 3 feet beyond the proposed limits of the paving or exterior hardscape.

General Subgrade Preparation

The subgrade soils exposed in the excavations should cut as neat as possible and should be observed by a representative of Fugro prior to scarifying or placing fill materials. If loose, compressible, or otherwise unsuitable soils are present at the subgrade level, the excavation should be deepened as needed to remove those soils. The presence of loose or compressible materials can be evaluated using a hand probe, by proof rolling, or other methods. Provisions for deepening the overexcavation should be included in the project plans and specifications.

Following approval of the subgrade by Fugro personnel, the overexcavated subgrade should be scarified and cross-scarified to a depth of 8 inches, moisture conditioned as required, and compacted to at least 90 percent relative compaction. Roots or organics observed during the scarifying work should be removed prior to compaction. Compacted fill can be placed to finished grade after the subgrade preparation work has been completed.

Subgrade Stabilization

Due to the high water content of the clayey soils and the relatively shallow groundwater level at the site, we expect that the soils within and at the base of the recommended overexcavation depth could be unstable and subject to pumping under construction traffic loading. In an effort to reduce the potential for unstable subgrade conditions to develop at the site and help allow for the placement and compaction of the overlying fill, we recommend that grading be performed with low ground-pressure tracked-type grading equipment.

If unstable or pumping subgrade conditions are encountered during grading, measures to stabilize the soils will be required. There are various methods of stabilizing pumping subgrade soils. Those measures could potentially consist of lime stabilization/treatment, using cement slurry or CLSM as fill material, or using geogrid reinforcing (likely in combination with crushed rockfill). The use of geogrid (in conjunction with crushed rock fill) is a commonly used method of subgrade stabilization and we believe that this method will likely be feasible for the project. However, we recommend that the method of subgrade stabilization be selected by the contractor and the final selection/approach may require some degree of trial and error in the field.

As initial input to subgrade stabilization at the site, we recommend that a layer of geogrid be placed on the exposed overexcavation subgrade and overlying fill be placed under careful control in an effort to bridge over the unstable soils. If the subgrade soils are significantly unstable, additional measures (such as placing additional intermediate layers geogrid, incorporating layer(s) of crushed rock, or other mitigation) may be required. Geogrid layers should be placed to overlap one another and extend beyond the limits of the proposed foundation locations by at least 3 feet to provide a near continuous reinforcement layer. Specifications for soil and geogrid fill materials are provided in a later section of this report.

Fill Selection, Placement, and Compaction

All fill materials, onsite or imported, should be free from organic material, hazardous substances, unsuitable fill debris, and any other deleterious materials. Rock fragments or poorly weathered material less than 3 inches in diameter may be utilized in fill materials, provided those materials are not placed in concentrated pockets. The fill material should not contain rocks, blocky material, or lumps over 3 inches in maximum dimension, or more than 15 percent material larger than 2 inches in maximum dimension. Fill soils should be thoroughly mixed and blended prior to use as compacted fill.

Fill materials should be placed in layers that, when compacted, should not exceed 8 inches in compacted thickness. Each layer should be spread evenly, moisture-conditioned to about 2 percent above optimum, and processed and compacted to obtain a uniformly dense layer. The fill should be placed and compacted on near-horizontal planes to a minimum of 90 percent of the relative maximum dry density as determined in the laboratory by ASTM D1557.

In general, onsite soils (including clayey alluvial soils) can be used as general backfill and fill beneath proposed foundations. However, the onsite clayey soils are expansive, and in general, we recommend that these soils not be used as fill within about 24 inches of building floor slabs and within about 12 inches of exterior slabs and hardscape. Imported soils or onsite soils with a low expansion potential should be used in those areas.

The intent of the grading recommendations presented in this section is to reduce the potential for expansive soils to impact the proposed structural elements. However, the recommendations will reduce, but not eliminate the risk of swelling or heaving of the subsurface materials and the potential impacts to foundations and slabs. If the design team wishes to further reduce the risks associated with expansive soil materials, additional removal and soils replacement would likely be required.

CORROSION

Laboratory corrosion tests were performed on a select soil sample. The results are presented in Appendix B and are summarized below in Table 7 - Summary of Corrosion Test Results.

Table 7. Summary of Corrosion Test Results

Boring	Depth (feet)	Material Description	Sulfates (%) [ppm]	Chlorides (%)	Resistivity (ohm-cm)	pH
DH-2	2-5	Sandy CLAY to Silty SAND	0.2797 % 2796 ppm	0.0097 % 97 ppm	836	7.4

Caltrans (2012c) describes a corrosive environment if chloride concentration is 500 ppm or greater, sulfate concentration is 2000 ppm or greater, or the pH is 5.5 or less. The data indicate that the soils are potentially corrosive to ferrous metals and have the potential to impact concrete. We recommend sulfate resistant cement be used for concrete that will be in contact with the onsite soils.

CONSTRUCTION CONSIDERATIONS

Excavation

Materials encountered within the anticipated depth of excavation for the proposed foundations consisted of artificial fill, alluvium, and Pico Formation siltstone/claystone. We anticipate those materials can be excavated with typical heavy construction equipment in good working order. Groundwater at the site is shallow and was encountered at a depth of about 8 feet below the ground surface during our exploration program.

Temporary Slopes and Shoring

Temporary slopes, excavations, and support should conform to federal Occupational Safety and Health Administration (OSHA) regulations and any other local ordinances and building codes, as required. In general, onsite artificial fill and alluvial soils may be classified as OSHA Type C soil materials, and in our opinion, temporary slopes should be excavated at an inclination of 1-1/2h:1v or flatter.

The contractor should be responsible for all safety issues affecting open excavations. The contractor should continuously monitor temporary slopes and remove loose or unstable rock, or soil masses. Slopes should also be monitored periodically by a Fugro representative. Stockpiled material or equipment should not be placed closer than 5 feet from any slope crest.

Runoff should be directed away from temporary excavations and should not be allowed to flow across slope faces and excavations. In addition, since groundwater is anticipated within the excavation depths, dewatering should be provided in advance of the excavation to avoid the potential for groundwater to daylight on the slope. Slopes should not be considered stable if seepage daylights on the slopes.

Groundwater and Dewatering

The contractor should be responsible for both designing and maintaining the dewatering system for construction. Dewatering facilities, such as sump pits and wells should be designed by a qualified registered professional and with filters such that sand and fine-grained materials are not removed from the soil during dewatering operations. Dewatering facilities should be installed prior to beginning excavation, and time should be allowed for lowering of the groundwater table before beginning excavation.

CIDH Pile Construction

Drilled piers will be excavated through the fill and alluvial soils into the underlying Pico Formation bedrock. Because the CIDH piles will be constructed below the groundwater level and will encounter loose and soft soils, we expect that excavations for drilled shaft foundations will require the use of drilling slurry and/or casing to prevent caving of the drilled hole. We recommend that casing be used and the installation be performed, if possible, to "seal" off seepage from above the bedrock surface. However, even is a seal is made at the bedrock surface seepage and caving could still be encountered in the bedrock.

Drilling and concrete placement for CIDH piles should conform to the requirements of Section 49 of Caltrans Standard Specifications and related Standard Special Provisions. Prior to placing rebar and concrete, the sides of the excavated piers should be reamed to remove smeared material, and loose or disturbed materials should be removed from the bottom of the piers. Groundwater should be removed from the drilled shafts prior to placing concrete, or tremie pumping methods should be used to place concrete from the bottom of the drilled shafts and to displace groundwater or slurry during concrete placement. The piers should be overfilled with concrete until fresh, non-contaminated concrete surfaces at the top of the drilled shaft.

Concrete used for drilled pier construction should have a high level of workability with a slump in the range of 6 to 9 inches. Concrete aggregates should be sized small enough to be suitable for placement by pumping and with consideration for the spacing between reinforcing bars to ensure that concrete can move through the rebar cage and adhere to the sidewalls of the shaft without honeycombs or voids. Concrete should be placed the day the drilling is completed. A pier excavation should not be allowed to stand open overnight. In general, a minimum of 24 hours should be allowed between placing concrete in one pier shaft and the drilling of nearby pier shafts within four pier diameters, center to center.

We recommend that the geotechnical professional observe the construction of the drilled shaft foundations. The purpose of this observation is to evaluate if the soil conditions encountered and methods of construction are consistent with those assumed for this report. The project specifications should provide for expected variations in the drilling conditions and materials encountered, and for deepening the drilled shaft foundations, if needed.

Suggested Materials Specifications

The following are suggested specifications for the materials that we have referenced in this report.

Onsite Soils to be used as compacted fill should be free of organics, debris, and oversize rocks (greater than 3 inches in diameter). Onsite soils can be used as compacted fill in overexcavated areas and beneath foundations. However, onsite clayey soils (fill, clayey alluvium, and Pico Formation bedrock) are expansive and we recommend that these materials not be used as fill within 24 inches of interior concrete floor slabs or within 12 inches of exterior concrete slabs.

Imported Borrow should consist of soil suitable for its intended use and area of placement at the site and should be reviewed by the geotechnical engineer before being brought to the site. Imported borrow for use as compacted fill should have an expansive index of no more than 20 with no more than 30 percent passing the No. 200 sieve. Imported borrow placed as fill in roadway areas should have an R-value of at least 30. Additional criteria may apply to select materials otherwise specified for this project (i.e. aggregate base, retaining wall backfill, vapor barrier sand, etc.).

Aggregate Base should consist of Class 2 conforming to Section 26-1.02B, "Class 2 Aggregate Base," of the Caltrans Standard Specifications.

Drainage Material should consist of Class 2 permeable material, conforming to Section 68-1.025 of the Caltrans Standard Specifications. Class 1 materials, ½- to ¾-inch gravel or crushed aggregate could also be used provided they are used in conjunction with filter fabric or a separation geotextile.

Geocomposite Drain should consist of a manufactured plastic core not less than 0.25 inches thick with both sides integrally bonded to a layer of filter fabric that will provide a drainage void. The drain shall produce a flow rate through the drainage void of at least 10 gallons per minute per foot of width at a hydraulic gradient of 1.0 at maximum externally applied pressure.

Geotextile for separation should consist of nonwoven geotextile that conforms to the requirements outlined in the Caltrans Standard Specifications for Filter Fabric-underdrains, Section 88-1.03.

Geogrid reinforcement for use in subgrade stabilization should consist of Tensar BX1100 biaxial geogrid.

Crushed (Float) rock to be used for subgrade stabilization should consist of 3-inch or 4-inch minus quarry-run rock having 100 percent of the material passing the 4-inch sieve, 0 to 30 percent passing the 2-inch sieve, 0 to 10 percent passing the 3/4-inch sieve, and less than 5 percent passing the No. 4 sieve. The rock particles should have at least 75 percent fractured faces.

Retaining wall backfill material should consist of selected onsite granular soils or imported soil material meeting the requirements of Caltrans Standard Specifications for Structure Backfill, Section 19-3.06.

PLAN REVIEW

We recommend that Fugro provide a general review of the project plans. The purpose of this review is to assess general compliance with the geotechnical recommendations of this report, and to confirm that the recommendations given in this report are incorporated in the project design plans and specifications.

FIELD OBSERVATIONS AND TESTING

The construction process is an integral part of the design with respect to geotechnical aspects of a project. Some of the conclusions and recommendations presented herein are based on assumptions made during our geotechnical studies and evaluations. To verify those assumptions, a representative of our firm should be present during construction to observe subsurface geotechnical conditions as they are exposed. Therefore, we recommend that Fugro be retained during site preparation for the proposed foundations to observe compliance with the design concepts and geotechnical recommendations, and to allow design changes in the event that subsurface conditions or methods of construction differ from those anticipated. Our representative should test and/or observe all excavations, fill and backfill placement, and compaction.

CLOSURE

This report has been prepared for the exclusive use of the County of Ventura and its agents for the specific application to the proposed Administration Building at the Goleta West Sanitary District property in Santa Barbara County, California. The findings, conclusions, and recommendations presented herein were prepared in accordance with generally accepted geotechnical engineering practices of the project region. No other warranty, express or implied, is made.

The scope of our services presented in this report did not include any environmental site assessment for the presence or absence of hazardous/toxic/biological materials in the soil, groundwater, surface water, or the presence of wetlands or the presence of environmentally sensitive areas, endangered or candidate wildlife or vegetation, or culturally significant zones within the project area.

REFERENCES

American Concrete Institute (ACI) (2006) “Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials,” ACI 302.2R-06, August 15.

American Society of Testing and Materials (ASTM) (latest edition), ASTM Caltrans Annual Book of Standards.

American Society of Civil Engineers Standard 07 (ASCE-7), Minimum Loads for Buildings and Other Structures, 2006.

California Building Code (2013), International Conference of Building Officials, January.

California Department of Transportation (latest edition), Standard Specifications.

California Department of Transportation (latest edition), Highway Design Manual.

California Geological Survey [CGS] (2008), Guidelines for Evaluating and Mitigating Seismic Hazards in California, Special Publication 117A.

Dibblee, T.W. Jr. (1966), Geology of the Central Ynez Mountains, Santa Barbara County, California, California Division of Mines and Geology Bulletin 186.

Federal Highway Administration [FHWA] (2010), Drilled Shafts: Construction Procedures and LRFD Design Methods, Publication No. FHWA-NHI-10-016, May.

Fugro West, Inc. (2010), Geotechnical Engineering Report, Mesa Road Sewer Pipeline, Goleta West Sanitary District, Santa Barbara County, California, Project No. 1212.019, March 22.

Fugro West, Inc. (1999a), Geotechnical Study, Campus Sewer System Renewal Project, Pump Station 559 Improvements, University of California at Santa Barbara, Santa Barbara, Project No. 99-42-1211, November 30.

Fugro West, Inc. (1999b), Geotechnical Engineering Report, Rehabilitation of Parking Lots 31 and 32, University of California at Santa Barbara, Santa Barbara, California, Project No. 99-92-7041, July 21.

Greenbook (2009), Standard Specifications for Public Works Construction, BNI Building News, BNI Publications, Inc.

Geologismiki (2006), Computer Program CLIQ, Version 1.7.6.34.

Gurrola, L.D. and Keller, E.A. (1998), “Seismic Sources and Earthquake Hazards of the Santa Barbara Fold Belt, California”, 1998 Annual SCEC Progress Report.

Gurrola, L.D. , E.A. Keller, J. Chen, L. Owen, J. Spender, G. Landis, M. Bell, and T.W. Dibblee, Jr. (2003), Active Tectonics and Earthquake Hazards of the Santa Barbara Fold Belt, Southern California Earthquake Center Field Trip Guide Book, dated September 8.

Gurrola, L. D., (2004) Active Tectonics and Earthquake Hazards of the Santa Barbara Fold Belt, Santa Barbara, California; unpub. Ph.D. dissertation, UC Santa Barbara, pp141.

Minor et al (2009), Geologic Map of the Santa Barbara County Coastal Plain Area, Santa Barbara County, California, U.S. Geological Survey Scientific Investigations Map 3001, scale 1:25,000, 1 sheet, pamphlet, 38 p.

Occupational Safety and Health Administration (2013), Part 1926 Subpart P - Excavations, Appendix B, "Allowable Slopes".

Pradel (1998), Procedure to evaluate earthquake-induced settlements of dry sandy soils, Journal of Geotechnical and Geoenvironmental Engineering, ASCE, 124 (4), 364-368.

Southern California Earthquake Center [SCEC] (1999), Recommended Procedures for Implementation of DMG Special Publication 117 Guidelines for Analyzing and Mitigating Liquefaction Hazards in California.

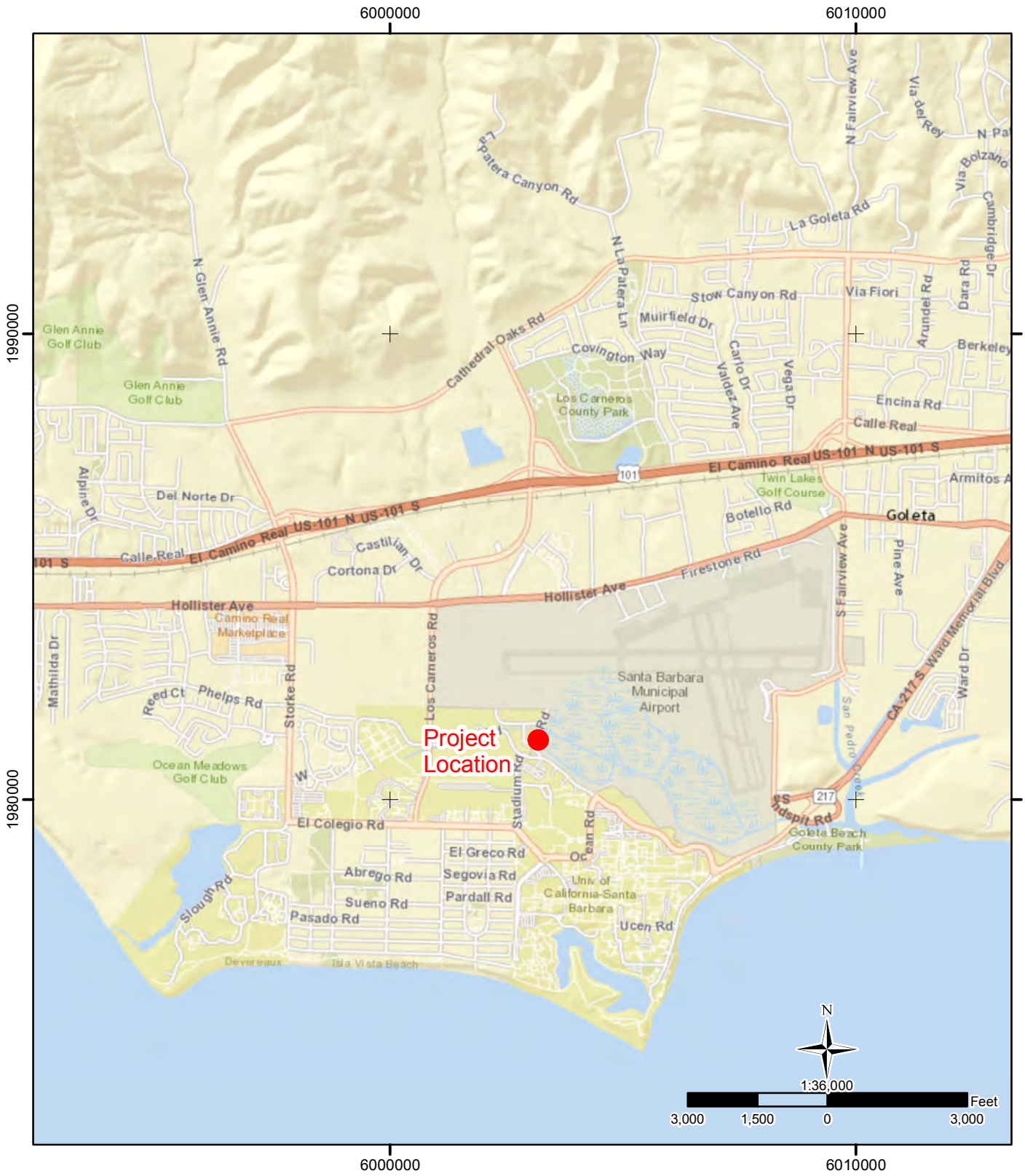
United States Geologic Survey(USGS) (2008a), Website. 2008 National Seismic Hazard Maps Spatial Query following web address: http://geohazards.usgs.gov/cfusion/hazfaults_search/hf_search_main.cfm.

United States Geologic Survey(USGS) (2008b), Website. 2008 NSHMP PSHA Interactive Deaggregations following web address: http://eqint.cr.usgs.gov/deaggint/2008/.

United States Geologic Survey (2013), U.S. Seismic Design Maps web application, Version 3.1.0, updated July 11.

Youd, T.L. and Idriss, Y.M. (2001), Liquefaction Resistance of Soils: Summary Report from the 1996 NCEER and 1998 NCEER/NSF Workshops on Evaluation of Liquefaction Resistance of Soils, Journal of Geotechnical and Geoenvironmental Engineering, Vol. 127, No. 4, dated April.

PLATES



N:\Projects\04_2014\04_6214_0143_GWSD_AdminBldg\Outputs\Working\mxd\Plate1_ProjectLocationMap.mxd, 2/13/2015, vencad

VICINITY MAP
New Administration Building
Goleta, California

PLATE 1

N

1:240

20 10 0 20 Feet

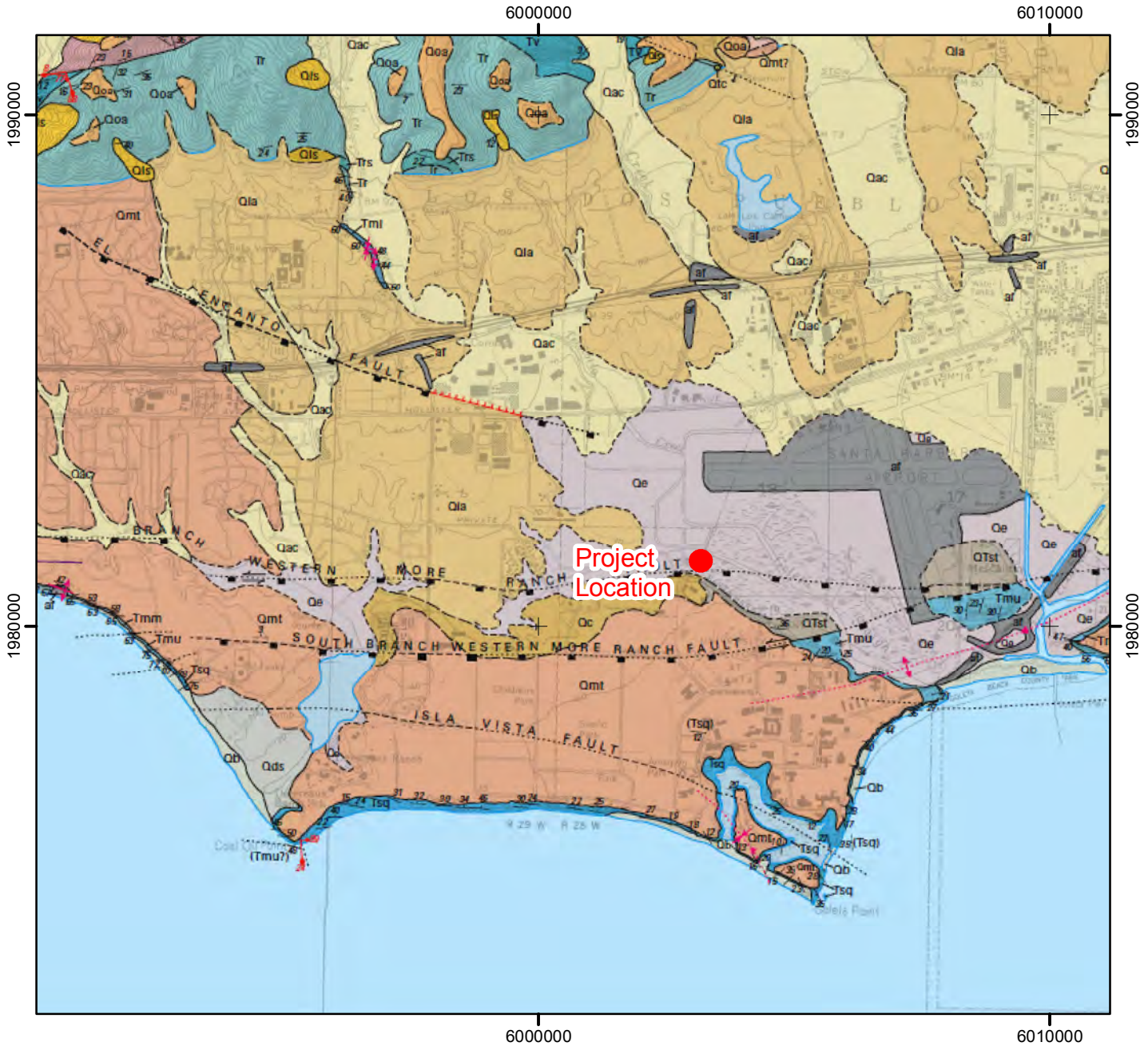
Legend

- Approximate location of hollow stem auger drill hole
- Approximate location of cone penetration test sounding
- Subsurface Profile A-A'

SITE LAYOUT AND EXPLORATION MAP
New Administration Building
Goleta, California

PLATE 2

N:\Projects\04_2014\04_6214_0143_GWSD_AdminBldg\GISData\XSect\2015_02_13_Xsect_Draft\MXD\XsectMap.mxd, 3/2/2015, vencad



af - Artificial fill (Holocene)
Qe - Estuarine Deposits (Holocene)
Qia - Intermediate alluvial deposits (upper Pleistocene)
QTst - Siltstone unit (lower Pleistocene and upper Pliocene?)
Tmu - Upper siliceous unit (upper Miocene)
Qc - Colluvium (Holocene and upper Pleistocene)

N

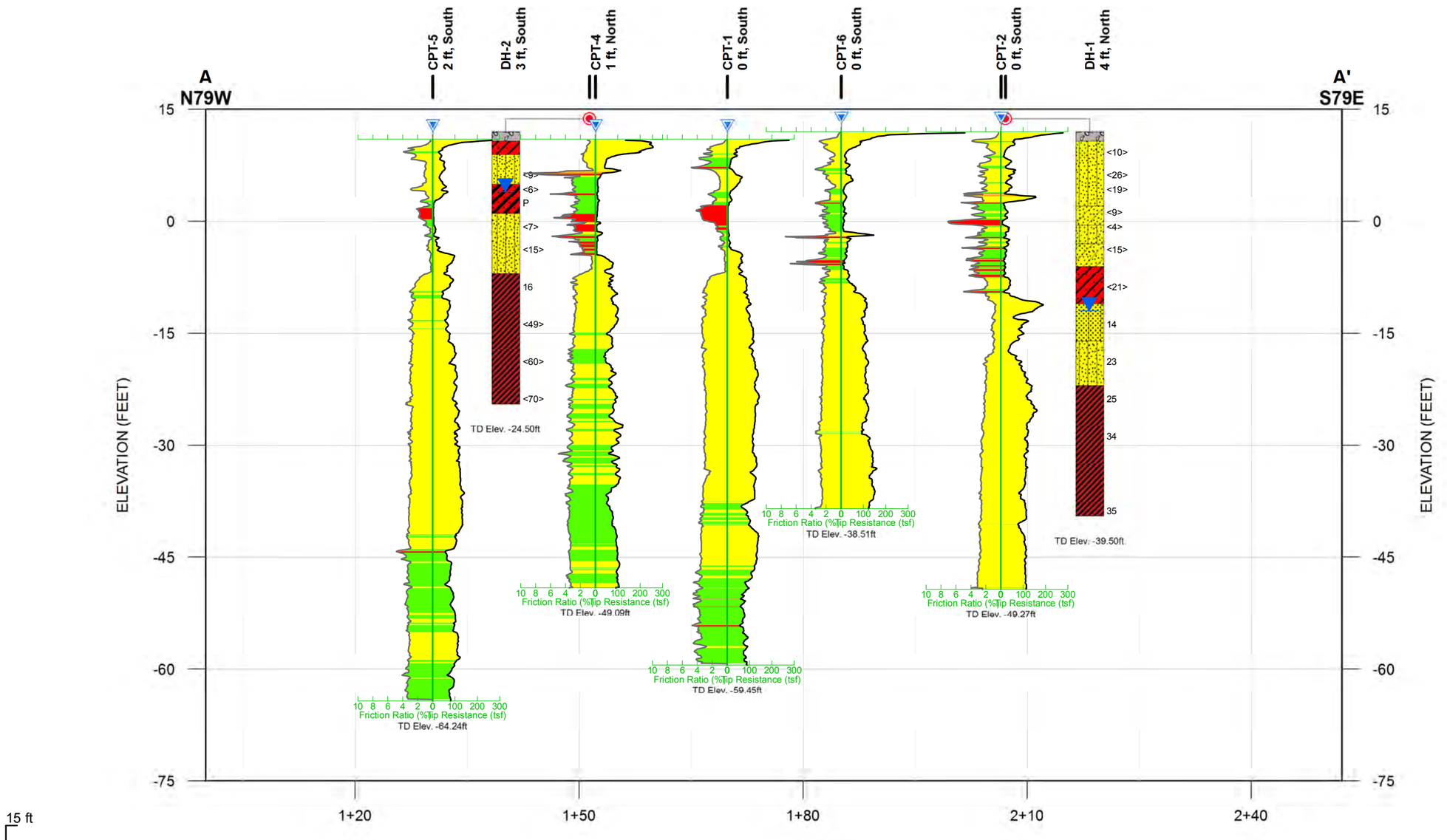
1:36,000

3,000 1,500 0 3,000 Feet

REGIONAL GEOLOGIC MAP
New Administration Building
Goleta, California

PLATE 3

N:\Projects\04_2014\04_6214_0143_GWSD_AdminBldg\Outputs\Working\mxd\Plate3_regionalgeologicmap2.mxd, 04/24/15, vencad



SUBSURFACE PROFILE A-A'
New Administration Building
Goleta, California

APPENDIX A
SUBSURFACE EXPLORATION

APPENDIX A

SUBSURFACE EXPLORATION

INTRODUCTION

The contents of this appendix shall be integrated with the geotechnical engineering study of which it is a part. The data contained in this appendix shall not be used in whole or in part as a sole source for information or recommendations regarding the subject site.

The subsurface exploration program for the proposed project consisted of four hollow-stem-auger drill holes and seven cone penetration test soundings within the limits of the proposed development. The approximate locations of the explorations are shown on Plate 2. The following sections describe the exploration means and methods.

HOLLOW-STEM-AUGER DRILL HOLES

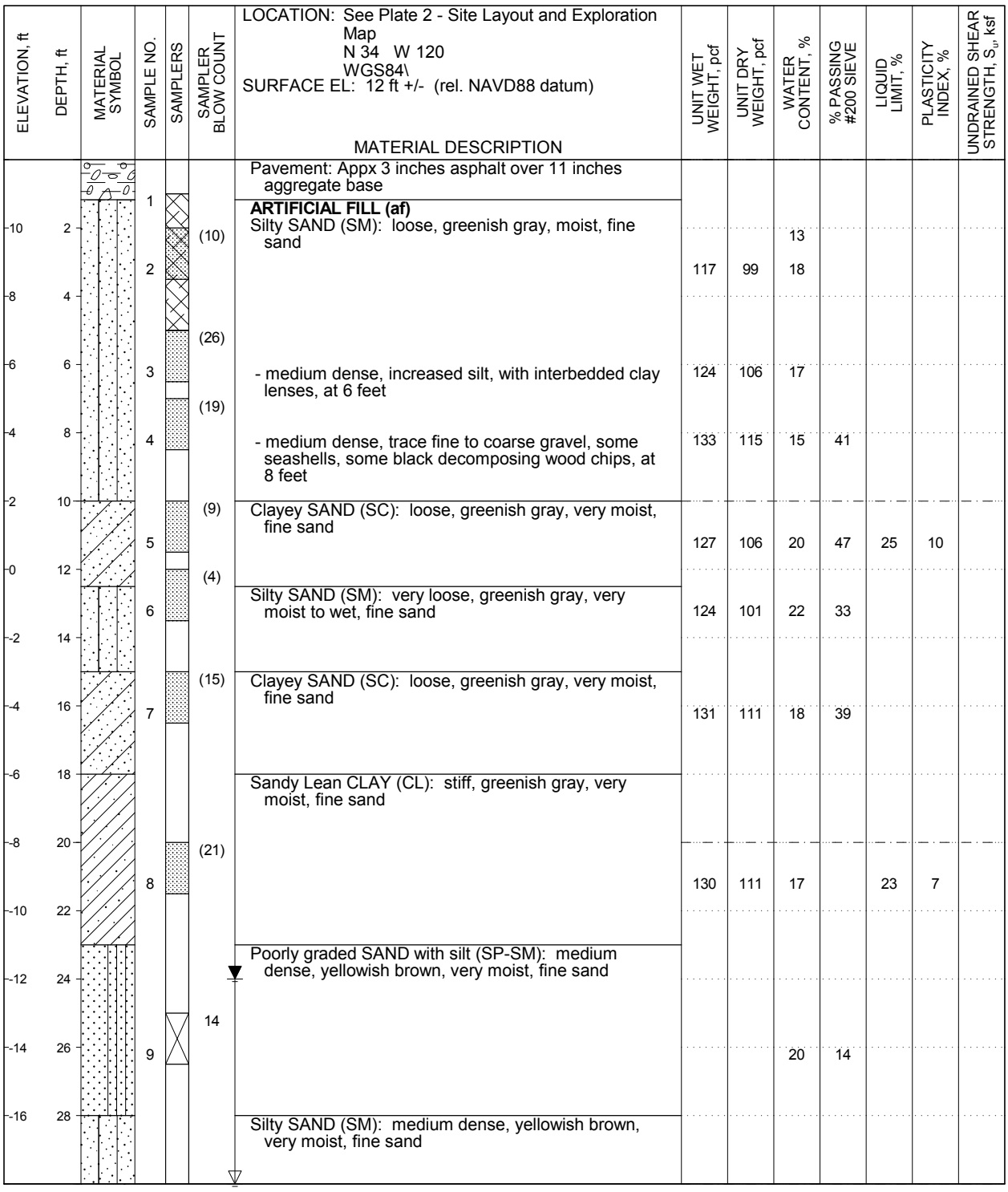
Two 8-inch-diameter hollow-stem-auger drill holes (DH-01 and DH-02) were excavated on December 17, 2014. The drill holes were excavated using a CME 85 drill rig operated by S/G Drilling Company of Lompoc, California. The drill holes were excavated to depths ranging from about 36 to 51 feet below the existing ground surface.

We sampled the drill holes at regular intervals using a 2-inch-outside-diameter standard penetration test (SPT) split spoon sampler, and a 3-inch-outside-diameter modified California split spoon sampler. The SPT sampler was driven without a liner, while the modified California sampler was fitted with 1-inch high brass ring. A 140-pound automatic trip hammer with a 30-inch drop height served to drive these samplers into the material at the bottom of the drill hole. Field blow counts (N-values) are defined as the number of blows from the hammer that were required to drive the sampler 1-foot after the being seated 6 inches into the material at the bottom of the hole. Our on-site personnel also collected bulk samples from drill cuttings retrieved from the auger flights. After completion the holes were backfilled with soil cuttings and patched at the ground surface using black-dyed rapid set concrete. Excess soil cuttings were spread in a designated area north of the project site.

Drill hole logs describe the earth materials encountered, sampling methods used, and field and laboratory tests performed. Logs also show the location, drill hole number, dates of start and completion, and the names of the logger and drilling subcontractor. Drill holes were logged by a Fugro geologist or engineer in general accordance with ASTM D2488 for visual manual soil classification. Boundaries between soil types shown on the logs are approximate because the transition between different soil layers may be gradual and may change with time. Drill hole logs are presented on Plates A-1 and A-2, Log of Drill Holes. The drill hole legend is provided on Plate A-3, Key to Terms & Symbols Used on Logs.

CPT SOUNDINGS

Seven cone penetration test (CPT) soundings were performed at the site as part of a second phase of subsurface exploration. The soundings were performed on February 9, 2015, to gather additional information regarding the depth to bedrock across the site and to further characterize the potential for liquefaction in the building area. The CPT soundings were performed using equipment and staff from Fugro Consultants. The CPT soundings were advanced at selected locations throughout the building footprint to depths about 50 to 70 feet below the existing ground surface. Drill hole logs are presented on Plates A-1 and A-2, Log of Drill Holes. The drill hole legend is provided on Plate A-3, Key to Terms & Symbols Used on Logs.



The log and data presented are a simplification of actual conditions encountered at the time of drilling at the drilled location. Subsurface conditions may differ at other locations and with the passage of time.

COMPLETION DEPTH: 51.5 ft
DEPTH TO WATER: 24.0 ft
BACKFILLED WITH: Cuttings
DRILLING DATE: December 17, 2014

DRILLING METHOD: 8-inch-dia. Hollow Stem Auger
DRILLED BY: S/G Testing
LOGGED BY: M Janousek
CHECKED BY: M Janousek
RIG TYPE: CME 85

LOG OF DRILL HOLE NO. DH-1

New Administration Building
Goleta, California

PLATE A-1a

LOCATION: See Plate 2 - Site Layout and Exploration Map
N 34 W 120
WGS84\
SURFACE EL: 12 ft +/- (rel. NAVD88 datum)

ELEVATION, ft	DEPTH, ft	SAMPLE NO.	SAMPLERS	SAMPLER BLOW COUNT	MATERIAL DESCRIPTION	UNIT WET WEIGHT, pcf	UNIT DRY WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	UNDRAINED SHEAR STRENGTH, S_u, ksf
				23								
		10			- wet, at 31 feet			16	20			
-20	32											
-22	34				**SANTA BARBARA FORMATION (Qsb)**							
				25	SILTSTONE (Rx) / CLAYSTONE (Rx): extremely to highly weathered, poorly indurated, moderately hard, greenish gray							
-24	36	11										
-26	38											
-28	40			34								
		12										
-30	42											
-32	44											
-34	46											
-36	48											
-38	50			35								
		13										
-40	52											
-42	54											
-44	56											
-46	58											

The log and data presented are a simplification of actual conditions encountered at the time of drilling at the drilled location. Subsurface conditions may differ at other locations and with the passage of time.

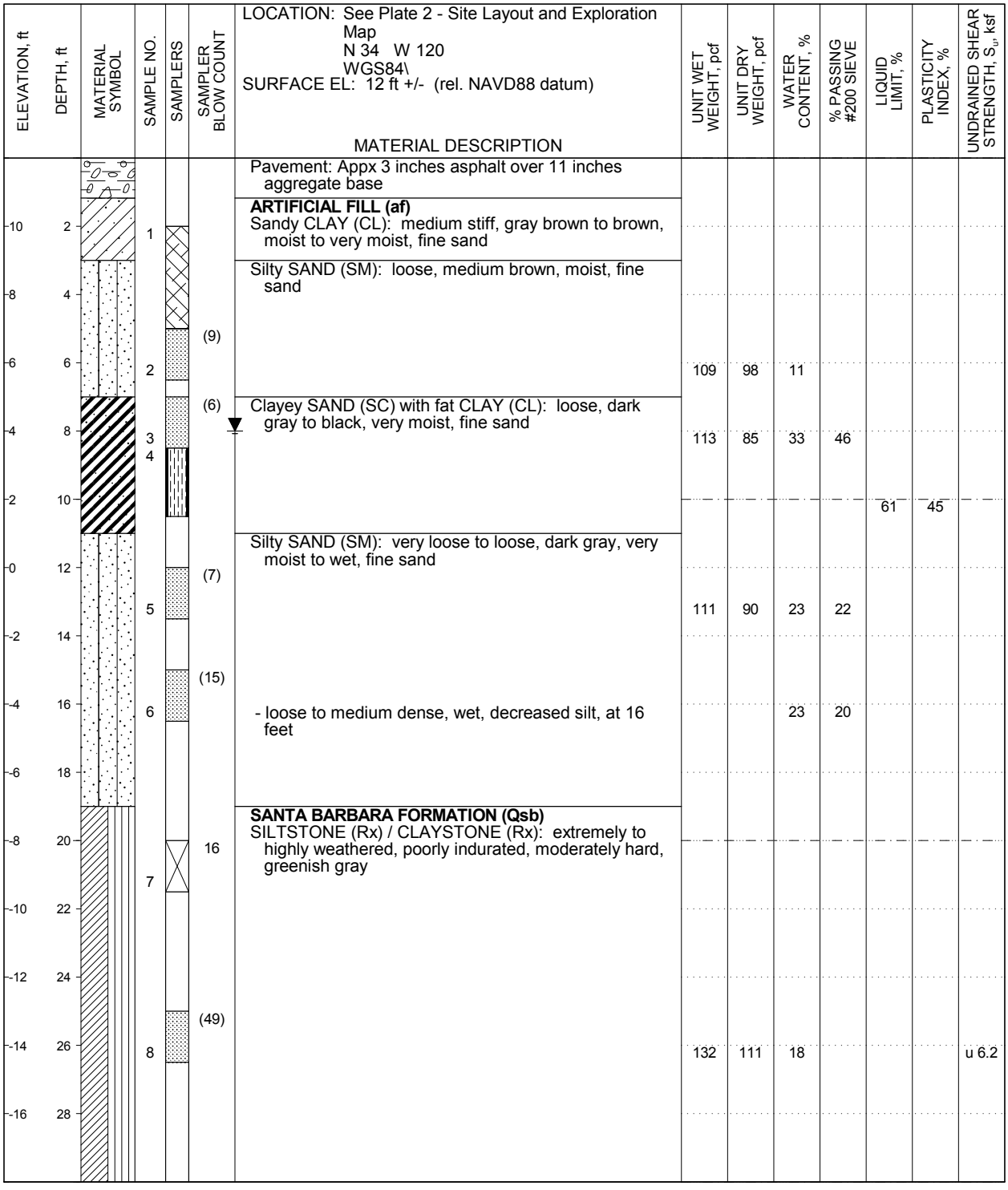
COMPLETION DEPTH: 51.5 ft
DEPTH TO WATER: 24.0 ft
BACKFILLED WITH: Cuttings
DRILLING DATE: December 17, 2014

DRILLING METHOD: 8-inch-dia. Hollow Stem Auger
DRILLED BY: S/G Testing
LOGGED BY: M Janousek
CHECKED BY: M Janousek
RIG TYPE: CME 85

LOG OF DRILL HOLE NO. DH-1

New Administration Building
Goleta, California

PLATE A-1b



The log and data presented are a simplification of actual conditions encountered at the time of drilling at the drilled location. Subsurface conditions may differ at other locations and with the passage of time.

COMPLETION DEPTH: 36.5 ft
DEPTH TO WATER: 8.0 ft
BACKFILLED WITH: Cuttings
DRILLING DATE: December 17, 2014

DRILLING METHOD: 8-inch-dia. Hollow Stem Auger
DRILLED BY: S/G Testing
LOGGED BY: M Janousek
CHECKED BY: M Janousek
RIG TYPE: CME 85

LOG OF DRILL HOLE NO. DH-2

New Administration Building
Goleta, California

PLATE A-2a

ELEVATION, ft	DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO.	SAMPLERS	SAMPLER BLOW COUNT	LOCATION: See Plate 2 - Site Layout and Exploration Map N 34 W 120 WGS84\ SURFACE EL: 12 ft +/- (rel. NAVD88 datum) MATERIAL DESCRIPTION	UNIT WET WEIGHT, pcf	UNIT DRY WEIGHT, pcf	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	UNDRAINED SHEAR STRENGTH, S_u, ksf
					(60)								
			9				131	111	19				u 10.7
-20	32												
-22	34												
					(70)								
-24	36		10										
-26	38												
-28	40												
-30	42												
-32	44												
-34	46												
-36	48												
-38	50												
-40	52												
-42	54												
-44	56												
-46	58												

The log and data presented are a simplification of actual conditions encountered at the time of drilling at the drilled location. Subsurface conditions may differ at other locations and with the passage of time.

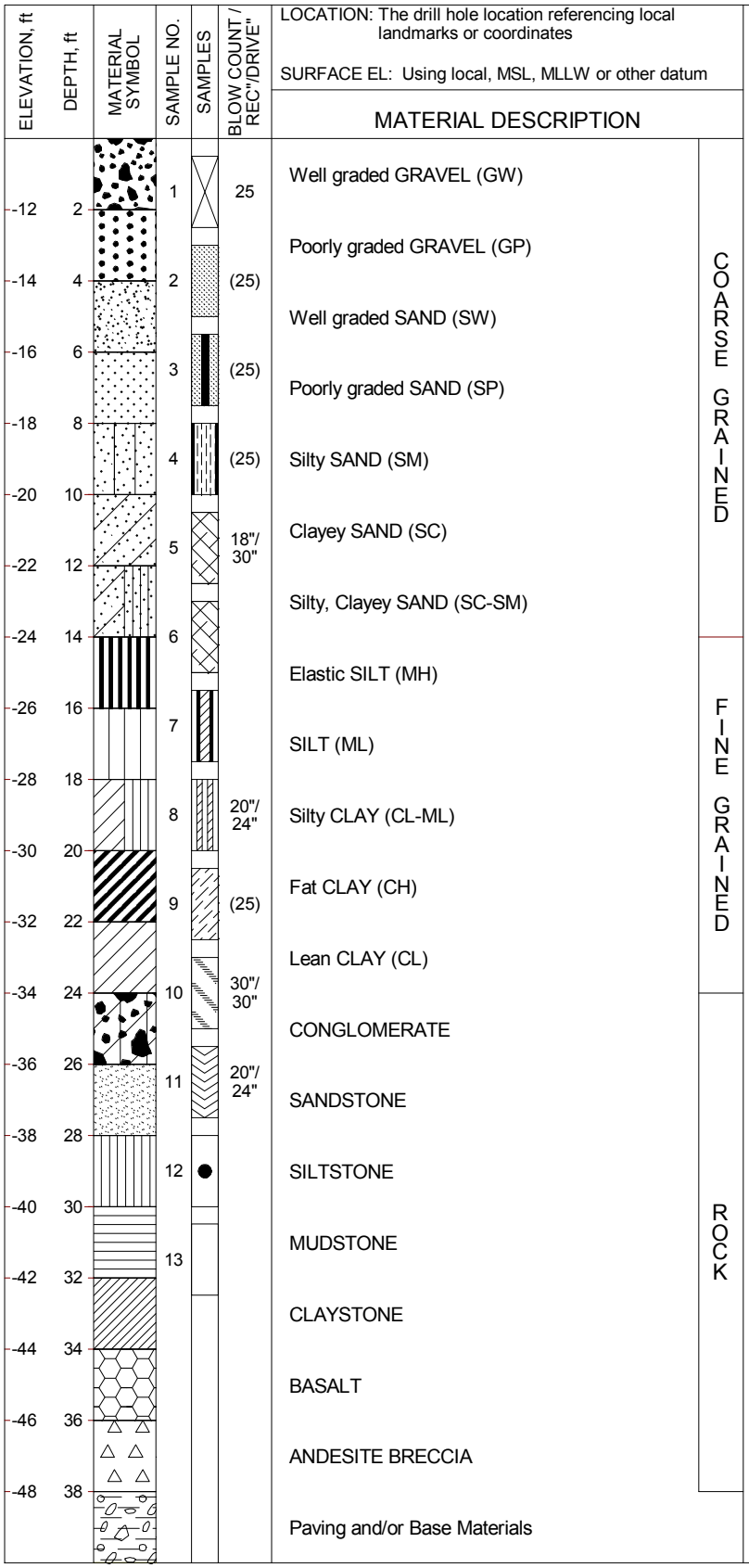
COMPLETION DEPTH: 36.5 ft
DEPTH TO WATER: 8.0 ft
BACKFILLED WITH: Cuttings
DRILLING DATE: December 17, 2014

DRILLING METHOD: 8-inch-dia. Hollow Stem Auger
DRILLED BY: S/G Testing
LOGGED BY: M Janousek
CHECKED BY: M Janousek
RIG TYPE: CME 85

LOG OF DRILL HOLE NO. DH-2

New Administration Building
Goleta, California

PLATE A-2b



General Notes

Soil Texture Symbol

Sloped line in symbol column indicates transitional boundary

Samplers and sampler dimensions
(unless otherwise noted in report text) are as follows:

Symbol for:

1	SPT Sampler, driven 1-3/8" ID, 2" OD
2	CA Liner Sampler, driven 2-3/8" ID, 3" OD
3	CA Liner Sampler, disturbed 2-3/8" ID, 3" OD
4	Thin-walled Tube, pushed 2-7/8" ID, 3" OD
5	Bulk Bag Sample (from cuttings)
6	CA Liner Sampler, Bagged
7	Hand Auger Sample
8	CME Core Sample
9	Pitcher Sample
10	Lexan Sample
11	Vibracore Sample
12	No Sample Recovered
13	Sonic Soil Core Sample

Sampler Driving Resistance

Number of blows with 140 lb. hammer, falling 30" to drive sampler 1 ft. after seating sampler 6"; for example,

Blows/ft	Description
25	25 blows drove sampler 12" after initial 6" of seating
86/11"	After driving sampler the initial 6" of seating, 36 blows drove sampler through the second 6" interval, and 50 blows drove the sampler 5" into the third interval
50/6"	50 blows drove sampler 6" after initial 6" of seating
Ref/3"	50 blows drove sampler 3" during initial 6" seating interval

Blow counts for California Liner Sampler shown in ( )

Length of sample symbol approximates recovery length

Classification of Soils per ASTM D2487 or D2488

Geologic Formation noted in bold font at the top of interpreted interval

Strength Legend

Q = Unconfined Compression
u = Unconsolidated Undrained Triaxial
t = Torvane
p = Pocket Penetrometer
m = Miniature Vane

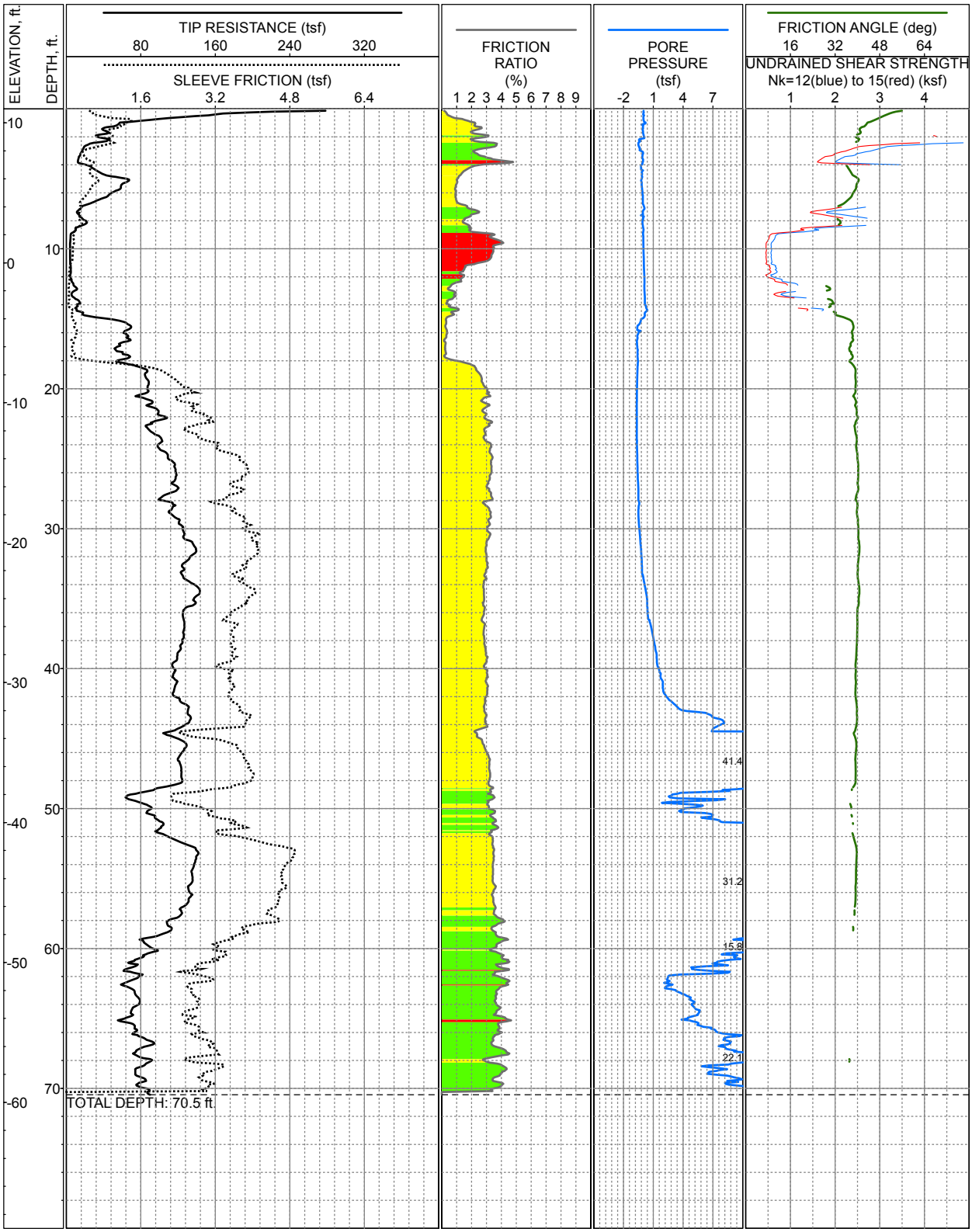
Water Level Symbols

- Initial or perched water level
- Final ground water level
- Seepages encountered

Rock Quality Designation (RQD) is the sum of recovered core pieces greater than 4 inches divided by the length of the cored interval.

KEY TO TERMS & SYMBOLS USED ON LOGS

PLATE A-3



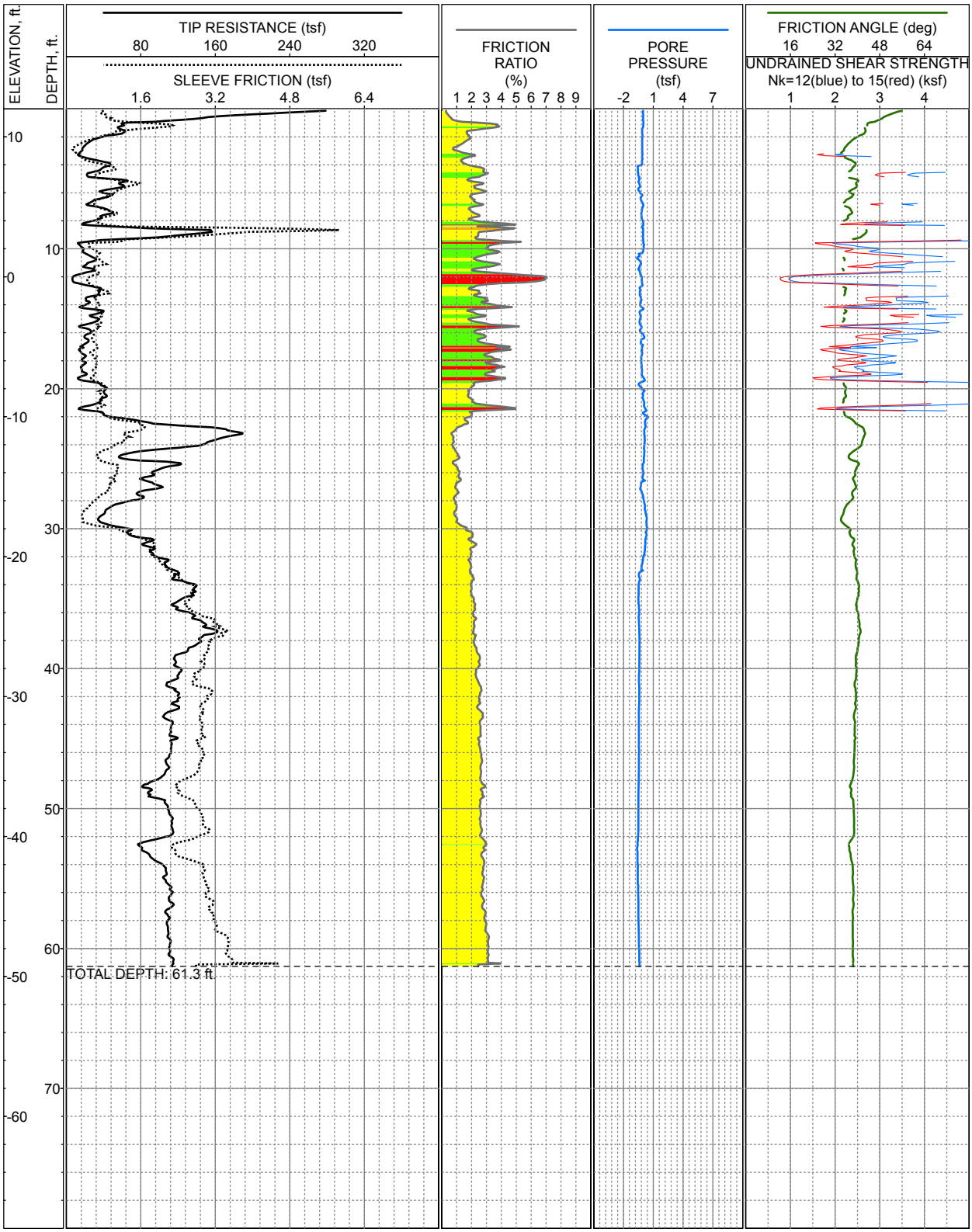
LOCATION: N1,981,168, E6,003,154, CA State Plane Zone V, NAD83, feet
SURFACE EL: 11.0ft +/- (NAVD88)
COMPLETION DEPTH: 70.5ft
TESTDATE: 2/9/2015

EXPLORATION METHOD: CPT
PERFORMED BY: Fugro CPT
REVIEWED BY: M Janousek
CONE AREA RATIO: 0.59

LOG OF CPT NO: CPT-1
New Administration Building
Goleta, California

PLATE A-4

N:\Projects\04_2014\04_6214_0143_GWSD_AdminBldg\Explorations\CPT\2015\Logs\2015_02_13_Logs_SuFr\MXD\CPT_Logs_VA15C.mxd,02/13/2015,vencad



LOCATION: N1,981,161, E6,003,190, CA State Plane Zone V, NAD83, feet
SURFACE EL: 12.0ft +/- (NAVD88)
COMPLETION DEPTH: 61.3ft
TESTDATE: 2/9/2015

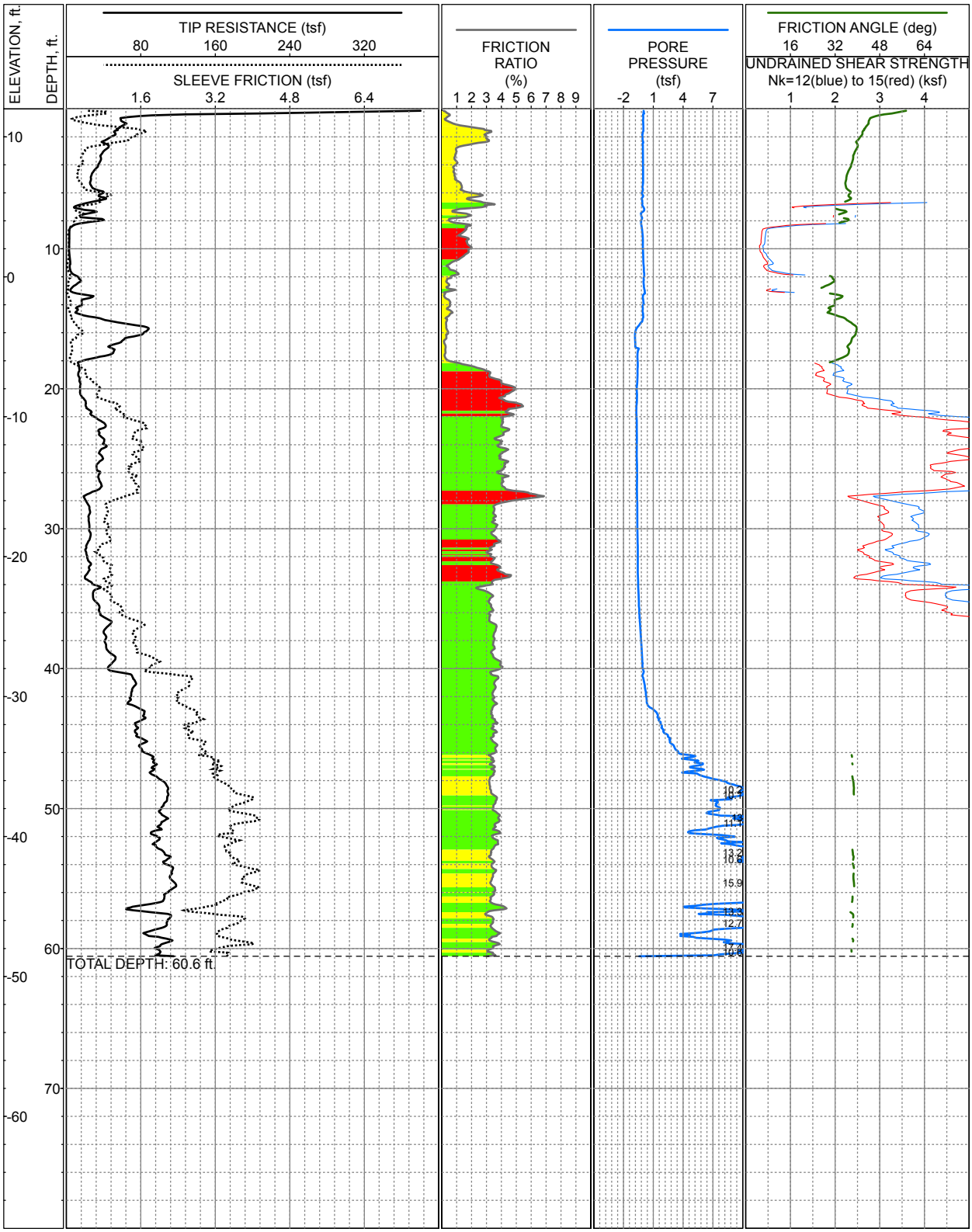
EXPLORATION METHOD: CPT
PERFORMED BY: Fugro CPT
REVIEWED BY: M Janousek
CONE AREA RATIO: 0.59

LOG OF CPT NO: CPT-2

New Administration Building
Goleta, California

PLATE A-5

N:\Projects\04_2014\04_6214_0143_GWSD_AdminBldg\Explorations\CPT\2015\Logs\2015_02_13_Logs_SuFr\MXD\CPT_Logs_VA15C.mxd,02/13/2015,vencad



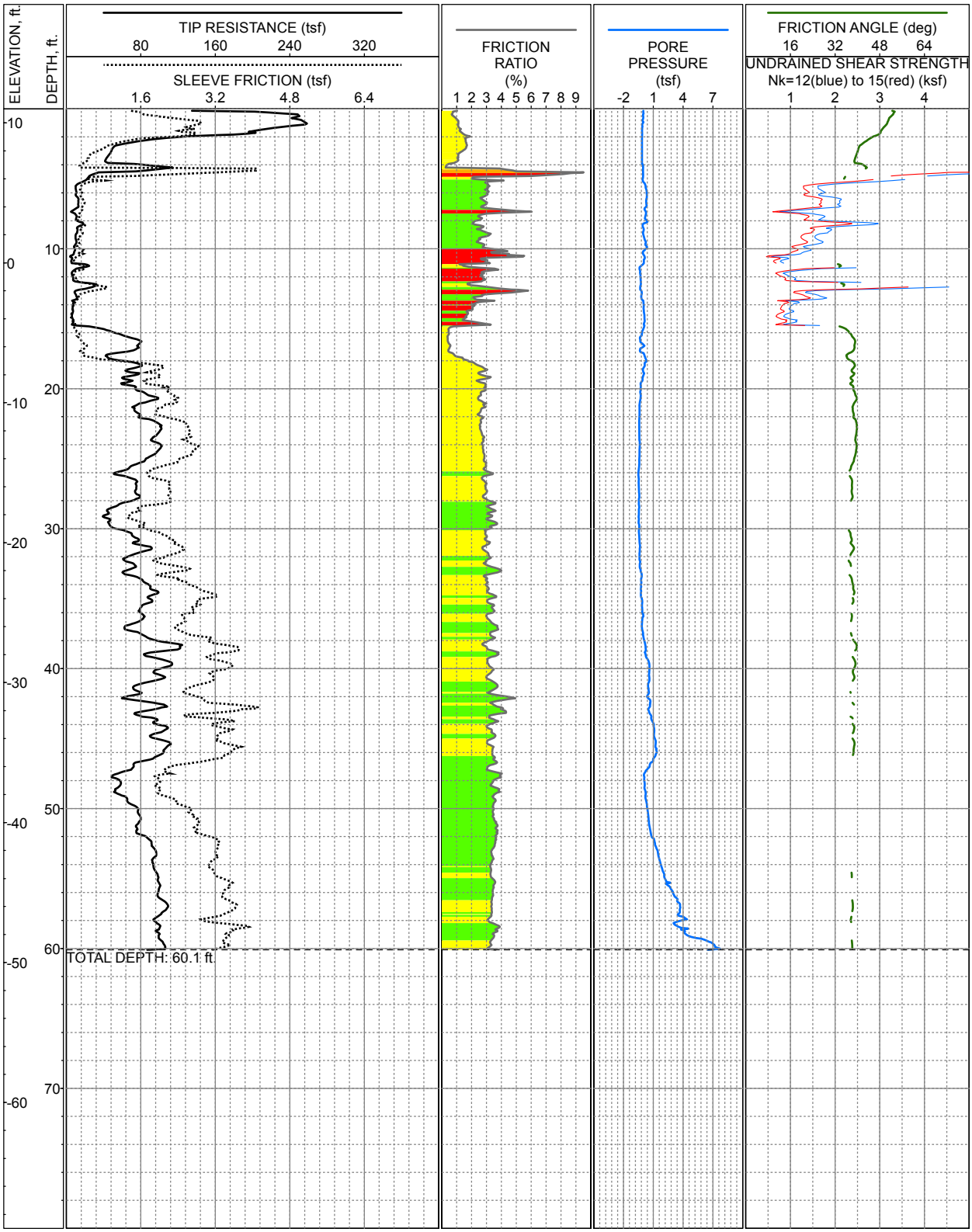
LOCATION: N1,981,144, E6,003,171, CA State Plane Zone V, NAD83, feet
SURFACE EL: 12.0ft +/- (NAVD88)
COMPLETION DEPTH: 60.6ft
TESTDATE: 2/9/2015

EXPLORATION METHOD: CPT
PERFORMED BY: Fugro CPT
REVIEWED BY: M Janousek
CONE AREA RATIO: 0.59

LOG OF CPT NO: CPT-3
New Administration Building
Goleta, California

PLATE A-6

N:\Projects\04_2014\04_6214_0143_GWSD_AdminBldg\Explorations\CPT\2015\Logs\2015_02_13_Logs_SuFr\MXD\CPT_Logs_VA15C.mxd,02/13/2015,vencad



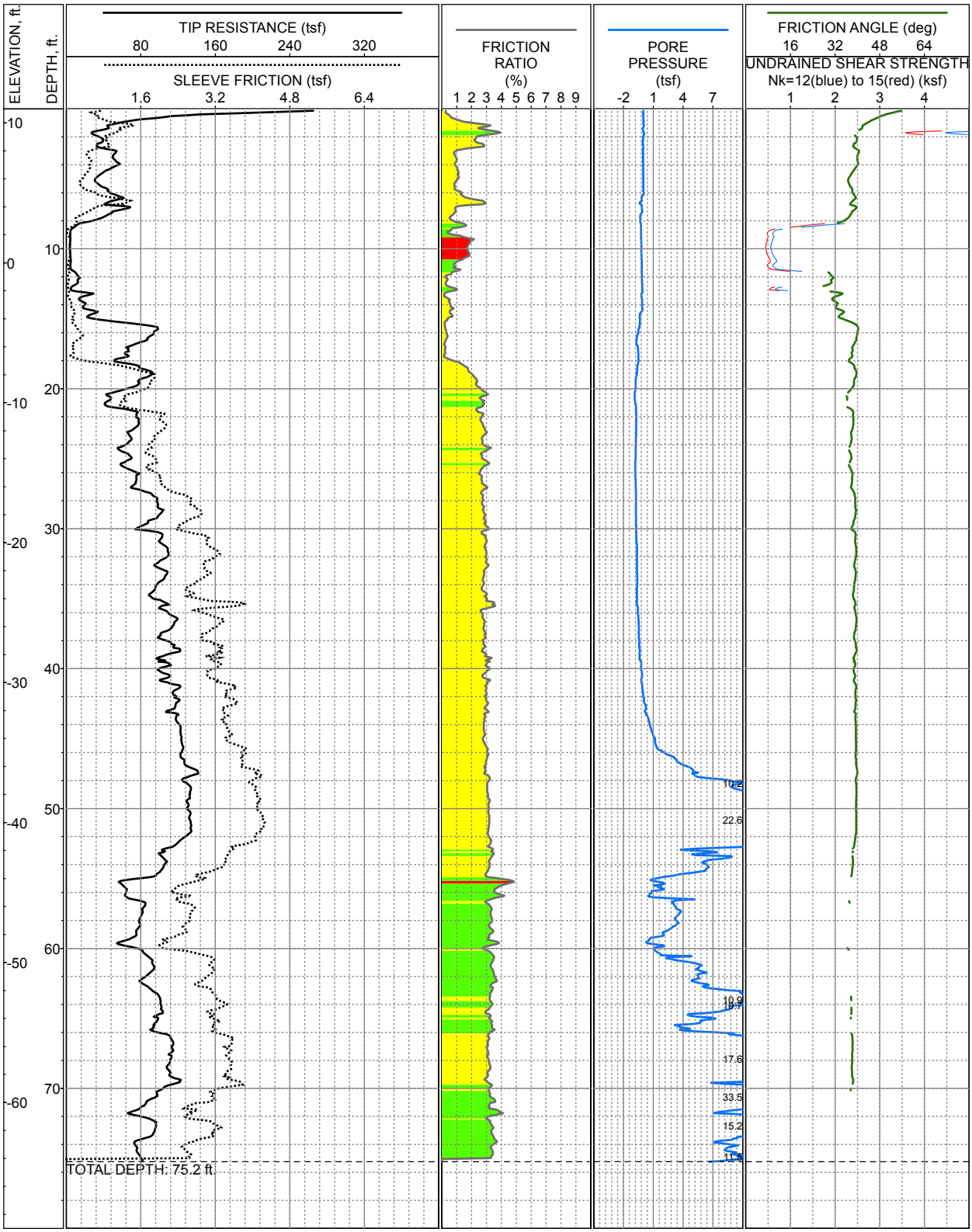
LOCATION: N1,981,173, E6,003,137, CA State Plane Zone V, NAD83, feet
SURFACE EL: 11.0ft +/- (NAVD88)
COMPLETION DEPTH: 60.1ft
TESTDATE: 2/9/2015

EXPLORATION METHOD: CPT
PERFORMED BY: Fugro CPT
REVIEWED BY: M Janousek
CONE AREA RATIO: 0.59

LOG OF CPT NO: CPT-4
New Administration Building
Goleta, California

PLATE A-7

N:\Projects\04_2014\04_6214_0143_GWSD_AdminBldg\Explorations\CPT\2015\Logs\2015_02_13_Logs_SuFr\MXD\CPT_Logs_VA15C.mxd,02/13/2015,vencad



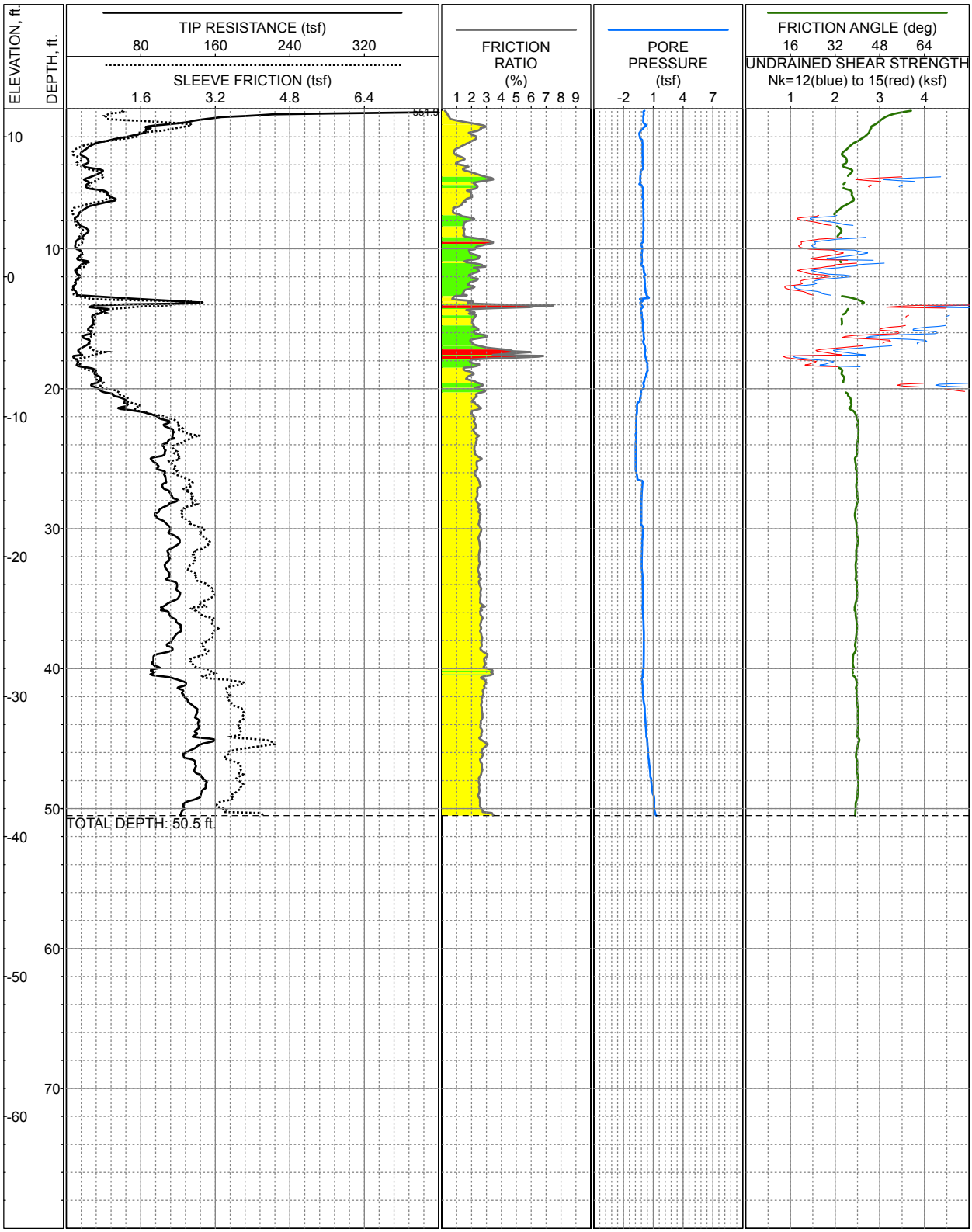
LOCATION: N1,981,174, E6,003,115, CA State Plane Zone V, NAD83, feet
SURFACE EL: 11.0ft +/- (NAVD88)
COMPLETION DEPTH: 75.2ft
TESTDATE: 2/9/2015

EXPLORATION METHOD: CPT
PERFORMED BY: Fugro CPT
REVIEWED BY: M Janousek
CONE AREA RATIO: 0.59

LOG OF CPT NO: CPT-5
New Administration Building
Goleta, California

PLATE A-8

N:\Projects\04_2014\04_6214_0143_GWSD_AdminBldg\Explorations\CPT\2015\Logs\2015_02_13_Logs_SuFr\MXD\CPT_Logs_VA15C.mxd,02/13/2015,vencad



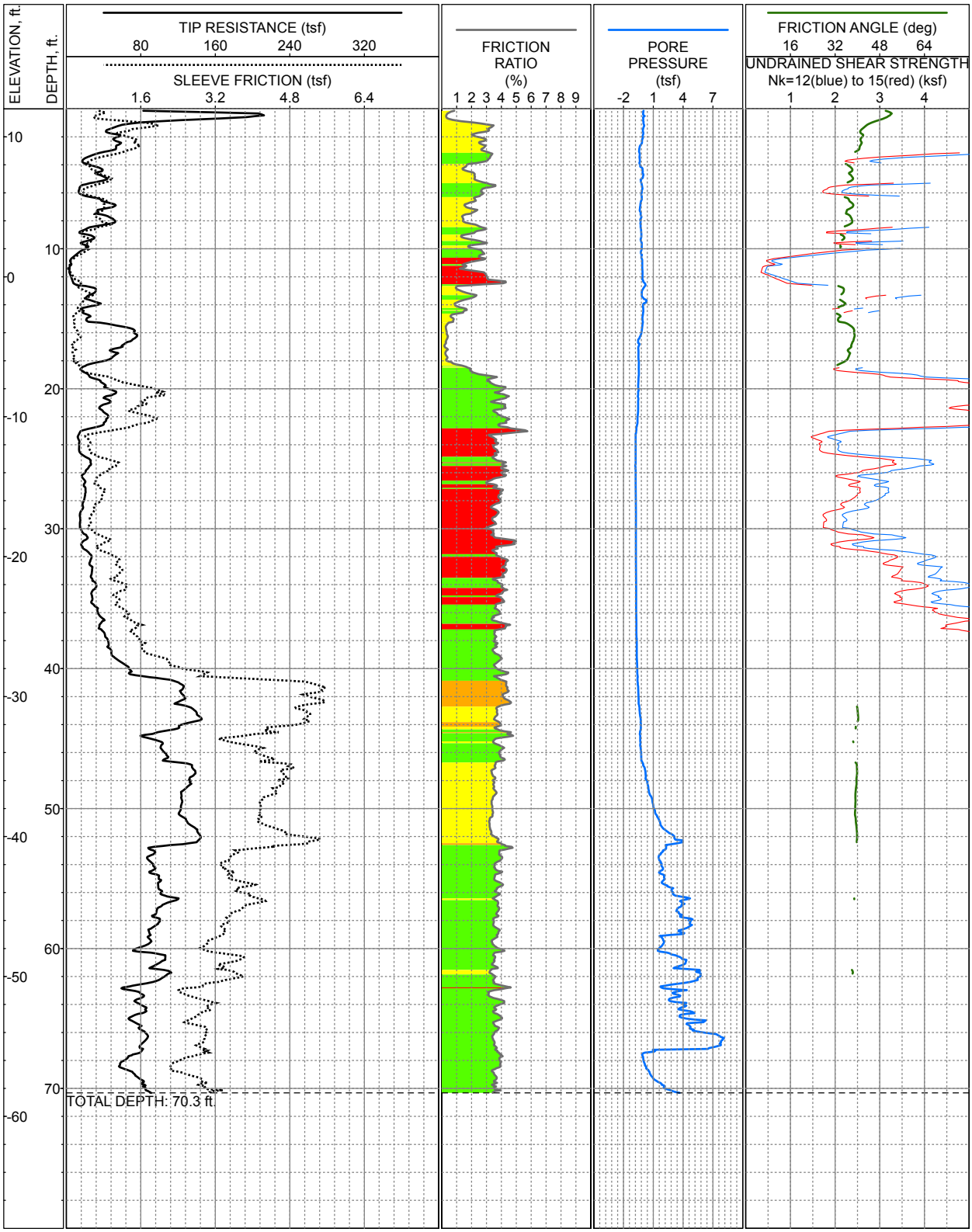
LOCATION: N1,981,165, E6,003,169, CA State Plane Zone V, NAD83, feet
SURFACE EL: 12.0ft +/- (NAVD88)
COMPLETION DEPTH: 50.5ft
TESTDATE: 2/9/2015

EXPLORATION METHOD: CPT
PERFORMED BY: Fugro CPT
REVIEWED BY: M Janousek
CONE AREA RATIO: 0.59

LOG OF CPT NO: CPT-6
New Administration Building
Goleta, California

PLATE A-9

N:\Projects\04_2014\04_6214_0143_GWSD_AdminBldg\Explorations\CPT\2015\Logs\2015_02_13_Logs_SuFr\MXD\CPT_Logs_VA15C.mxd,02/13/2015,vencad



LOCATION: N1,981,143, E6,003,185, CA State Plane Zone V, NAD83, feet
SURFACE EL: 12.0ft +/- (NAVD88)
COMPLETION DEPTH: 70.3ft
TESTDATE: 2/9/2015

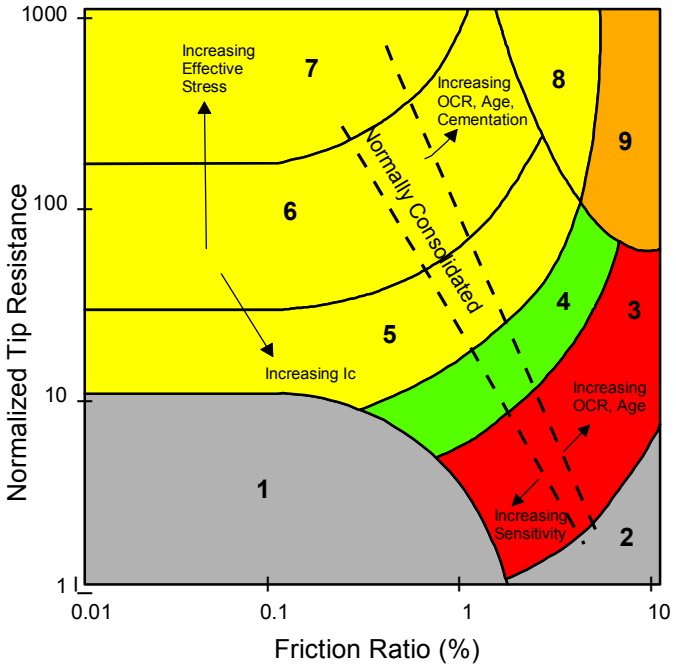
EXPLORATION METHOD: CPT
PERFORMED BY: Fugro CPT
REVIEWED BY: M Janousek
CONE AREA RATIO: 0.59

LOG OF CPT NO: CPT-7
New Administration Building
Goleta, California

PLATE A-10

N:\Projects\04_2014\04_6214_0143_GWSD_AdminBldg\Explorations\CPT\2015\Logs\2015_02_13_Logs_SuFr\MXD\CPT_Logs_VA15C.mxd,02/13/2015,vencad

CPT CORRELATION CHART
(Robertson and Wride, 1990)



Zone	Soil Behavior Type
1	Sensitive Fine-grained
2	Peats
3	Silty Clay to Clay
4	Clayey Silt to Silty Clay
5	Silty Sand to Sandy Silt
6	Clean Sand to Silty Sand
7	Gravelly Sand to Dense Sand
8	Very Stiff Sand to Clayey Sand*
9	Very Stiff Fine-Grained*

*heavily overconsolidated or cemented

KEY TO CPT INTERPRETATION

New Administration Building
Goleta, California

APPENDIX B
LABORATORY TESTING

APPENDIX B

LABORATORY TESTING

INTRODUCTION

The contents of this appendix shall be integrated with the geotechnical engineering study of which it is a part. The data contained in this appendix shall not be used in whole or in part as a sole source for information or recommendations regarding the subject site.

LABORATORY ANALYSES

Laboratory tests were performed on selected driven ring, split spoon sampler, and bulk soil samples to estimate engineering characteristics of the various earth materials encountered. Testing was performed in general accordance with ASTM Standards for Soil Testing, latest revision. The results of the laboratory analyses are summarized on Plate B-1 - Summary of Laboratory Test Results.

Laboratory Moisture and Unit Weight Determinations

Moisture content and dry unit weight determinations were performed on select driven ring samples collected to evaluate the natural water content and dry unit weight of the various earth materials encountered in general accordance with ASTM D2216 and D2937. The results are presented on Plate B-1 and on the respective drill hole logs (Appendix A).

Percent Passing #200 Sieve

Five fines content determinations (passing No. 200 sieve) were made in accordance with standard test method ASTM D1140. The percent passing No. 200 sieve results are shown on Plate B-1 and on the respective drill hole logs.

Atterberg Limits Testing

Three Atterberg limits tests were performed on select samples to evaluate liquid and plastic limits in general accordance with standard test method ASTM D4318. The test results are shown on Plate B-1, Plate B-2 - Plasticity Chart, and on the respective drill hole logs.

Direct Shear Testing

One multistage direct shear test was performed on a relatively undisturbed ring sample to evaluate the shear strength of the alluvial materials. The test was performed in general accordance with standard test method ASTM D3080. The direct shear test results are presented on Plate 3 - Direct Shear Test.

UNCONSOLIDATED, UNDRAINED TRIAXIAL SHEAR TESTING

Two unconsolidated, undrained triaxial shear tests were performed on relatively undisturbed ring samples to evaluate the undrained shear strengths of Pico Formation bedrock materials. The tests were performed in general accordance with standard test method ASTM D2850. The triaxial test results are presented on Plate B-1, Plates B-4a and B-4b - Unconsolidated, Undrained Triaxial Test, and the respective drill hole logs.

Consolidation Testing

Two consolidation tests were performed on selected driven ring and Shelby tube samples of fine grained earth material. The tests were conducted in general accordance with standard test method ASTM D2435. The results of the consolidation tests are presented on Plates B-5a and B-5b – Consolidation Test.

R-Value Test

One R-value test was performed on a select sample of surficial earth materials. The test was performed in accordance with standard test method ASTM D2844 and result of the test is presented on Plate B-1.

Soil Chemistry Tests/Corrosion Tests

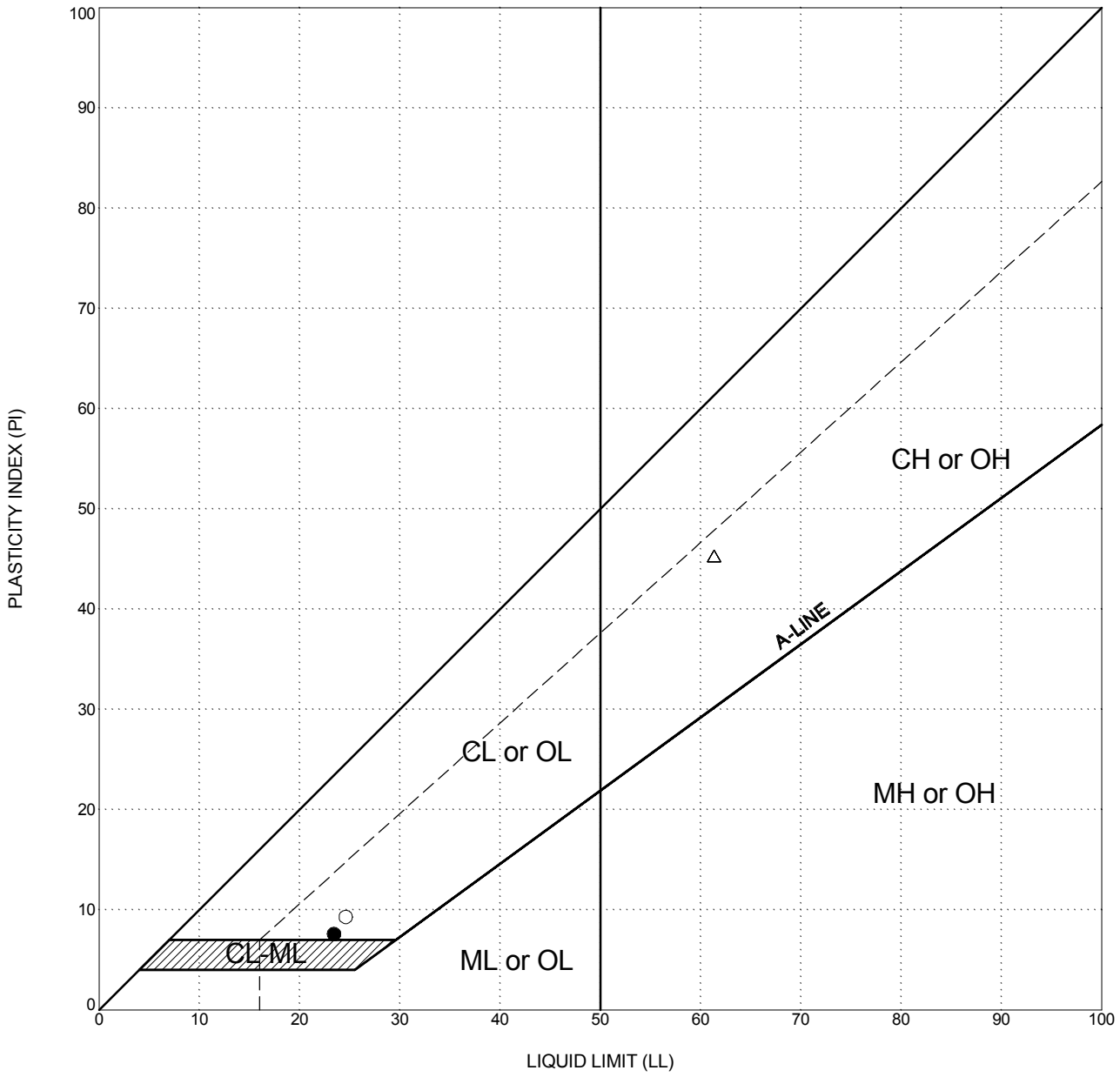
Soil chemistry tests were performed on one sample to evaluate sulfate, chloride, resistivity, and pH. The testing was performed by Cooper Testing Laboratories, Inc. of Palo Alto, California. The results of the testing and an analysis of the corrosivity to ferrous metals and concrete materials are summarized in this report and are shown on Plate B-1.

DRILL HOLE	DEPTH, ft	SAMPLE NUMBER	MATERIAL DESCRIPTION	UWW pcf	UDW pcf	MC %	FINES %	ATTERBERG LIMITS		COMPACTION TEST		DIRECT SHEAR		COMPRESSIVE STRENGTH TESTS		CORROSIVITY TESTS				R-VALUE	EXPANSION INDEX	SAND EQUIVALENT (SE)	SPECIFIC GRAVITY
								LL	PI	MAX DD pcf	OPT MC %	C ksf	PHI deg	Qu, ksf	S_u (Cell Prs.) ksf	R	pH	Cl	So_4 (ppm)				
DH-1	2.0		Silty SAND (SM)			13																	
DH-1	3.0		Silty SAND (SM)	117	99	18																	
DH-1	6.0		Silty SAND (SM)	124	106	17																	
DH-1	8.0		Silty SAND (SM)	133	115	15	41																
DH-1	11.0		Clayey SAND (SC)	127	106	20	47	25	10														
DH-1	13.0		Silty SAND (SM)	124	101	22	33																
DH-1	16.0		Clayey SAND (SC)	131	111	18	39																
DH-1	21.0		Sandy Lean CLAY (CL)	130	111	17		23	7														
DH-1	26.0		Poorly graded SAND with silt (SP-SM)			20	14																
DH-1	31.0		Silty SAND (SM)			16	20																
DH-2	2.0		Clayey SAND (SC)													836	7.40	97	2796	24			
DH-2	6.0		Silty SAND (SM)	109	98	11						0.2	37										
DH-2	8.0		Clayey SAND (SC) with fat CLAY (CL)	113	85	33	46																
DH-2	10.0		Clayey SAND (SC) with fat CLAY (CL)					61	45														
DH-2	13.0		Silty SAND (SM)	111	90	23	22																
DH-2	16.0		Silty SAND (SM)			23	20																
DH-2	26.0		SILTSTONE (Rx) / CLAYSTONE (Rx)	132	111	18									6.2(2)								
DH-2	31.0		SILTSTONE (Rx) / CLAYSTONE (Rx)	131	111	19									10.7(2.5)								

SUMMARY OF LABORATORY TEST RESULTS

Proposed Administration Building
Goleta West Sanitary District, Goleta, California

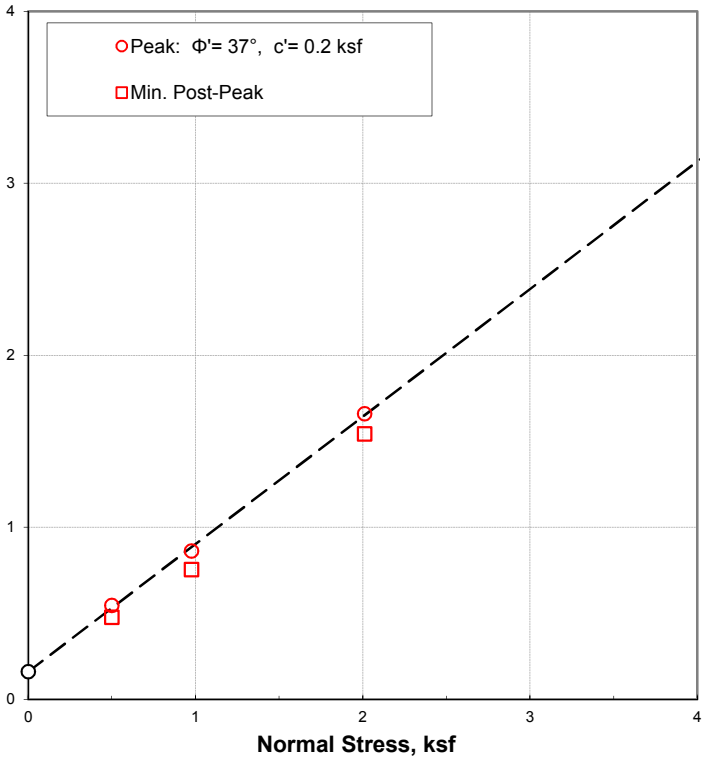
PLATE B-1

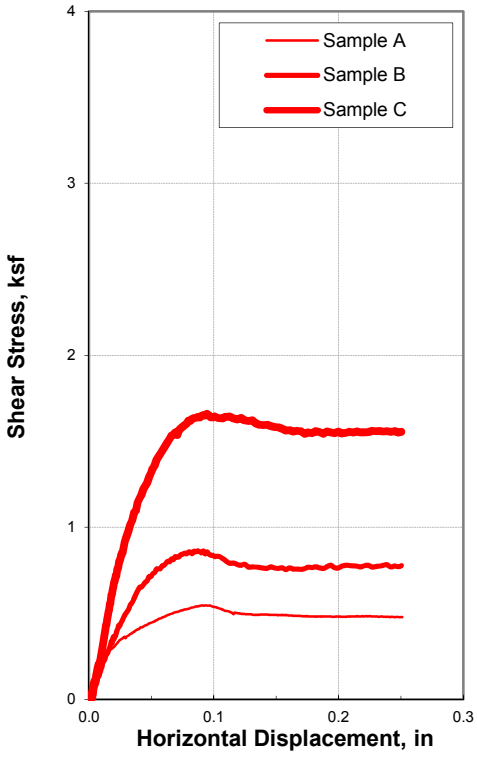


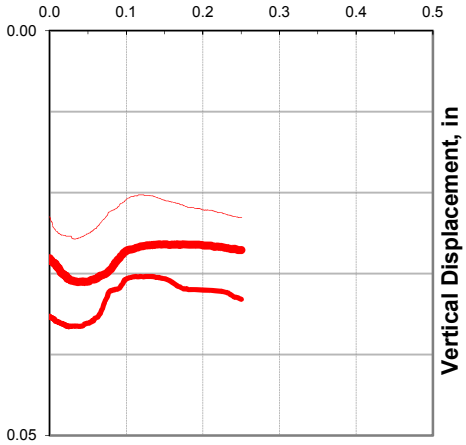
LEGEND			CLASSIFICATION	ATTERBERG LIMITS TEST RESULTS		
	location	depth, ft		LIQUID LIMIT (LL)	PLASTIC LIMIT (PL)	PLASTICITY INDEX (PI)
○	DH-1	11.0	Clayey SAND (SC)	25	15	10
●	DH-1	21.0	Sandy Lean CLAY (CL)	23	16	7
△	DH-2	10.0	Clayey SAND (SC) with fat CLAY (CL)	61	16	45

PLASTICITY CHART
Proposed Administration Building
Goleta West Sanitary District, Goleta, California

PLATE B-2







SAMPLE ID	Boring Number:	DH-2			
	Sample Number:	2			
	Sample Depth:	6.0 ft			
	USCS Classification:	Silty SAND (SM)			
INITIAL	Specimen	A	B	C	D
	Water Content, %	11.1%	11.1%	11.1%	
	Dry Unit Weight, pcf	97.8	98.1	97.9	
	Saturation, %	43%	43%	43%	
	Void Ratio	0.69	0.69	0.69	
	Diameter, in	2.42	2.42	2.42	
	Height, in	1.00	1.00	1.00	
FINAL	Water Content, %	19.8%	18.1%	18.1%	
	Dry Unit Weight, pcf	100.0	100.0	100.0	
	Void Ratio	0.65	0.65	0.65	
TEST SUMMARY	Displacement at Peak, in	0.09	0.09	0.09	
	Displacement Rate, in/min	0.001	0.001	0.001	
	Normal Stress, ksf	0.5	1.0	2.0	
	Peak Shear Stress, ksf	0.55	0.86	1.66	
	Min. Post-Peak Stress, ksf	0.48	0.75	1.54	
REMARKS	Test Method: ASTM D3080				

CLASSIFICATION

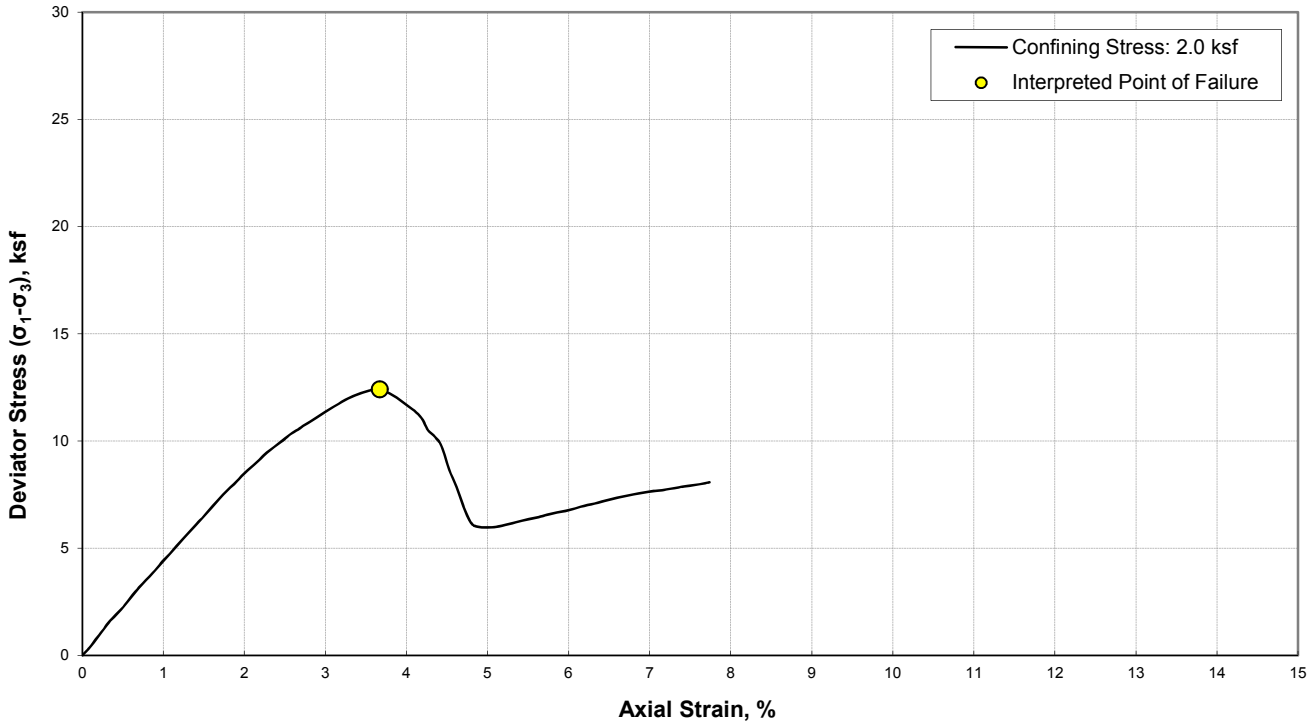
Sieve Size	% Passing
3/8-in. (9.5mm)	---
#4 (4.75mm)	---
#16 (1.18mm)	---
#30 (0.6mm)	---
#100 (0.150mm)	---
#200 (0.075mm)	---

Atterberg Limits	
Liquid Limit, %	---
Plastic Limit, %	---
Plasticity Index, %	---
Estimated Gs	2.65
k_{avg} 20°C, cm/sec	---

DIRECT SHEAR TEST

Proposed Administration Building
Goleta West Sanitary District, Goleta, California

PLATE B-3



SAMPLE ID

Boring Number:	DH-2
Sample Number:	8
Sample Depth:	26.0 ft
USCS Classification:	Santa Barbara Formation: Siltstone (Rx) / Claystone (Rx)

SAMPLE PROPERTIES

Water Content, %	18.4%
Dry Unit Weight, pcf	111.3
Saturation, %	100%
Void Ratio	0.49
Diameter, in	2.40
Height, in	4.85

SAMPLE IMAGES

CLASSIFICATION

Sieve Size	% Passing	Other Parameters	
3/8-in. (9.5mm)	---	Liquid Limit	---
#4 (4.75mm)	---	Plastic Limit	---
#16 (1.18mm)	---	Plasticity Index	---
#30 (0.6mm)	---	Estimated Gs	2.65
#100 (0.150mm)	---	S_u from T_v, ksf	---
#200 (0.075mm)	---	S_u from PP, ksf	---

TEST SUMMARY

Maximum Deviator Stress, ksf	12.4
Undrained Shear Strength, ksf	6.2
Axial Strain at Failure, %	3.7
Strain Rate, %/min	0.5
Cell Pressure, ksf	2.0
Tested By:	JB
Date Tested:	1/7/15

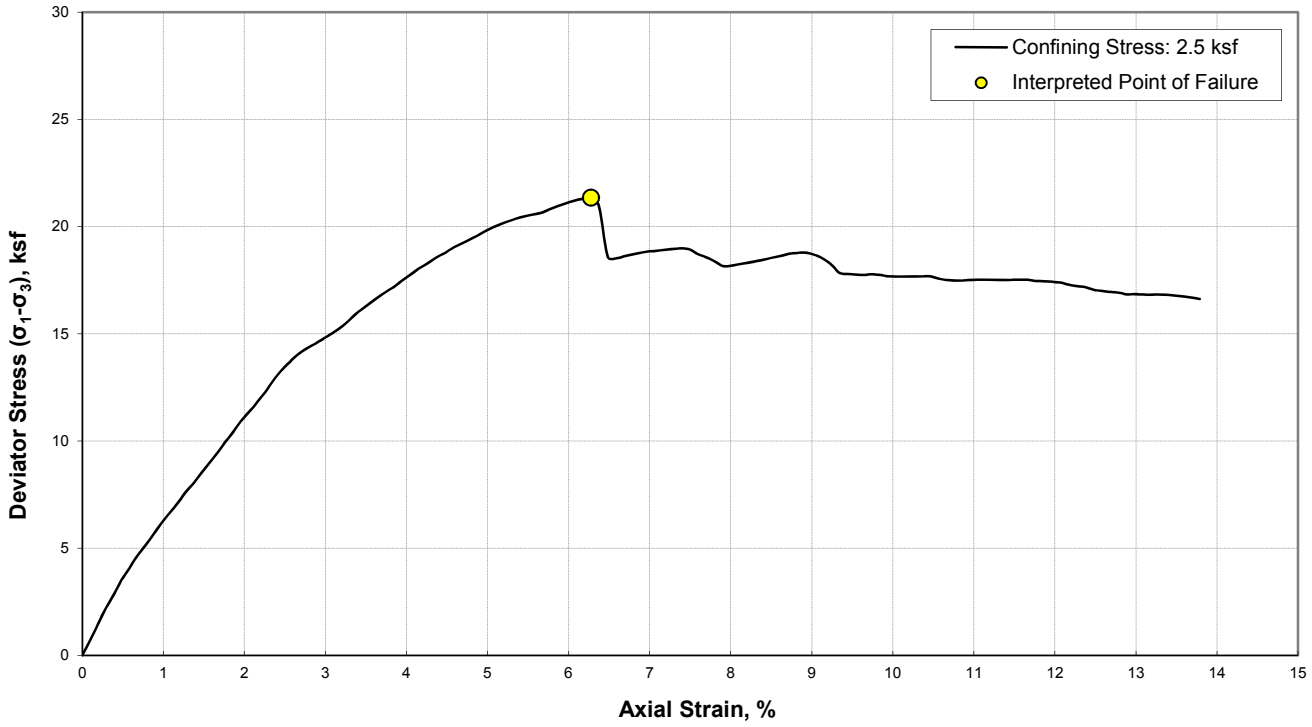
REMARKS

Test Method: ASTM 2850

UNCONSOLIDATED, UNDRAINED TRIAXIAL TEST

Proposed Administration Building
Goleta West Sanitary District, Goleta, California

PLATE B-4a



SAMPLE ID

Boring Number:	DH-2
Sample Number:	9
Sample Depth:	31.0 ft
USCS Classification:	Santa Barbara Formation: Siltstone (Rx) / Claystone (Rx)

SAMPLE PROPERTIES

Water Content, %	18.7%
Dry Unit Weight, pcf	110.5
Saturation, %	100%
Void Ratio	0.50
Diameter, in	2.41
Height, in	5.04

SAMPLE IMAGES

CLASSIFICATION

Sieve Size	% Passing	Other Parameters	
3/8-in. (9.5mm)	---	Liquid Limit	---
#4 (4.75mm)	---	Plastic Limit	---
#16 (1.18mm)	---	Plasticity Index	---
#30 (0.6mm)	---	Estimated Gs	2.65
#100 (0.150mm)	---	S_u from T_v, ksf	---
#200 (0.075mm)	---	S_u from PP, ksf	---

TEST SUMMARY

Maximum Deviator Stress, ksf	21.4
Undrained Shear Strength, ksf	10.7
Axial Strain at Failure, %	6.3
Strain Rate, %/min	0.6
Cell Pressure, ksf	2.5
Tested By:	JB
Date Tested:	1/7/15

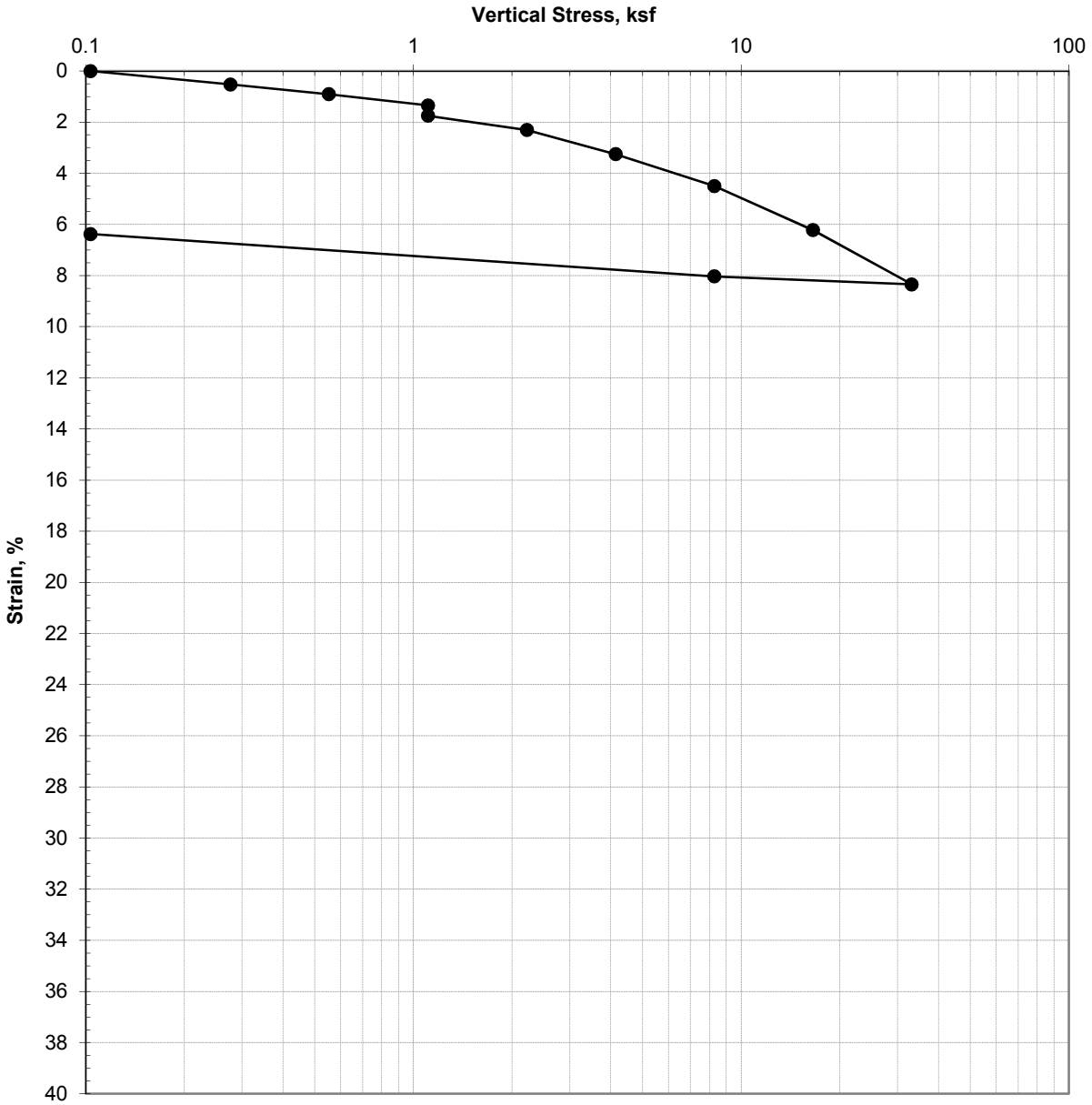
REMARKS

Test Method: ASTM 2850

UNCONSOLIDATED, UNDRAINED TRIAXIAL TEST

Proposed Administration Building
Goleta West Sanitary District, Goleta, California

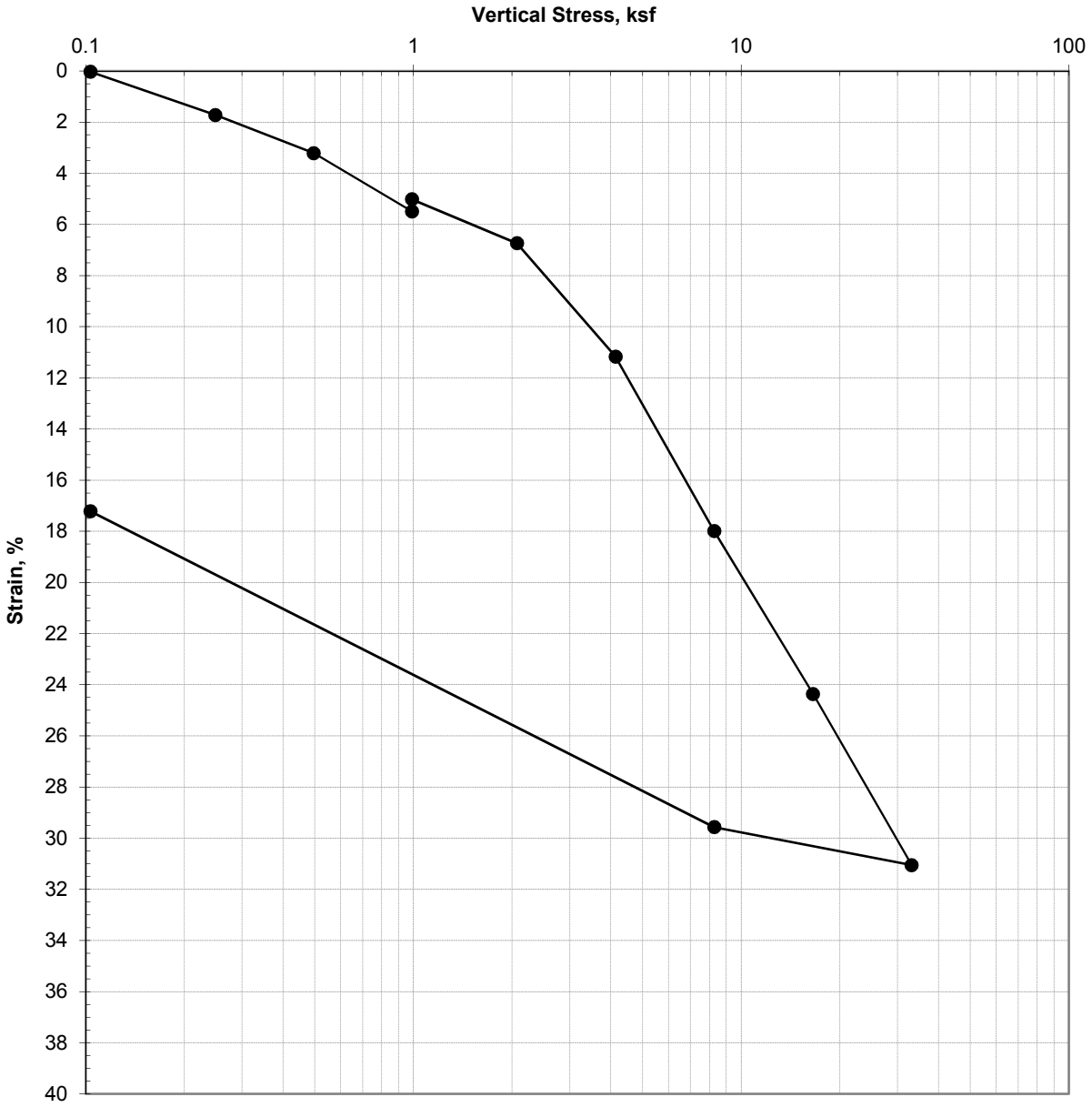
PLATE B-4b



SAMPLE ID	Boring, Sample #, Depth	DH-1 , #3 , 6.0 ft		SUMMARY	Preconsolidation Pressure, ksf ---
	USCS Classification:	Silty SAND (SM)			Inundation Increment, ksf 1.00
PROPERTIES		Initial	Final		Liquid Limit ---
	Water Content, %	17.2%	15.8%		Plastic Limit ---
	Dry Unit Weight, pcf	105.6	112.8		Plasticity Index ---
	Saturation, %	81%	90%		Passing #200 ---
	Void Ratio	0.57	0.47		Estimated Gs 2.65
	Diameter, in	2.42	2.42	REMARKS	Test Method: D2435
	Height, in	0.81	0.76		

CONSOLIDATION TEST
Proposed Administration Building
Goleta West Sanitary District, Goleta, California

PLATE B-5a

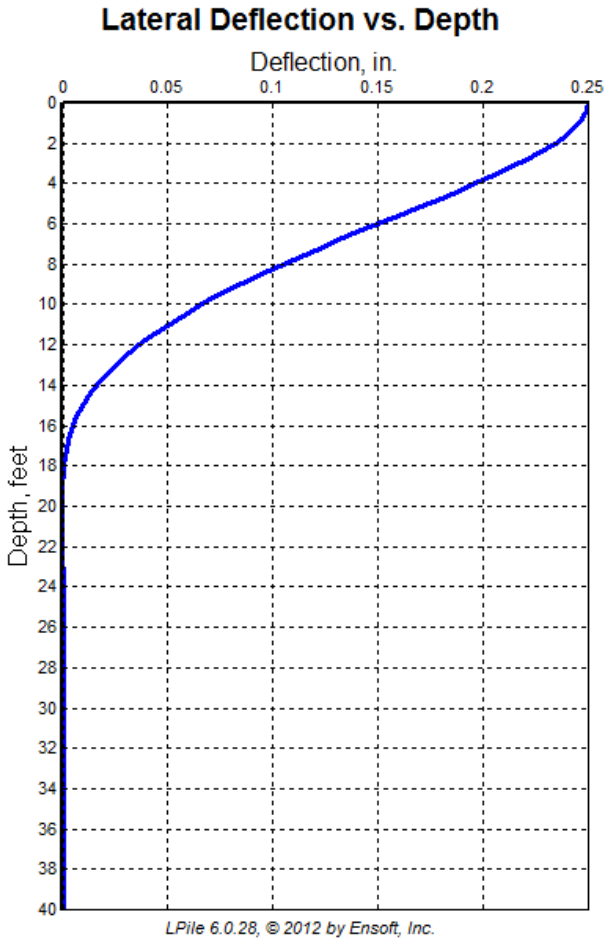


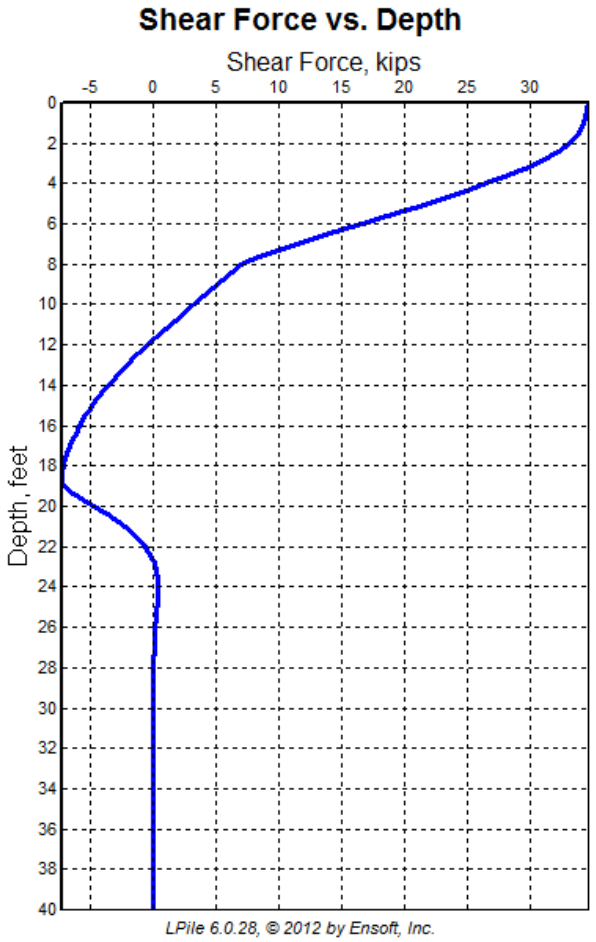
SAMPLE ID	Boring, Sample #, Depth	DH-2 , #4 , 10.0 ft		SUMMARY	Preconsolidation Pressure, ksf ---
	USCS Classification:	Clayey SAND (SC) with fat CLAY (CL)			Inundation Increment, ksf 1.00
					Liquid Limit ---
PROPERTIES		Initial	Final		Plastic Limit ---
	Water Content, %	64.6%	48.2%		Plasticity Index ---
	Dry Unit Weight, pcf	61.3	74.1		Passing #200 ---
	Saturation, %	99%	100%		Estimated Gs 2.76
	Void Ratio	1.81	1.33	REMARKS	Test Method: D2435
	Diameter, in	2.42	2.42		
	Height, in	0.82	0.67		

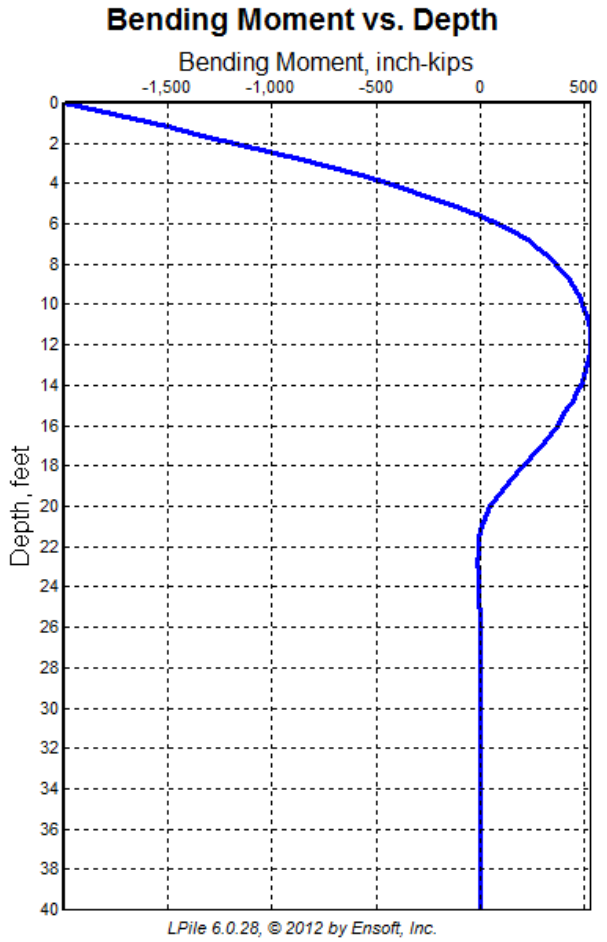
CONSOLIDATION TEST
Proposed Administration Building
Goleta West Sanitary District, Goleta, California

PLATE B-5b

APPENDIX C
LATERAL PILE CAPACITY RESULTS







Loading Conditions:

Axial Load = 120 Kips

Pile Head Deflection = 0.25”

Pile Head Slope = 0

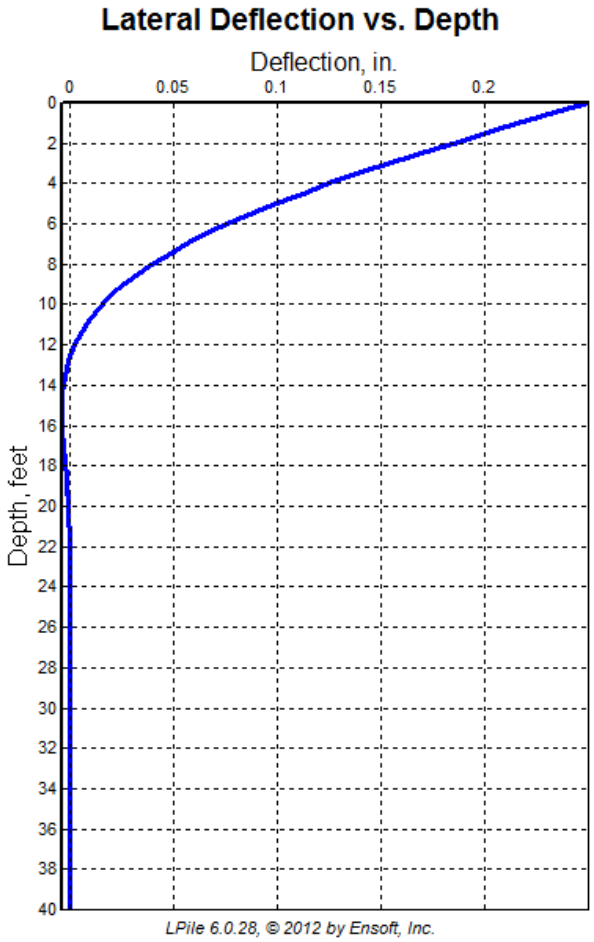
Lateral Capacity Results

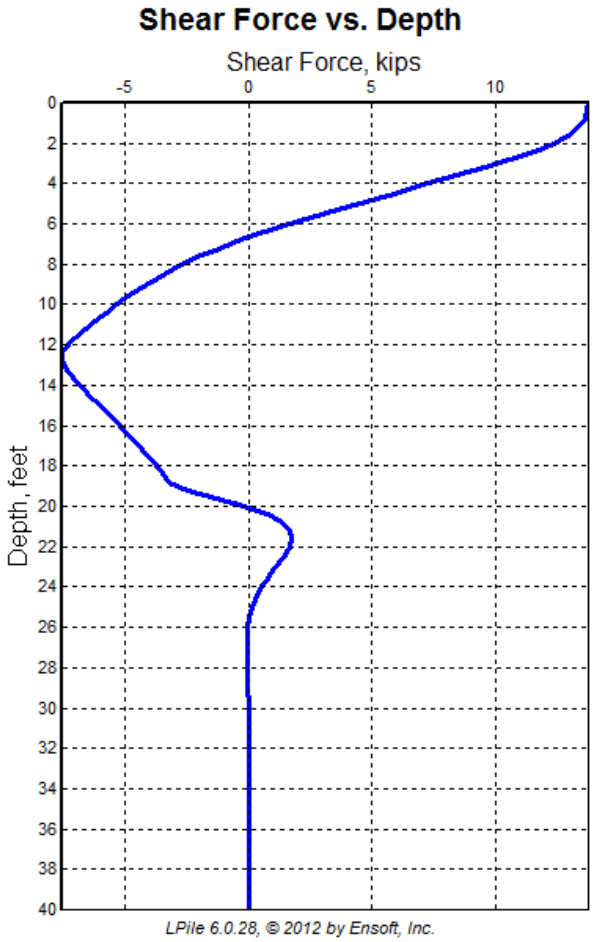
24-inch Fixed Head CIDH Pile – General Conditions

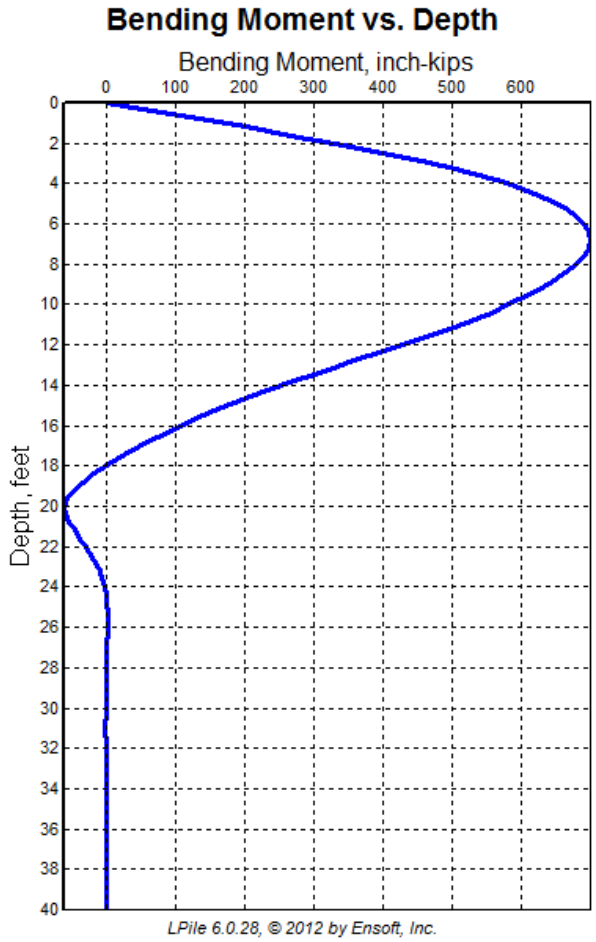
New Administration Building

Goleta, California

PLATE C-2a







Loading Conditions:

Axial Load = 120 Kips

Pile Head Deflection = 0.25”

Pile Head Moment = 0 inch-kips

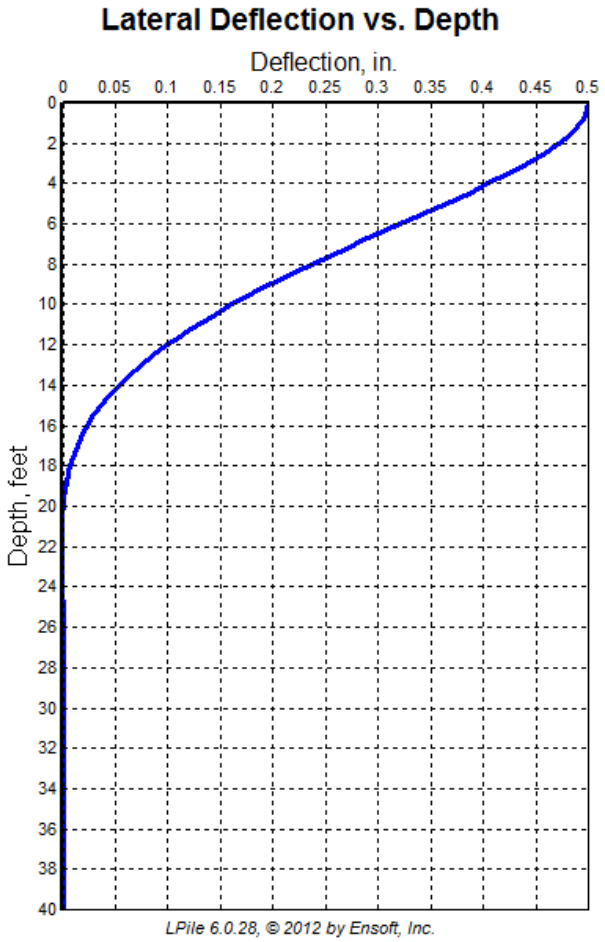
Lateral Capacity Results

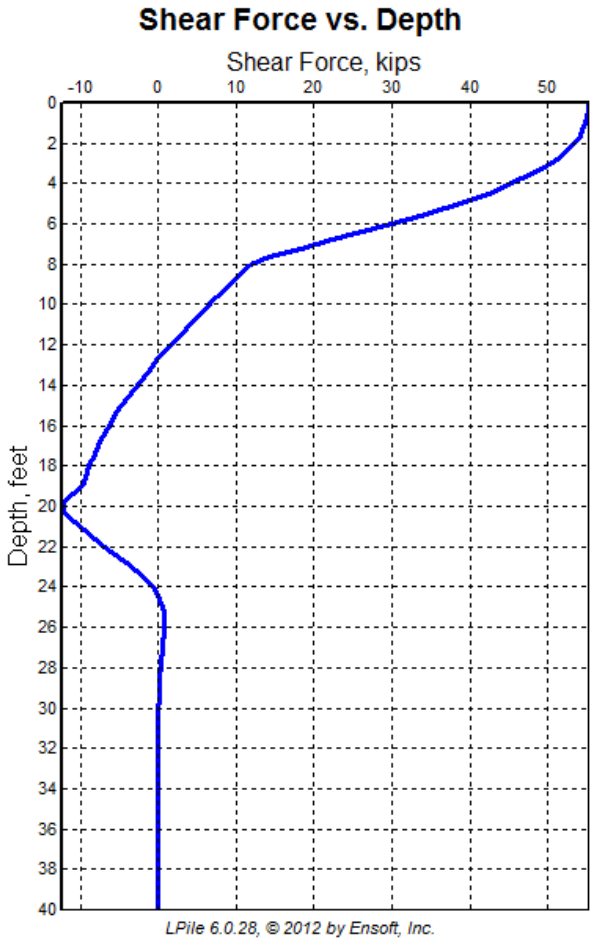
24-inch Free Head CIDH Pile – General Conditions

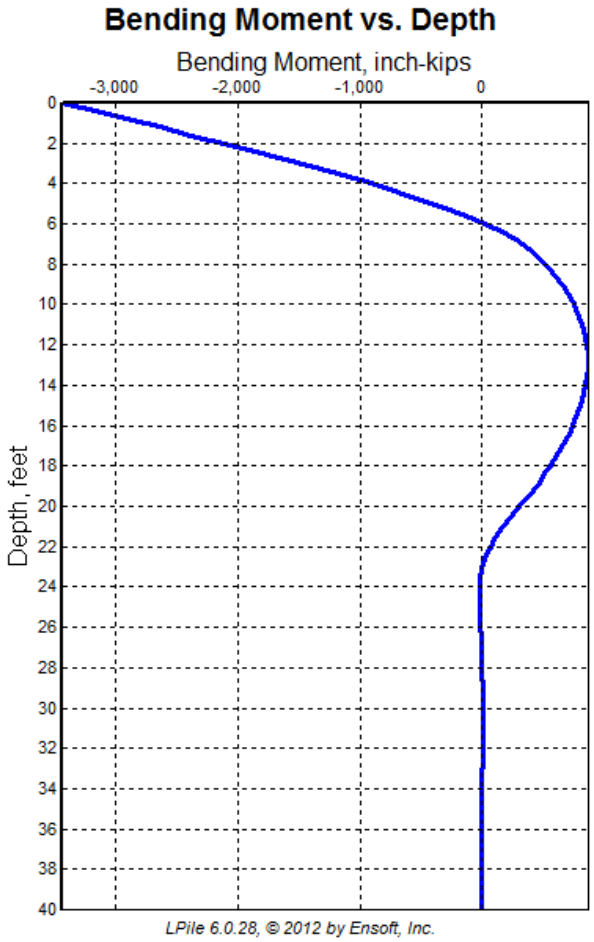
New Administration Building

Goleta, California

PLATE C-2b







Loading Conditions:

Axial Load = 120 Kips

Pile Head Deflection = 0. 5”

Pile Head Slope = 0

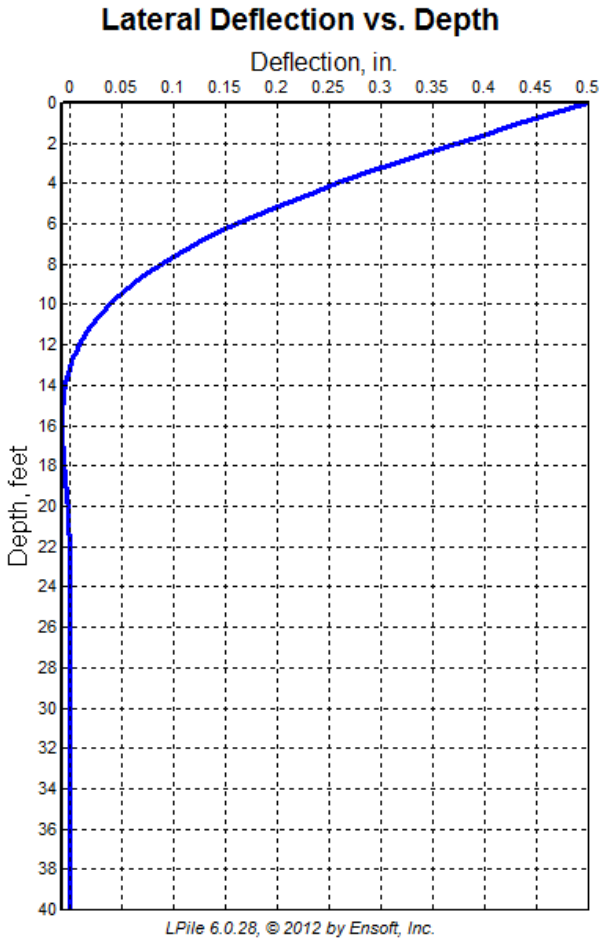
Lateral Capacity Results

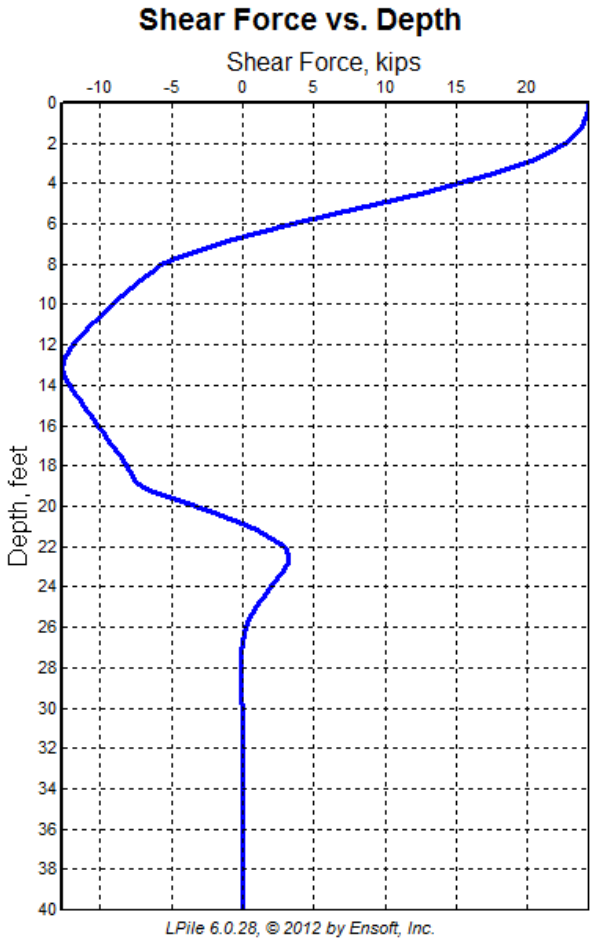
24-inch Fixed Head CIDH Pile – General Conditions

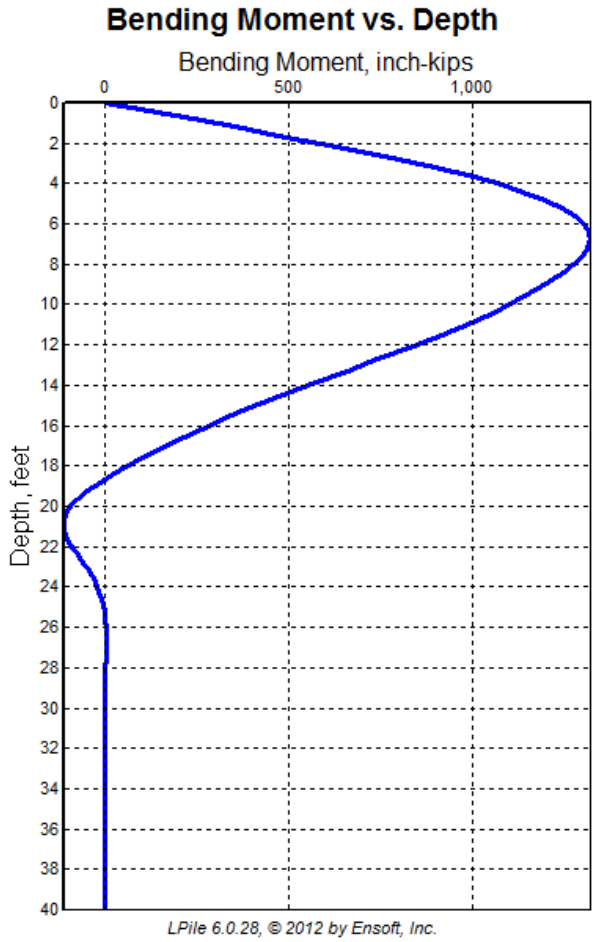
New Administration Building

Goleta, California

PLATE C-2c







Loading Conditions:

Axial Load = 120 Kips

Pile Head Deflection = 0. 5”

Pile Head Moment = 0 inch-kips

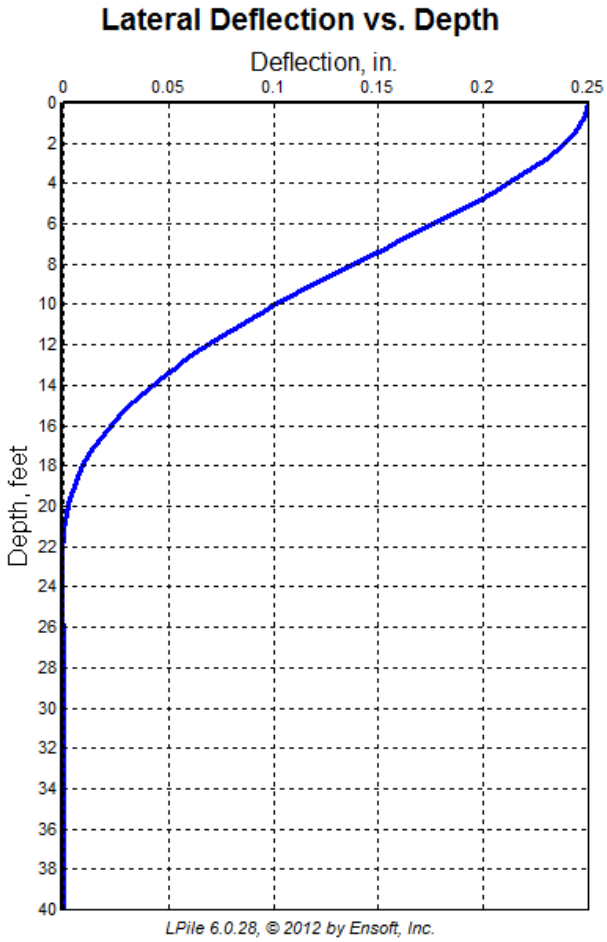
Lateral Capacity Results

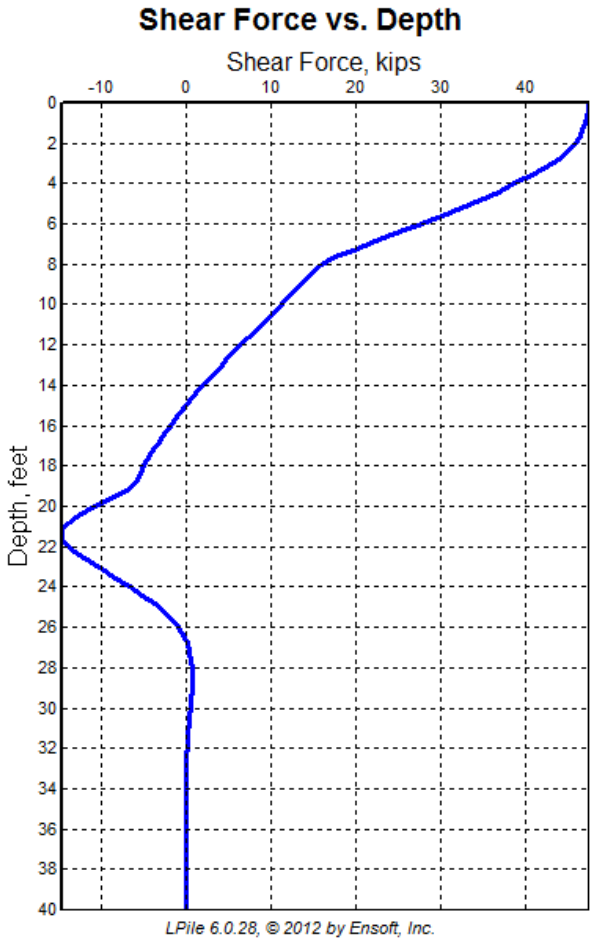
24-inch Free Head CIDH Pile – General Conditions

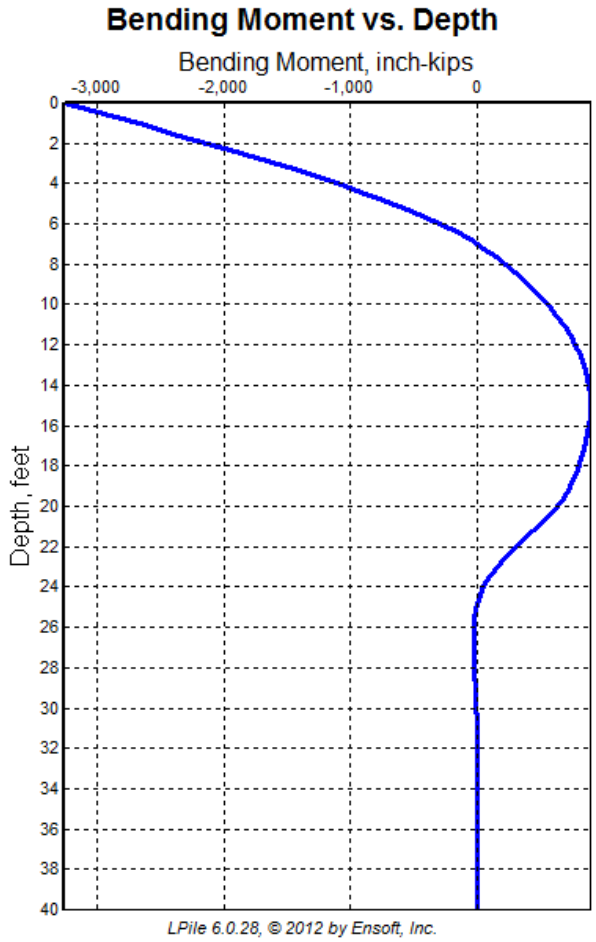
New Administration Building

Goleta, California

PLATE C-2d







Loading Conditions:

Axial Load = 120 Kips

Pile Head Deflection = 0.25”

Pile Head Slope = 0

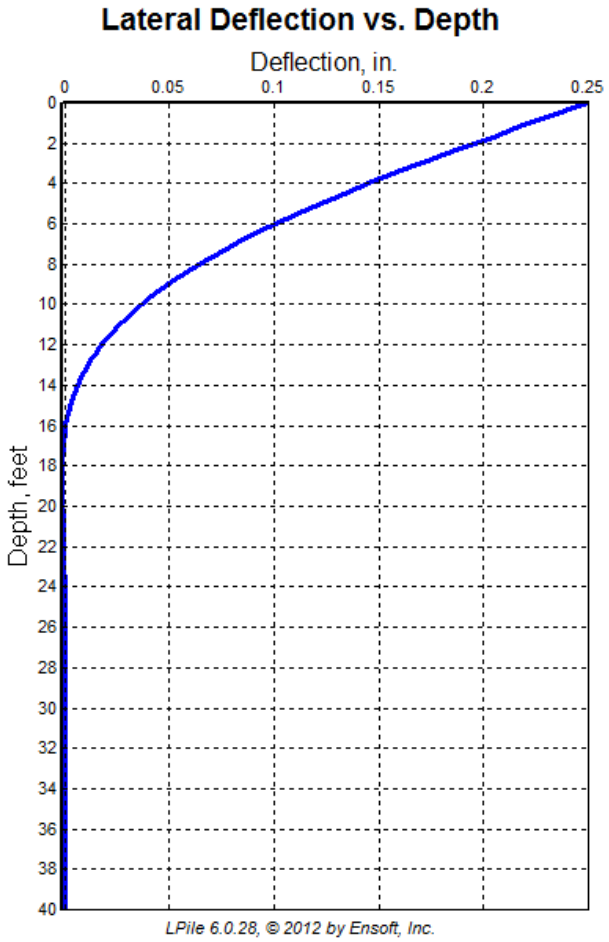
Lateral Capacity Results

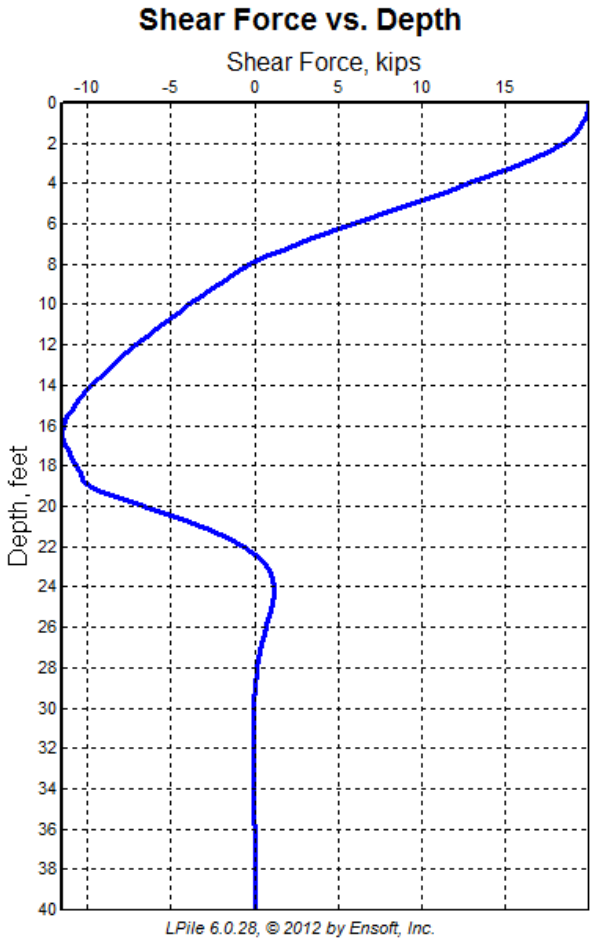
30-inch Fixed Head CIDH Pile – General Conditions

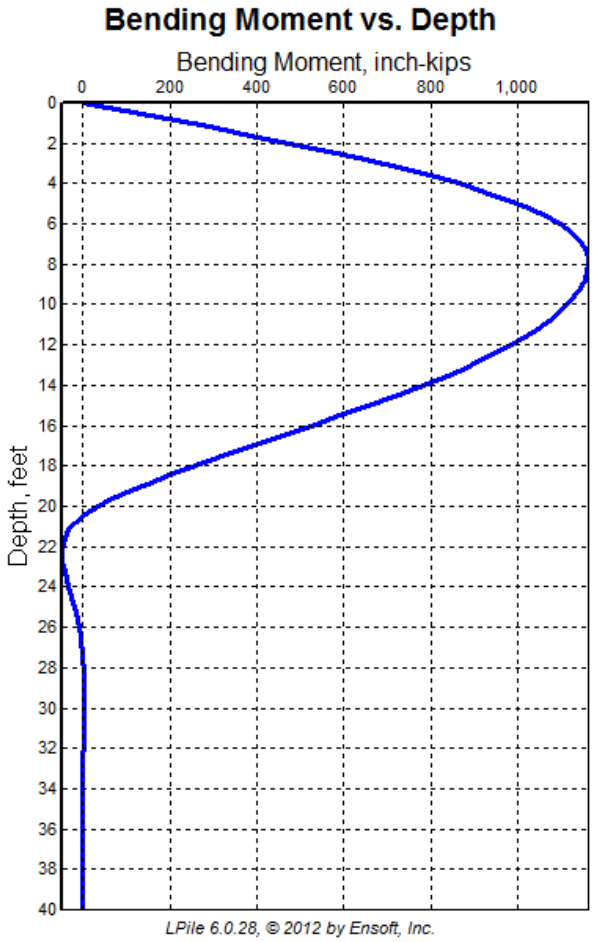
New Administration Building

Goleta, California

PLATE C-2e







Loading Conditions:

Axial Load = 120 Kips

Pile Head Deflection = 0.25”

Pile Head Moment = 0 inch-kips

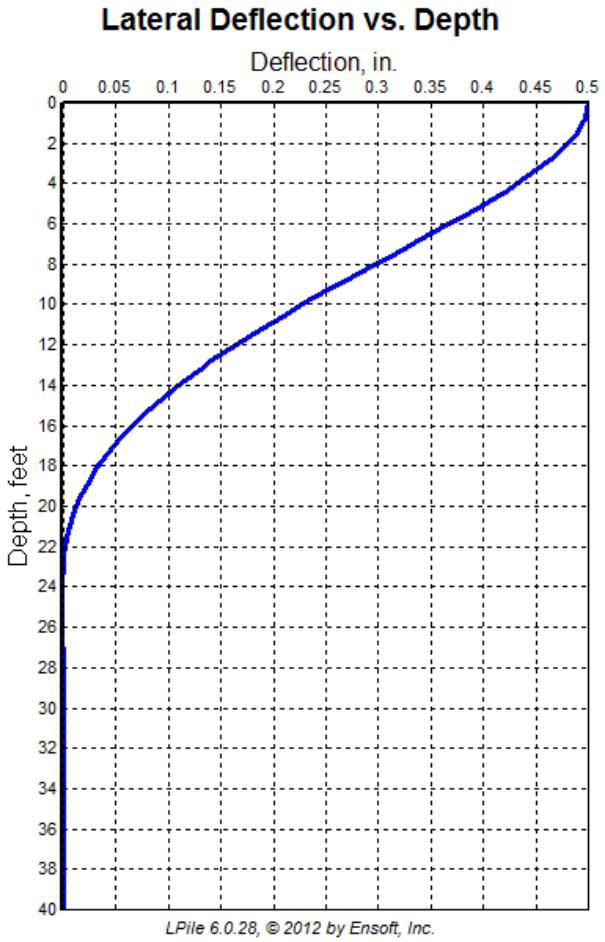
Lateral Capacity Results

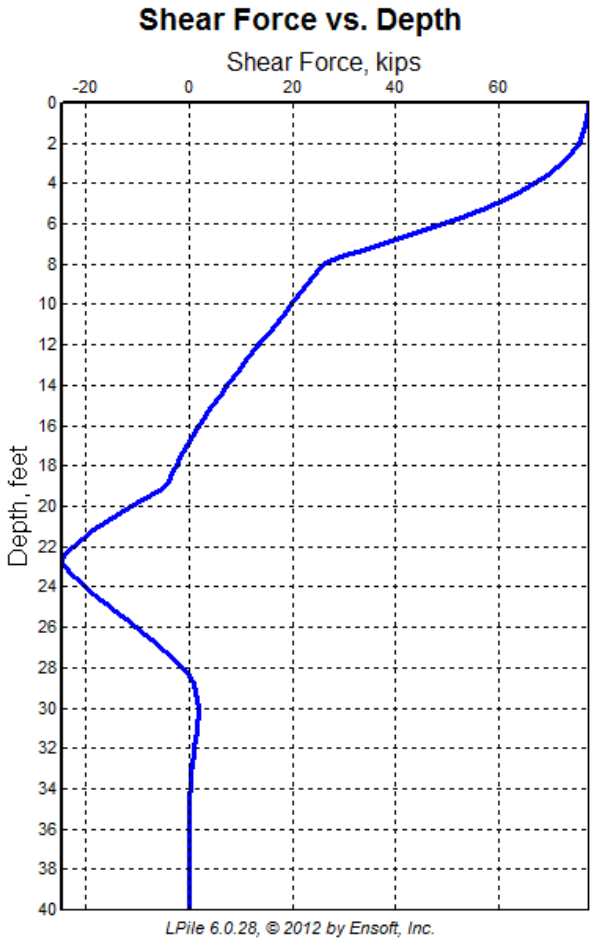
30-inch Free Head CIDH Pile – General Conditions

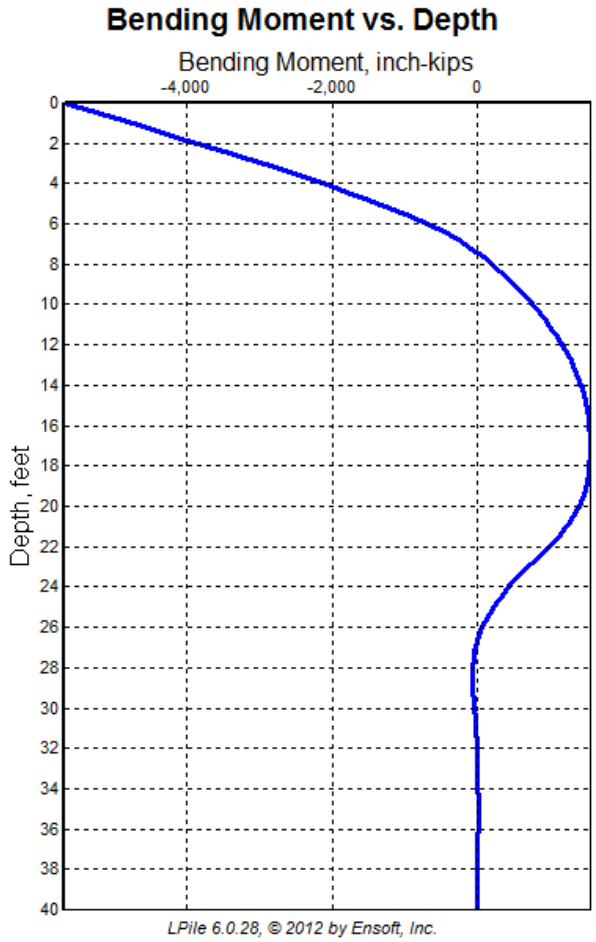
New Administration Building

Goleta, California

PLATE C-2f







Loading Conditions:

Axial Load = 120 Kips

Pile Head Deflection = 0.5”

Pile Head Slope = 0

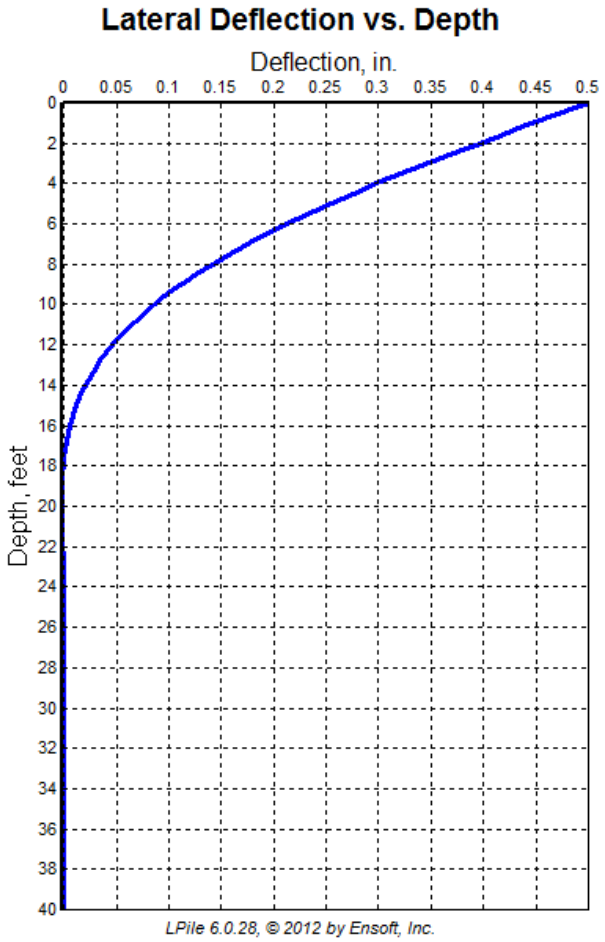
Lateral Capacity Results

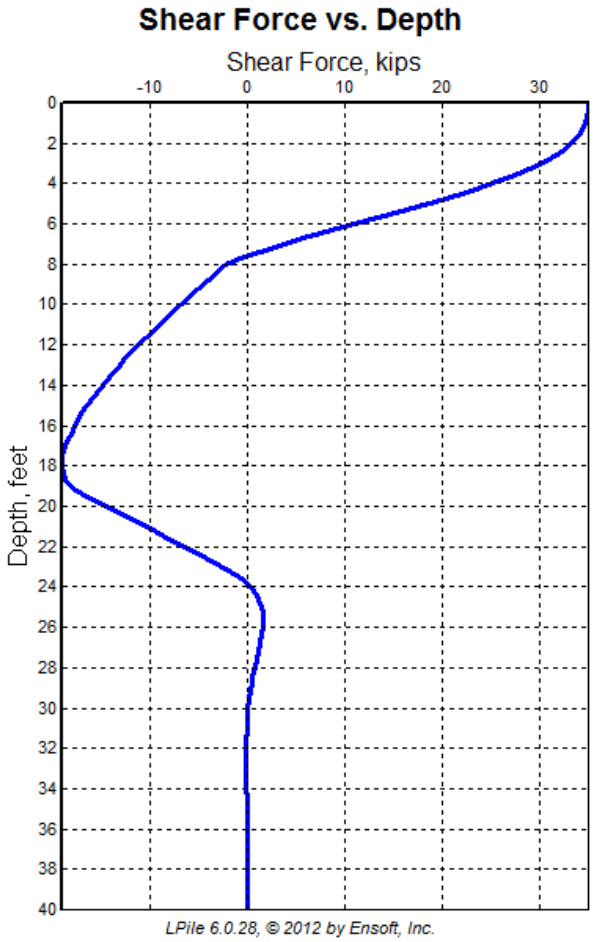
30-inch Fixed Head CIDH Pile – General Conditions

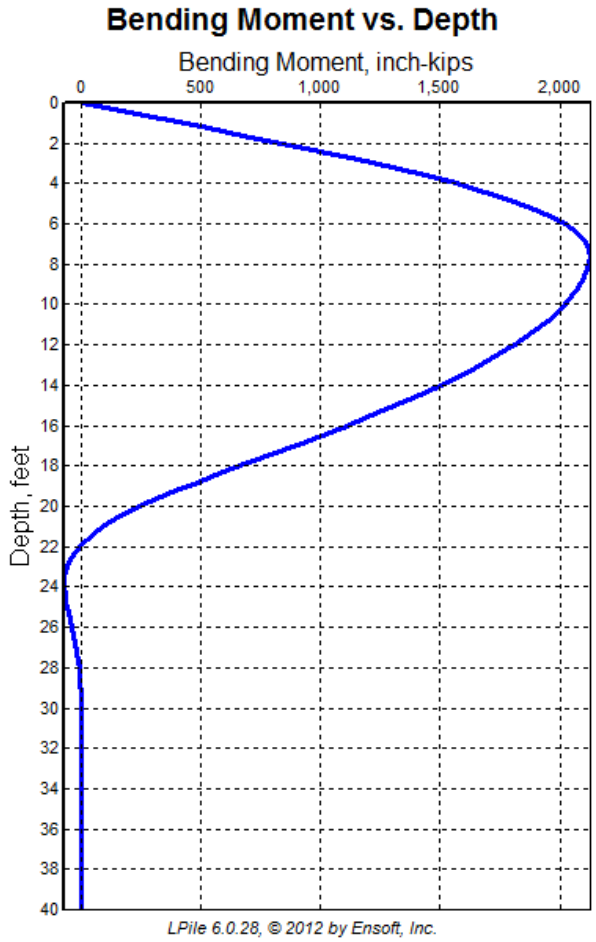
New Administration Building

Goleta, California

PLATE C-2g







Loading Conditions:

Axial Load = 120 Kips

Pile Head Deflection = 0.5”

Pile Head Moment = 0 inch-kips

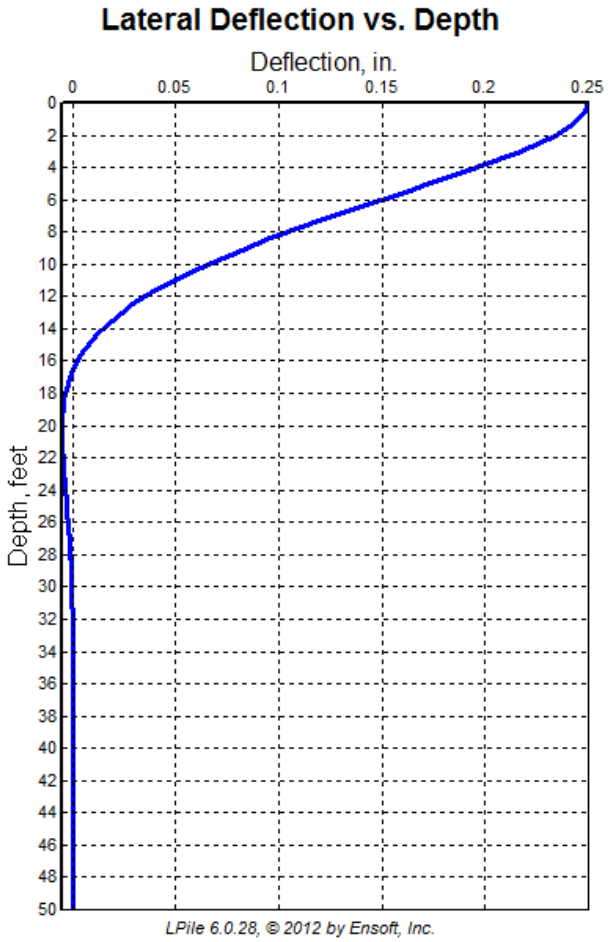
Lateral Capacity Results

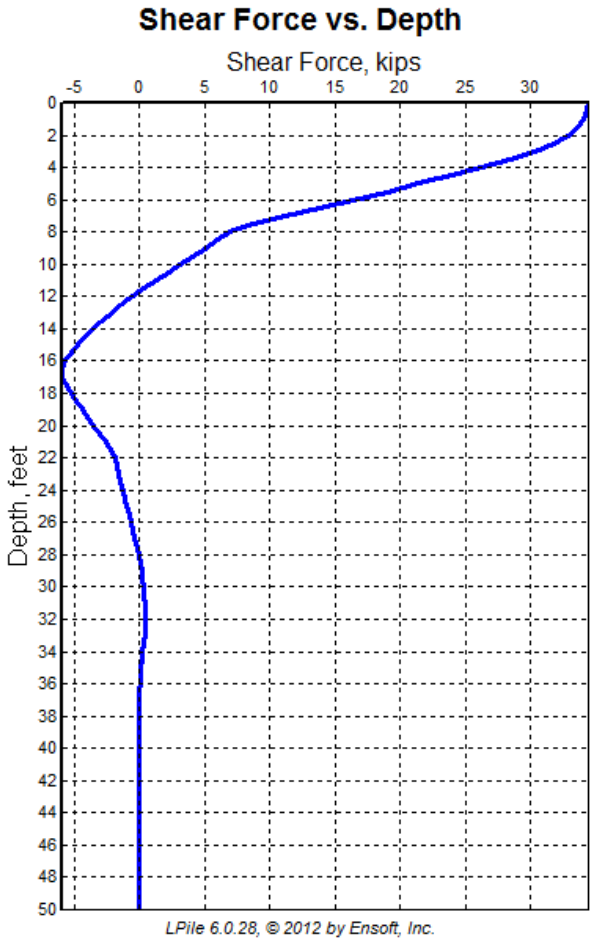
30-inch Free Head CIDH Pile – General Conditions

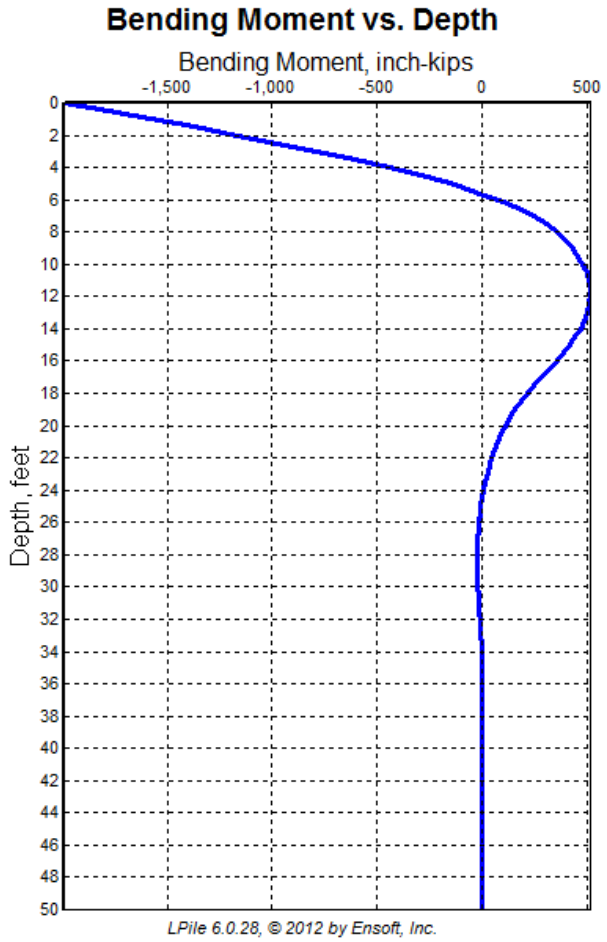
New Administration Building

Goleta, California

PLATE C-2h







Loading Conditions:

Axial Load = 120 Kips

Pile Head Deflection = 0.25”

Pile Head Slope = 0

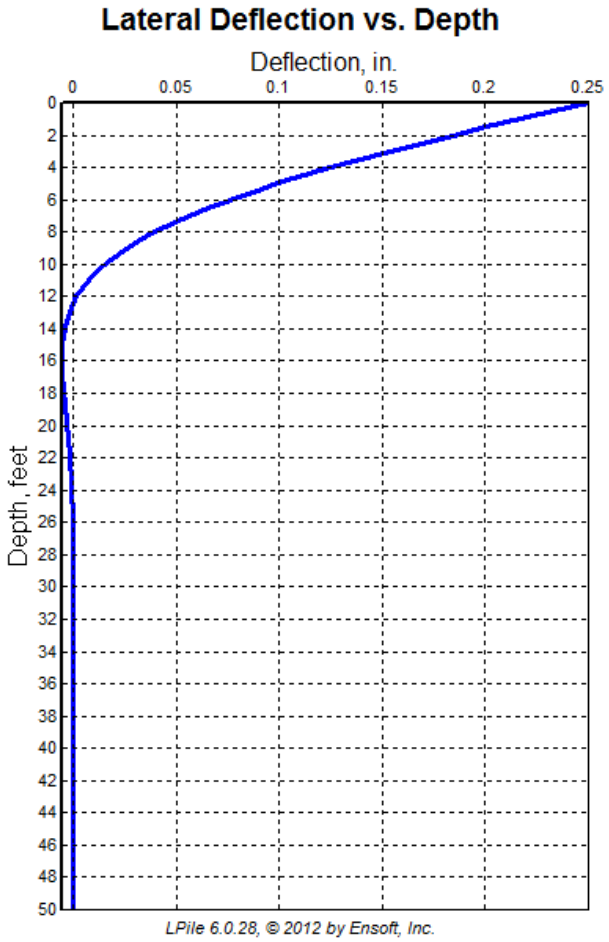
Lateral Capacity Results

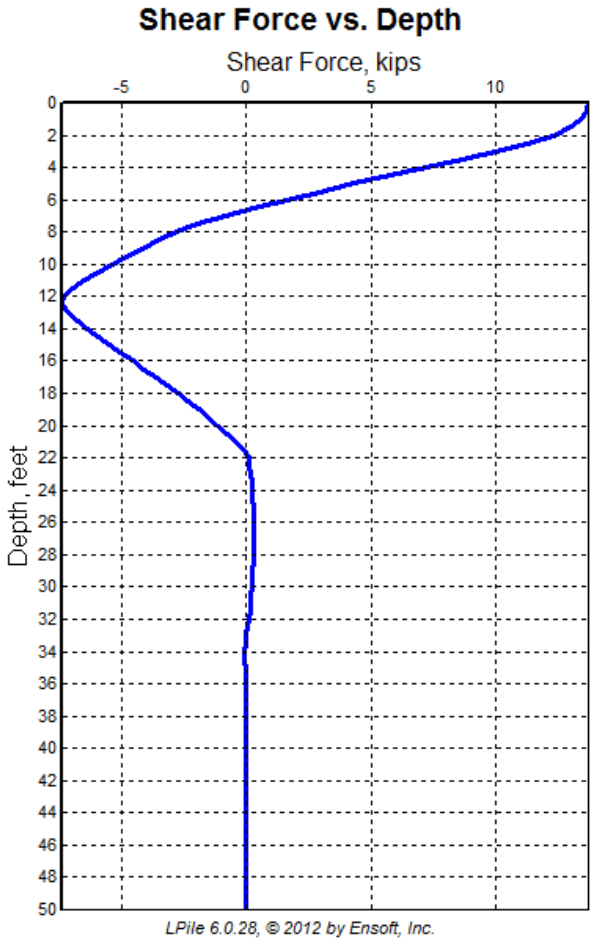
24-inch Fixed Head CIDH Pile – Northeast Portion of Site

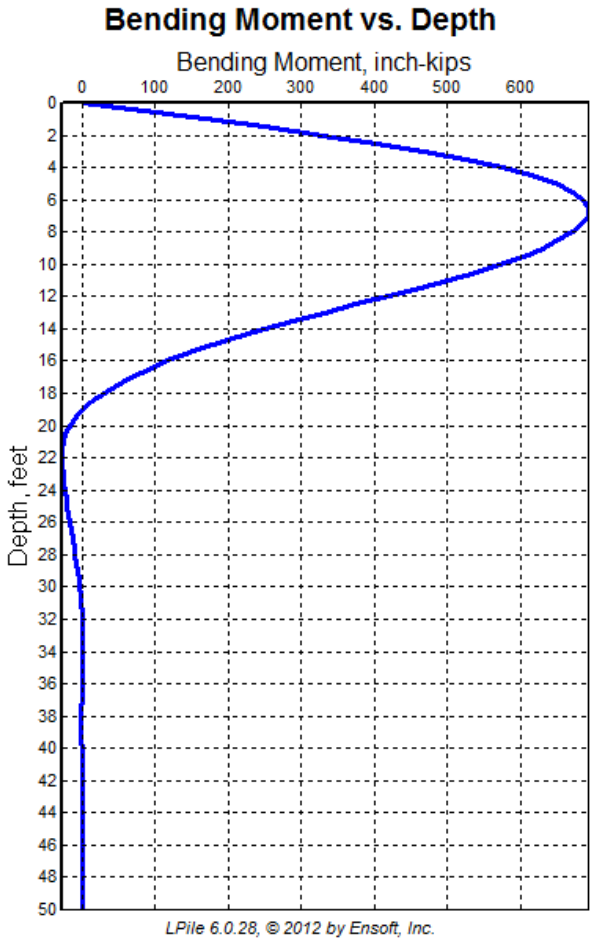
New Administration Building

Goleta, California

PLATE C-2i







Loading Conditions:

Axial Load = 120 Kips

Pile Head Deflection = 0.25”

Pile Head Moment = 0 inch-kips

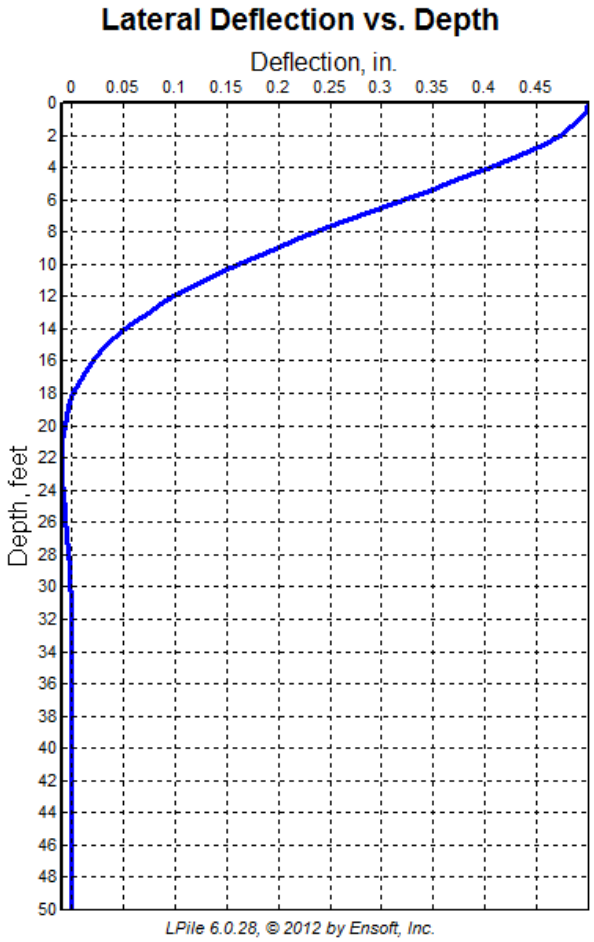
Lateral Capacity Results

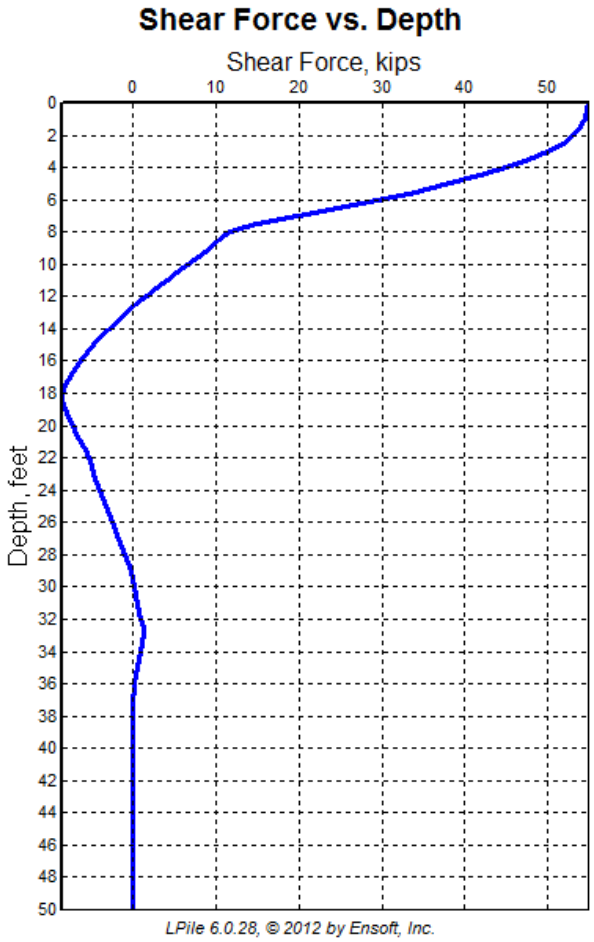
24-inch Free Head CIDH Pile – Northeast Portion of Site

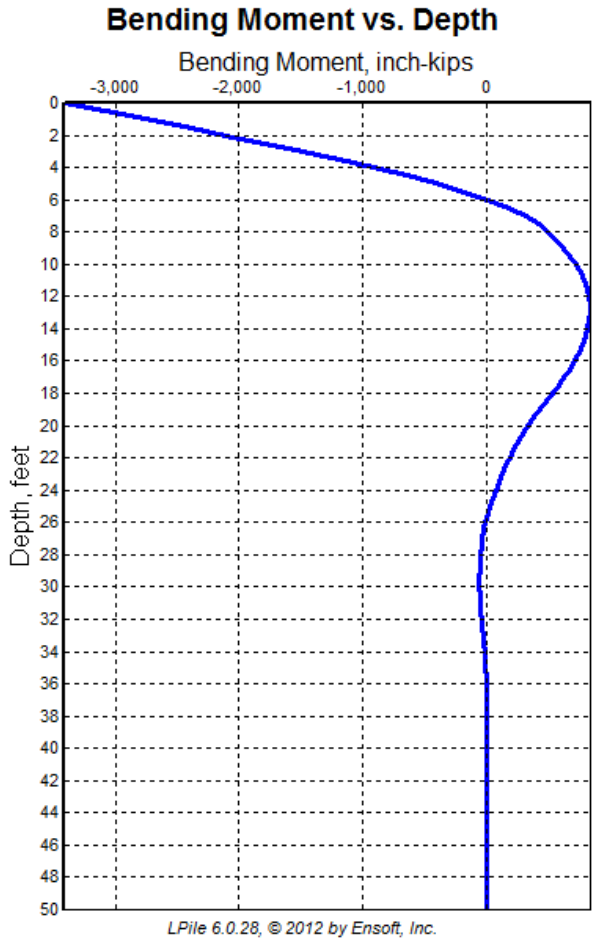
New Administration Building

Goleta, California

PLATE C-2j







Loading Conditions:

Axial Load = 120 Kips

Pile Head Deflection = 0. 5”

Pile Head Slope = 0

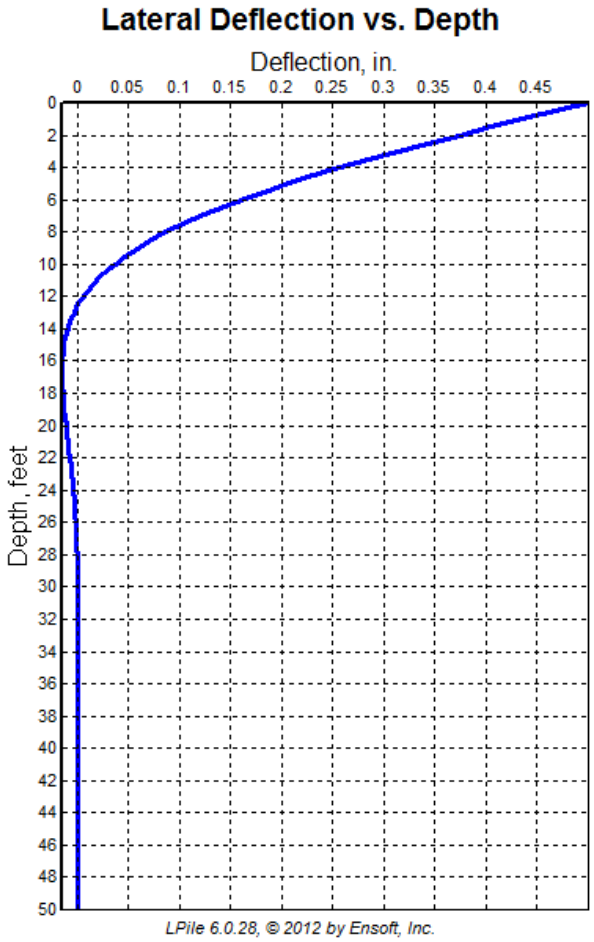
Lateral Capacity Results

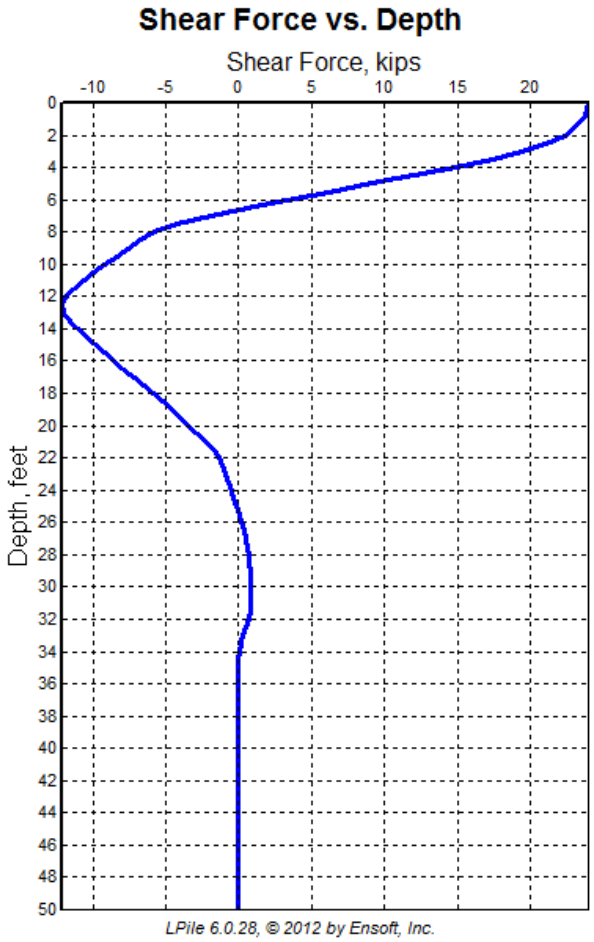
24-inch Fixed Head CIDH Pile – Northeast Portion of Site

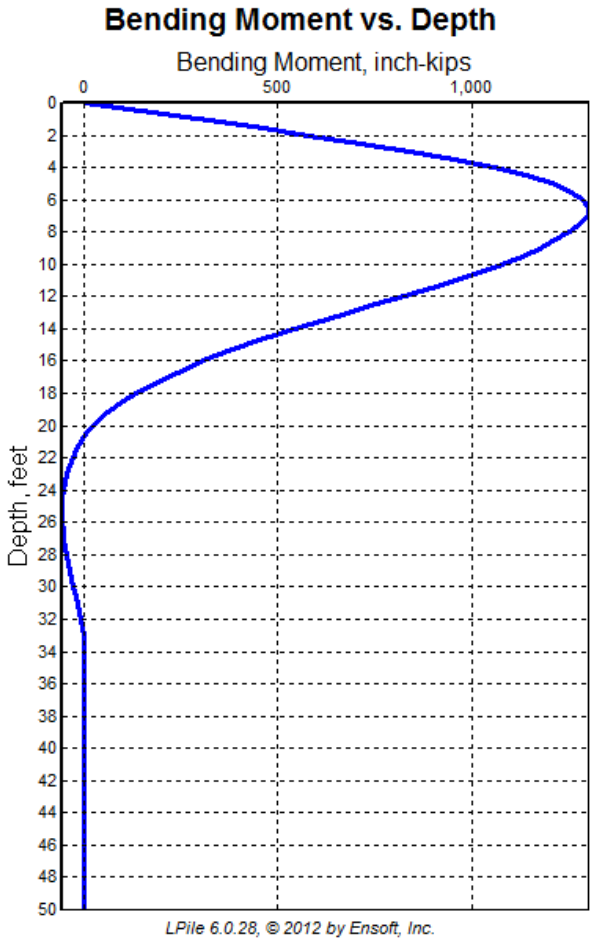
New Administration Building

Goleta, California

PLATE C-2k







Loading Conditions:

Axial Load = 120 Kips

Pile Head Deflection = 0. 5”

Pile Head Moment = 0 inch-kips

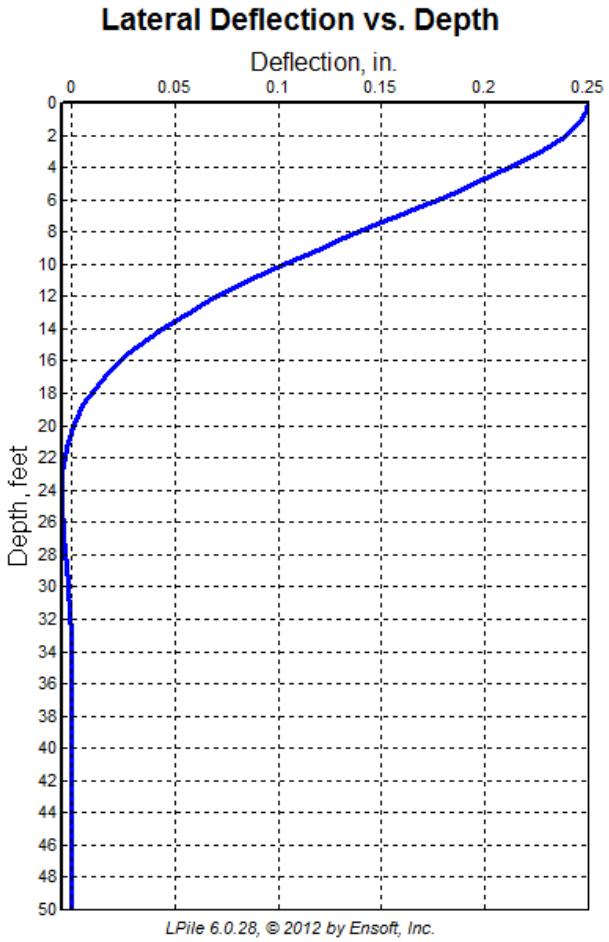
Lateral Capacity Results

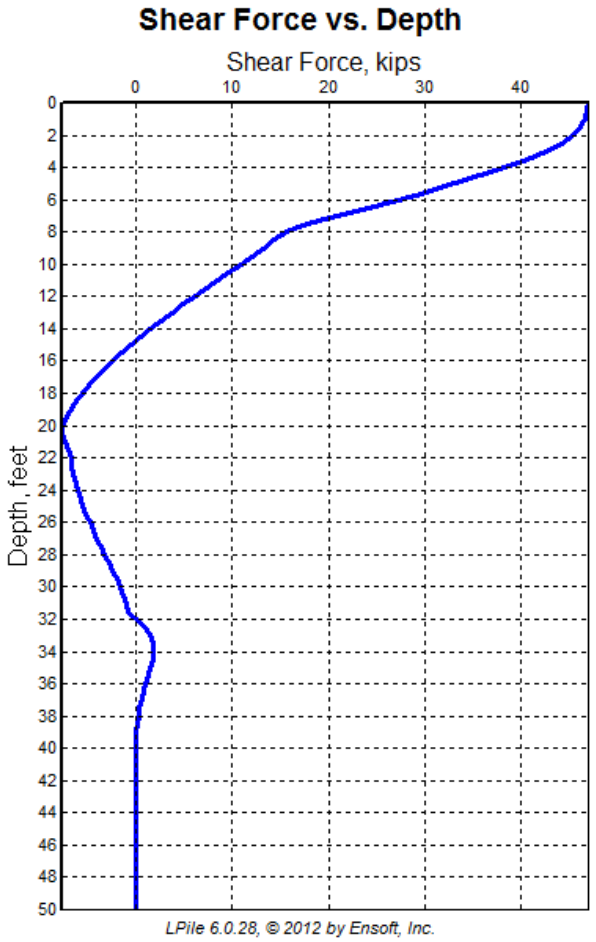
24-inch Free Head CIDH Pile – Northeast Portion of Site

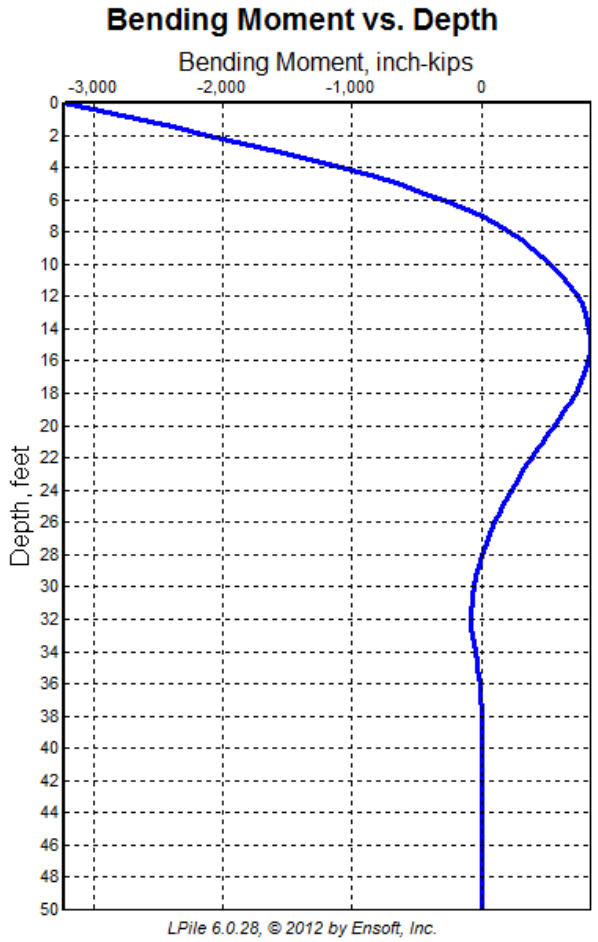
New Administration Building

Goleta, California

PLATE C-2l







Loading Conditions:

Axial Load = 120 Kips

Pile Head Deflection = 0.25”

Pile Head Slope = 0

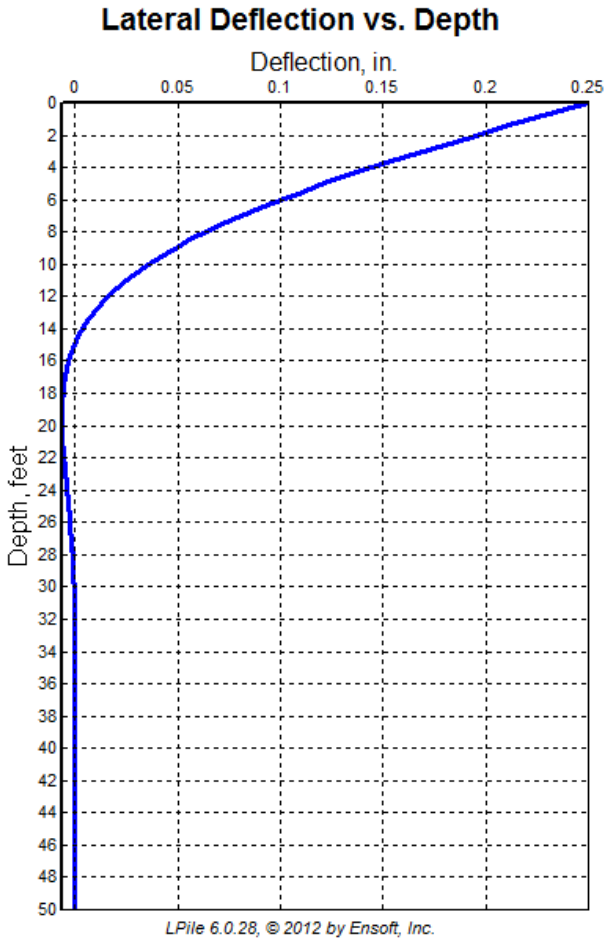
Lateral Capacity Results

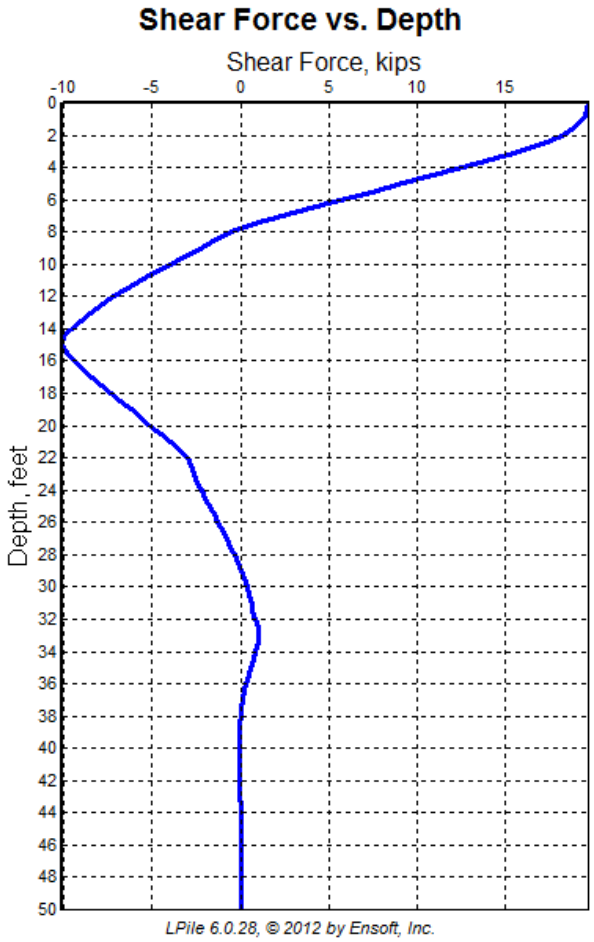
30-inch Fixed Head CIDH Pile – Northeast Portion of Site

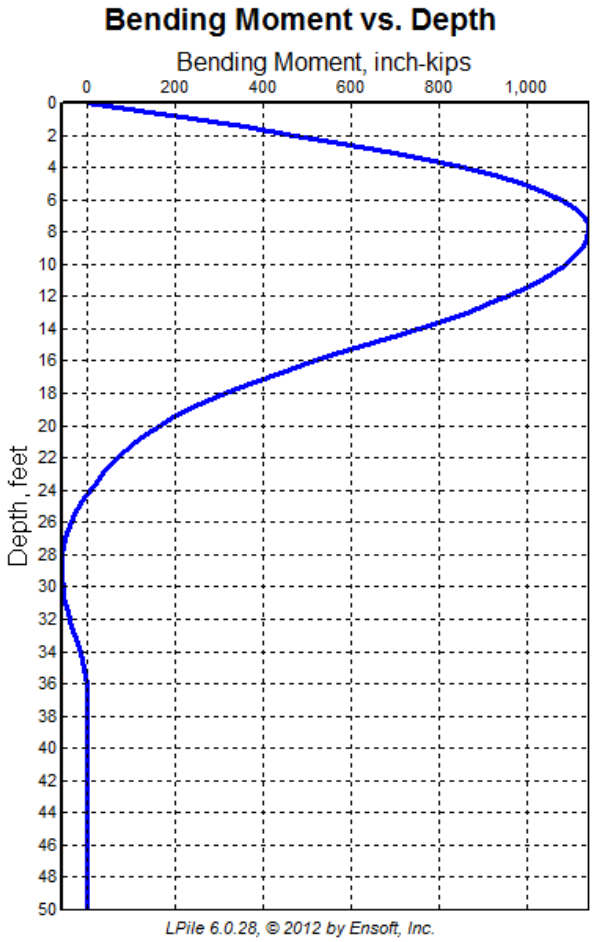
New Administration Building

Goleta, California

PLATE C-2m







Loading Conditions:

Axial Load = 120 Kips

Pile Head Deflection = 0.25”

Pile Head Moment = 0 inch-kips

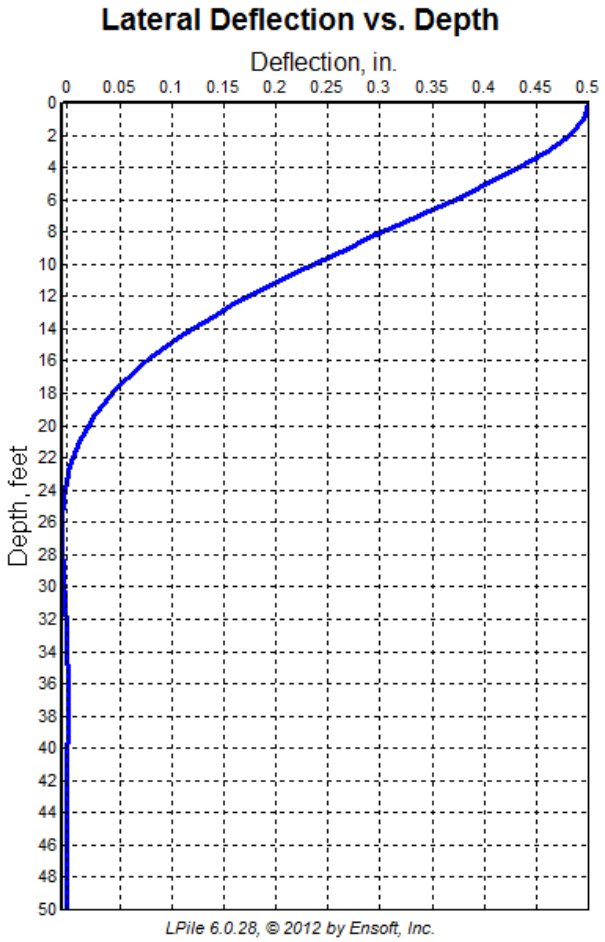
Lateral Capacity Results

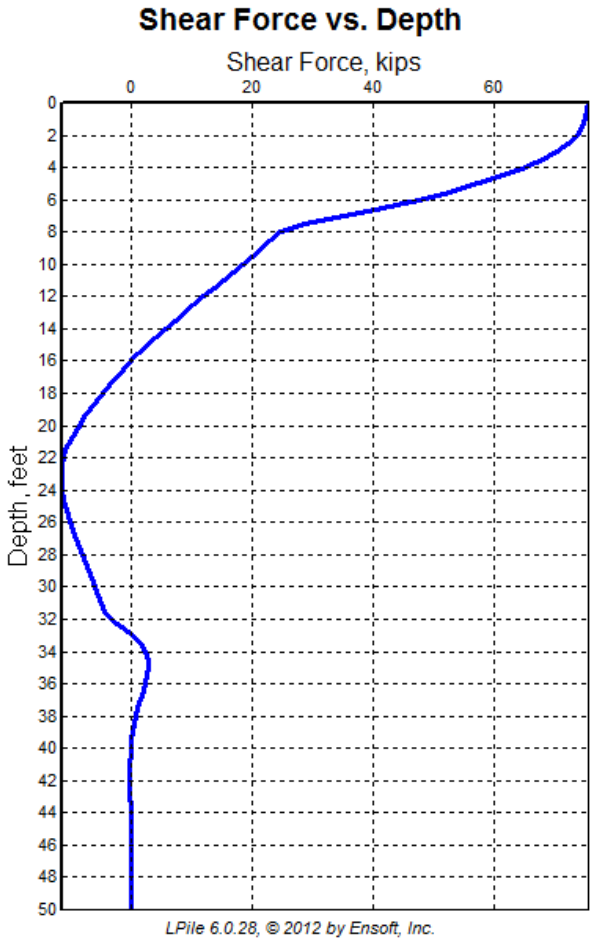
30-inch Free Head CIDH Pile – Northeast Portion of Site

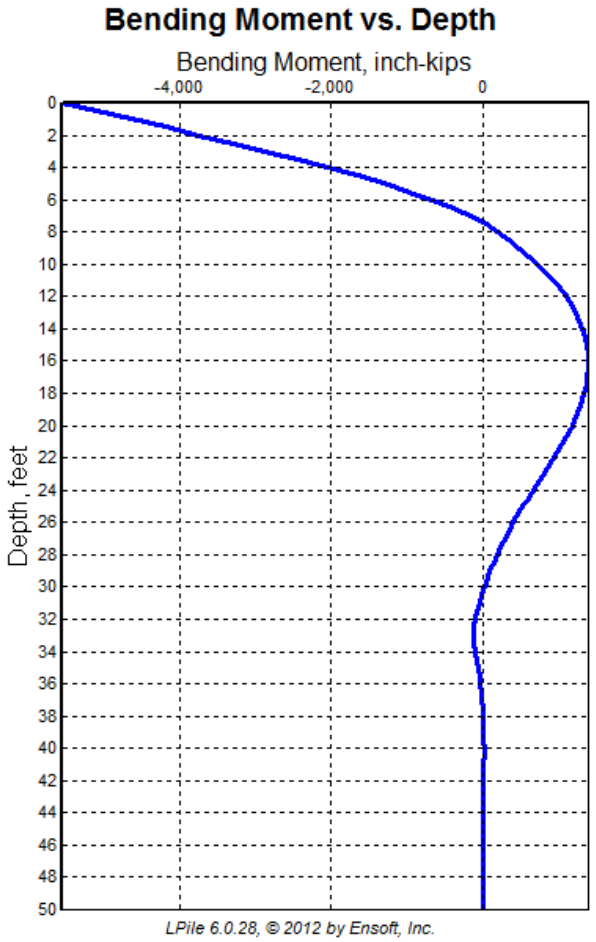
New Administration Building

Goleta, California

PLATE C-2n







Loading Conditions:

Axial Load = 120 Kips

Pile Head Deflection = 0.5”

Pile Head Slope = 0

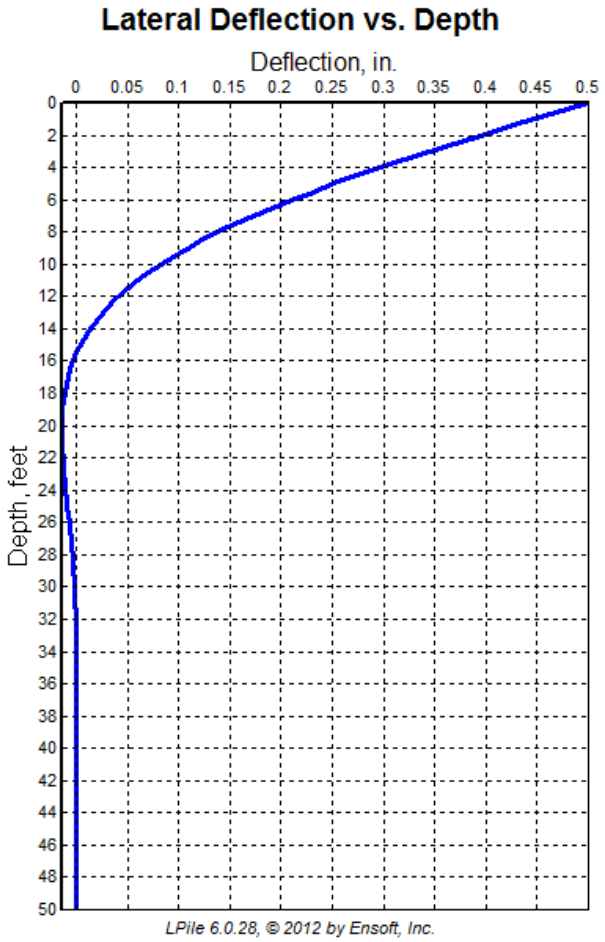
Lateral Capacity Results

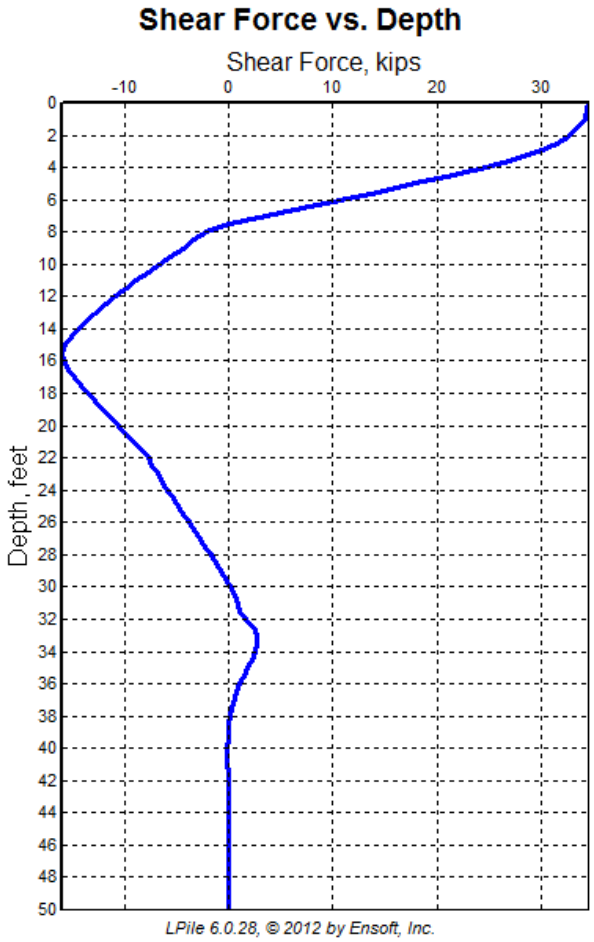
30-inch Fixed Head CIDH Pile – Northeast Portion of Site

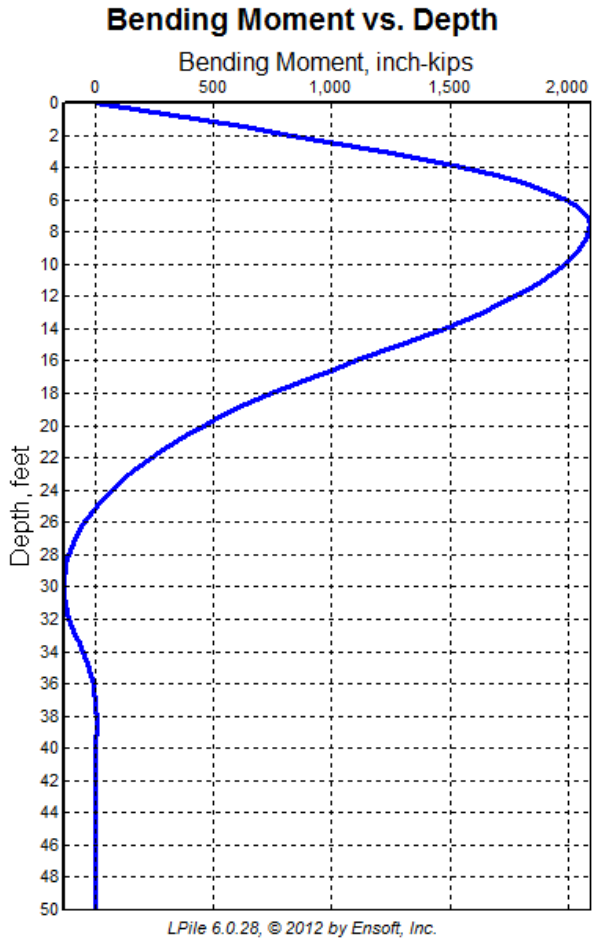
New Administration Building

Goleta, California

PLATE C-2o







Loading Conditions:

Axial Load = 120 Kips

Pile Head Deflection = 0.5”

Pile Head Moment = 0 inch-kips

Lateral Capacity Results

30-inch Free Head CIDH Pile – Northeast Portion of Site

New Administration Building

Goleta, California

PLATE C-2p

ATTACHMENT C-1

Geotechnical Study Addendum 1, Proposed Administration Building Goleta West Sanitary District

FUGRO
4820 McGrath Street, Suite 100
Ventura, California 93003
T +1 805 650 7000
F +1 805 650 7010

April 4, 2017
Project No. 04.62140143

Goleta West Sanitary District
P.O. Box 4
Goleta, California 93116-0004

Attention: Mr. Mark Nation

Subject: Addendum No. 1, Update to Geotechnical Report, Proposed Administration Building, Goleta West Sanitary District, Goleta, Santa Barbara County, California

Dear Mr. Nation,

Fugro is pleased to submit this addendum to our Geotechnical Report, dated April 24, 2015, for the proposed administration building project in Goleta, California. This addendum was prepared in response to the request by you and by Ms. Patsy Price of Brownstein Hyatt Farber Schreck. Our scope of services was performed in accordance with our proposal dated February 10, 2017. This addendum updates previously provided seismic data for compliance with the 2016 California Building Code. The seismic data presented herein supersedes the seismic data presented in the Fugro (2015) Geotechnical Report. Unless specifically addressed in this update letter, all other conclusions and recommendations provided in Fugro (2015) remain valid.

DATA REVIEW AND SITE VISIT

Fugro reviewed the geotechnical and project information contained in Fugro (2015). Additionally, on April 3, 2017, a Fugro engineer performed a site visit to evaluate potential changes to the project area since the previous report. Based on that reconnaissance, the proposed project area appears similar to that described in Fugro (2015).

CODE-BASED SEISMIC DESIGN PARAMETERS

Seismic design procedures are outlined in Section 1613 of the California Building Code (CBC) and are designed to meet the intent and requirements of ASCE 7. The design earthquake ground motion parameters for use with the 2016 California Building Code were estimated using the U.S. Geological Survey's Seismic Design Maps & Tools website (http://earthquake.usgs.gov/hazards/designmaps/usdesign.php). Seismic design parameters for use with

the CBC (2016) remained unchanged from the values presented in Fugro (2015) and are tabulated below.

2016 CBC Seismic Design Parameters, Site Class D

2016 California Building Code Section 1613	Seismic Parameter	Value
---	Latitude	34.4222
---	Longitude	-119.8521
Figure 1613.3.1(1)	Mapped Acceleration Response Parameter (S_s)	2.939g
Figure 1613.3.1(2)	Mapped Acceleration Response Parameter (S_1)	1.05g
Section 1613.3.2	Site Class	D
Section 1613.3.3 and Table 1613.3.3(1)	Site Coefficient (F_a)	1.00
Section 1613.3.3 and Table 1613.3.3(2)	Site Coefficient (F_v)	1.5
Section 1613.3.3	Adjusted Acceleration Response Parameter for Site Class D (S_{MS})	2.939g
Section 1613.3.3	Adjusted Acceleration Response Parameter for Site Class D (S_{M1})	1.569g
Section 1613.3.4	Design Spectral Response Acceleration Parameter (S_{DS})	1.959g
Section 1613.3.4	Design Spectral Response Acceleration Parameter (S_{D1})	1.046g
ASCE 7-10 Figure 22-7	Mapped MCE_G Peak Ground Acceleration (PGA)	1.196g
ASCE 7-10 Table 11.8-1	Site Coefficient (F_{PGA})	1.0
ASCE 7-10 Section 11.8.3	MCE_G Peak Ground Acceleration Adjusted for Site Class (PGA_M)	1.196g

Based on the seismic design parameters above, and per 2016 CBC Section 1613.3.5, structures classified as Risk Category I, II, III, or IV should be designed according to Seismic Design Category “D” based on the short period response acceleration (S_{DS}). Structures classified as Risk Category I, II, III, and IV should be designed according to Seismic Design Category “D” based on the 1-second period response acceleration (S_{D1}).

SEISMIC HAZARDS

Fugro (2015) presents the results of our evaluation of liquefaction and seismically induced settlement considering a peak ground acceleration (PGA) of 1.196g and a magnitude Mw6.9 earthquake. Those earthquake parameters have not changed as a result of the updated 2016 CBC. Therefore, we believe the opinions and recommendations regarding liquefaction potential and seismically induced settlement provided in Fugro (2015) remain applicable.

CLOSURE

We trust this letter meets your needs at this time. Please contact the undersigned if you have questions or require additional information.

Sincerely,
Fugro USA Land, Inc.

David Thornhill, EIT
Staff Engineer

Gregory S. Denlinger, GE
Principal Geotechnical Engineer

Copies Submitted: 1 – Addressee (pdf)

REFERENCES

American Society of Civil Engineers (2010), ASCE Standard 7-10, Minimum Design Loads for Buildings and Other Structures.

California Building Code (2016), published by the International Conference of Building Officials, Whittier, California, and California Building Standards Commission, Sacramento, California.

Fugro Consultants, Inc. [Fugro] (2015), "Geotechnical Study, Proposed Administration Building, Goleta West Sanitary District, Goleta, Santa Barbara County, California", Fugro Project No. 04.62140143, dated April 24.

United States Geological Survey (2017), US Seismic Design Web Application, accessed March 31, http://geohazards.usgs.gov/designmaps/us/application.php.

ATTACHMENT D

California Emissions Estimator Model Output Sheets

8165 Goleta Sanitary District

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
General Office Building	3.72	1000sqft	0.17	3,720.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.9	**Precipitation Freq (Days)**	37
Climate Zone	4			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	564.99	**CH4 Intensity (lb/MWhr)**	0.023	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS 2020 33% goal
CalEEMod accounts for 16.7%
Additional 16.3% reduction applied
(564.99, 0.023, 0.005)

Land Use - 0.17 acre earthwork footprint

Construction Phase - 12 month construction period

Demolition -

Grading -

Vehicle Trips - The project would not generate additional trips

Water And Wastewater - CalGreen 20% decrease in indoor water use (528,935.63)

8165 Goleta Sanitary District - Santa Barbara County APCD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	100.00	200.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	1.00	5.00
tblLandUse	LotAcreage	0.09	0.17
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.023
tblProjectCharacteristics	CO2IntensityFactor	702.44	564.99
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblVehicleTrips	CC_TL	5.50	0.00
tblVehicleTrips	CNW_TL	6.40	0.00
tblVehicleTrips	CW_TL	6.60	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblWater	IndoorWaterUseRate	661,169.54	528,935.63

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					
2018	0.1776	1.3379	0.9638	1.4600e-003	8.5800e-003	0.0847	0.0933	3.0800e-003	0.0783	0.0814	0.0000	132.7734	132.7734	0.0379	0.0000	133.7213
Maximum	**0.1776**	**1.3379**	**0.9638**	**1.4600e-003**	**8.5800e-003**	**0.0847**	**0.0933**	**3.0800e-003**	**0.0783**	**0.0814**	**0.0000**	**132.7734**	**132.7734**	**0.0379**	**0.0000**	**133.7213**

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					
2018	0.1776	1.3379	0.9638	1.4600e-003	8.5800e-003	0.0847	0.0933	3.0800e-003	0.0783	0.0814	0.0000	132.7733	132.7733	0.0379	0.0000	133.7211
Maximum	**0.1776**	**1.3379**	**0.9638**	**1.4600e-003**	**8.5800e-003**	**0.0847**	**0.0933**	**3.0800e-003**	**0.0783**	**0.0814**	**0.0000**	**132.7733**	**132.7733**	**0.0379**	**0.0000**	**133.7211**

	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2018	3-31-2018	0.3711	0.3711
2	4-1-2018	6-30-2018	0.3983	0.3983
3	7-1-2018	9-30-2018	0.4027	0.4027
		Highest	0.4027	0.4027

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0188	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	7.0000e-005
Energy	3.3000e-004	2.9900e-003	2.5100e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	20.2478	20.2478	7.5000e-004	2.1000e-004	20.3292
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.7185	0.0000	0.7185	0.0356	0.0000	1.6092
Water						0.0000	0.0000		0.0000	0.0000	0.1871	1.0970	1.2841	6.9000e-004	4.2000e-004	1.4255
Total	**0.0192**	**2.9900e-003**	**2.5400e-003**	**2.0000e-005**	**0.0000**	**2.3000e-004**	**2.3000e-004**	**0.0000**	**2.3000e-004**	**2.3000e-004**	**0.9057**	**21.3448**	**22.2505**	**0.0371**	**6.3000e-004**	**23.3640**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0188	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	7.0000e-005
Energy	3.3000e-004	2.9900e-003	2.5100e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	20.2478	20.2478	7.5000e-004	2.1000e-004	20.3292
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.7185	0.0000	0.7185	0.0356	0.0000	1.6092
Water						0.0000	0.0000		0.0000	0.0000	0.1871	1.0970	1.2841	6.9000e-004	4.2000e-004	1.4255
Total	**0.0192**	**2.9900e-003**	**2.5400e-003**	**2.0000e-005**	**0.0000**	**2.3000e-004**	**2.3000e-004**	**0.0000**	**2.3000e-004**	**2.3000e-004**	**0.9057**	**21.3448**	**22.2505**	**0.0371**	**6.3000e-004**	**23.3640**

	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

8165 Goleta Sanitary District - Santa Barbara County APCD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2018	1/26/2018	5	20	
2	Site Preparation	Site Preparation	1/26/2018	2/1/2018	5	5	
3	Grading	Grading	2/2/2018	2/15/2018	5	10	
4	Building Construction	Building Construction	2/16/2018	11/22/2018	5	200	
5	Paving	Paving	11/23/2018	12/6/2018	5	10	
6	Architectural Coating	Architectural Coating	12/7/2018	12/20/2018	5	10	

Acres of Grading (Site Preparation Phase): 2.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,580; Non-Residential Outdoor: 1,860; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

8165 Goleta Sanitary District - Santa Barbara County APCD Air District, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Demolition	4	10.00	0.00	6.00	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
Grading	4	10.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	1.00	1.00	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
Architectural Coating	1	0.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

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					6.8000e-004	0.0000	6.8000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0106	0.0943	0.0778	1.2000e-004		6.2300e-003	6.2300e-003		5.9400e-003	5.9400e-003	0.0000	10.6082	10.6082	2.0400e-003	0.0000	10.6593
Total	**0.0106**	**0.0943**	**0.0778**	**1.2000e-004**	**6.8000e-004**	**6.2300e-003**	**6.9100e-003**	**1.0000e-004**	**5.9400e-003**	**6.0400e-003**	**0.0000**	**10.6082**	**10.6082**	**2.0400e-003**	**0.0000**	**10.6593**

3.2 Demolition - 2018

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	3.0000e-005	1.0700e-003	3.1000e-004	0.0000	5.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.2401	0.2401	2.0000e-005	0.0000	0.2406
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	3.9000e-004	3.5000e-004	3.0500e-003	1.0000e-005	6.2000e-004	0.0000	6.2000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5361	0.5361	2.0000e-005	0.0000	0.5367
Total	**4.2000e-004**	**1.4200e-003**	**3.3600e-003**	**1.0000e-005**	**6.7000e-004**	**1.0000e-005**	**6.8000e-004**	**1.7000e-004**	**1.0000e-005**	**1.9000e-004**	**0.0000**	**0.7762**	**0.7762**	**4.0000e-005**	**0.0000**	**0.7773**

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					6.8000e-004	0.0000	6.8000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0106	0.0943	0.0778	1.2000e-004		6.2300e-003	6.2300e-003		5.9400e-003	5.9400e-003	0.0000	10.6082	10.6082	2.0400e-003	0.0000	10.6593
Total	**0.0106**	**0.0943**	**0.0778**	**1.2000e-004**	**6.8000e-004**	**6.2300e-003**	**6.9100e-003**	**1.0000e-004**	**5.9400e-003**	**6.0400e-003**	**0.0000**	**10.6082**	**10.6082**	**2.0400e-003**	**0.0000**	**10.6593**

3.2 Demolition - 2018

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	3.0000e-005	1.0700e-003	3.1000e-004	0.0000	5.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.2401	0.2401	2.0000e-005	0.0000	0.2406
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	3.9000e-004	3.5000e-004	3.0500e-003	1.0000e-005	6.2000e-004	0.0000	6.2000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5361	0.5361	2.0000e-005	0.0000	0.5367
Total	**4.2000e-004**	**1.4200e-003**	**3.3600e-003**	**1.0000e-005**	**6.7000e-004**	**1.0000e-005**	**6.8000e-004**	**1.7000e-004**	**1.0000e-005**	**1.9000e-004**	**0.0000**	**0.7762**	**0.7762**	**4.0000e-005**	**0.0000**	**0.7773**

3.3 Site Preparation - 2018

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					1.3300e-003	0.0000	1.3300e-003	1.4000e-004	0.0000	1.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9600e-003	0.0244	0.0106	2.0000e-005		1.0500e-003	1.0500e-003		9.6000e-004	9.6000e-004	0.0000	2.2288	2.2288	6.9000e-004	0.0000	2.2461
Total	**1.9600e-003**	**0.0244**	**0.0106**	**2.0000e-005**	**1.3300e-003**	**1.0500e-003**	**2.3800e-003**	**1.4000e-004**	**9.6000e-004**	**1.1000e-003**	**0.0000**	**2.2288**	**2.2288**	**6.9000e-004**	**0.0000**	**2.2461**

3.3 Site Preparation - 2018

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	5.0000e-005	4.0000e-005	3.8000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0670	0.0670	0.0000	0.0000	0.0671
Total	**5.0000e-005**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0670**	**0.0670**	**0.0000**	**0.0000**	**0.0671**

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					1.3300e-003	0.0000	1.3300e-003	1.4000e-004	0.0000	1.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9600e-003	0.0244	0.0106	2.0000e-005		1.0500e-003	1.0500e-003		9.6000e-004	9.6000e-004	0.0000	2.2288	2.2288	6.9000e-004	0.0000	2.2461
Total	**1.9600e-003**	**0.0244**	**0.0106**	**2.0000e-005**	**1.3300e-003**	**1.0500e-003**	**2.3800e-003**	**1.4000e-004**	**9.6000e-004**	**1.1000e-003**	**0.0000**	**2.2288**	**2.2288**	**6.9000e-004**	**0.0000**	**2.2461**

3.3 Site Preparation - 2018

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	5.0000e-005	4.0000e-005	3.8000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0670	0.0670	0.0000	0.0000	0.0671
Total	**5.0000e-005**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0670**	**0.0670**	**0.0000**	**0.0000**	**0.0671**

3.4 Grading - 2018

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					3.7600e-003	0.0000	3.7600e-003	2.0700e-003	0.0000	2.0700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3200e-003	0.0472	0.0389	6.0000e-005		3.1100e-003	3.1100e-003		2.9700e-003	2.9700e-003	0.0000	5.3041	5.3041	1.0200e-003	0.0000	5.3297
Total	**5.3200e-003**	**0.0472**	**0.0389**	**6.0000e-005**	**3.7600e-003**	**3.1100e-003**	**6.8700e-003**	**2.0700e-003**	**2.9700e-003**	**5.0400e-003**	**0.0000**	**5.3041**	**5.3041**	**1.0200e-003**	**0.0000**	**5.3297**

3.4 Grading - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.8000e-004	1.5300e-003	0.0000	3.1000e-004	0.0000	3.1000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2681	0.2681	1.0000e-005	0.0000	0.2684
Total	**2.0000e-004**	**1.8000e-004**	**1.5300e-003**	**0.0000**	**3.1000e-004**	**0.0000**	**3.1000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2681**	**0.2681**	**1.0000e-005**	**0.0000**	**0.2684**

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					3.7600e-003	0.0000	3.7600e-003	2.0700e-003	0.0000	2.0700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3200e-003	0.0472	0.0389	6.0000e-005		3.1100e-003	3.1100e-003		2.9700e-003	2.9700e-003	0.0000	5.3041	5.3041	1.0200e-003	0.0000	5.3296
Total	**5.3200e-003**	**0.0472**	**0.0389**	**6.0000e-005**	**3.7600e-003**	**3.1100e-003**	**6.8700e-003**	**2.0700e-003**	**2.9700e-003**	**5.0400e-003**	**0.0000**	**5.3041**	**5.3041**	**1.0200e-003**	**0.0000**	**5.3296**

3.4 Grading - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.8000e-004	1.5300e-003	0.0000	3.1000e-004	0.0000	3.1000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2681	0.2681	1.0000e-005	0.0000	0.2684
Total	**2.0000e-004**	**1.8000e-004**	**1.5300e-003**	**0.0000**	**3.1000e-004**	**0.0000**	**3.1000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2681**	**0.2681**	**1.0000e-005**	**0.0000**	**0.2684**

3.5 Building Construction - 2018

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	0.1085	1.1032	0.7751	1.1400e-003		0.0709	0.0709		0.0652	0.0652	0.0000	104.0117	104.0117	0.0324	0.0000	104.8212
Total	**0.1085**	**1.1032**	**0.7751**	**1.1400e-003**		**0.0709**	**0.0709**		**0.0652**	**0.0652**	**0.0000**	**104.0117**	**104.0117**	**0.0324**	**0.0000**	**104.8212**

3.5 Building Construction - 2018

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	5.8000e-004	0.0129	4.9000e-003	2.0000e-005	5.8000e-004	1.2000e-004	7.0000e-004	1.7000e-004	1.1000e-004	2.8000e-004	0.0000	2.3601	2.3601	1.8000e-004	0.0000	2.3646
Worker	3.9000e-004	3.5000e-004	3.0500e-003	1.0000e-005	6.2000e-004	0.0000	6.2000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5361	0.5361	2.0000e-005	0.0000	0.5367
Total	**9.7000e-004**	**0.0132**	**7.9500e-003**	**3.0000e-005**	**1.2000e-003**	**1.2000e-004**	**1.3200e-003**	**3.3000e-004**	**1.1000e-004**	**4.5000e-004**	**0.0000**	**2.8963**	**2.8963**	**2.0000e-004**	**0.0000**	**2.9014**

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	0.1085	1.1032	0.7751	1.1400e-003		0.0709	0.0709		0.0652	0.0652	0.0000	104.0115	104.0115	0.0324	0.0000	104.8210
Total	**0.1085**	**1.1032**	**0.7751**	**1.1400e-003**		**0.0709**	**0.0709**		**0.0652**	**0.0652**	**0.0000**	**104.0115**	**104.0115**	**0.0324**	**0.0000**	**104.8210**

3.5 Building Construction - 2018

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	5.8000e-004	0.0129	4.9000e-003	2.0000e-005	5.8000e-004	1.2000e-004	7.0000e-004	1.7000e-004	1.1000e-004	2.8000e-004	0.0000	2.3601	2.3601	1.8000e-004	0.0000	2.3646
Worker	3.9000e-004	3.5000e-004	3.0500e-003	1.0000e-005	6.2000e-004	0.0000	6.2000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5361	0.5361	2.0000e-005	0.0000	0.5367
Total	**9.7000e-004**	**0.0132**	**7.9500e-003**	**3.0000e-005**	**1.2000e-003**	**1.2000e-004**	**1.3200e-003**	**3.3000e-004**	**1.1000e-004**	**4.5000e-004**	**0.0000**	**2.8963**	**2.8963**	**2.0000e-004**	**0.0000**	**2.9014**

3.6 Paving - 2018

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	4.6000e-003	0.0437	0.0361	6.0000e-005		2.5500e-003	2.5500e-003		2.3700e-003	2.3700e-003	0.0000	4.8541	4.8541	1.3700e-003	0.0000	4.8883
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.6000e-003**	**0.0437**	**0.0361**	**6.0000e-005**		**2.5500e-003**	**2.5500e-003**		**2.3700e-003**	**2.3700e-003**	**0.0000**	**4.8541**	**4.8541**	**1.3700e-003**	**0.0000**	**4.8883**

3.6 Paving - 2018

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	3.5000e-004	3.2000e-004	2.7500e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4825	0.4825	2.0000e-005	0.0000	0.4830
Total	**3.5000e-004**	**3.2000e-004**	**2.7500e-003**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**5.6000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.4825**	**0.4825**	**2.0000e-005**	**0.0000**	**0.4830**

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	4.6000e-003	0.0437	0.0361	6.0000e-005		2.5500e-003	2.5500e-003		2.3700e-003	2.3700e-003	0.0000	4.8541	4.8541	1.3700e-003	0.0000	4.8883
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.6000e-003**	**0.0437**	**0.0361**	**6.0000e-005**		**2.5500e-003**	**2.5500e-003**		**2.3700e-003**	**2.3700e-003**	**0.0000**	**4.8541**	**4.8541**	**1.3700e-003**	**0.0000**	**4.8883**

3.6 Paving - 2018

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	3.5000e-004	3.2000e-004	2.7500e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4825	0.4825	2.0000e-005	0.0000	0.4830
Total	**3.5000e-004**	**3.2000e-004**	**2.7500e-003**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**5.6000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.4825**	**0.4825**	**2.0000e-005**	**0.0000**	**0.4830**

3.7 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0431					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4900e-003	0.0100	9.2700e-003	1.0000e-005		7.5000e-004	7.5000e-004		7.5000e-004	7.5000e-004	0.0000	1.2766	1.2766	1.2000e-004	0.0000	1.2797
Total	**0.0446**	**0.0100**	**9.2700e-003**	**1.0000e-005**		**7.5000e-004**	**7.5000e-004**		**7.5000e-004**	**7.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.2000e-004**	**0.0000**	**1.2797**

3.7 Architectural Coating - 2018

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	0.0431					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4900e-003	0.0100	9.2700e-003	1.0000e-005		7.5000e-004	7.5000e-004		7.5000e-004	7.5000e-004	0.0000	1.2766	1.2766	1.2000e-004	0.0000	1.2797
Total	**0.0446**	**0.0100**	**9.2700e-003**	**1.0000e-005**		**7.5000e-004**	**7.5000e-004**		**7.5000e-004**	**7.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.2000e-004**	**0.0000**	**1.2797**

3.7 Architectural Coating - 2018

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**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
General Office Building	0.00	0.00	0.00	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.553205	0.030828	0.204091	0.129951	0.023898	0.006086	0.017139	0.018453	0.002761	0.002481	0.007244	0.002707	0.001156

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	16.9981	16.9981	6.9000e-004	1.5000e-004	17.0602
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	16.9981	16.9981	6.9000e-004	1.5000e-004	17.0602
NaturalGas Mitigated	3.3000e-004	2.9900e-003	2.5100e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.2497	3.2497	6.0000e-005	6.0000e-005	3.2690
NaturalGas Unmitigated	3.3000e-004	2.9900e-003	2.5100e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.2497	3.2497	6.0000e-005	6.0000e-005	3.2690

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					
General Office Building	60896.4	3.3000e-004	2.9900e-003	2.5100e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.2497	3.2497	6.0000e-005	6.0000e-005	3.2690
Total		**3.3000e-004**	**2.9900e-003**	**2.5100e-003**	**2.0000e-005**		**2.3000e-004**	**2.3000e-004**		**2.3000e-004**	**2.3000e-004**	**0.0000**	**3.2497**	**3.2497**	**6.0000e-005**	**6.0000e-005**	**3.2690**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	60896.4	3.3000e-004	2.9900e-003	2.5100e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.2497	3.2497	6.0000e-005	6.0000e-005	3.2690
Total		**3.3000e-004**	**2.9900e-003**	**2.5100e-003**	**2.0000e-005**		**2.3000e-004**	**2.3000e-004**		**2.3000e-004**	**2.3000e-004**	**0.0000**	**3.2497**	**3.2497**	**6.0000e-005**	**6.0000e-005**	**3.2690**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	66327.6	16.9981	6.9000e-004	1.5000e-004	17.0602
Total		**16.9981**	**6.9000e-004**	**1.5000e-004**	**17.0602**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	66327.6	16.9981	6.9000e-004	1.5000e-004	17.0602
Total		**16.9981**	**6.9000e-004**	**1.5000e-004**	**17.0602**

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	0.0188	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	7.0000e-005
Unmitigated	0.0188	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	7.0000e-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	4.3100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0145					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	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	7.0000e-005
Total	**0.0188**	**0.0000**	**3.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0000**	**7.0000e-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	4.3100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0145					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	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	7.0000e-005
Total	**0.0188**	**0.0000**	**3.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0000**	**7.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.2841	6.9000e-004	4.2000e-004	1.4255
Unmitigated	1.2841	6.9000e-004	4.2000e-004	1.4255

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0.528936 / 0.405233	1.2841	6.9000e-004	4.2000e-004	1.4255
Total		**1.2841**	**6.9000e-004**	**4.2000e-004**	**1.4255**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0.528936 / 0.405233	1.2841	6.9000e-004	4.2000e-004	1.4255
Total		**1.2841**	**6.9000e-004**	**4.2000e-004**	**1.4255**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.7185	0.0356	0.0000	1.6092
Unmitigated	0.7185	0.0356	0.0000	1.6092

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	3.46	0.7185	0.0356	0.0000	1.6092
Total		**0.7185**	**0.0356**	**0.0000**	**1.6092**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	3.46	0.7185	0.0356	0.0000	1.6092
Total		**0.7185**	**0.0356**	**0.0000**	**1.6092**

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

8165 Goleta Sanitary District

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
General Office Building	3.72	1000sqft	0.17	3,720.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.9	**Precipitation Freq (Days)**	37
Climate Zone	4			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	564.99	**CH4 Intensity (lb/MWhr)**	0.023	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS 2020 33% goal
CalEEMod accounts for 16.7%
Additional 16.3% reduction applied
(564.99, 0.023, 0.005)

Land Use - 0.17 acre earthwork footprint

Construction Phase - 12 month construction period

Demolition -

Grading -

Vehicle Trips - The project would not generate additional trips

Water And Wastewater - CalGreen 20% decrease in indoor water use (528,935.63)

8165 Goleta Sanitary District - Santa Barbara County APCD Air District, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	100.00	200.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	1.00	5.00
tblLandUse	LotAcreage	0.09	0.17
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.023
tblProjectCharacteristics	CO2IntensityFactor	702.44	564.99
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblVehicleTrips	CC_TL	5.50	0.00
tblVehicleTrips	CNW_TL	6.40	0.00
tblVehicleTrips	CW_TL	6.60	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblWater	IndoorWaterUseRate	661,169.54	528,935.63

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					
2018	8.9197	19.3386	12.5072	0.0229	0.8159	1.0421	1.7404	0.4305	0.9801	1.0742	0.0000	2,269.2847	2,269.2847	0.5373	0.0000	2,282.7179
Maximum	**8.9197**	**19.3386**	**12.5072**	**0.0229**	**0.8159**	**1.0421**	**1.7404**	**0.4305**	**0.9801**	**1.0742**	**0.0000**	**2,269.2847**	**2,269.2847**	**0.5373**	**0.0000**	**2,282.7179**

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					
2018	8.9197	19.3386	12.5072	0.0229	0.8159	1.0421	1.7404	0.4305	0.9801	1.0742	0.0000	2,269.2847	2,269.2847	0.5373	0.0000	2,282.7179
Maximum	**8.9197**	**19.3386**	**12.5072**	**0.0229**	**0.8159**	**1.0421**	**1.7404**	**0.4305**	**0.9801**	**1.0742**	**0.0000**	**2,269.2847**	**2,269.2847**	**0.5373**	**0.0000**	**2,282.7179**

	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**

2.2 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	0.1033	0.0000	3.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.1000e-004	8.1000e-004	0.0000		8.7000e-004
Energy	1.8000e-003	0.0164	0.0137	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003		19.6282	19.6282	3.8000e-004	3.6000e-004	19.7448
Mobile	0.0000	0.0000	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	**0.1051**	**0.0164**	**0.0141**	**1.0000e-004**	**0.0000**	**1.2400e-003**	**1.2400e-003**	**0.0000**	**1.2400e-003**	**1.2400e-003**		**19.6290**	**19.6290**	**3.8000e-004**	**3.6000e-004**	**19.7457**

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	0.1033	0.0000	3.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.1000e-004	8.1000e-004	0.0000		8.7000e-004
Energy	1.8000e-003	0.0164	0.0137	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003		19.6282	19.6282	3.8000e-004	3.6000e-004	19.7448
Mobile	0.0000	0.0000	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	**0.1051**	**0.0164**	**0.0141**	**1.0000e-004**	**0.0000**	**1.2400e-003**	**1.2400e-003**	**0.0000**	**1.2400e-003**	**1.2400e-003**		**19.6290**	**19.6290**	**3.8000e-004**	**3.6000e-004**	**19.7457**

	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	Demolition	Demolition	1/1/2018	1/26/2018	5	20	
2	Site Preparation	Site Preparation	1/26/2018	2/1/2018	5	5	
3	Grading	Grading	2/2/2018	2/15/2018	5	10	
4	Building Construction	Building Construction	2/16/2018	11/22/2018	5	200	
5	Paving	Paving	11/23/2018	12/6/2018	5	10	
6	Architectural Coating	Architectural Coating	12/7/2018	12/20/2018	5	10	

Acres of Grading (Site Preparation Phase): 2.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,580; Non-Residential Outdoor: 1,860; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

8165 Goleta Sanitary District - Santa Barbara County APCD Air District, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Demolition	4	10.00	0.00	6.00	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
Grading	4	10.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	1.00	1.00	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
Architectural Coating	1	0.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

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					0.0681	0.0000	0.0681	0.0103	0.0000	0.0103			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943		1,169.3502	1,169.3502	0.2254		1,174.9857
Total	**1.0643**	**9.4295**	**7.7762**	**0.0120**	**0.0681**	**0.6228**	**0.6908**	**0.0103**	**0.5943**	**0.6046**		**1,169.3502**	**1,169.3502**	**0.2254**		**1,174.9857**

3.2 Demolition - 2018

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	3.2600e-003	0.1046	0.0302	2.4000e-004	5.2100e-003	7.0000e-004	5.9200e-003	1.4300e-003	6.7000e-004	2.1000e-003		26.6059	26.6059	2.2100e-003		26.6611
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	0.0381	0.0315	0.2996	6.1000e-004	0.0632	4.3000e-004	0.0636	0.0168	4.0000e-004	0.0172		60.4115	60.4115	2.5200e-003		60.4744
Total	**0.0414**	**0.1361**	**0.3298**	**8.5000e-004**	**0.0684**	**1.1300e-003**	**0.0695**	**0.0182**	**1.0700e-003**	**0.0193**		**87.0174**	**87.0174**	**4.7300e-003**		**87.1355**

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					0.0681	0.0000	0.0681	0.0103	0.0000	0.0103			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857
Total	**1.0643**	**9.4295**	**7.7762**	**0.0120**	**0.0681**	**0.6228**	**0.6908**	**0.0103**	**0.5943**	**0.6046**	**0.0000**	**1,169.3502**	**1,169.3502**	**0.2254**		**1,174.9857**

3.2 Demolition - 2018

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	3.2600e-003	0.1046	0.0302	2.4000e-004	5.2100e-003	7.0000e-004	5.9200e-003	1.4300e-003	6.7000e-004	2.1000e-003		26.6059	26.6059	2.2100e-003		26.6611
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	0.0381	0.0315	0.2996	6.1000e-004	0.0632	4.3000e-004	0.0636	0.0168	4.0000e-004	0.0172		60.4115	60.4115	2.5200e-003		60.4744
Total	**0.0414**	**0.1361**	**0.3298**	**8.5000e-004**	**0.0684**	**1.1300e-003**	**0.0695**	**0.0182**	**1.0700e-003**	**0.0193**		**87.0174**	**87.0174**	**4.7300e-003**		**87.1355**

3.3 Site Preparation - 2018

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	0.7858	9.7572	4.2514	9.7600e-003		0.4180	0.4180		0.3846	0.3846		982.7113	982.7113	0.3059		990.3596
Total	**0.7858**	**9.7572**	**4.2514**	**9.7600e-003**	**0.5303**	**0.4180**	**0.9483**	**0.0573**	**0.3846**	**0.4418**		**982.7113**	**982.7113**	**0.3059**		**990.3596**

3.3 Site Preparation - 2018

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	0.0191	0.0157	0.1498	3.0000e-004	0.0316	2.2000e-004	0.0318	8.3800e-003	2.0000e-004	8.5800e-003		30.2057	30.2057	1.2600e-003		30.2372
Total	**0.0191**	**0.0157**	**0.1498**	**3.0000e-004**	**0.0316**	**2.2000e-004**	**0.0318**	**8.3800e-003**	**2.0000e-004**	**8.5800e-003**		**30.2057**	**30.2057**	**1.2600e-003**		**30.2372**

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.7858	9.7572	4.2514	9.7600e-003		0.4180	0.4180		0.3846	0.3846	0.0000	982.7113	982.7113	0.3059		990.3596
Total	**0.7858**	**9.7572**	**4.2514**	**9.7600e-003**	**0.5303**	**0.4180**	**0.9483**	**0.0573**	**0.3846**	**0.4418**	**0.0000**	**982.7113**	**982.7113**	**0.3059**		**990.3596**

3.3 Site Preparation - 2018

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	0.0191	0.0157	0.1498	3.0000e-004	0.0316	2.2000e-004	0.0318	8.3800e-003	2.0000e-004	8.5800e-003		30.2057	30.2057	1.2600e-003		30.2372
Total	**0.0191**	**0.0157**	**0.1498**	**3.0000e-004**	**0.0316**	**2.2000e-004**	**0.0318**	**8.3800e-003**	**2.0000e-004**	**8.5800e-003**		**30.2057**	**30.2057**	**1.2600e-003**		**30.2372**

3.4 Grading - 2018

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	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943		1,169.3502	1,169.3502	0.2254		1,174.9857
Total	**1.0643**	**9.4295**	**7.7762**	**0.0120**	**0.7528**	**0.6228**	**1.3755**	**0.4138**	**0.5943**	**1.0081**		**1,169.3502**	**1,169.3502**	**0.2254**		**1,174.9857**

3.4 Grading - 2018

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	0.0381	0.0315	0.2996	6.1000e-004	0.0632	4.3000e-004	0.0636	0.0168	4.0000e-004	0.0172		60.4115	60.4115	2.5200e-003		60.4744
Total	**0.0381**	**0.0315**	**0.2996**	**6.1000e-004**	**0.0632**	**4.3000e-004**	**0.0636**	**0.0168**	**4.0000e-004**	**0.0172**		**60.4115**	**60.4115**	**2.5200e-003**		**60.4744**

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					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857
Total	**1.0643**	**9.4295**	**7.7762**	**0.0120**	**0.7528**	**0.6228**	**1.3755**	**0.4138**	**0.5943**	**1.0081**	**0.0000**	**1,169.3502**	**1,169.3502**	**0.2254**		**1,174.9857**

3.4 Grading - 2018

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	0.0381	0.0315	0.2996	6.1000e-004	0.0632	4.3000e-004	0.0636	0.0168	4.0000e-004	0.0172		60.4115	60.4115	2.5200e-003		60.4744
Total	**0.0381**	**0.0315**	**0.2996**	**6.1000e-004**	**0.0632**	**4.3000e-004**	**0.0636**	**0.0168**	**4.0000e-004**	**0.0172**		**60.4115**	**60.4115**	**2.5200e-003**		**60.4744**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520		1,146.5323	1,146.5323	0.3569		1,155.4555
Total	**1.0848**	**11.0316**	**7.7512**	**0.0114**		**0.7087**	**0.7087**		**0.6520**	**0.6520**		**1,146.5323**	**1,146.5323**	**0.3569**		**1,155.4555**

3.5 Building Construction - 2018

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	5.6200e-003	0.1268	0.0466	2.4000e-004	5.9200e-003	1.1600e-003	7.0800e-003	1.7000e-003	1.1100e-003	2.8100e-003		26.2606	26.2606	1.9400e-003		26.3092
Worker	3.8100e-003	3.1500e-003	0.0300	6.0000e-005	6.3200e-003	4.0000e-005	6.3600e-003	1.6800e-003	4.0000e-005	1.7200e-003		6.0412	6.0412	2.5000e-004		6.0474
Total	**9.4300e-003**	**0.1300**	**0.0766**	**3.0000e-004**	**0.0122**	**1.2000e-003**	**0.0134**	**3.3800e-003**	**1.1500e-003**	**4.5300e-003**		**32.3018**	**32.3018**	**2.1900e-003**		**32.3566**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520	0.0000	1,146.5323	1,146.5323	0.3569		1,155.4555
Total	**1.0848**	**11.0316**	**7.7512**	**0.0114**		**0.7087**	**0.7087**		**0.6520**	**0.6520**	**0.0000**	**1,146.5323**	**1,146.5323**	**0.3569**		**1,155.4555**

3.5 Building Construction - 2018

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	5.6200e-003	0.1268	0.0466	2.4000e-004	5.9200e-003	1.1600e-003	7.0800e-003	1.7000e-003	1.1100e-003	2.8100e-003		26.2606	26.2606	1.9400e-003		26.3092
Worker	3.8100e-003	3.1500e-003	0.0300	6.0000e-005	6.3200e-003	4.0000e-005	6.3600e-003	1.6800e-003	4.0000e-005	1.7200e-003		6.0412	6.0412	2.5000e-004		6.0474
Total	**9.4300e-003**	**0.1300**	**0.0766**	**3.0000e-004**	**0.0122**	**1.2000e-003**	**0.0134**	**3.3800e-003**	**1.1500e-003**	**4.5300e-003**		**32.3018**	**32.3018**	**2.1900e-003**		**32.3566**

3.6 Paving - 2018

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	0.9202	8.7447	7.2240	0.0113		0.5109	0.5109		0.4735	0.4735		1,070.1372	1,070.1372	0.3017		1,077.6798
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9202**	**8.7447**	**7.2240**	**0.0113**		**0.5109**	**0.5109**		**0.4735**	**0.4735**		**1,070.1372**	**1,070.1372**	**0.3017**		**1,077.6798**

3.6 Paving - 2018

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	0.0686	0.0567	0.5393	1.0900e-003	0.1137	7.8000e-004	0.1145	0.0302	7.2000e-004	0.0309		108.7407	108.7407	4.5300e-003		108.8539
Total	**0.0686**	**0.0567**	**0.5393**	**1.0900e-003**	**0.1137**	**7.8000e-004**	**0.1145**	**0.0302**	**7.2000e-004**	**0.0309**		**108.7407**	**108.7407**	**4.5300e-003**		**108.8539**

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	0.9202	8.7447	7.2240	0.0113		0.5109	0.5109		0.4735	0.4735	0.0000	1,070.1372	1,070.1372	0.3017		1,077.6798
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9202**	**8.7447**	**7.2240**	**0.0113**		**0.5109**	**0.5109**		**0.4735**	**0.4735**	**0.0000**	**1,070.1372**	**1,070.1372**	**0.3017**		**1,077.6798**

3.6 Paving - 2018

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	0.0686	0.0567	0.5393	1.0900e-003	0.1137	7.8000e-004	0.1145	0.0302	7.2000e-004	0.0309		108.7407	108.7407	4.5300e-003		108.8539
Total	**0.0686**	**0.0567**	**0.5393**	**1.0900e-003**	**0.1137**	**7.8000e-004**	**0.1145**	**0.0302**	**7.2000e-004**	**0.0309**		**108.7407**	**108.7407**	**4.5300e-003**		**108.8539**

3.7 Architectural Coating - 2018

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	8.6211					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	**8.9197**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.7 Architectural Coating - 2018

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	8.6211					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	**8.9197**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.7 Architectural Coating - 2018

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**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
General Office Building	0.00	0.00	0.00	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.553205	0.030828	0.204091	0.129951	0.023898	0.006086	0.017139	0.018453	0.002761	0.002481	0.007244	0.002707	0.001156

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	1.8000e-003	0.0164	0.0137	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003		19.6282	19.6282	3.8000e-004	3.6000e-004	19.7448
NaturalGas Unmitigated	1.8000e-003	0.0164	0.0137	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003		19.6282	19.6282	3.8000e-004	3.6000e-004	19.7448

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					
General Office Building	166.839	1.8000e-003	0.0164	0.0137	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003		19.6282	19.6282	3.8000e-004	3.6000e-004	19.7448
Total		**1.8000e-003**	**0.0164**	**0.0137**	**1.0000e-004**		**1.2400e-003**	**1.2400e-003**		**1.2400e-003**	**1.2400e-003**		**19.6282**	**19.6282**	**3.8000e-004**	**3.6000e-004**	**19.7448**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.166839	1.8000e-003	0.0164	0.0137	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003		19.6282	19.6282	3.8000e-004	3.6000e-004	19.7448
Total		**1.8000e-003**	**0.0164**	**0.0137**	**1.0000e-004**		**1.2400e-003**	**1.2400e-003**		**1.2400e-003**	**1.2400e-003**		**19.6282**	**19.6282**	**3.8000e-004**	**3.6000e-004**	**19.7448**

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	0.1033	0.0000	3.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.1000e-004	8.1000e-004	0.0000		8.7000e-004
Unmitigated	0.1033	0.0000	3.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.1000e-004	8.1000e-004	0.0000		8.7000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0236					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0796					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	3.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.1000e-004	8.1000e-004	0.0000		8.7000e-004
Total	**0.1033**	**0.0000**	**3.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**8.1000e-004**	**8.1000e-004**	**0.0000**		**8.7000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0236					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0796					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	3.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.1000e-004	8.1000e-004	0.0000		8.7000e-004
Total	**0.1033**	**0.0000**	**3.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**8.1000e-004**	**8.1000e-004**	**0.0000**		**8.7000e-004**

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

8165 Goleta Sanitary District

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
General Office Building	3.72	1000sqft	0.17	3,720.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.9	**Precipitation Freq (Days)**	37
Climate Zone	4			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	564.99	**CH4 Intensity (lb/MWhr)**	0.023	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS 2020 33% goal
CalEEMod accounts for 16.7%
Additional 16.3% reduction applied
(564.99, 0.023, 0.005)

Land Use - 0.17 acre earthwork footprint

Construction Phase - 12 month construction period

Demolition -

Grading -

Vehicle Trips - The project would not generate additional trips

Water And Wastewater - CalGreen 20% decrease in indoor water use (528,935.63)

8165 Goleta Sanitary District - Santa Barbara County APCD Air District, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	100.00	200.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	1.00	5.00
tblLandUse	LotAcreage	0.09	0.17
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.023
tblProjectCharacteristics	CO2IntensityFactor	702.44	564.99
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblVehicleTrips	CC_TL	5.50	0.00
tblVehicleTrips	CNW_TL	6.40	0.00
tblVehicleTrips	CW_TL	6.60	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblWater	IndoorWaterUseRate	661,169.54	528,935.63

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					
2018	8.9197	19.3462	12.5300	0.0229	0.8159	1.0421	1.7404	0.4305	0.9801	1.0743	0.0000	2,266.8578	2,266.8578	0.5374	0.0000	2,280.2935
Maximum	**8.9197**	**19.3462**	**12.5300**	**0.0229**	**0.8159**	**1.0421**	**1.7404**	**0.4305**	**0.9801**	**1.0743**	**0.0000**	**2,266.8578**	**2,266.8578**	**0.5374**	**0.0000**	**2,280.2935**

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					
2018	8.9197	19.3462	12.5300	0.0229	0.8159	1.0421	1.7404	0.4305	0.9801	1.0743	0.0000	2,266.8578	2,266.8578	0.5374	0.0000	2,280.2935
Maximum	**8.9197**	**19.3462**	**12.5300**	**0.0229**	**0.8159**	**1.0421**	**1.7404**	**0.4305**	**0.9801**	**1.0743**	**0.0000**	**2,266.8578**	**2,266.8578**	**0.5374**	**0.0000**	**2,280.2935**

	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**

2.2 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	0.1033	0.0000	3.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.1000e-004	8.1000e-004	0.0000		8.7000e-004
Energy	1.8000e-003	0.0164	0.0137	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003		19.6282	19.6282	3.8000e-004	3.6000e-004	19.7448
Mobile	0.0000	0.0000	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	**0.1051**	**0.0164**	**0.0141**	**1.0000e-004**	**0.0000**	**1.2400e-003**	**1.2400e-003**	**0.0000**	**1.2400e-003**	**1.2400e-003**		**19.6290**	**19.6290**	**3.8000e-004**	**3.6000e-004**	**19.7457**

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	0.1033	0.0000	3.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.1000e-004	8.1000e-004	0.0000		8.7000e-004
Energy	1.8000e-003	0.0164	0.0137	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003		19.6282	19.6282	3.8000e-004	3.6000e-004	19.7448
Mobile	0.0000	0.0000	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	**0.1051**	**0.0164**	**0.0141**	**1.0000e-004**	**0.0000**	**1.2400e-003**	**1.2400e-003**	**0.0000**	**1.2400e-003**	**1.2400e-003**		**19.6290**	**19.6290**	**3.8000e-004**	**3.6000e-004**	**19.7457**

	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	Demolition	Demolition	1/1/2018	1/26/2018	5	20	
2	Site Preparation	Site Preparation	1/26/2018	2/1/2018	5	5	
3	Grading	Grading	2/2/2018	2/15/2018	5	10	
4	Building Construction	Building Construction	2/16/2018	11/22/2018	5	200	
5	Paving	Paving	11/23/2018	12/6/2018	5	10	
6	Architectural Coating	Architectural Coating	12/7/2018	12/20/2018	5	10	

Acres of Grading (Site Preparation Phase): 2.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,580; Non-Residential Outdoor: 1,860; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

8165 Goleta Sanitary District - Santa Barbara County APCD Air District, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Demolition	4	10.00	0.00	6.00	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
Grading	4	10.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	1.00	1.00	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
Architectural Coating	1	0.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

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					0.0681	0.0000	0.0681	0.0103	0.0000	0.0103			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943		1,169.3502	1,169.3502	0.2254		1,174.9857
Total	**1.0643**	**9.4295**	**7.7762**	**0.0120**	**0.0681**	**0.6228**	**0.6908**	**0.0103**	**0.5943**	**0.6046**		**1,169.3502**	**1,169.3502**	**0.2254**		**1,174.9857**

3.2 Demolition - 2018

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	3.3500e-003	0.1054	0.0317	2.4000e-004	5.2100e-003	7.2000e-004	5.9300e-003	1.4300e-003	6.9000e-004	2.1100e-003		26.2697	26.2697	2.2600e-003		26.3261
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	0.0430	0.0360	0.3138	5.9000e-004	0.0632	4.3000e-004	0.0636	0.0168	4.0000e-004	0.0172		59.0177	59.0177	2.5500e-003		59.0815
Total	**0.0464**	**0.1414**	**0.3455**	**8.3000e-004**	**0.0684**	**1.1500e-003**	**0.0695**	**0.0182**	**1.0900e-003**	**0.0193**		**85.2874**	**85.2874**	**4.8100e-003**		**85.4076**

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					0.0681	0.0000	0.0681	0.0103	0.0000	0.0103			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857
Total	**1.0643**	**9.4295**	**7.7762**	**0.0120**	**0.0681**	**0.6228**	**0.6908**	**0.0103**	**0.5943**	**0.6046**	**0.0000**	**1,169.3502**	**1,169.3502**	**0.2254**		**1,174.9857**

3.2 Demolition - 2018

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	3.3500e-003	0.1054	0.0317	2.4000e-004	5.2100e-003	7.2000e-004	5.9300e-003	1.4300e-003	6.9000e-004	2.1100e-003		26.2697	26.2697	2.2600e-003		26.3261
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	0.0430	0.0360	0.3138	5.9000e-004	0.0632	4.3000e-004	0.0636	0.0168	4.0000e-004	0.0172		59.0177	59.0177	2.5500e-003		59.0815
Total	**0.0464**	**0.1414**	**0.3455**	**8.3000e-004**	**0.0684**	**1.1500e-003**	**0.0695**	**0.0182**	**1.0900e-003**	**0.0193**		**85.2874**	**85.2874**	**4.8100e-003**		**85.4076**

3.3 Site Preparation - 2018

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	0.7858	9.7572	4.2514	9.7600e-003		0.4180	0.4180		0.3846	0.3846		982.7113	982.7113	0.3059		990.3596
Total	**0.7858**	**9.7572**	**4.2514**	**9.7600e-003**	**0.5303**	**0.4180**	**0.9483**	**0.0573**	**0.3846**	**0.4418**		**982.7113**	**982.7113**	**0.3059**		**990.3596**

3.3 Site Preparation - 2018

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	0.0215	0.0180	0.1569	3.0000e-004	0.0316	2.2000e-004	0.0318	8.3800e-003	2.0000e-004	8.5800e-003		29.5089	29.5089	1.2700e-003		29.5407
Total	**0.0215**	**0.0180**	**0.1569**	**3.0000e-004**	**0.0316**	**2.2000e-004**	**0.0318**	**8.3800e-003**	**2.0000e-004**	**8.5800e-003**		**29.5089**	**29.5089**	**1.2700e-003**		**29.5407**

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.7858	9.7572	4.2514	9.7600e-003		0.4180	0.4180		0.3846	0.3846	0.0000	982.7113	982.7113	0.3059		990.3596
Total	**0.7858**	**9.7572**	**4.2514**	**9.7600e-003**	**0.5303**	**0.4180**	**0.9483**	**0.0573**	**0.3846**	**0.4418**	**0.0000**	**982.7113**	**982.7113**	**0.3059**		**990.3596**

3.3 Site Preparation - 2018

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	0.0215	0.0180	0.1569	3.0000e-004	0.0316	2.2000e-004	0.0318	8.3800e-003	2.0000e-004	8.5800e-003		29.5089	29.5089	1.2700e-003		29.5407
Total	**0.0215**	**0.0180**	**0.1569**	**3.0000e-004**	**0.0316**	**2.2000e-004**	**0.0318**	**8.3800e-003**	**2.0000e-004**	**8.5800e-003**		**29.5089**	**29.5089**	**1.2700e-003**		**29.5407**

3.4 Grading - 2018

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	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943		1,169.3502	1,169.3502	0.2254		1,174.9857
Total	**1.0643**	**9.4295**	**7.7762**	**0.0120**	**0.7528**	**0.6228**	**1.3755**	**0.4138**	**0.5943**	**1.0081**		**1,169.3502**	**1,169.3502**	**0.2254**		**1,174.9857**

3.4 Grading - 2018

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	0.0430	0.0360	0.3138	5.9000e-004	0.0632	4.3000e-004	0.0636	0.0168	4.0000e-004	0.0172		59.0177	59.0177	2.5500e-003		59.0815
Total	**0.0430**	**0.0360**	**0.3138**	**5.9000e-004**	**0.0632**	**4.3000e-004**	**0.0636**	**0.0168**	**4.0000e-004**	**0.0172**		**59.0177**	**59.0177**	**2.5500e-003**		**59.0815**

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					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857
Total	**1.0643**	**9.4295**	**7.7762**	**0.0120**	**0.7528**	**0.6228**	**1.3755**	**0.4138**	**0.5943**	**1.0081**	**0.0000**	**1,169.3502**	**1,169.3502**	**0.2254**		**1,174.9857**

3.4 Grading - 2018

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	0.0430	0.0360	0.3138	5.9000e-004	0.0632	4.3000e-004	0.0636	0.0168	4.0000e-004	0.0172		59.0177	59.0177	2.5500e-003		59.0815
Total	**0.0430**	**0.0360**	**0.3138**	**5.9000e-004**	**0.0632**	**4.3000e-004**	**0.0636**	**0.0168**	**4.0000e-004**	**0.0172**		**59.0177**	**59.0177**	**2.5500e-003**		**59.0815**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520		1,146.5323	1,146.5323	0.3569		1,155.4555
Total	**1.0848**	**11.0316**	**7.7512**	**0.0114**		**0.7087**	**0.7087**		**0.6520**	**0.6520**		**1,146.5323**	**1,146.5323**	**0.3569**		**1,155.4555**

3.5 Building Construction - 2018

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	5.9100e-003	0.1268	0.0512	2.4000e-004	5.9200e-003	1.1800e-003	7.1000e-003	1.7000e-003	1.1300e-003	2.8300e-003		25.6791	25.6791	2.0400e-003		25.7300
Worker	4.3000e-003	3.6000e-003	0.0314	6.0000e-005	6.3200e-003	4.0000e-005	6.3600e-003	1.6800e-003	4.0000e-005	1.7200e-003		5.9018	5.9018	2.5000e-004		5.9082
Total	**0.0102**	**0.1304**	**0.0826**	**3.0000e-004**	**0.0122**	**1.2200e-003**	**0.0135**	**3.3800e-003**	**1.1700e-003**	**4.5500e-003**		**31.5809**	**31.5809**	**2.2900e-003**		**31.6382**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0848	11.0316	7.7512	0.0114		0.7087	0.7087		0.6520	0.6520	0.0000	1,146.5323	1,146.5323	0.3569		1,155.4555
Total	**1.0848**	**11.0316**	**7.7512**	**0.0114**		**0.7087**	**0.7087**		**0.6520**	**0.6520**	**0.0000**	**1,146.5323**	**1,146.5323**	**0.3569**		**1,155.4555**

3.5 Building Construction - 2018

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	5.9100e-003	0.1268	0.0512	2.4000e-004	5.9200e-003	1.1800e-003	7.1000e-003	1.7000e-003	1.1300e-003	2.8300e-003		25.6791	25.6791	2.0400e-003		25.7300
Worker	4.3000e-003	3.6000e-003	0.0314	6.0000e-005	6.3200e-003	4.0000e-005	6.3600e-003	1.6800e-003	4.0000e-005	1.7200e-003		5.9018	5.9018	2.5000e-004		5.9082
Total	**0.0102**	**0.1304**	**0.0826**	**3.0000e-004**	**0.0122**	**1.2200e-003**	**0.0135**	**3.3800e-003**	**1.1700e-003**	**4.5500e-003**		**31.5809**	**31.5809**	**2.2900e-003**		**31.6382**

3.6 Paving - 2018

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	0.9202	8.7447	7.2240	0.0113		0.5109	0.5109		0.4735	0.4735		1,070.1372	1,070.1372	0.3017		1,077.6798
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9202**	**8.7447**	**7.2240**	**0.0113**		**0.5109**	**0.5109**		**0.4735**	**0.4735**		**1,070.1372**	**1,070.1372**	**0.3017**		**1,077.6798**

3.6 Paving - 2018

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	0.0774	0.0648	0.5648	1.0700e-003	0.1137	7.8000e-004	0.1145	0.0302	7.2000e-004	0.0309		106.2319	106.2319	4.5900e-003		106.3466
Total	**0.0774**	**0.0648**	**0.5648**	**1.0700e-003**	**0.1137**	**7.8000e-004**	**0.1145**	**0.0302**	**7.2000e-004**	**0.0309**		**106.2319**	**106.2319**	**4.5900e-003**		**106.3466**

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	0.9202	8.7447	7.2240	0.0113		0.5109	0.5109		0.4735	0.4735	0.0000	1,070.1372	1,070.1372	0.3017		1,077.6798
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9202**	**8.7447**	**7.2240**	**0.0113**		**0.5109**	**0.5109**		**0.4735**	**0.4735**	**0.0000**	**1,070.1372**	**1,070.1372**	**0.3017**		**1,077.6798**

3.6 Paving - 2018

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	0.0774	0.0648	0.5648	1.0700e-003	0.1137	7.8000e-004	0.1145	0.0302	7.2000e-004	0.0309		106.2319	106.2319	4.5900e-003		106.3466
Total	**0.0774**	**0.0648**	**0.5648**	**1.0700e-003**	**0.1137**	**7.8000e-004**	**0.1145**	**0.0302**	**7.2000e-004**	**0.0309**		**106.2319**	**106.2319**	**4.5900e-003**		**106.3466**

3.7 Architectural Coating - 2018

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	8.6211					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	**8.9197**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.7 Architectural Coating - 2018

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	8.6211					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	**8.9197**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.7 Architectural Coating - 2018

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**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
General Office Building	0.00	0.00	0.00	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.553205	0.030828	0.204091	0.129951	0.023898	0.006086	0.017139	0.018453	0.002761	0.002481	0.007244	0.002707	0.001156

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	1.8000e-003	0.0164	0.0137	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003		19.6282	19.6282	3.8000e-004	3.6000e-004	19.7448
NaturalGas Unmitigated	1.8000e-003	0.0164	0.0137	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003		19.6282	19.6282	3.8000e-004	3.6000e-004	19.7448

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					
General Office Building	166.839	1.8000e-003	0.0164	0.0137	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003		19.6282	19.6282	3.8000e-004	3.6000e-004	19.7448
Total		**1.8000e-003**	**0.0164**	**0.0137**	**1.0000e-004**		**1.2400e-003**	**1.2400e-003**		**1.2400e-003**	**1.2400e-003**		**19.6282**	**19.6282**	**3.8000e-004**	**3.6000e-004**	**19.7448**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.166839	1.8000e-003	0.0164	0.0137	1.0000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003		19.6282	19.6282	3.8000e-004	3.6000e-004	19.7448
Total		**1.8000e-003**	**0.0164**	**0.0137**	**1.0000e-004**		**1.2400e-003**	**1.2400e-003**		**1.2400e-003**	**1.2400e-003**		**19.6282**	**19.6282**	**3.8000e-004**	**3.6000e-004**	**19.7448**

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	0.1033	0.0000	3.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.1000e-004	8.1000e-004	0.0000		8.7000e-004
Unmitigated	0.1033	0.0000	3.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.1000e-004	8.1000e-004	0.0000		8.7000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0236					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0796					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	3.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.1000e-004	8.1000e-004	0.0000		8.7000e-004
Total	**0.1033**	**0.0000**	**3.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**8.1000e-004**	**8.1000e-004**	**0.0000**		**8.7000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0236					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0796					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-005	0.0000	3.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		8.1000e-004	8.1000e-004	0.0000		8.7000e-004
Total	**0.1033**	**0.0000**	**3.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**8.1000e-004**	**8.1000e-004**	**0.0000**		**8.7000e-004**

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

Drainage and Storm Water Quality Analysis

Drainage and Storm Water Quality Analysis

Goleta West Sanitary District
Headquarters Improvement Projects

Prepared for:
Goleta West Sanitary District

Prepared by:
Nick Bruckbauer, P.E., CFM

Reviewed by:
David W. Rundle, P.E.

June 16, 2016

Sign-off Sheet

This document entitled Drainage and Storm Water Quality Analysis was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of Goleta West Sanitary District (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by _____
(signature)

Nick Bruckbauer, P.E., CFM

Reviewed by _____
(signature)

David W. Rundle, P.E.

Table of Contents

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

1.0 INTRODUCTION

The project site of the Goleta West Sanitary District Headquarters is located within the limits of the City of Santa Barbara, on a 1.07 acre easement area located adjacent to UCSB Parking Lot 32, on the Santa Barbara Airport grounds, a portion of APN: 073-450-003. The site is adjacent to the Goleta Slough, and is accessed by an access road that connects into Mesa Road to the south. The existing site is mostly paved and contains four existing buildings.

The proposed project will be processed under two separate permit applications by the City of Santa Barbara. Phase 1 consists of an addition to the Equipment Garage, partial reconstruction and renovation of the Former Pump Station #2/New Operations Building, and an interior renovation to a portion of the Administration/Pump Station #1 Building (City of Santa Barbara Case No. MST2013-00379). Phase 1 will result in no increase or decrease in impervious area. Phase 2 consists of demolition of the Garage/Shop building and replacement with a new Administration Building. Phase 2 will also include site improvements including a veranda attached to the new building, an adjacent courtyard with permeable paving, reconfigured landscaping, and new parking on permeable paving (City case number not yet assigned). Phase 2 will result in a slight decrease in impervious area. The overall site drainage patterns will remain unchanged. See Figure 1 below for a project vicinity map.

Figure 1 – Vicinity Map

2.0 OBJECTIVES

The objective of this report is to demonstrate that the project will address the requirements outlined in the City of Santa Barbara Storm Water BMP Guidance Manual (BMP Manual), dated July 2013 – Final. Based on the proposed improvements, the project will fall under the post-construction storm water management requirements of Tier 3 – Large Projects (Commercial/Industrial, Mixed Use, Parking Lots, Hillside Residential, Single-Family Residential >4000 sq. ft. of new/replaced impervious area, and Public Works Projects):

Peak Runoff Discharge Requirement

Provide detention such that the post-development peak runoff discharge rate shall not exceed the pre-development peak runoff for 2-year, 5-year, 10-year, and 25-year 24-hour storm events.

Volume Reduction Requirement

Retain on-site the larger of the following two volumes from the entire project site:

- The volume difference between the pre- and post-conditions for the 25-year, 24-hour design storm (for re-development, the pre-condition is the pre-development condition).
- The volume difference between the pre- and post-conditions generated from a one-inch, 24-hr storm event.

Water Quality Treatment Requirement

Water quality treatment requirements are differentiated based on whether the BMP is volume-based or flow-based. The criteria for both are as follows:

- Volume-based storm water runoff BMPs shall be sized for the one-inch 24-hr design storm from the entire project site (not just the new or redeveloped area).
- Flow-based storm water runoff BMPs shall be sized based on a constant rainfall intensity of 0.25 in/hr for 4 hours from the entire project site (not just the new or redeveloped area).

3.0 METHOD OF ANALYSIS

The proposed project site was analyzed to determine the amount of impervious surfaces, and to identify the proposed drainage patterns, as compared to the existing site conditions. Phase 1 will result in no increase or decrease in impervious area, and Phase 2 will decrease in a slight decrease in impervious area. Since the proposed project site will have a slightly lower amount of impervious area, will continue the same drainage patterns, and will utilize the same drainage infrastructure as in the existing condition, it was determined that no additional storm water runoff BMPs are necessary. The findings of the analysis are summarized in the following section.

4.0 RESULTS

The existing project site consists of four buildings, a large paved area, a small grassy area on the western edge of the site, and another grassy area on the northern end of the site. Approximately 0.77 acres of the 1.07 acre site (72%) is covered in impervious surfaces. Existing drainage is captured onsite via storm drain inlets, and is collected in a wet well in Administration/Pump Station #1 building on the western edge of the site, where it is pumped to the Goleta Sanitary District wastewater treatment plant where it is treated and released.

The proposed project will keep the same drainage patterns. Storm water will continue to be captured via onsite storm drain inlets, collected into the same wet well, and pumped to the wastewater treatment plan. The proposed building addition and building replacements will be constructed in areas that are currently covered by impervious surface with the exception of an approximately 517 square foot area on the southeastern portion of the site where a portion of the courtyard will be constructed on land that is currently vegetated with weeds. Because of the addition of permeable parking stalls where there previously were impervious surfaces, the overall site imperviousness will slightly decrease from 72% to 68% throughout the two phases of the project. The overall site impervious values are summarized in Table 1 below. See Exhibit 1 and Exhibit 2 in Appendix A for the Existing and Proposed Site Plans.

Table 1 – Approximate Site Impervious Values

	Existing		Proposed	
	SF	%	SF	%
Administration/PS#1 Building	2,376	5%	2,376	5%
Equipment Garage	2,400	5%	3,300	7%
Former PS#2/New Operations Building	2,134	5%	2,670	6%
Garage/Shop	1,353	3%	0	0%
New Administration Building	0	0%	3,298	7%
Paving/Impervious Surfaces	25,202	54%	19,932	43%

Total Impervious	**33,465**	**72%**	**31,576**	**68%**
Landscaping/Permeable Surfaces	**13,198**	**28%**	**15,087**	**32%**
Total Lot Area	46,663	100%	46,663	100%

Phase 1 consists of an addition to the Equipment Garage, partial reconstruction and renovation of the Former Pump Station #2/New Operations Building, and an interior renovation to a portion of the Administration/Pump Station #1 Building. Phase 1 will result in no increase or decrease in impervious area. See Table 2 below.

Table 2 – Site Impervious Values – Phase 1

	Existing		Phase 1	After Phase 1	
	SF	%	SF	SF	%
Administration/PS#1 Building	2,376	5%	(+/- 0)	2,376	5%
Equipment Garage	2,400	5%	(+900)	3,300	7%
Former PS#2/New Operations Building	2,134	5%	(+536)	2,670	6%
Garage/Shop	1,353	3%	[Phase 2]	1,353	3%
New Administration Building	0	0%	[Phase 2]	0	0%
Paving/Impervious Surfaces	25,202	54%	(-1,436)	23,766	51%
Total Impervious	**33,465**	**72%**	**(+/- 0)**	**33,465**	**72%**
Landscaping/Permeable Surfaces	**13,198**	**28%**	**(+/- 0)**	**13,198**	**28%**
Total Lot Area	46,663	100%	46,663	46,663	100%

Phase 2 consists of demolition of the Garage/Shop building and replacement with a new Administration Building. Phase 2 will also include site improvements including a veranda attached to the new building, an adjacent courtyard with permeable paving, reconfigured landscaping, and new parking on permeable paving. Phase 2 will result in a slight decrease in impervious area. See Table 3 below.

Table 3 – Site Impervious Values – Phase 2

	After Phase 1		Phase 2	After Phase 2	
	SF	%	SF	SF	%
Administration/PS#1 Building	2,376	5%	[Phase 1]	2,376	5%
Equipment Garage	3,300	7%	[Phase 1]	3,300	7%
Former PS#2/New Operations Building	2,670	6%	[Phase 1]	2,670	6%
Garage/Shop	1,353	3%	(-1,353)	0	0%
New Administration Building	0	0%	(+3,298)	3,298	7%

Paving/Impervious Surfaces	23,766	51%	(-3,834)	19,932	43%
Total Impervious	**33,465**	**72%**	**(-1,889)**	**31,576**	**68%**
Landscaping/Permeable Surfaces	**13,198**	**28%**	**(+1,889)**	**15,087**	**32%**
Total Lot Area	46,663	100%	46,663	46,663	100%

Peak Runoff Discharge Requirement

Because the overall site imperviousness is less in the proposed condition, and because the overall site drainage patterns remain the same (resulting in unchanged Area, Curve Number and Time of Concentration values compared to the existing condition), the total peak runoff for the 2-year, 5-year, 10-year, and 25-year, 24-hour storm events will be the same or less than in the existing condition.

Volume Reduction Requirement

Again, since the overall site imperviousness is less in the proposed condition, and because the overall site drainage patterns remain the same (resulting in unchanged Area, Curve Number and Time of Concentration values compared to the existing condition), the total volume for the 25-year, 24-hour design storm and the one-inch, 24-hour storm event would be the same or less than in the existing condition.

Water Quality Treatment Requirement

All stormwater runoff generated onsite will be captured via storm drain inlets, and will continue to be collected in a wet well in the Administration/Pump Station #1 building on the western edge of the site, where it is then pumped to the wastewater treatment plant where it is treated and released. This method meets all treatment requirements, and no other BMPs are proposed.

5.0 FLOODPLAIN/FLOODWAY

Per the City of Santa Barbara Community Development Department Base Flood Elevation (BFE) Determination document (dated March 26, 2014), the BFE of the site is 13.7 ft (NAVD 1988 datum) and lies within the Zone "AE" floodplain, with a portion of the northern end of the site within the floodway. See Appendix B for the Base Flood Elevation Determination document. The proposed buildings will either be elevated or floodproofed to an elevation above the BFE. A "No-Rise" Certificate has been included for the portions of the development within the floodway. See Appendix C for the "No-Rise" Certificate and Floodway Encroachment Analysis.

6.0 SUMMARY AND CONCLUSIONS

In summary, the proposed site will keep the same overall layout and the same drainage patterns as in the existing conditions. The overall site impervious area is slightly less than in the existing conditions, meaning that the required peak runoff and volume values will be the same or less than in the existing condition. Phase 1 will result in no increase or decrease in impervious area, and Phase 2 will result in a slight decrease in impervious area. The site will continue to capture stormwater and pump it to the wastewater treatment plant, where it will receive treatment that meets or exceeds all BMP requirements. No other new BMPs are proposed. The site is located within a "Zone AE" floodplain, as well as a floodway, and is designed to meet all applicable floodplain management standards. No further hydrology/stormwater report is deemed necessary.

APPENDICES

Appendix A

A.1 EXISTING SITE PLAN

A.2 PRELIMINARY GRADING PLAN

LEGEND & ABBREVIATIONS

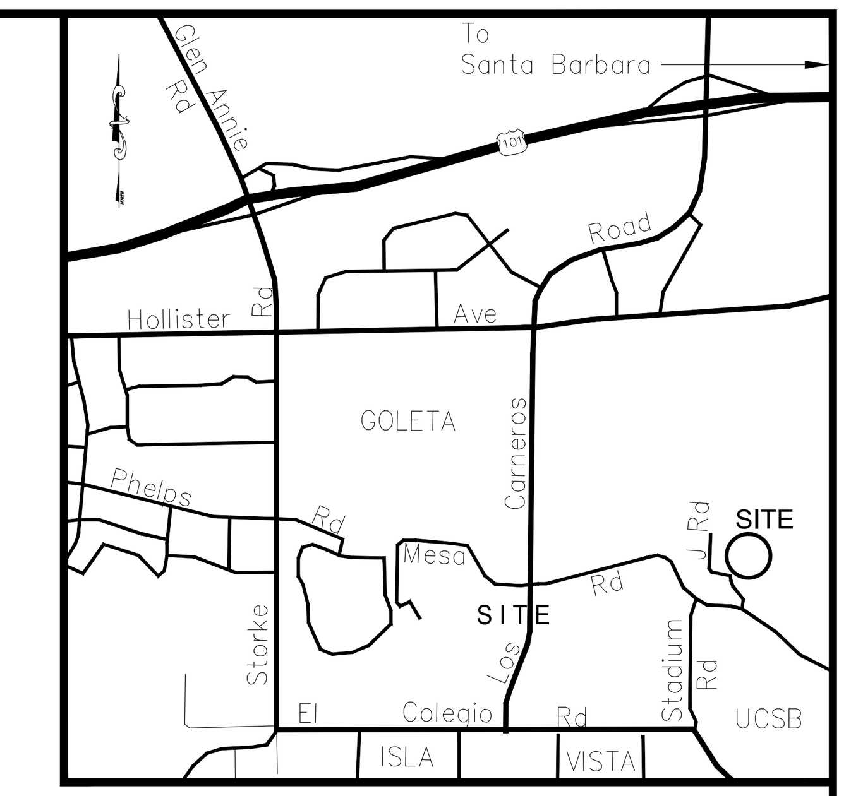
AC = ASPHALT CONCRETE
AD = AREA DRAIN
BLDG = BUILDING
BFR = BACK FLOW REGULATOR
BOTM = BOTTOM
CA = COMPRESSED AIR
CS = CHLORINE SOLUTION
CHLF = CHAIN LINK FENCE
CNC = CONCRETE
CVLT = CABLE TV VAULT
DBL = DOUBLE (ie: TREE TRUNK)
DEC = DECIDUOUS
DI = DROP INLET
ECP = ELECTRIC CONTROL PANEL
ELEC = ELECTRIC
ELPB = ELECTRIC PULL BOX
EMH = ELECTRIC MANHOLE
EMT = ELECTRIC METER
EP = EDGE OF PAVEMENT
EVLT = ELECTRIC VAULT
FF = FINISHED FLOOR ELEVATION
FH = FIRE HYDRANT
FLGP = FLAG POLE
FS = FIRE SERVICE
GEN = GENERATOR
GMT = GAS METER
GRND = GROUND
GV = GAS VALVE
GWSD = GOLETA WEST SANITARY DISTRICT
HB = HOSE BIB
HDG = HEDGE
HDRL = HAND RAIL
ICV = IRRIGATION CONTROL VALVE
IW = INDUSTRIAL WATER
LADR = LADDER
LSTD = LIGHT STANDARD
MBD = METAL BOLLARD
MTL = METAL
MW = MONITOR WELL
PP = POWER POLE
PRKG = PARKING
RFDN = ROOF DRAIN
ROH = ROOF OVERHANG
SCO = SEWER CLEANOUT
SMH = SEWER MAN HOLE
SN = SIGN
SWK = SIDEWALK
SWL = SWALE
SWS = SINGLE WHITE STRIPE
TFMR = TRANSFORMER (ELECTRIC)
THLD = THRESHOLD
TVLT = TELEPHONE VAULT
UBOX = UTILITY BOX
UGE = UNDERGROUND ELECTRIC LINE
UTIL = UTILITY
UVLT = UNDETERMINED UTILITY VAULT
VERT = VERTICAL
w/ = WITH
WM = WATER METER
WV = WATER VALVE

(grey fill) = AC
(stippled fill) = CNC

(1) = 10' WIDE EASEMENT IN FAVOR OF ISLA VISTA SANITARY DISTRICT FOR SANITARY SEWER PURPOSES PER 1865-OR-371

(2) = 10' WIDE EASEMENT IN FAVOR OF ISLA VISTA SANITARY DISTRICT FOR SANITARY SEWER PURPOSES PER 2218-OR-878

(3) = 10' WIDE EASEMENT IN FAVOR OF ISLA VISTA SANITARY DISTRICT FOR SANITARY SEWER PURPOSES PER 2017-OR-625 AND 2019-OR-639



VICINITY MAP
NO SCALE

ATTENTION:

ALL UNDERGROUND UTILITIES AND SUBSTRUCTURES SHOWN HEREON WERE OBTAINED FROM THE BEST AVAILABLE SOURCES AND ARE PRESUMED TO BE ACCURATE AND COMPLETE, BUT SINCE THE INFORMATION WAS OBTAINED FROM OTHERS, THE OFFICE OF MNS ENGINEERS, INC. CANNOT GUARANTEE SAID INFORMATION AS BEING ACCURATE AND COMPLETE. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO VERIFY, LOCATE, AND PROTECT ALL UTILITIES AND SUBSTRUCTURES SHOWN OR NOT SHOWN.

CALL UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA TOLL FREE AT 1-800-422-4133 TWO WORKING DAYS BEFORE YOU DIG

SV-01

REV	DATE	BY
1	2014-07-08	RLS
2	2015-04-30	RLS

MNS ENGINEERS INC
201 N. Calle Cesar Chavez, Ste 300
Santa Barbara, CA 93103
805.692.6921 Phone
ENGINEERING
PLANNING
SURVEYING
CONSTRUCTION MANAGEMENT

HORIZONTAL DATUM: CCS83, 1991.35 EPOCH
CONTROL: STATIONS 2000 AND 2001 PER RS BOOK 170, PAGE 48 REOCRDS OF SANTA BARBARA COUNTY.

VERTICAL DATUM: NAVD88
CONTROL: NGS MONUMENT EW3791, ELE: 62.827 (U.S. SURVEY FEET)

PROFESSIONAL LAND SURVEYOR ★ Mark E. Reinhardt PLS No. 6392 ★ STATE OF CALIFORNIA

November 2013

Mark E. Reinhardt, PLS 6392

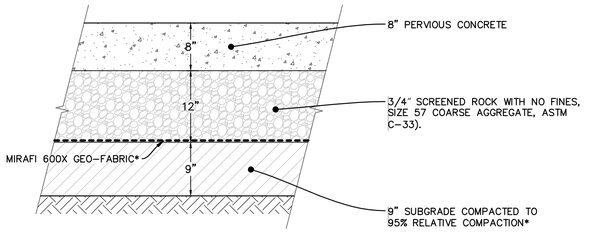
Goleta West Sanitary District

TOPOGRAPHIC MAP FOR NEW ADMINISTRATION BUILDING

1" = 20'
0 20 40 60 80

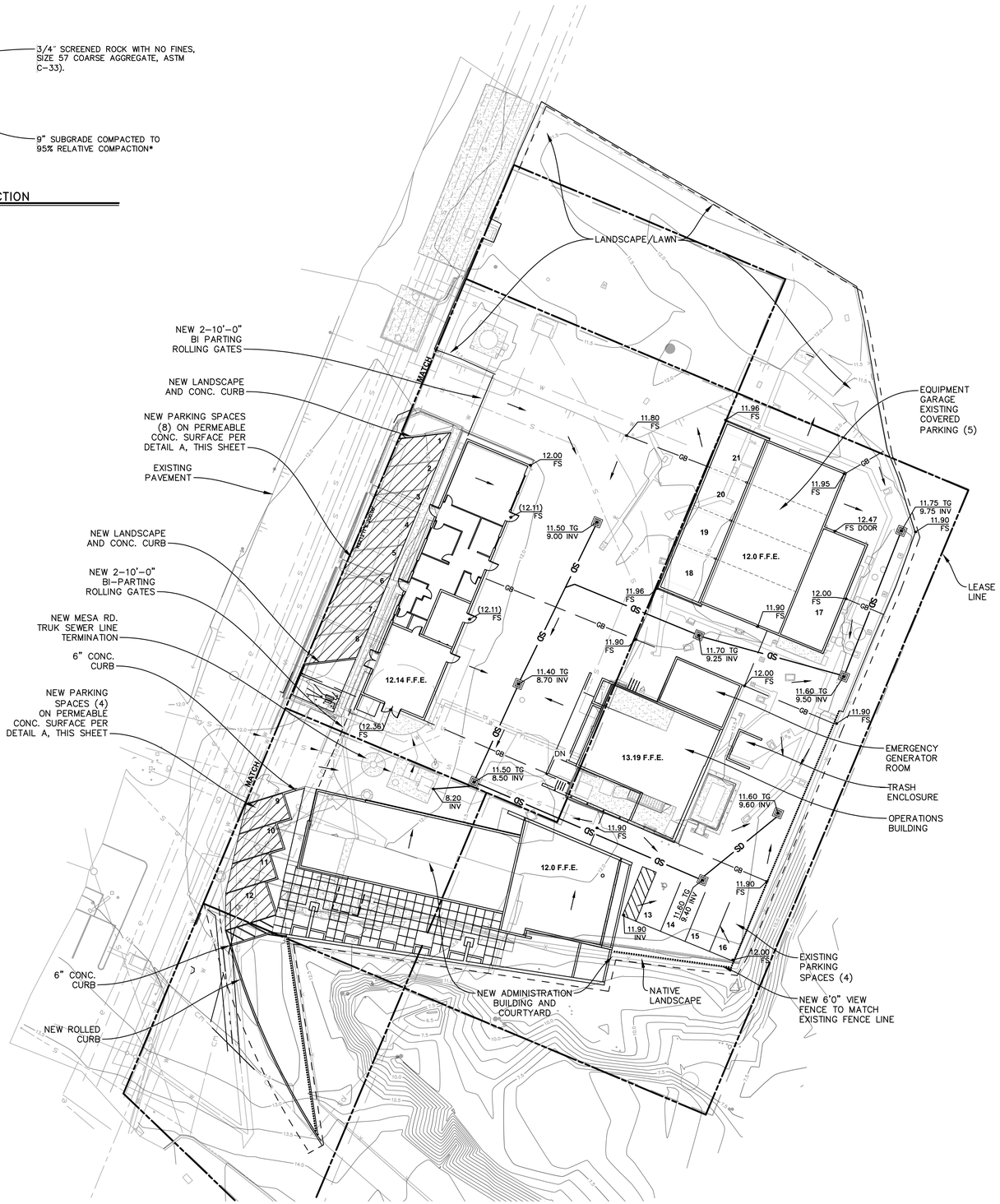
PROJECT NO. GOWSD.131303

SHEET 1 OF 1



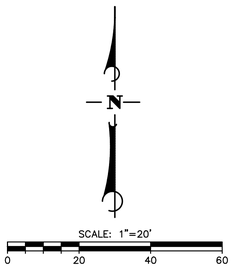
A PERVIOUS CONCRETE PAVEMENT SECTION

— SCALE: 1"=1'



LEGEND

	–RIGHT OF WAY
	–PROPERTY LINE
SD	–PROPOSED STORM DRAIN
	–PROPOSED RETAINING WALL
34	–EXISTING CONTOURS
	–100 YEAR FLOODPLAIN LINE
	–DRAINAGE SWALE/FLOWLINE
	–EXISTING GRADES
TG	–TOP OF GRATE
EG	–EXISTING GRADE
FS	–FINISH SURFACE
FG	–FINISH GRADE
TW	–TOP OF WALL
	–DRAINAGE INLETS
GB	–GRADE BREAK
	–PERVIOUS CONCRETE PAVEMENT



Stantec

Stantec Consulting Sevices Inc.
111 East Victoral Street
Santa Barbara, CA 93101
805.963-9532

Revision	By	Appd.	YY.MM.DD

File Name:

Issued	By	Appd.	YY.MM.DD

Dwn. Chkd. Dsgn. YY.MM.DD

Permit-Seal

Client/Project
GOLETA WEST SANITARY DISTRICT

NEW HEADQUARTERS BUILDING

SANTA BARBARA, CALIFORNIA

Title
PRELIMINARY GRADING PLAN

Project No.	Scale	
2064021501	1" = 20'	
Drawing No.	Sheet	Revision
	1of 1	

Appendix B

B.1 BASE FLOOD ELEVATION DETERMINATION

City of Santa Barbara
Community Development Department

www.ci.santa-barbara.ca.us

Director's Office
Tel: 805.564.5502
Fax: 805.564.5506

Building & Safety
Tel: 805.564.5485
Fax: 805.564.5476

Housing & Redevelopment
Tel: 805.564.5461
Fax: 805.564.5477

Planning
Tel: 805.564.5470
Fax: 805.897.1904

630 Garden Street
PO Box 1990
Santa Barbara, CA
93102-1990

BASE FLOOD ELEVATION (BFE) DETERMINATION

Date: March 26, 2014 **BLD**2014-00537
Site: 100 Adams Rd. **APN:** 073-450-003

Contact: Ed Galindo **e-mail:** galindoe@cdmsmith.com

NFIP Community: City of Santa Barbara 060335 **FIRM Map Index Date:** Dec. 4, 2012
Flood Insurance Rate Map (FIRM): 06083C1361 G **Effective Panel Date:** Dec. 4, 2012
Panel Number & 'Suffix': 1361 of 1835 'G' **Revision Date:** None

Building Use ☒ **Non-Residential** ☐ **Residential** ☐ **Accessory**
FIRM Zone(s) ☒ **FloodPlain SFHA 'AE'** ☒ **Regulatory FloodWAY SFHA 'AE'**
BFE Source: ☐ **Digital FIRM Map** ☒ **FIS Profile** ☐ **Other**

Residence
BFE: 11.1 NGVD 1929 Datum

BFE: 13.7 NAVD 1988 Datum

SFHA Area
'AE' Zone Blue
'AE' FloodWAY Red Vertical Lines

Red Line FIS Profile

Non SFHA Area
'X' Zone White

NOTE: Existing Structure(s) shown are approximate in location, shape & size.
Proposed Structure(s) are NOT shown - Refer to Architect/Engineer's construction documents for proposed project description and extent.

Building Permits are required before any new work, addition, or remodeling of structures in a Special Flood Hazard Area (SFHA) - City of Santa Barbara Municipal Code MC 22.24. Please make sure any plans submitted for permit accurately show the Floodplain and FloodWAY boundaries.

Flood Insurance is required for Federally Financed structures located in a SFHA 'A', 'AO', 'AH', 'AE' 'D' & 'VE' zones. Flood Insurance is not required in 'X' & Shaded 'X' zones.

Curtis Harrison, Floodplain Coordinator & Senior Plans Examiner @ (805) 560-7512
630 Garden Street, Santa Barbara, Ca. 93102

Cc: ☒ City Floodplain File ☒ City Street File Rev:5/13

H:\Group Folders\Building\Flood\BFEs\2014 BFE\Adams 100 BFE BLD2014-00537.doc

Appendix C

C.1 FLOODWAY ENCROACHMENT ANALYSIS

FLOODWAY ENCROACHMENT ANALYSIS

Goleta West Sanitary District
Headquarters Improvement Projects

Prepared for:
Goleta West Sanitary District

Prepared by:
Nick Bruckbauer, P.E., CFM

Reviewed by:
David W. Rundle, P.E.

March 17, 2016

Sign-off Sheet

This document entitled FLOODWAY ENCROACHMENT ANALYSIS was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of Goleta West Sanitary District (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by _____
(signature)

Nick Bruckbauer, P.E., CFM

Reviewed by _____
(signature)

David W. Rundle, P.E.

Stantec

Table of Contents

LIST OF FIGURES

LIST OF APPENDICES

1.0 INTRODUCTION/BACKGROUND

The project site of the Goleta West Sanitary District Headquarters is located within the limits of the City of Santa Barbara, on a 1.07 acre easement area located adjacent to UCSB Parking Lot 32, on the Santa Barbara Airport grounds, a portion of APN: 073-450-003. The site is adjacent to the Goleta Slough, and is accessed by an access road that connects into Mesa Road to the south. The existing site is mostly paved and contains four existing buildings.

Per the City of Santa Barbara Community Development Department Base Flood Elevation (BFE) Determination document (dated March 26, 2014), the site lies within the Zone "AE" floodplain, with a portion of the northern end of the site within the floodway. A portion of the project includes a 900 SF addition to the existing Equipment Garage in the northeast portion of the site that lies within the floodway. Per FEMA regulations and the City of Santa Barbara, any addition or substantial improvement to a structure in the floodway requires an engineering analysis and a certification showing that the project will not cause any increase in the 100-year Base Flood Elevation (BFE). This report provides that analysis and certification. Please refer to Figure 1 below for a Project Vicinity Map and Figure 2 for a Project Site Map.

Figure 1 – Vicinity Map

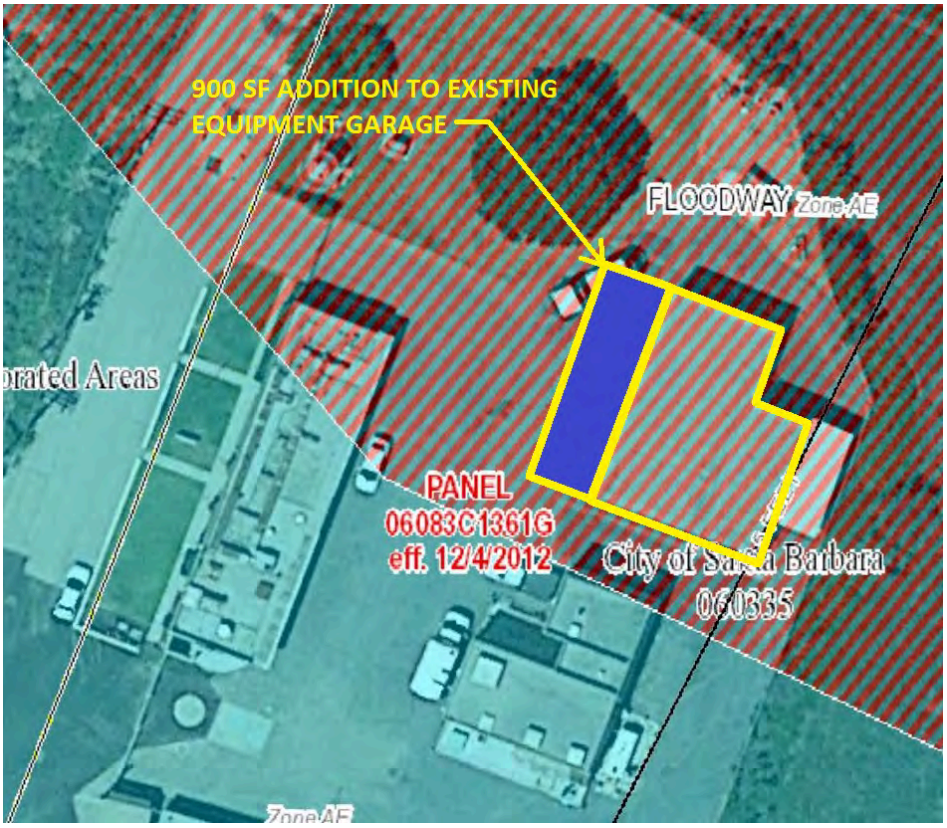


Figure 2 –
Project Site Map

2.0 METHOD OF ANALYSIS

The analysis to determine whether the 900 SF addition to the existing Equipment Garage would increase the BFE was prepared using the final "as-built" HEC-RAS model for Tecolotito Creek that was prepared for a Conditional Letter of Map Revision (CLOMR) for the Santa Barbara Airport runway extension project. While the final Letter of Map Revision (LOMR) was never filed with FEMA, this model is considered to be the most accurate available data for Tecolotito Creek, and will be used for this analysis.

In the HEC-RAS model, a cross section at Station 1500 is located at the spot of the existing Equipment Garage, and will be used to compare the existing and proposed conditions. The current "as-built" HEC-RAS model will be used to represent the existing site conditions. A copy of the current "as-built" HEC-RAS model was made and the file is called "GWSD", and this model will represent the proposed project conditions. In the "GWSD" model, a 90-ft wide flow obstruction was added to the cross section at Station 1500, representing the 900 SF addition to the existing Equipment Garage. Both the current "as-built" model and the proposed "GWSD" model were run with the 100-year flow conditions, and the results were compiled. Copies of

results of the HEC-RAS analysis and the measured perimeters of both the current "as-built" conditions and the proposed "GWSD" conditions are attached to this report.

3.0 FINDINGS/RESULTS

The Base Flood Elevation at the project site determined by the City of Santa Barbara Community Development Department Base Flood Elevation (BFE) Determination document (dated March 26, 2014) was 13.7 feet (NAVD88 datum). This BFE was determined using the FEMA Flood Insurance Rate Maps (FIRM) and Flood Insurance Study (FIS) profiles. With the ability of the HEC-RAS model to determine a much more precise water surface elevation, the BFE at the cross section at Station 1500 was found to be 13.49 feet (NAVD 88 datum) in both the existing "as-built" model and the proposed "GWSD" model. The results confirm that there is no rise in the 100-year water surface elevation at any cross sections as a result of the project. Please refer to Appendix A for the HEC-RAS results, and to Appendix B for a "no-rise" certification.

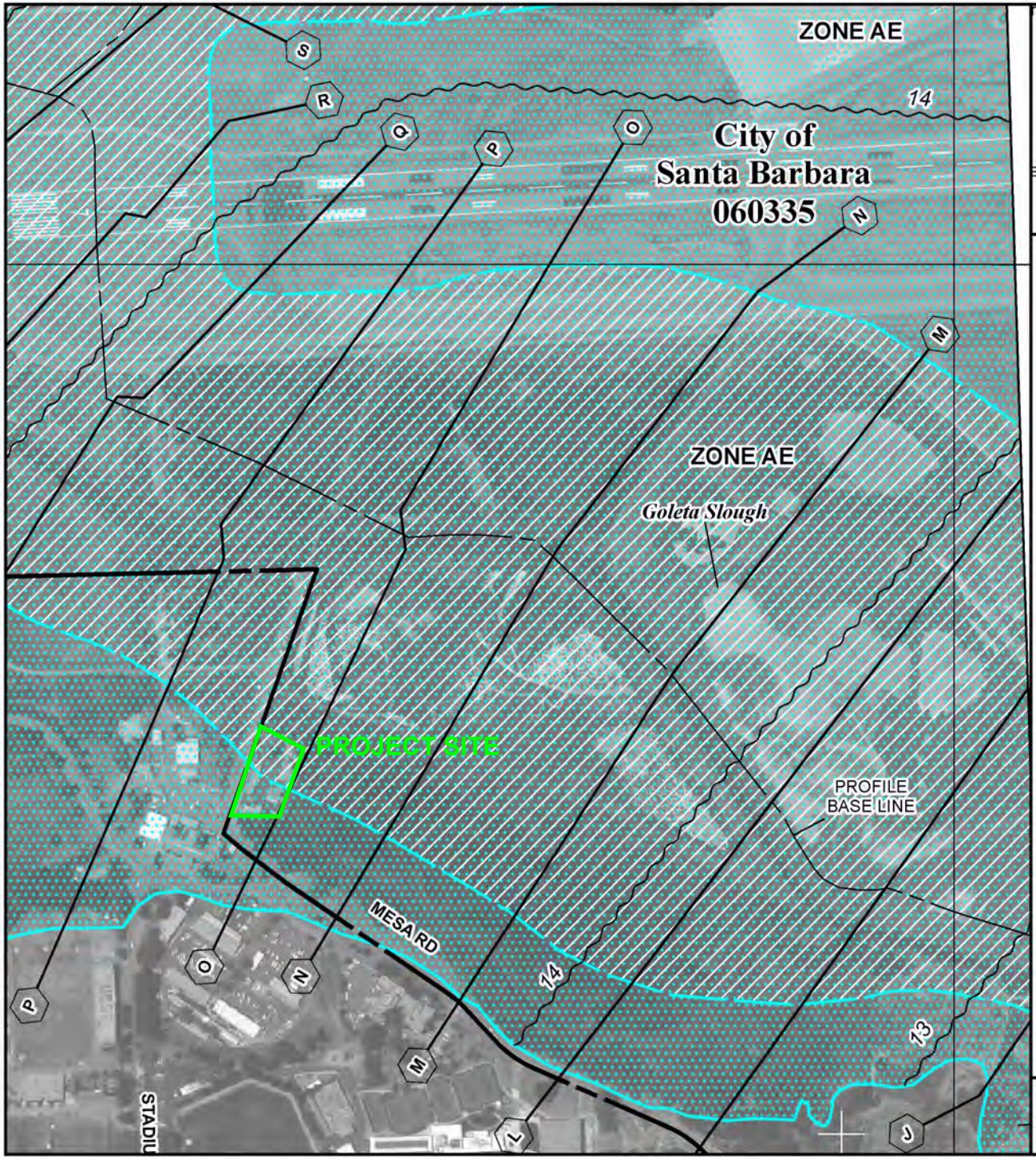
4.0 CONCLUSIONS AND RECOMENDATIONS

Based on our analysis, there will be no rise in the Base Flood Elevation (BFE) due to the proposed project. All structures will be elevated or floodproofed to an elevation at or above the BFE that was determined by the City of Santa Barbara. The project will be designed to meet all applicable floodplain and floodway development requirements.

APPENDICES

Appendix A

A.1 HEC-RAS RESULTS



rance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

0 250 500 750 1,000 FEET

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1361G

FIRM

FLOOD INSURANCE RATE MAP

SANTA BARBARA COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 1361 OF 1835

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
GOLETA, CITY OF	060771	1361	G
SANTA BARBARA COUNTY	060331	1361	G
SANTA BARBARA, CITY OF	060335	1361	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
06083C1361G

MAP REVISED
DECEMBER 4, 2012

Federal Emergency Management Agency

City of Santa Barbara
Community Development Department

www.ci.santa-barbara.ca.us

Director's Office
Tel: 805.564.5502
Fax: 805.564.5506

Building & Safety
Tel: 805.564.5485
Fax: 805.564.5476

Housing & Redevelopment
Tel: 805.564.5461
Fax: 805.564.5477

Planning
Tel: 805.564.5470
Fax: 805.897.1904

630 Garden Street
PO Box 1990
Santa Barbara, CA
93102-1990

BASE FLOOD ELEVATION (BFE) DETERMINATION

Date: March 26, 2014 **BLD**2014-00537
Site: 100 Adams Rd. **APN:** 073-450-003

Contact: Ed Galindo **e-mail:** galindoe@cdmsmith.com

NFIP Community: City of Santa Barbara 060335 **FIRM Map Index Date:** Dec. 4, 2012
Flood Insurance Rate Map (FIRM): 06083C1361 G **Effective Panel Date:** Dec. 4, 2012
Panel Number & 'Suffix': 1361 of 1835 'G' **Revision Date:** None

Building Use ☒ **Non-Residential** ☐ **Residential** ☐ **Accessory**
FIRM Zone(s) ☒ **FloodPlain SFHA 'AE'** ☒ **Regulatory FloodWAY SFHA 'AE'**
BFE Source: ☐ **Digital FIRM Map** ☒ **FIS Profile** ☐ **Other**

Residence
BFE: 11.1 NGVD 1929 Datum

BFE: 13.7 NAVD 1988 Datum

SFHA Area
'AE' Zone Blue
'AE' FloodWAY Red Vertical Lines

Red Line FIS Profile

Non SFHA Area
'X' Zone White

NOTE: Existing Structure(s) shown are approximate in location, shape & size.
Proposed Structure(s) are NOT shown - Refer to Architect/Engineer's construction documents for proposed project description and extent.

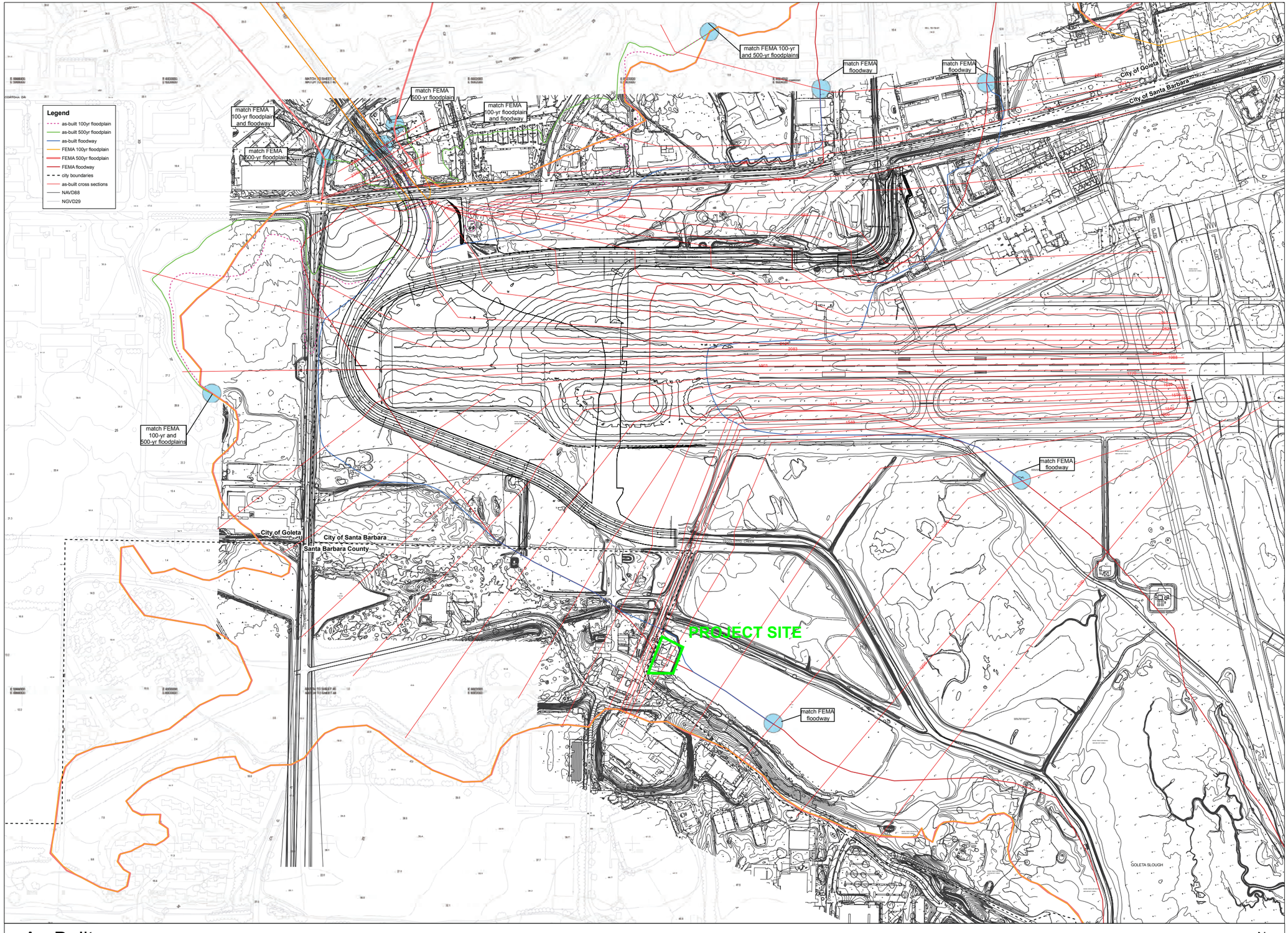
Building Permits are required before any new work, addition, or remodeling of structures in a Special Flood Hazard Area (SFHA) - City of Santa Barbara Municipal Code MC 22.24. Please make sure any plans submitted for permit accurately show the Floodplain and FloodWAY boundaries.

Flood Insurance is required for Federally Financed structures located in a SFHA 'A', 'AO', 'AH', 'AE' 'D' & 'VE' zones. Flood Insurance is not required in 'X' & Shaded 'X' zones.

Curtis Harrison, Floodplain Coordinator & Senior Plans Examiner @ (805) 560-7512
630 Garden Street, Santa Barbara, Ca. 93102

Cc: ☒ City Floodplain File ☒ City Street File Rev:5/13

H:\Group Folders\Building\Flood\BFEs\2014 BFE\Adams 100 BFE BLD2014-00537.doc



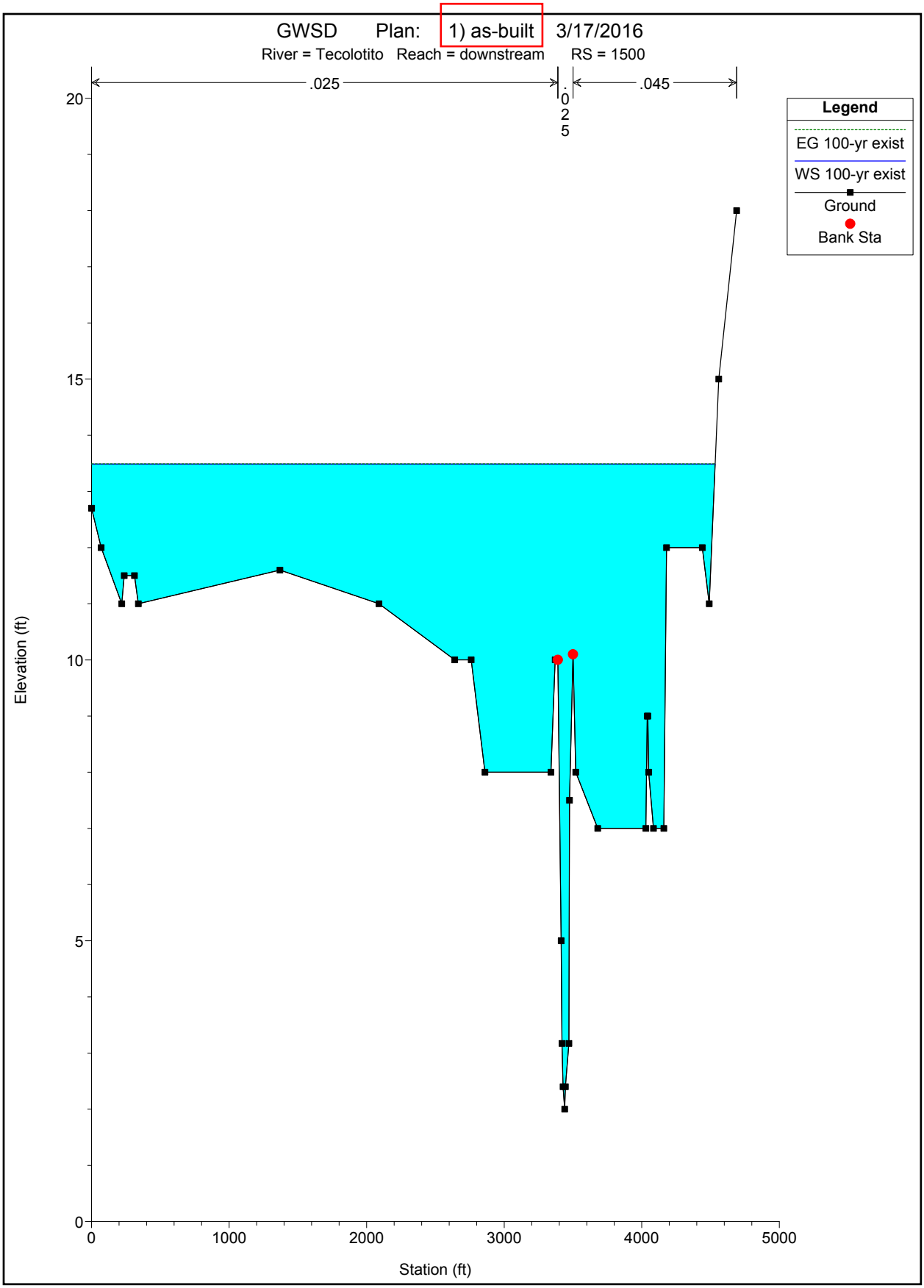
As-Built
Work Map

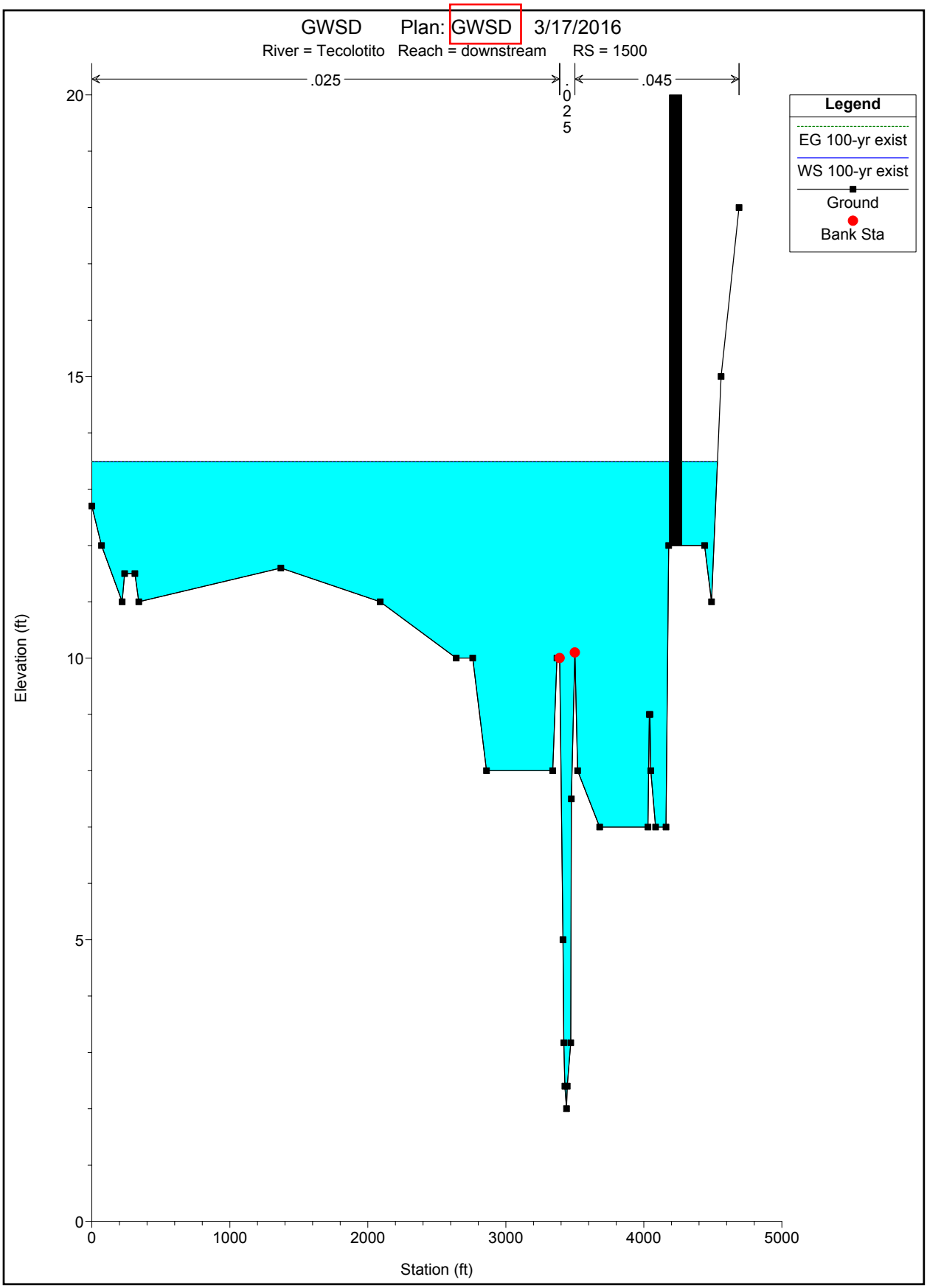
0 200 400 800 1,200 1,600 Feet

N

HEC-RAS River: Tecolotito Reach: downstream Profile: 100-yr exist

Reach	River Sta	Profile	Plan	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
downstream	2121	100-yr exist	as-built	7400.00	3.70	13.51		13.51	0.000010	0.74	17652.34	5695.10	0.05
downstream	2121	100-yr exist	GWSD	7400.00	3.70	13.51		13.51	0.000010	0.74	17651.75	5695.09	0.05
downstream	2083	100-yr exist	as-built	7400.00	3.75	13.51		13.51	0.000014	0.86	17249.87	6551.02	0.05
downstream	2083	100-yr exist	GWSD	7400.00	3.75	13.51		13.51	0.000014	0.86	17249.20	6551.01	0.05
downstream	2045	100-yr exist	as-built	7400.00	3.73	13.51		13.51	0.000017	0.96	16768.03	6399.26	0.06
downstream	2045	100-yr exist	GWSD	7400.00	3.73	13.51		13.51	0.000017	0.96	16767.37	6399.26	0.06
downstream	1988	100-yr exist	as-built	7400.00	3.71	13.50		13.51	0.000023	1.13	15517.52	6459.30	0.07
downstream	1988	100-yr exist	GWSD	7400.00	3.71	13.50		13.51	0.000023	1.13	15516.86	6459.28	0.07
downstream	1903	100-yr exist	as-built	7400.00	3.66	13.50		13.51	0.000028	1.22	14009.09	5779.48	0.08
downstream	1903	100-yr exist	GWSD	7400.00	3.66	13.50		13.51	0.000028	1.22	14008.49	5779.47	0.08
downstream	1827	100-yr exist	as-built	7400.00	3.63	13.50		13.50	0.000015	0.91	17827.00	5948.19	0.06
downstream	1827	100-yr exist	GWSD	7400.00	3.63	13.50		13.50	0.000015	0.91	17826.38	5948.18	0.06
downstream	1770	100-yr exist	as-built	7400.00	3.59	13.50		13.50	0.000013	0.84	19086.29	6167.00	0.05
downstream	1770	100-yr exist	GWSD	7400.00	3.59	13.50		13.50	0.000013	0.84	19085.64	6166.99	0.05
downstream	1712	100-yr exist	as-built	7400.00	3.56	13.50		13.50	0.000007	0.64	23410.54	6187.98	0.04
downstream	1712	100-yr exist	GWSD	7400.00	3.56	13.50		13.50	0.000007	0.64	23409.89	6187.98	0.04
downstream	1646	100-yr exist	as-built	7400.00	3.54	13.49		13.50	0.000006	0.61	21218.08	5233.87	0.04
downstream	1646	100-yr exist	GWSD	7400.00	3.54	13.49		13.50	0.000006	0.61	21217.54	5233.86	0.04
downstream	1600	100-yr exist	as-built	7400.00	1.60	13.49		13.50	0.000007	0.61	19087.38	4992.89	0.04
downstream	1600	100-yr exist	GWSD	7400.00	1.60	13.49		13.50	0.000007	0.61	19086.86	4992.88	0.04
downstream	1563	100-yr exist	as-built	7400.00	1.70	13.49	10.00	13.50	0.000006	0.57	21075.32	4789.48	0.04
downstream	1563	100-yr exist	GWSD	7400.00	1.70	13.49	10.00	13.50	0.000006	0.57	21074.82	4789.47	0.04
downstream	1556	100-yr exist	as-built	7400.00	1.80	13.49		13.50	0.000012	0.82	16026.20	4733.86	0.05
downstream	1556	100-yr exist	GWSD	7400.00	1.80	13.49		13.50	0.000012	0.82	16025.72	4733.84	0.05
downstream	1552	100-yr exist	as-built	7400.00	1.80	13.49		13.49	0.000022	1.07	13381.24	4693.49	0.07
downstream	1552	100-yr exist	GWSD	7400.00	1.80	13.49		13.49	0.000022	1.07	13380.75	4693.48	0.07
downstream	1546	100-yr exist	as-built	7400.00	1.80	13.49		13.49	0.000027	1.20	12519.42	4653.24	0.08
downstream	1546	100-yr exist	GWSD	7400.00	1.80	13.49		13.49	0.000027	1.20	12518.94	4653.23	0.08
downstream	1540	100-yr exist	as-built	7400.00	1.80	13.49	10.00	13.49	0.000016	0.98	15313.67	4663.30	0.06
downstream	1540	100-yr exist	GWSD	7400.00	1.80	13.49	10.00	13.49	0.000016	0.98	15313.19	4663.30	0.06
downstream	1500	100-yr exist	as-built	7400.00	2.00	13.49		13.49	0.000016	0.96	15437.34	4533.51	0.06
downstream	1500	100-yr exist	GWSD	7400.00	2.00	13.49		13.49	0.000016	0.94	15303.66	4443.51	0.06
downstream	1400	100-yr exist	as-built	6500.00	2.40	13.48		13.49	0.000014	0.82	18000.18	4027.45	0.05
downstream	1400	100-yr exist	GWSD	6500.00	2.40	13.48		13.49	0.000014	0.82	18000.18	4027.45	0.05
downstream	1300	100-yr exist	as-built	6500.00	2.81	13.48		13.48	0.000014	0.92	17348.66	3740.49	0.06
downstream	1300	100-yr exist	GWSD	6500.00	2.81	13.48		13.48	0.000014	0.92	17348.66	3740.49	0.06
downstream	1200	100-yr exist	as-built	6500.00	4.10	13.47		13.48	0.000005	0.60	23891.27	3781.30	0.04
downstream	1200	100-yr exist	GWSD	6500.00	4.10	13.47		13.48	0.000005	0.60	23891.27	3781.30	0.04
downstream	1100	100-yr exist	as-built	6500.00	4.00	13.47	5.66	13.47	0.000009	0.80	20018.36	3685.17	0.05
downstream	1100	100-yr exist	GWSD	6500.00	4.00	13.47	5.66	13.47	0.000009	0.80	20018.36	3685.17	0.05


GWSD Plan: 1) as-built 3/17/2016
River = Tecolotito Reach = downstream RS = 1500
.025
.025
.045
Legend
EG 100-yr exist
WS 100-yr exist
Ground
Bank Sta
Elevation (ft)
Station (ft)
0
5
10
15
20
0
1000
2000
3000
4000
5000


GWSD Plan: GWSD 3/17/2016
River = Tecolotito Reach = downstream RS = 1500
.025
.025
.045
Legend
EG 100-yr exist
WS 100-yr exist
Ground
Bank Sta
Elevation (ft)
Station (ft)
0
5
10
15
20
0
1000
2000
3000
4000
5000

Appendix B

B.1 NO-RISE CERTIFICATION

NATIONAL FLOOD INSURANCE PROGRAM

FEMA NATIONAL SERVICE PROVIDER

CERTIFICATION OF A "NO-RISE" DETERMINATION

FOR A PROPOSED FLOODWAY DEVELOPMENT

City of Santa Barbara
Community Name

Goleta West Sanitary District
Headquarters Improvement Projects
Development Name

A portion of
APN: 073-450-003
Lot/Property Designation

Santa Barbara Airport
Property Owner

I hereby certify that the proposed remedial measures, in combination with the property development designated above, will result in no loss of flow conveyance during the occurrence of the 1 percent annual chance of exceedance (100-year flood) discharge.

I further certify that the data submitted herewith in support of this request are accurate to the best of my knowledge, that the analyses have been performed correctly and in accordance with sound engineering practice, and that the proposed structural works are designed in accordance with sound engineering practice.

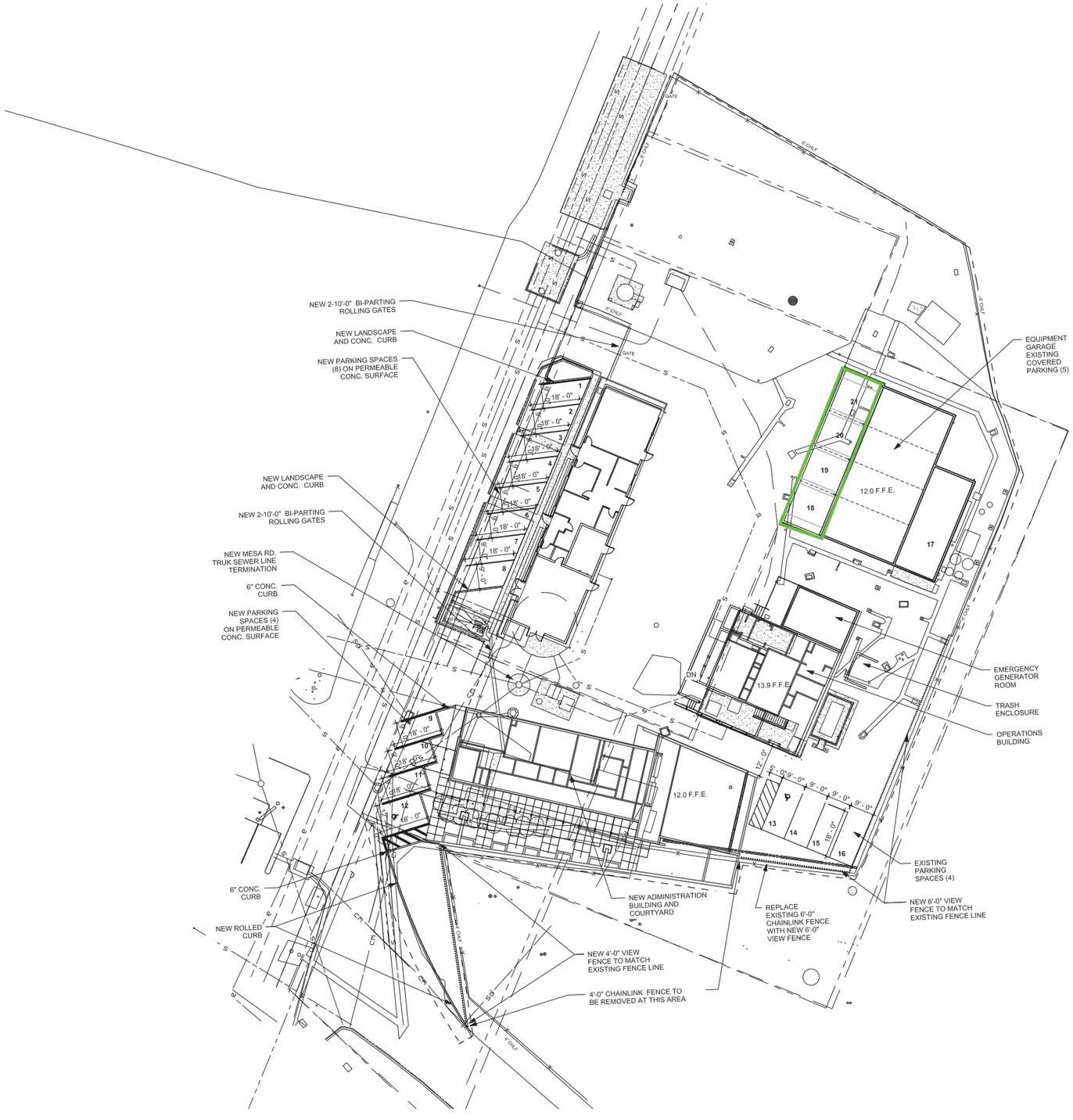
March 17, 2016
Date

Registered Professional Engineer

REGISTERED PROFESSIONAL ENGINEER
NICHOLAS T. BRUCKBAUER
No. 77857
CIVIL
STATE OF CALIFORNIA

Appendix C

C.1 PROPOSED SITE PLAN



LEGEND

	–RIGHT OF WAY
	–PROPERTY LINE
SD	–PROPOSED STORM DRAIN
	–PROPOSED RETAINING WALL
34	–EXISTING CONTOURS
	–100 YEAR FLOODPLAIN LINE
	–DRAINAGE SWALE/FLOWLINE
(28.8) 28	–EXISTING GRADES
TG	–TOP OF GRATE
EG	–EXISTING GRADE
FS	–FINISH SURFACE
FG	–FINISH GRADE
TW	–TOP OF WALL
	–DRAINAGE INLETS

N

SCALE: 1"=20'

0 20 40 60

Stantec

Stantec Consulting Sevices Inc.
111 East Victoral Street
Santa Barbara, CA 93101
805.963-9532

Revision	By	Appd.	YY.MM.DD

File Name:

Issued	By	Appd.	YY.MM.DD

Dwn. Chkd. Dsgn. YY.MM.DD

Permit-Seal

Client/Project
GOLETA WEST SANITARY DISTRICT

NEW HEADQUARTERS BUILDING

SANTA BARBARA, CALIFORNIA

Title
PROPOSED CONDITIONS
SITE PLAN

Project No. 2064021501

Scale 1" = 20'

Drawing No. EX-2

Sheet 1of 1

Revision

ATTACHMENT F

County of Santa Barbara Air Pollution Control District (APCD) Recommended Project Conditions, Fugitive Dust Control Measures, and Diesel Particulate and NOx Emission Reduction Measures

Santa Barbara County
Air Pollution Control District

October 2, 2017

Patsy Price
P.O. Box 720
Santa Barbara, CA 93102

Re: APCD Suggested Conditions on Goleta West Sanitary District New Administration Building

Dear Ms. Price:

The Air Pollution Control District (APCD) has reviewed the draft Initial Study/Mitigation Negative Declaration (IS/MND) for the Goleta West Sanitary District New Administration Building. The project consists of the demolition of the existing single-story 1,353 square foot (sq ft) garage and shop buildings located adjacent to a paved access driveway along the southern edge of the project site, and construction of a new 3,298 sq ft single-story administration building. There are additional parking spaces proposed increasing the onsite parking from 20 to 22 spaces and 4 bicycle parking spaces. To accommodate the changes in parking there will be new landscaping and permeable paving. Grading is estimated to be approximately 640 cubic yard (cy) cut and 640 cy fill. The subject property is a 1.07-acre portion of a parcel zoned Airport Facilities (A-F)/ Special District 3 Coastal Overlay (S-D-3) and identified in the Assessor Parcel Map Book as APN 073-450-003. It is located north of the intersection of Mesa Road and J Road, adjacent to University of California, Santa Barbara Campus Parking Lot 32, on the southwestern edge of the Santa Barbara Municipal Airport property, on an easement over City of Santa Barbara property.

Air Pollution Control District staff offers the following suggested conditions:

1. Standard dust mitigations (**Attachment A**) are recommended for all construction and/or grading activities. The name and telephone number of an on-site contact person must be provided to the APCD prior to grading/building permit issuance.

2. APCD Rule 345, *Control of Fugitive Dust from Construction and Demolition Activities* establishes limits on the generation of visible fugitive dust emissions at demolition and construction sites. The rule includes measures for minimizing fugitive dust from on-site activities and from trucks moving on- and off-site. The rule can be viewed at www.ourair.org/wp-content/uploads/rule345.pdf.

3. The State of California considers particulate matter emitted by diesel engines carcinogenic. Therefore, during project grading, construction, and hauling, construction contracts must specify that contractors shall adhere to the requirements listed in **Attachment B** to reduce emissions of particulate matter (as well as of ozone precursors) from diesel equipment. Recommended measures should be implemented to the maximum extent feasible.

4. All portable diesel-fired construction engines rated at 50 bhp or greater must have either statewide Portable Equipment Registration Program (PERP) certificates or APCD permits prior to grading/building permit issuance. Construction engines with PERP certificates are exempt from APCD permit, provided they will be on-site for less than 12 months.

5. The applicant is required to complete and submit an **Asbestos Demolition/Renovation Notification or an EXEMPTION** from Notification for Renovation and Demolition (APCD Form ENF-28 or APCD Form ENF-28e), which can be downloaded at www.ourair.org/compliance-forms/ for each regulated structure to be demolished or renovated. Demolition notifications are required regardless of whether asbestos is present or not. The completed exemption or notification should be presented, mailed, or emailed to the Santa Barbara County Air Pollution Control District with a minimum of 10 working days advance notice prior to disturbing asbestos in a renovation or starting work on a demolition. The applicant should visit www.ourair.org/asbestos/ to determine whether the project triggers asbestos notification requirements or whether the project qualifies for an exemption.

6. Natural gas-fired fan-type central furnaces with a rated heat input capacity of less than 175,000 Btu/hr and water heaters rated below 75,000 Btu/hr must comply with the emission limits and certification requirements of APCD Rule 352. Please see www.ourair.org/wp-content/uploads/rule352.pdf for more information.

7. Small boilers and water heating units (rated between 75,000 and 2.0 million Btu/hr) must comply with the emission limits and certification requirements of APCD Rule 360. Combinations of units totaling 2.0 million Btu/hr or greater are required to obtain a District permit prior to building permit issuance. Please see www.ourair.org/wp-content/uploads/rule360.pdf for more information and a list of certified boilers (note: any units fired on fuel(s) other than natural gas must be certified by the APCD on a case-by-case basis, even if the unit is certified when fired on natural gas).

8. If contaminated soils are found at the project site, the APCD must be contacted to determine if Authority to Construct and/or Permit to Operate permits will be required. APCD permits are required for all soil vapor extraction activities. APCD permits are also required for the excavation ("dig-and-haul") of more than 1,000 cubic yards of contaminated soil.

9. Asphalt paving activities shall comply with APCD Rule 329, *Cutback and Emulsified Asphalt Paving Materials*.

If you or the project applicant have any questions regarding these comments, please feel free to contact me at (805) 961-8893 or via email at NightingaleK@sbcapcd.org.

Sincerely,

Krista Nightingale,
Air Quality Specialist
Technology and Environmental Assessment Division

Attachments: Fugitive Dust Control Measures
Diesel Particulate and NO_x Emission Measures

cc: TEA Chron File

Santa Barbara County
Air Pollution Control District

ATTACHMENT A
FUGITIVE DUST CONTROL MEASURES

These measures are required for all projects involving earthmoving activities regardless of the project size or duration. Proper implementation of these measures is assumed to fully mitigate fugitive dust emissions.

- During construction, use water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this should include wetting down such areas in the late morning and after work is completed for the day. Increased watering frequency should be required whenever the wind speed exceeds 15 mph. Reclaimed water should be used whenever possible. However, reclaimed water should not be used in or around crops for human consumption.

- Minimize amount of disturbed area and reduce on site vehicle speeds to 15 miles per hour or less.

- If importation, exportation and stockpiling of fill material is involved, soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting fill material to and from the site shall be tarped from the point of origin.

- Gravel pads shall be installed at all access points to prevent tracking of mud onto public roads.

- After clearing, grading, earth moving or excavation is completed, treat the disturbed area by watering, or revegetating, or by spreading soil binders until the area is paved or otherwise developed so that dust generation will not occur.

- The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the Air Pollution Control District prior to grading/building permit issuance and/or map clearance.

  Plan Requirements: All requirements shall be shown on grading and building plans and/or as a separate information sheet listing the conditions of approval to be recorded with the map. **Timing:** Requirements shall be shown on plans prior to grading/building permit issuance and/or recorded with the map during map recordation. Conditions shall be adhered to throughout all grading and construction periods.

  MONITORING: Lead Agency shall ensure measures are on project plans and/or recorded with maps. Lead Agency staff shall ensure compliance onsite. APCD inspectors will respond to nuisance complaints.

Santa Barbara County
Air Pollution Control District

ATTACHMENT B
DIESEL PARTICULATE AND NO_x EMISSION REDUCTION MEASURES

Particulate emissions from diesel exhaust are classified as carcinogenic by the state of California. The following is a list of regulatory requirements and control strategies that should be implemented to the maximum extent feasible.

The following measures are required by state law:

- All portable diesel-powered construction equipment shall be registered with the state's portable equipment registration program OR shall obtain an APCD permit.
- Fleet owners of mobile construction equipment are subject to the California Air Resource Board (CARB) Regulation for In-Use Off-Road Diesel Vehicles (Title 13, California Code of Regulations (CCR), §2449), the purpose of which is to reduce oxides of nitrogen (NOx), diesel particulate matter (DPM), and other criteria pollutant emissions from in-use off-road diesel-fueled vehicles. Off-road heavy-duty trucks shall comply with the State Off-Road Regulation. For more information, see www.arb.ca.gov/msprog/ordiesel/ordiesel.htm.
- Fleet owners of mobile construction equipment are subject to the CARB Regulation for In-Use (On-Road) Heavy-Duty Diesel-Fueled Vehicles (Title 13, CCR, §2025), the purpose of which is to reduce DPM, NOx and other criteria pollutants from in-use (on-road) diesel-fueled vehicles. On-road heavy-duty trucks shall comply with the State On-Road Regulation. For more information, see www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm.
- All commercial off-road and on-road diesel vehicles are subject, respectively, to Title 13, CCR, §2449(d)(3) and §2485, limiting engine idling time. Idling of heavy-duty diesel construction equipment and trucks during loading and unloading shall be limited to five minutes; electric auxiliary power units should be used whenever possible.

The following measures are recommended:

- Diesel equipment meeting the CARB Tier 3 or higher emission standards for off-road heavy-duty diesel engines should be used to the maximum extent feasible.
- On-road heavy-duty equipment with model year 2010 engines or newer should be used to the maximum extent feasible.
- Diesel powered equipment should be replaced by electric equipment whenever feasible.
- Equipment/vehicles using alternative fuels, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel, should be used on-site where feasible.
- Catalytic converters shall be installed on gasoline-powered equipment, if feasible.
- All construction equipment shall be maintained in tune per the manufacturer's specifications.
- The engine size of construction equipment shall be the minimum practical size.
- The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest practical number is operating at any one time.
- Construction worker trips should be minimized by requiring carpooling and by providing for lunch onsite.

Plan Requirements: All requirements shall be shown on grading and building plans and/or as a separate information sheet listing the conditions of approval to be recorded with the map. **Timing:** Requirements shall be shown on plans prior to grading/building permit issuance and/or recorded with the map during map recordation. Conditions shall be adhered to throughout all grading and construction periods.

MONITORING: Lead Agency shall ensure measures are on project plans and/or recorded with maps. Lead Agency staff shall ensure compliance onsite. APCD inspectors will respond to nuisance complaints.

ATTACHMENT G

Letters of Comment on the Draft Initial Study and Mitigated Negative Declaration and Responses

ATTACHMENT G

Goleta West Sanitary District New Administration Building
Initial Study and Mitigated Negative Declaration

Letters of Comment on the Draft Initial Study and Mitigated Negative Declaration and Responses

The following letters of comment were received from the following agencies during the public review period (September 1, 2017 to October 2, 2017) of the Draft Initial Study and Mitigated Negative Declaration (IS/MND). A copy of each comment letter along with corresponding responses is included here. The responses to comments on the Draft IS/MND represent a good-faith, reasoned effort to address the environmental issues identified by the commenter. The comment letter has been bracketed and numbered to allow for a coordinated numerical reference next to the prepared response. All revisions to the IS/MND made after public review are indicated by strikeout (deleted) and underline (inserted) markings. These revisions are intended to correct minor discrepancies and provide additional clarification. The revisions do not affect the conclusions of the document.

Letter A

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

RECEIVED
OCT 09 2017
GOLETA WEST SANITARY DISTRICT

October 3, 2017

Mark Nation
Goleta West Sanitary District
P.O. Box 4
Goleta, CA 93116-0004

Subject: Goleta West Sanitary District New Administration Building
SCH#: 2017091003

Dear Mark Nation:

A-1 The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. The review period closed on October 2, 2017, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

A-1 The comment acknowledges that the Mitigation Negative Declaration complied with the State Clearinghouse review requirements pursuant to CEQA. No further response is required.

Document Details Report
State Clearinghouse Data Base

SCH# 2017091003
Project Title Goleta West Sanitary District New Administration Building
Lead Agency Goleta West Sanitary District

Type MND Mitigated Negative Declaration

Description The Goleta West Sanitary District has conducted administrative activities in a converted garage since the mid-1960s and is now looking to modernize its operations by constructing a new 3,298 sf Admin building. The project site is located on the District's HW complex at the southwestern edge of the Santa Barbara Airport, on an easement over city of SB property.
The proposed project under evaluation in this IS/MND consists of demolition of the existing single-story 1,353 sf garage and shop buildings located adjacent to a paved access driveway along the southern edge of the project site, and construction of a new 3,298 sf single story Admin building. The existing garage and shop buildings are located next to each other on the south property line and are separated by a small walk space. For the purpose of the IS/MND analysis they are discussed as one building that will be demolished to make way for the new Admin building. Existing admin uses will be transferred from the existing admin building to the new structure. Existing operations in the garage and shop buildings to be demolished will be moved into other existing facilities on the site. No expansion of operations or additional staff will be added on-site as part of this project.

Lead Agency Contact

Name Mark Nation
Agency Goleta West Sanitary District
Phone 805-968-2617 **Fax**
email
Address P.O. Box 4
City Goleta **State** CA **Zip** 93116-0004

Project Location

County Santa Barbara
City Santa Barbara
Region
Lat / Long 34.422385° N / 119.852001° W
Cross Streets North of Mesa Rd and J Rd/Adjacent to UCSB Campus Parking lot 32
Parcel No. 073-450-003
Township **Range** **Section** **Base**

Proximity to:

Highways 101, 217
Airports SB Municipal
Railways UPRR
Waterways Various
Schools UCSB
Land Use GPD: Goleta Slough natural reserve
Z: A-F/S-D-3
Z: A-F

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Coastal Zone; Cumulative Effects; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Growth Inducing; Landuse; Minerals; Noise; Other Issues; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian

Note: Blanks in data fields result from insufficient information provided by lead agency.

Document Details Report
State Clearinghouse Data Base

Reviewing Agencies	Resources Agency; California Coastal Commission; Department of Fish and Wildlife, Region 5; Department of Parks and Recreation; Department of Water Resources; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 5; Native American Heritage Commission; Public Utilities Commission; State Lands Commission; Regional Water Quality Control Board, Region 3

Date Received 09/01/2017 ***Start of Review*** 09/01/2017 ***End of Review*** 10/02/2017

Note: Blanks in data fields result from insufficient information

Letter B

Our Vision Clean Air

Santa Barbara County
Air Pollution Control District

October 2, 2017

Patsy Price
P.O. Box 720
Santa Barbara, CA 93102

Re: APCD Comments on the Draft Initial Study/Mitigation Negative Declaration for the Goleta West Sanitary District New Administration Building

Dear Ms. Price:

B-1 The Air Pollution Control District (APCD) has reviewed the draft Initial Study/Mitigation Negative Declaration (IS/MND) for the Goleta West Sanitary District New Administration Building. The project consists of the demolition of the existing single-story 1,353 square foot (sq ft) garage and shop buildings located adjacent to a paved access driveway along the southern edge of the project site, and construction of a new 3,298 sq ft single-story administration building. There are additional parking spaces proposed increasing the onsite parking from 20 to 22 spaces and 4 bicycle parking spaces. To accommodate the changes in parking there will be new landscaping and permeable paving. Grading is estimated to be approximately 640 cubic yard (cy) cut and 640 cy fill. The subject property is a 1.07-acre portion of a parcel zoned Airport Facilities (A-F)/ Special District 3 Coastal Overlay (S-D-3) and identified in the Assessor Parcel Map Book as APN 073-450-003. It is located north of the intersection of Mesa Road and J Road, adjacent to University of California, Santa Barbara Campus Parking Lot 32, on the southwestern edge of the Santa Barbara Municipal Airport property, on an easement over City of Santa Barbara property.

Air Pollution Control District staff offers the following comments on the draft IS/MND:

B-2 1. **Section 3. Air Quality and Greenhouse Gas Emissions, Discussion & Project-Specific Impacts, page 32 & 35:** The discussion references the 2013 Clean Air Plan, adopted in March 2015. The most recent Clean Air Plan is the 2016 Ozone Plan adopted in October 2016. The 2016 Ozone Plan can be found on the website here https://www.ourair.org/planning-clean-air/. Please update the text and consistency analysis with the most recent planning information.

B-3 2. **Section 3. Air Quality and Greenhouse Gas Emissions, Project-Specific Impacts, page 35 & 37, & Attachment D: California Emissions Estimator Model Output Sheets:** It is noted that the CalEEMod Version 2013.2.2 was used to estimate criteria pollutant and greenhouse gas emissions. The APCD recommends the use of the most recent version of CalEEMod, CalEEMod 2016.3.1, to estimate emissions of both criteria pollutants and greenhouse gases. The program was updated in October 2016 and contains up-to-date, accurate information and local default values for Santa Barbara County.

Aeron Arlin Genet • Air Pollution Control Officer
260 North San Antonio Road, Suite A • Santa Barbara, CA • 93110 • 805.961.8800
OurAir.org • twitter.com/OurAirSBC

B-1 This is an introductory comment that summarizes the project description. This comment does not address the MND and no response is required.

B-2 This comment states that the discussion in Section 3, Air Quality and Greenhouse Gas Emission, should address the most recent Clean Air Plan reflected in the 2016 Ozone Plan. Section 3 Air Quality and Greenhouse Gas Emissions discussion references the 2013 Clean Air Plan which was adopted in March 2015. The 2013 Clean Air Plan was changed to reflect the updated 2016 Ozone Plan.

B-3 This comment suggests that the California Emissions Estimator Model (CalEEMod) Output Sheets should use the most recent version of CalEEMod version 2016.3.1 as opposed to CalEEMod 2013.2.2 that was used to model this project. The project emissions estimate was updated using CalEEMod 2016.3.2.2 (this version was current as of October 31, 2017). The updated emissions estimate slightly changed the numerical results for construction emissions which are depicted in revised Tables 3 and 5 of the Final MND. However, the revised data results did not change the MND findings that construction and operation of the project would result in less than significant impacts from air pollutants or greenhouse gas emissions.

B-4 If you or the project applicant have any questions regarding these comments, please feel free to contact me at (805) 961-8893 or via email at NightingaleK@sbcapcd.org.

Sincerely,

Krista Nightingale,
Air Quality Specialist
Technology and Environmental Assessment Division

cc: TEA Chron File

B-4 This is a closing comment that does not identify an inadequacy in the MND. No response is required.

Letter C

Our Vision Clean Air

Santa Barbara County
Air Pollution Control District

October 2, 2017

Patsy Price
P.O. Box 720
Santa Barbara, CA 93102

Re: APCD Suggested Conditions on Goleta West Sanitary District New Administration Building

Dear Ms. Price:

C-1

The Air Pollution Control District (APCD) has reviewed the draft Initial Study/Mitigation Negative Declaration (IS/MND) for the Goleta West Sanitary District New Administration Building. The project consists of the demolition of the existing single-story 1,353 square foot (sq ft) garage and shop buildings located adjacent to a paved access driveway along the southern edge of the project site, and construction of a new 3,298 sq ft single-story administration building. There are additional parking spaces proposed increasing the onsite parking from 20 to 22 spaces and 4 bicycle parking spaces. To accommodate the changes in parking there will be new landscaping and permeable paving. Grading is estimated to be approximately 640 cubic yard (cy) cut and 640 cy fill. The subject property is a 1.07-acre portion of a parcel zoned Airport Facilities (A-F)/ Special District 3 Coastal Overlay (S-D-3) and identified in the Assessor Parcel Map Book as APN 073-450-003. It is located north of the intersection of Mesa Road and J Road, adjacent to University of California, Santa Barbara Campus Parking Lot 32, on the southwestern edge of the Santa Barbara Municipal Airport property, on an easement over City of Santa Barbara property.

Air Pollution Control District staff offers the following suggested conditions:

1. Standard dust mitigations (**Attachment A**) are recommended for all construction and/or grading activities. The name and telephone number of an on-site contact person must be provided to the APCD prior to grading/building permit issuance.

2. APCD Rule 345, *Control of Fugitive Dust from Construction and Demolition Activities* establishes limits on the generation of visible fugitive dust emissions at demolition and construction sites. The rule includes measures for minimizing fugitive dust from on-site activities and from trucks moving on- and off-site. The rule can be viewed at www.ourair.org/wp-content/uploads/rule345.pdf.

3. The State of California considers particulate matter emitted by diesel engines carcinogenic. Therefore, during project grading, construction, and hauling, construction contracts must specify that contractors shall adhere to the requirements listed in **Attachment B** to reduce emissions of particulate matter (as well as of ozone precursors) from diesel equipment. Recommended measures should be implemented to the maximum extent feasible.

4. All portable diesel-fired construction engines rated at 50 bhp or greater must have either statewide Portable Equipment Registration Program (PERP) certificates or APCD permits prior to grading/building permit issuance. Construction engines with PERP certificates are exempt from APCD permit, provided they will be on-site for less than 12 months.

Aeron Arlin Genet • Air Pollution Control Officer
260 North San Antonio Road, Suite A • Santa Barbara, CA • 93110 • 805.961.8800
OurAir.org • twitter.com/OurAirSBC

C-1 This comment provides recommended conditions for the project. These recommended conditions were added to the MND as Attachment F.

5. The applicant is required to complete and submit an **Asbestos Demolition/Renovation Notification or an EXEMPTION** from Notification for Renovation and Demolition (APCD Form ENF-28 or APCD Form ENF-28e), which can be downloaded at www.ourair.org/compliance-forms/ for each regulated structure to be demolished or renovated. Demolition notifications are required regardless of whether asbestos is present or not. The completed exemption or notification should be presented, mailed, or emailed to the Santa Barbara County Air Pollution Control District with a minimum of 10 working days advance notice prior to disturbing asbestos in a renovation or starting work on a demolition. The applicant should visit www.ourair.org/asbestos/ to determine whether the project triggers asbestos notification requirements or whether the project qualifies for an exemption.

6. Natural gas-fired fan-type central furnaces with a rated heat input capacity of less than 175,000 Btu/hr and water heaters rated below 75,000 Btu/hr must comply with the emission limits and certification requirements of APCD Rule 352. Please see www.ourair.org/wp-content/uploads/rule352.pdf for more information.

7. Small boilers and water heating units (rated between 75,000 and 2.0 million Btu/hr) must comply with the emission limits and certification requirements of APCD Rule 360. Combinations of units totaling 2.0 million Btu/hr or greater are required to obtain a District permit prior to building permit issuance. Please see www.ourair.org/wp-content/uploads/rule360.pdf for more information and a list of certified boilers (note: any units fired on fuel(s) other than natural gas must be certified by the APCD on a case-by-case basis, even if the unit is certified when fired on natural gas).

8. If contaminated soils are found at the project site, the APCD must be contacted to determine if Authority to Construct and/or Permit to Operate permits will be required. APCD permits are required for all soil vapor extraction activities. APCD permits are also required for the excavation ("dig-and-haul") of more than 1,000 cubic yards of contaminated soil.

9. Asphalt paving activities shall comply with APCD Rule 329, *Cutback and Emulsified Asphalt Paving Materials*.

If you or the project applicant have any questions regarding these comments, please feel free to contact me at (805) 961-8893 or via email at NightingaleK@sbcapcd.org.

Sincerely,

Krista Nightingale,
Air Quality Specialist
Technology and Environmental Assessment Division

Attachments: Fugitive Dust Control Measures
Diesel Particulate and NO_x Emission Measures

cc: TEA Chron File

Santa Barbara County
Air Pollution Control District

ATTACHMENT A
FUGITIVE DUST CONTROL MEASURES

C-2 These measures are required for all projects involving earthmoving activities regardless of the project size or duration. Proper implementation of these measures is assumed to fully mitigate fugitive dust emissions.

- During construction, use water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this should include wetting down such areas in the late morning and after work is completed for the day. Increased watering frequency should be required whenever the wind speed exceeds 15 mph. Reclaimed water should be used whenever possible. However, reclaimed water should not be used in or around crops for human consumption.
- Minimize amount of disturbed area and reduce on site vehicle speeds to 15 miles per hour or less
- If importation, exportation and stockpiling of fill material is involved, soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting fill material to and from the site shall be tarped from the point of origin.
- Gravel pads shall be installed at all access points to prevent tracking of mud onto public roads.
- After clearing, grading, earth moving or excavation is completed, treat the disturbed area by watering, or revegetating, or by spreading soil binders until the area is paved or otherwise developed so that dust generation will not occur.
- The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the Air Pollution Control District prior to grading/building permit issuance and/or map clearance.

Plan Requirements: All requirements shall be shown on grading and building plans and/or as a separate information sheet listing the conditions of approval to be recorded with the map. **Timing:** Requirements shall be shown on plans prior to grading/building permit issuance and/or recorded with the map during map recordation. Conditions shall be adhered to throughout all grading and construction periods.

MONITORING: Lead Agency shall ensure measures are on project plans and/or recorded with maps. Lead Agency staff shall ensure compliance onsite. APCD inspectors will respond to nuisance complaints.

C-2 This comment provides additional measures (Fugitive Dust Control Measures) recommended for the project. These measures are included as Attachment F in the MND.

Santa Barbara County
Air Pollution Control District

ATTACHMENT B
DIESEL PARTICULATE AND NO_x EMISSION REDUCTION MEASURES

Particulate emissions from diesel exhaust are classified as carcinogenic by the state of California. The following is a list of regulatory requirements and control strategies that should be implemented to the maximum extent feasible.

The following measures are required by state law:

- All portable diesel-powered construction equipment shall be registered with the state's portable equipment registration program OR shall obtain an APCD permit.
- Fleet owners of mobile construction equipment are subject to the California Air Resource Board (CARB) Regulation for In-Use Off-Road Diesel Vehicles (Title 13, California Code of Regulations (CCR), §2449), the purpose of which is to reduce oxides of nitrogen (NOx), diesel particulate matter (DPM), and other criteria pollutant emissions from in-use off-road diesel-fueled vehicles. Off-road heavy-duty trucks shall comply with the State Off-Road Regulation. For more information, see www.arb.ca.gov/msprog/ordiesel/ordiesel.htm.
- Fleet owners of mobile construction equipment are subject to the CARB Regulation for In-Use (On-Road) Heavy-Duty Diesel-Fueled Vehicles (Title 13, CCR, §2025), the purpose of which is to reduce DPM, NOx and other criteria pollutants from in-use (on-road) diesel-fueled vehicles. On-road heavy-duty trucks shall comply with the State On-Road Regulation. For more information, see www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm.
- All commercial off-road and on-road diesel vehicles are subject, respectively, to Title 13, CCR, §2449(d)(3) and §2485, limiting engine idling time. Idling of heavy-duty diesel construction equipment and trucks during loading and unloading shall be limited to five minutes; electric auxiliary power units should be used whenever possible.

The following measures are recommended:

- Diesel equipment meeting the CARB Tier 3 or higher emission standards for off-road heavy-duty diesel engines should be used to the maximum extent feasible.
- On-road heavy-duty equipment with model year 2010 engines or newer should be used to the maximum extent feasible.
- Diesel powered equipment should be replaced by electric equipment whenever feasible.
- Equipment/vehicles using alternative fuels, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel, should be used on-site where feasible.
- Catalytic converters shall be installed on gasoline-powered equipment, if feasible.
- All construction equipment shall be maintained in tune per the manufacturer's specifications.
- The engine size of construction equipment shall be the minimum practical size.
- The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest practical number is operating at any one time.
- Construction worker trips should be minimized by requiring carpooling and by providing for lunch onsite.

Plan Requirements: All requirements shall be shown on grading and building plans and/or as a separate information sheet listing the conditions of approval to be recorded with the map. **Timing:** Requirements shall be shown on plans prior to grading/building permit issuance and/or recorded with the map during map recordation. Conditions shall be adhered to throughout all grading and construction periods.

MONITORING: Lead Agency shall ensure measures are on project plans and/or recorded with maps. Lead Agency staff shall ensure compliance onsite. APCD inspectors will respond to nuisance complaints.

Letter D

From: Barbara Shelton [mailto:BShelton@SantaBarbaraCA.gov]
Sent: Friday, October 13, 2017 10:32 AM
To: Price, Patsy Stadelman
Subject: RE: Goleta West Sanitary District Draft Final IS/MND

Patsy,

D-1 The document looks good. Attached are a few comments and suggested edits for your consideration. Thanks for accommodating this review!

Barbara Shelton
Project Planner/ Environmental Analyst
CITY OF SANTA BARBARA, Community Development
(805) 564-5470 x 4467 | BShelton@SantaBarbaraCA.gov

D-1 The City of Santa Barbara provided an emailed comment letter that was received after the public review period on October 13, 2017. The emailed comment letter contained suggested revisions that have been incorporated into the Final MND. These changes to the text are indicated by strike-out (deleted) and underline (inserted) markings.
The following response addresses the main comment received by the City of Santa Barbara:

The commenter suggested that additional staffing for the new facility would be a reasonable assumption because there would be additional administrative space and, therefore, more vehicle trips. However, the Goleta West Sanitation District is a largely built out service area and it is not anticipated to substantively change. Therefore, the district has no plans to expand staff levels in the foreseeable future.