CALIFORNIA COASTAL COMMISSION

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Commission Action:	

STAFF REPORT: REGULAR CALENDAR

APPLICATION NUMBER: 5-04-125

RECORD PACKET COPY

APPLICANT: Harold D. Craft

AGENT: D-Works, Attn: Marcoz Rafael Anaya

PROJECT LOCATION: 1742 Galaxy Drive, City of Newport Beach, County of Orange

PROJECT DESCRIPTION: Construction of a 3,998 square foot one-story single-family residence attached to an existing 655 square foot three-car garage on a blufftop lot adjacent to the Upper Newport Bay Ecological Reserve.

SUMMARY OF STAFF RECOMMENDATION:

The subject site is a coastal bluff top lot located between the first public road and the shoreline of Upper Newport Bay in Newport Beach, and the applicant is proposing to construct a new residence on the site. The primary issues addressed in this staff report are the appropriateness of approving the project given its incompatibility with the geologic hazard, visual resource, water quality and sensitive habitat protection policies of the Coastal Act. Staff recommends that the Commission **DENY** the proposed project.

A slope stability analysis was completed for the site and the slope was shown to have a factor of safety of less than 1.5. Although the bluff slope has a factor of safety less than 1.5, the factor of safety increases at points landward of the bluff edge. The investigation provides cross-section plans that locate a 1.5 factor of safety line which intersects the surface of the lot approximately 25-feet inland of the bluff-side property boundary. The subject lot is 120 to 125-feet deep. Thus, based on the cross-section, there is at least an 85 foot deep area on the lot that presently has a factor of safety at or greater than 1.5. Rather than placing development landward of the 1.5 factor of safety line and including an adequate safety buffer to address anticipated bluff retreat over the life of the development, the proposed project includes development bluff-ward of the 1.5 factor of safety line. The proposed project achieves required structural stability by relying upon soldier piles embedded in the ground bluffward of the structure to protect the new development from damage caused by failure of the areas known to be unstable. An alternative to having the structure rely on such a bluff protective device is siting the residence in an area that is both safe and does not rely on bluff protective devices, which is done by identifying the amount of erosion that can be anticipated over the next 75 years based on historical data and adding that amount of retreat to the 1.5 factor of safety line to come up with a setback.

LOCAL APPROVALS RECEIVED: Approval in Concept (#0512-2004) from the City of Newport Beach Planning Department dated March 16, 2004.

SUBSTANTIVE FILE DOCUMENTS: City of Newport Beach Land Use Plan; Letter from Commission staff to D-Works dated April 28, 2004; Information from D-Works to Commission staff received June 30, 2004; *Geotechnical and Geologic Investigation For Proposed Residence at 1742 Galaxy Drive Newport Beach, California (W.O. 254004-01)* prepared by Coast Geotechnical dated June 24, 2004; Letter from Commission staff to D-Works dated July 30, 2004; and Information from D-Works to Commission staff received August 23, 2004.

LIST OF EXHIBITS

1. Location Map
2. Assessor's Parcel Map
3. Topographic Plan for the Previously Existing Residence
4. Site Plan
5. Floor Plan
6. Elevations Plans
7. Drainage Plan
8. Irrigation Plan
9. Landscape Plan
10. Caisson Plan
11. Geotechnical Investigation Section Plans

STAFF RECOMMENDATION:

I. STAFF RECOMMENDATION OF DENIAL

Staff recommends that the Commission **DENY** the coastal development permit application by voting **NO** on the following motion and adopting the following resolution.

A. Motion

I move that the Commission approve Coastal Development Permit No. 5-04-125 for the development proposed by the applicant.

B. Staff Recommendation of Denial

Staff recommends a **NO** vote. Failure of this motion will result in denial of the permit and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

C. Resolution to Deny the Permit

The Commission hereby **DENIES** a coastal development permit for the proposed development on the ground that the development will not conform with the policies of Chapter 3 of the Coastal Act and will prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit would not comply with the California Environmental Quality Act because there are feasible mitigation measures or alternatives that would substantially lessen the significant adverse impacts of the development on the environment.

II. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares:

A. Project Location and Description

The proposed project is located within an existing developed urban residential area at 1742 Galaxy Drive in the City of Newport Beach, County of Orange (Exhibits #1-2). A fire had destroyed the existing home except for the garage, which currently remains on site (Exhibit #3). To the North of the site (i.e. on the inland side of the property) is Galaxy Drive. To the South of the project site (i.e. the bluff and bay front side of the property) is the Upper Newport Bay Ecological Reserve. To the East and West of the project site are existing single-family residential development. The residence is located on a bluff top lot on Galaxy Drive, which is on the bayfronting side of Galaxy Drive, hence, the subject site is located between the nearest public roadway and the shoreline of Upper Newport Bay. Some bluff areas of Galaxy Drive have been known to be geotechnically active and have been prone to failure. The Commission has issued coastal development permits for slope repairs on Galaxy Drive (CDP's: #5-98-497-G-(Penfil), 5-98-524-G-(Penfill), 5-98-524-(Penfill), 5-98-469-G-(Ferber), 5-98-469-(Ferber), 5-98-240-G-(Patton) and 5-98-240-(Patton), 5-94-288-(Lewis), 5-93-308-(Pope Trust), 5-85-062-(Braman) and 5-93-367-(Rushton)).

The lot is rectangular in shape, near level, with a descending slope at the rear (bluff side) of the property. The slope descends from the building pad to Upper Newport Bay below at a gradient of about 1.25:1 (horizon to vertical) with localized variations. The total slope height is estimated to be 85-feet.

The subject property is located adjacent to the Upper Newport Bay Ecological Reserve (UNBER), which was created in 1975 to conserve and enhance 752 acres of saltwater marsh ecosystem in the upper reaches of Newport Bay, commonly referred to as the Back Bay. The reserve is managed by the California Department of Fish and Game (CDF&G). The reserve allows limited recreational and educational access as specified in the California Fish and Game code. The majority of the Upper Bay is an estuarine salt marsh system.

The proposed project consists of construction of a 3,998 square foot one-story single-family residence attached to an existing 655 square foot three-car garage on a blufftop lot adjacent to the Upper Newport Bay Ecological Reserve (Exhibits #4-11). In addition, the project also consists of: hardscape improvements, landscape improvements, and new rear yard spa. The project is

proposing use of a line of soldier piles bayward of the proposed residence to provide adequate lateral support and to protect rear yard areas from bluff failures(Exhibits #10-11). The applicant does not state that grading will take place. However, the submitted geotechnical investigation does state that grading will take place.

B. Geological Hazards

Section 30253 of the Coastal Act states, in relevant part states:

New development shall:

(l) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.

(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

The findings in this section of the staff report include generalized findings regarding the susceptibility of coastal bluffs to erosion and site-specific findings from the geological report.

1. General Findings on Bluff Erosion

The proposed development is located on a coastal bluff, which is subject to surficial erosion, but only to moderate marine erosion due to the subject site's location within Upper Newport Bay. Bay waters that intersect the toe of this coastal bluff are tidally influenced, therefore, tidal changes do have an erosive effect on the toe of this bluff.

Coastal bluff erosion is caused by a combination of inherent environmental factors and erosion caused by human activity. Environmental factors include gravity, seismicity, wave attack, wetting and drying of bluff face soils, wind erosion, salt spray erosion, rodent burrowing and piping, percolation of rain water, poorly structured bedding, surface water runoff and poorly consolidated soils.

Factors attributed to human activity include: improper irrigation practices; building too close to the bluff edge; improper site drainage; use of impermeable surfaces which concentrate runoff; use of water-dependent vegetation; pedestrian or vehicular movement across the bluff top, face and toe, and breaks in irrigation lines, water or sewer lines. In addition to irrigation water or runoff at the bluff top, increased residential development inland leads to increased water percolating beneath the surface soils and potentially outletting on the bluff face along fracture lines in the bluff or points of contact of different geologic formations, forming a potential slide plane.

2. Site Specific Bluff Information

The applicant has submitted a geotechnical investigation titled *Geotechnical and Geologic Investigation For Proposed Residence at 1742 Galaxy Drive Newport Beach, California (W.O. 254004-01)* prepared by Coast Geotechnical dated June 24, 2004. The

geotechnical investigation states that the site is underlain by predominantly fine grained folded marine sedimentary rocks of the Capistrano formation, which is overlain by artificial fill and terrace deposits. Slope wash deposits mantle face of the coastal bluff.

The geotechnical investigation discusses slope failures and states that they have occurred along the bluff in the area caused by localized conditions: "*Slope failures have occurred along this bluff at other locations and have been attributed to unique localized conditions. These conditions have been identified as near vertical gradients, poor lot drainage, broken irrigation lines, intense rainstorms rainfall and poorly placed fills. The failures have generally been restricted to areas near the top of bluff and have been repaired with soldier piles and or grading.*" A slope stability analysis was completed for the site and the slope was shown to have a factor of safety of less than 1.5. Furthermore, the investigation states that surficial slope instability could impact proposed improvements such as hardscape and fencing located near the bluff edge. Although the bluff has a factor of safety less than 1.5, the factor of safety increase at points landward of the bluff edge. The investigation provides cross-section plans that locate a 1.5 factor of safety line which intersects the surface of the lot approximately 25-feet inland of the bluff-side property boundary. The subject lot is 120 to 125-feet deep. Thus, based on the cross-section, there is at least an 85 foot deep area on the lot that presently has a factor of safety at or greater than 1.5. The Commission finds that in order to be consistent with Section 30253 of the Coastal Act, development must be sited such that it will be located in an area with a minimum factor of safety against sliding of greater than 1.5 throughout its useful economic life, assumed to be 75 years.

Rather than placing development landward of the 1.5 factor of safety line, and include an adequate safety buffer to address anticipated bluff retreat over the life of the development, the proposed project includes development bluff-ward of the 1.5 factor of safety line. The proposed project achieves required structural stability by relying upon sufficiently embedded soldier piles to protect the new development from damage caused by failure of the areas known to be unstable (Exhibits #10-11). The geotechnical investigation recommends use of a row of soldier piles placed at the rear of the property to adequately provide lateral support for the residence and proposed rear yard area development. The soldier piles would be placed a minimum of 10-feet bluff ward of the rear building line and no closer than 5-feet from the bluff edge, which is roughly the rear property line located at approximately the 101-foot contour. The investigation states that the location of the soldier piles would be within the applicant's property and would not affect the bluff. The geotechnical report also recommends that any rear yard improvements be placed landward of the soldier piles, unless those improvements are considered temporary and could be removed when the bluff recedes.

In addition, the investigation states that since the property is located about 85-feet above sea level adjacent to Upper Newport Bay, the property itself, which doesn't include the bluff face and bay below (these are within the boundary of the UNBER), is not subject to flooding or erosion forces caused by wave action, tidal changes or a rise in sea level. However, the bluff is subject to tidal changes and a rise in sea level and associated erosive forces.

The geotechnical investigation submitted for the subject site examined long term bluff retreat only very briefly. The investigation states: "*Based on review of aerial photographs significant bluff retreat has not occurred in the past fifty years at this site, however, the*

potential exists for episodic bluff retreat to occur due to moisture changes in the cliff; seismic activity; and weathering. Episodic failure has occurred at other locations along this bluff and was attributed to episodes of increased rainfall and poor drainage. The affected area was generally within the ten feet of top of slope. Quantitative analysis of long-term bluff retreat is only reliable as the data available from which to extrapolate a linear historical retreat rate. Adequate data is not available for this site. It is our opinion that the proposed residence and site improvements will not be affected by bluff retreat over the building lifespan of 50 years, provided recommendations of this report are followed." Furthermore, the geotechnical investigation state: *"It is our judgement, based on current site knowledge, that the proposed residence will not be subject to erosion or stability hazard over the course of its design life and that no seawall, revetment, jetty, groin, retaining wall, or other shoreline protective device will be needed to protect the development over the course of its design life, normally assigned to a residence, provided recommendations of this report are incorporated in to the project design.*" On the other hand, the applicant is proposing a bluff protective device (i.e. the soldier pile wall) which was deemed necessary by the applicant's geologist to protect the proposed development. The Commission's staff Geologist has reviewed the geotechnical investigation and his conclusions are discussed below.

Drainage on site and any vegetation proposed must not be allowed to contribute to any potential coastal bluff erosion. The applicant has submitted a drainage plan that shows that drainage will be directed to the street and treated before exiting property onto the street. Part of the proposed project also consists of construction of a spa in the rear yard. If water from the proposed spa is not properly controlled there is a potential for bluff failure due to the infiltration of water into the bluff. The applicant has not provided any methods (i.e. having the pool double lined and installing a pool leak detection system) to prevent any potential infiltration into the bluff. The applicant has also submitted a landscaping plan detailing what the landscaping improvements involve. Commission staff reviewed the landscape plan and determined that the plan does contain invasive species and also contains high-water use plants. Lastly, the applicant has stated that a permanent underground irrigation system is proposed.

3. Analysis and Conclusions

To meet the requirements of the Coastal Act, new development must be sited and designed to: "*Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices* [Emphasis added] *that would substantially alter natural landforms along bluffs and cliffs.*" As proposed, the new development is reliant upon a protective device (soldier piles). Over time, the soldier piles would halt the recession of the bluff and become exposed which would alter the natural bluff landform. In addition, the project proposes landscaping that is not drought tolerant, has not submitted methods to prevent any potential infiltration of water into the bluff from the spa and has proposed an underground irrigation system, all of which can have adverse impacts upon the bluff. Thus, the Commission finds that the project, as currently proposed, is not consistent with the geologic hazards policy of the Coastal Act. There are alternatives to the proposed project (see Section II.F. of these findings) that would lessen or avoid the identified impacts. Denial of the proposed project would avoid impacts to landforms. New development, such as the proposed residence, should be sited and designed so that no protective device is necessary to protect the structure over it's anticipated life (usually taken to be 75 years). Therefore, the Commission finds that the proposed project is

inconsistent with Section 30253 of the Coastal Act and therefore must be denied.

C. Scenic Resources

Section 30251 of the Coastal Act pertains to visual resources. It states:

> *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas...*

Section 30251 of the Coastal Act requires that scenic and visual qualities of coastal areas be protected. The project is located on a blufftop lot overlooking Upper Newport Bay. The site is visible from a variety of public vantage points around the bay, including from Back Bay Drive. Because the new residence will potentially affect views from public vantage points any adverse impacts must be minimized. Consequently, it is necessary to ensure that the development will be sited to protect views to and along Upper Newport Bay and minimize the alteration of existing landforms.

The geotechnical investigation provided by the applicant states that the bluff has a factor of safety less than 1.5, indicating the bluff is unstable. The project proposes the placement of a row of soldier piles at the rear of the property to protect the new development from known geologic hazards. The soldier piles would be placed a minimum of 10-feet bluff ward of the rear building line and no closer than 5-feet from the bluff edge, which is roughly the rear property line located at approximately the 101-foot contour. These solider piles would be embedded into the bluff, however, over time bluff erosion would expose the piles and would alter the appearance of the natural bluff landform. The piles would be visible from the variety of public vantage points around the bay and cause a significant adverse visual impact within this highly scenic coastal area. There are alternatives to the proposed project (see Section II.F. of these findings) that would lessen or avoid the identified impacts. Denial of the proposed project would preserve existing scenic resources and minimize landform alteration. Therefore, the Commission finds that the proposed project is inconsistent with Section 30251 of the Coastal Act and therefore must be denied.

D. Protection of Existing Structures

Section 30235 requires the Commission to permit the construction of protective devices to serve coastal dependent uses, to protect existing structures, and to protect existing beaches in danger of erosion, despite the conflict that such construction might present with other Coastal Act policies; however, Section 30235 limits its mandate to the three instances listed above and even then to situations in which the project is designed to eliminate or mitigate adverse impacts on local shoreline sand supply and where there are existing structures in danger from erosion.

The primary reason for constructing a bluff protective device, the soldier pile wall, at this site is to protect the proposed new residential development from bluff erosion hazards. Residential development is not a coastal dependent use. In addition, the residential development would be new, not existing. While there is an existing garage on the site, this garage is located at least 80-feet inland of the bluff edge, and more than 50-feet inland of the 1.5 factor of safety line. Accordingly, this existing garage is not threatened nor in need of protection from any geologic hazard. Finally, there are no identifiable public beaches in danger from erosion that the bluff

protective device would protect. Thus, the proposed development does not meet the test of Section 30235 of the Coastal Act.

E. Environmentally Sensitive Habitat Areas

The project site is immediately adjacent to the Upper Newport Bay Ecological Reserve managed by the California Department of Fish and Game. The Ecological Reserve is a 752 acre wetland habitat sanctuary. In 1968 the California State Legislature authorized the Fish and Game Commission to establish ecological reserves for the purpose of protecting rare and endangered wildlife, aquatic organisms, and critical habitat. Upper Newport Bay Ecological Reserve was established for the principal purpose of preserving and enhancing a saltwater marsh ecosystem. Section 30240(b) of the Coastal Act states:

> *(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

Upper Newport Bay (hereafter 'the Bay') is one of the last major estuarine habitats remaining in a near natural condition in southern California. The Department of Fish and Game notes that the Bay is ecologically valuable due to the fact that it supports many resident and migratory birds; many species of plants and animals; and that the Bay is a nursery for numerous marine organisms. In addition, the reserve contains areas that qualify as ESHA. The Upper Newport Bay Regional Park, Existing Conditions Report (May 30, 1990) identifies a total of 22 natural communities within Upper Newport Bay. Furthermore, the Bay is an important recreation area and supports nature study, bird watching, and fishing. According to the Los Angeles Times (Monday, July 22, 1996) over two million persons per year visit the Ecological Reserve. Thus, the Ecological Reserve is an important coastal visitor destination because of its ecological value and for its recreational benefits such as open space, and bird watching. Human activity, in the form of increasing urban development adjacent to the Ecological Reserve has had significant adverse effects on the Bay. Major adverse effects include increased sediment flowing into the Bay, the elimination of natural vegetation, and the elimination of habitat adjoining the Bay.

Concerning ESHA degradation, Commission staff noted in a working paper for the San Diego County Regional Coastal Wetlands Workshop (July 20 and 21, 1978) that: "*Excessive sedimentation is probably the biggest problem facing Upper Newport. The lack of proper watershed management and in particular poor grading practices have accelerated erosion and sediment transport. This process is endangering ecological habitats.*" As re-emphasis of sedimentation as a problem, the Los Angeles Times (April 6, 1992) wrote that urban development adjacent to Upper Newport Bay has caused silt to flow into the Bay. The Bay is dredged on an on-going basis to remove accumulated sediments.

Maintaining the Bay's biological productivity and ESHA values is a critical concern since estuaries are one of the most productive areas of the world. Tidal action allows acres of saltwater, spreading over mudflats to reach sunlight and air. This stimulates the growth of algae and plankton that begins the food chain essential to wildlife and commercial ocean fishing. Coastal mudflats support seventy percent of the birds using the Pacific Flyway. Birds known to frequent the Ecological Reserve include the light-footed clapper rail and Beldings Savannah sparrow, Brown Pelican, California least tern. The intertidal mud flats support cordgrass, pickleweed,

jaumea and the endangered salt marsh bird's beak. Some ocean dwelling fish such as the California halibut and barred sandbass use Upper Newport Bay for spawning and as a nursery.

Vegetation patterns in the watershed have been altered considerably by human activity. These changes have resulted from agricultural use, increasing urbanization, commercial development, and industrial development. Undeveloped areas still contain arid scrub vegetation that is typical of southern California. According the Upper Newport Bay Regional Park, Existing Conditions Report (May 30, 1990) exotic species, both plant and animal have invaded Upper Newport Bay. These include non-native grassland species, which are infiltrating native habitat such as wild oats, barely, fennel, and artichoke thistle. Introduced birds include English sparrows and rock doves. Introduced mammals include the house mouse and Virginia opossum.

Accordingly, development upon existing residential lots adjacent to the bay must be designed to avoid degradation of bay habitat. Proposed landscaping is one important issue to review. The applicant has submitted a landscape plan. However, it has been determined that the plan consists of invasive and non-drought tolerant species. The use of non-native and invasive plant species within new development can cause adverse impacts upon the adjacent natural habitat areas. Non-native and invasive plant species can directly colonize adjacent natural habitat areas. In addition, the seeds from non-native and invasive plant species can be spread from the developed area into natural habitat areas via natural dispersal mechanisms such as wind or water runoff and animal consumption and dispersal. These non-native and invasive plants can displace native plant species and the wildlife which depends upon the native plants. Non-native and invasive plants often can also reduce the biodiversity of natural areas because –absent the natural controls which may have existed in the plant's native habitat- non-native plants can spread quickly and create a monoculture in place of a diverse collection of plant species. Thus, the proposed landscape plan would be inconsistent with Section 30240(b) of the Coastal Act, which requires that development adjoining environmentally sensitive habitat areas and parks and recreation areas shall be designed to prevent impacts which would significantly degrade those areas and shall be compatible with the continuance of those habitat and recreation areas. To make the project consistent with the Coastal Act, the applicant would need to revise the landscape plan to use native plants. However, in addition to the project's inconsistency with Section 30240(b) of the Coastal Act, the proposed project has been found to be inconsistent with Sections 30253 and 30251 of the Coastal Act. Therefore, the Commission finds that the proposed project must be denied.

F. Public Access and Recreation

Section 30212 of the Coastal Act states, in relevant part states:

> *(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where:*
>
> *(2) adequate access exists nearby.*

Section 30252 of the Coastal Act states, in relevant part states:

> *The location and amount of new development should maintain and enhance public access to the coast by…*
>
> *(4) providing adequate parking facilities or providing substitute means of serving the development with public transportation…*

The proposed development is located on a lot that previously contained a single-family dwelling. The proposed development will not change the use or intensity of use of the site. Public access opportunities exist at Galaxy View Park, which overlooks the Bay and North Star Beach. The proposed development, as submitted, will not result in any adverse impacts to existing public access or recreation in the area. Upon completion of the project, the site would contain a single-family residence. The proposed development would provide adequate parking based on the Commission's regularly used parking ratio of two (2) parking spaces per individual dwelling unit. However, the proposed project has been found to be inconsistent with Sections 30253, 30251 and 30240(b)of the Coastal Act. Therefore, the Commission finds that the proposed must be denied.

G. Alternatives

Denial of the proposed project will neither eliminate all economically beneficial or productive use of the applicant's property, nor unreasonably limit the owner's reasonable investment backed expectations of the subject property. Several alternatives to the proposed development exist. One such alternative, provided merely as an example, is the following:

> New Residence Constructed Adhering to Slope Stability and Long Term Bluff Erosion Rate Concerns
>
> The applicant could construct a new residence that has been sited to avoid the areas subject to slope stability and long term bluff erosion rate concerns. To meet the requirements of the Coastal Act, bluff top developments must be sited and designed to: "*Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and* cliffs." In order to assure that this is the case, a development setback line must be established that places the proposed structures a sufficient distance from unstable or marginally stable bluffs to assure their safety, and that takes into account bluff retreat over the life of the structures, thus assuring the stability of the structures over their design life. The goal is to assure that by the time the bluff retreats sufficiently to

threaten the development, the structures themselves are obsolete. Replacement development can then be appropriately sited behind a new setback line.

The first aspect to consider in establishing development setbacks from the bluff edge is to determine whether the existing coastal bluff meets minimum requirements for slope stability. If the answer to this question is "yes," then no setback is necessary for slope stability considerations. If the answer is "no," then the distance from the bluff edge to a position where sufficient stability exists to assure safety must be found. In other words, a determination must be made relative to how far back from the unstable or marginally stable slope must development be sited to assure its safety. Assessing the stability of slopes against landsliding is undertaken through a quantitative slope stability analysis. In such an analysis, the forces resisting a potential landslide are first determined. These are essentially the strength of the rocks or soils making up the bluff. Next, the forces driving a potential landslide are determined. These forces are the weight of the rocks as projected along a potential slide surface. The resisting forces are divided by the driving forces to determine the "factor of safety." A value below 1.0 is theoretically impossible, as the slope would have failed already. A value of 1.0 indicates that failure is imminent. Factors of safety at increasing values above 1.0 lend increasing confidence in the stability of the slope. The industry-standard for new development is a factor of safety of 1.5.

In this case, the applicant has submitted slope stability analyses indicating that the slope has a factor of safety of less than 1.5. Thus, the slope is known to be unstable and some portions of the site on the bluff top also have a factor of safety less than 1.5. However, there is an approximately 85-foot deep area on the site, located from approximately 25-feet inland of the bluff edge that is presently known to be stable and presently has a factor of safety greater than 1.5.

The second aspect to be considered in the establishment of a development setback line from the edge of a coastal bluff is the issue of more gradual, or "grain by grain" erosion. In order to develop appropriate setbacks for bluff top development, the position of the bluff edge must be predicted so that development can be sited to be safe from long-term coastal erosion. The Coastal Act requires development to be stable for the anticipated life of the development (typically taken to be 75 years). The Commission has typically defined 'stable' to mean the development is sited in a location that will retain a 1.5 factor of safety throughout the life of the development without reliance upon a protective device. Thus, the development should be sited such that after 75 years of erosion/bluff retreat, the structures are in a location that retains the 1.5 factor of safety without reliance upon a protective device. Thus, the setback is derived by identifying the amount of erosion that can be anticipated based on historical data and adding that to the distance that one must move back from the bluff edge at present to reach the 1.5 factor of safety line.

In this case, the geotechnical investigation provided a long term bluff retreat analysis, but failed to provide a long term bluff erosion rate, which is necessary to aid in the establishment of a development setback line. In the absence of a long term bluff erosion rate, a conservative range of 10-25-feet of erosion has been determined for the site by the Commission's staff Geologist. Thus, siting the proposed development 10-25-feet landward of the applicant's 1.5 factor of safety line would likely assure the stability of the structure over it's life without reliance on a protective device.

Of course, another option would include identification of the specific long term bluff erosion

rate for the project site. This site specific value, if found to be valid, could then be used in-lieu of the conservative 10-25 foot value identified above. This site specific value would then be added to the 1.5 factor of safety line to identify the appropriate geologic setback necessary to assure the stability of the development over it's anticipate life without reliance upon a protective device.

H. Local Coastal Program

Section 30604(a) of the Coastal Act provides that the Commission shall issue a coastal development permit only if the project will not prejudice the ability of the local government having jurisdiction to prepare a Local Coastal Program which conforms with the Chapter 3 policies of the Coastal Act.

The City of Newport Beach Land Use Plan (LUP) was certified on May 19, 1982. Since the City only has an LUP, the policies of the LUP are used only as guidance. The Newport Beach LUP includes the following policy that relates to development at the subject site:

Development of Coastal Bluff Sites, Policy 2 (b) states,

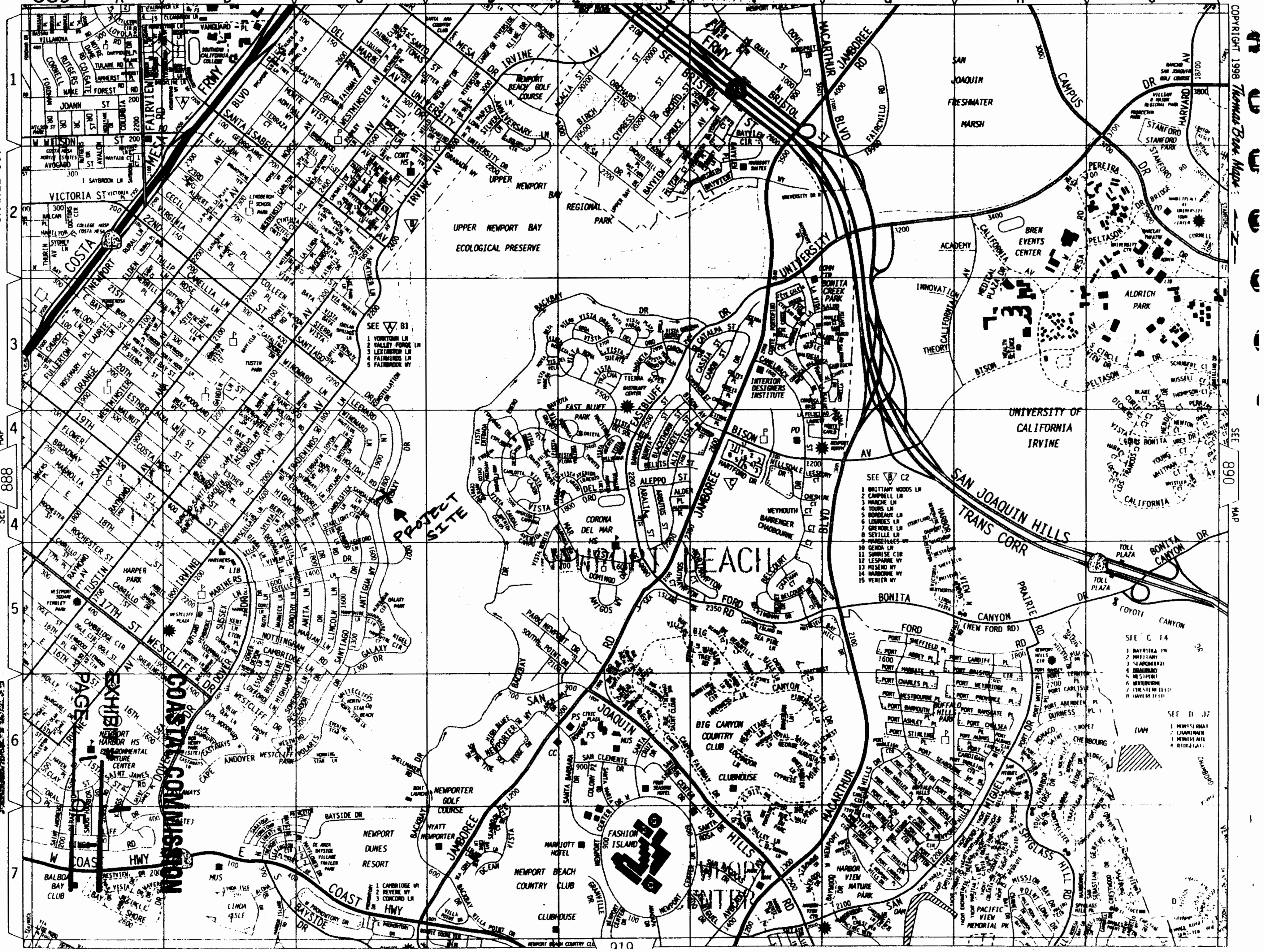
> *Public Views. The location and design of a proposed project shall take into account public view potential.*

The construction of the proposed project is inconsistent with the above identified policy in the City's certified LUP and the Chapter 3 policies of the Coastal Act discussed previously, specifically Sections 30253, 30251, 30235 and 30240(b). Over time bluff erosion would expose the proposed soldier piles and would alter the appearance of the natural bluff landform. Thus, the development would be inconsistent with the City's certified LUP. Furthermore, the proposed development would cause adverse impacts to the natural landform and coastal scenic resources, which is inconsistent with Section 30251 of the Coastal Act. Section 30253 of the Coastal Act states that new development shall assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs. Section 30251 of the Coastal Act states that permitted development should minimize landform alteration, visual impacts and the cumulative adverse impact that would occur if other lots develop the bluff face in the manner now proposed at the subject site. Section 30235 requires the Commission to permit the construction of protective devices to serve coastal dependent uses, to protect existing structures, and to protect existing beaches in danger of erosion. Section 30240(b) of the Coastal Act states that development in areas adjacent to parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas and be incompatible with their recreational use. The proposed development would not be consistent with the identified policies and therefore the development would prejudice the City's ability to prepare a Local Coastal Program for Newport Beach that is consistent with the Chapter 3 policies of the Coastal Act as required by Section 30604(a). Therefore, the project is found inconsistent with the policies in the City's certified LUP and the Chapter 3 policies of the Coastal Act and must be denied.

I. California Environmental Quality Act

Section 13096 of Title 14 of the California Code of Regulations requires Commission approval of Coastal Development Permits to be supported by a finding showing the permit, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effect, which the activity may have on the environment.

As described above, the proposed project would have adverse environmental impacts. There is a feasible alternative or mitigation measures available, such as new construction adhering to slope stability and long term bluff erosion rate concerns. Therefore, the proposed project is not consistent with CEQA or the policies of the Coastal Act because there are feasible alternatives, which would lessen significant adverse impacts, which the activity would have on the environment. Therefore, the project must be denied.


SEE 859 MAP
A
B
C
D
E
F
G
H
J
1
2
3
4
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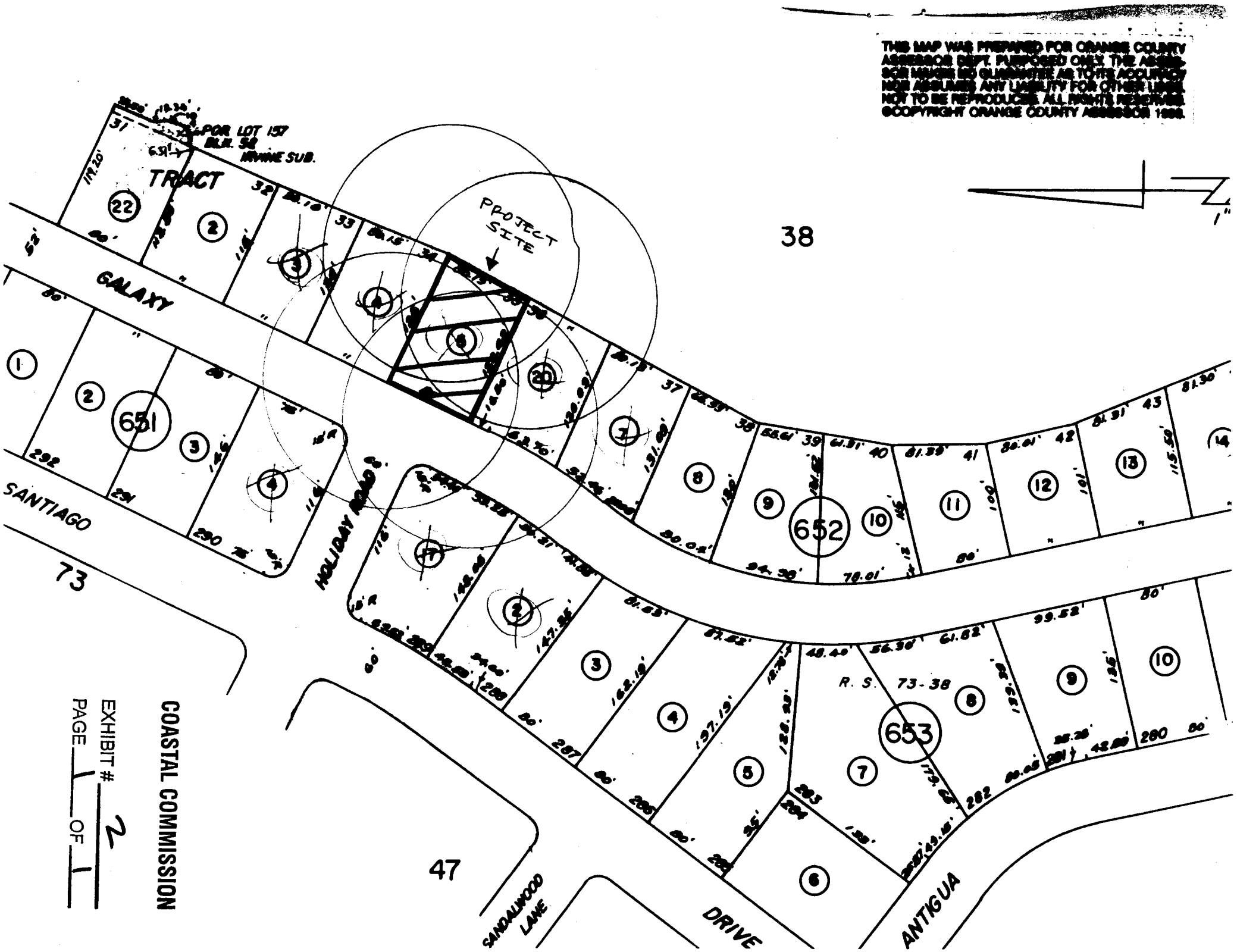
6
7
ORANGE CO.
SEE 888 MAP
SEE 890 MAP
COPYRIGHT 1996 Thomas Bros. Maps
COSTA MESA FRWY
NEWPORT BLVD
IRVINE AV
UNIVERSITY DR
BRISTOL ST
MACARTHUR BLVD
JAMBOREE RD
SAN JOAQUIN FRESHWATER MARSH
UPPER NEWPORT BAY ECOLOGICAL PRESERVE
UPPER NEWPORT BAY REGIONAL PARK
NEWPORT BEACH GOLF COURSE
VICTORIA ST
19TH ST
17TH ST
WESTCLIFF DR
DOVER DR
IRVINE AV
EASTBLUFF DR
BISON AV
FORD RD
BONITA CANYON RD
SAN JOAQUIN HILLS TRANS CORR
CAMPUS DR
UNIVERSITY OF CALIFORNIA IRVINE
BREN EVENTS CENTER
ALDRICH PARK
BONITA CREEK PARK
INTERIOR DESIGNERS INSTITUTE
CORONA DEL MAR HS
NEWPORT BEACH
PROJECT SITE
BIG CANYON COUNTRY CLUB
FASHION ISLAND
NEWPORT CENTER
NEWPORT BEACH COUNTRY CLUB
NEWPORTER GOLF COURSE
NEWPORT DUNES RESORT
HARBOR VIEW NATURE PARK
PACIFIC VIEW MEMORIAL PK
SPYGLASS HILL RD
COAST HWY
BALBOA BAY CLUB
LINDA ISLE
TOLL PLAZA
EXHIBIT
PAGE 1 OF
COASTAL COMMISSION
919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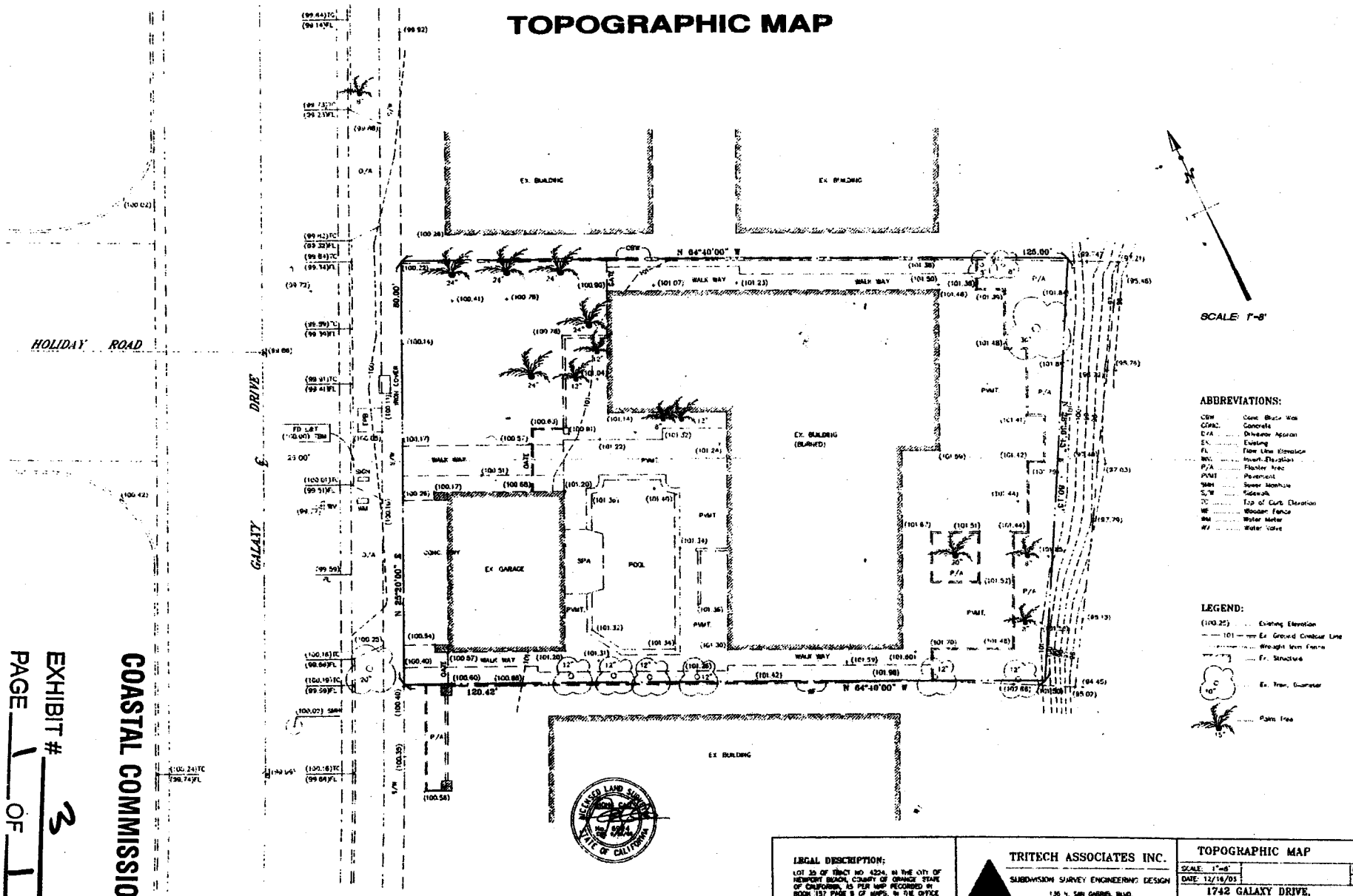
PROJECT SITE
TRACT
POR LOT 157 BLK. 56 IRVINE SUB.
GALAXY
SANTIAGO
HOLIDAY ROAD
SANDALWOOD LANE
DRIVE
ANTIGUA
73
47
38
651
652
653
R. S. 73-38
1"
COASTAL COMMISSION
EXHIBIT # 2
PAGE 1 OF 1

TOPOGRAPHIC MAP



ABBREVIATIONS:

CBW	Cane Block Wall
CONC.	Concrete
D/A	Driveway Approach
EX.	Existing
FL	Flow Line Elevation
INV.	Invert Elevation
P/A	Planter Area
PVMT	Pavement
MAN	Sewer Manhole
S/W	Sidewalk
TC	Top of Curb Elevation
WF	Wooden Fence
WM	Water Meter
WV	Water Valve

LEGEND:

(100.25) ..... Existing Elevation
101 ..... Ex. Ground Contour Line
..... Wrought Iron Fence
..... Ex. Structure
..... Ex. Tree, Diameter
..... Palm Tree

LEGAL DESCRIPTION:

LOT 39 OF TRACT NO. 4224, IN THE CITY OF NEWPORT BEACH, COUNTY OF ORANGE STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 157 PAGE 8 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY

TRITECH ASSOCIATES INC.
SUBDIVISION SURVEY ENGINEERING DESIGN
135 N. SAN GABRIEL BLVD.
SAN GABRIEL, CA 91775
PH. (626) 570-1918

TOPOGRAPHIC MAP

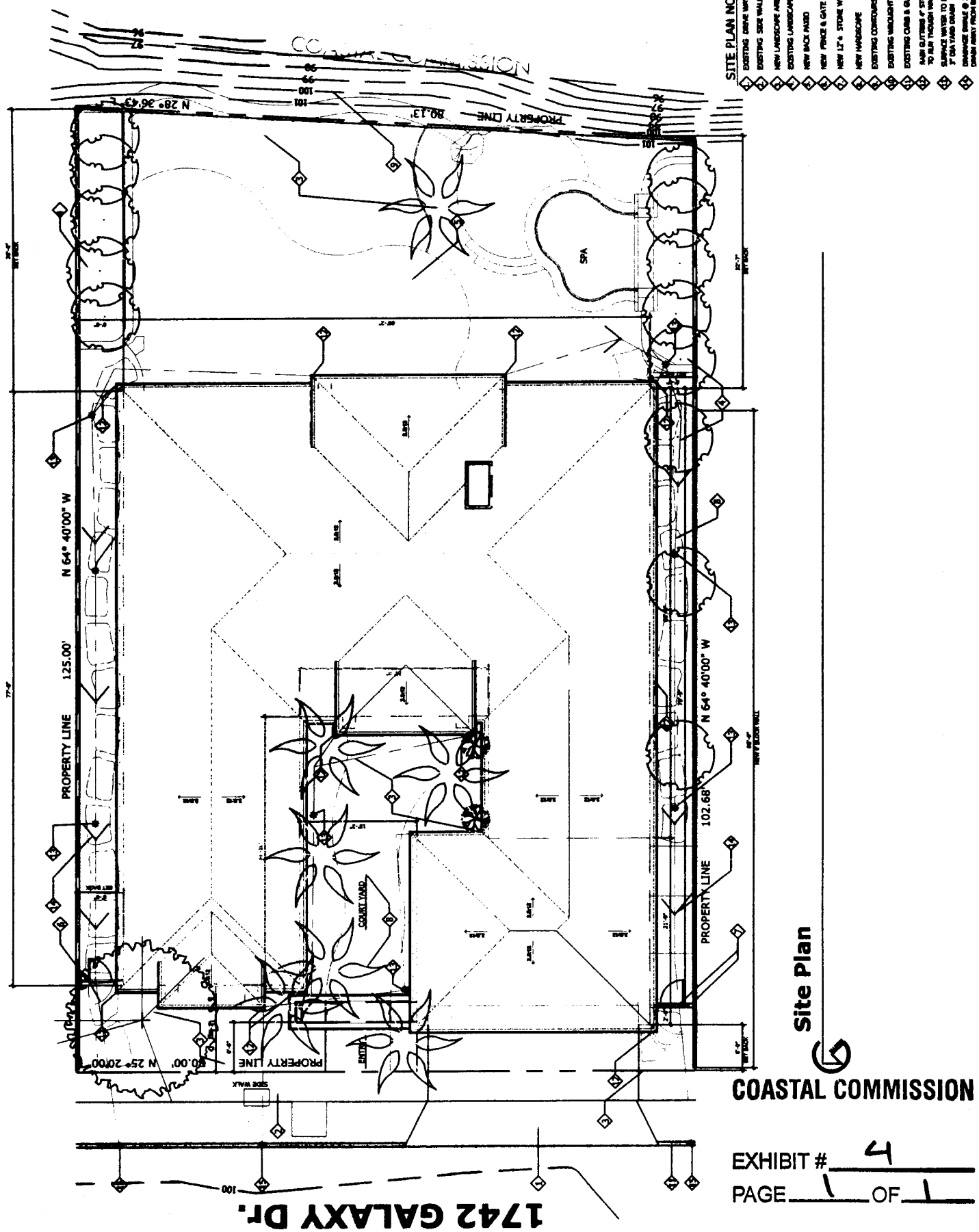
SCALE: 1"=8' | DRAWN BY: MHALE
DATE: 12/16/05 | REVISED:

1742 GALAXY DRIVE,
NEWPORT BEACH, CA 92660

SHEET 1 OF 1 | JOB NO. 031215

COASTAL COMMISSION

EXHIBIT # 3
PAGE 1 OF 1

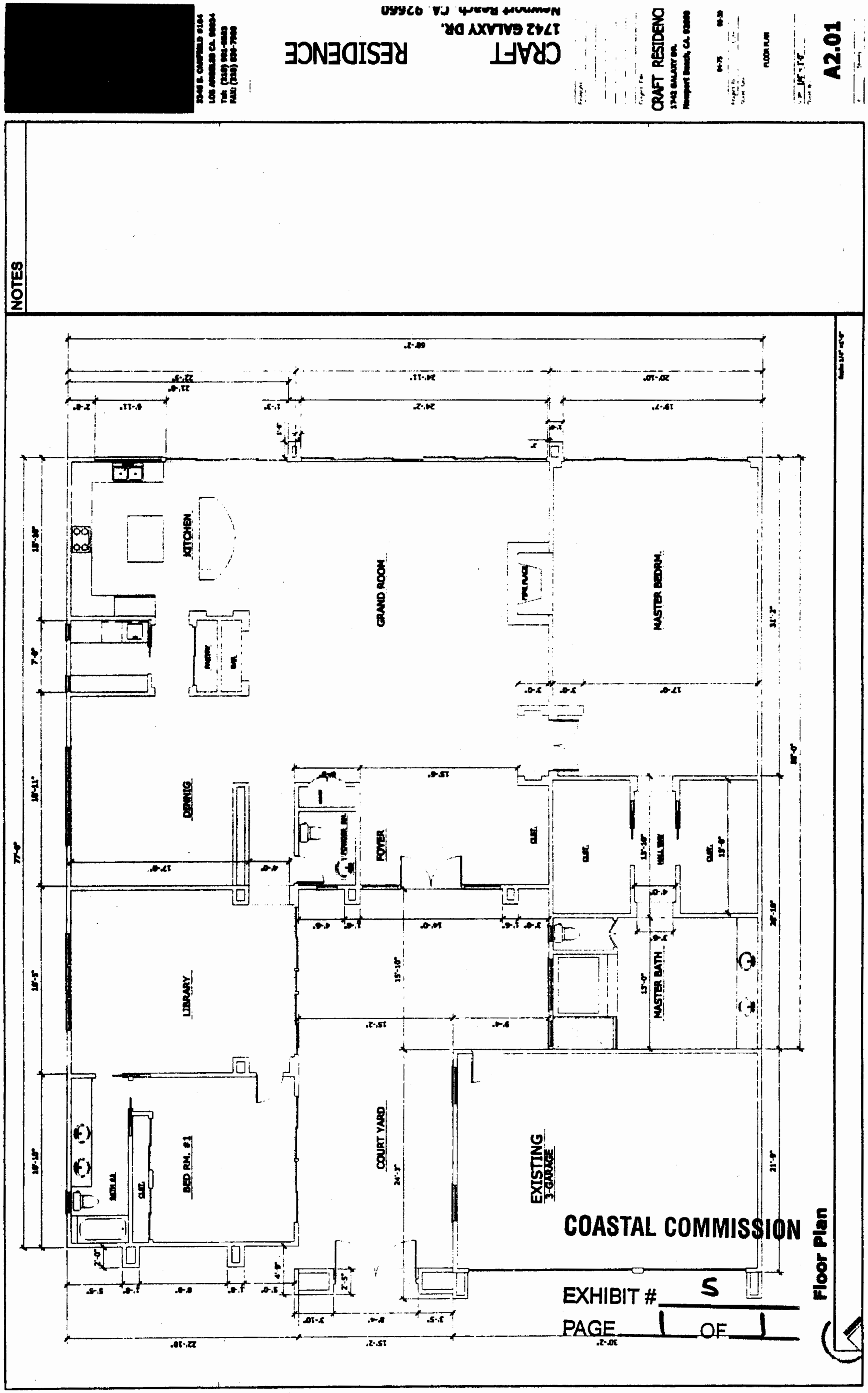


Site Plan

COASTAL COMMISSION

EXHIBIT # 4

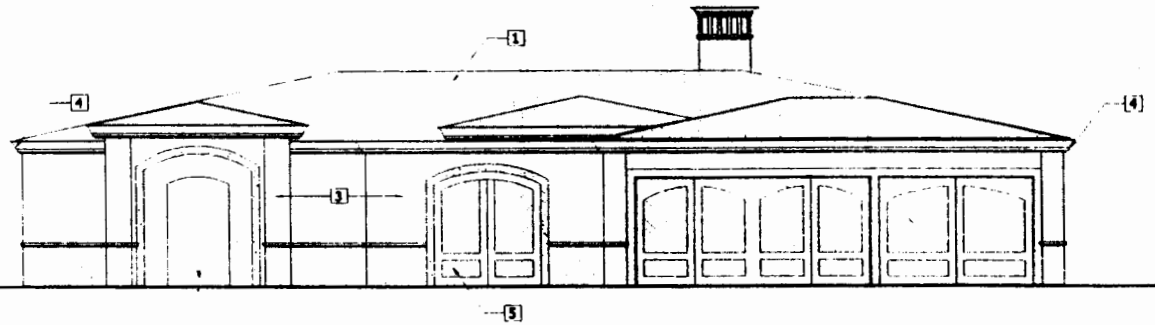
PAGE 1 OF 1



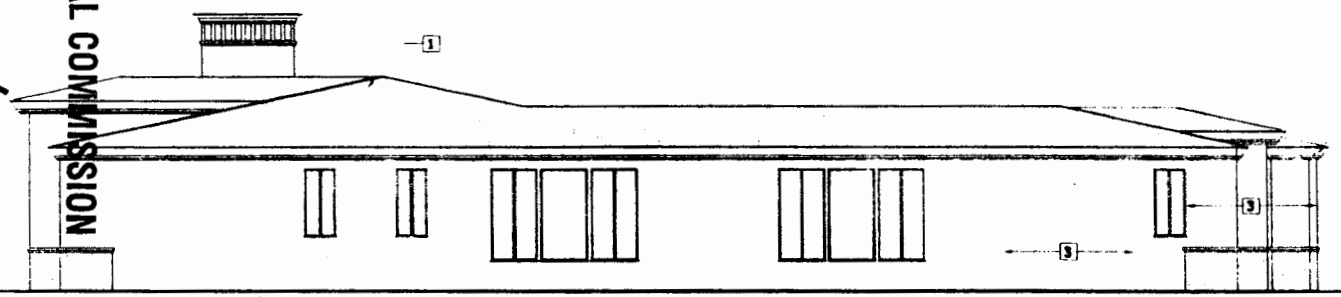
COASTAL COMMISSION

EXHIBIT # 5

PAGE 1 OF 1



North Front Elevation



East Side Elevation

ELEVATION NOTES:

1. SLATE ROOF
3. PRECAST CONC. CORNICES & TRIMS
5. SMOOTH PLASTER
6. COPPER GUTTER & DOWNSPOUTS
9. WOOD GATES

3240 S. CANFIELD #104
LOS ANGELES CA. 90034
Tel: (310) 991-9883
FAX: (310) 836-7988

CRAFT RESIDENCE

1742 GALAXY DR.
Newport Beach CA 92660

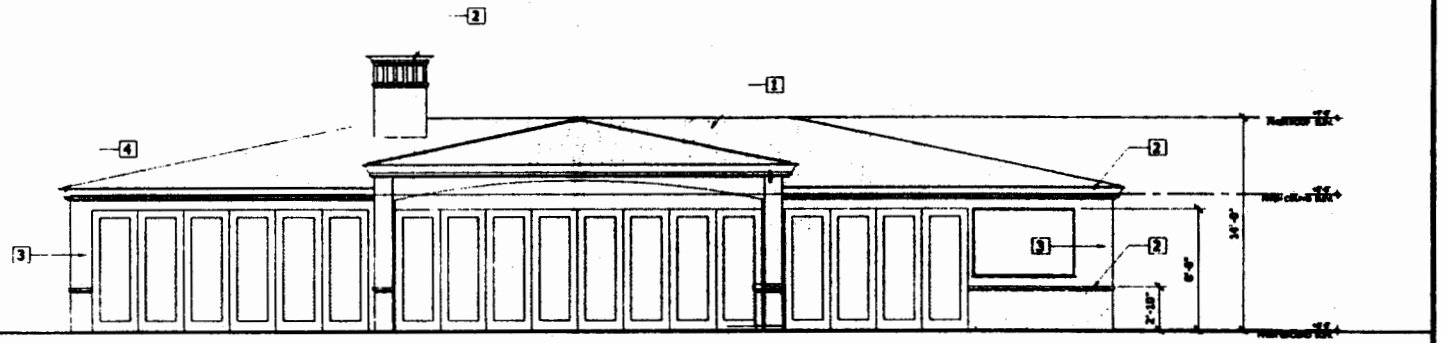
CRAFT RESIDENCE
1742 GALAXY DR.
Newport Beach, CA. 92660

04-75 08-30-

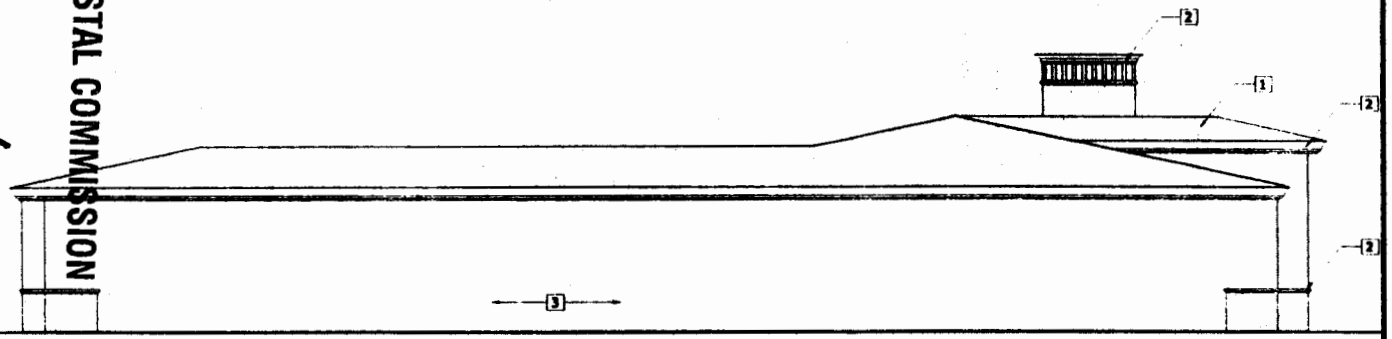
EXTERIOR ELEVATIONS

1/4" = 1'-0"

A3.03



Back South Elevation



West Side Elevation

ELEVATION NOTES:

1. SLATE ROOF
2. PRECAST CONC. CORNICES & TRIMS
3. SMOOTH PLASTER
4. COPPER GUTTER & DOWNSPOUTS
5. WOOD GATES

3345 S. CANFIELD #104
LOS ANGELES CA. 90034
Tel: (310) 991-0983
FAX: (310) 836-7988

CRAFT RESIDENCE
1742 GALAXY DR.
Newport Beach, CA. 92660

CRAFT RESIDENCE
1742 GALAXY DR.
Newport Beach, CA. 92660

04-75 05-304

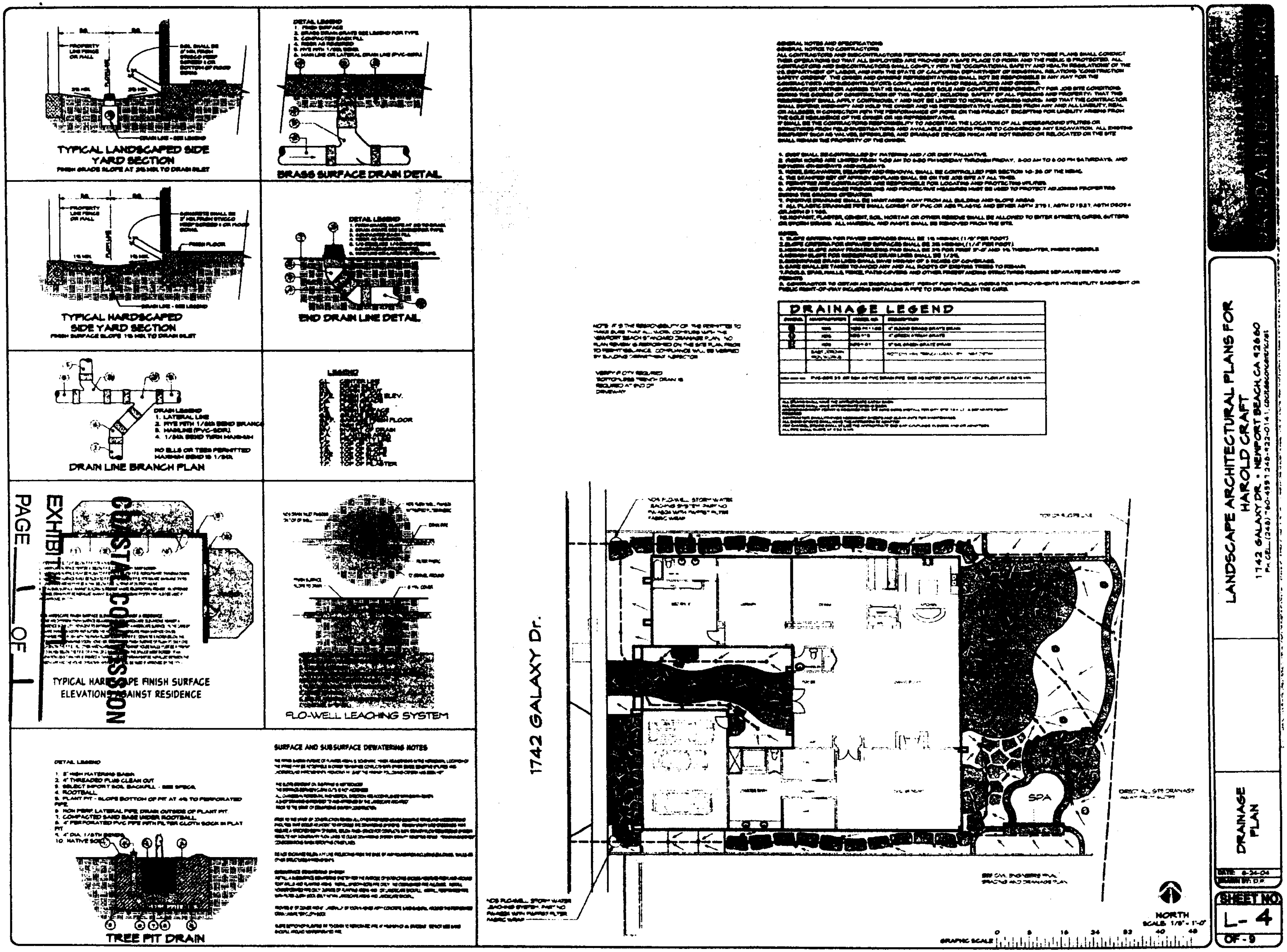
BUILDING ELEVATIONS

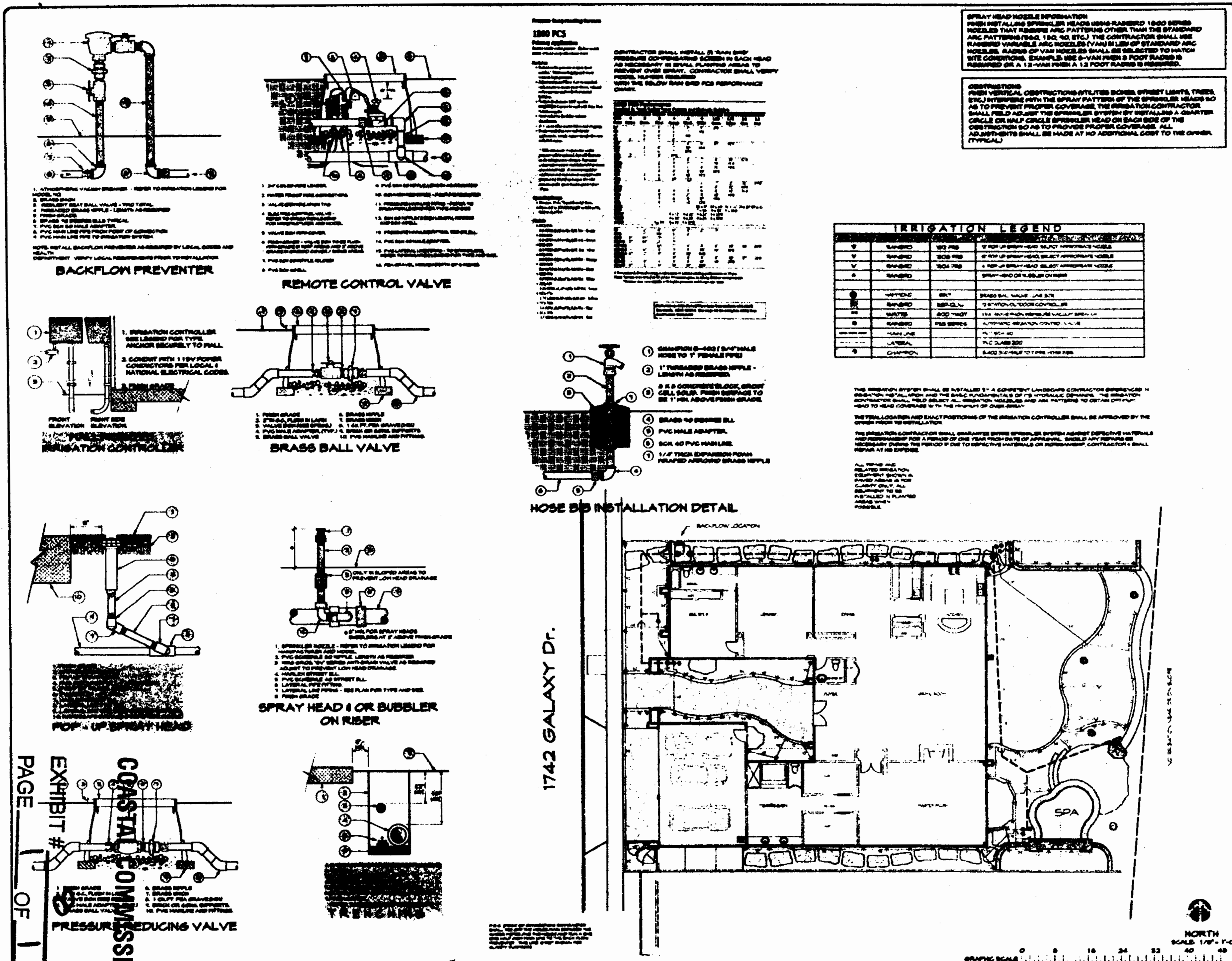
1/4" = 1'-0"

A3.02

COASTAL COMMISSION

EXHIBIT # 6
PAGE 2 OF 2


TYPICAL LANDSCAPED SIDE YARD SECTION
BRASS SURFACE DRAIN DETAIL
TYPICAL HARDSCAPED SIDE YARD SECTION
END DRAIN LINE DETAIL
DRAIN LINE BRANCH PLAN
NO ELLS OR TEES PERMITTED
TYPICAL HARDSCAPE FINISH SURFACE ELEVATIONS AGAINST RESIDENCE
FLO-WELL LEACHING SYSTEM
SURFACE AND SUBSURFACE DEWATERING NOTES
TREE PIT DRAIN
COASTAL COMMISSION
EXHIBIT
PAGE 1 OF 1
GENERAL NOTES AND SPECIFICATIONS
DRAINAGE LEGEND
1742 GALAXY Dr.
SPA
NORTH
GRAPHIC SCALE
LANDSCAPE ARCHITECTURAL PLANS FOR
HAROLD CRAFT
1742 GALAXY DR. • NEWPORT BEACH, CA 92660
DRAINAGE PLAN
SHEET NO.
L-4
OF-9



BACKFLOW PREVENTER
REMOTE CONTROL VALVE
IRRIGATION CONTROLLER
1. IRRIGATION CONTROLLER SEE LEGEND FOR TYPE ANCHOR SECURELY TO WALL
2. CONDUIT WITH 110V POWER CONNECTIONS PER LOCAL & NATIONAL ELECTRICAL CODES
FRONT ELEVATION
RIGHT SIDE ELEVATION
BRASS BALL VALVE
HOSE BIB INSTALLATION DETAIL
1 CHAMPION B-402 | 3/4" HALE HOSE TO 1" FEMALE PIPE
2 1" THREADED BRASS NIPPLE - LENGTH AS REQUIRED
3 8 X 8 CONCRETE BLOCK, GROUT CELL SOLID. FINISH SURFACE TO BE 1" MIN. ABOVE FINISH GRADE.
4 BRASS 90 DEGREE ELL
5 PVC MALE ADAPTER.
6 SCH. 40 PVC MAIN LINE
7 1/4" THICK EXPANSION FOAM WRAPPED AROUND BRASS NIPPLE
POP-UP SPRAY HEAD
SPRAY HEAD & OR BUBBLER ON RISER
PRESSURE REDUCING VALVE
TRENCHING
IRRIGATION LEGEND
1742 GALAXY Dr.
BACKFLOW LOCATION
SPA
NORTH
SCALE 1/8" = 1'-0"
GRAPHIC SCALE
0 8 16 24 32 40 48

LANDSCAPE ARCHITECTURAL PLANS FOR HAROLD CRAFT

1742 GALAXY DR. • NEWPORT BEACH, CA 92660

IRRIGATION PLAN

SHEET NO.

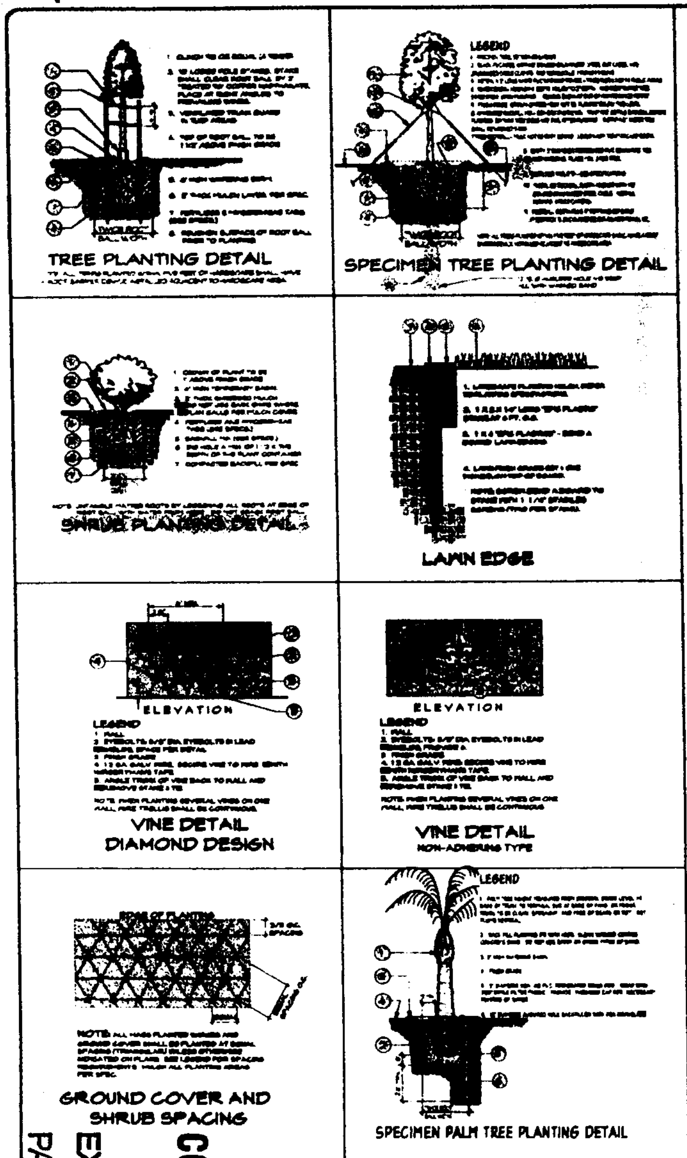
L-6

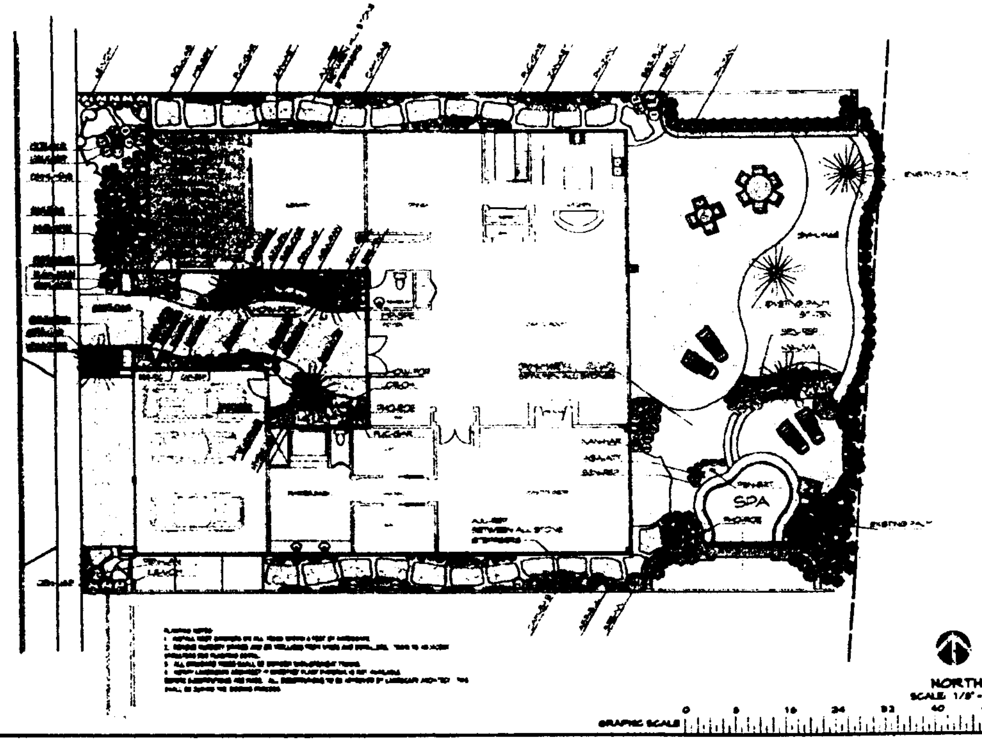
OF 9

COASTAL COMMISSION

EXHIBIT # 6

PAGE 1 OF 1





BOILS REPORT

LANDSCAPE ARCHITECTURAL PLANS FOR
HAROLD CRAFT
1742 GALAXY DR. • NEWPORT BEACH, CA 92660

PLANTING PLAN

DATE: 6-24-04

SHEET NO.
L-7
OF 9

COASTAL COMMISSION
EXHIBIT 9
PAGE 1 OF 1

STRUCTURAL NOTES

PILE NOTES

GENERAL NOTES

1). THE CONTRACTOR SHALL EXAMINE THE STRUCTURAL DRAWINGS AND SHALL NOTIFY THE STRUCTURAL ENGINEER OF ANY DISCREPANCIES HE MAY FIND BEFORE PROCEEDING WITH THE WORK.
2). THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS AT THE SITE AND SHALL NOTIFY STRUCTURAL ENGINEER OF DISCREPANCIES BETWEEN THE ACTUAL CONDITIONS AND INFORMATION SHOWN ON THE DRAWINGS BEFORE PROCEEDING WITH THE WORK.
3). ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE LATEST EDITION OF THE UNIFORM BUILDING CODE & SUCH OTHER REGULATING AGENCIES [illegible] AUTHORITY OVER ANY PORTION OF THE WORK INCLUDING THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY.

SOIL

1). SOIL REPORTS AND/OR GEO. REPORT IS BY COAST GEOTECHNICAL, DATED 1/24/04 ARE PART OF THIS PLAN.

REINFORCING STEEL

1). INTERMEDIATE GRADE PER ASTM 615, GRADE 40 FOR #3 AND SMALLER, GRADE 60 FOR #4 AND LARGER BARS.

SOIL ENGINEER.

1) SHALL INSPECT & APPROVE EXCAVATION PRIOR TO PLACING OF REINFORCING STEEL.
2) ALL GRADING SHALL BE PERFORMED UNDER THE INSPECTION OF THE SOIL ENGINEER.
3) THE FINAL STRUCTURAL AND GRADING PLANS SHOULD BE REVIEWED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.

OSHA

OBTAIN NECESSARY PERMIT FROM THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY FOR TRENCHES OR EXCAVATIONS 5' OR MORE IN DEPTH INTO WHICH A PERSON IS REQUIRED TO DESCEND.

CONCRETE

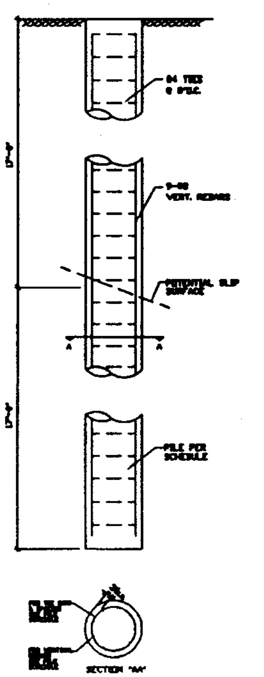
1). CONCRETE USED IN THE WORK SHALL HAVE THE FOLLOWING ULTIMATE COMPRESSIVE STRENGTH AT AGE 28 DAYS.

LOCATION IN STRUCTURE	ULTIMATE STRENGTH
A. SLAB ON GRADE	[illegible] PSI
B. GRADE BEAMS AND STEM WALLS	[illegible] PSI
C. PILES AND CAISSONS	[illegible] PSI

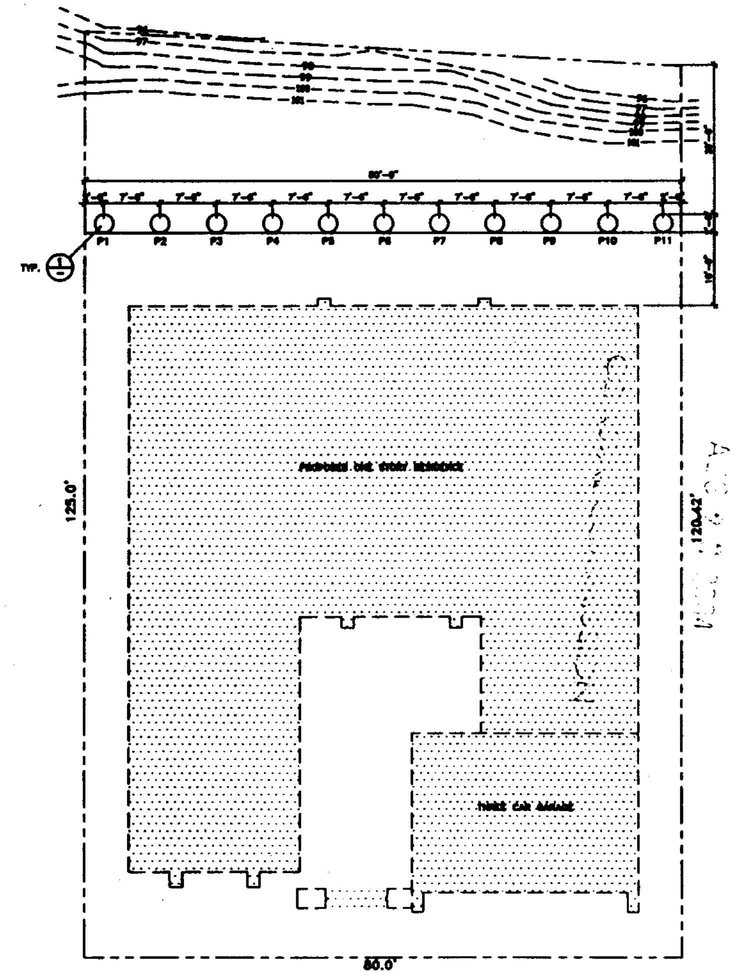
2). SPECIAL INSPECTION BY A DEPUTY INSPECTOR IS REQUIRED FOR ALL CONCRETE WITH REQUIRED STRENGTH EXCEEDING [illegible] PSI.

PILE SCHEDULE

I.D. #	DIAM.	DEPTH TO BEDROCK	TOTAL DEPTH	VERTICAL REINF.	HORZ. TIES
P1–P11	30"	17'–0"	34'–0"	9–#8	#4 @6"



PILE DETAIL 1



1742 GALAXY DRIVE

PLOT PLAN 1/8"=1'-0"

ADDITION AND REMODEL FOR:
CRAFT RESIDENCE
1742 GALAXY DRIVE
NEWPORT BEACH, CALIFORNIA 92660

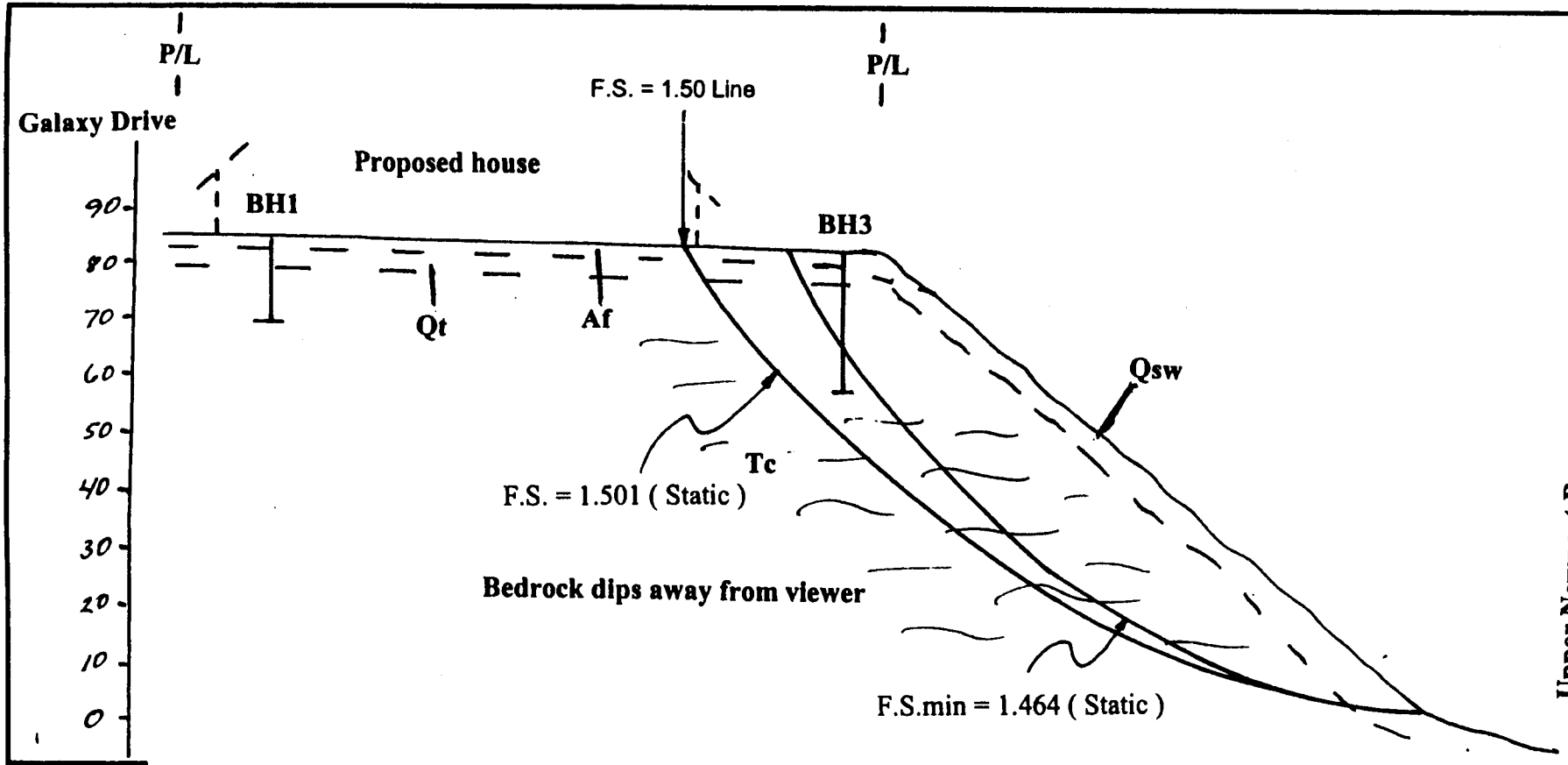
H.K. & ASSOCIATES
STRUCTURAL ENGINEERING
100 S. DOHENY DR. #1017
LOS ANGELES, CA 90048
TEL:310-278-3718

REVISIONS

DRAWN H.K.
DATE 8/15/04
SCALE
JOB NO. 0406
SHEET S-7
OF SHEETS

COASTAL COMMISSION
EXHIBIT # 10
PAGE 1 OF 1

COASTAL COMMISSION
EXHIBIT #
PAGE OF



Section A - A'

Scale: 1" = 30' (H=V)

GEOLOGIC CROSS SECTION

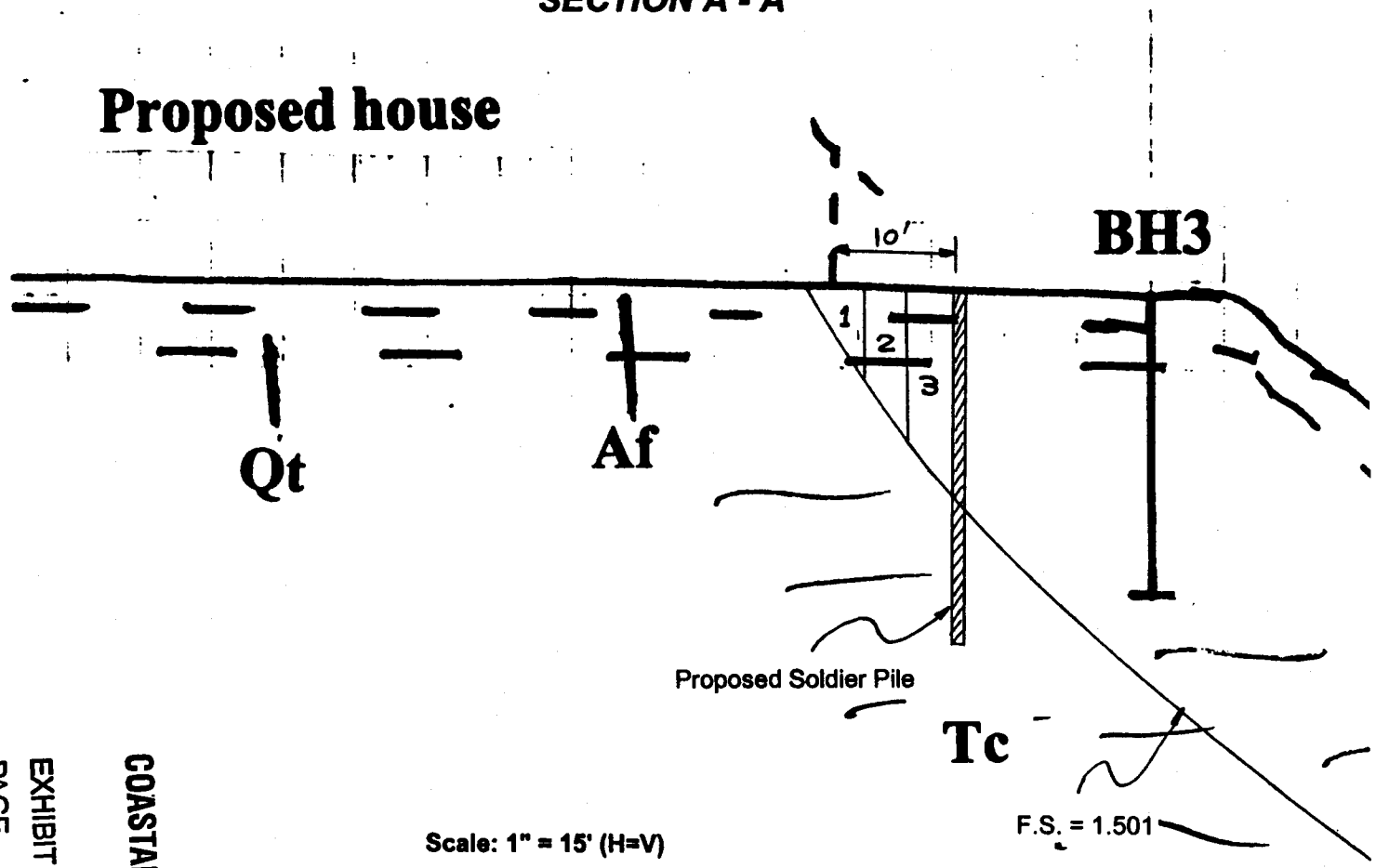
COASTAL COMMISSION

EXHIBIT # 11

PAGE 1 OF 2

COAST GEOTECHNICAL

W.O. 254004 Plate 1



COAST GEOTECHNICAL

W.O. 254004 Plate J

COASTAL COMMISSION

EXHIBIT # 11

PAGE 2 OF 2