FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.
06	TEXAS	BR 95(161), etc.	1
STATE DIST. NO.	COUNTY	STATE CONTROL NO.	HIGHWAY NO.
20	LIBERTY	0028-03-081, etc	U.S. 90

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
SEE SHEET NO. 1A	

STATE OF TEXAS
DEPARTMENT OF TRANSPORTATION

RES. NO. 054

DESIGN SPEED 45 MPH (URBAN)*
DESIGN SPEED 70 MPH (RURAL)*

*DESIGN SPEED FOR TRANSITIONS BETWEEN URBAN AND RURAL SECTIONS WILL BE 60MPH.

PLANS OF COMPLETED
STATE HIGHWAY IMPROVEMENT

FEDERAL AID PROJECT BR 95(161), etc.

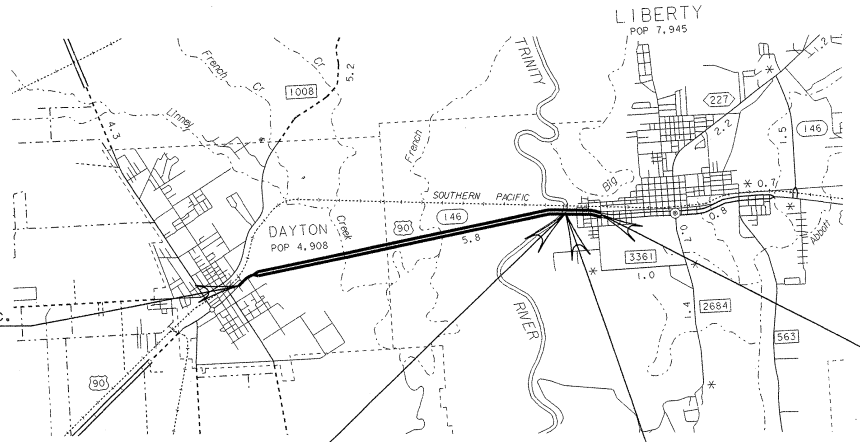
U.S. HWY. 90 LIBERTY COUNTY

LIMITS: FROM 0.38 MILES EAST OF TRINITY RIVER IN LIBERTY
TO 0.15 MILES EAST OF FM HWY. 1409 IN DAYTON

FOR THE CONSTRUCTION OF THE UPGRADING OF A NON-FREEWAY FACILITY
CONSISTING OF REPLACING STRUCTURES, WIDEN STRUCTURES, GRADING
CONC. PAV., CEM. STAB. BASE, ASPH. STAB. BASE, LIME TREAT. SUBG.
SAFETY FEATURES, SURF. TREAT., ACP, PAVEMENT MARKINGS AND SIGNING

NET LENGTH OF PROJECT = 23,800 FT. = 4.507 MI.

ROADWAY	19,352.34 FT.	= 3.665 MI.
BRIDGES	4,447.66 FT.	= 0.842 MI.



END PROJECT BR 95(161), etc.
STA. 1417+00 (G)
CONTROL 0028-03-081, etc.
REF. MRK. = 874-1.886

BEGIN PROJECT BR 95(161), etc.
STA. 1199+09 (G)
CONTROL 0028-03-081, etc.
REF. MRK. = 876+0.291

END PROJECT
STA. 1199+09 (G)
CONTROL 0028-04-063
REF. MRK. = 876+0.291

BEGIN PROJECT
STA. 1179+00 (G)
CONTROL 0028-04-063
REF. MRK. = 876+0.671

"FINAL PLANS"

PROJECT BEGAN (ACTUAL WORK BEGAN)	SEPTEMBER 9, 1996
PROJECT COMPLETED	AUGUST 18, 2000
PROJECT CONSTRUCTED & FINAL PLANS BY:	E.R. Seymour
FINAL CONTRACT COST	$ 15,507,365.22

Edward R. Seymour

COUNTY LIBERTY PROJ. NO. BR 95(161), etc.
HWY. NUMBER 90 LETTING DATE
DATE ACCEPTED

THE CONTRACTOR SHALL PROVIDE AND ERECT BARRICADES AND CONSTRUCTION SIGNS IN ACCORDANCE WITH BC (1-9)94 AND THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AT POINTS AS SHOWN ON THE TITLE SHEET AND PLAN SHEETS AND AS DIRECTED BY THE ENGINEER.

SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION MARCH 1, 1993 AND SPECIFICATION ITEMS LISTED AND DATED AS FOLLOWS, SHALL GOVERN ON THIS PROJECT: REQUIRED CONTRACT PROVISIONS FOR ALL FEDERAL-AID CONSTRUCTION CONTRACTS (FORM FHWA 1273, DECEMBER 1993)

NO EQUATIONS
EXCEPTION: RAILROAD
STA. 1190+46.74 TO STA. 1190+55.74 (A) = 9.0'

LAYOUT SCALE: 1 IN. = 3/4 MILE

STATE OF TEXAS EDWARD SEYMOUR 25415 REGISTERED PROFESSIONAL ENGINEER

TEXAS DEPARTMENT OF TRANSPORTATION

CORRECT: 12/18 1995
AREA ENGINEER

RECOMMENDED FOR LETTING: 12/18 1995
DIRECTOR OF TRANSPORTATION PLANNING & DEVELOPMENT

RECOMMENDED FOR LETTING: 12/22 1995
DISTRICT ENGINEER

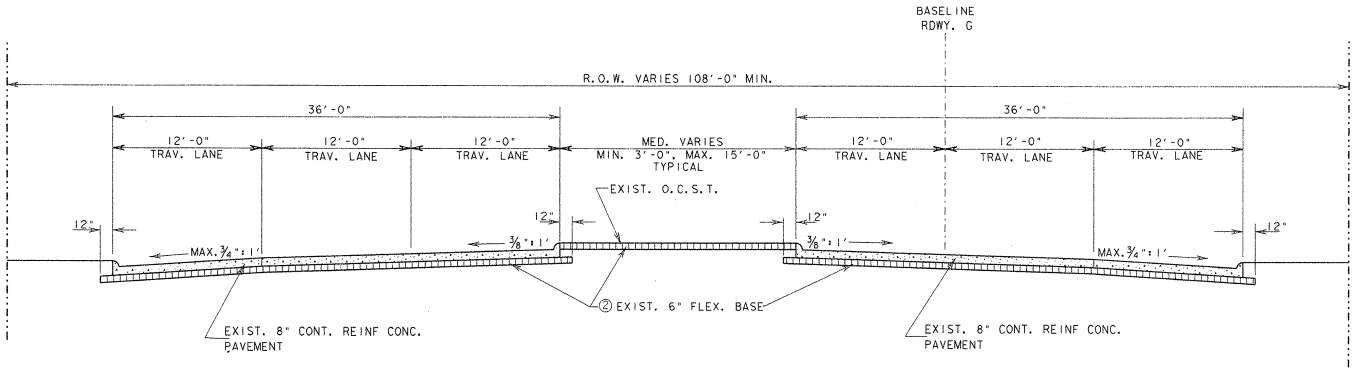
APPROVED FOR LETTING:
DIRECTOR OF BRIDGES AND STRUCTURES

APPROVED FOR LETTING:

APPROVED FOR LETTING: 1/27/96
for DIRECTOR, DESIGN DIVISION

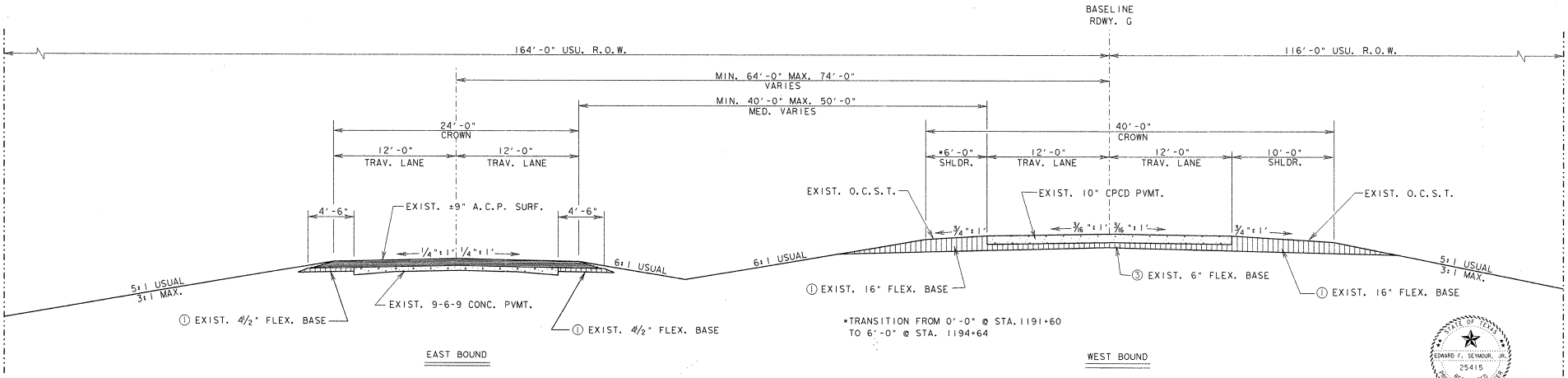
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:
DIVISION ADMINISTRATOR DATE



~~EXISTING SECTION~~

STA. 1179+00 TO STA. 1191+60 (G)



① ~~PROP.~~ REWORK BASE MATL. (TY. C)
LIMITS SHOWN ON PLAN PROFILE SHEETS.

**② ~~PROP.~~ REWORK BASE MATL. (TY. B)
LIMITS SHOWN ON PLAN PROFILE SHEETS.

**③ ~~PROP.~~ REWORK BASE MATL. (TY. B)
FROM STA. 1191+60 TO STA. 1199+27.99(G)
THE REMAINING AREAS SHOWN ON THE
PLAN PROFILE SHEETS WILL BE (TY.C).

SALV. FLEX BASE TO BE USED TO FILL
** IN MEDIAN & CONSTRUCT BOAT RAMP
ACCESS ROAD.

~~EXISTING SECTION~~

STA. 1191+60 TO STA. 1404+57 (G)

TOTAL EXIST. BRIDGE LENGTHS EAST BOUND = 4339.75'
TOTAL EXIST. BRIDGE LENGTHS WEST BOUND = 4340.68'

TYPICAL CROSS SECTIONS

U.S. HWY. 90

STATE OF TEXAS
EDWARD F. SEYMOUR, JR.
25415
REGISTERED
PROFESSIONAL ENGINEER

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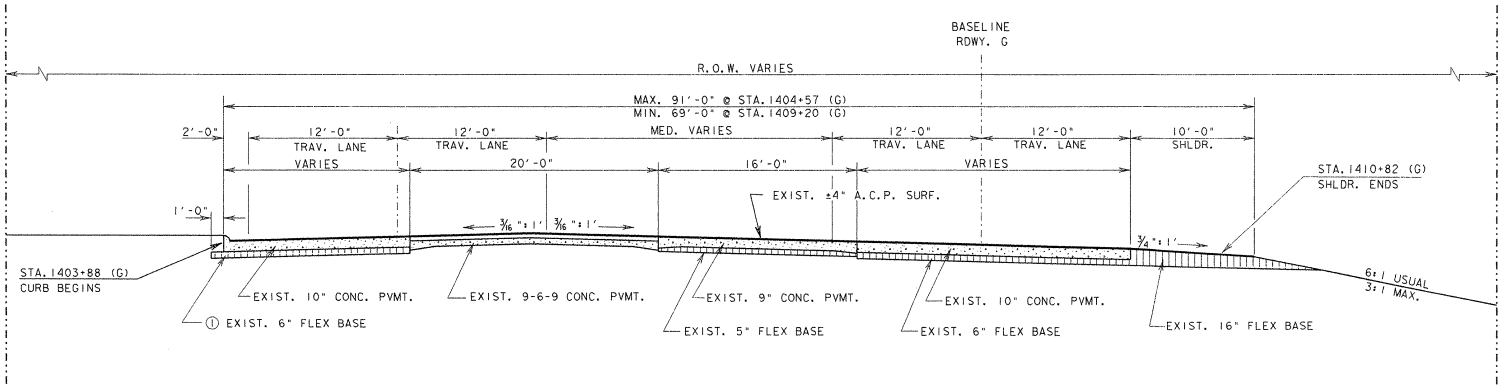
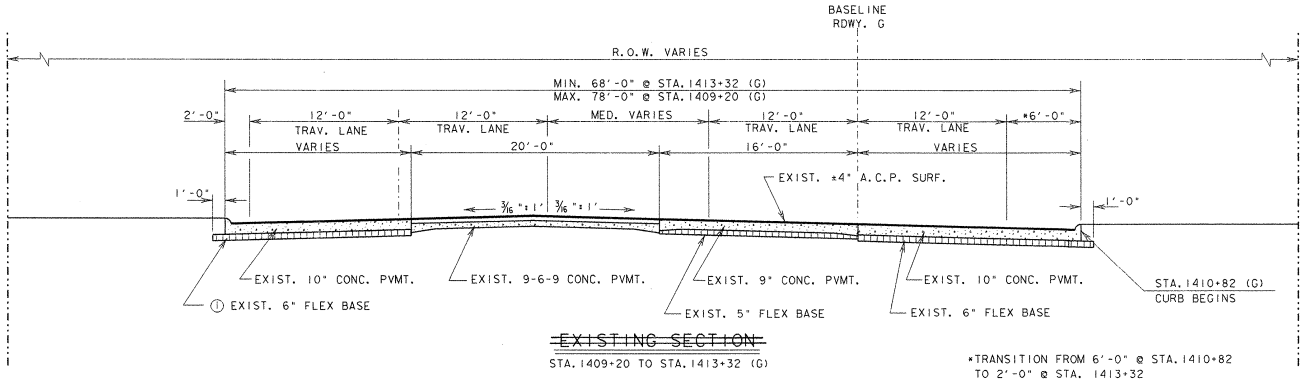
Edward F. Seymour Jr.

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.				SHEET NO.
6	TEXAS	BR 95(161), etc.				2
STATE DIST. NO.	COUNTY	CONT. NO.	SEC. NO.	JOB NO.		HIGHWAY NO.
20	LIBERTY	0028	03	087	etc.	US 90



~~EXISTING SECTION~~
STA. 1404+57 TO STA. 1409+20 (G)



~~EXISTING SECTION~~
STA. 1409+20 TO STA. 1413+32 (G)

*TRANSITION FROM 6'-0" @ STA. 1410+82
TO 2'-0" @ STA. 1413+32

① ~~PROP.~~ REWORK BASE MATL. (TY. C)
LIMITS SHOWN ON PLAN PROFILE SHEETS.

TYPICAL CROSS SECTIONS

U.S. HWY. 90

STATE OF TEXAS
EDWARD F. SEYMOUR, JR.
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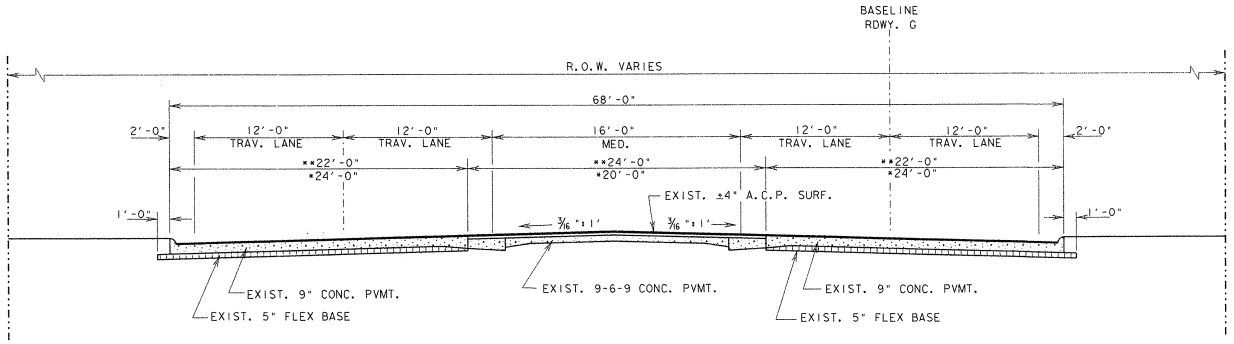
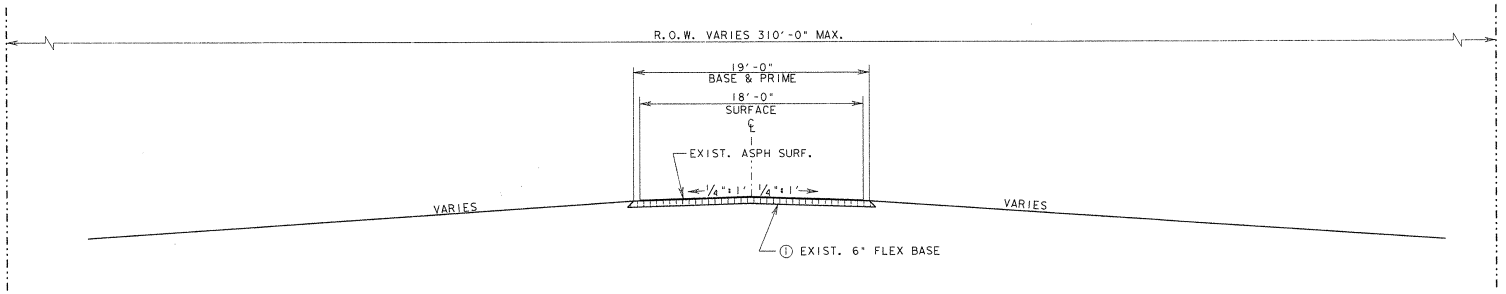
Edward F. Seymour Jr.

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.				SHEET NO.
6	TEXAS	BR 95(161), etc.				3
STATE DIST. NO.	COUNTY		CONT. NO.	SEC. NO.	JOB NO.	HIGHWAY NO.
20	LIBERTY		0028	03	081 ETC.	US 90



~~EXISTING SECTION~~

*STA. 1413+32 TO STA. 1414+36 (G)
**STA. 1414+36 TO STA. 1417+00 (G)



~~EXISTING SECTION~~

AT BOAT RAMP ACCESS ROAD

STA. 0+00 TO STA. 12+00 (D)

① ~~PROP.~~ REWORK BASE MATL. (TY. C)
LIMITS SHOWN ON PLAN PROFILE SHEETS.

TYPICAL CROSS SECTIONS

U.S. HWY. 90

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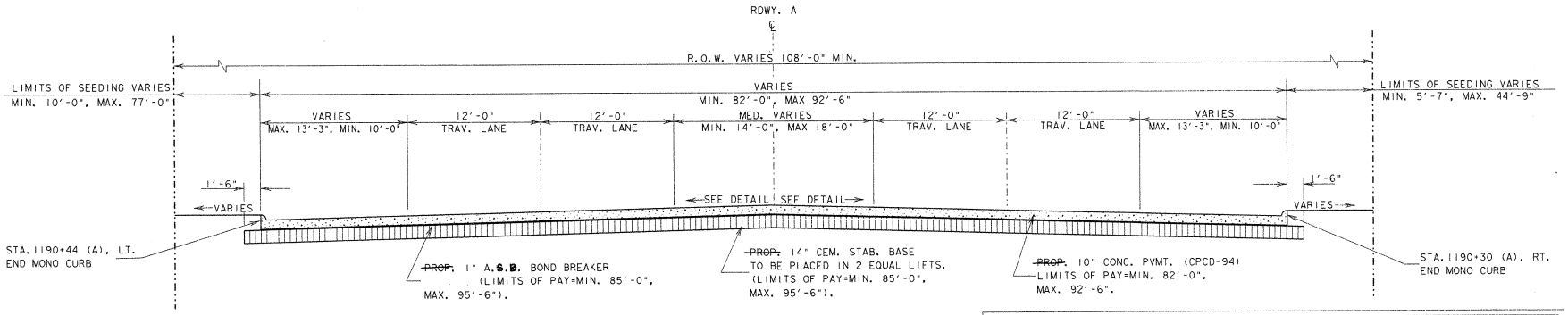
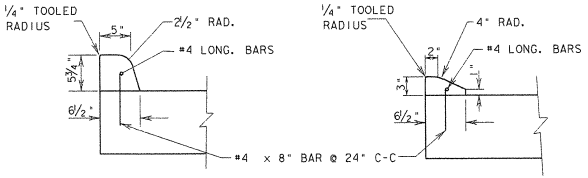
Edward F. Seymour Jr.

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.			SHEET NO.
6	TEXAS	BR 95(161), etc.			4
STATE DIST. NO.	COUNTY	CONT. NO.	SEC. NO.	JOB NO.	HIGHWAY NO.
20	LIBERTY	0028	03	081 etc.	US 90



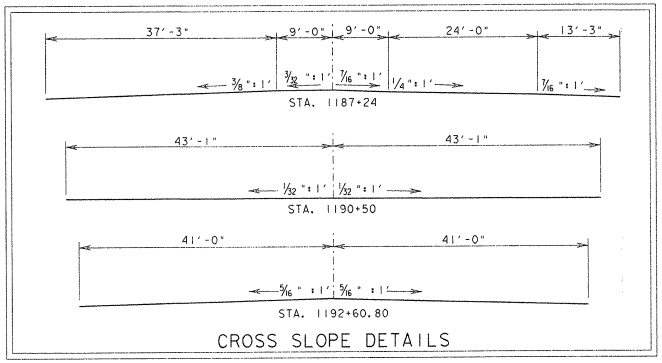
~~PROPOSED~~ SECTION

TRANSITION STA. 1187+24 TO STA. 1192+60.80 (A)

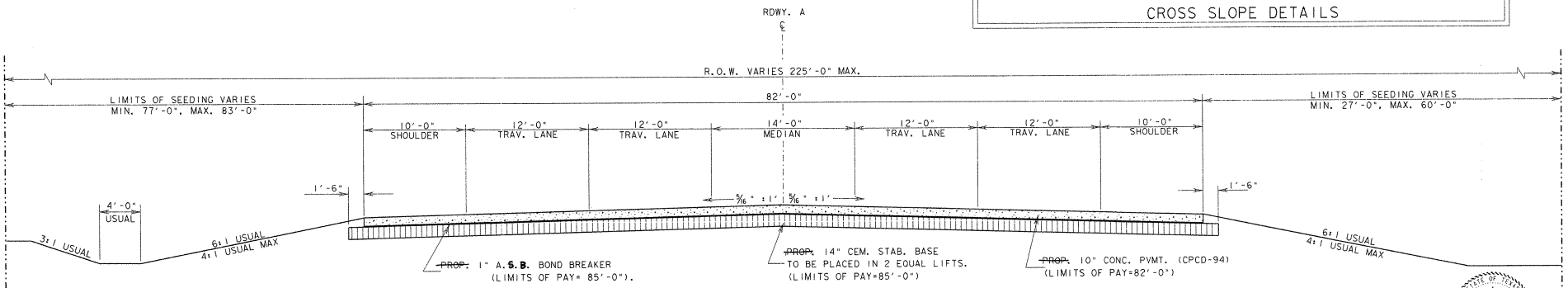


TY. II MONO CURB

TY. I MONO CURB



CROSS SLOPE DETAILS



~~PROPOSED~~ SECTION

STA. 1192+60.80 TO STA. 1198+86.17 (A)
STA. 1213+63.83 TO STA. 1214+39.83 (A)

(TRINITY RIVER BRIDGE STA. 1198+86.17 TO STA. 1213+63.83 (A))

MONO CURB NOTES:

1. REINF. STEEL IS SUBSIDIARY TO ITEM 360.
2. JOINTS IN CURB SHALL BE SPACED TO COINCIDE WITH JOINTS IN THE PAVEMENT. THE JOINTS ARE TO BE FORMED BY PLACING A TEMPLATE CONFORMING TO THE CURB SECTION, REMOVING TEMPLATE AFTER CONCRETE HAS ITS INITIAL SET, THEN GROOVING THE JOINTS.

TYPICAL CROSS SECTIONS

U.S. HWY. 90

STATE OF TEXAS
EDWARD F. SEYMOUR, JR.
25415
REGISTERED PROFESSIONAL ENGINEER

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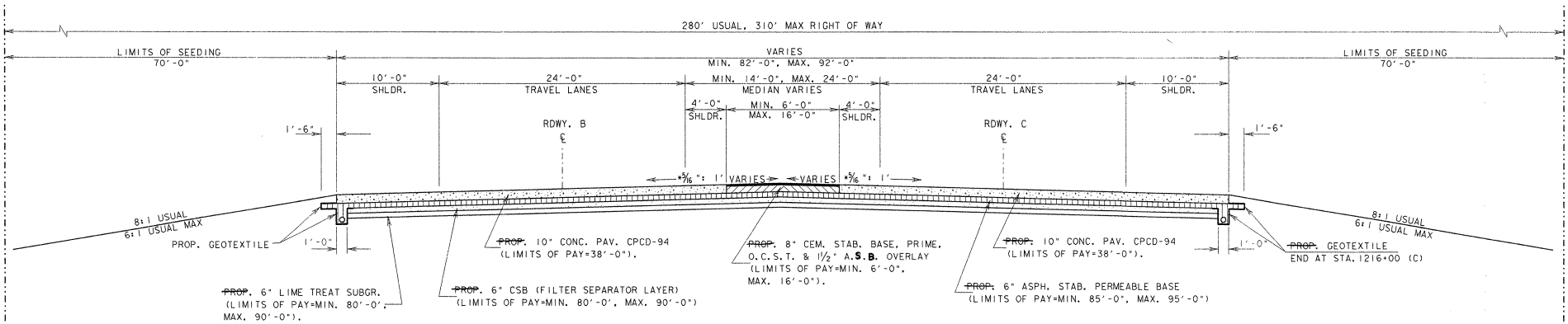
Edward F. Seymour Jr.

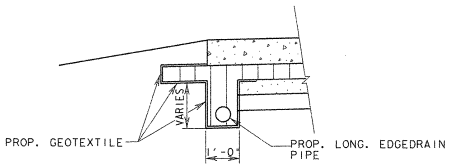
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.				SHEET NO.
6	TEXAS	BR 95(161), etc.				5
STATE DIST. NO.	COUNTY		CONT. NO.	SEC. NO.	JOB NO.	HIGHWAY NO.
20	LIBERTY		0028	03	081 etc.	US 90



~~PROPOSED~~ SECTION

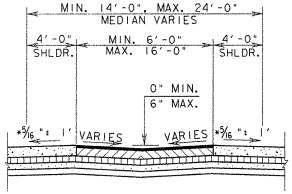
STA. 1214+51.67 TO STA. 1218+79.00 (B)
STA. 1214+38.44 TO STA. 1218+69.20 (C)

*CROSS SLOPE VARIES AT CURVE SUPERELEVATION & TRANSITION



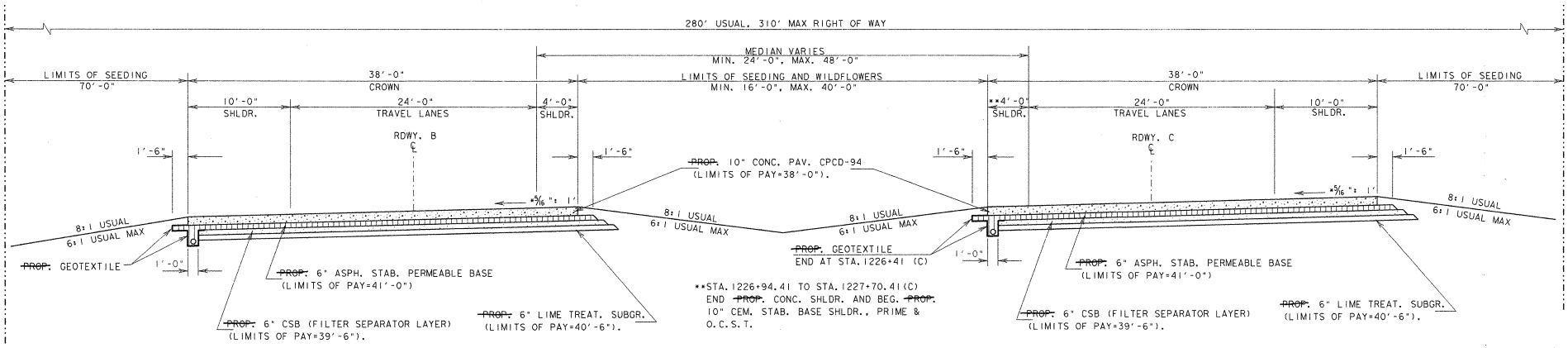
EDGEDRAIN DETAIL

SEE EDGEDRAIN DETAIL SHEET



MEDIAN DITCH DETAIL

STA. 1216+35 TO STA. 1218+79.00 (B)
STA. 1216+22 TO STA. 1218+69.20 (C)



~~PROPOSED~~ SECTION

STA. 1218+79.00 TO STA. 1227+63.00 (B)
STA. 1218+69.20 TO STA. 1227+70.41 (C)

(RELIEF STRUCT. NO. 1 STA. 1227+63.00 TO STA. 1233+57.00 (B))
(RELIEF STRUCT. NO. 1 STA. 1227+70.41 TO STA. 1233+46.79 (C))

TYPICAL CROSS SECTIONS

U.S. HWY. 90

STATE OF TEXAS
EDWARD F. SEYMOUR, JR.
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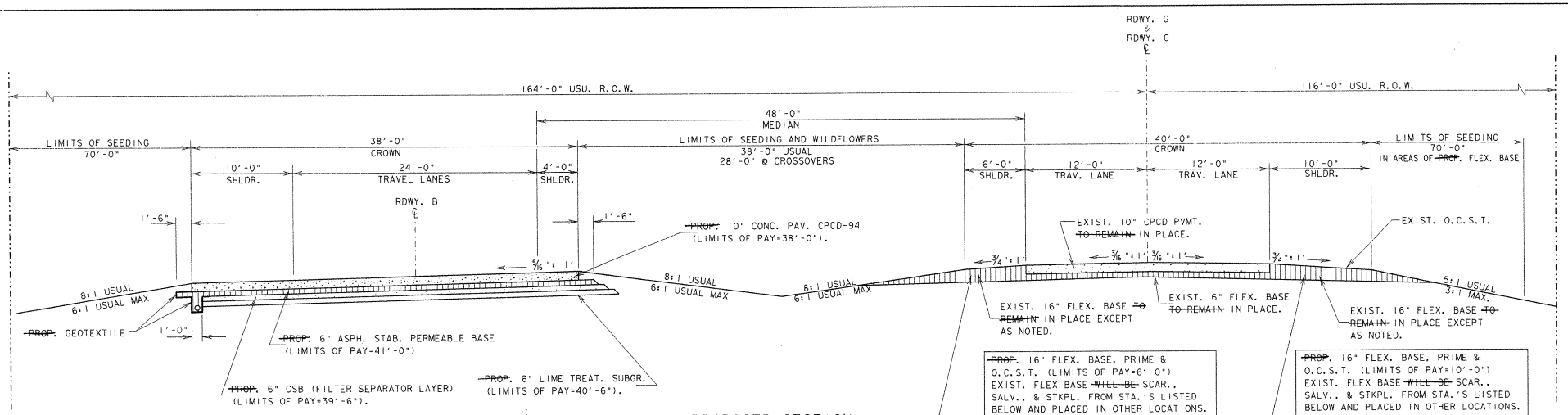
Edward F. Seymour Jr.

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.				SHEET NO.
6	TEXAS	BR 95(161), etc.				6
STATE DIST. NO.	COUNTY		CONT. NO.	SEC. NO.	JOB NO.	HIGHWAY NO.
20	LIBERTY		0028	03	081 etc.	US 90



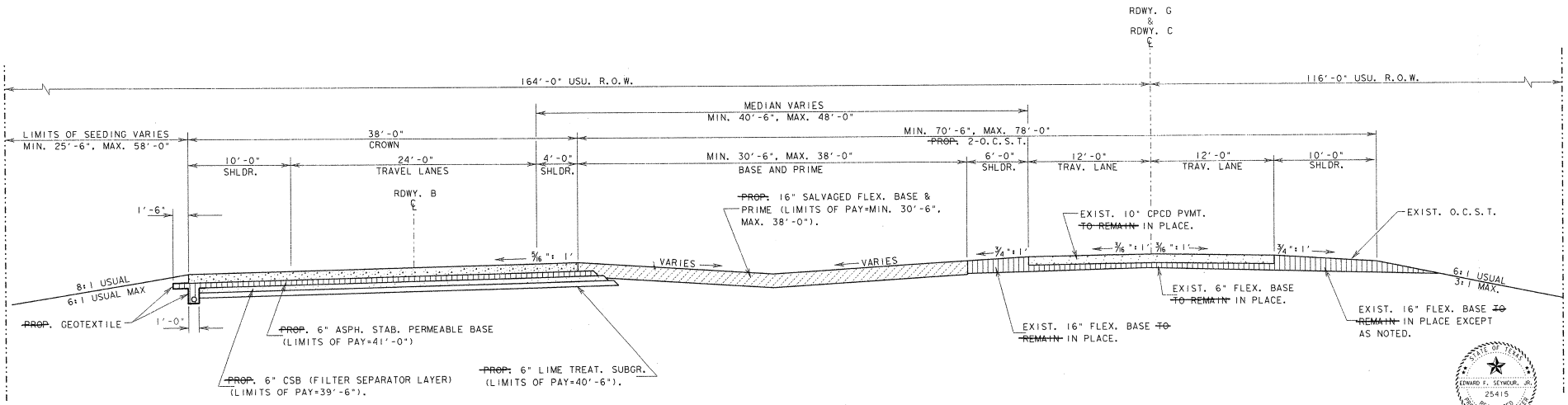
~~PROP.~~ 16" FLEX. BASE, PRIME & O.C.S.T. (LIMITS OF PAY=6'-0")
EXIST. FLEX BASE ~~WILL BE~~ SCAR., SALV., & STKPL. FROM STA.'S LISTED BELOW AND PLACED IN OTHER LOCATIONS.
STA. 1233+46.79 TO STA. 1234+46.79 (C)
STA. 1267+11.39 TO STA. 1269+61.39 (C)
STA. 1274+77.17 TO STA. 1275+77.17 (C)
STA. 1279+18.15 TO STA. 1281+68.15 (C)
STA. 1285+01.82 TO STA. 1286+01.82 (C)
STA. 1341+59.41 TO STA. 1344+09.41 (C)
STA. 1358+65.59 TO STA. 1359+65.59 (C)

~~PROP.~~ 16" FLEX. BASE, PRIME & O.C.S.T. (LIMITS OF PAY=10'-0")
EXIST. FLEX BASE ~~WILL BE~~ SCAR., SALV., & STKPL. FROM STA.'S LISTED BELOW AND PLACED IN OTHER LOCATIONS.
STA. 1233+46.79 TO STA. 1234+96.79 (C)
STA. 1266+61.39 TO STA. 1269+61.39 (C)
STA. 1274+77.17 TO STA. 1276+27.17 (C)
STA. 1279+68.15 TO STA. 1281+68.15 (C)
STA. 1285+01.82 TO STA. 1286+01.82 (C)
STA. 1342+09.41 TO STA. 1344+09.41 (C)
STA. 1358+65.59 TO STA. 1359+65.59 (C)

~~PROPOSED~~ SECTION

STA. 1233+57.00 TO STA. 1401+88.22 (B)
STA. 1233+46.79 TO STA. 1401+87.62 (C)

TOTAL ~~PROP.~~ BRIDGE LENGTHS WITHIN STA. LIMITS (B) = 2376.00'
TOTAL ~~PROP.~~ BRIDGE LENGTHS WITHIN STA. LIMITS (C) = 2305.63'



~~PROPOSED~~ SECTION

STA. 1401+88.22 TO STA. 1404+27.90 (B)
STA. 1401+87.62 TO STA. 1404+33.66 (C)

STATE OF TEXAS
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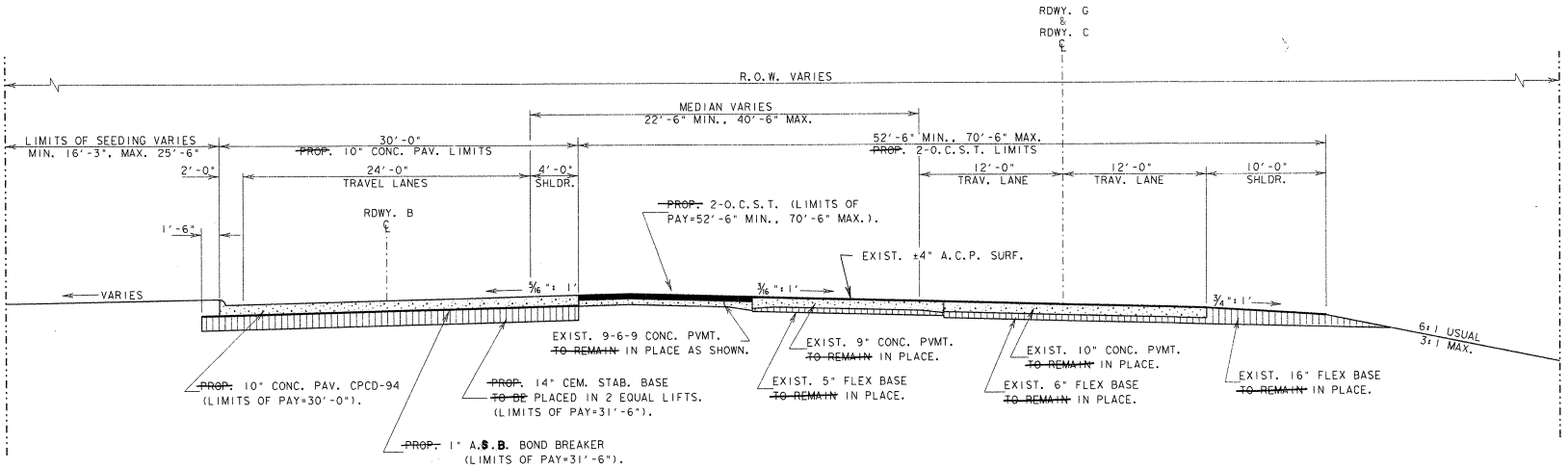
Edward F. Seymour

TYPICAL CROSS SECTIONS

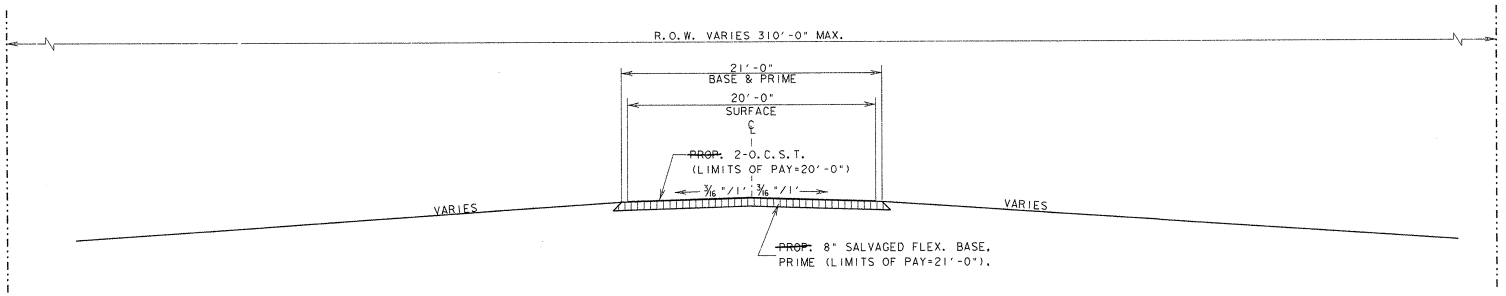
U.S. HWY. 90

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.			SHEET NO.
6	TEXAS	BR 95(161), etc.			7
STATE DIST. NO.	COUNTY	CONT. NO.	SEC. NO.	JOB NO.	HIGHWAY NO.
20	LIBERTY	0028	03	081 etc.	US 90



~~PROPOSED~~ SECTION

STA. 1404+27.90 TO STA. 1409+70 (B)
STA. 1404+33.66 TO STA. 1409+89 (C)



~~PROPOSED~~ SECTION
AT BOAT RAMP ACCESS ROAD

STA. 0+00 TO STA. 10+58 (D)

TYPICAL CROSS SECTIONS

U.S. HWY. 90

STATE OF TEXAS
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Edward F. Seymour

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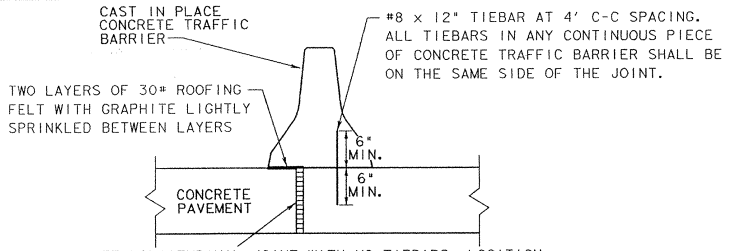
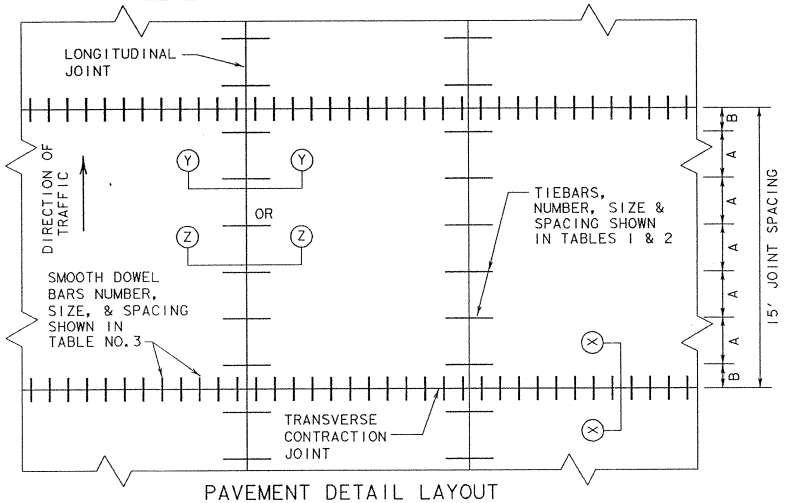
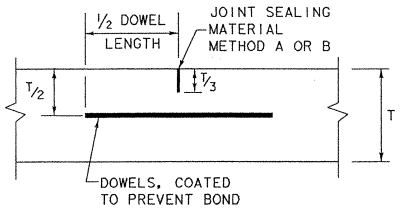
6	TEXAS	BR 95(161), etc.			8
STATE DIST. NO.	COUNTY	CONT. NO.	SEC. NO.	JOB NO.	HIGHWAY NO.
20	LIBERTY	0028	03	081 etc.	US 90



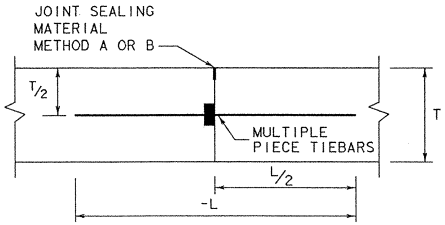
FREE LONGITUDINAL JOINT DETAIL



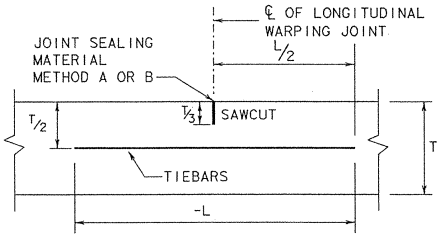
PAVEMENT DETAIL LAYOUT



TRANSVERSE CONTRACTION JOINT
SECTION X-X



LONGITUDINAL CONSTRUCTION JOINT
SECTION Y-Y



LONGITUDINAL WARPING JOINT
SECTION Z-Z

GENERAL NOTES

1. CONCRETE SLABS WIDER THAN 100' WITHOUT A FREE JOINT, ARE NOT COVERED BY THIS STANDARD.
2. FOR FURTHER INFORMATION REGARDING THE PLACEMENT OF CONCRETE AND LOAD TRANSFER DEVICES REFER TO THE GOVERNING SPECIFICATIONS FOR "CONCRETE PAVEMENT" AND "REINFORCING STEEL."
3. DETAILS FOR PAVEMENT WIDTH, PAVEMENT THICKNESS, AND CROWN CROSS SLOPE SHALL BE AS SHOWN ELSEWHERE IN THE PLANS.
4. THE DETAIL FOR THE JOINT SEALANT AND RESERVOIR WILL BE SHOWN IN CONCRETE PAVEMENT DETAIL, JOINT SEALANT STANDARD (JS-94).
5. PAVEMENT WIDTHS IN EXCESS OF 16' SHALL BE PROVIDED WITH A LONGITUDINAL JOINT (SECTION Z-Z OR Y-Y). THESE JOINTS SHALL BE LOCATED WITHIN 6" OF THE LANE LINES UNLESS SHOWN ELSEWHERE ON THE PLANS.
6. THE JOINT BETWEEN OUTSIDE LANE AND SHOULDER SHALL BE A LONGITUDINAL WARPING JOINT (SECTION Z-Z) UNLESS OTHERWISE SHOWN IN THE PLANS.
7. THE SPACING BETWEEN TRANSVERSE JOINTS SHALL BE 15 FEET UNLESS OTHERWISE SHOWN IN THE PLANS.
8. WHERE A 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.
9. TRANSVERSE CONSTRUCTION JOINTS MAY BE FORMED BY USE OF METAL OR WOOD FORMS EQUAL IN DEPTH TO THE NOMINAL DEPTH OF THE PAVEMENT, OR BY METHODS APPROVED BY THE ENGINEER.
10. THE ENGINEER WILL ADJUST THE REQUIRED NUMBER OF TIEBARS FOR SLABS SHORTER OR LONGER THAN 15'. SPACING "B" WILL BE ADJUSTED TO MAINTAIN A MINIMUM CLEARANCE OF 2" BETWEEN THE TIEBAR AND THE DOWEL BARS AT THE TRANSVERSE JOINT AND THE "A" SPACING WILL REMAIN AS REQUIRED FOR THE PAVEMENT SLAB WIDTH.
11. MULTIPLE PIECE TIEBARS SHALL BE USED AT LONGITUDINAL CONSTRUCTION JOINTS UNLESS OTHERWISE SPECIFIED IN THE PLANS.
12. THE SAW CUT FOR LONGITUDINAL WARPING AND THE TRANSVERSE CONSTRUCTION JOINTS MAY BE ONE FOURTH THE SLAB THICKNESS WHEN CRUSHED LIMESTONE IS USED AS THE COARSE AGGREGATE.

TABLE NO. 1 TIEBARS REQUIRED FOR LONGITUDINAL JOINT JOINTS FOR EACH 15' SLAB

ASTM A-616 OR A-615 (GRADE 60) STRAIGHT OR MULIPLE PIECE REINFORCING TIEBARS		CONCRETE SLAB THICKNESS	DISTANCE FROM THE LONGITUDINAL JOINT TO THE NEAREST LONGITUDINAL FREE EDGE			
			< OR =16'	< OR =24'	< OR =34'	< OR =50'
BAR LENGTH, "L" INCHES	BAR SIZE	"T" INCHES	REQUIRED NO. OF BARS	REQUIRED NO. OF BARS	REQUIRED NO. OF BARS	REQUIRED NO. OF BARS
42	#5 (5/8")	8	5	5	6	9
		9	5	5	7	10
		10	5	5	7	11
		11	5	6	8	12
		12	5	6	9	13
		13	5	7	9	13
		14	6	7	10	NA
		15	6	8	11	NA
50	#6 (3/4")	8	5	5	5	6
		9	5	5	5	7
		10	5	5	5	8
		11	5	5	6	8
		12	5	5	6	9
		13	5	5	7	10
		14	5	5	7	10
		15	5	6	8	11

THE DISTANCE TO THE FREE EDGE WILL BE DETERMINED BY THE ENGINEER AND THE DISTANCE WILL BE BASED ON THE NOMINAL WIDTHS OF THE LANES AND SHOULDERS PLUS ANY TIED RAMPS OR CONNECTING ROADWAYS.

TABLE NO. 2 TIEBAR SPACINGS

SPACING REQUIREMENT FOR 15'SLAB FOR REQUIRED NUMBER OF BARS		
REQUIRED NO. OF BARS	REGUALR SPACING "A" INCHES	FIRST AT JOINT "B" INCHES
5	36	18
6	30	15
7	25	15
8	21	16.5
9	18	18
10	16	18
11	15	15
12	13	18.5
13	12	18

TABLE NO. 3 DOWELS REQUIEMENTS

T, IN.	DOWELS (SMOOTH BARS)	
	SIZE AND LENGTH	AVERAGE SPACING (INCHES)
8	1" X 18"	12
9	1 1/8" X 18"	12
10	1 1/4" X 18"	12
11	1 3/8" X 18"	12
12	1 1/2" X 18"	12
13	1 5/8" X 18"	12
14	1 3/4" X 18"	12
15	1 7/8" X 18"	12

Texas Department of Transportation
Design Division (Pavement)

CONCRETE PAVEMENT DETAILS

CONTRACTION DESIGN
T-8 THROUGH 15 INCHES

CPCD-94

ORIG. DRAW DATE: SEPT. 1994	DW: LJB	CK: LJB	DW: BGD	CK: GLG	REV. NO.: ROOOO
MODIFICATIONS	STATE DISTRICT: 20	FEDERAL REGION: 6	FEDERAL AID PROJECT: BR 95(161), ETC.		SHT. NO.: 198
	COUNTY: LIBERTY	CONTROL: 0028	SECTION: 03	JOB: 081	HIGHWAY: US 90 ETC.

ACC: /usc/d481303
FILE: CPCD94.DGN
LEVELS DISPLAYED: 1 2 3 4