

Appendix F

2007 Bridge Inspection Report

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
BRIDGE INSPECTION AND REMEDIAL ENGINEERING DIVISION
STRUCTURAL / MECHANICAL / ELECTRICAL
2007 BRIDGE INSPECTION REPORT



BRIDGE NO. 2300700
MD ROUTE 50 OVER SINEPUXENT BAY
WORCESTER COUNTY, MARYLAND

Prepared by

MODJESKI AND MASTERS, INC
CONSULTING ENGINEERS
HARRISBURG, PENNSYLVANIA

BRIDGE NO. 2300700
MD ROUTE 50 OVER SINEPUXENT BAY
WORCESTER COUNTY, MARYLAND

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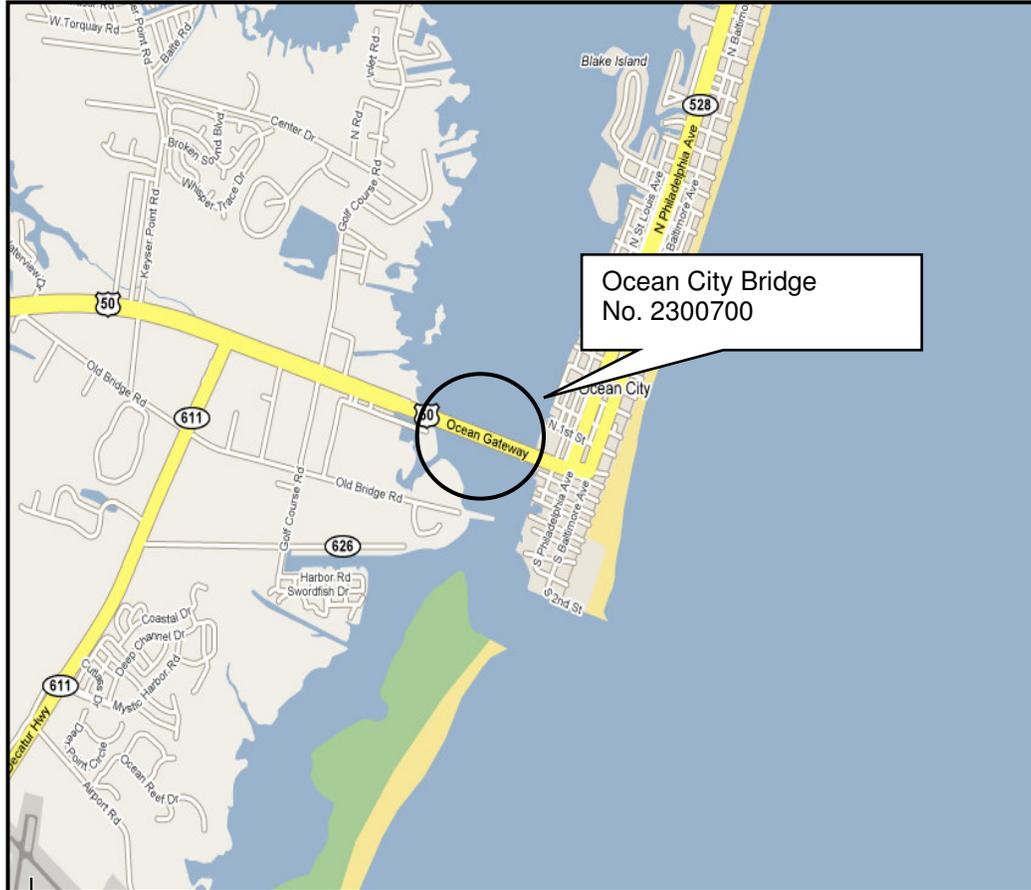
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BRIDGE LOCATION MAP



NO SCALE

BRIDGE NO. 2300700 MD ROUTE 50 OVER SINEPUXENT BAY

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WORCESTER COUNTY, MARYLAND

STRUCTURE DATA

Year Built: 1940

Years Rehabilitated: 1974, 1978, 1984, 1985, 1992, 1997, 2003

Total Number of Spans: 24 span units

Movable Span Structure Type: Double Leaf, Rolling Lift Bascule

Approach Span Structure Type: Reinforced Concrete Slab Spans

Navigational Channel Clearance: Horizontal: 70'-0" +/- (MHW)
Vertical (Span Closed): 13'-5" +/- (MHW)
Vertical (Span Open): Unlimited

Span Length (Bascule Span): 94'-0" (Center to Center of Roll with Bridge Closed)

Overall Structure Length: 2,295'-6" (Between centerline of bearings at abutments)

Clear Roadway Width: 46'-0"

Average Daily Traffic: 24,225 Vehicles (2002)

Posting: None

Bridge Openings Per Year: 12/day Summer (peak); 5/month Winter (off-peak)

Orientation: Span Units numbered east (1) to west (24)
Spans numbered east (1) to west (93)
Bents numbered east to west
Bent Piles are numbered from north to south
Lanes numbered north to south
Refer to Figures 3 and 4 for floorbeam, stringer, and span numbering conventions

Operator's House Telephone: 410-289-7126

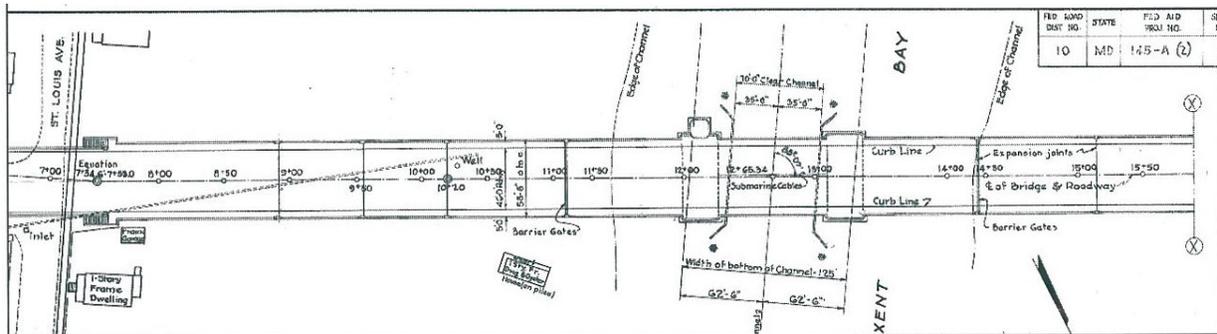


Figure 1 – General Plan

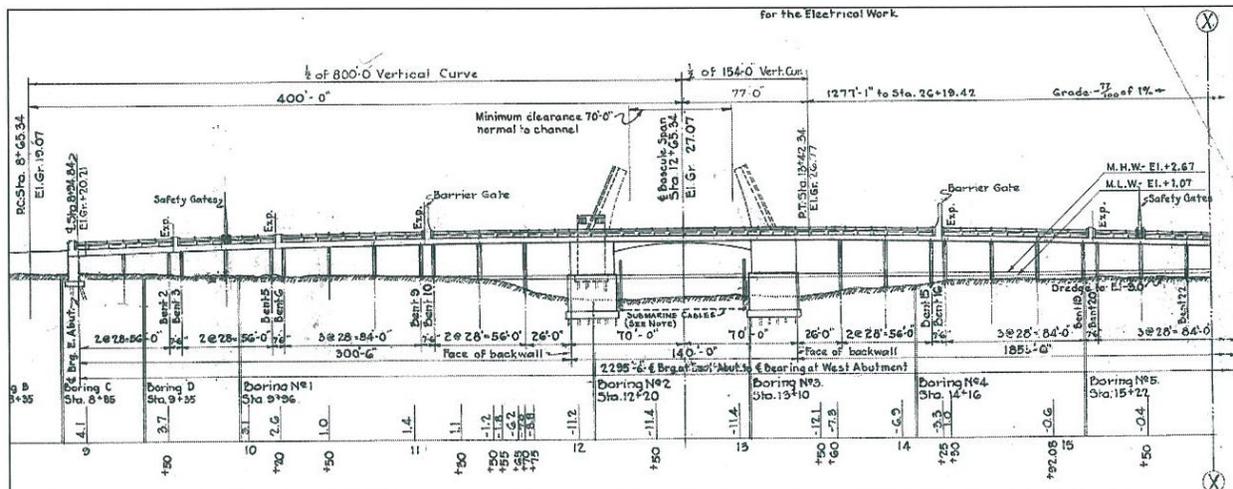
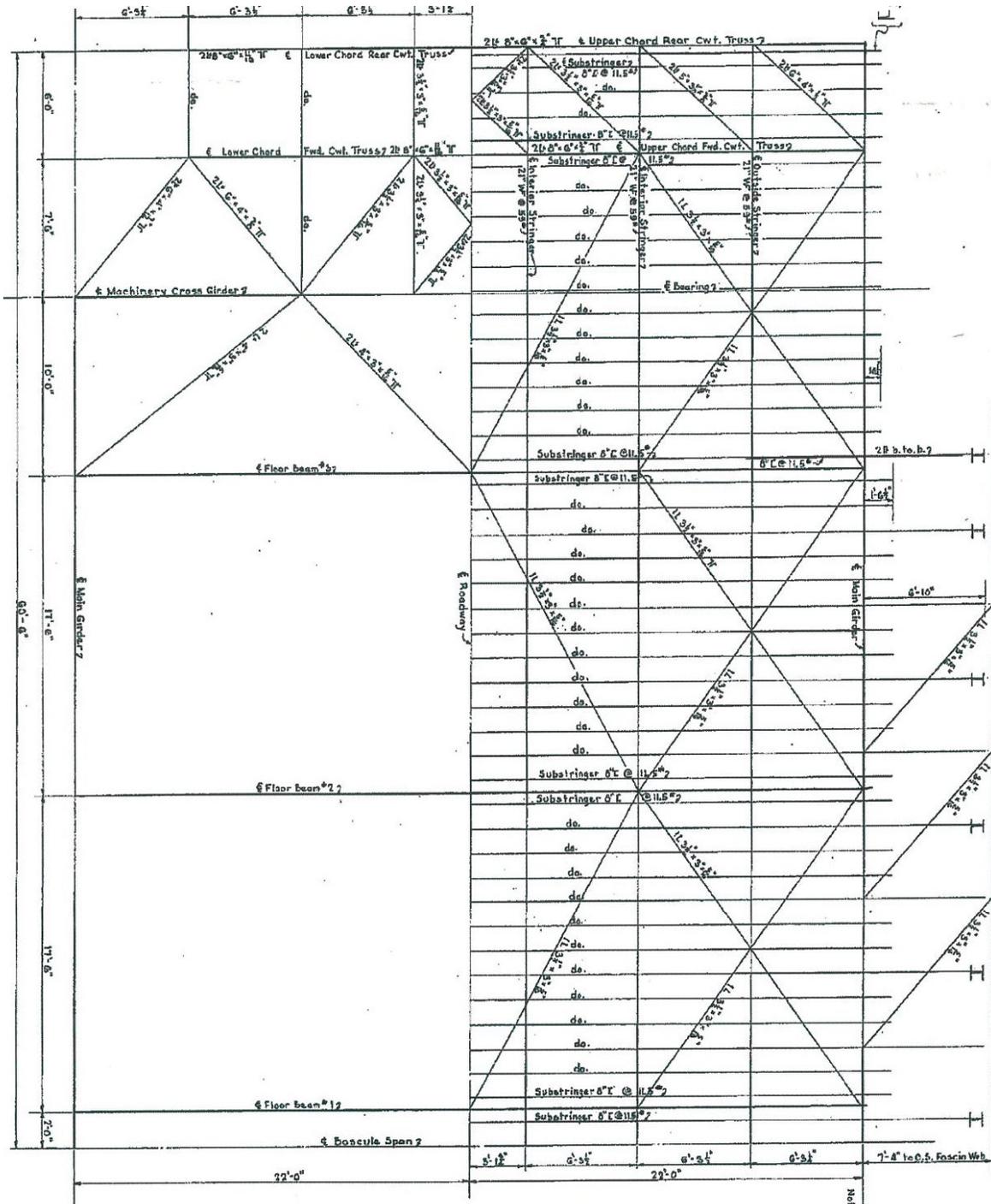


Figure 2 – General Elevation



HALF PLAN - BOTTOM
Symmetrical about & Roadway

Scale: 1/2" = 1'-0"

HALF PLAN - TOP
Symmetrical about & Roadway

Note:
Framing of sub-
structure and other
Roadway Details
shown. For Details
see Sheets-12016

Figure 3 – Bascule Framing Plan

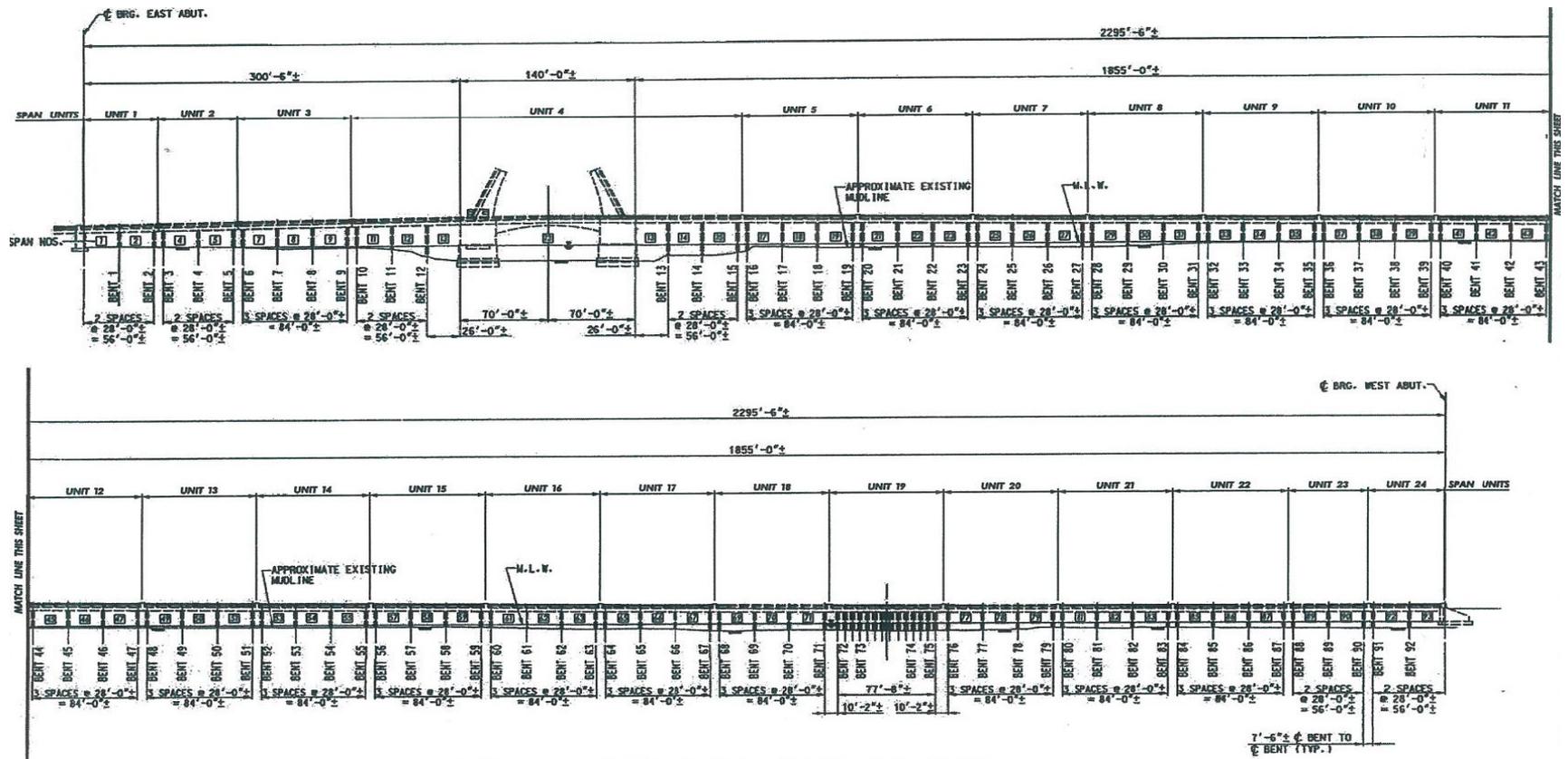


Figure 4 – Numbering Plan

EXECUTIVE SUMMARY

General Description

The Maryland Department of Transportation Bridge No. 2300700 consists of a 24-span unit structure which carries MD Route 50 over the Sinepuxent Bay, located in Ocean City, Maryland. Each span unit consists of three or more continuous slab units that were poured integrally with the pier caps, as well as adjacent armored expansion joints which are supported by an additional pier. The overall length of the structure is 2,295'-6" with an out-to-out width of 58'-8". The structure width is made up of a 46'-0" roadway and a 5'-0" sidewalk on both the north and south sides. This bridge also has a bascule span near the east approach.

The bascule span consists of a double-leaf, rolling lift and is made of two bascule girders, G1 (north) and G2 (south). These girders are framed by three transverse floorbeams (numbered from toe to heel), six longitudinal stringers (numbered from north to south) and 46 substringers (numbered from toe to heel) per leaf. The roadway deck consists of 5-3/16" deep open steel grating and is welded to the top flange of the transverse substringers. The bascule piers are constructed of reinforced concrete and house the counterweights, trunnion girders, machinery, superstructures and on the south side of the east bascule pier, the operator's house. The bascule piers are protected by a timber fender system in the navigational channel area.

Each movable leaf is powered by two 10 horsepower electric motors. The drive motors are coupled to a differential reducer. Torque is transmitted through the reducer to two output shafts. Each output shaft is coupled to a shaft which transmits torque through one open gear set to the final main pinions. These final main pinions engage racks fixed on the pier. Each bascule girder has a curved tread plate, with the center of the curvature at the pinion centerline. These curved treads "mate" with a flat track fixed to the pier. As the pinion travels the length of the rack, the bridge rolls open on the curved treads. Each leaf also has two motor brakes and two emergency brakes. The motor brakes are mounted on the rear extension shaft of each motor. The emergency brakes are mounted to the input shafts of the primary differential reducer.

Each leaf has an auxiliary manual drive system. A split sprocket is mounted on both input shafts of the primary differential reducer. Parallel to the input shaft are two auxiliary drive shafts, each supported by two bearings and also having a sprocket. All ends of the auxiliary drive shafts are square, for mounting a manual hand crank. For auxiliary operation, four chains are required between the four pairs of sprockets. Turning the auxiliary shafts via the hand cranks then turns the dual input shafts for the differential reducer, opening or closing the bridge.

Live load from the bridge is reacted by the live load shoes, located at the rear of each counterweight, and carried by the curved tread and track. A passive shear lock is located at each bascule girder and end floorbeam connection between the east and west leaves.

There are four automatic traffic/pedestrian gates, two at each approach to the bascule span. When closed, these gates are vertically flush with the parapets.

The vertical under clearance between mean sea level and the bottom of the bascule span

superstructure at the toe is approximately 13'-5" with the bascule span closed, and is unlimited while the span is open. When the bascule is in the open position, a 70'-0" horizontal clearance is available.

The structural (superstructure, deck and above-water portions of the piers and fender system), and the mechanical inspections of Bridge No. 23007 were performed by personnel from Modjeski and Masters, Inc. during the period of December 11, 2007 through January 22, 2008.

The inspection was performed in accordance with the Federal Highway Administration's Bridge Inspector's Manual for Movable Bridges and AASHTO's Movable Bridge Inspection, Evaluation, and Maintenance Manual. Access to the superstructure and approach pier substructures was gained with the use of a motorized pontoon boat with scaffolding and a 35'-0" reach snooper truck. Access to the bascule pier interior was gained through the hatchways and ladder system.

Condition Summary

The overall condition of the structure is fair. The condition and deficiencies of the various bridge elements are described in the Inspection Summary. Specific photographs are in Appendices A, B, and C for structural, mechanical, and electrical components respectively. The channel soundings are in Appendix D, the Lubrication Analyses are in Appendix E, and the Structure Inventory & Appraisal Forms and PONTIS Sheets in Appendix F.

The bridge is overall in fair condition. No significant changes have been noted in the condition since the last inspection. Spalls and cracks are found in the pier caps at many locations. The interior walls of the bascule piers exhibit minor to moderate cracking with significant efflorescence. The purlins, stringers, floorbeams and girders in the movable span are in fair to poor condition and exhibit minor to moderate surface corrosion, failed paint, and severe section loss and cracks at various locations. The grid deck in the bascule span contains several severely corroded tertiary bars. Minor corrosion of the grid deck and the welded connections to the stringers are noted. There are cracked top welds between grid bars within the bascule span, and cracked grid deck to stringer welds. Advanced section loss was noted in the steel members of the bascule span. The concrete deck in the approach spans exhibit numerous cracks and spalls. Large spalls are present throughout the soffit of the concrete approach spans. The sidewalks are in fair to poor condition. There are large shallow spalls and areas of significant scaling throughout both the north and south sidewalks. The chain link fence between the roadway and sidewalks has numerous rails and posts that are severely deteriorated or disconnected.

The general condition of the mechanical system is fair. All work scheduled to be performed during the January and February 2008 outage is noted in the Mechanical Recommendations section as "Currently Contracted". There are several important items that should be addressed:

- All tracks and treads exhibit significant corrosion toward the channel.
- The auxiliary span drive is not currently operable.
- Several tail lock assemblies are maladjusted.
- The northeast tail lock reducer oil level is very low.

- A majority of the motor brake pull rods exhibited severe pitting from corrosion.
- The northwest emergency brake shoe linings exhibit significant wear.
- All grid couplings require internal inspection and rehabilitation or replacement.
- The northeast B3 bearing exhibits excessive wear.
- Lubrication for all open gears was inadequate.
- All open gear sets G2/G3 exhibit excessive backlash and excessive wear.

In general the electrical equipment and its installation are in fair condition. Several code violations were noted and some recommendations for improvements are suggested.

- The electrical motors need local disconnects. These are used by inspection and maintenance staff for their safety. Gaskets should be provided under the main drive motor inspection covers. The control desk does not have an emergency stop red mushroom push button which is required by AASHTO. The two non-functional push-buttons which are covered by masking tape should be removed and the space suitably covered.
- The southwest warning gate door limit switch needs repair and its gate limit switch is missing a contact.
- The navigational lights can be improved by replacing their deteriorating raceways, broken lens, latch and non-functional lamps.
- The insulation resistances of the west brake motor no. 2, west emergency brake no. 1, southwest and northwest lock motors and their feeders need to be further evaluated.
- The tail locks should be provided with manual operation limit switches. This will eliminate the danger of energizing the tail lock motors during manual operation and causing possible injury to personnel. Unused raceways, boxes and cables should be removed. This will add to overall aesthetics, access, and reduce confusion.

RECOMMENDATIONS

Structural

| Immediate Repairs (< 2 years) | | | | |
|---|------|----------|------|---------------------|
| Description | Unit | Quantity | Unit | Estimated |
| Clean and paint exposed reinforcing steel and repair areas of spalled and unsound concrete in the deck soffit | SF | 5500 | 50 | 275,000 |
| Clean and paint exposed reinforcing steel and repair areas of spalled and unsound concrete in the piers and pier caps | SF | 500 | 50 | 25,000 |
| Seal the cracks in the wearing surface of the east and west approach spans | LF | 500 | 3 | 1,500 |
| Seal the cracks in the abutments, piers, and pier caps | LF | 750 | 50 | 37,500 |
| Total | | | | \$339,000.00 |

| Short Term Repairs (3 to 5 years) | | | | |
|---|------|----------|----------------|---------------------|
| Description | Unit | Quantity | Unit Cost (\$) | Estimated Cost (\$) |
| Replace steel open grid deck | SF | 3465 | 120 | 415,800 |
| Replace steel open grid sidewalk | SF | 860 | 25 | 21,500 |
| Replace bascule steel superstructure frame (bascule girders remain) | LS | 1 | 500,000 | 500,000 |
| Replace machinery platform | SF | 750 | 25 | 18,750 |
| Replace machinery platform railing | LF | 100 | 35 | 3,500 |
| Repair timber fender and piles | LS | 1 | 10,000 | 10,000 |
| Total | | | | \$969,550.00 |

| Long Term Repairs (5 to 10 years) | | | | |
|---|------|----------|----------------|-----------------------|
| Description | Unit | Quantity | Unit Cost (\$) | Estimated Cost (\$) |
| Replace Pile jackets | EA | 325 | 1,050 | 341,250 |
| Replace concrete wearing surface and sidewalk | SF | 105800 | 50 | 5,290,000 |
| Paint bascule superstructure | EA | 1 | 100,000 | 100,000 |
| Total | | | | \$5,731,250.00 |

Structural Total = \$7,039,800.00

Mechanical

| Immediate Repairs (<2 years) | | | | |
|---|----------------------|----------|----------------------|---------------------|
| Description | Unit | Quantity | Unit Cost (\$) | Estimated Cost (\$) |
| Install west leaf span drive motor lube port plugs. | LS | - | Maintenance | |
| Replace northwest and southwest G2/G3 open gear sets. | LS | - | Currently Contracted | |
| Replace northeast and southeast G2/G3 open gear sets. | LS | - | 100,000 | 100,000 |
| Clean and lubricate all open gearing. | LS | - | Maintenance | |
| Replace the inboard fibrous rack protection on the west leaf. | LS | - | Maintenance | |
| Adjust the northeast B3 bearing via liners. | LS | - | 2,000 | 2,000 |
| Replace temporary mounting bolt at northwest bearing B3. | LS | - | Maintenance | |
| All west leaf B4 bearings are scheduled to be replaced and the west leaf B3 bearings shall be adjusted using their liners during the January – February, 2008 outage. | Currently Contracted | | | |
| Replace the southwest bearing B2 mounting and cap bolts. | LS | - | 2,000 | 2,000 |
| Replace the B1 bearing lubrication line couplers. | LS | - | Maintenance | |
| Replace the southeast motor coupling and key. | LS | - | 11,000 | 11,000 |
| Replace the east leaf C1 and C4 couplings.(The west leaf C1 and C4 couplings are scheduled to be replaced during the January – February, 2008 outage) | EA | 2 | 10,000 | 20,000 |
| Replace all C2, C3, and motor coupling grid elements (excluding new southeast motor coupling), hub seals, missing bolts and lubrication port fittings. | EA | 8 | 1,000 | 8,000 |
| Tighten all thrust collars. | EA | 8 | Maintenance | |
| Monitor the northwest emergency brake shoe linings. | LS | - | Maintenance | |
| Replace all frame and motor mounting bolts at the tail lock assemblies. | LS | - | 6,000 | 6,000 |

| Immediate Repairs (<2 years) | | | | |
|--|------|----------|----------------|---------------------|
| Description | Unit | Quantity | Unit Cost (\$) | Estimated Cost (\$) |
| Adjust the northwest tail lock linkage, rotary cam drive chain, and span-mounted tail lock shoe. | LS | - | 6,000 | 6,000 |
| Adjust the southeast tail lock brake. | LS | - | 3,000 | 3,000 |
| Fill the northeast tail lock reducer with oil and monitor for leakage. | LS | - | Maintenance | |
| Adjust the northeast tail lock linkage. | LS | - | 2,000 | 2,000 |
| Reinstate manual auxiliary span drive. | EA | 2 | 10,000 | 20,000 |
| Replace the missing northwest air buffer mounting bolt. | LS | - | Maintenance | |
| Adjust the live load bearings for firm contact in the span seated position | LS | - | 6,000 | 6,000 |
| Total | | | \$186,000.00 | |

| Short Term Repairs (3 to 5 years) | | | | |
|---|------|----------|----------------|---------------------|
| Description | Unit | Quantity | Unit Cost (\$) | Estimated Cost (\$) |
| Clean and paint all machinery (including tracks, treads, and related stiffeners and fasteners). Provide in-depth inspection and evaluation of tracks, treads, drive machinery (including Rack-G1 engagement throughout entire travel) | LS | - | 100,000 | 100,000 |
| Replace the west leaf span drive motor shims. | LS | - | 3,000 | 3,000 |
| Replace the primary reducer shaft seals. | EA | 2 | 5,000 | 10,000 |
| Update all warning gate housing door latches and locks. Tighten all warning gate cross shaft flange bearing mounting bolts. Fill the northeast warning gate reducer and monitor. Clean and coat all guy wire fasteners with galvanized paint. | LS | - | Maintenance | |
| Total | | | \$113,000.00 | |

| Long Term Repairs (5 to 10 years) | | | | |
|---|------|----------|----------------|---------------------|
| Description | Unit | Quantity | Unit Cost (\$) | Estimated Cost (\$) |
| Replace the motor couplings. | EA | 2 | 5,000 | 10,000 |
| Replace the primary reducers. | EA | 2 | 300,000 | 600,000 |
| Replace the primary reducer output shaft couplings. | EA | 4 | 5,000 | 10,000 |
| Replace span drive motor brakes and emergency brakes in tandem with motor replacement (see Electrical). | EA | 8 | 10,000 | 80,000 |
| Replace the manual auxiliary drive with electric gearmotor drive. | EA | 2 | 80,000 | 160,000 |
| Replace tread and track fasteners which exhibit severe corrosion. | LS | - | 50,000 | 50,000 |
| Total | | | \$910,000.00 | |

Mechanical Total = \$1,209,000.00

Electrical

| Immediate Repairs (< 2 years) | | | | |
|---|------|-----|-----------|----------------|
| Description | Unit | Qty | Unit Cost | Estimated Cost |
| Provide emergency stop push button on console. | Each | 1 | 1,000 | 1,000 |
| Remove unused push buttons and close opening on console | Each | 2 | 600 | 1,200 |
| Provide gaskets under inspection covers of main drive motors | EA | 4 | 300 | 1,200 |
| Repair S-W warning gate door limit switch and provide contact on its gate limit switch. | EA | 1 | 1,000 | 1,000 |
| Lubricate N-E & N-W warning gates door limit switches | EA | 2 | 100 | 200 |
| Improve navigational lighting raceways, lens, latching and lamps. | LS | LS | 5,000 | 5,000 |
| Total | | | | \$9,600.00 |

| Short Term Repairs (3 to 5 years) | | | | |
|---|------|-----|-----------|----------------|
| Description | Unit | Qty | Unit Cost | Estimated Cost |
| Install disconnects for main drive motor | EA | 4 | 3,000 | 12,000 |
| Provide brake disconnects | EA | 8 | 1,200 | 9,600 |
| Evaluate insulation resistance of west brake motor no. 2 and west emergency brake no. 1 | EA | 2 | 400 | 800 |
| Provide separate disconnects for brakes at lock motors | EA | 4 | 1,200 | 4,800 |
| Evaluate insulation resistances of S-W and N-W lock motors and their feeders | EA | 2 | 500 | 1,000 |
| Install manual operation limit switches on tail locks | EA | 4 | 2,000 | 8,000 |
| Install warning signals on west side of roadways for traffic | EA | 1 | 6,000 | 6,000 |
| Install separate set and release limit switches on emergency brakes | EA | 4 | 5,000 | 20,000 |
| Remove abandoned MC Cables, raceways and boxes | LS | - | 5,000 | 5,000 |
| Replace wooden backboards from movable terminal box | EA | 1 | 1,000 | 1,000 |
| Total | | | | \$68,000.00 |

| Long Term Repairs (5 to 10 years) | | | | |
|-----------------------------------|------|-----|-----------|----------------|
| Description | Unit | Qty | Unit Cost | Estimated Cost |
| Replace span motors | EA | 4 | 6,000 | 24,000 |
| Replace lock motors and brakes | EA | 4 | 10,000 | 40,000 |
| Total | | | | \$64,000.00 |

Electrical Total = \$141,600.00

Structural Total = \$7,039,800.00
 Mechanical Total = \$1,209,000.00
 Electrical Total = \$141,600.00

Grand Total = \$8,390,400.00

INSPECTION SUMMARY

Structural

The structural inspection was performed by Messrs. B. C. Croop, E.I.T. (Team Leader), and W. R. Bolt, on December 11, 2007 and concluded on January 22, 2008.

This inspection included a visual and hands-on examination of all structural components above the waterline. A 35' snoop truck and a pontoon boat with scaffolding were used for inspection of the substructure above the waterline. A boat was also used to perform waterway soundings. The soundings were taken under the bridge as well as at 10', 20', and 30' intervals north and south of the structure. Access to the interior of the bascule piers was gained through the sidewalk hatches, ladders and platforms which lead to the base of the bascule piers. The roadway, deck and approaches were inspected by walking. Overall, the bridge components consisting of the superstructure, substructure, deck, fenders and dolphins are in fair condition. Refer to Appendix A for all structural inspection photographs.

Superstructure

Deck / Roadway

The roadway is in fair condition. There are several concrete patches in each span unit as well as small to moderate cracks and spalls throughout. Most of the expansion joints do not have joint filler material, but are generally free from obstruction.

Span Unit 1 (Spans 1, 2 and 3): There are 1/16" wide transverse cracks in the asphalt roadway just east of the east expansion joint. There hairline cracks are typical throughout the span unit. There are nine concrete patches in the span unit totaling 13 SF.

Span Unit 2 (Spans 3, 4, 5 and 6): There are two, 1 SF repaired areas along the joint. Numerous transverse cracks and map cracking areas were noted throughout the north half of the span unit (see Photograph S5). There are twenty-five concrete patches within the unit totaling 33 SF.

Span Unit 3 (Spans 6, 7, 8, 9 and 10): There is minor spalling along the west joint. There are three failed patches over construction cuts in the deck 12" east of the west joint up to 6"x 4"x 1/2" deep with exposed bolt holes. There is a 12'-0" x 4'-0" area of map cracking located 30'-0" west of the east joint in Lane 4. There are thirty-three concrete repair patches in the span unit totaling 75 SF (see Photograph S6).

Span Unit 4 (Bascule Span) (Spans 10, 11, 12, 13, 14, 15 and 16): The open grid deck appears to be in fair condition. There are several areas of chipped paint and some section loss noted near the south edge. The concrete filled grid deck appears to be in good condition. There are indications that all four corners of the bascule span fixed portion of the sidewalk had come into contact with the concrete filled grid

deck (see Photograph S7). There is a 1'-6" x full width repair adjacent to the east span unit joint that is in good condition with minor spalls along the west edge. Approximately, 35'-0" west of the east span unit joint, in Lane 4, there is a 6" diameter x 3/4" deep spall. The heel joints at the east and west ends of the Bascule Span are corroded with 5% section loss at the north end of the east heel joint and the south end of the west heel joint. The vertical face of the south curb is spalled adjacent to the east heel joint. There is a 3" x 4'-0" x 5" deep spall on the vertical face of the south sidewalk above the filled grid deck 112'-0" west of the east span unit joint. There is a 4" x 1'-4" x 7" deep spall in the vertical face of the north curb 6'-0" east of the west heel joint and a 4" x 5" x 6" deep spall in the vertical face of the north curb at the east heel joint. The north and south edge of the open grid deck of the west leaf is distorted at the toe of the bascule leafs (see Photograph S8). At the west heel joint, there is a 6" x 3" x 2" spall at the bridge centerline (see Photograph S9). There is a 12" x 12" repair that is cracked in the center of the westbound travel lanes 30'-0" east of the filled grid. There is a 12" x 5'-0" x 1/2" deep spall in the deck soffit located at the north sidewalk 37'-0" east of the filled grid. There are two 5" x 9" x 1/2" deep spalls in Lane 1 15'-0" west of the east span unit joint. Approximately 70'-0" east of the west span unit joint, there is a 12" x 3" x 1/2" spall in the Lane 3. At 62'-0" east of the west span unit joint, there is an 8" x 3" x 1/2" spall in the Lane 3. A 6" diameter x 1/2" deep spall is located 40'-0" east of the west span unit joint. There is a 2'-0" x full deck width repair adjacent to the west span unit joint in good condition. There is a 2'-0" x 2'-6" failed repair in Lane 2. The north end of the joint between the open and filled grid of the east leaf is deteriorated up to 1'-6" wide from the north curb. There are seventy seven concrete patches in the span unit totaling 692 SF.

Span Unit 5 (Spans 16, 17, 18, 19 and 20): Two spalls, 12" x 12" x 1" and 9" diameter x 1" mentioned in the previous inspection report have been repaired. There is a 1/16" wide longitudinal crack 8'-0" long in the center of the westbound travel lanes. There are twenty-nine concrete patches in the span unit totaling 116 SF.

Span Unit 6 (Spans 20, 21, 22, 23 and 24): The two 5" diameter x 1/2" deep spalls located 35'-0" west of the east joint near the south curb mentioned in the previous inspection report have been repaired (see Photograph S10). There are twenty-six concrete patches in the span unit totaling 875 SF.

Span Unit 7 (Spans 24, 25, 26, 27 and 28): Four shallow spalls have been repaired since the last inspection. There is a 6" diameter x 1/2" deep spall 12'-0" west of the east joint in Lane 2. There is a 6" x 7" x 1/2" deep spall in the deck adjacent to a concrete repair in the eastbound travel lane 33'-0" west of the east joint. There are forty-five concrete patches in the span unit totaling 223 SF.

Span Unit 8 (Spans 28, 29, 30, 31 and 32): There is a 6" x 3" x 1/4" deep surface spall in the deck near the west joint. There is a 3" diameter x 3/4" spall 20'-0" east of the west joint in Lane 4 adjacent to a 1 SF unsound area. There is a 3" diameter x 1/2" spall 25'-0" east of the west joint in the north lane. There is a 10" x 6" x 1/2" spall 30'-0" east of the west joint in Lane 3. In Lane 2, 45'-0" east of the west joint there is a 6" diameter x 1/2" spall. There is a 12" x 5'-0" x 1" deep spall at the bottom edge of the north curb 30'-0" east of the west joint and a 9" x 12" x 3/4" deep spall

60'-0" east of the west joint. At the east joint, there is a 6" x 3" x 1/2" spall. There are forty-two concrete patches in the span unit totaling 159 SF.

Span Unit 9 (Spans 32, 33, 34, 35 and 36): The 6" diameter x 1/2" deep spall adjacent to the east joint near the south curb has been repaired since the last inspection. The 12" x 6'-0" x 1/2" deep spall in the deck adjacent to the south curb 60'-0" west of the east joint has been repaired. There is a 2'-0" x 6" x 1" spall adjacent to the south curb adjacent to the west joint. There is a 6" diameter x 1/2" deep spall in Lane 4, 5'-0" east of the west joint. There is an 8" diameter x 1/2" spall 7'-0" east of the west joint in Lane 2. In Lane 2, 25'-0" east of the west joint, there is a 3'-0" x 2'-0" x 1" failed patch. There are two 3" diameter x 1/2" deep spalls in Lane 4, 45'-0" east of the west joint. At 50'-0" east of the west joint, in Lane 3 there is a 3" diameter x 1/2" deep spall. 50'-0" east of the west joint, in Lane 3 there is a 6" x 1" x 1/2" spall. There is a 7" x 8" x 1/2" deep spall in Lane 1, 60'-0" east of the west joint. There is a 12'-0" x 12'-0" area of patches that exhibit hairline transverse cracks in Lane 4, 60'-0" from the east joint. There is a 4" diameter x 1/4" deep spall near the center of the roadway. There are fifty-nine concrete patches in the span unit totaling 520 SF.

Span Unit 10 (Spans 36, 37, 38, 39 and 40): There is a 9" x 9" x 1" deep spall in a repair patch near the center of the eastbound travel lanes 24'-0" east of the west joint. There is a 12" x 1'-8" x 1" deep spall in Lane 1, 30'-0" east of the west joint adjacent to repair patches. There is a 6" x 8" x 1/2" deep spall and a 12" x 1'-2" x 1/4" deep spall in the deck beneath the north curb at 35'-0" and 43'-0" east of the west joint. There is a 4'-0" x 12" area of significant scaling beneath the south curb 45'-0" from the west joint. There is a 12" diameter x 3/4" deep spall and a 7" diameter x 3/4" deep spall in Lane 1, 50'-0" east of the west joint. There is a 4" x 10" x 1/4" deep spall near the center of the roadway 50'-0" east of the west joint in Lane 4. Approximately 64'-0" east of the west joint in Lane 2, there is a 5'-0" x 3'-0" x 1" area of failed patches and spalls (see Photograph S12). There are fifty-four concrete patches in the span unit totaling 871 SF.

Span Unit 11 (Spans 40, 41, 42, 43 and 44): There is up to 1/16" wide diagonal cracking in a 4'-0" x 6'-0" patch near the south curb 30'-0" east of the west joint. There is a 12" x 2'-0" repair patch in Lane 1 that is cracked and deteriorated 40'-0" east of the west joint. There is a 1/16" wide crack across a 2'-0" x 1'-6" repair patch 54'-0" east of the west joint. There is a 6" diameter x 1/2" deep spall in Lane 3, 54'-0", east from the west joint. There are forty-two concrete patches in the span unit totaling 42 SF.

Span Unit 12 (Spans 44, 45, 46, 47 and 48): There is a 4" x 6" x 1/2" deep spall 12'-0" east of the west joint near the center of the eastbound travel lanes. There is a 1" x 6'-0" x 1/4" deep spall in the deck near the center of the westbound travel lanes 12'-0" east of the west joint. There is 8" diameter x 1/2" spall 34'-0" east of the west joint. There is a failed 7" x 12" repair patch 49'-0" east of the west joint near the center of the eastbound travel lanes. There is an 8" diameter x 3/4" spall in the south lane, 54'-0" east of the west joint. There are thirty-eight concrete patches in the span unit totaling 116 SF.

Span Unit 13 (Spans 48, 49, 50, 51 and 52): There is an 8" diameter x 3/4" spall 24'-0" east of the west joint. There is a 10" x 5" x 1/4" deep spall in Lane 2, 40'-0" east of the west joint. There is a 6" diameter x 1/2" spall 79'-0" east of the west joint in Lane 2. There is a 4" x 6" x 1/2" deep spall just west of the east joint in Lane 4. There are fifteen concrete patches in the span unit totaling 41 SF.

Span Unit 14 (Spans 52, 53, 54, 55 and 56): There is a 3'-0" x 3'-0" repair patch in Lane 1, 25'-0" east of the west joint that exhibits map cracking. There is a 5" x 7" x 1/2" deep spall 49'-0" east of the west joint and a 6" x 1'-2" x 1/2" deep spall 34'-0" east from the west joint near the Lane 3. There are thirty concrete patches in the span unit totaling 124 SF.

Span Unit 15 (Spans 56, 57, 58, 59 and 60): There is a 4" x 5" x 1/2" deep spall just west of the east joint that has been repaired since the last inspection. There is a series of 1/8" wide diagonal cracks in Lane 1, 79'-0" west of the east joint. There is a 4" diameter x 1/4" deep spall at the corner of a repair patch in Lane 1, 79'-0" west of the east joint. There is a 4'-0" x 9" x 1/4" deep spall 60'-0" west of the east joint near the center of the eastbound travel lanes. There is a 12" x 6" x 1/2", 54'-0" west of the east joint in Lane 2. There is a 2" x 1'-6" x 1/2" deep spall in the center of the roadway 6'-0" west of the east joint. There are twenty-six concrete patches in the span unit totaling 102 SF.

Span Unit 16 (Spans 60, 61, 62, 63 and 64): There is a 2'-0" diameter failed repair, 80'-0" west of the east joint in Lane 2. There is a 5" x 5'-0" x 4" deep spall near the north curb, 75'-0" east of the west joint. There is a 5" diameter x 1/2" deep spall in Lane 2, 54'-0" west of the east joint. There is a 1" x 6" x 1/2" spall 42'-0" west of the east joint in Lane 2. There are small surface spalls at the corners of the repairs in the deck approximately 40'-0" west of the east joint in Lane 1. There is a 6" diameter x 1/2" spall 22'-0" west of the east joint in Lane 2. There is a 4" x 1'-3" x 1/2" deep spall in Lane 1, 10'-0" west of the east joint. There is a 4" x 4" x 1" failed repair 4'-0" west of the east joint. There are thirty-eight concrete patches in the span unit totaling 107 SF.

Span Unit 17 (Spans 64, 65, 66, 67 and 68): There are small spalls along the west joint at the center of the eastbound travel lanes. There is light scaling along the longitudinal joint in the center of the westbound travel lanes 50'-0" east of the west joint. There is a 6'-0" x 8'-0" area of map cracking in Lane 1, 50'-0" east of the west joint. There is a 6" diameter x 1/4" deep spall and a 5" diameter x 1/4" deep spall in Lane 2, 60'-0" east of the west joint. There is a 2" x 6' x 1/2" spall at the bridge centerline, 60'-0" east of the west joint. There are ten concrete patches in the span unit totaling 28 SF.

Span Unit 18 (Spans 68, 69, 70, 71 and 72): In Lane 3, mid-span, there are numerous 1/8" wide diagonal cracks (see Photograph S13). There are six concrete patches in the span unit totaling 8 SF.

Span Unit 19 (Spans 72, 73, 74, 75 and 76): There are two 1/16" wide longitudinal cracks extending 5'-0" from the west joint in the center of Lane 3. The north end of the west joint angle is moderately deteriorated. There are five transverse cracks up

to 1/8" wide spanning across the entire bridge at 17'-0", 25'-0", 32'-0", 37'-0" and 47'-0" west of the east joint. There is a 6" x 6" x 3/4" spall located 63'-0" west of the east joint in Lane 2. There is an 8" x 7'-0" x 1" deep spall in the deck beneath the south curb 45'-0" west of the east joint. At 40'-0" west of the east joint, in Lane 2, a 6" diameter x 1/2" deep spall is present. There is a 9" diameter x 1/2" deep surface spall in the deck beneath the north curb 6'-0" west of the east joint. There are sixteen concrete patches in the span unit totaling 154 SF.

Span Unit 20 (Spans 76, 77, 78, 79 and 80): There are five hairline to 1/16" wide transverse cracks 30'-0" west of the east joint in Lane 4. There is a 12" x 2'-0" x 1/2" deep spall beneath the north curb 6" east of the west joint. There are six concrete patches in the span unit totaling 8 SF.

Span Unit 21 (Spans 80, 81, 82, 83 and 84): There are eleven concrete patches in the span unit totaling 18 SF.

Span Unit 22 (Spans 84, 85, 86, 87 and 88): There are several areas of light scaling and small surface spalls along the longitudinal joint between the westbound travel lanes. There are diagonal cracks up to 1/4" wide in Lane 1, 70'-0" east of the west joint. There are thirteen concrete patches in the span unit totaling 24 SF.

Span Unit 23 (Spans 88, 89, 90 and 91): The entire surface of Lane 3 has been repaved and is in good condition. There are 1/8" wide diagonal cracks in Lane 1, 17'-0" east of the west joint. The east joint is open only 1/8" with the temperature approximately 65° F. The west joint is open 7/8" at the south curb and 3/16" at the north curb. There are four concrete patches in the span unit totaling 847 SF.

Span Unit 24 (Spans 91, 92 and 93): There is a 1/4" wide transverse crack through a repair patch in Lane 1 with a 6'-0" long 1/8" wide crack extending from the repaired area into Lane 2 (see Photograph S14). There is a large area of map cracking in Lane 2, 30'-0" east of the west joint. There are eight concrete patches in the span unit totaling 90 SF.

Sidewalk / Pedestrian Fence / Parapets

The sidewalks are in fair to poor condition. Typically both the north and south sidewalks exhibit light scaling and shallow surface spalls in most span units. The anchor bolts for the bridge railing typically exhibit moderate corrosion with a few areas of significant corrosion and up to 75% section loss. The southeast crossing gate platform attachment brackets are misaligned (see Photograph S15). At the east approach, north parapet, there is a missing route number sign on the light standard (see Photograph S16). The chain link fence typically exhibits paint chipping, however the posts and rails are only corroded at localized locations. Some of the chain link fence railings exhibit 100% thickness loss in various locations.

Span Unit 1 (Spans 1, 2 and 3): There is an 8" x 12" failed patch at the west joint on the south sidewalk. On the north sidewalk in Span 2 near Pier 1 there is a 3'-0" x 12" x 1" spall. There is no fencing along the south sidewalk in Span Unit 1.

Span Unit 2 (Spans 3, 4, 5 and 6): On the south sidewalk, in Span 6 near Pier 5, there is a 3'-0" x 12" x 2" spall. The south crossing gate access platform attachment brackets are misaligned. There is no fencing along the south sidewalk in Span Unit 2.

Span Unit 3 (Spans 6, 7, 8, 9. and 10): There is a 3'-0" diameter failed patch at the east joint of the north sidewalk. There is an empty sign support that exhibits moderate corrosion 80'-0" west of the east joint on the south sidewalk. There is no fencing along the south sidewalk in Span Unit 3(see Photograph S17).

Span Unit 4 (Bascule Span) (Spans 10, 11 12, 13, 14. 15 and 16): As per the MSHA representative present at the time of the inspection, the existing open steel grating sidewalk is to be replaced as part of a repair contract. The following defects for the bascule span open steel grate sidewalks still exist as follows: The steel grating of the sidewalk is in fair condition. There are localized areas of moderate corrosion and deterioration on both sides of the open grid sidewalk grates (see Photograph S18). The west end of the north open grid sidewalk is displaced downward by up to 1 1/4". The open grid sidewalk exhibits areas of severe corrosion with 100% section loss 85'-0" west of the east joint on the south sidewalk. There is a 6" long area of severe corrosion on the south open grid sidewalk that exhibits 80% section loss. Structural steel supporting members for the sidewalk are in poor to serious condition (see Photographs 19 and 20). Complete failure was noted on the two interior diagonal wind braces between the main girder and fascia beam of the east leaf (south sidewalk). Severe section loss was observed in several of the sidewalk supporting members. Severe corrosion and failures were also noted on multiple welded plate repairs to the cantilevered steel channels supporting the sidewalk. The east leaf of the north bascule sidewalk at mid-span is 1" lower than the west leaf sidewalk (see Photograph S21). The 4" x 12" x 1/2" deep spall along the west joint of the north concrete sidewalk listed in the previous inspection has been repaired. The access hatches in the north sidewalk are covered with bolted steel plates at both the east and west ends of the span unit (see Photograph S22). The east bascule pier north access hatch is moderately corroded and is missing several hinge screws. The west bascule pier, north sidewalk electrical access box is missing two screws. The south concrete sidewalk, both east and west sections are typically spalled. The west portion of the south sidewalk has a large 13'-0" x 3'-0" spalled area (see Photograph S23). At the south concrete sidewalk, east of the tender's house, an empty sign post is attached to the chain link fence post. A post cap is missing on the south sidewalk chain link fence post 12" east of the west joint. The bottom rail of the chain link fence is deteriorated and disconnected at two locations, one at 9'-0" and the other at 25'-0" east of the west joint on the south sidewalk.

Span Unit 5 (Spans 16. 17, 18, 19 and 20): The two bottom rails of the north chain link fence near the east end of the span unit have been replaced. There are surface spalls around the south chain link fence post base plate at 10'-0", 35'-0" and 40'-0" west of the east joint. There is a 3'-0" x 8" x 1/2" deep spall on the top surface of the south sidewalk 35'-0" west of the east joint. There are missing fence post caps 40'-0" west of the east joint and 5'-0" west of the east joint on the south sidewalk (see Photograph S24). On the north sidewalk, 15'-0" west of the east joint, the chain link fence post base plate is bent. Two chain link fence post base plates are bent at 5'-0"

east of the west joint (see Photograph S25). The bottom rail of the chain link fence is deteriorated and disconnected at two locations, one at 27'-0" and the other at 50'-0" east of the west joint on the south sidewalk (see Photograph S26). At the time of the inspection, in Spans 19 and 20, the north sidewalk chain link fence was missing. The south sidewalk spalls throughout this span unit total 23 SF.

Span Unit 6 (Spans 20, 21, 22, 23 and 24): There is a 4" x 4" x 1/2" deep spall in the parapet 5'-0" from the east joint. The north sidewalk chain link fence is missing a post cap near mid-span unit. At the signal pole at the south side of the bridge, the electrical access panel is missing all but two screws. The south sidewalk typical spalls equal an area of 27 SF.

Span Unit 7 (Spans 24, 25, 26, 27 and 28): The bottom rail of the chain link fence is bent near the east end of the north sidewalk. There is a significantly corroded bottom rail on the north sidewalk exhibiting 100% section loss 28'-0" west of the east joint. The typical spalling in this span unit totals 11 SF.

Span Unit 8 (Spans 28, 29, 30, 31 and 32): The top rail of the chain link fence is disconnected near the west end of the north sidewalk. At 50'-0" west of the east joint, on the north sidewalk, the bottom rail of the chain link fence is bent. At 55'-0" west of the east joint of the north sidewalk the middle and bottom rails of the chain link fence have 100% thickness loss. There are two concrete patches with hairline cracks at 30'-0" and 50'-0" west of the east joint of the south sidewalk. The top railing of the south chain link fence, 28'-0" west of the east joint, has 100% thickness loss. At the east joint of the south sidewalk, the bottom rail is disconnected. The typical south sidewalk spalls total 15 SF.

Span Unit 9 (Spans 32, 33, 34, 35 and 36): There is severe corrosion with 100% section loss on the top rail of the north chain link fence near the east end. Top rails of the chain link fence were disconnected at 5'-0" and 35'-0" west of the east joint. At 40'-0" west of the east joint a top rail of the north sidewalk chain link fence is disconnected. There is a concrete patch that exhibits hairline cracks 60'-0" west of the east joint. At 22'-0" east of the west joint, the bottom rail of the south sidewalk chain link fence exhibits 100% section loss. At mid-span of the span unit, the south sidewalk chain link fence top rail is missing and the bottom rail exhibits corrosion holes.

Span Unit 10 (Spans 36, 37, 38, 39 and 40): There is a 1/16" wide full height crack in the parapet wall 40'-0" west of the east joint. One to two cracks are typical between each parapet railing. The typical south sidewalk spalls total 7 SF.

Span Unit 11 (Spans 40, 41, 42, 43 and 44): The span unit exhibits only typical defects. The south sidewalk chain link fence bottom rail 20'-0" west of the east joint has corrosion holes at the east and west ends. The typical south sidewalk spalls total 13 SF.

Span Unit 12 (Spans 44, 45, 46, 47 and 48): The missing top rail near the east end of the north chain link fence has been replaced. The typical south sidewalk spalls total 5 SF.

Span Unit 13 (Spans 48, 49, 50, 51 and 52): The span unit exhibits only typical defects. 3'-0" of the south sidewalk fence is disconnected, 25'-0" west of the east joint. The north top rail chain link fence is missing, 5'-0" west of east joint. At the same location the fence post is bent slightly and the bottom rail is disconnected.

Span Unit 14 (Spans 52, 53, 54, 55 and 56): There is a large shotcrete repair in the east end of the north sidewalk that is in good condition. There is a missing top rail, dislodged middle rail and a bent post near the west end of the north sidewalk. There is a 10'-0" x full width patch with hairline cracks, 30'-0" west of the east joint and a 5'-0" x full width patch with hairline cracks 70'-0" west of the east joint of the south sidewalk. There is a 12" x 6" failed patch 80'-0" west of the east joint of the south sidewalk. On the south sidewalk, 30'-0" west of the east joint, the top rail of the chain link fence is disconnected. The typical south sidewalk spalls total 12 SF.

Span Unit 15 (Spans 56, 57, 58, 59 and 60): There is a 5'-0" full width patch with hairline cracks 2'-0" west of the east joint. There is a large shotcrete repair in the east end of the north sidewalk that is in good condition. There is a missing top rail, dislodged middle rail, and a Bent post near the west end of the north sidewalk. The typical south sidewalk spalls total 140 SF.

Span Unit 16 (Spans 60, 61, 62, 63 and 64): At the east end of the span unit there is 2'-0" diameter x 2" spall in the north sidewalk. The bottom fence rail is bent near the east end of the north sidewalk. The typical south sidewalk shallow spalls total 4 SF.

Span Unit 17 (Spans 64, 65, 66, 67 and 68): There is a bent bottom rail near the middle of the north sidewalk. The cap for the third post east of the west joint on the south sidewalk has 100% section loss. Span Unit 17 exhibits lighter scaling than typical in most other spans. The north sidewalk exhibits a 5'-0" x full width spall with exposed reinforcing steel. The typical south sidewalk shallow spalls total 4 SF.

Span Unit 18 (Spans 68, 69, 70, 71 and 72): 75% of the north sidewalk is patched and in good condition. Span Unit 18 exhibits lighter scaling than typical in most other spans. The third post east of the west joint on the south sidewalk is missing a cap. The typical south sidewalk spalls total 6 SF.

Span Unit 19 (Spans 72, 73, 74, 75 and 76): There is severe corrosion with 100% section loss on the bottom and middle rails near mid-span of the north sidewalk. The north parapet rail is bent near mid-span of the span unit. There are many patched areas most of which are cracked or have failed in the south sidewalk. The bottom south chain link fence rail at 50'-0" and 80'-0" west of the east joint with severe corrosion and 100% section loss have been replaced. The west joint is filled with debris and partially covered with unsound concrete at the south sidewalk. The typical south sidewalk spalls total 19 SF.

Span Unit 20 (Spans 76, 77, 78, 79 and 80): There is a failed patch along the east joint of the north sidewalk. There is a missing middle rail and a disconnected bottom rail near the west end of the north sidewalk. The north bridge railing near mid-span of the span unit is bent (see Photograph S27). The typical south sidewalk shallow

spalls total 8 SF.

Span Unit 21 (Spans 80, 81, 82, 83 and 84): At 24'-0" east of the west joint, the north sidewalk chain link fence bottom rail is disconnected and has 100% section loss. There is a unsound patch on the east end of the north sidewalk. At the east joint, in the north sidewalk there is a full width x 12" x full depth spall (see Photograph S28). The typical south sidewalk shallow spalls total 3 SF.

Span Unit 22 (Spans 84, 85, 86, 87 and 88): The moderately corroded north chain link fence base plate near the east end of the span unit has been replaced. There are a few small patches some of which have hairline cracks in the south sidewalk. The typical south sidewalk shallow spalls total 10 SF.

Span Unit 23 (Spans 88, 89, 90 and 91): There is an unsound patch in the middle of the north sidewalk. There is a bent rail at the west end of the north chain link fence. There is a failed patch near the west end of the north sidewalk. There are a few concrete patches that are in good condition. Span Unit 23 exhibits lighter scaling than typical in most other spans. The typical south sidewalk shallow spalls total 5 SF.

Span Unit 24 (Spans 91, 92 and 93): There is a bent post for the north chain link fence near the west end. One of the patches in the north sidewalk has failed. The top rail of the south chain link fence that was missing 10'-0" west of the east joint has been replaced.

Soffit

The overall condition of the deck soffit is fair. The deck soffit typically exhibits light to moderate efflorescence extending from the construction joints. Also, the deck soffit, sidewalk soffit and edge beams exhibit large areas of spalling and delamination. The sidewalk soffit typically exhibits light to moderate scaling. The deck soffit exhibits large shotcrete repairs throughout. The edge beams are typically discolored. The edges of the deck soffit typically have a fiberglass sheeting drip edge. The locations of these defects and others are as follows:

Span 1: A portion of the southeast soffit section was unable to be inspected due to power generation housing obstructing the access (see Photograph S29). The patches in the north sidewalk soffit have failed. The shotcrete patch along the north end of the deck soffit is in good condition exhibiting a few hairline cracks. There is fiberglass sheeting along the north and south faces of the deck soffit. There is a large shotcrete repair along the south edge of the deck soffit that is in good condition.

Span 2: There are several longitudinal hairline cracks with light efflorescence in the north sidewalk soffit. There is a full length x 2'-0" shotcrete repair along the north edge of the deck soffit that is in good condition with some hairline cracking. There is a 1'-6"x 2'-0" area of delamination along the south edge of the deck soffit. There is a 2'-0" long hairline crack with light efflorescence and delamination along the south edge of the deck soffit.

Span 3: The west expansion joint exhibits water stains near the north end. There are hairline cracks on the north end of both expansion joints; however, only the west joint exhibits efflorescence. There is a 10" x 12" x 6" deep corner spall with exposed reinforcing steel in the north sidewalk soffit. The spall has a 1/4" wide crack extending 8" from the spall.

Span 4: There are a few hairline cracks along a shotcrete repair in the north edge of the deck soffit. There is a 1/16" wide crack along the south edge of the deck soffit with delamination up to 12" to the south edge.

Span 5: There is a 3'-0" long 1/16" wide crack with delamination along the north edge of the deck soffit. There are a few longitudinal hairline cracks with light efflorescence in the north sidewalk soffit. There is a 1'-6" x 2'-0" imminent spall and a 2'-0" x 6'-0" area of delamination at the south end of the deck soffit.

Span 6: The west expansion joint exhibits several hairline cracks with efflorescence at the north end. The north sidewalk soffit exhibits a large spall that is covered with wood boards.

Span 7: The south edge of the deck soffit exhibits a failed patch exposing a 2'-0" x 14'-0" x 4" deep spall as well as an expansion bolt of the conduit hanger. There are three transverse hairline cracks with efflorescence in the south edge beam (see Photograph S30).

Span 8: There is a 12" x 3'-0" area of fine map cracking on the north side of the deck soffit. There are two 4" x 4" x 1" deep spalls in the north sidewalk soffit. There is a 2'-0" x 6'-0" patch near the south edge of the deck soffit that exhibits hairline cracks. There is fiberglass sheeting along the north and south faces of the deck soffit. There is an 18" diameter patch in the south sidewalk soffit. There is a 1/4" deep area of scaling near mid-span.

Span 9: There is a 12" x 2'-0" area of 1" deep scaling surrounded by 12" of delamination near the north edge of the deck soffit. There is a 1'-6" x 4'-0" x 1/2" deep area of scaling at the southeast corner of the deck soffit. There is a 12" x 1'-6" delaminated area at the southwest corner of the deck soffit.

Span 10: There is a 1'-6" x 1'-6" spall at the west expansion joint. There is also a corner spall at the west expansion joint measuring 12" x 1'-6" x 3" deep. 50% of the top of the west expansion joint is spalled up to 6" deep. There are exposed wires and conduit ends protruding from north side of Bent 10. There is a 1'-6" x 1'-6" spall and an adjacent 12" x 12" spall on the north sidewalk soffit. There is a 2'-4" x 1'-9" x 4" deep spall with exposed reinforcing steel on the south corner of the deck soffit.

Span 11: There is a 10" x 1'-4" x 5/8" deep area of scaling near mid-span. There are multiple spalls in the south sidewalk soffit with the two largest both with exposed reinforcing steel and measuring 1'-4" x 6'-0" x 4" deep and 1'-6" x 1'-6" x 2" deep . There is a 5'-0" long 1/16" wide longitudinal crack in the north face of the south edge beam soffit.

Span 12: There is a 1/4" wide crack along the entire length of the north end of the deck soffit with 1'-6" of delamination. There is an 8" diameter x 2" deep spall in the north sidewalk soffit. There is a 1/16" wide transverse crack with light efflorescence in the south end beam soffit. There are several areas of spalling and delamination in the south sidewalk soffit measuring 1'-6" x 2'-6", 7" x 6" x 2" deep with exposed reinforcing steel, and 4" x 9" x 2" deep with exposed reinforcing steel.

Span 13 (Bascule Span):

Fixed Spans: On both the east and west span there is a 1/4" wide crack along half the north end of the deck soffit with delamination up to 2'-0" wide. On the east span there is a 3'-0" x 10'-0" imminent spall along the north end of the deck soffit. There is a 6'-0" long horizontal crack along the south face of the north outside beam of the east span. There is a 2'-0" x 6" x 4" spall on the eastern edge of the west span. Adjacent to the 1/4" crack on the northern edge of the west span, there is an 8'-0" x 2'-0" x 2" spall. There are small 12" x 12" delaminated areas in the north sidewalk soffit. There is a 6" x 12" imminent spall in the deck soffit near the south edge of the east span.

Bascule Span Superstructure: Substringers (Purlins), Steel Stringers, Floorbeams, Fascia Beams, and Girders:

The substringers (C-Channel Purlins) that support the open steel grid deck are in poor to serious condition (see Photograph S31). Severe corrosion and section loss of the flanges and webs was noted throughout the entire bascule span. Complete section loss of the bottom flanges was noted at several stringer connections. Substringer 2 of the west bascule leaf at the south end has a full height web crack (see Photograph S32). Substringer 3 of the east bascule leaf is completely broken between Stringers 2 and 3 at Stringer 2 (see Photograph S33).

The six stringers running parallel to and interior of the Main Bascule Girders are in fair condition (see Photograph S34). There is corrosion on the top and bottom flanges, particularly around the substringer (purlin) and floor beam connections. Knife edging and up to a 1/4" section loss for 6'-0" of the east end of Stringers 1 through 6 bottom flanges was noted. Stringer 4 at Floorbeam 3 of the east leaf has two cracks. The top cope crack of Stringer 4 at Floorbeam 3 of the east leaf measures 3/4" in length (see Photograph S35). The bottom cope crack of Stringer 4 at Floorbeam 3 of the east leaf measures 1 1/2" in length (see Photograph S36).

The floorbeams are in fair to poor condition (see Photograph S37). Severe pitting and minor section losses (1" to 2" diameter holes) were noted in the floorbeam webs of the east and west leaves. The floorbeam bracing connections show signs of severe corrosion and section loss throughout. The hangers below Floorbeam 3 on both leaves have severe pitting and corrosion.

The main bascule girders are generally in fair to poor condition (see Photographs 38 and 39). Dirt and debris accumulation was noted on the girder bottom flanges (see Photograph S40). There was significant corrosion, 1/4" pitting and some section loss

on the bottom flanges and in the webs. In the seated position, at mid-span, the west leaf is approximately 1/2" higher than the east (see Photograph S41).

The lateral bracing in both bascule leaves exhibit pitting, section loss and corrosion holes. Section loss was noted at a maximum of 50%

The toe locks appeared to be functioning properly and were in fair condition (see Photograph S42). The span lock at the toe end of each bascule girder between bascule leaves is a passive assembly. No mechanically operated components are present. This type of shear lock maintains the closed position, holds the transverse alignment of the two bascule leaves within a certain tolerance (approximately +/-1/8" according to original as-built drawings for this bridge) and transfers live load to the bascule leaves, and ultimately to the live load bearings, when engaged. The north span lock portion on the east leaf is missing the southwest bolt. This same location exhibits a crack on the south side under the roadway deck channel support (see Photograph S43). There are indications of previous impact damage to structural framing members around the interlocks both on the north and south sides (see Photograph S44).

In general, it was noted that the connectors (rivet heads and bolt ends) were more severely corroded than the members (see Photographs 45 and 46). It appears that the corroded fasteners are predominately replacements that were improperly coated

Span 14: There is a 1/16" wide crack along the north side of the deck soffit with 6" of delamination. There is a 5" x 6" x 1" deep spall in the bottom face of the north edge beam. There are wood boards blocking the drain holes in the south face of the deck soffit.

Span 15: There is a 3'-0" x 12" area of imminent spalling along the north edge of the deck soffit with an adjacent 1/4" crack with delamination. There is an area of 1/4" deep scaling near mid-span (see Photograph S47). There is a full length x maximum 1'-6" wide area of imminent spalling along the south edge of the deck soffit with a connected 2' x 6' spalled area at the west end.

Span 16: There are exposed electrical wires protruding from the corroded conduit that runs along the bottom face of the north edge beam and terminates within the span on the north edge. On the south edge there is a corroded conduit that runs along the bottom face of the edge beam and terminates within the span. Span 16 exhibits typical defects.

Span 17: There is a 3/8" wide crack running along the entire length of the north edge of the deck soffit with up to 6" high of delamination on the vertical face of the deck slab and 3" wide of delamination on the bottom face of the deck slab (see Photograph S48). Adjacent to the previously listed crack is a 12" x 6" x 3" deep spall. There is a 1'0" x 10'-0" imminent spall in south edge of the deck soffit.

Span 18: There is a 12'-0" long shotcrete repair that exhibits fine map cracking. The north sidewalk soffit exhibits a 2" x 12" failed shotcrete patch. There is fiberglass sheeting along the north and south faces of the deck soffit. There is a full length 1/8"

wide crack with up to 2'-0" of delamination near the south edge of the deck soffit.

Span 19: There is a 3/8" wide crack with adjacent delamination up to 4" wide at the north edge of the deck soffit. There is an 8'-0" long 1/8" wide crack along the north edge of the deck soffit with localized delamination. There is a 12" x 1'-6" imminent spall near the north edge of the deck soffit. There is a 5'-0" long 1/8" wide crack near the south edge of the deck soffit with 5" x 10" of surrounding delamination.

Span 20: At the west end of the north sidewalk soffit, there is a 1'-6" x 1'-6" x 1" spall. The majority of span 20 exhibits typical defects.

Span 21: The north edge of the deck slab is delaminated with a full length 3/8" wide crack 12" from the edge and a 12'-0" x 2'-0" x 8" deep spall with exposed reinforcing steel.

Span 22: There is a 3/8" wide full length crack along the north edge of the deck soffit with up to 12" of delamination on both sides. There is a hairline crack with significant efflorescence in the north sidewalk soffit. There is a full length x 2'-0" wide imminent spall in the deck soffit near the south edge.

Span 23: The north edge of the deck soffit is delaminated for the entire span length. A 4'-0" x 1'-6" x 3" deep spall has exposed reinforcing steel exhibiting up to 20% section loss. There is a 6" x 1'-6" x 1/2" deep spall in the north edge of the deck soffit. There is a hairline crack with significant efflorescence at the connection between the deck soffit and Bent 23 on the south side. There is moderate efflorescence stemming from the connection between the south sidewalk soffit and the overhang soffit. There is a 6'-0" long 1/8" wide crack with a 1" x 4" x 1/2" deep surface spall in the south edge of the overhang soffit. There is a 5'-0" x 2'-0" area of delamination on the south face of the south exterior beam with cracks stemming from the top and bottom of the delamination area.

Span 24: There are random transverse hairline cracks with light efflorescence. There is a 2" x 1'0" x 2" deep spall with exposed reinforcing steel and an adjacent wood form to the east of the spall in the north sidewalk soffit.

Span 25: There is fiberglass sheeting along the north and south faces of the deck soffit. There is a full length shotcrete repair near the north end of the deck soffit that exhibits hairline map cracking. There are small areas of delamination in the north sidewalk soffit. There is a 12" x 6'-0" area of hairline map cracking in the south edge of the deck soffit. There are a few shotcrete repairs that are in good condition in the south edge of the deck soffit and the south sidewalk soffit. There is minor honeycombing in the south sidewalk soffit.

Span 26: There is a 1/4" wide crack along the north edge of the deck soffit spanning approximately 75% of the length of the span with up to 12" of surrounding delamination. At the previously mentioned 1/4" crack, a 1'-6" x 6" x 2" spall has developed. The north sidewalk soffit exhibits a few spalls and imminent spalls measuring 6" x 1'-6" x 2" deep, 4" diameter x 2" deep, 12" diameter, and 1'-4" x 1'-6". There is an 8" x 3'-0" area of delamination in the south side of the deck soffit. There

is minor honeycombing in the south sidewalk soffit.

Span 27: There is a 6" x 4'-0" imminent spall along the north edge of the deck soffit. There is a 3/8" wide crack running approximately 50% of the length of the span near the north end of the deck soffit with localized delamination. There are a few areas of delamination on the north sidewalk soffit up to 8" x 12" in size. There are several small shotcrete patches that are all in good condition. There is minor honeycombing in the south sidewalk soffit. There is typical corrosion staining and efflorescence at the center construction joint.

Span 28: There is hairline map cracking with light efflorescence in the expansion joint. Hairline cracks with light efflorescence are present in the bottom of the expansion joint.

Span 29: There is a spall measuring half the length of the north edge of the deck soffit, 4'-6" wide x 6" deep with exposed reinforcing steel and surrounding delamination. There is a full length x 3'-0" shotcrete repair in the south edge of the deck soffit. There is a spall with delamination measuring 2'-5" x 7'-0" x 3 1/2" deep with one exposed reinforcing bar exhibiting 20% section loss along the south edge of the deck soffit.

Span 30: There is a full length 1/8" wide crack along the north edge of the deck soffit with delamination and adjacent spalling. The spall is 3'-0" x 10'-0" x 6" deep exposed reinforcing steel and delamination the full length of the span. There are small areas of delamination in the north sidewalk soffit. There is a 12" x 12" x 1" deep spall in the south face of the deck soffit adjacent to a drain hole. There are two large shotcrete repairs that are in good condition along the south edge of the deck soffit. Near the center construction joint at mid-span, there is a 7'-0" hairline crack with corrosion staining and efflorescence.

Span 31: There is fiberglass sheeting along the north and south faces of the deck soffit. There is a large shotcrete repair near the north edge of the deck soffit that exhibits hairline cracks and map cracking with heavy efflorescence. There are two spalls in the north sidewalk soffit measuring 12" x 1'-2" x 3" deep and 8" x 6" x 3" deep, both with exposed reinforcing steel. There is a large shotcrete patch in the south edge of the deck soffit that exhibits map cracking and localized delamination. There are isolated shotcrete repairs in the south sidewalk soffit that are in good condition.

Span 32: There are hairline cracks with efflorescence near both sides of the expansion joint.

Span 33: There are two 3'-0" x 6" minor unsound shotcrete repairs near the north end of the deck slab, with one near Bent 33 and the other at mid-span. There are random areas of minor delamination up to 12" x 2'-0" in the north sidewalk soffit (see Photograph S49). There is a 12" x 2'-3" failed shotcrete repair near the south edge of the deck soffit at Bent 33. There are small surface spalls adjacent to the drain holes on the south face of the deck soffit. There is a hairline crack with adjacent scaling in the deck soffit extending onto the pier cap near Pile 6.

Span 34: There is a 10'-0" long 1/4" wide crack near the north edge of the deck soffit with up to 1'-6" of adjacent delamination. There are three hairline cracks near the south side of the deck soffit. There are two shotcrete patches in the south sidewalk soffit that are in good condition.

Span 35: There is a 1/8" wide full length crack with 6" wide delamination near the north end of the deck soffit. There is a 1/16" wide crack with efflorescence along the entire interior face of the north edge beam that extends into the pier cap of Bent 34. There is a hairline crack on the exterior face that reflects the crack on the interior face. All repair patches in the south side of the deck soffit are in good condition. The south drain holes are blocked with shotcrete material. There is a 7" x 8" x 2 1/2" failed patch near mid-span, 6'-0" from Bent 35 near Pile 4.

Span 36: There is a corner spall measuring 12" x 1'-6" x 3'-0" in the south end of the east expansion joint structure. There is a 12" x 3'-0" area of fine map cracking with light efflorescence near the south end.

Span 37: There is a 1'-2" x 1'-6" x 2 1/2" deep spall with exposed reinforcing steel along the north edge of the deck soffit with delamination up to 12" wide full length with an 1/8" wide crack at Bent 37. The north sidewalk soffit has two 1'-6" diameter unsound areas near Bent 37. There is a full length repair that is in good condition at the south edge of the deck soffit. There are two 12" x 12" areas of delamination in the south sidewalk soffit. There is a 5" x 1'-2" x 1/2" deep area of scaling with efflorescence in the west side of the sidewalk soffit between Construction Joints 1 and 2 at Bent 37. The north fascia beam exhibits a horizontal crack on the north side.

Span 38: There is a full length shotcrete repair along the north edge of the deck soffit with hairline map cracking and light efflorescence. There is a long crack with efflorescence near Bent 37, Pile 5. There is a full length repair in the south end of the deck soffit that exhibits a longitudinal hairline crack with heavy efflorescence. There is a 6" x 8" x 1" deep spall in the south sidewalk soffit. There are two 3" x 3" x 1/2" spalls with exposed reinforcing steel in the south edge beam.

Span 39: There are two spalls near the north edge of the deck soffit measuring 1'-6" x 1'-6" x 2" deep and 1'-6" x 4'-0" x 3 1/2" deep both with exposed reinforcing steel. There is a 1/16" wide crack with efflorescence in the north sidewalk soffit. There is a 12" x 2'-0" x 2" deep spall from a failed shotcrete repair near the west side of south edge.

Span 40: There is a 2" x 3" x 1/2" deep surface spall near the north end of the east expansion structure. The south end is in good condition.

Span 41: There is a 10'-0" long 1/8" wide crack with localized delamination up to 8' wide along the north edge of the deck soffit. At the first construction joint, near Bent 40, there is a 3'-0" x 6" unsound area 6'-0" from Bent 40. On the east end, north fascia, there is a 4" x 1" x 1/2" spall with exposed reinforcing steel. There is a full length shotcrete repair in the south end of the deck soffit that exhibits hairline cracks

throughout. There is a hairline crack with efflorescence in the south sidewalk soffit.

Span 42: There is a full length shotcrete repair in good condition along the north edge of the deck soffit. There are two repairs measuring 1'-6" x 12'-0" and 2'-0" x 3'-0" in the north sidewalk soffit that are in good condition. There is a full length shotcrete patch in the south end of the deck soffit that exhibits hairline cracks throughout. There is a full length x 8" x 2" deep spall with exposed reinforcing steel exhibiting up to 100% section loss along the third construction joint from the north edge.

Span 43: There is a 2" x 4" x 1 1/2" deep spall in the north exterior face of the north edge beam. There is a 1/8" wide crack with corrosion staining, efflorescence, and up to 8" of delamination along the north end of the deck soffit. There is minor honeycombing near mid-span of the deck soffit along each construction joint, up to 3'-0" wide. There is a full length shotcrete repair near the south end that exhibits fine map cracking.

Span 44: There is hairline map cracking on the east expansion joint.

Span 45: There is a 4" x 6" x 2" deep spall with exposed reinforcing steel in the north sidewalk soffit with an adjacent 3'-0" x 12" unsound area. There is a 4'-0" x 12'-0" shotcrete repair near the south end of the deck soffit that is in good condition. At the second construction joint from the north edge, there is a 1'-6" x 12" x 1" spall 6'-0" from Bent 45.

Span 46: There is a 12'-0" long 1/8" wide crack along the north side of the deck soffit. The shotcrete repairs in the deck soffit are in good condition. At the southwest corner of the deck there is a 3'-0" x 8" unsound area. At the north sidewalk soffit, at Bent 46, there is a 2'-0" x 6" unsound area.

Span 47: There are two 4" diameter surface spalls and two 12" diameter unsound areas in the north sidewalk soffit. There is a 24'-0" long 1/8" wide crack along the north edge of the deck soffit that is adjacent to a 12'-0" x 8" imminent spall and a 12" x 3" x 2" spall. Along the second construction joint from the north edge, 6'-0" from Bent 47, there is a 4'-0" x 6" unsound area. There is a 3'-0" x 6'-0" shotcrete repair in the south edge of the deck soffit that is in good condition. A conduit attachment to the south edge beam is severely corroded with 100% section loss.

Span 48: There is a 6" diameter area of imminent spalling in the north sidewalk soffit. There is a 2" x 8" x 1/2" deep spall in the expansion joint.

Span 49: There is a 1'-6" x 2'-0" imminent spall in the north sidewalk soffit near Bent 49. There is a 3" x 5" x 1" deep spall with exposed reinforcing steel in the north sidewalk soffit at mid-span. There is a 10" x 2'-6" x 1" deep spall with exposed reinforcing steel at the third construction joint from the north side, 6'-0" from Bent 49. Along the first construction joint from the north edge, there is typical efflorescence and corrosion staining.

Span 50: Near the north edge of the deck soffit there is a 1/4" wide crack that

exhibits localized delamination up to 8" wide. There is a 3" x 5" x 1" deep spall with exposed reinforcing steel near the north edge of the deck soffit at mid-span. The inside face of the north edge beam exhibits a full height hairline crack. There is map cracking adjacent to a shotcrete repair along the south edge of the deck soffit.

Span 51: There is a full length repair patch near the north edge of the deck soffit with three hairline cracks exhibiting efflorescence. There are two spalls measuring 2'-0" x 1'-6" x 1" and 12" diameter x 3/4", and a 3'-0" diameter unsound area in the north sidewalk soffit near Bent 51. All repair patches in this span are cracked. There is a longitudinal hairline crack along the repairs near the south edge of the deck soffit. At the south sidewalk soffit, mid-span, there is a 1'-6" diameter unsound area. There is a 12" x 1'-6" x 1" deep spall with exposed reinforcing steel near the east end of the south sidewalk soffit at the south fascia and deck (see Photograph S50).

Span 52: There is a 1'-3" x 2'-0" x 1 1/2" deep spall with exposed reinforcing steel in the north face of the deck slab.

Span 53: The north sidewalk soffit exhibits a 12" x 1'-2" x 1/4" deep spall with exposed and corroded reinforcing steel, a 4" x 4" x 1/2" deep spall with exposed reinforcing steel, and three imminent spalls up to 10" x 1'-2". There is a 1'-3" x 2'-0" x 1 1/2" deep spall with exposed reinforcing steel exhibiting 10% section loss on the north face of the deck slab.

Span 54: There are three vertical hairline cracks in the interior face of the north edge beam. There is a 4'-2" long 1/8" wide crack along the north edge of the deck soffit with a surrounding 1'-3" x 2'-10" area of delamination at Bent 53. There is a vertical hairline crack on the interior face of the north edge beam.

Span 55: There is a 12" x 6'-0" imminent spall in the north face of the deck slab near Bent 54. There is a 5" x 2'-6" imminent spall along the north edge of the deck soffit and a 10" x 5'-0" imminent spall along the first construction joint from the north. There are multiple longitudinal cracks up to 1/4" wide along the north edge of the deck soffit. There is a 2'-0" x 2'-2" imminent spall in the north sidewalk soffit near Bent 54. Between Pile 1 and 2 at Bent 55, there is a 4'-0" x 2'-6" unsound area and a 2'-0" x 6" x 3/4" spall. There is a 2'-0" x 3'-0" delaminated area along a 1/8" wide crack on the north face of the deck slab. There are three vertical hairline cracks on the interior face of the north edge beam.

Span 56: Exhibits only typical defects.

Span 57: The north edge of the deck soffit exhibits a 10" x 2'-6" area with imminent spalling near Bent 56. There is a 1'-6" diameter x 1/2" deep spall with exposed reinforcing steel between Pile 1 and 2 of Bent 56 at mid-span. There is a 1/4" wide crack along the entire length of the deck soffit along the north edge with 1'-4" of delamination. There is a 12" diameter area of delamination in west side of the south sidewalk soffit. At Bent 56, between Pile 2 and 3, there is a 4'-0" x 2'-6" x 2" spall. There is a 12" x 3'-0" area of scaling between Pile 3 and 4 at Bent 57. At Bent 57, on the north side of the beam fascia, there is a 6" diameter x 3/4" spall. Along the second construction joint from the north edge, there is an 8 1/2" x 6" unsound area.

Span 58: There is a 1'-9" x 4'-0" x 2" deep spall with delamination and exposed reinforcing steel exhibiting 20% section loss between Pile 1 and 2, near Bent 57. There is a 3" x 4" x 1/2" surface spall in the underside of the edge beam. At the north edge of the soffit near Bent 58, there is a 3'0" x 6" unsound area. All shotcrete repairs are in good condition. At the south edge beam, the conduit coupling is severely corroded and broken.

Span 59: There is a vertical hairline crack on the interior and exterior faces of the north edge beam. There is a 1/8" wide crack along the north edge of the deck soffit with an associated 5'-0" x 2'-6" x 2 1/2" deep spall with exposed reinforcing steel. The crack extends 20'-0" and has up to 12" of adjacent delamination. The north face of the deck slab exhibits a 6" x 6" x 1/2" deep spall and a 5'-0" long 1/4" wide crack. The north edge of the soffit has a 5'-0" x 3'-0" x 2 1/2" spall with an adjacent 4'-0" x 4'-0" unsound area. At the second construction joint from the north edge, there is an area, 2'-0" x 12" of scaling. At the third construction joint from the north edge, there is an area, 3'-0" x 6" of unsound concrete.

Span 60: There is an 8" x 2'-0" imminent spall in the north sidewalk soffit. There is an 8" diameter x 1" deep spall in the deck soffit near the south edge at Bent 59. There are a series of small spalls measuring up to 2" x 6" x 1/2" deep with exposed reinforcing steel in the deck soffit at the interface between the deck soffit and Bent 59 near Piles 3 and 4.

Span 61: There are multiple longitudinal hairline cracks along the north edge of the deck soffit with efflorescence. At the locations of the hairline cracks, there is a 6" unsound area that is extending from the cracks the full length of the north edge. There are two imminent spalls, an 8" x 3'-2" and a 2'-0" x 6", in the north sidewalk soffit. The first construction joint from the north edge exhibits efflorescence and a 3'-0" x 8" unsound area adjacent to the joint. The repair patch near the south edge of deck soffit is in good condition.

Span 62: Along the north edge of the deck soffit there is a 10'-0" long x 1/8" wide crack with a 2'-0" diameter x 1 1/2" deep spall and up to 6" of delamination around the crack. There is a 6'-0" long x 1/4" wide crack at the northeast corner of the deck slab. There is a 1'-6" x 5'-0" x 5" deep corner spall in the north face of the deck soffit near mid-span. There is a 12" x 4'-0" x 1" deep spall with exposed reinforcing steel and delamination near Bent 61 at the north sidewalk soffit. Between the first and second construction joint from the north edge, there are typical transverse hairline cracks. Also, along the first construction from the north edge, there is light scaling. At the third construction joint from the north edge, near mid-span, there is a 3'-0" x 6" unsound area. Shotcrete repairs near the south edge of the deck soffit are in good condition.

Span 63: There is a 4" x 12" x 3" deep spall in the north edge beam outboard corner. There is a 2'-0" x 6'-0" imminent spall along the north edge of the deck soffit. There is a 6'-0" x long 1/4" wide crack with a 6" x 6" x 1/4" deep spall along the north edge of the deck soffit. There is a 4" x 6" x 1" deep spall with exposed reinforcing steel in the north sidewalk soffit and three imminent spalls measuring up to 6" x 1'6". There

is a 3'-0" diameter x 1 1/2" deep spall between Piles 1 and 2 at mid-span. There is a 12" x 3'-0" area of light scaling near Bent 62. The shotcrete repair patch near the south edge of the deck soffit exhibits localized areas of fine map cracking. There is a 1'-0" x 3'-0" area of delamination near Bent 62.

Span 64: There are a few transverse hairline cracks with light efflorescence in the south sidewalk soffit.

Span 65: There is a 9" x 12" imminent spall in the north sidewalk soffit. There is a 3'-0" long x 1/16" wide horizontal crack along the north edge of the deck soffit with localized areas of delamination. Along the second construction joint from the north edge at mid-span, there is 3'-0" x 6" unsound area. Between the first and second construction joints from the north edge, there are typical transverse hairline cracks. There are hairline cracks in the repair patches in the south sidewalk soffit adjacent to the drain holes in the deck slab. There is a 6" diameter delaminated area at each end of the south sidewalk soffit.

Span 66: The north edge of the deck soffit exhibits a 1/4" wide crack with a 4" x 6'-0" area of delamination and a 2'-0" x 4" x 1/2" spall near Bent 65. The interior face of the north edge beam exhibits several horizontal hairline cracks with heavy efflorescence. There are three imminent spalls in the north sidewalk soffit measuring up to 8" x 12". There is a 12" x 4'-0" x 1/4" deep surface spall near the north edge of the deck soffit. Between the first and second construction joints from the north edge, there are typical transverse hairline cracks. The shotcrete repair along south edge of deck soffit is in good condition. There are several small areas of delamination in the south sidewalk soffit.

Span 67: There is a 10'-0" long by 1/4" wide crack along the north edge of the deck soffit with an adjacent imminent spall varying in width from 11" to 1'-9" x full length. The north sidewalk soffit exhibits three imminent spalls up to 6" x 7" and a 6" x 6" x 2 1/2" deep spall with exposed reinforcing steel. The north edge beam exhibits several hairline cracks with heavy efflorescence on the interior face and hairline cracks with heavy efflorescence on the bottom face and a 6" x 2'-0" imminent spall on the exterior face. There is an 8" x 1'-6" x 1" deep spall with exposed reinforcing steel located at the third construction joint from the north edge near mid-span. There is a 12" x 2'-0" area of delamination along the south edge of the deck soffit located 7'-0" east of Bent 67. There are two shotcrete repairs near the south edge of the deck soffit that are in good condition.

Span 68: There is a 12" x 1'-3" imminent spall in the north sidewalk soffit. There is light scaling along the south edge of the deck soffit. There is a 12" x 3'-0" deteriorated repair in the south sidewalk soffit adjacent to Bent 67.

Span 69: There is a 1'-3" x 4'-0" imminent spall along the north edge of the deck soffit near Bent 69. The north sidewalk soffit has four imminent spalls measuring up to 6" x 12". There is a 9" x 2'-0" area of delamination located on the west end of the span near the south edge. Between the first and second construction joints from the north edge, there are typical transverse hairline cracks. Along the second construction joint from the north edge at Bent 68, there is a 2'-0" x 8" unsound area.

Span 70: There are three imminent spalls measuring up to 8" x 8" in the north sidewalk soffit. There is a 6'-0" long 1/16" wide crack with delamination up to 8" wide along the north edge of the deck soffit. There are several hairline transverse cracks extending from the second construction joint from the north side with water stains. The repairs along the south side of the deck soffit are in good condition.

Span 71: There is a failing repair patch at the north side of the deck soffit. There is a 1'-8" x 2'-0" imminent spall in the north sidewalk soffit. There are two 12" diameter areas of delamination on the south sidewalk soffit. Near Bent 70, at Pile 6, there is a 12" diameter unsound area.

Span 72: There is a 2" x 12" x 1/2" deep spall with exposed reinforcing steel in the underside of the end beam adjacent to Pile 1. There is a 9" x 1'-6" x 1" deep spall with exposed reinforcing steel and surrounding delamination in the north sidewalk soffit. There is a delaminated area along the end beam adjacent to Bay 6 measuring the full width of the bay and 12" wide. The underside of Beam 8 exhibits fine map cracking.

Span 73: This span is the beginning of the diagonally oriented bents (see Photograph S51). There is a 6" diameter x 1/2" deep spall on the north side beam. The deck soffit between T-beams 3 and 4 has three imminent spalls and one 1'-6" x 8" x 1" spall near Bent 73. There are transverse hairline cracks in the deck soffit and T-beams between Beams 2 to 5. The bottom of Beam 1 has a full length crack up to 2" wide with surrounding delamination (see Photograph S52). There is a 6" x 2'-6" x 3" deep spall with exposed reinforcing steel in the north sidewalk soffit near Bent 74. There are vertical hairline cracks in the south face of Beam 4. Between Beam 4 and 5, at mid-span, there is a 4'-0" x 6" unsound area with an adjacent 6" x 12" x 2" spall.

Span 74: The north fascia beam is cracked with efflorescence above Bent 73. This span is the end of the diagonally oriented bents. T-beam 1 is delaminated approximately 60% of its length with corrosion stains from the reinforcing steel. There is an imminent spall and 1/4" wide cracks along the bottom of T-beams 1, 2 and 3 (see Photograph S53). There is a 6" x 4'-0" x 2" deep spall with exposed reinforcing steel and surrounding delamination at the east end of Bay 3. There is a 1'-6" x 1'-6" x 2' deep spall with exposed reinforcing steel in Bay 1 near mid-span. The deck soffit in Bays 4 through 8 exhibits random areas of light scaling and hairline transverse cracks with light efflorescence. There is a 9" x 1'-6" x 1 1/2" deep spall with exposed reinforcing steel in the deck slab near the west side of Bay 3. There is an 8" x 12" area of delamination in Bay 4 located just east of the previously mentioned spall. There are two delaminated areas and one spalled area measuring 12" x 3'-0" adjacent to transverse hairline cracks in Bay 5. There is a 7" x 1'-6" x 1" deep spall with exposed reinforcing steel located near mid-span of Bay 5. There are vertical hairline cracks on each face of Beams 5, 6 and 7. There is a 1/8" wide longitudinal crack along the bottom of the north face of Beam 6 located near mid-span. Bay 6 exhibits a 12" x 1'-6" x 1 1/2" deep spall with exposed reinforcing steel near the middle of the span. There is a 1/4" wide longitudinal crack along the bottom of Beam 7 with surrounding delamination extending half the width of the span. In Bay 7 there is a 9" x 1'-6" x 2" deep spall with exposed reinforcing steel at the

interface with Bent 74. There are 1/16" wide cracks with light corrosion stains on each face of Beam 8 through the repair patches.

Span 75: This span is the end of the diagonally oriented Bents. The bottoms of T-Beams 3 and 4 have imminent spalls near Bent 75. There is a 2'-0" diameter x 1" deep spall with exposed reinforcing steel in Bay 3. In Bay 4 there is a 2'-0" x 10'-0" x 2" deep spall with exposed reinforcing steel in the soffit. The south face of the bottom of Beam 4 has full length longitudinal cracks up to 1/4" wide with corrosion stains. Approximately 80% of Bay 5 is delaminated or spalled up to 2" deep. The south faces of the bottom of Beams 5 and 6 have longitudinal cracks up to 1/8" wide. There are vertical hairline cracks with light efflorescence on the vertical faces of Beams 4, 5 and 6. Between Piles 5, 6 and 7, there are full width transverse hairline cracks in the soffit. There is a full span crack up to 1/4" wide along the bottom of Beam 7. There are longitudinal hairline cracks with light efflorescence along the north face and bottom of Beam 8 (see Photograph S54).

Span 76: There is a 4" x 3'-0" x 2" deep spall on the west face of the end beam between Pile 2 and 3 of Bent 76. There is hairline to 1/16" wide map cracking with moderate efflorescence on the underside of the end beam adjacent to Pile 1. There are a few areas of hairline map cracking with light efflorescence on the south vertical face of the deck slab. The deck soffit at Bay 8 exhibits hairline map cracking with light efflorescence.

Span 77: There is a repair patch in the north edge beam that does not cover the entire spall. There is a 9" diameter x 1/2" deep spall with exposed reinforcing steel in the north sidewalk soffit near Bent 77 with a 1'-0" diameter area of delaminated concrete adjacent. There is a 2'-0" x delaminated area in a repair patch at the north edge of the deck slab. Along the second construction joint from the north edge at mid-span, there is a 6" wide unsound area measuring 8'-0" in length with corrosion staining and efflorescence. The shotcrete repairs near the south edge of the deck soffit are in good condition. There is fine map cracking in the south vertical face of the deck soffit.

Span 78: There is fine map cracking along the north side of the deck soffit. The shotcrete repairs near the south edge of the deck soffit are in good condition. There is a 3" diameter surface spall in the south sidewalk soffit near Bent 77. All repair patches in the south sidewalk soffit are in good condition.

Span 79: An area up to 12" from the north edge of the deck soffit is cracked and delaminated for the entire length of the span. There is a 2'-0" x 2'-6" spalls in the deck soffit located near mid-span between Piles 2 and 3 of Bent 79. There are large areas of delamination adjacent to the second construction joint from the north edge. There is a 2'-0" x 12" x 3" deep spall with exposed reinforcing steel near Bent 78. There is a 1'-6" x 4'-0" area of delamination in the deck soffit near Pile 2 of Bent 78. At Bent 78, on the north sidewalk soffit there is a 3'-0" diameter x 1" spall with exposed reinforcing steel. The concrete repair near the south edge of the deck soffit is in good condition. There is a 12" diameter area of delamination in the south sidewalk soffit near mid-span.

Span 80: There is a 1'-6" x 2'-0" x 3" deep spall with exposed reinforcing steel in the north sidewalk soffit. There are two, 2'-0" x 2'-0" x 1/2" deep spalls with exposed reinforcing steel in the south sidewalk soffit.

Span 81: There is a full length x 12" area of delamination adjacent to a 1/4" wide crack along the north edge of the deck soffit. There are two 1'-6" diameter areas of delamination in the deck soffit near Pile 2 of Bent 81. There are two spalls measuring 6" x 1'-6" x 3/4" and 1'-6" x 2'-6" x 2" deep with surrounding delamination near the southwest end of the deck fascia. The second construction joint from the north edge, near Pile 1 of Bent 80, there is a 2'-0" x 6" unsound area. Between Pile 3 and 4 at Bent 80, there are two 2'-0" diameter x 2" spalls. There is a 9" diameter delaminated area in the south sidewalk soffit near Bent 80.

Span 82: There is a 2'-0" diameter x 1 1/2" spall located near Bent 82 adjacent to the first joint from the north. There is a 12" x 1'-6" spall located near Pile 2 of Bent 81. There is a 3'-0" x 1'-6" x 1 1/2" deep spall with exposed reinforcing steel at the northeast edge of the deck soffit with a surrounding 5'-0" x 9'-0" area of delamination. There are two 12" diameter x 1" deep spalls with exposed reinforcing steel in the deck soffit near Bent 81 between Piles 4 and 5. There are corrosion stains along the south edge of the deck soffit. At the first construction joint south of the north edge at Bent 81 there is a 6'-0" x 12" unsound area.

Span 83: There is a 2'-0" x 4'-0" x 3" deep spall with exposed corroded reinforcing steel and surrounding delamination in the northwest corner of the deck soffit. There is an imminent spall along the entire north edge of the deck soffit. Near mid-span of the north edge of the deck soffit there is a 3' diameter x 3" deep spall. There is a 12" diameter x 1" deep spall with surrounding delamination located near Piles 1 and 2 of Bent 82. At Bent 82, between Piles 3 and 4, there are two 2'-0" diameter x 1" deep spalls with exposed reinforcing steel. There is a 12" x 4'-0" area of delamination along the northeast end of the deck soffit. Near the south side of the deck soffit there is a 12" x 5'-0" x 1" deep spall with exposed reinforcing steel along joint 3. There is a 9" x 10'-0" area of delamination surrounding the second joint from the north near Bent 83. At Bent 83 between Piles 3 and 4 there is a 4'-0" x 3'-0" unsound area. There is a 5'-0" x 5'-0" x 1" deep spall with exposed reinforcing steel located near Bent 82 between Piles 6 and 7. There are small spalls beneath the pipe bracket near to Bent 82 attached to the underside of the exterior beam.

Span 84: There is a 12" x 2'-0" x 3" deep spall with exposed reinforcing steel on the north face of the deck slab. There is a 12" x 5'-0" area of map cracking in the north side of the deck soffit.

Span 85: There is an 8" x 5'-0" area and two 2'-0" diameter areas of delamination adjacent to the first joint from the north near Bent 85. There is a 2'-0" diameter x 1 1/2" spall in the deck soffit near Pile 3 of Bent 85 with exposed reinforcing steel. There is a 4'-0" x 5'-0" area of delamination near Piles 2 and 3 of Bent 84. There are 1/16" wide cracks with corrosion stains extending from the drain holes in the south face of the deck soffit. There are two wood boards wedged between the south face of the deck slab and the exterior beam. Between Pile 1 and 2 of Bent 84 there is a 2" diameter unsound area. There is a 2" diameter unsound area and a 3'-0" diameter x

2" deep spall between Piles 3 and 4 of Bent 84 (see Photograph S55).

Span 86: There is a 2'-6" diameter x 1/2" deep spall with surrounding delamination near the north side of the deck soffit. There is a 5" diameter x 1" deep spall in the south sidewalk soffit near mid-span. There is a 12" diameter area of hollow sounding concrete in the deck soffit near Pile 5 of Bent 86. There are 2'-0" x 1'-6" and 2'-0" x 12" x 2" deep spalls with exposed reinforcing steel at Pile 3 of Bent 85.

Span 87: There is a 12" x 1'-6" x 1" deep spall with exposed reinforcing steel in the north sidewalk soffit. Several of the shotcrete repairs are failing along the north side of the deck soffit. There is a 1/4" wide longitudinal crack along the north edge of the deck soffit with a 12'-0" x 8" surrounding area of delamination. There is a 2'-0" x 2'-6" area of delamination in the deck soffit with a 2'-6" x 6" spall near Piles 1 and 2 of Bent 86. The pipe attached to the overhang soffit is typically severely corroded with up to 50% section loss in random areas. There is a 2'-0" x 5'-0" scaled area in the south sidewalk soffit with a 12" imminent spall within this area. The repairs around the joints exhibit fine map cracking.

Span 88: Along the centerline of the bridge there is an intermittent longitudinal hairline crack with efflorescence. All shotcrete repairs are in good condition.

Span 89: The shotcrete repair along the entire north sidewalk soffit is failed. There is a full length hairline crack in the deck soffit between Piles 1 and 2 of Bent 88 with efflorescence. There are three failed patches that have developed into spalls measuring 12" x 12'-0" between Piles 1 and 2 and Piles 2 and 3 of Bent 88. There is a 4'-0" x full width repair with a 12" x 5'-0" imminent spall within the patch on the south edge of the deck soffit. There is a 1'-6" x 4'-0" imminent spall in the deck soffit near to Pile 6 of Bent 89. Near Bent 89 at Pile 6, there is a 2'-0" x 4'-0" x 1" spall with exposed reinforcing steel with an adjacent 2'-0" x 8'-0" unsound area. There is a 10'-0" x 20'-0" repair near the center of the span exhibiting hairline map cracking and light efflorescence. There is an 8'-0" long longitudinal hairline crack with light efflorescence in the deck soffit near Pile 4 of Bent 88. There are several areas of honeycombing in the south sidewalk soffit. There is a 9" diameter x 1/2" deep spall on the south overhang soffit near Bent 88. On the north side of the span, there is a portion of the conduit that is severely corroded and disconnected (see Photograph S56).

Span 90: There is a 4'-0" diameter shotcrete repair near the north side of the deck soffit that is cracked. There is a 12" diameter x 2" spall with exposed reinforcing steel near Bent 90, between Piles 1 and 2. There is a 5" x 9" x 1" deep spall in the edge beam near Bent 89. Near Bent 89, the north outside beam fascia exhibits a 12" x 4" corner spall. Approximately 50 SF of the shotcrete repairs throughout the deck soffit are beginning to fail. The entire south sidewalk soffit that has been repaired with a shotcrete patch has failed. There is a 3'-0" x full width repair exhibiting several hairline cracks. There is a 1'-6" diameter x 1 1/2" deep spall in the deck soffit located between Piles 4 and 5 of Bent 90. There is a full length intermittent longitudinal hairline crack with light efflorescence in the deck soffit near Pile 4 of Bent 90. There is a full span width hairline crack with efflorescence in the deck soffit at Pile 3 of Bent 90. There are several vertical hairline cracks on the south face of the deck slab. At

Pile 3 of Bent 89 there is an 8'-0" long vertical hairline crack with efflorescence.

Span 91: There is a 12" x 4" and a 10" x 2" spall on the west edge of the expansion joint between Piles 2 and 3. Span 91 exhibits only typical defects.

Span 92: There is a 1'-6" x 2'-0" area of delamination in the deck soffit near Piles 1 and 2 of Bent 91. There is a 3'-0" x 5'-0" area of fine map cracking in a shotcrete patch near the north edge of the deck soffit at Bent 91 between Piles 1 and 2. There is a 9" x 12" area of delamination near Bent 91, Pile 3. There is a 3'-0" x full length shotcrete repair that is in good condition near the south side of the deck soffit. At Bent 92 between Piles 5 and 6 near the south end of the deck soffit there is a 4'-0" x 3'-0" unsound area in the patch. There is a 3'-0" x 4'-0" imminent spall in the south end of the deck soffit near Bent 92. There is a 12" diameter imminent spall at the interface between Bent 92 and the deck soffit near Piles 4 and 5. There is a 2'-0" x 4'-0" plywood sheet attached to the south sidewalk soffit (see Photograph S57).

Span 93: There is a shotcrete repair along the north edge of the deck soffit that exhibits a 2'-0" x 4'-0" area of fine map cracking with light efflorescence. Approximately 75% of the deck soffit has been repaired and is in good condition. Near the bridge centerline there are two 3'-0" diameter unsound repairs. At the south sidewalk soffit there is a 6'-0" x 6'-0" delaminated area. The drain holes on the south face of the deck slab exhibit typical cracking and moderate sized spalls. At the south fascia, there is a section of conduit that is disconnected.

Substructure

The abutments are in satisfactory condition exhibiting several vertical and diagonal cracks some with efflorescence (see Photographs 58 and 59).

The pier caps are in fair condition exhibiting vertical hairline to 1/16" wide cracks and spalls at random locations (see Photographs 60 through 63).

The piles are in satisfactory condition. There are typically hairline horizontal cracks at the top of the piles (see Photograph S64). Additionally, some of the piles have vertical cracks, moderate spalling and areas of delamination (see Photographs 65 through 66). The steel jackets on the piles are typically severely corroded with up to 30% section loss (see Photograph S67). There is typically minor to severe marine growth on the piles up to 3" deep (see Photograph S68). The substructure exhibits the following additional defects:

East Abutment

There are four full height hairline to 1/16" wide cracks, one exhibits moderate efflorescence. There are several minor 12" to 5'-0" long hairline cracks at random locations. Due to earth pressures, the top of the east abutment is leaning west 1/2" per 10'-0" from the northeast wingwall and 3/8 " per 10'-0" from the southeast wingwall. The northeast wing wall exhibits six hairline to 1/16" wide full height vertical cracks. There is a 4'-0" long diagonal hairline crack extending from a weep hole. The southeast wingwall exhibits 6'-0" long vertical hairline cracks extending from a weep hole at two locations. There are eleven full height hairline to 1/16" wide cracks some with efflorescence in the southeast wingwall.

Bents

Bent 1: There are several horizontal hairline cracks with heavy efflorescence in the pier cap above Pile 1. The conduit at the east face of Pile 1 exhibits 100% section loss with exposed electrical wires. There is a horizontal hairline crack along the top west face of Pile 6 and 7. The northwest corner of Pile 7 has water staining. There is map cracking on the underside of the pier cap near Pile 1.

Bent 2: There is a horizontal hairline crack along the top of Piles 1, 2 and 3. South of Pile 5, on the pier cap underside, there is a 12" x 6" x 1/2" spall.

Bent 3: Pile 5 exhibits a horizontal hairline crack at the top of the pile and longitudinal hairline cracks around the pile on the underside of the pier cap.

Bent 4: There is a horizontal hairline crack along the top of the east and west face of Pile 1, and the east face of Piles, 2, 3, 4 and 5. There are water stains on the pier cap near Pile 7. Pile 7 also displays minor surface spalls on the east face.

Bent 5: There are small surface spalls on the east face of Piles 1, 2 and 4. There are horizontal hairline cracks along the top of Piles 1 and 2.

Bent 6: Pile 5 exhibits a 12" x 2'-0" x 2" deep spall.

Bent 7: There are spalls up to 1'-6" x 12" x 1" deep with exposed reinforcing steel in the pier cap just north of Piles 4 and 7.

Bent 8: There is an 8'-0" long 1/16" wide crack on the west face of the pier cap above Pile 1. There is a hairline crack in the pier cap above Pile 7 that is surrounded by delaminated concrete.

Bent 9: On the north face of Pile 1, there is a 2'-0" x 4" x 1/2" spall. On the east face of the pier cap, above Piles 1 and 2, there is an 8'-0" x 12" x 10" spall with exposed reinforcing steel. There is 2" x 6" x 2" deep spall with exposed reinforcing steel in the pier cap above Pile 2.

Bent 10: There is a 1/8" wide crack above Pile 1 with localized delamination. On the pier cap underside at the north side of Pile 6, there is a 6" x 6" x 1" spall and an adjacent 8" x 10" delaminated area.

Bent 11: There is a small surface spall on the east face of the pier cap near Pile 1. There is a 1/8" wide crack on the west face of the pier cap above Pile 1. There is a 1'-6" x 4'-0" delaminated area. There is a 1'-6" x 2'-4" x 2" deep spall with three exposed reinforcing bars that exhibit up to 30% section loss near the south end. On the west face of the pier cap, near mid-span there is a 12" x 4'-0" x 6" deep spall with two exposed reinforcing bars that exhibit 5% section loss.

Bent 12: There are hairline cracks along the top of most of the Piles. On the pier cap, north of Pile 1, there is a 3'-0" x 12" x 1" spall with exposed reinforcing steel.

Bascule Piers: The bascule piers generally appear to be in good condition. Some minor hairline cracks and spalls were noted on both bascule piers.

East Bascule Pier: On the East Bascule Pier, there are three vertical 10'-0" long 1/16" wide cracks on the east face. There is a 2'-6" x 4'-4" x 2 1/2" deep spall with exposed reinforcing steel on the east face with a 5" x 10'-0" area of delamination under the spall. There is an 8'-0" long horizontal hairline crack along the bottom of the east face with light efflorescence. There is a 3'-0" x 5'-0" area of delamination on the north end of the east face. On the northwest corner there are two hairline cracks, with a maximum length of 5'-0". The interior of the bascule pier exhibits multiple hairline cracks with efflorescence and water staining.

West Bascule Pier: On the West Bascule Pier, there is a 12" x 4'-0" x 5" deep corner spall with exposed corroded reinforcing steel exhibiting 20% section loss on the south footing (see Photograph S69). There is a 2'-6" x 8'-0" area of delamination on the bottom of the south face. There are four full height 1/16" wide cracks on the west face with localized delamination. There is a 4'-4" x 10'-0" area of delamination near the north end of the west face. The northeast corner exhibits a hairline crack with efflorescence. On the southeast corner there is a hairline crack with efflorescence. The south "Draw Bridge Schedule" sign is detached from the lower west side connection. The interior of the bascule pier exhibits multiple hairline cracks with efflorescence and water staining.

Bent 13: Horizontal cracks were noted on Piles 5 and 6. There is a 3'-0" x 12" x 3" deep spall on Pile 1 and hairline map cracking on the northeast corner underside and a 4" x 4" x 2" deep spall with exposed reinforcing steel. There is a 12" x 5'-0" x 5" deep spall with exposed reinforcing steel on the west face of the pier cap between Piles 1 and 2. There is an 8" x 1'-6" x 1 1/2" deep spall with exposed reinforcing steel that exhibit 10% section loss in the pier cap. On the pier cap underside, south of Pile 7, there is a 12" x 6' shallow spall.

Bent 14: There is a 1/8" wide crack in the top of Pile 7. On the west face of the pier cap, there is a 6'-0" x 12" x 6" spall with surrounding delamination.

Bent 15: No major defects were noted.

Bent 16: There is a 1/16" wide crack on the east face of the pier cap near Pile 1. There is a 1/4" wide crack on the west face of the pier cap near the south end.

Bent 17: There is a 3/16" wide crack with delamination in the east face of the pier cap above Pile 1. Pile 1 has horizontal cracks on its east face. There is a 6'-0" long vertical hairline crack on Pile 2 stemming from the jacket. There is a small surface spall on Pile 1. There was hairline map cracking on the pier cap above Pile 7.

Bent 18: There is a 12" x 6" x 1" spall on the south face of Pile 7 with a 1/16" wide crack adjacent to a 6" x 12" x 2" deep spall on the north face of the pile.

Bent 19: Pile 1 has a 5'-0" long 1/8" wide horizontal crack on the east face of the pier

cap. Pile 5 of Bent 19 has been replaced by a steel support built-up system that consists of vertical and horizontal W-section members (see Photograph S70). The top horizontal members are supported by stiffeners that receive vertical loadings in addition to the web of the two horizontal W-sections. There is severe deterioration (90% to 100% section loss) of the top flanges, bottom flanges, and webs of these members (see Photographs 71 and 72). Remaining thickness of the top support members is approximately 1/16". The vertical columns display moderate corrosion.

Bent 20: On the west face of the pier cap, above Pile 2, there is a 2'-0" x 12" x 8" spall with exposed reinforcing steel. The west face of the pier, above Pile 5, has a 2'-0" long 1/8" wide crack with surrounding delamination.

Bent 21: There is a 1/16" wide crack above Pile 5. There is a 3'-0" long vertical hairline crack on the east face of Pile 1.

Bent 22: There are horizontal hairline cracks on the east and north faces of Piles 2 and 4.

Bent 23: There is a 2" diameter x 2" deep spall with exposed reinforcing steel exhibiting 10% section loss in the pier cap above Pile 1. The east face of the pier cap, above Pile 6, has a 6" x 6" x 1/2" spall with exposed reinforcing steel.

Bent 24: No major defects were noted.

Bent 25: There is a 1'-4" x 7'-0" x 6" deep spall with exposed reinforcing steel exhibiting 20% section loss in the west face of the pier cap above Pile 1. On the east face of the pier cap, above Pile 1, there is a 5'-0" x 6" x 8" deep spall with exposed reinforcing steel. There is a 1'-2" x 3'-0" x 3" deep spall with exposed reinforcing steel in the bottom face of the pier cap near Pile 2. There is light scaling with hairline cracks and delamination on the east face of the pier cap above Pile 1. There is a 4'-0" long 3/8" wide vertical crack in Pile 7.

Bent 26: There is an 8" x 2'-6" x 8" deep spall with exposed reinforcing steel on the east face of the pier cap above Pile 3. There is an 8" x 12" x 2" deep spall with exposed reinforcing steel on the bottom face of the pier cap south of Pile 2. There is a 1/16" wide crack in the pier cap above Pile 7, on the west face, with corrosion stains.

Bent 27: There is a 2'-0" long 1/16" wide crack on the east face of the pier cap above Pile 4.

Bent 28: There is a 2'-0" x 12" x 1" spall in bottom face of the south end of the pier cap with exposed reinforcing steel exhibiting 30% section loss. Pile 5 has corrosion staining on the east face

Bent 29: There is a 12" x 5'-0" x 8" deep spall with exposed reinforcing steel in the pier cap above Pile 3. There is a 4'-0" long 1/16" wide vertical crack in Pile 1. There is a 1/8" wide crack with an adjoining 12" x 5'-0" area of delamination in the pier cap above Pile 5.

Bent 30: There is a 10" x 1'-8" x 10" deep spall with one exposed tie bar and one exposed main reinforcing bar exhibiting 10% section loss on the pier cap east face. Pile 5 exhibits a minor 4" x 2" x 1/2" spall at the top south-east corner.

Bent 31: No major defects were noted.

Bent 32: There is a 9" x 10" x 4" deep spall with exposed reinforcing steel in the west face of the pier cap near Pile 2.

Bent 33: There is a 12" x 12" x 1" deep spall with one exposed main reinforcing bar in the underside of the pier cap between Piles 5 and 6. There is a 3 1/2" x 1'-3" surface spall near the jacket of Pile 7.

Bent 34: There is a 2'-0" long 1/16" wide crack in east face of the pier cap above Pile 1.

Bent 35: There is a 1/16" wide crack with localized delamination in the pier cap above Pile 4.

Bent 36: There is a 4" x 12" x 1" deep spall with exposed reinforcing steel in the pier cap near Pile 1.

Bent 37: There is a 3'-0" long vertical hairline crack in Pile 1. There is a 3'-0" long 1/16" wide crack in east face of the pier cap above Pile 1.

Bent 38: There are three 2'-0" long hairline cracks with corrosion staining on Pile 2. There is a hairline crack with localized delamination in the pier cap above Piles 2 and 3. There is a 12" x 12" x 1" deep spall with exposed main reinforcing steel on the bottom side of the pier cap between Piles 5 and 6 with 12" of surrounding delamination.

Bent 39: There is a 1/8" wide crack above Pile 1. There are two vertical hairline cracks on Pile 1. A repair patch between Piles 4 and 5 is in good condition but needs more concrete finishing.

Bent 40: There is a 9" x 12" x 1/2" deep spall with an exposed tie rod near the south end of the pier cap.

Bent 41: There is a 3" x 8" x 1" deep spall with exposed reinforcing steel and 8" x 12" of adjacent delamination in the pier cap above Pile 1.

Bent 42: There is a vertical hairline crack near the bottom of Pile 4. There is a 1'-6" x 2'-0" x 4" spall in the pier cap underside between Piles 3 and 4. Above Pile 4, on the west face of the pier cap, there is a 4'-0" x 2'-0" x 6" spall.

Bent 43: There is a small surface spall on Pile 4. There is a full height hairline crack on Pile 3. There is a 1/16" wide crack with efflorescence above Pile 3. There are two 1/16" wide cracks in the east face of the pier cap above Pile 1.

Bent 44: There is fine map cracking in the pier cap near the north end. There is a 3'-0" long hairline vertical crack in Pile 1.

Bent 45: There is a 4'-0" x 6" x 3" deep spall with exposed reinforcing steel in the pier cap above Pile 1. There is a 1/16" wide crack above Pile 2. There are vertical hairline cracks in Piles 1 and 2. There is a 1/16" wide vertical crack in the southwest corner and northwest corner of Pile 7. The northwest vertical crack has minor delamination surrounding it.

Bent 46: There are three vertical hairline cracks in Pile 1. There is an 8" diameter x 1 1/2" deep spall with exposed reinforcing steel in the pier cap between Piles 2 and 3. An area of map cracking on Pile 7 exhibits a 4'-0" long hairline crack that extends onto the deck soffit.

Bent 47: There is a 3/16" wide crack with localized delamination in the pier cap above Pile 1. There is a vertical hairline crack in Pile 2. There is a 1/8" wide crack with localized delamination in the pier cap above Pile 7.

Bent 48: There is map cracking on the west face of the pier cap near the south end.

Bent 49: There are three vertical hairline cracks in Pile 1. There is a 4" x 2'-0" x 1/2" deep spall with exposed reinforcing steel on the underside of the pier cap near Pile 7. There is a 2'-6" long 1/16" wide crack with corrosion staining in the west face of the pier cap above Pile 1.

Bent 50: There is a 1'-6" x 2'-0" x 3" deep spall with exposed reinforcing steel and delamination up to 3'-0" in the underside of the pier cap between Piles 2 and 3. Above Pile 7, on the west face of the pier cap, there is a 4'-0" x 6" delamination area.

Bent 51: There are three vertical hairline cracks in Pile 1. There is fine map cracking on the east face of the pier cap near the south end.

Bent 52: There is a horizontal hairline crack on the west face of the pier cap above Pile 1. There is a horizontal hairline crack in Pile 5. There are random areas of light scaling on west face of the pier cap.

Bent 53: There is a hairline horizontal crack in the east face of the pier cap above Pile 3 with localized delamination. There is a horizontal hairline crack in east face of the pier cap above Pile 1.

Bent 54: There is a horizontal hairline crack in the pier cap above Pile 3.

Bent 55: No major defects were noted.

Bent 56: There is fine map cracking with light efflorescence in the pier cap.

Bent 57: There is a 12" long hairline crack with light efflorescence that stems from the third joint from the south and continues onto the pier cap. On the bottom side of

the pier cap, north of Pile 4, there is a 1'-0" x 12" area of delamination.

Bent 58: There is a 1/8" wide crack with surrounding delaminated concrete in the pier cap above Pile 3. There is a 1'-6" x 2'-6" imminent spall in the pier cap. Some of the piles exhibit small horizontal hairline cracks. The pier cap construction joint between Piles 5 and 6 exhibits a minor hairline crack with efflorescence. Between Piles 2 and 3, both the west face and the bottom face exhibit a 2'-6" x 6" delaminated area.

Bent 59: There is a 6" x 3'-6" x 4" deep spall with exposed reinforcing steel and surrounding delamination on the west face of the pier cap above Pile 1 with a 1/4" wide crack extending from the spall. There is a 1/16" wide crack with efflorescence in the west face of the pier cap near Pile 4. There is a 12" x 2'-0" imminent corner spall on the underside of the pier cap between Piles 4 and 5. There is a vertical hairline crack with light efflorescence in the east face of the pier cap near the 3rd joint. On the bottom side of the pier cap, between Piles 1 and 2, there is a 4'-0" x 2'-0" area of minor spalling/ delamination.

Bent 60: No major defects were noted.

Bent 61: There is a 2'-0" x 5'-5" spall with exposed reinforcing steel on the underside of the pier cap between Piles 1 and 2. There is a 12" x 1'-3" x 7" deep corner spall on the east face of the pier cap over Piles 4 and 5. There is a 7" x 12" x 1" deep spall in the repair of the east face of the pier cap above Pile 7.

Bent 62: There is a 1/4" wide crack between Piles 2 and 3 with surrounding delamination. There is a 7" x 3'-0" x 1/2" deep spall on the east face of the pier cap. There is a 5" x 4'-0" x 10" deep corner spall with exposed reinforcing steel exhibiting 20% section loss on the pier cap above Pile 3. On the east face, above Pile 4, of the pier cap, there is 12" x 12" delaminated area. There is a 3'-0" x 12" x 4" spall above Pile 5, on the west face of the pier. Between Piles 5 and 6, on the pier cap underside, there is a 12" x 12" x 1" spall. There is a 1'-6" x 6'-0" x 8" deep corner spall with exposed reinforcing steel in the west face of the pier cap above Pile 6. There is a 9" x 1'-6" area of delamination on the east face of the pier cap above Pile 7.

Bent 63: There is a 12" long 1/16" wide horizontal crack in the east face of the pier cap above Pile 2 with an adjacent 4'-0" x 12" x 6" spall. There is a 2'-0" long 1/8" wide horizontal crack in the east face of the pier cap above Pile 3.

Bent 64: There is a 4" x 2'-0" x 3" deep spall with exposed reinforcing steel on the east face of the pier cap above Pile 3. There is a 6" x 1'-6" x 3" deep corner spall with exposed reinforcing steel in the east face of the pier cap above Pile 3.

Bent 65: There is a 1/16" wide horizontal crack in the east face of the pier cap above Piles 1, 2 and 3. There is a 2'-0" long 1/16" wide horizontal crack in the east face of the pier cap above Pile 4.

Bent 66: There is an 8" x 12" x 1/2" deep spall with exposed reinforcing steel on the

east face of the pier cap between Piles 4 and 5. The underside of the pier cap exhibits a 10" x 10" x 1/2" deep spall between Piles 1 and 2. There is a 2'-0" x 12'-0" x 5" deep corner spall with exposed reinforcing steel exhibiting 30% section loss on the east face of the pier cap above Piles 3 and 4. There is a 12" x 9" x 1" deep spall with exposed reinforcing steel on the east face of the pier cap above Pile 5. There is a 2'-0" long 1/16" wide horizontal crack in the east face of the pier cap above Pile 5.

Bent 67: There is a 3" x 2'-8" x 4" deep spall with exposed reinforcing steel exhibiting 30% section loss on the east face of the pier cap above Pile 2 with an adjacent 3" x 6" x 2" deep spall with exposed reinforcing steel. There is a 2'-0" long 1/8" wide crack on the underside of the pier cap east of Pile 4 with surrounding delamination. There is a 2'-0" long 1/16" wide crack on the east face of the pier cap above Pile 3.

Bent 68: There is a 5" x 2'-0" x 1/2" deep spall with exposed reinforcing steel in the underside of the pier cap near Pile 5.

Bent 69: There is a 3" x 3'-4" x 3" deep spall with exposed reinforcing steel exhibiting 20% section loss on the east face of the pier cap above Pile 2. There is a 4" x 6" x 1/2" deep surface spall on the underside of the pier cap between Piles 2 and 3. There is a 7" x 3" surface spall with corrosion stains on the underside of the pier cap near Pile 5. There is a 12" long 1/16" wide horizontal crack on the east face of the pier cap above Pile 6.

Bent 70: There is a 1'-3" x 2'-0" imminent spall on the pier cap near Pile 1. There is a 4" x 6" x 1/2" deep surface spall on the underside of the pier cap between Piles 2 and 3. There is a 3'-0" long 1/8" wide horizontal crack on the east face of the pier cap above Pile 6 with surrounding delamination on the underside.

Bent 71: There are hairline cracks on the pier cap above Pile 1. There is a 4" x 4'-0" x 3" deep spall with exposed reinforcing steel and delamination on the east face of the pier cap above Pile 2. Pile 5 exhibits horizontal hairline cracks. The pier cap above Pile 4 exhibits 1/16" wide map cracking on the east face.

Bent 72: There is a 2'-0" long 1/16" wide crack on the pier cap above Pile 1. There is a 6" x 4'-0" x 4" deep spall with exposed reinforcing steel on the east face of the pier cap above Pile 8 with an adjacent 3'-0" x 12" delaminated area.

Bent 73: There are multiple hairline cracks on the east face of the pier cap above Pile 3. There is a 6" x 4'-0" x 10" deep corner spall with exposed reinforcing steel exhibiting 10% section loss on the pier cap above Pile 4. There is a 1/8" wide horizontal crack on the east face of the pier cap above Pile 1. Piles exhibit typical random hairline horizontal cracks.

Bent 74: No major defects were noted.

Bent 75: The east face of the pier cap has severe spalling with exposed main reinforcing steel above Piles 3, 4 and 5. There is a 3'-0" long 1/8" wide horizontal crack in the east face of the pier cap above Pile 7. There is a corner spall in the east face of the pier cap between Piles 2 and 5 up to 12" high and 6" deep with exposed

corroded reinforcing steel. There is a 1/4" wide horizontal crack extending from previously mentioned spall that continues beyond Pile 6.

Bent 76: The piles of this bent exhibit the typical random horizontal hairline cracks.

Bent 77: Between Piles 1 and 2, on the pier cap underside, there is a 12" x 3'-0" delaminated area. There is a 12" x 3'-0" spall and a crack in the east face of the pier cap above Pile 3. There is a 2'-0" long 1/16" wide horizontal crack in the west face of the pier cap above Pile 4. There is a 6" x 5'-0" area of delamination on the east face of the pier cap above Pile 2. There is a 1/8" wide crack with surrounding delamination up to 6" x 18" in the west face of the pier cap between Piles 5 and 6. There is a 12" diameter x 1/2" deep spall with exposed reinforcing steel on the underside of the pier cap south of Pile 7. There is an 8'-0" x 12" spall on the east face of the pier cap above Pile 4.

Bent 78: There are two 3" x 12" x 1" deep spalls with exposed reinforcing steel in the underside of the pier cap between Piles 2 and 3 with an adjacent 2'-0" x full width delaminated area. There is a 9" x 8'-0" area of delamination on the west face of the pier cap between Piles 1 and 2. There is a 4" x 12" x 1" deep spall with a 1/4" wide crack extending 3'-0" from the spall in the west face of the pier cap near Pile 1. There is a 2" x 6" x 1/2" deep spall with exposed reinforcing steel in the west face of the pier cap beneath the north sidewalk soffit. There is a 7'-0" x 12" x 1'-0" spall on the east face of the pier cap above Pile 4. There is a 1/16" wide diagonal crack in the west face of the pier cap extending from the third construction joint from the north edge with light to moderate efflorescence. The crack is surrounded by a 12" x 3'-0" area of delamination. There is a 4" x 3'-0" area of unsound concrete on the east face of the pier cap above Pile 5. There is an 8" x 1'-6" x 5" deep corner spall on the east face of the pier cap between Piles 5 and 6.

Bent 79: There is a 7" x 3'-0" area of delamination on the underside of the pier cap near Pile 2. There is a 3'-0" x 12" spall in the east face of the pier cap above Pile 2 adjacent to the delaminated area previously listed. There is a 3'-0" long 1/16" wide vertical crack in the east face of the pier cap extending from the joint above Pile 2. The repaired portion of the pier cap above Pile 5 is in good condition. There is a 3" diameter x 1/2" deep spall on the underside of the pier cap near Pile 3 with several 1/16" wide cracks extending from the spall.

Bent 80: There are horizontal hairline cracks in the piles.

Bent 81: There are horizontal hairline cracks in the piles. The underside of the pier cap exhibits a 10" diameter x 1" deep spall with exposed reinforcing steel near Pile 5. There is a 2'-6" long x 1/16" wide vertical crack in the east face of Pile 7 with an adjacent 2'-0" x 12" delaminated area. There is an 8" long x 1/16" wide vertical crack on the east face of Pile 5 with an adjacent 12" x 6" delaminated area.

Bent 82: There are two 3" x 12" x 1" deep spalls on the underside of the pier cap between Piles 2 and 3. There is a 6" x 5'-0" delaminated area on the east side of the pier cap between Piles 1 and 2. There is a 2'-6" long x 1/16" wide crack on the underside of the pier cap extending from a scaled area on the east face.

Bent 83: There is a 1/16" wide crack with localized delamination on the underside of the pier cap near Piles 1 and 2. There is a 12" x 5'-0" area of delamination on the east face of the pier cap above Pile 2. There is a 15'-0" x 12" spall with exposed reinforcing steel in both the east and bottom face between Piles 3 through 5.

Bent 84: There are hairline vertical and horizontal cracks on the east face of the pier cap above Pile 1. There is an up to 12" wide area of delamination surrounding the second construction joint from the north edge. There is a 2'-0" x 12" delaminated area on the west face of the pier cap above Pile 2.

Bent 85: There is a 1/8" wide vertical crack on the south face of Pile 1. The northeast corner of Pile 7 exhibits a 12" x 12" area of spalling/delamination.

Bent 86: There are moisture stains on the underside of the pier cap. There are two 3" diameter x 1/4" deep surface spalls with exposed reinforcing steel on the underside of the pier cap north of Pile 2. There is a 9" x 9" area of delamination on the underside of the pier cap near Pile 2. On the west face of the pier cap above Pile 3, there is map cracking. On the northeast corner of Pile 4, there is a large crack/imminent spall.

Bent 87: There is a shotcrete repair patch on the underside of the pier cap near Pile 3 that is in good condition. The pier cap between Piles 3 and 4, exhibits map cracking on the east face, west face, and underside.

Bent 88: There are several longitudinal cracks up to 1/8" wide on the underside of the pier cap on the east side of Pile 1. Above the west face of Pile 2, on the pier cap underside, there is a 6" x 6" spall with exposed reinforcing steel. There are moisture stains and failed patches on the underside of the pier cap. There are two transverse cracks up to 1/8" wide with corrosion stains in the underside of the pier cap between Piles 4 and 5. The west face and underside of the pier cap exhibits a shotcrete repair with fine map cracking. There is a hairline crack in the pier cap extending from the south end of the deck soffit.

Bent 89: In the south face of Pile 1 there is a 3'-0" long 1/16" vertical crack. There are 1/16" wide horizontal cracks with 2'-0" of delamination on the east face of the pier cap above Pile 2. There are two 3" x 12" x 1" deep spalls with exposed reinforcing steel in the underside of the pier cap between Piles 2 and 3. There is a hairline crack on all faces of the pier cap between Piles 2 and 3. There is a 1/8" wide vertical crack on the south face of Pile 1. There are areas of map cracking on the underside of the pier cap between Piles 6 and 7 and between Piles 5 and 6.

Bent 90: Between Piles 1 through 3, there is a 10'-0" x 12" spall on both the east face and underside face of the pier cap with exposed reinforcing steel and an adjacent 5'-0" x 8" delaminated area. A shotcrete repair patch in the pier cap above Pile 4 is in good condition. There is map cracking in the underside of the pier cap between Piles 3 and 4.

Bent 91: There is a 3'-0" x 1'-6" patch on the east side of the pier cap above Pile 4.

Bent 92: There is a 1'-6" diameter x 1" deep spall in the underside of the pier cap near Pile 2. All the piles have fine horizontal cracks with water stains.

West Abutment:

The west abutment exhibits fourteen vertical hairline to 1/16" wide cracks with efflorescence. The north end of the southwest wingwall exhibits a 4" x 1'-3" x 4" deep corner spall. There is a 4'-6" x 7'-0" x 1'-3" erosion hole behind the southwest wingwall and sheet piles.

Machinery Platform

The machinery platforms in both bascule piers are corroded and tend to flex/yield under the weight of a person. The west machinery platform south of bridge centerline, exhibits severe corrosion with section loss and holes (see Photograph S73). There is also corrosion and holes in the east bascule machinery platform. The ladders accessing the machinery platforms typically show some corrosion and section loss at the connections. The east bascule pier machinery access ladder has minor section loss and two 1/2" corrosion holes at the southwest lower connection.

Handrails on both piers are in poor condition. The east handrail has a large amount of section loss near the connections to the pier (see Photograph S74); and the west handrail connection to the pier is completely deteriorated. The west handrail is in critical condition and moves excessively under minor load. The lower railing post of the south, counterweight pit entrance hand rail is disconnected from the floor connection with 100% section loss (see Photograph S75). The vertical end post of the southwest handrail is missing from the machinery platform. The missing end post appears to have been removed in order for the position transmitter of the secondary gearing. The submarine cables of the west pier are routed along the access walkway. They are supported in a manner which appears to be temporary.

Counterweights

The counterweights are in fair condition. Some cracked and spalled concrete was noted (see Photographs 76 and 77). There is also minor surface corrosion to the steel counterweight framing. There are a few small areas of hollow concrete in the east counterweight pocket. Access to the west counterweight pocket is restricted by a steel screen.

Control House

The structure of the control house generally appears to be in good condition. As with the piers, some hairline cracks were noted throughout. There is an abandoned tank and grating in the room below the operator's house (see Photograph S78). It was noted that both floor drains on the south side of the lower room of the operator's house are clogged.

Sheet Piles

The sheet piling appears to be in fair condition. The northwest sheet piling exhibits

paint chipping and moderate corrosion with localized areas of severe corrosion with 10% section loss. The southwest sheet piling exhibits large areas of paint chipping with moderate corrosion and localized areas of severe corrosion with 10% section loss.

Approach Guardrail

The approach guardrail is in satisfactory condition. The northwest approach guardrail exhibits impact damage 350'-0" from the bridge. The southwest approach guardrail exhibits impact damage 20'-0" and 50'-0" from the bridge.

Fenders and Dolphins

The fender and dolphin systems are in good condition. The metal piles of the dolphins exhibit minor peeling paint (see Photograph S79). The timber dolphins exhibit 3/16" pick penetration. The cables around the dolphins are typically loose. The battered piles behind the fender systems exhibit deterioration on the flanges with 10% section loss. The wood whalers exhibit 1/4" pick penetration. The whaler at the southeast end has a section that is completely deteriorated. The sheeting exhibits 1/8" pick penetration. There are two broken sheeting boards at the southeast fender (see Photograph S80).

Mechanical

The mechanical inspection was performed by Mr. D. M. Barrett, P.E. and Mr. L. R. Lentz, P.E., on January 2nd and 3rd, 2008.

Motors

The exterior of each motor housing is typically in fair condition with paint failure and minor to moderate corrosion (see Photograph M1). The west leaf motor lubrication purge plugs are missing leaving open holes near each shaft bearing. Both west leaf motor mounting shims exhibit pack rust and moderate corrosion. The southeast motor brake mounting frame, which is attached to the motor housing, exhibits debris build-up and failed paint.

Primary Differential Reducers

The reducers were observed externally and internally through their inspection ports. Paint failure is isolated for both the east and west reducers. In areas of paint loss minor corrosion is exhibited. The east reducer housing split exhibits debris build-up on the channel side (see Photograph M2). The east reducer is leaking oil from the north input shaft seal and the north output shaft seal. The west reducer also exhibits minor oil leaks at both input shaft seals. While visual observations note heavy foam presence following bridge operation, the lubrication analysis for each reducer found no contaminants requiring remedial action (see Appendix F). The enclosed reducer gear teeth exhibit minor wear in general with the exception of the opening face of the east leaf low speed pinion which exhibits moderate wear (see Photograph M3). No unusual noises or vibration were noted during operation.

Open Gearing

All open gear sets G2/G3 exhibit excessive backlash and excessive wear as shown in Tables M-1 and M-2 (see Photograph M4). The west leaf G2 gears and G3 pinions are scheduled for replacement in a January – February 2008 outage. The east leaf G2/G3 gear sets should be replaced in the near future (see Photograph M5).

Lubrication for all open gears was inadequate (see Photograph M6). A majority of the open gear lubrication was contaminated with debris and/or foreign objects. Regularly scheduled maintenance practices should include removing old lubricant and applying liberal amounts of fresh lubricant to the working surfaces of the teeth. Excess lubricant in the tooth roots and on the peripheries of the gearing should be removed.

The southwest rack and pinion gear set backlash, 0.264", is excessive. All other rack and pinion G1 gear set backlashes were moderately high between 0.136" and 0.168" (see Table M-2). The rack mounting bolts were typically in acceptable condition. Although the racks and pinions are partially protected by enclosures, the associated lubricant is contaminated with debris. The west leaf inboard fibrous rack protection is missing sections. A majority of the contacting surfaces for the rack teeth exhibit minor corrosion due to inadequate lubrication. Gear tooth contact between the racks and pinion G1's is generally good. Wear between the racks and G1 pinions was typically minor.

| TABLE M-1 | | | | | | | |
|------------------------|---------------------------|--|--|--|--|--|-------------------------------|
| OPEN GEAR MEASUREMENTS | | | | | | | |
| East (Near) Leaf | | | | | | | |
| Gear Identification | Chordal Addendum (inches) | 2001 Measured Chordal Thickness (Inches) | 2003 Measured Chordal Thickness (Inches) | 2005 Measured Chordal Thickness (Inches) * | 2007 Measured Chordal Thickness (Inches) | Theoretical Chordal Thickness (Inches) | % Chordal Thickness Remaining |
| North Rack | 0.841 | 1.462 | 1.481 | 1.460 | 1.455 | 1.568 | 92.79% |
| North Pinion, G-1 | 0.841 | 1.463 | 1.471 | 1.549 | 1.454 | 1.568 | 92.73% |
| North Gear, G-2 | 0.461 | 0.775 | 0.771 | 0.780 | 0.720 | 0.898 | 80.18% |
| North Pinion, G-3 | 0.461 | 0.744 | 0.748 | 0.788 | 0.753 | 0.896 | 84.04% |
| South Rack | 0.841 | 1.475 | 1.483 | 1.497 | 1.475 | 1.568 | 94.07% |
| South Pinion, G-1 | 0.841 | 1.483 | 1.479 | 1.576 | 1.478 | 1.568 | 94.26% |
| South Gear, G-2 | 0.461 | 0.812 | 0.804 | 0.870 | 0.768 | 0.898 | 85.52% |
| South Pinion, G-3 | 0.461 | 0.716 | 0.704 | 0.780 | 0.702 | 0.896 | 78.35% |
| West (Far) Leaf | | | | | | | |
| North Rack | 0.841 | 1.462 | 1.468 | 1.425 | 1.452 | 1.568 | 92.60% |
| North Pinion, G-1 | 0.841 | 1.463 | 1.463 | 1.528 | 1.448 | 1.568 | 92.35% |
| North Gear, G-2 | 0.461 | 0.768 | 0.764 | 0.836 | 0.745 | 0.898 | 82.96% |
| North Pinion, G-3 | 0.461 | 0.678 | 0.660 | 0.738 | 0.660 | 0.896 | 73.66% |
| South Rack | 0.841 | 1.478 | 1.485 | 1.435 | 1.464 | 1.568 | 93.37% |
| South Pinion, G-1 | 0.841 | 1.457 | 1.464 | 1.538 | 1.463 | 1.568 | 93.30% |
| South Gear, G-2 | 0.461 | 0.680 | 0.648 | 0.709 | 0.637 | 0.898 | 70.94% |
| South Pinion, G-3 | 0.461 | 0.745 | 0.718 | 0.790 | 0.711 | 0.896 | 79.35% |

* - chordal addendum used (0.576") for G2/G3 was for full depth teeth which would theoretically increase tooth thickness 0.084" from the correct addendum (0.461") for stub teeth

| TABLE M-2 | | | | | | |
|------------------------|-------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|-------------------------------|
| BACKLASH MEASUREMENTS | | | | | | |
| | Mated Gears | 2001 Measured Backlash (Inches) | 2003 Measured Backlash (Inches) | 2005 Measured Backlash (Inches) | 2007 Measured Backlash (Inches) | Theoretical Backlash (Inches) |
| East Leaf - North Side | G1-Rack | 0.135 | 0.160 | 0.166 | 0.168 | N/A |
| | G2-G3 | 0.340 | 0.312 | 0.338 | 0.342 | 0.030-0.050 |
| East Leaf - South Side | G1-Rack | 0.145 | 0.257 | 0.158 | 0.158 | N/A |
| | G2-G3 | 0.169 | 0.263 | 0.377 | 0.268 | 0.030-0.050 |
| West Leaf - North Side | G1-Rack | 0.135 | 0.253 | 0.135 | 0.136 | N/A |
| | G2-G3 | 0.245 | 0.229 | 0.235 | 0.305 | 0.030-0.050 |
| West Leaf - South Side | G1-Rack | 0.375 | 0.343 | 0.263 | 0.264 | N/A |
| | G2-G3 | 0.430 | 0.480 | 0.485+ | 0.485+ | 0.030-0.050 |

Bearings

All span drive bearings are plain bronze journal type bearings. Shaft to bushing clearances taken at accessible bearings are listed in Table M-3. It should be noted that the northwest and southwest B4 bearings are scheduled to be replaced in the January – February 2008 outage. The west leaf B3 bearings are scheduled to be adjusted for an ANSI RC6 fit using their liners during this year's outage also. The B1 and B3 bearings are accessible for clearance measurements. The northeast B3 bearing is the only accessible bearing which does not fall within an ANSI RC9 fit for worn bearings. This bearing should be adjusted by removing liners. A temporary undersized mounting bolt is being used at the northwest bearing B3 (see Photograph M7).

All bearings typically exhibited various degrees of housing and fastener corrosion. The most significant corrosion is occurring on the channel side of the east leaf bearings. These locations exhibit delamination due to severe corrosion (see Photograph M8). Southwest bearing B2 exhibited moderate to severe corrosion of its mounting and cap fasteners, especially at the southeast mounting bolt (see Photograph M9).

Local lubrication appears to be adequate at all bearings. The B1 bearings typically have lubrication lines running from another area on the bridge. The lubrication line couplers are moderately corroded (see Photograph M10).

| TABLE M-3 | | | | | | | | | | |
|------------------------|------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------|----------|---|---|--|
| BEARING MEASUREMENTS | | | | | | | | | | |
| Leaf - Side | Bearing ID | 2001 Clearance (Inches) | 2003 Clearance (Inches) | 2005 Clearance (Inches) | 2007 Clearance (Inches) | Insertion (Inches) | Location | ANSI RC6 Maximum Bearing Clearance (Inches) | ANSI RC9 Maximum Bearing Clearance (Inches) | Increase in Clearance from 2005 (Inches) |
| East Leaf - North Side | B1 | 0.035 | 0.035 | 0.023 | 0.023 | Through | 2:00 | 0.011 | 0.034 | 0.000 |
| | B3 | 0.026 | 0.059 | 0.062 | 0.020 | Through | 12:00 | 0.010 | 0.028 | 0.000 |
| | | | | | 0.040 | 2 | 12:00 | | | |
| | | | | | 0.060 | 1 | 12:00 | | | |
| East Leaf - South Side | B1 | 0.020 | 0.031 | 0.026 | 0.026 | Through | 9:00 | 0.011 | 0.034 | 0.000 |
| | B3 | 0.017 | 0.021 | 0.024 | 0.020 | Through | 12:00 | 0.010 | 0.028 | 0.000 |
| West Leaf - North Side | B1 | 0.025 | 0.027 | 0.021 | 0.025 | 4 | 3:00 | 0.011 | 0.034 | 0.004 |
| | | | | | 0.021 | 8 | 3:00 | | | |
| | | | | | 0.018 | 11 | 3:00 | | | |
| | B3 | 0.022 | 0.023 | 0.025 | 0.023 | Through | 12:00 | 0.010 | 0.028 | 0.000 |
| | | | | 0.025 | 2 | 12:00 | | | | |
| West Leaf - South Side | B1 | 0.028 | 0.024 | 0.026 | 0.028 | 4 | 9:00 | 0.011 | 0.034 | 0.002 |
| | | | | | 0.024 | 6 | 9:00 | | | |
| | | | | | 0.021 | 11 | 9:00 | | | |
| | B3 | 0.013 | 0.012 | 0.018 | 0.018 | Through | 9:30 | 0.010 | 0.028 | 0.000 |

Shafts, Collars and Couplings

The grid motor coupling paint has failed. The hub seals typically leak. The motor coupling covers rock during change of direction and a minor ticking noise is emitted during operation. This is a sign that the internal grid element could be compromised. The southwest motor coupling cover is missing 2 of 6 bolts. The southeast motor coupling cover and hubs exhibit minor to moderate corrosion, and its key is loose both radially and axially (see Photograph M11). This key also engages the adjacent emergency brake wheel keyway. The northwest motor coupling is missing the inboard and outboard lubrication purge plugs.

The west leaf C1 and C4 couplings are scheduled to be replaced during the January – February, 2008 rehabilitation. The east leaf C1 (southeast) and C4 (northeast) couplings are in poor condition. Moderate corrosion in general and severe corrosion with delamination of the lower half of the covers and cover fasteners is typical (see Photograph M12). The north hub seal for the southeast C1 coupling is torn and dislodged. Tape is being used to seal the hubs to the covers at the northeast C4 coupling (see Photograph M13). All coupling covers and hubs move relative to one another during change of direction. This is a sign that the internal grid element could be compromised.

The shaft collars exhibit isolated paint failure but little to no surface corrosion (see Photograph M14). Collar 4 in the northeast and collars 2-4 in the southeast are loose.

All shafts exhibit isolated moderate to significant corrosion especially at the bottom surface when the bridge is in the closed position (see Photograph M15). The northeast shaft S1 exhibits moderate corrosion and pitting at the gear G2 hub.

Brakes

All brake shoe lining thicknesses were measured and are listed in Table M-4.

The motor brakes, located on the rear shaft extension of each span drive motor, are Mondel thruster-operated drum brakes. Minor to moderate corrosion of the motor brake linkages and frames is present (see Photograph M16). A majority of the brake pull rods exhibited severe pitting from corrosion. Increased corrosion levels are new since the last biennial inspection and are due to the lack of protective paint on the components. All shoe lining clearance was acceptable in the motor brake set and released positions except for the northeast motor brake which does not exhibit clearance between the linings and brakewheel in the released position. The linings and brakewheel do not exhibit excessive heat build-up during bridge operation. The southwest motor brake thruster oil level was ½" low.

The emergency brakes are solenoid-operated drum brakes. The emergency brakes are in fair to poor condition. The northwest emergency brake shoe linings are the most worn at 0.17" thick. Both west leaf emergency brakes exhibit loose mounting bolts. The limit switch arms for all emergency brakes are made up of flimsy wire (see Photograph M17). These trip arms are not rigid enough to withstand accidental

contact from tools or maintenance personnel working in the area. The emergency brakewheels exhibit minor scoring and moderate corrosion and pitting on the non-contacting surfaces.

| TABLE M-4 | | | | |
|--------------------------------|----------------------|--------------------------------|--------------------------------|--------------------------------|
| BRAKE SHOE LINING MEASUREMENTS | | | | |
| | Brake Identification | 2003 Lining Thickness (Inches) | 2005 Lining Thickness (Inches) | 2007 Lining Thickness (Inches) |
| East Leaf - North Side | Tail Lock | 0.23 | 0.25 | 0.25 |
| | Motor | 0.25 | 0.25 | 0.22 |
| | Emergency | 0.23 | 0.22 | 0.22 |
| East Leaf - South Side | Tail Lock | 0.27 | 0.31 | 0.31 |
| | Motor | 0.20 | 0.22 | 0.23 |
| | Emergency | 0.25 | 0.22 | 0.28 |
| West Leaf - North Side | Tail Lock | 0.25 | 0.25 | 0.22 |
| | Motor | 0.22 | 0.66 | 0.22 |
| | Emergency | 0.20 | 0.19 | 0.17 |
| West Leaf - South Side | Tail Lock | 0.25 | 0.31 | 0.25 |
| | Motor | 0.25 | 0.63 | 0.23 |
| | Emergency | 0.25 | 0.19 | 0.25 |

Tail Locks

Generally, the tail lock assemblies are in fair to poor condition. The motor and reducer housings as well as the supports and linkages exhibit paint failure and moderate surface corrosion (see Photograph M18). Several frame mounting bolts and motor mounting bolts are loose, missing, or severely corroded. No safety interlock switch is provided for manual operation at the rear motor shaft extension.

The northwest tail lock assembly exhibits several deficiencies. The motor is missing the northeast mounting bolt. The brake frame which is attached to the motor is loose. The northwest tail lock support frame mounting bolt is severely corroded (see Photograph M19). The northwest tail lock rotary limit switch drive chain is very loose (see Photograph M20). This tail lock exhibited the greatest amount of clearance, $\frac{3}{4}$ ", under the span-mounted tail lock shoe. The linkage orientation in the fully driven position is not in-line and therefore not self-locking. The lock was operated manually to an in-line position with no interferences.

The southeast tail lock brake does not provide sufficient braking torque. At the end of travel in the drive direction the linkage sags under its own weight (back-driving and retracting slightly) before stopping.

The northeast tail lock reducer oil level is very low. The linkage orientation in the fully driven position is not in-line and therefore not self-locking (see Photograph M21). The lock was operated manually to an in-line position with no interferences.

| TABLE M-5 | | | |
|------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| TAIL LOCK MEASUREMENTS | | | |
| | 2003 Tail Lock Clearance (Inches) | 2005 Tail Lock Clearance (Inches) | 2007 Tail Lock Clearance (Inches) |
| East Leaf - North Side | 0.75 | 0.375 | 3/8" |
| East Leaf - South Side | 0.75 | 0.495 | 5/16" |
| West Leaf - North Side | 0.88 | 0.875 | 3/4" |
| West Leaf - South Side | 0.5 | 0.625 | 5/32" |

Auxiliary (manual) Span Drive

The auxiliary span drive components are seized in place due to inadequate lubrication. Moving parts have also been painted over. Several chains and hand crank keys are missing (see Photograph M22).

Air Buffers

The air buffers appear to be in fair condition. The counterweight arms and needle valve handles exhibit no paint and moderate corrosion (see Photograph M23). The piston rods do not extend under their own weight during every span operation. A mounting bolt is missing on the northwest air buffer.

Live Load Bearings

The southeast live load bearing exhibits contact in the bridge closed position. The northeast live load shoe exhibits 0.010" clearance and minor pumping under live loading. The northwest live load shoe exhibits 0.085" clearance and pumping under live loading. The overall condition of the live load shoes, strike plates, fasteners, and adjacent support steel is fair due to poor paint and minor to moderate corrosion.

Segmental Girder Track and Pier-Mounted Tread Plates

The condition of all tracks and treads is fair. Contact areas exhibit severe scoring and displaced metal. Several lugs on the tread plates exhibit 3/8"-1/2" of weld build-up from the past. The tread plate anchor bolts and the mounting bolts between the track and the segmental girders are delaminating due to severe corrosion. The most significant corrosion is occurring on the components closest to the channel (see Photographs M24 and M25).

Span Balance Drift Test

The drift test data is listed in Table M-6. The amount of movement in degrees of bascule leaf rotation is shown. This rotation occurred when the operator changed the trolley control from power point 3 to the "drift" position on the operator's console. The "drift" position de-energizes the span drive motors and keeps the motor and emergency brakes released. This test was performed two times every 15 degrees when raising and lowering each leaf. The amount of drift at all positions does not raise any concern that poor balance conditions exist. The near-future rehabilitation

during the January – February 2008 outage includes some grid deck work. Span balance should be monitored closely during this work.

| TABLE M-6 | | | | |
|---|------------------|-------|-----------------|-------|
| Drift Test - Degrees Movement of Bascule Leaf | | | | |
| Span Position | East (Near) Leaf | | West (Far) Leaf | |
| | Raise | Lower | Raise | Lower |
| 15 | 2 ↑ | 3 ↓ | 2 ↑ | 4 ↓ |
| 30 | 2 ↑ | 2 ↓ | 3 ↑ | 4 ↓ |
| 45 | 2 ↑ | 2 ↓ | 2 ↑ | 5 ↓ |
| 15 | 1 ↑ | 3 ↓ | 3 ↑ | 4 ↓ |
| 30 | 4 ↑ | 2 ↓ | 2 ↑ | 4 ↓ |
| 45 | 3 ↑ | 1 ↓ | 2 ↑ | 4 ↓ |

Note 1. Leaf speed for all drift tests started from power point 3 on console.

Note 2. Winds were 10-20 MPH to the east.

Over-travel Bumpers

The over-travel bumpers mounted to the bascule piers were in good condition. They exhibit minor deterioration and debris build-up.

Warning Gates

The warning gates were generally in good mechanical condition. Several access door hinge wing nuts are missing and/or the latches are broken (see Photograph M26). A majority of the gates exhibit loose main cross shaft flange bearing mounting bolts (see Photograph M27). The reducer housings typically exhibit minor paint failure and corrosion. The northeast warning gate enclosed gear reducer oil level is low. The lock for the outboard northeast access door does not function.

The southwest gate arm guy wire u-bolts exhibit moderate corrosion and one is missing a nut (see Photograph M28). The southeast anchor bolt for this gate exhibits minor corrosion (see Photograph M29).

Please refer to the Traffic Control section in the electrical report for further observations.

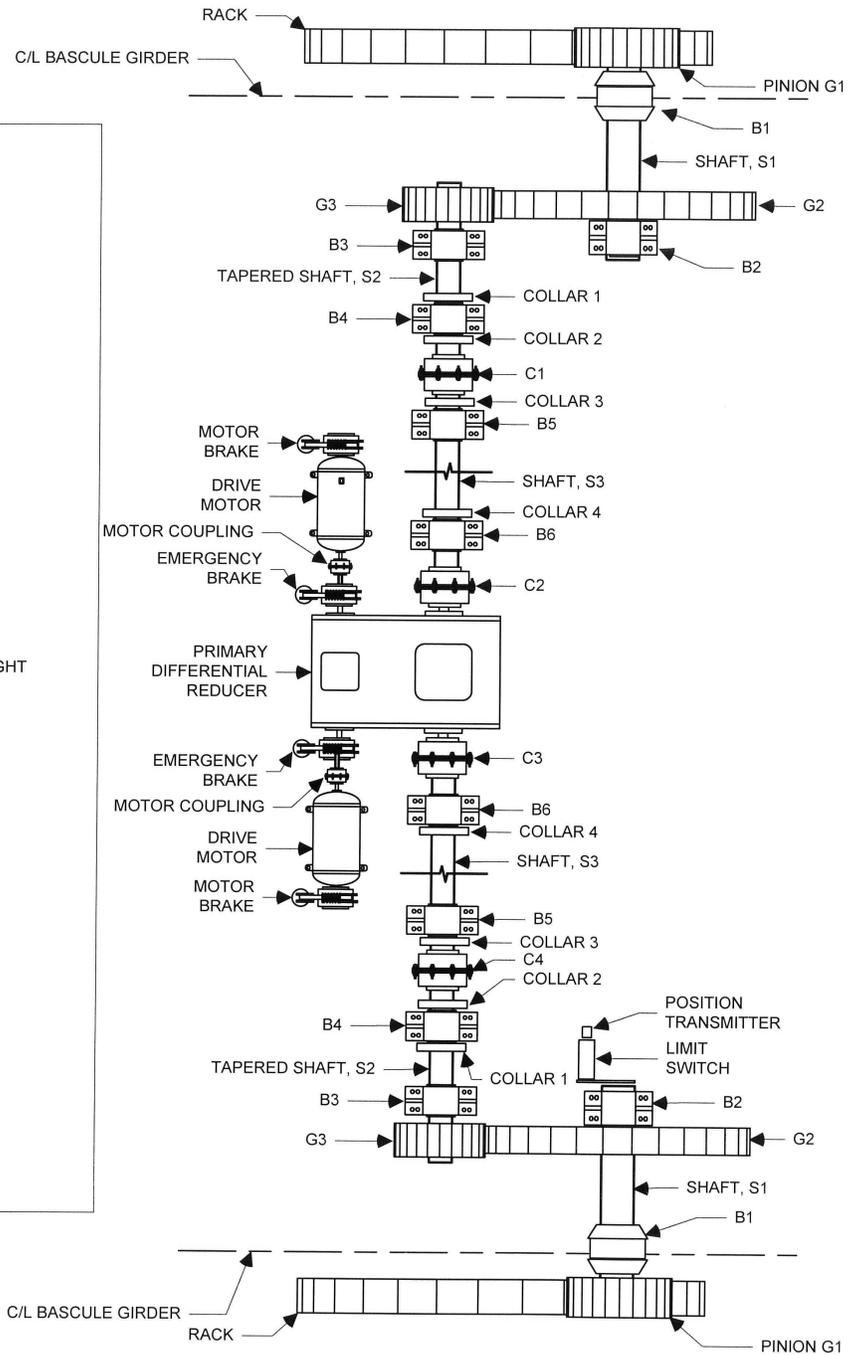
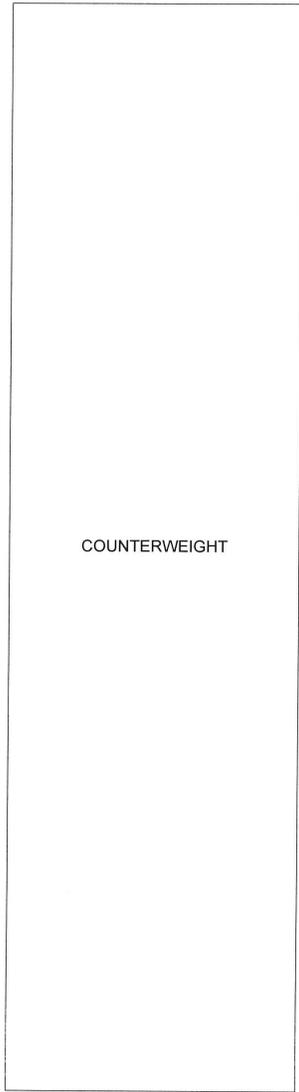


Figure M 1 – Span Drive Machinery Layout

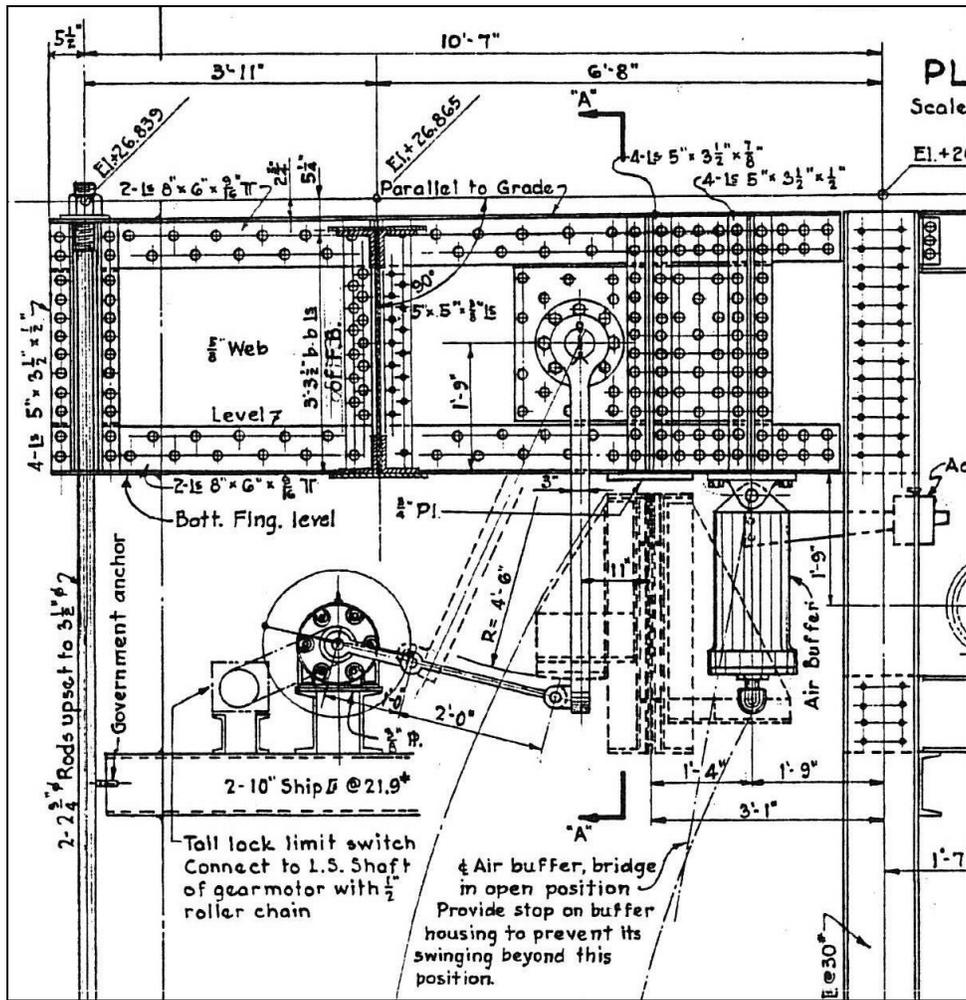


Figure M 2 – Tail Lock

Electrical

The electrical equipment on the bridge is in satisfactory to fair condition. Several observations indicate NEC and AASHTO code violations which are described herein.

The electrical inspection entailed visual inspection, removal of electrical covers for detailed inspection, and recording test readings which can be found in Appendix G: Electrical Equipment Data.

Power Distribution System

Electrical service to the bridge is located on southeast abutment (Photograph E1). This service has a utility company sealed meter socket, wireway and disconnect. This 240V, 3 phase, 4 wire service equipment feeds bridge load and is in good condition. The service feeder from this equipment is routed along the east approach and terminates in the motor control cabinet located at the lower level of the control house.

The bridge is provided with a 125KW emergency generator, (see Photograph E9) which acts as a stand-by source of power. This generator is connected to the utility service through an auto-transfer switch which in turn feeds bridge load and remains ready whenever the utility (normal) source fails.

This emergency source is being maintained by specialized maintenance staff. The condition of all generators, panels and attached equipment is in good condition and will provide reliable long-term service if maintained properly.

Motor Control Panel (MCP) and Cabinets

The motor control panel (Photograph E8) contains starters, relays, breakers and contacts for controlling all motors and brakes. The wires and terminals are arranged properly. They have termination tags for proper identification.

The MCP is located on the lower level of the control house. In addition, a load contactor cabinet and resistors which serve the main drive motors are located in the lower level.

Both the MCP and contactor cabinets are in good condition and should provide reliable long-term service.

Control Console

The control console is located in the operator's room in a floor mounted custom fabricated steel enclosure. The console contains push-buttons, selector switches, indicating lights to operate traffic control signals, warning gates, lock motors, span motors and brakes. All push buttons, selector switches and indicating lights are 30 mm oil tight devices complete with laminated nameplates. Photograph E3 shows the top view whereas Photograph E5 shows the space under the console.

The control console is located conveniently so that the operator has a clear view of

the roadway as well as navigational traffic. All pushbuttons are within easy reach of the operator.

All wires are brought from the terminal boards to their respective terminals in a neat and orderly arrangement. All meters and buttons looked new other than the two pushbuttons at the bottom left corner which were covered with masking tape. These pushbuttons are not used, (see Photograph E4). It is recommended to remove them and patch unused holes. The console does not have an emergency stop red head mushroom pushbutton. Overall the console is in good condition and is expected to provide long-term service if maintained properly.

Main Drive Motors

Bridge operation is accomplished by two main drive motors for each leaf, see Photographs E15 and E16. The nameplate data for each motor is recorded in Figures E-2 thru E-5 (Appendix G).

Individual motor insulation values were taken and recorded in Figure E33 in Appendix G. Similarly, individual motor loads were taken and recorded in Figure E-35 and E-36. The insulation and load data taken indicate the motors are in fair condition.

The motors were inspected visually and a detailed inspection was done by removing inspection covers where the condition of the motor interior, brakes, and condition of slip rings were checked. The motor interior did not show any deficiencies. The motor windings appeared healthy. Wiring at the connecting terminals is in good condition. The inside of the motor body is rust-free. The motor conduit boxes and wires are in fair condition.

There are no disconnects installed near the motors which are required as per the NEC 230 and the AASHTO "Bridge Inspection Evaluation and Maintenance Manual".

Span Brakes

There are two motor brakes and two emergency brakes provided on each bascule leaf, see Photographs E15 and E16. The motor brakes are thruster type whereas the emergency brakes are solenoid type. The nameplate information and condition of each is provided in Figures E-10 thru E-17 in Appendix G.

The motor brakes are in very good condition and are expected to serve in the long-term if maintained properly.

The emergency brakes are in satisfactory condition. They are showing signs of rust and aging. They will require more maintenance than the motor brakes. Their limit switches are functioning properly.

As stated in Figures E-10 thru E-17, no local disconnects are provided for the motor and machinery brakes. This is a violation of the NEC 230 and the AASHTO code. These disconnects are required for safety of maintenance and inspection staff.

In the absence of local disconnects megger readings were taken at the motor control panel which includes the values of the motor and the connected feeders. Overall, the above motors are in fair to good condition. The insulation values of the west motor brake no. 2 and west emergency brake no. 1 are low as compared to the others but are still above the minimum required as per AASHTO and NETA.

Lock Motors

There are 4 lock motors, two for each leaf. The nameplate data and condition of each is described in Figures E-5 thru E-9. These motors drive the tail locks which, in the driven position with the leaf seated, prevent each leaf from opening.

As seen in Photograph E20 there is a solenoid brake and drive gearmotor associated with each lock. The brakes are solenoid type. As per NEC 430 and AASHTO there should be a disconnect for each individual component. In this case a common disconnect is being utilized for both the brake and the lock motor. This is a violation for both NEC and AASHTO codes.

Insulation resistance value for the above motors was recorded separately and for the motors and feeders combined. The measurements were taken at the local disconnects and at the motor control panel respectively. The motors alone indicate a good insulation (Figure E-34) whereas in Figure E-33, they show a low insulation value. This needs to be further tested and possibly corrected. It is suspected that the insulation provided by the cables may not be adequate.

Limit Switches

Limit switches are provided to control, interlock and indicate the positions of warning gates, span locks, span brake linkages and the movable span itself.

Each leaf is provided with a 12 cam rotary limit switch (see Photograph E17). Their condition is described in Figures E-20 and E-21 respectively. Their condition is good. One fully seated limit switch is provided on each of the east and west leaves, see Photograph E13. Their installation condition is described in Figures E-26 & E-27. Their condition is fair, and they should provide reliable service if maintained properly.

There are four 6 position rotary cam limit switches used for controlling the lock motors and related span interlocking with controls. Their installed condition is described in Figures E-22 thru E-25. Also refer to Photograph E7 for a typical view. Their condition is good, and they will continue to provide reliable service if maintained properly.

The warning gate operation and indication is carried out thru 8 position rotary cam limit switches installed at each controller. They are in fair condition.

Inside each machine room, both emergency and motor brakes are provided with brake release or set and hand released limit switches for interlocking and indication. They are in fair condition.

The tail lock brakes should be provided with a manual operation limit switch installed

to prevent operation of the lock motors from control console when the brake is manually released. This is not provided.

Transmitters

Position transmitters as seen in Photograph E17 are located near the rotary cam limit switches on each machinery platform. They send movable span position indication to the control desk receiver.

These transmitters appear in good condition and should provide reliable service for the long-term.

Traffic Control

For traffic control there are four warning gates, two traffic signal poles and a warning signal.

For traffic signals as seen in Photograph E2 there are two pairs of traffic signal lights mounted on a mast arm poles. Each pair contains red, green and amber lights. These lights are clearly seen by the traffic, properly oriented and mounted on the mast arm. A similar traffic signal pole is for both directions.

The four warning gates (3 of them shown in Photographs E10 thru E12) were opened for inspection. Their condition as described in Figures E-28 thru E-31 are fair.

On the southwest warning gate the door limit switch is still supported by a plastic strap. Its gate limit switch contact is missing. This is the same condition from the 2005 inspection. On the northeast and northwest warning gates the door limit switches are hard to press, and they should be lubricated.

Warning signals are required to warn traffic of possible bridge operation. On the east side there is a signal installed which is in good condition, but on west side there is no such warning signal installed.

Navigational Lighting

Red fender navigation lights are in working order, but their condition needs improvement. As seen in Photograph E23, the raceway feeding the light is a trip hazard. This light should have been connected using the raceway below the deck. On the southwest fender (Photograph E25) the red navigation light exhibits a broken locking latch. The red/green navigation lights as seen on Photograph E19 are in fair condition. The southwest red/green span mounted light was not operational at the time of our inspection.

Submarine Cables and Terminal Cabinets

Submarine cables are used to cross waterways and provide power from the motor control cabinet and contactor panel to the span motors, warning gates, lock motors and associated controls.

Existing MC cables which were used as submarine cables have been abandoned

and replaced with new, refer to Photograph E14. This is an improvement since the previous inspection done in November 2005. The abandoned MC cables should be removed.

The original submarine cabinets are in poor condition and should be removed. The new submarine cabinets are in very good condition.

Droop Cables

Droop cables are used to provide slack between fixed raceways and movable terminal boxes. This circumstance is found at the connection to the span motors, brakes and navigational lights.

The droop cables and movable terminal boxes are in fair condition; however, the movable terminal box as seen in Photograph E24 contains a wooden backboard. Wood is not recommended in electrical cabinets and boxes due to its combustibility and lack of durability.

Raceways and Wiring

The raceways are in fair condition in general. There are certain locations where improvements can be made.

In Photograph E21, the raceway connecting to the navigation lights is not properly supported. This conduit vibrates during bridge operations. Under the far (west) span the existing raceways, wires and boxes which are abandoned should be removed, refer to Photograph E22. Similarly, as seen in Photograph E26, the existing unused raceways and wires can be removed. All three locations listed above are conditions listed in the previous inspection.

Lighting

Lighting over the bridge roadways is done thru pole arm mounted cobra head light fixtures. These poles are evenly spaced and should provide IES recommended foot candles. However since the inspection was carried out during day time hours, the light levels could not be verified.

Lighting fixtures inside the tender house, see Photograph E6, and in front of motor control cabinet as seen in Photograph E18 are in poor condition. They need to be replaced with new.

APPENDIX A: STRUCTURAL PHOTOGRAPHS



Photograph S1 - General south elevation view.



Photograph S2 - General north elevation view.



Photograph S3 - General east elevation view.



Photograph S4 - General west elevation view.



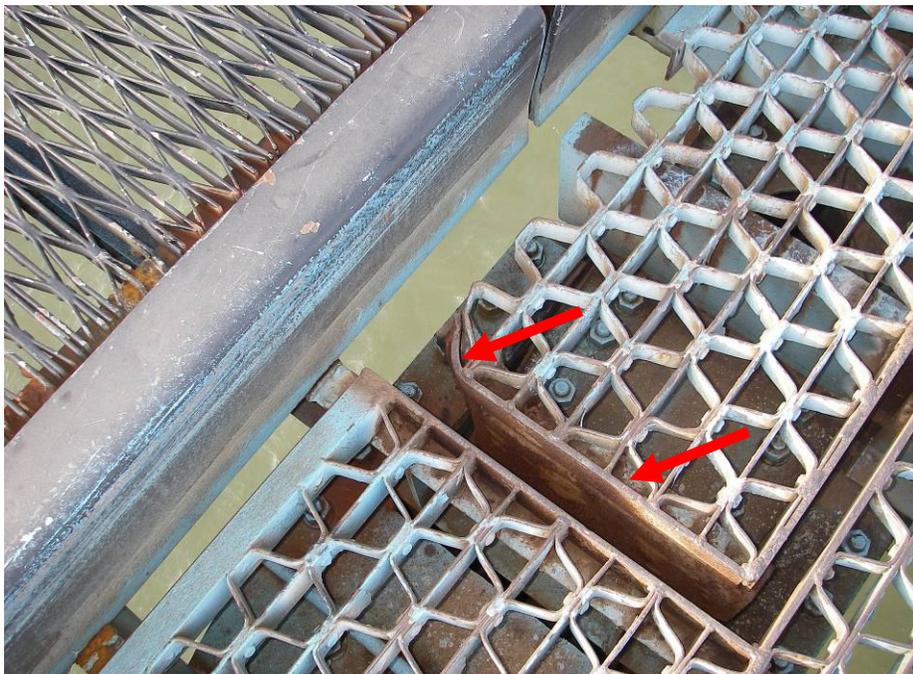
Photograph S5 - Span Unit 2. View of map cracking in Lane 1.



Photograph S6 - Span Unit 3. View of typical patches throughout deck.



Photograph S7 - Span Unit 4, concrete filled grid deck portion of the west bascule leaf. The north fixed sidewalk curb underside is spalled adjacent to the filled grid deck



Photograph S8 - Span Unit 4, west leaf, north side of the open grid deck. View if the open grid deck with bent grating at the opening between leaves (arrows).



Photograph S9 - Span Unit 4, west leaf heel joint. View of a 6" x 3" x 2" spall in a repair at the centerline of the bridge.



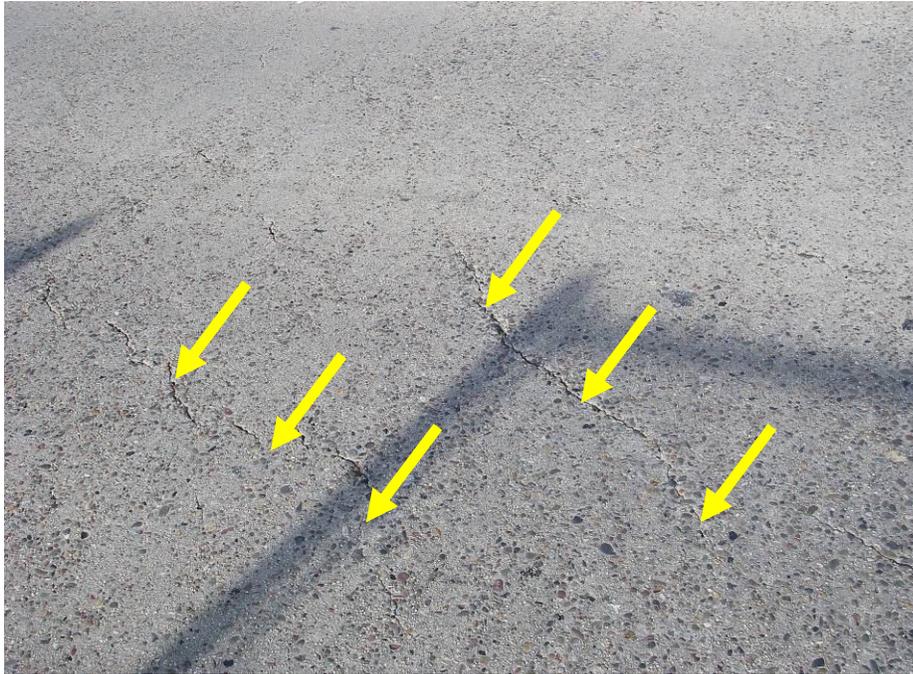
Photograph S10 - Span Unit 6, 35'-0" west of the east joint. View of two repaired 5" diameter x 1/2" deep spalls.



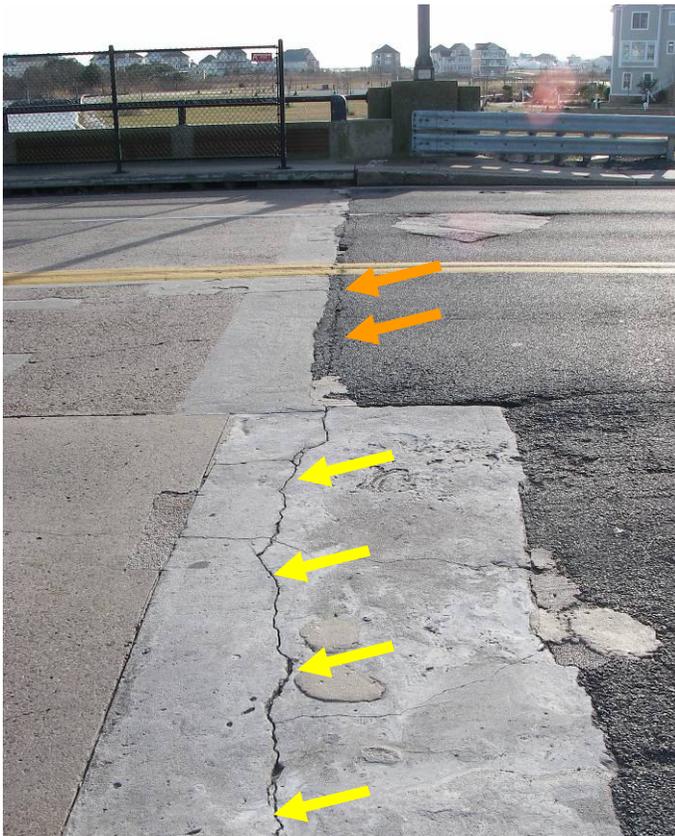
Photograph S11 - Span Unit 6.
View of a 12'-0" x
12'-0" area of
patches that
exhibit hairline
transverse crack
in Lane 4, 60'-0"
from the east
joint.



Photograph S12 - Span Unit 10. View of typical deck spalls and failing patches (arrows)



Photograph S13 - Span Unit 18. View of numerous 1/8" wide cracks near mid-span in Lane 3 (arrows).



Photograph S14 - Span Unit 24, west end. View of a 1/4" wide transverse crack through a repair patch in Lane 1 (yellow arrows) and a 6'-0" long 1/8" wide crack extending from the repair in Lane 2 (orange arrows).



Photograph S15 - Southeast crossing gate. View of the misaligned platform attachment brackets.



Photograph S16 - East approach, north parapet. View of the missing route number sign.



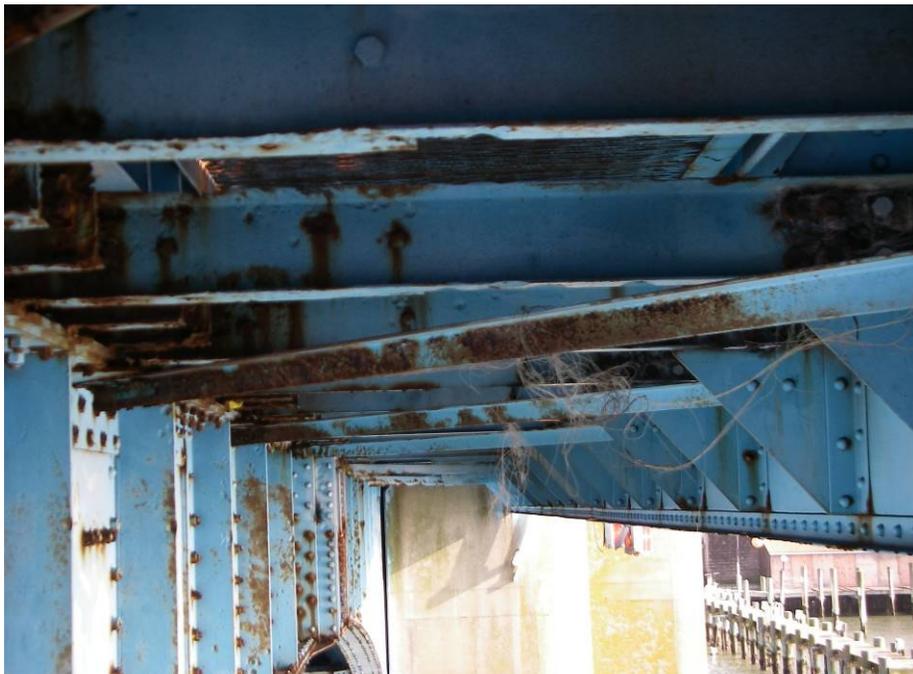
Photograph S17 - East approach, south sidewalk. There is no chain link fence in Span Unit 3.



Photograph S18 - View of the typical bascule span sidewalk grating with minor corrosion and deterioration.



Photograph S19 - North sidewalk underside of the bascule span. View of the typical bascule span sidewalk supporting steel in serious condition.



Photograph S20 - South sidewalk underside, south end of bascule span. View of the typical bascule span sidewalk supporting steel minor to moderate corrosion.



Photograph S21 - North bascule sidewalk, mid-span between the east and west leaves.
View of the east leaf sidewalk which is 1" lower than the west leaf sidewalk.



Photograph S22 - View of bascule access hatch bolted cover plates in the north sidewalk.



Photograph S23 - Span Unit 4, south sidewalk. View of typical spalling and scaling throughout the entire bridge sidewalk.



Photograph S24 - Span Unit 5, south sidewalk. View of the chain link fence with missing post cap.



Photograph S25 - Span Unit 5, south sidewalk. View of the typical bent chain link fence base plate with surrounding spalls.



Photograph S26 - Span Unit 5, south sidewalk. View of the typical horizontal chain link fence rail deterioration/bent/disconnection.



Photograph S27 - Span Unit 20, north bridge railing. View of the bent railing.



Photograph S28 - Span Unit 21, north sidewalk, east joint. View of the full depth spall.



Photograph S29 - Span 1, south end. View of the power generator housing which prevents inspection of the south portion of the deck soffit.



Photograph S30 - Span 7, south exterior beam. View of three transverse hairline cracks with efflorescence.



Photograph S31 - East Bascule Leaf, south edge. View of the typical substringer serious condition.



Photograph S32 - Substringer 2, west bascule leaf, south end. View of the full height web crack (arrows).



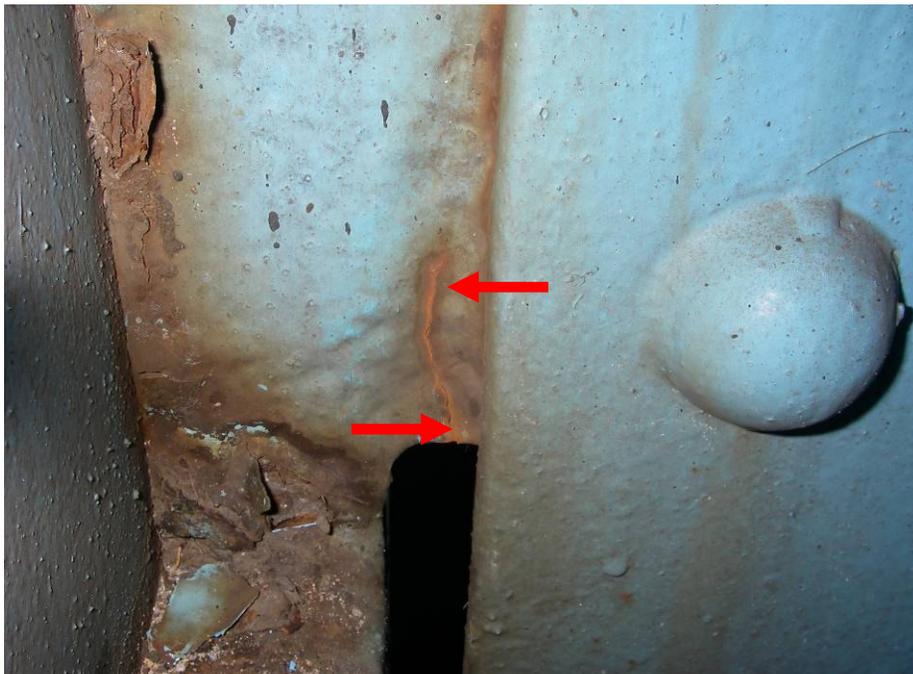
Photograph S33- Substringer 3, east bascule leaf, Stringers 2 to 3 at Stringer 2. View of the completely separated substringer (arrow).



Photograph S34- Stringer 5, Floorbeams 2 to 3, east bascule leaf. View of typical pitting and corrosion on the bascule span stringers.



Photograph S35- Stringer 4 at Floorbeam 3, the east leaf. The top cope crack measures $\frac{3}{4}$ " in length (arrows).



Photograph S36- Stringer 4 at Floorbeam 3, east leaf. The bottom cope crack measures $1\frac{1}{2}$ " in length (arrows).



Photograph S37 - Floorbeam 1, west face, east bascule leaf. View of the typical pitting, bottom flange corrosion, and 2" diameter corrosion holes (arrow).



Photograph S38 - South bascule girder, west leaf, north edge. View of the minor to moderate corrosion, corrosion holes (arrows), and pitting.



Photograph S39 - North bascule girder, west leaf, north edge. View of the minor to moderate corrosion.



Photograph S40 - South bascule girder at rack girder, west leaf. View of the accumulation of debris on the bottom flange.



Photograph S41 - North lane west leaf. View of the approximate 1/2" height difference between the west leaf and the east leaf.



Photograph S42 – North bascule girder, east leaf. View of the interlock metalwork.



Photograph S43 - North bascule girder, north interlock. View of the crack in the roadway channel support plate (arrows).



Photograph S44 - South bascule girder, south interlock. View of the minor impact damage. The north interlock has identical impact damages.



Photograph S45 - South bascule girder, west leaf, south face of the web. View of the typical deteriorated condition of the fastener heads.



Photograph S46 - North bascule girder, east leaf, bottom flange. View of the typical deteriorated condition of the exposed portions of the fasteners.



Photograph S47 - Span 15, 2nd longitudinal construction joint from the north. View of the typical minor scaling.



Photograph S48 - Span 17, north edge. View of a typical 3/8" crack (arrows) and surrounding delamination.



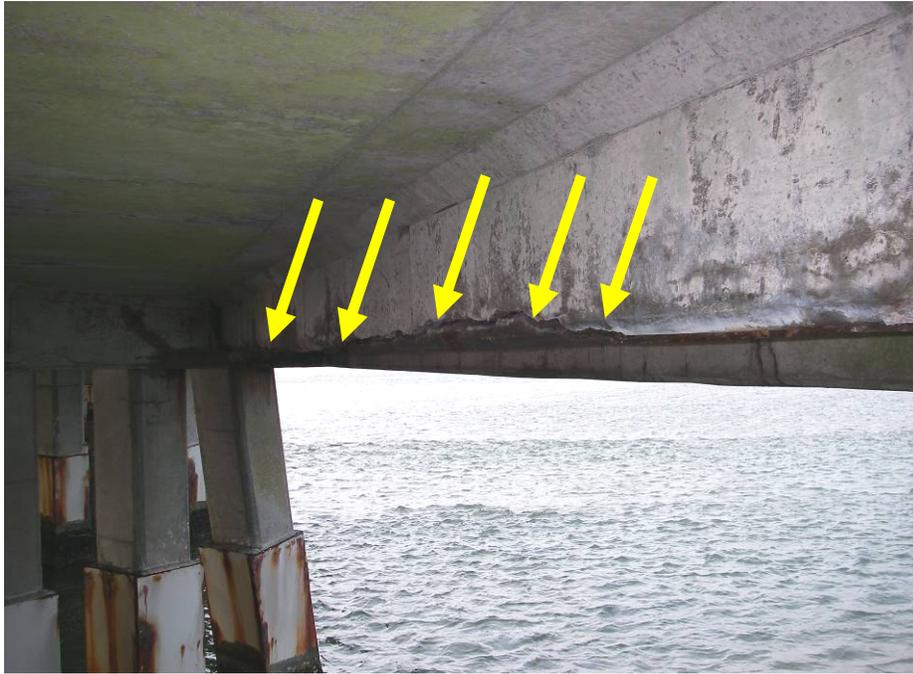
Photograph S49 – Span 33, north sidewalk soffit. View of the typical spalled areas, failed shotcrete repairs, and delamination.



Photograph S50 – Span 51, south sidewalk soffit. View of the typical spalling with exposed reinforcing steel adjacent to fiberglass sheeting.



Photograph S51 - General elevation view of diagonal bent spans looking north.



Photograph S52 - Span 73, Beam 1. View of the full length crack and up to 2" wide (arrows) with surrounding delamination.



Photograph S53 - Span 74, T-beams 1, 2, and 3. View of severe cracks along the bottom of the beams measuring full length and up to 2" wide with surrounding delamination.



Photograph S54- Span 75, T-beam 8. View of the corrosion staining (red arrows) and hairline cracks (yellow arrows).



Photograph S55- Span 85, Bent 2 to 3, north edge. View of a 2" wide delaminated area surrounding the 3'-0" diameter x 2" deep spall.



Photograph S56 - Span 89, north exterior beam. View of the conduit severely corroded and disconnected (arrow).



Photograph S57 - Span 92, east end, south sidewalk soffit. View of the plywood formwork.



Photograph S58 - East abutment. View of a hairline crack with efflorescence.



Photograph 59 - West abutment. View of the hairline cracks with efflorescence.



Photograph S60 - Bent 1, Pile 1, east face. View of several minor cracks with efflorescence.



Photograph S61 - Bent 34, Pile 1, east face. View of typical minor cracking in the pier cap.



Photograph S62 - Bent 14, Pile 7, west face. View of typical spalling with exposed reinforcing steel.



Photograph S63 - Bent 83, Piles 3 to 4, east face. View of large spall with exposed reinforcing steel.



Photograph S64 - Bent 92, Pile 5, east face. View of four typical horizontal hairline cracks (arrows).



Photograph S65 - Bent 25, Pile 7, west face. View of a 1/16" wide vertical crack.



Photograph S66 - Bent 5, Pile 4, east face. View of the minor surface spalls.



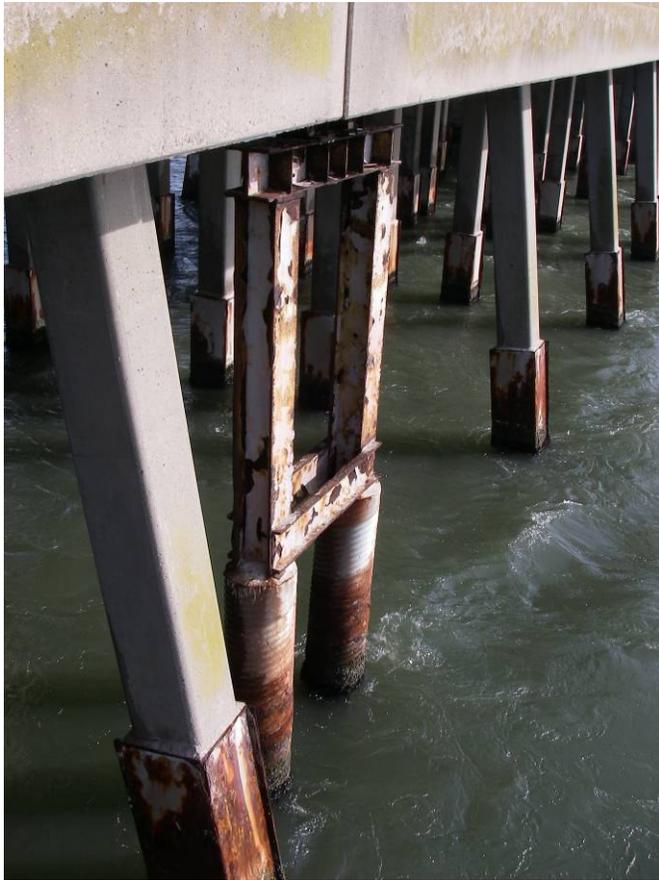
Photograph S67 - Bent 92, Pile 3.
View of typical
severe corrosion of
the pile jacket



Photograph S68 - East bascule pier, east face. View of minor marine growth at the water level



Photograph S69 - West bascule pier, southwest corner. View of the 12" x 4'-0" x 5" deep corner spall with exposed corroded reinforcing steel.



Photograph S70 - Bent 19, Pile 5.
View of the
replacement steel
support.



Photograph S71 - Bent 19, Pile 5, west upper built-up W-section. View of the severe section loss.



Photograph S72- Bent 19, Pile 5, east upper built-up W-section. View of the severe section loss. A pen was placed in the 100% thickness loss area (arrow).



Photograph S73- Machinery platform, west bascule pier, south of bridge centerline. View of the large amount of severe corrosion, and section loss with holes (arrows).



Photograph S74 - East bascule pier, east handrail. View of the large amount of section loss near the connection to the pier.



Photograph S75 - West bascule pier, south, counterweight pit entrance rail. The handrail is disconnected from the floor connection.



Photograph S76 - West bascule pier counterweight. View of the large spall in the upper northeast edge.



Photograph S77 - West bascule pier counterweight. View of the crack above the counterweight access hole, northeast edge (arrows).



Photograph S78 - View of an abandoned tank and grating in the room below the operator's house.



Photograph S79 - West fender near the south end of the west bascule pier. View off the moderately corroded pile condition.



Photograph S80- East fender near the south end of the east bascule pier. View of the two broken sheeting boards.

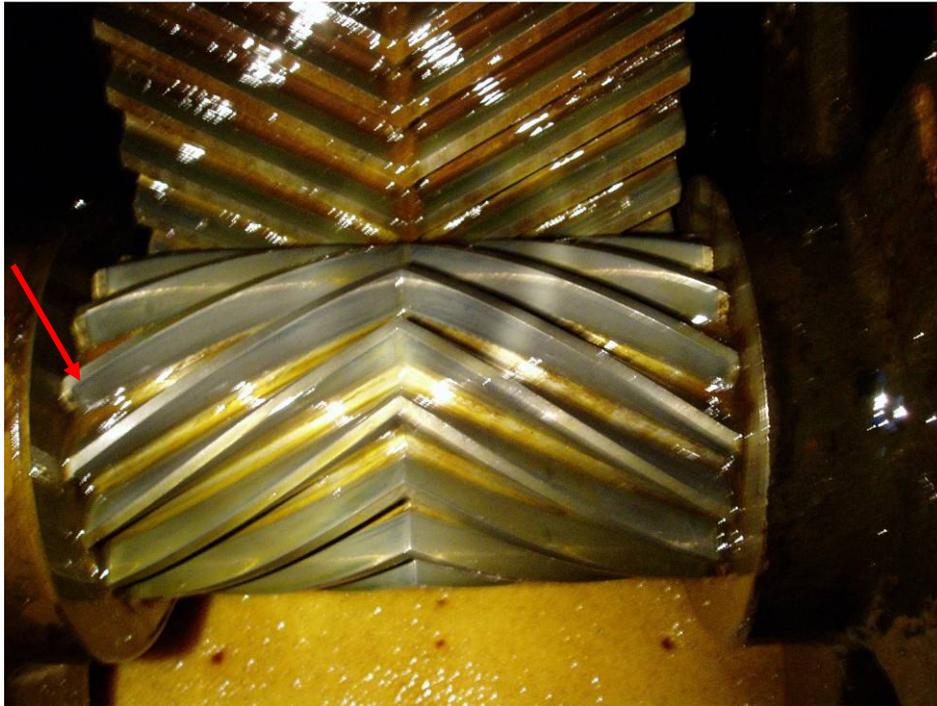
APPENDIX B: MECHANICAL PHOTOGRAPHS



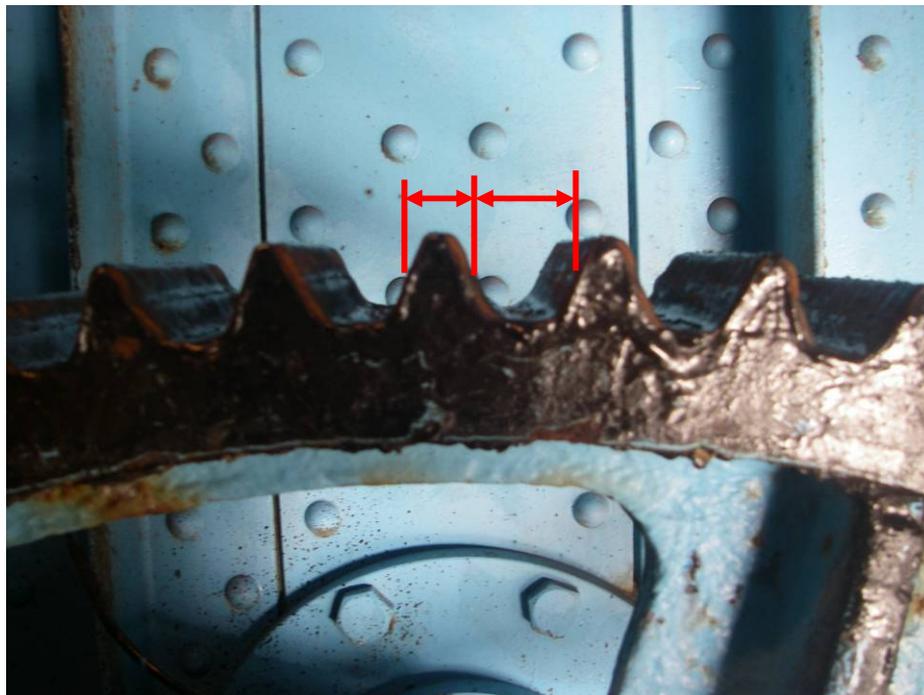
Photograph M1 – Typical span drive motor housing and motor brake frame support paint failure and minor to moderate corrosion.



Photograph M2 – East primary differential reducer, debris build-up on channel side of housing split.



Photograph M3 – East primary differential reducer low speed pinion. Minor wear on the opening face.



Photograph M4 – Typical significant west leaf open gear G2 tooth wear. Note the relation in tooth space width much greater than current tooth thickness.



Photograph M5 – Typical east leaf open gear G2 wear and excessive backlash with mating pinion G3.



Photograph M6 – Typical inadequate lubrication giving way to minor to moderate tooth face corrosion.



Photograph M7 – The northwest bearing B3 exhibits temporary undersized mounting bolt.



Photograph M8 – Typical severe corrosion and delamination on the channel side of the

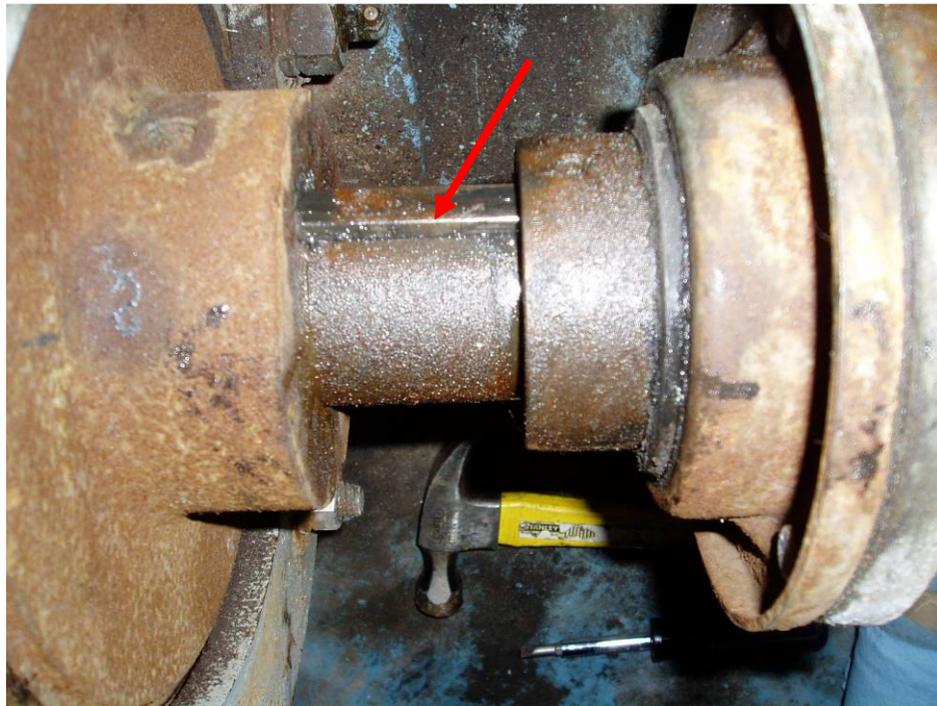
east leaf bearing housing feet and fasteners.



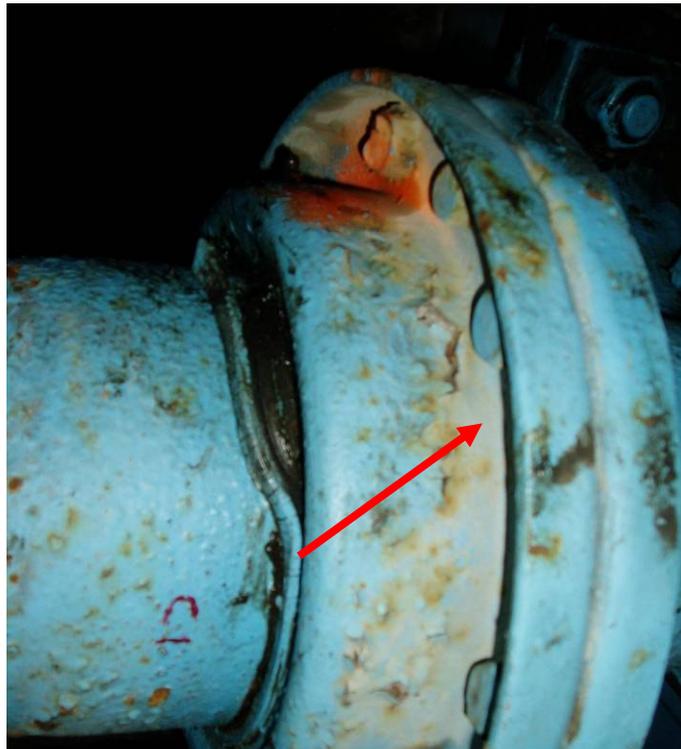
Photograph M9 – West leaf, south bearing B2, southeast mounting bolt severe corrosion.



Photograph M10 – Typical corrosion on B1 bearing lubrication line couplers.



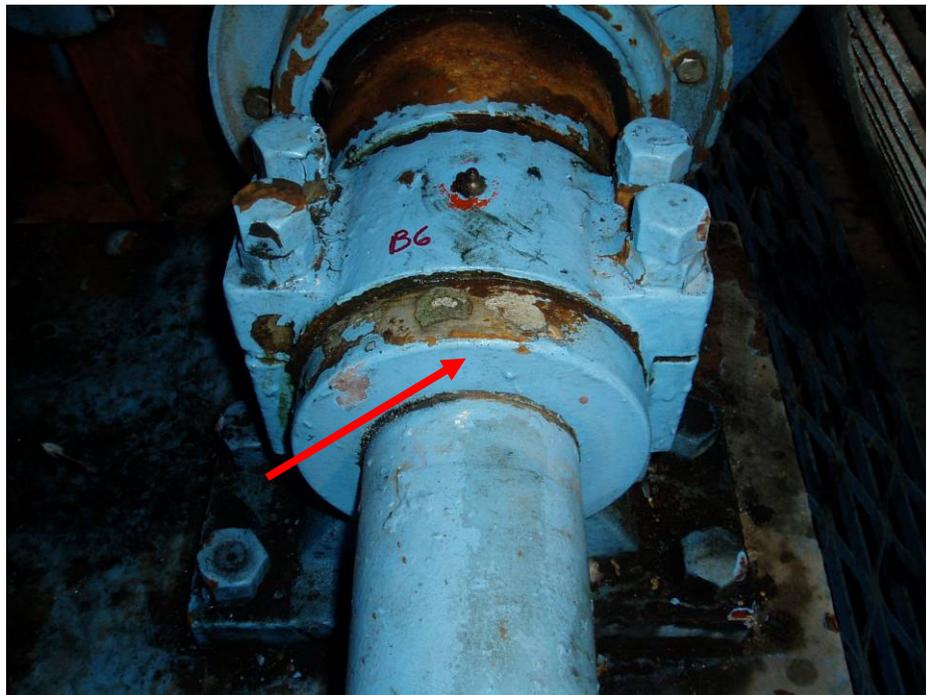
Photograph M11 – The north motor coupling/emergency brake key on the east leaf is loose radially and axially.



Photograph M12 – Southeast coupling C1, dislodged hub seal.



Photograph M13 – Northeast coupling C4, tape used in areas of hub to cover seals.



Photograph M14 – Typical shaft collar condition with failed paint but little to no surface corrosion.



Photograph M15 – Moderate to significant corrosion on the shafting is isolated to the areas which are oriented downward in the bridge fully closed position.



Photograph M16 – Southeast motor brake, typical significant corrosion in general with advanced corrosive pitting of the brake pull rods. (see oval)



Photograph M17 – The emergency brake limit switch trip arms have been replaced with wire.



Photograph M18 – Typical condition at tail lock drive motor, reducer and brake.



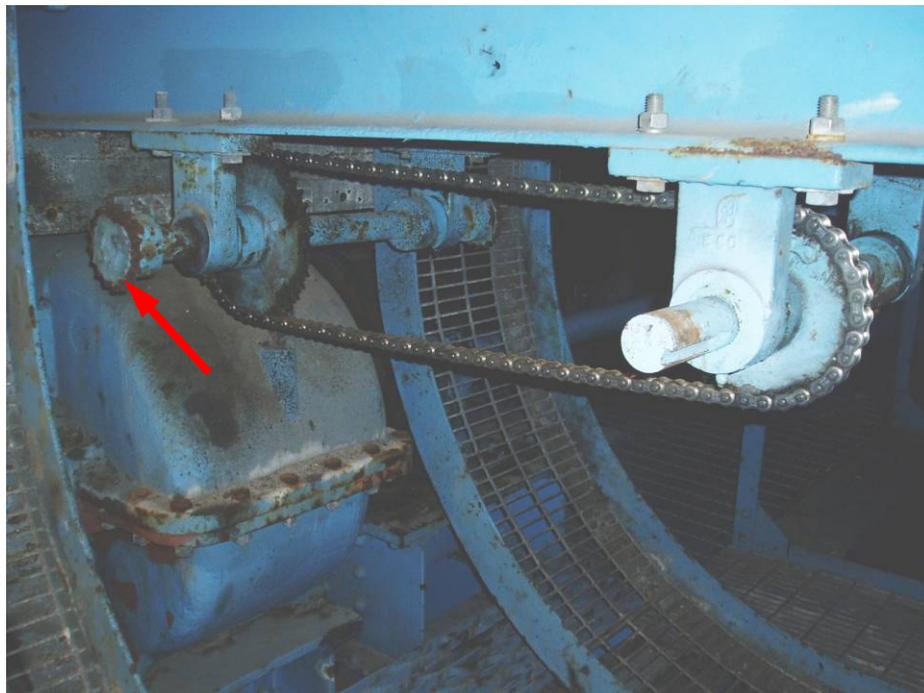
Photograph M19 – Severe corrosion of support frame mounting bolt at the northwest tail lock.



Photograph M20 – The northwest tail lock rotary cam limit switch drive chain is very loose.



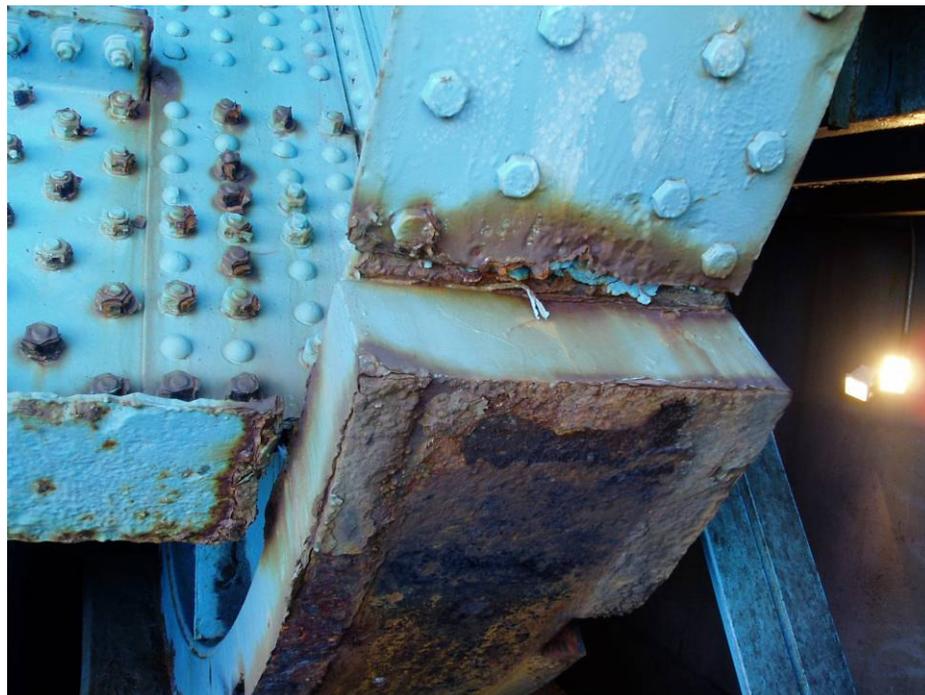
Photograph M21 – The northeast tail lock linkage is not in-line in the fully driven position. The rotary cam limit switch is maladjusted, and the brake for this assembly allows the weight of the linkage to back-drive the reducer when the motor de-energizes.



Photograph M22 – Typical auxiliary manual span drive chain. The hand cranks were located on the east leaf with no keys. The secondary chains were not found for 1 of 2 secondary sprockets (see arrow).



Photograph M23 – The needle valve handle on the air buffer piping exhibits moderate corrosion.



Photograph M24 – Typical severe corrosion and delamination of the tread facing the channel in the fully closed position.



Photograph M25 – The segmental girders typically exhibit severe corrosion in the region closest to the channel.



Photograph M26 – Missing access door latch wing nut at the southwest warning gate.



Photograph M27 – A majority of the warning gate cross shaft flange bearing mounting bolts were not tight.



Photograph M28 – The southwest warning gate guy-wire u-bolt exhibits moderate corrosion and one nut is missing.

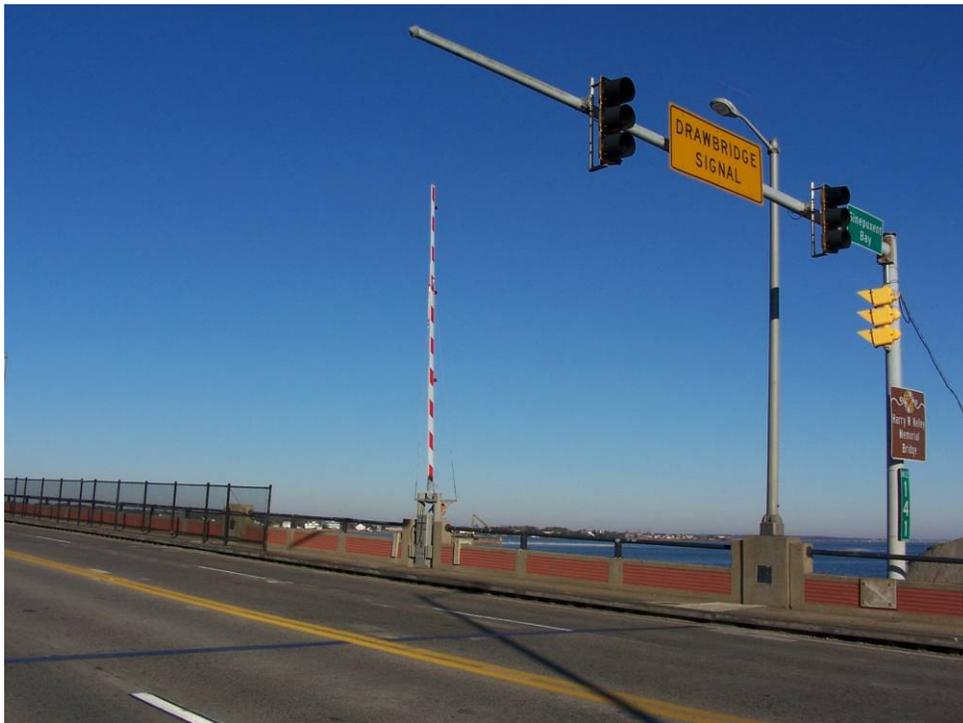


Photograph M29 – The southeast anchor bolt for the southwest warning gate exhibits minor corrosion.

APPENDIX C: ELECTRICAL PHOTOGRAPHS



Photograph E1 - Electrical Service Meter, Disconnect and ATS located on SE Abutment



Photograph E2 - Traffic Signal Pole & Warning Gate on North East Side



Photograph E3 - Control Console in Tender House



Photograph E4 - Control Console with masking Tape covering unused functions.



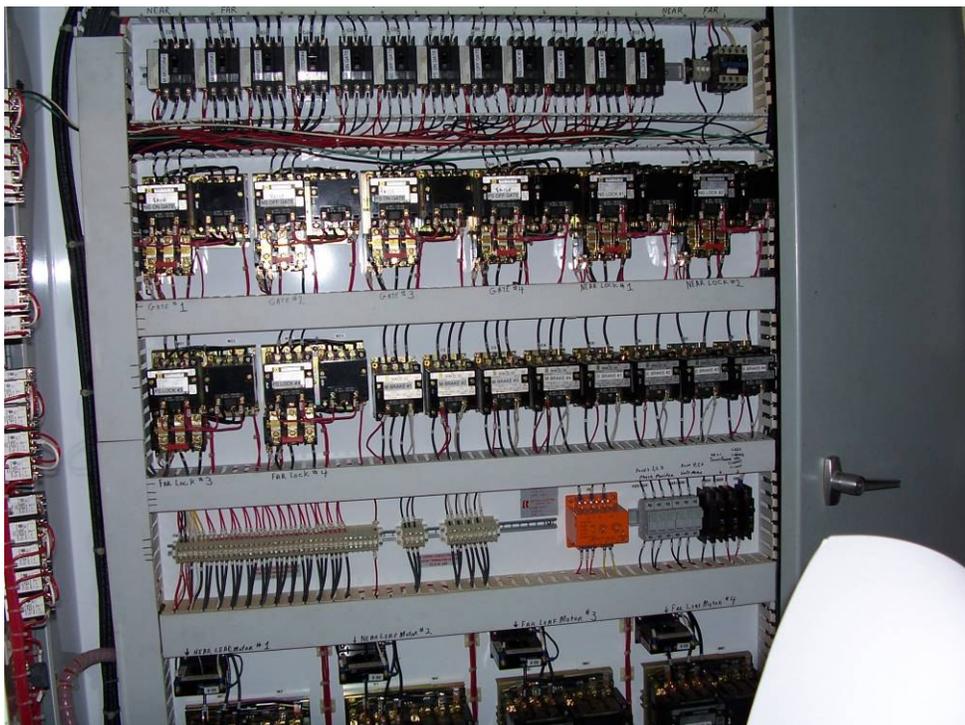
Photograph E5 - Control Console with door open.



Photograph E6 - Tender House Ceiling Mounted Lights in poor condition



Photograph E7 - Span Lock Motor and Rotary Cam Limit Switch on South East side



Photograph E8 - Motor Control Cabinet



Photograph E9 - Emergency Generator located on South East Abutment



Photograph E10 - South East warning gate controller in open position.



Photograph E11 - North East warning gate controller in open position.



Photograph E12 - South West warning gate controller in open position.



Photograph E13 - Fully Seated Limit Switch, Typ.



Photograph E14 - New Submarine & Abandoned MC cables located under far side span.



Photograph E15 - Main span motor and Span Brake Motor



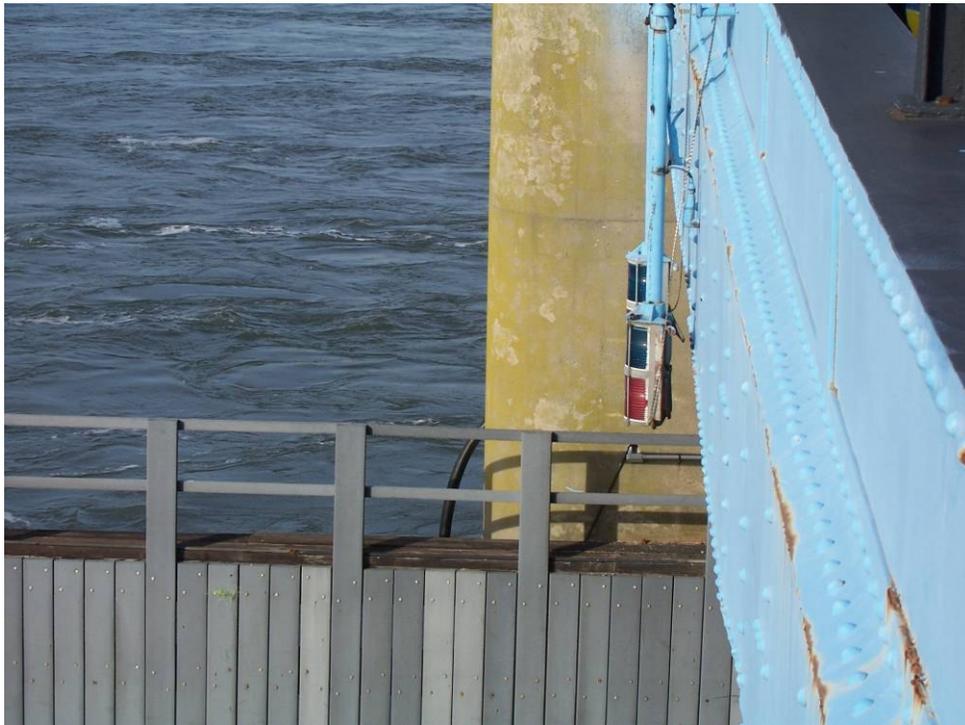
Photograph E16 - Main Span and Emergency Brake Motor



Photograph E17 - Position Transmitter with Open rotary cam limit switch under far span on North West side



Photograph E18 - Lighting Fixture in front of motor control cabinet in poor condition



Photograph E19 - Bridge Span Navigation Lights on South West leaf.



Photograph E20 - Span Lock Motor on North West side - rusted.



Photograph E21 - Unsupported raceway connecting to Navigational light.



Photograph E22 - Abandoned Wires and Box under far side span.



Photograph E23 - Navigation Light Raceway crossing walkway.



Photograph E24 - Moveable droop cable terminal box with wooden board.



Photograph E25 - Navigation light on South west Fender with its lid locking Latch broken.



Photograph E26 - Abandoned Raceway and cables located on Far Span on North West side

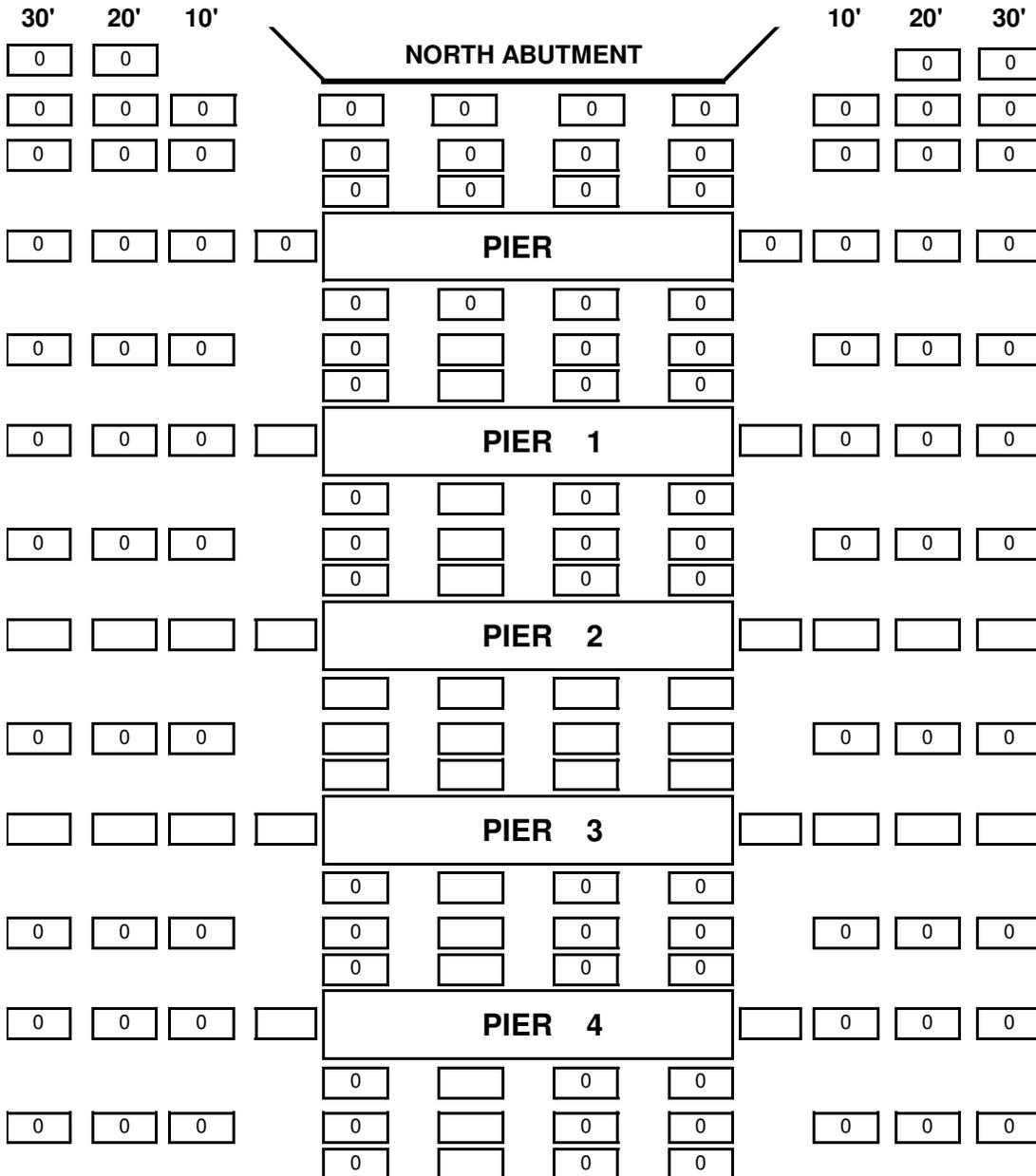
APPENDIX D: SOUNDINGS

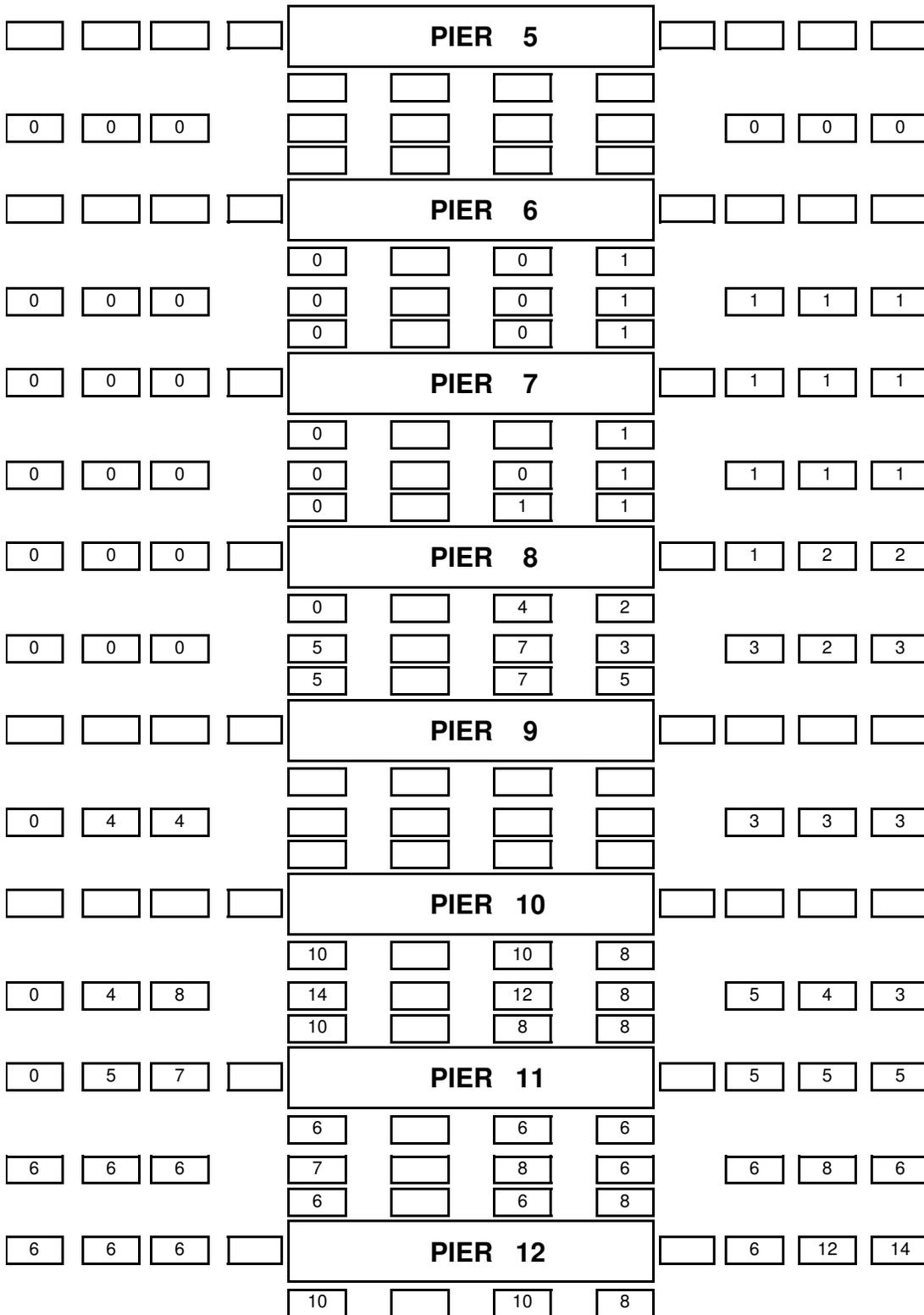
MARYLAND STATE HIGHWAY ADMINISTRATION BRIDGE
SOUNDING REPORT

BRIDGE: 2300700 INSPECTION DATE: 01/22/2008

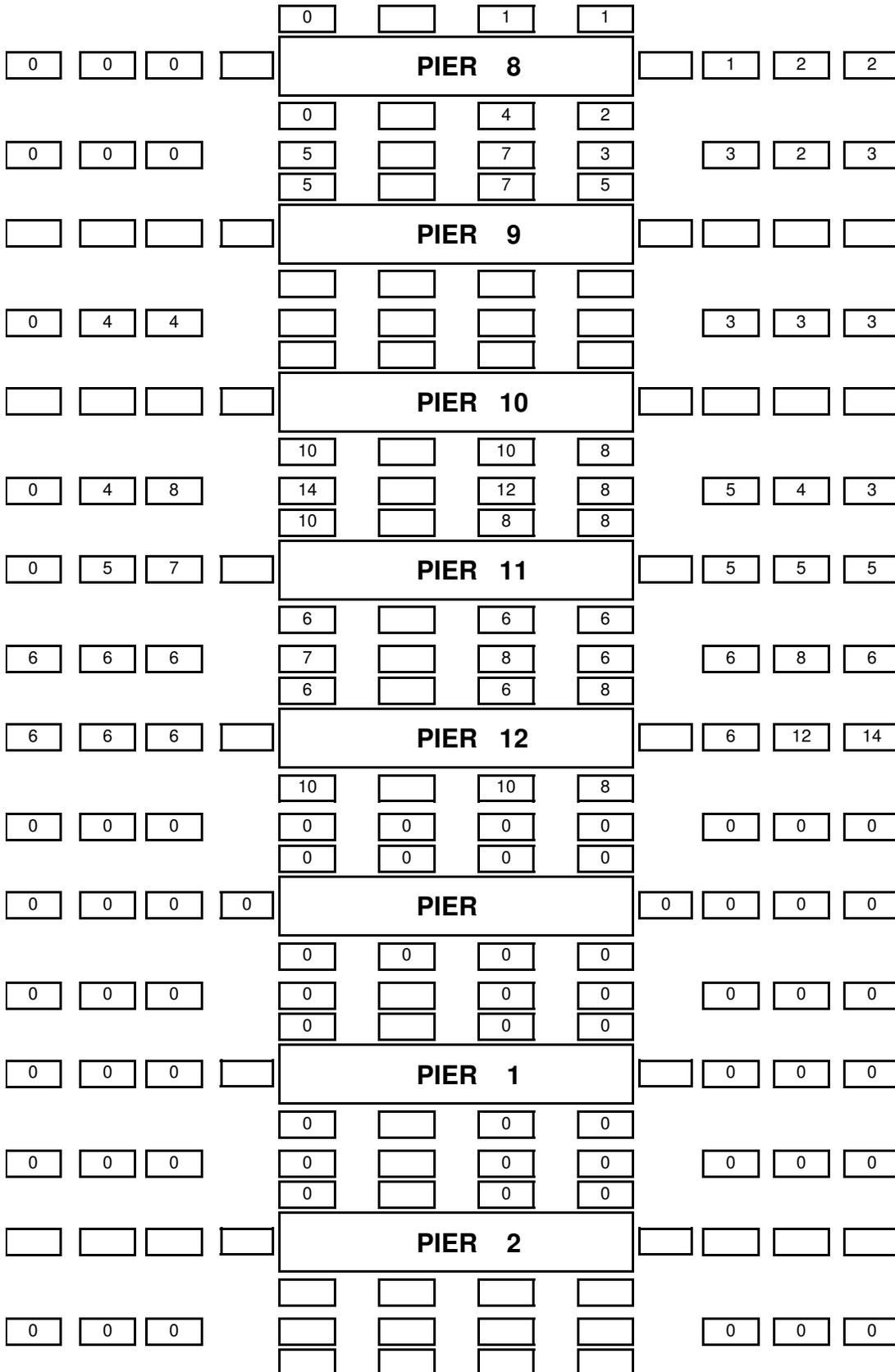
Flow

CLEAR, AT

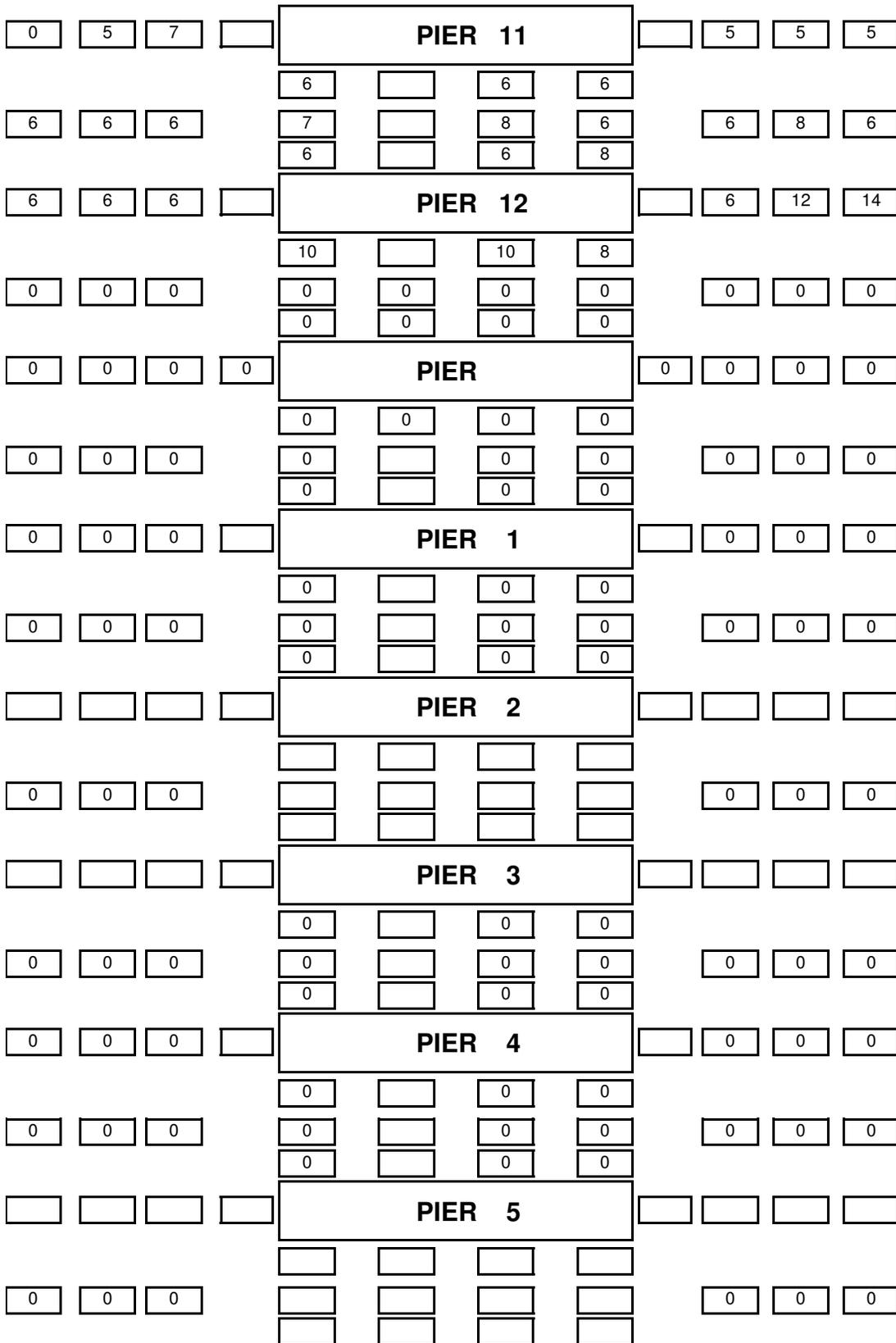




| | | | | | | | | | | | |
|---|---|---|---|---------------|---|---|---|---|---|---|---|
| 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | 0 | 0 | 0 | 0 | | | | |
| 0 | 0 | 0 | 0 | PIER | | | | 0 | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 | 0 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | PIER 1 | | | | | 0 | 0 | 0 |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | | | | 0 | | 0 | 0 | | | | |
| | | | | PIER 2 | | | | | | | |
| | | | | | | | | | | | |
| 0 | 0 | 0 | | | | | | 0 | 0 | 0 | |
| | | | | | | | | | | | |
| | | | | PIER 3 | | | | | | | |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | PIER 4 | | | | | 0 | 0 | 0 |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | | | | 0 | | 0 | 0 | | | | |
| | | | | PIER 5 | | | | | | | |
| | | | | | | | | | | | |
| 0 | 0 | 0 | | | | | | 0 | 0 | 0 | |
| | | | | | | | | | | | |
| | | | | PIER 6 | | | | | | | |
| | | | | 0 | | 0 | 1 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 1 | 1 | 1 | 1 | |
| | | | | 0 | | 0 | 1 | | | | |
| 0 | 0 | 0 | | PIER 7 | | | | | 1 | 1 | 1 |
| | | | | 0 | | | 1 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 1 | 1 | 1 | 1 | |



| | | | | | | | | | | | |
|---|---|---|--|----------------|--|----|---|---|---|---|---|
| | | | | PIER 3 | | | | | | | |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | PIER 4 | | | | | 0 | 0 | 0 |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | | | | 0 | | 0 | 0 | | | | |
| | | | | PIER 5 | | | | | | | |
| | | | | | | | | | | | |
| 0 | 0 | 0 | | | | | | 0 | 0 | 0 | |
| | | | | | | | | | | | |
| | | | | PIER 6 | | | | | | | |
| | | | | 0 | | 0 | 1 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 1 | 1 | 1 | 1 | |
| | | | | 0 | | 0 | 1 | | | | |
| 0 | 0 | 0 | | PIER 7 | | | | | 1 | 1 | 1 |
| | | | | 0 | | | 1 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 1 | 1 | 1 | 1 | |
| | | | | 0 | | 1 | 1 | | | | |
| 0 | 0 | 0 | | PIER 8 | | | | | 1 | 2 | 2 |
| | | | | 0 | | 4 | 2 | | | | |
| 0 | 0 | 0 | | 5 | | 7 | 3 | 3 | 2 | 3 | |
| | | | | 5 | | 7 | 5 | | | | |
| | | | | PIER 9 | | | | | | | |
| | | | | | | | | | | | |
| 0 | 4 | 4 | | | | | | 3 | 3 | 3 | |
| | | | | | | | | | | | |
| | | | | PIER 10 | | | | | | | |
| | | | | 10 | | 10 | 8 | | | | |
| 0 | 4 | 8 | | 14 | | 12 | 8 | 5 | 4 | 3 | |
| | | | | 10 | | 8 | 8 | | | | |



| | | | | | | | | | | | |
|---|---|---|---|----------------|---|----|---|---|---|----|----|
| | | | | PIER 6 | | | | | | | |
| | | | | 0 | | 0 | 1 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 1 | 1 | 1 | 1 | |
| | | | | 0 | | 0 | 1 | | | | |
| 0 | 0 | 0 | | PIER 7 | | | | | 1 | 1 | 1 |
| | | | | 0 | | | 1 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 1 | 1 | 1 | 1 | |
| | | | | 0 | | 1 | 1 | | | | |
| 0 | 0 | 0 | | PIER 8 | | | | | 1 | 2 | 2 |
| | | | | 0 | | 4 | 2 | | | | |
| 0 | 0 | 0 | | 5 | | 7 | 3 | 3 | 2 | 3 | |
| | | | | 5 | | 7 | 5 | | | | |
| | | | | PIER 9 | | | | | | | |
| | | | | | | | | | | | |
| 0 | 4 | 4 | | | | | | 3 | 3 | 3 | |
| | | | | | | | | | | | |
| | | | | PIER 10 | | | | | | | |
| | | | | 10 | | 10 | 8 | | | | |
| 0 | 4 | 8 | | 14 | | 12 | 8 | 5 | 4 | 3 | |
| | | | | 10 | | 8 | 8 | | | | |
| 0 | 5 | 7 | | PIER 11 | | | | | 5 | 5 | 5 |
| | | | | 6 | | 6 | 6 | | | | |
| 6 | 6 | 6 | | 7 | | 8 | 6 | 6 | 8 | 6 | |
| | | | | 6 | | 6 | 8 | | | | |
| 6 | 6 | 6 | | PIER 12 | | | | | 6 | 12 | 14 |
| | | | | 10 | | 10 | 8 | | | | |
| 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | 0 | 0 | 0 | 0 | | | | |
| 0 | 0 | 0 | 0 | PIER | | | | 0 | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 | 0 | | | | |
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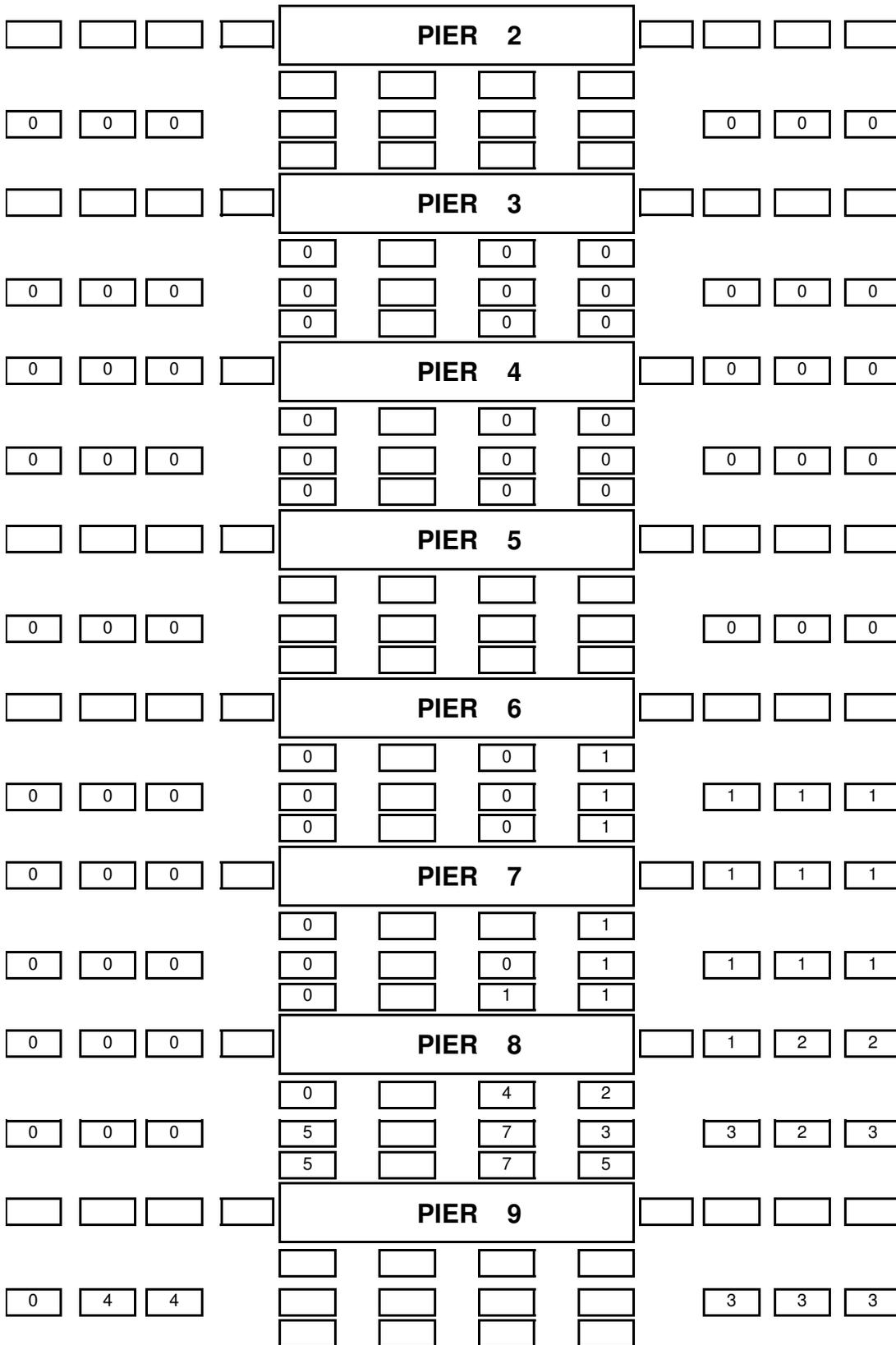
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| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | | | | 0 | | 0 | 0 | | | | |
| | | | | PIER 2 | | | | | | | |
| | | | | | | | | | | | |
| 0 | 0 | 0 | | | | | | 0 | 0 | 0 | |
| | | | | | | | | | | | |
| | | | | PIER 3 | | | | | | | |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | PIER 4 | | | | | 0 | 0 | 0 |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | | | | 0 | | 0 | 0 | | | | |
| | | | | PIER 5 | | | | | | | |
| | | | | | | | | | | | |
| 0 | 0 | 0 | | | | | | 0 | 0 | 0 | |
| | | | | | | | | | | | |
| | | | | PIER 6 | | | | | | | |
| | | | | 0 | | 0 | 1 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 1 | 1 | 1 | 1 | |
| | | | | 0 | | 0 | 1 | | | | |
| 0 | 0 | 0 | | PIER 7 | | | | | 1 | 1 | 1 |
| | | | | 0 | | | 1 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 1 | 1 | 1 | 1 | |
| | | | | 0 | | 1 | 1 | | | | |
| 0 | 0 | 0 | | PIER 8 | | | | | 1 | 2 | 2 |
| | | | | 0 | | 4 | 2 | | | | |
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| | | | | 5 | | 7 | 5 | | | | |

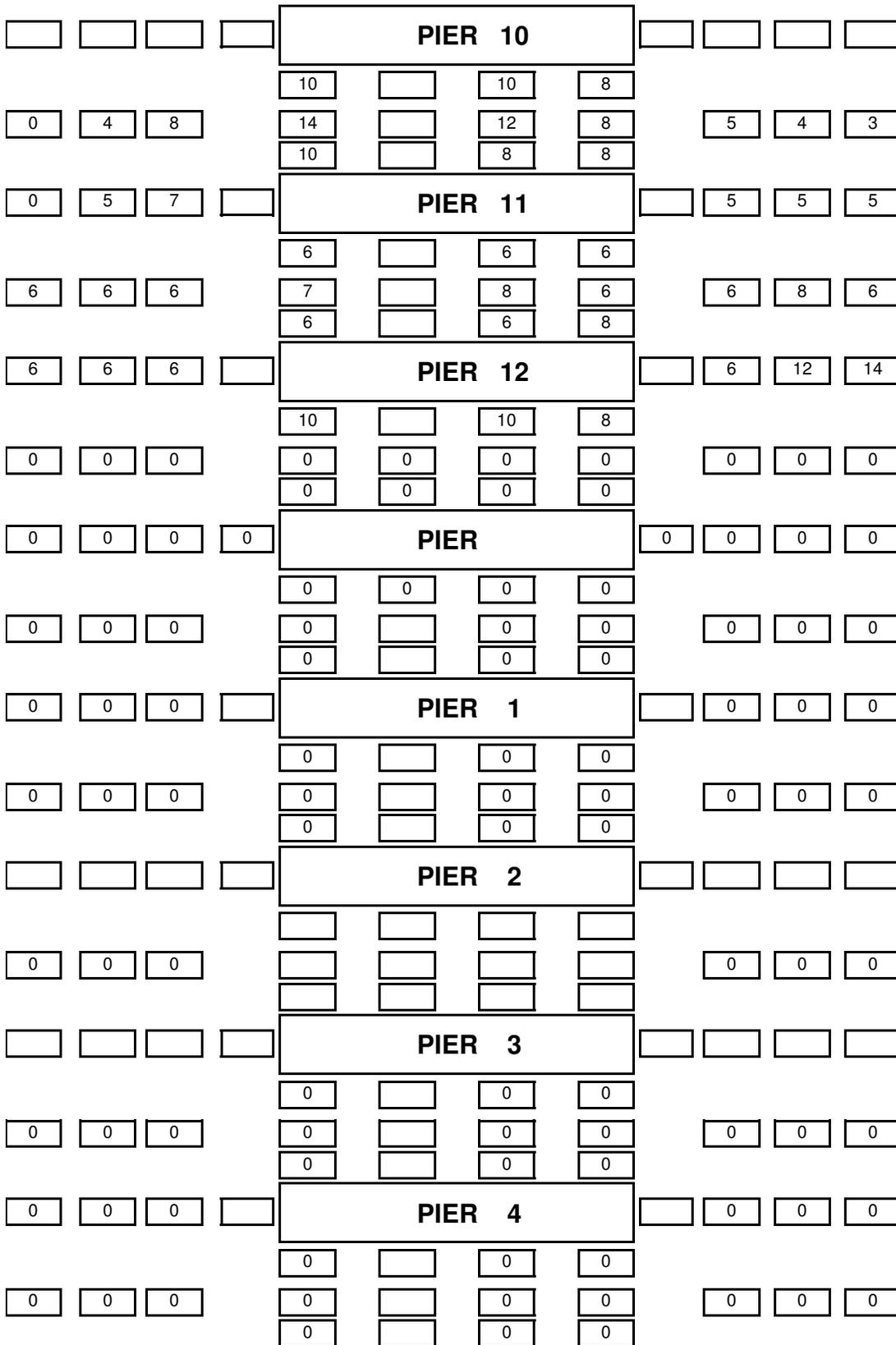
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| | | | | PIER 9 | | | | | | | |
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| 0 | 4 | 4 | | | | | | | 3 | 3 | 3 |
| | | | | | | | | | | | |
| | | | | PIER 10 | | | | | | | |
| | | | | 10 | | 10 | 8 | | | | |
| 0 | 4 | 8 | | 14 | | 12 | 8 | | 5 | 4 | 3 |
| | | | | 10 | | 8 | 8 | | | | |
| | | | | PIER 11 | | | | | | | |
| 0 | 5 | 7 | | 6 | | 6 | 6 | | 5 | 5 | 5 |
| | | | | | | | | | | | |
| 6 | 6 | 6 | | 7 | | 8 | 6 | | 6 | 8 | 6 |
| | | | | 6 | | 6 | 8 | | | | |
| | | | | PIER 12 | | | | | | | |
| 6 | 6 | 6 | | | | | | | 6 | 12 | 14 |
| | | | | 10 | | 10 | 8 | | | | |
| 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 | 0 | | | | |
| | | | | PIER | | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | | | | | | | | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | | 0 | 0 | 0 |
| | | | | 0 | | 0 | 0 | | | | |
| | | | | PIER 1 | | | | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | | 0 | 0 | 0 |
| | | | | | | | | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | | 0 | 0 | 0 |
| | | | | 0 | | 0 | 0 | | | | |
| | | | | PIER 2 | | | | | | | |
| | | | | | | | | | | | |
| 0 | 0 | 0 | | | | | | | 0 | 0 | 0 |
| | | | | | | | | | | | |
| | | | | PIER 3 | | | | | | | |
| | | | | 0 | | 0 | 0 | | | | |
| | | | | | | | | | | | |
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| | | | | 0 | | 0 | 0 | | | | |

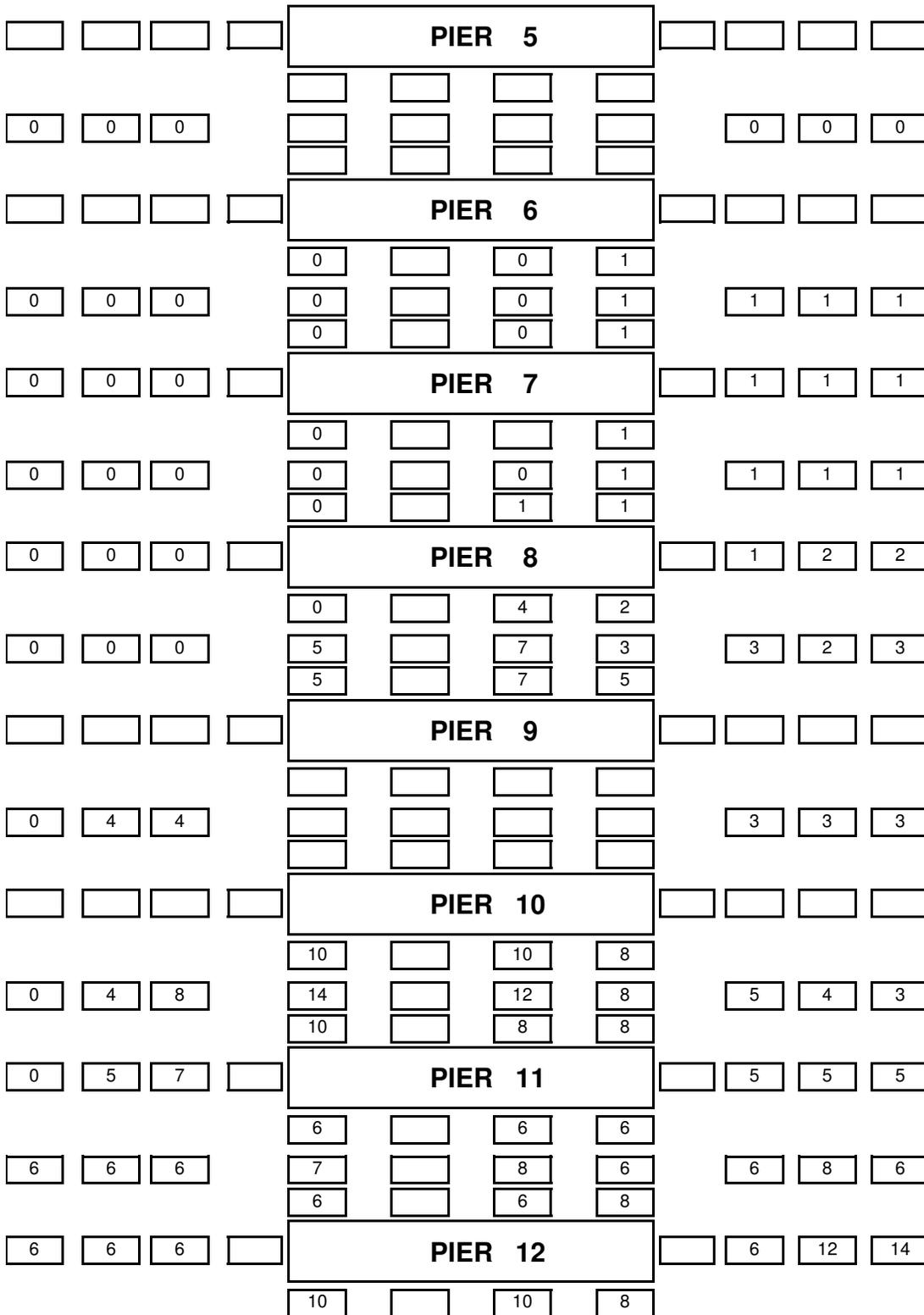
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| 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | | | | 0 | | 0 | 0 | | | | |
| | | | | PIER 5 | | | | | | | |
| | | | | | | | | | | | |
| 0 | 0 | 0 | | | | | | 0 | 0 | 0 | |
| | | | | | | | | | | | |
| | | | | PIER 6 | | | | | | | |
| | | | | 0 | | 0 | 1 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 1 | 1 | 1 | 1 | |
| | | | | 0 | | 0 | 1 | | | | |
| 0 | 0 | 0 | | PIER 7 | | | | | 1 | 1 | 1 |
| | | | | 0 | | | 1 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 1 | 1 | 1 | 1 | |
| | | | | 0 | | 1 | 1 | | | | |
| 0 | 0 | 0 | | PIER 8 | | | | | 1 | 2 | 2 |
| | | | | 0 | | 4 | 2 | | | | |
| 0 | 0 | 0 | | 5 | | 7 | 3 | 3 | 2 | 3 | |
| | | | | 5 | | 7 | 5 | | | | |
| | | | | PIER 9 | | | | | | | |
| | | | | | | | | | | | |
| 0 | 4 | 4 | | | | | | 3 | 3 | 3 | |
| | | | | | | | | | | | |
| | | | | PIER 10 | | | | | | | |
| | | | | 10 | | 10 | 8 | | | | |
| 0 | 4 | 8 | | 14 | | 12 | 8 | 5 | 4 | 3 | |
| | | | | 10 | | 8 | 8 | | | | |
| 0 | 5 | 7 | | PIER 11 | | | | | 5 | 5 | 5 |
| | | | | 6 | | 6 | 6 | | | | |
| 6 | 6 | 6 | | 7 | | 8 | 6 | 6 | 8 | 6 | |
| | | | | 6 | | 6 | 8 | | | | |

| | | | | | | | | | | | |
|---|---|---|---|----------------|---|----|---|---|---|----|----|
| 6 | 6 | 6 | | PIER 12 | | | | | 6 | 12 | 14 |
| | | | | 10 | | 10 | 8 | | | | |
| 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | 0 | 0 | 0 | 0 | | | | |
| 0 | 0 | 0 | 0 | PIER | | | | 0 | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 | 0 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | PIER 1 | | | | | 0 | 0 | 0 |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | | | | 0 | | 0 | 0 | | | | |
| | | | | PIER 2 | | | | | | | |
| | | | | | | | | | | | |
| 0 | 0 | 0 | | | | | | 0 | 0 | 0 | |
| | | | | | | | | | | | |
| | | | | PIER 3 | | | | | | | |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | PIER 4 | | | | | 0 | 0 | 0 |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | | | | 0 | | 0 | 0 | | | | |
| | | | | PIER 5 | | | | | | | |
| | | | | | | | | | | | |
| 0 | 0 | 0 | | | | | | 0 | 0 | 0 | |
| | | | | | | | | | | | |
| | | | | PIER 6 | | | | | | | |
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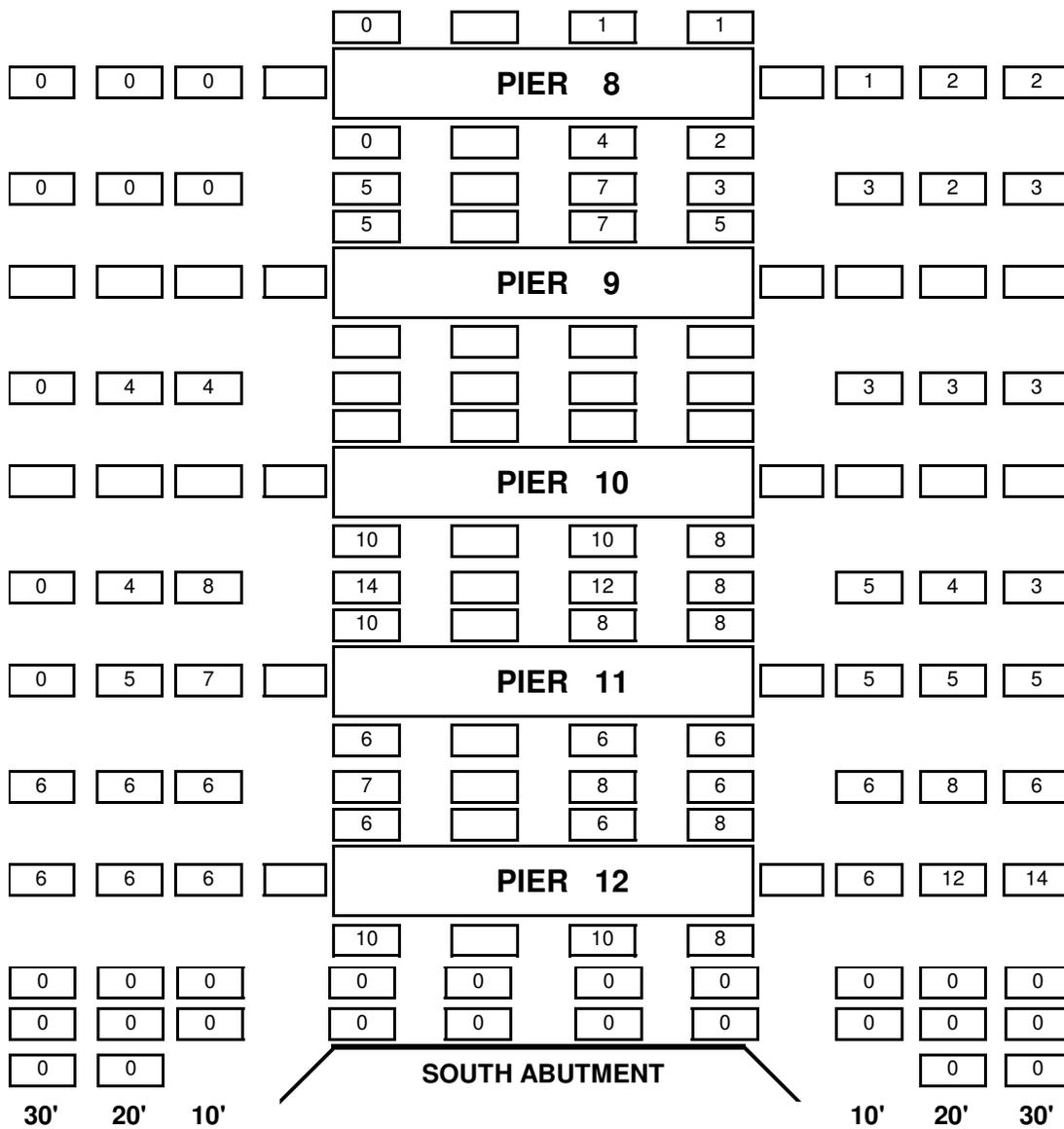
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| | | | | 0 | | | 1 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 1 | 1 | 1 | 1 | |
| | | | | 0 | | 1 | 1 | | | | |
| 0 | 0 | 0 | | PIER 8 | | | | | 1 | 2 | 2 |
| | | | | 0 | | 4 | 2 | | | | |
| 0 | 0 | 0 | | 5 | | 7 | 3 | 3 | 2 | 3 | |
| | | | | 5 | | 7 | 5 | | | | |
| | | | | PIER 9 | | | | | | | |
| | | | | | | | | | | | |
| 0 | 4 | 4 | | | | | | 3 | 3 | 3 | |
| | | | | | | | | | | | |
| | | | | PIER 10 | | | | | | | |
| | | | | 10 | | 10 | 8 | | | | |
| 0 | 4 | 8 | | 14 | | 12 | 8 | 5 | 4 | 3 | |
| | | | | 10 | | 8 | 8 | | | | |
| 0 | 5 | 7 | | PIER 11 | | | | | 5 | 5 | 5 |
| | | | | 6 | | 6 | 6 | | | | |
| 6 | 6 | 6 | | 7 | | 8 | 6 | 6 | 8 | 6 | |
| | | | | 6 | | 6 | 8 | | | | |
| 6 | 6 | 6 | | PIER 12 | | | | | 6 | 12 | 14 |
| | | | | 10 | | 10 | 8 | | | | |
| 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | 0 | 0 | 0 | 0 | | | | |
| 0 | 0 | 0 | 0 | PIER | | | | 0 | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 | 0 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | PIER 1 | | | | | 0 | 0 | 0 |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | | | | 0 | | 0 | 0 | | | | |







| | | | | | | | | | | | |
|---|---|---|---|---------------|---|---|---|---|---|---|---|
| 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 | 0 | | | | |
| 0 | 0 | 0 | 0 | PIER | | | | 0 | 0 | 0 | 0 |
| | | | | 0 | 0 | 0 | 0 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | PIER 1 | | | | | 0 | 0 | 0 |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | 0 | | 0 | 0 | | | | |
| | | | | PIER 2 | | | | | | | |
| | | | | | | | | | | | |
| 0 | 0 | 0 | | | | | | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | |
| | | | | PIER 3 | | | | | | | |
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| 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | PIER 4 | | | | | 0 | 0 | 0 |
| | | | | 0 | | 0 | 0 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | 0 | | 0 | 0 | | | | |
| | | | | PIER 5 | | | | | | | |
| | | | | | | | | | | | |
| 0 | 0 | 0 | | | | | | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | |
| | | | | PIER 6 | | | | | | | |
| | | | | 0 | | 0 | 1 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 1 | 1 | 1 | 1 | 1 |
| | | | | 0 | | 0 | 1 | | | | |
| 0 | 0 | 0 | | PIER 7 | | | | | 1 | 1 | 1 |
| | | | | 0 | | | 1 | | | | |
| 0 | 0 | 0 | | 0 | | 0 | 1 | 1 | 1 | 1 | 1 |
| | | | | | | | | | | | |



APPENDIX E: LUBRICATION ANALYSIS

18419 EUCLID AVENUE
CLEVELAND, OH 44112-1016
(800) 726-5400, FAX (216) 383-9633

CUSTOMER NO.: 17395
UNIT NO.: WEST-MAIN-OC
DESCRIPTION: WEST MAIN REDUCER GEARBOX
END USER: MARYLAND SHA
END USER LOCATION: OCEAN CITY MD

MAKE:
MODEL
OIL BRAND:
OIL TYPE:
SERIAL NO.:
FUEL TYPE:

NO. COPIES 3

SAMPLE DATA

LAB# 13732
NORMAL

| SAMPLE DATE | TIME ON OIL |
|--------------|--------------|
| 01/03/2008 | |
| RECEIPT DATE | TIME ON UNIT |
| 01/21/2008 | |

SPECTROCHEMICAL ANALYSIS (ppm)

| IRON | CHROMIUM | LEAD | COPPER | TIN | ALUMINUM | NICKEL | SILVER | SILICON | BORON | SODIUM | MAGNESIUM | CALCIUM | BARIUM | PHOSPHORUS | ZINC | MOLYBDENUM | TITANIUM | VANADIUM | POTASSIUM | FUEL (%VOL) | VIS @ 40 C | VIS @ 100 C | CST | WATER (%VOL) | SOOT/SOLIDS (%WT) | COOLANT |
|------|----------|------|--------|-----|----------|--------|--------|---------|-------|--------|-----------|---------|--------|------------|------|------------|----------|----------|-----------|-------------|------------|-------------|-----|--------------|-------------------|---------|
| 32 | 0 | 17 | 12 | 8 | 0 | 0 | 0 | 12 | 12 | 0 | 1 | 12 | 0 | 157 | 21 | 0 | 0 | 0 | 0 | N/A | 298.2 | N/A | 0 | 0 | N/A | N/A |

PHYSICAL PROPERTIES

LAB# ADDITIONAL TESTS

13732

No History to Graph

LAB# GRAPHICAL ANALYSIS

Key
A: Abnormal C: Critical

LAB# ANALYSIS RECOMMENDATIONS

RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED. ***RESULTS REPORTED BY FAX***

13732

ANALYST - MAL

LEE LENTZ
MODJESKI & MASTERS INC
4909 LOUISE DR
MECHANICSBURG, PA 17055

APPENDIX F: STRUCTURAL INVENTORY AND APPRAISAL/PONTIS SHEET

MARYLAND STATE HIGHWAY ADMINISTRATION STRUCTURE INVENTORY AND APPRAISAL REPORT

BRIDGE NUMBER: **100000230007010**

IDENTIFICATION

FORM 1 OF 8

| | | | | | | |
|------------------------------------|---|--|---|---|--|---|
| (8) STRUCTURE NUMBER: | <input type="text" value="1"/> | <input type="text" value="00000"/> Major Structure | <input type="text" value="23"/> | <input type="text" value="0007"/> | <input type="text" value="01"/> Major Structure > 20' 0" | <input type="text" value="0"/> Single Structure |
| (7) FACILITY CARRIED: | <input type="text" value="US 50"/> | | | | | |
| (6) FEATURE INTERSECTED: | <input type="text" value="SINEPUXENT BAY"/> | | | | | |
| (27) YEAR BUILT: | <input type="text" value="1942"/> | (106) YEAR RECONSTR: | <input type="text" value="0000"/> | | | |
| (1) STATE CODE: | <input type="text" value="243"/> | (2) DISTRICT CODE: | <input type="text" value="01"/> | | | |
| (3) COUNTY CODE: | <input type="text" value="047"/> | (4) PLACE CODE: | <input type="text" value="58225"/> | | | |
| (5) INVENTORY ROUTE: | <input type="text" value="1"/> Primary Reference | <input type="text" value="2"/> US Highway | <input type="text" value="1"/> Mainline | <input type="text" value="00050"/> Number | <input type="text" value="0"/> Direction | NA |
| (9) LOCATION: | <input type="text" value="0.17 MILE WEST OF MD 528"/> | | | | | |
| (11) MILE POINT: | <input type="text" value="014160"/> | (16) LATITUDE: | <input type="text" value="38200"/> | | | |
| (17) LONGITUDE: | <input type="text" value="075056"/> | (28) LANES ON: | <input type="text" value="04"/> | LANES UNDER: | <input type="text" value="00"/> | |
| (42) TYPE OF SERVICE ON: | <input type="text" value="5"/> Highway-Pedestrian | TYPE OF SERVICE UNDER: | <input type="text" value="5"/> Waterway | | | |
| (98) BORDER STATE: | <input type="text"/> | BORDER STATE'S SHARE %: | <input type="text"/> | | | |
| (99) BORDER STATE'S NUMBER: | <input type="text"/> | | | | | |
| (262) NAME OF STRUCTURE: | <input type="text" value="HARRY KELLY MEMORIAL"/> | | | | | |

CLASSIFICATION

FORM 2 OF 8

| | | | | | |
|---------------------------|---------------------------------|--------------------------------|-------------------------------|---------------------------------|--------------------------------|
| (104) HWY SYSTEM: | <input type="text" value="1"/> | Structure/Route is on NHS | (26) FUNCTION CLASS: | <input type="text" value="14"/> | Urban Other Principal Arterial |
| (100) DEFENSE HWY: | <input type="text" value="0"/> | Not a defense highway | (101) PARALLEL STRUCT: | <input type="text" value="N"/> | No parallel structure |
| (102) DIRECTION: | <input type="text" value="2"/> | 2-way traffic | (103) TEMP STRUCT: | <input type="text"/> | |
| (110) NAT'L NTWK: | <input type="text" value="0"/> | Inventory route not on Network | (20) TOLL: | <input type="text" value="3"/> | On free road |
| (21) MAINTENANCE: | <input type="text" value="01"/> | State Highway Administration | (22) OWNER: | <input type="text" value="02"/> | County Highway Agency |
| (37) HISTORICAL: | <input type="text" value="2"/> | Eligible for National Register | | | |

TRAFFIC

| | | | | | |
|---------------------------|---------------------------------|-----------------------|-------------------------------------|-------------------------------|-------------------------------------|
| (19) DETOUR: | <input type="text" value="25"/> | (29) ADT: | <input type="text" value="023350"/> | (114) FUTURE ADT: | <input type="text" value="027675"/> |
| (109) TRUCK ADT %: | <input type="text" value="08"/> | (30) ADT YEAR: | <input type="text" value="04"/> | (115) FUTURE ADT YEAR: | <input type="text" value="24"/> |

Bridge Number: 2300700

1

STRUCTURE TYPE AND MATERIAL

FORM 3 OF 8

| | | | | |
|---------------------------------------|---|---|---|--------------------------------|
| (43) STRUCT TYPE: | <input type="text" value="C"/> Steel | <input type="text" value="16"/> Movable - Bascule | (274) MAIN SUPP MEMBERS: | <input type="text" value="N"/> |
| (44) STRUCT TYPE - APPR: | <input type="text" value="A"/> Concrete | <input type="text" value="01"/> Slab | | |
| (206) SUPPL TYPE - MAIN: | <input type="text" value="N"/> Not Applicable | (207) SUPPL APPROACH: | <input type="text" value="N"/> Not Applicable | |
| (208) STRUCT TYPE - WIDENED/EXTENDED: | <input type="text" value="N"/> N/A | <input type="text" value="N"/> N/A | <input type="text" value="N"/> N/A | |
| (228) FOOTING - ABUTMENT: | <input type="text" value="1"/> Concrete | <input type="text" value="4"/> Other | <input type="text" value="0"/> Entire Structure | |
| (229) SUBSTRUCT ABUTMENT: | <input type="text" value="1"/> Concrete | <input type="text" value="3"/> Cantilever | <input type="text" value="0"/> Entire Structure | |
| (230) FOOTING - PIER: | <input type="text" value="1"/> Concrete | <input type="text" value="4"/> Other | <input type="text" value="0"/> Entire Structure | |
| (231) SUBSTRUCTURE PIER: | <input type="text" value="1"/> Concrete | <input type="text" value="4"/> Pile Bent | <input type="text" value="1"/> Predominant Feature | |
| (233) SUBSTRUCT DESIGN: | <input type="text" value="0"/> Composite | <input type="text" value="0"/> Entire Structure | | |
| (277) SUBSTRUCT - SPECIAL: | <input type="text" value="N"/> Not Applicable | (219) SLOPE PROTECTION: | <input type="text" value="0"/> None | |
| (221) STRUCTURAL STEEL: | <input type="text" value="07"/> Unknown | (235) PARAPET: | <input type="text" value="2"/> Concrete - Rectangular | |
| (242) BEARING TYPE: | <input type="text" value="A"/> None | <input type="text" value="A"/> None | <input type="text" value="A"/> None | |
| (107) DECK STRUCTURE TYPE: | <input type="text" value="1"/> Concrete Cast-in-Place | (270) CONCRETE SLAB: | <input type="text" value="N"/> Not Applicable | |
| (271) REBARS: | <input type="text" value="N"/> Not Applicable | (272) ADMIXTURES: | <input type="text" value="N"/> | |
| (108) WEARING SURFACE: | <input type="text" value="1"/> Concrete | <input type="text" value="0"/> None | <input type="text" value="0"/> None | |
| (243) JOINT TYPE: | <input type="text" value="Z"/> Other | <input type="text" value="A"/> None | <input type="text" value="A"/> None | |
| (236) RAILING: | <input type="text" value="3"/> <input type="text" value="3"/> Steel - One Strand (non-structural) | <input type="text" value="3"/> <input type="text" value="3"/> Steel - One Strand (non-structural) | | |
| (237) FENCING: | <input type="text" value="1"/> <input type="text" value="1"/> Steel - Straight Fence | | | |
| (278) PAINT SYSTEM: | <input type="text"/> | <input type="text"/> | <input type="text"/> | |
| (344) PAINT COLOR / NUMBER: | <input type="text"/> | <input type="text"/> | <input type="text"/> | |

GEOMETRICS

FORM 4 OF 8

| | | | |
|-------------------------------------|--|---------------------------------------|---|
| (112) NBIS BRIDGE LENGTH: | <input type="text" value="Y"/> | (49) STRUCTURE LENGTH: | <input type="text" value="002297"/> |
| (210) NUMBER OF SPANS: | <input type="text" value="073"/> | (48) LENGTH MAX SPAN: | <input type="text" value="0078"/> |
| (45) # SPANS IN MAIN UNIT: | <input type="text" value="001"/> | (46) # APPROACH SPANS: | <input type="text" value="0072"/> |
| (209) # CONTINUOUS SPANS: | <input type="text" value="00"/> | | |
| (211) SPAN LENGTH 1: | <input type="text" value="C008C"/> | (212) SPAN LENGTH 2: | <input type="text" value="C028C"/> |
| (213) SPAN LENGTH 3: | <input type="text" value="C028C"/> | (214) SPAN LENGTH 4: | <input type="text" value="C028C"/> |
| (215) SPAN LENGTH 5: | <input type="text" value="S140S"/> | (216) SPAN LENGTH 6: | <input type="text" value="C026C"/> |
| (217) SPAN LENGTH 7: | <input type="text" value="C078C"/> | (218) SPAN LENGTH 8: | <input type="text" value="C010C"/> |
| (238) # STRINGER - ORIGINAL: | <input type="text" value="08"/> | (239) # STRINGERS - WIDENED: | <input type="text" value="00"/> |
| (240) SPACING - ORIGINAL: | <input type="text" value="5"/> | (241) SPACING - WIDENED: | <input type="text" value="N"/> |
| (51) DECK CURB-CURB WIDTH: | <input type="text" value="0460"/> | (52) DECK OUT-OUT WIDTH: | <input type="text" value="0587"/> |
| (50) CURB/SIDEWALK WIDTHS: | <input type="text" value="050"/> <input type="text" value="050"/> | (223) SHOULDER WIDTHS: | <input type="text" value="0000"/> <input type="text" value="0000"/> |
| (33) BRIDGE MEDIAN: | <input type="text" value="0"/> | (205) MEDIAN WIDTH: | <input type="text" value="000"/> |
| (32) APPROACH ROAD WIDTH: | <input type="text" value="00"/> <input type="text" value="046"/> <input type="text" value="00"/> | (35) STRUCTURE FLARED: | <input type="text" value="0"/> |
| (10) INVENT ROUTE, MIN VERT CLEAR: | <input type="text" value="9999"/> | (47) INVENT ROUTE, TOTAL HORIZ CLEAR: | <input type="text" value="460"/> |
| (53) BRIDGE ROADWAY, MIN VERTCLEAR: | <input type="text" value="9999"/> | | |

Bridge Number: 2300700

GEOMETRICS (Cont.)

FORM 5 OF 8

(54) MIN VERTICAL UNDERCLEARANCE: N Feature not a highway or a railroad B 10' to < 20'

(55) MIN LATERAL UNDERCLEARANCE (RIGHT): N Feature not a highway or a railroad 999

(56) MIN LATERAL UNDERCLEARANCE (LEFT): 000

(342) HORIZONTAL CLEARANCE - ON: 460

(280) HORIZONTAL CLEARANCE - UNDER 700

(34) SKEW, IN DEGREES: 05

(253) NUMBER OF CELLS: N

(256) SPAN OF CELLS: N

(258) EARTH FILL: N

(343) CENTERLINE LENGTH - CULVERTS/PIPES: N

(254) RISE: N

LOAD RATINGS AND POSTINGS

(41) STATUS: A Open

(31) DESIGN LOAD: 4 H 20

(70) POSTING: 5 Equal to or above legal loads

(224) WEIGHT POSTED, KIPS: SINGLE VEHICLE COMBO VEHICLE

(64) OPERATING RATING: HS Type 2 38

(464) OPERATING RATING - H: 1 25

(564) OPERATING RATING - HS: 2 38

(664) OPERATING RATING - T3: 4 29

(764) OPERATING RATING - 3S2: 5

(225) SPEED LIMIT ON STRUCTURE

(66) INVENTORY RATING: HS Type 2 23

(466) INVENTORY RATING - H: 1 15

(566) INVENTORY RATING - HS: 2 23

(666) INVENTORY RATING - T3: 4 17

(766) INVENTORY RATING - 3S2: 5

(226) MIN VERT CLEARANCE OVER ROADWAY POSTED: 0 No

(227) MIN VERT UNDERCLEARANCE POSTED: 0 No

BMS CONDITION RATINGS

FORM 6 OF 8

(90) INSPECTION DATE: 0108 1/22/2008

(91) INSPECTION FREQUENCY, MONTHS: 24

| | FRACTURE CRITICAL | UNDER WATER | OTHER SPECIAL |
|-----------------------------|-------------------------------|-------------------------------|-------------------------------|
| (92) CRITICAL FEATURE INSP: | <input type="checkbox"/> Y12 | <input type="checkbox"/> Y48 | <input type="checkbox"/> Y12 |
| (93) CRIT FEATURE INSP DATE | <input type="checkbox"/> 0108 | <input type="checkbox"/> 1004 | <input type="checkbox"/> 0108 |

(58) DECK: 5

(59) SUPERSTRUCTURE 5

(60) SUBSTRUCTURE: 5

(61) CHANNEL: 6

(62) CULVERT: N

(332) POSTING SIGNS: N Not Applic

(307) UNDER CONSTRUCTION: 0 No

(340) INSPECTION CLASSIFICATION

| | |
|------------------------------------|--------------------------|
| <input type="checkbox"/> B Boat | <input type="checkbox"/> |
| <input type="checkbox"/> S Snooper | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |

Bridge Number: 2300700

3

APPRAISAL

FORM 7 OF 8

(67) STRUCTURAL EVALUATION: (68) DECK GEOMETRY:
 (69) UNDERCLEARANCE: (72) APPROACH ALIGNMENT:
 (71) WATERWAY ADEQUACY:
 (36) TRAFFIC SAFETY FEATURES RAILINGS: Meet Standards APPROACH BARRIERS: Meet Standards
 TRANSITIONS: Meet Standards APPROACH BARRIER ENDS: Meet Standards
 (113) SCOUR EVALUATION: Scour risk judged to be mild.

NAVIGATION AND HYDRAULIC

(38) NAVIGATION CONTROL: (39) NAV VERT CLEARANCE:
 (40) NAV HORIZONTAL CLEARANCE:
 (111) PIER/ABUTMENT PROTECTION:
 (116) MIN NAV VERT CLEARANCE, VERT LIFT BRIDGE
 (247) DESIGN YEAR STORM:
 (249) DRAINAGE AREA:
 (251) HIGH WATER ELEVATION:
 (252) YEAR HIGH WATER ELEVATION - LATEST:
 (248) RUN-OFF Q:
 (250) STRUCTURE IN TIDAL AREA: Yes

HISTORY AND PROPOSED IMPROVEMENTS

FORM 8 OF 8

(201) CONTRACT NUMBERS:
 (202) CONTRACT NUMBERS:
 (203) SHA SPEC-YEAR: (204) AASHTO SPEC-YEAR:
 (263) SHA SPEC RECON 1: (264) SHA SPEC RECON 2:
 (265) AASHTO SPEC RECON 1: (266) AASHTO SPEC RECON 2:
 (75) TYPE OF WORK: (76) LENGTH OF IMPROVEMENT:
 (94) BRIDGE IMPROVE COST: (95) ROADWAY IMPROVE COST:
 (96) TOTAL PROJECT COST: (97) YEAR OF IMPROVEMENT:

MISCELLANEOUS

(244) SIGNS ON STRUCTURE No (245) BRIDGE ROADWAY LIGHTING Yes
 (246) ROADWAY LIGHTING: No
 (260) UTILITIES - ON:
 Electric
 None
 None
 None
 None
 (261) UTILITIES - UNDER:
 Others
 None
 None
 None
 None

REMARKS:

20-3 SPANS AT 28'CONT.,4-2 SPANS AT 28'CONT.,140'BASCULE 1978 TEST PAINT-FX 70-9 AND NALZIN

Bridge Number: 2300700

4

MARYLAND STATE HIGHWAY ADMINISTRATION BRIDGE INSPECTION REPORT

BRIDGE: 2300700 INSPECTION DATE: 01/22/2008
 US 50 over SINEPUXENT BAY

| | | | | | |
|----------------------------------|-----|----------------------|------------------|--------------------|---|
| (58) DECK: | 5 | (59) SUPERSTRUCTURE: | 5 | (60) SUBSTRUCTURE: | 5 |
| (61) CHANNEL: | 6 | (62) CULVERT: | N | (71) WATERWAY : | 9 |
| (72) APPROACH ROADWAY ALIGNMENT: | 8 | | | | |
| INSPECTOR: | M&M | TEAM: | 1 | | |
| REVIEWER: | M&M | HOURS TO INSPECT: | 0 | | |
| PUNCTURES: | 0 | % SKETCHES ?: | No | | |
| PLANKING: | 0 | % POWER WASHING ?: | No | | |
| PATCHING: | 20 | % ID NUMBER ?: | Yes | | |
| BLOCKING: | 0 | # | | | |
| LOOKING: | W&N | TOWARD: | WEST - SALISBURY | | |
| MOT: | Yes | | | | |
| MOT COMMENT: | | | | | |
| (54b) CLEARANCE: | B | LOCATION: | | | |

ELEMENT TQ CS 1 CS 2 CS 3 CS 4 CS 5

012 Concrete Deck (Bare) (EA) 1 1

Screamer F.Y.I. District Inaccessible?

THE CONCRETE SURFACE HAS TRANSVERSE, MAP, DIAGONAL, AND LONGITUDINAL CRACKS. THERE IS SURFACE EROSION THAT IN SOME AREAS IS OPEN AND IN OTHER AREAS HAS BEEN PATCHED. IT APPEARS THAT THE PATCHING IS AN ON GOING PROCESS, HOWEVER THE 5268 SF PATCHED AREAS ARE LESS THAN 10% OF THE 105593 SF DECK AREA. SEVERAL PATCHES HAVE DEVELOPED DELAMINATIONS AT THE ENDS.

028 Open Grid Steel Deck (EA) 1 1

Screamer F.Y.I. District Inaccessible?

STEEL GRID IS IN GOOD CONDITION WITH THE EXCEPTION OF THE PERLIN. PERLIN HAS NUMEROUS SCATTERED HOLES, A FEW CRACKED WELDS, AND POINTS OF STEEL FAILURE ABOVE THE STRINGERS.

061 Steel Sidewalk (LF) 172 150 20 2

Screamer F.Y.I. District Inaccessible?

THE STEEL IN THE SIDEWALK WAS PAINTED IN 12/92 AND FOR THE MOST PART, THE PAINT IS IN FAIRLY GOOD CONDITION. THE EXCEPTION BEING THE CHANNELS THAT THE SIDEWALK PANELS ARE WELDED TO. THE WELDS ARE BROKE AT SOME LOCATIONS ALLOWING THE PANELS TO RATTLE UNDER FOOT. IN THESE AREAS THERE IS RUST. THERE ARE A FEW AREAS THAT HAVE BROKEN MEMBERS. THE END PLATES AT ALL LOCATIONS EXCEPT THE EAST END PLATE ON THE NORTH SIDE HAVE SEVERAL CORROSIVE HOLES EACH, RANGING UP TO 3/4". THE STEEL CURB TO TRANSVERSE STRINGERS HAS SEVERAL CRACKED WELDS. THE SIDEWALK SUPPORTS HAVE NUMEROUS CORROSIVE HOLES, AND SECTION LOSS. DIAGONAL BRACES #2 & #3 EAST OF THE NOSE OF THE EAST LEAF ON THE SOUTH SIDE ARE CRACKED THROUGH.

062 Reinforced Concrete Sidewalk (LF)

| | | | | | |
|------|-----|------|----|--|--|
| 4338 | 300 | 4028 | 10 | | |
|------|-----|------|----|--|--|

Screamer F.Y.I. District Inaccessible?

THE CONCRETE SIDEWALK HAS TRANSVERSE, LONGITUDINAL, MAP, AND DIAGONAL CRACKS, PATCHES, SPALLS AND SURFACE EROSION. THE SURFACE SCALE IS UP TO 1" DEEP, BUT MOSTLY RANGES FROM JUST NOTICEABLE TO 1/2" DEEP.

113 Steel Stringer, Painted (LF)

| | | | | | |
|-----|-----|----|--|--|--|
| 720 | 690 | 30 | | | |
|-----|-----|----|--|--|--|

Screamer F.Y.I. District Inaccessible?

PAINT # 12/8/92 or ZINC 315R EP MASTIC 38361 URETHANE 4249. The stringers have scattered minor pitting section loss on flanges and spots in the webs. There is moderate section loss at connections to diagonal bracing. Rusting varies with location from spot to moderate, with the heaviest typically located at the connections.

152 Steel Floor Beam, Painted (LF)

| | | | | | |
|-----|-----|----|--|--|--|
| 264 | 250 | 14 | | | |
|-----|-----|----|--|--|--|

Screamer F.Y.I. District Inaccessible?

The paint on the floorbeams is in good condition except at some connections where rust is active. Some of the rust is showing through insufficient paint coverage. The sway bars have holes and 25% to 65% section loss. The sway bar connection plates have heavy section loss and corrosive holes. The floorbeams have pitting and section loss on the flanges and web. The section loss is not constant. The corners and connection areas that collect dirt and debris are by far the worst. The section loss and corrosive holes are reported by floor beam starting with #1 at the west end of the bascule. The panels are numbered from the north, with Panel #1 in the area from the girder connection to the first vertical stiffener.

Floorbeam #1 has scattered pitting full height and width. There is heavy pitting and section loss 1/8" to 1/4" approx. 2'-0" from each end. There is pitting and section loss just above the lower flange to web connection plate. The affected area is 3" to 5" high and up to 1/8" deep. Panel #4 has a series of holes in the web, with the largest at 3/8" just above the north sway bar connection.

Floorbeam #2 has similar section loss as FB1. Corrosive holes are as follows: Panel #1 has a 1" hole just below the gusset plate. Panel #2 has a series of holes just above the lower flange plate, with the largest hole at 1/2". Panel #2 has a pinhole and two 1/2" holes just above the lower flange plate, and a series of holes just below the top flange plate. The largest hole is 5/16". These holes are located in the south corners next to stiffener #2. There is a pinhole 9" above the lower flange and 6" south of stiffener #3. Panel #8 has a 1/2" hole in the lower north corner, a series of pin holes 2-1/2" up and 8" south of stiffener #7, a 1" hole 5" up and 17" south of stiffener #7, a pinhole and two 1/4" holes 3" up and 27" south of stiffener #7. Panel #10 has a pinhole in the north corner, a 1" hole located 1" up and 20" south of stiffener #9, the lower south corner has a 1/4" and a pinhole. The rivets have rust that is popping the paint loose.

Floorbeam #3, located at the nose of the west leaf, is in worse condition. The depth of the pitting is 1/4". Panel #6 has several holes up to 3/4" in size in the upper half of the web. Panel #10 has a 1-1/8" diameter hole 2'-0" up and 7" south of stiffener #9.

Floorbeam #4, located at the nose of the east leaf, is in similar condition to FB3. Vertical stiffener #5 has a 3/8" hole 1" up from the bottom.

Floorbeam #5 has heavy pitting in panels #1 and #3. The other panels have intermittent pitting full height and width. Panel #7 has a 1/2" hole in the lower north corner next to stiffener #6.

Floorbeam #6 is in pretty good condition. The pitting is 1/16" to 1/8".

172 Exterior Steel Open Girder, Painted (LF)

| | | | | | |
|-----|--|-----|----|--|--|
| 246 | | 228 | 18 | | |
|-----|--|-----|----|--|--|

Screamer F.Y.I. District Inaccessible?

The girders have widespread pitting up to 1/4" deep, but in most areas it is 1/16" to 1/8" deep. The doubler plate has major section loss and necking on the edges. The worst areas seem to be in between the bolts. The west leaf has greater section loss than the east leaf, and Girder 2 is worse than Girder 1. The bottom plate has up to 80% section loss in some areas. The vertical stiffeners have moderate to heavy section loss (25% to 35%) with knife-edging and corrosive holes. The worst areas are usually within 12" of the bottom. Approx. 5% of the rivet heads in the lower flanges have major section loss. The lower 18" of the webs have the worst pitting. Girder 2, Panel 5 has a pinhole at the upper west corner. Most of the corrosive holes and section loss has been painted over. There is rust at some connection plates and in some areas where the paint appears to be thin. The midspan interlocking is in fair condition. A significant crack is noted at the north interlock, south roadway deck channel support. There is also indications of impact damage on both the north and south interlocks.

178 Steel Open Girder, Concrete Encased,(LF)

| | | | | | |
|-----|-----|-----|----|--|--|
| 704 | 199 | 475 | 30 | | |
|-----|-----|-----|----|--|--|

Screamer F.Y.I. District Inaccessible?

THE CONCRETE ENCASED GIRDERS ARE IN SPAN 73 , 74 AND 75 . TYPICALLY THE ENCASEMENT CONCRETE HAS LONGITUDINAL AND MAP CRACKING ON THE BOTTOM. THE FACES HAVE VERTICAL , MAP AND HORIZONTAL CRACKS . SPAN 73 GIRDER 5 HAS A MODERATE CRACK ON THE NORTH SIDE WITH SURROUNDING HOLLOW AREA. GIRDER 6 HAS A SEVERE CRACK ALONG THE FULL LENGTH OF THE BOTTOM. MOISTURE AND RUST ARE ALSO PRESENT. GIRDER 7 HAS POPOUTS ON FACE . GIRDER 8 HAS A OPEN LONGITUDINAL CRACK, 8' OF WHICH IS HOLLOW, AND THE CRACK IS OPEN 2" . GIRDER 9 HAS SAME OPEN LONGITUDINAL CRACK , ON NORTH FACE , MID-SPAN .SPAN 74 GIRDER 2 HAS POPOUTS WITH EXPOSED REINFORCEMENT, SEVERE CRACKS, AND HOLLOW SOUNDING AREAS ALONG THE BOTTOM, ABOUT 3'-0" TOTAL . GIRDER 3 HAS OPEN LONGITUDINAL CRACKS, HOLLOW SOUNDING WITH EXPOSED REINFORCEMENT ON BOTTOM OF FACES . THERE IS A 6 ' AREA WHERE THERE IS EXTREME HOLLOW SOUNDS . GIRDER 4 HAS A 9 ' LONG OPEN LONGITUDINAL CRACK ON BOTTOM WHICH IS HOLLOW SOUNDING . GIRDER 6 ALSO HAS A 8 ' LONG OPEN LONGITUDINAL ON BOTTOM OF GIRDER WHICH IS HOLLOW . BOTH THESE AREAS ARE CLOSE TO PIER 75 . GIRDER 7 HAS NUMEROUS LONGITUDINAL CRACKS ON THE GIRDER BOTTOM . THERE IS A SPALL 20 ' FROM PIER 74 . SPALL IS 2 ' LONG , 6 " WIDE , 1/2 " DEEP . THIS SPALL IS ON NORTH SIDE . ON THE SOUTH SIDE THERE IS A 18" LONG , 7 " HIGH AND 1" DEEP . AREA AROUND IS HOLLOW SOUNDING. SPAN 75 GIRDER CONDITION IS TYPICAL .

202 Steel Column or Pile Extension, Painted (EA)

| | | | | | |
|---|--|--|--|---|--|
| 2 | | | | 2 | |
|---|--|--|--|---|--|

Screamer F.Y.I. District Inaccessible?

PILE 5 OF BENT 19 HAS BEEN REPLACED BY A SUPPLEMENTAL STEEL SUPPORT BUILT-UP SYSTEM THAT EXHIBITS SEVERE DETERIORATION. THE STEEL PILES HAVE HEAVY RUST AND SCALE. THE PAINT THAT WAS PRESENT AT SOME POINT IN TIME HAS LONG SINCE FAILED AND PEELED OFF. THE SECTION LOSS IS SEVERE AT THE BUILT-UP SECTION, BUT MINIMAL ON THE PILE SUPPORTS.

205 Reinforced Concrete Column or Pile Extension (EA)

| | | | | | |
|-----|-----|----|---|--|--|
| 582 | 564 | 14 | 4 | | |
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Screamer F.Y.I. District Inaccessible?

THE CONCRETE PILES HAVE VERTICAL, MAP, AND WRAP AROUND HORIZONTAL CRACKS, AND SOME SPALLING. SPALLING RANGED FROM MINOR TO SEVERE. THE WRAP AROUND CRACKS ARE ABOUT EVENLY SPACED. SOME ARE SLIGHTLY OPEN, BUT SOLID. BENTS 17, 18, 25, 45, 85, AND 86 HAVE THE MOST NOTICEABLE CRACKS. SOME OF THE MORE SEVERE DEFECTS ARE LISTED AS FOLLOWS: BENT 13, PILE 1 SPALL IS 3' HIGH, 1' WIDE, AND 3" DEEP. PILE 2 OF BENT 17 HAS A 6'-0" LONG VERTICAL CRACK STEMMING FROM JACKET OF THE E FACE . PILE 7, PIER 18 HAS A SPALL AREA OF 6" X 12" X 2" ON THE N FACE, A 12" X 6" X 1" SPALL AREA ON THE S FACE, AND A 1/16" CRACK ON THE W FACE JOINING THE TWO SPALL AREAS. PILE 7 OF BENT 25 HAS A SEVERE 3/8" WIDE X 4'-0" LONG CRACK WITH AN ADJOINING HOLLOW AREA. PILE 1 AND 2 OF BENT 45 HAVE SEVERE VERTICAL CRACK ON THE S SIDE. PILE 7, BENT 45 HAS TWO 1/16" VERTICAL CRACKS ON THE NORTHWEST AND SOUTHWEST CORNERS. PILE 1 OF BENT 85 HAS AN 1/8" VERTICAL CRACK ON THE SE CORNER. PILE 2 OF BENT 86 HAS A SEVERE VERTICAL CRACK ON THE NE CORNER. ALL PILE JACKET RETROFITS SHOW FLAKING AND ACTIVE RUSTING. SOME CORNERS OF THE JACKETS APPEAR CRACKED WITH WATER POSSIBLY REACHING THE CONCRETE.

210 Reinforced Concrete Pier Wall (LF)

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| 143 | | 140 | 3 | | |
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Screamer F.Y.I. District Inaccessible?

THE PIER WALLS HAVE VERTICAL AND MAP CRACKS, SOME WITH EFFLORESCENCE. THERE IS MAJOR SPALLING WITH EXPOSED REINFORCEMENT IN THE TIDAL AREA ON THE EAST BASCULE PIER. SOME SPALLS ARE UP TO 12" DEEP. THE WEST BASCULE PIER HAS A LARGE SPALL WITH EXPOSED REINFORCEMENT AT THE SW CORNER OF THE FOOTING.

215 Reinforced Concrete Abutment (LF)

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| 121 | | 121 | | | |
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Screamer F.Y.I. District Inaccessible?

THE WEST ABUTMENT HAS HAD FULL LENGTH SHOTCRETE REPAIR ALONG TOP 5' . IN THIS PATCH AREA THERE IS VERTICAL MAP AND HORIZONTAL CRACKS . THERE IS MODERATE EFFLORESCENCE PRESENT. SOME AREAS ARE SLIGHTLY HOLLOW. UNDER THIS PATCH THERE ARE FULL HEIGHT VERTICALS WITH LIGHT TO MODERATE EFFLORESCENCE. THE FOOTER IS EXPOSED FULL LENGTH. IT IS ARMORED WITH STONE. THIS HAS BEEN THIS WAY FOR SOME TIME. MAXIMUM HEIGHT OF EXPOSURE IS 1'. THE EAST ABUTMENT HAS FINE VERTICAL, MAP AND HORIZONTAL CRACKS. ALL CRACKS ARE CLOSED AND CONCRETE WAS FOUND TO BE SOLID. EXPANSION JOINT MATERIAL IS EITHER MISSING OR NEEDS TO BE REPLACED. THE SOUTH PORTION OF THE EAST ABUTMENT WAS UNABLE TO BE INSPECTED DO TO THE POWER GENERATION HOUSING BLOCKING THE AREA.

234 Reinforced Concrete Pier Cap (LF)

5428

3800

1200

365

63

Screamer F.Y.I. District Inaccessible?

AT THIS INSPECTION THE SPALLING HAS INCREASED SLIGHTLY AT SEVERAL LOCATIONS. THE QUANTITIES HAVE NOT CHANGED. TYPICALLY, THE CAP FACES HAVE VERTICAL, HORIZONTAL, AND MAP CRACKS MEASURING UP TO 1/16" WIDE NEAR THE OUTBOARD PILES. THESE CRACKS TYPICALLY HAVE RUST STAINING, EFFLORESCENCE, AND HOLLOW DELAMINATED AREAS ADJOINING. THE FOLLOWING DESCRIBES THE DEFECTS FOUND. BENT 92 HAS A SPALL ON THE PIER CAP UNDERSIDE NEAR PILE 2 EQUALING 18" DIAMETER X 1" DEEP. VERTICAL CRACKS IN REPAIRED EAST CAP FACE AND UNDERSIDE BETWEEN PILES 1 THROUGH 3 OF BENT 91. PIER 90 HAS A 10'-0" X 1'-0" SPALL AREA IN EAST CAP FACE. BENT 89, BETWEEN PILES 2 AND 3, THERE ARE TWO 3" X 1'-0" X 1" SPALL WITH EXPOSED REINFORCEMENT. BENT 88, PILE 2, PIER CAP UNDERSIDE, THERE IS A 6" X 6" SPALL AREA WITH EXPOSED REINFORCEMENT. BENT 86, PILE 2, PIER CAP UNDERSIDE, THERE ARE TWO 3" DIAMETER X 1/4" SPALLS WITH EXPOSED REINFORCEMENT. BENT 83 HAS A 15'-0" X 1'-0" SPALL AREA IN THE EAST FACE OF THE CAP BETWEEN PILES 3 AND 5. THERE ARE TWO 3" X 1'-0" X 1" SPALLS WITH EXPOSED REINFORCEMENT IN THE UNDERSIDE OF THE CAP BETWEEN PILES 2 AND 3 OF BENT 82. BENT 81 EXHIBITS A 10" DIAMETER X 1" SPALL ADJACENT TO PILE 5. THERE IS A 3" DIAMETER X 1/2" SPALL IN THE UNDERSIDE OF THE PIER CAP NEAR PILE 3 AND A 3'-0" X 1'-0" SPALL ON THE EAST FACE NEAR PILE 2 OF BENT 79. BENT 78, THERE ARE TWO 3" X 1'-0" X 1" DEEP SPALLS WITH EXPOSED REINFORCING STEEL IN THE UNDERSIDE OF THE PIER CAP BETWEEN PILES 2 AND 3. THERE IS A 9" X 8'-0" AREA OF DELAMINATION ON THE WEST FACE OF THE PIER CAP BETWEEN PILES 1 AND 2. THERE IS A 4" X 1'-0" X 1" DEEP SPALL IN THE WEST FACE OF THE PIER CAP NEAR PILE 1. THERE IS A 2" X 6" X 1/2" DEEP SPALL WITH EXPOSED REINFORCING STEEL IN THE WEST FACE OF THE PIER CAP BENEATH THE NORTH SIDEWALK SOFFIT. THERE IS A 7'-0" X 1'-0" X 1'-0" SPALL ON THE EAST FACE OF THE PIER CAP ABOVE PILE 4. THERE IS AN 8" X 1'-6" X 5" DEEP CORNER SPALL ON THE EAST FACE OF THE PIER CAP BETWEEN PILES 5 AND 6. BENT 77, BETWEEN PILE 1 AND 2, ON THE PIER CAP UNDERSIDE, THERE IS A 1'-0" X 3'-0" DELAMINATED AREA. THERE IS A 1'-0" X 3'-0" SPALL AND A CRACK IN THE EAST FACE OF THE PIER CAP ABOVE PILE 3. THERE IS A 1'-0" DIAMETER X 1/2" DEEP SPALL WITH EXPOSED REINFORCING STEEL ON THE UNDERSIDE OF THE PIER CAP SOUTH OF PILE 7. THERE IS AN 8'-0" X 1'-0" SPALL ON THE EAST FACE OF THE PIER CAP ABOVE PILE 4. BENT 75, THE EAST FACE OF THE PIER CAP HAS SEVERE SPALLING WITH EXPOSED MAIN REINFORCING STEEL ABOVE PILES 3, 4, AND 5. THERE IS A CORNER SPALL IN THE EAST FACE OF THE PIER CAP BETWEEN PILES 2 AND 5 UP TO 1'-0" HIGH AND 6" DEEP WITH EXPOSED CORRODED REINFORCING STEEL. BENT 73, THERE IS A 6" X 4'-0" X 10" DEEP CORNER SPALL WITH EXPOSED REINFORCING STEEL EXHIBITING 10% SECTION LOSS ON THE PIER CAP ABOVE PILE 4. BENT 71, THERE IS A 4" X 4'-0" X 3" DEEP SPALL WITH EXPOSED REINFORCING STEEL ON THE EAST FACE OF THE PIER CAP ABOVE PILE 2. BENT 72: THERE IS A 2'-0" LONG 1/16" WIDE CRACK ON THE PIER CAP ABOVE PILE 1. THERE IS A 6" X 4'-0" X 4" DEEP SPALL WITH EXPOSED REINFORCING STEEL ON THE EAST FACE OF THE PIER CAP ABOVE PILE 8 WITH AN ADJACENT 3'-0" X 1'-0" DELAMINATED AREA. BENT 70, THERE IS A 1'-3" X 2'-0" IMMINENT SPALL ON THE PIER CAP NEAR PILE 1. THERE IS A 4" X 6" X 1/2" DEEP SURFACE SPALL ON THE UNDERSIDE OF THE PIER CAP BETWEEN PILES 2 AND 3. BENT 69: THERE IS A 3" X 3'-4" X 3" DEEP SPALL WITH EXPOSED REINFORCING STEEL EXHIBITING 20% SECTION LOSS ON THE EAST FACE OF THE PIER CAP ABOVE PILE 2. THERE IS A 4 X 6" X 1/2" DEEP SURFACE SPALL ON THE UNDERSIDE OF THE PIER CAP BETWEEN PILES 2 AND 3. THERE IS A 7" X 3" SURFACE SPALL WITH RUST STAINS ON THE UNDERSIDE OF THE PIER CAP NEAR PILE 5. BENT 67, THERE IS A 3" X 2'-8" X 4" DEEP SPALL WITH EXPOSED REINFORCING STEEL EXHIBITING 30% SECTION LOSS ON THE EAST FACE OF THE PIER CAP ABOVE PILE 2 WITH AN ADJACENT 3" X 6" X 2" DEEP SPALL WITH EXPOSED REINFORCING STEEL. BENT 66, THERE IS AN 8" X 1'-0" X 1/2" DEEP SPALL WITH EXPOSED REINFORCING STEEL ON THE EAST FACE OF THE PIER CAP BETWEEN PILES 4 AND 5. THE UNDERSIDE OF THE PIER CAP EXHIBITS A 10" X 10" X 1/2" DEEP SPALL BETWEEN PILES 1 AND 2. THERE IS A 2'-0" X 12'-0" X 5" DEEP CORNER SPALL WITH EXPOSED REINFORCING STEEL EXHIBITING 30% SECTION LOSS ON THE EAST FACE

OF THE PIER CAP ABOVE PILES 3 AND 4. THERE IS A 1'-0" X 9" X 1" DEEP SPALL WITH EXPOSED REINFORCING STEEL ON THE EAST FACE OF THE PIER CAP ABOVE PILE 5. BENT 64, THERE IS A 4" X 2'-0" X 3" DEEP SPALL WITH EXPOSED REINFORCING STEEL ON THE EAST FACE OF THE PIER CAP ABOVE PILE 3. THERE IS A 6" X 1'-6" X 3" DEEP CORNER SPALL WITH EXPOSED REINFORCING STEEL IN THE EAST FACE OF THE PIER CAP ABOVE PILE 3. BENT 63, THERE IS A 4'-0" X 1'-0" X 6" SPALL IN THE EAST FACE OF THE PIER CAP ABOVE PILE 2. BENT 62, THERE IS A 7" X 3'-0" X 1/2" DEEP SPALL ON THE EAST FACE OF THE PIER CAP. THERE IS A 5" X 4'-0" X 10" DEEP CORNER SPALL WITH EXPOSED REINFORCING STEEL EXHIBITING 20% SECTION LOSS ON THE PIER CAP ABOVE PILE 3. THERE IS A 3'-0" X 1'-0" X 4" SPALL ABOVE PILE 5, ON THE WEST FACE OF THE PIER. BETWEEN PILE 5 AND 6, ON THE PIER CAP UNDERSIDE, THERE IS A 1'-0" X 1'-0" X 1" SPALL. THERE IS A 1'-6" X 6'-0" X 8" DEEP CORNER SPALL WITH EXPOSED REINFORCING STEEL IN THE WEST FACE OF THE PIER CAP ABOVE PILE 6. BENT 61, THERE IS A 2'-0" X 5'-5" SPALL WITH EXPOSED REINFORCING STEEL ON THE UNDERSIDE OF THE PIER CAP BETWEEN PILES 1 AND 2. THERE IS A 1'-0" X 1'-3" X 7" DEEP CORNER SPALL ON THE EAST FACE OF THE PIER CAP OVER PILES 4 AND 5. THERE IS A 7" X 1'-0" X 1" DEEP SPALL IN THE REPAIR OF THE EAST FACE OF THE PIER CAP ABOVE PILE 7. BENT 59, THERE IS A 6" X 3'-6" X 4" DEEP SPALL WITH EXPOSED REINFORCING STEEL AND SURROUNDING DELAMINATION ON THE WEST FACE OF THE PIER CAP ABOVE PILE 1 WITH A 1/4" WIDE CRACK STEMMING FROM THE SPALL. THERE IS A 1'-0" X 2'-0" IMMEDIATE CORNER SPALL ON THE UNDERSIDE OF THE PIER CAP BETWEEN PILE 4 AND 5. ON THE BOTTOM SIDE OF THE PIER CAP, BETWEEN PILE 1 AND 2, THERE IS A 4'-0" X 2'-0" AREA OF MINOR SPALLING/ DELAMINATION. BENT 58, THERE IS A 1'-6" X 2'-6" IMMEDIATE SPALL IN THE PIER CAP. BENT 52, THERE ARE RANDOM AREAS OF LIGHT SCALING ON WEST FACE OF THE PIER CAP. BENT 50, THERE IS A 1'-6" X 2'-0" X 3" DEEP SPALL WITH EXPOSED REINFORCING STEEL AND DELAMINATION UP TO 3'-0" IN THE UNDERSIDE OF THE PIER CAP BETWEEN PILES 2 AND 3. BENT 49, THERE IS A 4" X 2'-0" X 1/2" DEEP SPALL WITH EXPOSED REINFORCING STEEL ON THE UNDERSIDE OF THE PIER CAP NEAR PILE 7. BENT 46, THERE IS AN 8" DIAMETER X 1 1/2" DEEP SPALL WITH EXPOSED REINFORCING STEEL IN THE PIER CAP BETWEEN PILES 2 AND 3. BENT 45, THERE IS A 4'-0" X 6" X 3" DEEP SPALL WITH EXPOSED REINFORCING STEEL IN THE PIER CAP ABOVE PILE 1. BENT 42, THERE IS A 1'-6" X 2'-0" X 4" SPALL IN THE PIER CAP UNDERSIDE BETWEEN PILE 3 AND 4. ABOVE PILE 4, THE WEST FACE OF THE PIER CAP, THERE IS A 4'-0" X 2'-0" X 6" SPALL. BENT 41, THERE IS A 3" X 8" X 1" DEEP SPALL WITH EXPOSED REINFORCING STEEL IN THE PIER CAP ABOVE PILE 1. BENT 40, THERE IS A 9" X 1'-0" X 1/2" DEEP SPALL WITH EXPOSED TIE ROD NEAR THE SOUTH END OF THE PIER CAP. BENT 38, THERE IS A 1'-0" X 1'-0" X 1" DEEP SPALL WITH EXPOSED MAIN REINFORCEMENT ON THE BOTTOM SIDE OF THE PIER CAP BETWEEN PILES 5 AND 6. BENT 36, THERE IS A 4" X 1'-0" X 1" DEEP SPALL WITH EXPOSED REINFORCING STEEL IN THE PIER CAP NEAR PILE 1. BENT 33: THERE IS A 1'-0" X 1'-0" X 1" DEEP SPALL WITH ONE EXPOSED MAIN REINFORCEMENT BAR IN THE UNDERSIDE OF THE PIER CAP BETWEEN PILES 5 AND 6. BENT 33: THERE IS A 1'-0" X 1'-0" X 1" DEEP SPALL WITH ONE EXPOSED MAIN REINFORCEMENT IN THE UNDERSIDE OF THE PIER CAP BETWEEN PILES 5 AND 6. BENT 32: THERE IS A 9" X 10" X 4" DEEP SPALL WITH EXPOSED REINFORCING STEEL IN THE WEST FACE OF THE PIER CAP NEAR PILE 2. BENT 30, THERE IS A 10" X 1'-8" X 10" DEEP SPALL WITH ONE EXPOSED TIE BAR AND ONE EXPOSED MAIN REINFORCEMENT EXHIBITING 10% SECTION LOSS ON THE PIER CAP EAST FACE. PILE 5 EXHIBITS A MINOR 4" X 2" X 1/2" SPALL AT THE TOP SOUTHEAST CORNER. BENT 29, THERE IS A 1'-0" X 5'-0" X 8" DEEP SPALL WITH EXPOSED REINFORCING STEEL IN THE PIER CAP ABOVE PILE 3. AT BENT 28, THERE IS A 2'-0" X 1'-0" X 1" SPALL IN THE BOTTOM FACE OF THE SOUTH END OF THE PIER CAP WITH EXPOSED REINFORCING STEEL EXHIBITING 30% SECTION LOSS. THE PIER CAP UNDERSIDE SOUTH OF PILE 2 OF BENT 26 THERE IS A 8" X 1'-0" X 2' SPALL. ABOVE PILE 3 OF BENT 26 THERE IS A 8" X 2'-6" X 8". IN THE PIER CAP OF BENT 25 AT PILE 1, THE EAST FACE, THERE IS A LARGE SPALL WITH EXPOSED REINFORCEMENT (5'-0" X 6" X 8"). A 2" DIAMETER X 2" SPALL WITH EXPOSED REINFORCEMENT IS LOCATED ON THE EAST FACE OF PIER CAP 23 UNDER THE NORTH SIDEWALK. IN THE WEST FACE AT PILE 2 OF BENT 20, THERE IS A 2'-0" X 1'-0" X 8" SPALL. AT PILE 1 OF PIER 14, THERE'S A 6'X-0" X 1'-0" X 6" SPALL WITH EXPOSED REINFORCEMENT. ON THE PIER CAP UNDERSIDE NEAR PILE 1 OF BENT 13, THERE IS A 4"

X 4" X 1" SPALL WITH EXPOSED REINFORCEMENT. SOUTH OF PILE 7, THERE IS A 1'-0" X 6" SHALLOW SPALL. BENT 13 ALSO HAS A SEVERE SPALL WITH EXPOSED REINFORCEMENT BETWEEN PILES 1 AND 2 OF 1'-0" X 5'-0" X 1" ON THE WEST FACE OF CAP. PIER 12 HAS A 3'-0" X 1'-0" X 1" SPALL WITH EXPOSED REINFORCEMENT ON THE NORTH SIDE OF PILE 1 ON THE BOTTOM OF THE CAP. BENT 11, NEAR THE SOUTH END THERE IS A 1'-6" X 2'-4" X 2" SPALL WITH EXPOSED REINFORCEMENT EXHIBITING 30% SECTION LOSS, ALONG WITH A 1'-0" X 4'-0" X 6" SPALL WITH EXPOSED REINFORCEMENT EXHIBITING 5% SECTION LOSS AT MIDSPAN OF THE PIER CAP. BENT 10, NORTH OF PILE 6 THERE IS A 6" X 6" X 1" SPALL. ALSO HAS SEVERE SPALLING AT THE NORTH END OF THE PIER. BENT 9, ABOVE PILES 1 AND 2 THERE IS A 8'-0" X 1'-0" X 10" SPALL WITH EXPOSED REINFORCEMENT. ABOVE PILE 2 OF BENT 9 THERE IS ALSO ANOTHER 2" X 6" X 2" SPALL WITH EXPOSED REINFORCEMENT. BENT 7, AT BOTH NORTH OF PILE 4 AND PILE 7 THERE ARE 1'-6" X 2'-0" X 1" SPALLS A 1'-0" X 6" X 1/2" SPALL WITH EXPOSED REINFORCEMENT IN BENT 2 IS LOCATED SOUTH OF PILE 5.

251 Reinforced Concrete Wingwalls (LF)
 Screamer F.Y.I. District Inaccessible?

WINGS HAVE MAP CRACKING IN THE FACE AND MINOR SCALE ON TOP. WINGS ARE ON WEST END ONLY. THERE IS GROUND EROSION AT THE SOUTH AND NORTH END OF BOTH WINGWALLS.

270 Timber Dolphin (EA)
 Screamer F.Y.I. District Inaccessible?

THE DOLPHINS ARE IN FUNCTIONAL CONDITION.

274 Timber Fender (LF)
 Screamer F.Y.I. District Inaccessible?

THERE ARE A TWO MISSING BOARDS ON THE SOUTH PORTION OF THE EAST FENDER. BOTTOMS ARE BEGINNING TO DETERIORATE IN AREAS.

304 Open Expansion Joint (LF)
 Screamer F.Y.I. District Inaccessible?

The open joints have some corrosion. There are some popout and minor spalls in the deck at the joints.

322 Roadway Approach Transition (EA)
 Screamer F.Y.I. District Inaccessible?

Approaches have been patched full width. There is random moderate cracking in the patches. There is a smooth transition on and off the structure.

330 Metal Bridge Railing (LF)
 Screamer F.Y.I. District Inaccessible?

THE PAINT IS STILL EFFECTIVE. THERE IS CORROSION AT SOME OF THE CONNECTIONS.

333 Miscellaneous Bridge Railing (LF)
 Screamer F.Y.I. District Inaccessible?

THE PARAPETS HAVE VERTICAL AND MAP CRACKS. THERE ARE SOME POP OUTS AND MINOR SPALLS. THE RAIL IS BENT BETWEEN PIERS 77 AND 78 ON THE WESTBOUND SIDE.

340 Utilities and Overhead Signs (ENTIRE BRIDGE)

Screamer F.Y.I. District Inaccessible?

THE ELECTRICAL SERVICE EQUIPMENT IS IN GOOD CONDITION. SIDEWALK PULL BOXES ARE MISSING SCREWS IN NUMEROUS PLACES AND HEAVILY CORRODED AND SHOULD BE REPLACED/REPAIRED. IN NUMEROUS PLACES THE ELECTRICAL CONDUIT IS DETERIORATED EXPOSING WIRES.

342 Fencing (LF)

Screamer F.Y.I. District Inaccessible?

THE FENCING HAS NUMEROUS TRAFFIC DENTS AND SCRAPES. MINOR CORROSION IS COMMON THROUGHOUT THE FENCING SYSTEM. SEVERAL OF THE FENCE MEMBERS ARE MODERATELY TO SEVERELY RUSTED AND DISLODGED FROM POSTS. NUMEROUS FENCE POST BASE PLATES ARE BENT THROUGHOUT THE BRIDGE. THE SOUTH FENCING IN SPANS 1 THROUGH 10 AND THE NORTH FENCING IN SPANS 19 THROUGH 20 IS MISSING.

344 Drainage Devices (ENTIRE BRIDGE)

Screamer F.Y.I. District Inaccessible?

THE DRAINAGE HAS BEEN MODIFIED , SCUPPERS HAVE BEEN BLOCKED OFF FOR TYPICALLY A 4 SPAN LENGTH . THE DRAINAGE SPANS HAVE HAD FIBERGLASS DRIP EDGES INSTALLED .

345 Stream Channel (ENTIRE BRIDGE)

Screamer F.Y.I. District Inaccessible?

THERE IS A RIP TIDE AT THIS BRIDGE. THERE IS ONLY A SHORT PERIOD OF TIME AT MEAN HIGH, AND LOW TIDE WHEN THE WATER IS FAIRLY CALM.

349 Movable Bridge Machinery (ENTIRE BRIDGE)

Screamer F.Y.I. District Inaccessible?

THE MACHINERY WAS IN FAIR TO POOR CONDITION WITH MAJOR DEFICIENCIES INCLUDING HEAVILY WORN SECONDARY REDUCTION OPEN GEARING AND MISSING COUPLING SEALS. MODERATE TO HEAVY CORROSION OF MACHINERY ELEMENTS WAS NOTICED THROUGHOUT.

34b Gears (ENTIRE BRIDGE)

Screamer F.Y.I. District Inaccessible?

THE OPEN GEARING WAS IN FAIR TO POOR CONDITION WITH THE SECONDARY REDUCTION OPEN GEARING BEING HEAVILY WORN. OPEN GEAR LUBRICATION WAS INADEQUATE AND CONTAMINATED.

34c Couplings (ENTIRE BRIDGE)

Screamer F.Y.I. District Inaccessible?

THE COUPLINGS WERE IN FAIR TO POOR CONDITION WITH SEVERAL CASES OF PAINT SYSTEM FAILURE, CORRODED FASTENERS, AND LEAKING SEALS. ELECTRICAL TAPE IS BEING USED AS SEALS.

34d Motors (ENTIRE BRIDGE)

Screamer F.Y.I. District Inaccessible?

THE MAIN SPAN DRIVE MOTORS ARE IN FAIR CONDITION WITH MODERATE HOUSING CORROSION. THE WEST LEAF MAIN SPAN DRIVE MOTOR SHIMS EXHIBIT PACK RUST. MOTOR BEARING MAINTENANCE DOES NOT APPEAR TO OCCUR REGULARLY.

34e Brakes (ENTIRE BRIDGE)

1 1

Screamer F.Y.I. District Inaccessible?

THE BRAKES WERE IN FAIR TO POOR CONDITION. THE TAIL LOCK MOTOR BRAKES EXHIBIT SIGNIFICANT WEAR, MALADJUSTMENT AND CORROSION. ALL BRAKES EXHIBIT ADVANCED CORROSION DUE TO LACK OF PROTECTION.

34f Auxillary Brakes (ENTIRE BRIDGE)

1 1

Screamer F.Y.I. District Inaccessible?

THE EMERGENCY BRAKES WERE CORRODED AND IN NEED OF REFURBISHMENT. THE EMERGENCY BRAKE LIMIT SWITCH TRIP ARMS ARE NOT RIGID. THE SOLENOID-TYPE EMERGENCY BRAKES SHOULD NOT BE CONSIDERED RELIABLE IN THE LONG TERM.

34g Hand Crank (ENTIRE BRIDGE)

1 1

Screamer F.Y.I. District Inaccessible?

The manual operation system on this bridge was not tested, and the components were in poor condition. Contamination and corrosion on the chain and sprockets was observed. The hand crank is also in poor condition. The manual drive system on each leaf appeared to be missing parts such as keys and chains.

34h Speed Reducers (ENTIRE BRIDGE)

1 1

Screamer F.Y.I. District Inaccessible?

THE SPEED REDUCERS FOR THE TAIL LOCKS WERE IN FAIR CONDITION. CORROSION ON OUTER CASING WAS OBSERVED. THE NORTHEAST TAIL LOCK REDUCER OIL LEVEL WAS VERY LOW.

34i Differential (ENTIRE BRIDGE)

1 1

Screamer F.Y.I. District Inaccessible?

THE DIFFERENTIALS WERE IN FAIR CONDITION. NO UNUSUAL NOISES WERE OBSERVED. MINOR CORROSION ON CASING WAS OBSERVED. THE PRIMARY DIFFERENTIAL REDUCER GEARING EXHIBITED MINOR WEAR. MINOR LEAKS WERE OBSERVED AT A MAJORITY OF THE SHAFT SEALS.

34j Bearings (ENTIRE BRIDGE)

1 1

Screamer F.Y.I. District Inaccessible?

THE BEARINGS WERE IN FAIR CONDITION WITH SPOTTY PAINT SYSTEM FAILURE, MINOR TO MODERATE CORROSION, AND SOME FASTENERS WITH SEVERE CORROSION AND MODERATE SECTION LOSS. THE NORTHEAST B3 BEARING REQUIRES ADJUSTMENT DUE TO EXCESSIVE WEAR. THE B1 BEARING LUBRICATION LINE COUPLERS EXHIBIT SIGNIFICANT CORROSION.

34k Central Locks (ENTIRE BRIDGE)

1 1

Screamer F.Y.I. District Inaccessible?

THE CENTER SHEAR LOCKS ARE IN FAIR CONDITION. THE ASSOCIATED FASTENERS EXHIBIT MODERATE CORROSION. THE NORTH SPAN LOCK IS MISSING THE SOUTHWEST BOLT AND EXHIBITS A SIGNIFICANT CRACK ON THE SOUTH SIDE UNDER THE ROADWAY DECK CHANNEL SUPPORT. SEVERAL TAIL LOCK ASSEMBLIES WERE MALADJUSTED. SEVERAL ROTARY CAM DRIVE CHAINS WERE LOOSE. THE TAIL LOCK MOTOR, REDUCER, BRAKE, AND ASSOCIATED SUPPORTS ARE IN FAIR TO POOR CONDITION IN GENERAL WITH RESPECT TO HOUSING CONDITIONS AND MOUNTING FASTENERS.

34l Load Supports (ENTIRE BRIDGE) 1 1

Screamer F.Y.I. District Inaccessible?

PUMPING WAS OBSERVED AT THE NORTHEAST AND NORTHWEST LIVE LOAD SUPPORTS. EXCESSIVE CLEARANCE WAS FOUND AT THE NORTHWEST LIVE LOAD SUPPORT.

34 Console (ENTIRE BRIDGE) 1 1

Screamer F.Y.I. District Inaccessible?

THE CONTROL DESK WAS IN GOOD CONDITION WITH A FEW EXCEPTIONS. TRAFFIC SIGNAL INDICATING LIGHTS SHOULD BE REPAIRED AND DOES NOT CONTAIN AN EMERGENCY STOP BUTTON.

34n Machinery Room (ENTIRE BRIDGE) 1 1

Screamer F.Y.I. District Inaccessible?

THE MACHINERY ROOM ACCESS PLATFORM, RAILING, AND ACCESS LADDERS ARE IN FAIR TO POOR CONDITION. THE ACCESS AND SUPPORT SYSTEM EXHIBITS MODERATE TO SEVERE CORROSION.

34o Tenders House (ENTIRE BRIDGE) 1 1

Screamer F.Y.I. District Inaccessible?

THE TENDERS HOUSE WAS IN GOOD CONDITION. THERE IS A 120 VA.C., 1500 WATT WATER HEATER IN THE RESTROOM. THIS WATER HEATER IS IMPROPERLY CONNECTED TO THE ELECTRICAL SYSTEM BY USING HOUSEHOLD PLUG INSERTED INTO A RECEPTACLE. THE PLUG EXHIBITS SIGNS OF OVER HEATING AND SHOULD BE DISCONNECTED AND REWIRED TO THE LIGHTING DISTRIBUTION PANEL WITH A DEDICATED CIRCUIT BREAKER.

34p Electrical System (ENTIRE BRIDGE) 1 1

Screamer F.Y.I. District Inaccessible?

The overall electrical system is in fair condition. Several code violations and safety concerns were noted and are recommended to be addressed within the next several years. For safety of inspection and maintenance personnel it is recommended that disconnect switches be installed within sight of all brakes and span motors. The control desk contains non-functioning traffic signal indicating lights and does not contain an emergency stop pushbutton as required by AASHTO.

During test operations, the West leaf repeatedly failed to stop at the nearly seated position as required for the mid-span interlocking of the leaves. It is recommended that brake torque settings and rotary cam limit switch settings be adjusted.

Tail lock motor insulation resistance tests indicate deterioration of the tail lock motor windings. It is recommended that the motors be replaced for long term service and reliability. The fender navigation light conduit is heavily corroded; the conduit should be replaced with PVC coated rigid galvanized steel type conduit.

Currently, a multi-conductor MC type cable is being used as a submarine cable. This particular cable is not intended for submersion and does not meet the requirements for submarine cables as specified in AASHTO. In addition the MC cables are routed through the front access door of the terminal cabinets which does not provide a watertight seal.

34q Counterweight (ENTIRE BRIDGE) 1 1

Screamer F.Y.I. District Inaccessible?

THE COUNTERWEIGHTS ARE IN GOOD TO FAIR CONDITION. THERE ARE VARIOUS MINOR CRACKS AND SPALLS THROUGHOUT. SOME OF THE CRACKS ARE SEVERE. THE COUNTERWEIGHTS ALSO HAVE A FEW POPOUTS.

34r Pits (ENTIRE BRIDGE)

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Screamer F.Y.I. District Inaccessible?

THE PIT AREAS ARE IN GOOD CONDITION. THE PIT WALLS GENERALLY HAVE VARIOUS VERTICAL, HORIZONTAL, AND MAP CRACKING AS WELL AS A FEW SMALL HOLLOW AREAS. THE FLOOR IS WET, BUT SOLID AND HAS MINOR BUILD UP OF DIRT/DEBRIS FROM THE WATER WHEN IT RISES. THERE ARE SOME STORAGE ISSUES THAT NEED TO BE ADDRESSED. THE WEST CTWT PIT HAS LIMITED ACCESS DUE TO STEEL SCREEN AND THE PROXIMITY OF THE THRUSTOR BRAKE.

34s Shaft Alignment (ENTIRE BRIDGE)

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Screamer F.Y.I. District Inaccessible?

SHAFT ALIGNMENTS APPEARED SATISFACTORY, THOUGH PRECISE MEASUREMENTS WERE NOT MADE.

34t Cleanliness (ENTIRE BRIDGE)

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Screamer F.Y.I. District Inaccessible?

THE CONTROL HOUSE IS GENERALLY WELL KEPT. SOME ADDITIONAL ATTENTION MUST BE PAID TO MATERIALS STORAGE. SOME OF THE WINDOWS HAVE BECOME INOPERABLE.

359 Soffit (EA)

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Screamer F.Y.I. District Inaccessible?

THE SOFFIT HAS LONGITUDINAL, MAP, DIAGONAL, AND TRANSVERSE CRACKS. MOST CRACKS HAVE MODERATE EFFLORESCENCE. THERE ARE SHOTCRETE REPAIRS, POP OUTS, SPALLS, AND HOLLOW SOUNDING AREAS. TYPICAL EFFLORESCENCE IS ALONG MOST LONGITUDINAL DECK JOINTS. UNDER THE SIDEWALK, THERE ARE SEVERAL RANDOM SPOTS OF SMALL SPALLS AND HOLLOW AREAS. SOME OF THESE SPALLS EXPOSE REINFORCEMENT. SUPPORT BLOCKS FOR THE SIDEWALK ALSO HAVE TYPICAL CRACKING AND EFFLORESCENCE. THE FOLLOWING DESCRIBES THE DEFECTS FOUND:

SPAN 1: A PORTION OF THE SOUTH EAST SOFFIT SECTION WAS UNABLE TO BE INSPECTED DUE TO POWER GENERATION HOUSING OBSTRUCTING THE VIEW. THE PATCHES IN THE NORTH SIDEWALK SOFFIT HAVE FAILED. THE PATCH ALONG THE NORTH END OF THE DECK SOFFIT IS IN GOOD CONDITION EXHIBITING A FEW HAIRLINE CRACKS. THERE IS FIBERGLASS SHEETING ALONG THE NORTH AND SOUTH FACES OF THE DECK SOFFIT. THERE IS A LARGE REPAIR ALONG THE SOUTH EDGE OF THE DECK SOFFIT THAT IS IN GOOD CONDITION.

SPAN 2: THERE ARE SEVERAL LONGITUDINAL HAIRLINE CRACKS WITH LIGHT EFFLORESCENCE IN THE NORTH SIDEWALK SOFFIT. THERE IS A FULL LENGTH X 2'-0" REPAIR ALONG THE NORTH EDGE OF THE DECK SOFFIT THAT IS IN GOOD CONDITION WITH SOME HAIRLINE CRACKING. THERE IS A 1'-6" X 2'-0" AREA OF DELAMINATION ALONG THE SOUTH EDGE OF THE DECK SOFFIT. THERE IS A 2'-0" LONG HAIRLINE CRACK WITH LIGHT EFFLORESCENCE AND DELAMINATION ALONG THE SOUTH EDGE OF THE DECK SOFFIT.

SPAN 3: THE WEST EXPANSION JOINT EXHIBITS WATER STAINS NEAR THE NORTH END. THERE ARE HAIRLINE CRACKS ON THE NORTH END OF BOTH EXPANSION JOINTS HOWEVER, ONLY THE WEST EXHIBITS EFFLORESCENCE. THERE IS A 10" X 1'-0" X 6" DEEP CORNER SPALL WITH EXPOSED REINFORCING STEEL IN THE NORTH SIDEWALK SOFFIT. THE SPALL HAS A 1/4" WIDE CRACK EXTENDING 8" FROM THE SPALL.

SPAN 4: THERE ARE A FEW HAIRLINE CRACKS ALONG A REPAIR IN THE NORTH EDGE OF THE DECK SOFFIT. THERE IS A 1/16" WIDE CRACK ALONG THE SOUTH EDGE OF THE DECK SOFFIT WITH DELAMINATION UP TO 1'-0" TO THE SOUTH EDGE.

SPAN 5: THERE IS A 3'-0" LONG 1/16" WIDE CRACK WITH DELAMINATION ALONG THE NORTH EDGE OF THE DECK SOFFIT. THERE ARE A FEW LONGITUDINAL HAIRLINE CRACKS WITH LIGHT EFFLORESCENCE IN THE NORTH SIDEWALK SOFFIT. THERE IS A 1'-6" X 2'-0" IMMINENT SPALL ON THE SOUTH EDGE OF THE DECK SOFFIT. THERE IS A 2'-0" X 6'-0" AREA OF DELAMINATION AT THE SOUTH END OF THE DECK SOFFIT.

SPAN 6: THE WEST EXPANSION JOINT EXHIBITS SEVERAL HAIRLINE CRACKS WITH EFFLORESCENCE AT THE NORTH END. THE NORTH SIDEWALK SOFFIT EXHIBITS A LARGE SPALL THAT IS COVERED WITH WOOD BOARDS.

SPAN 7: THE SOUTH EDGE OF THE DECK SOFFIT EXHIBITS A FAILED PATCH EXPOSING A 2'-0" X 14'-0" X 4" DEEP SPALL AS WELL AS AN EXPANSION BOLT OF THE CONDUIT HANGER. THERE ARE THREE TRANSVERSE HAIRLINE CRACKS WITH EFFLORESCENCE IN THE SOUTH EDGE BEAM.

SPAN 8: THERE IS A 1'-0" X 3'-0" AREA OF FINE MAP CRACKING ON THE NORTH SIDE OF THE DECK SOFFIT. THERE ARE TWO 4" X 4" X 1" DEEP SPALLS IN THE NORTH SIDEWALK SOFFIT. THERE IS A 2'-0" X 6'-0" PATCH NEAR THE SOUTH EDGE OF THE DECK SOFFIT THAT EXHIBITS HAIRLINE CRACKS. THERE IS FIBERGLASS SHEETING ALONG THE NORTH AND SOUTH FACES OF THE DECK SOFFIT. THERE IS AN 18" Ø PATCH IN THE SOUTH SIDEWALK SOFFIT. THERE IS 1/4" DEEP AREA OF SCALING NEAR MID SPAN.

SPAN 9: THERE IS A 1'-0" X 2'-0" AREA OF 1" DEEP SCALING WITH 1'-0" OF DELAMINATION SURROUNDING NEAR THE NORTH EDGE OF THE DECK SOFFIT. THERE IS A 1'-6" X 4'-0" X 1/2" DEEP AREA OF SCALING AT THE SOUTHEAST CORNER OF THE DECK SOFFIT. THERE IS A 1'-0" X 1'-6" DELAMINATED AREA AT THE SOUTHWEST CORNER OF THE DECK SOFFIT.

SPAN 10: THERE IS A 1'-6" X 1'-6" SPALL ON THE WEST EXPANSION JOINT SIDE. THERE IS ALSO A CORNER SPALL AT THE WEST EXPANSION JOINT MEASURING 1'-0" X 1'-6" X 3" DEEP. 50% OF THE TOP OF THE WEST EXPANSION JOINT IS SPALLED UP TO 6" DEEP.

THERE IS A 1'-6" X 1'-6" SPALL AND AN ADJACENT 1'-0" X 1'-0" SPALL ON THE NORTH SIDEWALK SOFFIT. THERE IS A 2'-4" X 1'-9" X 4" DEEP SPALL WITH EXPOSED REINFORCING STEEL ON THE SOUTH CORNER OF THE DECK SOFFIT.

SPAN 11: THERE IS A 10" X 1'-4" X 5/8" DEEP AREA OF SCALING NEAR MID SPAN. THERE ARE MULTIPLE SPALLS IN THE SOUTH SIDEWALK SOFFIT WITH THE TWO LARGEST BOTH WITH EXPOSED REINFORCING STEELS AND MEASURING 1'-4" X 6'-0" X 4" DEEP AND 1'-6" X 1'-6" X 2" DEEP. THERE IS A 5'-0" LONG 1/16" WIDE LONGITUDINAL CRACK IN THE NORTH FACE OF THE SOUTH EDGE BEAM SOFFIT.

SPAN 12: THERE IS A 1/4" WIDE CRACK ALONG THE ENTIRE LENGTH OF THE NORTH END OF THE DECK SOFFIT WITH 1'-6" OF DELAMINATION. THERE IS AN 8" Ø X 2" DEEP SPALL IN THE NORTH SIDEWALK SOFFIT. THERE IS A 1/16" WIDE TRANSVERSE CRACK WITH LIGHT EFFLORESCENCE IN THE SOUTH END BEAM SOFFIT. THERE ARE SEVERAL AREAS OF SPALLING AND DELAMINATION IN THE SOUTH SIDEWALK SOFFIT MEASURING 1'-6" X 2'-6", 7" X 6" X 2" DEEP WITH EXPOSED REINFORCING STEEL, AND 4" X 9" X 2" DEEP WITH EXPOSED REINFORCING STEEL.

SPAN 13 (BASCULE SPAN): FIXED SPANS: ON BOTH THE EAST AND WEST SPAN THERE IS A 1/4" WIDE CRACK ALONG HALF THE NORTH END OF THE DECK SOFFIT WITH DELAMINATION UP TO 2'-0". ON THE EAST SPAN THERE IS A 3'-0" X 10'-0" IMMINENT SPALL ALONG THE NORTH END OF THE DECK SOFFIT. THERE IS A 6'-0" HORIZONTAL CRACK ALONG THE SOUTH FACE OF THE NORTH OUTSIDE BEAM OF THE EAST SPAN. THERE IS A 2'-0" X 6" X 4" SPALL ON THE EASTERN EDGE OF THE WEST SPAN. ADJACENT TO THE 1/4" CRACK ON THE NORTHERN EDGE OF THE WEST SPAN, THERE IS AN 8'-0" X 2'-0" X 2" SPALL. THERE ARE SMALL 1'-0" X 1'-0" DELAMINATED AREAS IN THE NORTH SIDEWALK SOFFIT. THERE IS A 6" X 1'-0" IMMINENT SPALL IN THE DECK SOFFIT NEAR THE SOUTH EDGE OF THE EAST SPAN.

SPAN 14: THERE IS A 1/16" WIDE CRACK ALONG THE NORTH END OF THE DECK SOFFIT WITH 6" OF DELAMINATION. THERE IS A 5" X 6" X 1" DEEP SPALL IN THE BOTTOM FACE OF THE NORTH EDGE BEAM. THERE ARE WOOD BOARDS BLOCKING THE DRAIN HOLES IN THE SOUTH FACE OF THE DECK SOFFIT.

SPAN 15: THERE IS A 3'-0" X 1'-0" AREA OF IMMINENT SPALLING ALONG THE NORTH EDGE OF THE DECK SOFFIT WITH AN ADJACENT 1/4" CRACK WITH DELAMINATION. THERE IS AN AREA OF 1/4" DEEP SCALING NEAR MID SPAN. THERE IS A FULL LENGTH X UP TO 1'-6" AREA OF IMMINENT SPALLING ALONG THE SOUTH EDGE OF THE DECK SOFFIT WITH A CONNECTED 2' X 6' SPALLED AREA AT THE WEST END.

SPAN 16: THERE ARE EXPOSED ELECTRICAL WIRES PROTRUDING FROM THE CORRODED STEEL CONDUITS THAT RUN ALONG THE BOTTOM FACE OF THE EDGE BEAM WHICH TERMINATE WITHIN THE SPAN ON THE NORTH EDGE. ON THE SOUTH EDGE THERE ARE CORRODED STEEL CONDUITS THAT RUN ALONG THE BOTTOM FACE OF THE EDGE BEAM WHICH TERMINATE WITHIN THE SPAN. SPAN 16 EXHIBITS TYPICAL DEFECTS.

SPAN 17: THERE IS A 3/8" WIDE CRACK RUNNING ALONG THE ENTIRE LENGTH OF THE NORTH EDGE OF THE DECK SOFFIT WITH UP TO 6" HIGH OF DELAMINATION ON THE VERTICAL FACE OF DECK SLAB AND 3" WIDE OF DELAMINATION ON THE BOTTOM FACE OF THE DECK SLAB. ATTACHED TO THE PREVIOUSLY LISTED CRACK IS A 1'-0" X 6" X 3" DEEP SPALL. THERE IS A 1'-0" X 10'-0" IMMINENT SPALL IN SOUTH EDGE OF THE DECK SOFFIT.

SPAN 18: THERE IS A 12'-0" LONG REPAIR THAT EXHIBITS FINE MAP CRACKING. THE NORTH SIDEWALK SOFFIT EXHIBITS A 2" X 1'-0" FAILED PATCH. THERE IS FIBERGLASS SHEETING ALONG THE NORTH AND SOUTH FACES OF THE DECK SOFFIT. THERE IS A FULL LENGTH 1/8" WIDE CRACK WITH UP TO 2'-0" OF DELAMINATION SURROUNDING NEAR THE SOUTH EDGE OF THE DECK SOFFIT.

SPAN 19: THERE IS A 3/8" WIDE CRACK WITH DELAMINATION UP TO 4" AT THE NORTH EDGE OF THE DECK SOFFIT. THERE IS AN 8'-0" LONG 1/8" WIDE CRACK ALONG THE NORTH EDGE OF THE DECK SOFFIT WITH LOCALIZED DELAMINATION. THERE IS A 1'-0" X 1'-6" IMMINENT SPALL NEAR THE NORTH EDGE OF THE DECK SOFFIT. THERE IS A 5'-0" LONG 1/8" WIDE CRACK NEAR THE SOUTH EDGE OF THE DECK SOFFIT WITH 5" X 10" OF SURROUNDING DELAMINATION.

SPAN 20: AT THE WEST EDGE OF THE NORTH SIDE, THE SIDEWALK SOFFIT, THERE IS A 1'-6" X 1'-6" X 1" SPALL. THE MAJORITY OF SPAN 20 EXHIBITS TYPICAL DEFECTS.

SPAN 21: THE NORTH EDGE OF THE DECK SLAB IS DELAMINATED UP TO A 3/8" WIDE

CRACK, FULL LENGTH, 1'-0" FROM THE EDGE WITH A 12'-0" X 2'-0" X 8" DEEP PORTION THAT HAS ALREADY FALLEN, EXPOSING REINFORCING STEEL.

SPAN 22: THERE IS A 3/8" WIDE, FULL LENGTH, CRACK ALONG THE NORTH EDGE OF THE DECK SOFFIT WITH UP TO 1'-0" OF DELAMINATION ON BOTH SIDES. THERE IS A HAIRLINE CRACK WITH HEAVY EFFLORESCENCE AND STALACTITES ON THE NORTH SIDEWALK SOFFIT. THERE IS A FULL LENGTH X 2'-0" IMMINENT SPALL IN THE DECK SOFFIT NEAR THE SOUTH EDGE.

SPAN 23: FULL LENGTH ALONG THE NORTH EDGE OF THE DECK SOFFIT IS DELAMINATED. A 4'-0" X 1'-6" X 3" DEEP SECTION HAS ALREADY FAILED EXPOSING REINFORCING STEEL THAT EXHIBIT UP TO 20% SECTION LOSS. THERE IS A 6" X 1'-6" X 1/2" DEEP SPALL IN THE NORTH EDGE OF THE DECK SOFFIT. THERE IS A HAIRLINE CRACK WITH HEAVY EFFLORESCENCE AND STALACTITES AT THE CONNECTION BETWEEN THE DECK SOFFIT AND BENT 23 ON THE SOUTH SIDE. THERE IS MODERATE EFFLORESCENCE STEMMING FROM THE CONNECTION BETWEEN THE SOUTH SIDEWALK SOFFIT AND THE OVERHANG SOFFIT. THERE IS A 6'-0" LONG 1/8" WIDE CRACK WITH A 1" X 4" X 1/2" DEEP SURFACE SPALL IN THE SOUTH EDGE OF THE OVERHANG SOFFIT. THERE IS A 5'-0" X 2'-0" AREA OF DELAMINATION ON THE SOUTH FACE OF THE SOUTH OUTSIDE BEAM WITH CRACKS STEMMING FROM THE TOP AND BOTTOM OF THE DELAMINATION AREA.

SPAN 24: THERE ARE SCATTERED TRANSVERSE HAIRLINE CRACKS WITH LIGHT EFFLORESCENCE. THERE IS A 2" X 1'-0" X 2" DEEP SPALL WITH EXPOSED REINFORCING STEEL AND AN ADJACENT WOOD FORM TO THE EAST OF THE SPALL IN THE NORTH SIDEWALK SOFFIT.

SPAN 25: THERE IS FIBERGLASS SHEETING ALONG THE NORTH AND SOUTH FACES OF THE DECK SOFFIT. THERE IS A FULL LENGTH GUNNITE REPAIR NEAR THE NORTH END OF THE DECK SOFFIT THAT EXHIBITS HAIRLINE MAP CRACKING. THERE ARE SMALL AREAS OF DELAMINATION IN THE NORTH SIDEWALK SOFFIT. THERE IS A 1'-0" X 6'-0" AREA OF HAIRLINE MAP CRACKING IN THE SOUTH EDGE OF THE DECK SOFFIT. THERE ARE A FEW REPAIRS THAT ARE IN GOOD CONDITION IN THE SOUTH EDGE OF THE DECK SOFFIT AND THE SOUTH SIDEWALK SOFFIT. THERE IS MINOR HONEYCOMBING IN THE SOUTH SIDEWALK SOFFIT.

SPAN 26: THERE IS A 1/4" WIDE CRACK ALONG THE NORTH EDGE OF THE DECK SOFFIT SPANNING APPROXIMATELY 75% OF THE LENGTH OF THE SPAN WITH UP TO 1'-0" OF SURROUNDING DELAMINATION. AT THE PREVIOUSLY MENTIONED 1/4" CRACK, A 1'-6" X 6" X 2" SPALL HAS DEVELOPED. THE NORTH SIDEWALK SOFFIT EXHIBITS A FEW SPALLS AND IMMINENT SPALLS MEASURING 6" X 1'-6" X 2" DEEP, 4" Ø X 2" DEEP, 1'-0" Ø, AND 1'-4" X 1'-6". THERE IS AN 8" X 3'-0" AREA OF DELAMINATION IN THE SOUTH END OF THE DECK SOFFIT. THERE IS MINOR HONEYCOMBING IN THE SOUTH SIDEWALK SOFFIT.

SPAN 27: THERE IS A 6" X 4'-0" IMMINENT SPALL ALONG THE NORTH EDGE OF THE DECK SOFFIT. THERE IS A 3/8" WIDE CRACK RUNNING APPROXIMATELY 50% OF THE LENGTH OF THE SPAN NEAR THE NORTH END OF THE DECK SOFFIT WITH LOCALIZED DELAMINATION. THERE ARE A FEW AREAS OF DELAMINATION ON THE NORTH SIDEWALK SOFFIT UP TO 8" X 1'-0" IN SIZE. THERE ARE SEVERAL SMALL PATCHES THAT ARE ALL IN GOOD CONDITION. THERE IS MINOR HONEYCOMBING IN THE SOUTH SIDEWALK SOFFIT. THERE IS TYPICAL RUST STAINING AND EFFLORESCENCE AT THE CENTER CONSTRUCTION JOINT.

SPAN 28: THERE IS HAIRLINE MAP CRACKING WITH LIGHT EFFLORESCENCE IN THE EXPANSION JOINT. HAIRLINE CRACKS WITH LIGHT EFFLORESCENCE IN THE BOTTOM OF THE EXPANSION JOINT.

SPAN 29: THERE IS A SPALL MEASURING HALF THE LENGTH OF THE NORTH EDGE OF THE DECK SOFFIT X 4'-6" X 6" DEEP WITH EXPOSED REINFORCING STEELS AND SURROUNDING DELAMINATION. THERE IS A FULL LENGTH X 3'-0" REPAIR IN THE SOUTH EDGE OF THE DECK SOFFIT. THERE IS A SPALL WITH DELAMINATION MEASURING 2'-5" X 7'-0" X 3 1/2" DEEP WITH ONE EXPOSED REINFORCEMENT EXHIBITING 20% SECTION LOSS ALONG THE SOUTH EDGE OF THE DECK SOFFIT.

SPAN 30: THERE IS A FULL LENGTH 1/8" WIDE CRACK ALONG THE NORTH EDGE OF THE DECK SOFFIT WITH DELAMINATION AND ADJACENT SPALLING. THE SPALL IS 3'-0" X 10'-0" X 6" DEEP WITH EXPOSED REINFORCING STEEL AND THE DELAMINATION IS THE FULL LENGTH OF THE SPAN. THERE ARE SMALL AREAS OF DELAMINATION IN THE NORTH SIDEWALK SOFFIT. THERE IS A 1'-0" X 1'-0" X 1" DEEP SPALL IN THE SOUTH FACE OF THE

DECK SOFFIT ADJACENT TO A DRAIN HOLE. THERE ARE TWO LARGE REPAIRS THAT ARE IN GOOD CONDITION ALONG THE SOUTH EDGE OF THE DECK SOFFIT. NEAR THE CENTER CONSTRUCTION JOINT AT MID SPAN, THERE IS A 7'-0" HAIRLINE CRACK WITH RUST STAINING AND EFFLORESCENCE.

SPAN 31: THERE IS FIBERGLASS SHEETING ALONG THE NORTH AND SOUTH FACES OF THE DECK SOFFIT. THERE IS A LARGE REPAIR NEAR THE NORTH EDGE OF THE DECK SOFFIT THAT EXHIBITS HAIRLINE CRACKS AND MAP CRACKING WITH EFFLORESCENCE AND STALACTITES. THERE ARE TWO SPALLS IN THE NORTH SIDEWALK SOFFIT MEASURING 1'-0" X 1'-2" X 3" DEEP AND 8" X 6" X 3" DEEP, BOTH WITH EXPOSED REINFORCING STEEL. THERE IS A LARGE PATCH IN THE SOUTH EDGE OF THE DECK SOFFIT STILL SHOWING MAP CRACKING WITH LOCALIZED DELAMINATION. THERE ARE ISOLATED PATCHES IN THE SOUTH SIDEWALK SOFFIT THAT ARE IN GOOD CONDITION.

SPAN 32: THERE ARE HAIRLINE CRACKS WITH EFFLORESCENCE NEAR BOTH SIDES OF THE EXPANSION STRUCTURES.

SPAN 33: THERE ARE TWO 3'-0" X 6" MINOR UNSOUND REPAIRS NEAR THE NORTH END OF THE DECK SLAB, WITH ONE NEAR BENT 33 AND THE OTHER ONE AT MID SPAN. THERE ARE SCATTERED AREAS OF MINOR DELAMINATION UP TO 1'-0" X 2'-0" IN THE NORTH SIDEWALK SOFFIT. 1'-0" X 2'-3" FAILED REPAIR NEAR THE SOUTH EDGE OF THE DECK SOFFIT AT BENT 33. THERE ARE SMALL SURFACE SPALLS ADJACENT TO THE DRAIN HOLES ON THE SOUTH FACE OF THE DECK SOFFIT. THERE IS A HAIRLINE CRACK WITH ADJACENT SCALING IN THE DECK SOFFIT STEMMING ONTO THE PIER CAP NEAR PILE 6.

SPAN 34: THERE IS A 10'-0" LONG 1/4" WIDE CRACK NEAR THE NORTH EDGE OF THE DECK SOFFIT WITH UP TO 1'-6" OF DELAMINATION ADJACENT. THERE ARE THREE HAIRLINE CRACKS NEAR THE SOUTH SIDE OF THE DECK SOFFIT. THERE ARE TWO PATCHES IN THE SOUTH SIDEWALK SOFFIT THAT ARE IN GOOD CONDITION.

SPAN 35: THERE IS A 1/8" WIDE FULL LENGTH CRACK WITH 6" WIDE DELAMINATION NEAR THE NORTH END OF THE DECK SOFFIT. THERE IS A 1/16" WIDE CRACK WITH EFFLORESCENCE ALONG THE ENTIRE INSIDE FACE OF THE NORTH EDGE BEAM THAT EXTENDS INTO THE PIER CAP OF BENT 34. THERE IS ALSO A HAIRLINE CRACK ON THE OUTSIDE FACE THAT REFLECTS THE CRACK ON THE INSIDE FACE. ALL PATCHES IN THE SOUTH SIDE OF THE DECK SOFFIT ARE IN GOOD CONDITION. THE SOUTH DRAIN HOLES ARE BLOCKED WITH REPAIR MATERIAL. THERE IS A 7" X 8" X 2 1/2" FAILED PATCH NEAR MID SPAN, 6'-0" FROM BENT 35 NEAR PILE 4.

SPAN 36: THERE IS A CORNER SPALL MEASURING 1'-0" X 1'-6" X 3'-0" IN THE SOUTH END OF THE EAST EXPANSION JOINT STRUCTURE. THERE IS A 1'-0" X 3'-0" AREA OF FINE MAP CRACKING WITH LIGHT EFFLORESCENCE NEAR THE SOUTH END.

SPAN 37: THERE IS A 1'-2" X 1'-6" X 2 1/2" DEEP SPALL WITH EXPOSED REINFORCING STEEL ALONG THE NORTH EDGE OF THE DECK SOFFIT WITH DELAMINATION UP TO 1'-0" WIDE FULL LENGTH WITH AND 1/8" WIDE CRACK AT BENT 37. THE NORTH SIDEWALK SOFFIT HAS TWO 1'-6" Ø UNSOUND AREAS NEAR BENT 37. THERE IS A FULL LENGTH REPAIR THAT IS IN GOOD CONDITION AT THE SOUTH EDGE OF THE DECK SOFFIT. THERE ARE TWO 1'-0" X 1'-0" AREAS OF DELAMINATION IN THE SOUTH SIDEWALK SOFFIT. THERE IS A 5" X 1'-2" X 1/2" DEEP AREA OF SCALING WITH EFFLORESCENCE IN THE WEST SIDE OF THE SIDEWALK SOFFIT BETWEEN JOINT ONE AND TWO AT BENT 37. THE NORTH FASCIA BEAM EXHIBITS A HORIZONTAL CRACK ON THE NORTH SIDE.

SPAN 38: THERE IS A FULL LENGTH REPAIR ALONG THE NORTH EDGE OF THE DECK SOFFIT WITH HAIRLINE MAP CRACKING WITH EXHIBITION OF LIGHT EFFLORESCENCE. THERE IS A LONG CRACK WITH EFFLORESCENCE NEAR BENT 37, PILE 5. THERE IS A FULL LENGTH REPAIR IN THE SOUTH END OF THE DECK SOFFIT THAT EXHIBITS A LONGITUDINAL HAIRLINE CRACK WITH EFFLORESCENCE AND STALACTITES. THERE IS A 6" X 8" X 1" DEEP SPALL IN THE SOUTH SIDEWALK SOFFIT. THERE ARE TWO 3" X 3" X 1/2" SPALLS WITH EXPOSED REINFORCING STEEL IN THE SOUTH EDGE BEAM.

SPAN 39: THERE ARE TWO SPALLS NEAR THE NORTH EDGE OF THE DECK SOFFIT MEASURING 1'-6" X 1'-6" X 2" DEEP AND 1'-6" X 4'-0" X 3 1/2" DEEP BOTH WITH EXPOSED REINFORCING STEEL. THERE IS A 1/16" WIDE CRACK WITH EFFLORESCENCE IN THE NORTH SIDEWALK SOFFIT. THERE IS A 1'-0" X 2'-0" X 2" DEEP SPALL FROM A FAILED REPAIR NEAR THE WEST SIDE OF SOUTH EDGE.

SPAN 40: THERE IS A 2" X 3" X 1/2" DEEP SURFACE SPALL NEAR THE NORTH END OF THE

EAST EXPANSION STRUCTURE. THE SOUTH END IS IN GOOD CONDITION.

SPAN 41: THERE IS A 10'-0" LONG 1/8" WIDE CRACK WITH LOCALIZED DELAMINATION UP TO 8' WIDE ALONG THE NORTH EDGE OF THE DECK SOFFIT. AT THE FIRST CONSTRUCTION JOINT, NEAR BENT 40, THERE IS A 3'-0" X 6" UNSOUND AREA 6'-0" FROM BENT 40. ON THE EAST END, NORTH FASCIA, THERE IS A 4" X 1" X 1/2" SPALL WITH EXPOSED REINFORCING STEEL. THERE IS A FULL LENGTH REPAIR IN THE SOUTH END OF THE DECK SOFFIT THAT EXHIBITS HAIRLINE CRACKS THROUGHOUT. THERE IS A HAIRLINE CRACK WITH STALACTITES IN THE SOUTH SIDEWALK SOFFIT.

SPAN 42: THERE IS A FULL LENGTH REPAIR IN GOOD CONDITION ALONG THE NORTH EDGE OF THE DECK SOFFIT. THERE ARE TWO REPAIRS MEASURING 1'-6" X 12'-0" AND 2'-0" X 3'-0" IN THE NORTH SIDEWALK SOFFIT THAT ARE IN GOOD CONDITION. THERE IS A FULL LENGTH PATCH IN THE SOUTH END OF THE DECK SOFFIT THAT EXHIBITS HAIRLINE CRACKS THROUGHOUT. THERE IS A FULL LENGTH X 8" X 2" DEEP SPALL WITH EXPOSED REINFORCING STEEL EXHIBITING UP TO 100% SECTION LOSS ALONG THE THIRD CONSTRUCTION JOINT FROM THE NORTH EDGE.

SPAN 43: THERE IS A 2" X 4" X 1 1/2" DEEP SPALL IN THE NORTH OUTSIDE FACE. THERE IS A 1/8" WIDE CRACK WITH RUST STAINING, EFFLORESCENCE, AND UP TO 8" OF DELAMINATION ALONG THE NORTH END OF THE DECK SOFFIT. THERE IS MINOR HONEYCOMBING NEAR MID SPAN OF THE DECK SOFFIT ALONG EACH CONSTRUCTION JOINT, UP TO 3'-0" WIDE. THERE IS A FULL LENGTH PATCH NEAR THE SOUTH END THAT EXHIBITS FINE MAP CRACKING.

SPAN 44: THERE IS HAIRLINE MAP CRACKING ON THE EAST EXPANSION JOINT.

SPAN 45: THERE IS A 4" X 6" X 2" DEEP SPALL WITH EXPOSED REINFORCING STEEL IN THE NORTH SIDEWALK SOFFIT WITH AN ADJACENT 3'-0" X 1'-0" UNSOUND AREA. THERE IS A 4'-0" X 12'-0" REPAIR NEAR THE SOUTH END OF THE DECK SOFFIT THAT IS IN GOOD CONDITION. AT THE SECOND CONSTRUCTION JOINT FROM THE NORTH EDGE, THERE IS A 1'-6" X 1'-0" X 1" SPALL 6'-0" FROM BENT 45.

SPAN 46: THERE IS A 12'-0" LONG 1/8" WIDE CRACK ALONG THE NORTH END OF THE DECK SOFFIT. THE REPAIRS IN THE DECK SOFFIT ARE IN GOOD CONDITION. AT THE SOUTH WEST CORNER OF THE DECK THERE IS A 3'-0" X 8" UNSOUND AREA. AT THE NORTH SIDEWALK SOFFIT, AT BENT 46, THERE IS A 2'-0" X 6" UNSOUND AREA.

SPAN 47: THERE ARE TWO 4" Ø SURFACE SPALLS AND TWO 1'-0" Ø UNSOUND AREAS IN THE NORTH SIDEWALK SOFFIT. THERE IS A 24'-0" LONG 1/8" WIDE CRACK ALONG THE NORTH EDGE OF THE DECK SOFFIT THAT IS CONNECTED TO A 12'-0" X 8" IMMINENT SPALL AND A 1'-0" X 3" X 2" SPALL. ALONG THE SECOND CONSTRUCTION JOINT FROM THE NORTH EDGE, 6'-0" FROM BENT 47, THERE IS A 4'-0" X 6" UNSOUND AREA. THERE IS A 3'-0" X 6'-0" REPAIR IN THE SOUTH EDGE OF THE DECK SOFFIT THAT IS IN GOOD CONDITION.

SPAN 48: THERE IS A 6" Ø AREA OF IMMINENT SPALLING IN THE NORTH SIDEWALK SOFFIT. THERE IS A 2" X 8" X 1/2" DEEP SPALL IN THE EXPANSION JOINT.

SPAN 49: THERE IS A 1'-6" X 2'-0" IMMINENT SPALL IN THE NORTH SIDEWALK SOFFIT NEAR BENT 49. THERE IS A 3" X 5" X 1" DEEP SPALL WITH EXPOSED REINFORCING STEEL IN THE NORTH SIDEWALK SOFFIT AT MIDSPAN. THERE IS A 10" X 2'-6" X 1" DEEP SPALL WITH EXPOSED REINFORCING STEEL AT THE THIRD CONSTRUCTION JOINT FROM THE NORTH SIDE, 6'-0" FROM BENT 49. ALONG THE FIRST CONSTRUCTION JOINT FROM THE NORTH EDGE, THERE IS TYPICAL EFFLORESCENCE AND RUST STAINING.

SPAN 50: NEAR THE NORTH EDGE OF THE DECK SOFFIT THERE IS A 1/4" WIDE CRACK THAT EXHIBITS LOCALIZED DELAMINATION UP TO 8" WIDE. THERE IS A 3" X 5" X 1" DEEP SPALL WITH EXPOSED REINFORCING STEELS NEAR THE NORTH EDGE OF THE DECK SOFFIT AT MID SPAN. THE INSIDE FACE OF THE NORTH EDGE BEAM EXHIBITS A FULL HEIGHT HAIRLINE CRACK. THERE IS MAP CRACKING ADJACENT TO A REPAIR ALONG THE SOUTH EDGE OF THE DECK SOFFIT.

SPAN 51: THERE IS A FULL LENGTH REPAIR PATCH NEAR THE NORTH EDGE OF THE DECK SOFFIT WITH THREE HAIRLINE CRACKS EXHIBITING EFFLORESCENCE. THERE ARE TWO SPALLS AND AN UNSOUND AREA IN THE NORTH SIDEWALK SOFFIT NEAR BENT 51, MEASURING A 2'-0" X 1'-6" X 1" SPALL, A 1'-0" Ø X 3/4" SPALL AND A 3'-0" Ø UNSOUND AREA. ALL REPAIR PATCHES IN THIS SPAN ARE CRACKED. THERE IS A LONGITUDINAL HAIRLINE CRACK ALONG THE REPAIRS NEAR THE SOUTH EDGE OF THE DECK SOFFIT. AT THE SOUTH SIDEWALK SOFFIT, MIDSPAN, THERE IS A 1'-6" Ø UNSOUND AREA. THERE IS A 1'-0"

X 1'-6" X 1" DEEP SPALL WITH EXPOSED REINFORCING STEEL NEAR THE EAST END OF THE SOUTH SIDEWALK SOFFIT AT THE SOUTH FASCIA AND DECK.

SPAN 52: THERE IS A 1'-3" X 2'-0" X 1 1/2" DEEP SPALL WITH EXPOSED REINFORCING STEEL IN THE NORTH FACE OF THE DECK SLAB.

SPAN 53: THE NORTH SIDEWALK SOFFIT EXHIBITS A 1'-0" X 1'-2" X 1/4" DEEP SPALL WITH EXPOSED CORRODED REINFORCING STEEL, A 4" X 4" X 1/2" DEEP SPALL WITH EXPOSED REINFORCING STEEL, AND THREE IMMINENT SPALLS UP TO 10" X 1'-2". THERE IS A 1'-3" X 2'-0" X 1 1/2" DEEP SPALL WITH EXPOSED REINFORCING STEEL EXHIBITING 10% SECTION LOSS ON THE NORTH FACE OF THE DECK SLAB.

SPAN 54: THERE ARE THREE VERTICAL HAIRLINE CRACKS IN THE INTERIOR FACE OF THE NORTH EDGE BEAM. THERE IS A 4'-2" LONG 1/8" WIDE CRACK ALONG THE NORTH EDGE OF THE DECK SOFFIT WITH A SURROUNDING 1'-3" X 2'-10" AREA OF DELAMINATION AT BENT 53. THERE IS A VERTICAL HAIRLINE CRACK ON THE INSIDE FACE OF THE NORTH EDGE BEAM.

SPAN 55: THERE IS A 1'-0" X 6'-0" IMMINENT SPALL IN THE NORTH FACE OF THE DECK SLAB NEAR BENT 54. THERE IS A 5" X 2'-6" IMMINENT SPALL ALONG THE NORTH EDGE OF THE DECK SOFFIT AND A 10" X 5'-0" IMMINENT SPALL ALONG THE FIRST JOINT FROM THE NORTH. THERE ARE MULTIPLE LONGITUDINAL CRACKS UP TO 1/4" WIDE ALONG THE NORTH EDGE OF THE DECK SOFFIT. THERE IS A 2'-0" X 2'-2" IMMINENT SPALL IN THE NORTH SIDEWALK SOFFIT NEAR BENT 54. BETWEEN PILE 1 AND 2 AT BENT 55, THERE IS A 4'-0" X 2'-6" UNSOUND AREA AND A 2'-0" X 6" X 3/4" SPALL. THERE IS A 2'-0" X 3'-0" DELAMINATED AREA ALONG A 1/8" WIDE CRACK ON THE NORTH FACE OF THE DECK SLAB. THERE ARE THREE VERTICAL HAIRLINE CRACKS ON THE INTERIOR FACE OF THE NORTH EDGE BEAM.

SPAN 56: EXHIBITS ONLY TYPICAL DEFECTS.

SPAN 57: THE NORTH EDGE OF THE DECK SOFFIT EXHIBITS A 10" X 2'-6" AREA WITH IMMINENT SPALLING NEAR BENT 56. THERE IS A 1'-6" Ø X 1/2" DEEP SPALL WITH EXPOSED REINFORCING STEEL BETWEEN PILE 1 AND 2 AT MID SPAN. THERE IS A 1/4" WIDE CRACK ALONG THE ENTIRE LENGTH OF THE DECK SOFFIT ALONG THE NORTH EDGE WITH 1'-4" OF DELAMINATION. THERE IS A 1'-0" Ø AREA OF DELAMINATION IN WEST SIDE OF THE SOUTH SIDEWALK SOFFIT. AT BENT 56, BETWEEN PILE 2 AND 3, THERE IS A 4'-0" X 2'-6" X 2" SPALL. THERE IS A 1'-0" X 3'-0" AREA OF SCALING BETWEEN PILE 3 AND 4 AT BENT 57. AT BENT 57, ON THE NORTH SIDE OF THE BEAM FASCIA, THERE IS A 6" Ø X 3/4" SPALL. ALONG THE SECOND CONSTRUCTION JOINT FROM THE NORTH EDGE, THERE IS AN 8 1/2" X 6" UNSOUND AREA.

SPAN 58: THERE IS A 1'-9" X 4'-0" X 2" DEEP SPALL WITH DELAMINATION AND EXPOSED REINFORCING STEEL EXHIBITING 20% SECTION LOSS BETWEEN PILE 1 AND 2, NEAR BENT 57. THERE IS A 3" X 4" X 1/2" SURFACE SPALL IN THE UNDERSIDE OF THE EDGE BEAM. AT THE NORTH EDGE OF THE SOFFIT NEAR BENT 58, THERE IS A 3'-0" X 6" UNSOUND AREA. ALL REPAIRS ARE IN GOOD CONDITION.

SPAN 59: THERE IS A VERTICAL HAIRLINE CRACK ON THE INTERIOR AND EXTERIOR FACES OF THE NORTH EDGE BEAM. THERE IS A 1/8" WIDE CRACK ALONG THE NORTH EDGE OF THE DECK SOFFIT WITH AN ASSOCIATED 5'-0" X 2'-6" X 2 1/2" DEEP SPALL WITH EXPOSED REINFORCING STEEL. THE CRACK SPANS 20'-0" AND HAS UP TO 1'-0" OF ADJACENT DELAMINATION. THE NORTH FACE OF THE DECK SLAB EXHIBITS A 6" X 6" X 1/2" DEEP SPALL AND A 5'-0" LONG 1/4" WIDE CRACK. THE NORTH EDGE OF THE SOFFIT HAS A 5'-0" X 3'-0" X 2 1/2" SPALL WITH AN ADJACENT 4'-0" X 4'-0" UNSOUND AREA. AT THE SECOND CONSTRUCTION JOINT FROM THE NORTH EDGE, THERE IS AN AREA, 2'-0" X 1'-0" OF SCALING. AT THE THIRD CONSTRUCTION JOINT FROM THE NORTH EDGE, THERE IS AN AREA, 3'-0" X 6" OF UNSOUND CONCRETE.

SPAN 60: THERE IS AN 8" X 2'-0" IMMINENT SPALL IN THE NORTH SIDEWALK SOFFIT. THERE IS AN 8" Ø X 1" DEEP SPALL IN THE DECK SOFFIT NEAR THE SOUTH EDGE AT BENT 59. THERE ARE A SERIES OF SMALL SPALLS MEASURING UP TO 2" X 6" X 1/2" DEEP WITH EXPOSED REINFORCING STEEL IN THE DECK SOFFIT AT THE INTERFACE BETWEEN THE DECK SOFFIT AND BENT 59 NEAR PILES 3 AND 4.

SPAN 61: THERE ARE MULTIPLE LONGITUDINAL HAIRLINE CRACKS ALONG THE NORTH EDGE OF THE DECK SOFFIT WITH EFFLORESCENCE AND STALACTITES. AT THE LOCATIONS OF THE HAIRLINE CRACKS, THERE IS A 6" UNSOUND AREA THAT IS

PROTRUDING FROM THE CRACKS THE FULL LENGTH OF THE NORTH EDGE. THERE ARE TWO IMMINENT SPALLS, AN 8" X 3'-2" AND A 2'-0" X 6", IN THE NORTH SIDEWALK SOFFIT. THE FIRST CONSTRUCTION JOINT FROM THE NORTH EDGE EXHIBITS EFFLORESCENCE AND A 3'-0" X 8" UNSOUND AREA ADJACENT TO THE JOINT. REPAIR PATCH NEAR SOUTH EDGE OF DECK SOFFIT IS IN GOOD CONDITION.

SPAN 62: ALONG THE NORTH EDGE OF THE DECK SOFFIT THERE IS A 10'-0" LONG X 1/8" WIDE CRACK WITH A 2'-0" Ø X 1 1/2" DEEP SPALL AND UP TO 6" OF DELAMINATION AROUND THE CRACK. THERE IS A 6'-0" LONG X 1/4" WIDE CRACK AT THE NORTHEAST CORNER OF THE DECK SLAB. THERE IS A 1'-6" X 5'-0" X 5" DEEP CORNER SPALL IN THE NORTH FACE OF THE DECK SOFFIT NEAR MID SPAN. THERE IS A 1'-0" X 4'-0" X 1" DEEP SPALL WITH EXPOSED REINFORCING STEEL AND DELAMINATION NEAR BENT 61 AT THE NORTH SIDEWALK SOFFIT. BETWEEN THE FIRST AND SECOND CONSTRUCTION JOINT FROM THE NORTH EDGE, THERE ARE TYPICAL TRANSVERSE HAIRLINE CRACKS. ALSO, ALONG THE FIRST CONSTRUCTION FROM THE NORTH EDGE, THERE IS LIGHT SCALING. AT THE THIRD CONSTRUCTION JOINT FROM THE NORTH EDGE, NEAR MID SPAN, THERE IS A 3'-0" X 6" UNSOUND AREA. REPAIR PATCHES NEAR THE SOUTH EDGE OF THE DECK SOFFIT ARE IN GOOD CONDITION.

SPAN 63: THERE IS A 4" X 1'-0" X 3" DEEP SPALL IN THE NORTH EDGE BEAM OUTBOARD CORNER. THERE IS A 2'-0" X 6'-0" IMMINENT SPALL ALONG THE NORTH EDGE OF THE DECK SOFFIT. THERE IS A 6'-0" X LONG 1/4" WIDE CRACK WITH A 6" X 6" X 1/4" DEEP SPALL ALONG THE NORTH EDGE OF THE DECK SOFFIT. THERE IS A 4" X 6" X 1" DEEP SPALL WITH EXPOSED REINFORCING STEEL IN THE NORTH SIDEWALK SOFFIT AND THREE IMMINENT SPALLS MEASURING UP TO 6" X 1'-6". THERE IS A 3'-0" Ø X 1 1/2" DEEP SPALL BETWEEN PILE 1 AND 2 AT MIDSPAN. THERE IS A 1'-0" X 3'-0" AREA OF LIGHT SCALING NEAR BENT 62. THE REPAIR PATCH NEAR THE SOUTH EDGE OF THE DECK SOFFIT EXHIBITS LOCALIZED AREAS OF FINE MAP CRACKING. THERE IS A 1'-0" X 3'-0" AREA OF DELAMINATION NEAR BENT 62.

SPAN 64: THERE ARE A FEW TRANSVERSE HAIRLINE CRACKS WITH LIGHT EFFLORESCENCE IN THE SOUTH SIDEWALK SOFFIT.

SPAN 65: THERE IS A 9" X 1'-0" IMMINENT SPALL IN THE NORTH SIDEWALK SOFFIT. THERE IS A 3'-0" LONG X 1/16" WIDE HORIZONTAL CRACK ALONG THE NORTH EDGE OF THE DECK SOFFIT WITH LOCALIZED AREAS OF DELAMINATION. ALONG THE SECOND CONSTRUCTION JOINT FROM THE NORTH EDGE, MID SPAN, THERE IS 3'-0" X 6" UNSOUND AREA. BETWEEN THE FIRST AND SECOND CONSTRUCTION JOINT FROM THE NORTH EDGE, THERE ARE TYPICAL TRANSVERSE HAIRLINE CRACKS. THERE ARE HAIRLINE CRACKS IN THE REPAIR PATCHES IN THE SOUTH SIDEWALK SOFFIT ADJACENT TO THE DRAIN HOLES IN THE DECK SLAB. THERE IS A 6" Ø DELAMINATED AREA AT EACH END OF THE SOUTH SIDEWALK SOFFIT.

SPAN 66: THE NORTH EDGE OF THE DECK SOFFIT EXHIBITS A 1/4" WIDE CRACK WITH A 4" X 6'-0" AREA OF DELAMINATION AND A 2'-0" X 4" X 1/2" SPALL NEAR BENT 65. THE INTERIOR FACE OF THE NORTH EDGE BEAM EXHIBITS SEVERAL HORIZONTAL HAIRLINE CRACKS WITH EFFLORESCENCE AND STALACTITES. THERE ARE THREE IMMINENT SPALLS IN THE NORTH SIDEWALK SOFFIT MEASURING UP TO 8" X 1'-0". THERE IS A 1'-0" X 4'-0" X 1/4" DEEP SURFACE SPALL NEAR THE NORTH EDGE OF THE DECK SOFFIT. BETWEEN THE FIRST AND SECOND CONSTRUCTION JOINT FROM THE NORTH EDGE, THERE ARE TYPICAL TRANSVERSE HAIRLINE CRACKS. THE REPAIR ALONG THE SOUTH EDGE OF THE DECK SOFFIT IS IN GOOD CONDITION. THERE ARE SEVERAL SMALL AREAS OF DELAMINATION IN THE SOUTH SIDEWALK SOFFIT.

SPAN 67: THERE IS A 10'-0" LONG BY 1/4" WIDE CRACK ALONG THE NORTH END OF THE DECK SOFFIT WITH AN ADJACENT IMMINENT SPALL VARYING IN WIDTH FROM 11" TO 1'-9" BY FULL LENGTH. THE NORTH SIDEWALK SOFFIT EXHIBITS THREE IMMINENT SPALLS UP TO 6" X 7" TOGETHER WITH A 6" X 6" X 2 1/2" DEEP SPALL WITH EXPOSED REINFORCING STEEL. THE NORTH EDGE BEAM EXHIBITS SEVERAL HAIRLINE CRACKS WITH HEAVY EFFLORESCENCE ON THE INSIDE FACE PLUS HAIRLINE CRACKS WITH STALACTITES ON THE BOTTOM FACE AND A 6" X 2'-0" IMMINENT SPALL ON THE OUTSIDE FACE. THERE IS AN 8" X 1'-6" X 1" DEEP SPALL WITH EXPOSED REINFORCING STEEL LOCATED AT THE THIRD CONSTRUCTION JOINT FROM THE NORTH EDGE NEAR MID SPAN. THERE IS A 1'-0" X 2'-0" AREA OF DELAMINATION ALONG THE SOUTH EDGE OF THE DECK SOFFIT LOCATED 7'-0" EAST OF BENT 67. THERE ARE TWO REPAIRS NEAR THE SOUTH EDGE OF THE DECK

SOFFIT THAT ARE IN GOOD CONDITION.

SPAN 68: THERE IS A 1'-0" X 1'-3" IMMINENT SPALL IN THE NORTH SIDEWALK SOFFIT. THERE IS LIGHT SCALING ALONG THE SOUTH EDGE OF THE DECK SOFFIT. THERE IS A 1'-0" X 3'-0" AREA OF DETERIORATING REPAIR AREA IN THE SOUTH SIDEWALK SOFFIT ADJACENT TO BENT 67.

SPAN 69: THERE IS A 1'-3" X 4'-0" IMMINENT SPALL ALONG THE NORTH EDGE OF THE DECK SOFFIT NEAR BENT 69. THE NORTH SIDEWALK SOFFIT HAS FOUR IMMINENT SPALLS MEASURING UP TO 6" X 1'-0". THERE IS A 9" X 2'-0" AREA OF DELAMINATION LOCATED ON THE WEST END OF THE SPAN NEAR THE SOUTH EDGE. BETWEEN THE FIRST AND SECOND CONSTRUCTION JOINT FROM THE NORTH EDGE, THERE ARE TYPICAL TRANSVERSE HAIRLINE CRACKS. ALSO, ALONG THE SECOND CONSTRUCTION JOINT FROM THE NORTH EDGE AT BENT 68, THERE IS A 2'-0" X 8" UNSOUND AREA.

SPAN 70: THERE ARE THREE IMMINENT SPALLS MEASURING UP TO 8" X 8" IN THE NORTH SIDEWALK SOFFIT. THERE IS A 6'-0" LONG 1/16" WIDE CRACK WITH DELAMINATION UP TO 8" ALONG THE NORTH EDGE OF THE DECK SOFFIT. THERE ARE SEVERAL HAIRLINE TRANSVERSE CRACKS STEMMING FROM JOINT 2 OF THE SOUTH SIDE WITH WATER STAINS. THE REPAIRS ALONG THE SOUTH SIDE OF THE DECK SOFFIT ARE IN GOOD CONDITION.

SPAN 71: THERE IS A FAILING REPAIR PATCH AT THE NORTH END OF THE DECK SOFFIT. THERE IS A 1'-8" X 2'-0" IMMINENT SPALL IN THE NORTH SIDEWALK SOFFIT. THERE ARE TWO 1'-0" Ø AREAS OF DELAMINATION ON THE SOUTH SIDEWALK SOFFIT. NEAR BENT 70, AT PILE 6, THERE IS A 1'-0" Ø UNSOUND AREA.

SPAN 72: THERE IS A 2" X 1'-0" X 1/2" DEEP SPALL WITH EXPOSED REINFORCING STEEL IN THE UNDERSIDE OF THE END BEAM ADJACENT TO PILE 1. THERE IS A 9" X 1'-6" X 1" DEEP SPALL WITH EXPOSED REINFORCING STEELS AND SURROUNDING DELAMINATION IN THE NORTH SIDEWALK SOFFIT. THERE IS A DELAMINATED AREA ALONG THE END BEAM ADJACENT TO BAY 6 MEASURING THE FULL WIDTH OF THE BAY X 1'-0" WIDE. THE UNDERSIDE OF BEAM 8 EXHIBITS FINE MAP CRACKING.

SPAN 73: THIS SPAN IS THE BEGINNING OF THE DIAGONALLY ORIENTED BENTS. THERE IS A 6" Ø X 1/2" DEEP SPALL ON THE NORTH END BEAM. THE DECK SOFFIT BETWEEN T-BEAMS 3 AND 4 HAS THREE IMMINENT SPALLS AND ONE 1'-6" X 8" X 1" SPALL NEAR BENT 73. THERE ARE TRANSVERSE HAIRLINE CRACKS IN THE DECK SOFFIT AND T-BEAMS BETWEEN BEAMS 2 – 5. THE BOTTOM OF BEAM 1 HAS A FULL LENGTH CRACK UP TO 2" WIDE WITH SURROUNDING DELAMINATION. THERE IS A 6" X 2'-6" X 3" DEEP SPALL WITH EXPOSED REINFORCING STEEL IN THE NORTH SIDEWALK SOFFIT NEAR BENT 74. THERE ARE VERTICAL HAIRLINE CRACKS IN THE SOUTH FACE OF BEAM 4. BETWEEN BEAM 4 AND 5, AT MID SPAN, THERE IS A 4'-0" X 6" UNSOUND AREA WITH AN ADJACENT 6" X 1'-0" X 2" SPALL.

SPAN 74: THE NORTH FASCIA BEAM IS CRACKED WITH EFFLORESCENCE ABOVE BENT 73. THIS SPAN IS THE END OF THE DIAGONALLY ORIENTED BENTS. T-BEAM 1 IS DELAMINATED APPROXIMATELY 60% OF ITS LENGTH WITH CORROSION STAINS FROM THE REINFORCING STEEL. THERE IS AN IMMINENT SPALL AND 1/4" WIDE CRACKS ALONG THE BOTTOMS OF T-BEAMS 1, 2, AND 3. THERE IS A 6" X 4'-0" X 2" DEEP SPALL WITH EXPOSED REINFORCING STEEL AND SURROUNDING DELAMINATION AT THE EAST END OF BAY 3. THERE IS A 1'-6" X 1'-6" X 2' DEEP SPALL WITH EXPOSED REINFORCING STEEL IN BAY 1 NEAR MID SPAN. THE DECK SOFFIT IN BAYS 4 – 8 EXHIBIT RANDOM AREAS OF LIGHT SCALING AND HAIRLINE TRANSVERSE CRACKS WITH LIGHT EFFLORESCENCE. THERE IS A 9" X 1'-6" X 1 1/2" DEEP SPALL WITH EXPOSED REINFORCING STEEL IN THE DECK SLAB NEAR THE WEST SIDE OF BAY 3. THERE IS AN 8" X 1'-0" AREA OF DELAMINATION IN BAY 4 LOCATED JUST EAST OF THE PREVIOUSLY MENTIONED SPALL. THERE ARE TWO DELAMINATED AREAS AND ONE SPALLED AREA MEASURING 1'-0" X 3'-0" ADJACENT TO TRANSVERSE HAIRLINE CRACKS IN BAY 5. THERE IS A 7" X 1'-6" X 1" DEEP SPALL WITH EXPOSED REINFORCING STEEL LOCATED NEAR MID SPAN OF BAY 5. THERE ARE VERTICAL HAIRLINE CRACKS ON EACH FACE OF BEAMS 5, 6, AND 7. THERE IS A 1/8" WIDE LONGITUDINAL CRACK ALONG THE BOTTOM OF THE NORTH FACE OF BEAM 6 LOCATED NEAR MID SPAN. BAY 6 EXHIBITS A 1'-0" X 1'-6" X 1 1/2" DEEP SPALL WITH EXPOSED REINFORCING STEEL NEAR THE MIDDLE OF THE SPAN. THERE IS A 1/4" WIDE LONGITUDINAL CRACK ALONG THE BOTTOM OF BEAM 7 WITH SURROUNDING

DELAMINATION RUNNING HALF THE WIDTH OF THE SPAN. IN BAY 7 THERE IS A 9" X 1'-6" X 2" DEEP SPALL WITH EXPOSED REINFORCING STEEL AT THE INTERFACE WITH BENT 74. THERE ARE 1/16" WIDE CRACKS WITH LIGHT RUST STAINS ON EACH FACE OF BEAM 8 THROUGH THE REPAIR PATCHES.

SPAN 75: THIS SPAN IS THE END OF THE DIAGONALLY ORIENTED BENTS. THE BOTTOMS OF T-BEAMS 3 AND 4 HAVE IMMINENT SPALLS NEAR BENT 75. THERE IS A 2'-0" Ø X 1" DEEP SPALL WITH EXPOSED REINFORCING STEEL IN BAY 3. IN BAY 4 THERE IS A 2'-0" X 10'-0" X 2" DEEP SPALL WITH EXPOSED REINFORCING STEEL IN THE SOFFIT. THE SOUTH FACE OF THE BOTTOM OF BEAM 4 HAS FULL LENGTH LONGITUDINAL CRACKS UP TO 1/4" WIDE WITH RUST STAINS. APPROXIMATELY 80% OF BAY 5 IS DELAMINATED OR SPALLED UP TO 2" DEEP. THE SOUTH FACES OF THE BOTTOM OF BEAMS 5 AND 6 HAVE LONGITUDINAL CRACKS UP TO 1/8" WIDE. THERE ARE VERTICAL HAIRLINE CRACKS WITH LIGHT EFFLORESCENCE ON THE VERTICAL FACES OF BEAMS 4, 5, AND 6. BETWEEN PILES 5, 6 AND 7, THERE ARE FULL WIDTH TRANSVERSE HAIRLINE CRACKS IN THE SOFFIT. THERE IS A FULL SPAN LENGTH CRACK UP TO 1/4" WIDE ALONG THE BOTTOM OF BEAM 7. THERE ARE LONGITUDINAL HAIRLINE CRACKS WITH LIGHT EFFLORESCENCE AND STALACTITES ALONG THE NORTH FACE AND BOTTOM OF BEAM 8.

SPAN 76: THERE IS A 4" X 3'-0" X 2" DEEP SPALL ON THE WEST FACE OF THE END BEAM BETWEEN PILE 2 AND 3 OF BENT 76. THERE IS HAIRLINE TO 1/16" WIDE MAP CRACKING WITH MODERATE EFFLORESCENCE ON THE UNDERSIDE OF THE END BEAM ADJACENT TO PILE 1. THERE ARE A FEW AREAS OF HAIRLINE MAP CRACKING WITH LIGHT EFFLORESCENCE ON THE SOUTH VERTICAL FACE OF THE DECK SLAB. THE DECK SOFFIT AT BAY 8 EXHIBITS HAIRLINE MAP CRACKING WITH LIGHT EFFLORESCENCE.

SPAN 77: THERE IS A REPAIR PATCH IN THE NORTH EDGE BEAM THAT DOES NOT COVER THE ENTIRE SPALL. THERE IS A 9" Ø X 1/2" DEEP SPALL WITH EXPOSED REINFORCING STEEL IN THE NORTH SIDEWALK SOFFIT NEAR BENT 77 WITH A 1'-0" Ø AREA OF DELAMINATED CONCRETE ADJACENT. THERE IS A 2'-0" X DELAMINATED AREA IN A REPAIR PATCH AT THE NORTH EDGE OF THE DECK SLAB. ALONG THE SECOND CONSTRUCTION JOINT FROM THE NORTH EDGE, MID SPAN, THERE IS A 6" WIDE UNSOUND AREA MEASURING 8'-0" IN LENGTH WITH CORROSION STAINING AND EFFLORESCENCE. THE REPAIRS NEAR THE SOUTH EDGE OF THE DECK SOFFIT ARE IN GOOD CONDITION. THERE IS FINE MAP CRACKING IN THE SOUTH VERTICAL FACE OF THE DECK SOFFIT.

SPAN 78: THERE IS FINE MAP CRACKING ALONG THE NORTH END OF THE DECK SOFFIT. THE REPAIRS NEAR THE SOUTH EDGE OF THE DECK SOFFIT ARE IN GOOD CONDITION. THERE IS A 3" Ø SURFACE SPALL IN THE SOUTH SIDEWALK SOFFIT NEAR BENT 77. ALL REPAIR PATCHES IN THE SOUTH SIDEWALK SOFFIT ARE IN GOOD CONDITION.

SPAN 79: AN AREA UP TO 1'-0" FROM THE NORTH EDGE OF THE DECK SOFFIT IS CRACKED AND DELAMINATED FOR THE ENTIRE LENGTH OF THE SPAN. THERE IS A 2'-0" X 2'-6" SPALLS IN THE DECK SOFFIT LOCATED MID SPAN BETWEEN PILES 2 AND 3 OF BENT 79. THERE ARE LARGE AREAS OF DELAMINATION ADJACENT TO THE 2ND JOINT. THERE IS A 2'-0" X 1'-0" X 3" DEEP SPALL WITH EXPOSED REINFORCING STEEL NEAR BENT 78. THERE IS A 1'-6" X 4'-0" AREA OF DELAMINATION IN THE DECK SOFFIT NEAR PILE 2 OF BENT 78. AT BENT 78, ON THE NORTH SIDEWALK SOFFIT THERE IS A 3'-0" Ø X 1" SPALL WITH EXPOSED REINFORCING STEEL. THE CONCRETE REPAIR NEAR THE SOUTH EDGE OF THE DECK SOFFIT IS IN GOOD CONDITION. THERE IS A 1'-0" Ø AREA OF DELAMINATION IN THE SOUTH SIDEWALK SOFFIT NEAR MID SPAN.

SPAN 80: THERE IS A 1'-6" X 2'-0" X 3" DEEP SPALL WITH EXPOSED REINFORCING STEEL IN THE NORTH SIDEWALK SOFFIT. THERE ARE TWO, 2'-0" X 2'-0" X 1/2" DEEP SPALLS WITH EXPOSED REINFORCING STEEL IN THE SOUTH SIDEWALK SOFFIT.

SPAN 81: THERE IS A FULL LENGTH X 1'-0" AREA OF DELAMINATION ADJACENT TO A 1/4" WIDE CRACK ALONG THE NORTH EDGE OF THE DECK SOFFIT. THERE ARE TWO 1'-6" Ø AREAS OF DELAMINATION IN THE DECK SOFFIT NEAR PILE 2 OF BENT 81. THERE ARE TWO SPALLS MEASURING 6" X 1'-6" X 3/4" AND 1'-6" X 2'-6" X 2" DEEP WITH SURROUNDING DELAMINATION NEAR THE SOUTHWEST END OF THE DECK FASCIA. THE SECOND CONSTRUCTION JOINT FROM THE NORTH EDGE, NEAR PILE 1 OF BENT 80, THERE IS A 2'-0" X 6" UNSOUND AREA. BETWEEN PILE 3 AND 4 AT BENT 80, THERE ARE TWO 2'-0" Ø X 2" SPALLS. THERE IS A 9" Ø DELAMINATED AREA IN THE SOUTH SIDEWALK SOFFIT NEAR BENT 80.

SPAN 82: THERE IS A 2'-0" Ø X 1 1/2" SPALL LOCATED NEAR BENT 82 ADJACENT TO THE FIRST JOINT FROM THE NORTH. THERE IS A 1'-0" X 1'-6" SPALL LOCATED NEAR PILE 2 OF BENT 81. THERE IS A 3'-0" X 1'-6" X 1 1/2" DEEP SPALL WITH EXPOSED REINFORCING STEEL AT THE NORTHEAST EDGE OF THE DECK SOFFIT WITH A SURROUNDING 5'-0" X 9'-0" AREA OF DELAMINATION SURROUNDING. THERE ARE TWO 1'-0" Ø X 1" DEEP SPALLS WITH EXPOSED REINFORCING STEEL IN THE DECK SOFFIT NEAR BENT 81 BETWEEN PILES 4 AND 5. THERE ARE RUST STAINS ALONG THE SOUTH EDGE OF THE DECK SOFFIT. AT THE FIRST CONSTRUCTION SOUTH OF THE NORTH EDGE AT BENT 81 THERE IS A 6'-0" X 1'-0" UNSOUND AREA.

SPAN 83: THERE IS A 2'-0" X 4'-0" X 3" DEEP SPALL WITH EXPOSED CORRODED REINFORCING STEEL AND SURROUNDING DELAMINATION IN THE NORTHWEST CORNER OF THE DECK SOFFIT. THERE IS AN IMMINENT SPALL ALONG THE ENTIRE NORTH EDGE OF THE DECK SOFFIT. NEAR MID SPAN OF THE NORTH EDGE OF THE DECK SOFFIT THERE IS A 3' Ø X 3" DEEP SPALL. THERE IS A 1'-0" Ø X 1" DEEP SPALL WITH SURROUNDING DELAMINATION LOCATED NEAR PILES 1 AND 2 OF BENT 82. AT BENT 82, BETWEEN PILE 3 AND 4, THERE IS TWO 2'-0" Ø X 1" DEEP SPALLS WITH EXPOSED REINFORCING STEEL. THERE IS A 1'-0" X 4'-0" AREA OF DELAMINATION ALONG THE NORTHEAST END OF THE DECK SOFFIT. NEAR THE SOUTH END OF THE DECK SOFFIT THERE IS A 1'-0" X 5'-0" X 1" DEEP SPALL WITH EXPOSED REINFORCING STEEL ALONG JOINT 3. THERE IS A 9" X 10'-0" AREA OF DELAMINATION SURROUNDING THE SECOND JOINT FROM THE NORTH NEAR BENT 83. AT BENT 83 BETWEEN PILES 3 AND 4 THERE IS A 4'-0" X 3'-0" UNSOUND AREA. THERE IS A 5'-0" X 5'-0" X 1" DEEP SPALL WITH EXPOSED REINFORCING STEEL LOCATED NEAR BENT 82 BETWEEN PILES 6 AND 7. THERE ARE SMALL SPALLS BENEATH THE PIPE BRACKET NEAR TO BENT 82 ATTACHED TO THE UNDERSIDE OF THE EXTERIOR BEAM.

SPAN 84: THERE IS A 1'-0" X 2'-0" X 3" DEEP SPALL WITH EXPOSED REINFORCING STEEL ON THE NORTH FACE OF THE DECK SLAB. THERE IS A 1'-0" X 5'-0" AREA OF MAP CRACKING IN THE NORTH END OF THE DECK SOFFIT.

SPAN 85: THERE IS AN 8" X 5'-0" AREA AND TWO 2'-0" Ø AREAS OF DELAMINATION ADJACENT TO THE FIRST JOINT FROM THE NORTH NEAR BENT 85. THERE IS A 2'-0" Ø X 1 1/2" SPALL IN THE DECK SOFFIT NEAR PILE 3 OF BENT 85 WITH EXPOSED REINFORCING STEEL. THERE IS A 4'-0" X 5'-0" AREA OF DELAMINATION NEAR PILES 2 AND 3 OF BENT 84. THE DRAIN HOLES IN THE SOUTH FACE OF THE DECK SOFFIT HAVE 1/16" WIDE CRACKS STEMMING FROM THEM WITH RUST STAINS. THERE ARE TWO WOOD BOARDS WEDGED BETWEEN THE SOUTH FACE OF THE DECK SLAB AND THE EXTERIOR BEAM. BETWEEN PILE 1 AND 2 OF BENT 84 THERE IS A 2" Ø UNSOUND AREA. THERE IS A 2" Ø UNSOUND AREA AND A 3'-0" Ø X 2" DEEP SPALL BETWEEN PILE 3 AND 4 OF BENT 84.

SPAN 86: THERE IS A 2'-6" Ø X 1/2" DEEP SPALL WITH SURROUNDING DELAMINATION NEAR THE NORTH END OF THE DECK SOFFIT. THERE IS A 5" Ø X 1" DEEP SPALL IN THE SOUTH SIDEWALK SOFFIT NEAR MID SPAN. THERE IS A 1'-0" Ø AREA OF HOLLOW SOUNDING CONCRETE IN THE DECK SOFFIT NEAR PILE 5 OF BENT 86. THERE IS A 2'-0" X 1'-6" AND A 2'-0" X 1'-0" X 2" DEEP SPALL WITH EXPOSED REINFORCING STEEL AT PILE 3 OF BENT 85.

SPAN 87: THERE IS A 1'-0" X 1'-6" X 1" DEEP SPALL WITH EXPOSED REINFORCING STEEL IN THE NORTH SIDEWALK SOFFIT. SEVERAL OF THE REPAIRS ARE FAILING ALONG THE NORTH END OF THE DECK SOFFIT. THERE IS A 1/4" WIDE LONGITUDINAL CRACK ALONG THE NORTH EDGE OF THE DECK SOFFIT WITH A 12'-0" X 8" SURROUNDING AREA OF DELAMINATION. THERE IS A 2'-0" X 2'-6" AREA OF DELAMINATION IN THE DECK SOFFIT WITH A 2'-6" X 6" SPALL NEAR PILES 1 AND 2 OF BENT 86. THE PIPE ATTACHED TO THE OVERHANG SOFFIT IS TYPICALLY SEVERELY RUSTED WITH UP TO 50% SECTION LOSS IN RANDOM AREAS. THERE IS A 2'-0" X 5'-0" SCALED AREA IN THE SOUTH SIDEWALK SOFFIT WITH A 1'-0" IMMINENT SPALL WITHIN THIS AREA. THE REPAIRS AROUND THE JOINTS EXHIBIT FINE MAP CRACKING.

SPAN 88: ALONG THE CENTERLINE OF THE BRIDGE THERE IS AN INTERMITTENT LONGITUDINAL HAIRLINE CRACK WITH EFFLORESCENCE. ALL REPAIRS ARE IN GOOD CONDITION.

SPAN 89: THE REPAIR ALONG THE ENTIRE NORTH SIDEWALK SOFFIT IS FAILING. THERE IS A FULL LENGTH HAIRLINE CRACK IN THE DECK SOFFIT BETWEEN PILE 1 AND 2 OF BENT 88 WITH EFFLORESCENCE AND STALACTITES. THERE ARE THREE FAILED PATCHES THAT HAVE DEVELOPED INTO SPALLS MEASURING 1'-0" X 12'-0" BETWEEN PILE 1 AND 2 AND PILE

2 AND 3 OF BENT 88. THERE IS A 4'-0" X FULL WIDTH REPAIR WITH A 1'-0" X 5'-0" IMMEDIATE SPALL WITHIN THE PATCH ON THE SOUTH EDGE OF THE DECK SOFFIT. THERE IS A 1'-6" X 4'-0" IMMEDIATE SPALL IN THE DECK SOFFIT NEAR TO PILE 6 OF BENT 89. NEAR BENT 89 AT PILE 6, THERE IS A 2'-0" X 4'-0" X 1" SPALL WITH EXPOSED REINFORCING STEEL WITH AN ADJACENT 2'-0" X 8'-0" UNSOUND AREA. THERE IS A 10'-0" X 20'-0" REPAIR NEAR THE CENTER OF THE SPAN EXHIBITING HAIRLINE MAP CRACKING AND LIGHT EFFLORESCENCE. THERE IS AN 8'-0" LONG LONGITUDINAL HAIRLINE CRACK WITH LIGHT EFFLORESCENCE IN THE DECK SOFFIT NEAR PILE 4 OF BENT 88. THERE ARE SEVERAL AREAS OF HONEYCOMBING IN THE SOUTH SIDEWALK SOFFIT. THERE IS A 9" Ø X 1/2" DEEP SPALL ON THE SOUTH OVERHANG SOFFIT NEAR BENT 88.

SPAN 90: THERE IS A 4'-0" Ø REPAIR NEAR THE NORTH END OF THE DECK SOFFIT THAT IS CRACKED. THERE IS A 1'-0" Ø X 2" SPALL WITH EXPOSED REINFORCING STEEL NEAR BENT 90, PILE 1 AND 2. THERE IS A 5" X 9" X 1" DEEP SPALL IN THE EDGE BEAM NEAR BENT 89. NEAR BENT 89, THE NORTH OUTSIDE BEAM FASCIA EXHIBITS A 1'-0" X 4" CORNER SPALL. APPROXIMATELY 50 SF OF THE REPAIRS THROUGHOUT THE DECK SOFFIT ARE BEGINNING TO FAIL. THE ENTIRE SOUTH SIDEWALK SOFFIT THAT HAS BEEN REPAIRED HAS FAILED. THERE IS A 3'-0" X FULL WIDTH REPAIR EXHIBITING SEVERAL HAIRLINE CRACKS. THERE IS A 1'-6" Ø X 1 1/2" DEEP SPALL IN THE DECK SOFFIT LOCATED BETWEEN PILE 4 AND 5 OF BENT 90. THERE IS A FULL LENGTH INTERMITTENT LONGITUDINAL HAIRLINE CRACK WITH LIGHT EFFLORESCENCE IN THE DECK SOFFIT NEAR PILE 4 OF BENT 90. THERE IS A FULL SPAN WIDTH HAIRLINE CRACK WITH EFFLORESCENCE IN THE DECK SOFFIT AT PILE 3 OF BENT 90. THERE ARE SEVERAL VERTICAL HAIRLINE CRACKS ON THE SOUTH FACE OF THE DECK SLAB. AT PILE 3 OF BENT 89 THERE IS AN 8'-0" LONG VERTICAL HAIRLINE CRACK WITH EFFLORESCENCE.

SPAN 91: THERE IS A 1'-0" X 4" AND A 10" X 2" SPALL ON THE WEST EDGE OF THE EXPANSION JOINT BETWEEN PILE 2 AND 3. SPAN 91 EXHIBITS ONLY TYPICAL DEFECTS.

SPAN 92: THERE IS A 1'-6" X 2'-0" AREA OF DELAMINATION IN THE DECK SOFFIT NEAR PILES 1 AND 2 OF BENT 91. THERE IS A 3'-0" X 5'-0" AREA OF FINE MAP CRACKING IN A PATCH NEAR THE NORTH EDGE OF THE DECK SOFFIT AT BENT 91 BETWEEN PILE 1 AND 2. THERE IS A 9" X 1'-0" AREA OF DELAMINATION NEAR BENT 91, PILE 3. THERE IS A 3'-0" X FULL LENGTH REPAIR THAT IS IN GOOD CONDITION NEAR THE SOUTH END OF THE DECK SOFFIT. AT BENT 92 BETWEEN PILE 5 AND 6 NEAR THE SOUTH END OF THE DECK SOFFIT THERE IS A 4'-0" X 3'-0" UNSOUND AREA IN THE PATCH. THERE IS A 3'-0" X 4'-0" IMMEDIATE SPALL IN THE SOUTH END OF THE DECK SOFFIT NEAR BENT 92. THERE IS A 1'-0" Ø IMMEDIATE SPALL AT THE INTERFACE BETWEEN BENT 92 AND THE DECK SOFFIT NEAR PILES 4 AND 5. THERE IS A 2'-0" X 4'-0" PLYWOOD SLAB ATTACHED TO THE SOUTH SIDEWALK SOFFIT.

SPAN 93: THERE IS A REPAIR ALONG THE NORTH EDGE OF THE DECK SOFFIT THAT EXHIBITS A 2'-0" X 4'-0" AREA OF FINE MAP CRACKING WITH LIGHT EFFLORESCENCE. APPROXIMATELY 75% OF THE DECK SOFFIT HAS BEEN REPAIRED AND IS IN GOOD CONDITION. NEAR THE BRIDGE CENTERLINE THERE ARE TWO 3'-0" Ø UNSOUND REPAIRS. AT THE SOUTH SIDEWALK SOFFIT THERE IS A 6'-0" X 6'-0" DELAMINATED AREA. THE DRAIN HOLES ON THE SOUTH FACE OF THE DECK SLAB EXHIBIT TYPICAL CRACKING AND MODERATE SIZED SPALLS.

361 Scour (EA)

| | | | | | |
|--|--|--|--|--|--|
| | | | | | |
|--|--|--|--|--|--|

Screamer F.Y.I. District Inaccessible?

NO SCOUR IS EVIDENT. THE CHANNEL BOTTOM CLOSELY REPRESENTS THE JANUARY 4, 1988 AS BUILT PLANS FOR SCOUR PROTECTION. THE CHANNEL DEPTHS WHICH ARE SLIGHTLY MORE SHALLOW ARE THE ONLY NOTABLE CONDITIONS.

400 Bridge Paint (ENTIRE BRIDGE)

| | | | | | |
|---|---|--|--|--|--|
| 1 | 1 | | | | |
|---|---|--|--|--|--|

Screamer F.Y.I. District Inaccessible?

APPENDIX G: ELECTRICAL EQUIPMENT DATA

INSPECTION NOTES

Date 1/4/08 & 1/5/08

Inspection of Ocean City Bridge Bridge No. 23007

Insp. Personal K.K. Sidhu & Tej Malla Notes By Ram Khullar Weather _____

Photographs _____ Temp. _____

NAME PLATE AND FIELD NOTES

NUMERICAL RATING SYSTEM

- 1. Excellent**
- 2. Good**
- 3. Fair**
- 4. Poor**
- 5. Critical**

| | |
|-------------------------------|------------|
| Maryland State Highway | |
| Ocean City Bridge | |
| NUMERIC RATING | |
| Ocean City, MD | 01/04/08 |
| Sidhu Associates, Inc. | Figure E-1 |

Inspected By K.K. Sidhu / Tej Malla Date 01/04/08

Bridge No. 23007

MOTOR IDENTIFICATION Near Main Drive Motor No. 1

Figure No. E-2 Photo No. E-15 & E-16

| NAMEPLATE DETAIL | | | |
|------------------|----------------|-----------|-------------------------------|
| Manufacturer | <u>G.E</u> | Amp. | <u>37/18.5</u> Frame |
| H.P. | <u>10</u> | Ser.No. | <u>561405-2</u> C/S <u>60</u> |
| Volts | <u>220/440</u> | Model No. | <u>5MP364G</u> |
| Phase | <u>3</u> | R.P.M. | <u>900</u> |

MOTOR EXTERIOR

| No. | ITEM | CONDITION | REMARKS |
|-----|--------------------------------|-----------|---------|
| 1 | Bearing Noise | Good | |
| 2 | Vibration | Good | |
| 3 | Bearing Temp. | Good | |
| 4 | Mounting Bolts | Good | |
| 5 | Lubricant Leakage From Bearing | Fair | |
| 6 | Junction Box Attachment | Fair | |
| 7 | Conduit Termination | Fair | |

MOTOR INERIOR

| No. | ITEM | CONDITION | REMARKS |
|-----|-----------------------------|-----------|---------|
| 1 | Gasket Under Insp. Cover | Poor | |
| 2 | Cable Connections | Fair | |
| 3 | Interior Condition | Fair | |
| 4 | Carbon Brush Length | Good | |
| 5 | Brush Holder Tension | Good | |
| 6 | Brush Grinding | Good | |
| 7 | Oil/Grease Contamination | Good | |
| 8 | Air Passage Between Winding | Good | |
| 9 | Wiring Insulation | Good | |
| 10 | Surface Pitting | Fair | |

NOTES: Local Disconnect is not
Provided

NUMERICAL RATING: 2

Inspected By K.K. Sidhu / Tej Malla Date 01/04/08

Bridge No. 23007

MOTOR IDENTIFICATION Near Main Drive Motor No. 2

Figure No. E-3 Photo No. E-15 & E-16

| NAMEPLATE DETAIL | | | |
|------------------|----------------|-----------|-----------------|
| Manufacturer | <u>G.E</u> | Amp. | <u>37/18.5</u> |
| H.P. | <u>10</u> | Ser.No. | <u>561405-2</u> |
| Volts | <u>220/440</u> | Model No. | <u>5MP364G</u> |
| Phase | <u>3</u> | R.P.M. | <u>900</u> |
| | | Frame | <u>60</u> |
| | | C/S | <u>60</u> |

MOTOR EXTERIOR

| No. | ITEM | CONDITION | REMARKS |
|-----|--------------------------------|-----------|---------|
| 1 | Bearing Noise | Good | |
| 2 | Vibration | Good | |
| 3 | Bearing Temp. | Good | |
| 4 | Mounting Bolts | Fair | |
| 5 | Lubricant Leakage From Bearing | Good | |
| 6 | Junction Box Attachment | Fair | |
| 7 | Conduit Termination | Good | |

MOTOR INERIOR

| No. | ITEM | CONDITION | REMARKS |
|-----|-----------------------------|-----------|---------|
| 1 | Gasket Under Insp. Cover | Poor | |
| 2 | Cable Connections | Good | |
| 3 | Interior Condition | Good | |
| 4 | Carbon Brush Length | Good | |
| 5 | Brush Holder Tension | Good | |
| 6 | Brush Grinding | Good | |
| 7 | Oil/Grease Contamination | Good | |
| 8 | Air Passage Between Winding | Good | |
| 9 | Wiring Insulation | Good | |
| 10 | Surface Pitting | Fair | |

NOTES: No local disconnect switch

was provided

NUMERICAL RATING: 2

Inspected By K.K. Sidhu / Tej Malla Date 01/04/08

Bridge No. 23007

MOTOR IDENTIFICATION Far Main Drive Motor No. 1

Figure No. E-4 Photo No. E-15 & E-16

| NAMEPLATE DETAIL | | | |
|------------------|----------------|-----------|-----------------|
| Manufacturer | <u>G.E</u> | Amp. | <u>37/18.5</u> |
| H.P. | <u>10</u> | Ser.No. | <u>561405-2</u> |
| Volts | <u>220/440</u> | Model No. | <u>5MP364G</u> |
| Phase | <u>3</u> | R.P.M. | <u>900</u> |
| | | Frame | <u>60</u> |
| | | C/S | <u>60</u> |

MOTOR EXTERIOR

| No. | ITEM | CONDITION | REMARKS |
|-----|--------------------------------|-----------|---------|
| 1 | Bearing Noise | Good | |
| 2 | Vibration | Good | |
| 3 | Bearing Temp. | Good | |
| 4 | Mounting Bolts | Fair | |
| 5 | Lubricant Leakage From Bearing | Good | |
| 6 | Junction Box Attachment | Fair | |
| 7 | Conduit Termination | Good | |

MOTOR INERIOR

| No. | ITEM | CONDITION | REMARKS |
|-----|-----------------------------|-----------|---------|
| 1 | Gasket Under Insp. Cover | Poor | |
| 2 | Cable Connections | Good | |
| 3 | Interior Condition | Fair | |
| 4 | Carbon Brush Length | Good | |
| 5 | Brush Holder Tension | Good | |
| 6 | Brush Grinding | Good | |
| 7 | Oil/Grease Contamination | Good | |
| 8 | Air Passage Between Winding | Good | |
| 9 | Wiring Insulation | Good | |
| 10 | Surface Pitting | Good | |

NOTES: No local disconnect switch

was provided

NUMERICAL RATING: 2

Inspected By K.K. Sidhu / Tej Malla Date 01/04/08

Bridge No. 23007

MOTOR IDENTIFICATION Far Main Drive Motor No. 2

Figure No. E-5 Photo No. E-15 & E-16

| NAMEPLATE DETAIL | | | |
|------------------|----------------|-----------|-----------------|
| Manufacturer | <u>G.E</u> | Amp. | <u>37/18.5</u> |
| H.P. | <u>10</u> | Ser.No. | <u>561405-2</u> |
| Volts | <u>220/440</u> | Model No. | <u>5MP364G</u> |
| Phase | <u>3</u> | R.P.M. | <u>900</u> |
| | | Frame | <u>60</u> |
| | | C/S | <u>60</u> |

MOTOR EXTERIOR

| No. | ITEM | CONDITION | REMARKS |
|-----|--------------------------------|-----------|---------|
| 1 | Bearing Noise | Good | |
| 2 | Vibration | Good | |
| 3 | Bearing Temp. | Good | |
| 4 | Mounting Bolts | Fair | |
| 5 | Lubricant Leakage From Bearing | Good | |
| 6 | Junction Box Attachment | Fair | |
| 7 | Conduit Termination | Good | |

MOTOR INERIOR

| No. | ITEM | CONDITION | REMARKS |
|-----|-----------------------------|-----------|---------|
| 1 | Gasket Under Insp. Cover | Poor | |
| 2 | Cable Connections | Good | |
| 3 | Interior Condition | Fair | |
| 4 | Carbon Brush Length | Good | |
| 5 | Brush Holder Tension | Good | |
| 6 | Brush Grinding | Good | |
| 7 | Oil/Grease Contamination | Good | |
| 8 | Air Passage Between Winding | Good | |
| 9 | Wiring Insulation | Good | |
| 10 | Surface Pitting | Fair | |

NOTES: No local disconnect switch

was provided

NUMERICAL RATING: 2

Inspected By K.K. Sidhu / Tej Malla Date 01/04/08

Bridge No. 23007

MOTOR IDENTIFICATION South West Lock

Figure No. E-6 Photo No. E-7

| NAMEPLATE DETAIL | | | |
|------------------|-----------------|-----------|-------------------|
| Manufacturer | <u>G.E</u> | Amp. | <u>4/2</u> |
| H.P. | <u>0.75</u> | Ser.No. | <u> </u> |
| Volts | <u>220/440</u> | Model No. | <u>5K204A3761</u> |
| Phase | <u>3</u> | R.P.M. | <u>840</u> |
| L.R Code: | <u> </u> | Design: | <u> </u> |
| | | Frame | <u>204</u> |
| | | C/S | <u>60</u> |
| | | Duty: | <u>30 Min</u> |
| | | Type: | <u>K</u> |
| | | Rise: | <u>55</u> |

MOTOR EXTERIOR

| No. | ITEM | CONDITION | REMARKS |
|-----|--------------------------------|-----------|---------|
| 1 | Bearing Noise | Fair | |
| 2 | Vibration | Fair | |
| 3 | Bearing Temp. | Fair | |
| 4 | Mounting Bolts | Poor | |
| 5 | Lubricant Leakage From Bearing | Fair | |
| 6 | Junction Box Attachment | Fair | |
| 7 | Conduit Termination | Fair | |

MOTOR INERIOR - N/A

| No. | ITEM | CONDITION | REMARKS |
|-----|-----------------------------|-----------|---------|
| 1 | Gasket Under Insp. Cover | | |
| 2 | Cable Connections | | |
| 3 | Interior Condition | | |
| 4 | Carbon Brush Length | | |
| 5 | Brush Holder Tension | | |
| 6 | Brush Grinding | | |
| 7 | Oil/Grease Contamination | | |
| 8 | Air Passage Between Winding | | |
| 9 | Wiring Insulation | | |
| 10 | Surface Pitting | | |

NOTES: Separate disconnect is not provided for brakes.

NUMERICAL RATING: 3

Inspected By K.K. Sidhu / Tej Malla Date 01/04/08

Bridge No. 23007

MOTOR IDENTIFICATION North West Lock

Figure No. E-7 Photo No. E-20

| NAMEPLATE DETAIL | | | |
|------------------|-----------------|-----------|-------------------|
| Manufacturer | <u>G.E</u> | Amp. | <u>4/2</u> |
| H.P. | <u>0.75</u> | Ser.No. | <u> </u> |
| Volts | <u>220/440</u> | Model No. | <u>5K204A3761</u> |
| Phase | <u>3</u> | R.P.M. | <u>840</u> |
| L.R Code: | <u> </u> | Design: | <u> </u> |
| | | Frame | <u>204</u> |
| | | C/S | <u>60</u> |
| | | Duty: | <u>30 Min</u> |
| | | Type: | <u>K</u> |
| | | Rise: | <u>55</u> |

MOTOR EXTERIOR

| No. | ITEM | CONDITION | REMARKS |
|-----|--------------------------------|-----------|---------|
| 1 | Bearing Noise | Fair | |
| 2 | Vibration | Fair | |
| 3 | Bearing Temp. | Fair | |
| 4 | Mounting Bolts | Poor | |
| 5 | Lubricant Leakage From Bearing | Fair | |
| 6 | Junction Box Attachment | Fair | |
| 7 | Conduit Termination | Fair | |

MOTOR INERIOR - N/A

| No. | ITEM | CONDITION | REMARKS |
|-----|-----------------------------|-----------|---------|
| 1 | Gasket Under Insp. Cover | | |
| 2 | Cable Connections | | |
| 3 | Interior Condition | | |
| 4 | Carbon Brush Length | | |
| 5 | Brush Holder Tension | | |
| 6 | Brush Grinding | | |
| 7 | Oil/Grease Contamination | | |
| 8 | Air Passage Between Winding | | |
| 9 | Wiring Insulation | | |
| 10 | Surface Pitting | | |

NOTES: Separate disconnect is not provided for brakes.

NUMERICAL RATING: 3

Inspected By K.K. Sidhu / Tej Malla Date 01/04/08

Bridge No. 23007

MOTOR IDENTIFICATION South East Lock

Figure No. E-8 Photo No. E-7

| NAMEPLATE DETAIL | | | |
|------------------|-----------------|-----------|-------------------|
| Manufacturer | <u>G.E</u> | Amp. | <u>4/2</u> |
| H.P. | <u>0.75</u> | Ser.No. | <u> </u> |
| Volts | <u>220/440</u> | Model No. | <u>5K204A3761</u> |
| Phase | <u>3</u> | R.P.M. | <u>840</u> |
| L.R Code: | <u> </u> | Design: | <u> </u> |
| | | Frame | <u>204</u> |
| | | C/S | <u>60</u> |
| | | Duty: | <u>30 Min</u> |
| | | Type: | <u>K</u> |
| | | Rise: | <u>55</u> |

MOTOR EXTERIOR

| No. | ITEM | CONDITION | REMARKS |
|-----|--------------------------------|-----------|---------|
| 1 | Bearing Noise | Fair | |
| 2 | Vibration | Fair | |
| 3 | Bearing Temp. | Fair | |
| 4 | Mounting Bolts | Poor | |
| 5 | Lubricant Leakage From Bearing | Fair | |
| 6 | Junction Box Attachment | Fair | |
| 7 | Conduit Termination | Fair | |

MOTOR INERIOR - N/A

| No. | ITEM | CONDITION | REMARKS |
|-----|-----------------------------|-----------|---------|
| 1 | Gasket Under Insp. Cover | | |
| 2 | Cable Connections | | |
| 3 | Interior Condition | | |
| 4 | Carbon Brush Length | | |
| 5 | Brush Holder Tension | | |
| 6 | Brush Grinding | | |
| 7 | Oil/Grease Contamination | | |
| 8 | Air Passage Between Winding | | |
| 9 | Wiring Insulation | | |
| 10 | Surface Pitting | | |

NOTES: Separate disconnect is not provided for brakes.

NUMERICAL RATING: 3

Inspected By K.K. Sidhu / Tej Malla Date 01/04/08

Bridge No. 23007

MOTOR IDENTIFICATION North East Lock

Figure No. E-9 Photo No. _____

| NAMEPLATE DETAIL | | | |
|------------------|-----------------|-----------|-------------------|
| Manufacturer | <u>G.E</u> | Amp. | <u>4/2</u> |
| H.P. | <u>0.75</u> | Ser.No. | <u> </u> |
| Volts | <u>220/440</u> | Model No. | <u>5K204A3761</u> |
| Phase | <u>3</u> | R.P.M. | <u>840</u> |
| L.R Code: | <u> </u> | Design: | <u> </u> |
| | | Frame | <u>204</u> |
| | | C/S | <u>60</u> |
| | | Duty: | <u>30 Min</u> |
| | | Type: | <u>K</u> |
| | | Rise: | <u>55</u> |

MOTOR EXTERIOR

| No. | ITEM | CONDITION | REMARKS |
|-----|--------------------------------|-----------|---------|
| 1 | Bearing Noise | Fair | |
| 2 | Vibration | Fair | |
| 3 | Bearing Temp. | Fair | |
| 4 | Mounting Bolts | Poor | |
| 5 | Lubricant Leakage From Bearing | Fair | |
| 6 | Junction Box Attachment | Fair | |
| 7 | Conduit Termination | Fair | |

MOTOR INERIOR - N/A

| No. | ITEM | CONDITION | REMARKS |
|-----|-----------------------------|-----------|---------|
| 1 | Gasket Under Insp. Cover | | |
| 2 | Cable Connections | | |
| 3 | Interior Condition | | |
| 4 | Carbon Brush Length | | |
| 5 | Brush Holder Tension | | |
| 6 | Brush Grinding | | |
| 7 | Oil/Grease Contamination | | |
| 8 | Air Passage Between Winding | | |
| 9 | Wiring Insulation | | |
| 10 | Surface Pitting | | |

NOTES: Separate disconnect is not provided for brakes.

NUMERICAL RATING: 3

Inspected By K.K. Sidhu / Tej Malla Date 01/04/08
 Bridge No. 23007 Photo No. E - 15

BRAKE IDENTIFICATION: West Motor Brake No. 1

| | | | |
|-----------------------|-------------------------------|----------------------------|--|
| NAMEPLATE DATA | | Manufacturer <u>Mondel</u> | |
| Model <u>B-22585</u> | Spring Length _____ | Ser. No. <u>B-22585</u> | |
| Torque <u>140</u> | Freq. <u>60</u> | Type _____ | |
| Phase <u>3</u> | Duty _____ | Arm stroke _____ | |
| Volts <u>240</u> | FL Amps _____ | Spring Comp. _____ | |
| Frame _____ | Cat no. <u>8MBT/E-ED23/5S</u> | | |

| No. | ITEM | CONDITION | REMARKS |
|-----|---------------------------|-----------|---------|
| 1 | Brake Drum Surface | Good | |
| 2 | Brake Frame | Good | |
| 3 | Brake Mounting | Good | |
| 4 | Brake Shoes | Good | |
| 5 | Brake Pads | Good | |
| 6 | Conduit Termination | Good | |
| 7 | Noise | Good | |
| 8 | Vibrations | Good | |
| 9 | Brake Oil Leakage | Good | |
| 10 | Brake Set Limit Switch | N/A | |
| 11 | Brake Rel. Limit Switch | Good | |
| 12 | Hand Rel. Mechanism | Good | |
| 13 | Brake Hand Rel. Limit Sw. | Good | |

NUMERICAL RATING:

| | |
|-------------------------------|-----------|
| Maryland State Highway | |
| Ocean City Bridge | |
| THRUSTER BRAKE | |
| Ocean City, MD | 01/04/08 |
| Sidhu Associates, Inc. | Fig. E-10 |

Inspected By K.K. Sidhu / Tej Malla Date 01/04/08

Bridge No. 23007 Photo No. E - 15

BRAKE IDENTIFICATION:

West Motor Brake No. 2

| | | | |
|-----------------------|-------------------------------|----------------------------|--|
| NAMEPLATE DATA | | Manufacturer <u>Mondel</u> | |
| Model <u>B-22585</u> | Spring Length _____ | Ser. No. <u>B-22585</u> | |
| Torque <u>140</u> | Freq. <u>60</u> | Type _____ | |
| Phase <u>3</u> | Duty _____ | Arm stroke _____ | |
| Volts _____ | FL Amps _____ | Spring Comp. _____ | |
| Frame _____ | Cat no. <u>8MBT/E-ED23/5S</u> | | |

| No. | ITEM | CONDITION | REMARKS |
|-----|---------------------------|-----------|---------|
| 1 | Brake Drum Surface | Good | |
| 2 | Brake Frame | Good | |
| 3 | Brake Mounting | Good | |
| 4 | Brake Shoes | Good | |
| 5 | Brake Pads | Good | |
| 6 | Conduit Termination | Good | |
| 7 | Noise | Good | |
| 8 | Vibrations | Good | |
| 9 | Brake Oil Leakage | Good | |
| 10 | Brake Set Limit Switch | N/A | |
| 11 | Brake Rel. Limit Switch | Good | |
| 12 | Hand Rel. Mechanism | Good | |
| 13 | Brake Hand Rel. Limit Sw. | Good | |

NUMERICAL RATING:

| | |
|-------------------------------|-----------|
| Maryland State Highway | |
| Ocean City Bridge | |
| THRUSTER BRAKE | |
| Ocean City, MD | 01/04/08 |
| Sidhu Associates, Inc. | Fig. E-11 |

Inspected By K.K. Sidhu / Tej Malla Date 01/04/08
 Bridge No. 23007 Photo No. E - 16

BRAKE IDENTIFICATION: West Emergency Brake No. 1

| | | | |
|-----------------------|------------------|--------------------------------|---------------|
| NAMEPLATE DATA | | Manufacturer <u>G.E</u> | |
| Model | <u>GEH 641</u> | Spring Length | <u>2 1/2"</u> |
| Torque | <u>160 LB-FT</u> | Freq. | <u>60</u> |
| Phase | <u>1</u> | Duty | |
| Volts | <u>230</u> | FL Amps | |
| Frame | | | |
| | | Ser. No. | |
| | | Type | |
| | | Arm stroke | <u>2 1/2"</u> |
| | | Spring Comp. | |

| No. | ITEM | CONDITION | REMARKS |
|-----|---------------------------|-----------|---------|
| 1 | Brake Drum Surface | Fair | |
| 2 | Brake Frame | Fair | |
| 3 | Brake Mounting | Fair | |
| 4 | Brake Shoes | Fair | |
| 5 | Brake Pads | Fair | |
| 6 | Conduit Termination | Good | |
| 7 | Noise | Fair | |
| 8 | Vibrations | Fair | |
| 9 | Brake Oil Leakage | Good | |
| 10 | Brake Set Limit Switch | N/A | |
| 11 | Brake Rel. Limit Switch | Good | |
| 12 | Hand Rel. Mechanism | Fair | |
| 13 | Brake Hand Rel. Limit Sw. | N/A | |

NUMERICAL RATING:

NOTE: No local disconnect was noticed.

| | |
|-------------------------------|-----------|
| Maryland State Highway | |
| Ocean City Bridge | |
| SOLENOID BRAKE | |
| Ocean City, MD | 01/04/08 |
| Sidhu Associates, Inc. | Fig. E-12 |

Inspected By K.K. Sidhu / Tej Malla Date 01/04/08
 Bridge No. 23007 Photo No. E - 16

BRAKE IDENTIFICATION:

West Emergency Brake No. 2

| | | | |
|-----------------------|------------------|-------------------------|---------------|
| NAMEPLATE DATA | | Manufacturer <u>G.E</u> | |
| Model | <u>GEH 641</u> | Spring Length | <u>2 1/2"</u> |
| Torque | <u>160 lb-ft</u> | Freq. | <u>60</u> |
| Phase | <u>1</u> | Duty | |
| Volts | <u>230</u> | FL Amps | |
| Frame | | | |
| | | Ser. No. | |
| | | Type | |
| | | Arm stroke | <u>1 1/2"</u> |
| | | Spring Comp. | |

| No. | ITEM | CONDITION | REMARKS |
|-----|---------------------------|-----------|---------|
| 1 | Brake Drum Surface | Fair | |
| 2 | Brake Frame | Fair | |
| 3 | Brake Mounting | Fair | |
| 4 | Brake Shoes | Fair | |
| 5 | Brake Pads | Fair | |
| 6 | Conduit Termination | Good | |
| 7 | Noise | Fair | |
| 8 | Vibrations | Fair | |
| 9 | Brake Oil Leakage | Fair | |
| 10 | Brake Set Limit Switch | N/A | |
| 11 | Brake Rel. Limit Switch | Good | |
| 12 | Hand Rel. Mechanism | Fair | |
| 13 | Brake Hand Rel. Limit Sw. | N/A | |

NUMERICAL RATING:

NOTE: No local disconnect was noticed.

| | |
|-------------------------------|-----------|
| Maryland State Highway | |
| Ocean City Bridge | |
| SOLENOID BRAKE | |
| Ocean City, MD | 01/04/08 |
| Sidhu Associates, Inc. | Fig. E-13 |

Inspected By K.K. Sidhu / Tej Malla Date 01/04/08

Bridge No. 23007 Photo No. E - 15

BRAKE IDENTIFICATION: East Motor Brake No. 1

| | | | |
|-----------------------|-------------------------------|----------------------------|--|
| NAMEPLATE DATA | | Manufacturer <u>Mondel</u> | |
| Model <u>B-22585</u> | Spring Length _____ | Ser. No. <u>B-22585</u> | |
| Torque <u>140</u> | Freq. <u>60</u> | Type _____ | |
| Phase <u>3</u> | Duty _____ | Arm stroke _____ | |
| Volts <u>240</u> | FL Amps _____ | Spring Comp. _____ | |
| Frame _____ | Cat no. <u>8MBT/E-ED23/5S</u> | | |

| No. | ITEM | CONDITION | REMARKS |
|-----|---------------------------|-----------|---------|
| 1 | Brake Drum Surface | Good | |
| 2 | Brake Frame | Good | |
| 3 | Brake Mounting | Good | |
| 4 | Brake Shoes | Good | |
| 5 | Brake Pads | Good | |
| 6 | Conduit Termination | Good | |
| 7 | Noise | Good | |
| 8 | Vibrations | Good | |
| 9 | Brake Oil Leakage | Good | |
| 10 | Brake Set Limit Switch | N/A | |
| 11 | Brake Rel. Limit Switch | Good | |
| 12 | Hand Rel. Mechanism | Good | |
| 13 | Brake Hand Rel. Limit Sw. | Good | |

NUMERICAL RATING:

| | |
|-------------------------------|-----------|
| Maryland State Highway | |
| Ocean City Bridge | |
| THRUSTER BRAKE | |
| Ocean City, MD | 01/04/08 |
| Sidhu Associates, Inc. | Fig. E-14 |

Inspected By K.K. Sidhu / Tej Malla Date 01/04/08
 Bridge No. 23007 Photo No. E - 15

BRAKE IDENTIFICATION: East Motor Brake No. 2

| | | | |
|-----------------------|-------------------------------|----------------------------|--|
| NAMEPLATE DATA | | Manufacturer <u>Mondel</u> | |
| Model <u>B-22585</u> | Spring Length _____ | Ser. No. <u>B-22585</u> | |
| Torque <u>140</u> | Freq. <u>60</u> | Type _____ | |
| Phase <u>3</u> | Duty _____ | Arm stroke _____ | |
| Volts <u>240</u> | FL Amps _____ | Spring Comp. _____ | |
| Frame _____ | Cat no. <u>8MBT/E-ED23/5S</u> | | |

| No. | ITEM | CONDITION | REMARKS |
|-----|---------------------------|-----------|---------|
| 1 | Brake Drum Surface | Good | |
| 2 | Brake Frame | Good | |
| 3 | Brake Mounting | Good | |
| 4 | Brake Shoes | Good | |
| 5 | Brake Pads | Good | |
| 6 | Conduit Termination | Good | |
| 7 | Noise | Good | |
| 8 | Vibrations | Good | |
| 9 | Brake Oil Leakage | Good | |
| 10 | Brake Set Limit Switch | N/A | |
| 11 | Brake Rel. Limit Switch | Good | |
| 12 | Hand Rel. Mechanism | Good | |
| 13 | Brake Hand Rel. Limit Sw. | Good | |

NUMERICAL RATING:

| | |
|-------------------------------|-----------|
| Maryland State Highway | |
| Ocean City Bridge | |
| THRUSTER BRAKE | |
| Ocean City, MD | 01/04/08 |
| Sidhu Associates, Inc. | Fig. E-15 |

Inspected By K.K. Sidhu / Tej Malla Date 01/04/08
 Bridge No. 23007 Photo No. E - 16

BRAKE IDENTIFICATION: East Emergency Brake No. 1

| | | | |
|-------------------------|-----------------------------|-------------------------|---------------|
| NAMEPLATE DATA | | Manufacturer <u>G.E</u> | |
| Model <u>GEH 641</u> | Spring Length <u>2 1/2"</u> | Ser. No. | |
| Torque <u>160 lb-ft</u> | Freq. <u>60</u> | Type | |
| Phase <u>1</u> | Duty | Arm stroke | <u>1 1/2"</u> |
| Volts <u>230</u> | FL Amps | Spring Comp. | |
| Frame | | | |

| No. | ITEM | CONDITION | REMARKS |
|-----|---------------------------|-----------|---------|
| 1 | Brake Drum Surface | Good | |
| 2 | Brake Frame | Good | |
| 3 | Brake Mounting | Fair | |
| 4 | Brake Shoes | Fair | |
| 5 | Brake Pads | Fair | |
| 6 | Conduit Termination | Good | |
| 7 | Noise | Fair | |
| 8 | Vibrations | Fair | |
| 9 | Brake Oil Leakage | Good | |
| 10 | Brake Set Limit Switch | N/A | |
| 11 | Brake Rel. Limit Switch | Good | |
| 12 | Hand Rel. Mechanism | Fair | |
| 13 | Brake Hand Rel. Limit Sw. | N/A | |

NUMERICAL RATING:

NOTE: No local disconnect was noticed.

| | |
|-------------------------------|-----------|
| Maryland State Highway | |
| Ocean City Bridge | |
| SOLENOID BRAKE | |
| Ocean City, MD | 01/04/08 |
| Sidhu Associates, Inc. | Fig. E-16 |

Inspected By K.K. Sidhu / Tej Malla Date 01/04/08
 Bridge No. 23007 Photo No. E - 16

BRAKE IDENTIFICATION:

East Emergency Brake No. 2

| | | | |
|-----------------------|------------------|-------------------------|---------------|
| NAMEPLATE DATA | | Manufacturer <u>G.E</u> | |
| Model | <u>GEH 641</u> | Spring Length | <u>2 1/2"</u> |
| Torque | <u>160 lb-ft</u> | Freq. | <u>60</u> |
| Phase | <u>1</u> | Duty | |
| Volts | <u>230</u> | FL Amps | |
| Frame | | | |
| | | Ser. No. | |
| | | Type | |
| | | Arm stroke | <u>1 1/2"</u> |
| | | Spring Comp. | |

| No. | ITEM | CONDITION | REMARKS |
|-----|---------------------------|-----------|---------|
| 1 | Brake Drum Surface | Good | |
| 2 | Brake Frame | Fair | |
| 3 | Brake Mounting | Fair | |
| 4 | Brake Shoes | Fair | |
| 5 | Brake Pads | Fair | |
| 6 | Conduit Termination | Good | |
| 7 | Noise | Good | |
| 8 | Vibrations | Fair | |
| 9 | Brake Oil Leakage | Good | |
| 10 | Brake Set Limit Switch | N/A | |
| 11 | Brake Rel. Limit Switch | Good | |
| 12 | Hand Rel. Mechanism | Fair | |
| 13 | Brake Hand Rel. Limit Sw. | N/A | |

NUMERICAL RATING: 3

NOTE: No local disconnect was noticed.

| | |
|-------------------------------|-----------|
| Maryland State Highway | |
| Ocean City Bridge | |
| SOLENOID BRAKE | |
| Ocean City, MD | 01/04/08 |
| Sidhu Associates, Inc. | Fig. E-17 |

Inspected By K.K. Sidhu & Tej Malla Date 01/04/08
 Bridge No. 23007 Photo No. E-17
 Figure No. E-18

SENSOR IDENTIFICATION: Selsyn - West

| | | |
|--------------------------|------------------|-----------------|
| NAME PLATE DATA | Manufacturer | <u>Henschel</u> |
| Model <u>10-1051-210</u> | Volts <u>115</u> | Amps _____ |
| CAMS <u>01:01.8</u> | Ser. No. _____ | _____ |

| No. | ITEM | CONDITION | REMARKS |
|-----|---------------------|-----------|---------|
| 1 | Enclosure | Good | |
| 2 | Gasket | Good | |
| 3 | Mounting | Good | |
| 4 | Conduit Termination | Good | |
| 5 | Connections | Good | |
| 6 | Cable Insul. | Good | |
| 7 | Interiors | Good | |
| | | | |
| | | | |

NUMERICAL RATING: 2

| | |
|-------------------------------|-----------|
| Maryland State Highway | |
| Ocean City Bridge | |
| SENSORS | |
| Ocean City, MD | 01/04/08 |
| Sidhu Associates, Inc. | Fig. E-18 |

Inspected By K.K. Sidhu & Tej Malla Date 01/04/08
 Bridge No. 23007 Photo No. E-17
 Figure No. E-19

SENSOR IDENTIFICATION: Selsyn - East

| | | |
|--------------------------|------------------|-----------------|
| NAME PLATE DATA | Manufacturer | <u>Henschel</u> |
| Model <u>10-1051-210</u> | Volts <u>115</u> | Amps _____ |
| CAMS <u>01:01.8</u> | Ser. No. _____ | _____ |

| No. | ITEM | CONDITION | REMARKS |
|-----|---------------------|-----------|---------|
| 1 | Enclosure | Good | |
| 2 | Gasket | Good | |
| 3 | Mounting | Good | |
| 4 | Conduit Termination | Good | |
| 5 | Connections | Good | |
| 6 | Cable Insul. | Good | |
| 7 | Interiors | Good | |
| | | | |
| | | | |

NUMERICAL RATING:

| | |
|-------------------------------|-----------|
| Maryland State Highway | |
| Ocean City Bridge | |
| SENSORS | |
| Ocean City, MD | 01/04/08 |
| Sidhu Associates, Inc. | Fig. E-19 |

Inspected By K.K. Sidhu & Tej Malla Date 01/04/08
 Bridge No. 23007 Photo No. E-7
 Figure No. E-22

LIMIT SWITCH IDENTIFICATION: S-W Lock Rotary Cam

| | | | |
|-------|-------------|--------------|------------------------------|
| | | Manufacturer | <u>B & B Electomatic</u> |
| Model | <u>AV-6</u> | Volts | <u>120</u> Amps _____ |
| CAMS | <u>6</u> | Ser. No. | _____ |

| No. | ITEM | CONDITION | REMARKS |
|-----|---------------------|-----------|---------|
| 1 | Enclosure | Good | |
| 2 | Gasket | Good | |
| 3 | Mounting | Good | |
| 4 | Conduit Termination | Good | |
| 5 | Connections | Good | |
| 6 | Cable Insul. | Good | |
| 7 | Cams/Roller | Good | |
| 8 | Bearings | Good | |
| 9 | Interiors | Good | |

NUMERICAL RATING: 2

| | |
|-------------------------------|-----------|
| Maryland State Highway | |
| Ocean City Bridge | |
| LIMIT SWITCHES | |
| Ocean City, MD | 01/04/08 |
| Sidhu Associates, Inc. | Fig. E-22 |

Inspected By K.K. Sidhu & Tej Malla Date 01/04/08
 Bridge No. 23007 Photo No. E-7
 Figure No. E-23

LIMIT SWITCH IDENTIFICATION: N-W Lock Rotary Cam

| | | | |
|-------|-------------|--------------|------------------------------|
| | | Manufacturer | <u>B & B Electomatic</u> |
| Model | <u>AV-6</u> | Volts | <u>120</u> Amps _____ |
| CAMS | <u>6</u> | Ser. No. | _____ |

| No. | ITEM | CONDITION | REMARKS |
|-----|---------------------|-----------|---------|
| 1 | Enclosure | Good | |
| 2 | Gasket | Good | |
| 3 | Mounting | Good | |
| 4 | Conduit Termination | Good | |
| 5 | Connections | Good | |
| 6 | Cable Insul. | Good | |
| 7 | Cams/Roller | Good | |
| 8 | Bearings | Good | |
| 9 | Interiors | Fair | |

NUMERICAL RATING:

| | |
|-------------------------------|-----------|
| Maryland State Highway | |
| Ocean City Bridge | |
| LIMIT SWITCHES | |
| Ocean City, MD | 01/04/08 |
| Sidhu Associates, Inc. | Fig. E-23 |

Inspected By K.K. Sidhu & Tej Malla Date 01/04/08
 Bridge No. 23007 Photo No. E-7
 Figure No. E-24

LIMIT SWITCH IDENTIFICATION: S-E Lock Rotary Cam

| | | | |
|-------|-------------|--------------|------------------------------|
| | | Manufacturer | <u>B & B Electomatic</u> |
| Model | <u>AV-6</u> | Volts | <u>120</u> Amps _____ |
| CAMS | <u>6</u> | Ser. No. | _____ |

| No. | ITEM | CONDITION | REMARKS |
|-----|---------------------|-----------|---------|
| 1 | Enclosure | Good | |
| 2 | Gasket | Good | |
| 3 | Mounting | Good | |
| 4 | Conduit Termination | Good | |
| 5 | Connections | Good | |
| 6 | Cable Insul. | Good | |
| 7 | Cams/Roller | Good | |
| 8 | Bearings | Good | |
| 9 | Interiors | Fair | |

NUMERICAL RATING: 2

| | |
|-------------------------------|-----------|
| Maryland State Highway | |
| Ocean City Bridge | |
| LIMIT SWITCHES | |
| Ocean City, MD | 01/04/08 |
| Sidhu Associates, Inc. | Fig. E-24 |

Inspected By K.K. Sidhu & Tej Malla Date 01/04/08
 Bridge No. 23007 Photo No. E-7
 Figure No. E-25

LIMIT SWITCH IDENTIFICATION: N-E Lock Rotary Cam

| | | | |
|-------|-------------|--------------|------------------------------|
| | | Manufacturer | <u>B & B Electomatic</u> |
| Model | <u>AV-6</u> | Volts | <u>120</u> Amps _____ |
| CAMS | <u>6</u> | Ser. No. | _____ |

| No. | ITEM | CONDITION | REMARKS |
|-----|---------------------|-----------|---------|
| 1 | Enclosure | Good | |
| 2 | Gasket | Good | |
| 3 | Mounting | Good | |
| 4 | Conduit Termination | Good | |
| 5 | Connections | Good | |
| 6 | Cable Insul. | Good | |
| 7 | Cams/Roller | Good | |
| 8 | Bearings | Good | |
| 9 | Interiors | Fair | |

NUMERICAL RATING: 2

| | |
|-------------------------------|-----------|
| Maryland State Highway | |
| Ocean City Bridge | |
| LIMIT SWITCHES | |
| Ocean City, MD | 01/04/08 |
| Sidhu Associates, Inc. | Fig. E-25 |

Inspected By K.K. Sidhu & Tej Malla Date 01/04/08
 Bridge No. 23007 Photo No. E-13
 Figure No. E-26

LIMIT SWITCH IDENTIFICATION: West Fully Seated

| | | |
|---------------------|---------------------|-------------------------|
| Name Plate Data | Manufacturer | Microswitch |
| Model <u>LS2D41</u> | Volts <u>600</u> | Amps <u>10</u> |
| CAMS <u>N/A</u> | Ser. No. <u>---</u> | Contacts: <u>2NO/NC</u> |

| No. | ITEM | CONDITION | REMARKS |
|-----|---------------------|-----------|---------|
| 1 | Enclosure | Good | |
| 2 | Gasket | Good | |
| 3 | Mounting | Good | |
| 4 | Conduit Termination | Good | |
| 5 | Connections | Good | |
| 6 | Cable Insul. | Good | |
| 7 | Cams/Roller | N/A | |
| 8 | Bearings | N/A | |
| 9 | Interiors | Fair | |

NUMERICAL RATING: 3

| | |
|-------------------------------|-----------|
| Maryland State Highway | |
| Ocean City Bridge | |
| LIMIT SWITCHES | |
| Ocean City, MD | 01/04/08 |
| Sidhu Associates, Inc. | Fig. E-26 |

Inspected By K.K. Sidhu & Tej Malla Date 01/04/08
 Bridge No. 23007 Photo No. E-13
 Figure No. E-27

LIMIT SWITCH IDENTIFICATION: East Fully Seated

| | | | |
|-------------------|------------------|------------------------------|--|
| | Manufacturer | <u>B & B Electomatic</u> | |
| Model <u>AV-6</u> | Volts <u>600</u> | Amps <u>10</u> | |
| CAMS <u>6</u> | Ser. No. _____ | Contacts: <u>2NO/NC</u> | |

| No. | ITEM | CONDITION | REMARKS |
|-----|---------------------|-----------|---------|
| 1 | Enclosure | Good | |
| 2 | Gasket | Good | |
| 3 | Mounting | Good | |
| 4 | Conduit Termination | Good | |
| 5 | Connections | Good | |
| 6 | Cable Insul. | Good | |
| 7 | Cams/Roller | N/A | |
| 8 | Bearings | N/A | |
| 9 | Interiors | Fair | |

NUMERICAL RATING: 2

| | |
|-------------------------------|-----------|
| Maryland State Highway | |
| Ocean City Bridge | |
| LIMIT SWITCHES | |
| Ocean City, MD | 01/04/08 |
| Sidhu Associates, Inc. | Fig. E-27 |

Inspected By K.K. Sidhu & Tej Malla Date 01/04/08

Bridge No. 23007

WARNING / RESISTANCE GATE IDENTIFICATION South West Warning Gate

Figure No. E-28 Photo No. E-12

| | | | |
|-----------------------------|----------------------|--|--|
| NAMEPLATE DETAIL | | Manufacturer <u>B & B Electromatic</u> | |
| Model <u>VT-40, 98-8241</u> | H.P. <u>0.5</u> | Temp. | |
| Cat. No. _____ | Volts <u>208/230</u> | Ser.No. <u>4634</u> | |
| Type _____ | F.L.A. <u>2 / 1</u> | Dwg. No. | |
| Phase <u>3</u> | C/S <u>60</u> | | |

GATE CONTROLLER EXTERIOR

| No. | ITEM | CONDITION | REMARKS |
|-----|--------------------------------|-----------|---------|
| 1 | Smoothness Of Operation | Good | |
| 2 | Gtae Arm Attachment To Housing | Good | |
| 3 | Housing Metal Parts | Good | |
| 4 | Arm Condition | Good | |
| 5 | Warning Light Operation | Good | |
| 6 | Arm Stripes | Good | |
| 7 | Flexible Cable Support | Fair | |
| 8 | Gong | Fair | |
| 9 | Mounting Bolts | Good | |
| 10 | Flex Cable Stranded? | Good | |

GATE CONTROLLER INTERIOR

| No. | ITEM | CONDITION | REMARKS |
|-----|-------------------------|-----------|----------------------------------|
| 1 | Gasket Under Door | Fair | |
| 2 | Motor | Fair | |
| 3 | Switch / Breaker | Fair | |
| 4 | Terminal Connections | Fair | |
| 5 | Conduit Termination | Fair | |
| 6 | Door Limit Switch | Poor | *Sill supported by plastic strap |
| 7 | Hand Crank Limit Switch | N/A | |
| 8 | Gate Limit Switch | Poor | *Missing Contact |
| 9 | Starter | Fair | |
| 10 | Wiring Insulation | Fair | |
| 11 | Brake | Fair | |
| 12 | Crank Arm | Fair | |
| 13 | Oil Leakage | Fair | |
| 14 | Receptacle | Fair | |

NOTES: *Same Condition from 2005

NUMERICAL RATING: 3

Inspected By K.K. Sidhu & Tej Malla Date 01/04/08

Bridge No. 23007

WARNING / RESISTANCE GATE IDENTIFICATION North West Warning Gate

Figure No. E-29 Photo No. E-10

| | | | |
|-----------------------------|----------------------|--|--|
| NAMEPLATE DETAIL | | Manufacturer <u>B & B Electromatic</u> | |
| Model <u>VT-40, 98-8241</u> | H.P. <u>0.5</u> | Temp. _____ | |
| Cat. No. _____ | Volts <u>208/230</u> | Ser.No. <u>4633</u> | |
| Type _____ | F.L.A. <u>2 / 1</u> | Dwg. No. _____ | |
| Phase <u>3</u> | C/S <u>60</u> | | |

GATE CONTROLLER EXTERIOR

| No. | ITEM | CONDITION | REMARKS |
|-----|--------------------------------|-----------|---------|
| 1 | Smoothness Of Operation | Fair | |
| 2 | Gtae Arm Attachment To Housing | Good | |
| 3 | Housing Metal Parts | Good | |
| 4 | Arm Condition | Good | |
| 5 | Warning Light Operation | Good | |
| 6 | Arm Stripes | Fair | |
| 7 | Flexible Cable Support | Fair | |
| 8 | Gong | Fair | |
| 9 | Mounting Bolts | Good | |
| 10 | Flex Cable Stranded? | Good | |

GATE CONTROLLER INTERIOR

| No. | ITEM | CONDITION | REMARKS |
|-----|-------------------------|-----------|---------------|
| 1 | Gasket Under Door | Fair | |
| 2 | Motor | Good | |
| 3 | Switch / Breaker | Fair | |
| 4 | Terminal Connections | Fair | |
| 5 | Conduit Termination | Fair | |
| 6 | Door Limit Switch | Fair | Hard to Press |
| 7 | Hand Crank Limit Switch | N/A | |
| 8 | Gate Limit Switch | Fair | |
| 9 | Starter | Fair | |
| 10 | Wiring Insulation | Good | |
| 11 | Brake | Fair | |
| 12 | Crank Arm | Good | |
| 13 | Oil Leakage | Fair | |
| 14 | Receptacle | Good | |

NOTES: _____

NUMERICAL RATING: 3

Inspected By K.K. Sidhu & Tej Malla Date 01/04/08

Bridge No. 23007

WARNING / RESISTANCE GATE IDENTIFICATION North East Warning Gate

Figure No. E-30 Photo No. E-11

| | | | |
|-------------------------|----------------------|--|--|
| NAMEPLATE DETAIL | | Manufacturer <u>B & B Electromatic</u> | |
| Model <u>96-8241</u> | H.P. <u>0.5</u> | Temp. | |
| Cat. No. _____ | Volts <u>208/230</u> | Ser.No. <u>4695</u> | |
| Type _____ | F.L.A. <u>2 / 1</u> | Dwg. No. | |
| Phase <u>3</u> | C/S <u>60</u> | | |

GATE CONTROLLER EXTERIOR

| No. | ITEM | CONDITION | REMARKS |
|-----|--------------------------------|-----------|---------|
| 1 | Smoothness Of Operation | Good | |
| 2 | Gtae Arm Attachment To Housing | Good | |
| 3 | Housing Metal Parts | Good | |
| 4 | Arm Condition | Fair | |
| 5 | Warning Light Operation | Fair | |
| 6 | Arm Stripes | Fair | |
| 7 | Flexible Cable Support | Fair | |
| 8 | Gong | Fair | |
| 9 | Mounting Bolts | Good | |
| 10 | Flex Cable Stranded? | Good | |

GATE CONTROLLER INTERIOR

| No. | ITEM | CONDITION | REMARKS |
|-----|-------------------------|-----------|---------------|
| 1 | Gasket Under Door | Fair | |
| 2 | Motor | Fair | |
| 3 | Switch / Breaker | Fair | |
| 4 | Terminal Connections | Fair | |
| 5 | Conduit Termination | Fair | |
| 6 | Door Limit Switch | Poor | Hard To Press |
| 7 | Hand Crank Limit Switch | N/A | |
| 8 | Gate Limit Switch | Fair | |
| 9 | Starter | Good | |
| 10 | Wiring Insulation | Fair | |
| 11 | Brake | Fair | |
| 12 | Crank Arm | Good | |
| 13 | Oil Leakage | Fair | |
| 14 | Receptacle | Fair | |

NOTES: _____

NUMERICAL RATING:

Inspected By K.K. Sidhu & Tej Malla Date 01/04/08

Bridge No. 23007

WARNING / RESISTANCE GATE IDENTIFICATION South East Warning Gate

Figure No. E-31 Photo No. E-10

| | | | |
|---------------------------|--------------------------|--|--|
| NAMEPLATE DETAIL | | Manufacturer <u>B & B Electromatic</u> | |
| Model <u>C6T17NC167C</u> | H.P. <u>0.5</u> | Temp. | |
| Cat. No. <u>113647.00</u> | Volts <u>208/230/460</u> | Ser.No. | |
| Type | F.L.A. <u>2 / 1</u> | Dwg. No. | |
| Phase <u>3</u> | C/S <u>60</u> | | |

GATE CONTROLLER EXTERIOR

| No. | ITEM | CONDITION | REMARKS |
|-----|--------------------------------|-----------|---------|
| 1 | Smoothness Of Operation | Good | |
| 2 | Gtae Arm Attachment To Housing | Good | |
| 3 | Housing Metal Parts | Fair | |
| 4 | Arm Condition | Good | |
| 5 | Warning Light Operation | Good | |
| 6 | Arm Stripes | Good | |
| 7 | Flexible Cable Support | Fair | |
| 8 | Gong | Fair | |
| 9 | Mounting Bolts | Fair | |
| 10 | Flex Cable Stranded? | Good | |

GATE CONTROLLER INTERIOR

| No. | ITEM | CONDITION | REMARKS |
|-----|-------------------------|-----------|---------|
| 1 | Gasket Under Door | Fair | |
| 2 | Motor | Fair | |
| 3 | Switch / Breaker | Fair | |
| 4 | Terminal Connections | Fair | |
| 5 | Conduit Termination | Fair | |
| 6 | Door Limit Switch | Fair | |
| 7 | Hand Crank Limit Switch | N/A | |
| 8 | Gate Limit Switch | Fair | |
| 9 | Starter | Fair | |
| 10 | Wiring Insulation | Fair | |
| 11 | Brake | Fair | |
| 12 | Crank Arm | Good | |
| 13 | Oil Leakage | Fair | |
| 14 | Receptacle | Fair | |

NOTES: _____

NUMERICAL RATING: 3

Inspected By K.K. Sidhu & Tej Malla Date 01/05/08
 Bridge No. 23007 Photo No. E-9
 Fig. No. E-32

GENERATOR SET

| | | | |
|-----------------------|--------------------|--------------|-------------------|
| NAMEPLATE DATA | | Manufacturer | Olympian |
| KW | <u>125</u> | Phase | <u>3</u> |
| KVA | <u>156.3</u> | Freq. | <u>60</u> |
| P.F. | <u>- -</u> | RPM | <u>1800</u> |
| ALT. | <u>1525 Meters</u> | Date | <u>1998</u> |
| Amb. | <u>30 Deg. C</u> | Model | <u>D125P1</u> |
| | | Ser. No. | <u>E4641A/001</u> |
| | | Volts | <u>240/120</u> |
| | | F.L. Amps | <u>376</u> |

| No. | ITEM | CONDITION | REMARKS |
|-----|-------------------|-----------|---------|
| 1 | Gen. Enclosure | Good | |
| 2 | Gen. Mounting | Good | |
| 3 | Vibrations | Good | |
| 4 | Starting Time | Good | |
| 5 | Cable Connections | Fair | |
| 6 | Battery | Good | |
| 7 | Battery Charger | Good | |
| 8 | Fuel Level | Fair | |
| 9 | Exhaust | Good | |
| 10 | Exercise Time | * | |
| 11 | Ventilation | Good | |

* Could Not Verify

NUMERICAL RATING:

| | |
|-------------------------------|-----------|
| Maryland State Highway | |
| Ocean City Bridge | |
| STANDBY GENERATOR | |
| Ocean City, MD | 01/05/08 |
| Sidhu Associates, Inc. | Fig. E-32 |

INSULATION DATA

Bridge Name: Ocean City

Test Voltage: 500 DC

K.K. Sidhu &
By: Tej Malla

Bridge No. 23007

Humidity: 60%

Date: 01/05/08

Temp: 33 Deg. F

Figure: E-33

| Item No. | Description | Megaohms | | | General Conditions |
|----------|----------------------------|-------------------|------|------|----------------------|
| | | From MCC to Motor | | | |
| | | A | B | C | |
| 1 | Near Main Drive Motor No.1 | 500 | 500 | 500 | |
| 2 | Near Main Drive Motor No.2 | 500 | 500 | 500 | |
| 3 | Far Main Drive Motor No. 1 | 30 | 30 | 30 | |
| 4 | Far Main Drive Motor No. 2 | 50 | 50 | 50 | |
| 5 | S-E Lock Motor | 20 | 20 | 20 | |
| 6 | S-W Lock Motor | 5 | 5 | 5 | Low, Need evaluation |
| 7 | N-E Lock Motor | 15 | 15 | 15 | |
| 8 | N-W Lock Motor | 5 | 5 | 5 | Low, Need evaluation |
| 9 | East Motor Brake No. 1 | 1000 | 1000 | 1000 | |
| 10 | East Motor Brake No. 2 | 1000 | 1000 | 1000 | |
| 11 | West Brake Motor No. 1 | 300 | 300 | 300 | |
| 12 | West Brake Motor No. 2 | 50 | 50 | 50 | |
| 13 | East EM Brake Motor No. 1 | 1000 | 1000 | | |
| 14 | East EM Brake Motor No. 2 | 1000 | 1000 | | |
| 15 | West EM Brake Motor No. 1 | 50 | 50 | | |
| 16 | West EM Brake Motor No. 2 | 400 | 400 | | |
| 17 | SW Warning Gate | 30 | 30 | 30 | |
| 18 | NW Warning Gate | 40 | 50 | 50 | |
| 19 | NE Warning Gate | 1000 | 1000 | 1000 | |
| 20 | SE Warning Gate | 150 | 150 | 150 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Note: Above readings indicate values of feeder and motor combined.

Inspected By K.K. Sidhu & Tej Malla Date 01/05/08

Bridge No. 23007 Photo No. _____

Figure E-35

SPAN OPERATION TEST

Time _____ Instrument Used Console Meter
 Volts _____ Temp. 33 Deg. F Humidity 60%
 Wind _____

| LEAF POSITION DEGREES | Near Span (Amps) #1 | | | Near Span (Amps) #2 | | |
|-----------------------|---------------------|-------|------|---------------------|-------|------|
| | Raise | Lower | Seat | Raise | Lower | Seat |
| 0 | 35 | 41 | 43 | 30 | 22 | 38 |
| 5 | 26 | 26 | | 25 | 25 | |
| 10 | 26 | 26 | | 25 | 25 | |
| 15 | 26 | 26 | | 25 | 25 | |
| 20 | 26 | 26 | | 25 | 25 | |
| 25 | 26 | 26 | | 25 | 25 | |
| 30 | 26 | 26 | | 25 | 25 | |
| 35 | 26 | 26 | | 25 | 25 | |
| 40 | 26 | 26 | | 25 | 25 | |
| 45 | 26 | 26 | | 25 | 25 | |
| 50 | 26 | 26 | | 25 | 25 | |
| 55 | 35 | 26 | | 35 | 33 | |
| 60 | | | | | | |

REMARKS: Nearly Open 54 Deg.

Fully Open 58 Deg.

| | |
|-------------------------------|-----------|
| Maryland State Highway | |
| Ocean City Bridge | |
| SPAN OPERATION TEST | |
| Ocean City, MD | 01/05/08 |
| Sidhu Associates, Inc. | Fig. E-35 |

Inspected By K.K. Sidhu & Tej Malla Date 01/05/08

Bridge No. 23007 Photo No. _____

Figure E-36

SPAN OPERATION TEST

Time _____ Instrument Used Console Meter
 Volts _____ Temp. 33 Deg. F Humidity 60%
 Wind _____

| LEAF POSITION DEGREES | Far Span (Amps) #1 | | | Far Span (Amps) #2 | | |
|-----------------------|--------------------|-------|------|--------------------|-------|------|
| | Raise | Lower | Seat | Raise | Lower | Seat |
| 0 | 35 | 35 | 40 | 35 | 35 | 40 |
| 5 | 28 | 28 | | 28 | 28 | |
| 10 | 28 | 28 | | 28 | 28 | |
| 15 | 28 | 28 | | 28 | 28 | |
| 20 | 28 | 28 | | 28 | 28 | |
| 25 | 28 | 28 | | 28 | 28 | |
| 30 | 28 | 28 | | 28 | 28 | |
| 35 | 28 | 28 | | 28 | 28 | |
| 40 | 28 | 28 | | 28 | 28 | |
| 45 | 28 | 28 | | 28 | 28 | |
| 50 | 28 | 28 | | 28 | 28 | |
| 55 | 35 | 28 | | 35 | 35 | |
| 60 | | | | | | |

REMARKS: Nearly Open 54 Deg.

Nearly Open 58 Deg.

At fully open both nearly and fully Open lights at console are lit.

| | |
|-------------------------------|-----------|
| Maryland State Highway | |
| Ocean City Bridge | |
| SPAN OPERATION TEST | |
| Ocean City, MD | 01/05/08 |
| Sidhu Associates, Inc. | Fig. E-36 |