STRUCTURE NO. 04213

SOUTH PARK AVENUE
over
MILL RIVER
EASTON

12 MONTH

Indepth Inspection
on
4/9/2014

Inspected by Team 7
for Area 7

TEAM:	Forwarded to TE3 Parviz Mirzaee		Date	5/8/2014
TE3:	Reviewed by TE3 PARVIZ MIRZAEE		Date	6/6/2014
	BMM Required	NO		
	Town Bridge	YES		
	Rating <= 5 (Items 58,59,60 or 62)	YES		
	Rating Change 2 or More Values	NO		
	Forwarded to Supervisor TED. LAPIERRE		Date	6/27/2014
	Forwarded to "To Be Copied Drawer" ☐		Date	
	Date BRI-19 Entered	6/25/2014		
SUPERVISOR:	Reviewed by Supervisor	TDL	Date	7/30/14
SUPPORT:	Date Copies Made 08/15/14	BMM No Town Letter		
	Scanned By: DAS	Date Scanned 08/15/14	PDF Box No	

NBI: Yes

NHS: No

State of Connecticut
Department of Transportation
Bureau of Engineering and Construction

Inspection Report Transmittal Form
Form BRI-27, Rev. 8/09

Structure No.	04213	**Town**	Easton
Inspection Date	4/9/2014	**Inspectors**	Team 7

TABLE OF CONTENTS

Loose Forms (not bound in report)

			Number of Sheets Enclosed
Maintenance Memo			
Flagging Memos			
PONTIS Element Data Collection Form			2
Plan Sheets	Already on File	☐	

Bound Report Pages

Title Cover Sheet		1
Table of Contents		1
Executive Summary		
Field Notes		7
Calculations:	Load Rating Evaluation	
	Quantities & Cost Estimate	
Photo Sheets		14
Photo Images		28

Forms

BRI-18 Bridge Inspection Report Form	8
BRI-19 Highway Bridge Inventory Form	2
BRI-10 Concrete Deterioration Worksheet	1

Comments:

Bridge Number 04213

Inspected By: P. Sharron & J. Chavez

Sufficiency Rating 21.31

Previous Inspection Date 4/16/2012

BS&E Received ☐ Data Entry By: PM

Copies Made ☐ Data Entry Date: 6/25/2014

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BRIDGE SAFETY & EVALUATION

STRUCTURE EVALUATION

SHEET 1 OF 34 (INSP. REPORT)

90) Inspection Date 04/09/14 Inspection Team 7
91) Frequency 24 Class: 01
Indepth Insp 3/10/2004 Deck Survey 04/09/14 1/1/1900 12:
Access 0 Flagman 0

CRITICAL FEATURE INSPECTIONS

	Type	Frequency	Team	Date
Fracture:				
Uwater:				
Special:			0	5/25/2011

RED FLAG ☐

IDENTIFICATION

Bridge Name
Town Name EASTON Town Code 23890
5) Inventory Route:
A) Record Type 1 D) Route Number 00000
B) Signing Prefix 5 City Street E) Directional Suffix 0 NA
C) Level of Service 0 None of the bel
6) Feature Intersected MILL RIVER
7) Facility Carried: SOUTH PARK AVENUE
9) Location 0.7 MI N OF ROUTE 15
11) Milepoint 1.64 Miles
16) Latitude 41deg 14 min 12.00 sec deg min sec
17) Longitude 73deg 15 min 6.00 sec deg min sec
98) Border Bridge:
A) State Code B) Percent Responsibility %
C) Border Town Name
99) Border Bridge Structure No

STRUCTURE TYPE AND MATERIAL

43) Structure Type, Main:
A) Material 1 Concrete B) Design Type 1 Slab
44) Structure Type, Approach:
A) Material 0 Other B) Design Type 0 Other
45) Number of Spans, Main Unit 1
46) Number of Approach Spans 0
107) Deck Structure Type 1 Concrete Cast-in-Place
108) Wearing Surface/Protective System:
A) Type of Wearing Surface 6 Bituminous
B) Type of Membrane 0 None
C) Type of Deck Protection 0 None

AGE AND SERVICE

27) Year Built 1946 106) Year Reconstructed
42) Type of Service:
A) On 1 Highway B) Under 5 WATERWAY
28) Number of Lanes:
A) On 2 B) Under
29) Average Daily Traffic 1900 003900 Half ADT?: No
109) Percent Truck 4% Town Map
30) Year of ADT 2010 2010
19) Bypass, Detour Length 2miles

GEOMETRIC DATA

48) Length of Max Span 28ft
49) Structure Length 30ft
50) Curb or Sidewalk Widths:
A) Left 0.0ft B) Right 0.0ft
51) Brg Rdwy width,curb-curb 22.4ft
52) Deck Width, Out-Out 24.2ft
32) Approach Roadway Width 20ft
33) Bridge Median 0 No Median
Deck Area 726 sqft
34) Skew Angle 34deg
35) Structure Flared 0
10)Inv. Rte. Min. Vert Clearance 99ft 99in
47) Log Inv. Rte. Total Horiz Clr.: 22.4ft
47) RLog Inv. Rte. Total Horiz. Clr.: ft
53) Min Vert Clearance Over Bridge 99ft 99in
54) Min Vert Under Clearance N Ref 0ft 0in Ref
55) Min Lat Under Clearance on Right N Ref 99.9ft Ref
56) Min Lat Under Clearance on Left 0.0ft

BRIDGE COMMENTS

STRUCTURE EVALUATION

SHEET 2 OF 2 FORM BRI-19 REV 10/00

SHEET 2 OF 34

Bridge Number	04213	NBIS Length	
Town Name	EASTON	Yes 30	
Facility Carried	SOUTH PARK AVENUE		
Feature Crossed	MILL RIVER		

Inspected By: P. Sharron & J. Chavez

CLASSIFICATION

12) NBIS Bridge Length	Yes	
04) Highway System	0	Off System
26) Functional Class	17	Urban Collector
00) Defense Highway	0	Route is not a STRAHNET Route
01) Parallel Structure	N	No parallel structure exists
02) Direction of Traffic	2	2-way traffic
03) Temporary Structure		
10) Designated National Network	0	Not on national network
20) Toll	3	On Free Road
21) Maintain	3	Town or Township Highway Agency
22) Owner	3	Town or Township Highway Agency
Report Class	L	LOCAL
37) Historical Significance	5	Bridge is not eligible for National Register

WATERWAY

DrainageBasinCode	7108	
38) Navigation Control	0	No navigation control on waterway
39) Navigation Vert Clr.		40) Navigation Horiz Clr.
116) Vert-Lift Brg Nav Min		
111) Pier Abutment Protection		

PROPOSED IMPROVEMENTS

35A) Type of Work Proposed		
35B) Work Done By		
36) Length of Struct. Improvement	ft	ft
34) Bridge Improvement Cost	$	
35) Roadway Improvement Cost	$	
36) Total Project Cost	$	
37) Year of Improvement Cost Est.		
114) Future ADT		115) Year Future ADT
List No.	Project No.	Advertised

POSTED SIGNS & UTILITIES

Other Posted Signs 1	0	Blank			
Other Posted Signs 2	0	Blank			
Actual P.L. Single Unit Truck	tons		Actual P.L. 4Axle Truck	tons	
Rec. P.L. Single Unit Truck	tons		Rec. P.L. 4Axle Truck	tons	
Actual P.L. Semi-TrailerTruck	tons		Actual P.L. 3S2 Truck	tons	
Rec. P.L. Semi-TrailerTruck	tons		Rec. P.L. 3S2 Truck	tons	
Rec. P.L. All Vehicles	tons		Actual P.L. All Vehicles	tons	
Posted Vert Clearance On Bridge	ft	in		ft	In
Posted Vert UnderClearance	ft	in		ft	In
Posted Speed Limit	25	mph			mph
Utility					
Utility	1	Gas			

LOAD RATING AND POSTING

31) Design Load	0	Evaluation Code	C	
63) Operating Rating Type	0	Year of Evaluation	2006	
64) Operating Rating	58.0	70) Bridge Posting	5	
65) Inventory Rating Type	0	41) Structure Status	A	
66) Inventory Rating	34.0	Open, no restriction		

CONDITION

	Rating	By
58) Deck	7	RS
59) Superstructure	4	RS
60) Substructure	6	RS
61) Channel & Chan. Protection	6	RS
62) Culverts	N	

APPRAISALS

	Rating	By
67) Structure Evaluation	4	PM
68) Deck Geometry	3	RS
69) Under Clear Vert & Horiz	N	
71) Waterway Adequacy	7	RS
72) Approach Rdwy Alignment	7	RS
113) Scour Critical	8	

Items 58 Thru 72 Checked By:

36) Traffic Safety Features:

A) Bridge Railings	0	
B) Transitions	0	
C) Approach Guardrail	0	
D) Approach Guardrail End	0	

OTHER FEATURES

Fence Required	No	Barrel Ladder	No	
Fence Present	No	Stand Pipes	No	
Fence Height	0.0 ft	Cat Walks	No	
Fence Type		Movable Inspection System	No	
Fence Material		Loose Concrete Checked?	Yes	
Fence Top Type				

INSPECTION COMMENTS

Proposed Next Indepth Insp Year	2014	2014
Senior	Parviz Mirzaee	
Supervisor	Theodore Lapierr	

REVIEWED BY: Tony Morgan Date 6/6/2014

Connecticut Department of Transportation

Bridge Inspection Report BRI-18

Bridge #: 04213 **Inspection Date: 4/9/2014**

Inspection Type:	Indepth	**Previous Inspection Date:**	4/16/2012	**Snooper Required:**	No
Inspection Performed By:	Team 7	**Feature Carried:**	SOUTH PARK AVENUE	**Snooper Used:**	No
Town:	EASTON	**Feature Intersected:**	MILL RIVER	**Year Built:**	1946
Location:	0.7 MI N OF ROUTE 15	**Main Design:**	Slab	**Year Rebuilt:**	-
Main Material:	Concrete				

Visits

Visit Date:	Temp:	Start Time:	End Time:
4/9/2014	50	9:45:00 AM	1:50:00 PM

Inspectors:

Inspector:	Task:
J. Chavez	Inspector
P. Sharron	Lead Inspector

DECK: INSPECTED SOUTH TO NORTH. **Overall Rating:** 7

	Rating	
OVERLAY:	7	Bituminous Concrete Wearing Surface with Macadam (stone) treatment. No known membrane - See photo # 12. Wearing surface shows (1) transverse crack along the north deck end of the structure. Sand along curblines. Wearing surface is delaminated full length by 4 feet wide along the west curbline and full length by 2 feet wide on the east side. Moderate sand accumulation along the curblines.
DECK-STR. CONDITION:	7	The overall deck is rating is based on the condition of the wearing surface, per BIM. See item 59 Superstructure.
CURBS: *	4	Curb/ Railbase - Sand cover, light honeycombing and light scaling. Southwest end shows a large surface spall approximately 2 feet long by 10 inches high by 4 inches deep exposing the end post base. Below the spall is some heavy scale from drainage run off. The east curb shows heavy to severe scaling along the curb face for the entire length.

		The northeast end shows approximately 14 linear feet of heavy to severe scale with exposed rusted rebar up to 6 inches deep. See photo # 5. The severe scale extends full width and full height of the exterior face. The fascia side of the east rail base also shows horizontal hairline cracks and hollow concrete. See attached sheets and photo # 6. Also see item 59 superstructure, east deck edge.
MEDIAN:	N	-
SIDEWALKS:	N	-
PARAPET:	N	-
RAILING:	5	3&1/2 inch diameter Pipe Rail and Posts. Random areas of blush rust. Scrape marks which exhibit moderate rust. Southwest end is slightly pushed back from past impact damage. Northwest end of the bridge rail is pushed back up to approximately 6 inches out of plumb due to impact damage. Two of the posts at the north end are lifted up to approximately 2" revealing the original steel posts beneath. See photos # 7 & 8 The base of the southwest end post is also exposed due to the spalled railbase. East rail has 2 out of 5 base plates exposed at the north end due to scale on the railbase.
PAINT:	N	-
FENCE:	N	-
DRAINS:	N	-
LIGHTING STANDARD:	N	-
UTILITIES TYPE/SIZE:	6	There is an 8 inch, wrapped gas pipe, along the westerly side of the structure. Minor collision damage at northwest corner of pipe from rail being pushed up against gas pipe.
CONSTR JOINTS:	N	-
EXPANSION JOINTS:	N	-

Connecticut Department of Transportation

Bridge Inspection Report BRI-18

Bridge #: 04213 **Inspection Date: 4/9/2014**

Inspection Type:	Indepth	**Previous Inspection Date:**	4/16/2012	**Snooper Required:**	No
Inspection Performed By:	Team 7	**Feature Carried:**	SOUTH PARK AVENUE	**Snooper Used:**	No
Town:	EASTON	**Feature Intersected:**	MILL RIVER	**Year Built:**	1946
Location:	0.7 MI N OF ROUTE 15	**Main Design:**	Slab	**Year Rebuilt:**	-
Main Material:	Concrete				

Visits

Visit Date:	Temp:	Start Time:	End Time:
4/9/2014	50	9:45:00 AM	1:50:00 PM

Inspectors:

Inspector:	Task:
J. Chavez	Inspector
P. Sharron	Lead Inspector

DECK: INSPECTED SOUTH TO NORTH. **Overall Rating:** 7

	Rating	
OVERLAY:	7	Bituminous Concrete Wearing Surface with Macadam (stone) treatment. No known membrane - See photo # 12. Wearing surface shows (1) transverse crack along the north deck end of the structure. Sand along curblines. Wearing surface is delaminated full length by 4 feet wide along the west curbline and full length by 2 feet wide on the east side. Moderate sand accumulation along the curblines.
DECK-STR. CONDITION:	7	The overall deck is rating is based on the condition of the wearing surface, per BIM. See item 59 Superstructure.
CURBS: *	4	Curb/ Railbase - Sand cover, light honeycombing and light scaling. Southwest end shows a large surface spall approximately 2 feet long by 10 inches high by 4 inches deep exposing the end post base. Below the spall is some heavy scale from drainage run off. The east curb shows heavy to severe scaling along the curb face for the entire length.

		The northeast end shows approximately 14 linear feet of heavy to severe scale with exposed rusted rebar up to 6 inches deep. See photo # 5. The severe scale extends full width and full height of the exterior face. The fascia side of the east rail base also shows horizontal hairline cracks and hollow concrete. See attached sheets and photo # 6. Also see item 59 superstructure, east deck edge.
MEDIAN:	N	-
SIDEWALKS:	N	-
PARAPET:	N	-
RAILING:	5	3&1/2 inch diameter Pipe Rail and Posts. Random areas of blush rust. Scrape marks which exhibit moderate rust. Southwest end is slightly pushed back from past impact damage. Northwest end of the bridge rail is pushed back up to approximately 6 inches out of plumb due to impact damage. Two of the posts at the north end are lifted up to approximately 2" revealing the original steel posts beneath. See photos # 7 & 8 The base of the southwest end post is also exposed due to the spalled railbase. East rail has 2 out of 5 base plates exposed at the north end due to scale on the railbase.
PAINT:	N	-
FENCE:	N	-
DRAINS:	N	-
LIGHTING STANDARD:	N	-
UTILITIES TYPE/SIZE:	6	There is an 8 inch, wrapped gas pipe, along the westerly side of the structure. Minor collision damage at northwest corner of pipe from rail being pushed up against gas pipe.
CONSTR JOINTS:	N	-
EXPANSION JOINTS:	N	-

59. SUPERSTRUCTURE: -

Overall Rating: 4

	Rating	
BEARING DEVICES:	N	-
STRINGERS:	N	-
GIRDERS:	4	R.C. Slab - The discolored slab soffit shows approximately 50.4% deteriorated with form panel lines, shrinkage with curing cracking, light honeycombing, light scaling, and rust stains from shallow chairs. Numerous areas of light hairline cracking with and without efflorecence, flaking concrete with light scaling, some areas showing light efflorescence seepage. Also noted are several short shallow exposed re-bars at random locations, with two localized areas of short stag candles, at mid-span, along the westerly, and easterly edges. The u-side midspan shows several short intermittant transverse and pattern hairline cracks located in the middle 2/3 of the span. This area is approximately 6 feet by 24 feet. The westerly deck edge at mid-span, shows a spall with exposed rebar approximately 11 feet long by 10 inches high by 6 inches deep. The spall extends under the slab up to 14 inches with and adjacent hollow area approximately 20 square feet. The northeast deck end shows severe scale with exposed rusted rebars approximately 10 feet long by full height of the railbase and the deck edge, (22 inches). The severe scale and punky concrete is approximately 8 inches deep exposing longitudinal and transverse rebar ends also. The severe scale also extends under the slab up to approximately 15 inches. See attached BRI-10, sketches and photos # 6,14,19-22.
FLOOR BEAMS:	N	-
TRUSSES-GENERAL:	N	-
TRUSSES-PORTALS:	N	-
TRUSSES-BRACING:	N	-
PAINT:	N	-
RUST:	N	-
MACHINERY MOV SPAN:	N	-
RIVETS & BOLTS:	N	-
WELDS - CRACKS:	N	-
TIMBER DECAY:	N	-
CONCRETE	4	Refer to the above descriptions.

CRACKING:		
COLLISION DAMAGE:	8	-
MEMBER ALIGNMENT:	N	-
DEFLECT. UNDER LOAD:	N	-
VIBRATION UNDER LOAD:	N	-
STAND PIPES:	N	-
BARREL LADDERS:	N	-

ARE BARREL LADDERS OSHA COMPLIANT? -

---

60. SUBSTRUCTURE: - **Overall Rating:** 6

	Rating	
ABUTMENTS-STEM:	6	Both abutment stems show form panel lines, shrinkage with curing cracking, light honeycombing, light scaling, latent cracking, and a band of light scaling along the waterline, up to 1.5 feet high. Both stems show large areas of moderate scaling, along the upper stems. The southwest end shows an area of severe scale at the waterline approximately 20 inches by 20 inches by up to 6 inches deep. See attached sketches.
ABUTMENTS-BACKWALL:	N	The backwalls are not visible.
ABUTMENTS-FOOTINGS:	7	Top of footings are exposed. The top of the south abutment footing is exposed approximately 3 feet long at the west end. The north abutment footing is exposed at the ends. West end is exposed approximately 8 feet long at the stem and 2 feet long in front of the northwest wingwall. The vertical face is exposed 2 inches high. The east end is exposed approximately 11 feet long and the vertical face is exposed up to aproximately 6 inches high.
ABUTMENTS-SETTLEMENT:	8	-
ABUTMENTS-WINGWALLS:	5	All wingwalls show form panel lines, shrinkage with curing cracking, light honeycombing, light scaling, and latent cracking. Southwest wingwall shows severe scale approximately 75 inches long by up to 28 inches high by up to 12 inches deep with protruding re-bars.
PIERS/BENTS-CAPS:	N	-
PIERS/BENTS-PILE BENT:	N	-
PIERS/BENTS-COLUMNS:	N	-
PIERS/BENTS-FOOTING:	N	-

PIERS/BENTS-SETTLMT:	N	-
EROSION-SCOUR:	7	Local scour has exposed the top of the footings at the southwest, northwest and northeast. See attached sheets.
CONCRETE CRACK-SPALL:	5	Refer to the above descriptions. See wingwalls.
STEEL CORROSION:	N	-
PAINT:	N	-
TIMBER DECAY:	N	-
COLLISION DAMAGE:	8	The substructure shows no collision damage.
DEBRIS:	N	-

---

61. CHANNEL & CHANNEL PROTECTION: -

Overall Rating: 6

	Rating	
CHANNEL SCOUR:	6	Local scour under the structure. The top of the abutment footings are exposed at the ends. See attached sketch. The channel depths up and downstream are approximately 1ft. to 1.5ft. deep. The channel depths under the structure are approximately 2 feet deep.
EMBANKMENT EROSION:	7	Minor erosion areas.
DEBRIS:	7	Some light timber debris is noted along the inlet embankments. Some brush overhanging at the southwest.
VEGETATION:	6	The southwesterly bank shows moderate encroachment, while the Northwesterly shows light encroachment. All banks are well vegetated, and overhang the channel.
CHANNEL CHANGE:	7	Freeboard this inspection was 6 feet. Datum located soffit of slab at the northwest.
FENDER SYSTEM:	N	-
SPUR, DIKES & JETTIES:	N	-
RIP RAP:	N	No rip-rap is present along the embankments. Native rocks and boulders scattered along the embankments.

---

62. CULVERTS & -

N

RETAINING WALL:		Overall Rating:	

65. APPROACH CONDITION	-	Overall Rating:	5

	Rating	
APPROACH SLAB:	N	-
RELIEF JOINTS:	N	-
APPROACH GUIDE RAIL:	N	No approach rail system. Structure marker paddle boards ends. (1) steel post at the northwest and southwest.
APPROACH PAVEMENT:	6	Macadamized overlay. (1) transverse crack at the north deck end. (1) depressed area at the southwest end approximately 18 inches by 12 inches by 1 inch deep.
APPROACH EMBANKMENT:	5	Erosion at the wingwalls. Runoff at the southwest has deteriorateed the cap of the wingwall. The free end has erosion approximately 5 feet by 4 feet by 3 feet deep. See photos # 9,10,24. Erosion at the end of the southeast wingwall approximately 6 feet by 4 feet by 2 feet deep from runoff. Erosion at the end of the northeast wingwall approximately 7 feet long by 1 foot wide by 1 foot deep, from runoff.

TRAFFIC SAFETY FEATURES

	Rating	
BRIDGE RAILINGS:	Last Inspection: 0 Current: 0	-
TRANSITIONS:	Last Inspection: 0 Current: 0	-
APPROACH GUARDRAILS:	Last Inspection: 0 Current: 0	-
APPR. GUARDRAIL ENDS:	Last Inspection: 0 Current: 0	-

PIERS/BENTS-SETTLMT:	N	-
EROSION-SCOUR:	7	Local scour has exposed the top of the footings at the southwest, northwest and northeast. See attached sheets.
CONCRETE CRACK-SPALL:	5	Refer to the above descriptions. See wingwalls.
STEEL CORROSION:	N	-
PAINT:	N	-
TIMBER DECAY:	N	-
COLLISION DAMAGE:	8	The substructure shows no collision damage.
DEBRIS:	N	-

---

61. CHANNEL & CHANNEL PROTECTION: -

Overall Rating: 6

	Rating	
CHANNEL SCOUR:	6	Local scour under the structure. The top of the abutment footings are exposed at the ends. See attached sketch. The channel depths up and downstream are approximately 1ft. to 1.5ft. deep. The channel depths under the structure are approximately 2 feet deep.
EMBANKMENT EROSION:	7	Minor erosion areas.
DEBRIS:	7	Some light timber debris is noted along the inlet embankments. Some brush overhanging at the southwest.
VEGETATION:	6	The southwesterly bank shows moderate encroachment, while the Northwesterly shows light encroachment. All banks are well vegetated, and overhang the channel.
CHANNEL CHANGE:	7	Freeboard this inspection was 6 feet. Datum located soffit of slab at the northwest.
FENDER SYSTEM:	N	-
SPUR, DIKES & JETTIES:	N	-
RIP RAP:	N	No rip-rap is present along the embankments. Native rocks and boulders scattered along the embankments.

---

62. CULVERTS & -

N

RETAINING WALL:		Overall Rating:	

65. APPROACH CONDITION	-	Overall Rating:	5

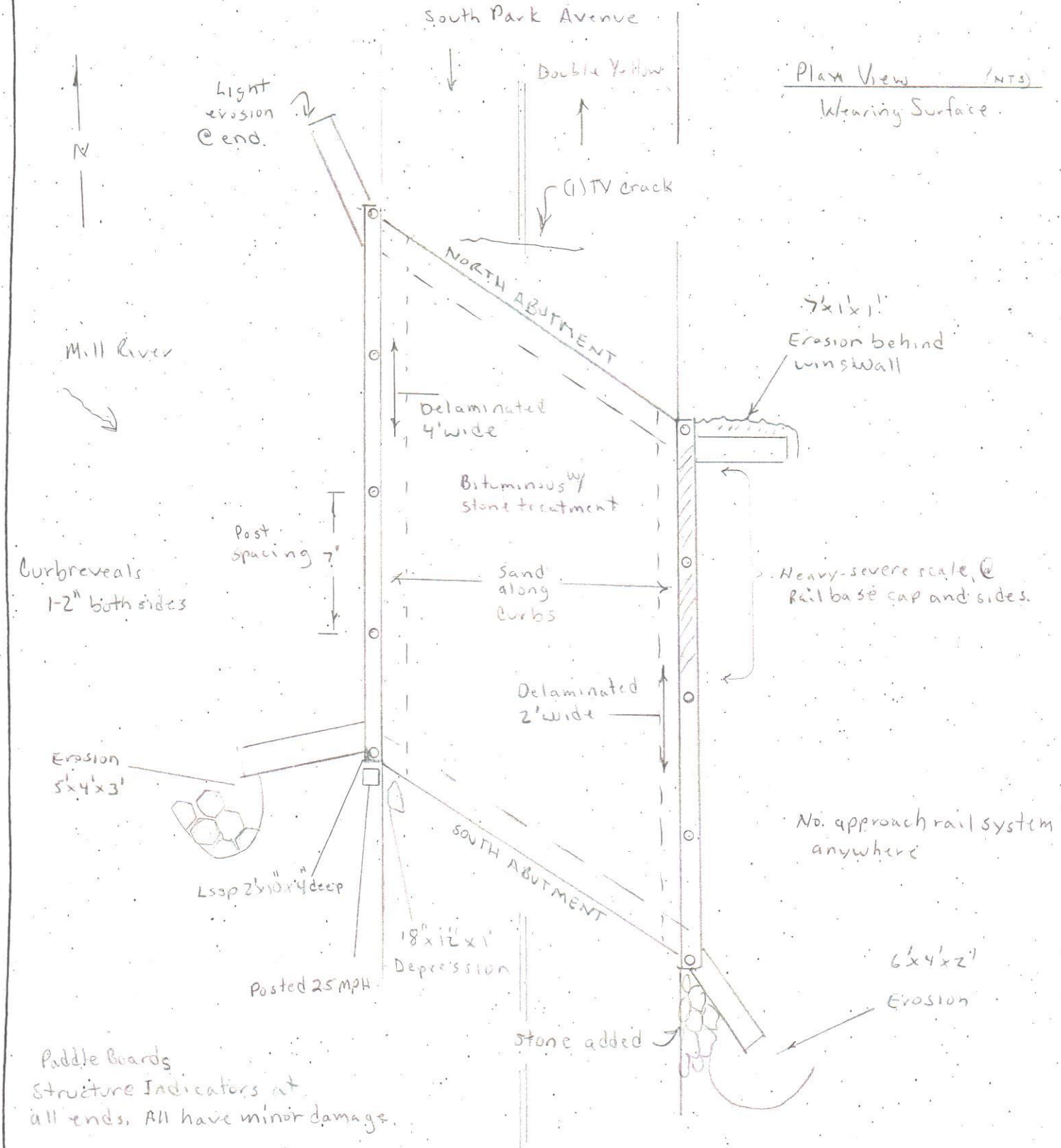
	Rating	
APPROACH SLAB:	N	-
RELIEF JOINTS:	N	-
APPROACH GUIDE RAIL:	N	No approach rail system. Structure marker paddle boards ends. (1) steel post at the northwest and southwest.
APPROACH PAVEMENT:	6	Macadamized overlay. (1) transverse crack at the north deck end. (1) depressed area at the southwest end approximately 18 inches by 12 inches by 1 inch deep.
APPROACH EMBANKMENT:	5	Erosion at the wingwalls. Runoff at the southwest has deteriorateed the cap of the wingwall. The free end has erosion approximately 5 feet by 4 feet by 3 feet deep. See photos # 9,10,24. Erosion at the end of the southeast wingwall approximately 6 feet by 4 feet by 2 feet deep from runoff. Erosion at the end of the northeast wingwall approximately 7 feet long by 1 foot wide by 1 foot deep, from runoff.

TRAFFIC SAFETY FEATURES

	Rating	
BRIDGE RAILINGS:	Last Inspection: 0 Current: 0	-
TRANSITIONS:	Last Inspection: 0 Current: 0	-
APPROACH GUARDRAILS:	Last Inspection: 0 Current: 0	-
APPR. GUARDRAIL ENDS:	Last Inspection: 0 Current: 0	-

FIELD NOTES	BRIDGE No. 04213	DATE. 4/9/14
	TEAM # 7	SHEET.

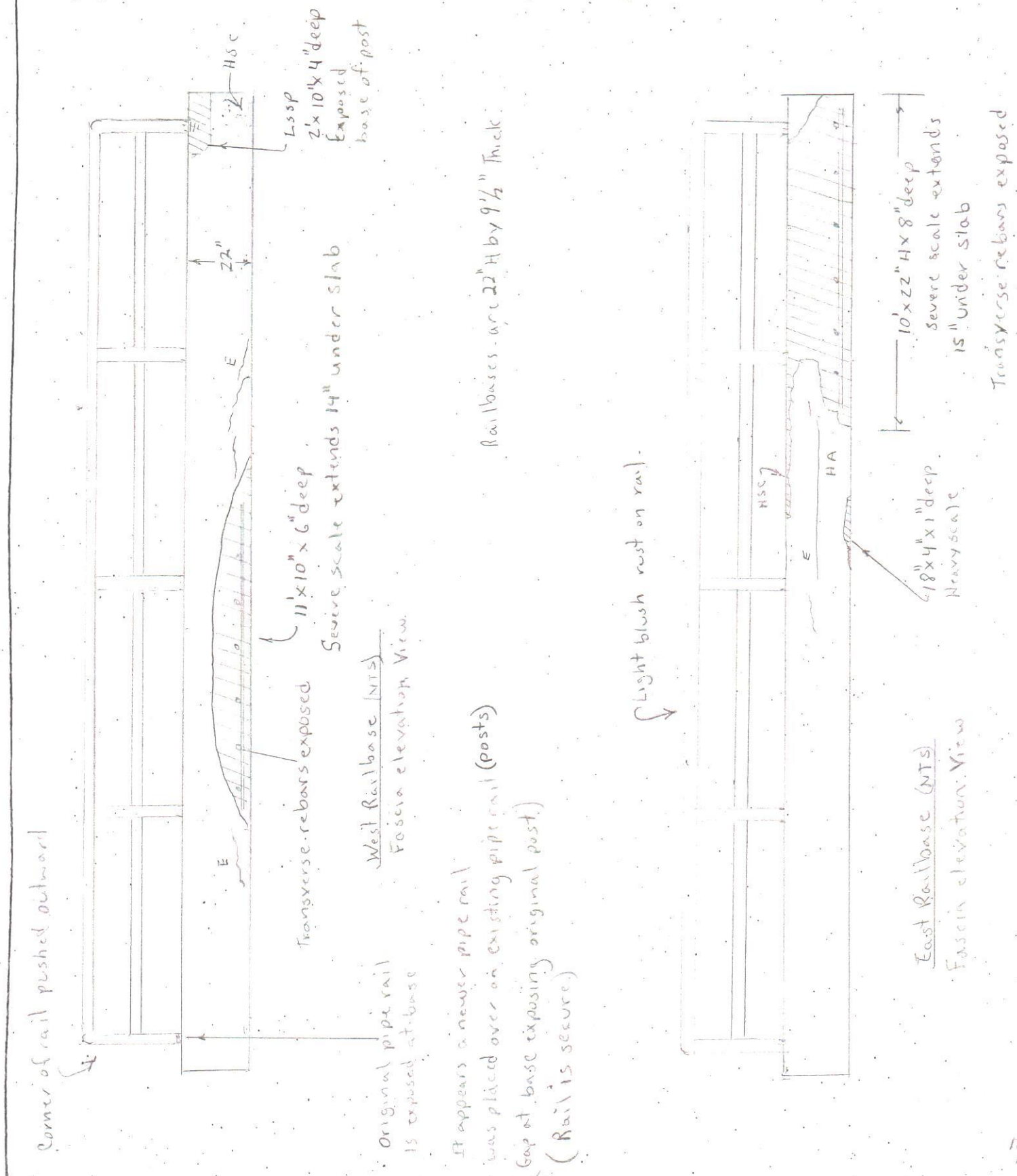
DESCRIPTION: South Park Avenue -o- Mill River, Easton



FIELD NOTES

BRIDGE No. 04213	DATE. 4/9/14
TEAM # 7	SHEET.

DESCRIPTION: Br 04213 South Park Avenue -o- Mill River, Easton. (Indeptn)



Bridge # ... 4213 **Date ...** 4/9/2014 **Prepared by ...** Team 7 **checked by ...** _____

CONCRETE DETERIORATION WORKSHEET

Form BRI-10 Rev 2001

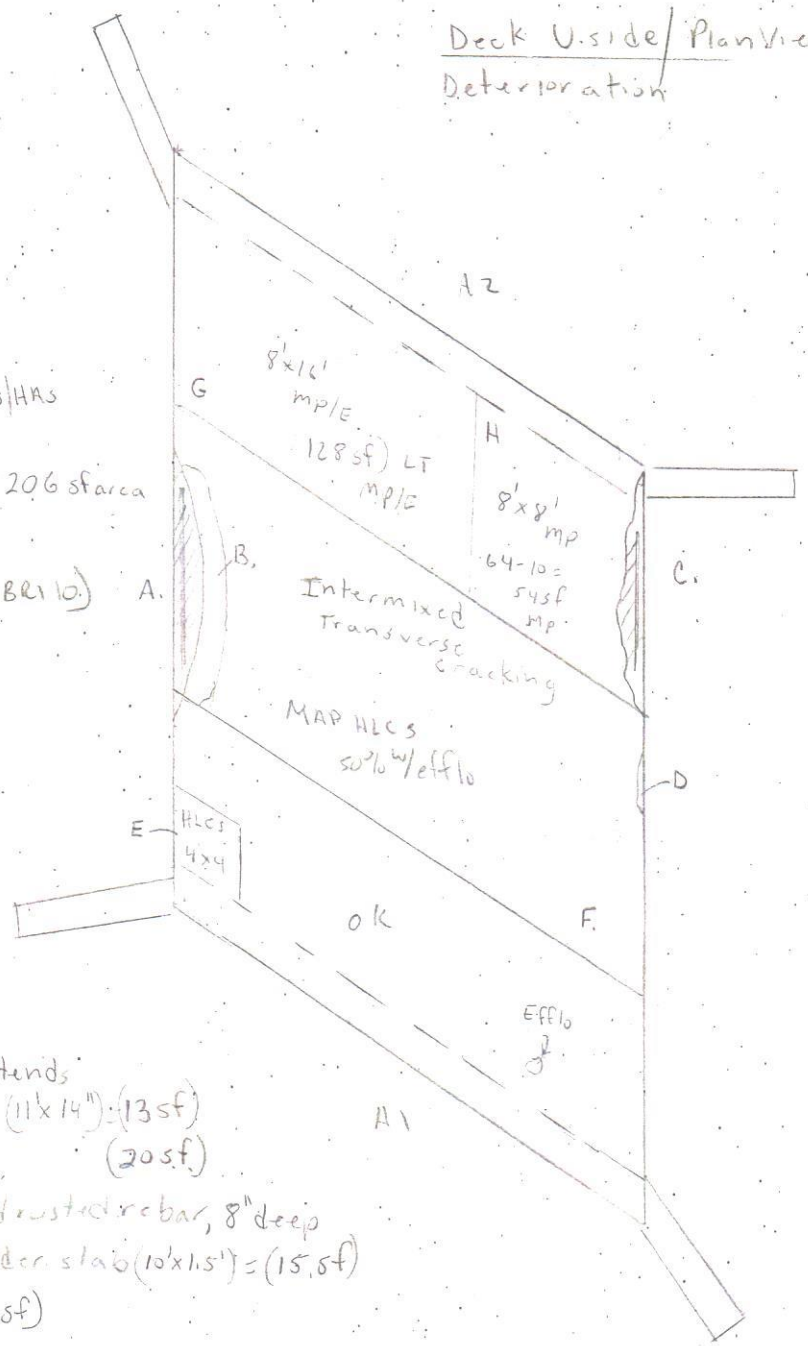
		Deterioration By Span - In Square Feet										
		Span Number										
Deterioration Type	X	1	2	3	4							Total
Spalled and Delaminated Areas	Top											
	Bot.	48										48
Scale (Moderate to Severe Only)	Top											
	Bot.	1										1
Cracks: with Efflorescence (Use 6" width x length)	Bot.											
Cracks: w/o Efflo.(Use 3" width x Length)	Top											
	Bot.											
Map Cracking/LSC w/Efflorescence (Use full Area)	Bot.	231										231
Map Cracking: w/o Efflo.(Use 50% of Area)	Top											
	Bot.	86.5										86.5
Honeycombed Areas: (only areas more than 1 1/2" deep)	Bot.											
Totals	Top											
	Bot.	366.5										366.5
Span Area		726										726
% Spalled and Delaminated on top												
% Deterioration on Bottom		50.4%										50.4%

Note: 1 /
2 /
3 /

FIELD NOTES	BRIDGE No. 04213	DATE. 4/9/14
	TEAM # 7	SHEET.

DESCRIPTION: Br 4213 South Park Avenue -- Mill River, Easton

Deck U.side/ Plan View
Deterioration



spalls/HAs

F = 10'x24' = 240 sf - 33 = 206 sf area
206 sf / 50% w/Efflo
103 MAP HLC = (51.5 sf BR1 10.)
103 MAP HLC w/efflo

A. 13 sf LSSP 6" deep extends 14" wide under slab (11'x14") = (13 sf)
B. 2'x10' HA (20 sf)
C. 15 sf LSSP w/ exposed rusted rebar, 8" deep extends 15" wide under slab (10'x1.5') = (15 sf)
D. HSC. 18"x4"x1" deep. (1 sf)
E. 16 sf HLCS
F. 103 sf mp HLC, 103 sf mp w/E
G. 128 sf mp/E
H. 54 sf mp HLC

BR1 10
spalls 48 sf
map w/efflo 231 sf
map w/o efflo
173 ÷ 2 = 86.5 sf
1 sf HSC
366.5 = 50% Deteriorated

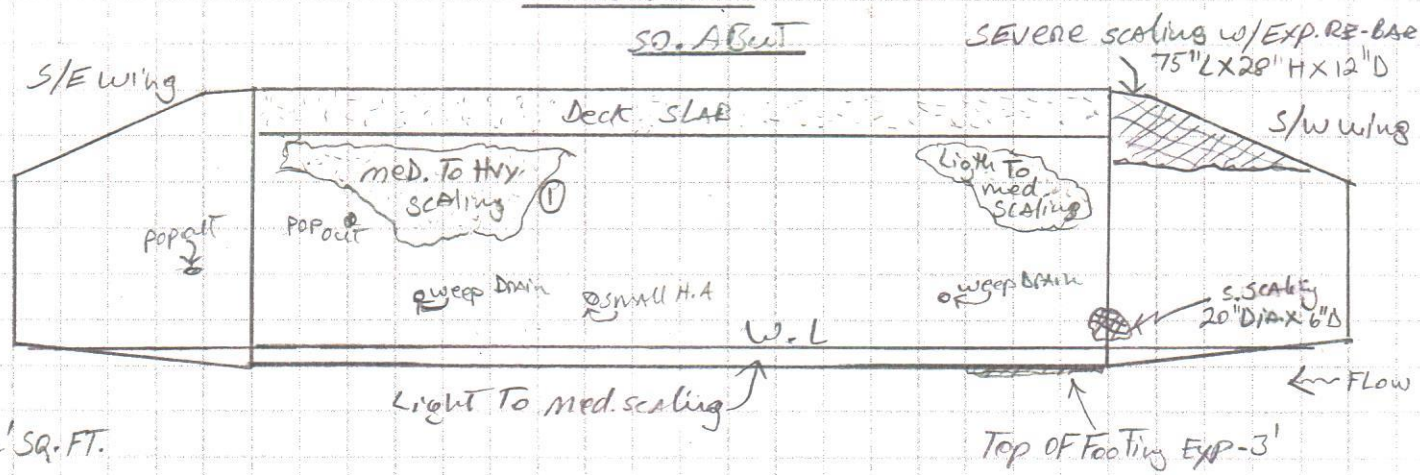
Deck Area 726 sf.
366.5 ÷ 726 = 50%

BRIDGE NO: 04213	TOWN: EASTON	ROUTE/STREET: South Park AVE	DATE PREPARED: 4-14-14
UNIT NO:	TEAM NO:	OVER ROUTE/STREET: Mill River	PREPARED BY:
DRAWING			SHEET NO.

Revision	1	Date	Team	2	Date	Team	3	Date	Team	4	Date	Team

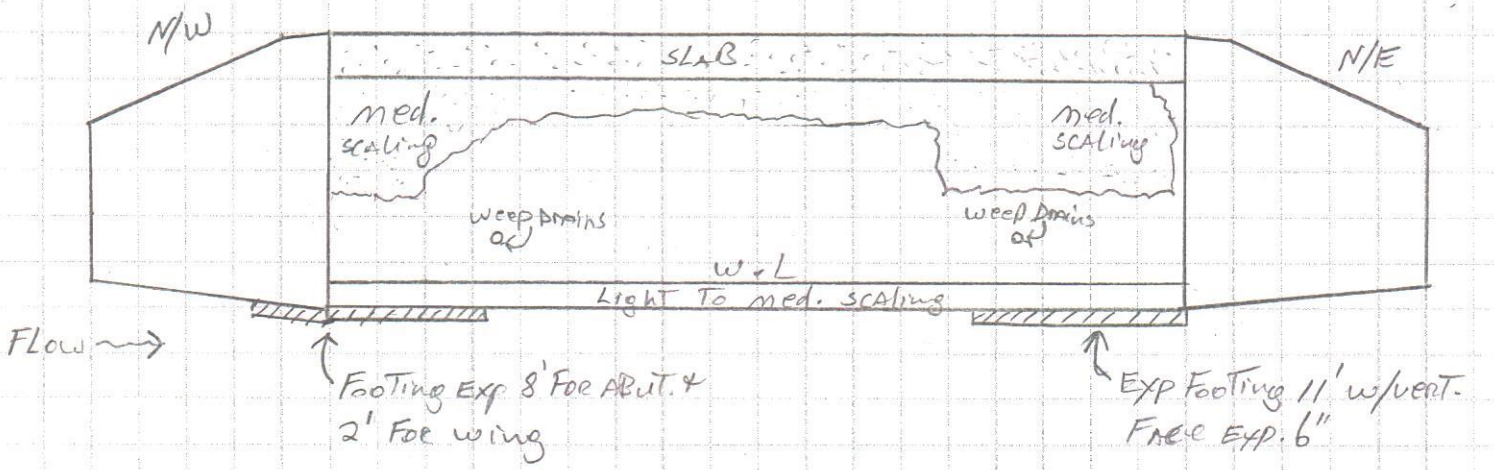
N.T.S

SO. ABUT



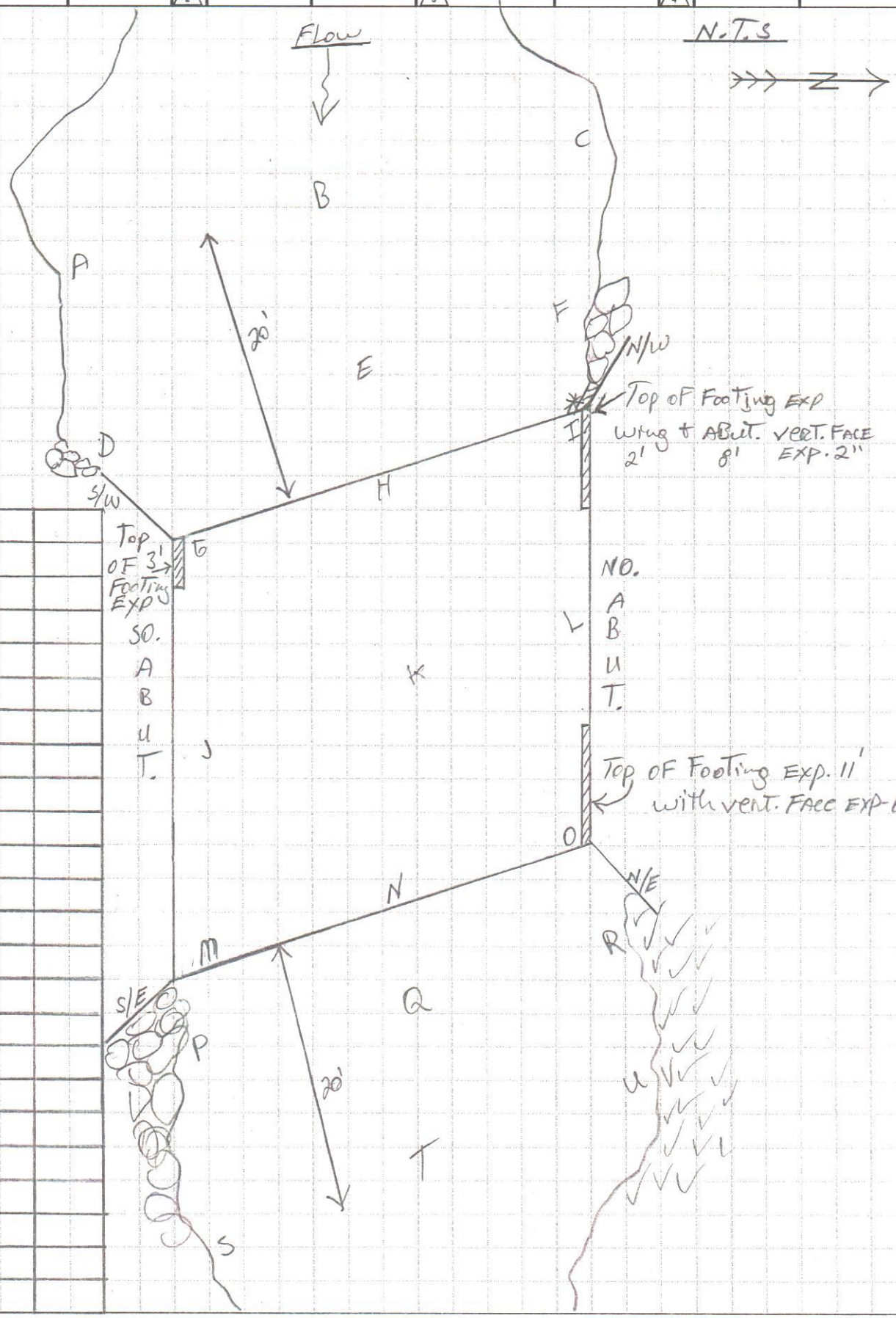
1 12' SQ. FT.

NO. ABUT



BRIDGE NO: 04213	TOWN: EASTON	ROUTE/STREET: South Park Ave.	DATE PREPARED: 4-14-14
UNIT NO:	TEAM NO:	OVER ROUTE/STREET: Mill River	PREPARED BY: T-7
DRAWING Channel Drawing			SHEET NO.

Revision	1	Date	Team	2	Date	Team	3	Date	Team	4	Date	Team

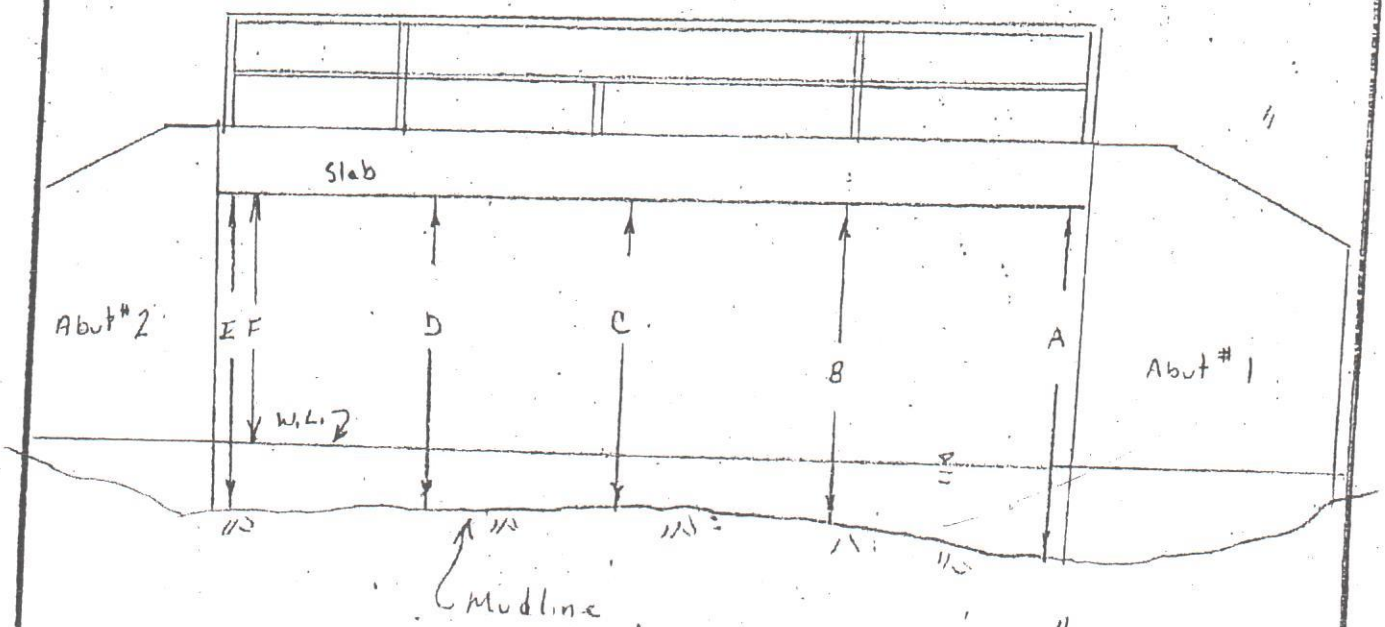


W.D	4-9-14		
A	3"		
B	20"		
C	9"		
D	6"		
E	13"		
F	12"		
G	24"		
H	18"		
I	22"		
J	18"		
K	24"		
L	18"		
M	12"		
N	27"		
O	21"		
P	15"		
Q	24"		
R	14"		
S	16"		
T	18"		
U	11"		
4-9-14			
F.B	6'-9"		

FIELD NOTES

BRIDGE NO. 04213	DATE: 3-10-04
CREW: PS MT	SHEET 9/11

Br# 04213 South Park Ave -o- Mill River, Easton



Inlet Elevation (west)

	DATE	3-10-04	12-23-06	5/7/08	4-16-12	4-9-14	
	A	99"	101"	8'-08"	8'-08"	N.C	
	B	90"	90"	8'-04"	8'-1½"	7'-9"	
	C	89"	91"	8'-05"	8'-4½"	8'	
	D	96	94"	8'-03"	8'-4½"	N.C	
	E	102	101"	8'-05"	8'-4¾"	8'	
Freeboard	F		77"	6'7"	6'-9½"	6'	

Abutment Stem Work Sheet

Bridge No.: 0 4213
Town: Easton
Facility Carried\Feature Intersected: South Park Avenue over Mill River

---

Abutment Stem No. or Nos.: Abutment Nos. 1 & 2

Abutment Stem Design Type: Full Height | Closed Abutments - Cantilever

Abutment Stem Material Type: Concrete

Abutment Stem Foundation Type: Unknown

Item No. 113 Scour Critical: - 8 -

Tidal: No **Rip Rap:** No

Exposed Footing: Yes - South Abutment Top Footing Exposed Approximately 9 feet
Located at Inlet
North Abutment Footing Exposed up to Approximately 8 inches high
Located at Inlet {8 feet long} & Outlet {10 feet Long}

Footing Undermining: No

Sheet Piles - Timber or Steel: No

Bed Rock: No **Concrete Apron:** No

Abutment Stem - In Water - At Normal Stage:

Normal Stage - The water stage prevailing during the greater part of the year.

Comments: Bridge Plans - No Bridge Plans Available

Prepared By: David Pawlikowski, P.E.
CTDOT - Bridge Safety

Date: April 23, 2012

Bridge No.	**04213**	**Inspected by:**	**PATRICK A.SHARRON**
Town:	**EASTON**	**Inspected by:**	**JOHN CHAVEZ**
Feature Carried:	**SOUTH PARK AVENUE**	**Date Inspected:**	**4 / 9 / 2014**
Feature Crossed:	**MILL RIVER**	**Project No.:**	**IN-DEPTH**

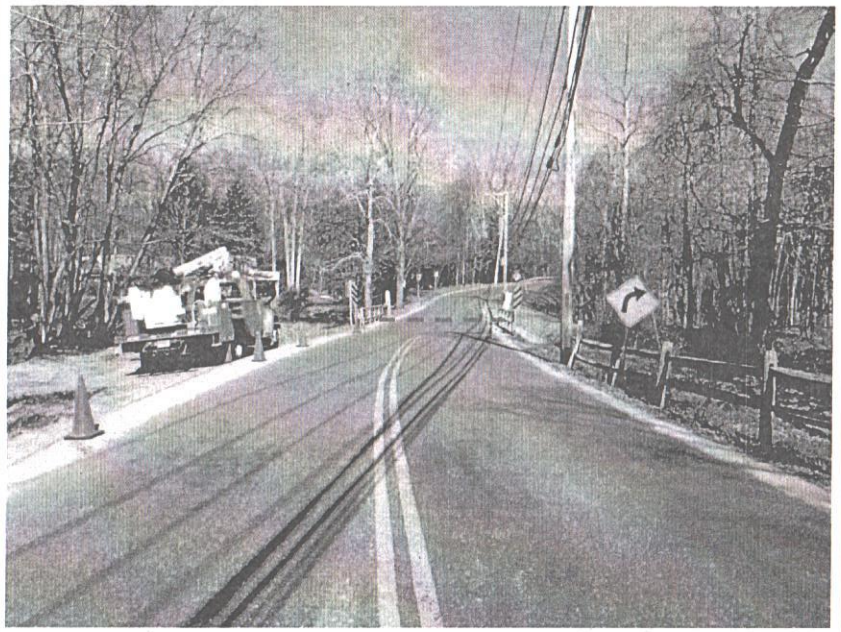


Photo # 1: View looking northbound.

Photo # 2: View looking southbound.

Bridge No.	**04213**	**Inspected by:**	**PATRICK A.SHARRON**
Town:	**EASTON**	**Inspected by:**	**JOHN CHAVEZ**
Feature Carried:	**SOUTH PARK AVENUE**	**Date Inspected:**	**4 / 9 / 2014**
Feature Crossed:	**MILL RIVER**	**Project No.:**	**IN-DEPTH**

Photo # 3: View of west rail base & railing.

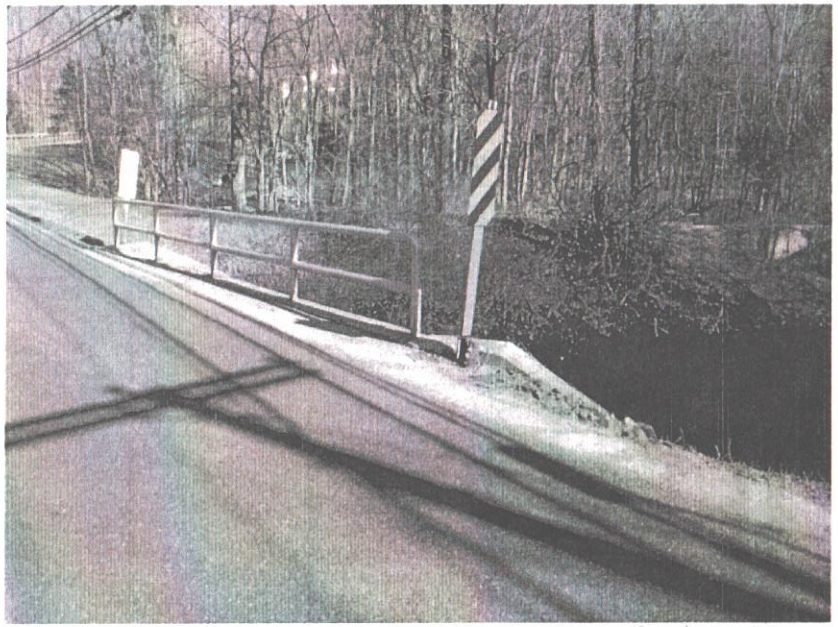


Photo # 4: View of east rail base & railing.

Bridge No.	04213	Inspected by:	PATRICK A.SHARRON
Town:	EASTON	Inspected by:	JOHN CHAVEZ
Feature Carried:	SOUTH PARK AVENUE	Date Inspected:	4 / 9 / 2014
Feature Crossed:	MILL RIVER	Project No.:	IN-DEPTH

Photo # 5: View of east rail base at northeast corner exhibits severe scaling with exposed re-bar.

Photo # 6: View of east rail base & slab at northeast corner exhibits severe scaling with exposed re-bar.

Bridge No.	**04213**	**Inspected by:**	**PATRICK A.SHARRON**
Town:	**EASTON**	**Inspected by:**	**JOHN CHAVEZ**
Feature Carried:	**SOUTH PARK AVENUE**	**Date Inspected:**	**4 / 9 / 2014**
Feature Crossed:	**MILL RIVER**	**Project No.:**	**IN-DEPTH**

Photo # 7: View of northwest corner exhibits collision damage to railing.

Photo # 8: View of pipe railing with sleeve at northwest corner.

Bridge No.	**04213**	**Inspected by:**	**PATRICK A.SHARRON**
Town:	**EASTON**	**Inspected by:**	**JOHN CHAVEZ**
Feature Carried:	**SOUTH PARK AVENUE**	**Date Inspected:**	**4 / 9 / 2014**
Feature Crossed:	**MILL RIVER**	**Project No.:**	**IN-DEPTH**

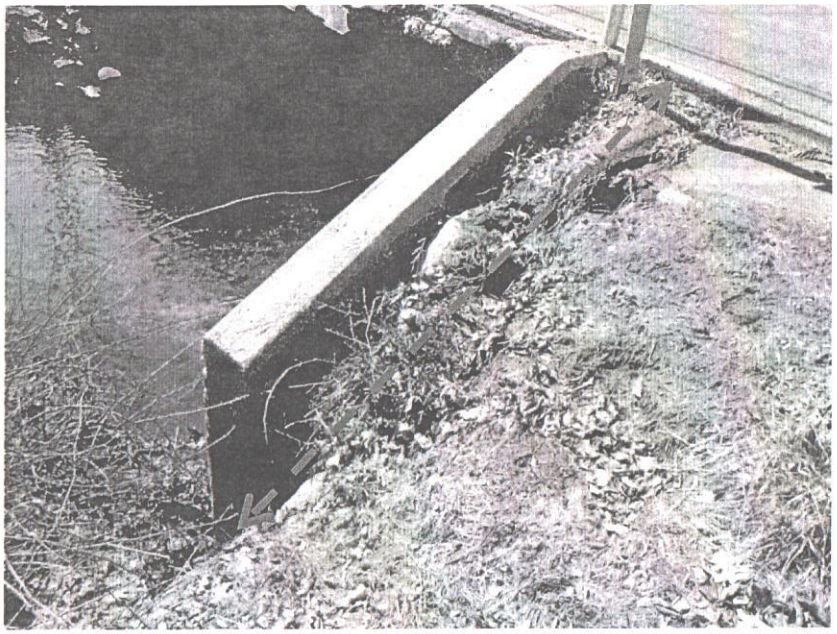


Photo # 9: View of erosion behind northeast wing wall.

Photo # 10: View of erosion behind southwest wing wall.

Bridge No.	**04213**	**Inspected by:**	**PATRICK A.SHARRON**
Town:	**EASTON**	**Inspected by:**	**JOHN CHAVEZ**
Feature Carried:	**SOUTH PARK AVENUE**	**Date Inspected:**	**4 / 9 / 2014**
Feature Crossed:	**MILL RIVER**	**Project No.:**	**IN-DEPTH**

Photo # 11: View of south approach.

Photo # 12: View of wearing surface.

29/39

Bridge No.	**04213**	**Inspected by:**	**PATRICK A.SHARRON**
Town:	**EASTON**	**Inspected by:**	**JOHN CHAVEZ**
Feature Carried:	**SOUTH PARK AVENUE**	**Date Inspected:**	**4 / 9 / 2014**
Feature Crossed:	**MILL RIVER**	**Project No.:**	**IN-DEPTH**

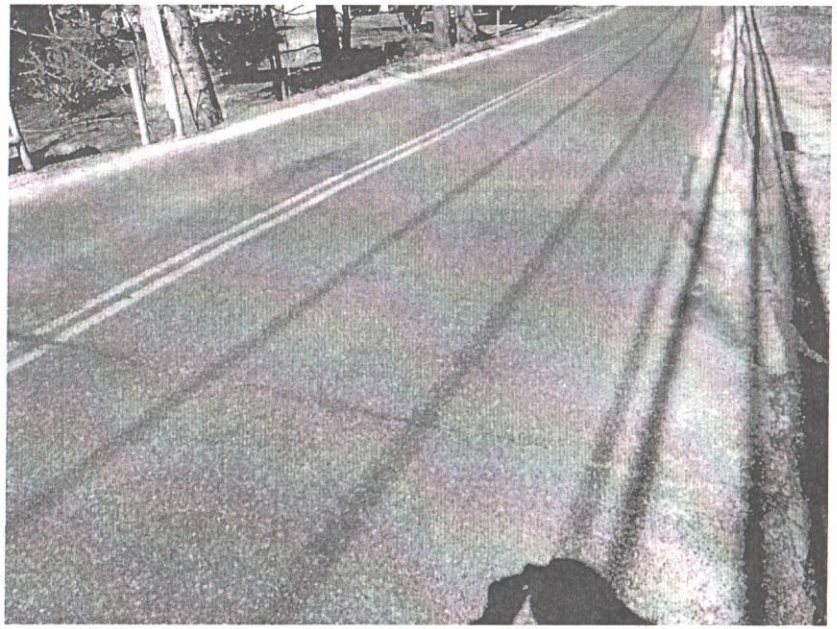


Photo # 13: View of north approach.

Photo # 14: View of severe scaling with exposed re-bar & hollow area to west side of slab.

Bridge No.	04213	Inspected by:	PATRICK A.SHARRON
Town:	EASTON	Inspected by:	JOHN CHAVEZ
Feature Carried:	SOUTH PARK AVENUE	Date Inspected:	4 / 9 / 2014
Feature Crossed:	MILL RIVER	Project No.:	IN-DEPTH

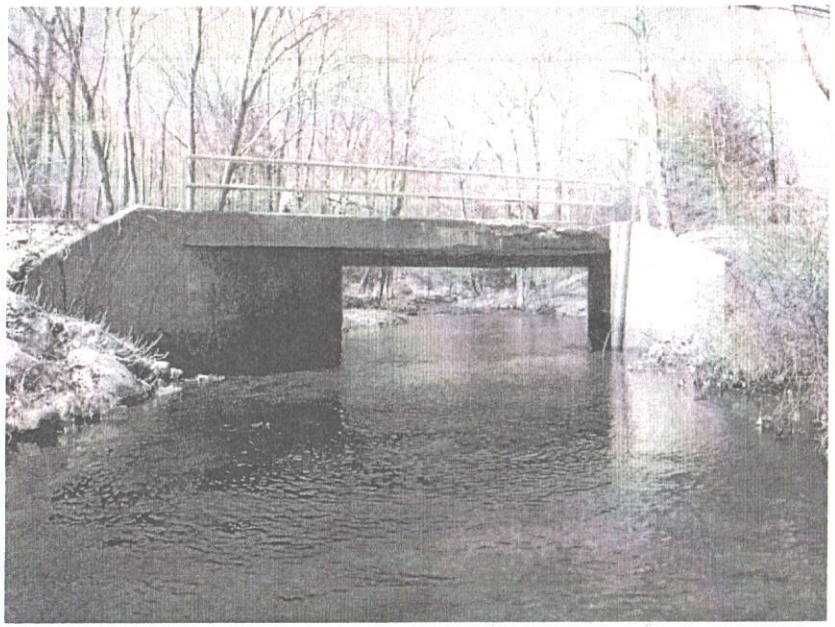


Photo # 15: View of east elevation (outlet end).

Photo # 16: View looking down river.

Bridge No.	**04213**	**Inspected by:**	**PATRICK A.SHARRON**
Town:	**EASTON**	**Inspected by:**	**JOHN CHAVEZ**
Feature Carried:	**SOUTH PARK AVENUE**	**Date Inspected:**	**4 / 9 / 2014**
Feature Crossed:	**MILL RIVER**	**Project No.:**	**IN-DEPTH**

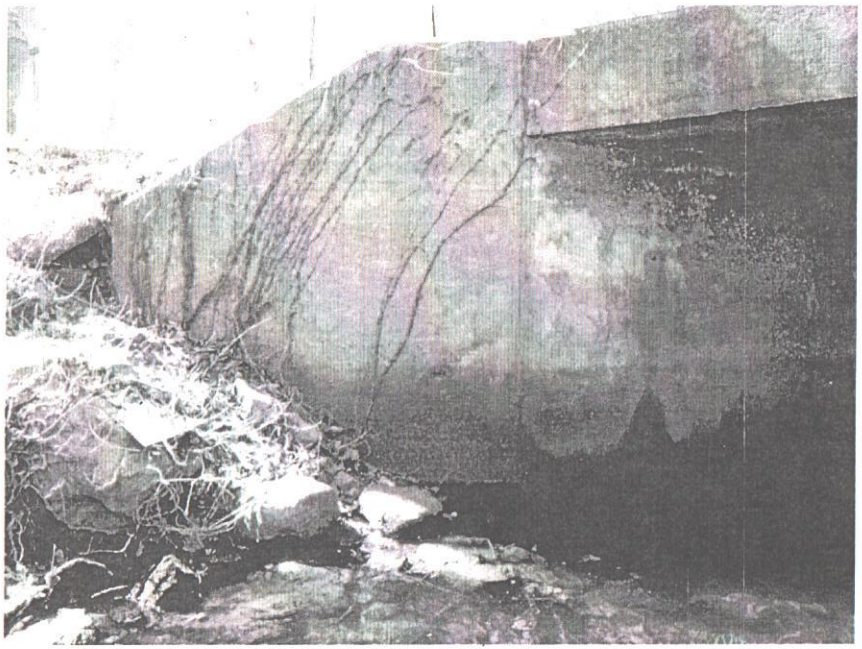


Photo # 17: View of southeast wing wall.

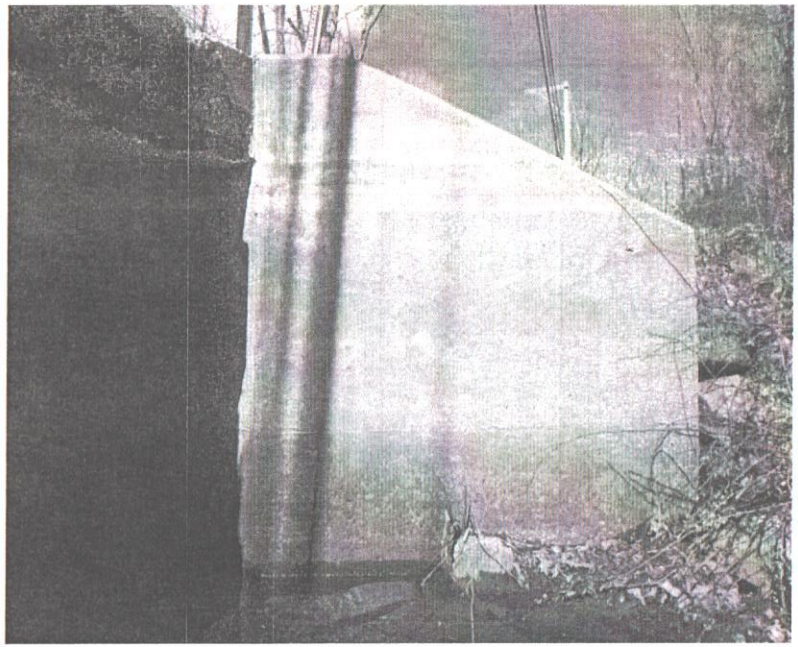


Photo # 18: View of northeast wing wall.

Bridge No.	**04213**	**Inspected by:**	**PATRICK A.SHARRON**
Town:	**EASTON**	**Inspected by:**	**JOHN CHAVEZ**
Feature Carried:	**SOUTH PARK AVENUE**	**Date Inspected:**	**4 / 9 / 2014**
Feature Crossed:	**MILL RIVER**	**Project No.:**	**IN-DEPTH**

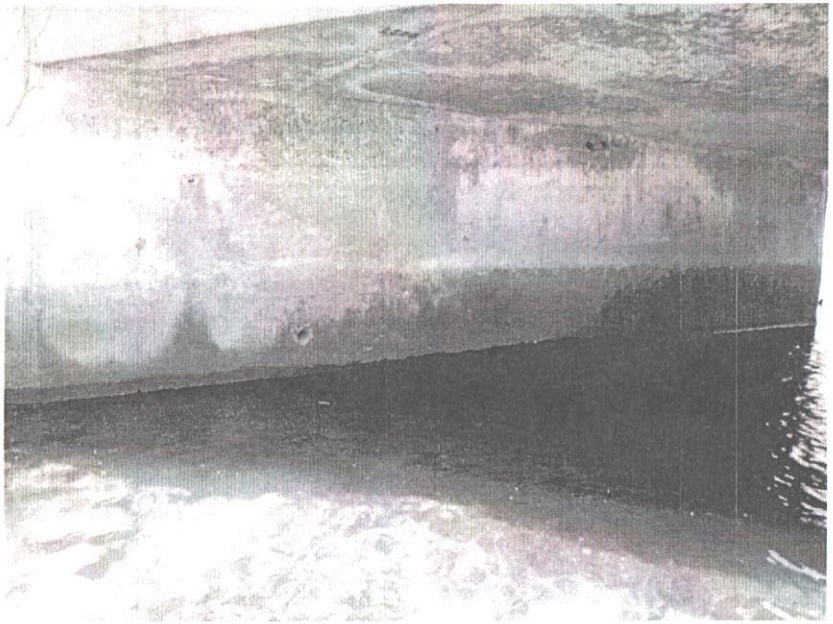


Photo # 19: View of south abutment.

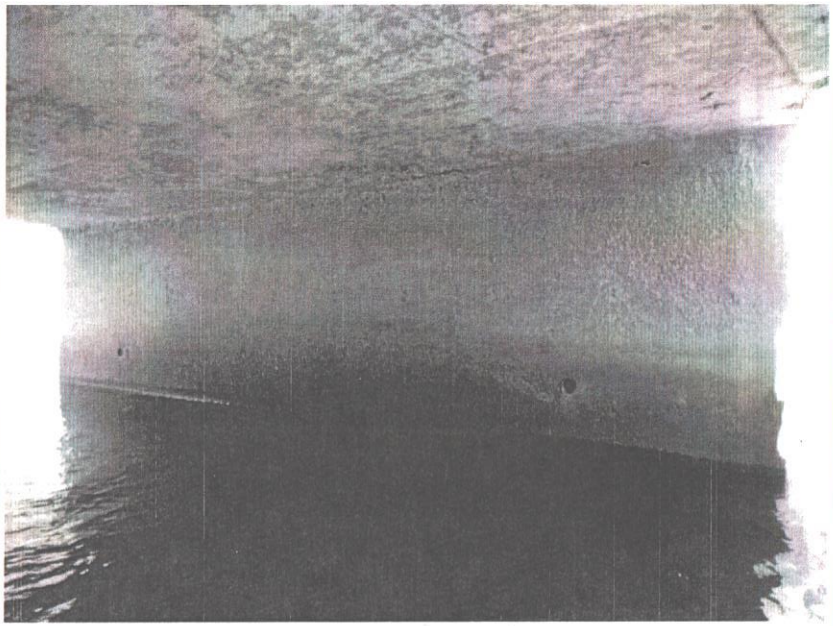


Photo # 20: View of north abutment.

Bridge No.	04213	Inspected by:	PATRICK A.SHARRON
Town:	EASTON	Inspected by:	JOHN CHAVEZ
Feature Carried:	SOUTH PARK AVENUE	Date Inspected:	4 / 9 / 2014
Feature Crossed:	MILL RIVER	Project No.:	IN-DEPTH

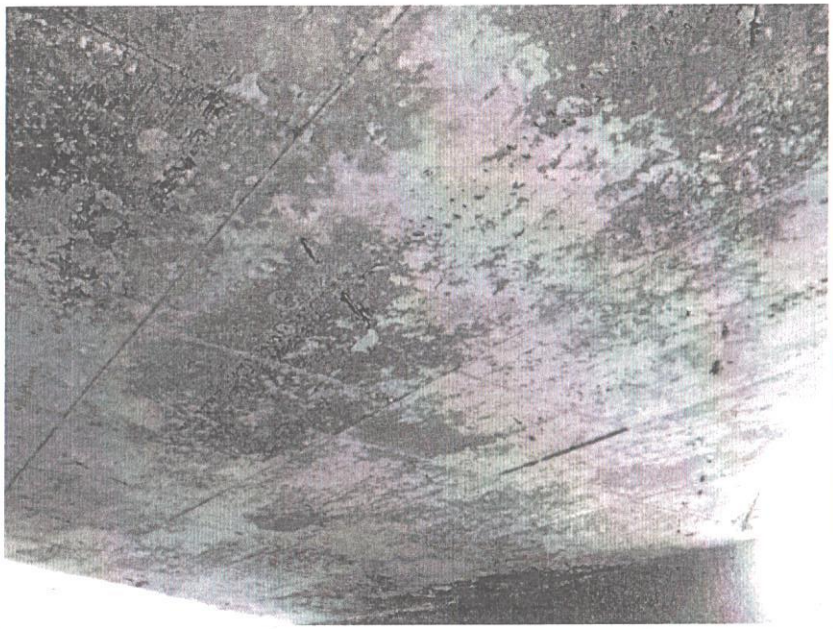


Photo # 21: View of slab underside.

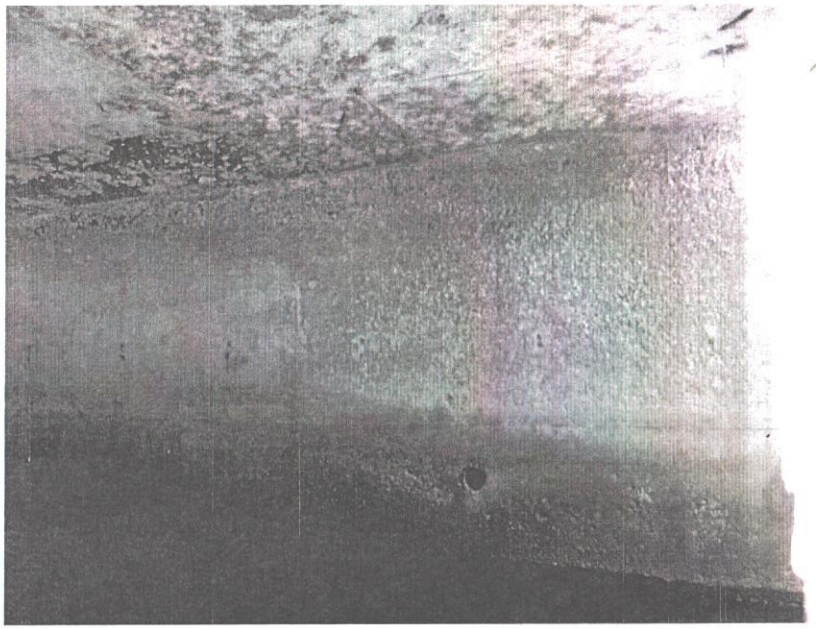


Photo # 22: View of medium to heavy scaling at northeast corner of north abutment, typical of south abutment.

Bridge No.	04213	Inspected by:	PATRICK A.SHARRON
Town:	EASTON	Inspected by:	JOHN CHAVEZ
Feature Carried:	SOUTH PARK AVENUE	Date Inspected:	4 / 9 / 2014
Feature Crossed:	MILL RIVER	Project No.:	IN-DEPTH

Photo # 23: View of severe scaling at base of south abutment & southwest wing wall.

Photo # 24: View of severe scaling at cap of southwest wing wall.

Bridge No.	**04213**	**Inspected by:**	**PATRICK A.SHARRON**
Town:	**EASTON**	**Inspected by:**	**JOHN CHAVEZ**
Feature Carried:	**SOUTH PARK AVENUE**	**Date Inspected:**	**4 / 9 / 2014**
Feature Crossed:	**MILL RIVER**	**Project No.:**	**IN-DEPTH**

Photo # 25: View of northwest wing wall.

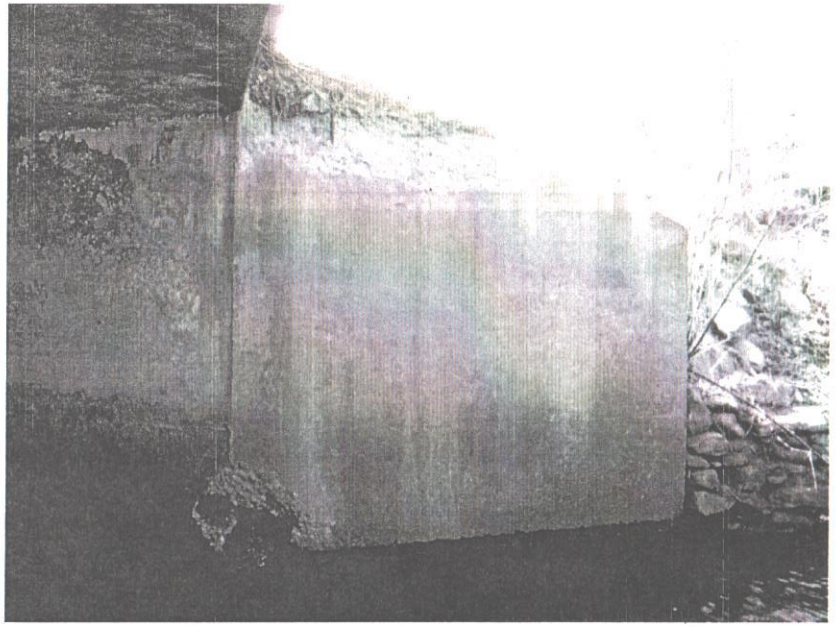


Photo # 26: View of southwest wing wall.

Bridge No.	**04213**	**Inspected by:**	**PATRICK A.SHARRON**
Town:	**EASTON**	**Inspected by:**	**JOHN CHAVEZ**
Feature Carried:	**SOUTH PARK AVENUE**	**Date Inspected:**	**4 / 9 / 2014**
Feature Crossed:	**MILL RIVER**	**Project No.:**	**IN-DEPTH**

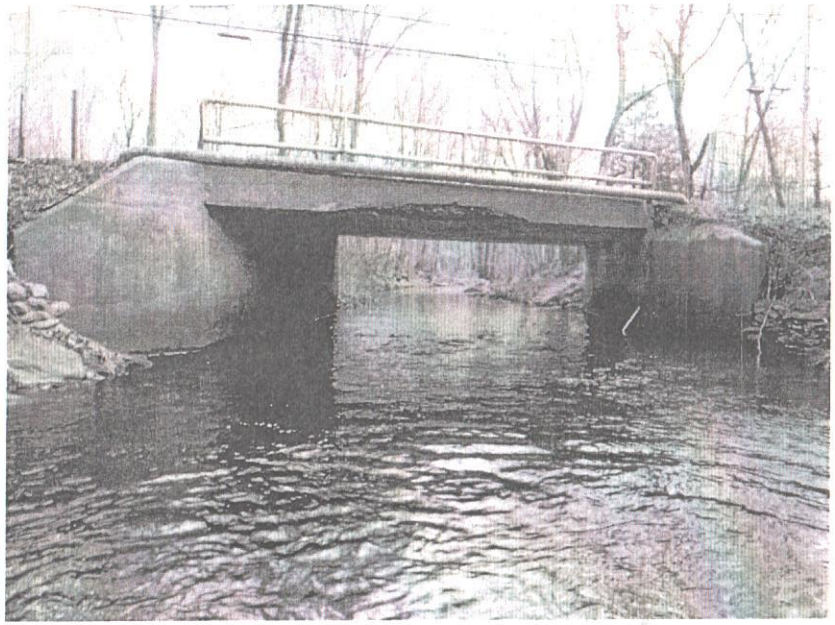


Photo # 27: View of west elevation (inlet end).

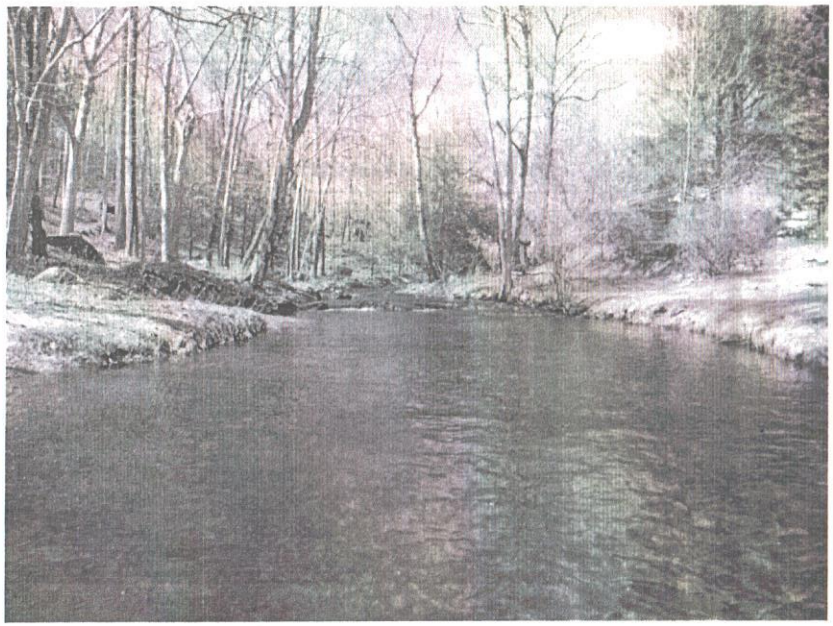


Photo # 28: View looking up river.

Your Agency Name

Your Office Name
Your Department Name

Structure Inventory and Appraisal Sheet (English Units)

Bridge Key: 04213 Agency ID: 04213 SR: 49.7 SD/FO: SD

IDENTIFICATION

State 1:	09 Connecticut	Struc Num 8:	04213
Facility Carried 7:	SOUTH PARK AVENUE	Location 9:	0.7 MI N OF ROUTE 15
Rte.(On/Under) 5A:	Route On Structure	Rte. Signing Prefix 5B:	5 City Street
Level of Service 5C:	0 None of the below	Route Number 5D:	00000
Directional Suffix 5E:	0 N/A (NBI)	% Responsibility:	0.00
SHD District 2:	03	County Code 3:	Fairfield
Place Code 4:	EASTON	Mile Post 11:	1.640 mi
Feature Intersected 6:	MILL RIVER		
Latitude 16:	41° 14' 12"	Longitude 17	073° 15' 06"
Border Bridge Code 98	Unknown (P)		
Border Bridge Number 99	NA		

STRUCTURE TYPE AND MATERIALS

Number of Approach Spans 46	0	Number of Spans Main Unit 45:	1
1 Concrete		01 Slab	
Deck Type 107:	1 Concrete-Cast-in-Place		
Wearing Surface 108A:	6 Bituminous		
Membrane 108B:	0 None		
Deck protection 108C	None		

AGE AND SERVICE

Year Built 27:	1946	Year Reconstructed 106:	-1		
Type of Service on 42A	1 Highway				
Type of Service under 42B	5 Waterway				
Lanes on 28A:	2	Lanes under 28B:	0	Detour Length 19:	2.0 mi
ADT 29:	1,900	Truck ADT 109:	4%	Year of ADT 30:	2010

GEOMETRIC DATA

Length Max Span 48:	28.00 ft	Structure Length 49:	30.00 ft
Curb/Sdwlk Width L 50A	0.00 ft	Curb/Sidewalk Width R 50B	0.00 ft
Width Curb to Curb 51:	22.40 ft	Width Out to Out 52:	24.20 ft
Approach Roadway width 32: (w/ shoulders)	20.00 ft	Median 33:	0 No median
Deck Area:	726.00 sq. ft		
Skew 34:	34.00°	Structure Flared 35	0 No flare
Vertical Clearance 10	99.90 ft	Horizontal Clearance 47:	22.40 ft
Minimum Vertical Clearance Over Bridge 53:		328.05 ft	
Minimum Vertical Underclearance Reference 54A		N Feature not hwy or RR	
Minimum Vertical Underclearance 54B:		0.00 ft	
Minimum Lateral Underclearance Reference R 55A:		N Feature not hwy or RR	
Minimum Lateral Underclearance R 55:		327.76 ft	
Minimum Lateral Underclearance L 56:		0.00 ft	

INSPECTION

Frequency 91:	24 months	Inspection Date 90:	4/9/2014	Next Inspection:	4/9/2016
FC Frequency 92A:	NA	FC Inspection Date 93A:	NA	Next FC Inspection:	NA
UW Frequency 92B:	NA	UW Inspection Date 93B:	NA	Next UW Inspection	NA
SI Frequency 92C:	NA	SI Date 93C:	NA	Next SI:	NA
Element Frequency:	24 months	Element Insp. Date:	4/16/2012	Next Elem. Insp.:	4/9/2016

CLASSIFICATION

Defense Highway 100:	0 Not a STRAHNET hwy	Parallel Structure 101:	No || bridge exists
Direction of Traffic 102:	2 2-way traffic	Temporary Structure 103:	Not Applicable (P)
Highway System 104:	0 Not on NHS	NBIS Length 112:	Long Enough
Toll Facility 20:	3 On free road	Functional Class 26:	17 Urban Collector
Defense Hwy 110:	0 Not a STRAHNET hwy	Historical Significance 37:	5 Not eligible for NRHP
Owner 22:	03 Town/Township Hwy Agency		
Custodian 21:	03 Town/Township Hwy Agency		

CONDITION

Deck 58:	7 Good	Super 59:	4 Poor	Sub 60:	6 Satisfactory
Culvert 62:	N N/A (NBI)	Channel/Channel Protection 61:	6 Bank Slumping		

LOAD RATING AND POSTING

Inventory Rating Method 65:	5 No rating	Operating Rating Method 63:	5 No rating
Inventory Rating 66:	HS18.8	Operating Rating 64:	HS32.2
Design Load 31:	5 MS 18 (HS 20)	Posting 70:	5 At/Above Legal Loads
Posting Status 41:	A Open, no restriction		

APPRAISAL

Bridge Rail 36A:	0 Substandard	Approach Rail 36C:	0 Substandard
Transition 36B:	0 Substandard	Approach Rail Ends 36D:	0 Substandard
Str Evaluation 67:	4 Minimum Tolerable	Deck Geometry 68:	3 Intolerable - Correct
Underclearance, Vertical and Horizontal 69:		N Not applicable (NBI)	
Waterway Adequacy 71:	7 Above Minimum	Approach Alignment 72:	7 Above Min Criteria
Scour Critical 113:	8 Stable Above Footing		

PROPOSED IMPROVEMENTS

Bridge Cost 94:	$1,000	Type of Work 75:	38 Other Structural
Roadway Cost 95:	$1,000	Length of Improvement 76	0.3 ft
Total Cost 96:	$2,000	Future ADT 114:	695
Year of Cost Estimate 97	2000	Year of Future ADT 115:	2029

NAVIGATION DATA

Navigation Control 38	Permit Not Required		
Vertical Clearance 39	0.0 ft	Horizontal Clearance 40:	0.0 ft
Pier Protection 111:	Not Applicable (P)	Lift Bridge Vertical Clearance 116	0.0 ft

Structure Inventory and Appraisal Sheet (English Units)

ELEMENT CONDITION STATE DATA

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
UNIT0	39/3	Unp Conc Slab/AC Ovl	(SF)	726	100%	726	0%	0	0%	0	0%	0	0%	0
UNIT0	212/3	Reinforced Conc wing	(LF)	100	91%	91	3%	3	6%	6	0%	0	0%	0
UNIT0	215/3	R/Conc Abutment	(LF)	58	49%	29	51%	30	0%	0	0%	0	0%	0
UNIT0	330/3	Metal Rail Uncoated	(LF)	60	0%	0	66%	40	0%	0	34%	20	0%	0
UNIT0	359/3	Soffit Smart Flag	(EA)	1	0%	0	0%	0	0%	0	0%	0	100%	1

Br 04213 South Park Avenue -o- Mill River, Easton 4/9/14