DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0561
Facility Carried: ISLAND WAY
Location : 0.1 MI S/O DANA PT HBR D
City :
Inspection Date : 06/18/2014

Bridge Inspection Report

Inspection Type
Routine FC Underwater Special Other
X

STRUCTURE NAME: DANA POINT HARBOR

CONSTRUCTION INFORMATION

Year Built : 1970
Year Widened: N/A
Length (m) : 62.2
Skew (degrees): 0
No. of Joints : 0
No. of Hinges : 0

Structure Description: Simply supported 4-span PC/PS concrete box girder (8 units) with a continuous RC deck and RC single column bents and RC closed end strutted abutments, all supported upon spread footings.

Span Configuration : (S) 4 @ 15.2 m (N) c/c

SAFE LOAD CAPACITY AND RATINGS

Design Live Load: UNKNOWN
Inventory Rating: 32.6 metric tons Calculation Method: NO RATING ANALYSIS
Operating Rating: 53.5 metric tons Calculation Method: NO RATING ANALYSIS
Permit Rating : PPPPP
Posting Load : Type 3: Legal Type 3S2: Legal Type 3-3: Legal

DESCRIPTION ON STRUCTURE

Deck X-Section: (W) 0.4 m br, 1.5 m sw, 8.5 m, 1.5 m sw, 0.4 m br (E)
Total Width: 12.5 m Net Width: 8.5 m No. of Lanes: 2 Speed: 25 mph
Min. Vertical Clearance: Unimpaired
Rail Code: 1000 Rail Description: Concrete with sidewalk.

DESCRIPTION UNDER STRUCTURE

Channel Description: Tidal basin.

INSPECTION COMMENTARY

SCOPE AND ACCESS
On the date of this inspection, piers 2 through 4 were submerged and inspected via Caltrans dive boat. All other elements were in the dry and will remain the responsibility of the assigned ABME.

NUMBERING CONVENTION

This report will reference elements using standard convention.

REVISIONS
None

SUBSTRUCTURE
The channel bottom consists of silty sand.

No scour issues were found.

ELEMENT 205 - REINFORCED CONCRETE COLUMN OR PILE EXTENSION.

Piers 2 through 4 consist of a single Reinforced Concrete "Hammerhead" Column.

INSPECTION COMMENTARY

All columns have been retrofitted with a steel mesh, which encircles the entire center section of the column, and is coated with a layer of grout approximately 100mm (4.0") thick. This retrofit covers cracks and spalls which were noted in previous inspections. Additionally, 2 sacrificial anodes, mounted horizontally and located at a depth of approximately 2.0m (6.6'), were found at the north-left and south-right quadrants. The anodes were found to be in good shape with 90% remaining.

All submerged portions were 100% covered in light marine growth 25mm (1.0") thick.

PIER 2: Maximum depth was 3.75m (12.3')at the right end with the retrofit portion extending to 1.5m (5.0') below the waterline.

PIER 3: A uniform maximum depth of 4.25 (14.0') was found with the top of the footing being flush with the mudline. The retrofit portion extended to 1.75m (5.7'.) A Level II cleaning was performed at the north-right and south-left quadrants, 1.0m (3.3') above the mudline.

PIER 4: A maximum depth of 4.25 (14.0') was found at the south nose with the retrofit portion extending to 1.75m (5.7') below the waterline. A Level II cleaning was performed at the north-left and south-right quadrants, 1.0m (3.3') above the mudline.

Except where mentioned, no exposure or other issues were found and the inspected portions of the substructure remain in good condition. This element will remain in condition state 1.

WATERWAY

Water surface elevation was recorded at 7.22m (23.6') from the waterline to the soffit at the right side of pier 2.

Prior to this inspection the NBI Item 61, Channel and Channel Protection, rating was 9. The conditions present on the date of this UWI are consistent with that coding.

UNDERWATER INVESTIGATION

Next Inspection	: 18-JUN-2019	Water Type	: 2 - Salt
Inspection Freq.	: 60 months	Max. Water Velocity	: 0 mps
Dive Type	: B - Routine UW	Max. Water Depth	: 4 m
Dive Mode	: D - Surface supplied	Max. Visibility	: 2.0 m
Contractor	: N/A	Water Surface Elev.	: m
Contract No.	: N/A		
Supervisor	: Richard Hunt	Diver	: Jeremy Colby
Tender	: Dale Floyd	Backup Diver	: Mitch Miller

SUBSTRUCTURE INVESTIGATED

Location	Depth(m)	Vel(mps)	Channel	Substructure Description
Pier 2	3.5	0.0	Silty sand	RC hammerlead column (1)
Pier 3	4.3	0.0	Silty sand	RC hammerlead column (1)
Pier 4	3.3	0.0	Silty sand	RC hammerlead column (1)

ELEMENT INSPECTION RATINGS

Elem No.	Element Description	Env	Total Qty	Units	Qty in each Condition State St. 1	St. 2	St. 3	St. 4	St. 5
13	Concrete Deck - Unprotected w/ AC Overlay	3	520	sq.m	520	0	0	0	0
104	P/S Conc Closed Web/Box Girder	3	62	m.	62	0	0	0	0
205	Reinforced Conc Column or Pile Extension	4	3	ea.	1	0	2	0	0
215	Reinforced Conc Abutment	2	24	m.	24	0	0	0	0
234	Reinforced Conc Cap	3	36	m.	36	0	0	0	0
256	Slope Protection	3	2	ea.	2	0	0	0	0
312	Enclosed/Concealed Bearing	3	1	ea.	1	0	0	0	0
335	Other Bridge Railing	2	140	m.	140	0	0	0	0

WORK RECOMMENDATIONS

RecDate: 02/22/2011
Action : Sub-Patch spalls
Work By: LOCAL AGENCY
Status : PROPOSED

EstCost:
StrTarget: 2 YEARS
DistTarget:
EA:

Remove the unsound concrete clean and patch the spalls at the splash zone of the north side of the piers.

Team Leader : Richard M. Hunt

Report Author : David Glasgow

Inspected By : D.Glasgow/RM.Hunt

7-15-14

Richard M. Hunt (Registered Civil Engineer) (Date)

STRUCTURE INVENTORY AND APPRAISAL REPORT

********** IDENTIFICATION **********

(1) STATE NAME- CALIFORNIA 069
(8) STRUCTURE NUMBER **55C0561**
(5) INVENTORY ROUTE(ON/UNDER)- ON 140000000
(2) HIGHWAY AGENCY DISTRICT 12
(3) COUNTY CODE 059 (4) PLACE CODE 00000
(6) FEATURE INTERSECTED- DANA POINT HARBOR
(7) FACILITY CARRIED- ISLAND WAY
(9) LOCATION- 0.1 MI S/O DANA PT HBR DR
(11) MILEPOINT/KILOMETERPOINT 0
(12) BASE HIGHWAY NETWORK- NOT ON NET 0
(13) LRS INVENTORY ROUTE & SUBROUTE
(16) LATITUDE 33 DEG 27 MIN 36.65 SEC
(17) LONGITUDE 117 DEG 41 MIN 57.47 SEC
(98) BORDER BRIDGE STATE CODE % SHARE %
(99) BORDER BRIDGE STRUCTURE NUMBER

******** STRUCTURE TYPE AND MATERIAL *********

(43) STRUCTURE TYPE MAIN:MATERIAL- PRSTR CONC CONT
TYPE- BOX BEAM OR GIRDER - MULTI CODE 605
(44) STRUCTURE TYPE APPR:MATERIAL- OTHER/NA
TYPE- OTHER/NA CODE 000
(45) NUMBER OF SPANS IN MAIN UNIT 4
(46) NUMBER OF APPROACH SPANS 0
(107) DECK STRUCTURE TYPE- PRECAST CONC. PA CODE 2
(108) WEARING SURFACE / PROTECTIVE SYSTEM:
A) TYPE OF WEARING SURFACE- BITUMINOUS CODE 6
B) TYPE OF MEMBRANE- NONE CODE 0
C) TYPE OF DECK PROTECTION- NONE CODE 0

********** AGE AND SERVICE **********

(27) YEAR BUILT 1970
(106) YEAR RECONSTRUCTED 0000
(42) TYPE OF SERVICE: ON- HIGHWAY-PEDESTRIAN 5
UNDER- WATERWAY 5
(28) LANES:ON STRUCTURE 02 UNDER STRUCTURE 00
(29) AVERAGE DAILY TRAFFIC 3510
(30) YEAR OF ADT 2011 (109) TRUCK ADT 1 %
(19) BYPASS, DETOUR LENGTH 199 KM

********** GEOMETRIC DATA **********

(48) LENGTH OF MAXIMUM SPAN 15.2 M
(49) STRUCTURE LENGTH 62.2 M
(50) CURB OR SIDEWALK: LEFT 1.5 M RIGHT 1.5 M
(51) BRIDGE ROADWAY WIDTH CURB TO CURB 8.5 M
(52) DECK WIDTH OUT TO OUT 12.5 M
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 8.5 M
(33) BRIDGE MEDIAN- NO MEDIAN 0
(34) SKEW 0 DEG (35) STRUCTURE FLARED NO
(10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR 8.5 M
(53) MIN VERT CLEAR OVER BRIDGE RDWY 99.99 M
(54) MIN VERT UNDERCLEAR REF- NOT H/RR 0.00 M
(55) MIN LAT UNDERCLEAR RT REF- NOT H/RR 0.0 M
(56) MIN LAT UNDERCLEAR LT 0.0 M

********** NAVIGATION DATA **********

(38) NAVIGATION CONTROL- NO CONTROL CODE 0
(111) PIER PROTECTION- CODE
(39) NAVIGATION VERTICAL CLEARANCE 0.0 M
(116) VERT-LIFT BRIDGE NAV MIN VERT CLEAR M
(40) NAVIGATION HORIZONTAL CLEARANCE 0.0 M

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SUFFICIENCY RATING = 61.0
STATUS
HEALTH INDEX 98.5
PAINT CONDITION INDEX = N/A

********** 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) FED.LANDS HWY- NOT APPLICABLE 0
(110) DESIGNATED NATIONAL NETWORK - NOT ON NET 0
(20) TOLL- ON FREE ROAD 3
(21) MAINTAIN- COUNTY HIGHWAY AGENCY 02
(22) OWNER- COUNTY HIGHWAY AGENCY 02
(37) HISTORICAL SIGNIFICANCE- NOT ELIGIBLE 5

********** CONDITION ********** CODE

(58) DECK 7
(59) SUPERSTRUCTURE 8
(60) SUBSTRUCTURE 6
(61) CHANNEL & CHANNEL PROTECTION 9
(62) CULVERTS N

********* LOAD RATING AND POSTING ********* CODE

(31) DESIGN LOAD- UNKNOWN 0
(63) OPERATING RATING METHOD- NO RATING ANALYSIS 5
(64) OPERATING RATING- 53.5
(65) INVENTORY RATING METHOD- NO RATING ANALYSIS 5
(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 6
(68) DECK GEOMETRY 4
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N
(71) WATER ADEQUACY 9
(72) APPROACH ROADWAY ALIGNMENT 8
(36) TRAFFIC SAFETY FEATURES 1000
(113) SCOUR CRITICAL BRIDGES 5

********** PROPOSED IMPROVEMENTS **********

(75) TYPE OF WORK- CODE
(76) LENGTH OF STRUCTURE IMPROVEMENT M
(94) BRIDGE IMPROVEMENT COST
(95) ROADWAY IMPROVEMENT COST
(96) TOTAL PROJECT COST
(97) YEAR OF IMPROVEMENT COST ESTIMATE
(114) FUTURE ADT 3082
(115) YEAR OF FUTURE ADT 2028

********** INSPECTIONS **********

(90) INSPECTION DATE 02/11 (91) FREQUENCY 48 MO
(92) CRITICAL FEATURE INSPECTION: (93) CFI DATE
A) FRACTURE CRIT DETAIL- NO MO A)
B) UNDERWATER INSP- YES 60 MO B) 06/14
C) OTHER SPECIAL INSP- NO MO C)