ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Tangent Data

Description	PT Station	Northing	Easting
Start:	0+00.000	952131.222	1047010.791
End:	0+41.916	952170.764	1046996.883

Tangent Data

Parameter	Value	Parameter	Value
Length:	41.916	Course:	N 19° 22' 44.8295" W

Curve Point Data

Description	Station	Northing	Easting
PC:	0+41.916	952170.764	1046996.883
RP:		952174.291	1047006.911
PT:	0+63.267	952184.870	1047007.966

Circular Curve Data

Parameter	Value	Parameter	Value

ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Delta:	115° 04' 14.7451"	Type:	RIGHT
Radius:	10.631		
Length:	21.351	Tangent:	16.710
Mid-Ord:	4.925	External:	9.174
Chord:	17.939	Course:	N 38° 09' 22.5430" E

Tangent Data

Description	PT Station	Northing	Easting
Start:	0+63.267	952184.870	1047007.966
End:	0+96.432	952181.581	1047040.967

Tangent Data

Parameter	Value	Parameter	Value
Length:	33.165	Course:	S 84° 18' 30.0844" E

Curve Point Data

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Description	Station	Northing	Easting
PC:	0+96.432	952181.581	1047040.967
RP:		952234.320	1047046.223
PT:	1+07.230	952181.608	1047051.746

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	11° 40' 21.9545"	Type:	LEFT
Radius:	53.000		
Length:	10.798	Tangent:	5.418
Mid-Ord:	0.275	External:	0.276
Chord:	10.779	Course:	N 89° 51' 18.9383" E

Tangent Data

Description	PT Station	Northing	Easting
Start:	1+07.230	952181.608	1047051.746

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End:	1+24.460	952183.404	1047068.882

Tangent Data

Parameter	Value	Parameter	Value
Length:	17.230	Course:	N 84° 01' 07.9611" E

Curve Point Data

Description	Station	Northing	Easting
PC:	1+24.460	952183.404	1047068.882
RP:		952130.001	1047074.477
PT:	1+43.315	952182.069	1047087.593

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	20° 07' 11.0803"	Type:	RIGHT
Radius:	53.695		
Length:	18.855	Tangent:	9.526

Mid-Ord:	0.826	External:	0.838
Chord:	18.758	Course:	S 85° 55' 16.4988" E

Tangent Data

Description	PT Station	Northing	Easting
Start:	1+43.315	952182.069	1047087.593
End:	1+47.053	952181.156	1047091.218

Tangent Data

Parameter	Value	Parameter	Value
Length:	3.738	Course:	S 75° 51' 40.9586" E

Spiral Point Data

Description	Station	Northing	Easting
TS:	1+47.053	952181.156	1047091.218
SPI:		952179.319	1047098.512

SC:	1+58.553	952180.366	1047102.559

Spiral Curve Data: clothoid

Parameter	Value	Parameter	Value
Length:	11.500	L Tan:	7.747
Radius:	13.000	S Tan:	3.906
Theta:	25° 20' 32.5105"	P:	0.421
X:	11.277	K:	5.713
Y:	1.672	A:	12.227
Chord:	11.369	Course:	S 86° 00' 56.4449" E

Curve Point Data

Description	Station	Northing	Easting
SC:	1+58.553	952180.366	1047102.559
RP:		952192.952	1047099.302
CS:	1+72.637	952189.935	1047111.948

ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	62° 04' 23.5582"	Type:	LEFT
Radius:	13.000		
Length:	14.084	Tangent:	7.822
Mid-Ord:	1.861	External:	2.172
Chord:	13.405	Course:	N 44° 27' 14.8592" E

Spiral Point Data

Description	Station	Northing	Easting
CS:	1+72.637	952189.935	1047111.948
SPI:		952194.002	1047112.918
ST:	1+84.137	952201.260	1047110.942

Spiral Curve Data: clothoid

Parameter	Value	Parameter	Value

ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Length:	11.500	L Tan:	7.747
Radius:	13.000	S Tan:	3.906
Theta:	25° 20' 32.5105"	P:	0.421
X:	11.277	K:	5.713
Y:	1.672	A:	12.227
Chord:	11.369	Course:	N 05° 04' 33.8368" W

Tangent Data

Description	PT Station	Northing	Easting
Start:	1+84.137	952201.260	1047110.942
End:	1+88.714	952205.676	1047109.739

Tangent Data

Parameter	Value	Parameter	Value
Length:	4.577	Course:	N 15° 13' 49.3231" W

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Curve Point Data

Description	Station	Northing	Easting
PC:	1+88.714	952205.676	1047109.739
RP:		952212.622	1047135.252
PT:	2+01.990	952218.812	1047109.545

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	28° 46' 08.5505"	Type:	RIGHT
Radius:	26.442		
Length:	13.277	Tangent:	6.781
Mid-Ord:	0.829	External:	0.856
Chord:	13.138	Course:	N 00° 50' 45.0478" W

Tangent Data

Description	PT Station	Northing	Easting

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Start:	2+01.990	952218.812	1047109.545
End:	2+10.849	952227.424	1047111.619

Tangent Data

Parameter	Value	Parameter	Value
Length:	8.858	Course:	N 13° 32' 19.2274" E

Curve Point Data

Description	Station	Northing	Easting
PC:	2+10.849	952227.424	1047111.619
RP:		952242.173	1047050.370
PT:	2+18.784	952235.236	1047112.987

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	07° 13' 01.8772"	Type:	LEFT
Radius:	63.000		

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Length:	7.936	Tangent:	3.973
Mid-Ord:	0.125	External:	0.125
Chord:	7.930	Course:	N 09° 55' 48.2888" E

Tangent Data

Description	PT Station	Northing	Easting
Start:	2+18.784	952235.236	1047112.987
End:	2+29.459	952245.846	1047114.162

Tangent Data

Parameter	Value	Parameter	Value
Length:	10.675	Course:	N 06° 19' 17.3502" E

Curve Point Data

Description	Station	Northing	Easting
PC:	2+29.459	952245.846	1047114.162

ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

RP:		952242.873	1047140.998
PT:	2+36.167	952252.354	1047115.717

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	14° 14' 09.2464"	Type:	RIGHT
Radius:	27.000		
Length:	6.709	Tangent:	3.372
Mid-Ord:	0.208	External:	0.210
Chord:	6.691	Course:	N 13° 26' 21.9734" E

Tangent Data

Description	PT Station	Northing	Easting
Start:	2+36.167	952252.354	1047115.717
End:	2+37.524	952253.624	1047116.194

Tangent Data

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Parameter	Value	Parameter	Value
Length:	1.357	Course:	N 20° 33' 26.5966" E

Curve Point Data

Description	Station	Northing	Easting
PC:	2+37.524	952253.624	1047116.194
RP:		952272.235	1047066.569
PT:	2+88.677	952302.438	1047110.120

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	55° 17' 55.0347"	Type:	LEFT
Radius:	53.000		
Length:	51.153	Tangent:	27.766
Mid-Ord:	6.052	External:	6.833
Chord:	49.190	Course:	N 07° 05' 30.9207" W

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Tangent Data

Description	PT Station	Northing	Easting
Start:	2+88.677	952302.438	1047110.120
End:	2+98.243	952310.298	1047104.669

Tangent Data

Parameter	Value	Parameter	Value
Length:	9.566	Course:	N 34° 44' 28.4381" W

Curve Point Data

Description	Station	Northing	Easting
PC:	2+98.243	952310.298	1047104.669
RP:		952325.685	1047126.856
PT:	3+16.854	952327.922	1047099.949

Circular Curve Data

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Parameter	Value	Parameter	Value
Delta:	39° 29' 41.0832"	Type:	RIGHT
Radius:	27.000		
Length:	18.611	Tangent:	9.693
Mid-Ord:	1.588	External:	1.687
Chord:	18.245	Course:	N 14° 59' 37.8965" W

Tangent Data

Description	PT Station	Northing	Easting
Start:	3+16.854	952327.922	1047099.949
End:	3+25.917	952336.954	1047100.700

Tangent Data

Parameter	Value	Parameter	Value
Length:	9.062	Course:	N 04° 45' 12.6451" E

ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Curve Point Data

Description	Station	Northing	Easting
PC:	3+25.917	952336.954	1047100.700
RP:		952344.644	1047008.225
PT:	3+72.005	952381.948	1047093.190

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	28° 27' 27.1149"	Type:	LEFT
Radius:	92.794		
Length:	46.089	Tangent:	23.530
Mid-Ord:	2.847	External:	2.937
Chord:	45.617	Course:	N 09° 28' 30.9123" W

Tangent Data

Description	PT Station	Northing	Easting

ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Start:	3+72.005	952381.948	1047093.190
End:	4+14.803	952421.135	1047075.985

Tangent Data

Parameter	Value	Parameter	Value
Length:	42.798	Course:	N 23° 42' 14.4698" W

Curve Point Data

Description	Station	Northing	Easting
PC:	4+14.803	952421.135	1047075.985
RP:		952436.009	1047109.864
PT:	4+20.944	952426.936	1047073.993

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	09° 30' 34.6281"	Type:	RIGHT
Radius:	37.000		

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Length:	6.141	Tangent:	3.078
Mid-Ord:	0.127	External:	0.128
Chord:	6.134	Course:	N 18° 56' 57.1557" W

Tangent Data

Description	PT Station	Northing	Easting
Start:	4+20.944	952426.936	1047073.993
End:	4+29.063	952434.807	1047072.002

Tangent Data

Parameter	Value	Parameter	Value
Length:	8.119	Course:	N 14° 11' 39.8417" W

Curve Point Data

Description	Station	Northing	Easting
PC:	4+29.063	952434.807	1047072.002

ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

RP:		952125.053	1045847.361
PT:	4+60.611	952465.293	1047063.885

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	01° 25' 51.4675"	Type:	LEFT
Radius:	1263.208		
Length:	31.549	Tangent:	15.775
Mid-Ord:	0.098	External:	0.098
Chord:	31.548	Course:	N 14° 54' 35.5754" W

Tangent Data

Description	PT Station	Northing	Easting
Start:	4+60.611	952465.293	1047063.885
End:	4+63.988	952468.544	1047062.976

Tangent Data

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Parameter	Value	Parameter	Value
Length:	3.376	Course:	N 15° 37' 31.3091" W

Curve Point Data

Description	Station	Northing	Easting
PC:	4+63.988	952468.544	1047062.976
RP:		952472.348	1047076.576
PT:	4+76.093	952480.141	1047064.798

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	49° 06' 53.1523"	Type:	RIGHT
Radius:	14.122		
Length:	12.106	Tangent:	6.453
Mid-Ord:	1.277	External:	1.404
Chord:	11.739	Course:	N 08° 55' 55.2670" E

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Tangent Data

Description	PT Station	Northing	Easting
Start:	4+76.093	952480.141	1047064.798
End:	4+80.104	952483.485	1047067.011

Tangent Data

Parameter	Value	Parameter	Value
Length:	4.011	Course:	N 33° 29' 21.8432" E

1.1.1 Alignment: Eje Izquierdo

1.1.2 Description:

Tangent Data

Description	PT Station	Northing	Easting

ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Start:	0+00.000	952129.232	1047005.131
End:	0+41.916	952168.773	1046991.222

Tangent Data

Parameter	Value	Parameter	Value
Length:	41.916	Course:	N 19° 22' 44.8295" W

Curve Point Data

Description	Station	Northing	Easting
PC:	0+41.916	952168.773	1046991.222
RP:		952174.291	1047006.911
PT:	0+75.317	952190.841	1047008.561

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	115° 04' 14.7451"	Type:	RIGHT
Radius:	16.631		

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Length:	33.401	Tangent:	26.141
Mid-Ord:	7.704	External:	14.352
Chord:	28.064	Course:	N 38° 09' 22.5430" E

Tangent Data

Description	PT Station	Northing	Easting
Start:	0+75.317	952190.841	1047008.561
End:	1+08.482	952187.551	1047041.562

Tangent Data

Parameter	Value	Parameter	Value
Length:	33.165	Course:	S 84° 18' 30.0844" E

Curve Point Data

Description	Station	Northing	Easting
PC:	1+08.482	952187.551	1047041.562

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

RP:		952234.320	1047046.223
PT:	1+18.058	952187.576	1047051.121

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	11° 40' 21.9545"	Type:	LEFT
Radius:	47.000		
Length:	9.575	Tangent:	4.804
Mid-Ord:	0.244	External:	0.245
Chord:	9.559	Course:	N 89° 51' 18.9383" E

Tangent Data

Description	PT Station	Northing	Easting
Start:	1+18.058	952187.576	1047051.121
End:	1+35.288	952189.371	1047068.257

Tangent Data

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Parameter	Value	Parameter	Value
Length:	17.230	Course:	N 84° 01' 07.9610" E

Curve Point Data

Description	Station	Northing	Easting
PC:	1+35.288	952189.371	1047068.257
RP:		952130.001	1047074.477
PT:	1+56.250	952187.888	1047089.059

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	20° 07' 11.0803"	Type:	RIGHT
Radius:	59.695		
Length:	20.962	Tangent:	10.590
Mid-Ord:	0.918	External:	0.932
Chord:	20.855	Course:	S 85° 55' 16.4988" E

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Tangent Data

Description	PT Station	Northing	Easting
Start:	1+56.250	952187.888	1047089.059
End:	1+59.988	952186.975	1047092.683

Tangent Data

Parameter	Value	Parameter	Value
Length:	3.738	Course:	S 75° 51' 40.9586" E

Spiral Point Data

Description	Station	Northing	Easting
TS:	1+59.988	952186.975	1047092.683
SPI:		952185.511	1047098.492
SC:	1+68.488	952186.175	1047101.056

Spiral Curve Data: clothoid

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Parameter	Value	Parameter	Value
Length:	8.500	L Tan:	5.780
Radius:	7.000	S Tan:	2.937
Theta:	34° 47' 12.2038"	P:	0.424
X:	8.192	K:	4.198
Y:	1.675	A:	7.714
Chord:	8.411	Course:	S 84° 32' 42.1870" E

Curve Point Data

Description	Station	Northing	Easting
SC:	1+68.488	952186.175	1047101.056
RP:		952192.952	1047099.302
CS:	1+76.071	952191.327	1047106.111

Circular Curve Data

Parameter	Value	Parameter	Value

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Delta:	62° 04' 23.5582"	Type:	LEFT
Radius:	7.000		
Length:	7.584	Tangent:	4.212
Mid-Ord:	1.002	External:	1.170
Chord:	7.218	Course:	N 44° 27' 14.8592" E

Spiral Point Data

Description	Station	Northing	Easting
CS:	1+76.071	952191.327	1047106.111
SPI:		952193.904	1047106.726
ST:	1+84.571	952199.684	1047105.152

Spiral Curve Data: clothoid

Parameter	Value	Parameter	Value
Length:	8.500	L Tan:	5.780
Radius:	7.000	S Tan:	2.937

AGENCIA PARA LA INFRAESTRUCTURA DEL META
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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Theta:	34° 47' 12.2038"	P:	0.424
X:	8.192	K:	4.198
Y:	1.675	A:	7.714
Chord:	8.411	Course:	N 06° 32' 48.0947" W

Tangent Data

Description	PT Station	Northing	Easting
Start:	1+84.571	952199.684	1047105.152
End:	1+89.148	952204.100	1047103.950

Tangent Data

Parameter	Value	Parameter	Value
Length:	4.577	Course:	N 15° 13' 49.3231" W

Curve Point Data

Description	Station	Northing	Easting

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

PC:	1+89.148	952204.100	1047103.950
RP:		952212.622	1047135.252
PT:	2+05.438	952220.217	1047103.712

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	28° 46' 08.5505"	Type:	RIGHT
Radius:	32.442		
Length:	16.289	Tangent:	8.320
Mid-Ord:	1.017	External:	1.050
Chord:	16.119	Course:	N 00° 50' 45.0478" W

Tangent Data

Description	PT Station	Northing	Easting
Start:	2+05.438	952220.217	1047103.712
End:	2+14.296	952228.829	1047105.786

ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Tangent Data

Parameter	Value	Parameter	Value
Length:	8.858	Course:	N 13° 32' 19.2274" E

Curve Point Data

Description	Station	Northing	Easting
PC:	2+14.296	952228.829	1047105.786
RP:		952242.173	1047050.370
PT:	2+21.476	952235.896	1047107.023

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	07° 13' 01.8772"	Type:	LEFT
Radius:	57.000		
Length:	7.180	Tangent:	3.595
Mid-Ord:	0.113	External:	0.113

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Chord:	7.175	Course:	N 09° 55' 48.2888" E

Tangent Data

Description	PT Station	Northing	Easting
Start:	2+21.476	952235.896	1047107.023
End:	2+32.150	952246.506	1047108.198

Tangent Data

Parameter	Value	Parameter	Value
Length:	10.675	Course:	N 06° 19' 17.3502" E

Curve Point Data

Description	Station	Northing	Easting
PC:	2+32.150	952246.506	1047108.198
RP:		952242.873	1047140.998
PT:	2+40.350	952254.460	1047110.099

ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	14° 14' 09.2464"	Type:	RIGHT
Radius:	33.000		
Length:	8.199	Tangent:	4.121
Mid-Ord:	0.254	External:	0.256
Chord:	8.178	Course:	N 13° 26' 21.9734" E

Tangent Data

Description	PT Station	Northing	Easting
Start:	2+40.350	952254.460	1047110.099
End:	2+41.706	952255.731	1047110.576

Tangent Data

Parameter	Value	Parameter	Value
Length:	1.357	Course:	N 20° 33' 26.5966" E

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Curve Point Data

Description	Station	Northing	Easting
PC:	2+41.706	952255.731	1047110.576
RP:		952272.235	1047066.569
PT:	2+87.068	952299.018	1047105.190

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	55° 17' 55.0347"	Type:	LEFT
Radius:	47.000		
Length:	45.362	Tangent:	24.623
Mid-Ord:	5.367	External:	6.059
Chord:	43.622	Course:	N 07° 05' 30.9207" W

Tangent Data

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Description	PT Station	Northing	Easting
Start:	2+87.068	952299.018	1047105.190
End:	2+96.634	952306.879	1047099.739

Tangent Data

Parameter	Value	Parameter	Value
Length:	9.566	Course:	N 34° 44' 28.4381" W

Curve Point Data

Description	Station	Northing	Easting
PC:	2+96.634	952306.879	1047099.739
RP:		952325.685	1047126.856
PT:	3+19.381	952328.420	1047093.969

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	39° 29' 41.0832"	Type:	RIGHT

ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Radius:	33.000		
Length:	22.747	Tangent:	11.847
Mid-Ord:	1.941	External:	2.062
Chord:	22.300	Course:	N 14° 59' 37.8965" W

Tangent Data

Description	PT Station	Northing	Easting
Start:	3+19.381	952328.420	1047093.969
End:	3+28.444	952337.451	1047094.720

Tangent Data

Parameter	Value	Parameter	Value
Length:	9.062	Course:	N 04° 45' 12.6451" E

Curve Point Data

Description	Station	Northing	Easting

ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

PC:	3+28.444	952337.451	1047094.720
RP:		952344.644	1047008.225
PT:	3+71.553	952379.536	1047087.696

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	28° 27' 27.1149"	Type:	LEFT
Radius:	86.794		
Length:	43.109	Tangent:	22.009
Mid-Ord:	2.663	External:	2.747
Chord:	42.667	Course:	N 09° 28' 30.9123" W

Tangent Data

Description	PT Station	Northing	Easting
Start:	3+71.553	952379.536	1047087.696
End:	4+14.350	952418.723	1047070.491

ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Tangent Data

Parameter	Value	Parameter	Value
Length:	42.798	Course:	N 23° 42' 14.4698" W

Curve Point Data

Description	Station	Northing	Easting
PC:	4+14.350	952418.723	1047070.491
RP:		952436.009	1047109.864
PT:	4+21.487	952425.465	1047068.176

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	09° 30' 34.6281"	Type:	RIGHT
Radius:	43.000		
Length:	7.137	Tangent:	3.577
Mid-Ord:	0.148	External:	0.148

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Chord:	7.129	Course:	N 18° 56' 57.1557" W

Tangent Data

Description	PT Station	Northing	Easting
Start:	4+21.487	952425.465	1047068.176
End:	4+29.606	952433.336	1047066.186

Tangent Data

Parameter	Value	Parameter	Value
Length:	8.119	Course:	N 14° 11' 39.8417" W

Curve Point Data

Description	Station	Northing	Easting
PC:	4+29.606	952433.336	1047066.186
RP:		952125.053	1045847.361
PT:	4+61.004	952463.677	1047058.107

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	01° 25' 51.4675"	Type:	LEFT
Radius:	1257.208		
Length:	31.399	Tangent:	15.700
Mid-Ord:	0.098	External:	0.098
Chord:	31.398	Course:	N 14° 54' 35.5754" W

Tangent Data

Description	PT Station	Northing	Easting
Start:	4+61.004	952463.677	1047058.107
End:	4+64.381	952466.928	1047057.197

Tangent Data

Parameter	Value	Parameter	Value
Length:	3.376	Course:	N 15° 37' 31.3091" W

Curve Point Data

Description	Station	Northing	Easting
PC:	4+64.381	952466.928	1047057.197
RP:		952472.348	1047076.576
PT:	4+81.630	952483.451	1047059.794

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	49° 06' 53.1523"	Type:	RIGHT
Radius:	20.122		
Length:	17.249	Tangent:	9.195
Mid-Ord:	1.820	External:	2.001
Chord:	16.726	Course:	N 08° 55' 55.2670" E

Tangent Data

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Description	PT Station	Northing	Easting
Start:	4+81.630	952483.451	1047059.794
End:	4+85.641	952486.796	1047062.007

Tangent Data

Parameter	Value	Parameter	Value
Length:	4.011	Course:	N 33° 29' 21.8432" E

1.1.3 Alignment: VÍA_AZOTEA

1.1.4 Description:

Tangent Data

Description	PT Station	Northing	Easting
Start:	0+00.000	952130.227	1047007.961
End:	0+41.916	952169.768	1046994.052

ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Tangent Data

Parameter	Value	Parameter	Value
Length:	41.916	Course:	N 19° 22' 44.8295" W

Curve Point Data

Description	Station	Northing	Easting
PC:	0+41.916	952169.768	1046994.052
RP:		952174.291	1047006.911
PT:	0+69.292	952187.855	1047008.263

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	115° 04' 14.7451"	Type:	RIGHT
Radius:	13.631		
Length:	27.376	Tangent:	21.426
Mid-Ord:	6.314	External:	11.763

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Chord:	23.002	Course:	N 38° 09' 22.5430" E

Tangent Data

Description	PT Station	Northing	Easting
Start:	0+69.292	952187.855	1047008.263
End:	1+02.457	952184.566	1047041.264

Tangent Data

Parameter	Value	Parameter	Value
Length:	33.165	Course:	S 84° 18' 30.0844" E

Curve Point Data

Description	Station	Northing	Easting
PC:	1+02.457	952184.566	1047041.264
RP:		952234.320	1047046.223
PT:	1+12.644	952184.592	1047051.433

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	11° 40' 21.9545"	Type:	LEFT
Radius:	50.000		
Length:	10.186	Tangent:	5.111
Mid-Ord:	0.259	External:	0.261
Chord:	10.169	Course:	N 89° 51' 18.9383" E

Tangent Data

Description	PT Station	Northing	Easting
Start:	1+12.644	952184.592	1047051.433
End:	1+29.874	952186.387	1047068.569

Tangent Data

Parameter	Value	Parameter	Value
Length:	17.230	Course:	N 84° 01' 07.9611" E

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Curve Point Data

Description	Station	Northing	Easting
PC:	1+29.874	952186.387	1047068.569
RP:		952130.001	1047074.477
PT:	1+49.782	952184.978	1047088.326

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	20° 07' 11.0803"	Type:	RIGHT
Radius:	56.695		
Length:	19.909	Tangent:	10.058
Mid-Ord:	0.872	External:	0.885
Chord:	19.806	Course:	S 85° 55' 16.4988" E

Tangent Data

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Description	PT Station	Northing	Easting
Start:	1+49.782	952184.978	1047088.326
End:	1+53.520	952184.065	1047091.950

Tangent Data

Parameter	Value	Parameter	Value
Length:	3.738	Course:	S 75° 51' 40.9586" E

Spiral Point Data

Description	Station	Northing	Easting
TS:	1+53.520	952184.065	1047091.950
SPI:		952182.415	1047098.502
SC:	1+63.520	952183.271	1047101.808

Spiral Curve Data: clothoid

Parameter	Value	Parameter	Value
Length:	10.000	L Tan:	6.756

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Radius:	10.000	S Tan:	3.415
Theta:	28° 38' 52.4031"	P:	0.413
X:	9.753	K:	4.959
Y:	1.637	A:	10.000
Chord:	9.889	Course:	S 85° 23' 25.2263" E

Curve Point Data

Description	Station	Northing	Easting
SC:	1+63.520	952183.271	1047101.808
RP:		952192.952	1047099.302
CS:	1+74.354	952190.631	1047109.029

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	62° 04' 23.5582"	Type:	LEFT
Radius:	10.000		

ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Length:	10.834	Tangent:	6.017
Mid-Ord:	1.432	External:	1.671
Chord:	10.312	Course:	N 44° 27' 14.8592" E

Spiral Point Data

Description	Station	Northing	Easting
CS:	1+74.354	952190.631	1047109.029
SPI:		952193.953	1047109.822
ST:	1+84.354	952200.472	1047108.047

Spiral Curve Data: clothoid

Parameter	Value	Parameter	Value
Length:	10.000	L Tan:	6.756
Radius:	10.000	S Tan:	3.415
Theta:	28° 38' 52.4031"	P:	0.413
X:	9.753	K:	4.959

Y:	1.637	A:	10.000
Chord:	9.889	Course:	N 05° 42' 05.0553" W

Tangent Data

Description	PT Station	Northing	Easting
Start:	1+84.354	952200.472	1047108.047
End:	1+88.931	952204.888	1047106.845

Tangent Data

Parameter	Value	Parameter	Value
Length:	4.577	Course:	N 15° 13' 49.3231" W

Curve Point Data

Description	Station	Northing	Easting
PC:	1+88.931	952204.888	1047106.845
RP:		952212.622	1047135.252

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

PT:	2+03.714	952219.514	1047106.629

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	28° 46' 08.5505"	Type:	RIGHT
Radius:	29.442		
Length:	14.783	Tangent:	7.551
Mid-Ord:	0.923	External:	0.953
Chord:	14.628	Course:	N 00° 50' 45.0478" W

Tangent Data

Description	PT Station	Northing	Easting
Start:	2+03.714	952219.514	1047106.629
End:	2+12.572	952228.126	1047108.702

Tangent Data

Parameter	Value	Parameter	Value

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Length:	8.858	Course:	N 13° 32' 19.2274" E

Curve Point Data

Description	Station	Northing	Easting
PC:	2+12.572	952228.126	1047108.702
RP:		952242.173	1047050.370
PT:	2+20.130	952235.566	1047110.005

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	07° 13' 01.8772"	Type:	LEFT
Radius:	60.000		
Length:	7.558	Tangent:	3.784
Mid-Ord:	0.119	External:	0.119
Chord:	7.553	Course:	N 09° 55' 48.2888" E

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Tangent Data

Description	PT Station	Northing	Easting
Start:	2+20.130	952235.566	1047110.005
End:	2+30.805	952246.176	1047111.180

Tangent Data

Parameter	Value	Parameter	Value
Length:	10.675	Course:	N 06° 19' 17.3502" E

Curve Point Data

Description	Station	Northing	Easting
PC:	2+30.805	952246.176	1047111.180
RP:		952242.873	1047140.998
PT:	2+38.259	952253.407	1047112.908

Circular Curve Data

Parameter	Value	Parameter	Value

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Delta:	14° 14' 09.2464"	Type:	RIGHT
Radius:	30.000		
Length:	7.454	Tangent:	3.746
Mid-Ord:	0.231	External:	0.233
Chord:	7.435	Course:	N 13° 26' 21.9734" E

Tangent Data

Description	PT Station	Northing	Easting
Start:	2+38.259	952253.407	1047112.908
End:	2+39.615	952254.677	1047113.385

Tangent Data

Parameter	Value	Parameter	Value
Length:	1.357	Course:	N 20° 33' 26.5966" E

Curve Point Data

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Description	Station	Northing	Easting
PC:	2+39.615	952254.677	1047113.385
RP:		952272.235	1047066.569
PT:	2+87.872	952300.728	1047107.655

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	55° 17' 55.0347"	Type:	LEFT
Radius:	50.000		
Length:	48.257	Tangent:	26.194
Mid-Ord:	5.710	External:	6.446
Chord:	46.406	Course:	N 07° 05' 30.9207" W

Tangent Data

Description	PT Station	Northing	Easting
Start:	2+87.872	952300.728	1047107.655

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End:	2+97.438	952308.589	1047102.204

Tangent Data

Parameter	Value	Parameter	Value
Length:	9.566	Course:	N 34° 44' 28.4381" W

Curve Point Data

Description	Station	Northing	Easting
PC:	2+97.438	952308.589	1047102.204
RP:		952325.685	1047126.856
PT:	3+18.118	952328.171	1047096.959

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	39° 29' 41.0832"	Type:	RIGHT
Radius:	30.000		
Length:	20.679	Tangent:	10.770

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Mid-Ord:	1.764	External:	1.874
Chord:	20.272	Course:	N 14° 59' 37.8965" W

Tangent Data

Description	PT Station	Northing	Easting
Start:	3+18.118	952328.171	1047096.959
End:	3+27.180	952337.202	1047097.710

Tangent Data

Parameter	Value	Parameter	Value
Length:	9.062	Course:	N 04° 45' 12.6451" E

Curve Point Data

Description	Station	Northing	Easting
PC:	3+27.180	952337.202	1047097.710
RP:		952344.644	1047008.225

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PT:	3+71.779	952380.742	1047090.443

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	28° 27' 27.1149"	Type:	LEFT
Radius:	89.794		
Length:	44.599	Tangent:	22.769
Mid-Ord:	2.755	External:	2.842
Chord:	44.142	Course:	N 09° 28' 30.9123" W

Tangent Data

Description	PT Station	Northing	Easting
Start:	3+71.779	952380.742	1047090.443
End:	4+14.577	952419.929	1047073.238

Tangent Data

Parameter	Value	Parameter	Value

Length:	42.798	Course:	N 23° 42' 14.4698" W

Curve Point Data

Description	Station	Northing	Easting
PC:	4+14.577	952419.929	1047073.238
RP:		952436.009	1047109.864
PT:	4+21.216	952426.201	1047071.085

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	09° 30' 34.6281"	Type:	RIGHT
Radius:	40.000		
Length:	6.639	Tangent:	3.327
Mid-Ord:	0.138	External:	0.138
Chord:	6.631	Course:	N 18° 56' 57.1557" W

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Tangent Data

Description	PT Station	Northing	Easting
Start:	4+21.216	952426.201	1047071.085
End:	4+29.334	952434.072	1047069.094

Tangent Data

Parameter	Value	Parameter	Value
Length:	8.119	Course:	N 14° 11' 39.8417" W

Curve Point Data

Description	Station	Northing	Easting
PC:	4+29.334	952434.072	1047069.094
RP:		952125.053	1045847.361
PT:	4+60.808	952464.485	1047060.996

Circular Curve Data

Parameter	Value	Parameter	Value

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Delta:	01° 25' 51.4675"	Type:	LEFT
Radius:	1260.208		
Length:	31.474	Tangent:	15.738
Mid-Ord:	0.098	External:	0.098
Chord:	31.473	Course:	N 14° 54' 35.5754" W

Tangent Data

Description	PT Station	Northing	Easting
Start:	4+60.808	952464.485	1047060.996
End:	4+64.184	952467.736	1047060.087

Tangent Data

Parameter	Value	Parameter	Value
Length:	3.376	Course:	N 15° 37' 31.3091" W

Curve Point Data

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ANEXO B: CARTERA ALINEAMIENTO HORIZONTAL

Description	Station	Northing	Easting
PC:	4+64.184	952467.736	1047060.087
RP:		952472.348	1047076.576
PT:	4+78.862	952481.796	1047062.296

Circular Curve Data

Parameter	Value	Parameter	Value
Delta:	49° 06' 53.1523"	Type:	RIGHT
Radius:	17.122		
Length:	14.677	Tangent:	7.824
Mid-Ord:	1.549	External:	1.703
Chord:	14.232	Course:	N 08° 55' 55.2670" E

Tangent Data

Description	PT Station	Northing	Easting
Start:	4+78.862	952481.796	1047062.296

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End:	4+82.872	952485.141	1047064.509

Tangent Data

Parameter	Value	Parameter	Value
Length:	4.011	Course:	N 33° 29' 21.8432" E

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