US90, 28-07-24

25

28-06-24

FED. ROAD DIV. NO.	STATE	FEDERAL AID PRO
6	TEXAS	U [illegible]
STATE DIST. NO.	COUNTY	CONT
20	JEFFERSON	28- [illegible] 28-7-

STATE OF TEXAS
STATE HIGHWAY DEPARTMENT

PLANS OF COMPLETED STATE HIGHWAY IMPROVEMENT

Final Plans

FEDERAL AID PROJECT.
U 312(5) & C 28-7-24

SCALES: PLAN: 1 IN. = 50 FT.
PROFILE: 1 IN. HOR. = 50 FT., 1 IN. VERT. = 5 FT.
CROSS-SECTIONS: 1 IN. HOR. AND VERT. = FT.
OTHERS AS NOTED.

NET LENGTH OF PROJECT= 19,531.21 FT.=3.697 MI.

JEFFERSON COUNTY
U. S. HIGHWAY 90
FROM LH.10 TO WESCALDER ROAD
GRADING, STRUCTURES AND CONCRETE PAVEMENT

CLASS 4L HIGHWAY
DESIGN SPEED: 60 MPH.

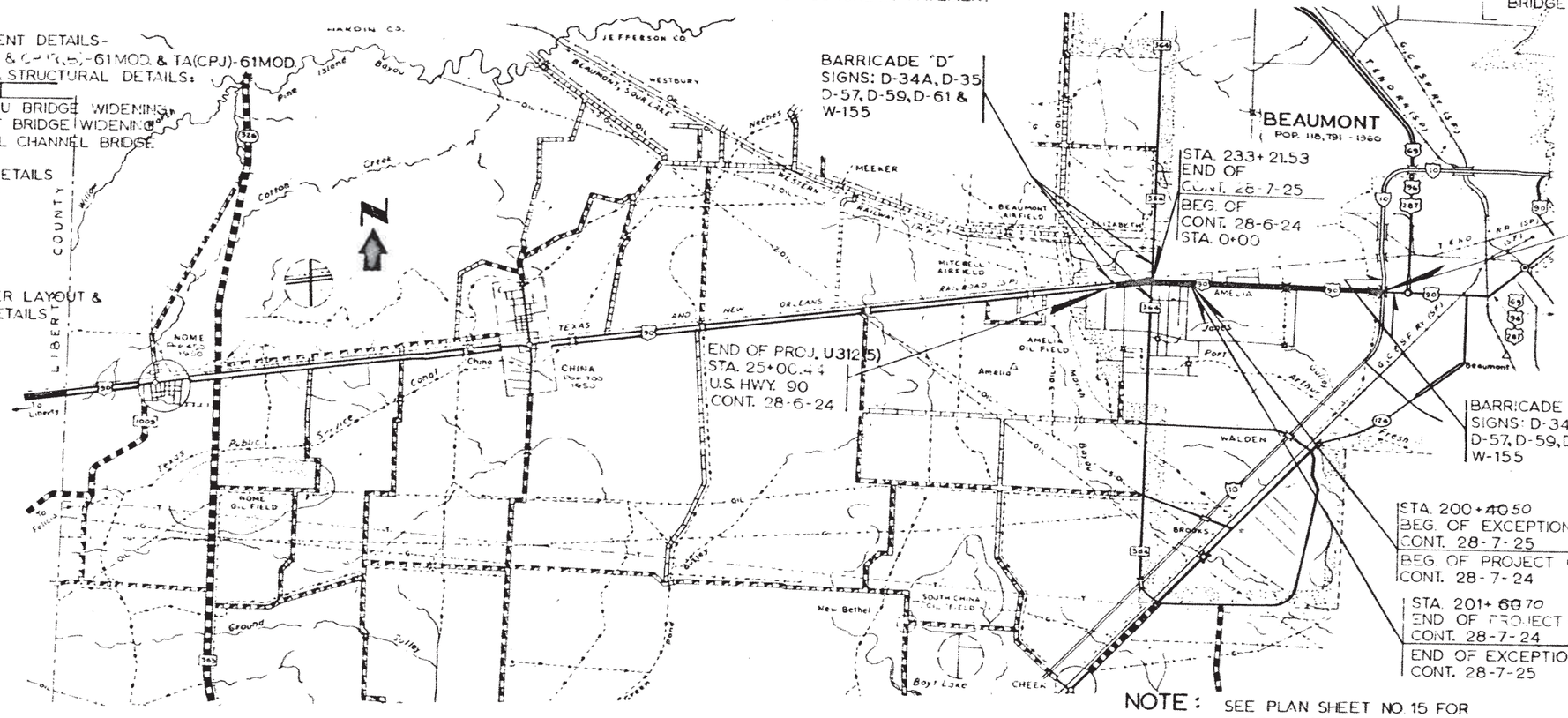
CONT. 28-6-24 - RDWY. - 2500.44 FT. - 0.473 MILES
CONT. 28-7-24 - RDWY. - 40.00 FT. - 0.007 MILES; BRIDGES - 80.00 FT. - 0.015 MILES
CONT. 28-7-25 - RDWY. - 16,700.77 FT. - 3.163 MILES; BRIDGES - 210.00 FT. - 0.039 MILES

TOTAL PROJECT: U 312(5) CONT. 28-6-24, CONT. 28-7-25
RDWY. - 19,201.21 FT. = 3.636 MILES
BRIDGES - 210.00 FT. = 0.039 MILES
19,411.21 FT. = 3.675 MILES

TOTAL PROJECT C 28-7-24
RDWY. - 40.00 FT. = 0.007 MILES
BRIDGES - 80.00 FT. = 0.015 MILES
120.00 FT. = 0.022 MILES

INDEX OF SHEETS

SHEET No.	DESCRIPTION
1	TITLE SHEET
2	GENERAL LAYOUT
3-6	TYPICAL SECTIONS
7-8	SUMMARY OF MANHOLES, INLETS & LATERALS
9	STRUCTURE SUMMARY
10-11	ESTIMATE & QUANTITY
12-15	SPECIFICATION & DATA
16-29	PLAN PROFILE, ETC.
30	WIDENING DETAILS
31	INTERSECTION DETAILS
32-33	INTERSECTION LAYOUT - F.M. 364 & U.S. HWY. 90
34	CONTOUR LAYOUT - F.M. 364 & U.S. HWY. 90
35-36	DRIVEWAY LAYOUTS
37	DRAINAGE AREA MAP (STORM SEWER)
38-40	RUNOFF, INLET & STORM SEWER COMPUTATIONS
41	DRAINAGE AREA MAP (BRIDGE & CULVERT)
42-45	INLET & MANHOLE DETAILS
46-47	23rd. STREET CULVERT DETAILS
48-50	LANGHAM RD. DITCH CULVERT DETAILS
51	MC 8-1
52	MCW P-1
53	SIPHON DETAILS
54-56	CONCRETE PAVEMENT DETAILS - CPJR(F)-61 MOD. & C-P-P(S)-61 MOD. & TA(CPJ)-61 MOD.
	BRIDGE LAYOUTS & STRUCTURAL DETAILS:
57-60	HILLEBRANDT BAYOU BRIDGE WIDENING
61-65	CALDWOOD CUTOFF BRIDGE WIDENING
66-68	PINCHBACK OUTFALL CHANNEL BRIDGE
69-70	APPROACH SLAB DETAILS
71	PILING DETAILS, CF
72	RAILING, TYPE P
73	RR 9
74	SWC - 61
75-76	BW-61-(1) & (2)
77	CIS-61
78	TRANSITION MARKER LAYOUT & SPECIAL SIGN DETAILS
79	M-61



BARRICADE "D" SIGNS: D-34A, D-35, D-57, D-59, D-61 & W-155

STA. 233+21.53
END OF CONT. 28-7-25
BEG. OF CONT. 28-6-24
STA. 0+00

END OF PROJ. U 312(5)
STA. 25+00.44
U.S. HWY. 90
CONT. 28-6-24

BEG. OF PROJECT U 312(5)
STA. 63+22
U.S. HWY. 90
CONT 25-7-25
EQUALS STA. 11+00
(COLLEGE ST. STA.)
PROJ. I 10-8(1) 859

BARRICADE "D" SIGNS: D-34A, D-35, D-57, D-59, D-61 & W-155

STA. 200+40.50
BEG. OF EXCEPTION
CONT. 28-7-25
BEG. OF PROJECT C 28-7-24
CONT. 28-7-24

STA. 201+60.70
END OF PROJECT C 28-7-24
CONT. 28-7-24
END OF EXCEPTION
CONT. 28-7-25

EXCEPTIONS TO PROJ
Station [illegible] to Stat
EQUATION: Control 28-7-2
Station 130+28.24 Backwa
Equals
Station 129+97.00 Forwar
PROJECT U 312(
Station 233+21.53 Backwar
Equals
Station 0+00 Forward

APPROVED:
COUNTY ENGINEER, JEFFERSON COUNTY

NOTE: SEE PLAN SHEET NO. 15 FOR FIELD CHANGES & WORK ORDERS.

PROJECT CONSTRUCTED AND FINAL PLANS PREPARED BY
SUPV. RES. ENGR.
MAY 29, 1964

NOTE: The contractor shall provide and erect Barricade and Warning Signs in accordance with BW-61-(1) & (2) and CIS-61 at points as shown on title sheet, layout sheet and as directed by the engineer.

Specifications adopted by the State Highway Department of Texas January 2, 1962 and specification items listed and dated as follows shall govern on this project;
Required Contract Provisions for Federal Aid Projects Approved Sep't. 6, 1962.

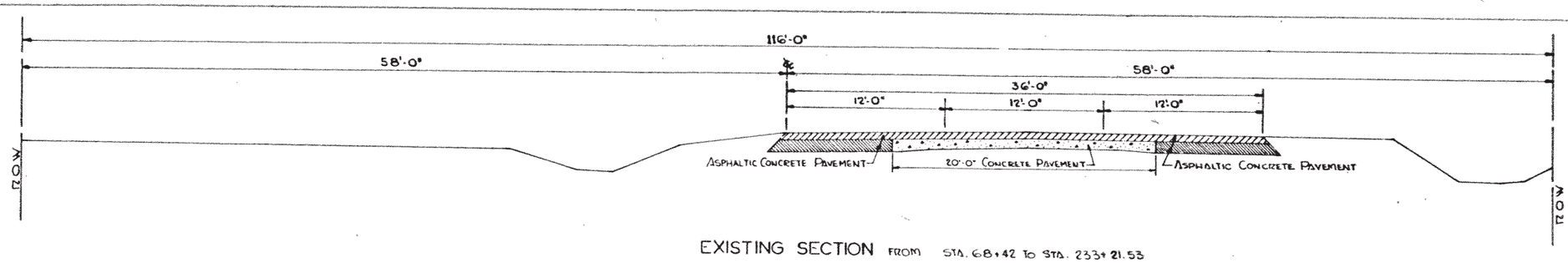
CONVENTIONAL SIGNS

STATE HIGHWAY DEPARTMENT

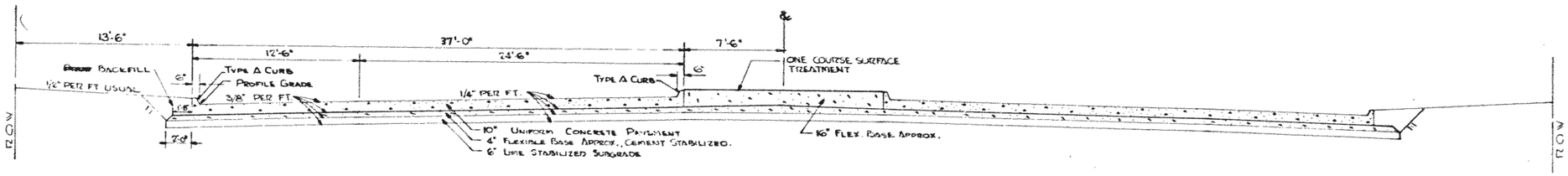
CORRECT:
JULY 25 1962
SUPV./RESIDENT ENGINEER

APPROVED
OCT. 8 1962

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS



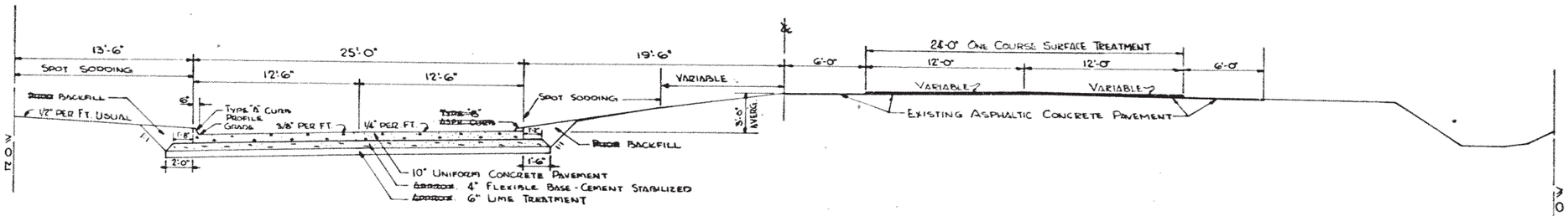
EXISTING SECTION FROM STA. 68+42 TO STA. 233+21.53



ULTIMATE ~~PROPOSED~~ TYPICAL SECTION

~~To Be~~ USED FROM:

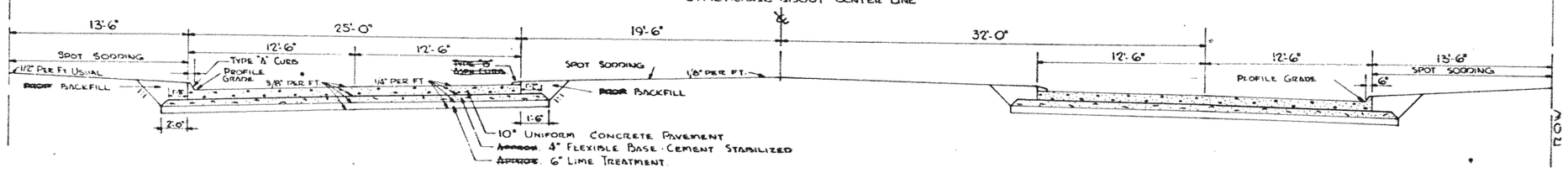
APPROX. STA. 68+42 TO STA 78+15.49



~~PROPOSED~~ SECTION

~~To Be~~ USED FROM:

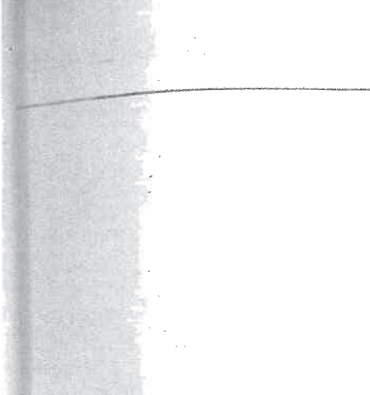
APPROX. STA. 78+15.49 TO STA. 226+57.00



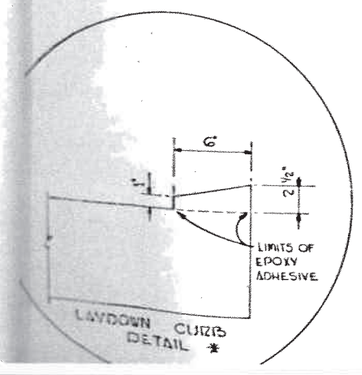
~~PROPOSED~~ SECTION

~~To Be~~ USED FROM:

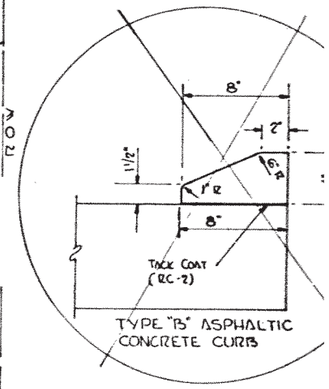
APPROX. STA 226+57.00 TO STA 233+21.53
APPROX. STA. 0+00 TO STA. 19+00



TYPE "A" CURB



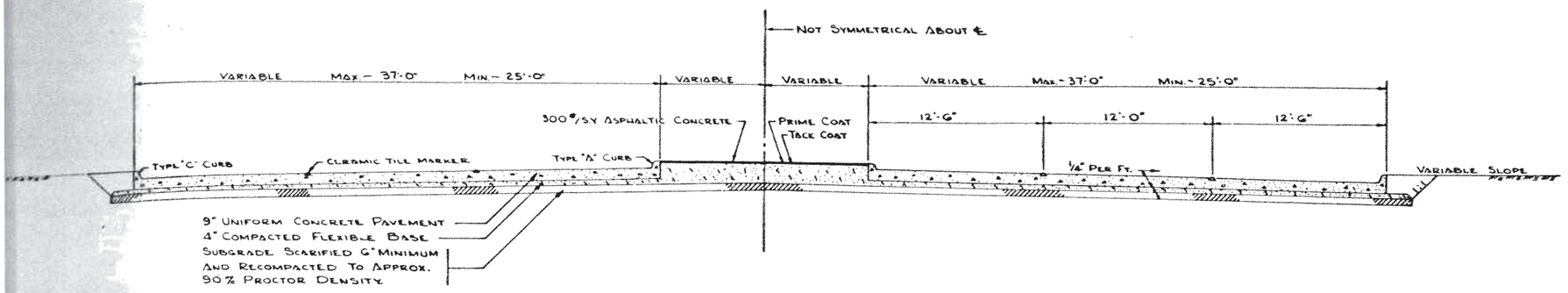
LAYDOWN CURB DETAIL *



TYPE "B" ASPHALTIC CONCRETE CURB

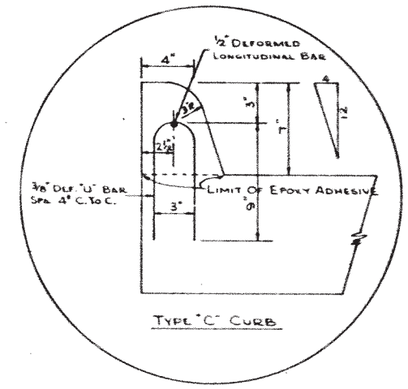
TYPICAL SECTION

U.S. HWY. 90

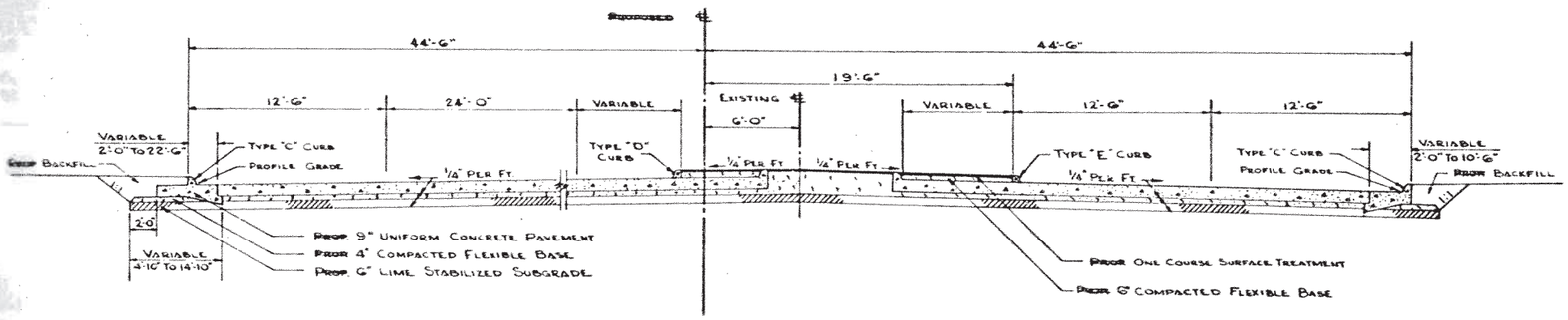


EXISTING SECTION

STATION 63+00.00 TO STATION 67+02.00

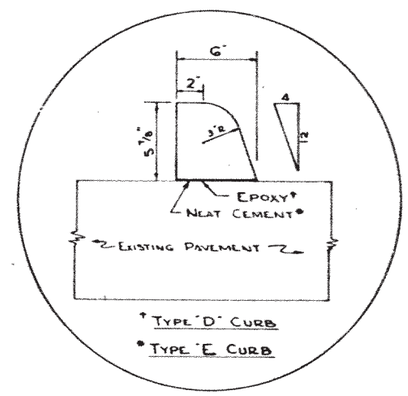


TYPE "C" CURB

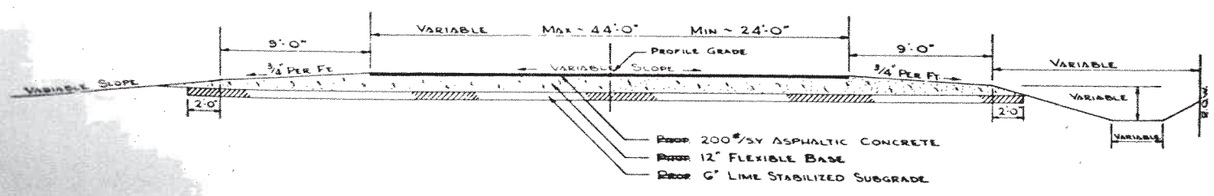


~~PROPOSED~~ WIDENED SECTION

APPROX. STATION 63+22.00 TO STATION 67+02.00
APPROX. STATION 66+42.00 TO STATION 67+02.00 (HOT MIX ASPHALTIC CONCRETE OVERLAY - 162 #/SY AVERAGE)
APPROX. STATION 67+02.20 TO STATION 68+42.00 (MEDIAN & BLOCKOUT ONLY)

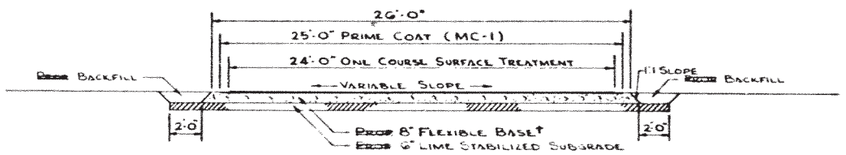


NOTE: THE CONTRACTOR MAY USE AN EXTRUSION MACHINE ON TYPES "D" AND "E" CURB AT H OPTION.



TEMPORARY CONNECTION

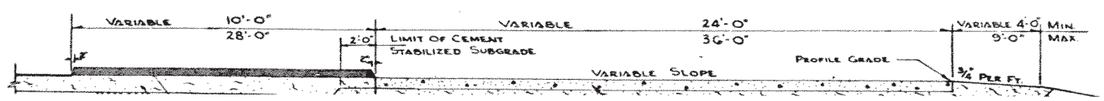
APPROX. STATION 78+15.49 TO STATION 81+50
APPROX. STATION 198+50 TO STATION 200+40
APPROX. STATION 201+60 TO STATION 203+50



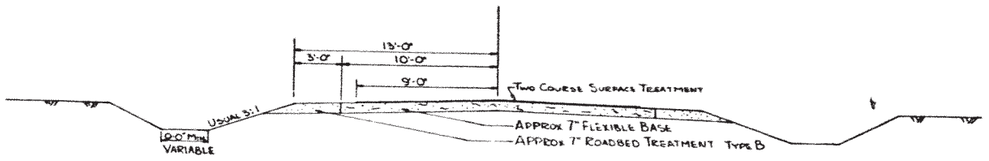
DETOUR

APPROX. *STATION 64+50 TO STATION 66+40
APPROX. †STATION 80+00 TO STATION 85+00
APPROX. †STATION 196+95 TO STATION 199+65
APPROX. †STATION 202+35 TO STATION 205+05
APPROX. †STATION 219+25 TO STATION 224+45

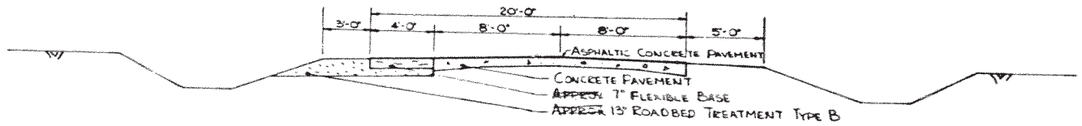
*ONE COURSE SURFACE TREATMENT ONLY.
† ~~PROP.~~ SALVAGED AND REPLACED ON SHOULDERS STATION 19+00 TO STATION 25+00.44.



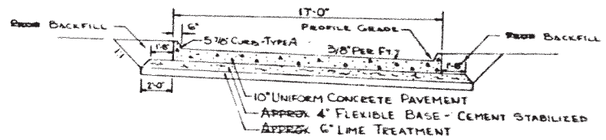
TYPICAL SECTION U.S. HWY. 90



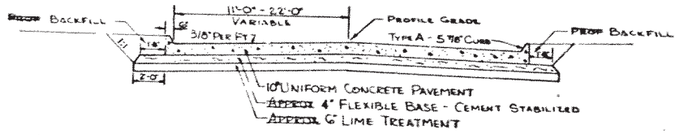
EXISTING SECTION
STA 0+00 TO STA 5+16.05 S



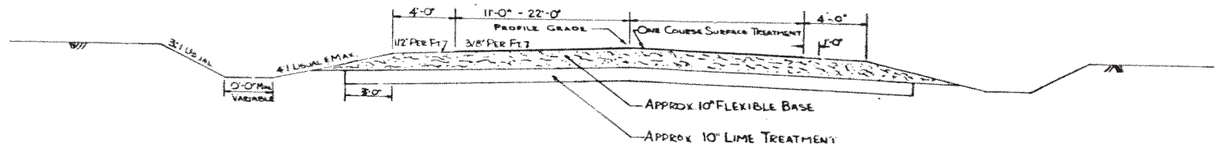
EXISTING SECTION
STA 0+00 TO STA 5+00.09 N



~~PROPOSED~~ SECTION
RIGHT TURN LANES

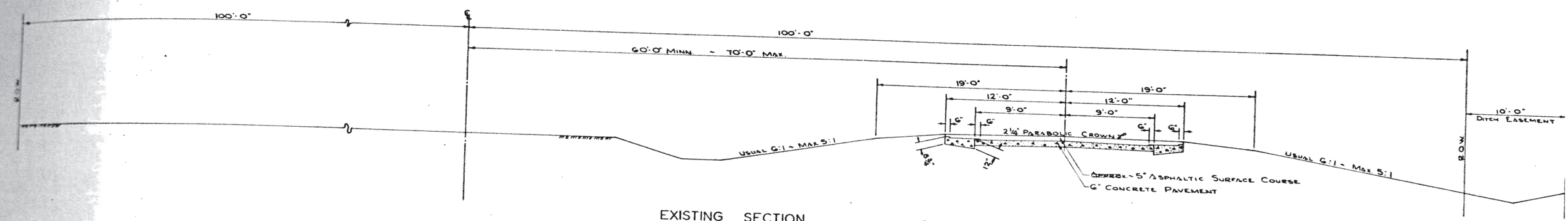


~~PROPOSED~~ SECTION
~~Approx~~ STA 0+44 TO STA 1+65 N
~~Approx~~ STA 0+44 TO STA 2+00 S

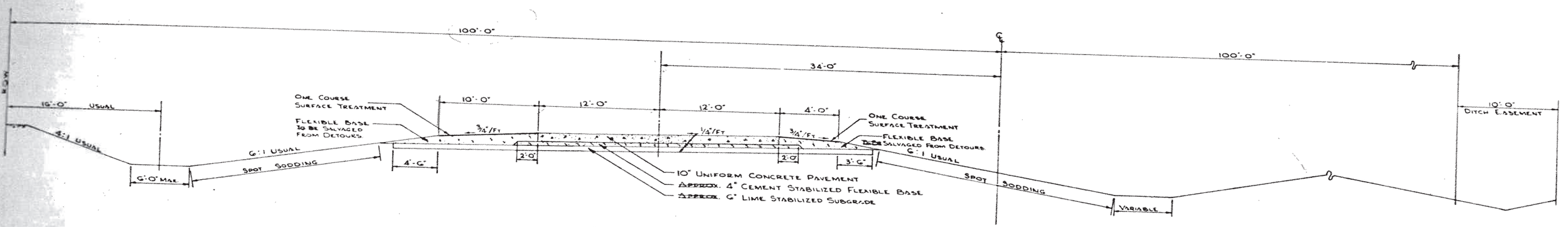


~~PROPOSED~~ SECTION
~~Approx~~ STA 1+65 TO STA 5+00.09 N
~~Approx~~ STA 2+00 TO STA 5+16.05 S

TYPICAL SECTION
FM 364
FM 364



EXISTING SECTION
STA 0+00 TO STA 22+00

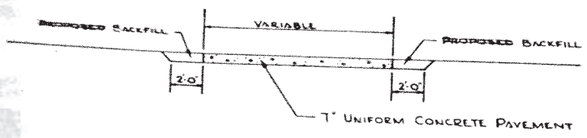


PROPOSED ROADWAY

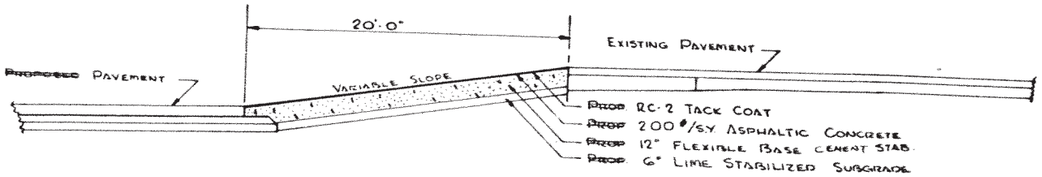
EXISTING ROADWAY

PROPOSED SECTION

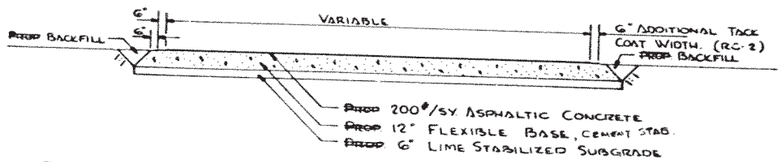
To be USED FROM:
APPROX. STATION 19+00 TO STATION 25+00.44 LEFT LANE
APPROX. STATION TO STATION 19+43



DRIVEWAY SECTION



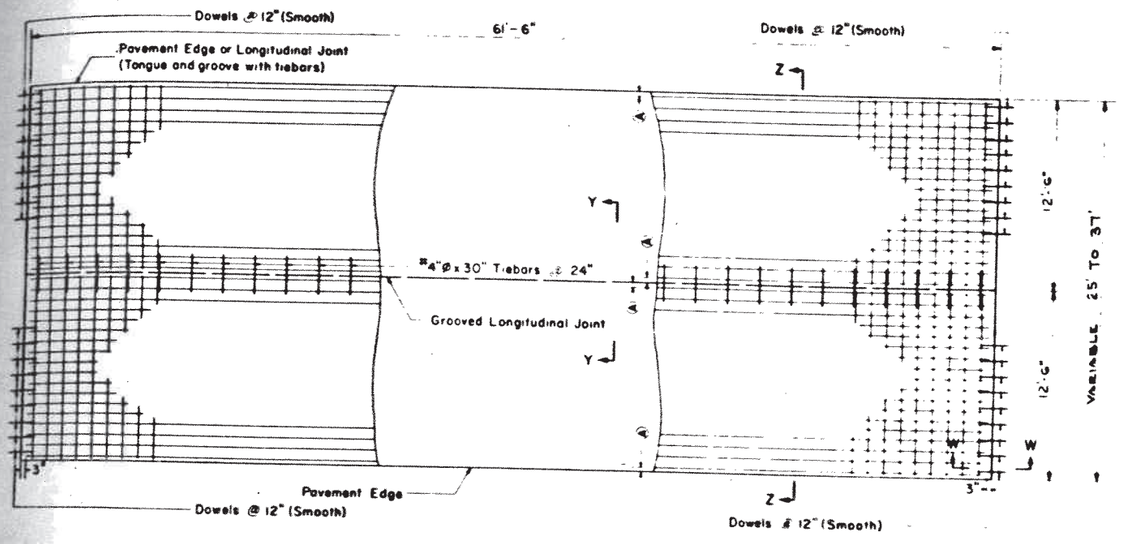
PROPOSED CROSSOVER SECTION (TRANSVERSE)
To be USED AS INDICATED ON PLAN PROFILE SHEETS.



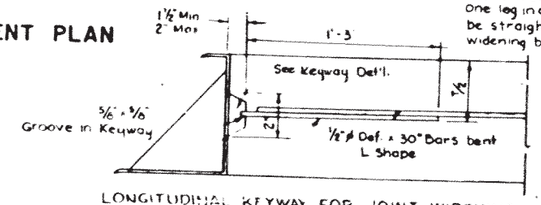
PROPOSED CROSSOVER SECTION (LONGITUDINAL)
To be USED AS INDICATED ON PLAN PROFILE SHEETS.

US HWY 90

TYPICAL SECTION

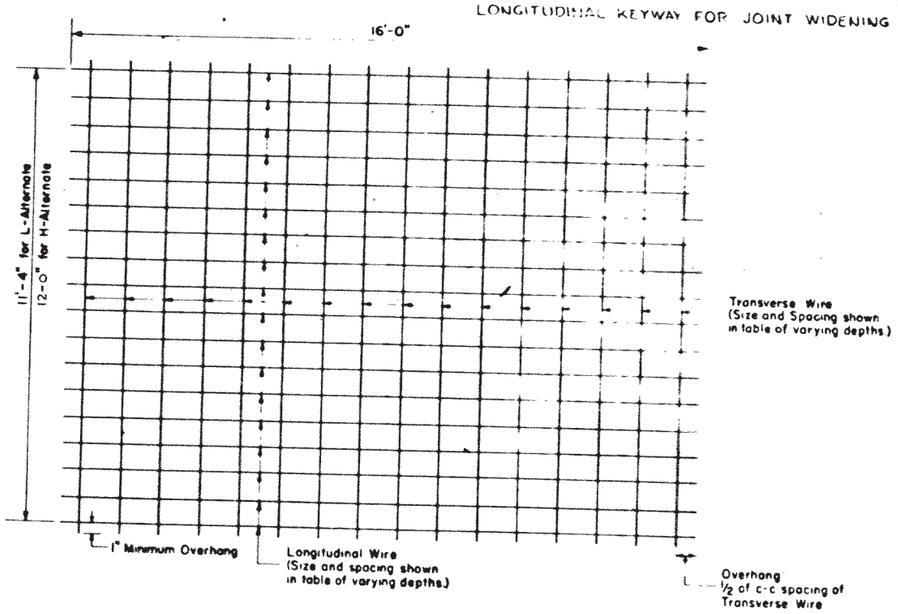


PAVEMENT PLAN

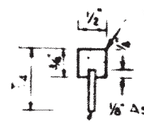


LONGITUDINAL KEYWAY FOR JOINT WIDENING

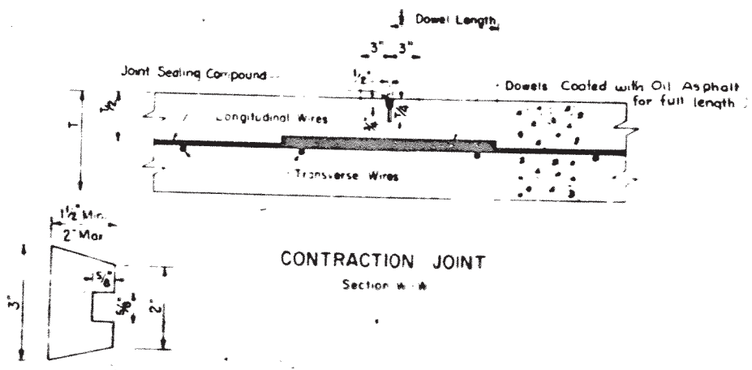
½" ϕ Def. 30" L Shaped bars shall have One leg in groove of key-way and shall be straightened prior to additional widening being placed.



TYPICAL SHEET OF WELDED WIRE FABRIC



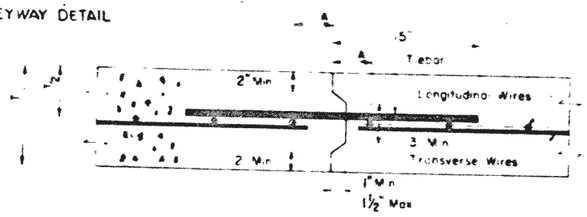
CONTRACTION JOINT SEAL FORM



CONTRACTION JOINT

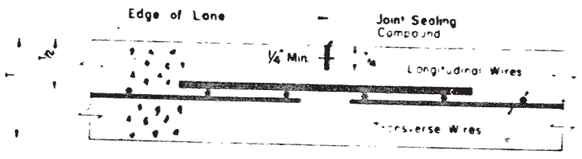
Section W-W

KEYWAY DETAIL



LONGITUDINAL CONSTRUCTION JOINT

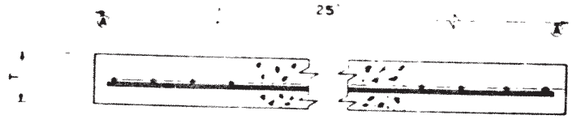
(Tongue and Groove with Tiebars)



GROOVED LONGITUDINAL JOINT

(Sawed)

Section Y-Y



TYPICAL SECTION

Section Z-Z

GENERAL NOTES

1. ALL GROOVED JOINTS SHALL BE SAWED VERTICAL AND TRUE TO LINE BY AN APPROVED METHOD AND FILLED WITH JOINT SEALING COMPOUND.
2. 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.
3. TREATMENT OF PAVEMENT ENDS AT STRUCTURES OR AT FIXED OBJECTS WILL BE SHOWN ELSEWHERE IN THE PLANS.
4. FOR FURTHER INFORMATION REGARDING THE PLACEMENT OF CONCRETE AND REINFORCEMENT REFER TO THE GOVERNING SPECIFICATIONS FOR "CONCRETE PAVEMENT".
5. DETAILS AS TO PAVEMENT WIDTH, PAVEMENT THICKNESS, AND THE CROWN CROSS-SLOPE SHALL BE AS SHOWN ELSEWHERE IN THE PLANS.
6. THE MINIMUM TRANSVERSE LAP OF THE WELDED WIRE FABRIC SHALL BE 12 INCHES LONG. THE MINIMUM LONGITUDINAL LAP, IF USED, SHALL BE EQUAL TO THE CENTER TO CENTER SPACING OF THE LONGITUDINAL WIRE.
7. 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.
8. CONCRETE SHALL NOT BE DISCHARGED FROM THE MIXER DIRECTLY ON TOP OF OR ON THE SIDES OF THE JOINT ASSEMBLY.
9. 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.
10. FABRIC MAY BE PLACED EITHER TOP OR BOTTOM OF JOINT STEEL.

TABLE OF VARYING DEPTHS

Alternate Designs	(T) Pavement Thickness (inches)	Steel Welded Wire Fabric* Style No	Edge Spacing (A)	Weight (W_{sy})	Dowels (Smooth Bars) Size	Dowels Average Spacing (in.)	Dowels Weight (W_{ft})	Tiebars (Deformed Bars) Size	Tiebars Average Spacing (in.)
L	10	8I2-½-1	4	5.58	#11 x 22"	12	7.89	#4 x 30"	24
	9	8I2-½-1	4	5.58	#10 x 20"	12	5.66	#4 x 30"	28½
	8	8I2-12	4	4.71	#8 x 18"	12	4.01	#4 x 30"	30
H	10	68-½-1	3	7.66	#11 x 22"	12	7.89	#4 x 30"	18
	9	68-½-1	3	7.66	#10 x 20"	12	5.66	#4 x 30"	20
	8	68-13	3	6.20	#8 x 18"	12	4.01	#4 x 30"	22

1 One of the alternate designs must be crossed out.
a. L alternate — to be used with subbases having a low friction factor
b. H alternate — to be used with subbases having a high friction factor

2 Steel weights are for contractors information only.

*Code for welded wire fabric

8 | 12 | ½ | 1
- 8 — Gauge of transverse wire
- 12 — Gauge of longitudinal wire
- ½ — Spacing of transverse wire (in)
- 1 — Spacing of longitudinal wire (in)

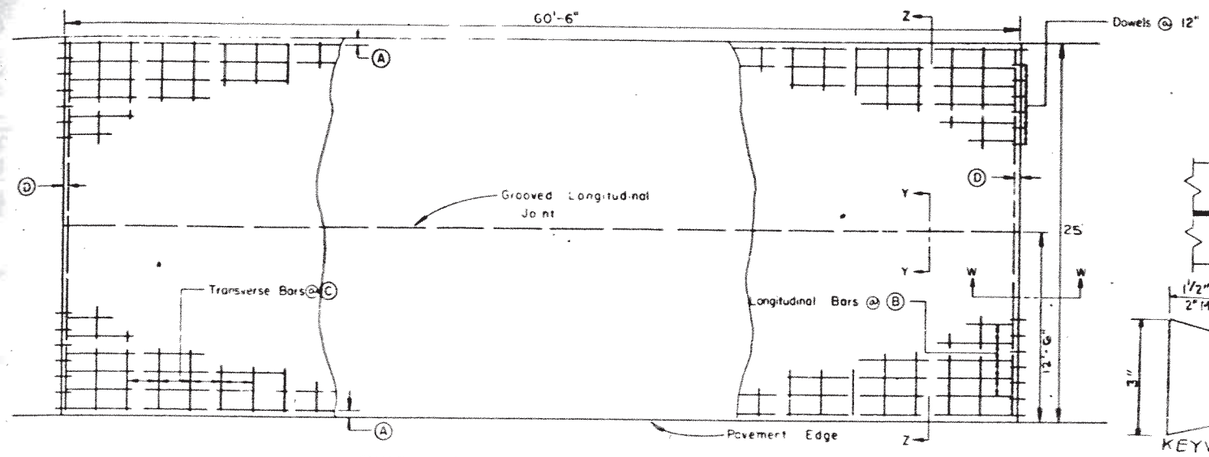
10A. ALL DOWEL BARS TO BE FASTENED IN THEIR PROPER POSITION USE OF A DOWEL CHAIR OF A TYPE APPROVED BY THE ENGINEER.

(GENERAL NOTES CONT'D.)

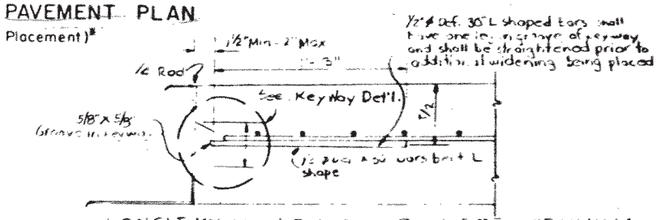
11. JOINT SEALING COMPOUND SHALL CONFORM TO THE REQUIR FOR CLASS 1-a AND CLASS 1-b JOINT SEALER.
12. KEYWAYS SHALL BE PROVIDED ON INSIDE EDGE OF PAVEMENT TO ALLOW FOR FUTURE WIDENING, AS DIRECTED BY THE ENGINEER.

TEXAS HIGHWAY DEPARTMENT

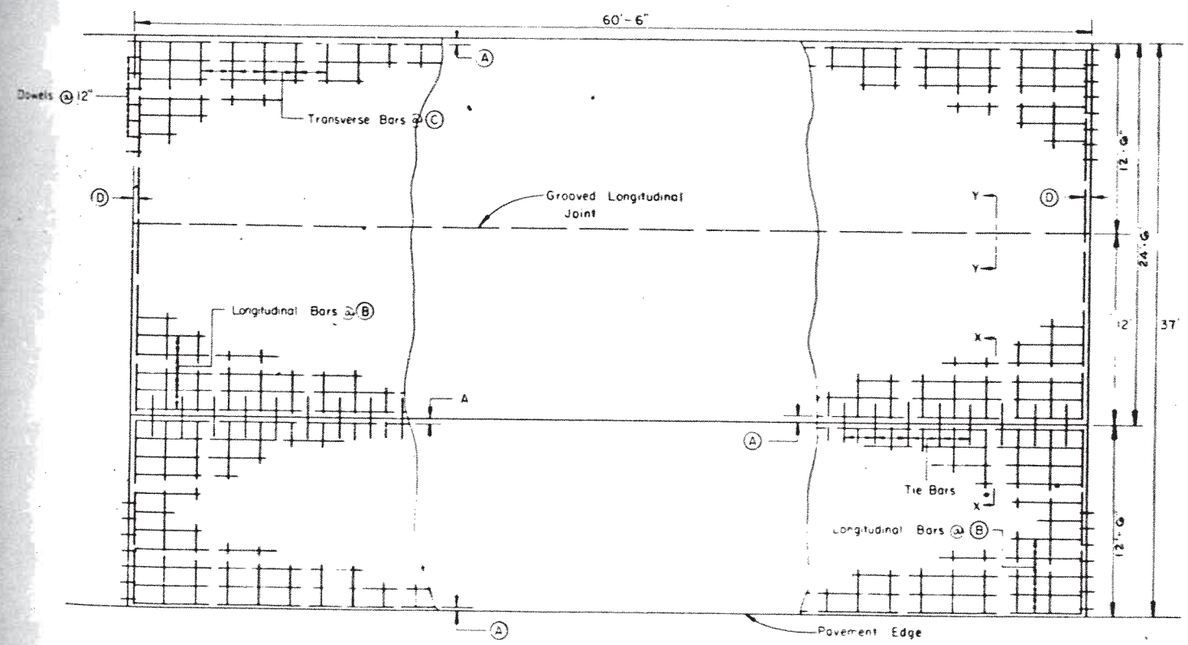
CONCRETE PAVEMENT DETAILS
JOINTED REINFORCED
WELDED WIRE FABRIC



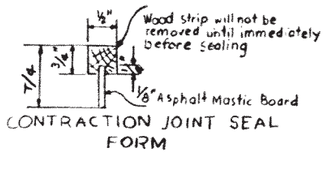
TWO LANE PAVEMENT PLAN
(25 ft. Placement)[8]



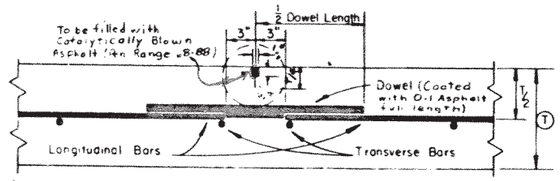
LONGITUDINAL KEYWAY JOINT FOR WIDENING



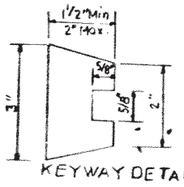
THREE LANE PAVEMENT PLAN
(12½ ft and 24½ ft Placement)[8]



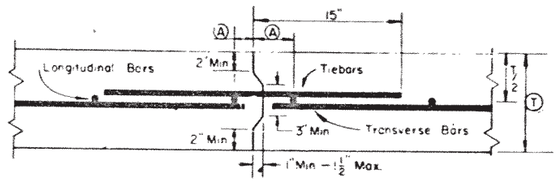
CONTRACTION JOINT SEAL FORM



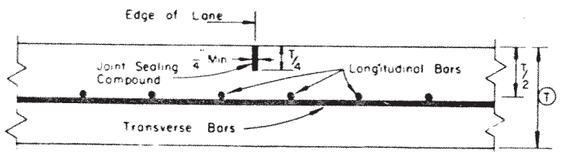
CONTRACTION JOINT
Section W — W



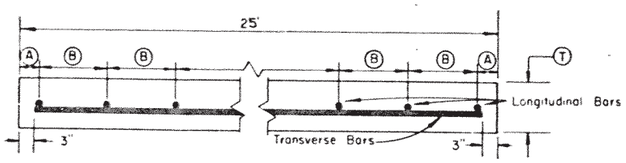
KEYWAY DETAIL



LONGITUDINAL CONSTRUCTION JOINT
(Tongue and Groove with Tie Bars)
Section X — X



GROOVED LONGITUDINAL JOINT
(Sawed ~~or Formed with Tie Bars~~)
Section Y — Y



TYPICAL SECTION
Section Z — Z

GENERAL NOTES

1. ALL GROOVED JOINTS SHALL BE ~~FORMED OR~~ SAWED VERTICAL AND TRUE TO LINE BY AN APPROVE METHOD AND FILLED WITH JOINT SEALING COMPOUND.
2. CONSTRUCTION JOINTS MAY BE FORMED BY THE USE OF METAL OR WOOD FORMS EQUAL IN DEPT TO THE NOMINAL DEPTH OF THE PAVEMENT, OR BY OTHER MEANS WHICH HAVE BEEN APPROVED B THE ENGINEER PRIOR TO THEIR USE.
3. TREATMENT OF PAVEMENT ENDS AT STRUCTURES OR AT FIXED OBJECTS WILL BE SHOWN ELSEWHERE IN THE PLANS.
4. FOR FURTHER INFORMATION REGARDING THE PLACEMENT OF CONCRETE AND REINFORCEMENT RE TO THE GOVERNING SPECIFICATIONS FOR "CONCRETE PAVEMENT".
5. DETAILS AS TO PAVEMENT WIDTH, PAVEMENT THICKNESS, AND THE CROWN CROSS--SLOPE SHALL AS SHOWN ELSEWHERE IN THE PLANS.
6. LONGITUDINAL BARS AND TRANSVERSE BARS SHALL BE INTERMEDIATE GRADE, HARD GRADE, OR HI YIELD STEEL IN ACCORDANCE WITH THE SIZE AND SPACING SHOWN IN THE TABLE, EXCEPT THAT ONLY INTERMEDIATE GRADE STEEL SHALL BE USED WHERE BARS ARE TO BE BENT.
7. IT IS THE INTENT OF THIS DESIGN THAT THE LONGITUDINAL STEEL BE AT THE CENTER OF THE SLAB. SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TAKE ALL NECESSARY PRECAUTIONS TO IN THAT THE FINAL POSITION OF THE STEEL IS WITHIN 1 2 INCH OF THE SLAB CENTER.
8. CONCRETE SHALL NOT BE DISCHARGED FROM THE MIXER DIRECTLY ON TOP OF OR ON THE SIDES C JOINT ASSEMBLY
9. ANY APPROVED METAL CHAIR TYPE OR DESIGN, WHICH WILL SATISFY THE REQUIREMENTS NOTED H WILL BE PERMITTED. CHAIR SPACINGS SHALL NOT BE GREATER THAN 50" C-C MEASURED PARALLEL PAVEMENT CENTER LINE AND 39" C-C MEASURED PERPENDICULAR TO THE PAVEMENT CENTER LINE. ADDITIONAL CHAIRS SHALL BE USED IF NECESSARY TO MEET THE STEEL PLACEMENT REQUIREMENTS.
10. THE CONTRACTOR SHALL HOLD AND SAVE THE STATE, ITS OFFICERS, ITS AGENTS, AND ITS EMPLOY HARMLESS TO LIABILITY OF ANY NATURE OR KIND, INCLUDING COST AND EXPENSES FOR OR ON OF ANY PATENT OR UNPATENTED INVENTION, ARTICLE OR APPLIANCE MANUFACTURED OR USED I ACCORDANCE WITH THE DETAILS OF THESE PLANS.

TABLE OF REINFORCING STEEL SIZES, SPACINGS AND ESTIMATED QUANTITIES

ALTERNATE DESIGNS (1)	PAVEMENT THICKNESS (T) (INCHES)	24' PLACEMENT WIDTH							12' PLACEMENT WIDTH							DOWELS (SMOOTH BARS)			TIE (DE
		LONGITUDINAL			TRANSVERSE			(2) STEEL	LONGITUDINAL			TRANSVERSE			(2) STEEL				
		BAR #	SPAC (A) (IN.)	SPAC (B) (IN.)	BAR #	SPAC (C) (IN.)	SPAC (D) (IN.)	#/SY	BAR #	SPAC (A) (IN.)	SPAC (B) (IN.)	BAR #	SPAC (C) (IN.)	SPAC (D) (IN.)	#/SY	SIZE	AVG SPAC (IN.)	WT. #/FT OF JT.	SIZE
L	10	3	4	8	4	24	3	8.05	3	4	8	4	24	3	7.71	#4 x 22"	12	7.89	#4 x 30"
	9	3	4	8½	4	26½	5¼	7.48	3	4	8½	4	26½	5¼	7.14	#10 x 20"	12	5.66	#4 x 30"
	8	3	4	10	4	30	3	6.48	3	2	10	4	30	3	6.30	#8 x 16"	12	4.01	#4 x 30"
H	10	4	4¾	10¾	4	18	3	10.70	4	7½	10¾	4	18	3	10.84	#11 x 22"	12	9.74	#4 x 30"
	9	4	6	12	4	20	3	9.57	4	6	12	4	20	3	9.48	#10 x 20"	12	7.17	#4 x 30"
	8	4	2¼	13½	4	22	11	8.68	4	4½	13½	4	22	11	8.60	#8 x 18"	12	4.01	#4 x 30"

NOTE:
(1) One of the alternate designs must be crossed out.
~~a L alternate — to be used with subbases having a low friction factor.~~
b H alternate — to be used with subbases having a high friction factor.
(2) Steel weights are for contractor's use only and include weights of longitudinal and transverse bars.

(GENERAL NOTES CON'T)
11 JOINT SEALING COMPOUND SHALL CONFORM TO THE REQUIREMENTS FOR CLASS 1-a AND CLASS 1 b JO
12 KEYWAYS SHALL BE PROVIDED ON INSIDE EDGE OF PAVEMENT TO ALLOW FOR FUTURE WIDENING

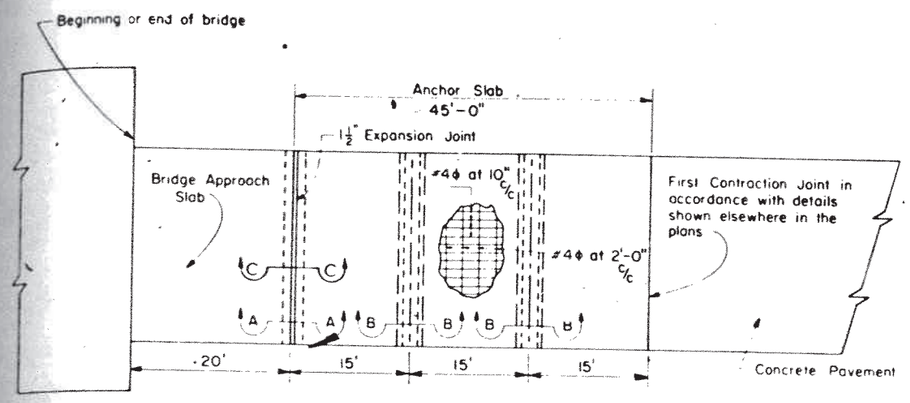
TEXAS HIGHWAY DEPARTMENT

CONCRETE PAVEMENT DETAILS

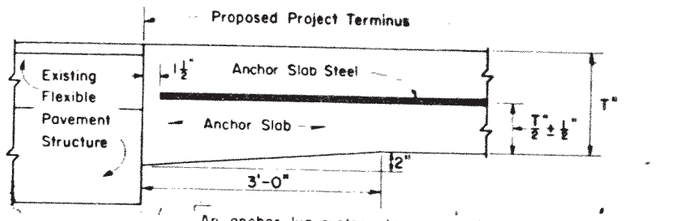
JOINTED REINFORCED

STEEL BARS

CPJR (B) — 61 MOD



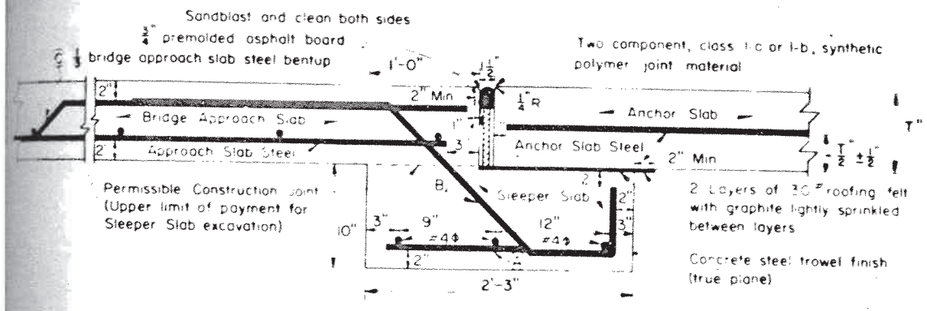
PLAN VIEW



An anchor lug system, less expansion joint and sleeper slab, shall be installed in accordance with these plans for the specified type of proposed pavement. Fifteen ft from terminus to center of first anchor lug.

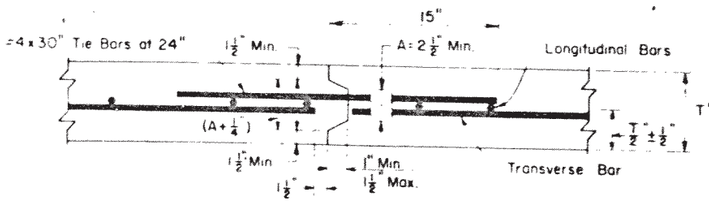
PAVEMENT TERMINUS DETAIL FOR JUNCTURE WITH EXISTING FLEXIBLE TYPE PAVEMENT STRUCTURE

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

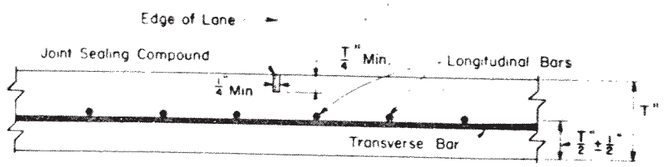


SECTION "A-A"

EXPANSION JOINT AND SLEEPER SLAB DETAIL
NEW CONSTRUCTION



LONGITUDINAL CONSTRUCTION JOINT
(Tongue and Groove with Tie Bars)



GROOVED LONGITUDINAL JOINT
(Sawed or Formed)

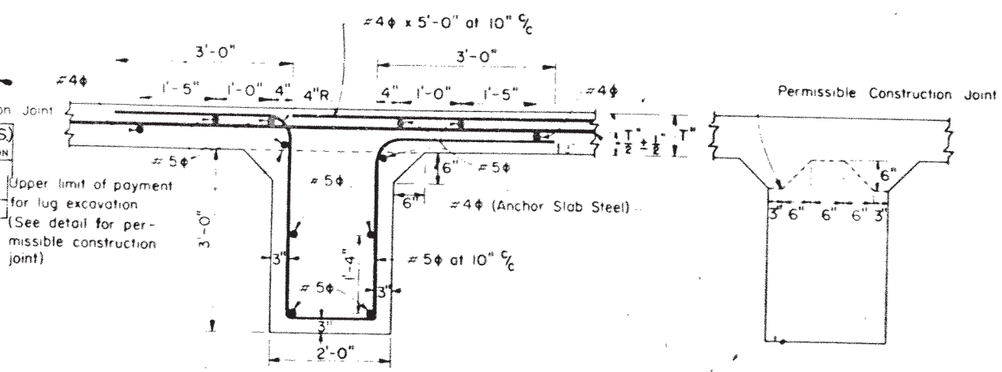
GENERAL NOTES

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 LONGITUDINAL SECTION AND TYPE OF LONGITUDINAL JOINTS SHALL BE AS SHOWN ELSEWHERE ON THE PLANS.
4. ALL CONCRETE [redacted] 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 DETAIL AS SHOWN HEREON.
6. THE CONTRACTOR SHALL HOLD AND SAVE THE STATE, ITS OFFICERS, ITS AGENTS, AND 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 SYSTEM SHALL BE AS SHOWN ELSEWHERE IN THE PLANS.
8. REINFORCING STEEL BARS SHALL BE OF THE SIZE AND SPACING AS DETAILED HEREON. 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. 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.
10. 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 OMITTED.
11. 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.
12. FOR SKEWED BRIDGES, THE APPROACH SLAB AND EXPANSION JOINT WILL BE SKEWED PER BRIDGE. LONGITUDINAL DIMENSION OF APPROACH SLAB, ANCHOR SLAB, AND ANCHOR LUG SPACINGS SHALL BE MEASURED ALONG THE CENTER LINE OF PAVEMENT.
13. TRANSVERSE REINFORCING RODS TO BE EXTENDED 1'-3" BEYOND THE SURFACE OF THE LUG ANCHOR CONCRETE ON THE MEDIAN SIDE OF THE PAVEMENT TO ALLOW FOR FUTURE PAVING. THE REINFORCING STEEL SHALL BE PAINTED WITH ASPHALTIC MATERIAL AND WRAPPED WITH 15# ROOFING FELT.

ESTIMATED QUANTITIES FOR ONE
24 FOOT WIDE TERMINAL ANCHORAGE

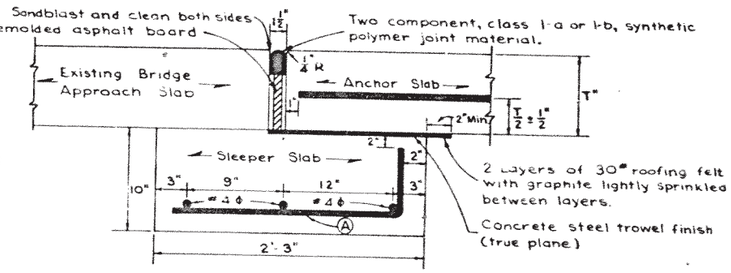
ITEM	PAVEMENT THICKNESS T(IN.)	CONCRETE (CU YD)	STEEL (LBS) NEW CONSTRUCTION	EXCAVATION (CU YD)	STEEL (LBS) EXIST. CONSTRUCTION
SLEEPER SLAB	8	1.67	349	1.67	
	9	1.67	355	1.67	
	10	1.67	361	1.67	78
LUG ANCHORS(2)	ALL	1.11	1535	1.11	
ANCHOR SLAB	8	2.67*	1168	0	
	9	3.00*	1168	0	
	10	3.33*	1168	0	

*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.



SECTION "B-B"

LUG ANCHOR DETAIL SHOWING



SECTION "C-C"

EXPANSION JOINT AND SLEEPER SLAB DETAIL
FOR EXISTING BRIDGE APPROACH SLABS

TEXAS HIGHWAY DEPARTMENT
TERMINAL ANCHORAGE FOR CONCRETE PAVEMENT