TEXAS DEPARTMENT OF TRANSPORTATION

DALLAS DISTRICT
WILLIAM L. HALE, P.E., DISTRICT ENGINEER

DESIGN SCHEMATIC
FM 2499, SECTION 3
FROM FM 1171 TO FM 407
PROJECT LENGTH 2.72 MILES
DENTON COUNTY

CONTROL : 2681–01–016
STA. 194+53.94 TO STA. 337+92.84
FUNCTIONAL CLASS: URBAN PRINCIPAL ARTERIAL
DESIGN SPEED: 45 mph
ROLL 1 OF 1

SCALE: 1″ = 100′ H, 1″ = 10′ V

JUNE, 2004

HALFF ASSOCIATES, INC.
ENGINEERS SURVEYORS · SCIENTISTS
PRELIMINARY – FOR INTERIM REVIEW ONLY

These documents are for Interim Review and not intended for Construction, Bidding, or Permit Purposes. They were prepared by, or under the supervision of:

Michael E. Romanowski	56306	6-04-04
Type or Print Name	P.E.#	Date

Halff Associates
ENGINEERS . ARCHITECTS . SCIENTISTS . PLANNERS . SURVEYORS

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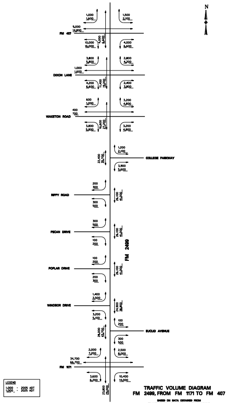
LEGEND

- EXISTING R.OW.
- PROPOSED R.OW.
- DIRECTION OF TRAFFIC
- EXISTING PROPERTY LINE
- EXISTING LOT LINE
- FUTURE LOT LINE
- ROW AQUISITION
- GRADING LIMITS
- SURVEY LINE
- CITY LIMITS
- 100 FLOODPLAIN LIMITS
- 100 YR FLOOD ELEVATION
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING FIBER OPTICS
- EXISTING POWER POLE
- EXISTING SANITARY SEWER MANHOLE
- EXISTING CONTOURS
- EXISTING PAVEMENT EDGES
- EXISTING UTILITY EASEMENTS
- PROPOSED FM 2499 CENTERLINE
- PROPOSED DRAINAGE EASEMENT
- PROPOSED PAVEMENT
- PROPOSED CONTROL OF ACCESS
- PROPOSED RETAINING WALL
- PROPOSED STORM SEWER

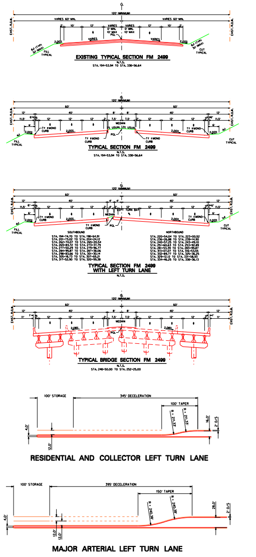

N
FM 407
DIXON LANE
WAKETON ROAD
COLLEGE PARKWAY
RIPPY ROAD
PECAN DRIVE
POPLAR DRIVE
WINDSOR DRIVE
EUCLID AVENUE
FM 1171
FM 2499
LEGEND
1,000 - 2005 ADT
1,000 - 2025 ADT

TRAFFIC VOLUME DIAGRAM
FM 2499, FROM FM 1171 TO FM 407

BASED ON DATA OBTAINED FROM
TRANSPORTATION PLANNING AND PROGRAMMING
TXDOT, AUSTIN, TEXAS

TRAFFIC DIAGRAM

N.T.S.


CL
120′ (MINIMUM)
VARIES 60′ MIN.
60′
40′
12′
11.5′
EXIST. R.O.W.
PGL
MEDIAN
LEFT TURN BAY
TY II MONO CURB
2.00%
FILL TYPICAL
CUT TYPICAL
100′ STORAGE
345′ DECELERATION
100′ TAPER
R = 211.33′
395′ DECELERATION
150′ TAPER
R = 240.38′

EXISTING TYPICAL SECTION FM 2499
N.T.S.
STA. 194+53.94 TO STA. 338+56.64

TYPICAL SECTION FM 2499
N.T.S.
STA. 194+53.94 TO STA. 338+56.64

SOUTHBOUND	NORTHBOUND
STA. 194+74.70 TO STA. 198+64.91	STA. 220+54.04 TO STA. 223+00.52
STA. 201+73.02 TO STA. 204+24.12	STA. 236+26.88 TO STA. 239+14.90
STA. 262+74.07 TO STA. 265+20.54	STA. 240+57.25 TO STA. 243+49.10
STA. 269+83.72 TO STA. 273+37.79	STA. 251+60.63 TO STA. 253+92.89
STA. 277+50.29 TO STA. 279+96.77	STA. 281+53.39 TO STA. 283+99.87
STA. 284+99.87 TO STA. 287+38.06	STA. 313+07.07 TO STA. 316+53.55
STA. 298+83.66 TO STA. 301+30.14	STA. 332+89.77 TO STA. 325+36.25
STA. 305+18.73 TO STA. 307+65.21	STA. 329+12.12 TO STA. 331+58.93
STA. 317+52.90 TO STA. 320+99.38	STA. 334+46.25 TO STA. 338+36.13

TYPICAL SECTION FM 2499
WITH LEFT TURN LANE
N.T.S.

TYPICAL BRIDGE SECTION FM 2499
N.T.S.
STA. 248+50.00 TO STA. 252+25.00

RESIDENTIAL AND COLLECTOR LEFT TURN LANE

MAJOR ARTERIAL LEFT TURN LANE

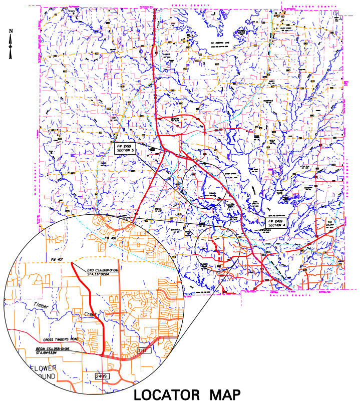
TYPICAL SECTIONS

1. FLOODPLAIN BOUNDARY LIMITS WERE OBTAINED FROM FIRM COMMUNITY-PANEL NUMBERS:
48121C0540 E, APRIL 2, 1997

2. EXACT LENGTHS OF LEFT TURN STORAGE LANES AND ADDITIONAL MEDIAN OPENING LOCATIONS
TO BE DETERMINED IN PS&E IN COORDINATION WITH TOWN OF FLOWER MOUND, DENTON COUNTY AND TX DOT.

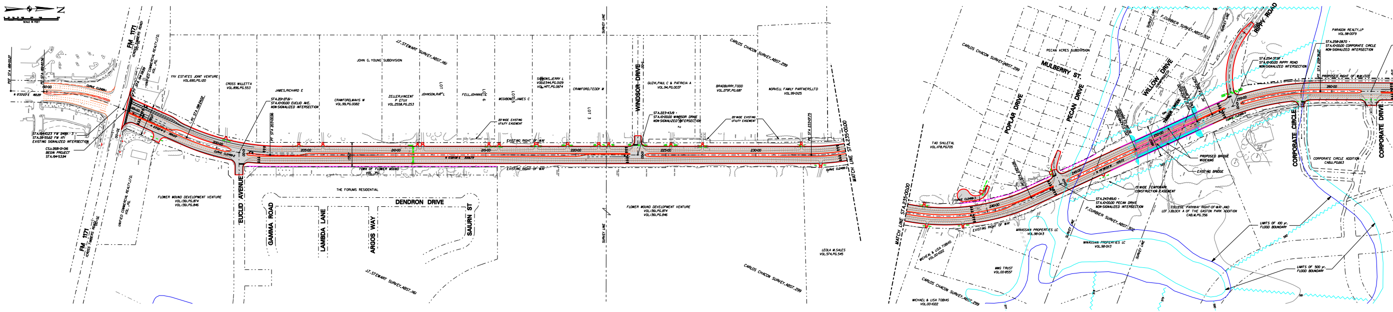
3.) DURING CONSTRUCTION AND AFTER PROJECT COMPLETION, BEST PRACTICES WILL BE FOLLOWED
IN ACCORDANCE WITH TPDES GENERAL PERMIT TXR150000 DATED 3/5/03.

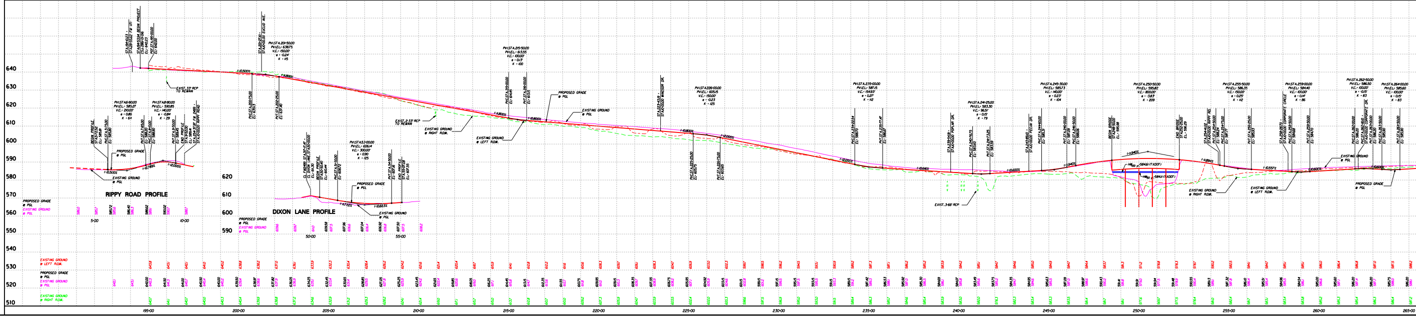
NOTES

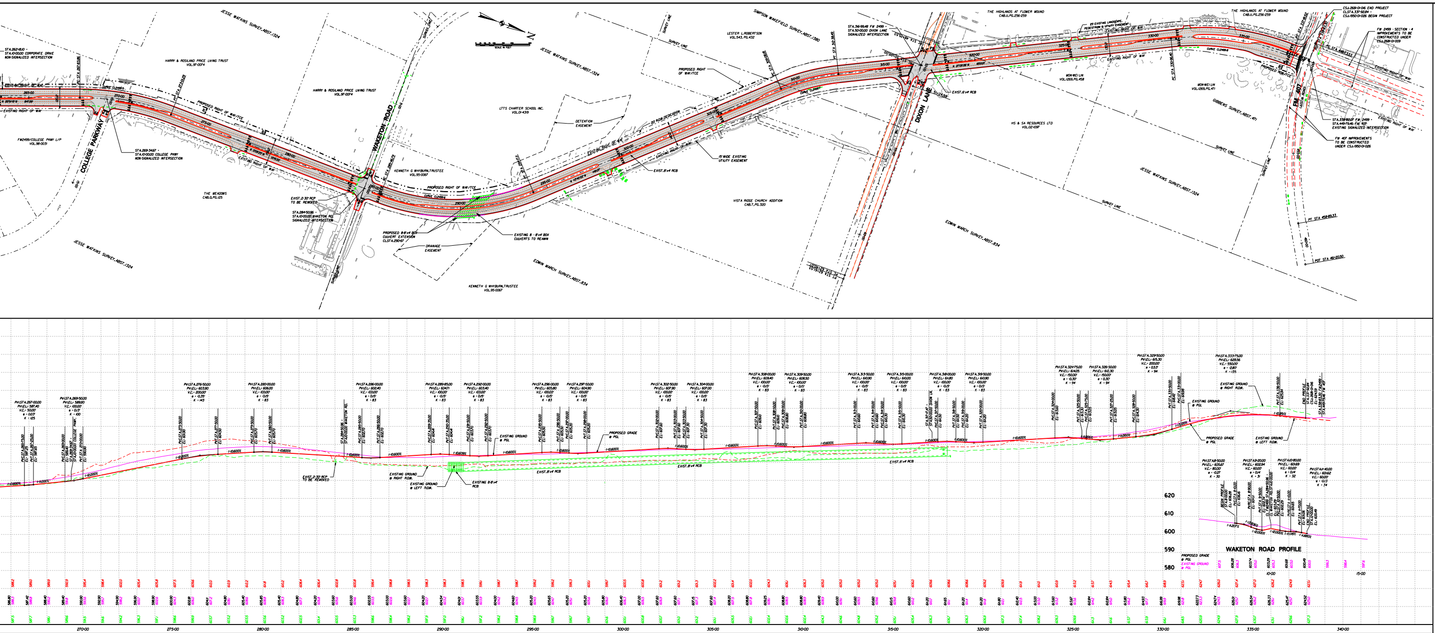

N
FM 2499
SECTION 5
FM 2499
SECTION 4
Timber
Creek
CROSS TIMBERS ROAD
FLOWER
MOUND
2499
1171

LOCATOR MAP

N.T.S.


N
FM 1171
EUCLID AVENUE
GAMMA ROAD
LAMBDA LANE
ARGOS WAY
DENDRON DRIVE
SAXURN ST
WINDSOR DRIVE
POPLAR DRIVE
MULBERRY ST.
PECAN DRIVE
WILLOW DRIVE
RIPPY ROAD
CORPORATE CIRCLE
CORPORATE DRIVE
THE FORUMS RESIDENTIAL
FLOWER MOUND DEVELOPMENT VENTURE
CARLOS CHACON SURVEY, ABST. 299
J.T. STEWART SURVEY, ABST. 1162
LIMITS OF 100 yr. FLOOD BOUNDARY
LIMITS OF 500 yr. FLOOD BOUNDARY


640
630
620
610
600
590
580
570
560
550
540
530
520
510
RIPPY ROAD PROFILE
DIXON LANE PROFILE
620
610
600
590
PROPOSED GRADE
@ PGL
EXISTING GROUND
@ PGL
EXISTING GROUND
@ LEFT ROW.
EXISTING GROUND
@ RIGHT ROW.
195+00
200+00
205+00
210+00
215+00
220+00
225+00
230+00
235+00
240+00
245+00
250+00
255+00
260+00
265+00


JESSE WATKINS SURVEY, ABST. 1324
STA. 262+18.10 = STA. 10+00.00 CORPORATE DRIVE NON-SIGNALIZED INTERSECTION
HARRY & ROSILAND PRICE LIVING TRUST VOL. 97-0074
EXISTING RIGHT OF WAY
PROPOSED RIGHT OF WAY/TCE
CURVE CL2499-5
265+00
270+00
275+00
280+00
285+00
290+00
295+00
300+00
305+00
310+00
315+00
320+00
325+00
330+00
335+00
COLLEGE PARKWAY
FM2499/COLLEGE PKWY L/P VOL. 98-0031
STA. 269+34.67 = STA. 10+00.00 COLLEGE PKWY NON-SIGNALIZED INTERSECTION
THE MEADOWS CAB. O, PG. 125
WAKETON ROAD
EXIST. 2-30" RCP TO BE REMOVED
STA. 284+50.96 = STA. 10+00.00 WAKETON RD. SIGNALIZED INTERSECTION
KENNETH G WHYBURN, TRUSTEE VOL. 95-0067
CURVE CL2499-6
PROPOSED 8-8'x4' BOX CULVERT EXTENSION CL STA. 290+67
DRAINAGE EASEMENT
EXISTING 8 - 8'x4' BOX CULVERTS TO REMAIN
EDWIN MARCH SURVEY, ABST. 834
LTTS CHARTER SCHOOL INC. VOL. 01-4319
DETENTION EASEMENT
SCALE IN FEET
N
SURVEY LINE
20' R.O.W. DEDICATION
EXIST. 8'x4' RCB
15' WIDE EXISTING UTILITY EASEMENT
PROPOSED RIGHT OF WAY/TCE
LESTER L. ROBERTSON VOL. 543, PG. 432
SIMPSON WAKEFIELD SURVEY, ABST. 1380
VISTA RIDGE CHURCH ADDITION CAB. T, PG. 320
CURVE CL2499-7
STA. 316+99.48 FM 2499 = STA. 50+00.00 DIXON LANE SIGNALIZED INTERSECTION
DIXON LANE
EXIST. 6'x4' RCB
THE HIGHLANDS AT FLOWER MOUND CAB. U, PG. 256-259
25' EXISTING LANDSCAPE, PEDESTRIAN & UTILITY EASEMENT
MON-WEI LIN VOL. 1269, PG. 458
MON-WEI LIN VOL. 1269, PG. 471
HS & SA RESOURCES LTD VOL. 02-1097
CURVE CL2499-8
PROPOSED ROW/TCE
GIBBENS SURVEY, ABST. 471
CSJ: 2681-01-016 END PROJECT CL STA. 337+92.84 = CSJ: 1950-01-026 BEGIN PROJECT
FM 2499 - SECTION - 4 IMPROVEMENTS TO BE CONSTRUCTED UNDER CSJ: 2681-01-009
FM 407 (JUSTIN ROAD)
STA. 338+82.07 FM 2499 = STA. 449+79.46 FM 407 EXISTING SIGNALIZED INTERSECTION
FM 407 IMPROVEMENTS TO BE CONSTRUCTED UNDER CSJ: 1950-01-026
PT STA 458+89.33
POT STA 461+20.50
EXISTING GROUND @ RIGHT ROW
EXISTING GROUND @ LEFT ROW
PROPOSED GRADE @ PGL
EXISTING GROUND @ PGL
EXISTING 8-8'x4' RCB
EXIST. 8'x4' RCB
EXIST. 2-30" RCP TO BE REMOVED
WAKETON ROAD PROFILE
620
610
600
590
580
270+00
275+00
280+00
285+00
290+00
295+00
300+00
305+00
310+00
315+00
320+00
325+00
330+00
335+00
340+00

F.M. 2499 CENTERLINE DATA

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BEGINNING CHAIN CL2499 DESCRIPTION
..........................................................................

POINT 100      N      7,063,297.6472  E      2,406,871.5077  STA   188+00.2788

COURSE FROM 100 TO PC CL2499-1  N 0° 33' 22.5806" E       DIST 182.2874

                              CURVE DATA
                             ...........
CURVE CL2499-1
P.I.  STATION         192+13.8401  N      7,063,711.1978  E      2,406,875.6829
DELTA        -    22° 49' 18.0256" (RT)
DEGREE       -     4° 59' 59.9998"
TANGENT      -             231.2827
LENGTH       -             456.4335
RADIUS       -           1,145.9156
EXTERNAL     -              23.1072
LONG CHORD   -             453.4222
MID. ORD.    -              22.6504
P.C.  STATION         189+82.5574  N      7,063,479.9268  E      2,406,873.3575
P.T.  STATION         194+38.9909  N      7,063,923.4939  E      2,406,967.3746
C.C.                               N      7,063,468.8088  E      2,408,019.2191
BACK        - N   0° 33' 22.5806" E
AHEAD       - N  23° 22' 40.6063" E
CHORD BEAR  - N  11° 58' 01.5935" E

COURSE FROM PT CL2499-1 TO PC CL2499-2  N 23° 22' 40.6063" E      DIST 385.0301

                              CURVE DATA
                             ...........
CURVE CL2499-2
P.I.  STATION         200+65.9936  N      7,064,499.0243  E      2,407,216.1659
DELTA        -    23° 50' 48.9998" (LT)
DEGREE       -     4° 59' 59.9998"
TANGENT      -             241.9726
LENGTH       -             476.9389
RADIUS       -           1,145.9156
EXTERNAL     -              25.2698
LONG CHORD   -             473.5039
MID. ORD.    -              24.7238
P.C.  STATION         198+24.0210  N      7,064,276.9158  E      2,407,120.1525
P.T.  STATION         203+00.9598  N      7,064,740.9088  E      2,407,214.1852
C.C.                               N      7,064,731.6090  E      2,406,068.3080
BACK        - N  23° 22' 40.6063" E
AHEAD       - N   0° 28' 08.3936" W
CHORD BEAR  - N  11° 27' 16.1063" E

COURSE FROM PT CL2499-2 TO PC CL2499-3  N 0° 28' 08.3936" W       DIST 3,006.7935

                              CURVE DATA
                             ...........
CURVE CL2499-3
P.I.  STATION         237+04.3456  N      7,068,224.2578  E      2,407,185.6721
DELTA        -    45° 09' 55.2778" (LT)
DEGREE       -     4° 59' 59.9998"
TANGENT      -             476.5922
LENGTH       -             903.3071
RADIUS       -           1,145.9156
EXTERNAL     -              95.1576
LONG CHORD   -             880.1003
MID. ORD.    -              87.8615
P.C.  STATION         233+07.7534  N      7,067,747.6816  E      2,407,189.5732
P.T.  STATION         242+11.0605  N      7,068,557.5077  E      2,406,844.9601
C.C.                               N      7,067,738.3818  E      2,406,043.6968
BACK        - N   0° 28' 08.3936" W
AHEAD       - N  45° 38' 03.6713" W
CHORD BEAR  - N  23° 03' 06.0324" W

COURSE FROM PT CL2499-3 TO 143  N 45° 38' 03.6708" W      DIST 630.9354

POINT 143      N      7,069,004.2736  E      2,406,388.1903  STA   248+49.9959

COURSE FROM 143 TO 144  N 45° 38' 03.6710" W      DIST 375.0000

POINT 144      N      7,069,266.4067  E      2,406,120.1057  STA   252+24.9959

COURSE FROM 144 TO PC CL2499-4  N 45° 38' 03.6761" W      DIST 91.7753

                              CURVE DATA
                             ...........
CURVE CL2499-4
P.I.  STATION         256+31.4421  N      7,069,550.6000  E      2,405,829.5406
DELTA        -    24° 46' 48.1736" (RT)
DEGREE       -     3° 59' 59.9999"
TANGENT      -             314.6709
LENGTH       -             619.5012
RADIUS       -           1,432.3945
EXTERNAL     -              34.1565
LONG CHORD   -             614.6042
MID. ORD.    -              33.3610
P.C.  STATION         253+16.7712  N      7,069,330.6592  E      2,406,054.4963
P.T.  STATION         259+36.2724  N      7,069,844.7445  E      2,405,717.5208
C.C.                               N      7,070,354.6666  E      2,407,056.0764
BACK        - N  45° 38' 03.6713" W
AHEAD       - N  20° 51' 15.4977" W
CHORD BEAR  - N  33° 14' 39.5845" W

COURSE FROM PT CL2499-4 TO PC CL2499-5  N 20° 51' 15.4977" W      DIST 847.5064

                              CURVE DATA
                             ...........
CURVE CL2499-5
P.I.  STATION         270+45.4250  N      7,070,881.2358  E      2,405,322.6696
DELTA        -    20° 41' 50.1141" (RT)
DEGREE       -     3° 59' 59.9999"
TANGENT      -             261.5662
LENGTH       -             517.4314
RADIUS       -           1,432.3945
EXTERNAL     -              23.6862
LONG CHORD   -             514.6226
MID. ORD.    -              23.3009
P.C.  STATION         267+83.8588  N      7,070,636.8843  E      2,405,415.7853
P.T.  STATION         273+01.2902  N      7,071,142.8002  E      2,405,321.9526
C.C.                               N      7,071,146.7265  E      2,406,754.3418
BACK        - N  20° 51' 15.4977" W
AHEAD       - N   0° 09' 25.3835" W
CHORD BEAR  - N  10° 30' 20.4406" W

COURSE FROM PT CL2499-5 TO PC CL2499-6  N 0° 09' 25.3835" W       DIST 1,245.5035

                              CURVE DATA
                             ...........
CURVE CL2499-6
P.I.  STATION         290+04.1512  N      7,072,845.6549  E      2,405,317.2850
DELTA        -    43° 30' 57.0165" (LT)
DEGREE       -     4° 59' 59.9998"
TANGENT      -             457.3576
LENGTH       -             870.3168
RADIUS       -           1,145.9156
EXTERNAL     -              87.0990
LONG CHORD   -             849.5493
MID. ORD.    -              81.6369
P.C.  STATION         285+46.7937  N      7,072,388.2991  E      2,405,318.5386
P.T.  STATION         294+17.1104  N      7,073,176.4509  E      2,405,001.4612
C.C.                               N      7,072,385.1508  E      2,404,172.6273
BACK        - N   0° 09' 25.3835" W
AHEAD       - N  43° 40' 22.4000" W
CHORD BEAR  - N  21° 54' 53.0918" W

COURSE FROM PT CL2499-6 TO PC CL2499-7  N 43° 40' 22.4000" W      DIST 1,491.0667

                              CURVE DATA
                             ...........
CURVE CL2499-7
P.I.  STATION         310+74.4058  N      7,074,375.2205  E      2,403,856.9768
DELTA        -    16° 30' 56.0100" (RT)
DEGREE       -     4° 59' 59.9998"
TANGENT      -             166.3007
LENGTH       -             330.3112
RADIUS       -           1,145.9156
EXTERNAL     -              12.0054
LONG CHORD   -             329.1608
MID. ORD.    -              11.8810
P.C.  STATION         309+08.1771  N      7,074,254.9304  E      2,403,971.0197
P.T.  STATION         312+38.4883  N      7,074,523.2028  E      2,403,781.0676
C.C.                               N      7,075,046.2392  E      2,404,800.6535
BACK        - N  43° 40' 22.4000" W
AHEAD       - N  27° 09' 26.3901" W
CHORD BEAR  - N  35° 24' 54.3950" W

COURSE FROM PT CL2499-7 TO PC CL2499-8  N 27° 09' 26.3901" W      DIST 1,857.9166

                              CURVE DATA
                             ...........
CURVE CL2499-8
P.I.  STATION         334+45.6449  N      7,076,487.0348  E      2,402,773.6431
DELTA        -    27° 24' 16.2665" (RT)
DEGREE       -     3° 59' 59.9999"
TANGENT      -             349.2400
LENGTH       -             685.1130
RADIUS       -           1,432.3945
EXTERNAL     -              41.9605
LONG CHORD   -             678.6011
MID. ORD.    -              40.7663
P.C.  STATION         330+96.4049  N      7,076,176.2962  E      2,402,933.0486
P.T.  STATION         337+81.5178  N      7,076,836.2715  E      2,402,775.1490
C.C.                               N      7,076,830.0918  E      2,404,207.5310
BACK        - N  27° 09' 26.3901" W
AHEAD       - N   0° 14' 49.0764" E
CHORD BEAR  - N  13° 27' 18.2568" W

COURSE FROM PT CL2499-8 TO 136  N 0° 14' 49.0764" E       DIST 101.7812

POINT 136      N      7,076,938.0518  E      2,402,775.5009  STA   338+83.2991

..........................................................................
ENDING CHAIN CL2499 DESCRIPTION
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CROSSFALL TRANSITION TABLES

SOUTHBOUND	FM 2499	NORTHBOUND	SOUTHBOUND	FM 2499	NORTHBOUND
STATION	TEMPLATE	STATION	STATION	TEMPLATE	STATION
194+38.99	-2.00% -2.00% AXIS OF ROTATION (TYP.)	194+38.99	259+00.00	-2.00% -2.00%	259+00.00
248+00.00	-2.00% -2.00%	248+00.00	328+00.00	-2.00% -2.00%	328+00.00
248+20.00	-2.00% -2.00%	248+20.00	331+60.00	+2.00% -2.00%	331+60.00
251+08.20	-2.00% -2.00%	251+08.20	333+00.00	+2.00% -2.00%	333+00.00
252+76.20	+2.00% -2.00%	252+76.20	337+80.00	-2.00% -2.00%	337+80.00
255+00.00	+2.00% -2.00%	255+00.00	338+40.44	-2.00% -2.00%	338+40.44

TEXAS DEPARTMENT OF TRANSPORTATION

DALLAS DISTRICT
WILLIAM L. HALE, P.E., DISTRICT ENGINEER

DESIGN SCHEMATIC
FM 2499, SECTION 3
FROM FM 1171 TO FM 407
PROJECT LENGTH 2.72 MILES
DENTON COUNTY

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DESIGN SPEED: 45 mph
ROLL 1 OF 1

SCALE: 1″=100′ H, 1″=10′ V

JUNE, 2004

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