
Bridge Inspection Records Information System

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State of California
Department of Transportation

**Division of Maintenance
Structures Maintenance & Investigations**



DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0477
Facility Carried: MASON REGIONAL PRK
Location : 50' s/o University Drive
City :
Inspection Date : 16-JUL-01
Inspection Type
Routine ☒ Group A ☐ Underwater ☐ Special ☐ Other ☐

Bridge Inspection Report

Name : SAND CANYON WASH

CONSTRUCTION INFORMATION

Year Built : 1973
Year Widened : N/A
Length (m) : 12.2

Skew (degrees): 99
No. of Joints : 0
No. of Hinges : 0

Description of Structure : Triple 3.7 m W x 2.7 m H x 15.2 m L RC box culvert (grade top) beneath 0.6 m of earth fill.

Span Configuration : (S) 3 @ 3.7 m (N) clear, normal

LOAD CAPACITY AND RATINGS

Design Live Load : MS - 18 OR HS - 20

Inventory Rating : 32.6 metric tons

Operating Rating : 53.5 metric tons

Permit Rating : PPPPP

Posting Load : Type 3 N/A english tons

Calculation Method : LOAD FACTOR

Calculation Method : LOAD FACTOR

Type 3S2 N/A english tons Type 3-3 N/A english tons

DESCRIPTION ON STRUCTURE

Bridge width : (W) 0.5 m br, 1.2 m sw, 6.9 m, 1.8 m cu med, 3.5 m, 1.2 m sw, 0.5 m br (E)

Total Width : 15.8 m

Net Width : 10.40 m

Rail Description : Timber Railing

No. of Lanes : 3

Min. Vertical Clearance : Unimpaired

Rail Code : 0000

DESCRIPTION UNDER STRUCTURE

Channel Description : Natural earth trapezoidal with rock slopes at the site.

CONDITION OF STRUCTURE

The structure is in good condition.

MISCELLANEOUS

Pedestrian access beneath the structure is from the southeast quadrant.

ELEMENT LEVEL INSPECTION RATINGS

F#	Elem No.	Element Description	Env	Total Units Quantity	Qty in each Condition State				
					St. 1	St. 2	St. 3	St. 4	St. 5
01	241	Reinforced Concrete Culvert	2	15m.	15	0	0	0	0
01	332	Timber Bridge Railing	2	32m.	32	0	0	0	0

WORK RECOMMENDATIONS - NONE

Bridge No.: 55C0477

Location: 50' s/o University Drive

Inspection Date: 16-JUL-01

Inspected By : M. Ogata

M. Ogata
Registered Civil Engineer



CC : TMRut
Orange County

Bridge No.: 55C0477 Location: 50' s/o University Drive Inspection Date: 16-JUL-01

STRUCTURE INVENTORY AND APPRAISAL REPORT

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***** IDENTIFICATION *****
(1) STATE NAME - CALIFORNIA                                069
(8) STRUCTURE NUMBER                                      55C0477
(5) INVENTORY ROUTE (ON/UNDER) - ON                        1 40 00000N
(2) HIGHWAY AGENCY DISTRICT                                12
(3) COUNTY CODE 059 (4) PLACE CODE 00000
(6) FEATURE INTERSECTED - SAND CANYON WASH
(7) FACILITY CARRIED - MASON REGIONAL PRK
(9) LOCATION - 50' s/o University Drive
(11) MILEPOINT/KILOMETERPOINT                              0
(12) BASE HIGHWAY NETWORK - NOT ON NET                     0
(13) LRS INVENTORY ROUTE & SUBROUTE
(16) LATITUDE 33 DEG 39 MIN 25 SEC
(17) LONGITUDE 117 DEG 49 MIN 55 SEC
(98) BORDER BRIDGE STATE CODE % SHARE %
(99) BORDER BRIDGE STRUCTURE NUMBER

***** STRUCTURE TYPE AND MATERIAL *****
(43) STRUCTURE TYPE MAIN: MATERIAL - CONCRETE
      TYPE - CULVERT CODE 1 19
(44) STRUCTURE TYPE APPR: MATERIAL -
      TYPE - CODE
(45) NUMBER OF SPANS IN MAIN UNIT 3
(46) NUMBER OF APPROACH SPANS 0
(107) DECK STRUCTURE TYPE NOT APPLICABLE CODE N
(108) WEARING SURFACE / PROTECTIVE SYSTEM:
      A) TYPE OF WEARING SURFACE - NOT APPLICABLE CODE N
      B) TYPE OF MEMBRANE - NOT APPLICABLE CODE N
      C) TYPE OF DECK PROTECTION - NOT APPLICABLE CODE N

***** AGE AND SERVICE *****
(27) YEAR BUILT 1973
(106) YEAR RECONSTRUCTED 0000
(42) TYPE OF SERVICE: ON - HIGHWAY-PEDESTRIAN 5
      UNDER - WATERWAY 5
(28) LANES: ON STRUCTURE 03 UNDER STRUCTURE
(29) AVERAGE DAILY TRAFFIC 500
(30) YEAR OF ADT 1998 (109) TRUCK ADT 1%
(19) BYPASS, DETOUR LENGTH 199 KM

***** GEOMETRIC DATA *****
(48) LENGTH OF MAXIMUM SPAN 3.7 M
(49) STRUCTURE LENGTH 12.2 M
(50) CURB OR SIDEWALK: LEFT 1.2 M RIGHT 1.2 M
(51) BRIDGE ROADWAY WIDTH CURB TO CURB 10.4 M
(52) DECK WIDTH OUT TO OUT 15.8 M
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 10.4 M
(33) BRIDGE MEDIAN - CLOSED (NO BARRIER) 2
(34) SKEW 99 DEG (35) STRUCTURE FLARED NO
(10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR 6.9 M
(53) MIN VERT CLEAR OVER BRIDGE RDWY 99.99 M
(54) MIN VERT UNDERCLEAR REF - NOT H/RR 0 M
(55) MIN LAT UNDERCLEAR RT REF - NOT H/RR 0 M
(56) MIN LAT UNDERCLEAR LT 0 M

***** NAVIGATION DATA *****
(38) NAVIGATION CONTROL - NOT APPLICABLE CODE N
(111) PIER PROTECTION - NOT REQUIRED CODE 1
(39) NAVIGATION VERTICAL CLEARANCE 0 M
(116) VERT-LIFT BRIDGE NAV MIN VERT CLEAR 0 M
(40) NAVIGATION HORIZONTAL CLEARANCE 0

***** SUFFICIENCY RATING = 70.3
STATUS = FUNCTIONALLY OBSOLETE
HEALTH INDEX = 100
***** CLASSIFICATION ***** CODE
(112) NBIS BRIDGE LENGTH - YES Y
(104) HIGHWAY SYSTEM - NOT ON NHS 0
(26) FUNCTIONAL CLASS - LOCAL URBAN 19
(100) DEFENSE HIGHWAY - NOT STRAHNET 0
(101) PARALLEL STRUCTURE - NONE EXISTS N
(102) DIRECTION OF TRAFFIC - 2 WAY 2
(103) TEMPORARY STRUCTURE -
(105) FEDERAL LANDS HIGHWAY - NOT APPLICABLE 0
(110) DESIGNATED NATIONAL NETWORK - NOT ON NET 0
(20) TOLL - ON FREE ROAD 3
(21) MAINTAIN - COUNTY HIGHWAY AGENCY 2
(22) OWNER - COUNTY HIGHWAY AGENCY 2
(37) HISTORICAL SIGNIFICANCE - NOT ELIGIBLE 5

***** CONDITION ***** CODE
(58) DECK N
(59) SUPERSTRUCTURE N
(60) SUBSTRUCTURE N
(61) CHANNEL & CHANNEL PROTECTION 8
(62) CULVERTS 8

***** LOAD RATING AND POSTING ***** CODE
(31) DESIGN LOAD - MS - 18 OR HS - 20 5
(63) OPERATING RATING METHOD - LOAD FACTOR 1
(64) OPERATING RATING - 53.5
(65) INVENTORY RATING METHOD - LOAD FACTOR 1
(66) INVENTORY RATING - 32.6
(70) BRIDGE POSTING - Equal to or above legal loads 5
(41) STRUCTURE OPEN, POSTED OR CLOSED - A
      DESCRIPTION - OPEN, NO RESTRICTION

***** APPRAISAL ***** CODE
(67) STRUCTURAL EVALUATION 8
(68) DECK GEOMETRY 2
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N
(71) WATER ADEQUACY 9
(72) APPROACH ROADWAY ALIGNMENT 6
(36) TRAFFIC SAFETY FEATURES 0000
(113) SCOUR CRITICAL BRIDGES 8

***** PROPOSED IMPROVEMENTS *****
(75) TYPE OF WORK - MISC STRUCTURAL WORK CODE 38
(76) LENGTH OF STRUCTURE IMPROVEMENT 12.2 M
(94) BRIDGE IMPROVEMENT COST $231,000
(95) ROADWAY IMPROVEMENT COST $23,000
(96) TOTAL PROJECT COST $347,000
(97) YEAR OF IMPROVEMENT COST ESTIMATE 1999
(114) FUTURE ADT 1000
(115) YEAR OF FUTURE ADT 2018

***** INSPECTIONS *****
(90) INSPECTION DATE 07/01 (91) FREQUENCY 24 MO
(92) CRITICAL FEATURE INSPECTION: (93) CFI DATE
      A) FRACTURE CRIT DETAIL - NO -1 MO A)
      B) UNDERWATER INSP - NO -1 MO B)
      C) OTHER SPECIAL INSP - NO -1 MO C)

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Bridge Number 55C-477

Location 12 - Ora - CR
Dist.-Co.-Rte.-City

Date of Investigation June 24, 1994

TYPE OF INVESTIGATION/REPORT	
BIENNIAL <u>X</u>	DAMAGE <u> </u>
CATEGORY A <u> </u>	OTHER <u> </u>
UNDERWATER <u> </u>	OFFICE <u> </u>

Name SAND CANYON WASH (Entrance to William R. Mason Regional
Park, University Drive, 0.2 mile west of Culver Drive)

CONDITION RATINGS:

Condition ratings of all bridge elements are
shown on the PONTIS DATA FORM (Attachment A).

Channel & Channel Protection

(8)

SCOUR CRITICAL:

The scour rating of A-3 is appropriate.

CONDITION OF STRUCTURE:

The structure is in good condition.

WORK RECOMMENDED:

None.

M. H. Behrooj *MHB*

By

S. A. Zangeneh
S. A. Zanganeh

SAZ:cd

cc: CDHarris
Orange County
WLindsey

CH1777

INFORMATION ONLY - NOT FOR UPDATE

BRIDGE NUMBER	FRAME	INSPECTION DATE
55C0477	01	062494
1 8	9	11 16

SCOUR CRITICAL	NO
CATEGORY A	NO
FRACTURE CRITICAL	NO
ELIGIBLE FOR RAIL UPGRADE	NO
UNDERWATER INSPECTION	NO

DISTRICT	12
COUNTY	ORA
ROUTE	
POSTMILE	
NAME	

[illegible]

07/10/95

BY: S22

SUPPLEMENTARY BRIDGE REPORT
DS-M19 (REV. 12/91)

Bridge Number 55C-477

Location 12 - Ora - CR
Dist.-Co.-Rte.-City

Date of Investigation June 10, 1992

TYPE OF INVESTIGATION/REPORT

BIENNIAL	<u>X</u>	DAMAGE	___
CATEGORY A	___	OTHER	___
UNDERWATER	___	OFFICE	___

Name SAND CANYON WASH (Entrance to William R. Mason Regional
Park, University Drive, 0.2 mile west of Culver Drive)

CONDITION RATINGS:

Deck

N

Superstructure

N

Substructure

N

Channel & Channel Protection

(8)

Culvert

8

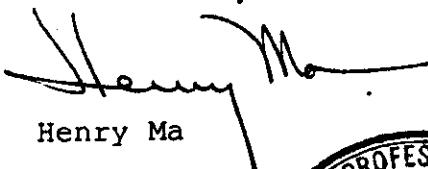
CONDITION OF STRUCTURE:

Condition of the structure is good.

REVISIONS:

Condition Rating: Channel & Channel Protection - 8

(There is no deterioration in condition of channel banks from the previous report, the above rating change indicates the nature of the earth channel slopes to reflect more closely to the current Federal Coding Guide.)


Henry Ma

HM:cd
cc: INagai (2)
County of Orange



BRIDGE REPORT

14W22

Bridge No. 55C - 477

DS-M58 (REV. 4/90)

Location 12 - Ora - CR
Dist Co Rte City

REVISED ORIGINAL REPORT

Date of Investigation May 24, 1990

Name SAND CANYON WASH (Entrance to William R. Mason Regional Park,
University Drive, 0.2 mile west of Culver Drive)

Lat. 33° - 39.4'N Long. 117° - 49.9'W

Custodian County of Orange Owner County of Orange

STRUCTURAL DATA AND HISTORY

Year Built 1973 By Orange County Contract No. Unknown

Designed by: Orange County Plans Avail. @ County

Description: Triple 12' x 9' x 50' long RC box culvert (grade top
culvert) on spread footing under 2'± of fill and AC
surfacing.

Spans 3 @ 12' clear, normal

Length 40' NBIS Bridge Length Yes Skew Varies

Number Of Intermediate Joints: @Hinges N @Bents N

Maximum Column/Pier Height: (Less than 20') X (20'-29') (30' & Over)

Design Live Load H20-S16-44 + 30% I Design Method Unknown

DESCRIPTION - ON STRUCTURE

Bridge Width (W) 1.5'br; 4'AC sw; 22.5'; 6'm; 11.5'; 4'AC sw; 1.5'br (E)

Total Width 52' Net Width 34' Lanes 3 Tracks None

Median Raised island Rail Type Concrete with timber
beam

0000

Vert. Clearance over deck Unimpaired Appr. Rdwy. Width 34'

Deck Type N Wearing Surface/Prot. Sys. NNN

Alignment R = 500'±

DESCRIPTION - UNDER STRUCTURE

Roadway Section None

Clearances: Road: Vert. Horiz. Lt. ; Rt.

Lanes Tracks

Facilities Crossed Sand Canyon Wash (F15)

May 24, 1990

DESCRIPTION - HYDRAULICS

Channel Natural earth with light vegetation.....

Navigable: Yes ☐ No ☒ Clearances: Vert.

Horiz.

Pier/Abutment Protection (For Navigation) ☐

TRAFFIC INFORMATION

	DECK	YEAR	UNDER	YEAR
Average Daily Traffic & Year :	500 Est	1990	N	
Average Daily Traffic (Future) :	500 Est	2010	N	
Average Daily Trucks (% OF ADT) :	1% Est		N	
Bypass Detour Length	99 miles (N)		N	
Shell Route:	No		N	
Functional Classification :	19		N	
LOAD RATINGS:	Inventory	HS 20	Operating	HS 33
	Permit	PPPPP	Computation Method	Assigned

CONDITION RATINGS:

Deck	N	Superstructure	N	Substructure	N
Channel & Channel Protection	9	Culvert	8	Widenable	Yes

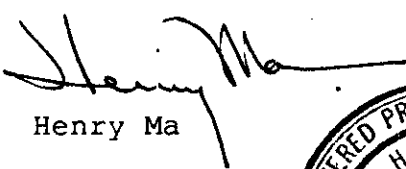
APPRAISAL RATINGS:

Waterway Adequacy	9	Approach Roadway Alignment	6
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Date of Revisions

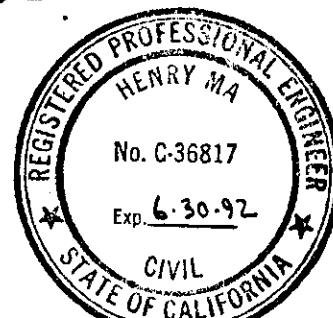
CONDITION OF STRUCTURE:

Condition of the structure is good.



Henry Ma

HM:ms

cc: INagai (2)
County of Orange

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
SUPPLEMENTARY BRIDGE REPORT
DS-M19 (REV. 2/75)

Bridge No. 55C-477

Location 7-Ora-CR
Dist - Co - Rte - PM - City

Date of Investigation May 13, 1988

Name SAND CANYON WASH (Mason Regional Park, south of University Drive)

CONDITION RATING:

APPRAISAL RATING:

Deck 8 Superstructure 8 Substr. & Pipes 8 Overall 8

Channel & Channel Protection 8 Retaining Walls N

Widenable? Yes ☒ No ☐ Conditional ☐

Action Required by COUNTY Yes ☐ No ☒

CONDITION OF STRUCTURE:

Condition of the structure is good.

RECOMMENDED POSTING:

None

WORK RECOMMENDED:

None

HM/pht

cc: INagai (2)
Orange County (2)

Henry Ma



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
SUPPLEMENTARY BRIDGE REPORT
DH-OS M10 (REV. 1/74)

55C-477

Bridge No. _____
Location 7-Ora-CR
Dist - Co - Rte - Rd - City

Date of Investigation May 20, 1986

Name SAND CANYON WASH (Mason Regional Park, south of University Drive)

CONDITION RATING:

APPRAISAL RATING:

Deck 8 Superstructure 8 Substr. & Pipes 8 Overall 8
Channel & Channel Protection 8 Retaining Walls (N)

Widensable? Yes ☒ No ☐ Conditional ☐

Action Required by County Yes ☐ No ☒

PRIORITY

A - Immediate Action
B - Early Scheduling
C - Routine Maint.
O - For Record Only

CONDITION OF STRUCTURE:

Overall condition of the structure is good.

RECOMMENDED POSTING:

None

WORK RECOMMENDED:

None


Henry Ma
C-36817

HM:pht
cc: INagai (2)
Orange County (2)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
SUPPLEMENTARY BRIDGE REPORT
DH-OS M19 (REV 1/74)

14W22

Bridge No. 55C-477
Location 7-Ora-CR
Dist - Co - Rte - PM - City
Date of Investigation May 17, 1984

Name SAND CANYON WASH (Mason Regional Park, south of University Drive)

CONDITION RATING:

APPRAISAL RATING:

Deck 8 Superstructure 8 Substr. & Pipes 8 Overall 8
Channel & Channel Protection 8 Retaining Walls 8

Widenable? Yes ☒ No ☐ Conditional ☐

Action Required by County ~~DRH~~ Yes ☐ No ☒

PRIORITY

A - Immediate Action
B - Early Scheduling
C - Routine Maint.
O - For Record Only

CONDITION OF STRUCTURE:

The overall condition of the structure is good.

RECOMMENDED POSTING:

None

RECOMMENDATION:

None

E. L. Neff
E. L. Neff
C-28703

ELN:pdh
cc: DRHiggins (2)
Orange County (2)

No. 1

~~RATER~~
~~COVER~~No. 2 - ~~BR~~

No. 3 - BR. BOOK

BRIDGE NO. 55C-477LOCATION 07-DRA - CRNAME SAND CANYON WASH (Entrance to Mason Regional Park)ASSIGNED
RATING

	FACTOR	VEHICLE
INVENTORY	<u> </u>	<u>HS 20</u>
OPERATING	<u> </u>	<u>HS 33</u>
PERMIT		
5 AXLE	<u> </u>	<u>P</u>
7 AXLE	<u> </u>	<u>P</u>
9 AXLE	<u> </u>	<u>P</u>
11 AXLE	<u> </u>	<u>P</u>
13 AXLE	<u> </u>	<u>P</u>
NOTES: AC =	<u>4"</u>	

TRIPLE 12' X 9' RC BOX CULVERT
H20-S16-44 + 30% IMPACT
1973
ORANGE COUNTY

RATED BY: E. L. NeffDATE: 7-16-82

Bridge No. 55C-477

Date July 15, 1982

DESCRIPTION - HYDRAULICS

Channel Earth cut trapezoidal shape

Navigable: Yes ☐ No ☒ Clearances: Vert. _____ Horiz. _____

MAINTENANCE

Custodian Orange County

Owner Orange County

**ORIGINAL
CONDITION RATING**

Deck	<u>8</u>
Superstructure	<u>8</u>
Substructure & Pipes	<u>8</u>
Channel & Channel Protection	<u>8</u>
Retaining Walls	<u>8</u>
Approach Rdwy. Alignment	<u>7</u>
Estimated Remaining Life	<u>50</u>

**ORIGINAL
APPRAISAL**

Overall	<u>8</u>
Deck Geometry	<u>4</u>
Underclearances	Vert. <u>N</u>
	Horiz. <u>N</u>
Safe Load Capacity	<u>9</u>
Waterway Adequacy	<u>8</u>
Approach Rdwy. Alignment	<u>7</u>

Widenable? Yes ☒ No ☐ Conditional ☐

Action Required by ^{County} District: Yes ☐ No ☒

AVERAGE DAILY TRAFFIC: 200 Estimated 1982

BYPASS DETOUR LENGTH: 99 miles

SEISMIC RETROFIT: Not applicable

CONDITION OF STRUCTURE:

The overall condition of the structure is good.

RECOMMENDED POSTING:

None

RECOMMENDATION:

None

ELN:pdh
cc: DRHiggins (2)
Orange County (2)

E. L. Neff
E. L. Neff
C-28703

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
BRIDGE REPORT
DS-M58A (REV. 1/79)

Bridge No. 55C-477
Date July 15, 1982

DESCRIPTION - HYDRAULICS

Channel Earth cut trapezoidal shape

Navigable: Yes ☐ No ☒ Clearances: Vert. _____ Horiz. _____

MAINTENANCE

Custodian Orange County Owner Orange County

**ORIGINAL
CONDITION RATING**

Deck	<u>8</u>
Superstructure	<u>8</u>
Substructure & Pipes	<u>8</u>
Channel & Channel Protection	<u>8</u>
Retaining Walls	<u>8</u>
Approach Rdwy. Alignment	<u>7</u>
Estimated Remaining Life	<u>50</u>

**ORIGINAL
APPRAISAL**

Overall	<u>8</u>
Deck Geometry	<u>4</u>
Underclearances	Vert. <u>N</u>
	Horiz. <u>N</u>
Safe Load Capacity	<u>9</u>
Waterway Adequacy	<u>8</u>
Approach Rdwy. Alignment	<u>7</u>

Widenable? Yes ☒ No ☐ Conditional ☐

Action Required by ^{County} District: Yes ☐ No ☒

AVERAGE DAILY TRAFFIC: 200 Estimated 1982

BYPASS DETOUR LENGTH: 99 miles

SEISMIC RETROFIT: Not applicable

CONDITION OF STRUCTURE:

The overall condition of the structure is good.

RECOMMENDED POSTING:

None

RECOMMENDATION:

None

ELN:pdh
cc: DRHiggins (2)
Orange County (2)

E. L. Neff
E. L. Neff
C-28703