USE $\frac{1}{2}''$ BORDER WITH DETAILS

RHB01_CIP_Deck_on_Girders Effective: May 2016 Supersedes: Jun. 2015

SEC/SUM ⊛ TMP ⊛ RGE ⊛

U.I.P. AND REHABILITATE EXISTING (⊛) ⊛ SPANS

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PRINTED 5/26/2016

DIST.	COUNTY	DESIGN	CHECK
⊛	⊛	MO	
DISTRICT		HWY NO.	SHEET NO.
BR		1	

COUNTY ⊛

JOB NO. ⊛

CONTRACT NO.

PROJECT NO.

BRIDGE NO. RHB01

REVISION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

PATRICK McKENNA
DIRECTOR OF TRANSPORTATION

B.M.

REPAIRS TO BRIDGE: ROUTE ⊛ OVER ⊛

ROUTE ⊛ FROM ⊛ TO ⊛.
ABOUT ⊛ MILES ⊛ OF ⊛
STA. ⊛+⊛⊛⊛⊛.⊛ (WHICH EXISTS)

STD.	
STD.	
STD.	
STD.	

Designed
Detailed
Checked

Note: This drawing is not to scale. Follow dimensions.

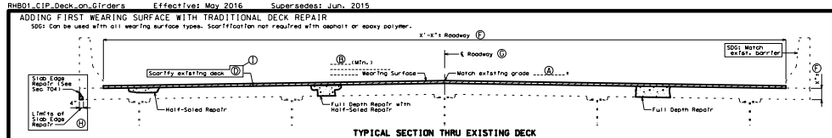
Sheet No. 1 of

RHB01_CIP_DECK_ON_GIRDERS.dgn 9:33:25 PM 5/26/2016

RHB01_CIP_Deck_on_Girders Effective: May 2016 Supersedes: Jun. 2015

ADDING FIRST WEARING SURFACE WITH TRADITIONAL DECK REPAIR

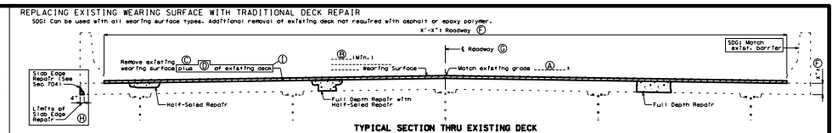
SDG: Can be used with all wearing surface types. Scarification not required with asphalt or epoxy polymer.



TYPICAL SECTION THRU EXISTING DECK

REPLACING EXISTING WEARING SURFACE WITH TRADITIONAL DECK REPAIR

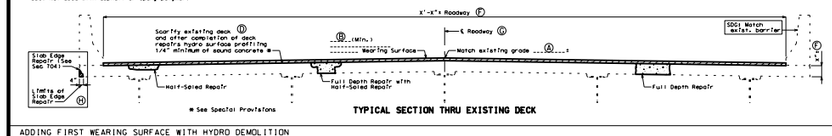
SDG: Can be used with all wearing surface types. Additional removal of existing deck not required with asphalt or epoxy polymer.



TYPICAL SECTION THRU EXISTING DECK

ADDING FIRST WEARING SURFACE WITH TRADITIONAL DECK REPAIR FOLLOWED BY HYDRO PROFILING

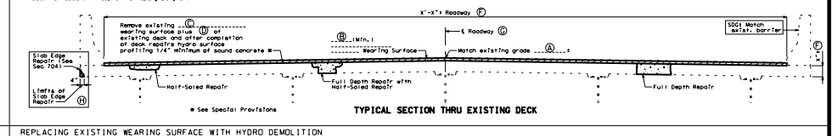
SDG: Not used with asphalt or epoxy polymer.



TYPICAL SECTION THRU EXISTING DECK

REPLACING EXISTING WEARING SURFACE WITH TRADITIONAL DECK REPAIR FOLLOWED BY HYDRO PROFILING

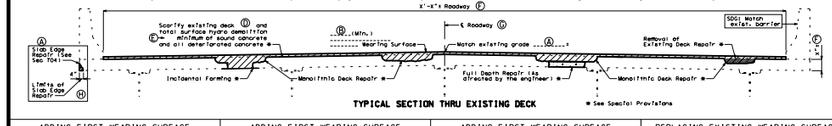
SDG: Not used with asphalt or epoxy polymer.



TYPICAL SECTION THRU EXISTING DECK

ADDING FIRST WEARING SURFACE WITH HYDRO DEMOLITION

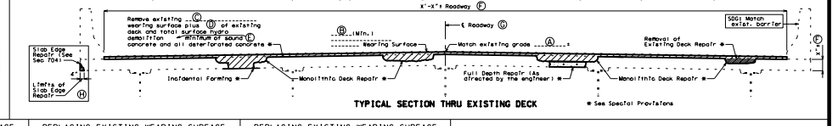
SDG: Not used with asphalt or epoxy polymer. Low slump concrete or polymer polymer concrete are too stiff to be used with monolithic repairs.
If alternate concrete wearing surface is specified, use both the hydro profiling typical section adding "Low Slump Concrete" to title: and the hydro demolition typical section adding "Silica Fume" to title.



TYPICAL SECTION THRU EXISTING DECK

REPLACING EXISTING WEARING SURFACE WITH HYDRO DEMOLITION

SDG: Not used with asphalt or epoxy polymer. Low slump concrete or polymer polymer concrete are too stiff to be used with monolithic repairs.
If alternate concrete wearing surface is specified, use both the hydro profiling typical section adding "Low Slump Concrete" to title: and the hydro demolition typical section adding "Silica Fume" to title.

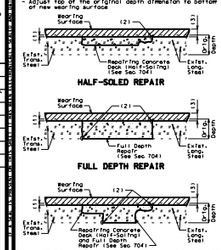


TYPICAL SECTION THRU EXISTING DECK

ADDING FIRST WEARING SURFACE WITH TRADITIONAL DECK REPAIR

SDG: Can be used with all new wearing surfaces types.

For asphaltic concrete wearing surfaces or epoxy polymer concrete overlays:
- Remove (1) and renumber notes
- Delete top existing line
- Adjust note (4) original depth dimension to bottom of new wearing surface



HALF-SOLED REPAIR

FULL DEPTH REPAIR

FULL DEPTH REPAIR WITH HALF-SOLED REPAIR

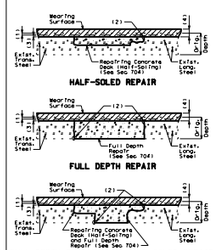
(1) Scarify existing deck (D) (I).

(2) One inch vertical side shall be established outside the deteriorated area. See Sec 704.

(3) 1 1/4" (Min.) Epoxy Polymer Concrete Overlay
1 1/4" (Min.) Polyester Polymer Concrete Overlay
1 3/4" (Min.) Latex Modified Concrete Wearing Surface
1 3/4" (Min.) Latex Modified High Early Strength Concrete Wearing Surface
2 1/4" (Min.) Low Slump Concrete or Silica Fume Concrete Wearing Surface (Alternate Concrete Wearing Surface)

ADDING FIRST WEARING SURFACE WITH TRADITIONAL DECK REPAIR FOLLOWED BY HYDRO PROFILING

SDG: Not used with asphalt or epoxy polymer.



HALF-SOLED REPAIR

FULL DEPTH REPAIR

FULL DEPTH REPAIR WITH HALF-SOLED REPAIR

(1) Scarify existing deck (D).

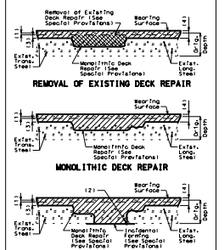
(2) One inch vertical side shall be established outside the deteriorated area. See Sec 704.

(3) After completion of deck repairs hydro surface profiling of existing deck 1/4" minimum of sound concrete.

(4) 1 1/4" (Min.) Polyester Polymer Concrete Overlay
1 1/4" (Min.) Latex Modified Concrete Wearing Surface
1 3/4" (Min.) Latex Modified High Early Strength Concrete Wearing Surface
2 1/4" (Min.) Low Slump Concrete or Silica Fume Concrete Wearing Surface (Alternate Concrete Wearing Surface)

ADDING FIRST WEARING SURFACE WITH HYDRO DEMOLITION

SDG: Not used with asphalt or epoxy polymer. Low slump concrete or polymer polymer concrete are too stiff to be used with monolithic repairs.
If alternate concrete wearing surface is specified, use hydro profiling details for the low slump option.



REMOVAL OF EXISTING DECK REPAIR

MONOLITHIC DECK REPAIR

MONOLITHIC DECK REPAIR REQUIRING INCIDENTAL FORMING

MONOLITHIC DECK REPAIR REQUIRING FULL DEPTH REPAIR

(1) Scarify existing deck (D).

(2) One inch vertical side shall be established outside the deteriorated area.

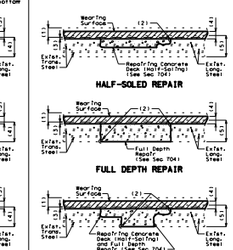
(3) Total surface hydro demolition of existing deck (E) minimum of sound concrete and all deteriorated concrete.

(4) 1 3/4" (Min.) Latex Modified Concrete Wearing Surface
1 3/4" (Min.) Latex Modified High Early Strength Concrete Wearing Surface
2 1/4" (Min.) Silica Fume Concrete Wearing Surface (Alternate Concrete Wearing Surface)

REPLACING EXISTING WEARING SURFACE WITH TRADITIONAL DECK REPAIR

SDG: Can be used with all new wearing surfaces types.

For asphaltic concrete wearing surfaces or epoxy polymer concrete overlays:
- Delete existing line at top of original depth minus previous scarification.
- Adjust note (4) original depth dimension to bottom of new wearing surface.



HALF-SOLED REPAIR

FULL DEPTH REPAIR

FULL DEPTH REPAIR WITH HALF-SOLED REPAIR

(1) Remove existing wearing surface plus (D) of existing deck.

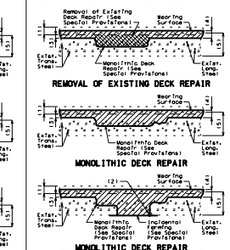
(2) One inch vertical side shall be established outside the deteriorated area. See Sec 704.

(3) 1 1/4" (Min.) Epoxy Polymer Concrete Overlay
1 1/4" (Min.) Polyester Polymer Concrete Overlay
1 1/4" (Min.) Latex Modified Concrete Wearing Surface
1 3/4" (Min.) Latex Modified High Early Strength Concrete Wearing Surface
2 1/4" (Min.) Low Slump Concrete or Silica Fume Concrete Wearing Surface (Alternate Concrete Wearing Surface)

(4) Original depth of deck minus previous scarification.

REPLACING EXISTING WEARING SURFACE WITH TRADITIONAL DECK REPAIR FOLLOWED BY HYDRO PROFILING

SDG: Not used with asphalt or epoxy polymer.



HALF-SOLED REPAIR

FULL DEPTH REPAIR

FULL DEPTH REPAIR WITH HALF-SOLED REPAIR

(1) Remove existing wearing surface plus (D) of existing deck.

(2) One inch vertical side shall be established outside the deteriorated area. See Sec 704.

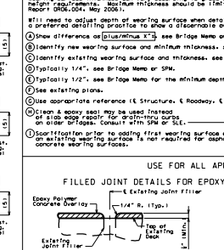
(3) After completion of deck repairs hydro surface profiling of existing deck 1/4" minimum of sound concrete.

(4) 1 1/4" (Min.) Polyester Polymer Concrete Overlay
1 3/4" (Min.) Latex Modified Concrete Wearing Surface
1 3/4" (Min.) Latex Modified High Early Strength Concrete Wearing Surface
2 1/4" (Min.) Low Slump Concrete or Silica Fume Concrete Wearing Surface (Alternate Concrete Wearing Surface)

(5) Original depth of deck minus previous scarification.

REPLACING EXISTING WEARING SURFACE WITH HYDRO DEMOLITION

SDG: Not used with asphalt or epoxy polymer. Low slump concrete or polymer polymer concrete are too stiff to be used with monolithic repairs.
If alternate concrete wearing surface is specified, use hydro profiling details for the low slump option.



REMOVAL OF EXISTING DECK REPAIR

MONOLITHIC DECK REPAIR

MONOLITHIC DECK REPAIR REQUIRING INCIDENTAL FORMING

MONOLITHIC DECK REPAIR REQUIRING FULL DEPTH REPAIR

(1) Remove existing wearing surface plus (D) of existing deck.

(2) One inch vertical side shall be established outside the deteriorated area.

(3) Total surface hydro demolition of existing deck (E) minimum of sound concrete and all deteriorated concrete.

(4) 1 1/4" (Min.) Latex Modified Concrete Wearing Surface
1 3/4" (Min.) Latex Modified High Early Strength Concrete Wearing Surface
2 1/4" (Min.) Silica Fume Concrete Wearing Surface (Alternate Concrete Wearing Surface)

(5) Original depth of deck minus previous scarification.

STANDARD DRAWING GUIDANCE (do not show on plans):

This is an index of Standard Drawing details. Draw typical section as required and scale to fit within attached border. Use appropriate deck repair details and modify as required.

For bridges with epoxy coated steel, see Sec 710 for reinforcing bars and add notes as necessary. See SPM.

Wearing surface thickness can vary according to grade elevation requirements and minimum barrier curb height requirements. Maximum thickness should be limited to 3" (Ref. Organizational Results Research Report OR06.004, May 2006).

Will need to adjust depth of wearing surface when detailing Epoxy Polymer Concrete Overlay, but it is a preferred detailing practice to show a discernable overlay thickness on the plans.

(A) Slope difference as (plus/minus 1/4") see Bridge Memo or SPM. e.g. Match existing grade plus 2 1/4"

(B) Identify new wearing surface and minimum thickness. see Bridge Memo or SPM.

(C) Identify existing wearing surface and thickness. see Bridge Memo or existing plans.

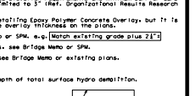
(D) Typically 1/4". see Bridge Memo or SPM.

(E) Typically 1/2". see Bridge Memo for the minimum depth of total surface hydro demolition.

(F) See existing plans.

(G) Use appropriate reference (℄ Structure, ℄ Roadway, ℄ Median, etc.)

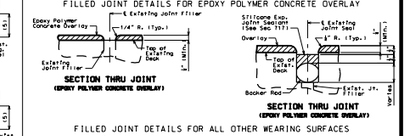
(H) Clean & epoxy seal may be used instead of slab edge repair for drain-thru curbs on older bridges. Consult with SM or SLE.



(I) Scarification prior to adding first wearing surface or removing a portion of the deck when remaining on existing wearing surface is not required for asphaltic concrete wearing surfaces or epoxy polymer concrete wearing surfaces.

USE FOR ALL APPLICATIONS

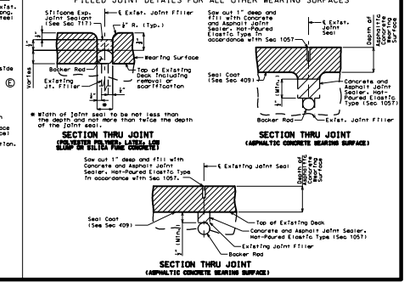
FILLED JOINT DETAILS FOR EPOXY POLYMER CONCRETE OVERLAY



SECTION THRU JOINT
(EPOXY POLYMER CONCRETE OVERLAY)

SECTION THRU JOINT
(EPOXY POLYMER CONCRETE OVERLAY)

FILLED JOINT DETAILS FOR ALL OTHER WEARING SURFACES



SECTION THRU JOINT
(ASPHALTIC CONCRETE WEARING SURFACE)

SECTION THRU JOINT
(ASPHALTIC CONCRETE WEARING SURFACE)