2018 INVENTORY, APPRAISAL & INSPECTION SNAPSHOT

Wayne County

Inventory Data - BR 87 NBIS Bridges Only

	NBIS COUNT
NBIS Bridges > 20'	**257**
Bridges 10'-20'	**0**
	257
***Possible NBIS length errors**	0

Item 221	Inspection Responsibility	CODE	COUNT	%
	County	3	257	100.0%
Item 21	**Maintenance responsibility**			
	County	3	257	100.0%
	City or other local	4	0	0.0%
	Railroad	6	0	0.0%
	Private	7	0	0.0%
	Township	F	0	0.0%
			257	100.0%
Item 42A	***Type service on bridge**			
	Other	0	0	0.0%
	Highway	1	245	95.3%
	Railroad	2	0	0.0%
	Ped/Bikeway	3	0	0.0%
	Hwy/RR	4	0	0.0%
	Hwy/Ped	5	12	4.7%
	RR Abnd. rails rem'vd	A	0	0.0%
			257	100.0%
Item 42B	***Type service under bridge**			
	Hwy w/ or w/o Ped	1	0	0.0%
	Railroad	2	0	0.0%
	Ped/Bkwy	3	0	0.0%
	Hwy w/ RR	4	0	0.0%
	Waterway	5	256	99.6%
	Hwy/Waterway	6	0	0.0%
	RR/Waterway	7	1	0.4%
	Hwy/Wtrway/RR	8	0	0.0%
	Relief (RR w/o tracks)	9	0	0.0%
	Other	0	0	0.0%
			257	100.0%

ITEMS	*Structure Type (Items 43A, 43B, 43C)	CODE	COUNT	%
	concrete slab simple	111	17	6.6%
	concrete slab continuous	112	24	9.3%
	concrete beam simple	121	7	2.7%
	concrete arch filled	155	1	0.4%
	concrete frame simple	171	12	4.7%
	concrete culvert filled	195	3	1.2%
	prestressed conc. beam simple	221	1	0.4%
	prestressed conc. box beam simple	231	105	40.9%
	prestressed conc. box beam continuous	232	2	0.8%
	steel beam simple	321	36	14.0%
	steel beam continuous	322	7	2.7%
	steel girder thru	364	25	9.7%
	steel culvert filled	395	2	0.8%
	steel truss pony	34A	15	5.8%
			257	100.0%

Item 92A	*Fracture Critical	CODE		COUNT	%
	fracture critical member	Y		40	15.6%
	fracture critical member	N		216	84.0%
	fracture critical member	Blank		1	0.4%
				257	100.0%
	No. of steel trusses and girders		34x, 36x	40	
	Fracture Critical File			**COUNT**	
	Required Fracture Critical Files	40	truss/girde	40	
	(including written Procedure and FPD)		2 girders	0	
	Gusset Pl. Analysis to be completed by December 31, 2011			**COUNT**	
	Required Gusset Plate Analysis	40	trusses	40	

Item 92B	*Underwater	CODE	COUNT	%
	requires dive inspection	N	256	99.6%
	requires dive inspection	Y	0	0.0%
	requires dive inspection	blank	1	0.4%
	dive inspection dates		0	0.0%
			257	100.0%

Item 113	Scour			
	Bridge not over waterway	N	0	0.0%
	unknown foundation	U	0	0.0%
	over tidal waters	T	0	0.0%
	foundations on dry land	9	3	1.2%
	stable above footing	8	209	81.3%
	countermeasures installed	7	0	0.0%
	no scour evaluation made	6	0	0.0%
	stable within footer limits	5	45	17.5%
	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%
			257	100.0%

Scour Photos on Schedule?

Item 709	Plan Information	CODE	COUNT	%
	no plans	0	11	4.3%
	plans available	1	188	73.2%
	field information	2	58	22.6%
	not applicable	N	0	0.0%
			257	100.0%

Item 63	*Documented Engineering Judgment			COUNT	%
	Field Eval & Doc EJ*			1	0.4%
	Rating Code in Error	D and F	0 171 or 195	0	

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%

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		0	0.0%

Item 63	*Method of Analysis	CODE	COUNT	%
	Field Eval & Doc. Eng Judgment	0	1	0.4%
	Load testing	4	0	0.0%
	No Rating done	5	0	0.0%
	Load Factor (LF)	6	211	82.1%
	WS or AS	7	38	14.8%
	Load & Resistance Factor	8	6	2.3%
	Assigned Rating (LFR) HS20	D	0	0.0%
	Assigned Rating (LRFR) HL93	F	1	0.4%
	Not applicable (Ped, RR, Bldg)	X	0	0.0%
			257	100.0%

Assigned Rating for WAY-C0052-00.98_(8554854) built 2017, looks good

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

Performance	% Bridges	General Appraisal	CODE	COUNT	% Bridges
		Excellent	9	111	43.2%
GOOD	66.5%	Very good	8	26	10.1%
		Good	7	34	13.2%
FAIR	26.5%	Satisfactory	6	45	17.5%
		Fair	5	23	8.9%
		Poor	4	16	6.2%
POOR	7.0%	Serious	3	2	0.8%
		Critical	2	0	0.0%
		Imminent Failure	1	0	0.0%
		Closed	0	0	0.0%
	100.0%			257	100.0%

Performance	% Deck Area		Lowest of GA or Deck	# Bridges	Deck s.f
		9	Excellent	103	179,223
GOOD	73.3%	8	Very good	31	54,378
		7	Good	36	59,876
FAIR	22.4%	6	Satisfactory	44	59,749
		5	Fair	24	29,825
		4	Poor	17	15,879
POOR	4.4%	3	Serious	2	1,602
		2	Critical	0	0
		1	Imminent Failure	0	0
		0	Closed	0	0
	100.0%			257	400,532

Performance Measure	NHS Bridges	Lowest of GA or Deck		Deck Area
WAY-C030A-0093 _(8558140)	PITTSBURG AVE.	6	Satisfactory	7144

Item 41 *Operating Status	CODE	COUNT	%
Open, No restriction	A	230	89.5%
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	0	0.0%
Posted for load capacity*	P	26	10.1%
Posted for other than load *	R	1	0.4%
Closed for other than load	X	0	0.0%
		257	100.0%

Item 41	Posted but % Legal >= 100	COUNT	%
		0	0.0%

Item 41	*NOT Posted but % Legal <100	COUNT	%
		1	0.4%

Items	AGE of BRIDGES	(Items 27, 106)	YEAR (built or rehab)	COUNT	
			-1900	0	0.0%
			1901-1910	0	0.0%
			1911-1920	2	0.8%
			1921-1930	2	0.8%
			1931-1940	9	3.5%
			1941-1950	0	0.0%
			1951-1960	8	3.1%
			1961-1970	16	6.2%
			1971-1980	31	12.1%
			1981-1990	49	19.1%
			1991-2000	73	28.4%
			2001-2010	53	20.6%
			2011-2020	14	5.4%
				257	100.0%

(C)	Compliant
(SC)	Substantially Compliant
(CC)	Conditionally Compliant (Adhering to approved pan 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%	N/A
BIM -	18 months	0	100.0%	N/A

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	Need for	# Not	% of NBIS	
*Type of Metric check	compliance	Rated	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	% COMPLIANT	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)

if sign is up this is OK

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 (Adheri
(NC) Not Compliant

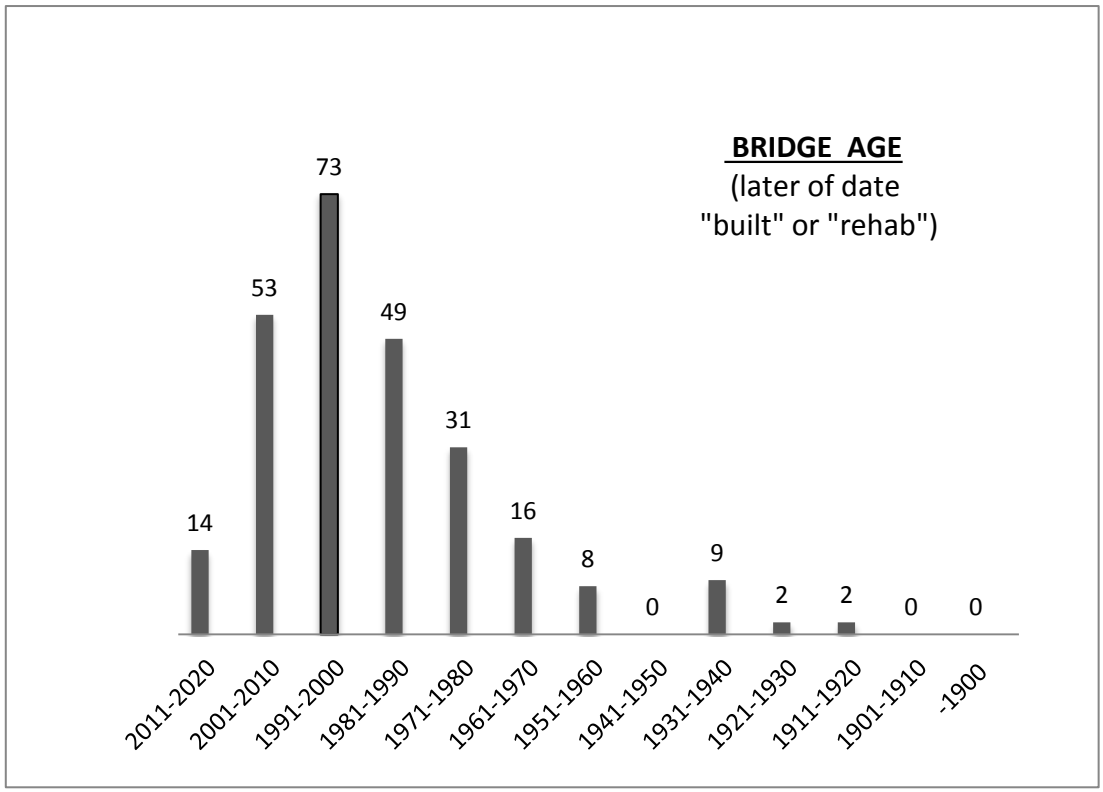
Metric	Description	(C)	(SC)	(CC)	(NC)
1	State Bridge Inspection Organization				
2	Program Manager Qualification				
3	Team Leader Qualification				
4	Load Rating Engineer Qualification				
5	UW Bridge Inspection Diver Qualification				
6	Routine Inspection Frequency - Low Risk				
7	Routine Inspection 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 **				
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 ** 95%				
23	Updating of Data				

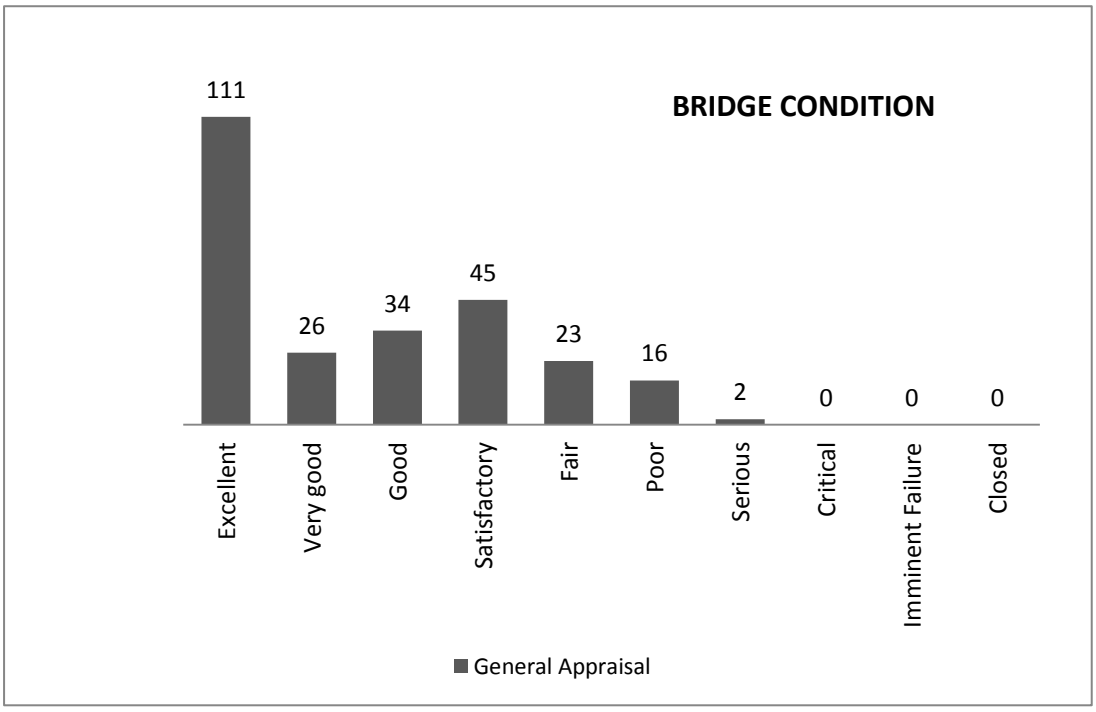
** based on results of Field Review

Metric	Action Needed

AGE VS. CONDITION

Overall Shape of AGE and CONDITION graphs typically mirror each other





GENERAL APPRAISAL COMPARISON