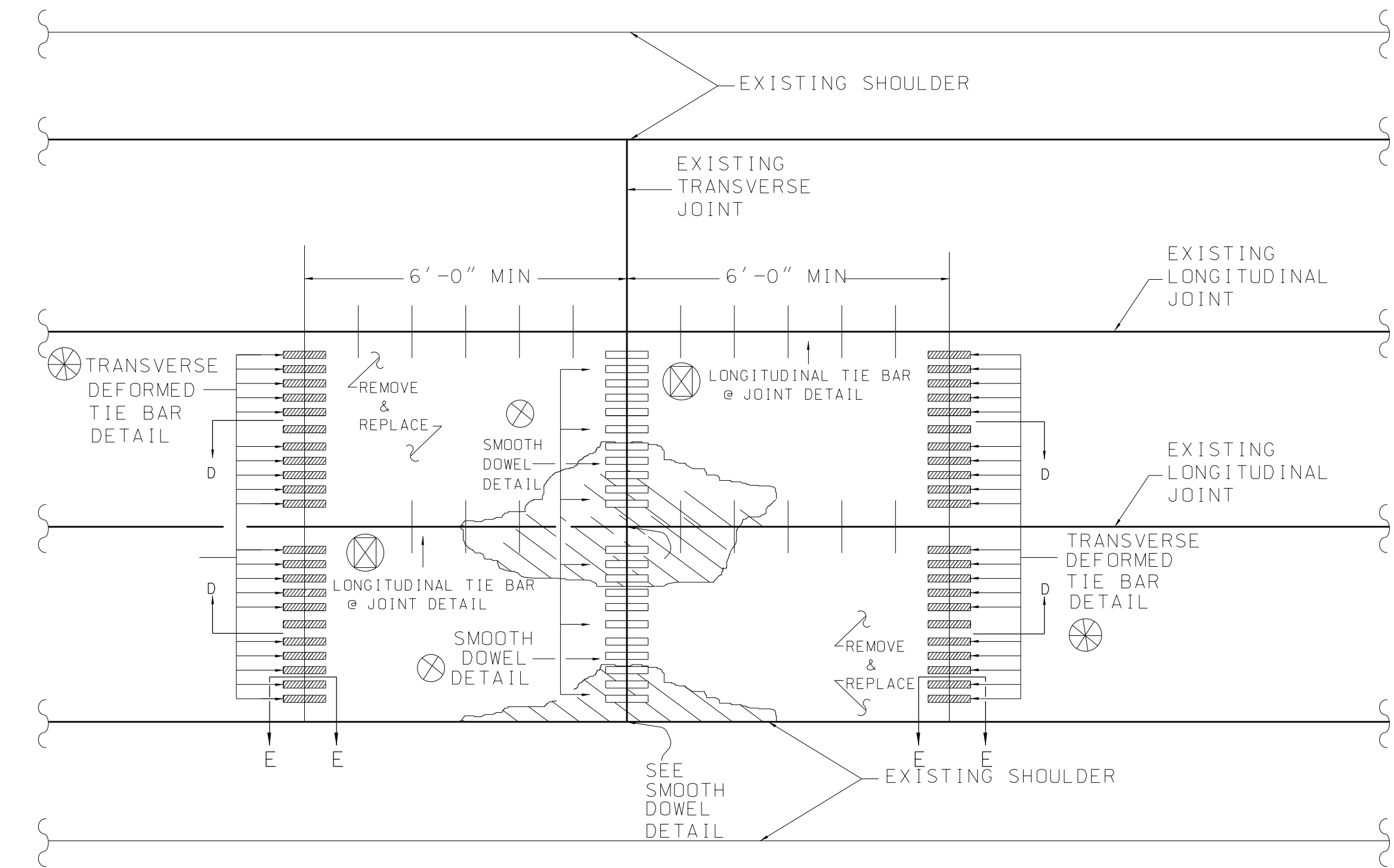
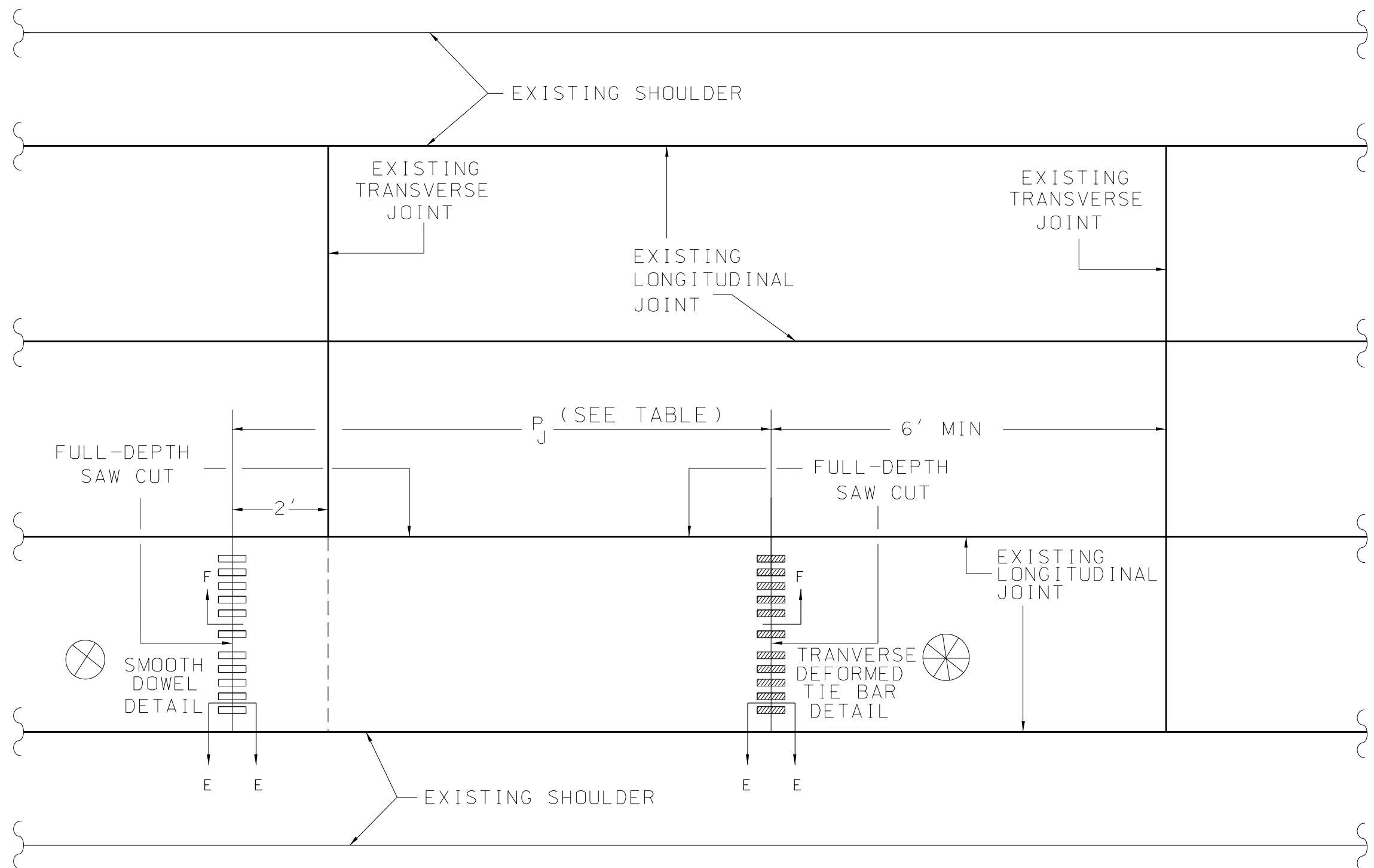


DAMAGED AREA EXCEEDS (2) FEET PERPENDICULAR DISTANCE
ON BOTH SIDES OF EXISTING TRANSVERSE JOINT
(SINGLE LANE)



DAMAGED AREA EXCEEDS (2) FEET PERPENDICULAR DISTANCE
ON BOTH SIDES OF EXISTING TRANSVERSE JOINT
(MULTIPLE LANE)



DAMAGED AREA EXCEEDS (2) FEET PERPENDICULAR
DISTANCE ON ONE SIDE OF EXISTING TRANSVERSE JOINT

APPROXIMATE CONCRETE PAVEMENT JOINT SPACING	MINIMUM DAMAGE REPAIR LENGTH P	MAXIMUM DAMAGE REPAIR LENGTH P
15 FT	6 FT	11 FT
20 FT	6 FT	16 FT
>20 FT	6 FT	16 FT

-GENERAL NOTES AND DETAIL DRAWINGS-
SEE SHEET 3 OF 3

--SPECIFICATIONS--
CURRENT ALABAMA DEPARTMENT OF TRANSPORTATION

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REVISIONS
1. Added to CADD on 04-30-99 by J.F.T.
2. Revised sheet for full lane width repairs and added table on 09-13-10 by J.F.T.

ALABAMA DEPARTMENT OF TRANSPORTATION
1409 COLISEUM BOULEVARD
MONTGOMERY, AL 36130-3050

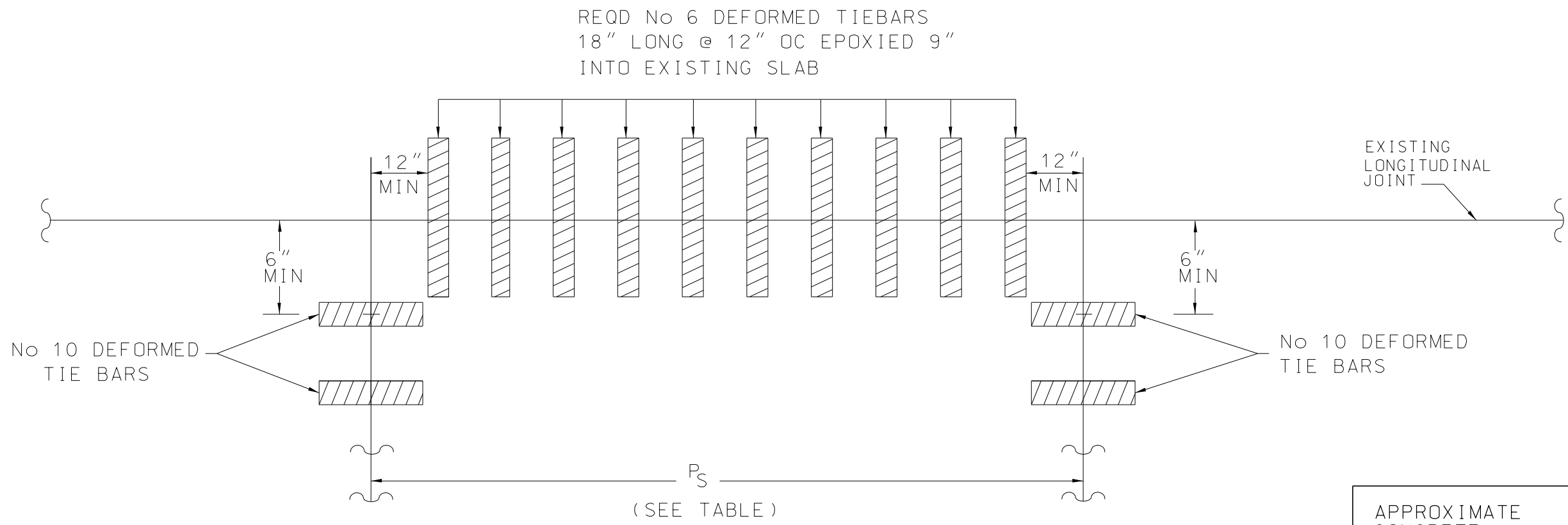
DESIGN BUREAU SPECIAL DRAWING
DETAILS OF CONCRETE PAVEMENT
REMOVAL & REPLACEMENT OF DAMAGED
SLABS AT JOINTS WHERE DAMAGE
EXCEEDS 6 FEET IN WIDTH

SPECIAL DRAWING NO
CPR-453 (SHEET 2 OF 3)

INDEX NO
45302

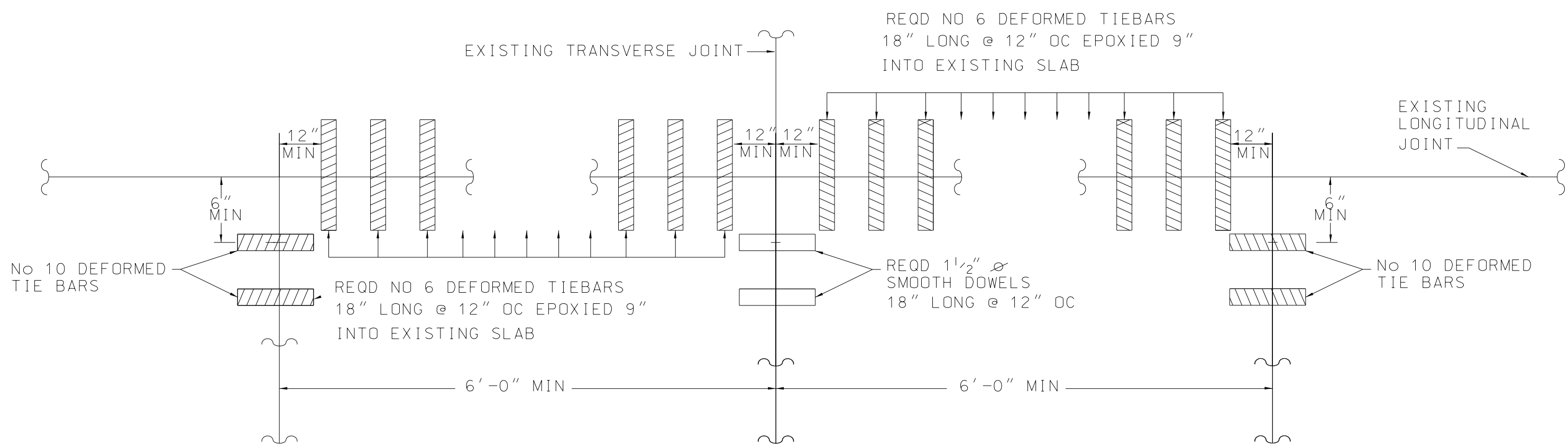
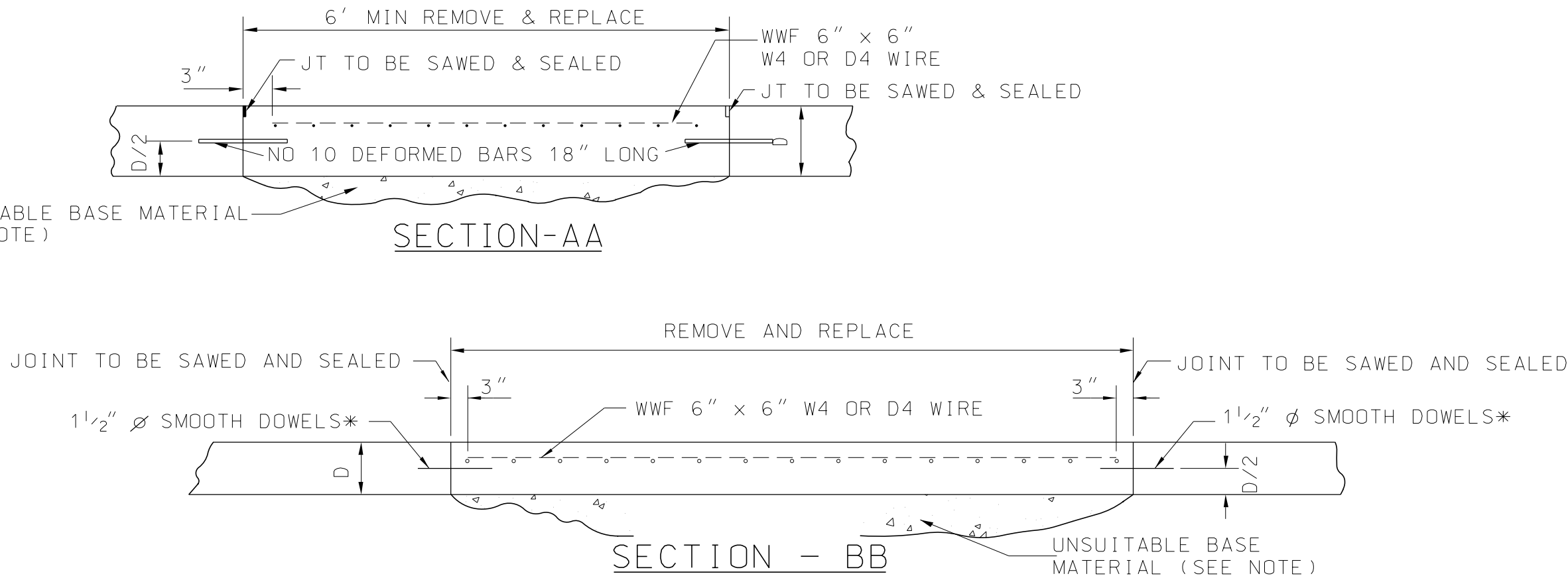
Bureau Std Engr: D.J.W.
DRAWN BY: _____ DATE DRAWN: 12-08-89

NOT TO SCALE

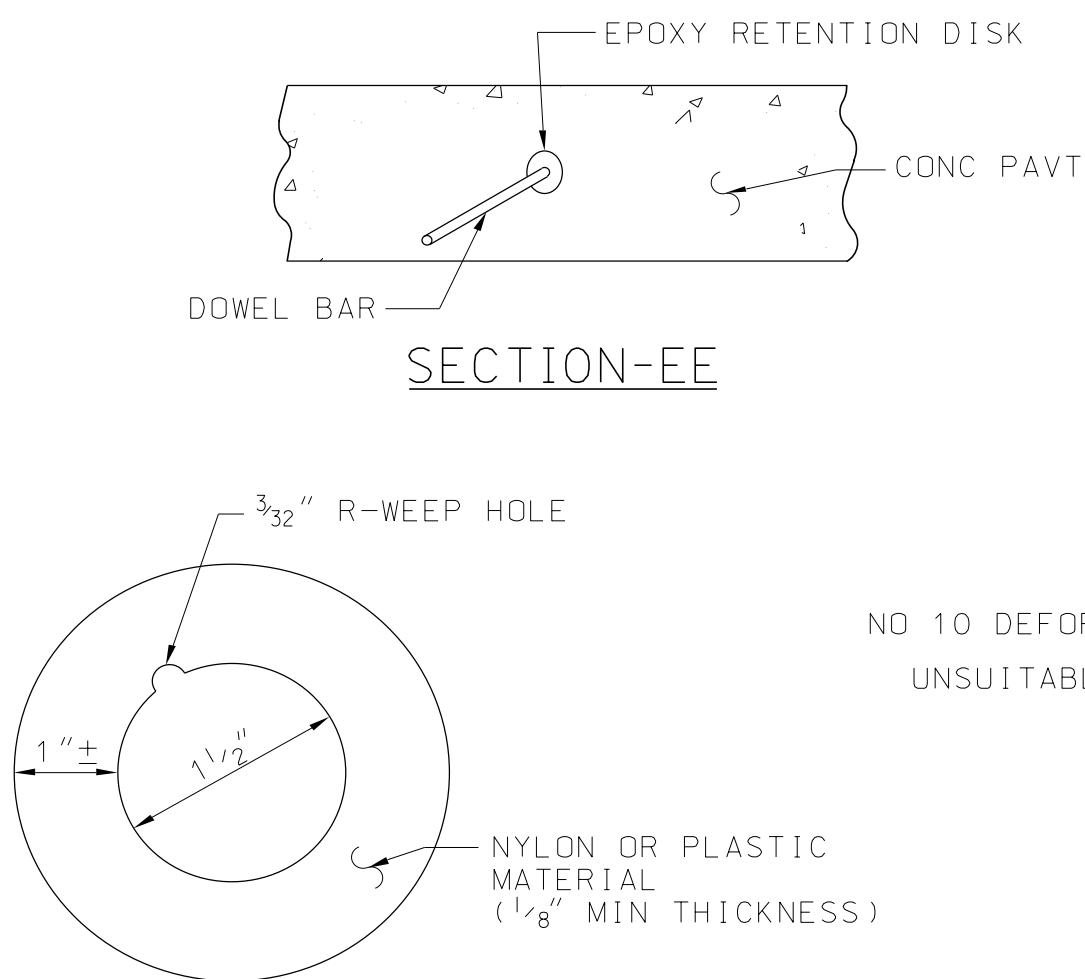


LONGITUDINAL TIEBAR DETAIL

APPROXIMATE CONCRETE PAVEMENT JOINT SPACING	MINIMUM DAMAGE REPAIR LENGTH P _s	MAXIMUM DAMAGE REPAIR LENGTH P _s
15 FT	N/A	N/A
20 FT	6 FT	8 FT
>20 FT	6 FT	16 FT

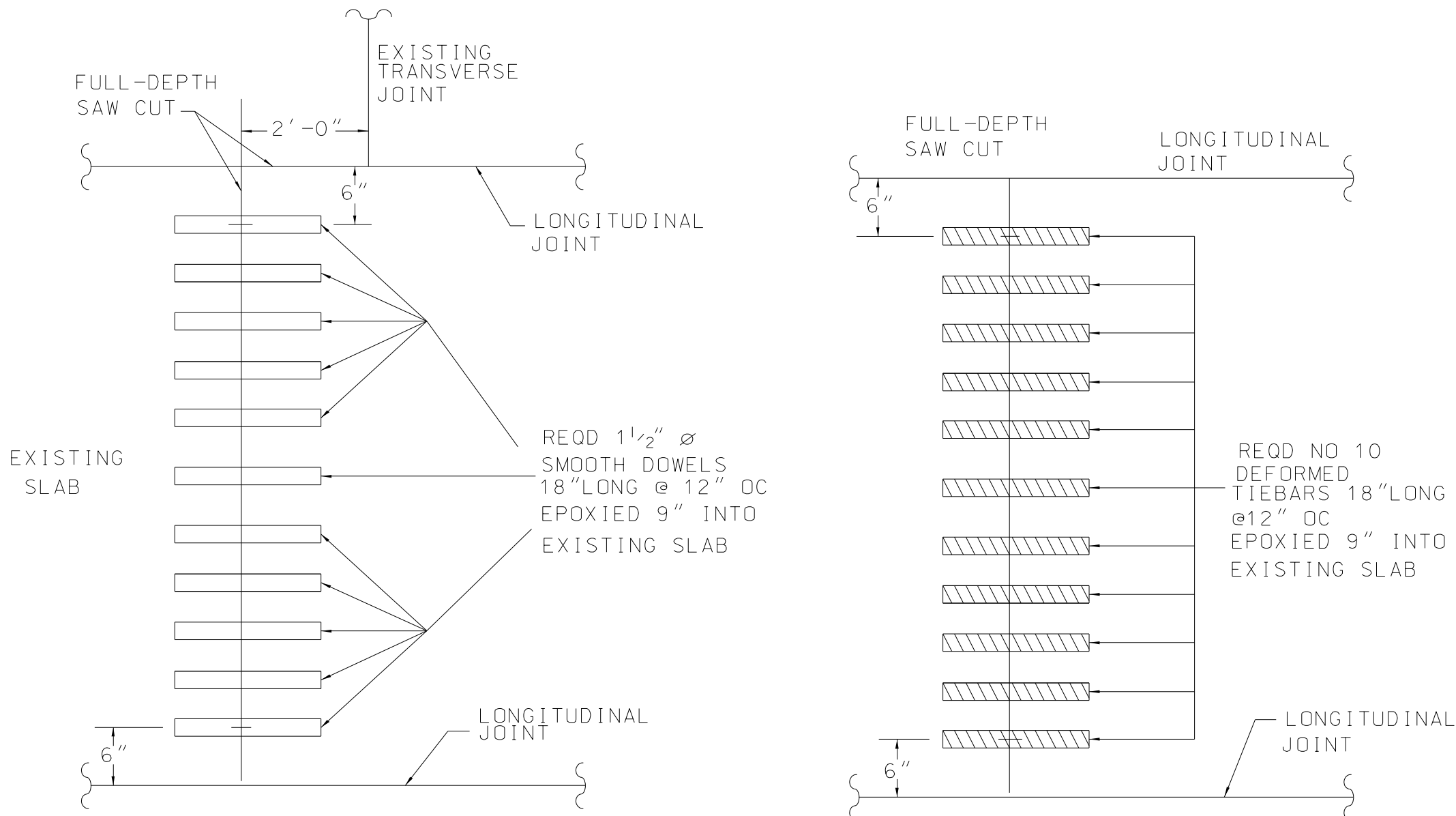
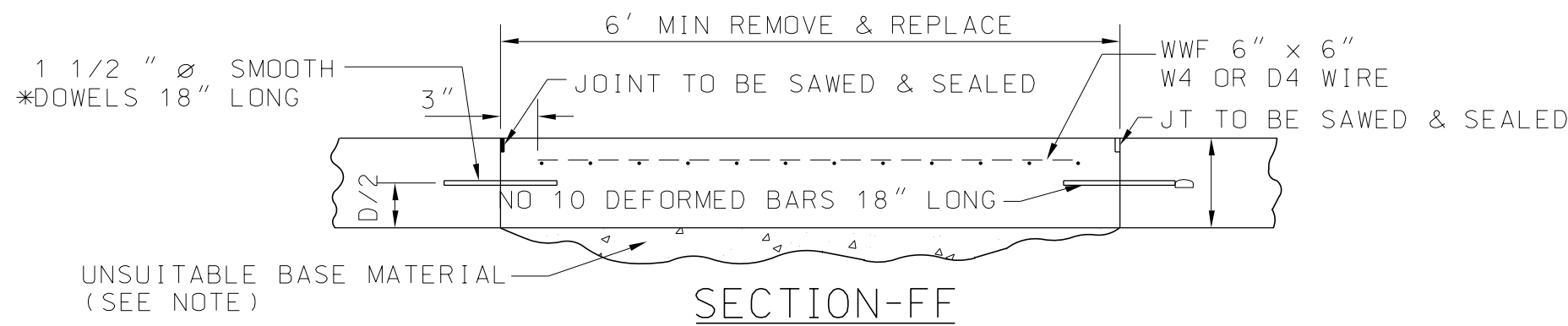
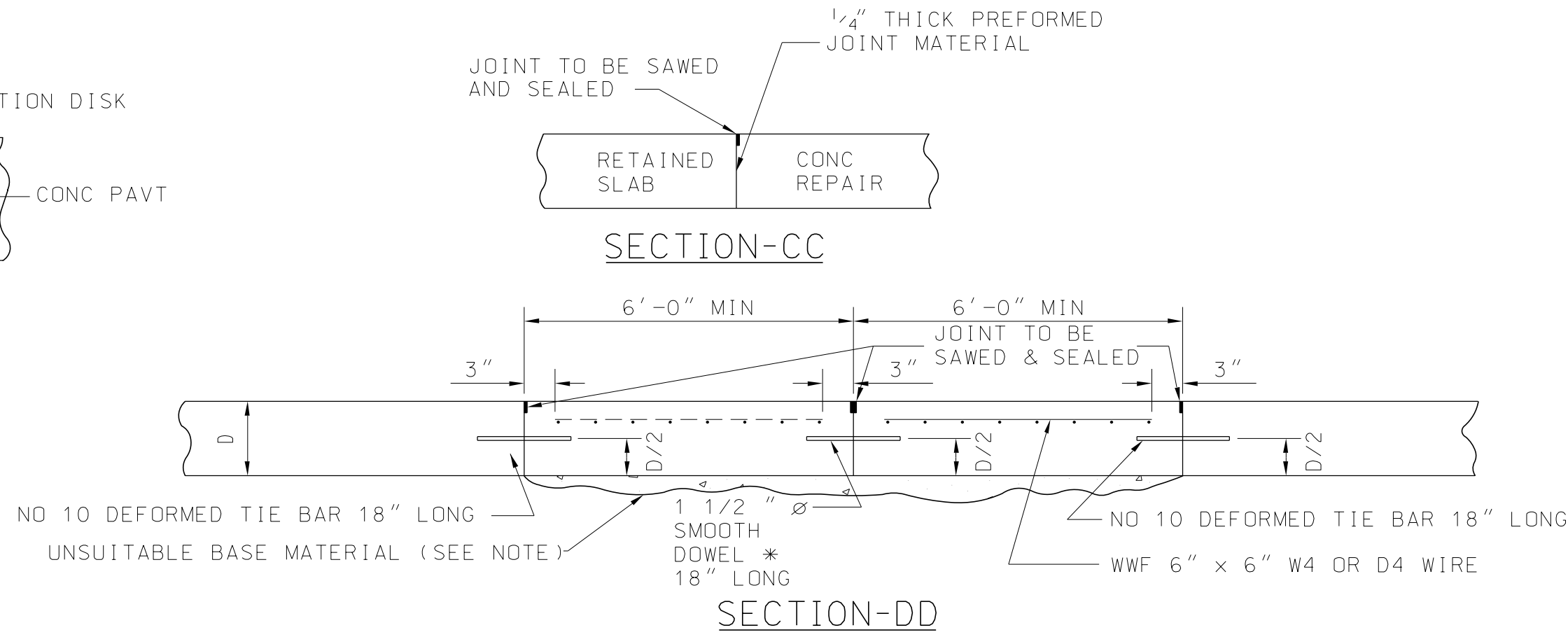


LONGITUDINAL TIEBAR @ JOINT DETAIL



* DETAILS OF EPOXY RETENTION DISK

REQUIRED TO EPOXY 1 1/2" Ø SMOOTH DOWELS * INTO EXISTING CONCRETE PAVEMENT




SMOOTH DOWEL DETAIL

TRANSVERSE DEFORMED TIEBAR DETAIL

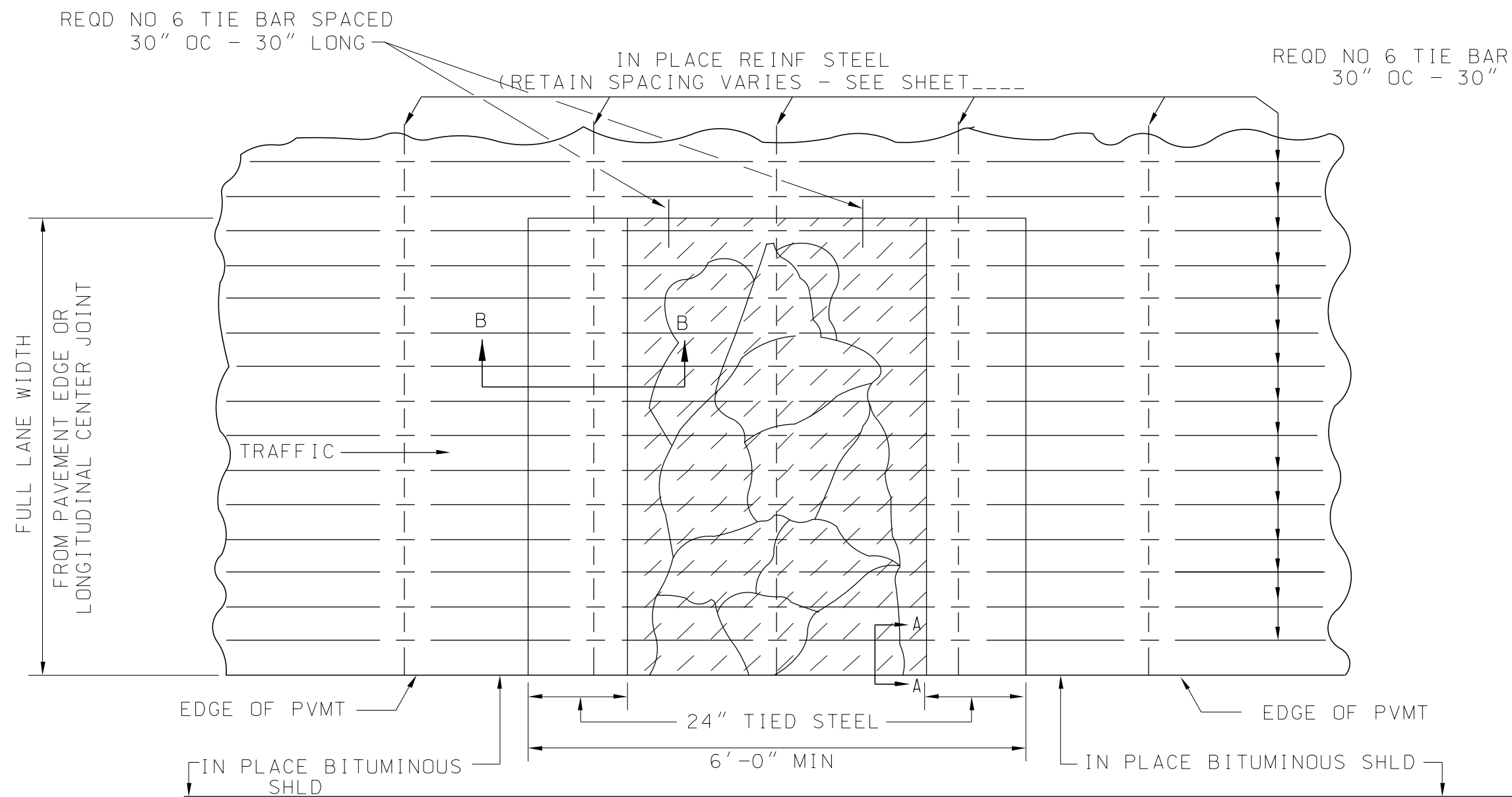
- ANY BASE MATERIAL DETERMINED TO BE UNSUITABLE BY THE ENGINEER SHALL BE REMOVED TO A DEPTH DIRECTED BY THE ENGINEER. AREAS OF REMOVAL SHALL BE REPLACED WITH CONCRETE POURED MONOLITHIC WITH REPLACEMENT SLAB. IF DEPTH OF REMOVAL IS GREATER THAN 2", THE CONCRETE SHALL BE POURED SEPARATE, A SMOOTH FINISH PROVIDED, AND A BOND BREAKER PLACED PRIOR TO POURING THE REPLACEMENT SLAB. THE COST OF REMOVAL OF UNSUITABLE MATERIAL SHALL BE A SUBSIDIARY OBLIGATION OF PAY ITEM 453-D.
- PATCHES FALLING WITHIN (6) FEET OF EXISTING TRANSVERSE CRACKS OR JOINTS SHALL BE EXTENDED TO INCLUDE THE CRACK OR JOINT.
- WIRE REINFORCEMENT WILL BE REQUIRED IN ALL REPAIR AREAS.
- SAME METHOD OF REPAIR SHALL BE USED FOR MORE THAN 2-LANES IN ONE DIRECTION.
- PAYMENT FOR REMOVING WILL BE MADE UNDER ITEM 453-C, REMOVAL OF CONCRETE PAVEMENT SLAB, PER SQUARE YARD, WHICH SHALL BE COMPLETE PAYMENT FOR SAWING AND REMOVING CONCRETE PAVEMENT SLAB, INCLUDING REINFORCEMENT STEEL, DOWELS AND TIE BARS. REMOVAL SHALL EXTEND (6) INCHES MIN BEYOND CRACKED OR SPALLED CONCRETE.
- PAYMENT FOR THE REQUIRED CONCRETE PAVEMENT WILL BE MADE UNDER ITEM 453-D, CONCRETE PAVEMENT REPLACEMENT SLAB, PER CUBIC YARD, WHICH SHALL BE COMPLETE PAYMENT FOR CONCRETE PAVEMENT SLAB INCLUDING REINFORCEMENT STEEL, TIE BARS, DOWELS, DRILLING EXISTING CONCRETE, EPOXY AND SAWING AND SEALING OF JOINTS.
- THE NEW JOINTS ADJACENT TO THE REPAIR AREA SHALL BE SAWED AND SEALED AS SHOWN FOR "LONGITUDINAL JOINT SEAL" AND "EDGE OF PAVEMENT JOINT SEAL" ON SP-DWG JC-454. NORMAL TRANSVERSE JOINTS THAT REQUIRE SMOOTH DOWELS SHALL BE SAWED AND SEALED AS DETAILED ON SP-DWG CPJ-450.
- EPOXY RETENTION DISK WILL BE REQUIRED FOR THE INSTALLATION OF ALL 1 1/2" Ø SMOOTH DOWELS INTO THE EXISTING CONCRETE PAVEMENT. THE RETENTION DISK SHALL BE HELD IN PLACE UNTIL THE EPOXY HAS REACHED A CONSISTENCY THAT IT WILL NOT RUN OUT OF THE DRILLED HOLE. THE RETENTION DISK SHALL BE REMOVED PRIOR TO THE POURING OF THE REPLACEMENT SLAB.
- NO WORKING JOINT SHALL BE ESTABLISHED AT A DISTANCE GREATER THAN (2) FEET FROM THE EXISTING JOINT OR NEW WORKING JOINT ON THE ADJACENT LANE.

--SPECIFICATIONS--

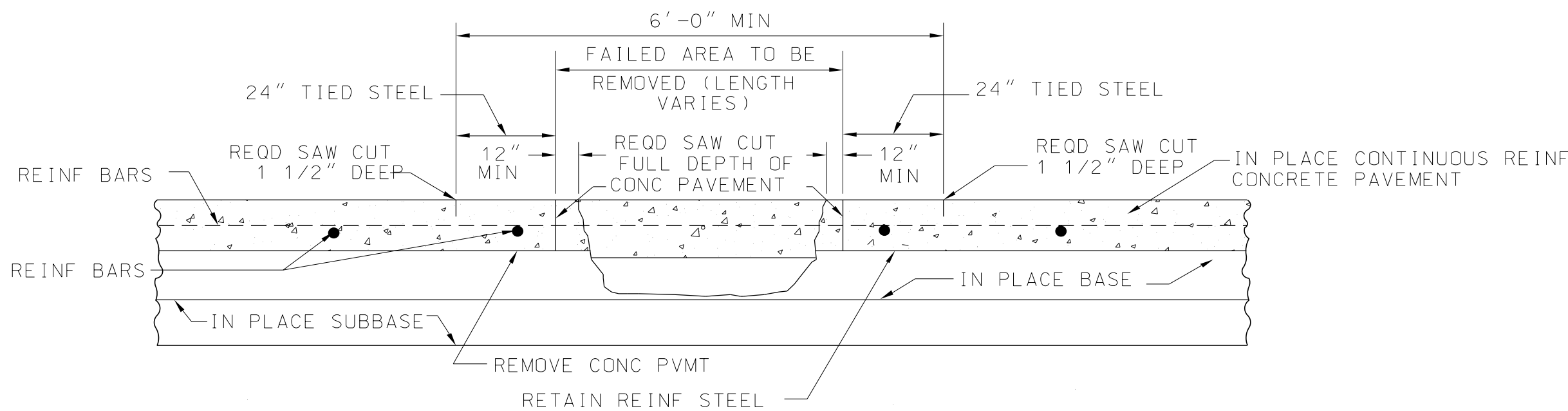
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REVISIONS 1. Added to CADD on 04-30-99 by J.F.T. 2. Consolidated all details as single sheet drawing, revised General Notes for full lane width repairs on 09-13-10 by J.F.T.		
 ALABAMA DEPARTMENT OF TRANSPORTATION 1409 COLISEUM BOULEVARD MONTGOMERY, AL 36130-3050		
DESIGN BUREAU SPECIAL DRAWING		
DETAILS OF CONCRETE PAVEMENT REMOVAL & REPLACEMENT		
Bureau Std Engr: D.J.W. DRAWN BY: _____ DATE DRAWN: 12-08-89	SPECIAL DRAWING NO CPR-453 (SHEET 3 OF 3)	INDEX NO 45303

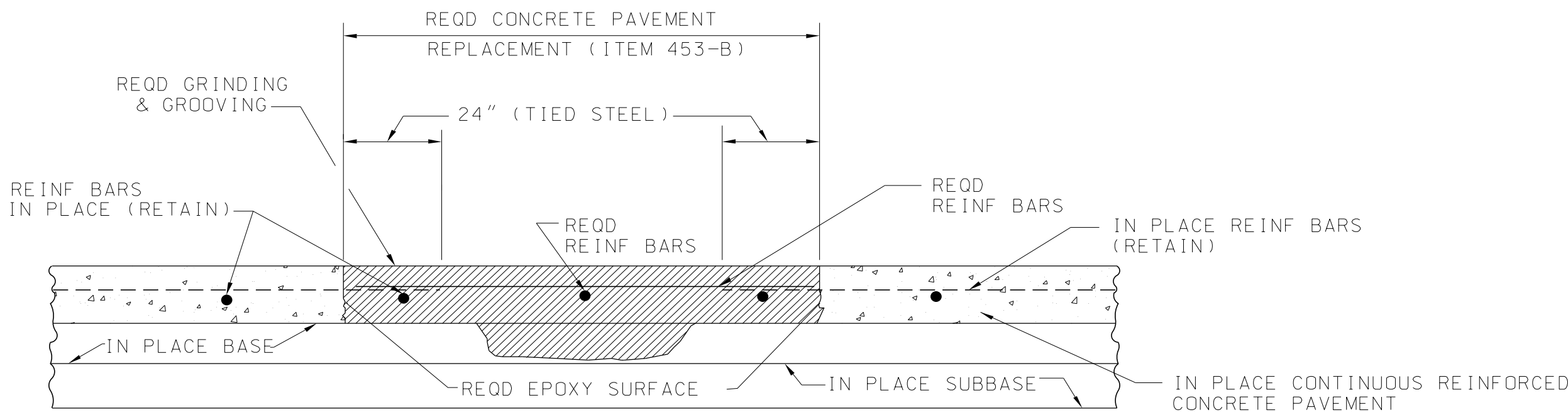
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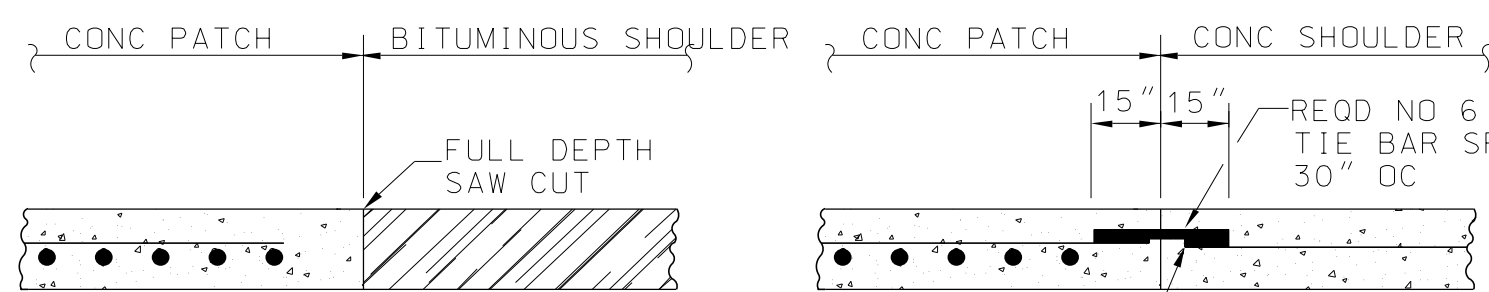
PLAN VIEW NO 1



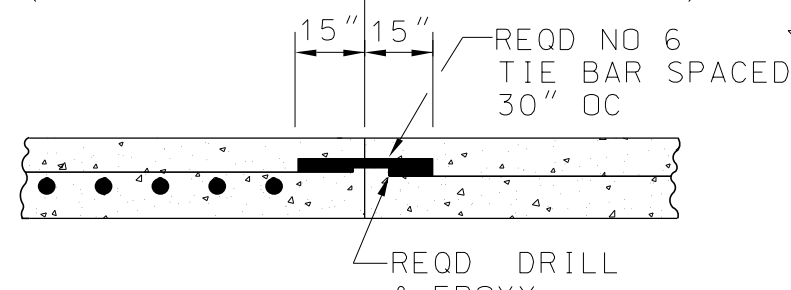
DETAIL FOR REMOVAL OF FAILED AREA



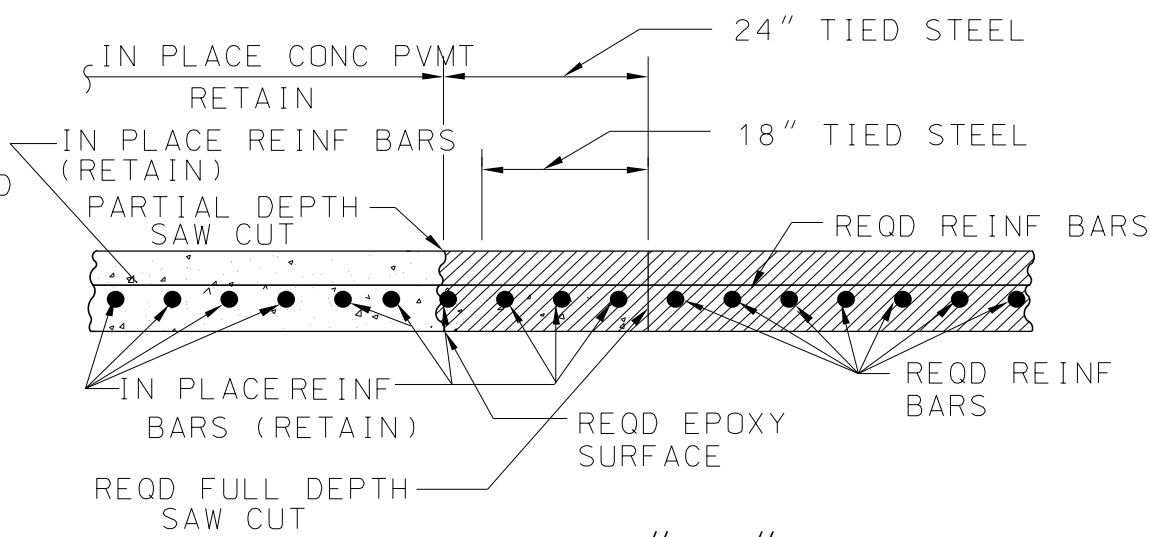
DETAIL FOR REPLACEMENT OF FAILED AREAS



SECTION "AA"



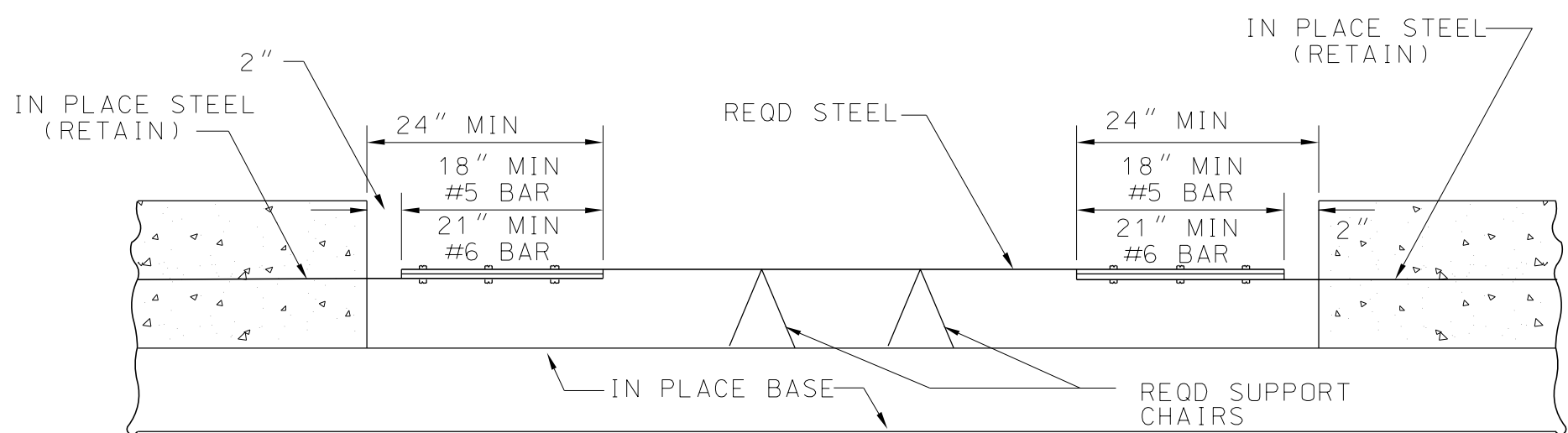
SECTION "CC"



SECTION "BB"



PLAN VIEW NO 2



DETAIL FOR TYING STEEL PATCHES


NOTES

1. THE REMOVAL OF THE EXISTING CONCRETE PAVEMENT INCLUDING THE EXISTING STEEL REINFORCEMENT SHALL BE PAID FOR UNDER THE PAY ITEM 453-C REMOVAL OF CONCRETE PAVEMENT, PER SQUARE YARD.
2. THE REQUIRED STEEL REINFORCEMENT MAY BE FIELD CUT.
3. ALL THE CONCRETE PAVEMENT LOCATED BETWEEN THE LIMITS OF THE FULL DEPTH SAW CUTS AND THE PARTIAL DEPTH SAW CUTS SHALL BE REMOVED WITH MAXIMUM 15 POUND RATED JACK HAMMERS AND OTHER TOOLS, TAKING CARE NOT TO NICK, BEND OR OTHERWISE DAMAGE THE STEEL REINFORCEMENT BARS LOCATED WITHIN THESE LIMITS. THE REINFORCING STEEL MUST NOT BE BENT UP OR DOWN DURING THE REMOVAL OR REPLACEMENT OF THE SLAB. THE EXPOSED REINFORCEMENT BARS ARE TO BE CLEANED AS NECESSARY.
4. THE REPAIRED JOINT SHOULD DESIRABLY BE 18" FROM THE NEAREST REMAINING TIGHT CRACK BUT IN NO CASE LESS THAN 6" FROM THE NEAREST TIGHT CRACK.
5. THE DRILLED AND EPOXIED TIE BAR MUST MEET A MINIMUM PULLOUT TEST OF 7200 LBS..
6. REPLACEMENT PAVEMENT CAN ONLY BE POURED FROM 12 O'CLOCK NOON TO 12 O'CLOCK MIDNIGHT. HOWEVER, THE SEPARATE POUR IN REMOVED BASE COURSE AREAS MAY BE POURED BEFORE 12 O'CLOCK NOON.
7. ANY BASE MATERIAL DETERMINED TO BE UNSUITABLE BY THE ENGINEER SHALL BE REMOVED TO A DEPTH AS DIRECTED BY THE ENGINEER. IN THE AREAS WHERE THE DEPTH OF REMOVAL IS LESS THAN 2" THE VOID IN THE BASE SHALL BE FILLED WITH CONCRETE AND POURED MONOLITHIC WITH THE REPLACEMENT SLAB. AREAS OF REMOVAL DEEPER THAN 2" SHALL BE FILLED WITH CLASS A CONCRETE AND FINISHED TO A SMOOTH SURFACE. AFTER THE AREA HAS HARDENED TO THE SATISFACTION OF THE ENGINEER, A BOND BREAKER OF POLYETHYLENE SHEETING 8 MILLS THICK SHALL BE PLACED PRIOR TO THE POURING OF THE REPLACEMENT SLAB. ALL CONCRETE SHALL BE PAID FOR UNDER PAY ITEM 453-D. THE COST OF REMOVAL OF THE UNSUITABLE MATERIALS AND THE POLYETHYLENE SHALL BE SUBSIDIARY OBLIGATIONS OF PAY ITEM 453-D.
8. THE PERIMETER OF THE REPAIR AREA SHALL BE SAWED AND SEALED AS SHOWN FOR "LONGITUDINAL JOINT SEAL" AND THE "EDGE OF PAVEMENT JOINT SEAL" SHOWN ON SPECIAL DRAWING JC-454. THE SEALING OF THE PERIMETER OF THE PATCH SHALL BE CONSIDERED A SUBSIDIARY OBLIGATION FOR THE PRICE BID FOR ITEM 453-D, CONCRETE PAVEMENT REPLACEMENT SLAB.
9. PRIOR TO REMOVING THE CONCRETE BETWEEN THE PARTIAL DEPTH AND FULL DEPTH SAW CUTS, THE CONTRACTOR SHALL LOCATE THE LONGITUDINAL STEEL AND DRILL HOLES BETWEEN PARTIAL DEPTH AND FULL DEPTH SAW CUTS, APPROXIMATELY 1 INCH IN DIAMETER, BETWEEN THE EXISTING LONGITUDINAL STEEL BARS TO ELIMINATE "CONING" BELOW THE EXISTING STEEL. THESE HOLES ARE TO ACCOMMODATE THE WEDGING TOOL USED FOR BREAKING THE CONCRETE IN THIS AREA.

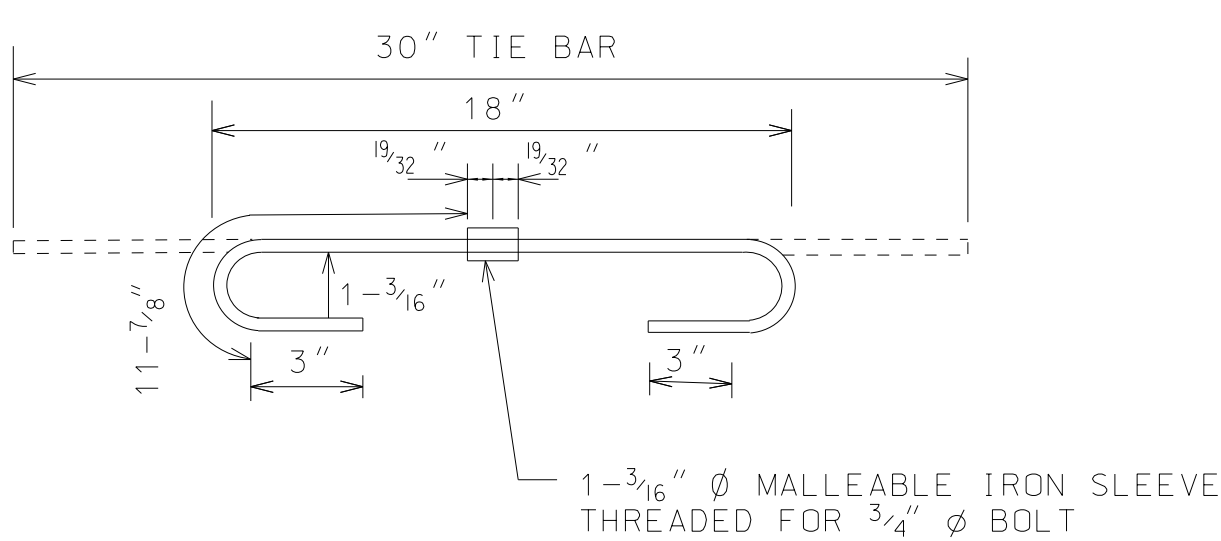
by J.F.T.
2. Removed welding of reinforcing steel on 09-13-10 by J.F.T.

--SPECIFICATIONS--

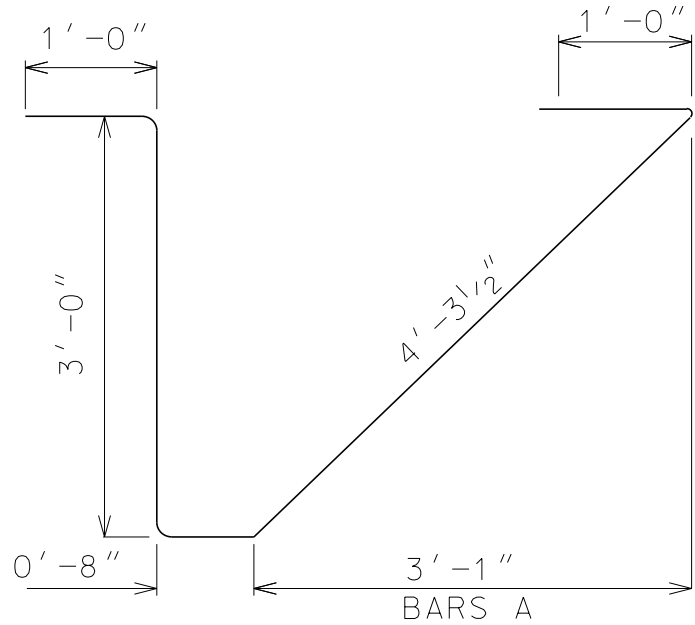
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<div>REVISIONS</div> <div>1. Added to CADD on 04-30-99 by J.F.T.</div> <div>2. Removed welding of reinforcing steel on 09-13-10 by J.F.T.</div>		
<div> ALABAMA DEPARTMENT OF TRANSPORTATION 1409 COLISEUM BOULEVARD MONTGOMERY, AL 36130-3050</div> <div>DESIGN BUREAU SPECIAL DRAWING</div>		
DETAILS OF CONTINUOUS REINFORCED CONCRETE PAVEMENT REPLACEMENT		
Bureau Std Engr: <u>D.J.W.</u> DRAWN BY: _____ DATE DRAWN: <u>12-08-89</u>	SPECIAL DRAWING NO CRCP-453	INDEX NO 45306

NOT TO SCALE

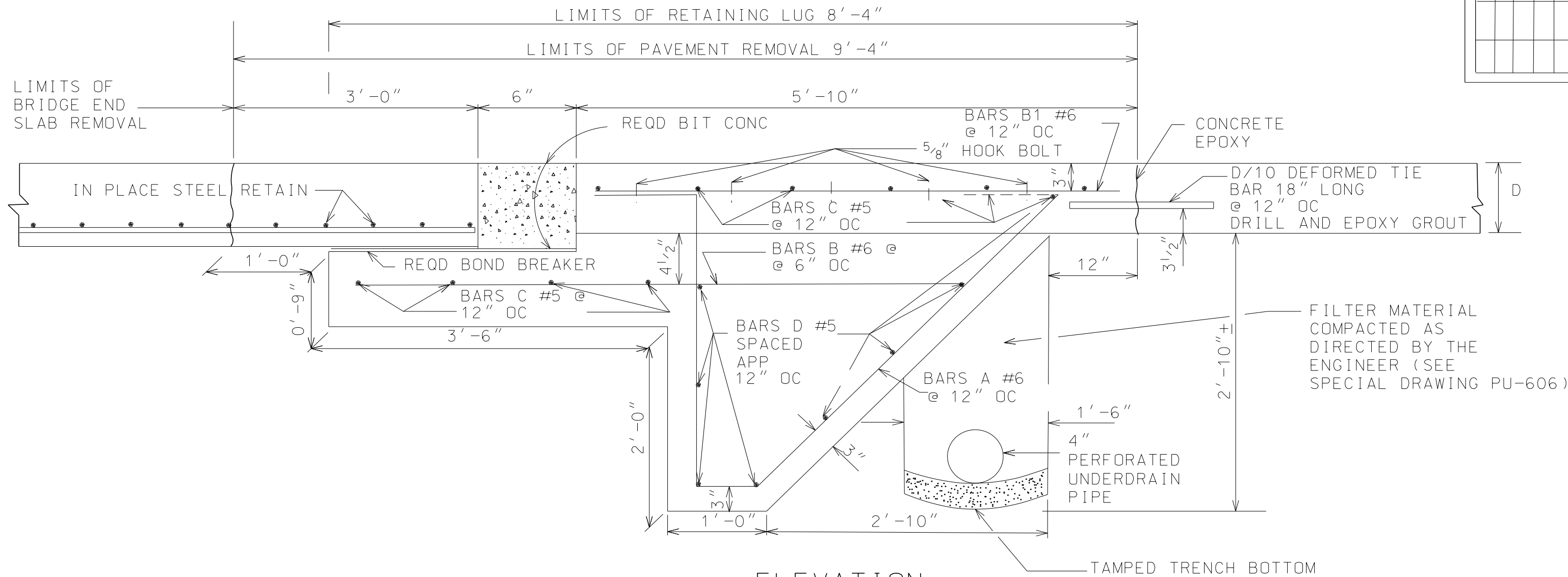


M20 DEFORMED HOOK BOLTS
SECTIONAL TIE BARS

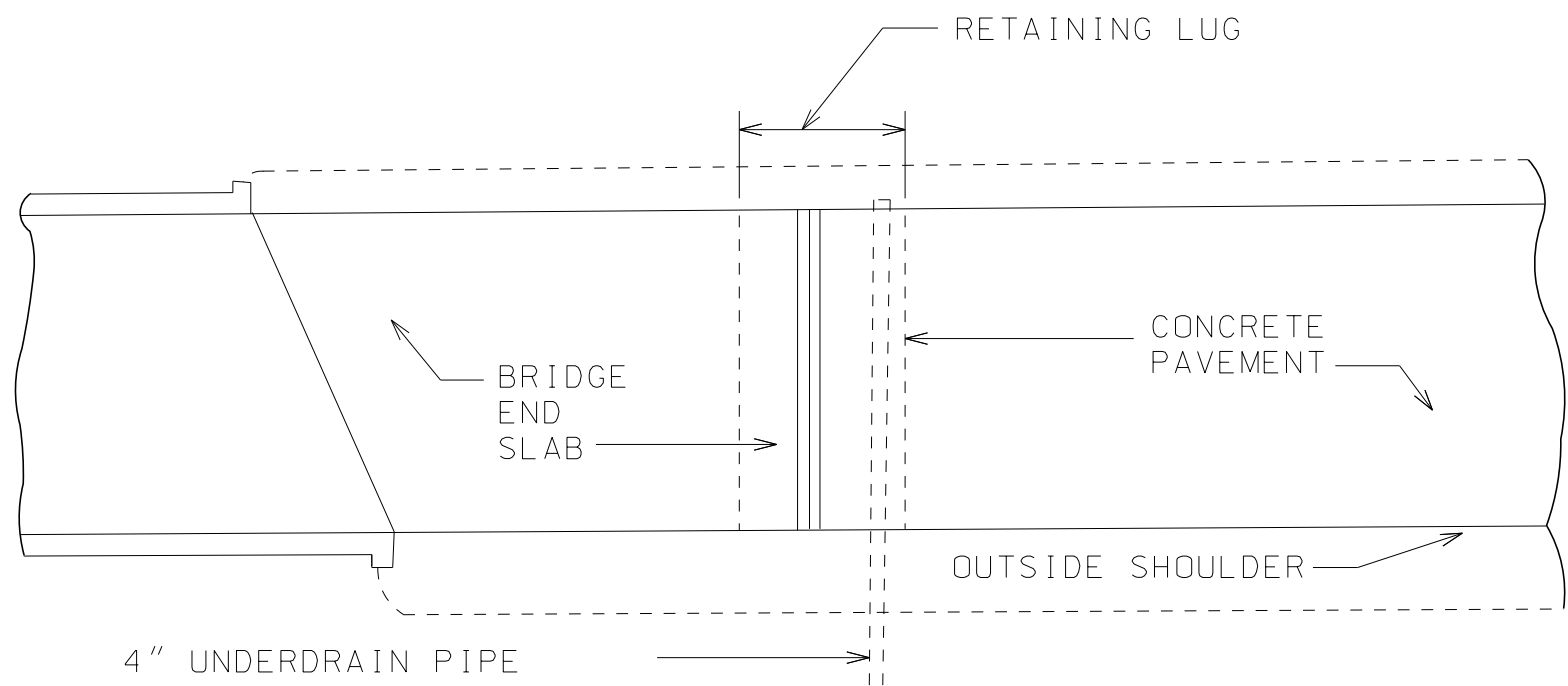


6'-5"	BARS B
5'-3"	BARS B ₁
11'-6"	BARS C
11'-6"	BARS D

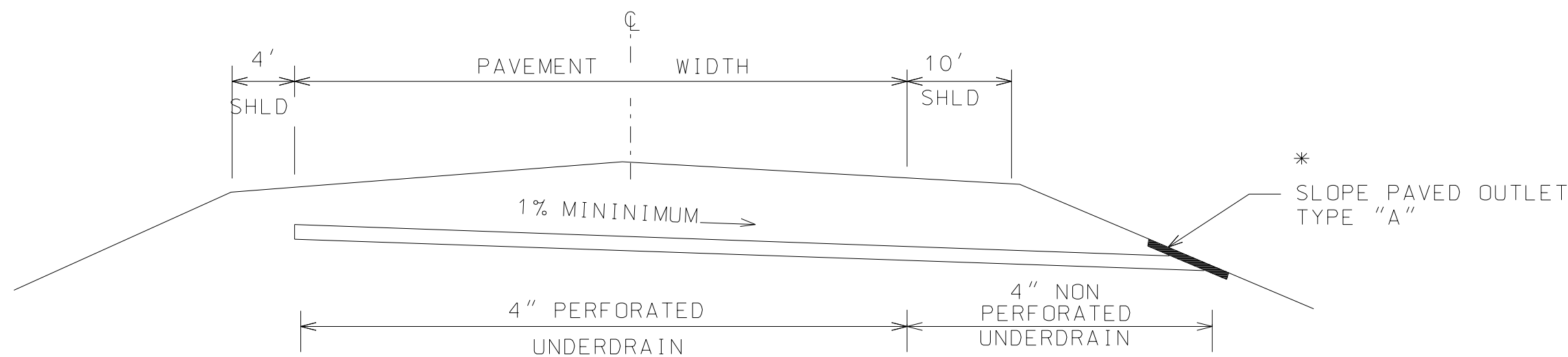
STEEL REINFORCEMENT SCHEDULE



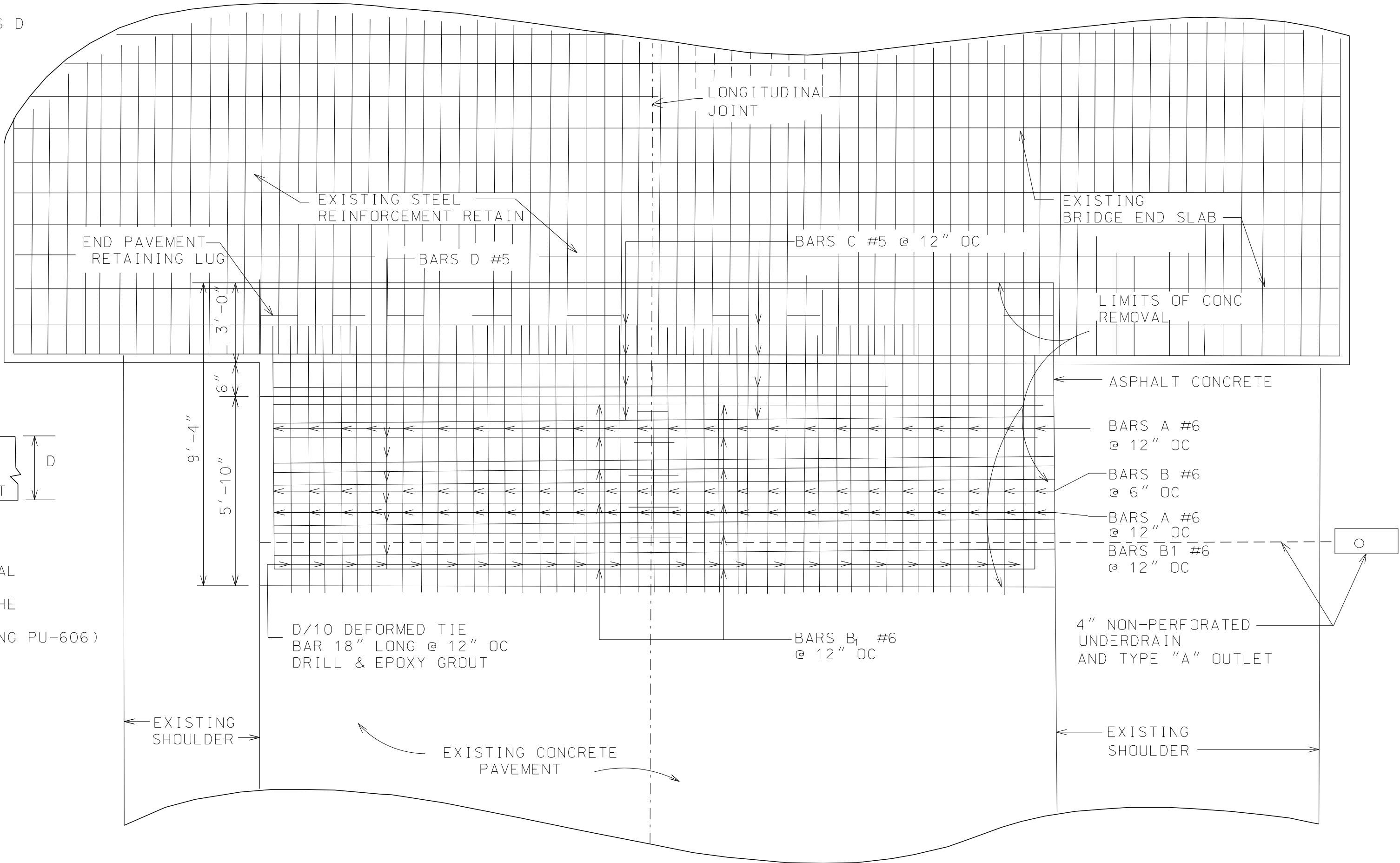
ELEVATION



PLAN



ELEVATION



PLAN

NOTES

CONCRETE REMOVAL: LIMITS OF CONCRETE REMOVAL SHALL BE SAWED TO PRESENT A UNIFORM BREAK WITH REMAINING CONCRETE. PAVEMENT REMOVAL SHALL NOT EXCEED 13 FT IN WIDTH.

WASTE MATERIAL: MATERIAL EXCAVATED SHALL BE DISPOSED OF AT SITES SELECTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

HOOK BOLTS: THE 5/8" DEFORMED HOOK BOLT SHALL BE GRADE 60 STEEL.

BOND BREAKER: A 1/8" THICK GALVANIZED STEEL PLATE OR APPROVED EQUAL SHALL BE INSTALLED TO PREVENT BONDING BETWEEN THE BRIDGE END SLAB AND THE PAVEMENT RETAINING LUG.

EPOXY GROUT: THIS APPLICATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURES RECOMMENDATIONS.

COMPACTION: PRIOR TO PLACING REINFORCEMENT AND CONCRETE, THE ENTIRE AREA SHALL BE COMPACTED TO THE SATISFACTION OF THE ENGINEER.

VARIABLE WIDTHS: THIS DRAWING REFLECTS 24 FT WIDTH OF PAVEMENT.

THE WIDTH OF PAVEMENT MAY VARY THROUGHOUT THE PROJECT LIMITS.

PAYMENT: THE INSTALLATION OF THE PAVEMENT AND PVMT RETAINING LUG SHALL BE PAID UNDER ITEM NUMBERS 424-B/429-B, 453-C, 453-D AND 502-A. ALL OTHER RELATED ITEMS SHALL BE ABSORBED.

* FOR DETAILS OF SLOPE PAVED OUTLET, SEE SPECIAL DRAWING SUO-605-AB.

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REVISIONS
1. Added to CAD00 on 05-04-99 by J.F.T.

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1409 COLISEUM BOULEVARD
MONTGOMERY, AL 36130-3050

DESIGN BUREAU SPECIAL DRAWING

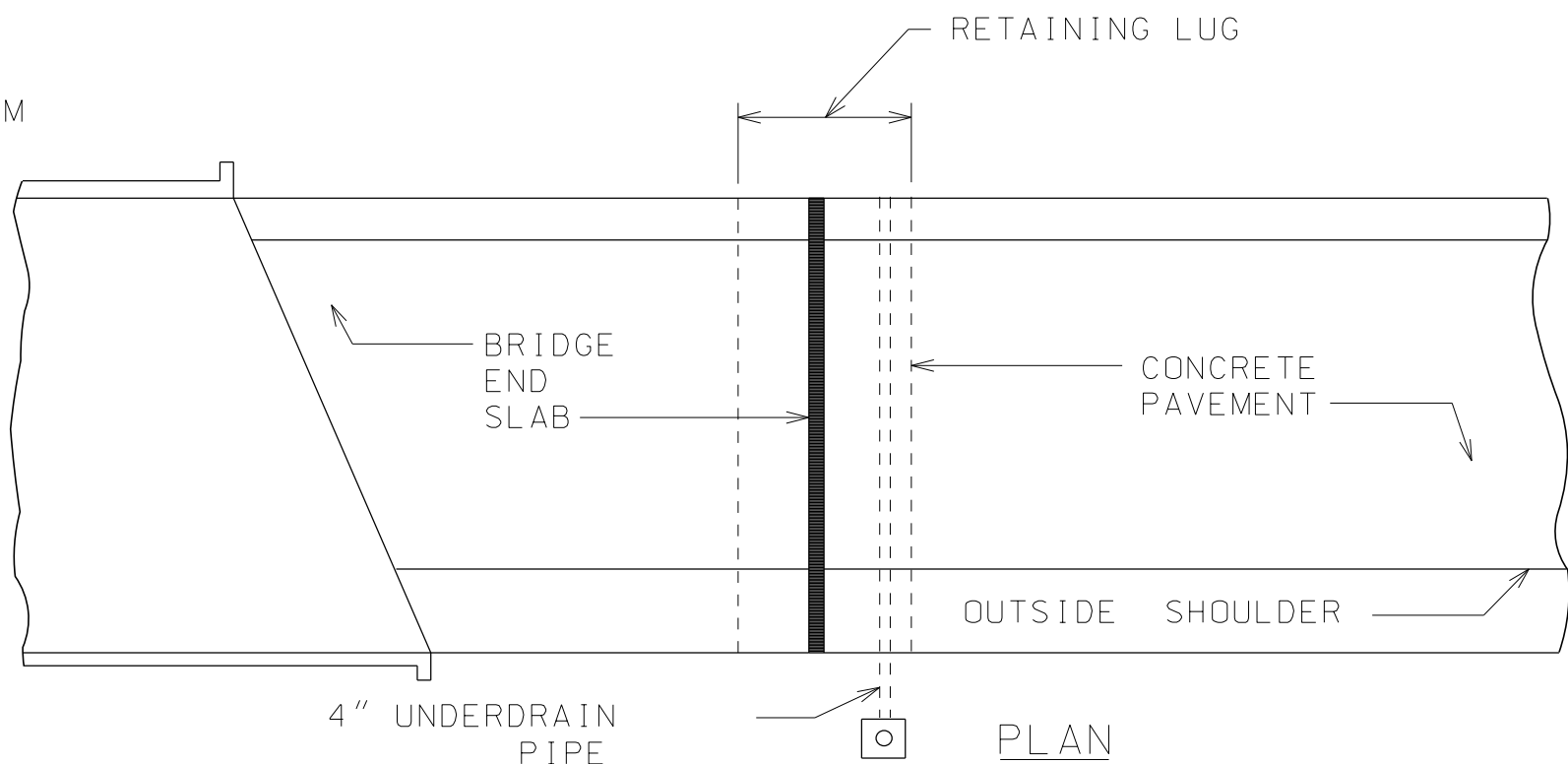
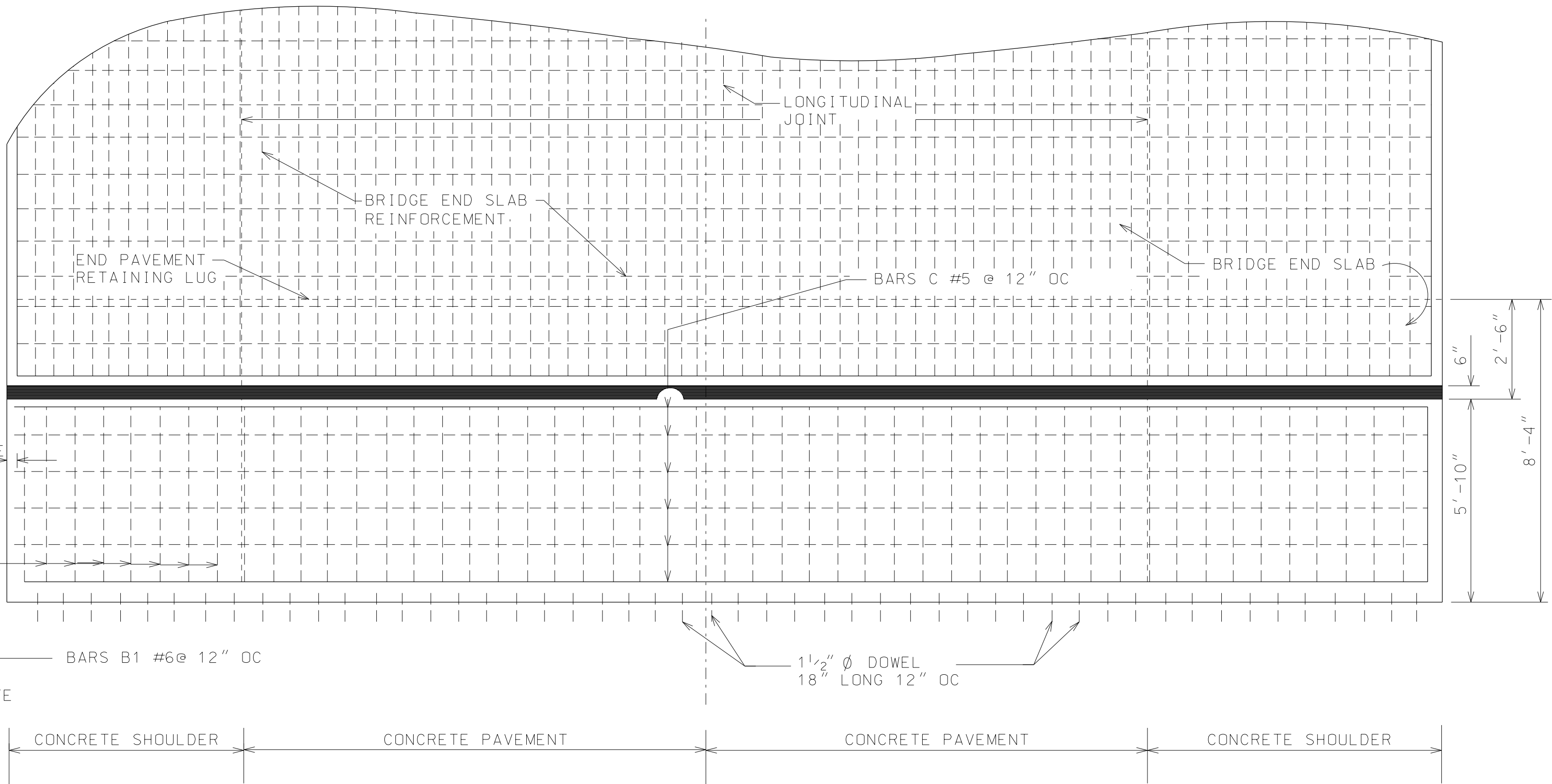
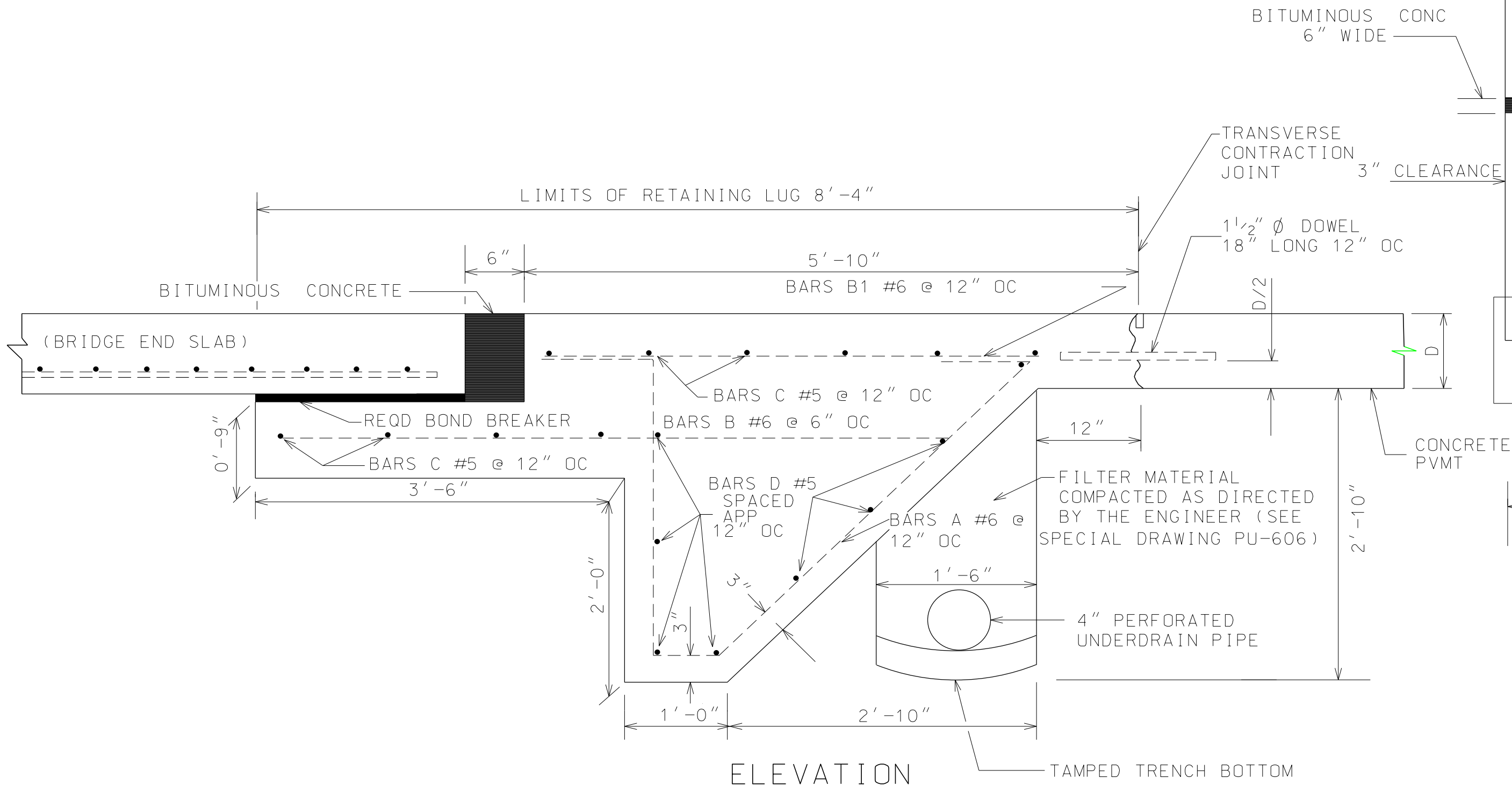
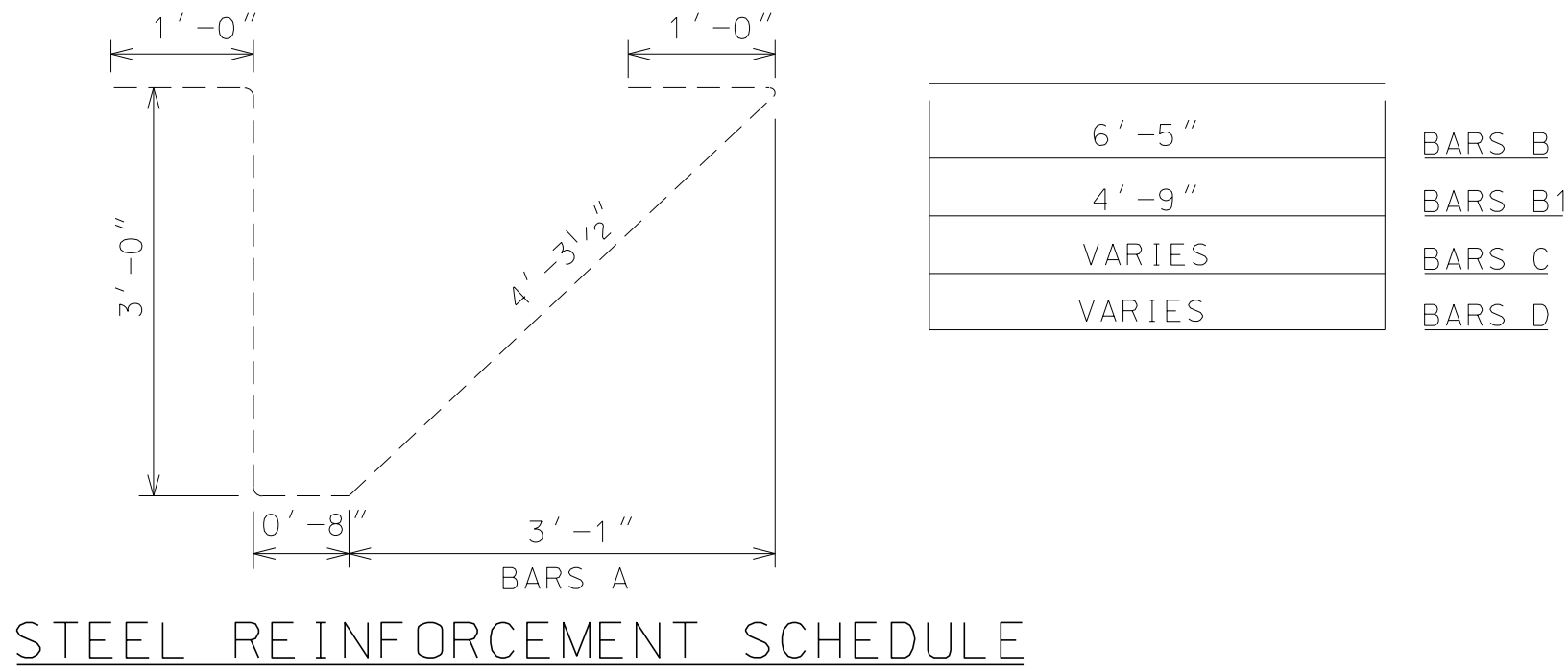
PAVEMENT RETAINING LUG FOR EXISTING CONCRETE PAVEMENT

Bureau Std Engr: D.J.W.
DRAWN BY: _____ DATE DRAWN: 04-27-93

SPECIAL DRAWING NO
LUG-453

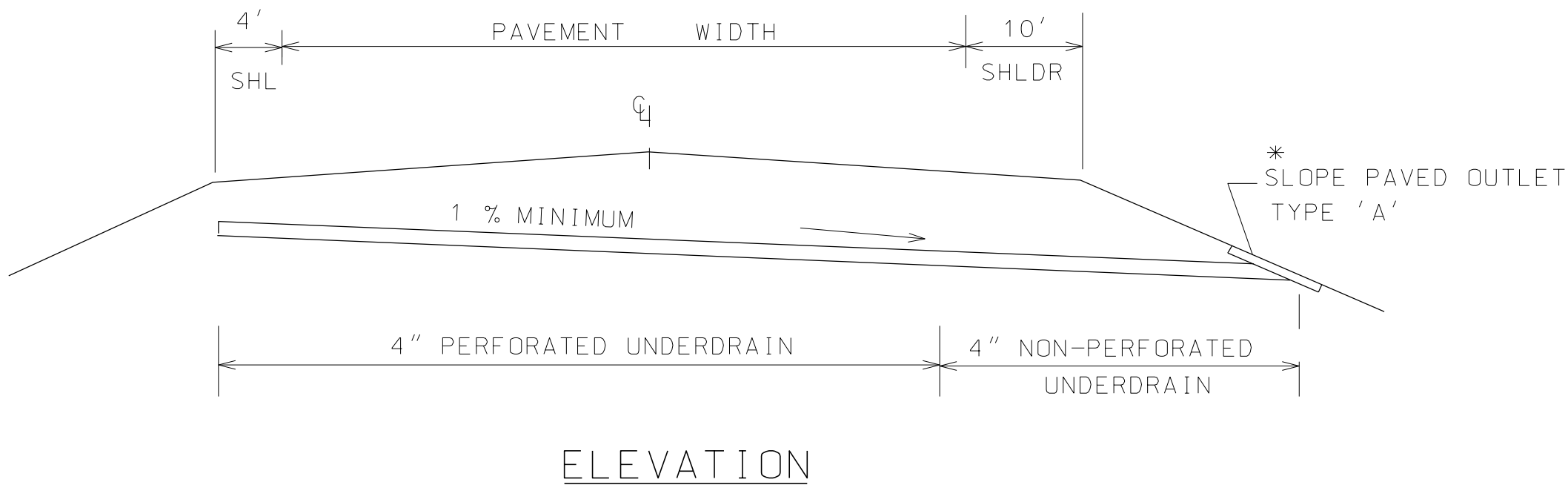
INDEX NO
45309

NOT TO SCALE



GENERAL NOTES

1. BOND BREAKER: A 1/8" THICK GALVANIZED STEEL PLATE OR APPROVED EQUAL SHALL BE INSTALLED TO PREVENT BONDING BETWEEN THE BRIDGE END SLAB AND THE PAVEMENT RETAINING LUG.
2. PAYMENT: THE INSTALLATION OF THE PAVEMENT AND PAVEMENT RETAINING LUG SHALL BE PAID UNDER ITEM NUMBERS 424-B/429-B, 453-D AND 502-A. ALL OTHER RELATED ITEMS SHALL BE ABSORBED.
3. PAVEMENT RETAINING LUG SHALL BE POURED IN ONE OPERATION.
- * 4. FOR DETAILS OF SLOPE PAVED OUTLET SEE SPECIAL DRAWING SUO-605-AB.



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REVISIONS
1. Added to CAD0 on 05-05-99 by J.F.T.

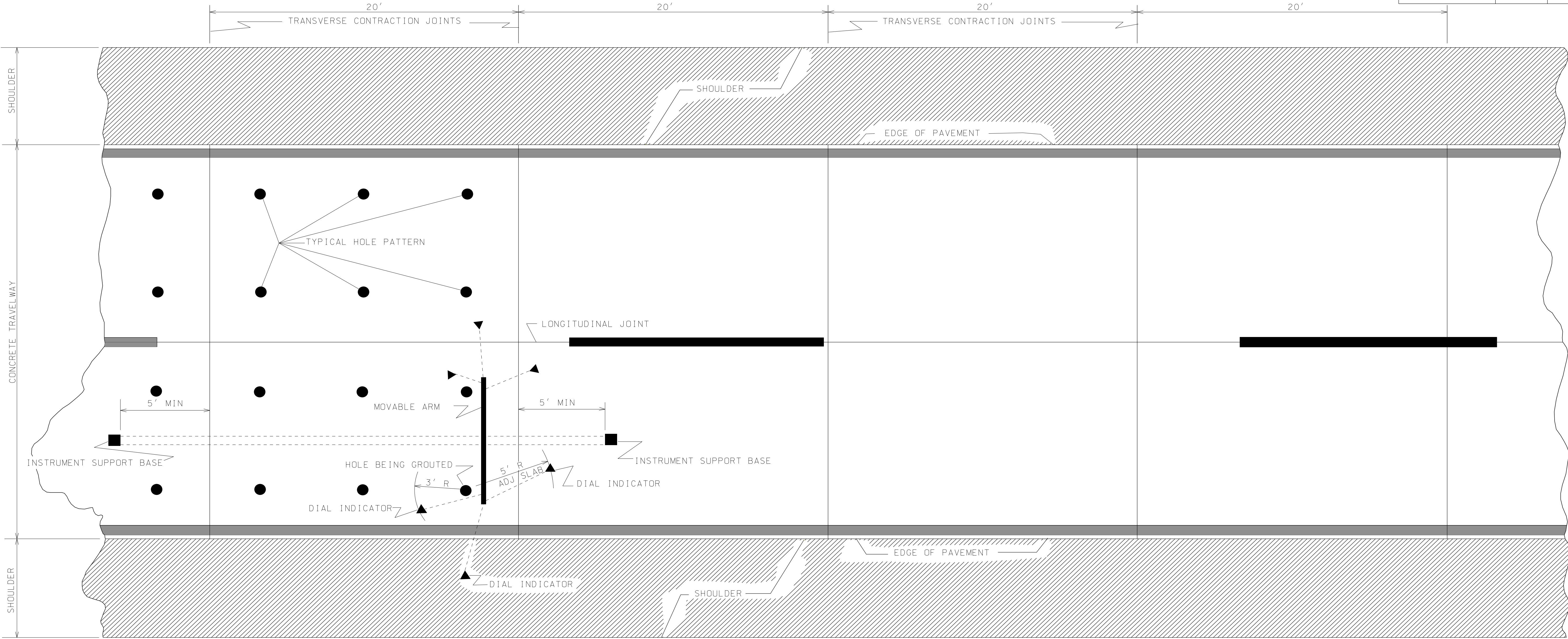
ALABAMA DEPARTMENT OF TRANSPORTATION
1409 COLISEUM BOULEVARD
MONTGOMERY, AL 36130-3050
DESIGN BUREAU SPECIAL DRAWING
PAVEMENT RETAINING LUG FOR NEW CONCRETE PAVEMENT

Bureau Std Engr: D.J.W.
DRAWN BY: _____ DATE DRAWN: 03-30-89

SPECIAL DRAWING NO
LUG-453-N

INDEX NO
45310

NOT TO SCALE



GENERAL NOTES

1. THE ILLUSTRATIONS SHOWN ON THIS DRAWING ARE FOR GUIDANCE ONLY IN OBTAINING THE PROPER MEASUREMENTS OF SLAB MOVEMENT AND DOES NOT REPRESENT THE LIMITS OR CONFIGURATION OF THE MEASURING DEVICES. ALTERNATE SCHEMES MAY BE SUBMITTED BY THE CONTRACTOR FOR CONSIDERATION OF APPROVAL BY THE ENGINEER.
2. MEASURING FOR MOVEMENT SHALL BE DONE USING DIAL INDICATORS AT THE FOLLOWING LOCATIONS:
- (1) WITHIN 3 FT RADIUS OF, AND ON THE SAME SLAB AS, THE HOLE BEING GROUTED.
 - (2) ON AN ADJUSTMENT SLAB WHEN THAT SLAB IS WITHIN 5 FT OF THE HOLE BEING GROUTED.
 - (3) ON THE ADJACENT SHOULDER TO THE SLAB BEING GROUTED.

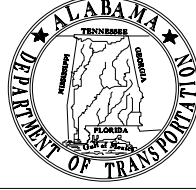
PAVEMENT MOVEMENT DURING PRESSURE
CONCRETE GROUTING OPERATIONS

--SPECIFICATIONS--
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REVISIONS

1. Added to CAD00 on 05-05-99 by J.F.T.



**ALABAMA DEPARTMENT
OF TRANSPORTATION**
1409 COLISEUM BOULEVARD
MONTGOMERY, AL 36130-3050

DESIGN BUREAU SPECIAL DRAWING

GUIDE FOR GAUGING CONCRETE
PAVEMENT MOVEMENT DURING PRESSURE
CONCRETE GROUTING OPERATIONS

Bureau Std Engr: D.J.W.
DRAWN BY: _____ DATE DRAWN: 10-22-82

SPECIAL DRAWING NO
PG-453

INDEX NO
45313

NOT TO SCALE