STATE OF TEXAS
STATE HIGHWAY DEPARTMENT

7321/16
FINAL PLANS

PLANS OF ~~PROPOSED~~ FINAL
STATE HIGHWAY IMPROVEMENT

FEDERAL AID PROJECT I45 1(103)019

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

NET LENGTH OF PROJECT = 27232.89 FT = 5.156 MI

ROADWAY	26,309.53 FT	4.982 MI
BRIDGES	923.36 FT	0.174 MI
TOTAL	27,232.89 FT	5.156 MI

INTERSTATE HIGHWAY 45
GALVESTON COUNTY

FROM HARRIS COUNTY LINE TO DICKINSON BAYOU
GRADING, STRUCTURES, CEMENT STABILIZED BASE, CONCRETE PAVEMENT, ASPHALTIC CONCRETE PAVEMENT, STORM SEWER, ASPH STAB BASE, MEDIAN BARRIER FENCE, FLEXIBLE BASE, & LIME STABILIZED FLEXIBLE BASE.

SEE SHEET 1A FOR FIELD CHANGES AND EXTRA WORK ORDERS

500-4-40
Compl 1975 (+/-)

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296	PRESTR CONC BMS NON-STAND SPANS
297	PCS
298	LIGHT STD BRACKET DETAILS
[illegible]	BPA (MOD)
299-302	RAIL TY T-4 MOD
303	CP (MOD)
304	RR 9 MOD
305	RR 8 MOD
306-308	BAS CN 64 MOD
309-310	BAS RW 64 MOD
311	CIS [illegible]
[illegible]-318	BC (1-617) & BARRICADE DETAILS
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321	RID-69 (MOD)
322	GF (TD) [illegible] (MOD)
323	CST 69
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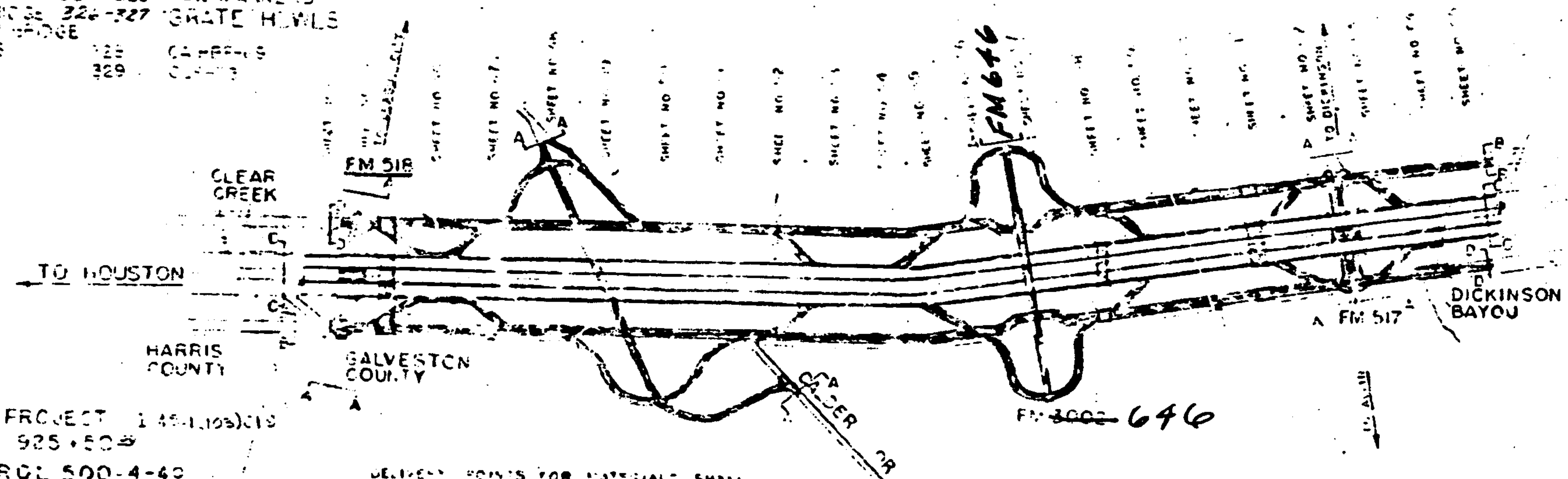
326-327	GRATE HOWLS
328	CAHPPHS
329	[illegible]

AT SITES MARKED A-A PLACE BARRICADES I(C), SIGNS W18-4, G20-2, W20-1D, R10-8
AT SITES MARKED B-B PLACE BARRICADES I(C), SIGNS G20-1, G20-6, W20-1D, R10-8
AT SITES MARKED C-C PLACE BARRICADES I(C), SIGNS G20-1, G20-6, G20-2, W20-1A, W20-1B, W20-1C, R10-8
AT SITES MARKED D-D PLACE BARRICADES I(C), SIGN G20-2

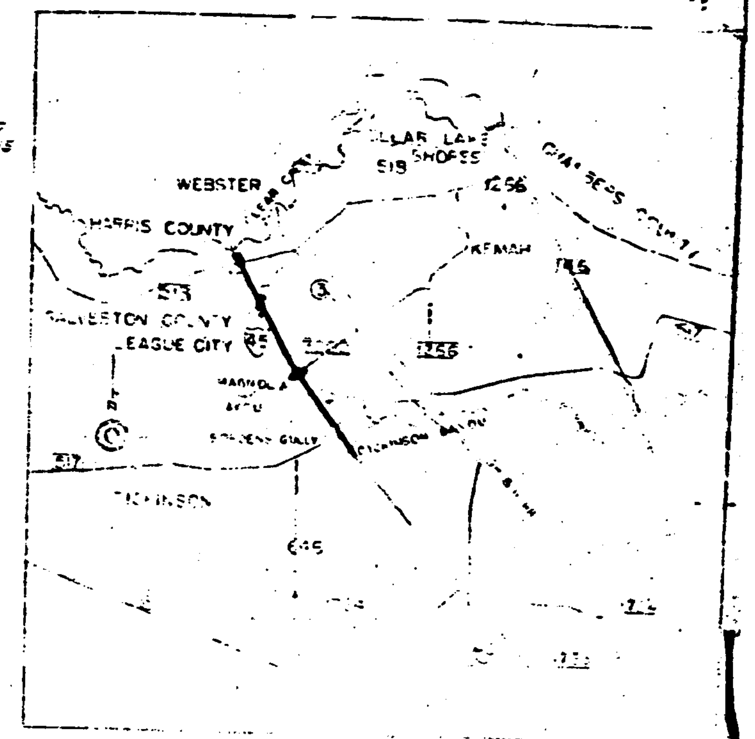
SIGNS C-1 SHALL BE PLACED AT THE BEGINNING AND END OF THE PROJECT.



BEGIN PROJECT I45 1(103)019
℄ STA 925+50
CONTROL 500-4-40
END PROJECT
℄ STA 925+50
CONTROL 500-4-35

END PROJECT I45 1(103)019
℄ STA 263+23.50 BK
CONTROL 500-4-40
℄ STA 263+24.42 FWD
CONTROL 500-4-[illegible]
PROJECT COMPL 8-[illegible]

DELIVERY POINTS FOR MATERIALS SHALL BE ARRANGED BY THE CONTRACTOR



EQUATIONS

STA 934+35.60 BK = 0+00 FWD
STA 224+00.00 BK = 224+88.02 FWD
STA 234+00.00 BK = 234+11.19 FWD
STA 263+23.50 BK = 263+24.42 FWD

EXCEPTION NONE

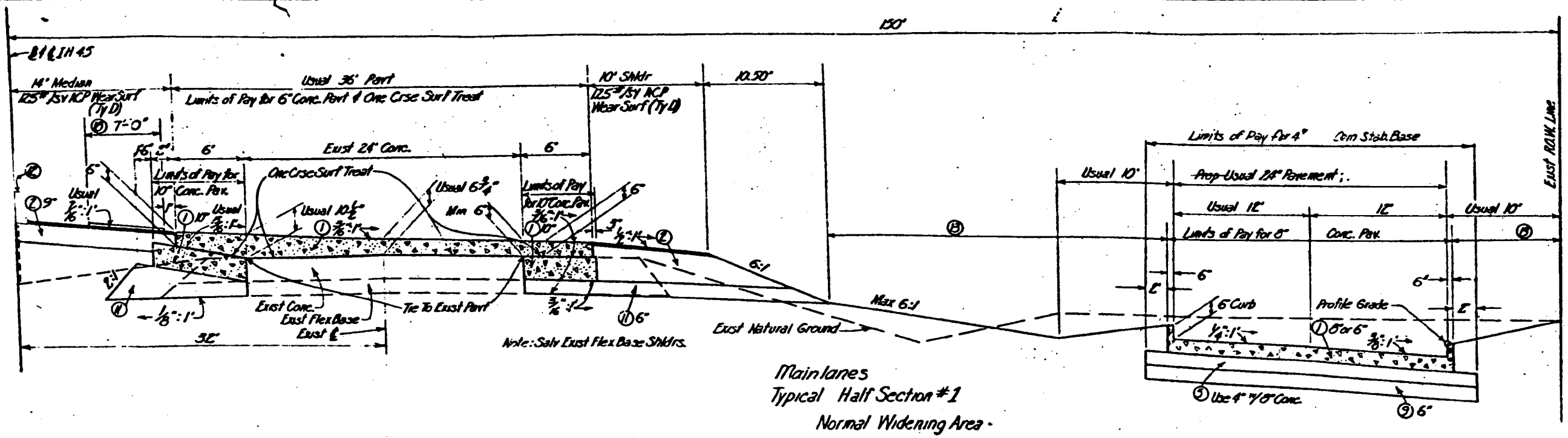
RAILROAD CROSSING NONE

LAYOUT SCALE 1 IN. = 2000 FT ALONG ℄
1 IN. = 100 FT PERPENDICULAR ℄

STATE HIGHWAY DEPARTMENT

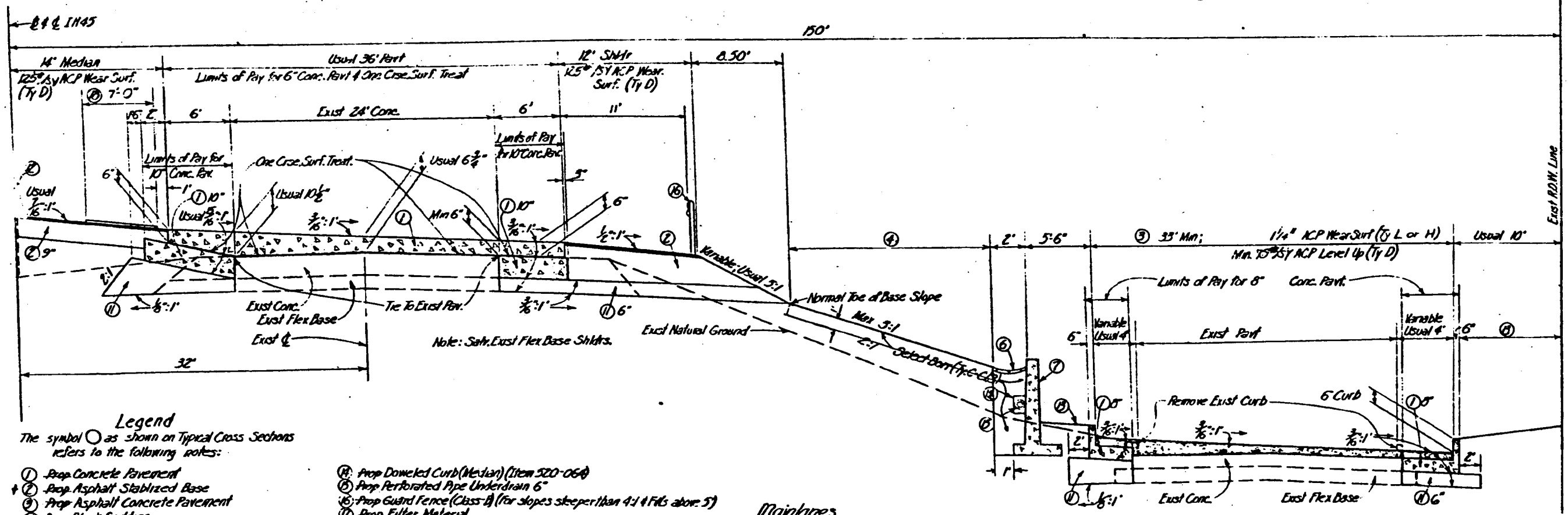
R. L. Lewis

DATE ACCEPTED



Mainlanes
Typical Half Section #1
Normal Widening Area.

Frontage Roads



Mainlanes
Typical Half Section #2
Normal High Fill with Guard Fence
Widening Area

Frontage Roads

Legend

The symbol ⬡ as shown on Typical Cross Sections refers to the following notes:

1. Prop. Concrete Pavement
2. † Prop. Asphalt Stablized Base
3. Prop. Asphalt Concrete Pavement
4. Prop. Block Sodding
5. Prop. Cement Stabilized Base
6. Prop. Concrete Riprap
7. Prop. Retaining Wall
8. Exist Flexible Base (To Be Salvaged)
9. Prop. Lime Treated Subgrade
10. Prop. One Course Surface Treatment
11. Salvage Flexible Base or Flexible Base (Ty B or Ty D)
12. Prop. Headlight Barrier Fence & Median Barrier
13. Prop. Disk Seeding
14. Prop. Doweled Curb (Median) (Item 520-064)
15. Prop. Perforated Pipe Underdrain 6"
16. Prop. Guard Fence (Class-B) (for slopes steeper than 4:1 & Fills above 5')
17. Prop. Filler Material
18. Prop. Juggle Bars (6-5½" Length)

Note: 6" Curb to be paid for under Item 360-032
for retaining wall locations, See Sheets 169-172

† Note - May Be Modified In Accordance With Detour Section B-B (Typ 1, 2, & 3). See Sheet # 2 - 17

For Additional Typical Sections See Sheet 23

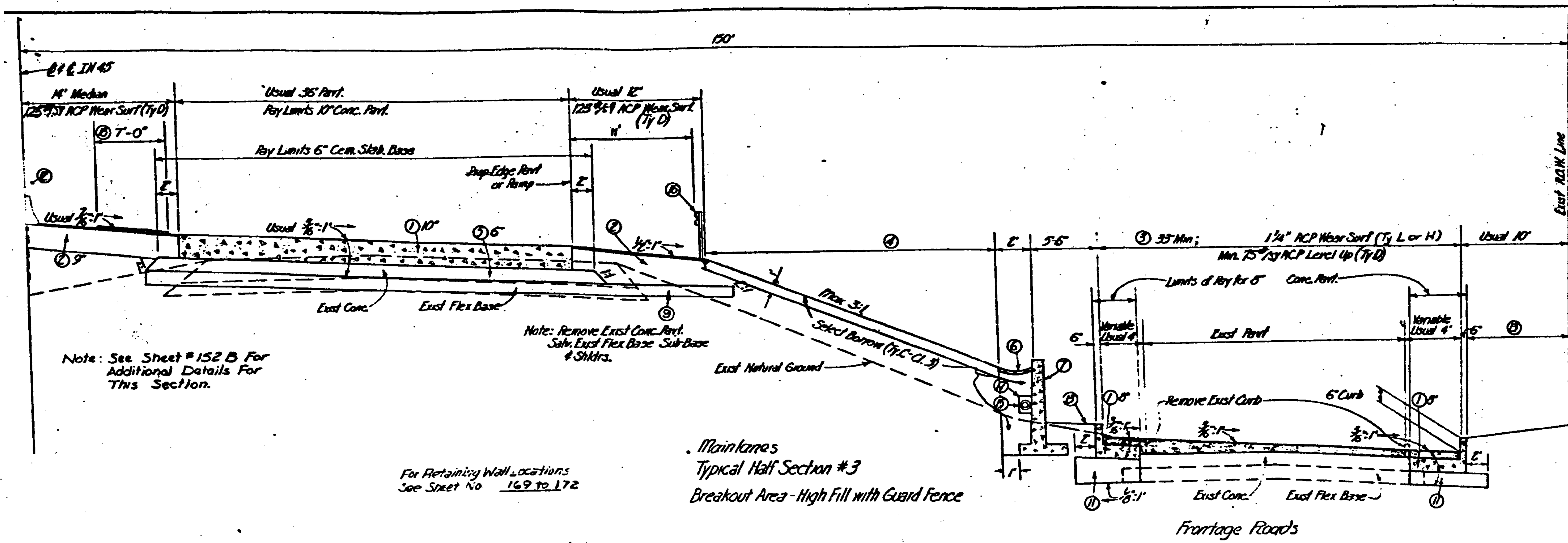
For Typical Section Stations See Sheets 21 & 22

TYPICAL SECTIONS

SHEET 1 OF 6 SHEETS

DIST	COUNTY	CONT.	SECT.	JOB
12	Galveston	300	4	40

18

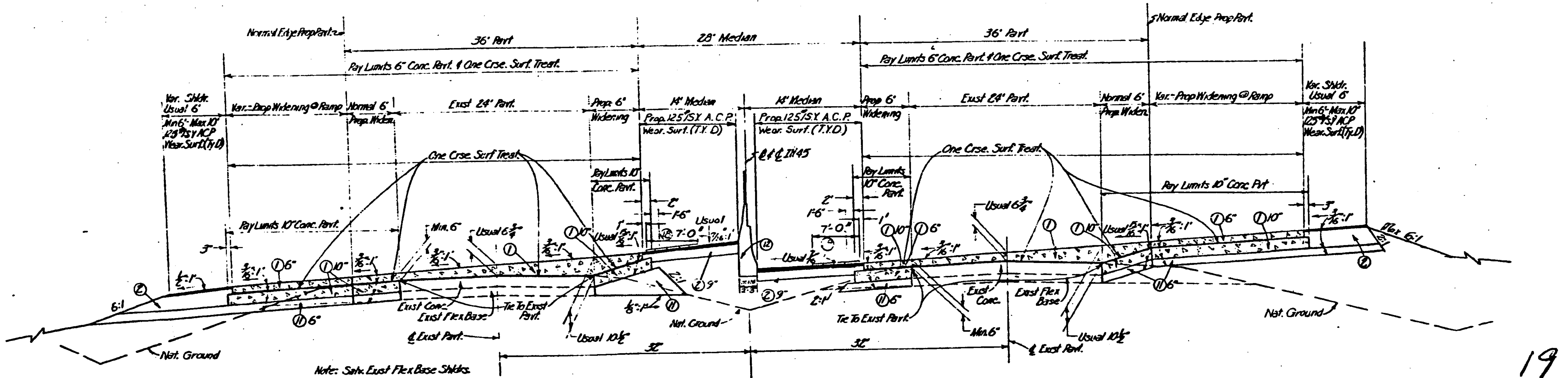


Note: See Sheet # 152 B For Additional Details For This Section.

For Retaining Wall Locations See Sheet No 169 to 172

. Maintanes
Typical Half Section #3
Breakout Area - High Fill with Guard Fence

Frontage Roads



Note: Salv. Exist Flex Base Shldrs.

For Additional Typical Sections See Sheets 23
For Typ. Sect. Stations See Chart on Sheets 21 & 22

Maintanes
Typical Section #4
Superelevation Area

For Legend See Sheet 18

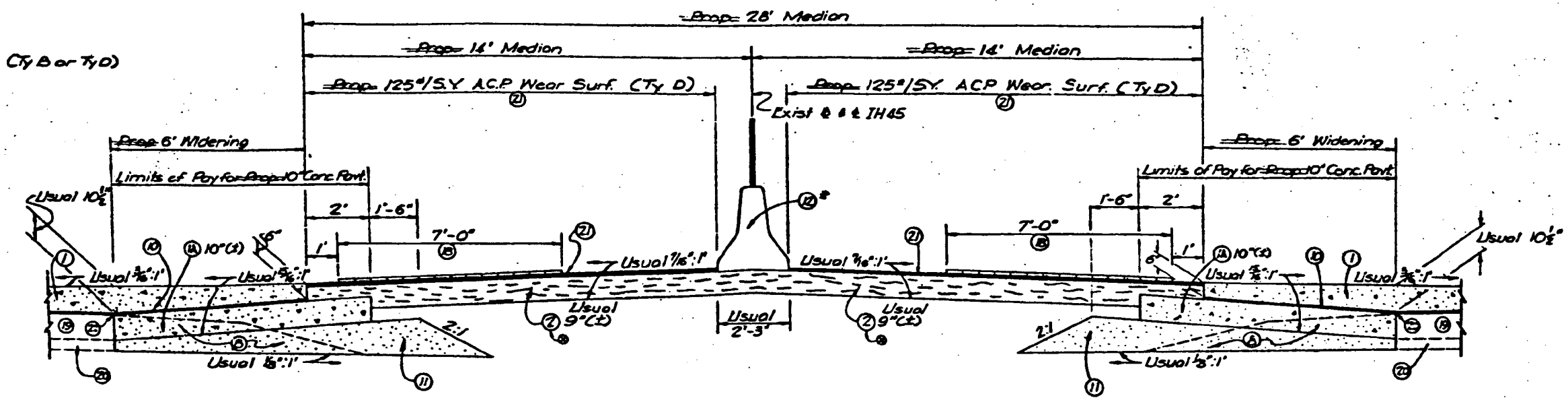
19

TYPICAL SECTIONS
SHEET 2 OF 6 SHEETS

FED. RD. DIV. NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.
6	TEXAS	I-45-1(103) 019	19
STATE DIST. NO.	COUNTY	CONT. / SECT. / JOB	HIGHWAY NO.
12	Galveston	500 / 4 / 40	IH 45

LEGEND

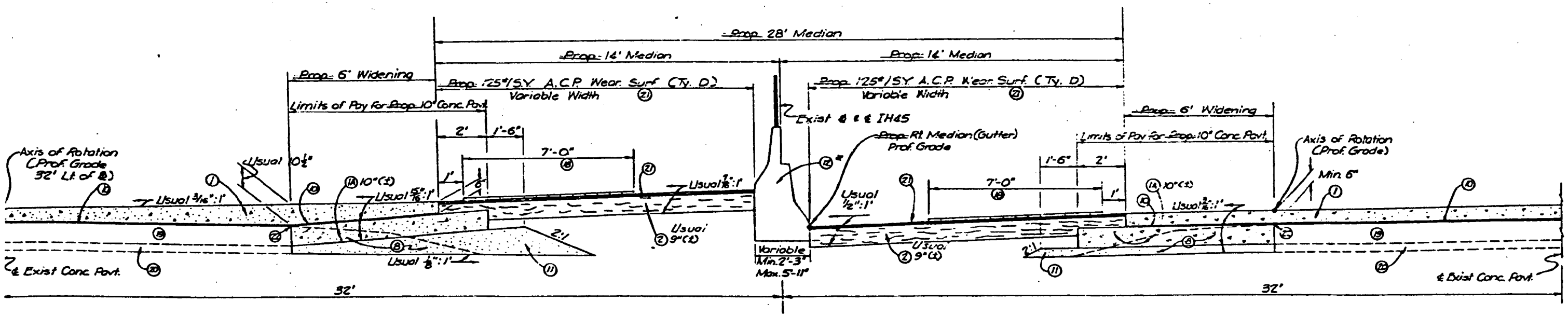
. Pavt.-Contl. Reinf.
: Pavt.-Jointed
h. Slab. Base
x. Base (To Be Salvaged)
Case. Surf. Treat.
Flex. Base or Flex. Base (Ty B or Ty D)
odlight Barrier Fence
ncrete Median Barrier
gle Bars
nc. Pavt To Remain In Place
x. Base To Remain In Place
Wear. Surf. (Ty D)
Prop. Pavt To Exist. Pavt



MAINLANES
TYPICAL HALF SECTIONS
NORMAL WIDENING AREA

Prop. 12"(±) as required for detours.

* Note: For details of Concrete Median Barrier, see sheets #156A-156E.



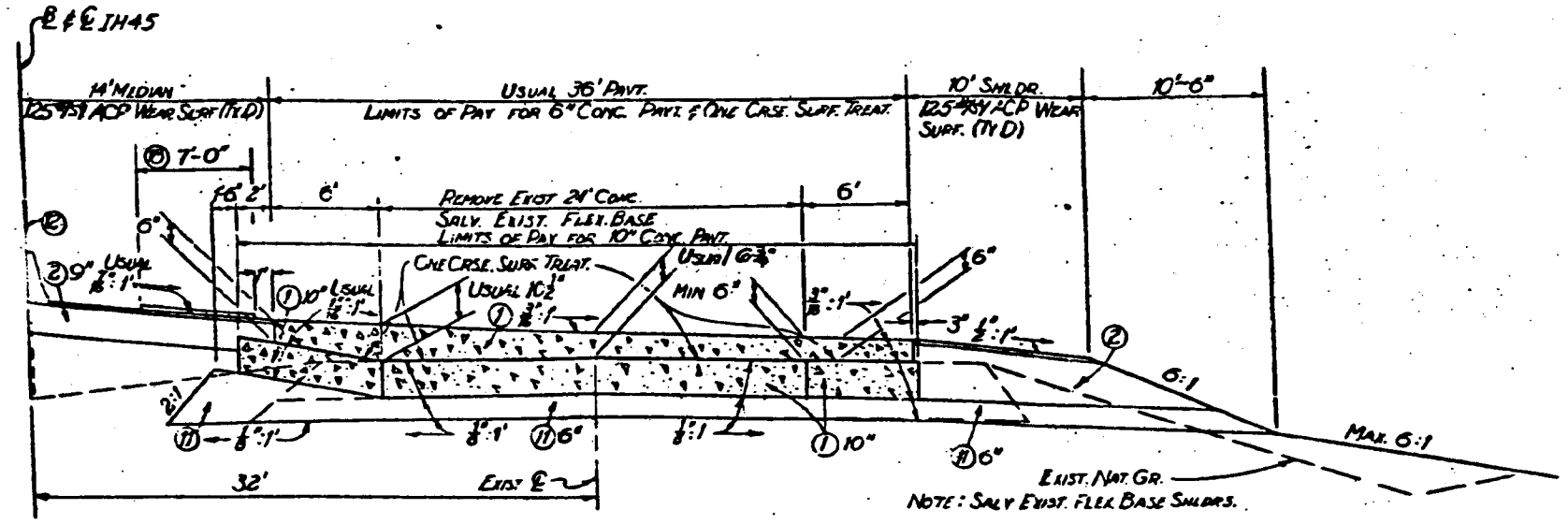
MAINLANES
TYPICAL SECTION
SUPERELEVATION AREA

SKETCH No. 1
To Accompany Field Change No. 22
IH 45 Project I45-1(103)019
Control 500-6-40
Galveston County

TYPICAL SECTIONS
FOR FIELD CHANGE #22

19-A

FED. RD. DIV. NO.	STATE	FEDERAL PROJECT NO.			SHEET NO.
6	TEXAS	I45-1(103)019			-A
STATE DIST. NO.	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
12	Galveston	500	6	40	IH45



⑤ MAINLANE SPECIAL BREAKOUT TYPICAL HALF-SECTION

LEGEND

THE SYMBOL ○ AS SHOWN ON TYPICAL CROSS SECTIONS REFERS TO THE FOLLOWING NOTES:

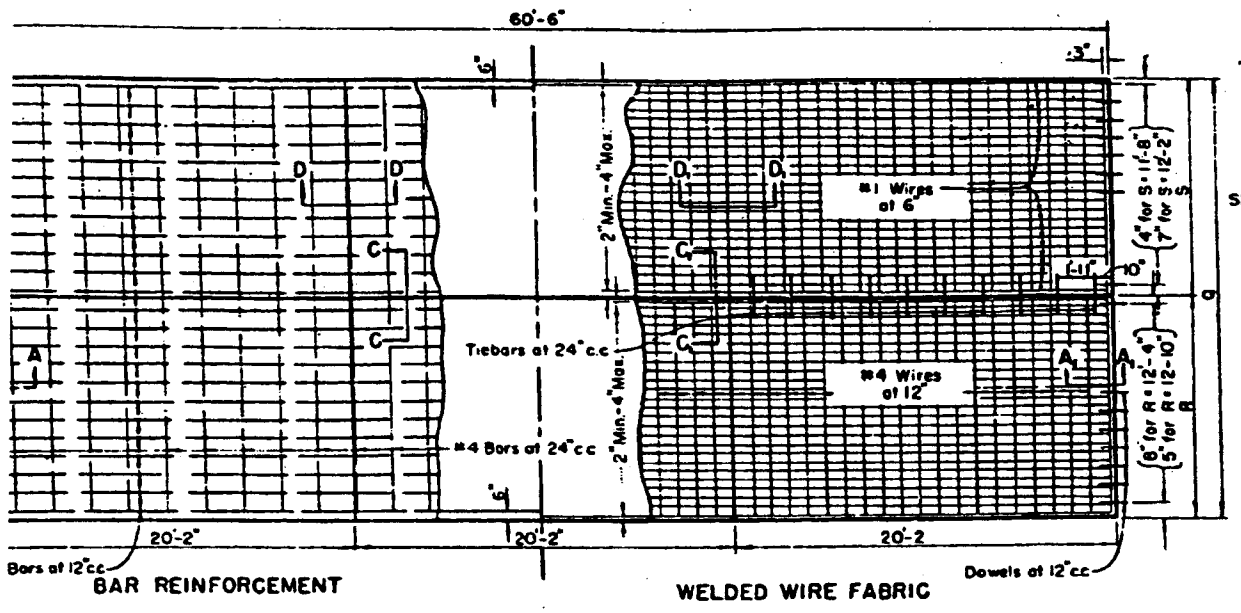
1. ~~PROP.~~ CONCRETE PAVEMENT
2. ~~PROP.~~ ASPHALT STABILIZED BASE
3. ~~PROP.~~ ASPHALT CONCRETE PAVEMENT
4. ~~PROP.~~ SLOPE SODDING
5. ~~PROP.~~ CEMENT STABILIZED BASE
6. ~~PROP.~~ CONCRETE RIPRAP
7. ~~PROP.~~ RETAINING WALL
8. EXIST. FLEX. BASE (TO BE SALVAGED)
9. ~~PROP.~~ LIME TREATED SUBGRADE
10. ~~PROP.~~ ONE COURSE SURFACE TREATMENT
11. SALVAGE FLEXIBLE BASE OR FLEXIBLE BASE (TY. B OR TY. D)
12. ~~PROP.~~ HEADLIGHT BARRIER FENCE & MEDIAN BARRIER
13. ~~PROP.~~ DISK SEEDING
14. ~~PROP.~~ DOWELED CURB (MEDIAN) (ITEM 520-064)
15. ~~PROP.~~ PERFORATED PIPE UNDERDRAIN 6"
16. ~~PROP.~~ GUARD FENCE (CLASS-B) (FOR SLOPES STEEPER THAN 4:1 & FILLS ABOVE 5')
17. ~~PROP.~~ FILTER MATERIAL
18. ~~PROP.~~ JIGGLE BARS (6'-5½" LONGITUDINAL)

TYPICAL SECTIONS

20

SHEET 3 OF 6 SHEETS

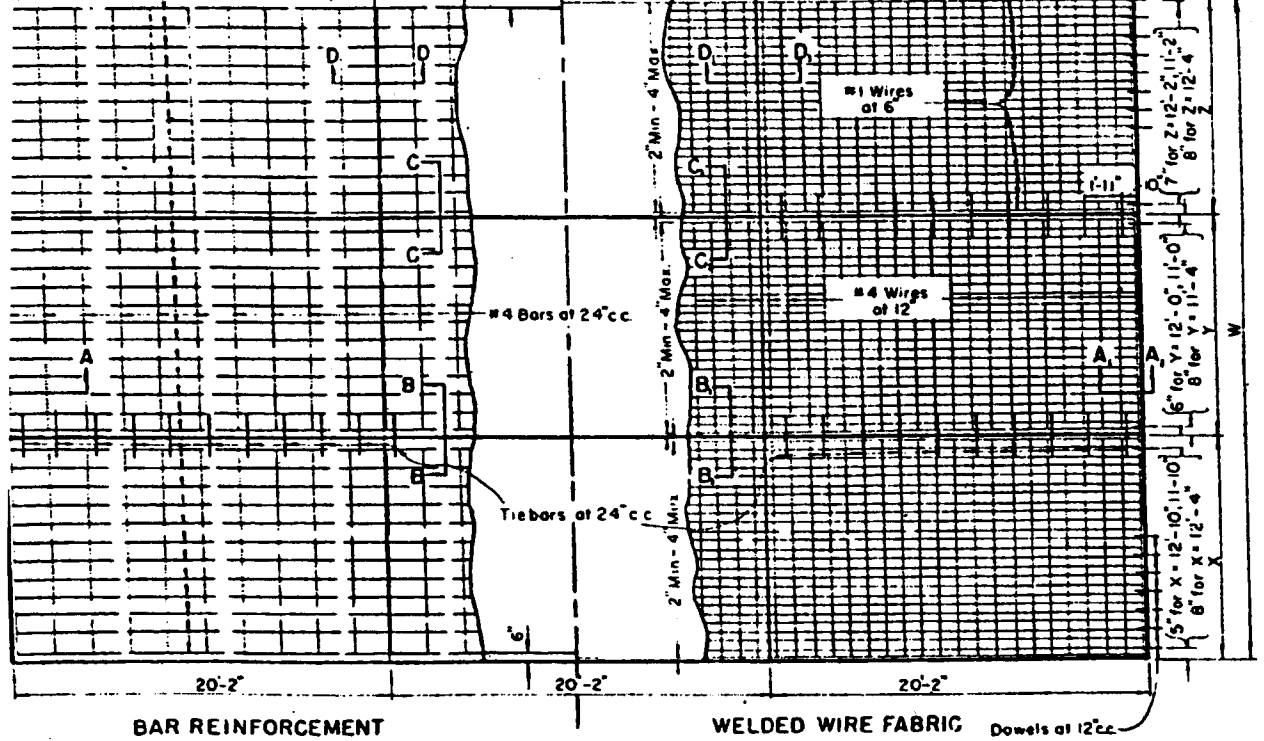
FED. RD. DIV. NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.
6	TEXAS	IAS-1(103)019	20
STATE	DISTRICT	COUNTY	CONT.	SECT.	JOB
DIST. NO.	12	GOLIAD	500	4	70



BAR REINFORCEMENT — WELDED WIRE FABRIC

TWO LANE PAVEMENT PLAN

Q	24'-0"	24'-6"	25'-0"
R	12'-4"	12'-4"	12'-10"
S	11'-8"	12'-2"	12'-2"



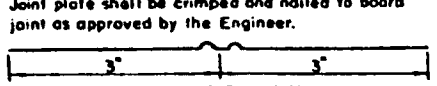
BAR REINFORCEMENT — WELDED WIRE FABRIC

THREE LANE PAVEMENT PLAN

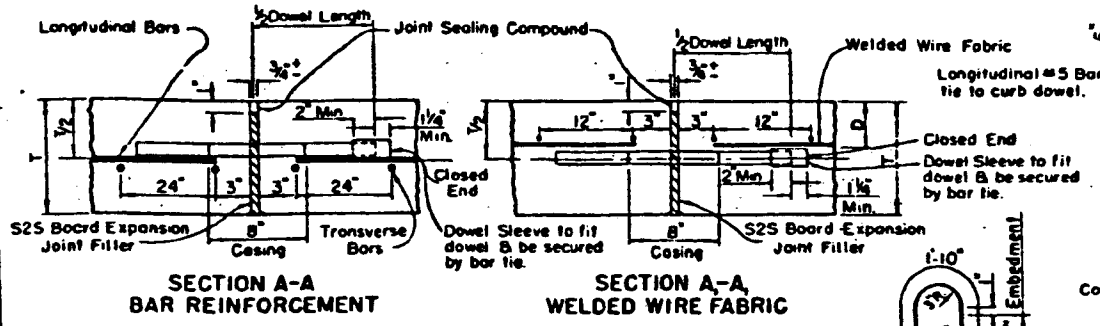
DOWEL & REINFORCING STEEL DATA			
SLAB THICKNESS "T"	8"	9"	10"
DOWEL SIZE	1"	1⅛"	1¼"
DOWEL LENGTH	14"	15"	18"
REINFORCING WIRE DEPTH "D"	3"	3½"	4"

W	37'-0"	36'-0"	34'-0"
X	12'-10"	12'-4"	11'-10"
Y	12'-0"	11'-4"	11'-0"
Z	12'-2"	12'-4"	11'-2"

Note:
Joint plate shall be crimped and nailed to board joint as approved by the Engineer.



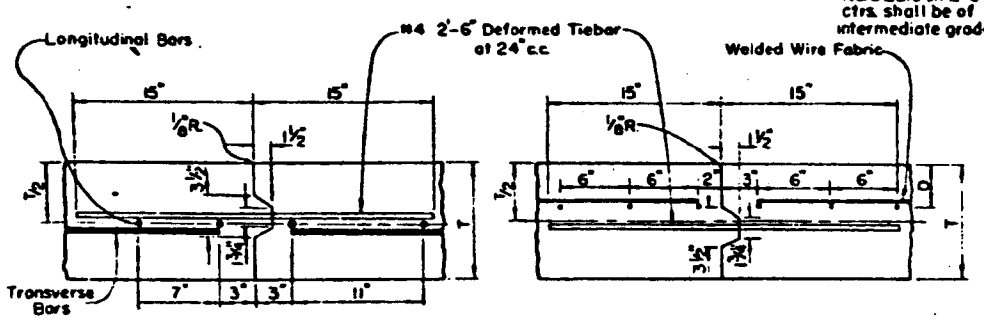
JOINT PLATE DETAIL



SECTION A-A BAR REINFORCEMENT — SECTION A-A WELDED WIRE FABRIC

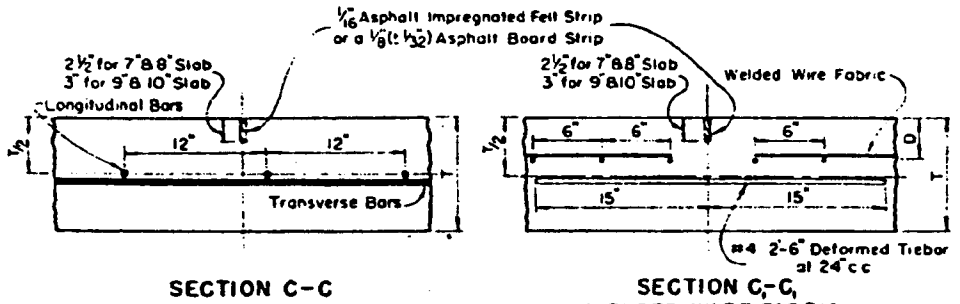
TRANSVERSE EXPANSION JOINTS

CURB DOWEL
No. 3 Bars on 2'-6" ctrs. shall be of intermediate grade stl.



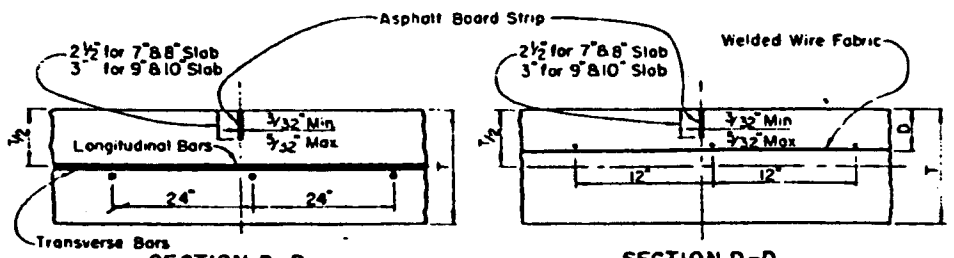
SECTION B-B BAR REINFORCEMENT — SECTION B-B WELDED WIRE FABRIC

LONGITUDINAL CONSTRUCTION JOINTS



SECTION C-C BAR REINFORCEMENT — SECTION C-C WELDED WIRE FABRIC

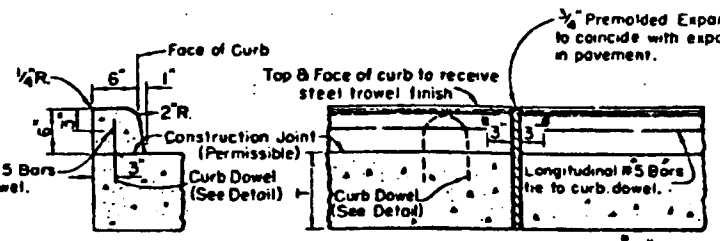
LONGITUDINAL WEAKENED PLANE JOINTS



SECTION D-D BAR REINFORCEMENT — SECTION D-D WELDED WIRE FABRIC

TRANSVERSE WEAKENED PLANE JOINTS

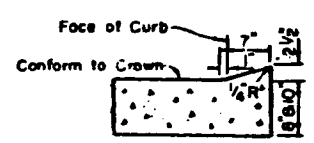
Note: Asphalt Board Strip for Sections D-D & D-D held in an approved continuous metal shield shall be installed, by an approved device operating behind but not attached to the longitudinal float.



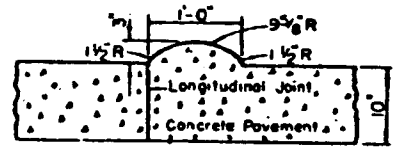
SECTION — ELEVATION

TYPICAL 6" CURB (MONOLITHIC)

8 3" edge distance also applies to Transverse Weakened Plane Joint in curb.



LAYDOWN CURB



CONCRETE CURB (TYPE I)

GENERAL NOTES

1. CONSTRUCTION JOINTS MAY BE FORMED WITH 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.
2. LONGITUDINAL JOINTS ARE SHOWN OFFSET FOUR INCHES FROM THE THEORETICAL CENTER LINE AND MAY BE OFFSET TO EITHER SIDE IF THE WIDTH OF THE WIRE FABRIC IS PROPERLY ADJUSTED.
3. ONE OF THE LONGITUDINAL JOINTS OF PAVEMENT SLABS WIDER THAN TWO LANES MAY BE A CONSTRUCTION JOINT. PAVEMENT SLABS WIDER THAN 15 FEET SHALL HAVE A LONGITUDINAL WEAKENED PLANE JOINT UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
4. JOINTS IN MONOLITHIC CURBS SHALL COINCIDE WITH TRANSVERSE WEAKENED PLANE JOINTS IN THE PAVEMENT AND SHALL BE FORMED BY THE USE OF A 1/4 INCH TEMPLATE PLACED FULL DEPTH OF THE CURB AND INTO THE JOINT SEAL SPACE. THE TEMPLATE SHALL BE LOOSENED AS SOON AS THE CONCRETE WILL RETAIN ITS SHAPE AND THE EDGES SHALL BE EDGED WITH AN APPROVED EDGING TOOL.
5. THE JOINT SEAL SPACE AT TRANSVERSE EXPANSION JOINTS SHALL BE FORMED BY A STRAIGHT FORM PLACED BEHIND THE LONGITUDINAL FLOAT. THE FORM SHALL BE LOOSENED AS SOON AS THE CONCRETE WILL RETAIN ITS SHAPE AND THE EDGES SHALL BE EDGED WITH AN APPROVED EDGING TOOL. LONGITUDINAL CONSTRUCTION JOINTS SHALL HAVE BOTH EDGES TOOLED TO A 1/8" RADIUS AT THE PAVEMENT SURFACE.
6. WHEN SLIP FORM PAVING IS USED, THE FOLLOWING SHALL ALSO APPLY: A) THE JOINT SEAL SPACE FOR TRANSVERSE JOINTS SHALL BE FORMED AND PLACED AS APPROVED BY THE ENGINEER, B) SEALING AND EDGING OF LONGITUDINAL CONSTRUCTION JOINTS WILL NOT BE REQUIRED, C) EDGING OF LONGITUDINAL PAVEMENT EDGES WILL NOT BE REQUIRED.
7. THE JOINT PLATE SHALL BE 20 GAGE ASPHALT COATED GALVANIZED STEEL WITH A USUAL MINIMUM LENGTH OF 6 FEET. JOINT PLATES MAY BE BUTTED AT THE LONGITUDINAL CONSTRUCTION JOINT OTHERWISE THEY SHALL BE LAPPED 3 INCHES. JOINT PLATE SHALL EXTEND TO WITHIN 1/2 INCH OF THE OUTSIDE FORM LINE.
8. ON THOSE SECTIONS WHERE THE CONCRETE PAVEMENT IS OF VARIABLE WIDTH AND THE LONGITUDINAL PLANE OF WEAKNESS CANNOT BE FORMED AS SHOWN, THE CONTRACTOR WILL BE REQUIRED TO FURNISH AND INSTALL A METAL PARTING STRIP OF ACCEPTABLE DESIGN.
9. TRANSVERSE EDGES OF SHEETS OF WELDED WIRE FABRIC SHALL BE LAPPED 12 INCHES EXCEPT AT TRANSVERSE JOINTS. LONGITUDINAL EDGES SHALL BE LAPPED 6 INCHES EXCEPT AT LONGITUDINAL JOINTS.
10. DOWEL BARS SHALL BE TIGHTLY ENCASED IN STAINLESS STEEL OR MONEL METAL. THE CASING SHALL CONFORM TO THE REQUIREMENTS OF ONE OF THE GRADES OF ASTM A176-54 AND SHALL BE NOT LESS THAN 0.010 INCH THICK. THE CASING SHALL BE AT LEAST 8 INCHES LONG AND SHALL COVER THE MIDDLE 8 INCHES OF THE DOWEL.
11. DOWELS SHALL BE SECURED PARALLEL TO THE PAVEMENT SURFACE AND PERPENDICULAR TO THE JOINT WITH THE AID OF APPROVED WELDED WIRE BASKET ARRANGEMENTS. WELDED WIRE BASKET ARRANGEMENTS SHALL NOT CROSS THE EXPANSION JOINT. DOWELS SHALL BE UNIFORMLY COATED WITH A THIN COAT OF OIL ASPHALT.
12. TO PREVENT DISPLACEMENT OF WIRE FABRIC BY CONCRETE PLACEMENT, THE FABRIC PANELS SHALL BE TIED TOGETHER AND/OR THE INITIAL FABRIC PANELS OF EACH SLAB SHALL BE TIED TO THE DOWEL BASKET IF SO DIRECTED BY THE ENGINEER.
13. PAVEMENT EDGES SHALL BE EDGED TO A RADIUS OF 1/8 INCH WITH AN APPROVED EDGING TOOL.
14. DETAILS AS TO PAVEMENT WIDTH, PAVEMENT THICKNESS, AND THE CROWN-SLOPE SHALL BE AS SHOWN ELSEWHERE ON PLANS.
15. LONGITUDINAL AND TRANSVERSE BARS SHALL BE OF INTERMEDIATE OR HARD GRADE STEEL.
16. THE CONTRACTOR SHALL HAVE THE OPTION OF USING WELDED WIRE FABRIC OR BAR REINFORCEMENT.
17. FOR LANE WIDTHS NOT SHOWN HEREON OR FOR VARIABLE PANEL LENGTHS AND WIDTHS, REINFORCING STEEL AND DOWEL SPACING SHALL BE AS DIRECTED BY THE ENGINEER.
18. THE LONGITUDINAL WEAKENED PLANE JOINT SHALL BE FORMED BY AN ASPHALT BOARD STRIP HELD IN AN APPROVED CONTINUOUS METAL SHIELD OR AN ASPHALT IMPREGNATED FELT STRIP PLACED CONTINUOUSLY BEHIND BUT NOT ATTACHED TO THE LONGITUDINAL FLOAT BY A MACHINE OF THE FLEX PLANE TYPE.
19. BAR MAT CHAIRS SHALL BE AS APPROVED BY THE ENGINEER. CHAIR SPACING SHALL NOT EXCEED 30" c-c (TRANSVERSE) AND 48" c-c (LONGITUDINAL). GALVANIZING OF CHAIRS WILL NOT BE REQUIRED.
20. BOARDS FOR EXPANSION JOINT FILLER SHALL BE OBTAINED FROM REDWOOD TIMBER.
21. LAYDOWN CURB AS DIRECTED BY THE ENGINEER SHALL BE PAID FOR UNDER THE ITEM OF MONOLITHIC CURB (6 INCHES).
22. JOINT SEALING MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF CLASS 2
23. WITH THE WRITTEN APPROVAL OF THE ENGINEER, A JOINT PLATE OF A DIFFERENT MATERIAL AND DESIGN MAY BE USED IN LIEU OF THE JOINT PLATE SHOWN HEREIN.

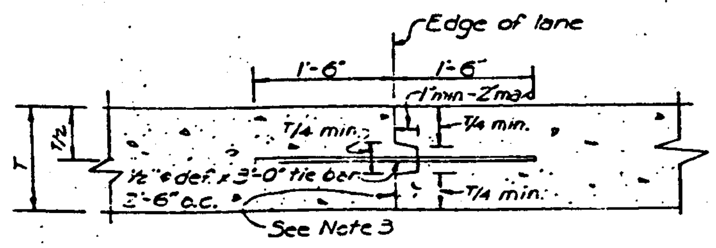
CONCRETE PAVEMENT DETAILS 150

24. *This Standard Is For All Types Of Concrete Pavement Except 6" & 10" Continuous Reinforced Concrete.*

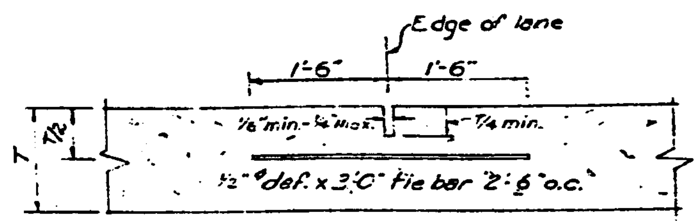
Revised: 8-4-70

FED. RD. DIV. NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.
6	TEXAS	I 35-(103) 0:0	150
STATE DIST. NO.	COUNTY	CONT.	SECT.	JOB	DIST. NO.
12	Galveston	550	4	40	1145

LONGITUDINAL JOINTS

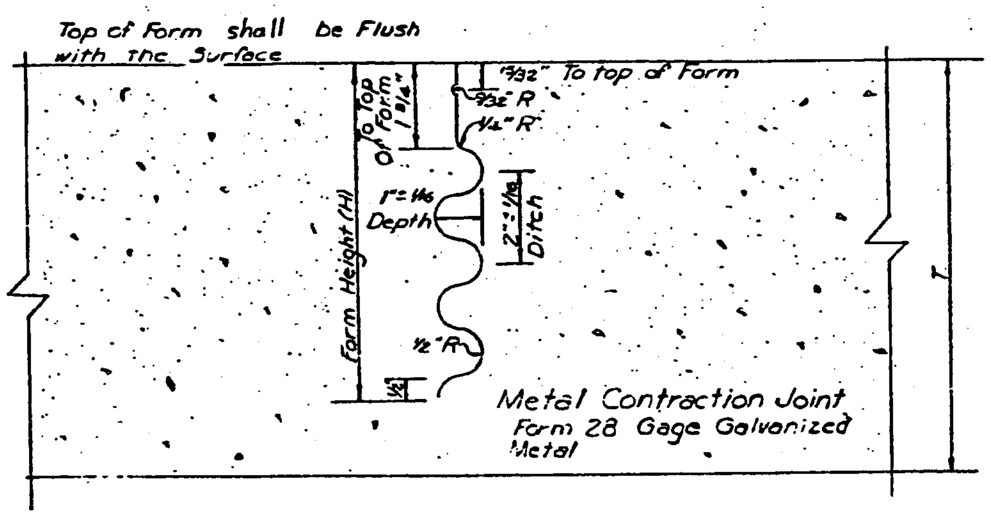


TYPE 1- CONSTRUCTION
(Tongue and Groove with Tie bar)



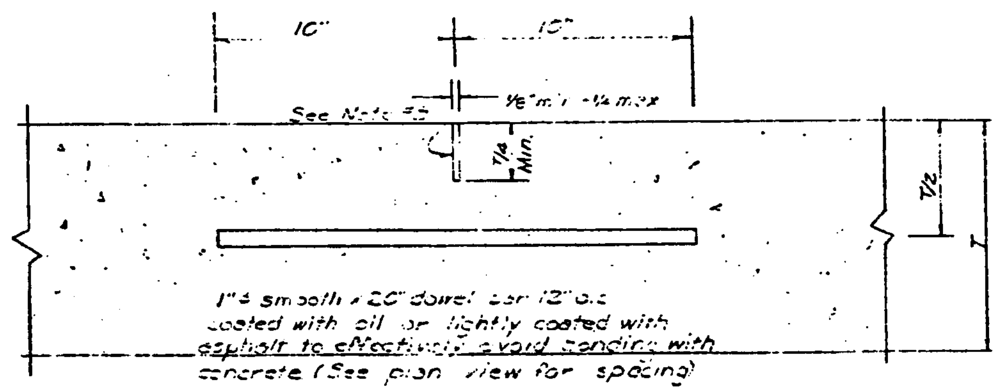
TYPE 2 - GROOVED
(Sawed or Formed with Tie Bars)

TRANSVERSE CONTRACTION JOINTS

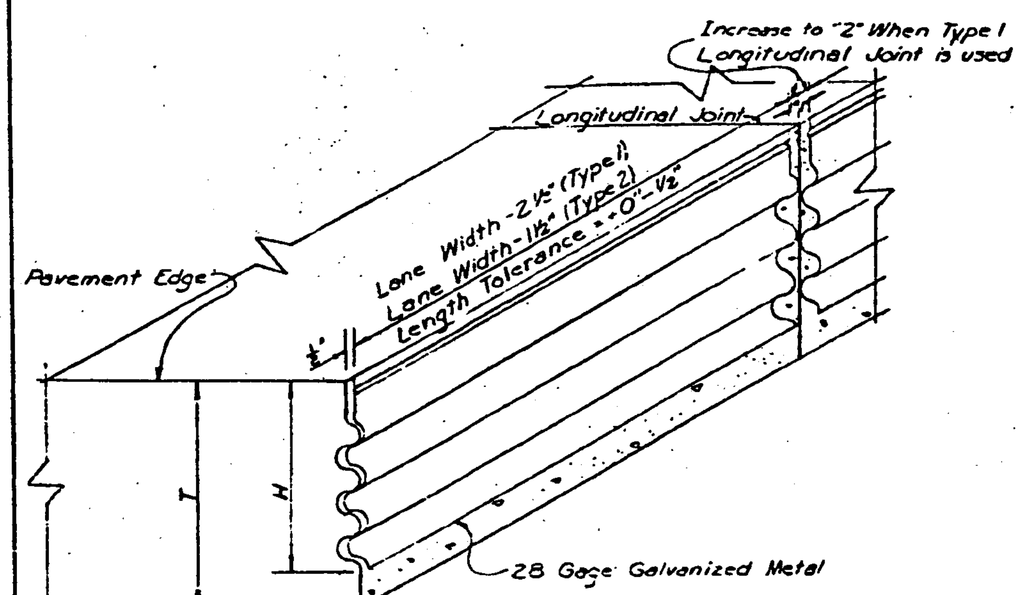


TYPE A (CORRUGATED METAL)

Note: Permissible Fabrication Tolerance: The semicircular segments shall be connected at a common point of tangency on the vertical axis of the joint or by a segment not exceeding one fourth of an inch (1/4") in length at right angles to and symmetrical with the vertical axis of the joint.



TYPE B (GROOVED)
(Sawed or Formed with Coated Dowel)

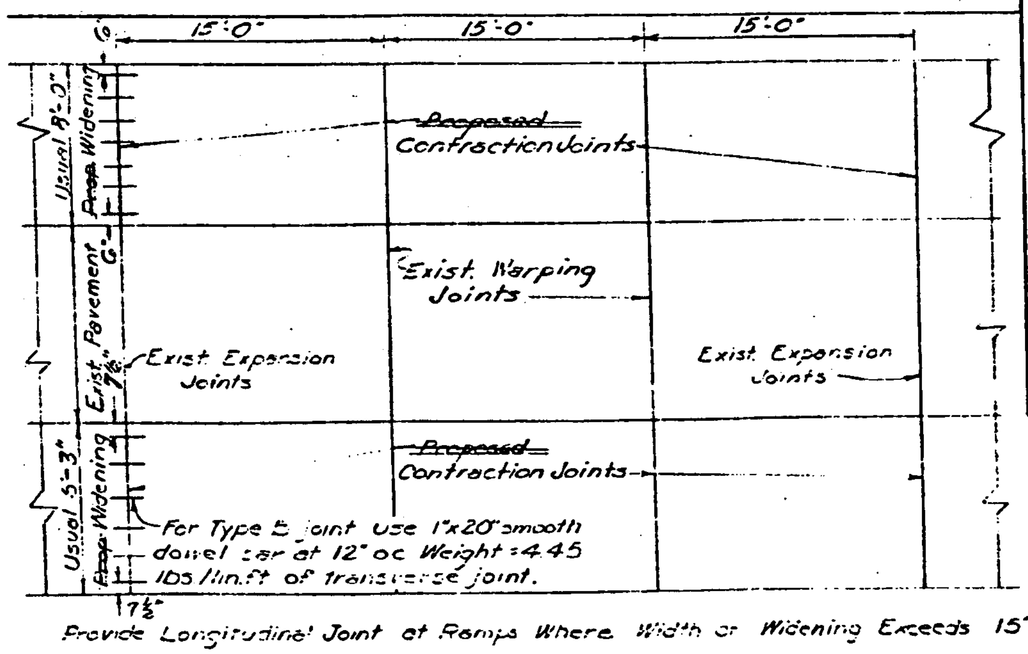


OBLIQUE SECTION SHOWING METAL CONTRACTION JOINT FORM IN PLACE

Table of Form (H)

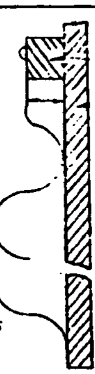
Slab Thickness (T) in.	6	7	8	9	10	11	12
Form Height (H) in.	5 1/4	5 1/4	5 1/4	6 1/4	7 1/4	8 1/4	9 1/4

The values shown above are applicable when form is installed by machine. When form is staked out in advance of concrete placement these values are to be considered as minimum heights.
* Cannot be placed by machine.



Provide Longitudinal Joint at Ramps Where Width of Widening Exceeds 15'

PLAN VIEW OF LONGITUDINAL AND TRANSVERSE CONTRACTION JOINTS



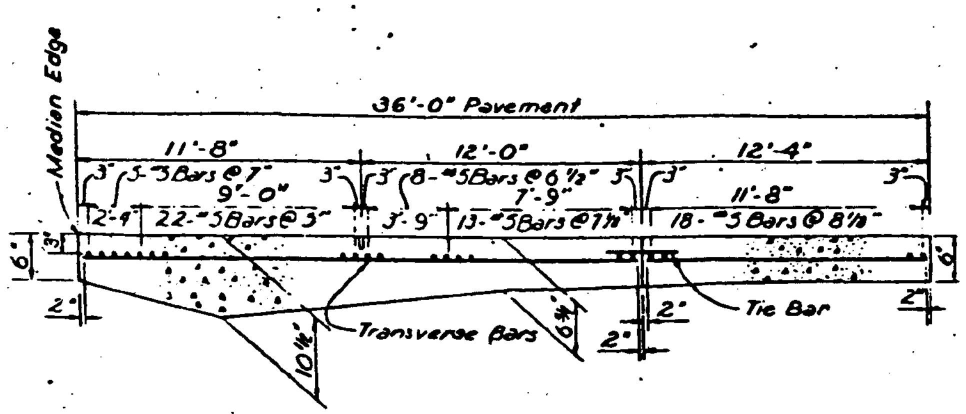
SECTION SHOWING BACKING PLATE AND SHIM TO BE PROVIDED IF METAL CONTRACTION JOINT FORM IS INSTALLED BY VIBRATING MACHINE

GENERAL NOTES:
1. Crown, pavement width and pavement thickness shall be as shown on typical sections elsewhere in plans. Where more than two lanes are shown on the typical sections, the Type 1 longitudinal joint shall be used as a construction joint.
2. The use of Type B transverse contraction joints is optional. Other means of load transfer may be used when approved by the Engineer.
3. The weakened plane in Types 2 & B shall be true to line, [illegible] of the depth shown. For Types 2 & B the weakened plane may be formed by:
(A) an asphalt board strip held in a continuous metal sheath and placed continuously in a groove cut in the concrete by an approved mechanical device operating behind the longitudinal [illegible] or B [illegible] in premolded felt strip, or C [illegible] alternate method which, prior to its use, has been approved by the Engineer. The minimum thickness of the weakened plane as shown in Types 2 & B does not apply to Construction Under Methods (A) & (B) above.
4. Type 1 Longitudinal Joint may be formed by a metal form, wood form or means, which prior to its use, has been approved by the Engineer.
5. The Contractor will be required to vibrate the metal contraction joint Form or concrete adjacent to the Form to the extent necessary that all corrugations are filled with concrete. Over vibration shall be avoided in all cases.
6. Tie bars shall be secured parallel to the pavement surface and perpendicular to the center line by a bar chair or accurately placed in position on the screeded concrete by means of an approved template and forced to the proper position with suitable tool or other means, approved in advance by the Engineer.
7. Dowel Bars shall be secured parallel to the pavement surface and centerline by a dowel bar chair or placed by a machine which will accurately position the bars by vibrating them into the full depth concrete slab prior to the pass of the final finishing equipment.
8. When work is stopped due to breakdown or other causes, remove concrete beyond last contraction joint in place and install header.
9. On two lane Pavements where circular or parabolic crown is specified, the Metal Contraction Joint Form shall be placed with axis flush with pavement surface. Cutting crown in top of form is not necessary.
10. Unless otherwise specified by the Engineer the minimum length of Metal Contraction Joint Form shall be lane width minus 1 1/2". Where shorter lengths are permitted, they shall be held together by any means which holds adjoining sheets in line and which is approved by the Engineer.
11. Expansion Joints shall be provided only at structure ends as shown elsewhere in plans.
12. The Contractor shall hold and save harmless the State, its officers, its agents and its employees, liability of any nature or kind, including costs 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.
13. Where 6-3 or 8-0 widening is [illegible] contiguous to existing [illegible] pavement, a [illegible] type joint shall be provided.

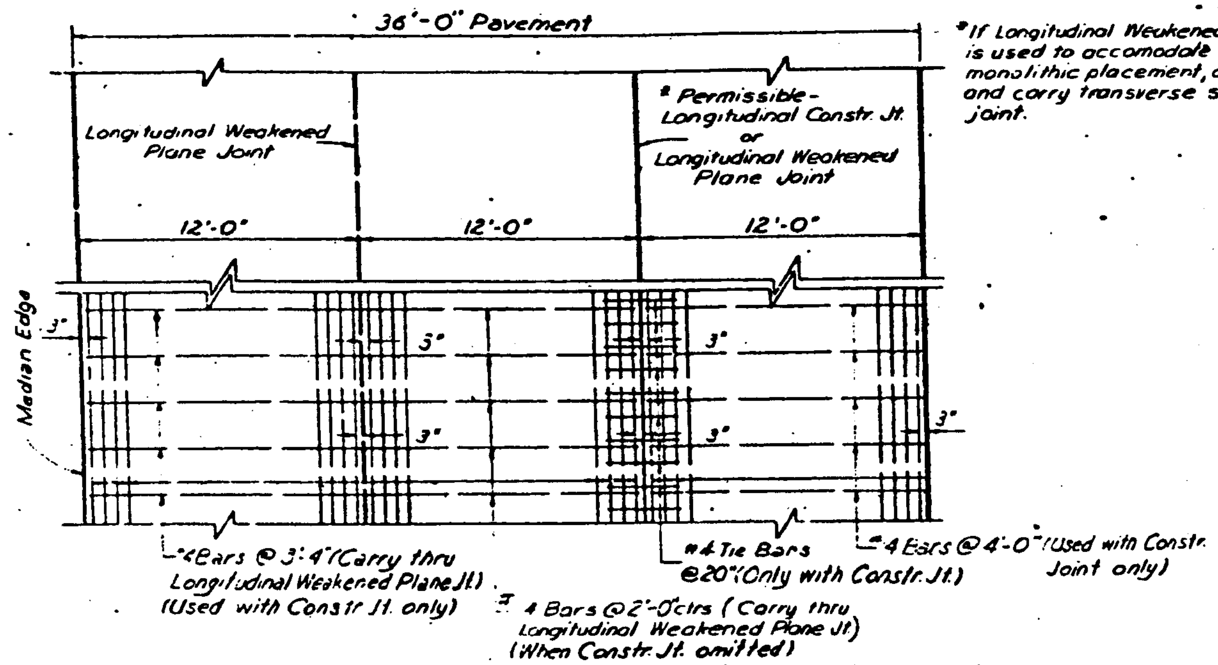
150-A

CONCRETE MAIN LANE PAVEMENT WIDENING DETAILS
CONTRACTION DESIGN

	145-1(14)19		150A
12	Galveston	500 + 10	1145

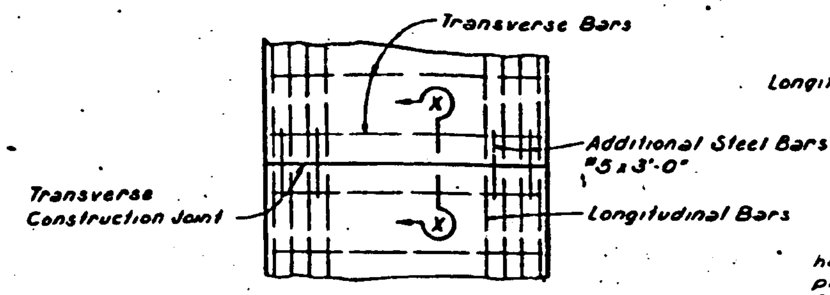


OVERLAY SECTION - VARIABLE DEPTH

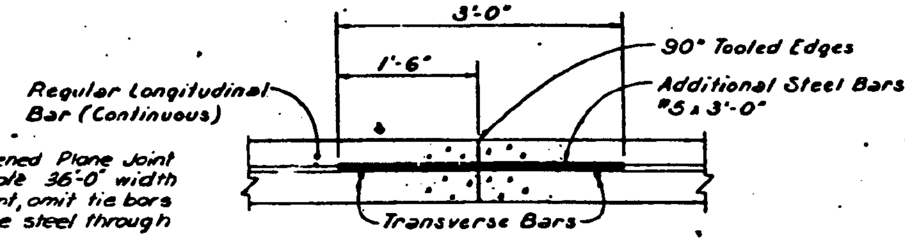


FREEWAY PAVEMENT PLAN

*If Longitudinal Weakened Plane Joint is used to accomodate 36'-0" width monolithic placement, omit tie bars and carry transverse steel through joint.

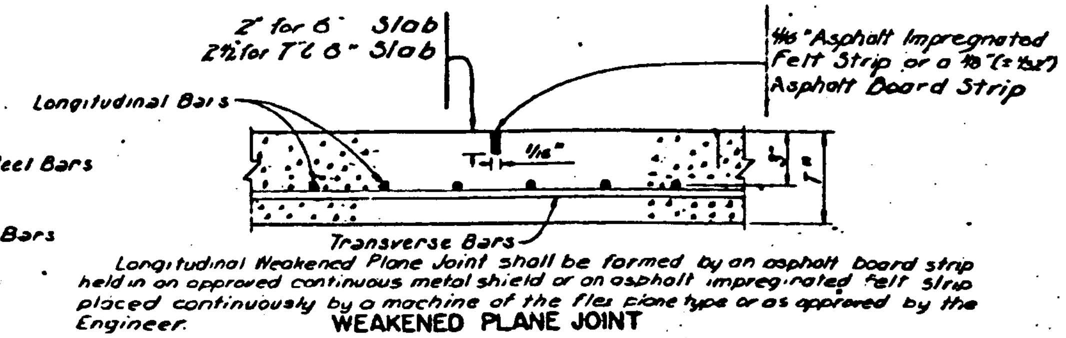


TYPICAL PAVEMENT PLAN (ONE LANE)



SECTION X-X

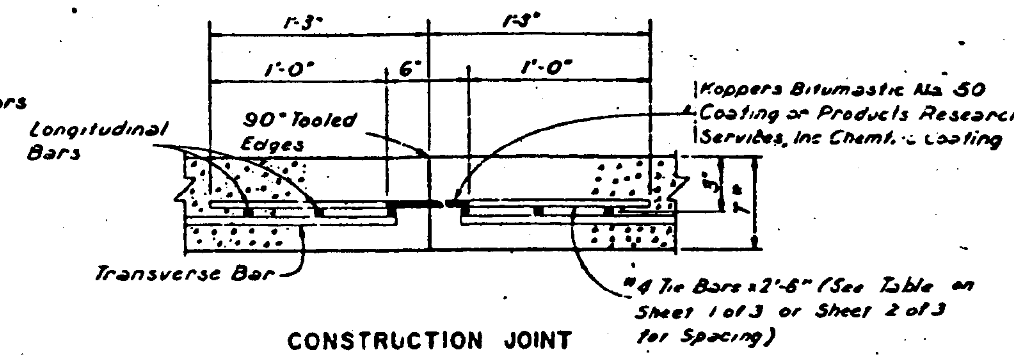
TRANSVERSE CONSTRUCTION JOINT



Longitudinal Weakened Plane Joint shall be formed by an asphalt board strip held in an approved continuous metal shield or an asphalt impregnated felt strip placed continuously by a machine of the flex plane type or as approved by the Engineer.

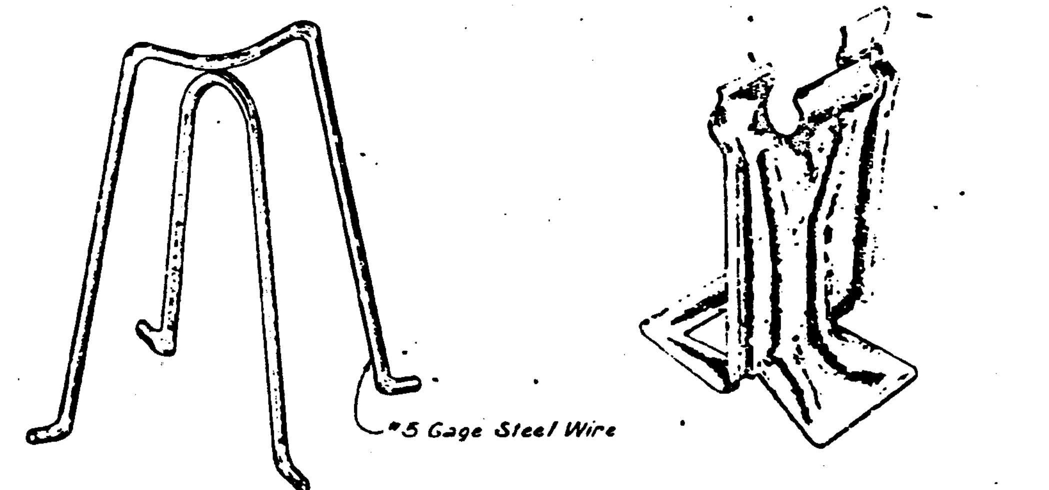
WEAKENED PLANE JOINT

*Thickness of Pavement



CONSTRUCTION JOINT SHOWING PAVEMENT TIE BAR

LONGITUDINAL JOINTS



Bar Mat Chairs of these types or equal as approved by the Engineer may be used to support reinforcing steel to dimensions shown. Chair spacing shall not exceed 34" c-c (transverse) and 48" (longitudinal). Galvanizing of chairs will not be required.

SUGGESTED CHAIR DETAILS

NERAL NOTES

ALL LONGITUDINAL AND TRANSVERSE REINFORCING BARS, (EXCEPT THOSE WHICH ARE TO BE BENT) SHALL BE "HIGH ELD" STEEL CONFORMING TO ASTM DESIGNATION 615, GRADE 60. TRANSVERSE TIE BARS AND BARS WHICH REQUIRE NDING SHALL CONFORM TO ASTM DESIGNATION 615, GRADE 40.

WITHIN ANY TWO FEET OF PAVEMENT LENGTH, MEASURED PARALLEL TO THE CENTERLINE, NOT OVER ONE OF THE NGITUDINAL BARS SHALL BE SPLICED WITHIN EACH TWELVE FOOT WIDE SECTION. BAR SPLICES SHALL BE A MINIMUM 24 TIMES THE NOMINAL DIAMETER OF THE BAR. LONGITUDINAL STEEL SHALL BE FURNISHED IN CONVENIENT LENGTHS. RAP STEEL SHALL NOT BE USED.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TAKE ALL NECESSARY PRECAUTIONS TO INSURE THAT THE NAL POSITION OF THE STEEL IS WITHIN TOLERANCE OF 1/2" HORIZONTAL & VERTICALLY, 1/2" UP & 1" DOWN FROM THE ORETICAL POSITIONS SHOWN WITH A MIN OF 2" FROM BOTTOM OF STEEL TO BOTTOM OF SLAB.

LONGITUDINAL CONSTRUCTION JOINTS MAY BE DELETED PROVIDED THAT TRANSVERSE EINFORCING STEEL IS ADJUSTED ACCORDINGLY AS DIRECTED BY THE ENGINEER. IN NO CASE SHALL LONGITUDINAL CONTRUCTION OR FORMED GROOVED JOINTS BE MORE THAN 17 FT APART ON FREEWAY PAVEMENT OR FRONTAGE STREET PAVEMENT S MEASURED TRANSVERSELY.

THE NUMBER OF TRANSVERSE CONSTRUCTION JOINTS INSTALLED SHALL BE KEPT TO AN ABSOLUTE MINIMUM AS APPROVED Y THE ENGINEER. IF PLACEMENT IS STOPPED AT THE END OF THE DAY OR FOR OTHER REASONS, PLACE BOARD HEADER ND EXTEND EACH OF THE LONGITUDINAL BARS IN CONSECUTIVE INCREMENTS OF 2' BEYOND THE BOARD HEADER. REMOVE OARD HEADER BEFORE COMMENCING NEW PLACEMENT. UNDER CERTAIN JUSTIFIABLE CONDITIONS, AS DETERMINED BY THE NGINEER, WELDED BAR LAP SPLICES MAY BE USED IN LIEU OF EXTENDING LONGITUDINAL BARS BEYOND THE BOARD HEADER. NI REINFORCING STEEL FURNISHED FOR WELDING SHALL BE NEW BILLET STEEL ONLY. SEE ITEM 440 FOR REQUIREMENTS OR WELDING REINFORCING STEEL.

"LEAVE-OUTS" IN CONTINUOUSLY REINFORCED PAVEMENT SHALL BE KEPT TO A MINIMUM. BEFORE PAVING A SECTION WERE A "LEAVE-OUT" WAS NECESSARY, SUCH AS A MAJOR STREET CROSSING, AN ATTEMPT SHALL BE MADE TO STABILIZE HE TEMPERATURE OF THE FREE ENDS OF THE EXISTING PAVEMENTS. TEMPERATURE STABILIZATION MAY BE ACCOMPLISHED BY PLACING WET COTTON MATS FOR A DISTANCE OF 200' ON EACH SIDE OF THE "LEAVE-OUT" 24 HOURS PRIOR TO CONCRETE PLACEMENT AND CONTINUED UNTIL 60 HOURS AFTER PLACEMENT. IF THE "LEAVE-OUT" IS LESS THAN 6' LONG, THE LAPS IF THE LONGITUDINAL STEEL SHALL BE WELDED. THE FACES OF THE FREE ENDS SHALL BE CLEANED SO THAT ADEQUATE OND WILL DEVELOP BETWEEN THE NEW AND OLD CONCRETE.

DETAILS AS TO PAVEMENT WIDTH, THICKNESS, AND CROWN SLOPE SHALL BE AS SHOWN ELSEWHERE IN THE PLANS OR S DIRECTED BY THE ENGINEER.

Terminal Section to be incidental to various other bid items.

TEXAS HIGHWAY DEPARTMENT

CONCRETE PAVEMENT DETAILS CONTINUOUSLY REINFORCED

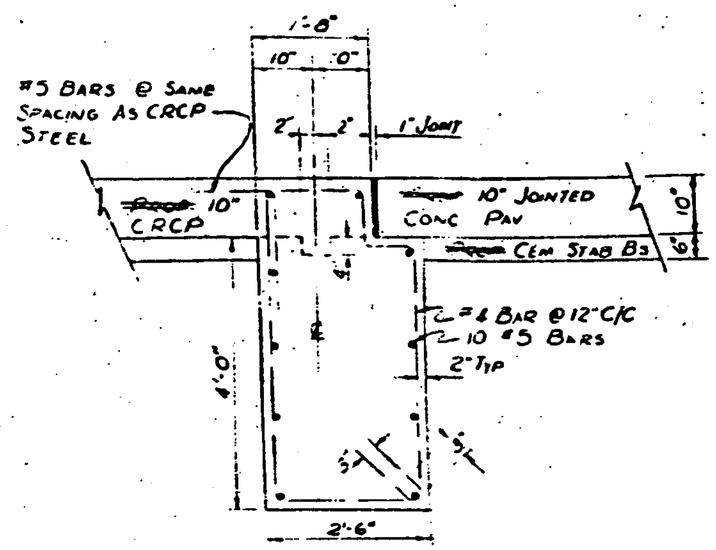
STEEL BARS
MAINLANES

151

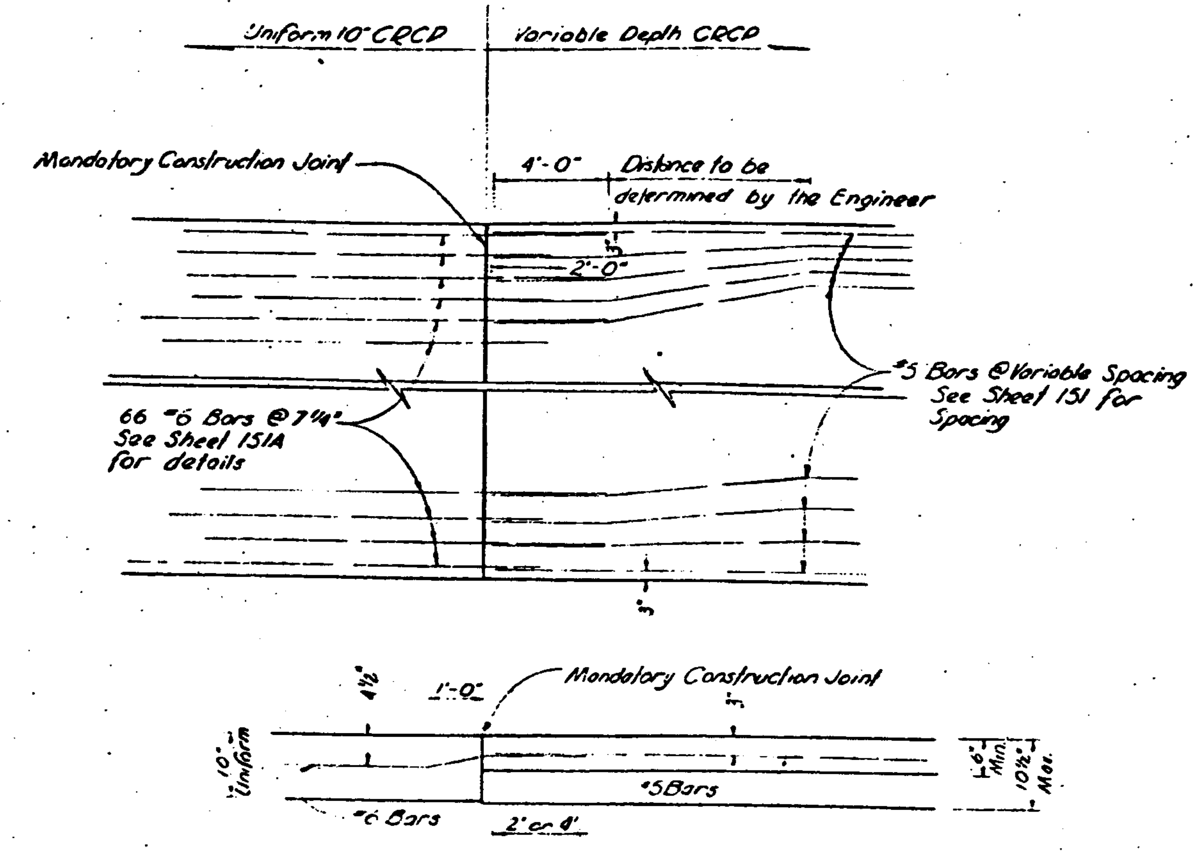
SEPT. 1967
JULY, 1968

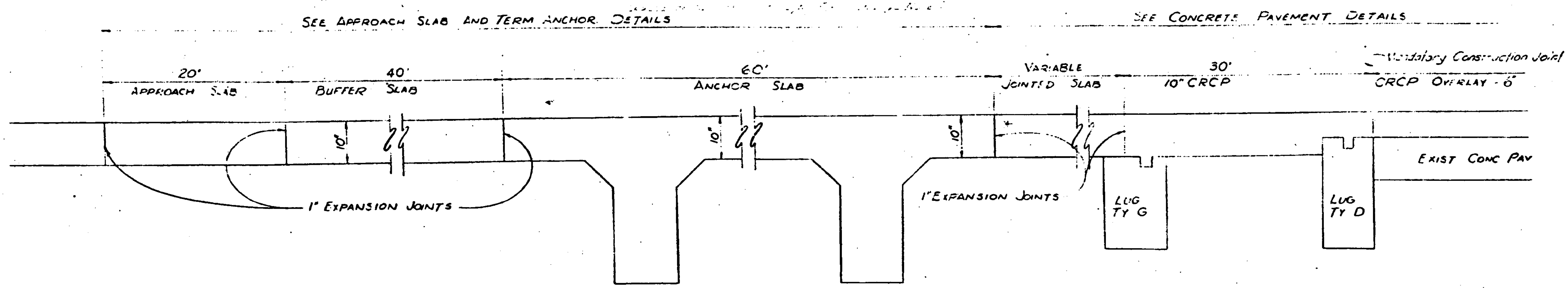
I45-1(103)0??

Galveston 500 4 40 151



LUG TY "G"

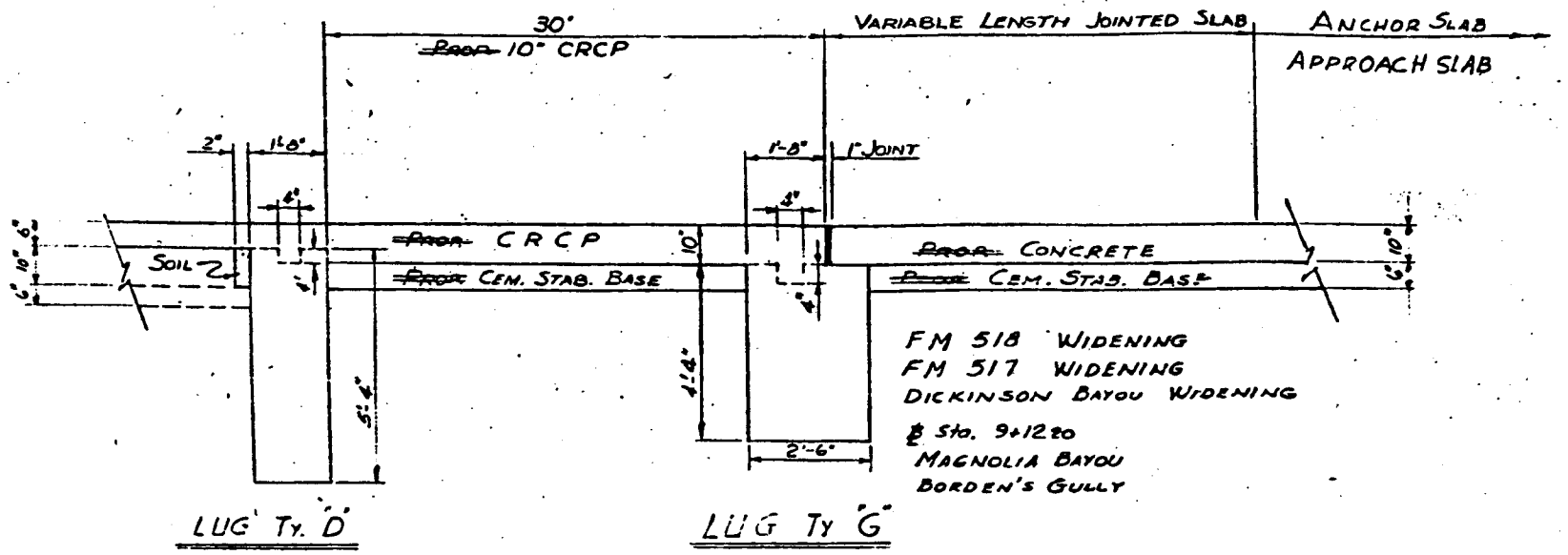




~~Proposed~~ Terminal Anchorage Treatment
For CRCP Overlay at Mainlane Bridges

CONCRETE PAVEMENT DETAILS

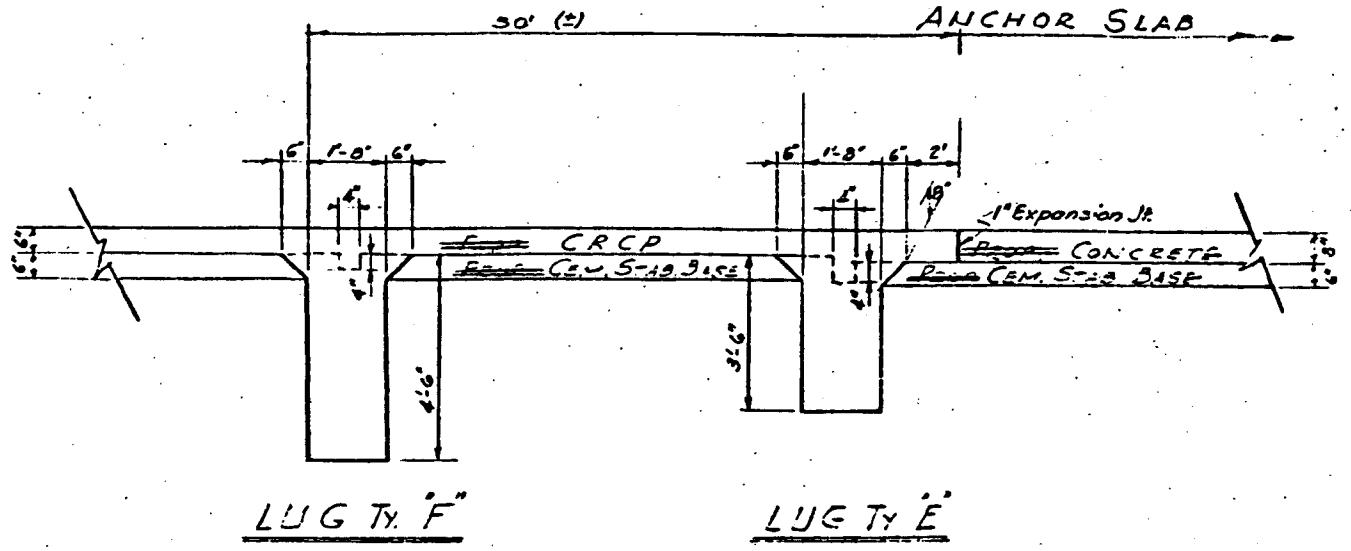
152-B



LUG TY. "D" LUG TY "G"

BRIDGES

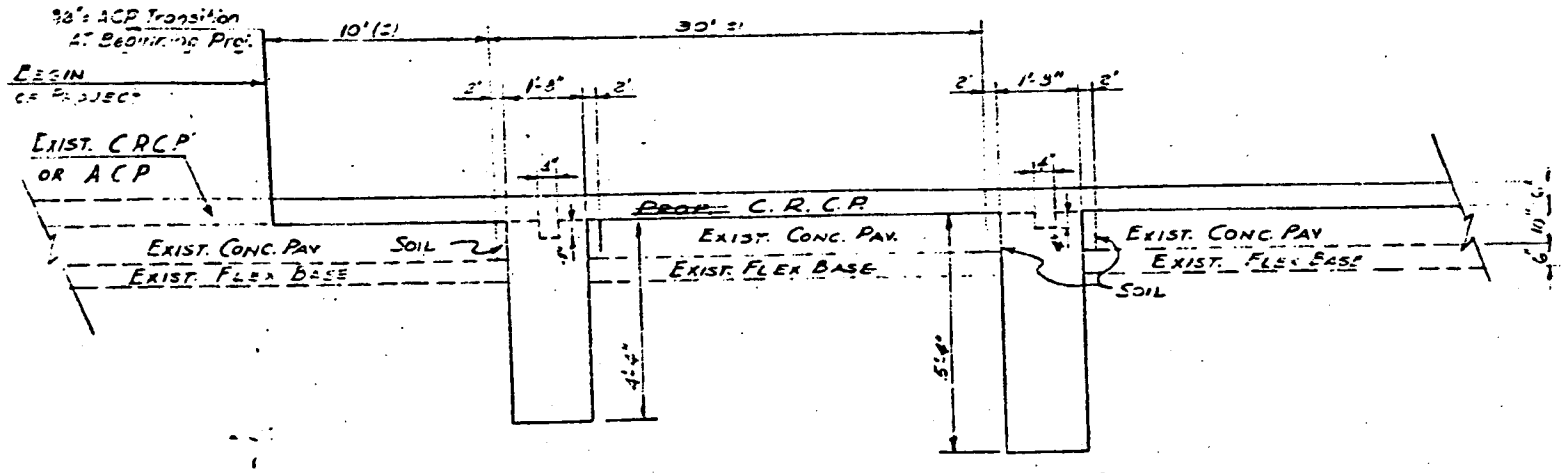
MAIN LANES



LUG TY. "F" LUG TY "E"

BRIDGES

FRONTAGE ROAD

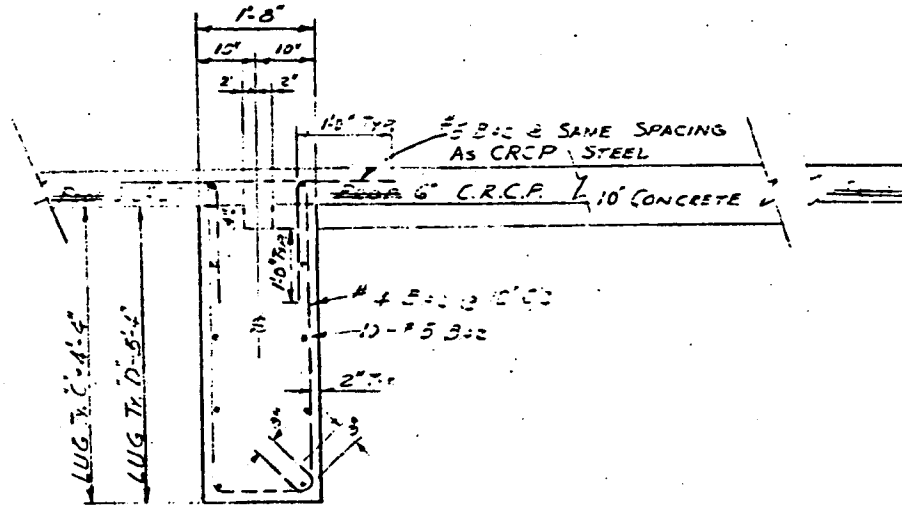


LUG TY "C" LUG TY. "D"

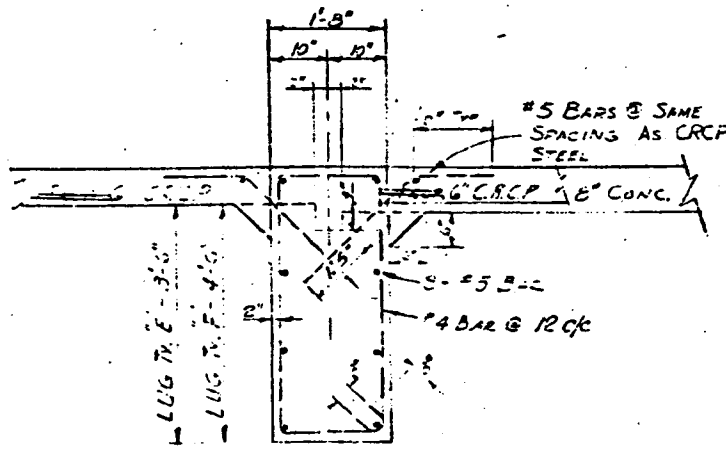
AT BEG. OF PROJECT OR TERMINAL SECTION

MAIN LANES

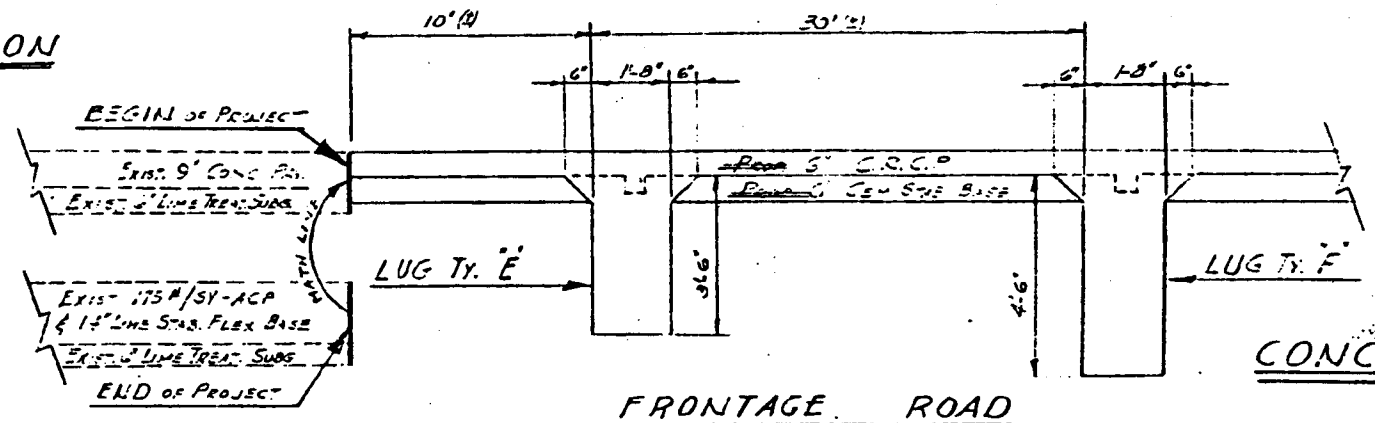
NOTE: FOR ANCHOR LUGS C, D, E, F AND G, THE REINFORCING STEEL, CONCRETE, EXCAVATION, AND MANIPULATIONS REQUIRED TO CONSTRUCT LUGS FOR 10" & 6" CONTINUOUSLY REINFORCED CONCRETE PAVEMENT SHALL BE INCIDENTAL TO THE BID ITEMS FOR 10" & 6" CRCP.



LUG TY "C" & LUG TY "D"



LUG TY. "E" & LUG TY. "F"



FRONTAGE ROAD

BEGIN OR TERMINAL SECTION

CONCRETE PAVEMENT DETAILS

152-C

STATE	DIST.	FEDERAL PROJECT NO.	SHT. NO.
TEXAS		I 45-1(103)013	152C
STATE CONTROL	COUNTY	CONT.	JOB
12 Galveston		Sec 4 - 40 IH 45	