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## STATE OF TEXAS STATE HIGHWAY DEPARTMENT

### PLANS OF PROPOSED STATE HIGHWAY IMPROVEMENT

FEDERAL AID PROJECT  
U 1089 (24)  
PLAN: 1 IN = 100 FT  
PROFILE: 1 IN HOR = 100 FT 1 IN VERT = 10 FT  
SCALES: CROSS-SECTIONS: 1 IN HOR AND VERT = 1 FT  
OTHERS AS NOTED  
NET LENGTH OF PROJECT: 16,451.27 FT = 3.14 MI

	CONTROL	581-1-34
ROADWAY	374.42	FT. 3.044 MI.
BRIDGES	374.42	FT. 0.070 MI.
TOTALS	16,451.27	FT. 3.114 MI.

#### DALLAS COUNTY LOOP 12

FROM: 0.1 MILE EAST U.S. 77  
TO : SUNNYVALE ST.

GRADING, STRUCTURES, STORM SEWERS  
AND CONCRETE PAVEMENT

Work Started: April 20, 1962  
Work Completed: November 20, 1963  
Field Change No. 1:

Revise grades, delete paved shoulder, add outside curbs to concrete pavement, and revise median left turns between sta. 220+08 and sta. 234+50.

Field Change No. 2:  
Install 6" traffic detectors and 2" and 3" conduit at various locations throughout project.

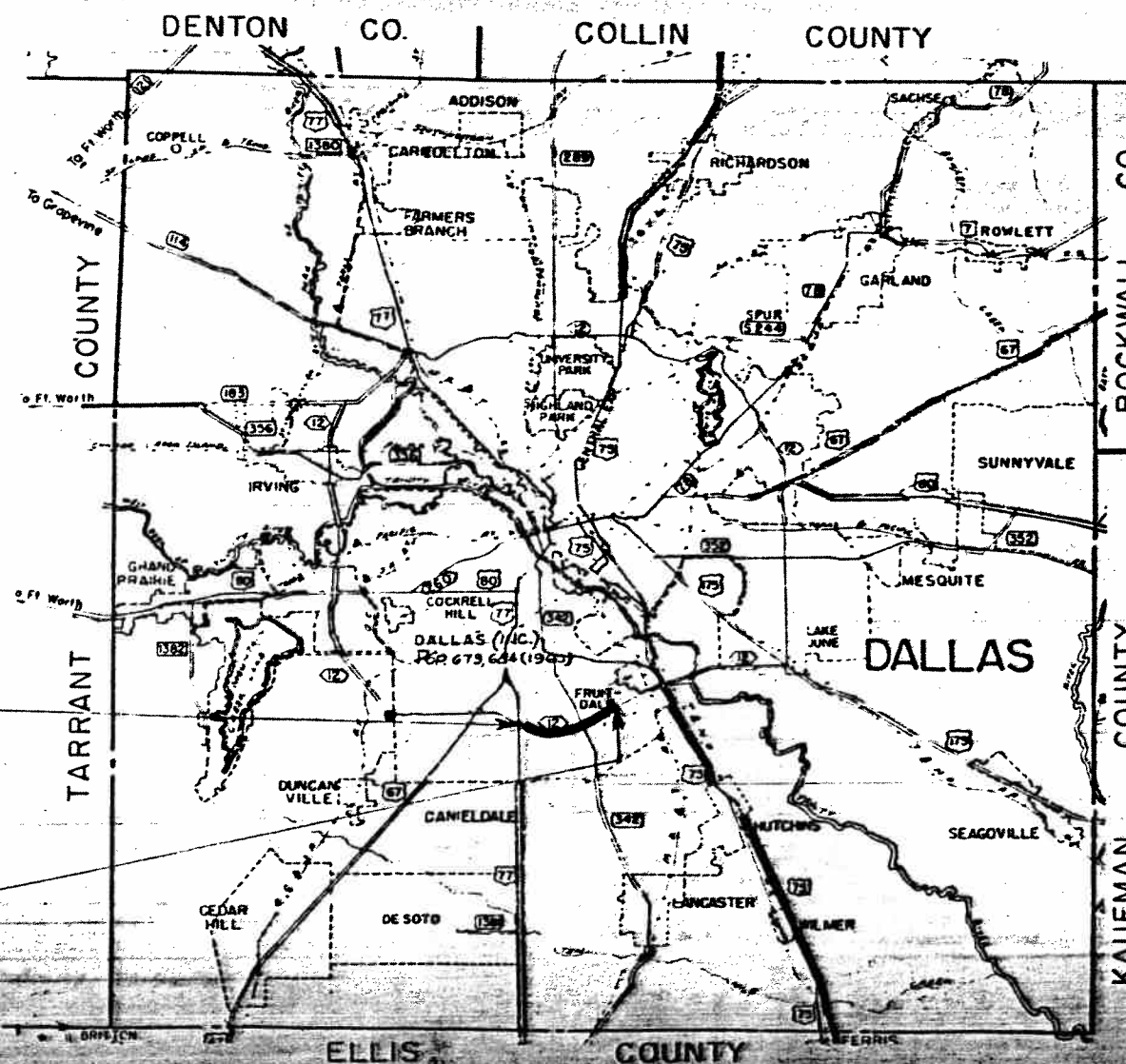
Field Change No. 3:  
Change density requirements on lime treated base from 100% D<sub>a</sub> to 95% D<sub>a</sub>.

#### RAILROAD DELIVERY POINTS FOR MATERIALS

DALLAS — ALL RAILROADS  
THE CONTRACTOR SHALL MAKE HIS OWN INVESTIGATION AND ARRANGEMENTS FOR TRACKING FACILITIES.

EQUATIONS: 330 + 31.09 Bk =  
NO EXCEPTIONS

Specifications adopted by the Texas Highway Department Jan. 2, 1960 and Specification items listed and dated as follows shall govern this project: Required contract provisions for Federal Aid contracts approved Oct. 25, 1961



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## STATE OF TEXAS STATE HIGHWAY DEPARTMENT

### PLANS OF PROPOSED STATE HIGHWAY IMPROVEMENT

FEDERAL AID PROJECT  
U 1089 (24)

PLAN 1 IN = 100 FT  
PROFILE 1 IN HOR = 100 FT 1 IN VERT = 10 FT  
CROSS-SECTIONS 1 IN HOR AND VERT = 5 FT  
OTHERS AS NOTED  
NET LENGTH OF PROJECT 16,451.27 FT = 3.114 MI

CONTROL	581-1-34
ROADWAY	3,044 MI.
BRIDGES	0.070 MI.
TOTALS	3.114 MI.

RAILROAD DELIVERY POINTS  
FOR MATERIALS  
DALLAS — ALL RAILROADS  
THE CONTRACTOR SHALL MAKE  
HIS OWN INVESTIGATION AND  
ARRANGEMENTS FOR TRackage  
FACILITIES.

### DALLAS COUNTY LOOP 12

FROM: 0.1 MILE EAST U.S. 77  
TO : SUNNYVALE ST  
GRADING, STRUCTURES, STORM SEWERS  
AND CONCRETE PAVEMENT

Work Started: April 20, 1962  
Work Completed: November 20, 1963  
Field Change No. 1:

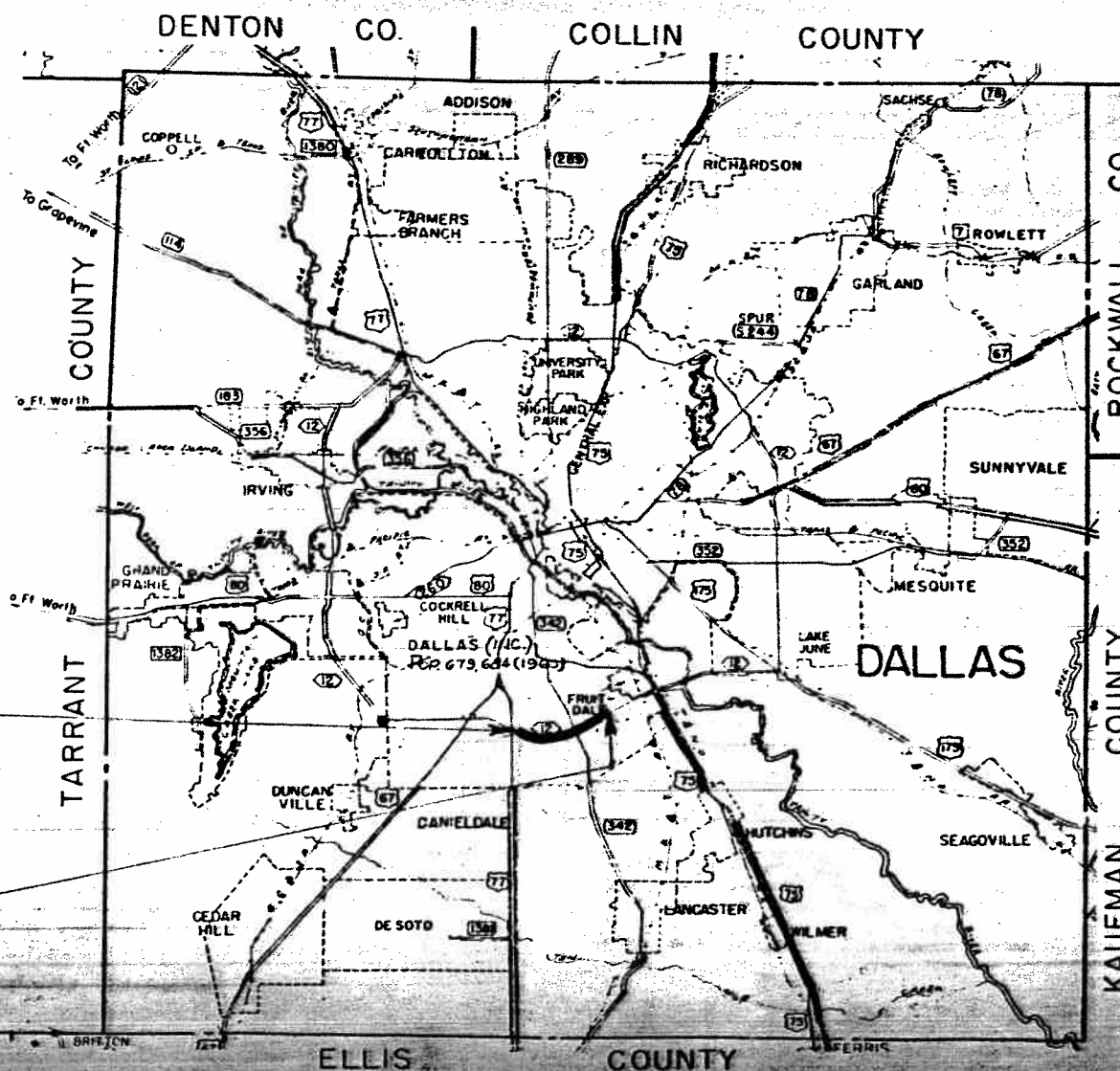
Revise grades, delete paved shoulder, add  
outside curbs to concrete pavement, and  
revise median left turns between  
sta. 220+08 and sta. 234+50.

Field Change No. 2:  
Install 6" traffic detectors and  
2" and 3" conduit at various locations  
throughout project.

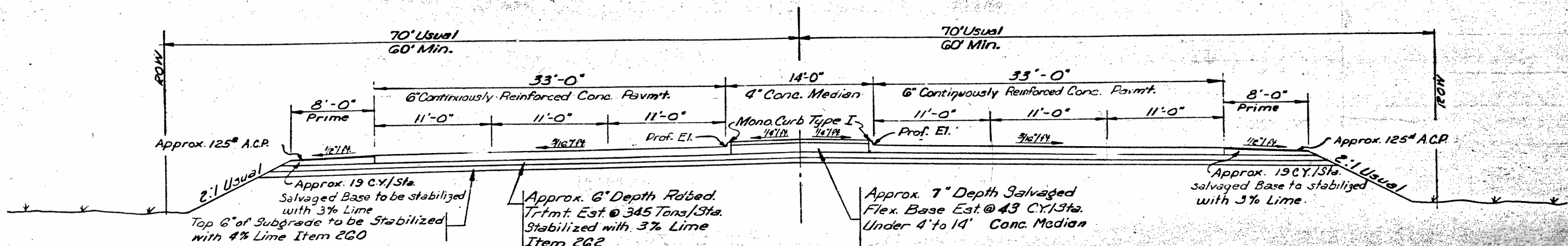
Field Change No. 3:  
Change density requirements on lime  
treated base from 100% D<sub>a</sub> to 95% D<sub>a</sub>.

EQUATIONS: 330+31.09 BA=  
330+30.61 Fnd-D<sub>a</sub>  
NO EXCEPTIONS

Specifications adopted by the Texas  
Highway Department Jan. 2, 1961,  
and Specification items listed and  
dated as follows shall govern  
this project: Required contract  
provisions per Federal Aid  
contracts approved Oct. 25, 1960.



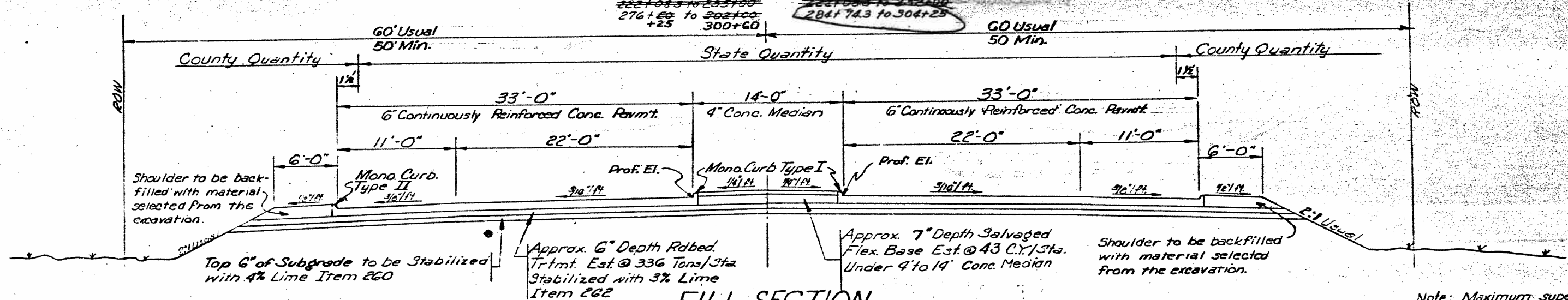




### FILL SECTION WITHOUT OUTSIDE CURBS

To Be Used Between The Following Stations:  
LEFT RIGHT

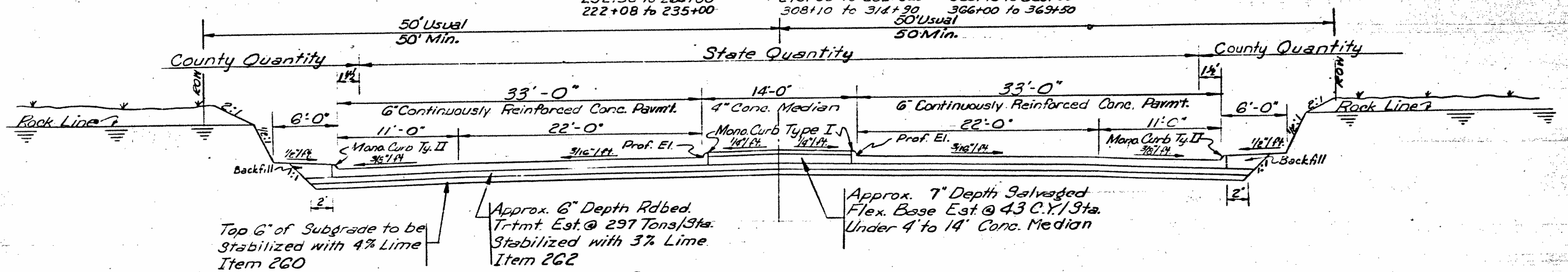
222+08 to 235+00  
276+00 to 300+00  
+25 300+60  
222+08 to 235+00  
284+74.3 to 304+25



### FILL SECTION

To Be Used Between The Following Stations:  
LEFT RIGHT

245+00 to 247+00  
252+50 to 264+00  
222+08 to 235+00  
245+00 to 247+00  
276+00 to 282+84.3  
308+10 to 314+90  
222+08 to 235+00  
282+00 to 282+84.3  
323+15 to 329+00  
366+00 to 369+50



### CUT SECTION

To Be Used Between The Following Limits:  
LEFT RIGHT

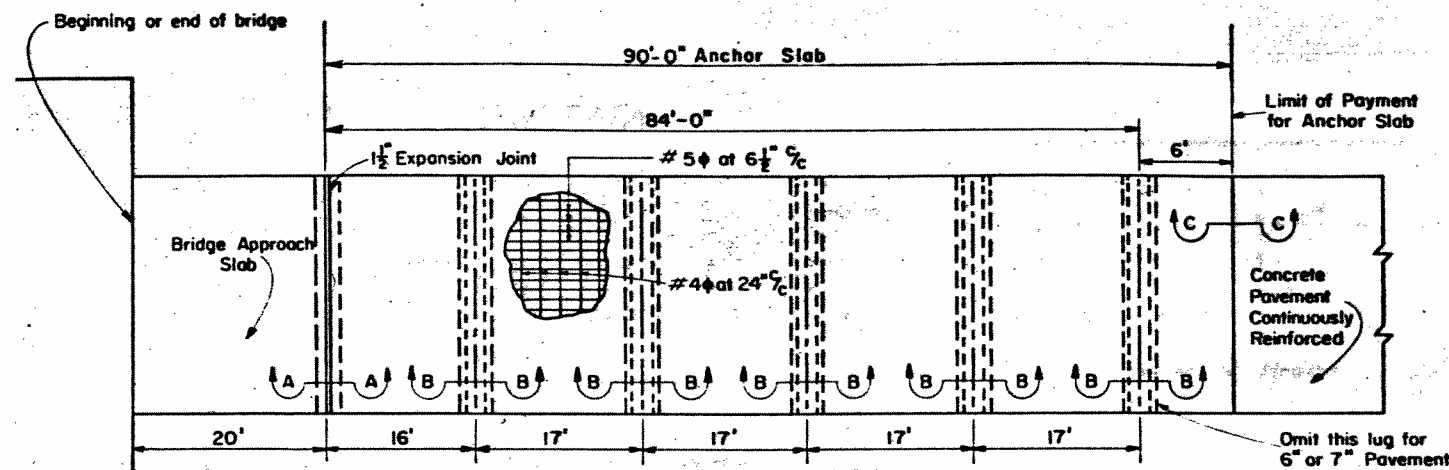
235+00 to 245+00  
247+00 to 252+50  
232+00 to 245+00  
247+00 to 252+50

## TYPICAL SECTIONS

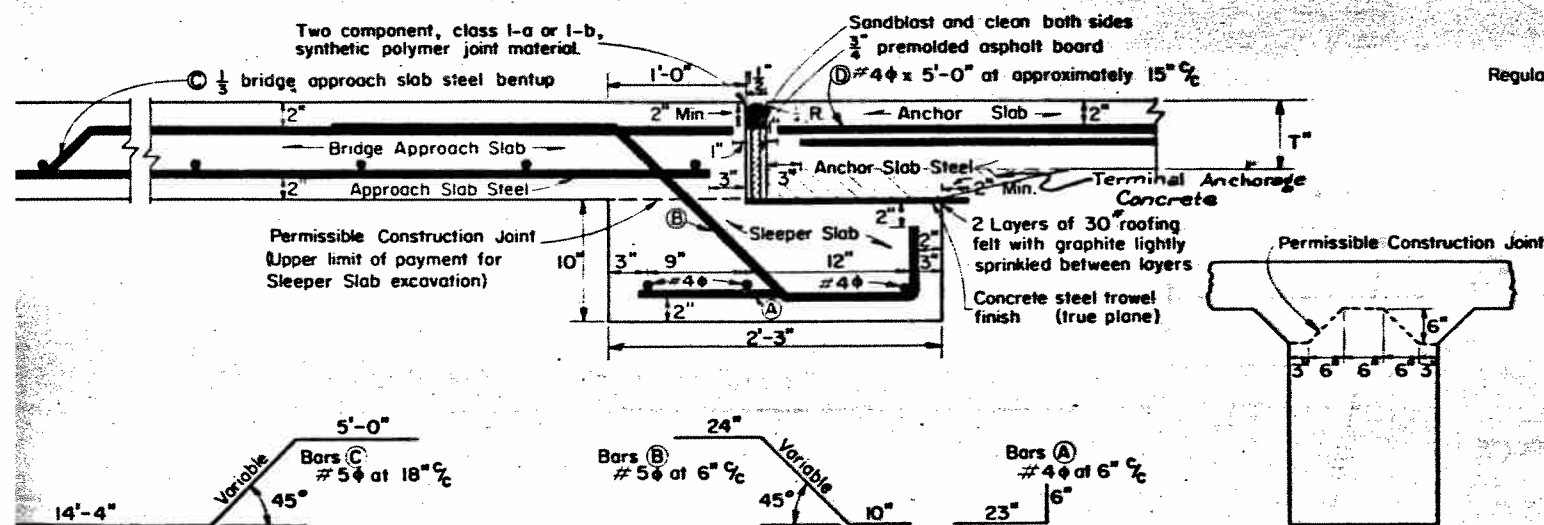






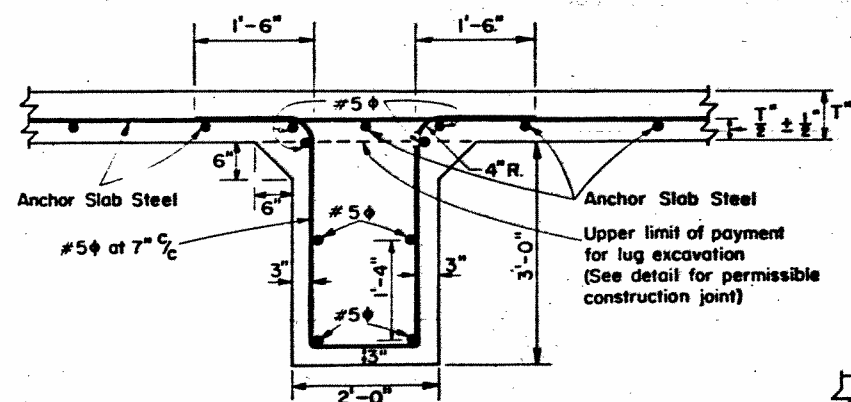


PLAN VIEW

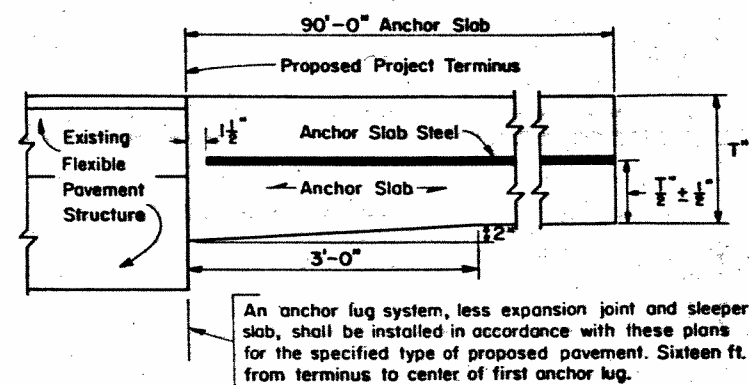


SECTION "A-A"  
EXPANSION JOINT AND SLEEPER SLAB DETAIL

LUG ANCHOR DETAIL SHOWING  
PERMISSIBLE CONSTRUCTION JOINT

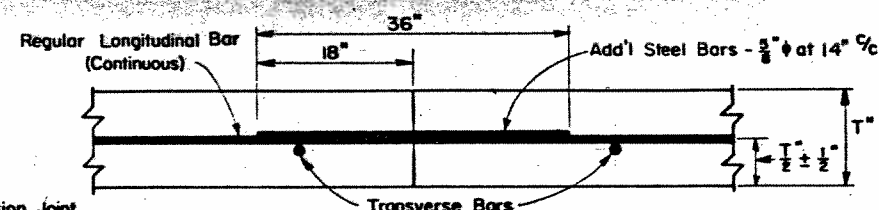


SECTION "B-B"  
LUG ANCHOR DETAIL

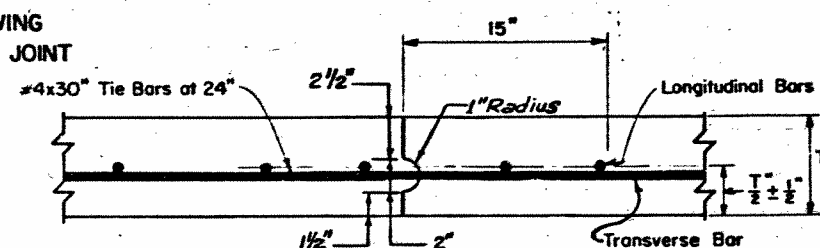


PAVEMENT TERMINUS DETAIL FOR JUNCTURE WITH  
EXISTING FLEXIBLE TYPE PAVEMENT STRUCTURE

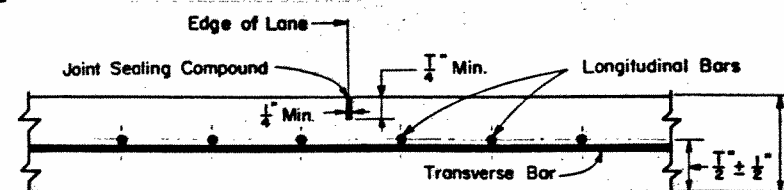
NOTE: Details of junctures with existing concrete pavements (if applicable) shall be as shown elsewhere in the plans.



SECTION "C-C"  
PERMISSIBLE TRANSVERSE CONSTRUCTION JOINT



LONGITUDINAL CONSTRUCTION JOINT  
(Tongue and Groove with Tie Bars)



GROOVED LONGITUDINAL JOINT  
(Sawed or Formed)

# GENERAL NOTES

1. THE REQUIREMENTS OF THE BRIDGE APPROACH SLAB DESIGN AND THICKNESS SHALL BE AS SHOWN ELSEWHERE IN THE PLANS.
2. FOR FURTHER INFORMATION REGARDING THE PLACEMENT OF CONCRETE AND REINFORCING STEEL REFER TO THE ITEM "TERMINAL ANCHORAGE (CONCRETE PAVEMENT)".
3. DETAILS AS TO ANCHOR SLAB WIDTH, THICKNESS, CROWN CROSS-SLOPE, AND LOCATION AND TYPE OF LONGITUDINAL JOINTS SHALL BE AS SHOWN ELSEWHERE ON THE PLANS.
4. ALL CONCRETE, REINFORCING STEEL, AND REQUIRED EXCAVATION FOR THE SLEEPER SLAB, LUG ANCHORS, AND ANCHOR SLAB SHALL BE MEASURED AND PAID FOR UNDER THE ITEM "TERMINAL ANCHORAGE (CONCRETE PAVEMENT)" EXCEPT THAT PAYMENT WILL NOT BE MADE FOR CONCRETE USED IN BACK FILLING OVER-EXCAVATED AREAS OF LUG ANCHORS OR SLEEPER SLABS.
5. THE USE OF THIS DESIGN INVOLVES THE MODIFICATION OF THE BRIDGE APPROACH SLAB DETAIL AS SHOWN HEREON.
6. THE CONTRACTOR SHALL HOLD AND SAVE THE STATE, ITS OFFICERS, ITS AGENTS, AND ITS EMPLOYEES HARMLESS TO LIABILITY OF ANY NATURE OR KIND, INCLUDING COSTS AND EXPENSES, FOR OR ON ACCOUNT OF ANY PATENTED OR UNPATENTED INVENTION, ARTICLE OR APPLIANCE MANUFACTURED OR USED IN ACCORDANCE WITH THE DETAILS OF THESE PLANS.
7. THE LOCATIONS OF THE TERMINAL ANCHORAGE SYSTEMS SHALL BE AS SHOWN ELSEWHERE IN THE PLANS.
8. REINFORCING STEEL BARS SHALL BE OF THE SIZE AND SPACING AS DETAILED HEREON AND MAY BE ANY OF THE APPROVED GRADES OF REINFORCING STEEL AS SPECIFIED IN THE ITEM "TERMINAL ANCHORAGE (CONCRETE PAVEMENT)", WITH THE PROVISION THAT BARS THAT REQUIRE FIELD BENDING SHALL BE OF STRUCTURAL OR INTERMEDIATE GRADE.
9. WITHIN ANY AREA BOUNDED BY TWO FEET OF PAVEMENT LENGTH, MEASURED PARALLEL TO THE CENTER LINE, AND TWELVE FEET OF PAVEMENT WIDTH, MEASURED PERPENDICULAR TO THE CENTER LINE, NOT OVER 53% OF THE REGULAR LONGITUDINAL STEEL SHALL BE SPLICED.
10. MINIMUM SPLICE REQUIREMENT: 20 TIMES THE NOMINAL DIAMETER OF THE BAR.
11. TRANSVERSE CONSTRUCTION JOINTS IN THE ANCHOR SLAB WILL NOT BE ALLOWED EXCEPT IN AN EMERGENCY STOPPAGE OF THE CONCRETE PLACEMENT AND WITH THE APPROVAL OF THE ENGINEER. AT TRANSVERSE CONSTRUCTION JOINTS THE REGULAR LONGITUDINAL BARS SHALL EXTEND BEYOND THE JOINT SUCH THAT THE BAR SPLICES FOR THE REGULAR LONGITUDINAL BARS SHALL BE A MINIMUM OF FOUR FEET FROM THE CONSTRUCTION JOINT. (IF THE CONTRACTOR ELECTS TO OMIT THE CONSTRUCTION JOINT IN SECTION "C-C", THE ADDITIONAL STEEL BAR SHOWN HEREON MAY BE DELETED.)
12. AT LONGITUDINAL CONSTRUCTION JOINTS, IF THE CONTRACTOR ELECTS TO CONTINUE THE REGULAR TRANSVERSE STEEL THROUGH THE JOINT THE #4 TIE BARS SHOWN HEREON MAY BE DELETED.
13. ANY APPROVED METAL CHAIR TYPE OR DESIGN, WHICH WILL SATISFY THE REQUIREMENTS NOTED HEREON, WILL BE PERMITTED. CHAIR SPACINGS SHALL NOT BE GREATER THAN 48" C-C MEASURED PARALLEL TO THE PAVEMENT CENTER LINE AND 30" C-C MEASURED PERPENDICULAR TO THE PAVEMENT CENTER LINE. ADDITIONAL CHAIRS SHALL BE USED IF NECESSARY TO MEET THE STEEL PLACEMENT REQUIREMENTS.
14. FOR SKEWED BRIDGES, THE APPROACH SLAB AND EXPANSION JOINT WILL BE SKEWED AS PER BRIDGE. LONGITUDINAL DIMENSION OF APPROACH SLAB, ANCHOR SLAB, AND ANCHOR LUG SPACINGS SHALL BE MEASURED ALONG THE CENTER LINE OF PAVEMENT.

ESTIMATED QUANTITIES FOR ONE  
24 FOOT WIDE TERMINAL ANCHORAGE

ITEM	PAVEMENT THICKNESS T (IN.)	CONCRETE (CU. YD.)	STEEL (LBS.)	EXCAVATION (CU. YD.)
SLEEPER SLAB	8	1.67	349	1.67
	7	1.67	343	1.67
	6	1.67	338	1.67
ANCHORS	8 <sup>a</sup>	27.8	3318	27.8
	7 <sup>b</sup>	22.2	2624	22.2
	6 <sup>b</sup>	22.2	2624	22.2
ANCHOR SLAB	8	53.3 <sup>c</sup>	5001	—
	7	46.7 <sup>c</sup>	5001	—
	6	40.0 <sup>c</sup>	5001	—

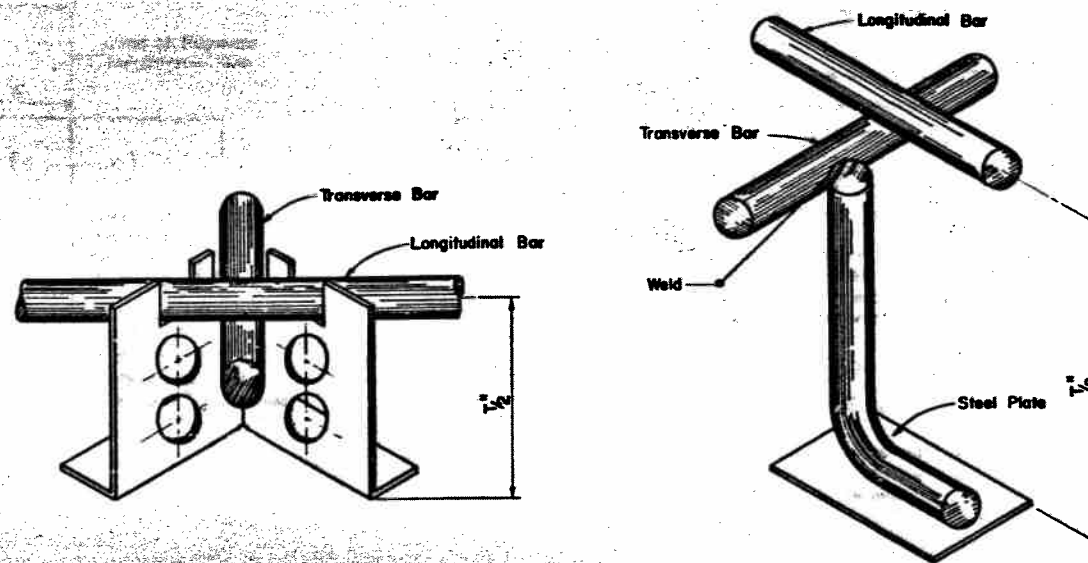
Five lug anchors required  
Four lug anchors required  
For pavement terminus with existing flexible pavement structure, the concrete quantity should be increased by 0.2 C.Y. to include the thickened end detail.

TEXAS HIGHWAY DEPARTMENT  
TERMINAL ANCHORAGE  
FOR  
CONCRETE PAVEMENT  
CONTINUOUSLY REINFORCED  
TA(CPCR) - 61 (MOD)

DN	WBL	DRAWING	DATE	REV.	STATE	FEDERAL PROJECT NO.	SHEET
CM	DN	MDS	07/19/61	1	TX	U1089 (61)	16
CM	DN						

# GENERAL NOTES

- ALL GROOVED LONGITUDINAL JOINTS SHALL BE FORMED OR SAWS VERTICAL AND TRUE TO LINE BY AN APPROVED METHOD AND FILLED WITH JOINT SEALING COMPOUND.
- CONSTRUCTION JOINTS MAY BE FORMED BY THE USE OF METAL OR WOOD FORMS EQUAL IN DEPTH TO THE NOMINAL DEPTH OF THE PAVEMENT, OR BY OTHER MEANS WHICH HAVE BEEN APPROVED BY THE ENGINEER PRIOR TO THEIR USE.
- NO EXPANSION JOINTS WILL BE USED EXCEPT AT STRUCTURAL ENDS OR FIXED OBJECTS AS SHOWN ELSEWHERE IN THE PLANS.
- FOR FURTHER INFORMATION REGARDING THE PLACEMENT OF CONCRETE AND REINFORCEMENT REFER TO THE GOVERNING SPECIFICATIONS FOR "CONCRETE PAVEMENT."
- DETAILS AS TO PAVEMENT WIDTH, PAVEMENT THICKNESS AND THE CROWN CROSS-SLOPE SHALL BE AS SHOWN ELSEWHERE IN THE PLANS.
- LONGITUDINAL BARS SHALL BE OF THE GRADE, SIZE AND SPACING AS DETAILED OR AS INDICATED AS AN ALTERNATE. STRUCTURAL AND INTERMEDIATE GRADE STEEL SHALL BE USED WHERE THE BARS ARE TO BE BENT.
- AT CONSTRUCTION JOINTS THE REGULAR LONGITUDINAL BARS SHALL EXTEND A MINIMUM OF FOUR FEET ON EITHER SIDE. WITHIN ANY TWO FEET OF PAVEMENT LENGTH, MEASURED PARALLEL TO THE CENTERLINE, NOT OVER 33% OF THE LONGITUDINAL STEEL SHALL BE SPLICED. LONGITUDINAL STEEL SHALL BE FURNISHED IN CONVENIENT LENGTHS. SCRAP STEEL SHALL NOT BE USED.
- IF THE CONTRACTOR ELECTS TO CONTINUE TRANSVERSE STEEL THROUGH THE LONGITUDINAL CONSTRUCTION JOINT, THE #4 TIE BARS SHOWN HEREON MAY BE DELETED.
- DEVIATIONS FROM THE SUGGESTED CHAIR DETAILS SHOWN WILL BE PERMITTED IF APPROVED BY THE ENGINEER.
- IT IS THE INTENT OF THIS DESIGN THAT THE LONGITUDINAL STEEL BE AT THE CENTER OF THE SLAB. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TAKE ALL NECESSARY PRECAUTIONS TO INSURE THAT THE FINAL POSITION OF THE STEEL IS WITHIN 1/2 INCH OF THE SLAB CENTER. CHAIR SPACINGS SHALL NOT BE GREATER THAN 48" C-C (LONGITUDINAL) AND 30" C-C (TRANSVERSE). ADDITIONAL CHAIRS SHALL BE USED IF NECESSARY TO MEET THE STEEL PLACEMENT REQUIREMENTS.
- MINIMUM SPLICE REQUIREMENTS:  
HIGH YIELD STEEL (MINIMUM 60,000 PSI YIELD): 24 TIMES THE NOMINAL DIAMETER OF THE BAR.  
HARD GRADE STEEL (MINIMUM 50,000 PSI YIELD): 20 TIMES THE NOMINAL DIAMETER OF THE BAR.
- See sheet No 47 for additional steel at Median openings and Left turn lanes



SUGGESTED CHAIR DETAILS

TABLE OF EQUIVALENT LONGITUDINAL REINFORCEMENT

Pavement Thickness "T" in.	Steel Grade	Bar Size	22 ft. Placement Width					11 ft. Placement Width					Add'l. Steel @ Const. Jt.			REMARKS	
			Spacing		C-C	Bars per placement	Steel % by	Spacing		C-C	Bars per placement	Steel % by	Size	Average spacing in ft.	No. of bars per lane		Weight #/ft.
			A in	B in				A in	B in								
8	High Yield	No. 5	3	6	7½	39	18.26	3	5½	7½	20	18.65	½" #36	12½	12	3.13	
	Hard Grade	No. 5	3½	4	6½	45	20.61	3	4	6½	23	21.00	½" #36	14	10	2.68	Alt. Design
7	High Yield	No. 5	3	5	8½	35	16.70	4	8½	8½	17	16.30	½" #36	12½	12	3.13	
	Hard Grade	No. 5	3	6	7½	39	18.26	3	5½	7½	20	18.65	½" #36	14	10	2.68	Alt. Design
6	High Yield	No. 4	3	4½	7	39	13.65	2	7	7	19	13.31	½" #36	8	17	3.10	Alt. Design
	Hard Grade	No. 5	3	5	8½	32	16.65	4	8½	8½	16	16.56	½" #36	14	9	2.52	Alt. Design

NOTE: THE SPACINGS (B) SHOWN IN THE ABOVE PLACEMENT TABLE ARE THE MAXIMUM ALLOWABLE SPACINGS. WHERE THE PROPOSED PLACEMENT WIDTHS VARY FROM THE BASIC DESIGN WIDTH SHOWN, THE SPACING (B) AND THE ADJACENT SPACING (C) SHALL BE ADJUSTED TO ACCOMMODATE A REINFORCEMENT ARRANGEMENT EQUAL TO OR SLIGHTLY HEAVIER THAN THAT SHOWN AS DIRECTED BY THE ENGINEER.

(1) INCLUDES BOTH REGULAR LONGITUDINAL AND TRANSVERSE BARS. BASED UPON 1 FOOT PAVEMENT FOR THE WIDTH INDICATED. ALL TRANSVERSE STEEL IS #4 BARS AT 24" CENTERS.

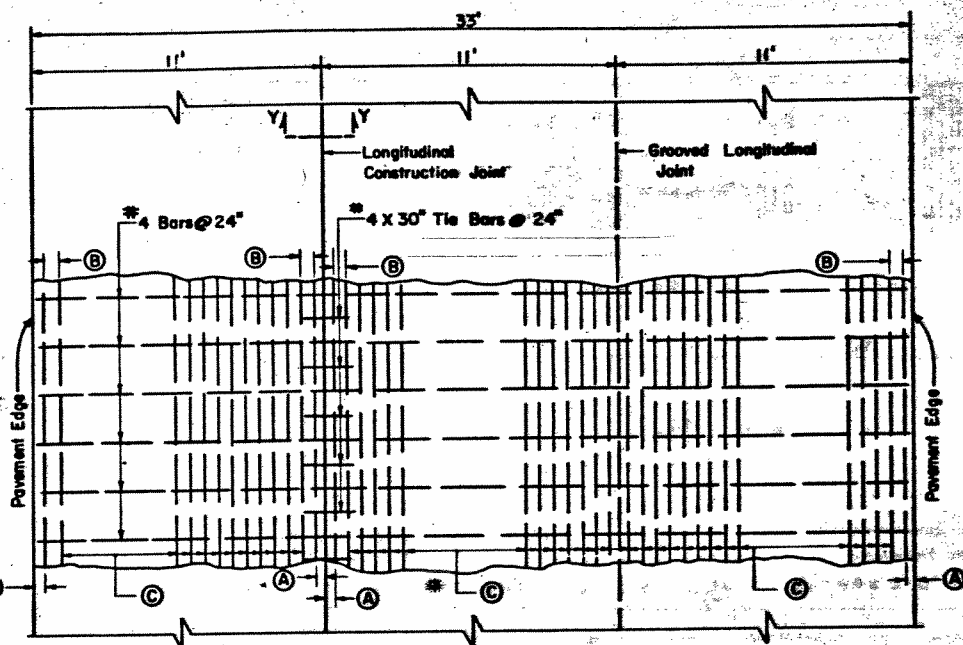
(2) THIS SHALL BE THE MINIMUM NUMBER OF ADDITIONAL STEEL BARS TO BE PLACED PER LANE. THE SPACING OF THE ADDITIONAL STEEL BARS SHALL BE VARIED AS DIRECTED IN ORDER TO PROVIDE A MINIMUM CLEARANCE OF 2 1/2" FROM EACH REGULAR LONGITUDINAL REINFORCING BAR.

TEXAS HIGHWAY DEPARTMENT

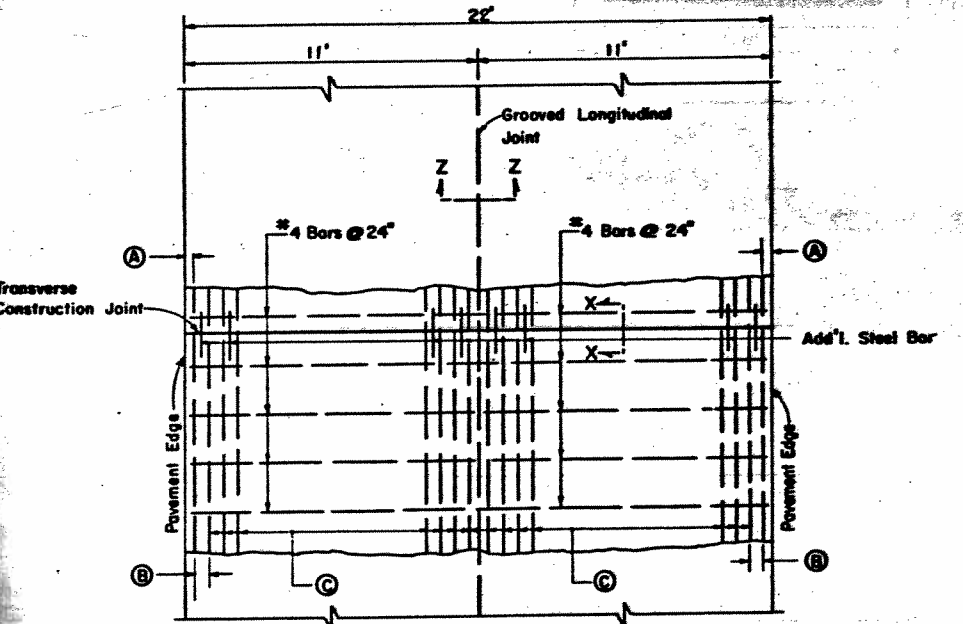
## CONCRETE PAVEMENT DETAILS CONTINUOUSLY REINFORCED STEEL BARS

CPCR (B)-61 (MOD.)

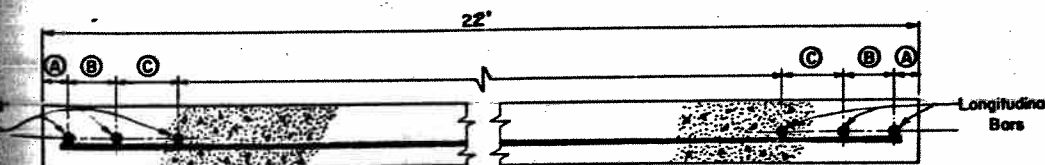
DESIGNED BY	DRAWING NO.	DATE	FILE NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.
CH. DE. JES	ORIGINAL	JAN. 1961	8	TEXAS	11085 (28)	25
CH. DE. JES						
CH. DE. JES						



THREE LANE PAVEMENT PLAN  
(11 ft. and 22 ft. Placement)\*

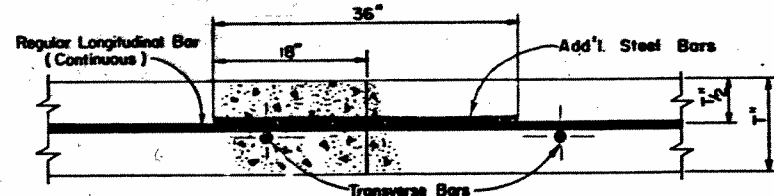


TWO LANE PAVEMENT PLAN  
(22 ft. Placement)\*

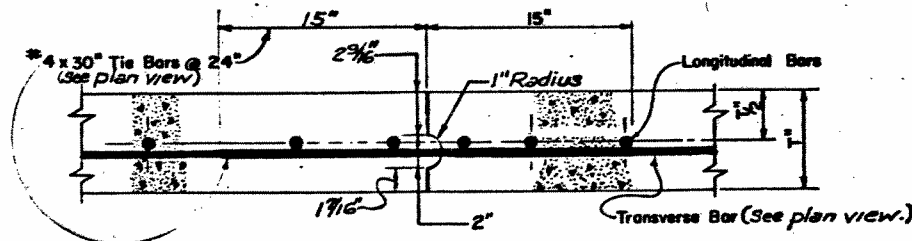


TYPICAL SECTION  
(22 ft. Placement)\*

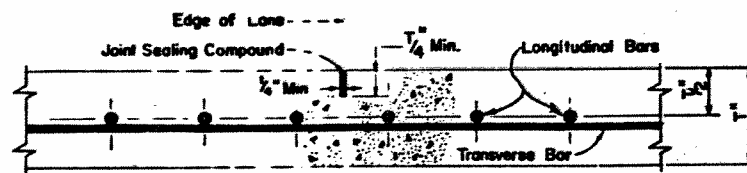
\* LANE WIDTHS ARE FOR ILLUSTRATIVE PURPOSES ONLY AND SHOULD NOT BE USED IF IN CONFLICT WITH TYPICAL CROSS SECTIONS SHOWN ELSEWHERE IN THE PLANS.



TRANSVERSE CONSTRUCTION JOINT  
Section X-X



LONGITUDINAL CONSTRUCTION JOINT  
(Tongue and Groove with Tie Bars)  
Section Y-Y



GROOVED LONGITUDINAL JOINT  
(Sawed or Formed)  
Section Z-Z

JOINT DETAILS

SPECIAL NOTE  
THE CONTRACTOR SHALL HOLD AND SAVE THE STATE, ITS OFFICERS, ITS AGENTS, AND ITS EMPLOYEES HARMLESS TO LIABILITY OF ANY NATURE OR KIND, INCLUDING COST AND EXPENSES FOR OR ON ACCOUNT OF ANY PATENT OR UNPATENTED INVENTION, ARTICLE OR APPLIANCE MANUFACTURED OR USED IN ACCORDANCE WITH THE DETAILS OF THESE PLANS.