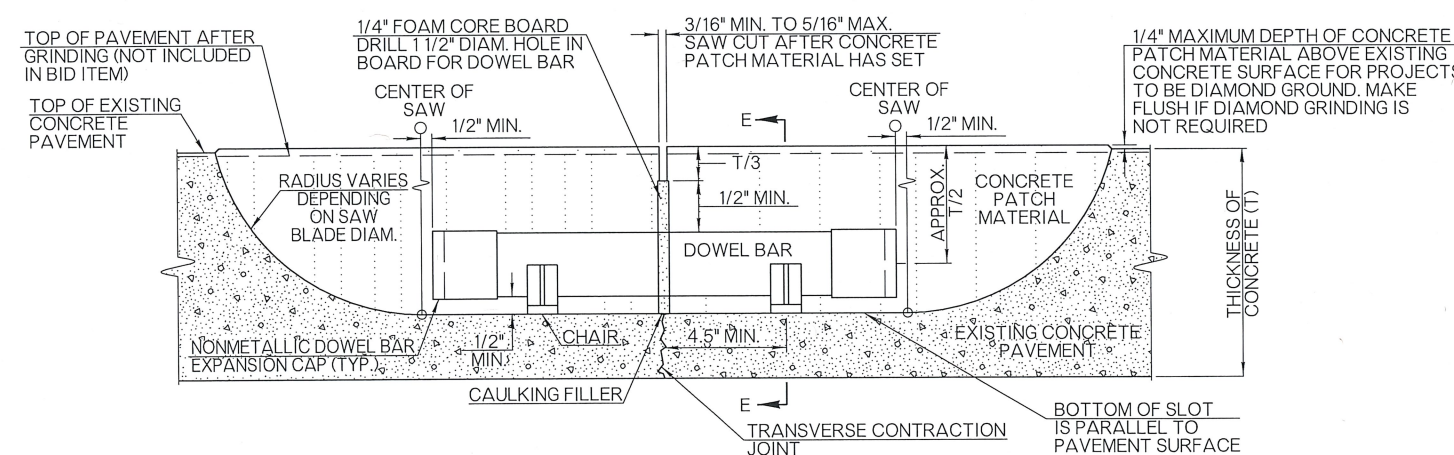
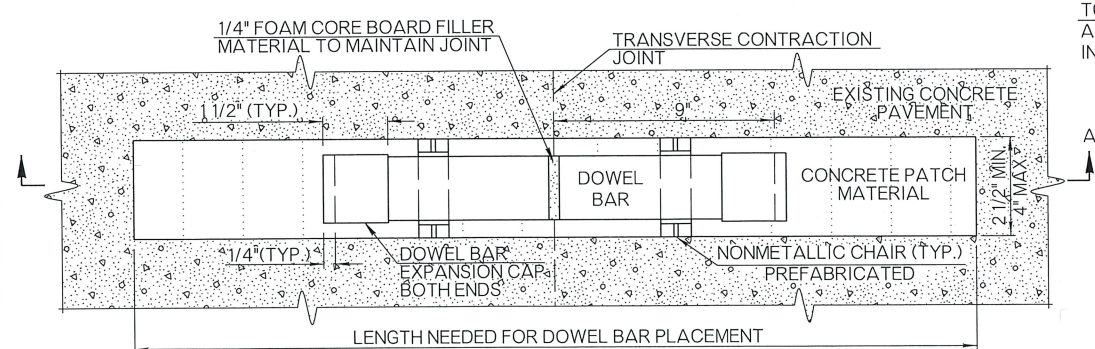


★ DOWEL BAR SETS ( FOUR BARS AT 12"CTRS. ) SHALL BE USED AS SHOWN FOR ALL CONTRACTION JOINTS. IF PATCH EXTENDS IN BOTH DIRECTIONS, FROM A CONTRACTION JOINT, THEN APPROVED LOAD TRANSFER DEVICES MEETING THE REQUIREMENTS OF SECTION 414.04, AND AS SHOWN ON ROADWAY STANDARD LTU-4 SHALL BE USED IN LIEU OF DOWEL BAR SETS. IF PARTIAL PANEL PATCH IS GOING TO EXCEED 7' (FOR 15' JOINTED PAVEMENT) OR 15' (FOR 62' JOINTED PAVEMENT), THEN USE A FULL PANEL PATCH.

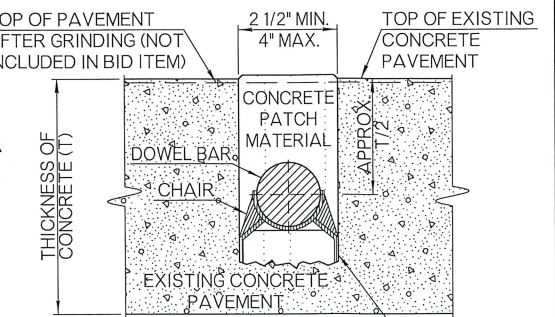
FULL DEPTH PATCHING DETAIL



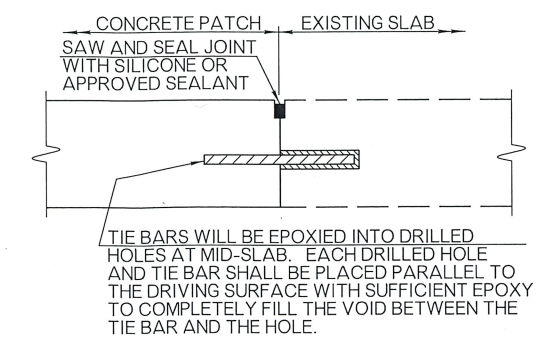
SECTION - A  
DOWEL BAR RETROFIT PLACEMENT DETAIL



PLAN VIEW  
DOWEL BAR RETROFIT INSTALLATION

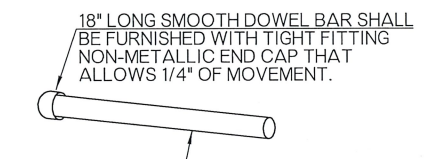


SECTION - E



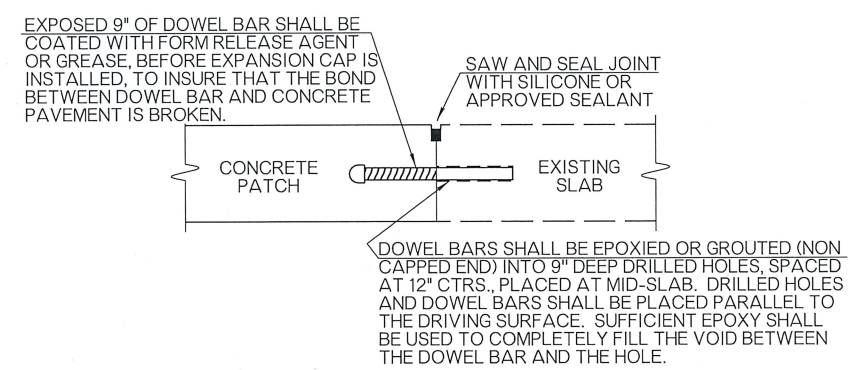
DETAIL OF TIE BAR JOINT

NOTE  
LONGITUDINAL JOINT - TIE BARS - NO. 5 DEFORMED REINFORCING STEEL BARS, 2'-6" LONG, SHALL BE EPOXIED INTO 3/4" DIA. ( MAX. ) DRILLED HOLES AT 3'-0" CTRS. TIED LONGITUDINALLY. JOINT SHALL BE SAWED AND SEALED.  
TRANSVERSE JOINT - TIE BARS - NO. 10 DEFORMED REINFORCING STEEL BARS, 1'-6" LONG, SHALL BE EPOXIED INTO 1 3/8" DIA. ( MAX. ) DRILLED HOLES AT 18" CTRS. FULL WIDTH, TRANSVERSE, TIED JOINTS SHALL NOT BE SAWED OR SEALED.



1" DIA. DOWELS FOR 6" TO 8" PAVEMENTS  
1 1/4" DIA. DOWELS FOR 8 1/2" TO 10" PAVEMENTS  
1 1/2" DIA. DOWELS FOR 10 1/2" PAVEMENTS OR THICKER.

DETAIL OF DOWEL BAR WITH CAP



DETAIL OF DOWEL BAR AT CONSTRUCTION JOINT

**BASE REPAIR AND PREPARATION**  
IN AREAS WHERE PATCHING IS REQUIRED, THE REMOVAL OF THE DAMAGED PAVEMENT SHALL BE PERFORMED IN A MANNER THAT WOULD MINIMIZE FURTHER DAMAGE TO THE UNDERLYING SUBBASE ( S ), SUBGRADE OR ADJACENT PAVEMENT( S ). NO COMPENSATION WILL BE MADE TO CONTRACTOR FOR REPAIRING DAMAGE SUSTAINED DURING THE REMOVAL PROCESS.  
  
COST OF ANY INCIDENTAL BASE REPAIR, LEVELING OR BACKFILLING, UP TO 2". WILL BE INCLUDED IN FULL DEPTH PCC PATCH ( PLACEMENT ) PAY ITEM. INCIDENTAL REPAIR, LEVELING AND BACKFILLING MATERIAL SHALL CONSIST OF SAME MATERIAL ENCOUNTERED, CRUSHED LIMESTONE OR BY THICKENING THE FULL DEPTH PATCH.  
  
BASE REPAIR, LEVELING AND RELATED BACKFILLING OF SUBBASE ( S ) OR SUBGRADE IN EXCESS OF 2" SHALL BE PAID FOR AS UNCLASSIFIED EXCAVATION WITH QUANTITIES COMPUTED FROM BOTTOM OF SLAB DOWNWARD TO LIMITS OF REMOVAL.

GENERAL SEQUENCE OF PAVEMENT REPAIR

- STEP 1 CONCRETE PATCHING**
- (1) AREAS TO BE PATCHED WILL BE DESIGNATED BY THE ENGINEER
  - (2) FOR REMOVAL OF FULL DEPTH PATCHES, SAWING IS TO BE FULL DEPTH. LIFT OUT DAMAGED PAVEMENT WHENEVER PRACTICAL.
  - (3) THE FLOW OF TRAFFIC MAY BE RESTRICTED TO ONE LANE DUE TO PATCHING OPERATION FOR A MAXIMUM DISTANCE OF ONE MILE.
- STEP 2 DOWEL BAR RETROFIT INSTALLATION**
- (1) INSTALL DOWEL BARS AS SHOWN. BAR PLACEMENT SHALL CONSIST OF 3 BARS PER WHEEL PATH, PLACED 12" TO 15" APART, AND 18" FROM EDGE OF DRIVING LANE.
  - (2) DOWEL BARS SHALL NOT BE PLACED ON TOP OF A LONGITUDINAL CRACK.
  - (3) PAYMENT FOR 'DOWEL BAR RETROFIT' SHALL ONLY BE MADE FOR DOWELS PLACED BY THE PROCESS OF CUTTING A SLOT.
  - (4) IF SLOTS ARE SAWED BUT NOT RETROFITTED WITH A BAR, THE SAW CUTS SHALL BE CLEANED AND SEALED WITH AN EPOXY RESIN.
- STEP 3 DIAMOND GRINDING CONCRETE PAVEMENT**
- (1) AFTER SLAB STABILIZATION AND/OR DOWEL BAR RETROFIT INSTALLATION, & APPROPRIATE CURE TIME HAS BEEN DETERMINED, GRINDING OPERATIONS MAY BEGIN.
- STEP 4 CONCRETE JOINT SEALING**
- (1) CUT SHALL BEGIN AT THE LOW EDGE OF THE DRIVING LANES AND MOVE TOWARD THE INITIAL JOINT.
  - (2) INSTALLATION OF BOND BREAKER AND SILICONE JOINT SEALANT SHALL BE FROM THE END OF THE INITIAL JOINT TO THE LOW EDGE OF THE DRIVING LANES.

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE 2009 ODOT STANDARD SPECIFICATIONS.
2. COST OF SAWING AND REMOVAL OF PAVEMENT FOR FULL DEPTH PATCHING, COST OF DOWEL BARS, TIE BARS AND ANY/ALL INCIDENTALS REQUIRED FOR INSTALLATION SHALL BE INCLUDED IN THE PRICE BID FOR FULL DEPTH PCC PATCH ( PLACEMENT ), UNLESS OTHERWISE SHOWN ON THE PLANS.
3. HIGH EARLY STRENGTH (HE ) CONCRETE, WHEN USED FOR FULL DEPTH PATCHING, WILL BE PAID FOR AS PC CONCRETE FOR PAVEMENT.
4. BID ITEM FOR CONCRETE JOINT SEALING (JOINT REHABILITATION) WILL INCLUDE SAWING, CLEANING OF JOINT, BACKER ROD, SILICONE SEALANT AND ANY/ALL INCIDENTALS REQUIRED TO COMPLETE THE WORK.
5. FOR SKEWED TRANSVERSE JOINTS, DOWEL BARS SHALL ALWAYS BE PLACED PARALLEL TO THE ROADWAY.
6. HOLES ARE TO BE DRILLED IN DIAMETER BASED ON DOWEL BAR SIZE AND TYPE OF GLUE USED:
  - FOR EPOXY, HOLE DIAMETER SHALL BE DOWEL DIA. + (2 x 1/8")
  - FOR CEMENT GROUT, HOLE DIAMETER SHALL BE DOWEL DIA. + (2 x 1/4")

BASIS OF PAYMENT

ITEM NO.	ITEM	UNIT
202 ( A )	UNCLASSIFIED EXCAVATION	CY
414 ( E )	FULL DEPTH P. C. C. PATCH ( PLACEMENT )	SY
414 ( G )	P. C. CONCRETE FOR PAVEMENT	CY
415	CONCRETE JOINT SEALING	LF
416	DOWEL BAR RETROFIT	EA
425	DIAMOND GRINDING CONCRETE PAVEMENT	SY