





The application formerly known as



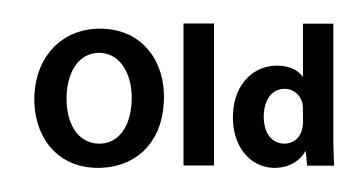
August 1, 2014 HDOT Launches BrM Website

July 15, 2015 BrM Website goes live on the internet

The Future New Version of BrM Launches October 2017

Old vs New

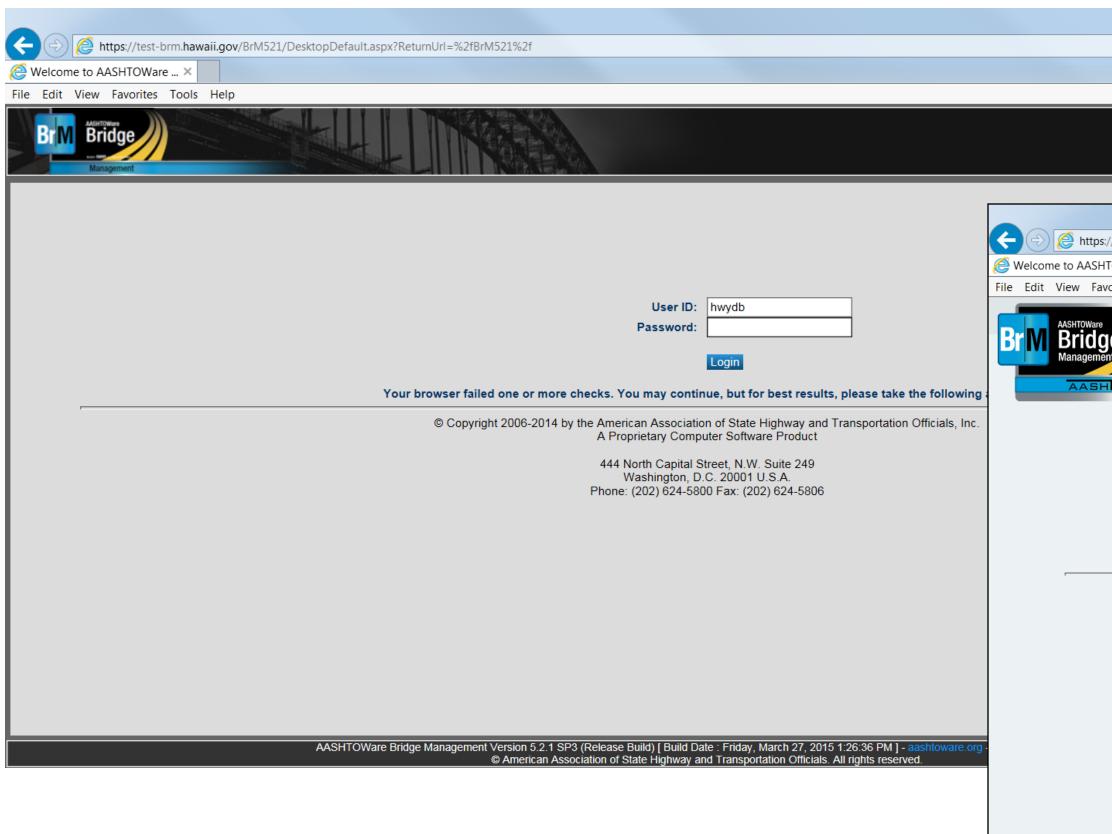
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	AASHTOWare Bridge Management Version 5.2.1 SP3 (Release Build) [Build Date : Friday, March 27, 2015 1:26:36 PM] - aashtoware.org - AASHTO Publications © American Association of State Highway and Transportation Officials. All rights reserved.



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BrM Version 5.3 Beta 4 [Build Date: Friday June 2, 2017]	







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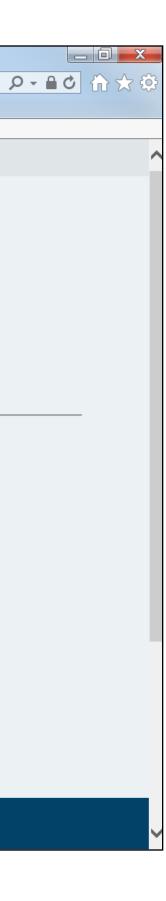
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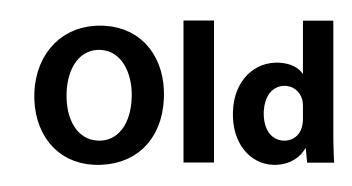
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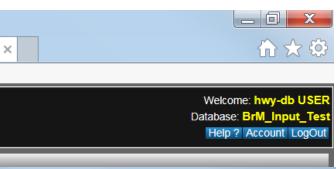


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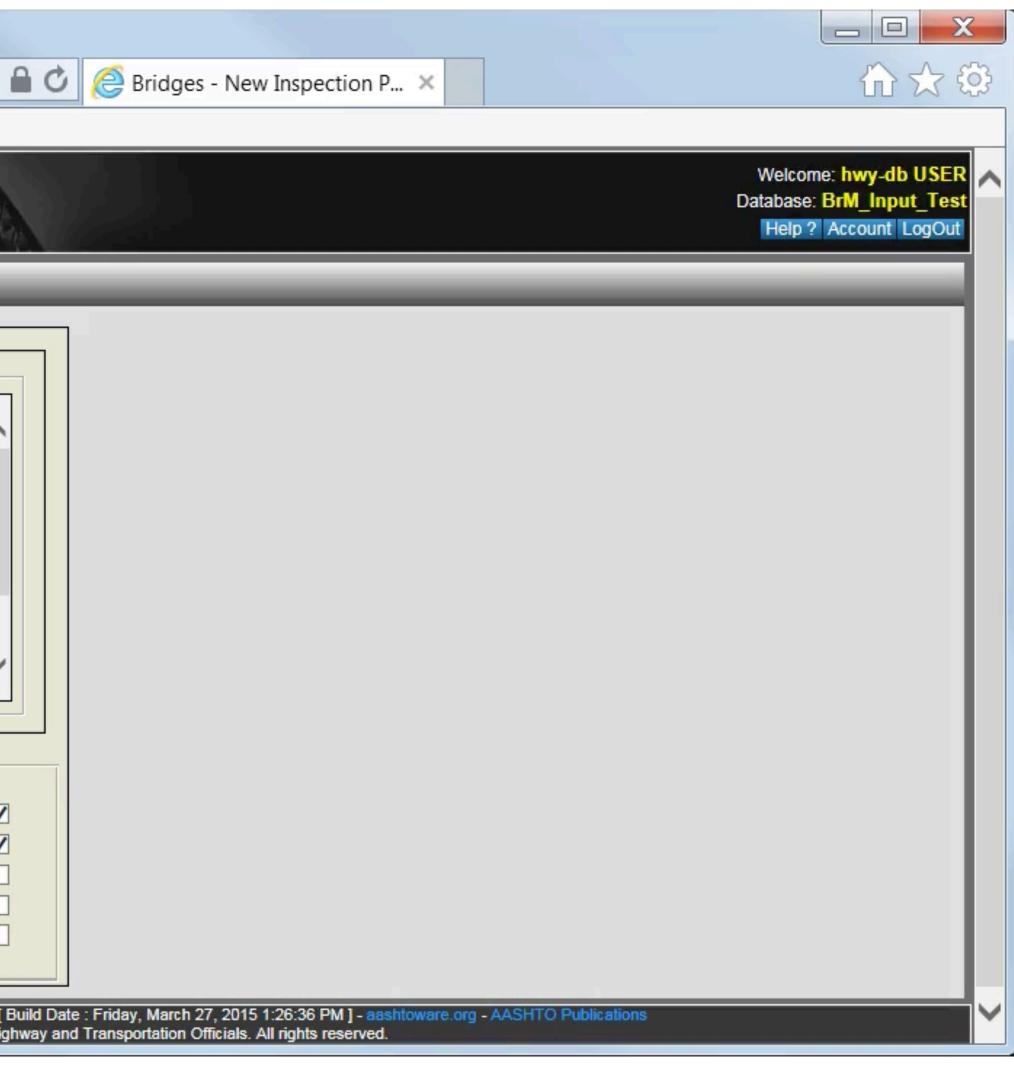
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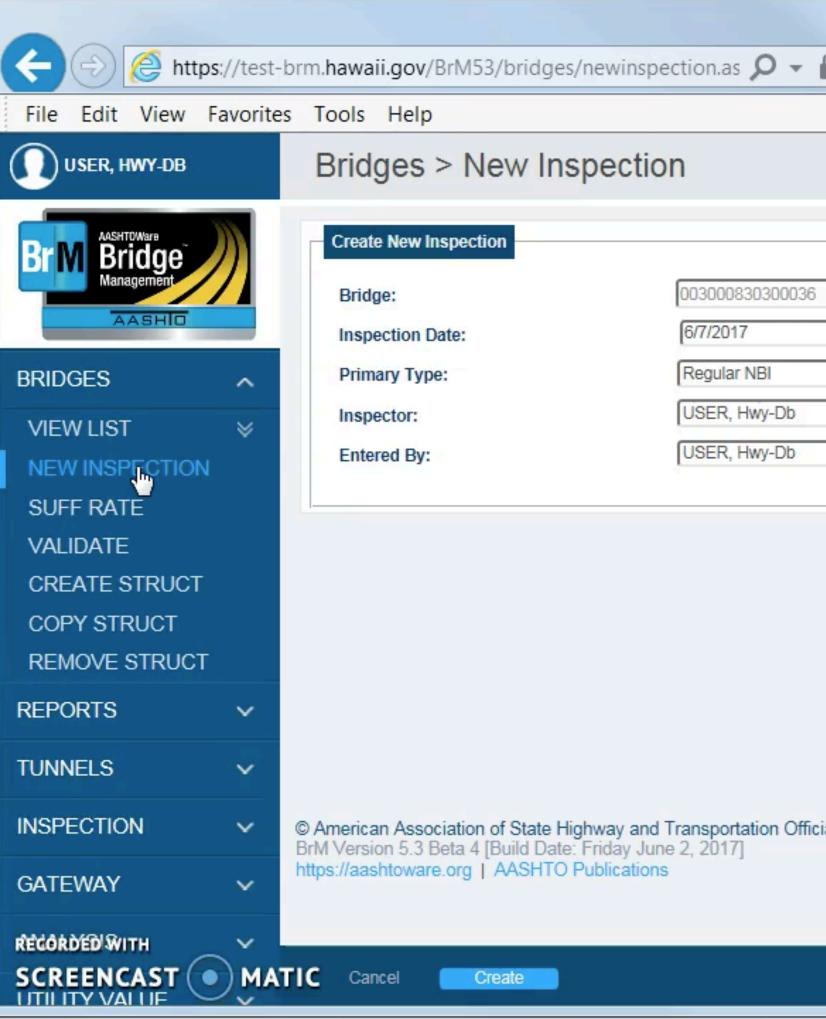
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CONDITION			Elem	i. 🔺	Str.	Unit. 🔺 E	nv.	Element Description
HDOT INSPECTION			12		1		Ben./low (1)	Re Concrete Deck
APPRAISAL		Ele	ement N	Manual:	1			
INVENTORY	*	No	tes: Co	ollapse N	otes			
	~	D	EFECT	NO. 1120	: 40 so	. ft. of efflor	escence on	atches in top of bridge de I bridge deck soffit in CS
SCHEDULE		40) sq. ft.					erate transverse and long spaced randomly in brid
WORK	*	2.						
MULTIMEDIA				Elem.	^	Str. Unit.	Env.	Element Descrip
ASSESSMENTS				1080	1		×	Delamination/Spall/ Area
LOAD RATINGS				1120	1			Efflorescence/Rust
ELEMENT CONDITIC RATINGS	N		_	1120			~	Linolescence/Rust
OTHER INSP ITEMS				1130	1		×	Cracking (RC and
HDOT MULTIMEDIA			109		1		Ben./low	Pre Opn Conc Gird
CROSS SECTIONS			245		4		(1) Ben./low	De Cene Abutmen
GATEWAY			215		1		(1)	Re Conc Abutment
GATEWAT	~		302		1		Ben./low (1)	Compressn Joint S
ANALYSIS	~		310		1		Ben./low (1)	Elastomeric Bearin
PROJECTS	~		321		1		Ben./low (1)	Re Conc Approach
PROGRAMS	~	Status:	New		•	Review I	Rep (low Needed	Approved By: USER
	6							
] <i>(</i> 2		$\mathbf{\mathcal{P}}$	0		3)	

			_	_					
D=93BF0A	013A44409	A827DE4949	33532EE&PON	NAV_TASK_GD	=47EAE350	A6244B3C958	3FD17A2E2C78	B2	
🍞 Capital (One cíti Ci	tibank 🏮 Ch	ase 🛛 🗰 Best Bu	y www.Wells Farge	o 🔝 USAA	🤣 HSFCU 🛛	🕼 Board of Wate	er 💀 HECO	Craigs
GHWAY	Inspecti	on: 2015-04-2	22 (ZFGE) 🔻	Type: Regular NB	1	Metr	ic 🖲 English		
s								_	
n anchor bolt	t nut not fully	engaged at up:	stream Kihei end	l post					
								4	
						Arrow K	Key Grid Navigati	on Help	
▼ Env.: A	AII.	Clear Filte	ers 💿 Qua	antity 🔘 Percent			Add El	ement	
n	Tot. Qty.	Units	Qty1	Qty2	Qty3	Qty4			
	2397	sq.ft	2,182.000	215	0	0	- 💽 🗖	×	
N.									
leck along sh	houlders in C								
leck along sh S 2. ngitudinal wid	dth cracks sp	S 2.	in top of bridge	deck in CS 2.					
S 2. ngitudinal wid	dth cracks sp	S 2.		deck in CS 2. D. 1120 in CS					
S 2. ngitudinal wid	dth cracks sp	S 2. aced randomly hich coincides	in top of bridge	D. 1120 in CS		Qty4			
S 2. ngitudinal wid idge deck sof	dth cracks sp ffit in CS 1 wi	S 2. aced randomly hich coincides	in top of bridge with DEFECT NC	D. 1120 in CS		Qty4		×	
S 2. ngitudinal wid idge deck sof ption	dth cracks sp ffit in CS 1 w Tot. Qty.	S 2. aced randomly hich coincides Units	in top of bridge with DEFECT NO Qty1	0. 1120 in CS	Qty3			×	
S 2. ngitudinal wid idge deck sof ption II/Patched st Staining	dth cracks sp ffit in CS 1 w Tot. Qty. 60 40	S 2. aced randomly hich coincides Units sq.ft sq.ft	in top of bridge with DEFECT NO Qty1 0.000	0. 1120 in CS	Qty3 0	0		×	
S 2. ngitudinal wid idge deck sof ption II/Patched st Staining I Other)	dth cracks sp ffit in CS 1 w Tot. Qty. 60 40 115	S 2. aced randomly hich coincides Units sq.ft sq.ft sq.ft	in top of bridge with DEFECT NO Qty1 0.000 0.000 0.000	0. 1120 in CS Qty2 60 40 115	Qty3 0 0	0 0 0		× ×	
S 2. ngitudinal wid idge deck sof ption II/Patched st Staining I Other)	dth cracks sp ffit in CS 1 wi Tot. Qty. 60 40 115 359	S 2. aced randomly hich coincides Units sq.ft sq.ft sq.ft ft	in top of bridge with DEFECT NO Qty1 0.000 0.000 0.000 359.000	0. 1120 in CS	Qty3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			×××	
S 2. ngitudinal wid idge deck sof ption II/Patched st Staining I Other) rder/Beam nt	dth cracks sp ffit in CS 1 w Tot. Qty. 60 40 115 359 165	S 2. aced randomly hich coincides Units sq.ft sq.ft ft ft	in top of bridge with DEFECT NO Qty1 0.000 0.000 0.000 359.000 165.000	0. 1120 in CS Qty2 60 40 115 0 0	Qty3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			× × ×	
S 2. ngitudinal wid idge deck sof ption II/Patched st Staining I Other)	dth cracks sp ffit in CS 1 wi Tot. Qty. 60 40 115 359	S 2. aced randomly hich coincides Units sq.ft sq.ft sq.ft ft	in top of bridge with DEFECT NO Qty1 0.000 0.000 0.000 359.000 165.000 52.000	C. 1120 in CS	Qty3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			× × ×	
S 2. ngitudinal wid idge deck sof ption II/Patched st Staining I Other) rder/Beam nt	dth cracks sp ffit in CS 1 w Tot. Qty. 60 40 115 359 165	S 2. aced randomly hich coincides Units sq.ft sq.ft ft ft	in top of bridge with DEFECT NO Qty1 0.000 0.000 0.000 359.000 165.000	0. 1120 in CS Qty2 60 40 115 0 0	Qty3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			× × ×	
S 2. ngitudinal wid idge deck sof ption II/Patched st Staining I Other) rder/Beam nt Seal	dth cracks sp ffit in CS 1 wi 60 40 115 359 165 122	S 2. aced randomly hich coincides v Units sq.ft sq.ft sq.ft ft ft ft	in top of bridge with DEFECT NO Qty1 0.000 0.000 0.000 359.000 165.000 52.000	C. 1120 in CS	Qty3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			× × ×	
S 2. ngitudinal wid idge deck sof ption II/Patched st Staining I Other) rder/Beam nt Seal ng	dth cracks sp ffit in CS 1 w 60 40 115 359 165 122 12	S 2. aced randomly hich coincides Units sq.ft sq.ft sq.ft ft ft ft ft each	in top of bridge with DEFECT NO Qty1 0.000 0.000 0.000 359.000 165.000 52.000 12.000	C. 1120 in CS Qty2 60 40 115 0 70 70 0	Qty3			× × × × ×	

Introducing the New Element Condition Screen

- Condition Grid 5.2.1
- <u>Speed</u>
- Scrolling
- Condition Grid
 5.3
- The Features
 - Layout
 - Elements
 - Key Nav
- Summary

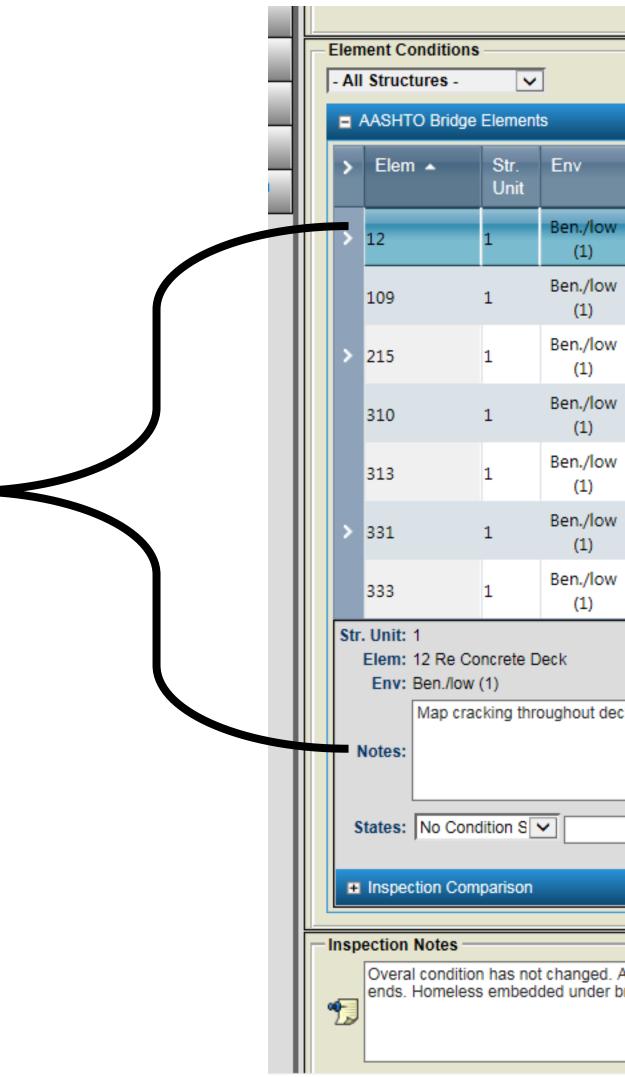
We want less of this!

E	Bridge		Ŧ	Facilit	y Carried (007): SPA
	Supers	ection > structure (059): structure (060):	7 Good		n Cu Water
	_	nt Conditions tructures -	V		
	AASH	TO Bridge Eler	ments		
		Elem	Str. Unit	Env	Description
		510	1	•	Wearing Surfa
		16	1	Ben. (1)	Re Conc Top Fl
		109	1	Ben. (1)	Pre Opn Conc (
		110	1	Ben. (1)	Re Conc Opn G
		215	1	Ben. (1)	Re Conc Abutm
		225	1	Ben. (1)	Steel Pile
		234	1	Ben. (1)	Re Conc Pier C
		310	1	Ben. (1)	Elastomeric Be
		331	1	Ben. (1)	Re Conc Bridge

ARKMAN DR	Inspection:	2017-08-28	(YVNZ) ▼	Type: Re	gular NBI		
ulvert (062) : N N/A (NBI) erway (071) : 7 Above Min							
	Quantity O	Percent					
	Quantity	Units	Qty. 1	Qty. 2	Qty. 3	Qty. 4	
	2988		2988.00				
faces	2988	sq.ft	2978.00	10.000			
Flange	6710	sq.ft	6710.00				
Girder/Beam	1006	ft	853.000	41.000			
Girder/Beam	561	ft	561.000				
ment	235	ft	235.000				
	32	(EA)	32.000				
Сар	181	ft	181.000				
earing	36		36.000				
e Railing	197	ft	197.000				



- Condition Grid 5.2.1
- Speed
- <u>Scrolling</u>
- Condition Grid 5.3
- The Features
 - Layout
 - Elements
 - Key Nav
- Summary



		Percent					w Last CoRe	
	Description	Defect Ac Quantity	d Protectiv Units	Qty. 1	dd New Eler Qty. 2	Qty. 3	Edit Elemen	
w	Re Concrete Deck	7280.000	sq.ft	6846.000	434.000	0.000	0.000	×
w	Pre Opn Conc Girder/Beam	910.000	ft	910.000	0.000	0.000	0.000	×
w	Re Conc Abutment	116.000	ft	90.944	25.056	0.000	0.000	×
w	Elastomeric Bearing	14.000	each	14.000	0.000	0.000	0.000	×
w	Fixed Bearing	14.000	each	14.000	0.000	0.000	0.000	×
w	Re Conc Bridge Railing	300.000	ft	300.000	0.000	0.000	0.000	×
w	Other Bridge Railing	260.000	ft	214.000	46.000	0.000	0.000	×
dec	k - nominal.							
d. A er bi	C separating at approach deck ends. Minor ma idge between girders. Photopholtaic cell panels	o/directional cra missing from s	acking thro tream volu	ughout deck. Ime monitorin	GRP settlin ng system.	g along cuta	in/abutment	~

- **Condition Grid** • 5.2.1
- Speed
- Scrolling •
- **Condition Grid** • <u>5.3</u>
- The Features •
 - Layout ullet
 - Elements •
 - Key Nav •
- Summary •

USER, HWY-DB	Bridg	e 0030	0083030	0036 🔻	Facility Carried	(007): KAI
Brm AASHTOWARE Bridge Management	Ins	pect	ion >	> Con	dition	
AASHIO	Co	ndition F	Ratings			
BRIDGES ~		perstruct	ure (059)	7 Good 7 Good	•	5
REPORTS ~	s	ubstructi	ure (060)	: 7 Good		<u>~</u>
TUNNELS ~	- Ele	ment Co	onditions	3		
	Elec.				pection Details	
CONDITION	Elen		m # or E	iem Desc	Struct. Unit.: All	
HDOT INSPECTION		Elem	•	Str. Unit. ▲	Env.	Element
APPRAISAL		7 12		1	Ben./low (1)	Re Cor
INVENTORY ⇒			-	'n	(1)	
SCHEDULE			lanual: 🔽			
WORK 🛛 😒			llapse No	otes Jghout deck	- nominal.	
MULTIMEDIA			-	-		
ASSESSMENTS						
LOAD RATINGS			Elem.			Elen
LOAD RATINGS ELEMENT CONDITION RATINGS			Elem. 7358	▲ Str. Unit		
ELEMENT CONDITION		400		Unit 1		Concre
ELEMENT CONDITION RATINGS		109		Unit	Ben./low (1)	Concre
ELEMENT CONDITION RATINGS OTHER INSP ITEMS		109 215		Unit 1	Ben./low (1) Ben./low (1)	Concre Pre Op
ELEMENT CONDITION RATINGS OTHER INSP ITEMS HDOT MULTIMEDIA GATEWAY ~				Unit 1	Ben./low (1) Ben./low	Elem Concre Pre Op Re Con Elaston
ELEMENT CONDITION RATINGS OTHER INSP ITEMS HDOT MULTIMEDIA GATEWAY ANALYSIS		215		Unit 1 1 1	Ben./low (1) Ben./low (1) Ben./low	Concre Pre Op Re Cor
ELEMENT CONDITION RATINGS OTHER INSP ITEMS HDOT MULTIMEDIA GATEWAY ~		215 310		Unit 1 1 1 1	Ben./low (1) Ben./low (1) Ben./low (1) Ben./low	Concre Pre Op Re Con Elaston
ELEMENT CONDITION RATINGS OTHER INSP ITEMS HDOT MULTIMEDIA GATEWAY ANALYSIS		215 310 313		Unit 1 1 1 1	Ben./low (1) Ben./low (1) Ben./low (1) Ben./low (1) Ben./low	Concre Pre Op Re Con Elaston Fixed B Re Con
ELEMENT CONDITION RATINGS OTHER INSP ITEMS HDOT MULTIMEDIA GATEWAY ANALYSIS		215 310 313 331 333	7358	Unit 1 1 1 1	Ben./low (1) Ben./low (1) Ben./low (1) Ben./low (1) Ben./low (1) Ben./low	Concre Pre Op Re Con Elaston Fixed E
ELEMENT CONDITION RATINGS OTHER INSP ITEMS HDOT MULTIMEDIA GATEWAY ANALYSIS	ſ	215 310 313 331 333 pection	7358 Notes	Unit 1 1 1 1 1 1 1 has not char	Ben./low (1) Ben./low (1) Ben./low (1) Ben./low (1) Ben./low (1) Ben./low	Concre Pre Op Re Con Elaston Fixed B Re Con Other B
ELEMENT CONDITION RATINGS OTHER INSP ITEMS HDOT MULTIMEDIA GATEWAY ANALYSIS		215 310 313 331 333 pection Overal c ends. Ho	7358 Notes	Unit 1 1 1 1 1 1 1 has not char embedded u	Ben./low (1) Ben./low (1) Ben./low (1) Ben./low (1) Ben./low (1) Ben./low (1)	Concre Pre Op Re Con Elaston Fixed B Re Con Other B

AM HWY	Inspection: 20	016-05-17 (1	СХКҮ 🗸 Туре	e: Regular NBI		🔿 Metric 🖲 En	glish		
Channel (061): Culvert (062): Waterway (071): Unrepaired Spalls:		ble	Valida Calculat		onverter Profile:		ulate NBI		
						Arrow Ke	y Grid Naviga	ation Help	
Env.: All	Clear Filt	ers	O Qua	antity O Percen	it		Add	Element	
t Description	Tot. Qty.	Units	Qty1	Qty2	Qty3	Qty4			
oncrete Deck	7280	sq.ft	6,846.000	434	0	0	1 🖸	🔏 🗙	
				~					
					0 				
ment Description	Tot. Qty.	Units	Qty1	Qty2	Qty3	Qty4			
rete Cracking	7280	sq.ft	6,846.000	434	D	D	Parteren	🗹 🗙	
pn Conc Girder/Beam	910	ft	910.000						1
			510.000	0	0	0] 🚺 [<i>м</i> х	
onc Abutment	116	ft	90.900	25.1	0	0		✓ ×	
onc Abutment	116	ft each			·		_		
			90.900	25.1	0	0		<mark>∧</mark> ×	
omeric Bearing Bearing	14	each	90.900 14.000	25.1 0				× 2	
meric Bearing	14 14	each each	90.900 14.000 14.000	25.1 0 0				 	
meric Bearing Bearing onc Bridge Railing	, [14 [14 [300]	each each ft	90.900 14.000 14.000 300.000	25.1 0 0				 × 	
meric Bearing Bearing nc Bridge Railing	14 14 300 260 ap/directional cra	each each ft ft acking throu	90.900 14.000 14.000 300.000 214.000	25.1 0 0 46 P settling along cu				 × 	

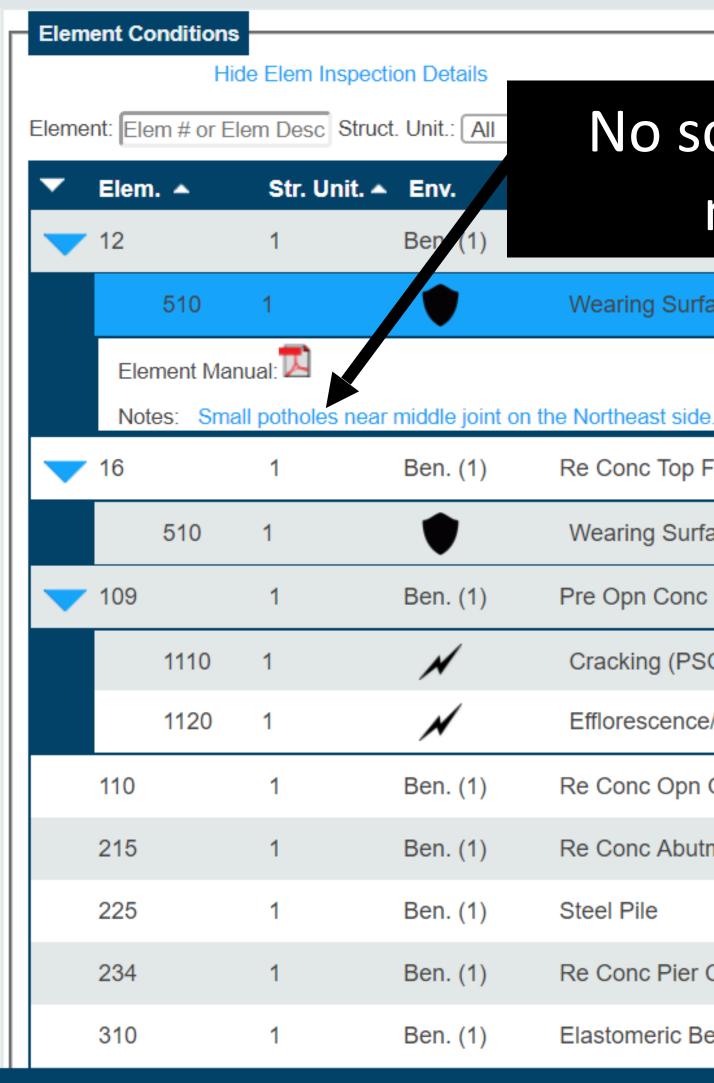
- **Condition Grid** • 5.2.1
- Speed
- Scrolling •
- **Condition Grid** • 5.3
- **The Features** •
 - <u>Layout</u> ۲
 - Elements •
 - Key Nav •
- Summary •

-	erstructure (059 bstructure (060	·	v	Culvert (062): N N/A (NBI) Waterway (071): 7 Above Mir	nimum y	v	culate SR			Calculate NB			
len	nent Condition	ns Hide Elem Inspec	ction Totalls	Improved	Sear	ch				Arrow K	ey Grid Nav	rigation	
eme	ent: Elem # or I	Elem Desc Stru	ict. Unit.: All	Env.: All C	lear Filters		🖲 Qua	antity 🔍 Perc	ent		Ac	ld Elem	ne
	Elem. 🔺	Str. Unit. 4	Env.	Element Description	Tot. Qty.	Units	Qty1	Qty2	Qty3	Qty4			
	12	1	Ben. (1)	Re Concrete Deck	2988	sq.ft	2,988.000	0	0	0		<i>M</i> •	
	16	1	Ben. (1)	Re Conc Top Flange	6710	sq.ft	6,710.000	0	0	0		H+	
	109	1	Ben. (1)	Pre Opn Conc Girder/Beam	1006	ft	853.000	41	112	0		<i>H</i> •	
	110	1	Ben. (1)	Re Conc Opn Girder/Beam	561	ft	561.000	0	0	0		H.	
	215	1	Ben. (1)	Re Conc Abutment	235	ft	235.000	0	0	0		1 /4	
	225	1	Ben. (1)	Steel Pile	32	(FA)	32.000	0	0	0		H+	
	234	1	Ben. (1)	Re Conc Pier Cap	181	ft	181.000	0	0	0		// +	
	310	1		doesn't	36	each	36.000	0	0	0		H.	
	331	1	COT	udesni	197	ft	197.000	0	0	0		14	
			im	oly edit									_



- Condition Grid
 5.2.1
- Speed
- Scrolling
- Condition Grid 5.3
- The Features
 - Layout
 - <u>Elements</u>
 - Key Nav
- Summary

Inspection > Condition

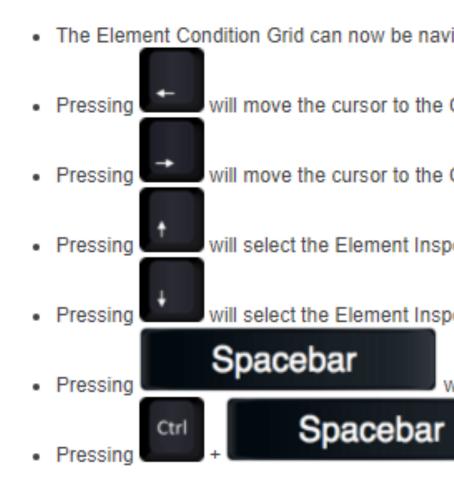


						Arrow k	ey Grid Nav	igation
crollir	ng for		🖲 Qua	antity 🔘 Pe	rcent		Ad	d Elem
		nits	Qty1	Qty2	Qty3	Qty4		
notes	•	.ft	2,988.000	0	0	0		// +
faces	2988	sq.ft	2,978.000	10	0	0		
le[edit]								
Flange	6710	sq.ft	6,710.000	0	0	0		<i>H</i> +
faces	6710	sq.ft	6,700.000	10	0	0		
c Girder/Beam	1006	ft	853.000	41	112	0		// +
SC)	140	ft	0.000	40	100			
e/Rust Stainin	g [13	ft	0.000	1	12	0		
n Girder/Beam	561	ft	561.000	0	0	0		<i>H</i> +
Itment	Nosc	rolli	ng to a	bha	0	0		// •
					0	0		H.
Сар	C	letec	cts or		0	0		// +
Bearing	prote	ctive	e syste	ms.	0	0		×+



- Condition Grid
 5.2.1
- Speed
- Scrolling
- Condition Grid
 5.3
- The Features
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 - Elements
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- Summary

Keyboard Instructions



. The Element Condition Grid can now be navigated with the arrow keys on your keyboard, as long as a Quantity or Percent field is currently selected.

Pressing will move the cursor to the Quantity or Percent field directly to the left of the currently selected field.

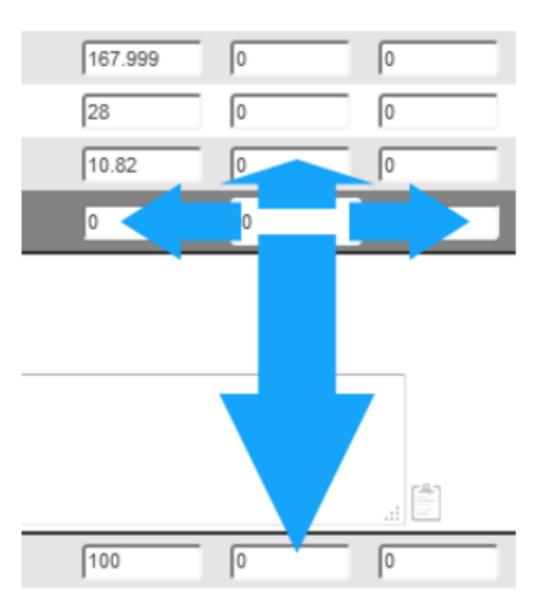
will move the cursor to the Quantity or Percent field directly to the right of the currently selected field.

will select the Element Inspection directly above the currently selected Element Inspection.

will select the Element Inspection directly below the currently selected Element Inspection.

will expand or collapse the Child Element Inspections of the currently selected parent.

will expand or collapse all of the Element Inspections in the grid.



X

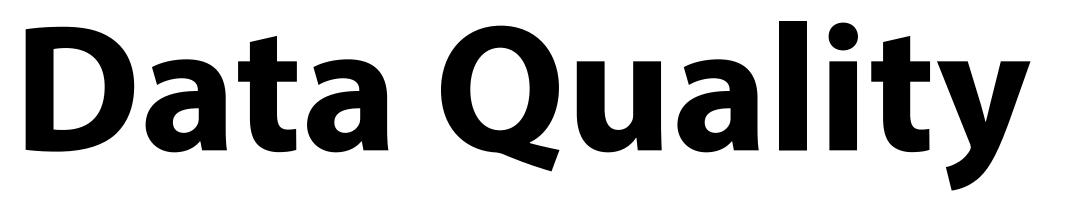
Close

- **Condition Grid** 5.2.1
- Speed
- Scrolling
- **Condition Grid** 5.3
- **The Features**
 - Layout
 - **Elements**
 - Key Nav
- **Summary**

In Summary:

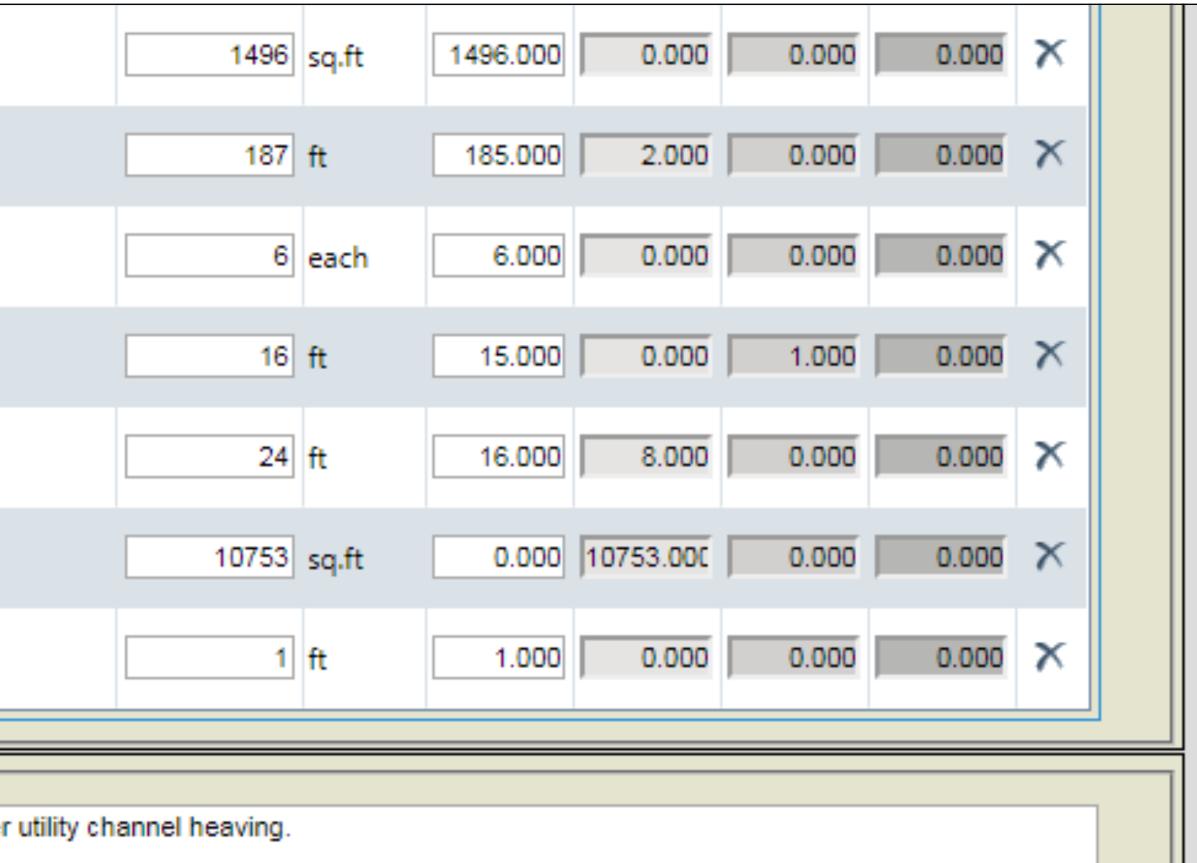
- Less scrolling for notes
- Less confusion over CS1
- Arrow key navigation

• Less spinning wheel of death (faster) Less scrolling for defects



	12	0	Ben./low (1)	Re Concrete Deck
	110	0	Ben./low (1)	Re Conc Opn Girder/Beam
	205	0	Ben./low (1)	Re Conc Column
>	215	0	Ben./low (1)	Re Conc Abutment
	301	0	Ben./low (1)	Pourable Joint Seal
	321	0	Ben./low (1)	Re Conc Approach Slab
>	330	0	Ben./low (1)	Metal Bridge Railing
Insp	ection Notes —			
•	New traffic can	neras mo	ounted on ex	S.E. sidewalk slabs. Cover plates over iting ends of bridge, EB and WB. ction box. Wires exposed.
	205 215 301 321 330 ection Notes — Heavy settling New traffic car	0 0 0	Ben./low (1) Ben./low (1) Ben./low (1) Ben./low (1) Ben./low (1)	Re Conc Column Re Conc Abutment Pourable Joint Seal Re Conc Approach Slab Metal Bridge Railing S.E. sidewalk slabs. Cover plates iting ends of bridge, EB and WB.

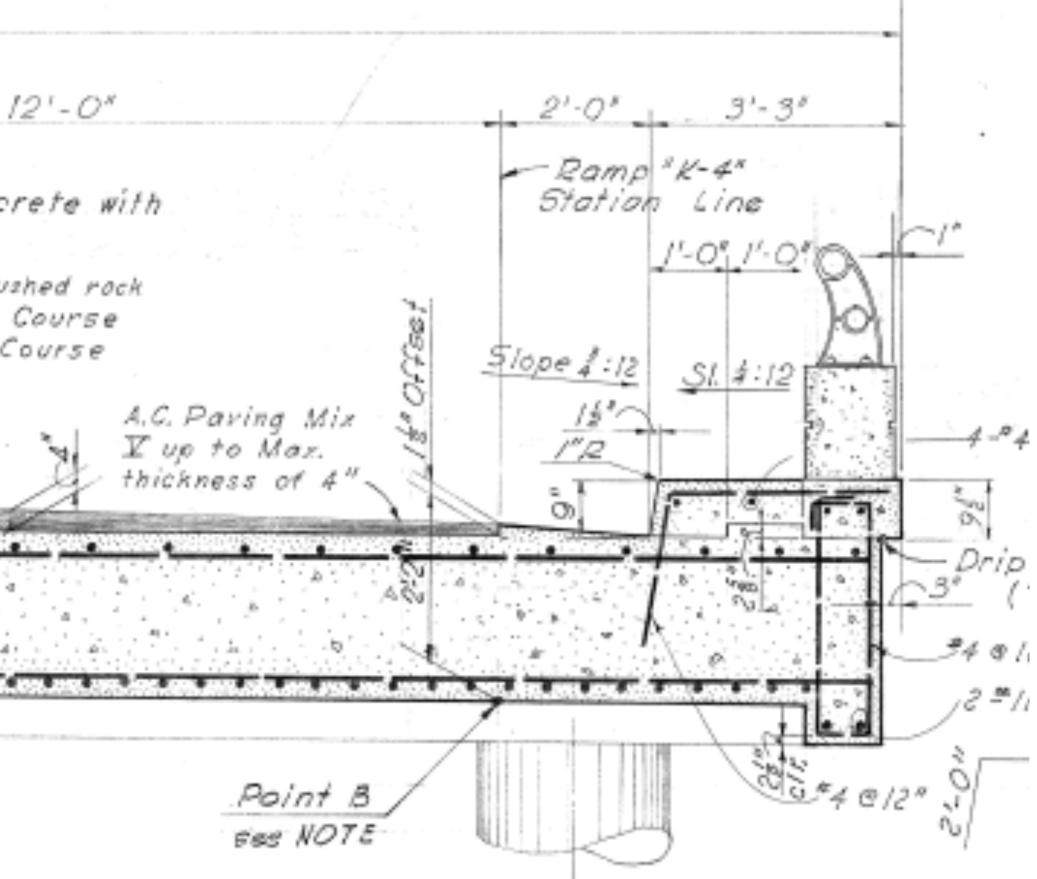
Data Quality





Bridge As-Built Section

39'-3" Light weight concrete with Ig" A.C. mix. I |4"A.C. Paving over crushed rock |½" Mix I Surface Course |2½"Mix II Binder Course)_#6@/8" Slope 0,015.Ft./Ft Slope Varies #8 @18" Ē



NOTE: Slope of concrete slab shall be a

Elem	n. 🔺	Str. Unit. 🔺	Env.	Element Description	Tot. Qty.	Units	Qty1	Qty2	Qty3	Qty4		
12		0 🔻	Ben./low (1)	Re Concrete Deck	1496	sq.ft	1,496.000	0	0	0	1 🖸 🛃	×.
ement N	/lanual: 🔼	$ \rightarrow $		Click for link to I	Element	t Mani	Jal					
otes: H	leavy settlir	ng occurring at l	N.W. & S.E. side	walk slabs. Cover plates over utilit	y channel heav	ring. New tr	affic cameras mo	unted on exiting	ends of br[ed	it]		
	2370	0	×	Metal Deterioration or Damage	16	sq.ft	16.000	0	0	0	Par ehi	T
	7360		×	Settlement	100	sq.ft	100.000	0	0	0	Parie-chi	T T
110		0	Ben./low (1)	Re Conc Opn Girder/Beam	187	ft	184.900	2.1	0	0	1 🚺 🛛	×.
205		0	Sen./im. (1)				0.000		0	0	i 🔽 🛛	<i>i</i>
215		0	Ben./	ohan Elements - D	Jefects	don't	go with e	element	1	0	1 🔽 💈	H.
	1080	0	×	Delamination/Spall/Patched Area	8	ft	8.000	0	0	0		
301		0	Ben./low (1)	Pourable Joint Seal	24	ft	16.000	8	0	0	i 🖸 🛛	И.
321		0	Ben./low (1)	Re Conc Approach Slab	10753.1	sq.ft	0.000	10753.1	D	0	1 🚺 💈	H.
330		0	Ben./low (1)	Metal Bridge Railing	1	ft	1.000	0	0	0	i 🔽 💈	<i>H</i> _+
	515	0	•	Steel Protective Coating	10753.1	sq.ft	10,753.100	0	0	0	· 📈	

New BrM

NBE Manual: Reinforced Concrete Deck

SECTION 3: DETAILED ELEMENT DESCRIPTIONS

2015 INTERIM REVISIONS TO THE AASHTO GUIDE MANUAL FOR BRIDGE ELEMENT INSPECTION, FIRST EDITION

SECTION 3: DETAILED ELEMENT DESCRIPTIONS

Revise Article 3.1.1 as follows:

3.1.1—Element 12—Reinforced Concrete Deck

Description: All reinforced concrete bridge decks regardless of the wearing surface or protection systems used.

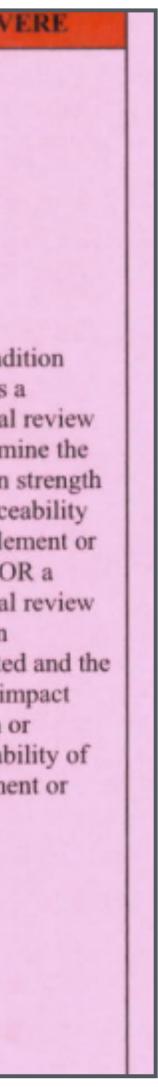
Classification: NBE Units of Measurement: ft²

Quantity Calculation: Area of the deck from edge to edge, including any median areas and accounting for any flares or ramps present.

Condition State Definitions

		Condition	States	
	1	2	3	4
Defects	GOOD	FAIR	POOR	SEVERE
Delamination/Spall/ Patched Area (1080)	None.	Delaminated. Spall 1 in. or less deep or 6 in. or less in diameter. Patched area that is sound.	Spall greater than 1 in. deep or greater than 6 in. diameter. Patched area that is unsound or showing distress. Does not warrant structural review.	
Exposed Rebar (1090)	None.	Present without measurable section loss.	Present with measurable section loss but does not warrant structural review.	The condition warrants a structural review to determine the
Efflorescence/Rust Staining (1120)	None.	Surface white without build-up or leaching without rust staining.	Heavy build-up with rust staining.	effect on strength or serviceability of the element or bridge; OR a structural review
Cracking (RC and Other) (1130)	Width less than 0.012 in. or spacing greater than 3.0 ft. Insignificant cracks or moderate-width cracks that have been sealed.	Width 0.012 0.05 in. or spacing of 1.0 3.0 ft. Unsealed moderate- width cracks or unsealed moderate pattern (map) cracking.	Width greater than 0.05 in. or spacing of less than 1 ft. Wide cracks or heavy pattern (map) cracking.	has been completed and the defects impact strength or serviceability of the element or bridge.
Abrasion/Wear (PSC/RC) (1190)	No abrasion or wearing.	Abrasion or wearing has exposed coarse aggregate but the aggregate remains secure in the concrete.	Coarse aggregate is loose or has popped out of the concrete matrix due to abrasion or wear.	

Defects	GOOD	FAIR	POOR	SEV
Delamination/Spall/ Patched Area (1080)	None.	Delaminated. Spall 1 in. or less deep or 6 in. or less in diameter. Patched area that is sound.	Spall greater than 1 in. deep or greater than 6 in. diameter. Patched area that is unsound or showing distress. Does not warrant structural review.	
Exposed Rebar (1090)	None.	Present without measurable section loss.	Present with measurable section loss but does not warrant structural review.	The condi warrants a structural to determ
Efflorescence/Rust Staining (1120)	None.	Surface white without build-up or leaching without rust staining.	Heavy build-up with rust staining.	or service of the eler bridge; O structural
Cracking (RC and Other) (1130)	Width less than 0.012 in. or spacing greater than 3.0 ft. Insignificant cracks or moderate-width cracks that have been sealed.	Width 0.012 0.05 in. or spacing of 1.0 3.0 ft. <u>Unsealed moderate-</u> width cracks or <u>unsealed moderate</u> pattern (map) cracking.	Width greater than 0.05 in. or spacing of less than 1 ft. Wide cracks or heavy pattern (map) cracking.	has been completed defects in strength o serviceabl the eleme bridge.
Abrasion/Wear (PSC/RC) (1190)	No abrasion or wearing.	Abrasion or wearing has exposed coarse aggregate but the aggregate remains	Coarse aggregate is loose or has popped out of the concrete matrix due to abrasion or wear	



NBE Manual: Reinforced Conc. Approach Slab

SECTION 3: DETAILED ELEMENT DESCRIPTIONS

FOR BRIDGE ELEMENT INSPECTION, FIRST EDITION

Revise Article 3.9.2 as follows:

3.9.2—Element 321—Reinforced Concrete Approach Slab

Description: Those structural sections between the abutment and the approach pavement that are constructed of mild steel reinforced concrete.

Classification: BME Units of Measurement: ft²

Quantity Calculation: Should include the area of the approach slab(s) from edge to edge including any median areas and accounting for any flares or ramps present.

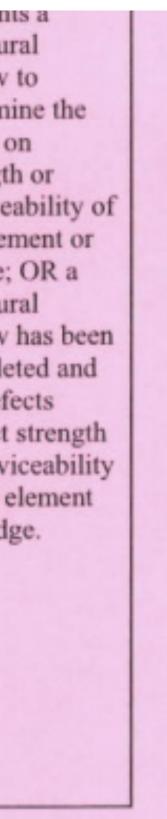
Condition State Definitions

	Condition States							
	1	2	3	4				
Defects	GOOD	FAIR	POOR	SEVERE				
Delamination/Spall/ Patched Area (1080)	None.	Delaminated. Spall 1 in. or less deep or 6 in. or less in diameter. Patched area that is sound.	Spall greater than 1 in. deep or greater than 6 in. diameter. Patched area that is unsound or showing distress. Does not warrant structural review.					
Exposed Rebar (1090)	None.	Present without measurable section loss.	Present with measurable section loss but does not warrant structural review.	The condition warrants a structural review to determine the effect on				
Cracking (RC and Other) (1130)	Width less than 0.012 in. or spacing greater than 3.0 ft. Insignificant cracks or moderate-width cracks that have been sealed.	Width 0.012 0.05 in. or spacing of 1.0 3.0 ft. Unsealed moderate- width cracks or unsealed moderate pattern (map) cracking.	Width greater than 0.05 in. or spacing of less than 1 ft. Wide cracks or heavy pattern (map) cracking.	strength or serviceability the element or bridge; OR a structural review has bee completed and the defects impact strengt or serviceabili				
Abrasion/Wear (PSC/RC) (1190)	No abrasion or wearing.	Abrasion or wearing has exposed coarse aggregate but the aggregate remains secure in the concrete.	Coarse aggregate is loose or has popped out of the concrete matrix due to abrasion or wear.	of the element or bridge.				
Settlement (4000)	None.	Exists within tolerable limits or arrested with no observed structural distress.	Exceeds tolerable limits but does not warrant structural review.					

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(1090) acking (RC and Other) (1130)	Width less than 0.012 in. or spacing greater than 3.0 ft. Insignificant cracks or moderate-width cracks that have been sealed.	measurable section loss. Width 0.012 0.05 in. or spacing of 1.0 3.0 ft. Unsealed moderate- width cracks or unsealed moderate pattern (map) cracking.	measurable section loss but does not warrant structural review. Width greater than 0.05 in. or spacing of less than 1 ft. Wide cracks or heavy pattern (map) cracking.	structur review determine effect of strength services the eler bridge; structur review comple the defe impact or servi
orasion/Wear (PSC/RC) (1190)	No abrasion or wearing.	Abrasion or wearing has exposed coarse aggregate but the aggregate remains secure in the concrete.	Coarse aggregate is loose or has popped out of the concrete matrix due to abrasion or wear.	of the e or bridg
Settlement (4000)	None.	Exists within tolerable limits or arrested with no observed structural distress.	Exceeds tolerable limits but does not warrant structural review.	



Main Span Design in BrM

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	Spans
-in-Place 🔻	Number of Main Spans (045): 3
•	Main Spans Material (043A): 2 Concrete Continuous
	Main Spans Design (043B): 01 Slab
	Number of Approach Spans (046): 0
1.969 ft	Approach Span Material (044A): Unknown (NBI)
6.890 ft	Approach Span Design (044B): Unknown (P)
39.370 ft	Skew (034): 5
•	Structure Flared (035): 0 No flare
898.623 (SF)	
	Length
	Maximum Span Length (048): 47.900 ft
Y	Structure Length (049): 149.934 ft
•	Total Length: 150.000 ft

Default	Elements (#)	Description	Notes
	77	Default unit	
	0	E Default unit	
			=
	Default	77	77 Default unit

Orphaned Element Report

Orphaned Element Analysis Report

The most common source of orphans is an improper configuration of the parent-to-child element relationship. This section of the report will list all instances where a child element is assigned to a parent element which is not configured. If it should be configured this way, go to Admin > Modeling Config > Element-Child Linking to allow the linkage. If the link is properly not configured, the structure number and inspection key of the improper linkage are listed here; fix the orphaned element on the inspection.

Element 1010 - Cracking is assigned to Element 12 - Re Concrete Deck in the following inspections. This link is not configured in this BrM instance.

this brivi instance						
Structure	<u>e</u>	Inspection	Inspection Date	Structure Unit	Environment	
0012100	01100001	FZYU	01/14/2016	0	3	
0030006	10000045	PCZL	10/04/2016	0	1	
0030006	40400149	ASKF	01/14/2016	0	1	
0030006	40400150	OMFI	01/14/2016	0	1	
0030007	20401504	KLZG	11/07/2014	0	1	
0030008	30300008	OTHK	05/09/2016	0	1	
0030009	20000054	NLWS	04/14/2015	0	1	
0030009	30300242	DLLC	03/02/2016	1	1	
0030009	30300970	LIKD	04/19/2016	0	1	
0030009	90401745	KION	01/06/2015	0	1	
0030009	90402336	YVOA	04/27/2015	0	1	
003000H	10100320	XVPZ	03/10/2016	1	1	
003000H	10100537	DYRM	03/08/2016	0	1	
003000H	10100538	FTQF	03/01/2016	0	1	
003000H	10100605	ZWKF	12/16/2014	0	1	
003000H	110100605	NWBB	12/09/2016	0	1	
003000H	10100708	CWSO	12/17/2014	0	1	
003000H	10100775	PPJT	12/17/2014	0	1	
003000H	10100776	YYLV	12/17/2014	0	1	
003000H	10201758	EQNJ	02/25/2016	0	1	
003000H	10201822	JYRR	01/25/2016	0	1	
003000H	111100048	XHFC	03/18/2016	0	1	
	111100677	ZUKA	11/17/2014	0	1	
003000H	111100677	ZGLA	11/02/2016	0	1	
003000H	111202269	QAHD	08/17/2015	0	1	
003000H	130311510	XJNW	08/18/2014	0	1	
003000H	130311510	MXPX	08/08/2016	0	1	
0030630	00000155	JJYE	08/14/2014	0	1	
0030630	00000155	IYTG	08/03/2016	0	1	
0030835	31400155	QCCI	10/19/2015	0	1	
0020000	01400400	10/70	11/01/0016	0	4	

BrM Customization

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION NATIONAL BRIDGE ELEMENT FINAL INSPECTION REPORT

Date of Ins	pection:	April 22, 2015	5				
Bridge Nur	nber:	009003800500	206	Bridg	e Name:	WAIKAPU	STREAM BRIDGE (OUTBOUND)
District	Maui	Route No:	00380	Milepost:	4	Facility:	KUIHELANI HIGHWAY

NBI ITEM 36 - TRAFFIC SAFETY FEATURES		List any maintenance work required: (ie: defects, missing bolts, collision damage, etc.)	
36A	Bridge Railings	(36B) Guardrail transition anchor bolt nut not fully engaged at	
36B	Transitions	upstream Kihei end post	
36C	Approach Guardrail		
36D	Approach Guardrail Ends		

			ELEMENT INS	PECTION	I			
ELEM NO. DEFECT	ELEMENT / DEFECT DESCRIPTION	ENV.	TOTAL QUANTITY	UNIT	CS 1 (Good)	CS 2 (Fair)	CS 3 (Poor)	CS 4 (Severe)
12	Re Concrete Deck	1	2,397	sq.ft	2,182	215	0	0
1080	Delamination/Spall/Patched		<mark>6</mark> 0	sq.ft	0	60	0	0
1120	Efflorescence/Rust Staining		40	sq.ft	0	40	0	0
1130	Cracking (RC and Other)		115	sq.ft	0	115	0	0
DEFECT NO DEFECT NO top of bridge	D. 1080: 60 sq.ft. of circular so D. 1120: 40 sq. ft. of effloresce D. 1130: 115 sq. ft. of unsealed e deck in CS 2. 40 sq. ft. of ins ch coincides with DEFECT NO	nce on I moder ignifica	bridge deck soff ate transverse a nt transverse wi	fit in CS 2 and longit	udinal width c	racks spaced		
109	Pre Opn Conc Girder/Beam	1	359	ft	359	0	0	0
DEFECT NO	D. 1080: 18'-0" of sound circula	ar patch	es in precast gi	rder soffit	s in CS 2.			
215	Re Conc Abutment	1	165	ft	165	0	0	0
ELEM NO.	215: Abutment footings not vi	sible for	rinspection. Fo	otings co	ncealed below	/ grade		
302	Compressn Joint Seal	1	122	ft	52	70	0	0
2350	Debris Impaction		70	ft	0	70	0	0
그 가 잘 못 안 다 집에 가지 못했는 것 같아요. ~	D. 2350: A total of 70'-0" of cor but still allowing free moveme		· · · · · · · · · · · · · · · · · · ·	Kahului ar	nd Kihei appro	ach slabs pa	rtially filled	
310	Elastomeric Bearing	1	12	each	12	0	0	0
321	Re Conc Approach Slab	1	1,593	sq.ft	1,593	0	0	0
330	Metal Bridge Railing	1	76	ft	76	0	0	0
331	Re Conc Bridge Railing	1	122	ft	83	39	0	0

1130	Cracking (RC and Other)	39	ft	0	39	0	0
DEFENTIN							Starter Starter

DEFECT NO. 1130: A total of 39'-0" of 0.012" to 0.015" wide vertical cracks in upstream and downstream bridge parapets in CS 2.

NBI IT	EM CONDITION RATINGS	Describe defects noted during bridge inspection. Provide sketches, diagrams, and photographs where possible.		
58	Deck 7		(58) Transverse and longitudinal cracks and patche	
59	Superstructure	7	in top of bridge deck. Transverse cracks with	
60	Substructure	7	 efflorescence in bridge deck soffit. (59) Sound circular patches in precast girder soffits 	
61	Channel and Channel Protection	6	(60) Erosion of earth embankments fronting Kahului	
62	Culvert	N	 and Kihei abutments. Erosion appears unchanged since previous July 2013 inspection 	

NBI ITEM 93 - CRITICAL FEATURE INSPECTION		REQUIRED	FREQUENCY	CURRENT	NEXT
93A	Fracture Critical Details	N			1/1/01
93B	Underwater Inspection	N			1/1/01
93C	Other Special Inspection	N		8. 93	1/1/01

OTHER FEATURES	REMARKS		
Bridge Posted?	(Provide Posted limit or 'N' if not applicable)	N	
Signing for Posting Legible/Visible?	(Y or N)	N	
Riding Surface (Roughness) Rating	(3 - smooth, 2 - Avg, 1 - Poor)	2	
Bridge Requires Insp by Bridge Section Applies to in-house inspectors who aren't structural engineers	(Y or N)	Ν	

REPAIRS, IMPROVEMENTS AND RECOMMENDATIONS

List all work done to this bridge since last inspection (ie: structural repair work, cleaning, maintenance work, etc.)

None

List proposed and/or recommended work for this bridge including estimated cost (ie: structural repair work, cleaning, maintenance, etc.)

a. Provide embankment protection for abutments and monitor embankments until protection is provided (Est. Cost = \$167,000).

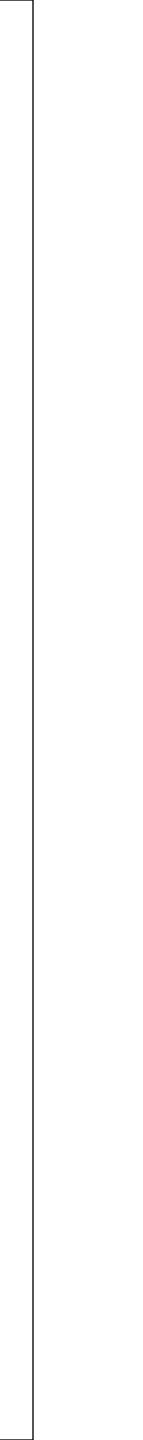
b. Remove graffiti from abutment walls (Maintenance Item).

c. Remove vegetation in channel under and upstream and downstream s

Other comments or observations.

1. Erosion of earth embankments fronting of both abutments and downstream Kihei end of bridge. The erosion of embankments appears unchanged from the previous 2013 bridge inspection.

2. Dense vegetation under and upstream and downstream sides of bridge sine previous July 2013 inspection



New Custom HDOT Inspection Screen

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION NATIONAL BRIDGE ELEMENT FINAL INSPECTION REPORT

Date of Inspection:		April 22, 2015	5					Item 36A:	
Bridge Number:		009003800500206		Bridge Name:		WAIKAPL	J STREAM BRIDGE (OUTBO	Item 36B:	
1999 - Alexandro	12423							Item 36C:	
District	Maui	Route No:	00380	Milepost:	4	Facility:	KUIHELANI HIGHWAY	Item 36D:	App

NBI ITE	M 36 - TRAFFIC SAFETY FEATURES	List any maintenance work required: (ie: defects, missing bolts, collision damage, etc.)				
36A	Bridge Railings	(36B) Guardrail transition anchor bolt nut not fully engage				
36B	Transitions	upstream Kihei end post				
36C	Approach Guardrail					
36D	Approach Guardrail Ends					

			ELEMENT INS	PECTION	1		
ELEM NO. DEFECT	ELEMENT / DEFECT DESCRIPTION	ENV.	TOTAL QUANTITY	UNIT	CS 1 (Good)	CS 2 (Fair)	CS 3 (Poor)
12	Re Concrete Deck	1	2,397	sq.ft	2,182	215	0
1080	Delamination/Spall/Patched		60	sq.ft	0	60	0
1120	Efflorescence/Rust Staining		40	sq.ft	0	40	0
1130	Cracking (RC and Other)		115	sq.ft	0	115	0
DEFECT N DEFECT N top of bridg	O. 1080: 60 sq.ft. of circular so O. 1120: 40 sq. ft. of effloresce O. 1130: 115 sq. ft. of unsealed e deck in CS 2. 40 sq. ft. of ins ich coincides with DEFECT NO	nce on d moder ignifica	bridge deck sof rate transverse a nt transverse wi	fit in CS 2 and longit	udinal width c	racks spaced	d randomly in
109	Pre Opn Conc Girder/Beam	1	359	ft	359	0	0
DEFECT N	O. 1080: 18'-0" of sound circula	ar patch	ies in precast gi	rder soffit	s in CS 2.		
045	Re Conc Abutment						
215	Re Conc Abutment	1	165	ft	165	0	0
	215: Abutment footings not vi	1 sible fo					0
		1 sible for 1					0
ELEM NO.	215: Abutment footings not vi	1 sible for 1	r inspection. Fo	otings co	ncealed below	/ grade	
ELEM NO. 302 2350 DEFECT N	 215: Abutment footings not vi Compressn Joint Seal Debris Impaction O. 2350: A total of 70'-0" of cor but still allowing free movement 	1 mpressi	r inspection. Fo 122 70 on joint seal at l	otings co ft ft	ncealed below 52 0	/ grade 70 70	0
ELEM NO. 302 2350 DEFECT N	215: Abutment footings not vi Compressn Joint Seal Debris Impaction O. 2350: A total of 70'-0" of cor	1 mpressi	r inspection. Fo 122 70 on joint seal at l	otings co ft ft	ncealed below 52 0	/ grade 70 70	0
ELEM NO. 302 2350 DEFECT N with debris,	 215: Abutment footings not vi Compressn Joint Seal Debris Impaction O. 2350: A total of 70'-0" of cor but still allowing free movement 	1 mpressi	r inspection. Fo 122 70 on joint seal at I 5 2.	otings co ft ft Kahului ar	ncealed below 52 0 nd Kihei appro	/ grade 70 70 ach slabs pa	0 0 artially filled
ELEM NO. 302 2350 DEFECT N with debris,	 215: Abutment footings not vi Compressn Joint Seal Debris Impaction O. 2350: A total of 70'-0" of cor but still allowing free movement 	1 mpressi	r inspection. Fo 122 70 on joint seal at I 5 2.	otings co ft ft Kahului ar	ncealed below 52 0 nd Kihei appro	/ grade 70 70 ach slabs pa	0 0 artially filled
ELEM NO. 302 2350 DEFECT N with debris, 310	 215: Abutment footings not vi Compressn Joint Seal Debris Impaction O. 2350: A total of 70'-0" of cor but still allowing free movement Elastomeric Bearing 	1 mpressi	r inspection. Fo 122 70 on joint seal at I 5 2. 12	otings co ft ft Kahului ar each	ncealed below 52 0 nd Kihei appro 12	/ grade 70 70 pach slabs pa 0	0 0 artially filled
ELEM NO. 302 2350 DEFECT N with debris, 310	 215: Abutment footings not vi Compressn Joint Seal Debris Impaction O. 2350: A total of 70'-0" of cor but still allowing free movement Elastomeric Bearing 	1 mpressi	r inspection. Fo 122 70 on joint seal at I 5 2. 12	otings co ft ft Kahului ar each sq.ft	ncealed below 52 0 nd Kihei appro 12	/ grade 70 70 pach slabs pa 0	0 0 artially filled 0
ELEM NO. 302 2350 DEFECT No with debris, 310 321	215: Abutment footings not vi Compressn Joint Seal Debris Impaction O. 2350: A total of 70'-0" of cor but still allowing free movement Elastomeric Bearing Re Conc Approach Slab	1 mpressi	r inspection. For 122 70 on joint seal at 1 5 2. 12 1,593	otings co ft ft Kahului ar each sq.ft	ncealed below 52 0 nd Kihei appro 12 1,593	/ grade 70 70 pach slabs pa 0 0	0 0 artially filled 0

Inspection > HDOT Inspection

Traffic Saf	ety Feat	ures							
Item 36A: Item 36B: Item 36C: Item 36D:		Bridge Railing Transition oproach Guardra ch Guardrail End	s: il:	Safety Features Notes (6B) Guardrail transition ancho	or bolt nut not fully	engaged at up	ostream Kihei en	d post	
Element C	Н	s lide Elem Inspec Elem Desc Struc		▼ E	nv.: All	Clear Filt	ers 💽 O	iantity 🔘 Per	rcent
	n. 🔺	Str. Unit. 🔺		Element Description	Tot. Qty.	Units	Qty1	Qty2	Qty3
			Ben./low	Re Concrete Deck	2397	sq.ft	2,182.000	215	

Notes: Collapse Notes

DEFECT NO. 1080: 60 sq.ft. of circular sound patches in top of bridge deck along shoulders in CS 2. DEFECT NO. 1120: 40 sq. ft. of efflorescence on bridge deck soffit in CS 2. DEFECT NO. 1130: 115 sq. ft. of unsealed moderate transverse and longitudinal width cracks spaced randomly in top of bridge deck in CS 2. 40 sq. ft. of insignificant transverse width cracks spaced randomly in bridge deck soffit in CS 1 which coincides with DEFECT NO. 1120 in CS

Elem.	•	Str. Unit.	Env.	Element Description	Tot. Qty.	Units	Qty1	Qty2	Qty3
1080	1		×	Delamination/Spall/Patched Area	60	sq.ft	0.000	60	0
1120	1		N	Efflorescence/Rust Staining	40	sq.ft	0.000	40	0
1130	1		×	Cracking (RC and Other)	115	sq.ft	0.000	115	0
	1		Ben./low (1)	Pre Opn Conc Girder/Beam	359	ft	359.000	0	0
	1		Ben./low (1)	Re Conc Abutment	165	ft	1 65.000	0	0
	1		Ben./low (1)	Compressn Joint Seal	122	ft	52.000	70	0
	1		Ben./low (1)	Elastomeric Bearing	12	each	12.000	0	0
	1		Ben./low (1)	Re Conc Approach Slab	1593	sq.ft	1,593.000	0	0
			Pop /low		-			-	-
	•	Review I	Needed	Approved By: USER, hwy-m		Cancel	Save	Save & Clos	Delete Insp

	Arrow Key Gr
Qt	y4



F.8.7

pection

1130	Cracking (RC and Other)	39	ft	0	39	0	0					
DEFECT NO	DEFECT NO. 1130: A total of 39'-0" of 0.012" to 0.015" wide vertical cracks in upstream and downstream bridge											

parapets in CS 2.

NBI IT	EM CONDITION RATINGS	Describe defects noted during bridge inspection. Provide sketches, diagrams, and photographs where possible.	
58	Deck	7	(58) Transverse and longitudinal cracks and patches
59	Superstructure	7	in top of bridge deck. Transverse cracks with
60	Substructure	7	 efflorescence in bridge deck soffit. (59) Sound circular patches in precast girder soffits
61	Channel and Channel Protection	6	(60) Erosion of earth embankments fronting Kahului
62	Culvert	N	 and Kihei abutments. Erosion appears unchanged since previous July 2013 inspection

NBI ITE	M 93 - CRITICAL FEATURE INSPECTION	REQUIRED	FREQUENCY	CURRENT	NEXT
93A	Fracture Critical Details	N		3	1/1/01
93B	Underwater Inspection	N			1/1/01
93C	Other Special Inspection	N	9 -	8. 93	1/1/01

OTHER FEATURES	REMARKS		
Bridge Posted?	(Provide Posted limit or 'N' if not applicable)	N	
Signing for Posting Legible/Visible?	(Y or N)	Ν	
Riding Surface (Roughness) Rating	(3 - smooth, 2 - Avg, 1 - Poor)	2	
Bridge Requires Insp by Bridge Section Applies to in-house inspectors who aren't structural engineers	(Y or N)	N	

REPAIRS, IMPROVEMENTS AND RECOMMENDATIONS

List all work done to this bridge since last inspection (ie: structural repair work, cleaning, maintenance work, etc.)

None

List proposed and/or recommended work for this bridge including estimated cost (ie: structural repair work, cleaning, maintenance, etc.)

a. Provide embankment protection for abutments and monitor embankments until protection is provided (Est. Cost = \$167,000).

b. Remove graffiti from abutment walls (Maintenance Item).

c. Remove vegetation in channel under and upstream and downstream s

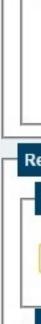
Other comments or observations.

1. Erosion of earth embankments fronting of both abutments and downstream Kihei end of bridge. The erosion of embankments appears unchanged from the previous 2013 bridge inspection.

2. Dense vegetation under and upstream and downstream sides of bridge sine previous July 2013 inspection

In





sp	ectior	N > HDO	T Inspect	ion						
	321	1	Ben./low (1)	Re Conc Approach Slab	1593	sq.ft	1,593.000	0	0	0
	330	1	Ben./low (1)	Metal Bridge Railing	76	ft	76.000	0	0	0
	331	1	Ben./low (1)	Re Conc Bridge Railing	122	ft	83.000	39	0	0
3I C	ondition Ra	itings								
			Good Good	NBI Inspection No	tes					
			Good		se and longitudi	nal cracks and	d patches in top o	f bridge deck.	Transverse cra	cks with e
			Bank Slumping	 (59) Sound cir 	cular patches in		er soffits			
			N/A (NBI) Equal Minimum	v						
her	Features									
Fea	tures	ener en adae	e de l'accountra accession	Other Features N	lotes					
	E		Posted Limit or 'N'):							
	Ridina Surf		<pre>//isible ('Y' or 'N'): , 2 - avg, 1 - poor):</pre>							
			Section ("Y" or 'N"):							
epai	rs Improve	ments and Rec	commendations							
Wo	k Done Sin	ice Last Inspec	tion							
-4-1	1									
Рго	posed and/	or Recommend	ded Work							
	None									
			-							
Con	nments an	d Observations								
-	1. Erosion	of earth emban	kments fronting of t	ooth abutments and downstrean d downstream sides of bridge si	n Kihei end of bi	ridge. The ero	sion of embankn	nents appears	unchanged from	n the prev
	1	egotation ando	i una apodoumani	a a a a a a a a a a a a a a a a a a a	ne premede edi,	2010 110000				
s: [New	🔹 🗹 Re	view Needed	Approved By: USER, hwy-m		Cancel	Save	Save & Clos	se Delete li	nspectior



Old SI&A Sheet

Your Agency Name Your Office Name Your Department Name Structure Inventory and Appraisal Sheet (English Units) Bridge Key: 001000110411925 SR: 78.3 SD/FO: ND 001000110411925 Agency ID: **IDENTIFICATION** INSPECTION 15 Hawaii Struc Num 8: 001000110411925 Inspection Date 90: 5/11/2016 State 1: 24 months 5/11/2018 Frequency 91: Next Inspection: HAWAII BELT RD .035MI S/PALAI ST FC Frequency 92A: Facility Carried 7: Location 9: FC Inspection Date 93A: NA Next FC Inspection: Rte.(On/Under) 5A: Route On Structure Rte. Signing Prefix 5B: 2 U.S. Numbered UW Frequency 92B UW Inspection Date 93B: Next UW Inspection Level of Service 5C: 00011 SI Date 93C: 1 Mainline Route Number 5D: SI Frequency 92C: NA Next SI Directional Suffix 5E 1 North % Responsibility: 0.00 Element Frequency: 24 months Element Insp. Date: 5/11/2016 Next Elem. Insp.: 6/13/2018 SHD District 2: County Code 3: 10 Hawaii Hawaii 3.280 mi Place Code 4: Mile Post 11: CLASSIFICATION PANAEWA STRM Defense Highway 100: 0 Not a STRAHNET hwy Parallel Structure 101: Feature Intersected 6: No || bridge exists 19° 40' 30" 155° 03' 53" Direction of Traffic 102: Latitude 16: Longitude 17 1 1-way traffic Temporary Structure 103: Unknown (NBI) Border Bridge Code 98 1 On the NHS Unknown (F Highway System 104: NBIS Length 112: Long Enough Border Bridge Number 99 NA Toll Facility 20: 3 On free road Functional Class 26: 12 Urban Fwy/Expwy Defense Hwy 110: 0 Not a STRAHNET hwy Historical Significance 37 5 Not eligible for NRHP Owner 22: 01 State Highway Agency STRUCTURE TYPE AND MATERIALS Custodian 21 01 State Highway Agency Number of Approach Spans 46 0 Number of Spans Main Unit 45: 2 Concrete Continuous 04 Tee Beam CONDITION Deck 58: 7 Good Super 59: 7 Good Sub 60: 7 Good Deck Type 107: 1 Concrete-Cast-in-Place Channel/Channel Protection 61: Culvert 62: N N/A (NBI) 7 Minor Damage Wearing Surface 108A: 6 Bituminous Membrane 108B: 0 None Deck protection 108C None LOAD RATING AND POSTING AGE AND SERVICE Inventory Rating Method 65: 2 AS Allowable Stress Operating Rating Method 63: 2 AS Allowable Stress ventory Rating 66: HS12.8 Operating Rating 64: HS23.9 Year Built 27: 1950 Year Reconstructed 106: 1977 4 M 18 (H 20) Posting 70: 5 At/Above Legal Loads Design Load 31: Type of Service on 42A 1 Highway Posting Status 41: A Open, no restriction Type of Service under 42B 5 Waterway Lanes on 28A: Lanes under 28B: 0 Detour Length 19: 1.2 mi APPRAISAL ADT 29: 33,230 Truck ADT 109: 2% Year of ADT 30: 2007 Bridge Rail 36A: 1 Meets Standards Approach Rail 36C: 1 Meets Standards 1 Meets Standards Transition 36B: Approach Rail Ends 36D: 1 Meets Standards GEOMETRIC DATA Str Evaluation 67: 4 Minimum Tolerable Deck Geometry 68: 9 Above Desirable Crit N Not applicable (NBI) Underclearance, Vertical and Horizontal 69 Length Max Span 48: 51.84 ft Structure Length 49: 107.94 ft 7 Above Minimum Approach Alignment 72: 8 Equal Desirable Crit Waterway Adequacy 71: Curb/Sdwlk Width L 50A 0.00 ft Curb/Sidewalk Width R 50B 0.00 ft Scour Critical 113: 8 Stable Above Footing Width Curb to Curb 51: 94.49 ft Width Out to Out 52 98.10 ft Approach Roadway width 32: (w/ shoulders) 95.14 ft Median 33 2 Closed PROPOSED IMPROVEMENTS Med w/o Deck Area: 10.591.69 sq. ft Bridge Cost 94: \$0 Type of Work 75: 38 Other Structural Skew 34: 0.00° Structure Flared 35 0 No flare Roadway Cost 95: \$102,000 Length of Improvement 76 0.0 ft Total Cost 96: Vertical Clearance 10 99.99 ft Horizontal Clearance 47: 94,49 ft \$1,532,000 Future ADT 114: 39,530 Minimum Vertical Clearance Over Bridge 53: 99.99 ft Year of Cost Estimate 97 2000 Year of Future ADT 115: 2025 Minimum Vertical Underclearance Reference 54A N Feature not hwy or RR Ainimum Vertical Underclearance 548: 0.00 ft NAVIGATION DATA Permit Not Required Ainimum Lateral Underclearance Reference R 55A N Feature not hwy or RR Navigation Control 38 Minimum Lateral Underclearance R 55: 0.00 ft Vertical Clearance 39 0.0 ft Horizontal Clearance 40: 0.0 ft 327.76 ft Pier Protection 111: Lift Bridge Vertical Clearance 116 Minimum Lateral Underclearance L 56 Unknown (NBI) Tue 10/10/2017 14:30:51 Agency ID: 001000110411925 INSP012_Inspection_SIA_English Page 1 of 2

Old SI&A Sheet

State of Hawaii

Department of Transportation

Structure Inventory and Appraisal Sheet (English Units)

Name:PANAEWA STRMBridge No:001000110411925Inspection Date:05/11/2016									
			IDENTIFI	CATION	li -				
Rte.(On/Under)	5A:	Route On Stru	ucture	State		1:	15 Hawaii		
Rte. Signing Prefix	5B:	2 U.S. Numbe	ered Hwy	Facility Carried		7:	HAWAII BEL	T RD	
Level of Service	5C:	1 Mainline		Place Code		4:			
Route Number	5D:	00011		SHD D	District	2:	10 Hawaii		
Directional Suffix	5E:	1 North		Featu	re Intersected	6:	PANAEWA S	TRM	
Border Bridge Code	98:	Unknown (P)		Count	ty Code	3:	Hawaii		
Border Bridge Number	99:	NA		Locat	ion	9:	.035MI S/PAI	LAI ST	
Mile Post	11:	3.280 mi		Latitu	de	16:	19° 40' 30"		
Struc Num	8:	00100011041	1925	Longi	tude	17:	155° 03' 53"		
INSPECTION									
Inspection Date	90:	5/11/2016	Frequency	91:	24 months	Next I	nspection:	5/11/2018	
FC Inspection Date	93A:	NA	FC Frequency	92A:		Next I	FC Inspection:	NA	
UW Inspection Date	93B:	NA	UW Frequency	92B:		Next I	JW Inspection	: NA	
SI Date	93C:	NA	SI Frequency	92C:		Next S	•	NA	
Element Insp. Date:	330.	5/11/2016	Element Freque		24 months	100	Elem. Insp.:	6/13/2018	
Element mop. butc.						TOAT			
			CONDI	TION					
Deck 58: 7 Good		Super 59:70	Good	Sub	60: 7 Good		SD/FO:	ND	
Culvert 62: N N/A (NBI)	0	Channel/Channel	el Protection		61: 7 Minor Da	mage	SUFF RA	E: 78.3	
		L	OAD RATING A	ND PO	STING				
Inventory Rating Method	65:	2 AS Allowab	le Stress	Operati	ing Rating Meth	od	63: 2 AS AI	lowable Stress	
Inventory Rating	66:	23.2 TONS		Operating Rating			64: 43.0 TO	NS	
Design Load	31:	4 M 18 (H 20)		Posting	g		70: 5 At/Ab	ove Legal Loads	
Posting Status	41:	A Open, no re	striction		-94-00 -				
			GEOMET	RIC DAT	A				
Length Max Span	48:	51.84 ft		Structu	ure Length		49: 107.94	ft	
Width Curb to Curb	51:	94.49 ft		Curb/S	dwlk Width L		50A: 0.00 ft		
Approach Roadway		95.14 ft		Curb/S	idewalk Width F		50B: 0.00 ft		
width (w/ shoulders)	32:	95.14 II		Width (Out to Out		52: 98.10 ft		
Deck Area:		10,591.69 sq.	ft	Median	1			d Med w/o Barrier	
Skew	34:	0.00°		Structu	ure Flared		35: 0 No fla		
Vertical Clearance	10:	99.99 ft		Horizo	ntal Clearance		47: 94.49 ft		
Min. Vert. Cl. Over Bridge	53:	99.99 ft			at. Undercl. Ref.	R		re not hwy or RR	
Min. Vert. Undercl. Ref.	54A:	N Feature not	t hwy		at. Undercl. R		55: 0.00 ft	4	
Min. Vert. Undercl.	54B:	0.00 ft		Min. La	at. Undercl. L		56: 327.76	π	
			AGE AND	SERVIC	Æ				
Year Built	27:	1950		ADT			29: 33,230		
Type of Service on	42A:	1 Highway		Year Re	econstructed		106: 1977		
Type of Service under	42B:	5 Waterway		Detour	Length		19: 1.2 mi		
Lanes on	28A:	4		Truck A	ADT		109: ^{2%}		
Lanes under	28B:	0		Year of	ADT		30 : 2007		

Structure Inventory and Appraisal Sheet

Bridge No: 001000110411925

Tue 10/10/2017 Page 1 of 2

New SI&A Sheet

State of Hawaii Department of Transportation Structure Inventory and Appraisal Sheet (English Units)

	STRUCTURE T	YPE	AND MATERIALS	
Deck Type	107: 1 Concrete-Cast-in-Place		Number of Spans Main Unit	45 : 2
Wearing Surface	108A: 6 Bituminous		Main Span Material Design	43A: 2 Concrete Continuous
Membrane	108B: 0 None		Main Span Material Design	43B: 04 Tee Beam
Deck protection	108C: None		Number of Approach Spans	46: 0
	API	PR/	AISAL	
Bridge Rail	36A: 1 Meets Standards		Approach Rail	36C: 1 Meets Standards
Transition	36B: 1 Meets Standards		Approach Rail Ends	36D: 1 Meets Standards
Str Evaluation	67: 4 Minimum Tolerable		Deck Geometry	68: 9 Above Desirable Crit
Waterway Adequacy	71: 7 Above Minimum		Approach Alignment	72: 8 Equal Desirable Crit
Scour Critical	113: 8 Stable Above Footing		Vert. & Horiz. Undercl.	69: N Not applicable (NBI)
	CLAS	SIF	ICATION	
Defense Highway	100: 0 Not a STRAHNET hwy		Parallel Structure	101: No bridge exists
Direction of Traffic	102: 1 1-way traffic		Temporary Structure	103: Unknown (NBI)
Highway System	104: 3 On free road		NBIS Length	112: Long Enough
Defense Hwy	110: 1 On the NHS		Functional Class	26: 12 Urban Fwy/Expwy
Toll Facility	20: 0 Not a STRAHNET hwy		Historical Significance	37: 5 Not eligible for NRHI
Owner	22: State Highway Agency		Custodian	21: State Highway Agency
	PROPOSED	IM	PROVEMENTS	
Bridge Cost	94: \$0		Type of Work	75: 38 Other Structural
Roadway Cost	95: \$102,000		Length of Improvement	76: 0.0 ft
Total Cost	96: \$1,532,000		Future ADT	114: 39,530
Year of Cost Estimate	97: 2000		Year of Future ADT	115 : 2025
	NAVIG	AT	ION DATA	
Navigation Control	38: Permit Not Required		Horizontal Clearance	40: 0.0 ft
Vertical Clearance	39: 0.0 ft		Lift Bridge Vert. Cl.	116:
Pier Protection	111: Unknown (NBI)			

New SI&A Sheet page 2

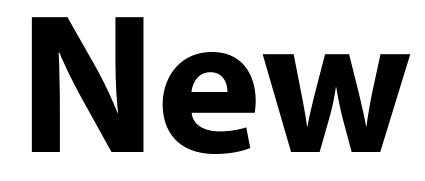
Your Agency Name			Your L	Department Nan	ne
Struc	cture Inventory a	ind Appraisal S	heet (Engl	ish Units)	
Bridge Key: 001000110411	925 Agency I	D: 001000110411	925 S	R: 78.3 s	SD/FO: ND
IDENTIFICA	TION		INSF	PECTION	
	tion 9: .035MI S/PALAI ST	Frequency 91: 24 FC Frequency 92A:	months Inspection Date 90 FC Inspection Date		Next Inspection: 5/11/2018 Next FC Inspection: NA
	Signing Prefix 5B: 2 U.S. Numbered	UW Frequency 92B:	UW Inspection Dat		Next UW Inspection NA
	e Number 5D: 00011 esponsibility: 0.00	SI Frequency 92C: Element Frequency: 24	SI Date 93C: months Element Insp. Date	NA 5/11/2016	Next SI: NA Next Elem. Insp.: 6/13/2018
	nty Code 3: Hawaii	Clement requercy. 24	Hondis Element hap. Dat	s. 311/2010	next clem. map
	Post 11: 3.280 mi		CLASS	SIFICATION	
Feature Intersected 6: PANAEWA STRM		Defense Highway 100:	0 Not a STRAHNET hwy	Parallel Structure 101:	No bridge exists
Latitude 16: 19° 40' 30" Long	itude 17 155° 03' 53"	Direction of Traffic 102:	1 1-way traffic	Temporary Structure 103	: Unknown (NBI)
Border Bridge Code 98 Unknown (P)		Highway System 104:	1 On the NHS	NBIS Length 112:	Long Enough
Border Bridge Number 99 NA		Toll Facility 20:	3 On free road	Functional Class 26:	12 Urban Fwy/Expwy
		Defense Hwy 110: Owner 22:	0 Not a STRAHNET hwy 01 State Highway Agenc	Historical Significance 37	5 Not eligible for NRHP
STRUCTURE TYPE AN	ID MATERIALS	Custodian 21:	01 State Highway Agenc		
Number of Approach Spans 46 0 Num	ber of Spans Main Unit 45: 2				
2 Concrete Continuous 04 Te	ae Beam				
		Deck 58: 7 Good	Super 59: 7 Goo		ub 60: 7 Good
Deck Type 107: 1 Concrete-Cast-in-Pl	lace	Culvert 62: N N/A (NBI)	Channel/Ch	annel Protection 61:	7 Minor Damage
Wearing Surface 108A: 6 Bituminous Membrane 108B: 0 None					
Deck protection 108C None			LOAD RATIN	G AND POSTING	j.
		Inventory Rating Method 65:	2 AS Allowable Stress	Operating Rating Method	63: 2 AS Allowable Stress
AGE AND SEF	RVICE	Inventory Rating 66:	HS12.8	Operating Rating 64:	HS23.9
Year Built 27: 1950	Year Reconstructed 106: 1977	Design Load 31:	4 M 18 (H 20)	Posting 70:	5 At/Above Legal Load
Type of Service on 42A 1 Highway Type of Service under 42B 5 Waterway		Posting Status 41:	A Open, no restriction		
Lanes on 28A: 4 Lanes under 28B:	0 Detour Length 19: 1.2 mi				
ADT 29: 33,230 Truck ADT 109:	2% Year of ADT 30: 2007			PRAISAL	
			eets Standards	Approach Rail 36C: Approach Rail Ends 36D:	1 Meets Standards
GEOMETRIC	DATA		nimum Tolerable	Deck Geometry 68:	9 Above Desirable Crit
		Underclearance, Vertical and He		N Not applicable (NBI)	
• • • • • • • • • • • • • • • • • • •	sture Length 49: 107.94 ft	Waterway Adequacy 71:	7 Above Minimum	Approach Alignment 72:	8 Equal Desirable Crit
	/Sidewalk Width R 50B 0.00 ft h Out to Out 52: 98.10 ft	Scour Critical 113:	8 Stable Above Footing		
Approach Roadway width 95.14 ft Medi	an 33: 2 Closed				
32: (w/ shoulders) Deck Area: 10,591.69 sq. ft	Med w/o	Bridge Cost 94-	PROPOSED \$0	Type of Work 75:	38 Other Structural
	ture Flared 35 0 No flare	Bridge Cost 94: Roadway Cost 95:	\$102,000	Length of Improvement 7	
	zontal Clearance 47: 94.49 ft	Total Cost 96:	\$1,532,000	Future ADT 114:	39,530
Minimum Vertical Clearance Over Bridge 53:	99.99 ft	Year of Cost Estimate 97	2000	Year of Future ADT 115:	2025
Minimum Vertical Underclearance Reference 54A	N Feature not hwy or RR				
Minimum Vertical Underclearance 54B:	0.00 ft		NAVIG	ATION DATA	
Minimum Lateral Underclearance Reference R 55A:	N Feature not hwy or RR	Navigation Control 38	Permit Not Required		
Minimum Lateral Underclearance R 55:	0.00 ft	Vertical Clearance 39		Horizontal Clearance 40:	0.0 ft
Minimum Lateral Underclearance L 56:	327.76 ft	Pier Protection 111:	Unknown (NBI)	Lift Bridge Vertical Clearance	116
NSP012_Inspection_SIA_Engli	sh	Agency ID: 001	00011041192	25	Tue 10/10/2017 14
					Page

State of Hawaii

Department of Transportation

Structure Inventory and Appraisal Sheet (English Units)

5A: 5B: 5C: 98: 99: 11: 8: 90: 93A: 93B: 93C:	NA NA	red Hwy	Place C SHD Dis Feature County Locatio Latitude Longitu	strict Intersected Code n	7: 4: 2: 6: 3: 9: 16:	HAW 10 H PAN Haw .035 19° 4 155°	MI S/PALAI 3 40' 30" ' 03' 53"	И
5C: 5D: 5E: 98: 99: 11: 8: 99: 90: 93A: 93B:	1 Mainline 00011 1 North Unknown (P) NA 3.280 mi 0010001104119 5/11/2016 NA NA	925 INSPEC Frequency FC Frequency	Place C SHD Dis Feature County Locatio Latitude Longitu CTION 91:	ode strict Intersected Code n e de	4: 2: 6: 3: 9: 16: 17:	10 H PAN Haw .035 19° 4 155°	lawaii AEWA STRM aii MI S/PALAI 3 40' 30" ' 03' 53"	И
5D: 5E: 98: 99: 11: 8: 90: 93A: 93B:	00011 1 North Unknown (P) NA 3.280 mi 0010001104119 5/11/2016 NA NA	INSPEC Frequency FC Frequency	SHD Dis Feature County Locatio Latitude Longitu CTION 91:	strict Intersected Code n e de	2: 6: 3: 9: 16: 17:	PAN Haw .035 19° 4 155°	AEWA STRM ali MI S/PALAI 3 40' 30" 1 03' 53"	
5E: 98: 99: 11: 8: 90: 93A: 93B:	1 North Unknown (P) NA 3.280 mi 0010001104119 5/11/2016 NA NA	INSPEC Frequency FC Frequency	Feature County Locatio Latitude Longitu	Intersected Code n e de	6: 3: 9: 16: 17:	PAN Haw .035 19° 4 155°	AEWA STRM ali MI S/PALAI 3 40' 30" 1 03' 53"	
98: 99: 11: 8: 90: 93A: 93B:	Unknown (P) NA 3.280 mi 0010001104119 5/11/2016 NA NA	INSPEC Frequency FC Frequency	County Locatio Latitude Longitu CTION 91:	Code n e de	3: 9: 16: 17:	Haw .035 19° 4 155°	ali MI S/PALAI 3 40' 30'' ' 03' 53''	
99: 11: 8: 90: 93A: 93B:	NA 3.280 mi 0010001104111 5/11/2016 NA NA	INSPEC Frequency FC Frequency	Locatio Latitude Longitu CTION 91:	n 9 Ide	9: 16: 17:	.035 19° 4 155°	MI S/PALAI 3 40' 30" ' 03' 53"	ST
11: 8: 90: 93A: 93B:	3.280 mi 001000110411 5/11/2016 NA NA	INSPEC Frequency FC Frequency	Latitude Longitu CTION 91:	e Ide	16: 17:	19° 4 155°	40' 30" ' 03' 53"	ST
8: 90: 93A: 93B:	001000110411 5/11/2016 NA NA	INSPEC Frequency FC Frequency	Longitu CTION 91:	de	17:	155°	' 03' 53"	
90: 93A: 93B:	5/11/2016 NA NA	INSPEC Frequency FC Frequency	TION 91:					
93A: 93B:	NA NA	Frequency FC Frequency	91:	24 months	Next In			
93A: 93B:	NA NA	FC Frequency		24 months	Next In			
93B:	NA	and the second se	92A:			ispe	ction:	5/11/2018
		UW Frequency			Next F	C Ins	spection:	NA
93C:	NA		92B:		Next U	W In	spection:	NA
		SI Frequency	92C:		Next S			NA
	5/11/2016	Element Freque	ency:	24 months	Next E	lem.	Insp.:	6/13/2018
		CONDI	TION					
S	uper 59:7 Go	bod	Sub 6	0: 7 Good		S	D/FO:	ND
C	hannel/Channe	I Protection	6	1: 7 Minor Da	mage			78.3
					<u> </u>			
65.					- d	62.		able Streep
		e Suess			oa			able Stress
			•	g Rating				
		triation	Posting			70:	5 At/Above	Legal Loads
41:	A Open, no res	surction						
		GEOMET	RIC DATA					
48:	51.84 ft		Structure	e Length				
51:	94.49 ft		Curb/Sd	wlk Width L				
32	95.14 ft		Curb/Sid	lewalk Width I				
JZ:				ut to Out				
	0.000	tt.	Median	a in the second second			2 Closed M	ad unla Damia
34:			Structure	e Flared				ed w/o Barrie
	00.00 0						0 No flare	ed w/o Barrie
10:	99.99 ft			al Clearance		47:	0 No flare 94.49 ft	
53:	99.99 ft	buo	Min. Lat.	al Clearance Undercl. Ref.		47: 5A:	0 No flare 94.49 ft N Feature n	not hwy or RF
53: 54A:	99.99 ft N Feature not h	hwy	Min. Lat. Min. Lat.	al Clearance Undercl. Ref. Undercl. R		47: 5A: 55:	0 No flare 94.49 ft N Feature n 0.00 ft	
53:	99.99 ft		Min. Lat. Min. Lat. Min. Lat.	al Clearance Undercl. Ref. Undercl. R Undercl. L		47: 5A:	0 No flare 94.49 ft N Feature n 0.00 ft	
53: 54A: 54B:	99.99 ft N Feature not h 0.00 ft	hwy AGE AND	Min. Lat. Min. Lat. Min. Lat. SERVICE	al Clearance Undercl. Ref. Undercl. R Undercl. L		47: 5A: 55: 56:	0 No flare 94.49 ft N Feature n 0.00 ft 327.76 ft	
53: 54A: 54B: 27:	99.99 ft N Feature not h 0.00 ft 1950		Min. Lat. Min. Lat. Min. Lat. SERVICE ADT	al Clearance Undercl. Ref. Undercl. R Undercl. L	R 5	47: 5A: 55: 56: 29:	0 No flare 94.49 ft N Feature n 0.00 ft 327.76 ft 33,230	
53: 54A: 54B: 27: 42A:	99.99 ft N Feature not h 0.00 ft 1950 1 Highway		Min. Lat. Min. Lat. Min. Lat. SERVICE ADT Year Rec	al Clearance Undercl. Ref. Undercl. R Undercl. L	R 5	47: 5A: 55: 56: 29: 06:	0 No flare 94.49 ft N Feature n 0.00 ft 327.76 ft 33,230 1977	
53: 54A: 54B: 27: 42A: 42B:	99.99 ft N Feature not f 0.00 ft 1950 1 Highway 5 Waterway		Min. Lat. Min. Lat. Min. Lat. SERVICE ADT Year Rec Detour Li	al Clearance Undercl. Ref. Undercl. R Undercl. L onstructed ength	R 5	47: 5A: 55: 56: 29: 06: 19:	0 No flare 94.49 ft N Feature n 0.00 ft 327.76 ft 333,230 1977 1.2 mi	
53: 54A: 54B: 27: 42A:	99.99 ft N Feature not h 0.00 ft 1950 1 Highway		Min. Lat. Min. Lat. Min. Lat. SERVICE ADT Year Rec	al Clearance Undercl. Ref. Undercl. R Undercl. L onstructed ength DT	R 5	47: 5A: 55: 56: 29: 06:	0 No flare 94.49 ft N Feature n 0.00 ft 327.76 ft 33,230 1977	
	65: 66: 31: 41: 48: 51: 32:	Channel/Channe Channel/Channel Channel/Channel/Channel Channel/Channel/Channel Channel/Channel Channel/Channel Channel/Channel Ch	Channel/Channel Protection LOAD RATING / 65: 2 AS Allowable Stress 66: 23.2 TONS 31: 4 M 18 (H 20) 41: A Open, no restriction GEOMET 48: 51.84 ft 51: 94.49 ft 32: 95.14 ft 10,591.69 sq. ft	Channel/Channel Protection 6 LOAD RATING AND POS 65: 2 AS Allowable Stress Operatin 66: 23.2 TONS Operatin 31: 4 M 18 (H 20) Posting 41: A Open, no restriction GEOMETRIC DATA 48: 51.84 ft Structure 51: 94.49 ft Curb/Sdi 32: 95.14 ft Width Out 0.000 Median Median	Channel/Channel Protection 61: 7 Minor Date LOAD RATING AND POSTING Operating Rating Meth 65: 2 AS Allowable Stress Operating Rating Meth 66: 23.2 TONS Operating Rating 31: 4 M 18 (H 20) Posting 41: A Open, no restriction Posting GEOMETRIC DATA 48: 51.84 ft Structure Length 51: 94.49 ft Curb/Sdwlk Width L 32: 95.14 ft Width Out to Out 10,591.69 sq. ft Median	Channel/Channel Protection 61: 7 Minor Damage LOAD RATING AND POSTING 65: 2 AS Allowable Stress Operating Rating Method 66: 23.2 TONS Operating Rating 31: 4 M 18 (H 20) Posting 41: A Open, no restriction GEOMETRIC DATA GEOMETRIC DATA 48: 51.84 ft Structure Length 51: 94.49 ft Curb/Sdwlk Width L 5 32: 95.14 ft Width Out to Out	Channel/Channel Protection61: 7 Minor DamageStLOAD RATING AND POSTING65:2 AS Allowable StressOperating Rating Method63:66:23.2 TONSOperating Rating64:31:4 M 18 (H 20)Posting70:41:A Open, no restrictionPosting70:GEOMETRIC DATA48:51.84 ftStructure Length49:51:94.49 ftCurb/Sdwlk Width L50A:32:95.14 ftWidth Out to Out52:	Channel/Channel Protection 61: 7 Minor Damage SUFF RATE: LOAD RATING AND POSTING SUFF RATE: 65: 2 AS Allowable Stress Operating Rating Method 63: 2 AS Allowable 66: 23.2 TONS Operating Rating 64: 43.0 TONS 31: 4 M 18 (H 20) Posting 70: 5 At/Above 41: A Open, no restriction Posting 70: 5 At/Above GEOMETRIC DATA 48: 51.84 ft Structure Length 49: 107.94 ft 51: 94.49 ft Curb/Sdwlk Width L 50A: 0.00 ft 32: 95.14 ft Width Out to Out 52: 98.10 ft



- Input Underwater Inspection Dates into BrM
- New high priority evaluation inspection checkbox
- Quality Assurance/Quality Control (QA/QC) Checks prior to generating Final Inspection Reports
- Inspectors input inspector generated work candidate
- Password rules for added security

Date Entered: 10 Inspection Date: 10 Inspector: USER, Hw Primary Type: Regular NE Entered By: USER, Hw	/10/2017	Routin Eleme Fractu		formed		
Schedule	Required (Y/N)	Current [)ate	Frequency (months)	Next Date	
Routine:		(090):	10/10/2017	(091) : 24	10/10/201	9
Element:			10/10/2017	24	10/10/201	
Fracture Critical (092AA):		(093A):		(092AB):	1/1/1901	
Underwater (092BA): Other Special (092CA):		(093B): (093C):	10/10/2017	(092BB): 48 (092CB):	10/10/202 1/1/1901	1
Inspection Resources						
Next Inspector: USER, Po	ontis 🔽		Crew Ho	urs: 0.00	Snooper Hours	s: 0.00
Bridge Group: -1 (FIX P/	ARAM VALUES 🗸		Flagger Ho Helper Ho		Special Crew Hours Special Equip. Hours	
Schedule Notes						

- Input Underwater Inspection Dates into BrM

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Proposed and/or Recommended Work	
Comments and Observations Inlet,outlet,top of box culvert and wingwalls with overgrown vegetation.	
High Priority Evaluation Inspection Recommended High Priority Evaluation Inspection Recommended High Priority Evaluation Inspection Completed Date Completed: 1 Image: Completed:	
Inspector Name: Lloyd M.Leslie Jr Inspector Title: BMS-1 Inspector Phone: 808-933-0731 Other Inspector Name: Dane Y.Yamamoto Other Inspector Title: BMW-1 Other Inspector Phone: 808-933-0731	
Team Leader Name: Salvador Panem Team Leader Title: Hawaii District Engineer Team Leader Phone: 808-933-8866	
© American Association of State Highway and Transportation Officials. All rights reserved. BrM Version 5.3 [Build Date: Friday September 1, 2017] https://aashtoware.org AASHTO Publications	
Status: New Cancel Save Save & Close Delete Inspection	

- New high priority evaluation inspection checkbox

When to Check the high priority evaluation inspection checkbox

- **Public safety concern** -

- quantity from the previous inspection

Major Structural Damage (Railings, Scour, etc.) Major structural repairs needed (spalls, cracks, etc.) Significant change in element condition state

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- Quality Assurance/Quality Control (QA/QC) Checks prior to generating Final Inspection Reports

Missing or added Elements -- Changes in total quantity of > 5% Significant improvement in condition -

- NBI Condition Ratings change by 2 or more

- Quality Assurance/Quality Control (QA/QC) Checks prior to generating Final Inspection Reports

001000	110307126	тотя		CHANGE
Elem No.	Element Description	New Quantity	Old Quantity	Notes
215	Re Conc Abutment	192	92	Previous quantity was incorrect.

00100011030)7126	NEW OR
	New Element	
Element No.	Element Description	
361	Scour Smart Flag	

001000	110307126	CONDI	TION STATE C	HANGE		
Elem No.	Element Description	CS1 (Good)	CS2 (Fair)	CS3 (Poor)	CS4 (Severe)	Inspection
215	Re Conc Abutment	182	10	0	0	Current
		80	12	0	0	Previous
Previous	s quantity was incorrect.	CS1 increased	from previous	inspection beca	ause the total q	uantity increased.

	١	BI RATING	CHANGE
NBI Item Number:	Current	Previous	Notes
Item 58 - Deck	7	5	
Item 59 - Superstructure	6	4	

MISSING	ELEMENTS		
		Missing Element	
	Element No.	Element Description	

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	 Facility Carried (007): HI BLT F 	(D PALANI R	Inspection: 2015-08-	20 (GFKY	V Type: Reg	gular NBI	0	Metric 🖲	English			
spection > Wo	ork > Work Candida	ates										
ork												
_	Show Open All Sources	~										
Candidate Action Name			Date Recommended 📥		Estimated Cost	Status	Work Assignment	Priority	Structure Unit	Date Completed	Description	Source
Repair Deck	Deck-Repair (Potholes)		8/20/201	5 2017	\$1,000.00	Under Review	0	High	0 / Type = M		Deck-Repair (Potholes)	Inspector Recommended ×
Type of Work			ork Estimatos									
	ame: Renair Deck	Wa	ork Estimates	100								
Candidate N	lame: Repair Deck		ork Estimates Estimated Quantity: [* Cost per unit: [*									
Candidate N Action Typ	lame: Repair Deck De: None V I: Deck-Repair (Potholes)		Estimated Quantity: Cost per unit: Cost per unit: Calculat	10 e								
Candidate N Action Typ Action Priority	e: None Deck-Repair (Potholes)		Estimated Quantity:	10 e								
Candidate N Action Typ Action	e: None Deck-Repair (Potholes)		Estimated Quantity: Cost per unit: Cost per unit: Calculat	10 e	 							
Candidate N Action Typ Action Priority Date Comple Status	be: None Deck-Repair (Potholes) High leted: Under Review		Estimated Quantity: Cost per unit: Calculat Estimated Cost (\$):	10 e	D17							
Candidate N Action Typ Action Priority Date Comple Status	be: None		Estimated Quantity: Cost per unit: Calculat Estimated Cost (\$):	10 e	 							
Candidate N Action Typ Action Priority Date Comple Status	be: None Deck-Repair (Potholes) High leted: Under Review		Estimated Quantity: Cost per unit: Calculat Estimated Cost (\$):	10 e	D17							

- Inspectors input inspector generated work candidate

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- Inspectors input inspector generated work candidate
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First Name:	hwy-db
Last Name:	USER
User ID:	hwydb
Agency:	HDOT
Phone:	808-692-7613
Email:	brm.help@hawaii.gov
Your password does not meet cur Old Password: New Password:	rrent complexity requirements and must be changed.
Old Password:	rrent complexity requirements and must be changed.
Old Password: New Password:	
Old Password: New Password:	Password must contain 8 or more total
Old Password: New Password:	Password must contain 8 or more total characters
Old Password: New Password:	Password must contain 8 or more total characters Password must contain 1 or more upper-case
Old Password: New Password: Confirm New Password:	Password must contain 8 or more total characters Password must contain 1 or more upper-case letters Password must contain 1 or more lower-case

- Password rules for added security

Ultimate Goal is...

Quality Data