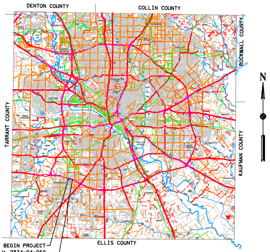
TEXAS DEPARTMENT OF TRANSPORTATION
DALLAS DISTRICT
WILLIAM L. HALE, P.E., DISTRICT ENGINEER

DESIGN SCHEMATIC FOR I-20 FRONTAGE ROAD FROM NORTH MAIN STREET TO CAMP WISDOM ROAD DUNCANVILLE, TEXAS DALLAS COUNTY

CSJ: 2374-04-060
FEBRUARY 2014
ROLL 2 OF 2
I-20 WESTBOUND FRONTAGE ROAD


DENTON COUNTY
COLLIN COUNTY
ROCKWALL COUNTY
TARRANT COUNTY
KAUFMAN COUNTY
ELLIS COUNTY
N

BEGIN PROJECT
CSJ: 2374-04-060
℄ I-20 STA 404+67.86

END PROJECT
CSJ: 2374-04-060
℄ I-20 STA 438+00.88

SCHEMATIC SCALE (18" PLOT):
HORIZONTAL: 1" = 100'
VERTICAL: 1" = 10'

SCHEMATIC SCALE (36" PLOT):
HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'

SCHEMATIC PREPARED BY:
Kimley-Horn and Associates, Inc.
FIRM NO. F-928

JASON LASTOVICA
PROJECT MANAGER
102189
P.E. NO.
2/19/2014
DATE

NOT A BIDDING DOCUMENT

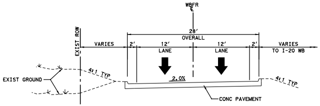
FUNCTIONAL CLASSIFICATION
I-20: URBAN INTERSTATE
FRONTAGE ROADS: URBAN COLLECTOR

PROJECT LENGTH
0.63 MILE

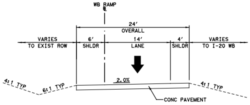
DESIGN SPEED
RAMPS: 40 MPH
FRONTAGE ROADS: 40 MPH

© 2014 By Texas Department of Transportation; all rights reserved

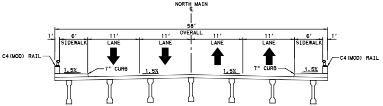
*** EXISTING TYPICAL SECTIONS ***


WBFR ℄
EXIST ROW
28' OVERALL
VARIES
2'
12' LANE
12' LANE
2'
VARIES TO I-20 WB
EXIST GROUND
4:1 TYP
2.0%
4:1 TYP
CONC PAVEMENT

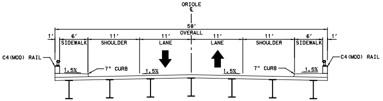
I-20 WB FRONTAGE ROAD
N.T.S.


WB RAMP ℄
24' OVERALL
VARIES TO EXIST ROW
6' SHLDR
14' LANE
4' SHLDR
VARIES TO I-20 WB
4:1 TYP
6:1 TYP
2.0%
4:1 TYP
CONC PAVEMENT

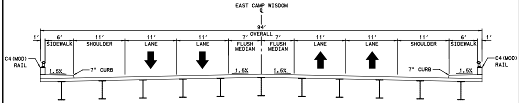
I-20 WB EXIT RAMP
N.T.S.


NORTH MAIN ℄
58' OVERALL
1'
6' SIDEWALK
11' LANE
11' LANE
11' LANE
11' LANE
6' SIDEWALK
1'
C4 (MOD) RAIL
C4 (MOD) RAIL
1.5%
7" CURB
1.5%
1.5%
7" CURB
1.5%

NORTH MAIN STREET UNDERPASS
N.T.S.

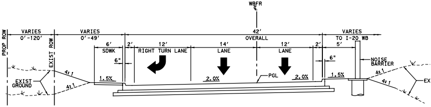

ORIOLE ℄
58' OVERALL
1'
6' SIDEWALK
11' SHOULDER
11' LANE
11' LANE
11' SHOULDER
6' SIDEWALK
1'
C4 (MOD) RAIL
C4 (MOD) RAIL
1.5%
7" CURB
1.5%
1.5%
7" CURB
1.5%

ORIOLE BOULEVARD UNDERPASS
N.T.S.


EAST CAMP WISDOM ℄
94' OVERALL
1'
6' SIDEWALK
11' SHOULDER
11' LANE
11' LANE
7' FLUSH MEDIAN
7' FLUSH MEDIAN
11' LANE
11' LANE
11' SHOULDER
6' SIDEWALK
1'
C4 (MOD) RAIL
C4 (MOD) RAIL
1.5%
7" CURB
1.5%
1.5%
7" CURB
1.5%

EAST CAMP WISDOM ROAD UNDERPASS
N.T.S.

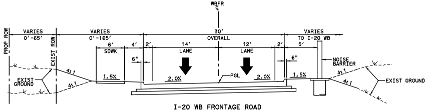
*** PROPOSED TYPICAL SECTIONS ***


WBFR
℄
PROP ROW
EXIST ROW
VARIES
0'-120'
VARIES
0'-49'
42'
OVERALL
VARIES
TO I-20 WB
6'
SDWK
2'
12'
RIGHT TURN LANE
14'
LANE
12'
LANE
2'
5'
6"
6"
NOISE
BARRIER
EXIST
GROUND
4:1
4:1
1.5%
2.0%
PGL
2.0%
1.5%
4:1
4:1
EXIST GROUND

I-20 WB FRONTAGE ROAD

1405+54 TO 1408+50

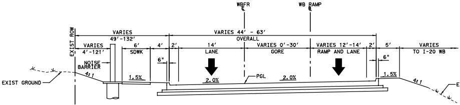
N.T.S.


WBFR
℄
PROP ROW
EXIST ROW
VARIES
0'-65'
VARIES
0'-165'
30'
OVERALL
VARIES
TO I-20 WB
6'
SDWK
4'
2'
14'
LANE
12'
LANE
2'
5'
6"
6"
NOISE
BARRIER
EXIST
GROUND
4:1
4:1
1.5%
2.0%
PGL
2.0%
1.5%
4:1
4:1
EXIST GROUND

I-20 WB FRONTAGE ROAD

1421+07 TO 1428+00

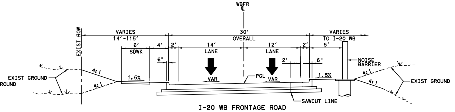
N.T.S.


WBFR
℄
WB RAMP
℄
EXIST ROW
VARIES
49'-132'
VARIES 44' - 63'
OVERALL
VARIES
4'-121'
6'
SDWK
4'
2'
14'
LANE
VARIES 0'-30'
GORE
VARIES 12'-14'
RAMP AND LANE
2'
5'
VARIES
TO I-20 WB
NOISE
BARRIER
6"
6"
EXIST GROUND
4:1
1.5%
2.0%
PGL
2.0%
1.5%
4:1
EXIST GROUND

I-20 WB FRONTAGE ROAD

1408+50 TO 1411+50

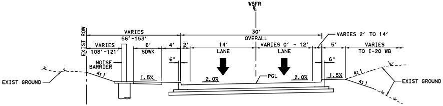
N.T.S.


WBFR
℄
EXIST ROW
VARIES
14'-115'
30'
OVERALL
VARIES
TO I-20 WB
6'
SDWK
4'
2'
14'
LANE
12'
LANE
2'
5'
6"
6"
2'
NOISE
BARRIER
EXIST GROUND
4:1
4:1
1.5%
VAR
PGL
VAR
1.5%
4:1
4:1
EXIST GROUND
SAWCUT LINE

I-20 WB FRONTAGE ROAD

1428+00 TO 1444+15

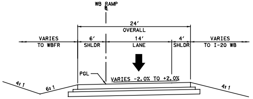
N.T.S.


WBFR
℄
EXIST ROW
VARIES
56'-153'
30'
OVERALL
VARIES 2' TO 14'
VARIES
108'-121'
6'
SDWK
4'
2'
14'
LANE
VARIES 0' - 12'
LANE
5'
VARIES
TO I-20 WB
NOISE
BARRIER
6"
6"
EXIST GROUND
4:1
1.5%
2.0%
PGL
2.0%
1.5%
4:1
4:1
EXIST GROUND

I-20 WB FRONTAGE ROAD

1411+50 TO 1415+50 (LANE DROP TRANSITION)
1415+50 TO 1421+07

N.T.S.


WB RAMP
℄
24'
OVERALL
VARIES
TO WBFR
6'
SHLDR
14'
LANE
4'
SHLDR
VARIES
TO I-20 WB
PGL
VARIES -2.0% TO +2.0%
4:1
6:1
4:1

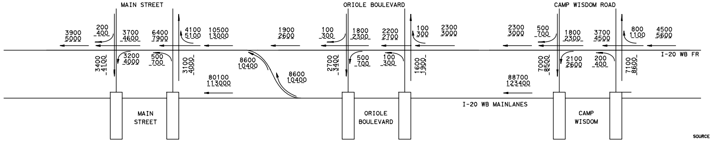
PROPOSED TYPICAL SECTION

I-20 WB RAMP

N.T.S.

*** DESIGN ADT ***

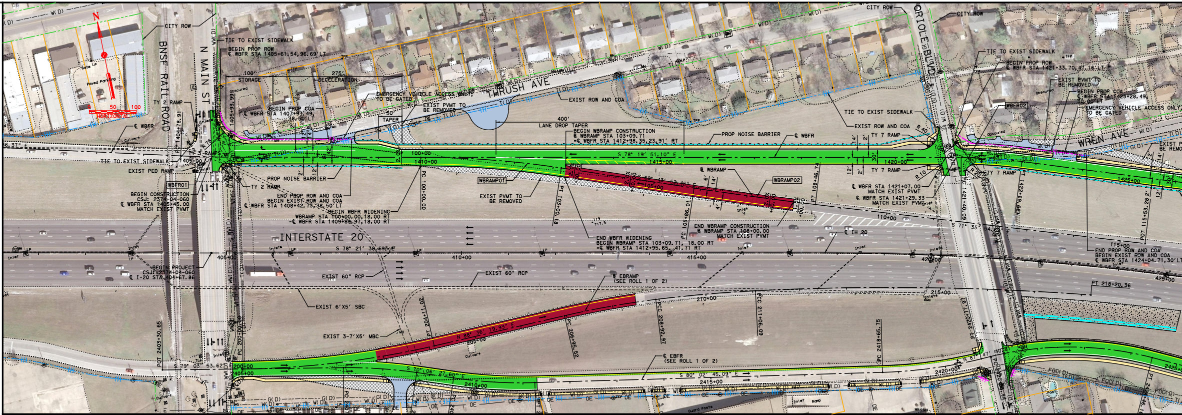
LEGEND
0000 -2016 ADT
0000 -2036 ADT
MAP SCALE
N.T.S.

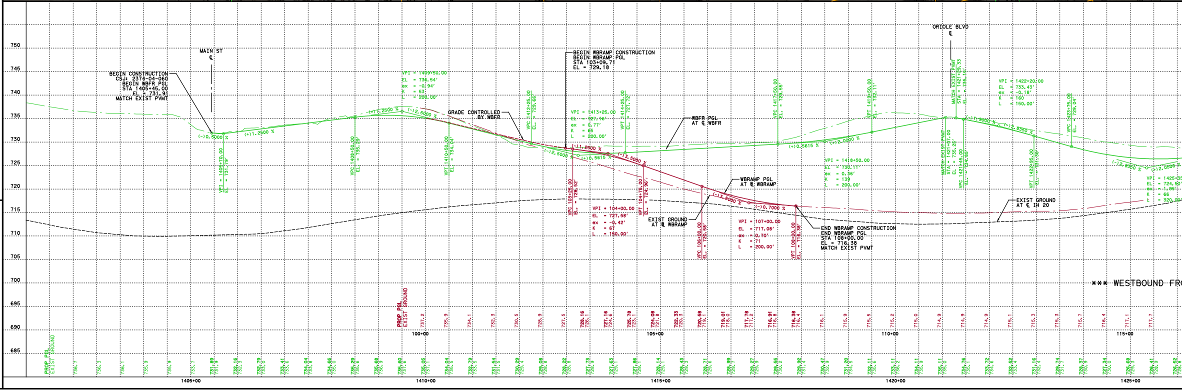

MAIN STREET
ORIOLE BOULEVARD
CAMP WISDOM ROAD
3900
5000
200
400
3700
4600
6400
7900
4100
5100
10500
13000
1900
2600
100
300
1800
2300
2200
2700
100
300
2300
3000
2300
3000
500
700
1800
2300
3700
4500
800
1100
4500
5600
I-20 WB FR
3400
4100
3200
4000
500
700
3100
4000
8600
10400
8600
10400
80100
113000
2700
3400
500
700
100
300
1600
1900
88700
123400
7000
8500
2100
2600
200
400
7100
8600
I-20 WB MAINLANES
MAIN
STREET
ORIOLE
BOULEVARD
CAMP
WISDOM

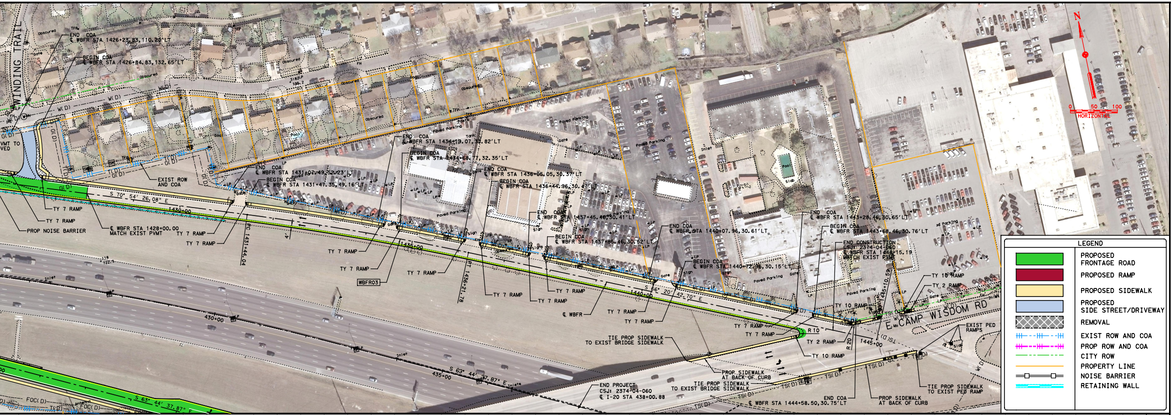
LEGEND
0000 -2016 ADT
0000 -2036 ADT
MAP SCALE
N.T.S.

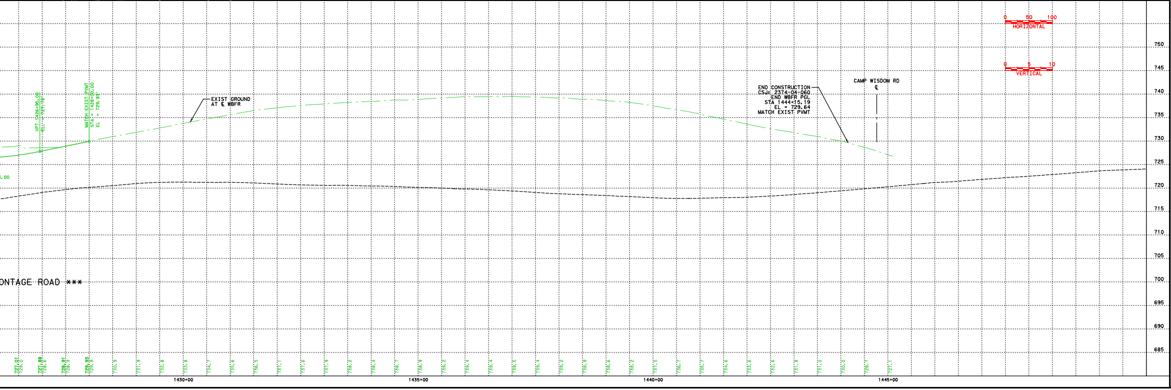
SOURCE OF DATA:

TXDOT TRANSPORTATION PLANNING AND PROGRAMMING DIVISION
MEMORANDUM DATED FEBRUARY 10, 2014.


N
0 50 100
HORIZONTAL
CITY ROW
BNSF RAIL ROAD
N MAIN ST
TIE TO EXIST SIDEWALK
BEGIN PROP ROW
℄ WBFR STA 1405+61.54,96.69' LT
100'
STORAGE
275'
DECELERATION
EMERGENCY VEHICLE ACCESS ONLY,
TO BE GATED
BEGIN PROP COA
℄ WBFR STA 1407+93.49,
38.50' LT
50'
TAPER
EXIST PVMT TO
BE REMOVED
THRUSH AVE
EXIST ROW AND COA
400'
LANE DROP TAPER
BEGIN WBRAMP CONSTRUCTION
℄ WBRAMP STA 103+09.71
=℄ WBFR STA 1412+98.35,23.91' RT
PROP NOISE BARRIER
℄ WBFR
S 78° 19' 51.10" E
100+00
1410+00
1415+00
1420+00
1425+00
TY 2 RAMP
TY 3 RAMPS
R 75
℄ WBFR
PC 1404+78.91
1405+93.99
TIE TO EXIST SIDEWALK
1405+00
EXIST PED RAMP
WBFR01
BEGIN CONSTRUCTION
CSJ: 2374-04-060
℄ WBFR STA 1405+45.00
MATCH EXIST PVMT
PROP NOISE BARRIER
END PROP ROW AND COA
BEGIN EXIST ROW AND COA
℄ WBFR STA 1408+42.73,38.50' LT
BEGIN WBFR WIDENING
WBRAMP STA 100+00.00,18.00 RT
=℄ WBFR STA 1409+89.97,18.00 RT
PC 100+00.00
WBRAMP01
EXIST PVMT TO
BE REMOVED
PT 103+00.18
S 69° 43' 52.46" E
105+00
℄ WBRAMP
WBRAMP02
PC 105+86.01
PT 108+46.74
END WBRAMP CONSTRUCTION
℄ WBRAMP STA 108+00.00
MATCH EXIST PVMT
END WBFR WIDENING
BEGIN WBRAMP STA 103+09.71, 18.00 RT
=℄ WBFR STA 1412+95.65, 41.71 RT
INTERSTATE 20
S 78° 21' 38.69" E
405+00
410+00
415+00
420+00
425+00
BEGIN PROJECT
CSJ: 2374-04-060
℄ I-20 STA 404+67.86
EXIST 60" RCP
EXIST 60" RCP
℄ EBRAMP
(SEE ROLL 1 OF 2)
EXIST 6'X5' SBC
EXIST 3-7'X5' MBC
PT 204+11.02
N 68° 36' 19.93" E
205+00
PC 206+95.52
PC 208+92.97
210+00
PC 211+06.69
215+00
PT 2418+65.75
PC 2420+77.97
PT 218+20.36
PC 200+00.00
POT 2403+30.65
S 79° 03' 53.62" E
200+00
2405+00
S 70° 06' 27.60" E
2410+00
℄ EBFR
(SEE ROLL 1 OF 2)
S 80° 02' 45.09" E
2415+00
2420+00
2425+00
CITY ROW
ORIOLE BLVD
TIE TO EXIST SIDEWALK
BEGIN PROP ROW
℄ WBFR STA 1421+33.70,47.16 LT
EXIST PVMT TO
BE REMOVED
BEGIN PROP COA
℄ WBFR STA 1423+28.49,
30.00' LT
WBFR02
EMERGENCY VEHICLE ACCESS ONLY,
TO BE GATED
TIE TO EXIST SIDEWALK
EXIST ROW AND COA
R 40
TY 7 RAMP
TY 7 RAMP
TY 7 RAMP
R 10
R 20
WREN AVE
EXIST PVMT TO
BE REMOVED
℄ WBFR STA 1421+07.00
MATCH EXIST PVMT
℄ WBFR STA 1421+29.33
MATCH EXIST PVMT
PC 1421+40.09
PT 1422+69.66
POT 115+53.28
110+00
S 71° 35' 54." E
℄ IH 20
115+00
END PROP ROW AND COA
BEGIN EXIST ROW AND COA
℄ WBFR STA 1424+04.71,30' LT




WINDING TRAIL
END COA
℄ WBFR STA 1426+23.83, 110.20'LT
BEGIN COA
℄ WBFR STA 1426+84.83, 132.65'LT
VMT TO
VED
EXIST ROW
AND COA
TY 7 RAMP
TY 7 RAMP
PROP NOISE BARRIER
℄ WBFR STA 1428+00.00
MATCH EXIST PVMT
S 70° 54' 26.08" E
1430+00
TY 7 RAMP
TY 7 RAMP
PC 1431+44.04
4'
END COA
℄ WBFR STA 1431+07.49, 52.23'LT
BEGIN COA
℄ WBFR STA 1431+47.35, 49.16'LT
END COA
℄ WBFR STA 1434+19.07, 33.82'LT
BEGIN COA
℄ WBFR STA 1434+68.77, 32.35'LT
END COA
℄ WBFR STA 1436+05.05, 30.37'LT
BEGIN COA
℄ WBFR STA 1436+44.96, 30.47'LT
1435+00
TY 7 RAMP
TY 7 RAMP
WBFR03
TY 7 RAMP
PT 1436+21.78
TY 7 RAMP
TY 7 RAMP
END COA
℄ WBFR STA 1437+45.46, 30.41'LT
BEGIN COA
℄ WBFR STA 1437+85.46, 30.52'LT
TY 7 RAMP
TY 7 RAMP
℄ WBFR
END COA
℄ WBFR STA 1440+07.96, 30.61'LT
BEGIN COA
℄ WBFR STA 1440+72.96, 30.15'LT
S 66° 20' 42.70" E
1440+00
TY 7 RAMP
TY 7 RAMP
TIE PROP SIDEWALK
TO EXIST BRIDGE SIDEWALK
430+00
435+00
S 63° 44' 37.87" E
END COA
℄ WBFR STA 1443+28.46, 30.65'LT
BEGIN COA
℄ WBFR STA 1443+68.46, 30.76'LT
END CONSTRUCTION
CSJ: 2374-04-060
℄ WBFR STA 1444+15.19
MATCH EXIST PVMT
1445+10.59
TY 10 RAMP
TY 2 RAMP
TY 10 RAMP
E CAMP WISDOM RD
TY 7 RAMP
TY 7 RAMP
R 10
TY 2 RAMP
R 20
1445+00
TY 10 RAMP
EXIST PED
RAMPS
PROP SIDEWALK
AT BACK OF CURB
END PROJECT
CSJ: 2374-04-060
℄ I-20 STA 438+00.88
TIE PROP SIDEWALK
TO EXIST BRIDGE SIDEWALK
END COA
℄ WBFR STA 1444+58.50, 30.75'LT
PROP SIDEWALK
AT BACK OF CURB
TIE PROP SIDEWALK
TO EXIST PED RAMP
S 63° 44' 37.87" E
N
0 50 100
HORIZONTAL
LEGEND
🟩 PROPOSED FRONTAGE ROAD
🟥 PROPOSED RAMP
🟨 PROPOSED SIDEWALK
🟦 PROPOSED SIDE STREET/DRIVEWAY
▨ REMOVAL
EXIST ROW AND COA
PROP ROW AND COA
CITY ROW
PROPERTY LINE
NOISE BARRIER
RETAINING WALL



*** HORIZONTAL GEOMETRY ***

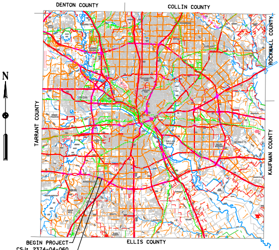
```
     ℄ I-20 WESTBOUND FRONTAGE ROAD (℄ WBFR)
==============================================================================
Begin Chain        N     6,929,880.37 E     2,458,557.87 Sta   1397+00.000
Begin Chain to PC [WBFR01] S 75° 41' 36.371" E Dist 778.91

Curve [WBFR01]
P.I.  Station          1405+36.464  N        6,929,673.67  E         2,459,368.40
Delta         =      2° 38' 14.732" (LT)
Degree        =      2° 17' 30.592"
Tangent       =              57.55
Length        =             115.08
Radius        =           2,500.00
External      =               0.66
Long Chord    =             115.07
Mid. Ord.     =               0.66
P.C.  Station          1404+78.914  N        6,929,687.89  E         2,459,312.63
P.T.  Station          1405+93.994  N        6,929,662.03  E         2,459,424.76
C.C.                                N        6,932,110.36  E         2,459,930.41
Back          = S  75° 41' 36.371" E
Ahead         = S  78° 19' 51.102" E
Chord Bear    = S  77° 00' 43.736" E

Course from PT [WBFR01] to PC [WBFR02] S 78° 19' 51.102" E Dist 1,546.10

Curve [WBFR02]
P.I.  Station          1422+04.969  N        6,929,336.20  E         2,461,002.44
Delta         =      7° 25' 25.027" (RT)
Degree        =      5° 43' 46.481"
Tangent       =              64.87
Length        =             129.57
Radius        =           1,000.00
External      =               2.10
Long Chord    =             129.48
Mid. Ord.     =               2.10
P.C.  Station          1421+40.095  N        6,929,349.32  E         2,460,938.90
P.T.  Station          1422+69.661  N        6,929,314.98  E         2,461,063.74
C.C.                                N        6,928,369.99  E         2,460,736.64
Back          = S  78° 19' 51.102" E
Ahead         = S  70° 54' 26.075" E
Chord Bear    = S  74° 37' 08.589" E

Course from PT [WBFR02] to PC [WBFR03] S 70° 54' 26.075" E Dist 874.38

Curve [WBFR03]
P.I.  Station          1433+83.037  N        6,928,950.79  E         2,462,115.87
Delta         =      4° 33' 43.377" (RT)
Degree        =      0° 57' 17.747"
Tangent       =             238.99
Length        =             477.74
Radius        =           6,000.00
External      =               4.76
Long Chord    =             477.61
Mid. Ord.     =               4.75
P.C.  Station          1431+44.043  N        6,929,028.97  E         2,461,890.02
P.T.  Station          1436+21.779  N        6,928,854.90  E         2,462,334.78
C.C.                                N        6,923,359.03  E         2,459,927.43
Back          = S  70° 54' 26.075" E
Ahead         = S  66° 20' 42.698" E
Chord Bear    = S  68° 37' 34.387" E

Course from PT [WBFR03] to End Chain S 66° 20' 42.698" E Dist 888.81

End Chain        N     6,928,498.29 E     2,463,148.92 Sta   1445+10.590
==============================================================================
```

```
     ℄ I-20 WESTBOUND EXIT RAMP (℄ WBRAMP)
==============================================================================
Begin Chain        N     6,929,581.96 E     2,459,812.45 Sta   100+00.000

Curve [WBRAMP01]
P.I.  Station           101+50.374  N        6,929,551.55  E         2,459,959.71
Delta         =      8° 35' 58.644" (RT)
Degree        =      2° 51' 53.240"
Tangent       =             150.37
Length        =             300.18
Radius        =           2,000.00
External      =               5.65
Long Chord    =             299.90
Mid. Ord.     =               5.63
P.C.  Station           100+00.000  N        6,929,581.96  E         2,459,812.45
P.T.  Station           103+00.183  N        6,929,499.45  E         2,460,100.78
C.C.                                N        6,927,623.30  E         2,459,407.93
Back          = S  78° 19' 51.102" E
Ahead         = S  69° 43' 52.458" E
Chord Bear    = S  74° 01' 51.780" E

Course from PT [WBRAMP01] to PC [WBRAMP02] S 69° 43' 52.458" E Dist 285.83

Curve [WBRAMP02]
P.I.  Station           107+16.387  N        6,929,355.27  E         2,460,491.21
Delta         =      1° 52' 02.228" (LT)
Degree        =      0° 42' 58.310"
Tangent       =             130.37
Length        =             260.72
Radius        =           8,000.00
External      =               1.06
Long Chord    =             260.71
Mid. Ord.     =               1.06
P.C.  Station           105+86.014  N        6,929,400.44  E         2,460,368.91
P.T.  Station           108+46.736  N        6,929,314.12  E         2,460,614.91
C.C.                                N        6,936,905.06  E         2,463,140.30
Back          = S  69° 43' 52.458" E
Ahead         = S  71° 35' 54.687" E
Chord Bear    = S  70° 39' 53.572" E

Course from PT [WBRAMP02] to End Chain S 71° 35' 54.687" E Dist 706.54

End Chain        N     6,929,091.08 E     2,461,285.33 Sta   115+53.278
==============================================================================
```

TEXAS DEPARTMENT OF TRANSPORTATION
DALLAS DISTRICT
WILLIAM L. HALE, P.E., DISTRICT ENGINEER

DESIGN SCHEMATIC FOR
I-20 FRONTAGE ROAD
FROM NORTH MAIN STREET
TO CAMP WISDOM ROAD
DUNCANVILLE, TEXAS
DALLAS COUNTY

CSJ: 2374-04-060
FEBRUARY 2014
ROLL 2 OF 2
I-20 WESTBOUND FRONTAGE ROAD


DENTON COUNTY
COLLIN COUNTY
ROCKWALL COUNTY
TARRANT COUNTY
KAUFMAN COUNTY
ELLIS COUNTY
N

BEGIN PROJECT
CSJ: 2374-04-060
℄ I-20 STA 404+67.86

END PROJECT
CSJ: 2374-04-060
℄ I-20 STA 438+00.88

SCHEMATIC SCALE (18" PLOT):
HORIZONTAL: 1" = 100'
VERTICAL: 1" = 10'

SCHEMATIC SCALE (36" PLOT):
HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'

SCHEMATIC PREPARED BY:
Kimley-Horn and Associates, Inc.
FIRM NO. F-928

JASON LASTOVICA
PROJECT MANAGER

102189
P.E. NO.

2/19/2014
DATE

NOT A BIDDING DOCUMENT

FUNCTIONAL CLASSIFICATION
I-20: URBAN INTERSTATE
FRONTAGE ROADS: URBAN COLLECTOR

PROJECT LENGTH
0.63 MILE

DESIGN SPEED
RAMPS: 40 MPH
FRONTAGE ROADS: 40 MPH

© 2014 By Texas Department of Transportation; all rights reserved