USE ½" BORDER WITH DETAILS

SEC/SUR ✱ TWP ✱ RGE ✱

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

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

DATE PREPARED	5/26/2016
ROUTE	✱
STATE	MO
DISTRICT	BR
SHEET NO.	1
COUNTY	✱
JOB NO.	✱
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	RHB02

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

B.M.

REPAIRS TO BRIDGE: ROUTE ✱ OVER ✱

ROUTE ✱ FROM ✱ TO ✱
ABOUT ✱ MILES ✱ OF ✱
STA. _________± (Match Existing)

STD.
STD.
STD.
STD.

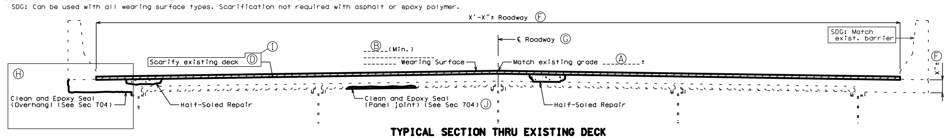
Designed
Detailed
Checked

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

Sheet No. 1 of

ADDING FIRST WEARING SURFACE WITH TRADITIONAL DECK REPAIR

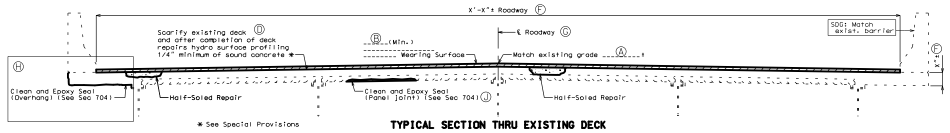
SDG: Can be used with all wearing surface types. Scarification not required with asphalt or epoxy polymer.



TYPICAL SECTION THRU EXISTING DECK

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

SDG: Not used with asphalt or epoxy polymer.

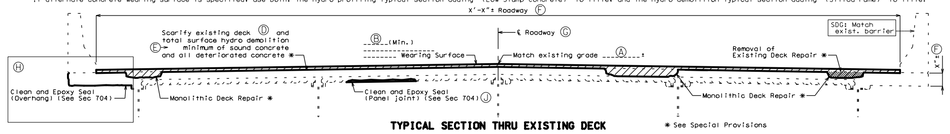


✱ See Special Provisions

TYPICAL SECTION THRU EXISTING DECK

ADDING FIRST WEARING SURFACE WITH HYDRO DEMOLITION

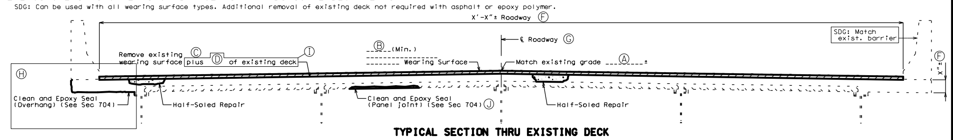
SDG: Not used with asphalt or epoxy polymer. Low slump concrete or polyester polymer concrete are too stiff to be used with monolithic repairs.
If alternate concrete wearing surface is specified, use both: the hydro profiling typical section adding "(Low Slump Concrete)" to title; and the hydro demolition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



TYPICAL SECTION THRU EXISTING DECK ✱ See Special Provisions

REPLACING EXISTING WEARING SURFACE WITH TRADITIONAL DECK REPAIR

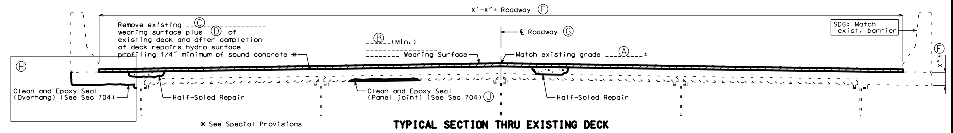
SDG: Can be used with all wearing surface types. Additional removal of existing deck not required with asphalt or epoxy polymer.



TYPICAL SECTION THRU EXISTING DECK

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

SDG: Not used with asphalt or epoxy polymer.

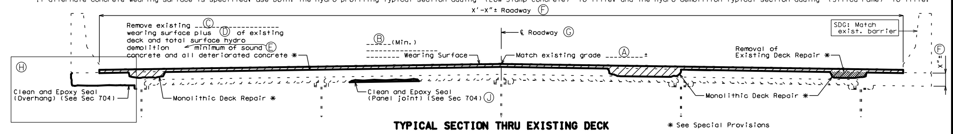


✱ See Special Provisions

TYPICAL SECTION THRU EXISTING DECK

REPLACING EXISTING WEARING SURFACE WITH HYDRO DEMOLITION

SDG: Not used with asphalt or epoxy polymer. Low slump concrete or polyester 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.

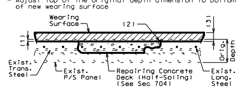


TYPICAL SECTION THRU EXISTING DECK ✱ See Special Provisions

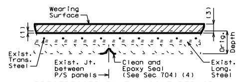
ADDING FIRST WEARING SURFACE WITH TRADITIONAL DECK REPAIR

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 top of the original depth dimension to bottom of new wearing surface



HALF-SOLED REPAIR



PRESTRESSED PANEL JOINT REPAIR
(TRANSVERSE SECTION SHOWN)

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

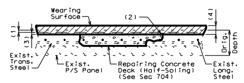
(2) One inch vertical side shall be established outside the deteriorated area. See Sec 704.

(3) 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)

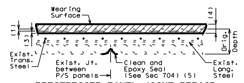
(4) Remove all deteriorated concrete at transverse joint between prestressed panels and seal with epoxy. See Sec 704.

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

SDG: Not used with asphalt or epoxy polymer.



HALF-SOLED REPAIR



PRESTRESSED PANEL JOINT REPAIR
(TRANSVERSE SECTION SHOWN)

(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.

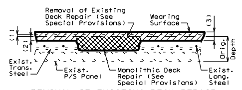
(4) 1 1/4" (Min.) Polyester Polymer Concrete Overlay
1 3/4" (Min.) Latex Modified Concrete Wearing Surface
1 3/4" (Min.) Latex Modified High Early Strength Concrete Wearing Surface
2 1/4" (Min.) Low Slump Concrete or Silica Fume Concrete Wearing Surface (Alternate Concrete Wearing Surface)

(5) Remove all deteriorated concrete at transverse joint between prestressed panels and seal with epoxy. See Sec 704.

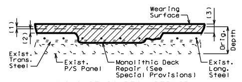
ADDING FIRST WEARING SURFACE WITH HYDRO DEMOLITION

SDG: Not used with asphalt or epoxy polymer. Low slump concrete or polyester polymer concrete are too stiff to be used with monolithic repairs.

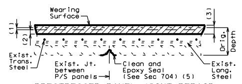
If alternate concrete wearing surface is specified, use hydro profiling details for the low slump option.



REMOVAL OF EXISTING DECK REPAIR



MONOLITHIC DECK REPAIR



PRESTRESSED PANEL JOINT REPAIR
(TRANSVERSE SECTION SHOWN)

(1) Scarify existing deck (D).

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

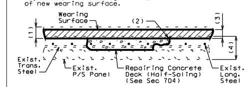
(3) 1 3/4" (Min.) Latex Modified Concrete Wearing Surface
1 3/4" (Min.) Latex Modified High Early Strength Concrete Wearing Surface
2 1/4" (Min.) Silica Fume Concrete Wearing Surface (Alternate Concrete Wearing Surface)

(4) Remove all deteriorated concrete at transverse joint between prestressed panels and seal with epoxy. See Sec 704.

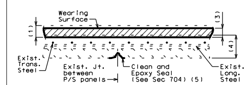
REPLACING EXISTING WEARING SURFACE WITH TRADITIONAL DECK REPAIR

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 top of the original depth dimension to bottom of new wearing surface.



HALF-SOLED REPAIR



PRESTRESSED PANEL JOINT REPAIR
(TRANSVERSE SECTION SHOWN)

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

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

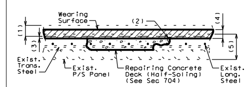
(3) 1/4" (Min.) Epoxy Polymer Concrete Overlay
1 1/4" (Min.) Polyester Polymer Concrete Overlay
1 3/4" (Min.) Latex Modified Concrete Wearing Surface
1 3/4" (Min.) Latex Modified High Early Strength Concrete Wearing Surface
2 1/4" (Min.) Low Slump Concrete or Silica Fume Concrete Wearing Surface (Alternate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

(4) Original depth of deck minus previous scarification.

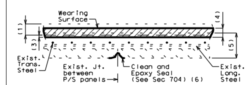
(5) Remove all deteriorated concrete at transverse joint between prestressed panels and seal with epoxy. See Sec 704.

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

SDG: Not used with asphalt or epoxy polymer.



HALF-SOLED REPAIR



PRESTRESSED PANEL JOINT REPAIR
(TRANSVERSE SECTION SHOWN)

(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)

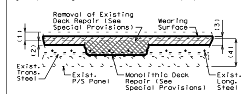
(5) Original depth of deck minus previous scarification.

(6) Remove all deteriorated concrete at transverse joint between prestressed panels and seal with epoxy. See Sec 704.

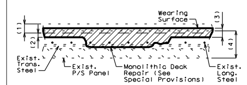
REPLACING EXISTING WEARING SURFACE WITH HYDRO DEMOLITION

SDG: Not used with asphalt or epoxy polymer. Low slump concrete or polyester polymer concrete are too stiff to be used with monolithic repairs.

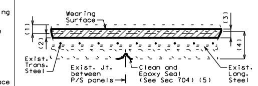
If alternate concrete wearing surface is specified, use hydro profiling details for the low slump option.



REMOVAL OF EXISTING DECK REPAIR



MONOLITHIC DECK REPAIR



PRESTRESSED PANEL JOINT REPAIR
(TRANSVERSE SECTION SHOWN)

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

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

(3) 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)

(4) Original depth of deck minus previous scarification.

(5) Remove all deteriorated concrete at transverse joint between prestressed panels and seal with epoxy. See Sec 704.

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 repairs of deck cantilever, use appropriate details from Drawing RHB01.

For bridges with epoxy coated steel, see Sec 710 for repairing 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.

Consideration shall be made for additional notes for repairing deterioration of the precast prestressed panels. See SPM.

The Prestressed Panel Joint Repair detail is shown transverse because typically deterioration follows the strand closest to the panel edge, referred to as a "joint".

(A) Show difference as plus/minus X"±, see Bridge Memo or SPM. e.g. Match existing grade plus 2¼"±

(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.

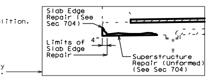
(D) Typically 1/4", see Bridge Memo or SPM.

(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) In urban areas, repair of the overhang may may be preferred. Consult with SPM or SLE.

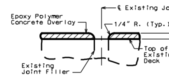


(I) Scarification prior to adding first wearing surface or removing a portion of the deck when removing an existing wearing surface is not required for asphaltic concrete wearing surfaces or epoxy polymer concrete wearing surfaces.

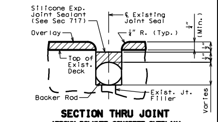
(J) Remove all deteriorated concrete at transverse joint between prestressed panels and seal with epoxy. Instruction may need to be given on plans regarding limits of concrete removal with respect to preserving prestressing development. See Sec 704.

USE FOR ALL APPLICATIONS

FILLED JOINT DETAILS FOR EPOXY POLYMER CONCRETE OVERLAY

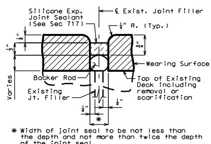


SECTION THRU JOINT
(EPOXY POLYMER CONCRETE OVERLAY)



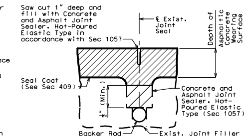
SECTION THRU JOINT
(EPOXY POLYMER CONCRETE OVERLAY)

FILLED JOINT DETAILS FOR ALL OTHER WEARING SURFACES

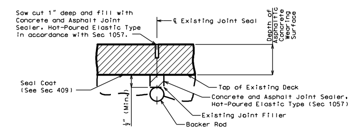


✱ Width of joint seal to be not less than the depth and not more than twice the depth of the joint seal.

SECTION THRU JOINT
(POLYESTER POLYMER, LATEX, LOW SLUMP OR SILICA FUME CONCRETE)



SECTION THRU JOINT
(ASPHALTIC CONCRETE WEARING SURFACE)



SECTION THRU JOINT
(ASPHALTIC CONCRETE WEARING SURFACE)