DATE: 6/14/2021 TIME: 8:27:37 AM FILE: c:\txdot\pw*online*txdot5\solomon.bayou\d0450704\HOR704HORIZONTAL GEOMETRY DATA SHEET.dgn

EXISTING ALIGNMENT "IH45"

Point 100 N 6,921,778.4316 E 2,521,777.5551 Sta 1621+67.26

Course from 100 to PC 45MAIN11 N 23° 47' 49.33" W Dist 3,342.6580

Curve Data

Curve 45MAIN11
P.I. Station 1655+09.92 N 6,924,836.8996 E 2,520,428.7990
Delta = 0° 00' 00.14" (LT)
Degree = 2° 00' 00.00"
Tangent = 0.0010
Length = 0.0020
Radius = 2,864.7890
External = 0.0000
Long Chord = 0.0020
Mid. Ord. = 0.0000
P.C. Station 1655+09.92 N 6,924,836.8987 E 2,520,428.7994
P.T. Station 1655+09.92 N 6,924,836.9005 E 2,520,428.7986
C.C. N 6,923,680.9622 E 2,517,807.5732
Back = N 23° 47' 49.33" W
Ahead = N 23° 47' 49.47" W
Chord Bear = N 23° 47' 49.43" W

Equation: Sta 1655+09.92 (BK) = Sta 10064+15.02 (AH)
End Region 1

Begin Region 2

Curve Data

Curve 45MAIN12
P.I. Station 10073+29.15 N 6,925,673.3142 E 2,520,059.9472
Delta = 35° 23' 42.00" (LT)
Degree = 2° 00' 00.00"
Tangent = 914.1330
Length = 1,769.7500
Radius = 2,864.7890
External = 142.3118
Long Chord = 1,741.7429
Mid. Ord. = 135.5769
P.C. Station 10064+15.02 N 6,924,836.9005 E 2,520,428.7986
P.T. Station 10081+84.77 N 6,926,141.4981 E 2,519,274.8084
C.C. N 6,923,680.9622 E 2,517,807.5732
Back = N 23° 47' 49.47" W
Ahead = N 59° 11' 31.47" W
Chord Bear = N 41° 29' 40.47" W

Course from PT 45MAIN12 to 101 N 59° 11' 31.47" W Dist 1,264.5347

Point 101 N 6,926,789.1443 E 2,518,188.7134 Sta 10094+49.30

EXISTING ALIGNMENT "DOWDY ROAD"

Point 7000 N 6,924,761.4222 E 2,521,915.9430 Sta 0+00.00

Course from 7000 to PC DOWDY1 N 84° 17' 45.10" W Dist 517.9478

Curve Data

Curve DOWDY1
P.I. Station 9+03.55 N 6,924,851.2279 E 2,521,016.8636
Delta = 20° 20' 09.44" (LT)
Degree = 2° 39' 53.71"
Tangent = 385.6057
Length = 763.0982
Radius = 2,150.0000
External = 34.3058
Long Chord = 759.0990
Mid. Ord. = 33.7670
P.C. Station 5+17.95 N 6,924,812.9019 E 2,521,400.5599
P.T. Station 12+81.05 N 6,924,753.8213 E 2,520,643.7635
C.C. N 6,922,673.5479 E 2,521,186.8679
Back = N 84° 17' 45.10" W
Ahead = S 75° 22' 05.46" W
Chord Bear = S 85° 32' 10.18" W

Course from PT DOWDY1 to 7001 S 75° 22' 05.46" W Dist 165.2567

Point 7001 N 6,924,712.0764 E 2,520,483.8662 Sta 14+46.30

Course from 7001 to PC DOWDY2 S 75° 22' 05.46" W Dist 213.5771

Curve Data

Curve DOWDY2
P.I. Station 18+62.15 N 6,924,607.0293 E 2,520,081.5006
Delta = 12° 09' 13.32" (LT)
Degree = 3° 00' 56.04"
Tangent = 202.2750
Length = 403.0320
Radius = 1,900.0000
External = 10.7368
Long Chord = 402.2768
Mid. Ord. = 10.6765
P.C. Station 16+59.88 N 6,924,658.1254 E 2,520,277.2156
P.T. Station 20+62.91 N 6,924,515.8737 E 2,519,900.9297
C.C. N 6,922,819.7442 E 2,520,757.1683
Back = S 75° 22' 05.46" W
Ahead = S 63° 12' 52.14" W
Chord Bear = S 69° 17' 28.80" W

Course from PT DOWDY2 to 7002 S 63° 12' 52.14" W Dist 162.3404

Point 7002 N 6,924,442.7147 E 2,519,756.0085 Sta 22+25.25

EXISTING ALIGNMENT "SOUTH FRONTAGE ROAD"

Point 17001 N 6,923,235.7805 E 2,521,000.1723 Sta 1638+14.41

Course from 17001 to PC 45SOUTHFRT1 N 23° 41' 15.06" W Dist 884.5485

Curve Data

Curve 45SOUTHFRT1
P.I. Station 1648+25.93 N 6,924,162.0800 E 2,520,593.7960
Delta = 5° 58' 55.74" (LT)
Degree = 2° 21' 28.26"
Tangent = 126.9713
Length = 253.7119
Radius = 2,430.0000
External = 3.3150
Long Chord = 253.5967
Mid. Ord. = 3.3104
P.C. Station 1646+98.96 N 6,924,045.8060 E 2,520,644.8065
P.T. Station 1649+52.67 N 6,924,272.4046 E 2,520,530.9453
C.C. N 6,923,069.5577 E 2,518,419.5336
Back = N 23° 41' 15.06" W
Ahead = N 29° 40' 10.80" W
Chord Bear = N 26° 40' 42.93" W

Course from PT 45SOUTHFRT1 to PC 45SOUTHFRT2 N 29° 40' 10.80" W Dist 59.4111

Curve Data

Curve 45SOUTHFRT2
P.I. Station 1652+40.32 N 6,924,522.8303 E 2,520,389.4316
Delta = 9° 06' 47.45" (RT)
Degree = 2° 00' 02.44"
Tangent = 228.2335
Length = 455.5043
Radius = 2,863.8165
External = 9.0802
Long Chord = 455.0243
Mid. Ord. = 9.0515
P.C. Station 1650+12.08 N 6,924,324.0265 E 2,520,501.5369
P.T. Station 1654+67.59 N 6,924,736.8804 E 2,520,310.2289
C.C. N 6,925,730.6957 E 2,522,996.0763
Back = N 29° 25' 07.05" W
Ahead = N 20° 18' 19.60" W
Chord Bear = N 24° 51' 43.32" W

Course from PT 45SOUTHFRT2 to 17002 N 20° 33' 23.35" W Dist 78.6779

Point 17002 N 6,924,810.5486 E 2,520,282.6027 Sta 1655+46.27

Course from 17002 to 16000 N 20° 33' 23.35" W Dist 0.1547

Equation: Sta 1655+46.42 (BK) = Sta 10065+24.57 (AH)
End Region 1

Begin Region 2

Point 16000 N 6,924,810.6935 E 2,520,282.5484 Sta 10065+24.57

Course from 16000 to PC 45SOUTHFRT3 N 20° 33' 23.35" W Dist 154.0853

Curve Data

Curve 45SOUTHFRT3
P.I. Station 10069+66.62 N 6,925,224.5968 E 2,520,127.3310
Delta = 25° 56' 45.63" (LT)
Degree = 4° 35' 01.18"
Tangent = 287.9649
Length = 566.0541
Radius = 1,250.0000
External = 32.7407
Long Chord = 561.2298
Mid. Ord. = 31.9051
P.C. Station 10066+78.66 N 6,924,954.9676 E 2,520,228.4443
P.T. Station 10072+44.71 N 6,925,422.8097 E 2,519,918.4400
C.C. N 6,924,516.0543 E 2,519,058.0362
Back = N 20° 33' 23.35" W
Ahead = N 46° 30' 08.98" W
Chord Bear = N 33° 31' 46.16" W

Course from PT 45SOUTHFRT3 to PC 45SOUTHFRT4 N 46° 30' 08.98" W Dist 473.7020

Curve Data

Curve 45SOUTHFRT4
P.I. Station 10080+43.46 N 6,925,976.9608 E 2,519,343.2332
Delta = 15° 20' 41.95" (LT)
Degree = 2° 22' 28.70"
Tangent = 325.0468
Length = 646.2031
Radius = 2,412.8214
External = 21.7961
Long Chord = 644.2735
Mid. Ord. = 21.6010
P.C. Station 10077+18.41 N 6,925,748.8697 E 2,519,574.8145
P.T. Station 10083+64.61 N 6,926,135.6370 E 2,519,059.5481
C.C. N 6,924,029.8429 E 2,517,881.6950
Back = N 45° 26' 06.08" W
Ahead = N 60° 46' 48.02" W
Chord Bear = N 53° 06' 27.05" W

Course from PT 45SOUTHFRT4 to 17003 N 59° 42' 45.12" W Dist 382.7999

Point 17003 N 6,926,328.6978 E 2,518,728.9981 Sta 10087+47.41

STATE OF TEXAS
SOLOMON BAYOU
127501
LICENSED
PROFESSIONAL ENGINEER

solomonbayou, P.E. 6/15/21
Signature of Registrant & Date

Texas Department of Transportation
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IH 45
HORIZONTAL GEOMETRY DATA SHEETS

SHEET 1 OF 3

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
TP	6	SEE TITLE SHEET		IH 45
GRAPHICS	STATE	DISTRICT	COUNTY	SHEET NO.
TP	TEXAS	18	DALLAS	70
CHECK	CONTROL	SECTION	JOB	
CHECK	0092	02	125	