

2018 INVENTORY, APPRAISAL & INSPECTION SNAPSHOT

Harrison County

Inventory Data - BR 87 NBIS Bridges Only

	<u>NBIS COUNT</u>
NBIS Bridges > 20'	79
Bridges 10'-20'	<u>66</u>
	145
*Possible NBIS length errors	0

Item 221	Inspection Responsibility	CODE	COUNT	%
	County	3	79	100.0%
Item 21	Maintenance responsibility			
	County	3	73	92.4%
	City or other local	4	6	7.6%
	Railroad	6	0	0.0%
	Private	7	0	0.0%
	Combination	8	0	0.0%
	ODNR	A	0	0.0%
	Park District	C	0	0.0%
	Township	F	0	0.0%
			79	100.0%
Item 42A	*Type service on bridge			
	Other	0	0	0.0%
	Highway	1	78	98.7%
	Railroad	2	0	0.0%
	Ped/Bikeway	3	0	0.0%
	Hwy/RR	4	0	0.0%
	Hwy/Ped	5	1	1.3%
	RR Abnd. rails rem'vd	A	0	0.0%
			79	100.0%
Item 42B	*Type service under bridge			
	Hwy w/ or w/o Ped	1	1	1.3%
	Railroad	2	3	3.8%
	Ped/Bkwy	3	0	0.0%
	Hwy w/ RR	4	0	0.0%
	Waterway	5	75	94.9%
	Hwy/Waterway	6	0	0.0%
	RR/Waterway	7	0	0.0%
	Hwy/Wtrway/RR	8	0	0.0%
	Relief (RR w/o tracks)	9	0	0.0%
			79	100.0%

ITEMS	*Structure Type (Items 43A, 43B, 43C)	CODE	COUNT	%
	concrete slab simple	111	1	1.3%
	concrete slab continuous	112	4	5.1%
	concrete beam simple	121	2	2.5%
	concrete frame simple	171	1	1.3%
	concrete culvert filled	195	1	1.3%
	prestressed conc. beam simple	221	6	7.6%
	prestressed conc. box beam simple	231	14	17.7%
	prestressed conc. box beam continuous	232	1	1.3%
	steel beam simple	321	30	38.0%
	steel beam continuous	322	1	1.3%
	steel girder thru	364	2	2.5%
	steel culvert filled	395	1	1.3%
	aluminum culvert filled	695	15	19.0%
			79	100.0%

Item 92A	*Fracture Critical	CODE	COUNT	%
	fracture critical member	Y	2	2.5%
	fracture critical member	N	75	94.9%
			77	97.5%
	No. of steel trusses and girders	34x, 36x		

2 bridges have FC = Y/N BLANK

Item 92B	Underwater	CODE	COUNT	%
	requires dive inspection	N	77	97.5%
	requires dive inspection	Y	0	0.0%
	dive inspection dates		0	0.0%
			77	97.5%

2 bridges have UW = Y/N BLANK

Item 113	Scour	CODE	COUNT	%
	Bridge not over waterway	N	4	5.1%
	unknown foundation	U	0	0.0%
	over tidal waters	T	0	0.0%
	foundations on dry land	9	1	1.3%
	stable above footing	8	10	12.7%
	countermeasures installed	7	4	5.1%
	no scour evaluation made	6	0	0.0%
	stable within footer limits	5	60	75.9%
	stable action needed	4	0	0.0%
	scour critical - unstable	3	0	0.0%
	scour critical - scour present	2	0	0.0%
	scour critical - failure imminent	1	0	0.0%
	scour critical - bridge failed	0	0	0.0%
			79	100.0%

Scour Photos on Schedule?

Item 709	*Plan Information	2	CODE	COUNT	%
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no plans	0	5	6.3%
plans available	1	17	21.5%
field information	2	57	72.2%
not applicable	N	0	0.0%
		79	100.0%

Item 63	*Documented Engineering Judgment		COUNT	%
	Field Eval & Doc EJ*		5	6.3%
	Rating Code in Error	D and F	0	
		0 171 or 195		

BR_100 for these bridges?

ITEMS	*Rating Factor	(Items 64, 66)	COUNT	%
	Inventory RF >= Operating RF		0	0.0%
	* Inventory Rating Factor < 40% Operating RF (Too Low)		0	0.0%
	Operating Rating Factor < 40% Ohio % Legal (Too Low)		0	0.0%
	Op RF < 0.61 not Posted		0	0.0%
	Op RF in tons for Eng Judgment		0	0.0%

Item 63	*Method Of Rating = 5		COUNT	%
			0	0.0%

Item 580	*Deep Culverts	(depth of fill)	COUNT	%
	Culvert	fill>6.5'	0	0.0%

Items	195 Culvert vs 171 Frame	(Items 43A, 43B, 43C)	COUNT	%
	# that do NOT meet the 2' Rule		1	1.3%

Item 63	*Method of Analysis	CODE	COUNT	%
	Field Eval & Doc. Eng Judgment	0	5	6.3%
	Load testing	4	0	0.0%
	No Rating done	5	0	0.0%
	Load Factor (LF)	6	72	91.1%
	WS or AS	7	0	0.0%
	Load & Resistance Factor	8	2	2.5%
	Assigned Rating (LFR) HS20	D	0	0.0%
	Assigned Rating (LFR) HL93	F	0	0.0%
	Not applicable (Ped, RR, Bldg)	X	0	0.0%
			79	100.0%

REMINDER:

Load Factor required for bridges built after 1993 (with certain exceptions)
LRFR required for bridges built after 2010

Inspection Condition Data - BR 86 NBIS Bridges Only

Item 41	Operating Status	CODE	COUNT	%
	Open, No restriction	A	66	83.5%
	Open, posting recommended	B	0	0.0%
	Open, Half width construction	C	0	0.0%
	Open because of temporary fix	D	0	0.0%
	Open using temporary structure	E	0	0.0%
	New struture not yet open	G	0	0.0%
	closed for load capacity reason*	K	1	1.3%
	Posted for load capacity*	P	12	15.2%
	Posted for other than load	R	0	0.0%
	Closed for other than load	X	0	0.0%
			79	100.0%

General Appraisal		CODE	COUNT	%
GOOD	22.8%	Excellent	9	11.4%
		Very good	7	8.9%
		Good	2	2.5%
FAIR	67.1%	Satisfactory	42	53.2%
		Fair	11	13.9%
POOR	10.1%	Poor	7	8.9%
		Serious	1	1.3%
		Critical	0	0.0%
		Imminent Failure	0	0.0%
		Closed	0	0.0%
			79	100.0%

FHWA Performance Measures

Performance	% Deck Area		Lowest of GA or Deck	COUNT	Deck s.f
GOOD	26.4%	19.5%	9 Excellent	9	19,364
		5.9%	8 Very good	7	5,845
		1.0%	7 Good	2	1,001
FAIR	64.1%	48.0%	6 Satisfactory	42	47,705
		16.0%	5 Fair	11	15,949
POOR	9.6%	5.6%	4 Poor	7	5,536
		4.0%	3 Serious	1	3,973
		0.0%	2 Critical	0	0
		0.0%	1 Imminent Failure	0	0
		0.0%	0 Closed	0	0
		100.0%	100.0%	79	99,373

Item 41	*Posted but % Legal >= 100	COUNT	%
		5	6.3%

Items	AGE of BRIDGES (Items 27, 106)	YEAR (built or rehab)	COUNT	
		-1900	4	5.1%

1901-1910	0	0.0%
1911-1920	1	1.3%
1921-1930	0	0.0%
1931-1940	2	2.5%
1941-1950	5	6.3%
1951-1960	12	15.2%
1961-1970	0	0.0%
1971-1980	8	10.1%
1981-1990	14	17.7%
1991-2000	16	20.3%
2001-2010	11	13.9%
2011-2020	6	7.6%
	<u>79</u>	<u>100.0%</u>

LOAD RATING DEADLINES		<u>Deadline</u>	<u>Total</u>	<u>Complete</u>	<u>Remaining</u>
EV & SHV	< 1mile from Interstate	end 2019	0	0	0
EV & SHV	> 1 mile from Interstate	HOLD	27	0	27
SHV & EV	<138% and < 200' span	end 2020	15	1	14

EV: HL93<0.9, HS20< 1.0, Distance from Interstate

SHV: Controlling RF<1.38, < 200' span

(SC)	Substantially Compliant
(CC)	Conditionally Compliant (Adhering to approved plan of corrective action)
(NC)	Not Compliant

***METRIC 6 Insp. Frequency Routine**

Bridge Inspections Overdue	ACTUAL COUNT	% COMPLIANT	COMPLIANCE
NBIS - 24 months	0	100.0%	(C)
ORC - Calendar Year	0	100.0%	(SC)
BIM - 18 months	0	100.0%	(SC)

METRIC 8 - Insp. Frequency Underwater

Dive Inspections Overdue	ACTUAL COUNT	% COMPLIANT	COMPLIANCE
60 months	0	N/A	(C)

METRIC 10 - Insp. Frequency FC Member

FC Inspections Overdue	ACTUAL COUNT	% COMPLIANT	COMPLIANCE
24 months	0	100.0%	(C)

METRIC 13 - Load Rating

Type of Metric check	Need for compliance	# Not Rated	% of NBIS Rated	COMPLIANCE
Deck, Super, Sub, Culvert Summary <=4	100%	0	100.0%	(C)
Operating Status = D or E	100%	0	100.0%	(C)
FC=Y	100%	0	100.0%	(C)
Operating Status = P or R	100%	0	100.0%	(C)
Bridges with no restrictions	100%	0	100.0%	(C)

METRIC 14 - Post or Restrict

Bridge posting/closing Follow-through	COUNT	% COMPLIA NT	COMPLIANCE
Bridges below 10% legal but not closed	0	100.0%	(C)
Operating Rating Factor = 0 but not closed	0	100.0%	(C)
Bridges < 100% legal but not posted (OpStatus =A or R)	0	100.0%	(C)
Bridges to be posted but aren't (Op Status code B)	0	100.0%	(C)

METRIC 22 - Inventory (partial review)

Structure Length	ACTUAL COUNT	COMPLIANCE
Number of bridges with length or span difference	0	depends on sample size
*Culvert Span		
unusually long steel culvert spans	0	depends on sample size
*Location		
Item 9 Location	0	depends on sample size
missing coordinates	0	depends on sample size

PRELIMINARY FHWA 23 Metric Matrix

23 metrics used by FHWA to measure NBIS compliance

Compliance Codes for the following Metrics:

- (C) Compliant
- (SC) Substantially Compliant
- (CC) Conditionally Compliant (Adhering to approved PCA)
- (NC) Not Compliant

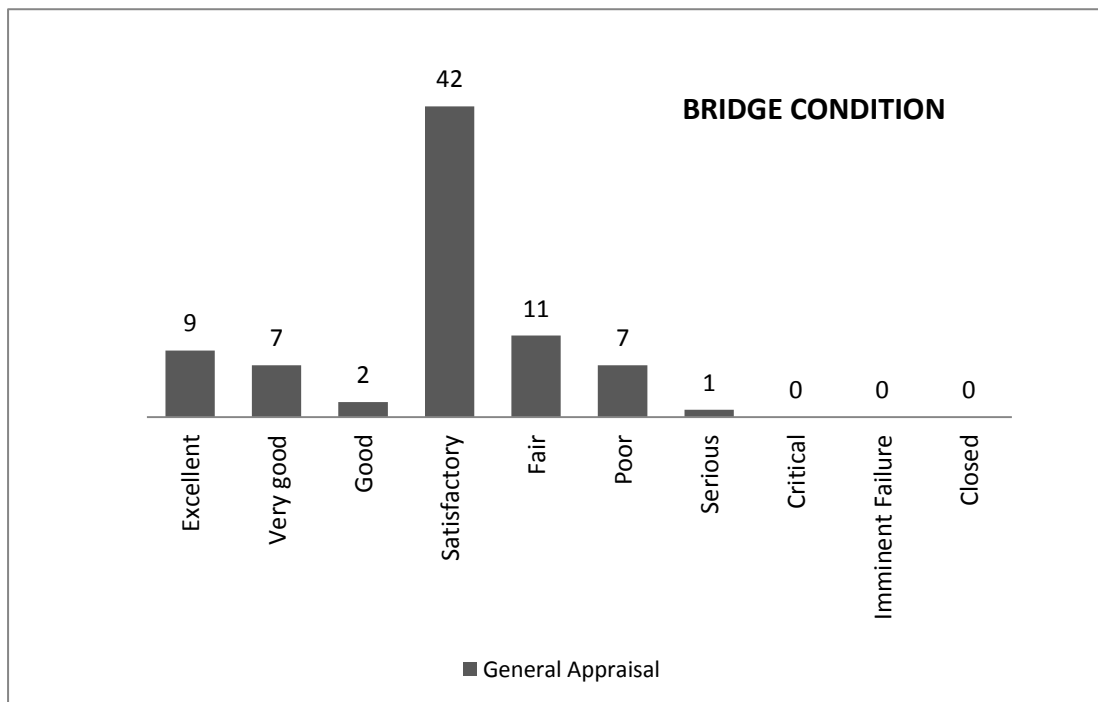
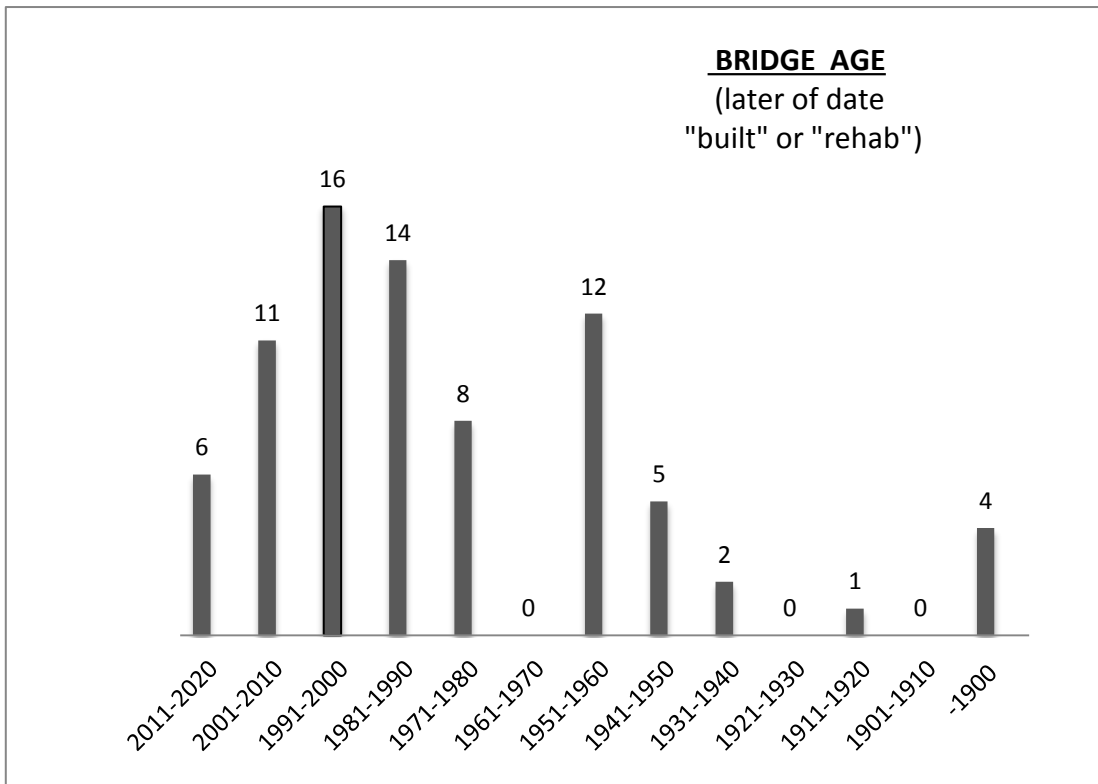
Metric	Description	(C)	(SC)	(CC)	(NC)
1	State Bridge Inspection Organization				
2	Program Manager Qualification				
3	Team Leader Qualification				
4	Load Rating Engineer Qualification				
5	UW Bridge Inspection Diver Qualification				
6	Routine Inspection Frequency - Low Risk				
7	Routine Inspection Frequency - High Risk				
8	UW Inspection Frequency - Low Risk				
9	UW Inspection Frequency - High Risk				
10	FC Inspection Frequency				
11	Frequency Criteria				
12	Inspection Quality ** 83%				
13	Load Rating				
14	Posted or Restricted Bridges				
15	Bridge Files				
16	FC Bridges				
17	UW inspection procedures				
18	Scour Critical Bridges				
19	Complex Bridges				
20	QC/QA				
21	Critical Findings				
22	Inventory ** 94%				
23	Updating of Data				

** based on results of Field Review

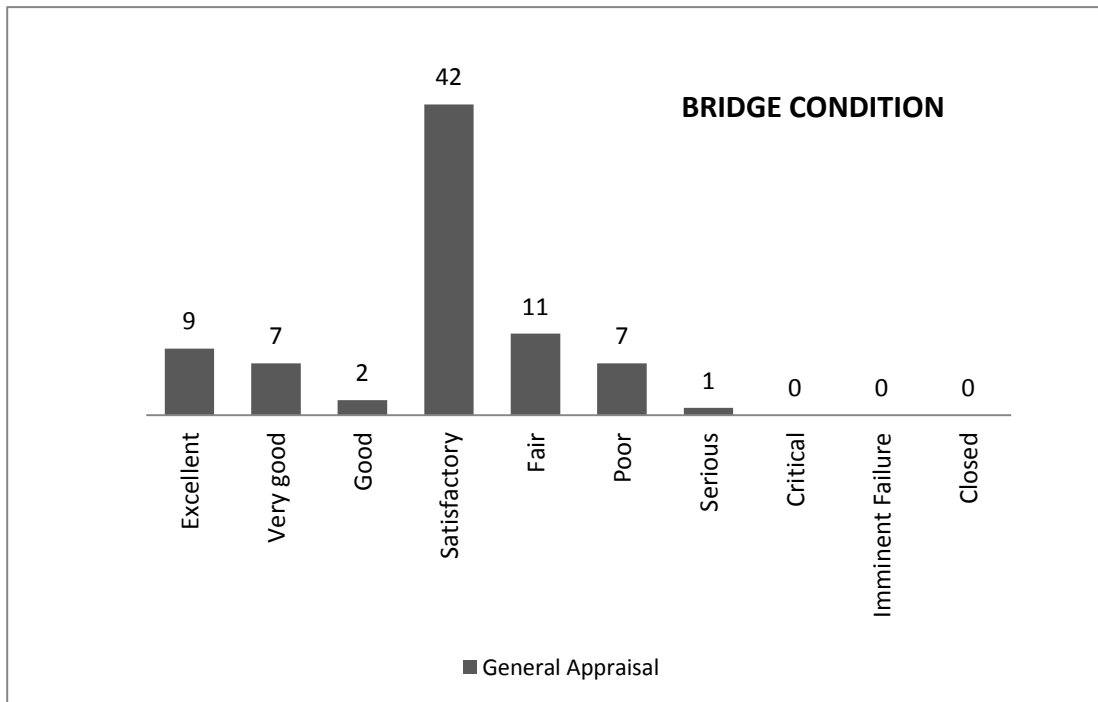
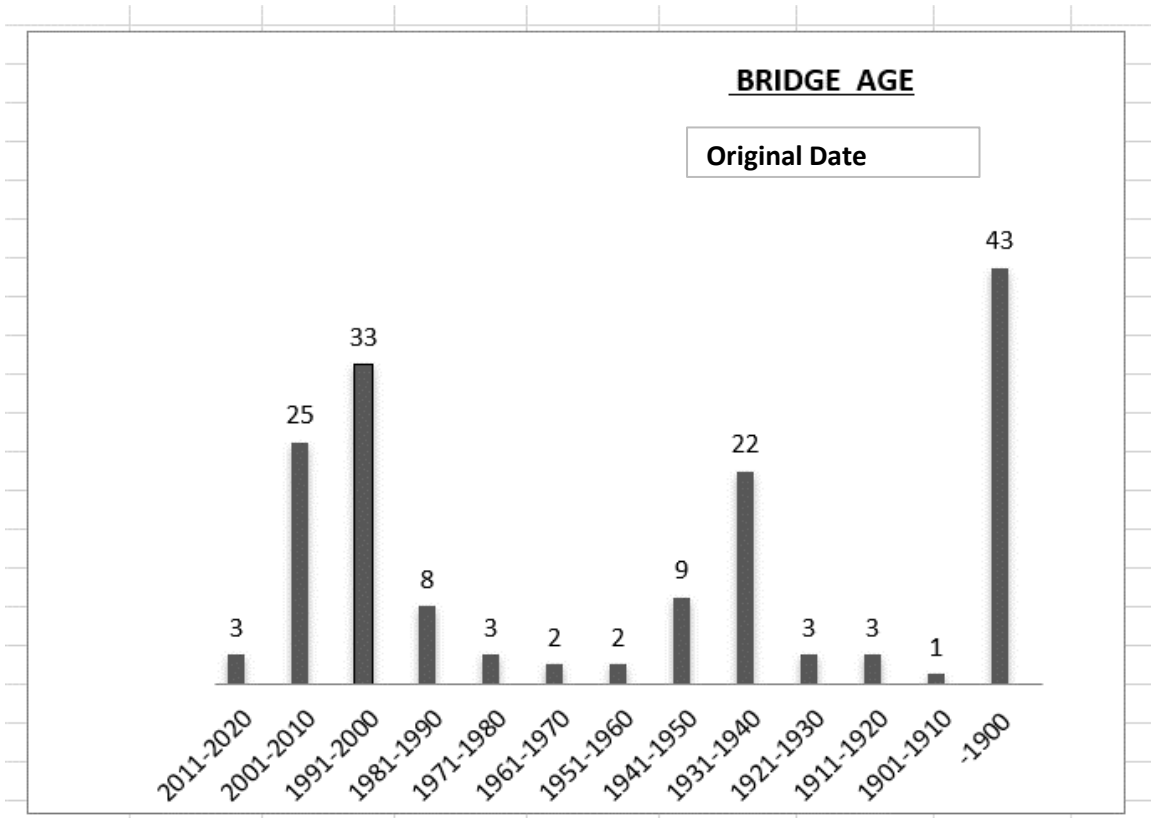
Metric	Action Needed
12	Ratings need to be within 1 value of the Manual, increase use of comments
13	Complete review of load ratings and postings and make corrections where needed
15	Complete filing system for bridges
22	Improve inventory, check items during inspection

AGE VS. CONDITION

Overall Shape of AGE and CONDITION graphs typically mirror each other



AGE VS. CONDITION



GENERAL APPRAISAL COMPARISON

