



**DEPARTMENT OF TRANSPORTATION**  
Structure Maintenance & Investigations

Bridge Number : 55C0172  
Facility Carried: MODJESKA CANYON RD  
Location : 0.1 MI N/O MODJESKA GR R  
City :  
Inspection Date : 07/25/2012

**Bridge Inspection Report**

Inspection Type

Routine ☐ FC ☒ Underwater Special Other

**STRUCTURE NAME:** SANTIAGO CREEK

CONSTRUCTION INFORMATION

Year Built : 1935                      Skew (degrees): 68  
Year Widened: N/A                      No. of Joints : 0  
Length (m) : 19.5                      No. of Hinges : 0

Structure Description: CIP/RC deck on riveted steel floor beams (5) on simply supported riveted steel through girders (2) on RC pedestals on RC closed end backfilled cantilever abutments on spread footings.

Span Configuration : (S) 1 @ 18.3 m (N) c/c

LOAD CAPACITY AND RATINGS

Design Live Load: M-13.5 OR H-15  
Inventory Rating: 17.2 metric tons                      Calculation Method: ALLOWABLE STRESS  
Operating Rating: 25.4 metric tons                      Calculation Method: ALLOWABLE STRESS  
Permit Rating : GGGGG  
Posting Load : Type 3: Legal                      Type 3S2: Legal                      Type 3-3: Legal

DESCRIPTION ON STRUCTURE

Deck X-Section: (W) Steel plate girder, 0.7 m cu, 2 @ 3.0 m, 0.7 m cu, steel plate girder (E)

Total Width: 7.3 m                      Net Width: 6.1 m                      No. of Lanes: 2                      Speed: 25 mph

Min. Vertical Clearance: Unimpaired

Rail Code: 0000                      Rail Description: Steel plate girder

DESCRIPTION UNDER STRUCTURE

Channel Description: Natural earth trapezoidal.

INSPECTION COMMENTARY

**FRACTURE CRITICAL INVESTIGATION**

A fracture critical inspection was performed on 07/25/2012 by Jeff Yang from the Office of Specialty Investigations and Bridge Management. The structure was accessed from the ground below. Lane closures and traffic control were not needed. The investigation was conducted in accordance with the Fracture Critical Member Inspection Plan, dated 05/21/2008.

A hands-on visual inspection was performed on the steel girders in Span 1. No fractures or cracks were found.

During the 05/21/2008 fracture critical inspection, up to 19 mm (3/4 in) thick pack rust was found between the bottom flange of the floor beam and the bottom flange of the girder at the following locations:

- Floor Beam 5 to Girder 1 connection
- Floor Beam 2 to Girder 2 connection
- Floor Beam 3 to Girder 1 connection (previously recorded as Girder 2 in error)
- Floor Beam 4 to Girder 2 connection

No increase in corrosion has occurred at these locations. These areas will continue to be monitored for any significant increase in corrosion during the next fracture critical

INSPECTION COMMENTARY

inspection.

STEEL INVESTIGATIONS

This structure qualifies for an in-depth Steel investigation because it possesses the following fracture critical or fatigue prone details :

Plate Girder: FC Members

Fracture Critical: Yes

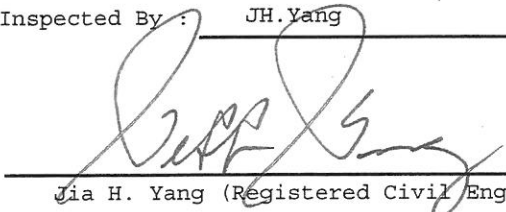
Inspection Freq.: 24

Next Inspection: 07/25/2014

Team Leader : Jia H. Yang

Report Author : Jia H. Yang

Inspected By : JH. Yang

  
Jia H. Yang (Registered Civil Engineer)

11/2/12



# SANTIAGO CREEK

0.1 MI N/O MODJESKA GR RD

07/25/2012 [AAAL]

55C0172

100 - PHOTO-Routine-Roadway View



Photo No. 1

Roadway view of bridge - looking north

101 - PHOTO-Routine-Elevation View



Photo No. 2

Elevation view of bridge - looking east



# SANTIAGO CREEK

0.1 MI N/O MODJESKA GR RD

07/25/2012 [AAAL]

55C0172

135 - PHOTO-Routine-Underside



Photo No. 3

Bridge underside view

107 - PHOTO-Super-Damage/Deteroration



Photo No. 4

Detail of typical pack rust at floor beam to girder connection