

**CALIFORNIA COASTAL COMMISSION**

South Coast Area Office  
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**RECORD PACKET COPY**

Filed: 3/17/2000  
 49th Day: 5/5/2000  
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 Staff: CP-LB  
 Staff Report: 4/20/2000  
 Hearing Date: May 9, 2000  
 Commission Action:


**Tu19j****STAFF REPORT: REGULAR CALENDAR**

**APPLICATION NUMBER:** 5-00-101  
**APPLICANT:** Catalina Island Yacht Club  
**AGENT:** A. Ross Cash, Cash & Associates  
**PROJECT LOCATION:** 30 Casino Way, City of Avalon, Los Angeles County.

**PROJECT DESCRIPTION:** Repair and/or replace piles of existing pier.

Pier Area	5,294 square feet
Building Coverage	5,294 square feet
Pavement Coverage	0 square feet
Landscape Coverage	0 square feet
Parking Spaces	0
Plan Designation	Resort & Recreation
Ht above MLLW	13.5 feet

**LOCAL APPROVAL:** City of Avalon Approval in Concept, 2/24/2000.

**SUBSTANTIVE FILE DOCUMENTS:**

1. City of Avalon Certified Local Coastal Program.
2. Lease Agreement between Catalina Island Yacht Club & City of Avalon.

**SUMMARY OF STAFF RECOMMENDATION**

A coastal development permit is required from the Commission because the proposed development is located seaward of the mean high tide line on submerged lands within the Commission's area of original jurisdiction. Staff recommends that the Commission grant a permit for the proposed development with conditions to prevent adverse impacts to marine resources, protect public rights that may exist on the site, require conformance with resource agency requirements, and to require the applicant and City (owner of the pier) to assume the risks of the development. The applicant agrees with the recommendation.

**STAFF NOTE:**

The existing pier which is the subject of this application is constructed over State Tidelands that are administered by the City of Avalon pursuant to an agreement with the State Lands Commission (Exhibit #2). The City of Avalon owns the pier. The applicant (Catalina Island Yacht Club) has leased the structure from the City since 1946.

A coastal development permit is required from the Commission for the proposed development because the site is located seaward of the mean high tide line (MHTL) within the Commission's area of original jurisdiction. Pursuant to Section 30519 of the Coastal Act, any development located within the Commission's area of original jurisdiction requires a coastal development permit from the Commission. In this case, the MHTL differentiates the Commission's area of retained (original) jurisdiction for tidelands, submerged lands, and public trust lands from the landward area for which the City of Avalon has accepted coastal development permit jurisdiction pursuant to the Avalon certified Local Coastal Program. The Commission's standard of review for the proposed development is the Chapter 3 policies of the Coastal Act. The City of Avalon certified LCP is advisory in nature and may provide guidance.

**STAFF RECOMMENDATION:**

The staff recommends that the Commission adopt the following resolution to **APPROVE** the coastal development permit application with special conditions:

**MOTION**

*"I move that the Commission approve with special conditions Coastal Development Permit 5-00-101 per the staff recommendation as set forth below."*

Staff recommends a **YES** vote which would result in the adoption of the following resolution and findings. An affirmative vote by a majority of the Commissioners present is needed to pass the motion.

**I. Resolution: Approval with Conditions**

The Commission hereby grants, subject to the conditions below, a coastal development permit for the proposed development on the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, is located between the sea and the first public road nearest the shoreline and is in conformance with the public access and public recreation policies of Chapter 3 of the Coastal Act, and will not have any significant adverse effects on the environment within the meaning of the California Environmental Quality Act.

## II. Standard Conditions

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. Expiration. If development has not commenced, the permit will expire two years from the date this permit is reported to the Commission. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. Compliance. All development must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.
4. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
5. Inspections. The Commission staff shall be allowed to inspect the site and the project during its development, subject to 24-hour advance notice.
6. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
7. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

## III. Special Conditions

### 1. Turbidity Control

Prior to issuance of the coastal development permit, the applicant shall submit a turbidity control plan, subject to the review and approval of the Executive Director, to minimize and control turbidity and siltation during demolition and construction. The plan shall include the use of silt curtains and/or other forms of barriers acceptable to the Executive Director to confine turbid water to the immediate area of demolition and construction. The applicant shall implement and carry out the turbidity control plan consistent with the plan approved by the Executive Director.

2. Eelgrass Mitigation Plan

Prior to the commencement of demolition and construction, the applicant shall: a) survey and map the eelgrass (*Zostera marina*) beds which exist within the project area, b) indicate on a detailed site plan all areas of eelgrass and potential eelgrass disturbance, and c) submit the eelgrass survey and site plan for the review and approval of the Executive Director along with an eelgrass mitigation plan which shall contain: 1) methods for minimizing the loss of eelgrass, 2) procedures for transplanting and re-establishing any disturbed eelgrass within the project site in order to maintain the extent of eelgrass at the pre-project level, and 3) a timeline for implementing re-establishment of disturbed eelgrass. The applicant shall obtain the Executive Director's approval of the eelgrass mitigation plan prior to any demolition or construction. The applicant shall implement and carry out the eelgrass mitigation plan consistent with the plan approved by the Executive Director.

If the proposed project has not been completed within twelve months of the Executive Director's approval of the applicant's eelgrass mitigation plan, a new eelgrass survey and updated eelgrass mitigation plan shall be submitted for the review and approval of the Executive Director before continuing with the approved demolition and construction.

3. Creosote

The use of creosote treated wood products is prohibited except for encased creosote treated wood products that have been authorized for use in the proposed project by the California Department of Fish and Game.

4. Disposal of Materials

All materials removed from the pier shall be taken from the site and out of coastal waters to be disposed of or recycled in compliance with all local, state and federal regulations. No debris or fill is permitted to be placed in coastal waters.

5. Public Rights

The Coastal Commission's approval of this coastal development permit shall not constitute a waiver of any public rights that may exist on the property. The permittee shall not use this coastal development permit as evidence of a waiver of any public rights that may exist on the property.

6. Assumption of Risk

A) By acceptance of this coastal development permit, the applicant and City of Avalon acknowledge and agree: (i) that the site may be subject to hazards from seismic events, liquefaction, storms, waves, floods and erosion; (ii) to assume the

risks to the permittee and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards; and (v) to agree to include a provision in any subsequent sublease or assignment of the development authorized by this permit requiring the sublessee or assignee to submit a written agreement to the Commission, for the review and approval of the Executive Director, incorporating all of the foregoing restrictions identified in (i) through (iv).

B) Prior to issuance of the coastal development permit, the applicant shall submit a copy of a written agreement by the applicant and the City of Avalon, in a form and content acceptable to the Executive Director, accepting all of the above terms of subsection A of this condition.

7. Conformance with the Requirements of the Resource Agencies

The permittee shall comply with all permit requirements and mitigation measures of the California Department of Fish and Game, Regional Water Quality Control Board, U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service with respect to preservation and protection of water quality and marine environment. Any change in the approved project which may be required by the above-stated agencies shall be submitted to the Executive Director in order to determine if the proposed change shall require a permit amendment pursuant to the requirements of the Coastal Act and the California Code of Regulations.

IV. Findings and Declarations

The Commission hereby finds and declares:

A. Project Description

The applicant proposes to repair the piles of the pier supporting the 5,294 square foot Catalina Yacht Club building leased by the applicant from the City of Avalon (See Exhibits). The Catalina Yacht Club is located on the Avalon Bay waterfront (The Crescent) between downtown Avalon and Casino Point (Exhibit #2). The yacht club occupies the entire pier area. The shoreline at the foot of the pier is comprised of a vertical seawall which is protected by a rock revetment. The landside entrance to the yacht club is located seaward

of the public boardwalk that parallels the shoreline of Avalon Bay. The pier is constructed over intertidal and subtidal mudflats that range between elevation +1.0' and -9.0' MLLW (Exhibit #3).

The proposed project involves the removal of the existing concrete shells that encase the old timber piles, inspection of the old piles, and the repair or replacement of the damaged piles, girders and braces (Exhibit #3). Damaged piles are proposed to be repaired by encasing the piles with composite pipes and filling the voids with grout. If a pile is found to be damaged beyond repair, the damaged pile will be removed and replaced with a composite pipe filled with concrete. The repaired and replaced piles are proposed to be connected to the existing timber girders with new fiberglass braces and fiberglass bolts. Additional wood bracing is also proposed to be installed in order to strengthen the pier that supports the 5,294 square foot yacht club building.

The applicant proposes to hand-carry the broken concrete and damaged timber up from under the pier to the waterfront road (Catherine Way) where it would be loaded onto a truck and taken to an appropriate reuse or disposal site. Professional divers will do much of the in-water work. The concrete is proposed to be recycled to be used for road construction on the island (Exhibit #4). The removed timber piles and girders will be either: a) donated to the City for future reuse on the island, b) burned by Seagull Sanitation Company on the island, or c) transported to the mainland for proper disposal.

## **B. Marine Resources**

The Coastal Act contains policies that address development in or near coastal waters. The proposed project is located in and over the coastal waters of Avalon Bay (Exhibit #2). The standard of review development proposed in coastal waters is the Chapter 3 policies of the Coastal Act, including the following marine resource policies.

Sections 30230 and 30231 of the Coastal Act require that marine resources and the biological productivity of coastal waters be maintained and enhanced.

Section 30230 of the Coastal Act states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 of the Coastal Act states:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine

organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

The proposed project involves the repair of an existing structure that is located in coastal waters. The number of piles is not proposed to be increased over the currently existing 67 piles (Exhibit #3). The existing damaged piles will be repaired in place by being enclosed with pipes and filled with grout. Some piles may be replaced in their entirety by pipes filled with concrete in the same location. In no case will additional fill be placed in coastal waters.

In order to ensure consistency with Sections 30230 and 30231 of the Coastal Act, the permit approval is conditioned to minimize the adverse environmental effects of the proposed demolition and construction. First, the proposed removal of hardened concrete from the old piles and the proposed pouring of new concrete and grout may cause turbidity in the waters of Avalon Bay. Excessive turbidity can block sunlight and result in siltation that can harm sea grasses and other marine organisms. Therefore, special condition one of the permit requires the applicant to submit to the Executive Director a turbidity control plan that will minimize and control turbidity and siltation during the proposed demolition and construction. The plan shall include the use of silt curtains and/or other forms of barriers to confine turbid water to the immediate area of demolition and construction. Only as conditioned is the proposed project consistent with the marine resource policies of the Coastal Act.

Secondly, there may be eelgrass beds that exist in the vicinity of the proposed project. Eelgrass (*Zostera marina*) is a flowering marine plant that grows on mud and sand bottoms. Bottom areas vegetated with eelgrass are important because they are refuges, foraging centers, and nursery habitats for many types of coastal and bay invertebrates and fishes. Eelgrass is also recognized as a key food source for certain shorebirds. Consequently eelgrass habitat is identified as a valuable and sensitive marine resource by the California Department of Fish and Game, the National Marine Fisheries Service, and the U.S. Fish and Wildlife Service.

At this time the applicant has not surveyed the project site for any eelgrass beds which may exist on the site. The applicant has consulted with a marine biologist and asserts that it is very unlikely that any eelgrass exists on the site because eelgrass does not grow on shaded rocky substrate like that which exists under the pier. If eelgrass beds do exist under or next to the 5,294 square foot pier, the proposed project could negatively affect this important marine habitat. However, the negative impacts to any eelgrass beds could be avoided with an eelgrass mitigation plan. An accurate and up to date eelgrass survey can be used to develop an eelgrass mitigation plan with methods to minimize the amount

of eelgrass disturbance and to mitigate any resulting loss of eelgrass in order to maintain the extent of eelgrass at the pre-project level. Because eelgrass beds can change naturally over time, an eelgrass survey should be every twelve months until the proposed project is completed. The best time for an accurate eelgrass survey would be just prior to the commencement of construction.

Therefore, special condition two requires the applicant, prior to the commencement of demolition and construction, to: a) survey and map the eelgrass (*Zostera marina*) beds which exist within the project area, b) indicate on a detailed site plan all areas of eelgrass and potential eelgrass disturbance, and c) submit the eelgrass survey and site plan for the review and approval of the Executive Director along with an eelgrass mitigation plan which shall contain: 1) methods for minimizing the loss of eelgrass, 2) procedures for transplanting and re-establishing any disturbed eelgrass within the project site in order to maintain the extent of eelgrass at the pre-project level, and 3) a timeline for implementing re-establishment of disturbed eelgrass. The applicant shall obtain the Executive Director's approval of the eelgrass mitigation plan prior to any demolition or construction. The applicant shall implement and carry out the eelgrass mitigation plan consistent with the plan approved by the Executive Director. Only as conditioned will the proposed project ensure that marine resources and biological productivity be maintained as required by Sections 30230 and 30231 of the Coastal Act.

Furthermore, in order to ensure that the required eelgrass mitigation plan is up to date and accurate, special condition two also requires that a new eelgrass survey and updated eelgrass mitigation plan shall be submitted for the review and approval of the Executive Director if the proposed project has not been completed within twelve months of the Executive Director's approval of the applicant's prior eelgrass mitigation plan.

In any case, the proposed project will not have a significant impact on the marine habitat of Avalon Bay because the proposed development is limited to the 5, 294 square foot area that has been covered by the existing pier for over sixty years (Exhibit #3).

Special condition three prohibits the use of **creosote treated wood products** except for creosote treated wood that is encased in a polyethylene pile cover system that has been authorized for use in the proposed project by the California Department of Fish and Game. Creosote treated wood that is not encased to prevent leaching of creosote into the marine environment is prohibited because of the adverse environmental effects of creosote on the marine environment. Only as conditioned is the proposed project consistent with the marine resource policies of the Coastal Act.

Special condition seven requires the permittee to comply with all permit requirements and mitigation measures of the California Department of Fish and Game, Regional Water Quality Control Board, U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service with respect to preservation and protection of water quality and marine environment. Only as conditioned is the proposed project consistent with the marine resource policies of the Coastal Act.



Finally, no debris is permitted to be placed in coastal waters. Special condition four requires that all materials removed from the pier shall be taken from the site and out of coastal waters to be disposed of or recycled in compliance with all local, state and federal regulations. Only as conditioned is the proposed project consistent with the marine resource policies of the Coastal Act.

The special conditions of approval adequately address and mitigate any potential adverse impacts to the environment caused by the proposed project. Therefore, as conditioned, the proposed project is consistent with the marine resource policies of the Coastal Act.

### C. Recreation and Public Access

One of the basic goals stated in the Coastal Act is to maximize public access and recreation along the coast. Pursuant to Section 30604(c) of the Coastal Act, because the proposed development is located between the first public road and the sea, the proposed project must be found consistent with the public access and recreation policies contained in Chapter 3 of the Coastal Act. The proposed project is consistent with the following Coastal Act policies which encourage public access and recreational use of coastal areas.

Section 30210 of the Coastal Act states:

In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30213 of the Coastal Act states:

Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.

Section 30221 of the Coastal Act states:

Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

The Catalina Yacht Club is a private facility that does not provide any recreational opportunities to the general public. The proposed project involves the repair of the existing structure that the Yacht Club has leased from the City of Avalon since 1946. The proposed project will not change the current use of the site, and therefore will not

negatively impact any public access or recreational opportunities that exist in the area. The proposed project is not permitted to block public pedestrian access along the public boardwalk that passes in front of the project site as it parallels the shoreline of Avalon Bay.

Special condition five protects any public rights that may exist on the property. The Coastal Commission's approval of this coastal development permit shall not constitute a waiver of any public rights that may exist on the property, and the permittee shall not use this coastal development permit as evidence of a waiver of any public rights that may exist on the property. The Commission finds that the proposed project, as conditioned, is consistent with the public access and recreation policies of the Coastal Act.

#### **D. Hazards**

The Coastal Act states that new development must minimize risks to life and property and not create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area.

Section 30253 of the Coastal Act states, in part:

New development shall:

- (1) 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.

Developments located in or near the ocean have the potential for damage caused by wave energy, floods, seismic events, storms and erosion. The proposed project is located in the waters of Avalon Bay and is susceptible to natural hazards. No development in the water can be guaranteed to be safe from hazard.

The Commission routinely imposes conditions for assumption of risk in areas at high risk from hazards. The condition ensures that the permittee understands and assume the potential hazards associated with development in or near the water. Therefore, by acceptance of this coastal development permit, the applicant and City of Avalon acknowledge and agree: (i) that the site may be subject to hazards from seismic events, liquefaction, storms, waves, floods and erosion; (ii) to assume the risks to the permittee and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; (iv) to indemnify and hold harmless the Commission, its

officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards; and (v) to agree to include a provision in any subsequent sublease or assignment of the development authorized by this permit requiring the sublessee or assignee to submit a written agreement to the Commission, for the review and approval of the Executive Director, incorporating all of the foregoing restrictions identified in (i) through (iv).

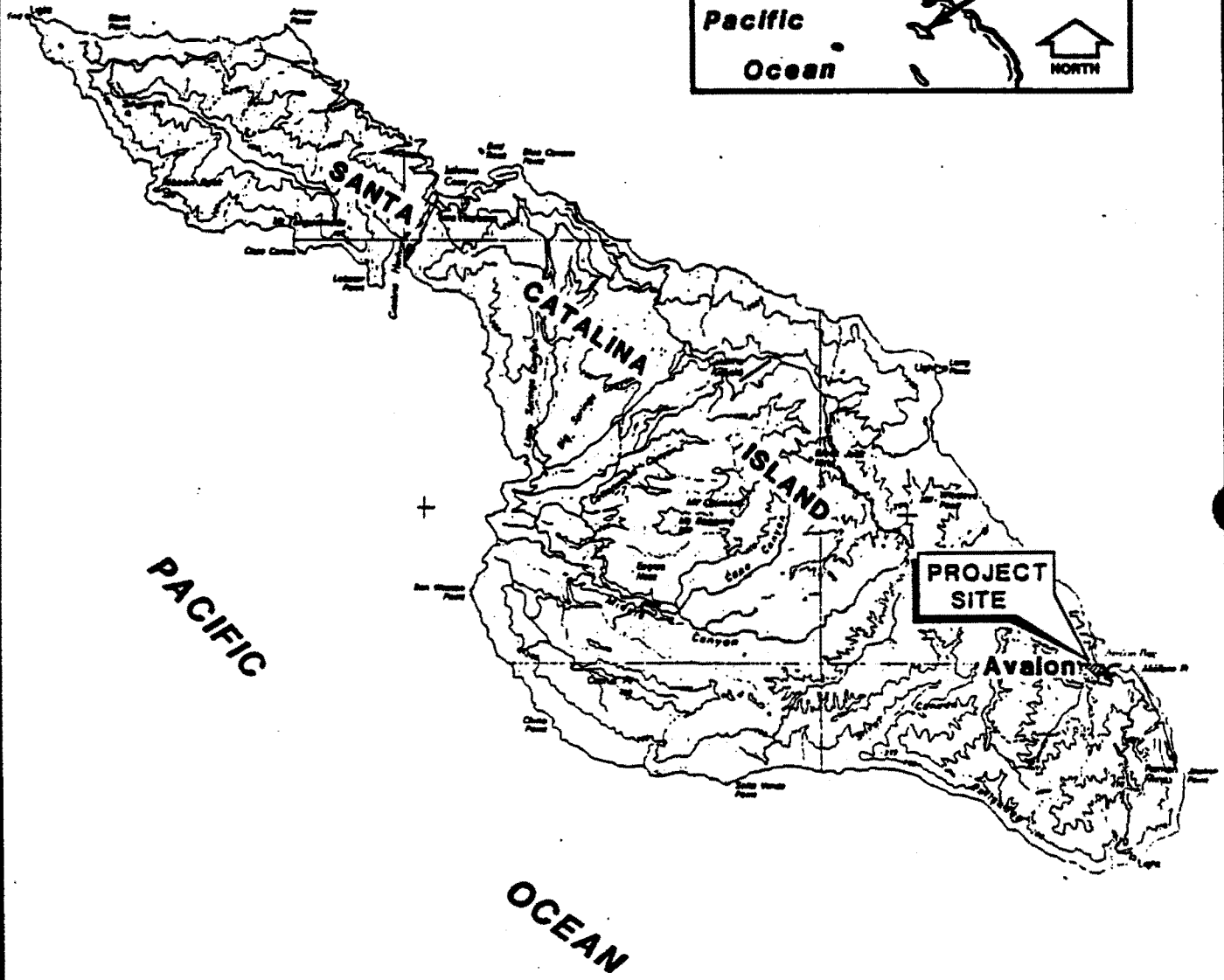
In addition, prior to issuance of the coastal development permit, the applicant shall submit a copy of a written agreement by the applicant and the City of Avalon, in a form and content acceptable to the Executive Director, accepting all of the above terms of subsection A of this condition. Only as conditioned is the proposed project is consistent with Section 30253 of the Coastal Act.

**E. California Environmental Quality Act (CEQA)**

Section 13096 of the California Code of Regulations requires Commission approval of coastal development permit application to be supported by a finding showing the application, 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.

The proposed project has been conditioned in order to be found consistent with the Chapter 3 policies of the Coastal Act. As conditioned, there are no feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, can be found consistent with the requirements of the Coastal Act to conform to CEQA.

End/cp



REGIONAL LOCATION MAP

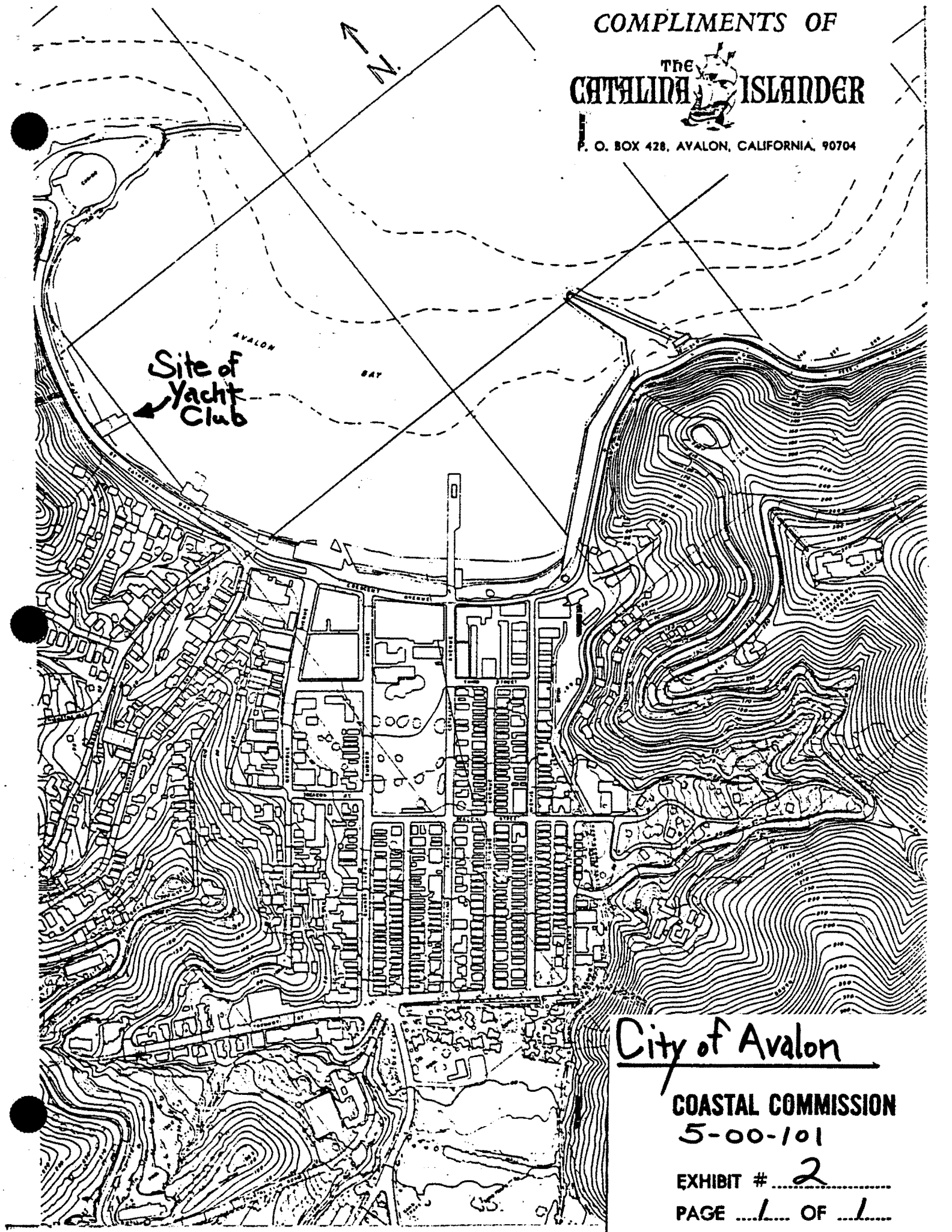
EXHIBIT NO. /
APPLICATION NO.
5-00-101

SOURCE: USGS Santa Catalina Island, CA Quad, 1981.

COMPLIMENTS OF  
THE  
**CATALINA ISLANDER**



P. O. BOX 428, AVALON, CALIFORNIA, 90704



Site of  
Yacht  
Club

City of Avalon

COASTAL COMMISSION

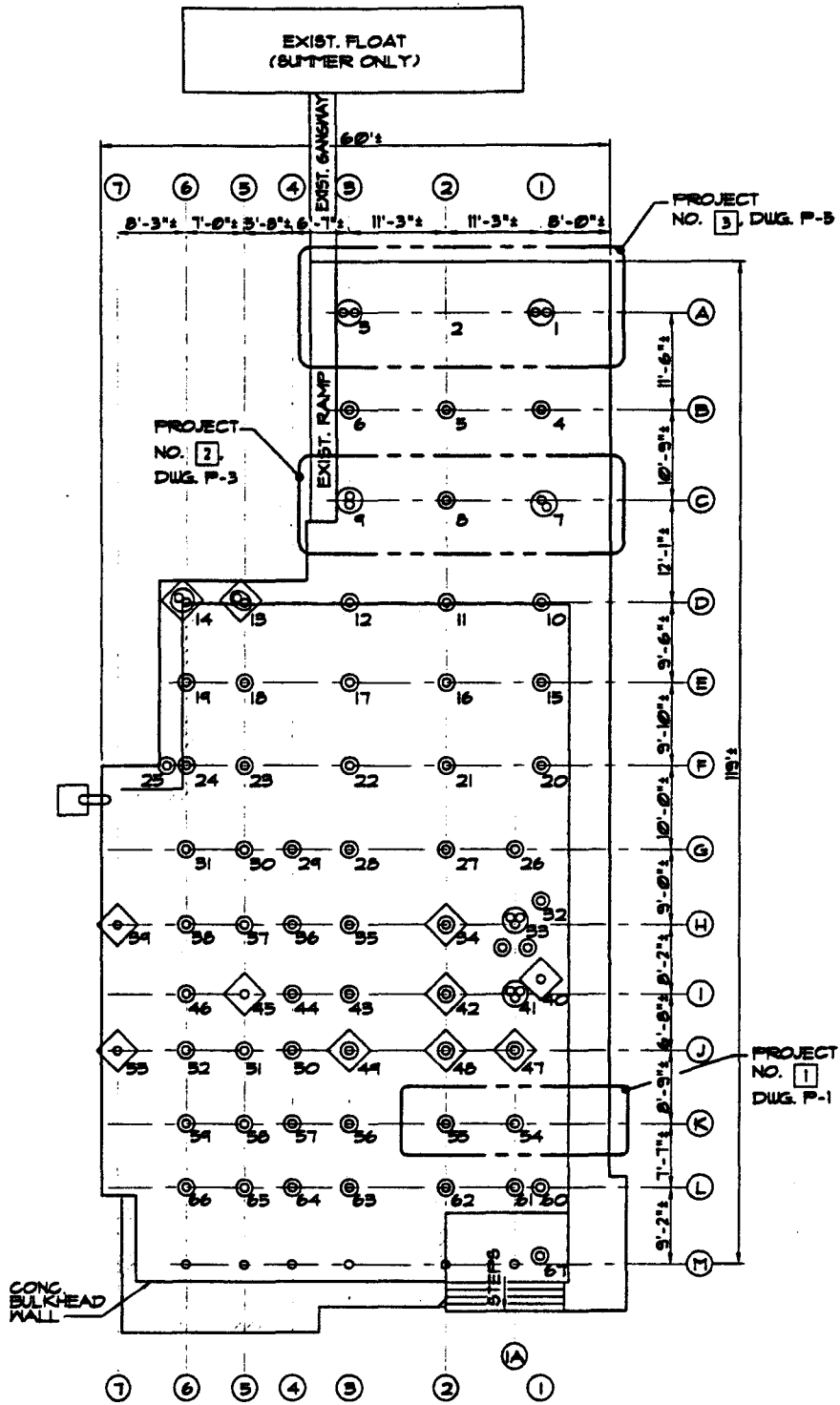
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EXHIBIT # 2

PAGE 1 OF 1

**LEGEND**

◊ ⊙ EXISTING TIMBER PILE WITH CONCRETE ENCASUREMENT.



NOTE:  
LOCATIONS SUBJECT TO CONFIRMATION  
AS OF FEBRUARY, 2000

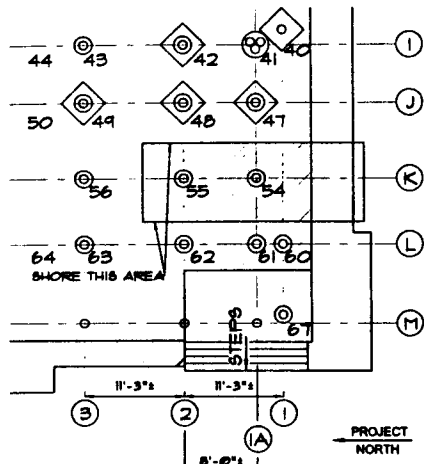
**EXISTING PILE PLAN**  
N.T.S.

PROJECT  
NORTH



**COASTAL COMMISSION**  
5-00-101

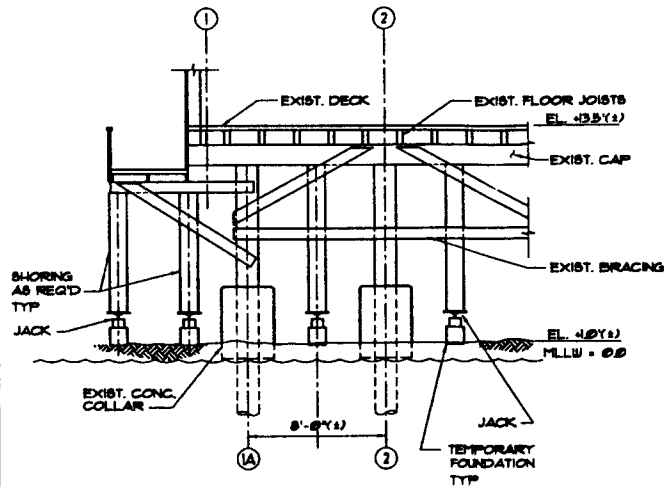
EXHIBIT # 3  
PAGE 1 OF 3



PARTIAL FILE PLAN

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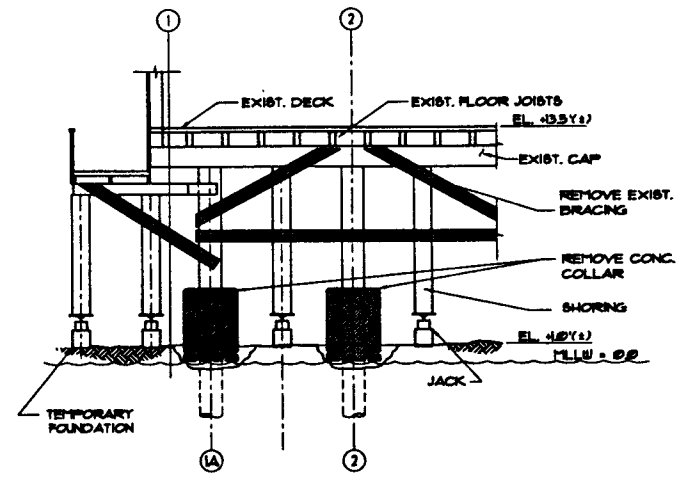
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INSTALL TEMPORARY SHORING

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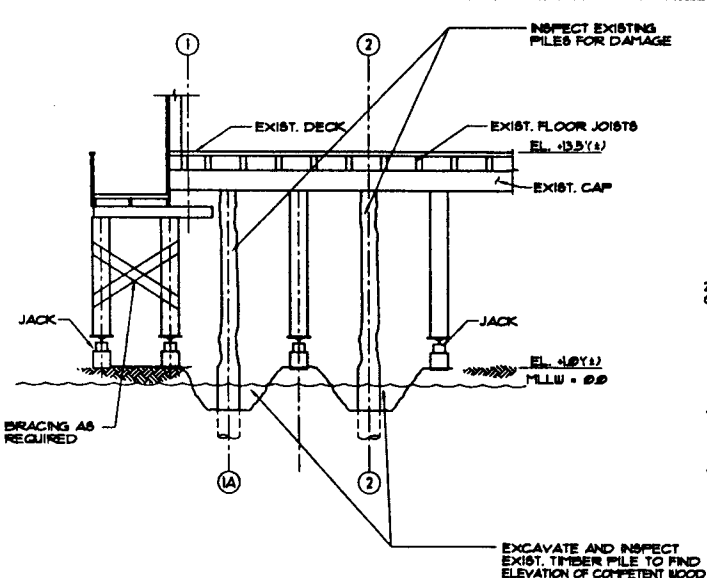
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REMOVE EXIST. CONCRETE & BRACING

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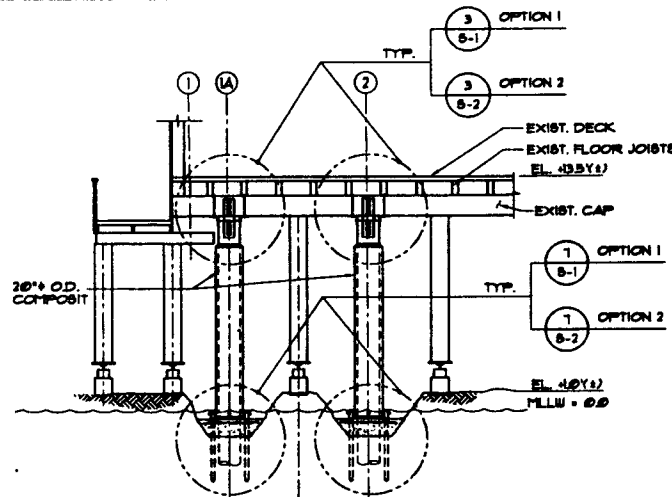
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INSPECT EXISTING PILES

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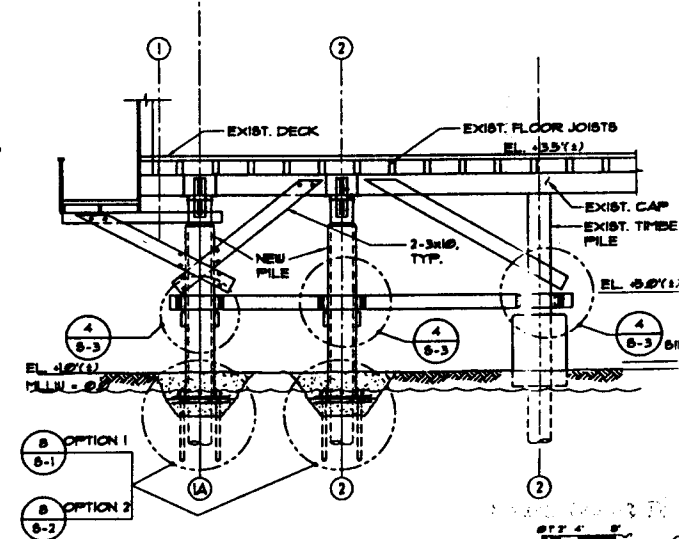
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P-1



HARDCORE COMPOSITE PIPE

SCALE: 1/4"=1'-0"

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P-1

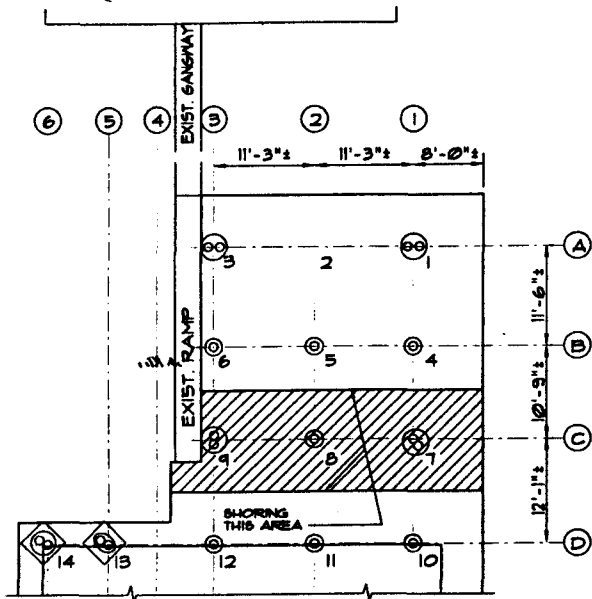


INSTALL NEW BRACING & REMOVE SHORING

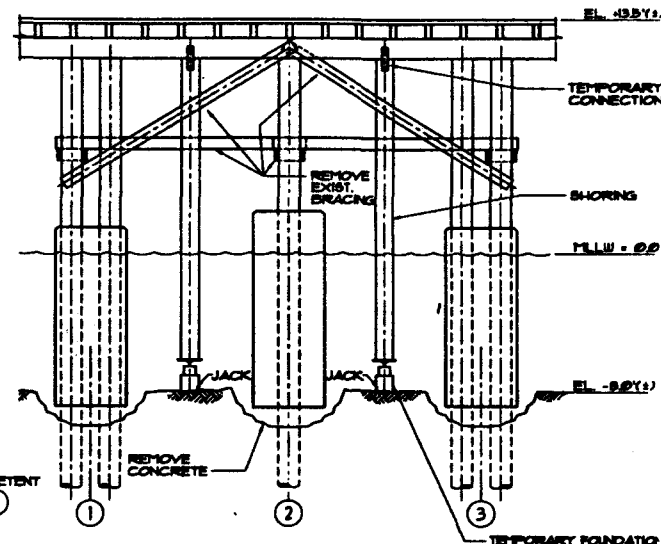
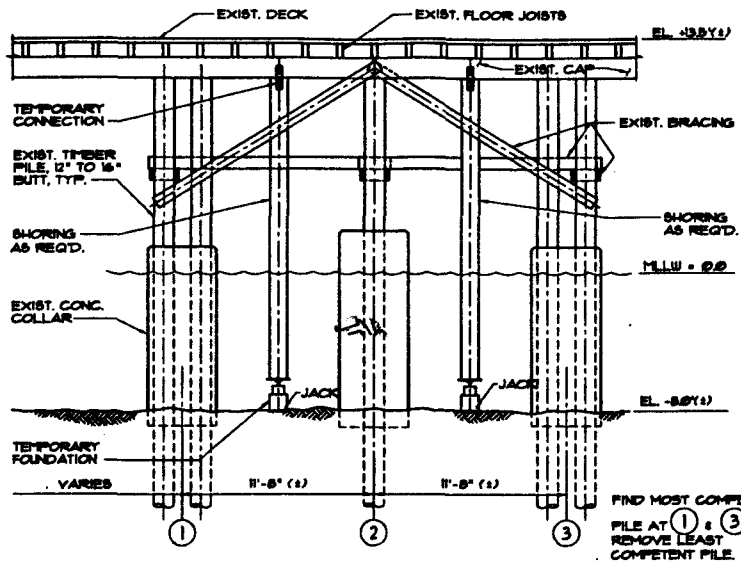
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P-1

MAR 1 2000



SEE DIAG. T-1 "GENERAL PROCEDURE"



INSTALL TEMPORARY SHORING

SCALE: 1/4"=1'-0"

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P-3

REMOVE EXISTING CONCRETE & BRACING

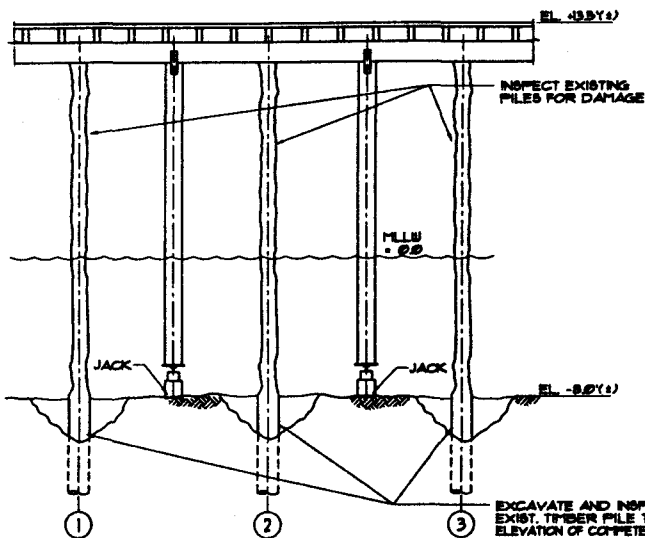
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P-3

PARTIAL FILE PLAN

SCALE: 1/8"=1'-0"

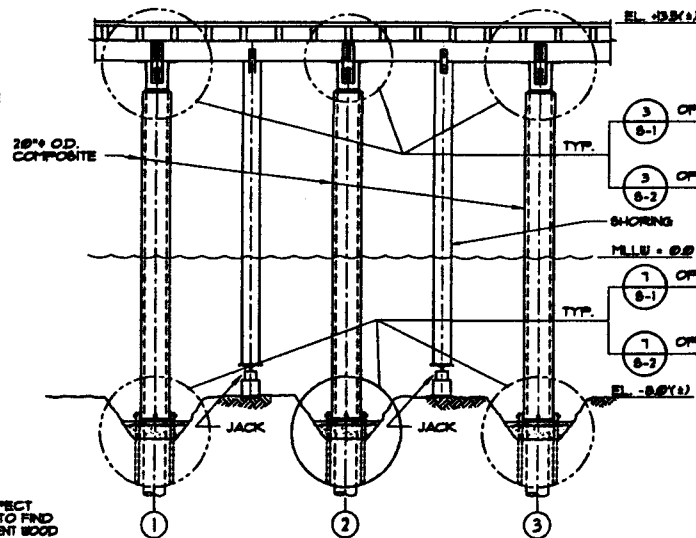
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P-3



INSPECT EXISTING PILES

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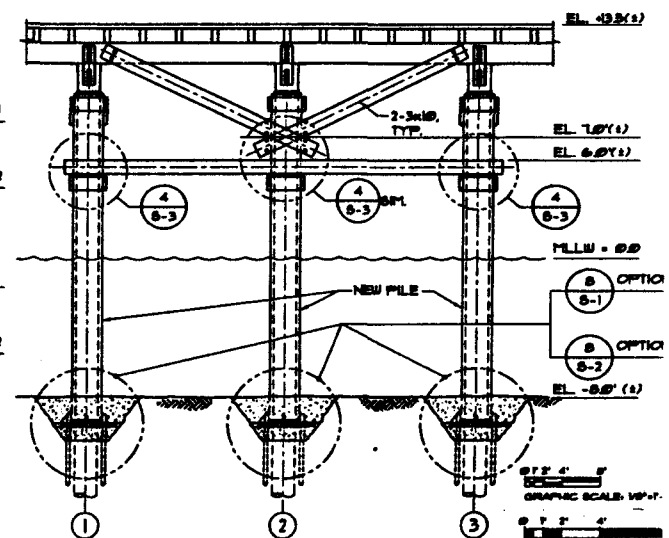
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P-3



INSTALL HARDCORE COMPOSITE

SCALE: 1/4"=1'-0"

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P-3



INSTALL NEW BRACING & REMOVE SHORING

SCALE: 1/4"=1'-0"

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P-3

MAR 1 2000

EXHIBIT # 3  
PAGE 303

5-00-1



Cash & Associates

April 6, 2000

NOTES FOR COASTAL COMMISSION APPLICATION

5-00-101

Pile Repair Project at Catalina Island Yacht Club  
Avalon, CA

The repair and/or replacement of existing timber piles at the Yacht Club will involve:

1. Removing existing concrete encasement to inspect the timber piles. The concrete removed will be broken into small pieces and hand carried to a pick up truck on Casino Way. The concrete will be delivered to Jordahl Construction Co., in Avalon, where it will be ground up to be used as Miscellaneous Material to form a base under roadway paving.
2. Existing timber piles which have less than 60% of their original cross section remaining will be removed, cut up into small sections and hand carried to a truck on Casino Way.
  - a. Timber piles which do not contain creosote will be delivered to Seagull Sanitation Co., in Avalon, and burned.
  - b. Timber piles which do contain creosote will be removed to the mainland and taken to an approved land fill.
  - c. In both cases, a. and b., the timber piles may be delivered to the Director of Public Works in Avalon to be stored and used in land side projects in the future.
3. Existing timber piles which have 60%, or more, of their original cross section remaining will be left in place and not removed.
4. Existing steel connections of timber piles to timber girders will be removed and hand carried to a pick up truck on Casino Way. The steel will be delivered to Seagull Sanitation Co. in Avalon.
5. Existing timber bracing will be removed, cut up into small pieces, hand carried to a truck on Casino Way.
  - a. Timber bracing which does not contain creosote will be delivered to Seagull Sanitation Co. in Avalon and burned.

COASTAL COMMISSION

5-00-101

EXHIBIT # 4

PAGE 1 OF 2

- b. Timber bracing which does contain creosote will be removed to the mainland and taken to an approved land fill.
  - c. In both cases, a. and b., the timber bracing may be delivered to the Director of Public Works in Avalon to be stored for use in land side projects in the future.
6. Existing timber piles which will remain will be encased in a composite pipe and the space between the pile and the pipe will be filled with grout.
  7. Existing timber piles which are removed will be replaced with a composite pipe filled with concrete.
  8. All connections of existing timber piles, and new concrete filled composite pipe, to existing timber girders will be made with fiberglass members and fiber glass bolts.
  9. New bracing will consist of new lumber treated with either Ammoniacal Copper Arsenate or Chromated Copper Arsenate in accordance with the Standard Specification for Public Works Construction. Connections for new bracing will be made with fiberglass parts and fiberglass bolts.
  10. New concrete for establishing, and maintaining, foundation conditions for both the remaining existing timber piles and the new concrete filled composite piles will be supplied by a concrete mixer and the concrete will be delivered to the piles from a concrete pump located on Casino Way. The pump and mixer will be removed from Casino Way each evening and will be in operation for less than a full day whenever it is used.
  11. Reinforcing for the concrete will be fiber reinforced plastic (FRP) and in very small quantities. A diver will install the reinforcing by hand.
  12. Equipment for demolition of the concrete, sawing the timber, drilling holes and installing stainless steel spuds into the existing soil will be air operated. An air compressor will be located on Casino Way for supplying the compressed air.
  13. A diver will be employed in the work and will be supplied with breathing air from his own compressor which will be on the diver's boat or on Casino Way.

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**COASTAL COMMISSION**

5-00-101

EXHIBIT # 4

PAGE 2 OF 2