ITEM 9a



Geotechnical Engineering

Coastal Engineering

Maritime Engineering

Proposal No. 20078 August 13, 2020

Revised: October 13, 2020

Mr. Donal S. Russell, District Manager **CAPISTRANO BAY DISTRICT** 35000 Beach Road Capistrano Beach, California 92624

PROPOSAL FOR COASTAL ENGINEERING SERVICES CAPISTRANO BAY DISTRICT CAPISTRANO BEACH, CALIFORNIA

Dear Mr. Russell:

TerraCosta Consulting Group, Inc. (TerraCosta) is pleased to submit this revised proposal to provide coastal engineering services, initially in working with both California Coastal Commission and City of Dana Point Staff to resolve the current issues associated with unpermitted development along the approximately 1.7-mile-long coastline, and eventually for development of, and preparation of construction documents for, a comprehensive solution for the protection of homes on Beach Road in a manner consistent with the City of Dana Point's Local Coastal Program and the State Coastal Act. The total length of the project is approximately 8,700 feet, extending from Palisades Drive southerly to just south of Camino Capistrano in the City of Dana Point.

BACKGROUND INFORMATION

To aid in the preparation of this proposal, on July 30, 2020, we met with you and several members of the Homeowners Association Board to discuss the project. Most recently the undersigned participated in a Zoom meeting with board members on October 8, 2020, to discuss recent discussions with Coastal Staff along with the board's initial thoughts regarding our August 13, 2020, proposal. We were provided a copy of the June 11, 2018, Notice of Violation of the California Coastal Act, along with a copy of the December 23, 2019, letter from the City of Dana Point, presumably sent to all of the individual property owners on Beach Road. We were also subsequently provided a Mean High Tide Line

(MHTL) survey prepared by Ralph Guida, Professional Land Surveyor, which plotted the MHTL, or the jurisdictional boundary between the City of Dana Point and the California Coastal Commission annually from 2001 through 2020, with individual MHTL surveys typically occurring at the beginning of the summer season; long before the jurisdictional MHTL reached its most seaward ambulatory annual location.

Notably, the Ralph Guida survey plots 202 lots within the Capistrano Bay community, while the June 2018 Notice of Violation letter from the Coastal Commission indicates only 196 single-family residences within the Capistrano Bay community. Most importantly, however, is the fact that 152 residences existed within the Capistrano Bay community in 1972, prior to the voter-approved Proposition 20 that authorized the formation of the Coastal Act, with even more residences likely having been constructed prior to 1976 when the State legislature passed the Coastal Act, which made the Coastal Commission a permanent agency with broad authority to regulate coastal development. This pre-Coastal Act status is important in that Section 30235 of the Coastal Act requires that, "revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes **shall** be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion ..."

The Coastal Commission is required to allow for the protection of these private properties, and we suspect that this is likely the main reason that both the Coastal Commission and City of Dana Point are still working with the District well past the May 20, 2016, deadline when all unpermitted structures were to be removed from the beach.

As we understand from your recent meeting with Coastal Commission Staff, while it is not surprising that they are opposed to a 1.7-mile-long linear concrete wall system, similar to what we have designed for the City of Del Mar, we find it somewhat refreshing that Coastal Staff has suggested that you consider groins and sand replenishment in leu of hard armoring directly on the beach. As we discussed, and while Coastal Staff apparently has also suggested an offshore artificial reef, and while this may ultimately be a preferred long-term solution, an offshore artificial reef could cost well in excess of 20 million dollars and starts to approach the cost of a 1.7-mile-long seawall.



As we understand from your discussions with Coastal Staff, we understood that Staff supported beach nourishment used Broad Beach in Malibu as a possible example. Since we did the original concept design for Broad Beach, and set up the original Geologic Hazard Abatement District (GHAD), we obtained approval in concept from the Coastal Commission's Staff to build a rock revetment to be buried by a vegetated dune with a seaward nourished beach stabilized by a series of groins. This might be particularly attractive since many of your residences already have significant rock on the beach which can easily be incorporated into a larger permanent revetment, albeit stabilized and made more attractive with a vegetated dune system. We have attached the typical revetment section provided for Broad Beach, which would also work well for the Capistrano Bay District, particularly given the amount of rock that many of the property owners currently have fronting their properties. Regardless, as we discussed in August and again this past week, there are a variety of measures that can protect your residences, while at the same time providing an improved beach experience for the public.

Specific to individual property owners needs to mitigate evolving life safety issues on the beach adjacent to their properties, we would recommend that your board put together simple recommendations for mitigating the hazard and file a standard request for emergency application with both the City of Dana Point and the California Coastal Commission to avoid any additional confrontations between Coastal and City Staff and the individual property owners within the district. The emergency permit application is a relatively straight forward process with a blank application attached along with an example of an emergency permit request submittal package. Any graphics can be hand drawn and the application package does not need to be professionally prepared. Of course, we would be happy to provide emergency application packages for private property owners separate from this proposal, but again we would strongly recommend that all of your district members comply with the law.

Given the preceding, the Capistrano Bay District must now work with both the City and Coastal Commission in developing a coordinated effort to protect the homes on Beach Road consistent with the City's Local Coastal Program and the California Coastal Act.



SCOPE OF WORK

Phase 1 - Concept Approval with City and Coastal Commission

Based on our review of the above-referenced documents provided by the City and Coastal Commission, both of these agencies clearly have an interest in working with the Capistrano Bay District to abate existing violations, remove existing unpermitted protective devices on the beach, and to develop a coordinated plan for protection of the homes on Beach Road consistent with the City's Local Coastal Program and the State's Coastal Act. While we understand that your board recently had a meeting with Coastal Commission Staff, we would recommend that a follow up meeting be scheduled with both the City and Coastal Commission as soon as convenient to discuss a path forward and to reach a reasonable solution for correcting the violations and unpermitted work described in the Coastal Commission's June 11, 2018, Notice, and more recently noted in the City's December 23, 2019, letter to property owners.

Although we initially recommended pursuing a linear seawall in our August 13, 2020, proposal, and since Coastal Staff are pushing for beach nourishment, and notably a series of groins which would substantially improve sand retention times, with certain assumptions we would estimate an annualized beach nourishment cost of about \$3,500 per year, per property, along with additional fixed costs for timber groins and of course the additional rock to stabilize individual properties. If Coastal were to accept this approach, this would be substantially more economical than a 1.7-mile-long concrete seawall. It does however require ongoing beach nourishment in perpetuity with a corresponding increase in annualized beach nourishment costs with any sea level rise.

As discussed, interim stabilization measures can also be provided with 4,000+ pound geobags. However, due to the cost of sand filled geobags, we would recommend that these be limited to truly emergency measures while trying to negotiate for either the Broad Beach rock revetment approach or the Del Mar seawall approach.

Having designed most of the seawalls in the City of Del Mar in northern San Diego County, with the support of both the Coastal Commission and the City of Del Mar, along with the city's residents, we believe that concurrently with any negotiations for resolving the status of unpermitted improvements in the District, we should also consider a proposed



coordinated program for the protection of the homes on Beach Road similar to what we have done in the City of Del Mar or what we proposed for Broad Beach (see attached). We understand that several Capistrano Bay District Board members have visited Del Mar to view the city's seawalls, and we understand that the Board members indicated their approval of what the City of Del Mar has done, recognizing that for Capistrano Bay District, it would provide a linear robust wall system that will protect the existing residences, while providing a more uniform and attractive beach resource available to both residents and the public; something that the Coastal Commission is committed to achieving.

Similarly, the Broad Beach revetment approach with a vegetated dune system would also be very attractive and protect the properties. In our experience, Coastal Staff will require ongoing renourishment after the exposure of the revetment with potentially substantial ongoing O & M costs. The attractiveness or viability of the Broad Beach dune vegetated rock revetment depends on how accommodating Coastal Commission Staff would be regarding their special conditions requiring renourishment. For example, while we have performed preliminary calculations based on renourishment every 4 years, minimally we would suggest that the trigger for requiring nourishment would be a certain percentage, say 50% of the revetment exposed for a period in excess of 1 year. The attractiveness, or economics, of this system depends on the negotiated deal that can be struck with the California Coastal Commission.

The Capistrano Bay District is also in the enviable position of owning out to the MHTL, which, as indicated on Rob Guida's survey, typically extends 60+ feet seaward of the individual residential improvements. Clearly, the Coastal Commission would like a blanket lateral public access easement along all of these properties, and the willingness to grant such an easement should greatly facilitate an amicable resolution of the numerous violations indicated in the Coastal Commission's 2018 Notice, and importantly the approval of a 1.7-mile-long seawall or rock revetment. Although we recognize that the HOA is not particularly interested in granting such a blanket lateral public access easement, in our estimation it would be naïve to think that Coastal Staff would not immediately require the lateral public access easement, and we would suggest that the district parlay this as much as possible to get needed concessions from Coastal Staff.



Given our experience in other coastal cities, including the City of Del Mar where we are serving as the City's Coastal Engineer, we recommend a phased approach for initially resolving the existing violations, then concurrently attempting to develop a comprehensive solution that protects the private properties and brings the District into compliance with both the City's Local Coastal Program and the Coastal Act.

We are currently proposing to develop sketches for both a conceptual 1.7-mile-long proposed seawall and alternative vegetated dune covered rock revetment for discussion with City and Coastal Commission Staff to explore what the City and the Coastal Commission Staff would consider for improved shoreline protection.

As discussed during the July 30 meeting with the Board, it has been our experience that when dealing with the Coastal Commission, and also with the City, it is much easier to negotiate with a proposed plan that has a reasonable chance of gaining approval so that the interested parties can see and discuss the issues specific to the various stakeholders. For example, there is no question that the Coastal Commission will require a contiguous lateral public access easement as part of any shoreline improvements, and in lieu of trying to negotiate for various concessions, we recommend proposing that these items be included in any final Coastal Development Permit approval for a proposed seawall or revetment alignment. Importantly, we will work with the District Board in choosing an alignment that makes sense for all of the property owners, while at the same time providing value to the public that both the City and Coastal Commission can ultimately support.

Since a variety of protection currently exists for the various properties within the district, and depending on the extent of existing shoreline stabilization, it may also be possible to defer continuous linear stabilization and propose both vertical seawalls and vegetated dune covered revetment as appropriate along the coastline. Regardless, it would be beneficial to develop a series of viable alternatives that homeowners would support for initial discussions with City and Coastal Commission Staff. Based on last week's discussions, we would suggest that some of the immediate needs be, at least conceptually, laid out, along with proposed long-term stabilization measures to facilitate further discussion with the Coastal Staff. Since board members indicated that they can provide much of the district specific historical coastal background information, along with typical emergency measures that, it might be requested in the near-term, along with long-term goals for the district, we can then develop a variety of discussion items for our next meeting that would hopefully



culminate in a path forward with both City and Coastal Staff. We would provide services on a time-and-materials basis, and would suggest that \$10,000 be budgeted for the preparation of initial graphics for talking purposes with the City and Coastal Staff and for hopefully participating in face-to-face meetings with both of these agencies. Subsequent meetings with these agencies, which would be billed on a time-and-materials basis, would be scheduled to develop a path forward for developing a comprehensive permanent uniform solution for protection of the shoreline, while concurrently closing out any outstanding violations against any members in the Capistrano Bay District.

Phase 2 - Design Level Services

After receiving concept approval from City and Coastal Commission Staff, we would proceed with design level services, which we anticipate would include a more detailed site survey, a geotechnical basis of design report, plans and specifications, and formal permit processing through both the City and Coastal Commission.

Site Survey

Although we anticipate that the MHTL survey prepared by Ralph Guida will ultimately be insufficient for use as a base for construction documents, we would propose to coordinate with Mr. Guida for the preparation of a conventional topographic base map that would incorporate all of the data provided on his original MHTL survey, and also include sufficient detail, including existing improvements, for use in developing construction drawings. Pending your approval, we will reach out to Mr. Guida to request an estimate of the cost to prepare a suitable topographic base map for our use in preparing construction drawings.

Geotechnical Basis of Design Report

Both the City and the Coastal Commission will require the preparation of a geotechnical report describing both the geotechnical and coastal processes affecting the subject section of coastline for submittal with the formal Coastal Development Permit application. Topics that will be discussed in the geotechnical report include:



The geologic/geotechnical setting of the site;

- August 13, 2020 **Revised:** October 13, 2020 Page 8
- Potential geologic hazards, including faulting and seismicity;
- General engineering characteristics of the identified soils and geologic units;
- Marine processes and the tidal regime affecting your project;
- An evaluation of sea level rise and wave runup in compliance with the Coastal Commission's Sea Level Rise Policy Guidance Science Update adopted November 7, 2018, and the California Sea Level Rise Guidance developed by the Ocean Protection Council - 2018 Update;
- Design wave height and design constraints;
- Frequency of overtopping;
- Maximum design scour; and
- Design input and construction recommendations for a Del Mar-type seawall.

As was discussed during your July 30, 2020, Board meeting, subsurface geotechnical information will be needed, which we believe exists from recent geotechnical reports prepared for newer projects within the District. Absent any existing subsurface geotechnical information, cone penetration test (CPT) soundings would be required along the approximate wall alignment to determine the depth and consistency of underlying formational soils that may prove difficult for driving conventional steel sheet piles.

Assuming sufficient subsurface geotechnical information is available from recent site development within the District, we estimate that the cost to prepare a geotechnical basis of design report, which will include the sea level rise and wave runup study, will be on the order of \$22,000. The cost for the geotechnical CPTs is estimated to range from \$10,000 to \$20,000, depending upon whether any subsurface geotechnical information is available or if the subsurface conditions along the entire 1.7-mile-long wall alignment have to be characterized.

Preparation of 30% Construction Documents

After the City and Coastal Commission's conceptual approval of the project, we would propose to prepare a 30% level set of plans and specifications on a 22x34 inch sheet layout generally conforming to the current edition of the Greenbook Standard Specifications for Public Works Construction, which can be submitted to both the City and Coastal Commission for their discretionary review and approval. Our plans will provide the specific wall alignment across the entire 1.7-mile-long shoreline, with a new topographic



base map, to define the precise wall alignment relative to every property in order to obtain approval from all property owners prior to any submittal to the City and Coastal Commission. We have previously provided example construction drawings for a City of Del Mar seawall project, and we would propose a similar style cantilevered sheet-pile wall, which is both economical and very effective. Absent any changes to our conceptual approach for shoreline stabilization from either the City or Coastal Commission, we estimate that the cost to prepare 30% level plans and specifications would be on the order of \$40,000.

Building Plan Set

Once all discretionary approvals have been obtained, we would begin preparation of final construction documents reflecting any special conditions that may be imposed on the project through the regulatory process; the structural calculation package; and preparation of various City inspection forms required for issuance of a final Building Permit. We anticipate that the cost to prepare final construction documents and structural calculations could be on the order of \$40,000.

Permit Processing

While we can prepare both City and Coastal Commission Coastal Development Permit applications, given the discretionary nature of these permits and the existing Notice of Violation and unpermitted improvements, it is difficult to estimate the level of effort required to process permits and respond to agency comments that may arise during the process. However, for budgeting purposes, we would suggest allocating upwards of \$20,000 for engineering fees for the effort that may be required to complete both the discretionary and ministerial permit processing. Permit application fees will also be required by both the City and Coastal Commission, the amounts of which can be determined once we have a better understanding of the various project requirements that may be imposed on the District by both of these agencies.



GEOLOGIC HAZARD ABATEMENT DISTRICT

As we discussed during the July 30 Board Meeting, we would suggest that the HOA consider the formation of a Geologic Hazard Abatement District (GHAD), the details of which are available on the internet at www.conservation.ca.gov/cgs/pages/GHAD.aspx. A GHAD provides several important benefits, including a funding source, particularly for those individuals who may not have sufficient funds or the means to obtain funding for their share of the project. A GHAD also provides for a more powerful unified voice in your negotiations with the City and Coastal Commission, and also enables the Board to more effectively handle a few opposing property owners who might not agree to participate in a coastwide project. We have formed three GHADs in Southern California and would be happy to further discuss some of the pros and cons of a GHAD with the HOA Board.

COST ESTIMATE AND CONDITIONS OF SERVICE

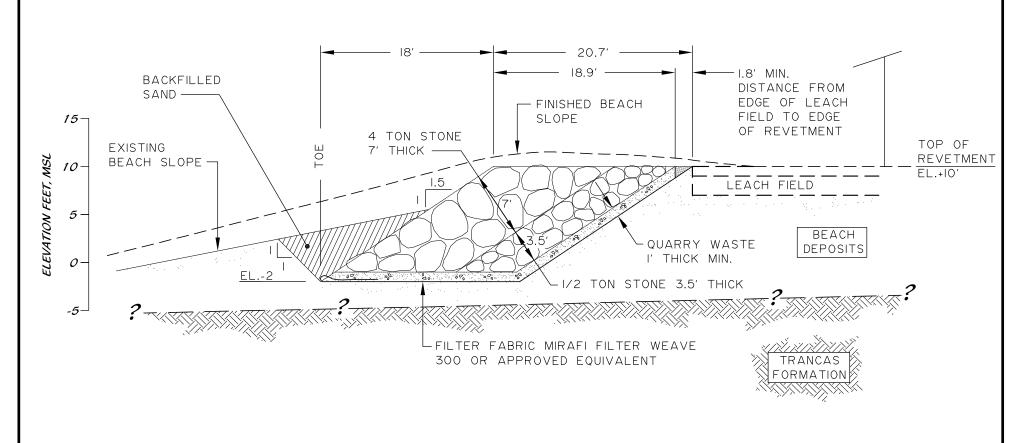
We propose to perform our services and invoice in accordance with the attached Conditions of Service (Exhibit A) and our currently effective 2019 Fee Schedule (Exhibit B) on a time-and-materials basis. We will not exceed the fee estimates described above without your prior approval. Any requested consulting services in addition to the services described above can be provided on a time-and-materials basis.

We appreciate the opportunity to submit this proposal and look forward to working with you on this project. If the above terms and conditions meet with your approval, please sign in the space provided below and return one signed copy to our office. Your signature will serve as our authorization to proceed, and your acknowledgment of your understanding of this proposal and of the attached Conditions of Service and 2019 Fee Schedule. Please retain a copy for your records. If you have any questions or require additional information, please give us a call.



Very truly yours,		
TERRACOSTA CONSULTIN	G GROUP, INC.	
Walter F. Crampton, Princip R.C.E. 23792, R.G.E. 245	al Engineer	
WFC/ar		
Attachments		
Consulting Group, Inc. to un	nt and the exhibits attached hereto, and dertake the items of work described by	in the above document.
	RANO BAY DISTRICT	
35000 Be		
Capistran	o Beach, California 92624	
SIGNATURE		
NAME		
TITI F		





TYP. SECTION THRU REVETMENT

SCALE: I"=10' (HORIZ. & VERT.)



Email address:

CALIFORNIA COASTAL COMMISSION



<u>APPLICATION FOR EMERGENCY PERMIT</u>

PLEASE NOTE: If immediate action is allowed under Public Resources Code Section 30611, contact the District Office within three days (72 hours) of the disaster or discovery of the danger, whichever occurs first, for authorization to conduct emergency action, then submit the required information and attachments below within seven days of taking emergency action.

If immediate action is not allowed under Public Resources Code, Section 30611 this application <u>must</u> be submitted in writing to the District Office and an emergency permit issued before any work may commence.

For more information, see California Code of Regulations, Title 14, sections 13138 to

1. Date/Time: ______ Request: _in person _by phone _by email

2. CONTACT INFORMATION

Property Owner

Name:

Address:

Phone Number:

Email address:

Authorized Representative

Name/ Company:

Address:

Phone Number:

Contractor	
Name/ Company:	
Address:	
Phone Number:	
Email address:	

3. <u>Location of Emergency Work</u>, including street address and Assessor's Parcel Number (APN):

Attach additional pages as needed for the following:

- 4. Nature and cause of emergency.
- 5. The circumstances during the emergency that appeared to justify the course(s) of action taken, including the probable consequences of failing to take action.
- 6. Construction method and a detailed description of preventive work requested (e.g., rip-rap, bulkhead, etc.) including plans or drawings if available.
- 7. Timing of emergency work (estimate as to when work will be performed generally a period of 24 to 72 hours after the emergency occurrence).

REQUIRED ATTACHMENTS

- 8. Evidence of applicant's interest in property on which emergency work is to be performed (e.g. property tax bill).
- 9. Site plan showing proposed and existing development on the subject parcel.
- 10. Vicinity map (road map) with location of project site marked. For rural areas, please also provide a parcel map.
- 11. An **application fee of \$1,270** (as of July 1, 2020). The emergency application fee is credited toward the follow-up permit application fee.

SUPPLEMENTAL ATTACHMENTS

Please provide, as available:

- 12. Evidence of approval by local planning department.
- 13. Documentation of the emergency, including photographs.
- 14. Plans or drawings depicting or describing the necessary work.

Note: The proposed emergency work must be the minimum necessary to address the <u>emergency</u>. Emergency work is considered temporary and subject to removal unless and until a regular coastal development permit permanently authorizing the work is approved. Consideration of the regular permit application is subject conditions

according to all applicable provisions of the California Coastal Act and Commission regulations. For more information, see the <u>Commission's Laws and Regulations page</u> under the About tab on the Commission website.



Geotechnical Engineering

Coastal Engineering

Maritime Engineering

TRANSMITTAL

(SAMPLE APPLICATION)

DATE: August 12, 2020

TO: Ms. Diana Lilly

CALIFORNIA COASTAL COMMISSION

7575 Metropolitan Drive, Suite 103 San Diego, California 92108

PROJ. NO: 2976

REFERENCE: 5386 Calumet Avenue, La Jolla

Enclosed please find two sets of our submittal package for an Emergency Coastal Development Permit for the above referenced property. Each package includes:

- Application for Emergency Permit
- Request for Emergency Coastal Development Permit
- One set of half-size Emergency Slope Stabilization Plans
- One set of full-size Emergency Slope Stabilization Plans

A check for fees and a current tax bill will be coming separately from the property owner.

If you have any questions or require additional information, please give us a call.

TERRACOSTA CONSULTING GROUP, INC.

Sincerely,

Walter F. Crampton, Principal Engineer

R.C.E. 23792, R.G.E. 245

WFC/ar

CALIFORNIA COASTAL COMMISSION



<u>APPLICATION FOR EMERGENCY PERMIT</u>

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For more information, see California Code of Regulations, Title 14, sections 13138 to 13144.

2. CONTACT INFORMATION

Property Owner

Name: Huey BBC LLP, c/o Bryan Huey

Address: 1235 E. La Marche, Phoenix, AZ 85022

Phone Number: (602) 758-9812

Email address: BHuey@carollo.com

Authorized Representative

Name/Company: Walter F. Crampton / TerraCosta Consulting Group

Address: 3890 Murphy Canyon Road, Suite 200, San Diego, CA 92123

Phone Number: (858) 573-6900

Email address: wcrampton@terracosta.com

Contractor

Name/Company: J C Baldwin Construction Co.

Address: 2469 Impala Drive, Carlsbad, CA 92010

Phone Number: (760) 438-9275

Email address: info@jcbaldwin.com

3. Location of Emergency Work, including street address and Assessor's Parcel

Number (APN): 5386 Calumet Avenue, La Jolla, CA 92037

APN: 415-021-01-00

Attach additional pages as needed for the following:

- 4. Nature and cause of emergency.
- 5. The circumstances during the emergency that appeared to justify the course(s) of action taken, including the probable consequences of failing to take action.
- 6. Construction method and a detailed description of preventive work requested (e.g., rip-rap, bulkhead, etc.) including plans or drawings if available.
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according to all applicable provisions of the California Coastal Act and Commission regulations. For more information, see the <u>Commission's Laws and Regulations page</u> under the About tab on the Commission website.



Project No. 2976 August 11, 2020

Geotechnical Engineering

Coastal Engineering

Maritime Engineering

Ms. Diana Lilly
CALIFORNIA COASTAL COMMISSION
7575 Metropolitan Drive, Suite 103
San Diego, California 92108

REQUEST FOR EMERGENCY COASTAL DEVELOPMENT PERMIT 5386 CALUMET AVENUE LA JOLLA, CALIFORNIA

Dear Ms. Lilly:

On behalf of the property owners at 5386 Calumet Avenue, we are requesting the issuance of an Emergency Permit for the construction of an approximately 25-foot-long erodible concrete infill to mitigate the recent collapse of an overlying gunite surface that had previously protected the subject property. We understand that this project crosses the jurisdictional boundary between the City of San Diego and the California Coastal Commission (that boundary being the toe of the coastal bluff), and we are therefore submitting this request. This property is located on the westerly side of Calumet Avenue between Colima Court and San Colla Street in La Jolla, California (as shown on the attached Vicinity Map, Figure 1). A single-story wood-frame house is located near the bluff edge. Steep coastal bluffs descend to a narrow shingle beach.

A site visit on May 18, 2020, revealed that the protective gunite surface on the bluff had, for the most part, been undermined by waves, and had collapsed onto the beach. Once the gunite apron was removed, coastal processes further eroded the underlying rubble-filled slope, undermining a portion of the patio and at least one roof-support footing. Additionally, a portion of a block wall that existed on the edge of the patio and not far from the edge of bluff became undermined, and had broken away and tumbled down onto the beach. The narrow patio that exists between the bluff edge and the westerly wall of the residence is also showing distress cracking. It is our opinion that it is necessary that efforts be made to re-stabilize this small section of coastal bluff to protect the house from damage. See Photos 1 through 5 (attached) for a comparison of the site conditions in 2017 to our site visit in May 2020.

In July 2017, the owners of the residence applied to the City of San Diego for an Emergency Coastal Development Permit when they discovered a failure in the gunite surface that had previously protected the bluff face. The failure in the gunite revealed an underlying rubble fill. The request for an Emergency Permit was subsequently denied in early 2018.

From our review of historical aerial photographs of the site area, it appears that the site was once occupied by the U.S. Army's Coast Artillery Corps and consisted of barracks, cannon foundations, and other support structures. Our research indicates that these improvements existed through the end of World War II and were formally decommissioned and disposed of in the late 1940s/early 1950s, after which the property was sold and subdivided for residential development.

Our research and review of historical aerial photographs indicates that a number of small drainages and gullies existed along the bluff prior to development. It appears that prior to the development of the bluff at 5386 Calumet Avenue, a small incised drainage extending some distance landward of the current foundation of the existing residential structure was infilled with the concrete rubble and construction debris generated during demolition of the buildings and site improvements from the Coast Artillery Corps site.

Review of 1972 and 1979 aerial photographs (Image Nos. <u>7241109</u> and <u>7955098</u>) on the California Coastal Records Project website (<u>www.californiacoastline.org</u>) suggests that rubble that infilled the subject drainage may have extended out onto the beach, protecting the infill and lower bluff. While the 1979 aerial photograph shows rubble still protecting the lower bluff, the extent of the protective rubble appears to have decreased. Based on a review of the 1987 aerial photograph (Image No. <u>8701195</u>), it appears that the bluff face had been previously gunited to protect the drainage infill from further erosion.

Having been the geotechnical engineer for several projects in the site area, we performed research on the Bird Rock Coastal Defense and Anti-Aircraft Training Center and published the attached June 2018 document (Attachment A), which provides more background on this facility and the project site area. Notably, Photo 7 of the attached document shows 5386 Calumet Avenue with "Location of rusting gun turret base on present-day beach," with the incised coastal canyon shown at the southwest corner of 5386 Calumet Avenue residence. The coastal canyon is more clearly illustrated on



Photo 1 of Attachment A, which we believe extends beneath the existing residence, now 70 years after the United States Military's demolition of the Bird Rock facility.

The more recent failure has now substantially undermined the existing bluff-top improvements (see Photo 3b), with still more of this 70+ year old rubble fill extending under the residence. Moreover, the soil matrix appears very loose and susceptible to additional marine erosion, which we believe places the existing residence in imminent danger. We have recommended to the applicant that they not inhabit the southwestern portion of the residence due to obvious safety concerns.

A cross section through the property, based on a topographic base map flown in December 2017, is presented on Sheet 2 of the Emergency Slope Stabilization plans, with the section location also shown on the Site Plan on Sheet 2. The principal geologic units exposed in the bluff at the site are the Cretaceous Point Loma Formation (Kp) and conglomerate portion of the Cretaceous Cabrillo Formation (Kcc), which form the near-vertical, lower cliffed portion of the bluff and the overlying late Pleistocene terrace deposits that cover the upper bluff.

The stability of the upper portion of the coastal bluff was evaluated using the GSTABL7 computer program. GSTABL7 is a graphical program that uses limit equilibrium theory to compute the factor of safety for earth and rock slopes. The Modified Bishop Method was selected for analyses of the subject slope. Summary results of the stability analyses for the sections shown on Plan Sheets 2 and 4 are provided in Attachment B. Slope stability analyses indicate that the existing factor of safety with regard to slope stability for the small coastal gully fill is about 1.07. The factor of safety for the proposed repairs is on the order of 2.2.

We are proposing to stabilize the coastal bluff by removing a portion of the rubble infill, which will allow the placement of a 3-foot minimum thickness of erodible concrete over the remaining fill. The proposed stabilization will prevent additional erosion and raise the minimum factor of static safety to in excess of 1.5. We anticipate that the infill will be approximately 25-feet long.



The most recent, much larger slope failure was, without question, a sudden unexpected occurrence within the coastal overlay zone that we believe demands immediate action to

protect the bluff-top property and, as importantly, the public traversing the relatively high-use public beach fronting the subject property.

We understand the Emergency Coastal Development Permit (CDP) requirements, and the applicants recognize that a formal CDP application will be required. Having designed and processed permits for numerous coastal bluff repairs throughout Southern California, it is our opinion that what is now proposed represents the minimum necessary effort to stabilize the emergency, and importantly to maintain public safety while processing the formal CDP application.

DESCRIPTION OF COASTAL EMERGENCY

- (1) The nature of the coastal emergency: The failure of the 38+ year old gunite bluff stabilization below the subject property was first breached in 2017, and subsequently failed during the 2020 spring storms, exposing what we consider to be a very unstable and dangerous coastal canyon/gully infill that has undermined the foundational elements of the westerly roof support, and the stability of the existing bluff-top residence. Moreover, there are portions of bluff-top improvements, such as the 24-inch block wall, that have fallen or are in danger of falling onto the beach, while the now-exposed rubble infill creates an attractive nuisance and additional hazard to the beach-going public. We believe this now-exposed rubble fill and remnants of the original gunite surface need to be removed and the bluff stabilized with the erodible concrete fill over the canyon fill.
- (2) The cause of the coastal emergency: While we cannot be certain, it appears that the failed 38+ year old gunite slope covering collapsed due to marine erosional removal of the underlying rubble fill and the spring 2020 storms.
- (3) The location of the coastal emergency: The coastal emergency is located within a relatively narrow, previously obscured, coastal canyon/gully rubble fill below the subject property at 5386 Calumet Avenue. The approximate location is shown on the Emergency Slope Stabilization plans.
- (4) The remedial, protective, or preventive work required to deal with the coastal emergency: The Emergency Slope Stabilization plans included with this submittal show



the proposed remedial and protective work required to deal with the subject coastal emergency.

(5) The circumstances during the coastal emergency that justify the course of action taken or to be taken, including the probable consequences of failing to take emergency action: As evident in Photos 1 through 5 and on the Emergency Slope Stabilization plans, the coastal bluff below the bluff-top residence is unstable and there is no question that additional failures within the rubble fill will occur and likely without warning, placing both the bluff-top residents and the public at risk. It is our opinion that failure to implement these stabilization measures will result in additional failures of the rubble fill, threatening the stability of the existing bluff-top residence and the public on the shingle beach below.

Having spent over 30 years designing and processing permits for shoreline stabilization measures, we believe that our proposed emergency stabilization measures represent the least environmentally damaging alternative that will protect both the bluff-top property and the public recreating on the shingle beach below.

We appreciate the opportunity to submit this request for an Emergency Coastal Development Permit. After you have had a chance to review the provided information, we would welcome the opportunity to further discuss this request and answer any questions that you may have.

Very truly yours,

TERRACOSTA CONSULTING GROUP, INC.

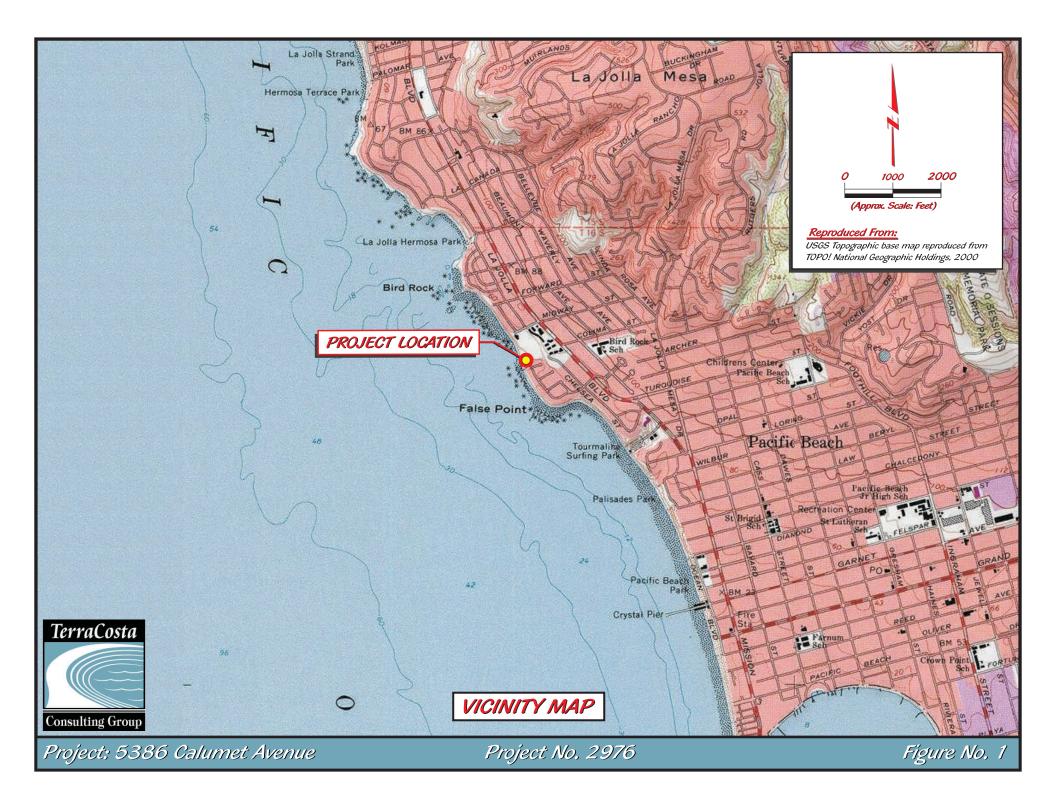
Walter F. Crampton, Principal Engineer

R.C.E. 23792, R.G.E. 245

WFC/jg Attachments

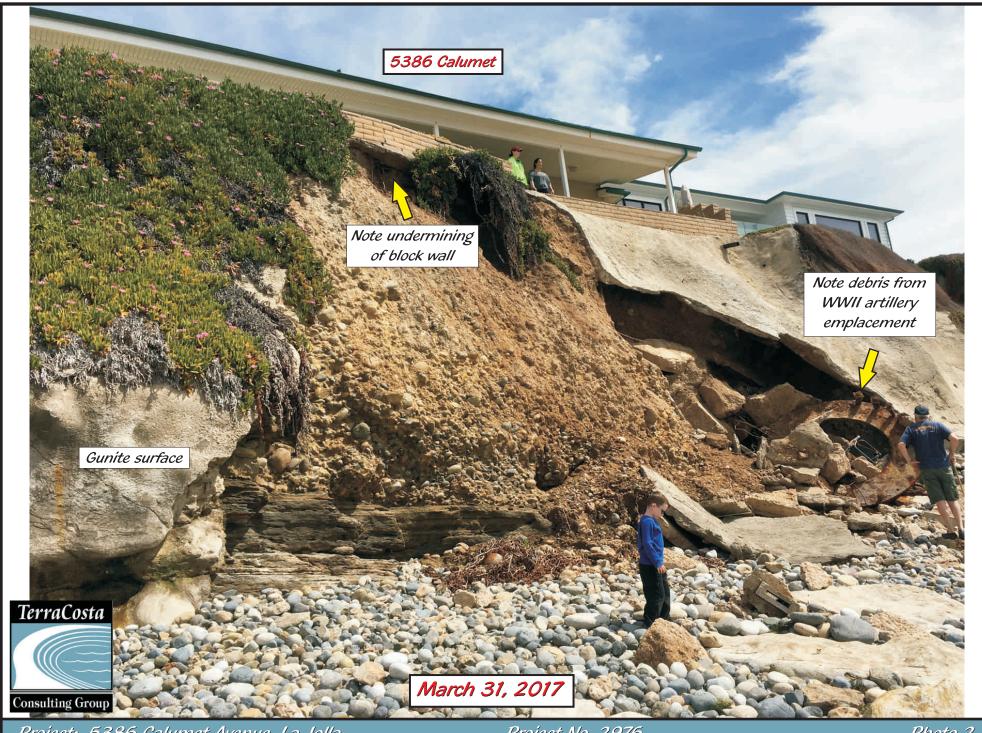
cc: Mr. Bryan Huey







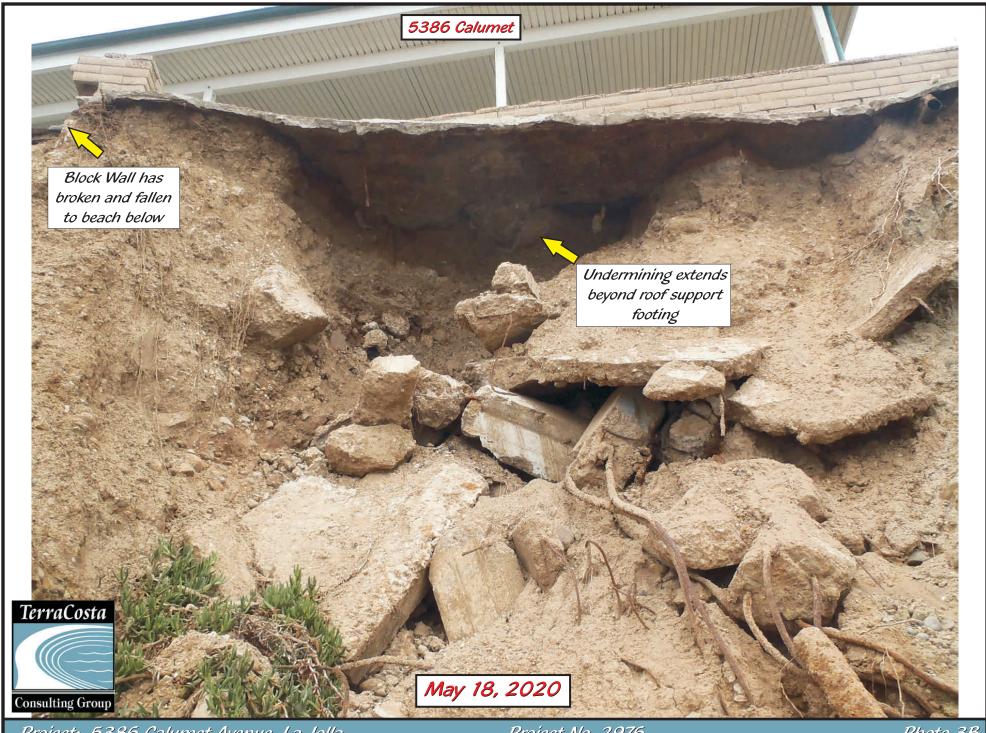




















GUN TURRET DETAIL FOR SCALE



TERRACOSTA CONSULTING GROUP

ENGINEERS AND GEOLOGISTS 3890 MURPHY CANYON ROAD, SUITE 200 SAN DIEGO, CA 92123 (858) 573-6900

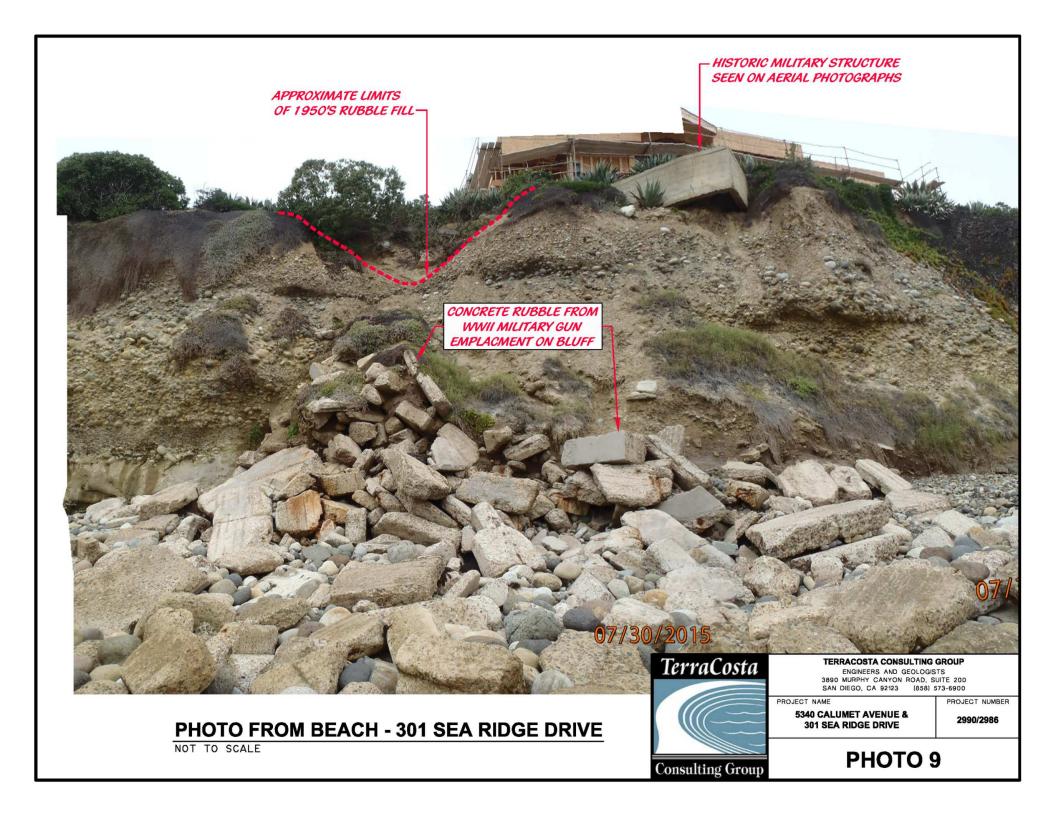
PROJECT NAME

5340 CALUMET AVENUE & 301 SEA RIDGE DRIVE

PROJECT NUMBER

2990/2986

PHOTO 8

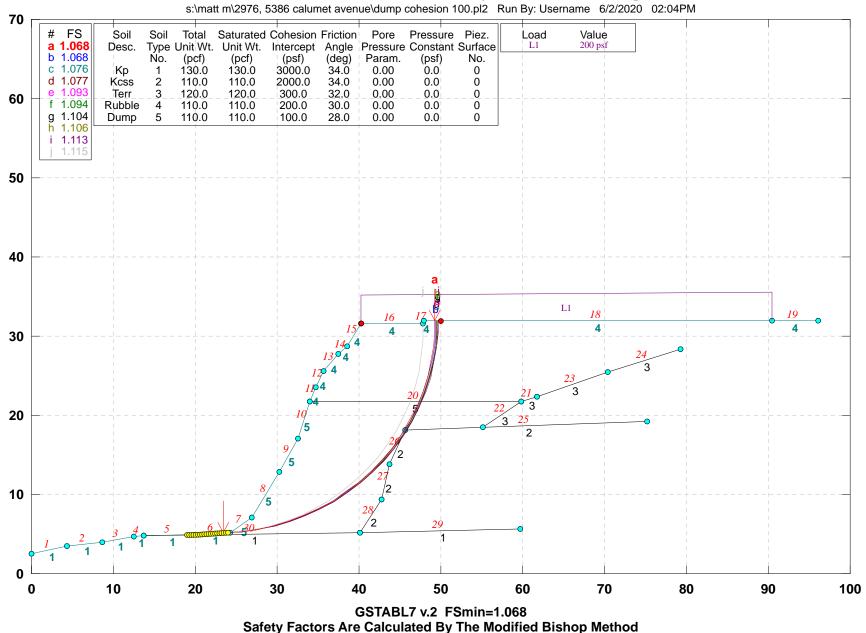


ATTACHMENT B STABILITY ANALYSES

SUMMARY RESULTS



5386 Calumet Avenue Stability Section - Existing



5386 Calumet Avenue Stability Section - Proposed, Erod Conc

c:\project files\2900-2999\2976, 5386 calumet avenue, kcabrillo, qop7, debris fill\stability section, proposed, erodible concrete, 8.10.20, 7,200 psf.pl2 Run By: Username 8/10/2020 11:53AM # FS Value 200 psf Pressure Piez. Load Soil Total Saturated Cohesion Friction Pore Type Unit Wt. Unit Wt. Intercept Angle Pressure Constant Surface Desc. (psf) Ño. (pcf) (pcf) (deg) Param. (psf) No. c 2.417 Kp 130.0 130.0 3000.0 34.0 0.00 0.0 0 0 110.0 110.0 2000.0 34.0 0.00 Kcss 0.0 120.0 120.0 300.0 32.0 0.00 0.0 0 Terr f 2.496 Rubble 110.0 110.0 200.0 30.0 0.00 0.0 0 g 2.585 28.0 0.00 0 Dump 110.0 110.0 75.0 0.0 h 2.648 Conc 6 120.0 120.0 7200.0 34.0 0.00 0.0 0 i 2.716 Conc 7 120.0 120.0 34.0 0.00 0.0 0 7200.0 2.725 50 40 L1 30 20 10 10 20 30 40 50 60 70 80 90 100 GSTABL7 v.2 FSmin=2.207

Safety Factors Are Calculated By The Modified Bishop Method

COASTAL DEVELOPMENT PERMIT PLANS:

EMERGENCY SLOPE STABILIZATION

5386 CALUMET AVENUE, LA JOLLA, CA

GENERAL NOTES

1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.

2. THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY THE CITY OF SAN DIEGO DOES NOT AUTHORIZE THE SUBDIVIDER AND OWNER TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES, INCLUDING, BUT NOT LIMITED TO, THE FEDERAL ENDANGERED SPECIES ACT OF 1973 AND AMENDMENTS THERETO (16 USC SECTION 1531 ET.SEQ.).

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK. IF DESTROYED, A LAND SURVEYOR SHALL REPLACE SUCH MONUMENTS WITH APPROPRIATE MONUMENTS. A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT, SECTION 8771 OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.

4. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID, FOR YOUR DIG ALERT LD, NUMBER, CALL LINDERGROUND SERVICE ALERT, TOLL FREE 1-800-422-4133, TWO DAYS BEFORE YOU DIG

5. CONTRACTOR SHALL IMPLEMENT AN EROSION AND SEDIMENT CONTROL PROGRAM DURING THE PROJECT GRADING AND/OR CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD AND THE CITY OF SAN DIEGO MUNICIPAL CODE AND STORM WATER STANDARDS MANUAL.

6. ``PUBLIC IMPROVEMENT SUBJECT TO DESUETUDE OR DAMAGE." IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, THE OWNER SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OF-WAY, SATISFACTORY TO THE PERMIT- ISSUING AUTHORITY.

7. ALL EXISTING AND/OR PROPOSED PUBLIC UTILITY SYSTEM AND SERVICE FACILITIES SHALL BE INSTALLED UNDERGROUND IN ACCORDANCE WITH SECTION

8. PRIOR TO ANY DISTURBANCE TO THE SITE, EXCLUDING UTILITY MARK-OUTS AND SURVEYING, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A

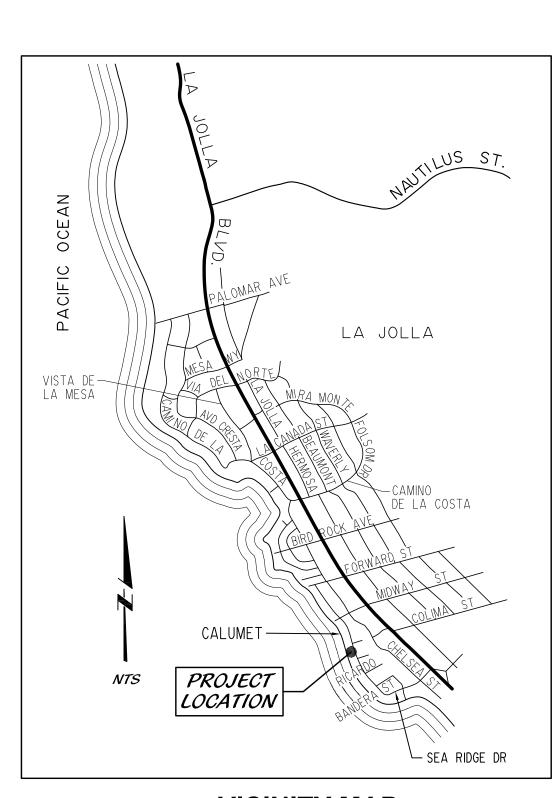
9. DEVIATIONS FROM THESE SIGNED PLANS WILL NOT BE ALLOWED UNLESS A CONSTRUCTION CHANGE IS APPROVED BY THE CITY ENGINEER OR THE CHANGE IS REQUIRED BY THE CITY INSPECTOR.

10. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE RESIDENT ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT BY THE CITY OF SAN DIEGO

11. AN AS-GRADED GEOTECHNICAL REPORT AND A SET OF THE REDLINE GRADING PLANS SHALL BE SUBMITTED AT AREA 3 ON THE THIRD FLOOR OF DEVELOPMENT SERVICES WITHIN 30 CALENDAR DAYS OF THE COMPLETION OF GRADING. AN ADDITIONAL SET SHALL BE PROVIDED TO THE RESIDENT ENGINEER OF THE FIELD ENGINEERING DIVISION AT 9485 AERO DR.

I2. THE AREA WHICH IS DEFINED AS A NON GRADING AREA AND WHICH IS NOT TO BE DISTURBED SHALL BE STAKED PRIOR TO START OF THE WORK. THE PERMIT APPLICANT AND ALL OF THEIR REPRESENTATIVES OR CONTRACTORS SHALL COMPLY WITH THE REQUIREMENTS FOR PROTECTION OF THIS AREA AS REQUIRED BY ANY APPLICABLE AGENCY. ISSUANCE OF THE CITY'S GRADING PERMIT SHALL NOT RELIEVE THE APPLICANT OR ANY OF THEIR REPRESENTATIVES OR CONTRACTORS FROM COMPLYING WITH ANY STATE OR FEDERAL REQUIREMENTS BY AGENCIES INCLUDING BUT NOT LIMITED TO CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CALIFORNIA DEPARTMENT OF FISH AND GAME. COMPLIANCE MAY INCLUDE OBTAINING PERMITS, OTHER AUTHORIZATIONS, OR COMPLIANCE WITH MANDATES BY ANY APPLICABLE STATE OR FEDERAL AGENCY.

13. CONTRACTOR SHALL REMOVE AND REPLACE ALL UTILITY BOXES SERVING AS HANDHOLDS THAT ARE NOT IN "AS-NEW" CONDITION IN PROPOSED SIDEWALK. DAMAGED BOXES, OR THOSE THAT ARE NOT IN COMPLIANCE WITH CURRENT CODE SHALL BE REMOVED AND REPLACED WITH NEW BOXES, INCLUDING WATER, SEWER, TRAFFIC SIGNALS, STREET LIGHTS, DRY UTILITIES-SDG&E, COX, ETC. ALL NEW METAL LIDS SHALL BE SLIP RESISTANT (FRICTION FACTOR >/= 0.50) AND INSTALLED FLUSH WITH PROPOSED SIDEWALK GRADE. IF A SLIP RESISTANT METAL LID IS NOT COMMERCIALLY AVAILABLE FOR THAT USE, NEW BOXES AND LIDS SHALL BE INSTALLED.



BENCHMARK AND SURVEY NOTES

BENCH MARK-CITY OF SAN DIEGO BRASS PLUG LOCATED AT THE NORTH CURB RETURN OF CALUMET AVENUE AND BANDERA STREET. ELEVATION 37.825 NAVD 29.

TOPOGRAPHY SOURCE

AERIAL TOPOGRAPHY SURVEY BY SAN-LO ERIAL SURVEYS.
FLIGHT DATE: DECEMBER 13, 2017, CONTROL & FIELD VERIFICATION BY TEAS LAND SURVEYING, DATED DECEMBER 13, 2017.

TOTAL DISTURBED AREA

<0.05 ACRES

GRADING QUANTITIES

GRADED AREA	_ 0 [ACRES]	MAX. CUT DEPTH	4 FEET
CUT QUANTITIES	_ 0 [CYD]	MAX CUT SLOPE RATIO	N/A
FILL QUANTITIES	_ 0 [CYD]	MAX. FILL DEPTH	N/A FEET
IMPORT (EXPORT)	_ 0 [CYD]	MAX FILL SLOPE RATIO	N/A

THIS PROJECT PROPOSES NO EXPORT OF MATERIAL FROM THIS SITE. ALL EXPORT MATERIAL SHALL BE DISCHARGED TO A LEGAL DISPOSAL SITE. THE APPROVAL OF THIS PROJECT DOES NOT ALLOW PROCESSING AND SALE OF THE MATERIAL. ALL SUCH ACTIVITIES REQUIRE A SEPARATE CONDITIONAL USE PERMIT.

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

VICINITY MAP

NOT TO SCALE

WALT

WALTER F. CRAMPTON NO. 23792 DATE

PROJECT DATA

PROJECT TEAM: DESIGN ENGINEER: ENGINEERING GEOLOGIST:	TERRACOSTA CONSULTING GROUP WALTER F. CRAMPTON, RCE GREGORY SPAULDING, CEG 3890 MURPHY CANYON ROAD, STE 200 SAN DIEGO, CALIFORNIA 92123 (858) 573-6900
SITE ADDRESS:	5386 CALUMET AVENUE LA JOLLA, CALIFORNIA 92037
LEGAL DESCRIPTION:	LOT 7 OF SUN GOLD POINT, MAP 3216
ASSESSOR PARCEL NO.:	APN 415-02I-0I-00
OWNER NAME & ADDRESS:	HUEY BBC LLP C/O BRYAN HUEY 1235 E LA MARCHE PHOENIX, AZ 85022
EXISTING & PROPOSED USE:	SINGLE FAMILY RESIDENCE
YEAR CONSTRUCTED:	1962
ZONING DESIGNATION:	RS-I-4
OVERLAY ZONES:	COASTAL OVERLAY ZONE, COASTAL HEIGHT LIMITATION OZ, FIRST PUBLIC ROADWAY, PARKING IMPACT OZ (BEACH IMPACT AREA), RESIDENTIAL TANDEM PARKING OZ, TRANSIT AREA OZ
LOT SIZE:	6,800 S.F. (0.156 ACRES)

APPROVALS NEEDED:

THIS PROJECT REQUIRES THE FOLLOWING DISCRETIONARY PERMITS/APPROVALS:

- EMERGENCY COASTAL DEVELOPMENT PERMIT

- EMERGENCY SITE DEVELOPMENT PERMIT

- COASTAL DEVELOPMENT PERMIT

- SITE DEVELOPMENT PERMIT

PROJECT SCOPE OF WORK:

THIS PROJECT CONSISTS OF THE FOLLOWING:

- INSTALLATION OF TEMPORARY EROSION CONTROL.

- REMOVAL OF RUBBLE AND OTHER DEBRIS WITHIN BLUFF FAILURE

- PLACE ERODIBLE CONCRETE FILL OVER RUBBLE FILL

- DIRECT DRAINAGE CURRENTLY FLOWING OVER BLUFF OUT TO GUTTER AT CALUMET AVENUE

SPECIAL NOTES:

1. NO WORK OR DISTURBANCE IS PROPOSED ON ADJACENT PROPERTIES. IF DISTURBANCE IS ANTICIPATED ON ADJACENT PROPERTIES, A LETTER OF PERMISSION SHALL BE REQUIRED.

2. IN ORDER TO REDUCE, CONTROL OR MITIGATE EROSION OF THE COASTAL BLUFF, ALL DRAINAGE FROM IMPROVEMENTS ON THE PREMISES SHALL BE DIRECTED AWAY FROM THE COASTAL BLUFF AND INTO THE GUTTER SYSTEM ON CALUMET AVENUE.

SHEET INDEX

	
SHT. NO.	DESCRIPTION
C-1	TITLE SHEET & NOTES
C-2	EXISTING SITE PLAN & SECTION
C-3	PROPOSED SITE PLAN
C-4	PROPOSED SECTION & PHOTOS



DRONE PHOTO TAKEN MAY 28, 2020

WORK TO BE DONE

THE PUBLIC IMPROVEMENTS SHOWN ON THESE PLANS SHALL BE CONSTRUCTED ACCORDING TO THE FOLLOWING STANDARD SPECIFICATIONS AND STANDARD DRAWINGS OF THE CITY OF SAN DIEGO.

STANDARD SPECIFICATIONS:

DOCUMENT NO. DESCRIPTION

PWPI010119-01 STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK), 2018 EDITION

PWPI010119-02 CITY OF SAN DIEGO STANDARD SPECIFICATIONS FOR PUBLIC WORKS

CONSTRUCTION (WHITEBOOK), 2018 EDITION

PWPI010119-04 CITYWIDE COMPUTER AIDED DESIGN AND DRAFTING (CADD) STANDARDS,

CUSTOMARY STANDARD SPECIFICATIONS, 2015 EDITION

PWPI092816-08 CALIFORNIA DEPARTMENT OF TRANSPORTATION MANUAL OF UNIFORM

TRAFFIC CONTROL DEVICES, 2014 EDITION (REVISION 4)

STANDARD DRAWINGS:

PWPI092816-05

DOCUMENT NO. DESCRIPTION

PWPI010119-03 CITY OF SAN DIEGO STANDARD DRAWINGS FOR PUBLIC WORKS

CONSTRUCTION, 2018 EDITION

PWPI010119-06 CALIFORNIA DEPARTMENT OF TRANSPORTATION U.S CUSTOMARY STANDARD PLANS, 2015 EDITION



TERRACOSTA CONSULTING GROUP, INC.
ENGINEERS & GEOLOGISTS
3890 MURPHY CANYON ROAD, SUITE 200
SAN DIEGO, CALIFORNIA 92123
(858) 573-6900

PRIVATE CONTRACT COASTAL DEVELOPMENT PERMIT PLANS FOR:

EMERGENCY SLOPE STABILIZATION 5386 CALUMET AVENUE

SHEET TITLE:

TITLE SHEET & NOTES

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT

SHEET 1 OF 4 SHEETS

PROJECT NO. 666342

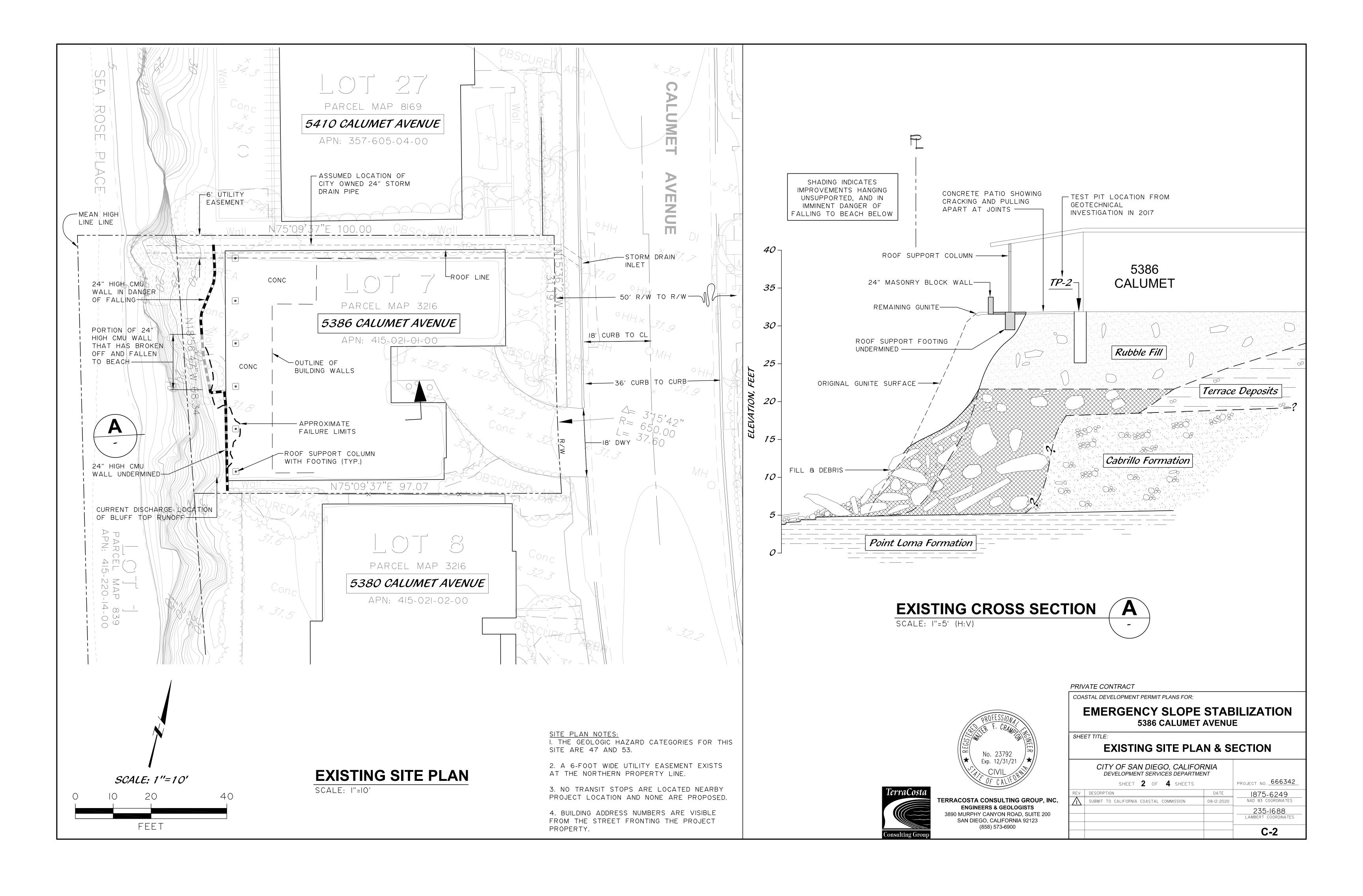
REV DESCRIPTION DATE 1875-6249

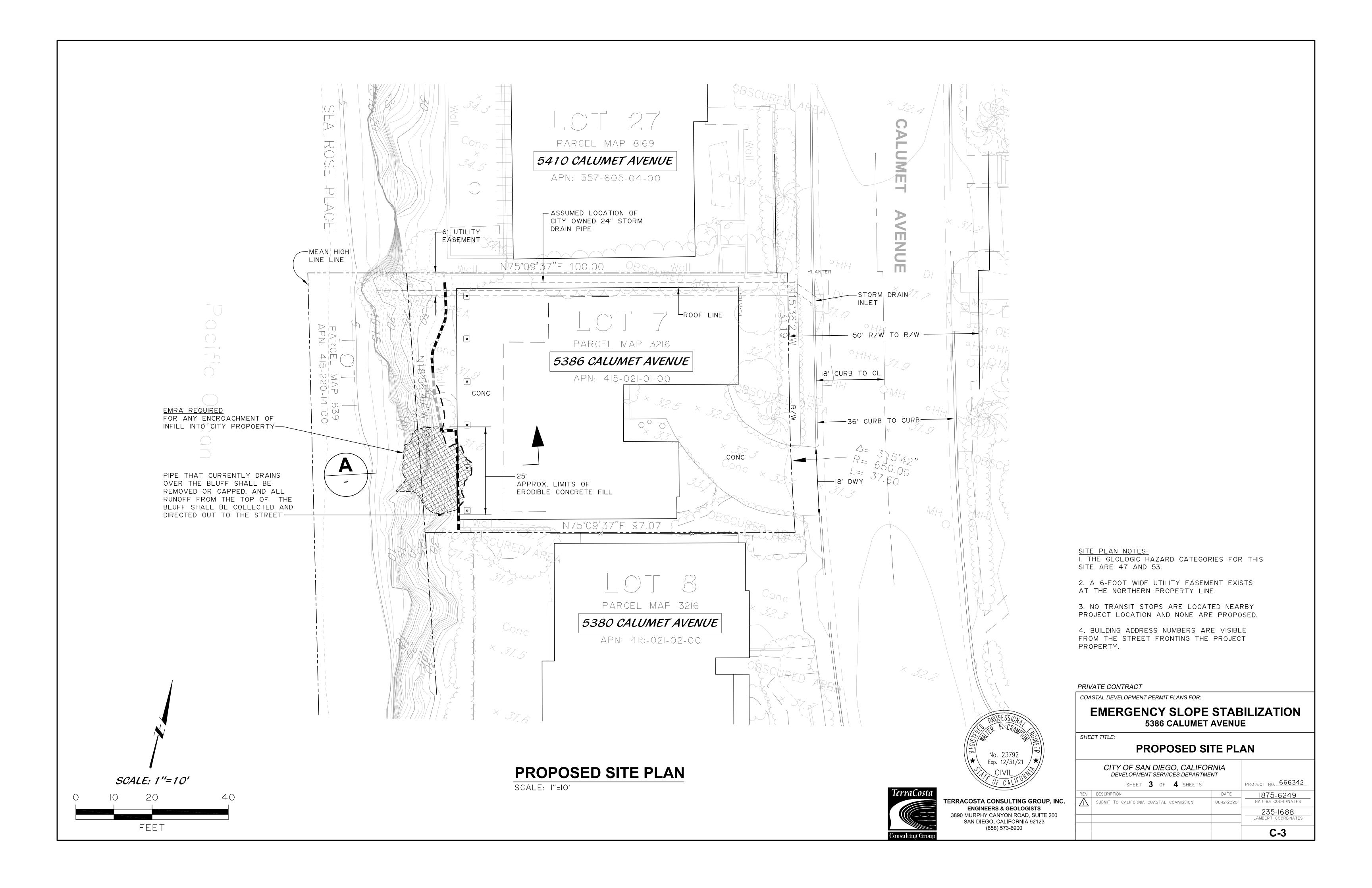
NAD 83 COORDINATES

235-1688

LAMBERT COORDINATES

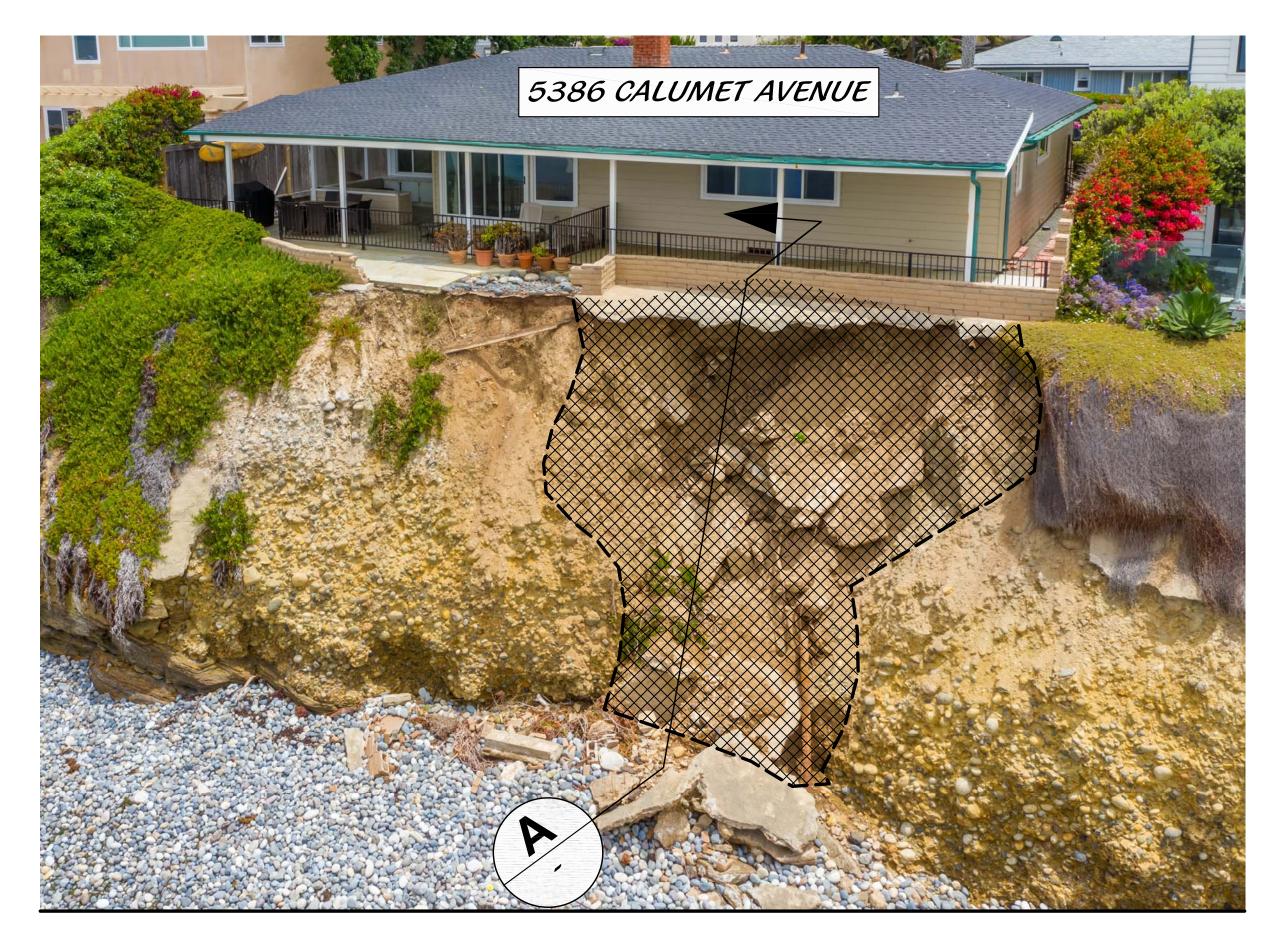
C-1



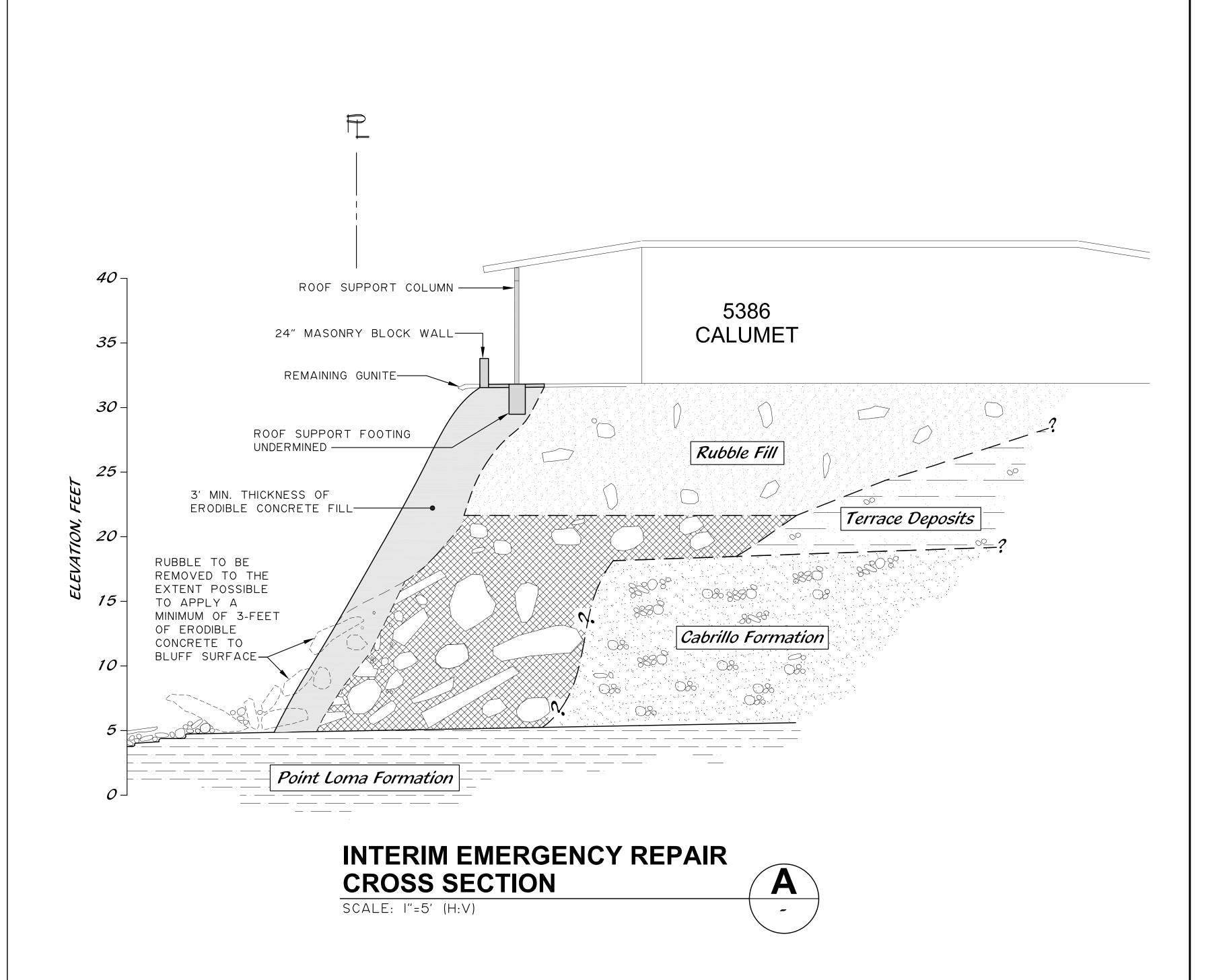




DRONE PHOTO - EXISTING CONDITION



PROPOSED INTERIM REPAIR



ESTIMATED QUANTITY OF ERODIBLE CONCRETE FILL: 150 C.Y.



ERRACOSTA CONSULTING GROUP, INC. ENGINEERS & GEOLOGISTS 3890 MURPHY CANYON ROAD, SUITE 200 SAN DIEGO, CALIFORNIA 92123 (858) 573-6900 EMERGENCY SLOPE STABILIZATION
5386 CALUMET AVENUE

SHEET TITLE:

PROPOSED SECTION & PHOTOS

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 4 OF 4 SHEETS

PROJECT NO. 666342

PRIVATE CONTRACT

DEVELOPMENT SERVICE'S DEPARTMENT

SHEET 4 OF 4 SHEETS

PROJECT NO. 666342

REV DESCRIPTION DATE 1875-6249

NAD 83 COORDINATES

235-1688

LAMBERT COORDINATES

C-4