Palm Beach County

Renewal/Replacement
Infrastructure Sales Tax Initiative

RENEWAL/REPLACEMENT PROGRAM ASSESSMENT STUDY
STRUCTURAL ELEMENTS

December, 2015

WGI™

RENEWAL/REPLACEMENT PROGRAM ASSESSMENT STUDY
STRUCTURAL ELEMENTS

WGI (structural) was retained October, 2015 to review from a structural perspective the various projects and assets listed in the **Infrastructure Sales Tax Capital Projects List** and to pass professional opinion and judgment as to the overall validity of those projects and the process by which they come to be identified.

Scope of Services:

Meet with PBC Department /Division Directors: 1) responsible for the renewal/replacement (R/R) recommendations and discuss the Departments routine maintenance and condition assessment process; 2) review their program protocol and reports to learn the specific process utilized to identify risk potential; 3)method of prioritizing (R/R) projects based on the available funding; and 4) field verify that the Department is appropriately applying the maintenance and condition assessment process in the field based on a random sampling of the projects listed in the (R/R) recommendations list.

The study will review maintenance history and condition assessment reports and any other studies available for the assets listed in the (R/R) recommendations and verify the following:

1. the condition assessment is accurate;
2. the correct risk category has been applied; and
3. the department has considered combining projects to minimize costs of procurement or separating projects to minimize operational impacts.

Based on our observations and review of the available reports we will report the following conclusions:

1. the thoroughness of the departments routine maintenance and condition assessment process;
2. the application of the maintenance and assessment process by the field personnel and the validity of their assignment of risk;
3. the validity of that process according to a working draft of an **Infrastructure Sales Tax Capital Projects List** and (R/R) schedule; and
4. recap beat practices of the various departments (R/R) programs.

WGI met with personnel from the Engineering and Public Works, Facilities Development and Operations, and the Parks and Recreation Departments. Our findings are documented in this report, and are based upon our meetings, field visits and review of the available reports.

Engineering and Public Works Department

The Engineering and Public Works Department has identified 32 bridge projects for renewal/replacement (R/R). Of the thirty-two (32) bridge projects listed, 18 are recommended for replacement and 14 for modifications/renewal.

During our meeting with the Road and Bridge Division staff and department heads, the following Department protocol was discussed.

The Department has developed several lists for monthly review to provide guidance and accountability for required repairs and maintenance.

These lists include:

1. a condition status of each bridge including active repairs and/or construction being performed in the area or adjacent to the bridges;
2. a quarterly list of normal/routine maintenance that is required at each bridge to correct minor deficiencies and repairs;
3. bi-annual condition reports for bridges under 20 foot in length; and
4. a maintenance tracking report documenting all repairs and maintenance done on the bridges throughout the year.

In addition to the Departments bi-annual inspections, all County owned bridges longer than 20 foot in length are inspected by an Independent bridge inspection team selected by the Florida Department of Transportation. The bridge inspection reports (State Inspection Report) follow the guidelines of the National Bridge Inspection (NBI) program and provide counties and municipalities with grades based on structural deficiencies and functionality of each bridge inspected.

After reviewing the Department lists and discussing the protocol, WGI reviewed a sampling of the independent (State Inspection Report) and Staff prepared reports. Based on my knowledge and familiarity with the bridges we were satisfied the County has been documenting repairs that need to be addressed, and repairs that have been completed or scheduled for repairs. Most of these repairs were also independently identified by the State Inspection Report program.

In addition to reviewing the documentation and photos in the office, WGI and Department staff visited three bridge sites to confirm the condition assessments.

1. S.W.23rd Ave. over LWDD E-4 Canal (#930302) identified for modifications.
2. Congress Ave. over LWDD Lat. 24 Canal (#934479) identified for replacement.
3. Congress Ave. over LWDD Lat. 2 Canal (#934251) identified for replacement.

In the past 12 months WGI staff had visited the following five bridges and are familiar with their condition.

4. 6th Ave. So. Over Lake Osborne LWDD E-4 Canal (#934307) identified for replacement.
5. CR880 over C-51 Canal (#934940) identified for replacement.
6. Belvedere Rd. over LWDD E-3 Canal (#934205 & #934206) identified for replacement.

7. Palm Beach Lakes Blvd. over FEC R/R (#937709) identified for modifications.
8. Lake Osbourne Dr. over Bass Lake Canal (#934354).

In addition to the bridge replacements and modifications the Engineering and Public Works Department has identified two canal projects for funding.

Belvedere Road canal piping The canal identified is located on the north side of Belvedere Road adjacent to Palm Beach International Airport. Based on our field visit we concurred with the assessment and agree that piping the canal is needed to create a safer environment for the motoring public in this part of the County.

CR 880 Canal Bank Stabilization project The SFWMD L-13 canal parallels CR 880 west of Southern Blvd. We observed the canal banks encroaching on the roadway and confirmed this condition is also a hazard for the motoring public and needs to be corrected.

Based on our review of the documentation and independent field observations of 25% of the projects listed we believe the following:

1. the condition assessments are accurate;
2. the correct risk category has been applied;
    a. age of the bridge structure, structural deficiencies and functionality scores were used to determine if repair/renewal were options;
3. the department has considered combining projects to minimize costs of procurement of separating projects to minimize operational impact;
    a. based on traffic needs, pending developments and repairs being done on potential detour routes, major repair schedules and replacements are being scheduled to provide the least amount of disruption to the County traffic needs.

We have concluded that the projects identified by the Road and Bridge Division for the **Infrastructure Sales Tax Capital Projects List** are valid and appear to address the future needs for the County transportation system.

We also have confirmed that the routine maintenance and repairs being done have been comprehensive and thorough and have systematically prolonged the usefulness of many of the bridges in the County.

In our opinion the independent inspections highlight one of the best practices in this Department's protocol and assessment of the County's bridge needs.

Facilities Development and Operations Department (FDO)

The Electronic Services & Security Division (ESS) of FDO has identified two towers for replacement in the near future. These include the West EMS and North EMS tower. We discussed with Staff the reasons and the following were stated.

1. Neither tower meets the current wind load standards.
2. Because the current standards are not met, adding antennas would require removal of existing antennas or stiffening of the structure if practical.
3. Both towers have been significantly modified already and additional retrofits will not provide the required height or capacity needed to add new fixtures.
4. The West EMS tower is not capable of supporting the County's current needs. A private tower located across the street is currently being leased to meet the County's needs.

WGI visited the West EMS tower site and observed that the tower is visibly in good shape with no significant signs of corrosion or bent or deformed members confirming that the tower has been appropriately maintained over the years. The latest engineer report for the tower confirms the current capacity to support additional fixtures would require tower modification. The report indicates that current regulatory requirements for wind load and site safety are not being met by the current tower, when new fixtures are added to the towers, in order to meet these new regulatory requirements major structural modifications will be required and would not be cost effective or practical.

Based on our discussions and site visit, WGI concurs the West EMS tower needs to be replaced to meet current needs and to eliminate the need to lease tower space at this location.

WGI also agrees with the assessment to replace the North EMS tower which has similar issues. Therefore, my opinion is that:

1. the condition assessment is accurate;
2. the risk category is not an essential component of this evaluation; and
3. combining the replacement of both tower at the same time does not appear to provide a significant benefit to the County.

The documentation and reasons for replacement is understood by Staff but not fully documented and readily available for review. In our opinion, the Staff should prepare a formal condition assessment report which highlight the issues in writing to create a reviewable document which will be placed in the tower file. It would also be a helpful if an independent study be commissioned to document the future potential needs for the towers and a cost study analysis to show future cost savings by eliminating the need to lease tower space and to provide for current and future County needs.

Parks and Recreation Department

The Parks and Recreation Department has identified three categories of projects for the **Infrastructure Sales Tax Capital**; Ocean Rescue Wooden Guard Towers Refurbishment; Aquatic Facility Repair/Replacement and Seawalls Repairs.

The various categories listed above were reviewed from a structural point of view only. The functionality and operational issues were not in our scope of review.

The Ocean Rescue Wooden Guard Towers vary in age and have been systematically replaced as funding has been available. We identified two of the wooden towers slated for refurbishment and visited the sites to determine their current condition and review their assessment. WGI observed the wooden guard tower at Gulfstream Park and the northern most wooden guard tower at Jupiter Inlet Park.

The wooden guard tower at Gulfstream Park has been maintained and there were no visible failing members or unsafe conditions. The tower is old and outdated and will require significant maintenance such as a new roof and decking for continuous use in the future.

The wooden guard tower at Jupiter Inlet Park is closed because the tower has become unsafe to use. The tower has failed structural members and significant wood rot on many supporting members.

Based on our observations we agree with the following:

1. the condition assessments are accurate;
2. the correct risk category has been applied; and
3. combining the refurbishment/replacement of both tower at the same time does not appear to provide a significant benefit to the County.

Parks has identified one aquatic center on the list for replacement, one aquatic center for major renovation and reconstruction, and five others for rehabilitations. I concentrated on the two facilities slated for replacement and major reconstruction because the repairs at the remaining facilities were determined to be predominately non-structural issues related to operation and maintenance. I met with staff and reviewed their documentation regarding the facilities and visited the two facilities to observe their condition.

The Lake Lytal Aquatic Center was constructed in 1975 (40 years old) and we observed significant cracking and settlement of the main pool deck system around the main pool. We also observed significant deterioration of the pool coping access stairs and pool walls. The condition of the pool deck justifies the risk category (safety) assigned to this facility

Based on our observations we agree with the following:

1. the condition assessment is accurate;
2. the correct risk category has been applied; and
3. combining the replacement at the same time as other projects in the park may provide a benefit to the County.

The Aqua Crest Aquatic Center was constructed in 1978 (37 years old) and we observed significant cracking in the main pool deck and some concrete spalling in the surge pits and filtration system pits. The pool walls, coping and stairs systems had no visible signs of distress. The condition of the pool deck justifies the risk category (safety) assigned to this facility.

Based on our observations we agree with the following:

1. the condition assessment is accurate;
    a. The assessment from a structural point of view is accurate for the pool deck but in general the rest of the facility is in good condition and structurally sound.
2. the correct risk category has been applied; and
3. combining the replacement at the same time as other projects in the park may provide a benefit to the county

Both aquatic facilities have been maintained and are operational at this time. Both facilities need immediate repairs to the main pool decks from a safety issue and structural condition. Expansion joints have failed, portions of the slabs have settled and trip hazards are prevalent.

We believe both facilities need to be revitalized and given the age and condition of the pool structure at the Lake Lytal facility replacement in our opinion is justified. The structural condition at Aqua Crest does not justify the complete replacement of the facility, therefore; the renovation and reconstruction designation also appears to be correct. Repair or replacement of the pool deck would address the structural needs of the facility. We recommend a study be done on the operational issues and needs of the patrons in the future to determine the extent of renovations and reconstruction that is required.

The County parks staff identified repairs to the Phil Foster Park Seawall as an ongoing maintenance issue with the paver bricks immediately behind the wall. We discussed with Staff the reasons and the following were stated.

1. The pavers behind the seawall continue to fail and create tripping hazards.
2. A portion of the pavers were removed and were reset properly but not all.
3. The seawall sheet panels need to be properly sealed to prevent migration of soil from behind the wall.
4. The paver stones were placed on a flexible sub base in lieu of a rigid sub-base.
5. Significant voids can go undetected before catastrophic collapses occur.
6. Park staff has to regularly inspect the pathway for signs of eminent collapses.

We visited the site and did not observe any immediate areas of concern. Unfortunately the voids beneath the pavers can be hidden by the bridging of the pavers over significant pockets of soil loss. Staff has photo documentation of the collapsed areas and the areas where the seawall has been retrofitted to minimize the soil loss through the wall.

It is our opinion that the seawall at the Phil Foster Park needs repairs. A safety issue existing that needs to be addressed.

Based on our observations we agree with the following:

1. The condition assessment is accurate (there is an ongoing safety concern);
2. The correct risk category has been applied (the collapses could cause injury to pedestrians); and
3. Combining the replacement with other projects does not appear to provide a significant benefit to the County.

Conclusions:

Based on my review of the reports, County assessments and interviews with staff, it appears as a general statement the County has implemented systems, practices and protocols to identify life safety issues and maintenance issues and reasonable replacement schedules for the infrastructure I reviewed.

The State Inspection Reports prepared by an independent engineering company validates the Engineering and Public Works Department internal lists and checks. The Parks and Recreation Department lists were accurate at the sites WGI visited.

The ESS Division of FDO has, in our opinion, identified true tower needs. The information regarding the shortfalls and needs at the tower sites are not clearly documented for review but based on the discussions with staff and site visits the Renewal/Replacement needs are accurate. My recommendation is to provide better written documentation and possibly independent studies validating the needs thoroughly.

During the review process it became clear that structural components of some of the infrastructure around the County has reached their functional life and in some cases closure of the structure is the only option. The closures result in reduced services to the County residents and potential life safety concerns such as unsafe roadway embankments, detours around bridges due to emergency repairs and fewer lifeguard towers at beaches.

The Departments have implemented regular maintenance on the infrastructure we inspected and it appears the maintenance has not been neglected or ignored.

In WGI's opinion the structural items reviewed on the **Infrastructure Sales Tax Capital Projects List** identified valid needs for **Renewal/Replacement** that should not be deferred.

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ATTACHMENTS

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ATTACHMENT 1 - SURTAX INFRASTRUCTURE LIST

Infrastructure Sales Tax Capital Projects

Project	District	Description	Expected Life Cycle	Current Age	Est. Cost
Engineering & Public Works					
Bridge Replacements					
Prosperity Farms Rd. over SFWMD C-17 Canal (934116)	1	**REPLACE** -Bridge built in 1958. Replace bridge to meet current FDOT design standards that will improve traffic safety, deck/lane geometry, parapets, and enhance pedestrian sidewalk safety. Bridge is weight restricted and experiences heavy ADT (avg. daily traffic).	50	58	$2,000,000
6th Ave. So. over Lake Osborne (LWDD E-4 Canal)(S Br/ East bound) (934307)	3	**REPLACE** -Bridge built in 1970. Replace bridge to meet current FDOT design standards that will improve traffic safety, deck/lane geometry, parapets, and enhance pedestrian sidewalk safety. Bridge experiences heavy ADT (avg. daily traffic) and recurring vehicular accidents impacting the guardrail system.	50	46	$6,000,000
Corkscrew Blvd. over SFWMD Miami Canal (934502)	6	**REPLACE** -Bridge built in 1955. Replace bridge to meet current FDOT design standards that will improve traffic safety, deck/lane geometry, and parapets. Bridge is weight restricted.	50	61	$900,000
CR 880 (Old SR 80) Over C-51 Canal (930940)	6	**REPLACE** -Bridge built in 1937. Replace steel thru-truss bridge to meet current FDOT design standards that will improve traffic safety (lane width and vehicle barrier) and eliminate weight restrictions due to recent FDOT Special Gusset Plate inspection findings.	50	79	$2,700,000
Sam Senter Rd. over Ocean Canal (SFWMD Lat. 13 Canal) (934513)	6	**REPLACE** (Steel Members) -Bridge built in 1966. Replace bridge to meet current FDOT design standards that will improve traffic safety, deck/lane geometry, parapets, and better accommodate Heavy Truck Traffic.	50	50	$600,000
Duda Rd. over SFWMD Lat. 14 Canal (Hillsboro Canal) (934519)	6	**REPLACE** -Bridge built in 1955. Replace bridge to meet current FDOT design standards that will improve traffic safety, deck/lane geometry, parapets, and better accommodate Heavy Truck Traffic.	50	61	$1,000,000
Congress Ave. over PBC Lat. 2 Canal (934251)	2	**REPLACE** -Bridge built in 1967. Replace bridge to meet current FDOT design standards that will improve traffic safety, deck/lane geometry, parapets, and enhance pedestrian sidewalk safety. Bridge experiences heavy ADT (avg. daily traffic) and continual roadway drainage issues affecting the sheet piles.	50	49	$800,000
Florida Mango Rd. over LWDD Lat. 9 Canal (PB934337)	3	**REPLACE** -Bridge built in 1968. Replace bridge to meet current FDOT design standards that will improve traffic safety (lane width, bike lanes, parapets), update guardrail system, improve roadway drainage, restore the embankment/ slope protection and enhance pedestrian sidewalk safety. Bridge has extensive utility attachments and crossings that have caused roadway settling previously.	50	48	$700,000
Florida Mango Rd. over LWDD Lat. 8 Canal (PB934338)	3	**REPLACE** -Bridge built in 1968. Replace bridge to meet current FDOT design standards that will improve traffic safety (lane width, bike lanes, parapets), update guardrail system, improve roadway drainage, restore the embankment/ slope protection and enhance pedestrian sidewalk safety. Bridge has extensive utility attachments and crossings that have caused roadway settling previously.	50	48	$700,000
Belvedere Rd over E-3 canal (934205 & 934206)	2	**REPLACE** -Both bridges built in 1975. Replace Functional Obsolete bridge to meet current FDOT design standards that will improve traffic safety (lane width, bike lanes, parapets), deck geometry, update guardrail system, improve roadway drainage, restore the embankment/ slope protection and enhance pedestrian sidewalk safety.	50	41	$1,800,000
Florida Mango Rd. over LWDD Lat. 5 Canal (PB934270)	3	**REPLACE BRIDGE WITH CULVERT** -Bridge built in 1982. Replace bridge to meet current FDOT design standards that will improve traffic safety (lane width, bike lanes, parapets), update guardrail system, improve roadway drainage, restore the embankment/ slope protection and enhance pedestrian sidewalk safety.	50	34	$600,000

Project	District	Description	Expected Life Cycle	Current Age	Est. Cost
Prairie Rd. over LWDD Lat. 8 Canal (PB934334)	3	**REPLACE BRIDGE WITH CULVERT** -Bridge built in 1966. Replace bridge to meet current FDOT design standards that will improve traffic safety (lane width, bike lanes, parapets), update guardrail system, improve roadway drainage, restore the embankment/ slope protection and enhance pedestrian sidewalk safety.	50	50	$600,000
Florida Mango Rd. over LWDD Lat. 10 Canal (PB934336)	3	**REPLACE BRIDGE WITH CULVERT** -Bridge built in 1967. Replace bridge to meet current FDOT design standards that will improve traffic safety (lane width, bike lanes, parapets), update guardrail system, improve roadway drainage, restore the embankment/ slope protection and enhance pedestrian sidewalk safety.	50	49	$600,000
Congress Ave. over LWDD Lat. 24 Canal (PB934479)	3	**REPLACE BRIDGE WITH CULVERT** -Bridge built in 1966. Replace bridge to meet current FDOT design standards that will improve traffic safety (lane width, bike lanes, parapets), update inadequate guardrail system, improve roadway drainage, restore the embankment/ slope protection and enhance pedestrian sidewalk safety. Roadway is a main traffic route experiencing high (ADT) in the City of Boynton Beach. Bridge has extensive utility attachments and crossings that have caused roadway settling previously.	50	50	$600,000
Wabasso Dr. over LWDD Lat. 2 Canal (934237)	2	**REPLACE BRIDGE WITH CULVERT** -Bridge built in 1961. Replace bridge to meet current FDOT design standards that will improve traffic safety (lane width, bike lanes, parapets), update guardrail system, improve roadway drainage, restore the embankment/ slope protection and enhance pedestrian sidewalk safety.	50	55	$700,000
Kudza Rd. over LWDD Lat. 8 Canal (934312)	2	**REPLACE BRIDGE WITH CULVERT** -Bridge built in 1960. Replace bridge to meet current FDOT design standards that will improve traffic safety (lane width, bike lanes, parapets), update guardrail system, improve roadway drainage, restore the embankment/ slope protection and enhance pedestrian sidewalk safety.	50	56	$700,000
Seminole Dr. over LWDD Lat. 16 Canal (934319)	3	**REPLACE BRIDGE WITH CULVERT**-Bridge built in 1959. Replace bridge to meet current FDOT design standards that will improve traffic safety (lane width, bike lanes, parapets), update guardrail system, improve roadway drainage, restore the embankment/ slope protection and enhance pedestrian sidewalk safety. Current bridge has sub-standard Post and Rail parapet and is built on 12" piles.	50	57	$700,000
Jupiter Beach Rd. over Branch of ICWW (934125)	1	**REPLACE BRIDGE WITH CULVERT** -Bridge built in 1961. Replace bridge to meet current FDOT design standards that will improve traffic safety (lane width, bike lanes, parapets), update guardrail system, improve roadway drainage, restore the embankment/ slope protection and enhance pedestrian sidewalk safety. Tidal zone causes continual erosion and washout issues.	50	55	$700,000
		Total Bridge Replacements:			$22,400,000
Bridge Modifications					
SW 23rd Ave. over LWDD E-4 Canal (930302)	3	**MODIFY** -Bridge built in 1975. Bridge to meet current FDOT design standards that will improve traffic safety, deck/lane geometry, parapets, and enhance pedestrian sidewalk safety. Bridge experiences heavy ADT (avg. daily traffic) as a thorofare to major hospital.	50	41	$600,000
Palm Beach Lakes Blvd over FEC R/R (937709)	7	**MODIFY** -Bridge built in 1965. Bridge to meet current FDOT design standards that will improve traffic safety (lane width, shoulders, add bike lane, add sidewalk, replace parapets).	50	51	$6,000,000

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Congress Ave. SB over LWDD Lat. 17 Canal (W Br) (934331)	3	**MODIFY** -Bridge built in 1984. Modify bridge to meet current FDOT design standards that will improve traffic safety, deck/lane geometry, parapets, and enhance pedestrian sidewalk safety. Bridge experiences heavy ADT (avg. daily traffic) and continual roadway drainage issues affecting the sheet piles.	50	32	$600,000
Congress Ave. NB over LWDD Lat. 17 Canal (E Br) (934332)	3	**MODIFY** -Bridge built in 1961. Modify bridge to meet current FDOT design standards that will improve traffic safety, deck/lane geometry, parapets, and enhance pedestrian sidewalk safety. Bridge experiences heavy ADT (avg. daily traffic) and continual roadway drainage issues affecting the sheet piles.	50	55	$600,000
Clint Moore Rd. over LWDD E-4 Canal (PB934426)	4	**MODIFY** -Bridge built in 1973. Modify bridge to meet current FDOT design standards that will improve traffic safety, deck/lane geometry, parapets, and enhance pedestrian sidewalk safety. Bridge experiences heavy ADT (avg. daily traffic) and continual roadway drainage issues affecting the sheet piles.	50	43	$600,000
Lake Osborne Dr. over Lake Bass Canal (PB934354)	3	**MODIFY** -Bridge built in 1955. Modify bridge to meet current FDOT design standards that will improve traffic safety (lane width, bike lanes, parapets), update guardrail system, improve roadway drainage, restore the embankment/ slope protection and enhance pedestrian sidewalk safety. Bridge has extensive utility attachments and crossings that have caused roadway settling previously.	50	61	$600,000
Le Chalet Blvd. over LWDD E-3 Canal (934487)	3	**MODIFY** -Bridge built in 1981. Modify bridge to meet current FDOT design standards that will improve traffic safety, deck/lane geometry, parapets, and enhance pedestrian sidewalk safety. Bridge experiences heavy ADT (avg. daily traffic) and continual roadway drainage issues affecting the sheet piles.	50	35	$600,000
Barwick Rd. over LWDD Lat. 30 Canal (934455)	4	**REPLACE BRIDGE WITH CULVERT** -Bridge built in 1964. Replace bridge to meet current FDOT design standards that will improve traffic safety (lane width, bike lanes, parapets), update guardrail system, improve roadway drainage, restore the embankment/ slope protection and enhance pedestrian sidewalk safety.	50	52	$600,000
Smith Sundy Rd. over LWDD Lat. 33 Canal (PB934411)	5	**REPLACE BRIDGE WITH CULVERT** -Bridge built in 1965. Replace bridge to meet current FDOT design standards that will improve traffic safety (lane width, bike lanes, parapets), update guardrail system, improve roadway drainage, restore the embankment/ slope protection and enhance pedestrian sidewalk safety.	50	51	$600,000
East Ocean Ave. (C-812) over Hypoluxo Island Lagoon (934347)	4	**MODIFY** -Bridge built in 1989. Modify bridge to meet current FDOT design standards that will improve traffic safety, deck/lane geometry, parapets, and enhance pedestrian sidewalk safety. Bridge experiences heavy ADT (avg. daily traffic) and continual roadway drainage issues affecting the sheet piles.	50	27	$600,000
CR-880 over SFWMD L-14 Canal @ 6 Mile Bend (930038)	6	**MODIFY** -Bridge built in 1954. Modify bridge to meet current FDOT design standards that will improve traffic safety, deck/lane geometry, and parapets.	50	62	$500,000
CR-700 over SFWMD L-13 Canal (930085)	6	**MODIFY** -Bridge built in 1968. Modify bridge to meet current FDOT design standards that will improve traffic safety, deck/lane geometry, parapets, guardrail system, and post-tensioning deck slab failure.	50	48	$900,000

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Project	District	Description	Expected Life Cycle	Current Age	Est. Cost
Donald Ross Rd. over Cypress Creek (N Br) (934128)	1	**MODIFY or Culvert** -Bridge built in 1989. Repair bridge to meet current FDOT design standards that will improve traffic safety, deck/lane geometry, parapets, and enhance pedestrian sidewalk safety. Bridge experiences heavy ADT (avg. daily traffic), pavement settling, and continual roadway drainage issues affecting the sheet piles.	50	27	$900,000
Donald Ross Rd. over Cypress Creek (S Br) (934129)	1	**MODIFY or Culvert** -Bridge built in 1990. Repair bridge to meet current FDOT design standards that will improve traffic safety, deck/lane geometry, parapets, and enhance pedestrian sidewalk safety. Bridge experiences heavy ADT (avg. daily traffic), pavement settling, and continual roadway drainage issues affecting the sheet piles.	50	27	$900,000
		Total Bridge Modifications:			$14,600,000
Resurfacing					
Northlake Blvd. from Military Trail to Beeline Hwy.	1	PBC has about 3,400 lane miles of roads to maintain. The average asphalt life is 18-20 years before very serious deterioration (rippling, alligator cracking, and large potholes) sets in. Arterial roads average 12-15 years, while residential streets may last 20-25 years. Allowing a road to reach the "serious" state creates a situation where the base material may get significant water intrusion, and once this level of deterioration sets in, resurfacing alone will not keep the road from getting significantly worse each year. The cost of rebuilding a deteriorated road is over ten times the cost of resurfacing. To avoid having our roads become major maintenance problems, we should therefore be averaging 170 lane miles of resurfacing each year (3400 lane miles/20 years =170 lane miles/year). Our current average milling/resurfacing cost is about $70,000 per lane mile. We should therefore be spending an average of $12m each year to maintain the road infrastructure. (170 x $0.07m = $11.90m)	20	Over 20	$1,500,000
Haverhill Rd.from Okeechobee Blvd. to Roebuck Rd.	7		20	Over 20	$1,200,000
Military Trail from PGA Blvd. to Donald Ross Rd.	1		20	Over 20	$1,800,000
Gun Club Rd. from Jog Rd. to Congress Ave.	2		20	Over 20	$1,400,000
Lantana Rd. from west of SR7 to Turnpike	3		20	Over 20	$900,000
Lantana Rd from I-95 to US-1	3		20	Over 20	$500,000
Community Dr. from Haverhill Rd. to Village Blvd.	7		20	Over 20	$500,000
Pike Rd. from SR 80 to Belvedere	2		20	Over 20	$300,000
Military Tr. From Hypoluxo Rd. to Lake Worth Rd.	3		20	Over 20	$2,200,000
Pratt Whitney Rd. from Indiantown Rd. to north County line	1		20	Over 20	$200,000
Congress Ave. from Miner Rd. to south of Hypoluxo Rd.	3		20	Over 20	$600,000
Okeechobee Blvd. from Sem. Pratt Whitney Rd to Royal Palm Beach Blvd.	6		20	Over 15	$1,500,000
A1A from Donald Ross Rd. to Marcinski	1		20	Over 20	$300,000
Congress Ave. from Palm Beach Lakes to 45th St.	7		20	12	$1,200,000
Old Boynton Rd. from Knuth Rd. to Congress Ave.	4		20	Over 20	$200,000
Lawrence Rd. from Boynton Beach Blvd. to Lantana Rd.	3 & 4		20	Over 20	$1,600,000
Military Trail from County Line to Palmetto Park Rd	4		20	Over 20	$900,000
Woolbright Rd. from Knuth Rd to Congress Ave.	4		20	Over 20	$200,000
Lake Ida Rd from Congress Ave to Swinton Ave.	4 & 7		20	Over 20	$700,000
Jog Road from Lake Ida Rd to Flavor Pict Rd.	5		20	Over 20	$700,000
Jog Rd. from Summit Blvd to Gun Club Rd.	2		20	Over 20	$400,000
Summit Blvd from Military Tr to Congress Ave.	2		20	Over 20	$700,000
Congress Ave. From Lake Ida Rd. to Summit Dr.	4		20	Over 20	$500,000
Golf Road from Military Trail to Congress Ave.	4		20	Over 20	$600,000
Lyons Rd from Hillsboro Canal to Boca Lago Blvd.	5		20	Over 20	$1,000,000
SW 18th St. from SR7 to Boca Rio Rd.	5		20	13	$900,000
Okeechobee Blvd from Royal Palm Beach Blvd. to Wildcat Way	6		20	Over 20	$700,000
Pinehurst Dr. from Lake Worth Rd. to Forest Hill Blvd.	2		20	Over 20	$500,000
Frederick Small Rd from Central Blvd. to Military Trail	1		20	Over 20	$300,000
Frederick Small Rd. from Military Trail to Palmwood Rd.	1		20	Over 20	$200,000

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Project	District	Description	Expected Life Cycle	Current Age	Est. Cost
El Clair Ranch Rd from Lake Ida Rd. to Woolbright Rd.	5		20	Over 20	$800,000
Seacrest Blvd from Gulfstream Blvd. to Hypoluxo Rd.	7		20	Over 20	$2,400,000
High Ridge Road/Hypoluxo Rd to Lake Osbourne Dr	3		20	Over 20	$400,000
Folsom Rd from Crestwood Blvd. to Okeechobee Blvd.	6		20	Over 20	$300,000
Crestwood Blvd. Folsom Rd. to Okeechobee Blvd.	6		20	Over 20	$700,000
Davis Road from Melaleuca Ln. to Lake Worth Rd.	3		20	Over 20	$200,000
Lakes of Boca Raton public residential roads	5		20	Over 15	$200,000
Lakeside Green/Willow Pond Rd. public residential roads	2		20	Over 20	$200,000
Cannon Gate public residential roads	6		20	Over 20	$400,000
Boca Del Mar (Powerline to Palmetto)	4		20	Over 20	$400,000
Northtree public residential roads	3		20	Over 20	$200,000
Woolbright Road from Military Trail to Lawrence Road	4		20	Over 20	$1,000,000
CR 880	6		7	Over 10	$3,000,000
Brown's Farms Road	6		7	7	$2,000,000
Lantana Rd. from Hagen Ranch Rd. to I-95	3		20	Over 20	$2,000,000
Jog Rd. from Atlantic Ave to Boynton Beach Blvd.	5		20	Over 20	$1,900,000
Lantana Rd. from Fla. Turnpike to Hagen Ranch Rd	3		20	Over 20	$300,000
Cresthaven Blvd. from Jog Rd. to Military Trail	2		20	Over 20	$300,000
10Th Ave N. from Pinehurst Dr. to Kirk Rd.	2 & 3		20	Over 20	$1,000,000
10Th Ave N. from Congress Ave. to I-95	3		20	Over 20	$400,000
Military Trail from Hillsboro Rd. to Clintmoore Rd.	4		20	Over 20	$2,100,000
Meleleuca Ln. from Military Trail to Davis Rd.	3		20	Over 20	$300,000
Orange Blvd. from Seminole Pratt Whitney Rd. Coconut Rd.	6		20	Over 20	$500,000
Coconut Blvd. from Orange Blvd to Northlake Blvd	6		20	Over 20	$300,000
Purdy Ln. from E-3 Canal to Kirk Rd.	2 & 3		20	Over 20	$200,000
Jupiter Farms Rd. from Sandy Run Rd to Indiantown Rd.	1		20	12	$300,000
Randolph Siding Rd. from 110th to Jupiter Farms Rd.	1		20	Over 20	$200,000
Sandy Run Rd. from 120th Place N. to Jupiter Farms Rd.	1		20	Over 20	$300,000
Center St. from Indiantown Rd. to Alt A-1-A	1		20	Over 20	$300,000
Alexander Run from Randolph Siding Rd. to Indiantown Rd.	1		20	Over 20	$300,000
Old Dixie Hwy. from 45th St. to Park Ave.	7		20	Over 20	$800,000
Belvedere Rd. from Jog Rd. to Haverhill Rd.	2		20	Over 20	$600,000
Austrailian Ave. from 45th St. to Blue Heron Blvd.	7		20	Over 20	$200,000
Old Dixie Hwy. from Alt A-1-A to County Line Rd.	1		20	Over 20	$300,000
Loxahatchee River Rd. from Center St. to County Line Rd.	1		20	13	$300,000
Cannon Way. From In a Loop to Haverhill Rd.	6		20	Over 20	$200,000
Central Blvd. from Indian Creek Parkway to Indiantown Rd.	1		20	13	$300,000
Garden Rd. from Bee-line Hwy. to Investment Ln.	7		20	Over 20	$300,000
Hypoluxo Rd. from Military Trail to U.S. 1	7 & 3		20	Over 20	$1,300,000
Prosperity Farms Rd. from Northlake Blvd. to Alamanda Dr.	1		20	Over 20	$200,000
Belvedere Rd. from Congress Ave. to U.S. 1	2		20	17	$800,000
Royal Palm Beach Blvd. from 40th St. to Persimmon Blvd.	6		20	Over 20	$400,000
Indian / Scott / Spafford from Okeechobee Blvd. to Gardinia Ave.	7		20	Over 20	$200,000

Infrastructure Sales Tax Capital Projects

Project	District	Description	Expected Life Cycle	Current Age	Est. Cost
Blanchette Trail from Lake Worth Rd. to Arrowhead Dr.	6		20	Over 20	$200,000
Old Boynton Rd. from Military Trail to Knuth Rd.	4		20	Over 20	$500,000
Kirk Rd. from Meleleuca Ln. to Purdy Ln.	3		20	Over 20	$400,000
Jog Rd. from Glades Rd. to Yamato Rd.	4 & 5		20	Over 20	$700,000
Woolbright Rd. from Knuth Rd. to Federal Hwy.	4, 3 & 7		20	Over 20	$600,000
Lake Ida Rd. from Hagen Ranch Rd. to Swinton Ave.	5		20	Over 20	$1,100,000
El Clair Ranch Rd. from Atlantic Ave. to Boynton Beach Blvd.	5		20	Over 20	$700,000
Congress Ave. from Clint Moore Rd. to Lake Ida Rd.	4 & 7		20	Over 20	$2,200,000
S.W. 18th St. from Boca Rio Rd. to Military Trail	4		20	Over 20	$700,000
Boca Rio Rd. from S.W. 18th St. to Glades Rd.	5		20	Over 20	$300,000
Old Dixie Hwy. from South County Line to Spanish River Blvd.	4		20	Over 20	$1,100,000
Palmetto Park Rd. from Glades Rd. to Crawford St.	5		20	Over 20	$3,500,000
Lake Ridge Blvd. from State Rd. 7 to Yamato Rd.	5		20	Over 20	$200,000
Boca Chase Dr. from Waterberry Dr. to State Rd. 7	5		20	Over 10	$200,000
Flavor Pict Rd. from Jog Rd. to Military Trail	5		20	Over 20	$200,000
Judge Winnikoff Rd. from State Rd. 7 to Glades Rd.	5		20	Over 20	$500,000
Ponderosa Dr. from Judge Winnikoff Rd. to Glades Rd.	5		20	Over 20	$300,000
Pipers Glen Blvd. from Jog Rd. to Military Trail	5		20	Over 20	$200,000
Palm Beach Lakes Blvd. from Okeechobee Blvd. to I-95	7		20	Over 20	$400,000
Palm Beach Lakes Blvd. from Congress Ave. to U.S. 1	7		20	Over 20	$700,000
Fla Mango Rd. from Belvedere Rd. to Dead End N. of Old Okeechobee Rd	7		20	Over 20	$200,000
Westgate Ave. from Military Trail to Congress Ave.	7		20	Over 20	$500,000
Congress Ave. from Okeechobee Blvd. to Palm Beach Lakes Blvd.	7		20	Over 20	$400,000
Pioneer Rd. from Dead End to Jog Rd.	2		20	Over 20	$200,000
Haverhill Rd. from Roebuck Rd. to 45th St.	7		20	Over 20	$500,000
Haverhill Rd. from Forest Hill Blvd. to Belvedere Rd.	2		20	Over 20	$900,000
Jog Rd. from Forest Hill Blvd. to Summit Blvd.	2		20	Over 20	$400,000
Sam Center Rd. from C.R. 880 to Gator Blvd.	6		7	16	$200,000
Tabit Rd. from Dead End to N.W. Ave G	6		10	15	$200,000
Eldorado Dr. from Pee Hokey Dr. to Muck City Rd.	6		10	Over 10	$200,000
Seville St. from Pee Hokey Dr. to Muck City Rd.	6		10	Over 10	$200,000
Joe Louis Blvd. from Dead End to Muck City Rd.	6		10	Over 20	$200,000
Curlee Rd. from State Rd 80 to West Sugar House Rd.	6		10	Over 15	$200,000
Duda Extension from C.R. 880 to Gator Blvd.	6		10	Over 20	$300,000
Wedgeworth Rd. from Dead End to State Rd 880	6		10	Over 15	$200,000
Rodgers Rd. from County line to E. 1.5 miles	6		10	Over 20	$200,000
Hatton Hwy. from Gator Blvd. to State Rd 80	6		10	9	$300,000
C.R. 827 from U.S. 27 to E. 2 miles	6		10	Over 15	$300,000
C.R 827 from C.R. 827A to North 1 Mile	6		10	Over 15	$200,000
Bolles Canal from U.S. 27 to West 5 Miles	6		10	Over 20	$600,000
Boat Ramp Rd. from C.R. 880 to East 1 mile	6		15	Over 20	$200,000
Ritta Rd. from Dead End to Corkscrew Blvd.	6		10	10	$200,000
Rodgers Rd. from County line to Miami Canal Rd.	6		10	Over 20	$500,000

Infrastructure Sales Tax Capital Projects

Project	District	Description	Expected Life Cycle	Current Age	Est. Cost
Corkscrew Blvd. from County line to U.S. 27	6		10	14	$900,000
Muck City Rd. from S.R. 700 to State Market Rd.	6		10	10	$800,000
Hooker Hwy. from Harris Rd. to S.R. 715	6		10	13	$600,000
Harris Rd. from Hooker Hwy. to Teddar Rd.	6		10	Over 20	$200,000
		Total Resurfacing:			$77,500,000
Pathways					
Belvedere Road canal piping and sidewalk addition (62nd Dr. N. to Haverhill park)	2	Pipe LWDD L-3 Canal and provide pedestrian path on south side of road for residents accessing park and school located on Drexel Rd. north of Belvedere	20	N/A	$2,400,000
Center St. from Old Dixie Highway to Alt. A1A	1	New pedestrian paths that have not been able to secure funding through the County's Pathway Program.	20	N/A	$400,000
Hood Road from Briarlake Dr. to W. of Turnpike	1		20	N/A	$200,000
Indiantown Rd. from Loxahatchee River Bridge to Taylor Rd.	1		20	N/A	$200,000
Randolph Siding Rd. from 110th Ave. N. to Jupiter Farms Rd.	1		20	N/A	$400,000
Roan Ln. from Kenas St. to Roan Court	1		20	N/A	$200,000
Seminole Dr. from Lantana Rd. to Tallulah Rd.	3		20	N/A	$500,000
SW 18th St. from Via De Sonrisa Del Sur to Military Trail	4		20	N/A	$700,000
		Total Pathways:			$5,000,000
Striping					
Sections of Australian Avenue	7	A road generally needs resurfacing once every 20 years. A road generally needs restriped once every 8-10 years. Note that road resurfacing includes restriping. Due to budget constraints, the funding for resurfacing and restriping has not kept up with the demand, and there is a great need to 'catch up' and bring the worst of the County roads up to safe striping levels.	10	over 10	$325,000
Sections of Congress Avenue	3, 4 & 7		10	over 10	$800,000
Sections of Haverhill Road	2, 3 & 7		10	over 10	$400,000
Sections of Hypoluxo Road	3 & 7		10	over 10	$275,000
Sections of Indiantown Road	1		10	over 10	$375,000
Sections of Jog Road	2, 3 & 5		10	over 10	$1,100,000
Sections of Lantana Road	2 & 3		10	over 10	$375,000
Sections of Military Trail	ALL		10	over 10	$900,000
Sections of Seacrest Blvd.	7		10	over 10	$200,000
Sections of Old Dixie Hwy.	ALL		10	over 10	$375,000
Sections of Palmetto Park Road	4 & 5		10	over 10	$275,000
Sections of Lyons Road	3 & 5		10	over 10	$600,000
Sections of Yamato Road	4 & 5		10	over 10	$175,000
Sections of Clint Moore Road	4 & 5		10	over 10	$200,000
Sections of Linton Blvd.	4 & 5		10	over 10	$175,000
Sections of Lake Ida Road	4 & 5		10	over 10	$175,000
Sections of Hagen Ranch Road	3 & 5		10	over 10	$275,000
Sections of 45th Street	7		10	over 10	$175,000
Sections of Okeechobee Blvd.	2, 6 & 7		10	over 10	$200,000
Sections of Palm Beach Lakes Blvd.	7		10	over 10	$100,000
Sections of Woolbright Road	3, 4 & 5		10	over 10	$200,000

Infrastructure Sales Tax Capital Projects

Project	District	Description	Expected Life Cycle	Current Age	Est. Cost
Sections of Gateway Blvd.	3		10	over 10	$200,000
Sections of Lawrence Road	3 & 4		10	over 10	$200,000
Sections of 10th Avenue North	2 & 3		10	over 10	$200,000
Sections of Summit Blvd.	2		10	over 10	$200,000
Sections of Belvedere Road	2 & 7		10	over 10	$325,000
Sections of Donald Ross Road	1		10	over 10	$200,000
		Total Striping:			$9,000,000
Signals and Signal Systems					
Donald Ross Road @ Military Trail	1	Mast Arm signal systems perform much better that traditional span-wire signal systems during major storm events; there is much less damage and repairs are less costly and can be made much faster.	25 / 50	22	$400,000
Okeechobee Blvd. @ Haverhill Road	7 & 2		25 / 50	20	$500,000
Lantana Road @ Congress Avenue	3		25 / 50	16	$400,000
Hypoluxo Road@ Military Trail	3		25 / 50	26	$400,000
Boynton Beach Blvd. @ Military Trail	4 & 5		25 / 50	14	$400,000
Atlantic Avenue @ Military Trail	4 & 5		25 / 50	25	$400,000
Blue Heron Blvd. & Riviera FS # 2	7		25 / 50	unknown	$400,000
Old Boynton & Military Trail	4 & 5		25 / 50	26	$400,000
Okeechobee Blvd. & Sapodilla Avenue	7		25 / 50	23	$500,000
Okeechobee Blvd. & Quadrille Blvd.	7		25 / 50	21	$500,000
15th Street & Tamarind Avenue	7		25 / 50	16	$500,000
Boynton Beach Blvd. & Seacrest Blvd.	7		25 / 50	32	$400,000
Le Chalet Blvd. & Military Trail	3		25 / 50	25	$400,000
Atlantic Avenue & Hamlet Drive	4		25 / 50	23	$400,000
Summit Blvd. & Haverhill Road	2		25 / 50	14	$400,000
Cascades Isle Blvd. & Jog Road	5		25 / 50	16	$400,000
Okeechobee Blvd. @ Military Trail	7		25 / 50	24	$600,000
Southern Blvd/SR 80 (Big Blue Tr to Royal Palm Beach Blvd.)	6	Transportation Systems Management and Operations (TSMO) will enable proper monitoring and effective management of traffic congestion with the help of closed circuit TVs, travel-time and volume/speed/occupancy data and collection systems deployed along the route	10	N/A	$400,000
45th Street (Military Tr. to Broadway)	7		10	N/A	$400,000
Blue Heron Blvd. (Military Tr. To Broadway)	1 & 7		10	N/A	$400,000
SR 7 (Glades to SW 18th Avenue)	5		10	N/A	$300,000
Forest Hill Blvd. (South Shore Blvd. to I-95)	2		10	N/A	$500,000
Boynton Beach Blvd. (SR7 to I-95)	3, 4 & 5		10	N/A	$500,000
W. Atlantic Avenue (Lyons Rd. to Congress Ave)	4 & 5		10	N/A	$400,000
Mostly along US-1/Dixie Highway	ALL		10	N/A	$500,000
Network Routers	ALL		10	N/A	$500,000
Video Detection (80 +/- intersection)	ALL		10	N/A	$2,200,000
Various Other TSMO Locations	ALL		10	N/A	$1,000,000
School Zone System Upgrade	ALL		10	N/A	$500,000
		Total Signals and Signal Systems:			$15,000,000
Street Lighting					
SR-7 High Mast Towers Rehab	6 & 3		25	17	$500,000
10th Avenue North (Haverhill Road to Kirk Road)	3 & 2	First Phase -- We have identified arterial street lighting that has been operating over 15 years as High Pressure Sodium (HPS) and maintained by FPL. Given that new LED	N/A	over 15	$40,000

Project	District	Description	Expected Life Cycle	Current Age	Est. Cost
Belvedere Road (Royal Palm Beach Blvd. City Limits to Haverhill City Limits)	2	years as High Pressure Sodium (HPS) and maintained by FPL. Given that new LED technology is available, the County could save over $700,000 per year in energy costs once the existing lights are changed our from HPS to LED. This saving would be created after an initial capital investment to have FPL change them out, and the breakeven point is estimated at 7 to 10 years.	N/A	over 15	$175,000
Boynton Beach Blvd. (Turnpike to Knuth Road)	5 & 4		N/A	over 15	$250,000
Community Drive (Haverhill Road to Military Trail)	7		N/A	over 15	$30,000
Congress Avenue (Okeechobee Blvd. to Belvedere Road)	2 & 7		N/A	over 15	$70,000
Congress Avenue (Gun Club Road to Summit Blvd.)	2		N/A	over 15	$35,000
Congress Avenue (Lantana Road to Hypoluxo Road)	3		N/A	over 15	$65,000
Forest Hill Blvd. (Turnpike to Pinehurst Drive)	2		N/A	over 15	$75,000
Forest Hill Blvd. (Jog Road to Military Trail)	2		N/A	over 15	$75,000
Gateway Blvd. (Military Trail to Windward Passage Drive)	3		N/A	over 15	$45,000
Glades Road (SR7 to Boca Rio Road)	5		N/A	over 15	$150,000
Gun Club Road (Bosque Blvd. to Congress Avenue)	2		N/A	over 15	$120,000
Haverhill Road (West Palm Beach City Limits to Haverhill City Limits)	2 & 7		N/A	over 15	$175,000
Haverhill Road (SR80 to Lake Worth Road)	2		N/A	over 15	$250,000
Hypoluxo Road (Hagen Ranch Road to I-95)	3		N/A	over 15	$275,000
Jog Road (Okeechobee Blvd. to Belvedere Road)	2		N/A	over 15	$75,000
Jog Road (Belvedere Road to SR80)	2		N/A	over 15	$120,000
Jog Road (SR80 to Forest Hill Blvd.)	2		N/A	over 15	$120,000
Jog Road (Gateway Blvd. to Woolbright Road)	3 & 5		N/A	over 15	$135,000
Jog Road (Lake Ida Road to Old Clint Moore Road)	5		N/A	over 15	$170,000
Lake Worth Road (SR7 - Jog Road)	6 & 2		N/A	over 15	$225,000
Lantana Road (Turnpike to High Ridge Road)	2 & 3		N/A	over 15	$260,000
Linton Blvd. (Military Trail to Jog Road)	5		N/A	over 15	$70,000
Lyons Road (Clint Moore Road to Broward County Line)	5		N/A	over 15	$235,000
Melalueca Lane (Greenacres City Limits to Kirk Road)	2 & 3		N/A	over 15	$65,000
Military Trail (Northlake Blvd. to Leo Lane)	1		N/A	over 15	$75,000
Military Trail (Okeechobee Blvd. to Lake Worth Road)	7, 3 & 2		N/A	over 15	$335,000
Military Trail (Lake Worth Road to Clint Moore Road)	2, 3, 4 & 5		N/A	over 15	$750,000
Northlake Blvd. (Kelso Drive to Military Trail)	1		N/A	over 15	$50,000
Okeechobee Blvd. (Turnpike to West Palm Beach City Limits	2 & 7		N/A	over 15	$175,000
Palmetto Park (University Blvd. to Military Trail)	5 & 4		N/A	over 15	$385,000
Seacrest Blvd. (Hypoluxo Road to Mentone Road)	7		N/A	over 15	$30,000
Summit Blvd. (Jog Road to C-51 Canal)	2 & 3		N/A	over 15	$175,000
SW 18th Street (SR7 to Turnpike)	5		N/A	over 15	$100,000
West Atlantic Avenue (Turnpike to Military Trail)	5		N/A	over 15	$135,000
Yamato Road (SR7 to Boca City Limits)	4 & 5		N/A	over 15	$85,000
		Subtotal Phase I:			$6,100,000
Boca Chase Drive (Cain Blvd. to 102 Way South)	5	Second Phase -- We have identified arterial street lighting that has been operating under 15 years as High Pressure Sodium (HPS) and maintained by FPL. Given that new LED technology is available, the County could save over $350,000 per year in energy costs once the existing lights are changed our from HPS to LED. This saving would be created after an initial capital investment to have FPL change them out, and the breakeven point is estimated at 7 to 10 years.	N/A	under 15	$6,000
Boynton Beach Blvd. (SR7 to Turnpike)	5		N/A	under 15	$125,000
Clint Moore Road (SR7 to Turnpike)	5		N/A	under 15	$150,000
Donald Ross Road (Jog Road Roundabout to 64th Drive North)	1		N/A	under 15	$65,000
Gateway Blvd. (Lawrence Road to Savannah Lakes Drive)	3		N/A	under 15	$45,000

Project	District	Description	Expected Life Cycle	Current Age	Est. Cost
Gun Club Road (Kirk Road to Congress Avenue)	2		N/A	under 15	$50,000
Hagen Ranch Road (Boynton Beach Blvd. to W. Atlantic Avenue)	5		N/A	under 15	$135,000
Hypoluxo Road (SR7 to Hagen Ranch Road)	3		N/A	under 15	$155,000
Jog Road (Hypoluxo Road to Joe de Long Blvd.)	3		N/A	under 15	$80,000
Jog Road (Woolbright Road to Lake Ida Road)	5		N/A	under 15	$170,000
Lantana Road (SR7 to Jog Road)	2 & 3		N/A	under 15	$185,000
Lake Worth Road (Wellington City Limits to SR7)	6		N/A	under 15	$70,000
Lake Worth Road (at Pinehurst Drive)	2		N/A	under 15	$6,000
Lawrence Road (Gateway Blvd. to Boynton Beach Blvd.)	3 & 4		N/A	under 15	$60,000
Lawrence Road (Hypoluxo Road to Miner Road)	3		N/A	under 15	$70,000
Lyons Road (Lantana Road to Boynton Beach Blvd)	3 & 5		N/A	under 15	$285,000
Military Trail (Waditika Way to Okeechobee Blvd.)	7		N/A	under 15	$170,000
Military Trail (Camino Real Road to S.W. 18th Street)	4		N/A	under 15	$50,000
Northlake Blvd. (Coconut Blvd. to Ibis)	1 & 6		N/A	under 15	$115,000
Okeechobee Blvd. (SR7 to Turnpike)	2 & 6		N/A	under 15	$155,000
Powerline Road (south of Glades Road to Broward County Line)	4 & 5		N/A	under 15	$120,000
Seminole Pratt Whitney Road (Sycamore Drive to Whitton Drive)	6		N/A	under 15	$150,000
Seminole Pratt Whitney Road (Whitton Drive to SR80)	6		N/A	under 15	$95,000
S.W. 18 Street (East and West of Powerline Road)	4		N/A	under 15	$35,000
Westgate Avenue (Military Trail to Congress Avenue)	7		N/A	under 15	$60,000
Woolbright Road (Hagen Ranch Road to Knuth Road)	4 & 5		N/A	under 15	$240,000
Discretionary Projects - 438 lights	2, 3, 5 & 6		N/A	under 15	$653,000
		Subtotal Phase II:			$3,500,000
		Total Street Lighting:			$9,600,000
CR 880 Canal Bank Stabilization	6		50	N/A	
		The County owns and maintains CR 880. The SFWMD's L-13 Canal parallels and is very close to CR 880. The embankment area from CR 880 to the canal is minimal. The undermining of the CR 880 embankment continues due to storm events and increased SFWMD pumping and has progressively deteriorated. Repair of the embankment is necessary to prevent the eventual collapse of CR 880.			
		Total CR 880 Canal Bank Stabilization:			$5,000,000
Belvedere Rd. Canal Piping	7		50	N/A	
		The embankment area for the ditch around the curve on Belvedere Road is small and difficult to maintain. The undermining of this area continues and compromises the integrity of the sidewalk and road. Piping of the ditch is necessary to properly protect the road and sidewalk.			
		Total Belvedere Rd. Canal Piping:			$1,000,000
Drainage Improvements					

Infrastructure Sales Tax Capital Projects

Project	District	Description	Expected Life Cycle	Current Age	Est. Cost
Seminole Colony west (Okeechobee/Military)	7	Drainage improvement projects are generally included in Engineering's Capital Project request list but due to budget constraints have not received funding.	50	N/A	$1,000,000
Seminole Colony east (Okeechobee/Military)	7		50	N/A	$1,200,000
Orange Blvd. from Seminole Pratt Whitney to Royal Palm Beach Blvd.	6		50	N/A	$3,000,000
Clint Moore Rd. west of Military Trail	4 & 5		50	N/A	$500,000
Congress Ave. north of Linton Blvd.	7		50	N/A	$500,000
Congress Ave. @ Palm Beach Lakes	7		50	N/A	$500,000
Haverhill Rd from Lake Worth Road to 10th Ave.	2		50	N/A	$500,000
Austrailian Ave. from Banyan St. to 45th St.	7		50	N/A	$17,800,000
		Total Drainage Improvements:			$25,000,000
Drainage (Pipe Replacements)					
Sections of Military Trail	ALL	Engineering has experienced an increase of pipe failures in County roads due to aging infrastructure. The Road and Bridge Division has developed a priority list for storm pipe replacements. Any failed pipes need to be repaired or replaced in order to properly drain and maintain our roads in a safe operating condition.	50	unknown	$600,000
Sections of Kirk Road	2 & 3		50	unknown	$500,000
Sections of Indiantown Road	1		50	unknown	$200,000
Various other locations Countywide	ALL		50	unknown	$1,700,000
		Total Drainage Pipe Replacements:			$3,000,000
		Total Engineering:			$187,100,000
Sheriff					
Headquarters R&R	CW/2	R&R to 30+ year old building	25 years	33 years	$18,000,000
Main Detention Center/Electronics System R&R	CW/2	Replaces infrastructure continuously occupied since the early 1980's/Replaces systems including locking control, fire alarm, intercom, CCTV, nurse call, and panic buttons which are over 20 years old.	20 years	33 years	$31,254,000
Main Detention Center Admissions Renovation	CW/2	Renovation/replacement of the existing intake, holding and court areas to more effectively handle the increased bookings and avoid new construction at a higher one time and recurring cost.	35 years	33 years	$40,000,000
Evidence Building	CW/2	Consolidate and expand four existing locations	Varies	Varies	$20,000,000
Acreage Substation	6	New construction - new demand based on population	25 years	N/A	$3,350,000
Jupiter Farms Substation	1	New construction - new demand based on population	25 years	N/A	$2,800,000
Shooting Range	CW/6	New Construction - 5 new handgun ranges; new Explosive Ordnance and Demolition training area	N/A	21 years	$10,000,000
Vehicle, Radio, Crime Lab, & Other Public Safety Equipment	CW	Backlogged Needs	Varies	Varies	$18,075,778
		Total Sheriff:			$143,479,778
Facilities - General Government					
Courthouse Electronics System R&R/Command Center	CW/2	Replacing CCTV, card access, fire alarm, intercom, elevator, FEAR system and panic buttons which are over 20 years old.	20 years	20 years	$10,300,000
Countywide Buildings	CW	Backlogged needs - renewal & replacement	Varies	Varies	$20,079,000
Countywide Parks Buildings	CW	Backlogged needs - renewal & replacement	Varies	Varies	$1,427,000
Animal Care & Control	CW/2	Improvements to ACC facility on Belvedere Road, including renovation of existing kennel. This facility is approximately 23 years old.	25 years	23 years	$14,000,000

Project	District	Description	Expected Life Cycle	Current Age	Est. Cost
Judicial Partners Records Warehouse	CW/2	Construct a new facility to enable consolidation of records facilities of Clerk/State Attorney/Public Defender/Guardian Ad Litem; Will reduce cost and increase efficiency.	30 years	N/A	$23,000,000
Courthouse Buildout and Renovations	CW/2	Build out 7th and 8th floors of Courthouse in addition to various other renovations to maximize use of Main Courthouse.	25 years	N/A	$35,000,000
Government Center Upgrade	CW/2	Renovations to the 30+ year old Government Center to maximize operational benefit of the current space.	25 years	31 years	$26,000,000
South County Admin Complex Redevelopment	CW/7	Redevelop the County property holdings into a cohesive, modern governmental complex, expanding access to the transit intermodal facility, and surplusing 1-2 acres for private use complementing the intermodel facility. The project will also act as an anchor for the redevelopment of the Congress Ave. Corridor.	25 years	45 years	$45,700,000
810 Datura Building Replacement	CW/2	This project relocates Community Services from 810 Datura to the County's 45th Street Complex. This project will modernize that facility which is 50+ years old, provide adequate space for the services and programs.	25 years	60 years	$23,000,000
Other Projects	CW	Dozens of individual capital projects for expansion, modification and new function ability	Varies	Varies	$17,114,000
		Total Facilities - General Government:			$215,620,000
Parks & Recreation					
Playground Replacement					
John Prince Park - Osborne Boundless Playground Safety Surface	3	**(Safety Concern)** - Play structures have exceeded the recommended life cycle for safe play. Components are worn and/or showing signs of deterioration. Surfacing is not ADA compliant and could present a fall hazard. Expected life cycle is 8 years- age of existing playgrounds is between 8 and 22 years.	8 - surface	11	$175,000
John Stretch Park Playground	6		10	19	$32,750
Paul Rardin Park Playground	6		10	17	$52,750
Lake Lytal Park - Activity Building Playground	2		10	17	$77,750
Lake Ida Park - 4th St. Playground	4		10	16	$52,750
Dyer Park Playground	7		10	18	$100,000
Carlin Park West Playground - near tennis courts	1		8 - ocean	20	$30,000
Morikami - Biwa Pavilion Playground	5		10	22	$52,750
Sanders Park Playground	3		10	17	$32,750
John Prince Park - Osborne Boundless Playground Structure	3		10	11	$75,000
Juno Park Playground	1		8 - ocean	19	$52,750
Okeeheelee Park - Alligator Playground	2		10	19	$205,500
West Boynton Park Playground	3		8 - surface	14	$85,000
Seminole Palms Playground	6		10	18	$50,000
Loggerhead Picnic Area Playground	1		8 - ocean	15	$82,750
John Prince - Center Drive Playground	3		10	23	$30,000
West Boynton Skate Park	3		5	8	$150,000
John Prince Park - Mound Circle Playground	3		10	14	$77,750
Carlin Park West Gumbo Limbo Playground	1		8 - ocean	14	$32,750
Dubois Park Playground	1		8 - ocean	18	$42,750
Jupiter Farms Park Playground	1		10	19	$70,000
Buttonwood Park Playground	3		10	14	$55,000

Project	District	Description	Expected Life Cycle	Current Age	Est. Cost
Glades Pioneer Park Playground	6		10	14	$80,500
Ocean Cay Park Playground	1		8 - ocean	14	$50,000
Glades Pioneer Park Playground	6		10	18	$30,000
John Prince Park - Campground Playgrounds	3		10	18	$105,500
Lake Charleston Park Playground	3		10	19	$50,000
Burt Aaronson South County Regional - Boundless Playground	5		8 - surface	7 - high use	$100,000
Limestone Creek Park Playground	1		10	19	$40,000
Lake Belvedere Estates Park Playground	2		10	14	$52,750
Coral Cove Park Playground	1		8 - ocean	11	$50,000
South Bay RV Park Playground	6		10	9	$52,750
Burt Aaronson South County Regional Park Playground near tennis courts	5		10	19	$32,750
		Total Playground Replacement:			$2,260,000
Sports Lighting Replacement					
Okeeheelee Park	2	**(Safety Concern) -** The age of many lighting systems far exceeds recommended replacement interval resulting in decreased light levels and potential participant injury. Older units have increased mechanical failure and require greater maintenance resources and service expense. The expected life cycle of sports lighting is 20 years. Current lighting systems range between 17 and 36 years.	20	33	$600,000
Okeeheelee Park	2		20	33	$600,000
Pinewoods Park	5		20	32	$400,000
Burt Aaronson South County Regional Park	5		20	19	$400,000
Caloosa Park	4		20	32	$900,000
Westgate Park and Recreation Center	7		20	32	$200,000
Caloosa Park	4		20	32	$300,000
Juno Park	1		20	32	$150,000
Carlin Park	1		20	32	$300,000
Bert Winters Park	1		20	33	$150,000
Bert Winters Park	1		20	33	$100,000
Lake Lytal Park	2		20	30	$100,000
Glades Pioneer Park	6		20	27	$100,000
Lake Charleston Park	3		20	22	$400,000
Jupiter Farms Park	1		20	20	$200,000
Burt Aaronson South County Regional Park	5		20	19	$400,000
Burt Aaronson South County Regional Park	5		20	19	$200,000
Dyer Park	7		20	18	$600,000
Seminole Palms Park	6		20	15-lower quality	$1,100,000
Haverhill Park	2		20	36	$300,000
Duncan Padget Park	6		20	36	$100,000
Okeeheelee Park	2		20	33	$400,000
Caloosa Park	4		20	32	$1,200,000
Lake Lytal Park	2		20	30	$800,000
Carlin Park	1		20	32	$200,000
Glades Pioneer Park	6		20	17	$200,000

Project	District	Description	Expected Life Cycle	Current Age	Est. Cost
Burt Aaronson South County Regional Park	5		20	19	$950,000
Burt Aaronson South County Regional Park	5		20	19	$100,000
Dyer Park	7		20	18	$100,000
Veterans Park	5		20	25	$300,000
		Total Sports Lighting Safety for Play:			$11,850,000
Sport Court Replacement/ Resurfacing					
Veterans Basketball Courts	5	**(Safety Concern) -** Significant cracking/crumbling of walls and surfacing will result in increased safety risk to participants and potential liability exposure to County. Expected life cycle - 15 years for basketball and 25 years for racquetball. Current years range from 13 to 26 years and 25 years respectively.	15	24	$45,000
Cabana Colony Basketball Courts	1		15	13	$12,000
Canal Point Basketball Courts	6		15	26	$6,500
John Stretch Basketball Courts	6		15	26	$5,750
Haverhill Park Racquetball Court Replacement	2		25	37	$270,000
Caloosa Park Racquetball Court Replacement	4		25	36	$810,000
West Jupiter Park and Recreation Center Basketball Courts	1		15	20	$20,000
Lake Lytal Park Racquetball Court Replacement	2		25	31	$270,000
Duncan Padget Park Racquetball Court Replacement	6		25	37	$135,000
		Total Sports Court Safety:			$1,574,250
Roadway/Bridges/Pathways/Parking Lots/ Access					
Various Beach Access, Dune Crossovers and Dock Renovations	Ctwde	(Safety Concern) - The public thoroughfares, pedestrian/bicycle pathways and parking areas are showing signs of degredation with potholes, cracks, faded markings and uneven surfaces resulting in potential hazards to the user. All facilities are currently beyond their expected life cycle.	10	15+	$250,000
Various Fencing Replacement	Ctwde		12	30	$500,000
Dubois Park Pedestrian Bridge Deck Replacement	1		10	19	$60,000
Burt Aaronson South County Regional Park Dog Park Pathways (Asphalt)	5		5	8	$25,000
Burt Aaronson South County Regional Park Pathways (Asphalt)	5		5	12	$40,000
Cabana Colony Pathways (Asphalt)	1		5	13	$8,000
Caloosa Park Pathways (Asphalt)	4		5	12	$16,000
Dyer Park Pathways (Asphalt)	7		5	7	$25,000
Glades Pioneer Pathways (Asphalt)	6		5	8	$20,000
John Prince Pathways (Asphalt)	3		5	6	$50,000
Lake Ida Dog Park Pathways (Asphalt)	4		5	5	$25,000
Okeeheelee Nature Center Pathways (Asphalt)	2		5	14	$35,000
Okeeheelee North Pathways (Asphalt)	2		5	9	$44,000
Ocean Inlet Pathways (Asphalt)	4		5	9	$7,000
Santaluces Pathways (Asphalt)	3		5	12	$65,000
Seminole Palms Pathways (Asphalt)	6		5	11	$4,000
West Boynton Park Pathways (Asphalt)	3		5	13	$20,000
John Stretch Roadways	6		10	10	$180,000

Infrastructure Sales Tax Capital Projects

Project	District	Description	Expected Life Cycle	Current Age	Est. Cost
Jupiter Farms Park Street/Parking Lot Lighting Replacement LED Lights	1		20	20	$60,000
Jupiter Beach Park Street/Parking Lot Lighting Replacement	1		20	30	$250,000
Carlin Park Street/Parking Lot Lighting Replacement	1		20	27	$200,000
Caloosa Park Street/Parking Lot Lighting Replacement	4		20	32	$200,000
Buttonwood Park Street/Parking Lot Lighting Replacement LED Lights	3		20	14	$87,000
Ocean Inlet Park Street/Parking Lot Lighting Replacement LED Lights	4		20	27	$84,000
Ocean Reef Park Street/Parking Lot Lighting Replacement	1		20	28	$250,000
Morikami Street/Parking Lot Lighting Replacement LED Lights	5		20	38	$144,000
Okeeheelee Park Street/Parking Lot Lighting Replacement	2		20	33	$350,000
Okeeheelee North Parking Lot - Striping	2		5	20	$65,000
West Boynton Park Street/Parking Lot Lighting Replacement LED Lights	3		20	13	$285,000
West Boynton Park Parking Lot - Striping	3		5	13	$10,000
Veterans Parking Lot - Striping	5		5	5	$5,000
Various Parking Lot	Ctwde		15	15+	$50,000
Seminole Palms Parking Lot - Striping	6		5	10	$6,000
South Inlet Parking Lot - Striping	4		5	6	$8,100
Okeeheelee North Roadways	2		15	20	$15,000
Ocean Inlet Roadways	4		15	15	$10,000
Lake Ida 4th Roadways	4		15	11	$33,000
Haverhill Park Street/Parking Lot Lighting Replacement	2		20	36	$200,000
Glades Pioneer Park Street/Parking Lot Lighting Replacement LED Lights	6		20	27	$60,000
Dyer Park Street/Parking Lot Lighting	7		20	18	$192,000
Dyer Park Parking Lot	7		15	18	$45,000
Dubois Park Parking Lot	1		15	20	$35,000
Caloosa Park Roadways	4		15	20	$20,000
Burt Reynolds Parking Lot	1		15	30	$22,650
Burt Reynolds Roadways	1		15	30	$44,550
John Prince Street/Parking Lot Lighting Replacement LED Lights	3		20	39	$300,000
Burt Aaronson South County Regional Park Street/Parking Lot Lighting Replacement	5		20	19	$540,000
Burt Aaronson South County Regional Park Nature Trail Boardwalk	5		10	20	$225,000
		Total Bridge/Pathway/Boardwalk/Parking Safety:			$5,170,300

Project	District	Description	Expected Life Cycle	Current Age	Est. Cost
Aquatic Facility Repair and Replacement					
Lake Lytal Aquatic Center Replace Public Aquatic Facility	2	**(Safety Concern) -** Aging pool facilities require ongoing capital maintenance of pump/filtration systems, decking and surfacing, drains, coping, leaks and other issues cited by Health Department. Numerous water park apparatuses are non-functional or aging and require replacement. Adequate capital funding is not currently available to address these increasing capital maintenance issues that could result in facility closure, loss of swim lessons, drowning prevention programs and decreased revenue. Every facility is at, or beyond, its expected useful life.	20	40	$6,000,000
Aqua Crest Aquatic Complex Major Renovation and Reconstruction	7		20	37	$6,000,000
North County Aquatic Complex Aquatic Facility Renovation	1		20	22	$1,800,000
Therapeutic Recreation Complex - Gleneagle Aquatic Center (formerly Mary Prince Pool) Pool Resurfacing	3		20	25+	$64,500
Santaluces Pool Aquatic Facility Renovation	3		20	28	$850,000
Coconut Cove Waterpark Facility Repairs and Renovation	5		15	15	$1,100,000
Calypso Bay Waterpark Facility Repairs and Renovation	6		15	14	$1,330,000
		Total Aquatic Facility Health/Safety			$17,144,500
Public Building/Restroom Replacement					
Kreusler Park Restroom Replacement	7	**(Safety Concern) -** Numerous park restroom buildings are showing signs of deterioration with cracking concrete walls and foundations, roof leaks, plumbing failures and worn stained fixtures. Clean/functional restrooms are required to ensure adequate sanitary conditions are being maintained. All facilities are at, or beyond, their expected life cycle.	30	36	$200,000
Ocean Rescue Refurbish wooden guard towers	Ctwde		10	8 - 20	$100,000
Ocean Inlet Park Park and Marina Improvements	4				$5,000,000
West Jupiter Park & Recreation Center Restroom Replacement with Storage	1		30	35	$250,000
Canal Point Restroom Replacement	6		30	45	$270,000
Triangle Park Restroom Replacement	6		30	38	$270,000
Juno Park Restroom Replacement	1		30	38	$270,000
John Stretch Restroom Replacement	6		30	38	$270,000
Carlin Park Restroom Replacement	1		30	30	$270,000
John Prince Park Campground Restroom Replacement	3		30	25	$810,000
John Prince Restroom Replacement	3		30	30	$270,000
John Prince Restroom Replacement	3		30	25	$270,000
John Prince Restroom Replacement	3		30	25	$270,000
Duncan Padget Park Restroom Replacement	6		30	36	$270,000
Sandalfoot Cove Park Athletic Facility/Press Box Replacement	5		30	30	$780,000
Dubois Park Historic Building Repair/Renovation	1		N/A	117	$2,000,000
Sunset Cove Amphitheater Audio & Lighting System Replacement	5		10		$150,000
Jim Brandon Equestrian Center Barn Painting and Rust Treatment - Poor Quality Initial Work	2		10	10	$250,000
Jim Brandon Equestrian Center Audio System Replacement	2		10	10	$120,000
Pinewoods Park Athletic Facility/Press Box Replacement	5		30	30	$780,000

Project	District	Description	Expected Life Cycle	Current Age	Est. Cost
Okeeheelee Park Athletic Facility/Press Box Replacement	2		30	30	$780,000
Lake Lytal Park Athletic Facility/Press Box Replacement	2		30	40	$780,000
Lake Lytal Park Athletic Facility/Press Box Replacement	2		30	30	$780,000
Lake Lytal Park Maintenance Building Building Replacement	2		30	45	$500,000
Lake Ida Park Building Replacement	4		30	30	$500,000
John Prince Park Softball Triplex Athletic Facility/Press Box Replacement	3		30	30	$780,000
Dubois Park Building Replacement	1		30	30	$500,000
Carlin Park Building Replacement	1		30	30	$500,000
Canal Point Building Replacement	6		30	30	$500,000
Caloosa Park Athletic Facility/Press Box Replacement	4		30	32	$780,000
John Prince Park Parks Division Administration Building Addition	3		15	20+	$2,500,000
West Delray Regional Park Building Replacement	5		N/A	"temp"	$500,000
Peanut Island Building Replacement	1/7		Not Adq.	16	$1,000,000
John Prince Park - Maintenance Trades Shop Building Replacement	3		30	30	$2,000,000
John Prince Park Campground Building Replacement	3		30	39	$750,000
Bert Winters Park Redevelopment - Phase 2	1		Varies	33	$1,700,000
		Total Buildings:			$27,720,000
Athletic Field Renovations					
John Prince Park Athletic Field Renovations Sports Turf	3	**(Safety Concern)** - Reconstruction of sports fields is necessary to meet high user demand and ensure safe playing field conditions for athletic participants. Poor turf coverage, uneven surfaces and drainage issues have resulted in premature field closure to prevent participant injury.		30	$3,220,000
West Boynton Park Athletic Field Renovations Sports Turf	3			13	$2,000,000
Samuel Friedland Park - Sport Fields very pool drainage and 12 week closure per year Athletic Field Renovations, Sports Turf and Playground /Shade Structure	6			10	$3,000,000
Westgate Park & Recreation Center Athletic Field Renovation, Restroom w/Storage	7			32	$2,000,000
Glades Pioneer Park Athletic Facility Improvements Sports Turf	6			27	$2,000,000
Caloosa Park Athletic Field Renovations Sports Turf	4			32	$4,000,000
Dyer Park Athletic Field Improvements/Additions, Sports Turf	7			18	$6,000,000
		Total Athletic Fields:			$22,220,000
Boat Ramps					
John Prince	3	**(Safety Concern)** - As a result of prop dredging and a poor design, several park boat ramps have become uneven, undermined, broken or were designed too short for the vessels being launched. These conditions have rendered the ramps unsafe with one		12	$400,000
Burt Aaronson South County Regional Park	5			6	$250,000

Infrastructure Sales Tax Capital Projects

Project	District	Description	Expected Life Cycle	Current Age	Est. Cost
Okeeheelee (ski lake)	2	already closed for public use.		12	$400,000
		Total Boat Ramps:			$1,050,000
Sanitary Sewer/Septic Systems					
Canal Point	6	Septic System Replacement	15	30	$50,000
Okeeheelee Park	2		15	33	$50,000
Triangle Park	6		15	30	$50,000
Lake Ida West Park	4		15	10	$150,000
Jupiter Farms Park	1		15	11	$50,000
Juno Park	1		15	13	$50,000
Gulfstream Park	4		15	30	$100,000
Duncan Padget Park	6		15	30	$50,000
Caloosa Park	4		15	30	$100,000
Morikami Park	5		15	10	$150,000
Loxahatchee Groves	6		15	30	$50,000
Lake Lytal Park	2		15	10	$50,000
Veterans Park Irrigation Well Replacement	5	Old well is sucking sand which effects both turf & irrigation infrastructure integrity. Can no longer be patch repaired.	Not Adq.		$50,000
South Bay RV Campground Electrical Upgrade	6	Need to meet industry standard and to accept larger recreational vehicles. This facility is designated for post disaster housing.	Not Adq.		$200,000
		Total Sanitary Sewer/Septic Systems:			$1,150,000
Group Pavilion Replacement					
Jupiter Beach Park	1	Pavilion Replacement	15 - ocean	16	$150,000
Morikami Park	5		20-25	23	$300,000
John Prince	3		20-25	25	$150,000
Burt Aaronson South County Regional Park	5		20-25	19	$150,000
Various	CW		20-25	30	$300,000
Carlin Park	1		15 - ocean	30	$150,000
		Total Group Pavilion Replacement:			$1,200,000
New/Expansion Projects					
Canyon's District Park New District Park Construction	3/5				$12,000,000
ITID Acreage Community Park Recreation Center	6				$3,000,000
Lake Lytal Park Westside Athletic Facilities	2				$4,000,000
John Prince Park Boating Center	3				$2,000,000
Riverbend/Loxahatchee Battlefield Park Visitor Restrooms and Interpretive Center	1				$5,000,000
Okeeheelee Park South Regional Park Expansion	2				$7,000,000
Jupiter Farms Park Restroom	1				$270,000
Gardens District Park New District Park Construction	1				$9,000,000

Infrastructure Sales Tax Capital Projects

Project	District	Description	Expected Life Cycle	Current Age	Est. Cost
Morikami Park - General Park/Green Space Area General Park / Green Space Improvements	5				$4,500,000
Jim Brandon Equestrian Center Irrigation Expansion (open riding areas & outdoor rings)	2				$130,000
Jim Brandon Equestrian Center Permanent Judges Stand for Barrel Ring	2				$200,000
Carlin Park Overflow Parking and Pedestrian Bridge	1				$150,000
South County Civic Center Lighting Upgrade	5				$55,000
South Inlet Park Jetty Fishing Pier/Parking	4				$4,000,000
Lake Ida Park Water Playground & Outdoor Fitness Zone	4				$1,000,000
Burt Aaronson South County Regional Park Parcel A Development	5				$4,000,000
Calypso Bay Waterpark Addition of Waterpark Feature	6				$1,200,000
Coconut Cove Waterpark Addition of Waterpark Feature	5				$1,200,000
		Total New/Expansion Projects:			$58,705,000
		Total Parks and Recreation:			$150,044,050
		Total All Departments:			$696,243,828

Renewal/Replacement
Infrastructure Sales Tax Initiative

ATTACHMENT 2 - DEPARTMENT OF ENGINEERING AND PUBLIC WORKS PPM'S

PALM BEACH COUNTY
DEPARTMENT OF ENGINEERING & PUBLIC WORKS
ROAD & BRIDGE DIVISION

TO:	Road & Bridge Division Personnel	**PPM NUMBER:**	**EBO-013**
FROM:	Director Road & Bridge Division	**ISSUE DATE:**	10-09-87
		EFFECTIVE DATE:	
SUBJECT:	BRIDGE INSPECTION FLORIDA DEPARTMENT OF TRANSPORTATION	**REVISED DATE:**	
		REVIEWED DATE:	05-10-11
		SUPERSEDES & RESCINDS: PPM NO.	EBO-013
		DATED:	01-13-89

CONTACT POSITIONS:
BRIDGE SUPERINTENDENT
BRIDGE INSPECTION SUPERVISOR

PURPOSE:

TO COMPLY WITH THE ESTABLISHED CRITERIA FOR INSPECTION OF BRIDGES.

POLICY:

TO MAINTAIN THE BRIDGE INSPECTION PROGRAM AS ESTABLISHED BY FEDERAL HIGHWAY ACT OF 1968 (23 U.S.C. 116) AND FLORIDA STATUTE 335.074 AMENDED 1991.

PROCEDURES:

THE INSPECTION PROGRAM WILL BE IMPLEMENTED IN ACCORDANCE WITH THE FOLLOWING:

A. THE COUNTY BRIDGE INSPECTION OFFICE THROUGH THE ROAD AND BRIDGE DIRECTOR, WILL SUPPLY THE FLORIDA DEPARTMENT OF TRANSPORTATION WITH A LIST OF COUNTY STRUCTURES OVER 20 FEET IN LENGTH.

B. AT THE START-UP OF THE TWO YEAR CYCLE OF INSPECTION, THE COUNTY, UPON WRITTEN REQUEST OF THE FLORIDA DEPARTMENT OF TRANSPORTATION, WILL SUPPLY A COPY OF ALL AVAILABLE PLANS OF THE AFOREMENTIONED LIST OF BRIDGES.

C. THE FLORIDA DEPARTMENT OF TRANSPORTATION WILL PROCEED WITH THEIR INTERNAL PROGRAM OF OBTAINING THE SERVICES OF AN ENGINEERING CONSULTANT TO PERFORM THE ACTUAL INSPECTION.

D. THE FLORIDA DEPARTMENT OF TRANSPORTATION AND ITS CONSULTANT WILL CONDUCT A FORMAL ORAL PRESENTATION OF THEIR WRITTEN REPORT TO THE ROAD AND BRIDGE DIVISION. THIS REPORT WILL INCLUDE THE RECOMMENDATION FOR REPAIR, LOAD POSTING OR REPLACEMENT.

E. THIS DATA WILL BE UTILIZED BY THE ROAD AND BRIDGE DIVISION TO IMPLEMENT THE POSTING OF NECESSARY LOAD LIMIT SIGNS, PRIORITIZE AND IMPLEMENT THE REPAIRS, AND ESTABLISH BUDGET FOR REPLACEMENT.

F. THE LOAD LIMIT POSTING OF ANY STRUCTURE WILL REQUIRE AN INTERIM INSPECTION BY THE FLORIDA DEPARTMENT OF TRANSPORTATION.

G. ANY NEW STRUCTURE ACCEPTED BY THE BOARD OF COUNTY COMMISSIONERS WILL BE SUBMITTED BY THE BRIDGE INSPECTION OFFICE THROUGH THE ROAD AND BRIDGE DIRECTOR TO THE FLORIDA DEPARTMENT OF TRANSPORTATION FOR INITIAL INSPECTION AND WILL THEN BE PLACED ON THE NORMAL TWO YEAR INSPECTION CYCLE.

APPROVALS:

Division Director _____ Date 5/31/11

Department Director _____ Date 7/18/11

PALM BEACH COUNTY
DEPARTMENT OF ENGINEERING & PUBLIC WORKS
ROAD & BRIDGE DIVISION

TO:	Road & Bridge Division Personnel	**PPM NUMBER:**	**EBO-014**
FROM:	Director Road & Bridge Division	**ISSUE DATE:**	10-09-87
		EFFECTIVE DATE:	
SUBJECT:	BRIDGE INSPECTION (COUNTY)	**REVISED DATE:**	
		REVIEWED DATE:	05-10-11
		SUPERSEDES & RESCINDS:	PPM NO. EBO-014 DATED: 3-05-99

CONTACT POSITIONS:
BRIDGE SUPERINTENDENT
BRIDGE INSPECTION SUPERVISOR

PURPOSE:

TO ESTABLISH CRITERIA FOR INSPECTION OF BRIDGES OF 20 FEET OR LESS AND ASSOCIATED STRUCTURES, I.E., PEDESTRIAN BRIDGES, BOX CULVERTS, AND GOLFCART UNDERPASSES.

POLICY:

TO MAINTAIN AN ONGOING BRIDGE INSPECTION PROGRAM FOR STRUCTURES NOT INSPECTED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION PROGRAM.

PROCEDURE:

COUNTY BRIDGE INSPECTORS WILL CONDUCT BIENNIAL INSPECTIONS ON ALL STRUCTURES NOT INSPECTED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION. THESE INSPECTIONS WILL BE RECORDED ON PALM BEACH COUNTY BRIDGE INSPECTION FORMS. THE REPORTS WILL BE SUBMITTED TO THE BRIDGE SECTION SUPERINTENDENT FOR PRIORITIZING AND IMPLEMENTING NECESSARY REPAIRS.

APPROVALS:

Division Director _____ Date 5/31/11

Department Director _____ Date 7/18/11

PALM BEACH COUNTY
DEPARTMENT OF ENGINEERING & PUBLIC WORKS
ROAD & BRIDGE DIVISION

TO:	Road & Bridge Division Personnel	**PPM NUMBER:**	**EBO-015**
FROM:	Director Road & Bridge Division	**ISSUE DATE:** 10-09-87 **EFFECTIVE DATE:**	
SUBJECT:	BASCULE BRIDGE PREVENTIVE MAINTENANCE PROGRAM	**REVISED DATE:** 05-10-11 **REVIEWED DATE:**	
		SUPERSEDES & RESCINDS: PPM NO. EBO-015 **DATED:** 01-13-89	

CONTACT POSITIONS:
BRIDGE SUPERINTENDENT

PURPOSE:

TO ESTABLISH A MAINTENANCE PROGRAM FOR EVALUATION OF BASCULE BRIDGE STRUCTURAL, MECHANICAL AND ELECTRICAL RELIABILITY AND SAFETY.

POLICY:

TWELVE (12) TIMES A YEAR SERVICE PERSONNEL WILL CONDUCT A DETAILED ANALYSIS OF EACH FACILITY AND RECORD ALL DATA ON SURVEY FORMS (SEE ATTACHED). THESE FORMS WILL BE SUBMITTED TO THE BRIDGE SUPERINTENDENT AND WILL BE USED IN PLANNING A MAINTENANCE SCHEDULE FOR THE BASCULE BRIDGES.

APPROVALS:

Division Director Michael D Bowyer Date 5/31/11

Department Director Steve McDonnell Date 7/18/11

ELECTRICAL
MONTHLY BASCULE BRIDGE CHECKLIST

REV. MAY '11

LOCATION: _____ **BRIDGE NO.** _____

BRIDGETENDER: _____ **DATE:** _____

•ELECTRICAL SAFETY CIRCUITS

_____ Overload Devices
_____ Circuit Breakers
_____ GFI Receptacles
_____ Span Brake Limit Switches
_____ Emergency Span Stop Pushbuttons/levers
_____ Lightning Protection Equipment & Grounding System

Notes:

•LIGHTING

_____ Bridgehouse
_____ Traffic Signals
_____ Pits & Machinery Rooms
_____ Channel Flood
_____ Check Navigation
_____ Emergency Lighting
_____ Traffic Safety Gates
_____ Street Lighting

Notes:

•AUDIBLE SIGNALS

_____ Horn
_____ P/A Intercom System
_____ Warning Bell/ Gongs
_____ Megaphone

Notes:

•A/C – HEAT

Clean Filter _____ Yes _____ No

Notes:

•PLC CLOCK

Correct Time _____

•PITS

Pick-up Debris _____ Yes _____ No

Test Sump Pumps _____ Yes _____ No

Notes:

•FIRE EXTINGUISHER - (Date & Sign Tag) _____ Yes _____ No

Notes:

•EMERGENCY STANDBY GENERATOR – (TEST Run 45 minutes). _____ Hours (After Test Run)

Check BEFORE Run

_____ Fuel Level
_____ Fluid Levels
_____ Water Heater
_____ Battery Charger & Battery

Check DURING Run

_____ Oil Pressure
_____ Water Temperature
_____ Transfer Switchgear
_____ Exhaust & Ventilation System

¤FPL Power

A-N _____ B-N _____ C-N _____
A-B _____ B-C _____
A-C _____

¤GENERATOR operating spans

A-N _____ B-N _____ C-N _____
A-B _____ B-C _____
A-C _____

Notes:

Employee: _____

MECHANICAL
MONTHLY BASCULE BRIDGE CHECKLIST

REV. MAY '11

LOCATION: _____ **BRIDGE NO.** _____

BRIDGETENDER: _____ **DATE:** _____

•SAFETY EQUIPMENT

_____ Flashlight
_____ Traffic Safety Flags (2)
_____ Throwable Floatation Device
_____ Ladders/ Handrails/ Stairs/ Hatch covers

Notes:

•SPAN MACHINERY

_____ Fluid Levels
_____ Span Brakes
_____ Reducer Assemblies
_____ Visual & Operational Check of all Machinery
_____ Visually Check & Lubricate Trunnions
_____ Hydraulic Equipment

Notes:

•SPAN LOCKS

_____ Check Mounting Hardware
_____ Lubricate Lockbar & Receiver/Guide Assemblies
_____ Visually Check & Lubricate Operator

Notes:

TRAFFIC SAFETY GATES & BARRIERS

_____ Fluid Levels
_____ Check Linkage Hardware
_____ Check Transmission Mounting Hardware
_____ Visually Check & Lubricate Operators
_____ Visually Check General Condition

Notes:

•SIGNS - (check all signage warnings and information)

_____ Cable Crossing
_____ Console-Caution
_____ Load Posting
_____ Lower antennas, etc.
_____ Timed Opening
_____ Vertical Clearance Gauges
_____ Walk Bike

Notes:

•FENDER SYSTEM

_____ Visual Check of General Condition

Damage from Vessels: _____ Yes _____ No

Notes:

•BRIDGEHOUSE

_____ Security _____ Doors _____ Windows _____ Plumbing

Notes:

•PITS

Pick-up Debris _____ Yes _____ No

Notes:

Employee: _____

PALM BEACH COUNTY
DEPARTMENT OF ENGINEERING & PUBLIC WORKS
ROAD & BRIDGE DIVISION

TO:	Road & Bridge Division Personnel	**PPM NUMBER: EBO-031**
FROM:	Director Road & Bridge Division	**ISSUE DATE: 4-24-13** **EFFECTIVE DATE: 5-1-13**
SUBJECT:	FIXED BRIDGE PREVENTIVE MAINTENANCE PROGRAM	**REVISED DATE:** **REVIEWED DATE:**
		SUPERSEDES & RESCINDS: PPM NO. DATED:

CONTACT POSITIONS:
BRIDGE SUPERINTENDENT

PURPOSE:

TO ESTABLISH A MAINTENANCE PROGRAM FOR EVALUATION OF FIXED BRIDGE STRUCTURAL RELIABILITY AND SAFETY.

POLICY:

FOUR (4) TIMES A YEAR SERVICE PERSONNEL WILL CONDUCT A DETAILED ANALYSIS OF EACH FACILITY AND RECORD ALL DATA ON SURVEY FORMS (SEE ATTACHED). THESE FORMS WILL BE SUBMITTED TO THE BRIDGE SUPERINTENDENT AND WILL BE USED IN PLANNING A MAINTENANCE SCHEDULE FOR THE FIXED BRIDGES.

APPROVALS:

Division Director Daryl A. Dawson Date 4/24/13

Department Director Edward W. McConnell Date 4/25/13

FIXED BRIDGE
Preventative Maintenance Checklist

REV. APRIL '13

LOCATION: _____ **BRIDGE NO.** _____

CREWCHIEF: _____ **DATE:** _____

•DECK

_____ Remove sand & sediment
_____ Check expansion joints
_____ Open joints found/ repaired
_____ Check slab cracks
_____ Check depressions
_____ Check/ repair wheel rutting
_____ Check sidewalks
_____ Check/ repair asphalt unraveling/ upheavel

Notes:

•SUPER STRUCTURE

_____ Slab/ joint cracks/ spalls
_____ Settlement
_____ Exposed rebar treat/ seal
_____ Clean abutment caps
_____ Guardrail attachments
_____ Deck drainage
_____
_____ Graffiti

Notes:

•SUB STRUCTURE

_____ Exposed rebar treat/ seal
_____ Check/ repair spalls in piles/ caps
_____ Scour
_____ Channel obstructions
_____ Degradation
_____ Graffiti

Notes:

•SIGNS - (check all signage warnings and information)

_____ Object Markers
_____ Load Posting
_____ Cable Crossing

Notes:

•EMBANKMENTS/ ABUTMENTS

_____ Remove trash
_____ Cut/ control vegetation
_____ Check/ repair drainage flumes
_____ Check/ repair embankment & abutment slope protection

Notes:

•SLOPE PROTECTION

_____ Erosion _____ General condition

Notes:

•PARAPETS

_____ Clean/ paint handrail hardware
_____ Check/ repair spalls
_____ Pressure clean/ seal
_____ Graffiti

Notes:

Employee: _____

Renewal/Replacement
Infrastructure Sales Tax Initiative

ATTACHMENT 3 - MAINTENANCE TRACKING REPORTS

Palm Beach County Bridge Inspection - Maintenance Tracking System

Bridge Inventory Spreadshet (2014-2015 cycle)
Over 20' FDOT Inspection Reports and Maintenance Check-off Lists

	Bridge #	Location	Type Insp.	FO	SD	Inspc. Date	Sent Maint.	to File:	I-Val	Next Insp	Bridge #	PM Cycle 1	PM Cycle 2	PM Cycle 3	PM Cycle 4	PM Cycle 5	PM Cycle 6	PM Cycle 7	PM Cycle 8	Last PM Prev Cal YR
1	864099	Lyons/ Hillsboro	Regular NBI			10/10/13	04/09/14	04/09/14	1	10/10/15	864099	02/13/15	05/12/15	07/15/15	10/09/15					10/03/14
2	**930026**	**Geo Bush Blvd Bascule**	Regular NBI-Mvbl	1		05/27/15	09/02/15			05/26/17	930026	01/30/15	04/10/15	07/01/15	09/18/15					09/24/14
	930026	**Geo Bush Blvd Bascule**	Spec-movable			05/29/14	09/11/14			05/28/16	930026									
3	930038	CR 880/ Hillsboro Canal L-14	Regular NBI			03/20/14	05/23/14	06/06/14	1	03/19/16	930038	04/16/15	06/30/15	09/29/15						12/11/14
4	**930056**	**707 Bascule**	Regular NBI			05/19/15	09/17/15			05/18/17	930056	01/15/15	05/21/15	07/22/15						07/30/14
	930056	**707 Bascule**	Spec-movable			05/30/14	09/11/14	;		05/29/16	930056									
5	**930072**	**Point Chosen - Swing Bridge**	Regular NBI-Mvbl	1		09/10/14	01/13/15			09/09/16	930072	04/23/15	07/02/15	09/30/15						12/30/14
	930072	**Point Chosen - Swing Bridge**	Spec-movable			09/27/13	04/09/14			09/27/15	930072									
6	930085	CR 700/ SFWMD L-13	Regular NBI			02/14/14	06/26/12			02/14/16	930085	04/15/15	06/26/15	09/25/15						12/05/14
7	930107	10th Ave N/ LWDD E-4 Canal	Regular NBI			04/28/14	07/16/14			04/27/16	930107	02/20/15	05/19/15	08/14/15						10/30/14
8	930163	Congress Ave/ L-14	Regular NBI			04/13/15	07/29/15			04/12/17	930163	02/12/15	05/12/15	08/04/15						07/09/14
9	**930214**	**15st/ Woolbright Rd Bascule**	Regular NBI			05/20/15	10/22/13	05/20/14	1	05/19/17	930214	03/12/15	06/04/15	08/19/15						12/05/14
	930214	**15st/ Woolbright Rd Bascule**	Spec-movable			05/15/14	08/14/14	01/23/15		05/14/16	930214									
10	930267	N.Lake Blvd (WB)/ C-17 Canal	Regular NBI			04/29/14	07/16/14			04/28/16	930267	03/12/15	07/02/15	10/08/15						11/14/14
11	930268	N.Lake Blvd (EB)/ C-17 Canal	Regular NBI			04/29/14	07/16/14			04/28/16	930268	03/12/15	07/02/15	10/08/15						11/14/14
12	930302	SW-23rd Ave/ LWDD E-4 Canal	Regular NBI			04/28/14	07/16/14			04/27/16	930302	03/12/15	06/05/15	08/20/15						09/10/14
13	**930322**	**Linton Blvd Bascule**	Regular NBI-Mvbl			07/17/14	01/13/15			07/16/16	930322	01/30/15	04/28/15	07/01/15	09/18/15					09/25/14
	930322	**Linton Blvd Bascule**	Spec-movable			07/30/15	10/02/15			07/29/17	930322									
14	930351	CR880/ Drainage Canal 4.1W SR80	Regular NBI			06/09/14	05/01/13	06/06/14	1	06/08/16	930351	04/15/15	06/26/15	09/25/15						12/05/14
15	930392	Central Blvd/ C-18 canal	Regular NBI			04/29/14	07/18/14			04/28/16	930392	04/16/15	07/21/15							12/19/14
16	930910	CR880/ Drainage Canal 7.7W SR80	Regular NBI			06/09/14	09/11/14	12/10/14	1	06/08/16	930910	04/16/15	06/30/15	09/25/15						12/09/14
17	930940	880/ L-12 (C-51) (20 mile bend)	Regular NBI			08/13/13	04/09/14	12/16/14	1	08/13/15	930940	04/15/15	06/26/15	09/24/15						12/04/14
	930940	880/ L-12 (C-51) (20 mile bend)	Special Posted	1		08/11/14	11/14/14			08/10/16	930940									
18	934100	45th St/ SFWMD C-17	Regular NBI			03/18/14				03/17/16	934100	03/03/15	06/24/15	09/24/15						10/29/14
19	934116	Prosperity Farms Rd/ C-17 Canal	Regular NBI			03/18/14	05/28/14		1	03/17/16	934116	01/14/15	04/29/15	08/13/15						08/14/14
	934116	Prosperity Farms Rd/ C-17 Canal	Special-Posted			04/30/15				04/29/17	934116									
20	934125	Jupiter Beach Rd/ Branch ICWW	Regular NBI			04/30/14	07/18/14	08/19/14	1	04/29/16	934125	01/09/15	07/22/15							07/31/14
21	934126	Jupiter Island Pk/Branch of ICWW (Parks)	Regular NBI			08/01/13					934126	Parks								
22	934128	Donald Ross WB/ Cypress Crk (NBridge)	Regular NBI			07/14/14	01/29/15	04/28/15	1	07/13/16	934128	01/09/15	04/23/15	07/23/15						08/12/14
23	934129	Donald Ross EB/ Cypress Crk (SBridge)	Regular NBI			07/14/14	01/29/15	04/28/15	1	07/13/16	934129	01/09/15	04/23/15	07/23/15						08/12/14
24	934131	Ellison Wilson/ H-20 Canal	Regular NBI	1		03/29/14	08/07/14	08/08/14	1	03/28/16	934131	04/15/15	07/23/15							12/18/14
	934131	Ellison Wilson/ H-20 Canal*	Special-Posted			03/19/15	07/31/15			03/18/17	934131									
25	934135	Prosperity Farms Rd/ EPB Cnl C-3	Regular NBI	1		04/30/14	07/18/14			04/29/16	934135	01/13/15	04/24/15	08/07/15						08/13/14
	934135	Prosperity Farms Rd/ EPB Cnl C-3								12/30/01	934135	n/a								
26	934136	Palmwood Rd/ Cypress Creek	Regular NBI			08/12/14	11/14/14	04/28/15	1	08/11/16	934136	01/09/15	04/23/15	08/06/15						08/12/14
27	934137	Prosperity/ Archies Creek	Regular NBI			05/05/15	08/04/15			05/04/17	934137	01/13/15	04/28/15	08/11/15						08/13/14
28	934139	Prosperity/ RCA Canal	Regular NBI			08/12/14	11/14/14	05/05/15		08/11/16	934139	01/13/15	04/29/15	08/13/15						08/13/14
29	934140	Dyer Park Road/Retention Pond (Parks)	Regular NBI			08/06/13				08/06/15	934140	Parks								
30	934142	Indiantown/ Loxahatchee Crk	Regular NBI			01/15/14	04/13/12			01/15/16	934142	04/10/15	07/17/15							12/30/14
31	934144	Indiantown Slough	Regular NBI			01/15/14	04/13/12			01/15/16	934144	04/14/15	07/21/15							12/31/14
32	934146	Center St./ Sims Creek	Regular NBI			05/04/15	08/04/15			05/03/17	934146	01/06/15	07/28/15							07/30/14
33	934147	Center St./ Jones Creek	Regular NBI			05/04/15	08/04/15	08/14/15		05/03/17	934147	01/06/15	07/29/15							07/30/14
34	934148	Northlake/ Turnpike (WB)	Regular NBI			08/01/13	04/09/14	06/18/14	1	08/01/15	934148	03/25/15	07/09/15	10/14/15						06/17/14
35	934149	Northlake/ Turnpike (EB)	Regular NBI			08/01/13	04/09/14	06/18/14	1	08/01/15	934149	03/25/15	07/09/15	10/14/15						06/17/14
36	934150	Royal Palm Bch Blvd/ **M** Canal	Regular NBI	1		03/24/14	06/26/12	07/11/12	1	03/23/16	934150	02/06/15	06/03/15	09/24/15						09/30/14
37	934151	Seminole Pratt Whit/ **M** Canal	Regular NBI			08/14/14	11/14/14			08/13/16	934151	02/06/15	06/04/15	08/19/15						10/01/14
38	934155	Congress Ave/ CSX (SB)	Regular NBI			05/05/15	08/07/15			05/04/17	934155	03/05/15	06/26/15	09/29/15						10/31/14

Palm Beach County Bridge Inspection - Maintenance Tracking System

Bridge Inventory Spreadshet (2014-2015 cycle)
Over 20' FDOT Inspection Reports and Maintenance Check-off Lists

	Bridge #	Location	Type Insp.	FO	SD	Inspc. Date	Sent Maint.	to File:	I-Val	Next Insp	Bridge #	PM Cycle 1	PM Cycle 2	PM Cycle 3	PM Cycle 4	PM Cycle 5	PM Cycle 6	PM Cycle 7	PM Cycle 8	Last PM Prev Cal YR
39	934156	Congress Ave/ CSX (NB)	Regular NBI			05/05/15	08/07/15			05/04/17	934156	03/05/15	06/26/15	09/29/15						10/31/14
40	934158	N. Jog Rd @ SWA canal (45th St.) 36' Culvert	Regular NBI								934158	02/27/15	06/24/15	09/03/15						
41	**934160**	**Donald Ross Bascule (WB)**	Regular NBI-Mvbl			07/17/14	12/18/14			07/16/16	934160	04/22/15	07/24/15							11/20/14
	934160	**Donald Ross Bascule (WB)**	Spec-movable			07/29/15	10/02/15			07/28/17	934160									
42	**934161**	**Donald Ross Bascule (EB)**	Regular NBI-Mvbl			07/17/14	12/18/14			07/16/16	934161	04/22/15	07/24/15							11/20/14
	934161	**Donald Ross Bascule (EB)**	Spec-movable			07/28/15	10/02/15			07/27/17	934161									
43	934162	Investment Lane/ I-95	Regular NBI			04/29/14	07/31/14	12/05/14	1	04/28/16	934162	03/11/15	07/01/15	10/07/15						11/13/14
44	934164	Park Ave W/ Canal C-17	Regular NBI			05/14/14	08/14/14			05/13/16	934164	03/06/15	06/30/15	10/01/15						11/04/14
45	934166	45th St. @ Fl Turnpike (RdSg 105-1)	Regular NBI			08/06/13	04/09/14				934166	02/27/15	06/23/15	09/17/15						10/28/14
46	934167	*Northlake Blvd @ Loxahatchee Slough (North)*	Initial			04/14/15	07/29/15				934167	07/28/15	09/03/15							
47	934168	*Northlake Blvd @ Loxahatchee Slough (South)*	Initial			04/14/15	07/29/15				934168	07/28/15	09/03/15							
48	934171	Haverhill Rd/ EPB-10 Canal -27' Culvert	Regular NBI			11/25/13	04/09/14	04/09/14	1	11/25/15	934171	02/27/15	06/24/15	09/03/15						10/29/14
49	934175	Central Blvd/ Golf Cart Underpass	Regular NBI			11/25/13	04/09/14	04/09/14	1	11/25/15	934175	04/02/15	07/10/15	10/16/15						12/18/14
50	934176	Riverbend Prk Rd/Loxahatchee Rvr (Parks)	Regular NBI			11/26/13				11/26/15	934176	Parks								
51	934177	Island Way/ SFWMD C-18 Canal	Regular NBI			11/25/13	03/27/14			11/25/15	934177	04/15/15	07/17/15							12/18/14
52	934178	*Prosperity Farms Rd/Cabana Colony Creek*	Initial			02/26/14				02/26/16	934178	01/13/15	04/28/15	08/11/15						08/13/14
53	934179	Loxahatchee Rvr Rd/ C-18 Canal	Regular NBI			11/26/13	03/09/12	04/12/12	1	11/26/15	934179	01/06/15	06/10/15	07/22/15						07/11/14
54	934201	Summit Blvd/ WPB Canal C-51	Regular NBI			03/18/14				03/17/16	934201	02/03/15	05/14/15	08/06/15						10/29/14
55	934203	Gun Club Rd/ LWDD Canal E-3	Regular NBI			03/18/14				03/17/16	934203	01/30/15	05/06/15	07/28/15	09/16/15					10/29/14
56	934205	Belvedere Rd (EB)/ LWDD Canal E-3	Regular NBI	1		03/26/14				03/25/16	934205	02/04/15	05/26/15	09/02/15						09/18/14
57	934206	Belvedere Rd (WB)/ LWDD Canal E-3	Regular NBI	1		03/26/14				03/25/16	934206	02/04/15	05/26/15	09/02/15						09/18/14
58	934208	Belvedere Rd/ PBC Stub Canal	Regular NBI			04/28/14	07/31/14			04/27/16	934208	03/18/15	04/30/15	07/23/15						08/14/14
59	934212	Big Blue Trace/ C-51	Regular NBI			01/21/14	04/13/12			01/21/16	934212	04/17/15	07/09/15	10/08/15						12/18/14
60	934213	Forest Hill Blvd/ C-51 Canal	Regular NBI			06/27/14	11/19/14			06/26/16	934213	04/21/15	07/09/15	10/15/15						12/19/14
61	934214	Marginal Rd/ LWDD L-5 Canal	Regular NBI			03/28/14	05/30/14	07/01/14	1	03/27/16	934214	03/06/15	07/10/15	10/15/15						10/24/14
62	934220	Okeechobee EB/ M-1 Canal	Regular NBI	1		05/12/14	07/31/14	05/29/15		05/11/16	934220	02/05/15	05/28/15	09/02/15						09/30/14
63	934221	Pioneer Rd/ LWDD E-1 Canal	Regular NBI			04/28/14	07/31/14			04/27/16	934221	04/15/15	06/25/15	09/24/15						10/24/14
64	934222	Okeechobee WB/ M-1 Canal	Regular NBI			05/12/14	07/31/14	05/22/15		05/11/16	934222	02/05/15	05/28/15	09/02/15						05/07/14
65	934223	Wallis Rd/ LWDD E-3 Canal	Regular NBI			06/10/14	11/19/14			06/09/16	934223	02/18/15	06/05/15	09/30/15						10/03/14
66	934224	Palm Bch Lks WB/ Lk Mangonia Canal	Regular NBI			05/13/14	07/31/14			05/12/16	934224	01/29/15	05/14/15	09/02/15						09/03/14
67	934228	Summit Blvd/ LWDD E-3 Canal	Regular NBI			03/26/14	05/30/14	08/01/14	1	03/25/16	934228	02/03/15	05/06/15	07/29/15						06/25/14
68	934229	Cherry Rd/ Airport Canal	Regular NBI			01/22/14				01/22/16	934229	02/03/15	05/22/15	09/18/15						09/18/14
69	934237	Wabasso Dr/ LWDD L-2 Canal	Regular NBI	1		04/30/14	08/14/14			04/29/16	934237	02/03/15	05/22/15	09/18/15						09/17/14
70	934240	Okeechobee Blvd/ M-2 Canal	Regular NBI			04/29/14	08/08/14			04/28/16	934240	02/17/15	06/04/15	09/22/15						10/02/14
71	934251	Congress Ave/ LWDD L-2 Canal	Regular NBI			04/24/14	08/08/14			04/23/16	934251	02/03/15	05/22/15	07/24/15						09/17/14
72	934254	Fla Mango/ LWDD PBC Lat 2	Regular NBI	1		04/24/14	08/08/14			04/23/16	934254	03/18/15	04/29/15	07/24/15	09/10/15					10/21/14
73	934256	Haverhill Rd/ M Canal	Regular NBI			05/12/14	08/08/14	06/23/15	1	05/11/16	934256	02/25/15	06/18/15	09/03/15						10/21/14
74	934258	Congress Ave/ C-15 (M)Canal	Regular NBI			04/24/14	08/08/14			04/23/16	934258	03/03/15	05/15/15	09/03/15						09/12/14
75	934259	Congrees Ave/ WPB Canal	Regular NBI			03/18/14	03/20/12	04/02/13	1	03/17/16	934259	01/08/15	05/15/15	07/28/15	09/03/15					09/04/14
76	934271	Jog Road/L-5 Canal (SB)	Regular NBI			09/08/14	12/04/14			09/07/16	934271	01/30/15	05/06/15	07/28/15						06/25/14
77	934272	Jog Road/L-5 Canal (NB)	Regular NBI			09/08/14	04/24/13	03/27/14	1	09/07/16	934272	01/30/15	05/06/15	07/28/15						06/25/14
78	934273	Jog Road/C-51 Canal	Regular NBI			09/10/14	12/18/14			09/09/16	934273	01/28/15	04/24/15	07/24/15						
	934273	Jog Road/C-51 Canal	Interim			06/16/14	06/16/14	01/23/15	1	06/15/16	934273									
79	934275	Australian Ave (SB)/ Okeechobee Blvd	Regular NBI	1		03/27/14				03/26/16	934275	01/23/15	05/12/15	08/26/15						08/22/14
80	934276	Australian Ave (NB)/ Okeechobee Blvd	Regular NBI			03/27/14				03/26/16	934276	01/23/15	05/12/15	08/26/15						08/22/14
81	934277	Australlian Ave SB/ Clear Lake	Regular NBI	1		05/13/14	07/31/14	05/14/15		05/12/16	934277	01/23/15	05/12/15	08/27/15						08/28/14
82	934278	Australlian Ave SB/ City WPB Canal	Regular NBI	1		05/14/14	08/14/14	05/14/15		05/13/16	934278	01/23/15	05/12/15	08/27/15						08/28/14

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83	934282	Belvedere Road/Fla Turnpike	Regular NBI			09/25/14	03/12/15			09/24/16	934282	01/23/15	04/29/15	07/21/15	10/20/15					06/19/14
84	934283	Jog Rd/ Roebuck Rd	Regular NBI			05/05/15	08/07/15			05/04/17	934283	02/24/15	06/18/15	09/10/15						10/17/14
85	934291	Crestwood Blvd/ ITCWD Canal 3	Regular NBI			01/21/14	04/13/12	05/08/12	1	01/21/16	934291	02/18/15	06/05/15	09/22/15						10/02/14
86	934293	Binks Forest Dr/ C-51 WPB Canal	Regular NBI			08/14/14	11/19/14			08/13/16	934293	04/14/15	07/09/15	10/08/15						12/17/14
87	934294	Crestwood Blvd/ ITCWD Canal 2	Regular NBI			01/21/14	04/12/12	05/08/12	1	01/21/16	934294	02/18/15	06/05/15	09/22/15						10/02/14
88	934295	Haverhill Rd/ C-51 WPB Canal	Regular NBI			07/14/14	12/16/14			07/13/16	934295	01/28/15	05/05/15	07/28/15						06/25/14
89	934296	Crestwood Blvd/ ITCWD Canal 1	Regular NBI			01/21/14	04/12/12	05/03/12	1	01/21/16	934296	02/17/15	06/05/15	09/22/15						10/02/14
90	934297	Jog Road/Fla Turnpike	Regular NBI			09/10/14	12/16/14			09/09/16	934297	01/27/15	05/05/15	07/23/15						06/24/14
91	934302	6th Ave So. (WB)/ Lk Osb-Center Dr	Regular NBI	1		04/23/14	07/31/14	02/27/15	1	04/22/16	934302	02/26/15	05/21/15	08/18/15						10/31/14
92	934307	6th Ave So. (EB)/ Lk Osb-Center Dr	Regular NBI	1		04/23/14	07/31/14	02/27/15	1	04/22/16	934307	02/26/15	05/21/15	08/18/15						10/31/14
93	934312	Kudza Rd/LWDD Lat 8 Canal	Regular NBI			06/24/14	11/19/14	08/04/15		06/23/16	934312	02/05/15	05/06/15	07/29/15						07/01/14
94	934313	Lyons Rd/ LWDD Lat 14 Canal	Regular NBI			06/24/14	11/20/14	10/06/15		06/23/16	934313	04/03/15	06/24/15	09/09/15						10/23/14
95	934315	Jog Rd/ LWDD Lat 14 Canal	Regular NBI			08/19/14	11/20/14	12/02/14	1	08/18/16	934315	03/24/15	06/16/15	09/03/15						12/30/14
96	934318	Military Trl/ LWDD L-14 canal	Regular NBI			02/13/14	05/30/14	07/17/14	1	02/13/16	934318	02/11/15	05/12/15	08/04/15						07/09/14
97	934319	Seminole Dr/ LWDD Lat 16 Canal	Regular NBI			06/16/14	09/11/14	06/04/15	1	06/15/16	934319	03/05/15	06/02/15	08/21/15						11/07/14
98	934322	Purdy Lane/ LWDD E-3 Canal	Regular NBI	1		06/24/14	11/20/14	08/04/15		06/23/16	934322	02/06/15	05/07/15	07/29/15						10/24/14
	934322	Purdy Lane/ LWDD E-3 Canal	Special Posted			06/23/15	09/17/15			06/22/17	934322									
99	934326	Cresthaven Blvd/ LWDD E-3 Canal	Regular NBI	1		06/24/14	11/20/14			06/23/16	934326	02/10/15	05/07/15	07/29/15						07/03/14
100	934328	Palomino Dr/ LWDD E-1 Canal	Regular NBI			08/14/14	12/18/2014	07/02/15		08/13/16	934328	04/10/15	06/25/15	09/24/15						12/31/14
101	934331	Congress Ave SB/ LWDD Lat 17 Canal	Regular NBI			06/11/14	09/16/14	06/15/15		06/10/16	934331	03/12/15	06/03/15	08/26/15						11/07/14
102	934332	Congress Ave NB/ LWDD Lat 17 Canal	Regular NBI			06/11/14	09/16/14	06/15/15		06/10/16	934332	03/12/15	06/03/15	08/26/15						11/07/14
103	934341	Lantana Rd WB/ Lake Osbourne	Regular NBI	1		06/12/14	09/11/14			06/11/16	934341	03/04/15	05/28/15	08/21/15						11/06/14
104	934342	Lantana Rd EB/ Lake Osbourne	Regular NBI	1		06/12/14	10/16/14	04/22/14	1	06/11/16	934342	03/04/15	05/28/15	08/21/15						11/06/14
105	934344	Hypoluxo Rd/ Lakewood E-4 Canal	Regular NBI	1		04/23/14	07/31/14			04/22/16	934344	03/05/15	06/03/15	08/26/15						12/18/14
106	934345	Hypoluxo Rd WB/ LWDD E-3 Canal	Regular NBI			07/15/14	12/16/14	12/16/14	1	07/14/16	934345	03/24/15	06/16/15	09/03/15						12/24/14
107	934346	Hypoluxo Rd EB/ LWDD E-3 Canal	Regular NBI			07/15/14	12/16/14	12/16/14	1	07/14/16	934346	03/24/15	06/16/15	09/03/15						12/24/14
108	934347	East Ocean Ave/ Hypoluxo Island Lgn	Regular NBI			08/12/14	12/18/14			08/11/16	934347	02/27/15	05/22/15	08/19/15						11/05/14
109	934348	10 Ave (N)/ E-3 Canal	Regular NBI			03/28/14				03/27/16	934348	02/10/15	05/07/15	07/31/15						07/08/14
110	934350	Center Dr/LWDD L-14 Canal	Regular NBI			04/15/14	07/31/14			04/14/16	934350	Parks								
111	934357	Center Drive/Keller Canal (JPPark)	Regular NBI			09/11/14	03/11/15	06/03/15		09/10/16	934357	Parks								
112	934359	Haverhill Road/LWDD L-14 Canal	Regular NBI			11/19/14	03/11/15			11/18/16	934359	01/08/15	02/11/15	05/08/15	08/04/15					07/08/14
	934359	Haverhill Road/LWDD L-14 Canal	Interim			02/28/14				02/28/16	934359									
113	934360	Lantana Rd/ LWDD E-1 Canal	Regular NBI			09/11/14	12/16/14			09/10/16	934360	04/03/15	06/18/15	09/09/15						10/23/14
114	934361	Melaleuca Lane/ E-3 Canal	Regular NBI			11/20/14	03/18/15			11/19/16	934361	02/11/15	05/08/15	07/31/15						07/08/14
115	934362	Hypoluxo Rd/ E-1 Canal	Regular NBI			07/15/14	01/29/15			07/14/16	934362	03/26/15	06/17/15	09/08/15						09/09/14
116	934363	Gateway Blvd/ LWDD E-3 Canal	Regular NBI			08/13/15	10/13/15			08/12/17	934363	03/20/15	06/12/15	09/03/15						12/24/14
117	934364	2nd Ave North/ Keller Canal (E-4)	Regular NBI			05/20/14	07/31/14	02/18/15		05/19/16	934364	02/13/15	05/20/15	08/18/15						10/30/14
118	934365	Lantana Rd/ LWDD E-2 (W)	Regular NBI			08/14/15	10/13/15			08/13/17	934365	03/25/15	06/16/15	09/04/15						12/30/14
119	934366	Lantana Rd/ LWDD E-2 (E)	Regular NBI			08/14/15	10/13/15			08/13/17	934366	03/24/15	06/16/15	09/04/15						12/30/14
120	934367	*Hypluxo Rd/ Fl Turnpike*	Initial			02/26/14	06/12/14			02/26/16	934367	04/03/15	06/24/15	09/23/15						12/04/14
121	934369	***Lantana - Ocean Ave. Bascule***	Initial			05/22/14	07/31/14	08/28/14	1	05/21/16	934369	03/03/15	05/26/15	08/20/15						12/30/14
	934369	**Lantana - Ocean Ave. Bascule**	Spec-movable			05/13/15	08/06/15			05/12/17	934369									
122	934373	*John Prince Park / Branch LWDD E-4*	Initial			04/13/15				04/12/17	934373	Parks								
123	934402	SW Third St/ LWDD E-1 Canal	Regular NBI			05/13/14	07/31/14			05/12/16	934402	02/18/15	05/13/15	07/30/15	10/14/15					08/07/14
124	934403	Sandalfoot Blvd/ E-1E Canal	Regular NBI			05/13/14	07/31/14			05/12/16	934403	02/17/15	05/13/15	07/30/15	10/14/15					08/07/14
125	934404	Sandalfoot Blvd EB/ E-1 Canal	Regular NBI	1		05/13/14	07/31/14			05/12/16	934404	02/17/15	05/13/15	07/15/15	10/14/15					08/07/14
126	934405	Sandalfoot Blvd WB/ E-1 Canal	Regular NBI	1		05/13/14	08/14/14			05/12/16	934405	02/17/15	05/13/15	07/15/15	10/14/15					08/07/14

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127	934406	W. Camino Real/ E-3 Canal LWDD	Regular NBI	1		07/17/14	01/30/15			07/16/16	934406	02/03/15	05/05/15	07/09/15	09/23/15					09/26/14
128	**934408**	**E. Camino Real Rd. (Boca Club) Bascule**	Regular NBI-Mvbl	1		05/28/15	10/01/15			05/27/17	934408	01/28/15	04/29/15	07/02/15	09/22/15					09/25/14
	934408	**E. Camino Real Rd. (Boca Club) Bascule**	Spec-movable			05/23/14	08/14/14			05/22/16	934408									
129	934419	El Clair Ranch Rd/ Canal L-30	Regular NBI	1		06/10/14	09/17/14	08/27/15	1	06/09/16	934419	01/20/15	03/19/15	06/16/15	08/26/15					09/17/14
130	934427	Via Delray Blvd/ LWDD E-3 Canal	Regular NBI			03/28/14				03/27/16	934427	01/21/15	03/19/15	06/16/15	08/27/15					09/17/14
131	934428	KimberlyBlvd EB/ E-1 Canal	Regular NBI	1		05/14/14	08/15/15			05/13/16	934428	02/19/15	05/15/15	08/04/15	10/20/15					10/16/14
132	934441	KimberlyBlvd WB/ E-1 Canal	Regular NBI	1		05/14/14	08/15/14			05/13/16	934441	02/19/15	05/15/15	08/04/15	10/20/15					10/16/14
133	934455	Barwick Rd/ LWDD Lat 30 Canal	Regular NBI			03/28/14	06/12/14	07/11/14	1	03/27/16	934455	03/17/15	06/09/15	08/25/15						12/16/14
134	934461	Woolbright(SE 15th Ave)/ LWDD E-4 Canal	Regular NBI			04/22/14	08/14/14			04/21/16	934461	03/11/15	06/03/15	08/18/15						12/04/14
135	934464	Palmetto Pk Rd EB / El Rio Cnl (E-4) (SBridge)	Regular NBI	1		05/21/14	08/15/14			05/20/16	934464	02/05/15	05/05/15	07/02/15	09/22/15					09/25/14
136	934465	Palmetto Pk Rd WB/ El Rio Cnl (E-4) (NBridge)	Regular NBI	1		05/21/14	08/15/14			05/20/16	934465	02/05/15	05/05/15	07/02/15	09/22/15					09/25/14
137	934468	Woolbright Rd EB/ Quail Covey Rd	Regular NBI			07/15/14	01/29/15			07/14/16	934468	03/04/15	06/02/15	08/18/15						07/02/14
138	934469	Woolbright Rd WB/ Quail Covey Rd	Regular NBI			07/15/14	12/16/14	12/16/14	1	07/14/16	934469	03/10/15	06/02/15	08/18/15						09/03/14
139	934470	Congress Ave/ C-15 Canal	Regular NBI			04/22/14	08/08/14			04/21/16	934470	01/27/15	04/08/15	06/25/15	09/17/15					09/23/14
140	934483	Linton Blvd/ Dirt Farm Road	Regular NBI			06/10/14	09/17/14	12/16/14	1	06/09/16	934483	01/22/15	04/07/15	06/17/15	09/01/15					09/19/14
141	934485	Linton Blvd/ E-3	Regular NBI			01/20/14	06/12/14	06/26/14	1	01/20/16	934485	01/22/15	04/10/15	06/19/15	09/01/15					09/19/14
142	934487	Le Chalet Blvd/ LWDD E-3 Canal	Regular NBI	1		06/13/14	09/19/14	09/04/15		06/12/16	934487	03/20/15	06/12/15	09/03/15						12/24/14
143	934488	Bob West Rd 130th St/ E-1 Canal	Regular NBI			07/15/14	01/29/15	08/14/15		07/14/16	934488	02/25/15	05/27/15	08/11/15						08/26/14
144	934489	Armone Place/ Canal E-1	Regular NBI			04/24/14	08/14/14	08/14/14	1	04/23/16	934489	03/26/15	06/17/15	09/08/15						12/31/14
145	934491	Congress Ave/ Boynton Canal C16	Regular NBI			06/12/14	09/19/14			06/11/16	934491	03/10/15	06/05/15	08/13/15						12/18/14
146	934499	Seacrest Blvd/ LWDD C-16 Canal	Regular NBI	1		06/12/14	09/19/14			06/11/16	934499	03/05/15	06/04/15	08/27/15						12/18/14
147	934502	Cork Screw/ Miami Canal	Regular NBI			08/11/14	11/21/14			08/10/16	934502	04/22/15	7/2/185	09/17/15						12/16/14
	934502	Cork Screw/ Miami Canal	Special Posted			01/19/15	03/18/15			01/18/17	934502									
148	934505	W.Lake Rd CR-717/ SFC Canal #1	Regular NBI			03/29/14	06/12/14	01/06/15	1	03/28/16	934505	04/24/15	07/09/15	09/30/15						12/30/14
149	934506	Vandergrift- Williams Rd (N) Canal	Regular NBI			05/04/15	08/12/15			05/03/17	934506	01/06/15	04/21/15	07/09/15	10/08/15					06/12/14
150	934513	Sam Senter Rd/ Ocean Canal L-13	Regular NBI			03/20/14	06/12/14	12/16/14	1	03/19/16	934513	04/16/15	06/30/15	09/25/15						12/09/14
151	934515	Harris Rd/ SFC Dist Canal #1	Regular NBI			03/20/14	06/12/14			03/19/16	934515	04/24/15	07/09/15	09/30/15						12/31/14
152	934516	Miami Canal Rd/ Branch Miami Canal	Regular NBI			03/20/14	06/12/14	12/18/14	1	03/19/16	934516	04/23/15	07/01/15	09/17/15						12/12/14
153	934518	Brwns Frm Rd/ Shawano Drain Ditch	Regular NBI			08/19/14	11/21/14	12/16/14	1	08/18/16	934518	04/17/15	06/30/15	09/29/15						12/11/14
154	934519	Duda Rd/ Hillsboro L-14 Canal	Regular NBI			08/11/14	12/18/14			08/10/16	934519	04/17/15	07/01/15	09/29/15						12/12/14
155	934522	Okeelanta Rd/ (N) New River Canal	Regular NBI			01/23/14	06/12/14	01/06/15	1	01/23/16	934522	04/22/15	07/02/15	09/17/15						12/24/14
156	934552	*Hatton Hwy (So)/ Drainage Canal*	Initial			02/25/14	06/12/14			02/25/16	934552	01/07/15	04/28/15	10/07/15						12/31/14
	934552	Hatton Hwy (So)/ Drainage Canal	Interim			06/13/12	06/13/12	06/13/12	1	06/13/14	934552									
157	934553	*Hatton Hwy/ Pahokee Drain Canal C-2*	Initial								934553	01/06/15	04/24/15		10/08/15					
158	934711	Benoist Farms Road/C-51 Canal	Regular NBI			11/19/14	03/11/15			11/18/16	934711	03/06/15	04/23/15	07/10/15	10/16/15					06/17/14
159	934721	*Pioneer Road / E-1 W*	Initial	1		02/27/14	06/12/14			02/27/16	934721	03/06/15	07/10/15	10/15/15						06/17/14
160	934731	Lyon's Rd. over SFWMD C-51 Canal	Regular NBI			01/21/14	04/12/12	05/11/12	1	01/21/16	934731	01/07/15	04/22/15	07/10/15	10/15/15					06/13/14
161	934751	Kirk Rd/ WPB Canal C-51	Regular NBI			04/24/14	08/08/14			04/23/16	934751	02/12/15	05/13/15	08/05/15						07/11/14
162	934900	SW 18th St (EB)/ LWDD E-3 canal	Regular NBI	1		07/17/12	04/26/13	03/12/15		07/17/14	934900	02/04/15	05/05/15	07/09/15	09/23/15					09/26/14
163	934901	SW 18th St (WB)/ LWDD E-3 canal	Regular NBI			07/17/14	03/12/15	03/12/15		07/16/16	934901	02/04/15	05/06/15	07/09/15	09/23/15					09/26/14
164	934902	Palmetto Pk Rd/ LWDD E-3 canal	Regular NBI			07/17/14	02/17/15			07/16/16	934902	02/03/15	05/05/15	07/09/15	09/23/15					09/26/14
165	934904	New England Blvd/ LWDD E-1	Regular NBI			07/16/14	01/29/15			07/15/16	934904	02/19/15	05/15/15	08/04/15	10/20/15					10/16/14
166	934905	Spanish Isles Blvd/ LWDD E-1	Regular NBI			07/16/14	01/29/15			07/15/16	934905	02/20/15	05/21/15	08/05/15						10/17/14
167	934907	Palmetto Pk WB/ SR-91 TPK-Boca Rio	Regular NBI			05/14/14	08/19/14			05/13/16	934907	02/04/15	05/06/15	07/09/15	09/29/15					09/26/14
168	**934908**	**Palmetto Park Bascule**	Regular NBI-Mvbl	1		10/24/13	03/27/14			10/24/15	934908	02/03/15	04/29/15	07/01/15	09/22/15					07/25/14
	934908	**Palmetto Park Bascule**	Spec-movable			10/24/13	04/19/13			10/24/15	934908									
169	934909	Palmetto Pk EB/ SR-91 TPK-Boca Rio	Regular NBI	1		05/14/14	08/19/14			05/13/16	934909	02/04/15	05/06/15	07/10/15	09/29/15					09/30/14

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170	934911	Old Dixie Hwy/ C-15 Canal	Regular NBI	1		04/22/14	08/08/14			04/21/16	934911	01/29/15	04/10/15	06/25/15	09/17/15					09/24/14
171	934913	Jog Rd (SB)/ Boynton Canal	Regular NBI			02/13/14	06/18/14			02/13/16	934913	03/20/15	06/11/15	09/02/15						12/23/14
172	934914	Lawrence Rd/ Boynton Canal C-16	Regular NBI			06/11/14	04/19/13	05/06/14	1	06/10/16	934914	03/17/15	06/09/15	09/01/15						12/23/14
173	934915	Military Trl (SB)/ LWDD L-38 Canal	Regular NBI			07/16/14	01/30/15			07/15/16	934915	01/23/15	04/08/15	06/23/15	09/15/15					09/19/14
174	934916	Military Trl (NB)/ LWDD L-38 Canal	Regular NBI			07/16/14	01/30/15			07/15/16	934916	01/23/15	04/08/15	06/23/15	09/15/15					09/23/14
175	934918	Jog Rd (SB)/ LWDD L-38 Canal/ C-15	Regular NBI			07/16/14	02/04/15			07/15/16	934918	01/22/15	04/07/15	06/17/15	09/01/15					09/02/14
176	934920	Central Pk Blvd So (EB)/ E-1 Canal	Regular NBI	1		03/19/14	06/18/14	06/18/14	1	03/18/16	934920	02/18/15	05/14/15	07/30/15	10/15/15					10/08/14
177	934921	Central Pk Blvd So (WB)/ E-1 Canal	Regular NBI	1		03/19/14	06/18/14	06/18/14	1	03/18/16	934921	02/18/15	05/14/15	07/30/15	10/15/15					10/08/14
178	934922	N Central Pk Blvd / E-1 Canal	Regular NBI			08/21/14	02/17/15			08/20/16	934922	02/18/15	05/14/15	07/30/15	10/15/15					10/16/14
179	934923	N Central Pk Blvd / E-1 Canal	Regular NBI	1		08/21/14	02/26/15			08/20/16	934923	02/18/15	05/14/15	07/30/15	10/15/15					10/16/14
180	934924	Palmetto Park/ E-1 Canal	Regular NBI			05/14/14	09/02/14			05/13/16	934924	02/18/15	05/14/15	07/30/15	10/15/15					10/08/14
181	934925	SW 18th St WB/ SR-91 TPK-Drn Canal	Regular NBI			08/20/14	02/17/15			08/19/16	934925	02/06/15	05/12/15	07/14/15	10/08/15					10/02/14
182	934926	SW 18th St EB/ SR-91 TPK-Drn Canal	Regular NBI			08/20/14	02/17/15			08/19/16	934926	02/06/15	05/08/15	07/14/15	10/08/15					10/02/14
183	934927	Lake Ridge Blvd/ LWDD E-1 Canal	Regular NBI	1		03/26/14	06/18/14	06/27/14	1	03/25/16	934927	02/20/15	05/20/15	08/05/15						08/22/14
184	934928	Yamato Rd/ LWDD E-1 Canal	Regular NBI			02/12/14	06/18/14	06/24/18	1	02/12/16	934928	02/19/15	05/15/15	08/04/15	10/20/15					10/16/14
185	934929	Clint Moore Rd/ E-1 Canal	Regular NBI			03/19/14	06/18/14	06/18/14	1	03/18/16	934929	02/20/15	05/21/15	08/06/15						10/21/14
186	934930	Congress Ave NB/ LWDD Lat-30 Canal	Regular NBI			08/13/14	12/18/14			08/12/16	934930	03/13/15	06/05/15	08/21/15						09/11/14
187	934931	Congress Ave SB/ LWDD Lat-30 Canal	Regular NBI			08/13/14	12/18/14			08/12/16	934931	03/13/15	06/05/15	08/21/15						11/07/14
188	934932	Congress Ave SB/ LWDD Lat-32 Canal	Regular NBI			08/08/12	05/07/13	12/16/14	1	08/08/14	934932	03/13/15	06/09/15	08/21/15						12/16/14
189	934933	Congress Ave NB/ LWDD Lat-32 Canal	Regular NBI			08/13/14	12/18/14			08/12/16	934933	03/13/15	06/09/15	08/21/15						12/16/14
190	934934	Military Trl (SB)/ C. Stanley Weaver	Regular NBI			04/25/14	08/08/14			04/24/16	934934	03/17/15	06/11/15	09/01/15						12/23/14
191	934935	Military Trl (NB)/ C. Stanley Weaver	Regular NBI			04/25/14	08/08/14			04/24/16	934935	03/17/15	06/11/15	09/01/15						12/23/14
192	934936	Military Trl SB/ LWDD Lat 30 (E Bridge)	Regular NBI			08/20/14	02/17/15			08/19/16	934936	03/18/15	06/11/15	08/25/15						09/12/14
193	934937	Military Trl NB/ LWDD Lat 30 (E Bridge)	Regular NBI			08/20/14	02/17/15			08/19/16	934937	03/18/15	06/11/15	08/25/15						09/12/14
194	934938	Jog Rd SB/ LWDD L-30 Canal	Regular NBI			06/10/14	09/26/14			06/09/16	934938	01/21/15	04/07/15	06/17/15	08/27/15					09/18/14
195	934939	Jog Rd NB/ LWDD L-30 Canal	Regular NBI			06/10/14	09/26/14			06/09/16	934939	01/21/15	04/07/15	06/17/15	08/27/15					09/18/14
196	934940	Pipers Glenn Road/ LWDD E-3 Canal	Regular NBI			09/10/14	02/26/15	08/27/15		09/09/16	934940	03/18/15	06/16/15	08/26/15						09/16/14
197	934942	Miner Rd/ E-4	Regular NBI			08/19/14	12/16/14	03/10/15		08/18/16	934942	03/11/15	06/09/15	08/28/15						12/19/14
198	934943	Marina Blvd/ E-1 (W) Canal	Regular NBI			10/17/13	03/28/14			10/17/15	934943	02/17/15	05/13/15	07/15/15	10/09/15					08/07/14
199	934944	Marina Blvd/ E-1 (E) Canal	Regular NBI			10/17/13	03/28/14	01/27/15	1	10/17/15	934944	02/17/15	05/13/15	07/15/15	10/09/15					10/02/14
200	934945	Yamato Rd (WB)/ Fl. Turnpike	Regular NBI			02/12/14	06/18/14	06/25/14	1	02/12/16	934945	02/19/15	05/19/15	08/04/15	10/20/15					10/17/14
201	934946	Yamato Rd (EB)/ Fl. Turnpike	Regular NBI			02/12/14	06/18/14	06/25/14	1	02/12/16	934946	02/19/15	05/20/15	08/05/15	10/20/15					10/17/14
202	934948	Flavor Pict Rd/ E-3 Canal	Regular NBI			06/11/14	09/26/14			06/10/16	934948	03/19/15	06/16/15	08/26/15						09/17/14
203	934950	Hagan Ranch Rd/ Boynton Canal	Regular NBI			03/21/14	06/18/14	08/27/14	1	03/20/16	934950	03/17/15	06/11/15	09/02/15						12/23/14
204	934951	Jog Rd (NB)/ Boynton Canal	Regular NBI			02/13/14	06/25/14			02/13/16	934951	03/20/15	06/11/15	09/02/15						12/24/14
205	934952	Jog Rd (NB)/ L-38 Canal (C-15)	Regular NBI			07/16/14	02/04/15			07/15/16	934952	01/22/15	04/07/15	06/17/15	09/01/15					09/18/14
206	934953	*Lyons Rd/ C-16 (initial- Rd widening)*	Regular NBI			01/23/14	04/12/12	04/25/12	1	01/23/16	934953	03/26/15	06/17/15	09/04/15						12/31/14
207	934954	Lyons Rd/ Casa Mar Dr	Regular NBI			08/14/15	10/13/15			08/13/17	934954	03/26/15	06/17/15	09/04/15						12/31/14
208	934956	Lyons Rd/ LWDD Lat 38 Canal (C-15)	Regular NBI			05/29/14	09/26/14			05/28/16	934956	02/24/15	05/22/15	08/06/15						10/22/14
209	934958	Hagen Ranch/ L-30	Regular NBI			05/06/15	08/12/15			05/05/17	934958	01/21/15	04/07/15	06/17/15	08/27/15					09/18/14
210	934960	Camino Real/ El Rio Canal	Regular NBI	1		10/22/14	03/12/15	10/15/15		10/21/16	934960	02/03/15	04/29/15	07/02/15	09/22/15					09/25/14
211	934963	Lake Ida Road/ C-3 Canal	Regular NBI			11/20/14	03/18/15			11/19/16	934963	03/17/15	06/09/15	08/21/15						12/16/14
212	934964	Lake Ida Road/ E-3 Canal	Regular NBI			10/30/14	03/11/15	03/12/15		10/29/16	934964	01/21/15	03/19/15	06/16/15	08/27/15					09/17/14
213	934965	Lake Ida Rd/ E-4 Canal	Regular NBI			03/21/14	06/25/14			03/20/16	934965	03/17/15	06/09/15	08/21/15						12/16/14
214	934966	Clintmoore/ E-2 W	Regular NBI			02/09/15	07/02/15	07/14/15		02/08/17	934966	02/20/15	05/22/15	08/06/15						08/22/14
215	934967	Clintmoore/ E-2 W	Regular NBI			03/16/15	07/02/15			03/15/17	934967	02/20/15	05/22/15	08/06/15						08/22/14
216	934968	Clintmoore/ E-2 E	Regular NBI			03/16/15	07/31/15	08/04/15		03/15/17	934968	02/24/15	05/22/15	08/06/15						08/22/14

Palm Beach County Bridge Inspection - Maintenance Tracking System

Bridge Inventory Spreadshet (2014-2015 cycle)
Over 20' FDOT Inspection Reports and Maintenance Check-off Lists

	Bridge #	Location	Type Insp.	FO	SD	Inspc. Date	Sent Maint.	to File:	I-Val	Next Insp	Bridge #	PM Cycle 1	PM Cycle 2	PM Cycle 3	PM Cycle 4	PM Cycle 5	PM Cycle 6	PM Cycle 7	PM Cycle 8	Last PM Prev Cal YR
217	934969	Clintmoore/ E-2 E	Regular NBI			03/17/15	08/04/15	08/14/15		03/16/17	934969	02/24/15	05/22/15	08/06/15						08/22/14
218	934977	Lyons Rd/ L-30 canal								12/30/01	934977	02/25/15	05/26/15	08/07/15						12/02/14
219	934981	*Old Boynton Rd/ E-4*	Initial			02/27/14	06/25/14	07/02/15	1	02/27/16	934981	03/06/15	06/04/15	08/27/15	10/06/15					12/18/14
220	934986	Linton Blvd/ LWDD E-4 Canal	Regular NBI			05/29/14	09/26/14			05/28/16	934986	01/27/15	04/08/15	06/25/15	09/15/15					09/23/14
221	934989	Woolbright (SE 15th Ave)/ E-3	Regular NBI			05/06/15	08/12/15			05/05/17	934989	03/18/15	06/11/15	08/25/15						12/17/14
222	937703	Australian Ave NB/ City WPB Canal	Regular NBI	1		05/14/14	09/02/14	05/14/15		05/13/16	937703	01/23/15	05/12/15	08/27/15						08/28/14
223	937706	Palm B Lk Blvd EB/ Lk Mangonia Canal	Regular NBI			05/13/14	08/08/14	05/15/15		05/12/16	937706	01/29/15	05/14/15	09/02/15						09/03/14
224	937707	Australian Ave NB/ Clear Lake	Regular NBI	1		05/13/14	08/14/14	05/14/15		05/12/16	937707	01/23/15	05/12/15	08/27/15						08/28/14
225	937709	Palm Beach Lakes Blvd/ CSX Railroad	Regular NBI	1		05/15/14	08/27/14	10/20/15		05/14/16	937709	01/27/15	05/13/15	09/01/15						09/02/14
		Total structures inspected:	242	45	0				63			219	218	206	58					
												Total PM Cycle 1-4		701	of 1200					
		Over 20ft Bridge inventory:	225																	
		Overall Bridge Count:	310								Total State and PBC PM Cycle 1-4				903					

KEY:

Interim = Interim inspection PBC requested
Initial Inspect = first bridge inspection after construction complete
Wht on Blk Total = Interims + Initials
Spec-posted = weight limited bridges
Spec-movable = Fracture critical for Bascules
Regular = regular NBI with Movable or Fixed
Regular NBI*FO = reg NBI w/ Movable or Fixed <Functionally Obsolete>
Regular NBI*SD = reg NBI w/ Movable or Fixed <Structurally Deficient>

*NOTE: **Routine bridge maintenace** - 1 crew @ $1500.00/ visit by 6 times/yr

PBC Road/ Bridge: Big Blue Trace, Binks Forest, Benoist Farms Rd @ C-51 Canal and Forest Hills Blvd @ C-51 Canal
Not PBC: Flying Cow

Request FDOT begin inspecting - not finaled or accepted PBC.
Pioneer/ E-1
Pioneer/ E-2
Lyons Rd/ C-51
Benoist Frms/ C-51
~~930192 Congress Av/L-14 (E Br.)~~ Removed from inventory
930163 Congress Av/L-14 (W Br.)

ROAD SEGMENTS - BRIDGE MAINTENANCE on Decks and Slopes only FOR STATE BRIDGES

Bridge #	Location	Type Insp.	FO	SD	Inspc. Date	Sent Maint.	to File:		Next Insp	Bridge #	PM Cycle 1	PM Cycle 2	PM Cycle 3	PM Cycle 4					
935-6	Congress Ave @ I-95 Overpass									935-6	02/03/15	05/20/15	09/04/15						04/30/14
1678-2	Hood Rd @ I-95 Overpass									1678-2	03/31/15	07/16/15							12/10/14
1678-2	Hood Rd @ FL TPk Overpass									1678-2	TBD	No PBC maintenance responsibility							07/01/14
800-1	Central Blvd @ I-95 Overpass									800-1	04/09/15	07/14/15	10/16/15						07/01/14

Palm Beach County Bridge Inspection - Maintenance Tracking System

Bridge Inventory Spreadshet (2014-2015 cycle)
Over 20' FDOT Inspection Reports and Maintenance Check-off Lists

	Bridge #	Location	Type Insp.	FO	SD	Inspc. Date	Sent Maint.	to File:	I-Val	Next Insp	Bridge #	PM Cycle 1	PM Cycle 2	PM Cycle 3	PM Cycle 4	PM Cycle 5	PM Cycle 6	PM Cycle 7	PM Cycle 8	Last PM Prev Cal YR
	105-1	45th @ FL TPK Overpass (New bridge 934166)									105-1									05/20/14
	364-2	Australlian Ave @ I-95 Overpass									364-2	01/20/15	05/05/15	08/20/15						08/20/14
	1107-2	Donald Ross Rd @ FL TPK Overpass									1107-2	04/09/15	07/16/15							07/08/14
	M-899	Fl Mango Pump Station @ L-2									M-899	03/18/15	07/24/15	09/10/15						10/21/14
		Benoist Pit (L42'xW20') Bridge																		
12	930192	Congress Av/L-14 (E Br.)								12/30/01	930192									
77	934231	Caroline Ave/ LWDD L-3 Canal	Special-Posted			08/18/11	11/15/11	12/16/11	1	08/17/13	934231	CULVERT				09/19/14				
78	934231	Caroline Ave/ LWDD L-3 Canal								12/30/01	934231									
27	934118	Prosperity Farms Rd/ Cabana Colony								12/30/01	934118									
60	934215	Benoist Frm/ C-51								12/30/01	934215									
68	934239	Seminole Blvd/ LWDD L-2 Canal	Regular NBI			08/12/14	05/01/13	06/18/13	1	08/11/16	934239	REMOVED								09/17/14
	934239	Seminole Blvd/ LWDD L-2 Canal	Special-Posted			08/08/13	03/27/14	12/10/14	1	08/08/15	934239									
70	934250	Osceola Dr./ LWDD L-2 Canal	Regular NBI			04/30/14	08/08/14	02/04/15	1	04/29/16	934250	REMOVED								09/17/14
	934250	Osceola Dr./ LWDD L-2 Canal	Special-Posted			04/08/13	09/03/13	11/07/13	1	04/08/15	934250									

BRIDGE TYPE	TOTALS
Over 20' (includes Movables)	224
Under 20'	40
Pedestrian	35
Golf Cart Underpass	11
TOTAL BRIDGE COUNT	310

PARK's	20
Movable	9
Fixed (Total Over 20' + Under 20' - Movables)	255

Palm Beach County Bridge Inspection - Maintenance Tracking System

Bridge Inventory Spreadshet (2014-2015 cycle)
Over 20' FDOT Inspection Reports and Maintenance Check-off Lists

Bridge #	Proj. Replace Yr.	Design Load	Yr-Blt	Last Rehab	Const. Type	Contractor	Br-Ov-Lgth	Br-Ov-Wth	Erosion Control	
864099		HS20	1989	None	Concrete		160.5'	115.1'		
930026		HS20	1949	2010	Steel		310'	35'		
930026										
930038		H15	1954	2003	Concrete		176.4'	31.5'		
930056		H20	1969	None	Steel/Conc		613.8'	38.7'		
930056										
930072		H10	1935	1998	Steel/Conc		466.2'	16.4'		
930072										
930085		HS20	1968	None	Concrete		180'	35.4'		
930107		HS20	1966	None	Concrete		132.8'	66.3'		
930163		HS20	1963	2011	Concrete		162'	116'		
930214		HS20	1967	None	Steel/Conc		496'	38'		
930214										
930267		HS20	1976	None	Concrete		200'	49.2'		
930268		HS20	1976	None	Concrete		200'	49.2'		
930302		HS20	1975	None	Concrete		178'	56.5'		
930322		HS20	1981	None	Steel/Conc		1430.7'	102.4'		
930322										
930351		HS20	1985	None	Concrete		143'	59'		
930392		HS20	1986	None	Concrete		342.3'	46.8'		
930910			1968	None	Concrete		47.9'	49.5'		
930940		H15	1937	None	Steel		219.8'	26.5'		
930940										
934100		HS20	1966	1983	Concrete		145'	114.5'		
934116		HS20	1958	1991	Concrete		220'	78.6'		
934116										
934125		HS20	1981	None	Concrete		70'	36.7'		
934126		HS20	1995	None	Steel		67.4'	16.1'		
934128		HS20	1989	None	Concrete		71.5'	52.5'		
934129		HS20	1989	None	Concrete		71.5	52.5'		
934131		H20	1963	None	Concrete		104.8'	39.1'		
934131										
934135		HS20	1981	None	Concrete		151'	40.1'		
934135										
934136		HS20	1991	None	Concrete		110'	43'		
934137		HS20+Mod	1996	None	Concrete		75.1'	52.8'		
934139		HS20	1991	None	Concrete		75.1'	81.9'		
934140		HS20	1996	None	Concrete		89.9'	39.7'		
934142		HS20+Mod	1997	None	Concrete		191.9'	142.2'		
934144		HS20+Mod	1997	None	Concrete		100'	140.4'		
934146		HS20+Mod	1996	None	Concrete		124'	65'		
934147		HS20+Mod	1996	None	Concrete		124'	65'		
934148		HS20	1996	None	Concrete		214.5'	54.1'		
934149		HS20	1996	None	Concrete		214.5'	54.1'		
934150		HS20	1976	1994	Concrete		146'	38.1'		
934151		HS20	1993	None	Concrete		69'	64.5'		
934155		HS20	1994	None	Concrete		639.8'	53.1'		

Palm Beach County Bridge Inspection - Maintenance Tracking System

Bridge Inventory Spreadshet (2014-2015 cycle)
Over 20' FDOT Inspection Reports and Maintenance Check-off Lists

Bridge #	Proj. Replace Yr.	Design Load	Yr-Blt	Last Rehab	Const. Type	Contractor	Br-Ov-Lgth	Br-Ov-Wth	Erosion Control	
934156		HS20	1994	None	Concrete		639.8'	53.1'		
934158		HL93	2012	None	Concrete		37.6'	30'		
934160		HS20	1999	None	Steel/Conc		1423.5'	57'		
934160										
934161		HS20	1999	None	Steel/Conc		1423.5'	57'		
934161										
934162		HS20	2003	None	Concrete		433.3'	45'		
934164		HS25	1999	None	Concrete		228.5'	63.3'		
934166		HL93	2011	None	Concrete		575.8'	102.6'		
934167										
934168										
934171			2009	None	Concrete		23.5'			CULVERT
934175		HL93	2009	None	Concrete		30'			CULVERT
934176		HL93	2009	None	Concrete		115'	40.5'		
934177		HL93	2009	None	Concrete		320'	91.1'		
934178		HL93	2007	None	Concrete		108.8'	53'		
934179		HL93	2006	None	Concrete		270'	49'		
934201		HS20	1967	None	Steel/Conc		335.3'	62.7'		
934203		H20	1965	None	Concrete		75'	40.5'		
934205		HS20	1975	None	Concrete		85.3'	36'		
934206		H20	1975	None	Concrete		85.3'	36'		
934208		HS20	1974	1995	Concrete		146'	128'		
934212		HS20+Mod	1975	1999	Concrete		199.1'	117.3'		
934213		HS20	1986	1997	Concrete		168.9'	136.5'		
934214			1955	2011	Concrete		95.1'	37.5'		
934220		HS20	1977	None	Concrete		154'	35.1'		
934221		HL93	1978	None	Concrete		54.4'	63.9'		
934222		HS20	1991	None	Concrete		154'	53.5'		
934223		HS20	1984	None	Concrete		115'	41'		
934224		HS20	1962	1980	Concrete		115'	55.4'		
934228		HS20	1992	None	Concrete		106.6'	80.7'		
934229		HL93	2011	None	Concrete		94'	46.2'		
934237		HS20	1961	None	Concrete		20'	35.2'		
934240		HS20+Mod	1995	None	Concrete		120'	45.6'		
934251		H20	1967	None	Concrete		45'	63.5		
934254		H20	1965	None	Concrete		45'	37'		
934256		H20+Mod	1992	None	Concrete		130'	89'		
934258		HS20	1980	None	Concrete		115'	81.5'		
934259		HS20	1980	None	Concrete		160'	68.2'		
934271		HS20	1993	None	Concrete		95.1'	57.4'		
934272		HS20	1993	None	Concrete		95.1'	57.4'		
934273		HL93	1993	2014	Concrete		220'	153.3'		
934273										
934275		HS20	1973	None	Concrete		293.9'	44.8'		
934276		HS20	1973	None	Concrete		293.9'	44.9'		
934277		HS20	1970	None	Concrete		164.7'	36.7'		
934278		H15	1972	None	Concrete		133'	35.5'		

Palm Beach County Bridge Inspection - Maintenance Tracking System

Bridge Inventory Spreadshet (2014-2015 cycle)
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Bridge #	Proj. Replace Yr.	Design Load	Yr-Blt	Last Rehab	Const. Type	Contractor	Br-Ov-Lgth	Br-Ov-Wth	Erosion Control	
934282		HS20+Mod	1996	None	Concrete		280.6'	117.7'		
934283		HS20	2004	None	Concrete		347.2'	74'		
934291		HS25 or Greater	1999	None	Concrete		110.5'	95.2'		
934293		HS20+Mod	1990	None	Concrete		188'	84.9'		
934294		HS25 or Greater	1999	None	Concrete		110.5	95.4'		
934295		HS20	1987	2007	Concrete		125'	140'		
934296		HS25 or Greater	1999	None	Concrete		110.5'	95.5'		
934297		HL93	1994	2007	Concrete		236.9'	120'		
934302		HS20	1977	None	Concrete		313'	35.5'		
934307		HS20	1970	None	Concrete		313'	35.5'		
934312		H15	1960	None	Concrete		44.9'	35.4'		
934313		HS20	1987	None	Concrete		30.3'	50.8'		
934315		HS20	1993	None	Concrete		75'	115'		
934318		HS20	1990	None	Concrete		146'	104.6'		
934319		H15	1959	None	Concrete		73.5'	35.1'		
934322		HS20	1961	None	Concrete		75.1'	39'		
934322										
934326		HS20	1972	None	Concrete		78.7'	38.3'		
934328		HS20	1989	None	Concrete		34'	47'		
934331		HS20	1984	None	Concrete		85.2'	48.2'		
934332		H20	1961	None	Concrete		84.9'	53.1'		
934341		HS20	1989	None	Concrete		176.2'	48.2'		
934342		HS20	1989	None	Concrete		176.2'	48.2'		
934344		H20	1989	None	Concrete		145.3'	106.3'		
934345		HS20	1990	None	Concrete		78'	51'		
934346		HS20	1991	None	Concrete		78'	51'		
934347		HS20	1989	None	Concrete		32.5'	66.8'		
934348			1990	None	Concrete		84.9'	90.5'		
934350		HS20	1989	None	Concrete		142.5'	44.7'		
934357		HS20	1996	None	Concrete		119.8'	42.6'		
934359			2001	None	Concrete		133.5'	53.5'		
934359										
934360		HS20	1997	None	Concrete		78'	109'		
934361		HL93	2006	None	Concrete		78'	83.4'		
934362		HS20+Mod	2000	None	Concrete		80.4'	111.5'		
934363		HS20+Mod	2002	None	Concrete		129.8'	97.6'		
934364		HS20	2003	None	Concrete		132'	49.4'		
934365		HS20+Mod	2001	None	Concrete		108'	110.4'		
934366		HS20+Mod	2001	None	Concrete		78.2'	109.8'		
934367		HL93	2009	None	Concrete		470.5'	83'		
934369		HL93	2013	None	Steel/Conc		845'	52'		
934369										
934373		HL93	2009	None	Concrete		11'-2"	51'-8"		
934402		H20	1972	None	Concrete		48'	37.3'		
934403		H20	1972	None	Concrete		38.5'	65.1'		
934404		H20	1969	None	Concrete		48.5'	34.7'		
934405		H20	1969	None	Concrete		48.5'	34.7'		

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Bridge #	Proj. Replace Yr.	Design Load	Yr-Blt	Last Rehab	Const. Type	Contractor	Br-Ov-Lgth	Br-Ov-Wth	Erosion Control	
934406		HS20	1972	1996	Concrete		130'	88.2'		
934408		HS15	1939	2007	Concrete		256.6'	32.5'		
934408										
934419		HS20	1975	None	Concrete		156.1'	38'		
934427		HS20	1972	None	Concrete		100.5'	38'		
934428		H20	1975	None	Concrete		51.5'	36'		
934441		H20	1973	None	Concrete		51.5'	36'		
934455		HS20	1964	None	Concrete		90.5'	41'		
934461		HS20	1971	None	Concrete		100.5'	87'		
934464		HS20	1966	None	Concrete		137.1'	37.7'		
934465		HS20	1966	None	Concrete		137.1'	37.7'		
934468		HS20	1991	None	Concrete		98.1'	42.9'		
934469		HS20	1991	None	Concrete		98.1'	42.9'		
934470		HS20	1969	1988	Concrete		230'	116.5'		
934483		HS20	1991	None	Concrete		90.2'	52.4'		
934485		HS20+Mod	1994	None	Concrete		107.9'	125'		
934487		HS20	1981	None	Concrete		104'	58'		
934488		HS20	1993	None	Concrete		101'	37.4'		
934489		HS20	1988	None	Concrete		47'	48.5'		
934491		HS20	1982	None	Concrete		166'	116.8'		
934499		H20	1959	1987	Concrete		189.6'	82.3'		
934502		HS20	1955	None	Concrete		136'	38'		
934502										
934505		HS20	1982	None	Concrete		131.4'	42.6'		
934506		HS20	1992	None	Concrete		121'	32.8'		
934513		HS20	1966	None	Concrete		90.5'	40.5'		
934515		HS20	1980	None	Concrete		31.8'	24.2'		
934516			1979	None	Concrete		85'	37'		
934518		HS20	1993	None	Concrete		68'	33.1'		
934519		HS20	1955	None	Concrete		167'	47.9'		
934522		HS25 or Greater	1999	None	Concrete		149.9'	45.6'		
934552		HL93	2011	None	Concrete		99.8'	64.5'		
934552										
934553										
934711		HL93	2008	None	Concrete		232.5'	80'		
934721		HL93	2005	None	Concrete		137.5'	42.2'		
934731		HL93	2004	None	Concrete		212.5'	80.2'		
934751		HS20	2007	None	Concrete		169.5'	85.4'		
934900		HS20	1975	None	Concrete		130'	46.7'		
934901		HS20	1975	None	Concrete		130'	51.2'		
934902		HS20	1979	1989	Concrete		130'	137.1'		
934904		HS20	1980	None	Concrete		91'	42.5'		
934905		H20	1985	None	Concrete		70.5'	48.8'		
934907		HS20	1986	None	Concrete		626.5'	56.4'		
934908		HS20+Mod	1987	None	Steel/Conc		556'	72.5'		
934908										
934909		HS20	1986	None	Concrete		626.5'	56.4'		

Palm Beach County Bridge Inspection - Maintenance Tracking System

Bridge Inventory Spreadshet (2014-2015 cycle)
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Bridge #	Proj. Replace Yr.	Design Load	Yr-Blt	Last Rehab	Const. Type	Contractor	Br-Ov-Lgth	Br-Ov-Wth	Erosion Control	
934911		HS20	1964	None	Concrete		220.1'	38.3'		
934913		HS20	1991	None	Concrete		130'	60.7'		
934914		HL93	1980	2010	Concrete		91.3'	67'		
934915		HS20	1987	None	Concrete		150'	55.1'		
934916		HS20	1987	None	Concrete		150'	52.1'		
934918		HS20	1991	None	Concrete		130'	55.7'		
934920		HS20+Mod	1984	None	Concrete		90'	34.6'		
934921		HS20+Mod	1984	None	Concrete		90'	34.6'		
934922		HS20	1992	None	Concrete		98'	34.1'		
934923		HS20	1992	None	Concrete		98'	34.1'		
934924		HS20	1987	None	Concrete		99'	132.9		
934925		HS20	1990	None	Concrete		500'	53.7'		
934926		HS20	1990	None	Concrete		500'	53.7'		
934927			1987	None	Concrete		101'	44'		
934928		HS20	1992	None	Concrete		100'	128.9'		
934929		HL93	1990	2004	Concrete		95.4'	110'		
934930		HS20	1988	None	Concrete		160'	55.6'		
934931		HS20	1988	None	Concrete		159.8'	49.8'		
934932		HS20	1988	None	Concrete		115.5'	49.2'		
934933		HS20	1988	None	Concrete		115'	55.7'		
934934		HS20	1991	None	Concrete		166'	49.9'		
934935		HS20	1991	None	Concrete		166'	57'		
934936		HS20	1990	None	Concrete		150.9'	51.1'		
934937		HS20	1990	None	Concrete		150.9'	55.7'		
934938		HS25	1999	None	Concrete		129.9'	53.1'		
934939		HS20+Mod	1994	None	Concrete		130'	53.1'		
934940			1985	None	Concrete		73.5'	33.9'		
934942		HS20	1990	None	Concrete		148.3'	52.6'		
934943		HS20+Mod	1993	None	Concrete		76.1'	104.7'		
934944		HS20+Mod	1993	None	Concrete		76.7'	97.5'		
934945		HS20	1992	None	Concrete		430.5'	54.1'		
934946		HS20	1992	None	Concrete		430.5'	54.1'		
934948		HS25	1997	None	Concrete		115.1'	55.7'		
934950		HS20+Mod	1995	None	Concrete		131'	47.1'		
934951		HS20+Mod	1996	None	Concrete		134.2'	53.1'		
934952		HS20	1997	None	Concrete		130'	53.1'		
934953		HL93	1999	2005	Concrete		148.3'	111.8'		
934954		HS20+Mod	2002	None	Concrete		135'	111.4'		
934956		HS20+Mod	2000	None	Concrete		134'	57.4'		
934958		HS20	2002	None	Concrete		133.3'	79.4'		
934960		HS20+Mod	1995	None	Concrete		155.9'	82.9'		
934963		HS25 or Greater	2002	None	Concrete		76.5'	92'		
934964		HS20+Mod	1996	None	Concrete		82'	82'		
934965		HS20+Mod	1996	None	Concrete		130.2'	81'		
934966										
934967										
934968		HS20+Mod	2004	None	Concrete		100.8'	60'		

Palm Beach County Bridge Inspection - Maintenance Tracking System

Bridge Inventory Spreadshet (2014-2015 cycle)
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Bridge #	Proj. Replace Yr.	Design Load	Yr-Blt	Last Rehab	Const. Type	Contractor	Br-Ov-Lgth	Br-Ov-Wth	Erosion Control
934969		HS20+Mod	2004	None	Concrete		100.8'	55'	
934977									
934981		HL93	2009	None	Concrete		126.5'	60.4'	
934986			2003	None	Concrete		180.5'	99.6'	
934989			2003	None	Concrete		115.3'	101'	
937703		H15	1959	None	Concrete		133'	35.5'	
937706		HS20	1967	1980	Concrete		115'	51.5'	
937707		HS20	1970	None	Concrete		164.7'	36.7'	
937709		H20	1965	None	Concrete		1043.9	52.5'	

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Bridge Inventory Spreadshet (2014-2015 cycle)
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Bridge #	Proj. Replace Yr.	Design Load	Yr-Blt	Last Rehab	Const. Type	Contractor	Br-Ov-Lgth	Br-Ov-Wth	Erosion Control
934239		H20	1961	None	Concrete		25'	39.2'	
934239									
934250		H20	1961	None	Concrete		30'	34.8'	
934250									

Palm Beach County Bridge Inspection - Maintenance Tracking System

Bridge Inventory Spreadshet (2014-2015 cycle)
Under 20' Inspection Reports and Maintenance Check-off Lists

#	Bridge #	Palm Beach County Bridge Location	Rd-Dist	Co-Dist	Start	Forward	Return	Val	Next Inspct	Intl-Insp (33)	Intrm-Insp (37)	Util-Insp (34)	Util-Opn	W/O Opn	Proj Opn
1	GC 2	Hagen Ranch/ Lighthouse Hill Ln. (S. of Le Chalet Blvd. @ Lighthouse Hill Dr.)	4	4	03/27/15	04/22/15			03/26/17						
2	GC 3	Hagen Ranch/ .10 mile no. Gateway (.10 Mi. N. of Gateway Blvd.)	4	4	03/27/15	04/22/15			03/26/17						
3	GC 4	Lyons Rd/ (.8 mi. S. of Glades Rd.)	4	4	04/23/14	04/30/14	07/08/15	1	04/22/16						
4	GC 6	Jog Rd/ (.1 Mi. S. of Pipers Glenn Blvd.)	4	5	11/06/14	12/03/14	08/25/15	1	11/05/16						
5	GC 7	Lake Worth Rd/ West of 441 (135' E. of Wycliff)	3	6	06/16/15	07/29/15			06/15/17						
6	GC 8	Lake Worth Rd/ West of 441 (105' E. of Wycliff)	3	6	06/16/15	07/29/15			06/15/17						
7	GC 9	El Clair Ranch Rd. (.5 Mi. S. of Woolbright Rd.)	4	5	03/06/15	03/12/15		1	03/05/17						
8	GC 10	Via Delray/ near El Clair (.2 Mi. E. of Via Delray Blvd.)	4	5	03/06/15	03/20/15			03/05/17						
9	GC 11	Lyons Rd/ (S. of Perth Rd)	3	3	06/04/13	06/19/13	01/23/15	1	06/04/15					1	
10	GC 12	Indiantown Rd/ (W. of of Turnpike)	1	1	01/15/15	02/05/15	02/05/15	1	01/14/17						
11	PB 934103	Juno Isles Blvd. over Fresh Water Lake	1	1	08/14/14	11/05/14	10/08/15	1	08/13/16						
12	PB 934109	Van Kessel Blvd/ Fresh water lake (Parks)	1	1	10/03/14	10/23/14	02/05/15	1	10/02/16						
13	PB 934114	Garden Rd Br. over Drainage Ditch	1	7	07/17/14	07/31/14	08/19/14	1	07/16/16						
	PB 934114	Garden Rd Br. over Drainage Ditch (INTERIM)	1	7	06/05/15	06/12/15	07/14/15	1							
14	PB 934120	Carlin Park Br. over Branch ICWW (Parks)	1	1	07/17/14	07/16/20			07/16/16						
	PB 934120	Carlin Park Br. over Branch ICWW (Parks) (INTERIM)	1	1	04/03/15	04/10/15			04/02/17		1				
15	PB 934150	Royal Plm Bch Blvd/ ITWCD "A"	1	6	04/15/14	04/24/14	06/03/15	1	04/14/16						
16	PB 934159	A-1-A (Ocean Ave)/ Branch ICWW (Carlin Park) (Initial)	1	1	09/25/14	10/07/14			09/24/16	1					
17	PB 934225	PB Lakes/ Golf Ave.	2	7	09/04/15	09/23/15			09/03/17						
18	PB 934230	Drexel Rd/ LWDD Lat-2	2	6	05/14/14	06/05/14	06/03/15	1	05/13/16						
19	PB 934234	Kirk Rd/ L-7	2	2	08/05/15	08/13/15			08/04/17						
20	PB 934235	Fla Mango Rd. Br. over Lat-6	2	2	05/27/14	06/12/14			05/26/16						
21	PB 934238	Davis Rd. Br. over Lat-6	2	2	08/05/14	08/19/14	02/19/15	1	08/04/16						
22	PB 934257	Patrick Dr. Br. over Lat-6	2	2	08/26/14	09/11/14			08/25/16						
23	PB 934270	Fla Mango Rd. Br. over Lat-5	2	2	08/29/14	09/16/14			08/28/16						
24	PB 934274	Congress Ave/ "F" canal	2	7	03/05/14	03/18/14	05/01/14	1	03/04/16						
25	PB 934279	Haverhill/ LWDD Lat-4 Canal	2	6	06/13/14	07/15/14			06/12/16						
26	PB 934311	Sherwood Forest Blvd/ LWDD Lat-8	3	2	04/30/14	05/27/14	07/15/14	1	04/29/16						
27	PB 934333	Congress Ave/ L-16	3	3	06/10/14	06/18/14	08/27/15	1	06/09/16						
28	PB 934334	Prarie Rd. Br. over Lat-8 Canal	3	3	02/06/15	03/12/15			02/05/17						
29	PB 934336	Fla Mango over LWDD L-10	3	3	08/14/15	09/04/15			08/13/17						
30	PB 934337	Fla Mango/ LWDD L-9	3	3	09/22/15	10/21/15			09/21/17						
31	PB 934338	Fla Mango/ LWDD L-8	3	3	06/30/15	07/22/15			06/29/17						
32	PB 934339	Kirk Rd. Br. over LWDD Lat-8 canal	3	3	01/09/15	01/30/15			01/08/17						
33	PB 934354	Lake Osborne Dr. Br. over Lake Bass Canal	3	3	10/06/15	10/21/15			10/05/17						
34	PB 934355	Lawrence Rd. Br. over LWDD L-22 Canal	3	3	05/06/14	05/27/14	08/21/14	1	05/05/16						
35	PB 934387	Park Rd. (Sheriff Bike) Square Lake Canal John Prince (Parks)	3	3	02/19/15	03/10/15			02/18/17						
36	PB 934411	Smith Sunday Rd. over L.W.D.D. Lat. 33 Canal	4	5	11/20/14	12/09/14			11/19/16						
37	PB 934426	Clintmoore Rd. Br. over LWDD E-4 Canal	4	4	03/25/14	04/08/14	07/09/15	1	03/24/16			1			
38	PB 934479	Congress Ave/ L-24	3	3	04/17/15	06/19/15			04/16/17						
39	PB 934493	Congress Ave/ LWDD L-21 canal	3	3	03/17/15	04/14/15			03/16/17					1	
40	PB 934910	Sims Rd/ L-35	4	5	03/11/14	03/27/14	06/18/14	1	03/10/16						
41	PB 934916	Congress Ave. over L.W.D.D. Lat. 28 Canal	4	3	03/11/14	03/27/14	06/10/14	1	03/10/16						
42	PB 934917	Congress/ L-27	4	3	01/31/14	02/14/14	06/10/14	1	01/31/16						
43	PB 934918	Congress/ L-26	4	3	04/22/14	05/07/14	06/24/15	1	04/21/16						
44	PB 934919	Congress over LWDD L-25 Canal	4	3	04/08/14	04/16/14			04/07/16						
45	PB 934938	El Clair Ranch/ LWDD L-28	4	5	08/08/14	08/26/14			08/07/16					1	
46	PB 934971	Congress Ave/ LWDD L-20 canal	3	3	06/24/14	07/16/14	08/20/14	1	06/23/16					1	
47	PB 934972	Congress Ave/ LWDD L-19 canal	3	3	07/11/14	07/17/14	08/20/14	1	07/10/16						
48	PB 934985	Linton/ E-3 1/2	4	4	02/20/14	03/13/14	06/18/14	1	02/20/16						
49	PED 5	Fla Mango/ LWDD L-8	3	3	06/30/15	07/29/15			06/29/17						
50	PED 6	Fla Mango/ LWDD L-9	3	3	09/22/15	10/21/15			09/21/17						
51	PED 7	Fla Mango/ LWDD L-10	3	3	08/14/15	09/04/15			08/13/17						

Palm Beach County Bridge Inspection - Maintenance Tracking System

Bridge Inventory Spreadshet (2014-2015 cycle)
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#	Bridge #	Palm Beach County Bridge Location	Rd-Dist	Co-Dist	Start	Forward	Return	Val	Next Inspct	Intl-Insp (33)	Intrm-Insp (37)	Utl-Insp (34)	Utl-Opn	W/O Opn	Proj Opn
52	PED 10	Center Dr. over small Ditch (John Prince Park) (Parks)	3	3	10/17/14	10/29/14			10/16/16						
53	PED 13	Lk Osborne Dr. / Lk Bass Canal (Parks)	3	3	09/30/14	10/22/14	02/05/15	1	09/29/16						
54	PED 16	Lake IDA Park over Lake IDA middle Br. to island (S. Br.) (Parks)	4	5	10/10/14	10/29/14	11/20/14	1	10/09/16						
55	PED 17	Lake IDA Park over Lake IDA middle Br. to island (S. Br.) (Parks)	4	4	10/10/14	10/29/14			10/09/16						
56	PED 25	Seminole Dr/ LWDD L-16	3	3	04/09/14	04/16/14	04/23/14	1	04/08/16						
57	PED 26	Woolbright Rd/ LWDD E-4 (North)	3	3	04/01/14	04/10/14	04/10/14	1	03/31/16						
58	PED 27	Woolbright Rd/ LWDD E-4 (South)	3	3	04/01/14	04/10/14	06/10/14	1	03/31/16						
59	PED 28	Dubois Park/ Branch ICWW (Parks)	1	1	04/16/14	04/18/14			04/15/16						
60	PED 29	Kudza/ L-8 (W) bridge	2	3	07/21/15	08/12/15			07/20/17						
61	PED 30	North Shore Dr. over LWDD Lat-14 Canal (Parks)	3	3	12/03/14	12/17/14	02/05/15	1	12/02/16						
62	PED 32	El Clair Ranch/ LWDD L-30	4	5	08/08/14	08/19/14			08/07/16						
63	PED 35	Kudza/ L-8 (E) bridge	2	3	07/21/15	08/12/15			07/20/17						
64	PED 36	Spanish Isles Blvd/ LWDD E-1 Canal	5	4	05/01/14	05/07/14	07/02/14	1	04/30/16						
65	PED 37	Le Chalet Blvd. over E-3 Canal	3	3	12/24/14	01/08/15			12/23/16						
66	PED 39	Lyons Rd/ LWDD L-11	3	6	04/03/15	04/03/15	04/10/15	1	04/02/17						
67	PED 40	Marginal/ L-5	2	6	02/11/14	02/27/14	07/17/14	1	02/11/16						
68	PED 41	Davis Rd/ LWDD L-6	3	2	02/13/14	02/27/14	07/17/14	1	02/13/16						
69	PED 44	Okeeheelee Pk. Br. over Lake (Parks)	2	6	10/29/14	11/14/14	04/16/15	1	10/28/16						
70	PED 45	Calossa Pk. Over Lat - 28 Canal (Parks)	4	3	09/10/14	09/19/14	02/05/15	1	09/09/16						
71	PED 46	Santaluces Pk. Br. over Lat - 17 Canal (Parks)	3	3	02/17/14	02/25/15			02/17/16						
72	PED 47	Lyons Rd/ L-10 (no work required)	3	6	02/14/14	02/27/14			02/14/16						
73	PED 48	Loxahatchee Slough Trail over S.F.W.M.D. C - 18 Canal (ERM)	1	1	09/18/14	09/26/14	10/07/14	1	09/17/16						
74	PED 49	Riverbend Pk. Br. over Canal (2)(Parks)	1	1	06/03/14				06/02/16						
75	PED 50	Riverbend Prk Equest/ Loxahatchee Rv	1	1	01/30/15	02/11/15	06/05/15	1	01/29/17	1					
76	PED 51	Lake Ida-4th St. @ Drainage Canal (Parks)	4	4	05/07/14	05/20/14			05/06/16						
77	PED 52	RiverBend Park Br over Canal (Parks)	1	1	06/04/14	01/29/13	05/21/13	1	06/03/16						
78	PED 53	Prosperity/ Cabana Colony	1	1	05/13/14	06/04/14			05/12/16						
79	PED 54	Prosperity/ Archies Creek	1	1	05/14/14	06/04/14	05/06/15	1	05/13/16						
80	PED 55	Bluegill Tr. Ped Br. over S.F.W.M.D. C-18 Canal	1	1	09/12/14	09/23/14	10/07/14	1	09/11/16		1				
81	PED 57	Seminole - Pratt Whitney over WPB M canal	1	6	08/27/14	09/16/14	06/11/15	1	08/26/16	1					
82	PED 58	10th Ave North over Keller Canal (North)	3	3	10/07/14	10/29/14	11/06/14	1	10/06/16						
83	PED 59	10th Ave North over Keller Canal (South)	3	3	10/08/14	10/29/14	11/06/14	1	10/07/16						
84	PED 60	Congress Ave Over L-16	3	3	10/14/14	10/29/14			10/13/16						
85	PED 61	Osceola Drive at LWDD L-2 Canal	2	2	05/20/15	06/09/15			05/19/17						
85	**Total Insp**	**87**	**Rd-Dist**	**Co-Dist**	**87**	**86**	**43**	**44**	**Next Inspct**	**3**	**2**	**1**	**0**	**4**	**0**

INITIAL-33= Initial inspection
INTRm-37 = Interim inspection
Utility-34 = Utility Inspection
Parks = Condition Report (Inspected for Parks Dept.)

Performance Measure Key Indicator

<20 Total of all inspections (33,37,34):	93
>20 State Interims by PBC Br. Insp.:	11
<20 & >20 Inspecs. Performed by PBC Br. Insp.:	**104**

28	PB 934330	Davis Rd/ LWDD L-11 (City of Palm Springs)	3	3	05/15/13	07/23/13	08/01/13	1	05/15/15			1	1	1	
63	PED 31	Removed													
15	PB 934133	A-1-A (Ocean Ave)/ Branch ICWW (Carlin Park) Removed 4-1-14	1	1	11/01/12	11/01/12	12/18/12	1	11/01/14						
64	PED 34	Kirk/ L-9 (no maint required) Remove in August 2014	3	3	02/19/14	02/28/14	04/08/14	1	02/19/16						
27	PB 934316	Kirk Rd Br. over LWDD Lat-9	3	3	03/21/13	03/29/13	04/01/11	1	03/21/15						

Palm Beach County Bridge Inspection - Maintenance Tracking System

Bridge Inventory Spreadshet (2014-2015 cycle)
Under 20' Inspection Reports and Maintenance Check-off Lists

Bridge #	PM Cyc 1	PM Cyc 2	PM Cyc 3	PM Cyc 4	PM Cyc 5	PM Cyc 6	PM Cyc 7	PM Cyc 8	Last PM Prev Cal YR	GR	PR	BR	VBr	Projected Replace Yr.	Design Load	Yr-Blt	Last Rehab	Const. Type	Contractor	Br-Ov-Lgth	Br-Ov-Wth	Erosion Control
GC 2	03/18/15	06/11/15	09/02/15						12/24/14									Concrete		14'-0"	80'-0"	Retaining Wall
GC 3	03/18/15	06/11/15	09/02/15						12/24/14									Concrete		14'-0"	80'-0"	Retaining Wall
GC 4	03/04/15	05/27/15	08/11/15						12/02/14									Concrete		14'-0"	108'-0"	Retaining Wall
GC 6	03/13/15	05/27/15	08/11/15						12/02/14	N	Y	Y	N					Concrete		14'-0"	102'-0"	Retaining Wall
GC 7	No maintenance required																	Concrete				
GC 8	No maintenance required																	Concrete				
GC 9	01/20/15	05/27/15	08/11/15						12/02/14									Concrete		14'-0"	80'-0"	Retaining Wall
GC 10	01/20/15	05/27/15	08/11/15						12/02/14									Concrete		15'-0"	44'-0"	Retaining Wall
GC 11	01/20/15	03/25/15	06/17/15	09/04/15					12/31/14	N	Y	Y	N					Concrete	Johnson & Davis	12'-0"	109'-0"	MSE Wall
GC 12	04/14/15	07/21/15							12/31/14	N	Y	Y	N			2008		Concrete	Toll Brothers	20'-6"	200'-0"	Retaining Wall
PB 934103	04/15/15	07/23/15							07/31/14						H-20-44	1963		Concrete		16'-4"	35'-0"	None
PB 934109	Parks									Y	N	N	N			1975		Concrete	PBC R&B Department	15'-0"	43'-0"	Rip-Rap
PB 934114	03/05/15	06/26/15	09/30/15						11/04/14						H-20-44	1966		Concrete	PBC R&B Department	17'-0"	35'-0"	None
PB 934120	Parks														H-20	1962		Concrete	PBC R&B Department	17'-0"	34'-0"	None
PB 934150	02/05/15	06/02/15	09/18/15						09/30/14						H-20-44	1994		Concrete	Drawdy Construction	17'-10"	81'-1"	Rev. Mat
PB 934159	01/09/15	07/22/15							07/31/14						HL-93 Impact	2014		Concrete	Drawdy Construction	17'-10"	50'-0"	Rip-Rap
PB 934225	01/29/15	05/14/15	09/01/15						04/25/14						H-15	1959	1982	Concrete		16'-6"	179'-0"	Block Wall
PB 934230	02/04/15	05/26/15	09/02/15						09/19/14						H-20-44	1962		Concrete	PBC R&B Department	18'-0"	37'-0"	None
PB 934234	02/04/15	05/13/15	08/05/15						07/10/14						H-20-44	1961		Concrete	PBC R&B Department	16'-6"	39'-9"	None
PB 934235	02/19/15	05/14/15	08/06/15						10/28/14						H-20	1979		Concrete	PBC R&B Department	17'-0"	37'-0"	Concrete
PB 934238	02/18/15	05/14/15	08/05/15						10/28/14						H-20-44	1967		Concrete	PBC R&B Department	17'-0"	37'-0"	Concrete
PB 934257	02/19/15	05/15/15	08/06/15						10/28/14	Y	Y	Y			H-20-44	1976		Concrete	Devcon Int. Const. Co.	19'-0"	34'-0"	None
PB 934270	02/18/15	05/14/15	08/05/15	09/16/15					10/28/14	Y	Y	N	N		H-20-44	1982		Concrete	PBC R&B Department	17'-0"	37'-0"	None
PB 934274	02/03/15	05/20/15	09/17/15						09/12/14						H-15	1959		Concrete		16'-4"	71'-5"	None
PB 934279	02/18/15	06/09/15	09/03/15						10/03/14						H-20-44	2000		Concrete	Drawdy Construction	15'-0"	79'-9"	Rev. Mat
PB 934311	02/05/15	05/06/15	07/29/15						06/25/14						H-20-44	1967		Concrete	PBC R&B Department	17'-0"	37'-0"	Rev. Mat
PB 934333	03/13/15	06/02/15	08/25/15						11/07/14	Y					H-20-44	1970	2014	Concrete		17'-9"	115'-0"	Rev. Mat
PB 934334	02/19/15	05/15/15	08/07/15						10/29/14	Y	Y	N	N		H-20-44	1966		Concrete	PBC R&B Department	16'-11"	36'-9"	Rip-Rap
PB 934336	02/20/15	05/19/15	08/07/15						10/30/14						H-20	1967		Concrete		18'-3"	37'-1"	Rip-Rap Bags
PB 934337	02/20/15	05/19/15	08/07/15						10/29/14	Y					H-20	1968		Concrete		18'-4"	37'-0"	Rip-Rap Bags
PB 934338	02/19/15	05/15/15	08/07/15						07/16/14	Y					H-20	1968		Concrete		18'-2"	37'-0"	Rip-Rap Bags
PB 934339	02/05/15	05/13/15	08/04/15						07/09/14	Y	Y	Y	N		H-20-44	1995		Concrete	Drawdy Construction	21'-0"	88'-1"	Rev. Mat
PB 934354	02/26/15	05/22/15	08/19/15						11/04/14							1955	1997	Concrete		18'-0"	35'-0"	Concrete
PB 934355	03/13/15	06/09/15	09/01/15						12/23/14						H-25	2006		Concrete	Zep Contracting Inc	20'-0"	79'-0"	Rev. Mat
PB 934387	Parks									Y	Y	Y	N			2007		Concrete		10'-0"	43'-6"	Rip-Rap
PB 934411	02/25/15	05/26/15	08/07/15						10/23/14	N	Y	N	N		H-20-44	1965		Concrete	PBC R&B Department	17'-0"	32'-9"	None
PB 934426	01/29/15	04/10/15	06/25/15	09/17/15					09/23/14						H-20	1973		Concrete		17'-6"	85'-6"	Concrete
PB 934479	03/10/15	06/05/15	08/27/15	10/06/15					12/18/14						H-20-44	1963	1983	Concrete	PBC R&B Department	17'-0"	119'-0"	Concrete
PB 934493	03/11/15	06/05/15	08/27/15						12/19/14	Y	N	N	N		HS-20-44	1985		Concrete	Hardrives/Volunteer Const.	18'-0"(Askew)	112'-0"	None
PB 934910	01/23/15	04/08/15	06/19/15	09/01/15					09/19/14	Y					HS-20-44	1989		Concrete		17'-11"	78'-4"	Rip-Rap Bags
PB 934916	03/13/15	06/05/15	08/20/15						09/11/14						H-20-44	1989		Concrete	Weekly Const./Hardrives	19'-6"	108'-9"	Rip-Rap Bags
PB 934917	03/12/15	06/05/15	08/20/15						09/10/14	Y					H-20-44	1988		Concrete	Weekly Const./Hardrives	19'-6"	116'-0"	Rip-Rap Bags
PB 934918	03/04/15	05/28/15	08/12/15						12/03/14	Y					H-20-44	1988		Concrete	Hardrives	19'-6"	115'-11"	Rip-Rap Bags
PB 934919	02/25/15	05/28/15	08/12/15						12/02/14	Y					H-20-44	1988		Concrete	Weekly Const./Hardrives	19'-6"	116'-0"	Rip-Rap Bags
PB 934938	03/18/15	06/11/15	08/25/15						12/17/14	Y	Y	Y			H-20-44	1992		Concrete	Murray Logan	16'-6"	45'-11"	Rev. Mat
PB 934971	03/12/15	06/09/15	08/28/15						12/19/14						HS-25	2000		Concrete	Drawdy Construction	15'-0"	115'-1"	Rev. Mat
PB 934972	03/13/15	06/09/15	09/01/15						12/19/14						HS-25	2000		Concrete	Drawdy Construction	15'-0"	115-1"	Rev. Mat
PB 934985	01/27/15	04/08/15	06/24/15	09/15/15					09/23/14						HL-93	2004		Concrete	Weekly Const.	15'-0"	64'-11"	Rev. Mat
PED 5	02/19/15	05/15/15	08/07/15						07/16/14								1995	Conc./Galv. Steel		16'-4 1/2"	4'-3 1/2"	N/A
PED 6	02/20/15	05/19/15	08/07/15						10/29/14								1995	Conc./Galv. Steel		16'-2 1/2"	4'-2"	N/A
PED 7	02/20/15	05/19/15	08/07/15						10/30/14									Conc./Galv. Steel		16'-1 1/2"	4'-2 1/2"	N/A

Palm Beach County Bridge Inspection - Maintenance Tracking System

Bridge Inventory Spreadshet (2014-2015 cycle)
Under 20' Inspection Reports and Maintenance Check-off Lists

Bridge #	PM Cyc 1	PM Cyc 2	PM Cyc 3	PM Cyc 4	PM Cyc 5	PM Cyc 6	PM Cyc 7	PM Cyc 8	Last PM Prev Cal YR	GR	PR	BR	VBr	Projected Replace Yr.	Design Load	Yr-Blt	Last Rehab	Const. Type	Contractor	Br-Ov-Lgth	Br-Ov-Wth	Erosion Control
PED 10	Parks									N	Y	N						Wood	P.B. County Parks Dept.	49'-0"	5'-8"	N/A
PED 13	Parks									N	Y	N				1974	2008	Steel / Wood	P.B. County Bridge Div.	69'-2"	5'-8 1/2"	Filter Fabric
PED 16	Parks									N	Y	N						Conc, T Beam		78'-6"	7'-9"	None
PED 17	Parks									N	Y	N						Conc, T Beam		74'-11"	8'-3"	None
PED 25	03/05/15	06/02/15	08/21/15						11/07/14						85 psf	1997		Aluminum Truss	Construction Technology	60'-1 1/2"	5'-10 1/2"	Rev. Mat
PED 26	03/11/15	06/03/15	08/18/15						12/04/14							1997		Conc./T-beam	Drawdy Construction	79'-4"	8'-1"	Concrete
PED 27	03/11/15	06/03/15	08/18/15						12/04/14							1997		Conc./T-beam	Drawdy Construction	99'-7"	8'-1"	Rev. Mat
PED 28	Parks														85 psf	1997		Wood,Glue Lam	Murray Logan	132'-0"	9'-5"	Concrete
PED 29	02/05/15	05/06/15	07/29/15						07/01/14							1998		Aluminum	Murray Logan	60'-7"	5'-11 1/2"	Rev. Mat
PED 30	Parks									N	Y	Y	N			1998		Wood,Glue Lam	Drawdy Construction	102'-1 1/2"	9'-0"	Rubble
PED 32	01/20/15	03/19/15	06/16/15	08/26/15					09/17/14	N	Y	N	N		85 psf	1998		Aluminum	Murray Logan	111'-3 1/2"	5'-10 1/2"	Rev. Mat
PED 35	02/05/15	05/06/15	07/29/15						07/01/14						85 psf	2001		Aluminum	Construction Technology	71'-2 1/2"	5'-3 1/2"	Rev. Mat
PED 36	02/20/15	05/21/15	08/05/15						10/17/14						85 psf	2001		Aluminum Truss	Construction Technology	62'-2"	7'-11 1/2"	Rip-Rap Bags
PED 37	03/20/15	06/12/15	09/03/15						08/28/14	N	Y	Y	N		85 psf	2001		Aluminum	Construction Technology	77'-11"	7'-3"	Rev. Mat
PED 39	04/10/15	06/25/15	08/25/15	09/09/15					12/31/14	N	Y	Y	N		85 psf	2002		Aluminum	P.B. County Bridge Div.	53'-0"	6'-0 1/2"	Rev. Mat
PED 40	03/06/15	07/10/15	10/15/15						06/13/14							2004		Aluminum	Drawdy Construction	66'-8 1/2"	6'- 0 1/2"	Rev. Mat
PED 41	02/18/15	05/14/15	08/05/15						10/28/14							2004		Aluminum	Drawdy Construction	66'-8 1/2"	5'-4"	Rev. Mat
PED 44	Parks									N	Y	Y	N					Wood		183'-0"	6'-6"	None
PED 45	Parks									N	Y					2005		Aluminum	Murray Logan	62'-0"	7'-2"	Rev. Mat
PED 46	03/05/15	06/02/15	08/21/15						11/07/14	N	Y	Y	N		85 psf	2005		Aluminum	Murray Logan	60'-0"	8'-0"	Rev. Mat
PED 47	04/10/15	06/25/15	08/25/15	09/24/15					10/23/14							2007		Steel/Wood	P.B. County Bridge Div.	60'-0"	5'-1"	None
PED 48	ERM									N	Y					2009		Weathering Steel	Murray Logan	106'-0"	10'-5"	Rev. Mat
PED 49	Parks																	Treated Pine		62'-0"	12'-2"	Rubble
PED 50	Parks									N	Y	Y	N			2009		Concrete	Drawdy Construction	75'-0"	11'-6 1/2"	Rubble
PED 51	Parks														60 psf	2009		Treated Pine	Murray Logan	67'-9"	6'-0"	Rubble
PED 52	Parks														85 psf	2010		Treated Pine	Murray Logan	70'-0"	12'-4"	Rubble
PED 53	01/13/15	04/28/15	08/11/15						08/13/14						85 psf	2010		Aluminum	P.B. County Bridge Div.	62'-0"	7'-4"	Rip-Rap Bags
PED 54	01/13/15	04/28/15	08/11/15						08/13/14						85 psf	2010		Aluminum	P.B. County Bridge Div.	53'-0"	7'-4"	Concrete
PED 55	ERM									N	Y					2011		Steel	Sunshine Land design	168'-0"	10'-0"	Rev. Mat
PED 57	02/06/15	06/04/15	08/19/15						10/01/14						90 psf	2014		Steel/Wood	Murphy Const./PBC Bridge	63'-0"	6'-0"	N/A
PED 58	02/20/15	05/19/15	08/14/15						10/30/14						3 Ton GVW	2014		Steel/Conc	Murphy Construction	125'-0"	7'-7"	Rev. Mat
PED 59	02/20/15	05/19/15	08/14/15						10/30/14						3 Ton GVW	2014		Steel/Conc	Murphy Construction	125'-0"	7'-7"	Rev. Mat
PED 60	03/13/15	06/02/15	08/25/15						11/07/14						90 psf	2014		Aluminum		50'-0"	7'-3"	Rev. Mat
PED 61	WARRANTY ITEM		09/17/15						n/a						85 psf	2015(1989)		Aluminum	Johnson Davis	38'-0"	6'-0"	Rev. Mat
Bridge #	**65**	**65**	**63**	**9**						**GR**	**HR**	**BR**	**VBr**	**Replace Yr. Proj.**	**Design Load**	**Yr. Blt.**	**Last Reha**	**Const. Type**	**Contractor**	**Br. Ov. Lgth**	**Br. Ov. Wth**	**Erosion Control**

PB 934330										N	Y	N	N		H-20-44	1966		Concrete	PBC R&B Department	17'	35'	None
PED 31																						
PB 934133	01/09/14															1962						
PED 34	To be Removed																					
PB 934316	11/14/13	12/19/13	04/01/14	Bridge removed 6/6/2013						Y	Y	N	N		H-20-44	1963		Concrete	PBC R&B Department	17'	37'7"	Rip-Rap

Total PM Cycle 1-4	202

Renewal/Replacement
Infrastructure Sales Tax Initiative

ATTACHMENT 4 - SAMPLE INDEPENDENT BRIDGE INSPECTION REPORT

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CID/Bridge Profile Report

BY: Kisinger Campo & Associates
OWNER: 2 County Hwy Agency
MAINTAINED BY: 2 County Hwy Agency
STRUCTURE TYPE: 3 Steel - 16 Movable-Bascule
LOCATION: 0.6MI E OF US-1
SERVICE TYPE ON: 5 Highway-pedestrian
SERV TYPE UND: 5 Waterway

STRUCTURE NAME: Clarence H. Geist Memorial Bridge
YEAR BUILT: 1939
SECTION NO.: 93 023 500
MP: 0.74
ROUTE: 00000
FACILITY CARRIED: E. CAMINO REAL
FEATURE INTERSECTED: INTRACOASTAL WATERWAY

☐ FUNCTIONALLY OBSOLETE ☒ STRUCTURALLY DEFICIENT

TYPE OF INSPECTION: Regular NBI with Movable

DATE FIELD INSPECTION WAS PERFORMED: ABOVE WATER: 05/28/2015 UNDERWATER: 5/13/2015

SUFFICIENCY RATING: 37.5
HEALTH INDEX: 76.18

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CID/Bridge Profile Report

BRIDGE ID: 934408
DISTRICT: 04 Fort Lauderdale **INSPECTION DATE: 5/28/2015 ENCF**

BY: Kisinger Campo & Associates
OWNER: 2 County Hwy Agency
MAINTAINED BY: 2 County Hwy Agency
STRUCTURE TYPE: 3 Steel - 16 Movable-Bascule
LOCATION: 0.6MI E OF US-1
SERVICE TYPE ON: 5 Highway-pedestrian
SERV TYPE UND: 5 Waterway

STRUCTURE NAME: Clarence H. Geist Memorial Bridge
YEAR BUILT: 1939
SECTION NO.: 93 023 500
MP: 0.74
ROUTE: 00000
FACILITY CARRIED: E. CAMINO REAL
FEATURE INTERSECTED: INTRACOASTAL WATERWAY

[X] THIS BRIDGE CONTAINS FRACTURE CRITICAL COMPONENTS
[X] THIS BRIDGE IS SCOUR CRITICAL
[ ] THIS REPORT IDENTIFIES DEFICIENCIES WHICH REQUIRE PROMPT CORRECTIVE ACTION
[ ] FUNCTIONALLY OBSOLETE [X] STRUCTURALLY DEFICIENT

TYPE OF INSPECTION: Regular NBI with Movable
DATE FIELD INSPECTION WAS PERFORMED: ABOVE WATER: 05/28/2015 UNDERWATER: 5/13/2015

SMART FLAGS:
None

OVERALL NBI RATINGS:

DECK: 6 Satisfactory
SUPERSTRUCTURE: 6 Satisfactory
SUBSTRUCTURE: 4 Poor
PERF. RATING: Poor

CHANNEL: 7 Minor Damage
CULVERT: N N/A (NBI)
SUFF. RATING: 37.5
HEALTH INDEX: 76.18

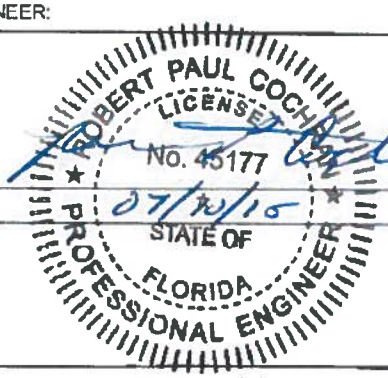
FIELD PERSONNEL / TITLE / NUMBER	INITIALS
Betz, Michael - Bridge Inspector/Diver (CBI#00162) (lead)	
Harrison, Michael - B.I. Tech.	
Barthle, Andrew - P.E. (#67512) Electrical	
Amalu-Anderson, Amaka - P.E. (#75527) Mrchanical	
Algazi, Robert - Asst. Mechanical	
Hoogland, Keith - Bridge Inspector (CBI #00341) - Lead Diver	
Salazar, Pete Jr. - Diver	
Payne, Timothy N. - Diver	

REVIEWING BRIDGE INSPECTION SUPERVISOR:
Rothman, David - Bridge Inspector (CBI #00056)

CONFIRMING REGISTERED PROFESSIONAL ENGINEER:

Cochran, Robert - (PE #45177)
Kisinger Campo & Associates
9270 Bay Plaza Boulevard
Certificate of Authorization #2317
Tampa, FL 33619

SIGNATURE:
DATE:



All Elements

UNIT: 0 DECKS

ELEMENT/ENV: 28/4 Steel Deck/Open Grid 2679 sf. ELEM CATEGORY: Decks/Slabs

CONDITION STATE (5)	DESCRIPTION	QUANTITY
2	There is little or no corrosion. The paint system, if any, may be showing early signs of distress. The connectors are still sound.	2679 sf.

ELEMENT INSPECTION NOTES:

CS2:
The steel deck grating has random areas of painted-over section loss - NO CHANGE.

The steel curbs over Bascule Pier 3 have moderate surface corrosion with up to 1/16in. deep pitting - NO CHANGE.

ELEMENT/ENV: 29/4 Steel Deck/Conc Grid 1066 sf. ELEM CATEGORY: Decks/Slabs

CONDITION STATE (5)	DESCRIPTION	QUANTITY
1	There is no corrosion. The paint system, if any, is sound. The connectors (welds, rivets, etc.) are sound. The concrete filler is sound.	1066 sf.

ELEMENT INSPECTION NOTES:

CS1:
Bascule Pier 4 left (north) sidewalk underside has a 4ft. x 7in. x 3in. spall with exposed rebar adjacent to Main Girder 4-1 - NO CHANGE. Refer to photo 1.

Areas of the steel grid are visible - NO CHANGE.

All Elements

UNIT: 0 DECKS

ELEMENT/ENV: 399/4 Other Xpansion Joint 66 lf. ELEM CATEGORY: Joints

CONDITION STATE (3)	DESCRIPTION	QUANTITY
1	The element shows minimal deterioration. Joint armor, if present, is secure. The adjacent deck and/or header is sound.	66 lf.

ELEMENT INSPECTION NOTES:

Note:
This element represents the joints along the bascule pier traffic plates.

CS1:
The traffic plate at Bascule Pier 4 has moderate wear in the wheel paths exposing bare metal - NO CHANGE.

The repair areas of the traffic plates have multi-directional 1/64in. wide cracks and random hollow sounding areas - NO CHANGE.

INCIDENTAL:
The east concrete header at Bascule Pier 4 traffic plate has a 2ft. 3in. long x 4-1/2in. wide delamination at the left (north) curb - NO CHANGE.

There is also a 2ft. 8in. x 4-1/2in. x 1/2in. area missing the top layer in the left (north) wheel path of the westbound lane - NO CHANGE.

ELEMENT/ENV: 334/4 Metal Rail Coated 172 lf. ELEM CATEGORY: Railing

CONDITION STATE (5)	DESCRIPTION	QUANTITY
1	There is no evidence of active corrosion. Protective coating is sound and functioning as intended to protect the element.	122 lf.
2	There is little or no active corrosion. Surface corrosion has formed or is forming. Protective coating may have minor areas of deterioration.	50 lf.

ELEMENT INSPECTION NOTES:

CS2:
The metal rails have severall small areas of peeling paint randomly throughout - INCREASE.

All Elements

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV: 107/4 Paint Stl Opn Girder 187 lf. **ELEM CATEGORY:** Superstructure

CONDITION STATE (5)	DESCRIPTION	QUANTITY
2	There is little or no active corrosion. Surface corrosion has formed or is forming. The paint system may be chalking, peeling, curling or showing other early evidence of paint system distress but there is no exposure of metal.	77 lf.
3	Surface corrosion is prevalent. There may be exposed metal but there is no active corrosion which is causing loss of section.	80 lf.

All Elements

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV: 107/4 Paint Stl Opn Girder 187 lf. ELEM CATEGORY: Superstructure

CONDITION STATE (5)	DESCRIPTION	QUANTITY
4	Corrosion may be present but any section loss due to active corrosion does not yet warrant structural review of either the element or the bridge.	30 lf.

ELEMENT INSPECTION NOTES:

Note:
The bascule span main girders were evaluated under this element. The measurement was taken from centerline of rack pinion to centerline of rack pinion.

CS4:
Random rivet heads on the top and bottom faces of the bottom flanges have moderate to heavy surface corrosion with approximately 80% section remaining - NO CHANGE. Refer to photo 2.

Main Girder 3-2 has ten rivet heads in the bottom face of the bottom flange with 50% to 25% section remaining with moderate corrosion at Bascule Pier 3 opening - NO CHANGE. Refer to photo 3.

Main Girder 3-2 has a 6in. long x 3in. wide area of heavy corrosion near Bascule Pier 4 machinery floor level support - NO CHANGE.

Main Girder 3-2 inside Bascule Pier 4 has painted-over corrosion and moderate section loss in the top and bottom flanges with numerous rivet heads having up to 40% section remaining - NO CHANGE.

CS3:
The main girders have light to moderate corrosion behind the vertical stiffeners and several vertical stiffeners have moderate to heavy flaking corrosion at the bottom flange - NO CHANGE. Refer to photo 4.

The top flange angles have random areas of light to moderate surface corrosion at the web - NO CHANGE.

The tops of the top flanges have areas of blistering paint with light to moderate surface corrosion and up to 3/16in. deep painted-over section loss - NO CHANGE.

The bottom flanges have moderate corrosion between built-up members at the lateral bracing gusset plates - NO CHANGE.

Refer to the additional Element Notes for other deficiencies and information.

All Elements

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV: 113/4 Paint Stl Stringer **489 lf.** **ELEM CATEGORY:** Superstructure

CONDITION STATE (5)	DESCRIPTION	QUANTITY
1	There is no evidence of active corrosion and the paint system is sound and functioning as intended to protect the metal surface.	483 lf.
3	Surface corrosion is prevalent. There may be exposed metal but there is no active corrosion which is causing loss of section.	6 lf.

ELEMENT INSPECTION NOTES:

Note:
The bascule span stringers were evaluated under this element. The stringers in the machinery rooms were included in the total quantity.

CS3:
The west 1in. of Stringers 3-1, 3-2 and 3-3 east of Floor Beam 3-3 has moderate surface corrosion on the bottom flange - NO CHANGE. Refer to photo 6.

The east 1in. of Stringers 3-2 and 3-3 west of Floor Beam 3-6 has moderate surface corrosion on the bottom flange - NO CHANGE.

Stringer 3-7 in Bascule Pier 3 and Stringer 3-1 in Bascule Pier 4 have up to 8in. long areas of moderate corrosion with knife-edging at the counterweight connection - NO CHANGE. Refer to photo 7.

The gusset plate at Stringer 3-4 in Bascule Pier 4 is knife-edged along the west edge - NO CHANGE.

CS1:
The stringers have areas of spotty corrosion throughout and painted-over section loss randomly - NO CHANGE.

ELEMENT/ENV: 152/4 Paint Stl Floor Beam **157 lf.** **ELEM CATEGORY:** Superstructure

CONDITION STATE (5)	DESCRIPTION	QUANTITY
1	There is no evidence of active corrosion and the paint system is sound and functioning as intended to protect the metal surface.	64 lf.

All Elements

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV: 152/4 Paint Stl Floor Beam 157 lf. **ELEM CATEGORY:** Superstructure

CONDITION STATE (5)	DESCRIPTION	QUANTITY
3	Surface corrosion is prevalent. There may be exposed metal but there is no active corrosion which is causing loss of section.	3 lf.

All Elements

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV: 152/4 Paint Stl Floor Beam 157 lf. **ELEM CATEGORY:** Superstructure

CONDITION STATE (5)	DESCRIPTION	QUANTITY
4	Corrosion may be present but any section loss due to active corrosion does not yet warrant structural review of either the element or the bridge.	90 lf.

ELEMENT INSPECTION NOTES:

Note:
The bascule span floor beams were evaluated under this element.

Floor Beams 3-1 and 3-8 have had sections cut out and replaced to facilitate installation of gear boxes (speed reducers) - NO CHANGE.

CS4:
The floor beams have areas of pitting in the top flange typically 1/8in. deep at the stringers and previous stringer locations, several with heavy corrosion - NO CHANGE. Refer to photo 8.

The retro-fit plates on Floor Beams 3-1 and 3-8 have moderate to heavy corrosion with up to 1/8in. section loss along the edges - NO CHANGE.

The top east rivet heads for Floor Beam 3-2 knee brace at the connection to Main Girder 3-2 have moderate to heavy corrosion with up to 30% section remaining and the bottom east flange has random areas of peeling paint with moderate surface corrosion - NO CHANGE.

The top east flange of Floor Beam 3-4 has random areas of heavy surface corrosion with up to 3/8in. deep section loss - NO CHANGE.

Floor Beam 3-5 has areas of heavy corrosion along the bottom flange edges and along the top east flange with 1/8in. section loss - NO CHANGE.

Floor Beam 3-8 bottom east flange at the south end has a 3ft. long area of moderate to heavy corrosion with 3/16in. deep pitting - NO CHANGE.

CS3:
Floor Beam 3-3 has a 4in. x 2in. area of heavy flaking corrosion in the bottom face at Stringer 3-3 - NO CHANGE.

The south gusset plate for Floor Beam 3-4 has moderate to heavy surface corrosion on the top and bottom face - NO CHANGE. Refer to photo 9.

Refer to the additional Element Notes for further deficiencies.

All Elements

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV: 540/4 Open Gearing **4 ea.** **ELEM CATEGORY:** Movable

CONDITION STATE (4)	DESCRIPTION	QUANTITY
2	Minor misalignment, gears may need lubrication, gear teeth wear or corrosion is measurable, but operation of drive system not impacted.	4 ea.

ELEMENT INSPECTION NOTES:

Note:
The four rack gear sets were evaluated under this element. Refer to the machinery layout diagram and charts in the additional Element Notes for related comments.

CS2:
Grease on all pinion and rack gear teeth is light on some teeth face sections. Sections of teeth are exposed and slight corrosion is present. Grease with a higher viscosity will help prevent sections of the teeth from being exposed. Grease pattern on rack depicts slight cross mesh misalignment with pinion - NEW. Refer to photo 11.

Paint loss and corrosion are present on the sides of all pinions and racks - NEW. Refer to photo 12.

The first and last tooth of all racks exhibit corrosion and section loss. This does not impede on operation as the faces are never in contact with the pinion - NEW. Refer to photo 13.

All pinion teeth exhibit minor scoring and slight flanging on the top lands near the ends of the teeth - NEW. Refer to photo 14

All rack inboard mounting bolts exhibit moderate corrosion and minor section loss - NEW. Refer to photo 15

Sections of all rack supports exhibit paint loss, corrosion, and moderate section loss - NEW Refer to photo 16.

INCIDENTAL:
No drip pan is present underneath the rack and grease is dripping onto the rack frame and concrete floor - NEW. Refer to photo 17.

The south longitudinal machinery room supports in Bascule Piers 3 and 4 have painted-over 15in. long x 2in. high corrosion holes in the webs at the counterweight where steel clip angles have now been bolted in-place - NO CHANGE.

The main transverse machinery room support in Bascule Pier 4 has areas of heavy corrosion and section loss at the main girder connections with corrosion holes up to 3in. x 1in. in the vertical gusset plates - NO CHANGE. Refer to photo 18.

The vertical and diagonal machinery supports in each machinery room have corrosion and pitting at the based and connection points - NEW. Refer to photo 19.

ELEMENT/ENV: 541/4 Speed Reducers **2 ea.** **ELEM CATEGORY:** Movable

CONDITION STATE (4)	DESCRIPTION	QUANTITY
2	Minor misalignment, gears may need lubrication, gear teeth wear or corrosion is measurable, but operation of drive system not impacted.	2 ea.

ELEMENT INSPECTION NOTES:

Note:
The original Earle speed reducers were replaced with Pragen reducers at an unknown time in the past. Refer to the machinery layout diagram and charts in the additional Element Notes for related comments.

Maintenance personnel requested that the dip stick not be removed for inspection of the oil level due to the oil spillage that would occur because the reducer is angled toward the stick. The oil level was observed from the interior of the reducer and was acceptable

CS2:
Both near leaf input shafts exhibit light leakage. A small pool/stain of lubricant has formed on the platform - NEW. Refer to photo 20.

Slight debris and corrosion are present on all reducer housings - NEW. Refer to photo 21.

All Elements

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV: 542/4 Shafts **16 ea.** **ELEM CATEGORY:** Movable

CONDITION STATE (4)	DESCRIPTION	QUANTITY
2	Shafts are not properly aligned, bearings are not lubricated, shaft clearance at bearings is not uniform. Minor corrosion may be present. Seals and gaskets show evidence of minor leaking.	16 ea.

ELEMENT INSPECTION NOTES:

Note:
The original Earle gear reducers for each leaf were replaced with Pragen speed reducers at an unknown time in the past. Installation of the newer reducers led to shaft alignment difficulties which is evident at the current coupling positions. Refer to the machinery layout diagram and charts in the additional Element Notes for related comments.

CS2:
The previous inspection report noted the misalignment of shafts S-2 left and S-3 left for both leaves was corrected by installing couplings with extra flexibility at the C-2 and C-4 positions. Misalignments at these locations were visible at the time of inspection by the abrupt style movement of couplings C-2 and C-4 during operation of the bridge - NEW.

All shafts exhibit paint cracked paint and moderate corrosion - NEW. Refer to photo 22.

The far leaf motor shaft is not painted - NEW.

All shaft surfaces outboard of the main girders are covered in grease with mild corrosion present - NEW.

The Far leaf reducer input shafts are marked by brake enclosures and corrosion is present on exposed steel. - NEW. Refer to photo 23

Debris and lubricant are present on all shafts - NEW.

CORRECTIVE ACTION TAKEN:
Shaft S-1 left of the far leaf machinery room has been cleaned and spot painted.

All Elements

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV: 543/4 Shaft Brgs and Coupl 24 ea. **ELEM CATEGORY:** Movable

CONDITION STATE (4)	DESCRIPTION	QUANTITY
2	Shafts are not properly aligned, bearings are not lubricated, shaft clearance at bearings is not uniform. Minor corrosion may be present. Seals and gaskets show evidence of minor leaking.	8 ea.

All Elements

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV: 543/4 Shaft Brgs and Coupl 24 ea. **ELEM CATEGORY:** Movable

CONDITION STATE (4)	DESCRIPTION	QUANTITY
3	Measurable section loss is present, minor cracks in shaft or bearing supports. Seals and gaskets not working.	16 ea.

ELEMENT INSPECTION NOTES:

Note:
Total quantity includes twelve bearings and ten couplings. The original Earle gear reducers for each leaf were replaced at an unknown time in the past. Installation of the newer reducers led to shaft alignment difficulties which are evident at the current coupling positions. Couplings C-2, C-3 and C-4 have extra flexibility (self-aligning). Refer to the machinery layout diagram and charts in the additional Element Notes section for related comments.

Two jaw coupling halves attached to the motor input shafts that were not noted in the previous report have been added to this report.

CS3:
Couplings C2 and C4 on both leaves are misaligned. Misalignment is shared between both couplings. The previous report noted the shafts bounce under live load. Shafts were observed to only bounce during operation. Misalignment was measured up to 3/16 inch at the sides of the shaft. Refer to photo 24.

Near leaf couplings C2 and C4 exhibit minor paint loss and corrosion on bolts - NEW.

All bearings B5 and B6 exhibit section loss and corrosion on the mounting bolts outboard of the main girders - NEW.

CS2:
All bearings and couplings have a minor to moderate layer of grease and debris present - NEW. Refer to photo 25

Near leaf bearings B2 and B4 exhibit paint loss and corrosion on housing and bolts - NEW.

Corrosion and section loss is present on both near and far leaves' bearing B3 mounting bolts - NEW. Refer to photo 26.

Far leaf jaw coupling half on the reducer input shaft at the machinery brake exhibits paint loss and corrosion - NEW.

All Elements

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV: 544/4 Brakes **4 ea.** **ELEM CATEGORY:** Movable

CONDITION STATE (4)	DESCRIPTION	QUANTITY
2	Brakes operating properly, moving parts may need lubricating, oil may need changed, minor corrosion may be present.	4 ea.

ELEMENT INSPECTION NOTES:

Note:
Refer to the machinery layout diagram and charts in the additional Element Notes for related comments.

CS2:
The motor brake drum of the near leaf has moderate corrosion, scoring, and pitting which is heaviest along the south edge - NO CHANGE.

All other brakes exhibit minor corrosion, scoring, and pitting on the brake drums - NEW.

All brakes exhibit minor corrosion and moderate debris on all brake drum hubs - NEW. Refer to photo 27.

All machinery brake hand release levers do not fully release - NEW.

Near leaf machinery brake enclosure rubs against reducer shaft - NEW.

Both far leaf brake shoes do not fully engage the drum when set - NEW. Refer to photo 28.

The fluid plug for near leaf motor and machinery brakes and far leaf motor brakes could not be removed. - NO CHANGE. Refer to photo 29.

All brake mounting supports exhibit light corrosion and debris - NEW. Refer to photo 30.

All Elements

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV: 545/4 Emergency Drive **1 ea.** **ELEM CATEGORY:** Movable

CONDITION STATE (4)	DESCRIPTION	QUANTITY
1	System is operating properly.	1 ea.

ELEMENT INSPECTION NOTES:

Note:
Total quantity for this element includes one electric motor and one emergency generator. The automatic transfer switch (ATS) is considered to be incidental to this element. Refer to the machinery layout diagram and charts in the additional Element Notes for related comments.

CS1:
The emergency electric generator hour meter currently displays 128.9 operational hours, which is an increase of 24.7 hours since the 5/23/14 routine inspection.

The top surface of the load bank has areas of spotty surface corrosion - NEW. Refer to photo 31.

ELEMENT/ENV: 546/4 Span Drive Motors **2 ea.** **ELEM CATEGORY:** Movable

CONDITION STATE (4)	DESCRIPTION	QUANTITY
1	Motor does not overheat, bearings properly lubricated, bearing seals tight, all components tight, no corrosion present, tests performed show normal readings.	2 ea.

ELEMENT INSPECTION NOTES:

Note:
Refer to the machinery layout diagram and chart in the additional Element Notes for related comments.

All Elements

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV: 560/4 Locks **6 ea.** **ELEM CATEGORY:** Movable

CONDITION STATE (4)	DESCRIPTION	QUANTITY
2	Locks are operating properly, there are signs of limited deterioration or wear, clearances may not be within specifications. Lubrication may be needed. Maintenance may be required.	6 ea.

ELEMENT INSPECTION NOTES:

Note:
This element includes the two rigid span locks and the four heel stops. Refer to the machinery charts in the additional Element Notes for related comments.

CS2:
A plate has recently been added to the rigid span locks as a shim due to excessive clearance between the rigid jaw and lock system. The mounting bolts are not painted and corrosion is present - NEW. Refer to photo 32.

The previous report noted the heel stops slightly bounce under live loads. No bounce was noted during the inspection. Light corrosion is present on all heel stops. Refer to photo 33.

ELEMENT/ENV: 562/4 Counterweight Suppor **4 ea.** **ELEM CATEGORY:** Movable

CONDITION STATE (5)	DESCRIPTION	QUANTITY
2	There is little or no active corrosion. Surface corrosion has formed or is forming. The paint system may be chalking, peeling, curling or showing other early evidence of paint system distress, but there is no exposure of metal.	4 ea.

ELEMENT INSPECTION NOTES:

Note:
The transverse counterweight supports are internal and the main girders frame the counterweight on the north and south faces.

CS2:
There is moderate corrosion along the visible edges of the counterweight supports - NO CHANGE.

All Elements

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV: 563/4 Acc Ladd & Plat **4 ea.** **ELEM CATEGORY:** Movable

CONDITION STATE (5)	DESCRIPTION	QUANTITY
1	There is no evidence of active corrosion, and the paint system is sound and functioning as intended to protect the metal surface.	4 ea.

ELEMENT/ENV: 564/4 Counterweight **2 ea.** **ELEM CATEGORY:** Movable

CONDITION STATE (4)	DESCRIPTION	QUANTITY
2	Minor cracks and spalls may be present, but there is no exposed reinforcing or surface evidence or rebar corrosion.	2 ea.

ELEMENT INSPECTION NOTES:

CS2:
The counterweights have multi-directional cracks up to 1/32in. wide throughout - NO CHANGE.

The far leaf counterweight has spalls up to 18in. x 18in. x 1in. adjacent to the main girders - NO CHANGE.

ELEMENT/ENV: 565/4 Trun/Str and Cur Trk **4 ea.** **ELEM CATEGORY:** Movable

CONDITION STATE (4)	DESCRIPTION	QUANTITY
2	Minor misalignment, lubrication may be needed, teeth wear or corrosion is measurable, but operation is not affected.	4 ea.

ELEMENT INSPECTION NOTES:

CS2:
Moderate corrosion and light debris are present on all tread and track plates. Refer to photo 34.

All tread and track plate mounting bolts lack paint and exhibit minor to moderate corrosion - NEW. Refer to photo 35.

All Elements

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV: 570/4 Transformers **3 ea.** **ELEM CATEGORY:** Movable

CONDITION STATE (3)	DESCRIPTION	QUANTITY
1	There are no signs of corrosion, oil leakage or any deleterious condition at the transformer. There are no blown fuses at the transformer.	3 ea.

ELEMENT INSPECTION NOTES:

Note:
This element includes the three transformers on the incoming electric service pole. Quantity increased to three for this element accordingly. No deficiencies noted. Transformers appear new.

ELEMENT/ENV: 571/4 Submarine Cable **3 ea.** **ELEM CATEGORY:** Movable

CONDITION STATE (3)	DESCRIPTION	QUANTITY
1	The cable is firmly attached to the pier wall and protected. The cable is fully buried on the channel bottom. There is no chafing of the outer protective coating. Cable is properly grounded.	1 ea.
3	There is significant deterioration to the outer protective coating, or the cable is not functioning properly.	2 ea.

ELEMENT INSPECTION NOTES:

CS3:
The armor for the two abandoned cables at the north end of Piers 3 and 4 has severe corrosion with 100% deterioration, in the splash zone - NO CHANGE. Refer to photo 36.

CS1:
The insulation for the in-service submarine cable at the south end of Bascule Piers 3 and 4 have light to moderate deterioration with corrosion staining where it enters the bascule pier - NO CHANGE. Refer to photo 37.

All Elements

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV: 572/4 Conduit & Junc. Box 1 ea. **ELEM CATEGORY:** Movable

CONDITION STATE (3)	DESCRIPTION	QUANTITY
2	There is some corrosion, supports may not be tight, junction box cover gaskets are not intact, wire connections and terminal strips are not tight. At least 2 % but less than 10 % of the conduit is not in good condition.	1 ea.

ELEMENT INSPECTION NOTES:

CS2:
The conduits under the south overhang and along the east abutment have light to moderate corrosion - NO CHANGE

There is a broken length of flexible conduit in the junction box at the southwest corner of the near bascule pier/track area - NEW. Refer to photo 38.

The support for the length of flexible conduit in the near machinery area is corroded with significant section loss - NEW. Refer to photo 39.

At the northeast corner of the structure, a black plastic water line emanates from the ground and enters a water meter junction box attached to the south end of the east abutment. The water line then exits the junction box through a conduit pipe under the south overhang, approximately 5ft. from the abutment. This water utility line is improperly supported but is not causing any problems – NO CHANGE.

CORRECTIVE ACTION TAKEN:
Unterminated conductors within the westernmost terminal enclosure in the near machinery room have been terminated.

The missing wire tray cover in the near submarine cable terminal cabinet has been replaced.

Conductors in the junction box at the southwest corner of the near machinery work platform have been terminated.

All Elements

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV: 573/4 PLCs **1 ea.** **ELEM CATEGORY:** Movable

CONDITION STATE (3)	DESCRIPTION	QUANTITY
1	Diagnostic display or bridge tender reports do not indicate equipment malfunction, air filters are clean, there is no accumulation of dirt and dust, wiring connections are all tight. Bridge is operating properly through entire range of movement and smoothly ramps and seats.	1 ea.

ELEMENT/ENV: 574/4 Control Console **1 ea.** **ELEM CATEGORY:** Movable

CONDITION STATE (3)	DESCRIPTION	QUANTITY
2	There is some corrosion or paint failure, the console area is not clear of foreign objects, there are burned out pilot light lamps or missing or broken lamp lenses.	1 ea.

ELEMENT INSPECTION NOTES:

CS2:
There is light corrosion along the bottom of the motor control cabinet and variable drive cabinets – NO CHANGE.

INCIDENTAL:
Rubber mats have not been provided in front of the control console, motor control cabinet (MCC), main distribution enclosure (MDE) or automatic transfer switch (ATS) – NO CHANGE. Refer to photo 40.

All Elements

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV: 580/4 Navigational Lights **1 ea.** **ELEM CATEGORY:** Movable

CONDITION STATE (3)	DESCRIPTION	QUANTITY
1	Lights are operational, lenses are clean and not broken, there is no evidence of corrosion.	1 ea.

ELEMENT INSPECTION NOTES:

Note:
This element represents the six fender navigation lights, four span navigation swing lights and the two floodlights for the "Clearance at Center" signs as a single system.

CS1:
The southeast swing light hits the bridge rail upon retrieval.- NO CHANGE.

The outer sleeve on the flexible conduit feeding southeast fender light is partially worn away - NEW.

The mounting bolts on the southwest fender light exhibit significant surface corrosion - NEW.

ELEMENT/ENV: 581/4 Operator Facilities **1 ea.** **ELEM CATEGORY:** Movable

CONDITION STATE (3)	DESCRIPTION	QUANTITY
1	There is only minor deficiencies in the Bridge Tender's Facility.	1 ea.

ELEMENT INSPECTION NOTES:

Note:
Refer to photo 41 and the chart in the additional Element Notes for a list of suggested safety items and their availability.

All Elements

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV: 591/4 Warning Gates **4 ea.** **ELEM CATEGORY:** Movable

CONDITION STATE (3)	DESCRIPTION	QUANTITY
1	There is some or no need for maintenance. Warning gate is operating properly.	4 ea.

ELEMENT INSPECTION NOTES:

Note:
The warning bells at the southwest and northeast approaches are considered to be incidental to this element. Refer to the additional Element Notes for the gate heights.

CS1:
There are no access door switches to disconnect the controller motors in the event a door is open – NO CHANGE.

The northwest (previously northeast) and southwest gates have unterminated wires within the housings (southwest shown in photo) - NO CHANGE. Refer to photo 42.

CORRECTIVE ACTION TAKEN:
There no longer appears to be grease on any of the gate rotary cam contacts.

ELEMENT/ENV: 592/4 Traffic Signals **2 ea.** **ELEM CATEGORY:** Movable

CONDITION STATE (3)	DESCRIPTION	QUANTITY
1	There is some or no need for maintenance.	2 ea.

ELEMENT INSPECTION NOTES:

Note:
The red and amber flashing beacons at the west approach are considered incidental to this element.

CS1:
Both traffic signals have dirt covering the foundations and packed under the base plates - No CHANGE. Refer to photo 43.

The anchor bolts and leveling nuts have heavy flaking corrosion and there are no grout pads or critter screens below the base plates - NO CHANGE. Refer to photo 44.

All Elements

UNIT: 0 SUBSTRUCTURE

ELEMENT/ENV: 202/4 Paint Stl Column **8 ea.** **ELEM CATEGORY:** Substructure

CONDITION STATE (5)	DESCRIPTION	QUANTITY
1	There is no evidence of active corrosion and the paint system is sound and functioning as intended to protect the metal surface.	4 ea.
3	Surface corrosion is prevalent. There may be exposed metal but there is no active corrosion which is causing loss of section.	4 ea.

ELEMENT INSPECTION NOTES:

Note:
This element represents the columns within Bascule Piers 3 and 4. Columns support the fixed main girders from Spans 2 and 4 and the machinery racks.

All four steel columns inside the bascule piers have steel plates bolted to the lower portion of the webs.

CS3:
BASCULE PIER 4:
The southeast column in Bascule Pier 4 has painted-over recurring corrosion at the base and at Main Girder 4-2 with areas of 0% section remaining up to 1-1/2ft. long x 3in. wide in the flanges - NO CHANGE. Refer to photo 45.

The southwest column has painted-over recurring corrosion at the base with areas of 0% section remaining in the flanges - NO CHANGE.

The northwest and northeast columns have areas of painted-over recurring corrosion and section loss in the lower 8in. - NO CHANGE.

ELEMENT/ENV: 210/4 R/Conc Pier Wall **66 lf.** **ELEM CATEGORY:** Substructure

CONDITION STATE (4)	DESCRIPTION	QUANTITY
1	The element shows little or no deterioration. There may be discoloration, efflorescence, and/or superficial cracking but without affect on strength and/or serviceability.	12 lf.
2	Minor cracks, spalls and scaling may be present but there is no exposed reinforcing or surface evidence of rebar corrosion.	35 lf.

All Elements

UNIT: 0 SUBSTRUCTURE

ELEMENT/ENV: 210/4 R/Conc Pier Wall **66 lf.** **ELEM CATEGORY:** Substructure

CONDITION STATE (4)	DESCRIPTION	QUANTITY
3	Some delaminations, moderate cracks, spalls and/or scaling may be present and some reinforcing may be exposed. Corrosion of rebar may be present but loss of section is incidental and does not significantly affect the strength and/or serviceability of either the element or the bridge.	19 lf.

ELEMENT INSPECTION NOTES:

Note:
Bascule Piers 3 and 4 were evaluated under this element.

CS3:
BASCULE PIER 3:
East face, west counterweight well, 4ft. x 1ft. 6in. x 1in. spall/delamination with exposed rebar at top of south counterweight girder pocket - NO CHANGE.

10ft. x 3ft. x 3/4in. spall/delamination in west face near midpoint - NO CHANGE.

6ft. x 18in. delamination along north side of south track - NO CHANGE.

BASCULE PIER 4:
East wall west face, 3ft. 6in. x 20in. x 2in. spall/delamination with two exposed rebar at top of north counterweight girder pocket, a 1ft. 6in. x 1ft. x 2in. spall/delamination 3ft. below, a 14in. x 14in. x 2in. spall/delamination and 5ft. 6in. long x 1/32in. wide vertical crack extending into the marine growth - INCREASE. Refer to photo 46.

10ft. x 1ft. delamination in north face near the submarine cable - NO CHANGE.

3ft. 6in. x 18in. spall/delamination with exposed rebar in south face near southeast corner - NO CHANGE..

30in. x 8in. x 1in. spall with exposed and corroded rebar in south face in sidewalk support under tender's house - NO CHANGE.

1ft. x 1ft. delamination at base of northeast steel columns - NO CHANGE.

The following was noted by the underwater inspectors:
CS3:
Pier wall 3 at the NE corner starting at the top of the marine growth, spall/delamination with pierce of 1in. exposed steel with 0% section remaining; 8ft. x 8in. x 3in. - INCREASE. Refer to photo 47.

CS2:
Both bascule piers have vertical cracks up to 1/32in. wide extending a maximum of 12in. below the top of the marine growth - NO CHANGE.

Bascule Pier 3:
There are intermittent voids between the bottom of the pier wall and the top of the footer up to 4in. with an 8in. maximum penetration - NO CHANGE.

Bascule Pier 4:
The northwest corner has a 4in. x 12in. x 12in. void between the bottom of the pier wall and the top of the footer penetration along the west and 4in. x 20in. x 12in. penetration along the north side - INCREASE.

ELEMENT/ENV: 220/4 R/C Sub Pile Cap/Ftg 2 ea. **ELEM CATEGORY:** Substructure

CONDITION STATE (4)	DESCRIPTION	QUANTITY
1	The element shows little or no deterioration. There may be discoloration, efflorescence, and/or superficial cracking but without affect on strength and/or serviceability.	2 ea.

ELEMENT INSPECTION NOTES:

The following was noted by the underwater inspectors:
CS1:
The footers are exposed on Piers 3 and 4. See Element 290 for heights.

All Elements

UNIT: 1 DECKS

ELEMENT/ENV: 13/4 Unp Conc Deck/AC Ovl 4569 sf. **ELEM CATEGORY:** Decks/Slabs

CONDITION STATE (5)	DESCRIPTION	QUANTITY
2	Repaired areas and/or potholes or impending potholes and/or raveling or rutting exist. Their combined area is more than 2% but less than 10% of the total deck area.	4569 sf.

ELEMENT INSPECTION NOTES:

Note:
The expansion joints were evaluated under this element.

CS2:
DECK TOP:
The asphalt surface on Spans 2 and 4 has transverse cracks up to 2ft. 6in. long x 1/8in. wide, primarily in the eastbound lane, with an occasional longitudinal crack - NO CHANGE.

Span 1, right fascia at Bent 2 has a 10in. x 5in. x 4in. spall with exposed rebar - NO CHANGE.

INCIDENTAL:
Both sidewalks have multi-directional cracks up to 1/32in. wide which are reflective in the deck underside, particularly in Span 2 - NO CHANGE.

The sidewalks at Bents 2 and 5 have an elevation difference up to 3/8in.; however, a leveling patch is in-place - NO CHANGE.

The left sidewalk in Span 4 has two delaminated patches up to 2ft. x 6in. near the expansion joint plate; there are also longitudinal and transverse cracks up to 1/32in. wide - NO CHANGE.

The left curb in Span 4 has an intermittent 1/32in. (previously 1/16in.) wide horizontal crack in the traffic face - NO CHANGE.

The roadway striping is completely deteriorated - NO CHANGE. Refer to photo 48.

Refer to the additional Element Notes for further deficiencies and information.

CORRECTIVE ACTION TAKEN:
The surfacing over the expansion joints has been sealed.

All Elements

UNIT: 1 DECKS

ELEMENT/ENV: 331/4 Conc Bridge Railing 290 lf. ELEM CATEGORY: Railing

CONDITION STATE (4)	DESCRIPTION	QUANTITY
1	The element shows little or no deterioration. There may be discoloration, efflorescence, and/or superficial cracking but without effect on strength and/or serviceability.	226 lf.
2	Minor cracks, surface scaling or spalls may be present but there is no exposed reinforcing or surface evidence of rebar corrosion.	60 lf.
3	Some delaminations and/or spalls may be present and some reinforcing may be exposed. Corrosion of rebar may be present but loss of section is incidental and does not significantly affect the strength and/or serviceability of either the element or the bridge.	4 lf.

ELEMENT INSPECTION NOTES:

CS3:
The right (south) bridge rail has three spalls up to 1ft. x 6in. x 2in. and several cracks up to 1/32in. wide in the area between Posts 4-1 and 4 - INCREASE. Refer to photo 51.

CS2:
The concrete bridge rails have vertical cracks up to 1/16in. wide, with the largest cracks in the left (north) and right (south) rails along Bascule Pier 4 - NO CHANGE.

INCIDENTAL:
The northeast approach guardrail has minor impact damage between the 6th and 7th post from the bridge - NO CHANGE.

The southwest end terminal has minor impact damage and the southwest and northeast approach guardrails are not attached to the structure - NO CHANGE.

The northwest and southwest approach sidewalks both have a full width x 1/16in. wide transverse crack 2ft. 6in. from Abutment 1 joint - NO CHANGE.

The southwest approach sidewalk has a 5ft. x 3in. x 1ft. penetration area of undermining along the south edge - NO CHANGE.

The northeast approach sidewalk is 1in. lower than the structure sidewalk and the northeast approach curb is spalled/delaminated up to 2ft. 6in. x 7in. x 3/4in. - NO CHANGE.

All Elements

UNIT: 1 SUPERSTRUCTURE

ELEMENT/ENV: 107/4 Paint Stl Opn Girder 144 lf. ELEM CATEGORY: Superstructure

CONDITION STATE (5)	DESCRIPTION	QUANTITY
2	There is little or no active corrosion. Surface corrosion has formed or is forming. The paint system may be chalking, peeling, curling or showing other early evidence of paint system distress but there is no exposure of metal.	40 lf.
3	Surface corrosion is prevalent. There may be exposed metal but there is no active corrosion which is causing loss of section.	72 lf.

All Elements

UNIT: 1 SUPERSTRUCTURE

ELEMENT/ENV: 107/4 Paint Stl Opn Girder 144 lf. ELEM CATEGORY: Superstructure

CONDITION STATE (5)	DESCRIPTION	QUANTITY
4	Corrosion may be present but any section loss due to active corrosion does not yet warrant structural review of either the element or the bridge.	32 lf.

ELEMENT INSPECTION NOTES:

Note:
This element represents the main girders in approach Spans 2 and 4.

CS4:
Main Girders 2-1 and 2-2 have heavy painted-over pitting with 5/8in. remaining section on the bottom exterior flange with areas of moderate to heavy surface corrosion at and in the bascule piers - NO CHANGE. Refer to photo 52.

The bottom interior flange and web of both Main Girders 2-1 and 2-2 have heavy pitting with areas of moderate to heavy corrosion - NO CHANGE.

Main Girder 2-2 has a 2ft. long area of moderate to heavy corrosion with knife-edging in the top and bottom south flanges, just outside the bascule pier - NO CHANGE. Refer to photo 53.

Main Girders 4-1 and 4-2 inside Bascule Pier 4 have heavy section loss with 5/8in. remaining section along the bottom exterior flange edges with corrosion staining from the top flange - NO CHANGE.

Main Girder 4-2 has a 3/16in. diameter painted-over perforation in the web at the first stiffener inside the bascule pier. The interior web and bottom flange at this location has a 4ft. long area of blistering paint with moderate to heavy corrosion - NO CHANGE.

CS3:
The top exterior flanges of Span 2 and 4 main girders have moderate to heavy corrosion at the deck underside within 10ft. of the bascule piers with staining on the bottom flanges - NO CHANGE.

Main Girders 2-1 and 2-2 have areas of light to moderate surface corrosion along the bottom edges of the bottom flanges - NO CHANGE. Refer to photo 54.

CS2:
Span 2 and 4 main girders have random areas of light painted-over pitting up to 3/16in. deep and section loss - NO CHANGE.

All Elements

UNIT: 1 SUPERSTRUCTURE

ELEMENT/ENV: 110/4 R/Conc Open Girder 446 lf. **ELEM CATEGORY:** Superstructure

CONDITION STATE (4)	DESCRIPTION	QUANTITY
1	The element shows little or no deterioration. There may be discoloration, efflorescence, and/or superficial cracking but without affect on strength and/or serviceability.	404 lf.
2	Minor cracks and spalls may be present but there is no exposed reinforcing or surface evidence of rebar corrosion.	20 lf.

All Elements

UNIT: 1 SUPERSTRUCTURE

ELEMENT/ENV: 110/4 R/Conc Open Girder 446 lf. ELEM CATEGORY: Superstructure

CONDITION STATE (4)	DESCRIPTION	QUANTITY
3	Some delaminations and/or spalls may be present and some reinforcing may be exposed. Corrosion of rebar may be present but loss of section is incidental and does not significantly affect the strength and/or serviceability of either the element or the bridge.	22 lf.

ELEMENT INSPECTION NOTES:

CS3:
Beams 1-1, 1-2 and 1-3 each have one delamination up to 3ft. long x 6in. wide in the lower north edge near the 3/4 point - NO CHANGE. Refer to photo 55.

Beam 1-2 has a 1ft. x 1ft. delamination in the south web over Bent 2 - NEW.

Beam 1-5 over Abutment 1 has a 2ft. x 16in. x 2-1/2in. spall/delamination with exposed and moderately corroded rebar in the bottom south edge, and a 20in. x 14in. delamination in the north edge - INCREASE. Refer to photo 56.

Beam 1-5 over Pier 2 has an 18in. x 12in. delamination in the south face - NEW

Beam 2-5 has a 1ft. x 1ft. x 3/4in. spall/delamination in the north face near the 3/4 point and a 1ft. 6in. x 1ft. delamination in the south face over Bent 2 - NO CHANGE.

Beam 5-5 has a 10in. x 1ft. delamination in the north face over Bent 5 - NO CHANGE.

CS2:
Span 1 tee beams have minor cracks outlining the repairs near mid-span - NO CHANGE.

Beam 5-1 has a 3ft. long x 1/32in. wide longitudinal crack in the bottom face, approximately 10ft. from Abutment 6 - NO CHANGE.

CS1:
Span 1 and 5 tee beams have minor transverse cracks in the stems which extend up the vertical face - NO CHANGE.

All Elements

UNIT: 1 SUPERSTRUCTURE

ELEMENT/ENV: 113/4 Paint Stl Stringer **269 lf.** **ELEM CATEGORY:** Superstructure

CONDITION STATE (5)	DESCRIPTION	QUANTITY
2	There is little or no active corrosion. Surface corrosion has formed or is forming. The paint system may be chalking, peeling, curling or showing other early evidence of paint system distress but there is no exposure of metal.	269 lf.

ELEMENT INSPECTION NOTES:

Note:
This element represents the stringers in approach Spans 2 and 4.

CS2:
Spans 2 and 4 stringers have random areas of light painted-over pitting and section loss - NO CHANGE.

INCIDENTAL:
The bottom exterior flanges of the sidewalk stringers have moderate to heavy corrosion and knife-edging along their length - NO CHANGE. Refer to photo 57.

ELEMENT/ENV: 152/4 Paint Stl Floor Beam **184 lf.** **ELEM CATEGORY:** Superstructure

CONDITION STATE (5)	DESCRIPTION	QUANTITY
2	There is little or no active corrosion. Surface corrosion has formed or is forming. The paint system may be chalking, peeling, curling or showing other early evidence of paint system distress but there is no exposure of metal.	173 lf.

All Elements

UNIT: 1 SUPERSTRUCTURE

ELEMENT/ENV: 152/4 Paint Stl Floor Beam 184 lf. ELEM CATEGORY: Superstructure

CONDITION STATE (5)	DESCRIPTION	QUANTITY
3	Surface corrosion is prevalent. There may be exposed metal but there is no active corrosion which is causing loss of section.	11 lf.

ELEMENT INSPECTION NOTES:

Note:
This element represents the approach Spans 2 and 4 floor beams. The load rating analysis identifies the approach span floor beams as the controlling members for all vehicle types. Refer to weight limit photos on page 59.

CS3:
The bottom west flange of Floor Beam 2-2 has heavy laminating corrosion at the south end - NO CHANGE.

The bottom east and north flanges of Floor Beam 2-4 have moderate to heavy corrosion in the southern 2ft. and is knife-edged - NO CHANGE.

Floor Beam 4-2 has areas of heavy corrosion up to 1ft. 4in. x 4in. in the top west flange in Bay 4-5 and in the top east flange in Bay 4-4 - NO CHANGE. Refer to photo 58.

CS2:
Floor Beams 2-3, 2-4, 4-1 and 4-2 have areas of painted-over light pitting – NO CHANGE.

Floor Beams 2-1 and 4-4 over Bents 2 and 5 have painted-over corrosion holes (0% section remaining), primarily at the ends - NO CHANGE.

Floor Beam 2-2 has light surface corrosion along the welds and intermittent areas of peeling paint on the bottom face at midpoint - NO CHANGE.

INCIDENTAL:
The east weight limit sign is set too low - NO CHANGE. Refer to photo 59.

ELEMENT/ENV: 313/4 Fixed Bearing 12 ea. ELEM CATEGORY: Bearings

CONDITION STATE (3)	DESCRIPTION	QUANTITY
2	The paint system, if present, may show moderate to heavy corrosion with pitting but still functioning as intended. The assemblies may have moved enough to cause minor cracking in the supporting concrete.	12 ea.

All Elements

UNIT: 1 SUBSTRUCTURE

ELEMENT/ENV: 201/4 Unpnt Stl Column **17 ea.** **ELEM CATEGORY:** Substructure

CONDITION STATE (4)	DESCRIPTION	QUANTITY
3	Steel has measurable section loss due to corrosion but does not warrant structural review. Weathering steel is dark brown or black. Oxide film is flaking.	14 ea.
4	Corrosion is advanced. Oxide film has a laminar texture with thin sheets of corrosion. Section loss is sufficient to warrant structural review to ascertain the impact on the ultimate strength and/or serviceability of either the element or the bridge.	3 ea.

ELEMENT INSPECTION NOTES:

Note:
Bents 2 and 5 have steel H-piles encased in concrete. The lower portion of both bents have a second solid concrete encasement installed beginning 3ft. below the cap. Area between the cap and second encasement has been coated with epoxy. The crutch bents installed on both sides of Bents 2 and 5 are considered temporary and the previously noted deficiencies still exist; therefore, the NBI rating for SIA Item 60 Substructure will remain a 4.

CS4:
Pile 2-6 is exposed up to 3ft. high x flange width on the east face and the northwest flange is exposed up to 2ft. high with heavy laminating corrosion and approximately 0.07in. section remaining in a 1ft. high area approximately 2ft. down from the cap in both areas - NO CHANGE. Refer to photo 60.

Pile 5-8 is exposed on the west face in a 3ft. 6in. x 1ft. 9in. area and has a 4in. x 3in. area of 100% section loss in the southwest flange 2ft. below the cap. The remaining exposed flange appears 1/2in. thick; however, when the laminating corrosion on the outside face and the pack rust on the inside face were removed the flange thickness was found to be 0.05in. - NO CHANGE. Refer to photo 61.

The southwest flange of Pile 5-9 is exposed up to 10in. high and is heavily corroded with 0.187in. remaining section. The southeast flange is exposed 1ft. 9in. high with 0.125in. remaining section 2ft. down from the cap - NO CHANGE.

CS3:
The concrete encasements have spalls and vertical cracks, in some instances severe, which suggest the steel piles are heavily corroded - NO CHANGE. Refer to Element 298 Pile Jacket Bare for related comments.

The true condition of the steel H-piles can not be determined due to the concrete encasements.

All Elements

UNIT: 1 SUBSTRUCTURE

ELEMENT/ENV: 202/4 Paint Stl Column **12 ea.** **ELEM CATEGORY:** Substructure

CONDITION STATE (5)	DESCRIPTION	QUANTITY
2	There is little or no active corrosion. Surface corrosion has formed or is forming. The paint system may be chalking, peeling, curling or showing other early evidence of paint system distress but there is no exposure of metal.	12 ea.

ELEMENT INSPECTION NOTES:

Note:
This element represents the painted steel H-piles in the crutch bents on each side of Bents 2 and 5.

CS2:
The steel H-piles in the crutch bents have moderate surface corrosion in the water zone - NO CAHNGE.

ELEMENT/ENV: 215/4 R/Conc Abutment **72 lf.** **ELEM CATEGORY:** Substructure

CONDITION STATE (4)	DESCRIPTION	QUANTITY
1	The element shows little or no deterioration. There may be discoloration, efflorescence, and/or superficial cracking but without affect on strength and/or serviceability.	67 lf.
2	Minor cracks, spalls and scaling may be present but there is no exposed reinforcing or surface evidence of rebar corrosion.	5 lf.

ELEMENT INSPECTION NOTES:

CS2:
The Abutment 6 cap has a 4ft. 6in. x 15in. repair in the top west edge extending from Beam 5-5 to Beam 5-6 that sounds hollow when tapped with a hammer - DECREASE.

All Elements

UNIT: 1 SUBSTRUCTURE

ELEMENT/ENV: 231/4 Paint Stl Cap **178 lf.** **ELEM CATEGORY:** Substructure

CONDITION STATE (5)	DESCRIPTION	QUANTITY
1	There is no evidence of active corrosion and the paint system is sound and functioning as intended to protect the metal surface.	178 lf.

ELEMENT INSPECTION NOTES:

Note:
This element represents the painted steel cap beams on the crutch bents on each side of Bents 2 and 5.

ELEMENT/ENV: 234/4 R/Conc Cap **62 lf.** **ELEM CATEGORY:** Substructure

CONDITION STATE (4)	DESCRIPTION	QUANTITY
1	The element shows little or no deterioration. There may be discoloration, efflorescence, and/or superficial cracking but without affect on strength and/or serviceability.	50 lf.

All Elements

UNIT: 1 SUBSTRUCTURE

ELEMENT/ENV: 234/4 R/Conc Cap **62 lf.** **ELEM CATEGORY:** Substructure

CONDITION STATE (4)	DESCRIPTION	QUANTITY
3	Some delaminations, moderate cracks, spalls and/or scaling may be present and some reinforcing may be exposed. Corrosion of rebar may be present but loss of section is incidental and does not significantly affect the strength and/or serviceability of either the element or the bridge.	12 lf.

ELEMENT INSPECTION NOTES:

CS3:
The Bent 2 cap has a 1ft. x 1ft. x 1in. spall with exposed rebar in the lower east edge over Pile 2-2; however, this area appears to have been coated in the past - NO CHANGE.

The Bent 2 cap has a 2ft. 6in. x 10in. delamination in the bottom east edge over Pile 2-7 - NO CHANGE.

The Bent 5 cap has a 2ft. 6in. x 7in. x 2in. spall with exposed rebar with 1in. remaining section in the bottom west edge over Pile 5-1 - NO CHANGE. Refer to photo 62.

The bottom west edge of the Bent 5 cap has a delamination up to 3ft. x 8in. over Piles 5-7 and 5-9 - NO CHANGE.

The bottom east edge of the Bent 5 cap has a 2ft. x 1ft. x 1in. spall/delamination over Pile 5-7 - NO CHANGE.

ELEMENT/ENV: 298/4 Pile Jacket Bare **17 ea.** **ELEM CATEGORY:** Substructure

CONDITION STATE (4)	DESCRIPTION	QUANTITY
3	Moderate to major deterioration and cracking. Major deterioration of joints.	9 ea.

All Elements

UNIT: 1 SUBSTRUCTURE

ELEMENT/ENV: 298/4 Pile Jacket Bare **17 ea.** **ELEM CATEGORY:** Substructure

CONDITION STATE (4)	DESCRIPTION	QUANTITY
4	Major deterioration, splitting, or cracking of materials may be affecting the structural capacity of the element.	8 ea.

ELEMENT INSPECTION NOTES:

Note:
This element represents the concrete encased steel H-piles at Bents 2 and 5. The lower portion of both bents has had a second encasement of concrete installed beginning approximately 3ft. below the cap. The area between the cap and secondary encasement is coated with epoxy.

CS4:
Pile Jacket 2-5 has a full height x full width delamination on the east face - NO CHANGE.

Pile Jacket 2-6 has a full height x full width x 4in. deep spall exposing 100% deteriorated jacket steel and H-pile in the east face. There is also a 2ft. x 6in. x 3-1/2in. spall in the northwest corner exposing the pile flange and a full height x full delamination in the west face - NO CHANGE.

Pile Jackets 2-7 and 2-8 each have a full height x full width delamination on the east and west faces - NO CHANGE.

Pile Jacket 5-6 is delaminated throughout with a 1ft. x 5in. x 4in. spall in the northeast corner and a 1ft. x 10in. x 5in. spall in the southwest corner exposing the H-pile - NO CHANGE. Refer to photo 63.

Pile Jacket 5-7 is delaminated throughout with a 1ft. x 15in. x 2in. spall with exposed and corroded steel in the west face - NO CHANGE.

Pile Jacket 5-8 is 100% cracked, spalled and delaminated with a 3ft. 6in. high x 1ft. 9in. wide x 3in. deep spall with exposed steel (100% section loss) in the west face and a 2ft. 9in. x 1ft. x 4in. spall in the south face exposing the southeast flange of the H-pile - NO CHANGE.

Pile Jacket 5-9 has a 2ft. 9in. x 9in. x 5in. spall in the southwest corner exposing 100% deteriorated jacket steel and the southwest H-pile flange. The southeast corner has a 4ft. x 1ft. x 4in. spall/delamination exposing 100% deteriorated jacket steel and the H-pile flange - NO CHANGE.

Refer to the additional Element Notes for further deficiencies.

All Elements

UNIT: 1 SUBSTRUCTURE

ELEMENT/ENV: 387/4 P/S Fender/Dolphin 244 lf. ELEM CATEGORY: Substructure

CONDITION STATE (4)	DESCRIPTION	QUANTITY
1	The element shows little or no deterioration. There may be discoloration, efflorescence, and/or superficial cracking but without affect on strength and/or serviceability.	44 lf.

All Elements

UNIT: 1 SUBSTRUCTURE

ELEMENT/ENV: 387/4 P/S Fender/Dolphin **244 lf.** **ELEM CATEGORY:** Substructure

CONDITION STATE (4)	DESCRIPTION	QUANTITY
3	Some delaminations and/or spalls may be present. There may be minor exposure but no deterioration of the prestress system. Corrosion of non-prestressed reinforcement may be present but loss of section is incidental and does not significantly affect the strength and/or serviceability of either the element or the bridge.	200 lf.

ELEMENT INSPECTION NOTES:

Note:
There are a total of 76 fender piles.

CS3:
In the east fender, the fifth pile cluster from the south battered pile one pile has a 3ft. 6in. x 8in. x 5in. spall/delamination in the southeast corner with exposed and corroded steel with 1/4in. section remaining - NO CHANGE.

The following was noted by the underwater inspectors:
CS3:
Sixty five piles (33 on east and 32 on west; field verified) have vertical cracks up to 5ft. long x 1/8in. wide and delaminations/spalls up to 4ft. x 18in. x 5in., several with exposed steel and corrosion staining at or near the corners above the waterline - INCREASE. Refer to photo 64.

INCIDENTAL:
The lower cable connectors and fasteners have heavy to severe corrosion, many with parted cables with 50% section remaining - NO CHANGE. Refer to photo 65.

The timber supports attached to the bascule piers which support the lower wales have moderate to heavy deterioration due to marine borers - NO CHANGE.

The bottom edge of the lower horizontal timber wales have minor marine borer activity with up to 80% section remaining - NO CHANGE.

One east fender deck plank near the tender house has an 8ft. long x 1/2in. wide split - NO CHANGE.

West Fender: The third wale from the north is only attached with one bolt and is tied in place with a rope - NEW. Refer to photo 66.

All Elements

UNIT: 1 SUBSTRUCTURE

ELEMENT/ENV: 396/4 Other Abut Slope Pro 2917 sf. **ELEM CATEGORY:** Substructure

CONDITION STATE (4)	DESCRIPTION	QUANTITY
2	There may be minor deterioration, random open joints, cracking and weathering. Mortar in joints may show minor deterioration.	2917 sf.

ELEMENT INSPECTION NOTES:

Note:
The slope protection at both abutments consists of broken concrete rubble, construction debris and sand-cement rip rap bags covered with grout.

CS2:
The rubble has areas where it is sparse or missing entirely, particularly at Abutment 1 slope - NO CHANGE.

The grout over Abutment 1 and 6 slope protection has a full length x up to 1-5/8in. wide horizontal crack along the abutment caps; however, the underlying sand-cement rip rap bags are in good condition - NO CHANGE.

The top of the slope protection at the southwest corner of the structure is undermined 3ft. long x 2in. high x 2ft. 8in. back under - NO CHANGE.

At the west slope protection there are areas of collapsed and missing grout over the brokes concrete and sand cement rip-rap - NEW. Refer to photo 67.

All Elements

UNIT: 1 CHANNEL

ELEMENT/ENV: 290/4 Channel **1 ea.** **ELEM CATEGORY:** Channel

CONDITION STATE (4)	DESCRIPTION	QUANTITY
1	The channel is in good condition, channel banks are protected or well vegetated, river control devices and embankment protection are not required or are in good condition.	1 ea.

ELEMENT INSPECTION NOTES:

The following was noted by the underwater inspectors:
CS1:
Pier 3: The footer is exposed the entire length along the channel side (east) a maximum of 24in. - NO CHANGE.

Pier 4: The footer is intermittently exposed along the channel side (west) a maximum of 5in. - INCREASE.

Inspector Recommendations

UNIT: 0 DECKS

ELEMENT/ENV:28/4 Steel Deck/Open Grid ELEM CATEGORY: Decks/Slabs

CONDITION STATE (5)		Priority
2	**2679 sf.**	3

WORK ORDER RECOMMENDATION:

Repair spall in the underside of the north sidewalk in Bascule Pier 4. 6MH

Inspector Recommendations

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV:107/4 Paint Stl Opn Girder ELEM CATEGORY: Superstructure

CONDITION STATE (5)		Priority
2	**77 lf.**	3

WORK ORDER RECOMMENDATION:
Replace all rivets with greater than 30% section loss. 50MH

4	**30 lf.**	3

WORK ORDER RECOMMENDATION:
Clean and spot paint Main Girders 3-1 and 3-2. 80MH

ELEMENT/ENV:113/4 Paint Stl Stringer ELEM CATEGORY: Superstructure

CONDITION STATE (5)		Priority
3	**6 lf.**	3

WORK ORDER RECOMMENDATION:
Clean and paint Stringer 3-1 inside Bascule Pier 4 at the counterweight. 4MH

3	**6 lf.**	3

WORK ORDER RECOMMENDATION:
Clean & paint Stringers 3-1 3-2 & 3-3 @ Floor Beam 3-3 & Stringer 3-2 & 3-3 @ Floor Beam 3-6. 4MH

ELEMENT/ENV:152/4 Paint Stl Floor Beam ELEM CATEGORY: Superstructure

CONDITION STATE (5)		Priority
4	**90 lf.**	3

WORK ORDER RECOMMENDATION:
Clean and spot paint the floor beams and associated members in Bascule Span 3. 100MH

Inspector Recommendations

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV:540/4 Open Gearing ELEM CATEGORY: Movable

CONDITION STATE (4)		Priority
2	**4 ea.**	3

WORK ORDER RECOMMENDATION:
Clean first and last rack teeth and apply grease. 10MH

2	**4 ea.**	3

WORK ORDER RECOMMENDATION:
Clean and paint sides of pinions and racks. 8MH.

2	**4 ea.**	3

WORK ORDER RECOMMENDATION:
Clean gear sets and apply grease with higher viscosity. 24MH

2	**4 ea.**	3

WORK ORDER RECOMMENDATION:
Clean & paint main transverse machinery support & vertical-diagonal supports in Bascule Pier 4. 6MH

2	**4 ea.**	3

WORK ORDER RECOMMENDATION:
Clean corrosion and paint inboard rack mounting bolts. 10MH

2	**4 ea.**	3

WORK ORDER RECOMMENDATION:
Provide debris pans for gearing elements. 6MH

2	**4 ea.**	0

WORK ORDER RECOMMENDATION:
Clean and paint all rack assembly supports. 6MH

Inspector Recommendations

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV:541/4 Speed Reducers ELEM CATEGORY: Movable

CONDITION STATE (4)		Priority
2	**2 ea.**	3

WORK ORDER RECOMMENDATION:
Clean and paint reducer housing. 10MH

2	**2 ea.**	3

WORK ORDER RECOMMENDATION:
Replace shaft seals at near leaf reducer input shafts. 20MH.

ELEMENT/ENV:542/4 Shafts ELEM CATEGORY: Movable

CONDITION STATE (4)		Priority
2	**16 ea.**	3

WORK ORDER RECOMMENDATION:
Clean corrosion debris and lubrication from all shafts and paint. 60MH

ELEMENT/ENV:543/4 Shaft Brgs and Coupl ELEM CATEGORY: Movable

CONDITION STATE (4)		Priority
2	**8 ea.**	3

WORK ORDER RECOMMENDATION:
Clean all bearing and coupling assemblies and paint. 80MH

2	**8 ea.**	3

WORK ORDER RECOMMENDATION:
Replace near and far leaf Bearing B3 mounting bolts. 8MH.

3	**16 ea.**	3

WORK ORDER RECOMMENDATION:
Repair coupling end plates in couplings C-2 and C-4 of both leaves. 20MH.

Inspector Recommendations

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV:544/4 Brakes ELEM CATEGORY: Movable

CONDITION STATE (4)		Priority
2	**4 ea.**	3

WORK ORDER RECOMMENDATION:
Clean and paint brake mounting supports 20MH.

2	**4 ea.**	3

WORK ORDER RECOMMENDATION:
Loosen brake fluid plugs on Brakes 1 and 2 near and Brake 2 far. 4MH.

2	**4 ea.**	3

WORK ORDER RECOMMENDATION:
Adjust both far leaf brake shoes and repair hand levers. 4MH

2	**4 ea.**	3

WORK ORDER RECOMMENDATION:
Clean all brake drums and hubs and paint hubs. 40MH.

ELEMENT/ENV:545/4 Emergency Drive ELEM CATEGORY: Movable

CONDITION STATE (4)		Priority
1	**1 ea.**	3

WORK ORDER RECOMMENDATION:
Clean and spot paint load bank enclosure. 2MH

ELEMENT/ENV:560/4 Locks ELEM CATEGORY: Movable

CONDITION STATE (4)		Priority
2	**6 ea.**	3

WORK ORDER RECOMMENDATION:
Clean and paint rigid lock plate mounting bolts. 6MH.

Inspector Recommendations

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV:560/4 Locks ELEM CATEGORY: Movable

CONDITION STATE (4)		Priority
2	**6 ea.**	3

WORK ORDER RECOMMENDATION:
Clean and paint nonbearing surfaces of heel stops. 20MH.

ELEMENT/ENV:565/4 Trun/Str and Cur Trk ELEM CATEGORY: Movable

CONDITION STATE (4)		Priority
2	**4 ea.**	3

WORK ORDER RECOMMENDATION:
Clean tread and track plates and paint all non-bearing surfaces. 40MH.

ELEMENT/ENV:572/4 Conduit & Junc. Box ELEM CATEGORY: Movable

CONDITION STATE (3)		Priority
2	**1 ea.**	3

WORK ORDER RECOMMENDATION:
Replace broken conduit in junction box at SW corner of near bascule pier track area. 4MH.

2	**1 ea.**	0

WORK ORDER RECOMMENDATION:
Replace corroded conduit clamp in near machinery area. 4MH.

ELEMENT/ENV:574/4 Control Console ELEM CATEGORY: Movable

CONDITION STATE (3)		Priority
2	**1 ea.**	3

WORK ORDER RECOMMENDATION:
Provide rubber mats for the electrical housings. 4MH

Inspector Recommendations

UNIT: 0 SUPERSTRUCTURE

ELEMENT/ENV:581/4 Operator Facilities ELEM CATEGORY: Movable

CONDITION STATE (3)		Priority
1	**1 ea.**	3

WORK ORDER RECOMMENDATION:
Restock items listed in the table in the additional element notes. 4MH

ELEMENT/ENV:591/4 Warning Gates ELEM CATEGORY: Movable

CONDITION STATE (3)		Priority
1	**4 ea.**	3

WORK ORDER RECOMMENDATION:
Properly terminate wires in the NW and SW gate enclosures. 2MH.

ELEMENT/ENV:592/4 Traffic Signals ELEM CATEGORY: Movable

CONDITION STATE (3)		Priority
1	**2 ea.**	3

WORK ORDER RECOMMENDATION:
Clean and paint traffic signal leveling nuts and provide critter screens. 4MH

1	**2 ea.**	3

WORK ORDER RECOMMENDATION:
Clean dirt under the traffic signal foundations. 3MH.

Inspector Recommendations

UNIT: 0 SUBSTRUCTURE

ELEMENT/ENV:210/4 R/Conc Pier Wall ELEM CATEGORY: Substructure

CONDITION STATE (4)		Priority
3	**19 lf.**	3

WORK ORDER RECOMMENDATION:

Repair the spalls and delaminations in the bascule piers. 40MH

Inspector Recommendations

UNIT: 1 DECKS

ELEMENT/ENV:13/4 Unp Conc Deck/AC Ovl ELEM CATEGORY: Decks/Slabs

CONDITION STATE (5)		Priority
2	**4569 sf.**	3

WORK ORDER RECOMMENDATION:
Repair spalls in the deck underside. 20MH

2	**4569 sf.**	3

WORK ORDER RECOMMENDATION:
Apply the roadway striping 10MH

ELEMENT/ENV:331/4 Conc Bridge Railing ELEM CATEGORY: Railing

CONDITION STATE (4)		Priority
3	**4 lf.**	3

WORK ORDER RECOMMENDATION:
Repair the spalls and cracks in the bridge rails. 10MH

Inspector Recommendations

UNIT: 1 SUPERSTRUCTURE

ELEMENT/ENV:107/4 Paint Stl Opn Girder ELEM CATEGORY: Superstructure

CONDITION STATE (5)		Priority
2	**40 lf.**	3

WORK ORDER RECOMMENDATION:
Clean and paint approach span main girders. 80MH

3	**72 lf.**	3

WORK ORDER RECOMMENDATION:
Clean and paint approach span main girders. 80MH

4	**32 lf.**	3

WORK ORDER RECOMMENDATION:
Repair MG 2-1 2-2 4-1 and 4-2 bottom flanges. 20MH

ELEMENT/ENV:110/4 R/Conc Open Girder ELEM CATEGORY: Superstructure

CONDITION STATE (4)		Priority
3	**22 lf.**	3

WORK ORDER RECOMMENDATION:
Repair the spalls-delaminations in Beams 1-1 1-3 1-3 1-5 2-5 and 5-5. 12MH

ELEMENT/ENV:113/4 Paint Stl Stringer ELEM CATEGORY: Superstructure

CONDITION STATE (5)		Priority
2	**269 lf.**	3

WORK ORDER RECOMMENDATION:
Clean and paint the stringers. 20MH

Inspector Recommendations

UNIT: 1 SUPERSTRUCTURE

ELEMENT/ENV:152/4 Paint Stl Floor Beam ELEM CATEGORY: Superstructure

CONDITION STATE (5)		Priority
2	**173 lf.**	3

WORK ORDER RECOMMENDATION:
Reset the east weight limit sign. 4MH

3	**11 lf.**	3

WORK ORDER RECOMMENDATION:
Clean and spot paint Floor Beams 2-2 2-4 and 4-2. 10MH

Inspector Recommendations

UNIT: 1 SUBSTRUCTURE

ELEMENT/ENV:202/4 Paint Stl Column ELEM CATEGORY: Substructure

CONDITION STATE (5)		Priority
4	**3 ea.**	3

WORK ORDER RECOMMENDATION:
Repair the steel H-piles at Bents 2 and 5. 64MH

ELEMENT/ENV:234/4 R/Conc Cap ELEM CATEGORY: Substructure

CONDITION STATE (4)		Priority
3	**12 lf.**	3

WORK ORDER RECOMMENDATION:
Repair the spalls and delaminations in the Bent 2 and 5 caps. 10MH

ELEMENT/ENV:298/4 Pile Jacket Bare ELEM CATEGORY: Substructure

CONDITION STATE (4)		Priority
4	**8 ea.**	3

WORK ORDER RECOMMENDATION:
Repair the pile jackets. 40MH

ELEMENT/ENV:387/4 P/S Fender/Dolphin ELEM CATEGORY: Substructure

CONDITION STATE (4)		Priority
1	**44 lf.**	3

WORK ORDER RECOMMENDATION:
Properly attach third wale from the north nd of the west fender. 6MH

3	**200 lf.**	3

WORK ORDER RECOMMENDATION:
Replace the fender cable wraps and hardware. 100MH

Inspector Recommendations

UNIT: 1 SUBSTRUCTURE

ELEMENT/ENV:387/4 P/S Fender/Dolphin ELEM CATEGORY: Substructure

CONDITION STATE (4)		Priority
3	**200 lf.**	3

WORK ORDER RECOMMENDATION:

Repair spalls and delaminations in the fender piles. 200LF

Structure Notes

BRIDGE OWNER: PALM BEACH COUNTY

Bridge inventoried from west to east.

TRAFFIC RESTRICTIONS:
Based on the current load rating analysis dated 3/28/97, posting is required for SU type vehicles at or below 30 tons. The structure is currently posted in advance and at both approaches for SU type vehicles at 30 tons. Refer to the weight limit sign photos.

This bridge is on a 12 month inspection frequency due to the movable components and SIA Items 60 Substructure and 70 Bridge Posting being coded a 4 or less.

The crutch bents installed on both sides of Bents 2 and 5 are considered temporary and the previously noted deficiencies still exist; therefore, the NBI rating for item 60 Substructure will remain a 4.

This structure is Functionally Obsolete due to an SIA Item 68 Deck Geometry rating of 2. With two traffic lanes and the current ADT, a 32.2ft. roadway width is required to achieve a Deck Geometry rating of 4.

Unit 0 Elements Movable Span
Unit 1 Elements Fixed Approach Slabs

FDOT provides a barge for the fracture critical inspection.
Contact: Larry Bauer
Phone Number: 561-370-1205

The following elements were inspected underwater by the divers:
202 Painted Steel Piles/Columns – Bents 2 and 5 with seventeen encased steel piles
210 Pier Walls
220 Submerged Footing – Piers 3 and 4
290 Channel
298 Pile Jackets Bare
571 Submarine Cable
387 Fender System
396 Abutment Slope Protection

INSPECTION NOTES: ENCF 5/28/2015

Sufficiency Rating Calculation Accepted by KNKCADG-P at 2015-07-10 16:46:38

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CID/Bridge Profile Report

NORTH ELEVATION

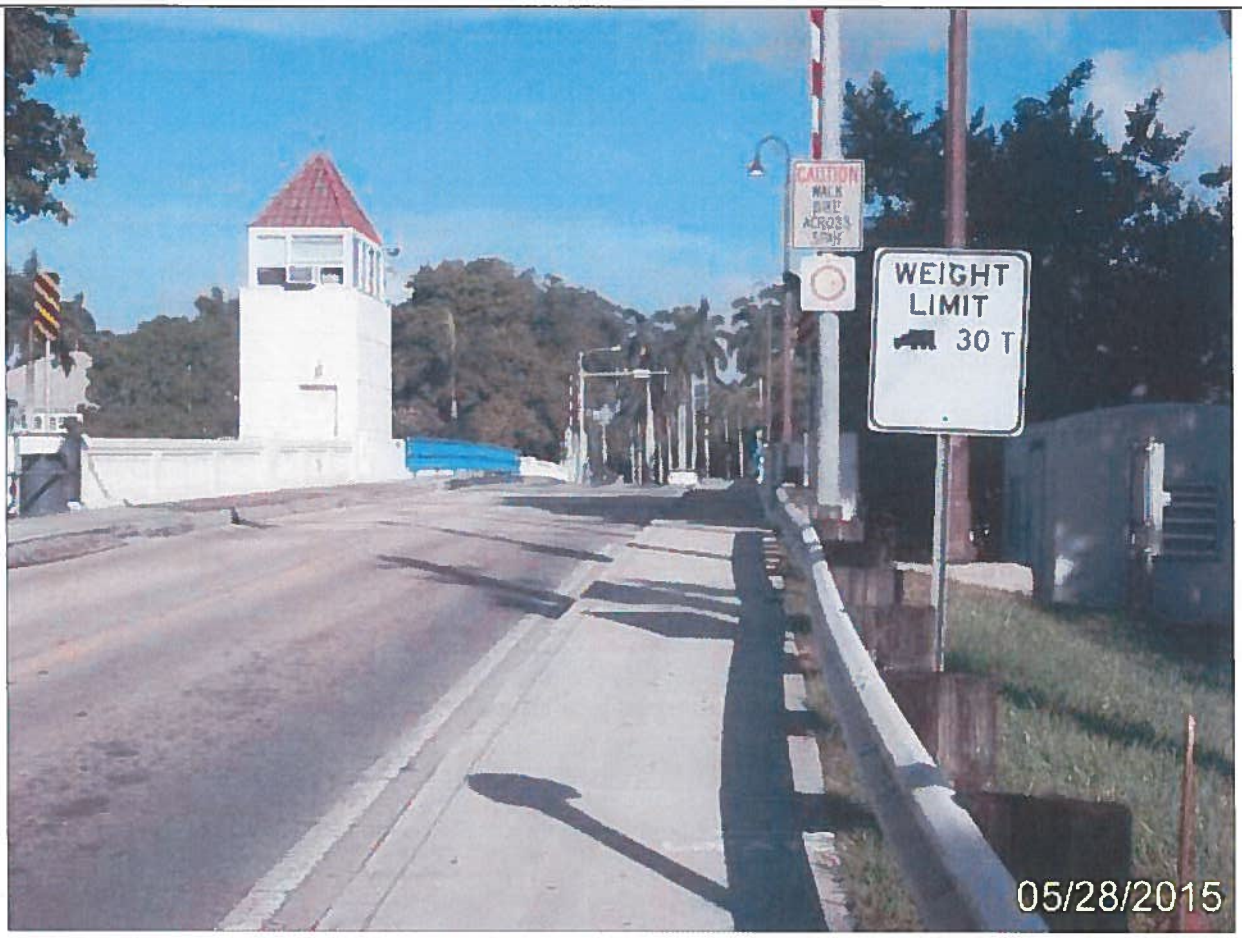
FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CID/Bridge Profile Report

East Camino Real over Intracoastal Waterway **0.6 Mile East of US-1**

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CID/Bridge Profile Report

WEST WEIGHT LIMIT SIGN

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CID/Bridge Profile Report



EAST WEIGHT LIMIT SIGN

FORM 850-010-06
MAINTENANCE - 06/93
Page 1 of 2

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
D: LOAD CAPACITY INFORMATION

1. **BRIDGE DATA:**
Bridge Number 934408
STR Type Main [BMIS Item B1(43)] 316
Date 03-26-97
STR Type APR [BMIS Item B2(44)] 000

2. **POSTING DATE:**
Posted YES If yes, Existing
Restrictions 15T
BMIS Item H8(41) P
Posting Needed YES If Yes, Proposed
Restrictions SU-28T
BMIS Item H11(70) 0
BMIS Item H7(31) 3

3. ANALYSIS DATA:

A. Method of Analysis:
X Load Factor
____ Working Stress

B. Analysis System:
X BARS
____ SALOD
____ BRUFEM
____ Load Test
____ Other

C. Analysis Based On:
____ Design Drawings
____ As-Built Record Plans
X Shop Drawings
X Field Measurement
____ Catalogs
____ Sample Testing
X Other existing data

D. Data Stored:
X District Office
____ Central Office
____ Microfilm
____ Bridge Owner
____ Materials Test Lab
____ Other

E. Controlling Member Analyzed:

Material:
1-6,8-12 Steel
____ Concrete
7 Cast in Place
____ Precast
____ Prestressed
____ Post Tensioned
____ Timber
____ Other

Span:
1-12 Simple
____ Continuous
____ Frame

Slab:
1-12 Non-Composite
____ Composite

Function:
____ Slab
9-12 Stringer
1-6 Floor Beam
7,8 Girder
____ Culvert
____ Truss

Shape:
1-6,8-12 Rolled
____ Built-up Welded
____ Built-up Riveted
____ Box Shape
____ AASHTO Girders
7 Other I-beam

Substructure:
____ Bent Construction
____ Piling
____ Cap
____ Pier Construction
____ Piling
____ Footing
____ Column
____ Cap

4. Load Rating Summary Table:

LOAD RATING SUMMARY FOR OPERATING RATING (GROSS TONS)

VEHICLE TYPE	TONS	OPR RATING	OPR FACTOR	SPAN NO.	SPAN LENGTH	CONTR. MEMBER	M OR V	FL BM SPACING
SU2	17	28.3	1.66	1	22.33	6	M	15.19
SU3	33	30.6	.926	1	22.33	5	M	15.19
SU4	35	30.0	.857	1	22.33	5	M	15.19
C3	28	42.3	1.51	1	22.33	6	M	15.19
C4	36.6	38.1	1.04	1	22.33	6	M	15.19
C5	40	41.6	1.04	1	22.33	6	M	15.19
ST5	40	46.5	1.16	1	22.33	5	M	15.19
HS20	36	41.2	1.14	1	22.33	6	M	15.19

HS 20 Inventory Rating 24.7 Rating Factor .686 Impact Factor .300

5. Comments:
MEMBERS 1, 2, 3 - FLOOR BEAMS - MAIN SPAN; MEMBERS 4, 5, 6 - FLOOR BEAMS - APPROACH SPAN. MEMBERS 7, 8 - GIRDERS - APPROACH SPAN; MEMBER 9, 10, 11 - STRINGERS - MAIN SPAN; MEMBER 12 - STRINGER - APPROACH SPAN.

6. Computations:
Performed By R. OGLESBY Date 03-26-97
Checked By H. KWOH Date 03-26-97
Reviewed By ____ Date 03-26-97

7. Responsible Engineer: SHUAN H. KWOH
P.E. # 20208 Date 03-26-97

3-26-97

LOAD RATING ANALYSIS SUMMARY

Element Category:

Unit 0

Element 107 Paint Stl Opn Girder (Continued):

CS2:
There are intermittent areas of corrosion bleedout between the bottom flange cover plates - NO CHANGE.

The main girders (top and bottom flanges, web plates, gusset plates and rivets) typically have painted-over pitting up to 3/4in. deep and section loss - NO CHANGE. Refer to photo 5.

The main girders are missing random rivets along the top flange and appears intentional, possibly from previous deck grating attachments – NO CHANGE.

Several of the main girder vertical web stiffeners have 100% painted-over section loss at the bottom flange - NO CHANGE.

The main girder bottom flange cover plates have 1/4in. deformations due to previous pack rust - NO CHANGE.

Main Girder 3-1 near leaf has three 1/4in. perforations in the web at the bottom flange between Floor Beams 3-4 and 3-5 - NO CHANGE.

Main Girder 3-2 has several painted perforations in the web adjacent to the stiffeners at the bottom flange - NO CHANGE.

ELEMENT NOTES

Element Category:

Unit 0

Element 152 Paint Stl Floor Beam (Continued):

CS1:
Rolled floor beams typically have painted-over section loss up to 1/8in. deep in various locations in the flanges and webs, generally at the stringer and lateral bracing connections - NO CHANGE.

Several of the rivet heads have up to 20% painted-over section remaining - NO CHANGE.

Many of the floor beam to main girder gusset plates have painted-over corrosion through-holes – NO CHANGE.

There is moderate dirt and debris on the bottom channel flange of Floor Beams 3-1 and 3-8 - NO CHANGE.

INCIDENTAL:
The east gusset plate at the south end of Floor Beams 3-5, 3-6 and the west gusset plate at the south end of Main Girder 3-8 have a corrosion hole over the lateral bracing up to 3in. x 1in. – NO CHANGE. Refer to photo 10.

The lateral bracing has areas of spotted surface corrosion and the lateral bracing between Floor Beams 3-3 and 3-4 has areas of moderate to heavy flaking corrosion with 1/16in. deep section loss – NO CHANGE.

The cantilevered sidewalk supports have moderate peeling paint and surface corrosion between the bottom flange angles - NO CHANGE.

ELEMENT NOTES

Element Category:

Unit 1

Element 13 Unp Conc Deck/AC Ovl (Continued):

CS2 (continued):
DECK UNDERSIDE:
Spans 2 and 4 have minor longitudinal and transverse cracks and minor spalls along the top flanges of the steel stringers - NO CHANGE.

Spans 2 and 4 also typically have up to bay width x 6in. delaminations along the top flanges of the floor beams - NO CHANGE.

Bay 1-4 has a 6ft. x 3ft. repaired area at mid-span that has delaminated areas throughout – NEW.

Bay 1-5 has a 2-1/2ft. x 3ft. x 1-1/2in. spalled/delaminated area with five exposed rebar with moderate surface corrosion near mid-span - NO CHANGE. Refer to photo 49.

Span 2, left sidewalk at 1/4 point has a 4in. x 3in. x 1in. spall with exposed rebar and a 15in. x 8in. x 2in. spall/delamination with exposed rebar near Bascule Pier 3- NO CHANGE.

Bay 2-5 has a 3-1/2ft. x 2ft. x 2-1/2in. spall/delamination with exposed rebar having heavy surface corrosion at Pier 2 - NO CHANGE. Refer to photo 50.

Span 2, right sidewalk between Floor Beams 2-3 and 2-4 has a 4ft. x 2ft. x 2in. spall/delamination with exposed rebar - NO CHANGE.

Span 4, right sidewalk near Floor Beam 4-2 has three spalls/delaminations up to 3ft. x 10in. x 2in. with exposed rebar - INCREASE.

Span 4, left sidewalk near mid-span has a 3ft. x 10in. x 2in. spall/delamination with exposed rebar – NO CHANGE.

ELEMENT NOTES

Element Category:

Unit 1

Element 298 Pile Jacket Bare (Continued):

CS3:
The pile encasements have vertical cracks up to 3/16in. wide with corrosion staining and sound hollow when tapped with a hammer, suggesting that corrosion has developed on the steel H-piles - NO CHANGE.

Secondary encasements have vertical cracks up to 1/16in. wide and delaminations that extend into the marine growth - NO CHANGE.

ELEMENT NOTES

MOVABLE BRIDGE – INSPECTION REPORT

District: 4 Bridge No. 934408 Route No. East Camino Real
County: Palm Beach Local Br. Name: Camino Real over Atlantic Intracoastal Waterway
Inspected By: Michael Betz - (CBI#162) Michael Harrison – BI Tech.
Electrical Inspected By: Andrew Barthle – (PE#67512)
Mechanical Inspected by: Amaka Amalu–Anderson – (PE#75527) and Robert Algazi
Underwater Inspected By: Kieth Hoogland – (CBI#00341) Pete Salazar and Timothy Payne

This is a five span bascule bridge located on Camino Real over the Atlantic Intracoastal Waterway. The bridge carries two lanes of traffic: one westbound and one eastbound. The structure was built in 1939. Nearest bridges along the waterway are Palmetto Park Draw to the north and Hillsboro Blvd. Draw to the south. The structure averaged 946 openings per month for the past 12 months. The structure is manned for operation 24 hours a day, 7 days a week. Openings are on the hour, 20 minutes after the hour and 40 minutes after the hour. The telephone number for the control house is (561) 395-7132. Tenders monitor marine radio channel 9. The bascule is a double leaf rolling lift design. The machinery is an open gear design with a Pragen gear reducer.

Navigational Vertical Clearances at M.H.W. is 8.9ft. (4ft. additional at center)

Navigational Horizontal Clearance is 83ft.

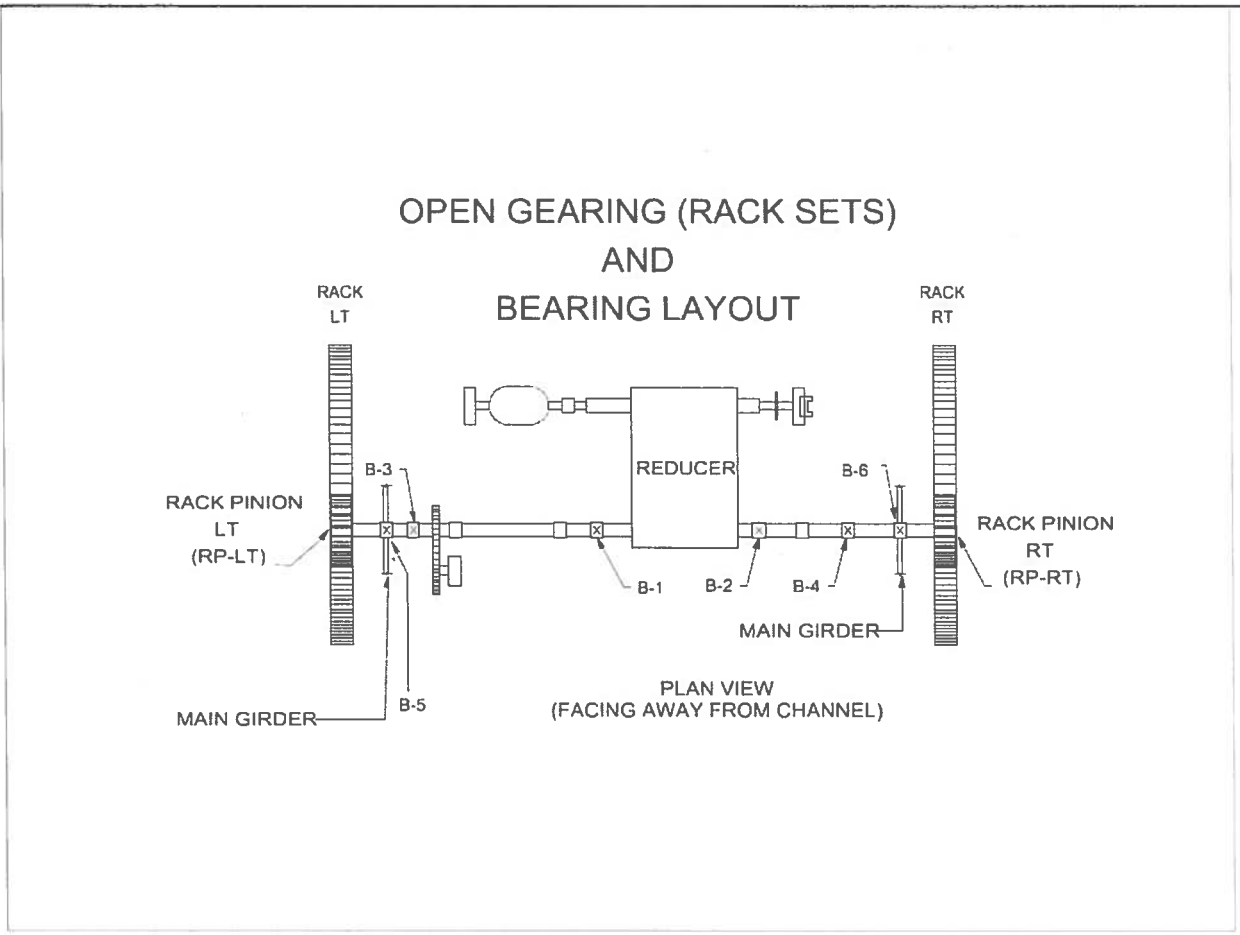
A.D.T. 13,888 v.p.d. per S.I.A.

Structure Length = 256.6ft.

Dates of Inspection:
Structural 5/28/15
Mechanical 5/8/15
Electrical 5/8/15
Underwater 5/13/15

Special Equipment Utilized
FDOT Work Barge (For scheduling, contact Larry Bauer Pone No. 561-370-1205)

ELEMENT NOTES



ELEMENT NOTES

ELEMENT 540/4 OPEN GEARING

NEAR LEAF

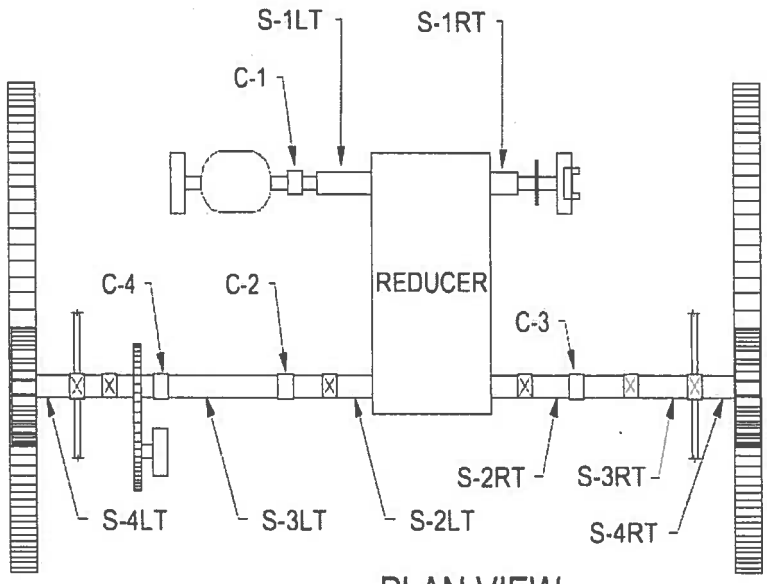
Racks & Gears - Measurements are in inches					
Element	Chordal Thickness 2014	Chordal Thickness 2015	Addendum	Lube	General Conditions
RP-LT	1.350	1.345	0.700	OK	Minor to moderate scoring 1/8in. misalignment
Rack Lt	1.350	1.350	0.685	OK	Good condition
RP-RT	1.340	1.336	0.688	OK	1/4in. misalignment, minor wear, moderate scoring, slight flanging on top land near ends of teeth
Rack Rt	1.360	1.350	0.700	OK	Good condition

FAR LEAF

Racks & Gears - Measurements are in inches					
Element	Chordal Thickness 2014	Chordal Thickness 2015	Addendum	Lube	General Conditions
RP-LT	1.340	1.340	0.690	Fair	Minor scoring, 1/8in. misalignment, minor wear
Rack Lt	1.350	1.353	0.688	OK	Good condition
RP-RT	1.353	1.348	0.693	OK	1/2in. misalignment, minor uneven wear, minor scoring, slight flanging on top land near ends of teeth
Rack Rt	1.359	1.355	0.700	OK	Minor scoring

ELEMENT NOTES

SHAFT AND COUPLING LAYOUT



PLAN VIEW
(FACING AWAY FROM CHANNEL)

ELEMENT NOTES

NEAR LEAF

ELEMENT 541/4 SPEED REDUCER (Pragen)

Item	General Condition
Fasteners	Slight Corrosion
Housings	Slight Corrosion
Bearings	Slight leakage at both input shafts
Gears	Good
Lubrication	Good
Operation	Smooth
Noise	Quiet

ELEMENT 542/4 SHAFTS

Shaft No.	General Condition
S-1LT	Debris and lubricant on shaft
S-2LT	Debris and lubricant on shaft. Shaft is misaligned
S-3LT	Debris and lubricant on shaft. Shaft is misaligned
S-4LT	Debris and lubricant on shaft
S-1RT	Debris and lubricant on shaft
S-2RT	Debris and lubricant on shaft
S-3RT	Debris and lubricant on shaft
S-4RT	Debris and lubricant on shaft. Paint cracked and corrosion present

ELEMENT 543/4 SHAFT COUPLINGS

Coupling No.	Type	Lube	Wear	General Condition
C-1	S/F	OK	Light	Debris and grease present
C-2	S/F	OK	Light	Misaligned, Paint loss and corrosion present, debris and grease present
C-3	S/F	OK	Light	Paint loss and corrosion present, debris and grease present
C-4	S/F	OK	Light	Misaligned, Paint loss and corrosion present, debris and grease present

N/F = Neoprene Flex

S/F = Steel Flex

ELEMENT NOTES

FAR LEAF

ELEMENT 541/4 SPEED REDUCER (Pragen)

Item	General Condition
Fasteners	Slight Corrosion
Housings	Slight corrosion
Bearings	No leakage noted
Gears	Good
Lubrication	Good
Operation	Smooth
Noise	Quiet

ELEMENT 542/4 SHAFTS

Shaft No.	General Condition
S-1LT	Debris and lubricant on shaft. Shaft marked by brake enclosure
S-2LT	Debris and lubricant on shaft. Shaft is misaligned
S-3LT	Debris and lubricant on shaft. Shaft is misaligned
S-4LT	Debris and lubricant on shaft. Paint cracked and corrosion present
S-1RT	Debris and lubricant on shaft. Shaft marked by brake enclosure
S-2RT	Debris and lubricant on shaft
S-3RT	Debris and lubricant on shaft
S-4RT	Debris and lubricant on shaft. Paint cracked and corrosion present

ELEMENT 543/4 SHAFT COUPLINGS

Coupling No.	Type	Lube	Wear	General Condition
C-1	S/F	OK	Light	Debris and grease present
C-2	S/F	OK	Light	Misaligned, debris and grease present
C-3	S/F	OK	Light	Debris and grease present
C-4	S/F	OK	Light	Misaligned, debris and grease present

N/F = Neoprene Flex

S/F = Steel Flex

ELEMENT NOTES

NEAR LEAF

ELEMENT 543/4 SHAFT BEARINGS

Item	Type	Clearance (inches) 2014	2015	Taken At	Bolts	Lube	General Condition
B-1	Splt. Slv.	.038	.014	3:00	OK	Good	Grease and debris present
B-2	Splt. Slv.	.042	.032	6:00	Paint loss and corrosion on housing bolts	Good	Grease and debris present
B-3	Splt. Slv.	INAC	INAC	--	Section loss on mounting bolts	Good	Grease and debris present
B-4	Splt. Slv.	INAC	INAC	--	Paint loss and corrosion on housing bolts	Good	Grease and debris present
B-5	Sleeve	.025	.010	3:00	Section loss on mounting bolts	Good	Grease and debris present
B-6	Sleeve	.025	.007	9:00	Section loss on mounting bolts	Good	Grease and debris present

ELEMENT NOTES

FAR LEAF

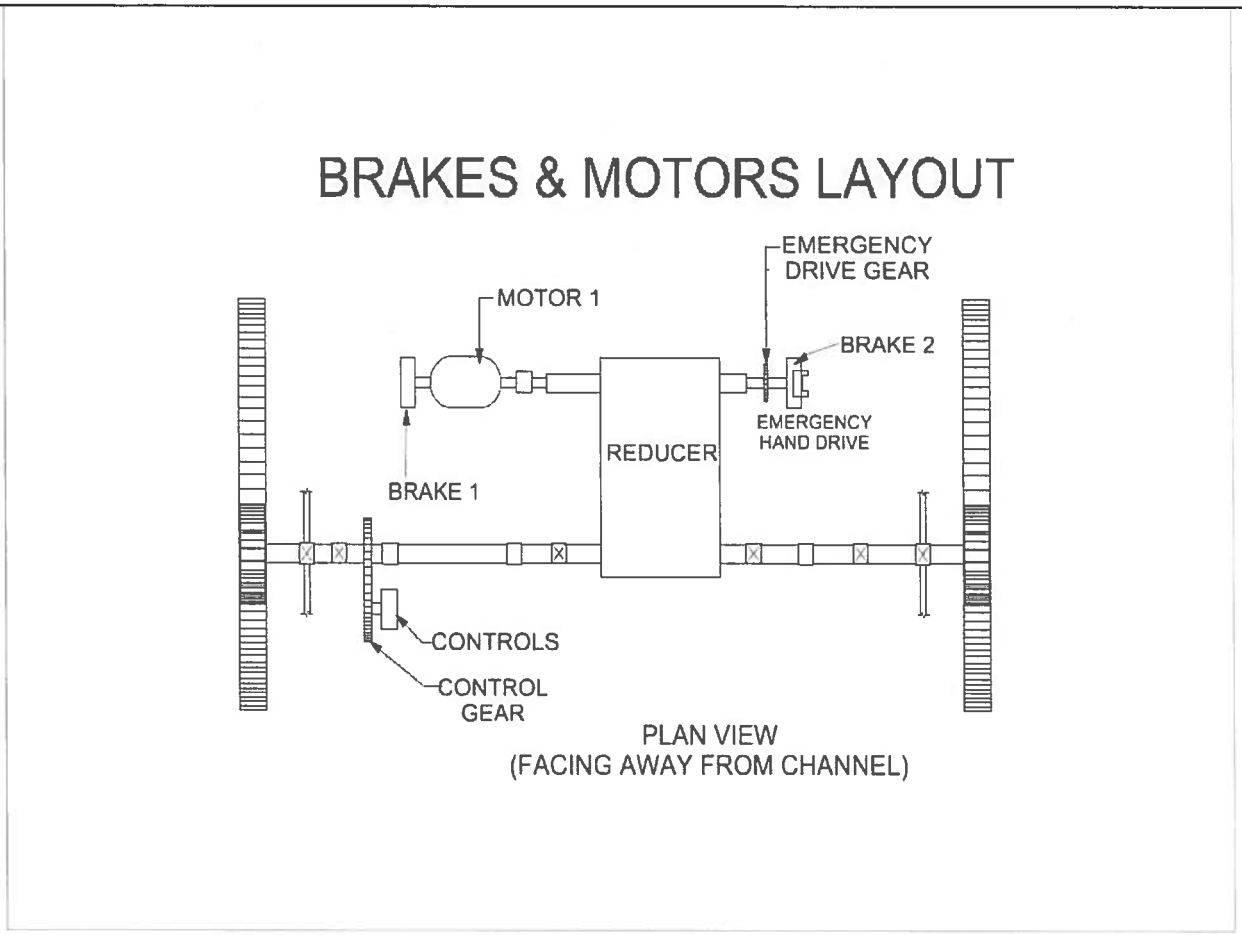
ELEMENT 543/4 SHAFT BEARINGS

Item	Type	Clearance (inches) 2014	2015	Taken At	Bolts	Lube	General Condition
B-1	Splt. Slv.	.025	.025	7:00	Good	Good	Grease and debris present
B-2	Splt. Slv.	.020	.020	12:30	Good	Good	Grease and debris present
B-3	Splt. Slv.	INAC	INAC	--	Section loss on mounting bolts	Good	Grease and debris present
B-4	Splt. Slv.	INAC	INAC	--	Good	Good	Grease and debris present
B-5	Sleeve	.037	.020	4:30	Section loss on mounting bolts	Good	Grease and debris present
B-6	Sleeve	.033	.015	7:30	Section loss on mounting bolts	Good	Grease and debris present

Splt. Slv. = Split Sleeve

INAC = Inaccessible

ELEMENT NOTES



ELEMENT NOTES

NEAR LEAF

ELEMENT 544/4 BRAKES

Item	Brake 1 General Condition	Brake 2
Fluid Level	Could not access plug frozen in-place	Could not access plug frozen in-place
Drum Condition	Moderate scoring and pitting, especially south edge, slightly offset with pads	Slightly offset with pads, minor scoring, 1/8in. deep gouge on south side and light surface corrosion
Pad Condition	OK - 3/16in. remaining	OK - 1/4in. remaining
Bolts/Brackets	Slight corrosion	Oslight corrosion
Operation	Good	Cannot easily release brakes with hand lever

Brake	Current (Amps)	Insulation Resistance (megohms)
Near Machinery brake	0.8	>1000
Near Service Brake	0.7	>1000
Far Machinery Brake	0.8	>1000
Far Service Brake	0.8	>1000

ELEMENT 545/4 MOTORS & 546/4 EMERGENCY DRIVE

Item	General Condition
Motor 1	OK
Hand Drive	Crank is kept in tender house

Motor	Current (Amps)		Insulation Resistance (megohms)
	Raise	Lower	
Near	12	6	>1000
Far	15	7	>1000

ELEMENT 560/4 Locks (Heel Stops)

Item	Contact	Bolts	General Condition
South	Good	Moderate corrosion	Moderate corrosion
North	Good	Moderate corrosion	Moderate corrosion

ELEMENT NOTES

FAR LEAF

ELEMENT 544/4 Brakes

Item	Brake 1 General Condition	Brake 2
Fluid Level	Low and dirty	Could not access plug frozen in-place
Drum Condition	OK – Light scoring and corrosion	OK - Slightly offset with pads light corrosion and moderate scoring
Pad Condition	OK - 3/16in. remaining	OK – 1/8in. remaining
Bolts/Brackets	Slight corrosion	Slight corrosion
Operation	Good	Cannot easily release brakes with hand lever

Brake	Current (Amps)	Insulation Resistance (megohms)
Near Machinery brake	0.8	>1000
Near Service Brake	0.7	>1000
Far Machinery Brake	0.8	>1000
Far Service Brake	0.8	>1000

ELEMENT 545/4 MOTORS & 546/4 EMERGENCY DRIVE

Item	General Condition
Motor 1	OK
Hand Drive	Crank is kept in tenders house

Motor	Current (Amps)		Insulation Resistance (megohms)
	Raise	Lower	
Near	12	6	>1000
Far	15	7	>1000

ELEMENT 560/4 Locks (Heel Stops)

Item	Contact	Bolts	General Condition
South	Good	Moderate corrosion	Moderate corrosion
North	Good	Moderate corrosion	Moderate corrosion

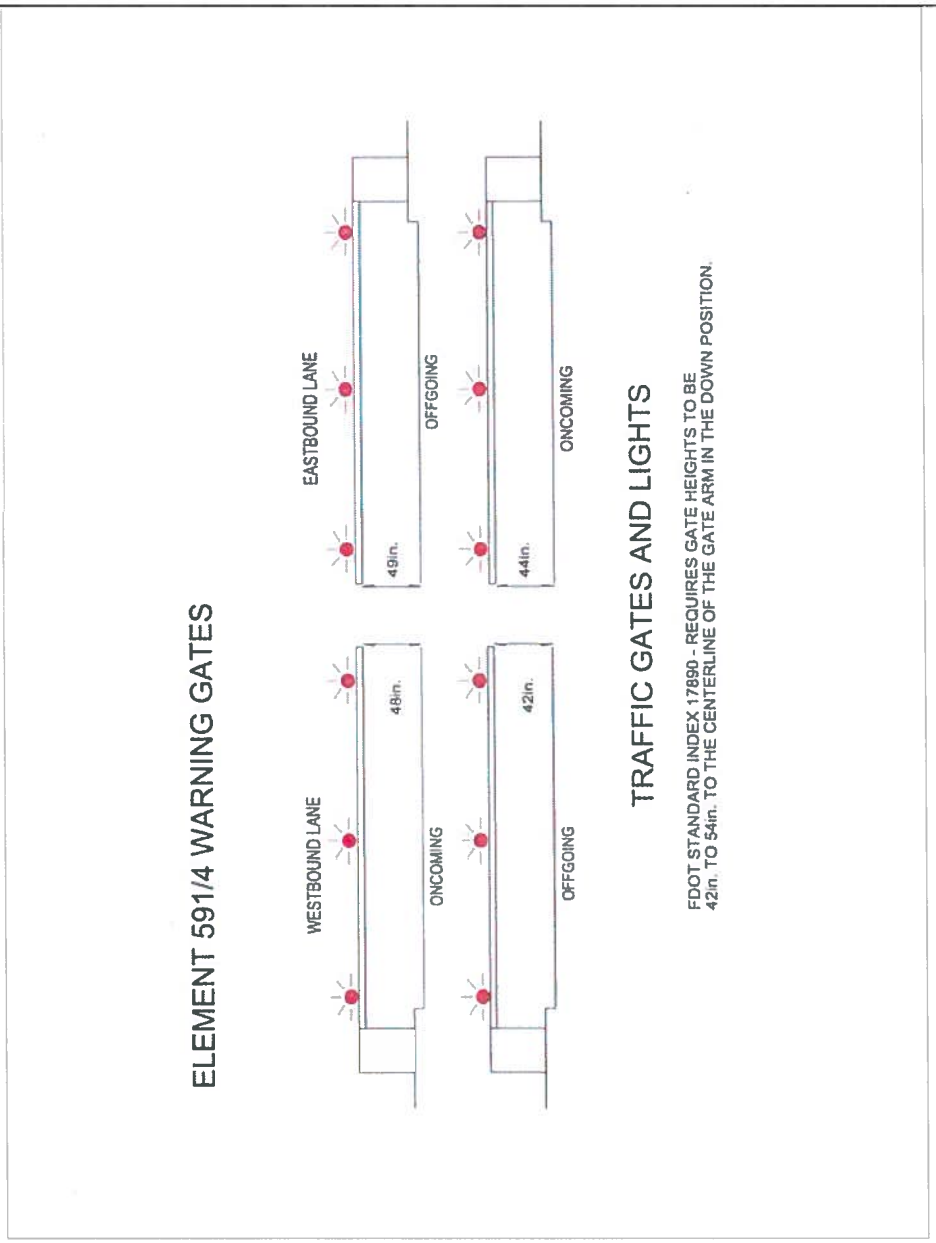
ELEMENT NOTES

ELEMENT 581/4 OPERATOR FACILITIES

SAFETY AND MISCELLANEOUS EQUIPMENT

	Item	No. Suggested	Available	Condition	Remarks
1	Life jackets	2	0		Need 2
2	Life ring and rope	2	1	Fair	Need 1
3	Binoculars	1	1	OK	--
4	Flags	4	1		Need 3
5	Cones	6	1	Poor	Need 5 (Replace all)
6	Safety vests	2	0		Need 2
7	Flares	4	0		Need 4
8	Battery operated lights	4	1	OK	Need 3
9	Emergency light system	--	Yes		Generator checked monthly
10	Flashlights	2	1		Need 1
11	Extra light bulbs	4	0	OK	Need 4
12	Coastguard regulations	--	No		Palm Beach Co. Tender's Op. Manual Available
13	Fire extinguishers	2	2	OK	Recharged 1/16/15 and 5/8/15
14	First Aid Kit	1	1	OK	
15	Rubber mat	4	0		Need 4
16	Light (gate)	--	--	OK	
17	Signals	--	--	OK	
18	Fender lights	--	--	OK	
19	Draw lights	--	--	OK	

ELEMENT NOTES



ELEMENT NOTES

ELEMENT 591/4 WARNING GATES

GATE ARM HEIGHTS AND MOTOR CURRENT AND INSULATION RESISTANCE

Gate	Current (Amps)		Insulation Resistance (megohms)	Arm Height (inches)
	Raise	Lower		
SE	3	3	>1000	49"
NE	2	2	>1000	48"
SW	3	3	>1000	44"
NW	3	3	>1000	42"

ELEMENT NOTES

Photo 1 - Unit 0 Element 29 Steel Deck/Conc Grid

Spall with exposed rebar in the underside of the left (north) sidewalk in Bascule Pier 4

REPAIR RECOMMENDATION:
Repair spall in the underside of the north sidewalk in Bascule Pier 4. 6MH

Photo 2 - Unit 0 Element 107 Paint Stl Open Girder

Typical corrosion and section loss to the bottom flange rivet heads

REPAIR RECOMMENDATION:
Clean and spot paint Main Girders 3-1 and 3-2. 80MH

Photo 3 – Unit 0 Element 107 Paint Stl Open Girder

Corrosion and section loss to the rivet heads on the bottom face of Main Girder 3-2 at Bascule Pier 3

REPAIR RECOMMENDATION:
Refer to photo 2.

Photo 4 - Unit 0 Element 107 Paint Stl Open Girder

Typical corrosion at vertical stiffeners

REPAIR RECOMMENDATION:
Refer to photo 2.

Photo 5 - Unit 0 Element 107 Paint Stl Open Girder

Typical deteriorated rivets at main girder connections

REPAIR RECOMMENDATION:
Replace all rivets with greater than 30% section loss. 50MH

Photo 6 – Unit 0 Element 113 Paint Stl Stringer

Stringer 3-2 corrosion at the east sidde of Floor Beam 3-3

REPAIR RECOMMENDATION:
Clean & paint Stringers 3-1 3-2 & 3-3 @ Floor Beam 3-3 & Stringer 3-2 & 3-3 @ Floor Beam 3-6. 4MH

Photo 7 - Unit 0 Element 113 Paint Stl Stringer

Corrosion at the end of Stringer 3-1 inside Bascule Pier 4

REPAIR RECOMMENDATION:
Clean and paint Stringer 3-1 inside Bascule Pier 4 at the counterweight. 4MH

Photo 8 – Unit 0 Element 152 Paint Stl Floor Beam

Typical pitting and corrosion of Floor Beam 3-1

REPAIR RECOMMENDATION:
Clean and spot paint the floor beams and associated members in Bascule Span 3. 100MH

Photo 9 – Unit 0 Element 152 Paint Stl Floor Beam

Corrosion on the south gusset plate of Floor Beam 3-4

REPAIR RECOMMENDATION:
Refer to photo 8.

Photo 10 – Unit 0 Element 152 Paint Stl Floor Beam

Corrosion hole in the east gusset plate at the south end of Floor Beam 3-5

REPAIR RECOMMENDATION:
Refer to photo 8.

Photo 11 – Unit 0 Element 540 Open Gearing

Grease on all pinion and rack gear teeth is light. Sections of teeth are exposed and slight corrosion is present. Grease pattern on rack depicts slight cross mesh misalignment with pinion. Near leaf adjacent side shown, others similar

REPAIR RECOMMENDATION:
Clean gear sets and apply grease with higher viscosity. 24MH

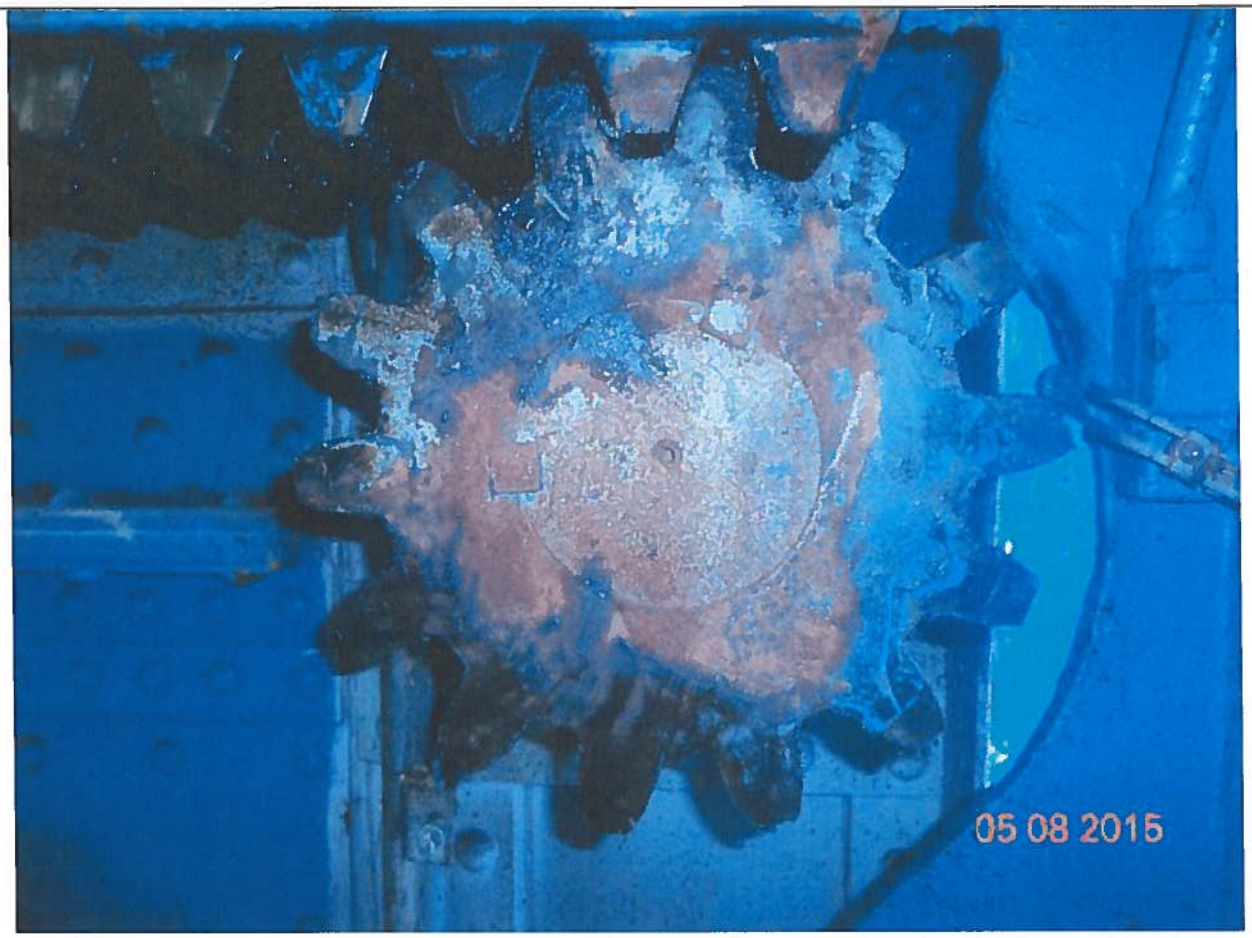


Photo 12 – Unit 0 Element 540 Open Gearing

Paint loss and corrosion is present on the sides of all pinions and racks. Far leaf adjacent side shown, others similar

REPAIR RECOMMENDATION:
Clean and paint sides of pinions and racks. 8MH.

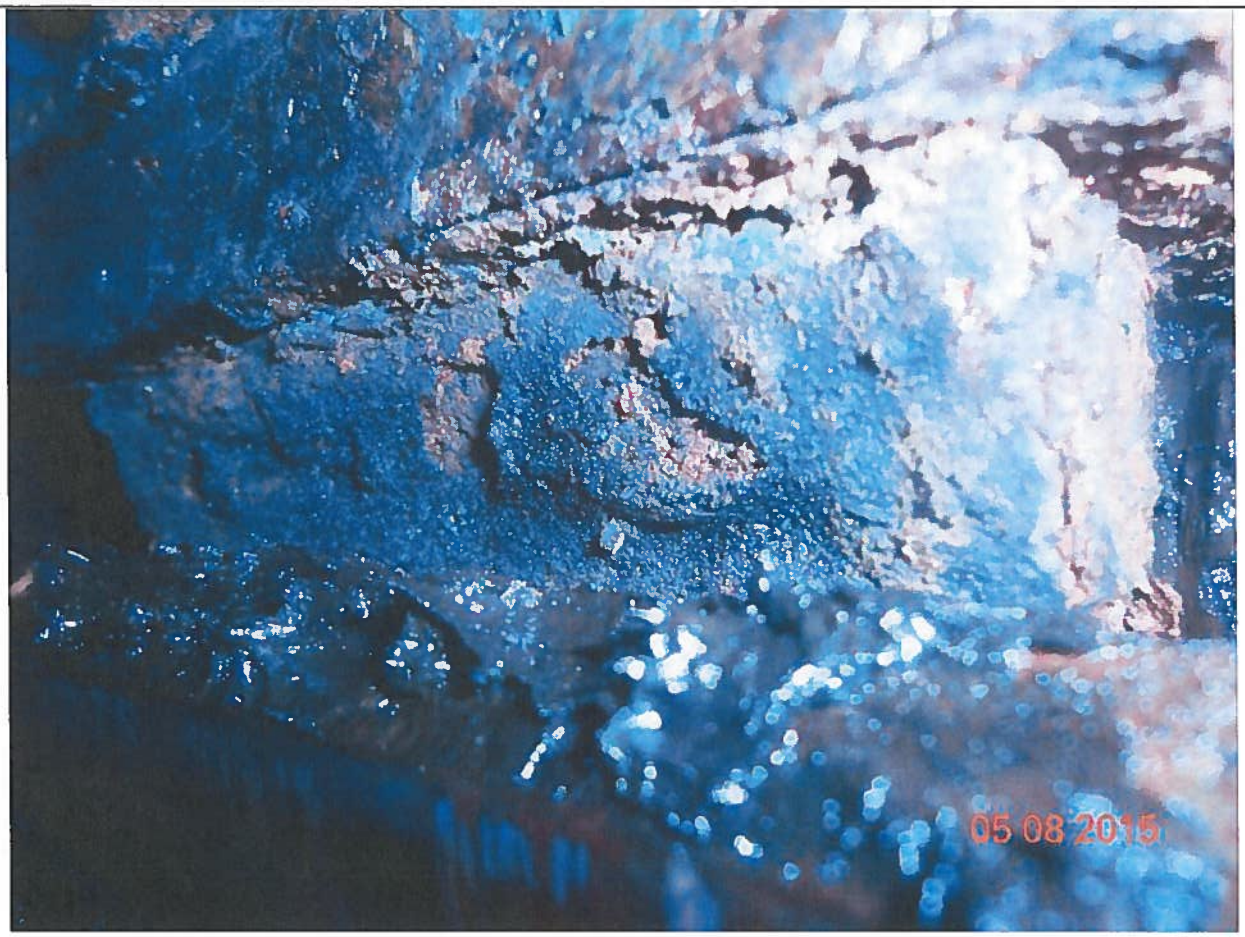


Photo 13 – Unit 0 Element 540 Open Gearing

The far faces of the first and last tooth of all racks exhibit corrosion and section loss. Far leaf opposite side shown, others similar

REPAIR RECOMMENDATION:
Clean first and last rack teeth and apply grease. 10MH

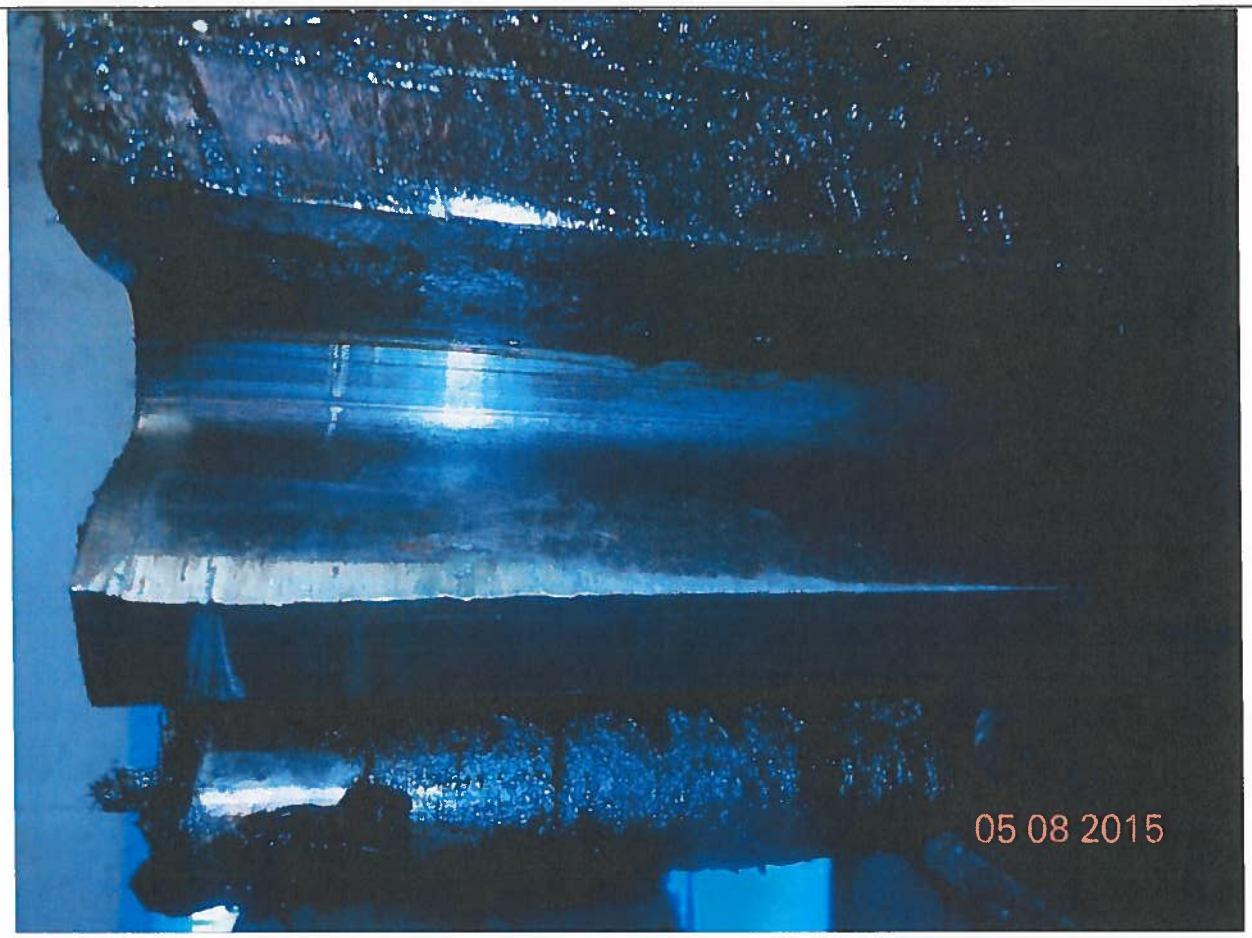


Photo 14 – Unit 0 Element 540 Open Gearing

All pinion teeth exhibit minor scoring and slight flanging on the top lands near the ends of the teeth. Near leaf adjacent side shown, others similar

REPAIR RECOMMENDATION:
None

Photo 15 – Unit 0 Element 540 Open Gearing

All rack inboard mounting bolts exhibit moderate corrosion and minor section loss. Near leaf opposite side shown, others similar

REPAIR RECOMMENDATION:
Clean corrosion and paint inboard rack mounting bolts. 10MH

Photo 16 – Unit 0 Element 540 Open Gearing

Sections of all rack supports exhibit paint loss, corrosion, and moderate section loss. Far leaf adjacent side shown, others similar

REPAIR RECOMMENDATION:
Clean and paint all rack assembly supports. 6MH

Photo 17 – Unit 0 Element 540 Open Gearing

No drip pan is present underneath the rack and grease is dripping onto the rack frame and concrete floor. Near leaf adjacent side shown, others similar

REPAIR RECOMMENDATION:
Provide debris pans for gearing elements. 6MH

Photo 18 - Unit 0 Element 540 Open Gearing

Corrosion hole in main transverse machinery support at main girder connections in Bascule Pier 4

REPAIR RECOMMENDATION:
Clean & paint main transverse machinery support & vertical-diagonal supports in Bascule Pier 4. 6MH

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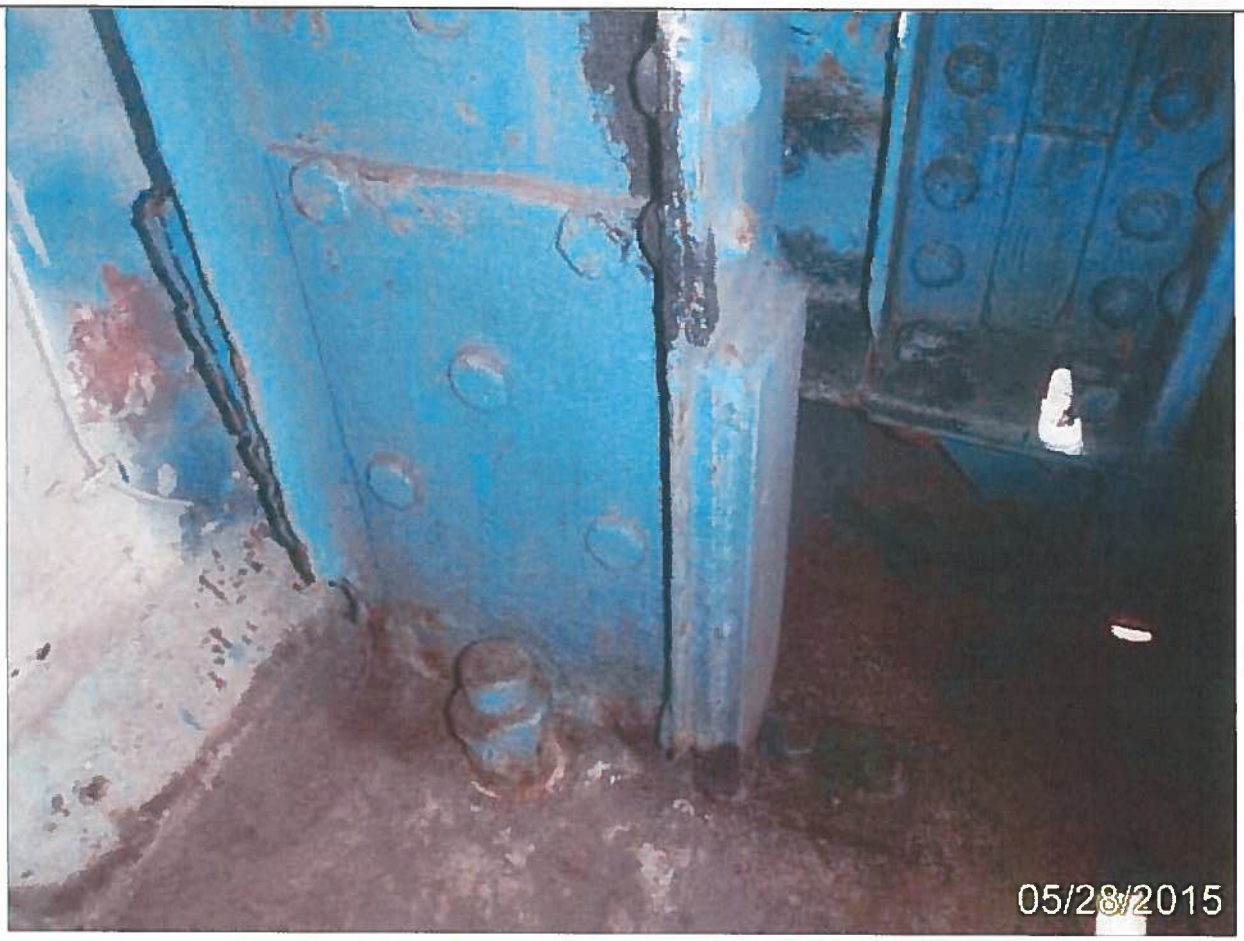

Photo 19 - Unit 0 Element 540 Open Gearing

Corrosion at the bases and connection points at the machinery supports

REPAIR RECOMMENDATION:
Refer to photo 18.

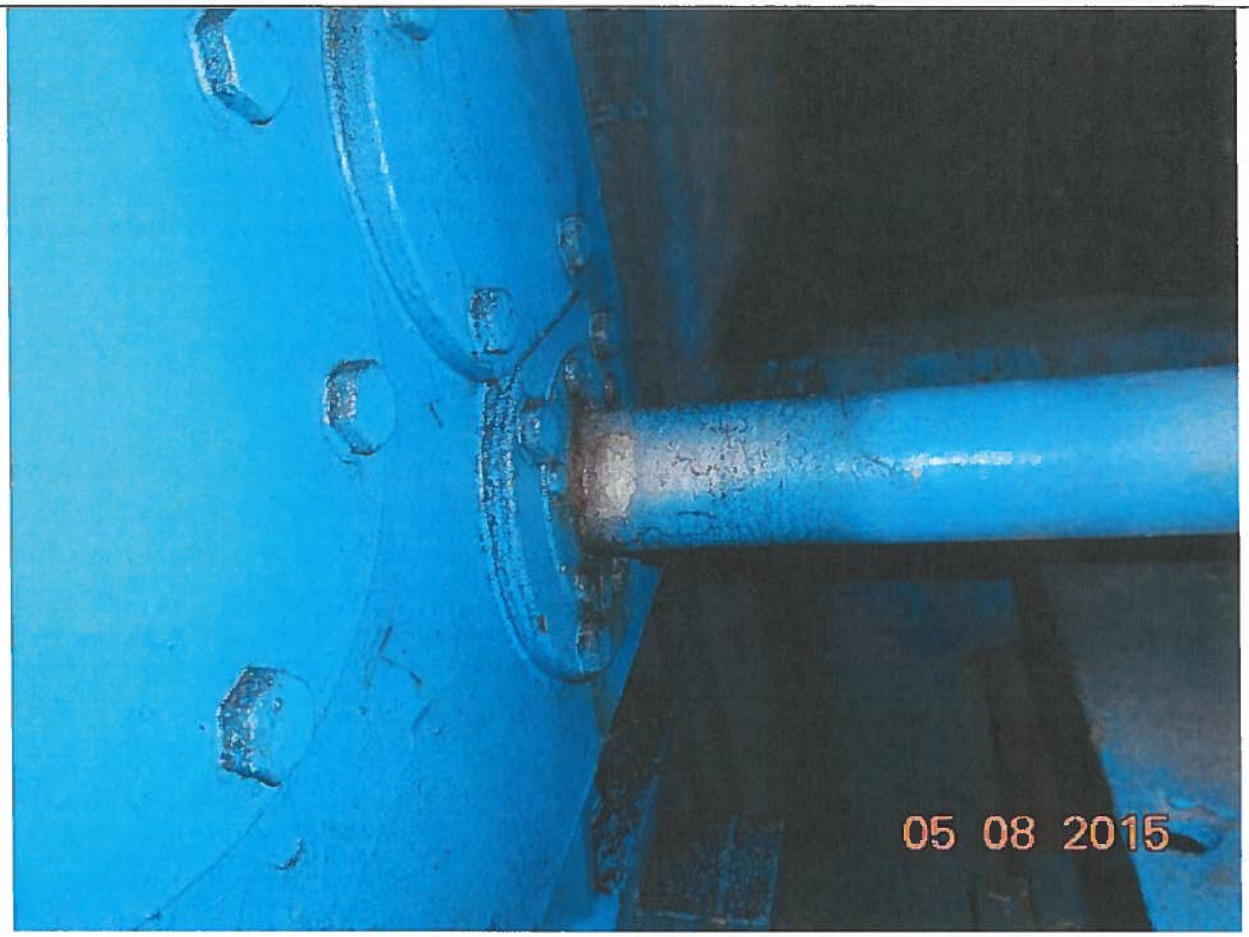

Photo 20 – Unit 0 Element 541 Speed Reducers

Both near leaf input shafts exhibit light leakage. Adjacent side shown

REPAIR RECOMMENDATION:
Replace shaft seals at near leaf reducer input shafts. 20MH.

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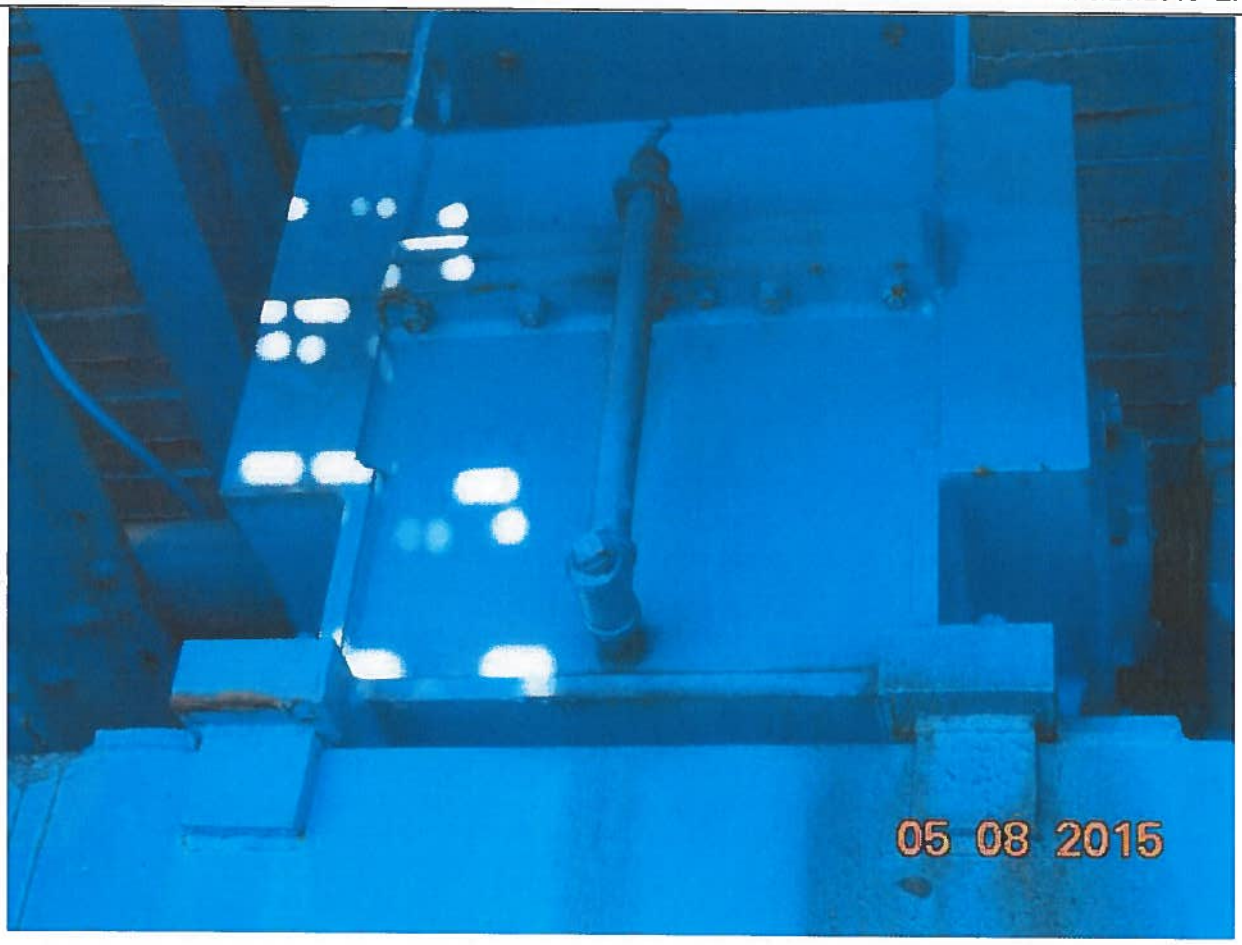

Photo 21 – Unit 0 Element 541 Speed Reducers

Slight debris and corrosion is present on all reducer housings. Far leaf shown, near leaf similar

REPAIR RECOMMENDATION:
Clean and paint reducer housing. 10MH

Photo 22 - Unit 0 Element 542 Shafts

Typical paint cracks and corrosion on the pinion shafts

REPAIR RECOMMENDATION:
Clean corrosion debris and lubrication from all shafts and paint. 60MH

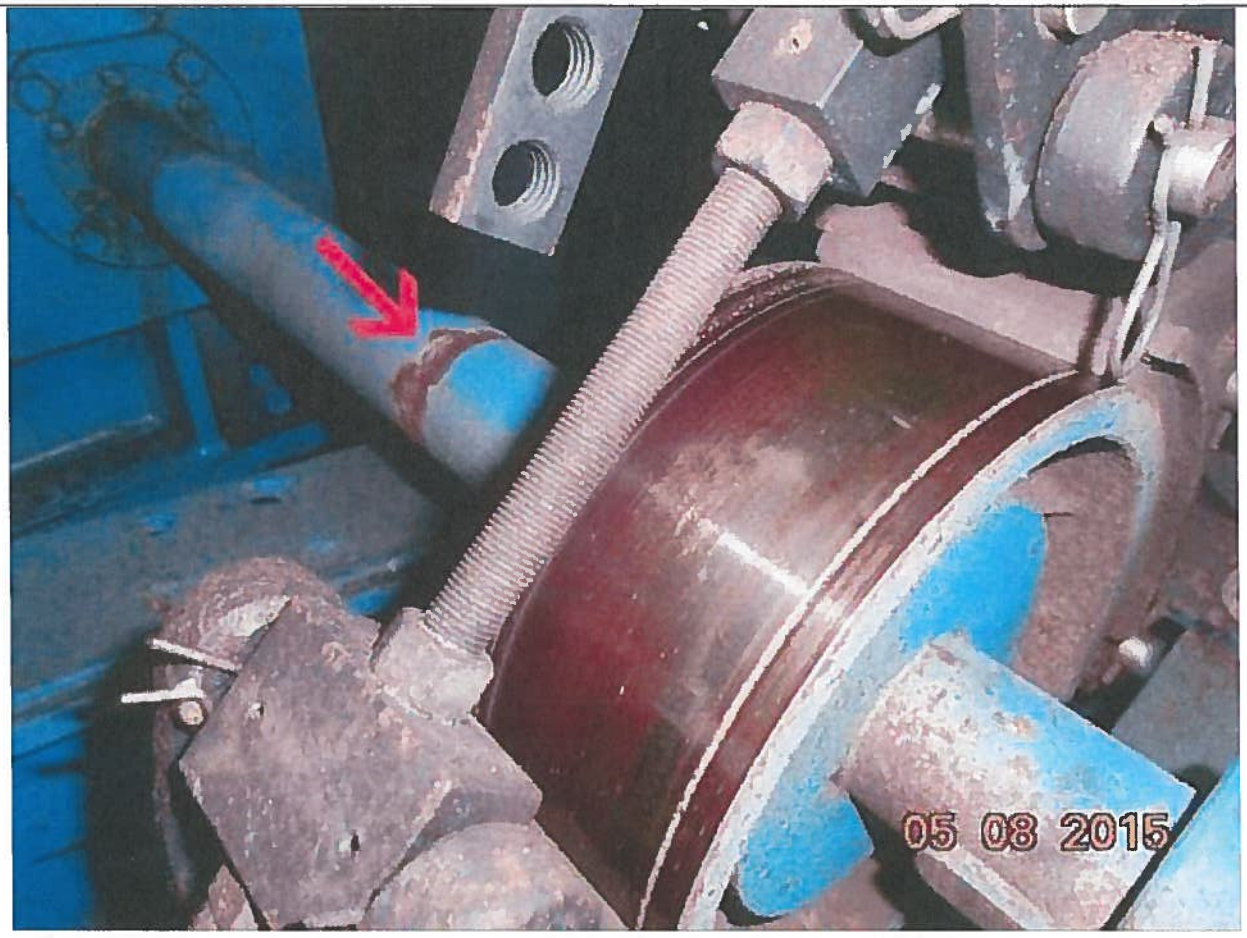

Photo 23 - Unit 0 Element 542 Shafts

Far leaf reducer input shafts are marked by brake enclosures

REPAIR RECOMMENDATION:
Refer to photo 22.

Photo 24 – Unit 0 Element 543 Shafts Brgs and Coupl

Couplings C2 and C4 on both leaves are misaligned. Near leaf coupling C2 shown, others similar

REPAIR RECOMMENDATION:
Repair coupling end plates in couplings C-2 and C-4 of both leaves. 20MH.

Photo 25 – Unit 0 Element 543 Shaft Brgs and Coupl

All couplings have a minor to moderate layer of grease and debris present. Near leaf coupling C3 shown, others similar

REPAIR RECOMMENDATION:
Clean all bearing and coupling assemblies and paint. 80MH

Photo 26 – Unit 0 Element 543 Shaft Brgs and Coupl

Corrosion and section loss are present on both near and far leaves' Bearing B3 mounting bolts at the nut. Near leaf shown, far leaf similar

REPAIR RECOMMENDATION:
Replace near and far leaf Bearing B3 mounting bolts. 8MH

Photo 27 – Unit 0 Element 544 Brakes

All brakes exhibit minor corrosion and moderate debris on all brake drums and hubs. Far leaf motor brake shown, others similar

REPAIR RECOMMENDATION:
Clean all brake drums and hubs and paint hubs. 40MH

Photo 28 – Unit 0 Element 544 Brakes

Both far leaf brake shoes do not fully engage the drum when set. Motor brake shown

REPAIR RECOMMENDATION:
Adjust both far leaf brake shoes and repair hand levers. 4MH

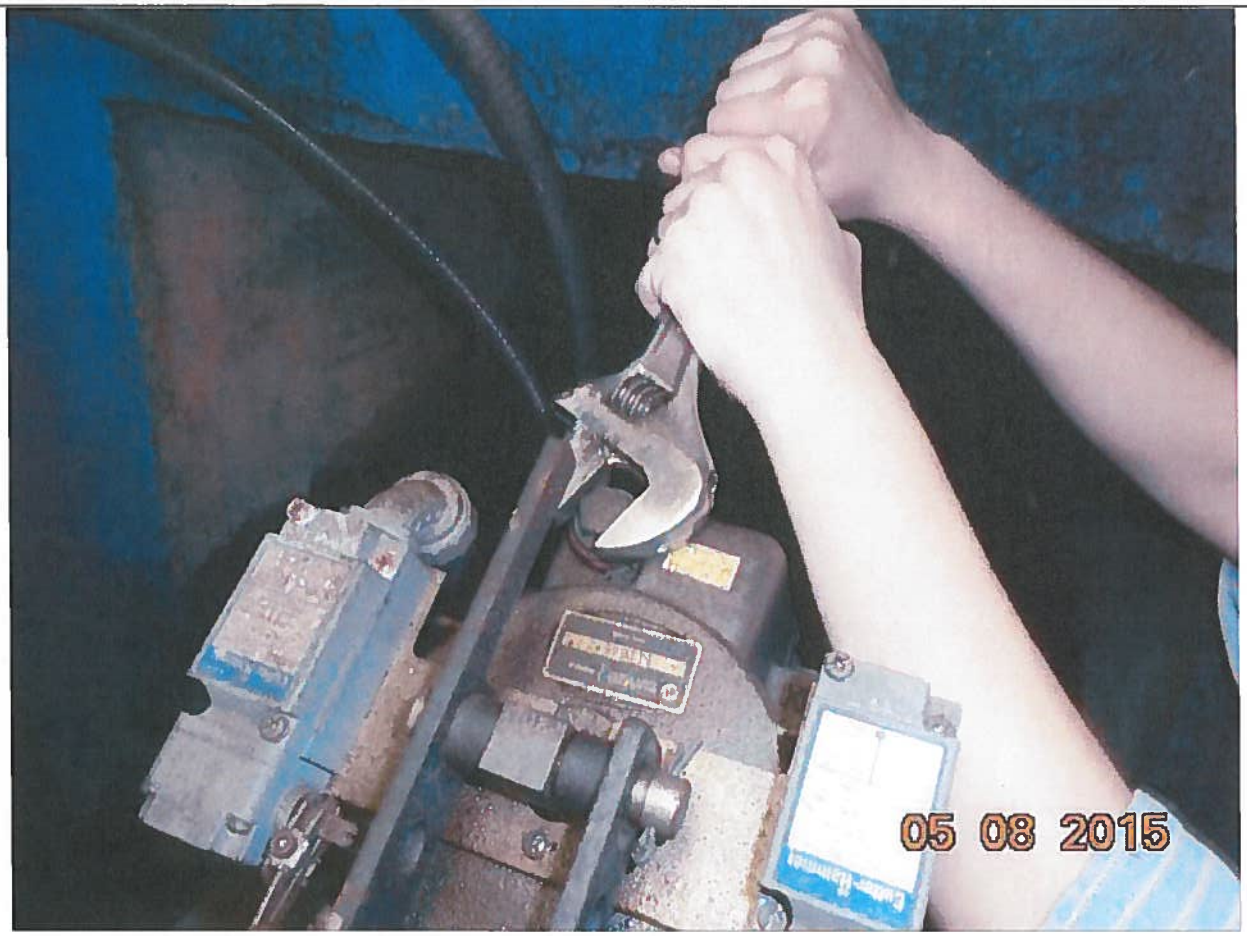

Photo 29 – Unit 0 Element 544 Brakes

The fluid plug for near leaf motor and machinery brakes and far leaf motor brakes could not be removed. Far leaf machinery brake shown

REPAIR RECOMMENDATION:
Loosen brake fluid plugs on Brakes 1 and 2 near and Brake 2 far. 4MH

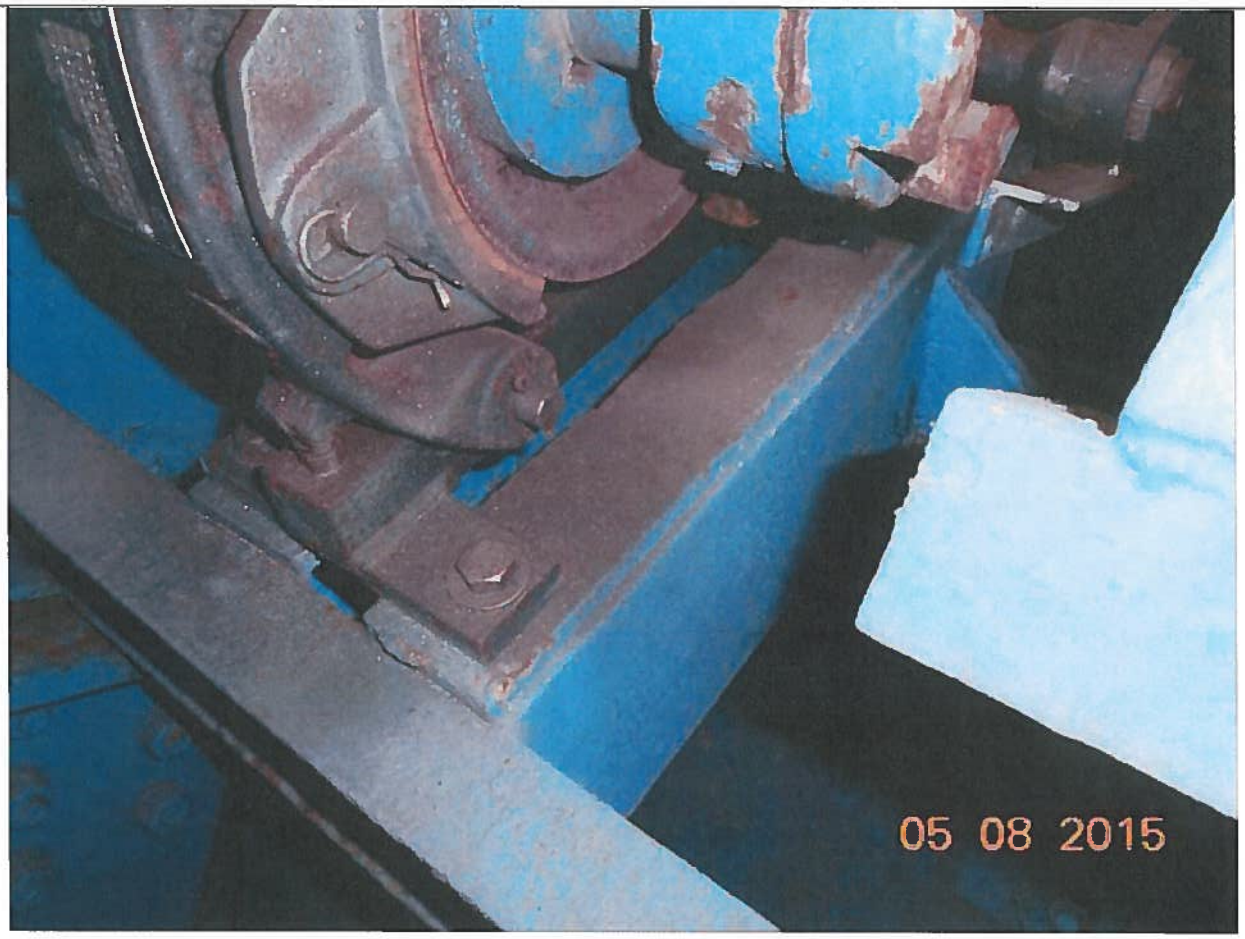

Photo 30 – Unit 0 Element 544 Brakes

All brake mounting support exhibit light corrosion and debris. Far leaf machinery brake shown

REPAIR RECOMMENDATION:
Clean and paint brake mounting supports 20MH.

Photo 31 – Unit 0 Element 545 Emergency Drive

The top surface of the load bank has areas of spotty surface corrosion

REPAIR RECOMMENDATION:
Clean and spot paint load bank enclosure. 2MH

Photo 32 – Unit 0 Element 560 Locks

The mounting bolts for the rigid lock plate are not painted and corrosion is present. Opposite side shown, adjacent similar

REPAIR RECOMMENDATION:
Clean and paint rigid lock plate mounting bolts. 6MH

Photo 33 – Unit 0 Element 560 Locks

Moderate corrosion is present on all heel stops. Near leaf opposite side shown, others similar

REPAIR RECOMMENDATION:
Clean and paint nonbearing surfaces of heel stops. 20MH

Photo 34 – Unit 0 Element 565 Trun/Str and Cur Trk

Moderate corrosion and light debris are present on all tread and track plates. Near leaf opposite side shown, others similar

REPAIR RECOMMENDATION:
Clean tread and track plates and paint all non-bearing surfaces. 40MH

Photo 35 – Unit 0 Element 565 Trun/Str and Cur Trk

All tread and track plate mounting bolts lack paint and exhibit minor to moderate corrosion. Far leaf opposite side track plate shown, others similar

REPAIR RECOMMENDATION:
Refer to photo 34.

Photo 36 – Unit 0 Element 571 Submarine Cable

The armor for the two abandoned cables at the north end of Piers 3 and 4 has severe corrosion with 100% deterioration, in the splash zone

REPAIR RECOMMENDATION:
None

Photo 37 – Unit 0 Element 571 Submarine Cable

The insulation for the in-service submarine cable at the south end of Bascule Piers 3 and 4 have light to moderate deterioration with corrosion staining where it enters the bascule pier

REPAIR RECOMMENDATION:
None

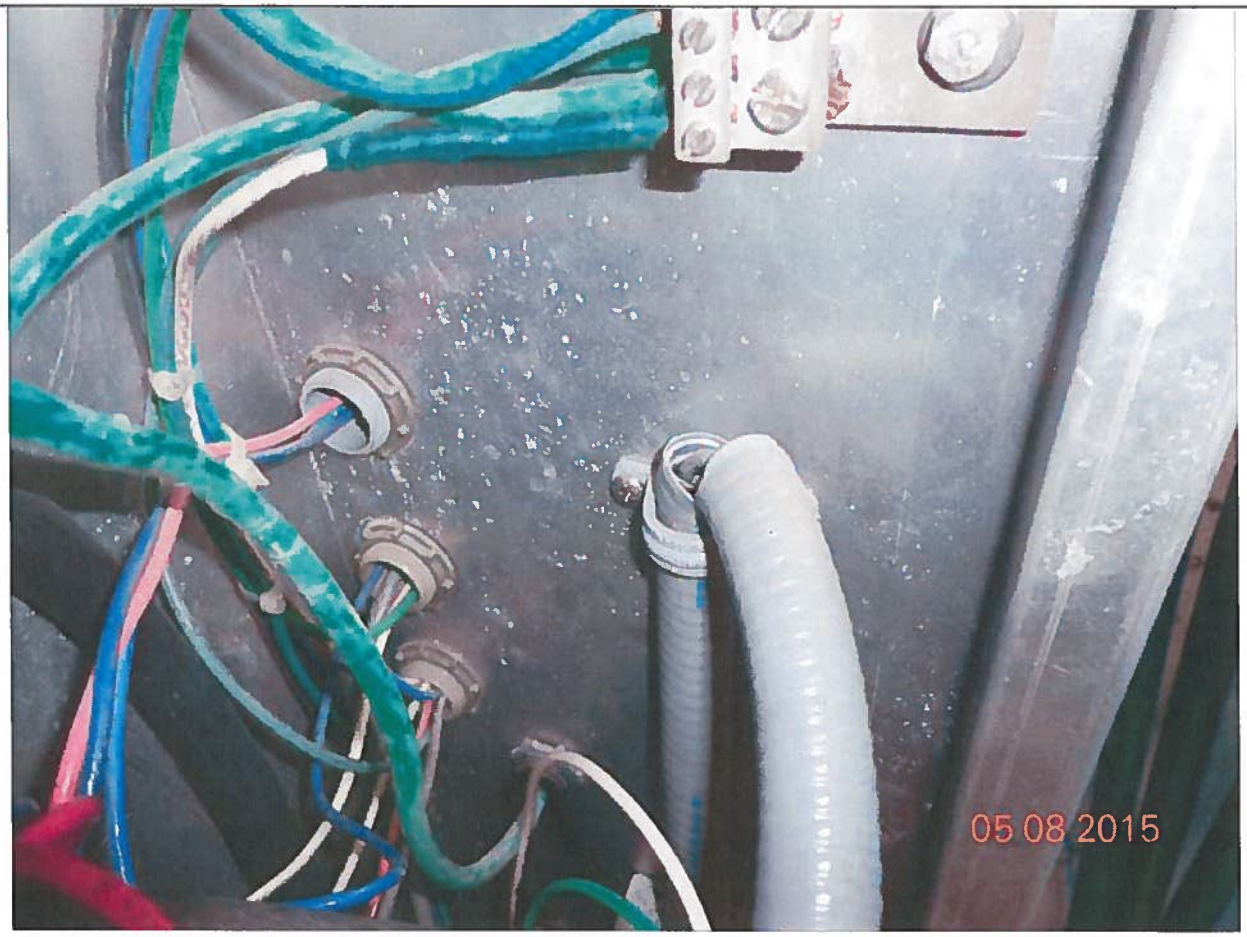

Photo 38 – Unit 0 Element 572 Conduit and Junct. Box

There is a broken length of flexible conduit in the junction box at the southwest corner of the near bascule pier/track area

REPAIR RECOMMENDATION:
Replace broken conduit in junction box at SW corner of near bascule pier track area. 4MH

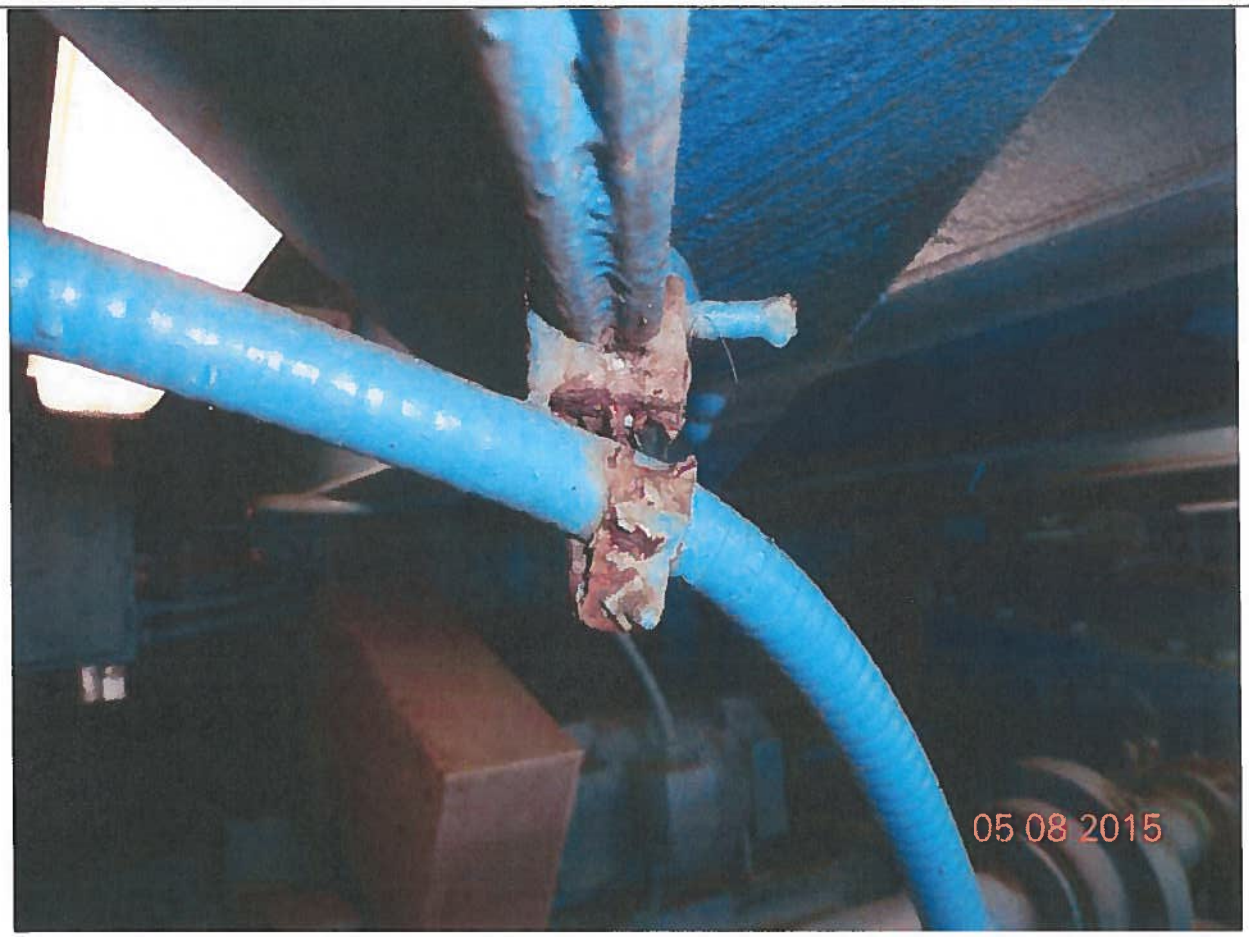

Photo 39 – Unit 0 Element 572 Conduit and Junct.

The support for the length of flexible conduit in the near machinery area is corroded with significant section loss

REPAIR RECOMMENDATION:
Replace corroded conduit clamp in near machinery area. 4MH

Photo 40 – Unit 0 Element 574 Control Console

Rubber mats have not been provided in front of the control console, motor control cabinet (MCC), main distribution enclosure (MDE) or automatic transfer switch (ATS)

REPAIR RECOMMENDATION:
Provide rubber mats for the electrical housings. 4MH

Photo 41 – Unit 0 Element 581 Operators Facilities

Only one standard size traffic cone provided

REPAIR RECOMMENDATION:
Restock items listed in the table in the additional element notes. 4MH

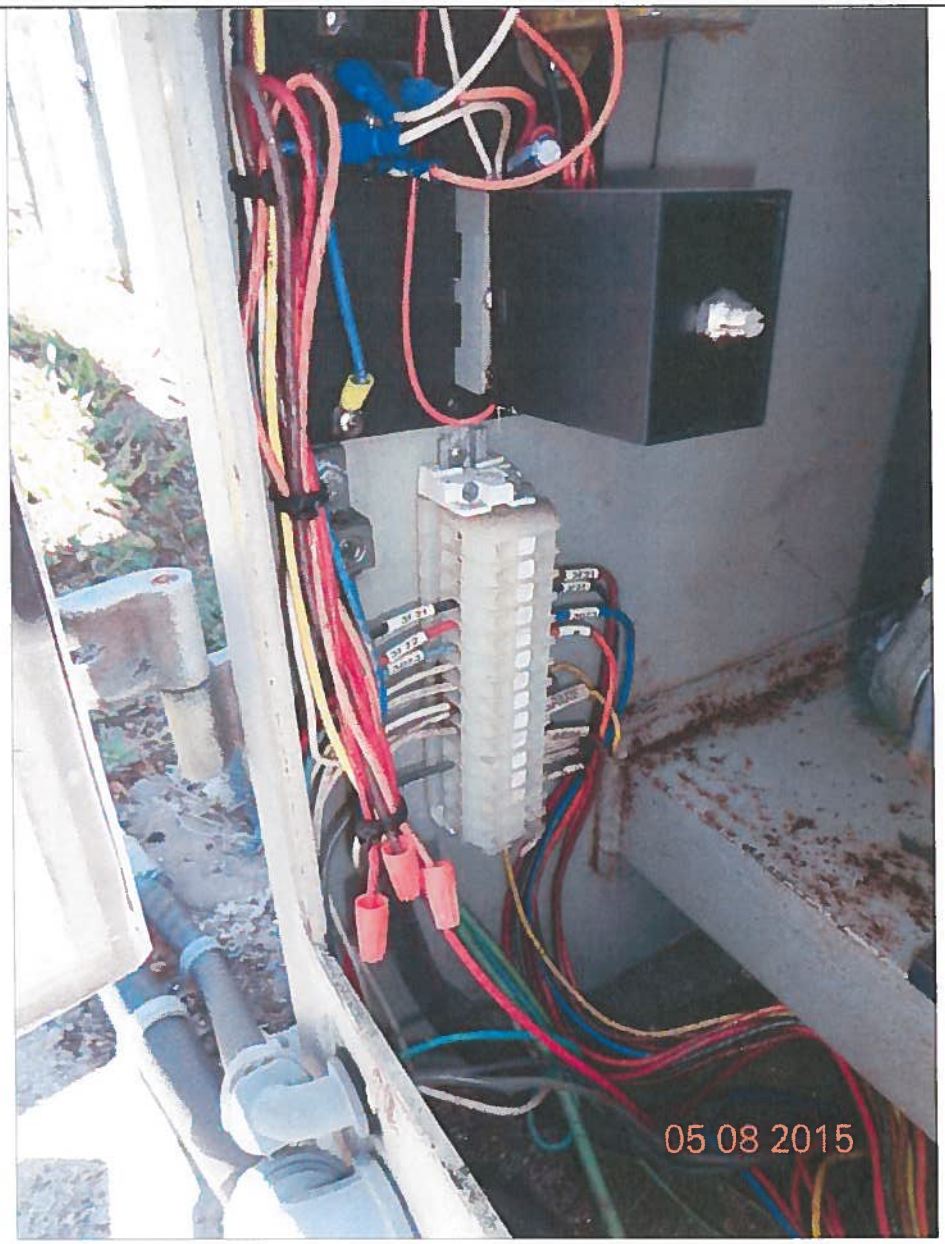

Photo 42 – Unit 0 Element 591 Warning Gates

The northwest (previously northeast) and southwest gates have unterminated wires within the housings (southwest shown in photo)

REPAIR RECOMMENDATION:
Properly terminate wires in the NW and SW gate enclosures. 2MH.

Photo 43 – Unit 0 Element 592 Traffic Signals

Both traffic signals have dirt covering the foundations and packed under the base plates

REPAIR RECOMMENDATION:
Clean dirt under the traffic signal foundations. 3MH

Photo 44 – Unit 0 Element 592 Traffic Signals

The anchor bolts and leveling nuts have heavy flaking corrosion and there are no grout pads or critter screens below the base plates

REPAIR RECOMMENDATION:
Clean and paint traffic signal leveling nuts and provide critter screens. 4MH

Photo 45 – Unit 0 Element 202 Paint Stl Column

Painted over section loss with recurring corrosion on the southeast column in Bascule Pier 4

REPAIR RECOMMENDATION:
None

Photo 46 – Unit 0 Element 210 R/Conc Pier Wall

Spall/delamination with exposed steel in the west face of the east wall at Bascule Pier 4

REPAIR RECOMMENDATION:
Repair the spalls and delaminations in the bascule piers. 40MH

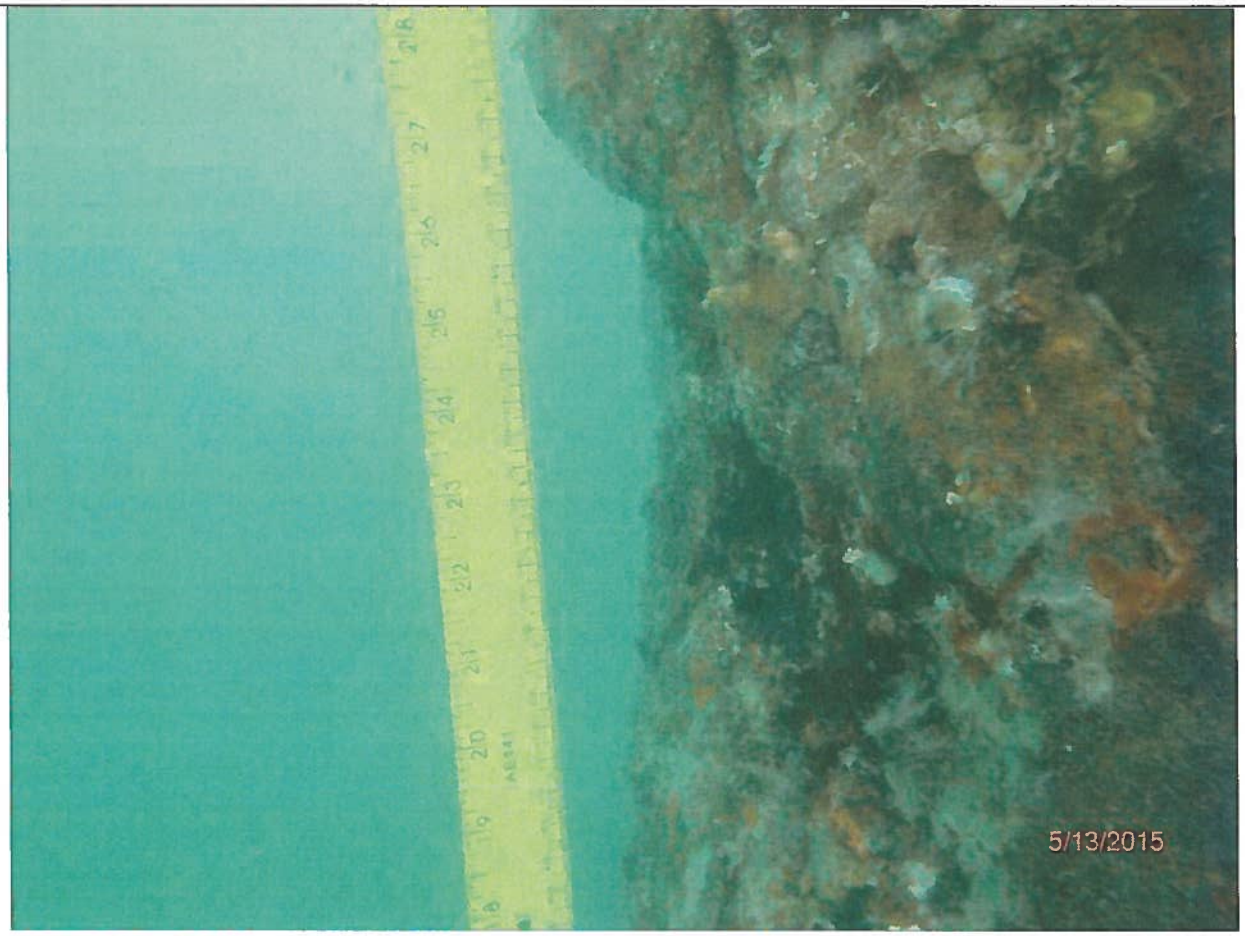

Photo 47 – Unit 0 Element 210 R/Conc Pier Wall

Spall/delamination with exposed steel in the west face of the east wall at Bascule Pier 4

REPAIR RECOMMENDATION:
Refer to photo 46.

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Photo 48 – Unit 1 Element 13 Unp Conc Deck/Asp Ovl

Deteriorated roadway striping

REPAIR RECOMMENDATION:
Apply roadway striping. 10MH

Photo 49 – Unit 1 Element 13 Unp Conc Deck/Asp Ovl

Spall with exposed rebar in Bay 1-6

REPAIR RECOMMENDATION:
Repair spalls in the deck underside. 20MH

Photo 50 – Unit 1 Element 13 Unp Conc Deck/Asp Ovl

Spall with exposed rebar in Bay 2-5

REPAIR RECOMMENDATION:
Refer to photo 49.

Photo 51 – Unit 1 Element 331 Conc Bridge Railing

Spalls between Posts 4-1 and 4-4 Right (south)

REPAIR RECOMMENDATION:
Repair spalls and cracks throughout the bridge rails. 10MH

Photo 52 – Unit 1 Element 107 Paint Stl Opn Girder

Corrosion and on MG 2-2 bottom south flange

REPAIR RECOMMENDATION:
Repair MG 2-1 2-2 4-1 and 4-2 bottom flanges. 20MH

Photo 53 – Unit 1 Element 107 Paint Stl Opn Girder

Corrosion and loss of section on MG 2-2 and its vertical stiffeners

REPAIR RECOMMENDATION:
Refer to photo 52.

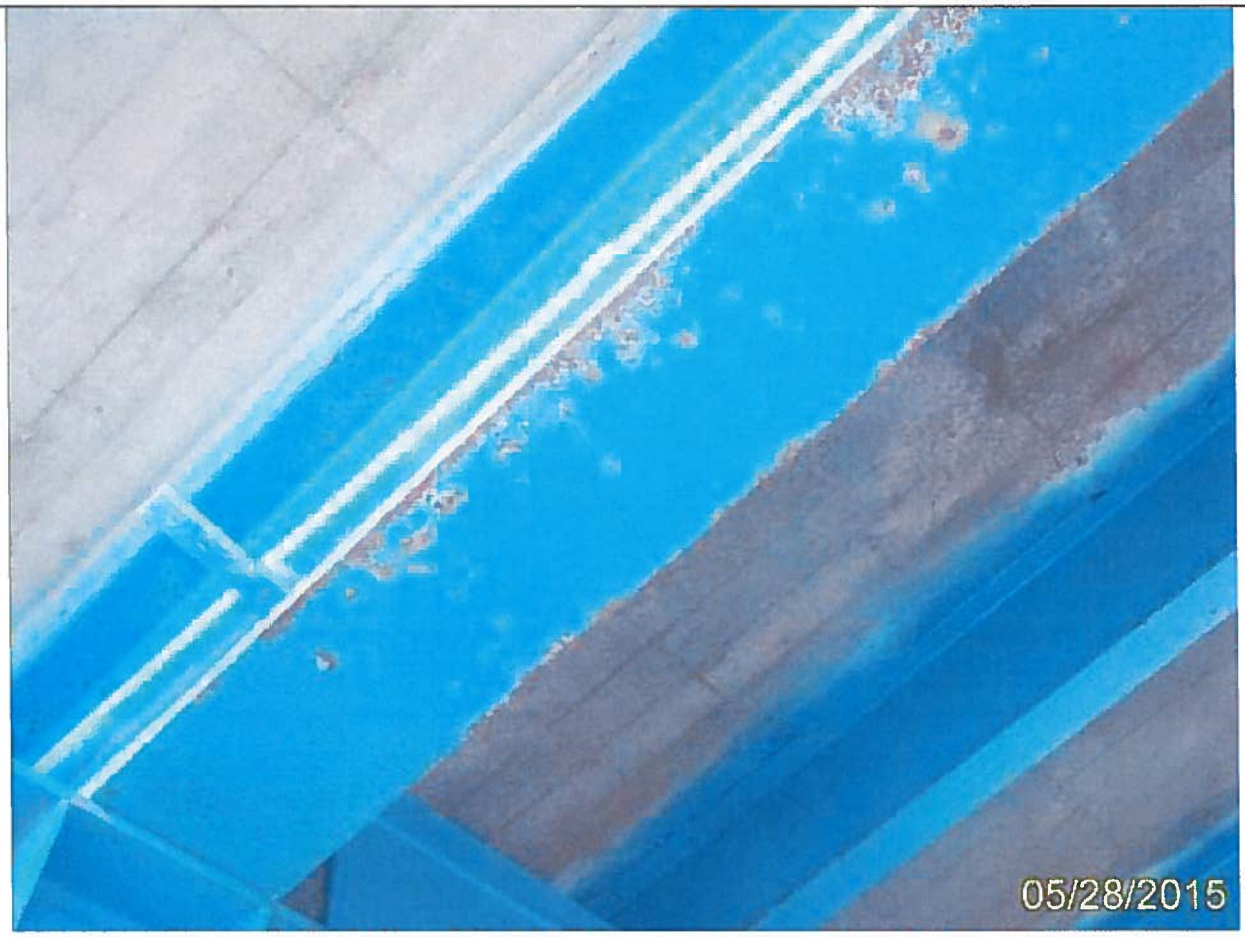

Photo 54 – Unit 1 Element 107 Paint Stl Opn Girder

Typical corrosion on the approach span main girders

REPAIR RECOMMENDATION:
Clean and paint approach span main girders. 80MH

Photo 55 – Unit 1 Element 110 R/Conc Open Girder

Delamination in the bottom north edge of Beam 1-3

REPAIR RECOMMENDATION:
Repair the spalls-delaminations in Beams 1-1 1-3 1-3 1-5 2-5 and 5-5. 12MH

Photo 56 – Unit 1 Element 110 R/Conc Open Girder

Spall with exposed rebar in Beam 1-5 at Abutment 1

REPAIR RECOMMENDATION:
Refer to photo 55.

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Photo 57 – Unit 1 Element 113 Paint Stl Stringer

Corrosion on the Span 2 stringers

REPAIR RECOMMENDATION:
Clean and paint the stringers. 20MH

Photo 58 – Unit 1 Element 152 Paint Stl Floor Beam

Corrosion on the top east flange of Beam 4-2 in Bay 4-4

REPAIR RECOMMENDATION:
Clean and spot paint Floor Beams 2-2 2-4 and 4-2. 10MH

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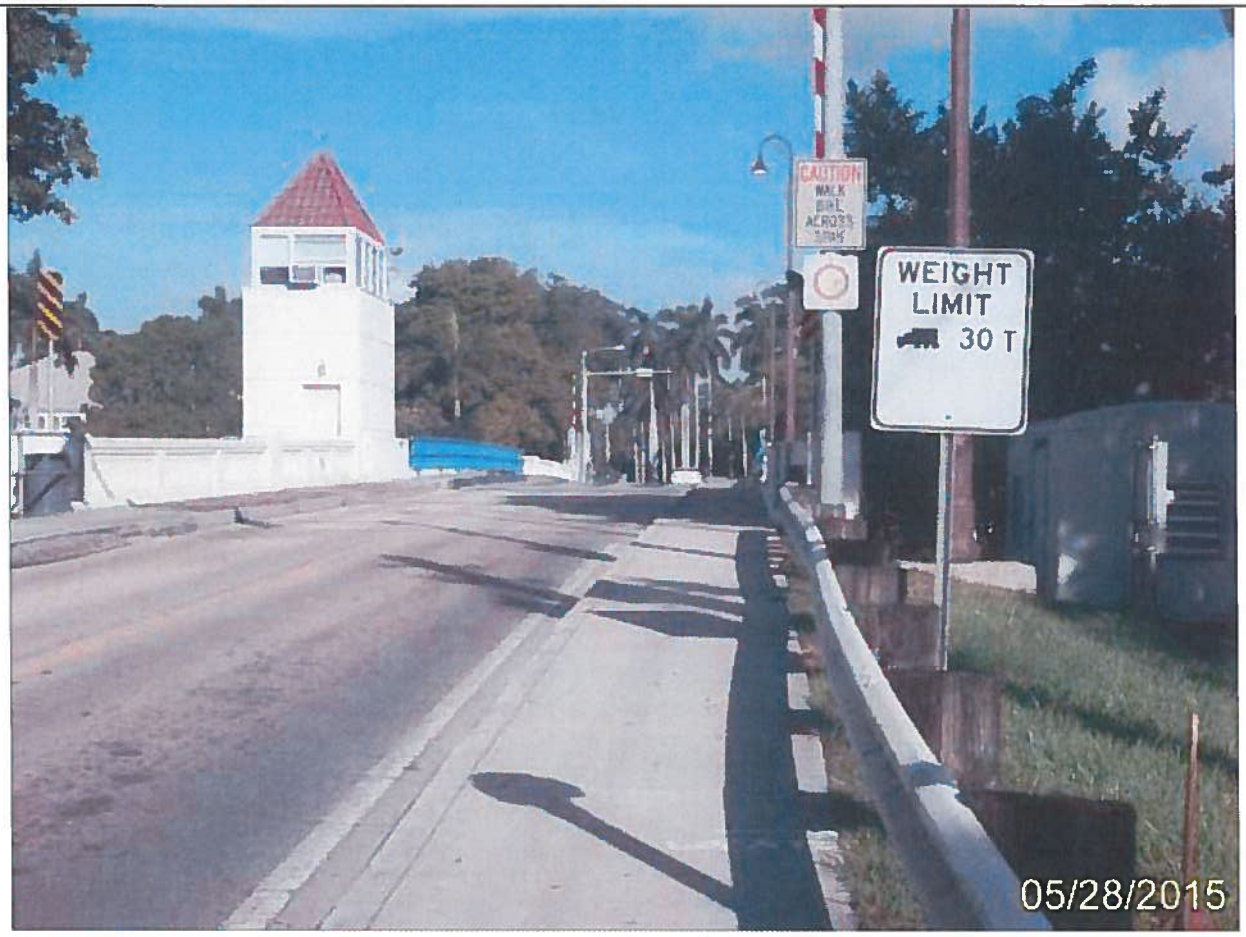

Photo 59 – Unit 1 Element152 Paint Stl Floor Beam

East weight limit sign set too low

REPAIR RECOMMENDATION:
Reset the east weight limit sign. 4MH

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Photo 60 – Unit 1 Element 202 Paint Stl Column

Heavy corrosion, section loss and spalled jacket at Pile 2-6

REPAIR RECOMMENDATION:
Repair the steel H-piles at Bents 2 and 5. 64MH

Photo 61 – Unit 1 Element 202 Paint Stl Column

Section loss in the flange of Pile 5-8 and spalled encasement

REPAIR RECOMMENDATION:
Refer to photo 60.

Photo 62 – Unit 1 Element 234 R/Conc Cap

Spall with exposed rebar in the bottom west edge of the Bent 5 cap at Pile 5-1

REPAIR RECOMMENDATION:
Repair the spalls and delaminations in the Bent 2 and 5 caps. 10MH

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Photo 63 – Unit 1 Element 298 Pile Jacket Bare

Spalls and cracks in Pile Jacket 5-6

REPAIR RECOMMENDATION:
Repair the pile jackets. 40MH

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Photo 64 – Unit 1 Element 387 P/S Fender/Dolphin

Typical spalls and delaminations in the fender piles

REPAIR RECOMMENDATION:
Repair spalls and delaminations in the fender piles. 200LF

Photo 65 – Unit 1 Element 387 P/S Fender/Dolphin

Corroded fender cable wraps and hardware.

REPAIR RECOMMENDATION:
Replace the fender cable wraps and hardware. 100MH

Photo 66 – Unit 1 Element 387 P/S Fender/Dolphin

Third wale from the north end of the west fender not properly attached

REPAIR RECOMMENDATION:
Properly attach the third wale from the north end of the west fender. 6MH

Photo 67 – Unit 1 Element 396 Other Abut Slope Pro

Collapsed and missing grout at the west slope protection

REPAIR RECOMMENDATION:
None

I. DEFINITION

The AASHTO Guide Specification for Fracture Critical Non-Redundant Steel Bridge Members states: A Fracture Critical Member (FCM) is a steel member in tension, or with a tension element, whose failure would probably cause a portion of or the entire bridge to collapse. Redundancy is defined as a structural condition where there are more elements of support than are necessary for stability. Tension members are structural elements that are subject the axial and tensile forces.

II. DESCRIPTION

The bascule span of this bridge consists of two leaves. Each leaf consists of two main girders, four floor beams, twenty eight stringers, two counterweight trusses, and lateral bracing. The main girders are built up "I" sections using riveted construction. The floor beams, stringers, and lateral bracing are rolled shapes.

The bascule main girders are cantilevered. Their top flanges and portions of their webs are in tension and are considered fracture critical members. The floor beams making up the rest of the frame for the floor system will also be considered fracture critical for this inspection. In this case, however, the members have their bottom flanges and portions of their webs in tension.

Flanking Spans 2 and 4 are considered fracture critical since there are only two simply supported main girders per span. The bottom flanges and lower webs are in tension. The floor beams are similar to the bascule floor beams and are considered fracture critical. The pin connections at the bascule ends of the flanking span main girders are considered fracture critical.

FRACTURE CRITICAL DATA

III. INSPECTION PROCEDURES

A. The first step to the inspection of this structure was to have the plans examined by a structural engineer. The engineer noted fracture critical/fatigue sensitive details in the plans. The structural engineer then briefed the bridge inspectors about such details.

B. Proper inspection of the riveted members (main girders, and counterweight trusses) generally includes the following steps:

1. Check all rivets (and any bolts) to determine that they are tight and that the individual members are operating as one.
2. Check for cracked or missing rivets and rivet heads.
3. Check the area around the floor beams and lateral bracing connections for cracking in the web plate due to out of plane bending.
4. Check the entire length of the tension flanges and web for cracking which may have originated from corrosion, pitting or section loss, nicks or gouges. Also, thoroughly inspect any areas with impact damage.
5. Check entire member length for temporary erection welds, tack welds, weld repairs, or welded connections not shown on the plans.
6. Carefully check any welded deck attachments on the top flanges.

C. Proper inspection procedures for the rolled shapes generally include the following steps:

1. Check the areas around the stringer connections for cracking in the web due to out of plane bending.
2. Check the areas around the lateral bracing connections.
3. Check for missing or cracked rivets and/or bolts at the connections.
4. Check the termination points of any cover plates.
5. Check any plug welds.
6. Check the entire length of the tension flanges and web for cracking which may have originated from corrosion, pitting or section loss, nicks, or gouges. Also thoroughly inspect any areas with impact damage.
7. Check entire member length for temporary erection welds, tack welds, weld repairs, or welded connections not shown on the plans.
8. Check pin connections at bascule ends of flanking span main girders.

FRACTURE CRITICAL DATA

IV. CATEGORIES

Fatigue Categories:

Category A: This fatigue category generally refers to plain members or components of plain members which are base metal and are away from any connection details. The components are generally rolled, but may be flame cut with ANSI smoothness of 1,000 or less.

Category B: This fatigue category generally refers to connections using continuous full penetration welds or high strength bolts. The base metal and weld metal are subject to this fatigue category.

Category C: This fatigue category generally refers to base and weld metal used in very short connections

Category D: This fatigue category generally refers to base and weld metal used in longer fillet welded connections than for category C. This category also refers to short groove welded connections with fairly sharp transitions, as well as riveted connections.

Category E and E': This fatigue category generally refers to base and weld metal of welded connections not mentioned in categories C and D, namely longer fillet and groove welds with sharp transitions.

FRACTURE CRITICAL DATA

FRACTURE CRITICAL/FATIGUE SENSITIVE ELEMENTS: **MAIN GIRDERS (BASCULE SPAN 3)**
CONSTRUCTION: **BUILT-UP GIRDERS WITH RIVETED CONNECTIONS**

DETAIL DESCRIPTION AND LOCATION	FATIGUE CATEGORY	TYPE CONNECTION	TYPE WELD	COMMENTS
Top flange to web connections (A1)	D	Riveted	N/A	
Bottom flange to web connections (A2)	D	Riveted	N/A	
Cover plate connects to top flange (A3)	D	Riveted	N/A	
Deck grating spacer bar to top flange (A4)	E	Welded	Fillet	
Cover plate connects to bottom flange (A5)	D	Riveted	N/A	
Vertical stiffener connects to web (A6)	D	Riveted	N/A	
Web Splices (A7)	D	Riveted	N/A	
Floor Beam connections (A8)	D	Riveted	N/A	
Lateral Bracing connections (A9)	D	Riveted	N/A	
Knee Brace connections (A10)	D	Riveted	N/A	Only applies to FB's 3-1, 3-2, 3-7 and 3-8
Machinery support connection (A11)	D	Riveted	N/A	
Base Metal (A12)	B	N/A	N/A	

( ) = See sketch for detail location.

FRACTURE CRITICAL DATA

FRACTURE CRITICAL/FATIGUE SENSITIVE ELEMENTS: **BASCULE SPAN FLOOR BEAMS 3-1 THROUGH 3-8**
CONSTRUCTION: **ROLLED I BEAMS**

DETAIL DESCRIPTION AND LOCATION	FATIGUE CATEGORY	TYPE CONNECTION	TYPE WELD	COMMENTS
Stringer to floor beam connections (B1)	D	Riveted	N/A	Riveted to top flange of Floor Beam 3-4 and 3-5.
Floor beam to main girder and sidewalk support connections (B2)	D	Riveted	N/A	
Knee brace connections (B3)	D	Riveted	N/A	Applies to Floor Beams 3-1, 3-2, 3-7 and 3-8 only.
Lateral bracing connections (B4)	D	Riveted	N/A	
Cut-short or coped corners of floor beams (B5)	N/A	N/A	N/A	
Sidewalk support connections (B6)	D	Riveted	N/A	Applies to Floor Beams 3-4 and 3-5 only.
Machinery diagonal support connections (B7)	D	Riveted	N/A	Applies to Floor Beams 3-1 and 3-8 only.
Repair splice (B8)	B	Bolted	N/A	Applies to Floor Beams 3-1 and 3-8 only.
Balance block to floor beam connection (B9)	B	Bolted	N/A	Applies to Floor Beams 3-4 and 3-5 only.
Bottom flange cover plate connection to floor beam (B10)	B	Bolted	N/A	Applies to Floor Beams 3-4 and 3-5 only.
Base Metal (B11)	A	N/A	N/A	

( ) = See sketch for detail location.

FRACTURE CRITICAL DATA

FRACTURE CRITICAL/FATIGUE SENSITIVE ELEMENTS: **MAIN GIRDERS (APPROACH SPANS 2 & 4)**
CONSTRUCTION: **ROLLED I BEAMS**

DETAIL DESCRIPTION AND LOCATION	FATIGUE CATEGORY	TYPE CONNECTION	TYPE WELD	COMMENTS
Vertical stiffener connections (D1)	D	Riveted	N/A	
Machinery support connection plate (D2)	D	Riveted	N/A	
Floor beam to main girder and sidewalk support connections (D3)	D	Riveted	N/A	
Floor beam to main girder connection (D4)	E	Welded	Fillet	Applies to Floor Beams 2-2 and 4-3 only
Knee brace connection (D5)	D	Riveted	N/A	
Welds to bottom flange (D6)	E	Welded	Fillet	Field weld for miscellaneous attachments
Main Girders to vertical machinery support (D7)	E	Pin	N/A	
Base metal (D8)	A	N/A	N/A	

( ) = See sketch for detail location

FRACTURE CRITICAL DATA

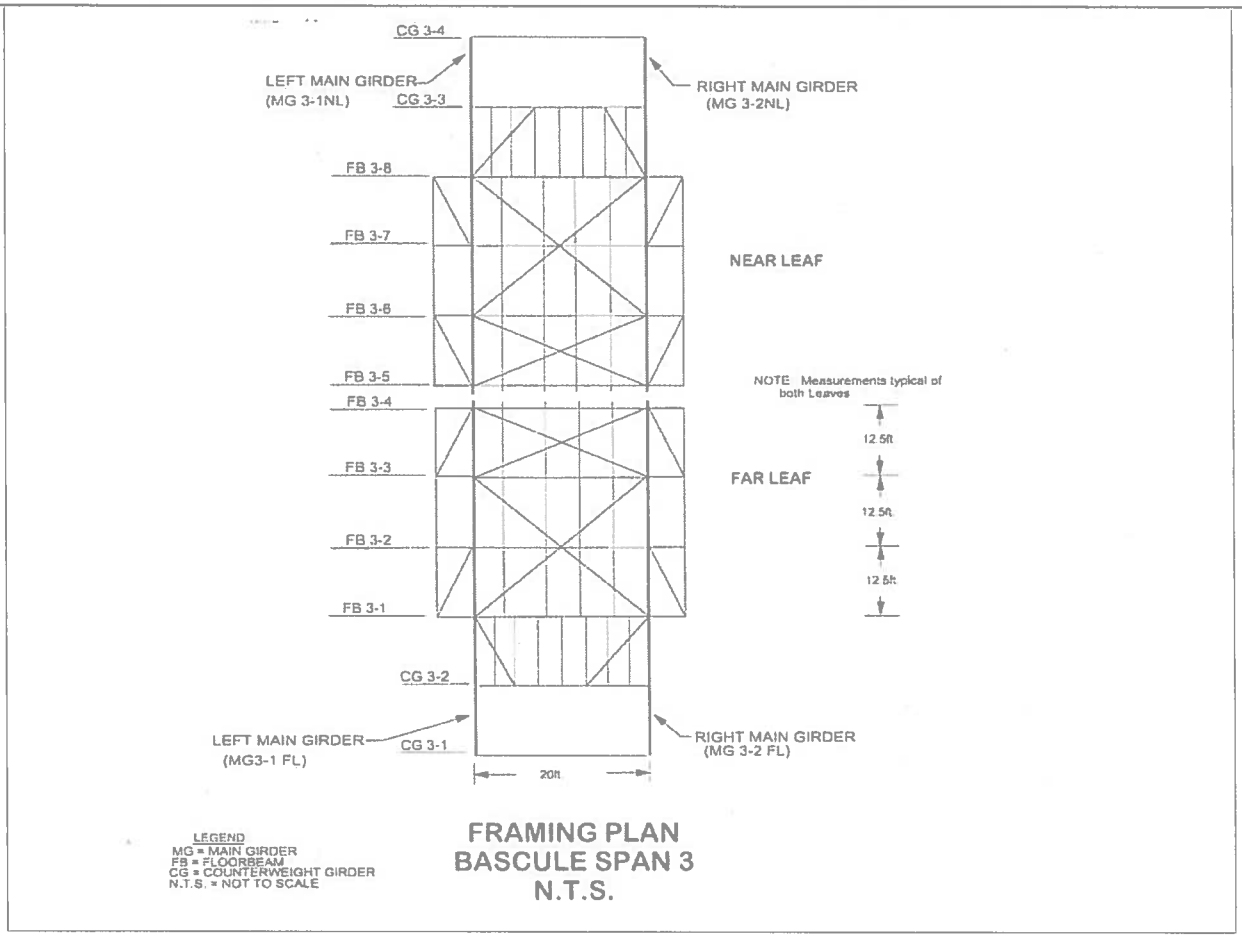
FRACTURE CRITICAL/FATIGUE SENSITIVE ELEMENTS: **FLOOR BEAMS (APPROACH SPANS 2 & 4)**
CONSTRUCTION: **ROLLED I BEAMS**

DETAIL DESCRIPTION AND LOCATION	FATIGUE CATEGORY	TYPE CONNECTION	TYPE WELD	COMMENTS
Stringer connections (E1)	D	Riveted	N/A	Riveted to web and top flange of Floor Beams 2-4 and 4-1.
Floor beam to main girder connections (E2)	D	Riveted	N/A	
Vertical stiffener connections (E3)	D	Riveted	N/A	Applies to Floor Beams 2-4 and 4-1 only.
Bearing connections (E4)	D	Riveted	N/A	Applies to Floor Beams 2-4 and 4-1 only.
Cut-short corners of top and bottom flanges (E5)	N/A	N/A	N/A	
Blocked corners of top and bottom flanges (E6)	N/A	N/A	N/A	
Floor beam connection plate to main girder (E7)	E	Welded	Fillet	Applies to Floor Beams 2-2 and 4-3 only.
Stringers connected to top flange of floor beam (E8)	E	Welded	Fillet	Applies to Floor Beams 2-2 and 4-3 only.
Base Metal (E9)	A	N/A	N/A	

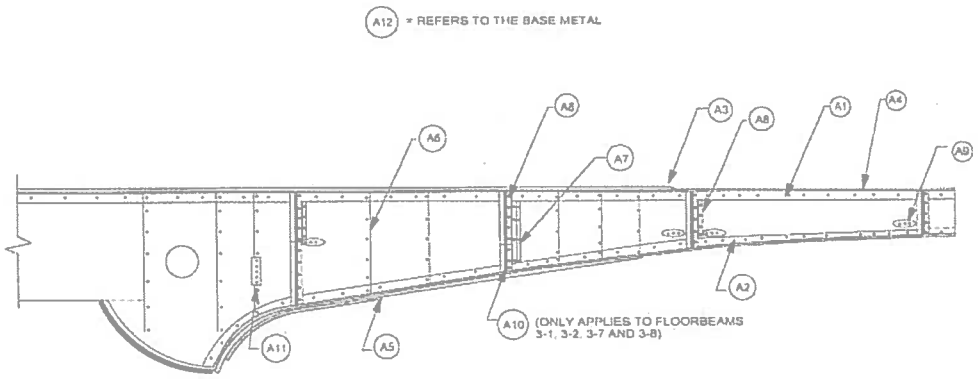
( ) = See sketch for detail location.

FRACTURE CRITICAL DATA

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CID/Bridge Profile Report



FRACTURE CRITICAL DATA

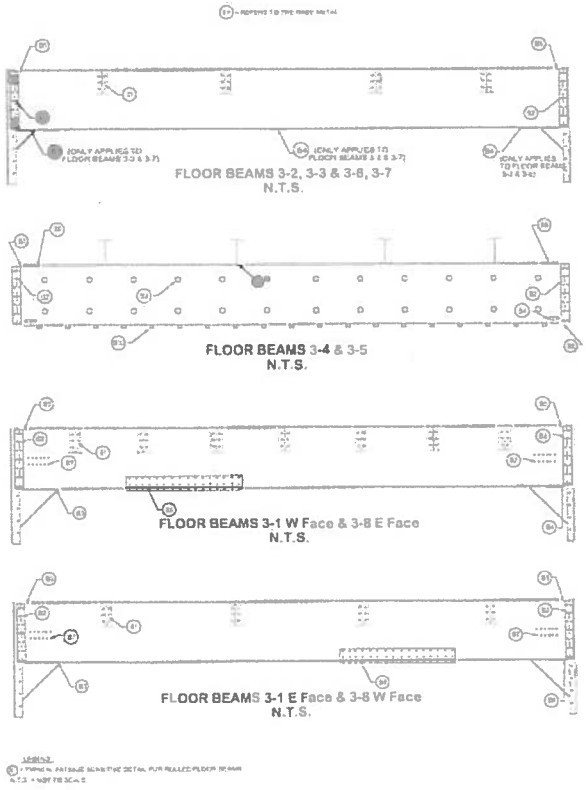


MAIN GIRDER ELEVATION
BASCULE SPAN 3
N.T.S.

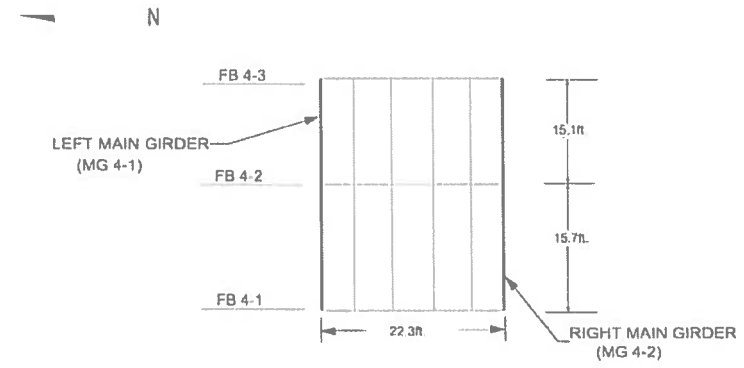
LEGEND:
(A) = TYPICAL FATIGUE SENSITIVE DETAIL
N.T.S. = NOT TO SCALE

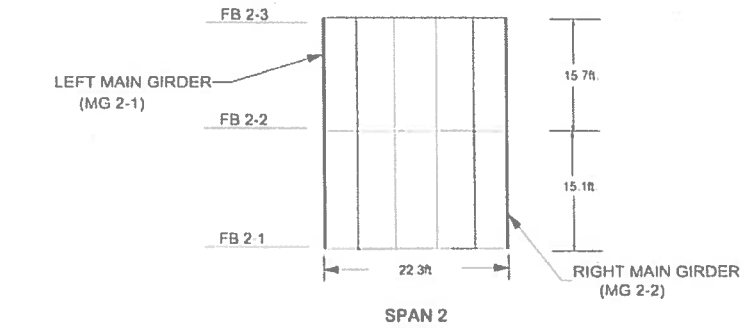
FRACTURE CRITICAL DATA

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CID/Bridge Profile Report



FRACTURE CRITICAL DATA



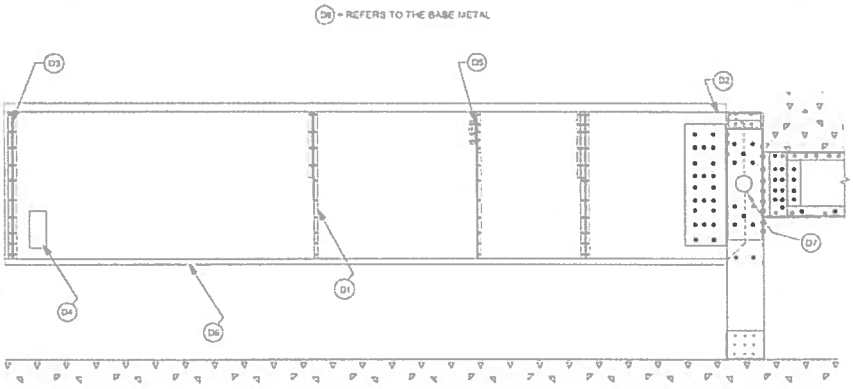


FRAMING PLAN
APPROACH SPANS 2 AND 4
N.T.S.

LEGEND:
MG = MAIN GIRDER
FB = FLOORBEAM
N.T.S. = NOT TO SCALE

FRACTURE CRITICAL DATA

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CID/Bridge Profile Report

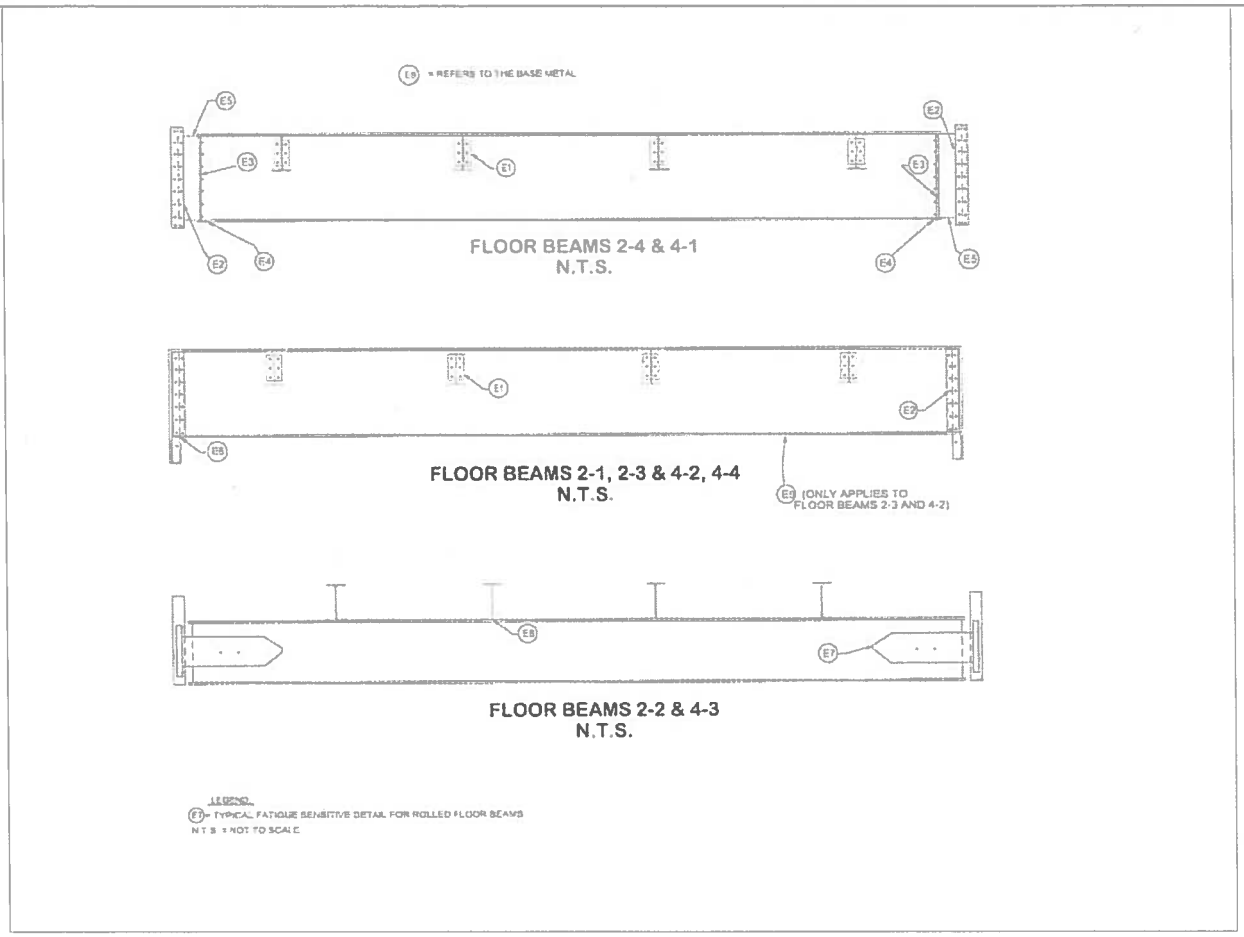


APPROACH SPAN MAIN GIRDER ELEVATION
SPANS 2 AND 4
N.T.S.

LEGEND
(D) = TYPICAL FATIGUE SENSITIVE DETAIL
N.T.S. = NOT TO SCALE

FRACTURE CRITICAL DATA

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CID/Bridge Profile Report



FRACTURE CRITICAL DATA

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CID/Bridge Profile Report

FRACTURE CRITICAL DATA

Far Leaf Floor System - Bascule Span

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CID/Bridge Profile Report

FRACTURE CRITICAL DATA

Bascule Span Main Girder - Outside Elevation

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CID/Bridge Profile Report

FRACTURE CRITICAL DATA

Bascule Span Main Girder - Inside Elevation

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CID/Bridge Profile Report

FRACTURE CRITICAL DATA

Approach Span Main Girder - Outside Elevation

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CID/Bridge Profile Report

FRACTURE CRITICAL DATA

Approach Span Main Girder - Inside Elevation

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CID/Bridge Profile Report

FRACTURE CRITICAL DATA

Approach Spans 2 and 4 Floor System

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CID/Bridge Profile Report

FRACTURE CRITICAL DATA

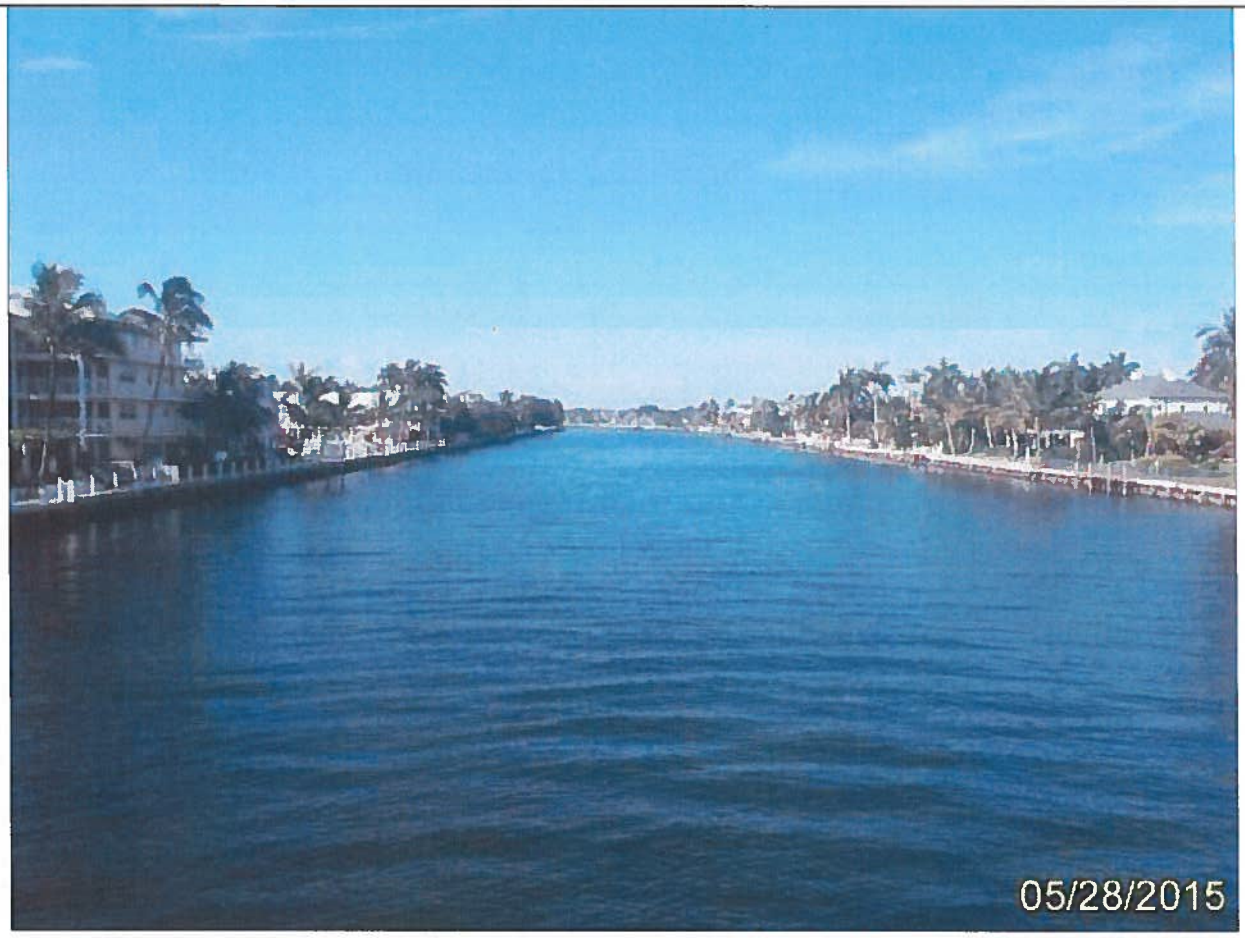
Approach Spans 2 and 4 Main Girder to Column Pin Connection

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CID/Bridge Profile Report

SCOUR EVALUATION

Channel Looking North

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CID/Bridge Profile Report



SCOUR EVALUATION

Channel Looking South

Routine Underwater Bridge Inspection Report
BOLT UNDERWATER SERVICES, INC.
for
KISINGER CAMPO & ASSOCIATES, CORP.

NBI Structure No. (8): 934408 Underwater Date (93): 05/13/15

Structure/Roadway Identification:		Underwater Inspection Details:	
District (2):	04 Local	Special Crew Hours:	6.0
County (3):	Palm Beach	Max. Depth:	13ft.
Feature Intersected (6):	ICWW	Type of Dive Insp.:	Level II (SCUBA)
Facility Carried (7):	East Camino Real	Type of Boat Used:	N/A
		Water Type/Marine Growth:	Salt – Barnacles/Oysters

Previous Inspection:

Lead Diver:	C.B.I. No.:	Inspection Date:
Hays, Stephen F.	00438	05/17/13

Inspection Personnel:

Field Personnel:	Title	C.B.I. No.:	Duty:	Signature:
Hoogland, Keith S.	C.B.I. Diver-Inspector	00341/Lead	Dive	
Salazar, Pete Jr.	Diver-Inspector		Dive	
Payne, Timothy N.	Diver-Inspector		Tend	

PILES/COLUMNS
ELEMENT: 201 UNPTD/STEEL 17 ea.

NOTE: There are no piles visible below the footings due to area being encased and surrounded with sand cement bags and concrete.

PILES/COLUMNS
ELEMENT: 202 PAINTED/STEEL 12 ea.
NBI: 7

NOTE: Bents 2 and 5 each have six H-Piles (crutch piles)

Condition State:	QTY:	Recommended Feasible Action:
CS-2	12	Do Nothing

The twelve H-piles (crutch piles) supporting Bents 2 and 5 have moderate surface corrosion due to areas of missing coating – *NO CHANGE*.

This report contains information relating to the physical security of a structure and depictions of the structure. This information is confidential and exempt from public inspection pursuant to sections 119.071(3)(a) and 119.071(3)(b), Florida Statutes.

(c:\mydocs\bridgereports\93-Palm Beach\934408_BIR_05-13-15_UW) Page 1 of 4

UNDERWATER INSPECTION REPORT

BOLT UNDERWATER SERVICES, INC.

Bridge ID: 934408
District: 04 Local Inspection Date: 05/13/15

PIER WALLS
ELEMENT: 210 R/CONCRETE 66 lf.
NBI: 6

Condition State:	QTY:	Recommended Feasible Action:
CS-3	1	REPAIR

Pier Wall 3 at the NE corner starting at the top of the marine growth, spall/delamination with one piece of 1in. exposed steel with 0% remaining section, 8ft. H x 8in. W x 3in. D – *INCREASE.*

CS-2	65	Do Nothing

Both Bascule Piers have vertical cracks up to 1/32in. wide extending a maximum of 12in. below the top of the marine growth – *NO CHANGE.*

Pier 3
There are intermittent voids between the bottom of the pier wall and the top of the footing are up to 4in. H and 8in. maximum penetration – *NO CHANGE.*
The North face has several small spalls with exposed and corroded form ties throughout – *NO CHANGE.*

Pier 4
The NW corner has a minor void between the bottom of the pier wall and the top of the footing, 4in. H x 12in. L x 12in. penetration along the west and 4in. H x 20in. L x 12in. penetration on the north – *INCREASE*

Cleaning Log: Random strips were cleaned.

SUBMERGED FOOTING
ELEMENT: 220 R/CONCRETE 2 ea.
NBI: 7

Condition State:	QTY:	Recommended Feasible Action:
CS-1	2	Do Nothing

The footings are exposed on Piers 3 and 4. See Element 290 Channel for heights.

Cleaning Log: Random strips were cleaned

CHANNEL
ELEMENT: 290 1 ea.
NBI: 7

Condition State:	QTY:	Recommended Feasible Action:
CS-1	1	Do Nothing

Pier 3: The footing is exposed the entire length along the channel side (east) a maximum of 24in. – *NO CHANGE.*

Pier 4: The footing is intermittently exposed along the channel side (west) a maximum of 5in. – *INCREASE.*

This report contains information relating to the physical security of a structure and depictions of the structure. This information is confidential and exempt from public inspection pursuant to sections 119.071(3)(a) and 119.071(3)(b), Florida Statutes.
(c:\mydocs\bridgereports\93 Palm Beach\934408_BR_05-13-15_UW) Page 2 of 4

UNDERWATER INSPECTION REPORT

BOLT UNDERWATER SERVICES, INC.

Bridge ID: 934408
District: 04 Local Inspection Date: 05/13/15

JACKETS
ELEMENT: 298 PILE JACKET BARE 17 ea

NOTE: This element represents the concrete pile encasements. Piles at Bents 2 and 5 are steel H-Piles encased in concrete. The lower portion of both bents also has a second encasement of concrete installed, beginning approximately 3ft below the cap. The quantity represents total jackets, only the second encasements extend into the water.

Condition State:	QTY:	Recommended Feasible Action:
CS-2	17	REPAIR

The secondary encasements have vertical cracks up to 1/16in. wide and spall up to 12in. H x 6in. W x 3/4in. D that extend into the marine growth (the previously reported delamination was not found this inspection) – *DECREASE*.

SUBMARINE CABLE
ELEMENT: 571 3 ea

Condition State:	QTY:	Recommended Feasible Action:
CS-3	2	REPAIR

The insulation for the in-service submarine cables at the south end of Bascule Piers 3 and 4 have light to moderate deterioration – *NO CHANGE*.

CS-1	1	Do Nothing

The armor for the two abandoned cables at the north end of Piers 3 and 4 have severe corrosion with 100% deterioration in the splash zone – *NO CHANGE*.

FENDER SYSTEM
ELEMENT: 387 P/S CONCRETE 244 lf

Condition State:	QTY:	Recommended Feasible Action:
CS-3	200	REPAIR

Sixty five piles (33 on east, 32 on west, field verified) have vertical cracks up to 5ft. L x 1/8in. W and delaminations/spalls up to 4ft. H x 18in. W x 5in. D, several with exposed steel and corrosion staining at or near the corners above the waterline – *INCREASE*.

CS-1	44	Do Nothing

INCIDENTAL:
The lower cable connectors and fasteners have heavy to severe corrosion, many with parted cables with 40% remaining section on the hardware – *NO CHANGE*.

The timber supports attached to the bascule piers, which support the lower wales, have moderate to heavy deterioration due to marine borers – *NO CHANGE*.

The bottom edge of the lower horizontal timber wales have minor marine borer activity with up to 80% section remaining – *NO CHANGE*.

West Fender, 3rd wale from the north is only attached with one bolt and is tied in place with a rope – *NEW*.

This report contains information relating to the physical security of a structure and depictions of the structure. This information is confidential and exempt from public inspection pursuant to sections 119.071(3)(a) and 119.071(3)(b), Florida Statutes.
(c:\mydocs\bridgereports\93-Palm Beach\934408_BIR_05-13-15_UW) Page 3 of 4

UNDERWATER INSPECTION REPORT

BOLT UNDERWATER SERVICES, INC.

Bridge ID: 934408
District: 04 Local Inspection Date: 05/13/15

ABUTMENT SLOPE PROTECTION
ELEMENT: 396 OTHER: 1000 sf

NOTE: The slope protection at both abutments consists of broken concrete rubble, construction debris and sand cement rip rap bags covered with mortar.

Condition State:	QTY:	Recommended Feasible Action:
CS-2	1000	Do Nothing

The rubble has areas where it is sparse or missing entirely, particularly at the Abutment 1 slope – *NO CHANGE*

UNDERWATER INSPECTION REPORT

Description

Structure Unit Identification

Bridge/Unit Key: 934408 0
Structure Name: Clarence H. Geist Memorial Bridge
Description: BASCULE SPAN 3
Type: M Main

Structure Unit Identification

Bridge/Unit Key: 934408 1
Structure Name: Clarence H. Geist Memorial Bridge
Description: SPANS 1, 2, 4 & 5
Type: A Approach

Roadway Identification:

NBI Structure No (8) 934408
Position/Prefix (5) Route On Structure
Kind Hwy (Rte Prefix) 4 County Hwy
Design Level of Service 1 Mainline
Route Number/Suffix 00000/ 0 N/A (NBI)
Feature Intersect (6) INTRACOASTAL WATERWAY
Critical Facility Not Defense-crit
Facility Carried (7) E. CAMINO REAL
Mile Point (11) 0.74
Latitude (16) 026d20'22.0" Long (17) 080d04'37.7"

Roadway Traffic and Accidents

Lanes (28) 2 Medians 0 Speed 15 mph
ADT Class ADT Class 4
Recent ADT (29) 13888 Year (30) 2015
Future ADT (114) 17360 Year (115) 2037
Truck % ADT (109) 4
Detour Length (19) 2.0 mi
Detour Speed -1 mph
Accident Count -1 Rate -1

Roadway Classification

Nat. Hwy Sys (104) 0 Not on NHS
National base Net (12) Not on Base Network
LRS Inventory Rte (13a) 93 023 500 Sub Rte (13b) 00
Functional Class (26) 17 Urban Collector
On Federal Aid System Y
Defense Hwy (100) 0 Not a STRAHNET hwy
Direction of Traffic (102) 2 2-way traffic
Emergency ☒

Roadway Clearances

Vertical (10) 99.99 ft Appr. Road (32) 20
Horiz. (47) 20 ft Roadway (51) 20 ft
Truck Network (110) 0 Not part of natl netwo
Toll Facility (20) 3 On free road
Fed. Lands Hwy (105) 0 N/A (NBI)
School Bus Route ☒
Transit Route ☒

Structure Identification

Admin Area Palm Beach
District (2) D4 - Ft. Lauderdale
County (3) (93)Palm Beach
Place Code (4) Boca Raton
Location (9) 0.6MI E OF US-1
Border Br St/Reg (98) Not Applicable (P) Share 0 %
Border Struct No (99)
FIPS State/Region (1) 12 Florida Region 4-Atlanta
NBIS Bridge Len (112) Meets NBI Length
Parallel Structure (101) No || bridge exists
Temp. Structure (103) Not Applicable (P)
Maint. Resp. (21) 2 County Hwy Agency
Owner (22) 2 County Hwy Agency
Historic Signif. (37) 3 Possibly eligible for

Geometrics

Spans in Main Unit (45) 1
Approach Spans (46) 4
Length of Max Span (48) 115.8 ft
Structure Length (49) 256.6 ft
Total Length 256.6 ft
Deck Area 8340 sqft
Structure Flared (35) 0 No flare

Age and Service

Year Built (27) 1939
Year Reconstructed (106) 2007
Type of Service On (42a) 5 Highway-pedestrian
Under (42b) 5 Waterway
Fracture Critical Details 1 or 2 Stl-girder systms

Structure Type and Material

Curb/Sidewalk (50): Left 4.9 ft Right 4.9 ft
Bridge Median (33): 0 No median
Main Span Material (43A): 3 Steel
Appr Span Material (44A): 3 Steel
Main Span Design (43B): 16 Movable-Bascule
Appr Span Design (44B): 03 Girder-Floorbeam

Deck Type and Material

Deck Width (52): 32.5
Skew (34): 0
Deck Type (107): 3 Open Grating
Surface (108): 6 Bituminous
Membrane: 0 None
Deck Protection: None

Appraisal

Structure Appraisal

Open/Posted/Closed (41) P Posted for load
Deck Geometry (68) 2 Intolerable - Replace
Underclearances (69) N Not applicable (NBI)
Approach Alignment (72) 8-No Speed Red thru Curv
Bridge Railings (36a) 0 Substandard
Transitions (36b) 0 Substandard
Approach Guardrail (36c) 0 Substandard
Approach Guardrail ends (36d) 0 Substandard
Scour Critical (113) 3 SC - Unstable

Navigation Data

Navigation Control (38) Permit Required
Nav Vertical Clr (39) 5 ft
Nav Horizontal Clr (40) 83 ft
Min Vert Lift Clr (116) 0 ft
Pier Protection (111) 2 In-Place, Functioning

NBI Condition Rating

Sufficiency Rating 37.5
Health Index 76.18
Structural Eval (67) 4 Minimum Tolerable
Deficiency Structurally Deficient

Minimum Vertical Clearance

Over Structure (53) 99.99 ft
Under (reference) (54a) N Feature not hwy or RR
Under (54b) 0 ft

Minimum Lateral Underclearance

Reference (55a) N Feature not hwy or RR
Right Side (55b) 0 ft
Left Side (56) 0 ft

Load Rating

Design Load (31) 3 MS 13.5 (HS 15)
Rating Date 3/28/1997 Initials SHK
Posting (70) 0 >39.9% below

Operating Type (63) 1 LF Load Factor
Operating rating (64) 41.2 tons Alternate -1
Inventory Type (65) 1 LF Load Factor
Inventory Rating (66) 24.7 tons Alternate -1
Alt Meth -1

Schedule

Current Inspection

Inspection Date: 05/28/2015
Inspector: KNKCABA-P - Michael Betz
Bridge Group: C9H85
Primary Type: Regular NBI with Movable
Review Required: ☒

Next Inspection Date Scheduled

NBI: 5/28/2017
Element: 05/28/2016
Fracture Critical: 05/28/2017
Underwater: 05/28/2017
Other/Special: 05/28/2016

Schedule Cont.

Inspection Types Performed NBI ☒ Element ☒ Fracture Critical ☒ Underwater ☒ Other Special ☒

Inspection Intervals	Required (92)	Frequency (92)	Last Date (93)
Fracture Critical	☒	24 mos	05/28/2015
Underwater	☒	24 mos	05/13/2015
Other Special	☒	12 mos	05/28/2015
NBI		24 mos (91)	05/28/2015 (90)

Inspection Resources

Crew Hours	20
Flagger Hours	0
Helper Hours	0
Snooper Hours	0
Special Crew Hours	6
Special Equip Hours	3

Custom

General Bridge Information

Parallel Bridge Seq		Bridge Rail 1	Steel channels/angles
Channel Depth	18.199 ft	Bridge Rail 2	Concrete post & beam
Radio Frequency	9	Electrical Devices	Combination values 1-7
Phone Number	(561) 395-7132	Culvert Type	Not applicable
Exception Date		Maintenance Yard	Not FDOT Maintained
Exception Type	Unknown	FIHS ON / OFF	No Routes on FIHS
Accepted By Construction	01/01/1939	Previous Structure	
Warranty Expiration	00/00/0000	2nd Previous Structure	
		Replacement Structure	

Bridge Load Rating Information

HS20 Govr. Span Length	22.3 ft	Single Unit Truck 2 Axles	28.3 tons
L-Rating Origination	Field Measurements	Single Unit Truck 3 Axles	30.6 tons
Load Rating Date	03/28/1997	Single Unit Truck 4 Axles	30 tons
Method Calculation	AASHTO formula	Combination Unit Truck 3 Axles	42.3 tons
Load Dist. Factor	1	Combination Unit Truck 4 Axles	38.1 tons
Impact Factor	30	Combination Unit Truck 5 Axles	41.6 tons
Design Method	Load Factor	Truck Trailer 5 Axles	46.5 tons
Design Measure	English	Posting Weight	99 tons
Recommend SU Posting	30.001 tons	Actual SU Posting	30.001 tons
Recommend C Posting	99 tons	Actual C Posting	99 tons
Recommend ST Posting	99 tons	Actual ST Posting	99 tons
Gov FB Span	19.8 ft	FL 120 Long Gov Span	-1 tons
Gov FB Spacing	12.5 ft	FL 120 Trans	-1 tons
FB HS20 Rating	50 tons	Single Axle Trans	-1 tons
FB SU4 Rating	51 tons	Tandem Axle Trans	-1 tons
FB Present	Y	Wing Span	-1 ft
FB INV Rating Factor	-1	Web to Web Span	-1 ft
FB OPR Rating Factor	-1	HS20 OPR Rating Max Span	41.2 tons
FB FL 120	-1 tons	FL120 Long Max Span	-1 tons

Bridge Scour and Storm Information

Pile Driving Record	No pile driving records	Scour Recommended I	Perform countermeasures
Foundation Type	No foundation details	Scour Recommended II	No recommendation
Mode of Flow	Tidal	Scour Recommended III	No recommendation
Rating Scour Eval	Scour Critical	Scour Elevation	999 ft
Highest Scour Eval	Phase I completed	Action Elevation	999 ft
		Storm Frequency	999

Condition

NBI Rating

Channel (61)	7 Minor Damage	Culvert (62)	N N/A (NBI)
Deck (58)	6 Satisfactory	Waterway (71)	7 Above Minimum
Superstructure (59)	6 Satisfactory	Unrepaired Spalls	-1 sq.ft.
Substructure (60)	4 Poor	Review Required	☒

Elements

Inspection Date: 5/28/2015ENCF

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	28/4	Steel Deck/Open Grid	0	.	2679	100.	0	.	0	.	0	.	**2679 sf.**

Notes CS2:
The steel deck grating has random areas of painted-over section loss - NO CHANGE.

The steel curbs over Bascule Pier 3 have moderate surface corrosion with up to 1/16in. deep pitting - NO CHANGE.

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	29/4	Steel Deck/Conc Grid	1066	100.	0	.	0	.	0	.	0	.	**1066 sf.**

Notes CS1:
Bascule Pier 4 left (north) sidewalk underside has a 4ft. x 7in. x 3in. spall with exposed rebar adjacent to Main Girder 4-1 - NO CHANGE. Refer to photo 1.

Areas of the steel grid are visible - NO CHANGE.

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	399/4	Other Xpansion Joint	66	100.	0	.	0	.	0	.	0	.	**66 lf.**

Notes Note:
This element represents the joints along the bascule pier traffic plates.

CS1:
The traffic plate at Bascule Pier 4 has moderate wear in the wheel paths exposing bare metal - NO CHANGE.

The repair areas of the traffic plates have multi-directional 1/64in. wide cracks and random hollow sounding areas - NO CHANGE.

INCIDENTAL:
The east concrete header at Bascule Pier 4 traffic plate has a 2ft. 3in. long x 4-1/2in. wide delamination at the left (north) curb - NO CHANGE.

There is also a 2ft. 8in. x 4-1/2in. x 1/2in. area missing the top layer in the left (north) wheel path of the westbound lane - NO CHANGE.

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	334/4	Metal Rail Coated	122	70.93	50	29.07	0	.	0	.	0	.	**172 lf.**

Notes CS2:
The metal rails have severall small areas of peeling paint randomly throughout - INCREASE.

Elements

Inspection Date: 5/28/2015ENCF

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	107/4	Paint Stl Opn Girder	0	.	77	41.18	80	42.78	30	16.04	0	.	**187 lf.**

Notes Note:
The bascule span main girders were evaluated under this element. The measurement was taken from centerline of rack pinion to centerline of rack pinion.

CS4:
Random rivet heads on the top and bottom faces of the bottom flanges have moderate to heavy surface corrosion with approximately 80% section remaining - NO CHANGE. Refer to photo 2.

Main Girder 3-2 has ten rivet heads in the bottom face of the bottom flange with 50% to 25% section remaining with moderate corrosion at Bascule Pier 3 opening - NO CHANGE. Refer to photo 3.

Main Girder 3-2 has a 6in. long x 3in. wide area of heavy corrosion near Bascule Pier 4 machinery floor level support - NO CHANGE.

Main Girder 3-2 inside Bascule Pier 4 has painted-over corrosion and moderate section loss in the top and bottom flanges with numerous rivet heads having up to 40% section remaining - NO CHANGE.

CS3:
The main girders have light to moderate corrosion behind the vertical stiffeners and several vertical stiffeners have moderate to heavy flaking corrosion at the bottom flange - NO CHANGE. Refer to photo 4.

The top flange angles have random areas of light to moderate surface corrosion at the web - NO CHANGE.

The tops of the top flanges have areas of blistering paint with light to moderate surface corrosion and up to 3/16in. deep painted-over section loss - NO CHANGE.

The bottom flanges have moderate corrosion between built-up members at the lateral bracing gusset plates - NO CHANGE.

Refer to the additional Element Notes for other deficiencies and information.

0	113/4	Paint Stl Stringer	483	98.77	0	.	6	1.23	0	.	0	.	**489 lf.**

Notes Note:
The bascule span stringers were evaluated under this element. The stringers in the machinery rooms were included in the total quantity.

CS3:
The west 1in. of Stringers 3-1, 3-2 and 3-3 east of Floor Beam 3-3 has moderate surface corrosion on the bottom flange - NO CHANGE. Refer to photo 6.

The east 1in. of Stringers 3-2 and 3-3 west of Floor Beam 3-6 has moderate surface corrosion on the bottom flange - NO CHANGE.

Stringer 3-7 in Bascule Pier 3 and Stringer 3-1 in Bascule Pier 4 have up to 8in. long areas of moderate corrosion with knife-edging at the counterweight connection - NO CHANGE. Refer to photo 7.

The gusset plate at Stringer 3-4 in Bascule Pier 4 is knife-edged along the west edge - NO CHANGE.

CS1:
The stringers have areas of spotty corrosion throughout and painted-over section loss randomly - NO CHANGE.

Elements

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Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	152/4	Paint Stl Floor Beam	64	40.76	0	.	3	1.91	90	57.32	0	.	157 lf.

Notes Note:
The bascule span floor beams were evaluated under this element.

Floor Beams 3-1 and 3-8 have had sections cut out and replaced to facilitate installation of gear boxes (speed reducers) - NO CHANGE.

CS4:
The floor beams have areas of pitting in the top flange typically 1/8in. deep at the stringers and previous stringer locations, several with heavy corrosion - NO CHANGE. Refer to photo 8.

The retro-fit plates on Floor Beams 3-1 and 3-8 have moderate to heavy corrosion with up to 1/8in. section loss along the edges - NO CHANGE.

The top east rivet heads for Floor Beam 3-2 knee brace at the connection to Main Girder 3-2 have moderate to heavy corrosion with up to 30% section remaining and the bottom east flange has random areas of peeling paint with moderate surface corrosion - NO CHANGE.

The top east flange of Floor Beam 3-4 has random areas of heavy surface corrosion with up to 3/8in. deep section loss - NO CHANGE.

Floor Beam 3-5 has areas of heavy corrosion along the bottom flange edges and along the top east flange with 1/8in. section loss - NO CHANGE.

Floor Beam 3-8 bottom east flange at the south end has a 3ft. long area of moderate to heavy corrosion with 3/16in. deep pitting - NO CHANGE.

CS3:
Floor Beam 3-3 has a 4in. x 2in. area of heavy flaking corrosion in the bottom face at Stringer 3-3 - NO CHANGE.

The south gusset plate for Floor Beam 3-4 has moderate to heavy surface corrosion on the top and bottom face - NO CHANGE. Refer to photo 9.

Refer to the additional Element Notes for further deficiencies.

Elements

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Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	540/4	Open Gearing	0	.	4	100.	0	.	0	.	0	.	4 ea.

Notes Note:
The four rack gear sets were evaluated under this element. Refer to the machinery layout diagram and charts in the additional Element Notes for related comments.

CS2:
Grease on all pinion and rack gear teeth is light on some teeth face sections. Sections of teeth are exposed and slight corrosion is present. Grease with a higher viscosity will help prevent sections of the teeth from being exposed. Grease pattern on rack depicts slight cross mesh misalignment with pinion - NEW. Refer to photo 11.

Paint loss and corrosion are present on the sides of all pinions and racks - NEW. Refer to photo 12.

The first and last tooth of all racks exhibit corrosion and section loss. This does not impede on operation as the faces are never in contact with the pinion - NEW. Refer to photo 13.

All pinion teeth exhibit minor scoring and slight flanging on the top lands near the ends of the teeth - NEW. Refer to photo 14

All rack inboard mounting bolts exhibit moderate corrosion and minor section loss - NEW. Refer to photo 15

Sections of all rack supports exhibit paint loss, corrosion, and moderate section loss - NEW Refer to photo 16.

INCIDENTAL:
No drip pan is present underneath the rack and grease is dripping onto the rack frame and concrete floor - NEW. Refer to photo 17.

The south longitudinal machinery room supports in Bascule Piers 3 and 4 have painted-over 15in. long x 2in. high corrosion holes in the webs at the counterweight where steel clip angles have now been bolted in-place - NO CHANGE.

The main transverse machinery room support in Bascule Pier 4 has areas of heavy corrosion and section loss at the main girder connections with corrosion holes up to 3in. x 1in. in the vertical gusset plates - NO CHANGE. Refer to photo 18.

The vertical and diagonal machinery supports in each machinery room have corrosion and pitting at the based and connection points - NEW. Refer to photo 19.

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	541/4	Speed Reducers	0	.	2	100.	0	.	0	.	0	.	2 ea.

Notes Note:
The original Earle speed reducers were replaced with Pragen reducers at an unknown time in the past. Refer to the machinery layout diagram and charts in the additional Element Notes for related comments.

Maintenance personnel requested that the dip stick not be removed for inspection of the oil level due to the oil spillage that would occur because the reducer is angled toward the stick. The oil level was observed from the interior of the reducer and was acceptable

CS2:
Both near leaf input shafts exhibit light leakage. A small pool/stain of lubricant has formed on the platform - NEW. Refer to photo 20.

Slight debris and corrosion are present on all reducer housings - NEW. Refer to photo 21.

Elements

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Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	542/4	Shafts	0	.	16	100.	0	.	0	.	0	.	16 ea.

Notes Note:
The original Earle gear reducers for each leaf were replaced with Pragen speed reducers at an unknown time in the past. Installation of the newer reducers led to shaft alignment difficulties which is evident at the current coupling positions. Refer to the machinery layout diagram and charts in the additional Element Notes for related comments.

CS2:
The previous inspection report noted the misalignment of shafts S-2 left and S-3 left for both leaves was corrected by installing couplings with extra flexibility at the C-2 and C-4 positions. Misalignments at these locations were visible at the time of inspection by the abrupt style movement of couplings C-2 and C-4 during operation of the bridge - NEW.

All shafts exhibit paint cracked paint and moderate corrosion - NEW. Refer to photo 22.

The far leaf motor shaft is not painted - NEW.

All shaft surfaces outboard of the main girders are covered in grease with mild corrosion present - NEW.

The Far leaf reducer input shafts are marked by brake enclosures and corrosion is present on exposed steel. - NEW. Refer to photo 23

Debris and lubricant are present on all shafts - NEW.

CORRECTIVE ACTION TAKEN:
Shaft S-1 left of the far leaf machinery room has been cleaned and spot painted.

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	543/4	Shaft Brgs and Coupl	0	.	8	33.33	16	66.67	0	.	0	.	24 ea.

Notes Note:
Total quantity includes twelve bearings and ten couplings. The original Earle gear reducers for each leaf were replaced at an unknown time in the past. Installation of the newer reducers led to shaft alignment difficulties which are evident at the current coupling positions. Couplings C-2, C-3 and C-4 have extra flexibility (self-aligning). Refer to the machinery layout diagram and charts in the additional Element Notes section for related comments.

Two jaw coupling halves attached to the motor input shafts that were not noted in the previous report have been added to this report.

CS3:
Couplings C2 and C4 on both leaves are misaligned. Misalignment is shared between both couplings. The previous report noted the shafts bounce under live load. Shafts were observed to only bounce during operation. Misalignment was measured up to 3/16 inch at the sides of the shaft. Refer to photo 24.

Near leaf couplings C2 and C4 exhibit minor paint loss and corrosion on bolts - NEW.

All bearings B5 and B6 exhibit section loss and corrosion on the mounting bolts outboard of the main girders - NEW.

CS2:
All bearings and couplings have a minor to moderate layer of grease and debris present - NEW. Refer to photo 25

Near leaf bearings B2 and B4 exhibit paint loss and corrosion on housing and bolts - NEW.

Corrosion and section loss is present on both near and far leaves' bearing B3 mounting bolts - NEW. Refer to photo 26.

Far leaf jaw coupling half on the reducer input shaft at the machinery brake exhibits paint loss and corrosion - NEW.

Elements

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Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	544/4	Brakes	0	.	4	100.	0	.	0	.	0	.	4 ea.

Notes Note:
Refer to the machinery layout diagram and charts in the additional Element Notes for related comments.

CS2:
The motor brake drum of the near leaf has moderate corrosion, scoring, and pitting which is heaviest along the south edge - NO CHANGE.

All other brakes exhibit minor corrosion, scoring, and pitting on the brake drums - NEW.

All brakes exhibit minor corrosion and moderate debris on all brake drum hubs - NEW. Refer to photo 27.

All machinery brake hand release levers do not fully release - NEW.

Near leaf machinery brake enclosure rubs against reducer shaft - NEW.

Both far leaf brake shoes do not fully engage the drum when set - NEW. Refer to photo 28.

The fluid plug for near leaf motor and machinery brakes and far leaf motor brakes could not be removed. - NO CHANGE. Refer to photo 29.

All brake mounting supports exhibit light corrosion and debris - NEW. Refer to photo 30.

0	545/4	Emergency Drive	1	100.	0	.	0	.	0	.	0	.	1 ea.

Notes Note:
Total quantity for this element includes one electric motor and one emergency generator. The automatic transfer switch (ATS) is considered to be incidental to this element. Refer to the machinery layout diagram and charts in the additional Element Notes for related comments.

CS1:
The emergency electric generator hour meter currently displays 128.9 operational hours, which is an increase of 24.7 hours since the 5/23/14 routine inspection.

The top surface of the load bank has areas of spotty surface corrosion - NEW. Refer to photo 31.

0	546/4	Span Drive Motors	2	100.	0	.	0	.	0	.	0	.	2 ea.

Notes Note:
Refer to the machinery layout diagram and chart in the additional Element Notes for related comments.

0	560/4	Locks	0	.	6	100.	0	.	0	.	0	.	6 ea.

Notes Note:
This element includes the two rigid span locks and the four heel stops. Refer to the machinery charts in the additional Element Notes for related comments.

CS2:
A plate has recently been added to the rigid span locks as a shim due to excessive clearance between the rigid jaw and lock system. The mounting bolts are not painted and corrosion is present - NEW. Refer to photo 32.

The previous report noted the heel stops slightly bounce under live loads. No bounce was noted during the inspection. Light corrosion is present on all heel stops. Refer to photo 33.

0	562/4	Counterweight Suppor	0	.	4	100.	0	.	0	.	0	.	4 ea.

Notes Note:
The transverse counterweight supports are internal and the main girders frame the counterweight on the north and south faces.

CS2:
There is moderate corrosion along the visible edges of the counterweight supports - NO CHANGE.

Elements

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Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	563/4	Acc Ladd & Plat	4	100.	0	.	0	.	0	.	0	.	4 ea.

Notes

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	564/4	Counterweight	0	.	2	100.	0	.	0	.	0	.	2 ea.

Notes CS2:
The counterweights have multi-directional cracks up to 1/32in. wide throughout - NO CHANGE.

The far leaf counterweight has spalls up to 18in. x 18in. x 1in. adjacent to the main girders - NO CHANGE.

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	565/4	Trun/Str and Cur Trk	0	.	4	100.	0	.	0	.	0	.	4 ea.

Notes CS2:
Moderate corrosion and light debris are present on all tread and track plates. Refer to photo 34.

All tread and track plate mounting bolts lack paint and exhibit minor to moderate corrosion - NEW. Refer to photo 35.

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	570/4	Transformers	3	100.	0	.	0	.	0	.	0	.	3 ea.

Notes Note:
This element includes the three transformers on the incoming electric service pole. Quantity increased to three for this element accordingly. No deficiencies noted. Transformers appear new.

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	571/4	Submarine Cable	1	33.33	0	.	2	66.67	0	.	0	.	3 ea.

Notes CS3:
The armor for the two abandoned cables at the north end of Piers 3 and 4 has severe corrosion with 100% deterioration, in the splash zone - NO CHANGE. Refer to photo 36.

CS1:
The insulation for the in-service submarine cable at the south end of Bascule Piers 3 and 4 have light to moderate deterioration with corrosion staining where it enters the bascule pier - NO CHANGE. Refer to photo 37.

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	572/4	Conduit & Junc. Box	0	.	1	100.	0	.	0	.	0	.	1 ea.

Notes CS2:
The conduits under the south overhang and along the east abutment have light to moderate corrosion - NO CHANGE

There is a broken length of flexible conduit in the junction box at the southwest corner of the near bascule pier/track area - NEW. Refer to photo 38.

The support for the length of flexible conduit in the near machinery area is corroded with significant section loss - NEW. Refer to photo 39.

At the northeast corner of the structure, a black plastic water line emanates from the ground and enters a water meter junction box attached to the south end of the east abutment. The water line then exits the junction box through a conduit pipe under the south overhang, approximately 5ft. from the abutment. This water utility line is improperly supported but is not causing any problems – NO CHANGE.

CORRECTIVE ACTION TAKEN:
Unterminated conductors within the westernmost terminal enclosure in the near machinery room have been terminated.

The missing wire tray cover in the near submarine cable terminal cabinet has been replaced.

Conductors in the junction box at the southwest corner of the near machinery work platform have been terminated.

Elements

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Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	573/4	PLCs	1	100.	0	.	0	.	0	.	0	.	1 ea.

Notes

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	574/4	Control Console	0	.	1	100.	0	.	0	.	0	.	1 ea.

Notes CS2:
There is light corrosion along the bottom of the motor control cabinet and variable drive cabinets – NO CHANGE.

INCIDENTAL:
Rubber mats have not been provided in front of the control console, motor control cabinet (MCC), main distribution enclosure (MDE) or automatic transfer switch (ATS) – NO CHANGE. Refer to photo 40.

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	580/4	Navigational Lights	1	100.	0	.	0	.	0	.	0	.	1 ea.

Notes Note:
This element represents the six fender navigation lights, four span navigation swing lights and the two floodlights for the "Clearance at Center" signs as a single system.

CS1:
The southeast swing light hits the bridge rail upon retrieval.- NO CHANGE.

The outer sleeve on the flexible conduit feeding southeast fender light is partially worn away - NEW.

The mounting bolts on the southwest fender light exhibit significant surface corrosion - NEW.

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	581/4	Operator Facilities	1	100.	0	.	0	.	0	.	0	.	1 ea.

Notes Note:
Refer to photo 41 and the chart in the additional Element Notes for a list of suggested safety items and their availability.

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	591/4	Warning Gates	4	100.	0	.	0	.	0	.	0	.	4 ea.

Notes Note:
The warning bells at the southwest and northeast approaches are considered to be incidental to this element. Refer to the additional Element Notes for the gate heights.

CS1:
There are no access door switches to disconnect the controller motors in the event a door is open – NO CHANGE.

The northwest (previously northeast) and southwest gates have unterminated wires within the housings (southwest shown in photo) - NO CHANGE. Refer to photo 42.

CORRECTIVE ACTION TAKEN:
There no longer appears to be grease on any of the gate rotary cam contacts.

Elements

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Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	592/4	Traffic Signals	2	100.	0	.	0	.	0	.	0	.	2 ea.

Notes Note:
The red and amber flashing beacons at the west approach are considered incidental to this element.

CS1:
Both traffic signals have dirt covering the foundations and packed under the base plates - No CHANGE. Refer to photo 43.

The anchor bolts and leveling nuts have heavy flaking corrosion and there are no grout pads or critter screens below the base plates - NO CHANGE. Refer to photo 44.

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	202/4	Paint Stl Column	4	50.	0	.	4	50.	0	.	0	.	8 ea.

Notes Note:
This element represents the columns within Bascule Piers 3 and 4. Columns support the fixed main girders from Spans 2 and 4 and the machinery racks.

All four steel columns inside the bascule piers have steel plates bolted to the lower portion of the webs.

CS3:
BASCULE PIER 4:
The southeast column in Bascule Pier 4 has painted-over recurring corrosion at the base and at Main Girder 4-2 with areas of 0% section remaining up to 1-1/2ft. long x 3in. wide in the flanges - NO CHANGE. Refer to photo 45.

The southwest column has painted-over recurring corrosion at the base with areas of 0% section remaining in the flanges - NO CHANGE.

The northwest and northeast columns have areas of painted-over recurring corrosion and section loss in the lower 8in. - NO CHANGE.

Elements

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Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
0	210/4	R/Conc Pier Wall	12	.	35	71.21	19	28.79	0	.	0	.	66 lf.

Notes Note:
Bascule Piers 3 and 4 were evaluated under this element.

CS3:
BASCULE PIER 3:
East face, west counterweight well, 4ft. x 1ft. 6in. x 1in. spall/delamination with exposed rebar at top of south counterweight girder pocket - NO CHANGE.

10ft. x 3ft. x 3/4in. spall/delamination in west face near midpoint - NO CHANGE.

6ft. x 18in. delamination along north side of south track - NO CHANGE.

BASCULE PIER 4:
East wall west face, 3ft. 6in. x 20in. x 2in. spall/delamination with two exposed rebar at top of north counterweight girder pocket, a 1ft. 6in. x 1ft. x 2in. spall/delamination 3ft. below, a 14in. x 14in. x 2in. spall/delamination and 5ft. 6in. long x 1/32in. wide vertical crack extending into the marine growth - INCREASE. Refer to photo 46.

10ft. x 1ft. delamination in north face near the submarine cable - NO CHANGE.

3ft. 6in. x 18in. spall/delamination with exposed rebar in south face near southeast corner - NO CHANGE..

30in. x 8in. x 1in. spall with exposed and corroded rebar in south face in sidewalk support under tender's house - NO CHANGE.

1ft. x 1ft. delamination at base of northeast steel columns - NO CHANGE.

The following was noted by the underwater inspectors:
CS3:
Pier wall 3 at the NE corner starting at the top of the marine growth, spall/delamination with pierce of 1in. exposed steel with 0% section remaining; 8ft. x 8in. x 3in. - INCREASE. Refer to photo 47.

CS2:
Both bascule piers have vertical cracks up to 1/32in. wide extending a maximum of 12in. below the top of the marine growth - NO CHANGE.

Bascule Pier 3:
There are intermittent voids between the bottom of the pier wall and the top of the footer up to 4in. with an 8in. maximum penetration - NO CHANGE.

Bascule Pier 4:
The northwest corner has a 4in. x 12in. x 12in. void between the bottom of the pier wall and the top of the footer penetration along the west and 4in. x 20in. x 12in. penetration along the north side - INCREASE.

0	220/4	R/C Sub Pile Cap/Ftg	2	100.	0	.	0	.	0	.	0	.	2 ea.

Notes The following was noted by the underwater inspectors:
CS1:
The footers are exposed on Piers 3 and 4. See Element 290 for heights.

Elements

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Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
1	13/4	Unp Conc Deck/AC Ovl	0	.	4569	100.	0	.	0	.	0	.	**4569 sf.**

Notes Note:
The expansion joints were evaluated under this element.

CS2:
DECK TOP:
The asphalt surface on Spans 2 and 4 has transverse cracks up to 2ft. 6in. long x 1/8in. wide, primarily in the eastbound lane, with an occasional longitudinal crack - NO CHANGE.

Span 1, right fascia at Bent 2 has a 10in. x 5in. x 4in. spall with exposed rebar - NO CHANGE.

INCIDENTAL:
Both sidewalks have multi-directional cracks up to 1/32in. wide which are reflective in the deck underside, particularly in Span 2 - NO CHANGE.

The sidewalks at Bents 2 and 5 have an elevation difference up to 3/8in.; however, a leveling patch is in-place - NO CHANGE.

The left sidewalk in Span 4 has two delaminated patches up to 2ft. x 6in. near the expansion joint plate; there are also longitudinal and transverse cracks up to 1/32in. wide - NO CHANGE.

The left curb in Span 4 has an intermittent 1/32in. (previously 1/16in.) wide horizontal crack in the traffic face - NO CHANGE.

The roadway striping is completely deteriorated - NO CHANGE. Refer to photo 48.

Refer to the additional Element Notes for further deficiencies and information.

CORRECTIVE ACTION TAKEN:
The surfacing over the expansion joints has been sealed.

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
1	331/4	Conc Bridge Railing	226	77.93	60	20.69	4	1.38	0	.	0	.	**290 lf.**

Notes CS3:
The right (south) bridge rail has three spalls up to 1ft. x 6in. x 2in. and several cracks up to 1/32in. wide in the area between Posts 4-1 and 4 - INCREASE. Refer to photo 51.

CS2:
The concrete bridge rails have vertical cracks up to 1/16in. wide, with the largest cracks in the left (north) and right (south) rails along Bascule Pier 4 - NO CHANGE.

INCIDENTAL:
The northeast approach guardrail has minor impact damage between the 6th and 7th post from the bridge - NO CHANGE.

The southwest end terminal has minor impact damage and the southwest and northeast approach guardrails are not attached to the structure - NO CHANGE.

The northwest and southwest approach sidewalks both have a full width x 1/16in. wide transverse crack 2ft. 6in. from Abutment 1 joint - NO CHANGE.

The southwest approach sidewalk has a 5ft. x 3in. x 1ft. penetration area of undermining along the south edge - NO CHANGE.

The northeast approach sidewalk is 1in. lower than the structure sidewalk and the northeast approach curb is spalled/delaminated up to 2ft. 6in. x 7in. x 3/4in. - NO CHANGE.

Elements

Inspection Date: 5/28/2015ENCF

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
1	107/4	Paint Stl Opn Girder	0	.	40	27.78	72	50.	32	22.22	0	.	144 lf.

Notes Note:
This element represents the main girders in approach Spans 2 and 4.

CS4:
Main Girders 2-1 and 2-2 have heavy painted-over pitting with 5/8in. remaining section on the bottom exterior flange with areas of moderate to heavy surface corrosion at and in the bascule piers - NO CHANGE. Refer to photo 52.

The bottom interior flange and web of both Main Girders 2-1 and 2-2 have heavy pitting with areas of moderate to heavy corrosion - NO CHANGE.

Main Girder 2-2 has a 2ft. long area of moderate to heavy corrosion with knife-edging in the top and bottom south flanges, just outside the bascule pier - NO CHANGE. Refer to photo 53.

Main Girders 4-1 and 4-2 inside Bascule Pier 4 have heavy section loss with 5/8in. remaining section along the bottom exterior flange edges with corrosion staining from the top flange - NO CHANGE.

Main Girder 4-2 has a 3/16in. diameter painted-over perforation in the web at the first stiffener inside the bascule pier. The interior web and bottom flange at this location has a 4ft. long area of blistering paint with moderate to heavy corrosion - NO CHANGE.

CS3:
The top exterior flanges of Span 2 and 4 main girders have moderate to heavy corrosion at the deck underside within 10ft. of the bascule piers with staining on the bottom flanges - NO CHANGE.

Main Girders 2-1 and 2-2 have areas of light to moderate surface corrosion along the bottom edges of the bottom flanges - NO CHANGE. Refer to photo 54.

CS2:
Span 2 and 4 main girders have random areas of light painted-over pitting up to 3/16in. deep and section loss - NO CHANGE.

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
1	110/4	R/Conc Open Girder	404	90.58	20	4.48	22	4.93	0	.	0	.	446 lf.

Notes CS3:
Beams 1-1, 1-2 and 1-3 each have one delamination up to 3ft. long x 6in. wide in the lower north edge near the 3/4 point - NO CHANGE. Refer to photo 55.

Beam 1-2 has a 1ft. x 1ft. delamination in the south web over Bent 2 - NEW.

Beam 1-5 over Abutment 1 has a 2ft. x 16in. x 2-1/2in. spall/delamination with exposed and moderately corroded rebar in the bottom south edge, and a 20in. x 14in. delamination in the north edge - INCREASE. Refer to photo 56.

Beam 1-5 over Pier 2 has an 18in. x 12in. delamination in the south face - NEW

Beam 2-5 has a 1ft. x 1ft. x 3/4in. spall/delamination in the north face near the 3/4 point and a 1ft. 6in. x 1ft. delamination in the south face over Bent 2 - NO CHANGE.

Beam 5-5 has a 10in. x 1ft. delamination in the north face over Bent 5 - NO CHANGE.

CS2:
Span 1 tee beams have minor cracks outlining the repairs near mid-span - NO CHANGE.

Beam 5-1 has a 3ft. long x 1/32in. wide longitudinal crack in the bottom face, approximately 10ft. from Abutment 6 - NO CHANGE.

CS1:
Span 1 and 5 tee beams have minor transverse cracks in the stems which extend up the vertical face - NO CHANGE.

Elements

Inspection Date: 5/28/2015ENCF

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
1	113/4	Paint Stl Stringer	0	.	269	100.	0	.	0	50.19	0	.	**269 lf.**

Notes Note:
This element represents the stringers in approach Spans 2 and 4.

CS2:
Spans 2 and 4 stringers have random areas of light painted-over pitting and section loss - NO CHANGE.

INCIDENTAL:
The bottom exterior flanges of the sidewalk stringers have moderate to heavy corrosion and knife-edging along their length - NO CHANGE. Refer to photo 57.

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
1	152/4	Paint Stl Floor Beam	0	.	173	94.02	11	5.98	0	.	0	.	**184 lf.**

Notes Note:
This element represents the approach Spans 2 and 4 floor beams. The load rating analysis identifies the approach span floor beams as the controlling members for all vehicle types. Refer to weight limit photos on page 59.

CS3:
The bottom west flange of Floor Beam 2-2 has heavy laminating corrosion at the south end - NO CHANGE.

The bottom east and north flanges of Floor Beam 2-4 have moderate to heavy corrosion in the southern 2ft. and is knife-edged - NO CHANGE.

Floor Beam 4-2 has areas of heavy corrosion up to 1ft. 4in. x 4in. in the top west flange in Bay 4-5 and in the top east flange in Bay 4-4 - NO CHANGE. Refer to photo 58.

CS2:
Floor Beams 2-3, 2-4, 4-1 and 4-2 have areas of painted-over light pitting – NO CHANGE.

Floor Beams 2-1 and 4-4 over Bents 2 and 5 have painted-over corrosion holes (0% section remaining), primarily at the ends - NO CHANGE.

Floor Beam 2-2 has light surface corrosion along the welds and intermittent areas of peeling paint on the bottom face at midpoint - NO CHANGE.

INCIDENTAL:
The east weight limit sign is set too low - NO CHANGE. Refer to photo 59.

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
1	313/4	Fixed Bearing	0	.	12	100.	0	.	0	.	0	.	**12 ea.**

Notes

Elements

Inspection Date: 5/28/2015ENCF

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
1	201/4	Unpnt Stl Column	0	.	0	.	14	82.35	3	17.65	0	.	**17 ea.**

Notes Note:
Bents 2 and 5 have steel H-piles encased in concrete. The lower portion of both bents have a second solid concrete encasement installed beginning 3ft. below the cap. Area between the cap and second encasement has been coated with epoxy. The crutch bents installed on both sides of Bents 2 and 5 are considered temporary and the previously noted deficiencies still exist; therefore, the NBI rating for SIA Item 60 Substructure will remain a 4.

CS4:
Pile 2-6 is exposed up to 3ft. high x flange width on the east face and the northwest flange is exposed up to 2ft. high with heavy laminating corrosion and approximately 0.07in. section remaining in a 1ft. high area approximately 2ft. down from the cap in both areas - NO CHANGE. Refer to photo 60.

Pile 5-8 is exposed on the west face in a 3ft. 6in. x 1ft. 9in. area and has a 4in. x 3in. area of 100% section loss in the southwest flange 2ft. below the cap. The remaining exposed flange appears 1/2in. thick; however, when the laminating corrosion on the outside face and the pack rust on the inside face were removed the flange thickness was found to be 0.05in. - NO CHANGE. Refer to photo 61.

The southwest flange of Pile 5-9 is exposed up to 10in. high and is heavily corroded with 0.187in. remaining section. The southeast flange is exposed 1ft. 9in. high with 0.125in. remaining section 2ft. down from the cap - NO CHANGE.

CS3:
The concrete encasements have spalls and vertical cracks, in some instances severe, which suggest the steel piles are heavily corroded - NO CHANGE. Refer to Element 298 Pile Jacket Bare for related comments.

The true condition of the steel H-piles can not be determined due to the concrete encasements.

1	202/4	Paint Stl Column	0	.	12	100.	0	.	0	.	0	.	**12 ea.**

Notes Note:
This element represents the painted steel H-piles in the crutch bents on each side of Bents 2 and 5.

CS2:
The steel H-piles in the crutch bents have moderate surface corrosion in the water zone - NO CAHNGE.

1	215/4	R/Conc Abutment	67	93.06	5	6.94	0	.	0	.	0	.	**72 lf.**

Notes CS2:
The Abutment 6 cap has a 4ft. 6in. x 15in. repair in the top west edge extending from Beam 5-5 to Beam 5-6 that sounds hollow when tapped with a hammer - DECREASE.

1	231/4	Paint Stl Cap	178	100.	0	.	0	.	0	.	0	.	**178 lf.**

Notes Note:
This element represents the painted steel cap beams on the crutch bents on each side of Bents 2 and 5.

Elements

Inspection Date: 5/28/2015ENCF

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
1	234/4	R/Conc Cap	50	80.65	0	.	12	19.35	0	.	0	.	62 lf.

Notes CS3:
The Bent 2 cap has a 1ft. x 1ft. x 1in. spall with exposed rebar in the lower east edge over Pile 2-2; however, this area appears to have been coated in the past - NO CHANGE.

The Bent 2 cap has a 2ft. 6in. x 10in. delamination in the bottom east edge over Pile 2-7 - NO CHANGE.

The Bent 5 cap has a 2ft. 6in. x 7in. x 2in. spall with exposed rebar with 1in. remaining section in the bottom west edge over Pile 5-1 - NO CHANGE. Refer to photo 62.

The bottom west edge of the Bent 5 cap has a delamination up to 3ft. x 8in. over Piles 5-7 and 5-9 - NO CHANGE.

The bottom east edge of the Bent 5 cap has a 2ft. x 1ft. x 1in. spall/delamination over Pile 5-7 - NO CHANGE.

1	298/4	Pile Jacket Bare	0	.	0	.	9	52.94	8	47.06	0	.	17 ea.

Notes Note:
This element represents the concrete encased steel H-piles at Bents 2 and 5. The lower portion of both bents has had a second encasement of concrete installed beginning approximately 3ft. below the cap. The area between the cap and secondary encasement is coated with epoxy.

CS4:
Pile Jacket 2-5 has a full height x full width delamination on the east face - NO CHANGE.

Pile Jacket 2-6 has a full height x full width x 4in. deep spall exposing 100% deteriorated jacket steel and H-pile in the east face. There is also a 2ft. x 6in. x 3-1/2in. spall in the northwest corner exposing the pile flange and a full height x full delamination in the west face - NO CHANGE.

Pile Jackets 2-7 and 2-8 each have a full height x full width delamination on the east and west faces - NO CHANGE.

Pile Jacket 5-6 is delaminated throughout with a 1ft. x 5in. x 4in. spall in the northeast corner and a 1ft. x 10in. x 5in. spall in the southwest corner exposing the H-pile - NO CHANGE. Refer to photo 63.

Pile Jacket 5-7 is delaminated throughout with a 1ft. x 15in. x 2in. spall with exposed and corroded steel in the west face - NO CHANGE.

Pile Jacket 5-8 is 100% cracked, spalled and delaminated with a 3ft. 6in. high x 1ft. 9in. wide x 3in. deep spall with exposed steel (100% section loss) in the west face and a 2ft. 9in. x 1ft. x 4in. spall in the south face exposing the southeast flange of the H-pile - NO CHANGE.

Pile Jacket 5-9 has a 2ft. 9in. x 9in. x 5in. spall in the southwest corner exposing 100% deteriorated jacket steel and the southwest H-pile flange. The southeast corner has a 4ft. x 1ft. x 4in. spall/delamination exposing 100% deteriorated jacket steel and the H-pile flange - NO CHANGE.

Refer to the additional Element Notes for further deficiencies.

Elements

Inspection Date: 5/28/2015ENCF

Span Id	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	Qty5	%5	T Qty
1	387/4	P/S Fender/Dolphin	44	18.03	0	.	200	81.97	0	.	0	.	**244 lf.**

Notes Note:
There are a total of 76 fender piles.

CS3:
In the east fender, the fifth pile cluster from the south battered pile one pile has a 3ft. 6in. x 8in. x 5in. spall/delamination in the southeast corner with exposed and corroded steel with 1/4in. section remaining - NO CHANGE.

The following was noted by the underwater inspectors:
CS3:
Sixty five piles (33 on east and 32 on west; field verified) have vertical cracks up to 5ft. long x 1/8in. wide and delaminations/spalls up to 4ft. x 18in. x 5in., several with exposed steel and corrosion staining at or near the corners above the waterline - INCREASE. Refer to photo 64.

INCIDENTAL:
The lower cable connectors and fasteners have heavy to severe corrosion, many with parted cables with 50% section remaining - NO CHANGE. Refer to photo 65.

The timber supports attached to the bascule piers which support the lower wales have moderate to heavy deterioration due to marine borers - NO CHANGE.

The bottom edge of the lower horizontal timber wales have minor marine borer activity with up to 80% section remaining - NO CHANGE.

One east fender deck plank near the tender house has an 8ft. long x 1/2in. wide split - NO CHANGE.

West Fender: The third wale from the north is only attached with one bolt and is tied in place with a rope - NEW. Refer to photo 66.

1	396/4	Other Abut Slope Pro	0	.	2917	100.	0	.	0	.	0	.	**2917 sf.**

Notes Note:
The slope protection at both abutments consists of broken concrete rubble, construction debris and sand-cement rip rap bags covered with grout.

CS2:
The rubble has areas where it is sparse or missing entirely, particularly at Abutment 1 slope - NO CHANGE.

The grout over Abutment 1 and 6 slope protection has a full length x up to 1-5/8in. wide horizontal crack along the abutment caps; however, the underlying sand-cement rip rap bags are in good condition - NO CHANGE.

The top of the slope protection at the southwest corner of the structure is undermined 3ft. long x 2in. high x 2ft. 8in. back under - NO CHANGE.

At the west slope protection there are areas of collapsed and missing grout over the brokes concrete and sand cement rip-rap - NEW. Refer to photo 67.

1	290/4	Channel	1	100.	0	.	0	.	0	.	0	.	**1 ea.**

Notes The following was noted by the underwater inspectors:
CS1:
Pier 3: The footer is exposed the entire length along the channel side (east) a maximum of 24in. - NO CHANGE.

Pier 4: The footer is intermittently exposed along the channel side (west) a maximum of 5in. - INCREASE.

Total Number of Elements: 47

Inspection Information

Inspection Date: 05.28.2015 **Type:** Regular NBI with Movable
Inspector: KNKCABA-P - Michael Betz
Inspection Notes: Sufficiency Rating Calculation Accepted by KNKCADG-P at 2015-07-10 16:46:38

Inspection Date: 05.23.2014 **Type:** Special - Movable
Inspector: KNKCABA-P - Michael Betz
Inspection Notes: Sufficiency Rating Calculation Accepted by KNKCADG-P at 2014-07-02 13:44:36

This is a Special Movable Inspection, the elements in Unit 0 that pertain to the mechanical and electrical portions of the structure were inspected and evaluated. Also being performed is a Special-Posted Bridge Inspection due to SIA Item 70, Bridge Posting, being coded a 3. Unit 1 Element 152 Paint Stl Floor Beam was inspected and included since it is the controlling member of the most recent load rating analysis. Unit 1 Element 201 Unpnt Stl Column and Element 202, Painted Stl Column were also included due to SIA Item 60, Substructure, being coded a 4. For all other deficiencies refer to the previous routine inspection dated 5/15/13.

Inspection Date: 05.15.2013 **Type:** Regular NBI with Movable
Inspector: KNKCARD-P - David Rothman
Inspection Notes: Sufficiency Rating Calculation Accepted by knkcard-P at 2013-07-12 09:57:53

This is a Routine inspection.

FDOT provides a barge for the fracture critical inspection.
Contact: Larry Bauer
Phone Number: 561-370-1205

Inspection Date: 05.08.2012 **Type:** Special - Movable
Inspector: KNAAAOJ-P - John O'Grady
Inspection Notes:

This Special Movable Inspection, the elements in Unit 0 that pertain to the mechanical and electrical portions of the structure were inspected and evaluated. Also being performed is a Special-Posted Bridge Inspection due to SIA Item 70, Bridge Posting, being coded a 3. Unit 1 Element 152 Paint Stl Floor Beam was inspected and included since it is the controlling member of the most recent load rating analysis. Unit 1 Element 201 Unpnt Stl Column was also included due to SIA Item 60, Substructure, being coded a 4. For all other deficiencies refer to the previous routine inspection dated 5/26/11.

Inspection Information

Inspection Date: 05.26.2011 **Type:** Regular NBI with Movable

Inspector: KNKCALE-P - Eric Lambert

Inspection Notes: Sufficiency Rating Calculation Accepted by knkcaen-P at 2011-07-08 14:12:50

This structure is classified as Functionally Obsolete due to SIA Item 68, Deck Geometry, being coded a 3 or less.

The lead underwater inspector for the current routine inspection is Keith Hoogland (CBI #00341).

The following underwater elements were inspected:
201 Unpnt Stl Column
210 R/Conc Pier Wall
220 R/C Sub Pile Cap/Ftg
290 Channel
298 Pile Jacket Bare
571 Submarine Cable
387 P/S Fender/Dolphin
396 Other Abut Slope Pro

Inspection Date: 05.19.2010 **Type:** Special - Movable

Inspector: KNKCAMB-P - Brice McMinn

Inspection Notes: Sufficiency Rating Calculation Accepted by KNKCABT-P at 2010-07-01 13:55:21

Note: This is a Special Movable Inspection, only the the elements in Unit 0 that pertain to the mechanical and electrical portions of the structure were inspected and evaluated. Also being performed is a Safe Load Interim due to SIA Item No. 70 Bridge Posting being coded a 3. Only Element 152 Painted Steel Floor Beam Unit 1 was included in the safe load Inspection since it is the controlling member of the most recent load rating analysis dated 3/26/97. For a comprehensive list of all other deficiencies, refer to the previous routine inspection report dated 5/28/09.

Inspection Date: 05.28.2009 **Type:** Regular NBI with Movable

Inspector: KNKCAST-P - Timothy Sweeney

Inspection Notes: Sufficiency Rating Calculation Accepted by KNKCARL-P at 2009-07-09 14:01:46

Note: FDOT supplied the work barge for the Fracture Critical Inspection. Call Mike Atkins for scheduling - 561.432.4966 Ext. 1126.

Unit 0 Elements are main span components (Bascule Span 3).
Unit 1 Elements are approach span components (Spans 1, 2, 4 & 5)

Element 301 Pourable Joint Seal was deleted during this inspection.

Inspection Information

Inspection Date: 05.30.2008 **Type:** Special - Movable

Inspector: KNKCAMB-P - Brice McMinn

Inspection Notes: Sufficiency Rating Calculation Accepted by knkcamb-P at 2008-07-07 09:57:54

Note: This is a Special Movable Inspection in conjunction with an interim inspection due to SIA Item No. 60 Substructure being rated a 4 due to the condition of Unit 0 Element 202 Painted Steel Column. Also being performed is a Safe Load Interim due to SIA Item No. 70 Bridge Posting being coded a 3. Only Element 152 Painted Steel Floor Beam Unit 1 was included in the safe load Inspection since it is the controlling member of the most recent load rating analysis dated 3/26/97. For a comprehensive list of all other deficiencies, refer to the previous routine inspection report dated 5/24/07.

Note: Due to the recent rehabilitation work performed, the Substructure NBI rating has been raised to a 5. The NBI rating for the Superstructure will remain a 5 and evaluated during the next routine inspection.

Note: As a result of the rehabilitation work, the controlling members (approach span floor beams) of the most recent load analysis dated 3/26/97 were not affected; therefore, a new analysis is not warranted at this time.

Unit 0 Elements are main span components (Bascule Span 3).
Unit 1 Elements are approach span components (Spans 1, 2, 4 & 5)

Inspection Date: 05.24.2007 **Type:** Regular NBI with Movable

Inspector: KNKCAGW-P - William Greer

Inspection Notes: Sufficiency Rating Calculation Accepted by knkcagw-P at 2007-07-05 13:57:51

Unit 0 Elements are main span components (Bascule Span 3).
Unit 1 Elements are approach span components (Spans 1, 2, 4 & 5)

Note: FDOT supplied the work barge for the Fracture Critical Inspection. Call Mike Atkins for scheduling - 561.432.4966 Ext. 1126.

Inspection Date: 05.24.2006 **Type:** Interim

Inspector: KNAAAOJ-P - John O'Grady

Inspection Notes: Sufficiency Rating Calculation Accepted by kn538oj-P at 2006-06-27 11:38:14

Note: This is an Annual Mechanical and Electrical Inspection in conjunction with an interim inspection due to S.I.A. Item #60 Substructure being rated a 4 due to the condition of Pontis Element 202 Painted Steel Column Unit 0. Also being performed is a Safe Load Interim due to S.I.A. Item #70 Bridge Posting being rated a 3. Only Pontis Element 152 Painted Steel Floor Beam Unit 1 was included in the safe load Inspection since it is the controlling member of the most recent load rating analysis dated 3/26/97. For a comprehensive list of all other deficiencies, refer to the previous routine inspection report dated 5/24/05.

Unit 0 Elements are main span components (Bascule Span 3).
Unit 1 Elements are approach span components (Spans 1, 2, 4 & 5)

Note: FDOT supplied the work barge for Fracture Critical Inspection. Call Mike Atkins for scheduling - 561.432.4966 Ext. 1126.

Inspection Date: 11.01.2005 **Type:** Special-Nat Disaster Dmg

Inspector: KNIEIOD-P - David Orr

Inspection Notes: NOTE: Soundings were taken on 11/01/2005 following Hurricane Wilma. No storm related damage was found.

Inspection Information

Inspection Date: 10.27.2005 **Type:** Special-Nat Disaster Dmg
Inspector: 843

Inspection Notes: NOTE: Storm damage assessment completed on 10/27/2005 following Hurricane Wilma. As a result of the hurricane, storm related damage was found in Element 581 Operating Facilities. Only this element is included with this report.

Inspection Date: 08.26.2005 **Type:** Special-Nat Disaster Dmg
Inspector: KN853KR-P - Ken Reinhold

Inspection Notes: NOTE: Storm damage assessment completed on 08/27/2005 following Hurricane Katrina. No storm related damage was found in the structure as a result of the hurricane.

Inspection Date: 05.24.2005 **Type:** Regular NBI with Movable
Inspector: 843

Inspection Notes: Sufficiency Rating Calculation Accepted by kn538pl-P at 2005-06-27 16:15:08

Note: This bridge is on a 12 month inspection frequency due to the movable components, S.I.A. Item 70 (Bridge Posting) being rated 4 or less, and S.I.A. Item 60 Substructure rating being 4 or less. S.I.A. Item 60 Substructure has been rated 4 (Poor) because of deterioration to the painted steel columns within the bascule piers, particularly the southeast column in the near leaf machinery room.

Unit 0 Elements are main span components (Bascule Span 3).
Unit 1 Elements are approach span components (Spans 1, 2, 4 & 5)

Note: FDOT supplied the work barge for Fracture Critical Inspection. Call Mike Atkins for scheduling - 561.432.4966 Ext. 1126.

Inspection Date: 04.21.2004 **Type:** Interim
Inspector: 365

Inspection Notes: KN738RO inspection comments -
Structure 934408 -
Date 4/21/04 - Interim inspection
Only the Electrical/Mechanical, Steel Superstructure and Deck elements were inspected. For all other elements refer to 4/25/03 Routine inspection report.

SIA Item 59, Superstructure rating is rated 4 (Poor) because of the deteriorated state of the SE painted steel column in the near leaf machinery room.
This column has a fracture critical pin securing fracture critical flanking span MG 4-2.

FDOT District Four supplied barge for Fracture Critical Inspection. Call Cell #561/432-4966 Ext. 1126 - Mike Atkins for scheduling.

Inspection Information

Inspection Date: 04.25.2003 **Type:** Regular NBI
Inspector: KNVOLWW-P - Wade Wolfe

Inspection Notes: Sufficiency Rating Calculation Accepted by kn110mb-P at 2004-04-27 12:36:17
Sufficiency Rating Calculation Accepted by kn738vb-P at 2003-05-19 10:23:47
KN738WW-P inspection comments -
Structure 934408 -
Date 2003-04-25 -
SIA Item 59, Superstructure rating was lowered to 4(Poor) because of the deteriorated state of the SE painted steel column in the near leaf machinery room.
This column has a fracture critical pin securing fracture critical flanking span MG 4-2.

FDOT District Four supplied barge for Fracture Critical Inspection. Call Cell #561/432-4966 Ext. 1126 - Mike Atkins for scheduling.

Inspection Date: 03.28.2002 **Type:** Interim
Inspector: 365

Inspection Notes: Sufficiency Rating Calculation Accepted by kn738vb at 5/14/02 08:34:11
KN738RO inspection comments -
Structure 934408 -
Date 3/28/02 -
This is an interim inspection only the Mechanical/Electrical and safe load structural components of flanking spans 2 and 4 are included.
For a comprehensive list of all other deficiencies refer to the previous routine report.

Inspection Date: 04.24.2001 **Type:** Regular NBI
Inspector: 322

Inspection Notes: Sufficiency Rating Calculation Accepted by kn738vb at 7/11/01 08:22:20
KN738DR inspection comments - The following deficiencies were noted in elements not covered by Pontis. Repair recommendations for these deficiencies can be found in the Repair Recommendation section of the Addendum.
Approach Roadway: The west approach roadway has a 2m long x 3mm wide transverse crack 1m from abutment 1 in the EB lane. There is a 3mm wide transverse crack across the east approach roadway 2m from abutment 6.
Guardrails: There are no guardrails provided at the SE or NW quadrants. The SW and NE guardrail is not attached to the structure. There is a 1.6m long area of minor impact damage at the NE quadrant.
Signs: The weight limit signing does not meet FDOT Standard Index 17357 guidelines due to improper sign panel configuration.
Structure 934408 -
Date 4/24/01 -

Inspection Date: 03.28.2000 **Type:** Interim
Inspector: 315

Inspection Notes: Sufficiency Rating Calculation Accepted by kn738mb at 4/18/00 15:45:48
KN738MB inspection comments -
Structure 934408 -
Date 3/28/00 -
This interim inspection is being conducted to perform the annual mechanical and electrical inspections and based of S.I.A. Item 70 Bridge Posting being rated 4 or less. Structural deficiencies affecting the load carrying capacity of Flanking Spans 2 and 4 will be included in this report. All mechanical and electrical elements related to the movable portion of the bridge were reviewed and will be included in this report. For a comprehensive list of all other deficiencies, see the previous routine report dated 3/31/99.
The following deficiencies were noted in elements not covered by PONTIS. Repair recommendations for these deficiencies can be found in the Repair Recommendation section in the attatched addendum:
Signs - This structure is currently posted at each approach for a 30 ton weight restriction. The signs do not conform to FDOT Standard Index No. 17357 guidelines due to the configuration of the sign panels.

Inspection Information

Inspection Date: 03.31.1999 **Type:** Regular NBI

Inspector: 312

Inspection Notes: Sufficiency Rating Calculation Accepted by kn738po at 5/5/99 10:02:43
Structure 934408 -
Date 3/31/99 -
KN738PO inspection comments -
The following deficiencies were noted in elements not covered by PONTIS. Repair recommendations for these deficiencies can be found in the Repair Recommendation section in the attatched addendum:

Approach roadway- The west approach roadway has a 2m long x 3mm wide transverse crack 1m from Abutment 1 in the eastbound lane. There is a 3mm wide transverse crack across the east approach roadway 2m from Abutment 6. The uneven transitions at both roadway - bridge transitions have been leveled.
Approach sidewalks- All four approach sidewalks have been reconstructed.
Guardrails- There are no guardrails provided at the southeast or northwest quadrants. The southwest and northeast guardrail is not attached to the structure. There is a 1.6m long area of minor impact damage at the northeast quadrant.

Signs- The weight limit signing does not meet FDOT Standard Index 17357 guidelines due to improper sign panel configuration.
Previous comments > (none)

Structure Notes

BRIDGE OWNER: PALM BEACH COUNTY

Bridge inventoried from west to east.

TRAFFIC RESTRICTIONS:
Based on the current load rating analysis dated 3/28/97, posting is required for SU type vehicles at or below 30 tons. The structure is currently posted in advance and at both approaches for SU type vehicles at 30 tons. Refer to the weight limit sign photos.

This bridge is on a 12 month inspection frequency due to the movable components and SIA Items 60 Substructure and 70 Bridge Posting being coded a 4 or less.

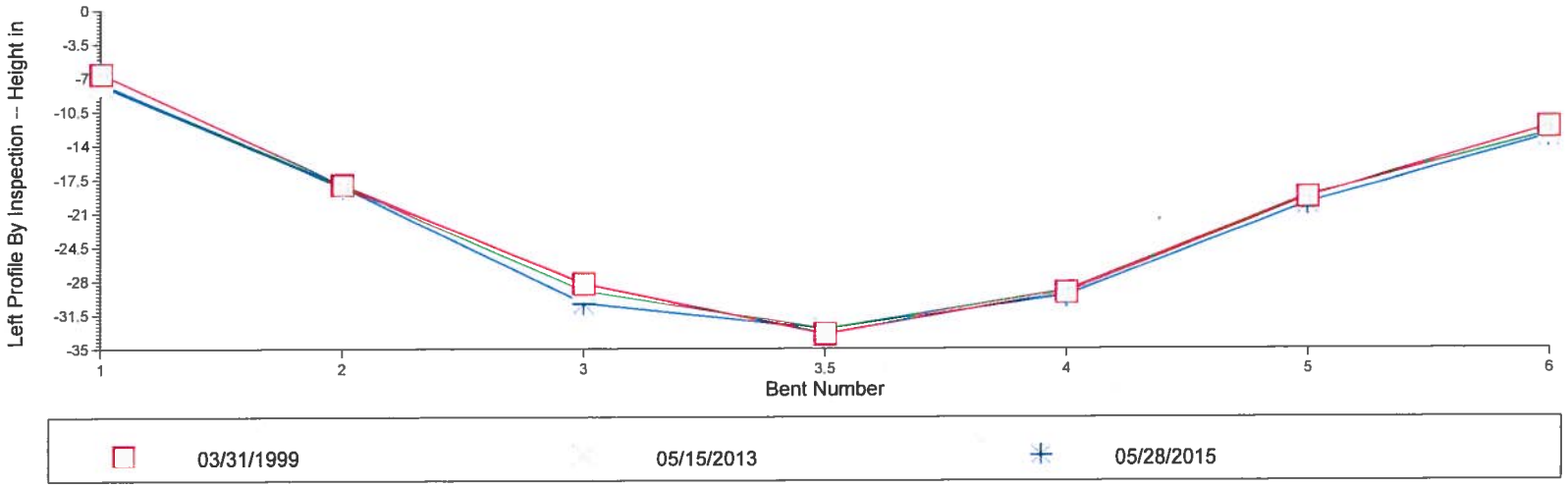
The crutch bents installed on both sides of Bents 2 and 5 are considered temporary and the previously noted deficiencies still exist; therefore, the NBI rating for item 60 Substructure will remain a 4.

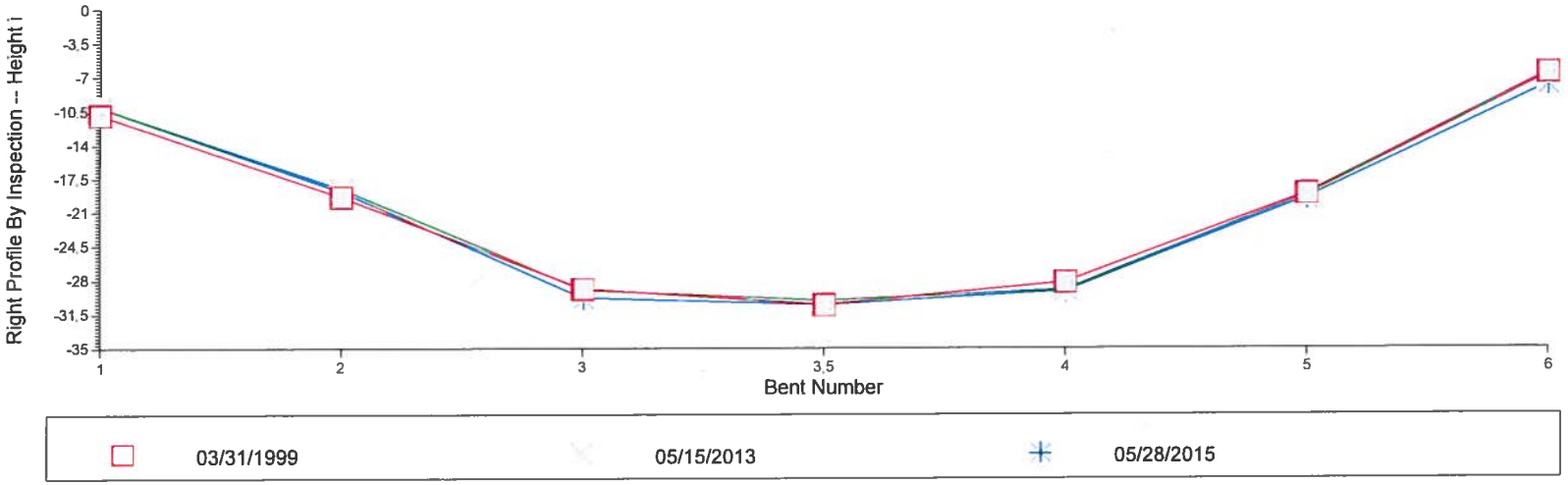
This structure is Functionally Obsolete due to an SIA Item 68 Deck Geometry rating of 2. With two traffic lanes and the current ADT, a 32.2ft. roadway width is required to achieve a Deck Geometry rating of 4.

Unit 0 Elements Movable Span
Unit 1 Elements Fixed Approach Slabs

FDOT provides a barge for the fracture critical inspection.
Contact: Larry Bauer
Phone Number: 561-370-1205

The following elements were inspected underwater by the divers:
202 Painted Steel Piles/Columns – Bents 2 and 5 with seventeen encased steel piles
210 Pier Walls
220 Submerged Footing – Piers 3 and 4
290 Channel
298 Pile Jackets Bare
571 Submarine Cable
387 Fender System
396 Abutment Slope Protection


Left Profile By Inspection -- Height in
0
-3.5
-7
-10.5
-14
-17.5
-21
-24.5
-28
-31.5
-35
1
2
3
3.5
4
5
6
Bent Number
03/31/1999
05/15/2013
05/28/2015


Right Profile By Inspection -- Height i
0
-3.5
-7
-10.5
-14
-17.5
-21
-24.5
-28
-31.5
-35
1
2
3
3.5
4
5
6
Bent Number
03/31/1999
05/15/2013
05/28/2015

Profile Data - Numerical Summary

Inspection Date and Key: 05/28/2015 ENCF

Bent #	Left Height	Right Height
1	7.8	10.1
2	18.3	18.8
3	30.3	29.8
3.5	33	30.5
4	29.5	29.1
5	20	19.5
6	13.1	7.8

(All Heights Are In Feet)

Air Temp: 86
Profile Notes:
Waterline at the centerline of the channel = 17.8ft.
Measurements referenced from the tops of the bridgerails.

Inspection Date and Key: 05/15/2013 VZMS

Bent #	Left Height	Right Height
1	7.6	10.1
2	18.2	18.5
3	29	29
3.5	33	30.1
4	29	29
5	19.2	19.2
6	12.8	6.8

Air Temp: 89
Profile Notes:
Waterline at C/L Channel = 18ft.
Measurements referenced to the top of the bridge rails.

Inspection Date and Key: 03/31/1999 VMLD

Bent #	Left Height	Right Height
1	6.56	10.83
2	18.04	19.36
3	28.22	28.87
3.5	33.46	30.51

Profile Data - Numerical Summary

Inspection Date and Key: 03/31/1999 VMLD

Bent #	Left Height	Right Height
4	29.2	28.22
5	19.36	19.03
6	12.14	6.56

(All Heights Are In Feet)

Air Temp:

Profile Notes:

Groundline measurements are referenced to the top of the bridgerail.
Waterline at centerline = 5.3

Renewal/Replacement
Infrastructure Sales Tax Initiative

ATTACHMENT 5 - PARKS QUALITY STANDARDS MANUAL (BUILDINGS, STRUCTURES AND FIXTURES CHECKLIST)

WGI™

PALM BEACH COUNTY PARKS AND RECREATION

PARKS QUALITY STANDARDS MANUAL

PARKS AND RECREATION DEPARTMENT

PARKS QUALITY STANDARDS MANUAL

CREDITS

Prepared by:

Eric M. Call
Director of Parks

WITH THE ASSISTANCE OF PARKS SENIOR MANAGEMENT STAFF

Mark Godwin	**George Crowther**	**Craig Murphy**
Ed Barrow	**John Street**	**Mike Martz**

OFFICE SUPPORT BY

Chandra Williams, Senior Secretary

CONTENTS

to Sea Turtle nesting season (March 1 through October 31) in accordance with technical contract specifications.

Our performance goal is to maintain a minimum of 90% of beach shoreline in accordance with prepared technical specifications.

PERFORMANCE INDICATOR

8. NUMBER AND PERCENT OF BEACH SHORELINE MAINTAINED IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS.

BUILDINGS, STRUCTURES AND FIXTURES

This section groups together a large number of physical park features not addressed by more specific objectives, including everything from signs to flag poles. The Parks Division's Skilled Trades Section is responsible for the maintenance and repair of all buildings, structures, and fixtures within the park system.

All physical features are to be maintained in a safe, serviceable and attractive condition. All public safety concerns are to be corrected the same day as reported. Gang related and obscene graffiti is to be repainted within 24 hours of occurrence or notification.

The following checklist details the desired condition of most items covered by this section. The actual condition of park buildings, structures and fixtures will be compared to these quality standards. Each item will be observed and judged relative to its ability to meet all the listed criteria.

Our performance will be measured by the percentage of inventoried items which meet all of the criteria identified. Our performance goal is to maintain 80% buildings, structures, and fixtures in such a condition.

PERFORMANCE INDICATOR

9. NUMBER AND PERCENT OF PARK BUILDINGS, STRUCTURES AND FIXTURES WHICH MEET DIVISION STANDARDS RELATIVE TO UTILITY, DESIGN AND AESTHETICS.

BUILDING CHECKLIST

CEILINGS

- SHOULD BE STRUCTURALLY SOUND AND IN GOOD CONDITION
- SHOULD BE CLEAN AND PAINTED WHERE APPROPRIATE
- SHOULD BE FREE OF COBWEBS, STAPLES AND OTHER DEBRIS

DOORS

- SHOULD OPERATE FREELY, QUIETLY AND AS DESIGNED
- SHOULD LOCK WHEN APPROPRIATE
- SHOULD BE CLEAN, GRAFFITI FREE AND PAINTED WHEN APPROPRIATE

ELECTRICAL OUTLETS

- SHOULD BE FUNCTIONAL SAFE AND INTACT

EXIT SIGNS

- SHOULD BE CLEARLY VISIBLE AND FUNCTIONAL

FLOORS

- SHOULD BE CLEAN AND FREE OF DEBRIS
- SHOULD NOT HAVE ANY TRIPPING HAZARDS
- SHOULD PROVIDE SECURE FOOTING

HEATING/COOLING

- SHOULD BE FUNCTIONAL AND OPERATE WITHOUT EXCESSIVE NOISE

ROOF

- SHOULD BE FUNCTIONAL AND IN GOOD REPAIR INCLUDING EAVES AND GUTTERS

WALLS/PARTITIONS

- SHOULD BE CLEAN AND PAINTED WHERE APPROPRIATE
- SHOULD BE FREE OF TAPE, STAPLES, TACKS, ETC.

WINDOWS

- SHOULD BE FREE OF CRACKS, HOLES OR OTHER DAMAGE
- SHOULD BE CLEAN AND FREE OF SMUDGES AND OBSTRUCTIONS

STRUCTURES AND FIXTURES CHECKLIST

FENCING AND GATES

- SHOULD BE SECURELY ANCHORED TO THE GROUND
- FRAMING, FABRIC AND HARDWARE SHOULD BE IN GOOD REPAIR
- SHOULD BE FREE OF GRAFFITI
- SHOULD BE FREE OF SHARP EDGES
- GATES SHOULD SWING FREELY, WITH LATCHES FUNCTIONAL

BENCHES AND BLEACHERS

- SHOULD OFFER SMOOTH SEATING SURFACE
- SHOULD BE SECURE AND STURDY (BLEACHERS ANCHORED TO CONCRETE SLAB)
- SHOULD BE FREE OF UNINTENDED PROTRUSIONS (NAILS, BOLTS, ETC.)
- SHOULD BE FREE OF GRAFFITI
- SHOULD BE PRESENT SKID-RESISTANT FOOT SURFACES

DRINKING FOUNTAINS

- SHOULD BE SECURELY ANCHORED
- SHOULD PROVIDE A STEADY FLOW OF WATER WHEN ACTIVATED
- DOES NOT LEAK OR RUN WHEN NOT ACTIVATED
- SHOULD DRAIN FREELY AND COMPLETELY
- SHOULD BE FREE OF GRAFFITI

FLAGPOLES

- SHOULD BE ACCESSIBLE AND VISIBLE
- CABLES AND HOOKS SHOULD BE FUNCTIONAL
- SHOULD BE FREE OF GRAFFITI
- FLAGS SHOULD NOT BE RIPPED OR TORN

LIGHT STANDARDS AND FIXTURES

- SHOULD BE PROPERLY ANCHORED OR SECURED
- SHOULD BE FUNCTIONAL (GLOBES AND LAMPS)
- NO EXPOSED WIRES
- SHOULD BE FREE OF GRAFFITI

PAY PHONES

- SHOULD BE SECURE AND OPERATIONAL
- SHOULD BE CLEAN AND FREE OF GRAFFITI

SIGNAGE

- SHOULD BE FREE OF GRAFFITI
- SHOULD BE VISIBLE AND LEGIBLE
- SHOULD BE PROPERLY SECURED
- SHOULD BE LOCATED SO AS NOT TO PRESENT A HAZARD TO PARK VISITORS
- SHOULD MEET ALL TRAFFIC AND PARK STANDARDS WHERE APPLICABLE

WASTE CONTAINERS

- SHOULD BE CLEAN AND FREE OF GRAFFITI
- PLACEMENT DOES NOT IMPEDE TRAFFIC OR PRESENT HAZARDS
- ARE FUNCTIONAL INCLUDING LIDS AND LINERS WHERE APPLICABLE
- HAVE NO PROTRUDING HARDWARE

Renewal/Replacement
Infrastructure Sales Tax Initiative

ATTACHMENT 6 - AQUATIC FACILITY MAINTENANCE/ INSPECTION/EVALUATION

Palm Beach County Parks and Recreation Department
Aquatics Division

AQUATIC FACILITY MAINTENANCE/INSPECTION/EVALUATION PROCESS

- Facilities and equipment are inspected on a regular schedule and repairs made as noted on the inspections.

OCEAN RESCUE LIFEGUARD TOWERS:

- Inspected daily (Attachment 1). Repairs are made by Ocean Rescue Staff, Parks Division Staff or an outside vendor depending on the nature of the repair.
- Lightning protection is inspected and repaired annually by a vendor.

POOLS AND WATERPARKS:

- Pools and waterparks are regulated by Chapters 64E-9 of the Florida Administrative Code and Chapters 386 and 514 of the Florida Statutes. The State of Florida Health Department makes routine inspections a minimum of twice annually. (Attachment 2)
- Daily Inspections are made by facility staff and reported to the Manager on duty (Attachment 3)
- Monthly Inspections are made at the pools (Attachment 4)

MAINTENANCE MECHANICS: Pool and Waterpark mechanical systems and chemicals are maintained by a team consisting of a Crew Chief and 3 General Maintenance Mechanics who are all Aquatic Facility Operator Certified:

- Daily and weekly tasks are mandated (Attachment 5)
- Broken tile and minor deck repairs are made as needed when reported by the Manager.
- Annual Inspections are made each September to determine the major maintenance needs for the off/slower season. Some items are handled in house and others by vendors. (Attachment 6 – sample from previous year)

WATERPARKS - ADDITIONAL REGULATIONS: The waterparks 4-story slides and river rides are regulated by the Florida Department of Agriculture and Consumer Services, Bureau of Fair Rides.

- An Affidavit of Compliance and Nondestructive testing must be completed by an engineer on an annual basis and sent to the State.
- The state reviews the affidavit and inspects the two amenities prior to issuing an operational license for the season. A second inspection is conducted if the waterpark will be operating past Labor Day. (Attachment 7 contains a sample of the affidavit.)

Attachment 1

PALM BEACH COUNTY OCEAN RESCUE CHECKLIST

LOCATION: _____ TOWER: _____ DAY / DATE: _____

TRAUMA BAG

	OK	NEED
OXYGEN PRESSURE		
SPARE OXYGEN (1ST/15TH)		
BVM ADULT		
BVM CHILD		
NRBM ADULT		
NRBM CHILD		
NASAL CANNULA (2)		
SUCTION KIT		
ORAL AIRWAYS		
NASAL AIRWAYS		
NASAL LUBRICANT		
BP CUFF		
STETHOSCOPE		
SCISSORS		

TRAUMA BAG

	OK	NEED
B.S.I. KIT		
GLOVES (10 PAIRS)		
BAND-AIDS (25)		
ICE PACKS (2)		
HEAT PACKS (2)		
KLING (2)		
NON-STERILE 4X4'S		
STERILE 4X4'S (10)		
TAPE (2)		
STERILE 5"X9" (5)		
TRAUMA PADS (2)		
BLANKET		
PEROXIDE		
STERILE WATER		
MICRO SHIELD		
AED DAILY CHECK		

FIRST AID BOX

	OK	NEED
BAND-AIDS (50)		
GLOVES (10 PAIRS)		
KLING (4)		
NON-STERILE 4X4'S		
PEROXIDE		
SOAP		
STERILE 4X4'S (10)		
STERILE WATER		
TAPE (2)		
SCISSORS		

TOOL BOX

CRESANT WRENCH		
HAMMER		
PLIERS		
VISE GRIPS		
SCREWDRIVER		

TOWER

	OK	NEED
RESCUE CAN (1)		
RESCUE TUBES (2)		
RESCUE BOARD		
BACKBOARD		
C-SPINE KIT		
INCIDENT REPORTS		
AIR HORN		
SPARE AIR HORN		
BINOCULARS		
POCKET MASK		
VINEGAR		
MASK & SNORKEL		
SWIM FINS		
SEARCH & RECOVERY LINE		

TOWER MAINTENANCE

	OK	N/A/ REPAIR/NEED
LADDER		
EAST SHUTER/HINGES		
NORTH SHUTTER/HINGES		
WEST SHUTTER/HINGES		
SOUTH SHUTTER/HINGES		
DOOR SHUTTER/HINGES		
TOWER DOOR LOCK		
50K LOCKS		
EAST WINDOW		
NORTH WINDOW		
WEST WINDOW		
SOUTH WINDOW		
DOOR WINDOW		
OUTSIDE DECK		
INSIDE DECK		
EQUIPMENT BOX/HINGES		
ROOF		
FLAGPOLE		
FLAGPOLE LINE/CLIPS		
PAINT/STAIN		
EAST RAILING		
NORTH RAILING		
WEST RAILING		
SOUTH RAILING		
LIGHTNING PROTECTION		

ACTIVITY STATS

BEACH ATTENDANCE	
YOUTH ATTENDANCE	
PREVENTATIVE ACTIONS	
MINOR FIRST AIDS	
MAJOR MEDICAL AIDS	
RIPCURRENT RESCUES	
SWIFTWATER RESCUES	
BATHERS ASSISTED	
BATHERS RESCUED OTHER	
INLET USAGE	
BOAT RESCUES	
# OF BOAT PASSENGERS	
BOAT ASSISTS	
# OF PASSENGERS	
UNGUARDED DROWNINGS	
GUARDED DROWNINGS	
LOST & FOUND PERSONS	
PUBLIC SAFETY LECTURES	
NUMBER OF STUDENTS	
ENFORCEMENT CALLS	
HAZARD CLOSINGS	

WEATHER CONDITIONS

HIGH TIDE: _____

LOW TIDE: _____

	AM	PM
FLAG		
SKIES:		
WIND:		
TEMP:		
SURF:		
RIPS:		
CURRENT:		

WATER CLARITY

GOOD		
FAIR		
POOR		

SEA PESTS

DOCUMENT AS MINOR MEDICAL

MOW _____

JELLYFISH _____

SEA LICE _____

CHECKLIST FILLED OUT BY: _____

COMMENTS: _____

STAFF: 1 2 3 4

WATER PARKS AND POOLS

Daily Maintenance Required of all Maintenance Mechanics

- Clean all strainer baskets as needed.
- Check all filters for leaks. Check gauges to see whether or not backwash is needed. If backwash is needed then do so. Repair any leaks to filters if needed.
- Fill all pulsar units at each station. Check for any air leaks on hoses on all pulsar units. Make sure all feeders are being fed. Repair if needed.
- Check all water levels at the waterparks and pools. Adjust auto fill as needed to fill pool. If pool is over flowing, mechanic must drain unnecessary water.
- Check all acid containers and fill as needed.
- Take chemical read, record levels.
- Tell Crew Chief when chemicals need to be ordered.
- Check all valves, and make sure they're in the right position. Inspect for leaks, and repair if found.
- Check surge tanks for leaks, and that valves are in the right position. Repair leaks, and put valves in correct position.
- Check chemical controllers to be sure it is operating correctly. Also check all reads from chemical controllers. Make adjustments as needed.
- Check stenner feeders for correct operation. Repair if needed.
- Walk the park and check for any allege growth. Also check for anything that is unsafe.
- Check water slides, ladders concrete deck for safety. Report to Crew Chief if anything is unsafe. Make repair or block off.
- Accept chemical deliveries, and put into storage.
- Empty all trash at each filter station, at least once a week.
- Check pool vacuum equipment to be sure it is operating correctly. Repair if needed and pressure cleaners.
- All chemicals must be put away and locked up.
- Clean pulsar units once a week; replace any parts as needed.
- Check all flow meters for correct operation. Repair or replace if needed.
- When fecal accidents happen, you must Call Crew Chief.
- Clean probes once a month
- Record on log sheets when you backwash, clean probes, add chemicals and etc::
- Clean up your facility, nothing left in the back of you pools. Throw garbage away.

(see reverse)

WATER PARKS AND POOLS

Required Weekly Work Performed by all Maintenance Mechanics

- Inspect concrete sidewalks and repair as needed
- Inspect pressure cleaners for proper operation and transport for service as needed. Must be loaded on truck if transported for repair.
- Replace tarps on filters.
- Repair hammer heads (5) and vacuums
- Repair sub-pumps to make sure they're working correctly
- Replace tile when needed
- Replace main drain covers when needed
- Perform general clean up
- Install water lines as needed
- Install fun umbrellas when needed
- Ensure proper supplies on hand for hurricane preparation
- Repair umbrellas
- Clean Pulsars units
- Install all types of chemical feed lines
- Make repairs to any filtration and pvc piping as needed

Renewal/Replacement
Infrastructure Sales Tax Initiative

ATTACHMENT 7 - AQUATIC FACILITIES REPAIR AND REPLACEMENT

AQUATIC FACILITY REPAIR AND REPLACEMENT

(Safety Concern) - Aging pool facilities require ongoing capital maintenance of pump/filtration systems, decking and surfacing, drains, coping, leaks and other issues cited by Health Department. Numerous water park apparatuses are non-functional or aging and require replacement. Adequate capital funding is not currently available to address these increasing capital maintenance issues that could result in facility closure, loss of swim lessons, drowning prevention programs and decreased revenue.

Safety or LOS?	District	Park Location	Type	Amount	Cuts	Expected Life Cycle	Current Age	Additional Information
S	2	Lake Lytal Aquatic Center	Replace Public Aquatic Facility	$6,000,000		20	40	Current facility has ongoing large maintenance issues due to age. Pool opened in 1975 and continuous capital repairs cost more in long term than new facility. Health Dept. concerns are being addressed but ongoing issues. If we no longer have money to repair and pool drops below acceptable Health Dept. standards, pool will be closed for public safety. Old gang style locker rooms receive many public complaints. Overall structural integrity of facility may be compromised and should be evaluated.
S	7	Aqua Crest Aquatic Complex	Aquatic Complex Major Renovation and Reconstruction	$6,000,000		20	37	Public pool facility in need of overhaul (built in 1978). Renovation will include pool deck replacement, filter system replacement, baby pool and playground replacement (playground recently was removed completely for safety reasons) with redesigned family friendly water feature, refurbished swim team rooms and adding moveable bulkhead, geothermal heating/cooling system and shade structures. Baby pool is currently running with special Health Dept. permission. Deck is sinking and must be shored up and replaced. Structural integrity of surge pits and filtration system is concerning. If filtration is compromised pool will be closed.
S	1	North County Aquatic Complex	Aquatic Facility Renovation	$1,800,000		20	22	Public aquatic facility overdue for large scale capital repair and renovation - renovations would include restroom/locker-room renovation, resurfacing and coping repairs, baby pool replacement with water feature and shade structures. We receive many public complaints about the structural design of and capital condition of the restrooms.
S	3	Therapeutic Recreation Complex - Gleneagle Aquatic Center (formerly Mary Prince Pool)	Pool Resurfacing	$64,500		20	25+	Pool is currently leaking. Trying to patch latest leak but there are ongoing issues, pitting, cracking and high utility bills; resurfacing due. Special Olympics training facility.
S	3	Santaluces Pool	Aquatic Facility Renovation	$850,000		20	28	Public pool in need of renovation/preventative capital maintenance to ensure continued public safety and compliance with Health Dept. standards - Resurface pool and replace coping, remodel restrooms and replace baby pool and playground with zero depth water playground. Pool will be closed by Health Dept. if not resurfaced.

Renewal/Replacement
Infrastructure Sales Tax Initiative

ATTACHMENT 8 - PUBLIC BUILDING/RESTROOM RE-PLACEMENT

PUBLIC BUILDING / RESTROOM REPLACEMENT

(Safety Concern) - Numerous park restroom buildings are showing signs of deterioration with cracking concrete walls and foundations, roof leaks, plumbing failures and worn stained fixtures. Clean/functional restrooms are required to ensure adequate sanitary conditions are being maintained.

Safety or LOS?	District	Park Location	Type	Amount	Cuts	Expected Life Cycle	Current Age	Additional Information
S	7	Kreusler Park	Restroom Replacement	$200,000		30	36	This partial funding is necessary to complete the replacement project. Some capital funding has been allocated but it is not enough to complete. This aging oceanfront park restroom is heavily utilized and has no lifeguard room for staff to get safely out of the elements (built in 1979).
S	Ctwde	Ocean Rescue	Refurbish wooden guard towers	$100,000		10	8 - 20	Several existing wooden Ocean Rescue lifeguard towers are in need of repair/renovation in order to continue provision of this lifesaving service from an acceptable elevation. These towers are exposed to extreme weather conditions on the beach.
S	4	Ocean Inlet Park	Park and Marina Improvements	$5,000,000			28	Structural issues are causing marina piles to crack; seawall is structurally compromised; existing building is being undermined. The septic system/drain field is currently failing. In addition, patron utilization of this park exceeds and is not compliant with the older park design. Redesign will allow for better parking situation to help with enforcement issues and improve pedestrian safety. Replacement building will house Ocean Rescue, PBSO, public restrooms and caretaker's residence for 24 hr. fishing park/marina.
S	1	West Jupiter Park & Recreation Center	Restroom Replacement w/ Storage	$250,000		30	35	Outdoor public single stall restrooms in very bad repair (built in the early 1980s). Also there is currently no storage for needed sanitary supplies.
S	6	Canal Point	Restroom Replacement	$270,000		30	45	Public restroom associated with playground and outdoor athletic facilities in need of replacement. Very old restroom (1970s).
S	6	Triangle Park	Restroom Replacement	$270,000		30	38	Old public restroom at this park in need of replacement (more than 38 years old).
S	1	Juno Park	Restroom Replacement	$270,000		30	38	Old public restroom at this park in need of replacement (more than 38 years old).
S	6	John Stretch	Restroom Replacement	$270,000		30	38	Old pavilion/public restroom at this park in need of replacement (more than 38 years old).

Renewal/Replacement
Infrastructure Sales Tax Initiative

ATTACHMENT 9 - BOARDWALKS, PIERS, DOCKS, PEDESTRIAN BRIDGES MAINTENANCE CHECKLIST

Palm Beach County Parks and Recreation Department
Park Maintenance Division

Boardwalks, Piers, Docks, Pedestrian Bridges
Maintenance Checklist

The following are some of the points that will be checked during each inspection/maintenance tour.

- Check structural integrity. Check all wood or metal connections to insure they are secure (i.e.; welds, metal straps, metal plates, lag bolts, thru bolts, etc.) to resist movement that would tend to dismantle structure.

- Check framing, pilings, structure supports, joist and stringer to insure they are structurally sound. Lumber should be free of splits, decay or damages that would tend to dismantle structure.

- Check cleats, ladders, bumper guards, fenders to insure they are securely hinged or fastened. Cleats, ladders, bumper guards, fenders shall be functional and in a state of good repair.

- Check Ecograte™ / Fibergrates panels to insure they are secure. Ecograte™ / Fibergrates walkways should be free of splits, cracks or damages that would tend to dismantle structure. Clip fasteners must be securely fastened.

- Check piling caps and pile shield system. Caps and shields shall be in a state of good repair. Caps and shields should be free of splits, cracks or damages.

- Check floating dock system. Floatation cubes shall be secure to structure and maintain adequate stability and safe dock. Floatation cubes shall not be punctured or waterlogged. Cables, pile rollers, pile roller pads, pins shall be in a state of good repair.

- Check gangway ramps. Guardrails, pivoted hinge pins and ramps shall be secure to structure and maintain stability and safe footing.

- Check handrails to insure they are structurally sound. Handrails shall be maintained in a state of good repair and free of splinters. Nails and screws shall be recessed or flush with the surface. Where handrail sections join they must be securely hinged or fastened.

- Check condition of all walkways to insure they are structurally sound. Lumber should be free of splits, decay, protruding nails or screws and slick spot. Walkways shall be free from excessive spring, deflection or lateral movement. If metal, no badly rusted areas that might fail within one year. If coated, shall be maintained in a state of good repair and free of cracks, flaking or bubbling.
  - Deck boards shall be maintained in a state of good repair and free of splinters.
  - Planking should lay close together (gap no more than 3/8") and properly braced.
  - Nails and screws shall be recessed or flush with the surface.
  - Planks shall be free of algae/mold formation. Remove utilizing chemical/mechanical methods.

- Check electrical system. All outdoor switches, lights, conduits, panel boxes shall be maintained in a state of good repair and securely anchored. Outdoor switches, lights and panel boxes shall be in waterproof enclosures.

- Check plumbing system. All pipes, straps, mounting clamps and clips shall be maintained in a state of good repair and securely anchored. Water spigots/shot off valve shall be tested for functionally and proper operation.

- Check fish cleaning tables for structural integrity. Table shall be maintained in a state of good repair and securely anchored.

INSTRUCTIONS: Entries must be made in all blanks!!!

If area is approved, enter ✓

If problem/defective area discovered, enter Ø (describe in detail problem/defective area)

Not applicable, enter **N/A**

Describe work performed, location, materials used, and parts/equipment/action needed. If none, enter NONE.

Palm Beach County Parks and Recreation Department
Park Maintenance Division

ANNUAL BOARDWALKS, PIERS, DOCKS, PEDESTRIAN BRIDGES INSPECTION / SURVEY

Safety Inspection performed by Skilled Trades Personnel

PARK: _____

Wood/Metal Connections _____ Framing _____ Pilings/Structural Support _____

Joist or Stringers _____ Handrails _____ Deck boards/planks _____

Lumber _____ Metal _____ Nails/Screws _____ Algae/Mold formation _____

Coating _____ Cleats, Ladders, Bumper Guards, Fenders _____ Piling Caps _____

Piling Shield System _____ Floating Dock Cables, Pile Roller Assembly, Pile Roller Pads, Pins and fasteners _____ Floatation Cubes _____ Gangway Ramps _____

Plumbing _____ Fish Cleaning Tables _____

Electrical conduits, lights, panel boxes, etc. _____

COMMENTS:

Comment section can be used to describe deficiencies or problems. Must be detailed.

_____

_____

_____

_____

_____

_____

Work performed on location _____

_____

_____

_____

_____

Palm Beach County Parks and Recreation Department
Park Operations Division

ANNUAL BOARDWALKS, PIERS, DOCKS, PEDESTRIAN BRIDGES INSPECTION / SURVEY

Safety Inspection performed by Skilled Trades Personnel

PARK: : _____

OVERALL CONDITION:
(Rate on a scale of 1-5 with 1 representing the poorest condition) _____

NOTE: ***If an item is found to be unsafe or in a condition that warrants being taken out of service notify the Skilled Trades Supervisor and the District Manager immediately. Inform the Parks Dispatcher of any items that has been temporary removed from public service. Personnel who are conducting PM service inspections are to compile a list of materials needed to perform repairs. If possible photographs are to be taken of anything involving repairs other than routine maintenance.***

_____ _____
Name of Person Completing Form (Please Print) Date Safety Check Made

IMPORTANT: **PLEASE RETURN THIS FORM TO YOUR SUPERVISOR UPON COMPLETION.**

SUPERVISOR'S REVIEW:

Maintenance Performance _____ ***%***

_____ _____
Name of Person Reviewing Form Date of review

PARTS/EQUIPMENT/ACTION NEEDED (Estimated time before corrective action can be completed)

_____

_____

_____

_____

_____

_____

Renewal/Replacement
Infrastructure Sales Tax Initiative

ATTACHMENT 10 - BRIAN RHEAULT'S RESUME

RELEVANT EXPERIENCE

Jupiter Riverwalk Lagoon Bridge, Palm Beach County, Town of Jupiter, Project Manager. This project included design phase services and construction phase services for the 776-foot-long walkway along the Intracoastal Waterway in Jupiter. A set of construction documents and specifications for the structural components of the bridge were prepared for the Town. The bridge was designed utilizing prestressed piles with a precast superstructure. The design services for this project also included a tie-in to the existing sidewalk and the existing Riverwalk bridge. Construction phase services performed on this project included: review of all shop drawings, site visits, attendance at progress meetings and a final inspection.

Snook Island Boardwalk and Docks, Palm Beach County, City of Lake Worth, Project Manager. This project included the structural design of floating docks, 200 linear foot of seawall, an "L" shaped, 6-foot-wide, fishing pier, and a boardwalk with a gazebo. WGI provided the County with specifications for the new floating dock, and calculations and shop drawing reviews during the construction phase.

Juno Dunes Natural Area, Palm Beach County, Palm Beach County Environmental Resource Management, Project Manager. Brian and his team completed the structural design of of a boardwalk and observation tower in the Juno Dunes Natural area for Palm Beach County. The design of the boardwalk consisted of an 8-foot-wide by 225-foot-long wooden boardwalk with prestressed concrete piles. The project also included the design of a 20 foot by 20 foot covered observation tower with wood framing and 14 foot prestressed concrete piles.

670 Island Drive Seawall, Palm Beach County, Tim Givens Building and Remodeling, Project Manager. This project included the design and construction phase services for the residential seawall at 670 Island Drive; which consisted of a 115-foot-long sheet pile wall with concrete cap, 349-foot pile cap extension with concrete piles and concrete cap and a concrete stem wall the length of the seawall on top of the pile cap.

Village of Wellington Boardwalk, Palm Beach County, Village of Wellington, Project Manager. This project included design phase and construction phase services for the wood framed boardwalk. The boardwalk was designed for pedestrian and small vehicular traffic. It was constructed utilizing pressure treated wood to prevent rot and the effects of weathering.

Tequesta Drive Bridge, Palm Beach County, Village of Tequesta, Project Manager. This project included the design of a multi-span bridge with decorative railings and arched spandrel panels to increase vertical clearance for boat traffic. The bridge approach incorporates tiered retaining walls providing areas for planting.

Riverbend Park Pedestrian Bridge, Palm Beach County, Project Manager. This project consists of the design of three pedestrian bridges for Palm Beach County Park Facility. The bridges were constructed of timber with decorative wood retaining walls. Each bridge is approximately 22-feet-long by 30 feet wide. They were aesthetically designed to enhance the pedestrian trails throughout the park.

Loxahatchee Slough Pedestrian Bridge, Jupiter, Project Manager. This project consisted of the structural design of the prefabricated steel framed pedestrian bridge on cast-in-place end bents with prestressed piles.

George Bush Boulevard Bridge Over the Intracoastal Waterway, Palm Beach County, Palm Beach County Roadway Production, Project Manager. WGI provided engineering services, maintenance of traffic, cost estimates and pre-bid meeting assistance. In addition to concrete restoration and repair, the project included the replacement of the existing intermediate pile bent located between the concrete approach span and the flanking span, as well as a new pile supported generator foundation pad. The design included a temporary support system to allow the superstructure to remain in place while the foundation system was replaced. In addition to the foundations, the existing traffic barrier and support system on the flanking spans were replaced as well as the traffic barrier on the approach spans and main piers. The plans also identified concrete restoration required on the bridge and the addition of concrete approach slabs approaching the bridge. Construction phase services were provided for the generator pad and included the review of helical pile shop drawings and installation plan, monitoring of the installation of four helical piles, review of the concrete design mix specifications and a site visit prior to casting the slab.

Brian **Rheault**, PE

QA/QC Manager

PROFESSIONAL PROFILE:

Brian has over three decades of experience in structural engineering in the South Florida area. He has been responsible for the design, review, inspection, coordination and management of construction projects. Brian has been either a Design Engineer or a Project Manager for over 100 state and county bridges. He has also provided engineering services in Martin County, Palm Beach County, Indian River County, Lee County, Duval County and Okeechobee County. Brian oversees the design and inspection of low-rise office buildings, pump stations, shopping centers and civic structures.

REGISTRATIONS:

Registered Professional Engineer: Florida #38797; Michigan #35925; Wisconsin #26940

CERTIFICATIONS:

Special Inspector

EDUCATION:

Bachelor of Science / Civil Engineering - Michigan Technological University, 1982

AFFILIATIONS:

Florida Engineering Society

National Society of Professional Engineers

American Society of Civil Engineers

Florida Institute of Consulting Engineers

YEARS OF EXPERIENCE:

32

WGI

Tequesta Drive Bridge, Palm Beach County, Village of Tequesta, Project Manager. This project included the design of a multi-span bridge with decorative railings and arched spandrel panels to increase vertical clearance for boat traffic. The bridge approach incorporates tiered retaining walls providing areas for planting.

Flagler Downtown Seawall, Palm Beach County, City of West Palm Beach, Project Manager. This project included the design of a 2,900 linear foot seawall replacement along the Downtown West Palm Beach Sunfest route.

Chihuly Sculpture Enclosure, Palm Beach County, Ms. Reisman(Residential Owner), Project Manager. WGI provided the structural engineering services and construction phase services for the Chihuly sculpture support structure. In addition, a removable hurricane enclosure was designed to protect the sculpture from hurricane force winds and missile impact. The removable shelter was designed to be assembled using hand labor without the use of large cranes and other equipment. The removable shelter was designed utilizing aluminum products and hurricane / impact resistant wall panels and roof plates.

Southern Boulevard Catwalk Repair, Palm Beach County, Village of Royal Palm Beach, Project Manager. Structural Engineering Services were provided for the Southern Boulevard Weir Rehab. Brian and his team modified existing plans to include adding slope protection around the structure and concrete repair details for a subaqueous crack in the east wall of the structure. Construction phase services were also provided; which included shop drawing reviews, site visits, responses to RFI's and a final certification.

Coral Sky Amphitheater, Palm Beach County, Clearspan Structures, LLC., Project Manager. WGI provided structural engineering services for the repair and re-coating of various structural steel components of the amphitheater. Inspection of the various areas of the amphitheater was provided and specific repair details were prepared for each connection including all plates and fasteners that would be utilized to repair the connections. In addition to the details, protocols for recoating the connections and adjacent members were specified.

Guanabanas Restaurant Docks, Palm Beach County, Guanabanas Restaurant, Project Manager. WGI observed issues developing on the Guanabanas restaurant property while completing a different project for the Town of Jupiter along the Jupiter River adjacent to the Guanabanas property. WGI proposed alternate materials and a new dock layout to fix the issues. Design, permitting and construction phase services were then completed to give Guanabanas new mariginal, and finger timber docks and strengthen the existing seawall with riprap placement and a composite toe wall.

Phil Foster Park, Palm Beach County, Palm Beach County Parks and Recreation, Project Manager. WGI was responsible for structural engineering services and the preparation of a topographic and hydrographic survey for the relocation of the existing floating docks from the western dock to the eastern dock on the north side of Phil Foster Park. Following office research, calculations, and verifications, field crews located existing docks, seawalls, pilings and other necessary data as directed by the client. The hydrographic survey was performed to map the underwater surface around the existing dock area as well as the proposed dock expansion area. The existing dinghy dock was removed from the western dock and the 12x80 dock was relocated and installed in a north-south orientation on the existing eastern dock. The 12x80 dock was retrofitted with new pile guides on the western side of the dock. The existing aluminum gang was also retrofitted for re-use on the eastern dock. WGI provided the County with the site surveys and sketches and legal for the submerged land lease, environmental permitting and structural design modifications and construction administration.

Reverse Osmosis Plant, Palm Beach County, City of Lake Worth, Project Manager. This project consisted of the design of a new reverse osmosis plant with cast–in-place columns, 12" masonry walls and prestressed joints.

Murphy Road Bridge over L-23, Martin County, Martin County Engineering Department, Project Manager. WGI completed design, utility coordination relocation for overhead lines and conduits in the bridge, utility location, permitting and construction phase services for this project. A bridge hydraulics study was required due to the modified bent spacing and the canal bank slope protection. WGI also designed a maintenance of traffic plan to maintain one 10'-0 lane of traffic at all times during construction. Foundations were placed between the existing bent to allow the 12" water main to remain in service and portions of the existing bridge to be utilized to maintain traffic in Phase I. The new bridge was designed to meet current AASHTO and FDOT criteria loads including all Florida Legal Loads and Permit Vehicle loading. Prestressed concrete piling, concrete pile caps and prestressed concrete flat slab deck units were utilized for the project. Sidewalk and traffic barriers met the traffic safety and ADA standards and safe sight distances were utilized. Sidewalks were provided for both sides of the bridge. Permits were obtained from the U.S. Army Corps of Engineers, U.S. Coast Guard, Department of Environmental Protection and South Florida Water Management District.

Loxahatchee River Road Bridge over the C-18 Canal, Palm Beach County Engineering Department, Project Manager. This project consists of the design and construction of a multi-span concrete bridge which includes two travel lanes and a sidewalk on each side.

South Cove Boardwalk, Palm Beach County, Palm Beach County Environmental Resource Management, Project Manager. The structural analysis, design and construction phases services were completed for the new lagoon fishing and sightseeing boardwalk on West Palm Beach's Flagler waterfront. The boardwalk was constructed utilizing concrete piles and pile caps with a wood deck walking surface and a cable railing system.

RENEWAL/REPLACEMENT PROGRAM ASSESSMENT STUDY
STRUCTURAL ELEMENTS

December, 2015

Brian C. Rheault, PE // Project Manager
brian.rheault@wantmangroup.com

WGI™

1402 Royal Palm Beach Blvd., Bldg 200, Royal Palm Beach FL 33411
t: 561.686.3660 f: 561.791.1995
www.**wantmangroup**.com