Texas Department of Transportation

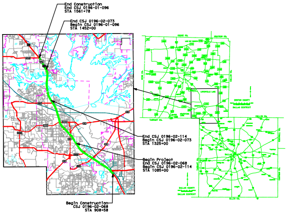
Dallas District Design Schematic
William L. Hale, P.E., District Engineer

IH 35E

From: PGBT
To: FM 2181 S. in Corinth
Dallas & Denton County
Functional Class: Urban Freeway
Project Length: 12.27 Miles

CSJ's: 0196-01-096
0196-02-073
0196-02-114
0196-02-068

Design Speeds:
Mainlanes 70 mph
Managed Lanes 70 mph
Ramps 40 mph
Turnaround Ramps 20 mph
Frontage Roads 40 mph
Cross Streets 30 mph
Collector Distributor 50 mph
Direct Connectors 50 mph
DM21SW 40 mph


End Construction
End CSJ 0196-01-096
STA 1561+78
End CSJ 0196-02-073
Begin CSJ 0196-01-096
STA 1452+00
End CSJ 0196-02-114
Begin CSJ 0196-02-073
STA 1325+00
Begin Project
End CSJ 0196-02-068
Begin CSJ 0196-02-114
STA 1085+00
Begin Construction
CSJ 0196-02-068
STA 908+58
DENTON COUNTY
DALLAS DISTRICT
DALLAS COUNTY
DALLAS DISTRICT

Scale:
Horizontal 1"=100'
Vertical 1"=10'

October 2010

MIDDLE SEGMENT - FRONTAGE ROAD
AND DIRECT CONNECTOR
Roll 6 of 9

SCHEMATIC PREPARED BY:

HDR ENGINEERING, INC.
REGISTRATION NUMBER 754

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

Prepared by or under the
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10-18-2010
DATE

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Dallas, Texas 75248-1229

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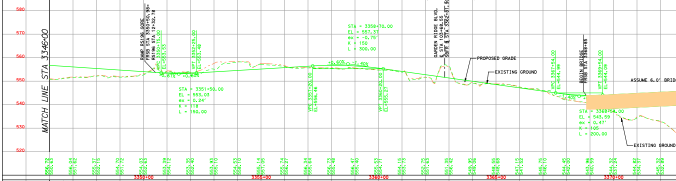
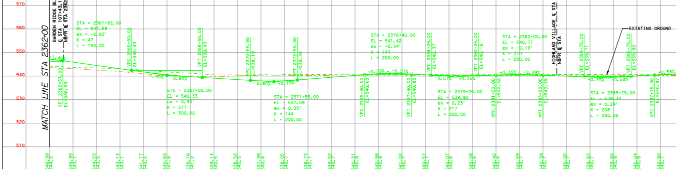
SOUTHBOUND FRONTAGE ROAD PROFILE (FRSB)

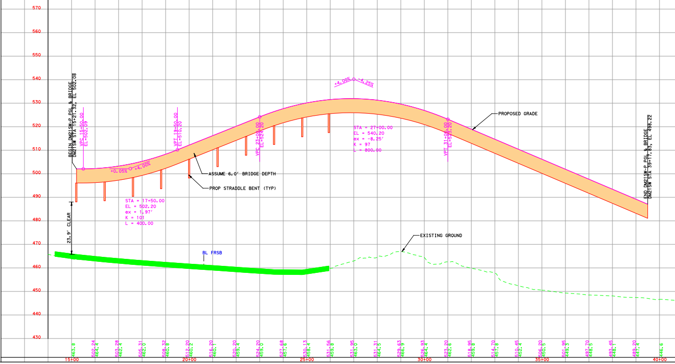

MATCH LINE STA 3346+00
580
570
560
550
540
530
520
RAMP RS196 GORE
FRSB STA 3350+50.98=
RS196 STA 12+32.78
VPC 3350+75.00
EL=553.63
VPT 3352+25.00
EL=553.48
-0.67%
+0.60%
STA = 3351+50.00
EL = 553.03
ex = 0.24'
K = 118
L = 150.00
VPC 3357+20.00
EL=556.46
STA = 3358+70.00
EL = 557.37
ex = -0.75'
K = 150
L = 300.00
+0.60%
-1.40%
VPT 3360+20.00
EL=555.27
GARDEN RIDGE BLVD.
℄ STA 103+68.55
SBFR ℄ STA 3362+81.90
PROPOSED GRADE
EXISTING GROUND
VPC 3367+54.00
EL=544.99
BEGIN BRIDGE
FRSB STA 3368+85
VPT 3369+54.00
EL=544.09
STA = 3368+54.00
EL = 543.59
ex = 0.47'
K = 105
L = 200.00
ASSUME 6.0' BRIDGE
EXISTING GROUND
3350+00
3355+00
3360+00
3365+00
3370+00

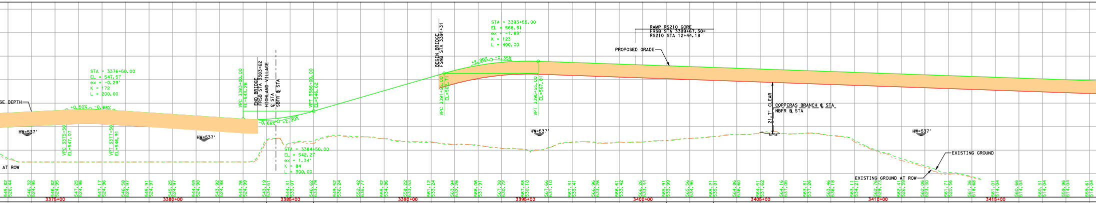
NORTHBOUND FRONTAGE ROAD PROFILE (FRNB)

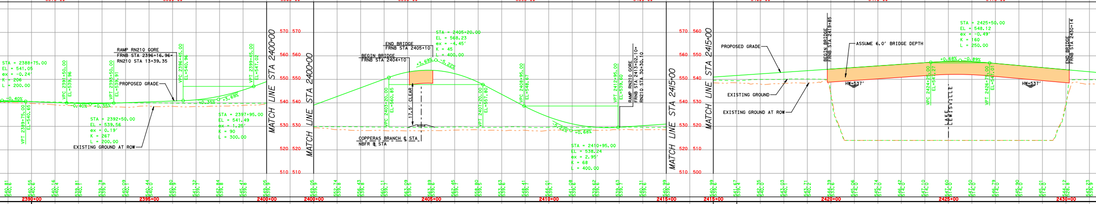

MATCH LINE STA 2362+00
570
560
550
540
530
520
510
GARDEN RIDGE BLVD.
℄ STA 107+43.17
NBFR ℄ STA 2362+59.74
VPT 2362+57.00
EL=546.63
STA = 2361+82.00
EL = 547.68
ex = -0.60'
K = 47
L = 150.00
VPC 2365+60.00
EL=542.43
-1.40%
-0.60%
STA = 2367+00.00
EL = 540.33
ex = 0.30'
K = 377
L = 300.00
VPT 2368+50.00
EL=539.45
VPC 2370+55.00
EL=538.19
-0.60%
+0.79%
STA = 2371+55.00
EL = 537.59
ex = 0.36'
K = 144
L = 200.00
VPT 2372+55.00
EL=538.38
STA = 2376+40.00
EL = 541.42
ex = -0.34'
K = 147
L = 200.00
+0.79%
-0.57%
VPC 2375+40.00
EL=540.63
VPT 2377+40.00
EL=540.85
VPC 2378+25.00
EL=540.37
STA = 2379+25.00
EL = 539.80
ex = 0.23'
K = 217
L = 200.00
-0.57%
+0.35%
VPT 2380+25.00
EL=540.16
VPC 2381+00.00
EL=540.42
STA = 2382+00.00
EL = 540.77
ex = -0.19'
K = 270
L = 200.00
+0.35%
-0.39%
VPT 2383+00.00
EL=540.39
HIGHLAND VILLAGE ℄ STA
NBFR ℄ STA
VPC 2384+75.00
EL=539.71
STA = 2385+75.00
EL = 539.32
ex = 0.24'
K = 208
L = 200.00
-0.39%
+0.58%
VPT 2386+75.00
EL=539.90
VPC 2387+75.00
EL=540.47
EXISTING GROUND
2365+00
2370+00
2375+00
2380+00
2385+00

DIRECT CONNECTOR (DM21SW)

SB IH35E TO WB 121 TOLL

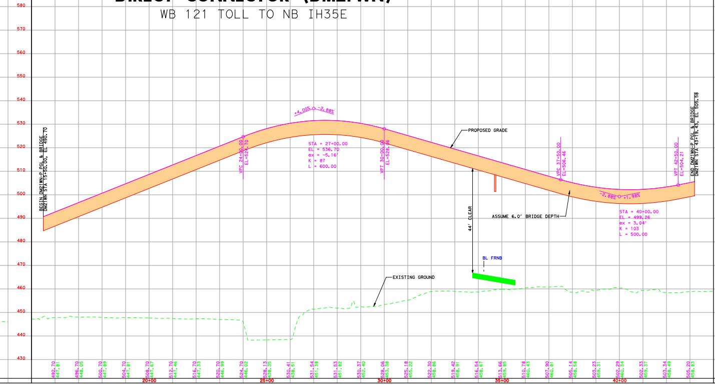

580
570
560
550
540
530
520
510
500
490
480
470
460
450
440
430
BEGIN DM21SW-P PGL & BRIDGE
DM21SW STA 15+21.32, EL 502.08
23.9' CLEAR
VPC 15+50.00
EL=502.09
+0.05%
+4.00%
STA = 17+50.00
EL = 502.20
ex = 1.97'
K = 101
L = 400.00
VPC 19+50.00
EL=510.20
ASSUME 6.0' BRIDGE DEPTH
PROP STRADDLE BENT (TYP)
VPC 23+00.00
EL=524.20
+4.00%
-4.25%
STA = 27+00.00
EL = 540.20
ex = -8.25'
K = 97
L = 800.00
VPT 31+00.00
EL=523.20
PROPOSED GRADE
BL FRSB
EXISTING GROUND
END DM21SW-P PGL & BRIDGE
DM21SW STA 39+17.83, EL 498.22
15+00
20+00
25+00
30+00
35+00
40+00


STA = 3376+50.00
EL = 547.57
ex = -0.29'
K = 172
L = 200.00
+0.50% -0.66%
HW=537'
AT ROW
VPC 3375+50
VPT 3377+50
END BRIDGE
HIGHLAND VILLAGE
SBFR ℄ STA
-0.66% +2.90%
STA = 3384+50.00
EL = 542.27
ex = -1.34'
K = 84
L = 300.00
BEGIN BRIDGE
FRSB STA 3391+31
STA = 3393+55.00
EL = 568.51
ex = -1.63'
K = 123
L = 400.00
+2.90% -0.35%
RAMP RS210 GORE
FRSB STA 3399+67.50=
RS210 STA 12+44.18
PROPOSED GRADE
21.7' CLEAR
COPPERAS BRANCH ℄ STA
NBFR ℄ STA
EXISTING GROUND
EXISTING GROUND AT ROW
3375+00
3380+00
3385+00
3390+00
3395+00
3400+00
3405+00
3410+00
3415+00


STA = 2388+75.00
EL = 541.05
ex = -0.24'
K = 206
L = 200.00
-0.40% +0.35%
RAMP RN210 GORE
FRNB STA 2396+16.96=
RN210 STA 13+39.35
PROPOSED GRADE
STA = 2392+50.00
EL = 539.56
ex = 0.19'
K = 267
L = 200.00
EXISTING GROUND AT ROW
+0.35% +3.69%
STA = 2397+95.00
EL = 541.49
ex = -1.26'
K = 90
L = 300.00
MATCH LINE STA 2400+00
END BRIDGE
FRNB STA 2405+10
BEGIN BRIDGE
FRNB STA 2404+10
STA = 2405+20.00
EL = 568.23
ex = -4.45'
K = 45
L = 400.00
+3.69% -5.22%
17.5' CLEAR
COPPERAS BRANCH ℄ STA
NBFR ℄ STA
-5.22% +0.68%
STA = 2410+95.00
EL = 538.24
ex = 2.95'
K = 68
L = 400.00
RAMP RN210 GORE
FRNB STA 2413+02.10=
RN210 STA 30+30.10
MATCH LINE STA 2415+00
PROPOSED GRADE
EXISTING GROUND
EXISTING GROUND AT ROW
BEGIN BRIDGE
FRNB STA 2419+85
ASSUME 6.0' BRIDGE DEPTH
STA = 2425+50.00
EL = 548.12
ex = -0.49'
K = 160
L = 250.00
+0.68% -0.89%
END BRIDGE
FRNB STA 2430+14
HW=537'
LAKE LEWISVILLE
2390+00
2395+00
2400+00
2405+00
2410+00
2415+00
2420+00
2425+00
2430+00

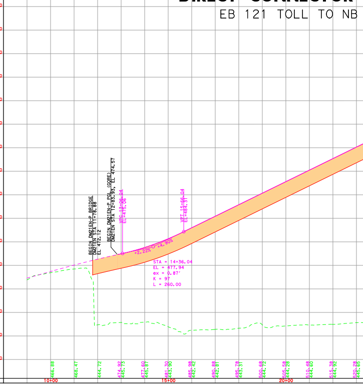
DIRECT CONNECTOR (DM21WN)

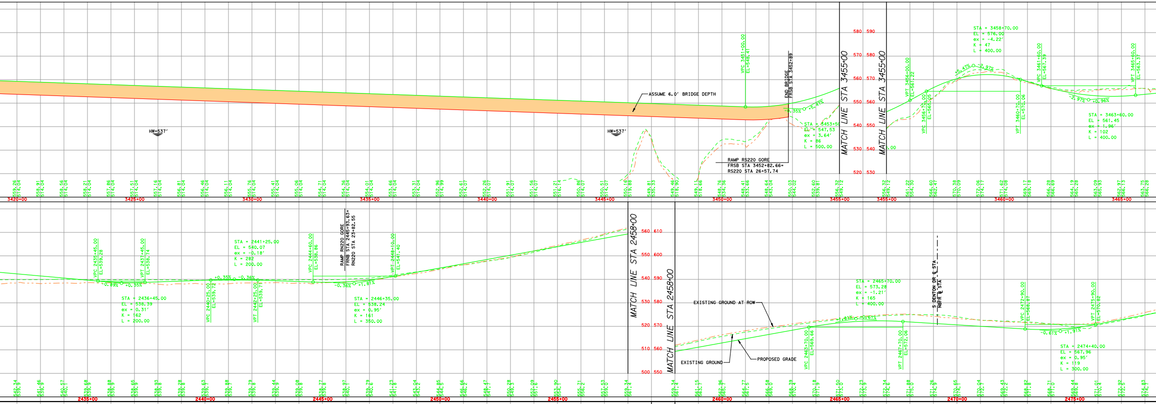
WB 121 TOLL TO NB IH35E


BEGIN DM21WN-P PGL & BRIDGE
DM21WN STA 15+50.00, EL 490.70
+4.00% -2.88%
VPC 24+00.00
VPT 30+00.00
STA = 27+00.00
EL = 536.70
ex = -5.16'
K = 87
L = 600.00
PROPOSED GRADE
44' CLEAR
ASSUME 6.0' BRIDGE DEPTH
VPC 37+50.00
EL=506.46
-2.88% +1.98%
STA = 40+00.00
EL = 499.26
ex = 3.04'
K = 103
L = 500.00
VPT 42+50.00
EL=504.21
END DM21WN-P PGL & BRIDGE
DM21WN STA 43+19.43, EL 505.58
BL FRNB
EXISTING GROUND
580
570
560
550
540
530
520
510
500
490
480
470
460
450
440
430
20+00
25+00
30+00
35+00
40+00

DIRECT CONNECTOR

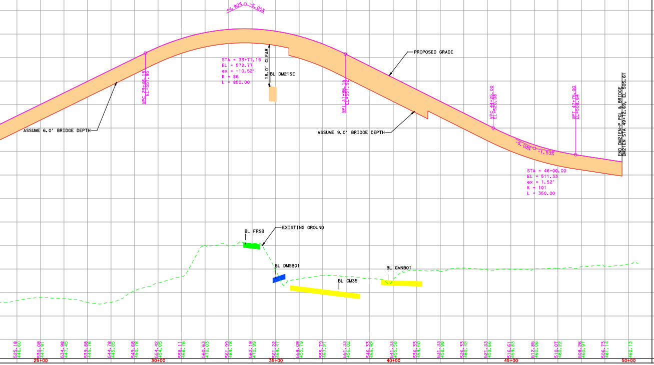
EB 121 TOLL TO NB


BEGIN DM21EN-P BRIDGE
DM21EN STA 11+78.88
EL 472.12
BEGIN DM21EN-P PGL (GORE)
DM21EN STA 12+83.93, EL 474.57
+2.22% +4.90%
STA = 14+36.04
EL = 477.94
ex = 0.87'
K = 97
L = 260.00
580
570
560
550
540
530
520
510
500
490
480
470
460
450
440
430
10+00
15+00
20+00


ASSUME 6.0' BRIDGE DEPTH
HW=537'
HW=537'
VPC 3451+00.00 EL=548.41
END BRIDGE FRSB STA 3452+89
RAMP RS220 GORE
FRSB STA 3452+82.66=
RS220 STA 26+57.74
STA = 3453+50
EL = 547.53
ex = 3.64'
K = 86
L = 500.00
MATCH LINE STA 3455+00
MATCH LINE STA 3455+00
STA = 3458+70.00
EL = 576.00
ex = -4.22'
K = 47
L = 400.00
STA = 3463+60.00
EL = 561.45
ex = -1.96'
K = 102
L = 400.00
3420+00
3425+00
3430+00
3435+00
3440+00
3445+00
3450+00
3455+00
3455+00
3460+00
3465+00
STA = 2436+45.00
EL = 538.39
ex = 0.31'
K = 162
L = 200.00
STA = 2441+25.00
EL = 540.07
ex = -0.18'
K = 282
L = 200.00
RAMP RN220 GORE
FRNB STA 2445+93.63=
RN220 STA 23+82.55
STA = 2446+35.00
EL = 538.24
ex = 0.95'
K = 161
L = 350.00
MATCH LINE STA 2458+00
MATCH LINE STA 2458+00
EXISTING GROUND AT ROW
EXISTING GROUND
PROPOSED GRADE
STA = 2465+70.00
EL = 573.28
ex = -1.21'
K = 165
L = 400.00
S DENTON DR ℄ STA
NBFR ℄ STA
STA = 2474+40.00
EL = 567.96
ex = 0.95'
K = 119
L = 300.00
2435+00
2440+00
2445+00
2450+00
2455+00
2460+00
2465+00
2470+00
2475+00

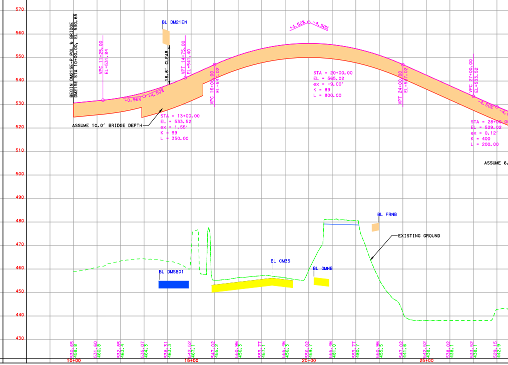
(DM21EN)

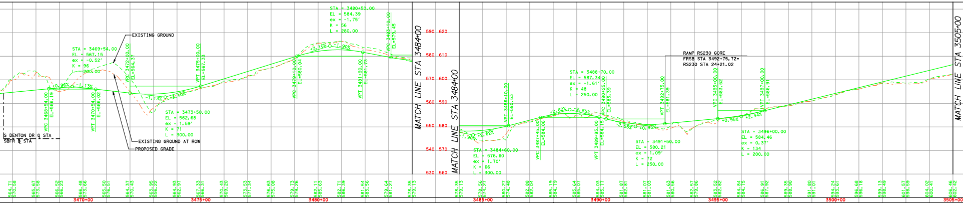
IH35E


+4.90%
-5.00%
STA = 33+71.15
EL = 572.77
ex = -10.52'
K = 86
L = 850.00
18.0' CLEAR
BL DM21SE
PROPOSED GRADE
ASSUME 6.0' BRIDGE DEPTH
ASSUME 9.0' BRIDGE DEPTH
-5.00%
-1.53%
STA = 46+00.00
EL = 511.33
ex = 1.52'
K = 101
L = 350.00
END DM21EN-P PGL & BRIDGE
DM21EN STA 49+72.89, EL 505.61
BL FRSB
EXISTING GROUND
BL DMSB01
BL CM35
BL GMNB01
25+00
30+00
35+00
40+00
45+00
50+00

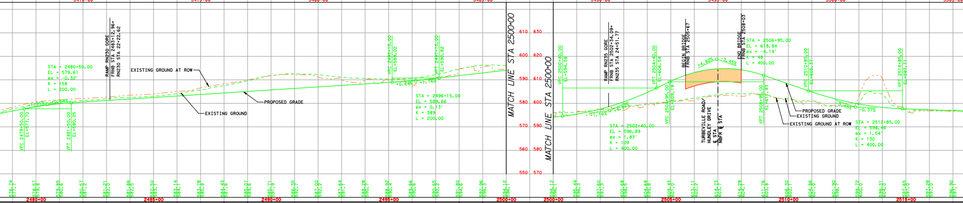
DIRECT CONNECTOR (DM21SE)

SB IH35E TO EB 121 TOLL

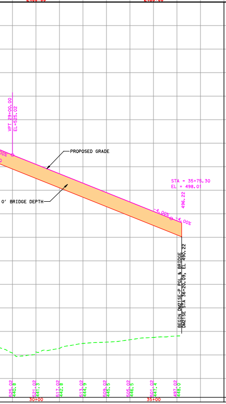

BEGIN DM21SE-P PGL & BRIDGE
DM21SE STA 10+00.00, EL 530.65
BL DM21EN
18.6' CLEAR
+4.50%
-4.50%
-0.96%
+4.50%
STA = 13+00.00
EL = 533.52
ex = 1.55'
K = 99
L = 350.00
ASSUME 10.0' BRIDGE DEPTH
STA = 20+00.00
EL = 565.02
ex = -9.00'
K = 89
L = 800.00
STA = 28+00.00
EL = 529.02
ex = 0.12'
K = 400
L = 200.00
ASSUME 6.
BL FRNB
EXISTING GROUND
BL CM35
BL GMNB
BL DMSB01
10+00
15+00
20+00
25+00



EXISTING GROUND
STA = 3469+54.00
EL = 567.15
ex = -0.52'
K = 96
L = 200.00
EXISTING GROUND AT ROW
PROPOSED GRADE
STA = 3473+50.00
EL = 562.68
ex = 1.59'
K = 71
L = 300.00
STA = 3480+50.00
EL = 584.39
ex = -1.75'
K = 56
L = 280.00
MATCH LINE STA 3484+00
STA = 3484+60.00
EL = 576.60
ex = 1.70'
K = 66
L = 300.00
STA = 3488+70.00
EL = 587.34
ex = -1.61'
K = 48
L = 250.00
RAMP RS230 GORE
FRSB STA 3492+75.72=
RS230 STA 24+21.02
STA = 3491+50.00
EL = 580.21
ex = 1.09'
K = 72
L = 250.00
STA = 3496+00.00
EL = 584.46
ex = 0.37'
K = 134
L = 200.00
MATCH LINE STA 3505+00
3470+00
3475+00
3480+00
3485+00
3490+00
3495+00
3500+00
3505+00



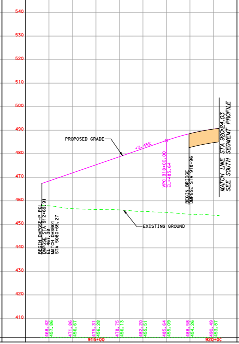
STA = 2480+50.00
EL = 579.61
ex = -0.32'
K = 158
L = 200.00
RAMP RN230 GORE
FRNB STA 2483+12.96=
RN230 STA 22+22.62
EXISTING GROUND AT ROW
PROPOSED GRADE
EXISTING GROUND
STA = 2496+15.00
EL = 593.66
ex = 0.13'
K = 389
L = 200.00
MATCH LINE STA 2500+00
RAMP RN235 GORE
FRNB STA 2502+34.09=
RN235 STA 24+51.77
STA = 2502+40.00
EL = 596.89
ex = 1.93'
K = 109
L = 400.00
BEGIN BRIDGE
FRNB STA 2505+67
END BRIDGE
FRNB STA 2508+03
TURBEVILLE ROAD
HUNDLEY DRIVE
NBFR ℄ STA
STA = 2506+95.00
EL = 618.84
ex = -4.14'
K = 48
L = 400.00
PROPOSED GRADE
EXISTING GROUND
EXISTING GROUND AT ROW
STA = 2512+85.00
EL = 598.46
ex = 1.54'
K = 130
L = 400.00
2480+00
2485+00
2490+00
2495+00
2500+00
2505+00
2510+00
2515+00



VPT 29+00.00
EL=525.02
PROPOSED GRADE
0' BRIDGE DEPTH
STA = 35+75.30
EL = 498.01
-4.00%
-4.00%
BEGIN DM21SE-P PGL & BRIDGE
DM21SE STA 36+20.09, EL 490.22
30+00
35+00

DIRECT CONNECTOR (DMPGSE)

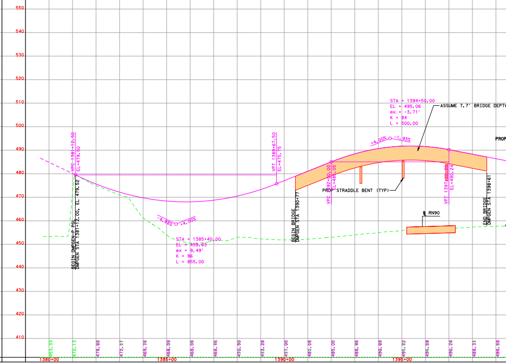
SB IH35E TO EB SH190



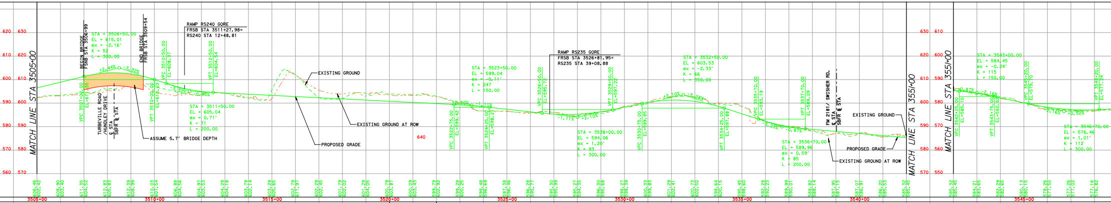
PROPOSED GRADE
+3.45%
VPC 918+00.00
EL=485.64
BEGIN BRIDGE
DMPGSE STA 918+96
MATCH LINE STA 920+24.03
SEE SOUTH SEGMENT PROFILE
BEGIN DMPGSE-P PGL
DMPGSE STA 912+69.91
EL 467.38
MATCH DMSB01
STA 5080+65.27
EXISTING GROUND
915+00
920+00

DIRECT CONNECTOR (DMPGEN)

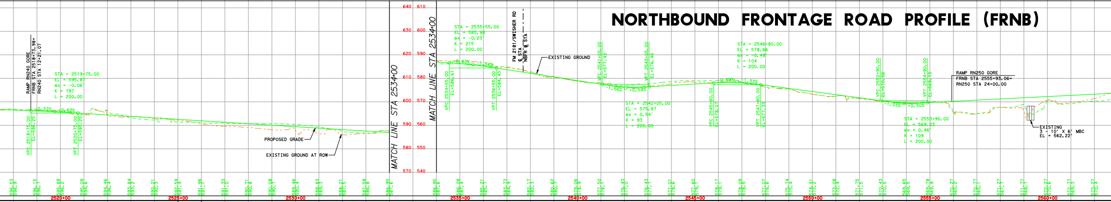
EB SH190 TO NB IH35E



STA = 1394+50.00
EL = 495.06
ex = -3.71'
K = 84
L = 500.00
ASSUME 7.7' BRIDGE DEPTH
+4.00%
-1.93%
PROP STRADDLE BENT (TYP)
℄ RN90
BEGIN DMPGEN-P PGL
DMPGEN STA 1381+12.00, EL 479.52
-4.88%
+4.00%
STA = 1385+40.00
EL = 458.63
ex = 9.49'
K = 96
L = 855.00
BEGIN BRIDGE
DMPGEN STA 1390+77
END BRIDGE
DMPGEN STA 1398+61
1380+00
1385+00
1390+00
1395+00

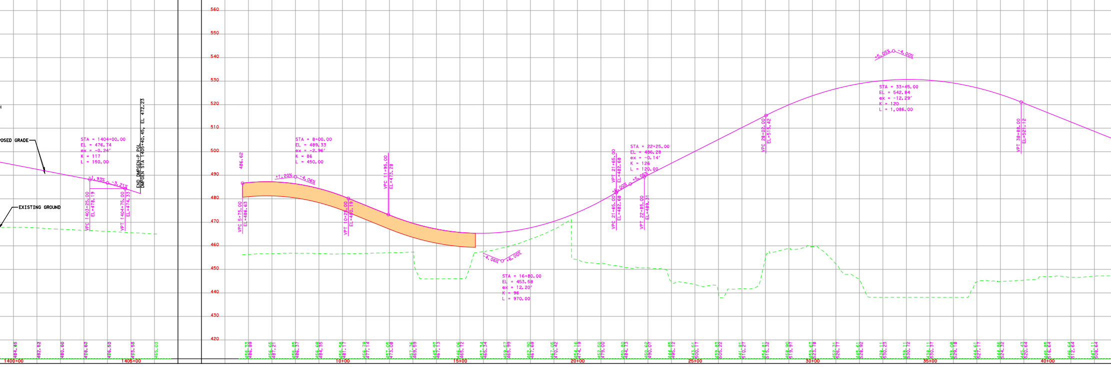

MATCH LINE STA 3505+00
BEGIN BRIDGE FSNB STA 3506+99
END BRIDGE FRSB STA 3509+54
TURNEVILLE ROAD /HUNDLEY DRIVE ℄ STA SBFR ℄ STA
STA = 3508+50.00 EL = 615.01 ex = -2.16' K = 52 L = 300.00
ASSUME 5.7' BRIDGE DEPTH
RAMP RS240 GORE FRSB STA 3511+27.98= RS240 STA 12+48.81
STA = 3511+50.00 EL = 605.04 ex = 0.71' K = 71 L = 200.00
EXISTING GROUND
EXISTING GROUND AT ROW
PROPOSED GRADE
STA = 3523+50.00 EL = 599.04 ex = -0.11' K = 247 L = 150.00
RAMP RS235 GORE FRSB STA 3526+81.95= RS235 STA 39+08.88
STA = 3528+00.00 EL = 594.06 ex = 1.20' K = 93 L = 300.00
STA = 3532+00.00 EL = 603.53 ex = -2.33' K = 66 L = 350.00
STA = 3536+70.00 EL = 589.96 ex = 0.59' K = 85 L = 200.00
FM 2181/ SWISHER RD. ℄ STA SBFR ℄ STA
EXISTING GROUND
PROPOSED GRADE
EXISTING GROUND AT ROW
MATCH LINE STA 3551+00
STA = 3543+00.00 EL = 584.45 ex = -0.24' K = 115 L = 150.00
STA = 3546+70.00 EL = 576.46 ex = 1.01' K = 112 L = 300.00
3505+00
3510+00
3515+00
3520+00
3525+00
3530+00
3535+00
3540+00
3545+00

NORTHBOUND FRONTAGE ROAD PROFILE (FRNB)

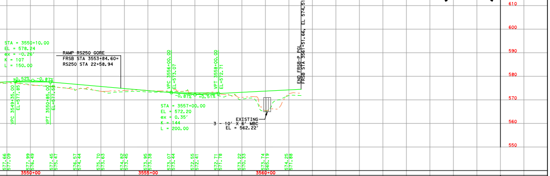

RAMP RN240 GORE FRNB STA 2518+73.98= RN240 STA 12+21.07
STA = 2519+75.00 EL = 595.87 ex = -0.06' K = 797 L = 200.00
PROPOSED GRADE
EXISTING GROUND AT ROW
MATCH LINE STA 2534+00
MATCH LINE STA 2534+00
STA = 2535+55.00 EL = 585.98 ex = -0.23' K = 215 L = 200.00
FM 2181/SWISHER RD ℄ STA NBFR ℄ STA
EXISTING GROUND
STA = 2542+05.00 EL = 575.87 ex = 0.54' K = 93 L = 200.00
STA = 2546+80.00 EL = 578.66 ex = -0.48' K = 104 L = 200.00
STA = 2555+90.00 EL = 569.23 ex = 0.46' K = 109 L = 200.00
RAMP RN250 GORE FRNB STA 2555+93.06= RN250 STA 24+00.00
EXISTING 3 - 10' X 6' MBC EL = 562.22'
2520+00
2525+00
2530+00
2535+00
2540+00
2545+00
2550+00
2555+00
2560+00

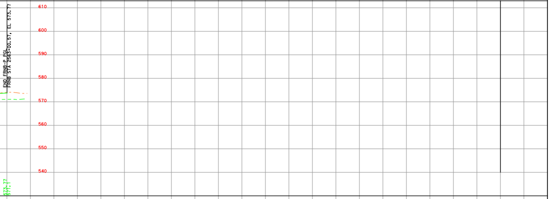
DIRECT CONNECTOR (DM21NE)

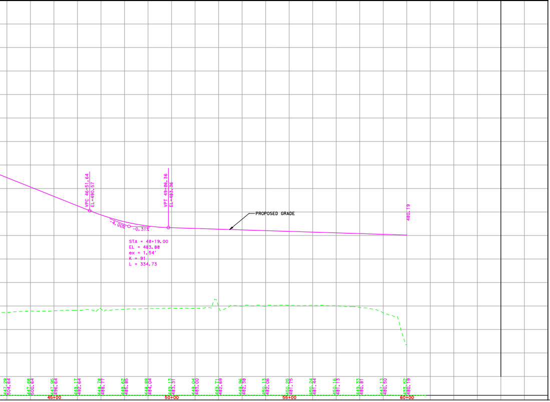
NB IH35E TO EB 121 TOLL


PROPOSED GRADE
EXISTING GROUND
STA = 1404+00.00 EL = 476.74 ex = -0.24' K = 117 L = 150.00
END DM21NE-P PGL DM21NE STA 1405+40.45, EL 472.23
STA = 8+00.00 EL = 489.33 ex = -2.96' K = 86 L = 450.00
STA = 16+80.00 EL = 453.58 ex = 12.20' K = 96 L = 970.00
STA = 22+25.00 EL = 486.28 ex = -0.14' K = 126 L = 120.00
STA = 33+45.00 EL = 542.84 ex = -12.29' K = 120 L = 1,086.00
+5.05%
-4.00%
1400+00
1405+00
10+00
15+00
20+00
25+00
30+00
35+00
40+00

SOUTHBOUND FRONTAGE ROAD PROFILE (FRSB)


610
600
590
580
570
560
550
STA = 3550+10.00
EL = 578.24
ex = -0.26′
K = 107
L = 150.00
RAMP RS250 GORE
FRSB STA 3553+84.60=
RS250 STA 22+58.94
+0.52%
-0.87%
VPC 3549+35.00
EL=577.85
VPT 3550+85.00
EL=577.58
VPC 3556+00.00
EL=573.07
VPT 3558+00.00
EL=572.71
-0.87%
+0.51%
STA = 3557+00.00
EL = 572.20
ex = 0.35′
K = 144
L = 200.00
EXISTING
3 - 10′ X 6′ MBC
EL = 562.22′
END FRSB-P PGL
FRSB STA 3561+51.66, EL 574.51
577.66
577.09
577.99
576.49
577.45
575.47
576.57
574.44
575.70
573.63
574.82
573.45
573.95
573.38
573.07
573.44
572.55
572.41
572.71
571.78
573.22
570.33
573.74
565.19
574.25
571.88
3550+00
3555+00
3560+00


END FRNB-P PGL
FRNB STA 2563+00.57, EL 573.77
610
600
590
580
570
560
550
540
573.77
571.1


VPC 46+51.64
EL=490.57
VPT 49+86.36
EL=483.36
PROPOSED GRADE
480.19
-4.00%
-0.31%
STA = 48+19.00
EL = 483.88
ex = 1.54′
K = 91
L = 334.73
447.29
504.64
447.88
500.64
447.95
496.64
448.17
492.64
448.78
488.77
448.62
485.85
448.89
484.04
449.13
483.31
449.04
483.00
449.71
482.69
449.96
482.38
450.13
482.06
450.25
481.75
450.24
481.44
450.16
481.13
449.33
480.81
447.13
480.50
433.52
480.19
45+00
50+00
55+00
60+00

Texas Department of Transportation

Dallas District Design Schematic

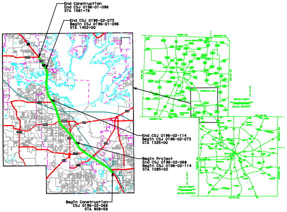
William L. Hale, P.E., District Engineer

IH 35E

From: PGBT
To: FM 2181 S. in Corinth
Dallas & Denton County
Functional Class: Urban Freeway
Project Length: 12.27 Miles

CSJ's: 0196-01-096
0196-02-073
0196-02-114
0196-02-068

Design Speeds:
Mainlanes 70 mph
Managed Lanes 70 mph
Ramps 40 mph
Turnaround Ramps 20 mph
Frontage Roads 40 mph
Cross Streets 30 mph
Collector Distributor 50 mph
Direct Connectors 50 mph
DM21SW 40 mph


End Construction
End CSJ 0196-01-096
STA 1561+78
End CSJ 0196-02-073
Begin CSJ 0196-01-096
STA 1452+00
End CSJ 0196-02-114
Begin CSJ 0196-02-073
STA 1325+00
Begin Project
End CSJ 0196-02-068
Begin CSJ 0196-02-114
STA 1085+00
Begin Construction
CSJ 0196-02-068
STA 908+58
DENTON COUNTY
DALLAS DISTRICT
DALLAS COUNTY
DALLAS DISTRICT

Scale:
Horizontal 1"=100′
Vertical 1"=10′

October 2010

MIDDLE SEGMENT - FRONTAGE ROAD
AND DIRECT CONNECTOR
Roll 6 of 9

SCHEMATIC PREPARED BY:
HDR ENGINEERING, INC.
REGISTRATION NUMBER 754
FOR INTERIM REVIEW ONLY. NOT FOR PERMITTING, BIDDING OR CONSTRUCTION.
Prepared by or under the Direct Supervision of:

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DATE: 10-18-2010

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