Bridge No. BC 8020

Fleet Street at Central Avenue over Harford Run

Routine Inspection

2009 BRIDGE INSPECTION PROGRAM

City of Baltimore Contract #1105

Presented by: STV

In association with:
Modjeski & Masters, Inc.
Sabra, Wang & Associates, Inc.
Tuhin Basu & Associates, Inc.
M&N Engineering and Diving, Inc.

2009 BALTIMORE CITY BRIDGE INSPECTION

BRIDGE NO. BC 8020

FLEET STREET AT CENTRAL AVENUE OVER HARFORD RUN

Amanda D. Schindhelm, P.E.

Date

Professional Certification - I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 27713, Expiration Date: July 12, 2012.

This inspection report was prepared under my supervision. The condition data and recommendations contained within this report are based on a visual inspection of accessible portions of the existing structure. No responsibility is accepted for the existence of latent defects, which cannot be detected during visual inspection.

2009 BALTIMORE CITY BRIDGE INSPECTION

BRIDGE NO. BC 8020

FLEET STREET AT CENTRAL AVENUE OVER HARFORD RUN

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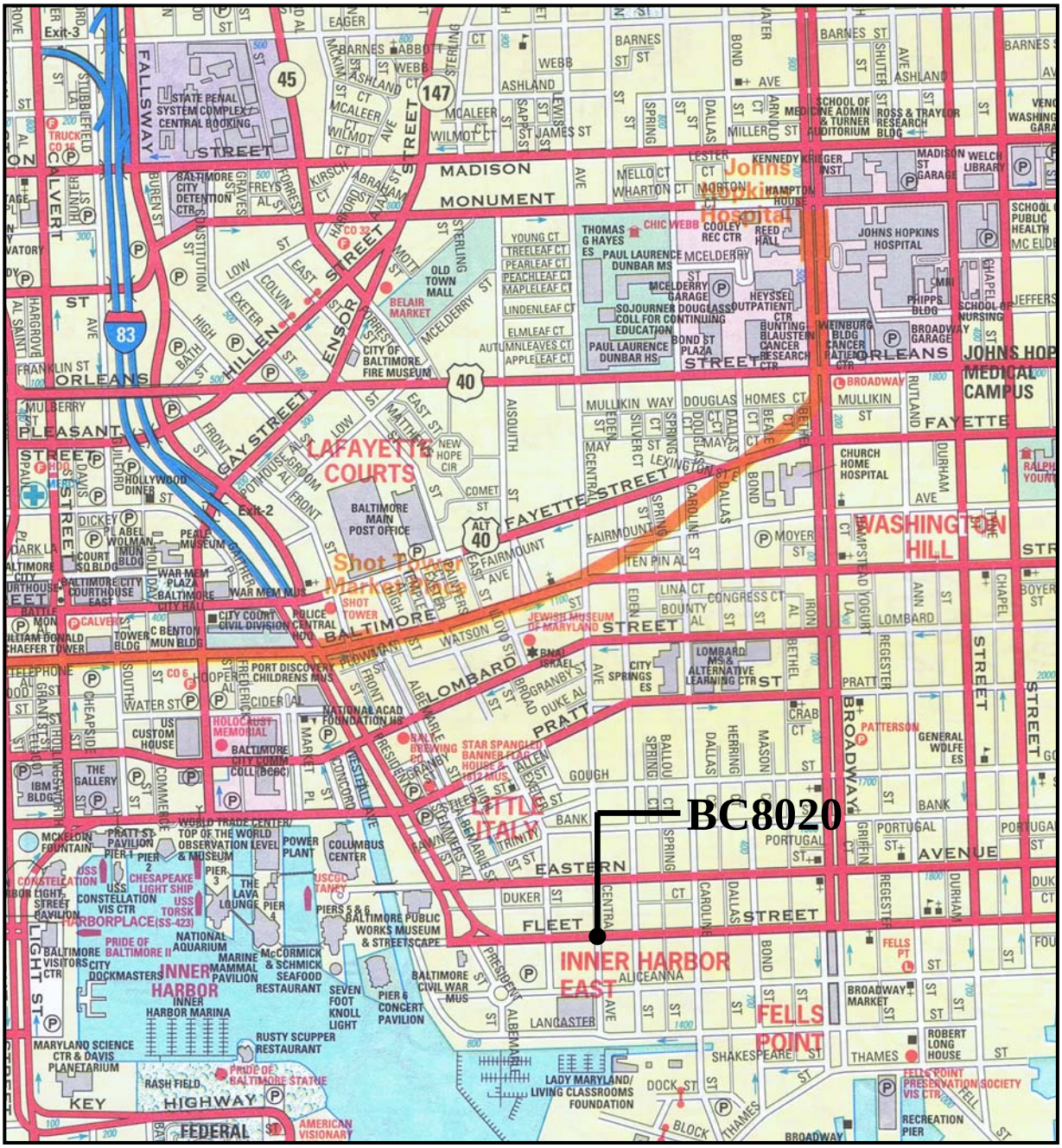


ADC Street Grid Location: DOWNTOWN G6

LOCATION MAP

SCALE: 1" = 2,000'

Copyright ADC The Map People
M&N's Permitted Use Number: 21007246
Expiration Date: July 31, 2011

2009 BALTIMORE CITY BRIDGE INSPECTION
BRIDGE NO. BC 8020
FLEET STREET AT CENTRAL AVENUE OVER HARFORD RUN
SUMMARY REPORT

BRIDGE NO.:	**BC 8020**
DESCRIPTION:	**FLEET STREET AT CENTRAL AVENUE OVER HARFORD RUN**
REPORT PREPARED BY:	**M&N Engineering & Diving Services, Inc.**
REPORT REVIEWED AND SUBMITTED BY:	**STV**
PROJECT MANAGER:	Amanda D. Schindhelm, P.E.
DATE OF INSPECTION:	08/24/2010
REDUNDANT/NON-REDUNDANT:	Redundant
FRACTURE CRITICAL:	No
PIN/HANGER UT INSPECTION:	No
UNDERWATER INSPECTION:	Required. Due 08/13.
POSTED:	No
RATING RECOMMENDED:	No
POSTING RECOMMENDED:	No
MAINTENANCE NEEDS:	Yes, See Repair Recommendations.
REPAIR NEEDS:	Yes, See Repair Recommendations.
REHABILITATION:	None
LETTER OF CONCERN:	No
BRIDGE SUFFICIENCY RATING:	69.3
FOLLOW-UP REQUIREMENTS:	
Warm Weather Inspection:	No
Storm Weather Inspection:	No
Underwater Inspection:	Required. Due 08/13.
Increased Inspection Frequency:	No
Other:	None
SCOUR EVALUATION:	5B
DATE OF SUBMISSION:	

2009 BALTIMORE CITY BRIDGE INSPECTION
BRIDGE NO. BC 8020
FLEET STREET AT CENTRAL AVENUE OVER HARFORD RUN
BRIDGE INSPECTION DATA FORM

BRIDGE NO. BC 8020 (8) **YEAR BUILT** 1920 (Estimated) (27, 106)

PRINCIPAL ROUTE Fleet Street at Central Avenue (6)

CROSSING Harford Run (7)

TYPE C35, Concrete Encased Steel Beam (43, 44, 206, 207) **POSTED WEIGHT & SPEED** A, None (41, 224, 225)

LENGTH 26'
(Total length from end of approach pavement to end of approach pavement)

ROADWAY MEASUREMENTS

APPROACH		BRIDGE		SIDEWALKS	
Width-Traveled Way:	26' (32)	Clear Roadway:	26.3' (curb to curb) (51)	Number:	None
Type of Roadway:	Bituminous	Surface:	Bituminous (107, 108, 232)	Clear Width: Lt	0' (50) Rt. 0' (50)
Width of Shoulders:	None (32)	Clearance over Rd.:	Unlimited (53, 226)	Railing Type:	None (235, 236)
Type of Shoulders:	None	Skew:	0 Degrees (34)		
		Long. Dist.:	26.0'		
Alignment:	Intersection (72)	Trans. Dist.:	26.3' (52)		
		Alignment:	Intersection		

FOUNDATION

Character of Foundation Material: Unknown

Type of Footing: Pile Timber (228, 230) Spread None (228, 230)

HYDRAULIC DATA (To be completed for structures over water - By others)

Record of High Water Above Uncl. (Ft) _____ (251) Below Uncl. (Ft) _____ (251) Data _____ (252)

WATERSHED DATA -By others

Area in Acres: _____

Discharge at Bridge (c.f.s.): _____

Velocity Thru Bridge (ft./sec.): _____

Bridge Opening Calculated (sq. ft.): _____

Bridge Opening Furnished (sq. ft.): _____

Underclearance of Bridge to M.L.W.: _____

UTILITIES (260, 261)

Storm Sewers: None

Sanitary Sewers: None

Water Mains: None

Gas Mains: None

Electric Mains: Yes 3" Diameter & 1-4" Diameter Conduit

Overhead: None

Underground: Present Under Bridge

Other: None

CLEARANCES UNDER BRIDGES OVER HIGHWAYS AND RAILROADS

Vertical: N/A
(Minimum distance from top of roadway to underside of bridge superstructure) (54)

Horizontal: N/A
(Each lane of duals - Minimum distance face to face of supports flanking roadway. Measurements to be made perpendicular to Centerline of roadway) (55, 56, 280)

2009 BALTIMORE CITY BRIDGE INSPECTION
BRIDGE NO. BC 8020
FLEET STREET AT CENTRAL AVENUE OVER HARFORD RUN
BRIDGE INSPECTION DATA FORM

TYPE C35, Concrete Encased Steel Beam **POSTED WEIGHT AND SPEED** A, None

TRAFFIC SAFETY FEATURES N-N-N-N **YEAR BUILT** 1920 (Estimated)

DATE OF INSPECTION	08/06/03	11/15/05	12/3/07	08/24/10	REMARKS
INSPECTOR	ADS	BEC	DS	ADS	
1. Number of Spans	1	1	1	1	
a. Arch	N	N	N	N	
b. Girder	N	N	N	N	
c. Beam	1	1	1	1	
d. Prestressed or Voided	N	N	N	N	
2. Foundations	7	7	7	7	
a. Undermining	7	7	7	7	
b. Scour	7	7	7	7	
c. Alignment	8	8	8	8	
3. Abutments and Wing Walls	6	6	6	6	
a. Concrete	N	N	N	N	
b. Rubble	6	6	6	6	Missing Mortar
c. Alignment	8	8	8	8	
d. Timber	N	N	N	N	
4. Piers	N	N	N	N	
a. Concrete	N	N	N	N	
b. Rubble	N	N	N	N	
c. Alignment	N	N	N	N	
d. Timber	N	N	N	N	
5. Bents	N	N	N	N	
a. Piles	N	N	N	N	
b. Caps	N	N	N	N	
c. X Bracing	N	N	N	N	
6. Superstructure	5	5	5	5	
a. Girder	N	N	N	N	
b. Beams	5	5	5	5	
c. Floorbeams	N	N	N	N	
d. Hangers, Pins	N	N	N	N	
e. Expansion Devices	N	N	N	N	
f. Slab or Deck	6	6	6	6	
g. Surfacing	8	7	7	7	
h. Curbs	N	N	N	N	
i. Sidewalks	N	N	N	N	
j. Parapet, Balust., Handrail	N	N	N	N	
k. Drainage Devices	N	N	N	N	
l. Approaches					
7. Slope Protection	N	N	N	N	
8. Paint	N	N	N	N	
9. Stream Channel	7	7	7	7	
10. Removal of Vegetation	No	No	No	No	
11. Deck Punctures	None	None	None	None	
12. Identification Number	BC8020	BC8020	BC8020	BC8020	
13. Hardware	N	N	N	N	
14. Culvert and Retaining Walls	N	N	N	N	
15. Bearings	N	N	N	N	

2009 BALTIMORE CITY BRIDGE INSPECTION
BRIDGE NO. BC 8020
FLEET STREET AT CENTRAL AVENUE OVER HARFORD RUN
BRIDGE INSPECTION FINDINGS

Description

Bridge No. BC 8020 is a single span concrete-encased steel beam bridge built in 1920 (see Photograph Nos. 1 - 5). The bridge spans 24'-0" and has an overall length of 26'-0" with a curb-to-curb width of 26'-4" and carries two lanes in multiple directions through an intersection. The superstructure consists of six concrete-encased steel beams supporting a reinforced concrete deck with an asphalt wearing surface. The substructure consists of stone masonry abutments. There are no approach traffic barriers along the approaches or on the bridge, however, these are not required due to urban features.

The bridge is not posted. The bridge was inspected on August 24, 2010. The numbering convention for reporting purposes is from the north and the west.

Inspection Access

The inspection of Bridge No. BC 8020 required chest waders, extension ladder and a boat. The bridge is located between and abuts up to an unknown culvert to the north and BC 1255 to the south. Access was obtained through the underside of BC 8018, BC 1555, BC8019, and BC1255.

Inspection Findings

Overall the bridge is in fair condition. The following is a summary of the bridge inspection findings. For a more detailed description of the condition of each bridge element, see Pontis form:

Approach Roadways

1. The approach roadways and transitions are generally smooth and in good condition. The bridge is located under the intersection of Fleet Street and Central Avenue.

2. The approach roadway pavement is in good condition exhibiting only minor transverse cracks in the east approach pavement.

Deck

1. The deck and wearing surface are in satisfactory condition.

2. There are two full length longitudinal cracks up to 1/8" wide located in the pavement construction joints in the eastbound lane.

3. A 2' wide x 15' long area of up to 1" wide transverse cracks exists at the West Abutment.

Superstructure

1. The superstructure is in fair condition.

2. The steel beam concrete encasements are cracked up to 1/8" wide and delaminated along the bottom flanges approximately 90% of the total beam lengths.

3. The bottom flanges of Beams 4, 5 and 6 (see Photograph No. 6) are exposed up to 12' in length and Beam 1 (see Photograph No. 7) is exposed up to 10' in length. The exposed steel has moderate corrosion however any section loss is indeterminable.

4. There is minor water leakage through the top slab at the joint with Bridge No. BC 1255.

Substructure

1. The stone masonry abutments are in satisfactory condition.

2. The concrete backwalls are in good condition.

3. Approximately 10% of the mortar is missing in the stone masonry abutment joints above the waterline.

Stream Channel

1. The stream channel consists of hard sand and gravel.

Review of Previous Report

The 2007 Bridge Inspection Report was available and used for comparison purposes. The overall condition of the structure differed from the previous report as noted:

The following repairs have been completed since the previous inspection:

1. No repairs were noted.

The following defects have progressed since the previous inspection:

1. No significant change in defects since the last inspection.

The following are new defects noted in the current inspection:

1. No new defects since the last inspection.

Review of Item 113 - Scour Potential Rating

Item 113 was originally rated 6U, indicating that the bridge foundation type is

unknown. Comparison of soundings from consecutive cycles indicates that only minor scour is occurring. Based on this comparison and in accordance with Chapter 7 of SHA's Manual for Hydrologic and Hydraulic Design, a rating of 5B is recommended for this structure. A multi-disciplinary scour evaluation should be performed for this structure in order to refine this rating.

Load Ratings Summary/Posting Recommendation

Whether due to deterioration or rehabilitation, the overall condition of the structure and rated components has not significantly changed since the 2005 inspection. The following Maryland Legal Load Limits were reproduced from the 2007 inspection report. Since review of load rating computations is beyond the scope of this inspection, no representation is hereby made or responsibility hereby assumed for the accuracy of the following tabulation:

Vehicle	Gross Vehicle Weight	Inventory (Tons)	Operating (Tons)
H-15	15 tons	33	55
HS-20	36 tons	60	99
Type 3	33 tons	39	65
Type 3S2	40 tons	69	99

Based on the above ratings, the bridge does not require posting for weight restriction.

2009 BALTIMORE CITY BRIDGE INSPECTION
BRIDGE NO. BC 8020
FLEET STREET AT CENTRAL AVENUE OVER HARFORD RUN
RECOMMENDATIONS

Item	Quantity	Units	Unit Cost	Total Cost
Immediate				
None				$0.00
Subtotal (Immediate)				**$0.00**
Short Term				
None				$0.00
Subtotal (Short Term)				**$0.00**
Long Term				
1. Remove loose concrete encasement and clean and paint the exposed portions of the steel beams.	1	SF	$14,000.00	$14,000.00
2. Repoint the masonry joints.	1	LS	$6,000.00	$6,000.00
3. Seal cracks in concrete cover over beams.	75	LF	$60.00	$4,500.00
Subtotal (Long Term)				**$24,500.00**
Total Maintenance Cost				**$24,500.00**

2009 BALTIMORE CITY BRIDGE INSPECTION
BRIDGE NO. BC 8020
FLEET STREET AT CENTRAL AVENUE OVER HARFORD RUN
PHOTOGRAPHS

1. Looking North

2. West Approach (Looking West)

2009 BALTIMORE CITY BRIDGE INSPECTION
BRIDGE NO. BC 8020
FLEET STREET AT CENTRAL AVENUE OVER HARFORD RUN
PHOTOGRAPHS

3. West Approach (Looking East)

4. East Approach (Looking East)

2009 BALTIMORE CITY BRIDGE INSPECTION
BRIDGE NO. BC 8020
FLEET STREET AT CENTRAL AVENUE OVER HARFORD RUN
PHOTOGRAPHS

5. East Approach (Looking West)

6. West End of Beam 6 with Exposed Bottom Flange

7. East End of Beam 1 with Exposed Bottom Flange

Structure Inventory and Appraisal Forms

STRUCTURE INVENTORY AND APPRAISAL REPORT

BRIDGE NUMBER: BC8020001

IDENTIFICATION FORM 1 OF 8

(8) STRUCTURE NUMBER: 2 00000 Major Structure BC 8020 01 Major Structure > 20' 0" 0 Single Structure

(7) FACILITY CARRIED: CENTRAL AVENUE

(6) FEATURE INTERSECTED: HARFORD RUN

(27) YEAR BUILT: 1920 **(106) YEAR RECONSTR:** 0000

(1) STATE CODE: 243 **(2) DISTRICT CODE:** 04

(3) COUNTY CODE: 510 **(4) PLACE CODE:** 04000

(5) INVENTORY ROUTE: 1 Route carried "on" the structure 5 City Street Route Prefix 1 Mainline Level of Service 01230 Number 0 NA Direction

(9) LOCATION: CENTRAL AVE. AT FLEET ST.

(11) MILE POINT: 000230 **(16) LATITUDE:** 00000

(17) LONGITUDE: 000000 **(28) LANES ON:** 02 **LANES UNDER:** 00

(42) TYPE OF SERVICE ON: 4 Highway-Railroad **TYPE OF SERVICE UNDER:** 5 Waterway

(98) BORDER STATE: **BORDER STATE'S SHARE %:**

(99) BORDER STATE'S NUMBER:

(262) NAME OF STRUCTURE:

CLASSIFICATION FORM 2 OF 8

(104) HWY SYSTEM: 0 Structure/Route is NOT on NHS

(26) FUNCTION CLASS: 19 Urban Local

(100) DEFENSE HWY: 0 Not a defense highway

(101) PARALLEL STRUCT: N No parallel structure

(102) DIRECTION: 2 2-way traffic

(103) TEMP STRUCT:

(110) NAT'L NTWK: 0 Inventory route not on Network

(20) TOLL: 3 On free road

(21) MAINTENANCE: 04 City or Municipal Highway Agency

(22) OWNER: 04 City or Municipal Highway Agency

(37) HISTORICAL: 5 Not eligible

TRAFFIC

(19) DETOUR: 01 **(29) ADT:** 006020 **(114) FUTURE ADT:** 007345

(109) TRUCK ADT %: 05 **(30) ADT YEAR:** 07 **(115) FUTURE ADT YEAR:** 27

Bridge Number: BC8020001 1

STRUCTURE TYPE AND MATERIAL — FORM 3 OF 8

(43) STRUCT TYPE:	C	Steel	35	Concrete Encased Steel Beam	**(274) MAIN SUPP MEMBERS:** N
(44) STRUCT TYPE - APPR:	0	Not Applicable	00	Other	
(206) SUPPL TYPE - MAIN:			**(207) SUPPL APPROACH:**	N	Not Applicable
(208) STRUCT TYPE - WIDENED/EXTENDED:	N	N/A	N	N/A	N N/A
(228) FOOTING - ABUTMENT:	5		1	Timber Pile	0 Entire Structure
(229) SUBSTRUCT ABUTMENT:	5	Stone	8	Gravity	0 Entire Structure
(230) FOOTING - PIER:	N	Not Applicable	N	Not Applicable	N
(231) SUBSTRUCTURE PIER:	N	Not Applicable	N	Not Applicable	N
(233) SUPSTRUCT DESIGN:	0	Non- Composite	0		
(277) SUBSTRUCT - SPECIAL:	N		**(219) SLOPE PROTECTION:**	0	None
(221) STRUCTURAL STEEL:	07	Unknown	**(235) PARAPET:**	0	None
(242) BEARING TYPE:	A	None	A	None	A None
(107) DECK STRUCTURE TYPE:	1	Concrete Cast-in-Place	**(270) CONCRETE SLAB:**	N	Not Applicable
(271) REBARS:	N		**(272) ADMIXTURES:**	N	
(108) WEARING SURFACE:	6	Bituminous	8	Unknown	8 Unknown
(243) JOINT TYPE:	A	None	A	None	A None
(236) RAILING:	0 0	None - None	0 0	None - None	
(237) FENCING:	0 0	None - None			
(278) PAINT SYSTEM:	N	Not Applicable			
(344) PAINT COLOR / NUMBER:	N				

GEOMETRICS — FORM 4 OF 8

(112) NBIS BRIDGE LENGTH:	Y	**(49) STRUCTURE LENGTH:**	000026
(210) NUMBER OF SPANS:	001	**(48) LENGTH MAX SPAN:**	0024
(45) # SPANS IN MAIN UNIT:	001	**(46) # APPROACH SPANS:**	0000
(209) # CONTINUOUS SPANS:	00		
(211) SPAN LENGTH 1:	S024S	**(212) SPAN LENGTH 2:**	
(213) SPAN LENGTH 3:		**(214) SPAN LENGTH 4:**	
(215) SPAN LENGTH 5:		**(216) SPAN LENGTH 6:**	
(217) SPAN LENGTH 7:		**(218) SPAN LENGTH 8:**	
(238) # STRINGER - ORIGINAL:	06	**(239) # STRINGERS - WIDENED:**	00
(240) SPACING - ORIGINAL:	0	**(241) SPACING - WIDENED:**	N
(51) DECK CURB-CURB WIDTH	0263	**(52) DECK OUT-OUT WIDTH:**	0263
(50) CURB/SIDEWALK WIDTHS:	000 000	**(223) SHOULDER WIDTHS:**	N N N N
(33) BRIDGE MEDIAN:	0	**(205) MEDIAN WIDTH:**	
(32) APPROACH ROAD WIDTH:	00 026 00	**(35) STRUCTURE FLARED:**	0
(10) INVENT ROUTE, MIN VERT CLEAR:	9999	**(47) INVENT ROUTE, TOTAL HORIZ CLEAR:**	263
(53) BRIDGE ROADWAY, MIN VERTCLEAR:	9999		

Bridge Number: BC8020001

2

GEOMETRICS (Cont.) FORM 5 OF 8

(54) MIN VERTICAL UNDERCLEARANCE: N Feature not a highway or a railroad A

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

(56) MIN LATERAL UNDERCLEARANCE (LEFT): 000

(342) HORIZONTAL CLEARANCE - ON: 263

(280) HORIZONTAL CLEARANCE - UNDER

(34) SKEW, IN DEGREES: 00

(253) NUMBER OF CELLS: N

(256) SPAN OF CELLS: N

(258) EARTH FILL: N

(343) CENTERLINE LENGTH - CULVERTS/PIPES: N

(254) RISE: N

LOAD RATINGS AND POSTINGS

(41) STATUS: A Open

(31) DESIGN LOAD: 0 Other

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

(224) WEIGHT POSTED, KIPS: SINGLE VEH. (First 2 Digits) N COMBO VEH. (Second 2 Digits)

(64) OPERATING RATING:	2	99	(66) INVENTORY RATING:	2	60
(464) OPERATING RATING - H:	1	55	(466) INVENTORY RATING - H:	1	33
(564) OPERATING RATING - HS:	2	99	(566) INVENTORY RATING - HS:	2	60
(664) OPERATING RATING - T3:	4	65	(666) INVENTORY RATING - T3:	4	39
(764) OPERATING RATING - 3S2:	5	99	(766) INVENTORY RATING - 3S2:	5	69

(225) SPEED LIMIT ON STRUCTURE N

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

(227) MIN VERT UNDERCLEARANCE POSTED: 0 No

BMS CONDITION RATINGS FORM 6 OF 8

(90) INSPECTION DATE: 08/24/2010

(91) INSPECTION FREQUENCY, MONTHS: 24

	FRACTURE CRITICAL	UNDER WATER	OTHER SPECIAL
(92) CRITICAL FEATURE INSP:	N	Y60	N
(93) CRIT FEATURE INSP DATE		0808	

(58) DECK: 6

(59) SUPERSTRUCTURE 5

(60) SUBSTRUCTURE: 6

(61) CHANNEL: 7

(62) CULVERT: N

(332) POSTING SIGNS: N Not Applicable

(307) UNDER CONSTRUCTION: 0

(340) INSPECTION CLASSIFICATION

B Boat

D Diver

L Ladder

W Waders

Bridge Number: BC8020001 3

APPRAISAL

FORM 7 OF 8

(67) STRUCTURAL EVALUATION: 5

BSR 69.3

(68) DECK GEOMETRY: 2

(69) UNDERCLEARANCE: N

(72) APPROACH ALIGNMENT: 8

(71) WATERWAY ADEQUACY: 7

(36) TRAFFIC SAFETY FEATURES

RAILINGS: N Not Applicable

APPROACH BARRIER: N Not Applicable

TRANSITIONS: N Not Applicable

APPROACH BARRIER ENDS: N Not Applicable

(113) SCOUR EVALUATION: 5B Foundations are stable due to assessment of scour conditions.

NAVIGATION AND HYDRAULIC

(38) NAVIGATION CONTROL: 0

(39) NAV VERT CLEARANCE: 000

(40) NAV HORIZONTAL CLEARANCE: 0000

(111) PIER/ABUTMENT PROTECTION:

(116) MIN NAV VERT CLEARANCE, VERT LIFT BRIDGE

(247) DESIGN YEAR STORM:

(248) RUN-OFF Q:

(249) DRAINAGE AREA:

(250) STRUCTURE IN TIDAL AREA: 1 Yes

(251) HIGH WATER ELEVATION:

(252) YEAR HIGH WATER ELEVATION - LATEST:

HISTORY AND PROPOSED IMPROVEMENTS

FORM 8 OF 8

(201) CONTRACT NUMBERS:

(202) CONTRACT NUMBERS:

(203) SHA SPEC-YEAR: 00

(204) AASHTO SPEC-YEAR: 00

(263) SHA SPEC RECON 1:

(264) SHA SPEC RECON 2:

(265) AASHTO SPEC RECON 1

(266) AASHTO SPEC RECON 2:

(75) TYPE OF WORK: 38 1

(76) LENGTH OF IMPROVEMENT: 000026

(94) BRIDGE IMPROVE COST: 000025

(95) ROADWAY IMPROVE COST: 000002

(96) TOTAL PROJECT COST: 000027

(97) YEAR OF IMPROVEMENT: 07

MISCELLANEOUS

(244) SIGNS ON STRUCTURE 0 No

(245) BRIDGE ROADWY LIGHTING 0 No

(246) ROADWAY LIGHTING: 0 No

(260) UTILITIES - ON:

2 Electric/Pavement Sensors
0 None
0 None
0 None
0 None

(261) UTILITIES - UNDER:

0 None
0 None
0 None
0 None
0 None

REMARKS:

Bridge Number: BC8020001 4

PONTIS Form

2009 BALTIMORE CITY BRIDGE INSPECTION
BRIDGE NO. BC 8020
FLEET STREET AT CENTRAL AVENUE OVER HARFORD RUN
PONTIS FORM

BRIDGE NUMBER: BC 8020 INSPECTION DATE: 08/24/2010

(58) DECK	6	**(59) SUPERSTRUCTURE**	5	**(60) SUBSTRUCTURE**	6
(61) CHANNEL	7	**(62) CULVERT**	N		

ELEMENT		TQ	CS 1	CS 2	CS 3	CS 4	CS 5
014	**Concrete Deck, Protected, with AC Overlay (EA)**	1	1				

The deck and wearing surface are in satisfactory condition. There are two full length longitudinal cracks up to 1/8" wide located in the pavement construction joints in the eastbound lane. A 2' wide x 15' long area of up to 1" wide transverse cracks exists at the West Abutment.

178	**Steel Open Girder, Concrete Encased (LF)**	150	15	103	32		

The concrete encased steel beams are in fair condition. The steel beam concrete encasements are cracked up to 1/8" wide and delaminated along the bottom flanges of approximately 90% of the total beam lengths. The bottom flanges of Beams 4, 5 and 6 are exposed up to 12' in length at the west end and Beam 1 is exposed up to 10' in length at the east end with an indeterminable amount of section loss.

217	**Other Material Abutment (LF)**	70	50	20			

The stone masonry abutments are in satisfactory condition. The concrete backwalls are in good condition. Approximately 10% of the mortar is missing in the stone masonry abutment joints above the waterline.

218	**Reinforced Concrete Abutment Backwall (LF)**	70	70				

The abutment backwalls are in satisfactory condition.

322	**Roadway Approach Transition (EA)**	4	4				

The approach roadways and transitions are generally smooth and in good condition. The bridge is located under the intersection of Fleet Street and Central Avenue. The approach roadway pavement is in good condition exhibiting only minor transverse cracks in the east approach pavement.

345	**Stream Channel (ENTIRE BRIDGE)**	1					

The channel bottom consists of hard sand and gravel.

359	**Soffit (EA)**	1	1				

The soffit is in satisfactory condition. There is minor water leakage through the top slab at the joint with Bridge No. BC 1255.

Bridge No. BC-8020 (Fleet Street at Central Avenue over Harford Run)

SOUNDING SHEET

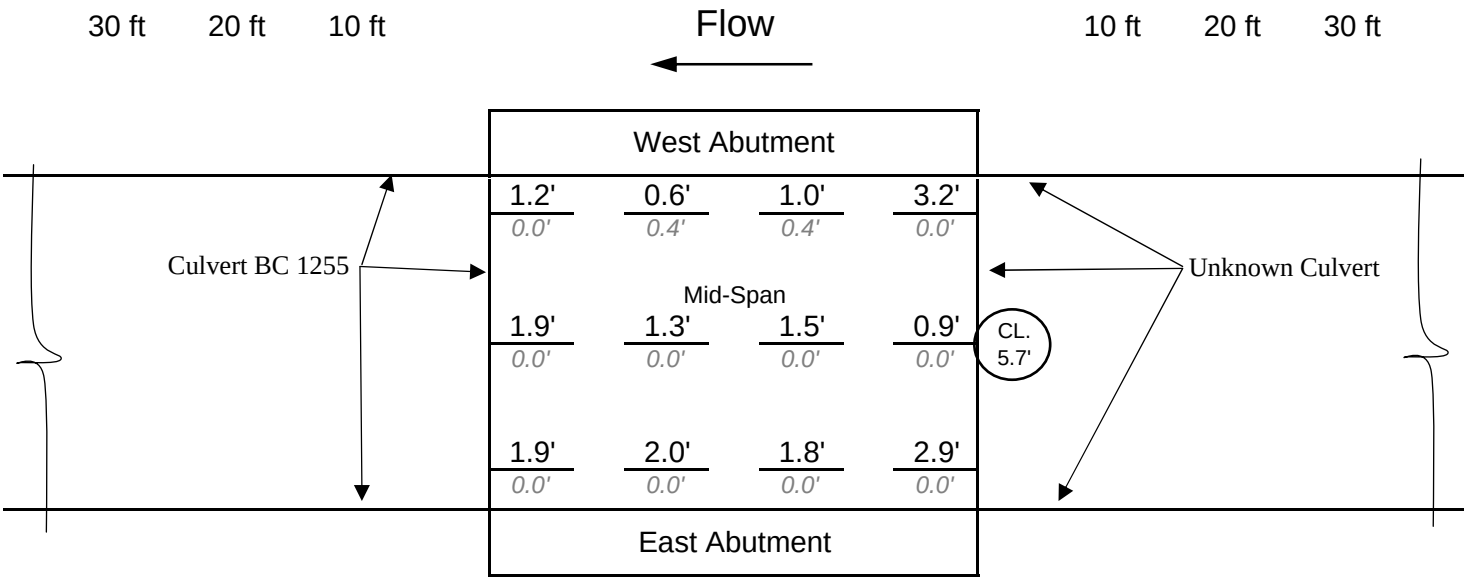
(All measurements are in feet)

North

Clearance Location: Bottom of the Beam to Water Line at Mid-span

Clearance is the distance measured from the water surface to the clearance location.

Inspectors: NZ/MH



Streambed Composition: soft silt

Legend: X.X - Current Soundings (**Red** numbers indicate degradation of 2.0' or more compared to Base Year)
(**Green** numbers indicate aggradation of 2.0' or more compared to Base Year)

X.X - 2002 Base Year Soundings (Adjusted for difference in water surface elevation)

CL. X.X' - Clearance

- Edge of Stream

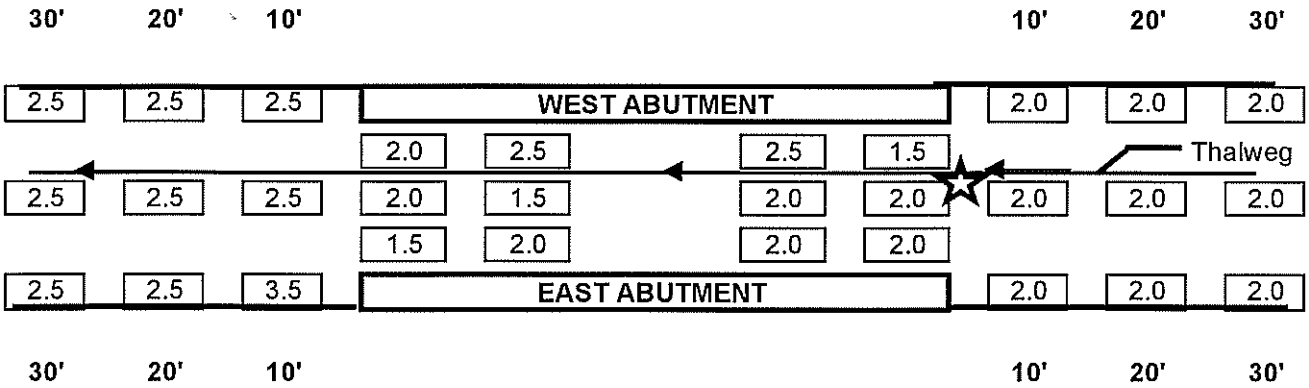
BALTIMORE CITY
BRIDGE SOUNDING REPORT

BRIDGE: **BC 8020** **INSPECTION DATE:** **1/29/2002**

<<<<<<<FLOW DIRECTION

N

Note: All water levels are rounded to the nearest 6"



Datum: ☆ **2'- 6" Distance from the bottom of the beam to the waterline.**