

**STRUCTURAL DATA RECORD****Sufficiency Rating: 77.0****IDENTIFICATION**

Bridge ID: 1748 059 (2) District: 01 (3) County: 3  
 Inventory Route: (4) Place Code: 77580  
 (A) On/Under: 1 (B) Highway Type: 1 (C) Service Lvl: 1  
 (D) Route No: 00095 (E) Direction: 0  
 6A) Features Intersected: MARYLAND AVE. & AMTRAK 6B) Critical: \*  
 (7) Facility Carried: I 95 11) Km. Point: 3.480 mi  
 (9) Location: SOUTH OF WILMINGTON  
 16) Latitude: 39^44'0.78" 17) Longitude: 75^33'55.65"  
 98) Border Bridge Code: NA 99) Border Br. Str. No.: NA

**STRUCTURE TYPE AND MATERIAL**

43A) MAIN SPAN MATERIAL: 3 43B) DESIGN TYPE: 02  
 44A) APPR. SPAN MATERIAL: NA 44B) DESIGN TYPE: NA  
 45) Main Spans: 26 46) Approach Spans: 0  
 107) Deck Type: 1 108B) Membrane: 0 108C) Deck Protection: 0  
 108A) Wearing Surface: 3  
 Pier 1: 33 Pier 2: 23 Pier Ftg. 1: NA Pier Ftg. 2: NA  
 Abut 1: 2 Abut 2: NA Abut Ftg. 1: NA Abut Ftg. 2: NA

**NAVIGATION DATA**

38) Navigational Control: N 39) Vertical Clearance: 0.0 ft 40) Horizontal Clearance: 0.0 ft  
 111) Pier Protection: 1 116) Lift Br. Vert. Clr: 0.0 ft

**AGE AND SERVICE**

19) Detour Length: 5 mi 27) Year Built: 1964  
 28) No. of Lanes: A) On Bridge: 6 B) Under Bridge: 6  
 29) ADT: 102035 30) Year of ADT: 2011  
 42) Type of Service: A) On Bridge: 1 B) Under Bridge: 4  
 106) Year Reconst.: 1980 109) % Truck ADT: 11

**CLASSIFICATION**

12) Base Hwy. Network: 1 13A) LRS Inv. Rte: 0000000059 13B) LRS Subroute No.: 00  
 20) Toll Facility: 3 21) Maintenance: 1 22) Owner: 1  
 26) Functional Class: 11 37) Historical: 5 100) Defense Highway: 1  
 101) Parallel Str.: N 102) Direction: 2 103) Temp. Str.:  
 104) NHS: 1 105) Fed. Lands Highway: 0 110) Nat. Truck Network: 1  
 112) NBIS Length: Y

**LOAD RATING AND POSTING**

31) Design Load: 6 41) Oper. Status: A Rating Date: 1/1/1901  
 63) Oper. Rating Method: 1 64) Operating Rating: 79.0  
 65) Inv. Rating Method: 1 66) Inv. Rating: 47.0 70) Bridge Posting: 5  
 Reason of Posting: NA Date of Resolution: NA Rating Analysis Req'd: NA  
 S335: 0 S437: 0 T330: 0  
 T435: 0 T540: 0

**PROPOSED IMPROVEMENTS**

75) Type of Work: 35 76) Length of Imp.: 894.893  
 94) Bridge Cost: 32649000 95) Roadway Cost: 3265000  
 96) Total Cost: 48973000 97) Year of Cost Est.: 2005  
 114) Future ADT: 95900 115) Year of Future ADT: 2031

**CONTRACT INFORMATION**

Contract 1: 6401050 Contract 2: 6908003 Contract 3: 7210006  
 Contract 4: I-2(12) Contract 5: 7809101 Contract 6: -1

**INSPECTION RECORD**

90) Inspection Date: 3/28/2013	91) Frequency: 24 months	Next Inspection: 3/28/2015
92A) FC Frequency: 24 months	93A) FC. Insp. Date: 3/28/2013	Next FC Insp.: 3/28/2015
92B) UW Frequency: NA	93B) UW Insp. Date: NA	Next UW Insp.: NA
92C) SI Frequency: NA	93C) SI Date: NA	Next SI: NA
Element Frequency: 24 months	Elem. Insp. Date: 3/28/2013	Next Elem Insp.: 3/28/2015
UBIV Required: N	UBIV Days: 10	Inspection Zone: 99
Boat: N	Tidal: N	GPS: Y

**CONDITION**

58) Deck: 6	59) Superstructure: 6	60) Substructure: 6
61) Channel: N	Paint Condition: 4	
62) Culvert: N	Paint Priority: 92.85	

**APPRAISAL**

36) Traffic Sfty Feat.:		
A) Bridge Rail: 1	B) Transition: 1	C) Approach Rail: 1
D) Approach Rail Ends: N		
67) Structure Evaluation: 6	68) Deck Geometry: 9	69) Underclearance: 4
71) Waterway Adequacy: N	72) Approach Rdwy Alignment: 8	
113) Scour Critical Evaluation: N		Scour Analysis Date: NA

**GEOMETRIC DATA**

32) Appr. Rdwy Width (w/ Shldrs): 108.00 ft	33) Median: 3
34) Skew: 0^0' 0"	35) Structure Flared: 1
48) Length Maximum Span: 146.00 ft	49) Structure Length: 2,936.00 ft
50) Curb or Sidewalk:	A) Left: 0.00 ft
51) Width Curb to Curb: 104.90 ft	52) Deck Width o/o: 111.20 ft
53) Minimum Vertical Clearance Over Bridge Roadway: 17.50 ft	
54) Vertical Underclearance:	A) Reference: R
55) Lateral Underclearance:	A) Reference: R
56) Lateral Underclearance - Minimum Left: 12.60 ft	B) Right: 0.00 ft
	B) Minimum: 21.50 ft
	B) Minimum: 10.90 ft

**PAST INSPECTION**

Inspection Date: 3/28/2013	Type: 1	Inspector: PENNONI
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**INSPECTION NOTES**

INSPECTED BY: PENNONI: SON(TL,I,P,U)/LAA  
(I,P,U)/TJP(I,P,U)/JRQ(I,P,U)/CWM(I,P,U)  
MAINTENANCE: CLEAN/PAINT PIER CAPS W/ SL RESET  
BASEPLATES & TIGHTEN DOWN ANCHOR BOLTS FOR SP  
19 & 23 SIGNS REPAIR SPALLS & CRACKS IN CONC  
PED FOR LIGHTS REPAIR/REPL. APPR SLABS  
REPAIR/REPL. DAMAGED & LEAKING JTS CLEAN/REPL.  
CLOGGED DWN SPTS, REMOVE VEG GROWTH FROM DWN SPT  
IN SPAN 6 REPL. SECTION OF DRAIN PIPE @ S ABUT  
REPAIR SPALLS IN DECK & SOFFIT SEAL CRACKS &  
REPAIR SPALLS IN PARAPETS REPAIR CRACKS &  
REPAIR SPALLS IN SUB REPAIR DAMAGED/LOOSE  
SOUNDWALL SP 23 & 25 SEAL/REPAIR WIDE CRACKS  
IN APPR RDWY BITUM @ SE REATTACH SUPPORTS FOR  
CHAIN LINK FENCE, SP 13 REPLACE MISSING  
HANDHOLE AND JUNCT. BOX COVERS CLEAN/FLUSH  
DECK & SCUPPER INSPECTION NOTES: TOP OF DECK  
INSPECTION PERF. FROM RT SHLR CLOSURES. RANDOM  
SPANS WITH MORE THAN TYP DEFLECTION UNDER LIVE  
LOAD MISSING A. BOLT COVERS @ SP 19S, 22S,  
23S, 25S MISSING HANDHOLE COVERS @ SP 18N,  
22N, 24N, 25N SPALLED CONC BASE @ SP 18N, 19S,  
22N, 24N, 25N SPAN 12 NB: CANT. SIGN STRC -  
MINOR CORR. TO HANDHOLE COVER & FASTENERS SPAN  
14 NB: STR. MOUNTED CHAIN LINK FENCE W/ FEW  
HOLES @ MIDSPAN (5 SF), 2 SECTIONS OF  
DISCONNECTED BTM HORIZ POSTS @ THE N. END SPAN  
19: OVERHEAD SIGN STRC - MINOR SPOT RUST TYP.  
PACK RUST BTW S.SUPPORT BEAM AND CONN. ANGLE  
FOR TRANS MEMBER. RANDOM FRECKLES & CHALKING.  
BASE PLATES W/ GAP ALONG E. HALF FOR 9"L (OUT  
OF 25"L) AND W. SUPP W/ GAP ALONG +12"L - TYP  
TO N AND S BASE PL'S. SPOT RUST TO BASE PLS,  
ANCHOR BOLTS, CHALKING TO U/SIDE FROM BTWN GAP  
IN PLS AT ANCHOR BOLTS. BLEEDING RUST DWN

SHAFT OF ANCHOR BOLTS SPAN 20 NB: LIGHT  
REMOVED FROM PED SPAN 22 SB: JUNCTION BOX  
COVER MISSING EXPOSING WIRES IN W. PARAPET  
SPAN 23 SB: CONC BASE W/ CR'S W/ RUST SPAN 24:  
OVERHEAD SIGN STRC - A. BOLTS NOT TIGHTENED  
DOWN W/ BASEPL'S UPLIFTED APPROX 1/4" FOR E &  
W SUPP'S, SURFACE RUST TYP, E. SUPP TOP FL  
BOWED UPWARD @ CENTER BY 1/8" @ EITHER END  
SPAN 25 SB: SPALL W/ EXP STEEL ON E. FACE OF  
CONC BASE

**BRIDGE NOTES**

NBI DONE BY: JASON BAUER & DMJM NOTE: SCALE FACTORS ENTERED BY GRD ON 11/14/07, DO NOT  
CHANGE OR ERASE....

**PONTIS DATA**

Elements	ID	ENV	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	Comments
Concrete Deck - Protected w/ Rigid Overlay	22	4	(SF)	1071140	0	1071140	0	0	0	For Notes See MSPE Report
Median - Reinforced Concrete	62	4	(LF)	3156	2897	92	167	0	0	For Notes See MSPE Report
Drains/Downspouts/Scuppers	65	4	(EA)	52	24	8	20	0	0	For Notes See MSPE Report
Painted Steel Open Girder/Beam	107	4	(LF)	48966	39875	8579	512	0	0	For Notes See MSPE Report
Reinforced Concrete Column or Pile	205	3	(LF)	3013	2854	81	78	0	0	For Notes See MSPE Report
Reinforced Concrete Abutment	215	2	(LF)	112	96	16	0	0	0	For Notes See MSPE Report
Painted Steel Pier Cap	231	4	(LF)	2071	380	1348	331	12	0	For Notes See MSPE Report
Reinforced Concrete Pier Cap	234	4	(LF)	1017	835	80	102	0	0	For Notes See MSPE Report
Strip Seal Expansion Joint	300	4	(LF)	5272	113	5046	113	0	0	For Notes See MSPE Report
Open Expansion Joint	304	4	(LF)	4	0	4	0	0	0	For Notes See MSPE Report
Moveable Bearing (roller, sliding, etc.)	311	4	(EA)	467	398	69	0	0	0	For Notes See MSPE Report
Fixed Bearing	313	4	(EA)	452	446	6	0	0	0	For Notes See MSPE Report
Reinforced Conc Approach Slab w/ or w/o AC Ovly	321	4	(EA)	2	0	0	2	0	0	For Notes See MSPE Report
Bridge Railing - Reinforced Concrete	331	4	(LF)	5541	4357	849	335	0	0	For Notes See MSPE Report
Bridge Railing - Metal Coated	334	4	(LF)	654	432	46	83	93	0	For Notes See MSPE Report
Pack Rust	357	1	(EA)	1	1	0	0	0	0	For Notes See MSPE Report
Deck Cracking	358	1	(EA)	1	0	1	0	0	0	For Notes See MSPE Report
Soffit (or Under Surface) of Concrete Deck or Slab	359	2	(EA)	1	0	1	0	0	0	For Notes See MSPE Report
Section Loss	363	2	(EA)	1	1	0	0	0	0	For Notes See MSPE Report
Erosion	364	1	(EA)	1	1	0	0	0	0	For Notes See MSPE Report
Painted Steel Diaphragm	381	4	(EA)	2294	778	1454	62	0	0	For Notes See MSPE Report
Reinforced Concrete Wingwalls	390	2	(LF)	28	28	0	0	0	0	For Notes See MSPE Report

Total Elements: 22

# DELAWARE DEPARTMENT OF TRANSPORTATION

## Bridge Management Section MultiSpan PONTIS Element Report for Span No. 1

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 1 (S. Abut. to Pier  
1)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	1071140	0	1071140	0	0	0	CS2: (1071140 SF) Typ. exhibits mod wear w/ exp. aggregate. Span 1: SB shldr with shallow 8" diameter spall at P01 joint with missing top edge of extrusion 6" long. Span 5: Area of fire damage/scaling @ N. end in E. shldr (6 SF). Span 6: Area of fire damage/scaling in E. shldr @ S. end (25 SF) and N. end (8 SF). Span 7: SB at P07, center lane 10" W x 2" L x 1/4" D spall. Center lane with (2) gouges in the concrete at 1/4 span. Span 7 & Span 8: NB @ P07 jt with bitum. patches and a 12" dia. x 2" D spall in the center lane (10 SF). Span 8: NB with bitum patch at P08 (5 SF). Span 10: SB at 2/3 span with a 2 SF conc. patch in left lane. Span 11: SB left lane at midspan w/ bitum patch (3 SF). Previously noted area of fire damage/scaling (8 SF) in E. shldr @ 1/3 span not found. Span 13: SB between joints over P13 with 1 SF conc patch in center lane. Span 14: NB with area of spalled concrete from vehicle fire @ midspan (6 SF). SB with evidence of ponding water along West Parapet. Span 18: Previously noted 6"diameter spall in SB left ramp lane repaired with conc. patch. Span 19: NB with few small spalls btwn jts (1 SF). SB with 6" dia spall between joints over P19 in center lane. Span 21: SB left ramp lane w/ (4) small shallow spalls @ N. end (5 SF). Span 22: Shallow spalls in center SB lane near midspan (8" diam., 6" diam. & 3" diam.) area of spalled conc. from vehicle fire in NB gore area (25 SF) and a 12" dia. x 2 1/2" D spall in NB Rt. lane near edge of lane (See Photo 13). Span 24: Large spall in SB gore area, spall in left lane (12" L x 5" W x 1" D), and severely scaled area in shldr (25 SF). NB deck w/ bitum. patch @ joint. Span 25: SB with concrete patches throughout, a 7" dia. x 1" D spall along W. Parapet 10' from P24 and (4) small 1 SF shallow spalls in left lane spread randomly over south 1/2 of span. Bitum. patch at P24 in right lane, spall in right shoulder (32" W x 3.5" L x 1" D), and adjacent to drain with spall (15" W x 13" L x 1"D).
62	4	Median (RC)	(LF)	118	111	4	3	0	0	CS2: (4 LF) East face @ approach slab joint w/ spall @ base (3' L x 6" H x 4" D). Small corner spall at base of W. face (1 SF). CS3: (3 LF) N. end of W. face with fine horizontal cracks with rust stains. Note: Collision scrape marks typical throughout both faces of median.
65	4	Drainage	(EA)	2	0	1	1	0	0	CS2: (1 EA) Scupper with minor dirt and debris along West Parapet, downspout is open. CS3: (1 EA) Scupper completely filled with dirt and debris along media. Note that the abut. drain pipes on the slope have areas of severe rust. Center pipe on slope wall broken off w/ downspout laying on ground beyond slope.
300	4	Strip Seal Exp Joint	(LF)	226	0	113	113	0	0	CS2: (113 LF) Abutment joint with debris throughout and random areas depressed up to 1". Minor spalling up to 12" W x 4" L x 1/2" D in NB lanes and up to 8" W x 2" L x 1/2" D in SB lanes. CS3: (113 LF) Pier joint w/ areas of evidence of leakage and NB lanes with random tears and areas depressed up to 2 1/2". Spalling adjacent to joint, some patched. SB shoulder with 8" dia. x 1/2" D spall adjacent to joint with 6" length of steel armor broken off (See Photo 20). Joint packed w/ debris in shldrs.

304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	2	0	0	2	0	0	CS3: (2 EA) Minor to moderate wear, numerous fine long. & transv. cracks, some in NB slab are partially sealed, several 1/16" to 1/8" wide long. & transv. open cracks, numerous small edge spalls, several concrete patches, numerous large edge spalls in SB slab (5 SF) and (1) 5' W x 1' L x 2" D spall in SB left lane. Many of the edge spalls are partially patched with bituminous.
107	4	Paint Stl Opn Girder	(LF)	1890	1696	190	4	0	0	CS2: (190 LF) Random minor spot rust, mostly notably on BM 14 bottom flange. Top flange at median with spot & freckled rust mostly on fascia & u/side top flange at the abutment. CS3: (4 LF) Beams 11, 12, 13, & 15 exhibit exposed steel with minor rust laminations (negl. section loss) in the bottom flange.
331	4	Conc Bridge Railing	(LF)	228	106	111	11	0	0	CS2: (111 LF) 1/16-inch to 1/8-inch wide longitudinal cracks at the top fascia of the W. Parapet. CS3: (11 LF) Hairline cracking with rust stains throughout the West Parapet. Lateral offset between the railing segments at the approach slab up to 1 1/4" in E. parapet. Note: Collision scrape marks typical throughout inside face of both barriers.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	4	Painted Steel Diaphr	(EA)	84	33	49	2	0	0	CS2: (49 EA) Numerous diaphragms w/ minor spot or freckled rust. (Bay 7 int. diaphragm with previously noted exposed corroded steel not found). CS3: (2 EA) Pier 1, Bays 12 and 13 end diaphragms with exposed corroded steel.
311	4	Moveable Bearing	(EA)	16	15	1	0	0	0	CS1: (15 EA) Plate brgs at P01 are within tolerance limits and a few have minor to moderate surface corrosion. CS2: (1 EA) B11 Bearing has one (1) bent anchor bolt.
313	4	Fixed Bearing	(EA)	16	16	0	0	0	0	CS1: (16 EA) South Abutment bearings with No Deficiencies Observed (NDO).
205	3	R/Conc Column	(LF)	88	78	5	5	0	0	CS2: (5 LF) Column 4, north face with 2' L up to 1/16" wide vertical crack. Column 6, south face with area of honeycombing 3' H at the base of the column. CS3: (5 LF) Fine to hairline cracks and hairline map cracking throughout south face of Column 1, some with rust stains.
215	2	R/Conc Abutment	(LF)	112	96	16	0	0	0	CS2: (16 LF) Backwall w/ several fine to 1/16-inch wide vertical cracks, painted over w/ no new growth. 1/16" to 1/8" wide vertical cracks in stem behind Beams 6-11, starting at the corners.
231	4	Paint Stl Pier Cap	(LF)	0	0	0	0	0	0	0
234	4	R/Conc Pier Cap	(LF)	113	109	2	2	0	0	CS2: (2 LF) Large patch in bottom corner of North face under Beam 2 with associated 1/16" wide crack in underside of cap. CS3: (2 LF) Few hairline to 1/16" wide cracks with rust stains in underside at median Bay. Underside below Beam 13 with two (2) spalls up to 7" L x 3" W x 1/2" D with exposed corroded steel reinforcement.
390	2	Reinf Conc Wingwalls	(LF)	28	28	0	0	0	0	CS1: Vertical HL crack at the top of the SW Wingwall, 3' from abutment.
357	1	Pack Rust Smart Flag	(EA)	1	1	0	0	0	0	CS1: (1 EA) Typical minor pack rust (CS1: (1 EA) Typical minor pack rust (< 1/16") between bottom flange and cover plates of cap girders.
358	1	Deck Cracking SmFlag	(EA)	1	0	1	0	0	0	CS2: (1 EA) Typically HL to fine cracks in deck. Span 20 with 3' L x up to 1/4" W trans. crack over P20 in SB right lane and Span 21 w/ up to 1/16" wide trans. crack adj. to joint @ P20 in SB right lane (See Photo 14).
359	2	Soffit Smart Flag	(EA)	1	0	1	0	0	0	See Additional Sheet for MSPE Notes.
363	2	Section Loss SmFlag	(EA)	1	1	0	0	0	0	CS1: (1 EA) Typically areas of painted over pitting and minor section loss up to 3/8" mostly @ the ends of the beam, end diaph's and on top of the bottom flange of exterior girder fascias. Several beam ends w/ minor section loss/ active pitting (See Painted Steel Girder Notes). Span 22: BM 1 at midspan with section loss on bottom of stiffener FW x 1 1/2" H with a 3/4" diam. area of 100% Sx loss. Bottom flange in same location with (2) areas of Sx loss 4" diam. x 3/8" D. Span 25:

										BM 17 at Pier 24 with painted over section loss in web, stiffeners and bottom flange w/ area of 100% section loss in the east bearing stiffener 4" H x 3 1/2" W w/ minor active corrosion.
364	1	Erosion Smart Flag	(EA)	1	1	0	0	0	0	CS1: (1 EA) The previously noted erosion @ the base of Pier 13, Col. 3 due to the disconnected downspout has been repaired, and the downspout has a new PVC connection. There was no erosion observed at the disconnected downspout at Pier 22.

## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 2

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 2 (Pier 1 to Pier 2)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	118	106	2	10	0	0	CS2: (2 LF) 12" L x 6" H delam in west face (SB) near midspan. CS3: (10 LF) Hairline horizontal cracks along the west face (SB) with rust stains at the N. end.
65	4	Drainage	(EA)	2	1	1	0	0	0	CS1: (1 EA) West downspout with NDO. CS2: (1 EA) Downspout at Bay 9 is partially clogged.
300	4	Strip Seal Exp Joint	(LF)	113	0	113	0	0	0	CS2: (113 LF) Active leakage noted and packed w/ debris in shldrs, areas torn & depressed up to 2" thruout, daylight visible below and debris accum on cap.
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	1887	1839	32	16	0	0	CS2: (32 LF) Areas of minor freckled or spot rust mostly along flanges. CS3: (16 LF) Ends at Pier 2 with exposed rusted steel.
331	4	Conc Bridge Railing	(LF)	228	99	115	14	0	0	CS2: (115 LF) 1/16" to 1/8" wide horiz. cr's along the outside face of W. Parapet for full span length. 6" L x 6" H x 2" D corner spall at base of West Parapet at 2/3 span. CS3: (14 LF) 51" L x 9" W x 4" D spall w/ exp. steel in top of E. Parapet @ midspan (See Photo 21) and HL to fine cr's w/ rust.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	4	Painted Steel Diaphr	(EA)	84	41	40	3	0	0	CS2: (40 EA) Minor freckled or spot rust. Bay 9 with distorted connection plate at P02. CS3: (3 EA) Bay 12 end diaph @ P01 and Bays 11 and 15 at P02 with exposed corroded steel.
311	4	Moveable Bearing	(EA)	16	9	7	0	0	0	CS1: (9 EA) Sliding plate brgs @ P02 are w/in limits and exhibit spot rust, flaking paint and surface corrosion mostly to plate edges. CS2: (7 EA) Some bent anchor bolts at Brgs 3,4,5,6,13, and 14. Brg 8 with mod. to heavy debris from the open joint which may disrupt brg movement.
313	4	Fixed Bearing	(EA)	16	16	0	0	0	0	CS1: (16 EA) Fixed brgs @ Pier 1 w/ minor surface corrosion and blistering.
205	3	R/Conc Column	(LF)	103	66	22	15	0	0	CS2: (22 LF) Column 3 east face with 41" L x 32" H delam that continues onto south face. Column 4, south face w/ FH 1/16" to 1/8" wide vert cr at the west side. CS3: (15 LF) Column 3 with 19" H x 2" W x 2" D spall with exposed steel reinforcement and vert. crack with rust stain at top SE corner. Col. 4 w/ 1/16" to 1/8" wide vertical crack w/ rust stains and assoc. delam areas on west face FH at the south edge. South face w/ vertical crack 1/16" to 1/8" wide with area of rust stains and efflo w/ associated delam at top half of Column 4 (7' H x 2' W) and north face with 1/16" vertical crack with rust stains and delam at top (60" H x 21" W).
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
231	4	Paint Stl Pier Cap	(LF)	0	0	0	0	0	0	0
										CS2: (15 LF) Delaminated area in bott of N. face @ W. o/hang. Patch w/ 1/16" wide horiz. crack & assoc. delam in S. face Bay 15; delaminated patch @ bott of S. face @ Beam 13 (28" W x 3" H) with associated 1/8" wide horiz. crack. Bay 5, N. face at Beam 5 with trans. crack in edge of seat with associated delam and patch (12" W x 13" H x 2" D). Bay 8 N. face with two (2) HL diagonal cracks in East Overhang and S. face with FH x 3' W HL map cracking. South face at Bay 13 with

234	4	R/Conc Pier Cap	(LF)	113	84	15	14	0	0	delaminated patch at the top 8" L x 4" H. CS3: (14 LF) Delaminated patch (30" W x 5" H x 4" L) under Beam 12 south face with associated HL to 1/16" wide horiz. and vertical cracking with rust stains. South face Bay 8 with two (2) 3-foot long vertical cracks 1/16" to 1/8" wide under Beam 9 at the bottom and (2) 2' L hairline cracks with rust stains on the cap underside. N. face at bottom Bay 1 with 1/16" wide horiz. crack with rust stain, S. face and underside under Beam 8 with (2) 1' L hairline horiz. & vert. cracks with rust stains. Pedestal 10 NW corner at bottom with HL horiz crack w/ rust stains. Bay 8 N. face with HL vert and horiz crack with rust stains. Pedestals 7, 8 and 12 west face with horizontal HL cracks w/ rust stains.
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 3

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 3 (Pier 2 to Pier 3)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	118	90	13	15	0	0	CS2: (13 LF) Horiz. cracks 1/16" wide along top edge of W. face. CS3: (15 LF) Horiz. cracks w/ rust stains to W. face.
65	4	Drainage	(EA)	1	1	0	0	0	0	CS1: (1 EA) Scupper and downspout open.
300	4	Strip Seal Exp Joint	(LF)	113	0	113	0	0	0	CS2: (113 LF) Seal packed w/ debris in shldrs, some areas depressed up to 1", a few small tears and evidence of leakage noted in Bays 8 thru 10 w/ debris & dirt on cap.
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	1887	1829	44	14	0	0	CS2: (44 LF) Minor spot or freckled & bleeding rust, mostly on bottom flanges. Random areas of top flange with minor spot rust and Beams 6 and 15 with cluster of freckled rust at P02. CS3: (14 LF) BM 1, ext brg stiff @ P02 w/ rust & delam atop prev losses, typ ends of fascia beams w/ rusted steel along top fl's, u/side of BM 16 at P03 w/ blistering freckled rust and BM 6 bott fl @ P3 w/ exposed rusted steel.
331	4	Conc Bridge Railing	(LF)	228	113	115	0	0	0	CS2: (115 LF) Small collision spalls in E. Parapet @ N. end (2 SF total) and 1/16" to 1/8" wide long. cracks along top of outside face of W. Parapet. 9" L x 5" H x 1/2" D spall in base of East Parapet at 2/3 span.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	4	Painted Steel Diaphr	(EA)	84	48	36	0	0	0	CS2: (36 EA) Light spot or freckled rust. Bay 9 at P02 with distorted connection plate. Bay 1 and 10 with flaking paint and exposed primer.
311	4	Moveable Bearing	(EA)	16	12	4	0	0	0	CS1: (12 EA) Sliding plate brgs @ Pier 2 are w/in limits and typically exhibit spot and surface corrosion, mostly to plate edges and flaking paint. CS2: (4 EA) Slightly bent anchor bolts at Bearings 6,10,11, and 13.
313	4	Fixed Bearing	(EA)	16	16	0	0	0	0	CS1: (16 EA) Pier 3 bearings w/ minor spot rust.
205	3	R/Conc Column	(LF)	114	86	21	7	0	0	CS2: (21 LF) Col. 6 w/ two large spalls on E. face @ base that are painted with no new growth. Column 4, S. face with HL to 1/16" wide craks for most of height. CS3: (7 LF) Column 4 at bottom of N. face with area of HL cracks with rust stains (4' H x 3' W) and south face with HL to 1/16" wide vertical crack, with area of rust stains.
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
231	4	Paint Stl Pier Cap	(LF)	0	0	0	0	0	0	0
234	4	R/Conc Pier Cap	(LF)	113	97	12	4	0	0	CS2: (12 LF) Large corner spall @ bottom, No. edge below Bay 3 (1' L x 6" W x 3/4" D) that has been painted over w/ no new growth. HL diagonal crack at N. face Bay 14 and S. face Bays 9, 10 and 12. Underside beneath Bay 11 with severe delam (32" W x 24" L). West overhang underside with HL cracks and delam throughout (5 LF). CS3: (4 LF) Lg open & incip spall w/ exp steel (with minor section loss) in u/side between columns 3 and 4 with associated cracks and small spall in bottom of South face (1'W x 39" L x 3" H) . Bay 11, north face at bottom with HL to 1/16" wide horiz crack with rust and minor delam. Pedestal 9, S. face with HL cracks with rust stains.

390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

# DELAWARE DEPARTMENT OF TRANSPORTATION

## Bridge Management Section MultiSpan PONTIS Element Report for Span No. 4

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 4 (Pier 3 to Pier 4)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	118	98	0	20	0	0	CS3: (20 LF) Fine horiz cr's w/ rust in the West face.
65	4	Drainage	(EA)	2	1	0	1	0	0	CS1: (1 EA) NB downspout @ P03 w/ blistering & freckled rust on pipe. CS3: (1 EA) SB scupper clogged.
300	4	Strip Seal Exp Joint	(LF)	113	0	113	0	0	0	CS2: (113 LF) Seal packed w/ debris in shldrs with minor debris throughout, areas depressed up to 1 1/2", several small tears in SB joint and active leakage noted thruout. Few small edge spalls in NB lanes up to 4" W x 2" L x 1/2" D.
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	1887	1837	40	10	0	0	CS2: (40 LF) Typ. minor freckled rust @ ends or on bottom flanges. CS3: (10 LF) Ends of fascia BMs @ P03 w/ exp & rusted steel, BM 13 west bott fl @ P04 w/ minor blistering freckles and random beams w/ small area of flaking paint w/ rust along fl edge.
331	4	Conc Bridge Railing	(LF)	227	162	60	5	0	0	CS2: (60 LF) 1/16" to 1/8" wide long. cracks in top outside face of W. Parapet. CS3: (5 LF) Cracks with rust stains in W. Parapet at N. end and (1) at midspan.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	4	Painted Steel Diaphr	(EA)	84	60	19	5	0	0	CS2: (19 EA) Minor spot or freckled rust. Typ P04 diaph conn pl's are deformed. CS3: (5 EA) Bay 6,12,13,14 and 15 at P04 with minor rust laminations on U/S bottom flange with no section loss.
311	4	Moveable Bearing	(EA)	16	10	6	0	0	0	CS1: (10 EA) Sliding plate brgs @ Pier 4 are within limits w/ minor spot rust and minor surface corrosion on plate edges & flaking paint typical w/ minor blisters and moderate spot rust on Bearings 13, 14, 15, and 16. CS2: (6 EA) Bent anchor bolt at P04 Bearings 5, 7, 8, 12, 13, and 16.
313	4	Fixed Bearing	(EA)	16	16	0	0	0	0	CS1: (16 EA) Pier 3 brgs typically w/ minor rust on plates and minor to moderate rust at Bearings 5 and 10.
205	3	R/Conc Column	(LF)	122	116	2	4	0	0	CS2: (2 LF) Column 1, S. face at top with map cracking up to 1/16" wide in patch. CS3: (4 LF) Column 6, E. face at mid-hieght with 18" L x 12" H x 1/2" D spall with exposed corroded steel reinforcement. HL horizontal and vertical cracks with rust stains and associated delam 18" W x 36" H at mid-height.
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
231	4	Paint Stl Pier Cap	(LF)	0	0	0	0	0	0	0
234	4	R/Conc Pier Cap	(LF)	113	93	9	11	0	0	CS2: (9 LF) North face Bay 14 with HL horizontal crack with assoc delam (37" W x 28" H) and into seat with associated trans cracks (37" W x 6" L). Bay 12 north face with delam (19" H x 13" W). N. face Bay 9 with open/incip spall at top (12" W x 10" H). CS3: (11 LF) Crack w/ rust and efflo in seat in N. face with associated delam (36" W x 14" H x 6" L). North face Bay 13 with 1/8" wide crack w/ rust with assoc delam (37" W x 21" H x 4" into seat). E. face w/ spall 54" H x 43" L x 4" D with exposed steel (4 Horiz Bars with 10% Sx Loss) (See Photo 31) and some debonded bars with assoc cracks with rust stains, delam/spalls cont' into S. face (20" H x 8" W x 2" D) and N. face (54" H x 10" W x 2" D).

										Bay 8 N & S faces with cracks with rust stains. Bay 7, N. face top edge with a painted over spall with rust stains.
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 5

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 5 (Pier 4 to Pier 5)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	118	111	0	7	0	0	CS3: (7 LF) Fine cr's w/ rust in W. face.
65	4	Drainage	(EA)	3	0	1	2	0	0	CS2: (1 EA) NB scupper with minor debris, downspout is partially open. Previously noted crack not found; grate is settled up to 1" at the W. end. Typ downspout pipes w/ freckled rust, worst adj to support straps. CS3: (2 EA) Clogged scupper at SB Shoulder and debris build up in scupper at SB median.
300	4	Strip Seal Exp Joint	(LF)	113	113	0	0	0	0	CS1: (113 LF) Packed w/ debris in shoulders and minor debris throughout.
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	1887	1771	96	20	0	0	CS2: (96 LF) Minor spot and freckled rust and chalking to underside of flanges. Large area of peeling paint @ S. end of BM 14 w/ exp primer. CS3: (20 LF) Ends of fascia BMS @ P04 and ends of BMS 8 & 9 @ P05 w/ exposed corroded steel, BM 16 east side of bott fl w/ scattered minor blistering freckles, BM 8 @ P04, top surface of bott fl w/ bubbled paint w/ exposed corroded steel, Bms along median w/ areas of corrosion along edge of top fl, BM 9 near P04 w/ gouge on u/side bott fl w/ exposed corroded steel, random beams w/ scattered blistering freckles.
331	4	Conc Bridge Railing	(LF)	226	166	35	25	0	0	CS2: (35 LF) Minor spalls on W. Parapet and 1/16" to 1/8" long. cracks on top outside face on W. Parapet. CS3: (25 LF) Fine cr's w/ rust in W. Parapet.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	4	Painted Steel Diaphr	(EA)	84	44	38	2	0	0	CS2: (38 EA) Minor spot or freckled rust. Bay 14 at P04 with flaked paint with exposed primer. CS3: (2 EA) Bay 13 and 15 at P04 with exposed corroded steel.
311	4	Moveable Bearing	(EA)	16	7	9	0	0	0	CS1: (7 EA) Sliding plate brgs @ Pier 4 within limits w/ minor spot and surface corrosion and typical flaking paint. CS2: (9 EA) Bent anchor bolts at P04 Bearings 5, 6, 8, 9, 11, 12, 13, and 15. Minor blisters and severe corrosion to Bearing 13 & 16.
313	4	Fixed Bearing	(EA)	16	16	0	0	0	0	CS1: (16 EA) Pier 5 brgs w/ minor random spot rust of a few plates.
205	3	R/Conc Column	(LF)	128	126	0	2	0	0	CS3: (2 LF) Spall in top NW corner of Col 6 22" L x 22" H x 3" D on the N. face and 22" H x 6" L x 1" D on the W. face with exposed corroded steel reinforcement (See Photo 42).
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
231	4	Paint Stl Pier Cap	(LF)	0	0	0	0	0	0	0
234	4	R/Conc Pier Cap	(LF)	113	100	8	5	0	0	CS2: (8 LF) South face Bay 14 with delaminated patch and 8" L x 6" H delaminated area below the patch with associated trans crack in cap surface. Bay 15 seat at north edge with delam in top surface (11" L x 20" W). North face at Column 6 with delam continuing from column (34" W x 13" H) and into the underside side with a crack, 12" W x 5" L delam and 10" L x 2" W x 2" D spall. CS3: (5 LF) East face of cap w/ diagonal HL cracking with rust; Beam 16 pedestal, E. face w/ vertical HL cracking with rust; West face of cap w/ 3" diam. x 1" D spall with rust staining and vertical and horizontal cracks with rust stains which continue into the underside

390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 6

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 6 (Pier 5 to Pier 6)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	118	116	2	0	0	0	CS2: (2 LF) Few shallow spalls in base of west face (SB).
65	4	Drainage	(EA)	3	0	1	2	0	0	CS1: (1 EA) E. pipe w/ minor freckled rust & ivy growth up downspout. CS3: (2 EA) SB shoulder and median scuppers are clogged with debris. SW scupper pan has a broken/missing piece of scupper.
300	4	Strip Seal Exp Joint	(LF)	113	0	113	0	0	0	CS2: (113 LF) Seal w/ debris in shldr, gland w/ minor depressed & debonded areas and evidence of leakage and jt failure w/ hvy debris on seat, worst in Bay 9. Seal is shredded/torn thruout NB lanes.
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	1887	1636	139	112	0	0	CS2: (139 LF) Spot or freckled rust on bottom flanges and flange edges. CS3: (112 LF) Ends of BMs @ P06 and BM 8 top fl along median w/ exp & rusted steel, BMS 2, 4, 6, 7, 8, 11, 12, 13, 14 & 15 @ P6 w/ areas of moderate rust w/ blistering or flaking paint and random beams w/ small areas of flaking paint w/ exposed corroded steel along fl edge.
331	4	Conc Bridge Railing	(LF)	224	201	3	20	0	0	CS2: (3 LF) 12" H x 6" L x 2" D corner spall in base of W. Parapet at 1/4 span and a 10" diam. x1" D spall in face of W. Parapet at same location. Spalls in the west face of west barrier 3" diam. x 1/2" D spall at 1/2 span and 6" L x 3" H x 1/2" D at 3/4". CS3: (20 LF) Fine to HL cracks w/ rust in W. Parapet.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	4	Painted Steel Diaphr	(EA)	84	38	38	8	0	0	CS2: (38 EA) Minor spot or freckled rust. CS3: (8 EA) Bay 4, 5, 6, 9, 10, 11, 13, and 15 at P06 with blistering and exposed corroded steel.
311	4	Moveable Bearing	(EA)	16	10	6	0	0	0	CS1: (10 EA) Pier 6 sliding plate brgs are w/in limits and a few have minor spot rust. Flaking paint typical, blisters w/ corrosion to masonry plate, and minor corrosion to plate edges. CS2: (6 EA) Bearings 5, 10, 11, 12, 14, and 15 with slightly bent anchor bolts.
313	4	Fixed Bearing	(EA)	16	16	0	0	0	0	CS1: (16 EA) Pier 5 brgs w/ minor random spot corrosion on a few plates.
205	3	R/Conc Column	(LF)	129	125	0	4	0	0	CS3: (4 LF) Column 5 S. face near bottom with delam adjacent to patch (16" H x 12" W) with HL cracks in patch and one with rust stains. Column 4 S. face with vertical HL crack with rust.
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
231	4	Paint Stl Pier Cap	(LF)	0	0	0	0	0	0	0
										CS2: (14 LF) Shallow spalls on S. face @ top below Bay 1 (22" L x 5" H) and on bottom above Col. 2 (16" W x 8" H). North face at East Overhang with horiz crack at bottom Bay 15 with associated delam (5' W x 1' H). Underside under BM 11 with delam (36" L x 34" W). South face and underside Bay 14 with delam patch with cracks (20" L x 23" W). CS3: (23 LF) U/side Bay 15 w/ spall with exp steel (38" W x 36" L) that is associated with delam in N. face of Bay 15. North face and underside below Beam 15 and Bay 14 with delam patch with cracks and rust (56" W x 29" L).

234	4	R/Conc Pier Cap	(LF)	113	76	14	23	0	0	Spall with exposed steel under Beam 11 in underside (8" diameter x 1 1/2" D). Bay 14 in underside at South edge with longitudinal crack with rust stains and delam 67" L and up South face 3" H. South face Bay 15 at top with HL horiz cracks with hvy rust. Bottom edge under Bay 13 on South face with 1/16" wide max horiz crack with delam contiunes into underside with rust stains. Underside at Bay 12 with 31" W x 20" L x 2 1/2" D spall with exposed steel and adjacent 31" W x 31" L delam. South face, Bay 8 with vertical crack with rust stains. South face at east end with horizontal 5" L HL crack with rust staining and E. face of cap with 4" L horizontal crack with rust staining.
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 7

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 7 (Pier 6 to Pier 7)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	116	113	0	3	0	0	CS3: (3 LF) Fine cracks with rust stains at north and south ends of west face.
65	4	Drainage	(EA)	2	1	0	1	0	0	CS1: (1 EA) Typ minor freckles on all dwnspt pipes. CS3: (1 EA) SB median scupper clogged.
300	4	Strip Seal Exp Joint	(LF)	113	0	113	0	0	0	CS2: (113 LF) Seal w/ debris in shldr and areas depressed up to 1" or debonded and a few edge spalls in SB lanes up to 10" W x 2" L x 1 1/2" D. Evidence of leakage in Bays 6 & 7.
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	1855	1732	96	27	0	0	CS2: (96 LF) Minor spot or freckled rust, mostly at beam ends and along flanges. BMs 11 & 12 top fl's w/ mionor corrosion @ gouged areas but no exposed metal. CS3: (27 LF) N. end of BM 8 and BM 8 top fl along median w/ exp corroded steel, BMs 4, 7, 8, 11, 12, 13, 14 & 15 @ P06 and BM 11 @ P07 w/ areas of moderate to severe corrosion on the bottom flange w/ blistering or flaking paint (See Photo 25), BM 9 top flange at P06, ends of some BMs @ P06 w/ paint chips on bott fl w/ corrosion and BM 6 w/ bott flange with painted over section loss with minor active corrosion.
331	4	Conc Bridge Railing	(LF)	220	191	19	10	0	0	CS2: (19 LF) 1/16" to 1/8" long. cracks on top outside face of W. Parapet and a 4" W x 4" H x 1/2" D spall near midspan. Spall in top of East Parapet at north end (18" L x 10" W x 1 1/2" D). West Parapet at south end exhibits a 22" L x 4" H x 1/2" D collision spall. CS3: (10 LF) Cracks w/ minor rust in W. parapet.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	4	Painted Steel Diaphr	(EA)	84	44	31	9	0	0	CS2: (31 EA) Minor spot or freckled rust. CS3: (9 EA) Bays 3, 4, 5, 6, 10, 11, 13, 14, and 15 at P06 with blistering with rusted steel.
311	4	Moveable Bearing	(EA)	16	13	3	0	0	0	CS1: (13 EA) Pier 6 sliding plate brgs are w/in limits and a few have minor surface corrosion to plate edges. Bearings exhibit flaking paint randomly and blisters with minor corrosion to masonry plates. CS2: (3 EA) Bearings 11, 14, and 15 with bent anchor bolts.
313	4	Fixed Bearing	(EA)	16	16	0	0	0	0	CS1: (16 EA) Pier 7 bearings are painted and clean except Bearing 6, 7, 8 and 9 with minor rust blisters.
205	3	R/Conc Column	(LF)	139	129	1	9	0	0	CS2: (1 LF) Col 3 w/ 1/16" to 1/8" wide vert cracks w/ assoc. delam @ SW corner near top 25" H x 5" W x 5" L and at bottom with 1/8" vertical cracks at SE and SW corners w/ assoc delam @ SW 35" H x 5" W x 5" L. CS3: (9 LF) SE corner at top exhibits a 66" L x 1/8" wide crack with rust stains and associated delam (6" H x 7" W). Column 3, west face SW corner near bottom with 34" H x 1/16" wide crack with minor rust stains. Column 3, SE corner at bottom with a 42" H x 1/8" wide crack w/ rust.
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
231	4	Paint Stl Pier Cap	(LF)	0	0	0	0	0	0	0
										CS2: (3 LF) Bay 7, South face, top of cap with 1/16-wide horizontal cracking. South

234	4	R/Conc Pier Cap	(LF)	113	106	3	4	0	0	face at bottom under Beam 8 with 1/16" to 1/8" wide longitudinal crack. South face Bay 14 with edge spall at bottom (8" W x 3" H x 3" D). CS3: (4 LF) Horiz. cracks w/ heavy rust staining in top of S. face of Bay 7. Spall with exposed steel (19" diameter x1 1/2" D) in underside of east overhang.
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 8

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 8 (Pier 7 to Pier 8)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	116	115	1	0	0	0	CS2: (1 LF) 12" H x 7" W x 1' D spall in base of east face adjacent to P07 joint.
65	4	Drainage	(EA)	2	1	0	1	0	0	CS1: (1 EA) NB scupper and downspout w/ NDN. CS3: (1 EA) SB scupper clogged.
300	4	Strip Seal Exp Joint	(LF)	113	0	113	0	0	0	CS2: (113 LF) Evidence of leakage noted with debris on cap. Debris in shldr, areas depressed up to 2 1/2" throughout and torn areas throughout the SB lanes.
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	1855	1711	122	22	0	0	CS2: (122 LF) Minor spot or freckled rust mostly on bottom flanges. Beam 14 and 15 top of bottom flange with minor gravel and debris accumulating. CS3: (22 LF) BM 1 at P07, fascia, top flange edges are exposed with minor rust laminations (No measurable section loss) for 2 LF. Ends of BMs @ P08 and BM 11 @ P07 w/ exp & rusted steel and BM 13 & 14 w/ flaking paint w/ rust along fl edge @ N. end.
331	4	Conc Bridge Railing	(LF)	222	216	1	5	0	0	CS2: (1 LF) Edge spall (13" H x 3" L x 2 1/2"D) in north end of East Parapet at P08. CS3: (5 LF) Cracks w/ rust in W. Parapet.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	4	Painted Steel Diaphr	(EA)	84	35	45	4	0	0	CS2: (45 EA) Minor spot or freckled rust. Few kinks in top flanges @ piers. Bay 3 at P08 has exposed primer. CS3: (4 EA) Exposed and rust steel to Bay 4 and 13 at P07 and Bays 11, and 14 at P08
311	4	Moveable Bearing	(EA)	16	8	8	0	0	0	CS1: (8 EA) Pier 8 sliding plate brgs are w/in limits and a few have spot rust & flaking paint w/ blisters on masonry plates. CS2: (8 EA) Bearings 5, 6, 11, 13 and 16 with bent anchor bolts. Bearings 8, 9, 12 and 13 with moderate corrosion and up to 1/8" rust laminations on masonry plates.
313	4	Fixed Bearing	(EA)	16	16	0	0	0	0	CS1: (16 EA) Pier 7 bearings clean and painted except Bearings 6, 7, 8, and 9 exhibit rust blisters.
205	3	R/Conc Column	(LF)	141	124	6	11	0	0	CS2: (6 LF) Few small painted over corner spalls along NW & NE col 4. Column 3 SW corner with crack on bottom with associated delam and some efflo (9" H x 10" L x 5" W). Column 3 north face at top with open/incip spall (15" W x 18" H). CS3: (11 LF) Vert HL cracks w/ rust in N. and E. faces (51" H) at mid ht of Col 3. Column 3 north face with horiz crack with rust at mid ht. Column 3 north face above cracks with 14" W x 17" H x 2" D spall with exposed corroded steel reinforcement. Column 6 east face with vertical crack with rust stains and delam at SE corner (30" H x 4" W x 4" D). Column 6 east face at midht with 3 spalls up to 9" D x 2" D with exposed corroded steel reinforcement with rust laminations.
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
231	4	Paint Stl Pier Cap	(LF)	0	0	0	0	0	0	0
										CS2: (2 LF) Spall on u/side between Col's 1 & 2 (8" L x 2" W x 1/4" D) painted over. Large spall in W. face of Ped 1. CS3: (30 LF) Small corner spall w/ exp steel, painted over w/ rust in bott of N. face @ W. end, fine horiz cr's w/ assoc rust & corner spall in bott N. face @ Bay 13 and into underside (48" W x 10"

234	4	R/Conc Pier Cap	(LF)	113	81	2	30	0	0	H x 4" L) w/ area of cracks w/ rust staining (44" L x 55" W). Fine cracks w/ assoc. delam (6' L x 6" H x 6" W) on the north face at the bottom with rust stains below BM 15. North face under Beam 9 with horiz cracks with rust stains. South face Bay 8 with vertical crack with rust stain. South face Bay 12 and 13 at top with HL horiz crack with rust stains. South face at bottom under Bay 13 and 14 with 1/16" to 1/8" wide horiz crack with rust stains. Bay 14, underside of cap with delam, patch, and cracks with rust stains.
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 9

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 9 (Pier 8 to Pier 9)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	116	114	2	0	0	0	CS2: (2 LF) Spall in base of east face at 2/3 span (18" L x 6" H x 1" D).
65	4	Drainage	(EA)	1	1	0	0	0	0	CS1: (1 EA) Scupper with minor debris and downspout w/ typ minor freckled rust.
300	4	Strip Seal Exp Joint	(LF)	113	0	113	0	0	0	CS2: (113 LF) Evidence of water leakage, seal w/ debris in shldr, areas depressed up to 2" and debonded/torn areas.
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	1855	1640	179	36	0	0	CS2: (179 LF) Typical areas of painted over S.L. mostly @ flange ends and BMS 1 and 16 fascias w/ spot or freckled rust. Localized minor spot or freckled rust mostly on bottom flanges. Peeling paint at north end with exposed primer with freckled rust along the top and underside of bottom flange of Beam 2. Minor edge rust to random flange edges. Beam 10, bottom flange, 8' from 1st diaphragm north of P08 with up to 1/8" bend over 18-inch length. CS3: (36 LF) Ends of BMS @ P08 & P09 and BM 8 top fl. along median throughout w/ exposed steel with minor corrosion, BMS 1, 3-9, 12, 13, 15 & 16 @ P08 w/ areas of blistering freckled rust and random beams w/ small areas of flaking paint w/ exposed metal with corrosion along top of bottom flange edges.
331	4	Conc Bridge Railing	(LF)	221	160	50	11	0	0	CS2: (50 LF) 1/16" to 1/8" longitudinal cracks on outside face @ top of West Parapet. CS3: (11 LF) Cracks with rust on the inside face of the West Parapet and a 5' Dia. x 3/4" D spall with exposed steel reinforcement on the inside face of West Parapet, at the base.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	4	Painted Steel Diaphr	(EA)	84	35	42	7	0	0	CS2: (42 EA) Minor spot or freckled rust. CS3: (7 EA) Isolated areas of exposed metal with corrosion in Bays 1, 2, 4, 5, 6, 11, and 13 at P09.
311	4	Moveable Bearing	(EA)	16	5	11	0	0	0	CS1: (5 EA) Pier 8 sliding plate bearings are w/in limits and many have spot corrosion, random flaked paint, and some blisters to masonry plates. Some bearings have more corrosion than typical, usually in areas below the leaking joint. CS2: (11 EA) Bearings 1-5, 7, 10, 12, 13, and 16 have bent anchor bolts. BMS 13 & 15 Brgs exhibit moderate rust to plates (See Photo 29).
313	4	Fixed Bearing	(EA)	16	16	0	0	0	0	CS1: (16 EA) Pier 9 bearings w/ minor corrosion on plate edges.
205	3	R/Conc Column	(LF)	145	145	0	0	0	0	NDO
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
231	4	Paint Stl Pier Cap	(LF)	0	0	0	0	0	0	0
234	4	R/Conc Pier Cap	(LF)	113	89	15	9	0	0	CS2: (15 LF) Bottom of south face under BM 15 with 1/16" to 1/8" wide horiz crack (2 LF). Top of north face at Beam 16 with HL diagonal cracks with delam (36" H x 20" W). Beam 16 pedestal exhibits scaling on the east and north faces 12" W x 6" H x 1/2". CS3: (9 LF) Horiz. crack w/ rust stains and delam at the north face, bottom of cap under BM 15 (58" W x 5" H). Underside at Col 6 with HL cracks in patch with rust stains. Top of the south face under Beam 15 with 8" Dia. x 2" D spall with exposed corroded steel reinforcement.

											Underside between Column 5 and 6 with hairline transverse cracks with rust stains.
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0	0

## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 10

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 10 (Pier 9 to Pier 10)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	149	143	6	0	0	0	CS2: (6 LF) On the east face there is a delamination at top w/ cracks at midspan (2 LF), a 15" L x 13" H x 2" D spall at P10 and at the south end there is a 10" H x 6" W x 1 1/2" D spall at the base. One the west face there is a 3" diam. x 1/2" D spall near the south end at the base.
65	4	Drainage	(EA)	1	1	0	0	0	0	CS1: (1 EA) Scupper and downspout w/ NDN.
300	4	Strip Seal Exp Joint	(LF)	222	0	222	0	0	0	CS2: (222 LF) Both strip seals w/ active leakage, debris in shldr and areas depressed up to 1 1/2".
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	2375	2253	83	39	0	0	CS2: (83 LF) Localized minor spot or freckled rust mostly on flanges and area of peeling paint w/ exp primer but no rust on BM 5 @ Pier 9 and Beam 12 at Pier 10. Tie rod assemblies with minor random rust at Beams 5, 8, 6, 11, 12, and 13. BM 14 at P10 exhibits a minor kink in the top flange at the beam end. CS3: (39 LF) Ends of BMs @ P09 and BM 8 @ P10 w/ exposed corroded steel, BMs 3, 6, 8 & 13 @ P10 w/ areas of blistering freckled rust, BM 14 along S. half w/ areas of steel corrosion steel along u/side, and random beams w/ small area of flaking paint w/ rust along flange edges. Beam 8 at midspan with peeled paint with minor rust laminations (CS2: (83 LF) Localized minor spot or freckled rust mostly on flanges and area of peeling paint w/ exp primer but no rust on BM 5 @ Pier 9 and Beam 12 at Pier 10. Tie rod assemblies with minor random rust at Beams 5, 8, 6, 11, 12, and 13. BM 14 at P10 exhibits a minor kink in the top flange at the beam end. CS3: (39 LF) Ends of BMs @ P09 and BM 8 @ P10 w/ exposed corroded steel, BMs 3, 6, 8 & 13 @ P10 w/ areas of blistering freckled rust, BM 14 along S. half w/ areas of steel corrosion steel along u/side, and random beams w/ small area of flaking paint w/ rust along flange edges. Beam 8 at midspan with peeled paint with minor rust laminations (negl. section loss) at the top flange median side (20 LF).
331	4	Conc Bridge Railing	(LF)	282	269	3	10	0	0	CS2: (3 LF) West Parapet, inside face with a 4" H x 6" L x 1/2" D spall at the base at the south end, an 8" H x 4" L x 3/4" D spall at 2/3 span, and a 1' L x 5" H x 1/2" D spall at the north end. CS3: (10 LF) HL cracks w/ minor rust staining in the West Parapet.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	4	Painted Steel Diaphr	(EA)	98	56	34	8	0	0	CS2: (34 EA) Localized minor spot or freckled rust. Bay 13 @ Pier 10 w/ kink in top flange & missing bolt @ top E. corner. CS3: (8 EA) Exposed corroded steel at several diaphragms over P09.
311	4	Moveable Bearing	(EA)	18	12	6	0	0	0	CS1: (12 EA) Sliding plate brgs @ Pier 9 (16 total) are w/in limits and many have minor spot rust. Cap beam bearings (2 total) w/ typical corrosion with blisters on masonry plates and flaking paint w/ corrosion on nuts. CS2: (6 EA) Minor bent anchor bolts at Bearing 2, 4, 6, 11, 15, and 16.
										CS1: (17 EA) Pier 10 bearings (16 total) are all heavily greased w/ NDO. Cap bearing at

313	4	Fixed Bearing	(EA)	17	17	0	0	0	0	center with corroded nuts, bleeding rust from pin areas and corrosion randomly to plate edges, sole plate with peeling paint and exposed primer.
205	3	R/Conc Column	(LF)	78	75	0	3	0	0	CS3: (3 LF) Column 1 w/ a 7" L x 3" W x 1/2" D spall w/ exposed steel reinforcement (painted over) w/ minor rust staining and a 12" L x 8" W x 8" H corner spall w/exposed corroded steel reinforcement in the top SE corner. South face of Column 1, near the top with a 6" diameter x 1/2" D spall with exposed corroded steel reinforcement. Column 1 east face at the top with a 11" W x 6" H x 3/4' D spall with exposed corroded steel reinforcement.
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
231	4	Paint Stl Pier Cap	(LF)	111	13	67	31	0	0	CS2 (67 LF): Exterior (56 LF): Typ freckled rust on built up pl's, stiff's or fasteners for brgs, rust along web adj to brg bolsters, spot rust to edge of fl's or cover pl's, web pl's w/ rust around some tie rods. N. face Bay 15 bottom fl w/ flaked paint w/ rust staining and exposed primer. Interior (28 LF): Typ top fl over portal w/ freckled rust and scattered areas throughout interior, area of web @ NW end w/ freckled rust, E. end web fasteners and portals thru diaph's w/ light freckled rust, minor spot rust on floor randomly. CS3 (31 LF): Exterior (13 LF): N. face Bay 8 w/ moderate corrosion on bolts @ bott, E. end of top fl w/ exposed steel with corrosion at the north and south faces, N. edge of fl under Bay 3 w/ chipped paint w/ exposed steel with minor corrosion and some fasteners through the web with corrosion behind BMs 6, 7, 8 & 10. Previously noted bott fl cover pl @ Bay 11 w/ flaked paint w/ corrosion not found. Interior (18 LF): Areas of web around tie rods w/ blistering paint w/ exposed corroded steel, bott fl w/ areas of corroded steel adj to diaph's (evidence of leakage into box at the east half and ponding water in several bays at the west half), E. end Bay 1 w/ blistering and freckled rust to area of top flange.
234	4	R/Conc Pier Cap	(LF)	0	0	0	0	0	0	0
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 11

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 11 (Pier 10 to Pier 11)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	138	131	5	2	0	0	CS2: (5 LF) Delaml @ top w/ cr's on E. face on NB at 2/3 span. CS3: (2 LF) West face at north end with fine vertical crack with rust stains between joints and at 2/3 span with fine crack with rust staining.
65	4	Drainage	(EA)	2	2	0	0	0	0	CS1: (2 EA) Scuppers clear and downspouts w/ typ freckled rust along pipes w/ blistering adj to support straps.
300	4	Strip Seal Exp Joint	(LF)	222	0	222	0	0	0	CS2: (222 LF) Packed w/ debris in shoulders and some areas debonded and depressed up to 2".
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Ovn Girder	(LF)	2192	1761	350	81	0	0	CS2: (350 LF) Random localized areas of minor spot or freckled rust mostly on flanges and light corrosion to random tie rod assemblies at Beams 3, 4, 5, 6, 8, 9, 11, 12, 13, and 14. CS3: (81 LF) Beam 8 w/ areas of exposed corroded steel at the top flange along the median and at the south end. Beam 1 with an area exposed corroded steel at the south end. Previously noted BM 16 exterior top fl edge w/ scattered areas of exposed steel with minor corrosion not found.
331	4	Conc Bridge Railing	(LF)	261	175	75	11	0	0	CS2: (75 LF) 1/16" to 1/8" long. crack in top, outside face of W. Parapet. Shallow spall and delamination 3" L x 12" H in East Parapet from impact damage. CS3: (11 LF) Cracks w/ minor rust in W. Parapet and a 4' diam. x 1" D spall in the top of the West Parapet near the south end.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	4	Painted Steel Diaphr	(EA)	98	16	78	4	0	0	CS2: (78 EA) Minor spot or freckled rust. Lat wind bracing w/ random freckles & spot rust. CS3: (4 EA) Exposed steel with minor corrosion to diaph's over P10 in Bays 11, 13, 12 and 14. Random spots of lat wind bracing member w/ paint chips w/ exposed steel with minor corrosion.
311	4	Moveable Bearing	(EA)	18	18	0	0	0	0	CS1: (18 EA) Sliding plates @ Pier 10 (16 total) are w/in limits and a few have minor spot corrosion spots mostly on edges or bleeding rust from between plates. Brgs 7 thru 10 are heavily greased. Cap brgs @ Pier 11 (2 total) w/ typical minor corrosion and blisters to masonry plates and flaking paint w/ minor corrosion to anchor bolt nuts.
313	4	Fixed Bearing	(EA)	17	16	1	0	0	0	CS1: (16 EA) Pier 11 brgs (16 total) are heavily greased w/ NDO. CS2: (1 EA) Cap brg @ center with corroded nuts, bleeding rust from pin areas and corrosion randomly to plate edges (See Photo 30); sole pl w/ peeling paint w/ exp primer.
205	3	R/Conc Column	(LF)	95	95	0	0	0	0	NDO
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
										CS2 (66 LF): Exterior (50 LF): Typ freckled rust on built up pl's, stiff's or fasteners for brgs, corrosion along web adj to brg bolsters, spot rust to edge of fl's or cover pl's, web pl's w/ corrosion around some tie rods. Interior (16 LF): Typ top fl over portal and isolated areas throughout interior w/ freckled rust, web fasteners and portals thru diaph's w/ minor bleeding and freckled

231	4	Paint Stl Pier Cap	(LF)	111	12	66	30	3	0	rust, minor spot rust and rust staining on top of bottom flange and evidence of leakage in some bays. CS3: (30 LF) Exterior: Spots of corrosion on web where stiff's meet bott fl and random spots along height of stiffeners, fasteners on web behind BMs 7, 8 & 10 w/ minor corrosion, top flange in Bay 8 with minor corrosion on the north face, south edge of the top flange at the east end with exposed steel with corrosion, and the north edge of the bottom flange in Bays 10 and 11 with exposed steel with minor rust laminations (<1 /16" ). Interior (18 LF): North Web with areas around tie rods w/ blistering paint w/ exposed corroded steel, bott fl w/ areas of corroded steel adj to diaph's (evidence of leakage into box at the east half and ponding water in several bays at the west half) and beneath random web fasteners with evidence of leakage. CS4 ( 3 LF): Interior Bottom flange, 6th Bay from the west end with evidence of ponding water and exposed corroded steel with 33" L x 37" W x 1/16" section loss.
234	4	R/Conc Pier Cap	(LF)	0	0	0	0	0	0	0
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 12

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 12 (Pier 11 to Pier 12)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	141	138	1	2	0	0	CS2: (1 LF) 5"H x 4" W x 3" D spall in base of east face at midspan. CS3: (2 LF) Fine horiza crack with rust stains in west face between joints at P12.
65	4	Drainage	(EA)	2	2	0	0	0	0	NDO
300	4	Strip Seal Exp Joint	(LF)	222	0	222	0	0	0	CS2: (222 LF) Both joints packed w/ debris in shldr. Areas of SB debonded and depressed up to 1 1/2".
304	4	Open Expansion Joint	(LF)	4	0	4	0	0	0	CS2: (4 LF) Steel pl on parapet @ sign struc w/ freckled rust & surface corrosion throughout.
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	2240	2124	108	8	0	0	CS2: (108 LF) Approx. 5% of the beam areas exhibit minor freckled rust or spot corrosion, mostly on bott flanges. BMs 2 & 3 @ S. end w/ peeled paint w/ minor freckled rust on the exposed primer. CS3: (8 LF) BM 16 @ S. end at Pier 11 scupper w/ area of peeling paint and minor to moderate corrosion to exposed steel on bott fl. Beams 7 and 10 at Pier 11 and Beam 6 at Pier 2 with areas of peeling paint and minor corrosion. Beam 16 fascia flange at north end with exposed corroded steel.
331	4	Conc Bridge Railing	(LF)	254	239	3	12	0	0	CS2: (3 LF) On east side of sign structure base there are (3) spalls at the top up to 14" L x 17" W x up to 2" D. CS3: (12 LF) Cracks w/ rust on W. Parapet and minor spalling at 1/3 span with exposed corroded steel reinforcement up to 12" L x 3" H x 1/2" D.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	4	Painted Steel Diaphr	(EA)	98	0	98	0	0	0	CS2: (98 EA) Minor freckled/spot rust.
311	4	Moveable Bearing	(EA)	18	17	1	0	0	0	CS1: (17 EA) Sliding plate brgs @ Pier 11 (16 total) are w/in limits and a few have minor freckled rust. West cap brg @ Pier 12 w/ minor rust on anchor bolts and masonry plates. CS2: (1 EA) East cap bearing with areas of masonry plate with moderate spot corrosion with flaking paint on nuts. West face of masonry plate with painted over section loss with active rust and 1/8" thick rust laminations along the north end 18" L (no active section loss).
313	4	Fixed Bearing	(EA)	17	17	0	0	0	0	CS1: (17 EA) Pier 12 bearings (16 total) with Bearings 7-12 heavily greased with NDO a few areas of minor spot rust on other bearings. Cap brg (1 total) w/ corrosion on anchor bolts, masonry plate, sole plate bolts and bleeding rust from pins.
205	3	R/Conc Column	(LF)	89	87	2	0	0	0	CS2: (2 LF) Col. 1 NW corner at the top with (2) shallow corner spalls up to 1' H x 1' W x 2" D that are painted w/ no new defects and a 2" diam. corner spall, SE corner of Co.1 3 with a 6" x 6" delam and Col 3, W. face at top with delam 20" W x 10" H.
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
										CS2 (64 LF): Exterior (50 LF): Typ freckled rust on built up pl's, stiff's or fasteners for brgs, corrosion staining along web adj to brg bolsters, spot rust to edge of fl's or cover pl's, web pl's w/ rust stains around some tie rods. Interior (14 LF): Freckled rust to top & bott fl pl's throughout

231	4	Paint Stl Pier Cap	(LF)	111	41	64	5	1	0	interior (worst above access holes) and rust stans to the bottom flange west of Beam 8. CS3: (5 LF): Exterior (3 LF): SE and NE end of top fl w/ exposed steel with minor corrosion. Interior (2 LF): Top of bottom flange above pier cap fixed bearing with nuts exhibiting peeling plaint with surface corrosion with rust laminations up to 1/16". CS4: (1 LF) Interior: Bottom flange at SE corner w/ 12" L x 9" W area of up to 1/4" D section loss and 75% section loss to (1) bottom flange rivet (See Photo 37).
234	4	R/Conc Pier Cap	(LF)	0	0	0	0	0	0	0
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 13

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 13 (Pier 12 to Pier 13)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	89	88	0	1	0	0	CS3: (1 LF) Crack w/ rust stains in west face @ Pier 13.
65	4	Drainage	(EA)	2	1	0	1	0	0	CS3: (1 EA) SB scupper is clogged.
300	4	Strip Seal Exp Joint	(LF)	222	0	222	0	0	0	CS2: (222 LF) Active leakage noted, debris in shldrs and a few areas debonded or depressed up to 2". 12" W x 6" L x 1" D spall adjacent to south joint at Pier 13, NB. Concrete patch adjacent to joint in SB lane.
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	1415	915	500	0	0	0	CS2: (500 LF) Approx. 30% of bott fl's w/ minor spot or freckled rust. Beam 6-10 and 12-15 with peeling paint with exposed primer @ Pier 13.
331	4	Conc Bridge Railing	(LF)	180	136	42	2	0	0	CS2: (42 LF) 1/16" W cracks on the outside face of W. Parapet. Scale/shallow spall in East Parapet at 1/3 span 14" L x 24" H. CS3: (2 LF) HL crack with rust stains in base of East Parapet at midspan and at the south end.
334	4	Metal Rail Coated	(LF)	90	89	1	0	0	0	CS2: (1 LF) Chain link fence atop East Parapet with 1st vertical post with 6" H vertical crack up to 1/16" wide (See Photo 23).
381	4	Painted Steel Diaphr	(EA)	70	14	56	0	0	0	CS2: (56 EA) Minor freckled or spot rust.
311	4	Moveable Bearing	(EA)	18	16	2	0	0	0	CS1: (16 EA) Sliding plate brgs @ Pier 12 (16 total) are w/in limits and all have spot rust. Bearings 7-10 are heavily greased. West Cap Bearing at Pier 13 w/ minor surface corrosion. CS2: (2 EA) Bearing 14 with bronze plate shifted against west keeper which is slightly pushed out with peeling paint and surface corrosion. East Cap Bearing at Pier 13 with moderate blistering along bottom of masonry plate.
313	4	Fixed Bearing	(EA)	17	17	0	0	0	0	CS1: (17 EA) Pier 13 brgs (16 total) are heavily greased w/ NDO. Cap brg on Col 2 w/ cracked & peeling paint and minor corrosion typical at many of the anchor bolt nuts. There is bleeding rust from the pin area and plate edges exhibit minor corrosion.
205	3	R/Conc Column	(LF)	100	99	1	0	0	0	CS2: (1 LF) Col. 1 w/ 4" diameter x 1" D corner spall at the top fo the south face. Previously noted large painted over corner spall @ top NE corner not found.
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
231	4	Paint Stl Pier Cap	(LF)	111	39	53	19	0	0	CS2: (53 LF) Several large areas of peeling and missing paint exposing primer coat and some areas with freckled rust on the south face (Bays 9-14). Random areas of minor spot rust. E. end of web bet southward up to 3/16" @ top over 7.5" and W. end is bent 1/2" southward for 18". Bolster plates with spots and freckled rust on nuts and bolts. Random areas of peeling paint with exposed primer at the north face. CS3: (19 LF) Areas of exposed steel with minor corrosion on the underside of the bottom flange in Bay 15, at the west end of the top flange, on the bottom flange under Beam 4 and Bay 11, on top flange at Bay 8 and on the bottom and top flanges at the east end.
234	4	R/Conc Pier Cap	(LF)	0	0	0	0	0	0	0

390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 14

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 14 (Pier 13 to Pier 14)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	89	79	4	6	0	0	CS2: (4 LF) Delaminated patches on the east face CS3: (6 LF) Cracks w/ rust in the west face
65	4	Drainage	(EA)	3	2	0	1	0	0	CS1: (2 EA) Minor debris in NB shoulder scupper. NB Median Scupper with NDO. CS2: (1 EA) Scupper in SB shoulder is clogged.
300	4	Strip Seal Exp Joint	(LF)	222	0	222	0	0	0	CS2: (222 LF) Evidence of leakage noted, seals packed w/ debris in shoulders and minor debris throughout. SB joint with a few areas depressed up to 1".
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	1421	917	500	4	0	0	CS2: (500 LF) Localized freckled rust and minor spot rust and some peeling paint w/ exp. primer and freckled rust. CS3: (4 LF) Beams 8 and 10 with peeling paint with exposed steel with minor surface corrosion.
331	4	Conc Bridge Railing	(LF)	159	149	0	10	0	0	CS3: (10 LF) Cracks w/ rust in West Parapet
334	4	Metal Rail Coated	(LF)	158	148	0	10	0	0	CS3: (10 LF) Chain link fence on top of East parapet with (3) holes up to 6" diameter at midspan and (2) section of disconnected bottom horizontal posts at the north end.
381	4	Painted Steel Diaphr	(EA)	70	15	55	0	0	0	CS2: (55 EA) Several diaphragms with minor spot rust.
311	4	Moveable Bearing	(EA)	18	18	0	0	0	0	CS1: (18 EA) Sliding plate brgs @ Pier 13 (16 total) are w/in limits, some w/ minor spot rust or bleeding from between plates. Bearing plates with scattered areas of peeling paint with exposed primer. Brgs 7 thru 10 are heavily greased. Cap brgs @ Pier 14 (2 total) with corrosion on bottom plate edges with blistering rust, minor rust laminations and bleeding rust from between plates.
313	4	Fixed Bearing	(EA)	17	16	1	0	0	0	CS1: (16 EA) Pier 14 brgs (16 total) are heavily greased w/ NDO. CS2: (1 EA) Cap brg @ Pier 14 @ Col. 2 w/ cracked & peeling paint and corrosion on bott of plate edges, bleeding rust from pin area, and corrosion to anchor bolts and sole plate bolts & nuts.
205	3	R/Conc Column	(LF)	104	104	0	0	0	0	NDO
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
231	4	Paint Stl Pier Cap	(LF)	111	36	50	25	0	0	CS2: (50 LF) West end of web is bent up to 3/8" @ bottom 5'-6" and east end of web bent north 1/4" over 4' at bottom. Localized minor spot rust on flanges and built up bearing bolsters. Areas of peeling paint exposing primer coat @ random areas and some freckled rust on primer. CS3: (25 LF) Small areas of chipped paint w/ minor corrosion to exposed steel on the bottom flange and Cap Bolsters at the north edge at random bays throughout and at the south edge in Bay 8 (See Photo 32). The top flange at the east and west ends of the beam exhibit exposed steel with corrosion. Paint flaked with exposed metal with minor corrosion on the north face of the web and bottom flange at Beam 2.
234	4	R/Conc Pier Cap	(LF)	0	0	0	0	0	0	0
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0

358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 15

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 15 (Pier 14 to Pier 15)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	89	74	0	15	0	0	CS3: (15 LF) Cracks w/ rust in the west face
65	4	Drainage	(EA)	3	2	0	1	0	0	CS1: (2 EA) Scuppers and downspouts w/ NDN. CS3: (1 EA) Clogged scupper @ SB median at Pier 14.
300	4	Strip Seal Exp Joint	(LF)	222	0	222	0	0	0	CS2: (222 LF) Both seals with debris throughout, heaviest in the shoulders
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	1421	1166	250	5	0	0	CS2: (250 LF) BM 14 bottom flange is bent up to 1/2" downward along 18" length @ 5'-8" from the north end of the beam. Random areas of minor spot rust and freckles on flanges. Most beams @ Pier 14 exhibit peeling paint and exposed primer. CS3: (5 LF) Beam 1, 4' south of Pier 15, bottom flange, east edge with 2 LF of peeling paint with corrosion of exposed steel. Beam 6 at Pier 14 exhibits 1 LF of peeling paint with corrosion of exposed steel. (Previously noted scrape at Beam 15 bottom flange with exposed and rusted steel not found). Tie rods for Beams 3 and Bay 15 are flaked, blistered and corroded.
331	4	Conc Bridge Railing	(LF)	172	112	50	10	0	0	CS2: (50 LF) West Parapet with 1/16" to 1/8" wide longitudinal cracks on top outside face and East Parapet with 1/16" wide crack from base of surmounted fence. CS3: (10 LF) Cracks w/ rust in West Parapet at N. end.
334	4	Metal Rail Coated	(LF)	14	10	4	0	0	0	CS2: (4 LF) Chain link fence on East Parapet with horizontal support disconnected at end (See Photo 24).
381	4	Painted Steel Diaphr	(EA)	70	12	58	0	0	0	CS2: (58 EA) Diaphragms typically exhibit minor spot rust.
311	4	Moveable Bearing	(EA)	18	16	2	0	0	0	CS1: (16 EA) Sliding plate bearings @ Pier 14 (16 total) are w/in limits and a few have minor spot rust. Bearings 7-10 are heavily greased. CS2: (2 EA) Cap bearings @ Pier 15 (2 total) exhibit corrosion and rust blisters on masonry plates and flaked paint with corrosion on anchor bolt nuts.
313	4	Fixed Bearing	(EA)	17	16	1	0	0	0	CS1: (16 EA) Pier 15 bearings (16 total) are heavily greased w/ NDO. CS2: (1 EA) Cap bearing on Pier 15 @ Col. 2 w/ cracked & peeling paint and corrosion typical at many of the anchor bolt nuts. There is bleeding rust from pin area, minor rust laminations on the nuts, corrosion on the sole plate nuts, and up to 1/4" pack rust in the gap between the pin and sole plate. Plates exhibit peeling paint with exposed primer.
205	3	R/Conc Column	(LF)	107	106	1	0	0	0	CS2: (1 LF) Two (2) corner spalls up to 6" H x 4" L x 1/2" D @ NW corner of Col. 2 approx. 15' above ground, painted w/ NDO.
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
231	4	Paint Stl Pier Cap	(LF)	111	36	55	20	0	0	CS2: (55 LF) East end of girder is bent along the bottom 2/3 up to 5/16" toward north and the west end of the web is bent north by 3/8" (Previously noted as bent southward) at midheight. Few localized areas of minor spot rust on flanges and areas of peeling paint exposing the primer coat mostly on bottom flange with some minor rust freckles. CS3: (20 LF) East and west end of top flange with exposed and rusted steel, also in Bays 8-10 on the south edge. North edge of bottom

											flange with exposed and corroded steel at Beams 3, 4 and 14.
234	4	R/Conc Pier Cap	(LF)	0	0	0	0	0	0	0	0
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0	0

## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 16

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 16 (Pier 15 to Pier 16)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	89	84	0	5	0	0	CS3: (5 LF) HL cracks w/ rust in west face at the south end and (1) at 3/4 span. Patch with HL cracks with rust in base of the east face at south end.
65	4	Drainage	(EA)	2	1	0	1	0	0	CS3: (1 EA) Debris in pan at SE scupper.
300	4	Strip Seal Exp Joint	(LF)	222	0	222	0	0	0	CS2: (222 LF) Both seals w/ debris in shldrs, few areas depressed up to 1 1/2" and evidence of leakage noted in Bays 3 and 4 and Beam 2, 10, and 12 on Span 17 side.
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Ovn Girder	(LF)	1421	1321	100	0	0	0	CS2: (100 LF) Peeled paint exposing primer on bottom flange of BM 3 at Pier 15 and on BM 7 @ north splice plate. Localized areas of spot or freckled rust on bottom flange or ends. BM 16, east side of top flange is bent downward up to 2" over a 15" length at the north end of the beam. Tie rods exhibit peeling paint and corrosion to the exposed steel in Bays 4, 9 and 11.
331	4	Conc Bridge Railing	(LF)	169	124	20	25	0	0	CS2: (20 LF) West Parapet with 1/16" to 1/8" wide longitudinal cracks along top outside face. CS3: (25 LF) West Parapet with cracks w/ rust and 1/4" wide horizontal cracks along top outside face near midspan.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	4	Painted Steel Diaphr	(EA)	70	35	35	0	0	0	CS2: (35 EA) Many diaphragm w/ minor spot rust.
311	4	Moveable Bearing	(EA)	18	18	0	0	0	0	CS1: (18 EA) Sliding plate bearings @ Pier 15 (16 total) are w/in limits and a few exhibit minor spot rust. Bearings 7-10 are heavily greased. Cap brgs @ Pier 16 (2 total) w/ blistering rust and minor corrosion along bottom of masonry plate and nuts.
313	4	Fixed Bearing	(EA)	17	16	1	0	0	0	CS1: (16 EA) Pier 16 bearings (16 total) are heavily greased w/ NDO. CS2: (1 EA) Cap bearing @ Col. 2 w/ cracked & peeling paint and minor corrosion typical at many of the anchor bolt nuts. Cap bearing w/ corrosion on plate edges, sole plate, and nuts. Bleeding rust and minor pack rust at pins.
205	3	R/Conc Column	(LF)	109	108	1	0	0	0	CS2: (1 LF) Col. 2 w/ painted over large spall at the NE corner.
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
231	4	Paint Stl Pier Cap	(LF)	111	35	70	6	0	0	CS2: (70 LF) Areas of minor spot rust mostly on bottom flanges. Typical minor rust staining at median bay to flanges, fasteners, and plate edges. West end of web bent North by 1/4" at bottom. CS3: (6 LF) East and west end of top flanges with exposed corroded steel.
234	4	R/Conc Pier Cap	(LF)	0	0	0	0	0	0	0
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0

364	1	Erosion Smart Flag (EA)	0	0	0	0	0	0	0	0
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## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 17

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 17 (Pier 16 to Pier 17)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	89	81	0	8	0	0	CS3: (8 LF) Delams @ top of west face w/ crack w/ rust stains at the south end. 2' L x 8" H x 1" D spall at base of east face at 1/4 span.
65	4	Drainage	(EA)	2	2	0	0	0	0	CS 1 : (2 EA) NB scupper with minor debris, downspout open. SB scupper and downspout with NDO.
300	4	Strip Seal Exp Joint	(LF)	222	0	222	0	0	0	CS2: (222 LF) Both seals w/ debris in shldrs and few areas depressed up to 1 1/2". Evidence of leakage Bay 2 at Beam 3, north side. Edge spalling adjacent to north joint, SB center lane, south of joint 18" W x up to 6" L x up to 3/4" D.
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	1421	1221	200	0	0	0	CS2: (200 LF) Localized areas of minor spot or freckled rust and minor chipped paint on bottom flange of most beams at the south end.
331	4	Conc Bridge Railing	(LF)	170	140	30	0	0	0	CS2: (30 LF) West Parapet, outside face with 1/16" to 1/8" wide longitudinal cracks at the top.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	4	Painted Steel Diaphr	(EA)	70	10	60	0	0	0	CS2: (60 EA) Intermediate diaphragms typically exhibit minor spot rust.
311	4	Moveable Bearing	(EA)	18	18	0	0	0	0	CS1: (18 EA) Sliding plate bearings @ Pier 16 (16 total) are w/in limits. Some bearings exhibit bleeding rust between plates. Bearings 7-10 are heavily greased. Cap bearings w/ corrosion to masonry plates and anchor bolt nuts.
313	4	Fixed Bearing	(EA)	17	16	1	0	0	0	CS1: (16 EA) Pier 17 bearings (16 total) are heavily greased w/ NDO. CS2: (1 EA) Cap bearings @ Pier 17, Col. 2 w/ cracked & peeling paint and minor corrosion typical at many of the anchor bolt nuts w/ up to 1/16" rust laminations on 50% of the nuts. Bleeding rust from pin area. (Water previously noted to run through the pin area not present at the time of inspection).
205	3	R/Conc Column	(LF)	110	108	2	0	0	0	CS2: (2 LF) Col. 2 w/ two corner patches w/ unsound areas at the SE 2' H x 4" W and 18" H x 4" W. Column 1 NW corner painted over corner spall 8" x 6" x 3/4".
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
231	4	Paint Stl Pier Cap	(LF)	111	25	75	11	0	0	CS2: (75 LF) Areas of minor spot or freckled rust on bottom flanges and some top fl's. West end of cap web at midheight is bent 1/4" north. North side of top flange at Bay 13 with flaked paint with exposed metal. (The east end of the web was checked with a plumb bob to verify the previously noted 4' H x up to 1/2" bend, however the web was found to be vertical). CS3: (11 LF) Top flange exhibits exposed steel with corrosion at the east and west ends, the median bay, and the south edge of Bay 9. There is exposed steel with corrosion on the bolster plate on the north face below BM 3 and on the north edge of the bottom flange at Bay 4.
234	4	R/Conc Pier Cap	(LF)	0	0	0	0	0	0	0
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
		Pack Rust Smart								

357	1	Flag	(EA)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 18

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 18 (Pier 17 to Pier 18)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	96	94	0	2	0	0	CS3: (2 LF) HL crack w/ rust on NB east face at 2/3 span. Fine horiz crack with rust stains in west face at north end.
65	4	Drainage	(EA)	3	1	0	2	0	0	CS3: (2 EA) Downspout at Col. 2 @ Pier 18 and Col. 3 @ Pier 17 w/ clogged bases.
300	4	Strip Seal Exp Joint	(LF)	224	0	224	0	0	0	CS2: (224 LF) Both seals w/ debris throughout, heaviest in shoulders, a few areas depressed up to 1 1/2" and evidence of leakage noted.
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	1449	1139	300	10	0	0	CS2: (300 LF) Localized areas of minor spot or freckled rust on bottom flanges of beams. Beam 2 & 3 w/ chalking and peeling paint with exposed primer at the south end. CS3: (10 LF) Beam 7 bottom flange at south end with area of corrosion and moderate rust blisters. BM 8 w/ peeled paint w/ exposed corroded steel @ S. end and top fl @ median w/ area of corrosion. BM 9 top fl along median @ S. end w/ area of corrosion. Beam 15 west tie rod with exposed corroded steel at P17.
331	4	Conc Bridge Railing	(LF)	183	175	7	1	0	0	CS2: (7 LF) 1/16" wide longitudinal cracks on outside face of E. Parapet over Beech St. underpass and spall at 3/4 span (12" x 12"). Spall in light pole base of E. Parapet (16" L x 12" H x 1/2" D). CS3: (1 LF) Crack with rust on inside face of West Parapet at the north end.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	4	Painted Steel Diaphr	(EA)	70	25	45	0	0	0	CS2: (45 EA) Diaphragms typically exhibit minor spot rust.
311	4	Moveable Bearing	(EA)	18	16	2	0	0	0	CS1: (16 EA) Sliding plate bearings @ Pier 17 (16 total) are w/in limits and bearings 7-10 are heavily greased. Some bearings with bleeding rust from between plates. CS2: (2 EA) West cap brg w/ peeling paint w/ rust. NE anchor bolt is bent, section loss/pitting to west face of masonry plate, bronze plate, and underside of sole plate with minor rust laminations and pitting and section loss. E. cap bearing with corrosion to masonry plate with minor rust laminations, fasteners and North side keeper with corrosion. Plate is being pushed outward by debris w/ misalignment.
313	4	Fixed Bearing	(EA)	17	16	1	0	0	0	CS1: (16 EA) Pier 18 bearings (16 total) are heavily greased w/ NDO. CS2: (1 EA) Cap bearing @ Col. 2 w/ cracked & peeling paint and minor corrosion to plate edges at many of the anchor bolt nuts. Minor bleeding and pack rust at pin.
205	3	R/Conc Column	(LF)	112	111	1	0	0	0	CS2: (1 LF) Column 1 top surface, south edge trans crack with associated small delamination.
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
231	4	Paint Stl Pier Cap	(LF)	112	42	60	10	0	0	CS2: (60 LF) Localized areas of minor spot or freckled rust. East end of cap with minor bowed web 1/8" to the south at bottom. CS3: (10 LF) Area of missing paint w/ minor rust to exposed steel on bottom flange, N. side, below Bay 1. East and west ends of cap with rusted steel on top flange. Peeling paint on underside at median and Bay 17 north face

										with minor corrosion to exposed steel.
234	4	R/Conc Pier Cap	(LF)	0	0	0	0	0	0	0
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 19

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 19 (Pier 18 to Pier 19)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	89	67	0	22	0	0	CS3: (22 LF) Cracks w/ rust in west face.
65	4	Drainage	(EA)	2	1	0	1	0	0	CS1: (1 EA) Previously noted tear in neoprene joint collar @ Col. 2 not found. Collar appears to be new with NDO. CS3: (1 EA) Scupper clogged with debris.
300	4	Strip Seal Exp Joint	(LF)	230	0	230	0	0	0	CS2: (230 LF) Both seals partially clogged w/ debris in shoulders and a few areas depressed up to 1 1/2". Spall in center SB lane adjacent to south seal 6" diameter x 3/4" D.
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	1421	1069	350	2	0	0	CS2: (350 LF) Many localized areas of minor spot rust on bottom flanges. Random edge corrosion. Tie rod assemblies on north side of P18 with rust on rods and nuts. CS3: (2 LF) Beam 16 web adjacent to south sign structure support with buckled/distorted bottom flange rotated inboard (18.5" W x 10.5" H) and buckled 5/16" max out of plane. No evidence of distress to paint (condition remains unchanged from previous inspection).
331	4	Conc Bridge Railing	(LF)	174	163	2	9	0	0	CS2: (2 LF) East Parapet at south end with delamination with cracks with efflorescence on outside face (18" W x 12" H). CS3: (9 LF) West Parapet exterior face at midspan with a 11" L x 4" H x 1" D spall with exposed steel reinforcement. West Parapet interior face with cracks w/ rust, a 6" diameter x 1/2" D spall with exposed steel at 3/4 span and a 6" diam. delamination with areas of severe scaling for 2 LF at the light support.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	4	Painted Steel Diaphr	(EA)	70	30	40	0	0	0	CS2: (40 EA) Diaph's exhibit minor spot rust. Bay 3 over P19 with missing bolt in W. end connection.
311	4	Moveable Bearing	(EA)	19	19	0	0	0	0	CS1: (19 EA) Sliding plate bearings @ Pier 18 (17 total) are within limits w/ minor spot rust and bearings 1-10 are heavily greased. Cap bearings (2 total) w/ minor spots of corrosion on masonry plates and random bolts and plate edges.
313	4	Fixed Bearing	(EA)	18	18	0	0	0	0	CS1: (18 EA) Pier 19 bearings (17 total) are heavily greased w/ NDO. Cap bearing (1 total) w/ bleeding rust from pin area, rusted nuts and rust on random plate edges.
205	3	R/Conc Column	(LF)	112	110	2	0	0	0	CS2: (2 LF) Column 2 on south face @ mid-height with a 15" H x 10" W x 1 1/4"D spall.
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
231	4	Paint Stl Pier Cap	(LF)	115	36	70	9	0	0	CS2: (70 LF) Areas of minor spot or freckled rust. West end bottom of web bowed 1/8" to south over 4' height. CS3: (9 LF) East and west ends of top flange with flaking paint with corrosion. Top flange, north and south edges at the median bay with exposed steel with corrosion minor rust laminations. Top flange in Bays 10 and 11 with exposed steel with corrosion.
234	4	R/Conc Pier Cap	(LF)	0	0	0	0	0	0	0
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0

358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 20

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 20 (Pier 19 to Pier 20)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	89	89	0	0	0	0	NDO
65	4	Drainage	(EA)	2	1	0	1	0	0	CS3: (1 EA) Downspout @ COL 1 w/ evidence of leakage, severe corrosion, and a hole through the lower joint collar & couplers.
300	4	Strip Seal Exp Joint	(LF)	258	0	258	0	0	0	CS2: (258 LF) Both seals are partially clogged w/ debris in shldrs, few areas are depressed up to 2 1/2" with joint failed and hanging in Bays 1, 2, 3 & 4 w/ water seepage into cap girder.
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	1503	1092	400	11	0	0	CS2: (400 LF) Localized areas of minor spot rust on bottom flange. BM 7 top flange @ 1/4 span w/ peeled paint w/ exp primer. CS3: (11 LF) BM 4 @ N. end w/ area of peeled paint w/ exp metal and area of exp & corroded steel, exposed corroded steel to BM 2 @ S end top flange, Ext bott fl of BM 1 and Ext top fl of BM 16. Exposed corroded steel to the top flange of Beam 9 at the south end, to the top flanges of BMs 6 and 8 at the north end, and to the bottom flange of BM 5 at the north end.
331	4	Conc Bridge Railing	(LF)	170	165	4	1	0	0	CS2: (4 LF) Two collision spalls in East Parapet at midspan up to 8" L x 6" H x 1" D. Delamination in base of West Parapet adjacent to south pier 20 joint (6" x 6"). CS3: (1 LF) West Parapet inside face with horizontal crack with rust stains at midspan.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	4	Painted Steel Diaphr	(EA)	75	20	55	0	0	0	CS2: (55 EA) Numerous diaphragms w/ minor spot rust.
311	4	Moveable Bearing	(EA)	19	19	0	0	0	0	CS1: (19 EA) Sliding plate bearings @ Pier 19 (17 total) are w/in limits w/ some bleeding rust from btwn pl's and brgs 7-10 are heavily greased. Cap brgs (2 total) w/ flaking paint, minor corrosion and some blistering & minor rust laminations on masonry pl.
313	4	Fixed Bearing	(EA)	18	18	0	0	0	0	CS1: (18 EA) Pier 20 bearings (17 total) are heavily greased w/ NDO. Cap bearing (1 total) w/ rust bleeding from pin area w/ minor debris and minor corrosion on some nuts and plate edges.
205	3	R/Conc Column	(LF)	117	113	0	4	0	0	CS3: (4 LF) Col 2 @ SE corner w/ 40" H x 22" W x 2" to 6" dp spall @ base w/ exposed corroded steel reinforcement that u/cuts corner and appears to be from collision.
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
										CS2: (108 LF) Exterior: Random areas of cracked paint w/ exp primer. North face of median fl's & web pl's w/ spot rust. N. face at center, web pl's w/ full ht spot rust adj to bolsters. Localized areas of minor spot rust on both flanges and the webs. Typ bleeding rust or staining to web adj to bearing bolsters. Interior: (60 LF) Freckled rust on top fl pl mostly @ ends near access holes, E. half of cap w/ freckled rust throughout top fl and minor spot corrosion on the east portal flange. CS3: (21 LF) Exterior: N. face of web w/ full ht line of severe corrosion under leaking jt. U/side bott fl under BM 2 w/ flaked paint w/ exp steel w/ freckled rust @ N. edge. N. face

231	4	Paint Stl Pier Cap	(LF)	129	0	108	21	0	0	center bay bolts thru web exposed with corroded steel. Exposed corroded steel to top flange at the south face under Bay 8, at the east overhang on both faces, and on the north web at the bolster plate under Bay 1. Interior: (21 LF) Water infiltration into box @ N. side tie rods 3 & 5-8 w/ assoc area of bott fl w/ corrosion and bleeding rust and evidene of ponding water adj to interior diaph's. E. end of cap w/ peeled paint w/ exp steel w/ rust on bott fl, evidence of water accumulation w/ assoc rusted bott fl @ west end of east half, flaking paint w/ corrosion in web around tie rod holes and most of the tie rods throughout are allowing water into the cap w/ evidence of ponding water @ diaph's and exposed corroded steel.
234	4	R/Conc Pier Cap	(LF)	0	0	0	0	0	0	0
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 21

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 21 (Pier 20 to Pier 21)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	96	95	0	1	0	0	CS3: (1 LF) West face with a HL horizontal crack at midspan with rust stains.
65	4	Drainage	(EA)	2	0	0	2	0	0	CS3: (2 EA) Downspout @ Col 1 and NB scupper are clogged. Previously noted leak in neoprene collar @ Col. 1 base not found.
300	4	Strip Seal Exp Joint	(LF)	274	0	274	0	0	0	CS2: (274 LF) Both seals clogged w/ debris in shldr and some areas depressed up to 1".
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	1712	1304	400	8	0	0	CS2: (400 LF) Random areas of minor spot or freckled rust on bottom flanges. Peeling paint on u/side of top flange, E. side of BM 7 @ 3/4 span with exposed primer. CS3: (8 LF) BM 7 @ P21 w/ blistering freckled rust at bott of stiff and scattered throughout. BM 4 @ P20 w/ corrosion below leaking jt.
331	4	Conc Bridge Railing	(LF)	185	184	1	0	0	0	CS2: (1 LF) East Parapet inside face with a 6" diam. x 1/2" D collision spall at midspan.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	4	Painted Steel Diaphr	(EA)	80	29	50	1	0	0	CS2: (50 EA) Diaph's exhibit minor spot or freckled rust. CS3: (1 EA) Bay 5 end diaph @ P20 w/ flaking paint w/ exposed corroded steel.
311	4	Moveable Bearing	(EA)	20	20	0	0	0	0	CS1: (20 EA) Sliding plate bearings @ Pier 20 (18 total) are w/in limits w/ minor spot rust on pl's, worst at BM 11, Brg 4 w/ bleeding rust from between plates due to leaking jt and bearings 7-10 are heavily greased. Cap brgs (2 total) w/ minor rust on masonry plate and minor debris.
313	4	Fixed Bearing	(EA)	19	19	0	0	0	0	CS1: (19 EA) Pier 21 bearings (18 total) are heavily greased w/ corrosion on edges of a few plates or nuts. Cap brg (1 total) w/ rust w/ blisters around masonry plate with rust laminations up to 1/8-inch.
205	3	R/Conc Column	(LF)	120	119	1	0	0	0	CS2: (1 LF) SE corner of Col 2 with a 6" W x 10" H x 1 1/5" D corner spall (Appears to be result of collision damage from an Earthmover).
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
231	4	Paint Stl Pier Cap	(LF)	137	17	100	20	0	0	CS2: (100 LF) Exterior: Areas of minor freckled & spot rust on flanges and around the brg ped's. Web w/ spot rust along brg bolsters and stiff's, u/side bott fl @ center w/ some spot rust, some bolts through web w/ surface corrosion, rust stains to web where stiff's meet bott fl, worst @ Ped 12 & 13 on N. side. Random spots of corrosion from btwn bott fl & cover pl. Interior: (49 LF) Top flange w/ freckled rust throughtout but worst at the portalsl, portal fl's w/ freckled rust, occasional interior diaph's w/ freckled rust, bott fl w/ light spot rust randomly. N. web plate along E. half w/ evidence of water leakage btwn bolts @ 3rd built up interior diaph bay east of the fixed cap bearing. Evidence of ponding water along west end of most bays. (1) blind hole through bott fl, N. side @ center brg and (1) through bott fl angle for interior diaph @ west side of center brg. CS3: (20 LF) Exterior: E & W ends of top fl w/ flaking paint w/ corrosion to exposed steel, top fl in center bay, S. side w/ flaked paint w/ corrosion. North edge of

										top flange under Bay 8, north edge of bott flange under Bay 12, and south edge of bottom flange under Bay 15 with exposed steel w/ corrosion. Interior: (19 LF) E. end w/ areas of flaking paint w/ rusted & exp steel to bott fl thruout, web w/ flaking paint w/ rusted metal around tie rod holes, bott fl near center brg w/ area of previous ponding water w/ exp & rusted steel
234	4	R/Conc Pier Cap	(LF)	0	0	0	0	0	0	0
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

# DELAWARE DEPARTMENT OF TRANSPORTATION

## Bridge Management Section MultiSpan PONTIS Element Report for Span No. 22

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 22 (Pier 21 to Pier 22)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	138	136	0	2	0	0	CS3: (2 LF) Shallow 3" diameter spall with exposed steel reinforcement in west face at south end and a vertical HL crack with rust stains in the west face at the north end.
65	4	Drainage	(EA)	1	0	0	1	0	0	CS3: (1 EA) Scupper is clogged and there is a missing segment of the downspout at the base (See Photo 19).
300	4	Strip Seal Exp Joint	(LF)	288	0	288	0	0	0	CS2: (288 LF) Seals with debris throughout, worst in shoulders, some areas depressed up to 1 1/2" and SB half of joints w/ evidence of leakage inside cap and daylight visible below.
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	2744	1923	800	21	0	0	CS2: (800 LF) Areas of minor freckled & spot rust mostly on bottom flanges, random areas of minor edge corrosion and split paint with exposed metal. Some girder tie rods w/ spots of corrosion. CS3: (21 LF) Random beam ends with corrosion to exposed steel and some beam tie rods w/ flaking paint and corrosion. BM1 at midspan w/ previously painted over S.L. on bott flg. and 3/4" Diam. area of 100% S.L. stiffener with minor active corrosion (See Photo 26).
331	4	Conc Bridge Railing	(LF)	266	230	5	31	0	0	CS2: (5 LF) 1/16" wide horiz crack in West Parapet at 3/4 span. 7" L x 4" W x 1 1/2" D spall in top of East Parapet at 1/4 span. 7" L x 8" H x 4" W corner spall in East light pole base. CS3: (31 LF) Cracks w/ rust in West Parapet, HL cracks with rust stains in East Parapet. Shallow 5" diameter spall/delam with rust stains in East Parapet at 2/3 span.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	4	Painted Steel Diaphr	(EA)	126	23	100	3	0	0	CS2: (100 EA) Many end and intern. diaph's havem minor spot or freckled rust. Fifth (5th) diaphragm north of south end in Bay 11 has 1/4" kinks in horiz. and vert. legs of the bottom horiz. bracket @ BM 11. CS3: (3 EA) Bays 8 and 14 w/ end diaph's @ P21 w/ exp steel with corrosion, Bay 14 2nd int. diaph. north of south end w/ 1/4" L cracked weld at lower horizontal to stiffener connection (See Photo 28).
311	4	Moveable Bearing	(EA)	21	21	0	0	0	0	CS1: (21 EA) Sliding plate bearings @ Pier 21 (19 total) are w/in limits and many have minor spot rust. Bearings 8-10 are heavily greased. Cap bearings (2 total) w/ blisters, minor rust laminations & corrosion on masonry pl & some bolts. East cap bearing w/ minor corrosion on nuts & pl edges.
313	4	Fixed Bearing	(EA)	20	20	0	0	0	0	CS1: (20 EA) Pier 22 bearings (19 total) are heavily greased w/ NDO. Cap brg (1 total) w/ flaking paint w/ corrosion on pl edges, minor bleeding rust from pin area and flaking paint w/ exp steel w/ corrosion to nuts.
205	3	R/Conc Column	(LF)	130	129	0	1	0	0	CS3: (1 LF) Column 1, east face at mid-height with 10" diam. x 1" D and 6" diam. x 1" D spalls with exposed corroded steel reinforcement.
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
										CS2: (100 LF) Exterior: Localized minor spot rust along edges of bottom flange and web and across entire top flange. Typ rust stains to

231	4	Paint Stl Pier Cap	(LF)	144	0	100	40	4	0	web adj to brg bolsters or stiff's, minor active pack rust (<1/16") btwn bott fl & cover pl, randomly along bott fl, some stiff's w/ minor active pack rust (<1/16") @ bott. Interior: (17 LF) Spot rust to top flange over the E. access hole and freckled or spot rust to flange around access holes. Freckled rust to top flange from W. access portal to W. end and W. half of cap w/ evidence of water infiltration/ponding w/ surface stains. CS3: (40 LF) Exterior: NW face of web w/ areas of corrosion to exposed steel adj to some bolsters, W. end of top fl w/ exp steel with corrosion, north edge of top flange in Bays 8 and 9 with peeling paint and corrosion to exposed steel, some fasteners thru the web w/ flaking paint and corrosion. Interior: (22 LF) Corrosion to bottom flange adj to several diaph's throughout due to water infiltration from holes in web for tie rods with ponding on bott fl @ diaph's and web w/ flaking paint w/ rusted metal around several tie rod holes, just past W. end access hole w/ area of exp corroded steel on bott fl, area of flaking paint w/ severe rust to exp steel near BM 9, west of center brg w/ areas of active ponding water in Bay 10 (FW x FL x up to 3 1/2" D) (See Photo 40) and Bay 11 (2' L x FW x 1" D) w/ flaking paint w/ rusted steel, and some holes thru web along W. half w/ rust from water infiltration. CS4: (4 LF) Interior: Bay 8 bottom flange with 4' L x 3' W area of corrosion to bottom flange with rust laminations up to 1/16" and minor (<1/16" D) section loss to the bottom flange angles and bottom flange plate. (See Photos 38 & 39).
234	4	R/Conc Pier Cap	(LF)	0	0	0	0	0	0	0
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 23

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 23 (Pier 22 to Pier 23)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	138	133	0	5	0	0	CS3: (5 LF) Cracks w/ rust in west face.
65	4	Drainage	(EA)	2	0	2	0	0	0	CS2: (2 EA) Downspout at Pier 22 in Bay 9 is missing the downspout clamp. Pier 23, Col. 1 downspout w/ removed/missing section @ bott but functioning. Note: Scupper is in Span 24 and clogged (See Photo 18), but water still flows through downspout.
300	4	Strip Seal Exp Joint	(LF)	294	0	294	0	0	0	CS2: (294 LF) Seals packed w/ debris in shldrs, few areas depressed up to 1 1/2" and a tear in seal at the ramp exit lane .
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	2835	2106	700	29	0	0	CS2: (700 LF) Random areas of freckled rust and flaking paint w/ exp primer, areas throughout w/ clusters of freckled rust mostly along the bott fl, most tie rods w/ minor areas of corrosion. Note that BM 8 is partial length beam, running from Diaph. 2 to Pier 23. Peeling paint on bottom flange of BM 9 @ midspan and on E. fascia girder, E. face @ N. end w/ few spots exposing primer coat without corrosion. CS3: (29 LF) Tie rods for BM 7 @ P22 are loose, few tie rods w/ moderate corrosion, BM 9 @ P22 w/ corrosion along fl's, most beam ends at P22 and random beam ends at P23 exhibit minor corrosion to flanges.
331	4	Conc Bridge Railing	(LF)	265	222	5	38	0	0	CS2: (5 LF) East Parapet w/ 12" H x 4" L x 2" D spall @ jt armor. 12" H x 8" L x 1 1/2" D spall in base of East Parapet at 1/2 span. Area of scaling 3' L x 2' H on the inside face of East Parapet at 2/3 span. CS3: (38 LF) Cracks w/ rust in W. Parapet. Few fine cracks with rust stains in East Parapet. (2) spalls on inside face of West Parapet 4" diam. x 1/2" D with exposed corroded reinforcement.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	4	Painted Steel Diaphr	(EA)	140	39	100	1	0	0	CS2: (100 EA) Several diaph's have minor spot rust. CS3: (1 EA) End diaph @ P22, Bay 8 w/ exp corroded steel along top fl.
311	4	Moveable Bearing	(EA)	22	22	0	0	0	0	CS1: (22 EA) Sliding plate bearings @ Pier 22 (20 total) are all w/in limits w/ minor corrosion on pl edges and flaked off paint on bronze pl. Note that BM 8 has no brg @ Pier 22 because beam runs from Pier 23 to Diaph 2. Cap brgs (2 total) w/ E. brg w/ minor rust around bott of pl edges. W. cap brg w/ typ rust staining on pl edges, bolts & nuts and some bleeding rust from btwn pl's, E. face of sole pl w/ some minor rust laminationsl.
313	4	Fixed Bearing	(EA)	22	22	0	0	0	0	CS1: (22 EA) Pier 23 brgs (21 total) are heavily greased w/ NDO. Cap brgs (1 total) w/ some corrosion on pl edges, minor bleeding rust from pin areas, flaking paint and random bolts w/ corrosion.
205	3	R/Conc Column	(LF)	130	130	0	0	0	0	NDO
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
										CS2: (110 LF) Exterior: Minor spot rust. Typ bleeding rust from btwn bott fl & cover pl, scattered freckled rust along top edge of bott fl and rivets, web pl's & fasteners thru web w/ surface corrosion, N. side brg bolsters w/ bleeding rust & minor pack rust @

231	4	Paint Stl Pier Cap	(LF)	147	0	110	37	0	0	bott of some stiff's and N. flange edge @ BMS 19 and 20 w/ kinked flange, bent upward up to 1/4". Interior: (110 LF) Freckled rust to access hole fl's, evidence of ponding water with surface corrosion but no exposed steel with corrosion, top fl's throughout w/ freckled rust. CS3: (37 LF) Exterior: Peeled & missing paint w/ minor freckled rust to exp. steel on S. web @ E. fascia. SE end of web with area of exp & corroded steel to web pl and bolster steel, BM 21 brg bolster w/ corrosion along E. face, E & W ends of top fl w/ exposed corroded steel. North face at BM 20 w/ E. stiffener at bot flange w/ exposed corroded steel. Interior: (28 LF) Flaking & bubbled paint w/ corrosion btwn W. access hole and W. end, add'l corrosion to bott fl btwn W. brg and center brg, E. and W. halves near center brg w/ exp corroded steel along bott fl and a few holes through N. web w/ exp corroded steel to web and bottom flange around hole. Several areas w/ evid. of ponding have exposed corroded steel.
234	4	R/Conc Pier Cap	(LF)	0	0	0	0	0	0	0
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

# DELAWARE DEPARTMENT OF TRANSPORTATION

## Bridge Management Section MultiSpan PONTIS Element Report for Span No. 24

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 24 (Pier 23 to Pier 24)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	137	132	2	3	0	0	CS2: (2 LF) Spall in base of east face at 1/4 span (24" L x 8" H). CS3: (3 LF) Crack w/ rust in W. face @ N. end and (2) cracks w/ rust at 1/3 span.
65	4	Drainage	(EA)	0	0	0	0	0	0	0
300	4	Strip Seal Exp Joint	(LF)	288	0	288	0	0	0	CS2: (288 LF) Both seals w/ debris in shldr and throughout on-ramp rdwy adjacent deck w/ minor spalling. Spalls with bitum patch between both joints in NB lanes up to 3' W x 4' L is depressed up to 1".
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	2837	1830	1000	7	0	0	CS2: (1000 LF) Localized areas of minor freckled & spot rust mostly on bottom flanges. BM 17 bott fl @ P24 w/ rust stains on painted over pitting but no add'l S.L., BM 21 w/ remnant welds/pl's to web near P24. CS3: (7 LF) BM 1 @ P23 w/ flaked paint w/ corrosion @ end, BM 11 @ P24 w/ exposed corroded steel @ end, BM 21 w/ fascia top fl near P24 and fascia stiff's w/ spots of exp & corroded steel. (Previously noted BM 14 @ P24 w/ corrosion on fl's and BM 17 bott fl @ P24 w/ area of corroded steel not found).
331	4	Conc Bridge Railing	(LF)	201	79	80	42	0	0	CS2: (80 LF) Shallow spall in East Parapet at 1/4 span. West Parapet outside face w/ full length 1/16" to 1/8" horiz cr w/ efflo and small delam areas. CS3: (42 LF) HL horizontal and map cracks w/ rust in W. Parapet and a horiz cr w/ rust on E. Parapet.
334	4	Metal Rail Coated	(LF)	80	65	15	0	0	0	CS2: (15 LF) Soundwall on West Parapet with missing and/or loose fasteners. Minor bulged areas in last 2 panels from north end. Wilmington "W" bent outward 4" on inside face at south end.
381	4	Painted Steel Diaphr	(EA)	140	32	105	3	0	0	CS2: (105 EA) Bay 16, 3rd diaph from S. end has 1/2" kink in horiz. leg of bottom angle bracket. Bay 18, 6th from S. end horiz leg of bott angle bracket bent 1" upward along west 6". Many diaph's have minor spot rust. CS3: (3 EA) Bay 5 end diaph @ P27 and Bay 14 @ P24 w/ exp corroded steel. Bay 17 @ P24 w/ painted over pitting w/ active corrosion.
311	4	Moveable Bearing	(EA)	23	23	0	0	0	0	CS1: (23 EA) Sliding plate bearings @ Pier 23 (21 total) are within limits w/ some minor bleeding rust from btwn pl's and spot rust typ. Cap brgs (2 total) w/ corrosion to bott of masonry pl edges.
313	4	Fixed Bearing	(EA)	22	22	0	0	0	0	CS1: (22 EA) Pier 24 brgs (21 total) are heavily greased w/ NDO. Cap brg (1 total) w/ corrosion on bott of masonry pl & sole pl bolts, minor bleeding rust from pin area.
205	3	R/Conc Column	(LF)	131	128	1	2	0	0	CS2: (1 LF) Col. 1 w/ 1 SF spall on S. face. CS3: (2 LF) Col. 1 w/ 2' L x 1/16" W crack with rust staining on north face at mid-height.
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
										CS2: (100 LF) Exterior (83 LF) : Areas of minor spot rust along bott flange. Painted over pitting w/ surface corrosion throughout bott fl cover pl, u/side w/ freckled rust typ, minor bleeding rust or pack rust btwn bott fl & cover pl (heavier @ BM 17), typ spots of rust on web @ intersection of bott

231	4	Paint Stl Pier Cap	(LF)	144	26	100	18	0	0	0	fl angle and stiff's, on web along ht of bolsters or stiff's. Interior: (17 LF) Top flange w/ freckled rust throughout, typ over access holes and above fixed bearing. Bot flange with minor rust stains at rand locations from btwn bot flange plates and web fasteners. CS3: (18 LF) Exterior (17 LF): E. end of top fl w/ exposed corroded steel, N & S top fl's @ BM 1 w/ moderate corrosion, S. face Bay 15 w/ moderate corrosion and paint failure, N. face @ BM 17 w/ some flaked paint w/ corrosion to some rivets, Bay 16 w/ N & S fl's w/ area of exposed steel w/ corrosion on painted over pitting on web along ht of bolsters, Brg 14 & 17 bolsters w/ area of exp corroded steel. Interior: (1 LF) Bot flange w/ minor corrosion at bot flange splice where plates join.
234	4	R/Conc Pier Cap	(LF)	0	0	0	0	0	0	0	0
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0	0

# DELAWARE DEPARTMENT OF TRANSPORTATION

## Bridge Management Section MultiSpan PONTIS Element Report for Span No. 25

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 25 (Pier 24 to Pier 25)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	230	170	50	10	0	0	CS2: (50 LF) 1/16" to 1/8" wide horiz crack in west face (SB). CS3: (10 LF) Cracks w/ rust in W. face. East face w/ few small shallow spalls with rust stains in base and HL horiz. cracks w/ rust stains at base at south end.
65	4	Drainage	(EA)	3	2	0	1	0	0	CS3: (1 EA) SW scupper clogged.
300	4	Strip Seal Exp Joint	(LF)	268	0	268	0	0	0	CS2: (268 LF) Both seals w/ debris throughout, heaviest in shldrs and few areas depressed up to 1 1/2" w/ active leakage. Previously noted large open spall and large bitum patch spall adj to south seal in left lane repaired w/ concrete patch w/ NDO.
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	1901	785	1100	16	0	0	CS2: (1100 LF) Localized areas of spot & freckled rust on bottom flanges w/ areas @ edges of fl w/ peeling paint. CS3: (16 LF) BM 1 @ S. end fascia web & fl w/ area of steel corrosion, BM 11 @ P24 w/ fl corrosion, BM 17 w/ areas of steel corrosion on bott fl near mdspn & S. end and area of painted over pitting w/ active corrosion on E. face @ P24. Area of 100% section loss 4" H x 3 1/2" W to BM 17 E. brg stiffener painted over w/ minor rust staining at bot but no active corrosion causing S.L. (See Photo 27). BM 14 at 3/4 span bott flange w/ peeling paint and exposed corroded steel.
331	4	Conc Bridge Railing	(LF)	220	203	0	17	0	0	CS3: (17 LF) Painted over spall in top of W. Parapet 1' L x 4" W with rust stains. Cracks w/ rust in W. Parapet. Spall with exposed steel reinforcement in West Parapet at base of light pole 3' diam. x 1/2" D.
334	4	Metal Rail Coated	(LF)	106	42	1	0	63	0	CS2: (1 LF) One post with missing fastener. CS4: (63 LF) Many panels with numerous small holes thru panel (See Photo 22).
381	4	Painted Steel Diaphr	(EA)	97	19	77	1	0	0	CS2: (77 EA) Diaph's w/ minor spot or freckled rust. CS3: (1 EA) South end diaph in Bay 11 w/ blistering freckled rust.
311	4	Moveable Bearing	(EA)	19	18	1	0	0	0	CS1: (18 EA) Sliding plate bearings @ Pier 25 (17 total) w/ NDO. Cap brgs (2 total) w/ E. side w/ some bleeding rust & some corrosion to bott of masonry pl. CS2: (1 EA) W. cap brg w/ corrosion and minor rust laminations along bott of masonry pl & some blisters on pl's, pitting (CS1: (18 EA) Sliding plate bearings @ Pier 25 (17 total) w/ NDO. Cap brgs (2 total) w/ E. side w/ some bleeding rust & some corrosion to bott of masonry pl. CS2: (1 EA) W. cap brg w/ corrosion and minor rust laminations along bott of masonry pl & some blisters on pl's, pitting (<1/16") to masonry w/ active corrosion, rust laminations and pack rust below masonry pl.
313	4	Fixed Bearing	(EA)	18	18	0	0	0	0	CS1: (18 EA) Pier 24 bearings (17 total) are heavily greased w/ NDO. Cap brgs (1 total) w/ flaked paint & corrosion to pl edges, bolts and minor bleeding rust from pin.
205	3	R/Conc Column	(LF)	129	128	1	0	0	0	CS2: (1 LF) Col. 2 NW corner at top with 7" L x 7" W x 1/2" D spall.
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
										CS2: (110 LF) Exterior: Typ. areas minor spot rust. Bott fl @ BM 1 w/ surface corrosion,

231	4	Paint Stl Pier Cap	(LF)	134	0	110	22	2	0	bott fl & cover pl's w/ minor bleeding or pack rust and minor spot rust on pl edges, brg bolsters w/ some bleeding or pack rust btwn stiff's @ bott flange, random area of painted over pitting w/ minor surface stains, spot rust to web pl along ht of brg bolsters and Brg 11 bolster has freckled rust throughout. Interior: (26 LF) Top fl w/ freckled rust randomly throughout, freckled rust on bot flange and webs below tie rod holes, bot flange east of diaphs w/ rust staining and bot flange at W. side of center brg w/ rust staining. CS3: (22 LF) Exterior: Exposed corroded steel at on top & bott fl's at E and W ends and in Bay 6 at the N. edge of top flange. Interior: (16 LF) W. end w/ corroded steel along area of bott fl and corroded steel to the fl of the W. access portal. Evid. of water leakage at random tie rods and adj to diaphs w/ exp. corroded steel to webs and bott flange (See Photo 41). CS4: (2 LF) Exterior: Top flange, 3' west of BM 1, south edge w/ 17" L x 3" W x up to 3/16" S.L. (1/2" remains at edge, orig. = 11/16" thick) (See Photo 33). North edge at same location w/ 15" L x 2 1/4" W x up to 5/16" S.L. (3/8" remains at edge, orig. = 11/16" thick) (See Photo 34).
234	4	R/Conc Pier Cap	(LF)	0	0	0	0	0	0	0
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

## DELAWARE DEPARTMENT OF TRANSPORTATION

### Bridge Management Section MultiSpan PONTIS Element Report for Span No. 26

Bridge ID: 1748 059

Inspection Date: 3/28/2013

Description: Span 26 (Pier 25 to Pier 26)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
62	4	Median (RC)	(LF)	214	189	0	25	0	0	CS3: (25 LF) Cracks w/ heavy rust staining in E. and W. face of West Median at N. end.
65	4	Drainage	(EA)	2	0	2	0	0	0	CS3: (2 EA) NW and SW scupper clogged.
300	4	Strip Seal Exp Joint	(LF)	242	0	242	0	0	0	CS2: (242 LF) Seals are packed w/ debris in shldrs w/ a areas depressed up to 2". Bay 6 w/ failed joint, Bay 8 w/ missing jt mat'l and evid of leakage noted in Bay 11.
304	4	Open Expansion Joint	(LF)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	4	Paint Stl Opn Girder	(LF)	1768	1258	500	10	0	0	CS2: (500 LF) Localized areas of minor spot rust on bottom flange. Note that BM 10 is partial length, runs from Pier 25 to Diaph. 5. Tie rods w/ typ freckled/spot rust, BMs 8, 9 & 10 @ N. end w/ areas of peeled paint w/ exp primer. CS3: (10 LF) Tie rods at BMs 5, 14 and 15 w/ moderate corrosion and BM 12 near N. end w/ peeled paint w/ exp corroded steel along fl's @ end due to leaking jt. BM 2 bott flange at S. end w/ area of exp corroded steel.
331	4	Conc Bridge Railing	(LF)	206	178	13	15	0	0	CS2: (13 LF) W. Parapet w/ 1' H x 4" W x 6" D spall @ Pier 25 joint. E. Parapet with horiz cracks with efflo. CS3: (15 LF) E. Parapet with HL horiz cracks with efflo and/or rust stains and a 3/4" wide x 1' L crack at midspan.
334	4	Metal Rail Coated	(LF)	206	78	25	73	30	0	CS2: (25 LF) Minor collision damage and graffiti at 1/3 span on East wall. Random missing bolt heads throughout East Wall. CS3: (73 LF) Soundwall on West Parapet with loose panels for entire length. CS4: (30 LF) Several areas of multiple holes through W. panel.
381	4	Painted Steel Diaphr	(EA)	96	25	70	1	0	0	CS2: (70 EA) Many have spot rust. CS3: (1 EA) Bay 11 @ Pier 26 w/ exp & corroded steel.
311	4	Moveable Bearing	(EA)	18	18	0	0	0	0	CS1: (18 EA) Sliding plate bearings @ Pier 26 (16 total) w/ bleeding rust from btwn some pl's and minor corrosion on pl edges or nuts (Brg 12 w/ more corrosion than typ.). Brgs 7, 8, 9 & 11 are heavily greased. Note that there is no brg for BM 10 since beam ends @ Diaph 5. Cap brgs (2 total) w/ corrosion throughout W. Brg and E. Brg w/ areas of peeled paint and minor corrosion to pl edges.
313	4	Fixed Bearing	(EA)	18	18	0	0	0	0	CS1: (18 EA) Pier 25 bearings (17 total) are heavily greased w/ NDO. Cap brgs (1 total) w/ minor bleeding rust from pin, minor corrosion on random nuts, bolts or pl edges.
205	3	R/Conc Column	(LF)	131	109	11	11	0	0	CS2: (11 LF) Col 1, W. & S. faces @ top w/ vert cr's w/ efflo (11 LF) and top surface w/ longit cr @ W. edge. CS3: (11 LF) Col 1, S. face @ bott w/ 1/16" to 1/8" wide vert cr w/ rust (2 LF), S & W faces @ bott w/ vert cr's w/ rust (6 LF), S. face @ mdht w/ 2 horiz cr's w/ rust (2 LF) and W. face @ mdht w/ vert cr w/ rust and S. face @ top w/ diag cr's w/ rust (1 LF).
215	2	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
										CS2: (90 LF) Exterior: Typ. areas of minor spot rust. S. side bottom fl in Bay 4 w/ bent up fl, minor pack rust btwn bott fl & cover in pl in Bay 11 and minor pack rust throughout w/ some surface corrosion to pl edges, minor pack rust in top & bott of some

231	4	Paint Stl Pier Cap	(LF)	121	22	90	7	2	0	brg stiff's, top fl & brg bolsters w/ minor rust stains throughout. S. face of bot flange in Bay 16 kinked upward. Interior: (8 LF) E & W access holes w/ freckled rust to fl's, bot fl at W. access hole w/ freckled rust and evidence of water @ W end but no corroded steel. Freckled rust on bot flange and webs at the tie rod holes on south face of the web throughout and few fasteners with minor corrosion at fixed pier cap bearing. CS3: (7 LF) Exterior: (4 LF) Bay 11 @ BM 12 w/ painted pitting to web w/ active corrosion and rust laminations up to 3/8". W. end of top fl w/ exp corroded steel and minor rust laminations, exp corrded steel on N. side to top flange in Bays 6 & 8, bot flange in Bay 7 and top flange in Bay 12 w/ minor rust laminations. Rust lam in top cover plate on S. face at Bay 6 Interior: (3 LF) Bay 7 w/ ponding water noted on top of bott flange at the N. side and bot fl angle and web w/ exp corroded steel. Bot fl E. of the 2nd diaph east of fixed bearing w/ peeling paint and exp corroded steel. CS4: (2 LF) Top fl plate, N. edge at Bays 11 and 12 w/ 2' L x 1" W x up to 3/8" S. L. to flange plate (1/8" remains at edge, orig. = 1/2" ) and up to 1/4" S. L. to flange cover plate (1/4" remains at edge, orig. = 1/2" ) . (See Photos 35 & 36).
234	4	R/Conc Pier Cap	(LF)	0	0	0	0	0	0	0
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
357	1	Pack Rust Smart Flag	(EA)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	2	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
363	2	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0





1. South Approach, looking north onto bridge from SB Lanes.



2. North Approach, looking south onto bridge from Bridge 1748S 059.



3. East Elevation, looking northwest.



4. General view of underside (Span 14), looking north.



5. Under record, High Speed Way (Span 3), looking east.



6. Under record, High Speed Way (Span 3), looking west.



7. Under record, Delmarva Lane (Span 13), looking SE.



8. Under record, Beech Street (Span 18), looking east.



9. Under record, Beech Street (Span 18), looking west.



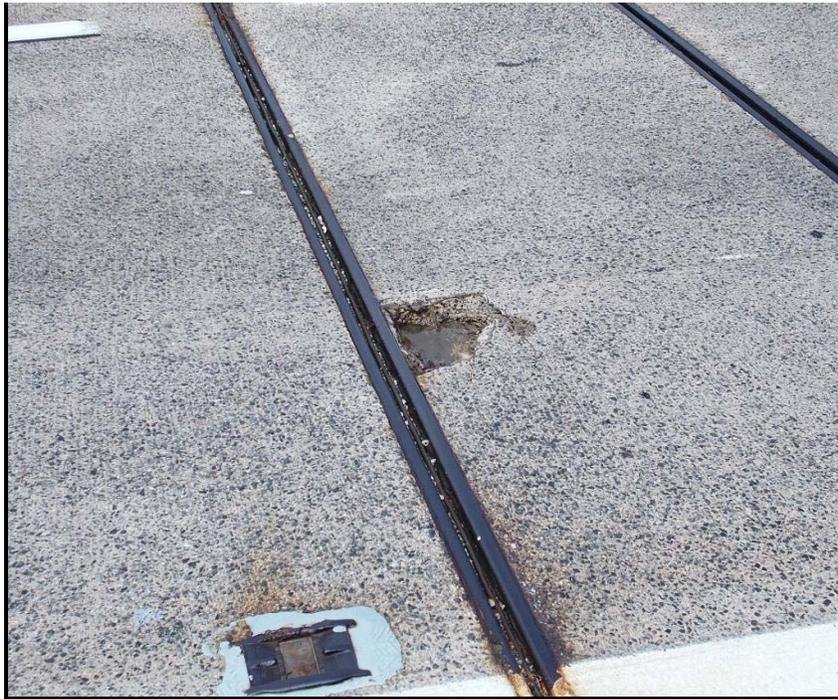
10. Under record, Amtrak (Span 24), looking east



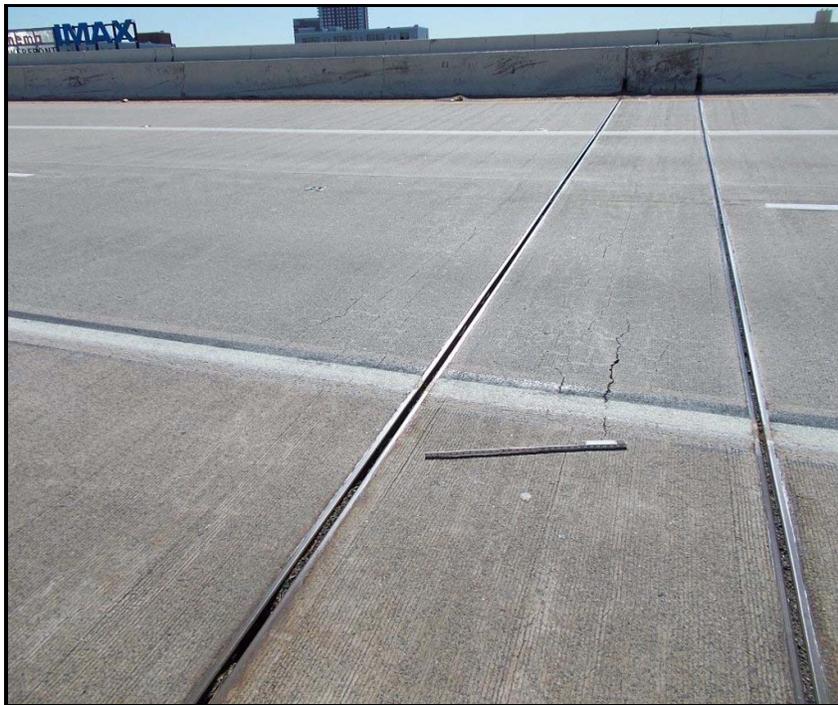
11. Under record, Amtrak (Span 24), west side of Bridge 1748.



12. General view of deck, looking north (Span 11 shown).



13. Span 22 NB right lane - 12" Diam. x 2 1/2" D spill.



14. Span 20 SB at P20 - Trans cracks up to 1/4" W at P20 and 1/16" W in Span 21.



15. Span 5, E. o/hang at P05 - 30" W x 9" L x 2" D spalls w/ exp corr deck jt angle.



16. Span 6, Bay 11 - SIP w/ 36" L x FW area of corr. and conc. voids.



17. Span 26, W. o/hang at P26 - 4' L x 20" W x 2 1/2" D spall w/ exp corr steel.



18. Span 24, SB west shoulder at P23 - Clogged scupper.



19. P22, Col. 1 downspout - Bott. portion of downspout disconnected.



20. P01, SB lanes, W. shldr - Depressed jt mat'l, spall & 6" L missing steel extrusion.



21. Span 2, E. Ppt @ midspan - 51" L x 9" W x 4" D spall w/ exp corr steel reinf.



22. Span 25 at P25, W. Ppt - Numerous small holes throughout panel.



23. Span 13, E. Ppt fence at P12 - 6" H x 1/16" W vert. crack in post.



24. Span 15, E. Ppt fence at P14 - Horizontal support is disconnected.



25. Sp 7, BM12 at P06, B.F. - Exp corr steel w/ minor rust lam (negl SL).



26. Span 22, BMI at midspan, W. BF - S.L. prev. painted over now active.



27. Sp 25, BM17 at P24, E. face, stiff - 4" H x 3 1/2" W 100% S.L. w/ active corr.



28. Sp 22, Bay 14, 2nd diaph - 1/4" L cr. weld b/t horiz. and conn pl.



29. P08, Span 9, BM15 fix brg w/ mod corrosion on masonry and sole PL's.



30. Typ cond pier fixed brg w/ bleeding rust & mod corr on nuts & keeper angles.



31. P04 Cap, E. face, looking SW - 54" H x 43" L x 4" D spall w/ exp corr steel reinf.



32. P14, u/s of Cap @ BM8- 4'Lx4"W area of peeling paint w/ exp corr steel.



33. P25 Cap ext, T.F., S. edge near BM1 w/ 17" L x 3" W x up to 3/16" S.L. in cov pl.



34. P25 Cap ext, T.F., N. edge @ BM1 w/ 15" L x 2 1/4" W x up to 5/16" S.L. in cov pl.



35. P26 Cap ext, T.F., N. edge @ Bay 11- 2'L x 1'W S.L. up to 3/8" in flg and cov pl.



36. P26 Cap ext - Close up of Photo 35 w/ up to 3/8" S.L. in T.F. and cov. pl.



37. P12 Cap int, B.F. at SE - 12"L x 9"W area of 1/4" S.L. & 75% S.L. to rivet.



38. P22 Cap int, B.F., Bay 8 w/ 4' L x 3' W area of 1/16" S.L. to BF and angles.



39. P22 Cap int - Close up of Photo 37 S.L. at N. end/bot flange angles.



40. P22 Cap int, Bay 10 - FL x FW ponding water up to 3 1/2" D.



41. P25 Cap int, W. end of cap - Tie rod w/ evid of water & exp corr steel.



42. P05, Col 6, top NW corner - 22" H x 22" W x 2" D spall w/ exp corr steel.

**UNDER RECORD****For  
Bridge: 1748 059****IDENTIFICATION**

Bridge ID: 1748 059	(2) District: 01	(3) County: 3
Inventory Route:		
(A) On/Under: A	(B) Highway Type: 3	(C) Service Lvl: 1
(D) Route No: 00048		11) Mile Pt: 9.18 mi
6A) Features Intersected: MARYLAND AVE. & AMTRAK		6B) Critical:
16) Latitude: 39^44'0.78"	17) Longitude: 75^33'55.65"	

**AGE AND SERVICE**

19) Detour Length: 1 mi	27) Year Built: 1964	
28) No. of Lanes:	A) On Bridge: 2	B) Under Bridge: 6
29) ADT: 14167	30) Year of ADT: 2011	109) % Truck ADT: 6

**CLASSIFICATION**

20) Toll Facility: 3		
26) Functional Class: 14	37) Historical: 5	100) Defense Highway: 0
102) Direction: 2	103) Temp. Str.:	104) NHS: 0
110) Nat. Truck Network: 0		

**GEOMETRIC DATA**

10) Clearances - Vertical:: 21.5 ft		
42) Type of Service:	A) On Bridge: 1	B) Under Bridge: 4
43A) MAIN SPAN MATERIAL: 3		43B) DESIGN TYPE: 02
47) Inv. Route - Horiz. Clearance: 21.0 ft		
48) Length Maximum Span: 146.0 ft	49) Structure Length: 2,936.0 ft	

**UNDER RECORD SKETCH**

**UNDER RECORD**

**For  
Bridge: 1748 059**

**IDENTIFICATION**

Bridge ID: 1748 059 (2) District: 01 (3) County: 3  
Inventory Route: (A) On/Under: B (B) Highway Type: 5 (C) Service Lvl: 1  
(D) Route No: 00000 11) Mile Pt: 0.46 mi  
6A) Features Intersected: MARYLAND AVE. & AMTRAK 6B) Critical:  
16) Latitude: 39^44'0.78" 17) Longitude: 75^33'55.65"

**AGE AND SERVICE**

19) Detour Length: 1 mi 27) Year Built: 1964  
28) No. of Lanes: A) On Bridge: 2 B) Under Bridge: 6  
29) ADT: 99 30) Year of ADT: 2011 109) % Truck ADT: 3

**CLASSIFICATION**

20) Toll Facility: 3 37) Historical: 5 100) Defense Highway: 0  
26) Functional Class: 19 103) Temp. Str.: 104) NHS: 0  
102) Direction: 2  
110) Nat. Truck Network: 0

**GEOMETRIC DATA**

10) Clearances - Vertical:: 40.2 ft  
42) Type of Service: A) On Bridge: 1 B) Under Bridge: 4  
43A) MAIN SPAN MATERIAL: 3 43B) DESIGN TYPE: 02  
47) Inv. Route - Horiz.  
Clearance: 36.0 ft  
48) Length Maximum Span: 146.0 ft 49) Structure Length: 2,936.0 ft

**UNDER RECORD SKETCH**

**UNDER RECORD****For  
Bridge: 1748 059****IDENTIFICATION**

Bridge ID: 1748 059	(2) District: 01	(3) County: 3
Inventory Route:		
(A) On/Under: C	(B) Highway Type: 5	(C) Service Lvl: 0
(D) Route No: 00000		11) Mile Pt: 0.00 mi
6A) Features Intersected: MARYLAND AVE. & AMTRAK		6B) Critical:
16) Latitude: 39^44'0.78"	17) Longitude: 75^33'55.65"	

**AGE AND SERVICE**

19) Detour Length: 199 mi	27) Year Built: 1964	
28) No. of Lanes:	A) On Bridge: 2	B) Under Bridge: 6
29) ADT: 50	30) Year of ADT: 2011	109) % Truck ADT: 3

**CLASSIFICATION**

20) Toll Facility: 3		
26) Functional Class: 19	37) Historical: 5	100) Defense Highway: 0
102) Direction: 2	103) Temp. Str.:	104) NHS: 0
110) Nat. Truck Network: 0		

**GEOMETRIC DATA**

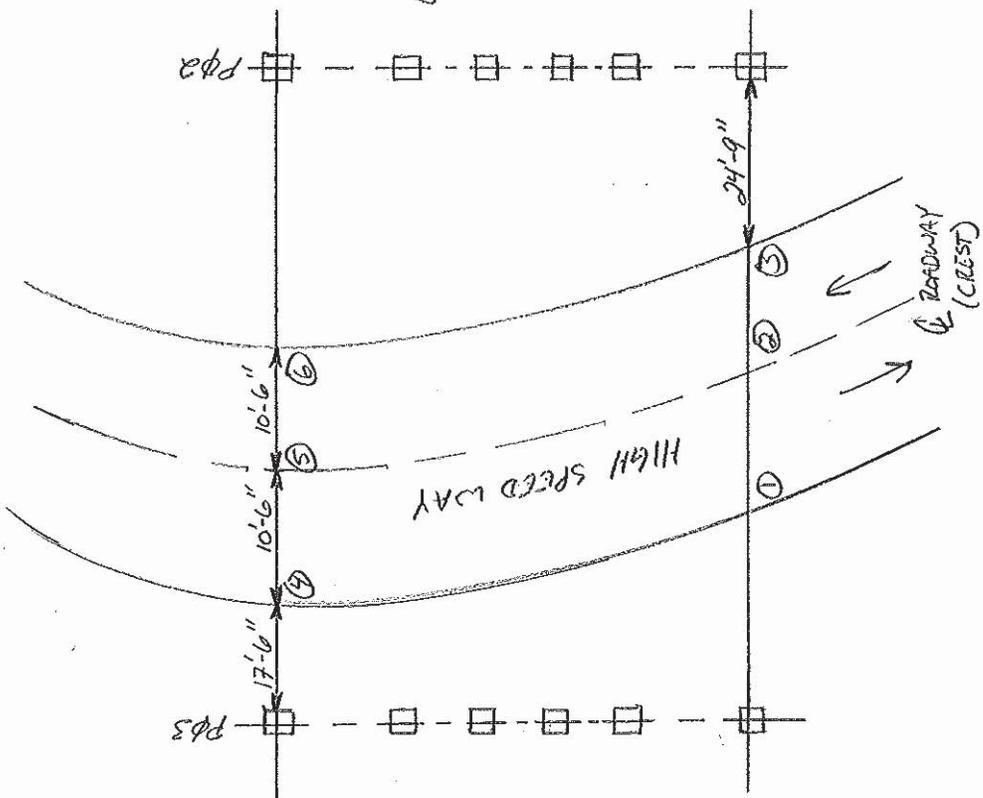
10) Clearances - Vertical:: 18.0 ft		
42) Type of Service:	A) On Bridge: 1	B) Under Bridge: 4
43A) MAIN SPAN MATERIAL: 3		43B) DESIGN TYPE: 02
47) Inv. Route - Horiz. Clearance: 20.0 ft		
48) Length Maximum Span: 146.0 ft	49) Structure Length: 2,936.0 ft	

**UNDER RECORD SKETCH**

# Under Record Sketch Sheet

Bridge: 1 - 74/8 - DS9  
 Inspected By: SON ICUMMI  
 Date: 4 / 11 / 2013

I-95 OVER HIGH SPEED WAY (SPAN 3)



LAT CUR

LT = 0.0' (FOR 2 WAY ROAD)

RT = 17.5'

VERTICAL CLEARANCES:

- ① 22'-3 1/8"
- ② 21'-9 5/8"
- ③ 21'-6 1/8" ← MIN CLR
- ④ 26'-9 5/8"
- ⑤ 26'-6 3/8"
- ⑥ 26'-7 5/8"

# Under Record Sketch Sheet

Bridge: 1 - 748 - 059  
 Inspected By: cwm, son, I  
 Date: 4, 11, 2013

I-95 OVER CONNECTIN ST.

VERTICAL CLEARANCES:

- ① 33'-1"
- ② 30'-6"
- ③ 30'-3" ← MIN CLR
- ④ 34'-0"
- ⑤ 33'-5"
- ⑥ 33'-6"
- ⑦ 35'-8"
- ⑧ 35'-4"
- ⑨ 35'-6"
- ⑩ 36'-5"
- ⑪ 36'-2"
- ⑫ 36'-5"
- ⑬ 37'-1"
- ⑭ 36'-10"
- ⑮ 37'-0"
- ⑯ 37'-2"
- ⑰ 37'-10"
- ⑱ 38'-1"

