COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PLANNING & BUILDING
TREVOR KEITH, *DIRECTOR*

THIS IS A NEW PROJECT REFERRAL / SUMMARY

DATE: 3/24/2025

TO: **BUILDING, CAL FIRE, CAMBRIA CSD, COASTAL COMMISSION, LEGISLATIVE ASSISTANT 2ND DIST, PUBLIC WORKS, NORTH COAST ADVISORY GROUP, AND STORM WATER.**

FROM: Andy Knighton / 805-781-4142 / aknighton@co.slo.ca.us

PROJECT NUMBER & NAME: C-DRC2025-00007 Fuccio Variance/CDP

PROJECT DESCRIPTION: A request by Mark Fuccio for a Variance/Coastal Development Permit (C-DRC2025-00007) to allow grading on slopes over 30% for the construction of an approximately 100-foot long, 6-foot tall retaining wall. The project will result in the disturbance of approximately 100 square-feet on a 0.29-acre parcel. The proposed project is within the Residential Single-Family land use category and is located at 1060 Hillcrest Drive, in the community of Cambria. The site is in the North Coast Planning Area.

APN: 022-353-010

Please submit comments within 14 days from receipt of this referral. CACs please respond within 60 days. Thank you. In your response, please consider and/or indicate the following:

PART I: IS THE ATTACHED INFORMATION ADEQUATE TO COMPLETE YOUR REVIEW?

- ❑ YES (Please go on to PART II.)
- ❑ NO (Call me ASAP to discuss what else you need. We have only 10 days in which we must obtain comments from outside agencies.)

PART II: ARE THERE SIGNIFICANT CONCERNS, PROBLEMS OR IMPACTS IN YOUR AREA OF REVIEW?

- ❑ YES (Please describe impacts, along with recommended mitigation measures to reduce the impacts to less-than-significant levels, and attach to this letter.**)**
- ❑ NO (Please go on to PART III.)

PART III: INDICATE YOUR RECOMMENDATION FOR FINAL ACTION.

Please attach any conditions of approval you recommend to be incorporated into the project's approval, or state reasons for recommending denial.

IF YOU HAVE "NO COMMENT," PLEASE INDICATE (VIA E-MAIL OR PHONE).

_____

_____	_____	_____	_____
Date	**Name**		**Phone**

**All information and/or material provided in the following Referral Package is valid for 90 days after this correspondence. After that time please contact the Project Manager for the most updated information.*

COASTAL COUNTY REFERRAL REQUEST
REFERRAL TYPE: NEW PROJECT

DATE REQUESTED: 03/19/25 ASSIGNED PLANNER: Andy Knighton

PROJECT NAME: C-DRC2025-00007 Fuccio Variance/CDP

PROJECT DESCRIPTION: A request by Mark Fuccio for a Variance/Coastal Development Permit (C-DRC2025-00007) to allow grading on slopes over 30% for the construction of an approximately 100-foot long, 6-foot tall retaining wall. The project will result in the disturbance of approximately 100 square-feet on a 0.29-acre parcel. The proposed project is within the Residential Single-Family land use category and is located at 1060 Hillcrest Drive, in the community of Cambria. The site is in the North Coast Planning Area.

COUNTY DEPARTMENTS

- ☐ AG COMMISSIONER
- ☐ AIRPORT
- ☐ AIR POLLUTION CONTROL BOARD *(APCD)*
- ☐ ASSESSOR
- ☑ BUILDING
- ☑ CAL FIRE/ COUNTY FIRE
- ☐ ENV HEALTH
- ☐ HEAL SLO
- ☑ LEGISLATIVE ASSISTANT 2ND
- ☐ PARKS
- ☑ PUBLIC WORKS
- ☐ ROAD NAMING *(TRACT/PARCEL MAP)*
- ☐ SHERIFF
- ☑ STORM WATER

COMMUNITY ADVISORY COUNCILS

- ☐ AVILA VALLEY ADVISORY COUNCIL
- ☐ CAYUCOS CITIZENS ADVISORY COUNCIL
- ☐ LOS OSOS COMMUNITY ADVISORY COUNCIL
- ☑ NORTH COAST ADVISORY COUNCIL
- ☐ OCEANO/ HALCYON ADVISORY COUNCIL
- ☐ VACO
- ☐ SOUTH COUNTY ADVISORY COUNCIL

SERVICE PROVIDERS

- ☐ AT&T
- ☐ CHARTER CABLE TV
- ☐ PG&E
- ☐ SOUTHERN CAL GAS CO.

COMMUNITY SERVICES DISTRICTS

- ☐ AVILA CSD *(INC FIRE)*
- ☑ CAMBRIA CSD *(WATER, SEWER, FIRE)*
- ☐ CAYUCOS SANITARY
- ☐ FIVE CITIES FIRE AUTHORITY
- ☐ GOLDEN STATE WATER *(LOS OSOS)*
- ☐ LOS OSOS CSD
- ☐ MORRO ROCK MUTUAL *(CAYUCOS WATER)*
- ☐ OCEANO CSD
- ☐ CAYUCOS BEACH MUTUAL *(CAYUCOS WATER)*
- ☐ COUNTY SERVICE AREA 10 *(CAYUCOS WATER)*
- ☐ SAN MIGUELITO WATER CO *(AVILA)*
- ☐ SAN SIMEON CSD

SCHOOL DISTRICTS

- ☐ COAST UNION JOINT DISTRICT
- ☐ SAN LUIS COASTAL

CITIES

- ☐ ARROYO GRANDE
- ☐ ATASCADERO
- ☐ GROVER BEACH
- ☐ MORRO BAY
- ☐ PASO ROBLES
- ☐ PISMO BEACH
- ☐ SAN LUIS OBISPO
- ☐ OTHER:

COUNTY & COUNTY AGENCIES

- ☐ KERN COUNTY
- ☐ KINGS COUNTY
- ☐ MONTEREY COUNTY
- ☐ MONTEREY COUNTY PARKS
- ☐ MONTEREY COUNTY WATER
- ☐ OTHER:

OTHER AGENCIES

- ☐ ARMY CORPS
- ☐ BICYCLE ADVISORY COMMITTEE
- ☐ BUREAU OF LAND MANAGEMENT
- ☐ CA FISH & WILDLIFE
- ☐ CAL TRANS
- ☑ COASTAL COMMISSION
- ☐ COASTAL SAN LUIS RESOURCE CONS.
- ☐ MORRO BAY ESTUARY PROGRAM
- ☐ NATIONAL MARINE FISHERIES SERVICE
- ☐ SCRS (NATIONAL RES. CONS. DIST.)
- ☐ PORT SAN LUIS HARBOR DIST. (AVILA)
- ☐ RWQCB
- ☐ STATE PARKS
- ☐ STATE LAND COMMISSION
- ☐ US FISH & WILDLIFE
- ☐ OTHER:

OTHER

- ☐ GEOLOGY REVIEW
- ☐ AB52
- ☐ OTHER:

COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PLANNING & BUILDING

PLN-1000
04/01/2020

Land Use – Checklist & Application Package

REQUIRED MATERIALS AND INFORMATION

The following information is required to be submitted with your application. If additional information is necessary for application review, Department staff will notify applicants and/or authorized agents.

We are now accepting initial application materials in digital format but may request hard copies of documents and plans as necessary review and processing. Digital files should be in PDF format, and in a higher resolution to support digital review of all plan and map details.

FORMS

For applications via the Online Permit Portal: please upload this complete and digitally signed application package PLN-1000 (as detailed below).

Please provide one (1) completed copy of the following form:

- ☐ **PLN-1000: Land Use Application Checklist & Package.** This form conveniently combines all the following forms into one, and begins with a Checklist of Materials and Information Requirements for Applications
  - GEN-3000: General Application Contact Information
  - PLN-1004: Land Use – Project Information Form
  - PLN-1003: Environmental Description Form
  - PLN-1006: Information Disclosure form
  - PLN-1012: Land Use Consent of Property Owner form (only if applicant does not own the property)
  - PLN-1122: Hazardous Waste and Substances Statement Disclosure (PLN-1122)
- ☐ **Accessory Application form(s), if applicable**. These forms are not included in this package. Examples include, but are not limited to:
  - Curb, Gutter, and Sidewalk Waiver
  - Tree Removal form
  - Variance Application form

FEES

- ☐ Application fee (refer to current fee schedule)

SITE LAYOUT PLAN(S)

For applications via the Online Permit Portal: please upload during initial application submittal. The Department may request up to 4 copies of full-sized hard copy plans for inter-agency review as necessary.

Plans should consist of an accurate drawing of the property, and the site plan must show the following items (where they apply to your site):

- ☑ Exterior boundaries and dimensions of the entire site
- ☑ North arrow and scale

Land Use – Checklist & Application Package

- ☑ Slope contour map (except when a grading plan in required), showing the following:
  - *Inside urban reserve lines* – show contours at 5-feet intervals for undeveloped areas and 2-feet intervals for building sites and paved or graded areas
  - *Outside urban reserve lines* – show contours at 10-feet intervals for undeveloped areas and 2-feet intervals for building sites
  - *Steep slopes* – areas in excess of 30% slope may be designated as such and contours omitted, unless proposed for grading, construction or other alterations
- ☑ General location of major topographic and man-made features, such as rock outcrops, bluffs, streams, swales and graded areas
- ☑ Location, dimensions, and use of all existing and proposed structures on the property, including buildings, decks, balconies, fences, walls, and other structural elements that extend into yard areas
- ☑ Location, name, width, and pavement type of adjacent and on-site streets/alleys
- ☑ Existing/proposed curbs, gutters, and sidewalks. Include all points of access, both existing and proposed
- ☑ Types and location of existing/proposed water supply and sewage disposal facilities
- ☐ Location and dimensions of all existing/proposed easements, driveways and parking areas (enclosed or open), including pavement type
- ☑ Location, diameter (at 4 feet above grade), species, approximate canopy cover (dripline) of all trees on the site, noting which will remain and which are proposed for removal, and include proposals for replacement of trees to be removed
- ☐ All areas proposed for grading and landscaping
- ☐ Any areas proposed to be reserved and maintained as open space
- ☑ Location, use and approximate dimensions of all structures within 100 feet of the site's boundaries
- ☑ A vicinity map showing precisely how to drive to the site. (include street names and distances to help with describing how to get to the site)
- ☐ Coastal Access - If the project is within the coastal zone and located between the ocean and the nearest public road, applications shall include the locations of the nearest public access points to the beach
- ☐ Preliminary Floor Plans and Architectural Elevations – showing height of buildings and structures, color, texture and material of exterior finishes and roofing (not required for most agricultural buildings)
- ☐ Elevations – (relative height) from the finish floor of the garage or other parking area to the edge of the pavement or road at the driveway entrance
- ☐ Legal Lot Verification – how the parcel(s) was/were legally created

Land Use – Checklist & Application Package

PLN-1000
04/01/2020

SUPPLEMENTAL INFORMATION

The following information may be required, depending on your Land Use application type.

If you had a pre-application meeting and any of these items were indicated, they are required for a complete submittal. For applications via the Online Permit Portal, these can be uploaded with your initial application submittal, or later when your full Plan Case has been created.

- ☐ Preliminary Landscaping Plan prepared pursuant to Section 22.16/23.04.180, et seq.
- ☐ Fire Safety Plan prepared pursuant to Section 22.52/23.05.080, et seq.
- ☐ Preliminary grading/drainage plan – when required by Section 22.52/23.05.020 and .040
- ☐ Agricultural buffers – if any adjacent parcels are used for agriculture, show all proposed agricultural buffers
- ☐ Archeological Report – two (2) copies, where required
- ☐ Biological Report – two (2) copies, where required
- ☐ Botanical Report – two (2) copies, where required
- ☐ Building Site Envelopes – on site layout plan show all areas proposed for development, or areas proposed to be excluded from development
- ☐ Noise Study – two (2) copies, if the property either adjoins or will be a noise generator or a potential source of noise
- ☐ Traffic Study – two (2) copies, where required
- ☐ Geological Report – two (2) copies, where required
- ☐ Visual Analysis – for applications that propose development along significant visual corridors (such as Highways 101 and 1)
- ☐ Location, size, design and text of all existing and proposed signs
- ☐ Location and design of solid waste disposal facilities, as required by Section 22.10.150/23.04.280
- ☐ Cross-section drawings. The drawings shall include two sectional views of the project, approximately through the middle and at right angles to each other. The existing and proposed grades and the location of and distances between buildings, parking and landscaping shall also be provided
- ☐ Supplemental Development Statement stating the project's phasing schedule (if one is proposed), and any information that is pertinent or helpful to the understanding of the proposal, such as photos, statistical data, petitions, etc.
- ☐ Water will-serve letter OR Well pump test (4-72 hour)
- ☐ Sewer will-serve letter OR Percolation tests
- ☐ County Public Works road requirements
- ☐ Road Plan and Profile / Culvert Plan and Profile / Streetscape Plan
- ☐ Completed Cost Accounting Agreement – one (1) copy
- ☐ Abandoned oil and gas wells, if applicable – Information is available from the California Division of Oil & Gas: 195 South Broadway, Suite 101, Orcutt, California 93455, (805) 937-7246
- ☐ Other _____

COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PLANNING & BUILDING

Land Use -- Project Information Form

PLN-1004
04/01/2020

APPLICATION TYPE – CHECK ALL THAT APPLY

- ☐ Emergency Permit
- ☐ Tree Removal Permit
- ☑ Minor Use Permit
- ☐ Conditional Use Permit/Development Plan
- ☐ Plot Plan
- ☐ Curb, Gutter & Sidewalk Waiver
- ☐ Site Plan
- ☐ Surface Mining/Reclamation Plan
- ☐ Zoning Clearance
- ☐ Amendment to approved Land Use Permit
- ☑ Variance
- ☐ Other_____

TYPE OF PROJECT:

☐ Commercial ☐ Industrial
☑ Residential ☐ Recreational ____ Other: _____

Describe any modifications/adjustments from ordinance needed and the reason for the request (if applicable):

Build concrete retaining wall at rear of property to reinforce soil on a slope that has partially eroded due to heavy rain fall in 2021 and 2023. FEMA declared a disaster for San Luis Obispo County with identfication FEMA-4683-DR.

Describe existing and future access to the proposed project site:

Future access will be the same as current acces. This is a residential lot with driveway on the front. There are fences between properties on both sides. At the rear there is open

SURROUNDING PARCEL OWNERSHIP Do you own adjacent property? ☐ YES ___ NO

If YES, what is the acreage of all property you own that surrounds the project site?

_____

SURROUNDING LAND USE What are the uses of the land surrounding your property (when applicable, please specify all agricultural uses):

North: residential single family home South: residential single family home

East: residential single family home West: residential single family home

FOR ALL PROJECTS, ANSWER THE FOLLOWING – Square footage and percentage of the total site (approximately) that will be used:

Buildings: _____ sq. feet _____%
Paving: _____ sq. feet _____%
Landscaping: _____ sq. feet _____%
Other: _____ sq. feet _____%

Total area of all paving structures: _____ ☐ sq. feet __acres

Total area of grading or removal of ground cover: _____ ☐ sq. feet __ acres

Land Use – Project Information Form

Trees:
Number of trees to be removed: none

Type(s) of tree(s):

Setbacks:
Front _____ Back _____ Left _____ Right _____

PROPOSED WATER SOURCE:
☐ On-Site Well ☐ Shared Well ___ Other: _____

Community System (agency / company responsible for the provision of water):
Existing hookup with Cambria CSD

WILL-SERVE LETTER?
☐ Yes (If yes, please submit copy)
☐ No

PROPOSED SEWAGE DISPOSAL
☐ Individual On-Site System
☐ Other: _____
☑ Community System (list the agency or company responsible provision):
Cambria CSD

WILL-SERVE LETTER?
☐ Yes (If yes, please submit copy)
☐ No

RESPONSIBLE FIRE PROTECTION AGENCY:
Cambria Fire Department

FOR COMMERCIAL/INDUSTRIAL PROJECTS ANSWER THE FOLLOWING:

Total outdoor use area: _____ ☐ sq. feet __ acres

Total floor area of all structures including upper stories: _____ sq. feet

FOR RESIDENTIAL PROJECTS, ANSWER THE FOLLOWING:

Number of residential units: _____ Number of bedrooms per unit: ☐

Total floor area of all structures including upper stories, but not garages and carports: _____ sq. feet

Total of area of the lot(s) minus building footprint and parking spaces: _____ sq. feet

COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PLANNING & BUILDING

GEN-3000
04/01/2020

General Application Contact Information

Staff: Input File Number or File Label Here

Please check *ONLY ONE* of the contacts as the 'Primary Billing Contact' to appear on invoices and receipts

PROPERTY OWNER	☑ Primary Billing Contact
Name: Mark Fuccio	
Company:	
Telephone: cell: 408-829-0963	Email Address: mark.fuccio@gmail.com
Mailing address: 1060 Hillcrest Dr	
City: Cambria CA 93428	State:	Zip Code:

APPLICANT	☑ Primary Billing Contact	**AUTHORIZED AGENT**	☐ Primary Billing Contact
Name: Mark Fuccio		Name:	
Company:		Company:	
Telephone: cell: 408-829-0963	Email address: mark.fuccio@gmail.com	Telephone:	Email address:
Mailing address: 1060 Hillcrest Dr		Mailing Address:	
City: Cambria	State: CA	Zip Code: 93428	City:	State:	Zip Code:

PROPERTY INFORMATION

Assessor's Parcel Number:	Physical address:	Total size, in acres:
022-353-010	1060 Hillcrest Dr, Cambria CA 93428	approximately 1/4 acre

Directions to the property (include landmarks and any gate codes):
Property is at 1060 Hillcrest Drive. Iva Court is the nearest cross street.

Describe current uses on the property (include structures, improvements, and vegetation):
Current use if a single family home

PROJECT INFORMATION

Briefly describe the proposed project (include all uses and building heights and areas, in square-feet) and attach supplemental info as necessary:
Build a segmented concrete retaining wall at the rear of the property. The length is about 100' and maximum height 6'.

Legal Declaration

I, the owner of record of this property, have completed this form accurately and declare that all statements here are true. I do hereby grant official representatives of the county authorization to inspect the subject property.

SIGNATURE: Mark T. Fuccio **DATE:** 3/11/25

NOTE: *Your application is public record and information regarding your application is available both in person and online via the Department of Planning & Building. All references to names, addresses, telephone numbers, email addresses and project details are part of this public record. All applications must be filed under the subject property's owner of record; however, you may use an alternate contact address and telephone number.*

COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PLANNING & BUILDING

Environmental Description

PLN-1003
01/01/2020

The California Environmental Quality Act (CEQA) requires all state and local agencies to consider and mitigate environmental impacts for their own actions and when permitting private projects. The Act also requires that an environmental impact report (EIR) be prepared for all actions that may significantly affect the quality of the environment. The information you provide on this form will help the Department of Planning and Building determine whether your project will significantly affect the quality of the environment.
To ensure that your environmental review is completed as quickly as possible, please remember to:

1. Answer ALL the questions as accurately and completely as possible.
2. Include any additional information or explanations where you believe it would be helpful or where required. Include additional pages if needed.
3. If you are requesting a land division or a re-zoning, be sure to include complete information about future development that may result from the proposed land division or rezoning.
4. Include references to any reports or studies you are aware of that might be relevant to the questions asked or the answers you provide.

Should a determination be made that the information is inaccurate or insufficient, you will be required to submit additional information upon request.

PHYSICAL SITE CHARACTERISTICS

Acres with 0-10% slopes:	Acres with 10-20% slopes: .24	Acres with 20-30% slopes:	Acres over 30% slopes: .06

Are there any springs, streams, lakes, or marshes on or near the site?
___Yes ☑No
If yes, please describe:
_____
_____

Are there any flooding problems on the site or in the surrounding area?
___Yes ☑No
If yes, please describe:
_____
_____

Has a drainage plan been prepared?
___Yes ☑No
If yes, please attach a copy.

Has there been any grading or earthwork on the site?
___Yes ☑No
If yes, please describe:
_____
_____

Has a grading plan been prepared?
___Yes ☑No
If yes, please attach a copy.

Are there any sewer ponds/waste disposal sites on or adjacent to the site?
___Yes ☑No
If yes, please describe:
_____
_____

Are there any railroads or highways within 300 feet of the site? ☐Yes ☑No
If yes, please describe:
_____

Can the site be seen from surrounding public roads?
☐Yes ☑No
If yes, please describe:
_____

Environmental Description

PLN-1003
01/01/2020

WATER SUPPLY INFORMATION

What type of water supply is proposed?
☐ Individual Well ☐ Shared Well
☑ Community Water System

What is the proposed use of the water?
☑ Residential ☐ Non-Residential
If non-residential, please describe: _____

What is the expected daily water demand associated with the project? less than 50 gallons

How many service connections will be required?
_____

Do operable water facilities exist on the site?
☑ Yes ☐ No

If yes, please describe: Existing house with water hookup.

Has there been a sustained yield test on proposed or existing wells?
☐ Yes ☑ No

If yes, please attach a copy.

Does Water Meet the Health Agency's Quality Requirements?
☑ Yes ☐ No

Bacteriological?
☑ Yes ☐ No

Chemical? ☑ Yes ☐ No

Physical? ☐ Yes ☐ No

Water analysis report submitted. ☐ Yes ☑ No

Please check if any of the following have been completed on the subject property and/or submitted to County Environmental Health:

☐ Well Driller's Letter
☐ Water Quality Analysis OK Problems
☐ Will-Serve Letter
☐ Other: _____

☐ Pump Test Hours: ___ GPM: ___
☐ Surrounding Well Logs
☐ Hydrologic Study

SEWAGE DISPOSAL INFORMATION (ON-SITE INDIVIDUAL DISPOSAL SYSTEM)

Has an engineered percolation test been completed?
___Yes ___No
If yes, please attach a copy.

Has a piezometer test been completed?
___Yes ___No
If yes, please attach a copy.

Will subsurface drainage result in the possibility of effluent reappearing in surface water or on adjacent lands, due to steep slopes, impervious soil layers or other existing conditions?
☐ Yes ☑ No

Will a Waste Discharge Permit from the Regional Water Quality Control Board be required a waste discharge (typically needed in excess of 2,500 gallons per day)?
___Yes ___No

What is the distance from proposed leach field to any neighboring water wells? N/A feet

PLN-1003
01/01/2020

Environmental Description

SEWAGE DISPOSAL INFORMATION (COMMUNITY DISPOSAL SYSTEM)

Is this project to be connected to an existing sewer line? ☐ Yes ☑ No
Distance to nearest sewer line: _____ Location of connection: _____

What is the amount of proposed flow?
N/A _____ (gallons per day)

Does the existing collection treatment and disposal system have adequate additional capacity to accept the proposed flow? ☐ Yes ☐ No

SOLID WASTE INFORMATION

What is the name of solid waste disposal company?
_____

Where is the waste disposal storage in relation to buildings? _____

What type of solid waste will be generated by the project?
☐ Domestic ☐ Industrial
☐ Agricultural ☑ Other
If other, please describe: existing allan blocks will be removed

Does your project design include an area for collecting recyclable materials and/or composting materials?
☐ Yes ☑ No

COMMUNITY SERVICE INFORMATION

Name of school district: _____

Are services (grocery/other shopping) within ½ mile of the project?
☐ Yes ☑ No

Location of nearest....
Police station: SLO County Sheriff Kansas Ave
Fire station: Cambria CCSD Fire Station Burton Drive
Public transit stop: bus station Main Street cross street Arlington

HISTORIC AND ARCHEOLOGICAL INFORMATION

Describe the historic use of the site:

Are you aware of the presence of any historic, cultural, or archaeological materials on the project site or in the vicinity?
☐ Yes ☑ No
If yes, please describe: _____

Has an archaeological surface survey been done for the project site?
☐ Yes ☑ No
If yes, please attach two copies.

AGRICULTURAL INFORMATION

If your land is currently vacant or in agricultural production, are there any restrictions on the crop productivity of the land? That is, are there any reasons (i.e., poor soil, steep slopes) the land cannot support a profitable agricultural crop?

Is the site currently in Agricultural Preserve (Williamson Act)? ☐ Yes ☑ No

Is the site currently under land conservation contract?
☐ Yes ☑ No

Environmental Description

SPECIAL PROJECT INFORMATION

Describe any amenities included in the project, such as park areas, open spaces, common recreation facilities, etc. (these also need to be shown on your site plan):
N/

Will the development occur in phases?
☐ Yes ☑ No
If yes, please describe: _____
_____

Are there any proposed or existing deed restrictions?
☐ Yes ☑ No
If yes, please describe: _____
_____

Do you have any plans for future additions, expansion or further activity related to or connected with this proposal?
☐ Yes ☑ No
If yes, please describe: _____
_____

ENERGY CONSERVATION INFORMATION

Describe any special energy conservation measures or building materials that will be incorporated into your project:
N/A

ENVIRONMENTAL INFORMATION

List any mitigation measures that you propose to lessen the impacts associated with your project:

Are you aware of any unique, rare or endangered species (vegetation or wildlife) associated with the project site?
☐ Yes ☑ No
If yes, please describe: _____
_____

Are you aware of any previous environmental determinations for all or portions of this property?
☐ Yes ☑ No
If yes, please describe and provide permit or subdivision numbers(s): _____
_____

OTHER RELATED PERMITS

List all permits, licenses or government approvals that will be required for your project (federal, state, and local):

COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PLANNING & BUILDING

Information Disclosure Form

PLN-1006
01/24/2020

Time Limits for Processing and Public Notice Distribution Requirements

California state law (California Government Code Section 65941.5) requires that the County provide the following information to applicants, when a permit application is filed:

- Not later than 30 days after a land use or land division application is received, the county must notify the project applicant or designated representative in writing either that the application is complete, or that items are necessary to complete the application. If you are not notified in writing, the application is considered complete. Any land use or land division application receiving a Negative Declaration must be approved or denied within 60 days of its adoption. If the project is exempt under CEQA, the project must be approved or denied within 90 days of acceptance. For land use/land division applications subject to an Environmental Impact Report (EIR), project approval/denial shall be within six months of the certification of the EIR. The County of San Luis Obispo processes the land use application and the environmental review concurrently, so these decisions are made simultaneously. (Government Code Sections 65943 and 65950, et seq.)
- A project applicant may make a written request to the county to receive notice of any proposal to adopt or amend the general plan and the land use, real property division, building and construction, road name and addressing, and growth management ordinances which might reasonably be expected to affect that applicant's project. The county offers a subscription service for notification of either: (1) all applications received by the county, or (2) Planning Commission agendas. The cost for each of these services is established by the county fee ordinance. (Government Code Sections 65945, 65945.3 and 65945.5)
- When a property was created through recordation of a final or parcel map, and it is within five years of recordation, the county cannot withhold or condition the issuance of building permits for residential units based on conformance with conditions that could have been imposed as conditions of the tentative map, except where: (1) A failure to do so would place subdivision residents or residents in the immediate area in a condition perilous to health, safety or both; or (2) The condition is required in order to comply with state or federal law. (Government Code Section 65961)
- Copies of Government Code Sections are available at the County of San Luis Obispo Law Library, County Government Center, San Luis Obispo, California.

Right to Farm Disclosure

The County of San Luis Obispo recognizes the statewide policy to protect and encourage Agriculture. Sections 3482.5 and 3482.6 of the California Civil Code and Chapter 5.16. of the San Luis Obispo County Code protect certain, pre-existing agricultural production and processing operations ("agricultural operation") from nuisance claims. If your property is near a protected agricultural operation, you may be subject to certain inconveniences and/or discomforts which are protected by law. In order for the agricultural operation to be protected, the following requirements of Civil Code Sections 3482.5 and 3482.6 must be satisfied:

Information Disclosure Form

1. The agricultural operation must be conducted or maintained for commercial purposes;
2. The agricultural operation must be conducted or maintained in a manner consistent with proper and accepted customs and standards as established and followed by similar agricultural operations in the same locality;
3. The agricultural operation predated the affected use(s) on your property; (4) The agricultural operation has been in existence for more than three years; and (5) The agricultural operation was not a nuisance at the time it began.

If your property is near an agricultural operation in the unincorporated area of the County which satisfies the above requirements, you may at times be subject to one or more inconveniences and/or discomfort arising from that operation. Such inconveniences may include (depending upon the type of agricultural operation protected), but are not necessarily limited to, the following: noise, odors, fumes, dust, legal pesticide use, fertilizers, smoke, insects, farm personnel and truck traffic, visual impacts, night time lighting, operation of machinery and the storage, warehousing and processing of agricultural products or other inconveniences or discomforts associated with the protected agricultural operations. For additional information pertaining to this disclosure and the Right to Farm Ordinance, or concerns with an agricultural operation, please contact the San Luis Obispo County Agricultural Commissioner's Office.

Landfill Disclosure

Please answer the following question: "This project is within ½ mile of one of the landfills in the North County planning area (Paso Robles Municipal or Chicago Grade Landfills)" ☐ Yes ☑ No

Acknowledgement

I acknowledge that I have read and understand the sections detailed above:

1. Time Limits for Processing and Public Notice Distribution Requirements
2. Right to Farm Disclosure
3. Landfill Disclosure

Mark T. Francis — 3/11/25

Applicant Signature — Date

Jacqueline Padin Francis — 3/11/25

Additional Applicant Signature (if applicable) — Date

COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PLANNING & BUILDING

Land Use Consent of Property Owner

PLN-1012
04/01/2020

Property Address:	**APN(s):**
1060 Hillcrest Drive, Cambria CA 93428	022-353-010

Project Description:

Concrete Retaining Wall

CONSENT

I (we) the undersigned owner(s*****) of record of the fee interest in the parcel of land located at the above address, identified as the above Assessor Parcel Number, for which a construction permit, land use permit, land division, general plan or ordinance amendment, or LAFCO application referral is being filed with the County requesting an approval for the above project description, do hereby certify that:

1. Such application may be filed and processed with my (our) full consent, and that I (we) have authorized the agent named below to act as my (our) agent in all contacts with the county and to sign for all necessary permit applications in connection with this matter.
2. I (we) hereby grant consent to the County of San Luis Obispo, its officers, agents, employees, independent contractors, consultants, sub-consultants and their officers, agents, and employees to enter the property identified above to conduct any and all surveys and inspections that are considered appropriate by the inspecting person or entity to process this application. This consent also extends to governmental entities other than the county, their officers, agencies, employees, independent contractors, consultants, sub-consultants, and their officers agents or employees if the other governmental entities are providing review, inspections and surveys to assist the county in processing this application. This consent will expire upon completion of the project.
3. If prior notice is required for an entry to survey or inspect the property, please contact:
4. I (we) hereby give notice of the following concealed or unconcealed dangerous conditions on the property (dogs, hazardous materials, or specify none)

CONSENT GRANTOR / PROPERTY OWNER		**AUTHORIZED AGENT FOR CONSENT GRANTOR**	
Name: Mark T. Fuccio & Jacqueline Padin F	Phone: 408829096	Name:	Phone:
		Company / Agency:	Email:
Full Mailing Address: 1060 Hilcrest Drive, Cambria CA 93428		Full Mailing Address:	
Signature: Jacqueline Padin Fuccio Mark T. Fuccio	Date: 3/11/25	Signature:	Date:

*****attach additional PLN-1012 forms for multiple owners, if applicable*

COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PLANNING & BUILDING

PLN-1122
04/01/2020

Hazardous Waste and Substances Statement Disclosure

PROJECT TITLE: Fuccio Residence Retaining Wall **PROJECT APN(s):** 022-353-010

Per Government Code section 65962,5, known as the 'Cortese List' (AB3750), I have consulted the following website resources and lists to determine if the subject property contains hazardous wastes or substances:

- List of Hazardous Waste and Substances sites from Department of Toxic Substances Control (DTSC) EnviroStor database (http://www.envirostor.dtsc.ca.gov/public/)
- List of Leaking Underground Storage Tank Sites by County and Fiscal Year from Water Board GeoTracker database (http://geotracker.waterboards.ca.gov/)
- List of solid waste disposal sites identified by Water Board with waste constituents above hazardous waste levels outside the waste management unit (PDF). (http://www.calepa.ca.gov/SiteCleanup/CorteseList/CurrentList.pdf)
- List of "active" CDO and CAO from Water Board PLEASE NOTE: This list contains many Cease and Desist Orders and Cleanup and Abatement Orders that do NOT concern the discharge of wastes that are hazardous materials. (http://www.calepa.ca.gov/SiteCleanup/CorteseList/default.htm)
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC (https://calepa.ca.gov/sitecleanup/corteselist/section-65962-5a)

After consultation with each of the lists provided on the above websites, I verify that the subject parcel(s) and proposed development (and any alternative development sites, if applicable):

☑ **Is not** included on any of lists found on the above-referenced websites.

☐ **Is** included on one or more of the lists found on the above-referenced websites. Pursuant to Section 65962.5 of the Government Code. the following information is provided related to this site/application:

Name of Applicant: _____

Address of site (street name & number if available, City, State and ZIP Code):

_____

Local agency (city/county): _____

Assessor's book, page, and parcel number: _____

Specify any list pursuant to Section 65962.5 of the Government Code: _____

Regulatory identification number: _____ Date of list: _____

Applicant Signature: Mark T. Fuccio	Applicant Name (Print): Mark T. Fuccio
Date of Signature: 3/11/25	Phone: cell: 408-829-0963
Email: mark.fuccio@gmail.com	

PROJECT CONTACTS

OWNER:
MARK FUCCIO
1060 HILLCREST ROAD
CAMBRIA, CA 93428

ENGINEER:
PRAXIS ENGINEERING
1009 MORRO STREET, SUITE 205
SAN LUIS OBISPO, CA 93401
PH: (805) 489-9900

PROJECT INFORMATION

DESCRIPTION: TR 44 PTN BL 3
ESTIMATED ACRES: 0.29 ACRES
AVERAGE SLOPE: 8%
LAND USE: RSF (RESIDENTIAL SINGLE FAMILY)

SOILS REPORT

GEOTECHNICAL INVESTIGATION REPORT
PREPARED BY GEOSOLUTION, INC.
REPORT NO. SL 13074
DATED OCTOBER 25, 2022

SHEET INDEX	
SHEET No.	SHEET TITLE
RW-1	WALL PLAN AND GENERAL NOTES
RW-2	TYPICAL DETAILS

EXISTING CONDITIONS

ALL EXISTING INFORMATION SHOWN ON THESE PLANS HAS BEEN BASED ON THE SEARCH OF AVAILABLE RECORDS. THE ENGINEER DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF EXISTING INFORMATION SHOWN. IF THE CONTRACTOR NOTICES ANY DISCREPANCIES BETWEEN EXISTING INFORMATION SHOWN ON THESE PLANS AND THE ACTUAL CONDITIONS, HE SHALL GIVE NOTICE OF SUCH FACT TO THE ENGINEER WITHOUT DELAY.

UNDERGROUND UTILITY STATEMENT

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THIS MAP.
THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THIS DRAWING.
ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY SUCH INFORMATION OR DATA.
UNDERGROUND SERVICE ALERT SHALL BE CONTACTED TWO WORKING DAYS PRIOR TO CONSTRUCTION BY CALLING 811 OR 1-800-642-2444.

GENERAL

1. ALL WORK SHALL CONFORM TO MINIMUM STANDARDS OF THE 2022 CALIFORNIA BUILDING CODE (CBC), OF ANY CODES LISTED IN THE DRAWINGS, AND OF ANY REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK, INCLUDING THE CALIFORNIA HEALTH AND SAFETY CODE.
2. GENERAL NOTES AND TYPICAL DETAILS APPLY TO ALL STRUCTURAL FEATURES, UNLESS OTHERWISE INDICATED. ALL NONSTRUCTURAL FEATURES, INCLUDING WATERPROOFING, SHALL BE THE RESPONSIBILITY OF THE OWNER OR THE OWNER'S REPRESENTATIVE.
3. ANY ATTACHED PROJECT BUILDING AND CONSTRUCTION SPECIFICATIONS FORM A PART OF THE CONTRACT DOCUMENTS.
4. ALL SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO MATERIALS AND PRODUCTS, SHALL BE AS REFERENCED IN THE CONTRACT DOCUMENTS. SUBSTITUTIONS SHALL NOT BE PERMITTED DURING BIDDING OR CONSTRUCTION OPERATIONS WITHOUT WRITTEN APPROVAL BY THE ARCHITECT/ENGINEER.
5. IF CERTAIN FEATURES ARE NOT FULLY SHOWN OR CALLED OUT ON THE DRAWINGS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS.
6. ANY CHANGES OR DEVIATIONS FROM THE CONTRACT DOCUMENTS SHALL BE CALLED TO THE ATTENTION OF THE STRUCTURAL ENGINEER AND SHALL BE RESOLVED PRIOR TO PROCEEDING WITH THE WORK.
7. SPECIFICATIONS, CODES, AND STANDARDS NOTED IN THE CONTRACT DOCUMENTS SHALL BE OF THE LATEST EDITION, UNLESS OTHERWISE NOTED.
8. DIMENSIONS SHALL NOT BE SCALED OFF OF THE DRAWINGS.
9. PRIOR TO SUBMITTING SHOP DRAWINGS AND PRODUCT DATA, THE CONTRACTOR SHALL VERIFY THAT THE SUBMITTALS MEET THE REQUIREMENTS OF THE DRAWINGS. THE CONTRACTOR SHALL SPECIFICALLY NOTE ANY EXCEPTIONS TO THESE REQUIREMENTS WITH THE SUBMITTAL.
10. THE CONTRACTOR SHALL MAINTAIN A CONTINUOUS FIRE WATCH, WITH EXTINGUISHING EQUIPMENT IMMEDIATELY AVAILABLE DURING WELDING, CUTTING OR BURNING NEAR COMBUSTIBLE MATERIALS.
11. OPENINGS, POCKETS, ETC. SHALL NOT BE PLACED IN STRUCTURAL MEMBERS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE STRUCTURAL ENGINEER WHEN WORK REQUIRES OPENINGS, POCKETS, ETC. IN STRUCTURAL MEMBERS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS AND HOLES AND OPENINGS REQUIRED IN STRUCTURAL MEMBERS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT/ENGINEER AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK.
13. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOFS. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING WHERE OVERLOAD IS ANTICIPATED.

CONCRETE & REINFORCING STEEL

1. All concrete shall be ready-mix in accordance with ASTM C94.
2. Cement: ASTM C150 Type II or Type III.
3. Aggregate: ASTM C33.
4. Non-shrink Grout: ASTM C1107, premixed, non-staining, non-shrink grout.
5. Grout or concrete containing more than 0.1 percent of soluble chloride shall not be used.
6. Mixes shall be submitted to the Architect/Engineer for approval. Do not cast concrete without approval by Architect/Engineer. Mixes with specified compressive strength greater than 2500 psi shall also be reviewed by the owner's testing lab.

Concrete	Strength	Max. Agg. Size	Max. W/C Ratio	Air Content
Slab-on-grade, Foundations	3000 psi	¾"	0.50	1½% ± 1½%
Other	3000 psi	1"	0.50	

All concrete shall be hard rock aggregate, regular-weight concrete, 145 pcf, unless otherwise noted.
7. All items to be cast in concrete including reinforcing bars, reinforcing dowels, bolts, anchors, pipes, sleeves, etc., shall be positioned in the forms and secured in place prior to placing concrete.
8. Pipes and electrical conduits shall not be embedded in structural concrete, except where specifically approved by the structural engineer.
9. Provide sleeves for plumbing and electrical openings in concrete before placing. Provide 1" minimum clear concrete cover around all sleeves. Do not cut any reinforcing which may interfere. Coring in concrete is not permitted except as shown. Notify the Architect/Engineer in advance of conditions that are not shown on the drawings.
10. Consolidate all concrete as it is placed with a mechanical vibrator operated by experienced personnel in accordance with ACI 309R.
11. Control joints: U.N.O. on the drawings, provide ¾" deep saw cut at tops of reinforced slabs-on-grade. Control joint spacing shall not exceed 16'-0" in each direction.
12. Construction joints: Provide as detailed on drawings. Expose clean coarse aggregate solidly embedded in mortar matrix by sandblasting, bushammer, or other approved method. Location of construction joints shall be approved by the Architect/Engineer.
13. Reinforcing steel: ASTM A615 Grade 60.
ASTM A706 where welded or otherwise indicated.
14. Welded wire fabric: ASTM A185 (flat sheets only).
15. Detailing, fabricating, and placement of reinforcing steel shall be in accordance with the Concrete Reinforcing Steel Institute (CRSI) Manual of Standard Practice.
16. All reinforcement shall be continuous. Stagger splices where possible. Laps shall be per typical details, unless otherwise noted.
17. Mechanical couplers shall be Lenton Taper Threaded Rebar Splices (ICC ER-3967) or Bar-Lock "L" Series Couplers (ICC ER-2495).
18. Headed terminators shall be HRC 100-Series T-heads (ICC ER-5292), or HRC 555 T-heads (IAPMO ER-0177).
19. Welded couplers shall be Lenton CJ3 weldable half couplers (IAPMO ER-0129).
20. Minimum clear concrete cover for reinforcement, U.N.O. (clearances are to closest reinforcement):
Cast against earth: 3 inches
Cast in forms and exposed to earth or weather:
#6 bar and larger: 2 inches
#5 bar and smaller: 1½ inches
Not exposed to earth or weather:
Slabs, walls, and joists: 1 inch
Beams, girders, and columns (to ties): 1½ inches

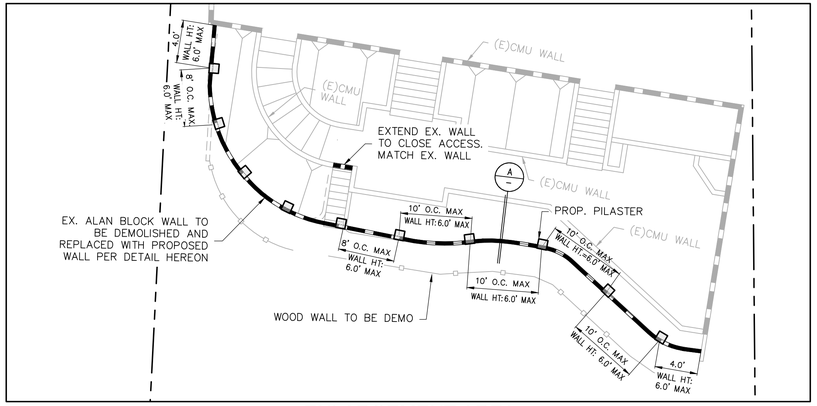
FOUNDATIONS

1. The foundation design is based on recommendations in the geotechnical report SL13153-1 by GeoSolutions, Inc., dated December 19, 2022
2. The Contractor shall conform to the recommendations of the geotechnical report regarding site preparation and foundation construction. Copies of the report are available from the Architect/Engineer.
3. Foundation excavations shall be inspected and approved by the geotechnical engineer prior to placement of any reinforcing steel or concrete.
4. Foundation type: Conventional spread foundations.
5. Foundation Design Values:

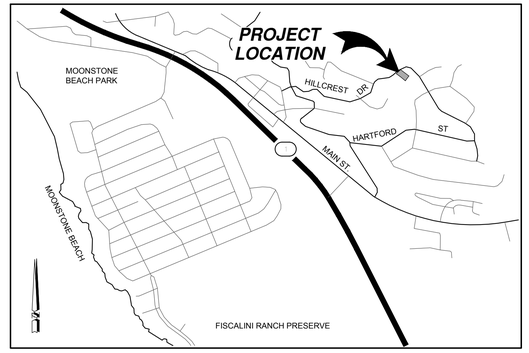
Item	Allowable Bearing Pressures
Toe Pressure	2500 psf
Coefficient of Friction	0.45
Active Pressure	40 pcf
Passive (Non-Expansive)	350 pcf

6. All footings shall bear on firm undisturbed soil. Depth of footings shown on the drawings are minimum, and the bottom of footing shall be clean and lowered as required at the direction of the geotechnical engineer to remove soft or loose materials.
7. For footings placed on or adjacent to slopes, the geotechnical engineer shall approve any foundations not in conformance with Section 1808.7 and Figure 1808.7.1 of the CBC.
8. Finished grade shall have a minimum 5% slope away from foundations for a 10'-0" horizontally.
9. The Contractor shall be solely responsible for all excavation procedures, including lagging, shoring and protection of adjacent property, structures, streets and utilities in accordance with the local building department.
10. Backfill at walls shall not be placed until a minimum of 14 days after the completion of the walls and shall not be placed until after completed inspection of damp-proofing.
11. Use 4" diameter perforated pipe sub-drain behind all retaining walls, U.N.O. in the geotechnical report. Slope drain to positive outfall.

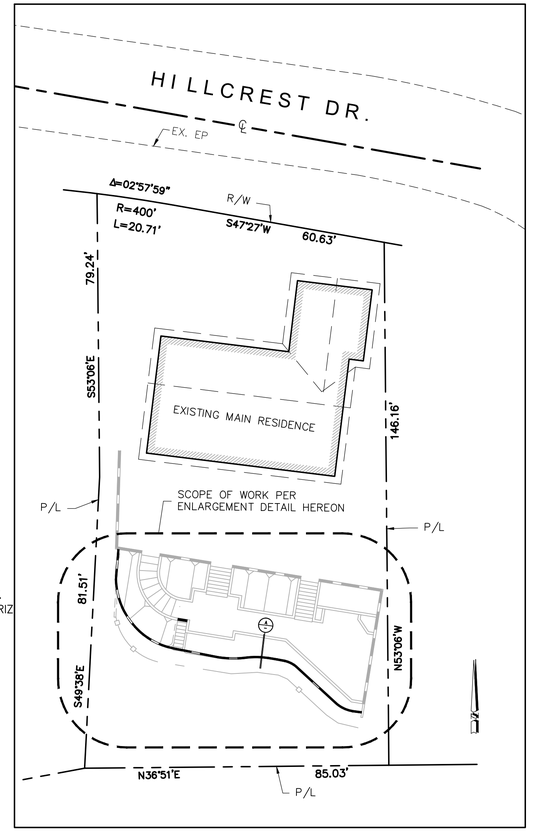
PORTIONS OF WORK REQUIRING SPECIAL INSPECTION:		YES	NO	N/A
FDN.	PERIODIC INSPECTION OF COMPACTED FILL, GRADING, AND EXCAVATIONS	X		
	CONTINUOUS INSPECTION OF PILE DRIVING AND/OR DRILLING OF CAISSONS	X		
CONC.	CONTINOUS INSPECTION AND TEST CYLINDERS FOR CONCRETE OVER 2,500 PSI	X		
	CONTINUOUS INSPECTION FOR SLAB-ON-GRADE CONCRETE		X	
	TEST CYLINDERS FOR SLAB-ON-GRADE CONCRETE		X	
	CONTINUOUS INSPECTION OF ANCHOR BOLTS OR EMBEDS IN CONCRETE (OVER 2,500 PSI) (INSTALLATION AND CONCRETE PLACEMENT)			X
REINF. STEEL	PLACING OF REINFORCING	X		
	SAMPLING AND TESTING STEEL (MILL REPORTS AND IDENTIFICATION OF STEEL)		X	



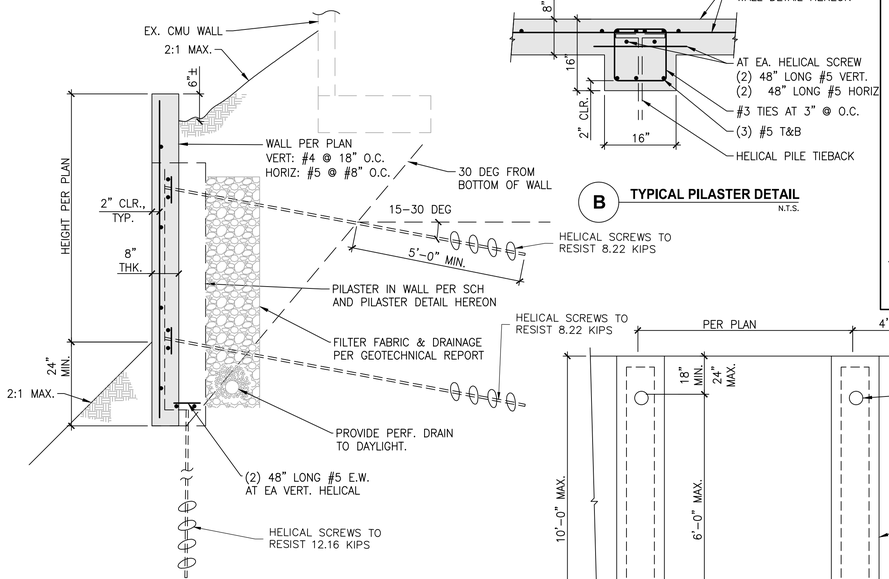
ENLARGEMENT AREA
NTS



VICINITY MAP
NOT TO SCALE

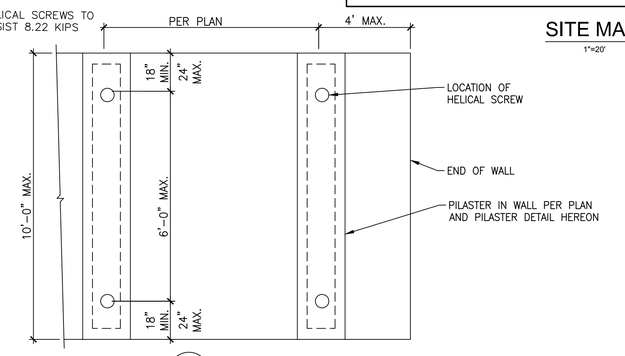


SITE MAP
1"=20'



A TYPICAL WALL DETAIL
N.T.S.

B TYPICAL PILASTER DETAIL
N.T.S.



C TYPICAL WALL ELEVATION
N.T.S.

DIGALERT
DIAL TOLL FREE
(1-800-642-2444)
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF CALIFORNIA

PRAXIS Engineering
1009 Morro Street, Suite 205
San Luis Obispo, CA 93401
(805) 489-9900 | www.praxisci.com

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. ALLSHOUSE
No. 62506
STATE OF CALIFORNIA
CIVIL

FUCCIO RESIDENCE
1060 HILLCREST DR
CAMBRIA, CA 93428-2504
APN: 022-353-010

Client

No.	Date	Issuance or Revisions
	09/14/23	1ST SUBMITTAL
	11/27/24	PC #1

Project No.	Checked	Date
22068	MDA	03/21/23
Drawn	Approved	Scale
YR	MDA	AS SHOWN

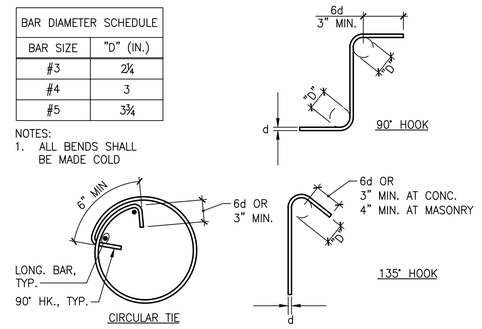
WALL PLAN AND GENERAL NOTES
Drawing Title

RW-1

Sheet 1 Of 2

BAR DIAMETER SCHEDULE	
BAR SIZE	"D" (IN.)
#3	2¼
#4	3
#5	3¾

NOTES:
1. ALL BENDS SHALL BE MADE COLD



22068-SITE PLAN **31** TYPICAL TIE AND STIRRUP HOOKS — N.T.S.

	BASIC DEVELOPMENT LENGTH (ld), IN.	LAP SPLICE LENGTH, IN.	DEVELOPMENT OF BAR W/ STD. HK. (ldh), IN.
BAR SIZE	f'_c=2500		
#3	18	24	9
#4	24	32	12
#5	30	39	15
#6	36	47	18
#7	53	69	21

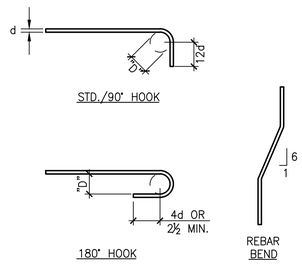
MODIFICATION FACTORS:
THE LENGTHS NOTED ABOVE SHALL BE MULTIPLIED BY THE FOLLOWING FACTORS, AS APPLICABLE, WHICH SHALL BE COMBINED WHEN MULTIPLE CONDITIONS OCCUR:
- 1.3 FOR TOP BARS (MORE THAN 12" CONC. CAST BELOW)
- 1.3 FOR LIGHTWEIGHT CONCRETE
- 1.5 FOR BARS WITH LESS THAN 2 BAR DIAMETERS CLEAR SPACING OR FOR BARS WITH LESS THAN 1 BAR DIAMETER OF CONCRETE COVER

NOTES:
1. CONTACT ENGINEER FOR BAR SIZES NOT INCLUDED ABOVE.
2. SPLICES OF HORIZ. REINF. IN WALLS SHALL BE STAGGERED.
3. SPLICES IN WALLS CONTAINING TWO CURTAINS OF REINF. SHALL NOT OCCUR IN THE SAME LOCATION.
4. TOP BAR FACTOR DOES NOT APPLY TO BARS IN WALLS.

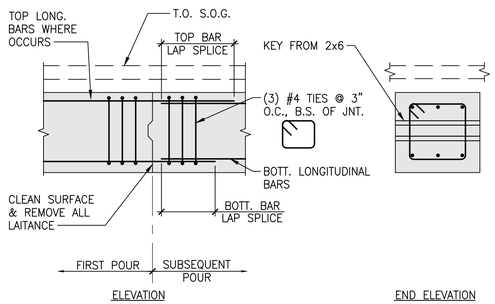
22068-SITE PLAN **42** DEVELOPMENT LENGTH & LAP SPLICE SCHEDULE – CONCRETE — NO SCALE

BAR DIAMETER SCHEDULE	
BAR SIZE	"D" (IN.)
#3	2¼
#4	3
#5	3¾
#6	4½
#7	5¼
#8	6
#9	9½
#10	10¾
#11	12

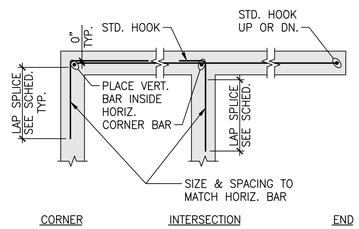
NOTES:
1. ALL BENDS SHALL BE MADE COLD

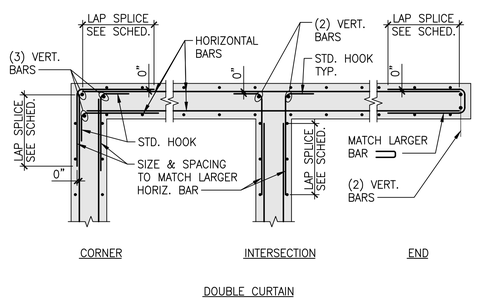


22068-SITE PLAN **32** TYPICAL REINFORCEMENT BENDS — N.T.S.

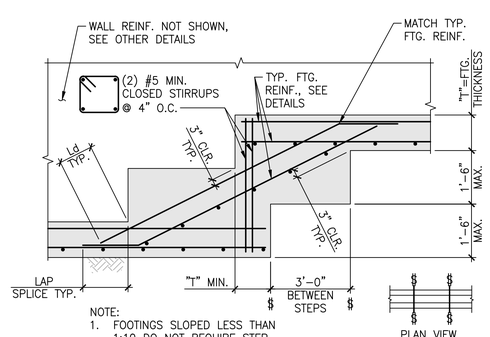


22068-SITE PLAN **43** TYPICAL CONSTRUCTION JOINT FOR TIE/GRADE BEAM — N.T.S.





22068-SITE PLAN **34** TYPICAL HORIZONTAL WALL & FOOTING REINFORCING DETAILS — N.T.S.



22068-SITE PLAN **24** TYPICAL STEP FOOTINGS — N.T.S.

PRAXIS Engineering
1009 Morro Street, Suite 205
San Luis Obispo, CA 93401
(805) 489-9900 | www.praxisci.com

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. ALLSHOUSE
No. 62506
STATE OF CALIFORNIA

FUCCIO RESIDENCE
1060 HILLCREST DR
CAMBRIA, CA 93428-2504
APN: 022-353-010

Client

No.	Date	Issuance or Revisions
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	11/27/24	PC #1

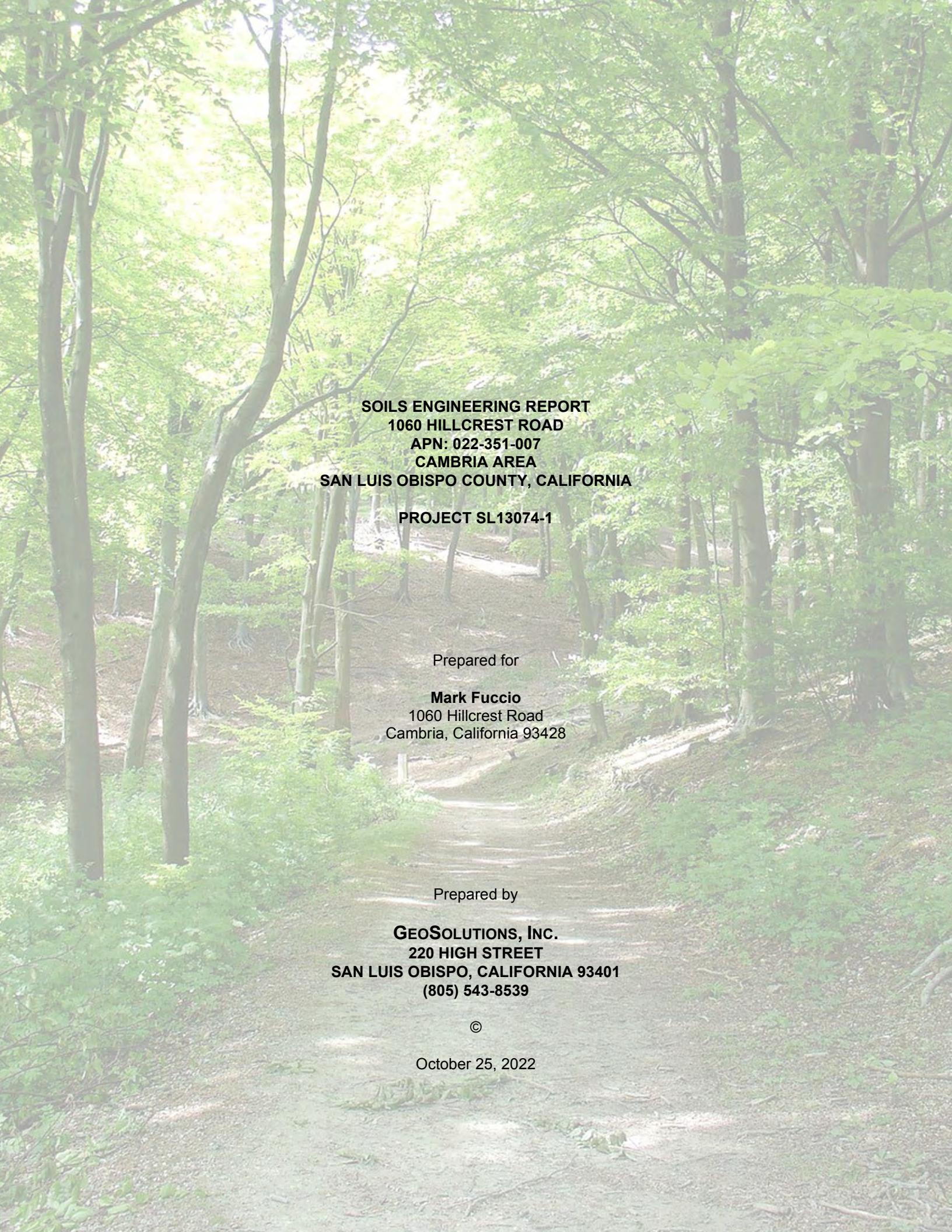
Project No.	Checked	Date
22068	MDA	03/21/23
Drawn	Approved	Scale
YR	MDA	AS SHOWN

TYPICAL DETAILS

Drawing Title

RW-2

Sheet 2 Of 2



SOILS ENGINEERING REPORT
1060 HILLCREST ROAD
APN: 022-351-007
CAMBRIA AREA
SAN LUIS OBISPO COUNTY, CALIFORNIA

PROJECT SL13074-1

Prepared for

Mark Fuccio
1060 Hillcrest Road
Cambria, California 93428

Prepared by

GEOSOLUTIONS, INC.
220 HIGH STREET
SAN LUIS OBISPO, CALIFORNIA 93401
(805) 543-8539

October 25, 2022

GEO SOLUTIONS

DATE:
October 25, 2022

PROJECT NUMBER:
SL13074-1

CLIENT:
Mark Fuccio
1060 Hillcrest Drive
Cambria, CA 93428

PROJECT NAME:
1060 Hillcrest Drive
APN: 022-351-007
Cambria area
San Luis Obispo County, CA

SOILS ENGINEERING REPORT

Dear Mr. Fuccio:

This Soils Engineering Report has been prepared for the proposed repair of the existing retaining wall located at 1060 Hillcrest Drive, APN: 022-351-007, Cambria area of San Luis Obispo County, California. Geotechnically, the site is suitable for the proposed development provided the recommendations in this report for site preparation, earthwork, foundations, slabs, retaining walls, and pavement sections are incorporated into the design.

It is anticipated that all foundations for the proposed repair of the existing retaining wall will be excavated into the competent formational material encountered at approximately 3.0 feet below ground surface during the field investigation. All foundations are to be excavated into uniform material to limit the potential for distress of the foundation systems due to differential settlement. If cuts steeper than allowed by State of California Construction Safety Orders for "Excavations, Trenches, Earthwork" are proposed, a numerical slope stability analysis may be necessary for temporary construction slopes.

Thank you for the opportunity to have been of service in preparing this report. If you have any questions, please contact the undersigned at (805) 543-8539.

Sincerely,
GeoSolutions, Inc.

REGISTERED PROFESSIONAL ENGINEER
KRAIG ROBERT CROZIER
No. C61361
CIVIL
STATE OF CALIFORNIA

Kraig R. Crozier, PE
Principal, C61361

220 High Street
San Luis Obispo CA 93401
805.543.8539

1021 Tama Lane, Suite 105
Santa Maria, CA 93455
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SOILS ENGINEERING REPORT
1060 HILLCREST ROAD
APN: 022-351-007
CAMBRIA AREA
SAN LUIS OBISPO COUNTY, CALIFORNIA

PROJECT SL13074-1

1.0 INTRODUCTION

This report presents the results of the geotechnical investigation for the proposed repair of the existing retaining wall located at 1060 Hillcrest Drive, APN: 022-351-007, Cambria area of San Luis Obispo County, California. See Figure 1: Site Location Map for the general location of the project area. Figure 1: Site Location Map was obtained from the computer program GIS Surfrider 1.8 (Elfelt, 2016).

1.1 Site Description

1060 Hillcrest Drive is located at 35.568210 degrees north latitude and -121.093499 degrees east longitude at a general elevation of 236 feet above mean sea level. The property is approximately irregular in shape and 0.32 acres in size. The nearest intersection is where Hillcrest Drive intersects Oakhurst Drive approximately to the southeast of the property. The project property will hereafter be referred to as the "Site." See Figure 2: Site Plan for the general layout of the Site.

The Site is situated on a hill side that drops to the southeast at an approximate gradient of 8 to 1 (horizontal to vertical). Surface drainage follows the topography to the southeast. A single-family residence currently occupies the Site and is to remain.

Figure 1: Site Location Map

1.2 Project Description

The proposed repair of the existing retaining wall is anticipated to be located in the back of the existing residence. At the time of the preparation of this report, the proposed repair of the existing retaining wall is anticipated to be constructed of reinforced concrete or concrete masonry units (CMU).

2.0 PURPOSE AND SCOPE

The purpose of this study was to explore and evaluate the surface and sub-surface soil conditions at the Site and to develop geotechnical information and design criteria. The scope of this study includes the following items:

1. A literature review of available published and unpublished geotechnical data pertinent to the project site including geologic maps, and available on-line or in-house aerial photographs.

2. A field study consisting of site reconnaissance and subsurface exploration in order to formulate a description of the sub-surface conditions at the Site.

3. Laboratory testing performed on representative soil samples that were collected during our field study.

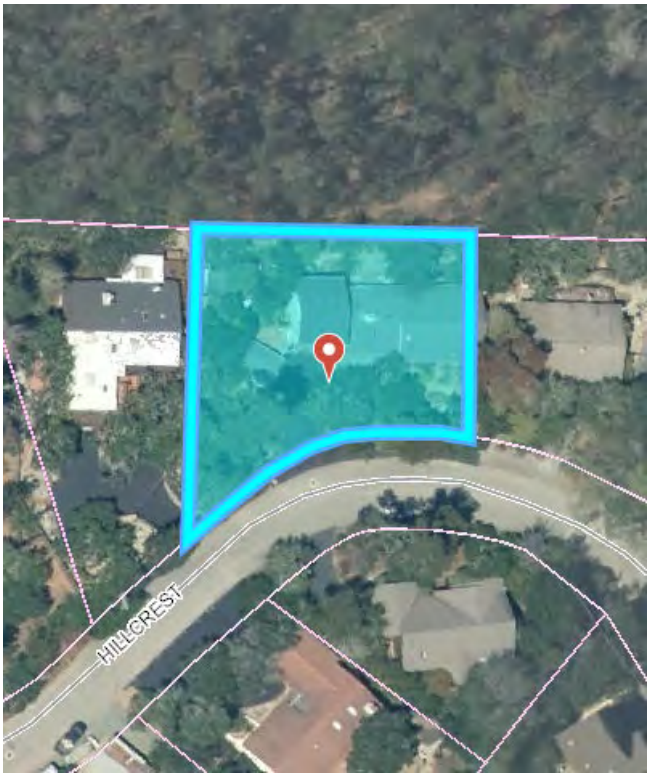


Figure 2: Site Plan

4. Engineering analysis of the data gathered during our literature review, field study, and laboratory testing.

5. Development of recommendations for site preparation and grading as well as geotechnical design criteria for foundations, retaining walls, and drainage facilities.

3.0 FIELD AND LABORATORY INVESTIGATION

The field investigation was conducted on September 22, 2022 using a shovel. One exploratory hand sample was advanced to a maximum depth of 4.5 feet below ground surface (bgs) at the approximate location indicated on Figure 3: Field Investigation. Sampling methods included obtaining bulk samples.

Data gathered during the field investigation suggest that the soil materials at the Site consist of colluvial soil overlying competent formational material. The surface material at the Site generally consisted of brown silty SAND (SM) encountered in a slightly moist condition to approximately 2.5 feet bgs. The sub-surface materials consisted of brown sandy GRAVEL (GP), interpreted as competent formational material.

Regional site geology was obtained from United States Geological Survey MapView internet application (USGS, 2013) which compiles existing geologic maps. Figure 4: Regional Geologic Map presents the geologic conditions in site vicinity as mapped on the *Geologic Map of the Cambria Quadrangle* (Dibblee, 2007). The majority of all underlying material at the Site was interpreted as unnamed sedimentary rocks and will hereafter be referred to as competent formational material.

Groundwater was not encountered during the field investigation. It should be expected that groundwater elevations may vary seasonally and with irrigation practices.

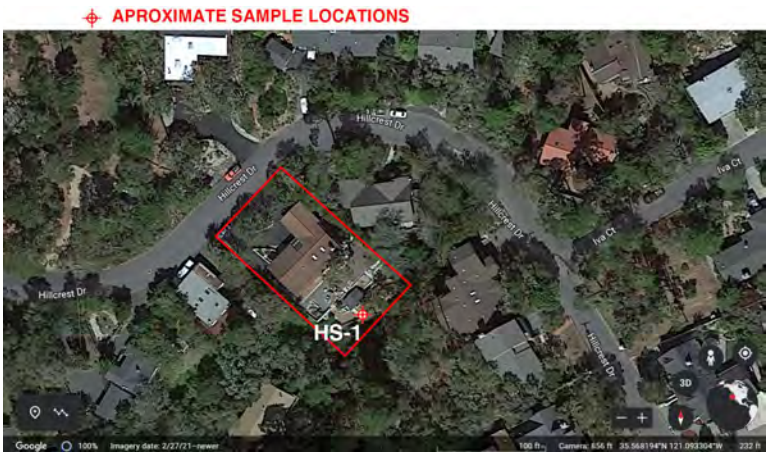
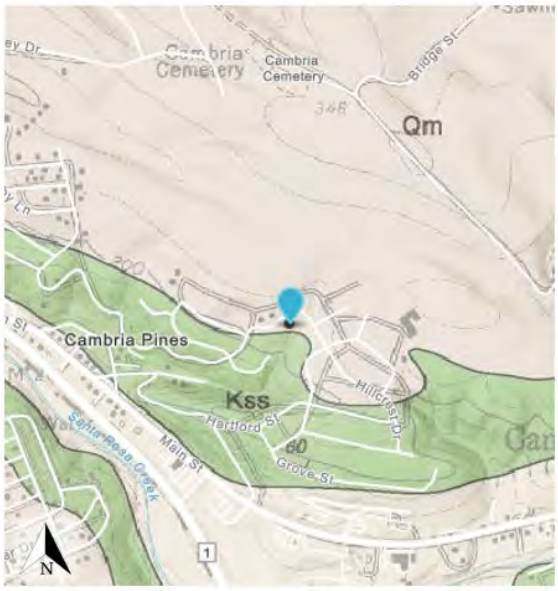


Figure 3: Field Investigation



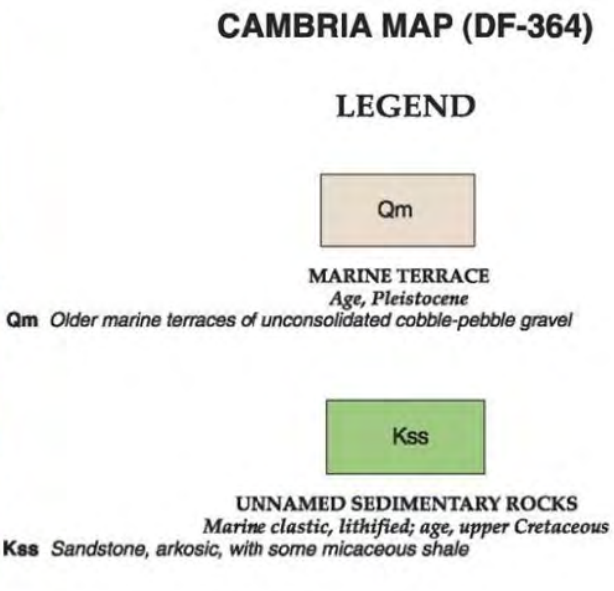


Figure 4: Regional Geologic Map

During the boring operations the soils encountered were continuously examined, visually classified, and sampled for general laboratory testing. A project engineer has reviewed a continuous log of the soils encountered at the time of field investigation. See **Appendix A** for the Boring Logs from the field investigation.

Laboratory tests were performed on soil samples that were obtained from the Site during the field investigation. The results of these tests are listed below in Table 1: Engineering Properties. Laboratory data reports and detailed explanations of the laboratory tests performed during this investigation are provided in **Appendix B**.

Table 1: Engineering Properties

Sample Name	Sample Description	USCS Specification	Expansion Index	Expansion Potential	Maximum Dry Density, γ_d (pcf)	Optimum Moisture (%)	Plasticity Index	Fines Content (%)
A	Brown Silty SAND	SM	0	Very Low	122.1	11.0	NP	24.1
B	Brown Sandy GRAVEL	GP	-	-	-	-	NP	-

4.0 SEISMIC DESIGN CONSIDERATIONS

Estimating the design ground motions at the Site depends on many factors including the distance from the Site to known active faults; the expected magnitude and rate of recurrence of seismic events produced on such faults; the source-to-site ground motion attenuation characteristics; and the Site soil profile characteristics. According to section 1613 of the 2019 CBC (CBSC, 2019), all structures and portions of structures should be designed to resist the effects of seismic loadings caused by earthquake ground motions in accordance with the ASCE 7: Minimum Design Loads for Buildings and Other Structures, hereafter referred to as ASCE 7-16 (ASCE, 2016). The Site soil profile classification (Site Class) can be determined by the average soil properties in the upper 100 feet of the Site profile and the criteria provided in Table 20.3-1 of ASCE 7-16.

Spectral response accelerations and peak ground accelerations, provided in this report were obtained using the computer-based Seismic Design Maps tool available from the Structural Engineers Association of California (SEAOC, 2019). This program utilizes the methods developed in ASCE 7-16 in conjunction with user-inputted Site location to calculate seismic design parameters and response spectra (both for period and displacement) for soil profile Site Classes A through E.

Site coordinates of 35.568210 degrees north latitude and -121.093499 degrees east longitude were used in the web-based probabilistic seismic hazard analysis (SEAOC, 2019). Based on the results from the in-situ tests performed during the field investigation, the Site was defined as **Site Class C**, “Very Dense Soil and Soft Rock” profile per ASCE7-16, Chapter 20. Relevant seismic design parameters obtained from the program are summarized in Table 2: Seismic Design Parameters.

Table 2: Seismic Design Parameters

Site Class	**C “Very Dense Soil and Soft Rock”**
Seismic Design Category	**D**
1-Second Period Design Spectral Response Acceleration, S_{D1}	**(See Note 1)**
Short-Period Design Spectral Response Acceleration, S_{DS}	**0.979g**
Site Specific MCE Peak Ground Acceleration, PGA_M	**0.663g**

Note 1: It is assumed that this design-period acceleration will not be required for the project.

5.0 LIQUEFACTION HAZARD ASSESSMENT

Liquefaction occurs when saturated cohesionless soils lose shear strength due to earthquake shaking. Ground motion from an earthquake may induce cyclic reversals of shear stresses of large amplitude. Lateral and vertical movement of the soil mass combined with the loss of bearing strength can result from this phenomenon. Liquefaction potential of soil deposits during earthquake activity depends on soil type, void ratio, groundwater conditions, the duration of shaking, and confining pressures on the potentially liquefiable soil unit. Fine, poorly graded loose sand, shallow groundwater, high intensity earthquakes, and long duration of ground shaking are the principal factors leading to liquefaction.

As the underlying material encountered at the Site was weathered rock rather than soil, there is no potential for liquefaction, seismically induced settlement or differential settlement. Rock material differs from soil in that it cannot be saturated, cohesion is considered infinite and relative density is not applicable. Assuming the rock material encountered at the Site accurately represents these conditions, liquefaction potential does not apply.

6.0 GENERAL SOIL-FOUNDATION DISCUSSION

It is anticipated that all foundations for the proposed repair of the existing retaining wall will be excavated into the competent formational material encountered at approximately 3.0 feet below ground surface during the field investigation. All foundations are to be excavated into uniform material to limit the potential for distress of the foundation systems due to differential settlement. If cuts steeper than allowed by State of California Construction Safety Orders for “Excavations, Trenches, Earthwork” are proposed, a numerical slope stability analysis may be necessary for temporary construction slopes.

7.0 CONCLUSIONS AND RECOMMENDATIONS

The Site is suitable for the proposed development provided the recommendations presented in this report are incorporated into the project plans and specifications.

The primary geotechnical concerns at the Site are:

1. The potential for differential settlement occurring between foundations supported on two soil materials having different settlement characteristics, such as native soil and competent formational material. Therefore, it is important that all of the foundations are founded in equally competent uniform material in accordance with this report.

7.1 Site Preparation

1. It is anticipated that foundations for the proposed repair of the existing retaining wall will be excavated into uniform competent formational material as observed and approved by a representative of GeoSolutions, Inc.

2. Soils within the area of the proposed wall should be cleared of loose material and debris, exposing competent material, as observed and approved by a representative of this firm.

3. In areas to receive surface improvements, following removal of loose materials and debris, the exposed surface should be scarified to a depth of 6 inches, moisture conditioned to slightly above optimum moisture content, and compacted to a minimum relative density of 90 percent (ASSTM D1557-12).

4. For any new proposed slab-on-grade areas, the pad area to receive slab-on-grade construction should be graded such that all slabs are supported on uniform competent material. The native material should be over-excavated beneath the slab at least 12

inches below existing grade or finished pad elevation, to competent material, or to one-half the depth of the deepest fill; whichever is greatest. The exposed surface should be scarified to a depth of 6 inches, moisture conditioned to slightly above optimum moisture content, and compacted to a minimum relative density of 90 percent (ASTM D1557-12).

5. The ground immediately adjacent to the foundation shall be sloped away from the building at a slope of not less than one unit vertical in 20 units horizontal (5 percent slope) for a minimum distance of 10 feet measured perpendicular to the exterior of the structure per Section 1804.3 of the 2019 CBC.

7.2 Conventional Foundations

1. Conventional continuous and spread footings with grade beams may be used for support of the proposed structure. Isolated pad footings should be a minimum of two feet square in size and are permitted for single floor loads only.

2. Minimum footing and grade beam sizes and depths in uniform competent formational material should conform to the following table, as observed and approved by a representative of GeoSolutions, Inc.

Table 3: Minimum Footing Recommendations

	Perimeter Footings
Minimum Width	12 inches (one story) 15 inches (two story)
Minimum Depth	12 inches (one story) 18 inches (two story)
Minimum Embedment into Competent Formational Material	12 inches
Minimum Reinforcing*	2 #4 bars (1 top / 1 bottom)
* Steel should be held in place by stirrups at appropriate spacing to ensure proper positioning of the steel (see WRI Design of Slab-on-Ground Foundations and ACI 318, Section 26.6.6 – Placing Reinforcement).	

3. Minimum reinforcing for footings should conform to the recommendations provided in Table 3: Minimum Footing Recommendations which meets the specifications of Section 1808.6 of the 2019 California Building Code for the soil conditions at the Site. Reinforcing steel should be held in place by stirrups at appropriate spacing to ensure proper positioning of the steel in accordance with WRI Design of Slab-on-Ground Foundations, and ACI 318, Section 26.6.6 – Placing Reinforcement.

4. A representative of this firm should observe and approve all foundation excavations for required embedment depth prior to the placement of reinforcing steel and/or concrete. Concrete should be placed only in excavations that are free of loose, soft soil and debris and that have been lightly pre-moistened, with no associated testing required.

5. An allowable dead plus live load bearing pressure of **2,500 psf** may be used for the design of footings founded in uniform competent formational material.

6. Allowable bearing capacities may be increased by one-third when transient loads such as wind or seismicity are included.

7. A total settlement of less than 1 inch and a differential settlement of less than 1 inch in 30 feet are anticipated.

8. Lateral forces on structures may be resisted by passive pressure acting against the sides of shallow footings and/or friction between the uniform competent formational material and the bottom of the footings. For resistance to lateral loads, a friction factor of **0.40** may be utilized for sliding resistance at the base of footings extending a minimum of 12 inches into uniform competent formational material. A passive pressure of **375-pcf** equivalent fluid weight may be used against the side of shallow footings in uniform competent formational material. If friction and passive pressures are combined to resist lateral forces acting on shallow footings, the lesser value should be reduced by 50 percent.

9. Foundation excavations should be observed and approved by a representative of this firm prior to the placement of formwork, reinforcing steel and/or concrete.

10. Foundation design should conform to the requirements of Chapter 18 of the latest edition of the CBC (CBSC, 2019).

11. The base of all grade beams and footings should be level and stepped as required to accommodate any change in grade while still maintaining the minimum required footing embedment and slope setback distance. Footings adjacent to descending slopes should be deepened as necessary to maintain a minimum horizontal distance of 5 feet from the face of slope.

7.3 Slab-On-Grade Construction

1. Concrete slabs-on-grade and flatwork should not be placed directly on unprepared native materials. Preparation of sub-grade to receive concrete slabs-on-grade and flatwork should be processed as discussed in the preceding sections of this report. Concrete slabs should be placed only over sub-grade that is free of loose, soft soil and debris and that has been lightly pre-moistened, with no associated testing required.

2. Concrete slabs-on-grade should be in conformance with the recommendations provided in Table 4: Minimum Slab Recommendations. Reinforcing should be placed on-center both ways at or slightly above the center of the structural section. Reinforcing bars should have a minimum clear cover of 1.5 inches. Where lapping of the slab steel is required, laps in adjacent bars should be staggered a minimum of every five feet (see WRI Design of Slab-on-Ground Foundations, Steel Placement). The recommended reinforcement may be used for anticipated uniform floor loads not exceeding 200 psf. If floor loads greater than 200 psf are anticipated, a Structural Engineer should evaluate the slab design.

Table 4: Minimum Slab Recommendations

Minimum Thickness	4 inches
Reinforcing*	#3 bars at 18 inches on-center each way
* Where lapping of the slab steel is required, laps in adjacent bars should be staggered a minimum of every five feet (see WRI/CSRI-81 recommendations for Steel Placement, Section 2).	

3. Concrete for all slabs should be placed at a maximum slump of less than 5 inches. Excessive water content is the major cause of concrete cracking. If fibers are used to aid in the control of cracking, a water-reducing admixture may be added to the concrete to increase slump while maintaining a water/cement ratio, which will limit excessive shrinkage. Control joints should be constructed as required to control cracking.

4. Where concrete slabs-on-grade are to be constructed for interior conditioned spaces, the slabs should be underlain by a minimum of four inches of clean free-draining material, such as a ¾-inch coarse aggregate mix, to serve as a cushion and a capillary break. Where moisture susceptible storage or floor coverings are anticipated, a 15-mil Stego Wrap membrane (or equivalent installed per manufacturer's specifications) should be placed between the free-draining material and the slab to minimize moisture condensation under the floor covering. See Figure 5: Sub-Slab Detail for the placement of under-slab drainage material. It is suggested, but not required, that a two-inch thick sand layer be placed on top of the membrane to assist in the curing of the concrete, increasing the depth of the under-slab material to a total of six inches. The sand should be lightly moistened prior to placing concrete.

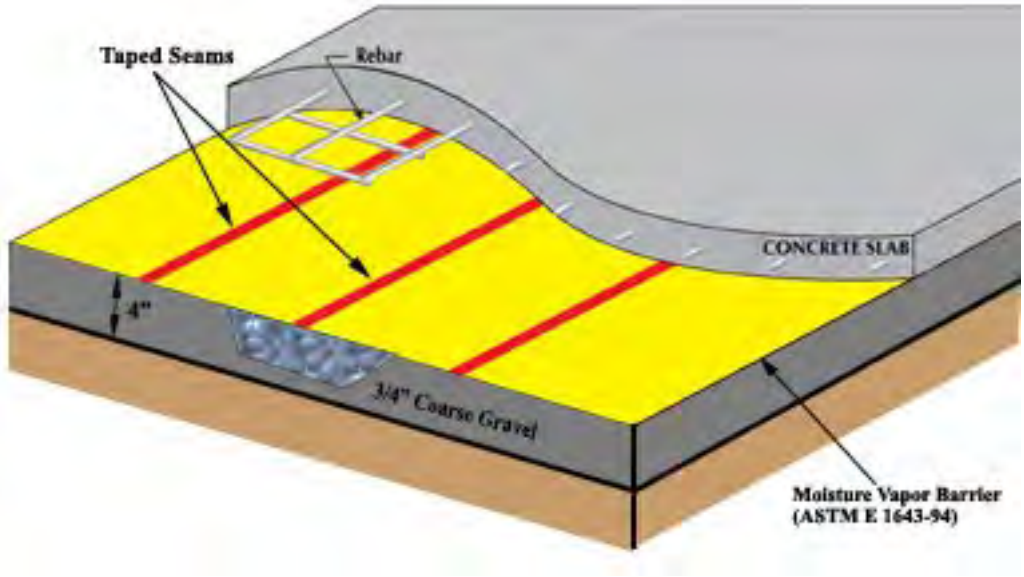


Figure 5: Sub-Slab Detail

5. It should be noted that for a vapor barrier installation to conform to manufacturer's specifications, sealing of penetrations, joints and edges of the vapor barrier membrane are typically required. As required by the California Building Code, joints in the vapor barrier should be lapped a minimum of 6 inches. If the installation is not performed in accordance with the manufacturer's specifications, there is an increased potential for water vapor to affect the concrete slabs and floor coverings.

6. The most effective method of reducing the potential for moisture vapor transmission through concrete slabs-on-grade would be to place the concrete directly on the surface of the vapor barrier membrane. However, this method requires a concrete mix design specific to this application with low water-cement ratio in addition to special concrete finishing and curing practices, to minimize the potential for concrete cracks and surface defects. The contractor should be familiar with current techniques to finish slabs poured directly onto the vapor barrier membrane.

7. Moisture condensation under floor coverings has become critical due to the use of water-soluble adhesives. Therefore, it is suggested that moisture sensitive slabs not be constructed during inclement weather conditions.

7.4 Retaining Walls

1. Retaining walls should be designed to resist lateral pressures from adjacent soils and surcharge loads applied behind the walls. We recommend using the lateral pressures presented in Table 5: Retaining Wall Design Parameters and Figure 6: Retaining Wall Detail for the design of retaining walls at the Site. The Active Case may be used for the design of unrestrained retaining walls, and the At-Rest Case may be used for the design of restrained retaining walls.

Table 5: Retaining Wall Design Parameters

Lateral Pressure and Condition	Equivalent Fluid Pressure, pcf
Static, Active Case, Native ($\gamma' K_A$)	40
Static, At-Rest Case, Native ($\gamma' K_O$)	60
Static, Passive Case, Uniform Competent Formational Material ($\gamma' K_P$)	375

2. The above values for equivalent fluid pressure are based on retaining walls having level retained surfaces, having an approximately vertical surface against the retained material, and retaining granular backfill material or engineered fill composed of native soil within the active wedge. See Figure 6: Retaining Wall Detail and Figure 7: Retaining Wall Active and Passive Wedges for a description of the location of the active wedge behind a retaining wall.

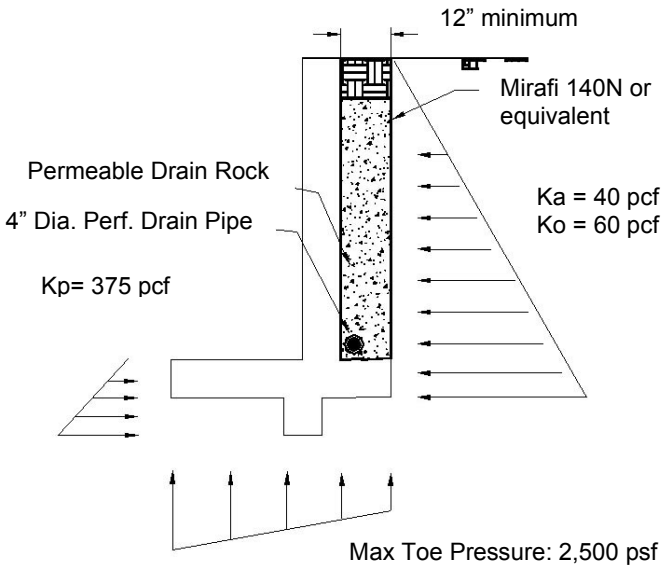


Figure 6: Retaining Wall Detail

3. Proposed retaining walls having a retained surface that slopes upward from the top of the wall should be designed for an additional equivalent fluid pressure of 1 pcf for the active case and 1.5 pcf for the at-rest case, for every degree of slope inclination.

4. We recommend that the proposed retaining walls at the Site have an approximately vertical surface against the retained material. If the proposed retaining walls are to have sloped surfaces against the retained material, the project designers should contact the Soils Engineer to determine the appropriate lateral earth pressure values for retaining walls located at the Site.

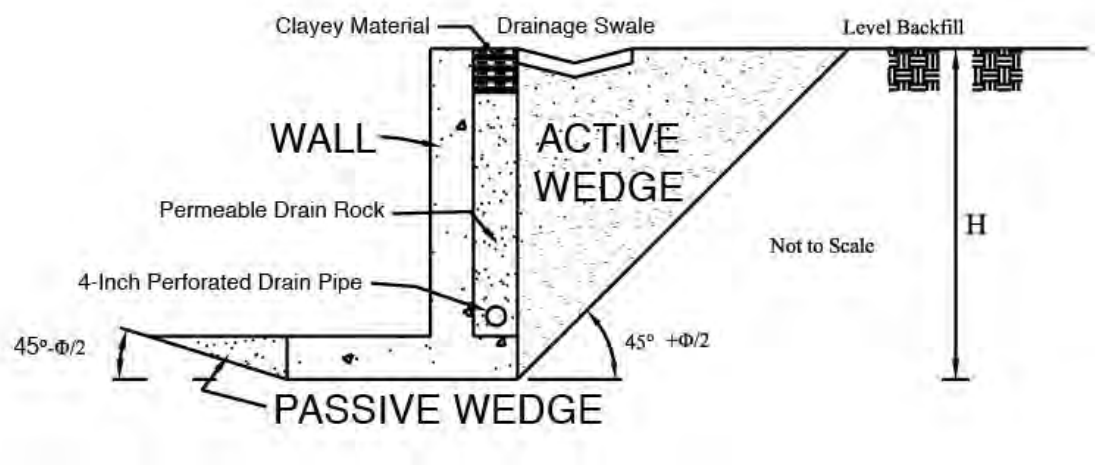


Figure 7: Retaining Wall Active and Passive Wedges

5. Retaining wall foundations should be founded a minimum of 12 inches below lowest adjacent grade with a minimum embedment of 12 inches in uniform competent formational material as observed and approved by a representative of GeoSolutions, Inc. A coefficient of friction of **0.40** may be used between uniform competent formational material and concrete footings. Project designers may use a maximum toe pressure of **2,500 psf** for the design of retaining wall footings founded in uniform competent formational material.

6. For earthquake conditions, retaining walls greater than 6 feet in height should be designed to resist an additional seismic lateral soil pressure of **20 pcf** equivalent fluid pressure for unrestrained walls (active condition). The pressure resultant force from earthquake loading should be assumed to act a distance of $^1/_3H$ above the base of the retaining wall, where *H* is the height of the retaining wall. Seismic active lateral earth pressure values were determined using the simplified dynamic lateral force component (SEAOC 2010) utilizing the design peak ground acceleration, PGA_M, discussed in Section 4.0 (**PGA_M = 0.663g**). The dynamic increment in lateral earth pressure due to earthquakes should be considered during the design of retaining walls at the Site. Based on research presented by Dr. Marshall Lew (Lew et al., 2010), lateral pressures associated with seismic forces should not be applied to restrained walls (at-rest condition).

7. Seismically induced forces on retaining walls are considered to be short-term loadings. Therefore, when performing seismic analyses for the design of retaining wall footings, we recommend that the allowable bearing pressure and the passive pressure acting against the sides of retaining wall footings be increased by a factor of one-third.

8. In addition to the static lateral soil pressure values reported in Table 5: Retaining Wall Design Parameters, the retaining walls at the Site should be designed to support any design live load, such as from vehicle and construction surcharges, etc., to be supported by the wall backfill. If construction vehicles are required to operate within 10 feet of a retaining wall, supplemental pressures will be induced and should be taken into account in the design of the retaining wall.

9. The recommended lateral earth pressure values are based on the assumption that sufficient sub-surface drainage will be provided behind the walls to prevent the build-up of hydrostatic pressure. To achieve this we recommend that a granular filter material be placed behind all proposed walls. The blanket of granular filter material should be a

minimum of 12 inches thick and should extend from the bottom of the wall to 12 inches from the ground surface. The top 12 inches should consist of moisture conditioned, compacted, clayey soil. Neither spread nor wall footings should be founded in the granular filter material used as backfill.

10. A 4-inch diameter perforated or slotted drainpipe (ASTM D1785 PVC) should be installed near the bottom of the filter blanket with perforations facing down. The drainpipe should be underlain by at least 4 inches of filter type material and should daylight to discharge in suitably projected outlets with adequate gradients. The filter material should consist of a clean free-draining aggregate, such as a coarse aggregate mix. If the retaining wall is part of a structural foundation, the drainpipe must be placed below finished slab sub-grade elevation.

11. The filter material should be encapsulated in a permeable geotextile fabric. A suitable permeable geotextile fabric, such as non-woven needle-punched Mirafi 140N or equal, may be utilized to encapsulate the retaining wall drain material and should conform to Caltrans Standard Specification 88-1.03 for underdrains.

12. For hydrostatic loading conditions (i.e. no free drainage behind retaining wall), an additional loading of 45-pcf equivalent fluid weight should be added to the active and at-rest lateral earth pressures. If it is necessary to design retaining structures for submerged conditions, the allowed bearing and passive pressures should be reduced by 50 percent. In addition, soil friction beneath the base of the foundations should be neglected.

13. Precautions should be taken to ensure that heavy compaction equipment is not used adjacent to walls, so as to prevent undue pressure against, and movement of the walls.

14. The use of water-stops/impermeable barriers should be used for any basement construction, and for building walls that retain earth. Damproofing and waterproofing shall meet the minimum standards of Section 1805 of the 2019 California Building Code.

8.0 ADDITIONAL GEOTECHNICAL SERVICES

The recommendations contained in this report are based on a limited number of borings and on the continuity of the sub-surface conditions encountered. GeoSolutions, Inc. assumes that it will be retained to provide additional services during future phases of the proposed project. These services would be provided by GeoSolutions, Inc. as required by the County of San Luis Obispo, the 2019 CBC, and/or industry standard practices. These services would be in addition to those included in this report and would include, but are not limited to, the following services:

1. Consultation during plan development.

2. Plan review of grading and foundation documents prior to construction and a report certifying that the reviewed plans are in conformance with our geotechnical recommendations.

3. Construction inspections and testing, as required, during all grading and excavating operations beginning with the stripping of vegetation at the Site, at which time a site meeting or pre-job meeting would be appropriate.

4. Special inspection services during construction of reinforced concrete, structural masonry, high strength bolting, epoxy embedment of threaded rods and reinforcing steel, and welding of structural steel.

5. Preparation of construction reports certifying that building pad preparation and foundation excavations are in conformance with our geotechnical recommendations.

6. Preparation of special inspection reports as required during construction.

7. In addition to the construction inspections listed above, section 1705.6 of the 2019 CBC (CBSC, 2019) requires the following inspections by the Soils Engineer for controlled fill thicknesses greater than 12 inches as shown in Table 6: Required Special Inspections and Tests of Soils:

Table 6: Required Special Inspections and Tests of Soils

Verification and Inspection Task	Continuous During Task Listed	Periodically During Task Listed
1. Verify materials below footings are adequate to achieve the design bearing capacity.	-	X
2. Verify excavations are extended to proper depth and have reached proper material.	-	X
3. Perform classification and testing of controlled fill materials.	-	X
4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of controlled fill.	X	-
5. Prior to placement of controlled fill, observe sub-grade and verify that site has been prepared properly.	-	X

9.0 LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations of this report are based upon the assumption that the soil conditions do not deviate from those disclosed during our study. Should any variations or undesirable conditions be encountered during the development of the Site, GeoSolutions, Inc. should be notified immediately and GeoSolutions, Inc. will provide supplemental recommendations as dictated by the field conditions.

2. This report is issued with the understanding that it is the responsibility of the owner or his/her representative to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project, and incorporated into the project plans and specifications. The owner or his/her representative is responsible to ensure that the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

3. As of the present date, the findings of this report are valid for the property studied. With the passage of time, changes in the conditions of a property can occur whether they are due to natural processes or to the works of man on this or adjacent properties. Therefore, this report should not be relied upon after a period of 3 years without our review nor should it be used or is it applicable for any properties other than those studied. However many events such as floods, earthquakes, grading of the adjacent properties and building and municipal code changes could render sections of this report invalid in less than 3 years.

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REFERENCES

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APPENDIX A

Field Investigation

Soil Classification Chart

Boring Logs

FIELD INVESTIGATION

The field investigation was conducted on September 22, 2022 using a shovel. The surface and sub-surface conditions were studied by advancing one exploratory hand sample. This exploration was conducted in accordance with presently accepted geotechnical engineering procedures consistent with the scope of the services authorized to GeoSolutions, Inc.

A shovel was used to advance one exploratory hand sample near the approximate location indicated on Figure 3: Field Investigation. The field observation was performed under the direction of the project engineer. A representative of GeoSolutions, Inc. maintained a log of the soil conditions and obtained soil samples suitable for laboratory testing. The soils were classified in accordance with the Unified Soil Classification System. See the Soil Classification Chart in this appendix.

Disturbed bulk samples are obtained from hand sample operations. The bulk samples are selected for classification and testing purposes and may represent a mixture of soils within the noted depths. Recovered samples are placed in transport containers and returned to the laboratory for further classification and testing.

Logs of the borings showing the approximate depths and descriptions of the encountered soils, applicable geologic structures, and the results of laboratory tests are presented in this appendix. The logs represent the interpretation of field logs and field tests as well as the interpolation of soil conditions between samples. The results of laboratory observations and tests are also included in the boring logs. The stratification lines recorded in the boring logs represent the approximate boundaries between the surface soil types. However, the actual transition between soil types may be gradual or varied.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS		LABORATORY CLASSIFICATION CRITERIA		GROUP SYMBOLS	PRIMARY DIVISIONS
COARSE GRAINED SOILS More than 50% retained on No. 200 sieve	GRAVELS More than 50% of coarse fraction retainined on No. 4 (4.75mm) sieve	Clean gravels (less than 5% fines*)	C_u greater than 4 and C_z between 1 and 3	GW	Well-graded gravels and gravel-sand mixtures, little or no fines
			Not meeting both criteria for GW	GP	Poorly graded gravels and gravel-sand mixtures, little or no fines
		Gravel with fines (more than 12% fines*)	Atterberg limits plot below "A" line or plasticity index less than 4	GM	Silty gravels, gravel-sand-silt mixtures
			Atterberg limits plot below "A" line and plasticity index greater than 7	GC	Clayey gravels, gravel-sand-clay mixtures
	SANDS More than 50% of coarse fraction passes No. 4 (4.75mm) sieve	Clean sand (less than 5% fines*)	C_u greater than 6 and C_z between 1 and 3	SW	Well graded sands, gravely sands, little or no fines
			Not meeting both criteria for SW	SP	Poorly graded sands and gravelly and sands, little or no fines
		Sand with fines (more than 12% fines*)	Atterberg limits plot below "A" line or plasticity index less than 4	SM	Silty sands, sand-silt mixtures
			Atterberg limits plot above "A" line and plasticity index greater than 7	SC	Clayey sands, sand-clay mixtures
FINE GRAINED SOILS 50% or more passes No. 200 sieve	SILTS AND CLAYS (liquid limit less than 50)	Inorganic soil	PI < 4 or plots below "A"-line	ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands
		Inorganic soil	PI > 7 and plots on or above "A" line**	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		Organic Soil	LL (oven dried)/LL (not dried) < 0.75	OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS (liquid limit 50 or more)	Inorganic soil	Plots below "A" line	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts
		Inorganic soil	Plots on or above "A" line	CH	Inorganic clays of high plasticity, fat clays
		Organic Soil	LL (oven dried)/LL (not dried) < 0.75	OH	Organic silts and organic clays of high plasticity
Peat	Highly Organic	Primarily organic matter, dark in color, and organic odor		PT	Peat, muck and other highly organic soils

*Fines are those soil particles that pass the No. 200 sieve. For gravels and sands with between 5 and 12% fines, use of dual symbols is required (i.e. GW-GM, GW-GC, GP-GM, or GP-GC).

**If the plasticity index is between 4 and 7 and it plots above the "A" line, then dual symbols (i.e. CL-ML) are required.

the "A" line, then dual symbols (i.e. CL-ML) are required.

CONSISTENCY

CLAYS AND PLASTIC SILTS	STRENGTH TON/SQ. FT ++	BLOWS/ FOOT +
VERY SOFT	0 - 1/4	0 - 2
SOFT	1/4 - 1/2	2 - 4
FIRM	1/2 - 1	4 - 8
STIFF	1 - 2	8 - 16
VERY STIFF	2 - 4	16 - 32
HARD	Over 4	Over 32

RELATIVE DENSITY

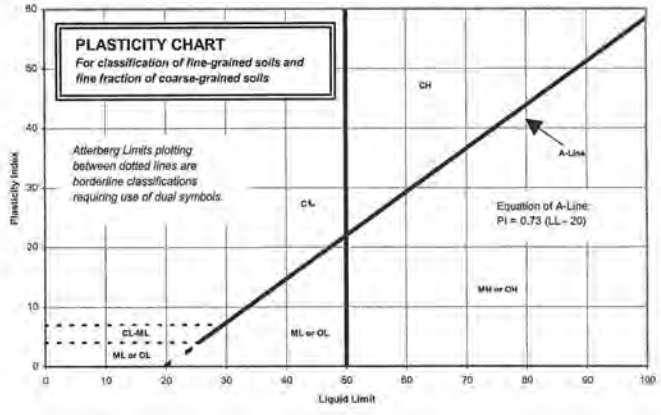
SANDS, GRAVELS AND NON-PLASTIC SILTS	BLOWS/ FOOT +
VERY LOOSE	0 - 4
LOOSE	4 - 10
MEDIUM DENSE	10 - 30
DENSE	30 - 50
VERY DENSE	Over 50

+ Number of blows of a 140-pound hammer falling 30-inches to drive a 2-inch O.D. (1-3/8-inch I.D.) split spoon (ASTM D1586).

++ Unconfined compressive strength in tons/sq.ft. as determined by laboratory testing or approximated by the standard penetration test (ASTM D1586), pocket penetrometer, torvane, or visual observation.

CLASSIFICATIONS BASED ON PERCENTAGE OF FINES

Less than 5%, Pass No. 200 (75mm)sieve — GW, GP, SW, SP
More than 12% Pass N. 200 (75 mm) sieve — GM, GC, SM, SC
5%-12% Pass No. 200 (75 mm) sieve — Borderline Classification requiring use of dual symbols



Drilling Notes:

1. Sampling and blow counts
   a. California Modified – number of blows per foot of a 140 pound hammer falling 30 inches
   b. Standard Penetration Test – number of blows per 12 inches of a 140 pound hammer falling 30 inches

Types of Samples:
X – Sample
SPT - Standard Penetration
CA - California Modified
N - Nuclear Gauge
PO – Pocket Penetrometer (tons/sq.ft.)

GEO SOLUTIONS
220 High Street, San Luis Obispo, CA 93401
Phone: 805-543-8539
1021 Tama Lane, Ste 105, Santa Maria, CA 93455
Phone: 805-614-6333
201 S. Milpas St, Ste 103, Santa Barbara, CA 93103
Phone: 805-966-2200

BORING LOG

BORING NO. HS-1
JOB NO. SL13074-1

PROJECT INFORMATION

PROJECT:	**1060 Hillcrest Drive**
DRILLING LOCATION:	**See Figure 3, Field Investigation**
DATE DRILLED:	**9/22/22**
LOGGED BY:	**B. Jagger**

DRILLING INFORMATION

DRILL RIG:	**Shovel**
HOLE DIAMETER:	**6 inches**
SAMPLING METHOD:	**Bulk Samples**
APPROX. ELEVATION:	**Not Recorded**

Depth of Groundwater: **Not Encountered** Boring Terminated: **4.5 feet**

DEPTH	LITHOLOGY	USCS	SOIL DESCRIPTION	SAMPLE ID	SAMPLERS TYPE	N (BLOWS / FT)	(N1) 60	MOISTURE CONTENT (%)	FINES CONTENT (%)	PLASTICITY INDEX (PI)	EXPANSION INDEX (EI)	OPTIMUM WATER CONTENT (%)	MAXIMUM DRY DENSITY (pcf)	COHESION, C (psf)	FRICTION ANGLE, (degrees)
0–2.5		SM	Silty SAND: brown, slightly moist, many roots	A					24.1	NP	0	11.0	122.1	221	28.8
2.5–4.5		GP	Sandy GRAVEL: brown	B						NP					

APPENDIX B

Laboratory Testing

Soil Test Reports

LABORATORY TESTING

This appendix includes a discussion of the test procedures and the laboratory test results performed as part of this investigation. The purpose of the laboratory testing is to assess the engineering properties of the soil materials at the Site. The laboratory tests are performed using the currently accepted test methods, when applicable, of the American Society for Testing and Materials (ASTM).

Undisturbed and disturbed bulk samples used in the laboratory tests are obtained from various locations during the course of the field exploration, as discussed in **Appendix A** of this report. Each sample is identified by sample letter and depth. The Unified Soils Classification System is used to classify soils according to their engineering properties. The various laboratory tests performed are described below:

Direct Shear Tests of Soils Under Consolidated Drained Conditions (ASTM D3080) is performed on undisturbed and remolded samples representative of the foundation material. The samples are loaded with a predetermined normal stress and submerged in water until saturation is achieved. The samples are then sheared horizontally at a controlled strain rate allowing partial drainage. The shear stress on the sample is recorded at regular strain intervals. This test determines the resistance to deformation, which is shear strength, inter-particle attraction or cohesion c, and resistance to interparticle slip called the angle of internal friction ϕ.

Particle Size Analysis of Soils (ASTM D422) is used to determine the particle-size distribution of fine and coarse aggregates. In the test method the sample is separated through a series of sieves of progressively smaller openings for determination of particle size distribution. The total percentage passing each sieve is reported and used to determine the distribution of fine and coarse aggregates in the sample.

GeoSolutions, Inc. | **LABORATORY SUMMARY REPORT SHEET** | **(805) 543 - 8539**

Project: 1060 Hillcrest Drive — Lab #: 11946

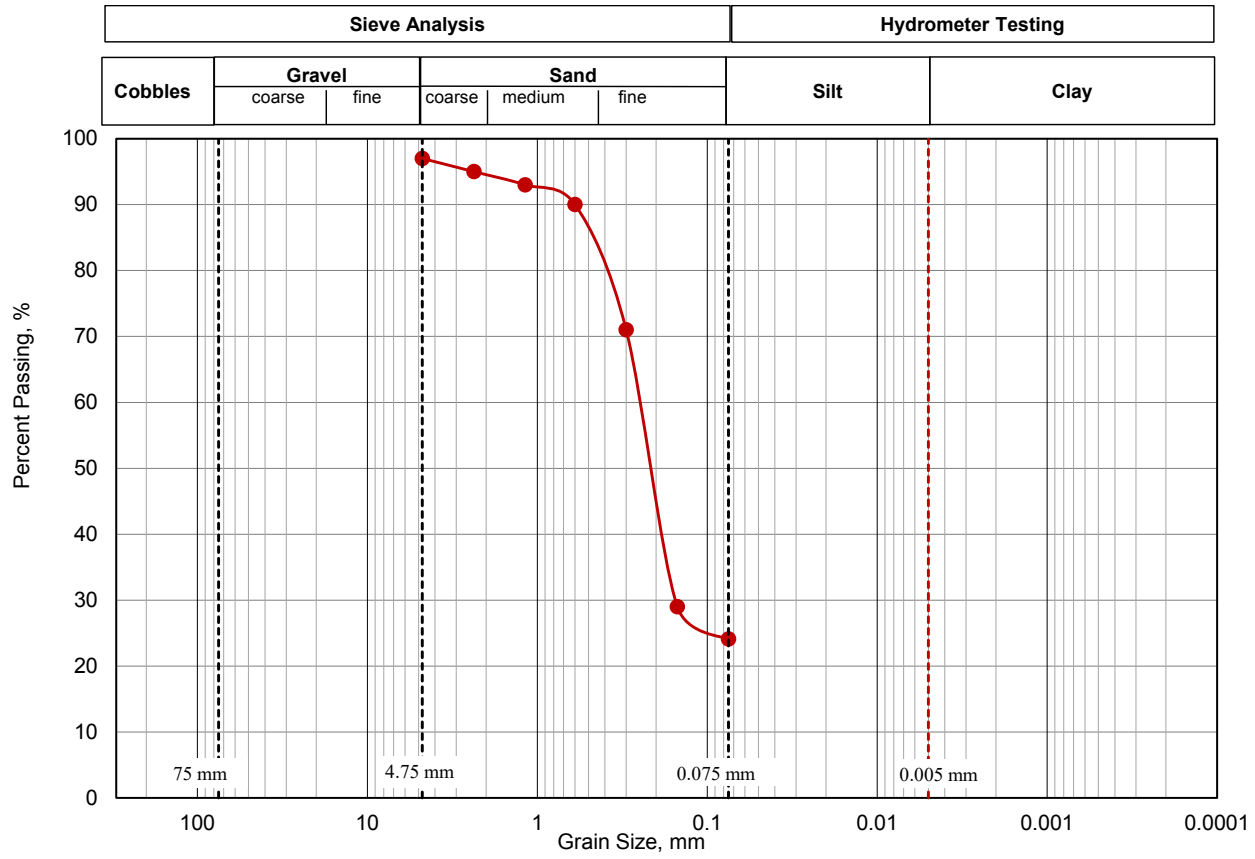
Client: Mark Fuccio — Date: 10/10/22

Job #: SL13074-1 — Checked By: AE

Sample ID			Material Description	USCS Specifications	Dry Density (pcf)	Moisture Content (%)	% Fines	Atterberg Limits		Compaction Curve		Direct Shear (Peak)		Direct Shear (Ultimate)		Expansion Index	R-Value
Boring Hole	Depth (ft)	Sample						LL	PI	γ_{d_max} (pcf)	ω_{c_opt} (%)	C (psf)	ø (deg)	C (psf)	ø (deg)		
HS-1	0-1.5'	A	Brown Silty SAND	SM			24.1	NA	NP	122.1	11.0	102	32.4	221	28.8	0	
HS-1	2.5-3.5'	B	Brown Sandy GRAVEL	GP				NA	NP								

GeoSolutions, Inc. | **PARTICLE SIZE ANALYSIS SUMMARY REPORT** | **(805) 543-8539**

Project: 1060 Hillcrest Drive
Client: Mark Fuccio — Date: 10/10/2022
Project #: SL13074-1 — Checked By: AE



LEGEND symbol	location	depth	SAMPLE DESCRIPTION	PLASTICITY (FINER FRACTION) Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Expansion Index (EI)
●	HS-1	0-1.5'	Brown Silty SAND	NA	NA	NP	0

PARTICLE SIZE ANALYSIS SUMMARY

LEGEND symbol	location	depth	D_{100}	D_{60}	D_{30}	D_{10}	C_u	C_c	% Gravel	% Sand	% Passing No. 200	% Silt	% Clay
●	HS-1	0-1.5'	#N/A	0.261	0.154	NA	NA	NA	3.0	72.9	24.1	NA	NA

Remarks: Testing was performed in accordance with ASTM D422 and D4318 (where applicable)

NP - non-plastic
NA - not available (could not be calculated from data)

D_{100} - grain size diameter corresponding to 100% passing (mm)
D_{60} - grain size diameter corresponding to 60% passing (mm)
D_{30} - grain size diameter corresponding to 30% passing (mm)
D_{10} - grain size diameter corresponding to 30% passing (mm)

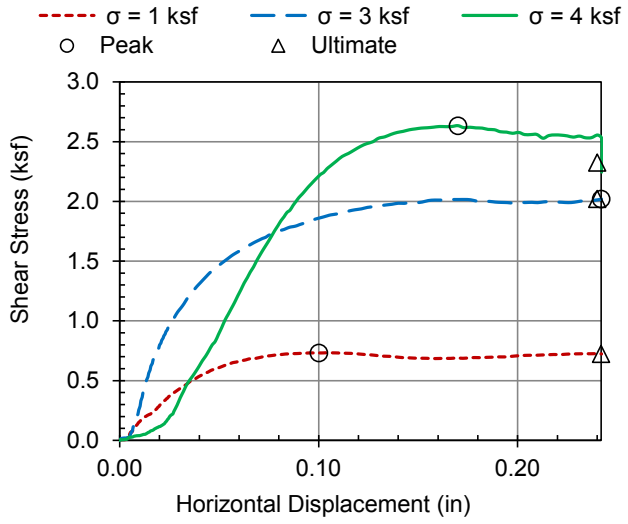
C_c - coefficient of curvature: $C_c = (D_{30})^2 / (D_{60} * D_{10})$
Cu - coefficient of uniformity: $C_u = D_{60} / D_{10}$

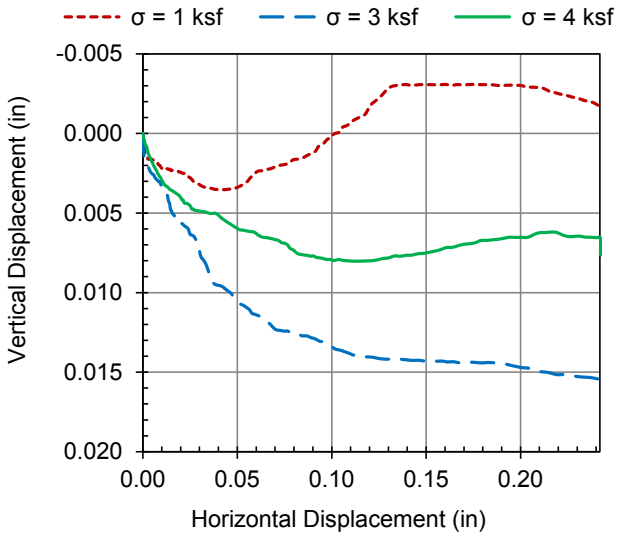
GeoSolutions, Inc.	DIRECT SHEAR TEST SUMMARY REPORT (ASTM D3080)	(805) 543-8539

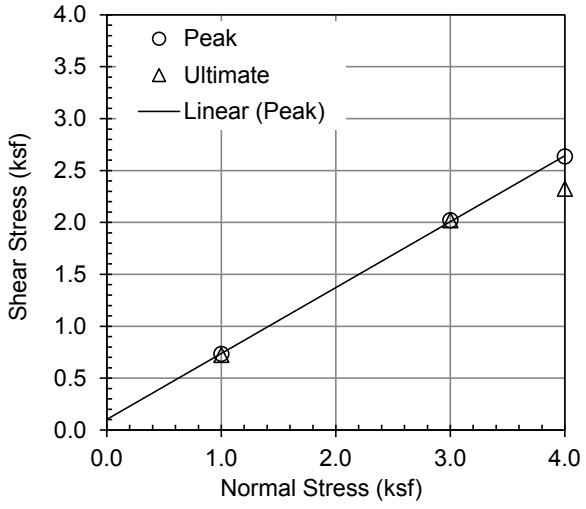
Project:	1060 Hillcrest Drive			Project #:	SL13074-1
Client:	Mark Fuccio			Date Tested:	10/5/2022
Sample:	A	Depth:	0.0 to 1.5 Feet	Lab #:	11946
Location:	HS-1			Checked By:	AE

MATERIAL DESCRIPTION	LL	PL	PI	% passing No. 200	Gs *	Sample Type
Brown Silty SAND	NA	NA	NP	24.1	2.7	remolded

* Gs = assumed; nm = not measured







Initial Conditions	Specimen No. 1	2	3
Dry Density	108.0	108.0	108.0
Water Content (%)	15.0	15.0	15.0
Diameter (in)	2.42	2.42	2.42
Sample Height (in)	1.00	1.00	1.00

Test Data	Specimen No. 1	2	3
Normal Stress (ksf)	1.00	3.00	4.00
Peak Shear Stress (ksf)	0.733	2.020	2.634
Horiz. Displacenent at Peak Shear (in)	0.100	0.242	0.170
Ultimate Shear Stress (ksf)	0.723	2.020	2.325
Horiz. Displ. at Ult. Shear (in)	0.242	0.240	0.240
Rate of Deformation (in/min)	0.024	0.024	0.024

	Peak	Ultimate
Angle of Internal Friction, $ø_{peak}$ (degrees):	**32.4**	**28.8**
Cohesion, C_{peak} (psf)	**102**	**221**

Remarks: Saturated

APPENDIX C

Seismic Hazard Analysis

Design Map Summary (SEAOC, 2019)

SEISMIC HAZARD ANALYSIS

According to section 1613 of the 2019 CBC (CBSC, 2019), all structures and portions of structures should be designed to resist the effects of seismic loadings caused by earthquake ground motions in accordance with the *ASCE 7: Minimum Design Loads for Buildings and Other Structures*, hereafter referred to as ASCE7-16 (ASCE, 2016). Estimating the design ground motions at the Site depends on many factors including the distance from the Site to known active faults; the expected magnitude and rate of recurrence of seismic events produced on such faults; the source-to-site ground motion attenuation characteristics; and the Site soil profile characteristics. As per section 1613.2.2 of the 2019 CBC, the Site soil profile classification is determined by the average soil properties in the upper 100 feet of the Site profile and can be determined based on the criteria provided in Table 20.3-1 of ASCE7-16.

ASCE7-16 provides recommendations for estimating site-specific ground motion parameters for seismic design considering a Risk-targeted Maximum Considered Earthquake (MCE_R) in order to determine *design spectral response accelerations* and a Maximum Considered Earthquake Geometric Mean (MCE_G) in order to determine probabilistic geometric mean *peak ground accelerations*.

Spectral accelerations from the MCE_R are based on a 5% damped acceleration response spectrum and a 1% probability of exceedance in 50 years. *Maximum* short period (S_s) and 1-second period (S_1) spectral accelerations are interpolated from the MCE_R-based ground motion parameter maps for bedrock, provided in ASCE7-16. These spectral accelerations are then multiplied by site-specific coefficients (F_a, F_v), based on the Site soil profile classification and the maximum spectral accelerations determined for bedrock, to yield the *maximum* short period (S_{MS}) and 1-second period (S_{M1}) spectral response accelerations at the Site. According to section 11 of ASCE7-16 and section 1613 of the 2019 CBC, buildings and structures should be specifically proportioned to resist *design* earthquake ground motions. Section 1613.2.4 of the 2019 CBC indicates the site-specific *design* spectral response accelerations for short (S_{DS}) and 1-second (S_{D1}) periods can be taken as two-thirds of *maximum* ($S_{DS} = 2/3*S_{MS}$ and $S_{D1} = 2/3*S_{M1}$).

Per ASCE7-16, Section 21.5, the probabilistic maximum mean peak ground acceleration (PGA) corresponding to the MCE_G can be computed assuming a 2% probability of exceedance in 50 years (2475-year return period) and is initially determined from mapped ground accelerations for bedrock conditions. The site-specific peak ground acceleration (PGA_M) is then determined by multiplying the PGA by the site-specific coefficient F_h (where F_h is a function of Site Class and PGA).

Spectral response accelerations and peak ground accelerations, provided in this report were obtained using the computer-based Seismic Design Maps tool available from the Structural Engineers Association of California (SEAOC, 2019). This program utilizes the methods developed in ASCE 7-16 in conjunction with user-inputted Site location to calculate seismic design parameters and response spectra (both for period and displacement) for soil profile Site Classes A through E.

SL13074-1 1060 Hillcrest Road, Cambria CA 93428

Latitude, Longitude: 35.568210, -121.093499

Date	10/25/2022, 12:10:52 PM
Design Code Reference Document	ASCE7-16
Risk Category	II
Site Class	C - Very Dense Soil and Soft Rock

Type	Value	Description
S_S	1.223	MCE_R ground motion. (for 0.2 second period)
S_1	0.441	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.468	Site-modified spectral acceleration value
S_{M1}	0.661	Site-modified spectral acceleration value
S_{DS}	0.979	Numeric seismic design value at 0.2 second SA
S_{D1}	0.441	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	D	Seismic design category
F_a	1.2	Site amplification factor at 0.2 second
F_v	1.5	Site amplification factor at 1.0 second
PGA	0.553	MCE_G peak ground acceleration
F_{PGA}	1.2	Site amplification factor at PGA
PGA_M	0.663	Site modified peak ground acceleration
T_L	8	Long-period transition period in seconds
SsRT	1.223	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	1.37	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	2.25	Factored deterministic acceleration value. (0.2 second)
S1RT	0.441	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.483	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.855	Factored deterministic acceleration value. (1.0 second)
PGAd	0.941	Factored deterministic acceleration value. (Peak Ground Acceleration)
PGA_{UH}	0.553	Uniform-hazard (2% probability of exceedance in 50 years) Peak Ground Acceleration
C_{RS}	0.893	Mapped value of the risk coefficient at short periods
C_{R1}	0.912	Mapped value of the risk coefficient at a period of 1 s
C_V	1.145	Vertical coefficient

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APPENDIX D

Preliminary Grading Specifications

PRELIMINARY GRADING SPECIFICATIONS

A. General

1. These preliminary specifications have been prepared for the subject site; GeoSolutions, Inc. should be consulted prior to the commencement of site work associated with site development to ensure compliance with these specifications.

2. GeoSolutions, Inc. should be notified at least 72 hours prior to site clearing or grading operations on the property in order to observe the stripping of surface materials and to coordinate the work with the grading contractor in the field.

3. These grading specifications may be modified and/or superseded by recommendations contained in the text of this report and/or subsequent reports.

4. If disputes arise out of the interpretation of these grading specifications, the Soils Engineer shall provide the governing interpretation.

B. Obligation of Parties

1. The Soils Engineer should provide observation and testing services and should make evaluations to advise the client on geotechnical matters. The Soils Engineer should report the findings and recommendations to the client or the authorized representative.

2. The client should be chiefly responsible for all aspects of the project. The client or authorized representative has the responsibility of reviewing the findings and recommendations of the Soils Engineer. During grading the client or the authorized representative should remain on-site or should remain reasonably accessible to all concerned parties in order to make decisions necessary to maintain the flow of the project.

3. The contractor is responsible for the safety of the project and satisfactory completion of all grading and other operations on construction projects, including, but not limited to, earthwork in accordance with project plans, specifications, and controlling agency requirements.

C. Site Preparation

1. The client, prior to any site preparation or grading, should arrange and attend a meeting which includes the grading contractor, the design Structural Engineer, the Soils Engineer, representatives of the local building department, as well as any other concerned parties. All parties should be given at least 72 hours' notice.

2. All surface and sub-surface deleterious materials should be removed from the proposed building and pavement areas and disposed of off-site or as approved by the Soils Engineer. This includes, but is not limited to, any debris, organic materials, construction spoils, buried utility line, septic systems, building materials, and any other surface and subsurface structures within the proposed building areas. Trees designated for removal on the construction plans should be removed and their primary root systems grubbed under the observations of a representative of GeoSolutions, Inc. Voids left from site clearing should be cleaned and backfilled as recommended for structural fill.

3. Once the Site has been cleared, the exposed ground surface should be stripped to remove surface vegetation and organic soil. A representative of GeoSolutions, Inc. should determine the required depth of stripping at the time of work being completed. Strippings may either be disposed of off-site or stockpiled for future use in landscape areas, if approved by the landscape architect.

D. Site Protection

1. Protection of the Site during the period of grading and construction should be the responsibility of the contractor.

2. The contractor should be responsible for the stability of all temporary excavations.

3. During periods of rainfall, plastic sheeting should be kept reasonably accessible to prevent unprotected slopes from becoming saturated. Where necessary during periods of rainfall, the contractor should install check-dams, de-silting basins, sand bags, or other devices or methods necessary to control erosion and provide safe conditions.

E. Excavations

1. Materials that are unsuitable should be excavated under the observation and recommendations of the Soils Engineer. Unsuitable materials include, but may not be limited to: 1) dry, loose, soft, wet, organic, or compressible natural soils; 2) fractured, weathered, or soft bedrock; 3) non-engineered fill; 4) other deleterious materials; and 5) materials identified by the Soils Engineer or Engineering Geologist.

2. Unless otherwise recommended by the Soils Engineer and approved by the local building official, permanent cut slopes should not be steeper than 2:1 (horizontal to vertical). Final slope configurations should conform to section 1804 of the 2019 California Building Code unless specifically modified by the Soil Engineer/Engineering Geologist.

3. The Soil Engineer/Engineer Geologist should review cut slopes during excavations. The contractor should notify the Soils Engineer/Engineer Geologist prior to beginning slope excavations.

F. Structural Fill

1. Structural fill should not contain rocks larger than 3 inches in greatest dimension, and should have no more than 15 percent larger than 2.5 inches in greatest dimension.

2. Imported fill should be free of organic and other deleterious material and should have very low expansion potential, with a plasticity index of 12 or less. Before delivery to the Site, a sample of the proposed import should be tested in our laboratory to determine its suitability for use as structural fill.

G. Compacted Fill

1. Structural fill using approved import or native should be placed in horizontal layers, each approximately 8 inches in thickness before compaction. On-site inorganic soil or approved imported fill should be conditioned with water to produce a soil water content near optimum moisture and compacted to a minimum relative density of 90 percent based on ASTM D1557-12$_{e1}$.

2. Fill slopes should not be constructed at gradients greater than 2-to-1 (horizontal to vertical). The contractor should notify the Soils Engineer/Engineer Geologist prior to beginning slope excavations.

3. If fill areas are constructed on slopes greater than 10-to-1 (horizontal to vertical), we recommend that benches be cut every 4 feet as fill is placed. Each bench shall be a minimum of 10 feet wide with a minimum of 2 percent gradient into the slope.

4. If fill areas are constructed on slopes greater than 5-to-1, we recommend that the toe of all areas to receive fill be keyed a minimum of 24 inches into underlying dense material. Key depths are to be observed and approved by a representative of GeoSolutions, Inc. Sub-drains shall be placed in the keyway and benches as required.

H. Drainage

1. During grading, a representative of GeoSolutions, Inc. should evaluate the need for a sub-drain or back-drain system. Areas of observed seepage should be provided with sub-surface drains to release the hydrostatic pressures. Sub-surface drainage facilities may include gravel blankets, rock filled trenches or Multi-Flow systems or equal. The drain system should discharge in a non-erosive manner into an approved drainage area.

2. All final grades should be provided with a positive drainage gradient away from foundations. Final grades should provide for rapid removal of surface water runoff. Ponding of water should not be allowed on building pads or adjacent to foundations. Final grading should be the responsibility of the contractor, general Civil Engineer, or architect.

3. Concentrated surface water runoff within or immediately adjacent to the Site should be conveyed in pipes or in lined channels to discharge areas that are relatively level or that are adequately protected against erosion.

4. Water from roof downspouts should be conveyed in solid pipes that discharge in controlled drainage localities. Surface drainage gradients should be planned to prevent ponding and promote drainage of surface water away from building foundations, edges of pavements and sidewalks. For soil areas we recommend that a minimum of 2 percent gradient be maintained.

5. Attention should be paid by the contractor to erosion protection of soil surfaces adjacent to the edges of roads, curbs and sidewalks, and in other areas where hard edges of structures may cause concentrated flow of surface water runoff. Erosion resistant matting such as Miramat, or other similar products, may be considered for lining drainage channels.

6. Sub-drains should be placed in established drainage courses and potential seepage areas. The location of sub-drains should be determined after a review of the grading plan. The sub-drain outlets should extend into suitable facilities or connect to the proposed storm drain system or existing drainage control facilities. The outlet pipe should consist of a non-perforated pipe the same diameter as the perforated pipe.

I. Maintenance

1. Maintenance of slopes is important to their long-term performance. Precautions that can be taken include planting with appropriate drought-resistant vegetation as recommended by a landscape architect, and not over-irrigating, a primary source of surficial failures.

2. Property owners should be made aware that over-watering of slopes is detrimental to long term stability of slopes.

J. Underground Facilities Construction

1. The attention of contractors, particularly the underground contractors, should be drawn to the State of California Construction Safety Orders for “Excavations, Trenches, Earthwork.” Trenches or excavations greater than 5 feet in depth should be shored or sloped back in accordance with OSHA Regulations prior to entry.

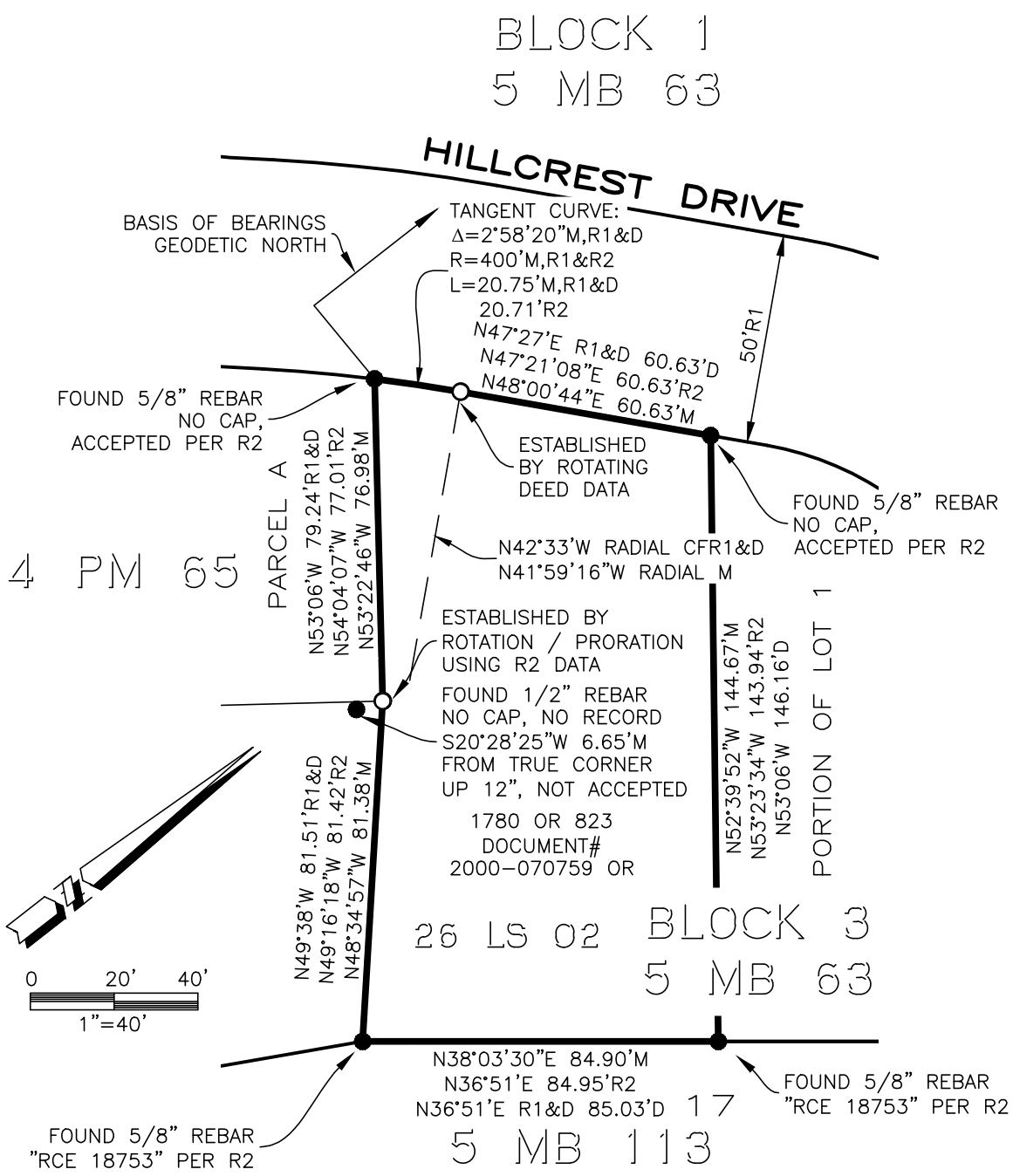
2. Bedding is defined as material placed in a trench up to 1 foot above a utility pipe and backfill is all material placed in the trench above the bedding. Unless concrete bedding is required around utility pipes, free-draining sand should be used as bedding. Sand to be used as bedding should be tested in our laboratory to verify its suitability and to measure its compaction characteristics. Sand bedding should be compacted by mechanical means to achieve at least 90 percent relative density based on ASTM D1557-12$_{e1}$.

3. On-site inorganic soils, or approved import, may be used as utility trench backfill. Proper compaction of trench backfill will be necessary under and adjacent to structural fill, building foundations, concrete slabs, and vehicle pavements. In these areas, backfill should be conditioned with water (or allowed to dry), to produce a soil water content of about 2 to 3 percent above the optimum value and placed in horizontal layers, each not exceeding 8 inches in thickness before compaction. Each layer should be compacted to at least 90 percent relative density based on ASTM D1557-12$_{e1}$. The top lift of trench backfill under vehicle pavements should be compacted to the requirements given in report under Preparation of Paved Areas for vehicle pavement sub-grades. Trench walls must be kept moist prior to and during backfill placement.

K. Completion of Work

1. After the completion of work, a report should be prepared by the Soils Engineer retained to provide such services. The report should including locations and elevations of field density tests, summaries of field and laboratory tests, other substantiating data, and comments on any changes made during grading and their effect on the recommendations made in the approved Soils Engineering Report.

2. Soils Engineers shall submit a statement that, to the best of their knowledge, the work within their area of responsibilities is in accordance with the approved soils engineering report and applicable provisions within Chapter 18 of the 2019 CBC.



LEGEND

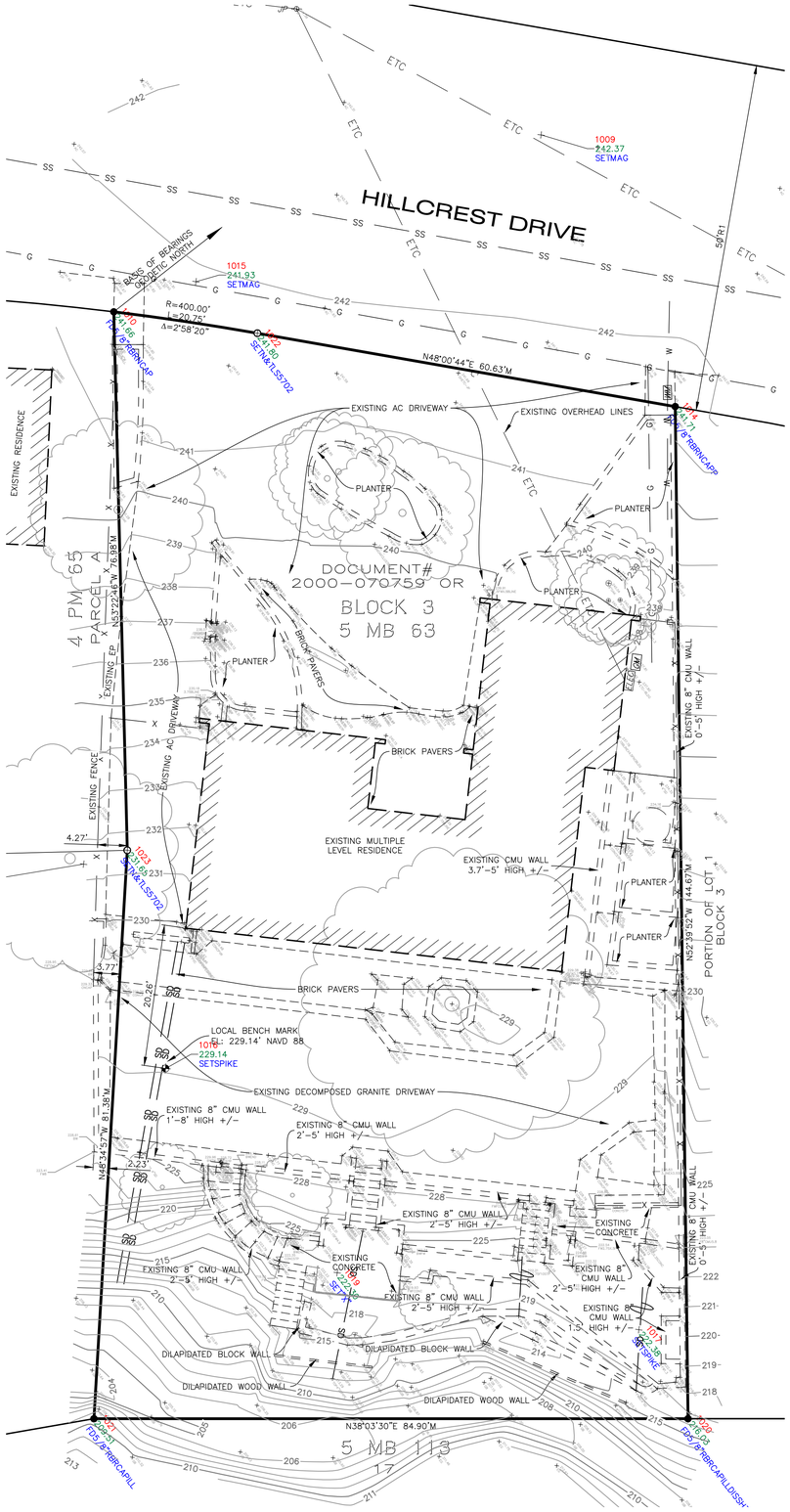
O	SET NAIL & TAG "LS 5702"
●	FOUND MONUMENT AS NOTED
D	DEED / DOCUMENT
M	MEASURED
R_	RECORD

REFERENCES

R1	5 MB 63
R2	26 LS 02
D	DOCUMENT#2000-070759 OR

October 22, 2024 JOB #24-267

N:\2024\24-267 1060 Hillcrest Dr, Cambria\C3D\1060 Hillcrest Drive-Corner Record (24-267).dwg, 8.5X11 CR SHT 2, Oct 22, 2024 8:49am, JBlackwell



GRAPHIC SCALE

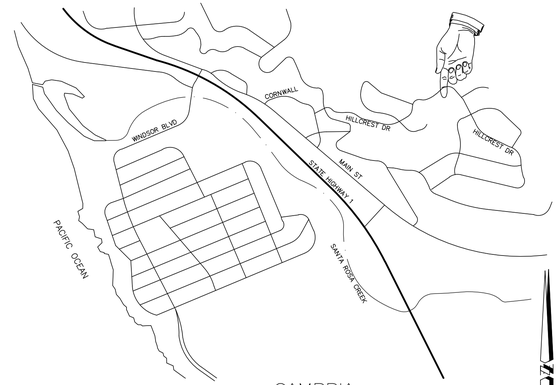
10 0 5 10 20

(IN FEET)

1 inch = 10 ft.

SYMBOL LEGEND:

x	FENCE LINE		RETAINING WALL
SS	SEWER MAIN	PGE	PG&E BOX
W	WATER MAIN	GM	GAS METER
G	GAS MAIN	TEL	TELEPHONE BOX
ETC	ELEC/TELEPHONE/CABLE	SIG	SIGNAL BOX
OHE	CL OF OVERHEAD ELECTRIC BETWEEN POLES	CATV	CABLE T.V. BOX
	DROP INLET AT CURB	ELEC	ELECTRIC BOX
	DROP INLET	T	TELEPHONE MANHOLE
SD	STORM DRAIN MANHOLE		STREET LIGHT
	FIRE HYDRANT	JP	JOINT POLE
W	WATER WELL	PP	POWER POLE
	WATER VALVE		GUY WIRE
WM	WATER METER		MONITORING WELL
S	SEWER MANHOLE		BENCH MARK
CO	SEWER CLEANOUT		



CAMBRIA
VICINITY MAP
NOT TO SCALE

ABBREVIATIONS

AC	ASPHALT CONCRETE	IP	IRON PIPE
AP	ANGLE POINT	GB	GRADE BREAK
BM	BENCH MARK	GM	GAS METER
BLDG	BUILDING	HP	HIGH POINT
BOW	BACK OF WALK	LT	LIGHT
CB	CATCH BASIN	MH	MANHOLE
CF	CURB FACE	PP	POWER POLE
CO	CLEAN OUT	PVC	POLYVINYL PIPE
COL	COLUMN	RB	REBAR
COR	CORNER	RCP	REINFORCED CONCRETE PIPE
CONC	CONCRETE	R10	CANOPY RADIUS
CMP	CORRUGATED METAL PIPE	SD	STORM DRAIN
CMU	CONCRETE MASONRY UNITS	SL	POINT ON SLOPE
CRN	CROWN OF STREET	SS	SEWER
DI	DROP INLET	STP	STEP
EG	EXISTING GRADE	STR	STAIRS
EP	EDGE OF PAVEMENT	TOP	TOP OF SLOPE
FD	FOUND	TOE	TOE OF SLOPE
FL	FLOW LINE	TW	TOP OF WALL
FF	FINISH FLOOR	W	WATER
FOW	FACE OF WALL	WL	WALL
HSE	HOUSE COR	WM	WATER METER
GR	GRASS	WV	WATER VALVE
GM	GAS METER		
IP	IRON PIPE		

DI-1.5FL TOP OF GRATE -1.5' FLOW LINE

BASIS OF BEARINGS:

THE BASIS OF BEARINGS FOR THIS PROJECT IS BASED ON GPS OBSERVATION OF GEODETIC NORTH AT FOUND 5/8" REBAR AT THE WESTERLY CORNER OF LOT OF 1060 HILLCREST DRIVE AS SHOWN.

BENCH MARK:

THE BENCH MARK FOR THIS PROJECT IS A FOUND NGS BENCH MARK DH6702. BEING A STANDARD BENCH MARK DISK STAMPED "WINDSOR 2004" THE NORHTERLY END OF THE WESTERLY SIDEWALK OF THE BRIDGE AT WINDSOR DRIVE AND MOONSTONE BEACH DRIVE, 81 FEET SOUTHERLY OF THE CENTERLINE OF MOONSTONE DRIVE, 16 FEET WESTERLY OF THE CENTERLINE OF WINDSOR DRIVE.

ELEVATION: 26.20' NAVD 88

THE LOCAL BENCH MARK IS A SET SPIKE IN DECOMPOSED GRANITE DRIVEWAY, 20.3 FEET SOUTHEASTERLY OF THE SOUTHERLY CORNER OF THE RESIDENCE AS SHOWN.

ELEVATION: 229.14' NAVD 88

SURVEYOR'S NOTES:

1. NO TITLE SEARCH (TITLE REPORT) WAS PROVIDED TO THE SURVEYOR. EASEMENTS WHICH MAY AFFECT THE SUBJECT PROPERTY HAVE NOT BEEN PLOTTED.

2. ONLY THE SURFACE EVIDENCE OF UNDERGROUND UTILITIES HAVE BEEN MEASURED IN THE FIELD ON THIS SURVEY. IF APPROXIMATE UNDERGROUND ALIGNMENTS ARE SHOWN, I MAKE NO WARRANTY AS TO THE ACTUAL LOCATION, TYPE OR DEPTH OF THOSE UNDERGROUND UTILITIES. CALL UNDERGROUND SERVICE ALERT (USA) AT 1-800-642-2444 TO VERIFY THE ACTUAL LOCATION OF UTILITIES PRIOR TO ANY EXCAVATION. THE SURVEYOR ALSO HAS MADE NO INVESTIGATION AS TO SUBSURFACE ENVIRONMENTAL CONDITIONS THAT WOULD AFFECT THE USE OR DEVELOPMENT OF THIS PROPERTY.

3. IT WILL BE THE ARCHITECT'S RESPONSIBILITY TO VERIFY SETBACK AND HEIGHT RESTRICTIONS WITH THE LOCAL GOVERNING AGENCY.

4. THE SIGNED AND SEALED ORIGINAL DRAWING OF THIS MAP CONSTITUTES THE FINAL WORK PRODUCT. MBS LAND SURVEYS WILL NOT BE LIABLE FOR ELECTRONIC VERSIONS OF THIS MAP PROVIDED TO OTHER PARTIES.

5. THE PROPERTY LINES SHOWN HEREON REPRESENT THE ACTUAL BOUNDARY LINES BASED ON A BOUNDARY SURVEY WHICH IS CURRENTLY IN PROGRESS. PERMANENT MONUMENTS WILL BE SET AT ALL PROPERTY CORNERS AND A CORNER RECORD MAP OR RECORD OF SURVEY MAP WILL BE SUBMITTED TO THE COUNTY OF SAN LUIS OBISPO AS REQUIRED BY STATE LAW.

SURVEYOR'S STATEMENT:

THIS MAP REPRESENTS A FIELD SURVEY OF SURFACE FEATURES AND ELEVATIONS PERFORMED ON OCTOBER 21, 2024 & UPDATED DECEMBER 5, 2024.

MICHAEL B. STANTON, PLS 5702 — DATE 12/6/24

LICENSED LAND SURVEYOR MICHAEL B. STANTON LIC. NO. 5702 STATE OF CALIFORNIA

SITE DATA:

ADDRESS: 1060 HILLCREST DRIVE, CAMBRIA

ASSESSOR'S PARCEL NO. APN: 022-353-010

TOPOGRAPHIC MAP

OF A PORTION OF LOT 1 OF BLOCK 3 OF TRACT NO. 44 AS SHOWN ON MAP FILED IN BOOK 5 AT PAGE 63, AND AS DESCRIBED ID DOCUMENT#2000-07059 IN THE COUNTY OF SAN LUIS OBISPO, CALIFORNIA

AT THE REQUEST OF MARK FUCCIO

DATE	REVISION
12-5-2024	FRONT HALF MAPPING

MBS LAND SURVEYS
MICHAEL B. STANTON, PLS 5702
3559 SOUTH HIGUERA ST.
SAN LUIS OBISPO, CA 93401
805-594-1960

December 6, 2024 JOB #24-267

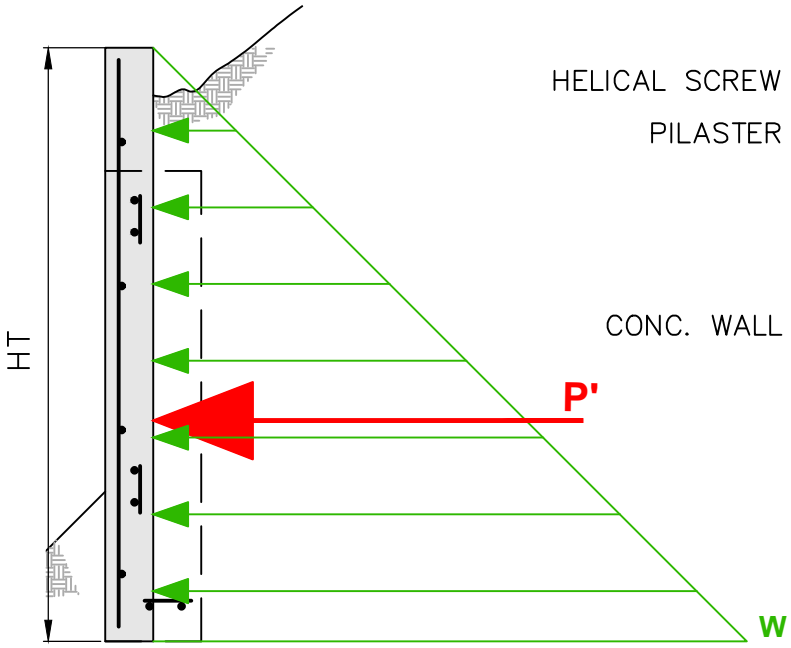
N:\2024\24-267 1060 Hillcrest Dr, Cambria\C3D\1060 Hillcrest Drive-Topo (24-267).dwg, 24X36, Dec 06, 2024 1:10pm, JBlackwell

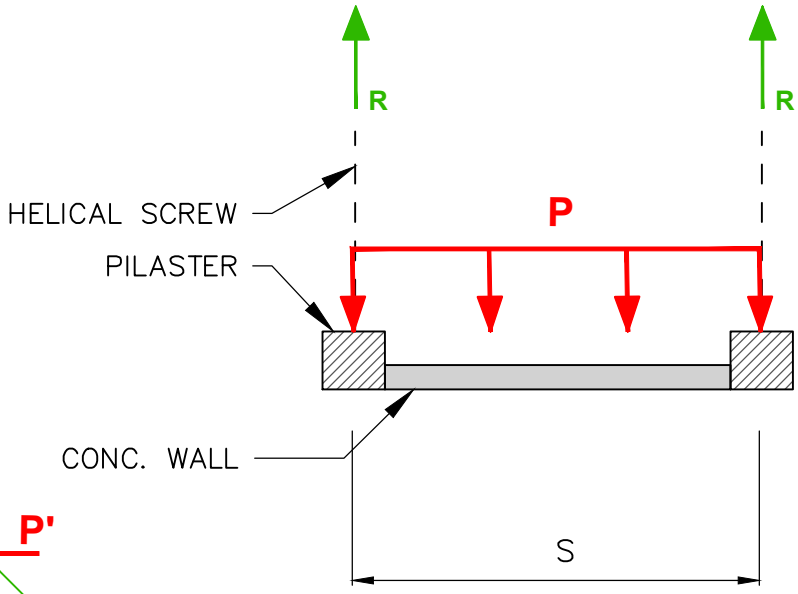
205 Suburban Road, Suite 1 • San Luis Obispo, CA 93401
(805) 489-9900 • www.praxisci.com

Structural Calculations
1060 Hillcrest road
Cambria, CA 93428

Prepared for
Mark Fuccio
1060 Hillcrest Road
Cambria, CA 93428

Praxis Project 22068
July 19, 2024





ACTIVE PRESSURE:	40 PCF
DEGREE OF RET. SLOPE:	27°
TOTAL ACTIVE PRESSURE:	67 PCF
HEIGHT OF WALL (HT_1)=	8 FT
PILASTER SPACING (S_1)=	10 FT O.C.

W_1=67 PCF x 8/2 FT = 268 PSF

REBAR SPACING 8" O.C.

P_1=268 PSF x 0.67 FT = 180 LB/FT

W_1=268 PSF

P_1'=268 PSF x 10 FT = 2,680 LBS/FT

ACTIVE PRESSURE:	40 PSF/FT
DEGREE OF RET. SLOPE:	27°
TOTAL ACTIVE PRESSURE:	67
HEIGHT OF WALL (HT_2)=	10 FT
PILASTER SPACING (S_2)=	8 FT O.C.

W_2=67 PSF/FT x 10/2 FT = 335 PSF

REBAR SPACING 8" O.C.

P_2=800 PSF x 0.67 FT = 536 LB/FT

W_2=335 PSF

P_2'=335 PSF x 8 FT = 2,680 LBS/FT

PRAXIS Engineering
205 Suburban Road, Suite 1
San Luis Obispo, CA 93401
(805) 489-9900 | www.praxisci.com

Project: RETAINING WALL 1060 HILLCREST ROAD CAMBRIA				Drawing No.: -
Title: WALL DIAGRAM				Scale: SCALE:
Drawn: YR	Checked: MDA	Approved: MDA	Project No.: 222068	Date: 07/19/24

Project Title:
Engineer:
Project ID:
Project Descr:

Concrete Beam

Project File: 22068 Hillcrest.ec6

DESCRIPTION: WALL AT 8' HT

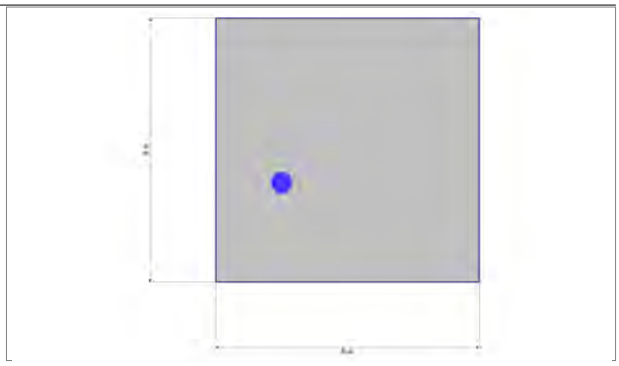
CODE REFERENCES

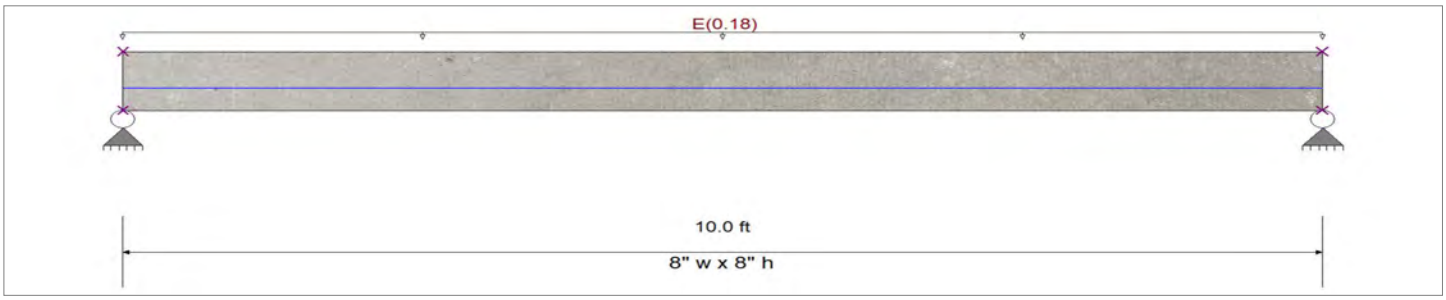
Calculations per ACI 318-19, IBC 2021, ASCE 7-16
Load Combination Set : IBC 2021

General Information

f'c	= 3.0 ksi	ϕ Phi Values	Flexure :	0.90	
fr = f'c$^{1/2}$ * 7.50	= 410.792 psi		Shear :	0.750	
ψ Density	= 145.0 pcf	β_1	=	0.850	
λ LtWt Factor	= 1.0				
Elastic Modulus	= 3,122.0 ksi	Fy - Stirrups		40.0 ksi	
fy - Main Rebar	= 60.0 ksi	E - Stirrups	=	29,000.0 ksi	
E - Main Rebar	= 29,000.0 ksi	Stirrup Bar Size #		3	
		Number of Resisting Legs Per Stirrup	=	2	

Seismic Design Category = A





Cross Section & Reinforcing Details

Rectangular Section, Width = 8.0 in, Height = 8.0 in
Span #1 Reinforcing....
1-#5 at 3.0 in from Bottom, from 0.0 to 10.0 ft in this span

Load for Span Number 1
Uniform Load : E = 0.180 k/ft, Tributary Width = 1.0 ft

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio = **0.355** : 1

Section used for this span	**Typical Section**	
Mu : Applied	2.250	k-ft
Mn * Phi : Allowable	6.339	k-ft
Location of maximum on span	5.009	ft
Span # where maximum occurs	Span # 1	

Maximum Deflection

Max Downward Transient Deflection	0.038 in	Ratio =	3158	>=360.0	Overall MAXimum Envelope
Max Upward Transient Deflection	0.000 in	Ratio =	0	<360.0	Overall MAXimum Envelope
Max Downward Total Deflection	0.038 in	Ratio =	3158	>=180.0	Span: 1 : E Only
Max Upward Total Deflection	0.000 in	Ratio =	0	<180.0	Span: 1 : E Only

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	0.900	0.900
Max Upward from Load Cases	0.900	0.900
E Only * 0.70	0.630	0.630
E Only * 0.5250	0.473	0.473
E Only	0.900	0.900

Shear Stirrup Requirements

Entire Beam Span Length : Vu <= Phi*lambda*sqrt(f'c)*bw*d, Req'd Vs = Not Reqd per 9.3.6.1, Stirrups are not required.

Project Title:
Engineer:
Project ID:
Project Descr:

Concrete Beam

Project File: 22068 Hillcrest.ec6

DESCRIPTION: WALL AT 8' HT

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd
E Only	1	0.00	5.00	0.90	0.90	0.00	1.00	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	0.11	5.00	0.88	0.88	0.10	1.00	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	0.22	5.00	0.86	0.86	0.19	1.00	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	0.33	5.00	0.84	0.84	0.29	1.00	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	0.44	5.00	0.82	0.82	0.38	0.91	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	0.55	5.00	0.80	0.80	0.46	0.72	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	0.66	5.00	0.78	0.78	0.55	0.59	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	0.77	5.00	0.76	0.76	0.64	0.50	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	0.87	5.00	0.74	0.74	0.72	0.43	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	0.98	5.00	0.72	0.72	0.80	0.38	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	1.09	5.00	0.70	0.70	0.88	0.33	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	1.20	5.00	0.68	0.68	0.95	0.30	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	1.31	5.00	0.66	0.66	1.03	0.27	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	1.42	5.00	0.64	0.64	1.10	0.24	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	1.53	5.00	0.62	0.62	1.17	0.22	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	1.64	5.00	0.60	0.60	1.23	0.20	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	1.75	5.00	0.59	0.59	1.30	0.19	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	1.86	5.00	0.57	0.57	1.36	0.17	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	1.97	5.00	0.55	0.55	1.42	0.16	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.08	5.00	0.53	0.53	1.48	0.15	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.19	5.00	0.51	0.51	1.54	0.14	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.30	5.00	0.49	0.49	1.59	0.13	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.40	5.00	0.47	0.47	1.64	0.12	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.51	5.00	0.45	0.45	1.69	0.11	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.62	5.00	0.43	0.43	1.74	0.10	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.73	5.00	0.41	0.41	1.79	0.10	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.84	5.00	0.39	0.39	1.83	0.09	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.95	5.00	0.37	0.37	1.87	0.08	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	3.06	5.00	0.35	0.35	1.91	0.08	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	3.17	5.00	0.33	0.33	1.95	0.07	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	3.28	5.00	0.31	0.31	1.98	0.07	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	3.39	5.00	0.29	0.29	2.02	0.06	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	3.50	5.00	0.27	0.27	2.05	0.06	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	3.61	5.00	0.25	0.25	2.08	0.05	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	3.72	5.00	0.23	0.23	2.10	0.05	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	3.83	5.00	0.21	0.21	2.13	0.04	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	3.93	5.00	0.19	0.19	2.15	0.04	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	4.04	5.00	0.17	0.17	2.17	0.03	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	4.15	5.00	0.15	0.15	2.19	0.03	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	4.26	5.00	0.13	0.13	2.20	0.03	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	4.37	5.00	0.11	0.11	2.21	0.02	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	4.48	5.00	0.09	0.09	2.23	0.02	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	4.59	5.00	0.07	0.07	2.23	0.01	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	4.70	5.00	0.05	0.05	2.24	0.01	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	4.81	5.00	0.03	0.03	2.25	0.01	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	4.92	5.00	0.01	0.01	2.25	0.00	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	5.03	5.00	-0.00	0.00	2.25	0.00	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	5.14	5.00	-0.02	0.02	2.25	0.00	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	5.25	5.00	-0.04	0.04	2.24	0.01	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	5.36	5.00	-0.06	0.06	2.24	0.01	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	5.46	5.00	-0.08	0.08	2.23	0.02	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	5.57	5.00	-0.10	0.10	2.22	0.02	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	5.68	5.00	-0.12	0.12	2.21	0.02	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	5.79	5.00	-0.14	0.14	2.19	0.03	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	5.90	5.00	-0.16	0.16	2.18	0.03	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	6.01	5.00	-0.18	0.18	2.16	0.04	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	6.12	5.00	-0.20	0.20	2.14	0.04	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0

Project Title:
Engineer:
Project ID:
Project Descr:

Concrete Beam

Project File: 22068 Hillcrest.ec6

DESCRIPTION: WALL AT 8' HT

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu (k) Actual	Vu (k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd
E Only	1	6.23	5.00	-0.22	0.22	2.11	0.04	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	6.34	5.00	-0.24	0.24	2.09	0.05	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	6.45	5.00	-0.26	0.26	2.06	0.05	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	6.56	5.00	-0.28	0.28	2.03	0.06	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	6.67	5.00	-0.30	0.30	2.00	0.06	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	6.78	5.00	-0.32	0.32	1.97	0.07	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	6.89	5.00	-0.34	0.34	1.93	0.07	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	6.99	5.00	-0.36	0.36	1.89	0.08	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	7.10	5.00	-0.38	0.38	1.85	0.09	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	7.21	5.00	-0.40	0.40	1.81	0.09	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	7.32	5.00	-0.42	0.42	1.76	0.10	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	7.43	5.00	-0.44	0.44	1.72	0.11	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	7.54	5.00	-0.46	0.46	1.67	0.11	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	7.65	5.00	-0.48	0.48	1.62	0.12	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	7.76	5.00	-0.50	0.50	1.56	0.13	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	7.87	5.00	-0.52	0.52	1.51	0.14	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	7.98	5.00	-0.54	0.54	1.45	0.15	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	8.09	5.00	-0.56	0.56	1.39	0.17	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	8.20	5.00	-0.58	0.58	1.33	0.18	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	8.31	5.00	-0.60	0.60	1.27	0.20	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	8.42	5.00	-0.61	0.61	1.20	0.21	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	8.52	5.00	-0.63	0.63	1.13	0.23	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	8.63	5.00	-0.65	0.65	1.06	0.26	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	8.74	5.00	-0.67	0.67	0.99	0.28	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	8.85	5.00	-0.69	0.69	0.91	0.32	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	8.96	5.00	-0.71	0.71	0.84	0.35	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	9.07	5.00	-0.73	0.73	0.76	0.40	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	9.18	5.00	-0.75	0.75	0.68	0.46	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	9.29	5.00	-0.77	0.77	0.59	0.54	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	9.40	5.00	-0.79	0.79	0.51	0.65	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	9.51	5.00	-0.81	0.81	0.42	0.80	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	9.62	5.00	-0.83	0.83	0.33	1.00	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	9.73	5.00	-0.85	0.85	0.24	1.00	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	9.84	5.00	-0.87	0.87	0.15	1.00	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	9.95	5.00	-0.89	0.89	0.05	1.00	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment	Span #	Location (ft) along Beam	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	10.000	2.25	6.34	0.35
Span # 1	1	10.000	2.25	6.34	0.35
E Only					
Span # 1	1	10.000	2.25	6.34	0.35

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl (in)	Location in Span (ft	Load Combination	Max. "+" Defl (in)	Location in Span (ft
E Only	1	0.0380	5.000		0.0000	0.000

Project Title:
Engineer:
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Concrete Beam

Project File: 22068 Hillcrest.ec6

DESCRIPTION: WALL AT 10' HT

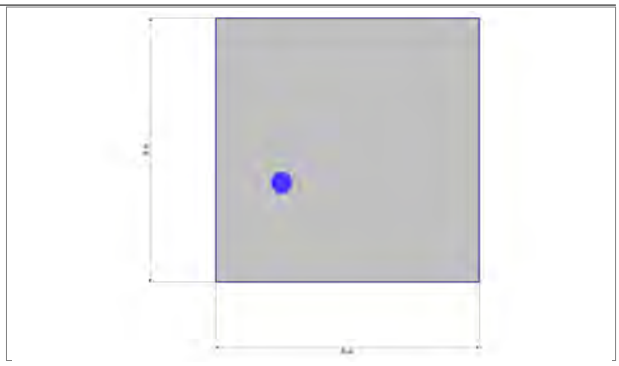
CODE REFERENCES

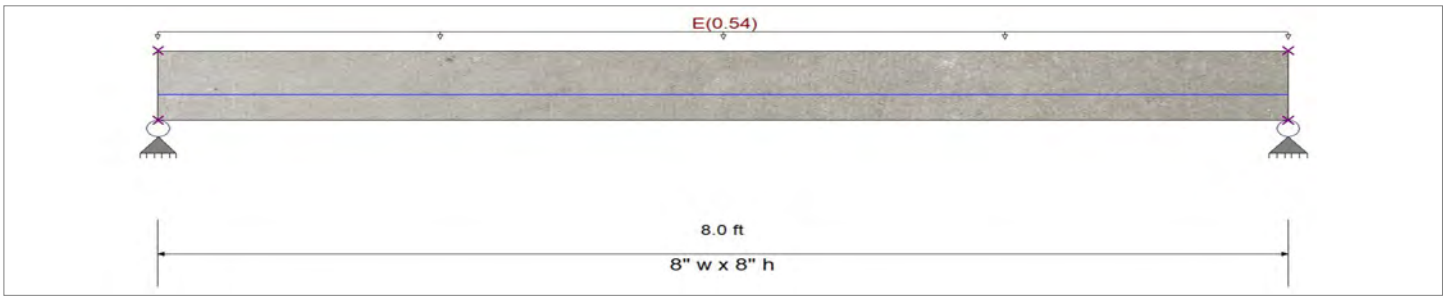
Calculations per ACI 318-19, IBC 2021, ASCE 7-16
Load Combination Set : IBC 2021

General Information

f'c	=	3.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ * 7.50	=	410.792 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup	=	2

Seismic Design Category = A





Cross Section & Reinforcing Details

Rectangular Section, Width = 8.0 in, Height = 8.0 in
Span #1 Reinforcing....
1-#5 at 3.0 in from Bottom, from 0.0 to 8.0 ft in this span

Load for Span Number 1
Uniform Load : E = 0.540 k/ft, Tributary Width = 1.0 ft

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.681**	: 1
Section used for this span	**Typical Section**	
Mu : Applied	4.320	k-ft
Mn * Phi : Allowable	6.339	k-ft
Location of maximum on span	4.007	ft
Span # where maximum occurs	Span # 1	

Maximum Deflection

Max Downward Transient Deflection	0.115 in	Ratio =	835 >=360.0	Overall MAXimum Envelope
Max Upward Transient Deflection	0.000 in	Ratio =	0 <360.0	Overall MAXimum Envelope
Max Downward Total Deflection	0.115 in	Ratio =	835 >=180.0	Span: 1 : E Only
Max Upward Total Deflection	0.000 in	Ratio =	0 <180.0	Span: 1 : E Only

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	2.160	2.160
Max Upward from Load Cases	2.160	2.160
E Only * 0.70	1.512	1.512
E Only * 0.5250	1.134	1.134
E Only	2.160	2.160

Shear Stirrup Requirements

Between 0.00 to 0.95 ft, Phi*lambda*sqrt(f'c)*bw*d < Vu <= Phi*Vc, Req'd Vs = Min per 9.6.3.1, use #3 stirrups spaced at 2.000 in
Between 0.96 to 7.04 ft, Vu <= Phi*lambda*sqrt(f'c)*bw*d, Req'd Vs = Not Reqd per 9.3.6.1, Stirrups are not required.

Project Title:
Engineer:
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Concrete Beam

Project File: 22068 Hillcrest.ec6

DESCRIPTION: WALL AT 10' HT

Shear Stirrup Requirements

Between 7.05 to 7.99 ft, Phi*lambda*sqrt(f'c)*bw*d < Vu <= Phi*Vc, Req'd Vs = Min per 9.6.3.1, use #3 stirrups spaced at 2.000 in

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd
E Only	1	0.00	5.00	2.16	2.16	0.00	1.00	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	0.09	5.00	2.11	2.11	0.19	1.00	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	0.17	5.00	2.07	2.07	0.37	1.00	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	0.26	5.00	2.02	2.02	0.55	1.00	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	0.35	5.00	1.97	1.97	0.72	1.00	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	0.44	5.00	1.92	1.92	0.89	0.90	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	0.52	5.00	1.88	1.88	1.06	0.74	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	0.61	5.00	1.83	1.83	1.22	0.62	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	0.70	5.00	1.78	1.78	1.38	0.54	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	0.79	5.00	1.74	1.74	1.53	0.47	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	0.87	5.00	1.69	1.69	1.68	0.42	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	0.96	5.00	1.64	1.64	1.83	0.37	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	1.05	5.00	1.59	1.59	1.97	0.34	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	1.14	5.00	1.55	1.55	2.11	0.31	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	1.22	5.00	1.50	1.50	2.24	0.28	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	1.31	5.00	1.45	1.45	2.37	0.26	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	1.40	5.00	1.40	1.40	2.49	0.23	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	1.49	5.00	1.36	1.36	2.61	0.22	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	1.57	5.00	1.31	1.31	2.73	0.20	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	1.66	5.00	1.26	1.26	2.84	0.19	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	1.75	5.00	1.22	1.22	2.95	0.17	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	1.84	5.00	1.17	1.17	3.06	0.16	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	1.92	5.00	1.12	1.12	3.16	0.15	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.01	5.00	1.07	1.07	3.25	0.14	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.10	5.00	1.03	1.03	3.34	0.13	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.19	5.00	0.98	0.98	3.43	0.12	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.27	5.00	0.93	0.93	3.51	0.11	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.36	5.00	0.89	0.89	3.59	0.10	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.45	5.00	0.84	0.84	3.67	0.10	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.54	5.00	0.79	0.79	3.74	0.09	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.62	5.00	0.74	0.74	3.81	0.08	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.71	5.00	0.70	0.70	3.87	0.07	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.80	5.00	0.65	0.65	3.93	0.07	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.89	5.00	0.60	0.60	3.98	0.06	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	2.97	5.00	0.55	0.55	4.04	0.06	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	3.06	5.00	0.51	0.51	4.08	0.05	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	3.15	5.00	0.46	0.46	4.12	0.05	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	3.23	5.00	0.41	0.41	4.16	0.04	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	3.32	5.00	0.37	0.37	4.20	0.04	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	3.41	5.00	0.32	0.32	4.23	0.03	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	3.50	5.00	0.27	0.27	4.25	0.03	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	3.58	5.00	0.22	0.22	4.27	0.02	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	3.67	5.00	0.18	0.18	4.29	0.02	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	3.76	5.00	0.13	0.13	4.30	0.01	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	3.85	5.00	0.08	0.08	4.31	0.01	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	3.93	5.00	0.04	0.04	4.32	0.00	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	4.02	5.00	-0.01	0.01	4.32	0.00	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	4.11	5.00	-0.06	0.06	4.32	0.01	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	4.20	5.00	-0.11	0.11	4.31	0.01	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	4.28	5.00	-0.15	0.15	4.30	0.01	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	4.37	5.00	-0.20	0.20	4.28	0.02	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	4.46	5.00	-0.25	0.25	4.26	0.02	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	4.55	5.00	-0.30	0.30	4.24	0.03	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	4.63	5.00	-0.34	0.34	4.21	0.03	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0
E Only	1	4.72	5.00	-0.39	0.39	4.18	0.04	2.60	Vu <= Phi*lambd	t Reqd per	2.6	0.0

Project Title:
Engineer:
Project ID:
Project Descr:

Concrete Beam

Project File: 22068 Hillcrest.ec6

DESCRIPTION: WALL AT 10' HT

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd
E Only	1	4.81	5.00	-0.44	0.44	4.14	0.04	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	4.90	5.00	-0.48	0.48	4.10	0.05	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	4.98	5.00	-0.53	0.53	4.06	0.05	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	5.07	5.00	-0.58	0.58	4.01	0.06	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	5.16	5.00	-0.63	0.63	3.96	0.07	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	5.25	5.00	-0.67	0.67	3.90	0.07	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	5.33	5.00	-0.72	0.72	3.84	0.08	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	5.42	5.00	-0.77	0.77	3.77	0.08	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	5.51	5.00	-0.81	0.81	3.71	0.09	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	5.60	5.00	-0.86	0.86	3.63	0.10	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	5.68	5.00	-0.91	0.91	3.56	0.11	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	5.77	5.00	-0.96	0.96	3.47	0.11	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	5.86	5.00	-1.00	1.00	3.39	0.12	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	5.95	5.00	-1.05	1.05	3.30	0.13	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	6.03	5.00	-1.10	1.10	3.20	0.14	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	6.12	5.00	-1.14	1.14	3.11	0.15	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	6.21	5.00	-1.19	1.19	3.00	0.17	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	6.30	5.00	-1.24	1.24	2.90	0.18	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	6.38	5.00	-1.29	1.29	2.79	0.19	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	6.47	5.00	-1.33	1.33	2.67	0.21	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	6.56	5.00	-1.38	1.38	2.55	0.23	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	6.64	5.00	-1.43	1.43	2.43	0.24	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	6.73	5.00	-1.48	1.48	2.30	0.27	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	6.82	5.00	-1.52	1.52	2.17	0.29	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	6.91	5.00	-1.57	1.57	2.04	0.32	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	6.99	5.00	-1.62	1.62	1.90	0.35	2.60	Vu <= Phi*lambda*t	Reqd per	2.6	0.0
E Only	1	7.08	5.00	-1.66	1.66	1.76	0.40	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	7.17	5.00	-1.71	1.71	1.61	0.44	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	7.26	5.00	-1.76	1.76	1.46	0.50	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	7.34	5.00	-1.81	1.81	1.30	0.58	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	7.43	5.00	-1.85	1.85	1.14	0.68	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	7.52	5.00	-1.90	1.90	0.98	0.81	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	7.61	5.00	-1.95	1.95	0.81	1.00	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	7.69	5.00	-1.99	1.99	0.64	1.00	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	7.78	5.00	-2.04	2.04	0.46	1.00	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	7.87	5.00	-2.09	2.09	0.28	1.00	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5
E Only	1	7.96	5.00	-2.14	2.14	0.09	1.00	3.29	Phi*lambda*sqrt	in per 9.6.3	19.8	2.5

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment	Span #	Location (ft) along Beam	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	8.000	4.32	6.34	0.68
Span # 1	1	8.000	4.32	6.34	0.68
E Only					
Span # 1	1	8.000	4.32	6.34	0.68

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl (in)	Location in Span (ft	Load Combination	Max. "+" Defl (in)	Location in Span (ft
E Only	1	0.1149	4.000		0.0000	0.000

Project Title:
Engineer:
Project ID:
Project Descr:

Concrete Beam

Project File: 22068 Hillcrest.ec6

DESCRIPTION: PILASTER

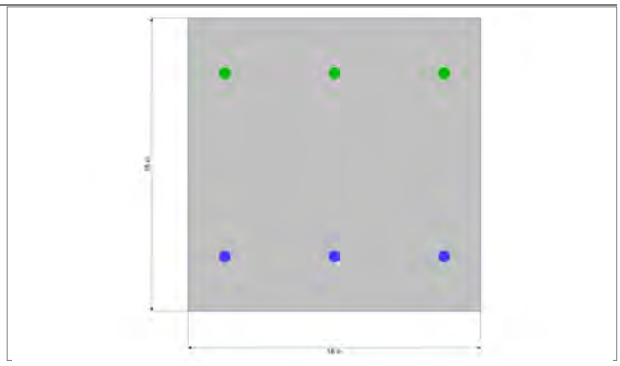
CODE REFERENCES

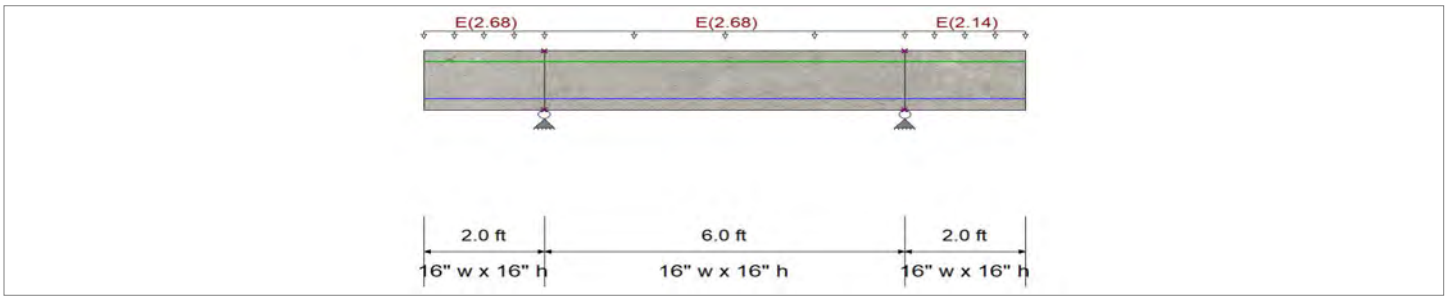
Calculations per ACI 318-19, IBC 2021, ASCE 7-16
Load Combination Set : IBC 2021

General Information

f'c	=	3.0 ksi	ϕ Phi Values	Flexure :	0.90
fr = f'c$^{1/2}$ '7.50	=	410.792 psi		Shear :	0.750
ψ Density	=	145.0 pcf	β_1	=	0.850
λ LtWt Factor	=	1.0			
Elastic Modulus	=	3,122.0 ksi	Fy - Stirrups		40.0 ksi
fy - Main Rebar	=	60.0 ksi	E - Stirrups	=	29,000.0 ksi
E - Main Rebar	=	29,000.0 ksi	Stirrup Bar Size #		3
			Number of Resisting Legs Per Stirrup	=	2

Seismic Design Category = A





Cross Section & Reinforcing Details

Rectangular Section, Width = 16.0 in, Height = 16.0 in

Span #1 Reinforcing....
- 3-#5 at 3.0 in from Bottom, from 0.0 to 2.0 ft in this span
- 3-#5 at 3.0 in from Top, from 0.0 to 2.0 ft in this span

Span #2 Reinforcing....
- 3-#5 at 3.0 in from Bottom, from 0.0 to 6.0 ft in this span
- 3-#5 at 3.0 in from Top, from 0.0 to 6.0 ft in this span

Span #3 Reinforcing....
- 3-#5 at 3.0 in from Bottom, from 0.0 to 2.0 ft in this span
- 3-#5 at 3.0 in from Top, from 0.0 to 2.0 ft in this span

Load for Span Number 1
Uniform Load : E = 2.680 k/ft, Tributary Width = 1.0 ft

Load for Span Number 2
Uniform Load : E = 2.680 k/ft, Tributary Width = 1.0 ft

Load for Span Number 3
Uniform Load : E = 2.140 k/ft, Tributary Width = 1.0 ft

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	**0.134** : 1	
Section used for this span	**Typical Section**	
Mu : Applied	7.246 k-ft	
Mn * Phi : Allowable	53.971 k-ft	
Location of maximum on span	3.080 ft	
Span # where maximum occurs	Span # 2	

Maximum Deflection

Max Downward Transient Deflection	0.002 in	Ratio =	30253	>=360.0	Overall MAXimum Envelope
Max Upward Transient Deflection	-0.002 in	Ratio =	29380	>=360.0	
Max Downward Total Deflection	0.002 in	Ratio =	30253	>=180.0	
Max Upward Total Deflection	-0.002 in	Ratio =	29380	>=180.0	Span: 3 : E Only

Project Title:
Engineer:
Project ID:
Project Descr:

Concrete Beam

Project File: 22068 Hillcrest.ec6

DESCRIPTION: PILASTER

Vertical Reactions

Support notation : Far left is #1

Load Combination	Support 1	Support 2	Support 3	Support 4
Max Upward from all Load Conditions		13.580	12.140	
Max Upward from Load Cases		13.580	12.140	
E Only * 0.70		9.506	8.498	
E Only * 0.5250		7.129	6.374	
E Only		13.580	12.140	

Shear Stirrup Requirements

Entire Beam Span Length : Vu <= Phi*lambda*sqrt(f'c)*bw*d, Req'd Vs = Not Reqd per 9.3.6.1, Stirrups are not required.

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd
E Only	1	0.00	13.00	0.00	0.00	0.00	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	0.08	13.00	-0.21	0.21	0.01	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	0.16	13.00	-0.43	0.43	0.03	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	0.24	13.00	-0.64	0.64	0.08	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	0.32	13.00	-0.86	0.86	0.14	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	0.40	13.00	-1.07	1.07	0.21	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	0.48	13.00	-1.29	1.29	0.31	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	0.56	13.00	-1.50	1.50	0.42	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	0.64	13.00	-1.72	1.72	0.55	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	0.72	13.00	-1.93	1.93	0.69	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	0.80	13.00	-2.14	2.14	0.86	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	0.88	13.00	-2.36	2.36	1.04	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	0.96	13.00	-2.57	2.57	1.23	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	1.04	13.00	-2.79	2.79	1.45	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	1.12	13.00	-3.00	3.00	1.68	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	1.20	13.00	-3.22	3.22	1.93	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	1.28	13.00	-3.43	3.43	2.20	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	1.36	13.00	-3.64	3.64	2.48	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	1.44	13.00	-3.86	3.86	2.78	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	1.52	13.00	-4.07	4.07	3.10	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	1.60	13.00	-4.29	4.29	3.43	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	1.68	13.00	-4.50	4.50	3.78	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	1.76	13.00	-4.72	4.72	4.15	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	1.84	13.00	-4.93	4.93	4.54	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	1	1.92	13.00	-5.15	5.15	4.94	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	2.00	13.00	8.22	8.22	5.36	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	2.24	13.00	7.58	7.58	3.46	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	2.48	13.00	6.93	6.93	1.72	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	2.72	13.00	6.29	6.29	0.14	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	2.96	13.00	5.65	5.65	1.30	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	3.20	13.00	5.00	5.00	2.57	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	3.44	13.00	4.36	4.36	3.70	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	3.68	13.00	3.72	3.72	4.67	0.86	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	3.92	13.00	3.07	3.07	5.48	0.61	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	4.16	13.00	2.43	2.43	6.14	0.43	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	4.40	13.00	1.79	1.79	6.65	0.29	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	4.64	13.00	1.14	1.14	7.00	0.18	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	4.88	13.00	0.50	0.50	7.20	0.08	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	5.12	13.00	-0.14	0.14	7.24	0.02	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	5.36	13.00	-0.78	0.78	7.13	0.12	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	5.60	13.00	-1.43	1.43	6.87	0.23	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	5.84	13.00	-2.07	2.07	6.45	0.35	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	6.08	13.00	-2.71	2.71	5.87	0.50	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	6.32	13.00	-3.36	3.36	5.14	0.71	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	6.56	13.00	-4.00	4.00	4.26	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	6.80	13.00	-4.64	4.64	3.22	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	7.04	13.00	-5.29	5.29	2.03	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	7.28	13.00	-5.93	5.93	0.68	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0

Project Title:
Engineer:
Project ID:
Project Descr:

Concrete Beam

Project File: 22068 Hillcrest.ec6

DESCRIPTION: PILASTER

Detailed Shear Information

Load Combination	Span Number	Distance (ft)	'd' (in)	Vu Actual	(k) Design	Mu (k-ft)	d*Vu/Mu	Phi*Vc (k)	Comment	Phi*Vs (k)	Phi*Vn (k)	Spacing (in) Req'd
E Only	2	7.52	13.00	-6.57	6.57	0.82	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	2	7.76	13.00	-7.22	7.22	2.47	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	8.00	13.00	4.28	4.28	4.28	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	8.08	13.00	4.11	4.11	3.94	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	8.16	13.00	3.94	3.94	3.62	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	8.24	13.00	3.77	3.77	3.31	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	8.32	13.00	3.60	3.60	3.02	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	8.40	13.00	3.42	3.42	2.74	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	8.48	13.00	3.25	3.25	2.47	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	8.56	13.00	3.08	3.08	2.22	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	8.64	13.00	2.91	2.91	1.98	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	8.72	13.00	2.74	2.74	1.75	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	8.80	13.00	2.57	2.57	1.54	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	8.88	13.00	2.40	2.40	1.34	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	8.96	13.00	2.23	2.23	1.16	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	9.04	13.00	2.05	2.05	0.99	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	9.12	13.00	1.88	1.88	0.83	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	9.20	13.00	1.71	1.71	0.68	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	9.28	13.00	1.54	1.54	0.55	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	9.36	13.00	1.37	1.37	0.44	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	9.44	13.00	1.20	1.20	0.34	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	9.52	13.00	1.03	1.03	0.25	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	9.60	13.00	0.86	0.86	0.17	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	9.68	13.00	0.68	0.68	0.11	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	9.76	13.00	0.51	0.51	0.06	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	9.84	13.00	0.34	0.34	0.03	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	9.92	13.00	0.17	0.17	0.01	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0
E Only	3	10.00	13.00	0.00	0.00	0.00	1.00	10.50	Vu <= Phi*lambd	t Reqd pe	10.5	0.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment	Span #	Location (ft) along Beam	Bending Stress Results (k-ft) Mu : Max	Phi*Mnx	Stress Ratio
MAXimum BENDING Envelope					
Span # 1	1	2.000	-5.29	53.97	0.10
Span # 2	2	6.000	7.25	53.97	0.13
Span # 3	3	2.000	-4.28	53.97	0.08
Span # 1	1	2.000	-4.28	53.97	0.08
Span # 2	2	6.000	-4.28	53.97	0.08
Span # 3	3	2.000	-4.28	53.97	0.08
E Only					
Span # 1	1	2.000	-5.29	53.97	0.10
Span # 2	2	6.000	7.25	53.97	0.13
Span # 3	3	2.000	-4.28	53.97	0.08

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl (in)	Location in Span (ft	Load Combination	Max. "+" Defl (in)	Location in Span (ft
E Only	1	0.0001	2.120	E Only	-0.0013	0.000
E Only	2	0.0024	3.000	E Only	-0.0000	6.040
	3	0.0000	3.000	E Only	-0.0016	2.000

Department of Planning & Building

Parcel Report

APN: 022-353-010

Parcel Information

APN: 022-353-010

Assessee: FUCCIO MARK T & JACQUELINE P

Care Of:

Address: 1060 HILLCREST DR, CAMBRIA
CA 93428

Description: TR 44 PTN BL 3

For additional assessment information please see Assessor's Property Inquiry Portal

Community Code: CAMB

Supervisor District: Supdist 2

Avg Percent Slope: 8

Land Use Information

Land Uses	Combining Designations	
RSF	Archaeologically Sensitive Area	
	Terrestrial Habitat	GSA Geologic Hazard Area
		Coastal Zone

Permit Information

Permit	Description	Work Class	Application Date
C-DRC2025-00007	Land Use, Coastal Appealable	Variance / CDP	3/11/2025 4:15:55 PM
P-APP2025-00061	Application	Land Use	3/11/2025 2:16:35 PM
CODE2022-00136	Code Enforcement		6/6/2022 1:56:07 PM
PMTR2021-00685	PMTR - Residential Permit	OTC	5/21/2021 2:11:12 PM
REA2009-000499	Research		11/8/2019 5:46:05 PM

Report generated: 3/24/2025 4:26:21 PM

Department of Planning & Building

Parcel Report

APN: 022-353-010

S950155C	Subdivision	Certificate of Compliance	5/8/1996 12:00:00 AM

Addresses on this Parcel

1060 HILLCREST DR

Recorded Ownership Documents (Current Ownership)

2000-R-070759

2000-R-070759

Report generated: 3/24/2025 4:26:21 PM

Department of Planning & Building

GIS Near 022-353-010

Legend

- SLO County Parcels
- Roads
  - CalTrans
  - Maintained by SLO CO
  - Private Maintenance
  - Federal or State Maintenance
  - CITY OF SAN LUIS OBISPO; ARROYO GR ATASCADERO; MORRO BAY; PASO ROB BEACH
  - CAL POLY
- Community Advisory Groups
  - Community Advisory Group Boundaries
  - Cayucos Citizens Advisory Council Subarea
  - Creston Advisory Body Sub Areas
- 2011 Supervisor Districts
- SLO County Boundary

-96.00 0 48.00 96.00 Feet 1: 576

WGS_1984_Web_Mercator_Auxiliary_Sphere

Department of Planning & Building

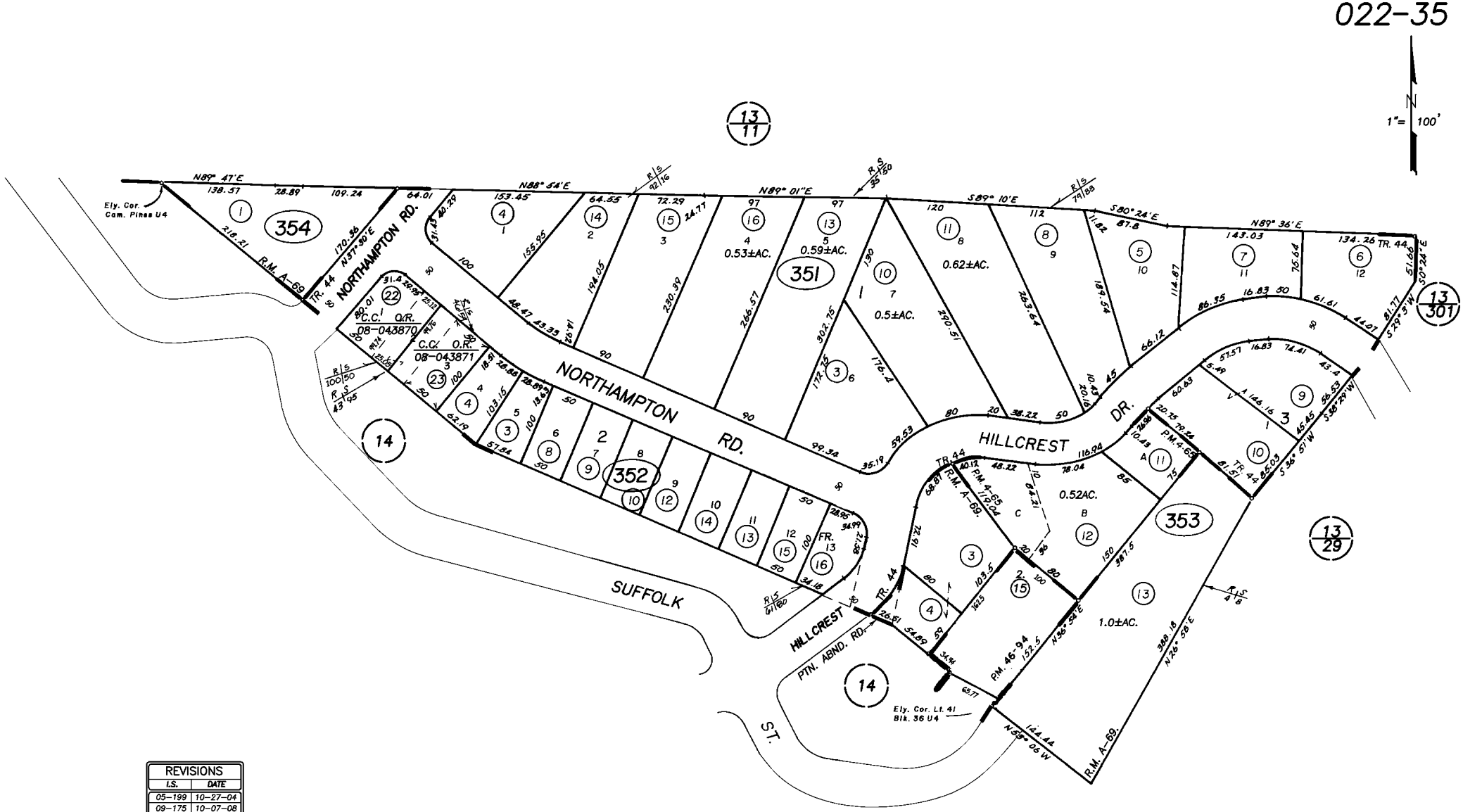
GIS Far 022-353-010

Legend

- SLO County Parcels
- Roads
  - CalTrans
  - Maintained by SLO CO
  - Private Maintenance
  - Federal or State Maintenance
  - CITY OF SAN LUIS OBISPO; ARROYO GR ATASCADERO; MORRO BAY; PASO ROB BEACH
  - CAL POLY
- Community Advisory Groups
  - Community Advisory Group Boundaries
  - Cayucos Citizens Advisory Council Subarea
  - Creston Advisory Body Sub Areas
- 2011 Supervisor Districts
- SLO County Boundary

-752.33 0 376.17 752.33 Feet 1: 4,514

WGS_1984_Web_Mercator_Auxiliary_Sphere



REVISIONS	
I.S.	DATE
05-199	10-27-04
09-175	10-07-08
09-175	10-08-08
NA	11-22-16
NA	09-26-18

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CAMBRIA
ASSESSOR'S MAP, COUNTY OF SAN LUIS OBISPO, CA.
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