# APPENDIX F
# Hydrology

Appendix F, Table 1
Hydrologic Modeling Results

| Water Level and Velocity at Rodeo Grounds Concrete Levee | | | | | | |
|---|---|---|---|---|---|---|
| **902.48 m from North of PCH** | | | | | | |
| | | | **Existing** | | **Proposed** | |
| **Storm Events** | **Peak Flow (cfs)** | **Return Period (yr)** | ***Velocity (m/s)*** | **Water Level (m, MSL)** | ***Velocity (m/s)*** | **Water Level (m, MSL)** |
| **02/16/80** | 391 | 83 | ***2.2*** | 12.6 | ***2.1*** | 12.4 |
| **01/27/83** | 289 | 20 | ***2.0*** | 12.1 | ***1.9*** | 11.9 |
| **01/10/01** | 80 | 4 | ***1.5*** | 11.4 | ***1.4*** | 11.2 |
| **02/23/98** | 70 | 3.3 | ***1.5*** | 11.3 | ***1.3*** | 11.1 |
| **02/23/00** | 30 | 2 | ***1.1*** | 11.0 | ***0.9*** | 10.8 |
| **04/11/99** | 3 | 1 | ***0.4*** | 10.5 | ***0.4*** | 10.4 |
| **2961 ft from North of PCH** | | | | | | |
| | | | **Existing** | | **Proposed** | |
| **Storm Events** | **Peak Flow (cfs)** | **Return Period (yr)** | ***Velocity (fps)*** | **Water Level (ft, MSL)** | ***Velocity (fps)*** | **Water Level (ft, MSL)** |
| **02/16/80** | 13800 | 83 | ***7.2*** | 41.3 | ***6.8*** | 40.8 |
| **01/27/83** | 10200 | 20 | ***6.6*** | 39.8 | ***6.4*** | 39.2 |
| **01/10/01** | 2820 | 4 | ***5.0*** | 37.3 | ***4.5*** | 36.6 |
| **02/23/98** | 2470 | 3.3 | ***4.8*** | 37.1 | ***4.3*** | 36.4 |
| **02/23/00** | 1050 | 2 | ***3.6*** | 35.9 | ***3.1*** | 35.3 |
| **04/11/99** | 93 | 1 | ***1.4*** | 34.5 | ***1.3*** | 34.2 |
| Excerpted From: Topanga Creek Watershed and Lagoon Restoration Feasibility Study (2002) | | | | | | |

**Concrete Levee at the Rodeo Grounds**

Problem description: Following the 1980 flood, tenants filled the creek and constructed a concrete covered levee 25 feet wide, 20 feet high and over 200 feet long along a meander within the floodplain to protect their homes from flooding. The un-permitted levee encroaches significantly into the creek floodway and constrains the cross-section. As a result, the creek has eroded its bed and is actively undermining the concrete bank, threatening it with failure as shown in Figure 3-7. It has also redirected the main thalweg eastward, destabilizing that bank and completely disrupting the natural floodplain condition.

Proposed solution: The levee should be removed if the residences are removed. The creek cross-section would then be significantly enlarged to restore the historic floodway at this location. From historic topographic maps, the meander appears to have originally been at the location of the homes. Removal of the levee should be done during late summer or early fall, when potential for disturbing local amphibians or fishes is minimized. Concurrently, the stands of *Arundo donax* that have overtaken the native willows in that area should be mechanically removed.

**Topanga Creek Restoration Feasibility Study Recommendations**

Recommendations are provided below based on engineering work completed for the project.

1. Implement upstream improvements along Topanga Creek to improve flood protection, habitat quality, maintain traffic circulation, improve public safety and reduce emergency costs. Improvements should be implemented at Lake Topanga, Topanga School Road, boulder dams, the Narrows, the landslides, the Rodeo Grounds and the lagoon/PCH bridge.

2. Implement a lagoon restoration to improve the environment, and provide better flood and sediment conveyance to the sea to benefit the coast.
   A. The superior lagoon alternative based on modeling and analyses is the 15.5-acre wetland, 8 acre lagoon, with a 490-foot-long bridge, and relocated highway to the south (Alternative concept 4). This concept alternative most closely replicates the historic condition, provides the maximum amount of habitat restoration, significantly increases recreational opportunities, and potentially provides the greatest improvements to water quality. It will provide an optimal aesthetic and educational experience for residents of the highly urbanized Los Angeles area. In addition this alternative will substantially increase the opportunity for successful recovery of endangered Steelhead Trout and Tidewater Gobies. This concept alternative costs more than the others to construct, monitor/maintain and causes impacts by relocating and reducing available parking. It will also require the relocation of historically significant buildings (Wylies Bait Shop and possibly one or two of the small units of the Topanga Ranch Motel). This concept alternative most closely supports the goals identified in the Lower Topanga State Park Interim Plan.
   B. The other concept alternative that clearly improves environmental conditions at the lagoon is a 10.5 acre wetland, 6-acre lagoon, with a 340-foot-long bridge and relocated highway to the south (Alternative concept 3). This concept alternative will provide many benefits, but the retention of the vertical bank on the east side will prevent optimal restoration of natural processes. This concept alternative does not optimize the opportunity to convey floods and sediments. It would not cost as much as Alternative concept 4, nor would it provide as much benefit.
3. Initiate permitting and environmental review of the preferred lagoon alternative concept and upstream improvements. If possible, secure permits and complete environmental review of all improvements as one Master Plan for the creek.
4. Initiate final engineering design for construction as permitting and environmental review are being concluded. The final engineering will incorporate permit conditions and mitigation measures identified as necessary during the permitting and environmental review stage.
5. Continue to pursue all possible funding opportunities to finance project planning, engineering and construction.

**DEPARTMENT OF TRANSPORTATION**
DISTRICT 7
100 MAIN STREET, SUITE 100
LOS ANGELES, CA 90012-3606
PHONE (213) 897-0362
FAX (213) 897-0360
TTY (213) 897-4937

*Flex your power!*
*Be energy efficient!*

August 24, 2006

Ron Schaffer
Los Angeles District Superintendent
California Department of Parks and Recreation
1925 Las Virgenes Road
Calabasas, CA 91302

Dear Mr. Schaffer:

The California Department of Transportation (Caltrans) has completed its review of the technical reports used to evaluate the impacts of the Topanga Creek Watershed and Lagoon Restoration Plan Feasibility Study. As you know, our staff has also reviewed the Mitigated Negative Declaration for the current project. Caltrans staff of biologist, hydraulics engineers and structural engineers evaluated the project implications and focused specifically on the planned removal of the Rodeo Ground Berm.

Topanga Creek Bridge, # 53-0035 original construction date is 1932. This structure is a 2 span RC slab with a RC closed end rigid frame abutments and pier bents. This structure is supported on untreated Douglas fir piles. The channel invert is concrete lined. All calculated scour is above the existing footings.

For the proposed watershed restoration project, a berm placed approximately 600 to 900 meters upstream of the existing bridge is to be removed. The present slopes in this reach are approximately 1 to 2 percent, yielding velocities of about 3.3 m/s. This velocity will increase slightly when the berm is removed. The slope gradient changes to less than 1 percent within 500 meters upstream of the bridge site. As the gradient flattens out the sediment will start to deposit.

Based on the review of the Feasibility Study, our Stucture Maintenace Records and As-Built Plans, we have determined that the effects of removing the berm are negligible to our structure on the Pacific Coast Highway. This is due to the concrete channel paving on the invert and the transition length of the slope gradient. No excess sedimentation is expected due to berm removal.

We appreciate the fact that you have shared the views of those individuals who had concerns about this important bridge. We also appreciate your patience regarding our response.

Sincerely,

RON KOSINSKI
Deputy District Director, Environmental Planning
District 7

cc: Rosi Dagit, Resource Conservation District of the Santa Monica Mountains

# APPENDIX G
# Transportation/Traffic

Katz, Okitsu & Associates
*Planning and Engineering*

September 19, 2006

1055 Corporate Center Dr., Suite 300
Monterey Park, CA
91754-7642
323.260.4703
fax: 323.260.4705
koala@katzokitsu.com
www.katzokitsu.com

Ms. Rosi Dagit
Resource Conservation District of the Santa Monica Mountains
122 N. Topanga Canyon Boulevard
Topanga, CA 90290

ja6232

Subject: Traffic Control Plans for Rodeo Grounds Berm Removal

Dear Ms. Dagit:

Construction traffic for the removal of the Rodeo Grounds Berm will be handled as follows:

Trucks will haul materials from the site by way of Pacific Coast Highway (Route 1) through the McClure Tunnel to the Santa Monica Freeway (Interstate 10) and by way of Topanga Canyon Boulevard (Route 27) over the Santa Monica Mountains to the Ventura Freeway (US 101). An estimated 726 outbound truck loads will use Pacific Coast Highway and Interstate 10, carrying approximately 17,160 tons, some of which may be hazardous materials. An estimated 374 outbound truck trips will be made by way of Topanga Canyon Boulevard over the Santa Monica Mountains, carrying approximately 8,840 tons, none of which may be hazardous materials.

Inbound empty trucks arriving at the site via Pacific Coast Highway will turn right onto Topanga Canyon Boulevard and park on the east side of the road. Parking will be prohibited along the east shoulder of Topanga Canyon Boulevard, south of the Rodeo Grounds entrance. Inbound empty trucks arriving from the north along Topanga Canyon Boulevard will park on the west shoulder, north of the Rodeo Grounds entrance. Flaggers, i.e. employees stationed at the entrance carrying a "Stop/Slow" paddle, will hold up traffic on Topanga Canyon Boulevard to allow trucks to turn in. Outbound trucks, whether turning right toward Pacific Coast Highway or turning left to head up Topanga Canyon, would be assisted by flaggers while exiting. To avoid traffic impacts caused by caravans of trucks, a concern raised by Caltrans District 7's IGR/CEQA Branch in their letter dated January 18, 2006, flaggers should allow outbound trucks to exit at 2-minute minimum headways, which would be roughly one truck for each cycle of the traffic signal at Pacific Coast Highway and Topanga Canyon Boulevard.

*San Diego*
619.683.2933
fax: 619.683.7982

*Tustin*
714.573.0317
fax: 714.573.9534

*Ontario*
909.890.9693
fax: 909.890.9694

*Oakland*
408.608.7707
fax: 408.225.3971

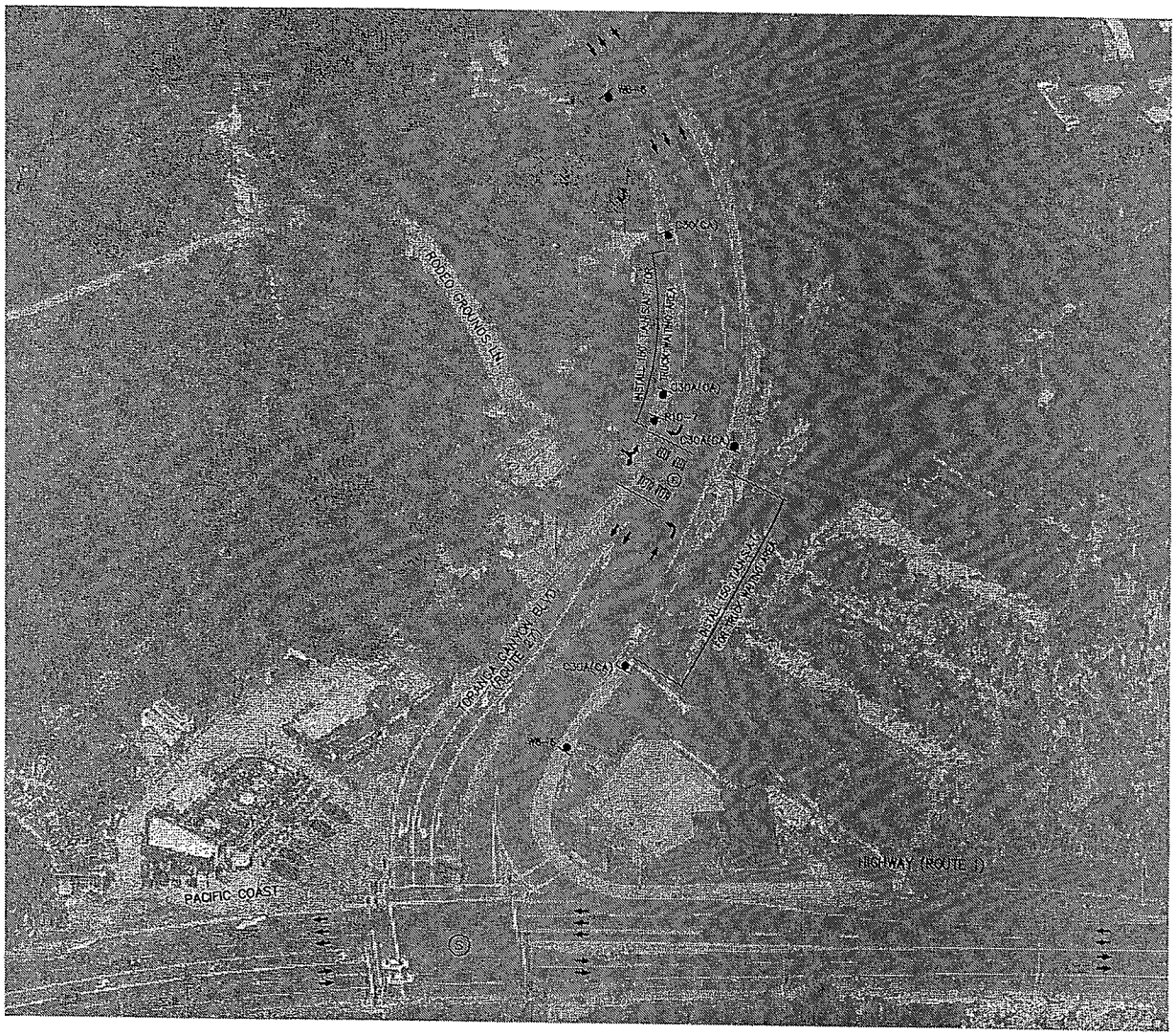
The plans labeled TH-1 and TH-2 depict the traffic handling of trucks adjacent to the site and the truck hauling routes, respectively. Caltrans District 7's Office of Traffic Investigations stated in their letter dated September 13, 2006 that two flaggers, one for each direction, shall be onsite at all times during the Hours of Operation. Their letter also stated that plan TH-1 should provide a C9A (CA) "Flagger" sign and a W3-4 "Be Prepared to Stop" sign for southbound, and a C9A (CA) "Flagger" sign for northbound Topanga Canyon Boulevard. They requested a requirement that entering trucks not block traffic lanes. Plan TH-1 is intended as a conceptual-level plan, only. A detailed plan that addresses these comments should be provided as part of the contractor's permit process.

The Caltrans District 7 letter of September 13, 2006 also mentioned that "it is preferable that all the hauling truck traffic be routed by way of Pacific Coast Highway (Route 1) rather than Topanga Canyon Boulevard (Route 27) due to the roadway geometrics, such as curves, narrow width, etc., of Topanga Canyon Boulevard." Only those Rodeo Grounds trucks with

sufficient power and lighter loads will use the Topanga Canyon Boulevard route. All other trucks, and those with hazardous materials, will use the Pacific Coast Highway route.

The Caltrans September 13, 2006 letter also mentions that a road widening and resurfacing project for Topanga Canyon Boulevard that will be completed March 30, 2007 may cause delays for the trucks. The Rodeo Grounds berm removal is scheduled to take place after March 30, 2007, so the widening and resurfacing project would not cause traffic delays to hauling operations.

Walter Okitsu, Professional Engineer
(Calif. Regis. Civil 52655, Traffic 1406)




| DIST | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 1 | XX.X-XX.X | 1 | 2 |

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

Katz, Okitsu & Associates
1055 Corporate Center Drive, Suite 309
Monterey Park, California 91754-7642

Caltrans now has a web site! To get to the web site, go to http://www.dot.ca.gov.

LEGEND
- (F) FLAGGER
- (S) SIGNALIZED INTERSECTION
- DIRECTION OF TRAVEL
- TEMPORARY TRAFFIC SIGN

SHOULDER CLOSED
C30A(CA)

TRUCK CROSSING
W8-6

DO NOT BLOCK INTERSECTION
R10-7

N

THIS PLAN IS ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRAFFIC HANDLING PLAN
PACIFIC COAST HIGHWAY AT TOPANGA CANYON BOULEVARD
SCALE = N.T.S.

TH-1

CU XXXXXX EA XXXXXX

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

DESIGN OVERSIGHT: XX
CALCULATED/DESIGNED BY
CHECKED BY
DATE REVISED BY
DATE REVISED

| DIST | COUNTY | ROUTE | KILOMETER POST TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 1 | XX.X–XX.X | 2 | 2 |

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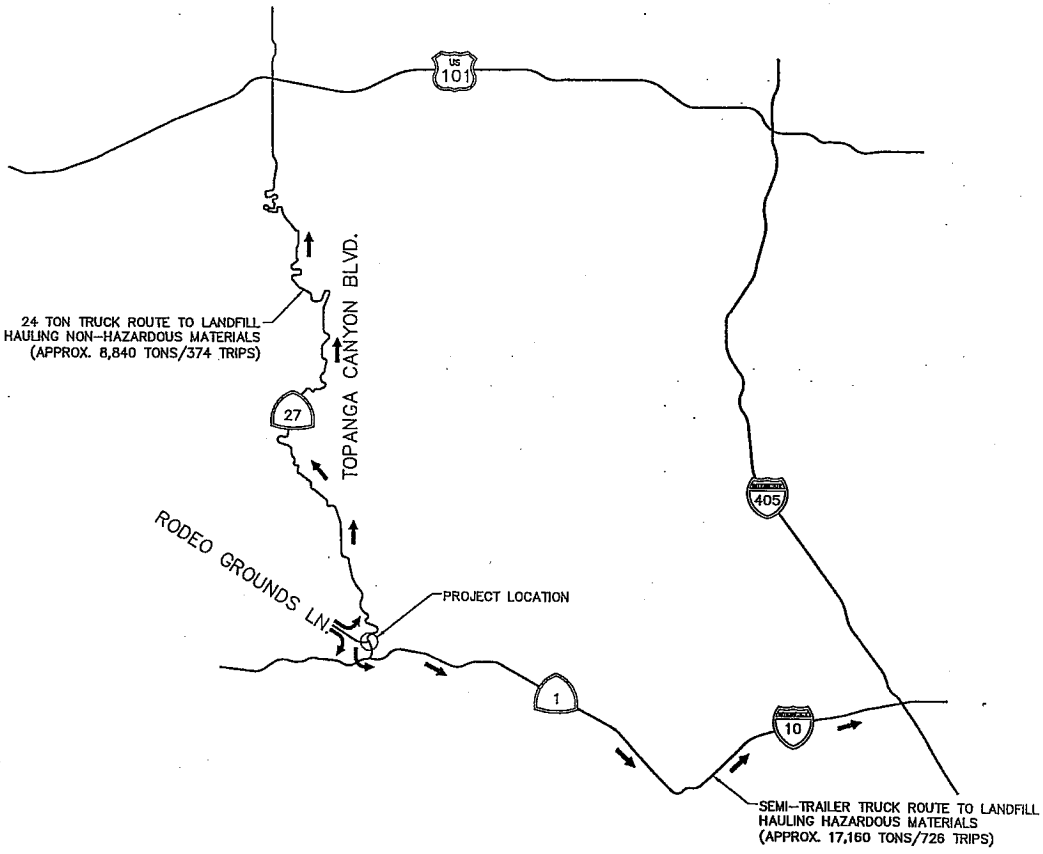


LEGEND

← DIRECTION OF TRAVEL

HOURS OF OPERATION

MONDAY–FRIDAY (8AM–3PM) 40 DAYS MAX.

N

THIS PLAN IS ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

TRUCK HAUL ROUTE PLAN
PACIFIC COAST HIGHWAY AT TOPANGA CANYON BOULEVARD
SCALE = N.T.S.

TH–2

CU XXXXXX

EA XXXXXX

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

| DESIGN OVERSIGHT | CALCULATED/ DESIGNED BY | DATE | REVISED BY |
|---|---|---|---|
| XX | CHECKED BY | | DATE REVISED |

State of California Business, Transportation and Housing Agency

# Memorandum

To: Syed Huq
Project Manager

Date: September 13, 2006

From : Sheik Moinuddin
Senior Transportation Engineer
Office of Traffic Investigations

File: Topanga Cyn Blvd (Rte 27)
Rodeo Grounds Berm Office
Removal
IGR/CEQA # 060119/EK

Subject: Comments on Traffic Control Plan

Per your e-mail, dated 9/7/2006, the following are comments from Office of Traffic Investigations for the Traffic Control Plan submitted by Parks and Recreations for their project to remove a berm at Rodeo Grounds at Topanga Creek.

1. It is preferable that all the hauling truck traffic be routed by way of Pacific Coast Highway (Route 1) rather than Topanga Cyn Blvd (Route 27) due to the roadway geometrics, such as curves, narrow width, etc., of Topanga Cyn Blvd. Also, a project to widen and resurface the roadway from Pacific Coast Highway to Mulholland Dr is currently under construction. Lane closures are performed using reversible control. Therefore, delays are common. This project is scheduled to be completed March 30, 2007. If the Rodeo Grounds Berm removal project is scheduled within the same time, the delays may be excessive, both for the trucks and the everyday motorists.
2. All work shall be conducted during the Hours of Operation, as shown on TH-2.
3. Two (2) flaggers shall be onsite at all times during the hours of operation, (one for each direction of travel).
4. All trucks waiting to enter Rodeo Grounds Ln shall not block traffic lanes.
5. In addition to the proposed signs as shown on TH-1, please post a C9A (CA), Flagger, and a W3-4, Be Prepared to Stop signs for southbound Topanga Cyn Blvd, and a C9A (CA), Flagger sign for northbound Topanga Cyn Blvd.

Should you have any questions, please call Wayne Liu at extension 7-5742, or Rosie San Juan at extension 7-3499.

SHEIK MOINUDDIN
Senior Transportation Engineer
Office of Traffic Investigations