FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.
6	TEXAS	U.I-56(2)	1
STATE DIST. NO.	COUNTY	STATE CONTROL NO.	HIGHWAY NO.
20	Jefferson	28-13-3	U.S. 90

US90, 28-13-03

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL LAYOUT
3	DRAINAGE MAP
4-6	TYPICAL CROSS SECTIONS
7	ESTIMATE & QUANTITY
8-24	PLAN PROFILE
25-26	HAUL DIAGRAM
27-29	PAVEMENT LAYOUT (JOINTS)
30	APPROACH SLAB & CURB DETAILS
31	CONCRETE PAVEMENT DETAILS
32	CONCRETE PAVEMENT JOINT DETAILS (C.P.J.-52-2)(MOD.)
33-36	INLET & MANHOLE DETAILS
37-38	BW-46 (1) & (2)
39	M-47

STATE OF TEXAS
STATE HIGHWAY DEPARTMENT

PLANS OF COMPLETED
STATE HIGHWAY IMPROVEMENT

FEDERAL AID PROJECT.

U.I-56(2)

SCALES: PLAN: 1 IN. = 20 FT.
PROFILE: 1 IN. HOR. = 120 FT., 1 IN. VERT. = 5 FT.
CROSS-SECTIONS: 1 IN. HOR. AND VERT. = 5 FT.
OTHERS AS NOTED.

NET LENGTH OF PROJECT= 1962.42 FT.=0.371 MI.

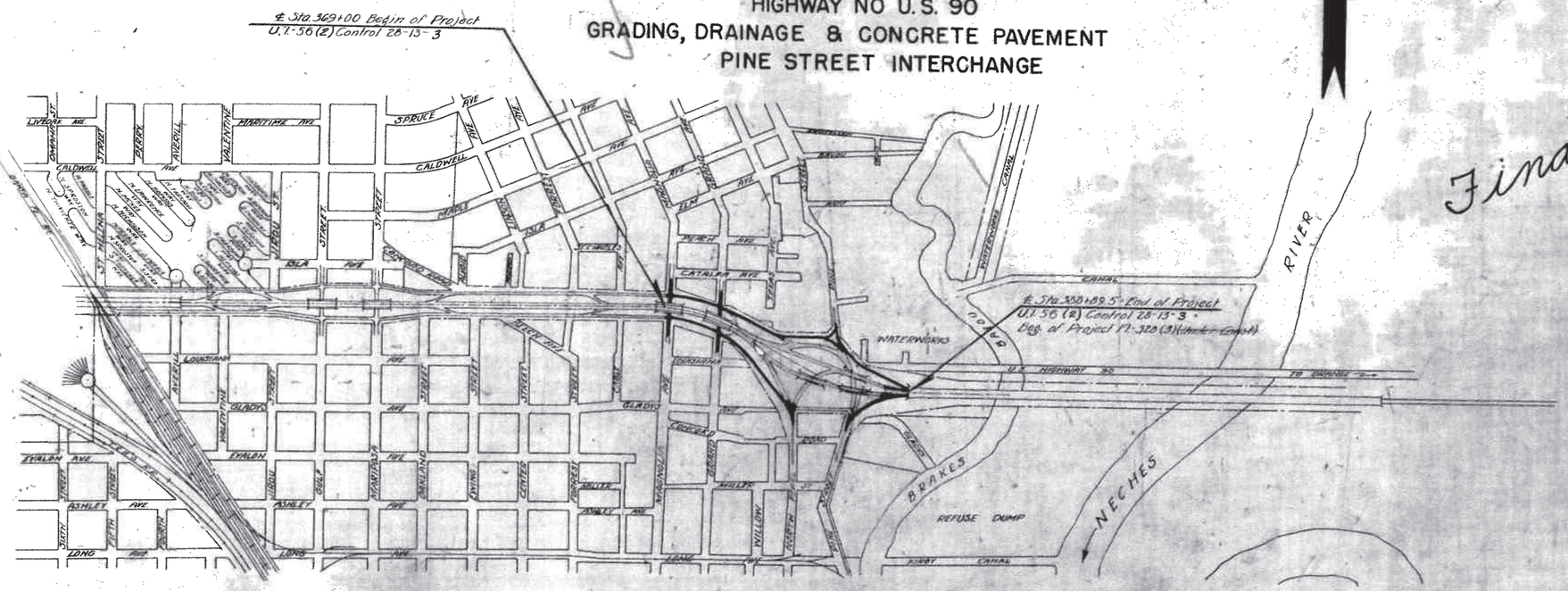
JEFFERSON COUNTY

FROM MAGNOLIA AVENUE TO NECHES RIVER BRIDGE

HIGHWAY NO U.S. 90

GRADING, DRAINAGE & CONCRETE PAVEMENT

PINE STREET INTERCHANGE



BEAUMONT INC.
POPULATION 94,014 1950

Equation: Sta. 382+52.92(Back)= 382+80.00(Fwd)= – 27.08'
No Exceptions
No Railroad Crossings Involved

DELIVERY POINT OF MATERIAL			
DELIVERY PT.	RAILROAD	DISTANCE	CAPACITY
BEAUMONT	T. & N.O.	1.0	AMPLE
BEAUMONT	KCS	1.0	AMPLE

SPECIFICATIONS ADOPTED BY THE STATE HIGHWAY DEPARTMENT OF TEXAS JANUARY 2, 1951 AND APPROVED BY THE BUREAU OF PUBLIC ROADS JULY 25, 1951 AND SPECIFICATIONS ITEMS LISTED AND DATED AS FOLLOWS SHALL GOVERN ON THIS PROJECT. REQUIRED CONTRACT PROVISIONS FOR FEDERAL AID PROJECTS APPROVED AUGUST 5, 1948.

NOTE: FEDERAL PROJECT MARKERS OF APPROVED DESIGN WILL BE ERECTED AT EACH END OF PROJECT PRIOR TO COMPLETION.

LAYOUT SCALE: 1 IN. = 500 FT.

CONVENTIONAL SIGNS
- STATE OR NATIONAL LINE
- CITY OR VILLAGE LINE
- COUNTY LINE
- BASE OR SURVEY LINE
- RIGHT OF WAY LINE
- RIGHT OF WAY MARKERS
- FENCE LINE
- RAILROAD
- TRAVELLED WAY
- CULVERT OR BRIDGE
- POWER LINE
- TELEGRAPH OR TELEPHONE

Contractor shall provide and erect barricades and warning signs in accordance with BW-46 at points as directed by the Engineer.
Barricades shall be provided at intersecting streets when ordered by the Engineer. The Contractor shall provide and maintain adequate detours and approaches where the proposed improvement crosses or coincides with existing streets. Refer to Special Provision: "Description of Project, Control, Traffic Service and Sequence"

APPROVED FIELD CHANGES

No.	Description
1	Eliminate paved intersection of Element "D" with Reservoir Street.
2	Replace prime coat & surface treatment on flexible base shoulders with prime & tack coat and Hot mix cold laid asphaltic conc. pavement.

APPROVED EXTRA WORK ORDERS

No.	Description
1	Install tile & gravel sub-drains at each Type "A" Inlet.

16

Final Plans

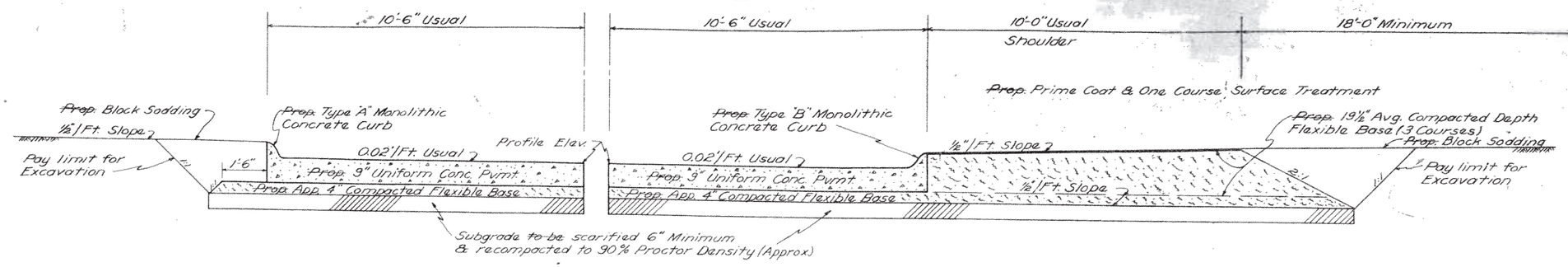
Project Constructed and Final Plans Prepared by:
Supervising Urban Engineer

Rec. For Approval: P. Clyde Black, City Engineer of Beaumont

Approved: [illegible], Mayor City of Beaumont

STATE HIGHWAY DEPARTMENT

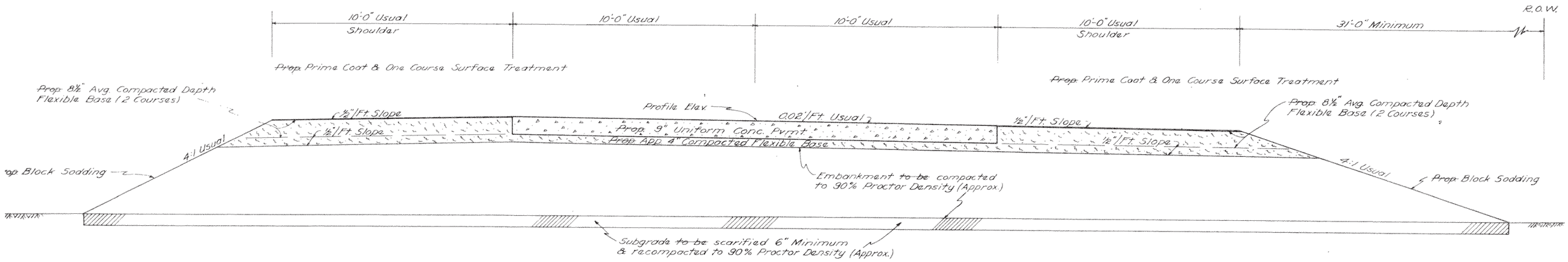
CORRECT: Dec. 17, 1951
[redacted]
RECOMMENDED FOR APPROVAL: Dec. 20, 1951
[redacted]
RECOMMENDED FOR APPROVAL
[redacted]
DISTRICT ENGINEER DEPARTMENT OF CONSERVATION, BUREAU OF PUBLIC ROADS
RECOMMENDED FOR APPROVAL
[redacted]
APPROVED
[redacted]
CHIEF ENGINEER OF PLANNING
APPROVED
[redacted]



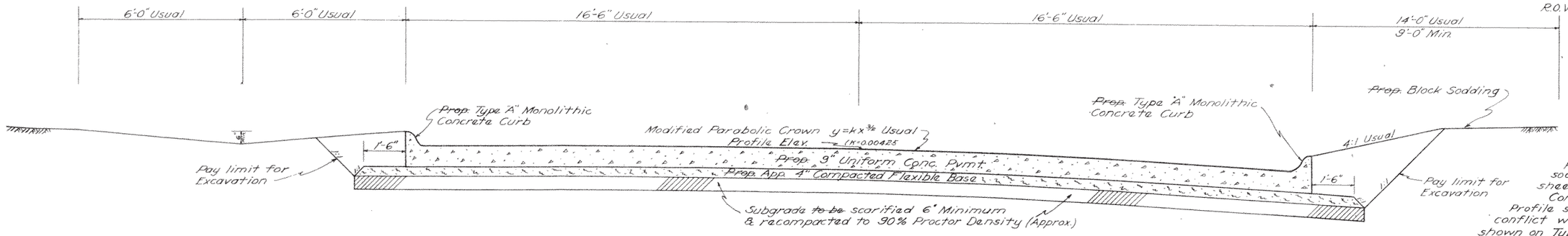
HALF-SECTION WITHOUT SHOULDERS

HALF-SECTION WITH SHOULDERS

NORMAL SECTIONS
ELEMENTS "D" AND "E"
To be used approximately 6 Stations
(1)



FILL SECTION
ELEMENTS "D" AND "E"
To be used approximately 8 Stations
(2)



NORMAL AND USUAL SECTION
ELEMENTS "M" AND "F"
To be used approximately 23 Stations
(3)

TYPICAL CROSS-SECTIONS
ELEMENTS "D"-"E"-"M"-"F"

GENERAL NOTES

In those instances where fixed features require, the governing slopes indicated hereon may be varied between the limits and to the extent determined by the Engineer.

The 6" depth of sub-grade to be scarified and recompacted to approx. 90% Proctor Density will not be measured for payment. The cost of scarifying and such manipulation not including "Sprinkling" and "Rolling" as is necessary to bring the material to uniform moisture content will not be paid for directly but will be considered subsidiary to bid item "Common Road Excavation."

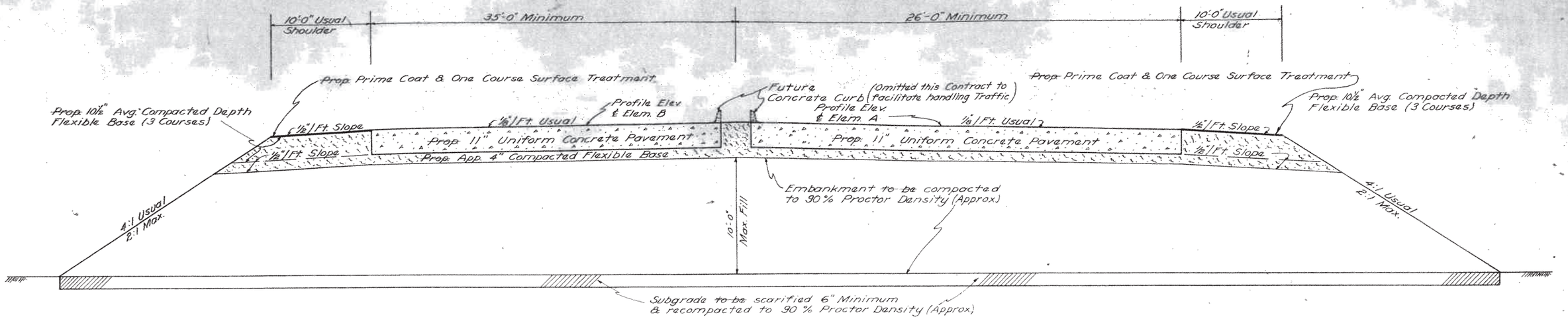
For more detailed limits of pavements, curbs, paved shoulders, sodding, etc. refer to Plan & Profile sheets in these plans.

Contour elevations shown on Plan & Profile sheets will govern where in conflict with usual pavement crowns shown on Typical Cross-Section Sheets.

For details of pavement widths, transitions at intersections and intersecting streets, refer to Plan & Profile and Pavement Layout sheets.

Max superelevation for curves shall be 0.05'/Ft. except when in conflict with contour elevations shown on Plan & Profile sheets, in which case contour elevations shall govern.

STATE HIGHWAY ROAD SYSTEM NO.	STATE	FEDERAL AID PROJECT NO.		SHEET NO.
6	TEXAS	U1- 56 (2)		4
STATE DIST. NO.	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
20	Jefferson	28	13	3	US 90

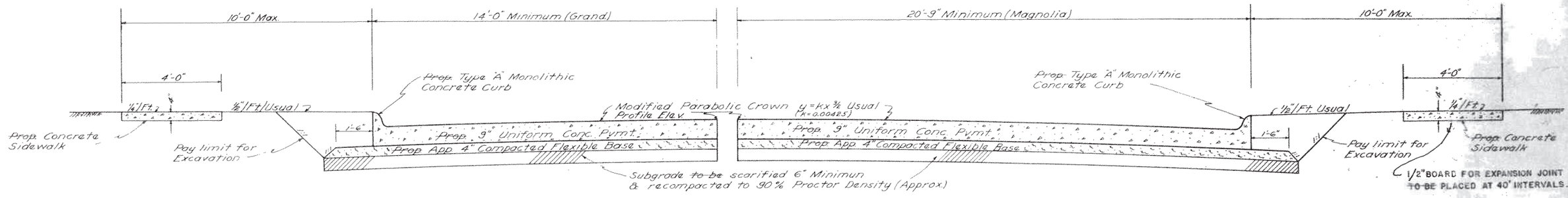


Fill Section at Beginning of Neches River Bridge

Elements "A" and "B"

To be used approximately 4 Stations

④



Half-Section Grand Ave.

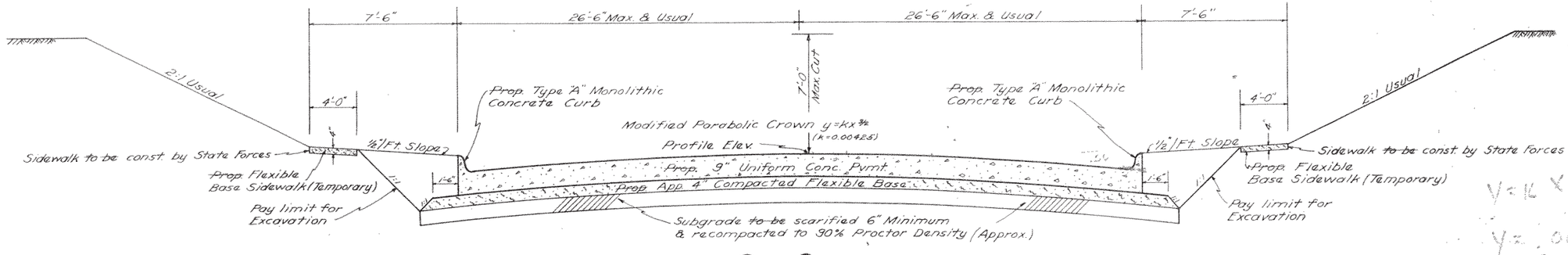
Half-Section Magnolia Ave.

Normal Sections

Grand Ave. and Magnolia Ave.

To be used approximately 4 Stations

(Approach to ⑤ Underpass)



Cut Section

Grand Ave. and Magnolia Ave.

To be used approximately 6 Stations

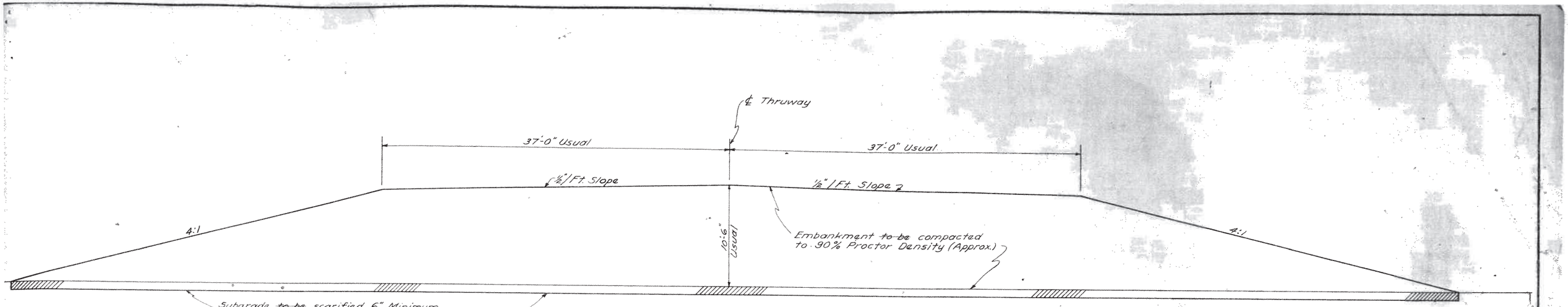
(Thru ⑥ Underpass)

Typical Cross-Sections

Elements "A" and "B" — Grand Ave. and Magnolia Ave.

Fed. Road Dist. No.	State	Federal Aid Project No.			Sheet No.
6	Texas	U2- 56 (2)			5
State Dist. No.	County	Control No.	Section No.	Job No.	Highway No.
20	Jefferson	28	13	3	US 90

Sheet 2 of 3



FILL SECTION FOR FUTURE THRUWAY

(BETWEEN MAGNOLIA AVE. & GRAND AVE)

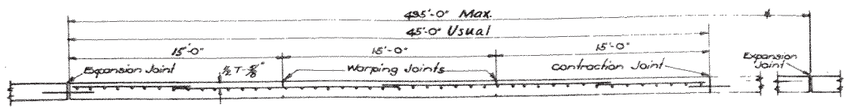
~~To be~~ used approximately 2 Stations

TYPICAL CROSS-SECTIONS

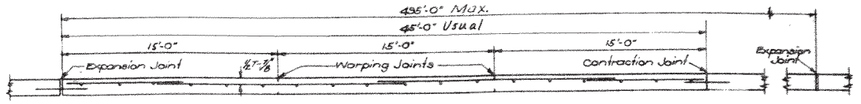
FUTURE THRUWAY

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.				SHEET NO.
6	TEXAS	UI- 56				6
STATE DIST. NO.	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.		HIGHWAY NO.
20	Jefferson	28	13	3		US 90

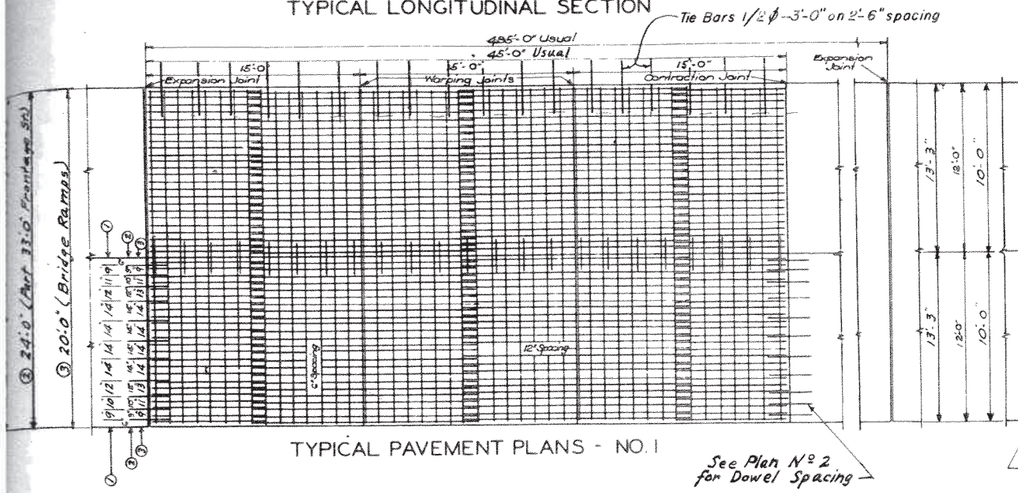
Sheet 3 of 3



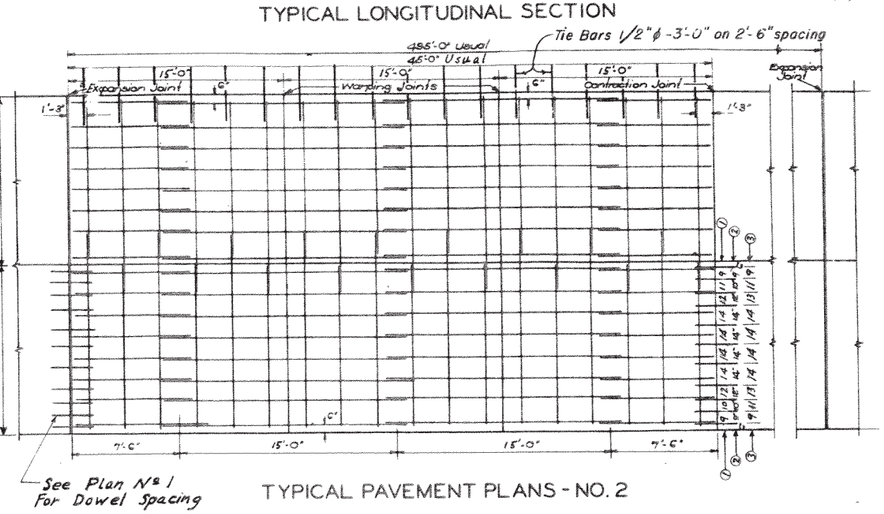
TYPICAL LONGITUDINAL SECTION



TYPICAL LONGITUDINAL SECTION

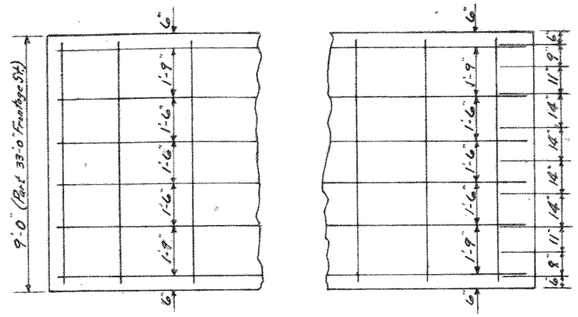


TYPICAL PAVEMENT PLANS - NO. 1



TYPICAL PAVEMENT PLANS - NO. 2

NOTE
Location of Expansion, Contraction, and Warping Joints shall conform to adjacent 24' Slab.



DETAIL 9'-0" SLAB (PART 33'-0" FRONTAGE ST.)

REINFORCING STEEL PLAN No 2

9'-0" Width

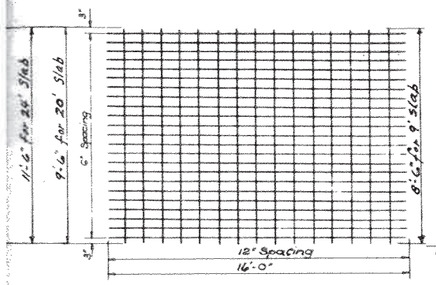
Bar	At Exp. Joint				At Cont. Joint				Intermediate**			
	No	Size	Lgth	Wt. Lbs.	No	Size	Lgth	Wt. Lbs.	No	Size	Lgth	Wt. Lbs.
Long.	6	½"ϕ	8'-1"	32.398	6	½"ϕ	8'-1"	32.398	6	½"ϕ	16'-8"	66.800
Trans.	3	½"ϕ	8'-6"	17.034	3	½"ϕ	8'-6"	17.034	6	½"ϕ	8'-6"	34.068

** For 45' Section multiply above quantities by 2

REINFORCING STEEL PLAN No 3

9'-0" Width x 45'

Long. Bars = 12 - ½"ϕ Def. x 23'-0"	= 184.368 Lbs.
Trans. Bars = 19 - ½"ϕ Def. x 8'-6"	= 107.882 Lbs.



WELDED WIRE FABRIC - MAT NO.1

Welded Wire Fabric Reinforcement.
All welded wire fabric.

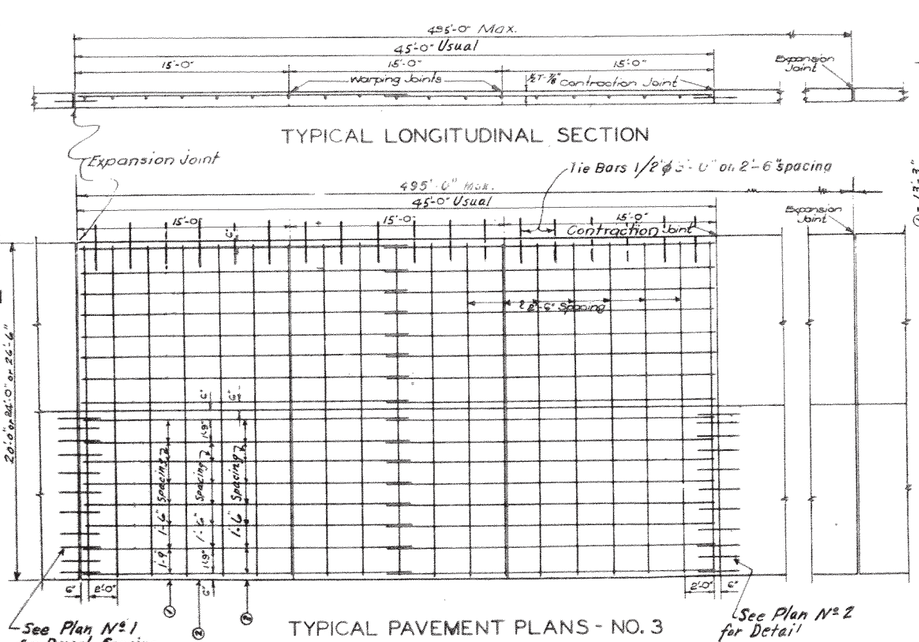
Longitudinal No.1 @ 6" c.c.
Transverse No.7 @ 12" c.c.
Weight 55 lbs. per 100 Sq. Ft.

NOTE: Weight does not include Tie Bars, Load Transmission Units or Dowel Bars.

Welded wire mats on either side of Expansion and Contraction Joints, can be standard mat cut in half transversely.

REINFORCING STEEL PLAN No 3

① 26'-6" Width x 45'	
Long. Bars = 36 - ½"ϕ Def. x 23'-0"	= 553.104 Lbs.
Trans. Bars = 19 - ½"ϕ Def. x 26'-0"	= 329.992 Lbs.
② 24'-0" Width x 45'	
Long. Bars = 32 - ½"ϕ Def. x 23'-0"	= 491.648 Lbs.
Trans. Bars = 19 - ½"ϕ Def. x 23'-6"	= 298.262 Lbs.
③ 20'-0" Width x 45'-0"	
Long. Bars = 28 - ½"ϕ Def. x 23'-0"	= 430.192 Lbs.
Trans. Bars = 19 - ½"ϕ Def. x 19'-6"	= 247.494 Lbs.

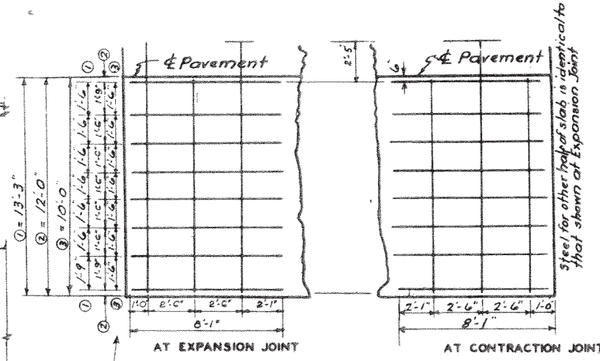


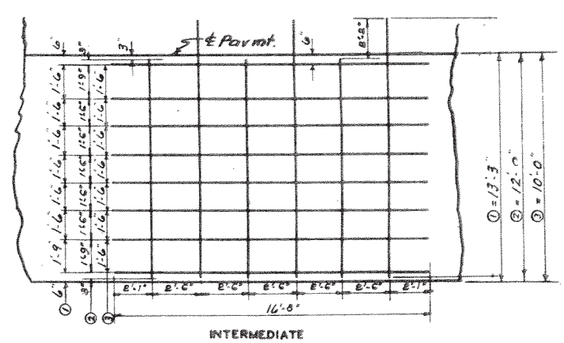
TYPICAL PAVEMENT PLANS - NO. 3

NOTE: Weight shown does not include Tie Bars, Load Transmission Units or Dowel Bars.

GENERAL NOTES:

Either of the (3) three alternate types of reinforcing shown may be constructed at the option of the Contractor. Pavements of varying width shall contain reinforcing placed to conform with the spacing shown on this sheet.





REINFORCING STEEL PLAN No 2

Bar	At Exp. Joint				At Cont. Joint				Intermediate**			
	No	Size	Lgth	Wt. Lbs.	No	Size	Lgth	Wt. Lbs.	No	Size	Lgth	Wt. Lbs.
① 26'-6" Width*												
Long.	18	½"ϕ	8'-1"	97.193	18	½"ϕ	8'-1"	97.193	18	½"ϕ	16'-8"	200.401
Trans.	3	½"ϕ	12'-9"	25.551	3	½"ϕ	12'-9"	25.551	6	½"ϕ	12'-9"	51.102
Trans.	3	½"ϕ	14'-11"	29.893	3	½"ϕ	14'-11"	29.893	6	½"ϕ	14'-11"	59.786
② 24'-0" Width*												
Long.	16	½"ϕ	8'-1"	86.394	16	½"ϕ	8'-1"	86.394	16	½"ϕ	16'-8"	178.133
Trans.	3	½"ϕ	11'-6"	23.046	3	½"ϕ	11'-6"	23.046	6	½"ϕ	11'-6"	46.092
Trans.	3	½"ϕ	13'-8"	27.388	3	½"ϕ	13'-8"	27.388	6	½"ϕ	13'-8"	54.776
③ 20'-0" Width												
Long.	14	½"ϕ	8'-1"	75.595	14	½"ϕ	8'-1"	75.595	14	½"ϕ	16'-8"	155.867
Trans.	3	½"ϕ	9'-6"	19.038	3	½"ϕ	9'-6"	19.038	6	½"ϕ	9'-6"	38.076
Trans.	3	½"ϕ	11'-8"	23.380	3	½"ϕ	11'-8"	23.380	6	½"ϕ	11'-8"	46.760

*NOTE: For 53'-0" Pvmt. and 33'-0" Pvmt. slabs may be joined either by extending transverse bars 18" into adjoining slab or by the use of ½"ϕ def. x 3'-0" Tie Bars.

MAT DETAIL OF PAVEMENT PLAN NO. 2

NOTE: Weight shown does not include Tie Bars, Load Transmission Units or Dowel Bars.

TEXAS HIGHWAY DEPARTMENT

CONCRETE PAVEMENT DETAILS

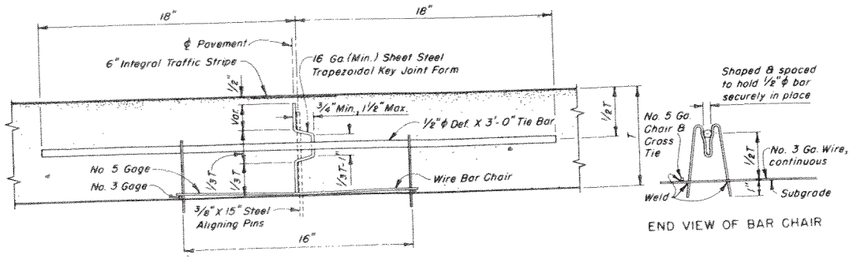
SHOWING

ALTERNATE METHODS OF REINFORCING

9" & 11" UNIFORM SECTIONS

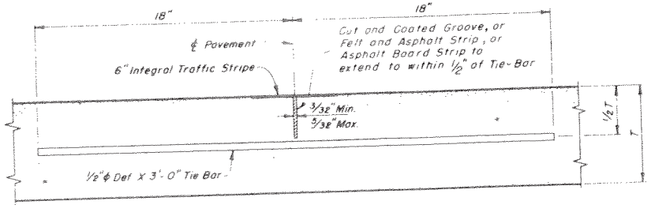
** For 45' Section multiply Intermediate quantities by 2

FED.ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.			SHEET NO.
6	TEXAS	U I SG (2)			31
STATE DIST. NO.	COUNTY	CONTROL NO.	SECT NO.	JOB NO.	HIGHWAY NO.
20	JEFFERSON	28	13	3	U.S. 90



TYPE 1 - STEEL TONGUE - AND - GROOVE FORM

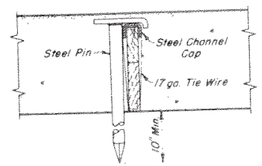
END VIEW OF BAR CHAIR



TYPE 2 - MACHINE CUT GROOVE

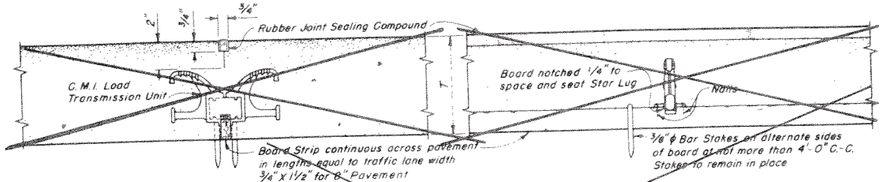
Top groove shall be cut by an approved machine and the vertical faces of the concrete coated with an approved concrete curing compound before closing and final finishing, or a 1/16" asphalt impregnated felt strip shall be inserted, continuous between expansion joints, or an asphalt board strip held in an approved continuous metal shield, shall be placed continuously in a groove cut in the concrete by an approved mechanical device operated in advance of the longitudinal float. The strips or groove shall be true to line, vertical, and of the depth shown. Tie bars shall be installed as in Type 1, or accurately placed in position on the screeded concrete by means of an approved template and forced to the proper position with a suitable tool.

ALTERNATE TYPES OF LONGITUDINAL JOINTS



INSTALLING PIN FOR EXPANSION JOINT

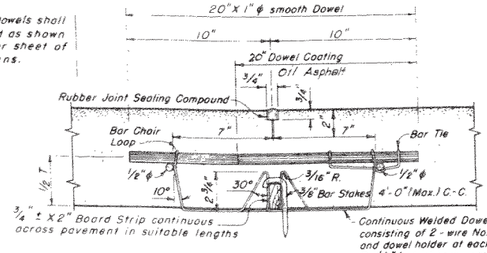
Board Joint Filler of specified type shall be secured on subgrade in exact position and line as illustrated or by other approved device. Pins shall be removed after passage of finishing machine, then pavement resurfaced by second pass of finishing machine. After second passage of finishing machine remove concrete to 1" below top of board and nail 3/4" x 1/8" wood strip to top of board filler to form joint seal space. Replace concrete and finish with longitudinal float. The wood top strip shall not be removed until immediately prior to pouring joint seal.



CAST MALLEABLE IRON CANTILEVER TYPE LOAD TRANSMISSION UNIT

D-14 "STAR LUG" as manufactured by Texas Foundries, Lufkin, Texas, or equal Load Transmission Unit

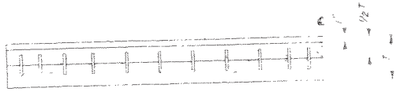
Lugs and Dowels shall be spaced as shown on another sheet of these plans.



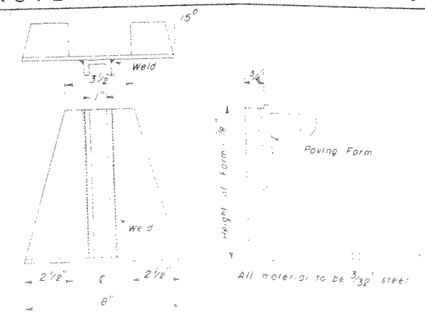
1" ROUND STEEL BAR DOWEL

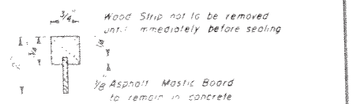
(If the contractor so elects the Dowel Bar Chair may be omitted at Contraction Joints and the Dowel vibrated into place by approved methods.)

ALTERNATE TYPES OF TRANSVERSE CONTRACTION JOINTS



ELEVATION OF BOARD STRIP FOR EXPANSION JOINT WITH C.M.I. LOAD TRANSMISSION UNITS

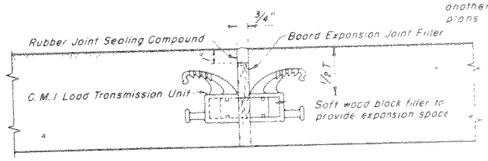




CONTRACTION JOINT SEAL FORM

ACCEPTABLE CONTRACTION AND EXPANSION JOINT HOLDER

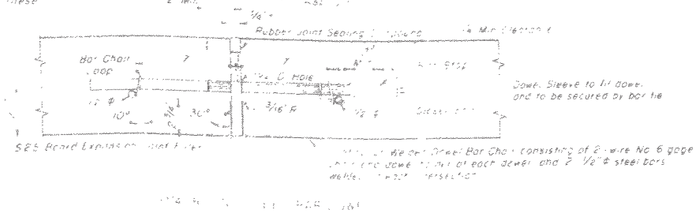
(Other types may be used if approved)



CAST MALLEABLE IRON CANTILEVER TYPE LOAD TRANSMISSION UNIT

D-13 "STAR LUG" as manufactured by Texas Foundries, Lufkin, Texas or equal Load Transmission Unit

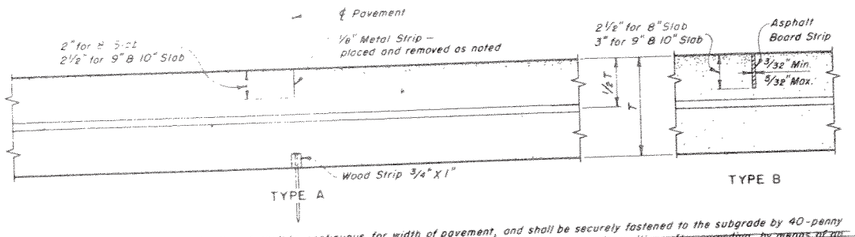
Spacing of Lugs or Dowels shall be as shown on another sheet of these plans



SEE Board Expansion Joint Filler

Continuous Welded Dowel Bar Chair consisting of 2 - wire No. 6 gage chair and dowel holder at each dowel and 2 - 1/2" ϕ steel bars welded at each intersection

ALTERNATE TYPES OF TRANSVERSE EXPANSION JOINTS



The 3/4" X 1" Wood Strip as shown for Type A shall be continuous for width of pavement, and shall be securely fastened to the subgrade by 40-penny wire nails driven through drilled holes on not more than 30" centers. ~~Tie Bars shall be placed accurately in position, after screeding, by means of an approved template.~~ The transverse finishing machine shall pass over the joint area after installing the bars.

Type A, 1/8" x 2" or 2 1/2" Metal Strip --- Cut top surface of concrete directly over wood strip and insert metal strip after screeding and in advance of longitudinal float. After longitudinal float has passed over, remove steel plate prior to finishing.

Type B, Asphalt Board Strip --- Asphalt board strip, held in an approved continuous metal shield, shall be placed continuously in a groove cut by an approved mechanical device operating in advance of the longitudinal float.

ALTERNATE TYPES OF TRANSVERSE WARPING JOINTS

GENERAL NOTES

Either of the alternate types of Joints shown by these details may be constructed, at the option of the Contractor. If the Contractor desires to use any other alternate device, he shall, prior to its use, secure its approval by the Engineer.

Load Transmission Units or Dowels shall be secured parallel to the pavement surface and center line.

All Joints, including all materials, devices, and work required shall be considered subsidiary work and shall be included in the unit price bid for "Concrete Pavement." No direct payment will be made for any material, bar chair, steel, or any other device shown, nor for its installation.

"T" indicates center depth of thickened-edge pavements or depth of uniform pavements.

For thickened edge pavements the bottom edges of board expansion joint fillers shall be made to conform with the subgrade by the addition of wedges of the same material and thickness.

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 patent or unpatented invention, article or appliance manufactured or used in accordance with the details of these plans.

TEXAS HIGHWAY DEPARTMENT

CONCRETE PAVEMENT JOINT DETAILS

8" - 9" - 10" SLABS

C.P.J. - 52 - 2 (MOD.)

REVISED

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.			SHEET NO.
6	TEXAS	U1 SC(2)			32
STATE DIST. NO.	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	HIGHWAY NO.
20	JEFFERSON	28	13	3	US90