

2019 INVENTORY, APPRAISAL & INSPECTION SNAPSHOT

Ottawa County

Inventory Data - BR 87 NBIS Bridges Only

	<u>NBIS COUNT</u>
NBIS Bridges > 20'	92
Bridges 10'-20'	<u>21</u>
	113

*Possible NBIS length errors 2

Item 221	Inspection Responsibility	CODE	COUNT	%
	County	3	92	100.0%
Item 21	Maintenance responsibility			
	County	3	92	100.0%
	City or other local	4	0	0.0%
	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%
			92	100.0%
Item 42A	Type service on bridge			
	Other	0	0	0.0%
	Highway	1	92	100.0%
	Railroad	2	0	0.0%
	Ped/Bikeway	3	0	0.0%
	Hwy/RR	4	0	0.0%
	Hwy/Ped	5	0	0.0%
	RR Abnd. rails rem'vd	A	0	0.0%
			92	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	92	100.0%
	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%
			92	100.0%

ITEMS	Structure Type (Items 43A, 43B, 43C)	CODE	COUNT	%
	concrete slab simple	111	2	2.2%
	concrete slab continuous	112	3	3.3%
	concrete beam simple	121	11	12.0%
	concrete frame simple	171	3	3.3%
	prestressed conc. box beam simple	231	29	31.5%
	steel beam simple	321	10	10.9%
	steel beam continuous	322	2	2.2%
	steel arch deck	353	5	5.4%
	steel girder thru	364	1	1.1%
	steel truss (pony)	34A	26	28.3%
			92	100.0%

Item 92A	Fracture Critical	CODE	COUNT	%
	fracture critical member	Y	27	29.3%
	fracture critical member	N	65	70.7%
			92	100.0%
	No. of steel trusses and girders	27 34x, 36x	27	

Item 92B	Underwater	CODE	COUNT	%
	requires dive inspection	N	92	100.0%
	requires dive inspection	Y	0	0.0%
	dive inspection dates		0	0.0%
			92	100.0%

Item 113	Scour	CODE	COUNT	%
	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	0	0.0%
	stable above footing	8	77	83.7%
	countermeasures installed	7	0	0.0%
	no scour evaluation made	6	0	0.0%
	stable within footer limits	5	15	16.3%
	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%
			92	100.0%

Scour Photos Done?

Item 709	Plan Information	CODE	COUNT	%
	no plans	0	0	0.0%
	plans available	1	76	82.6%
	field information	2	16	17.4%
	not applicable	N	0	0.0%
			<hr/>	
			92	100.0%

Item 63	Documented Engineering Judgment	COUNT	%
	Field Eval & Doc EJ	0	0.0%
	Rating Code in Error D and F	0	0
		0	171 or 195

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 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	0	0.0%
	Load testing	4	0	0.0%
	No Rating done	5	0	0.0%
	Load Factor (LF)	6	52	56.5%
	WS or AS	7	28	30.4%
	Load & Resistance Factor	8	12	13.0%
	Assigned Rating (LFR) HS20	D	0	0.0%
	Assigned Rating (LRFR) HL93	F	0	0.0%
	Not applicable (Ped, RR, Bldg)	X	0	0.0%
			<hr/>	
			92	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	79	85.9%
	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	13	14.1%
	Posted for other than load	R	0	0.0%
	Closed for other than load	X	0	0.0%
			92	100.0%

General Appraisal		CODE	COUNT	%		
GOOD	64.1%	9 Excellent	9	6.5%		
		8 Very good	8	29.3%		
		7 Good	7	28.3%		
FAIR	28.3%	6 Satisfactory	6	17.4%		
		5 Fair	5	10.9%		
POOR	7.6%	4 Poor	4	7.6%		
		3 Serious	3	0.0%		
		2 Critical	2	K	0	0.0%
		1 Imminent Failure	1	K	0	0.0%
		0 Closed	0	K	0	0.0%
			92	100.00%		

FHWA Performance Measures

Performance	% Deck Area		Lowest of GA or Deck	COUNT	Deck s.f
GOOD	62.2%	4.6%	9 Excellent	5	7,029
		25.0%	8 Very good	21	38,464
		32.7%	7 Good	28	50,378
FAIR	31.6%	20.6%	6 Satisfactory	21	31,777
		11.0%	5 Fair	10	16,988
POOR	6.2%	6.2%	4 Poor	7	9,523
		0.0%	3 Serious	0	0
		0.0%	2 Critical	0	0
		0.0%	1 Imminent Failure	0	0
		0.0%	0 Closed	0	0
		100.0%	100.0%	92	154,159

Items	AGE of BRIDGES	(Items 27, 106)	YEAR (built or rehab)	COUNT	
			-1900	0	0.0%
			1901-1910	0	0.0%
			1911-1920	0	0.0%
			1921-1930	0	0.0%
			1931-1940	11	12.0%
			1941-1950	5	5.4%
			1951-1960	2	2.2%
			1961-1970	7	7.6%
			1971-1980	12	13.0%
			1981-1990	16	17.4%
			1991-2000	7	7.6%
			2001-2010	24	26.1%
			2011-2020	8	8.7%
				<u>92</u>	<u>100.0%</u>

Load Rating Errors	COUNT
GVW / NRL	2
Inv RF low	1
Equal RFs	7
Software	1

Load Ratings Due	COUNT
due by 2019	0
due by 2020	5
On HOLD	11

(C)	Compliant
(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	(C)
*Culvert Span		
unusually long steel culvert spans	0	(C)
*Location		
Item 9 Location	0	(C)
missing coordinates	0	(C)

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

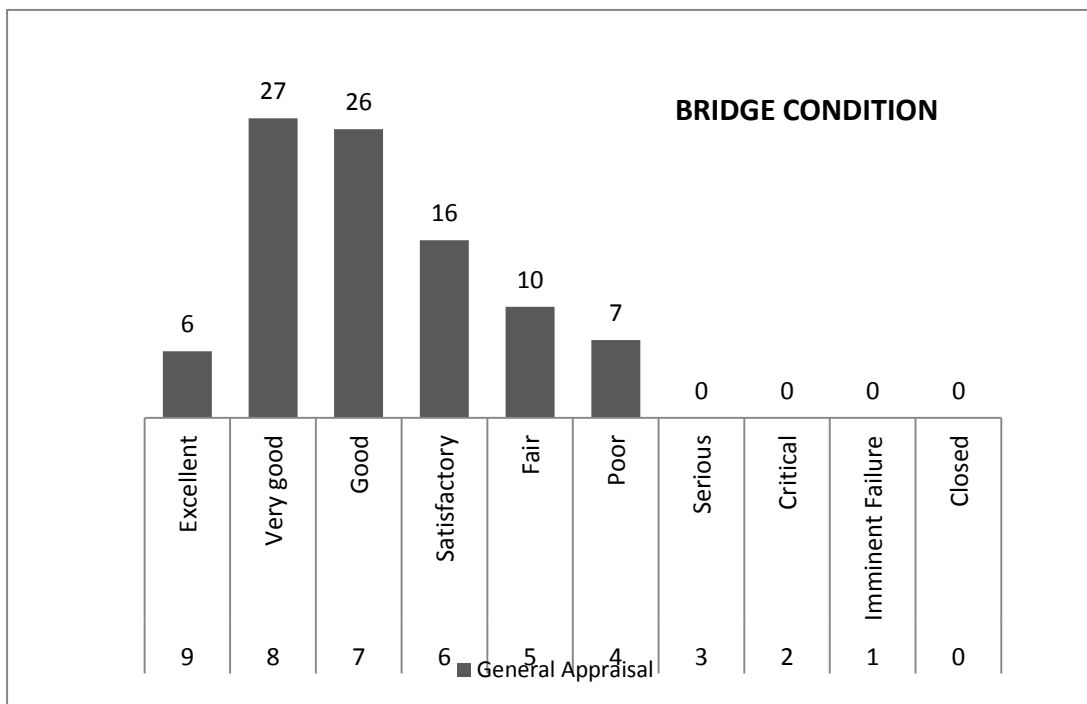
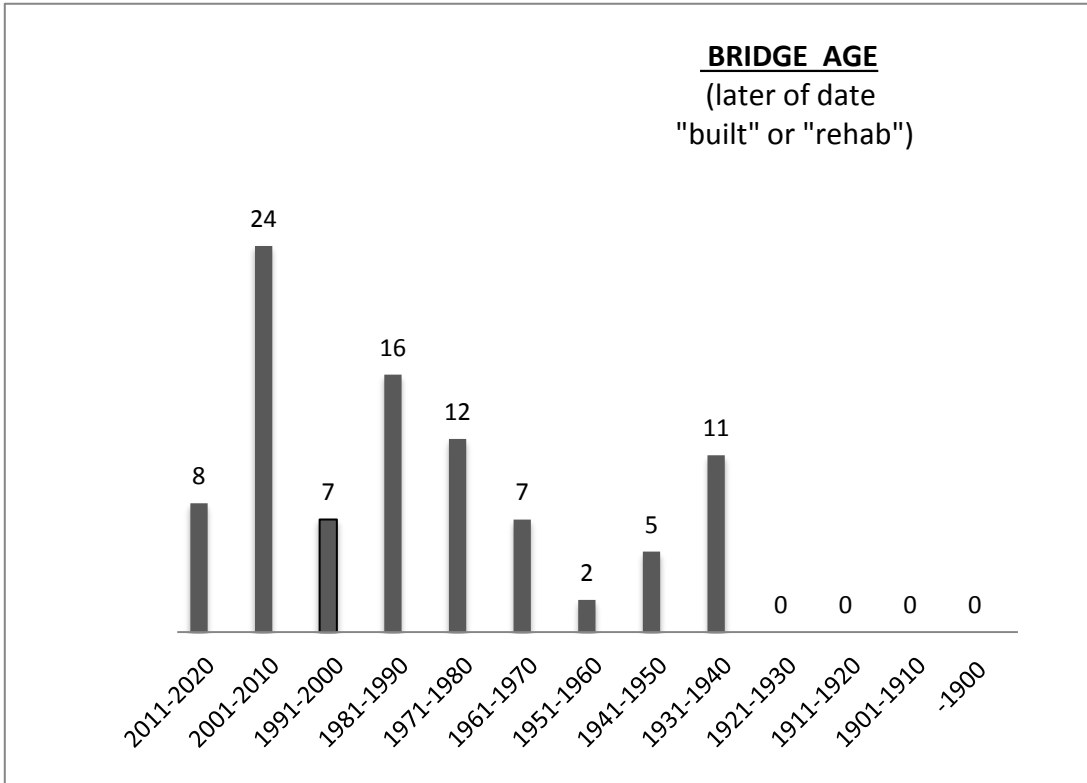
Metric	Description	(C)	(SC)	(CC)	(NC)
1	State Bridge Inspection Organization				
2	Program Manager Qualification				
3	Team Leader Qualification				
4	Load Rating Engineer Qualification				
5	UW Bridge Inspection Diver Qualification				
6	Routine Inspection Frequency - Low Risk				
7	Routine Inspection 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 **				
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 ** 97%				
23	Updating of Data				

** based on results of Field Review

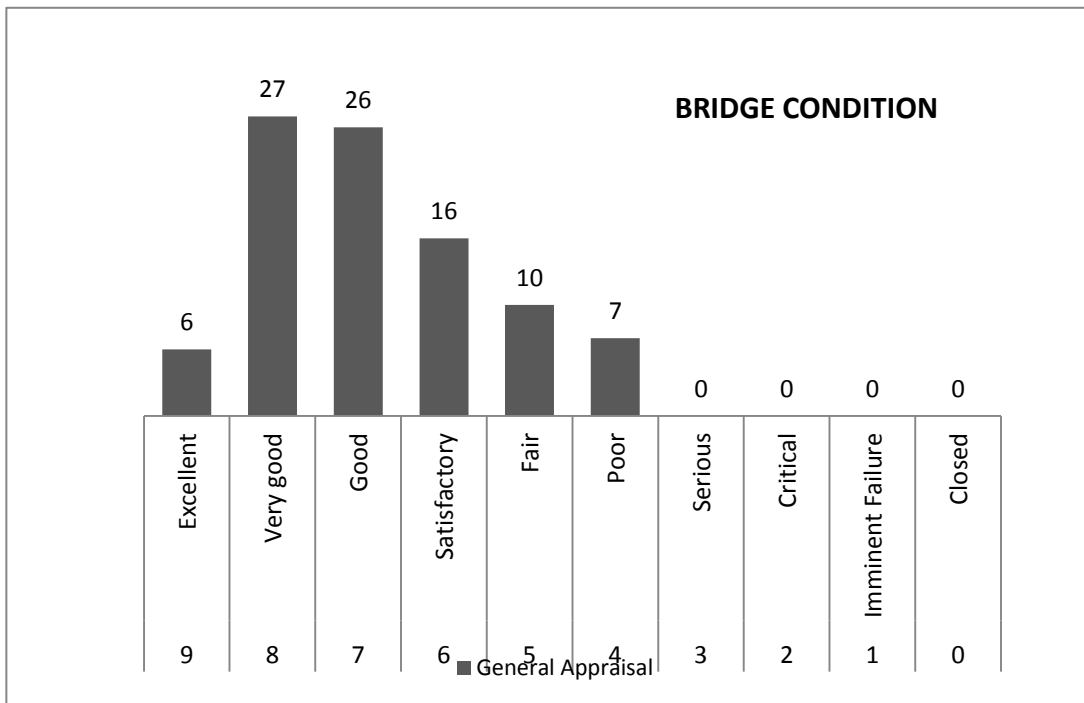
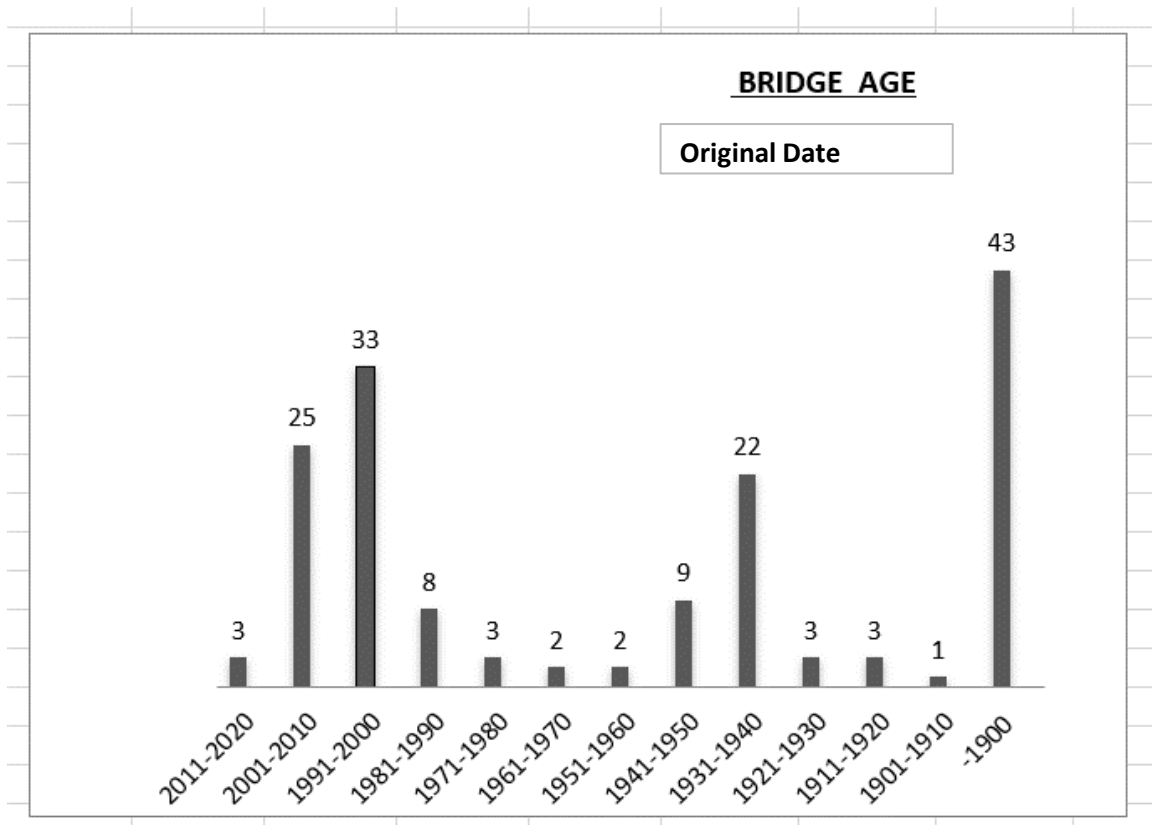
Metric	Action Needed

AGE VS. CONDITION

Overall Shape of AGE and CONDITION graphs typically mirror each other



AGE VS. CONDITION



GENERAL APPRAISAL COMPARISON

