

AGENDA ITEM

May 13, 2008

TO: Planning Commission

FROM: Planning Department

SUBJECT: Request for General Plan Conformity Finding – San Juan Creek Channel West Levee Protection project, Phase 1, approximately 1,700 feet upstream of Stonehill Drive to approximately 5,700 feet upstream of Stonehill Drive (Station 72+00 to 112+00) located in the City of San Juan Capistrano (Applicant: County of Orange, Resources Development & Management Department, Nadeem Majaj, P.E.)

RECOMMENDATION

By motion: adopt a resolution finding that the Orange County Resources Development & Management Department's (RD&MD) proposed San Juan Creek Channel West Levee Protection Project would be consistent with the General Plan Safety Element (see Attachment 1, Draft Planning Commission Resolution 08-5-13-x).

Request:	The County of Orange requests a General Plan conformity finding for a proposed flood control protection project along a portion of the San Juan Creek levee located north of Stonehill Drive. The Planning Commission has not previously considered this project.
Location:	The project location consists of a portion of the existing San Juan Creek west levee north of Stonehill Drive. This segment of the levee protects several residential neighborhoods in the City of San Juan Capistrano that have been threatened by past storm events and potential flooding.
Description:	The proposed project consists of installing a Z-type, steel, sheetpile into the existing west creek levee extending from a point 1,700 feet upstream of Stonehill Drive to approximately 5,700 feet upstream of Stonehill Drive. Sheetpiling would be installed through mechanical vibration of the steel panels and would not involve pile driving. When installed, the sheetpiles would be completely below levee grade, and extend at varying depths below the base of the creek channel flow. The sheetpiles would provide a system of contingency protection in the event that a major flood event wash out the concrete panel lining and the underlying earthen levee material. (see Attachment 2, March 26, 2008 Letter from Nadeem Majaj, P.E. to Steven Apple, AICP, Planning Director, Requesting a General Plan Conformity Finding for the Proposed San Juan Creek Channel West Levee Protection Project, Phase 1).
General Plan:	The San Juan Creek channel including the proposed project limits are designated "1.0, General Open Space" by the General Plan Land Use Element. The designation allows the development of various uses and structures permitted within the open district classifications.
Zoning District:	The project area is designated "GOS" (General Open Space) on the Official

	Zoning Map and is located within the "FM" (Floodplain Management District). <i>'Flood-control structures including levees, channels, spreading basins, detention areas, and diversion drains'</i> are classified as permitted uses within the District.
Prior Entitlements:	There are no prior land use entitlements associated with the project area.
Environmental Processing:	The Orange County Resources Development & Management Department (RD&MD) prepared a Mitigated Negative Declaration (IP 06-493) for the project which was circulated for public review this past Spring. The County Board of Supervisors has approved the Mitigated Negative Declaration (MND). As part of the City's review of this document, the city has Psomas Engineering address the issue of whether the sheetpile system would affect the recharge of the City's groundwater wells located along San Juan Creek. Psomas has recommended and the County has agreed to install period sheetpile panels at a slightly shallower depth to maintain groundwater inter-flow between the creek channel and the groundwater basin that supplies the City's Groundwater Recovery Facility (GRF) wells.

OWNER/ APPLICANT:

Orange County Resources Development
& Management Department (RD&MD)
% Nadeem Majaj, P.E.
300 N. Flower Street
PO Box 4048
Santa Ana, CA 92702-4048

ENGINEER:

Orange County Resources Development &
Management Department (RD&MD)
Flood Control Design
300 N. Flower Street
PO Box 4048
Santa Ana, CA 92702-4048

A. Background

San Juan Creek and Trabuco Creek have experienced several major storm/flooding events in the past that have posed a threat to City residents and businesses. The more recent events include:

- February 25, 1969 (maximum volume of 22,400 cubic feet per second): The storm resulted in flooding to adjacent properties, and was the largest flood of record at that time
- March 5, 1995 (maximum volume of 25,600 cubic feet per second): The storm resulted in no damage but was the largest flood of record at that time
- February 23, 1998 (maximum volume of 28,300 cubic feet per second): This storm resulted in major damage to the concrete channel lining and resulted in localized flooding to the City Hall area. The storm was the largest flood of record at that time.
- Jan. 11, 2005 (maximum volume of 33,650 cubic feet per second). The storm resulted in major damage to the concrete channel lining and resulted in localized flooding. This is currently largest flood of record.

As is clearly event, storm events have increased substantially in magnitude over the past 36 years. Since 1969, the magnitude of record storm events has increased by 50%. The continually increasing flood volumes indicate a serious potential threat to the levee protection. As a result of the 2005 flood, by letter dated September 1, 2005, the City requested that Orange County *"establish a permanent solution and avoid future costly repairs and potential risks to property and lives (from flooding along San Juan Creek)."* The proposed project is designed to address these issues and is in response to the City's request for assistance.

B. Issues

The main issue the Planning Commission must consider is consistency with the City's General Plan goals, policies, and recommendations.

C. Staff Analysis:

San Juan Capistrano contains three major creeks, San Juan Creek, Trabuco Creek and Oso Creek carrying water runoff from the hills northeast of the City toward the Pacific Ocean in the south. Floods along any of these major creeks are expected. Floods in residential areas are considered hazardous due to the potential for injury and property damage. Business and commercial activities can be impeded by floods due to facility damage and access related problems. Although considerable development has occurred near the City's creeks over the years, most of the creeks have not been channelized with hard concrete sides or bottoms which are designed to reduce the risk of flooding. Figure S-3 depicts the flood prone areas within the City as mapped by FEMA. This figure depicts the inundation areas for a 100-year flood; a flood of this size has a one percent chance of occurring in a given year.

Portions of the City are also subject to potential risk of hazards associated with failure of the Trampas Canyon Dam, located two miles east of the City limits within a tributary of San Juan Creek. Figure S-4 illustrates the portions of the City that would be subject to inundation if a catastrophic failure of this earthen dam were to occur. The inundation areas projected for failure of Trampas Canyon Dam are similar to that projected by the hypothetical 100-year flood. However, east of Interstate 5, the area of inundation due to dam failure is slightly greater along San Juan Creek than the area impacted by the 100-year flood.

The City of San Juan Capistrano is required by Section 8589.5 of the California Government Code to have in place emergency procedures for the evacuation and control of populated areas within the limits of inundation below dams. In addition, real estate disclosure upon sale or transfer of property in the inundation area is required under AB 1195 Chapter 65 passed on June 9, 1998.

San Juan Capistrano participates in the National Flood Insurance Program (NFIP), which is administered by the Federal Emergency Management Agency (FEMA). The NFIA program provides federal flood insurance and federally financed loans for property owners in flood prone areas. To qualify for federal flood insurance, the City must identify flood hazard areas and implement a system of protective controls.

Staff has analyzed the proposed project for consistency with applicable General Plan policies. The General Plan Safety Element establishes the following relevant goals and policies:

Safety Goal 1: Reduce the risk to the community from hazards related to geologic conditions, seismic activity, wildfires, structural fires and flooding.

Policy 1.2: Protect the community from flooding hazards by providing and maintaining flood control facilities and limiting development within the floodplain.

The proposed project would provide additional contingency protection for residents and businesses in the City through the installation of a system that would continue to provide flood protection in the event of a catastrophic levee failure. However, should a flood event remove that portion of the levee on the creek side of the sheetpile, the result would be a vertical wall. Under such a circumstance, the City would work with the Orange County Flood Control District (OCFCD) and the U.S. Army

Corps of Engineers (USACE) to repair the channel to maintain the current trapezoidal channel geometric design.

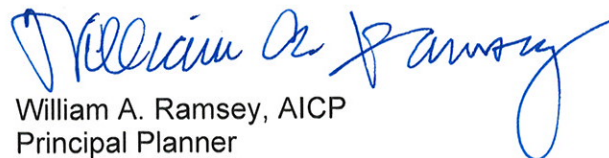
PUBLIC NOTIFICATION

Public notice is not required for consideration of a General Plan conformity finding.

Respectfully submitted,


Grant Taylor
Assistant Planning Director

Prepared by,


William A. Ramsey, AICP
Principal Planner

Attachments:

- 1, Draft Planning Commission Resolution 08-5-13-x.
- 2, March 26, 2008 Letter from Nadeem Majaj, P.E. to Steven Apple, AICP, Planning Director, Requesting a General Plan Conformity Finding for the Proposed San Juan Creek Channel West Levee Protection Project, Phase 1.

PC RESOLUTION NO. 08-5-13-__

**GENERAL PLAN CONFORMITY FINDING FOR THE SAN
JUAN CREEK CHANNEL WEST LEVEE PROTECTION
PROJECT, PHASE 1**

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF SAN JUAN CAPISTRANO, CALIFORNIA RENDERING A GENERAL PLAN CONFORMITY FINDING FOR THE PROPOSED SAN JUAN CREEK CHANNEL WEST LEVEE PROTECTION PROJECT, PHASE 1 (COUNTY OF ORANGE, RESOURCES DEVELOPMENT & MANAGEMENT DEPARTMENT, NADEEM MAJAJ, P.E.)

Whereas, the Orange County Resources Development & Management Department (RD&MD) has requested a General Plan conformity finding for the proposed San Juan Creek Channel West Levee Protection Project, Phase 1, which includes from approximately 1,700 feet upstream of Stonehill Drive to approximately 5,700 feet upstream of Stonehill Drive (Station 72+00 to 112+00) located in the City of San Juan Capistrano; and,

Whereas, by letter dated September 1, 2005, the City requested the proposed project has been processed pursuant to Section 9-2.301, Development Review of the Land Use Code; and,

Whereas, the Orange County Resources Development & Management Department (RD&MD) has prepared an initial study pursuant to Section 15063 and 15064 of the CEQA Guidelines, issued a mitigated negative declaration pursuant to Section 15070 of those guidelines; and has caused a Notice of Negative Declaration to be posted pursuant to Section 15072 of those guidelines, and has otherwise complied with all applicable provisions of the California Environmental Quality Act (1970); and,

Whereas, the City has reviewed and commented on the Mitigated Negative Declaration (MND) and provided recommended mitigation to the Orange County Resources Development & Management Department (RD&MD) regarding the protection of the City's existing Groundwater Recovery Facility (GRF) wells located along San Juan Creek; and,

Whereas, the Planning Commission has considered the proposed project for General Plan conformity pursuant to California Government Code Section 65402.

NOW, THEREFORE, BE IT RESOLVED, that the Planning Commission of the City of San Juan Capistrano does hereby make the following findings:

1. The record of historic flooding along San Juan Creek demonstrates that flood events are becoming more severe and destructive and pose an eminent threat to the public health and safety of the residents and businesses of San Juan

Capistrano and require appropriate corrective action to protect the public health and safety; and,

2. The proposed project is consistent with the policies and objectives of the San Juan Capistrano General Plan, specifically, the General Plan Safety Element which establishes the Public Safety Goal to *"Reduce the risk to the community from hazards related to geologic conditions, seismic activity, wildfires, structural fires and flooding."*
3. The proposed project is consistent with the policies and objectives of the San Juan Capistrano General Plan, specifically, the General Plan Safety Element which establishes the Public Safety Policy to *"Protect the community from flooding hazards by providing and maintaining flood control facilities and limiting development within the floodplain."*
4. The proposed project will be designed to provide important public safety improvements to the San Juan Creek levee to provide enhanced flood protection for residents and businesses situated along the creek.
5. The proposed project will be designed to assure that the City's Groundwater Recovery Facility (GRF) wells located along San Juan Creek will not be adversely affected by the project by maintaining an appropriate level of inter-flow between the creek channel and the groundwater basin as recommended by Psomas Engineering, the City's engineering consultant.

NOW, THEREFORE, BE IT FURTHER RESOLVED, that the Planning Commission of the City of San Juan Capistrano hereby finds and determine that the proposed project will be consistent with the General Plan pursuant to Section 65402 of the California Government Code

PASSED, APPROVED AND ADOPTED this 13th day of May, 2008, by the following vote, to wit:

AYES: none

NOES: none

ABSTAIN: none

Robert Cardoza, Chairman

Steven Apple, AICP, Planning Director

MAR 31 2008

*COUNTY OF ORANGE**RESOURCES & DEVELOPMENT MANAGEMENT DEPARTMENT*

PLANNING DEPT.

Bryan Speegle, Director
300 N. Flower Street
Santa Ana, CAP.O. Box 4048
Santa Ana, CA 92702-4048
Telephone: (714) 834-2300
Fax: (714) 834-5188

March 26, 2008

Mr. Steve Apple
Director of Planning
City of San Juan Capistrano
32400 Paseo Adelanto
San Juan Capistrano, CA 92675

SUBJECT: Request for General Plan Conformity – San Juan Creek Channel West Levee Protection Project, Phase I, from 1700 feet Upstream of Stonehill Drive to 5700 feet Upstream of Stonehill Drive (Station 72+00 to 112+00)

Dear Mr. Apple:

The Orange County Flood Control District (OCFCD) is currently completing plans and contract documents for the San Juan Creek Channel West Levee Protection Project. OCFCD respectfully requests that the City of San Juan Capistrano (City) adopt a resolution addressing conformity of the subject project to the City's General Plan. The State of California Government Code, Section 65402, stipulates that a local agency such as OCFCD shall not construct public works in any city until the location, purpose, and extent of such works have been submitted to the planning agency having jurisdiction and the conformity to the city's adopted General Plan is reported. The following provides background for the project and a description of the existing channel and proposed improvements.

Background

The San Juan Creek Channel is a major flood control facility traversing the City and it drains a watershed of 176 square miles with a 100-year design discharge estimated at 58,800 cfs at the confluence of San Juan and Trabuco Creek channels. Tributaries to this watershed include Trabuco Creek and Oso Creek. Portions of these channel facilities are currently earthen-bottom with concrete lined slopes. The limits of the planned levee protection project begin along San Juan Creek Channel at Stonehill Drive and continue upstream to the I-5 Freeway and along Trabuco Creek from its confluence with San Juan Creek to 1600 feet upstream of Del Obispo Street. The entire project is divided into 8 phases with Phase I scheduled for construction to begin in summer 2008. The remaining phases are tentatively planned for construction per the attached Project Phasing schedule.

During the storms of January 2005, the west levee on San Juan Creek Channel sustained major damage putting hundreds of city residents at risk. Emergency repairs were carried out by the US Army Corps of Engineers and OCFCD. Since 1963, various repairs have been made to San Juan and Trabuco Creek channels including increasing the channel embankment height by 4 feet.

Existing Conditions

The existing channel facilities, as constructed in the early 1960's, were designed to carry approximately half of today's estimated design discharge with an unreinforced concrete lining

consisting of four (4) inch thick concrete panels varying in height from 17 feet to 21 feet on a side slope of 2 (horizontal) to 1 (vertical). Scouring of the earthen-bottom channel is evident at some reaches of San Juan and Trabuco Creek channels. There remains the threat and potential of channel lining failure during major storms which was the primary cause of the west levee failure in January 2005.

Lower San Juan and Trabuco Creek channels are owned, operated, and maintained by OCFCD. The channels are built on fee-owned OCFCD property ranging from a width of 250 feet at San Juan Creek to 170 feet at Trabuco Creek with slope maintenance easements located adjacent to some areas.

Proposed Improvements

To increase the level of protection to these critical areas as proposed by the various phases of the project, the improvements consist of driving a Z-type steel sheet pile into the maintenance road behind the existing unreinforced concrete channel lining. The steel piles will be driven below the roadway surface and covered with A.C. pavement. The existing concrete channel lining will be left in place. It is anticipated that some portions of the existing maintenance access roadway and bikeway may sustain damage during pile driving activities. The maintenance road/bikeway pavement may be removed and reconstructed, repaired, or slurry sealed depending on the degree of damage incurred during construction. Bikeway striping will be completed following pavement work. Steel sheet pile installation will employ the latest technology in steel pile driving methods.

To address and mitigate the issue of groundwater migration of the Lower San Juan Basin aquifer, a recent study titled "Lower San Juan Basin Sheetpiling Assessment Modeling Report", December 27, 2007 was prepared by AMEC Environmental Services, Inc. for OCFCD. It concluded that there would be no significant negative groundwater impacts due to the project. However, Flood Control Design staff considered an alternative steel sheet pile wall system design configuration as a precaution to allow unrestricted groundwater migration by incorporating shortened 30-foot long piles every fourth sheet pile pair. All other piles will be 48-feet long.

Funding

Funding will be provided by a capital outlay from the OCFCD improvement funds.

Schedule

Completion of the design for Phase 1 is scheduled for March 2008 and advertisement for public bid is scheduled for April 2008. Phase 1 construction should commence after Labor Day 2008 (to minimize the impact to trail-users) and is expected to have a duration of 200 working days.

CEQA and Environmental Resources Agency Approval

Mitigated Negative Declaration IP 06-493 was prepared by Orange County's Resources and Development Management Department (RDMD). The CEQA documentation will be certified by the Orange County Board of Supervisors at the same time the Phase 1 project is authorized for public advertisement in mid-April 2008. A permit from the Army Corps of Engineers and a State Fish and Game 1601 Agreement are not required for the project; however, the contractor will be required to submit a Notice of Intent and SWPPP prior to construction under the jurisdiction of the California Regional Water Quality Control Board.

The OCFCD respectfully requests that the City's Planning Department provide a finding as to the conformity of the project with the City of San Juan Capistrano's General Plan. A sample resolution is enclosed to assist the City's Planning Commission. When approved, please forward two certified copies of the Commission's action to this office.

Thank you for your assistance in processing this general plan conformity. If you or your staff have any questions regarding this request or need additional information, please call Meynardo Sanchez, Project Engineer, at (714) 834-2407 or Penny Lew, Senior Civil Engineer, at (714) 834-2606.

Sincerely,



Nadeem Majaj, P.E.
Assistant Chief Engineer, OC Public Works

S:\FCD&PM\Flood Control Design\Projects\Penny's Staff Share\L01_San Juan Crk Other\City of SJC\L01-021308 IGO to City of San Juan Capistrano Gen Plan Conformity v2.doc

Attachments: Location Map
Typical Section
Phasing Schedule
Photographs
Sample Resolution

cc: Nasser Abbaszadeh, City of SJC
Ignacio G. Ochoa
Kevin Onuma
Phil Jones
Penny Lew

Project Phasing					
San Juan Creek (Facility No. L01) and Trabuco Creek (Facility No.L02)					
Phase	Facility	Reach	Features Within or Closest to Reach	Approximate Channel-Feet	Fiscal Year
I	L01	1700' U/S Stonehill Drive to 5700' U/S Stonehill Drive (westside)	Stonehill Drive	4,000	2007-2008
		7,700' Upstream Stonehill Drive to 9,500' upstream Stonehill Drive(westside) and 7,400' upstream Stonehill Drive to 9,100' upstream Stonehill Drive (eastside)	Confluence with L02, Railroad Bridge, Camino Capistrano Bridge, I-5 Freeway	2,500	2008-2009
II	L01	5,700' upstream Stonehill Drive to 7,500' upstream Stonehill Drive (westside) and 7,300' upstream Stonehill Drive to 7,500' upstream Stonehill Drive (eastside)	L01/L02 Confluence & Pedestrian Bridge	2,000	2008-2009
III	L01/ L02	1,700 Upstream Stonehill Drive to 5700' upstream of Stonehill Drive (eastside)	Stonehill Drive	4,000	2009-2010
IV	L01	Stonehill Drive to 1700' upstream of Stonehill Drive (eastside)	Stonehill Drive	1,700	2010-2011
V	L01	Stonehill Drive to 1700' upstream of Stonehill Drive (westside)	Stonehill Drive	1,700	2010-2011
VI	L01	7,500' upstream of Stonehill Drive to 9,820' upstream of Stonehill Drive (both sides)	Pedestrian Bridge & Del Obispo Street	4,640	2011-2012
VII	L02	9,820' upstream of Stonehill Drive to 11,700' upstream of Stonehill Drive (both sides)	Del Obispo Street	3,760	2012-2013

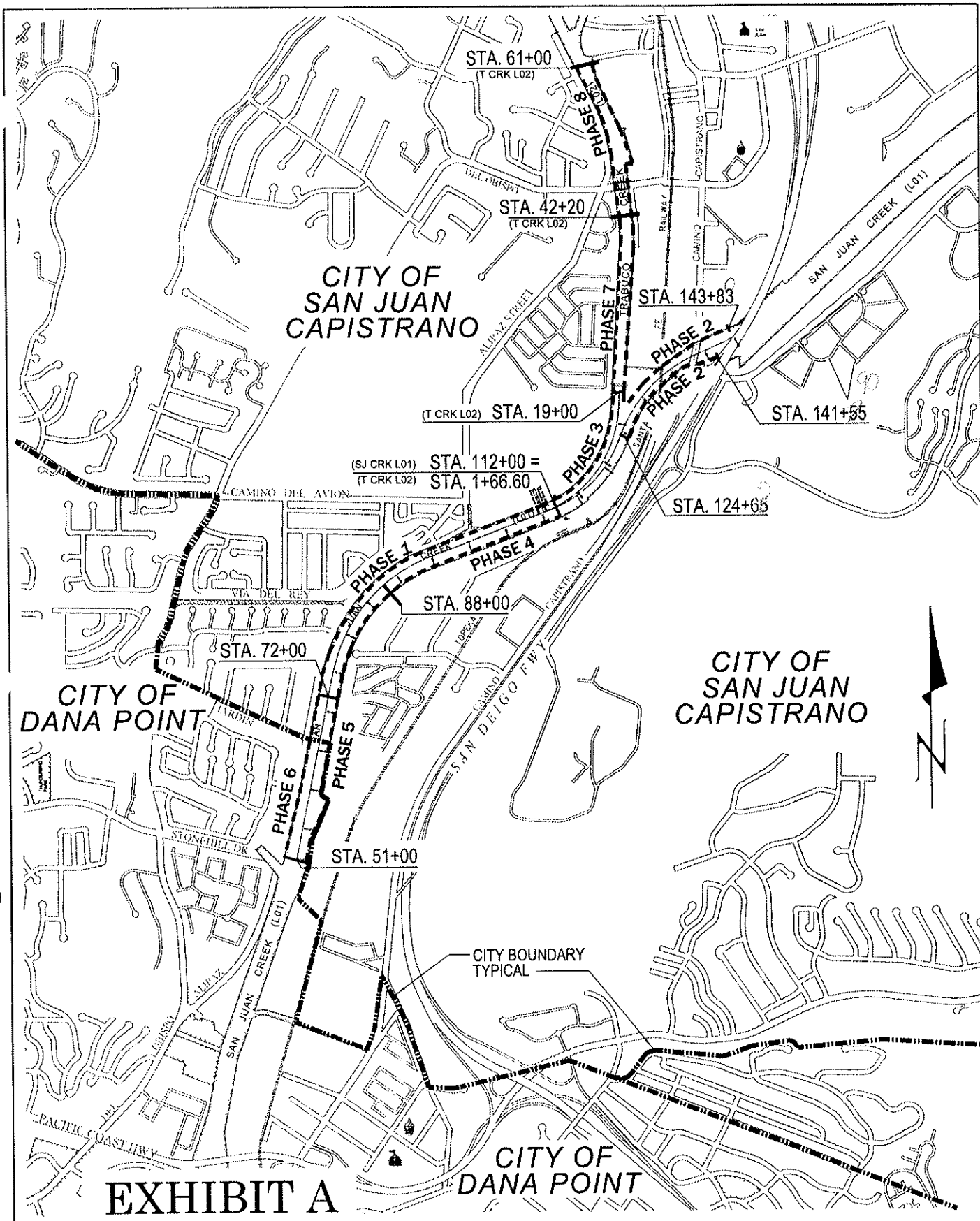


EXHIBIT A



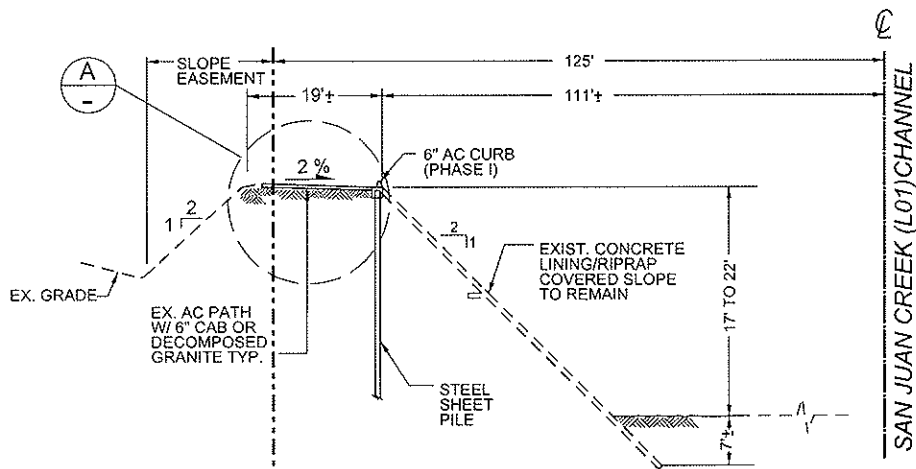
ORANGE COUNTY
RESOURCES & DEVELOPMENT
MANAGEMENT DEPARTMENT
FLOOD CONTROL DESIGN

CREATED BY: VH

SCALE : 1" = 600'

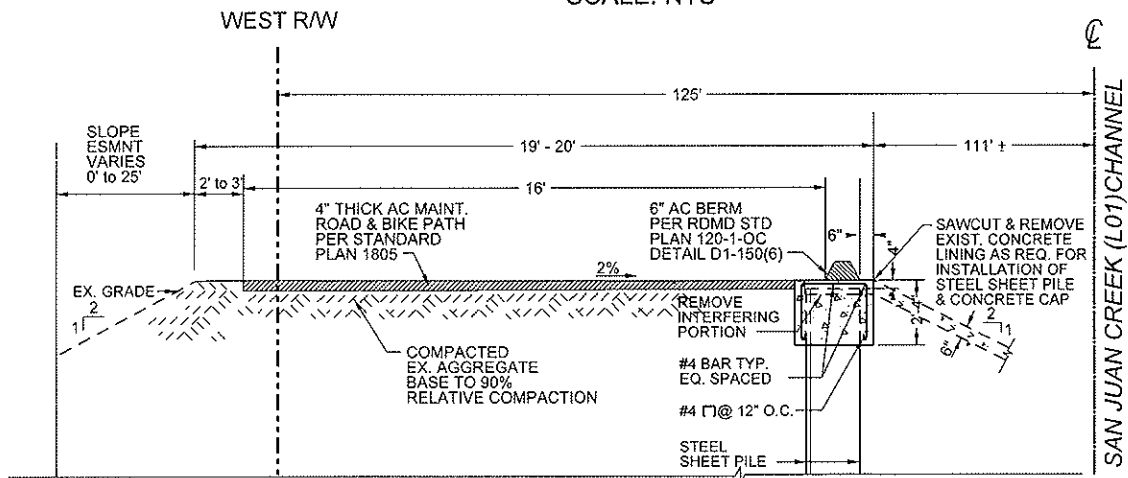
CONSTRUCTION PHASING PLAN

SAN JUAN CREEK (L01) & TRABUCO CREEK (L02) CHANNEL IMPROVEMENT PROJECTS



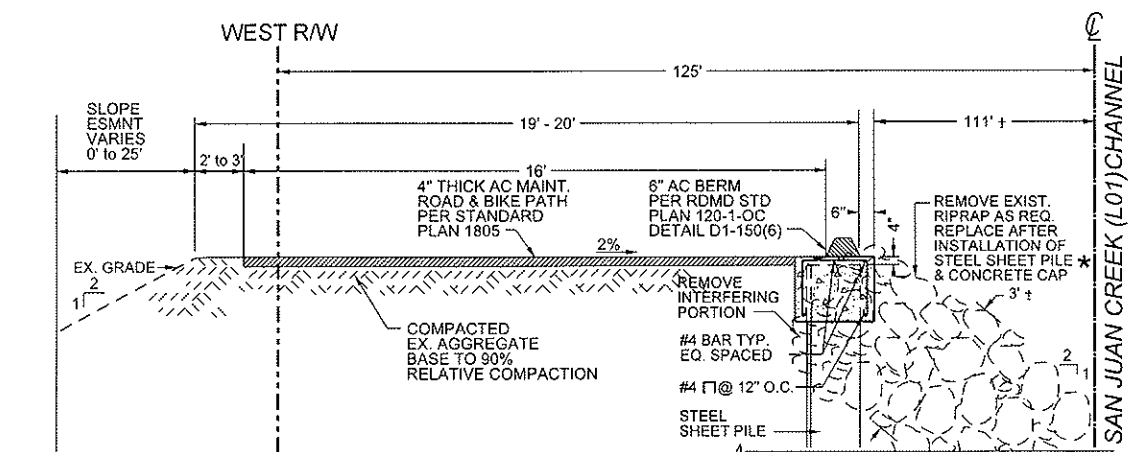
ALTERNATIVE # 1 - TYPICAL SECTION SYMMETRICAL TO CENTER LINE

SCALE: NTS



(A) CONCRETE LINING COVERED SLOPE SECTION DETAIL

NTS

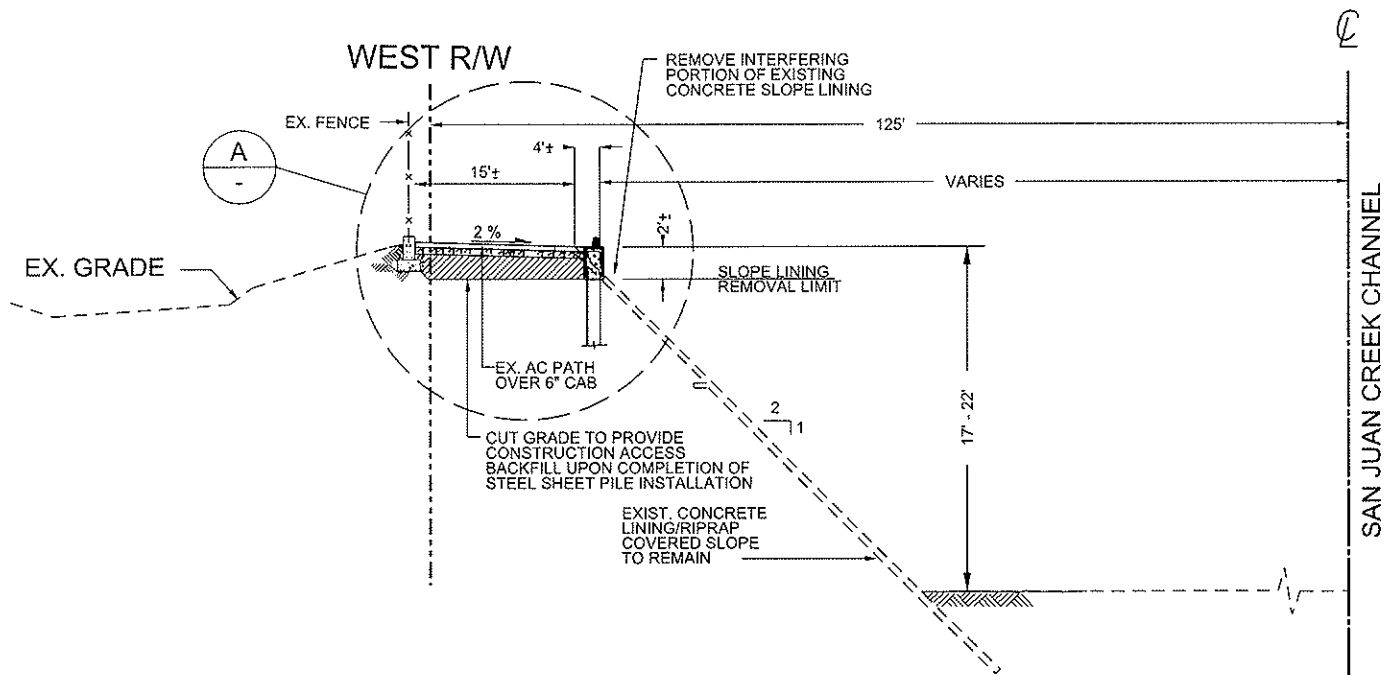


* NOTE: CONTRACTOR TO TAKE SPECIAL CARE NOTTO DAMAGE THE CORROSION RESISTANT COATING WHEN PLACING RIPRAP

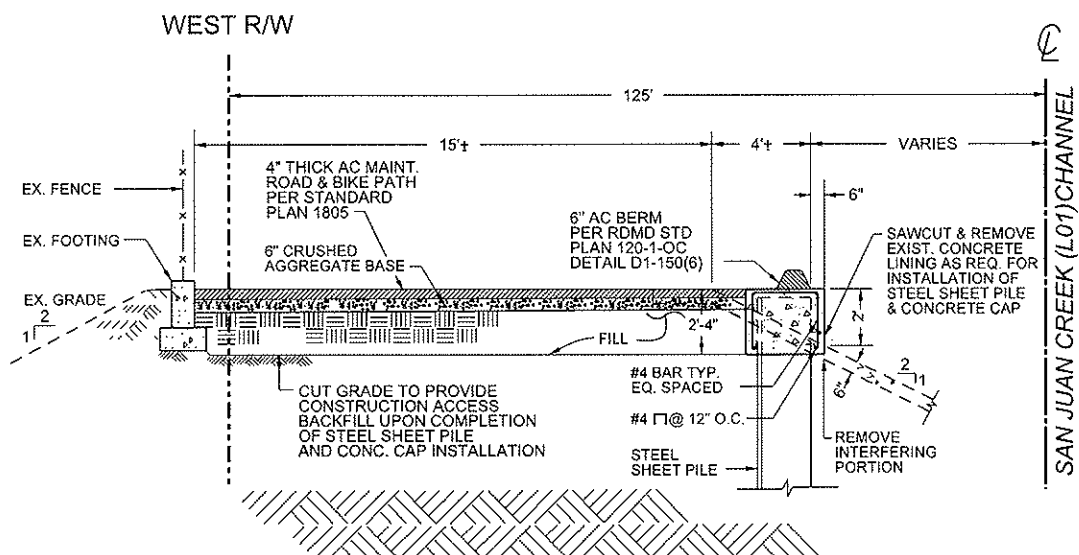
(B) RIPRAP COVERED SLOPE SECTION DETAIL

NTS

EXHIBIT B1 (ALT # 1)- SAN JUAN CREEK & TRABUCO CREEK CHANNEL IMPROVEMENT PROJECT



ALTERNATIVE # 2 - TYPICAL SECTION (PHASE III)
NTS

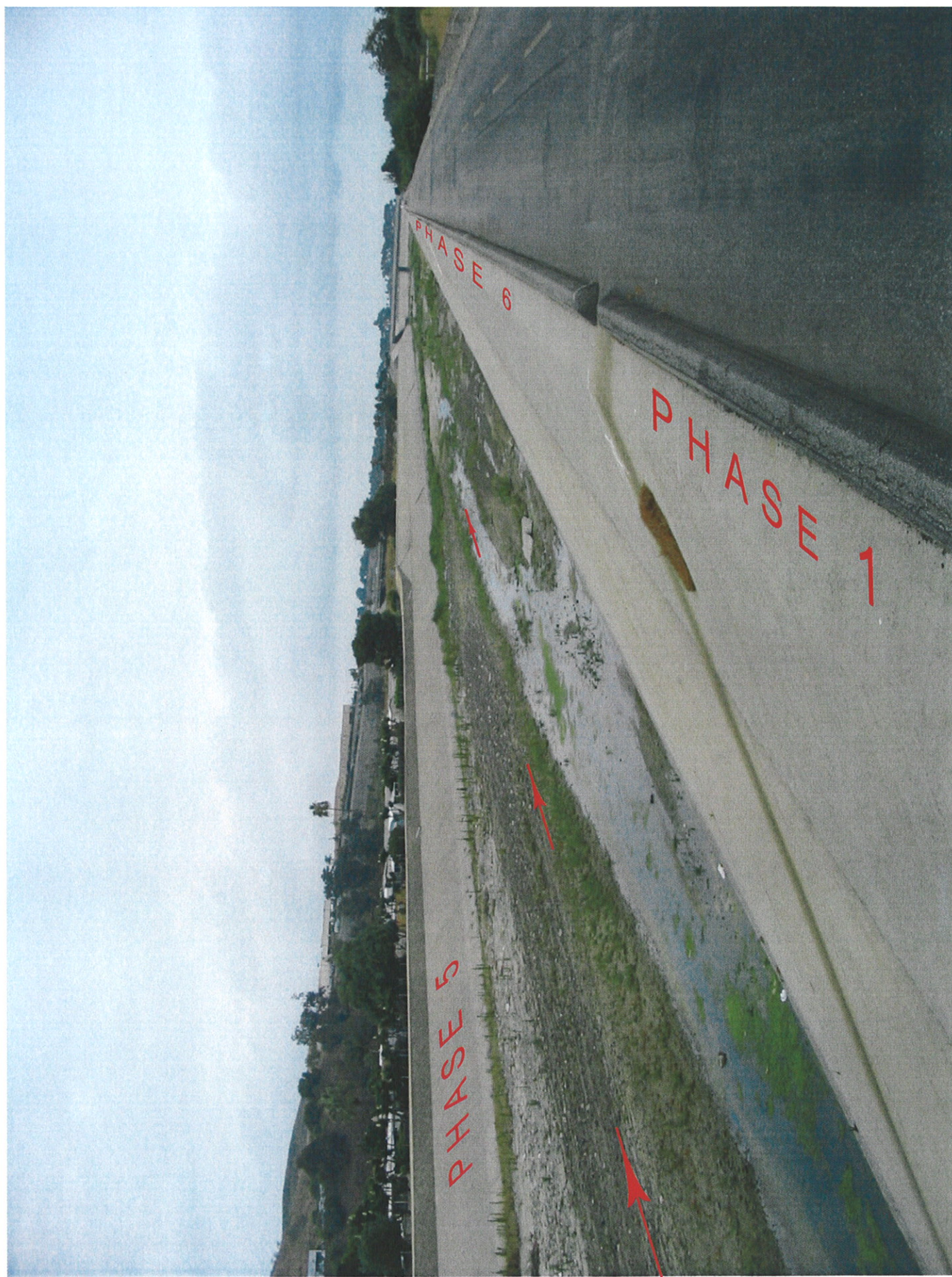


DETAIL A
SCALE: NTS

EXHIBIT B2 (ALT # 2)- SAN JUAN CREEK & TRABUCO CREEK CHANNEL IMPROVEMENT PROJECT



SAN JUAN CREEK - LOOKING SOUTHWESTERLY FROM STA. $\pm 110+00$



SAN JUAN CREEK - LOOKING SOUTHERLY FROM ±STA. 72+00



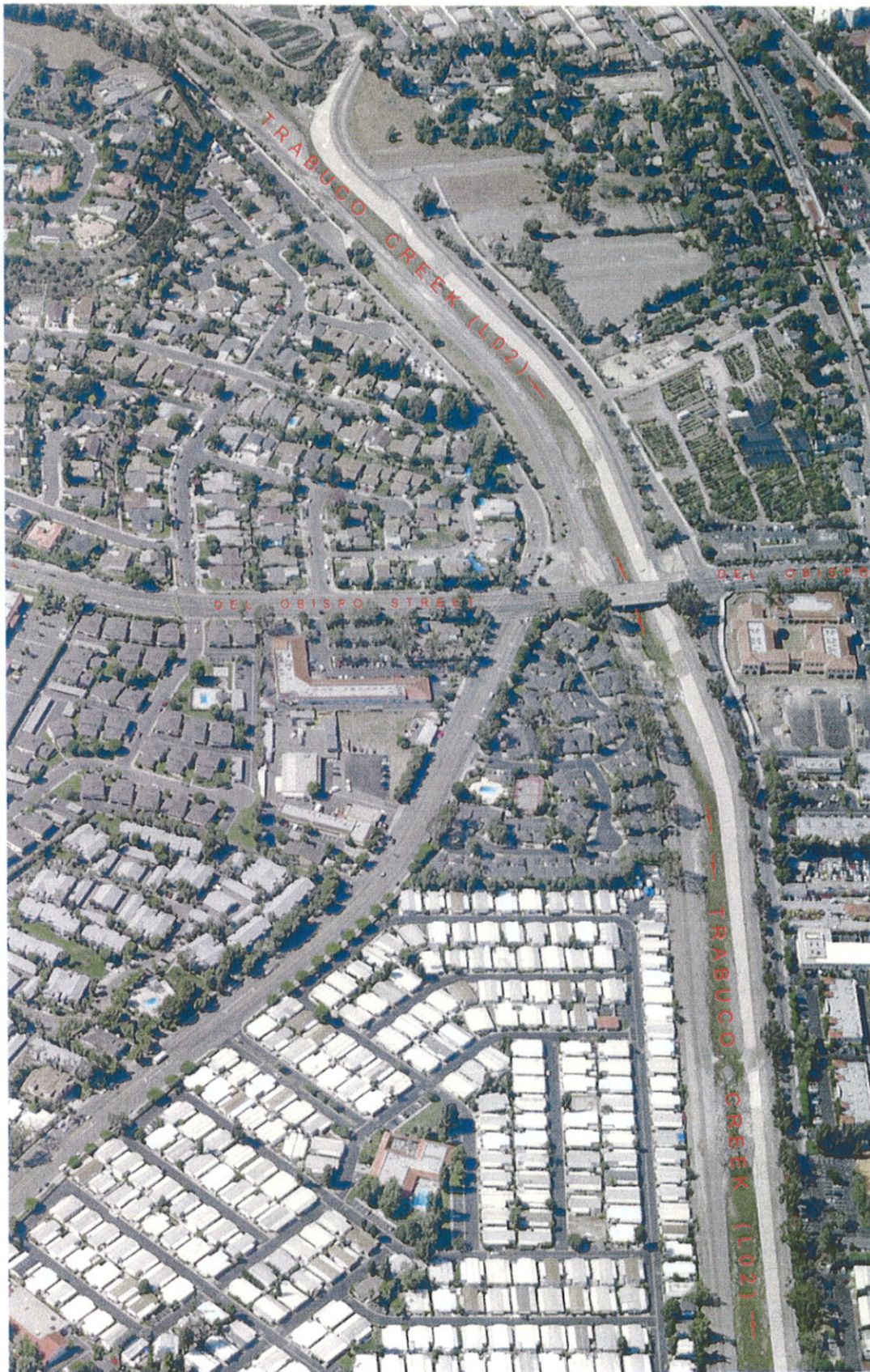
SAN JUAN CREEK (L01) FROM ±STA. 105+00 TO TRABUCO CREEK (L02)
& U/S L01 LIMITS



L01 L02.dgn 11/27/2007 11:16:30 AM



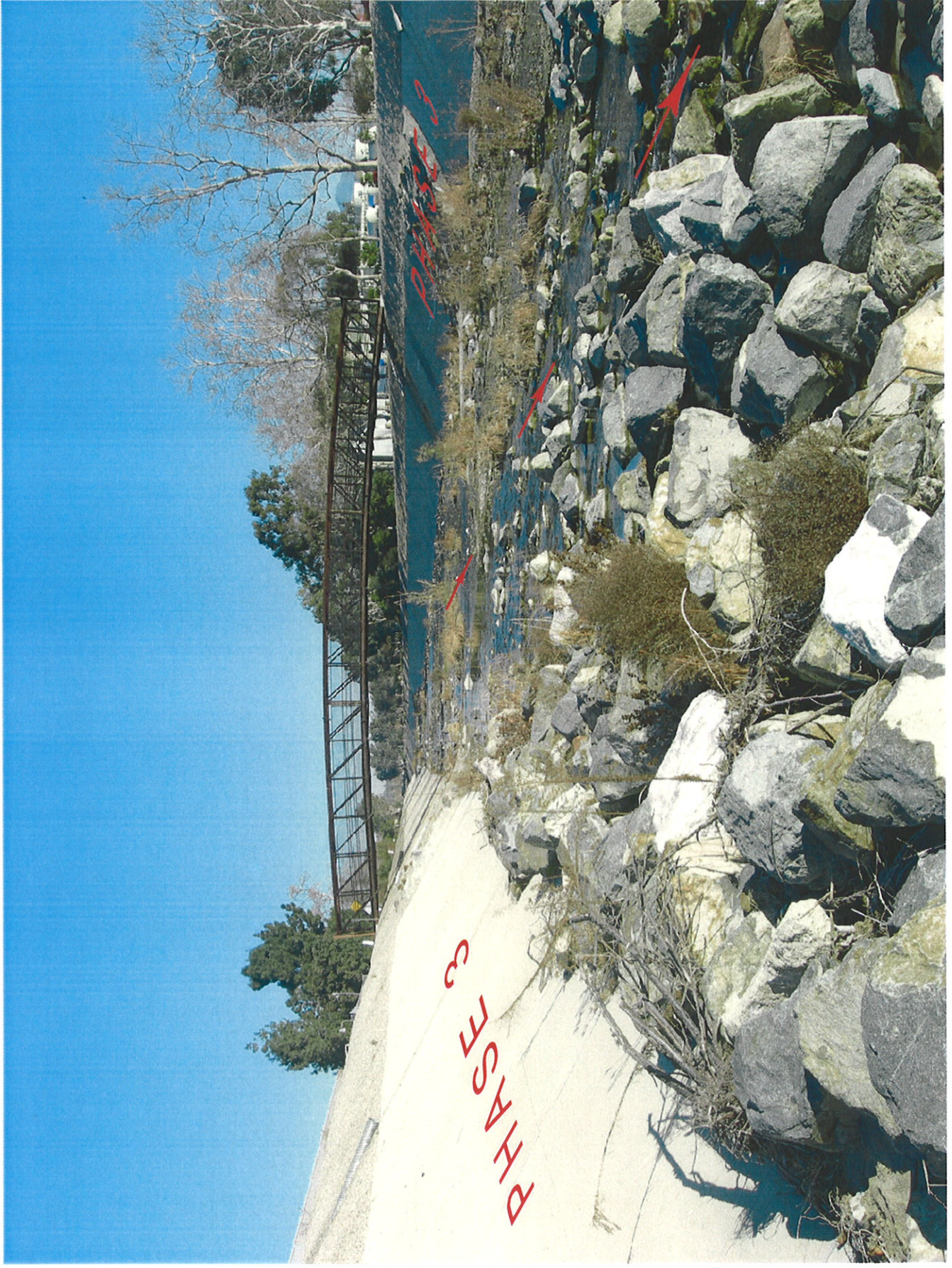
SAN JUAN CREEK - LOOKING NORTHERLY FROM ± STA. 84+00



TRABUCO CREEK (L02) FROM 300' U/S CONFLUENCE
TO 1600' U/S OF DEL OBISPO ST.



SAN JUAN CREEK - LOOKING NORTHEASTERLY FROM STA. +130+00



TRABUCO CREEK - LOOKING NORTHERLY FROM STA. +17+00

RESOLUTION OF THE CITY COUNCIL
OF THE CITY OF SAN JUAN CAPISTRANO

WHEREAS, the Orange County Flood Control District proposes to construct a steel sheet pile wall system along the levees of San Juan and Trabuco Creek channels (Facility L01 and L02) from Stonehill Drive to I-5 Freeway on San Juan Creek and from its confluence with Trabuco Creek to 1600 feet upstream of Del Obispo bridge, located within the City of Dana Point and San Juan Capistrano, Orange County, California; and

WHEREAS, the Public Contract Code of the State of California, Section 21020.9, provides in part that a local agency shall not acquire real property nor dispose of any real property, nor construct a public building or structure in any city, until the location, purpose, and extent of such activity has been reported upon as to the conformity with the adopted general plan applicable thereto,

NOW, THEREFORE BE IT RESOLVED that the Planning Commission does hereby find that the proposed improvements are in conformity with the adopted general plan of the City of San Juan Capistrano, Orange County, California.

Mayor, City of San Juan Capistrano

City Council Recording Secretary