

**CALIFORNIA COASTAL COMMISSION**

South Coast Area Office  
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# Th 9a

July 7, 2011

## ADDENDUM

**TO:** Commissioners and Interested Persons

**FROM:** South Coast District Staff

**SUBJECT:** Application No. 5-09-065 (Orange County Public Works), Item No. Th 9a, Scheduled for hearing on Thursday, July 14, 2011 in Marin.

### CORRECTIONS TO STAFF REPORT PROJECT DESCRIPTION

In the coastal development permit application, the amount of fill and the amount of riprap included in the project were described differently than in the Alternatives Analysis submitted with the application. This discrepancy was not recognized until late in the preparation of the staff report. The applicant has explained that the quantities described in the Alternatives Analysis were based on older information at the project planning stage. However, the applicant asserts that the analysis and conclusions contained in the Alternatives Analysis remain the same, stating: *"The quantities specified in the document were only used as a description of the repair. They had no effect on the calculations or the final conclusion of the report."* and *"[I]f the quantities described in the report [Alternatives Analysis] were actually constructed, would the analysis be the same? The answer is: yes, the conclusion of the analysis would be the same. And yes the channel embankment material is what affects the channel velocities and related potential erosion considered in the Alternatives Analysis. The quantities described in the report had nothing to do with the actual analysis performed. The analysis was completed using the survey of the existing channel and the rip rap along the northern [western] bank. If the rip rap was expanded further downstream than what is currently there, it would only help slow down the water and make this alternative an even better option. Basically providing the same conclusion for the alternatives analysis."* The applicant has stated that the Alternatives Analysis was based upon information gathered from an actual "as-built" survey of the channel. The fill and rip rap quantities referenced in the preferred alternative were inserted into the report, but were based upon an earlier, inaccurate (based on actual as-built condition) estimate of the amount of material expected to be used for the project. Consequently, corrections to the project description contained in the staff report are needed as described below.

1. On page 1 of the staff report, in the project description, the following change should be made (additions shown in **bold, underlined** text; deletions shown in ~~strike out~~ text):

To make permanent channel stabilization project conducted under Emergency Coastal Development Permit No. 5-05-104-G consisting of repairs to eroded earthen slope by placing fill material buttressed by riprap along flood control channel bank. Development approved under the emergency permit consisted of

construction of a rock-lined buttress along the westerly embankment of the channel including approximately 837 cubic yards of earthen fill material on the channel slope and placement of approximately 583 cubic yards of rock upon the earthen slope to re-enforce and prevent further slope erosion that threatens an exiting parking lot. The footprint of the rock as described in the emergency permit was approximately 185 feet long by 16 feet wide (2,960 square feet). **No change to the project as approved in the emergency coastal development permit and as built is proposed.** ~~However, the as-built results of the construction reveal that the amount of earthen fill placed was 260 cubic yards and that the amount of riprap placed was 1,190 cubic yards. The as-built length of the footprint is 197 feet.~~

2. On page 4 of the staff report, under the heading Project Description, the following change should be made (additions shown in **bold, underlined** text; deletions shown in ~~strike-out~~ text):

**A. Project Description**

The applicant proposes to retain a rock-lined buttress along the westerly embankment of the Santa Ana Delhi flood control channel constructed pursuant to Emergency Coastal Development Permit 5-05-104-G. As described in the emergency permit, the project was to include approximately 837 cubic yards of earthen fill material in the channel slope and placement of approximately 583 cubic yards of rock upon the earthen slope. The emergency project was necessary to reinforce and prevent further slope erosion that threatened an exiting parking lot. The footprint of the project described in the emergency permit was approximately 185 feet long by 16 feet wide (2,960 square feet). **No change to the project as approved in the emergency coastal development permit and as built is proposed.** ~~However, the as-built results of the construction reveal that the amount of earthen fill placed was 260 cubic yards and that the amount of riprap placed was 1,190 cubic yards. The as-built length of the footprint is 197 feet. The as-built project is entirely contained within the original configuration of the channel.~~

The rock-lined buttress was constructed under emergency coastal development permit 5-05-104-G. The subject application is the required follow up permit to that emergency coastal development permit. The current application proposes to retain and make permanent the work done under the emergency coastal development permit. The emergency work was completed in 2005. No additional work ~~beyond the expanded as-built project~~ is proposed.

3. On page 10 of the staff report, under the heading d) Rock Lined Slope Buttress, the following change should be made (additions shown in **bold, underlined** text; deletions shown in ~~strike-out~~ text):

d) Rock Lined Slope Buttress

This is the applicant's preferred alternative and consists of retaining the ~~expanded~~ work **approved and constructed** ~~done~~ under emergency coastal development permit 5-05-104-G. **Although the Alternatives Analysis describes** ~~that~~ this alternative ~~includes~~ **as** retaining the placement of 260 cubic yards of fill material buttressed with 197 feet of rip rap material (2 feet thick) along the westerly channel bank, and ~~This alternative also includes retaining the placement of 1,190 cubic yards of riprap (775 cubic yards for the foundation structure and 415 cubic yards for the slope protection structure).~~ **this alternative actually includes retaining the approximately 837 cubic yards of earthen fill material in the channel slope and the placement of approximately 583 cubic yards of rock upon the earthen slope as approved and constructed under the emergency coastal development permit.** This alternative results in retention of the existing riprap lined western slope at the project site.

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Staff: Meg Vaughn-LB  
Staff Report: 6/29/11  
Hearing Date: 7/13-15/11  
Commission Action:

# Th 9a

**STAFF REPORT: REGULAR CALENDAR**

**APPLICATION NUMBER:** 5-09-065

**APPLICANT:** Orange County Public Works Department  
Nardy Khan & Lisa Cibellis

**AGENT:** RBF Consulting  
Lauren See

**PROJECT LOCATION:** Santa Ana Delhi Channel  
(400 feet from terminus of University Drive)  
Newport Beach, Orange County

**PROJECT DESCRIPTION:** To make permanent channel stabilization project conducted under Emergency Coastal Development Permit No. 5-05-104-G consisting of repairs to eroded earthen slope by placing fill material buttressed by riprap along flood control channel bank. Development approved under the emergency permit consisted of construction of a rock-lined buttress along the westerly embankment of the channel including approximately 837 cubic yards of earthen fill material on the channel slope and placement of approximately 583 cubic yards of rock upon the earthen slope to re-enforce and prevent further slope erosion that threatens an exiting parking lot. The footprint of the rock as described in the emergency permit was approximately 185 feet long by 16 feet wide (2,960 square feet). However, the as-built results of the construction reveal that the amount of earthen fill placed was 260 cubic yards and that the amount of riprap placed was 1,190 cubic yards. The as-built length of the footprint is 197 feet.

**SUMMARY OF STAFF RECOMMENDATION:**

Staff is recommending **approval** of the request to make permanent the work conducted under Emergency Coastal Development Permit 5-05-104-G with one special condition requiring Maintenance and Monitoring Plan for the riprap. The plan shall provide for periodic retrieval and re-use or proper disposal of any riprap that becomes dislodged or has fallen into the channel and periodic inspection of the riprap structure for evidence of failure or erosion. Post construction evaluations confirm that as constructed and as conditioned for maintenance and monitoring, the development is consistent with Coastal Act Section 30236 regarding channelization of streams; Section 30233 regarding protection of wetlands; Section 30240 regarding protection of Environmentally Sensitive Habitat Areas; Section 30251 regarding protection of public views; Sections 30230 and 30231 regarding protection of marine resources and biological productivity, and Section 30210 regarding public access.

**SUBSTANTIVE FILE DOCUMENTS:** Emergency Coastal Development Permit No. 5-05-104-G (County of Orange, Resources & Development Management); Coastal Development Permit Application 5-09-065 (Orange County Public Works) Submittal Package; Biological Assessment for the Santa Ana – Delhi Stabilization Project, prepared by BonTerra Consulting, dated 7/8/10; Santa Ana-Delhi Emergency Repair Alternatives Analysis, prepared by RBF Consulting, dated 11/16/10; City of Newport Beach certified Land Use Plan.

**I. APPROVAL WITH CONDITIONS**

**STAFF RECOMMENDATION:**

Staff recommends that the Commission **APPROVE** the permit application with one special condition.

**MOTION:**

***I move that the Commission approve Coastal Development Permit No. 5-09-065 pursuant to the staff recommendation.***

Staff recommends a **YES** vote. Passage of this motion will result in approval of all the permits included on the consent calendar. The motion passes only by affirmative vote of a majority of the Commissioners present.

**RESOLUTION:**

**I. APPROVAL WITH CONDITIONS**

The Commission hereby **APPROVES** a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act and will not 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 complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

**I. 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 on which the Commission voted on the application. 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. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
4. 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.
5. 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. Maintenance and Monitoring of Riprap**

- A. **PRIOR TO ISSUANCE OF THIS COASTAL DEVELOPMENT PERMIT**, the applicant shall submit for the review and approval of the Executive Director a maintenance and monitoring plan for the riprap structure to prevent impacts upon public access and safety and biological resources. At minimum, the plan shall identify procedures for:
  1. The periodic retrieval and re-use or proper disposal of any rock or other components of the riprap that has become dislodged and/or has fallen into the channel;
  2. Periodic inspection of the riprap for evidence of any failure of the protection and/or evidence of erosion of the slope that would lead to any instability of the channel embankment. Where such inspection reveals a problem the applicant shall develop recommendations to address the problem including a mechanism to assure that all affected parties participate in the process. The applicant shall consult with the executive Director and a coastal development permit shall be required for any development that the Executive Director determines requires a permit.
- B. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

#### **IV. FINDINGS AND DECLARATIONS:**

The Commission hereby finds and declares:

##### **A. Project Description**

The applicant proposes to retain a rock-lined buttress along the westerly embankment of the Santa Ana Delhi flood control channel constructed pursuant to Emergency Coastal Development Permit 5-05-104-G. As described in the emergency permit, the project was to include approximately 837 cubic yards of earthen fill material in the channel slope and placement of approximately 583 cubic yards of rock upon the earthen slope. The emergency project was necessary to reinforce and prevent further slope erosion that threatened an exiting parking lot. The footprint of the project described in the emergency permit was approximately 185 feet long by 16 feet wide (2,960 square feet). However, the as-built results of the construction reveal that the amount of earthen fill placed was 260 cubic yards and that the amount of riprap placed was 1,190 cubic yards. The as-built length of the footprint is 197 feet. The as-built project is entirely contained within the original configuration of the channel.

The rock-lined buttress was constructed under emergency coastal development permit 5-05-104-G. The subject application is the required follow up permit to that emergency coastal development permit. The current application proposes to retain and make permanent the work done under the emergency coastal development permit. The emergency work was completed in 2005. No additional work beyond the expanded as-built project is proposed.

The channel embankment at the subject location was originally constructed as a 1:1 earthen slope. Immediately upstream of the subject location, the western bank of the flood control channel is concrete lined. Severe erosion of the subject site embankment threatened an adjacent parking lot and the upstream concrete lining. Without the emergency action, additional erosion would have occurred, causing eroded material to discharge into the channel and ultimately into the Upper Newport Bay Ecological Reserve. In addition, if left untreated, further collapse of the channel bank was expected that would ultimately damage the parking lot, causing blockage of the storm flow within the flood control channel, resulting in flooding within the upstream areas. Emergency Coastal Development Permit No. 5-05-104-G was issued on March 18, 2005 subject to thirteen conditions of approval (see Exhibit 5). Among the conditions of approval was a requirement to submit an application for a regular coastal development permit. This Coastal Development Permit Application (5-09-065) is intended to fulfill that condition of the emergency coastal development permit.

Condition No. 13 of Emergency Coastal Development Permit No. 5-05-104-G required that the follow up coastal development permit application address erosion hazards at the site by including in the application submittal analysis of alternative methods of addressing the hazards (including, but not limited to, the no-project alternative, removal of the rock-lined

slope buttress, foundation underpinning for threatened structures with and without accompanying slope protection device(s), channel widening/reconfiguration, use of geogrid/cell/erosion “mattress” and vegetation, and planned retreat (i.e. reconfiguration and/or removal of existing development). Condition No. 13 of the emergency permit required that the Alternatives Analysis identify the least environmentally damaging feasible alternative and also identify the applicant's preferred alternative along with the reasons for selecting the preferred alternative. Additionally, Condition No. 13 required the follow-up coastal development permit application submittal to address: visual treatment of any proposed-to-be-retained and/or revised slope protection devices at the site; mitigation of any adverse impacts upon biological resources at the subject site; and upstream and downstream erosional effects of final slope stabilization.

The subject site is located on the western bank of the Santa Ana Delhi flood control channel, approximately 400 feet northeast of the terminus of North University Drive, downstream of Mesa Drive (see Exhibits 1 and 3). The Santa Ana Delhi flood control channel flows into Upper Newport Bay Ecological Reserve just downstream of the subject site. The project extends approximately from Station 12+60 to Station 14+45.

Just upstream of the emergency repair site, the west bank of the channel is concrete lined and the east bank is an unprotected soil embankment. Downstream of the emergency repair site the channel is in a natural state. Prior to the emergency repair work the channel slope at the subject site was also a soil embankment. A pedestrian bridge connecting public trails within the Upper Newport Bay Ecological Reserve across the flood control channel exists downstream of the emergency repair site at approximately Station 8+00. East of the subject site are large single family residential lots. West of and adjacent to the subject site is an office complex. The office complex parking lot lies between the office building and the channel. To the northwest of the subject site, west of the channel, is Upper Newport Bay Ecological Reserve upland area. To the northeast, west of the channel is existing residential development. Northwest of the subject site, east of the channel is the Newport Beach public golf course. (See Exhibit 3 for the subject site and surrounding land uses.)

## **B. Channelization**

Section 30236 of the Coastal Act states:

*Channelizations, dams, or other substantial alterations of rives and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.*



The proposed project is the repair of an eroded flood control channel bank, thus it falls under item (2) of Section 30236 above, flood control projects. The issues the project raises with regard to consistency with Coastal Act Section 30236 are whether the project as proposed is the only feasible method for protecting existing structures and whether that protection is necessary to protect public safety and/or existing development (i.e. is the project that is proposed the least environmentally damaging feasible alternative), and whether the best mitigation measures feasible have been incorporated into the project.

The proposed repair of the channel bank is necessary to protect existing structures. Without the project, additional erosion would occur, causing eroded material to discharge into the channel and ultimately into the Upper Newport Bay Ecological Reserve. In addition, if left untreated, further collapse of the channel bank, and ultimately the parking lot, is expected, causing blockage of the storm flow within the flood control channel, resulting in flooding within the upstream developed areas.

#### 1. Alternatives

With regard to project alternatives, the applicant has submitted an Alternatives Analysis titled *Santa Ana – Delhi Emergency Repair Alternatives Analysis*, prepared by RBF Consulting, dated 11/16/10. The Alternatives Analysis considered eight possible alternatives including the no-project alternative and the proposed alternative (rock lined slope buttress). The other alternatives considered were: removal of rip rap with no further improvements; vegetated earthen slope; foundation underpinning/sheet piles; channel widening/reconfiguration; use of geogrid/cell/erosion mattresses and vegetation; and planned retreat.

Five evaluation criteria were considered in the Alternative Analysis: 1) engineering, 2) erosional impact, 3) right-of-way acquisition, 4) cost, and 5) environmental impact or benefit. These criteria were applied for each alternative considered. Describing the engineering criteria, the Alternatives Analysis states:

*The engineering evaluation was based on two main criteria: flood capacity of the channel and the maximum allowable velocity within the channel. Each alternative was analyzed to determine if the 100-year storm event could be contained within the channel with no flood damage to the surrounding structures.*

*Even though the channel was found to generally run at a sub-critical flow regime for all alternatives, which means that the Froude number is less than 1 and generally signifies a lower velocity, erosion caused by high velocities was the biggest concern of the hydraulic analyses. The concrete lining upstream of the emergency repair appears to be causing the highest velocities within the channel to flow along the western edge of the downstream channel. Due to this, a maximum velocity analysis was conducted for each alternative to determine the potential for continued erosion. The transport of bed material or erosion begins when the velocity in the channel exceeds a maximum permissible velocity.*

Describing the erosional impact criteria, the Alternatives Analysis states:

*An evaluation of each alternative was conducted to determine the potential effects on upstream and downstream erosion during the 100-year storm event. For each alternative, a cross section approximately 300 ft upstream (River Sta 1800) and a cross section approximately 280 ft downstream (River Sta 1000) of the project site were analyzed to determine if the velocities in the channel exceed the maximum permissible velocity. The velocities were also compared against those found within the No Project conditions.*

Regarding the right-of-way acquisition criteria, the Alternatives Analysis states:

*Each alternative was categorized into two groups: 1) no acquisition of private land required and 2) acquisition of private land required. The private land requiring acquisition is the parking lot to the north-west of the channel (which is being protected by the emergency riprap). It is assumed from recent condemnation proceedings that if only a portion of the parking lot was acquired for the improvement of the Santa Ana-Delhi Channel, reduction in parking would likely require acquisition of the whole parcel.*

Regarding cost criteria, the Alternatives Analysis states:

*A detailed cost comparison was not created for the alternative analysis. Each alternative was broken down into one of three categories.*

- *Low Cost – Little or no construction required to complete the proposed alternative*
- *Medium Cost – More than minor construction but less than extensive construction.*
- *High Cost – An extensive amount of construction is required to complete the proposed alternative.*

Regarding environmental impact criteria, the Alternatives Analysis states:

*Each alternative will be analyzed for their potential to benefit or impact the areas surrounding the Santa Ana-Delhi Channel. The main objective of the project will be to decrease the sediment that enters the Newport Bay. Long term water quality will benefit by decreasing the erosion of the westerly bank.*

Sedimentation of Upper Newport Bay has been a significant issue for the bay. The City and various Resource agencies have been working to reduce sedimentation into the bay, as well as remove existing sediment through dredging. Sedimentation has resulted in displacement of important open water habitat in the bay. So, reducing causes of sedimentation is an important habitat protection goal for Upper Newport Bay.

Below is a discussion of each of the alternatives evaluated.

a) No Project Alternative

This alternative assumes no emergency repair work has been done and no other work would be undertaken. The westerly slope, where the severe erosion occurred, would remain exposed. The hydraulic model performed for this alternative found that adequate freeboard would remain within the channel, however the maximum permissible velocity would be exceeded. According to information contained in the Alternatives Analysis, the maximum permissible velocity for a natural channel is 3.75 to 5 feet per second (fps). According to the hydraulic models, the maximum velocities under the no project alternative would be: 1) 7.19 fps at approximately the midpoint of the project site (Station 13.75); 2) 10.44 fps upstream of the project site (Station 1800); and, 3) 10.39 fps downstream of the subject site (Station 1000). Thus, the Alternatives Analysis concludes that under the no project alternative the channel would continue to erode.

No private lands would need to be acquired under this alternative and there are no construction costs associated with this alternative. Thus, the cost of the no project alternative is classified as Low in the Alternatives Analysis. However, the Alternative Analysis also suggests that the applicant (Orange County Flood Control District) could be found liable for inverse condemnation if the channel continues to erode into the adjacent private property, which may add to the cost of the project.

With regard to environmental impacts of the no project alternative, the Alternatives Analysis states:

*The project would not decrease the erosion of the channel's westerly bank. The erosion problem is considered serious, which, if left unresolved, could result in significant impacts to both coastal and fresh water resources. Should the bank fail, there is the potential for the trees and pavement to collapse and be deposited into the channel and Newport Bay. There is potential for significant environmental impacts.*

b) Removal of Rip Rap with No Further Improvements Alternative

This alternative would consist of removing the riprap that was placed along the westerly bank during the emergency repair. The approximately 1,300 cubic yards (cy) of earthen fill would remain but no additional improvements would be made to the channel bank.

The hydraulic model for this alternative indicates that adequate freeboard would remain, but that maximum permissible velocities would be exceeded. As previously stated, the maximum permissible velocity for a natural channel is 3.75 to 5 fps. According to the hydraulic models, the maximum velocities under this alternative would be: 1) 10.7 fps at approximately the midpoint of the project site (Station 13.75); 2) 9.89 fps upstream of the project site (Station 1800); and, 3) 10.39 fps downstream of the subject site (Station 1000).

Thus, the Alternatives Analysis concludes that under this project alternative the channel would continue to erode.

No private lands would need to be acquired under this alternative. The placement of 1,300 cubic yards of fill under this alternative does incur cost, but compared to the other alternatives considered, the overall cost would be minor. Thus, this alternative is classified as Low Cost. However, as with the no project alternative, the Alternative Analysis suggests that the applicant (Orange County Flood Control District) could be found liable for inverse condemnation if the channel continues to erode into the adjacent private property, which may add to the cost of the project.

Regarding the environmental impacts of this alternative, the Alternatives Analysis states:

*The project would not decrease the erosion of the channel's westerly bank. The velocities are too high and the earthen fill would not be at the required 4:1 side slope for natural channels. The bank would continue to erode and the placed 1,300 cy of fill would be subject to accelerated erosion and would eventually be deposited within the Newport Bay. Should the bank fail, there is the potential for the trees and pavement to collapse and be deposited into the channel and Newport Bay. There is potential for significant environmental impacts.*

#### c) Vegetated Earthen Slopes

This alternative would modify the channel so that the westerly bank would be a vegetated earthen slope per Orange County Standards. According to the Orange County Local Drainage Manual, side slopes for grassed channels would be 4:1 or shallower. Thus, this alternative would modify channel side slopes from 1:1 to 4:1. The top of the bank would be approximately 170 feet from the channel centerline and would require the removal of approximately 100 feet of the existing, adjacent, privately owned parking lot.

The hydraulic model for this alternative indicates that adequate freeboard would remain, but that the maximum permissible velocities of 3.75 to 5 fps would be exceeded. According to the hydraulic models, the maximum velocities under this alternative would be: 1) 8.59 fps at approximately the midpoint of the project site (Station 13.75); 2) 9.98 fps upstream of the project site (Station 1800); and, 3) 17.64 fps downstream of the subject site (Station 1000). Thus, the Alternatives Analysis concludes that under this project alternative the channel would continue to erode.

Private land would need to be acquired under this alternative. The channel top would be relocated into the existing, adjacent, privately owned parking lot by approximately 100 feet to create the 4:1 side slope (see Exhibit 4). Proposed construction would require the removal of the existing trees and a 100 foot width of the adjacent parking lot would need to be removed. Due to the necessary land acquisition and construction expense, the cost of this alternative is classified as High Cost in the Alternatives Analysis.

Even with the vegetated, shallower side slope of this alternative, the channel flow velocities would be too high and erosion would continue. Thus, the bank would continue to erode and be deposited into the channel and Newport Bay. The Alternatives Analysis finds that there is potential for significant environmental impacts.

d) Rock Lined Slope Buttress

This is the applicant's preferred alternative and consists of retaining the expanded work done under emergency coastal development permit 5-05-104-G. This alternative includes retaining the placement of 260 cubic yards of fill material buttressed with 197 feet of rip rap material (2 feet thick) along the westerly channel bank. This alternative also includes retaining the placement of 1,190 cubic yards of riprap (775 cubic yards for the foundation structure and 415 cubic yards for the slope protection structure). This alternative results in retention of the existing riprap lined western slope at the project site.

The hydraulic model for this alternative indicates that adequate freeboard would remain, and that the velocities within the channel would be below the maximum permissible velocity at the location of the emergency repair work (project site). Maximum permissible velocity for rock lined channels is 12 to 17 feet per second. The maximum velocities under this alternative would be: 1) 10.44 fps upstream of the site (Station 1800); 2) 7.19 fps at the emergency repair site (Station 1375); and 3) 10.37 downstream of the site (Station 1000).

The cost of this alternative is classified as Medium Cost and no private lands would need to be acquired.

The alternatives analysis identifies this alternative as having environmental benefits because maximum permissible velocities would not be exceeded at the emergency repair site and so no further erosion is expected to occur there. Thus, debris, including debris resulting from the potential collapse of the parking lot, would not enter the channel or Upper Newport Bay Ecological Reserve. Erosional effects upstream and downstream of the site are not expected to increase under this alternative.

e) Foundation Underpinning/Sheet Piles

Originally this alternative was to add foundation underpinning to the existing parking lot, but it was determined by the applicant that this option was economically unfeasible. The applicant's determination of unfeasibility is due to the parking lot being located approximately 37 feet from the invert of the channel, making construction costs too high to be considered feasible.

The alternative considered under this option, instead of parking lot underpinning, is placement of sheet piles along the existing fence line at the channelward edge of the parking lot, three feet from the existing westerly top of the bank. The Alternatives Analysis notes that there are concerns with the effectiveness of the sheet piles to resist the design

loads which would need to be analyzed further. The hydraulic model for this alternative assumed a vertical (sheetpile) wall on the westerly bank position near the alignment of the existing chain-link fence.

The Alternative was found to have adequate freeboard. Regarding the maximum velocity of this alternative, the Alternative Analysis states:

*The maximum velocity found at STA 13+75.00 was 6.96 fps, assuming the channel had eroded to the sheet pile. The velocity was lower in this alternative because the sheet piles were only located along the 260 ft of the emergency repair. This created a wide section within the channel, which created transition losses and lowered the channel velocities. The channel velocity was found to be above the Maximum Permissible Velocity for a natural channel (3.75 to 5 fps) but below the Maximum Permissible Velocity for sheet piles (>20 fps). Before the channel had eroded to the sheet pile, the velocities would be even higher than 6.96 fps. Therefore, it can be concluded that the channel would continue to erode until the sheet pile was exposed.*

After the sheet piles are placed, the erosion potential of the westerly bank is expected to be the same as the No Project Alternative as the bank material channelward of the sheet piles continues to erode back to the sheet piles. Once the channel erodes back to the sheet pile, velocities at Station 1800 Upstream of the site were found to be lower than the maximum permissible velocity for the western concrete side of the channel, but higher than the maximum permissible velocity for the eastern natural side of the channel. However, velocities did decrease insignificantly when compared to the no project alternative (the decrease is considered insignificant because the velocity would still be within the range that would result in erosion). At Station 1375, the subject site, the velocities were also acceptable for the western side of the channel with the sheet piles, but too high for the natural eastern side of the channel. At Station 1000, downstream from the sheetpile, the channel is natural and the velocities would be above the maximum permissible and would have the potential for erosion identical to that of the no project alternative.

No private land would need to be acquired under this alternative. The cost of placing the sheetpiles is classified as High. In addition, special reinforcement may be required to help the sheet piles resist the design loads.

Regarding the environmental impacts of this alternative, the Alternatives Analysis finds that the impacts would be moderate and states:

*After the construction of the sheet pile, the velocities would be even higher than the 6.96 fps and the erosion problem would occur until the sheet pile was exposed. The sediment would continue to be deposited in Newport Bay. When the natural bank eroded away, the channel bank would be protected and the maximum velocities would be below the maximum permissible velocities. No additional erosion is assumed to occur. There are moderate environmental impacts to this alternative.*

f) Channel Widening/Reconfiguration

This alternative includes a complete reconfiguration and reconstruction of the existing channel. Unlike all the other alternatives considered, the improvements included in this alternative would extend past the 260 feet of the emergency repair site. The channel would be widened out to have a 30 ft bottom width with 4:1 side slopes. The channel would begin the transition at station 17+00.00, which is located just downstream of the existing public golf course. The golf course is located upstream, to the north and east of the channel. The westerly top bank line would remain at its existing location, and the channel alignment would shift approximately 25 feet toward the easterly bank. The widening of the channel under this alternative would require that the pedestrian bridge across the channel downstream of the subject site be completely redesigned and reconstructed to accommodate the widened banks. The top width of the channel under this alternative would be approximately 170 feet at the bridge location, which may require a pier to be placed in the middle of the channel for bridge support.

The hydraulic model for this alternative indicates that adequate freeboard would remain, however the channel would continue to erode. Regarding the potential for erosion under this alternative the Alternatives Analysis states:

*Although, it was found that the velocities within cross-section 1800 [upstream] were not above the maximum permissible for the concrete lined channel wall, the eastern portion of the cross-section did have potential for erosion. The cross-section east of the concrete lining would be a natural channel and have a maximum permissible velocity of 3.75 to 5 fps. A significant increase in velocity was found due to the channel transitions to a wide trapezoidal channel. The transition caused the water surface elevation to approach critical depth.*

*Cross-section 1375 [emergency repair location] would be a vegetated natural channel with no reinforcement. The velocities were above the maximum permissible velocity and the cross-section would have the potential to erode.*

*Cross-section 1000 [downstream] would be a vegetated natural channel with no reinforcement. The velocities were above the maximum permissible and the cross-section would have the potential to erode.*

Although this alternative includes a complete realignment of the channel configuration, all construction could be accommodated on County owned land. However, if channel erosion threatened surrounding land, acquisition issues may arise. This alternative is considered to have the highest cost of the alternatives considered, due to the need for redesign of the channel, the extent of construction necessary, and the need to remove and reconstruct the pedestrian bridge.

Under this alternative, the channel bank would not retain the emergency repair work, and would remain an unreinforced soil channel bank. Even though the channel bank would be

vegetated and would be reconfigured to a 4:1 side slope, the velocities in the channel would be too high to prevent continued erosion and the bank would continue to erode. Thus, the adjacent parking lot would remain threatened, creating the potential for the trees and pavement to collapse and be deposited into the channel and Newport Bay which would result in significant environmental impacts.

g) Geogrid/Cell/Erosion Mattresses and Vegetation

This alternative involves removing the riprap along the westerly bank placed under the emergency permit. The earthen fill would remain and a synthetic fabric would be placed on the channel bank for erosion control. According to Orange County Local Drainage Manual, synthetic fabric or mattresses generally consist of one or two layers of woven fabric forms placed on the slope to be protected which is then planted with vegetation. This alternative may require an irrigation system to establish the vegetation. This alternative is similar to the Removal of Rip Rap alternative except that it has a higher Maximum Permissible Velocity due to the geogrid and a higher n-value (which means the velocity within the channel is lower) because of the vegetation.

The hydraulic model for this alternative indicates that adequate freeboard would remain. With this alternative, erosion on the westerly bank would not continue as long as the geogrid is vegetated. Velocities at cross-section 1800 (upstream) would be within the maximum permissible for the concrete lined west bank, but the natural bank on the east would still be subject to erosion. Velocities upstream would have an insignificant decrease compared to the no project alternative due to the change in downstream channel geometry.

Velocities at cross-section 1375 (emergency repair site) would be below the maximum permissible for the western bank, but would exceed maximum permissible on the eastern, natural bank. Thus, the eastern bank would have the potential to erode. Velocities at cross-section 1000 (downstream) would be above the maximum permissible and thus the area would have the potential to erode. However, velocities downstream would have an insignificant decrease compared to the no project alternative due to the change in downstream channel geometry.

No land acquisition would be required for this alternative. This alternative is classified as Medium Cost due to construction required to place the 1,300 cubic yards of fill and geogrid mattress, and possibly construction and design of an irrigation system.

This alternative would result in environmental benefits, as long as vegetation remains. The environmental benefits accrue by preventing erosional debris generated from the emergency repair site from entering the channel and Upper Newport Bay.



h) Planned Retreat

Under this alternative the emergency riprap would be removed and the channel would be allowed to run naturally. Historical aerials were used to approximate the general configuration of the channel under this scenario. It is assumed that the channel would have light vegetation in this case.

The hydraulic model indicates that adequate freeboard would remain with this alternative, however maximum permissible velocities would be exceeded and the channel is expected to continue to erode. Upstream velocities would have an insignificant decrease compared to the no project alternative because it is assumed that the channel would naturally become larger. At cross-section 1375 (location of emergency repair work) velocities would exceed permissible velocities for natural channels and so erosion would continue. At cross-section 1000 (downstream), velocities would exceed maximum permissible and so erosion would continue. Overall, this alternative is expected to have a negative effect on the erosional impact due to the increase in channel velocities when compared to the no project alternative.

Private land would need to be acquired under this alternative. Most, if not all of the existing adjacent parking lot would need to be purchased, and compensation for the loss of property value to the adjacent buildings is expected. Construction costs are classified as Low Cost as no construction would be associated with this alternative. However, overall the cost is classified as High Cost due to the necessity of acquiring private land.

Regarding potential environmental impacts of this alternative, the Alternatives Analysis states:

*The project would not decrease the erosion of the channel's westerly bank. The erosion problem is considered serious, which, if left unresolved, could result in significant impacts to both coastal and fresh water resources. Should the bank fail, there is the potential for the trees and pavement to collapse and be deposited into the channel and Newport Bay. There is potential for significant environmental impacts.*

i. Alternatives – Conclusion

Of the alternatives considered, all but the rock lined slope buttress (riprap and earthen fill) alternative and the vegetated geogrid/mattress alternative did not prevent erosion of the western bank (subject site). Continued erosion of the subject site would threaten the adjacent parking lot, which if failure should occur would result in deposition of the trees and pavement into the channel and bay, creating adverse environmental impacts. In addition, the deposition could also result in blocked channel flow, potentially causing flooding in upstream developed areas.

The rock lined slope buttress alternative (riprap and earthen fill) is the applicant's preferred alternative. The applicant's Alternatives Analysis finds the rock lined slope to be the most viable solution to solving both the immediate erosion issues along the westerly bank at the emergency repair/subject site as well as for the long term solution. The results of the hydraulic models for both the preferred alternative and the geogrid/mattress alternative were similar. The hydraulic models for both indicated: 1) velocities below the maximum permissible at the project site, 2) both caused insignificant decreases in channel velocities, and 3) both are expected to have similar erosional impacts upstream and downstream. However, the preferred alternative design is also expected to prevent erosion from velocities up to 12 to 17 fps, while the geogrid/mattress design is expected to prevent erosion only up to velocities of 10 to 14 fps. In addition, the riprap alternative has a higher factor of safety, would not require an irrigation system, and provides a higher n-value (which lowers the velocity within the channel). Although, the geogrid/mattress alternative would allow the emergency repair site to be vegetated, that would likely require installation of an irrigation system. Prior to the erosional event requiring the emergency action, the bank was not vegetated.

Environmentally, both the preferred rock lined slope and the geogrid/mattress alternatives are expected to benefit Upper Newport Bay and the channel area by preventing erosional debris (including debris resulting from collapse of the adjacent parking lot) from entering the channel system and bay.

With regard to cost feasibility, the applicant asserts that the rock lined slope alternative, although classified as medium cost, is the most cost effective. Some of the alternatives considered had lower costs but did not prevent continued erosion of the westerly bank, which is the goal of the project. This alternative also does not require land acquisition with also adds to the feasibility of the preferred alternative.

Therefore, the Commission finds the applicant's preferred alternative to be an acceptable alternative. Of the alternatives considered, none have greater environmental benefits, and this alternative achieves the goal of the project which is to prevent further erosion of the westerly bank at the subject site. Therefore, the Commission finds the proposed project to be consistent with Section 30236 regarding stream channelizations.

### **C. Biological Resources**

Section 30233 of the Coastal Act limits fill of wetlands to seven enumerated uses, and requires that adequate mitigation be provided, and that the least environmentally damaging feasible alternative be employed. The Biological Assessment prepared for the project, by BonTerra Consulting, dated July 8, 2010, identified a stand of coastal brackish marsh within the survey area prior to the emergency repair work. The post-construction survey did not identify any wetlands within the survey area. However, the wetlands were not located within the construction footprint. The emergency repair work restored the channel to its previous dimensions prior to the erosional event. All work was confined within the area previously occupied by the channel bank as indicated on the "as-built"

plans for the channel. Thus, no fill beyond the pre-existing footprint of the channel bank occurred. The wetlands identified in the pre-construction survey were not located within this footprint. It should also be noted that, due to the nature and function of the flood control channel, establishment of wetland plants within the channel is dynamic and ephemeral, the amount and distribution of wetland plants can change quickly (i.e. storm events can wash them away) and, depending on the flow within the channel at any given time and related alterations of the channel bottom and sides, wetlands may form and later may fade away and re-form later in a different location. In this case, the location of the wetlands identified prior to project construction were not within the construction footprint, and thus the disappearance of wetland area within the channel was not identified in the Biological Survey as an impact due to the project. All work occurred along an unvegetated, eroded channel bank, with construction access taken from above the bank. The project restored the bank to its pre-emergency slope configuration. Therefore, the Commission concurs with the applicant's biologist that impacts to wetlands did not occur as a part of the emergency repair project.

Section 30240 of the Coastal Act requires that environmentally sensitive habitat areas (ESHAs) be protected from significant disruption and that only uses dependent on the ESHA be allowed within the ESHA. In addition, Section 30240 requires that development in areas adjacent to ESHA be sited and designed to prevent impacts that would significantly degrade the ESHA areas, and that development be compatible with the continuance of the ESHA. Downstream of the project site is the Upper Newport Bay Ecological Reserve (see Exhibit 3). The Upper Newport Bay Ecological Reserve supports significant habitat and wildlife and is considered ESHA. Upper Newport Bay Ecological Reserve is a shallow 752-acre estuary, located where saltwater from the Pacific Ocean mixes with fresh water from inland areas. The Bay supports thousands of fish, amphibians, mammals and birds. Grebes, ospreys, egrets and endangered brown pelicans feed within Bay waters. Various mammals establish their dens in the coastal sage vegetation along the Bay's bluffs. Nearly 200 bird species have been identified in the reserve. Up to 30,000 birds are present from August to April, including six threatened or endangered bird species.

In the case of the subject site, it was an eroded, unvegetated flood control channel bank. The proposed development is a request to make permanent the riprap and earthen fill placed within the footprint and configuration of the pre-erosion channel bank. The Biological Survey prepared for the project found that the area of impact occurred over 0.129 acre of non-wetland waters along 185 linear feet of the westerly channel bank, and that prior to construction the bank had been eroded and no vegetation was present on the bank. During the emergency repair work a biological monitor was present at all times during construction. The biological monitor found, upon conclusion of project, that the construction had no impact on the federally and State-endangered light-footed clapper rail or on the federally threatened coastal California gnatcatcher, both of which have the potential to occur within the general project area. The Biological Assessment states: "The survey area post construction has not dramatically changed regarding the habitat offered for wildlife species." The project area (the construction footprint of the emergency repair

work) does not rise to the level of ESHA, and in any case the project did not result in significant disruption of the habitat values of the site.

However, if the riprap placed under the emergency permit were to shift and dislodge from the bank and fall into the channel, impacts to the nearby ESHA of the Upper Newport Bay Ecological Reserve would result. As stated earlier, sedimentation is an on-going threat to the UNBER's habitat function. Thus, measures must be in place to assure that impacts due to the placement of riprap do not ultimately result in impacts to the UNBER ESHA. In order to assure that impacts to the adjacent ESHA do not result from the project, a special condition is necessary that requires the applicant to monitor the subject site, and if riprap is discovered to have dislodged, to either replace it within the channel bank or remove it and properly dispose of it. As conditioned, the project could be found to be consistent with Coastal Act Section 30240 which requires that development adjacent to ESHA prevent impacts that would degrade the ESHA. Therefore, the Commission finds that, as conditioned, the project is consistent with Section 30240 of the Coastal Act regarding protection of ESHA.

#### **D. Visual Resources**

Section 30251 of the Coastal Act requires that scenic and visual qualities of coastal areas be considered and protected. The opposite (eastern) channel bank is identified in the City of Newport Beach certified Land Use Plan as an area for a "potential" equestrian trail. No formal public trail currently exists. However, informal trails exist within view of the project site. In addition, the project site is also visible from the pedestrian bridge downstream that connects trails within the ecological reserve. Regarding visual treatment of the riprap, in a letter dated 9/1/10, the applicant states:

*"No additional visual treatments are proposed to the project site. Filling over the existing rock is not a reasonable option, as the earthen fill would erode into the channel and add sediment to the Back Bay. Adding fill will also disturb the geometry of the channel and create additional erosion issues. A veneer or concrete stain could be applied to the rock to make the rocks more of a natural dirt color; however, this would require dewatering the area (it is constantly under water from the tidal influence) and could introduce coloring chemicals into the Back Bay environment."*

In any case, the previous view from the area of public areas prior to the erosive event was of an unvegetated channel bank. The view to the project site post emergency work is of a riprap channel bank. Upstream of the repair work the channel is concrete-lined, downstream the channel banks are earthen. The view has not been substantially degraded compared to the pre-existing condition with the placement of riprap. Therefore, the Commission finds that the project does not result in any adverse impacts to existing public views and is consistent with Section 30251 of the Coastal Act.

**E. Marine Resources & Water Quality**

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.*

Section 30230 of the Coastal Act requires that marine resources be protected. Section 30231 of the Coastal Act requires that the biological productivity of coastal waters be maintained, and where feasible, restored. In addition, Sections 30230 and 30231 require that the quality of coastal waters be maintained and protected from adverse impacts. The proposed project is located along the Santa Ana-Delhi flood control channel, just upstream of Upper Newport Bay Ecological Reserve. Thus, it is important to assure that marine resources and biological productivity of the Bay and the channel be protected.

The project would substantially minimize the amount of debris that could potentially enter the channel and ultimately the Upper Newport Bay Ecological Reserve when compared with the no project alternative, which is a project benefit. Long term water quality of the Bay will benefit by the resulting decrease of erosion of the westerly bank.

The emergency repair project employed measures to help assure protection of coastal waters and marine resources as specified in Condition 6 of the Emergency Coastal Development Permit. These measures include: no construction materials, debris, waste, oil or liquid chemicals placed or stored where it may be subject to wave erosion and dispersion, stormwater, or where it may contribute to or come into contact with nuisance flow; all debris resulting from construction activities be removed from the site within 1 day of completion of construction; no machinery or construction materials not essential for project implementation allowed at any time in channel waters; if turbid conditions are generated during construction, a silt curtain be utilized to minimize and control turbidity to the maximum extent practicable; all stock piles and construction materials be covered, enclosed on all sides, shall be located as far away as possible from drain inlets and any

waterway, and shall not be stored in contact with the soil; all debris and trash be disposed of in the proper trash and recycling receptacles at the end of each construction day; the discharge of any hazardous materials into coastal waters or any receiving waters is prohibited; all temporary construction access measures (e.g. access ramps) be removed in their entirety upon completion of the emergency work and the area restored to the pre-construction condition. Thus, consistent with work carried out under the Emergency Coastal Development Permit, the project, as conditioned, is consistent with Sections 30230 and 30231 of the Coastal Act regarding protection of biological productivity and marine resources.

**F. Public Access and Recreation**

The subject site does not currently provide public access. The opposite, eastern bank of the flood control channel is identified in the City's certified LUP as a potential public equestrian trail location. The proposed development will not prevent a public trail from being establishing in that location in the future. Moreover, the proposed development will not affect the public's ability to gain access to, and/or to use the coast and nearby recreational facilities. Therefore, as proposed the development, as conditioned, conforms to Sections 30210 through 30214, Sections 30220 through 30224, and 30252 of the Coastal Act.

**G. California Environmental Quality Act**

Section 13096 of the Commission's regulations requires Commission approval of Coastal Development Permit applications 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.

In this case, the County of Orange is the lead agency and the Commission is a responsible agency for the purposes of CEQA. The County determined that the proposed development is ministerial or categorically exempt on April 1, 2009. As a responsible agency under CEQA, the Commission has determined that the proposed project, as conditioned, is consistent with the marine resources and habitat protection, water quality, and public access policies of the Coastal Act. As conditioned, there are no feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impact which the activity may have on the environment. Therefore, the Commission finds that the proposed project can be found consistent with the requirements of the Coastal Act to conform to CEQA.

5-09-065 (Orange County Public Works)  
Santa Ana Delhi Channel  
Page 20

upper newport bay, newport beach, ca - Google Maps

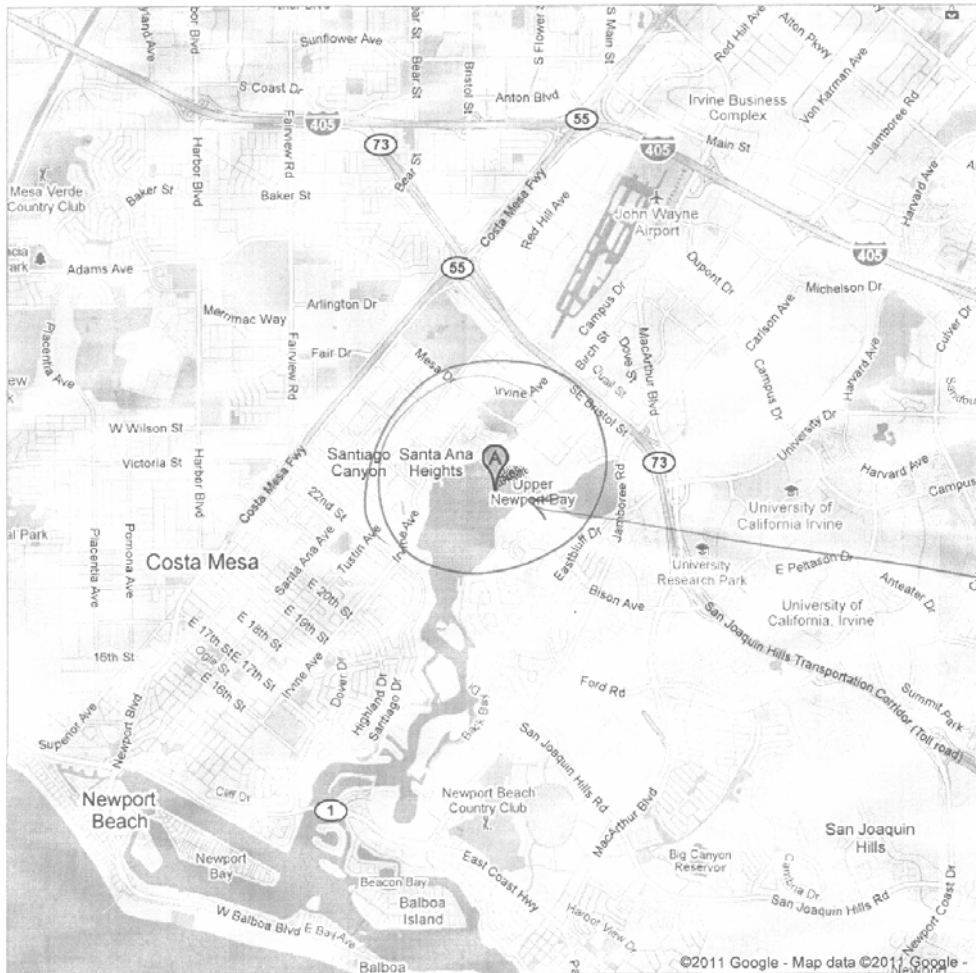
Page 1 of 1

Google maps

Address Upper Newport Bay  
Newport Beach, CA 92660

Get Google Maps on your phone

Text the word "GMAPS" to 466453



Santa Ana - Delhi  
Flood Control Channel  
Repair

5-09-065  
Exhibit 1

Vicinity Map

page 1 of 2

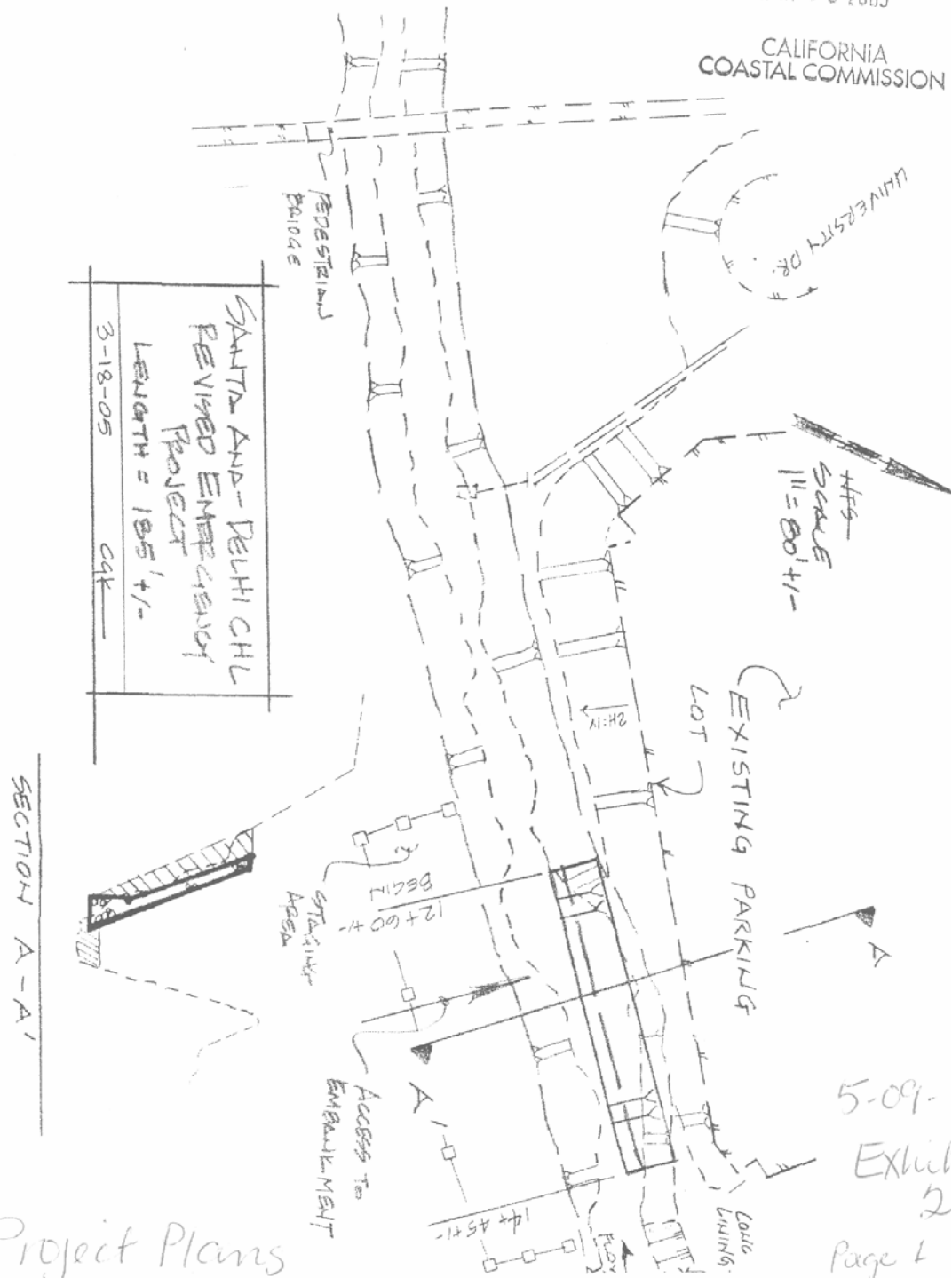
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page 2 of 2



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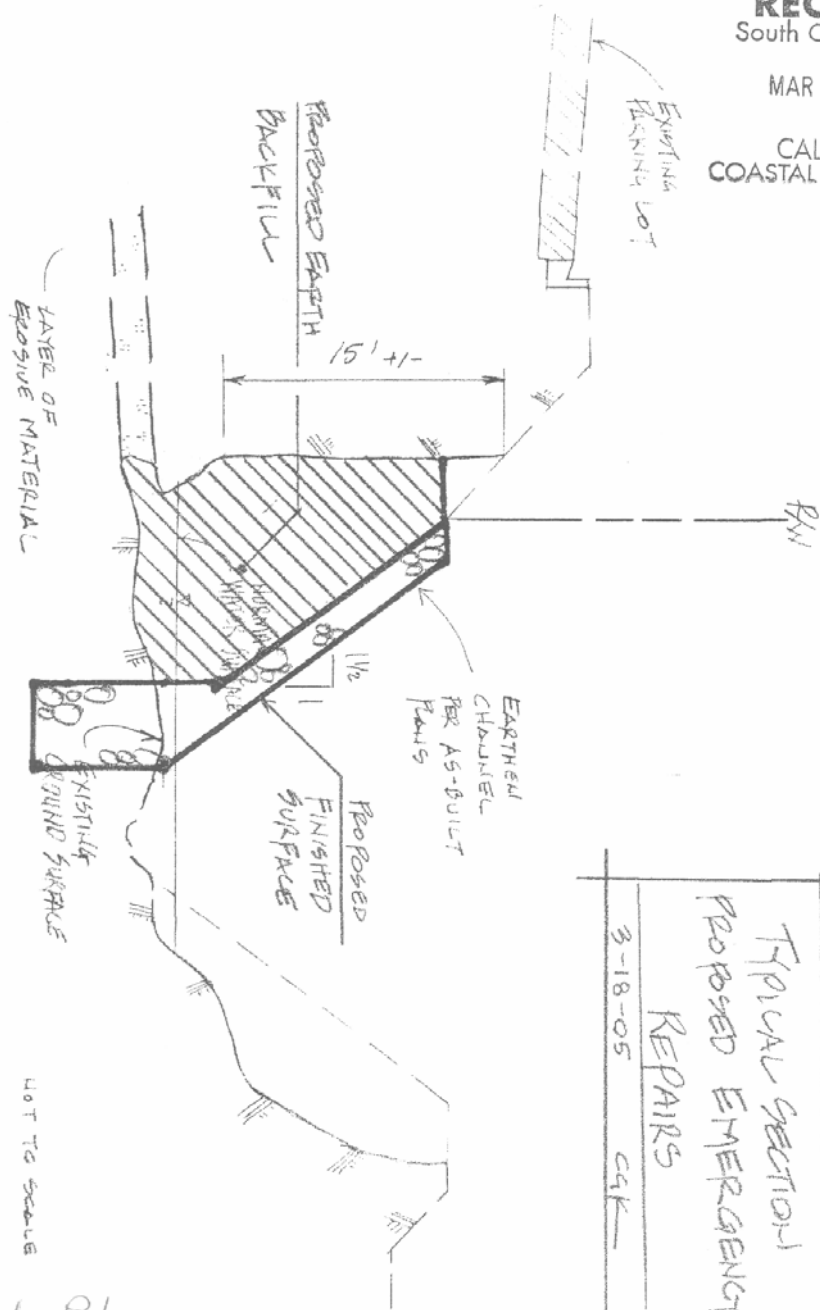
MAR 28 2005

CALIFORNIA  
COASTAL COMMISSION



5/11/05 4/14/05 Santa Ana - Delhi Channel  
EXISTING CONDITIONS  
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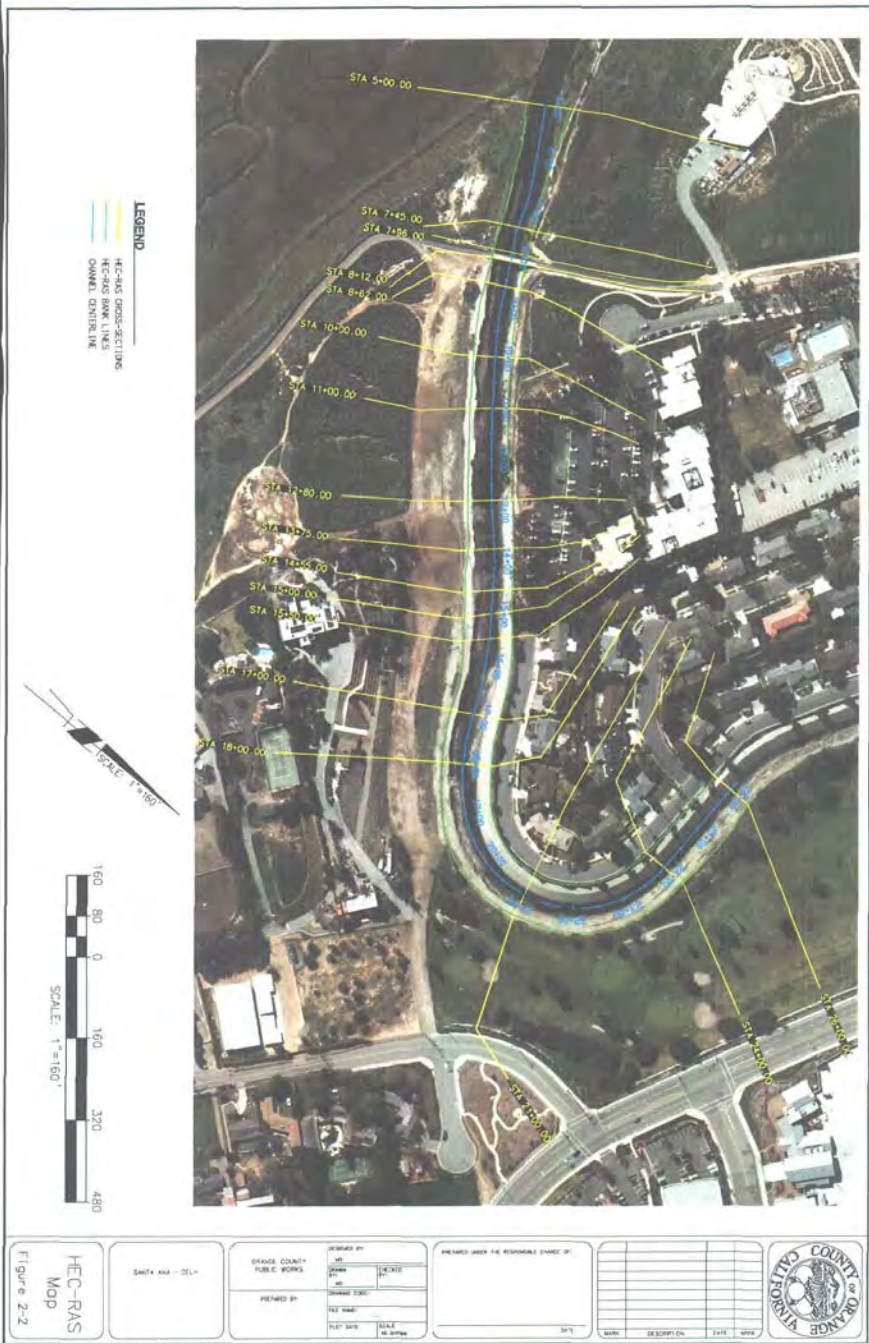


TYPICAL SECTION-1  
PROPOSED EMERGENCY  
REPAIRS  
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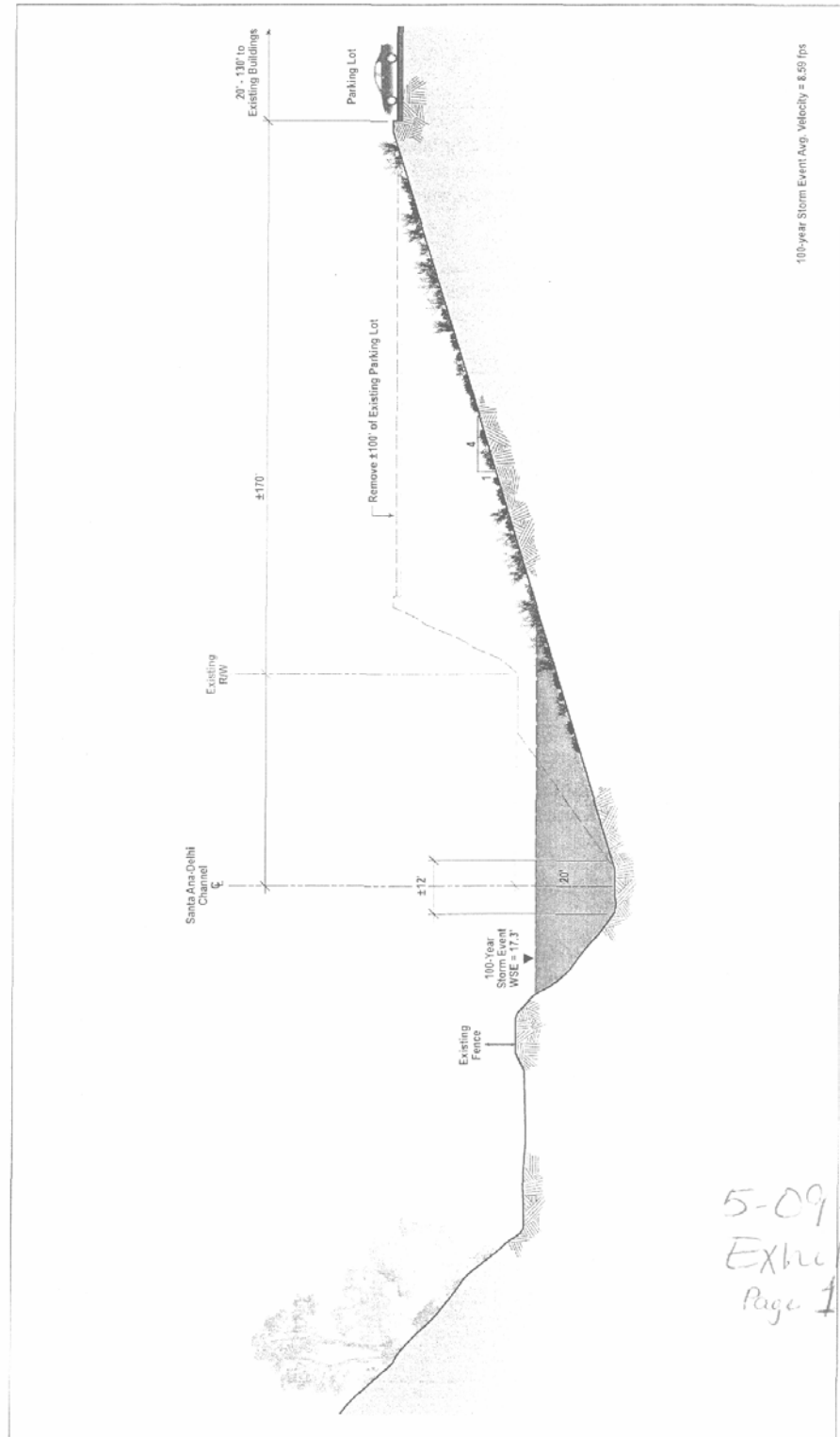
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Project Plans

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 Santa Ana Delhi Channel  
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Santa Ana Delhi Channel  
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Alternative No. 3: Vegetated Earthen Slope  
Typical Channel Section

Figure 3.4

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Exhibit 4  
Page 1 of 1

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Santa Ana Delhi Channel  
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Mar-18-05 05:53pm From-California Coastal

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T-363 P.002/005 F-56

STATE OF CALIFORNIA - THE RESOURCES AGENCY

**CALIFORNIA COASTAL COMMISSION**

South Coast Area Office  
200 OceanGate, Suite 1000  
Long Beach, CA 90802-4302  
(562) 590-5071

ARNOLD SCHWARZENEGGER, C  
**RECEIVED**  
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MAR 28 2005

**EMERGENCY PERMIT**

CALIFORNIA  
COASTAL COMMISSION

**DATE:** MARCH 18, 2005

**EMERGENCY PERMIT:** 5-05-104-G

**APPLICANT:** County of Orange, Resources & Development Management  
Attn: Chris Kubasek

**LOCATION:** Santa Ana-Delhi Channel between the terminuses of University Drive  
and Anniversary Lane, City of Newport Beach, Orange County

**EMERGENCY WORK PROPOSED:** Construction of a rock-lined slope buttress along the western embankment of the channel including approximately 837 cubic yards of earthen fill material in the channel slope and placement of approximately 583 cubic yards of rock upon the earthen slope to re-enforce and prevent further slope erosion that threatens an existing parking lot. The proposed footprint of the rock is approximately 185 feet long by 16 feet (2,960 square feet), and will extend approximately from Station 12+60 to Station 14+45 as described on the revised plans dated March 18, 2005.

This letter constitutes approval of the emergency work you or your representative has requested be done at the location listed above. I understand from your information that an unexpected occurrence in the form of heavy storm run-off causing channel bank erosion and undercutting of an existing parking lot requires immediate action to prevent or mitigate loss or damage to life, health, property or essential public services. 14 Cal. Admin. Code Section 13009. The Executive Director hereby finds that:

- (a) An emergency exists which requires action more quickly than permitted by the procedures for administrative or ordinary permits and the development can and will be completed within 30 days unless otherwise specified by the terms of the permit;
- (b) Public comment on the proposed emergency action has been reviewed if time allows; and
- (c) As conditioned the work proposed would be consistent with the requirements of the California Coastal Act of 1976.

The work is hereby approved, subject to the attached conditions.

Very Truly Yours,

Peter M. Douglas  
Executive Director

By: Teresa Henry

Title: District Manager

5-09-065

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Santa Ana Delhi Channel  
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5-05-104-G (County of Orange)  
Page 2 of 3

**CONDITIONS OF APPROVAL:**

1. The enclosed form must be signed by the permittee and returned to our office within 15 days.
2. Only that work specifically described above and for the specific property listed above is authorized. Any additional work requires separate authorization from the Executive Director.
3. The work authorized by this permit must be completed within 30 days of the date of this permit.
4. In exercising this permit the permittee agrees to hold the California Coastal Commission harmless from any liabilities for damage to public or private properties or personal injury that may result from the project.
5. This permit does not obviate the need to obtain necessary authorizations and/or permits from other agencies (e.g. City of Newport Beach, California Department of Fish and Game, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers).
6. Construction Responsibilities and Debris Removal

The permittee shall comply with the following construction related requirements:

- (a) No construction materials, debris, waste, oil or liquid chemicals shall be placed or stored where it may be subject to wave erosion and dispersion, stormwater, or where it may contribute to or come into contact with nuisance flow;
  - (b) Any and all debris resulting from construction activities shall be removed from the site within 1 day of completion of construction;
  - (c) No machinery or construction materials not essential for project implementation shall be allowed at any time in channel waters;
  - (d) If turbid conditions are generated during construction, a silt curtain shall be utilized to minimize and control turbidity to the maximum extent practicable;
  - (e) All stock piles and construction materials shall be covered, enclosed on all sides, shall be located as far away as possible from drain inlets and any waterway, and shall not be stored in contact with the soil;
  - (f) All debris and trash shall be disposed of in the proper trash and recycling receptacles at the end of each construction day;
  - (g) The discharge of any hazardous materials into coastal waters or any receiving waters shall be prohibited.
  - (h) All temporary construction access measures (e.g. access ramps) shall be removed in their entirety upon completion of the emergency work and the area restored to the pre-construction condition.
7. Authorization of this emergency permit shall not preclude consideration, through the regular coastal development permit process, of other hazard avoidance and/or protective response options (e.g. bio-engineering).
  8. The rock-lined slope buttress shall not encroach beyond the toe of the slope identified on the as-built plans of the channel and shall be no more than approximately 185 linear feet long.
  9. This emergency permit does not authorize any permanent wetland impacts. If any inadvertent impacts to wetland habitat occurs, the applicant shall mitigate at a minimum 4:1 (mitigation to impact) ratio.

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Page 28

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5-05-104-G (County of Orange)

Page 3 of 3

10. This emergency permit does not authorize any riparian impacts. If any inadvertent impacts to riparian habitat occurs, the applicant shall mitigate at a minimum 3:1 (mitigation to impact) ratio.
11. Construction activities shall avoid any work during times that sensitive species are known to utilize, or could be disturbed by work within, the subject area. A biological monitor shall be present during all construction activities.
12. Pre-project site conditions shall be documented through photographs of the site, mapping and other appropriate documentation prior to commencement of work and submitted with any required follow-up coastal development permit application.
13. Follow-Up

Within 60 days of the date of this permit, the permittee shall submit a complete application for a regular Coastal Development Permit, or revise and complete pending Coastal Development Permit Application 5-04-433, to address erosion hazards at the site. Such application shall include an analysis, prepared by an appropriately qualified professional (e.g. engineer with expertise in bay and channel environments), of alternative methods of addressing the hazards, including but not limited to, the following alternatives: no-project, removal of the rock-lined slope buttress authorized under this emergency permit and no further protection, vegetated earthen slope (and/or other bio-engineering alternatives), rock lined slope buttress, foundation underpinning for threatened structures with and without accompanying slope protection device(s), channel widening/reconfiguration, use of geogrid/cell/erosion 'mattresses' and vegetation, and planned retreat (i.e. reconfiguration and/or removal of existing development). The alternatives analysis shall identify which alternative is the least environmentally damaging feasible alternative and identify the applicant's preferred alternative along with the reasons for selecting the preferred alternative.

The follow-up application submittal shall also, at minimum, address the following issues: visual treatment of any proposed-to-be retained and/or revised slope protection devices at the site; mitigation of any adverse impacts upon biological resources at the subject site; upstream and downstream erosion effects.

Condition number thirteen (13) indicates that the emergency work is considered to be temporary work done in an emergency situation. If the property owner wishes to have the emergency work become a permanent development, a Coastal Development Permit must be obtained. A regular permit would be subject to all of the provisions of the California Coastal Act and may be conditioned accordingly. These conditions may include provisions for public access (such as an offer to dedicate an easement) and/or a requirement that a deed restriction be placed on the property assuming liability for damages incurred from hazards.

If you have any questions about the provisions of this emergency permit, please call the Commission office in Long Beach (562) 590-5071.

Enclosures: Acceptance Form  
Coastal Permit Application Form

cc: City of Newport Beach  
Jason Lambert, U.S. Army Corps of Engineers

5-09-065

Ex 5  
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Mar-18-05 05:54pm From-California Coastal  
**CALIFORNIA COASTAL COMMISSION**  
SOUTH COAST DISTRICT  
PO Box 1450  
200 Oceangate, 10th Floor  
LONG BEACH, CA 90802-4416  
www.coastal.ca.gov

+5625905084

T-363 P.005/005 F-581

**EMERGENCY PERMIT ACCEPTANCE FORM****RECEIVED**  
South Coast Region

MAR 23 2005

CALIFORNIA  
COASTAL COMMISSION

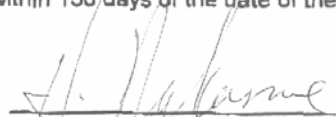
TO: CALIFORNIA COASTAL COMMISSION  
SOUTH COAST DISTRICT  
PO Box 1450  
200 Oceangate, 10th Floor  
LONG BEACH, CA 90802-4416  
(562) 590-5071

RE: Emergency Permit No. 5-05-104-6

INSTRUCTIONS: After reading the attached Emergency Permit, please sign this form and return to the South Coast District Office within 15 working days from the permit's date.

I hereby understand all of the conditions of the emergency permit being issued to me and agree to abide by them.

I also understand that the emergency work is TEMPORARY and that a regular Coastal Permit is necessary to make it a permanent installation. I agree to apply for a regular Coastal Permit within 60 days of the date of the emergency permit (i.e., by ), OR I will remove the emergency work authorized by such permit in its entirety within 150 days of the date of the emergency permit (i.e., by ).

  
Signature of property owner or  
Authorized representative

Herbert I. Nakasone,

Name

Director Public Works/Chief Engineer

Address

County of Orange, RDMD

P.O. Box 4048, Santa Ana, CA 92702-4048

March 21, 2005

Date of Signing

5-09-065

Ex 5

 CALIFORNIA COASTAL COMMISSION

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