Hudspeth IM 10-1(226)

INDEX OF SHEETS

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3,3a,3b	ESTIMATE & QUANTITY SHEETS	
4-10	SUMMARY SHEETS (7)	
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13	TCP LINE DIAGRAM	
14-17	TCP SEQUENCE OF WORK (4)	
18-21	FORT HANCOCK INTERCHANGE (4)	
22-25	McNARY INTERCHANGE (4)	
26-29	FM 2217 INTERCHANGE (4)	
30	TCP DETAILS	
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73	T501R(M) (MOD)	
74-83,95a	STANDARDS (10)	BED-95(M); CPCR (1)-95(M); JS-95(M); MBGF-95A(M); SGT (5,6)-97 (M); TYPE T101 (M); TYPE T501 (M) (2); TA (CP)-95 (M); ST(1)-99(M)
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88A, 89A, 89b, 89c, 89d, 89e, 89f		
	EROSION & SEDIMENT CONTROL	
122	SW3P SHEET	
123-125	STANDARDS (3)	EC (1,4,5)-95(M)
126		

THE STANDARD SHEETS SPECIFICALLY IDENTIFIED ABOVE HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

Timothy F. Twomey, P.E. 09/22/99
EAST EL PASO AREA DESIGN ENGINEER — DATE

STATE OF TEXAS — TIMOTHY F. TWOMEY — 71423 — REGISTERED PROFESSIONAL ENGINEER

SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION, MARCH 1, 1995 AND SPECIFICATIONS ITEMS LISTED AND DATED AS FOLLOWS, SHALL COVERN ON THIS PROJECT; REQUIRED CONTRACT PROVISIONS, FEDERAL AID CONSTRUCTION CONTRACTS (FORM FHWA 1273, DECEMBER, 1993).

FINAL PLANS

STATE OF TEXAS
DEPARTMENT OF TRANSPORTATION

IH-10:
DESIGN SPEED = 110 KM/H
A.D.T. = 14,400 (1998)

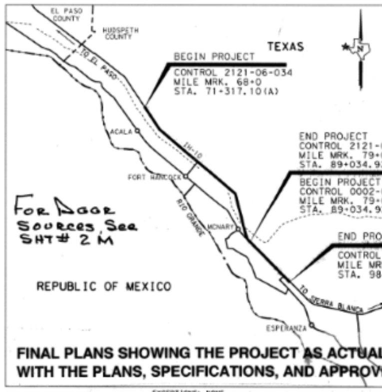
PLANS OF PROPOSED STATE HIGHWAY IMPROVEMENT

FEDERAL AID PROJECT: IM 10-1(226)
NET LENGTH OF PROJECT: 17.718 KM (2121-06-034)
9.641 KM (0002-05-039)
27.359 KM (TOTAL)

HUDSPETH COUNTY
IH-10 REHABILITATION

LIMITS FROM: 9.656 KM EAST OF EL PASO/HUDSPETH COUNTY LINE
TO: 37.015 KM EAST OF EL PASO/HUDSPETH COUNTY LINE

RECONSTRUCTION OF MAIN LANES CONSISTING OF GRADING, ASPHALTIC CONCRETE PAVEMENT (TY D), CONCRETE PAVEMENT CONTINUOUSLY REINFORCED (C.P.C.R.), SIGNING, STRIPING & DELINEATION



For Aggr Sources See SHT# 2M

For Change Orders See Sheets# 2(I)-2(O)

FINAL PLANS SHOWING THE PROJECT AS ACTUALLY CONSTRUCTED IN WITH THE PLANS, SPECIFICATIONS, AND APPROVED CHANGE ORDERS.

EXCEPTIONS: NONE
EQUATIONS: NONE

FED. RD. DIV. NO.	FEDERAL AID PROJECT		SHEET NO.
6	IM 10-1(226)		1
STATE	DIST.	COUNTY	
TEXAS	ELP	HUDSPETH	
CONT.	SECT.	JOB	HIGHWAY NO.
0002	05	039,ETC.	IH-10

FINAL PLANS

TIME CHARGES BEGAN: MARCH 17, 2000
DATE CONTRACTOR BEGAN WORK: MARCH 31, 2000
DATE WORK WAS COMPLETED: JANUARY 21, 2003
DATE WORK WAS ACCEPTED: FEBRUARY 1, 2003
TOTAL DAYS CHARGED: 624
FINAL CONTRACT COST: $ 25,746,477.43
LETTING: JAN. 2000

EAST EL PASO AREA ENGINEER

STATE OF TEXAS — JOHN WILLIAM RILEY — 33950 — REGISTERED PROFESSIONAL ENGINEER

KEY TO COUNTIES

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:
DIVISION ADMINISTRATOR — DATE

Texas Department of Transportation

RECOMMENDED FOR LETTING:

DIRECTOR, TRAFFIC OPERATIONS DIVISION

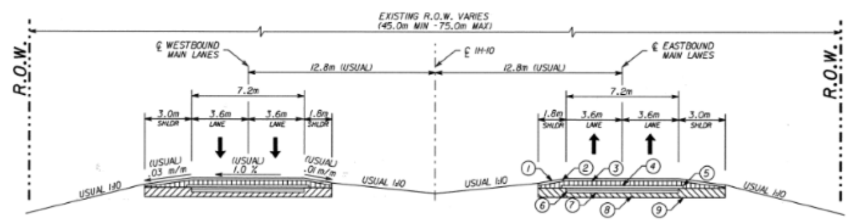
RECOMMENDED FOR LETTING: 9/27 1999 — SAFETY REVIEW COMMITTEE CHAIRMAN, P.E.

SUBMITTED FOR LETTING: 9-22 1999 — Robt 2 Steeds, P.E. — EAST EL PASO AREA ENGINEER

RECOMMENDED FOR LETTING: 9/24 1999 — Charles H. Berry Jr., P.E. — DIRECTOR OF TRANSPORTATION PLANNING & DEVELOPMENT

RECOMMENDED FOR LETTING: 9/21 1999 — Manuel P. Chavez, P.E. — DISTRICT ENGINEER

APPROVED FOR LETTING: 11-5-99 — P.E. — DIRECTOR, DESIGN DIVISION

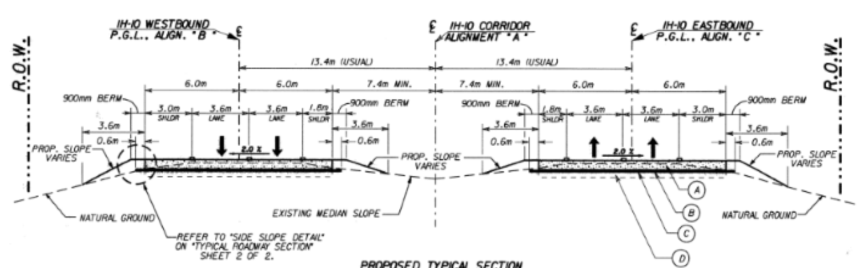


EXISTING TYPICAL SECTION
IH-10 MAIN LANES FROM MILE MRK. 70 TO MILE MRK. 83

(STA. 74+541.14 (A) TO STA. 95+459.07 (A))
(STA. 74+534.10 (B) TO STA. 95+460.16 (B))
(STA. 74+530.87 (C) TO STA 95+441.98 (C))

EXISTING PAVEMENT LEGEND

1. SLURRY SEAL (POLYMER MOD) (GR2)
2. SLURRY SEAL (POLYMER MOD) (GR2) FILL LEVEL RUTS.
3. A.C.P.
4. TY "B" BASE CRSE
5. ACP TY "D"
6. ACP TY "C"
7. TY "B"
8. FLEX BASE 254.0mm COMPACTED
9. SUBGRADE



PROPOSED TYPICAL SECTION
IH-10 MAINLANES FROM MILE MRK. 70 TO MILE MRK. 83

(STA. 74+541.14 (A) TO STA. 95+459.07 (A))
(STA. 74+534.10 (B) TO STA. 95+460.16 (B))
(STA. 74+530.87 (C) TO STA 95+441.98 (C))

PROPOSED PAVEMENT LEGEND

- (A) - 300mm CONCRETE PAVEMENT CONTINUOUSLY REINFORCED
- (B) - 75mm HOT MIX ASPH (TY "D") (SURF) (PG 76-16)
- (C) - EMUL ASPH CSS-1H (PRIME) (APPLIED @ 0.910 L/M2)
- (D) - EXISTING ASPHALT (TO BE ROTO-MILLED)

NOTES: 1. REFER TO PAVEMENT MARKING STANDARDS FOR STRIPING REQUIREMENTS
2. FOR EXISTING ASPHALT CORE INFORMATION REFER TO TABLE ON "TYPICAL ROADWAY SECTION" SHEET 2 OF 2.

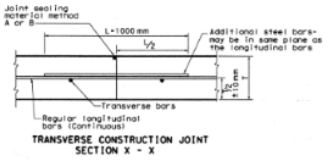
STATE OF TEXAS — TIMOTHY F. TWOMEY — 71423 — REGISTERED PROFESSIONAL ENGINEER
Timothy F. Twomey, P.E. 09/22/99

IH-10
PHASE VIII
(ROADWAY PLANS)
TYPICAL ROADWAY SECTIONS

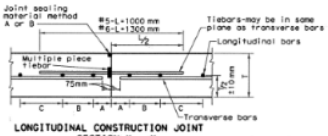
 Texas Department of Transportation

SHEET 1 OF 2 — NOT TO SCALE

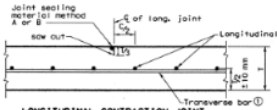
FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		SHEET NO.
6	IM 10-1(226)		11
STATE	DIST.	COUNTY	
TEXAS	ELP	HUDSPETH	
CONT.	SECT.	JOB	HIGHWAY NO.
0002	05	039,ETC.	IH-10



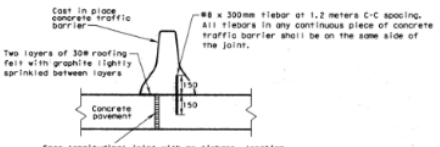
TRANSVERSE CONSTRUCTION JOINT
SECTION X - X



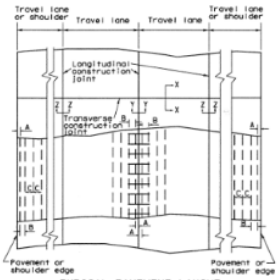
LONGITUDINAL CONSTRUCTION JOINT
SECTION Y - Y



LONGITUDINAL CONTRACTION JOINT
SECTION Z - Z



FREE LONGITUDINAL JOINT DETAIL



TYPICAL PAVEMENT LAYOUT

TABLE NO. 1 LONGITUDINAL STEEL

LONGITUDINAL STEEL SIZE AND SPACINGS

Slab thickness and bar size		Regular reinforcement	First spacing at edge or joint	Second spacing from edge or joint	Additional reinforcement at transverse const. joint	
T mm	Bar number	Spacing "C" mm	Spacing "A" mm	Spacing "B" mm	Spacing 2 x C mm	Length "L" mm
200	5	235	75 To 100	75 To 235	470	1000
225	5	190	75 To 100	75 To 190	380	1000
250	5	215	75 To 100	75 To 220	None	-
275	5	180	75 To 100	75 To 190	None	-
300	5	155	75 To 100	75 To 160	None	-
325	6	135	75 To 100	75 To 150	None	-

TABLE NO. 2A ALLOWABLE PAVEMENT WIDTH(W) IN METERS
FOR TRANSVERSE BAR SPACING (Bs)
NOT SHOWN USE FORMULAE.

Slab Thickness	200 mm	225 mm	250 mm	275 mm	300 mm	325 mm
#5 BAR AT 1000 mm	17.3	15.4	13.8	12.6	11.5	10.6
#5 BAR AT 600 mm	28.8	25.6	23.0	20.9	19.2	17.7
#6 BAR AT 1000 mm	24.5	21.8	19.6	17.8	16.4	15.1
#6 BAR AT 600 mm	40.9	36.3	32.7	29.7	27.3	25.2

TRANSVERSE STEEL AND TIEBAR SPACINGS SHALL BE BASED ON THE FOLLOWING FORMULAE.

For #5 bars: $W = \frac{3,455,000\ N}{T\ Bs}$

For #6 bars: $W = \frac{4,905,000\ N}{T\ Bs}$

W = Allowable width of pavement slab width in meters (Measured edge to edge or edge to untied joint)
N = Number of layers of steel (1 or 2)
T = Thickness of slab in (mm)
Bs = bar spacing in (mm)
Maximum Bs = 1000mm
Minimum Bs = 300mm

GENERAL NOTES

1. For further information regarding the placement of concrete and reinforcement, refer to the governing specifications for "Concrete" and "Reinforcing steel".
2. Longitudinal and transverse bars shall be deformed steel conforming to ASTM A-615M (Grade 420) or ASTM A-616M (Grade 420).
3. Details for pavement width, pavement thickness and the crown cross-slope shall be shown elsewhere in the plans.
4. Splices shall be a minimum of 33 times the nominal steel diameter.
5. Vibration with hand-manipulated mechanical vibrators is required adjacent to all transverse construction joints.
6. The detail for joint sealant and reservoir will be shown in concrete pavement detail, joint sealant.
7. Pavement widths of more than 4.8 meters shall have a longitudinal joint (Section Z-Z or Y-Y). these joints shall be located within 150 mm of the lane line unless the joint is shown elsewhere on the plans.
8. The saw cut for the longitudinal joint may be one fourth the slab thickness when crushed limestone is used as the coarse aggregate.
9. Within any area bounded by 0.7 meters of pavement length measured parallel to the centerline and 5.6 meters of width measured perpendicular to the pavement centerline, not over 33% of the regular longitudinal steel shall be spliced.
10. Multiple piece tiebars shall be used at longitudinal construction joints unless otherwise specified in the plans.
11. For the 325 mm slab thickness, when standard detail CPCR(1)-94M is included in the plans, the contractor may choose either the one or two layer placement of reinforcing steel unless otherwise specified.

Footnote:

① When machine placing of the steel reinforcement is used, the use of chairs will not be required and the transverse steel may be placed above or below the longitudinal steel. the vertical location of the bars will be approved by the Engineer.

R = Radius
D = Diameter
All unit-less dimensions are millimeters

Texas Department of Transportation
Design Division (Pavement)

CONCRETE PAVEMENT DETAILS

CONTINUOUSLY REINFORCED STEEL BARS ONE LAYER PLACEMENT T-200mm TO 300mm

CPCR(1)-95(M)

FILE: CPCR1195M.DGN	DN: TxDOT	CK: LJB	DW: LJB	DW: BCD	CK:	REVISIONS
©TxDOT 1995		DIST	FED.RD. DIV. NO.	FEDERAL AID PROJECT NO.		SHEET NO.
REVISIONS		EL	6		SW 10-1(226)	75
		COUNTY			CONTROL SECT	JOB
		HIDALGO			0202	85