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Texas Department
of Transportation

DALLAS DISTRICT

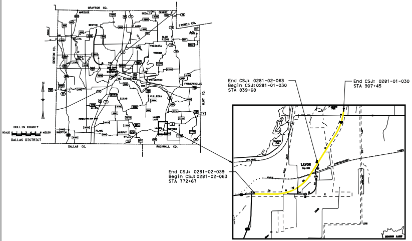
Design Schematic

William L. Hale, P.E.
District Engineer

SH 78
From: SH 205
To: FM 6

CSJ: 0281-02-063
0281-01-030

Collin County
Functional Class: Urban Minor Arterial
Project Length: 2.55 Miles
Design Speed: Mainlanes 45 mph
Cross Streets 30 mph


GRAYSON CO.
FANNIN CO.
DENTON CO.
HUNT CO.
COLLIN COUNTY
DALLAS DISTRICT
DALLAS CO.
ROCKWALL CO.
SCALE MILES
LAVON
End CSJ: 0281-02-063
Begin CSJ: 0281-01-030
STA 839+68
End CSJ: 0281-01-030
STA 907+45
End CSJ: 0281-02-039
Begin CSJ: 0281-02-063
STA 772+67

Scale: Horizontal = 1:200
Vertical = 1:20

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December 2009

SCHEMATIC PREPARED BY:
HDR ENGINEERING, INC.
REGISTRATION NUMBER F-754

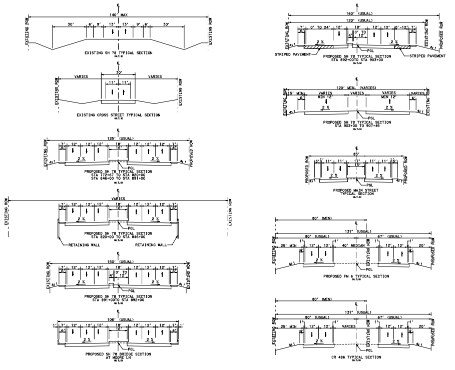
FOR INTERIM REVIEW ONLY
NOT INTENDED FOR PERMITTING, BIDDING
OR CONSTRUCTION.

Prepared by or under the
Direct Supervision of

TEWODROS "TED" TEGENE
PROJECT MANAGER

94889 P.E. NUMBER
12-04-09 DATE

HDR Engineering, Inc.
17111 Preston Road, Suite 200
Dallas, Texas 75248-1232

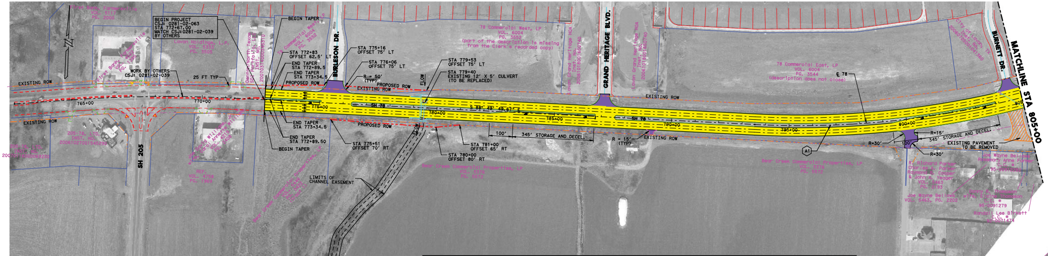

EXISTING SH 78 TYPICAL SECTION
EXISTING CROSS STREET TYPICAL SECTION
PROPOSED SH 78 TYPICAL SECTION STA 772+67 TO STA 820+00 STA 846+00 TO STA 891+00
PROPOSED SH 78 TYPICAL SECTION STA 820+00 TO STA 846+00
RETAINING WALL
PROPOSED SH 78 TYPICAL SECTION STA 891+00TO STA 892+00
PROPOSED SH 78 BRIDGE SECTION AT MOORE LN
PROPOSED SH 78 TYPICAL SECTION STA 892+00TO STA 903+00
STRIPED PAVEMENT
PROPOSED SH 78 TYPICAL SECTION STA 903+00 TO 907+45
PROPOSED MAIN STREET TYPICAL SECTION
PROPOSED FM 6 TYPICAL SECTION
CR 486 TYPICAL SECTION
EXISTING ROW
PROPOSED ROW
PGL

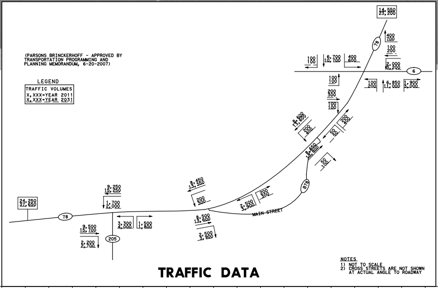
TYPICAL SECTIONS

LEGEND

🟨	MAINLANE
🟪	CROSS STREET/DRIVEWAY
🟧	BRIDGE STRUCTURE
— · — · —	EXISTING ROW (ACCESS BY PERMIT ONLY)
— · — · —	PROPOSED ROW (ACCESS BY PERMIT ONLY IN ACCORDANCE WITH TxDOT ACCESS CONTROL MANUAL)
▨	EXISTING PAVEMENT TO BE REMOVED
———	PROPERTY LINES

NOT INTENDED FOR CONSTRUCTION,
BIDDING, OR PERMIT PURPOSES

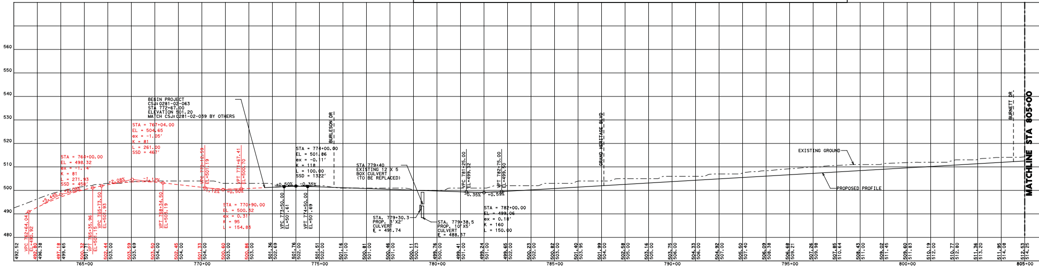

First Bank, Farmersville
VOL. 5117
PG. 2000
BEGIN PROJECT
CSJ: 0281-02-063
STA 772+67.00
MATCH CSJ:0281-02-039
BY OTHERS
Lavon Holdings, L.P.
VOL. 5333
PG. 3505
First Bank, Farmersville
VOL. 4622
PG. 1395
Denton/North Texas
SDI Portfolio, LLC
INST. NO.
20070314000345310
78 Commercial West, LP
VOL. 6004
PG. 3552
WORK BY OTHERS
CSJ: 0281-02-039
25 FT TYP
EXISTING ROW
765+00
770+00
775+00
780+00
785+00
790+00
795+00
800+00
805
BEGIN TAPER
STA 772+83
OFFSET 62.5' LT
END TAPER
STA 772+89.5
END TAPER
STA 773+34.5
PROPOSED ROW
BURLESON DR.
STA 775+16
OFFSET 75' LT
STA 776+06
OFFSET 75' LT
R = 50'
(TYP)
PROPOSED ROW
EXISTING ROW
FLOW
STA 779+53
OFFSET 75' LT
STA 779+40
EXISTING 12' X 5' CULVERT
(TO BE REPLACED)
78 Commercial West, LP
VOL. 6004
PG. 3552
(part of the description is missing
from the Clerk's recorded copy)
Lavon Grand Heritage HOA
Inst. No.
20061018001650740
GRAND HERITAGE BLVD.
Lavon Grand Heritage HOA
Inst. No.
20061018001650740
SH 78
S 88° 49' 49.67" E
SH 78
EXISTING ROW
78 Commercial East, LP
VOL. 6004
PG. 3544
(description does not close)
℄ 78
City of Lavon, TX
Inst. No.
20060725001041360
BURNETT DR.
MATCHLINE STA 805+00
EXISTING ROW
205-78, LTD.
INST. NO.
20061027001545290
205-78, LTD.
INST. NO.
20070116000069230
SH 205
Joe David Williams, Jr.
wife, Carol Annette Williams
VOL. 4219
PG. 2408
REF.
VOL. 4758
PG. 1969
END TAPER
STA 773+34.5
END TAPER
STA 772+89.50
BEGIN TAPER
Bear Creek Commercial Properties, LP
VOL. 5446
PG. 3422
(Tract 1)
LIMITS OF
CHANNEL EASEMENT
STA 775+51
OFFSET 70' RT
PROPOSED ROW
FLOW
STA 780+00
OFFSET 80' RT
STA 781+00
OFFSET 65' RT
100'
345' STORAGE AND DECEL.
R = 15'
(TYP)
EXISTING ROW
Bear Creek Commercial Properties, LP
VOL. 5376
PG. 5572
45' CHANNEL EASEMENT
18' FLAT BOTTOM
A1
Bear Creek Commercial Properties, LP
VOL. 5376
PG. 5572
R=30'
100'
R=15'
345' STORAGE AND DECEL.
EXISTING PAVEMENT
TO BE REMOVED
R=30'
Joe Wayne Bellows
Rosemary Anne Farmer
C.C. #
95-0091282
R. Richard Parker
Charles A. Parker
Raymond B. Cooper
& John A. Yeager
VOL. 5463
PG. 2193
Joe Wayne Bellows
VOL. 5463, PG. 2202
Danny R. Thomason
wife, Elaine Thomason
C.C. #
95-0091279
Randall Lee Birkett
C.C. #
92-0071474

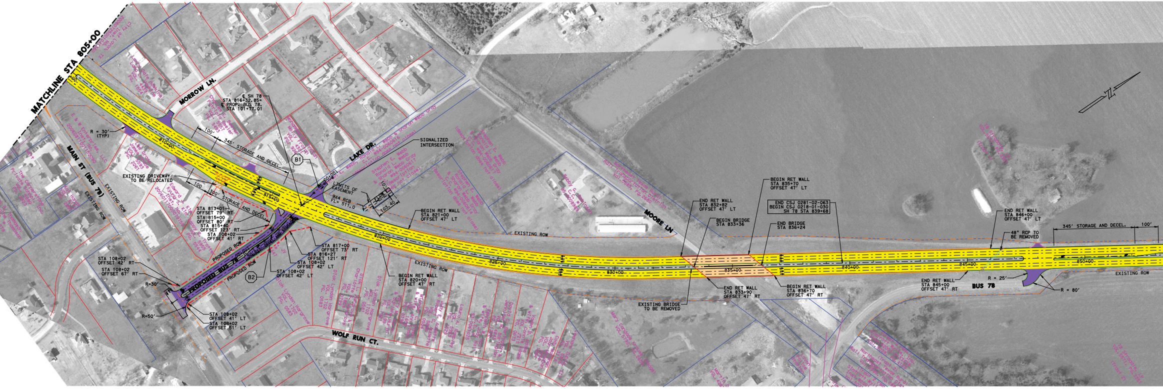

LEGEND
TRAFFIC VOLUMES
X,XXX=YEAR 2011
X,XXX=YEAR 2031
24,250
37,650
78
9,250
15,250
1,700
2,000
9,500
15,700
2,200
2,700
205
3,300
4,000
1,500
1,800
8,450
13,350
200
300
8,500
13,600
2,500
3,900
2,500
3,900
200
300
MAIN STREET
B78
8,650
13,800
50
100
8,600
13,600
200
400
50
50
200
400
200
300
100
100
100
100
100
100
6,700
10,700
400
600
6
100
200
6,850
11,000
1,900
3,000
2,000
3,200
100
200
400
700
78
14,550
23,200

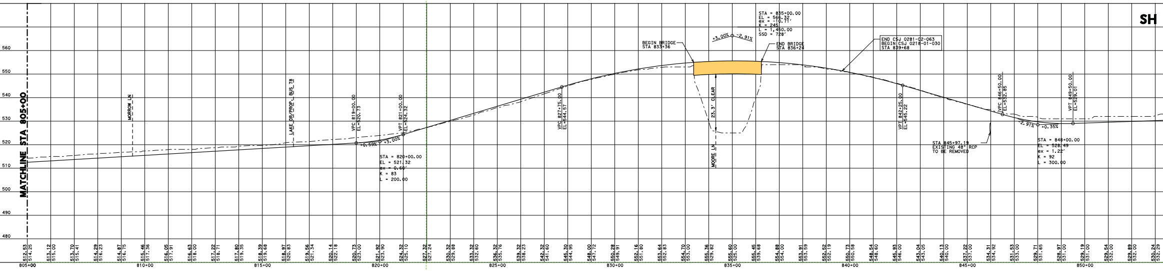
(PARSONS BRINCKERHOFF - APPROVED BY
TRANSPORTATION PROGRAMMING AND
PLANNING MEMORANDUM, 6-20-2007)

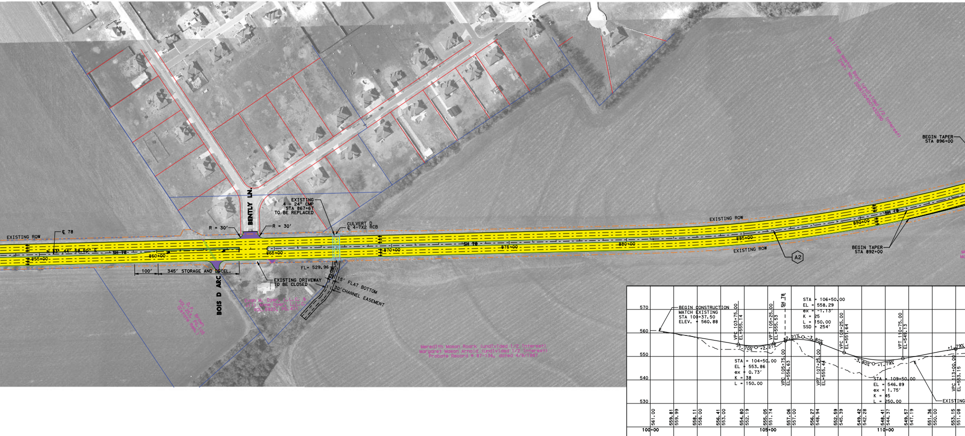
TRAFFIC DATA

NOTES
1) NOT TO SCALE
2) CROSS STREETS ARE NOT SHOWN
AT ACTUAL ANGLE TO ROADWAY

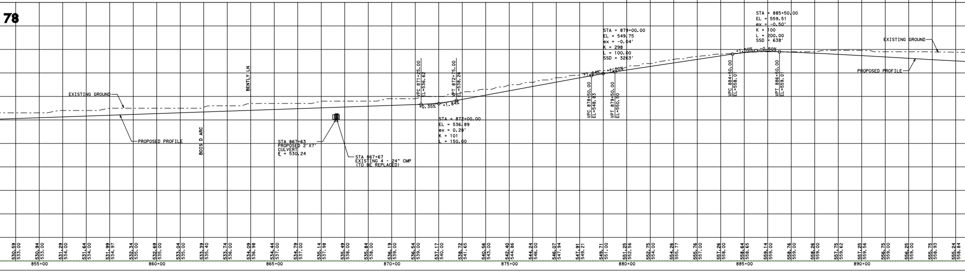



MATCHLINE STA 805+00
MORROW LN.
LAKE DR.
MAIN ST (BUS 78)
MOORE LN
WOLF RUN CT.
BUS 78
PROPOSED BUS 78
R = 30' (TYP)
℄ SH 78 STA 816+32.85= ℄ PROP. BUS 78. STA 101+77.01
100'
345' STORAGE AND DECEL.
300' STORAGE AND DECEL.
B1
B2
SIGNALIZED INTERSECTION
LIMITS OF EASEMENT
9X4 RCB FL= 511.0
103.40
EXISTING DRIVEWAY TO BE RELOCATED
STA 813+01 OFFSET 79' RT
STA 815+00 OFFSET 80' RT
STA 815+40 OFFSET 123' RT
STA 108+02 OFFSET 41' RT
STA 108+02 OFFSET 42' RT
STA 108+02 OFFSET 67' RT
R=30'
R=50'
STA 108+02 OFFSET 41' LT
STA 108+02 OFFSET 51' LT
STA 817+00 OFFSET 73' RT
STA 816+27 OFFSET 121' RT
STA 108+02 OFFSET 42' LT
STA 108+02 OFFSET 42' LT
PROPOSED ROW
EXISTING ROW
BEGIN RET WALL STA 821+00 OFFSET 47' LT
BEGIN RET WALL STA 820+00 OFFSET 47' RT
END RET WALL STA 832+82 OFFSET 47' LT
BEGIN BRIDGE STA 833+36
BEGIN RET WALL STA 835+70 OFFSET 47' LT
END CSJ 0281-02-063 BEGIN CSJ 0218-01-030 SH 78 STA 839+68
END BRIDGE STA 836+24
END RET WALL STA 833+90 OFFSET 47' RT
BEGIN RET WALL STA 836+70 OFFSET 47' RT
EXISTING BRIDGE TO BE REMOVED
END RET WALL STA 846+00 OFFSET 47' LT
48" RCP TO BE REMOVED
END RET WALL STA 845+00 OFFSET 47' RT
R = 25'
R = 80'
810+00
815+00
820+00
825+00
830+00
835+00
840+00
845+00
850+00

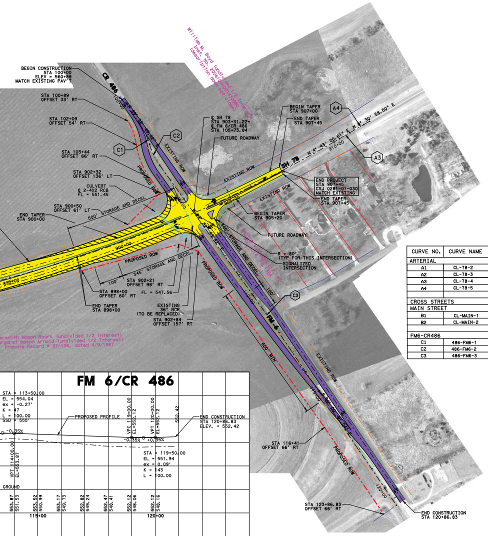

SH
MATCHLINE STA 805+00
560
550
540
530
520
510
500
490
480
MORROW LN
LAKE DR/PROP. BUS 78
MOORE LN
VPC 819+00.00 EL=520.73
VPT 821+00.00 EL=524.32
+0.59%
+3.00%
STA = 820+00.00 EL = 521.32 ex = 0.60' K = 83 L = 200.00
VPC 827+75.00 EL=544.57
BEGIN BRIDGE STA 833+36
END BRIDGE STA 836+24
+3.00%
-2.91%
STA = 835+00.00 EL = 566.32 ex = -10.71' K = 245 L = 1,450.00 SSD = 728'
23.3' CLEAR
END CSJ 0281-02-063 BEGIN CSJ 0218-01-030 STA 839+68
VPT 842+25.00 EL=545.22
STA 845+97.19 EXISTING 48" RCP TO BE REMOVED
VPC 846+50.00 EL=532.85
-2.91%
+0.35%
STA = 848+00.00 EL = 528.49 ex = 1.22' K = 92 L = 300.00
VPT 849+50.00 EL=539.01
805+00
810+00
815+00
820+00
825+00
830+00
835+00
840+00
845+00
850+00

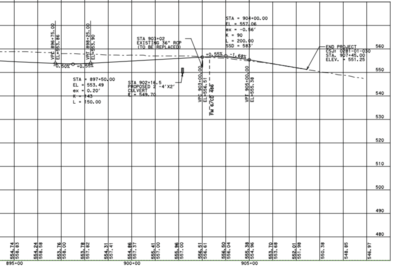


BENTLY LN.
BOIS D ARC
EXISTING ROW
℄ 78
N 23° 44' 58.50" E
SH 78
855+00
860+00
865+00
870+00
875+00
880+00
885+00
890+00
R = 30'
R = 30'
EXISTING
4 - 24" CMP
STA 867+67
TO BE REPLACED
CULVERT D
℄ 4-7X2 RCB
100'
345' STORAGE AND DECEL.
FL= 529.96
FLOW
EXISTING DRIVEWAY
TO BE CLOSED
15' FLAT BOTTOM
30' CHANNEL EASEMENT
D.P. Brown
VOL.253, PG.105
(Estate Rem.)
Evan M. Dyer, L.L.C. &
Jill Anne Dyer, L.L.C.
VOL.5923, PG.471
Meredith Mason Roark (undivided 1/2 interest)
Margaret Mason Arnold (undivided 1/2 interest)
Probate Record # 87-136, dated 4/9/1987
William Mason Boyd (undivided 1/2 interest)
Inst. No. 20061004001432090
BEGIN TAPER
STA 896+00
BEGIN TAPER
STA 892+00
EXISTING ROW
A2
570
560
550
540
530
BEGIN CONSTRUCTION
MATCH EXISTING
STA 100+37.50
ELEV. = 560.88
VPC 103+75.00
EL=555.14
VPT 105+25.00
EL=555.53
SH 78
STA = 106+50.00
EL = 558.29
ex = -1.13'
K = 25
L = 150.00
SSD = 254'
VPC 108+25.00
EL=551.64
VPT 110+75.00
EL=549.13
-1.70%
+2.21%
+2.21%
-3.80%
-3.80%
+1.79%
+1.79%
STA = 104+50.00
EL = 553.86
ex = 0.73'
K = 38
L = 150.00
VPC 105+75.00
EL=556.63
VPT 107+25.00
EL=555.44
STA = 109+50.00
EL = 546.89
ex = 1.75'
K = 45
L = 250.00
VPC 113+00.00
EL=553.15
EXISTING
561.00
559.81
559.99
558.11
558.00
556.41
553.00
554.80
552.19
555.05
551.74
557.06
557.00
556.27
548.94
552.59
545.39
549.42
542.28
548.41
544.37
549.57
547.19
551.36
550.00
553.15
551.08
100+00
105+00
110+00



78
EXISTING GROUND
PROPOSED PROFILE
BOIS D ARC
BENTLY LN
STA 867+63
PROPOSED 2'X7'
CULVERT
℄ = 530.24
STA 867+67
EXISTING 4 - 24" CMP
(TO BE REPLACED)
VPC 871+25.00
EL=536.62
VPT 872+75.00
EL=538.26
+0.35%
+1.84%
STA = 872+00.00
EL = 536.89
ex = 0.28'
K = 101
L = 150.00
STA = 879+00.00
EL = 549.75
ex = -0.04'
K = 298
L = 100.00
SSD = 3263'
+1.84%
+1.50%
VPC 878+50.00
EL=548.83
VPT 879+50.00
EL=550.50
STA = 885+50.00
EL = 559.51
ex = -0.50'
K = 100
L = 200.00
SSD = 638'
+1.50%
-0.50%
VPC 884+50.00
EL=558.01
VPT 886+50.00
EL=559.01
EXISTING GROUND
PROPOSED PROFILE
530.59
533.00
530.94
533.00
531.29
534.00
531.64
534.00
531.99
534.97
532.34
535.00
532.69
535.00
533.04
535.00
533.39
535.40
533.74
536.00
534.09
536.98
534.44
537.00
534.79
537.00
535.14
537.98
535.49
538.00
535.84
538.00
536.19
539.00
536.54
539.00
537.17
540.00
538.72
541.65
540.56
543.00
542.40
544.86
544.24
546.00
546.07
547.94
547.91
549.21
549.71
551.00
551.25
552.56
552.75
554.00
554.26
555.77
555.76
557.00
557.26
558.00
558.64
558.65
559.14
559.00
558.76
559.00
558.26
559.00
557.75
559.62
557.25
559.56
556.75
559.00
556.25
559.00
555.75
558.93
555.24
558.84
855+00
860+00
865+00
870+00
875+00
880+00
885+00
890+00

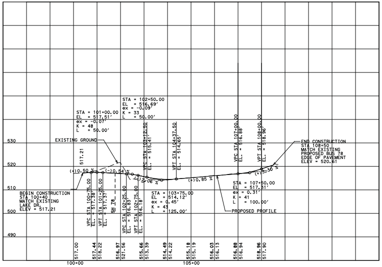

BEGIN CONSTRUCTION
STA 100+00
ELEV = 560.88
MATCH EXISTING PAV'T
STA 100+89
OFFSET 33' RT
STA 102+09
OFFSET 54' RT
STA 103+44
OFFSET 66' RT
STA 902+32
OFFSET 136' LT
CULVERT
℄ 2-4X2 RCB
FL = 551.45
STA 900+50
OFFSET 61' LT
END TAPER
STA 900+00
500' STORAGE AND DECEL
CR 486
C1
C2
C3
A3
A4
EXISTING ROW
PROPOSED ROW
℄ SH 78
STA 903+31.22=
℄ FM 6/CR 486
STA 105+73.84
FUTURE ROADWAY
BEGIN TAPER
STA 907+00
END TAPER
STA 907+45
N 30° 58.50 E
SH 78
N 4° 43' 20.61" E
910+00
END PROJECT
STA 907+45
CSJ 0281-01-030
MATCH EXISTING
END TAPER
STA 907+45
BEGIN TAPER
STA 905+20
FUTURE ROADWAY
R = 80'
(TYP FOR THIS INTERSECTION)
SIGNALIZED
INTERSECTION
900+00
PROPOSED ROW
345' STORAGE AND DECEL.
100'
STA 902+21
OFFSET 98' RT
STA 898+00
OFFSET 60' RT
FL = 547.56
END TAPER
STA 898+00
EXISTING
36" RCP
(TO BE REPLACED)
STA 902+84
OFFSET 157' RT
200' STORAGE AND DECEL
FM 6
600' MIN
115+00
STA 116+41
OFFSET 66' RT
120+00
STA 123+86.83
OFFSET 66' RT
END CONSTRUCTION
STA 120+86.83
William W. Boyd (undivided 1/2 interest)
Meredith Mason Roark (undivided 1/2 interest)
Margaret Mason Arnold (undivided 1/2 interest)
Probate Record # 87-136, dated 4/9/1987
FM 6/CR 486
STA = 113+50.00
EL = 554.04
ex = -0.27'
K = 47
L = 100.00
SSD = 555'
-0.35%
PROPOSED PROFILE
VPC 119+00.00
EL=552.12
VPT 120+00.00
EL=552.12
552.42
-0.35%
+0.35%
END CONSTRUCTION
STA 120+86.83
ELEV. = 552.42
STA = 119+50.00
EL = 551.94
ex = 0.09'
K = 143
L = 100.00
VPT 114+00.00
EL=553.87
GROUND
553.87
551.53
553.82
550.99
553.17
549.73
552.82
549.24
552.47
548.41
552.12
548.06
552.12
548.16
115+00
120+00


VPC 896+75.00
EL=553.86
VPT 898+25.00
EL=553.90
-0.50%
+0.55%
STA = 897+50.00
EL = 553.49
ex = 0.20'
K = 143
L = 150.00
STA 903+02
EXISTING 36" RCP
(TO BE REPLACED)
STA 902+16.5
PROPOSED 2 -4'X2'
CULVERT
FL = 549.70
VPC 903+00.00
EL=556.51
℄ FM 6/CR 486
STA = 904+00.00
EL = 557.06
ex = -0.56'
K = 90
L = 200.00
SSD = 583'
+0.55%
-1.68%
VPT 905+00.00
EL=555.38
END PROJECT
CSJ: 0281-01-030
STA. 907+45.00
ELEV. = 551.25
560
550
540
530
520
510
500
490
480
554.74
556.83
554.24
554.58
553.76
555.00
553.78
557.82
554.31
557.41
554.86
557.37
555.41
557.00
555.96
557.00
556.51
556.61
556.50
556.04
555.38
554.96
553.70
553.68
552.01
551.98
550.38
548.85
546.97
895+00
900+00
905+00

CURVE DATA

CURVE NO.	CURVE NAME	DELTA	DEGREE	TANGENT	LENGTH	RADIUS	PI STATION	PC STATION	PT STATION
ARTERIAL									
A1	CL-78-2	57° 25′ 11.83″ LT	1° 30′ 28.02″	2,081.30′	3,808.24′	3,800.00′	814+35.55	793+54.25	831+62.49
A2	CL-78-3	29° 01′ 37.89″ LT	0° 59′ 47.21″	1,488.51′	2,913.07′	5,750.00′	896+01.42	881+12.91	910+25.97
A3	CL-78-4	0° 47′ 37.89″ RT	1° 08′ 45.30″	34.64′	69.28′	5,000.00′	911+12.16	910+77.52	911+46.80
A4	CL-78-5	28° 07′ 31.67″ LT	0° 59′ 47.21″	1,440.32′	2,822.57′	5,750.00′	895+54.83	881+14.50	909+37.08
CROSS STREETS									
MAIN STREET									
B1	CL-MAIN-1	9° 06′ 10.92″ LT	15° 04′ 40.21″	30.25′	60.37′	380.00′	100+72.57	100+42.32	101+02.70
B2	CL-MAIN-2	11° 40′ 58.17″ RT	15° 04′ 40.21″	38.88′	77.48′	380.00′	103+57.29	103+18.41	103+95.89
FM6-CR486									
C1	486-FM6-1	19° 05′ 27.79″ RT	19° 05′ 54.94″	50.45′	99.96′	300.00′	101+75.93	101+25.48	102+25.44
C2	486-FM6-2	19° 05′ 27.79″ LT	19° 05′ 54.94″	50.45′	99.96′	300.00′	102+75.89	102+25.44	103+25.40
C3	486-FM6-3	1° 26′ 19.53″ RT	0° 57′ 00.64″	75.71′	151.42′	6,030.00′	110+82.40	110+06.68	111+58.10

PROPOSED BUS 78


530
520
510
500
490
EXISTING GROUND
STA = 101+00.00
EL = 517.51'
ex = -0.07'
K = 48
L = 50.00'
STA = 102+50.00
EL = 516.69'
ex = -0.09'
K = 33
L = 50.00'
(+)0.50 %
(-)0.54 %
(-)0.06 %
(+)0.85 %
(+)5.30 %
VPC STA 100+75.00
EL. = 517.38'
VPT STA 101+25.00
EL. = 517.37'
℄ SH 78
VPC STA 102+25.00
EL. = 516.83'
VPT STA 102+75.00
EL. = 516.18'
VPC STA 103+12.50
EL. = 515.41'
VPT STA 104+37.50
EL. = 514.65'
VPC STA 107+00.00
EL. = 516.88'
VPT STA 108+00.00
EL. = 518.96'
STA = 103+75.00
EL = 514.12'
ex = 0.45'
K = 43
L = 125.00'
STA = 107+50.00
EL = 517.31'
ex = 0.31'
K = 41
L = 100.00'
BEGIN CONSTRUCTION
STA 100+40
MATCH EXISTING
LAKE DR.
ELEV = 517.21
END CONSTRUCTION
STA 108+50
MATCH EXISTING
PROPOSED BUS 78
EDGE OF PAVEMENT
ELEV = 520.61
PROPOSED PROFILE
517.21
517.00
517.44
518.22
516.97
521.56
515.66
513.39
514.49
514.22
515.18
515.19
516.03
516.13
516.88
516.94
518.96
517.90
100+00
105+00

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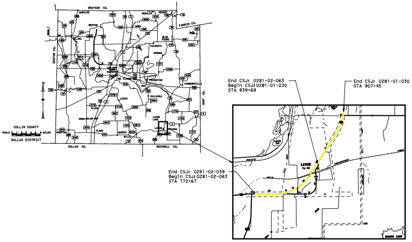
DALLAS DISTRICT
Design Schematic

William L. Hale, P.E.
District Engineer

SH 78
From: SH 205
To: FM 6

CSJ: 0281-02-063
0281-01-030

Collin County
Functional Class: Urban Minor Arterial
Project Length: 2.55 Miles
Design Speed: Mainlanes 45 mph
Cross Streets 30 mph


GRAYSON CO.
FANNIN CO.
COLLIN COUNTY
SCALE
MILES
DALLAS DISTRICT
DALLAS CO.
ROCKWALL CO.
DENTON CO.
HUNT CO.
End CSJ: 0281-02-063
Begin CSJ: 0281-01-030
STA 839+68
End CSJ: 0281-01-030
STA 907+45
End CSJ: 0281-02-039
Begin CSJ: 0281-02-063
STA 772+67
LAVON

Scale: Horizontal = 1:200
Vertical = 1:20

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December 2009

SCHEMATIC PREPARED BY:
HDR ENGINEERING, INC.
REGISTRATION NUMBER F-754

FOR INTERIM REVIEW ONLY
NOT INTENDED FOR PERMITTING, BIDDING
OR CONSTRUCTION.

Prepared by or under the
Direct Supervision of

TEWODROS "TED" TEGENE
PROJECT MANAGER

94889	12-04-09
P.E. NUMBER	DATE

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