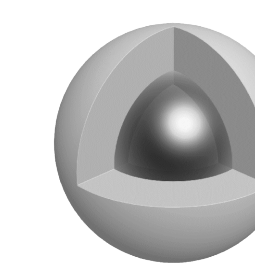
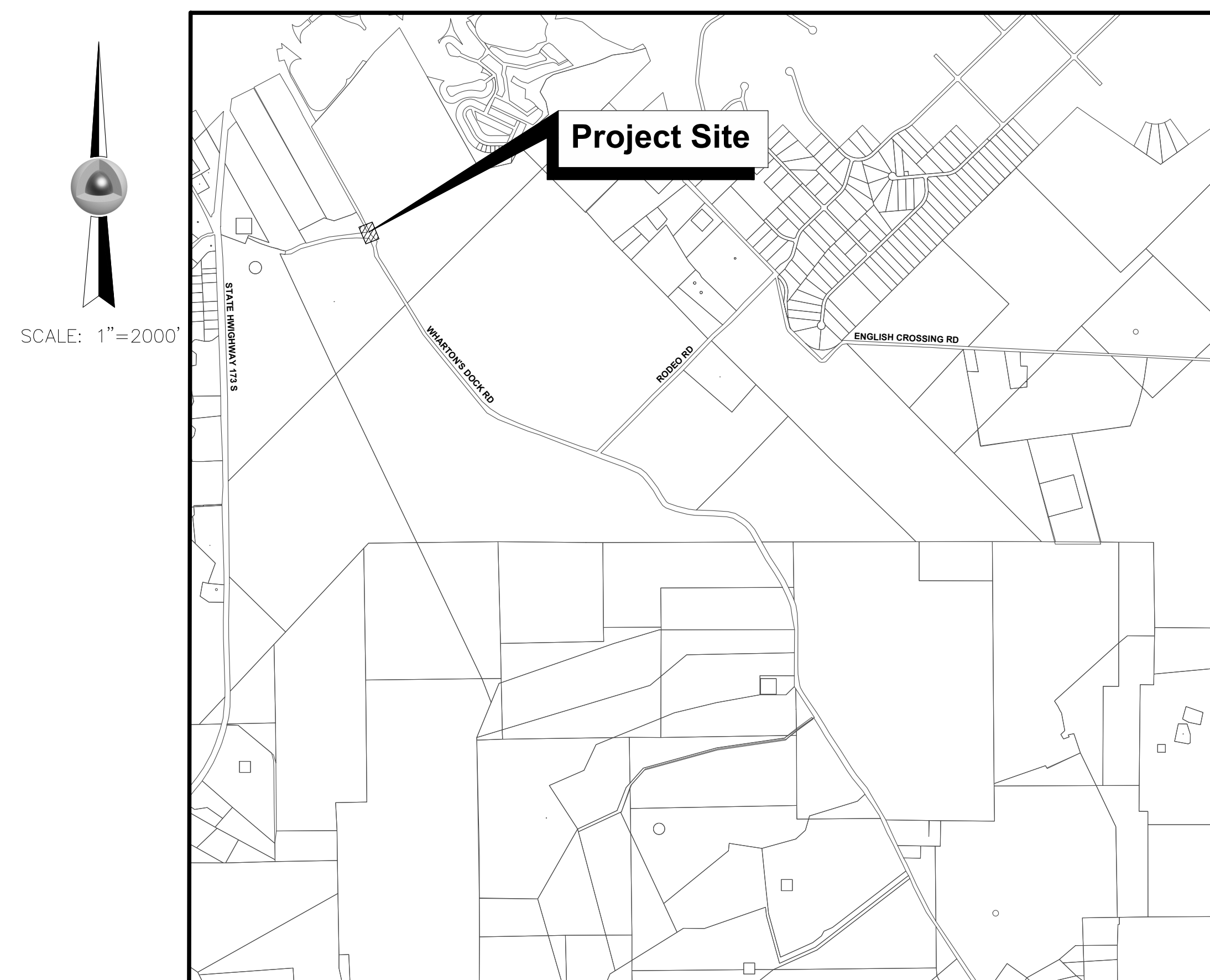


CIVIL CONSTRUCTION PLANS FOR **LOW WATER CROSSING IMPROVEMENTS** WHARTON'S DOCK ROAD BANDERA, TEXAS

SHEET INDEX

	COVER SHEET
GN-01	GENERAL NOTES
PP-01	PLAN & PROFILE
DT-01	ROADWAY DETAILS
DT-02	PAVEMENT DETAILS (SHEET 1)
DT-03	PAVEMENT DETAILS (SHEET 2)
DT-04	CULVERT DETAILS

VICINITY MAP

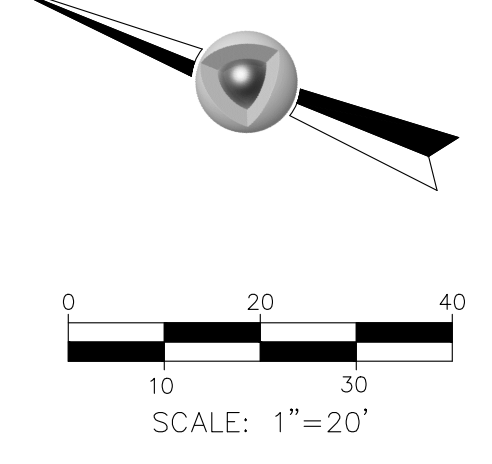
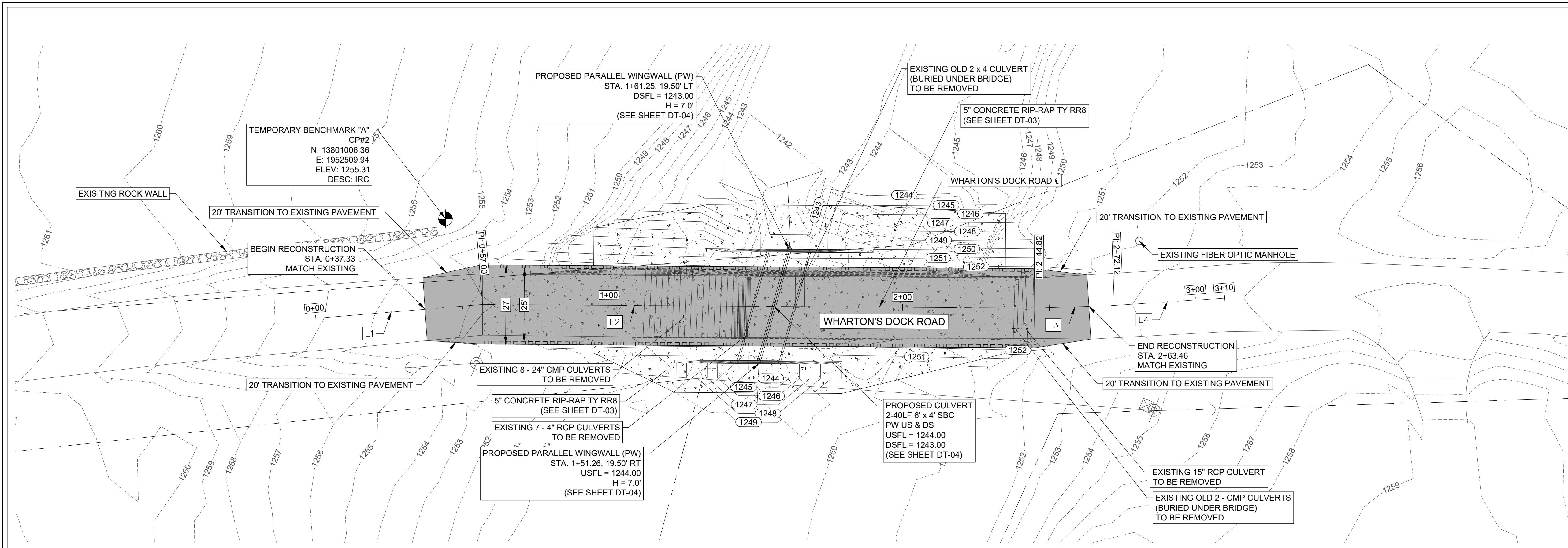


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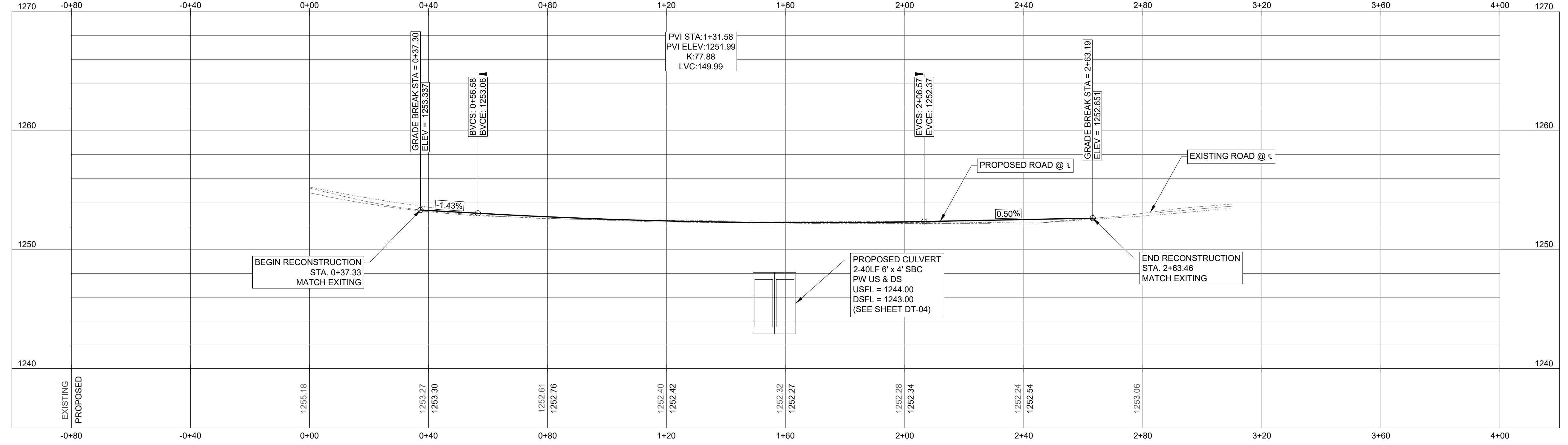
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- LEGEND**
- PLAN**
- 1244 --- EXISTING 1' CONTOUR LINE
 - 1245 --- EXISTING 5' CONTOUR LINE
 - 1244 --- PROPOSED 1' CONTOUR LINE
 - --- PROPOSED ROAD CENTERLINE
 - PROPOSED CONCRETE
 - --- EXISTING LOT LINE
 - --- PROPOSED DITCH FLOW LINE
 - PROPOSED RIP-RAP
- PROFILE**
- PROPOSED GROUND PROFILE
 - EXISTING GROUND PROFILE @ CENTERLINE
 - EXISTING GROUND PROFILE 30' O/S LEFT
 - EXISTING GROUND PROFILE 30' O/S RIGHT

WHARTON'S DOCK ROAD STA. -0+80.00 - STA. 4+00.00

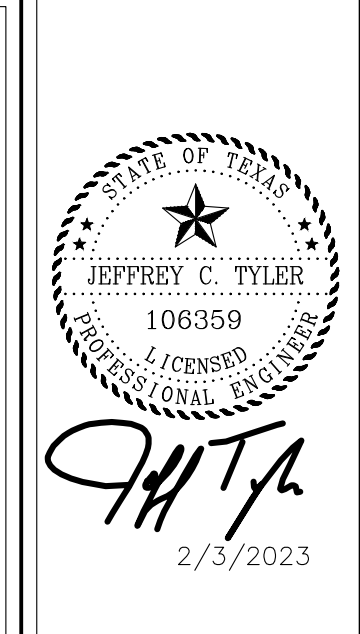
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=10'



LINE TABLE: ALIGNMENTS

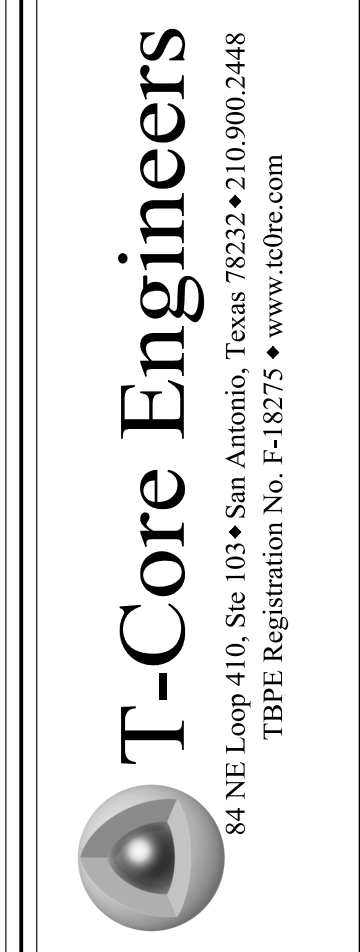
LINE #	LENGTH	DIRECTION	START	END	START COORDINATES	END COORDINATES
L1	57.00	S26° 45' 41.49"E	0+00.00	0+57.00	13801034.60, 1952461.93	13800983.71, 1952487.60
L2	187.82	S21° 36' 47.40"E	0+57.00	2+44.82	13800983.71, 1952487.60	13800809.09, 1952556.78
L3	27.30	S23° 56' 26.62"E	2+44.82	2+72.12	13800809.09, 1952556.78	13800784.14, 1952567.86
L4	37.69	S25° 48' 34.52"E	2+72.12	3+09.81	13800784.14, 1952567.86	13800750.21, 1952584.26

NOTE:
1. CONTRACTOR SHALL IDENTIFY AND RELOCATE ACTIVE UTILITIES PRIOR TO STARTING WORK. RELOCATED UTILITIES SHALL BE APPROVED IN ADVANCE BY OWNER. THIS INCLUDES THE COORDINATION/RELOCATION OF EXISTING SURFACE-MOUNTED FIBER OPTIC AND/OR 3 PHASE ELECTRIC BY BANDERA ELECTRIC COOPERATIVE (BEC) 1-866-226-3372.

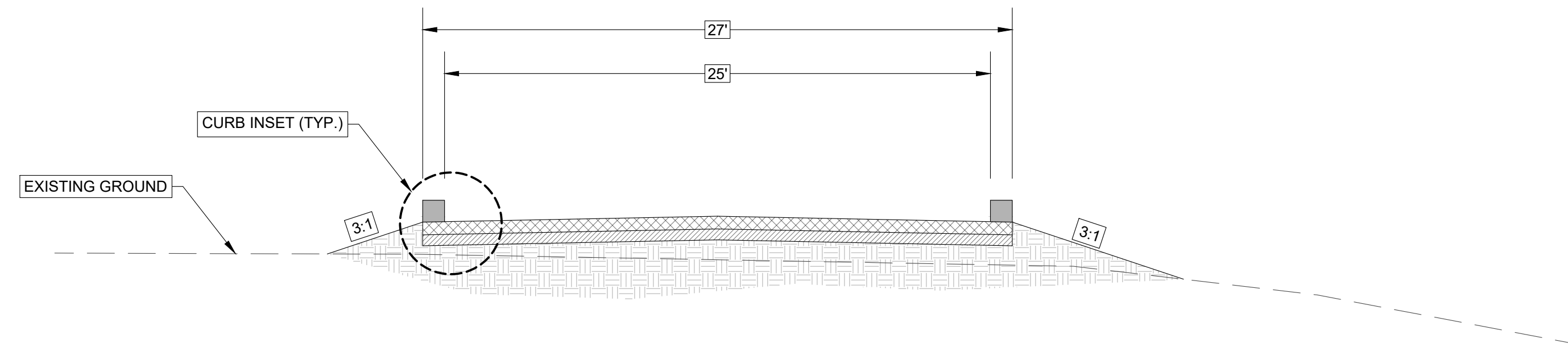


PLAN & PROFILE
LOW WATER CROSSING IMPROVEMENTS
WHARTON'S DOCK ROAD
BANDERA, TEXAS

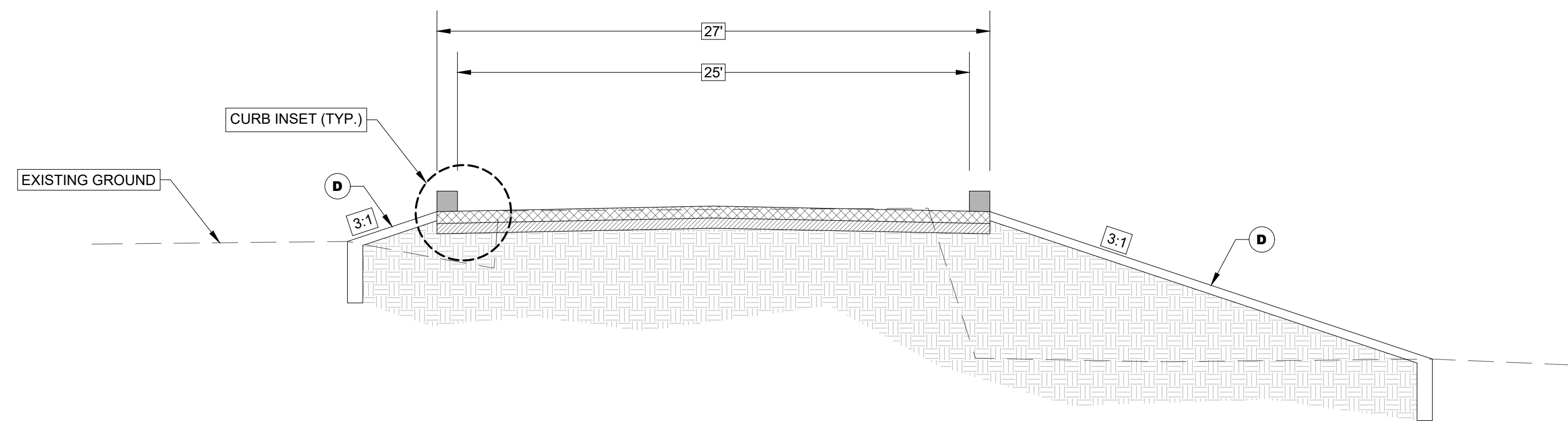
780003, BANDERA COUNTY



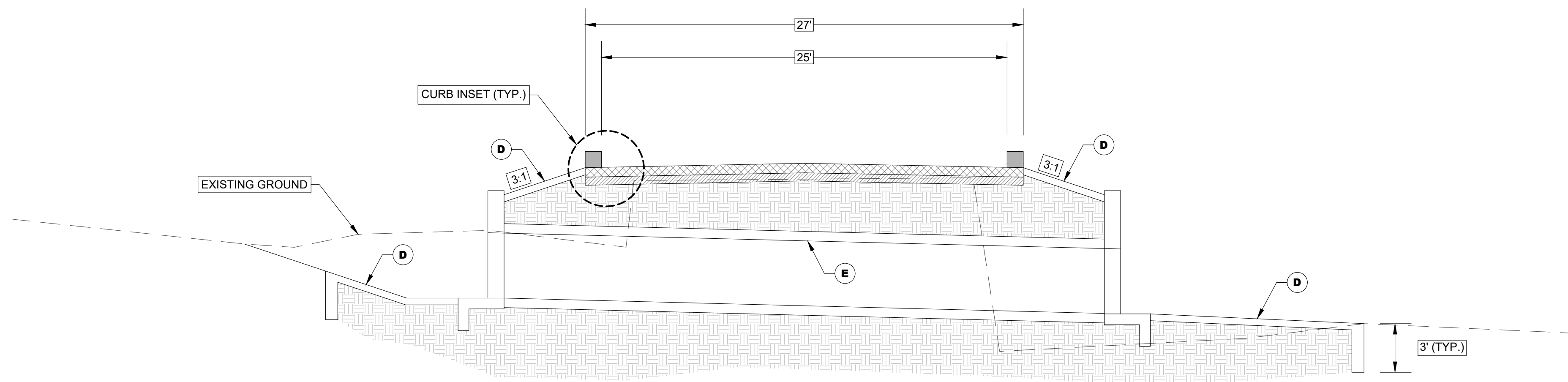
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DATE: 2/3/2023
DRAWN BY: CT
SHEET: PP-01
3 OF 7



1 TYPICAL PROPOSED ROAD SECTION (STA 0+37.33 TO STA 0+94.72 & STA 2+34.93 TO STA 2+63.46)
DT-01 NTS



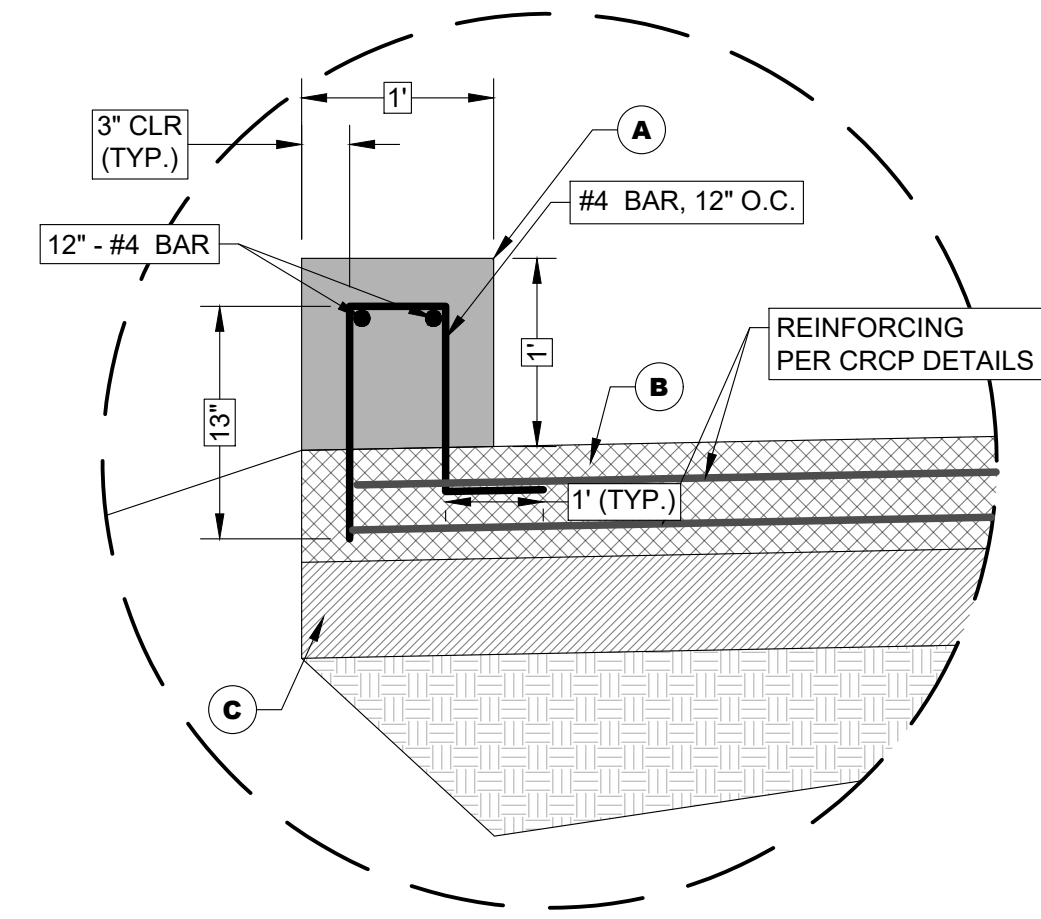
2 TYPICAL PROPOSED ROAD SECTION (STA 0+94.72 TO STA 2+34.93)
DT-01 NTS



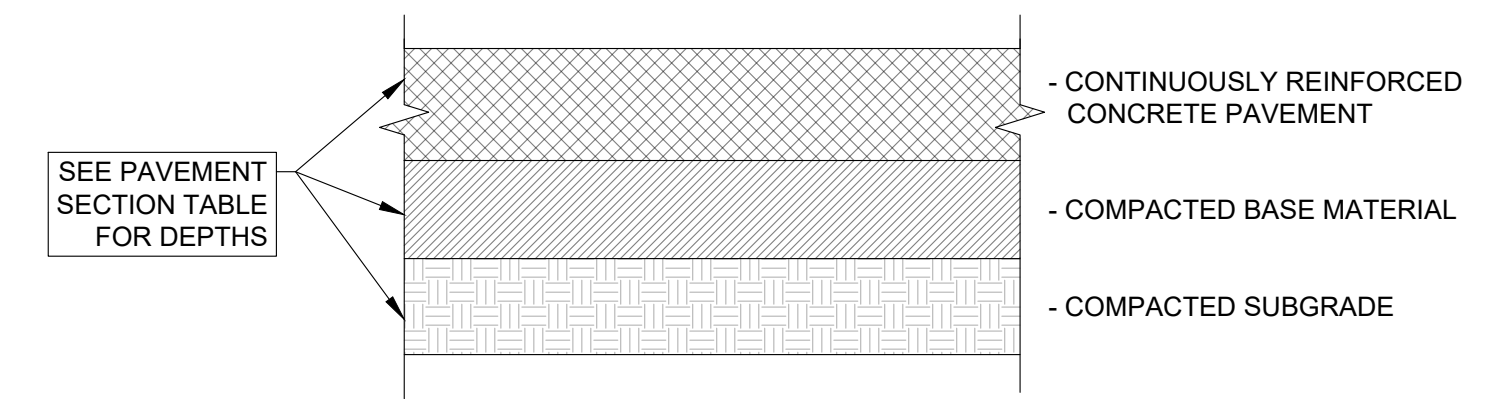
3 PROPOSED ROAD SECTION @ CULVERT
DT-01 NTS

LEGEND

- (A) -1' H X 1' W X 1.5' L CURB (1' SPACING BETWEEN CURB UNITS)
- (B) -CONTINUOUSLY REINFORCED CONCRETE PAVEMENT (SEE SHEETS DT-02 & DT-03)
- (C) -COMPACTED BASE MATERIAL
- (D) -5" CONCRETE RIPRAP TY RR8 (SEE SHEET DT-03)
- (E) -2-40LF 6' x 4' SBC (SEE SHEET DT-04)



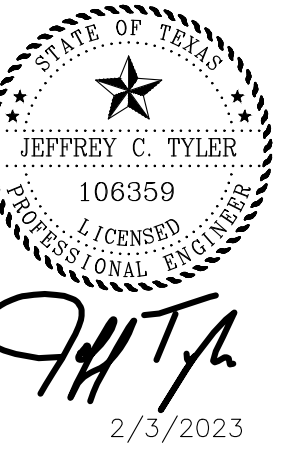
4 CURB INSET (TYP.)
DT-01 NTS



PAVEMENT SECTION TABLE

PAVEMENT OPTION	MATERIAL THICKNESS
CONTINUOUSLY REINFORCED CONCRETE PAVEMENT	7" (MAX.)
COMPACTED BASE MATERIAL	6"
COMPACTED SUBGRADE	VARIABLE

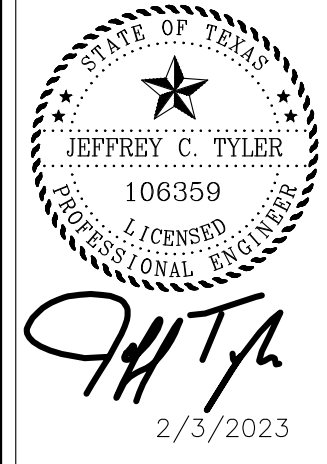
5 PAVEMENT SECTION
DT-01 NTS



ROADWAY DETAILS
LOW WATER CROSSING IMPROVEMENTS
WHARTON'S DOCK ROAD
BANDERA, TEXAS
78003, BANDERA COUNTY

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JOB NO: TC-111
DATE: 2/3/2023
DRAWN BY: CT
SHEET: DT-01



GENERAL NOTES

- DETAILS FOR PAVEMENT WIDTH, PAVEMENT THICKNESS AND THE CROWN CROSS-SLOPE SHALL BE SHOWN ELSEWHERE IN THE PLANS. PAVEMENTS WIDER THAN 100 FT, WITHOUT A FREE LONGITUDINAL JOINT ARE NOT COVERED BY THIS STANDARD.
- FOR FURTHER INFORMATION REGARDING THE PLACEMENT OF CONCRETE AND LOAD TRANSFER DEVICES REFER TO THE GOVERNING SPECIFICATION FOR "CONCRETE PAVEMENT".
- THE SPACING BETWEEN TRANSVERSE CONTRACTION JOINTS SHALL BE 15 FT, UNLESS OTHERWISE SHOWN IN THE PLANS.
- TRANSVERSE CONTRACTION JOINTS MAY BE FORMED BY USE OF METAL OR WOOD FORMS EQUAL IN DEPTH TO THE DEPTH OF PAVEMENT, OR BY METHODS APPROVED BY THE ENGINEER.
- USE HAND-OPERATED IMMERSION VIBRATORS TO CONSOLIDATE THE CONCRETE ADJACENT TO ALL THE FORMED JOINTS.
- PAVEMENT WIDTHS OF MORE THAN 15 FT. SHALL HAVE A LONGITUDINAL JOINT (SECTION Z-Z OR SECTION Y-Y). THESE JOINTS SHALL BE LOCATED WITHIN 6 IN. OF THE LANE LINE UNLESS THE JOINT LOCATION IS SHOWN ELSEWHERE ON THE PLANS.
- THE JOINT BETWEEN OUTSIDE LANE AND SHOULDER SHALL BE A LONGITUDINAL CONTRACTION JOINT (SECTION Z-Z) UNLESS OTHERWISE SHOWN IN THE PLANS. THE SAW CUT DEPTH FOR THE LONGITUDINAL CONTRACTION JOINT (SECTION Z-Z) SHALL BE ONE THIRD OF THE SLAB THICKNESS (T/3).
- WHEN TYING CONCRETE GUTTER AT A LONGITUDINAL JOINT, THE TIE BAR LENGTH OR POSITION MAY BE ADJUSTED, PROVIDE 3 IN. OF CONCRETE COVER FROM THE BACK OF GUTTER TO THE END OF TIE BAR.
- REPLACE MISSING OR DAMAGED TIE BARS WITHOUT ADDITIONAL COMPENSATION BY DRILLING MIN. 10 IN. DEEP AND GROUTING THE BARS WITH TYPE III, CLASS C EPOXY. MEET THE PULL-OUT TEST REQUIREMENTS IN ITEM 361.
- WHEN AN MONOLITHIC CURB IS SPECIFIED, THE JOINT IN THE CURB SHALL COINCIDE WITH PAVEMENT JOINTS AND MAY BE FORMED BY ANY MEANS APPROVED BY THE ENGINEER.
- DOWEL BAR PLACEMENT TOLERANCE SHALL BE +/- 1/4 IN. HORIZONTALLY AND VERTICALLY UNLESS OTHERWISE SPECIFIED, WHERE DOWEL BAR BASKETS ARE USED, REMOVE THE SHIPPING WIRES.
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TRANSVERSE CONTRACTION JOINT SECTION X-X

LONGITUDINAL CONTRACTION JOINT SECTION Y-Y

LONGITUDINAL CONTRACTION JOINT SECTION Z-Z

TYPICAL PAVEMENT LAYOUT PLAN VIEW (NOT TO SCALE)

FREE LONGITUDINAL JOINT DETAIL

TRANSVERSE JOINT DETAIL EXISTING CPCD TO NEW CPCD PLAN VIEW (NOT TO SCALE)

TRANSVERSE EXPANSION JOINT DETAIL AT BRIDGE APPROACH

LONGITUDINAL WIDENING JOINT DETAIL

CONCRETE PAVEMENT DETAILS CONTRACTION DESIGN T-6 TO 12 INCHES

CPCD-14

TABLE NO. 1 DOWELS (SMOOTH BARS)

SLAB THICKNESS T (IN.)	BAR DIA. AND LENGTH (IN.)	AVERAGE SPACING (IN.)
6 to 7.5	1" X 18"	12
8 to 10	1 1/4" X 18"	12
>= 10.5	1 1/2" X 18"	12

TABLE NO. 2 TIE BARS (DEFORMED BARS)

SLAB THICKNESS T (IN.)	BAR SIZE	AVERAGE SPACING (IN.)
6 to 7.5	#5	24
>= 8	#6	24

REVISIONS

DATE: _____

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- USE COARSE AGGREGATES WITH A RATED COEFFICIENT OF THERMAL EXPANSION (CTE) OF NOT MORE THAN 5.5 X 10⁻⁶ IN/IN/°F AS LISTED IN THE CONCRETE RATED SOURCE QUALITY CATALOG (CRSQC).
- ALL THE REINFORCING STEEL AND TIE BARS SHALL BE DEFORMED STEEL BARS CONFORMING TO ASTM A 615 (GRADE 60) OR ASTM A 996 (GRADE 60) OR ABOVE. STEEL BAR SIZES AND SPACINGS SHALL CONFORM TO TABLE NO. 1, TABLE NO. 2 AND TABLE NO. 3.
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- LONGITUDINAL REINFORCING STEEL SPLICES SHALL BE A MINIMUM OF 25 IN. STAGGER THE LAP LOCATIONS SO THAT NO MORE THAN 1/3 OF THE LONGITUDINAL STEEL IS SPLICED IN ANY GIVEN 12-FT. WIDTH AND 2-FT. LENGTH OF THE PAVEMENT.
- THE DETAIL FOR THE JOINT SEALANT AND RESERVOIR IS SHOWN ON STANDARD SHEET "CONCRETE PAVING DETAILS, JOINT SEALS."

TRANSVERSE EXPANSION JOINT DETAIL AT BRIDGE APPROACH

FREE LONGITUDINAL JOINT DETAIL

OPTION A: DRILL AND EPOXY PLAN VIEW (NOT TO SCALE)

OPTION B: BREAKBACK AND LAP TRANSVERSE TIE JOINT DETAIL EXISTING CRCP TO NEW CRCP

CONCRETE PAVEMENT DETAILS CONTRACTION DESIGN T-6 TO 12 INCHES

CPCD-14

TABLE NO. 1 LONGITUDINAL STEEL

SLAB THICKNESS AND BAR SIZE	FOR BOTH STEEL MATS		FOR TOP STEEL MAT ONLY	
	REGULAR STEEL BARS	FIRST SPACING AT EDGE OR JOINT	ADDITIONAL STEEL BARS AT TRANSVERSE CONTRACTION JOINT (SECTION X-X)	LENGTH L (IN.)
T (IN.) BAR SIZE	SPACING (IN.)	SPACING (IN.)	SPACING (IN.)	LENGTH L (IN.)
14 #6	9.5	3 TO 4	19	50
15 #6	8.5	3 TO 4	17	50

TABLE NO. 2 TRANSVERSE STEEL AND TIE BARS

SLAB THICKNESS (IN.)	FOR BOTH STEEL MATS		FOR LOWER STEEL MAT ONLY		FOR BOTH STEEL MATS	
	TRANSVERSE STEEL	TIE BARS AT LONGITUDINAL CONTRACTION JOINT (SECTION Z-Z)	TRANSVERSE STEEL	TIE BARS AT LONGITUDINAL CONTRACTION JOINT (SECTION Y-Y)	TRANSVERSE STEEL	TIE BARS AT LONGITUDINAL CONTRACTION JOINT (SECTION Z-Z)
14 - 15	BAR SIZE SPACING (IN.)	BAR SIZE SPACING (IN.)	BAR SIZE SPACING (IN.)	BAR SIZE SPACING (IN.)	BAR SIZE SPACING (IN.)	BAR SIZE SPACING (IN.)
	#5 48	#6 48	#6 48	#6 24	#6 48	#6 24

TABLE NO. 3 TWO LAYER STEEL PLACEMENT HEIGHT OF STEEL MATS

SLAB THICKNESS (IN.)	LOWER STEEL MAT HEIGHT T1 (IN.)	TOP STEEL MAT HEIGHT T2 (IN.)
14	4.5	8.0
15	5.0	8.5

TYPICAL PAVEMENT LAYOUT PLAN VIEW (NOT TO SCALE)

TRANSVERSE CONSTRUCTION JOINT SECTION X-X

LONGITUDINAL CONTRACTION JOINT SECTION Y-Y

LONGITUDINAL CONTRACTION JOINT SECTION Z-Z

CONCRETE PAVEMENT DETAILS CONTRACTION DESIGN T-14 & 15 INCHES

CRCP (2) - 20

REVISIONS

DATE: _____

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TRANSVERSE CONTRACTION JOINT SECTION X-X

LONGITUDINAL CONTRACTION JOINT SECTION Y-Y

LONGITUDINAL CONTRACTION JOINT SECTION Z-Z

TYPICAL PAVEMENT LAYOUT PLAN VIEW (NOT TO SCALE)

FREE LONGITUDINAL JOINT DETAIL

TRANSVERSE JOINT DETAIL EXISTING CPCD TO NEW CPCD PLAN VIEW (NOT TO SCALE)

TRANSVERSE EXPANSION JOINT DETAIL AT BRIDGE APPROACH

LONGITUDINAL WIDENING JOINT DETAIL

CONCRETE PAVEMENT DETAILS CONTRACTION DESIGN T-6 TO 12 INCHES

CPCD-14

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TABLE NO. 2 TIE BARS (DEFORMED BARS)

SLAB THICKNESS T (IN.)	BAR SIZE	AVERAGE SPACING (IN.)
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REVISIONS

DATE: _____

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TRANSVERSE EXPANSION JOINT DETAIL AT BRIDGE APPROACH

FREE LONGITUDINAL JOINT DETAIL

OPTION A: DRILL AND EPOXY PLAN VIEW (NOT TO SCALE)

OPTION B: BREAKBACK AND LAP TRANSVERSE TIE JOINT DETAIL EXISTING CRCP TO NEW CRCP

CONCRETE PAVEMENT DETAILS CONTRACTION DESIGN T-14 & 15 INCHES

CRCP (2) - 20

TABLE NO. 1 LONGITUDINAL STEEL

SLAB THICKNESS AND BAR SIZE	FOR BOTH STEEL MATS		FOR TOP STEEL MAT ONLY	
	REGULAR STEEL BARS	FIRST SPACING AT EDGE OR JOINT	ADDITIONAL STEEL BARS AT TRANSVERSE CONTRACTION JOINT (SECTION X-X)	LENGTH L (IN.)
T (IN.) BAR SIZE	SPACING (IN.)	SPACING (IN.)	SPACING (IN.)	LENGTH L (IN.)
14 #6	9.5	3 TO 4	19	50
15 #6	8.5	3 TO 4	17	50

TABLE NO. 2 TRANSVERSE STEEL AND TIE BARS

SLAB THICKNESS (IN.)	FOR BOTH STEEL MATS		FOR LOWER STEEL MAT ONLY		FOR BOTH STEEL MATS	
	TRANSVERSE STEEL	TIE BARS AT LONGITUDINAL CONTRACTION JOINT (SECTION Z-Z)	TRANSVERSE STEEL	TIE BARS AT LONGITUDINAL CONTRACTION JOINT (SECTION Y-Y)	TRANSVERSE STEEL	TIE BARS AT LONGITUDINAL CONTRACTION JOINT (SECTION Z-Z)
14 - 15	BAR SIZE SPACING (IN.)	BAR SIZE SPACING (IN.)	BAR SIZE SPACING (IN.)	BAR SIZE SPACING (IN.)	BAR SIZE SPACING (IN.)	BAR SIZE SPACING (IN.)
	#5 48	#6 48	#6 48	#6 24	#6 48	#6 24

TABLE NO. 3 TWO LAYER STEEL PLACEMENT HEIGHT OF STEEL MATS

SLAB THICKNESS (IN.)	LOWER STEEL MAT HEIGHT T1 (IN.)	TOP STEEL MAT HEIGHT T2 (IN.)
14	4.5	8.0
15	5.0	8.5

TYPICAL PAVEMENT LAYOUT PLAN VIEW (NOT TO SCALE)

TRANSVERSE CONSTRUCTION JOINT SECTION X-X

LONGITUDINAL CONTRACTION JOINT SECTION Y-Y

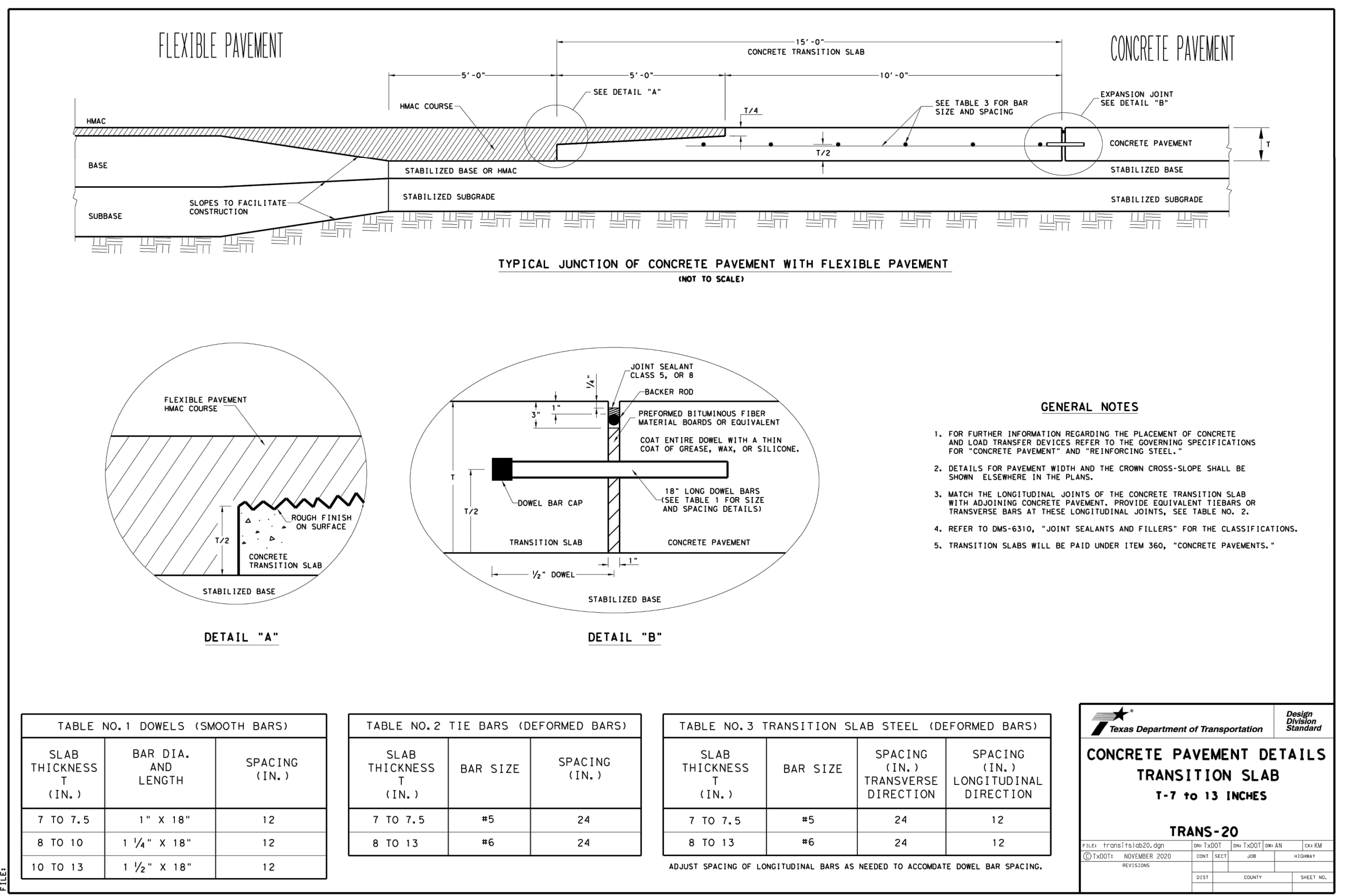
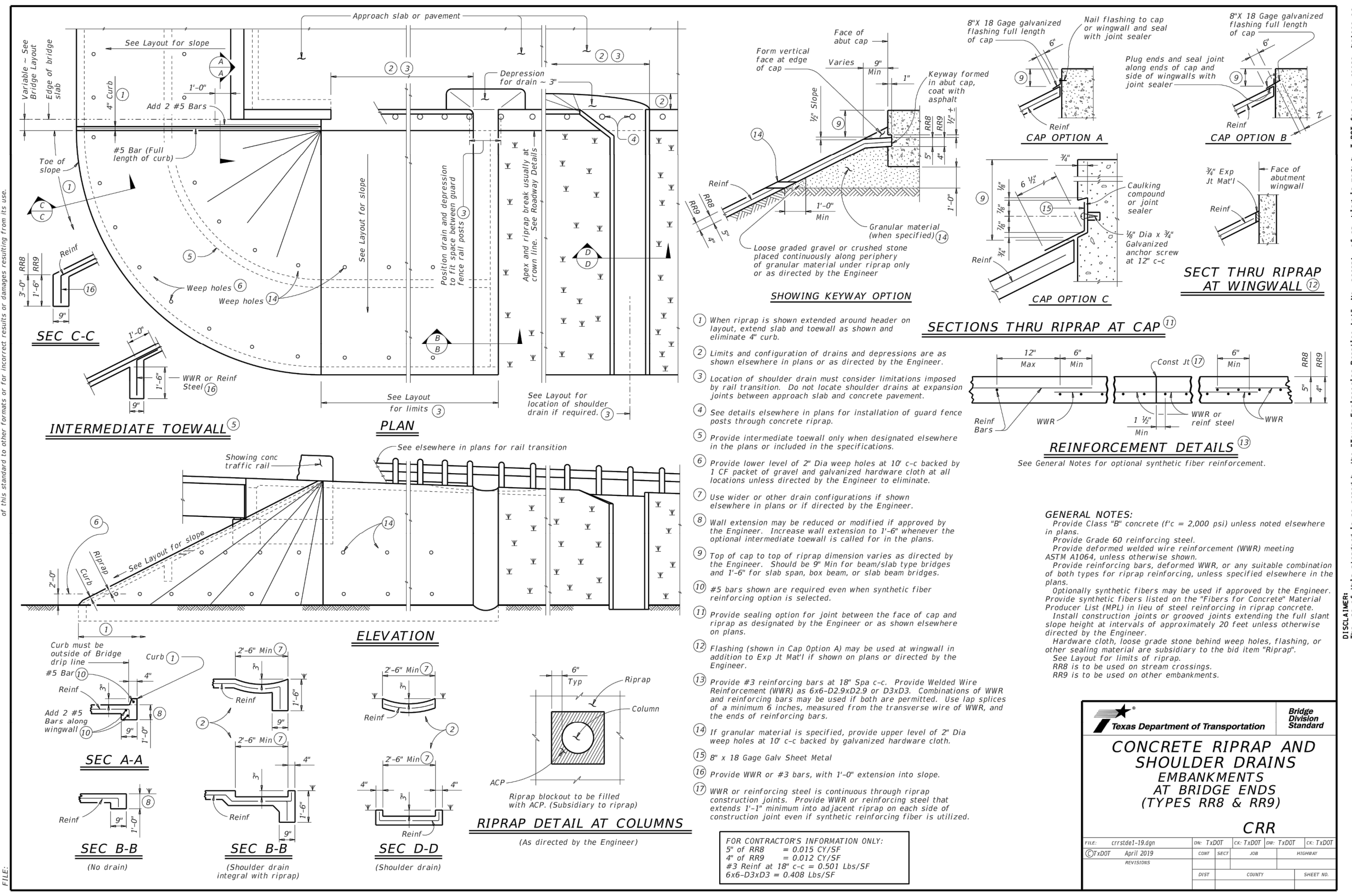
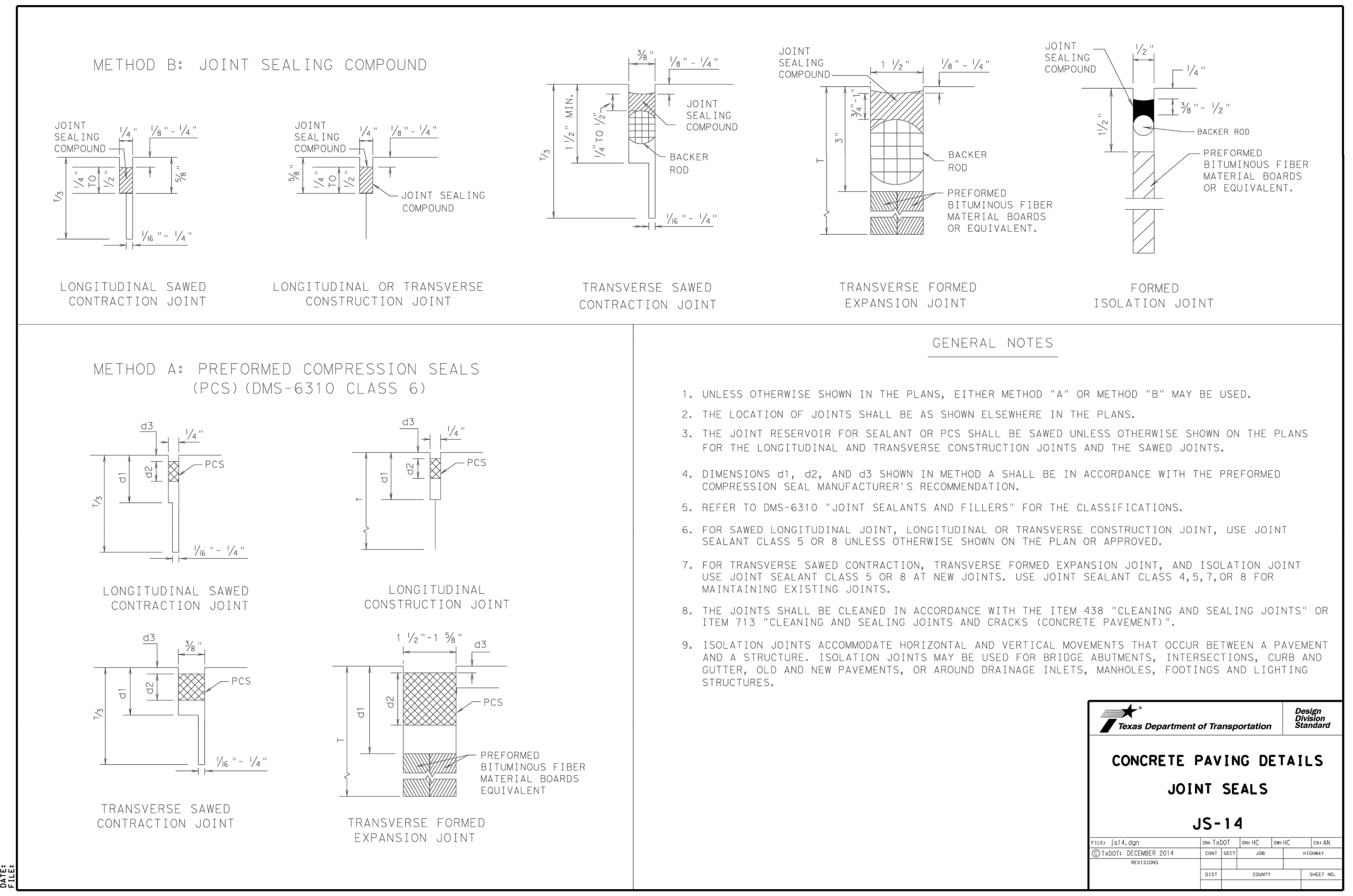
LONGITUDINAL CONTRACTION JOINT SECTION Z-Z

CONCRETE PAVEMENT DETAILS CONTRACTION DESIGN T-14 & 15 INCHES

CRCP (2) - 20

REVISIONS

DATE: _____



CONCRETE PAVEMENT DETAILS TRANSITION SLAB T-7 TO 13 INCHES

TRANS-20

SLAB THICKNESS (IN.)	BAR SIZE	SPACING (IN.) TRANSVERSE DIRECTION	SPACING (IN.) LONGITUDINAL DIRECTION
7 TO 7.5	#5	24	12
8 TO 13	#6	24	12

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