



# CITY OF MORRO BAY

## Planning Commission

### Regular Meeting Agenda

Tuesday, April 21, 2026, 6:00 p.m.

Veterans Memorial Hall  
209 Surf St., Morro Bay, CA

#### Public Participation

Public participation is offered in the following ways:

- Community members may attend the meeting in person at the Morro Bay Veterans Hall.
- Alternatively, members of the public may watch the meeting and speak during general Public Comment or on a specific agenda item by logging into the Zoom webinar using the information provided below. Please use the "raise hand" feature to indicate your desire to provide public comment.
- **NEW!! Zoom webinar link: <https://us02web.zoom.us/j/82429164990>**
- Or Telephone Attendee: 1 (669) 444-9171 or 1 (669) 900-9128 or 1 (346) 248-7799; Webinar ID: 824 2916 4990. Press \*9 to raise hand for public comment.
- Meetings are also livestreamed on the City's [website](#).
- Community Members are encouraged to submit agenda correspondence via email to the Planning Commission at [planningcommission@morrobayca.gov](mailto:planningcommission@morrobayca.gov) prior to the meeting. Agenda correspondence received by 10:00 a.m. on the meeting day will be posted on the City website.

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Pages

1. ESTABLISH QUORUM AND CALL TO ORDER

2. PLEDGE OF ALLEGIANCE

3. PLANNING COMMISSIONER ANNOUNCEMENTS

4. PUBLIC COMMENT

Members of the audience wishing to address the Planning Commission on City business matters not on the agenda may do so at this time. Those desiring to speak to items on the agenda, but unable to stay for the item, may also address the Planning Commission at this time.

5. PRESENTATIONS

6. CONSENT AGENDA

Unless an item is pulled for separate action, the following actions are approved without discussion. The public will also be provided an opportunity to comment on consent agenda items.

6.a Approval of Minutes

1. April 7, 2026 Regular Meeting Minutes  
**Staff Recommendation:** Approve as submitted.

5

7. **PUBLIC HEARING ITEMS**

7.a **CDP25-003/DR25-003/MUP25-02**

**Site Location:** 1180 Front St, Morro Bay, California.

**Proposal:** Proposed 6,561 sf two-story, 10-unit hotel located at 1180 Front St. Concurrent with Minor Use Permit application MUP25-02 for a reduction in required parking and Design Review Permit application DR25-001. The project is zoned VSC (Visitor Serving Commercial) and is within the Cultural Resources Overlay and the Coastal Appeals Jurisdiction.

**CEQA:** The proposed project is exempt under the California Environmental Quality Act (CEQA), pursuant to CEQA Guidelines Section 15332, Class 32 for Infill Development.

**Staff Recommendation:** Conditional Approval

**Staff Contact:** Susana Toner, Senior Planner, (805) 772-6270, [stoner@morrobayca.gov](mailto:stoner@morrobayca.gov)

8. **BUSINESS ITEMS**

9. **FUTURE AGENDA ITEMS**

10. **COMMUNITY DEVELOPMENT DIRECTOR COMMENTS**

11. **ADJOURNMENT**

The next Regular Meeting will be held on Tuesday, May 5, 2026.

**PLANNING COMMISSION MEETING PROCEDURES**

This Agenda is subject to amendment up to 72 hours prior to the date and time set for the meeting. Please refer to the Agenda posted at the Community Development Department, 955 Shasta Avenue, for any revisions, or call the Department at 805-772-6264 for further information.

Written testimony is encouraged so it can be distributed in the Agenda packet to the Commission. Material submitted by the public for Commission review prior to a scheduled hearing should be received by the Planning Division at the Community Development Department, 955 Shasta Avenue, no later than 5:00 P.M. the Tuesday (eight days) prior to the scheduled public hearing. Written testimony provided after the Agenda packet is published will be distributed to the Commission but there may not be enough time to fully consider the information. Mail should be directed to the Community Development Department, Planning Division.

This Agenda may be found on the City website or you can subscribe to Notify Me for email notification when the Agenda is posted on the City’s website. To subscribe, go to [www.morrobayca.gov/notifyme](http://www.morrobayca.gov/notifyme) and follow the instructions.

The Brown Act forbids the Commission from taking action or discussing any item not appearing on the agenda, including those items raised at Public Comment. In response to Public Comment, the Commission is limited to:

- 1. Responding to statements made or questions posed by members of the public; or

2. Requesting staff to report back on a matter at a subsequent meeting; or
3. Directing staff to place the item on a future agenda. (Government Code Section 54954.2(a))

Commission meetings are conducted under the authority of the Chair who may modify the procedures outlined below. The Chair will announce each item. Thereafter, the hearing will be conducted as follows:

1. The Planning Division staff will present the staff report and recommendation on the proposal being heard and respond to questions from Commissioners.
2. The Chair will open the public hearing by first asking the project applicant/agent to present any points necessary for the Commission, as well as the public, to fully understand the proposal.
3. The Chair will then ask other interested persons to present testimony either in support of or in opposition to the proposal.
4. Finally, the Chair may invite the applicant/agent to respond to the public testimony. Thereafter, the Chair will close the public testimony portion of the hearing and limit further discussion to the Commission and staff prior to the Commission taking action on a decision.

## **APPEALS**

If you are dissatisfied with an approval or denial of a project, you have the right to appeal this decision to the City Council up to 10 calendar days after the date of action. Pursuant to Government Code §65009, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the Commission, at, or prior to, the public hearing. The appeal form is available at the Community Development Department and on the City's website. If legitimate coastal resource issues related to our Local Coastal Program are raised in the appeal, there is no fee if the subject property is located within the Coastal Appeal Area. If the property is located outside the Coastal Appeal Area, the fee is a \$336 flat fee. If a fee is required, the appeal will not be considered complete if the fee is not paid. If the City decides in the appellant's favor then the fee will be refunded.

City Council decisions may also be appealed to the California Coastal Commission pursuant to the Coastal Act Section 30603 for those projects that are in their appeals jurisdiction. Exhaustion of appeals at the City is required prior to appealing the matter to the California Coastal Commission. The appeal to the City Council must be made to the City and the appeal to the California Coastal Commission must be made directly to the California Coastal Commission Office. These regulations provide the California Coastal Commission 10 working days following the expiration of the City appeal period to appeal the decision. This means that no construction permit shall be issued until both the City and Coastal Commission appeal period have expired without an appeal being filed. The Coastal Commission's Santa Cruz Office at (831) 427-4863 may be contacted for further information on appeal procedures.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Community Development Department

at (805) 772-6264. Notification 24 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting.



**MORRO BAY PLANNING COMMISSION  
REGULAR MEETING MINUTES**

**April 7, 2026, 6:00 p.m.  
Veterans Memorial Hall  
209 Surf St., Morro Bay, CA**

Members Present: Chairperson Eric Meyer  
Vice-Chairperson Joe Ingraffia  
Planning Commissioner Tony DeFazio  
Commissioner John Solu  
Planning Commissioner Mary Witkowski

Staff Present: Community Development Director Airlin Singewald  
Fire Chief Dan McCrain  
Senior Planner Susana Toner  
Associate Planner Erik Valentine

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**1. ESTABLISH QUORUM AND CALL TO ORDER**

The meeting was called to order at 6:00 p.m. with all Commissioners present.

**2. PLEDGE OF ALLEGIANCE**

**3. PLANNING COMMISSIONER ANNOUNCEMENTS**

None.

**4. PUBLIC COMMENT**

Chairperson Meyer opened the Public Comment Period.

None given.

Chairperson Meyer closed the Public Comment Period.

**5. PRESENTATIONS**

None.

**6. CONSENT AGENDA**

Unless an item is pulled for separate action by, the following actions are approved without discussion. The public will also be provided an opportunity to comment on consent agenda items.

**6.a Approval of Minutes**

- a. March 17, 2026 Regular Meeting Minutes

**Motion by** Chairperson Meyer  
**Seconded by** Commissioner Witkowski

Approved as submitted.

Ayes (5): Chairperson Meyer, Vice-Chairperson Ingraffia, Commissioner DeFazio, Commissioner Solu, and Commissioner Witkowski

**CARRIED (5 to 0)**

**7. PUBLIC HEARING ITEMS**

**7.a Case No: CDP25-021/CUP25-01/MOD26-001**

Director Singewald gave opening remarks regarding the project and reminded the Planning Commission what they can take into account when considering the project.

Erik Valentine, Associate Planner, presented the staff report.

Commissioner Witkowski presented questions to staff.

Staff answered questions from the Commissioner.

Dan McCrain, Fire Chief, gave a presentation outlining the changes made during the project design, including concerns raised by a neighbor.

Chairperson Meyer opened the Public Comment Period.

- Solmaz Nagash, Morro Bay, asked the Commissioners for a denial of the project.
- Betty Winholtz, Morro Bay, commented that she appreciates Chief McCrain's efforts, sympathizes with the neighbor, and appreciates the Commissioners questions.

Chairperson Meyer closed the Public Comment Period.

Commissioners presented questions to staff.

Staff answered questions from the Commissioners.

General discussion with Commissioners.

**Motion by** Vice-Chairperson Ingraffia  
**Seconded by** Chairperson Meyer

Ayes (5): Chairperson Meyer, Vice-Chairperson Ingraffia, Commissioner DeFazio, Commissioner Solu, and Commissioner Witkowski

**CARRIED (5 to 0)**

**8. BUSINESS ITEMS**

None.

**9. FUTURE AGENDA ITEMS**

None.

**10. COMMUNITY DEVELOPMENT DIRECTOR COMMENTS**

Director Singewald commented that the next Waterfront Master Plan Advisory Committee Meeting is May 7th, and the next community workshop will be Monday, May 18th at the Community Center.

The next Planning Commission meeting is April 21st and we will be presenting the Conditional Use Permit and Coastal Development Permit for the 10-room hotel project at 1180 Front Street.

Also, at next week's City Council meeting there are a few items that are Building and Planning related, including an update to the Building Ordinance, 2025 General Plan Progress Report, and the user fee updates.

**11. ADJOURNMENT**

The meeting adjourned at 6:43 P.M.

6:43 P.M.



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# Staff Report

**TO:** Chairperson Meyer and Members of the Planning Commission

**FROM:** Susana Toner, Senior Planner, Planning Division

**SUBJECT:** 1180 Front St; Coastal Development Permit (CDP25-003), Minor Use Permit (MUP25-02), and Design Review Permit (DR25-001)

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## PROJECT DESCRIPTION

Coastal Development Permit (CDP25-001) request for the construction of a 6,561 sf two-story, 10-unit luxury hotel located at 1180 Front St. Concurrent with Minor Use Permit application MUP25-02 for a reduction in required parking and Design Review Permit application DR25-001. The project is zoned VSC (Visitor Serving Commercial) and is within the Cultural Resources Overlay and the Coastal Appeals Jurisdiction.

## RECOMMENDED ACTION

CONDITIONALLY APPROVE THE PROJECT by approving Planning Commission Resolution 04-26 (Exhibit A) which includes the Findings and Conditions of Approval for the project as depicted on site development plans dated January 15, 2026.

## APPLICANT

Don Daniels,  
Property Owner

## AGENT

Joey Cox,  
RRM Design Group

## ADDRESS / APN

1180 Front St,  
066-034-015

Figure 1: Project Location



**PROJECT SETTING**

The project is located on portions of Lot 1 and 2, Block 61 of the Bakersfield Colony Tract, with a land use designation of Visitor Serving Commercial per the Local Coastal Plan Land Use Map. The project site lies within the Visitor Serving Commercial Zoning District and is within the Coastal Commission Appeals Jurisdiction. This 0.36 acre lot is not visible from scenic Highway 1.

*Figure 2: View of Subject Property*



*Figure 3: Photosimulation of Proposed Project*



Adjacent Zoning / Land Use			
<b>North:</b>	VSC / RM (Visitor Serving Commercial / Medium Density Residential)	<b>South:</b>	VSC (Visitor Serving Commercial)
<b>East:</b>	RM (Medium Density Residential)	<b>West:</b>	VSC (Visitor Serving Commercial)
<b>North East:</b>	PF (Public Facilities)	<b>North West:</b>	PF (Public Facilities)

Site Characteristics	
<b>Site Area</b>	0.36 Acres
<b>Existing Use</b>	Vacant
<b>Terrain</b>	20% avg slope
<b>Vegetation / Wildlife</b>	N/A
<b>Archaeological Resources</b>	Within Cultural Resources Overlay
<b>Access</b>	Front St Parking Lot

General Plan, Zoning Ordinance, & Local Coastal Plan Designations	
<b>General Plan / Coastal Plan Land Use Designation</b>	Visitor Serving Commercial
<b>Base Zone District</b>	VSC
<b>Zoning Overlay District</b>	N/A
<b>Special Treatment Area</b>	N/A
<b>Specific Plan Area</b>	N/A
<b>Coastal Zone</b>	Located Inside of the Coastal Zone and within Coastal Commission Appeal Jurisdiction

**PROJECT ANALYSIS**

**Background**

This project is proposed on a currently vacant lot. The lot adjacent to the south was developed into a 6-unit hotel project by 2019. At the time of the development, Coastal Permit boundaries identified this area as Coastal Commission Original Jurisdiction, meaning that the Coastal Development Permit review authority was the California Coastal Commission. Recent Tidelands mapping has now identified the area as within the City’s permitting authority, subject to appealability to the Coastal Commission.

The area north of the project is Surf St right-of-way, this right-of-way area is not entirely paved and does not allow continuous vehicular access down the bluff. The area contains a lift station

and was the previous location of the Surf St Stairs, which provided pedestrian Coastal Access from the top of the bluff down to the Front St parking lot and Embarcadero. The Surf St stairs were closed and removed in late 2018 due to deterioration and safety concerns.

**Visitor Serving Commercial District Development Standards – VSC (MBMC 17.08.030)**

<b>VSC Development Standards (17.08.030)</b>		
	<b>Standards</b>	<b>Proposed</b>
<b>Front Setback</b>	0'	2'2"
<b>Interior Side-Yard Setback (South)</b>	0'	1'3"
<b>Corner Side-Yard Setback (North)</b>	0'	4'5"
<b>Rear Setback</b>	10' (adjacent to a residential district)	16'4"
<b>Height</b>	30' Max from Average Natural Grade <sup>1</sup> Low Point: 17'4" High Point: 33'4" ANG: 25'4" Max Height: 55'4"	From ANG: 24'7" to roof ridge 28'10" to elevator tower From Sea Level: 42'5" to roof ridge 46'8" to elevator tower
<b>Floor Area Ratio</b>	1.25	0.33
<b>Parking</b>	11 Spaces	0 Spaces <sup>2</sup>

<sup>1</sup>See discussion on Height below

<sup>2</sup>See discussion on Parking and Minor Use Permit (MUP25-02) below

**Height**

The Zoning Code / Implementation Plan (IP) in effect at the time of this review outlines a 30-foot height limit, measured from average natural grade. The Beach Street Specific Plan, repealed with the adoption of the current Zoning Code/ IP, contained a provision that limited development on Front Street in Visitor Serving Commercial Zones between Beach and Surf St to no taller than the height of the bluff. This provision, referred to as the Blufftop Height Limit, from the Beach Street Specific Plan has been recommended by Planning Commission and approved by City Council to be added back into the Zoning Code / IP; it is currently waiting for certification by the California Coastal Commission to take effect.

While this provision is not yet in effect, the majority of the project does not exceed the height of the bluff, the only portion above the height of the bluff is the proposed elevator tower. The top of bluff at the rear property line is 43' above sea level (ASL). The top of the roof ridge is 42'5", 7" lower than the height of the bluff. The top of the elevator tower is 46'8", 3'8" above the top of

the bluff. The view of the project from the end of Surf St, at the top of the bluff, can be seen in Figure 4 below.

Figure 4: Photosimulation from top of Surf St.



MBMC Section 17.23.070 – Heights and Height Exceptions goes through specific structures that may exceed the maximum permitted height from a specific district’s development standards. While the provision limiting height to the top of the bluff is not yet in effect, the height exceptions stated in MBMC 17.23.070 will allow for exceptions from the height limit defined by the Blufftop Height Limit. Table 17.23.070: Allowed Projections Above Height Limits, allows for elevator towers to have a maximum allowance of 6’ above a district’s height limit, with coverage and location limitations. The elevator tower is limited to a total of 20% of roof area and must be setback from the exterior wall one foot for every foot of projection above the height limit, or 3.66 feet in the scenario where the Bluff Top Height Limit was in effect. With a floor area of approximately 104 sf, the elevator tower is approximately 2.2% of the roof area (4,393 sf). The design of the project does not include exterior walls on the rear elevation of the building, the elevator tower is set approximately 6’ back from the edge of the floor area on the second floor and approximately 4’9” from the edge of the trellis. If the coverage and location standards from Table 17.23.070 are met, the height exceptions would not require any variances or modifications for approval.

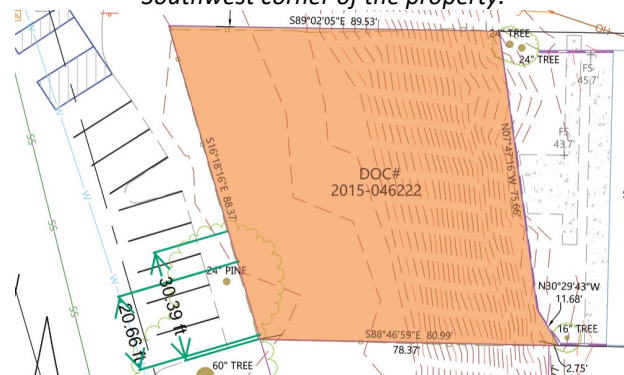
#### **Parking and Minor Use Permit Findings (MUP25-02)**

Hotels and Motels have a parking requirement of 1 space per room, plus one space for every 10 rooms. This 10-room boutique hotel has a parking requirement of 11 spaces. MBMC 17.25.050.B allows for a reduction of all or a portion of required parking spaces when located within 1,200

linear feet of a city-owned public parking lot with the approval of a Minor Use Permit. The project is directly adjacent to a city-owned public parking lot, meaning it would be eligible for this reduction.

Due to the nature of the property's frontage and access from an existing public parking lot, in order to provide on-site parking spaces, 3-4 public parking spaces would be removed to accommodate a two-way drive aisle to private parking spaces, see figure 4 below. Table 17.27.100.G establishes a minimum drive aisle width of 20 feet and a maximum drive aisle width of 30 feet for two-way drive aisles.

Figure 4: Cropped image from Sheet A-2 Topographic Survey, showing approximate dimensions, in green, from the Southwest corner of the property.



Since the project qualifies for a parking reduction and the majority of parcels along this stretch of Front St do not provide any on-site parking, staff is recommending a reduction of 4 required parking spaces, as those parking spaces would have been removed if parking were to go on site due to the proximity to the public parking lot, through Minor Use Permit findings shown below and in PC Reso 04-26.

- A. *The proposed use is allowed within the applicable zoning district and complies with all other applicable provisions of this title and all other titles of the municipal code;*

The proposed boutique hotel use is a permitted use within the Visitor Serving Commercial Zone. The project as proposed and conditioned meets the requirements of the Morro Bay Municipal Code.

- B. *The proposed use is consistent with the general plan and any applicable specific plan;*

The proposed hotel use is consistent with the general plan and no specific plans are applicable to the property.

- C. *The proposed use will not be adverse to the public health, safety, or general welfare of the community, nor detrimental to surrounding properties or improvements;*

The parking reduction will not be adverse to the public health, safety, or general welfare of the community as it preserves public parking spaces that would have been removed to provide on-site private parking spaces. The parking reduction will not be detrimental to the surrounding properties as the majority of the properties along the Front St parking lot do not provide on-site parking spaces.

- D. The proposed use complies with any design or development standards applicable to the zoning district or the use in question unless waived or modified pursuant to the provisions of this title;*

The proposed hotel project meets the design and development standards applicable to the zoning district and type. Due to its proximity to a city-owned public parking lot, the project is eligible for a parking reduction to all or a portion of the required parking. The required proximity is 1,200 feet, this project is directly adjacent to the parking lot.

- E. The design, location, size, and operating characteristics of the proposed activity are compatible with the existing and reasonably foreseeable future land uses in the vicinity; and*

The proposed hotel project is directly adjacent to a boutique hotel and there are several other hotels along Front St. None of the existing hotel projects on this block provide dedicated on-site parking for their overnight guests.

- F. The site is physically suitable for the type, density, and intensity of use being proposed.*

Through the reduction in on-site parking requirements, the site is physically suited for a hotel project of this size. The project is well below the maximum allowed Floor Area Ratio (FAR), it meets the both the height limit in effect at the time of the hearing and the height limit under consideration for certification by the California Coastal Commission.

For the remaining 7 required parking spaces, MBMC 17.27.060.B grants the Planning Commission the authority to allow an applicant to satisfy parking requirements through in-lieu fees where the reasonable development of a property precludes the development of off-street parking. The proposed structure is located towards the west side of the property; however, the portion of the property that would remain vacant is unusable for parking due to the existing bluff. Condition 54 of PC Reso 04-26 requires the payment of 7 parking in-lieu fees prior to building permit issuance. The in-lieu fee is currently set at \$15,000 per space. The in-lieu funds can be used for projects, such as restriping of existing parking lots, to increase parking capacity on the waterfront. Preliminary analysis in the Waterfront Master Plan Update shows the potential for increased parking capacity through restriping. The updated Waterfront Master Plan will include a circulation concept showing specific proposals for restriping existing parking lots.

**Sloping Lot Standards (17.23.140)**

Lots with an average grade over 15% must comply with the provisions of MBMC 17.23.140. With an average slope of 20%, the project must comply with the standards below:

- A. *Downhill Facing Building Elevation. The building elevation facing the downslope shall have a maximum height of twenty feet from finished grade with sufficient articulation from that building face to the next highest story to minimize the visual height and bulk as viewed from the lowest finished grade.*

The proposed building is broken up into 2 stories. Not including the roof pitch, each story is approximately 10 feet. A pedestrian at the lowest finished grade would have a minimized view of the bulk of the structure because of the relief provided by the private hotel decks. The articulation features of the building are described in more detail in the next standard.

- B. *Articulation. The apparent size of exterior wall surfaces visible from off the site shall be minimized through the use of bays, recesses, stepbacks, overhangs, landscaping, and/or other means of horizontal and vertical articulation to create changing shadow lines and break up massive forms.*

The proposed building is broken up both horizontally and vertically to provide articulation. As mentioned above, each hotel room has a private deck facing the bay and Morro Rock, the decks have both horizontal wood and glass railings. Because of the decks on the west side of the building, there is no solid wall on the front façade of the building, shown in Figure 2 above. The vertical articulation is best demonstrated through the roof line and photosimulation provided on Sheets A5 and A11 of the Exhibit A – Plan Set, also shown below in Figures 5 and 6. From the northern side of the building, both stories of the building steps back 4’2” every 14’2” of frontage, or the width of one room.

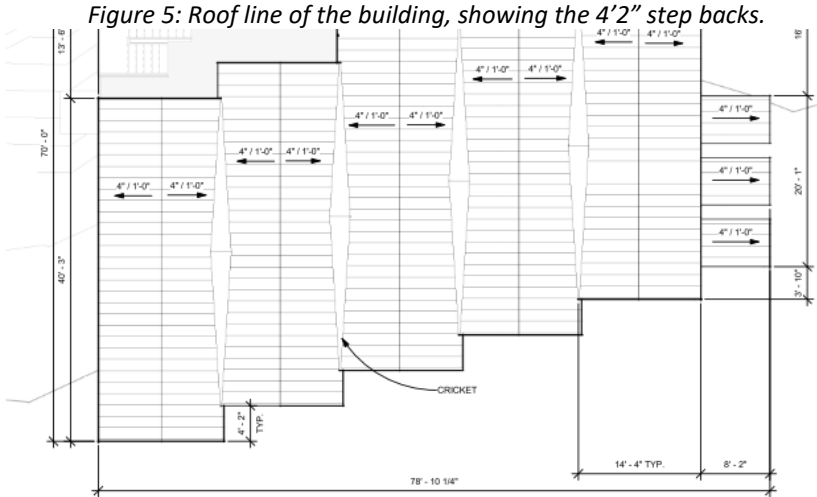


Figure 6: Photosimulation showing the project looking North.



C. Foundation Design. The use of multi-level foundations (floor levels separated by a minimum of four feet) shall be the standard design for residential structures unless an alternative design, with less grading, is approved through the design review process as more appropriate for the site.

The proposed project does not use multi-level foundations, the majority of the proposed structure is located on the flattest portion of the parcel before the slope of the bluff.

D. Underfloors. Areas between the lowest floor and finished grade shall not exceed six feet in height.

The project does not propose any underfloor areas.

- E. Decks. *No portion of the walking surface of a deck with visible underpinnings shall exceed a height of six feet above grade. Decks shall be integrated into the architecture of the structure, and not appear as an add-on to the primary building mass.*

Decks are proposed with each of the 10 hotel rooms. None of the private decks have any visible underpinnings. The outdoor area on the second floor does not have any visible underpinnings and stays below the roofline of the building. The materials used for all deck railings are complementary to the materials of the building and are integrated into the architectural style of the building.

### **Low-Cost Visitor Serving Accommodations**

The City's Local Coastal Program requires new hotel projects to provide low-cost visitor serving accommodations at a rate of 1 low-cost accommodation for every 4 high-cost accommodations provided. Implementation Action LU-17 in Plan Morro Bay allows projects not located within State Tidelands that do not provide low-cost accommodations to incorporate non-overnight facilities. Through Condition 53 in PC Reso 04-26, this project would be required to rebuild the Surf St stairs as the frontage improvements for the property along the Surf St right-of-way and as their means to provide no-cost visitor serving amenities for enhanced public access to the waterfront.

### **Project Evaluation**

As conditioned and through Minor Use Permit approval, the project meets all requirements outlined in the Morro Bay Municipal Code (MBMC) and Plan Morro Bay. This project is before the Planning Commission for review pursuant to MBMC 17.39.010(B), which identifies the Commission as the review authority for the Coastal Development Permit and MBMC 17.38.030.A, which identifies the Commission as the review authority for the required Design Review Permit.

### **ENVIRONMENTAL REVIEW**

Projects requiring discretionary action are subject to the California Environmental Quality Act (CEQA) and require review for determination and appropriate documentation. The project is not located within any known originally mapped environmentally sensitive habitat area (ESHA), however, the project is located within the Cultural Resources Protection Overlay (CRP). A Phase I Archeological study was prepared by SWCA, and no significant resources were identified during the survey. The archeological study recommended monitoring during any ground disturbing activities and the project is conditioned to provide an archeological monitoring plan at the time of building permit submittal through Condition 55 of PC Reso 04-26.

Due to the project's location near the bluff, a Geotechnical Engineering and Geologic Hazards Report was prepared to evaluate the project. Page 14 of the report, Exhibit C, outlines the determination that slope stability is not a hazard to the project or potential hotel occupants. The

project shall comply with all the recommendations of the Report, as required through the Building Permit process. The proposed project, which is primarily located at the base of the bluff, minimizes grading on the steeper portions of the site.

CEQA Determination: The proposed project is categorically exempt from the provisions of CEQA per State CEQA Guidelines Section 15332 Class 32, In-Fill Development projects. The project meets the general plan and zoning ordinance and is on a parcel within city limits smaller than 5 acres. The parcel does not provide habitat areas to any endangered, rare, or threatened species. The project does not pose a risk to traffic, noise, air quality, or water quality. The site can also be adequately serviced by all required utilities and public services. Additionally, none of the Categorical Exemption exceptions, noted under Section 15300.2, apply to the project.

A Notice of Exemption will be filed with the San Luis Obispo County Clerk's office upon final approval.

### **CONCLUSION**

The proposed project is consistent with all applicable development standards of the Zoning Ordinance through Minor Use Permit approval for the parking reduction and conditioned payment of in-lieu fees for the remaining required parking spaces. In addition, the project complies with all applicable provisions of Plan Morro Bay and the City's Local Coastal Plan. The project has been found to be exempt from CEQA.

### **RECOMMENDATION**

Staff recommends the Planning Commission approve the requested Coastal Development Permit (CDP25-003), Minor Use Permit (MUP25-02), and Design Review Permit (DR25-001) for the proposed project at 1180 Front Street, as shown on plans dated January 16, 2026, by adopting Planning Commission Resolution 04-26, which includes the Findings and Conditions of Approval for the project.

### **EXHIBIT**

Exhibit A – Planning Commission Resolution 04-26

Exhibit B – Plan Set, Dated December 15, 2025 (Includes Materials Board and Photosimulations)

Exhibit C – Geotechnical Engineering and Geologic Hazards Report, dated December 9, 2025

## RESOLUTION NO. PC 04-26

A RESOLUTION OF THE MORRO BAY PLANNING COMMISSION FOR COASTAL DEVELOPMENT PERMIT NO. CDP25-003, MINOR USE PERMIT NO. MUP25-01, AND DESIGN REVIEW PERMIT NO. DR25-001 TO ALLOW FOR THE CONSTRUCTION OF A 6,561SF TWO-STORY TEN-ROOM BOUTIQUE HOTEL LOCATED AT 1180 FRONT STREET

**WHEREAS**, the Planning Commission of the City of Morro Bay (the “City”) conducted a public hearing on April 21, 2026, in a hybrid format with both an in-person meeting at the Morro Bay Veterans Memorial Building, 209 Surf Street, Morro Bay, CA 93442 as well as through virtual public participation provided telephonically through Zoom, for the purpose of considering the approval of CDP25-001 / MUP25-01 / DR25-001 for the construction of a 6,561 sf 10-room boutique hotel; and

**WHEREAS**, notices of said public hearing were made at the time and in the manner required by law; and

**WHEREAS**, the City has duly considered all evidence, including the testimony of the applicant, interested parties, and the evaluation and recommendations by staff, presented at said hearing.

**NOW, THEREFORE, BE IT RESOLVED** by the Planning Commission of the City of Morro Bay as follows:

Section 1: Findings. Based upon all the evidence, the Commission makes the following findings:

### **California Environmental Quality Act (CEQA) Findings**

1. The project is exempt from the California Environmental Quality Act, under Class 32, Section 15332, In-Fill Development Projects. The project meets the general plan and zoning ordinance and is on a parcel within city limits smaller than 5 acres. The parcel does not provide habitat areas to any endangered, rare, or threatened species. The project does not pose a risk to traffic, noise, air quality, or water quality. The site can also be adequately serviced by all required utilities and public services. Additionally, none of the Categorical Exemption exceptions, noted under Section 15300.2, apply to the project.

### **Coastal Development Permit Findings**

1. **LCP Consistency.** The project is consistent with the LCP.

*Plan Morro Bay was adopted in 2021, encompassing both the City’s General Plan and Coastal Land Use Plan (LCP). The property falls within the General Plan’s land use designation of Visitor Serving Commercial, which is intended for visitor-oriented services and uses located at easily accessible locations and tourist destinations within the coastal zone.*

2. **Public Views.** The project protects or enhances public views.

*Plan Morro Bay includes various policies related to the protection and enhancement of coastal public views. The view from the top of Surf St, while not an expressly protected public view*

*outlined in Plan Morro Bay, is a popular and loved view of Morro Rock and the bay. This project, as designed, does not block public views of Morro Rock or the bay.*

3. **Habitat Protection.** The project protects vegetation, natural habitats and natural resources consistent with LCP.

*The Conservation Element of Plan Morro Bay addresses the use and preservation of natural resources to improve the environmental quality of Morro Bay. This property is not located within a mapped environmentally sensitive habitat area and therefore is not expected to compromise existing vegetation, natural habitats or natural resources with proper erosion control measures.*

4. **Design Consistency.** The design, location, size, and operating characteristics of the proposed development is consistent with applicable LCP design requirements, including design plans and area plans incorporated into the LCP.

*Plan Morro Bay designates the City of Morro Bay's Zoning Code (Title 17 of the Municipal Code) as the regulatory authority for implementation of coastal requirements including allowed uses, development standards, and coastal resource protection standards. The design, size, location, and operating characteristics of this project are consistent with applicable sections of the Morro Bay Zoning Code. Further, Plan Morro Bay places this property in the North Embarcadero Character Area, this area is envisioned to be redeveloped with more visitor serving uses.*

5. **Coastal Access.** The project protects or enhances public access to and along the coast.

*This project, as conditioned, will rebuild the Surf St. stairs. The stairs were removed in late 2018 due to deterioration and safety concerns. The rebuilding of the stairs will enhance coastal access to the coast from the neighborhood above.*

6. **Visitor Serving.** The project supports the LCP goal of providing for visitor-serving needs as appropriate, including providing low- and no-cost visitor and recreational facilities.

*Plan Morro Bay includes various policies related to visitor-serving needs, including policies that require hotel projects to provide low-cost overnight visitor serving accommodations when the City goes below the 25% required threshold city-wide. The last survey conducted city-wide determined that 36% of all hotel and motel accommodations in Morro Bay were low-cost accommodations. Including campgrounds and short-term rentals, 52% of all overnight accommodations city-wide are considered low-cost accommodations. Plan Morro Bay Implementation Action LU-17 allows hotels that do not provide low-cost overnight visitor serving accommodations to provide low or no cost visitor serving amenities. This project is not proposed with low-cost overnight visitor serving accommodations, but by rebuilding the Surf St stairs, the project will provide a no-cost public amenity to the public and enhanced public access to the Morro Bay Waterfront.*

7. **Appropriate Use.** The project is consistent with the allowed LCP uses associated with the property.

*Plan Morro Bay was adopted in 2021, encompassing both the City's General Plan and Coastal Land Use Plan (LCP). The property falls within the General Plan's land use designation of*

*Visitor Serving Commercial, which is intended for visitor-oriented services and uses located at easily accessible locations and tourist destinations within the coastal zone.*

*Plan Morro Bay designates the City of Morro Bay Zoning Code as the regulatory authority for implementation of coastal requirements including allowed uses, development standards, and coastal resource protection standards. The design, size, location, and operating characteristics of this project are consistent with applicable sections of the Morro Bay Zoning Code.*

8. **Coastal Resources.** The proposed development protects or enhances coastal resources, where applicable.

*Plan Morro Bay includes various policies related to the protection or enhancement of coastal resources. The proposed project is consistent with the protection of coastal resources.*

9. **Environmental Justice.** The project addresses whether proposed development results in environmental justice impacts, consistent with LCP environmental justice policies. When relevant, the project includes mitigation measures to minimize or eliminate potential adverse and/or disproportionate impacts of development on environmental justice communities.

*The project does not trigger environmental justice impacts. No mitigation measures are required to minimize or eliminate potential adverse and/or disproportionate impacts of development on environmental justice communities.*

10. **Hazards.** The proposed development is consistent with the LCP's coastal hazards provisions.

*Coastal hazards include, but are not limited to, episodic and long-term shoreline retreat and coastal erosion, high seas, ocean waves, storms, tsunami, coastal flooding, landslide, bluff and geologic instability, and the interaction of same, and all is impacted by sea level rise. This project, however, is not located along the shoreline and, as determined by a Geologic Hazards Report, is not subject to geologic instability.*

### **Minor Use Permit Findings**

1. The proposed use is allowed within the applicable zoning district and complies with all other applicable provisions of this title and all other titles of the municipal code;

*The proposed boutique hotel use is a permitted use within the Visitor Serving Commercial Zone. The project as proposed and conditioned meets the requirements of the Morro Bay Municipal Code.*

2. The proposed use is consistent with the general plan and any applicable specific plan;

*The proposed hotel use is consistent with the general plan and no specific plans are applicable to the property.*

3. The proposed use will not be adverse to the public health, safety, or general welfare of the community, nor detrimental to surrounding properties or improvements;

*The parking reduction will not be adverse to the public health, safety, or general welfare of the community as it preserves public parking spaces that would have been removed to provide on-site private parking spaces. The parking reduction will not be detrimental to the surrounding properties as the majority of the properties along the Front St parking lot do not provide on-site parking spaces.*

4. The proposed use complies with any design or development standards applicable to the zoning district or the use in question unless waived or modified pursuant to the provisions of this title;

*The proposed hotel project meets the design and development standards applicable to the zoning district and type. Due to its proximity to a city-owned public parking lot, the project is eligible for a parking reduction. The required proximity is 1,200 feet, this project is directly adjacent to the parking lot.*

5. The design, location, size, and operating characteristics of the proposed activity are compatible with the existing and reasonably foreseeable future land uses in the vicinity; and

*The proposed hotel project is directly adjacent to a boutique hotel and there are several other hotels along Front St. None of the existing hotel projects on this block provide dedicated on-site parking for their overnight guests.*

6. The site is physically suitable for the type, density, and intensity of use being proposed.

*Through the reduction in on-site parking requirements, the site is physically suited for a hotel project of this size. The project is well below the maximum allowed Floor Area Ratio (FAR), it meets the both the height limit in effect at the time of the hearing and the bluff top height limit under consideration for certification by the California Coastal Commission.*

### **Design Review Permit Findings**

1. The overall design of the project including its form, scale, massing, site plan, exterior design, and landscaping will implement the general plan vision for community character areas for the particular area in which it is located as well as complement the natural and built features of surrounding properties and incorporate sustainable development features.

*This property is located in the North Embarcadero Community Area, as defined by Plan Morro Bay. The North Embarcadero Area is largely defined by the former Vistra Power Plant site, the commercial fishing working area, and by spectacular views of Morro Rock and the bay. Redevelopment in this area should be focused on visitors, which this project does by providing visitor accommodations, and pedestrian connectivity, accomplished through this project by the Surf St stairs. The overall design preserves public views of the Rock and the Bay from the top of Surf Street and is consistent with all applicable design standards.*

- The project design is appropriate to the function of the project and will provide an attractive and comfortable environment for occupants, visitors, and the general community.

*The two-story design, with both private and common outdoor areas, will provide different options for visitors to enjoy Morro Bay's natural environment. As designed, the project will preserve the public views of Morro Rock and the bay from the top of Surf St.*

- Project details, materials, signage and landscaping, are internally consistent, fully integrated with one another, and used in a manner that is visually consistent with the proposed architectural design.

*The proposed design is internally consistent throughout the project through the proposed colors and materials.*

- The design of streetscapes, including street trees, lighting, and pedestrian furniture, is consistent with the intended character of the area.

*The project does not include any streetscape designs.*

- Parking areas and other hardscape areas are designed and developed to buffer surrounding land uses; compliment pedestrian-oriented development; enhance the environmental quality of the site, including minimizing stormwater run-off and the heat-island effect; and achieve a safe, efficient, and harmonious development.

*Through parking reductions and in-lieu fees, this project does not provide any parking areas. Hardscape walking paths are provided for access to the project site.*

- Lighting and lighting fixtures are designed to complement buildings, be of appropriate scale, provide adequate light over walkways and parking areas to create a sense of pedestrian safety, avoid creating glare, and conform to dark sky principles.

*The proposed lighting is downward facing and shielded. The proposed fixtures compliment and are in scale with the architectural style of the proposed building.*

- Landscaping is designed to be compatible with and enhance the vision for the community character area in which the development is located as well as the architectural character and features of the buildings on site.

*The landscaping proposed at the rear of the property will mainly serve the purpose of screening the project from the adjacent residences at the top of the bluff. All vegetation shall be native and drought tolerant. The landscaping at the front of the property is designed to soften the building and enhance the pedestrian experience along the public sidewalk.*

Section 2: Action. The Planning Commission does hereby approve CDP25-001 / MUP25-01 / DR25-001 subject to the following conditions:

### **STANDARD CONDITIONS**

- Authorized Development: CDP25-001 / MUP25-01 / DR25-001 for the land described as Assessor's Parcel Number 066-034-015 to allow for the construction of a 6,561 sf two-story, 10-unit luxury hotel located at 1180 Front St, as shown on plans date-stamped and approved on April 21, 2026, and on file with the Community Development Department, as modified by these conditions of approval. Site development, including all buildings and other features,

shall be located and designed substantially as shown on plans, unless otherwise specified herein.

2. Inaugurate Within Two Years: Unless the construction or operation of the structure, facility, or use is commenced not later than two (2) years after the effective date of this Resolution and is diligently pursued, thereafter, this approval will automatically become null and void; provided, however, that upon the written request of the applicant, prior to the expiration of this approval, the applicant may request up to two extensions for not more than one (1) additional year each. Any extension may be granted by the Director, upon finding the project complies with all applicable provisions of the Morro Bay Municipal Code (the "MBMC"), General Plan and certified Local Coastal Program Land Use Plan (LCP) in effect at the time of the extension request.
3. Changes: Minor changes to the project description and/or conditions of approval shall be subject to review and approval by the Community Development Director. Any changes to this approved permit determined, by the Director, not to be minor shall require the filing of an application for a permit amendment subject to Planning Commission review.
4. Compliance with the Law: (a) All requirements of any law, ordinance or regulation of the State of California, the City, and any other governmental entity shall be complied with in the exercise of this approval, (b) This project shall meet all applicable requirements under the MBMC and shall be consistent with all programs and policies contained in the LCP and General Plan for the City.
5. Hold Harmless: The Applicant, as a condition of approval, hereby agrees to defend, indemnify, and hold harmless the City, its agents, officers, and employees, from any claim, action, or proceeding against the City as a result of the action or inaction by the City, or from any claim to attack, set aside, void, or annul this approval by the City of the applicant's project; or applicant's failure to comply with conditions of approval. Applicant understands and acknowledges the City is under no obligation to defend any legal actions challenging the City's actions with respect to the project. This condition and agreement shall be binding on all successors and assigns.
6. Compliance with Conditions: The Applicant's establishment of the use or development of the subject property constitutes acknowledgement and acceptance of all Conditions of Approval. Compliance with and execution of all conditions listed hereon shall be required prior to obtaining final building inspection clearance. Deviation from this requirement shall be permitted only by written consent of the Director or as authorized by the Planning Commission. Failure to comply with any of these conditions shall render this entitlement, at the discretion of the Director, null and void. Continuation of the use without a valid entitlement will constitute a violation of the MBMC and is a misdemeanor.
7. Compliance with Morro Bay Standards: This project shall meet all applicable requirements under the MBMC and shall be consistent with all programs and policies contained in the LCP and General Plan of the City.
8. Archaeology: In the event of the unforeseen encounter of subsurface materials suspected to be of an archaeological or paleontological nature, all grading or excavation shall immediately cease in the immediate area, and the find should be left untouched until a qualified professional archaeologist or paleontologist, whichever is appropriate, is contacted and called

in to evaluate and make recommendations as to disposition, mitigation and/or salvage. The developer shall be liable for costs associated with the professional investigation.

9. Conditions of Approval: The Findings and Conditions of Approval shall be included as a full-size sheet in the Building Plans.

### **BUILDING CONDITIONS:**

All construction will conform to the 2025 California Building Code (CBC), 2025 California Residential Code (CRC), 2025 California Fire Code (IFC), 2025 California Mechanical Code (CMC), 2025 California Plumbing Code (CPC), 2025 California Electrical Code (CEC), 2025 California Energy Code, 2025 California Green Code (CGBC), Title 14 and 17 of the Morro Bay Municipal Code.

*(Code adoption dates are subject to change. The code adoption year is established by the application date of plans submitted to the Building Division for plan review.)*

### **PRIOR TO ISSUANCE OF A BUILDING PERMIT:**

10. Building permit plans shall be submitted by a California licensed architect or engineer when required by the Business & Professions Code, except when otherwise approved by the Chief Building Official.
11. The owner shall designate on the building permit application a registered design professional who shall act as the Registered Design Professional in Responsible Charge. The Registered Design Professional in Responsible Charge shall be responsible for reviewing and coordinating submittal documents prepared by others including phased and staggered submittal items, for compatibility with design of the building.
12. The owner shall comply with the City's Structural Observation Program. The owner shall employ the engineer or architect responsible for the structural design, or another engineer or architect designated by the engineer of record or architect responsible for the structural design, to perform structural observation as defined in Section 220. Observed deficiencies shall be reported in writing to the owner's representative, special inspector, contractor and the building official. The structural observer shall submit to the building official a written statement that the site visits have been made and identify any reported deficiencies that, to the best of the structural observer's knowledge, have not been resolved.
13. The owner shall comply with the City's Special Inspection Program. Special inspections will be required by Section 1704 of the California Building Code. All Special Inspectors shall first be approved by the Building Official to work in the jurisdiction. All field reports shall be provided to the City Building Inspector when requested at specified increments in order for the construction to proceed. All final reports from Special Inspectors shall be provided to the Building Official when they are complete and prior to final inspection.
14. A soils investigation performed by a qualified professional shall be required for this project. All cut and fill slopes shall be provided with subsurface drainage as necessary for stability; details shall be provided. Alternatively, submit a completed City of Morro Bay soils report waiver request.

15. Mitigation measures for naturally occurring asbestos require approval from San Luis Obispo County Air Pollution Control District.
16. BUILDING PERMIT APPLICATION. To apply for building permits, submit three (3) sets of construction plans, fire sprinkler plans, if applicable, and supplemental documents to the Building Division.
17. The Title sheet of the plans shall include, but not be limited to:
  - a. Street address, lot, block, track and Assessor Parcel Number.
  - b. Occupancy Classification(s)
  - c. Construction Type
  - d. Maximum Height of the building allowed and proposed.
  - e. Floor area of the building(s).
  - f. Fire sprinklers proposed or existing
  - g. Minimum building setback allowed and proposed

**CONDITIONS TO BE MET DURING CONSTRUCTION:**

18. SITE MAINTENANCE. During construction, the site shall be maintained so as to not infringe on neighboring property, such as debris and dust. A storm water management plan shall be maintained throughout the duration of the project. The storm water management measures such as fiber rolls, silt fencing, etc. will be enforced by City staff by random site visits.
19. ARCHAEOLOGICAL MATERIALS. In the event unforeseen archaeological resources are unearthed during any construction activities, all grading and or excavation shall cease in the immediate area and the find left untouched. The Building Official shall be notified so that the extent and location of discovered materials may be recorded by a qualified archaeologist, Native American, or paleontologist, whichever is appropriate. The qualified professional shall evaluate the find and make reservations related to the preservation or disposition of artifacts in accordance with applicable laws and ordinances. If discovered archaeological resources are found to include human remains, or in any other case when human remains are discovered during construction, the Building Official shall notify to county coroner. If human remains are found to be of ancient age and of archaeological and spiritual significance, the Building Official shall notify the Native American Heritage Commission. The developer shall be liable for costs associated with the professional investigation.
20. FOUNDATION SETBACK VERIFICATION. Prior to the placement of concrete and upon completed form installation, a licensed surveyor is required to measure and record the distance from the proposed foundation walls to the established lot lines. The contractor shall submit these findings in letter format to the building inspector upon the request for a foundation inspection. Letter shall specify findings of front, sides and rear yard setbacks as defined by Title 17 of the MBMC. The Building Official shall have discretion on a case-by-case basis for some lot types.
21. BUILDING HEIGHT VERIFICATION. Prior to roof sheathing or shear wall inspection, a licensed surveyor is required to measure and record the height of the structure. The contractor shall submit this finding in letter format to the building inspector upon request for roof sheathing/shear wall inspection. Letter shall specify the recorded height of structure as

defined in Title 17 of the MBMC. The Building Official shall have discretion on a case-by-case basis for some site-specific projects.

22. **EXISTING BUILDINGS.** Where windows are required to provide emergency escape and rescue openings, replacement windows shall comply with the maximum sill height requirements of Section R310.2.2 and the minimum opening area requirements of Section R310.2.1 of the 2022 California Building Code.

### **CONDITIONS TO BE MET PRIOR TO FINAL INSPECTION AND ISSUANCE OF CERTIFICATE OF OCCUPANCY**

23. Prior to building division final approval all required inspections from the other various divisions must have been completed and verified by a city inspector. All required final inspection approvals must be obtained from the various departments and documented on the permit card. This permit card shall then be turned into the building division for scheduling of the final building inspection.
24. Any as-built drawings that were required by the building inspector or plans examiner must be submitted for approval prior to the request for final inspection.
25. If structural observations were required, the final structural observation report shall be submitted to the building division prior to issuance of the certificate of occupancy or final inspection approval.
26. If special inspections were required, the final special inspection report shall be submitted to the building division prior to the issuance of the certificate of occupancy or final inspection approval.
27. Final soils summary report from the geotechnical representative indicating compliance with the required conditions set forth in the soils report.
28. Final T-24 energy reports (Certificates of Installation).

### **PUBLIC WORKS CONDITIONS:**

29. Title Report: Submit a copy of a preliminary title report.
30. Stormwater Management: The City has adopted Low Impact Development (LID) and Post-Construction requirements. All SFR projects must complete the "Appendix A - Performance Requirement Determination Form" and submit the letter size form identifying all proposed new and replaced impervious surfaces to determine applicable performance requirements. Additional guidance can be found in the City's Stormwater Management EZ Manual: <https://www.morrobayca.gov/DocumentCenter/View/11114/MB-Stormwater-Management-EZ-manual> (MBMC §14.48.140).

31. Frontage Improvements (Street Expansion & Curb Ramp): The installation of frontage improvements is required as follows:
  - a. The installation of concrete curb and gutter (per City detail B-1) on frontage.
  - b. The installation of a city standard driveway approach is required per detail B-6 or alternative driveway that provides ADA crossing access (if applicable).
  - c. The installation of a 6' sidewalk along frontage per Detail B-5.
  - d. The removal of pine tree located within proposed ADA sidewalk requires the installation of new City trees of not less than two-to-one replacement. (12.08.070)
  - e. Repairs to existing deteriorated frontages.
  - f. Show and label an 18" minimum to 10' maximum asphalt cut and pave back at all portions of concrete curb and gutter to be installed. Add note that asphalt cut and pave back will be needed to be replaced at nearest clean edge extending to competent street material, per Public Works inspector's recommendations. (MBMC 14.44.020)
32. Non-Residential Driveway Slopes: Driveways serving non-residential developments shall not exceed a ten percent slope. (MBMC 17.27.100J)
33. Non-Residential Driveway Width: Non-Residential Driveways must adhere to 12-foot minimum (one-way), 20-foot minimum (two-way) and 30-foot maximum driveway width. (MBMC 17.27.100)
34. Driveway Surface: Driveways shall be surfaced with asphalt or concrete paving or alternative as approved by the City Engineer. (MBMC 17.27.100I)
35. AC Cut & Pave Back: Show and label an 18" minimum to 10' maximum asphalt cut and pave back at all new concrete driveway edge that meets street AC. Add note that asphalt cut and pave back will be needed to be replaced at nearest clean edge per Public Works inspector recommendations.
36. Construction Details: Add construction details of proposed installations.
37. Sewer: Show and label all existing and proposed locations of the sewer mainline and sewer laterals. Include sizes where appropriate. See attached utility maps.
38. Sewer Video: If private Sewer Lateral exists a video Inspection is required. Perform a video inspection of the private sewer lateral, from the cleanout at the structure to the connection at the public sewer main, including verification of the main line connection. (Reference: MBMC §14.07.030)
39. Sewer Backwater Valve: Indicate and label sewer backwater valve on plan. Any sewer lateral upon any premises which services fixtures whose elevation is lower than the elevation of the first upstream sewer manhole rim, lamp hole, or pump station, shall be protected from backflow of sewage by installing backwater valves. Exception: Installation of backwater valve shall not be required when it is determined that the intent and purpose of this section is otherwise met. (MBMC 14.07.010.C).
40. Water: Show and label all existing and proposed locations of the water mainline and water lateral lines. Include sizes where appropriate. See attached utility maps.

41. Water Meter: Indicate on plans location and sizes of both water meter and water lateral. (MBMC 13.04.140)
42. Separate Meters: Separate residential, commercial or industrial occupancies, if situated on the same premises and not under a common roof, shall have separate service connections and meters. (MBMC 14.04.010.C)
43. Water Backflow Prevention Device: Verify and label all new or existing water backflow preventers. Water backflow preventer devices are required for fire water systems, irrigation systems (on a dedicated water meter), systems which may change in character of use (commercial rentals, etc.), gray water systems, or any plumbing system which has cross-connections or the ability to allow water of deteriorated sanitary quality to enter the public water supply. Add note to plan that device is required to be an approved domestic water backflow prevention device. (MBMC 13.08.040)
44. County Cross-Connection Inspection: Add note to plan that contractor is required to contact the County Cross-Connection Control Program at (805)781-5544 to confirm prevention device location and completed test form. The contractor must provide the city with a copy of the results. (MBMC 13.08.040)
45. Utilities: Show and label all existing and proposed lines such as gas lines. Note that a 3-foot separation is required between gas lines and other utilities.
46. Underground Utilities: Per MBMC 17.23.170, All electrical, telephone, cable television, and similar distribution lines providing direct service to a project shall be installed underground within the site. This requirement may be waived by the director upon determining that underground installation is infeasible, in which case the utilities shall be placed outside of the public view and/or appropriately screen with landscaping.
47. Grading and Drainage: Show and label existing and proposed contours, drainage patterns, spot elevations, finish floor elevation, roof downspouts, and all drainage pipes and structures draining to City right of way on the plans. All runoffs shall be directed to vegetated areas prior to overflowing into City right of way. (CBC 107.2.1/CRC R106.1.1)
48. Erosion and Sediment Control Plan: For projects under ½ acre and with slopes less than 15%, provide a standard erosion and sediment control plan. The plan must show the type and location of control measures to prevent erosion, and to keep sediment or debris from entering the City right-of-way, adjacent properties, or any harbor, waterway, or sensitive area. Guidelines are available on the City's website:  
<https://www.morrobayca.gov/DocumentCenter/View/462>
49. Erosion and Sediment Inspection: Add note to contact Public Works Inspector (Matt Bishop) at (805)772-6232 prior to starting any onsite work for erosion and sediment control inspection.
50. Trenching: All trenching and excavation must comply with OSHA Regulations. If trench exceeds 5 feet, a permit is required.

Add the following Notes to the Plans:

- a. Any damage to City facilities (curb, berm, street, sewer, water, or other public improvements) from construction shall be repaired at no cost to the City of Morro Bay.

- b. The designer and contractor are responsible for verifying all utility locations and connections.
- c. No work or use of the City right-of-way or easements is allowed without an Encroachment Permit. Permit information: <https://www.morro-bay.ca.us/197/Public-Works>
  - Driveway requires a standard encroachment permit and must meet Detail B-9.
  - Sewer encroachment permit required for sewer lateral work in right of way or easements.
  - A water encroachment permit and water meter application shall be required for new water meter installations within the City right-of-way.
  - Dumpsters must be on private property unless approved under a temporary encroachment permit.

### **PLANNING CONDITIONS:**

51. Construction Hours: Construction or Repairing of Buildings, the erection (including excavating), demolition, alteration or repair of any building or general land grading and contour activity using equipment in such a manner as to be plainly audible at a distance of fifty feet from the building other than between the hours of seven a.m. and seven p.m. on weekdays and eight a.m. and seven p.m. on weekends except in case of urgent necessity in the interest of public health and safety, and then only with a permit from the Community Development Department, which permit may be granted for a period not to exceed three days or less while the emergency continues and which permit may be renewed for a period of three days or less while the emergency continues (MBMC Section 9.28.030.I).
52. Dust Control: Prior to issuance of a grading permit, a method of control to prevent dust and wind blow earth problems shall be submitted for review and approval by the Building Official.
53. Architecture: Building colors and materials shall be as shown on plans approved by the Planning Commission and specifically called out on the plans submitted for a Building Permit to the satisfaction of the Community Development Director.
54. Boundaries and Setbacks: The property owner is responsible for verification of lot boundaries. Prior to requesting foundation inspection, a licensed land surveyor shall verify lot boundaries and building setbacks to the satisfaction of the Community Development Director. A copy of the surveyor's Form Certification based on a boundary survey shall be submitted with the request for foundation inspection.
55. Structure Height Verification: Prior to foundation inspection, a licensed land surveyor shall measure and inspect the forms and submit a letter to the Community Development Director certifying that the tops of the forms are in compliance with the finish floor elevations as shown on approved plans. Prior to either roof nail or framing inspection, a licensed surveyor shall submit a letter to the building inspector certifying that the height of the structures is in accordance with the approved plans and complies with the maximum height requirements as approved for this project.
56. Inspection: The Applicant shall comply with all City conditions of approval and obtain final inspection clearance from the Planning Division at the necessary time in order to ensure all conditions have been met.

57. Conditions of Approval on Building Plans: Prior to the issuance of a Building Permit, the final Conditions of Approval for both the Conditional Use Permit and the Coastal Development Permit shall be attached to the set of approved plans. The sheet containing Conditions of Approval shall be the same size as other plan sheets and shall be the last sheet in the set of Building Plans.
58. Exterior Lighting and Illumination Plan: Exterior lighting and illumination shall comply with MBMC Section 17.14.090.B.
59. Walls and Fences: Walls and fences shall be maintained in a safe, neat, and orderly condition at all times.
60. Surf St Stairs: With Building Permit Application, project plans shall show wooden stairs along the northern property line to restore Coastal Access from the top of Surf St to the Front St parking lot. Stairs must be constructed prior to the issuance of Certificate of Occupancy.
61. Parking In-Lieu Fee: Prior to the issuance of a Building Permit, a payment of \$105,000 (\$15,000 per space x 7 spaces) shall be made to the City of Morro Bay.
62. Archaeological Monitoring Plan Required: Prior to the issuance of a building or demolition permit, an Archaeological Monitoring Plan shall be prepared by the Applicant and approved by the Community Development Director to provide an archaeologist and cultural Native American monitor during any ground disturbing or trenching activities. A final monitoring report shall be submitted to the Planning Division upon completion of monitoring. The developer shall be liable for any costs associated with providing onsite monitors.
63. Pre-Ground Disturbance Meeting Required: Prior to any ground disturbing or trenching activities, an on-site pre-construction meeting must be scheduled between the Planning Division, the Building Division, the archaeologist, the cultural Native American monitor, and the project agent to discuss monitoring and reporting requirements.
64. Signage: Prior to the installation of any signage, a Sign Permit must be obtained from the Community Development Department.

PASSED AND ADOPTED by the Morro Bay Planning Commission at a regular meeting thereof held on this 21<sup>st</sup> day of April, 2026, on the following vote:

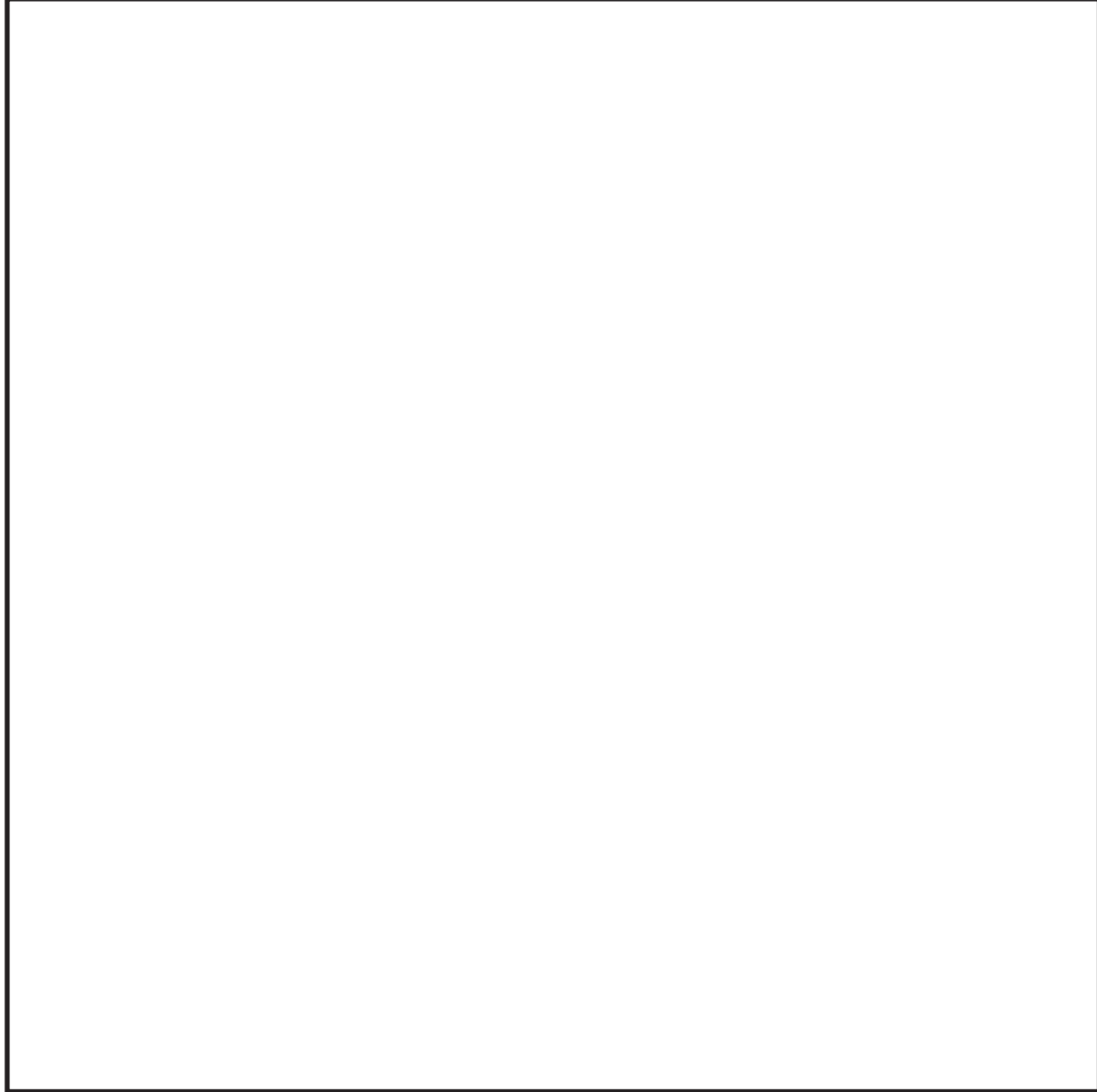
AYES:  
NOES:  
ABSENT:  
ABSTAIN:

\_\_\_\_\_  
Chairperson Eric Meyer

ATTEST

\_\_\_\_\_  
Airlin Singewald, Secretary

The foregoing resolution was passed and adopted this 21<sup>st</sup> day of April, 2026.



CITY OF MORRO BAY STAMP

# FRONT STREET HOTEL

## VICINITY MAP



## PROJECT DIRECTORY

**OWNER:** DON DANIELS  
22985 EL CAMINO REAL  
SANTA MARGARITA, CA 93453  
PHONE: (805) 550-8912  
EMAIL: 711DONUT@GMAIL.COM

**ARCHITECT:** RRM DESIGN GROUP  
3765 S. HIGUERA STREET, SUITE 102  
SAN LUIS OBISPO, CA 93401  
CONTACT: SCOTT MARTIN  
PHONE: (805) 543-1794  
EMAIL: SAMARTIN@RRMDESIGN.COM

**PROJECT ADDRESS:** 1180 FRONT STREET, MORRO BAY, CA 93442

**APN:** 066-034-015

## PROJECT DESCRIPTION

TWO-STORY, 10 UNIT, LUXURY HOTEL ON THE BEAUTIFUL COAST OF MORRO BAY. THE PROJECT NAME (FRONT STREET HOTEL AS PLACEHOLDER) IS STILL BEING DETERMINED. THIS NEW PROJECT IS DESIGNED WITH SITE CONTEXT IN MIND.

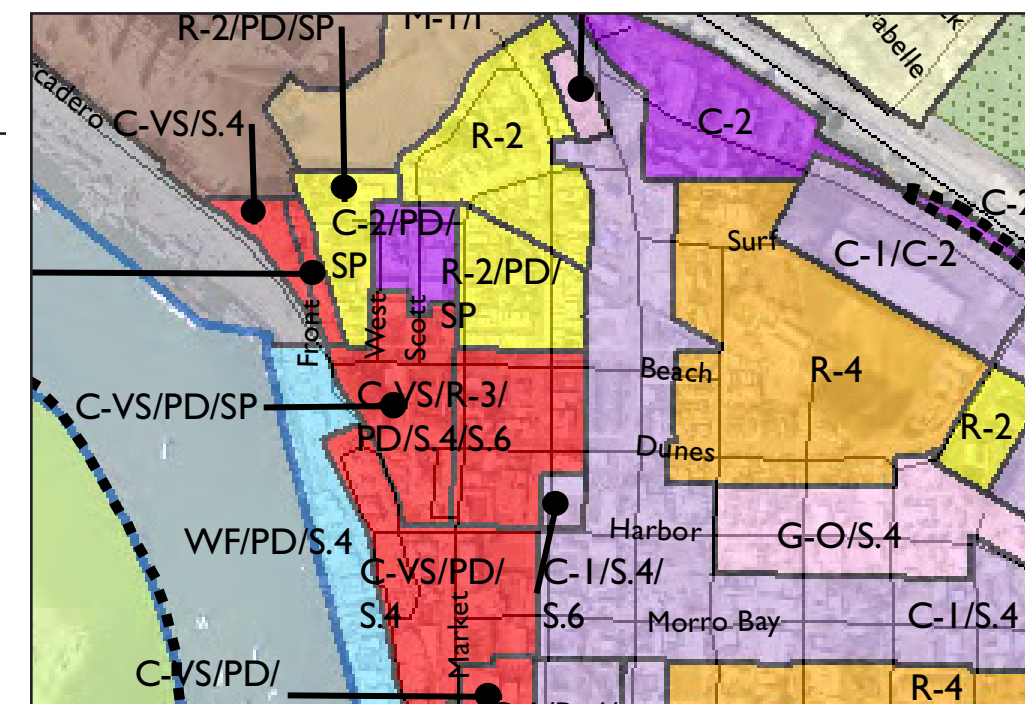
## LOT STATISTICS

**PARCEL SIZE** 0.36 ACRES (0.18 AC, 0.18 AC)  
**SLOPE** 20% AVG PER COUNTY LAND USE VIEW

**ZONING** VISITOR SERVING COMMERCIAL (VSC)  
**LAND USE** VISITOR SERVING COMMERCIAL (VSC)

**COASTAL AREA** YES  
**SCENIC CORRIDOR** NO  
**AIRPORT AREA** NO  
**FIRE HAZARD SEVERITY ZONE** NO

## ZONING MAP



## PROJECT STATISTICS

**PROPOSED COVERAGE:** 28% (4,393 SF)  
**MAX. F.A.R.** 1.25  
**PROPOSED F.A.R.** 0.33 (BUILDING GROSS/ PARCEL SIZE)

**LANDSCAPE AREA** 3,176 SF (16%)  
**IMPERVIOUS SURFACE:** 1,850 SF

**MAX. ALLOWED HEIGHT:** 30 FT. FROM AVG. GRADE  
**MAX. PROPOSED HEIGHT:** 29 FT. AFF

BUILDING SETBACKS:	REQUIRED	PROPOSED
FRONT	0 FT	2 FT
SIDE	0 FT, 10 FT ADJ. TO RESIDENTIAL DIST.	4.5 FT ON LEFT 0 FT ON RIGHT
REAR	0 FT, 10 FT ADJ. TO RESIDENTIAL DIST.	17 FT

**OCCUPANCY TYPES & AREA:**  
R-1 5,138 SF, 10 UNITS HOTEL/MOTEL  
LOAD FACTOR = 200 GROSS  
= 26 OCCUPANTS

**CONSTRUCTION TYPE:** VB

**CONDITIONED SF:** 4,308 SF

**TOTAL SQUARE FOOTAGE:** MORRO BAY MUNICIPAL CODE 17.02.030 6,561 SF

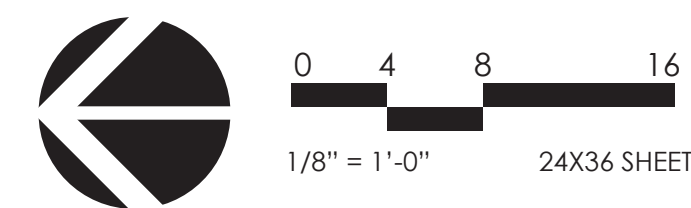
## PARKING

**AUTO PARKING** CALCULATION  
**PARKING REQUIRED** PER CITY OF MORRO BAY  
**PARKING PROVIDED**

SPACE COUNT  
0  
0

## SHEET INDEX

T1	TITLE SHEET
A2	EXISTING SITE SURVEY
A3	ARCHITECTURAL SITE PLAN
A4	GROUND AND SECOND FLOOR PLANS
A5	ROOF PLAN & ENLARGED UNIT PLAN
A6	EXTERIOR ELEVATIONS
A7	EXTERIOR ELEVATIONS
A8	SITE SECTIONS
A9	SITE SECTIONS
A10	FEATURE PERSPECTIVE
A11	PHOTOSIMULATIONS
A12	PHOTOSIMULATIONS
A13	PHOTOMATCH
A14	PHOTOSIMULATIONS
A15	COLOR AND MATERIALS
A16	DETAIL VIGNETTES
C1	CIVIL GRADING PLAN
C2	CIVIL SITE PLAN
C3	STORMWATER PLAN
L1	LANDSCAPE SITE PLAN - GROUND FLOOR
L2	LANDSCAPE SITE PLAN - SECOND FLOOR
L3	PLANTING & IRRIGATION



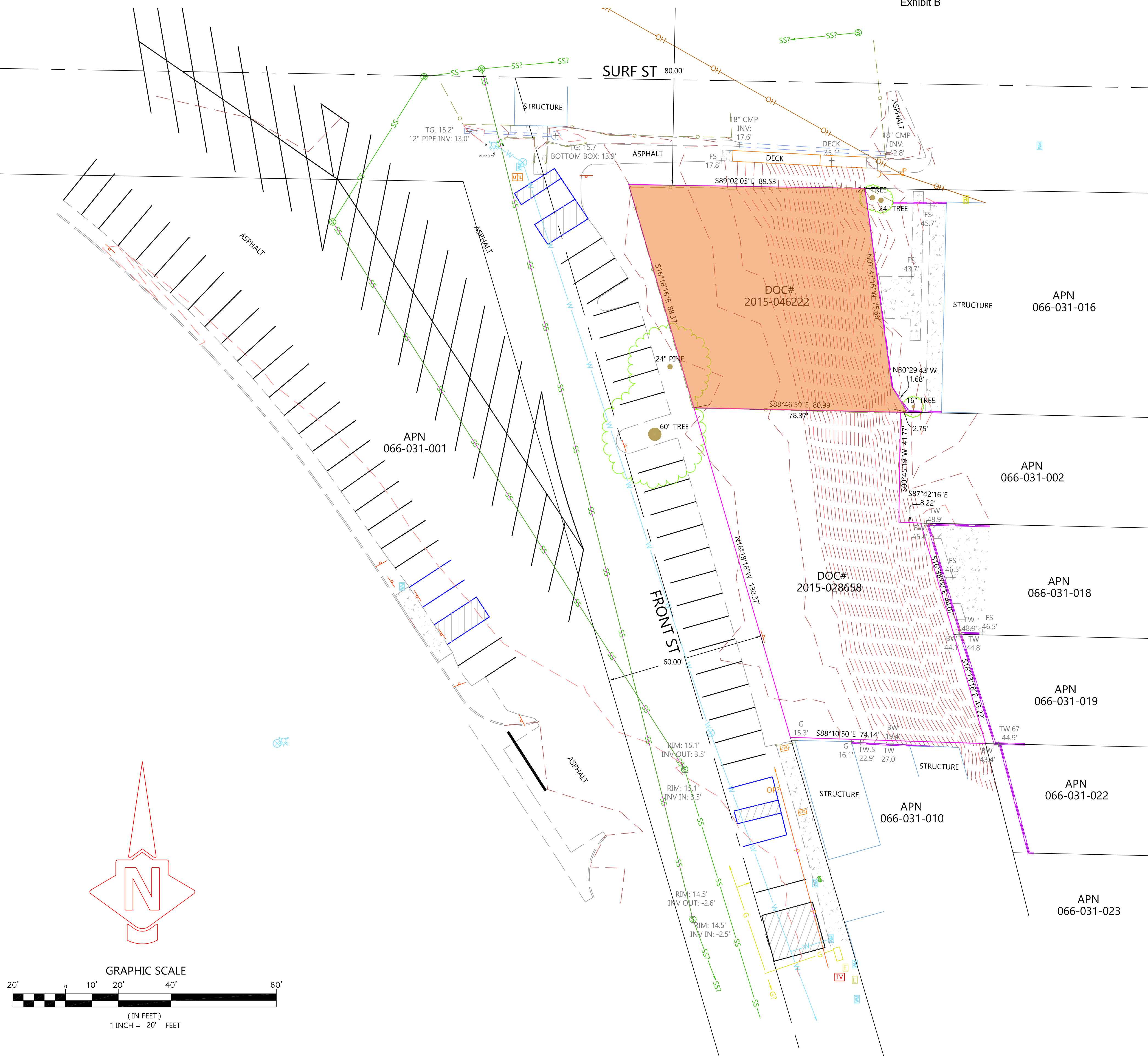
TITLE SHEET

FRONT STREET HOTEL - MORRO BAY

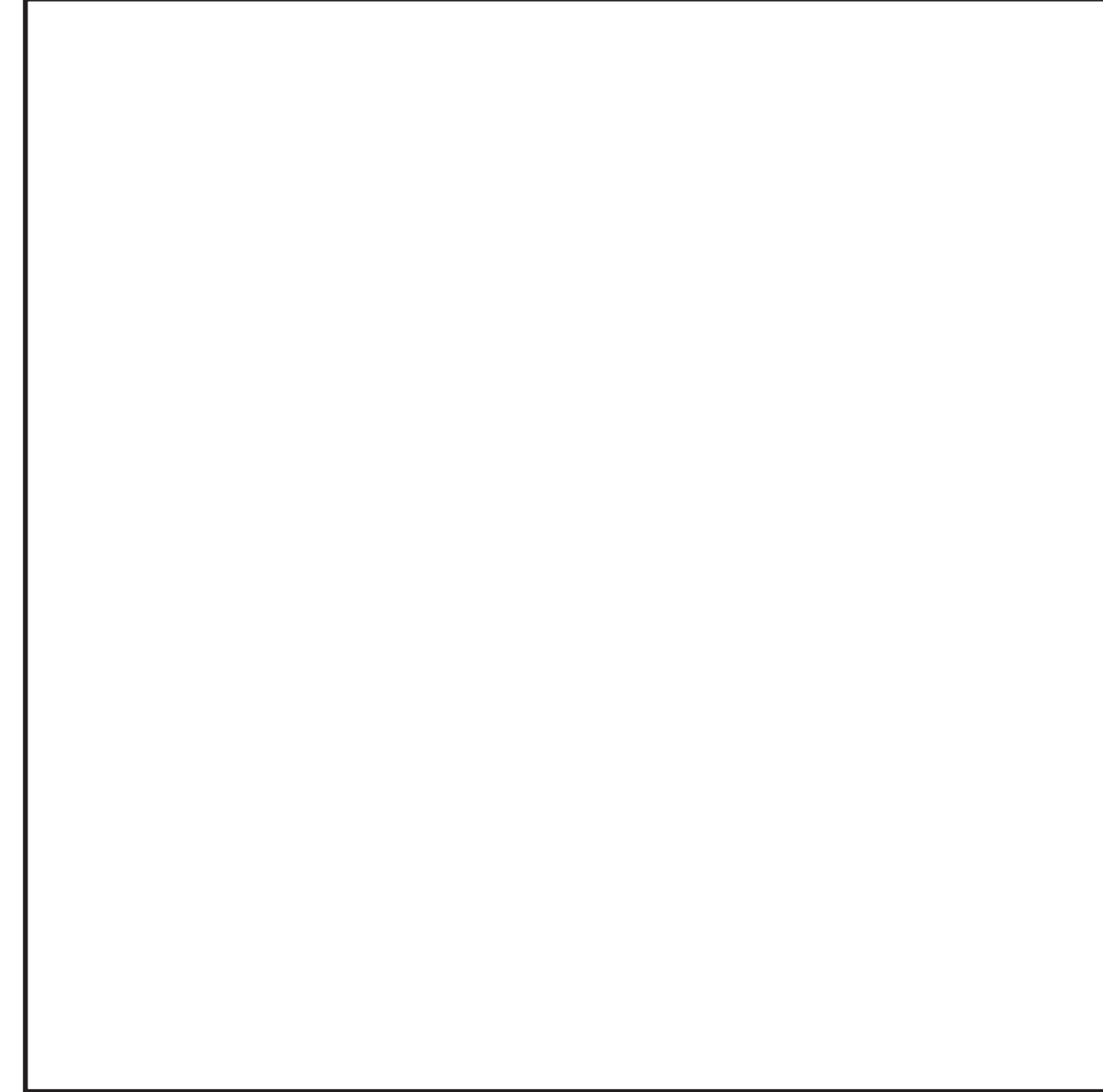
15 JANUARY 2026

2875-01-CO22

T1



- WATER METER
- GAS METER
- GAS VALVE
- PHONE PEDESTAL, BOX, VAULT, OR LOCKER
- PHONE MANHOLE
- TRAFFIC PEDESTAL, BOX, VAULT, OR LOCKER
- TRAFFIC SIGNAL POLE
- TV PEDESTAL, BOX, VAULT, OR LOCKER
- MAIL BOX
- STORM DRAIN MANHOLE
- DRAIN INLET
- SEWER MANHOLE
- CLEANOUT
- SIGN
- BILLBOARD / SIGNAGE
- LAMP POST
- ELECTRIC PEDESTAL, BOX, VAULT, OR LOCKER
- PVC PIPE UTILITY STUB / RISER
- OVERHEAD UTILITY LINE
- GREEN PAINT/FLAG: POSSIBLE SEWER/STORM UTILITY
- BLUE PAINT/FLAG: POSSIBLE WATER UTILITY
- YELLOW PAINT/FLAG: POSSIBLE GAS UTILITY
- RED PAINT/FLAG: POSSIBLE ELECTRIC UTILITY
- ORANGE PAINT/FLAG: POSSIBLE PHONE UTILITY
- ORANGE PAINT/FLAG: POSSIBLE TV UTILITY
- WALL
- FENCES
- EDGE OF PAVEMENT
- CONCRETE
- PAVERS, TILE OR BRICK
- UTILITY POLE
- POWER POLE
- JOINT POLE
- GUY WIRE
- SET MONUMENT
- FOUND MONUMENT
- BENCHMARK
- SURVEY CONTROL POINT
- STREET MONUMENT WELL
- BOLLARD
- LO = LIVE OAK
- WO = WHITE OAK
- PI = PINE
- TR = TREE
- FF = FINISH FLOOR
- FS = FINISH SURFACE
- CMP = CORRUGATED METAL PIPE
- HDPE = PLASTIC PIPE
- G: xxx'+ + GROUND SPOT GRADE
- AC: xxx'+ + ASPHALT SPOT GRADE
- TC: xxx'+ + TOP OF CURB SPOT GRADE
- CONC: xxx'+ + CONCRETE SPOT GRADE
- TW: xxx'+ + TOP OF WALL SPOT GRADE



CITY OF MORRO BAY STAMP

**GENERAL NOTES:**

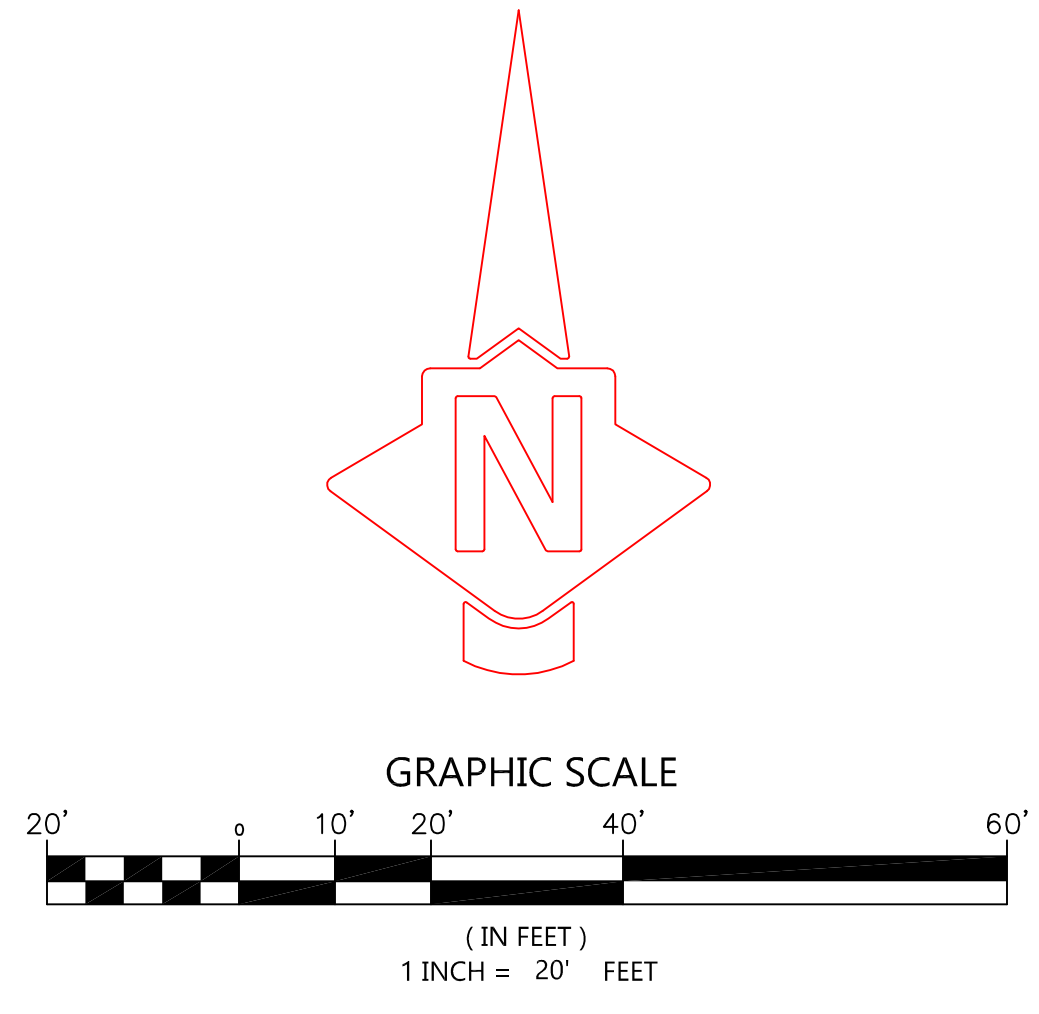
- 1) TREE SIZES AND SPECIES ARE APPROXIMATE AND SHOULD BE VERIFIED AND/OR DETERMINED BY A CERTIFIED ARBORIST.
- 2) UTILITIES SHOWN ON THIS MAP ARE ON BASED VISIBLE IMPROVEMENTS AND CLEARLY DEFINED PAINT MARKINGS MADE BY OTHERS EXISTING AT THE TIME OF THE FIELD SURVEY. APPARENT TYPES AND SIZES OF UTILITIES MAY BE INDICATED BUT MUST BE VERIFIED BY THE APPROPRIATE UTILITY COMPANY. OTHER UTILITY SERVICES MAY EXIST THAT ARE NOT SHOWN.
- 3) EASEMENTS, OFFERS, LICENSES, RIGHTS, RESTRICTIONS AND/OR INTERESTS AFFECTING THIS PROPERTY MAY EXIST BUT MAY NOT BE SHOWN ON THIS MAP.
- 4) PARCEL LINES SHOWN HEREON DO NOT INDICATE OR IMPLY PARCEL LEGALITY. ADDITIONAL TITLE RESEARCH AND CERTIFICATE OF COMPLIANCE APPLICATION TO THE LOCAL GOVERNING AGENCY MAY BE REQUIRED FOR DETERMINATION.

**BASIS OF BEARINGS**

THE BASIS OF BEARINGS FOR THIS SURVEY IS GRID NORTH, CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 5, PER THE SURVEYED TIE BETWEEN FOUND MONUMENTS AT THE INTERSECTIONS OF FRONT ST/BEACH ST AND SURF ST/SCOTT AVE HAVING A CALCULATED BEARING OF N34°45'46"E PER 107/LS/46.

**BASIS OF ELEVATIONS**

THE BASIS OF ELEVATIONS FOR THIS SURVEY IS THE BRASS CAP AT THE INTERSECTION OF FRONT ST AND BEACH ST HAVING AN ELEVATION OF 13.91' NAVD88 PER 107/LS/46



This map correctly represents a topographic survey performed by me or under my direction. The boundary lines of the subject parcel, shown hereon, are based on a measured survey.  
*Marc Dakos* 09-14-17  
 Marc D. Dakos, LS 8769 (Date)

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7600 Morro Road  
 Atascadero, CA 93422  
 Ph: (805) 466-2445  
 info@dakoslandsurveys.com  
 www.DakosLandSurveys.com

TOPOGRAPHIC SURVEY									
Site:	1170 Front St								
Requested By:	Jason Blankenship								
	PTN LOTS 3-5, BLOCK 61, BAKERSFIELD COLONY TRACT, 2/MB/52, CITY OF MORRO BAY, COUNTY OF SAN LUIS OBISPO, STATE OF CALIFORNIA PER DOC# 2004-045846								
APN(S):	066-034-021								
DATE:	September 2017								
FILENAME:	17-104 Blankenship Front								
Drafter:	CLM	Scale:	1"=20'	Project:	17-104	Job:	17-104	Sheet:	1 of 1

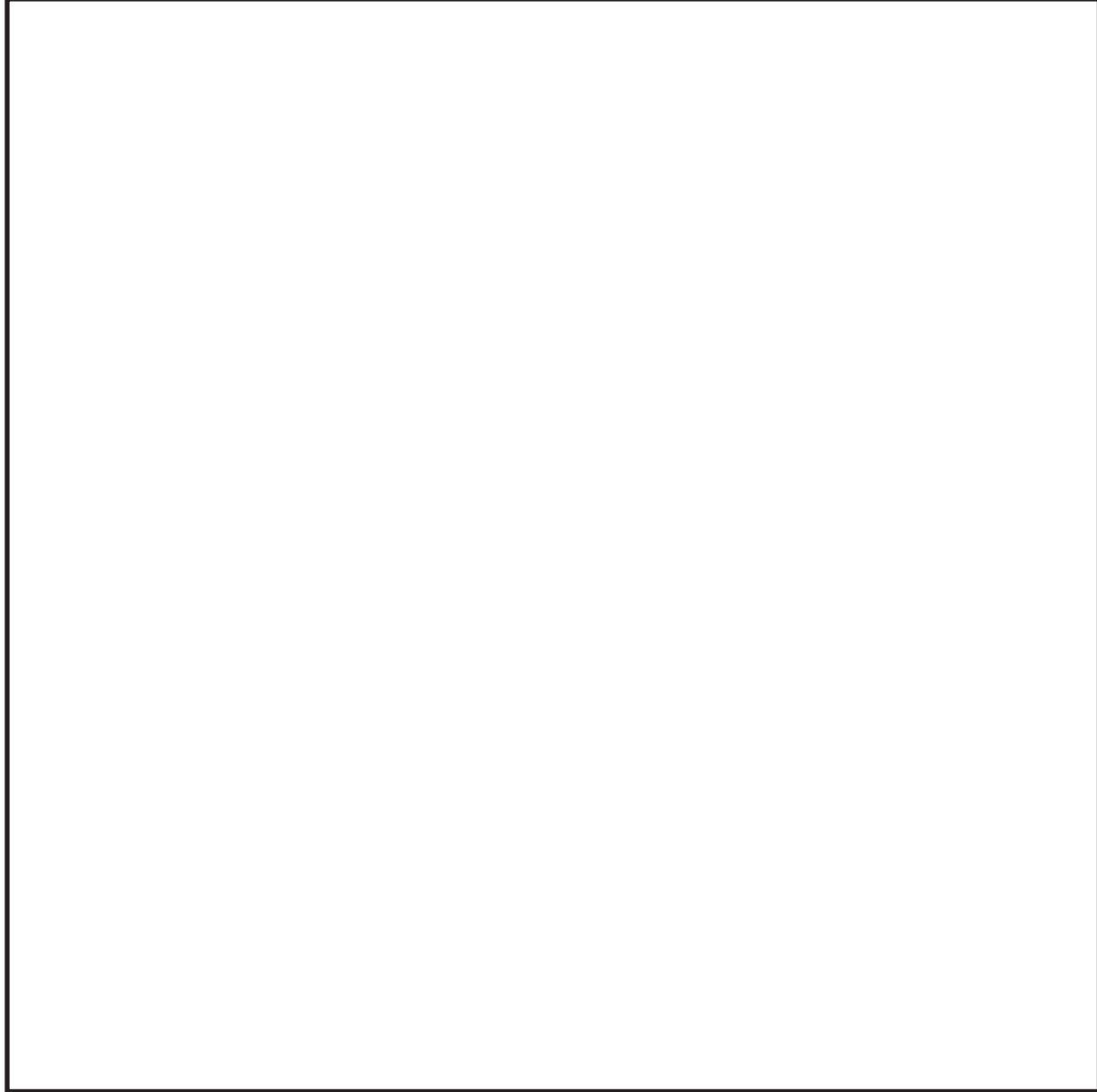


**EXISTING SITE SURVEY**  
**FRONT STREET HOTEL - MORRO BAY**

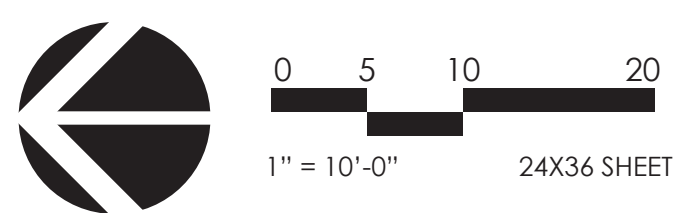
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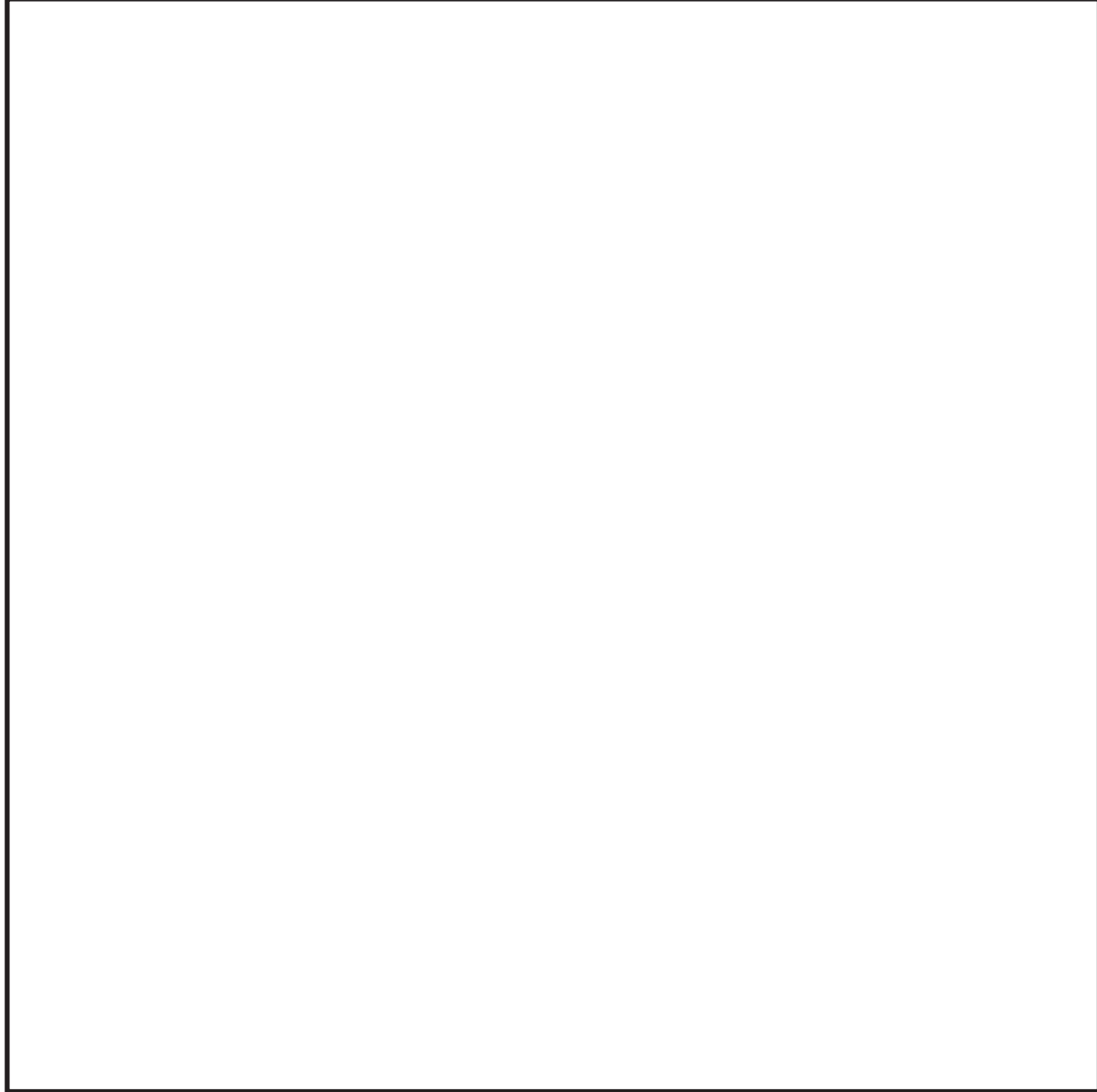
2875-01-CO22

**A2**

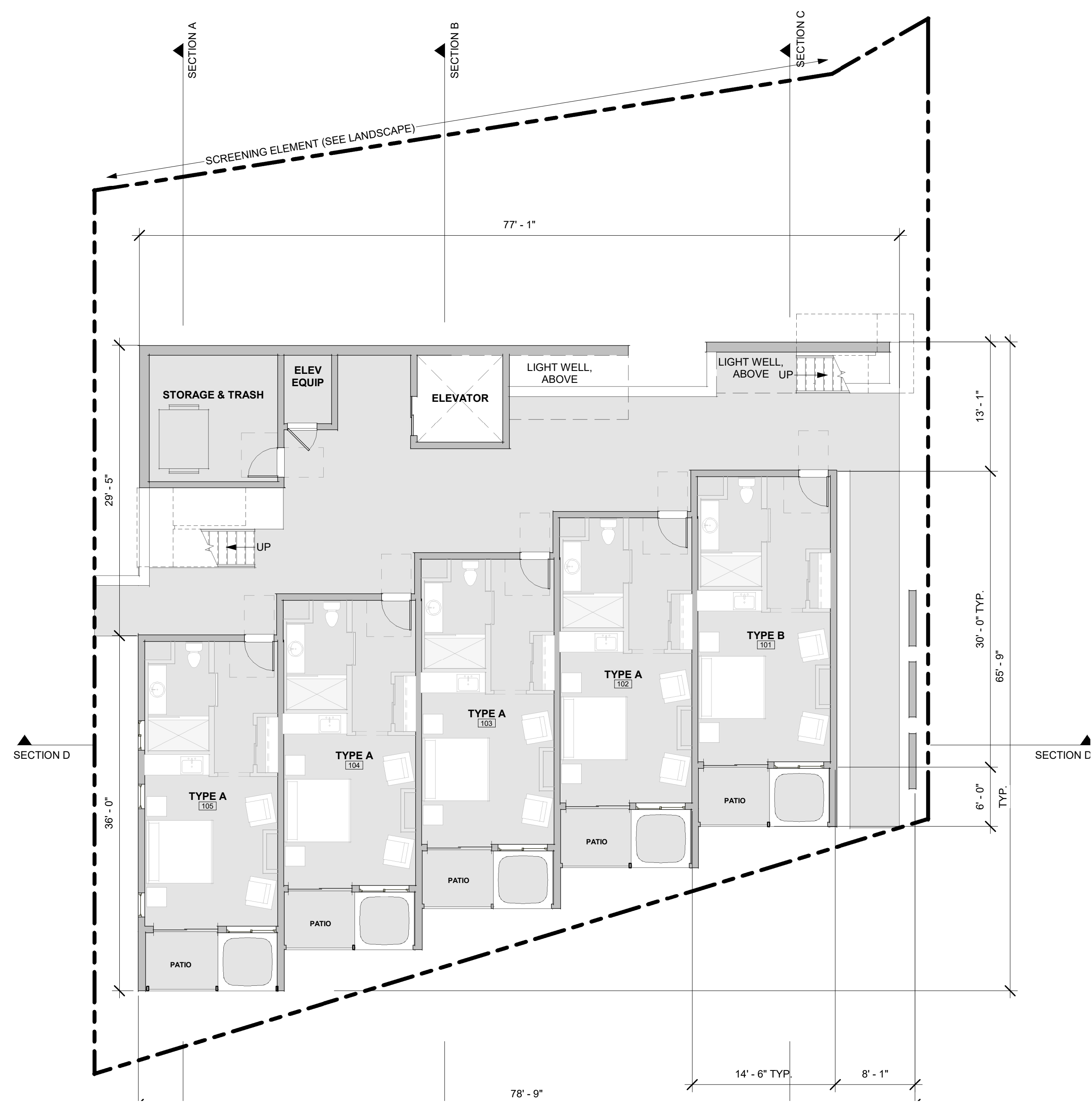


CITY OF MORRO BAY STAMP

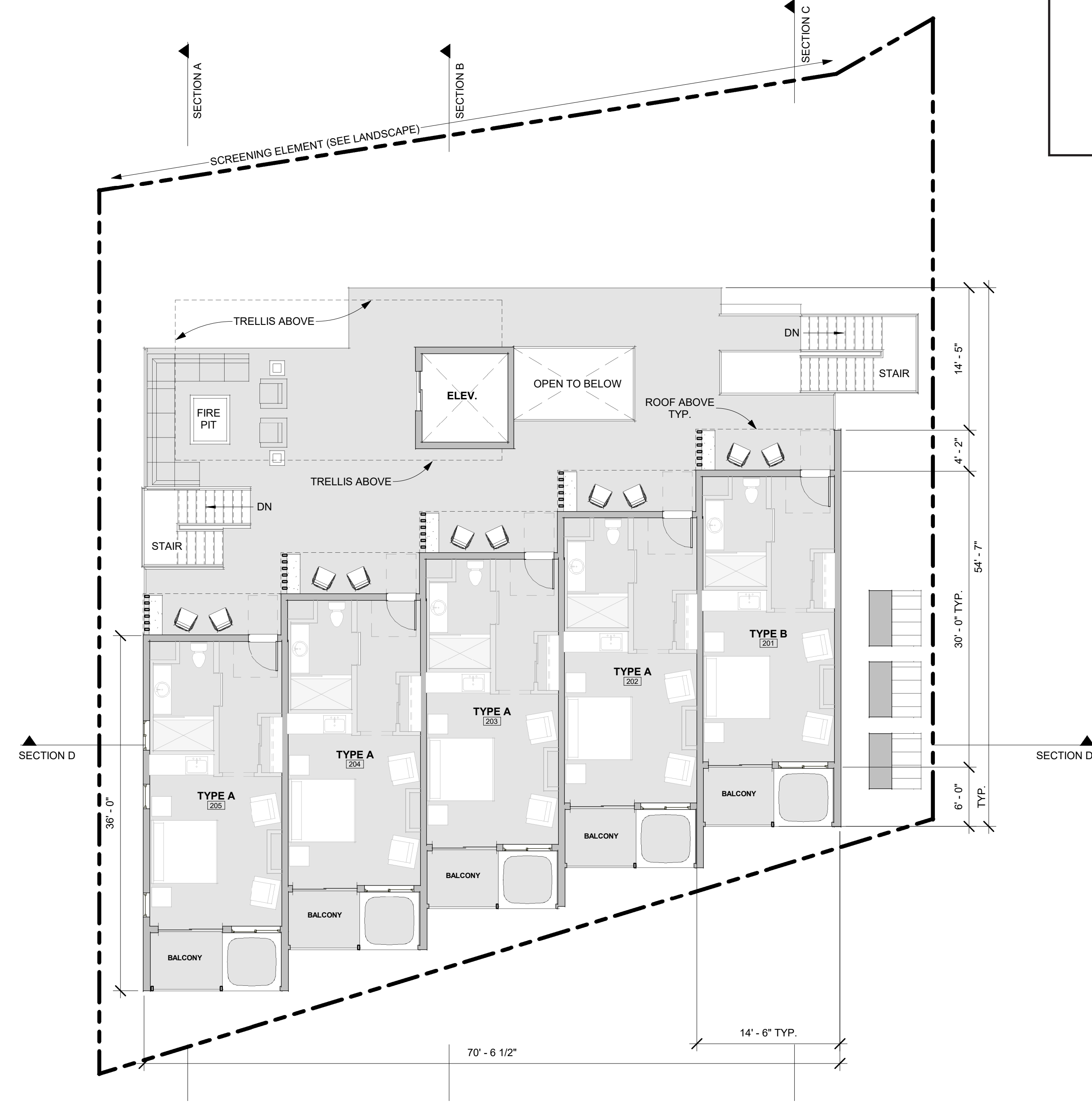




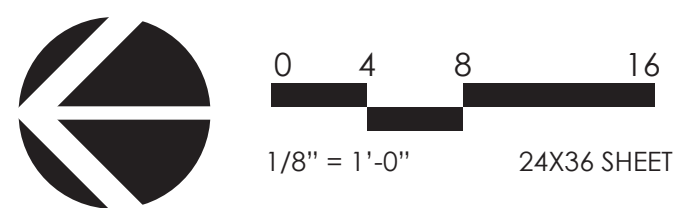
CITY OF MORRO BAY STAMP

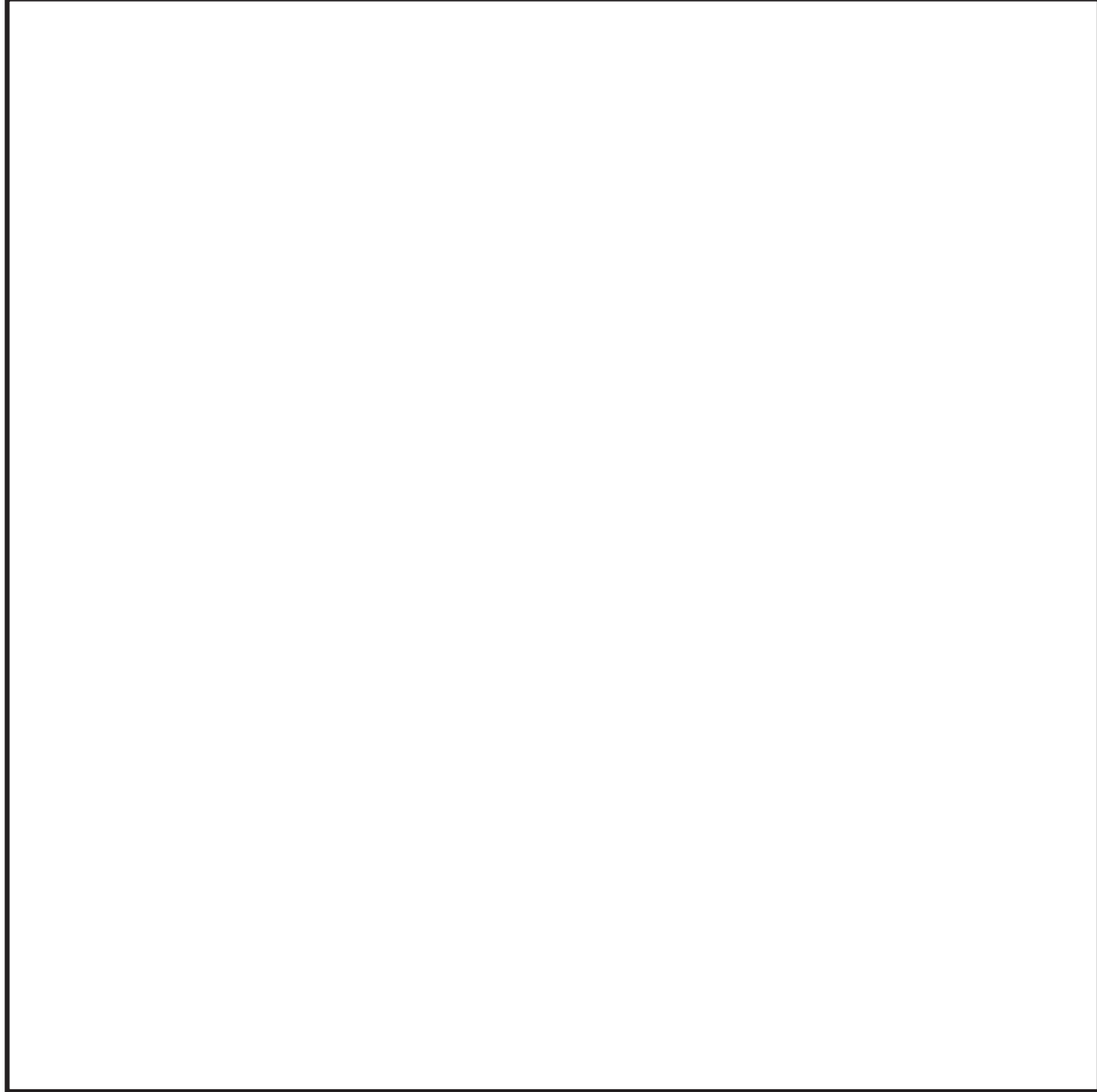


**1 GROUND FLOOR PLAN**  
 1/8" = 1'-0" (24 X 36 SHEET)

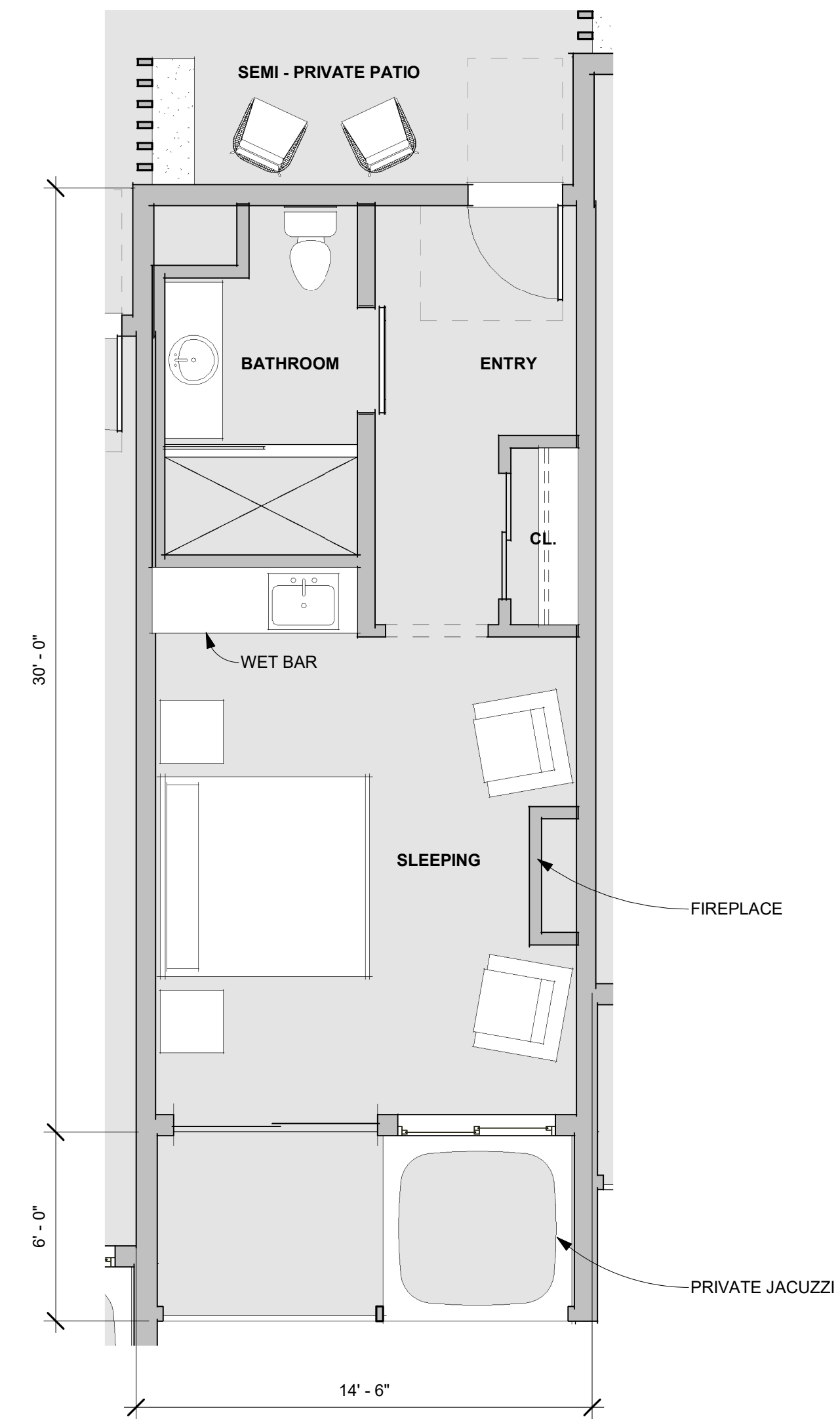
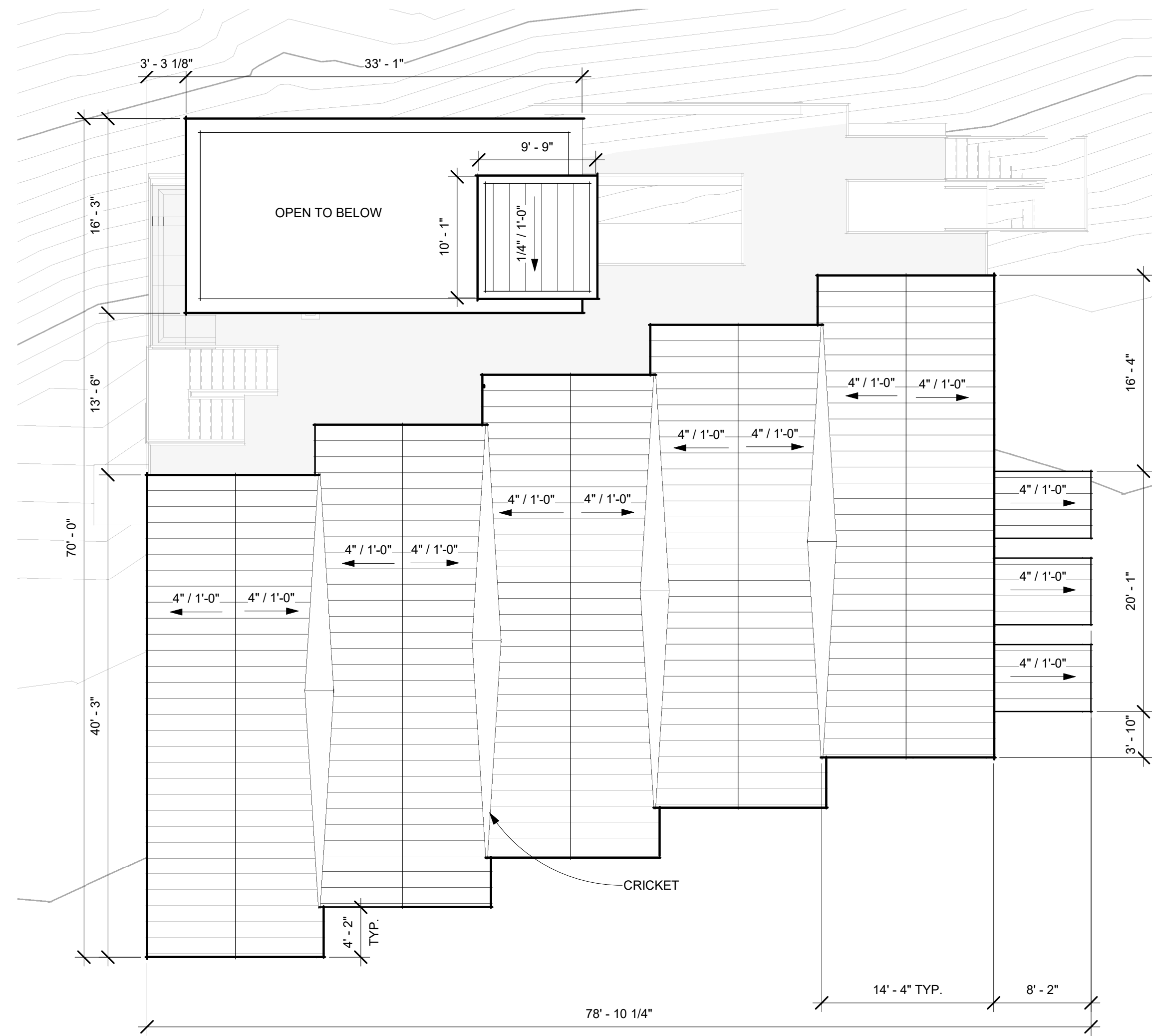


**2 SECOND FLOOR PLAN**  
 1/8" = 1'-0" (24 X 36 SHEET)





CITY OF MORRO BAY STAMP



1 ROOF PLAN  
 1/8" = 1'-0" (24 X 36 SHEET)

2 TYPICAL UNIT  
 1/4" = 1'-0" (24 X 36 SHEET)

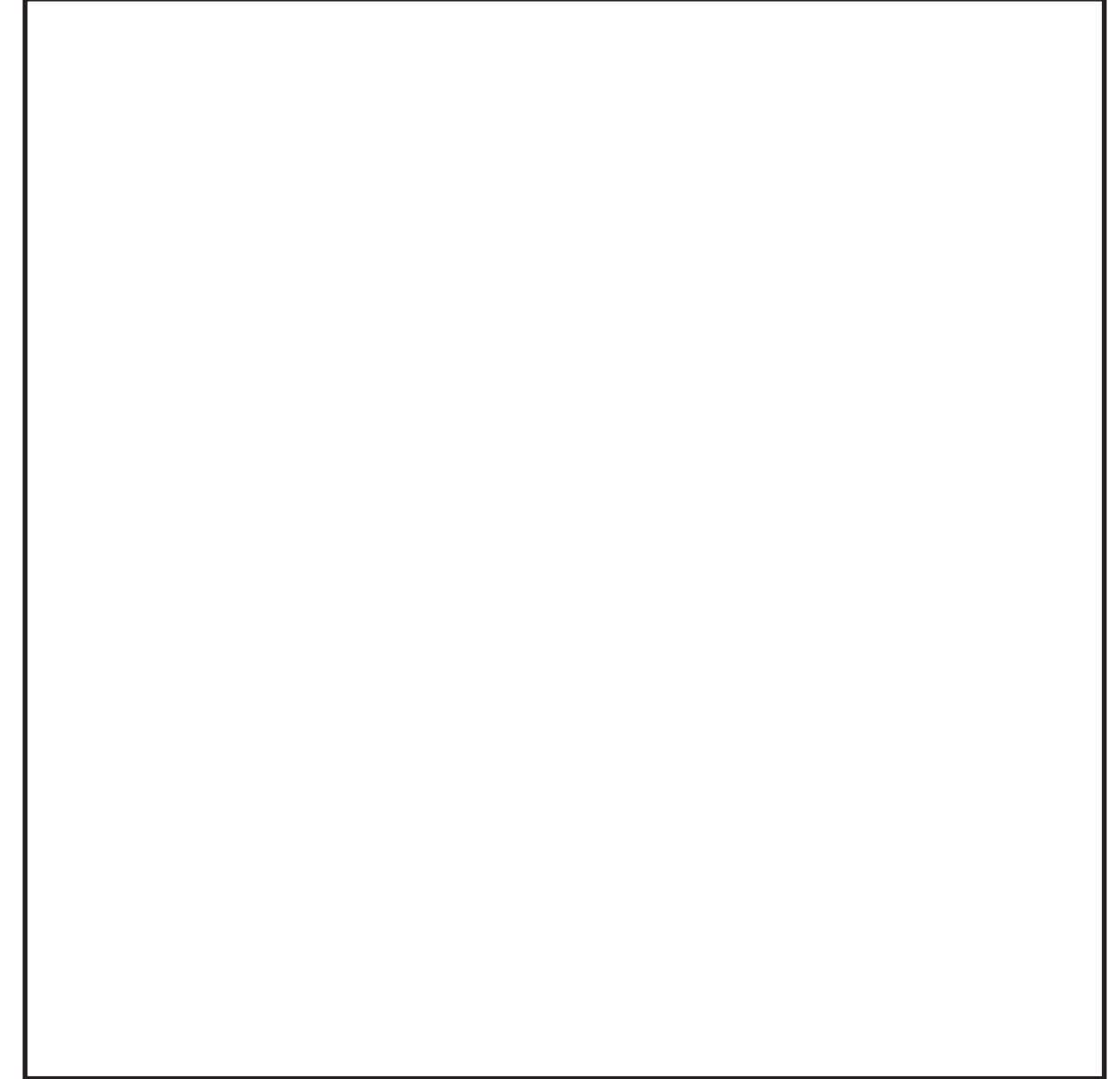


**ROOF PLAN & ENLARGED UNIT PLAN**  
**FRONT STREET HOTEL - MORRO BAY**

15 JANUARY 2026

2875-01-CO22

A5

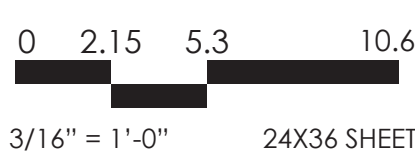


CITY OF MORRO BAY STAMP

1 WEST ELEVATION  
3/16" = 1'-0" (24 X 36 SHEET)



2 EAST ELEVATION  
3/16" = 1'-0" (24 X 36 SHEET)

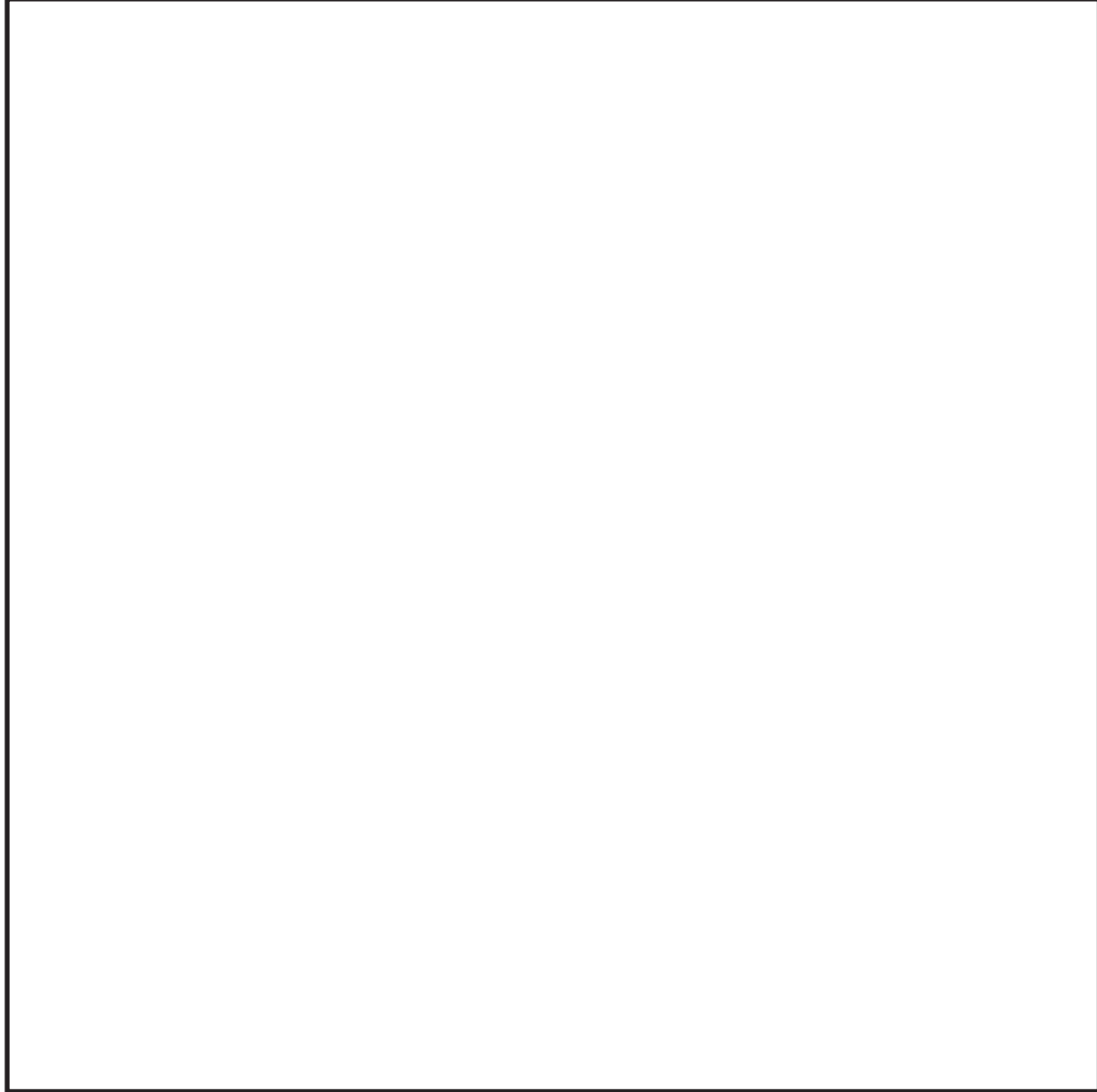


**EXTERIOR ELEVATIONS**  
**FRONT STREET HOTEL - MORRO BAY**

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2875-01-CO22

**A6**



CITY OF MORRO BAY STAMP



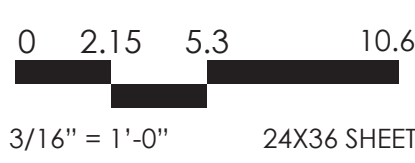
- MAX ALLOWABLE HEIGHT 37'-7"
- I.O. ELEVATOR TOWER 28'-10"
- ROOF RIDGE 24'-7"
- SECOND FLOOR 11'-3"
- GROUND LEVEL 0'-0" FF
- SIDEWALK -0'-6" FF

1 NORTH ELEVATION  
3/16" = 1'-0" (24 X 36 SHEET)



- MAX ALLOWABLE HEIGHT 37'-7"
- I.O. ELEVATOR TOWER 28'-10"
- ROOF RIDGE 24'-7"
- SECOND FLOOR 11'-3"
- GROUND LEVEL 0'-0" FF
- SIDEWALK -0'-6" FF

2 SOUTH ELEVATION  
3/16" = 1'-0" (24 X 36 SHEET)



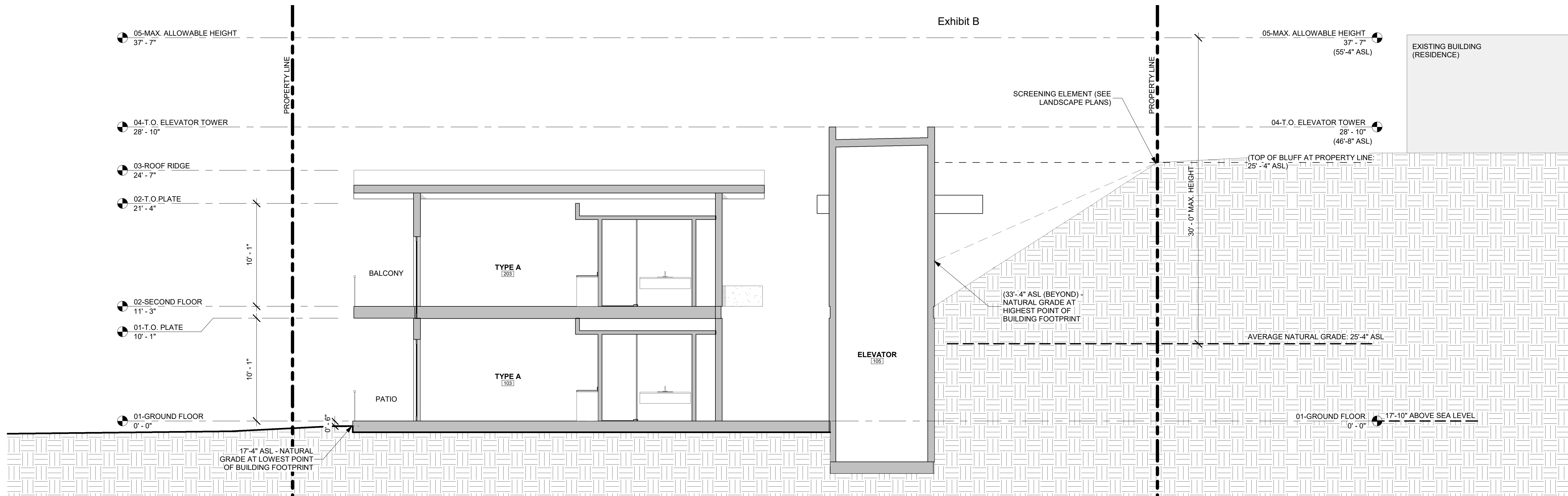
# EXTERIOR ELEVATIONS

## FRONT STREET HOTEL - MORRO BAY

15 JANUARY 2026

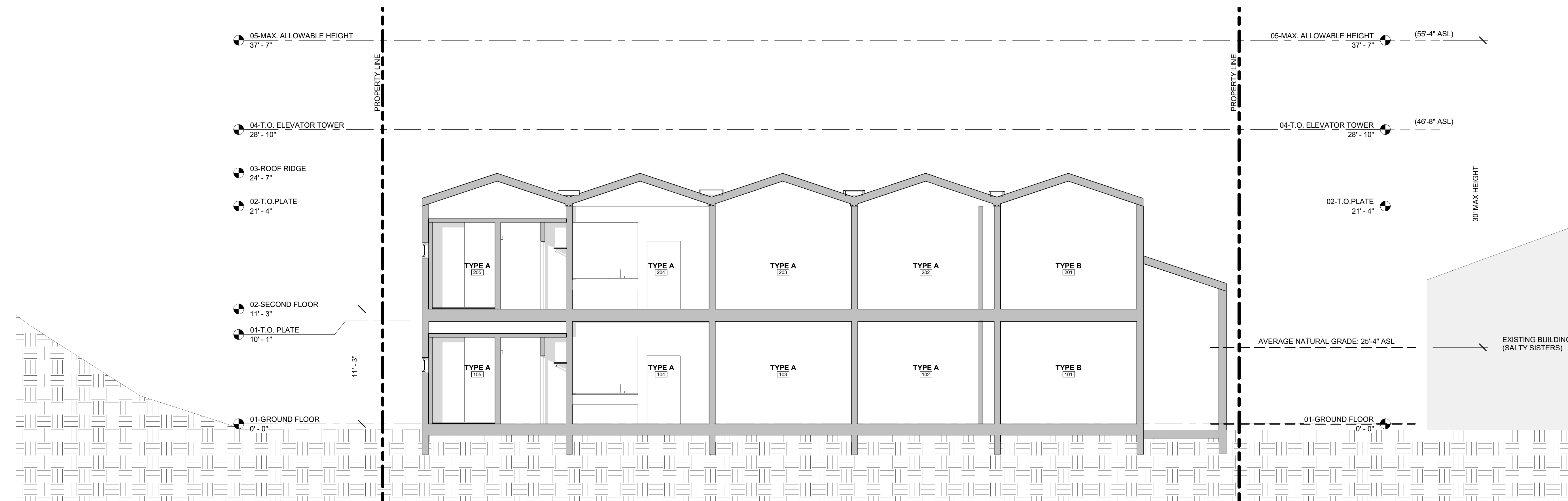
2875-01-CO22

# A7



CITY OF MORRO BAY STAMP

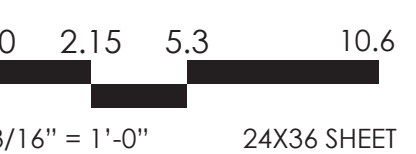
**A** CROSS SECTION LOOKING NORTH  
3/16" = 1'-0" (24 X 36 SHEET)



**HEIGHT CALC:**

AVERAGE NATURAL GRADE:  $(17'-4" + 33'-4") / 2 = 25'-4"$   
 MAX HEIGHT = 30'-0"  
 $25'-4" + (MAX HEIGHT) = 55'-4"$  ABOVE SEA LEVEL

**2** LONGITUDINAL SECTION LOOKING EAST  
3/16" = 1'-0" (24 X 36 SHEET)

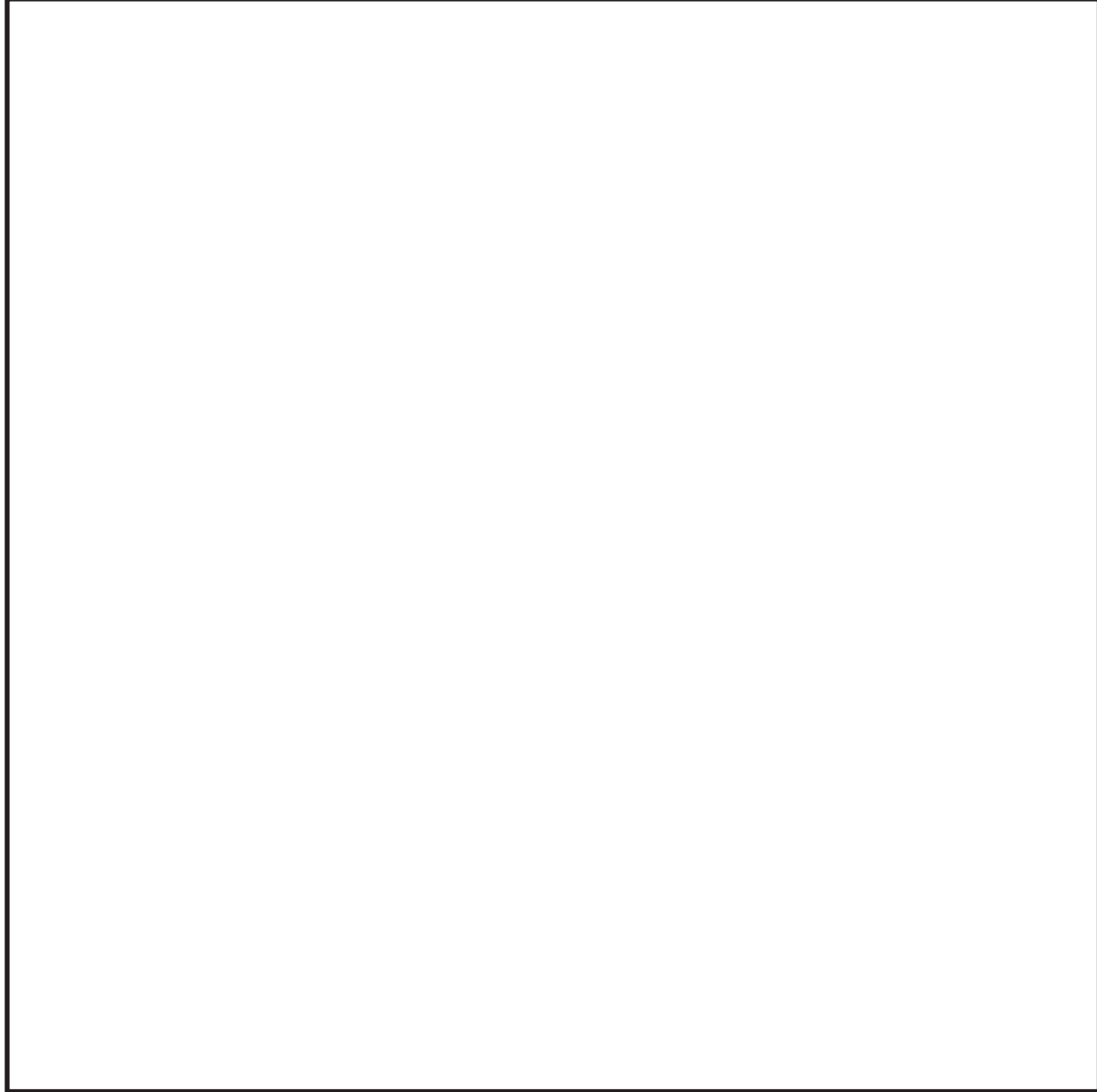
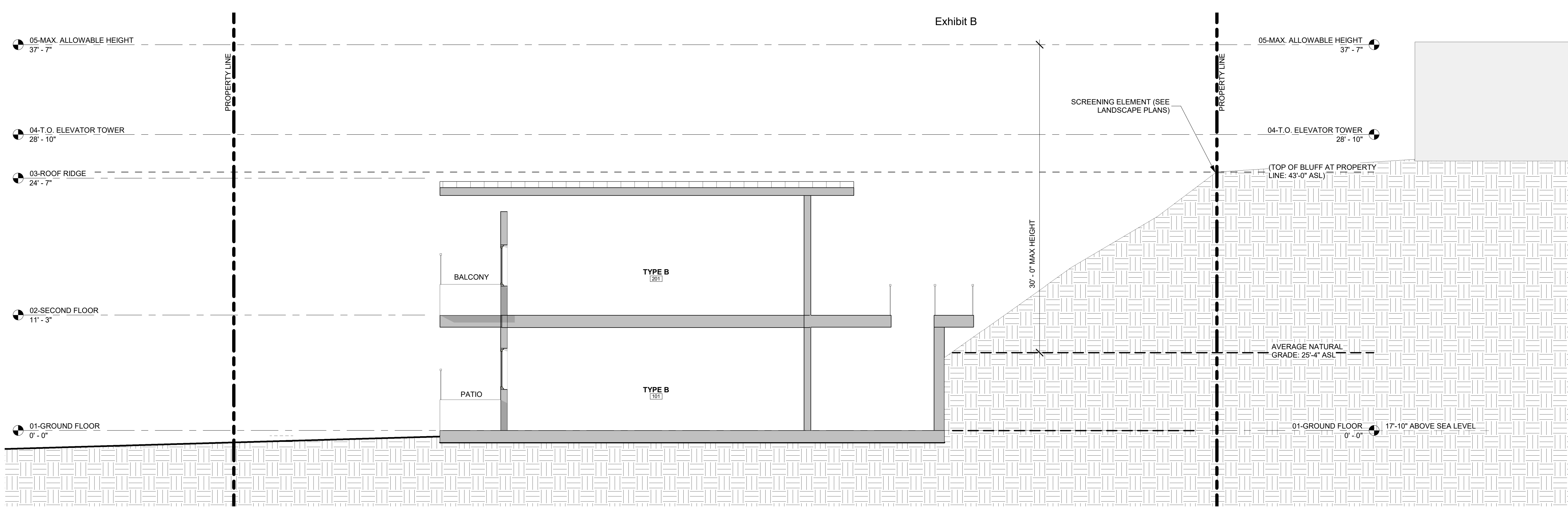


**SITE SECTIONS**  
**FRONT STREET HOTEL - MORRO BAY**

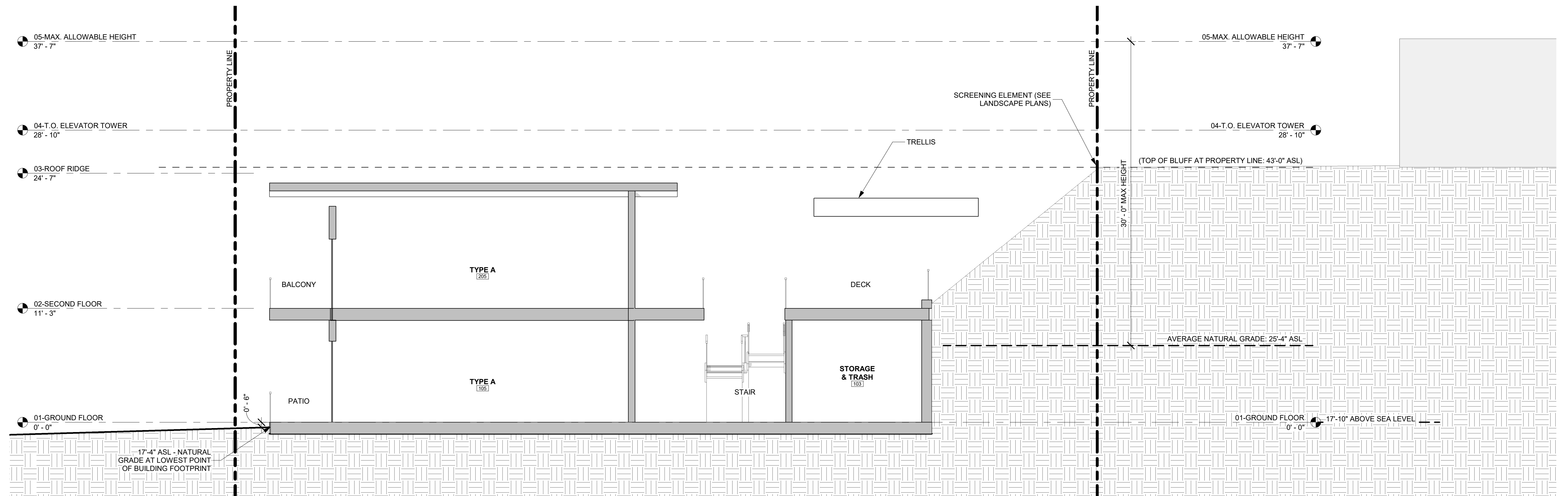
15 JANUARY 2026

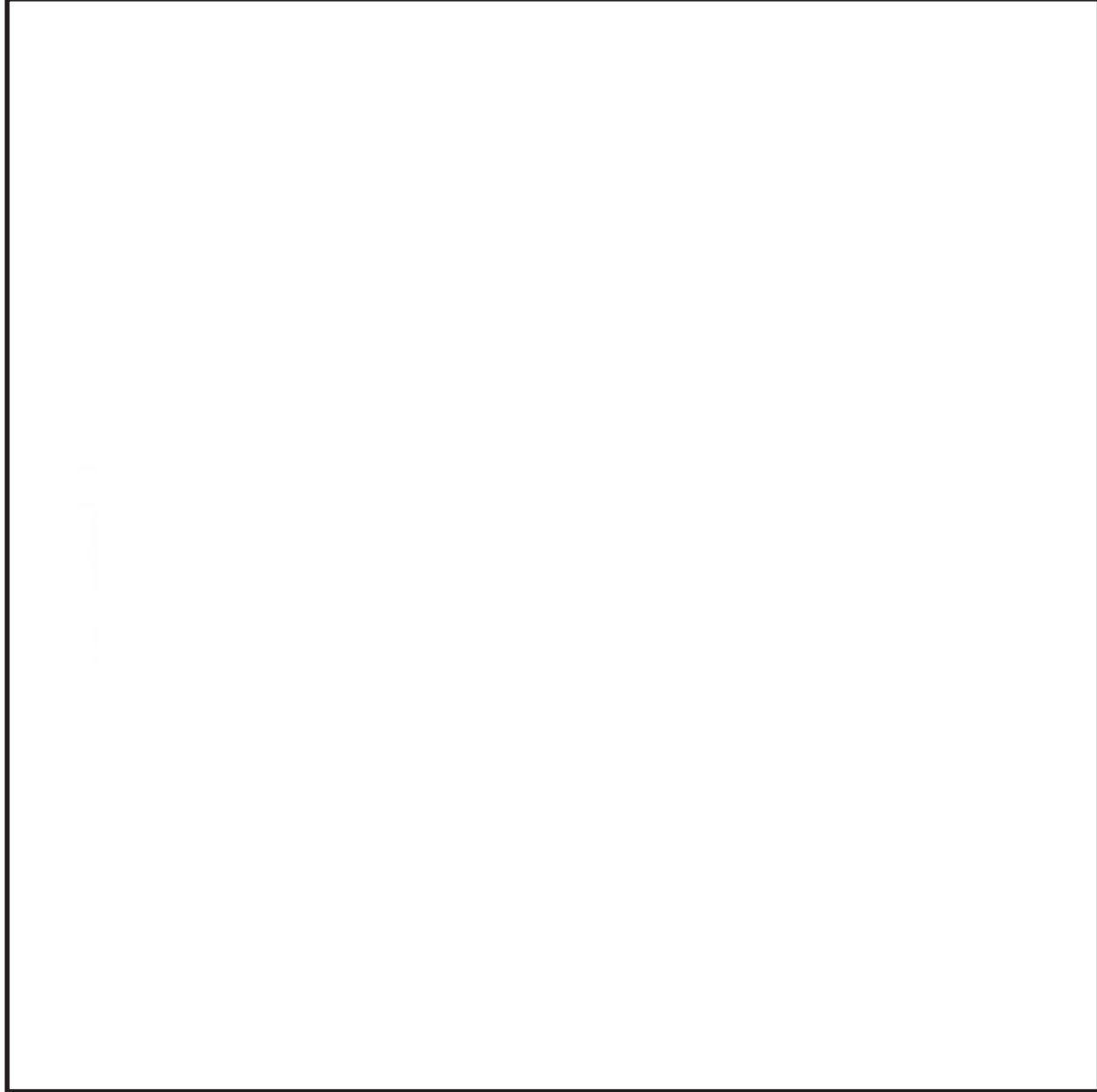
2875-01-CO22

**A8**



CITY OF MORRO BAY STAMP





CITY OF MORRO BAY STAMP



① PERSPECTIVE LOOKING TOWARDS MORRO ROCK FROM 2ND FLOOR BALCONY

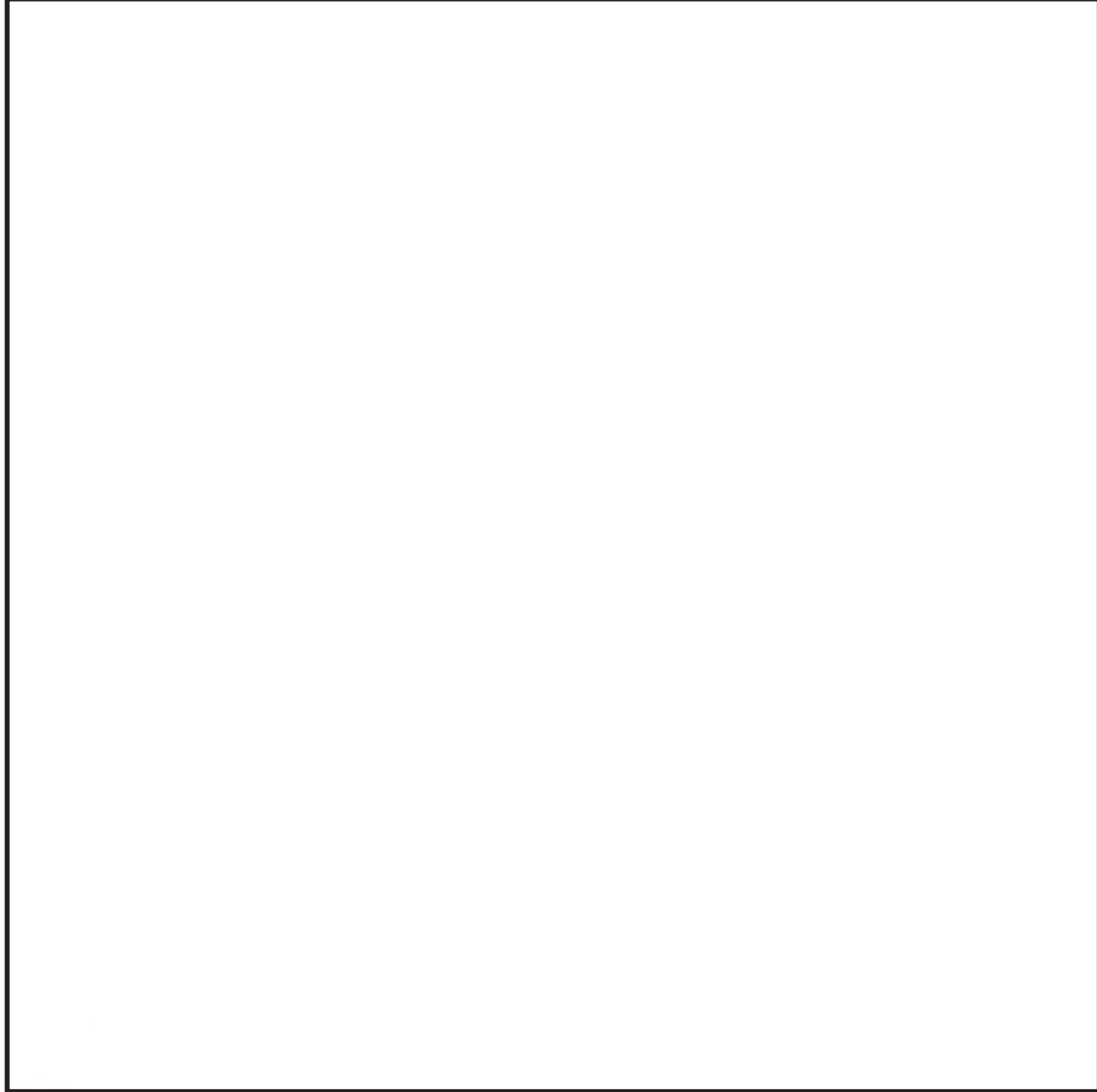


**FEATURE PERSPECTIVE**  
**FRONT STREET HOTEL - MORRO BAY**

15 JANUARY 2026

2875-01-CO22

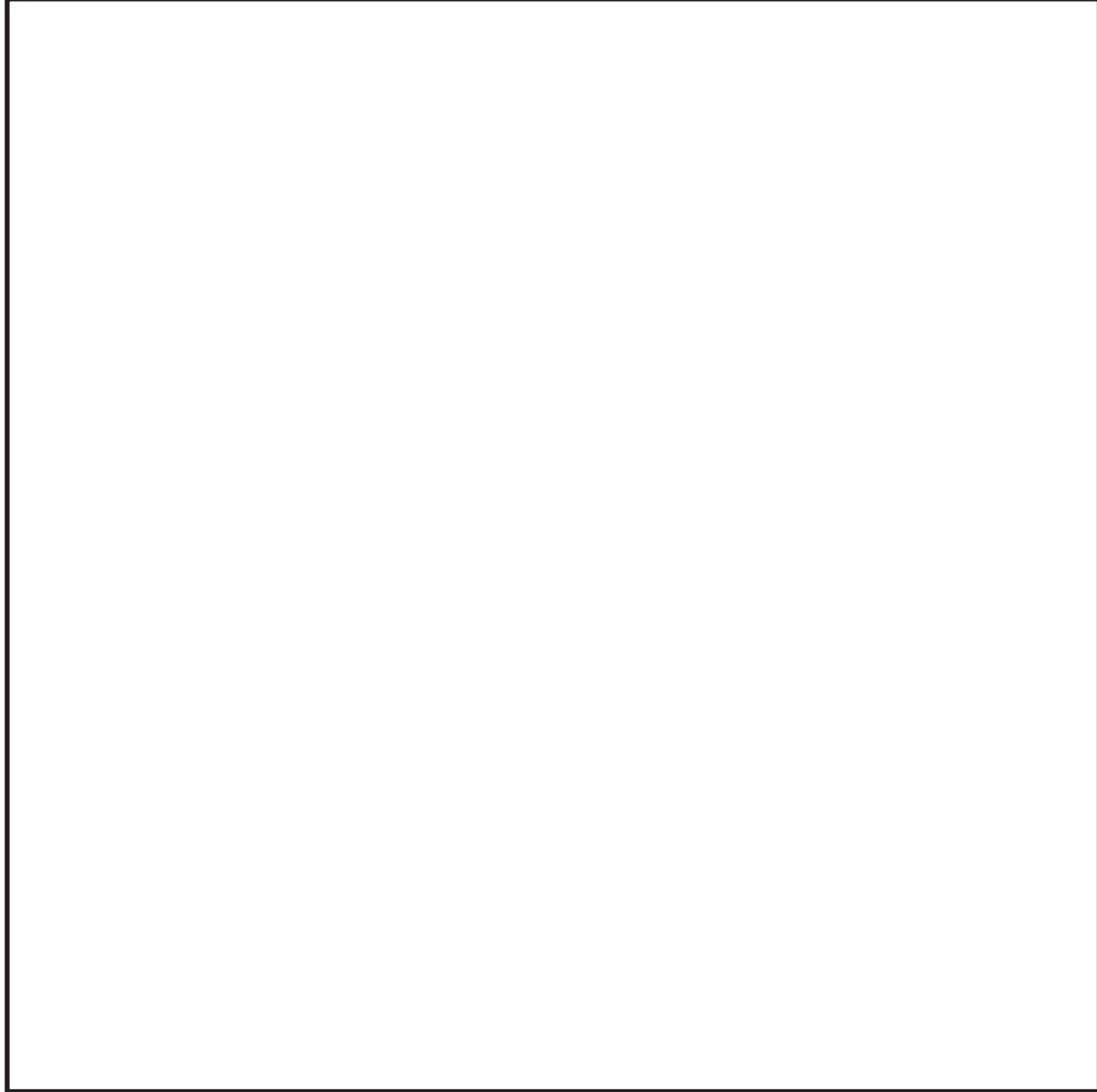
**A10**



CITY OF MORRO BAY STAMP



① PHOTOSIMULATION: LOOKING NORTH TOWARDS THE POWER PLANT



CITY OF MORRO BAY STAMP



2 PHOTOSIMULATION: LOOKING WEST FROM EMBARCADERO



**PHOTOSIMULATIONS**  
**FRONT STREET HOTEL - MORRO BAY**

15 JANUARY 2026

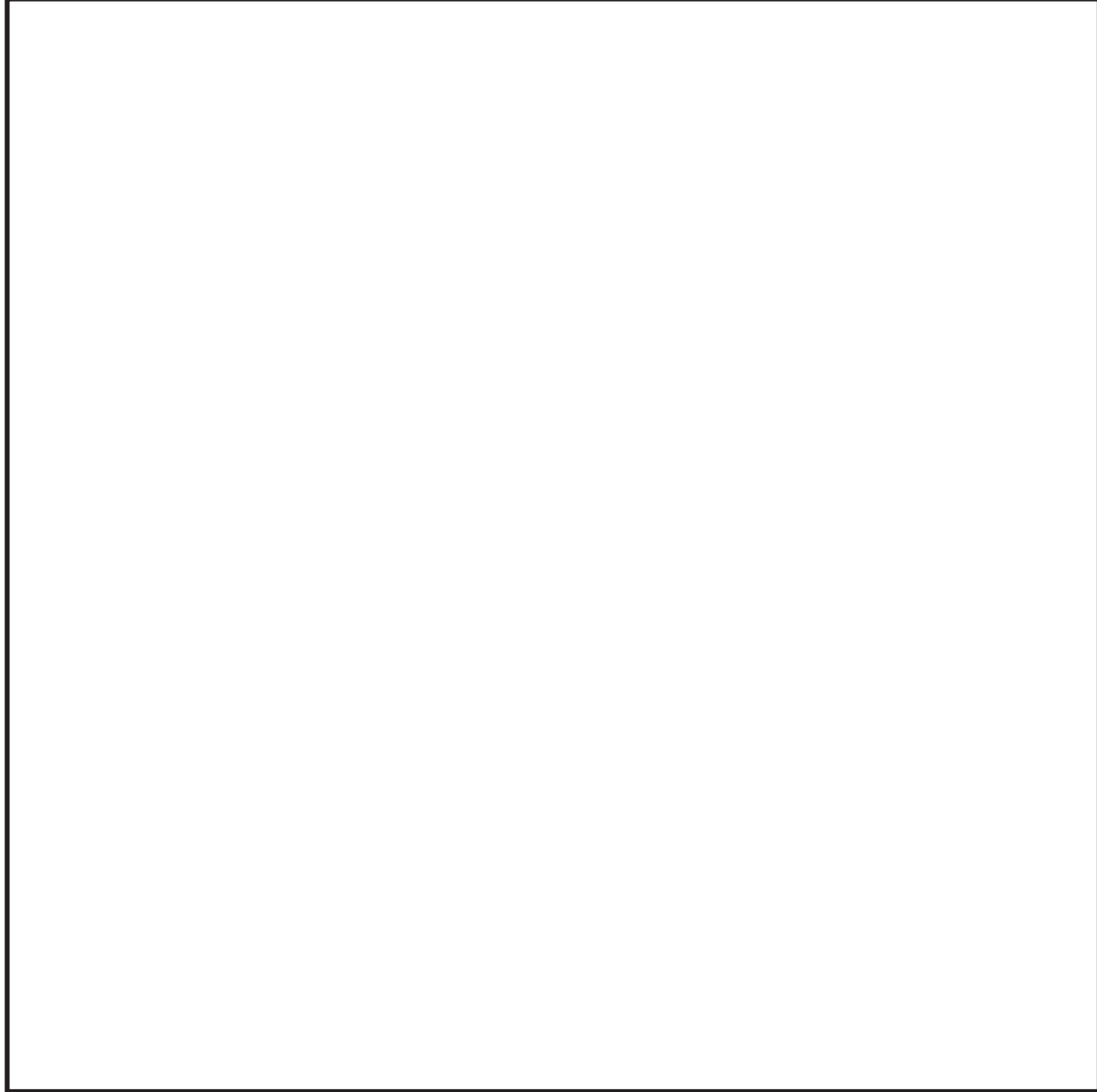
2875-01-CO22

**A12**



CITY OF MORRO BAY STAMP

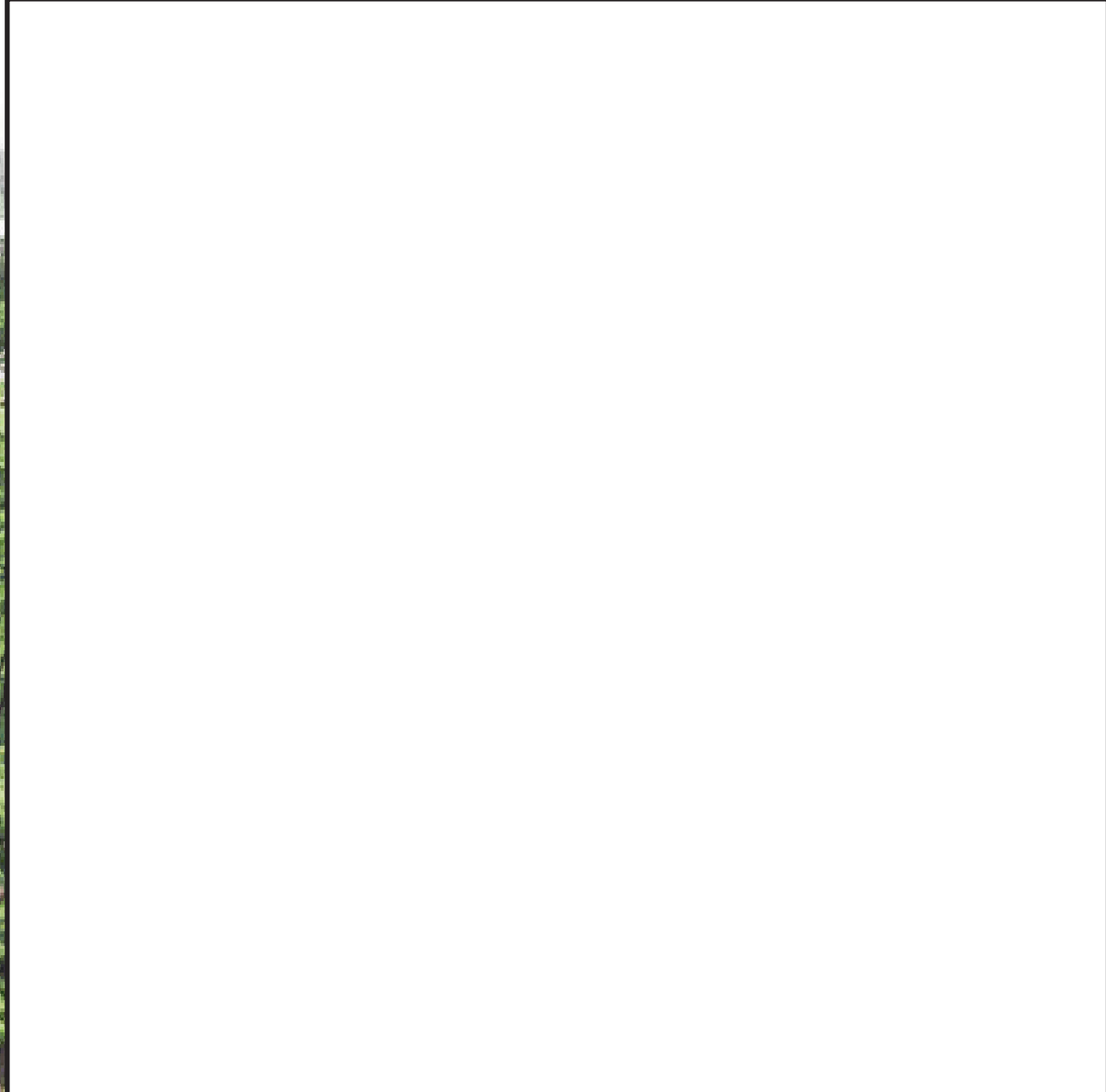
① PHOTOMATCH: LOOKING TOWARDS MORRO ROCK FROM SURF STREET



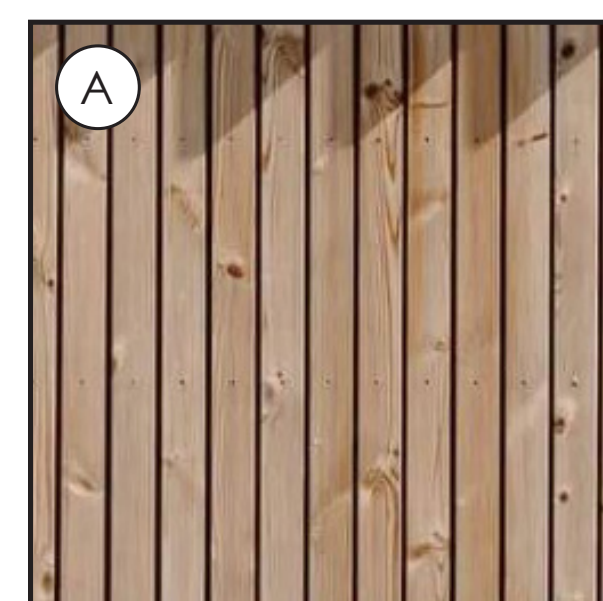
CITY OF MORRO BAY STAMP



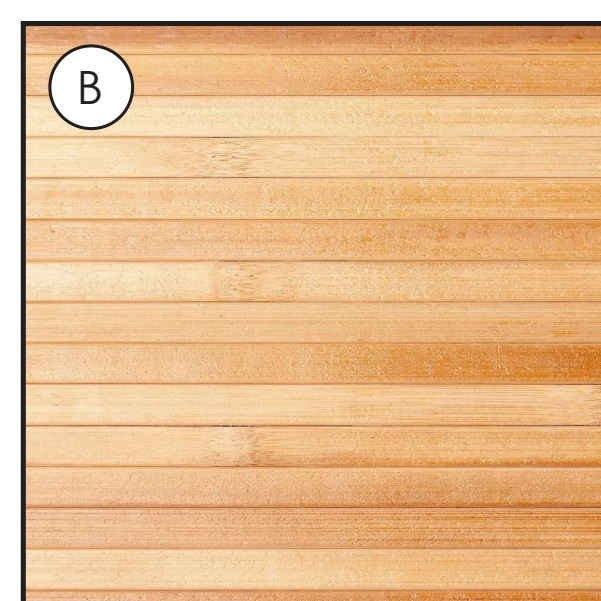
3 PHOTOSIMULATION: TOWARDS MORRO ROCK FROM SURF STREET



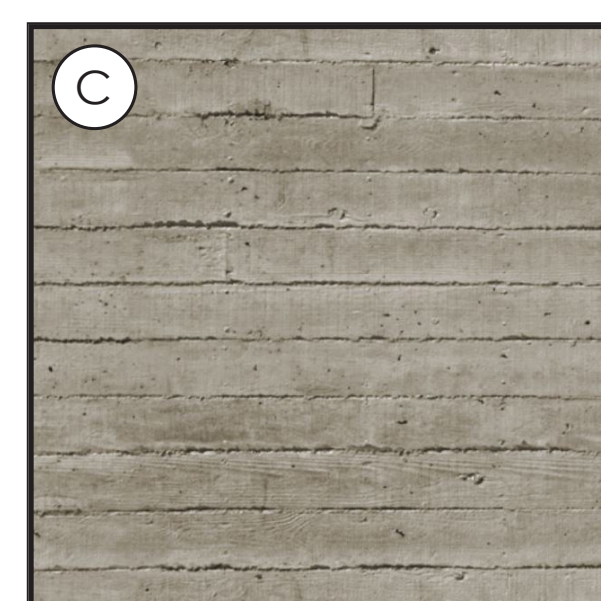
CITY OF MORRO BAY STAMP



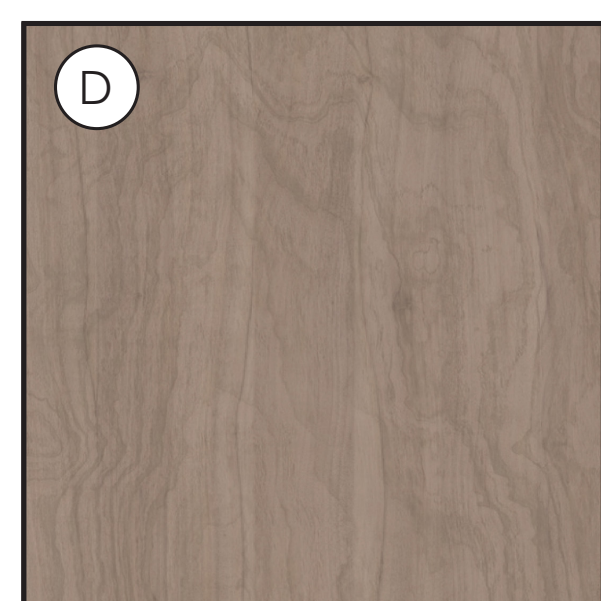
VERTICAL WOOD LOOK  
BROWN



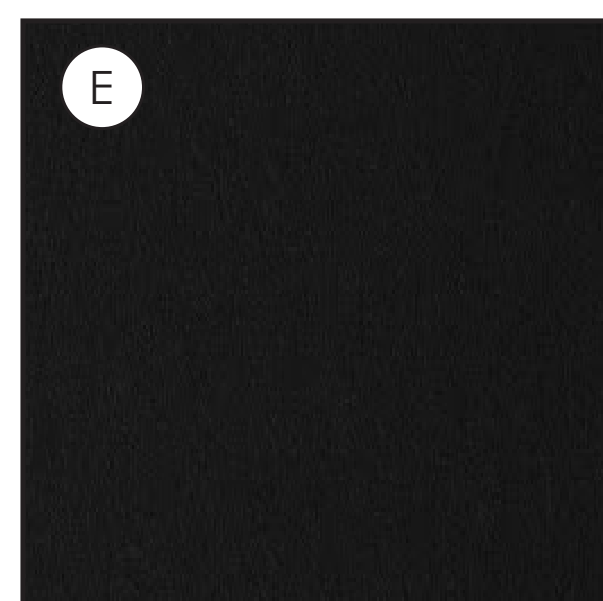
HORIZONTAL WOOD LOOK  
LIGHT BROWN



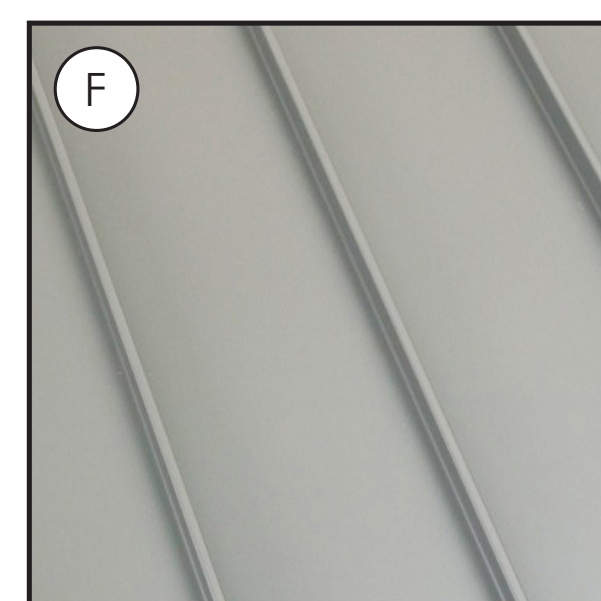
BOARD FORMED CONCRETE LOOK  
GREY



FIBER CEMENT TRIM  
BROWN



WINDOWS  
BLACK



STANDING SEAM METAL  
GREY



GLASS  
FROSTED



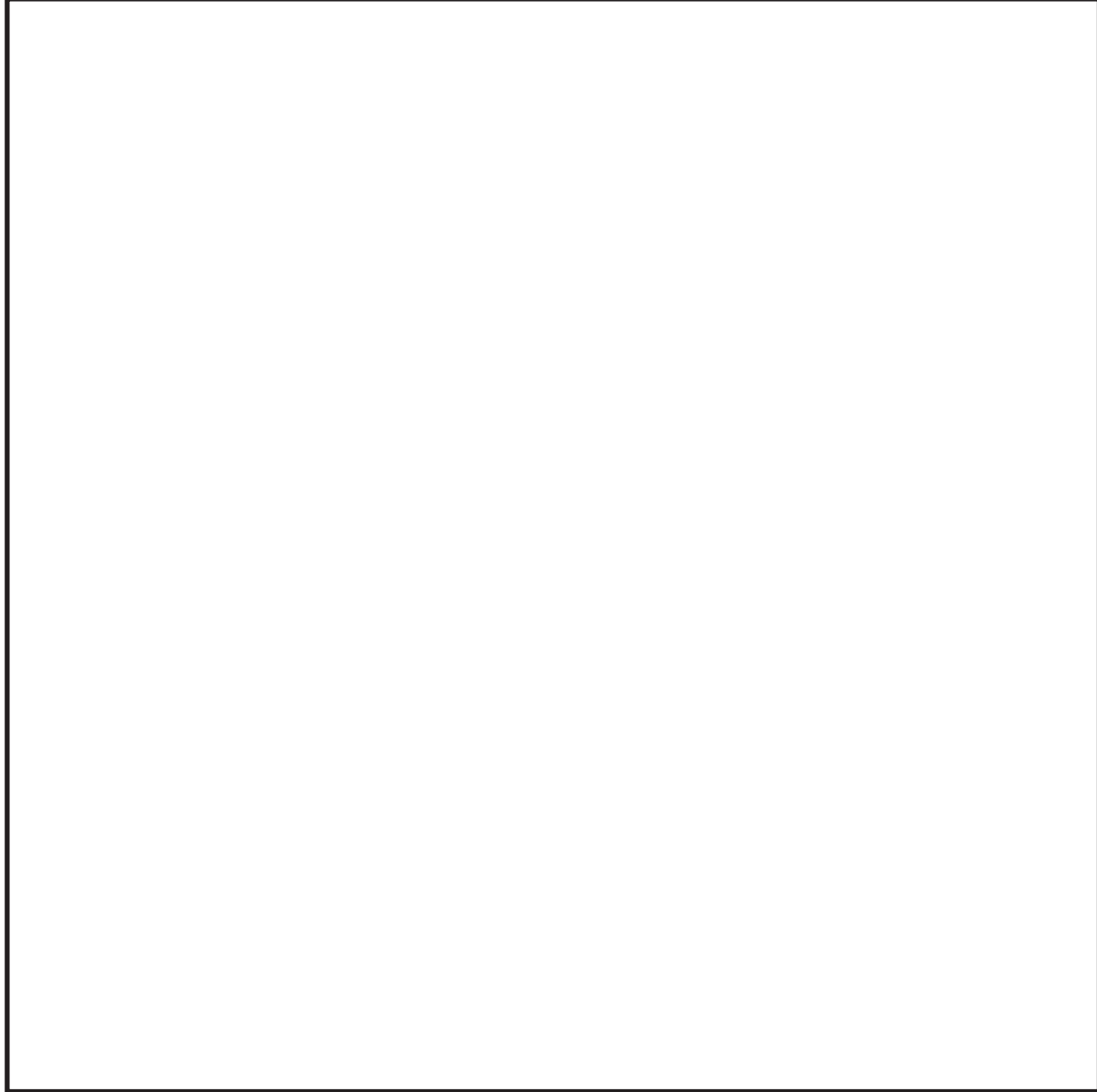
LIGHT FIXTURE  
BLACK



RAILING  
BLACK



- FASCIA
- SCREEN WALL
- ENTRY LIGHT
- VERTICAL WOOD LOOK



CITY OF MORRO BAY STAMP

1 ROOM ENTRY



- VERTICAL WOOD LOOK
- METAL SIDING
- GLASS WIND WALLS
- HOT TUB
- HORIZONTAL WOOD LOOK

2 BALCONIES FACING MORRO BAY



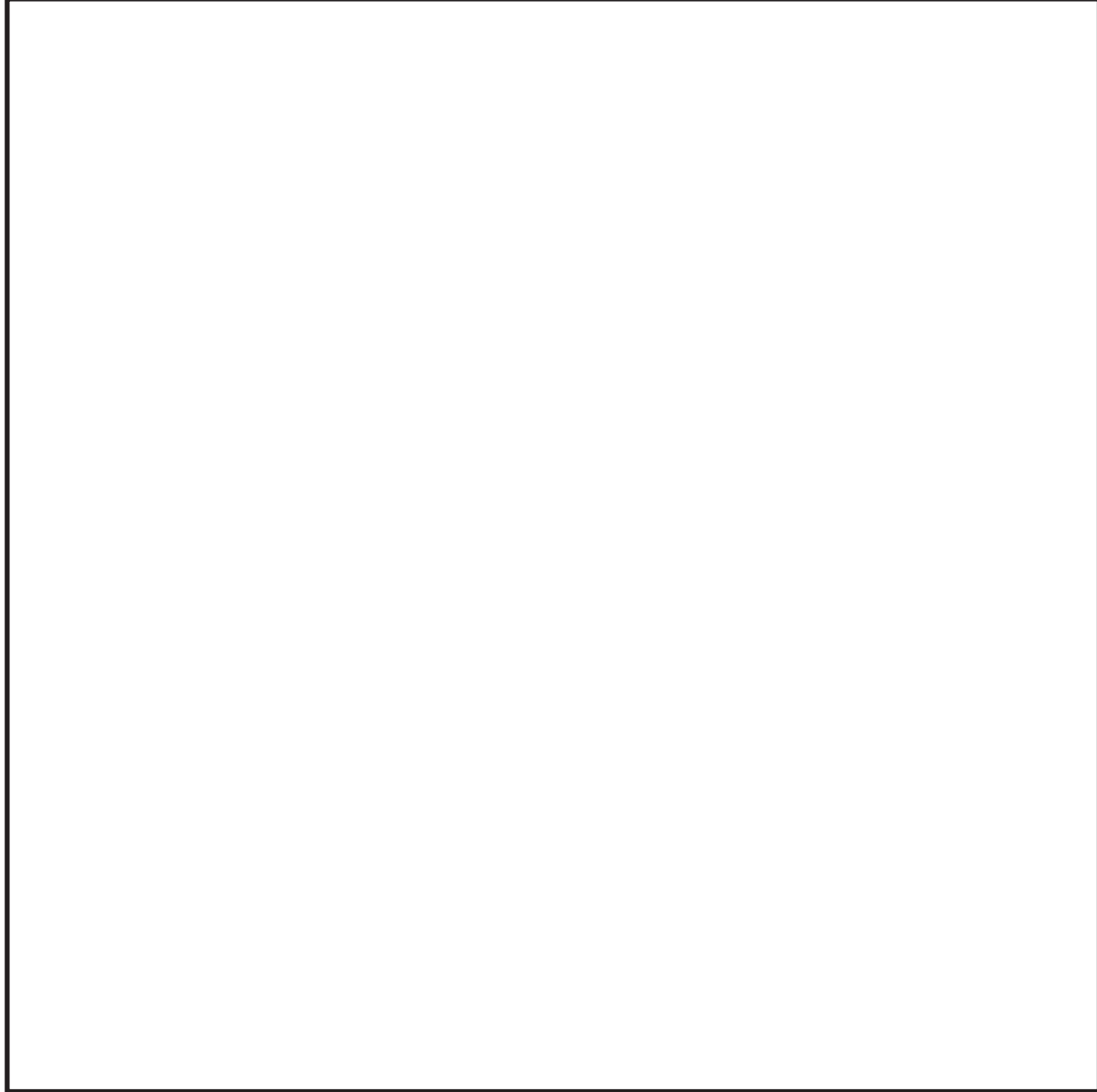
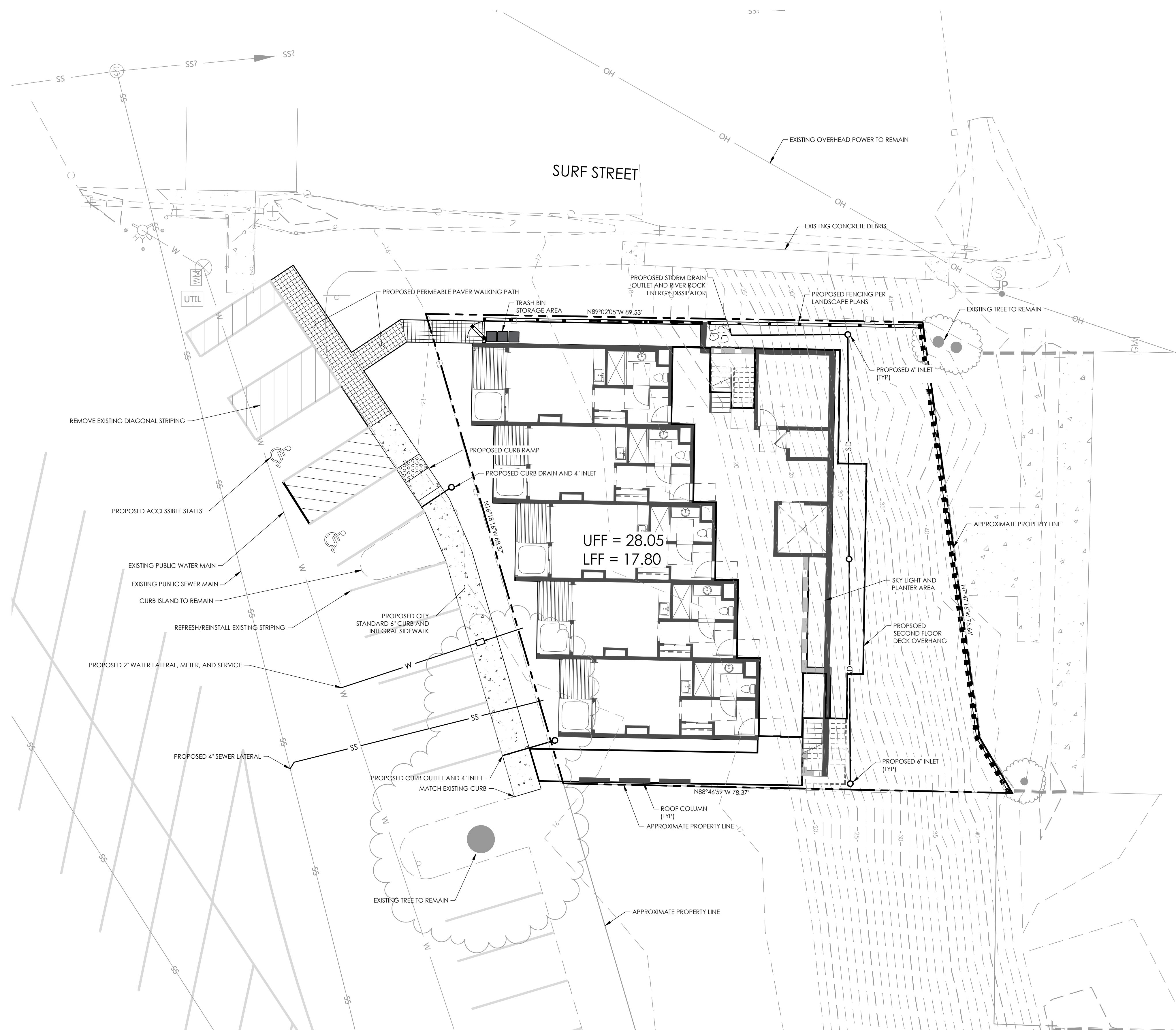
- CONCRETE
- GREEN WALL

3 LIGHT WELL

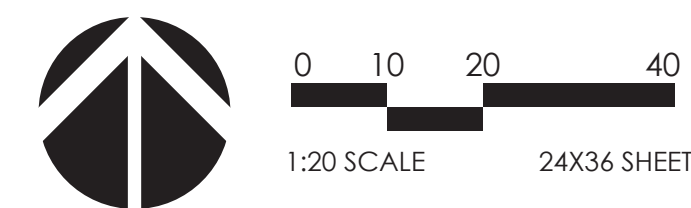
**LEGEND**

- PROPERTY LINE
- 500 — PROPOSED MAJOR CONTOUR
- 497 — PROPOSED MINOR CONTOUR
- 500 — EXISTING MAJOR CONTOUR
- 497 — EXISTING MINOR CONTOUR
- SD — PROPOSED STORM DRAIN
- SS — PROPOSED 4" SEWER SERVICE
- W — 2" WATER LATERAL

Exhibit B



**CITY OF MORRO BAY STAMP**



g:\engineering\04\Dev\SheetFiles\C1\_Civil\Site.dwg, C1\_Dwg\_09\_2024\_11:44am, rgwallers



**CIVIL GRADING PLAN**  
**FRONT STREET HOTEL - MORRO BAY**

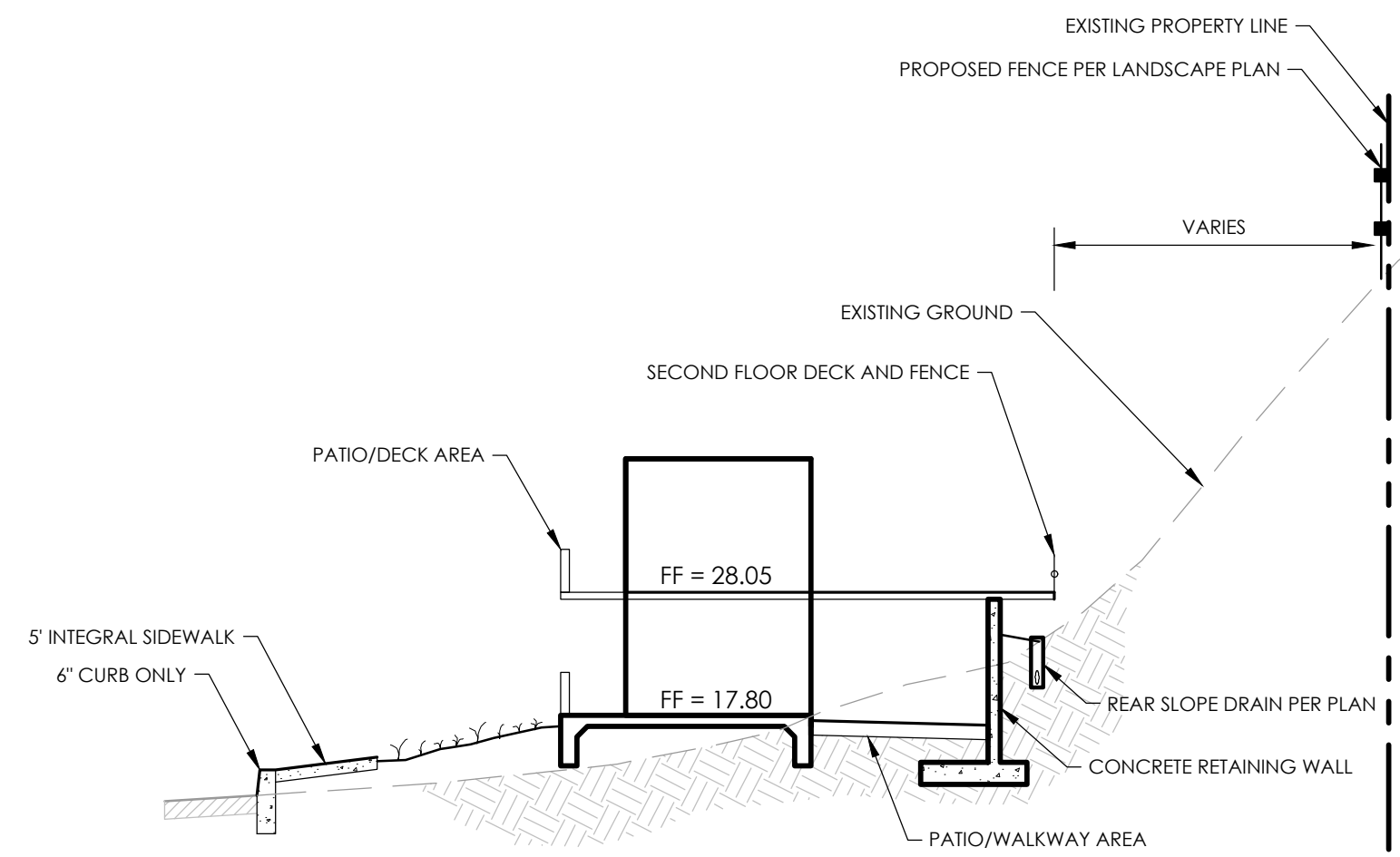
15 JANUARY 2026

2875-01-CO22

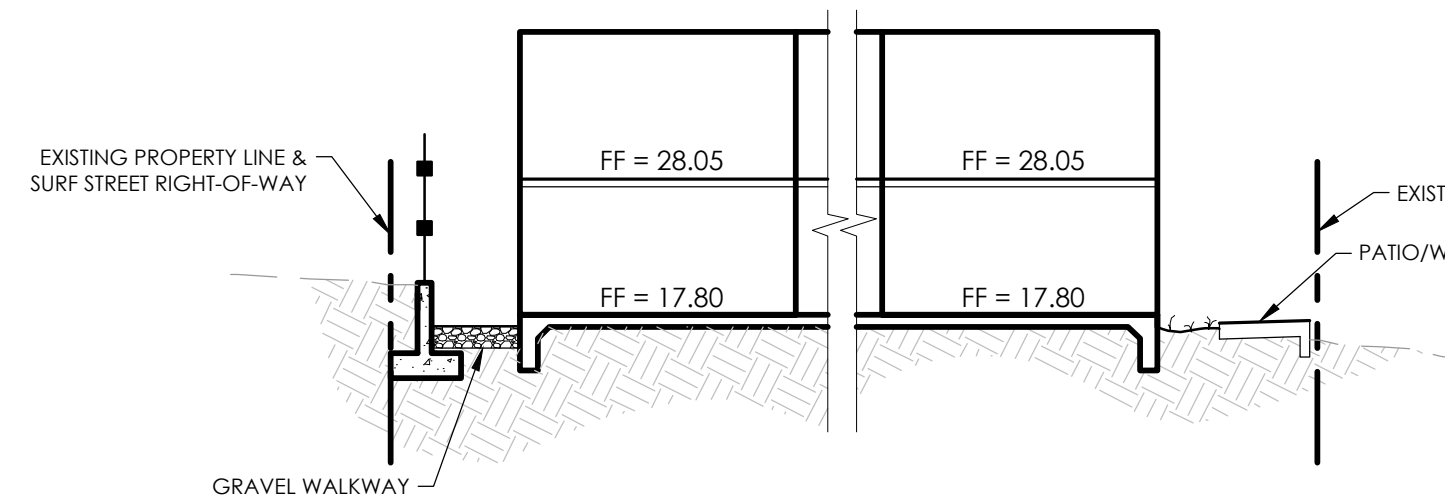
**C1**

LEGEND

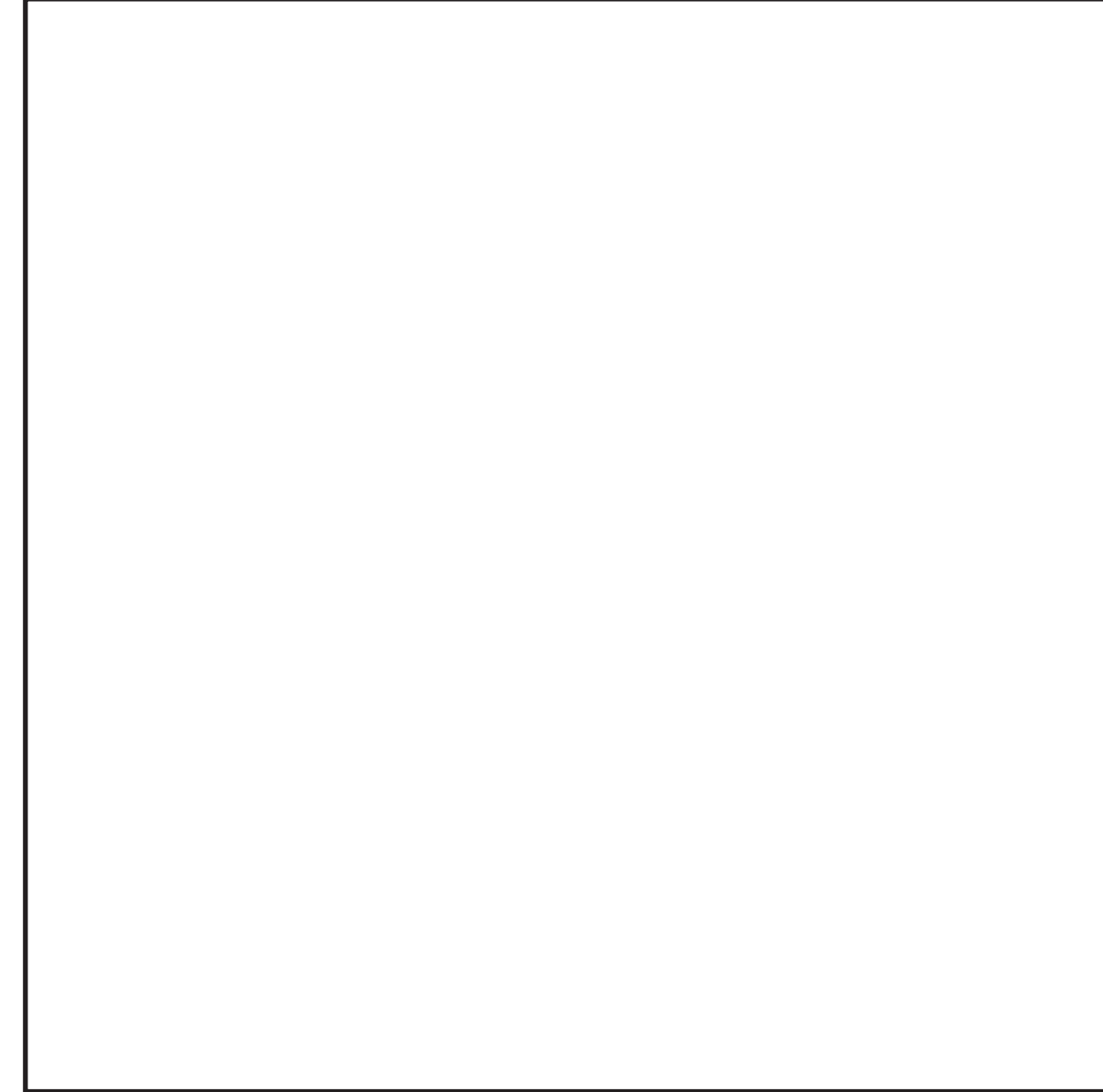
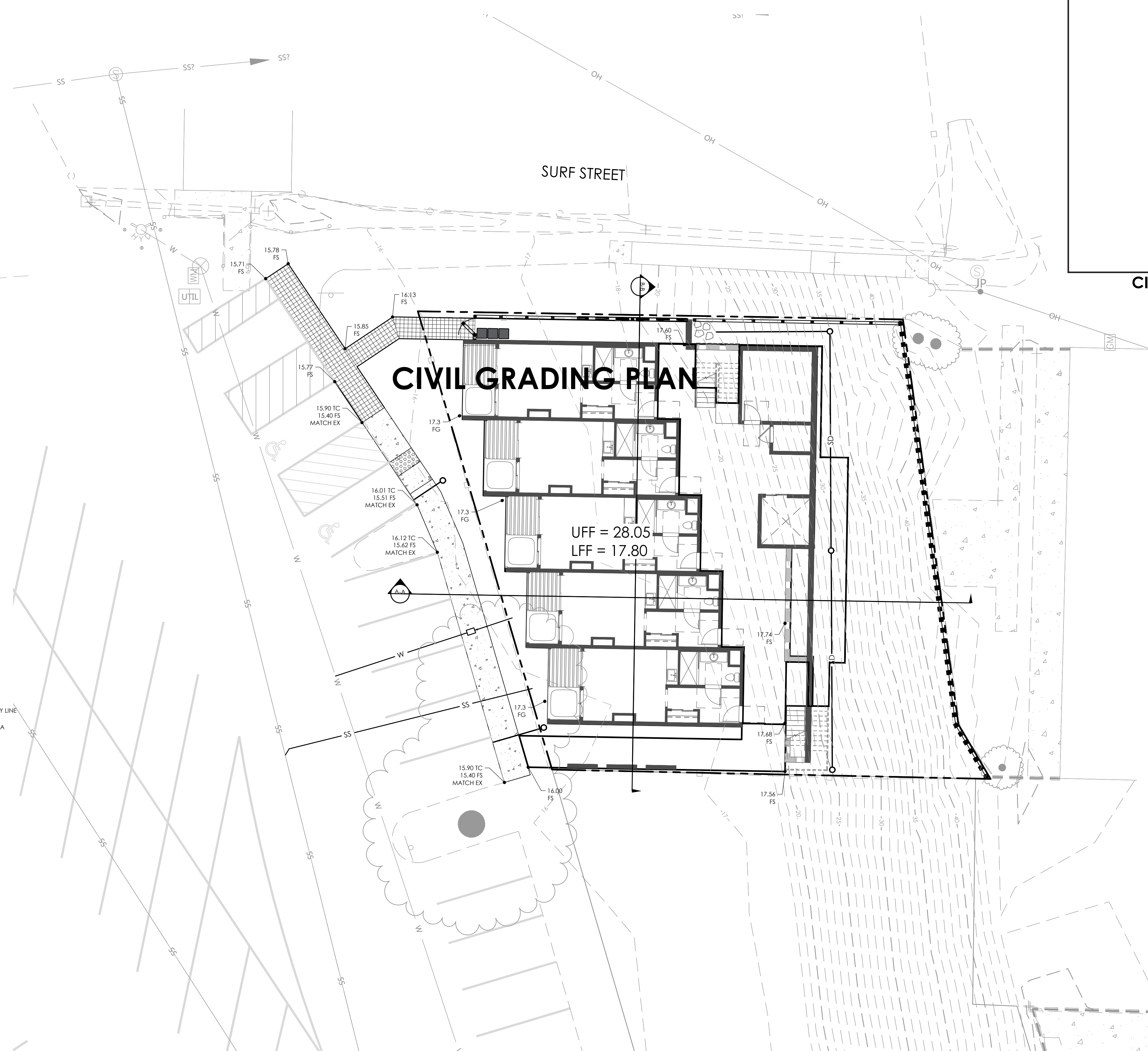
- PROPERTY LINE
- 500— PROPOSED MAJOR CONTOUR
- 497— PROPOSED MINOR CONTOUR
- 500— EXISTING MAJOR CONTOUR
- 497— EXISTING MINOR CONTOUR
- SD— PROPOSED STORM DRAIN
- SS— PROPOSED 4" SEWER SERVICE
- W— 2" WATER LATERAL



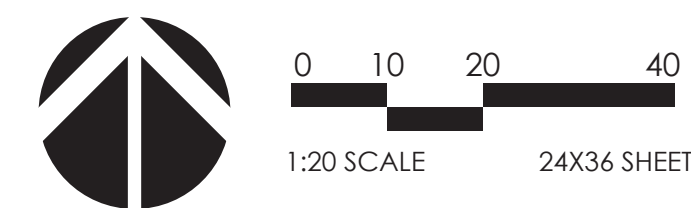
SECTION A-A



SECTION B-B



CITY OF MORRO BAY STAMP



**CIVIL SITE PLAN**  
**FRONT STREET HOTEL - MORRO BAY**

15 JANUARY 2026

2875-01-CO22



**LEGEND**

DIRECTION OF FLOW

**PROPOSED IMPROVEMENTS**

IMPERMEABLE AREA: 1,850 sf

SIDEWALKS: 400 sf

BUILDINGS: 2,600 sf

PERMEABLE PAVERS: 260 sf

LANDSCAPE: 3,176 sf

**TOTAL IMPERVIOUS = 4,850 sf**

**PROPOSED TREATMENT**

BIORETENTION AREA (0 sf None Required)

**REQUIRED STORMWATER CONTROL MEASURES**

**TIER 1 - RUNOFF REDUCTION**

- ROOF DRAIN DISCONNECT
- MINIMIZE IMPERVIOUS AREAS

**TIER 2 - WATER QUALITY**

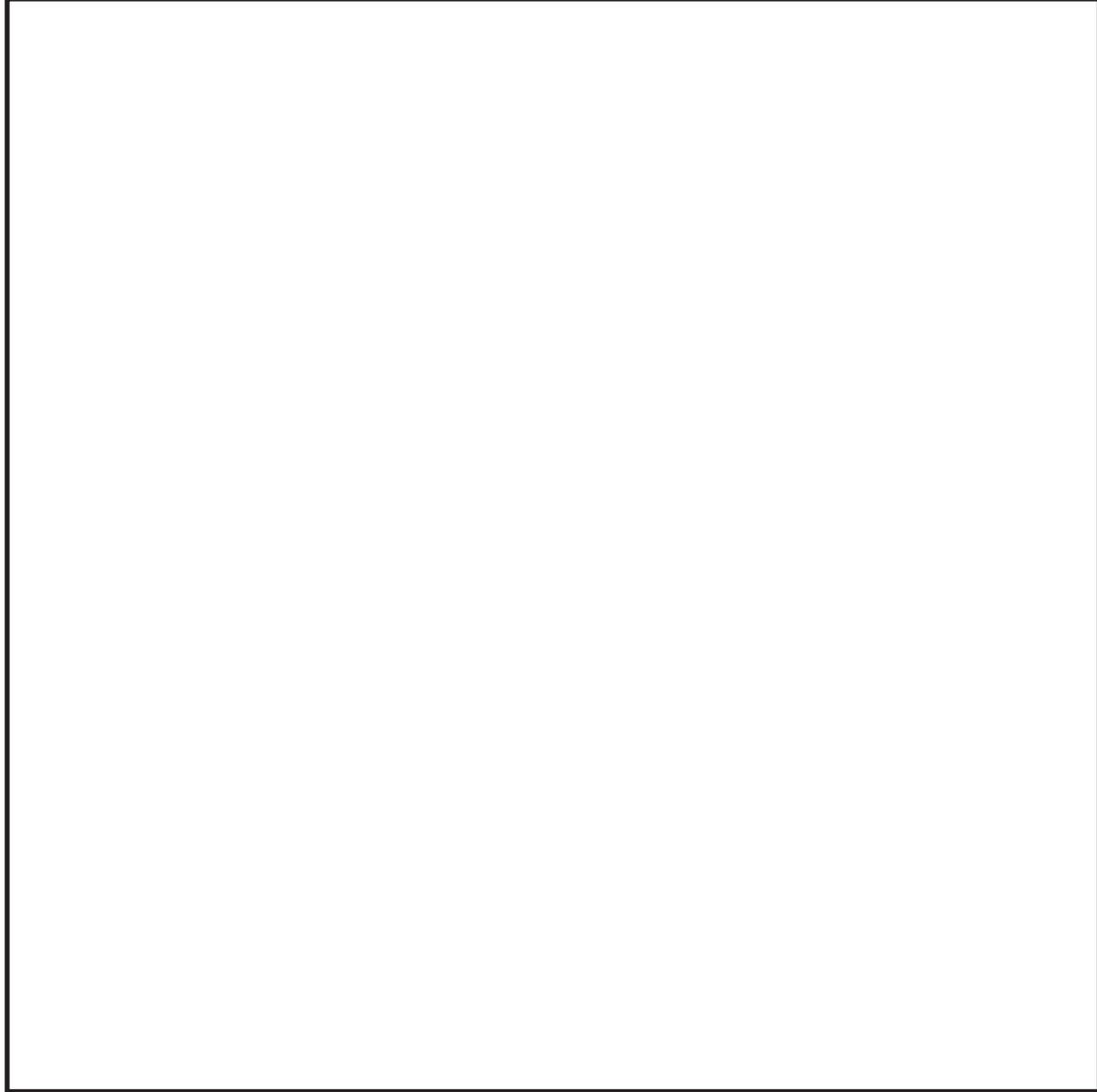
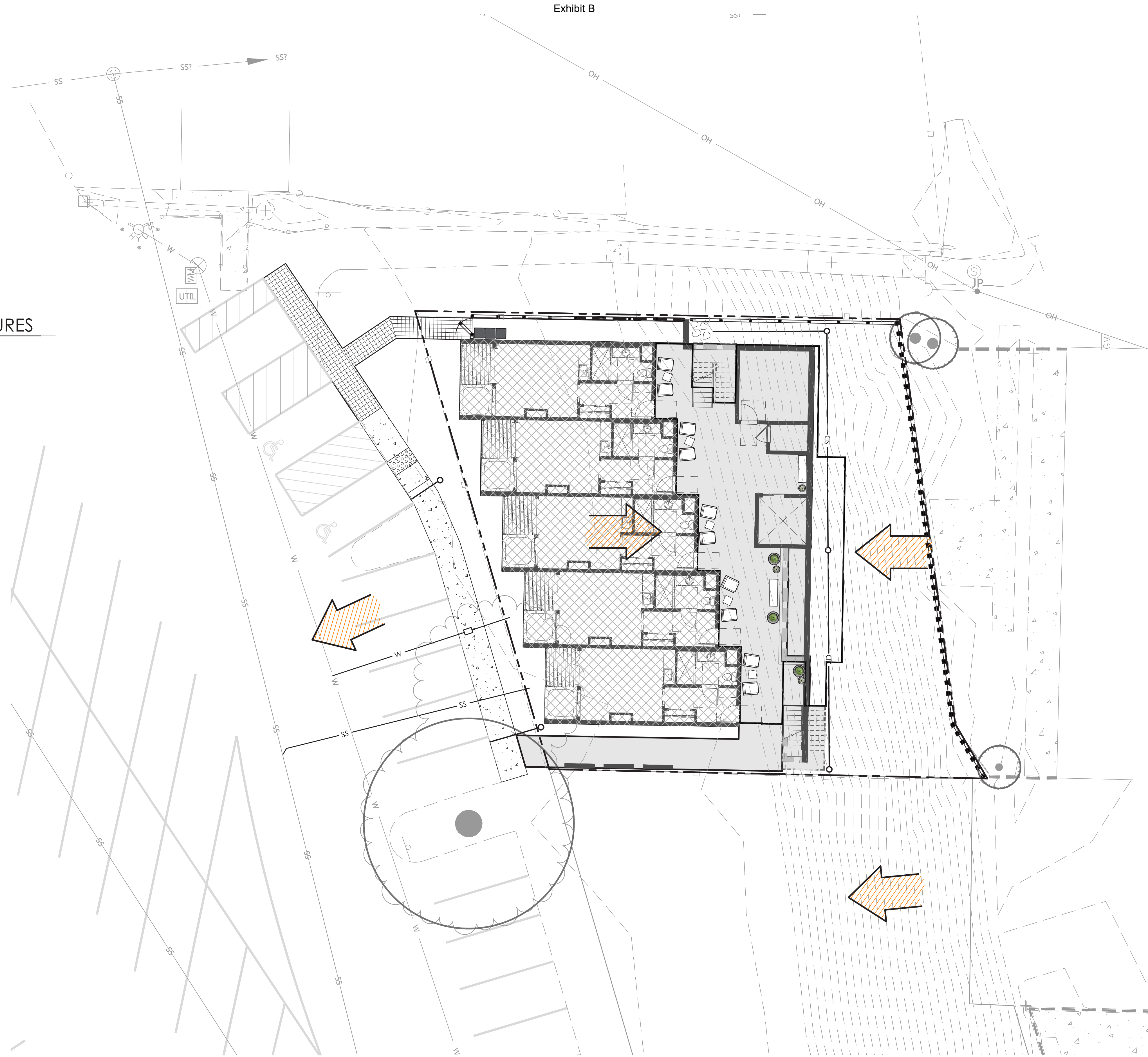
- EXEMPT < 5,000 sf NEW/REPLACED IMPERVIOUS AREA

**TIER 3 - RETAIN 95TH PERCENTILE STORM EVENT**

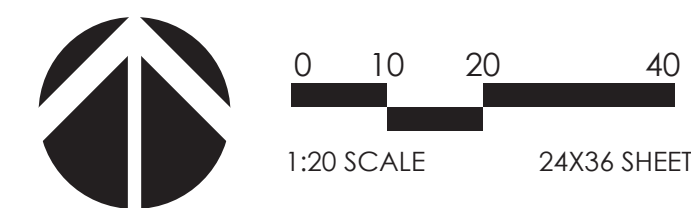
- EXEMPT < 15,000 sf NEW/REPLACED IMPERVIOUS AREA

**TIER 4 - PEAK MANAGEMENT**

- EXEMPT < 22,500 sf NEW/REPLACED IMPERVIOUS AREA



**CITY OF MORRO BAY STAMP**



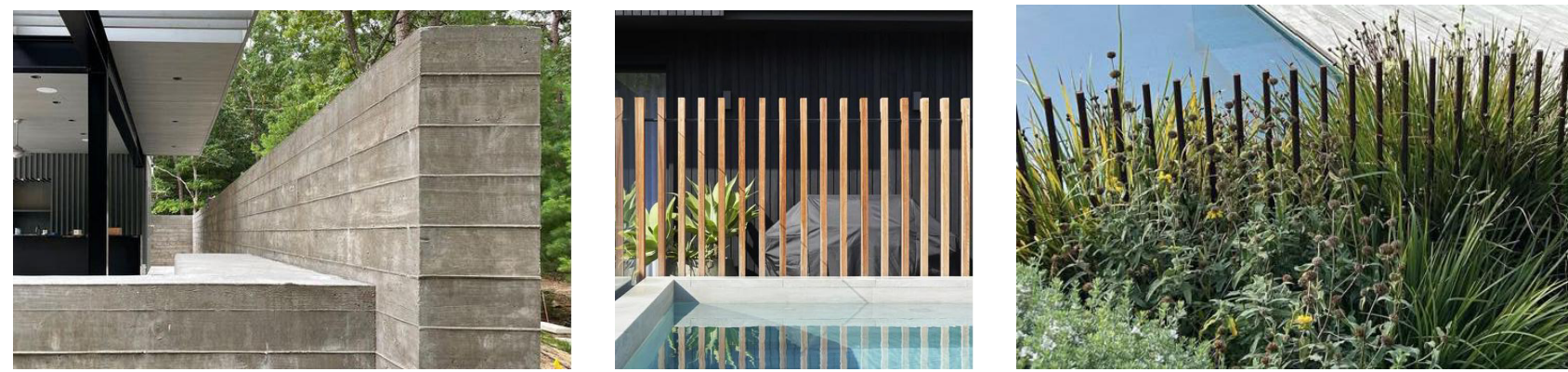
**STORMWATER PLAN**  
**FRONT STREET HOTEL - MORRO BAY**

15 JANUARY 2026

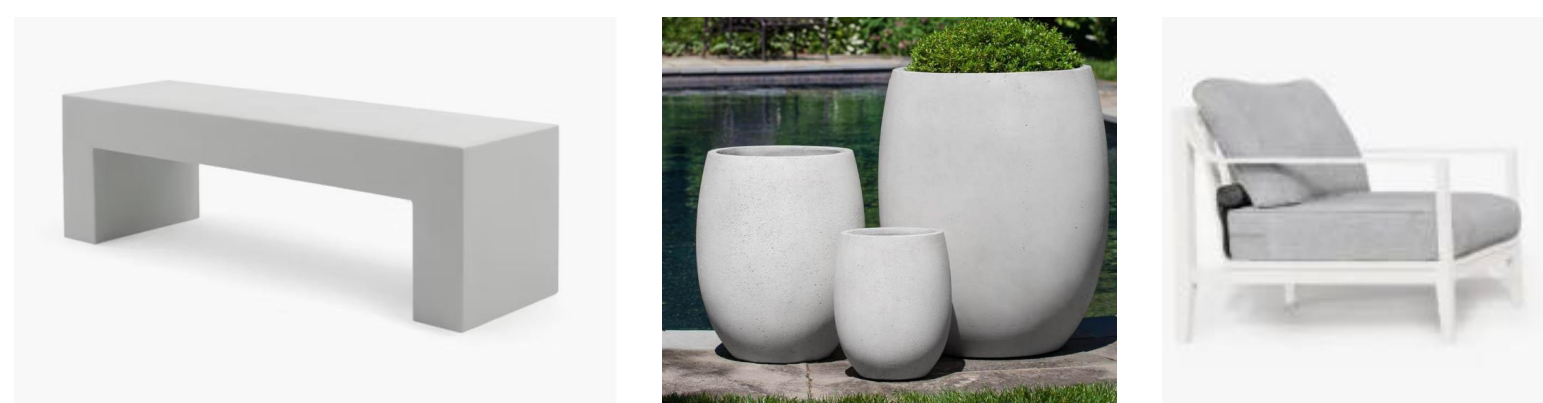
2875-01-CO22



WALLS / FENCES



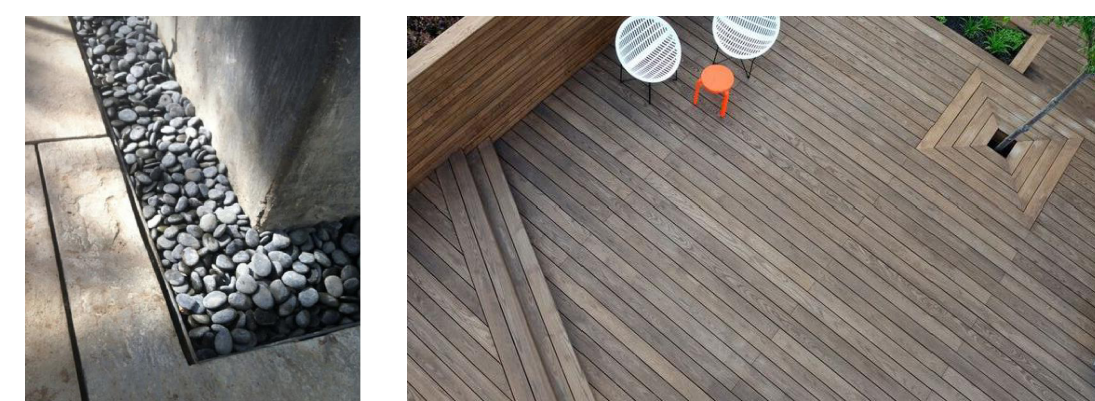
AMENITIES / SEATING



HARDSCAPE IMAGERY



OPTION 1: COLORED CONCRETE W/ TOP-CAST FINISH  
 OPTION 2: BELGARD SHELL PAVER, TAN  
 OPTION 3: TERRAZO TILE



COBBLE DETAIL AT WALL THERMORY DECKING

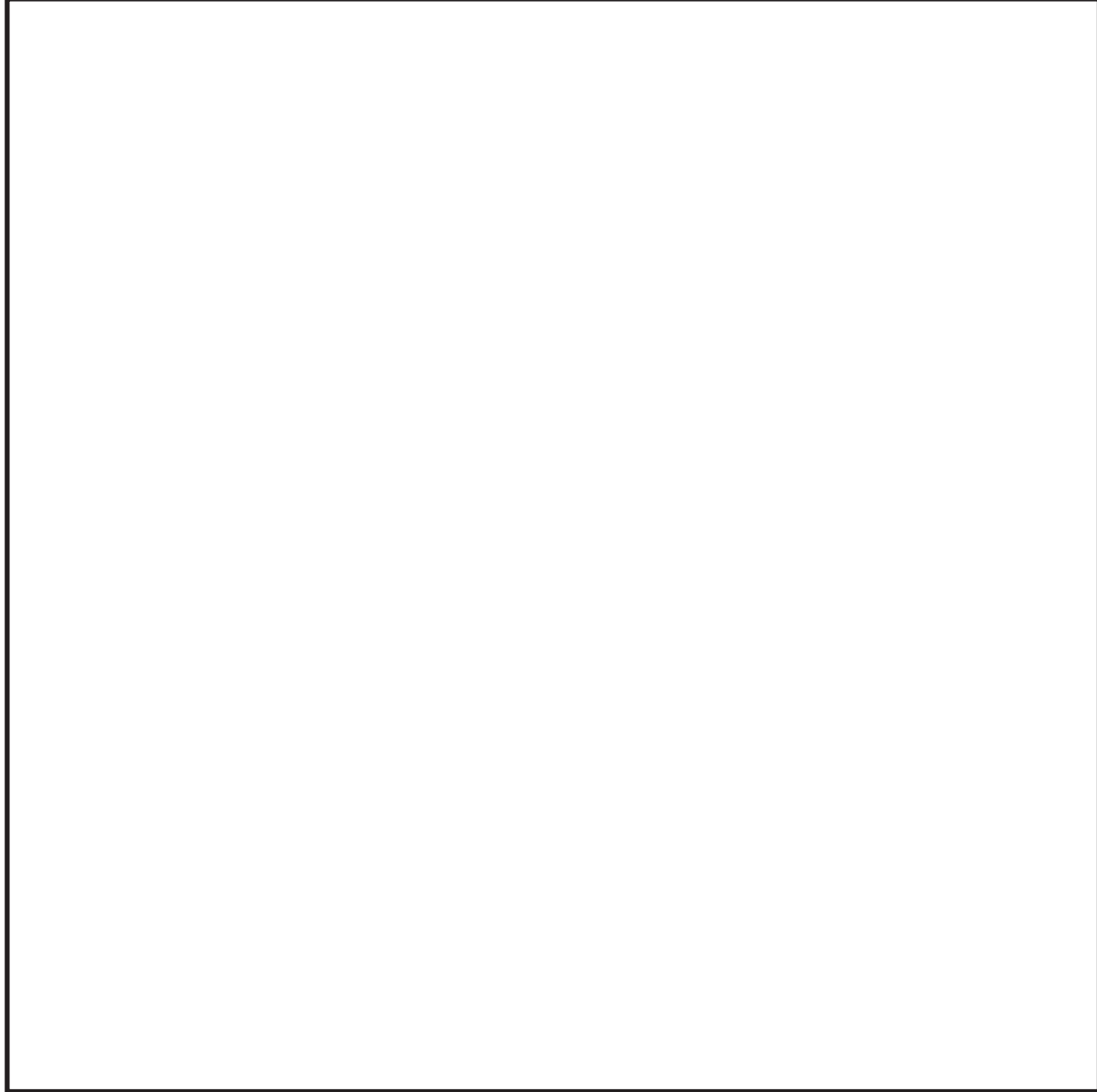


GRAVEL 8" X 8" PERMEABLE PAVERS

Exhibit B



GROUND FLOOR



CITY OF MORRO BAY STAMP

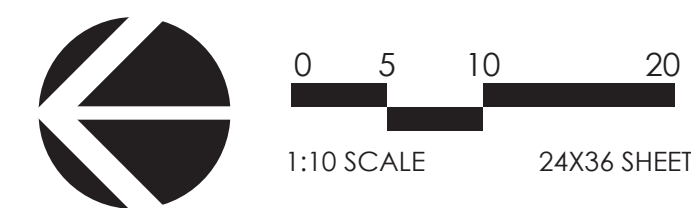
PLANT SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME
<b>TREES</b>		
	CERCIS CANADENSIS 'FOREST PANSY'	FOREST PANSY EASTERN REDBUD
<b>SHRUB AREAS</b>		
	TYPICAL SHRUB AREA AGAVE X 'BLUE FLAME' BACCHARIS PILULARIS 'PIGEON POINT' CAREX TUMULICOLA CASUARINA GLAUCA 'COUSIN IT' CEANOTHUS GRISEUS HORIZONTALIS 'YANKEE POINT' CHONDRPETALUM TECTORUM 'EL CAMPO' CORDYLONE AUSTRALIS 'RED STAR' DIANELLA CAERULEA 'CASSA BLUE' LEUCADENDRON X 'SAFARI SUNSET' LEYMUS CONDENSATUS 'CANYON PRINCE' LOMANDRA LONGIFOLIA 'BREEZE' SALVIA CLEVELANDII SENECIO MANDRALISCAE	BLUE FLAME AGAVE PIGEON POINT COYOTE BRUSH FOOTHILL SEDGE COUSIN IT SWAMP OAK YANKEE POINT CARMEL CREEPER EL CAMPO CAPE RUSH RED STAR GRASS PALM CASSA BLUE DIANELLA SAFARI SUNSET COFFEEBERRY CANYON PRINCE GIANT WILD RYE BREEZE™ MAT RUSH CLEVELAND SAGE BLUE FINGERS
	SLOPED SHRUB AREA BACCHARIS PILULARIS 'PIGEON POINT' CEANOTHUS GRISEUS HORIZONTALIS 'YANKEE POINT' ERIOGONUM ARBORESCENS FRANGULA CALIFORNICA MYRICA CALIFORNICA SALVIA CLEVELANDII	PIGEON POINT COYOTE BRUSH YANKEE POINT CARMEL CREEPER CALIFORNIA ENCELIA SANTA CRUZ ISLAND BUCKWHEAT CALIFORNIA COFFEEBERRY PACIFIC WAX MYRTLE CLEVELAND SAGE

PLANT IMAGERY



PLANT IMAGERY



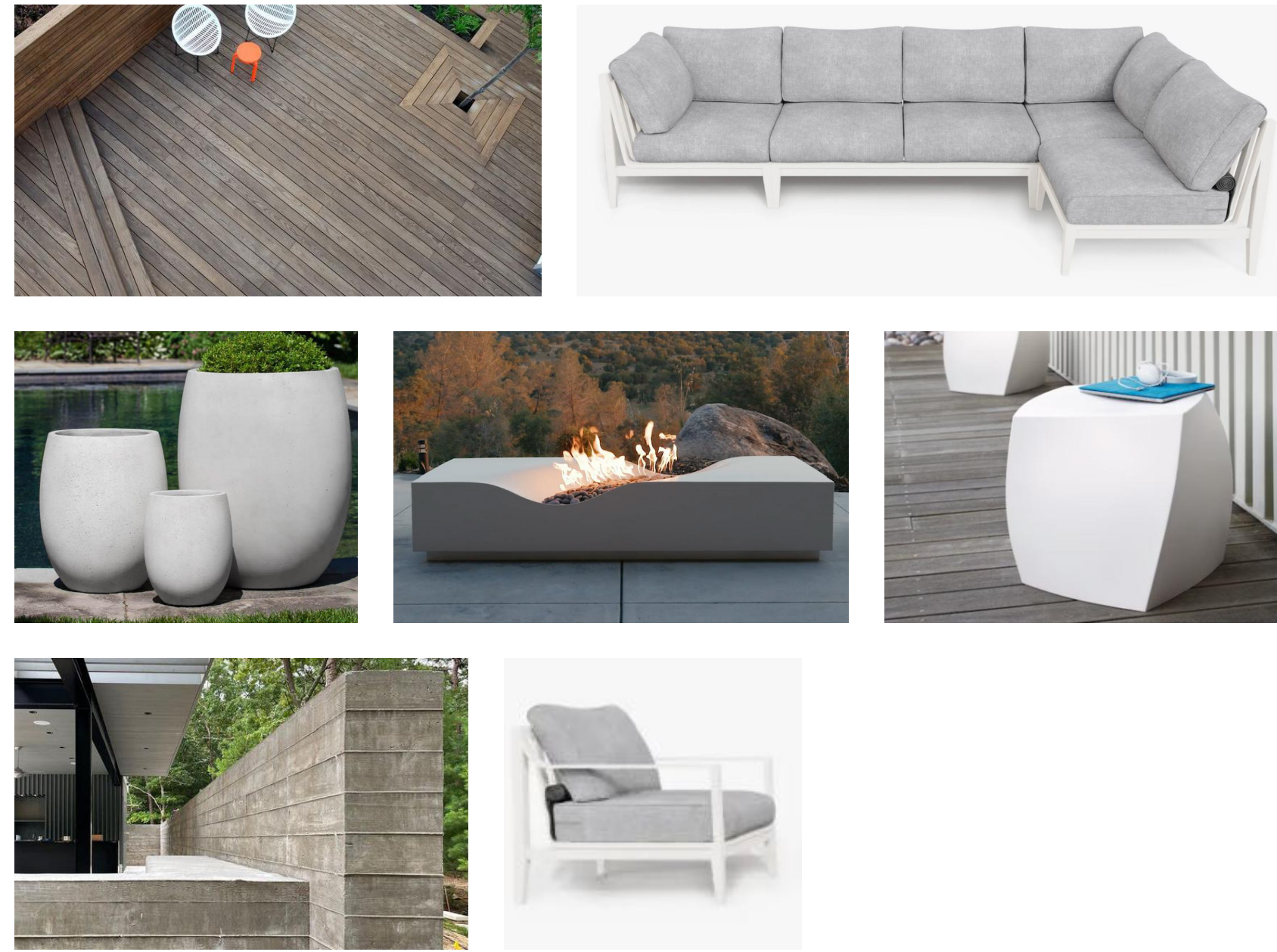
LANDSCAPE SITE PLAN - GROUND FLOOR  
**FRONT STREET HOTEL - MORRO BAY**

15 JANUARY 2026

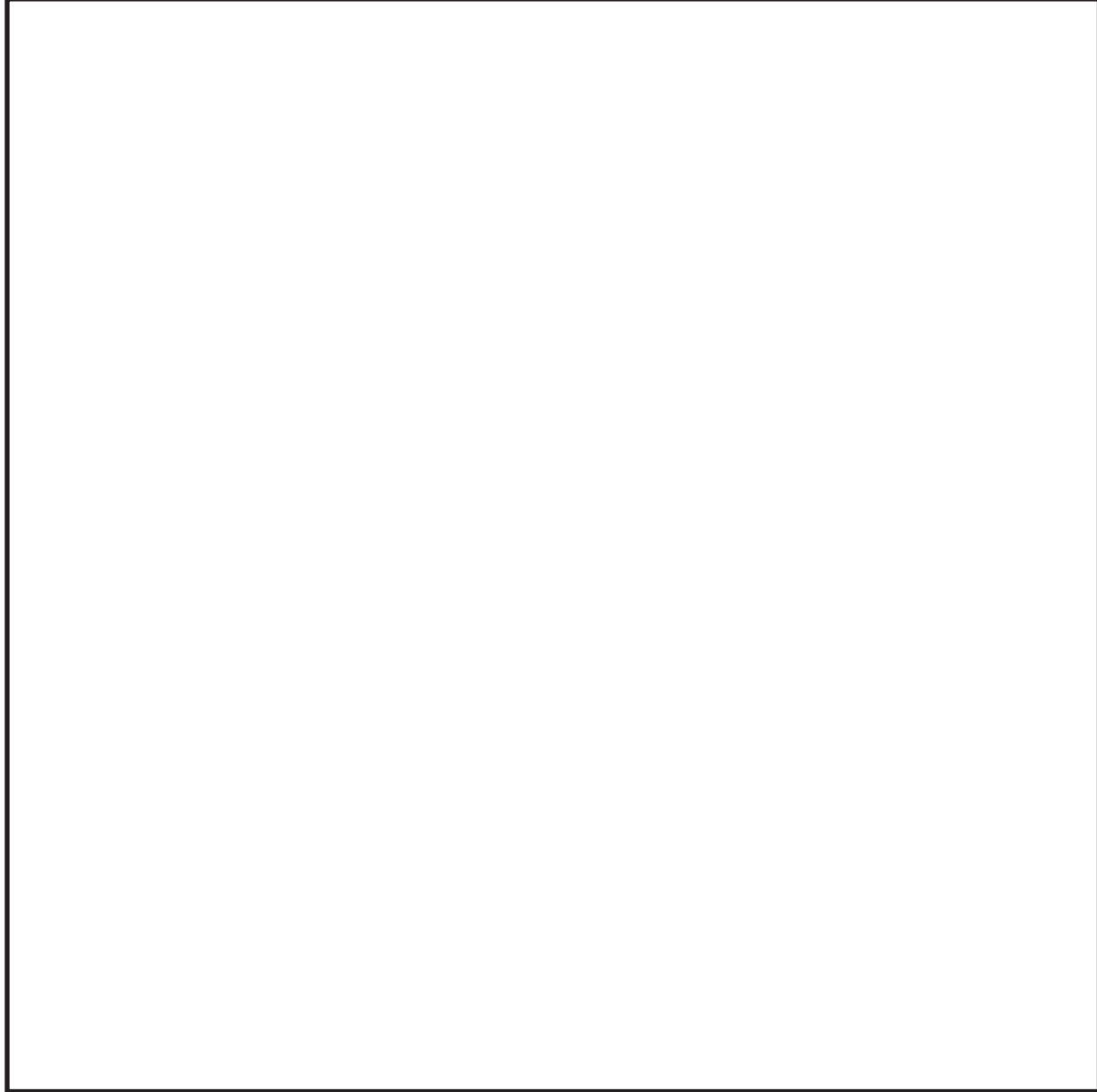
2875-01-CO22



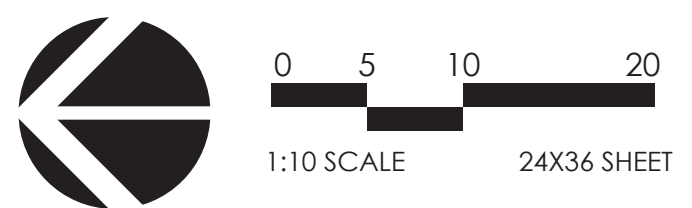
HARDSCAPE / AMENITIES



SECOND FLOOR



CITY OF MORRO BAY STAMP



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**LANDSCAPE SITE PLAN - SECOND FLOOR**  
**FRONT STREET HOTEL - MORRO BAY**

15 JANUARY 2026  
 2875-01-CO22

**L2**

PROJECT STATISTICS

APN: 066-031-015, 066-031-021  
**TOTAL PROJECT AREA:**  
 15,681 SF  
 (APPROX. 0.36 AC)  
**TOTAL LANDSCAPE AREA (ONSITE):**  
 2,492 SF  
**TOTAL LANDSCAPE AREA (OFFSITE):**  
 684 SF  
**TOTAL LANDSCAPE AREA (COMBINED):**  
 3,176 SF  
**LANDSCAPE PERCENTAGE OF TOTAL PROJECT AREA:**  
 ONSITE LANDSCAPE AREA EQUALS 16% OF PROJECT AREA



Exhibit B

PLANTING AND IRRIGATION DESIGN STATEMENT

**PLANTING DESIGN CRITERIA:**  
 THE PLANT PALETTE ABOVE IS COMPRISED OF MEDITERRANEAN PLANT MATERIAL KNOWN TO THRIVE IN THE LOCAL CLIMATE AND SOIL CONDITIONS.  
 THIS PLANT PALETTE COUPLE WITH THE IRRIGATION SYSTEM WILL MEET OR EXCEED THE STATE'S MODEL WATER ORDINANCE AND MORRO BAY STANDARDS FOR WATER CONSERVATION THROUGH WATER EFFICIENT LANDSCAPE IRRIGATION DESIGN. A COMPLETED WORKSHEET FOR MAXIMUM APPLIED WATER ALLOWANCE AND ESTIMATED TOTAL WATER USE CALCULATIONS IS PROVIDED ABOVE.  
 ALL ABOVE GROUND UTILITIES WILL BE SCREENED WITH VEGETATION.

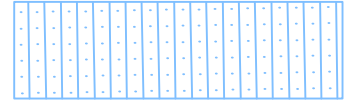
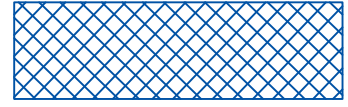
**IRRIGATION DESIGN CRITERIA:**  
 A WEATHER SENSING, 'SMART CONTROLLER' WILL BE USED TO MONITOR THE IRRIGATION WATER AND MANAGE DAILY WATER CONSUMPTION TO THE MINIMUM REQUIREMENTS FOR EACH HYDROZONE.

ALL TREES, SHRUBS AND GROUNDCOVER AREAS WILL BE IRRIGATED ON SEPARATE HYDROZONES WITH DRIP OR BUBBLER IRRIGATION, SO THAT ONCE ESTABLISHED, WATER CAN BE REGULATED IN A MORE EFFICIENT MANNER.

THIS PLANT PALETTE COUPLED WITH THE IRRIGATION SYSTEM DESCRIBED ABOVE WILL MEET OR EXCEED THE STATE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWEL0).

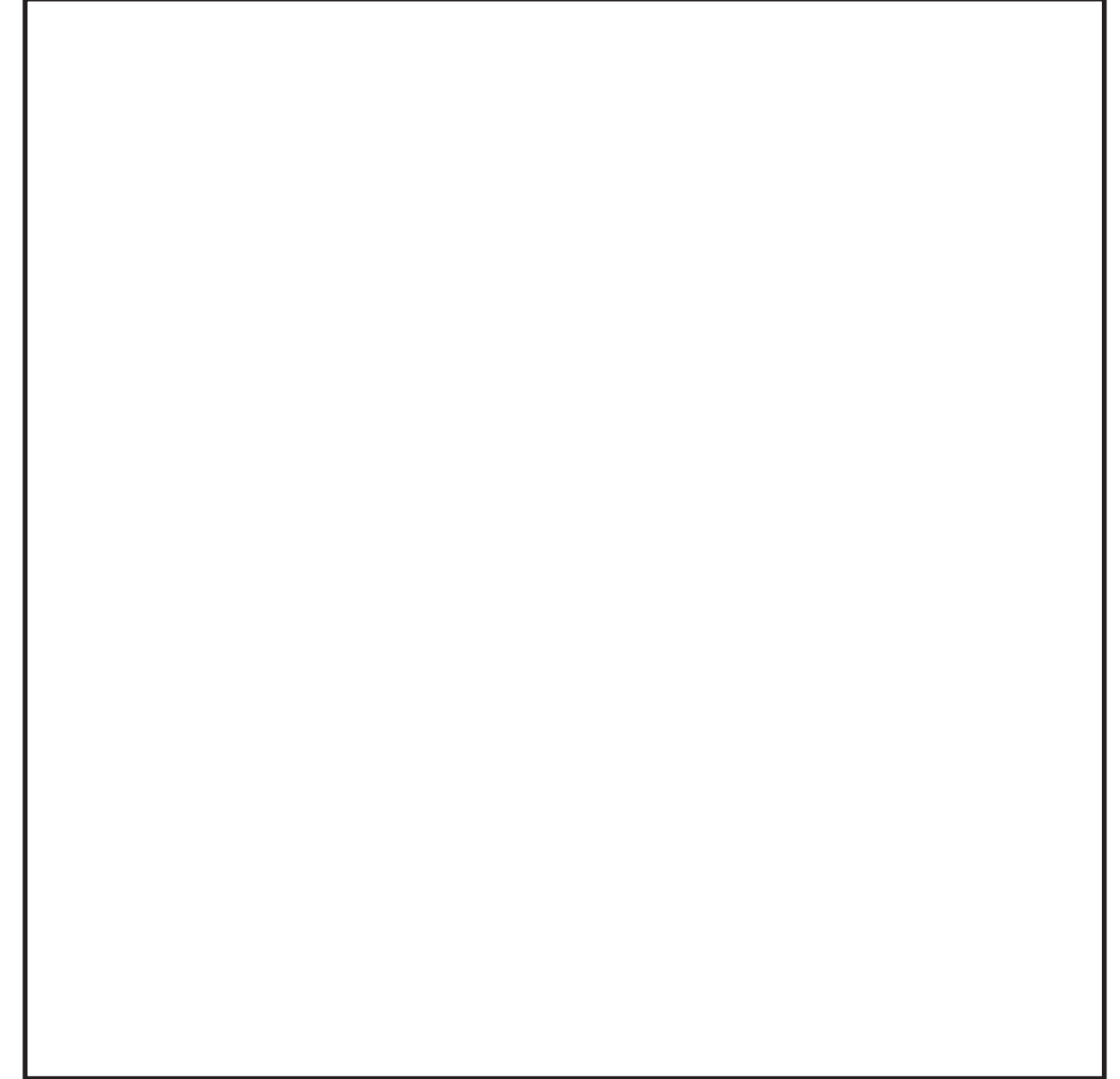
KATIE KLEIN  
 LANDSCAPE ARCHITECT | CA LICENSE NUMBER #6253

HYDROZONE LEGEND

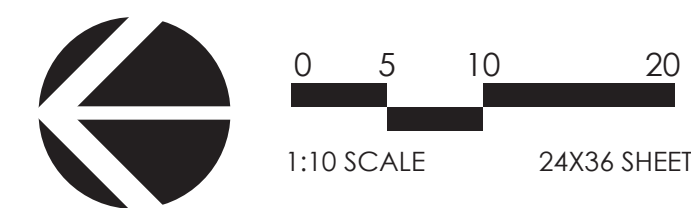
-  **LOW WATER USE**  
SHRUB PLANTING AREA = 3,136 SF
-  **MODERATE WATER USE**  
TREE PLANTING AREA = 40 SF

WATER USE CALCULATIONS

Reference Evapotranspiration (Eto)				39.9				
Hydrozone # /Planting Description*	Plant Factor (PF)	Irrigation Method	Irrigation Efficiency (IE)	ETAF (PF/IE)	Landscape Area (Sq. ft)	ETAF x Area	Estimated Total Water Use (ETWU)	
<b>Regular Landscape Areas</b>								
1 - DT Shrubs	0.25	Drip	0.91	0.27	3136	861.54	21,313	
2 - Mod Trees	0.5	Bubbler	0.8	0.63	40	25.00	618	
					<b>Totals</b>	3176	886.54	21,931
<b>Special Landscape Areas</b>								
Play Field				1	0		0	
Recirculated				1	0		0	
Other				0	0		0	
					<b>Totals</b>	0	0	
							<b>ETWU Total</b>	<b>21,931</b>
							<b>Maximum Allowed Water Allowance (MAWA)</b>	<b>35,356</b>



CITY OF MORRO BAY STAMP



**PLANTING & IRRIGATION**  
**FRONT STREET HOTEL - MORRO BAY**

15 JANUARY 2026

2875-01-CO22



**GEOTECHNICAL ENGINEERING  
AND GEOLOGIC HAZARDS REPORT  
FRONT STREET HOTEL  
1180 FRONT STREET  
MORRO BAY, CALIFORNIA  
APN 066-034-015**

December 9, 2025

Prepared for

Mr. Don Daniels

Prepared by

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

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December 9, 2025

FILE NO.: 307453-001

Mr. Don Daniels  
22985 El Camino Real  
Santa Margarita, CA 93453

PROJECT: FRONT STREET HOTEL  
1180 FRONT STREET  
MORRO BAY, CALIFORNIA  
APN 066-034-015

SUBJECT: Geotechnical Engineering and Geologic Hazards Report

CONTRACT


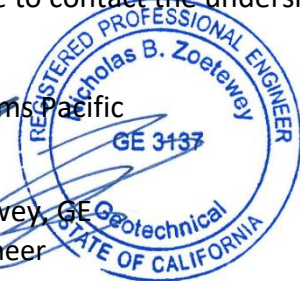
REF: Proposal to Provide a Geotechnical Engineering Investigation and a Geologic Hazards Assessment, Front Street Hotel, 1180 Front Street, Morro Bay, California, APN 066-034-015, by Earth Systems Pacific, Doc. No. SLO-2504-067.PRP, dated April 30, 2025

Dear Mr. Daniels:

In accordance with your authorization of the referenced proposal, this geotechnical engineering and geologic hazards report has been prepared for use in the development of plans and specifications for the Front Street Hotel project in Morro Bay, California. Preliminary geotechnical recommendations for site preparation, grading, utility trenches, mat slab foundations, exterior pedestrian flatwork, retaining walls, drainage and maintenance, and observation and testing are presented herein. An assessment of the geologic hazards on the site and their potential effects on the proposed project was also completed. Digital copies of this report have been furnished to you and to Mr. Joey Cox of RRM Design Group. Additional digital copies can be forwarded to others as requested.

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

Sincerely,  
Earth Systems Pacific

  
Nick Zoetewey, CEG  
Senior Engineer  


  
Darrin Hasham, CEG  
Engineering Geologist  


Doc. No.: 2512-016.SGR/cr



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APPENDIX F	Typical Detail A: Pipe Placed Parallel to Foundations



## 1.0 INTRODUCTION AND SITE SETTING

Based on information provided by Mr. Joey Cox of RRM design Group (RRM 2025), we understand that the planned Front Street Hotel in Morro Bay, California, will be a ten-unit, two-story hotel, with landscape, exterior pedestrian flatwork and other typical on-site and off-site improvements. The general location of the project is shown on Figure 1 – Site Vicinity Map in Appendix A. The structure will have a footprint of approximately 2,600 square feet; we have assumed that it will be of cast-in-place concrete, masonry, structural steel and/or stud construction. Conventional shallow continuous and spread (pad) foundations are desired, with slabs-on-grade for the lower level. Maximum isolated loads of 50 kips and wall (line) loads on the order of 3 kips per foot have been assumed. Common deck spaces will be provided at the rear of the upper units, and access to the upper units will be by stairways and an elevator at the rear of the building. Retained cuts on the order of 12 feet tall will be made at the rear of the building and fills of 1 to 2 feet will be needed at the front. The site will be served by the existing municipal utility lines in the area. Drainage will be by sheet flow to the existing improvements to the west. We understand the project will not utilize Low Impact Development/Best Management Practices (LID/BMPs) for stormwater control, and that infiltration testing for such improvements will not be needed.

The approximate center of the site is at latitude 35.3700°N, and longitude 120.8546°W, and at an elevation of approximately 14 feet MSL (Google Earth 2025). The west half (approximately) of the site slopes gently toward the west, with only 2 to 3 feet of total elevation change. The east half slopes upward at an estimated gradient of 3:1 (horizontal to vertical), with a total slope height of approximately 25 feet. Developed residential lots are to the east at the top of the slope, and an asphalt concrete paved public parking area, Front Street and The Embarcadero are to the west. A single-story hotel is on the commercial property to the south, and to the north is the right-of-way for Surf Street, and a public restroom facility. At the time of our field investigation, the site was covered with low vegetation and shrubs; the preliminary plans (RRM 2025) indicate that the two mature trees at the southwest corner of the site will remain. The locations and dispositions of utility lines on the site are unknown.

## 2.0 SCOPE OF SERVICES

The scope of work for this report included the following: a field reconnaissance by a registered geotechnical engineer and a certified engineering geologist; subsurface exploration; geotechnical laboratory testing of samples obtained during the field investigation; geotechnical and geologic analyses of the data; and preparation of this report. The analysis and subsequent recommendations were based on preliminary information (RRM 2025) provided.



This report and geotechnical recommendations are intended to comply with the considerations of Sections 1803.1 through 1803.7, J104.3 and J104.4, as applicable, of the CBC (CBSC 2022); and common geotechnical engineering and engineering geology practice regarding Coastal Zone developments in the City of Morro Bay under similar conditions at this time. The geotechnical test procedures were accomplished in general conformance with the standards noted, as modified by common geotechnical engineering practice in this area under similar conditions at this time.

Geotechnical recommendations for site preparation, grading, utility trenches, mat slab foundations, exterior pedestrian flatwork, retaining walls, drainage and maintenance, and observation and testing are provided in this report. This report also describes the general geologic characteristics, identifies existing and potential geologic hazards, and discusses the impacts the geologic conditions may have upon the project. It is our intent that this geotechnical/geologic report be used exclusively by the client to form the geotechnical/geologic basis of the design, and to guide the preparation of the project's plans and specifications. Application beyond this intent is strictly at the user's risk.

This report does not address dewatering and other issues in the domain of contractors such as, but not limited to, site safety, loss of volume due to stripping of the site, shrinkage of soils during compaction, excavatability, shoring, temporary slope angles, construction means and methods, etc. Analyses of the soil for mold potential, asbestos in man-made products, lead, radioisotopes, hydrocarbons, or chemical properties (other than geotechnical corrosivity) are beyond the scope of this report. Ancillary features such as temporary access roads, and non-structural fills are not within our scope and are also not addressed.

As there may be unresolved geotechnical and/or geologic issues with respect to this project, the geotechnical engineer and the engineering geologist should be retained to provide consultation as the design progresses, to review project plans as they near completion to assist in verifying that pertinent geotechnical and geologic issues have been addressed and to aid in conformance with the intent of this report. In the event that there are any changes in the nature, design, or location of improvements, or if any assumptions used in the preparation of this report prove to be incorrect, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions of this report are verified or are modified in writing. The criteria presented in this report are considered preliminary until such time as any peer review or review by any jurisdiction has been completed, conditions are observed by the geotechnical engineer and/or engineering geologist in the field during construction, and the recommendations have been verified as appropriate or modified in writing.



### **3.0 FIELD INVESTIGATION**

Three exploratory borings were drilled at the site on November 6, 2025, to assess the subsurface conditions. One boring was drilled with 4-inch outside diameter solid stem hand augers, to a maximum depth of approximately 10 feet below the existing ground surface (bgs). The other two borings were drilled to maximum depths of approximately 24.5 and 51.5 feet bgs, using a Gtech GT-8 truck-mounted drill rig, equipped with 6-inch outside diameter hollow stem auger and an automatic trip hammer for sampling. The approximate locations of the borings are shown on Figure 2 – Exploration Location Map in Appendix A. As the rig borings were drilled, soil samples were obtained using a ring-lined barrel sampler (ASTM D 3550-17 with shoe similar to D 2937-24). Bulk soil samples were also obtained from the auger cuttings in all borings. The borings were backfilled per San Luis Obispo County Department of Environmental Health requirements.

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

### **4.0 LABORATORY ANALYSIS**

Selected ring samples obtained from the borings were tested for unit weight and moisture (ASTM D 2937-17, modified for ring liners and ASTM D 2216-19). Ring samples were also tested for cohesion and angle of shearing resistance (ASTM D 3080-11), and percentage passing a No. 200 sieve (ASTM D 1140-17). A bulk sample was tested for expansion index (ASTM D 4829-21). The geotechnical laboratory test results are presented in Appendix B.

### **5.0 GENERAL SUBSURFACE AND GEOLOGIC PROFILE**

The subsurface conditions encountered in Boring 1 (which was performed within the sloped eastern portion of the site) consisted of loose to medium dense poorly graded sand (dune sand) to the maximum depth explored of approximately 10 feet bgs. Fill consisting of poorly graded sand with variable amounts of clay was encountered in the upper 15 feet (approximately) of Borings 2 and 3. Underlying the fill in these two borings were paralic estuarine deposits consisting of poorly graded sand with variable amounts of clay and gravel. The fill was logged as being loose



to medium dense, and the paralic estuarine deposits were medium dense to very dense. The soils were also described during drilling as being slightly moist to wet. Groundwater was encountered in Boring 2 at 15 feet bgs, and it was logged at 10 feet bgs upon completion of drilling. In Boring 3, groundwater was encountered at 10 feet bgs, during and after drilling. Groundwater was not encountered in Boring 1.

Please refer to the boring logs in Appendix A for a more complete description of the subsurface conditions encountered.

## 6.0 GEOLOGY

### Geologic Setting

Regionally, the site is between the Santa Lucia Range to the north and Irish Hills to the south, within the Coast Ranges geomorphic province of California (CGS 2002). The northern and southern coast ranges are separated by a depression containing the San Francisco Bay. The Santa Lucia Range is bounded by the Pacific Ocean to the west and the Salinas River to the east and extends south to the Cuyama River (USGS 2025a). Tectonically, the region is dominated by northwest-trending faults, which include the Los Osos, San Luis Range, Oceanic-West Huasna, Rinconada, and Hosgri-San Simeon faults (Lettis and Hall 1994). The Los Osos fault is the closest known *Holocene Active* fault to the site.

Locally, the site is located at the northern end of Morro Bay, an estuary and salt marsh, within the larger Estero Bay, which extends from Point Estero in the north to Point Buchon in the south. The Morro Bay estuary and harbor have been created by a sand spit extending from the south northward towards Morro Rock. The estuary is fed by two primary fluvial systems, Los Osos and Chorro Creeks, which deliver sediments that have formed the salt marsh. The site is at the transition from the historical coastal bluff, which is now just a hill at the eastern side of the property; it is comprised of older eolian deposits (wind-blown sand/sand dunes, map symbol Qoe of Wieggers), similar to the sand spit that forms the western limit of Morro Bay. The western, generally level, part of the site is located upon “reclaimed” land that was created during the late 1940s as the United States Army Corps of Engineers (USACE) improved the harbor by constructing the breakwater that extends south from Morro Rock and filling (creating) and/or stabilizing a strip of land along the northeastern part of the bay that became the location of the future power plant, the Embarcadero, and Tidelands Park. At the site the dredged fill appears to be about 15 feet thick. Although this strip of land is mapped as young alluvial flood plain deposits (map symbol Qya of Wieggers), it is clear from historical aerial photographs that the strip of land described



above did not exist in 1937 (USDA 1937) and from archived writing that Morro Rock was an isolated land mass protruding from the Pacific Ocean prior to construction of the breakwater extending northwest from Morro Rock to the mainland by USACE in 1933 (Gates and Bailey 1982), and therefore should have been mapped as artificial fill (map symbol af of Wieggers). With this exception, the regional geology depicted on the Regional Geologic Map and Legend, presented as Figures 3a and 3b, respectively, in Appendix C is generally consistent with what was observed in our borings.

### **Faulting**

Faults are classified by the State of California based on the likelihood of generating ground motions and surface rupture. The classification system applies to known faults that have been compiled by numerous researchers through various methods of investigation. The State evaluates faults with demonstrated ground rupture during the last 11,700 years and considers them for inclusion in Earthquake Fault Zones requiring investigation (Alquist-Priolo or A-P Zones) which encompass traces of *Holocene-active* faults as defined by the State's Alquist-Priolo Earthquake Fault Zoning Act (California 1972). The State's guidance is intended to prohibit developments and structures for human occupancy across the trace of active faults (CGS 2018). Other active faults capable of generating strong ground motion are present in the region but are not included in A-P Zones because they do not meet the criteria of "sufficiently active and well-defined."

The site is within a seismically active region, and the project will experience seismic shaking during its design life. There are several faults considered capable of earthquakes located near the site, but there are no known Holocene-Active faults on the site. The closest Holocene-Active fault included in an A-P Zone is the Los Osos fault located approximately 4.5 miles (7.2 km) south of the site (SLOCO 2025, USGS 2013). There are several late Quaternary faults mapped within 10 miles of the site (SLOCO 2025).

Although there are no known *Holocene-Active* faults on the site, the site is within a seismically active region, and the project will experience seismic shaking. Known faults and fault systems within the region that potentially could generate earthquakes affecting the site include the Los Osos, Oceanic-West Huasna, Hosgri-San Simeon, San Luis Range, Rinconada, and San Andreas faults (USGS 2013). These are several of the known faults within a 65-mile radius of the site; other unknown faults may exist in the region and movement on any of these faults could affect operations at the site. Table D-1, Fault Parameters, presented in Appendix D, lists the 40 closest faults to the site.



### Los Osos Fault

The Los Osos fault is the closest *Holocene-active* fault to the site, mapped as a series of discontinuous segments within Los Osos Valley south and southeast of the site. The Los Osos fault consists of four distinct segments; from northwest to southeast these are the Estero Bay, Irish Hills, Lopez Reservoir, and Newsome Ridge segments. The Irish Hills segment is approximately two miles long and starts near Los Osos and extends to just past San Luis Obispo Creek. A portion of the Irish Hills segment southwest of the site is zoned as a State Earthquake Fault Zone under the Alquist-Priolo Act (Treiman 1989, CDMG 1990). The Los Osos fault is modeled as a reverse fault, dipping to the southwest (USGS 2013), although it is a very complex set of fault segments that exhibits both normal and reverse faulting. At its western end, the Los Osos fault may extend offshore and intersect with the Hosgri fault (SCEDC 2025). The Los Osos fault is generally mapped as an inferred trace approximately 4.5 miles (7.2 km) south of the site. The Los Osos fault is considered capable of a magnitude 7.15 earthquake (BSSC 2014).

### Oceanic-West Huasna Fault

The Oceanic-West Huasna fault zone separates the Santa Lucia and San Rafael mountains from a series of distinct tectonic domains stretching from Cambria to the western Transverse Ranges (Lettis et al. 2004). This fault system trends northwest-southeast for approximately 75 miles and is modeled about 6.1 miles (9.8 km) northeast of the site. The Oceanic-West Huasna fault is considered capable of a magnitude 7.2 earthquake (BSSC 2014).

### Hosgri-San Simeon Fault System

The Hosgri-San Simeon fault system lies offshore, approximately 8.2 miles (13.2 km) west of the site. A northwest-trending strike-slip fault, the San Simeon fault extends from offshore of Ragged Point southward across San Simeon to just offshore of San Simeon Point, where it joins the northern end of the Hosgri fault; the Hosgri fault extends to an ocean shelf 2 miles west of Point Buchon, and then trends toward the Point Sal area. The fault system is considered *Holocene-active* and is included in an A-P Zone between San Simeon Point and Arroyo de le Cruz (CDMG 1986b, 1986c). The Hosgri fault is considered capable of a magnitude 7.54 earthquake (BSSC 2014).

### San Luis Range Fault System

The San Luis Range fault system consists of a series of west-northwest trending faults that include the Shoreline, Santa Maria River, Wilmar Avenue, Oceano, San Luis Bay, and San Miguelito faults. The San Luis Range fault system is modeled about 9.2 miles (14.8 km) southwest of the site. The San Luis Range fault system is considered capable of a magnitude 7.49 earthquake (BSSC 2014).



### Rinconada Fault Zone

The Rinconada fault zone lacks obvious Holocene offset and therefore does not meet the State's criteria for inclusion in an A-P zone; nonetheless, it is considered an active fault and is included as a seismic source in regional models. The Rinconada fault is a northwest trending high angle fault that forms the boundary between two dissimilar geologic terranes. Northeast of the Rinconada fault is the Salinian Block, composed of crystalline plutonic and metamorphic rock overlain by a thick sequence of marine sedimentary rocks. Southwest of the Rinconada fault is the Coastal Block, composed of Franciscan mélangé overlain by marine sedimentary rocks (Dibblee 1976). The Rinconada fault is located about 14.8 miles (23.8 km) northeast of the site and is considered capable of a magnitude 7.5 earthquake (Cao et al. 2003).

### San Andreas Fault

The San Andreas fault is considered the most active fault in the region. Several large magnitude earthquakes have occurred on the San Andreas fault during historical time, including the 1857 great Fort Tejon earthquake, estimated magnitude 7.9; the 1906 San Francisco earthquake, estimated magnitude 7.8; and the 1989 Loma Prieta earthquake, which had an estimated magnitude of 6.9. The 1989 Loma Prieta earthquake did not rupture the ground surface but was nevertheless responsible for many deaths and many millions of dollars in damages. The San Andreas fault is modeled as segments with some segments capable of earthquakes up to magnitude 7.5 (Cao et al. 2003). Simultaneous rupture of more than one segment could cause an earthquake of magnitude 8 or more (BSSC 2014). The Cholame-Carrizo segment is located approximately 41 miles (66 km) east of the site, is approximately 201 km long and is in an A-P Zone (CDMG 1986a). This fault ruptured during the magnitude 7.9 earthquake in 1857 (USGS 2019).

### **Groundwater**

The site is located approximately 260 feet from the Pacific Ocean on permeable sediments. Groundwater should be anticipated to be a reflection of sea level and may be influenced by tidal flux. Groundwater was observed in Borings 2 and 3 approximately 10 feet bgs, which is slightly higher than local sea level and may reflect latent tidal influence or groundwater backed up behind the sheet piles that stabilize the Embarcadero.

## **7.0 SEISMICITY**



### Earthquake History

The historic seismicity in the site's region was researched using a catalog of historical California earthquakes (ANSS 2025). We compiled the epicentral distance for earthquakes within the following search parameters: magnitudes greater than 5.0, within a 65-mile radius from the site, from 1800 to December 2024. Epicentral distances should be considered estimates, particularly for earthquake data prior to 1932, when modern instruments were first used to record earthquake data. The site coordinates used in this search were latitude 35.3700°N and longitude 120.8546°W. Figure 4 – Historical Seismicity Map presented in Appendix C graphically depicts historical earthquake epicenters, their corresponding magnitudes, and the faults within the general region of the project.

Results of the search indicated that within the search parameters, over 39 earthquakes with magnitude greater than or equal to 5.0 have occurred within 65 miles of the site. The largest magnitude earthquake that occurred during the 224-year time period was the magnitude 7.9 Tejon Ranch earthquake on January 9, 1857. The closest earthquake to the site occurred approximately 10 miles from the site on September 5, 1922 and had an estimated magnitude of 5.5. The historical earthquakes are presented in Table D-2, Historical Earthquakes in Vicinity of Project Site,  $M \geq 5.0$ , in Appendix D.

Historical earthquakes that resulted in damage within the region include the Lompoc Earthquake of 1927 and the San Simeon Earthquake of 2003. The Lompoc event is believed to have occurred on the offshore Hosgri fault and had a magnitude of greater than 7.0 (Helmberger et. al. 1992). The event triggered a tsunami that was measured by tidal gauges at San Francisco and San Diego and liquefaction phenomenon, including sand boils, at several locations within and around Lompoc. Reportedly, structures were damaged in Lompoc and Guadalupe (SCEDC 2025).

The San Simeon earthquake that occurred on December 22, 2003, is an example of a significant regional earthquake during recent times, the results of which are well documented. Significant damage was reported from Paso Robles to Oceano. The highest recorded PGA from the San Simeon earthquake was at the hospital in Templeton and liquefaction effects were concentrated at Oceano, approximately 50 miles south of the earthquake epicenter suggesting a PGA of 0.4g or greater (EERI 2005).



### **Ground Motion Analyses**

In accordance with the CBC (CBSC 2022) and ASCE 7-16 (2017, 2018, 2021), an assessment was made to determine the need for employing “Site-Specific Ground Motion Procedures” to calculate the seismic design parameters for the project. Based on our site evaluation and Standard Penetration Tests (SPT), the subsurface characteristics are those of Site Class D (Stiff Soil) as defined by ASCE 7-16 Table 20.3-1, Site Classification. Our analysis indicated that the site is underlain by soils that are vulnerable to potential failure or collapse under seismic loading; Section 20.3 of ASCE 7-16 stipulates that such sites should be classified as Site Class F, and a site response analysis is required unless the fundamental period of the structure is 0.5 seconds or less. Our understanding is that the fundamental period of the planned structure is less than 0.5 seconds, and therefore a site response analysis is not required, and the Site Class may be determined per Section 20.3 (Site Class D).

The mapped  $S_1$  ground motion value obtained from the Structural Engineers Association of California website (SEAOC 2025), using ASCE 7-16 (2017) and Site Class D (Stiff Soil), was 0.357g, which is greater than 0.2; therefore, per Section 11.4.8 of ASCE 7-16, the project requires site-specific ground motion analyses unless certain procedures are used during the structural design that comply with the exceptions allowed. To provide flexibility for the structural design professionals, we have provided “General Procedure” seismic design parameters, which are only valid if structural calculations are performed in accordance with the exception permitted by Supplement 3 of ASCE 7-16 (ASCE 2021), and “Site-Specific” seismic design parameters developed through a site-specific ground motion hazard analysis in accordance with Chapter 21 of ASCE 7-16.

The site may be subject to strong ground shaking due to potential fault movements along regional faults including the Los Osos fault. Engineered design and earthquake-resistant construction increase safety and allow development of seismic areas. The minimum seismic design should comply with the CBC (CBSC 2022) and ASCE 7-16 (2017, 2018, 2021) using the seismic design coefficients given in the table below.

### **Seismic Design Category**

Section 1613.2.5 of the CBC (CBSC 2022) states that structures classified as Risk Category I, II, or III that are located where the mapped spectral response acceleration parameter at 1-second period,  $S_1$ , is greater than or equal to 0.75 shall be assigned to Seismic Design Category E...others



shall be assigned to Seismic Design Category D. The  $S_1$  for the site is 0.357, which is less than 0.75; therefore, the site should be assigned to Seismic Design Category D. We understand that the site falls under Risk Category II, per Table 1604.5 of the CBC (CBSC 2022).

**General Procedure Seismic Design Parameters**

The General Procedure seismic parameters presented in Table 1 below were generally obtained from the Structural Engineers Association of California (SEAOC 2025), consider seismic Site Class D, and an earthquake probability of 2-percent in 50 years, equivalent to a 2,475-year return period. The general procedure seismic design parameters presented below are only valid if structural calculations are performed in accordance with the exception permitted by Supplement 3 of ASCE 7-16, which stipulates that the parameter  $S_{M1}$  be increased by 50 percent for all applications in the ASCE 7-16 Standard (ASCE 2021). The resulting value of the parameter  $S_{D1}$  shall be determined by Eq. (11.4-4) and shall be used for all applications of  $S_{D1}$  in the ASCE 7-16 Standard (ASCE 2021). The values presented in the following table HAVE NOT been increased by 50 percent.

**Table 1: General Procedure Seismic Parameters (2022 CBC)**

Site Class (ASCE 7-16)	D
Occupancy (Risk) Category	II
Seismic Design Category	D
<b>Maximum Considered Earthquake (MCE) Ground Motion</b>	
Spectral Response Acceleration, Short Period – $S_s$	0.959 g
Spectral Response Acceleration at 1 sec. – $S_1$	0.357 g
General Procedure Site Coefficient – $F_a$	1.12
General Procedure Site Coefficient – $F_v$	1.94
Site-Modified Spectral Response Acceleration, Short Period – $S_{MS}$	1.071 g
Site-Modified Spectral Response Acceleration at 1 sec. – $S_{M1}$	0.694 g
<b>Design Earthquake Ground Motion</b>	
Short Period Spectral Response – $S_{DS}$	0.714 g
One Second Spectral Response – $S_{D1}$	0.462 g
Site Modified Peak Ground Acceleration - $PGA_M$	0.50 g
<b>Design Response Spectrum Transition Periods (Seconds)</b>	
$T_0 = 20\%$ of $S_{D1}/S_{DS}$	0.13
$T_5 = S_{D1}/S_{DS}$	0.65
$T_L =$ Mapped Long Period Transition	8



### Site Specific Seismic Design Parameters

As an alternative, we have also developed site-specific seismic design parameters for the site. The site-specific seismic design parameters are summarized in Table 2 below, and the results of our analysis are presented in Appendix D.

A risk-targeted maximum considered earthquake ( $MCE_R$ ) modeling procedure was performed in accordance with ASCE 7-16 (2017, 2018, 2021), including a Probabilistic Seismic Hazard Analysis (PSHA) using ground motion data from the United States Geologic Survey Earthquake Hazard Toolbox (USGS 2025b), based on the National Seismic Hazard Model (NSHM) Conterminous U.S. 2023, and a Deterministic Seismic Hazard Analysis (DSHA) using the Third Uniform California Earthquake Rupture Forecast (UCERF3) fault model (USGS 2013) and NGA-West2 ground motion prediction equations (PEER 2015). These analyses are based on knowledge of the regional tectonic setting, geology, and seismicity. These analyses were performed as described in ASCE 7-16 (2018) Section 21.2.1.1 (Method 1) to estimate the peak ground motion corresponding to the uniform hazards earthquake and  $MCE_R$  which has a 2 percent probability of being exceeded in 50 years. Our site-specific ground motion hazard analysis compared two likely earthquake scenarios on faults modeled near the site. The Los Osos and Oceanic-West Huasna faults have similar magnitude potential and distances from the site. The Oceanic-West Huasna fault has a slightly larger magnitude potential, but it is also slightly farther from the site than the Los Osos fault. Both faults dip away from the site at 45 degrees or greater so hanging wall effects were not considered for either scenario. Our analysis indicated that these two earthquake scenarios produced very similar ground responses, but the Los Osos fault scenario produced slightly higher accelerations at periods of 0.10 seconds or less. Fault parameters used in our analyses are summarized in Table D-1, Fault Parameters, presented in Appendix D, modified in accordance with the USGS Earthquake Scenario web page (BSSC 2014). The resulting site-specific seismic coefficients considering Site Class D are summarized in the table below and the analysis is presented as Figure D-3 and D-4 in Appendix D.



**Table 2: Site-Specific Seismic Parameters (2022 CBC/ASCE 7-16)**

Seismic Design Category	D
Occupancy (Risk) Category	II
Site Class	D
<b>Mapped and Code Based Ground Motion</b>	
Short Period Spectral Response, $S_s$	0.959 g
1 second mapped Spectral Response, $S_1$	0.357 g
<b>Design Earthquake Ground Motion</b>	
Short Period Spectral Response, $S_{DS}$	0.901 g
1 second Spectral Response, $S_{D1}$	0.800 g
Peak Ground Acceleration ( $PGA_M$ )	0.557 g
<b>MCE Spectral Response Acceleration</b>	
Short Period Spectral Response, $S_{MS}$	1.351 g
1 Second Period Spectral Response, $S_{M1}$	1.200 g
<b>Site Amplification Factors</b>	
Short Period Site Coefficient, $F_a$	1.12
1 Second Period Site Coefficient, $F_v$	2.50
Vertical Site Coefficient, $C_v$	1.28
Risk Coefficient (Short Period), $C_{RS}$	0.896
Risk Coefficient (1 Second Period), $C_{R1}$	0.905
<b>Design Response Spectrum Transition Periods (Seconds)</b>	
$T_0 = 20\%$ of $S_{D1}/S_{DS}$	0.178
$T_S = S_{D1}/S_{DS}$	0.888
$T_L =$ Mapped Long Period Transition	8

**8.0 GEOLOGIC HAZARDS**

**Surface Ground Rupture**

Surface ground rupture generally occurs at sites that are traversed by, or lie very near to, an active fault. The site is not located within any State Earthquake Fault Zones (Hart and Bryant 2007) and there are no mapped faults crossing or trending towards the site. The closest mapped *Holocene-active* fault to the site included in an A-P Zone is the Los Osos fault system, located approximately 1.8 miles (2.9 km) south. Although the potential for ground rupture at the site is very low, the possibility cannot be ruled out entirely for any site in a seismically active area, especially where lateral spreading or ground rupture resulting from liquefaction are potential secondary effects of an earthquake.



## **Seismic Settlement and Lateral Spreading**

### Liquefaction Settlement

Liquefaction refers to a phenomenon that tends to occur in saturated soils (soils below the groundwater table) of low density that have grain sizes within a certain range, usually fine- to medium-grained poorly graded sands, silty sands, and silts. A sufficiently strong earthquake is also required to cause liquefaction. During liquefaction, the energy from the earthquake causes the water pressure within the pores of the soil to increase. The increase in water pressure decreases the friction between the soil grains, allowing the soil grains to move relative to one another. During this state, the soil will behave as a viscous liquid, temporarily losing its ability to support foundations and other improvements. The high-pressure water will flow through the soil along the path of least resistance. As the pressure is released, the soils typically settle in a process called "liquefaction settlement." Liquefaction settlement can cause damage to structures and other surface and subsurface improvements.

The planned building area is mapped by San Luis Obispo County as having moderate to high potential for liquefaction (SLOCO 2025). Due to the loose to medium dense subsurface conditions encountered within the soil profile and the presence of shallow groundwater, the potential for liquefaction was assessed. Groundwater was encountered as shallow as 10 feet bgs in both borings drilled for this project; however, we used a groundwater depth of 5 feet bgs for our liquefaction analysis. Our analysis of the subsurface soil conditions indicate there is a high potential for liquefaction and seismically induced settlement to occur. The potentials for liquefaction and subsequent dynamic settlement were evaluated using the data from Boring 2. Based on our analysis, the potential for settlement due to liquefaction was estimated to be on the order of 5.2 inches using Idriss and Boulanger's 2004 procedure (Idriss and Boulanger 2004). Copies of our liquefaction calculations are included in Appendix E.

Although our analyses indicated potential liquefaction settlement to be on the order of 5.2 inches, it is our opinion that this figure is overly conservative. Based on the depth of some of the deeper potentially liquefiable layers (such as the layer at 46 feet bgs), the potential for void redistribution within the areas above the liquefiable layers, and the potential for arching effects, all of which have the potential to reduce the magnitude of liquefaction settlement at the surface, we estimate maximum settlement due to liquefaction will be on the order of 3 inches.



Additionally, the work of Youd and Garris (1995) indicates the non-liquefiable cap above the soils susceptible to liquefaction *does not* have sufficient thickness to prevent ground rupture resulting from liquefaction; therefore, actual settlement *may be more* than the estimated settlements if mitigation is not implemented.

#### Lateral Spreading

Lateral spreading is horizontal movement of slightly sloped soil deposits or relatively level soil toward a nearby free face, such as the harbor to the west. The movement within a soil layer is typically associated with liquefaction of that layer or an underlying layer. Based on the work of Zhang et al. (2004), lateral displacement toward the harbor of approximately 32 inches was calculated to be possible within the building footprint during the design seismic event.

#### Settlement of Unsaturated Soils

Seismically induced settlement of unsaturated soils is also caused by a significant seismic event and typically occurs in lower density sandy and silty soils that are not saturated by groundwater. During a major earthquake, the void spaces between the unsaturated soil particles that are filled with air tend to compress which translates to a decrease in volume resulting in settlement. Considering the loose soils above the design groundwater level of 5 feet bgs, there will likely be up to 1 inch of potential settlement within this zone.

#### **Slope Stability**

The site is in an area designated Class 0 for deep seated landslide susceptibility, which is considered low potential (Wills et al. 2011). The County has mapped the site as low landslide risk (SLOCO 2025). Global slope stability is not considered a hazard to the project or hotel occupants although the slope on the east side of the hotel may be prone to localized erosion due to the unconsolidated nature of eolian sediments and the previously stated potential for lateral spreading during an earthquake.

#### **Flooding**

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map No. 06079C1026H (FEMA 2017), the site is located within Flood Zone X, which indicates areas of 0.2 percent annual chance (500-year) flood or 1-percent annual chance (100-year) flood with a depth of less than 1-foot. The flood hazard zone for this site is presented on Figure 5 – FEMA Flood Zone Map in Appendix C.



The site is not within a mapped downstream dam inundation zone based on the County's hazard map (SLOCO 2025).

### **Tsunami and Seiches**

According to the State of California Tsunami Inundation Zone map for the County of San Luis Obispo (CGS 2021), the project site is within a Tsunami Inundation Zone. The site is also within a tsunami design zone. The web-based Tsunami Hazard Tool (ASCE 2025) indicates that the anticipated run-up elevation of a tsunami in the Embarcadero area is about 65 feet (NAVD88), the offshore amplitude is reported as 15.0 feet with a period of 45 minutes (ASCE 2025). As the elevation of the site is at an elevation of approximately 14 feet the potential for a tsunami to inundate the site is high, although tsunami that impact the central California coastline are uncommon. Several tsunamis have impacted Morro Bay in historical times; the most notable tsunami to impact Morro Bay followed the March 11, 2011 magnitude 9.0 earthquake off the coast of Japan that reportedly produced an 8-foot tidal surge in Morro Bay. The Tsunami hazard zone for this site is presented on Figure 6 – Tsunami Inundation Zone Map in Appendix C.

A seiche is a water wave that can be generated in a reservoir, lake, or pond as the result of barometric pressure anomalies or long-period seismic waves generated by strong local earthquakes. Because the site is not within any downstream dam inundation zone and there are no reservoirs, lakes, or ponds in the vicinity of the site there is no potential for a seiche to affect the project.

### **Naturally Occurring Asbestos**

Asbestos is a term used for several types of naturally occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. When rock containing asbestos is broken or crushed, asbestos fibers may be released and become airborne. Exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest and abdominal cavity), and asbestosis (a non-cancerous lung disease which causes scarring of the lungs) (CARB 2002).

Asbestos minerals are generally limited to only a few types of rocks known to be present in the coast ranges of California. These are ultra-mafic igneous rocks and their metamorphic equivalents which include serpentinite and some types of schist. There are no naturally occurring asbestos-bearing rock formations (serpentinite or ultramafic rock) known in the vicinity of the



site. The area is underlain by alluvial and eolian sediments, which are not considered to be asbestos-bearing geologic units. Therefore, there are no indications that friable asbestos is present in the area and the potential for naturally occurring asbestos is considered very low.

### **Radon**

Radon is a naturally occurring, colorless, odorless gas present in certain soils and rocks, which is derived from the decay of uranium atoms. The occurrence of radon correlates with the presence of specific minerals, and its concentrations in soil or rock will vary depending on the mineralogy of the surrounding bedrock, temperature, barometric pressure, moisture and other factors. Prolonged exposure to elevated levels of radon is associated with an increased risk of lung cancer. Radon exposure can occur after it becomes trapped indoors after it enters buildings through cracks and other holes in foundations. The U.S. EPA recommends remedial action if indoor radon concentrations exceed 4 picocuries per liter (pCi/L) (Churchill 2008).

No rock types associated with elevated radon were observed during our investigation. According to the Radon Potential Zone Map for Western San Luis Obispo County (Churchill 2008), the site is mapped as having low potential for indoor radon. An excerpt of the State's Indoor Radon Potential Map depicting the site is presented as Figure 7 in Appendix C.

## **9.0 CONCLUSIONS**

In our opinion, the site is suitable, from a geotechnical engineering and engineering geology standpoint, for the construction of the proposed improvements as described in the "Introduction and Site Setting" Section of this report, provided the recommendations contained herein are implemented in the design and construction. The primary geotechnical engineering and engineering geology concerns are the potential for strong ground shaking; the existing fill and the potentials for total and differential static settlement, seismic settlement and lateral spreading; shallow groundwater; and the soil's erosion potential. The site soils were found to be nonexpansive, therefore no special measures with respect to expansive soils are considered necessary.

### **Strong Ground Shaking**

The site is in a region of high seismic activity, with the potential for large seismic events that could generate strong ground shaking. Seismic analyses were undertaken to provide General Procedure and Site-Specific seismic acceleration design parameters. Our methods and the results of the seismic analyses are presented in the "Seismicity" Section of this report. Seismic acceleration parameters should be utilized in the design of the structures so that potential damage is reduced during a seismic event.



### Existing Fill and Potentials for Total and Differential Static Settlement

Fill soils were found in Borings 2 and 3 to a maximum depth of approximately 15 feet bgs. The fill soils were poorly graded sands with clay and were likely placed during construction of the Embarcadero area. However, we are unaware of any documentation regarding the placement of the fill, therefore for the purposes of this report, the fill is considered to be undocumented. As undocumented fill typically has variable moisture, density and consolidation characteristics, it is not considered suitable for support of foundations in its current condition.

To reduce the potential for destructive total and differential settlement, we recommend removing and moisture conditioning the existing fill to the degree practicable and then replacing the soils in a controlled earthwork program.

### Seismic Settlement and Lateral Spreading

As discussed in the “Geologic Hazards” Section of this report, potential total seismic settlements up to 4 inches are anticipated, with lateral spreading resulting from liquefaction estimated to be on the order of 32 inches. Ground surface rupture is also possible.

Recommendations for reducing the potential for damage resulting from liquefaction settlement, lateral spread and ground surface rupture are included in the “Grading” and “Mat Slab Foundations” Sections of this report. In general, the recommendations consist of removing the upper feet of existing fill soil and using an imported gravel reinforced with geogrid and a select fill layer to underlie a mat slab foundation system that will support the structure. The potential for liquefaction, lateral spread and dynamic settlement will still be present, but the recommended earthwork and foundation system is intended to provide an increase in rigidity within and below the foundation to reduce the potential effects of liquefaction, lateral spread, and surface rupture. Utility lines that will span between the reinforced gravel/select fill area and any unreinforced zones should be provided with flexible connections, to reduce the potential for damage in the event liquefaction and resulting dynamic settlement, lateral spread and surface rupture were to occur.

### Shallow Groundwater

Following completion of our exploratory borings, groundwater stabilized in Borings 2 and 3 at 10 feet bgs (groundwater was not encountered in Boring 1, which was performed upslope from the western portion of the site). This depth to groundwater is expected to remain relatively constant, and could rise as high as 5 feet bgs, depending on the weather conditions during and immediately preceding construction. As noted in the previous section, a program to remove the upper soils



and replace them with a reinforced geogrid/select fill layer is recommended to reduce the potential for damage to the structure due to potential liquefaction and subsequent dynamic settlement, lateral spread and ground rupture. The recommended overexcavation depth will likely be at or very near the depth of groundwater found in the exploratory borings, especially within the elevator pit area. Construction details should note this expected groundwater condition, and the need for the contractor to utilize adequate equipment, experienced personnel, and specialized techniques, including temporary dewatering as needed, to successfully complete the recommended reinforced gravel/select fill layer to support the planned building's foundations.

### Erosion Potential

The site soils are considered to be highly erodible. It is essential that all surface drainage be controlled and directed to appropriate discharge points, and that surface soils, particularly those disturbed during construction, are stabilized by vegetation or other means during and following construction. The architect/engineer should ensure appropriate nonerosive overland escape if storm water drainage systems fail or are overwhelmed during significant storm event(s), so that soils are not eroded.

## **10.0 GEOTECHNICAL RECOMMENDATIONS**

The following recommendations are for improvements constructed as described in the "Introduction and Site Setting" Section of this report. If locations, elevations, structural loads, etc., change, the recommendations contained herein may require modification. In developing the following recommendations, it was assumed that irrigated landscaping or flatwork will be installed within a zone of at least five feet around the perimeter of the structure; the intent is to keep the soils in a relatively uniform moisture condition year-round.

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

- **Building Area** – The building areas are defined as the areas within and extending a minimum of 5 feet beyond the perimeter of the building's foundations. The building area includes any retaining walls, covered walkways or other improvements that are connected to the building and that are intended to act in a manner similar to it.



- **Flatwork Areas** – The footprints of all areas to receive exterior pedestrian flatwork constructed of Portland cement concrete (PCC).
- **Sitework Retaining Wall Areas** – The areas within and extending a minimum of 3 feet beyond the foundation limits of all sitework retaining walls.
- **Grading Area** – The entire area to be graded, including building, flatwork and sitework retaining wall areas.
- **Existing Grade** – Elevations of the site that existed as of the date of this report.
- **Finish Pad Grade** – The elevation in the building area where earthwork operations are typically considered to be complete. It does not include any sand or gravel that might be placed below slabs-on-grade in association with vapor protection for the slabs.
- **Subgrade** – The elevation of the surface upon which a sand cushion/nonexpansive imported material or AB will be placed to support PCC flatwork.
- **Finish Grade** – The elevations beyond the building and flatwork areas where earthwork operations are typically considered to be complete. It does not include any topsoil or other select material used to facilitate plant growth.
- **Aggregate Base (AB) Grade** – The finished surface of any AB used to support PCC flatwork. AB should conform to Section 26 of the Standard Specifications (Caltrans 2025)
- **Scarified** – Plowed or ripped in two orthogonal directions to a depth of not less than 8 inches.
- **Moisture Conditioned** – Adjusting the soil moisture to optimum moisture content or just above, prior to application of compactive effort, unless stated otherwise.
- **Compacted/Recompacted** – Soils placed in level lifts not exceeding 8 inches in loose thickness and compacted to a minimum of 95 percent of maximum dry density (unless stated otherwise), based on maximum dry density by ASTM D 1557-12/21 and field density by ASTM D 6938-23, or other methods acceptable to the geotechnical engineer and jurisdiction.

**Site Preparation**

1. The ground surface in the grading areas should be prepared for construction by removing existing vegetation, large roots, debris, organic topsoil, and other deleterious materials. Existing utility lines that will not remain in service should be either removed or abandoned. The appropriate method of abandonment will depend upon the type and depth of the utility. Recommendations for abandonment can be made as necessary.
2. Voids created by the removal of materials or utilities described above should be called to the attention of the geotechnical engineer. No fill should be placed unless the underlying soil has been observed by the geotechnical engineer.

**Grading**

1. Following site preparation, the existing fill soils within the building and sitework retaining wall areas should be removed to a level plane at 5 feet below lowest existing grade in the building area or 2 feet below the bottom of the mat slab elevation (including the elevator pit), whichever is deeper. The exposed surface should then be scarified, moisture conditioned and recompacted.
2. Following compaction, a bottom layer of Tensar NX750 (or approved equivalent) geogrid should be placed in the bottom of the building and sitework retaining wall areas. The grid should be unrolled along the long axis of the excavation. The geogrid should be held in place and overlapped per the manufacturer's installation instructions. Depending on groundwater conditions at the time of construction, the contractor may need to temporarily dewater the excavation or use other methods to properly place the geogrid.
3. After the bottom layer of geogrid has been placed and to reduce the potential for soil fines to enter the gravel zone, a layer of geotextile filter fabric (durable, nonwoven, minimum 6 oz. per square yard) should be placed over the bottom geogrid layer, with overlaps per the manufacturer, and extended up the excavation sidewalls on all sides with at least 4 feet of overlap. A minimum of 12 inches of clean crushed gravel (1 to 1.5-inch maximum size) should then be placed over the filter fabric in maximum 6-inch lifts. Each lift should be consolidated in two orthogonal directions using heavy vibratory equipment. The filter fabric extending up the excavation sidewalls should then be lapped over the top of the crushed rock, with additional filter fabric placed over the crushed rock for the remainder of the excavation and overlapped per the manufacturer. An additional layer



of Tensar NX750 (or approved equivalent) geogrid should then be placed over the top of the filter fabric. The remaining area between the top layer of geogrid and finish pad grade elevation should consist of previously removed site soils, Class 2 aggregate base per Section 26 of the Standard Specifications (Caltrans 2025) or locally termed nonexpansive "Decomposed Granite" (DG). Fill within this area should be placed in maximum 6-inch lifts, and should be compacted to a minimum of 95 percent of maximum dry density.

4. Following site preparation, the soils within flatwork areas should be removed to subgrade elevation. The resulting surfaces should be scarified, moisture conditioned and recompacted.
5. Following site preparation and excavations to finish grade, or prior to placement of fill, the soils within the balance of the grading areas should be scarified, moisture conditioned and recompacted.
6. Previously removed soils, as well as approved imported nonexpansive soil, may be placed in thin, moisture conditioned and compacted lifts to subgrade in flatwork areas, and to finish grade in all other areas. All imported fill should be nonexpansive.
7. Nonexpansive materials are defined as on-site or imported soils that fall in the GW, GM, GC, SP, SW, SC and SM categories per ASTM D 2487-17, and that have an expansion index of 10 or less (ASTM D 4829-21).
8. To create conditions that are as uniform as possible, all earthwork operations should be completed throughout the building area in a uniform manner at the same time, from the bottom of the overexcavation through fill placement to finish grade. Earthwork operations in the building area that complete only a portion of the area at one time (i.e., "flip-flopping", "checkerboarding," etc.) should not be allowed.
9. All fill soil (site derived or imported) should be placed in uniform lifts across the entire building or improvement area being constructed; these soils should not be mixed or placed in non-uniform layer thicknesses.
10. AB used to support PCC flatwork should be compacted to a minimum of 95 percent of maximum dry density.



11. Imported soils used in the building area should have strength qualities equal to or better than the site soils. Proposed imported materials should be reviewed by the geotechnical engineer before being brought to the site, and on an intermittent basis during placement.
12. All materials used as fill should be cleaned of any debris and rocks larger than 3 inches in diameter. When fill material includes rocks, the rocks should be placed in a sufficient soil matrix to ensure that voids caused by nesting of the rocks will not occur and that the fill can be properly compacted.
13. Imported soils to be used in landscape areas should be reviewed and approved by the landscape architect or others.
14. If the soils are overly moist so that they become unstable, or if the minimum recommended compaction cannot be readily achieved, drying the soil so that it is nearer optimum moisture content may be necessary. Placement of gravel layers, geotextiles, or geogrids may also be necessary to help stabilize unstable soils. Additional over-excavation may also be recommended to correct unstable conditions or if soft or loose conditions are encountered during grading. No fill should be placed in any grading area if the underlying soil is unstable. Recommendations for stabilization should be provided at the time of construction.
15. The recommended soil moisture contents should be maintained throughout construction, and during the lives of the structures and sitework improvements. Failure to maintain the soil moisture content can result in loosening of the soil and disturbance, which are an indication of degradation of the soil compaction. If soils near improvements such as foundations, flatwork, etc. are disturbed, damage to those improvements may result. Soils that have been disturbed should be removed, moisture conditioned, and recompacted.
16. The architect/engineer should designate any special measures for grading operations, as needed, to mitigate the low potential for radon.
17. Where feasible, temporary excavations for the retaining walls at the rear of the planned structure may be sloped per OSHA requirements from existing grades to the bottoms of the excavations required to construct the walls, as determined by the contractor's "competent person." Where temporary cut slopes are not feasible, due to the soil types,



the excavation depths or other factors, shoring should be implemented to support the planned cuts and other loading conditions. Geotechnical recommendations can be provided for shoring, if determined to be needed, at the time of construction.

### Utility Trenches

1. Utility trenches adjacent to foundations should not be excavated within the zone of foundation influence, as shown in Typical Detail A in Appendix F.
2. Utilities that must pass beneath foundations should be placed with properly compacted utility trench backfill and the foundation should be designed to span the trench.
3. A select, noncorrosive, easily compacted sand should be used as bedding and shading immediately around utilities. The site soil or approved import soil may be used for trench backfill above the select material. In building and flatwork areas, the upper portion of the trench backfill should match the thickness of imported nonexpansive material, AB or other select material used to support these improvements.
4. Trench backfill should be compacted to a minimum of 90 percent of maximum dry density. AB used for trench backfill to support PCC flatwork should be compacted to a minimum of 95 percent of maximum dry density. Prior to applying compactive effort, trench backfill should be moisture conditioned and placed in level lifts not exceeding 6 inches in loose thickness.
5. Compaction of trench backfill by jetting or flooding is not recommended at this site, as the site soils are highly erodible. However, to aid in *encasing* utility conduits, particularly corrugated drainpipes, and multiple, closely-spaced conduits in a single trench with the bedding and shading material, jetting or flooding may be useful. Flooding or jetting should only be attempted with extreme caution, and any flooding or jetting operation should be subject to review by the geotechnical engineer.
6. Long-term settlement of properly compacted on-site soil and imported sand should be assumed to be about 0.25 to 0.5 percent of the depth of the backfill. Improvements that are constructed over or near trenches should be designed to accommodate the potential for settlement.



7. Utility lines may be placed within the geogrid-reinforced gravel supporting the mat foundation, provided the geogrid and geotextile filter material is properly lapped around the utility penetrations per the manufacturer's recommendations. Proper coordination of utility penetrations is essential to maintain the integrity of the reinforced gravel layer that will support the building. Utility line manufacturers should be contacted to verify acceptability of gravel backfill for their lines, instead of typical clean sand bedding and shading.
8. Flexible utility connections to accommodate differential movement on the order of 4 inches should be provided where the utility lines cross into the reinforced gravel supporting layer and/or the mat slab foundation area.
9. The recommendations of this section are minimums only and may be superseded by the architect/engineer based upon soil corrosivity or the requirements of pipe manufacturers, utility companies or the governing jurisdiction.
10. The architect/engineer should incorporate appropriate measures in the design of the utility systems to mitigate the low potential for radon.

### **Mat Slab Foundations**

1. The building and sitework retaining walls should be supported by mat slab foundations ("mat foundations" or "mat slabs") bearing on the gravel/geogrid/compacted soil layer, as recommended in the "Grading" Section of this report.
2. Mat foundations can have a uniform thickness, or they can consist of variable thickness slabs and grade beams (i.e., a "waffle slab"). Mat slab edges should have a minimum depth of 12 inches below lowest adjacent grade. The mat foundations should be reinforced in accordance with the requirements of the architect/engineer and should contain minimum rebar meeting the criteria of ACI 318, Section 24.4. (ACI 2019/2022).
3. Mat foundations should be designed for maximum dead plus live areal bearing pressures of 800 psf, with isolated areas not exceeding 1,200 psf. A preliminary static modulus of subgrade reaction of 10 pci may be used; equal modulus of subgrade reaction contours can be provided as requested by the architect/engineer once a SAFE-type output has been performed.



4. For resistance to lateral loads, mat slabs may be designed using a passive equivalent fluid pressure of 200 pcf and a friction factor of 0.35. Passive and friction components may be combined in the analysis without reduction to either value. Lateral capacity is based on the assumption that any backfill adjacent to foundations has been properly compacted to a minimum of 95 percent of maximum dry density.
5. Allowable bearing capacities may be increased by one-third when transient loads such as wind or seismicity are included. Foundations may be designed as necessary using the seismic parameters provided in the "Seismicity" Section of this report.
6. Static settlement of the mat slabs is expected to be a maximum of 1 inch total and ½-inch differential over a horizontal distance of 30 feet. Potential seismic settlement due to liquefaction is estimated to be on the order of 3 inches, with differential seismic settlement on the order of half this amount over a horizontal distance of 30 feet. Total and differential combined (static plus seismic) settlement could therefore be on the order of 4 inches and 2 inches over a horizontal distance of 30 feet, respectively. The mat foundations should be designed to accommodate these potentials for total and differential settlements.
7. Mat slab excavations should be observed by the geotechnical engineer during excavation and prior to placement of reinforcing steel and concrete. Mat slab excavations should be moistened, and no desiccation cracks should be present, prior to placing concrete.
8. The architect/engineer should incorporate appropriate measures in the design of the foundation systems to mitigate the low potential for radon.

#### Moisture Vapor Transmission

1. Due to the current use of impermeable floor coverings, water-soluble flooring adhesives, and the speed at which buildings are now constructed, moisture vapor transmission through slabs is a much more common problem than in past years. Where moisture vapor transmitted from the underlying soil would be undesirable, slabs should be protected from subsurface moisture vapor. A number of options for vapor protection are discussed below; however, the means of vapor protection, including the type and thickness of the vapor retarder, if specified, are left to the discretion of the architect/engineer.



2. Where specified, vapor retarders should conform to ASTM Standard E 1745-17/23. This standard specifies properties for three performance classes; Class A, B and C. The appropriate class should be selected based on the potential for damage to the vapor retarder during placement of slab reinforcement and concrete. Unless it is determined that a permeance of 0.10 perms will not allow vapor to accumulate beneath moisture-sensitive flooring, adhesives, stored products and/or equipment, then a vapor retarder permeance of 0.010 perms is recommended, per ACI 302.1-15 (ACI 2015). Permeance of vapor retarders should remain below 0.010 perms after the conditioning tests of ASTM E 1745-17.

Note: ASTM E 1745-17 has the same permeance threshold for Class A, B and C (0.1 perms). The class that is chosen will make a difference in how resistant the vapor retarder is to punctures and tears, but it will not ensure any better permeance values to protect floor coverings.

3. Several studies, including those of American Concrete Institute Committee 302 (ACI 2015), have concluded that excess water above the vapor retarder increases the potential for moisture damage to floor coverings and could increase the potential for mold growth or other microbial contamination. The studies also concluded that it is preferable to eliminate the typical sand layer beneath the slab and place the slab concrete in direct contact with a Class A vapor retarder, particularly during wet weather construction. However, placing the concrete directly on the vapor retarder requires special attention to using the proper vapor retarder, a very low water-cement ratio in the concrete mix, and special finishing and curing techniques.
4. Another option that may be a reasonable compromise between effectiveness and cost considerations is the use of a subslab vapor retarder protected by a sand layer. If a Class A vapor retarder is specified, the retarder can be placed directly on the subgrade. The retarder should be covered with a minimum 2 inches of clean sand. If a less durable vapor retarder is specified (Class B or C), a minimum of 4 inches of clean sand should be provided, and the retarder should be placed in the center of the clean sand layer. Clean sand is defined as a well or poorly graded sand (ASTM D 2487-17) of which less than 3 percent passes the No. 200 sieve. The site soils do not meet the criteria to be considered "clean sand".



5. Regardless of the underslab vapor retarder selected, proper installation of the retarder per ASTM E 1643-18a is critical for optimum performance. Where utilized, the vapor retarder should be placed a minimum of 1 inch above the flow line of the drainage path surrounding the structures, or 1 inch above the area drain grates if area drains are used to collect runoff around the structures. As required by ASTM E 1643-18a, all seams and utility penetrations should be properly sealed. At terminating edges of the vapor retarder, the vapor retarder should be effectively sealed with accessories specifically designed to seal the material to new or existing concrete; details for edge sealing of the vapor retarder should be provided by the architect/engineer.
6. If the sand is used between the vapor retarder and the slab, it should be moistened only as necessary to promote concrete curing; saturation of the sand should be avoided, as the excess moisture would be on top of the vapor retarder, potentially resulting in vapor transmission through the slab for months or years.
7. Positive drainage away from the structure should be maintained; see the “Drainage and Maintenance” Section of this report for additional discussion of this issue. If water is allowed to pond near the structure, it may seep into the ground and migrate laterally through cracks or utility penetrations in the foundation, ultimately gaining access above the vapor retarder.

### **Exterior Pedestrian Flatwork**

#### Interior Slabs-on-Grade

1. Interior slabs-on-grade should have a minimum thickness of 4 inches and should be reinforced and doweled to foundations per the specifications of the architect/engineer. As the site soils are nonexpansive, at a minimum, interior slabs should be reinforced with No. 3 rebar at 24 inches on center each way, placed as directed by the architect/engineer. All structural slabs should contain minimum rebar meeting the criteria of ACI 318, Section 7.6.1.1 (ACI 2019/22). At a minimum, foundation dowels should be lap spliced to the slab rebar. The size and spacing of the dowels should match the size and spacing of the slab rebar.

#### Exterior Pedestrian Flatwork

1. Exterior pedestrian flatwork should have a minimum PCC thickness of 4 inches. Minimum reinforcement for PCC exterior pedestrian flatwork should consist of No. 3 rebar placed at 24 inches on-center each way.



2. In conventional construction, it is common to use 4 to 6 inches of imported sand beneath flatwork. As the site soils are nonexpansive, this common practice would be suitable at this site. If additional cost savings are desired with minimal potential for loss of support, exterior pedestrian flatwork can be constructed directly over compacted site soils.
3. Flatwork should be constructed with frequent joints to allow articulation as the flatwork moves in response to seasonal soil temperature and moisture variations. The soil below flatwork should be moisture conditioned prior to casting the flatwork.
4. Flatwork at doorways, and at other areas where maintaining the elevation of the flatwork is desired, should be doweled to the perimeter foundations, at a minimum, by No. 3 dowels lapped to the flatwork rebar at 24 inches on-center. In other areas, the flatwork may be doweled to the foundation or the flatwork may be allowed to “float free,” at the discretion of the architect/engineer. Flatwork that is intended to float free should be separated from foundations by a felt joint or other means.
5. To reduce shrinkage cracks in all interior slabs-on-grade and exterior pedestrian flatwork, the concrete aggregates should be of appropriate size and proportion, the water/cement ratio should be low, the concrete should be properly placed and finished, contraction joints should be installed, and the concrete should be properly cured. This is particularly applicable to slabs that will be cast directly upon a vapor retarder and those that will be protected from transmission of vapor by use of admixtures or surface sealers. Concrete materials, placement, and curing specifications should be at the direction of the architect/engineer; AC 302.1R-15 (ACI 2015) is suggested as a resource for the architect/engineer in preparing such specification.

### **Retaining Walls**

1. Retaining walls should be supported on mat slabs over the gravel/geogrid/compacted soil layer per the “Grading” Section of this report. Foundations for all retaining walls should have minimum overall depths (not including any keyway) of 18 inches below lowest grade within 7 feet laterally of any adjacent slope.
2. Retaining wall mat foundations should be reinforced per the recommendations in the “Foundations” Section.



3. Retaining wall design may be based on the following parameters:

**Table 3: Retaining Wall Design Parameters**

Parameter	Backfill Type	Value
Active Equivalent Fluid Pressure	On Site Soils	40 pcf
Active Equivalent Fluid Pressure	Imported Well Graded Sand/Gravel	35 pcf
At-rest Equivalent Fluid Pressure	On Site Soils	55 pcf
At-rest Equivalent Fluid Pressure	Imported Well Graded Sand/Gravel	50 pcf
Passive Equivalent Fluid Pressure	Gravel/Geogrid/Compacted Soil	200 pcf
Maximum Toe Pressure	Gravel/Geogrid/Compacted Soil	1,200 psf
Coefficient of Sliding Friction	Gravel/Geogrid/Compacted Soil	0.35

4. No surcharges are taken into consideration in the values presented in the previous paragraph. The maximum toe pressure is an *allowable* value; no factors of safety, load factors or other factors have been applied to the remaining values. With the exception of the maximum toe pressure, these values will require application of appropriate factors of safety, load factors, and/or other factors as deemed appropriate by the architect/engineer.
5. The upper foot of backfill behind all retaining walls should consist of native soil, except in areas where exterior pedestrian flatwork will abut the top of the wall. In such cases, the gravel should extend to the aggregate base or other material below the improved surface, as appropriate. If gravel backfill is utilized, the gravel should be encased in a permeable synthetic filter fabric conforming to standard specification section 96-1.02B – Class C (Caltrans 2025).
6. The active and at-rest pressures presented in Table 2 are applicable to a horizontal retained surface behind the wall. Walls having a retained surface that slopes upward from the wall should be designed for an additional equivalent fluid pressure of 1 pcf for the active case and 1.5 pcf for the at-rest case, for every 2 degrees of slope inclination.
7. Under the 2022 CBC, the Risk-Targeted Maximum Considered Earthquake ( $MCE_R$ ) must be used for determining seismic pressures on walls. Further, Section 1807.2.2 of the 2022 CBC requires that dynamic seismic lateral earth pressures be provided by the geotechnical engineer for walls retaining more than 6 feet of backfill. The  $MCE_R$ -based Geometric



Mean Peak Ground Acceleration ( $PGA_M$ ) of 0.557 g was obtained from Table 2 in the Site Specific Seismic Design Parameters Section of this report. Then, using the methods presented by Lew et al. (2010) and this  $PGA_M$ , the appropriate incremental increase in lateral soil pressure above the static active equivalent fluid pressure for flexible (cantilevered) walls was determined to be 15 pcf for site soils, or imported sand or gravel backfill. Flexible (cantilevered) walls retaining over 6 feet of backfill should be designed using these incremental seismic pressures. Walls retaining 6 feet or less of backfill need not be designed for seismic pressures.

8. Research by Al Atik and Sitar (2010) confirmed that for flexible (cantilevered) walls, particularly those over 12 feet tall, an increase in soil pressure does occur under significant seismic accelerations. Further, they found that the increase is due to the out-of-phase interaction between the soil and the flexible wall. When considering rigid walls (i.e. those designed using at-rest criteria); however, they found that the incremental increase due to seismicity was typically less than 50 percent of the static wall pressure. Consequently, no incremental increase in lateral soil pressure is recommended for the design of walls where the static design utilizes the at-rest equivalent fluid pressure and they are designed with factors of safety and earth load factors of at least 1.5.
9. In typical structural design methods for retaining walls such as those found in Section 1605 of the 2022 CBC, lateral soil pressure is multiplied by a load factor of 1.6. According to Lew et al. (2010), a load factor of 1.6 is too conservative for seismic loads; this paper suggests that the seismic increase in lateral pressure be separated from the static active pressure and that a load factor of 1.0 be used for the seismic increase. Further, Al Atik and Sitar (2010) found that pressure increases due to seismic earth loads were minimal for walls retaining less than 12 feet of backfill. While Al Atik and Sitar's research is generally accepted among geotechnical and structural engineers in California, it is not entirely acknowledged by the CBC, as the CBC sets the height below which seismic loads may be ignored at 6 feet. Given this disparity, it is suggested that caution be used not to over-engineer walls retaining between 6 and 12 feet of backfill.
10. Long-term settlement of properly compacted site soil or imported sand/gravel retaining wall backfill should be assumed to be about 0.25 to 0.5 percent of the depth of the backfill. Improvements that are constructed near the tops of retaining walls should be designed to accommodate long-term settlement.



11. All retaining walls should be drained with perforated pipe encased in a free-draining gravel blanket. The pipe should be placed with perforations facing downward and should discharge in a nonerosive manner away from foundations and other improvements. The gravel blanket should have a width of approximately 1 foot and should extend upward to approximately 1 foot from the top of the wall backfill. The upper foot should be backfilled with native soil, except in areas where exterior pedestrian flatwork will abut the top of the wall. In such cases, the gravel should extend to the imported nonexpansive material, sand, aggregate base, or other material below the improved surface, as appropriate. To reduce infiltration of the soil into the gravel, a permeable synthetic filter fabric conforming to Standard Specifications Section 96-1.02B – Class C (Caltrans 2025), should be placed between the two materials. Manufactured synthetic drains, such as Miradrain or Enkadrain are acceptable alternatives to the use of gravel, provided that they are installed in accordance with the recommendations of the manufacturer.
12. Where weep hole drainage can be properly discharged, the perforated pipe may be omitted in lieu of weep holes on maximum 4-foot centers. A filter fabric as described above should be placed between the weep holes and the drain gravel.
13. Walls facing areas where moisture transmission through the wall would be undesirable should be thoroughly waterproofed in accordance with the specifications of the architect/engineer.
14. The architect/engineer should bear in mind that retaining walls by their nature are flexible structures, and that surface treatments on walls often crack. Where walls are to be plastered or otherwise have a finish applied, the flexibility should be considered in determining the suitability of the surfacing material, spacing of horizontal and vertical control joints, etc. The flexibility should also be considered where a retaining wall will abut or be connected to a rigid structure, and where the geometry of the wall is such that its flexibility will vary along its length.
15. The architect/engineer should incorporate appropriate measures in the design of retaining walls to mitigate the low potential for radon activity.



### Drainage and Maintenance

1. Per Section 1804.4 of the CBC (CBSC 2022), unpaved ground surfaces should be *finish graded* to direct surface runoff away from foundations and other improvements at a minimum 5 percent grade for a minimum distance of 10 feet. The site should be similarly sloped to drain away from foundations, and other improvements during construction. Where this is not practicable due to other improvements, etc., swales with improved surfaces, area drains, or other drainage facilities, should be used to collect and discharge runoff.
2. All eaves of the building should be fitted with roof gutters. Runoff from flatwork, roof gutters, downspouts, planter drains, area drains, etc. should discharge in a non-erosive manner away from foundations and other improvements in accordance with the requirements of the governing agencies. Erosion protection should be placed at all discharge points unless the discharge is to a pavement surface.
3. To reduce the potential for planter drainage gaining access to subslab areas, any raised planter boxes adjacent to foundations should be installed with drains and sealed sides and bottoms. Drains should also be provided for areas adjacent to the structures and in landscape areas that would not otherwise freely drain.
4. Stabilization of the site soils and any similar imported soils by vegetation or other means, *during and following* construction, is essential to reduce the potential for erosion damage. Care should be taken to establish and maintain vegetation. The landscaping should be planned and installed to maintain the surface drainage recommended above. Surface drainage should also be maintained during construction.
5. Maintenance of drainage and other improvements is critical to the long-term stability of the site and the integrity of the structures. Site improvements should be maintained on a regular basis.
6. Finished flatwork surfaces should be sloped to freely drain toward appropriate drainage facilities. Water should not be allowed to stand or pond on or adjacent to exterior pedestrian flatwork, or other improvements as it could infiltrate into the AB and/or subgrade, causing premature deterioration of flatwork or other improvements.



7. All exterior drains, retaining wall drains, and drain outlets should be maintained to be free-flowing. Care should be taken to establish and maintain vegetation. Vegetation and erosion matting (if utilized) should be maintained or augmented as needed. Irrigation systems should be maintained so that soils around structures are maintained at a relatively uniform year-round moisture content and are neither over-watered nor allowed to dry and desiccate.
8. To reduce the potential for disruption of drainage patterns and undermining of structures, fill areas, etc., all rodent activity should be aggressively controlled.

### **Observation and Testing**

1. It must be recognized that the recommendations contained in this report are based on a limited number of borings and rely on continuity of the subsurface conditions encountered.
2. It is assumed that the geotechnical engineer will be retained to provide consultation during the design phase, to interpret this report during construction, and to provide construction monitoring in the form of testing and observation.
3. At a minimum, the geotechnical engineer and/or engineering geologist should be retained to provide:
  - Review of project plans and specifications
  - Professional observation during grading, trench and retaining wall backfill and foundation construction
  - Oversight of special inspection and compaction testing during grading, trench and retaining wall backfill and foundation construction
4. Special inspection of grading and backfill should be provided as per Section 1705.6 and Table 1705.6 of the CBC (CBSC 2022). The special inspector should be under the direction of the geotechnical engineer and/or the engineering geologist. At a minimum, the following items should be inspected and/or tested by the special inspector:
  - Stripping and clearing of all existing improvements, vegetation, and deleterious materials
  - Overexcavation to the recommended depths



- Scarification, moisture conditioning and recompaction of excavated areas
  - Fill quality; geogrid, fill and crushed rock placement; moisture conditioning and compaction
  - Utility trench backfill, moisture conditioning and compaction
  - Foundation excavations
  - Retaining wall drains and backfill
5. A program of quality assurance should be developed prior to beginning construction. At a minimum, the program should include all geotechnical items shown on the testing and inspection schedule of the approved plans. It should also include any additional inspection items required by the engineer and/or the governing jurisdiction. These items should be discussed at a preconstruction site meeting among a representative of the owner, the geotechnical engineer, special inspector, the project inspector, the engineer, and contractors. The geotechnical engineer should be notified at least 48 hours prior to beginning grading operations.
6. Locations and frequency of compaction tests should be per the recommendation of the geotechnical engineer at the time of construction. The recommended test location and frequency may be subject to modification by the geotechnical engineer, based upon soil and moisture conditions encountered, size and type of equipment used by the contractor, the general trend of the results of compaction tests, or other factors.

## 11.0 CLOSURE

Our intent was to perform the investigation in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the locality of this project under similar conditions. No representation, warranty, or guarantee is either expressed or implied. This report is intended for the exclusive use by the client as discussed in the "Scope of Services" Section. Application beyond the stated intent is strictly at the user's risk.

This report is valid for conditions as they exist at this time for the type of project described herein. The conclusions and recommendations contained in this report could be rendered invalid, either in whole or in part, due to changes in building codes, regulations, standards of geotechnical or construction practice, changes in physical conditions, or the broadening of knowledge.



If changes with respect to the project become necessary, if items not addressed in this report are incorporated into plans, or if any of the assumptions used in the preparation of this report are not correct, this firm shall be notified for modifications to this report. Any items not specifically addressed in this report should comply with the CBC of other applicable standards, and the requirements of the governing jurisdiction.

The recommendations presented in this geotechnical report are based upon the geotechnical conditions encountered at the site and may be augmented by additional requirements of the client, or by additional recommendations provided by the geotechnical engineer based on peer or jurisdiction reviews, or conditions exposed at the time of construction. If Earth Systems Pacific is *not* retained to provide construction observation and testing services, it shall not be responsible for the interpretation of the information by others or any consequences arising therefrom.

This document, the data, conclusions, and recommendations contained herein are the property of Earth Systems Pacific. This report shall be used in its entirety, with no individual sections reproduced or used out of context. Copies may be made only by Earth Systems Pacific, the client, and the client's authorized agents for use exclusively on the subject project. Any other use is subject to federal copyright laws and the written approval of Earth Systems Pacific.

Thank you for this opportunity to have been of service. If you have any questions, please feel free to contact this office at your convenience.

End of Text.

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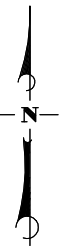
**APPENDIX A**

Figure 1 – Site Vicinity Map

Figure 2 – Exploration Location Map

Boring Log Legend

Boring Logs



NOT TO SCALE

BASE MAP PROVIDED BY: GOOGLE EARTH (2025)



**Earth Systems Pacific**  
 4378 Old Santa Fe Road, San Luis Obispo, CA 93401  
 www.earthsystems.com  
 (805) 544-3276 • Fax (805) 544-1786


**SITE VICINITY MAP**  
 Front Street Hotel  
 1180 Front Street  
 Morro Bay, California

Date  
 December 2025  
Project No.  
 307453-001  
 Figure 1

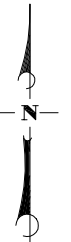
307453-001 FrontStreetHotel\_111325 - Maps.dwg



### LEGEND

 Boring Location (Approx.)

BASE MAP PROVIDED BY: RRM DESIGN GROUP (202)



NOT TO SCALE



## Earth Systems Pacific

4378 Old Santa Fe Road, San Luis Obispo, CA 93401  
 www.earthsystems.com  
 (805) 544-3276 • Fax (805) 544-1786

## EXPLORATION LOCATION MAP

Front Street Hotel  
 1180 Front Street  
 Morro Bay, California

**Date**  
 December 2025

**Project No.**  
 307453-001

Figure 2



**Earth Systems Pacific**

# BORING LOG LEGEND

## UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487)

SAMPLE / SUBSURFACE WATER SYMBOLS		GRAPH. SYMBOL	MAJOR DIVISIONS	GROUP SYMBOL	TYPICAL DESCRIPTIONS	GRAPH. SYMBOL
CALIFORNIA MODIFIED		■	COARSE GRAINED SOILS MORE THAN HALF OF MATERIAL IS LARGER THAN #200 SIEVE SIZE	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	
STANDARD PENETRATION TEST (SPT)		●		GP	POORLY GRADED GRAVELS, OR GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	
SHELBY TUBE		□		GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES, NON-PLASTIC FINES	
BULK		○		GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES, PLASTIC FINES	
SUBSURFACE WATER DURING DRILLING		▼		SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	
SUBSURFACE WATER AFTER DRILLING		▽		SP	POORLY GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES	
				SM	SILTY SANDS, SAND-SILT MIXTURES, NON-PLASTIC FINES	
				SC	CLAYEY SANDS, SAND-CLAY MIXTURES, PLASTIC FINES	
			FINE GRAINED SOILS HALF OR MORE OF MATERIAL IS SMALLER THAN #200 SIEVE SIZE	ML	INORGANIC SILTS AND VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY	
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	
				MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS	
				CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS	
				PT	PEAT AND OTHER HIGHLY ORGANIC SOILS	

### OBSERVED MOISTURE CONDITION

DRY      SLIGHTLY MOIST      MOIST      VERY MOIST      WET (SATURATED)

### CONSISTENCY

COARSE GRAINED SOILS			FINE GRAINED SOILS		
BLOWS/FOOT		DESCRIPTIVE TERM	BLOWS/FOOT		DESCRIPTIVE TERM
SPT	CA SAMPLER		SPT	CA SAMPLER	
0-10	0-16	LOOSE	0-2	0-3	VERY SOFT
11-30	17-50	MEDIUM DENSE	3-4	4-7	SOFT
31-50	51-83	DENSE	5-8	8-13	MEDIUM STIFF
OVER 50	OVER 83	VERY DENSE	9-15	14-25	STIFF
			16-30	26-50	VERY STIFF
			OVER 30	OVER 50	HARD

### GRAIN SIZES

U.S. STANDARD SERIES SIEVE				CLEAR SQUARE SIEVE OPENING			
# 200	# 40	# 10	# 4	3/4"	3"	12"	
SILT & CLAY		SAND		GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		

### TYPICAL BEDROCK HARDNESS

MAJOR DIVISIONS	TYPICAL DESCRIPTIONS
EXTREMELY HARD	CORE, FRAGMENT, OR EXPOSURE CANNOT BE SCRATCHED WITH KNIFE OR SHARP PICK; CAN ONLY BE CHIPPED WITH REPEATED HEAVY HAMMER BLOWS
VERY HARD	CANNOT BE SCRATCHED WITH KNIFE OR SHARP PICK; CORE OR FRAGMENT BREAKS WITH REPEATED HEAVY HAMMER BLOWS
HARD	CAN BE SCRATCHED WITH KNIFE OR SHARP PICK WITH DIFFICULTY (HEAVY PRESSURE); HEAVY HAMMER BLOW REQUIRED TO BREAK SPECIMEN
MODERATELY HARD	CAN BE GROOVED 1/16 INCH DEEP BY KNIFE OR SHARP PICK WITH MODERATE OR HEAVY PRESSURE; CORE OR FRAGMENT BREAKS WITH LIGHT HAMMER BLOW OR HEAVY MANUAL PRESSURE
SOFT	CAN BE GROOVED OR GOUGED EASILY BY KNIFE OR SHARP PICK WITH LIGHT PRESSURE, CAN BE SCRATCHED WITH FINGERNAIL; BREAKS WITH LIGHT TO MODERATE MANUAL PRESSURE
VERY SOFT	CAN BE READILY INDENTED, GROOVED OR GOUGED WITH FINGERNAIL, OR CARVED WITH KNIFE; BREAKS WITH LIGHT MANUAL PRESSURE

### TYPICAL BEDROCK WEATHERING

MAJOR DIVISIONS	TYPICAL DESCRIPTIONS
UNWEATHERED	NO DISCOLORATION, NOT OXIDIZED
SLIGHTLY WEATHERED	DISCOLORATION OR OXIDATION IS LIMITED TO SURFACE OF, OR SHORT DISTANCE FROM, FRACTURES; SOME FELDSPAR CRYSTALS ARE DULL
MODERATELY WEATHERED	DISCOLORATION OR OXIDATION EXTENDS FROM FRACTURES, USUALLY THROUGHOUT; Fe-Mg MINERALS ARE "RUSTY", FELDSPAR CRYSTALS ARE "CLOUDY"
HIGHLY WEATHERED	DISCOLORATION OR OXIDATION THROUGHOUT; FELDSPAR AND Fe-Mg MINERALS ARE ALTERED TO CLAY TO SOME EXTENT, OR CHEMICAL ALTERATION PRODUCES IN SITU DISAGGREGATION
DECOMPOSED	DISCOLORATION OR OXIDATION THROUGHOUT, BUT RESISTANT MINERALS SUCH AS QUARTZ MAY BE UNALTERED; FELDSPAR AND Fe-Mg MINERALS ARE COMPLETELY ALTERED TO CLAY



# Earth Systems Pacific

Boring No. 1

PAGE 1 OF 1

JOB NO.: 307453-001

DATE: 11/06/2025

LOGGED BY: T. Robison

AUGER TYPE: 3" Hand Auger

DEPTH (feet)	USCS CLASS	SYMBOL	SAMPLE DATA					
			INTERVAL (feet)	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.	
<b>Front Street Hotel 1180 Front Street Morro Bay, California</b>								
<b>SOIL DESCRIPTION</b>								
0 - 1 - 2 - 3 - 4 - 5	SP- SC		POORLY GRADED SAND WITH CLAY: brown, loose, slightly moist (Dune Sand)	1.5 - 5.0	○			
6 - 7 - 8 - 9 - 10	SP		POORLY GRADED SAND: light brown, medium dense, slightly moist	7.0 - 10.0	○			
11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 - 20 - 21 - 22 - 23 - 24 - 25 - 26 -			End of Boring @ 10.0' No subsurface water encountered					

LEGEND: Ring Sample Grab Sample Shelby Tube Sample SPT

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.



# Earth Systems Pacific

Boring No. 2

PAGE 1 OF 2

LOGGED BY: T. Robison  
 DRILL RIG: GTech GT 8 with Automatic Hammer  
 AUGER TYPE: 6" Hollow Stem

JOB NO.: 307453-001

DATE: 11/06/2025

DEPTH (feet)	USCS CLASS	SYMBOL	SAMPLE DATA					
			INTERVAL (feet)	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.	
<b>Front Street Hotel 1180 Front Street Morro Bay, California</b>								
<b>SOIL DESCRIPTION</b>								
0	SP-SC		POORLY GRADED SAND WITH CLAY: brown, loose, slightly moist (Fill)	1.0 - 5.0	○			
1				2.0 - 3.5	■	95.1	2.9	3
2								3
3								6
4								
4			dark brown					
5				5.0 - 6.5	■	113.7	1.3	3
6			light gray brown, medium dense					11
7								15
8								
9								
10	SP		POORLY GRADED SAND: light gray brown, loose, very moist	10.0 - 11.5	■	115.1	18.5	5
11								4
12								8
13								
14								
15	SP-SC		POORLY GRADED SAND WITH CLAY: light gray brown, medium dense, wet, trace gravel (Paralic Estuarine Deposits)	15.0 - 16.5	■	117.3	17.2	15
16								19
17								22
18								
19								
20	SP-SC		POORLY GRADED SAND WITH CLAY AND GRAVEL: dark brown, medium dense, wet	20.0 - 21.5	■	93.7	19.2	16
21								23
22								22
23								
24								
25	SP-SC		POORLY GRADED SAND WITH CLAY: dark brown, medium dense, wet	25.0 - 26.5	■	101.2	23.0	4
26								9
27								15

LEGEND: ■ Ring Sample ○ Grab Sample □ Shelby Tube Sample ● SPT

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.



# Earth Systems Pacific

Boring No. 2

PAGE 2 OF 2

LOGGED BY: T. Robison  
 DRILL RIG: GTech GT 8 with Automatic Hammer  
 AUGER TYPE: 6" Hollow Stem

JOB NO.: 307453-001

DATE: 11/06/2025

DEPTH (feet)	USCS CLASS	SYMBOL	Front Street Hotel 1180 Front Street Morro Bay, California	SAMPLE DATA				
				INTERVAL (feet)	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.
SOIL DESCRIPTION								
27 - 28 - 29 - 30 - 31 - 32 - 33 - 34 -	SP- SC		POORLY GRADED SAND WITH CLAY: same as above	30.0 - 31.5	■	102.9	25.1	6 9 12
35 - 36 - 37 - 38 - 39 - 40 - 41 - 42 - 43 - 44 - 45 -	SP- SC		POORLY GRADED SAND WITH CLAY AND GRAVEL: gray to dark brown, medium dense, wet	35.0 - 36.5	■	101.2	24.7	6 10 19
40 - 41 - 42 - 43 - 44 - 45 -			flow sands encountered, sampler plugged	40.0 - 41.5	■		18.4	
46 - 47 - 48 - 49 - 50 - 51 -			very dense, flow sands end					
50 - 51 - 52 - 53 -			End of Boring @ 51.5' Subsurface water encountered @ 15.0' during and @ 10.0' after drilling	50.0 - 51.5	■	97.3	27.5	12 32 50/5"

LEGEND: ■ Ring Sample ○ Grab Sample □ Shelby Tube Sample ● SPT

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.



# Earth Systems Pacific

Boring No. 3

PAGE 1 OF 1

LOGGED BY: T. Robison  
 DRILL RIG: GTech GT 8 with Automatic Hammer  
 AUGER TYPE: 6" Hollow Stem

JOB NO.: 307453-001

DATE: 11/06/2025

DEPTH (feet)	USCS CLASS	SYMBOL	Front Street Hotel 1180 Front Street Morro Bay, California	SAMPLE DATA							
				INTERVAL (feet)	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.			
			<b>SOIL DESCRIPTION</b>								
0	SP-SC		POORLY GRADED SAND WITH CLAY: reddish brown, loose, slightly moist (Fill)	0.0 - 5.0	○						
1											
2						2.0 - 3.5	■	93.3	4.2	3 5 7	
3											
4						brown					
5											
6						light gray brown					
7											
8											
9											
10						medium dense, wet	10.0 - 11.5	■	NO RECOVERY		4 8 10
11											
12						light brown					
13											
14											
15	SP-SC		POORLY GRADED SAND WITH CLAY: light brown, medium dense, wet (Paralic Estuarine Deposits)	15.0 - 16.5	■	112.6	19.5	13 13 19			
16											
17											
18											
19											
20											
21											
22											
23											
24											
25			End of Boring @ 24.5'								
26			Subsurface water encountered @ 10.0' during and after drilling								

LEGEND: ■ Ring Sample ○ Grab Sample □ Shelby Tube Sample ● SPT

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

**APPENDIX B**

Geotechnical Laboratory Test Results



Front Street Hotel

307453-001

**BULK DENSITY TEST RESULTS**

ASTM D 2937-17 (modified for ring liners)

November 20, 2025

<b>BORING NO.</b>	<b>DEPTH feet</b>	<b>MOISTURE CONTENT, %</b>	<b>WET DENSITY, pcf</b>	<b>DRY DENSITY, pcf</b>
2	3.0 - 3.5	2.9	97.9	95.1
2	6.0 - 6.5	1.3	115.2	113.7
2	11.0 - 11.5	18.5	136.4	115.1
2	16.0 - 16.5	17.2	137.5	117.3
2	21.0 - 21.5	19.2	111.7	93.7
2	26.0 - 26.5	23.0	124.5	101.2
2	31.0 - 31.5	25.1	128.7	102.9
2	36.0 - 36.5	24.7	126.2	101.2
2	41.0 - 41.5	18.4	128.2	108.3
2	51.0 - 51.5	27.5	124.1	97.3
3	3.0 - 3.5	4.2	97.3	93.3
3	6.0 - 6.5	4.6	101.0	96.5
3	16.0 - 16.5	19.5	134.5	112.6
3	24.0 - 24.5	21.5	131.3	108.0

**EXPANSION INDEX TEST RESULTS**

ASTM D 4829-21

<b>BORING NO.</b>	<b>DEPTH feet</b>	<b>EXPANSION INDEX</b>
2	1.0 - 5.0	16



Front Street Hotel

307453-001

**PARTICLE SIZE ANALYSIS**

ASTM D 422-63/07; D 1140-17

Boring #2 @ 11.0 - 11.5'

November 20, 2025

Poorly Graded Sand (SP)

Cu = 1.4; Cc = 0.9

**Sieve size**

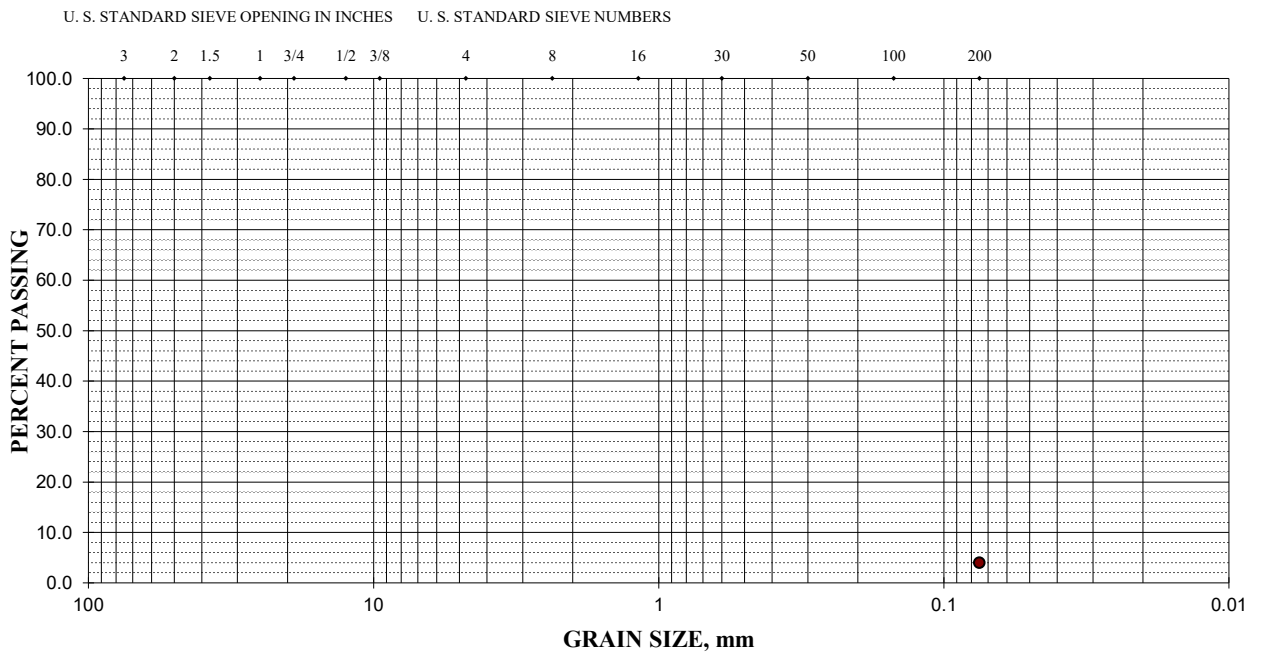
**% Retained**

**% Passing**

#200 (75- $\mu$ m)

96

4.0





Front Street Hotel

307453-001

**PARTICLE SIZE ANALYSIS**

ASTM D 422-63/07; D 1140-17

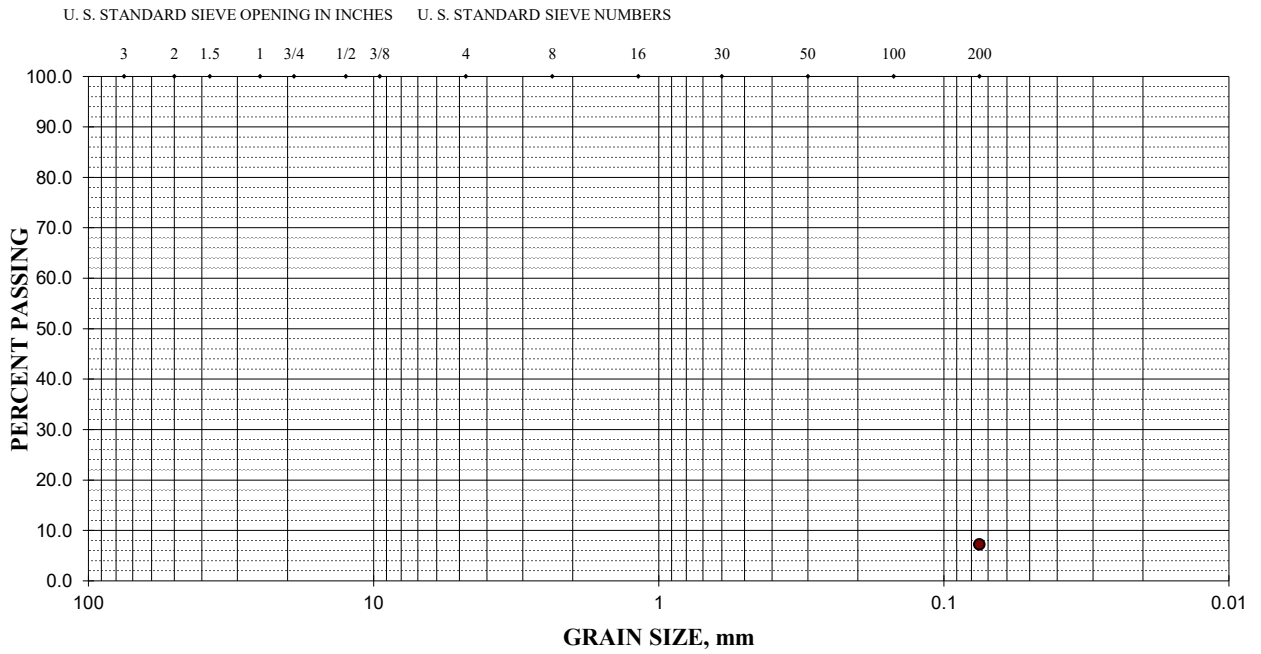
Boring #3 @ 6.0 - 6.5'

November 20, 2025

Poorly Graded Sand with Clay (SP-SC)

Cu = 1.5; Cc = 0.9

<u>Sieve size</u>	<u>% Retained</u>	<u>% Passing</u>
#200 (75- $\mu$ m)	93	7.2





**DIRECT SHEAR**

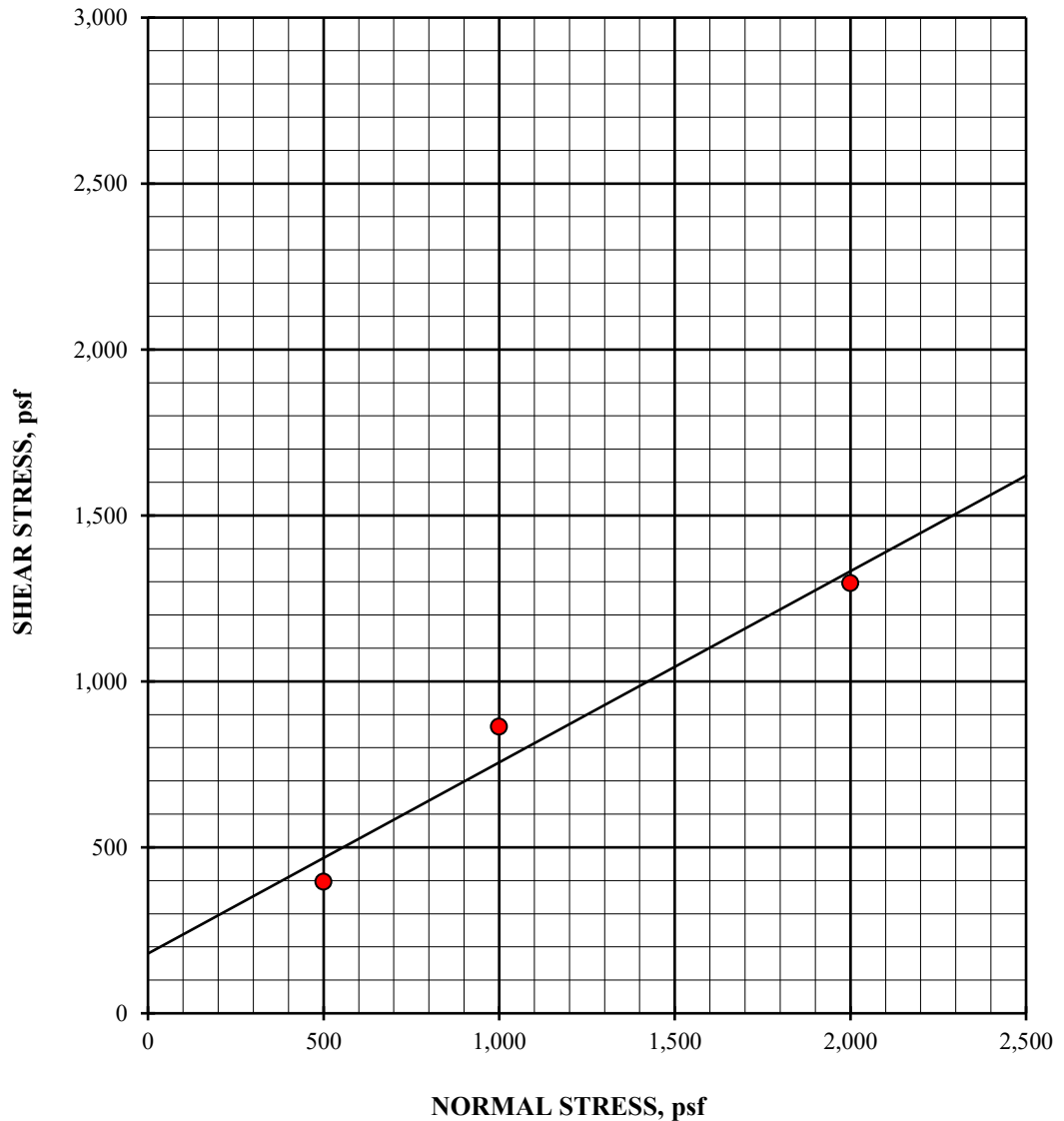
ASTM D 3080-23 (modified for consolidated, undrained conditions)

November 20, 2025

Boring #3 @ 6.0 - 6.5'  
Poorly Graded Sand with Clay (SP-SC)  
Ring sample, saturated

INITIAL DRY DENSITY: 95.6 pcf  
INITIAL MOISTURE CONTENT: 4.6 %  
PEAK SHEAR ANGLE ( $\phi$ ): 30°  
COHESION (C): 180 psf

**SHEAR vs. NORMAL STRESS**





**DIRECT SHEAR** continued

ASTM D 3080-23 (modified for consolidated, undrained conditions)

Boring #3 @ 6.0 - 6.5'

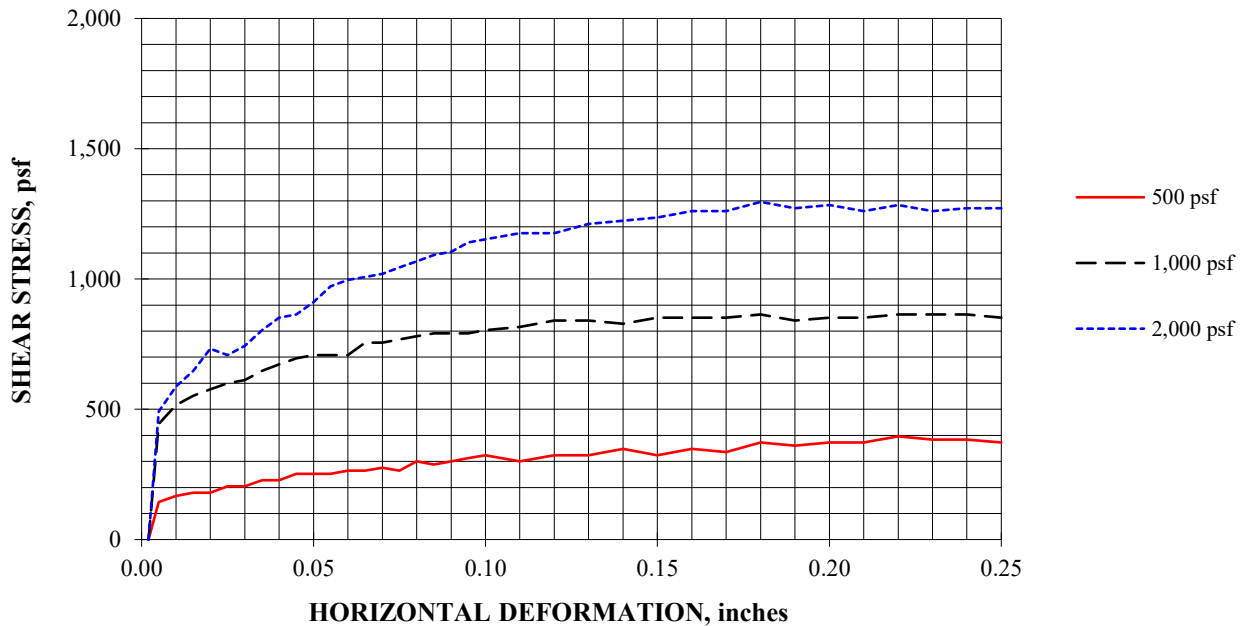
November 20, 2025

Poorly Graded Sand with Clay (SP-SC)

Ring sample, saturated

SPECIFIC GRAVITY: 2.65 (assumed)

SAMPLE NO.:	1	2	3	AVERAGE
<b>INITIAL</b>				
WATER CONTENT, %	4.6	4.6	4.6	4.6
DRY DENSITY, pcf	96.6	94.6	95.7	95.6
SATURATION, %	17.1	16.3	16.8	16.7
VOID RATIO	0.712	0.748	0.727	0.729
DIAMETER, inches	2.410	2.410	2.410	
HEIGHT, inches	1.00	1.00	1.00	
<b>AT TEST</b>				
WATER CONTENT, %	14.5	14.1	14.1	
DRY DENSITY, pcf	99.5	99.4	102.4	
SATURATION, %	57.9	56.4	60.8	
VOID RATIO	0.662	0.664	0.615	
HEIGHT, inches	0.97	0.95	0.94	



**APPENDIX C**

Figure 3a – Regional Geologic Map

Figure 3b – Regional Geologic Map Legend

Figure 4 – Historical Seismicity Map

Figure 5 – FEMA Flood Zone Map

Figure 6 – Tsunami Inundation Zone Map

Figure 7 – Radon Potential Map



Contour Interval 40 feet  
 Supplementary Contour Interval 20 feet  
 National Geodetic Vertical Datum of 1929

- Qb** **Beach and Active Dune Deposits (late Holocene)**—Unconsolidated, mostly fine- and medium-grained sand accumulated along the coastline; includes scattered cobbles.
- Qd** **Dune sands (late Holocene)**—Unconsolidated, well-sorted white to brown windblown sand. Forms active dunes behind modern beaches.
- Qa** **Alluvial flood plain and channel deposits (late Holocene)**—Active stream channel and recently active flood-plain deposits. Consist of unconsolidated, silty sand and sandy gravel with cobbles, scattered boulders with occasional lenses of silty clay.
- Qls** **Landslide deposits (Holocene to late Pleistocene)**—Includes comparatively shallow earth flow and debris slide deposits consisting of fragmented bedrock and soil mixtures, and deep rock slides of relatively intact bedrock displaced along rotational or translational slip surfaces. Most prevalent in ophiolitic serpentinite along the Oceanic Fault and in Franciscan melange.
- Qya** **Young alluvial flood-plain deposits, undivided (Holocene to late Pleistocene)**—Unconsolidated sand, silt and clay-bearing alluvium deposited on flood-plains and along valley floors. Surfaces on young deposits are undissected and lack soil development. Surfaces on older deposits are slightly dissected
- Qpe<sub>1-2</sub>** **Paralic estuarine deposits (late Holocene)** – Unconsolidated estuarine deposits composed of fine-grained sand and clay. Divided into:
  - Qpe<sub>1</sub>** **Salt marsh deposits** - Unconsolidated sand and clay underlying salt marshes at mouth of Chorro Creek and Los Osos Creek.
  - Qpe<sub>2</sub>** **Tidal flat deposits** Unconsolidated sand and clay underlying tidal flats of Morro Bay
- Qe** **Eolian Deposits (Holocene)** – Unconsolidated, well-sorted white to brown windblown sand. Forms active sand dunes along west side of Morro Bay.

**Tpm**

**Miguelito Member**—Brown to buff interbedded siltstone and claystone, moderately resistant, well-bedded, beds generally 2 to 4 inches thick. Locally includes beds and lenses of siliceous and dolomitic siltstone, opaline shale, porcelaneous shale, thin-bedded chert, diatomaceous shale, diatomite, friable and locally bituminous sandstone and locally conglomeratic or tuffaceous near base. (Hall and others, 1979).

**Tpe**

**Edna Member**—Poorly to moderately well indurated, brown to gray, fine- to medium-grained arkosic sandstone. Locally interbedded with yellow claystone. Contains 35% to 80% quartz, 5% to 15% feldspar, up to 40% silt-sized particles (Hall, 1979).

**Kfm**

embedded in a penetratively sheared matrix of argillite and crushed metasandstone. Penetrative deformation of the matrix postdates metamorphism of enclosed rock masses. Individual rock masses range from less than a meter to kilometers in scale and include altered mafic volcanic rocks (greenstone), chert, serpentinite, high-grade blueschist, graywacke, and conglomerate. Greenstone, chert, and serpentinite blocks are probably derived from the Coast Range Ophiolite and were emplaced and interleaved in the matrix during subduction. Small pods mapped locally are designated with abbreviated labels as follows:

- mv** – metavolcanic rock
- sp** – serpentinite
- ch** – chert
- bs** – blueschist
- gw** – graywacke

**Kfs**

Larger slabs and blocks enclosed in mélange consist of the following:

**Sandstone of Cambria (Late Cretaceous)**—Light gray, fine- to coarse-grained, medium-bedded arkose and arkosic wacke interbedded with brown to black micaceous siltstone. Unit is more coherent and less sheared and fractured than other Franciscan units. Contains Late Cretaceous foraminifera and pollen (Graymer and others, 2014)

**KJfg**

**Graywacke and Metagraywacke (Cretaceous and Jurassic?)**—Brown to greenish gray, fine- to medium-grained, massive- to thin-bedded graywacke sandstone interbedded with shale and siltstone. Composed of 60% to 70% quartz; 20% to 30% feldspar, 5% biotite and 10% shale fragments embedded in a muddy matrix (Hall and Prior, 1975). Rocks are generally moderately to intensely sheared, often obscuring original stratification. This unit lacks exotic blocks characteristic of mélange. Locally includes conglomerate beds with clasts of chert, sandstone and metavolcanic rock.

**KJfc**

**Chert (Cretaceous and Jurassic)**—Red and green radiolarian chert associated with greenstone. Commonly veined and recrystallized, locally bleached to yellow or white. Deposited in deep oceanic setting on greenstone prior to influx of sandstone and shale. Locally interbedded with thin layers of argillite.

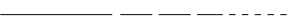



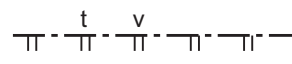


**KJfv**

**Metavolcanic rocks (greenstone) (Cretaceous? and Jurassic)**—Primarily metamorphosed basalt and diabase. Includes massive to pillowed basalt flows, breccia and tuff. Commonly deeply weathered and extensively sheared, with intermingled pods of chert. Considered to be tectonic blocks incorporated into

**Jsp**

**Serpentinized Ultramafic Rocks (Jurassic)**—Pervasively sheared serpentinite occurring as lenticular fault-bounded bodies in Franciscan mélange. Considered to be dismembered bodies of the Coast Range Ophiolite tectonically interleaved with mélange during subduction and entrained along faults. Locally altered to:

**SYMBOL EXPLANATION**

-  Contact between map units - Solid where accurately located, dashed where approximately located, dotted where concealed.
-  Fault - Solid where accurately located, dashed where approximately located, dotted where concealed.
-  Synclinal axis - Solid where accurately located.
-  Anticlinal axis - Solid where accurately located.
-  Linear features indicative of faulting along the Los Osos Fault mapped by Treiman (1989) and shown on the Alquist-Priolo Earthquake Fault Zone Map, San Luis Obispo Quadrangle.  
t = tonal contrast; v = vegetative lineament.
-  Aerial photo lineaments along the Los Osos Fault (Lettis and Hall, 1994).  
t = tonal contrast; v = vegetative lineament; ld = linear drainage.
-  Strike and dip of bedding.



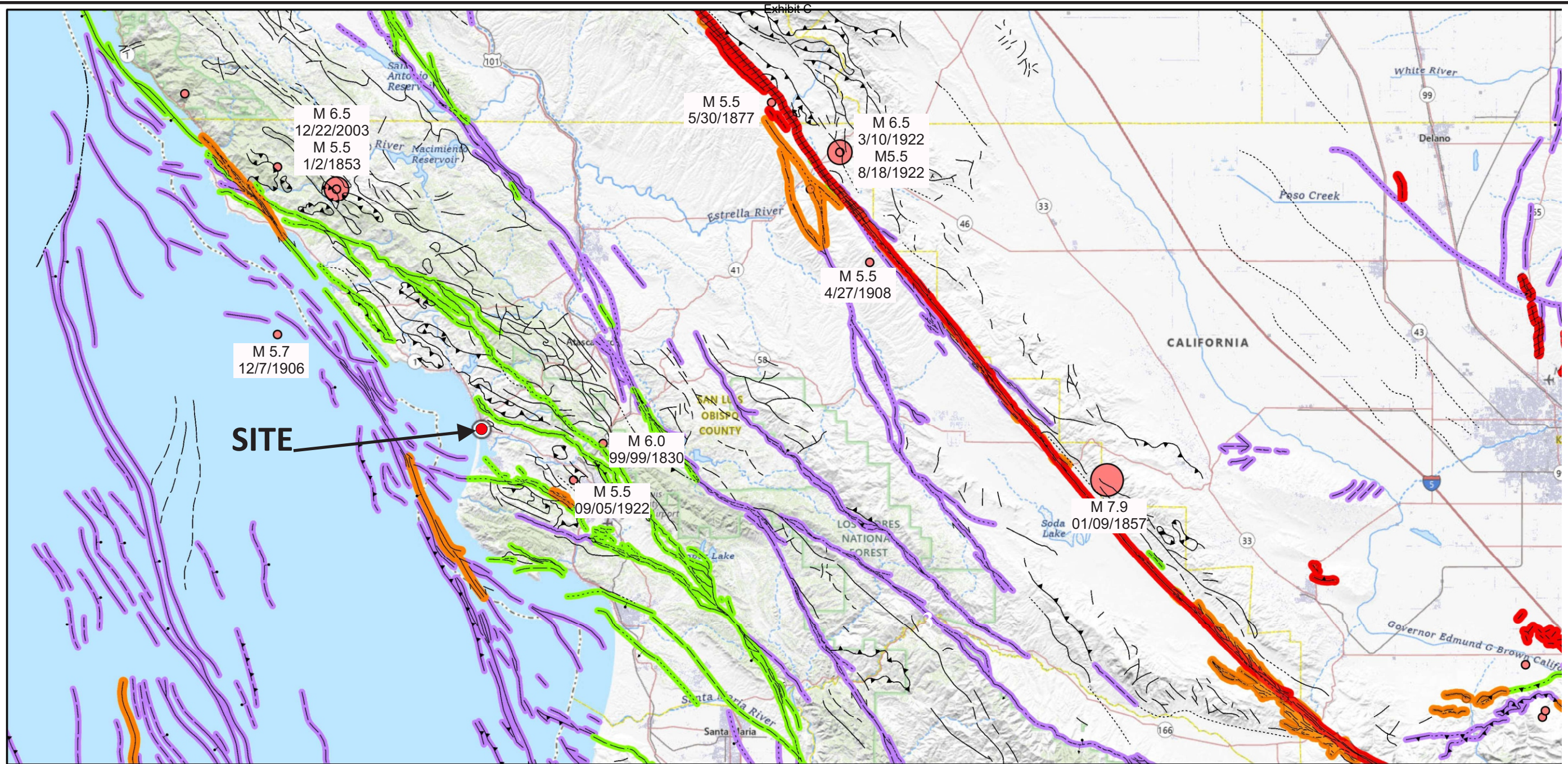
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 www.earthsystems.com - email: esp@earthsystems.com  
 (805) 544-3276

**REGIONAL GEOLOGIC MAP LEGEND**

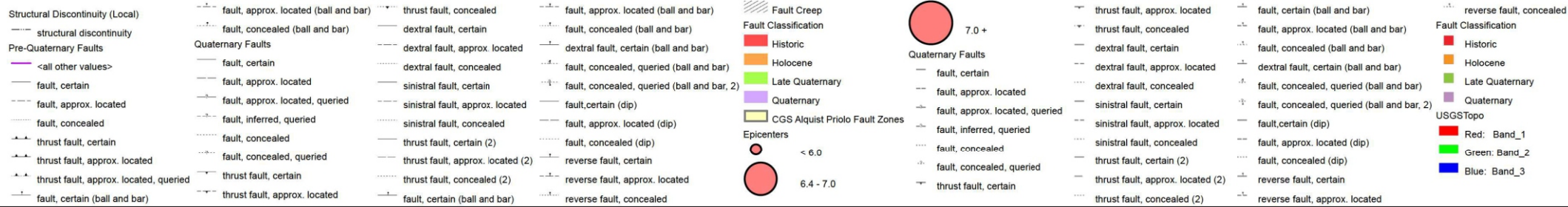
Front Street Hotel  
 1180 Front Street  
 Morro Bay, California

**Figure 3b**

Date  
 December 2025  
 Project No.  
 307453-001



11/20/2025



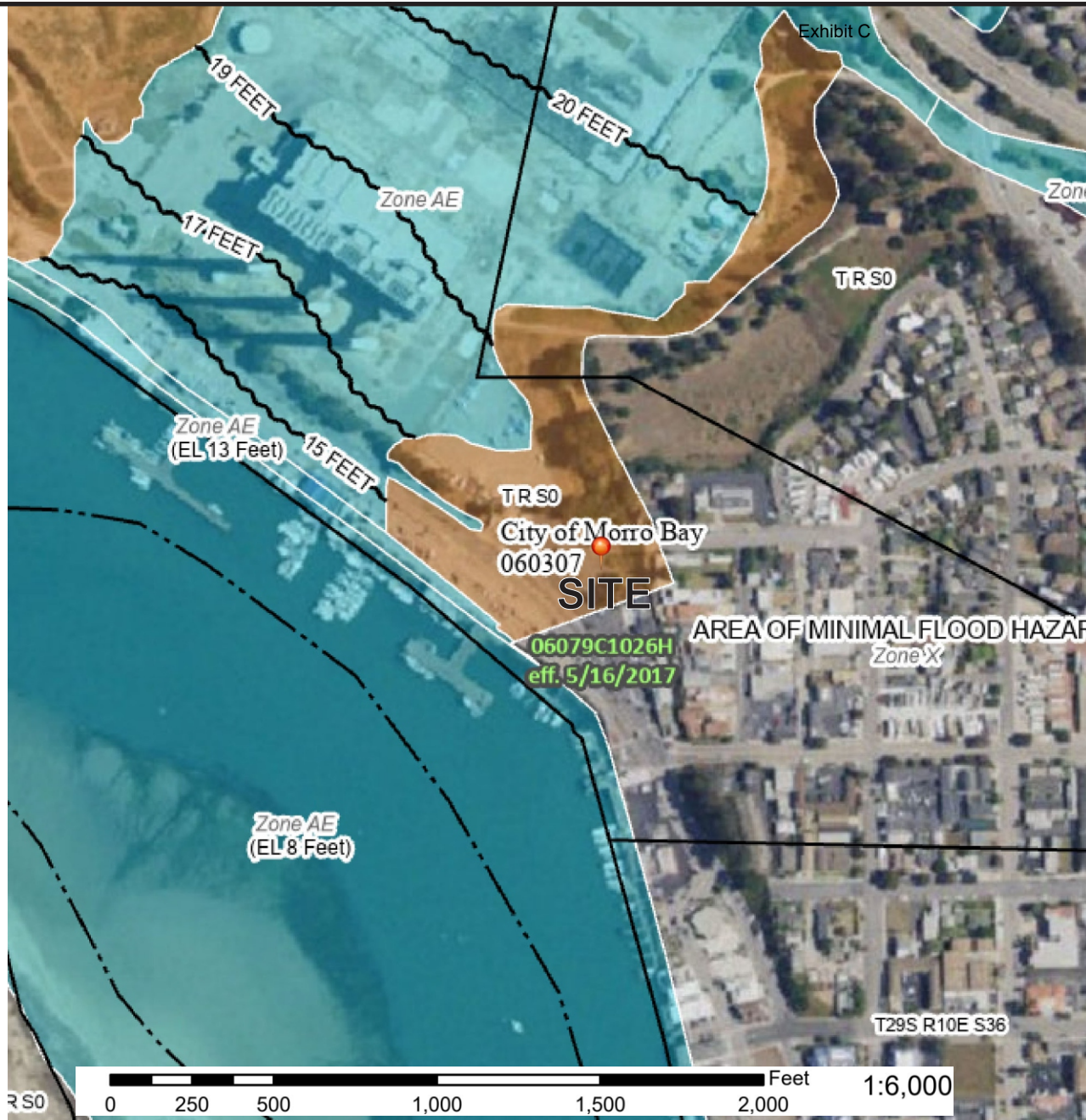
USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data;



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**HISTORICAL SEISMICITY MAP**  
 Front Street Hotel  
 1180 Front Street  
 Morro Bay, California

**Figure 4**  
 Date  
 December 2025  
 Project No.  
 307453-001



### Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D

OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary

MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.



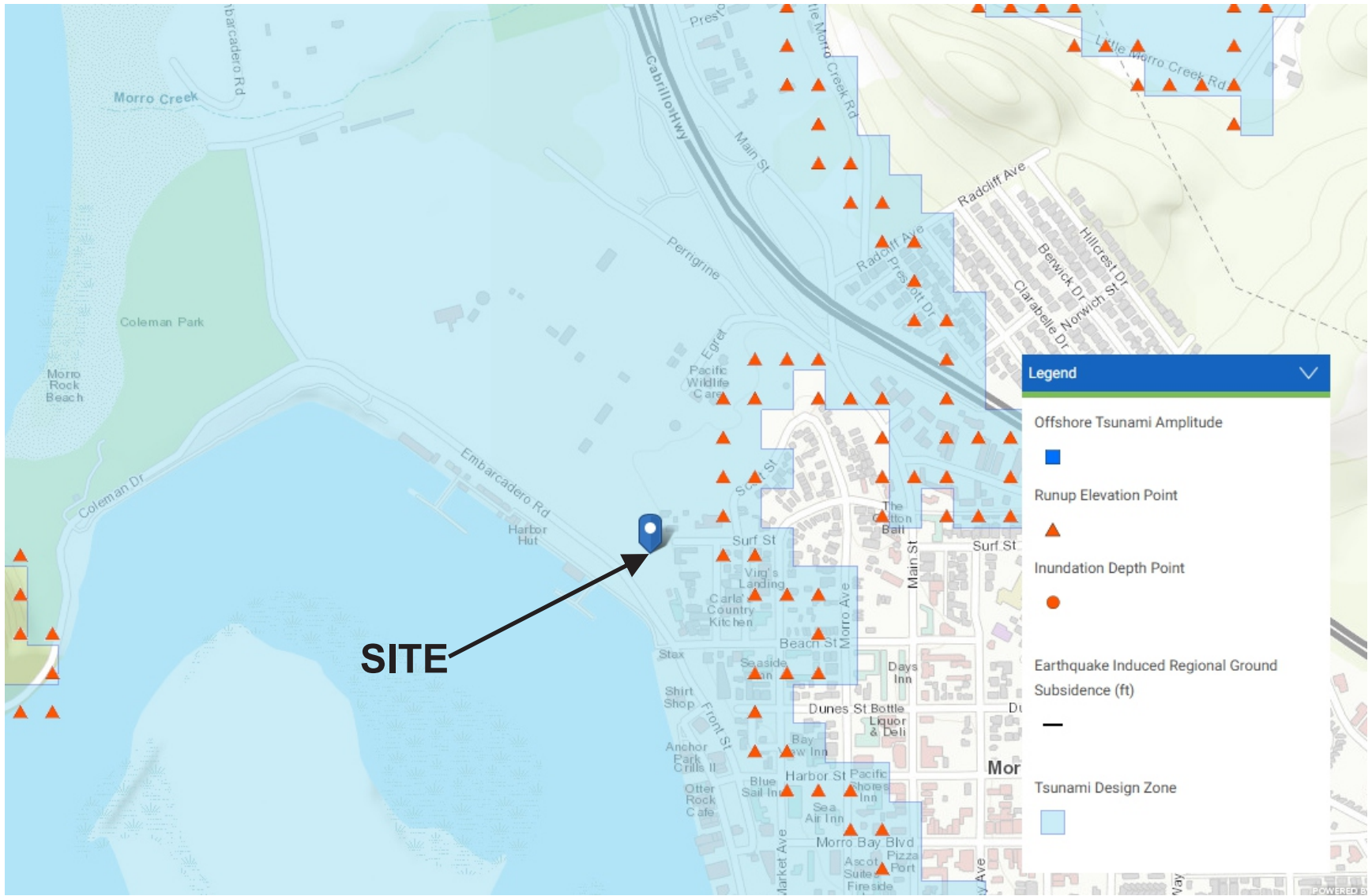
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**FEMA FLOOD ZONE MAP**

Front Street Hotel  
 1180 Front Street  
 Morro Bay, California

**FIGURE 5**

Date  
 December 2025  
 Project No.  
 307453-001



Source: USGS National Map (<https://apps.nationalmap.gov/viewer/> Not to Scale)



**EARTH SYSTEMS PACIFIC**

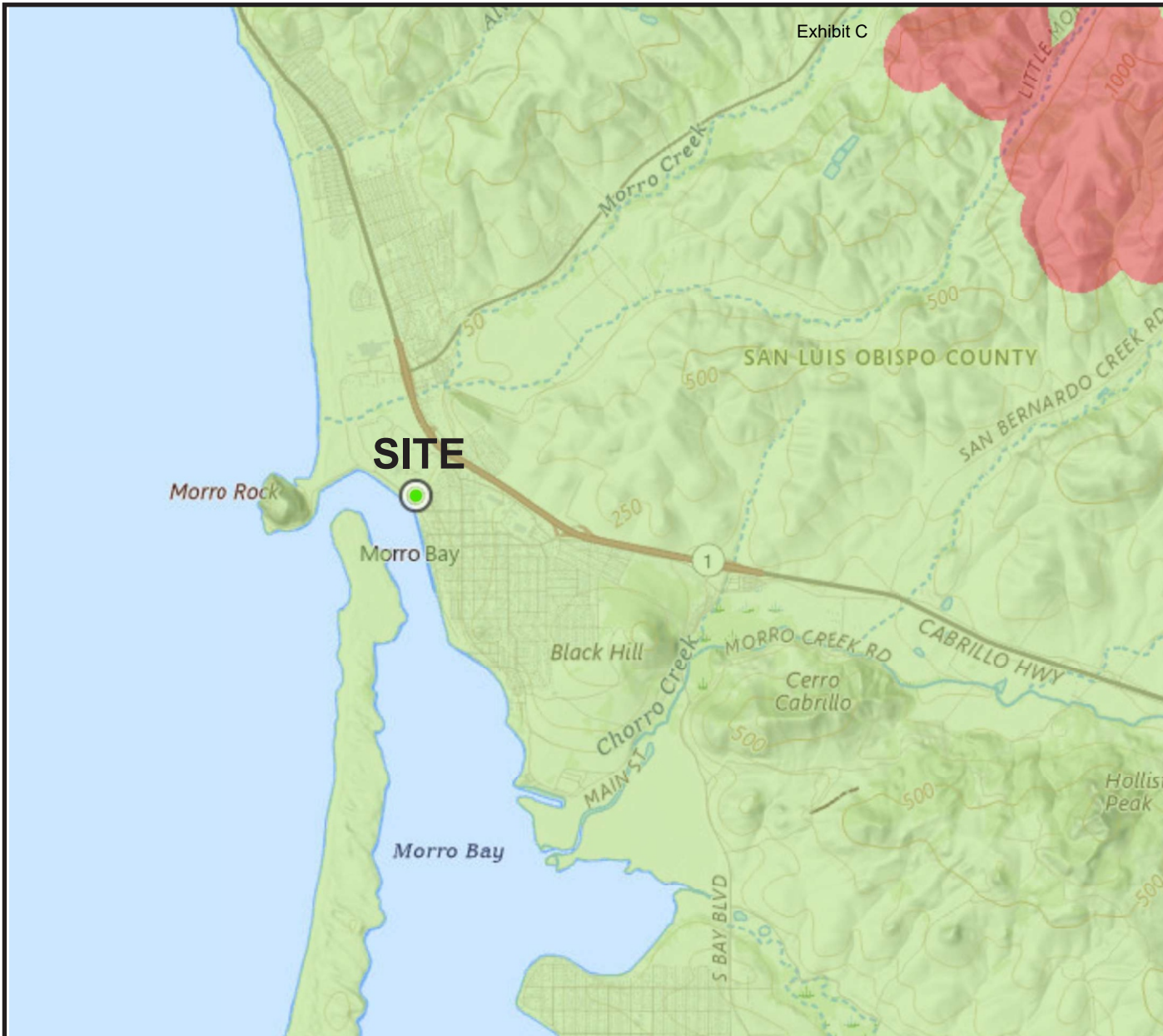
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**TSUNAMI INNUNDATION ZONE MAP**

Front Street Hotel  
 1180 Front Street  
 Morro Bay, California

**FIGURE 6**

**Date**  
 December 2025  
**Project No.**  
 307453-001



### Legend

CGS Mineral Hazards: Indoor Radon Potential Zones

- Very High
- High
- Moderate
- Low
- Unknown

Site Coordinates: 35.3700, -120.8546, base map from California Geological Survey, after Churchill, 2008, not to scale.



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**RADON POTENTIAL MAP**  
 Front Street Hotel  
 1180 Front Street  
 Morro Bay, California

**FIGURE 7**  
Date  
 December 2025  
Project No.  
 307453-001

**APPENDIX D**

Site Specific Ground Motion Analysis – Tables D-1 through D-4

**Table D-1  
Fault Parameters**

Fault Section Name	Distance		Upper Seis. Depth	Lower Seis. Depth	Avg Dip Angle	Avg Dip Direction	Avg Rake	Trace Length	Fault Type	Mean Mag	Mean Return Interval	Slip Rate
	(miles)	(km)	(km)	(km)	(deg.)	(deg.)	(deg.)	(km)			(years)	(mm/yr)
Los Osos 2011 CFM FM3.1, 3.2	4.5	7.2	0.0	12.0	45	208	90	58	B	6.9		0.5
Oceanic-West Huasna FM3.1, 3.2	6.1	9.8	0.0	7.0	58	49	na	122	B'	7.1		
Hosgri FM3.1, 3.2	8.2	13.2	0.0	6.8	80	59	180	171	B	7.3		2.5
Shoreline FM3.1, 3.2	9.2	14.8	0.0	12.0	90	na	na	23	B'	6.5		
San Luis Bay 2011 CFM FM3.2	12.4	19.9	0.0	10.0	90	na	na	16	B'	6.3		
San Luis Range - Pecho FM3.1, 3.2	12.5	20.1	0.0	12.0	90	na	na	26	B'	6.6		
San Luis Range 2011 CFM, FM3.1	13.0	21.0	0.0	12.0	52	na	na	79	B'	7.2		
San Luis Range (So Margin) FM3.2	13.5	21.8	0.0	12.0	45	37	90	115	B	7.1		0.2
Rinconada 2011 CFM FM3.1, 3.2	14.8	23.8	0.0	8.5	82	233	180	123	B	7.5		1
San Luis Range - Oceano 2011 CFM, FM3.1	20.4	32.9	0.0	12.0	45	na	na	21	B'	6.6		
East Huasna 2011 CFM FM3.1, 3.2	21.0	33.8	0.0	15.0	90	na	na	74	B'	7.2		
La Panza FM3.1, 3.2	22.0	35.4	0.0	13.9	51	45	na	72	B'	7.3		
Casmalia 2011 CFM	27.2	43.8	0.0	12.0	75	na	na	48	B'	6.9		
South Cuyama FM3.1, 3.2	29.8	47.9	0.0	13.9	33	210	na	83	B'	7.5		
Lions Head 2011 CFM FM3.1, 3.2	34.0	54.8	0.0	12.0	75	29	90	65	B	6.7		0.02
Hosgri (Extension) FM3.1, 3.2	36.1	58.1	0.0	7.5	80	79	na	29	B'	6.4		
San Juan FM3.1, 3.2	36.3	58.5	0.0	13.0	90	243	180	82	B	7.1		1
San Andreas (Cholame) rev FM3.1, 3.2	40.8	65.7	0.0	12.0	90	51	180	63	A	6.8	89	3.5
San Andreas (Parkfield) FM3.1, 3.2	41.7	67.1	0.0	10.2	90	50	180	36	A	6.4	13	20
San Andreas (Creeping Section) FM3.1, 3.2	46.7	75.1	0.0	12.0	90	227	180	121	A	6.8	89	9
Santa Ynez River FM3.1, 3.2	50.5	81.2	0.0	12.0	70	na	na	73	B'	7.1		
Los Alamos 2011 CFM FM3.1, 3.2	51.4	82.8	0.0	12.0	30	na	na	27	B'	6.9		
Morales (West) FM3.1, 3.2	54.6	87.8	0.0	8.6	32	49	na	28	B'	6.8		
San Andreas (Carrizo) rev FM3.1, 3.2	55.8	89.8	0.0	15.1	90	224	180	59	A	6.8	89	3.5
Lost Hills FM3.1, 3.2	60.3	97.0	4.2	12.0	29	233	na	33	B'	6.8		
Reliz 2011 CFM FM3.1, 3.2	62.0	99.8	0.0	10.9	58	240	na	127	B'	7.4		
Santa Ynez (West) FM3.1, 3.2	62.8	101.1	0.0	9.2	70	182	0	80	B	6.9		2
Great Valley 14 (Kettleman Hills) FM3.1, 3.2	66.1	106.4	8.1	22.5	22	215	90	24	B	7.1		1.5
Los Alamos extension FM3.1, 3.2	66.5	107.0	0.0	12.0	30	na	na	22	B'	6.8		
Great Valley 13 (Coalinga) FM3.1, 3.2	68.7	110.6	9.1	15.2	15	226	90	32	B	7.0		1.5
Morales (East) FM3.1, 3.2	71.8	115.6	0.0	8.6	32	14	na	18	B'	6.6		
San Gregorio (South) 2011 CFM FM3.1, 3.2	72.1	116.1	0.0	11.6	75	66	180	90	B'	7.2		
Great Valley 12 FM3.1, 3.2	72.7	117.0	7.0	9.6	15	243	90	17	B	6.3		1.5
Ozena FM3.1, 3.2	72.9	117.4	0.0	13.9	33	na	na	41	B'	7.2		
Calaveras (So) - Paicines extension FM3.1, 3.2	73.2	117.8	0.0	13.0	77	na	na	60	B'	7.0		
Red Mountain FM3.1, 3.2	74.8	120.4	0.0	14.1	56	2	90	101	B	7.4		2
Monterey Bay-Tularcitos FM3.1, 3.2	77.2	124.3	0.0	14.0	90	49	150	86	B	7.3		0.5
Great Valley 11 FM3.1, 3.2	80.9	130.3	7.0	9.6	15	221	90	24	B	6.5		1.5
Mission Ridge-Arroyo Parida-Santa Ana FM3.1, 3.2	84.6	136.1	0.0	7.6	70	176	90	69	B	6.8		0.4
Big Pine (West) FM3.1, 3.2	84.7	136.3	0.0	11.0	50	2	na	18	B'	6.5		

Reference: USGS OFR 2013-1165 (CGS SP 228)

Based on Site Coordinates of 35.37 Latitude, -120.8546 Longitude

Mean Magnitude for Type A Faults based on 0.1 weight for unsegmented section, 0.9 weight for segmented model (weighted by probability of each scenario with section listed as given on Table 3 of Appendix G in OFR 2008-1437). Mean magnitude is average of Ellworths-B and Hanks & Bakun moment area relationship.

Site Coordinates: 35.3700 N 120.8546 W

**Table D-2**  
**Historical Earthquakes in Vicinity of Project Site, M >= 5.0**

Day	Year	Epicenter		Distance from Site (mi)	Magnitude M <sub>w</sub>
		Latitude (Degrees)	Longitude		
9/5	1922	35.30	120.70	10.0	5.5
99/99	1830	35.35	120.65	11.6	6.0
12/7	1906	35.50	121.20	21.4	5.7
2/1	1853	35.70	121.10	26.6	5.5
12/22	2003	35.70	121.10	26.6	6.6
11/22	1952	35.76	121.27	35.6	6.2
5/30	1877	35.70	120.30	38.6	5.5
4/27	1908	35.60	120.20	40.1	5.5
9/28	2004	35.82	120.37	41.3	6.0
12/28	1939	35.97	120.92	41.6	5.2
2/14	1987	35.96	120.70	41.7	5.2
3/10	1922	35.75	120.25	42.9	6.3
8/18	1922	35.75	120.25	42.9	5.7
6/8	1934	35.79	120.29	43.0	6.0
11/2	1955	36.00	120.92	43.7	5.2
2/26	1932	36.00	121.00	44.3	5.0
6/28	1966	35.81	120.27	44.7	6.0
9/29	2004	35.95	120.50	44.7	5.1
9/17	1991	35.81	121.45	45.2	5.0
11/16	1956	35.95	120.47	45.5	5.0
9/13	1975	36.00	120.55	46.7	5.1
7/28	1902	34.80	120.40	47.0	5.8
3/3	1901	36.00	120.50	47.8	6.4
2/2	1881	36.05	120.55	50.0	6.0
5/6	1881	36.05	120.55	50.0	5.5
1/9	1857	36.10	120.65	51.7	6.1
11/4	*1927	34.60	120.90	53.2	7.1
1/14	1855	36.15	120.70	54.5	5.5
7/31	1902	34.70	120.30	55.9	5.8
1/9	1857	36.20	120.80	57.4	7.9
4/12	1885	36.20	120.80	57.4	6.5
2/5	1947	36.23	120.65	60.5	5.0
9/2	1853	36.25	120.80	60.8	6.3
11/5	1969	34.65	121.50	61.7	5.5
1/9	1857	36.29	120.85	63.5	5.6
7/25	1983	36.22	120.41	63.8	5.2
6/11	1983	36.25	120.46	64.7	5.4
1/12	*1915	34.60	120.20	64.8	5.7
10/21	2012	36.31	120.86	65.0	5.3

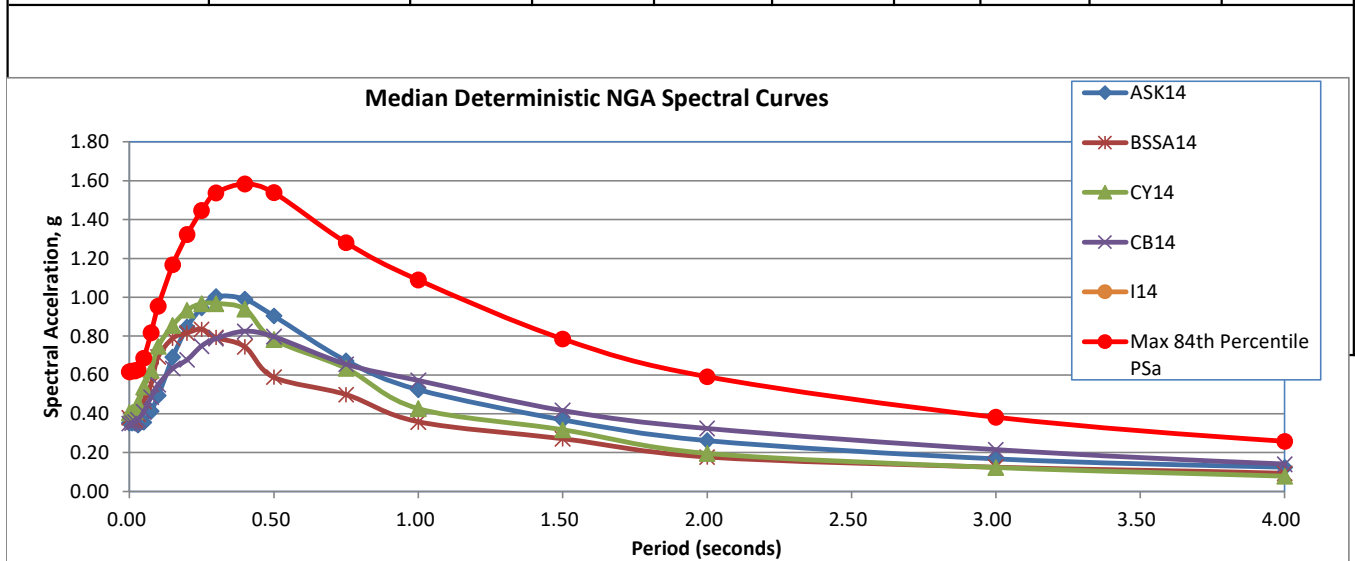
From full earthquake catalog in USGS OFR 2008-1437h as updated with current events through 2024 (ANSS 2025). For events with an asterisk, alternate solutions are given in the OFR. Ordered By Closest Event. Maximum 40 Closest Events

**Table D-3 - Deterministic Spectral Response Values**  
**Deterministic NGA Response Spectra for Largest Median Earthquake Ground Motion**

Average of NGA: Abrahamson - Silva - Kamai (2014), Boore - Stewart - Seyhan - Atkinson (2013),  
Campbell-Bozorgnia (2013), Chiou - Youngs (2014), and Idriss (2013)

Mean Spectra Response from Attenuation Relationships

Input Variables		ASK14	BSSA14	CB14	CY14	I14	Average				
		Median		Median	Median	Median	Median	Mean		Max 84th Percentile	Max Rotated Determ. PSa
		Period (sec)	PSa (g)	PSa (g)	PSa (g)	PSa (g)	PSa (g)	Period (sec)	PSa (g)	PSa (g)	PSa (g)
<b>Weight:</b>		<b>0.25</b>	<b>0.25</b>	<b>0.25</b>	<b>0.25</b>	<b>0.00</b>					
<b>M</b>		<b>0.00</b>	0.35	0.37	0.35	0.40	-	<b>0.00</b>	0.370	0.616	<b>0.678</b>
	7.15	<b>0.01</b>	0.35	0.38	0.35	0.40	-	<b>0.01</b>	0.372	0.620	<b>0.682</b>
<b>R<sub>RUP</sub></b>		<b>0.02</b>	0.35	0.37	0.36	0.41	-	<b>0.02</b>	0.371	0.621	<b>0.683</b>
	7.20	<b>0.03</b>	0.34	0.37	0.37	0.41	-	<b>0.03</b>	0.373	0.626	<b>0.689</b>
<b>R<sub>JB</sub></b>		<b>0.05</b>	0.36	0.40	0.41	0.45	-	<b>0.05</b>	0.404	0.685	<b>0.754</b>
	7.20	<b>0.075</b>	0.41	0.47	0.49	0.54	-	<b>0.075</b>	0.475	0.817	<b>0.899</b>
<b>V<sub>S30</sub></b>		<b>0.10</b>	0.49	0.55	0.55	0.62	-	<b>0.10</b>	0.555	0.954	<b>1.049</b>
	260	<b>0.15</b>	0.69	0.69	0.63	0.75	-	<b>0.15</b>	0.691	1.167	<b>1.284</b>
<b>F<sub>RV</sub></b>		<b>0.20</b>	0.85	0.79	0.68	0.86	-	<b>0.20</b>	0.792	1.322	<b>1.454</b>
	0	<b>0.25</b>	0.95	0.82	0.75	0.93	-	<b>0.25</b>	0.861	1.446	<b>1.659</b>
<b>F<sub>NM</sub></b>		<b>0.30</b>	1.00	0.83	0.79	0.97	-	<b>0.30</b>	0.898	1.537	<b>1.778</b>
	0	<b>0.40</b>	0.99	0.79	0.82	0.97	-	<b>0.40</b>	0.893	1.583	<b>1.864</b>
<b>W</b>		<b>0.50</b>	0.90	0.74	0.80	0.94	-	<b>0.50</b>	0.846	1.538	<b>1.843</b>
	17.00	<b>0.75</b>	0.67	0.59	0.65	0.78	-	<b>0.75</b>	0.674	1.281	<b>1.600</b>
<b>Z<sub>TOR</sub></b>		<b>1.00</b>	0.52	0.50	0.57	0.63	-	<b>1.00</b>	0.557	1.088	<b>1.415</b>
	0.00	<b>1.50</b>	0.37	0.36	0.42	0.43	-	<b>1.50</b>	0.392	0.785	<b>1.040</b>
<b>Z<sub>BOT</sub></b>		<b>2.00</b>	0.26	0.27	0.32	0.32	-	<b>2.00</b>	0.294	0.590	<b>0.797</b>
	12.00	<b>3.00</b>	0.17	0.18	0.21	0.20	-	<b>3.00</b>	0.189	0.382	<b>0.535</b>
<b>dip</b>		<b>4.00</b>	0.12	0.13	0.14	0.12	-	<b>4.00</b>	0.128	0.258	<b>0.374</b>
	45	<b>5.00</b>	0.09	0.09	0.10	0.08	-	<b>5.00</b>	0.091	0.182	<b>0.273</b>
		<b>7.50</b>	0.05	0.05	0.04	0.03	-	<b>7.50</b>	0.043	0.085	<b>0.127</b>
		<b>10.00</b>	0.03	0.03	0.02	0.02	-	<b>10.00</b>	0.024	0.046	<b>0.070</b>



**Table D-4 - Site Specific Spectral Response Values  
Probabilistic and Deterministic Response Spectra for MCE compared to Code Spectra  
for 5% Viscous Damping Ratio**

Natural Period T (seconds)	GeoMean Probab. 2% in 50 year MCE Spectrum	Rotated Probab. 2% in 50 year MCEr Spectrum	Rotated 84th Percentile Determ. MCE Spectrum	Determ. Lower Limit MCE Spectrum	Determ. MCE Spectrum	Site Specific MCE <sub>R</sub> Ground Response (SaM)	Site Specific MCE Spectrum Comparator	2022 CBC MCE Spectrum	Site Specific Design Spectrum (Sa)	2022 CBC Design Spectrum
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2475-year (ASCE 21.2.1)	2475-year (ASCE 21.2.1.1)	(ASCE 21.2.2)	(3) * 1.00=Scaling (ASCE 21.2.2)	Max (3),(4) (ASCE 21.2.2)	Min (2),(5) (ASCE 21.2.3)	Max (6),1.5*(8) (ASCE 21.2.3)	(ASCE 21.3)	(ASCE 21.3)	2/3*(7)	
0.00	0.557	0.549	0.678	0.678	0.678	0.549	0.549	0.428	0.366	0.286
0.05	0.759	0.748	0.754	0.754	0.754	0.748	0.748	0.621	0.499	0.414
0.10	0.961	0.947	1.049	1.049	1.049	0.947	0.947	0.814	0.631	0.542
0.15	1.159	1.142	1.284	1.284	1.284	1.142	1.142	1.006	0.762	0.671
0.20	1.300	1.281	1.454	1.454	1.454	1.281	1.281	1.071	0.854	0.714
0.30	1.447	1.502	1.778	1.778	1.778	1.502	1.502	1.071	1.001	0.714
0.40	1.399	1.479	1.864	1.864	1.864	1.479	1.479	1.071	0.986	0.714
0.50	1.361	1.467	1.843	1.843	1.843	1.467	1.467	1.071	0.978	0.714
0.75	1.083	1.221	1.600	1.600	1.600	1.221	1.221	1.071	0.814	0.714
1.00	0.886	1.043	1.415	1.415	1.415	1.043	1.043	0.893	0.695	0.595
1.50	0.650	0.780	1.040	1.040	1.040	0.780	0.780	0.595	0.520	0.397
2.00	0.483	0.590	0.797	0.797	0.797	0.590	0.590	0.446	0.393	0.298
3.00	0.316	0.400	0.535	0.535	0.535	0.400	0.400	0.298	0.267	0.198
4.00	0.228	0.299	0.374	0.374	0.374	0.299	0.299	0.223	0.199	0.149
5.00	0.174	0.236	0.273	0.273	0.273	0.236	0.236	0.179	0.157	0.119
8.00	0.100	0.135	0.151	0.151	0.151	0.135	0.135	0.112	0.090	0.074
10.00	0.069	0.094	0.070	0.070	0.070	0.070	0.071	0.071	0.048	0.048

C<sub>RS</sub>: 0.896  
 C<sub>RI</sub>: 0.905  
 Site Specific To: 0.178 = 0.2\*S<sub>D1</sub>/S<sub>DS</sub>  
 Site Specific Ts: 0.888 = S<sub>D1</sub>/S<sub>DS</sub>

The value of Fa used in Column (3) is defined within ASCE 21.2.2 Supplement 1. This Fa value only applies within Column (3).

Probabilistic spectrum from 2018 USGS Ground Motion Mapping Program adjusted for site conditions and scaled to represent maximum response in a horizontal plane, in accordance with ASCE 7-16 Section 21.2

Risk Coefficients have been applied to Column (2); If Method 1 was utilized the Risk Coefficients, CRS and CR1 are presented above, if Method 2 was utilized the Risk Coefficients were obtained from the USGS Risk Targeted Ground Motion Calculator (<https://earthquake.usgs.gov/designmaps/rtgm>).

Reference: ASCE 7-16, Chapters 21.2, 21.3, 21.4, 21.5, 11.4, and 11.8

Calculation Utilized ASCE7-16, Section 21.2.1.1 - Method 1

Short-Period Seismic Design Category:	1-Second Period Seismic Design Category:
D	D

Vertical Coefficient (C <sub>v</sub> )
1.28

1 g = 980.6 cm/sec<sup>2</sup> = 32.2 ft/sec<sup>2</sup>  
 PSV (ft/sec) = 32.2(S<sub>a</sub>)T/(2p)

Deterministic Fault Parameters			
Los Osos 2011 CFM FM3.1, 3.	R <sub>JB</sub> (km)		7.2
Magnitude	7.15	R <sub>RUP</sub> (km)	7.2
Distance (km)	7.2	Z <sub>TOR</sub> (km)	0.0
Width (km)	17	Z <sub>BOT</sub> (km)	12.0
Dip (Deg.)	45	V <sub>S30</sub> (m/s)	260

Site Coefficients	
F <sub>PGA</sub>	1.17
F <sub>a</sub>	1.12
F <sub>v</sub>	2.50

Mapped MCE Acceleration Values	
PGA	0.426 g
S <sub>s</sub>	0.959 g
S <sub>1</sub>	0.357 g

Seismic Site Class	D
Risk Category	II

Site-Specific Design Acceleration Values	
PGA <sub>M</sub>	0.557 g
S <sub>DS</sub>	0.901 g
S <sub>D1</sub>	0.800 g

Site-Specific MCE <sub>R</sub> , 5% damped, Spectral Response Acceleration Parameter	
S <sub>MS</sub>	1.351 g
S <sub>M1</sub>	1.200 g

Key: Probab. = Probabilistic, Determ. = Deterministic, MCE = Maximum Considered Earthquake

**APPENDIX E**

Liquefaction Settlement Calculations – Boring 2

Exhibit C

Project: **Front Street Hotel**  
 Job No: **307453-001**  
 Date: **11/26/2025**  
 Boring: **B2**

Methods: **Liquefaction Analysis using Idriss & Boulanger Method (2004)**

Semi-empirical Procedures for Evaluating Liquefaction Potential During Earthquakes, 11th SDEE and 3rd ICEGE, Univ. of California, Berkeley, 2004.  
 Settlement Analysis from Tokimatsu and Seed (1987), JGEE, Vol 113, No. 8, ASCE  
 Modified by Pradel, JGEE, Vol 124, No. 4, ASCE

**EARTHQUAKE INFORMATION:**

Magnitude: **6.87** 7.5  
 PGA, g: **0.50** 0.42  
 MSF: 1.18  
 GWT: **10.0** feet  
 Calc GWT **5.0** feet  
 Remediate to: **0.0** feet

**SPT N VALUE CORRECTIONS:**

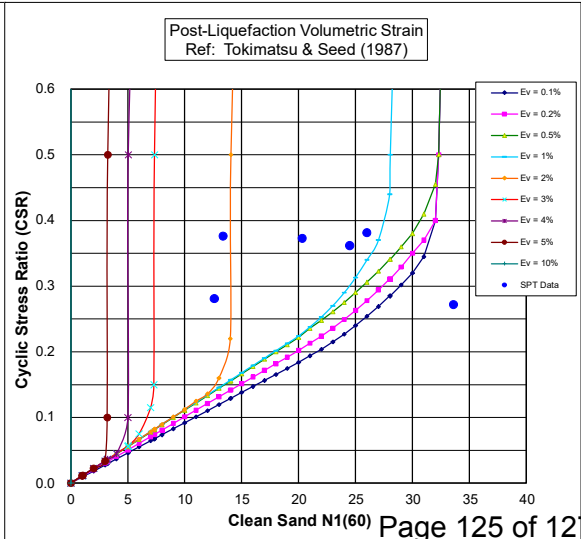
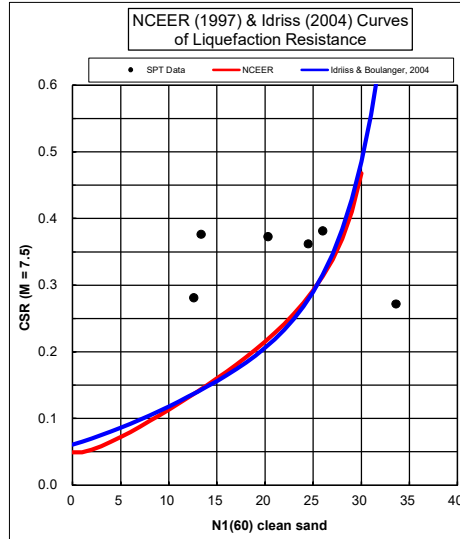
Energy Correction to N60 (C<sub>E</sub>): **1.48**  
 Drive Rod Corr. (C<sub>R</sub>): **1** Default  
 Rod Length above ground (feet): **3.00**  
 Borehole Dia. Corr. (C<sub>B</sub>): **1.05**  
 Sampler Liner Correction for SPT?: **0** No  
 Cal Mod/ SPT Ratio: **0.63**

<b>Total (ft)</b>	<b>Total (in.)</b>
<b>Liquefied</b>	<b>Induced</b>
<b>Thickness</b>	<b>Subsidence</b>
<b>26</b>	<b>5.2</b>

Required SF: **1.20**  
 Minimum SF: **0.38**

N<sub>c</sub> = 9.9

Base Depth (feet)	Cal Mod N	Liquef. Suscept. (0 or 1)	Total Unit Wt. (pcf)	Fines Content (%)	Depth of SPT (feet)	Rod Length (feet)	Tot. Stress at SPT σ <sub>v</sub> (tsf)	Eff. Stress at SPT σ' <sub>v</sub> (tsf)	rd	C <sub>N</sub>	C <sub>R</sub>	C <sub>S</sub>	N <sub>1(60)</sub>	Rel. Dens. FC Dr (%)	FC Adj. ΔN <sub>1(60)</sub>	Equiv. Sand N <sub>1(60)CS</sub>	K <sub>σ</sub>	CRR <sub>7.5</sub>	CSR*	Liquefac. Safety Factor	Volumetric Strain (%)	Induced Subsidence (in.)	p (tsf)	G <sub>max</sub> (tsf)	τ <sub>av</sub> (tsf)	Shear Strain γ	Strain E <sub>15</sub>	Strain Enc	Dry Sand Subsidence (in.)	
																				Non-Liq.	>10	>10								
5.0	9	6	1	98	10	3.0	6.0	0.147	0.147	1.00	1.70	0.75	1.00	11.2	49	1.1	12.4	1.00	0.135	0.275	Non-Liq.	0.00	0.00							
5.5	9	6	1	98	10	5.0	8.0	0.245	0.245	0.99	1.70	0.75	1.00	11.2	49	1.1	12.4	1.00	0.135	0.273	Non-Liq.	0.00	0.00							
10.0	26	16	1	115	10	6.0	9.0	0.298	0.298	0.99	1.70	0.75	1.00	32.5	84	1.1	33.6	1.00	0.844	0.272	3.10	0.00	0.00							
15.0	12	8	1	136	4	11.0	14.0	0.597	0.565	0.97	1.37	0.78	1.00	12.6	52	0.0	12.6	1.00	0.1	0.281	0.49	2.21	1.33							
20.0	41	26	1	138	10	16.0	19.0	0.938	0.751	0.94	1.19	0.88	1.00	41.9	95	1.1	43.1	1.00	13.0	0.325	>10	0.00	0.00							
25.0	45	28	1	112	10	21.0	24.0	1.269	0.926	0.92	1.07	0.94	1.00	44.5	98	1.1	45.6	1.00	42.919	0.347	>10	0.00	0.00							
28.0	24	15	1	125	10	26.0	29.0	1.555	1.055	0.89	1.00	0.99	1.00	23.3	71	1.1	24.5	1.00	0.278	0.362	0.77	1.18	0.42							
35.0	21	13	1	129	10	31.0	34.0	1.872	1.217	0.86	0.93	1.00	1.00	19.2	65	1.1	20.3	0.98	0.210	0.373	0.56	1.52	1.27							
40.0	29	18	1	126	10	36.0	39.0	2.193	1.382	0.84	0.88	1.00	1.00	24.8	73	1.1	26.0	0.96	0.316	0.381	0.83	1.09	0.65							
46.0	15	9	1	100	10	41.0	44.0	2.495	1.528	0.81	0.83	1.00	1.00	12.2	52	1.1	13.4	0.96	0.143	0.376	0.38	2.10	1.51							
51.5	82	52	1	124	10	51.0	54.0	3.055	1.776	0.75	0.77	1.00	1.00	62.0	100	1.1	63.1	1.00	#####	0.354	>10	0.00	0.00							

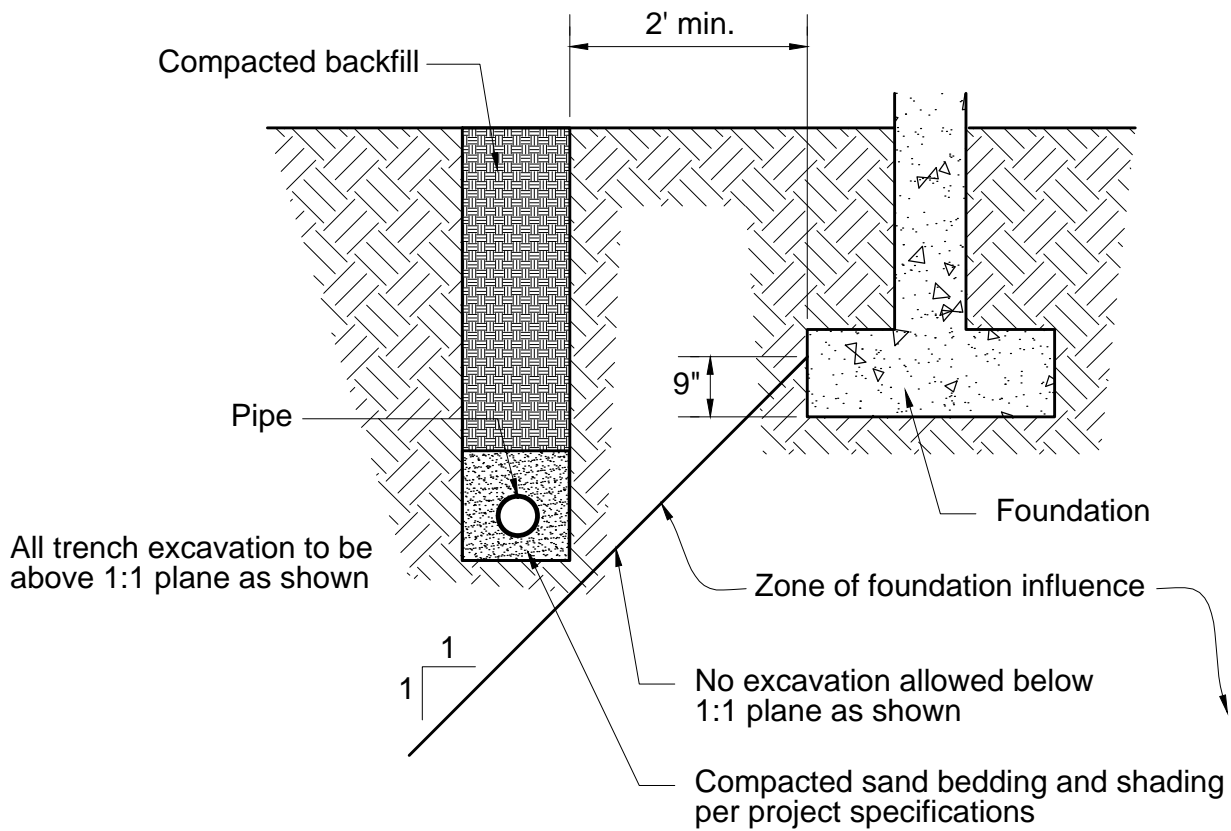


$N_{1(60)} = C_N * C_E * C_B * C_R * C_S * N$   
 $C_R = 0.75$  for Rod lengths < 3m, 1.0 for > 10m  
 $C_R = \min(1, \max(0.75, 1.4666 - 2.556/(z^{0.5})))$   
 $C_N = \min(1.7, (pa/\sigma'v)^{0.784 - 0.0768 * \min(46, N_{1(60)})^{0.5}})$   
 $C_S = \max(1.1, \min(1.3, 1 + N_{1(60)}/100))$  for SPT without liners  
 $MSF = \min(1.8, 6.9 * \exp(-M/4) - 0.058)$   
 $z = \text{Depth (m)}$   
 $rd = \exp[-(1.012 - 1.126 \sin(z/11.73 + 5.133))] + (0.106 + 0.118 \sin(z/11.28 + 5.14))$   
 $pa = 1 \text{ atm} = 101 \text{ KPa} = 1.058 \text{ tsf}$   
 $\Delta N_{1(60)} = \exp[1.63 + 9.7/FC - (15.7/FC)^2]$   
 $N_{1(60)CS} = N_{1(60)} + \Delta N_{1(60)}$   
 $K_{\sigma} = \min(1, 1 - \min(0.3, 1/(18.9 - 17.3Dr))) * \ln(p'o/1.058))$   
 $Dr = (N_{1(60)}/46)^{0.5}$   
 $CSR_{req} = 0.65 * PGA * (po/p'o) * rd$   
 $CSR^* = CSR_{req} / MSF / K_{\sigma}$   
 $CRR_{7.5} = \exp((N/14.1) + (N/126)^2 - (N/23.6)^3 + (N/25.4)^4 - 2.8)$   
 $N = N_{1(60)CS}$   
 $SF = CRR_{7.5, 1atm} / CSR^*$   
 $p = 0.67 * po$   
 $\tau_{av} = 0.65 * PGA * po * rd$   
 $G_{max} = 447 * N_{1(60)CS}^{(1/3)} * p^{0.5}$  -sand, 10l  
 $\rho = \gamma/g$   
 $V_{SO} = (G/\rho)^{0.5}$   
 $a = 0.0389 * (p/1) + 0.124$   
 $b = 6400 * (p/1)^{-0.6}$   
 $\gamma = [1 + a * \exp(b * \tau_{av} / G_{max})] / [(1 + a)^{\tau_{av}}]$   
 $E_{15} = \gamma * (N_{1(60)CS} / 20)^{-1.2}$   
 $N_c = (MAG - 4)^{2.17}$   
 $E_{nc} = (N_c / 15)^{0.45} * E_{15}$   
 $S = 2 * H * E_{nc}$

**APPENDIX F**

Typical Detail A: Pipe Parallel to Foundations

# TYPICAL DETAIL A PIPE PLACED PARALLEL TO FOUNDATION



**SCHMATIC ONLY**  
NOT TO SCALE



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