

MAINTENANCE PLANNING GUIDELINES		2/2014																																				
ACTIVITY: Bridge Deck Repair (R323) MAJOR & MINOR	ACTION: Deck Repair (SY) <i>A. Concrete</i>																																					
DEFINITION: The time and expenses incurred for permanent repairs to bridge deck, including the repair or replacement of timber decks.																																						
PURPOSE: Replacement of deteriorated concrete with accelerated mortar to restore rideability and prevent further damage to the structure.																																						
SCHEDULING: Repair as needed when conditions permit.	<table border="1" style="margin: auto;"> <tr> <td>J</td><td>F</td><td>M</td><td>A</td><td>M</td><td>J</td><td>J</td><td>A</td><td>S</td><td>O</td><td>N</td><td>D</td> </tr> <tr> <td>A</td><td>E</td><td>A</td><td>P</td><td>A</td><td>U</td><td>U</td><td>U</td><td>E</td><td>C</td><td>O</td><td>E</td> </tr> <tr> <td>N</td><td>B</td><td>R</td><td>R</td><td>Y</td><td>N</td><td>L</td><td>G</td><td>P</td><td>T</td><td>V</td><td>C</td> </tr> </table>		J	F	M	A	M	J	J	A	S	O	N	D	A	E	A	P	A	U	U	U	E	C	O	E	N	B	R	R	Y	N	L	G	P	T	V	C
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N	B	R	R	Y	N	L	G	P	T	V	C																											
RECOMMENDED EQUIPMENT: <ul style="list-style-type: none"> • Air Compressor • Dump Truck • Flatbed or Van • Water Tank • Concrete Saw • Concrete Mixer or Mobile Mix Truck • Concrete Vibrator w/Generator • Traffic Control Equipment; reference the (See EPG 616.23 Traffic Control for Field Operations) 	RECOMMENDED PROCEDURE: <ol style="list-style-type: none"> 1. Place traffic control devices as needed. 2. Mark limits of patch areas by visual methods and by sounding. 3. Saw all patch edges to minimum depth of 1-in. or to top reinforcing steel if it is less than 1-in. deep. 4. Remove concrete to below the top reinforcing steel grid as a minimum. Remove all broken concrete. Do not jackhammer against the reinforcing steel. 5. Using oil-less compressed air, blow fines from patch area. 6. Mix and place accelerated concrete using manufacturer's recommendations. 7. Vibrate and strike-off with straight-edge. Minimize troweling. 8. Hand broom patch for surface texturing. 9. Pour edge joints and other cracks in work zone while material is curing. 10. Make sure concrete patch is cured before opening to traffic. 11. Remove traffic control devices. 																																					
RECOMMENDED MATERIAL: <ul style="list-style-type: none"> • Accelerated Concrete Mix Ingredients • Water • Bituminous Crack Sealer • Sand 																																						
SAFETY: Clean up and remove excess material. Do not blow debris into adjacent traffic lanes, or travel lanes and waterways beneath the structure. Refer to the Comprehensive Safety Program sharepoint portal . Wear all appropriate PPE. Refer to the Risk Based Assessment for additional information.																																						
OTHER CONSIDERATIONS: The maximum area to be repaired on a bridge deck is 100 sq. ft. per span per day on reinforced concrete superstructures. If more than 100 sq. ft. per span is necessary, the additional repairs must be done on another day.																																						
REFERENCES: Missouri Standard Specifications for Highway Construction Sections 216.50 , 216.60 , 704 .																																						

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ACTIVITY: Bridge Deck Repair (R323) MAJOR & MINOR	ACTION: Deck Repair (SY) <i>B. Asphalt</i>																																																	
DEFINITION: The time and expenses incurred for permanent repairs to bridge deck, including the repair or replacement of timber decks.																																																		
PURPOSE: Replacement of deteriorated asphaltic overlay with hot mix asphalt to restore rideability and prevent further damage to the structure.																																																		
SCHEDULING: Repair as needed when conditions permit.	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>J</td><td>F</td><td>M</td><td>A</td><td>M</td><td>J</td><td>J</td><td>A</td><td>S</td><td>O</td><td>N</td><td>D</td> </tr> <tr> <td>A</td><td>E</td><td>A</td><td>P</td><td>A</td><td>U</td><td>U</td><td>U</td><td>E</td><td>C</td><td>O</td><td>E</td> </tr> <tr> <td>N</td><td>B</td><td>R</td><td>R</td><td>Y</td><td>N</td><td>L</td><td>G</td><td>P</td><td>T</td><td>V</td><td>C</td> </tr> <tr style="background-color: black; height: 10px;"> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>		J	F	M	A	M	J	J	A	S	O	N	D	A	E	A	P	A	U	U	U	E	C	O	E	N	B	R	R	Y	N	L	G	P	T	V	C												
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RECOMMENDED EQUIPMENT: <ul style="list-style-type: none"> • Dump Trucks • Flatbed or Van • Concrete Saw • Air Compressor • Roller or Pan Vibrator • Roto Mill (optional) • Traffic Control Equipment; reference (See EPG 616.23 Traffic Control for Field Operations) 	RECOMMENDED PROCEDURE: <ol style="list-style-type: none"> 1. Place traffic control devices as needed. 2. Mark limits of patch areas by visual and sounding methods. 3. Saw all patch edges. 4. Remove old asphalt or patching material and any loose concrete below patch area. If loose concrete is removed below the reinforcing steel, then repair should be made using guidelines for Function R323A for Concrete. 5. Remove fines from patch area. 6. Cover patch bottom and sides with liquid asphalt tack. 7. Place hot mix and strike off ¼-in. higher than adjacent surfaces for each inch deep. 8. Compact with roller or vibrator. 9. Pour patch edges and any other cracks within the work zone. 10. Remove traffic control devices. 																																																	
RECOMMENDED MATERIAL: <ul style="list-style-type: none"> • Hot Mix Asphalt • Liquid Asphalt Tack • Sand 																																																		
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REFERENCES: Missouri Standard Specifications for Highway Construction Section 216.30 ; EPG 771.9 Temporary Bridge Deck Repair .																																																		