




Office of Engineering  
Project Development Division  
Bridge Design Section  
PO Box 94245 | Baton Rouge,  
LA 70804-9245  
Phone: 225-379-1302

John Bel Edwards, Governor  
Shawn D. Wilson, Ph.D., Secretary

MEMORANDUM

TO: ALL CONSULTANTS  
ALL BRIDGE DESIGNERS

FROM: PAUL FOSSIER, P.E.   
BRIDGE DESIGN ENGINEER ADMINISTRATOR

SUBJECT: BRIDGE DESIGN TECHNICAL MEMORANDUM NO. 64 (BDTM.64)  
PAVEMENT EXPANSION JOINT REHAB FOR OVERLAY PROJECTS

DATE: October 12, 2016

Effectively immediately, use of the subject new Special Details, "Pavement Expansion Joint Rehab for Overlay Projects", shall be implemented for all asphalt overlay projects adjacent to bridges which are prior to 60% Final Plan stage.

These details are applicable for the rehab and construction of 4" expansion relief joints in existing concrete pavements in overlay projects. Concrete pavement roadways should be constructed with EJ-4" relief joints in three locations near each end of a bridge and an additional relief joint at the end of the approach slab, as shown on Roadway Standard Plan "CP-01".

Existing EJ-4" joints shall be repaired according to the details on sheet 2 of 4 of these plans. Locations that are lacking an EJ-4" relief joint where one should exist will require construction of a new joint according to the details on sheet 3 of 4. EJ-4" joints should be located as closely as possible to the locations shown on "CP-01".

Existing expansion relief joints located at the end of an approach slab shall be repaired according to the details on sheet 4 of 4 of these plans. If no joint exists at the end of the approach slab, no work is required at that location.

In the past, existing pavement expansion joints may have been overlooked and covered by asphalt overlay. However, proper treatment of these joints is critical in preventing damage to bridge end bents and spans caused by concrete pavement expansion.

A new pay item (NS-602-00011 – "Expansion Joint Rehabilitation") has been created to cover the work shown in this set of details. The index of special details posted on the Bridge Design website has been updated to include these details. See attachments for the new detail sheets and the pay item description.

This technical memorandum is posted on the LA DOTD Website under [Inside La DOTD > Divisions - Engineering > Bridge Design > Technical Memoranda – BDTMs.](#)

Please contact Ms. Zhengzheng "Jenny" Fu (225-379-1321, [zhengzheng.fu@la.gov](mailto:zhengzheng.fu@la.gov)) if you have questions or comments.

PF/zzf/abl

Attachments

Cc: Janice Williams (Chief Engineer)  
Edward Wedge (Deputy Engineer Administrator)

Chad Winchester (Chief, Project Development Division)  
Kirk Gallien (Assistant Secretary of Operations)  
David Miller (Chief Maintenance Administrator)  
Michael Vosburg (Chief Construction Division Engineer)  
Jeff Burst (Project Management Director)  
Jeff Lambert (Pavement and Geotechnical Engineer Administrator)  
Simone Ardoin (Road Design Engineer Administrator)  
Jacques Deville (Pavement Preservation Program Manager)  
Art Aguirre (FHWA)  
Patrick Wollerson (DOTD Plans Manager)  
District Administrators, ADA Engineering, ADA Operations, and District Area Engineers

Inactive



10/12/2016

16:4:

**NOTES:**

**EXPANSION JOINT REHAB DETAILS INDEX**

1. THESE DETAILS ARE APPLICABLE FOR THE REHAB AND CONSTRUCTION OF 4" EXPANSION RELIEF JOINTS IN EXISTING CONCRETE PAVEMENTS IN OVERLAY PROJECTS. ALL SHEETS IN THIS SET SHALL BE USED TOGETHER. CONCRETE PAVEMENT ROADWAYS SHOULD BE CONSTRUCTED WITH E-J-4" RELIEF JOINTS IN THREE LOCATIONS NEAR EACH END OF A BRIDGE, AND AN ADDITIONAL RELIEF JOINT AT THE END OF THE APPROACH SLAB, AS SHOWN ON ROADWAY STANDARD PLAN "CP-01".

EXISTING E-J-4" JOINTS SHALL BE REPAIRED ACCORDING TO THE DETAILS ON SHEET 2 OF 4 OF THESE PLANS. LOCATIONS THAT ARE LACKING AN E-J-4" JOINT WHERE ONE SHOULD EXIST WILL REQUIRE CONSTRUCTION OF A NEW JOINT ACCORDING TO THE DETAILS ON SHEET 3 OF 4. E-J-4" JOINTS SHOULD BE LOCATED AS CLOSELY AS POSSIBLE TO THE LOCATIONS SHOWN ON "CP-01".

EXISTING EXPANSION RELIEF JOINTS LOCATED AT THE END OF AN APPROACH SLAB SHALL BE REPAIRED ACCORDING TO THE DETAILS ON SHEET 4 OF 4 OF THESE PLANS. IF NO JOINT EXISTS AT THE END OF THE APPROACH SLAB, NO WORK IS REQUIRED AT THAT LOCATION.

2. BASIS OF PAYMENT: ALL WORK SHOWN IN THESE PLANS SHALL BE PAID FOR UNDER ITEM NS-602-0001, "EXPANSION JOINT REHABILITATION."

BRIDGE STANDARD INDEX NO.	SERIES	DESCRIPTION
BD.2.9.1.0.01	1 OF 4	EXPANSION JOINT REHAB NOTES AND INDEX
BD.2.9.1.0.02	2 OF 4	REHAB OF EXISTING E-J-4" JOINT
BD.2.9.1.0.03	3 OF 4	CONSTRUCTION OF NEW E-J-4" JT. IN EXISTING PAVEMENT
BD.2.9.1.0.04	4 OF 4	REHAB OF EXISTING EXPANSION JOINT NEAR APPROACH SLAB

Inactive

**PAVEMENT EXPANSION JOINT REHAB FOR OVERLAY PROJECTS**  
NOTES AND INDEX

BD.2.9.1.0.01 - PREVENTIVE MAINTENANCE



NO.	DATE	REVISION OR CHANGE ORDER DESCRIPTION	BY

DESIGNED	A.L. LANCASTER	CHECKED	X. WANG
DETAILED	A.L. LANCASTER	CHECKED	R. MORVANT
REVIEWED	Z.Z. FU	SERIES #	1 OF 4

PARISH	CONTROL SECTION	STATE PROJECT
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ADAM LANCASTER  
 License No. 35573  
 PROFESSIONAL ENGINEER  
 IN  
 CIVIL ENGINEERING

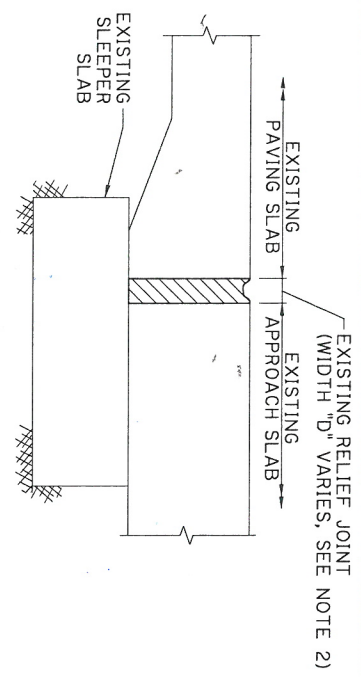
Adam Lancaster  
10/12/16

SHEET NUMBER

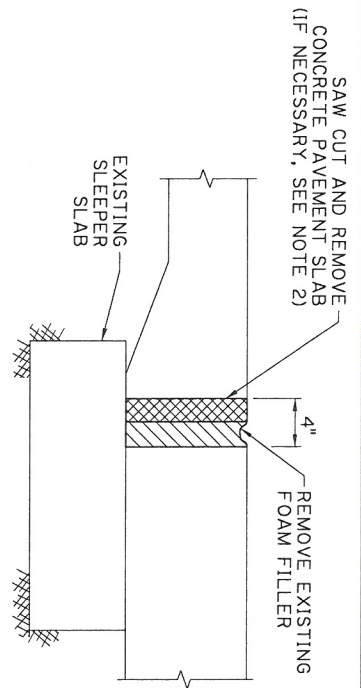
BRIDGE AND STRUCTURAL DESIGN



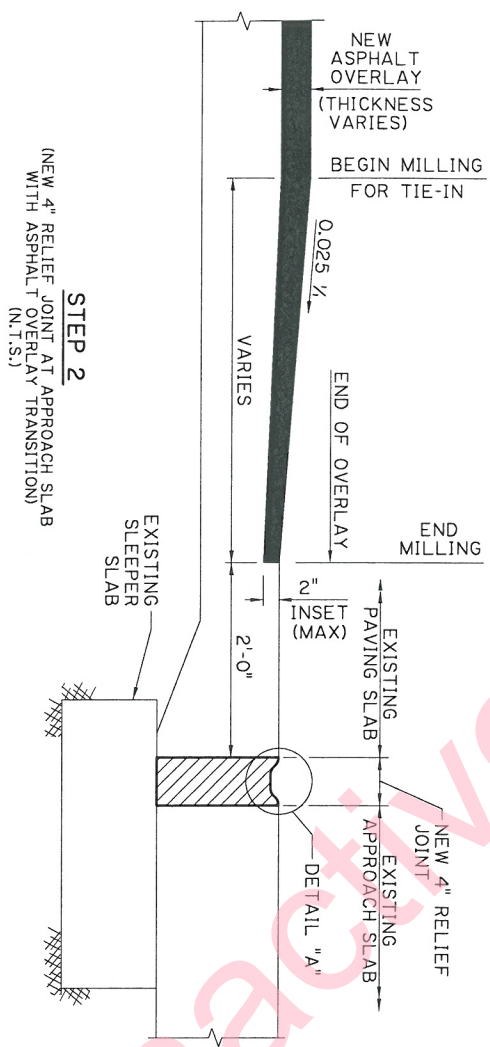




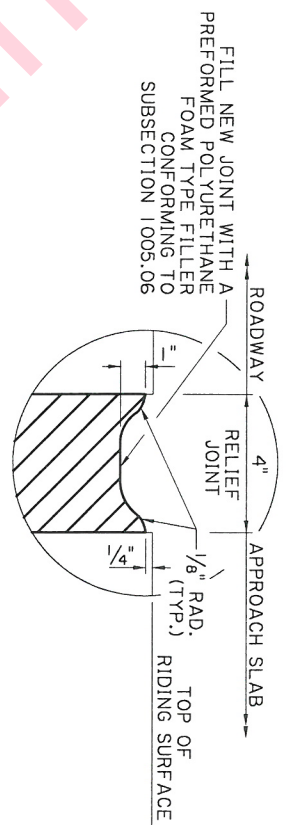
EXISTING RELIEF JOINT IN CONG. PAVEMENT AT APPROACH SLAB (N.T.S.)



STEP 1 (PAVEMENT DEMO, SEE NOTE 2) (N.T.S.)



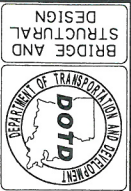
STEP 2 (NEW 4" RELIEF JOINT AT APPROACH SLAB WITH ASPHALT OVERLAY TRANSITION) (N.T.S.)



DETAIL A (NEW INSTALLED FOAM FILLER) (N.T.S.)

NOTES:

1. THIS PLAN IS APPLICABLE FOR THE REHABILITATION OF EXISTING 4" RELIEF JOINTS IN CONCRETE PAVEMENT AT THE END OF THE BRIDGE APPROACH SLAB, AS SHOWN IN THE BRIDGE DESIGN SPECIAL DETAILS FOR APPROACH SLABS.
2. IF THE WIDTH OF THE RELIEF JOINT ("D") IS 2" OR LESS, OR IF THE EXISTING FOAM JOINT FILLER IS DETERIORATED OR TORN, THEN REHABILITATION OF THE RELIEF JOINT IS REQUIRED. REMOVE THE EXISTING FOAM FILLER. SAWCUT AND REMOVE EXISTING CONCRETE PAVING SLAB AS NEEDED TO REESTABLISH 4" OPENING, AS SHOWN IN "STEP 1". VERTICAL SIDES OF JOINT OPENING MUST BE PARALLEL WITH RESPECT TO EACH OTHER, AND MUST BE PERPENDICULAR WITH RESPECT TO THE SLEEPER SLAB. DEMO PAVEMENT SLAB ONLY. DO NOT SAW CUT/DEMO THE APPROACH SLAB. JOINT OPENING AND VERTICAL EDGES OF SLABS MUST BE FREE OF DEBRIS BEFORE INSTALLATION OF NEW JOINT FILLER. FILL NEW JOINT OPENING WITH FULL-DEPTH FOAM FILLER AND TRANSITION ASPHALT OVERLAY AS SHOWN IN "STEP 2" AND DETAIL "A".
3. BASIS OF PAYMENT: ALL WORK ASSOCIATED WITH THE EXPANSION JOINT SHALL BE PAID FOR UNDER ITEM NS-602-0001 I, "EXPANSION JOINT REHABILITATION."



PAVEMENT EXPANSION JOINT REHAB FOR OVERLAY PROJECTS  
4" EXPANSION JOINT @ APPROACH SLAB



NO.	DATE	REVISION OR CHANGE ORDER DESCRIPTION	BY

DESIGNED	A.L. LANCASTER	PARISH	
CHECKED	X. WANG	CONTROL SECTION	
REVIEWED	R. MORVANT	STATE PROJECT	
SERIES #	4 OF 4		

STATE OF LOUISIANA  
ADAM LANCASTER  
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CIVIL ENGINEERING  
10/12/16

*Use on Pavement Rehab and Preventive Maintenance Projects.  
Requires Approval Of Pavement Preservation Engineer.  
Use on Bridge Preventive Maintenance and Rehabilitation Projects.*

**NS EXPANSION JOINT REHABILITATION (05/15):**

DESCRIPTION. This item consists of the rehabilitation of expansion joints in accordance with plan details, the 2006 Louisiana Standard Specifications for Roads and Bridges, this specification, the manufacturer's instructions, and as directed by the project engineer.

MATERIALS. Materials shall be in accordance with Section 1005.06.

MEASUREMENT. Expansion Joint Rehabilitation will be measured by the linear foot repaired.

PAYMENT. Payment for Expansion Joint Rehabilitation will be made at the contract unit price per linear foot which includes all materials, labor, equipment, tools, and incidentals (included but not limited to the required filler material, sawcut and removal of existing pavement, handling, testing, preparing surfaces) necessary to complete the work.

Payment will be made under:

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
NS-602-00011	Expansion Joint Rehabilitation	Linear Foot (Lin m)

Inactive