

DALLAS NH 2002 (39) Volume 1

FINAL PLANS

NAME OF CONTRACTOR: **Gilbert Texas Construction**
DATE OF LETTING: **8/06/2002**
DATE WORK BEGAN: **1/02/2003**
DATE WORK COMPLETED: **8/02/2006**
DATE WORK ACCEPTED: **8/15/2006**

SUMMARY OF CHANGE ORDERS:

See Sheet 1A

STATE OF TEXAS
DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED
STATE HIGHWAY IMPROVEMENT

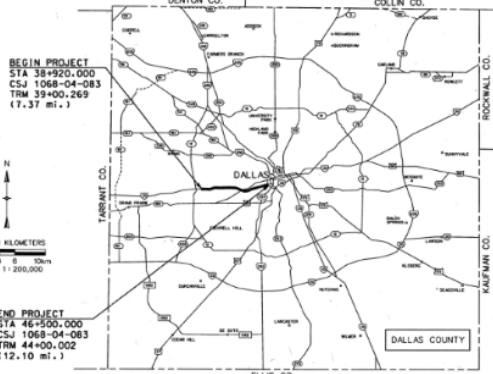
FEDERAL AID PROJECT
NH 2002 (39)
CSJ 1068-04-083

I.H. 30
DALLAS COUNTY

LIMITS: FROM EAST OF LOOP 12
TO EAST OF SYLVAN AVENUE

TOTAL LENGTH OF PROJECT = 7,580.000 m
ROADWAY = 7,275.200 m
BRIDGE = 303.800 m
TOTAL = 7,580.000 m

FOR THE RECONSTRUCTION AND WIDENING OF A FREEWAY FACILITY
CONSISTING OF: GRADING, DRAINAGE FACILITIES, CONCRETE PAVEMENT, BRIDGES,
RETAINING WALLS, SIGNING, PAVEMENT MARKINGS AND ILLUMINATION.



SCALE IN KILOMETERS
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:200,000

END PROJECT
STA 46+000.000
CSJ 1068-04-083
TRM 44+00.002
(12.10 mi.)



WORK WAS COMPLETED ACCORDING
TO THE PLANS AND CONTRACT.

Signature of Registrant: *Paul E. Williams* Date: **11/18/08**

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FINAL PLANS

FED. AID PROJECT NO.	STATE PROJECT NO.	FED. AID PROJECT NO.
0	NH 2002 (39)	I.H. 30
STATE	SECTION	SECTION
TEXAS	DALLAS	DALLAS
CONTRACT	SECTION	SECTION
1068	04	083

DESIGN SPEEDS:
MAINLANES = 110 km/h
RAMP = 80 km/h
FRONTAGE RD = 40 km/h
LOOP RAMP = 40 km/h
CROSSING STREETS = 40 km/h
RAMP WB = 40 km/h
RAMP EB = 40 km/h
RAMP E-SY = 40 km/h

ADT: 110810
158200

NOTE:
SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION,
MARCH 1, 1995, AND THE CONTRACT PROVISIONS LISTED AND DATED AS
FOLLOWS SHALL GOVERN ON THIS PROJECT. REQUIRED CONTRACT PROVISIONS
FOR ALL FEDERAL-AID CONSTRUCTION CONTRACTS FROM FPMR 571.1, DECEMBER
1993.
THE CONTRACTOR SHALL PROVIDE AND ERECT BARRICADES AND WARNING SIGNS
IN ACCORDANCE WITH TDCU-99, TDCU-99, TDCU-99, TDCU-99, TDCU-99, TDCU-99,
TDCU-99, TDCU-99, TDCU-99, TDCU-99, TDCU-99, TDCU-99, TDCU-99, TDCU-99,
POINTS INDICATED AND AT OTHER POINTS AS DIRECTED BY THE ENGINEER.
YOUR INSPECTION REQUIRED.

VOLUME 1

4/30/02

Turner Collier & Braden Inc.

ENGINEERS • PLANNERS • PROJECT MANAGERS

CONDUCTED BY: *David L. Smith* 4/30/02
DIRECTOR OF PUBLIC AFFAIRS, CITY OF DALLAS

APPROVED FOR LETTING: *4/30/02*
PROJECT MANAGER, TURNER COLLIER & BRADEN, INC.

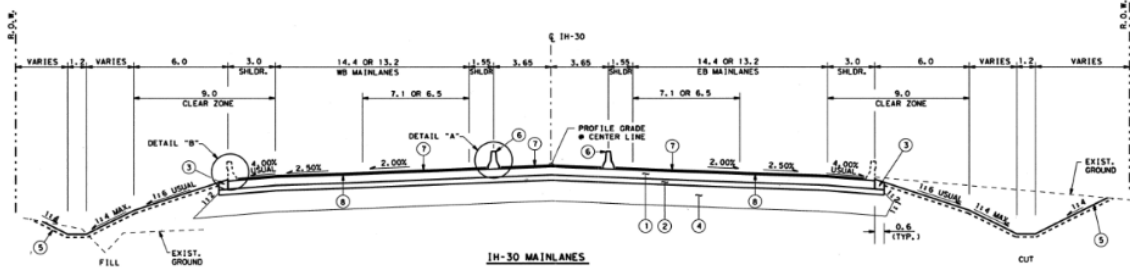
RECOMMENDED FOR LETTING: *5-2-2002*
NCEA ENGINEER

RECOMMENDED FOR LETTING: *5-2-2002*
DIRECTOR OF TRANSPORTATION PLANNING & DEVELOPMENT

RECOMMENDED FOR LETTING: *5/2/2002*
DIRECTOR, TRAFFIC OPERATIONS DIVISION

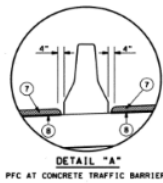
APPROVED FOR LETTING: *5-2-2002*
DIRECTOR, TRAFFIC OPERATIONS DIVISION

APPROVED FOR LETTING: *7-3-2002*
DIRECTOR, DESIGN DIVISION

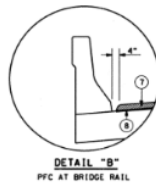


LEGEND

- ① 325 mm CONCRETE PAVEMENT (EPCB)
- ② 175 mm ASPHALT CONC. PAINT
- ③ VAR. DEPTH ASPHALT CONC. PAINT
- ④ SELECT FILL (PI < 20)
- ⑤ 600 mm STA 38+000 TO 43+400
- ⑥ 0 mm STA 43+400 TO STA 46+000
- ⑦ 100 mm TOP SOIL WITH BLOCKS
- ⑧ CONCRETE TRAFFIC BARRIER
- ⑨ 1 1/2" - 2" POROUS FRICTION COURSE
- ⑩ ONE COARSE SURFACE TREATMENT
- ⑪ 1/2" - 2" POROUS FRICTION COURSE
- ⑫ 1/2" - 2" POROUS FRICTION COURSE
- ⑬ 1/2" - 2" POROUS FRICTION COURSE
- ⑭ 1/2" - 2" POROUS FRICTION COURSE
- ⑮ 1/2" - 2" POROUS FRICTION COURSE
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- ㊾ 1/2" - 2" POROUS FRICTION COURSE
- ㊿ 1/2" - 2" POROUS FRICTION COURSE



DETAIL "A"
PFC AT CONCRETE TRAFFIC BARRIER



DETAIL "B"
PFC AT BRIDGE RAIL

SCALE: 1:100
HORIZ. 0 1 2 3 4
VERT. 0 1 2 3 4
ALL DIMENSIONS IN METERS
UNLESS SPECIFIED OTHERWISE

NOTE:
SEE PLAN & PROFILE FOR
SUPERELEVATIONS AND TRANSITIONS.



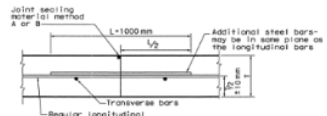
CHANGE ORDER #72

Texas Department of Transportation

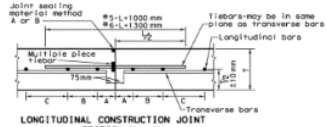
TYPICAL SECTIONS
POROUS FRICTION COURSE

SECTION	DATE	BY	CHKD	APPD	REVISION
1	05-24-06	M. Bataineh	P. Smith	P. Smith	1

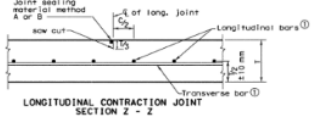
1. This manual is intended to provide the user with the necessary information to design and construct a concrete pavement structure. It is not intended to be a substitute for the user's own engineering judgment and experience. 2. The user is responsible for the design and construction of the pavement structure. 3. The user is responsible for the selection of the materials and the construction methods. 4. The user is responsible for the quality control and quality assurance of the construction. 5. The user is responsible for the safety of the construction. 6. The user is responsible for the environmental protection. 7. The user is responsible for the social and economic impact of the construction. 8. The user is responsible for the cultural and historical preservation. 9. The user is responsible for the public participation. 10. The user is responsible for the transparency and accountability of the construction. 11. The user is responsible for the innovation and research and development. 12. The user is responsible for the collaboration and partnership. 13. The user is responsible for the leadership and management. 14. The user is responsible for the communication and public relations. 15. The user is responsible for the risk management. 16. The user is responsible for the conflict resolution. 17. The user is responsible for the dispute resolution. 18. The user is responsible for the grievance redressal. 19. The user is responsible for the social and environmental impact assessment. 20. The user is responsible for the monitoring and evaluation of the construction. 21. The user is responsible for the reporting and documentation of the construction. 22. The user is responsible for the archiving and preservation of the construction records. 23. The user is responsible for the dissemination and sharing of the construction knowledge. 24. The user is responsible for the capacity building and training. 25. The user is responsible for the knowledge management. 26. The user is responsible for the innovation and research and development. 27. The user is responsible for the collaboration and partnership. 28. The user is responsible for the leadership and management. 29. The user is responsible for the communication and public relations. 30. The user is responsible for the risk management. 31. The user is responsible for the conflict resolution. 32. The user is responsible for the dispute resolution. 33. The user is responsible for the grievance redressal. 34. The user is responsible for the social and environmental impact assessment. 35. The user is responsible for the monitoring and evaluation of the construction. 36. The user is responsible for the reporting and documentation of the construction. 37. The user is responsible for the archiving and preservation of the construction records. 38. The user is responsible for the dissemination and sharing of the construction knowledge. 39. The user is responsible for the capacity building and training. 40. The user is responsible for the knowledge management.



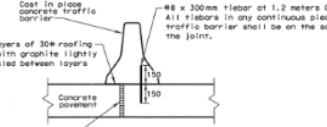
TRANSVERSE CONSTRUCTION JOINT SECTION X - X



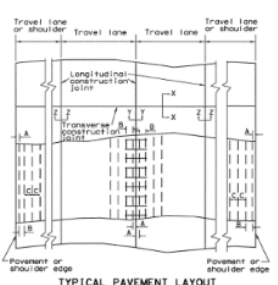
LONGITUDINAL CONSTRUCTION JOINT SECTION Y - Y



LONGITUDINAL CONTRACTION JOINT SECTION Z - Z



FREE LONGITUDINAL JOINT DETAIL



TYPICAL PAVEMENT LAYOUT

TABLE NO. 1 LONGITUDINAL STEEL					
FOR TRANSVERSE BAR SPACING (mm)					
Slab thickness and bar size	Regular reinforcement	First spacing at edge or joint	Second spacing from edge or joint	Additional reinforcement at transverse construction joint	Length of reinforcement
T Bar number	Spacing mm	Spacing mm	Spacing mm	Spacing mm	Length m
200	5	235	75 to 100	75 to 100	235 to 1000
225	5	190	75 to 100	75 to 100	190 to 1000
250	5	215	75 to 100	75 to 100	215 to 1000
275	5	190	75 to 100	75 to 100	190 to 1000
300	5	190	75 to 100	75 to 100	190 to 1000
325	5	190	75 to 100	75 to 100	190 to 1000

TABLE NO. 2A ALLOWABLE PAVEMENT WIDTH (W) IN METERS					
FOR TRANSVERSE BAR SPACING (mm)					
Slab thickness	200 mm	225 mm	250 mm	275 mm	300 mm
#5 Bar at 1000 mm	17.3	15.4	13.8	12.6	11.5
#5 Bar at 600 mm	28.8	25.6	23.0	20.9	19.2
#6 Bar at 1000 mm	24.5	21.8	19.6	17.8	16.4
#6 Bar at 600 mm	40.9	36.3	32.7	29.7	27.3

TRANSVERSE STEEL AND TIEBAR SPACINGS SHALL BE BASED ON THE FOLLOWING FORMULAE.	
For #5 bars	For #6 bars
$N = \frac{3,455,000 N}{T B}$	$N = \frac{4,905,000 N}{T B}$
N = Allowable width of pavement slab width in meters measured edge to edge or edge to united joint	
N = Number of layers of steel (1 or 2)	
T = Thickness of slab in (mm)	
B = Bar spacing in (mm)	
Maximum B = 1000 mm	
Minimum B = 300 mm	

- GENERAL NOTES**
- For further information regarding the placement of concrete and reinforcement, refer to the governing specifications for "Concrete" and "Reinforcing steel".
 - Longitudinal and transverse bars shall be deformed steel conforming to ASTM A-616 (Grade 430) or ASTM A-616 (Grade 430).
 - Details for pavement width, pavement thickness and the crown cross-slope shall be shown elsewhere in the plans.
 - Splices shall be a minimum of 33 times the nominal steel diameter.
 - Vibration with hand-manipulated mechanical vibrators is required adjacent to all transverse construction joints.
 - The detail for joint sealant and reservoir will be shown in concrete pavement detail, joint section.
 - Pavement widths of more than 4.8 meters shall have a longitudinal joint (Section 2-2 or Y-Y). These joints shall be located within 150 mm of the lane line unless the joint is shown elsewhere on the plans.
 - The saw cut for the longitudinal joint may be one fourth the slab thickness when crushed limestone is used as the coarse aggregate.
 - 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 applied.
 - Multiple place tiebars shall be used at longitudinal construction joints unless otherwise specified in the plans.
 - For the 325 mm slab thickness, when standard detail CPCCR(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.

Texas Department of Transportation
Design Division (Pavement)

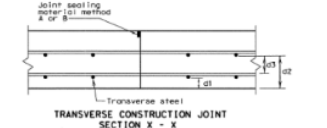
CONCRETE PAVEMENT DETAILS
CONTINUOUSLY REINFORCED STEEL BARS
ONE LAYER PLACEMENT
T-200mm TO 300mm

CPCCR (1) - 95 (M)

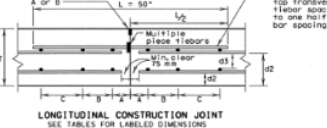
PLAN	SECTION	DATE	BY	CHK	APP	REV	DESCRIPTION
01/01/95	01/01/95	01/01/95	01/01/95	01/01/95	01/01/95	01/01/95	01/01/95

ALL UNITS ARE IN MILLIMETERS

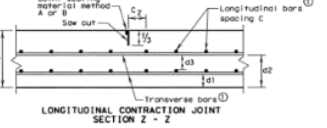
1. This manual is intended to provide the user with the necessary information to design and construct a concrete pavement structure. It is not intended to be a substitute for the user's own engineering judgment and experience. 2. The user is responsible for the design and construction of the pavement structure. 3. The user is responsible for the selection of the materials and the construction methods. 4. The user is responsible for the quality control and quality assurance of the construction. 5. The user is responsible for the safety of the construction. 6. The user is responsible for the environmental protection. 7. The user is responsible for the social and economic impact of the construction. 8. The user is responsible for the cultural and historical preservation. 9. The user is responsible for the public participation. 10. The user is responsible for the transparency and accountability of the construction. 11. The user is responsible for the innovation and research and development. 12. The user is responsible for the collaboration and partnership. 13. The user is responsible for the leadership and management. 14. The user is responsible for the communication and public relations. 15. The user is responsible for the risk management. 16. The user is responsible for the conflict resolution. 17. The user is responsible for the dispute resolution. 18. The user is responsible for the grievance redressal. 19. The user is responsible for the social and environmental impact assessment. 20. The user is responsible for the monitoring and evaluation of the construction. 21. The user is responsible for the reporting and documentation of the construction. 22. The user is responsible for the archiving and preservation of the construction records. 23. The user is responsible for the dissemination and sharing of the construction knowledge. 24. The user is responsible for the capacity building and training. 25. The user is responsible for the knowledge management.



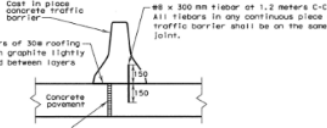
TRANSVERSE CONSTRUCTION JOINT SECTION X - X



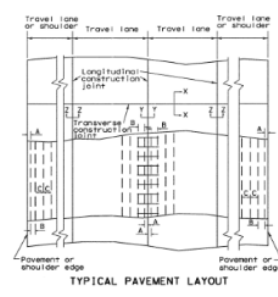
LONGITUDINAL CONSTRUCTION JOINT SECTION Y - Y



LONGITUDINAL CONTRACTION JOINT SECTION Z - Z



FREE LONGITUDINAL JOINT DETAIL



TYPICAL PAVEMENT LAYOUT

TABLE NO. 1 LONGITUDINAL STEEL					
FOR TRANSVERSE BAR SPACING (mm)					
Slab thickness and bar size	Regular reinforcement	First spacing at edge or joint	Second spacing from edge or joint	Additional reinforcement at transverse construction joint	Length of reinforcement
T Bar number	Spacing mm	Spacing mm	Spacing mm	Spacing mm	Length m
200	5	235	75 to 100	75 to 100	235 to 1000
225	5	190	75 to 100	75 to 100	190 to 1000
250	5	215	75 to 100	75 to 100	215 to 1000
275	5	190	75 to 100	75 to 100	190 to 1000
300	5	190	75 to 100	75 to 100	190 to 1000
325	5	190	75 to 100	75 to 100	190 to 1000

TABLE NO. 2B ALLOWABLE PAVEMENT WIDTH (W) IN METERS					
FOR TRANSVERSE BAR SPACING (mm)					
Slab thickness	325 mm	350 mm	375 mm		
#5 Bar at 1000 mm	21.3	19.8	18.4		
#5 Bar at 600 mm	35.5	32.9	30.7		
#6 Bar at 1000 mm	30.2	28.0	26.2		
#6 Bar at 600 mm	50.3	46.7	43.6		

TRANSVERSE STEEL AND TIEBAR SPACINGS SHALL BE BASED ON THE FOLLOWING FORMULAE.	
For #5M Bars	For #20M Bars
$N = \frac{3,455,000 N}{T B}$	$N = \frac{4,905,000 N}{T B}$
N = Allowable width of pavement slab width in meters measured edge to edge or edge to united joint	
N = Number of layers of steel (1 or 2)	
T = Thickness of slab in (mm)	
B = Bar spacing in (mm)	
Maximum B = 1000 mm	
Minimum B = 300 mm	

TABLE NO. 3 TWO LAYER STEEL PLACEMENT SPECIFICATIONS OF DIMENSIONS					
Thickness (mm)	d1 (mm)	d2 (mm)	d3 (mm)	Minimum Clearance	
325	60	160	50		
350	70	170	50		
375	80	180	50		

- GENERAL NOTES**
- For further information regarding the placement of concrete and reinforcement, refer to the governing specifications for "Concrete" and "Reinforcing steel".
 - Longitudinal and transverse bars shall be deformed steel conforming to ASTM A-616 (Grade 430) or ASTM A-616 (Grade 430).
 - Details for pavement width, pavement thickness and the crown cross-slope shall be shown elsewhere in the plans.
 - Splices shall be a minimum of 33 times the nominal steel diameter.
 - Vibration with hand-manipulated mechanical vibrators is required adjacent to all transverse construction joints.
 - The detail for joint sealant and reservoir will be shown in concrete pavement detail, joint section.
 - Pavement widths of more than 4.8 meters shall have a longitudinal joint (Section 2-2 or Y-Y). These joints shall be located within 150 mm of the lane line unless the joint is shown elsewhere on the plans.
 - The saw cut for the longitudinal joint may be one fourth the slab thickness when crushed limestone is used as the coarse aggregate.
 - 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 applied.
 - Multiple place tiebars shall be used at longitudinal construction joints unless otherwise specified in the plans.
 - For the 325 mm slab thickness, when standard detail CPCCR(2)-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.

Texas Department of Transportation
Design Division (Pavement)

CONCRETE PAVEMENT DETAILS
CONTINUOUSLY REINFORCED STEEL BARS
TWO LAYER PLACEMENT
T-325mm TO 375mm

CPCCR (2) - 95 (M)

PLAN	SECTION	DATE	BY	CHK	APP	REV	DESCRIPTION
01/01/95	01/01/95	01/01/95	01/01/95	01/01/95	01/01/95	01/01/95	01/01/95

ALL UNITS ARE IN MILLIMETERS