2013 INVENTORY, APPRAISAL & INSPECTION SNAPSHOT

PREBLE COUNTY ENGINEER

Inventory Data - BR 87 NBIS Bridges Only

	NBIS COUNT
NBIS Bridges > 20'	**229**
Bridges 10'-20'	**187**
	416

Possible NBIS length errors 0 **total**

		CODE	COUNT	%
Item 95	**Inspection Responsibility**			
	County	3	229	100.0%
Item 97	**Maintenance responsibility**			
	County	3	226	98.7%
	City or other local	4	3	1.3%
	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%
			229	100.0%
Item 100	**Type service on bridge**			
	Other	0	0	0.0%
	Highway	1	228	99.6%
	Railroad	2	0	0.0%
	Ped/Bikeway	3	0	0.0%
	Hwy/RR	4	0	0.0%
	Hwy/Ped	5	1	0.4%
	RR Abnd. rails rem'vd	A	0	0.0%
			229	100.0%

Item 100	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	228	99.6%
	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	1	0.4%
	Other	0	0	0.0%
			229	100.0%

Item 63	Structure Type			
	concrete slab simple	111	14	6.1%
	concrete slab continuous	112	6	2.6%
	concrete beam simple	121	15	6.6%
	concrete beam continuous	122	1	0.4%
	concrete box beam simple	131	63	27.5%
	concrete arch filled	155	5	2.2%
	prestressed conc. beam simple	221	1	0.4%
	prestressed conc. box beam simple	231	59	25.8%
	prestressed conc. box beam continuous	232	2	0.9%
	steel beam simple	321	34	14.8%
	steel beam continuous	322	2	0.9%
	steel truss thru	344	5	2.2%
	steel girder thru	364	1	0.4%
	timber truss thru	444	6	2.6%
	stone arch filled	555	1	0.4%
	Steel Truss Pony	34A	14	6.1%
			229	100.0%

Item 188	Fracture Critical			COUNT	%
	fracture critical member	Y		19	8.3%
	fracture critical member	N		210	91.7%
				229	100.0%
	No. of steel trusses and girders	34_, 36_	Struct. Type	20	
			3 closed	FC insp = 17	
	Fracture Critical File	to be completed by April 1, 2013		COUNT	
	Required Fracture Critical Files	20	truss/girde	17	
	(including written Procedure and FPD)	3	bridges should not be FC		
	Gusset Pl. Analysis	to be completed by December 31, 2011		COUNT	
	Required Gusset Plate Analysis	19	trusses	17	?
		13	riveted truss		

Item 189	**Underwater**				
		requires dive inspection	N	229	100.0%
		requires dive inspection	Y	0	0.0%
		dive inspection dates		0	0.0%
Item 74	**Scour**				
		Bridge not over waterway	N	1	0.4%
		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	52	22.7%
		countermeasures installed	7	95	41.5%
		no scour evaluation made	6	0	0.0%
		stable within footer limits	5	80	34.9%
		stable action needed	4	1	0.4%
		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%
				229	100.0%

	Load Rating	CODE	COUNT	%
Item 87	**Plan Information**			
	no plans	0	77	33.6%
	plans available	1	140	61.1%
	field information	2	11	4.8%
	not applicable	N	1	0.4%
			229	100.0%

	Load Rating	CODE	COUNT	%
Item 84	**Method of Analysis**			
	WS or AS	1	10	4.4%
	Load Factor (LF)	2	131	57.2%
	Load & Resistance Factor	3	21	9.2%
	Combination of methods	4	0	0.0%
	Engineering Judgment Superstr	5	67	29.3%
	Load testing	6	0	0.0%
	Engineering Judgment Substr	7	0	0.0%
	Not applicable (Ped or RR bridges	X	0	0.0%
			229	100.0%

REMINDER:

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

LRFR required for bridges built after 2010

LOAD RATING	Goal		DATE	COUNT	%
Total NBIS bridges to load rate					
229	60%	County	6/7/2013	162	70.7%
226	60%	ODOT	3/27/2013	221	97.8%

ODOT		COUNTY		
total	226	total	229	
already rated	221	closed	3	
Left to load rate	5	sub eng. Judg.	0	
		Good 5'S	61	
		Br no veh traffic	0	
		already rated	162	2 closed
		Left to load rate	3	5

Inspection Condition Data - BR 86 NBIS Bridges Only

General Appraisal	CODE	COUNT	%
9 Excellent	9	73	31.9%
8 Very good	8	34	14.8%
7 Good	7	21	9.2%
6 Satisfactory	6	36	15.7%
5 Fair	5	17	7.4%
4 Poor	4	16	7.0%
3 Serious	3	29	12.7%
2 Critical	2	1	0.4%
1 Imminent Failure	1	2	0.9%
0 Closed	0	0	0.0%
		229	100.0%

Rating Consistency	COUNT	%
GA <> Summary Items	2	0.9%
1-4 codes <> Summary	2	0.0%

INSPECTION FREQUENCY		COUNT	
Number inspections per day	Avg.	3.0	
	High	7	
Recommended Max. 10 per day	# days over 10	0	0.0%
Maximum 50 reviews per day			

Operating Status	CODE	COUNT	%
Open, No restriction	A	208	90.8%
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	3	1.3%
Posted for load capacity	P	18	7.9%
Posted for other than load	R	0	0.0%
Closed for other than load	X	0	0.0%
		229	100.0%

Good 5's	from culverts		
Culvert	fill>6.5'	0	possible

Good 5's	from plans		
		61	possible
		not coded correctly	

195 Culvert vs 171 Frame	# that do NOT meet the 2' Rule	
	0	0.0%

Item 41	AGE of BRIDGES	YEAR	COUNT	
		-1900	71	31.0%
		1901-1910	4	1.7%
		1911-1920	6	2.6%
		1921-1930	5	2.2%
		1931-1940	4	1.7%
		1941-1950	5	2.2%
		1951-1960	4	1.7%
		1961-1970	7	3.1%
		1971-1980	9	3.9%
		1981-1990	8	3.5%
		1991-2000	27	11.8%
		2001-2010	64	27.9%
		2011-2020	15	6.6%
			229	100.0%

Compliance Codes for the following Metrics:

(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 -	18 months	0	100.0%	(C)

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	*PCA in effect* COMPLIANCE
Deck, Super, Sub, Culvert Summary <=4	100%	1	99.6%	(CC)
Operating Status = D or E	100%	0	100.0%	(C)
FC=Y	100%	0	100.0%	(C)
Operating Status = P or R	100%	1	99.6%	(CC)
Bridges with no restrictions	95%	4	98.3%	(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 below 100% legal but not posted or closed	0	100.0%	(C)
Bridges to be posted but aren't (GA code B)	0	100.0%	(C)

METRIC 22 - Inventory (partial review)

Structure Length	ACTUAL COUNT	COMPLIANCE
Number of bridges >10% length difference	0	depends on sample size
LAT/LONG		

missing coordinates	1	depends on sample size

PRELIMINARY FHWA 23 Metric Matrix

23 metrics used by FHWA to measure NBIS compliance

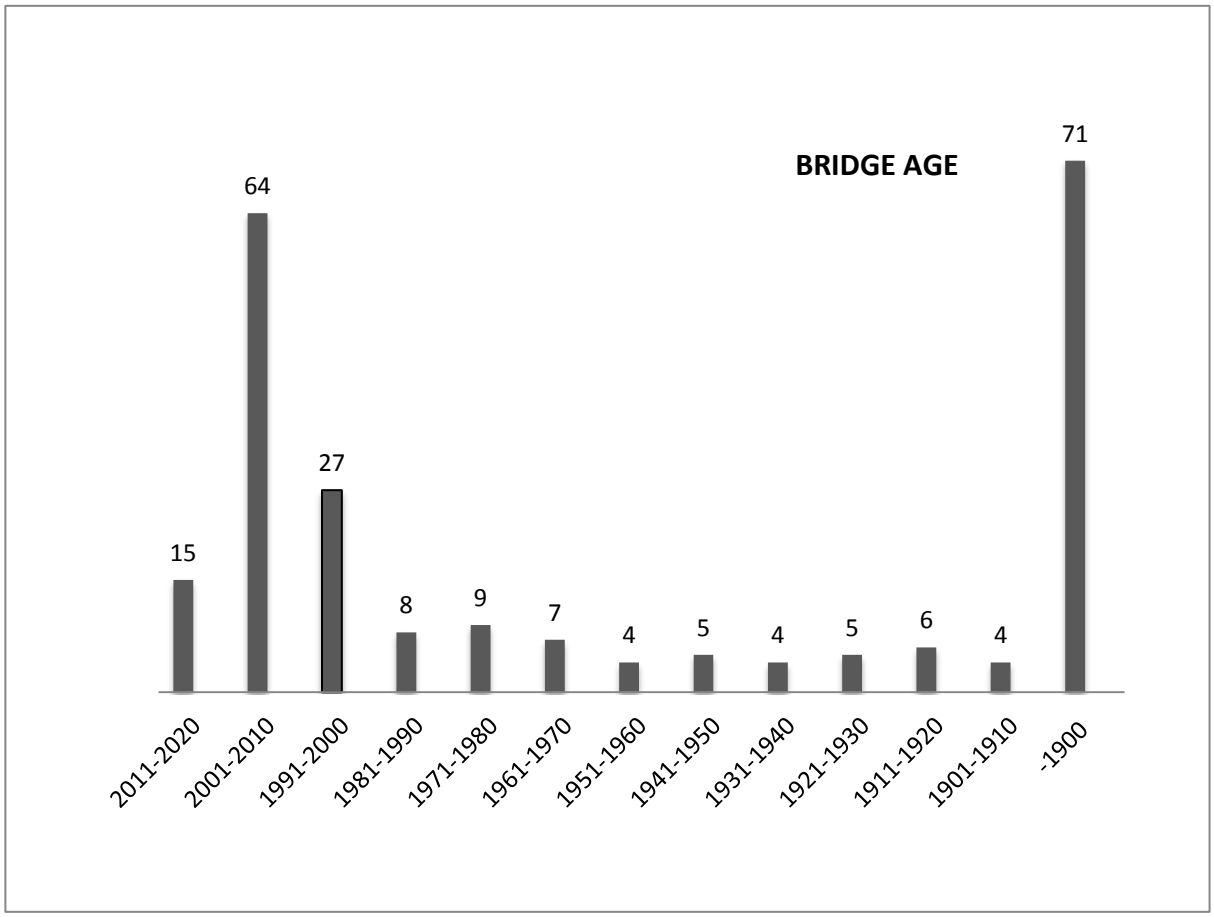
Compliance Codes for the following Metrics:

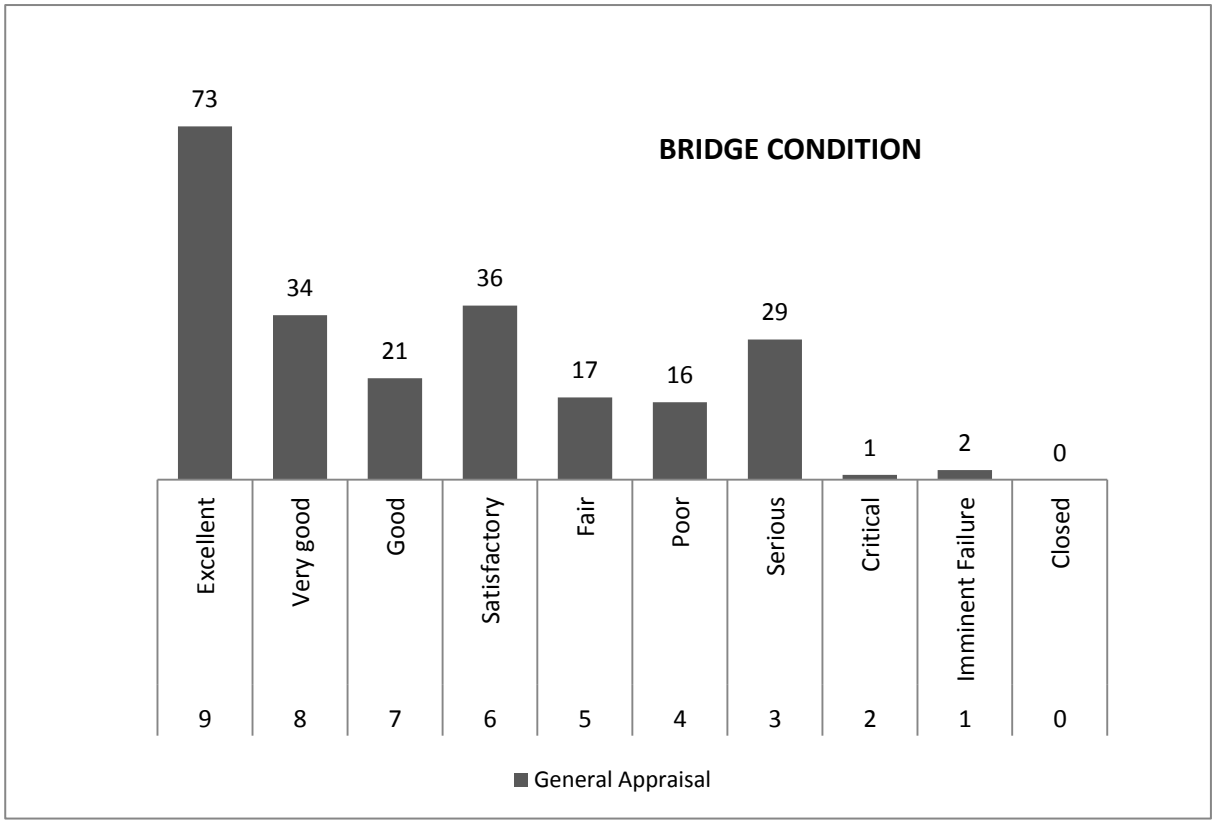
(C) Compliant
(SC) Substantially Compliant
(CC) Conditionally Compliant (Adhering to approved PCA)
(NC) Not Compliant

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 100%				
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 96%				
23	Updating of Data				

** based on results of Field Review

Metric	Action Needed
16	develop FC inspection procedures for each FC bridge within year
21	Adopt Critical Findings procedure in writing within year


BRIDGE AGE
15
64
27
8
9
7
4
5
4
5
6
4
71
2011-2020
2001-2010
1991-2000
1981-1990
1971-1980
1961-1970
1951-1960
1941-1950
1931-1940
1921-1930
1911-1920
1901-1910
-1900


BRIDGE CONDITION
73
34
21
36
17
16
29
1
2
0
Excellent
Very good
Good
Satisfactory
Fair
Poor
Serious
Critical
Imminent Failure
Closed
9
8
7
6
5
4
3
2
1
0
General Appraisal

23	23	22	23	24	24	139
24	24	24	24	24	24	144
						0.965278