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ANEXO VI. TRAZADOS Y SERVICIOS

1. ANTECEDENTES

Se propone para la distribución viaria del sector dos ramales principales uno en dirección N-S, y otro en dirección E-O. En la intersección de dichos ramales principales se proyecta una rotonda de dimensiones similares a la existente en Infanta Elena.

Se define otro vial principal que ejercerá de frontera con el sector existente al sur.

Se definen tres viales secundarios de conexión entre estos viales principales y un vial adicional para conectar con el paso inferior de la vía de ADIF.

Los viales serán los siguientes:

- CALLE A OESTE: de la Rotonda de Infanta Elena a la rotonda nueva.
- CALLE A ESTE: de la rotonda nueva hasta la conexión con Rúa da Terra en el parque empresarial de O CEAO.
- CALLE D NORTE: desde Rúa do Vidro en el polígono industrial de O CEAO hasta la rotonda nueva.
- CALLE D SUR: desde la rotonda nueva hasta la calle E.
- CALLE E OESTE: desde Rúa Garaballa de Arriba hasta la intersección con Rúa dos servicios.
- CALLE E ESTE: desde la intersección con Rúa dos servicios hasta O CEAO.
- CALLE B: desde la calle A ESTE hasta la calle E ESTE.
- CALLE F: desde la CALLE E hasta el paso Inferior de la vía de ADIF.
- CALLE G: desde la CALLE A ESTE hasta la CALLE D NORTE.
- ROTONDA: definición de la rotonda a implantar.

Adicionalmente se definen una serie de alineaciones auxiliares para definir las intersecciones existentes:

- ENLACE A OESTE - D NORTE
- ENLACE D NORTE – A ESTE
- ENLACE A ESTE – D SUR
- ENLACE D SUR – A OESTE
- ENLACE D NORTE – G
- ENLACE G – D NORTE
- ENLACE A ESTE – G
- ENLACE A ESTE – B
- ENLACE B – A ESTE
- ENLACE B – E ESTE

- ENACE E ESTE –B
- ENLACE E ESTE –F
- ENLACE F – E OESTE
- ENLACE D SUR – E OESTE
- ENLACE E OESTE D – SUR

Con estas alineaciones se consigue definir correctamente la transición entre las distintas alineaciones existentes.

Las alineaciones en planta y alzado de los viales anteriormente descritos, se pueden consultar en los anejos nº 1: trazado en planta, y nº 2: trazado en alzado del presente documento.

2. ESTRUCTURAS

En el presente apartado se describirán y valorarán las estructuras necesarias para la realización de los viales del sector. Las estructuras necesarias para tal fin son:

- Puente Vial A.
- Puente Vial D.
- Paso Vial E.
- Well-Damn

2.1. PUENTE VIAL A

El puente sobre el vial A se realizará entre los P.K. 0+140.62 y 0+200.62. Consiste en dos vanos de aproximación de 15 metros y un vano central de 30 metros.

Se realizarán dos tableros paralelos de 11,5 metros de ancho y 0,35 metros de canto. Colocados respectivamente sobre 2 vigas artesas prefabricadas de canto 1,45 metros y 1,4 metros de ancho.

Se colocarán sobre pilas prefabricadas de sección cuadrada achaflanada de 1 metro de lado, con capiteles troncocónicos para el apoyo de las vigas. La altura libre de pilas, descontando los capiteles es de 3,85 metros.

Las Pilas se colocarán sobre zapatas de 5,5 x 2,20 x 1,50 metros, estando preparadas para actuar como encepado para dos pilotes diámetro 1000 mm en caso de que el estudio geotécnico estableciera la necesidad de realizarlos.

Se proyectan dos estribos únicos para la carga de las cuatro vigas.

2.1.1. Altura libre

La altura libre del vial, queda definida por el trazado en alzado del vial A ESTE, quedando una altura libre bajo tablero de 5 metros aproximadamente.

2.1.2. Planos

Se pueden consultar los planos de la estructura en el anexo nº 4 planos del presente documento.

2.1.3. Valoración de las obras

La valoración detallada del puente se puede consultar en el anejo nº 3: valoración de las obras, del presente documento.

2.2. PUENTE VIAL D

El puente sobre el vial A se realizará entre los P.K. 0+220 y 0+253. Consiste en vano único de 33 metros de largo para librar la vaguada. El tablero y los estribos están esviados con respecto al eje del vial D, en paralelo al cauce existente.

Se realizarán dos tableros paralelos de 11,5 metros de ancho y 0,35 metros de canto. Colocados respectivamente sobre 2 vigas artesas prefabricadas de canto 1,45 metros y 1,4 metros de ancho.

Se proyectan dos estribos únicos para la carga de las cuatro vigas.

2.2.1 Altura libre

La altura libre del vial, queda definida por el trazado en alzado del vial D NORTE, quedando una altura libre bajo tablero de 5 metros aproximadamente.

2.2.2 Planos

Se pueden consultar los planos de la estructura en el anejo nº 4 planos del presente documento.

2.2.3 Valoración de las obras

La valoración detallada del puente se puede consultar en el anejo nº 3: valoración de las obras, del presente documento.

2.3. PASO VIAL E

Se proyecta un paso inferior para el desagüe de la cuenca de la zona verde, se dimensiona con 4,4 metros de ancho y dos metros de alto, con espesor de muros 0,5 m, y con una pendiente longitudinal similar a la del cauce existente.

2.3.1 Planos

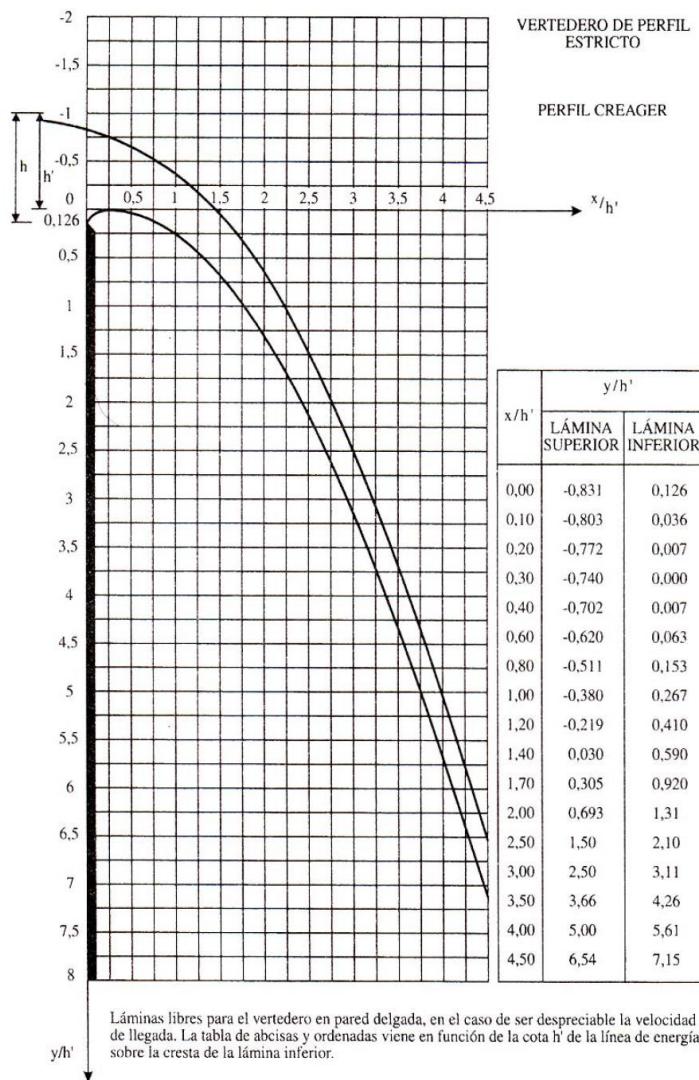
Se pueden consultar los planos de la estructura en el anejo nº 4 planos del presente documento.

2.3.2 Valoración de las obras

La valoración detallada del puente se puede consultar en el anejo nº 3: valoración de las obras, del presente documento.

2.4. WELL-DAMM

Se proyecta un WELL-DAMM con perfil Creager, de acuerdo con la imagen siguiente.



Las dimensiones y el perfil final se pueden consultar en el anexo nº 4 planos, del presente documento. La valoración de la obra se puede consultar en el anexo nº 3 del presente documento.

2.5. PASO INFERIOR BAJO VÍA DE ADIF

La obra a realizar consiste en un paso inferior hincado bajo la vía de ADIF, que se realizará en paralelo al paso existente en la actualidad en la Rúa dos Servicios, con el objetivo de proceder al desdoblamiento de la Rúa dos servicios dentro del ámbito del S-5.I, tal y como se marca en el PXOM y el Plan parcial.



El paso Inferior existente tiene unas dimensiones de 7 metros de largo, 8 metros de ancho y un gálibo de 5,5 metros. Consta de 2 estribos sobre el que se apoyan 6 vigas prefabricadas de hormigón sobre las que se apoya la plataforma de la vía.

La vía de ferrocarril existente se encuentra en un tramo recto, y cuenta con una única vía de ancho RENFE (1668 mm), por lo que de acuerdo a la norma de ADIF NAP 1-2-1.0 el ancho total de la plataforma de subbalasto a 8.60 metros.



Se realizará un marco de Hormigón Armado HA-35/B/20/XC4 según la nomenclatura del código estructural.

Se deben demoler parcialmente las aletas de los estribos del paso existente dado que interferirán en la hincada del nuevo paso.

La cara externa del nuevo paso se colocará a 20 cm de la cara interior del estribo del paso existente, para tener una holgura suficiente durante las operaciones de hincada.

Los hastiales serán de 90 cm ancho y las losas de 120 cm de ancho para poder soportar las cargas inducidas por las dos vías se reforzará el armado en dichas zonas, en un ancho de 2,25 metros bajo los ejes de las vías, mediante la colocación de cercos de refuerzo de diámetro 12 mm cada 20 cm entre las armaduras superior e inferior de la losa que serán de diámetro 25 cada 20 cm.

La dotación final de acero de la estructura se estima en torno a los 132 kg/m³ debido a la cuantía de los refuerzos necesarios.

La longitud del marco será de 12 m, dada la sección transversal de la vía, para asegurar una correcta sujeción de la plataforma existente que se puede consultar en el anexo nº 2 planos de la presente memoria.

El ancho interior del marco será de 9,20 m, dada la sección del vial descrita en el plan parcial, y el ancho del estribo del paso existente.

La altura interior del paso será de 5,50 m, de manera que se consiga un gálibo de 5,44 metros cuando se ejecute el vial, con una capa de rodadura de 6 cm de aglomerado AC-16 surf D.

Los planos de la estructura se pueden consultar en el anexo nº 4 de la presente memoria.

La superficie de deslizamiento tendrá un ancho de 11,05 cm y un largo de al menos 12,50 metros hasta el muro de empuje. Se realizará en hormigón HA-35/20/B/XC4. No se valorará en este caso la demolición de la estructura para la ejecución del desdoblamiento del vial.

La valoración de la obra se puede consultar en el anexo nº3 del presente documento.

3. REDES DE SANEAMIENTO

Para calcular el saneamiento del sector hace falta definir una serie de cuencas drenantes de acuerdo al trazado en alzado de los viales.

La descripción de las cuencas drenantes se puede encontrar en el anexo nº 4: planos, del presente documento.

Se definen 6 cuencas drenantes:

- Cuenca 1: correspondiente a las parcelas con frente a la Avenida Infanta Elena, que desaguarán principalmente hacia la red de saneamiento de la misma.
- Cuenca 2: Correspondiente a las parcelas que dan frente al vial D Norte.
- Cuenca 3: Correspondiente a las parcelas que dan frente al vial G.
- Cuenca 4: Correspondiente a las parcelas que dan frente al vial D Sur.
- Cuenca 5: Correspondiente a las parcelas que dan frente al vial B
- Cuenca 6: Correspondiente al frente oeste de las parcelas de la manzana C.1 que dan al vial posterior.

Queda fuera de la descripción de las cuencas la zona verde, puesto que constituye parte del cauce natural y no formará parte de las redes de saneamiento.

3.1. DESCRIPCIÓN DE LAS CUENCAS

Las características físicas de las cuencas son las siguientes:

CUENCA	superficie m2	longitud	supKm2	longKm	pte
CUENCA 1	46069.00	332.00	0.0461	0.3320	0.0140
CUENCA 2	59536.00	433.00	0.0595	0.4330	0.0342
CUENCA 3	51197.00	420.00	0.0512	0.4200	0.0320
CUENCA 4	60373.00	642.00	0.0604	0.6420	0.0275
CUENCA 5	39358.00	434.00	0.0394	0.4340	0.0255
CUENCA 6	3967.00	675.00	0.0040	0.6750	5.7500

3.2. CÁLCULO CAUDALES PLUVIALES

Se realiza el cálculo de acuerdo con la Norma 5.2 – IC Drenaje Superficial de la Instrucción de Carreteras

Caudal de Proyecto

El desague se realiza por gravedad por lo que se considera un período de Retorno de 25 años.

QT (m³/s) Caudal máximo anual correspondiente al período de retorno T

Cálculo de caudales

Por ser una cuenca de área inferior a cincuenta kilómetros cuadrados ($A \geq 50 \text{ km}^2$) se emplea el siguiente procedimiento:

-
- Utilización de datos sobre caudales máximos proporcionados por la Administración Hidráulica.
 - Si la Administración Hidráulica no dispone de datos sobre caudales máximos se debe aplicar el método racional

Fórmula de cálculo. Método racional

Siguiendo el método racional, el caudal máximo anual QT, correspondiente a un período de retorno T, se calcula mediante la fórmula:

$$Q_T = \frac{I(T, t_c) \cdot C \cdot A \cdot K_t}{3,6}$$

QT	(m ³ /s)	Caudal máximo anual correspondiente al período de retorno T, en el punto de desagüe de la cuenca
I (T, tc)	(mm/h)	Intensidad de precipitación correspondiente al período de retorno considerado T, para una duración del aguacero igual al tiempo de concentración tc, de la cuenca.
C	(adimensional)	Coeficiente medio de escorrentía de la cuenca o superficie considerada.
A	(km ²)	Área de la cuenca o superficie considerada
Kt	(adimensional)	Coeficiente de uniformidad en la distribución temporal de la precipitación

Intensidad de precipitación

La intensidad de precipitación I (T, t) correspondiente a un período de retorno T, y a una duración del aguacero t, a emplear en la estimación de caudales por el método racional, se obtendrá por medio de la siguiente fórmula:

$$I(T, t) = I_d \cdot F_{int}$$

Donde:

I (T, t)	(mm/h)	Intensidad de precipitación correspondiente a un período de retorno T y a una duración del aguacero t.
I _d	(mm/h)	Intensidad media diaria de precipitación corregida correspondiente al período de retorno T
F _{int}	(adimensional)	Factor de intensidad

Intensidad media diaria de precipitación corregida

La intensidad media diaria de precipitación corregida correspondiente al período de retorno T, se obtiene mediante la fórmula:

$$I_d = \frac{P_d \cdot K_A}{24}$$

Donde:

Id	(mm/h)	Intensidad media diaria de precipitación corregida correspondiente al período de retorno T
Pd	(mm)	Precipitación diaria correspondiente al período de retorno T
KA	(adimensional)	Factor reductor de la precipitación por área de la cuenca

Para la determinación de la precipitación diaria correspondiente al período de retorno T, Pd, se debe adoptar el mayor valor de los obtenidos a partir de:

- Datos publicados por la Dirección General de Carreteras.
- Estudio estadístico de las series de precipitaciones diarias máximas anuales, medidas en los pluviómetros existentes en la cuenca, o próximos a ella. Se debe ajustar a la serie de precipitaciones máximas registrada en cada pluviómetro, la función de distribución extremal más apropiada a los datos de la zona, considerando al menos las funciones Gumbel y SQRT ET-max

A los efectos de esta norma, para la aplicación del método racional se toma como precipitación diaria Pd, la correspondiente al valor medio en la superficie de la cuenca (media areal), que se obtiene mediante la interpolación espacial de los valores obtenidos en cada uno de los pluviómetros considerados.

Factor reductor de la precipitación por área de la cuenca

El factor reductor de la precipitación por área de la cuenca KA, tiene en cuenta la no simultaneidad de la lluvia en toda su superficie. Se obtiene a partir de la siguiente formula:

$$\text{Si } A < 1 \text{ km}^2$$

$$K_A = 1$$

$$\text{Si } A \geq 1 \text{ km}^2$$

$$K_A = 1 - \frac{\log_{10} A}{15}$$

Donde:

KA (adimensional) Factor reductor de la precipitación por área de la cuenca

A (km²) Área de la cuenca

Factor de intensidad Fint

El factor de intensidad introduce la torrencialidad de la lluvia en el área de estudio y depende de:

- La duración del aguacero t
- El período de retorno T, si se dispone de curvas intensidad - duración - frecuencia (IDF) aceptadas por la Dirección General de Carreteras, en un pluviógrafo situado en el entorno de la zona de estudio que pueda considerarse representativo de su comportamiento.

Se tomará el mayor valor de los obtenidos de entre los que se indican a continuación:

$$F_{int} = \max (F_a, F_b)$$

Donde:

Fint (adimensional) Factor de intensidad

Fa (adimensional) Factor obtenido a partir del índice de torrecialidad (I_1/I_d)

Fb (adimensional) Factor obtenido a partir de las curvas IDF de un pluviógrafo próximo.

a) Obtención de F_a

$$F_a = \left(\frac{I_1}{I_d} \right)^{3,5287 - 2,5287 t^{0,1}}$$

donde:

F_a (adimensional) Factor obtenido a partir del índice de torrecialidad (I_1/I_d). Se representa en la figura 2.3.

I_1/I_d (adimensional) Índice de torrecialidad que expresa la relación entre la intensidad de precipitación horaria y la media diaria corregida. Su valor se determina en función de la zona geográfica, a partir del mapa de la figura 2.4.

t (horas) Duración del aguacero.

Para la obtención del factor F_a , se debe particularizar la expresión para un tiempo de duración del aguacero igual al tiempo de concentración ($t = t_c$).

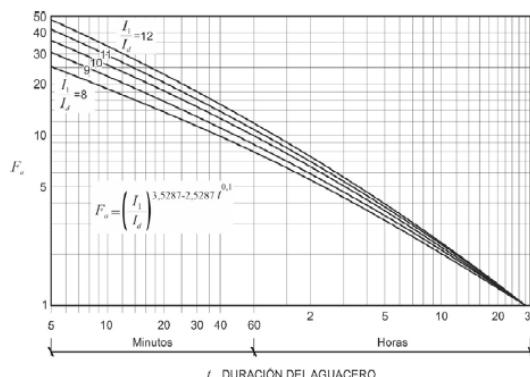
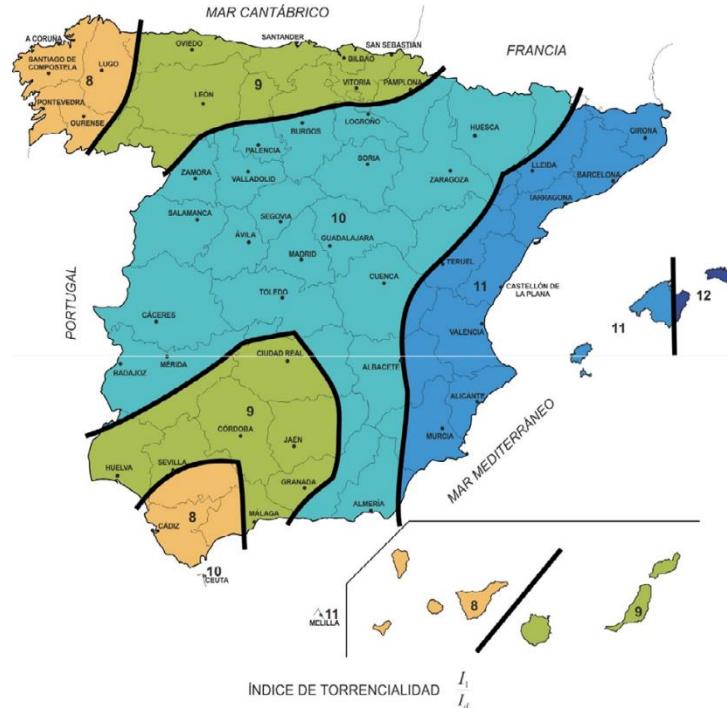


FIGURA 2.3.- FACTOR F_a

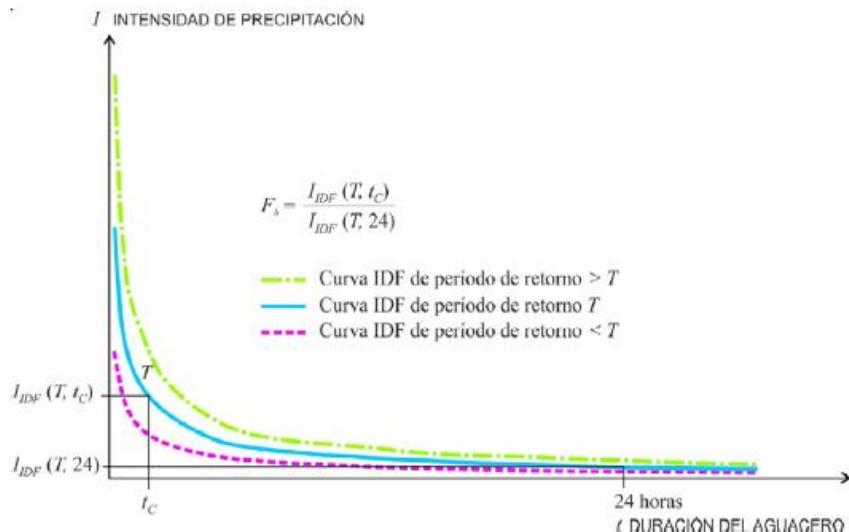
**b) Obtención de F_b**

$$F_b = k_b \frac{I_{IDF}(T, t_c)}{I_{IDF}(T, 24)}$$

donde:

- F_b (adimensional) Factor obtenido a partir de las curvas IDF de un pluviógrafo próximo..
- $I_{IDF}(T, t_c)$ (mm/h) Intensidad de precipitación correspondiente al período de retorno T y al tiempo de concentración t_c , obtenido a través de las curvas IDF del pluviógrafo (figura 2.5).
- $I_{IDF}(T, 24)$ (mm/h) Intensidad de precipitación correspondiente al período de retorno T y a un tiempo de aguacero igual a veinticuatro horas ($t = 24$ h), obtenido a través de curvas IDF (figura 2.5).

k_b (adimensional) Factor que tiene en cuenta la relación entre la intensidad máxima anual en un período de veinticuatro horas y la intensidad máxima anual diaria. En defecto de un cálculo específico se puede tomar $k_b = 1,13$

FIGURA 2.5.- OBTENCIÓN DEL FACTOR F_b

Tiempo de concentración

Tiempo de concentración t_c , es el tiempo mínimo necesario desde el comienzo del aguacero para que toda la superficie de la cuenca esté aportando escorrentía en el punto de desagüe. Se obtiene calculando el tiempo de recorrido más largo desde cualquier punto de la cuenca hasta el punto de desagüe, mediante las siguientes formulaciones:

Para cuencas principales:

$$t_c = 0,3 \cdot L_c^{0,76} \cdot J_c^{-0,19}$$

T_c (horas) Tiempo de concentración

L_c (km) Longitud del cauce

J_c (adimensional) Pendiente media del cauce

Dado que el tiempo de concentración depende de la longitud y pendiente del cauce escogido, deben tantearse diferentes cauces o recorridos del agua, incluyendo siempre en los tanteos los de mayor longitud y menor pendiente. El cauce (o recorrido) que debe escogerse es aquél que da lugar a un valor mayor del tiempo de concentración t_c .

Coefficiente de escorrentía

El coeficiente de escorrentía C , define la parte de la precipitación de intensidad I (T, t_c) que genera el caudal de avenida en el punto de desagüe de la cuenca.

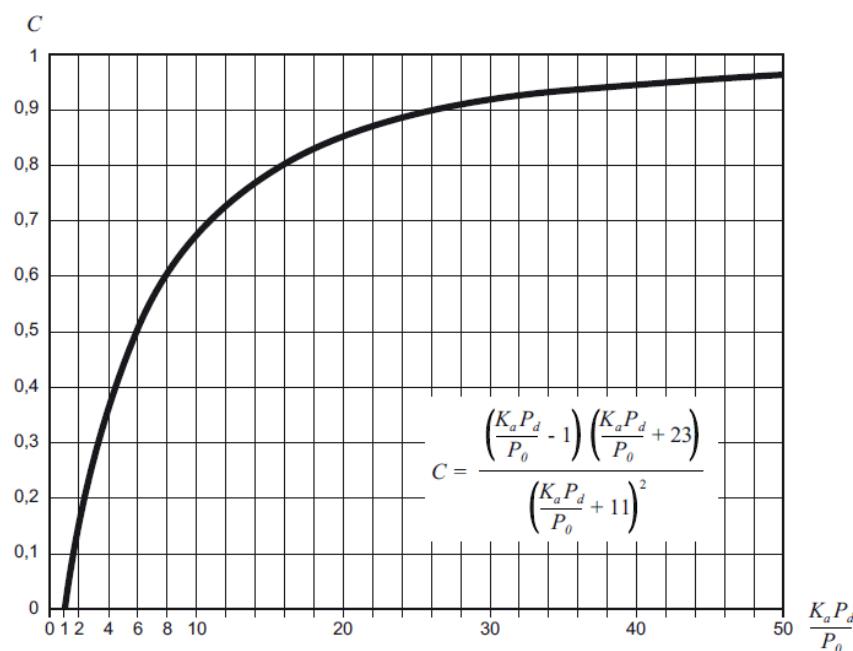
El coeficiente de escorrentía C , se obtendrá mediante la siguiente formula,

$$\text{Si } P_d \cdot K_A > P_0 \quad C = \frac{\left(\frac{P_d \cdot K_A}{P_0} - 1 \right) \left(\frac{P_d \cdot K_A}{P_0} + 23 \right)}{\left(\frac{P_d \cdot K_A}{P_0} + 11 \right)^2}$$

$$\text{Si } P_d \cdot K_A \leq P_0 \quad C = 0$$

Donde:

- C (adimensional) Coeficiente de escorrentía
 P_d (mm) Precipitación diaria correspondiente al período de retorno T considerado
 K_A (adimensional) Factor reductor de la precipitación por área de cuenca
 P_0 (mm) Umbral de escorrentía



Umbral de escorrentía

El umbral de escorrentía P_0 , representa la precipitación mínima que debe caer sobre la cuenca para que se inicie la generación de escorrentía. Se determinará mediante la siguiente fórmula:

$$P_0 = P_0^i \cdot \beta$$

Donde.

P_0	(mm)	Umbral de escorrentía
P_0^i	(mm)	Valor inicial del umbral de escorrentía
b	(adimensional)	Coeficiente corrector del umbral de escorrentía

Valor inicial del umbral de escorrentía

El valor inicial del umbral de escorrentía P0i, se determinará como se refiere a continuación, a partir de la siguiente tabla:

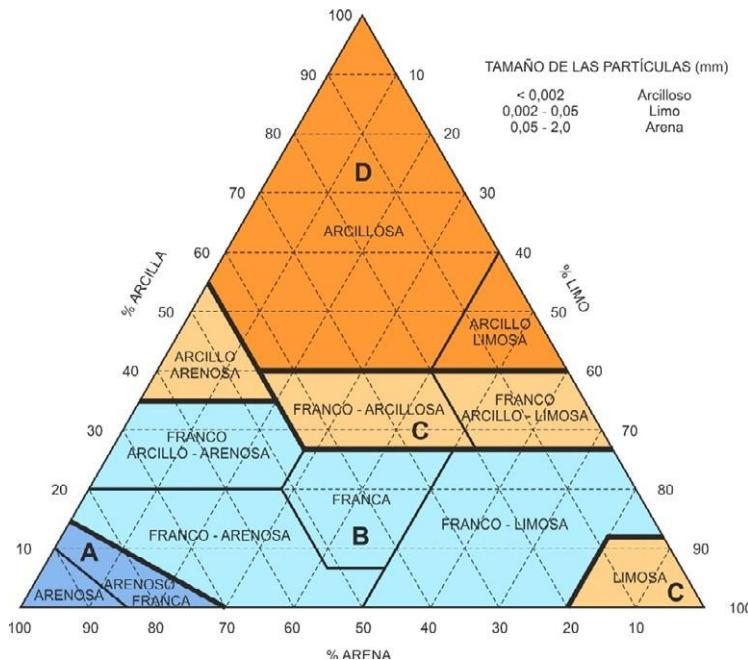
Código	Uso de suelo	Práctica de cultivo	Pendiente (%)	Grupo de suelo			
				A	B	C	D
11100	Tejido urbano continuo			1	1	1	1
11200	Tejido urbano discontinuo			24	14	8	6
11200	Urbanizaciones			24	14	8	6
11210	Estructura urbana abierta			24	14	8	6
11220	Urbanizaciones exentas y/o ajardinadas			24	14	8	6
12100	Zonas industriales y comerciales			6	4	3	3

GRUPOS HIDROLÓGICOS DE SUELO A EFECTOS DE LA DETERMINACIÓN DEL VALOR INICIAL DEL UMBRAL DE ESCORRENTÍA

Grupo	Infiltración (cuando están muy húmedos)	Potencia	Textura	Drenaje
A	Rápida	Grande	Arenosa	Perfecto
			Areno-limosa	
B	Moderada	Media a grande	Franco-arenosa	Bueno a moderado
			Franca	
			Franco-arcillosa-arenosa	
C	Lenta	Media a pequeña	Franco-limosa	Imperfecto
			Franco-arcillosa	
			Franco-arcillo-limosa	
D	Muy lenta	Pequeño (litosuelo) u horizontes de arcilla	Arcillo-arenosa	Pobre o muy pobre
			Arcillosa	

Nota: Los terrenos con nivel freático alto se incluirán en el Grupo D.

DIAGRAMA TRIANGULAR PARA DETERMINACIÓN DE LA TEXTURA EN MATERIALES TIPO SUELO



Coeficiente corrector del umbral de escorrentía

La formulación del método racional efectuada en los epígrafes precedentes requiere una calibración con datos reales de las cuencas, que se introduce en el método a través de un coeficiente corrector del umbral de escorrentía b .

Producto del valor medio de la región del coeficiente corrector del umbral de escorrentía corregido por el valor correspondiente al intervalo de confianza del cincuenta por ciento, por un factor dependiente del período de retorno T considerado para el caudal de proyecto, es decir:

$$\beta^{DT} = (\beta_m - \Delta_{50}) \cdot F_T$$

Donde:

β^{DT}	adimensional	Coeficiente corrector del umbral de escorrentía
β_m	adimensional	Valor medio en la región, del coeficiente corrector del umbral de escorrentía
F_T	adimensional	Factor función del período de retorno
Δ_{50}	adimensional	Desviación respecto al valor medio: intervalo de confianza correspondiente al cincuenta por ciento (50 %)

COEFICIENTE CORRECTOR DEL UMBRAL DE ESCORRENTÍA: VALORES CORRESPONDIENTES A CALIBRACIONES REGIONALES.

Región	Valor medio, β_m	Desviación respecto al valor medio para el in-			Período de retorno T (años), FT				
		50%	67%	90%	2	5	25	100	500
		$\Delta 50$	$\Delta 67$	$\Delta 90$					
11	0,90	0,20	0,30	0,50	0,80	0,90	1,13	1,34	1,59

REGIONES CONSIDERADAS PARA LA CARACTERIZACIÓN DEL COEFICIENTE CORRECTOR DEL UMBRAL DE ESCORRÉNTIA



Coeficiente de uniformidad en la distribución temporal de la precipitación

El coeficiente K_t tiene en cuenta la falta de uniformidad en la distribución temporal de la precipitación. Se obtendrá a través de la siguiente expresión:

$$K_t = 1 + \frac{t_c^{1.25}}{t_c^{1.25} + 14}$$

Donde:

K _t	Adimensional	Coeficiente de uniformidad en la distribución temporal de la precipitación.
t _c	Adimensional	Tiempo de concentración de la cuenca

Los resultados se pueden consultar en la tabla siguiente:

TRAMO	P _o (mm)	K _a	K _t	T _c (h)	T _c (m)	I _d	I ₁ /I _d	F _a	I(t,T _c)		Caudal pluviales	
									I _t (mm/h)	C _e	Q _p (m ³ /s)	Q _p (l/s)
CUENCA 1	2.75	1	1.015	0.29	17	5.78	8	14.7564	85.29	0.96	1.0642	1064.2
CUENCA 2	2.75	1	1.0156	0.3	18	5.78	8	14.5254	83.96	0.96	1.3529	1352.9
CUENCA 3	2.75	1	1.0156	0.3	18	5.78	9	16.9026	97.7	0.96	1.3547	1354.7
CUENCA 4	2.75	1	1.0236	0.42	25	5.78	10	16.2226	93.77	0.96	1.546	1546
CUENCA 5	2.75	1	1.0169	0.32	19	5.78	11	21.1341	122.16	0.96	1.3052	1305.2
CUENCA 6	2.75	1	1.0072	0.16	10	5.78	12	34.3662	198.64	0.96	0.2134	213.4

Los caudales que recibe cada cuenca son los siguientes:

- CUENCA 1: los propios
- CUENCA 2: los propios
- CUENCA 3: los propios
- CUENCA 4: los propios
- CUENCA 5: los propios y los de la cuenca 3
- CUENCA 6: los propios y los del tramo de la cuenca 1 perteneciente al ramal a

3.3. RED DE PLUVIALES

Con los datos anteriormente calculados se define la siguiente red de pluviales:

- Infanta Elena: Un colector de pluviales a 2 metros de la línea definida por el bordillo.
- Calle A: dos colectores de pluviales, uno por calzada, a 2 metros de la línea definida por el bordillo.
- Calle D: dos colectores de pluviales, uno por calzada, a 2 metros de la línea definida por el bordillo.
- Calle E: un colector de pluviales a 2 metros de la línea definida por el bordillo del lado más interno al sector.
- Calles F y B: un colector de pluviales al centro de la alineación.
- Calle desdoblamiento Ramal 6: un colector de pluviales, a 2 metros de la línea definida por el bordillo.

Los diámetros de dicha red de pluviales se pueden encontrar en la tabla siguiente:

capacidad hidráulica tuberías								
Coeficiente de Manning		n	0.013	PVC				
CUENCA			1	2	3	4	5	6
SECCIÓN (mm)			1000	800	1000	1000	1000	400
caudal (m ³ /s)			1.06420	0.90193	1.35470	2.89890	2.65990	0.24122
Pendiente hidráulica mínima	S (m/m)		0.014	0.034	0.032	0.028	0.026	0.058
Calado			0.662	0.524	0.582	0.942	0.92	0.312
Capacidad			66.200%	10.576%	58.200%	94.200%	92.000%	78.000%
Perímetro	P (m)=		1.9008	1.5088	1.7355	2.6551	2.5681	0.8661
Sección mojada	A (m ²)=		0.3569	0.2257	0.3106	0.6054	0.5742	0.0700
Radio Hidráulico	Rh (m)=		0.1878	0.1496	0.1790	0.2280	0.2236	0.0808
Velocidad	V(m/s)=		2.9848	3.9972	4.3705	4.8039	4.5694	3.4624
caudal (l/s)	Q(m ³ /s)		1.0653	0.9022	1.3575	2.9083	2.6237	0.2424

Los cálculos para la cuenca 2 se hacen para el lado más desfavorable, el derecho en sentido de aumento de los P.K., aunque se considera hacer los colectores simétricos.

Como se puede observar, la velocidad es algo elevada, por lo que estudiará la posibilidad de hacer los pozos con resaltos, y disminuir la pendiente longitudinal entre pozos, para evitar un excesivo desgaste de las tuberías.

El tramo de la calle A incluido en el polígono 1 se puede ejecutar independientemente, dado que se colocarán bombeos provisionales hacia la cuenca 6 hasta la realización de la cuenca 2, correspondiente al polígono vecino.

3.4. PUNTOS DE VERTIDO DE PLUVIALES

Las cuencas 1 y 6 desaguarán a la red de pluviales de Infanta Elena, por lo que no se considerarán para los cálculos los puntos de vertido de pluviales.

La cuenca 1 desaguará provisionalmente mediante una impulsión hacia Infanta Elena, hasta la realización del polígono 4, que permitirá el desagüe de pluviales por gravedad hasta la cuenca 4.

Se proyectan dos puntos de vertido de la red de pluviales al cauce de la zona verde.

El punto de desagüe 1 recogerá las aguas de las cuencas 2 y 4, mientras que el punto de desagüe 2 recogerá las aguas de escorrentía de las cuencas 3 y 5.

En ambos puntos de desagüe será necesario colocar 2 separadores de hidrocarburos en paralelo de 12 m de largo y 2,98 m de diámetro con caudal punto de 1500 l/s.

La solución propuesta consiste para las escorrentías, por las zonas verdes habilitadas, las zonas pavimentadas de los espacios libres serán pavimentos drenantes, los viales en las zonas de calzadas y aceras se colocará pavimento descontaminante. Las sendas y carril bici serán de zahorra u otro material liso.

El sistema de pluviales discurrirá por el sistema de saneamiento interior al Sector instalado siguiendo el propio trazado del sistema viario y se canalizará a través de este a la propia balsa. Previamente, pasará por un sistema de separación de hidrocarburos para evitar la contaminación de las aguas.

La balsa se considera como un sistema de regulación del caudal. Es una balsa descontaminante, entremezclada con la vegetación de ribera.

El trazado de red de saneamiento y pluviales recogen en la documentación gráfica de planos (11.01. Sistema Local de Infraestructura de redes de servicios. Saneamiento y Pluviales).

3.5. RED DE RESIDUALES

Para calcular el saneamiento del sector se han definido una serie de cuencas drenantes de acuerdo al trazado en alzado de los viales.

Se definen 5 cuencas drenantes:

- Cuenca 1: correspondiente a las parcelas con frente a la Avenida Infanta Elena, que desaguarán principalmente hacia la red de saneamiento de la misma.
- Cuenca 2: Correspondiente a las parcelas que dan frente al vial D Norte.
- Cuenca 3: Correspondiente a las parcelas que dan frente al vial F.
- Cuenca 4: Correspondiente a las parcelas que dan frente al vial D Sur.
- Cuenca 5: Correspondiente a las parcelas que dan frente al vial B.

Queda fuera de la descripción de las cuencas la zona verde, puesto que constituye parte del cauce natural y no formará parte de las redes de saneamiento. Se opta por un sistema separativo de residuales y pluviales.

DESCRIPCIÓN DE LAS CUENCAS

Las características físicas de las cuencas son las siguientes:

CUENCA	superficie m2	longitud	supKm2	longKm	pte
CUENCA 1	46.069,00	332.00	0.0461	0.3320	0.0140
CUENCA 2	59.536,00	433.00	0.0595	0.4330	0.0342
CUENCA 3	51.197,00	420.00	0.0512	0.4200	0.0320
CUENCA 4	60.373,00	642.00	0.0604	0.6420	0.0275
CUENCA 5	39.358,00	434.00	0.0394	0.4340	0.0255

CÁLCULO DE LA RED DE RESIDUALES

Para el cálculo de la red de residuales supondremos un consumo de agua de 0,38 l/(s*Ha) para las parcelas. De acuerdo a la programación de polígonos propuesta, a saber:

- Fase 1: Polígono 1 y Polígono 6 indistintamente.
- Fase 2: Polígono 4 y Polígono 7 Indistintamente.
- Fase 3: Polígono 5.
- Fase 4: Polígono 2 y Polígono 3 Simultáneamente.

Los desagües de las cuencas serán los siguientes:

CUENCA	DESAGÜE
CUENCA 1	Infanta Elena
CUENCA 2	Cuenca 4
CUENCA 3	Cuenca 5
CUENCA 4	Infanta Elena
CUENCA 5	Cuenca 4

En la tabla siguiente, se recogen los caudales de cálculo de cada cuenca y el diámetro del colector para cada cuenca.

capacidad hidráulica tuberías caudales medios						
Coeficiente de Manning	n	0.013	PVC			
CUENCA		1	2	3	4	5
SECCIÓN (mm)		315	315	315	315	315
caudal (m ³ /s)		0.00766	0.02298	0.01172	0.06477	0.02576
Pendiente hidráulica mínima	S (m/m)	0.014	0.010	0.010	0.020	0.002
Calado		0.023	0.129	0.07	0.224	0.26
Capacidad		7.302%	40.952%	22.222%	71.111%	82.540%
Perímetro	P (m)=	0.1724	0.4375	0.3093	0.6321	0.7180
Sección mojada	A (m ²) =	0.0071	0.0223	0.0140	0.0385	0.0471
Radio Hidráulico	Rh (m) =	0.0412	0.0510	0.0453	0.0609	0.0656
Velocidad	V(m/s)=	1.0857	1.0579	0.9775	1.6839	0.5596
caudal (l/s)	Q(m ³ /s)	0.0077	0.0236	0.0137	0.0648	0.0264

capacidad hidráulica tuberías caudal punta						
Coefficiente de Manning	n	0.013	PVC			
CUENCA			1	2	3	4
SECCIÓN (mm)			315	315	315	600
caudal (m³/s)			0.01914	0.05744	0.02930	0.16190
Pendiente hidráulica mínima	S (m/m)		0.014	0.010	0.010	0.002
Calado			0.09	0.258	0.165	0.525
Capacidad			28.571%	81.905%	52.381%	87.500%
Perímetro	P (m)=		0.3553	0.7128	0.5098	1.4513
Sección mojada	A (m ²) =		0.0168	0.0466	0.0278	0.1879
Radio Hidráulico	Rh (m) =		0.0473	0.0654	0.0545	0.1295
Velocidad	V(m/s)=		1.1904	1.2487	1.1057	0.8805
caudal (l/s)	Q(m³/s)		0.0200	0.0582	0.0307	0.1654
						0.0646

Como se puede comprobar las redes se pueden desaguar con colectores de 315 mm, mientras que la cuenca 1 únicamente necesita tuberías de 200 mm, dado el escaso caudal que se va a generar. Para la cuenca 5 es necesario colocar colectores de 400 mm para poder dar salida al caudal punta debido a la escasa pendiente de los colectores, mientras que en la cuenca 4 hacen falta colectores de 600 mm en el último tramo de la calle F, dado que tienen la misma pendiente que los de la cuenca 5, mientras que el resto de los colectores pueden realizarse en PVC de 400 mm.

Los efluentes serán conducidos a la EDAR de Lugo a los puntos de vertido NO2701653 y NO2701654 de Tratamiento primario y secundario EDAR-Lugo, cuyos puntos de vertido son en Coordenadas UTM ETRS 89 HUSO 29: (X= 620.573, Y= 4.758.631) ; (X= 620.744 , Y= 4.758.567) respectivamente.

El vertido se realiza al río Miño mediante un colector-emisario construido a tal efecto, aguas debajo de la toma del bombeo "Puleva" que se encuentra cercano a la parcela de la E.D.A.R. La cota de salida de planta es tal que permite que el desagüe se produzca cuando el nivel del río Miño se sitúe a la cota 356,12.

Las características de la autorización de vertido V/27/00022 son:

Punto de vertido NO2701653:

- Volumen anual: 800.000 m³/año.
- Volumen diario: 2.191,78 m³/día.
- Población equivalente: 90.384 habitantes.

Punto de vertido NO2701654:

- Volumen anual: 17.293.641 m³/año.
- Volumen diario: 47.379,64 m³/día.
- Población equivalente: 90.384 habitantes.

Dicha autorización de vertido a nombre del Ayuntamiento para la EDAR de Lugo está condicionada al cumplimiento de un plan de reducción de la contaminación (PRC)

El PP recoge en sus ordenanzas y normativa las limitaciones de vertido de la Ordenanza municipal de protección ambiental y del PGOM. Cumpliendo así con el PRC (Plan de reducción de contaminación), de obligado cumplimiento para toda actividad implantada.

Las residuales se vierten al emisario de O Ceao y las pluviales se vierten al cauce a través de una balsa Well - Damn previo paso por separadores de hidrocarburos. Formando dicha balsa parte de la infraestructura verde asociada al cauce, depurando las aguas a través de procesos biológicos naturales.

Tal y como se recoge en el plan de etapas descrito en el punto "2.5.4 División en polígonos" de este documento en caso de ejecutarse antes el polígono 1 que el Polígono 6 las aguas pluviales del polígono 1 se conectarán a Duquesa de Lugo de manera provisional.

El presente documento fue elaborado por el siguiente equipo multidisciplinar:

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Jose Maneiro García | Abogado |

Iban Pérez Castro | Delineante |

Ana Isabel Vázquez Vázquez | Administración y dirección empresas |

Guillermo Sánchez Legido | Informático |

Alejandro Extremera Díez | Analista gestión de suelo |

En Lugo, marzo de 2023

Eulogio Soto Jurado

Arquitecto

Nº colegiado 5008 C.O.A.G.

ANEJO N°1: TRAZADO EN PLANTA

Alignment: CALLE A ESTE**Description:**Tangent Data

Length: 90.358 Course: S 31° 09' 20.6301" W

Circular Curve Data

Delta:	00° 08' 56.1339"	Type:	LEFT
Radius:	200.000		
Length:	0.520	Tangent:	0.260
Mid-Ord:	0.000	External:	0.000
Chord:	0.520	Course:	S 31° 04' 52.5631" W

Tangent Data

Length: 18.338 Course: S 31° 00' 24.4962" W

Circular Curve Data

Delta:	01° 10' 24.4668"	Type:	RIGHT
Radius:	94.807		
Length:	1.942	Tangent:	0.971
Mid-Ord:	0.005	External:	0.005
Chord:	1.942	Course:	S 31° 35' 36.7296" W

Tangent Data

Length: 0.874 Course: S 32° 10' 48.9631" W

Circular Curve Data

Delta:	03° 03' 34.1273"	Type:	RIGHT
Radius:	21.814		
Length:	1.165	Tangent:	0.583
Mid-Ord:	0.008	External:	0.008
Chord:	1.165	Course:	S 33° 42' 36.0266" W

Tangent Data

Length:	1.511	Course:	S 35° 14' 23.0902" W
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Circular Curve Data

Delta:	03° 03' 34.1269"	Type:	RIGHT
Radius:	21.814		
Length:	1.165	Tangent:	0.583
Mid-Ord:	0.008	External:	0.008
Chord:	1.165	Course:	S 36° 46' 10.1537" W

Tangent Data

Length:	1.511	Course:	S 38° 17' 57.2172" W
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Circular Curve Data

Delta:	03° 03' 34.1273"	Type:	RIGHT
Radius:	21.814		
Length:	1.165	Tangent:	0.583
Mid-Ord:	0.008	External:	0.008
Chord:	1.165	Course:	S 39° 49' 44.2808" W

Tangent Data

Length:	1.550	Course:	S 41° 21' 31.3444" W
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Circular Curve Data

Delta:	02° 23' 13.3327"	Type:	RIGHT
Radius:	21.814		
Length:	0.909	Tangent:	0.454
Mid-Ord:	0.005	External:	0.005
Chord:	0.909	Course:	S 42° 33' 08.0108" W

Tangent Data

Length:	0.808	Course:	S 43° 44' 44.6772" W
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Circular Curve Data

Delta:	01° 42' 52.5384"	Type:	RIGHT
Radius:	21.814		
Length:	0.653	Tangent:	0.326
Mid-Ord:	0.002	External:	0.002
Chord:	0.653	Course:	S 44° 36' 10.9463" W

Tangent Data

Length:	0.845	Course:	S 45° 27' 37.2154" W
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Circular Curve Data

Delta:	00° 51' 19.0957"	Type:	RIGHT
Radius:	21.814		
Length:	0.326	Tangent:	0.163
Mid-Ord:	0.001	External:	0.001
Chord:	0.326	Course:	S 45° 53' 16.7637" W

Tangent Data

Length:	20.585	Course:	S 46° 18' 56.3113" W
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Circular Curve Data

Delta:	00° 00' 07.7988"	Type:	RIGHT
Radius:	21.814		
Length:	0.001	Tangent:	0.000
Mid-Ord:	0.000	External:	0.000
Chord:	0.001	Course:	S 46° 19' 00.1286" W

Tangent Data

Length:	55.991	Course:	S 46° 19' 04.1101" W
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Tangent Data

Length:	13.437	Course:	S 46° 19' 04.1101" W
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Circular Curve Data

Delta:	07° 20' 04.4435"	Type:	RIGHT
Radius:	368.717		
Length:	47.200	Tangent:	23.632
Mid-Ord:	0.755	External:	0.757
Chord:	47.168	Course:	S 49° 59' 05.6581" W

1 Alignment: CALLE A**OESTE Description:**

Tangent Data

Length: 124.912 Course: N 66° 24' 14.3832" E

Circular Curve Data

Delta:	09° 55' 57.9522"	Type:	LEFT
Radius:	368.717		
Length:	63.920	Tangent:	32.041
Mid-Ord:	1.384	External:	1.390
Chord:	63.840	Course:	N 61° 16' 49.9403" E

2 Alignmen**t: CALLE B****Description:**Tangent Data

Length: 21.352 Course: N 59° 33' 34.7211" W

Tangent Data

Length: 292.868 Course: N 59° 33' 34.7213" W

3 Alignment: CALLE D**NORTEDescription:**Tangent Data

Length: 42.078 Course: S 30° 21' 30.7572" W

Tangent Data

Length: 2.315 Course: S 29° 14' 04.1662" W

Tangent Data

Length: 2.433 Course: S 26° 59' 10.9837" W

Tangent Data

Length: 2.433 Course: S 24° 44' 17.8015" W

Tangent Data

Length: 2.433 Course: S 22° 29' 24.6193" W

Tangent Data

Length: 2.433 Course: S 20° 14' 31.4372" W

Tangent Data

Length: 2.433 Course: S 17° 59' 38.2548" W

Tangent Data

Length: 2.433 Course: S 15° 44' 45.0726" W

Tangent Data

Length: 2.433 Course: S 13° 29' 51.8903" W

Tangent Data

Length: 2.433 Course: S 11° 14' 58.7080" W

Tangent Data

Length: 2.433 Course: S 09° 00' 05.5258" W

Tangent Data

Length: 2.433 Course: S 06° 45' 12.3436" W

Tangent Data

Length: 2.433 Course: S 04° 30' 19.1614" W

Tangent Data

Length: 2.433 Course: S 02° 15' 25.9791" W

Tangent Data

Length: 2.433 Course: S 00° 00' 32.7968" W

Tangent Data

Length: 2.433 Course: S 02° 14' 20.3854" E

Tangent Data

Length: 2.433 Course: S 04° 29' 13.5676" E

Tangent Data

Length: 2.433 Course: S 06° 44' 06.7499" E

Tangent Data

Length: 2.433 Course: S 08° 58' 59.9322" E

Tangent Data

Length: 2.433 Course: S 11° 13' 53.1144" E

Tangent Data

Length: 2.433 Course: S 13° 28' 46.2967" E

Tangent Data

Length: 2.433 Course: S 15° 43' 39.4789" E

Tangent Data

Length: 2.433 Course: S 17° 58' 32.6611" E

Length: 2.433 Course: S 20° 13' 25.8434" E

Tangent Data

Length: 2.315 Course: S 22° 28' 19.0256" E

Tangent Data

Length: 338.180 Course: S 23° 35' 45.6361" E

4 Alignment:**CALLE D SURDescription:**Tangent Data

Length: 281.984 Course: N 27° 44' 11.8885" W

Circular Curve Data

Delta: 01° 08' 15.4767" Type: RIGHT

Radius: 2441.390

Length: 48.475 Tangent: 24.238

Mid-Ord: 0.120 External: 0.120

Chord: 48.474 Course: N 27° 14' 30.7528" W

5 Alignment: CALLE**E ESTEDescription:**Circular Curve Data

Delta:	05° 18' 37.3541"	Type:	LEFT
Radius:	642.072		
Length:	59.510	Tangent:	29.776
Mid-Ord:	0.689	External:	0.690
Chord:	59.488	Course:	N 32° 57' 15.8896" E

Circular Curve Data

Delta:	00° 57' 17.5223"	Type:	LEFT
Radius:	546.060		
Length:	9.100	Tangent:	4.550
Mid-Ord:	0.019	External:	0.019
Chord:	9.100	Course:	N 29° 49' 35.3382" E

Circular Curve Data

Delta:	07° 12' 21.3104"	Type:	LEFT
Radius:	546.060		
Length:	68.676	Tangent:	34.383
Mid-Ord:	1.079	External:	1.081
Chord:	68.631	Course:	N 25° 44' 45.9219" E

6 Alignment: CALLE E**OESTE Description:**Tangent Data

Length:	14.573	Course:	N 61° 34' 47.4254" E
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Circular Curve Data

Delta:	00° 11' 45.0148"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 61° 28' 54.9180" E

Tangent Data

Length:	2.244	Course:	N 61° 23' 02.4105" E
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Circular Curve Data

Delta:	00° 11' 45.0144"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000

Chord: 0.684 Course: N 61° 17' 09.9034" E

Tangent Data

Length: 2.244 Course: N 61° 11' 17.3962" E

Circular Curve Data

Delta: 00° 11' 45.0148" Type: LEFT

Radius: 200.000

Length: 0.684 Tangent: 0.342

Mid-Ord: 0.000 External: 0.000

Chord: 0.684 Course: N 61° 05' 24.8886" E

Tangent Data

Length: 2.244 Course: N 60° 59' 32.3814" E

Circular Curve Data

Delta: 00° 11' 45.0147" Type: LEFT

Radius: 200.000

Length: 0.684 Tangent: 0.342

Mid-Ord: 0.000 External: 0.000

Chord: 0.684 Course: N 60° 53' 39.8739" E

Tangent Data

Length: 2.244 Course: N 60° 47' 47.3667" E

Circular Curve Data

Delta: 00° 11' 45.0147" Type: LEFT

Radius: 200.000

Length: 0.684 Tangent: 0.342

Mid-Ord: 0.000 External: 0.000

Chord: 0.684 Course: N 60° 41' 54.8593" E

Tangent Data

Length: 2.244 Course: N 60° 36' 02.3520" E

Circular Curve Data

Delta: 00° 11' 45.0146" Type: LEFT

Radius: 200.000

Length: 0.684 Tangent: 0.342

Mid-Ord: 0.000 External: 0.000

Chord: 0.684 Course: N 60° 30' 09.8445" E

Tangent Data

Length: 2.244 Course: N 60° 24' 17.3374" E

Circular Curve Data

Delta:	00° 11' 45.0148"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 60° 18' 24.8300" E

Tangent Data

Length: 2.244 Course: N 60° 12' 32.3226" E

Circular Curve Data

Delta:	00° 11' 45.0146"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 60° 06' 39.8155" E

Tangent Data

Length: 2.244 Course: N 60° 00' 47.3080" E

Circular Curve Data

Delta:	00° 11' 45.0149"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 59° 54' 54.8004" E

Tangent Data

Length: 2.244 Course: N 59° 49' 02.2932" E

Circular Curve Data

Delta:	00° 11' 45.0145"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 59° 43' 09.7860" E

Tangent Data

Length: 2.244 Course: N 59° 37' 17.2786" E

Circular Curve Data

Delta:	00° 11' 45.0148"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 59° 31' 24.7714" E

Tangent Data

Length:	2.244	Course:	N 59° 25' 32.2638" E
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Circular Curve Data

Delta:	00° 11' 45.0146"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 59° 19' 39.7565" E

Tangent Data

Length:	2.244	Course:	N 59° 13' 47.2492" E
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Circular Curve Data

Delta:	00° 11' 45.0147"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 59° 07' 54.7418" E

Tangent Data

Length:	2.244	Course:	N 59° 02' 02.2345" E
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Circular Curve Data

Delta:	00° 11' 45.0147"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 58° 56' 09.7272" E

Tangent Data

Length:	2.244	Course:	N 58° 50' 17.2198" E
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Circular Curve Data

Delta:	00° 11' 45.0145"	Type:	LEFT
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Radius:	200.000	Tangent:	0.342
Length:	0.684	External:	0.000
Mid-Ord:	0.000	Course:	N 58° 44' 24.7126" E
Chord:	0.684		

Tangent Data

Length:	2.244	Course:	N 58° 38' 32.2053" E
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Circular Curve Data

Delta:	00° 11' 45.0150"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 58° 32' 39.6977" E

Tangent Data

Length:	2.244	Course:	N 58° 26' 47.1903" E
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Circular Curve Data

Delta:	00° 11' 45.0146"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 58° 20' 54.6831" E

Tangent Data

Length:	2.244	Course:	N 58° 15' 02.1758" E
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Circular Curve Data

Delta:	00° 11' 45.0147"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 58° 09' 09.6685" E

Tangent Data

Length:	2.244	Course:	N 58° 03' 17.1611" E
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Circular Curve Data

Delta:	00° 11' 45.0147"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342

Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 57° 57' 24.6537" E

Tangent Data

Length:	2.244	Course:	N 57° 51' 32.1463" E
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Circular Curve Data

Delta:	00° 11' 45.0147"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 57° 45' 39.6392" E

Tangent Data

Length:	2.244	Course:	N 57° 39' 47.1317" E
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Circular Curve Data

Delta:	00° 11' 45.0146"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 57° 33' 54.6243" E

Tangent Data

Length:	2.244	Course:	N 57° 28' 02.1171" E
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Circular Curve Data

Delta:	00° 11' 45.0148"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 57° 22' 09.6098" E

Tangent Data

Length:	2.244	Course:	N 57° 16' 17.1024" E
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Circular Curve Data

Delta:	00° 11' 45.0148"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 57° 10' 24.5949" E

Tangent Data

Length: 2.244 Course: N 57° 04' 32.0877" E

Circular Curve Data

Delta:	00° 11' 45.0147"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 56° 58' 39.5801" E

Tangent Data

Length: 2.244 Course: N 56° 52' 47.0729" E

Circular Curve Data

Delta:	00° 11' 45.0147"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 56° 46' 54.5656" E

Tangent Data

Length: 2.244 Course: N 56° 41' 02.0583" E

Circular Curve Data

Delta:	00° 11' 45.0145"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 56° 35' 09.5509" E

Tangent Data

Length: 2.244 Course: N 56° 29' 17.0437" E

Circular Curve Data

Delta:	00° 11' 45.0149"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 56° 23' 24.5364" E

Tangent Data

Length: 2.244 Course: N 56° 17' 32.0289" E

Circular Curve Data

Delta:	00° 11' 45.0146"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 56° 11' 39.5215" E

Tangent Data

Length: 2.244 Course: N 56° 05' 47.0144" E

Circular Curve Data

Delta:	00° 11' 45.0148"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 55° 59' 54.5069" E

Tangent Data

Length: 2.244 Course: N 55° 54' 01.9995" E

Circular Curve Data

Delta:	00° 11' 45.0146"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 55° 48' 09.4922" E

Tangent Data

Length: 2.244 Course: N 55° 42' 16.9848" E

Circular Curve Data

Delta:	00° 11' 45.0146"	Type:	LEFT
Radius:	200.000	Tangent:	0.342
Length:	0.684	External:	0.000
Mid-Ord:	0.000	Course:	N 55° 36' 24.4775" E
Chord:	0.684		

Tangent Data

Length:	2.244	Course:	N 55° 30' 31.9701" E
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Circular Curve Data

Delta:	00° 11' 45.0148"	Type:	LEFT
Radius:	200.000	Tangent:	0.342
Length:	0.684	External:	0.000
Mid-Ord:	0.000	Course:	N 55° 24' 39.4629" E
Chord:	0.684		

Tangent Data

Length:	2.244	Course:	N 55° 18' 46.9555" E
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Circular Curve Data

Delta:	00° 11' 45.0146"	Type:	LEFT
Radius:	200.000	Tangent:	0.342
Length:	0.684	External:	0.000
Mid-Ord:	0.000	Course:	N 55° 12' 54.4481" E
Chord:	0.684		

Tangent Data

Length:	2.244	Course:	N 55° 07' 01.9408" E
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Circular Curve Data

Delta:	00° 11' 45.0147"	Type:	LEFT
Radius:	200.000	Tangent:	0.342
Length:	0.684	External:	0.000
Mid-Ord:	0.000	Course:	N 55° 01' 09.4336" E
Chord:	0.684		

Tangent Data

Length:	2.244	Course:	N 54° 55' 16.9262" E
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Circular Curve Data

Delta:	00° 11' 45.0147"	Type:	LEFT
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Radius:	200.000	Tangent:	0.342
Length:	0.684	External:	0.000
Mid-Ord:	0.000	Course:	N 54° 49' 24.4188" E
Chord:	0.684		

Tangent Data

Length:	2.244	Course:	N 54° 43' 31.9115" E
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Circular Curve Data

Delta:	00° 11' 45.0148"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 54° 37' 39.4042" E

Tangent Data

Length:	2.244	Course:	N 54° 31' 46.8967" E
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Circular Curve Data

Delta:	00° 11' 45.0145"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 54° 25' 54.3893" E

Tangent Data

Length:	2.244	Course:	N 54° 20' 01.8821" E
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Circular Curve Data

Delta:	00° 11' 45.0148"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 54° 14' 09.3748" E

Tangent Data

Length:	2.244	Course:	N 54° 08' 16.8675" E
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Circular Curve Data

Delta:	00° 11' 45.0148"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342

Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 54° 02' 24.3602" E

Tangent Data

Length:	2.244	Course:	N 53° 56' 31.8527" E
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Circular Curve Data

Delta:	00° 11' 45.0146"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 53° 50' 39.3452" E

Tangent Data

Length:	2.244	Course:	N 53° 44' 46.8381" E
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Circular Curve Data

Delta:	00° 11' 45.0147"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 53° 38' 54.3307" E

Tangent Data

Length:	2.244	Course:	N 53° 33' 01.8234" E
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Circular Curve Data

Delta:	00° 11' 45.0147"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 53° 27' 09.3160" E

Tangent Data

Length:	2.244	Course:	N 53° 21' 16.8087" E
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Circular Curve Data

Delta:	00° 11' 45.0149"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 53° 15' 24.3013" E

Tangent Data

Length: 2.244 Course: N 53° 09' 31.7938" E

Circular Curve Data

Delta:	00° 11' 45.0144"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 53° 03' 39.2867" E

Tangent Data

Length: 2.244 Course: N 52° 57' 46.7795" E

Circular Curve Data

Delta:	00° 11' 45.0149"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 52° 51' 54.2719" E

Tangent Data

Length: 2.244 Course: N 52° 46' 01.7645" E

Circular Curve Data

Delta:	00° 11' 45.0145"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 52° 40' 09.2573" E

Tangent Data

Length: 2.244 Course: N 52° 34' 16.7501" E

Circular Curve Data

Delta:	00° 11' 45.0149"	Type:	LEFT
Radius:	200.000		
Length:	0.684	Tangent:	0.342
Mid-Ord:	0.000	External:	0.000
Chord:	0.684	Course:	N 52° 28' 24.2425" E

Tangent Data

Length: 1.756 Course: N 52° 22' 31.7352" E

Circular Curve Data

Delta:	00° 30' 50.4907"	Type:	RIGHT
Radius:	200.000		
Length:	1.794	Tangent:	0.897
Mid-Ord:	0.002	External:	0.002
Chord:	1.794	Course:	N 52° 37' 56.9805" E

Tangent Data

Length: 1.848 Course: N 52° 53' 22.2258" E

Circular Curve Data

Delta:	00° 11' 38.3716"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339
Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 52° 47' 33.0400" E

Tangent Data

Length: 2.339 Course: N 52° 41' 43.8542" E

Circular Curve Data

Delta:	00° 11' 38.3714"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339
Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 52° 35' 54.6686" E

Tangent Data

Length: 2.339 Course: N 52° 30' 05.4829" E

Circular Curve Data

Delta:	00° 11' 38.3717"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339
Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 52° 24' 16.2970" E

Tangent Data

Length: 2.339 Course: N 52° 18' 27.1112" E

Circular Curve Data

Delta:	00° 11' 38.3716"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339
Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 52° 12' 37.9253" E

Tangent Data

Length:	2.339	Course:	N 52° 06' 48.7397" E
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Circular Curve Data

Delta:	00° 11' 38.3716"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339
Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 52° 00' 59.5537" E

Tangent Data

Length: 2.339 Course: N 51° 55' 10.3681" E

Circular Curve Data

Delta:	00° 11' 38.3715"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339
Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 51° 49' 21.1823" E

Tangent Data

Length: 2.339 Course: N 51° 43' 31.9965" E

Circular Curve Data

Delta:	00° 11' 38.3717"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339
Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 51° 37' 42.8106" E

Tangent Data

Length: 2.339 Course: N 51° 31' 53.6248" E

Circular Curve Data

Delta:	00° 11' 38.3715"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339
Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 51° 26' 04.4391" E

Tangent Data

Length: 2.339 Course: N 51° 20' 15.2533" E

Circular Curve Data

Delta:	00° 11' 38.3715"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339
Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 51° 14' 26.0674" E

Tangent Data

Length: 2.339 Course: N 51° 08' 36.8819" E

Circular Curve Data

Delta:	00° 11' 38.3717"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339
Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 51° 02' 47.6962" E

Tangent Data

Length:	2.339	Course:	N 50° 56' 58.5101" E
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Circular Curve Data

Delta:	00° 11' 38.3715"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339
Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 50° 51' 09.3242" E

Tangent Data

Length:	2.339	Course:	N 50° 45' 20.1386" E
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Circular Curve Data

Delta:	00° 11' 38.3715"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339
Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 50° 39' 30.9527" E

Tangent Data

Length:	2.339	Course:	N 50° 33' 41.7671" E
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Circular Curve Data

Delta:	00° 11' 38.3715"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339
Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 50° 27' 52.5813" E

Tangent Data

Length:	2.339	Course:	N 50° 22' 03.3956" E
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Circular Curve Data

Delta:	00° 11' 38.3716"	Type:	LEFT
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Radius:	200.000	Tangent:	0.339
Length:	0.677	External:	0.000
Mid-Ord:	0.000	Course:	N 50° 16' 14.2098" E
Chord:	0.677		

Tangent Data

Length:	2.339	Course:	N 50° 10' 25.0241" E
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Circular Curve Data

Delta:	00° 11' 38.3718"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339
Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 50° 04' 35.8381" E

Tangent Data

Length:	2.339	Course:	N 49° 58' 46.6523" E
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Circular Curve Data

Delta:	00° 11' 38.3715"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339
Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 49° 52' 57.4664" E

Tangent Data

Length:	2.339	Course:	N 49° 47' 08.2808" E
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Circular Curve Data

Delta:	00° 11' 38.3716"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339
Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 49° 41' 19.0950" E

Tangent Data

Length:	2.339	Course:	N 49° 35' 29.9092" E
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Circular Curve Data

Delta:	00° 11' 38.3716"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339

Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 49° 29' 40.7234" E

Tangent Data

Length:	2.339	Course:	N 49° 23' 51.5376" E
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Circular Curve Data

Delta:	00° 11' 38.3716"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339
Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 49° 18' 02.3520" E

Tangent Data

Length:	2.339	Course:	N 49° 12' 13.1660" E
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Circular Curve Data

Delta:	00° 11' 38.3715"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339
Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 49° 06' 23.9804" E

Tangent Data

Length:	2.339	Course:	N 49° 00' 34.7945" E
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Circular Curve Data

Delta:	00° 11' 38.3716"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339
Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 48° 54' 45.6087" E

Tangent Data

Length:	2.339	Course:	N 48° 48' 56.4230" E
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Circular Curve Data

Delta:	00° 11' 38.3716"	Type:	LEFT
Radius:	200.000		
Length:	0.677	Tangent:	0.339
Mid-Ord:	0.000	External:	0.000
Chord:	0.677	Course:	N 48° 43' 07.2372" E

<u>Tangent Data</u>			
Length:	2.533	Course:	N 48° 37' 18.0513" E
<u>Circular Curve Data</u>			
Delta:	00° 11' 38.3711"	Type:	LEFT
Radius:	85.216		
Length:	0.289	Tangent:	0.144
Mid-Ord:	0.000	External:	0.000
Chord:	0.289	Course:	N 48° 31' 28.8657" E
<u>Tangent Data</u>			
Length:	0.216	Course:	N 48° 25' 39.6804" E
<u>Tangent Data</u>			
Length:	2.655	Course:	N 48° 25' 39.6799" E
<u>Tangent Data</u>			
Length:	3.002	Course:	N 48° 14' 01.3082" E
<u>Tangent Data</u>			
Length:	2.888	Course:	N 47° 53' 52.0554" E
<u>Tangent Data</u>			
Length:	2.900	Course:	N 47° 41' 29.0121" E
<u>Tangent Data</u>			
Length:	2.900	Course:	N 47° 29' 05.9688" E
<u>Tangent Data</u>			
Length:	2.900	Course:	N 47° 16' 42.9252" E
<u>Tangent Data</u>			
Length:	2.900	Course:	N 47° 04' 19.8820" E
<u>Tangent Data</u>			
Length:	2.900	Course:	N 46° 51' 56.8385" E
<u>Tangent Data</u>			
Length:	2.900	Course:	N 46° 39' 33.7952" E
<u>Tangent Data</u>			
Length:	2.900	Course:	N 46° 27' 10.7517" E

Length:	2.900	<u>Tangent Data</u>	Course: N 46° 14' 47.7084" E
Length:	2.900	<u>Tangent Data</u>	Course: N 46° 02' 24.6649" E
Length:	2.900	<u>Tangent Data</u>	Course: N 45° 50' 01.6216" E
Length:	2.900	<u>Tangent Data</u>	Course: N 45° 37' 38.5783" E
Length:	2.900	<u>Tangent Data</u>	Course: N 45° 25' 15.5349" E
Length:	2.900	<u>Tangent Data</u>	Course: N 45° 12' 52.4913" E
Length:	2.900	<u>Tangent Data</u>	Course: N 45° 00' 29.4481" E
Length:	2.900	<u>Tangent Data</u>	Course: N 44° 48' 06.4047" E
Length:	2.900	<u>Tangent Data</u>	Course: N 44° 35' 43.3613" E
Length:	2.900	<u>Tangent Data</u>	Course: N 44° 23' 20.3179" E
Length:	2.900	<u>Tangent Data</u>	Course: N 44° 10' 57.2745" E
Length:	2.900	<u>Tangent Data</u>	Course: N 43° 58' 34.2311" E
Length:	2.900	<u>Tangent Data</u>	Course: N 43° 46' 11.1877" E
Length:	2.900	<u>Tangent Data</u>	Course: N 43° 33' 48.1443" E

Length:	2.900	<u>Tangent Data</u>	Course:	N 43° 21' 25.1011" E
Length:	2.900	<u>Tangent Data</u>	Course:	N 43° 09' 02.0575" E
Length:	2.900	<u>Tangent Data</u>	Course:	N 42° 56' 39.0141" E
Length:	2.900	<u>Tangent Data</u>	Course:	N 42° 44' 15.9709" E
Length:	2.900	<u>Tangent Data</u>	Course:	N 42° 31' 52.9273" E
Length:	2.900	<u>Tangent Data</u>	Course:	N 42° 19' 29.8840" E
Length:	2.900	<u>Tangent Data</u>	Course:	N 42° 07' 06.8407" E
Length:	2.900	<u>Tangent Data</u>	Course:	N 41° 54' 43.7973" E
Length:	2.900	<u>Tangent Data</u>	Course:	N 41° 42' 20.7540" E
Length:	2.900	<u>Tangent Data</u>	Course:	N 41° 29' 57.7103" E
Length:	2.900	<u>Tangent Data</u>	Course:	N 41° 17' 34.6670" E
Length:	2.900	<u>Tangent Data</u>	Course:	N 41° 05' 11.6238" E
Length:	2.900	<u>Tangent Data</u>	Course:	N 40° 52' 48.5803" E
Length:	2.900	<u>Tangent Data</u>	Course:	N 40° 40' 25.5370" E

Length:	2.900	<u>Tangent Data</u>	Course: N 40° 28' 02.4936" E
Length:	2.900	<u>Tangent Data</u>	Course: N 40° 15' 39.4501" E
Length:	2.900	<u>Tangent Data</u>	Course: N 40° 03' 16.4068" E
Length:	2.900	<u>Tangent Data</u>	Course: N 39° 50' 53.3634" E
Length:	2.900	<u>Tangent Data</u>	Course: N 39° 38' 30.3200" E
Length:	2.900	<u>Tangent Data</u>	Course: N 39° 26' 07.2766" E
Length:	2.900	<u>Tangent Data</u>	Course: N 39° 13' 44.2333" E
Length:	2.900	<u>Tangent Data</u>	Course: N 39° 01' 21.1898" E
Length:	2.900	<u>Tangent Data</u>	Course: N 38° 48' 58.1465" E
Length:	2.306	<u>Tangent Data</u>	Course: N 38° 36' 35.1030" E
Length:	2.946	<u>Tangent Data</u>	Course: N 38° 26' 46.8854" E
Length:	2.953	<u>Tangent Data</u>	Course: N 38° 12' 09.5406" E
Length:	2.953	<u>Tangent Data</u>	Course: N 37° 57' 32.1955" E
Length:	2.953	<u>Tangent Data</u>	Course: N 37° 42' 54.8508" E

Tangent Data
Length: 2.953 Course: N 37° 28' 17.5057" E

Tangent Data
Length: 2.953 Course: N 37° 13' 40.1609" E

Tangent Data
Length: 2.953 Course: N 36° 59' 02.8159" E

Tangent Data
Length: 2.953 Course: N 36° 44' 25.4711" E

Tangent Data
Length: 2.953 Course: N 36° 29' 48.1261" E

Tangent Data
Length: 2.953 Course: N 36° 15' 10.7812" E

Tangent Data
Length: 1.791 Course: N 36° 00' 33.4362" E

7 Alignme

nt: CALLE F

Description:

Tangent Data
Length: 4.838 Course: N 67° 49' 31.9185" W

Circular Curve Data

Delta:	01° 55' 07.2548"	Type:	RIGHT
Radius:	192.601		
Length:	6.450	Tangent:	3.225
Mid-Ord:	0.027	External:	0.027
Chord:	6.449	Course:	N 66° 51' 58.2911" W

Tangent Data
Length: 5.242 Course: N 65° 54' 24.6637" W

Circular Curve Data
Delta: 07° 39' 33.6531" Type: RIGHT
Radius: 223.916

Length:	29.933	Tangent:	14.989
Mid-Ord:	0.500	External:	0.501
Chord:	29.911	Course:	N 60° 35' 48.1874" W

Circular Curve Data

Delta:	01° 36' 10.3600"	Type:	LEFT
Radius:	1883.295		
Length:	52.686	Tangent:	26.345
Mid-Ord:	0.184	External:	0.184
Chord:	52.684	Course:	N 58° 08' 25.0755" W

8 Alignment**t: CALLE G****Description:**Tangent Data

Length:	342.065	Course:	N 59° 35' 58.4373" W
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9 Alignment: ENLACE A ESTE -D**SURDescription:**Tangent Data

Length:	13.601	Course:	S 46° 19' 04.1101" W
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Tangent Data

Length:	1.299	Course:	S 46° 19' 04.1102" W
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Tangent Data

Length:	1.958	Course:	S 45° 11' 44.7768" W
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Tangent Data

Length:	1.958	Course:	S 42° 57' 06.1102" W
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Tangent Data

Length:	1.958	Course:	S 40° 42' 27.4436" W
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Tangent Data

Length:	1.958	Course:	S 38° 27' 48.7770" W
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Tangent Data

Length: 1.958 Course: S 36° 13' 10.1103" W

Tangent Data

Length: 1.958 Course: S 33° 58' 31.4437" W

Tangent Data

Length: 1.958 Course: S 31° 43' 52.7771" W

Tangent Data

Length: 1.958 Course: S 29° 29' 14.1104" W

Tangent Data

Length: 1.958 Course: S 27° 14' 35.4438" W

Tangent Data

Length: 1.958 Course: S 24° 59' 56.7772" W

Tangent Data

Length: 1.958 Course: S 22° 45' 18.1106" W

Tangent Data

Length: 1.958 Course: S 20° 30' 39.4440" W

Tangent Data

Length: 1.958 Course: S 18° 16' 00.7773" W

Tangent Data

Length: 1.958 Course: S 16° 01' 22.1107" W

Tangent Data

Length: 1.958 Course: S 13° 46' 43.4441" W

Tangent Data

Length: 1.958 Course: S 11° 32' 04.7774" W

Tangent Data

Length: 1.958 Course: S 09° 17' 26.1108" W

Tangent Data

Length: 1.958 Course: S 07° 02' 47.4442" W

Tangent Data

Length: 1.958 Course: S 04° 48' 08.7776" W

Tangent Data

Length: 1.958 Course: S 02° 33' 30.1110" W

Tangent Data

Length: 1.958 Course: S 00° 18' 51.4443" W

Tangent Data

Length: 1.958 Course: S 01° 55' 47.2223" E

Tangent Data

Length: 1.958 Course: S 04° 10' 25.8889" E

Tangent Data

Length: 1.958 Course: S 06° 25' 04.5555" E

Tangent Data

Length: 1.958 Course: S 08° 39' 43.2222" E

Tangent Data

Length: 1.958 Course: S 10° 54' 21.8888" E

Tangent Data

Length: 1.958 Course: S 13° 09' 00.5555" E

Tangent Data

Length: 1.958 Course: S 15° 23' 39.2221" E

Tangent Data

Length: 1.958 Course: S 17° 38' 17.8887" E

Tangent Data

Length: 1.958 Course: S 19° 52' 56.5553" E

Tangent Data

Length: 1.958 Course: S 22° 07' 35.2219" E

Tangent Data

Length: 1.958 Course: S 24° 22' 13.8886" E

Tangent Data

Length: 1.958 Course: S 26° 36' 52.5552" E

Tangent Data

Length: 1.193 Course: S 27° 44' 11.8885" E

10 Alignment: ENLACE A OESTE -D NORTE**Description:**Tangent Data

Length: 4.161 Course: N 66° 24' 14.3833" E

Circular Curve Data

Delta:	01° 32' 11.4328"	Type:	LEFT
Radius:	55.975		
Length:	1.501	Tangent:	0.751
Mid-Ord:	0.005	External:	0.005
Chord:	1.501	Course:	N 65° 38' 08.6668" E

Tangent Data

Length: 0.676 Course: N 64° 52' 02.9503" E

Circular Curve Data

Delta:	03° 04' 19.8936"	Type:	LEFT
Radius:	16.794		
Length:	0.900	Tangent:	0.450
Mid-Ord:	0.006	External:	0.006
Chord:	0.900	Course:	N 63° 19' 53.0037" E

Tangent Data

Length: 0.976 Course: N 61° 47' 43.0566" E

Circular Curve Data

Delta:	03° 04' 19.8935"	Type:	LEFT
Radius:	16.794		
Length:	0.900	Tangent:	0.450
Mid-Ord:	0.006	External:	0.006
Chord:	0.900	Course:	N 60° 15' 33.1097" E

Tangent Data

Length: 1.201 Course: N 58° 43' 23.1631" E

Circular Curve Data

Delta:	01° 32' 09.1602"	Type:	LEFT
Radius:	16.794		
Length:	0.450	Tangent:	0.225
Mid-Ord:	0.002	External:	0.002
Chord:	0.450	Course:	N 57° 57' 18.5831" E

Tangent Data

Length: 24.865 Course: N 57° 11' 14.0029" E

Circular Curve Data

Delta:	01° 36' 57.1871"	Type:	LEFT
Radius:	16.794		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.002	External:	0.002
Chord:	0.474	Course:	N 56° 22' 45.4092" E

Tangent Data

Length: 1.263 Course: N 55° 34' 16.8158" E

Circular Curve Data

Delta:	03° 13' 52.7523"	Type:	LEFT
Radius:	16.794		
Length:	0.947	Tangent:	0.474
Mid-Ord:	0.007	External:	0.007
Chord:	0.947	Course:	N 53° 57' 20.4396" E

Tangent Data

Length: 1.026 Course: N 52° 20' 24.0635" E

Circular Curve Data

Delta:	03° 13' 52.7521"	Type:	LEFT
Radius:	16.794		
Length:	0.947	Tangent:	0.474
Mid-Ord:	0.007	External:	0.007
Chord:	0.947	Course:	N 50° 43' 27.6876" E

Tangent Data

Length: 1.026 Course: N 49° 06' 31.3113" E

Circular Curve Data

Delta:	03° 13' 52.7523"	Type:	LEFT
Radius:	16.794		
Length:	0.947	Tangent:	0.474
Mid-Ord:	0.007	External:	0.007
Chord:	0.947	Course:	N 47° 29' 34.9352" E

Tangent Data

Length: 1.026 Course: N 45° 52' 38.5590" E

Circular Curve Data

Delta:	03° 13' 52.7523"	Type:	LEFT
Radius:	16.794		
Length:	0.947	Tangent:	0.474
Mid-Ord:	0.007	External:	0.007
Chord:	0.947	Course:	N 44° 15' 42.1829" E

Tangent Data

Length: 1.026 Course: N 42° 38' 45.8068" E

Circular Curve Data

Delta:	03° 13' 52.7521"	Type:	LEFT
Radius:	16.794		
Length:	0.947	Tangent:	0.474
Mid-Ord:	0.007	External:	0.007
Chord:	0.947	Course:	N 41° 01' 49.4308" E

Tangent Data

Length: 1.026 Course: N 39° 24' 53.0546" E

Circular Curve Data

Delta:	03° 13' 52.7522"	Type:	LEFT
Radius:	16.794		
Length:	0.947	Tangent:	0.474
Mid-Ord:	0.007	External:	0.007
Chord:	0.947	Course:	N 37° 47' 56.6784" E

Tangent Data

Length: 1.026 Course: N 36° 11' 00.3023" E

Circular Curve Data

Delta:	03° 13' 52.7522"	Type:	LEFT
Radius:	16.794		
Length:	0.947	Tangent:	0.474
Mid-Ord:	0.007	External:	0.007
Chord:	0.947	Course:	N 34° 34' 03.9261" E

Tangent Data

Length:	1.026	Course:	N 32° 57' 07.5500" E
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Circular Curve Data

Delta:	03° 13' 52.7521"	Type:	LEFT
Radius:	16.794		
Length:	0.947	Tangent:	0.474
Mid-Ord:	0.007	External:	0.007
Chord:	0.947	Course:	N 31° 20' 11.1740" E

Tangent Data

Length:	1.026	Course:	N 29° 43' 14.7979" E
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Circular Curve Data

Delta:	03° 13' 52.7524"	Type:	LEFT
Radius:	16.794		
Length:	0.947	Tangent:	0.474
Mid-Ord:	0.007	External:	0.007
Chord:	0.947	Course:	N 28° 06' 18.4217" E

Tangent Data

Length:	1.026	Course:	N 26° 29' 22.0456" E
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Circular Curve Data

Delta:	03° 13' 52.7522"	Type:	LEFT
Radius:	16.794		
Length:	0.947	Tangent:	0.474
Mid-Ord:	0.007	External:	0.007
Chord:	0.947	Course:	N 24° 52' 25.6695" E

Tangent Data

Length:	1.026	Course:	N 23° 15' 29.2933" E
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Circular Curve Data

Delta:	03° 13' 52.7522"	Type:	LEFT
Radius:	16.794		

Length:	0.947	Tangent:	0.474
Mid-Ord:	0.007	External:	0.007
Chord:	0.947	Course:	N 21° 38' 32.9173" E

Tangent Data

Length:	1.026	Course:	N 20° 01' 36.5411" E
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Circular Curve Data

Delta:	03° 13' 52.7522"	Type:	LEFT
Radius:	16.794		
Length:	0.947	Tangent:	0.474
Mid-Ord:	0.007	External:	0.007
Chord:	0.947	Course:	N 18° 24' 40.1650" E

Tangent Data

Length:	1.026	Course:	N 16° 47' 43.7889" E
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Circular Curve Data

Delta:	03° 13' 52.7522"	Type:	LEFT
Radius:	16.794		
Length:	0.947	Tangent:	0.474
Mid-Ord:	0.007	External:	0.007
Chord:	0.947	Course:	N 15° 10' 47.4127" E

Tangent Data

Length:	1.026	Course:	N 13° 33' 51.0366" E
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Circular Curve Data

Delta:	03° 13' 52.7523"	Type:	LEFT
Radius:	16.794		
Length:	0.947	Tangent:	0.474
Mid-Ord:	0.007	External:	0.007
Chord:	0.947	Course:	N 11° 56' 54.6605" E

Tangent Data

Length:	1.026	Course:	N 10° 19' 58.2844" E
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Circular Curve Data

Delta:	03° 13' 52.7523"	Type:	LEFT
Radius:	16.794		
Length:	0.947	Tangent:	0.474
Mid-Ord:	0.007	External:	0.007

Chord: 0.947 Course: N 08° 43' 01.9083" E

Tangent Data

Length: 1.026 Course: N 07° 06' 05.5321" E

Circular Curve Data

Delta: 03° 13' 52.7522" Type: LEFT

Radius: 16.794

Length: 0.947 Tangent: 0.474

Mid-Ord: 0.007 External: 0.007

Chord: 0.947 Course: N 05° 29' 09.1560" E

Tangent Data

Length: 1.026 Course: N 03° 52' 12.7799" E

Circular Curve Data

Delta: 03° 13' 52.7523" Type: LEFT

Radius: 16.794

Length: 0.947 Tangent: 0.474

Mid-Ord: 0.007 External: 0.007

Chord: 0.947 Course: N 02° 15' 16.4037" E

Tangent Data

Length: 1.026 Course: N 00° 38' 20.0276" E

Circular Curve Data

Delta: 03° 13' 52.7522" Type: LEFT

Radius: 16.794

Length: 0.947 Tangent: 0.474

Mid-Ord: 0.007 External: 0.007

Chord: 0.947 Course: N 00° 58' 36.3485" W

Tangent Data

Length: 1.026 Course: N 02° 35' 32.7246" W

Circular Curve Data

Delta: 03° 13' 52.7523" Type: LEFT

Radius: 16.794

Length: 0.947 Tangent: 0.474

Mid-Ord: 0.007 External: 0.007

Chord: 0.947 Course: N 04° 12' 29.1007" W

Tangent Data

Length:	1.026	Course:	N 05° 49' 25.4768" W
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Circular Curve Data

Delta:	03° 13' 52.7522"	Type:	LEFT
Radius:	16.794		
Length:	0.947	Tangent:	0.474
Mid-Ord:	0.007	External:	0.007
Chord:	0.947	Course:	N 07° 26' 21.8530" W

Tangent Data

Length:	1.026	Course:	N 09° 03' 18.2291" W
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Circular Curve Data

Delta:	03° 13' 52.7523"	Type:	LEFT
Radius:	16.794		
Length:	0.947	Tangent:	0.474
Mid-Ord:	0.007	External:	0.007
Chord:	0.947	Course:	N 10° 40' 14.6052" W

Tangent Data

Length:	1.026	Course:	N 12° 17' 10.9813" W
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Circular Curve Data

Delta:	03° 13' 52.7522"	Type:	LEFT
Radius:	16.794		
Length:	0.947	Tangent:	0.474
Mid-Ord:	0.007	External:	0.007
Chord:	0.947	Course:	N 13° 54' 07.3575" W

Tangent Data

Length:	1.026	Course:	N 15° 31' 03.7336" W
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Circular Curve Data

Delta:	03° 13' 52.7522"	Type:	LEFT
Radius:	16.794		
Length:	0.947	Tangent:	0.474
Mid-Ord:	0.007	External:	0.007
Chord:	0.947	Course:	N 17° 08' 00.1097" W

Tangent Data

Length:	1.026	Course:	N 18° 44' 56.4858" W
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Circular Curve Data

Delta:	03° 13' 52.7523"	Type:	LEFT
Radius:	16.794		
Length:	0.947	Tangent:	0.474
Mid-Ord:	0.007	External:	0.007
Chord:	0.947	Course:	N 20° 21' 52.8620" W

Tangent Data

Length:	1.263	Course:	N 21° 58' 49.2381" W
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Circular Curve Data

Delta:	01° 36' 56.3697"	Type:	LEFT
Radius:	16.794		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.002	External:	0.002
Chord:	0.474	Course:	N 22° 47' 17.4229" W

Tangent Data

Length:	11.411	Course:	N 23° 35' 45.6078" W
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11 Alignment: ENLACE D NORTE - A ESTE**Description:**Tangent Data

Length:	5.876	Course:	S 23° 35' 45.6168" E
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Circular Curve Data

Delta:	02° 12' 06.2053"	Type:	LEFT
Radius:	39.985		
Length:	1.537	Tangent:	0.768
Mid-Ord:	0.007	External:	0.007
Chord:	1.536	Course:	S 24° 41' 48.7194" E

Tangent Data

Length:	0.692	Course:	S 25° 47' 51.8221" E
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Circular Curve Data

Delta:	04° 24' 12.4110"	Type:	LEFT
Radius:	11.991		

Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	S 27° 59' 58.0276" E

Tangent Data

Length:	0.999	Course:	S 30° 12' 04.2331" E
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Circular Curve Data

Delta:	04° 24' 12.4108"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	S 32° 24' 10.4385" E

Tangent Data

Length:	0.999	Course:	S 34° 36' 16.6438" E
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Circular Curve Data

Delta:	04° 24' 12.4111"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	S 36° 48' 22.8494" E

Tangent Data

Length:	0.999	Course:	S 39° 00' 29.0551" E
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Circular Curve Data

Delta:	04° 24' 12.4108"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	S 41° 12' 35.2604" E

Tangent Data

Length:	0.999	Course:	S 43° 24' 41.4657" E
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Circular Curve Data

Delta:	04° 24' 12.4110"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009

Chord: 0.921 Course: S 45° 36' 47.6713" E

Tangent Data

Length: 0.999 Course: S 47° 48' 53.8767" E

Circular Curve Data

Delta:	04° 24' 12.4110"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	S 50° 01' 00.0822" E

Tangent Data

Length: 0.999 Course: S 52° 13' 06.2879" E

Circular Curve Data

Delta:	04° 24' 12.4108"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	S 54° 25' 12.4931" E

Tangent Data

Length: 0.999 Course: S 56° 37' 18.6984" E

Circular Curve Data

Delta:	04° 24' 12.4111"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	S 58° 49' 24.9042" E

Tangent Data

Length: 0.999 Course: S 61° 01' 31.1097" E

Circular Curve Data

Delta:	04° 24' 12.4108"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	S 63° 13' 37.3150" E

Tangent Data

Length: 0.999 Course: S 65° 25' 43.5205" E

Circular Curve Data

Delta:	04° 24' 12.4110"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	S 67° 37' 49.7258" E

Tangent Data

Length: 0.999 Course: S 69° 49' 55.9315" E

Circular Curve Data

Delta:	04° 24' 12.4110"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	S 72° 02' 02.1367" E

Tangent Data

Length: 0.999 Course: S 74° 14' 08.3424" E

Circular Curve Data

Delta:	04° 24' 12.4108"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	S 76° 26' 14.5476" E

Tangent Data

Length: 0.999 Course: S 78° 38' 20.7531" E

Circular Curve Data

Delta:	04° 24' 12.4110"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	S 80° 50' 26.9588" E

Tangent Data

Length: 0.999 Course: S 83° 02' 33.1644" E

Circular Curve Data

Delta:	04° 24' 12.4108"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	S 85° 14' 39.3697" E

Tangent Data

Length:	0.999	Course:	S 87° 26' 45.5752" E
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Circular Curve Data

Delta:	04° 24' 12.4109"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	S 89° 38' 51.7804" E

Tangent Data

Length:	0.999	Course:	N 88° 09' 02.0141" E
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Circular Curve Data

Delta:	04° 24' 12.4109"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	N 85° 56' 55.8083" E

Tangent Data

Length:	0.999	Course:	N 83° 44' 49.6030" E
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Circular Curve Data

Delta:	04° 24' 12.4109"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	N 81° 32' 43.3976" E

Tangent Data

Length:	0.999	Course:	N 79° 20' 37.1921" E
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Circular Curve Data

Delta:	04° 24' 12.4109"	Type:	LEFT
Radius:	11.991		

Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	N 77° 08' 30.9865" E

Tangent Data

Length:	0.999	Course:	N 74° 56' 24.7812" E
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Circular Curve Data

Delta:	04° 24' 12.4111"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	N 72° 44' 18.5757" E

Tangent Data

Length:	0.999	Course:	N 70° 32' 12.3701" E
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Circular Curve Data

Delta:	04° 24' 12.4108"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	N 68° 20' 06.1647" E

Tangent Data

Length:	0.999	Course:	N 66° 07' 59.9592" E
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Circular Curve Data

Delta:	04° 24' 12.4109"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	N 63° 55' 53.7538" E

Tangent Data

Length:	0.999	Course:	N 61° 43' 47.5484" E
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Circular Curve Data

Delta:	04° 24' 12.4111"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009

Chord: 0.921 Course: N 59° 31' 41.3428" E

Tangent Data

Length: 0.999 Course: N 57° 19' 35.1373" E

Circular Curve Data

Delta:	04° 24' 12.4109"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	N 55° 07' 28.9318" E

Tangent Data

Length: 0.999 Course: N 52° 55' 22.7265" E

Circular Curve Data

Delta:	04° 24' 12.4110"	Type:	LEFT
Radius:	11.991		
Length:	0.922	Tangent:	0.461
Mid-Ord:	0.009	External:	0.009
Chord:	0.921	Course:	N 50° 43' 16.5211" E

Tangent Data

Length: 1.229 Course: N 48° 31' 10.3156" E

Circular Curve Data

Delta:	02° 12' 06.2055"	Type:	LEFT
Radius:	11.991		
Length:	0.461	Tangent:	0.230
Mid-Ord:	0.002	External:	0.002
Chord:	0.461	Course:	N 47° 25' 07.2129" E

Tangent Data

Length: 6.448 Course: N 46° 19' 04.1101" E

12 Alignment: ENLACE D SUR - A OESTE**Description:**Tangent Data

Length: 5.309 Course: N 27° 44' 11.8885" W

Circular Curve Data

Delta:	01° 51' 59.4288"	Type:	LEFT
Radius:	47.987		
Length:	1.563	Tangent:	0.782
Mid-Ord:	0.006	External:	0.006
Chord:	1.563	Course:	N 28° 40' 11.6029" W

Tangent Data

Length: 0.704 Course: N 29° 36' 11.3173" W

Circular Curve Data

Delta:	03° 43' 58.8577"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469
Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	N 31° 28' 10.7463" W

Tangent Data

Length: 1.016 Course: N 33° 20' 10.1751" W

Circular Curve Data

Delta:	03° 43' 58.8578"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469
Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	N 35° 12' 09.6040" W

Tangent Data

Length: 1.016 Course: N 37° 04' 09.0330" W

Circular Curve Data

Delta:	03° 43' 58.8578"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469
Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	N 38° 56' 08.4618" W

Tangent Data

Length:	1.016	Course:	N 40° 48' 07.8908" W
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Circular Curve Data

Delta:	03° 43' 58.8576"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469
Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	N 42° 40' 07.3195" W

Tangent Data

Length:	1.016	Course:	N 44° 32' 06.7482" W
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Circular Curve Data

Delta:	03° 43' 58.8579"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469
Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	N 46° 24' 06.1773" W

Tangent Data

Length:	1.016	Course:	N 48° 16' 05.6061" W
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Circular Curve Data

Delta:	03° 43' 58.8577"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469
Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	N 50° 08' 05.0352" W

Tangent Data

Length:	1.016	Course:	N 52° 00' 04.4640" W
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Circular Curve Data

Delta:	03° 43' 58.8578"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469

Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	N 53° 52' 03.8928" W

Tangent Data

Length:	1.016	Course:	N 55° 44' 03.3217" W
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Circular Curve Data

Delta:	03° 43' 58.8578"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469
Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	N 57° 36' 02.7505" W

Tangent Data

Length:	1.016	Course:	N 59° 28' 02.1795" W
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Circular Curve Data

Delta:	03° 43' 58.8578"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469
Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	N 61° 20' 01.6083" W

Tangent Data

Length:	1.016	Course:	N 63° 12' 01.0372" W
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Circular Curve Data

Delta:	03° 43' 58.8578"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469
Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	N 65° 04' 00.4659" W

Tangent Data

Length:	1.016	Course:	N 66° 55' 59.8949" W
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Circular Curve Data

Delta:	03° 43' 58.8578"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469
Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	N 68° 47' 59.3238" W

Tangent Data

Length: 1.016 Course: N 70° 39' 58.7526" W

Circular Curve Data

Delta:	03° 43' 58.8578"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469
Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	N 72° 31' 58.1816" W

Tangent Data

Length: 1.016 Course: N 74° 23' 57.6106" W

Circular Curve Data

Delta:	03° 43' 58.8577"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469
Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	N 76° 15' 57.0394" W

Tangent Data

Length: 1.016 Course: N 78° 07' 56.4684" W

Circular Curve Data

Delta:	03° 43' 58.8576"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469
Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	N 79° 59' 55.8972" W

Tangent Data

Length: 1.016 Course: N 81° 51' 55.3259" W

Circular Curve Data

Delta:	03° 43' 58.8577"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469
Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	N 83° 43' 54.7548" W

Tangent Data

Length: 1.016 Course: N 85° 35' 54.1838" W

Circular Curve Data

Delta:	03° 43' 58.8578"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469
Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	N 87° 27' 53.6125" W

Tangent Data

Length:	1.016	Course:	N 89° 19' 53.0414" W
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Circular Curve Data

Delta:	03° 43' 58.8578"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469
Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	S 88° 48' 07.5298" W

Tangent Data

Length:	1.016	Course:	S 86° 56' 08.1007" W
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Circular Curve Data

Delta:	03° 43' 58.8579"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469
Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	S 85° 04' 08.6719" W

Tangent Data

Length:	1.016	Course:	S 83° 12' 09.2430" W
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Circular Curve Data

Delta:	03° 43' 58.8576"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469
Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	S 81° 20' 09.8140" W

Tangent Data

Length:	1.016	Course:	S 79° 28' 10.3853" W
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Circular Curve Data

Delta:	03° 43' 58.8578"	Type:	LEFT
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Radius:	14.392	Tangent:	0.469
Length:	0.938	External:	0.008
Mid-Ord:	0.008	Course:	S 77° 36' 10.9565" W
Chord:	0.938		

Tangent Data

Length:	1.016	Course:	S 75° 44' 11.5274" W
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Circular Curve Data

Delta:	03° 43' 58.8577"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469
Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	S 73° 52' 12.0986" W

Tangent Data

Length:	1.016	Course:	S 72° 00' 12.6698" W
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Circular Curve Data

Delta:	03° 43' 58.8578"	Type:	LEFT
Radius:	14.392		
Length:	0.938	Tangent:	0.469
Mid-Ord:	0.008	External:	0.008
Chord:	0.938	Course:	S 70° 08' 13.2407" W

Tangent Data

Length:	1.251	Course:	S 68° 16' 13.8120" W
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Circular Curve Data

Delta:	01° 51' 59.4289"	Type:	LEFT
Radius:	14.392		
Length:	0.469	Tangent:	0.234
Mid-Ord:	0.002	External:	0.002
Chord:	0.469	Course:	S 67° 20' 14.0977" W

Tangent Data

Length:	33.022	Course:	S 66° 24' 14.3831" W
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Tangent Data

Length:	4.910	Course:	S 66° 24' 14.3832" W
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13 Alignment: ENLACE D SUR - E OESTE**Description:**

PLAN PARCIAL DEL SECTOR S-5.I DEL PGOM DE LUGO

CONCELLO DE LUGO

Arquitecto: Eulogio Soto Jurado COAG 5008

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VERSIÓN INICIAL – MARZO 2023

Tangent Data

Length: 0.596 Course: S 29° 38' 05.8557" E

Circular Curve Data

Delta:	03° 47' 47.9341"	Type:	LEFT
Radius:	11.985		
Length:	0.794	Tangent:	0.397
Mid-Ord:	0.007	External:	0.007
Chord:	0.794	Course:	S 31° 31' 59.8226" E

Tangent Data

Length: 0.358 Course: S 33° 25' 53.7899" E

Circular Curve Data

Delta:	03° 47' 47.9342"	Type:	LEFT
Radius:	7.191		
Length:	0.477	Tangent:	0.238
Mid-Ord:	0.004	External:	0.004
Chord:	0.476	Course:	S 35° 19' 47.7566" E

Tangent Data

Length: 0.516 Course: S 37° 13' 41.7240" E

Circular Curve Data

Delta:	03° 47' 47.9343"	Type:	LEFT
Radius:	7.191		
Length:	0.477	Tangent:	0.238
Mid-Ord:	0.004	External:	0.004
Chord:	0.476	Course:	S 39° 07' 35.6910" E

Tangent Data

Length: 0.516 Course: S 41° 01' 29.6581" E

Circular Curve Data

Delta:	03° 47' 47.9342"	Type:	LEFT
Radius:	7.191		
Length:	0.477	Tangent:	0.238
Mid-Ord:	0.004	External:	0.004
Chord:	0.476	Course:	S 42° 55' 23.6251" E

Tangent Data

Length:	0.516	Course:	S 44° 49' 17.5921" E
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Circular Curve Data

Delta:	03° 47' 47.9342"	Type:	LEFT
Radius:	7.191		
Length:	0.477	Tangent:	0.238
Mid-Ord:	0.004	External:	0.004
Chord:	0.476	Course:	S 46° 43' 11.5593" E

Tangent Data

Length:	0.516	Course:	S 48° 37' 05.5266" E
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Circular Curve Data

Delta:	03° 47' 47.9338"	Type:	LEFT
Radius:	7.191		
Length:	0.47	Tangent:	0.238
	7		
Mid-Ord:	0.00	External:	0.004
	4		
Chord:	0.47	Course:	S 50° 30' 59.4931" E
	6		

Tangent Data

Length:	0.51	Course:	S 52° 24' 53.4605" E
	6		

Circular Curve Data

Delta:	03° 47' 47.9342"	Type:	LEFT
Radius:	7.191		
Length:	0.477	Tangent:	0.238
Mid-Ord:	0.004	External:	0.004
Chord:	0.476	Course:	S 54° 18' 47.4274" E

Tangent Data

Length:	0.51	Course:	S 56° 12' 41.3946" E
	6		

Circular Curve Data

Delta:	03° 47' 47.9345"	Type:	LEFT
Radius:	7.191		
Length:	0.477	Tangent:	0.238
Mid-Ord:	0.004	External:	0.004
Chord:	0.476	Course:	S 58° 06' 35.3619" E

Tangent Data

Length: 0.51 Course: S 60° 00' 29.3294" E
6

Circular Curve Data

Delta:	03° 47' 47.9339"	Type:	LEFT
Radius:	7.191		
Length:	0.477	Tangent:	0.238
Mid-Ord:	0.004	External:	0.004
Chord:	0.476	Course:	S 61° 54' 23.2960" E

Tangent Data

Length: 0.51 Course: S 63° 48' 17.2630" E
6

Circular Curve Data

Delta:	03° 47' 47.9339"	Type:	LEFT
Radius:	7.191		
Length:	0.477	Tangent:	0.238
Mid-Ord:	0.004	External:	0.004
Chord:	0.476	Course:	S 65° 42' 11.2300" E

Tangent Data

Length: 0.516 Course: S 67° 36' 05.1968" E

Circular Curve Data

Delta:	03° 47' 47.9347"	Type:	LEFT
Radius:	7.191		
Length:	0.477	Tangent:	0.238
Mid-Ord:	0.004	External:	0.004
Chord:	0.476	Course:	S 69° 29' 59.1642" E

Tangent Data

Length: 0.516 Course: S 71° 23' 53.1316" E

Circular Curve Data

Delta:	03° 47' 47.9339"	Type:	LEFT
Radius:	7.191		
Length:	0.477	Tangent:	0.238
Mid-Ord:	0.004	External:	0.004
Chord:	0.476	Course:	S 73° 17' 47.0986" E

Tangent Data

Length: 0.516 Course: S 75° 11' 41.0653" E

Circular Curve Data

Delta:	03° 47' 47.9344"	Type:	LEFT
Radius:	7.191		
Length:	0.477	Tangent:	0.238
Mid-Ord:	0.004	External:	0.004
Chord:	0.476	Course:	S 77° 05' 35.0322" E

Tangent Data

Length:	0.516	Course:	S 78° 59' 28.9996" E
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Circular Curve Data

Delta:	03° 47' 47.9339"	Type:	LEFT
Radius:	7.191		
Length:	0.477	Tangent:	0.238
Mid-Ord:	0.004	External:	0.004
Chord:	0.476	Course:	S 80° 53' 22.9670" E

Tangent Data

Length:	0.516	Course:	S 82° 47' 16.9340" E
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Circular Curve Data

Delta:	03° 47' 47.9341"	Type:	LEFT
Radius:	7.191		
Length:	0.47	Tangent:	0.238
	7		
Mid-	0.00	External:	0.004
Ord:	4		
Chord:	0.47	Course:	S 84° 41' 10.9009" E
	6		

Tangent Data

Length:	0.51	Course:	S 86° 35' 04.8678" E
	6		

Circular Curve Data

Delta:	03° 47' 47.9342"	Type:	LEFT
Radius:	7.191		
Length:	0.477	Tangent:	0.238
Mid-	0.004	External:	0.004
Ord:			
Chord:	0.476	Course:	S 88° 28' 58.8348" E

Tangent Data

Length:	0.51	Course:	N 89° 37' 07.1982" E
	6		

Circular Curve Data

Delta:	03° 47' 47.9344"	Type:	LEFT
Radius:	7.191		
Length:	0.477	Tangent:	0.238
Mid-Ord:	0.004	External:	0.004
Chord:	0.476	Course:	N 87° 43' 13.2306" E

<u>Tangent Data</u>			
Length:	0.516	Course:	N 85° 49' 19.2635" E

<u>Circular Curve Data</u>			
Delta:	03° 47' 47.9339"	Type:	LEFT
Radius:	7.191		
Length:	0.477	Tangent:	0.238
Mid-Ord:	0.004	External:	0.004
Chord:	0.476	Course:	N 83° 55' 25.2963" E

<u>Tangent Data</u>			
Length:	0.516	Course:	N 82° 01' 31.3299" E

<u>Circular Curve Data</u>			
Delta:	03° 47' 47.9343"	Type:	LEFT
Radius:	7.191		
Length:	0.477	Tangent:	0.238
Mid-Ord:	0.004	External:	0.004
Chord:	0.476	Course:	N 80° 07' 37.3626" E

<u>Tangent Data</u>			
Length:	0.516	Course:	N 78° 13' 43.3954" E

<u>Circular Curve Data</u>			
Delta:	03° 47' 47.9338"	Type:	LEFT
Radius:	7.191		
Length:	0.477	Tangent:	0.238
Mid-Ord:	0.004	External:	0.004
Chord:	0.476	Course:	N 76° 19' 49.4283" E

<u>Tangent Data</u>			
Length:	0.516	Course:	N 74° 25' 55.4613" E

<u>Circular Curve Data</u>			
Delta:	03° 47' 47.9343"	Type:	LEFT
Radius:	7.191		

Length:	0.477	Tangent:	0.238
Mid-Ord:	0.004	External:	0.004
Chord:	0.476	Course:	N 72° 32' 01.4940" E

Tangent Data

Length:	0.516	Course:	N 70° 38' 07.5269" E
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Circular Curve Data

Delta:	03° 47' 47.9336"	Type:	LEFT
Radius:	7.191		
Length:	0.477	Tangent:	0.238
Mid-Ord:	0.004	External:	0.004
Chord:	0.476	Course:	N 68° 44' 13.5601" E

Tangent Data

Length:	0.516	Course:	N 66° 50' 19.5934" E
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Circular Curve Data

Delta:	03° 47' 47.9345"	Type:	LEFT
Radius:	7.191		
Length:	0.477	Tangent:	0.238
Mid-Ord:	0.004	External:	0.004
Chord:	0.476	Course:	N 64° 56' 25.6261" E

Tangent Data

Length:	0.516	Course:	N 63° 02' 31.6584" E
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Circular Curve Data

Delta:	03° 47' 47.9339"	Type:	LEFT
Radius:	7.191		
Length:	0.47	Tangent:	0.238
	7		
Mid-	0.00	External:	0.004
Ord:	4		
Chord:	0.47	Course:	N 61° 08' 37.6916" E
	6		

Tangent Data

Length:	0.51	Course:	N 59° 14' 43.7246" E
	6		

Circular Curve Data

Delta:	03° 47' 47.9340"	Type:	LEFT
Radius:	7.191		
Length:	0.477	Tangent:	0.238
Mid-	0.004	External:	0.004
Ord:			

Chord: 0.476 Course: N 57° 20' 49.7574" E

Tangent Data

Length: 0.63 Course: N 55° 26' 55.7905" E
6

Circular Curve Data

Delta:	01° 53' 53.9671"	Type:	LEFT
Radius:	7.191		
Length:	0.238	Tangent:	0.119
Mid- Ord:	0.001	External:	0.001
Chord:	0.238	Course:	N 54° 29' 58.8070" E

Tangent Data

Length: 2.90 Course: N 53° 33' 01.8235" E
7

Circular Curve Data

Delta:	00° 11' 45.0148"	Type:	LEFT
Radius:	7.191		
Length:	0.025	Tangent:	0.012
Mid- Ord:	0.000	External:	0.000
Chord:	0.025	Course:	N 53° 27' 09.3111" E

Tangent Data

Length: 2.86 Course: N 53° 21' 16.8087" E
5

Circular Curve Data

Delta:	00° 11' 45.0146"	Type:	LEFT
Radius:	7.191		
Length:	0.025	Tangent:	0.012
Mid- Ord:	0.000	External:	0.000
Chord:	0.025	Course:	N 53° 15' 24.2986" E

Tangent Data

Length: 2.108 Course: N 53° 09' 31.7940" E

14 Alignme**nt: ENLACE E - F****Description:**Tangent Data

Length: 3.807 Course: N 38° 24' 12.0597" E

Circular Curve Data

Delta:	01° 53' 56.3782"	Type:	RIGHT
Radius:	23.993		
Length:	0.795	Tangent:	0.398
Mid-Ord:	0.003	External:	0.003
Chord:	0.795	Course:	N 39° 21' 10.2489" E

Tangent Data

Length:	0.358	Course:	N 40° 18' 08.4378" E
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Circular Curve Data

Delta:	03° 47' 52.7559"	Type:	RIGHT
Radius:	7.196		
Length:	0.477	Tangent:	0.239
Mid-Ord:	0.004	External:	0.004
Chord:	0.477	Course:	N 42° 12' 04.8161" E

Tangent Data

Length:	0.517	Course:	N 44° 06' 01.1940" E
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Circular Curve Data

Delta:	03° 47' 52.7564"	Type:	RIGHT
Radius:	7.196		
Length:	0.477	Tangent:	0.239
Mid-Ord:	0.004	External:	0.004
Chord:	0.477	Course:	N 45° 59' 57.5721" E

Tangent Data

Length:	0.517	Course:	N 47° 53' 53.9503" E
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Circular Curve Data

Delta:	03° 47' 52.7562"	Type:	RIGHT
Radius:	7.196		
Length:	0.477	Tangent:	0.239
Mid-Ord:	0.004	External:	0.004
Chord:	0.477	Course:	N 49° 47' 50.3283" E

Tangent Data

Length:	0.517	Course:	N 51° 41' 46.7065" E
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Circular Curve Data

Delta:	03° 47' 52.7564"	Type:	RIGHT
Radius:	7.196		
Length:	0.477	Tangent:	0.239
Mid-Ord:	0.004	External:	0.004
Chord:	0.477	Course:	N 53° 35' 43.0847" E

Tangent Data

Length:	0.517	Course:	N 55° 29' 39.4627" E
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Circular Curve Data

Delta:	03° 47' 52.7563"	Type:	RIGHT
Radius:	7.196		
Length:	0.477	Tangent:	0.239
Mid-Ord:	0.004	External:	0.004
Chord:	0.477	Course:	N 57° 23' 35.8410" E

Tangent Data

Length:	0.517	Course:	N 59° 17' 32.2190" E
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Circular Curve Data

Delta:	03° 47' 52.7561"	Type:	RIGHT
Radius:	7.196		
Length:	0.477	Tangent:	0.239
Mid-Ord:	0.004	External:	0.004
Chord:	0.477	Course:	N 61° 11' 28.5970" E

Tangent Data

Length:	0.517	Course:	N 63° 05' 24.9753" E
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Circular Curve Data

Delta:	03° 47' 52.7563"	Type:	RIGHT
Radius:	7.196		
Length:	0.477	Tangent:	0.239
Mid-Ord:	0.004	External:	0.004
Chord:	0.477	Course:	N 64° 59' 21.3533" E

Tangent Data

Length:	0.517	Course:	N 66° 53' 17.7317" E
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Circular Curve Data

Delta:	03° 47' 52.7562"	Type:	RIGHT
Radius:	7.196		
Length:	0.477	Tangent:	0.239
Mid-Ord:	0.004	External:	0.004
Chord:	0.477	Course:	N 68° 47' 14.1094" E

Tangent Data

Length:	0.517	Course:	N 70° 41' 10.4877" E
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Circular Curve Data

Delta:	03° 47' 52.7563"	Type:	RIGHT
Radius:	7.196		
Length:	0.477	Tangent:	0.239
Mid-Ord:	0.004	External:	0.004
Chord:	0.477	Course:	N 72° 35' 06.8658" E

Tangent Data

Length:	0.517	Course:	N 74° 29' 03.2441" E
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Circular Curve Data

Delta:	03° 47' 52.7565"	Type:	RIGHT
Radius:	7.196		
Length:	0.477	Tangent:	0.239
Mid-Ord:	0.004	External:	0.004
Chord:	0.477	Course:	N 76° 22' 59.6220" E

Tangent Data

Length:	0.517	Course:	N 78° 16' 56.0007" E
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Circular Curve Data

Delta:	03° 47' 52.7557"	Type:	RIGHT
Radius:	7.196		
Length:	0.477	Tangent:	0.239
Mid-Ord:	0.004	External:	0.004
Chord:	0.477	Course:	N 80° 10' 52.3786" E

Tangent Data

Length:	0.517	Course:	N 82° 04' 48.7562" E
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Circular Curve Data

Delta:	03° 47' 52.7565"	Type:	RIGHT
Radius:	7.196		
Length:	0.477	Tangent:	0.239

Mid-Ord:	0.004	External:	0.004
Chord:	0.477	Course:	N 83° 58' 45.1345" E

Tangent Data

Length:	0.517	Course:	N 85° 52' 41.5129" E
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Circular Curve Data

Delta:	03° 47' 52.7557"	Type:	RIGHT
Radius:	7.196		
Length:	0.477	Tangent:	0.239
Mid-Ord:	0.004	External:	0.004
Chord:	0.477	Course:	N 87° 46' 37.8909" E

Tangent Data

Length:	0.517	Course:	N 89° 40' 34.2688" E
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Circular Curve Data

Delta:	03° 47' 52.7570"	Type:	RIGHT
Radius:	7.196		
Length:	0.477	Tangent:	0.239
Mid-Ord:	0.004	External:	0.004
Chord:	0.477	Course:	S 88° 25' 29.3529" E

Tangent Data

Length:	0.517	Course:	S 86° 31' 32.9747" E
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Circular Curve Data

Delta:	03° 47' 52.7558"	Type:	RIGHT
Radius:	7.196		
Length:	0.477	Tangent:	0.239
Mid-Ord:	0.004	External:	0.004
Chord:	0.477	Course:	S 84° 37' 36.5966" E

Tangent Data

Length:	0.517	Course:	S 82° 43' 40.2187" E
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Circular Curve Data

Delta:	03° 47' 52.7565"	Type:	RIGHT
Radius:	7.196		
Length:	0.477	Tangent:	0.239
Mid-	0.004	External:	0.004

Ord:

Chord: 0.477

Course:

S 80° 49' 43.8407" E

Tangent Data

Length: 0.517

Course:

S 78° 55' 47.4624" E

Circular Curve Data

Delta: 03° 47' 52.7563"

Type: RIGHT

Radius: 7.196

Length: 0.477

Tangent: 0.239

Mid-Ord: 0.004

External: 0.004

Chord: 0.477

Course: S 77° 01' 51.0842" E

Tangent Data

Length: 0.517

Course:

S 75° 07' 54.7062" E

Circular Curve Data

Delta: 03° 47' 52.7563"

Type: RIGHT

Radius: 7.196

Length: 0.477

Tangent: 0.239

Mid-Ord: 0.004

External: 0.004

Chord: 0.477

Course: S 73° 13' 58.3281" E

Tangent Data

Length: 0.517

Course:

S 71° 20' 01.9495" E

Circular Curve Data

Delta: 03° 47' 52.7559"

Type: RIGHT

Radius: 7.196

Length: 0.477

Tangent: 0.239

Mid-Ord: 0.004

External: 0.004

Chord: 0.477

Course: S 69° 26' 05.5716" E

Tangent Data

Length: 0.517

Course:

S 67° 32' 09.1939" E

Circular Curve Data

Delta: 03° 47' 52.7566"

Type: RIGHT

Radius: 7.196

Length: 0.477

Tangent: 0.239

Mid-Ord: 0.004

External: 0.004

Chord: 0.477

Course: S 65° 38' 12.8158" E

Tangent Data

Length:	0.517	Course:	S 63° 44' 16.4370" E
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Circular Curve Data

Delta:	03° 47' 52.7560"	Type:	RIGHT
Radius:	7.196		
Length:	0.477	Tangent:	0.239
Mid-Ord:	0.004	External:	0.004
Chord:	0.477	Course:	S 61° 50' 20.0592" E

Tangent Data

Length:	0.636	Course:	S 59° 56' 23.6814" E
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Circular Curve Data

Delta:	01° 53' 56.3781"	Type:	RIGHT
Radius:	7.196		
Length:	0.239	Tangent:	0.119
Mid-Ord:	0.001	External:	0.001
Chord:	0.238	Course:	S 58° 59' 25.4916" E

Tangent Data

Length:	1.295	Course:	S 58° 02' 27.3032" E
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Circular Curve Data

D	00° 04' 47.0709"	Type:	RIGHT
elt	7.196		
a:			
R			
a			
di			
us:			
Length:	0.010	Tangent:	0.005
Mid-Ord:	0.000	External:	0.000
Chord:	0.010	Course:	S 58° 00' 03.7566" E

Tangent Data

Length:	0.187	Course:	S 57° 57' 40.2329" E
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15 Alignment: ENLACE E OESTE- D SUR**Description:**

Tangent Data

Length: 0.309

Course:

N 57° 51' 32.1460" E

Circular Curve Data

Delta: 00° 11' 45.0147"

Type: LEFT

Radius: 120.498

Length: 0.412

Tangent: 0.206

Mid-Ord: 0.000

External: 0.000

Chord: 0.412

Course: N 57° 45' 39.6389" E

Tangent Data

Length: 2.478

Course:

N 57° 39' 47.1317" E

Circular Curve Data

Delta: 00° 11' 45.0146"

Type: LEFT

Radius: 120.498

Length: 0.412

Tangent: 0.206

Mid-Ord: 0.000

External: 0.000

Chord: 0.412

Course: N 57° 33' 54.6243" E

Tangent Data

Length: 1.902

Course:

N 57° 28' 02.1171" E

Circular Curve Data

Delta: 02° 47' 57.6568"

Type: LEFT

Radius: 15.694

Length: 0.767

Tangent: 0.383

Mid-Ord: 0.005

External: 0.005

Chord: 0.767

Course: N 56° 04' 03.2887" E

Tangent Data

Length: 0.345

Course:

N 54° 40' 04.4605" E

Circular Curve Data

Delta: 03° 39' 44.7267"

Type: LEFT

Radius: 7.196

Length: 0.460

Tangent: 0.230

Mid-Ord: 0.004

External: 0.004

Chord: 0.460

Course: N 52° 50' 12.0970" E

Tangent Data

Length:	0.499	Course:	N 51° 00' 19.7335" E
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Circular Curve Data

Delta:	03° 39' 44.7263"	Type:	LEFT
Radius:	7.196		
Length:	0.460	Tangent:	0.230
Mid-Ord:	0.004	External:	0.004
Chord:	0.460	Course:	N 49° 10' 27.3704" E

Tangent Data

Length:	0.499	Course:	N 47° 20' 35.0072" E
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Circular Curve Data

Delta:	03° 39' 44.7268"	Type:	LEFT
Radius:	7.196		
Length:	0.460	Tangent:	0.230
Mid-Ord:	0.004	External:	0.004
Chord:	0.460	Course:	N 45° 30' 42.6435" E

Tangent Data

Length:	0.499	Course:	N 43° 40' 50.2804" E
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Circular Curve Data

Delta:	03° 39' 44.7263"	Type:	LEFT
Radius:	7.196		
Length:	0.460	Tangent:	0.230
Mid-Ord:	0.004	External:	0.004
Chord:	0.460	Course:	N 41° 50' 57.9169" E

Tangent Data

Length:	0.499	Course:	N 40° 01' 05.5539" E
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Circular Curve Data

Delta:	03° 39' 44.7271"	Type:	LEFT
Radius:	7.196		
Length:	0.460	Tangent:	0.230
Mid-Ord:	0.004	External:	0.004
Chord:	0.460	Course:	N 38° 11' 13.1906" E

Tangent Data

Length:	0.499	Course:	N 36° 21' 20.8268" E
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Circular Curve Data

Delta:	03° 39' 44.7261"	Type:	LEFT
Radius:	7.196		
Length:	0.460	Tangent:	0.230
Mid-Ord:	0.004	External:	0.004
Chord:	0.460	Course:	N 34° 31' 28.4636" E

Tangent Data

Length:	0.499	Course:	N 32° 41' 36.1006" E
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Circular Curve Data

Delta:	03° 39' 44.7267"	Type:	LEFT
Radius:	7.196		
Length:	0.460	Tangent:	0.230
Mid-Ord:	0.004	External:	0.004
Chord:	0.460	Course:	N 30° 51' 43.7375" E

Tangent Data

Length:	0.499	Course:	N 29° 01' 51.3740" E
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Circular Curve Data

Delta:	03° 39' 44.7267"	Type:	LEFT
Radius:	7.19 6		
Length:	0.46 0	Tangent:	0.230
Mid- Ord:	0.00 4	External:	0.004
Chord:	0.46 0	Course:	N 27° 11' 59.0106" E

Tangent Data

Length:	0.49 9	Course:	N 25° 22' 06.6472" E
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Circular Curve Data

Delta:	03° 39' 44.7266"	Type:	LEFT
Radius:	7.196		
Length:	0.460	Tangent:	0.230
Mid- Ord:	0.004	External:	0.004
Chord:	0.460	Course:	N 23° 32' 14.2841" E

Tangent Data

Length:	0.49 9	Course:	N 21° 42' 21.9207" E
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Circular Curve Data

Delta:	03° 39' 44.7264"	Type:	LEFT
Radius:	7.196		
Length:	0.460	Tangent:	0.230
Mid-Ord:	0.004	External:	0.004
Chord:	0.460	Course:	N 19° 52' 29.5575" E

Tangent Data

Length:	0.49 9	Course:	N 18° 02' 37.1942" E
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Circular Curve Data

Delta:	03° 39' 44.7267"	Type:	LEFT
Radius:	7.196		
Length:	0.460	Tangent:	0.230
Mid-Ord:	0.004	External:	0.004
Chord:	0.460	Course:	N 16° 12' 44.8308" E

Tangent Data

Length:	0.49 9	Course:	N 14° 22' 52.4675" E
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Circular Curve Data

Delta:	03° 39' 44.7264"	Type:	LEFT
Radius:	7.196		
Length:	0.460	Tangent:	0.230
Mid-Ord:	0.004	External:	0.004
Chord:	0.460	Course:	N 12° 33' 00.1041" E

Tangent Data

Length:	0.499	Course:	N 10° 43' 07.7410" E
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Circular Curve Data

Delta:	03° 39' 44.7268"	Type:	LEFT
Radius:	7.196		
Length:	0.460	Tangent:	0.230
Mid-Ord:	0.004	External:	0.004
Chord:	0.460	Course:	N 08° 53' 15.3776" E

Tangent Data

Length:	0.499	Course:	N 07° 03' 23.0142" E
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Circular Curve Data

Delta:	03° 39' 44.7265"	Type:	LEFT
Radius:	7.196		
Length:	0.460	Tangent:	0.230
Mid-Ord:	0.004	External:	0.004
Chord:	0.460	Course:	N 05° 13' 30.6510" E

Tangent Data

Length:	0.499	Course:	N 03° 23' 38.2877" E
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Circular Curve Data

Delta:	03° 39' 44.7266"	Type:	LEFT
Radius:	7.196		
Length:	0.460	Tangent:	0.230
Mid-Ord:	0.004	External:	0.004
Chord:	0.460	Course:	N 01° 33' 45.9244" E

Tangent Data

Length:	0.499	Course:	N 00° 16' 06.4389" W
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Circular Curve Data

Delta:	03° 39' 44.7267"	Type:	LEFT
Radius:	7.196		
Length:	0.460	Tangent:	0.230
Mid-Ord:	0.004	External:	0.004
Chord:	0.460	Course:	N 02° 05' 58.8022" W

Tangent Data

Length:	0.499	Course:	N 03° 55' 51.1656" W
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Circular Curve Data

Delta:	03° 39' 44.7265"	Type:	LEFT
Radius:	7.19		
Length:	0.46	Tangent:	0.230
Mid-Ord:	0.00	External:	0.004
Chord:	0.46	Course:	N 05° 45' 43.5288" W

Tangent Data

Length:	0.49	Course:	N 07° 35' 35.8922" W
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Circular Curve Data

Delta:	03° 39' 44.7267"	Type:	LEFT
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Radius:	7.196	Tangent:	0.230
Length:	0.460	External:	0.004
Mid- Ord:	0.004	Course:	N 09° 25' 28.2554" W
Chord:	0.460		

<u>Tangent Data</u>			
Length:	0.49	Course:	N 11° 15' 20.6188" W
	9		

<u>Circular Curve Data</u>			
Delta:	03° 39' 44.7266"	Type:	LEFT
Radius:	7.196		
Length:	0.460	Tangent:	0.230
Mid- Ord:	0.004	External:	0.004
Chord:	0.460	Course:	N 13° 05' 12.9821" W

<u>Tangent Data</u>			
Length:	0.49	Course:	N 14° 55' 05.3454" W
	9		

<u>Circular Curve Data</u>			
Delta:	03° 39' 44.7265"	Type:	LEFT
Radius:	7.196		
Length:	0.460	Tangent:	0.230
Mid- Ord:	0.004	External:	0.004
Chord:	0.460	Course:	N 16° 44' 57.7086" W

<u>Tangent Data</u>			
Length:	0.49	Course:	N 18° 34' 50.0719" W
	9		

<u>Circular Curve Data</u>			
Delta:	03° 39' 44.7267"	Type:	LEFT
Radius:	7.196		
Length:	0.460	Tangent:	0.230
Mid- Ord:	0.004	External:	0.004
Chord:	0.460	Course:	N 20° 24' 42.4353" W

<u>Tangent Data</u>			
Length:	0.499	Course:	N 22° 14' 34.7988" W

<u>Circular Curve Data</u>			
Delta:	03° 39' 44.7262"	Type:	LEFT
Radius:	7.196		

Length:	0.460	Tangent:	0.230
Mid-Ord:	0.004	External:	0.004
Chord:	0.460	Course:	N 24° 04' 27.1618" W

<u>Tangent Data</u>			
Length:	0.614	Course:	N 25° 54' 19.5249" W

Circular Curve Data

D	01° 49' 52.3636"	Type:	LEFT
elt	7.196		
a:			
R			
a			
di			
us:			
Length:	0.230	Tangent:	0.115
Mid-Ord:	0.001	External:	0.001
Chord:	0.230	Course:	N 26° 49' 15.7066" W

<u>Tangent Data</u>			
Length:	6.448	Course:	N 27° 44' 11.8885" W

16 Alignment: ENLACE**ENLACE A - BDescription:**Tangent Data

Length:	18.254	Course:	N 59° 33' 12.8419" W
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Circular Curve Data

Delta:	01° 51' 32.0954"	Type:	LEFT
Radius:	23.918		
Length:	0.776	Tangent:	0.388
Mid-Ord:	0.003	External:	0.003
Chord:	0.776	Course:	N 60° 28' 58.8898" W

<u>Tangent Data</u>			
Length:	0.349	Course:	N 61° 24' 44.9371" W

Circular Curve Data

D	03° 42' 22.1004"	Type:	LEFT
elt	7.196		

a:

Ra

di

us:

Length: 0.465
 Mid-Ord: 0.00
 Chord: 0.46
 4
 5

Tangent: 0.233
 External: 0.004
 Course: N 63° 15' 55.9873" W

Tangent Data

Length:	0.50	Course:	N 65° 07' 07.0379" W
	4		

Circular Curve Data

Delta:	03° 42' 22.1001"	Type:	LEFT
Radius:	7.196		
Length:	0.465	Tangent:	0.233
Mid-Ord:	0.004	External:	0.004
Chord:	0.465	Course:	N 66° 58' 18.0874" W

Tangent Data

Length:	0.50	Course:	N 68° 49' 29.1377" W
	4		

Circular Curve Data

Delta:	03° 42' 22.1003"	Type:	LEFT
Radius:	7.196		
Length:	0.465	Tangent:	0.233
Mid-Ord:	0.004	External:	0.004
Chord:	0.465	Course:	N 70° 40' 40.1879" W

Tangent Data

Length:	0.50	Course:	N 72° 31' 51.2378" W
	4		

Circular Curve Data

Delta:	03° 42' 22.1000"	Type:	LEFT
Radius:	7.196		
Length:	0.465	Tangent:	0.233
Mid-Ord:	0.004	External:	0.004
Chord:	0.465	Course:	N 74° 23' 02.2880" W

Tangent Data

Length:	0.50	Course:	N 76° 14' 13.3381" W
	4		

Circular Curve Data

Delta:	03° 42' 22.0996"	Type:	LEFT
Radius:	7.196		
Length:	0.465	Tangent:	0.233
Mid-Ord:	0.004	External:	0.004
Chord:	0.465	Course:	N 78° 05' 24.3880" W

Tangent Data

Length:	0.50	Course:	N 79° 56' 35.4376" W
	4		

Circular Curve Data

Delta:	03° 42' 22.1008"	Type:	LEFT
Radius:	7.196		
Length:	0.465	Tangent:	0.233
Mid-Ord:	0.004	External:	0.004
Chord:	0.465	Course:	N 81° 47' 46.4881" W

Tangent Data

Length:	0.504	Course:	N 83° 38' 57.5383" W
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Circular Curve Data

Delta:	03° 42' 22.0999"	Type:	LEFT
Radius:	7.196		
Length:	0.465	Tangent:	0.233
Mid-Ord:	0.004	External:	0.004
Chord:	0.465	Course:	N 85° 30' 08.5883" W

Tangent Data

Length:	0.504	Course:	N 87° 21' 19.6382" W
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Circular Curve Data

Delta:	03° 42' 22.1000"	Type:	LEFT
Radius:	7.196		
Length:	0.465	Tangent:	0.233
Mid-Ord:	0.004	External:	0.004
Chord:	0.465	Course:	N 89° 12' 30.6885" W

Tangent Data

Length:	0.504	Course:	S 88° 56' 18.2613" W
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Circular Curve Data

Delta:	03° 42' 22.1000"	Type:	LEFT
Radius:	7.196		

Length:	0.465	Tangent:	0.233
Mid-Ord:	0.004	External:	0.004
Chord:	0.465	Course:	S 87° 05' 07.2117" W

Tangent Data

Length:	0.504	Course:	S 85° 13' 56.1618" W
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Circular Curve Data

Delta:	03° 42' 22.1001"	Type:	LEFT
Radius:	7.196		
Length:	0.465	Tangent:	0.233
Mid-Ord:	0.00	External:	0.004
Chord:	0.46 5	Course:	S 83° 22' 45.1113" W

Tangent Data

Length:	0.50 4	Course:	S 81° 31' 34.0610" W
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Circular Curve Data

Delta:	03° 42' 22.1002"	Type:	LEFT
Radius:	7.196		
Length:	0.465	Tangent:	0.233
Mid-Ord:	0.004	External:	0.004
Chord:	0.465	Course:	S 79° 40' 23.0114" W

Tangent Data

Length:	0.50 4	Course:	S 77° 49' 11.9610" W
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Circular Curve Data

Delta:	03° 42' 22.1001"	Type:	LEFT
Radius:	7.196		
Length:	0.465	Tangent:	0.233
Mid-Ord:	0.004	External:	0.004
Chord:	0.465	Course:	S 75° 58' 00.9113" W

Tangent Data

Length:	0.50 4	Course:	S 74° 06' 49.8610" W
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Circular Curve Data

Delta:	03° 42' 22.1001"	Type:	LEFT
Radius:	7.196		
Length:	0.465	Tangent:	0.233
Mid-Ord:	0.004	External:	0.004

Chord:	0.465	Course:	S 72° 15' 38.8109" W
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Tangent Data

Length:	0.50 4	Course:	S 70° 24' 27.7609" W
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Circular Curve Data

Delta:	03° 42' 22.1002"	Type:	LEFT
Radius:	7.196		
Length:	0.465	Tangent:	0.233
Mid-Ord:	0.004	External:	0.004
Chord:	0.465	Course:	S 68° 33' 16.7109" W

Tangent Data

Length:	0.50 4	Course:	S 66° 42' 05.6606" W
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Circular Curve Data

Delta:	03° 42' 22.0999"	Type:	LEFT
Radius:	7.196		
Length:	0.465	Tangent:	0.233
Mid-Ord:	0.004	External:	0.004
Chord:	0.465	Course:	S 64° 50' 54.6110" W

Tangent Data

Length:	0.504	Course:	S 62° 59' 43.5606" W
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Circular Curve Data

Delta:	03° 42' 22.1001"	Type:	LEFT
Radius:	7.196		
Length:	0.465	Tangent:	0.233
Mid-Ord:	0.004	External:	0.004
Chord:	0.465	Course:	S 61° 08' 32.5109" W

Tangent Data

Length:	0.504	Course:	S 59° 17' 21.4602" W
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Circular Curve Data

Delta:	03° 42' 22.0996"	Type:	LEFT
Radius:	7.196		
Length:	0.465	Tangent:	0.233
Mid-Ord:	0.004	External:	0.004
Chord:	0.465	Course:	S 57° 26' 10.4105" W

Tangent Data

Length:	0.504	Course:	S 55° 34' 59.3607" W
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Circular Curve Data

Delta:	03° 42' 22.1006"	Type:	LEFT
Radius:	7.196		
Length:	0.465	Tangent:	0.233
Mid-Ord:	0.004	External:	0.004
Chord:	0.465	Course:	S 53° 43' 48.3103" W

Tangent Data

Length:	0.504	Course:	S 51° 52' 37.2602" W
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Circular Curve Data

Delta:	03° 42' 22.0999"	Type:	LEFT
Radius:	7.196		
Length:	0.465	Tangent:	0.233
Mid-Ord:	0.00 4	External:	0.004
Chord:	0.46 5	Course:	S 50° 01' 26.2102" W

Tangent Data

Length:	0.62 1	Course:	S 48° 10' 15.1602" W
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Circular Curve Data

Delta:	01° 51' 11.0500"	Type:	LEFT
Radius:	7.196		
Length:	0.233	Tangent:	0.116
Mid-Ord:	0.001	External:	0.001
Chord:	0.233	Course:	S 47° 14' 39.6356" W

Tangent Data

Length:	1.06 9	Course:	S 46° 19' 04.1100" W
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17 Alignment: ENLACE**ENLACE B - A Description:**

Tangent Data

Length:	0.197	Course:	S 31° 09' 20.6300" W
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Circular Curve Data

Delta:	02° 12' 49.4505"	Type:	LEFT
Radius:	6.785		
Length:	0.262	Tangent:	0.131
Mid-Ord:	0.001	External:	0.001
Chord:	0.262	Course:	S 30° 02' 55.9047" W

Tangent Data

Length:	0.632	Course:	S 28° 56' 31.1797" W
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Circular Curve Data

Delta:	03° 45' 57.6979"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 27° 03' 32.3306" W

Tangent Data

Length:	0.540	Course:	S 25° 10' 33.4819" W
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Circular Curve Data

Delta:	03° 45' 57.6982"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 23° 17' 34.6328" W

Tangent Data

Length:	0.540	Course:	S 21° 24' 35.7838" W
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Circular Curve Data

Delta:	03° 45' 57.6980"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 19° 31' 36.9349" W

Tangent Data

Length:	0.540	Course:	S 17° 38' 38.0859" W
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Circular Curve Data

Delta:	03° 45' 57.6978"	Type:	LEFT
Radius:	6.785		

Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 15° 45' 39.2370" W

Tangent Data

Length:	0.540	Course:	S 13° 52' 40.3881" W
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Circular Curve Data

Delta:	03° 45' 57.6980"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 11° 59' 41.5391" W

Tangent Data

Length:	0.540	Course:	S 10° 06' 42.6901" W
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Circular Curve Data

Delta:	03° 45' 57.6979"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 08° 13' 43.8411" W

Tangent Data

Length:	0.540	Course:	S 06° 20' 44.9922" W
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Circular Curve Data

Delta:	03° 45' 57.6979"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 04° 27' 46.1432" W

Tangent Data

Length:	0.540	Course:	S 02° 34' 47.2943" W
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Circular Curve Data

Delta:	03° 45' 57.6979"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004

Chord: 0.446 Course: S 00° 41' 48.4453" W

Tangent Data

Length: 0.540 Course: S 01° 11' 10.4037" E

Circular Curve Data

Delta:	03° 45' 57.6979"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 03° 04' 09.2526" E

Tangent Data

Length: 0.540 Course: S 04° 57' 08.1016" E

Circular Curve Data

Delta:	03° 45' 57.6979"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 06° 50' 06.9505" E

Tangent Data

Length: 0.540 Course: S 08° 43' 05.7994" E

Circular Curve Data

Delta:	03° 45' 57.6979"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 10° 36' 04.6485" E

Tangent Data

Length: 0.540 Course: S 12° 29' 03.4973" E

Circular Curve Data

Delta:	03° 45' 57.6980"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 14° 22' 02.3463" E

Tangent Data

Length:	0.540	Course:	S 16° 15' 01.1954" E
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Circular Curve Data

Delta:	03° 45' 57.6979"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 18° 08' 00.0442" E

Tangent Data

Length:	0.540	Course:	S 20° 00' 58.8934" E
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Circular Curve Data

Delta:	03° 45' 57.6977"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 21° 53' 57.7420" E

Tangent Data

Length:	0.540	Course:	S 23° 46' 56.5909" E
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Circular Curve Data

Delta:	03° 45' 57.6982"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 25° 39' 55.4402" E

Tangent Data

Length:	0.540	Course:	S 27° 32' 54.2891" E
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Circular Curve Data

Delta:	03° 45' 57.6977"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid- Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 29° 25' 53.1379" E

Tangent Data

Length:	0.540	Course:	S 31° 18' 51.9867" E
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Circular Curve Data

Delta:	03° 45' 57.6982"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 33° 11' 50.8360" E

Tangent Data

Length:	0.540	Course:	S 35° 04' 49.6850" E
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Circular Curve Data

Delta:	03° 45' 57.6976"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 36° 57' 48.5339" E

Tangent Data

Length:	0.540	Course:	S 38° 50' 47.3828" E
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Circular Curve Data

Delta:	03° 45' 57.6980"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 40° 43' 46.2317" E

Tangent Data

Length:	0.540	Course:	S 42° 36' 45.0807" E
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Circular Curve Data

Delta:	03° 45' 57.6979"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 44° 29' 43.9296" E

Tangent Data

Length:	0.540	Course:	S 46° 22' 42.7785" E
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Circular Curve Data

Delta:	03° 45' 57.6980"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 48° 15' 41.6275" E

Tangent Data

Length:	0.540	Course:	S 50° 08' 40.4765" E
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Circular Curve Data

Delta:	03° 45' 57.6979"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 52° 01' 39.3258" E

Tangent Data

Length:	0.540	Course:	S 53° 54' 38.1744" E
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Circular Curve Data

Delta:	03° 45' 57.6978"	Type:	LEFT
Radius:	6.785		
Length:	0.446	Tangent:	0.223
Mid-Ord:	0.004	External:	0.004
Chord:	0.446	Course:	S 55° 47' 37.0234" E

Tangent Data

Length:	0.651	Course:	S 57° 40' 35.8723" E
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Circular Curve Data

Delta:	01° 52' 58.8489"	Type:	LEFT
Radius:	6.785		
Length:	0.223	Tangent:	0.112
Mid-Ord:	0.001	External:	0.001
Chord:	0.223	Course:	S 58° 37' 05.2971" E

Tangent Data

Length:	13.755	Course:	S 59° 33' 34.7213" E
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18 Alignment: ENLACE**ENLACE B -EDescription:**

Tangent Data

Length: 6.670

Course:

S 59° 33' 34.7213" E

Circular Curve Data

Delta: 01° 50' 21.8808"

Type: LEFT

Radius: 23.994

Length: 0.770

Tangent: 0.385

Mid-Ord: 0.003

External: 0.003

Chord: 0.770

Course: S 60° 28' 45.6617" E

Tangent Data

Length: 0.347

Course:

S 61° 23' 56.6019" E

Circular Curve Data

Delta: 03° 40' 43.7626"

Type: LEFT

Radius: 7.196

Length: 0.462

Tangent: 0.231

Mid-Ord: 0.004

External: 0.004

Chord: 0.462

Course: S 63° 14' 18.4835" E

Tangent Data

Length: 0.501

Course:

S 65° 04' 40.3650" E

Circular Curve Data

Delta: 03° 40' 43.7616"

Type: LEFT

Radius: 7.196

Length: 0.462

Tangent: 0.231

Mid-Ord: 0.004

External: 0.004

Chord: 0.462

Course: S 66° 55' 02.2456" E

Tangent Data

Length: 0.501

Course:

S 68° 45' 24.1263" E

Circular Curve Data

Delta: 03° 40' 43.7626"

Type: LEFT

Radius: 7.196

Length: 0.46

Tangent: 0.231

Mid-Ord: 0.00

External: 0.004

Chord: 0.46

Course: S 70° 35' 46.0076" E

2

4

2

<u>Tangent Data</u>			
Length:	0.50 1	Course:	S 72° 26' 07.8888" E

Circular Curve Data

Delta:	03° 40' 43.7614"	Type:	LEFT
Radius:	7.196		
Length:	0.462	Tangent:	0.231
Mid-Ord:	0.004	External:	0.004
Chord:	0.462	Course:	S 74° 16' 29.7696" E

<u>Tangent Data</u>			
Length:	0.50 1	Course:	S 76° 06' 51.6501" E

Circular Curve Data

Delta:	03° 40' 43.7625"	Type:	LEFT
Radius:	7.196		
Length:	0.462	Tangent:	0.231
Mid-Ord:	0.004	External:	0.004
Chord:	0.462	Course:	S 77° 57' 13.5317" E

<u>Tangent Data</u>			
Length:	0.50 1	Course:	S 79° 47' 35.4129" E

Circular Curve Data

Delta:	03° 40' 43.7618"	Type:	LEFT
Radius:	7.196		
Length:	0.462	Tangent:	0.231
Mid-Ord:	0.004	External:	0.004
Chord:	0.462	Course:	S 81° 37' 57.2942" E

<u>Tangent Data</u>			
Length:	0.50 1	Course:	S 83° 28' 19.1751" E

Circular Curve Data

Delta:	03° 40' 43.7621"	Type:	LEFT
Radius:	7.196		
Length:	0.462	Tangent:	0.231
Mid-Ord:	0.004	External:	0.004
Chord:	0.462	Course:	S 85° 18' 41.0560" E

Tangent Data

Length:	0.501	Course:	S 87° 09' 02.9370" E
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Circular Curve Data

Delta:	03° 40' 43.7620"	Type:	LEFT
Radius:	7.196		
Length:	0.462	Tangent:	0.231
Mid-Ord:	0.004	External:	0.004
Chord:	0.462	Course:	S 88° 59' 24.8176" E

Tangent Data

Length:	0.501	Course:	N 89° 10' 13.3013" E
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Circular Curve Data

Delta:	03° 40' 43.7625"	Type:	LEFT
Radius:	7.196		
Length:	0.462	Tangent:	0.231
Mid-Ord:	0.004	External:	0.004
Chord:	0.462	Course:	N 87° 19' 51.4196" E

Tangent Data

Length:	0.501	Course:	N 85° 29' 29.5386" E
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Circular Curve Data

Delta:	03° 40' 43.7617"	Type:	LEFT
Radius:	7.196		
Length:	0.462	Tangent:	0.231
Mid-Ord:	0.004	External:	0.004
Chord:	0.462	Course:	N 83° 39' 07.6576" E

Tangent Data

Length:	0.501	Course:	N 81° 48' 45.7768" E
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Circular Curve Data

Delta:	03° 40' 43.7622"	Type:	LEFT
Radius:	7.196		
Length:	0.462	Tangent:	0.231
Mid-Ord:	0.004	External:	0.004
Chord:	0.462	Course:	N 79° 58' 23.8958" E

Tangent Data

Length:	0.501	Course:	N 78° 08' 02.0144" E
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Circular Curve Data

Delta:	03° 40' 43.7621"	Type:	LEFT
Radius:	7.196		
Length:	0.46	Tangent:	0.231
	2		
Mid-	0.00	External:	0.004
Ord:	4		
Chord:	0.46	Course:	N 76° 17' 40.1337" E
	2		

Tangent Data

Length:	0.50	Course:	N 74° 27' 18.2525" E
	1		

Circular Curve Data

Delta:	03° 40' 43.7623"	Type:	LEFT
Radius:	7.196		
Length:	0.462	Tangent:	0.231
Mid-	0.004	External:	0.004
Ord:			
Chord:	0.462	Course:	N 72° 36' 56.3716" E

Tangent Data

Length:	0.50	Course:	N 70° 46' 34.4903" E
	1		

Circular Curve Data

Delta:	03° 40' 43.7621"	Type:	LEFT
Radius:	7.196		
Length:	0.462	Tangent:	0.231
Mid-	0.004	External:	0.004
Ord:			
Chord:	0.462	Course:	N 68° 56' 12.6091" E

Tangent Data

Length:	0.50	Course:	N 67° 05' 50.7284" E
	1		

Circular Curve Data

Delta:	03° 40' 43.7619"	Type:	LEFT
Radius:	7.196		
Length:	0.462	Tangent:	0.231
Mid-	0.004	External:	0.004
Ord:			
Chord:	0.462	Course:	N 65° 15' 28.8472" E

Tangent Data

Length:	0.50	Course:	N 63° 25' 06.9666" E
	1		

Circular Curve Data

Delta:	03° 40' 43.7624"	Type:	LEFT

Radius:	7.196	Tangent:	0.231
Length:	0.462	External:	0.004
Mid-Ord:	0.004	Course:	N 61° 34' 45.0855" E
Chord:	0.462		

Tangent Data

Length:	0.501	Course:	N 59° 44' 23.2038" E
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Circular Curve Data

Delta:	03° 40' 43.7619"	Type:	LEFT
Radius:	7.196	Tangent:	0.231
Length:	0.462	External:	0.004
Mid-Ord:	0.004	Course:	N 57° 54' 01.3235" E
Chord:	0.462		

Tangent Data

Length:	0.501	Course:	N 56° 03' 39.4421" E
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Circular Curve Data

Delta:	03° 40' 43.7621"	Type:	LEFT
Radius:	7.196	Tangent:	0.231
Length:	0.462	External:	0.004
Mid-Ord:	0.004	Course:	N 54° 13' 17.5612" E
Chord:	0.462		

Tangent Data

Length:	0.501	Course:	N 52° 22' 55.6801" E
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Circular Curve Data

Delta:	03° 40' 43.7624"	Type:	LEFT
Radius:	7.196	Tangent:	0.231
Length:	0.462	External:	0.004
Mid-Ord:	0.004	Course:	N 50° 32' 33.7989" E
Chord:	0.462		

Tangent Data

Length:	0.501	Course:	N 48° 42' 11.9175" E
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Circular Curve Data

Delta:	03° 40' 43.7620"	Type:	LEFT
Radius:	7.196	Tangent:	0.231
Length:	0.462	External:	0.004
Mid-Ord:	0.004		

Chord:	0.462	Course:	N 46° 51' 50.0367" E
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Tangent Data

Length:	0.501	Course:	N 45° 01' 28.1559" E
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Circular Curve Data

Delta:	03° 40' 43.7619"	Type:	LEFT
Radius:	7.196		
Length:	0.46 2	Tangent:	0.231
Mid- Ord:	0.00 4	External:	0.004
Chord:	0.46 2	Course:	N 43° 11' 06.2750" E

Tangent Data

Length:	0.50 1	Course:	N 41° 20' 44.3937" E
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Circular Curve Data

Delta:	03° 40' 43.7622"	Type:	LEFT
Radius:	7.196		
Length:	0.462	Tangent:	0.231
Mid- Ord:	0.004	External:	0.004
Chord:	0.462	Course:	N 39° 30' 22.5127" E

Tangent Data

Length:	0.50 1	Course:	N 37° 40' 00.6315" E
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Circular Curve Data

Delta:	03° 40' 43.7621"	Type:	LEFT
Radius:	7.196		
Length:	0.462	Tangent:	0.231
Mid- Ord:	0.004	External:	0.004
Chord:	0.462	Course:	N 35° 49' 38.7506" E

Tangent Data

Length:	0.50 1	Course:	N 33° 59' 16.8696" E
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Circular Curve Data

Delta:	03° 40' 43.7620"	Type:	LEFT
Radius:	7.196		
Length:	0.462	Tangent:	0.231
Mid- Ord:	0.004	External:	0.004

Chord: 0.462 Course: N 32° 08' 54.9884" E

Tangent Data

Length: 0.66 Course: N 30° 18' 33.1073" E
8

Circular Curve Data

Delta:	01° 01' 25.3567"	Type:	LEFT
Radius:	7.196		
Length:	0.129	Tangent:	0.064
Mid-Ord:	0.000	External:	0.000
Chord:	0.129	Course:	N 29° 47' 50.4288" E

Tangent Data

Length: 1.717 Course: N 29° 17' 07.7507" E

19 Alignment: ENLACE**ENLACE D - GDescription:**Tangent Data

Length: 11.667 Course: N 59° 35' 58.4373" W

Circular Curve Data

Delta:	03° 27' 47.3388"	Type:	LEFT
Radius:	12.788		
Length:	0.773	Tangent:	0.387
Mid-Ord:	0.006	External:	0.006
Chord:	0.773	Course:	N 61° 19' 52.1066" W

Tangent Data

Length: 0.348 Course: N 63° 03' 45.7765" W

Circular Curve Data

Delta:	06° 55' 34.6773"	Type:	LEFT
Radius:	3.833		
Length:	0.463	Tangent:	0.232
Mid-Ord:	0.007	External:	0.007
Chord:	0.463	Course:	N 66° 31' 33.1147" W

Tangent Data

Length: 0.503 Course: N 69° 59' 20.4534" W

Circular Curve Data

Delta:	06° 55' 34.6766"	Type:	LEFT
Radius:	3.833		
Length:	0.463	Tangent:	0.232
Mid-Ord:	0.007	External:	0.007
Chord:	0.463	Course:	N 73° 27' 07.7921" W

Tangent Data

Length:	0.503	Course:	N 76° 54' 55.1305" W
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Circular Curve Data

Delta:	06° 55' 34.6781"	Type:	LEFT
Radius:	3.833		
Length:	0.463	Tangent:	0.232
Mid-Ord:	0.007	External:	0.007
Chord:	0.463	Course:	N 80° 22' 42.4690" W

Tangent Data

Length:	0.503	Course:	N 83° 50' 29.8084" W
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Circular Curve Data

Delta:	06° 55' 34.6771"	Type:	LEFT
Radius:	3.833		
Length:	0.463	Tangent:	0.232
Mid-Ord:	0.007	External:	0.007
Chord:	0.463	Course:	N 87° 18' 17.1468" W

Tangent Data

Length:	0.503	Course:	S 89° 13' 55.5146" W
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Circular Curve Data

Delta:	06° 55' 34.6772"	Type:	LEFT
Radius:	3.833		
Length:	0.463	Tangent:	0.232
Mid-Ord:	0.007	External:	0.007
Chord:	0.463	Course:	S 85° 46' 08.1760" W

Tangent Data

Length:	0.503	Course:	S 82° 18' 20.8374" W
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Circular Curve Data

Delta:	06° 55' 34.6772"	Type:	LEFT
Radius:	3.833		
Length:	0.463	Tangent:	0.232
Mid-Ord:	0.007	External:	0.007
Chord:	0.463	Course:	S 78° 50' 33.4988" W

Tangent Data

Length:	0.503	Course:	S 75° 22' 46.1603" W
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Circular Curve Data

Delta:	06° 55' 34.6778"	Type:	LEFT
Radius:	3.833		
Length:	0.463	Tangent:	0.232
Mid-Ord:	0.007	External:	0.007
Chord:	0.463	Course:	S 71° 54' 58.8212" W

Tangent Data

Length:	0.503	Course:	S 68° 27' 11.4821" W
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Circular Curve Data

Delta:	06° 55' 34.6770"	Type:	LEFT
Radius:	3.833		
Length:	0.463	Tangent:	0.232
Mid-Ord:	0.007	External:	0.007
Chord:	0.463	Course:	S 64° 59' 24.1439" W

Tangent Data

Length:	0.503	Course:	S 61° 31' 36.8049" W
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Circular Curve Data

Delta:	06° 55' 34.6773"	Type:	LEFT
Radius:	3.833		
Length:	0.463	Tangent:	0.232
Mid-Ord:	0.007	External:	0.007
Chord:	0.463	Course:	S 58° 03' 49.4667" W

Tangent Data

Length:	0.503	Course:	S 54° 36' 02.1281" W
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Circular Curve Data

Delta:	06° 55' 34.6773"	Type:	LEFT
Radius:	3.833		

Length:	0.463	Tangent:	0.232
Mid-Ord:	0.007	External:	0.007
Chord:	0.463	Course:	S 51° 08' 14.7891" W

Tangent Data

Length:	0.503	Course:	S 47° 40' 27.4506" W
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Circular Curve Data

Delta:	06° 55' 34.6773"	Type:	LEFT
Radius:	3.833		
Length:	0.463	Tangent:	0.232
Mid-Ord:	0.007	External:	0.007
Chord:	0.463	Course:	S 44° 12' 40.1120" W

Tangent Data

Length:	0.503	Course:	S 40° 44' 52.7732" W
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Circular Curve Data

Delta:	06° 55' 34.6773"	Type:	LEFT
Radius:	3.833		
Length:	0.463	Tangent:	0.232
Mid-Ord:	0.007	External:	0.007
Chord:	0.463	Course:	S 37° 17' 05.4346" W

Tangent Data

Length:	0.735	Course:	S 33° 49' 18.0957" W
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20 Alignment: ENLACE**ENLACE E - BDescription:**Tangent Data

Length:	0.644	Course:	N 32° 25' 38.3367" E
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Circular Curve Data

Delta:	03° 55' 09.6200"	Type:	LEFT
Radius:	11.504		
Length:	0.787	Tangent:	0.394
Mid-Ord:	0.007	External:	0.007
Chord:	0.787	Course:	N 30° 28' 03.5267" E

Tangent Data

Length:	0.354	Course:	N 28° 30' 28.7167" E
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Circular Curve Data

Delta:	03° 45' 18.7871"	Type:	LEFT
Radius:	7.204		
Length:	0.472	Tangent:	0.236
Mid-Ord:	0.004	External:	0.004
Chord:	0.472	Course:	N 26° 37' 49.3231" E

Tangent Data

Length:	0.512	Course:	N 24° 45' 09.9300" E
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Circular Curve Data

Delta:	03° 45' 18.7867"	Type:	LEFT
Radius:	7.204		
Length:	0.472	Tangent:	0.236
Mid-Ord:	0.004	External:	0.004
Chord:	0.472	Course:	N 22° 52' 30.5363" E

Tangent Data

Length:	0.512	Course:	N 20° 59' 51.1430" E
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Circular Curve Data

Delta:	03° 45' 18.7867"	Type:	LEFT
Radius:	7.20		
Length:	0.47 2	Tangent:	0.236
Mid- Ord:	0.00 4	External:	0.004
Chord:	0.47 2	Course:	N 19° 07' 11.7497" E

Tangent Data

Length:	0.51 2	Course:	N 17° 14' 32.3563" E
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Circular Curve Data

Delta:	03° 45' 18.7868"	Type:	LEFT
Radius:	7.204		
Length:	0.472	Tangent:	0.236
Mid- Ord:	0.004	External:	0.004
Chord:	0.472	Course:	N 15° 21' 52.9630" E

Tangent Data

Length:	0.51 2	Course:	N 13° 29' 13.5697" E
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Circular Curve Data

Delta:	03° 45' 18.7867"	Type:	LEFT
Radius:	7.204		
Length:	0.472	Tangent:	0.236
Mid- Ord:	0.004	External:	0.004
Chord:	0.472	Course:	N 11° 36' 34.1763" E

Tangent Data

Length:	0.51 2	Course:	N 09° 43' 54.7829" E
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Circular Curve Data

Delta:	03° 45' 18.7868"	Type:	LEFT
Radius:	7.204		
Length:	0.472	Tangent:	0.236
Mid- Ord:	0.004	External:	0.004
Chord:	0.472	Course:	N 07° 51' 15.3895" E

Tangent Data

Length:	0.51 2	Course:	N 05° 58' 35.9961" E
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Circular Curve Data

Delta:	03° 45' 18.7868"	Type:	LEFT
Radius:	7.204		
Length:	0.472	Tangent:	0.236
Mid- Ord:	0.004	External:	0.004
Chord:	0.472	Course:	N 04° 05' 56.6028" E

Tangent Data

Length:	0.512	Course:	N 02° 13' 17.2094" E
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Circular Curve Data

Delta:	03° 45' 18.7868"	Type:	LEFT
Radius:	7.204		
Length:	0.472	Tangent:	0.236
Mid-Ord:	0.004	External:	0.004
Chord:	0.472	Course:	N 00° 20' 37.8161" E

Tangent Data

Length:	0.512	Course:	N 01° 32' 01.5774" W
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Circular Curve Data

Delta:	03° 45' 18.7867"	Type:	LEFT
Radius:	7.204		
Length:	0.472	Tangent:	0.236
Mid-Ord:	0.004	External:	0.004
Chord:	0.472	Course:	N 03° 24' 40.9707" W

Tangent Data

Length:	0.512	Course:	N 05° 17' 20.3641" W
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Circular Curve Data

Delta:	03° 45' 18.7868"	Type:	LEFT
Radius:	7.204		
Length:	0.472	Tangent:	0.236
Mid-Ord:	0.004	External:	0.004
Chord:	0.472	Course:	N 07° 09' 59.7574" W

Tangent Data

Length:	0.512	Course:	N 09° 02' 39.1508" W
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Circular Curve Data

Delta:	03° 45' 18.7867"	Type:	LEFT
Radius:	7.204		
Length:	0.472	Tangent:	0.236
Mid-Ord:	0.004	External:	0.004
Chord:	0.472	Course:	N 10° 55' 18.5442" W

Tangent Data

Length:	0.512	Course:	N 12° 47' 57.9375" W
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Circular Curve Data

Delta:	03° 45' 18.7868"	Type:	LEFT
Radius:	7.204		
Length:	0.472	Tangent:	0.236
Mid-Ord:	0.004	External:	0.004
Chord:	0.472	Course:	N 14° 40' 37.3308" W

Tangent Data

Length:	0.512	Course:	N 16° 33' 16.7244" W
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Circular Curve Data

Delta:	03° 45' 18.7866"	Type:	LEFT
Radius:	7.204		
Length:	0.472	Tangent:	0.236
Mid-Ord:	0.004	External:	0.004
Chord:	0.472	Course:	N 18° 25' 56.1177" W

<u>Tangent Data</u>			
Length:	0.512	Course:	N 20° 18' 35.5110" W

Circular Curve Data

Delta:	03° 45' 18.7869"	Type:	LEFT
Radius:	7.204		
Length:	0.472	Tangent:	0.236
Mid-Ord:	0.004	External:	0.004
Chord:	0.472	Course:	N 22° 11' 14.9044" W

<u>Tangent Data</u>			
Length:	0.512	Course:	N 24° 03' 54.2978" W

Circular Curve Data

Delta:	03° 45' 18.7867"	Type:	LEFT
Radius:	7.204		
Length:	0.472	Tangent:	0.236
Mid-Ord:	0.004	External:	0.004
Chord:	0.472	Course:	N 25° 56' 33.6910" W

<u>Tangent Data</u>			
Length:	0.512	Course:	N 27° 49' 13.0845" W

<u>Circular Curve Data</u>			
Delta:	03° 45' 18.7867"	Type:	LEFT
Radius:	7.204		
Length:	0.472	Tangent:	0.236
Mid-Ord:	0.004	External:	0.004
Chord:	0.472	Course:	N 29° 41' 52.4780" W

<u>Tangent Data</u>			
Length:	0.512	Course:	N 31° 34' 31.8713" W

Circular Curve Data

Delta:	03° 45' 18.7867"	Type:	LEFT
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Radius:	7.204	Tangent:	0.236
Length:	0.472	External:	0.004
Mid-Ord:	0.004	Course:	N 33° 27' 11.2648" W
Chord:	0.472		

Tangent Data

Length:	0.512	Course:	N 35° 19' 50.6578" W
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Circular Curve Data

Delta:	03° 45' 18.7867"	Type:	LEFT
Radius:	7.204		
Length:	0.472	Tangent:	0.236
Mid-Ord:	0.004	External:	0.004
Chord:	0.472	Course:	N 37° 12' 30.0514" W

Tangent Data

Length:	0.512	Course:	N 39° 05' 09.4447" W
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Circular Curve Data

Delta:	03° 45' 18.7871"	Type:	LEFT
Radius:	7.204		
Length:	0.472	Tangent:	0.236
Mid-Ord:	0.004	External:	0.004
Chord:	0.472	Course:	N 40° 57' 48.8381" W

Tangent Data

Length:	0.512	Course:	N 42° 50' 28.2315" W
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Circular Curve Data

Delta:	03° 45' 18.7867"	Type:	LEFT
Radius:	7.204		
Length:	0.472	Tangent:	0.236
Mid-Ord:	0.004	External:	0.004
Chord:	0.472	Course:	N 44° 43' 07.6250" W

Tangent Data

Length:	0.512	Course:	N 46° 35' 47.0182" W
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Circular Curve Data

Delta:	03° 45' 18.7862"	Type:	LEFT
Radius:	7.20		
Length:	0.47	Tangent:	0.236
	2		

Mid-Ord:	0.00 4	External:	0.004
Chord:	0.47 2	Course:	N 48° 28' 26.4116" W

Tangent Data

Length:	0.51 2	Course:	N 50° 21' 05.8044" W
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Circular Curve Data

Delta:	03° 45' 18.7876"	Type:	LEFT
Radius:	7.204		
Length:	0.472	Tangent:	0.236
Mid-Ord:	0.004	External:	0.004
Chord:	0.472	Course:	N 52° 13' 45.1983" W

Tangent Data

Length:	0.44 9	Course:	N 54° 06' 24.5921" W
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Circular Curve Data

Delta:	05° 26' 48.2498"	Type:	LEFT
Radius:	6.289		
Length:	0.598	Tangent:	0.299
Mid-Ord:	0.007	External:	0.007
Chord:	0.598	Course:	N 56° 49' 48.7170" W

Tangent Data

Length:	6.78 7	Course:	N 59° 33' 12.8419" W
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21 Alignment: ENLACE ENLACE G - A ESTE**Description:**Tangent Data

Length:	0.744	Course:	N 31° 00' 22.0121" E
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Circular Curve Data

Delta:	01° 53' 15.4263"	Type:	LEFT
Radius:	23.993		
Length:	0.790	Tangent:	0.395
Mid-Ord:	0.003	External:	0.003
Chord:	0.790	Course:	N 30° 03' 44.2990" E

<u>Tangent Data</u>			
Length:	0.356	Course:	N 29° 07' 06.5858" E

Circular Curve Data

Delta:	03° 46' 30.8520"	Type:	LEFT
Radius:	7.196		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.004	External:	0.004
Chord:	0.474	Course:	N 27° 13' 51.1600" E

Tangent Data

Length:	0.514	Course:	N 25° 20' 35.7338" E
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Circular Curve Data

Delta:	03° 46' 30.8520"	Type:	LEFT
Radius:	7.196		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.004	External:	0.004
Chord:	0.474	Course:	N 23° 27' 20.3080" E

Tangent Data

Length:	0.514	Course:	N 21° 34' 04.8819" E
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Circular Curve Data

Delta:	03° 46' 30.8521"	Type:	LEFT
Radius:	7.196		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.004	External:	0.004
Chord:	0.474	Course:	N 19° 40' 49.4559" E

Tangent Data

Length:	0.514	Course:	N 17° 47' 34.0299" E
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Circular Curve Data

Delta:	03° 46' 30.8521"	Type:	LEFT
Radius:	7.196		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.004	External:	0.004
Chord:	0.474	Course:	N 15° 54' 18.6039" E

Tangent Data

Length:	0.514	Course:	N 14° 01' 03.1778" E
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Circular Curve Data

Delta:	03° 46' 30.8521"	Type:	LEFT
Radius:	7.196		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.00	External:	0.004
	4		
Chord:	0.47	Course:	N 12° 07' 47.7517" E
	4		

Tangent Data

Length:	0.51	Course:	N 10° 14' 32.3257" E
	4		

Circular Curve Data

Delta:	03° 46' 30.8520"	Type:	LEFT
Radius:	7.196		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.004	External:	0.004
Chord:	0.474	Course:	N 08° 21' 16.8997" E

Tangent Data

Length:	0.51	Course:	N 06° 28' 01.4736" E
	4		

Circular Curve Data

Delta:	03° 46' 30.8521"	Type:	LEFT
Radius:	7.196		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.004	External:	0.004
Chord:	0.474	Course:	N 04° 34' 46.0476" E

Tangent Data

Length:	0.51	Course:	N 02° 41' 30.6216" E
	4		

Circular Curve Data

Delta:	03° 46' 30.8521"	Type:	LEFT
Radius:	7.196		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.004	External:	0.004
Chord:	0.474	Course:	N 00° 48' 15.1955" E

Tangent Data

Length:	0.51	Course:	N 01° 05' 00.2305" W
	4		

Circular Curve Data

Delta:	03° 46' 30.8520"	Type:	LEFT

Radius:	7.196	Tangent:	0.237
Length:	0.474	External:	0.004
Mid-Ord:	0.004	Course:	N 02° 58' 15.6565" W
Chord:	0.474		

Tangent Data

Length:	0.51	Course:	N 04° 51' 31.0824" W
4			

Circular Curve Data

Delta:	03° 46' 30.8522"	Type:	LEFT
Radius:	7.196		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.004	External:	0.004
Chord:	0.474	Course:	N 06° 44' 46.5085" W

Tangent Data

Length:	0.514	Course:	N 08° 38' 01.9346" W
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Circular Curve Data

Delta:	03° 46' 30.8520"	Type:	LEFT
Radius:	7.196		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.004	External:	0.004
Chord:	0.474	Course:	N 10° 31' 17.3607" W

Tangent Data

Length:	0.514	Course:	N 12° 24' 32.7866" W
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Circular Curve Data

Delta:	03° 46' 30.8520"	Type:	LEFT
Radius:	7.196		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.004	External:	0.004
Chord:	0.474	Course:	N 14° 17' 48.2126" W

Tangent Data

Length:	0.514	Course:	N 16° 11' 03.6387" W
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Circular Curve Data

Delta:	03° 46' 30.8523"	Type:	LEFT
Radius:	7.196		
Length:	0.474	Tangent:	0.237

Mid-Ord:	0.004	External:	0.004
Chord:	0.474	Course:	N 18° 04' 19.0646" W

Tangent Data

Length:	0.514	Course:	N 19° 57' 34.4909" W
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Circular Curve Data

Delta:	03° 46' 30.8518"	Type:	LEFT
Radius:	7.196		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.00	External:	0.004
	4		
Chord:	0.47	Course:	N 21° 50' 49.9169" W
	4		

Tangent Data

Length:	0.51	Course:	N 23° 44' 05.3427" W
	4		

Circular Curve Data

Delta:	03° 46' 30.8523"	Type:	LEFT
Radius:	7.196		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.004	External:	0.004
Chord:	0.474	Course:	N 25° 37' 20.7689" W

Tangent Data

Length:	0.51	Course:	N 27° 30' 36.1950" W
	4		

Circular Curve Data

Delta:	03° 46' 30.8520"	Type:	LEFT
Radius:	7.196		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.004	External:	0.004
Chord:	0.474	Course:	N 29° 23' 51.6209" W

Tangent Data

Length:	0.51	Course:	N 31° 17' 07.0468" W
	4		

Circular Curve Data

Delta:	03° 46' 30.8520"	Type:	LEFT
Radius:	7.196		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.004	External:	0.004
Chord:	0.474	Course:	N 33° 10' 22.4728" W

		<u>Tangent Data</u>	
Length:	0.51 4	Course:	N 35° 03' 37.8990" W

Circular Curve Data

Delta:	03° 46' 30.8523"	Type:	LEFT
Radius:	7.196		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.004	External:	0.004
Chord:	0.474	Course:	N 36° 56' 53.3250" W

Tangent Data

Length:	0.51 4	Course:	N 38° 50' 08.7511" W
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Circular Curve Data

Delta:	03° 46' 30.8519"	Type:	LEFT
Radius:	7.196		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.004	External:	0.004
Chord:	0.474	Course:	N 40° 43' 24.1769" W

Tangent Data

Length:	0.514	Course:	N 42° 36' 39.6031" W
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Circular Curve Data

Delta:	03° 46' 30.8523"	Type:	LEFT
Radius:	7.196		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.004	External:	0.004
Chord:	0.474	Course:	N 44° 29' 55.0291" W

Tangent Data

Length:	0.514	Course:	N 46° 23' 10.4554" W
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Circular Curve Data

Delta:	03° 46' 30.8520"	Type:	LEFT
Radius:	7.196		
Length:	0.474	Tangent:	0.237
Mid-Ord:	0.004	External:	0.004
Chord:	0.474	Course:	N 48° 16' 25.8811" W

Tangent Data

Length:	0.514	Course:	N 50° 09' 41.3072" W
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Circular Curve Data

Delta:	03° 46' 30.8523"	Type:	LEFT
Radius:	7.196	Tangent:	0.237
Length:	0.474	External:	0.004
Mid-Ord:	0.004	Course:	N 52° 02' 56.7331" W
Chord:	0.474		

Tangent Data

Length:	0.514	Course:	N 53° 56' 12.1592" W
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Circular Curve Data

Delta:	03° 46' 30.8522"	Type:	LEFT
Radius:	7.196	Tangent:	0.237
Length:	0.474	External:	0.004
Mid-Ord:	0.004	Course:	N 55° 49' 27.5855" W
Chord:	0.474		

Tangent Data

Length:	0.632	Course:	N 57° 42' 43.0114" W
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Circular Curve Data

Delta:	01° 53' 15.4260"	Type:	LEFT
Radius:	7.196	Tangent:	0.119
Length:	0.237	External:	0.001
Mid-Ord:	0.001	Course:	N 58° 39' 20.7243" W
Chord:	0.237		

Tangent Data

Length:	3.609	Course:	N 59° 35' 58.4373" W
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22 Alignment: ENLACE**ENLACE G - DDescription:**Tangent Data

Length:	0.639	Course:	S 30° 21' 30.7572" W
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Circular Curve Data

Delta:	01° 52' 26.8580"	Type:	LEFT
Radius:	23.994		
Length:	0.785	Tangent:	0.392
Mid-Ord:	0.003	External:	0.003
Chord:	0.785	Course:	S 29° 25' 17.3281" W

<u>Tangent Data</u>			
Length:	0.353	Course:	S 28° 29' 03.8990" W

Circular Curve Data

D	03° 44' 53.7167"	Type:	LEFT
elt	7.196		
a:			
R			
a			
di			
us:			
Length:	0.471	Tangent:	0.235
Mid-Ord:	0.004	External:	0.004
Chord:	0.471	Course:	S 26° 36' 37.0407" W

<u>Tangent Data</u>			
Length:	0.510	Course:	S 24° 44' 10.1826" W

Circular Curve Data

Delta:	03° 44' 53.7165"	Type:	LEFT
Radius:	7.196		
Length:	0.471	Tangent:	0.235
Mid-Ord:	0.004	External:	0.004
Chord:	0.471	Course:	S 22° 51' 43.3243" W

<u>Tangent Data</u>			
Length:	0.510	Course:	S 20° 59' 16.4461" W

Circular Curve Data

Delta:	03° 44' 53.7164"	Type:	LEFT
Radius:	7.196		
Length:	0.471	Tangent:	0.235
Mid-Ord:	0.004	External:	0.004
Chord:	0.471	Course:	S 19° 06' 49.6079" W

<u>Tangent Data</u>			
Length:	0.515	Course:	S 17° 14' 22.7496" W

Circular Curve Data

Delta:	03° 40' 38.7747"	Type:	LEFT
Radius:	7.196		
Length:	0.462	Tangent:	0.231
Mid-Ord:	0.004	External:	0.004
Chord:	0.462	Course:	S 15° 24' 03.3622" W

Tangent Data

Length:	0.522	Course:	S 13° 33' 43.9749" W
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Circular Curve Data

Delta:	03° 58' 32.6253"	Type:	LEFT
Radius:	7.196		
Length:	0.499	Tangent:	0.250
Mid-Ord:	0.004	External:	0.004
Chord:	0.499	Course:	S 11° 34' 27.6623" W

Tangent Data

Length:	0.485	Course:	S 09° 35' 11.3496" W
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Circular Curve Data

Delta:	03° 35' 29.7493"	Type:	LEFT
Radius:	7.196		
Length:	0.451	Tangent:	0.226
Mid-Ord:	0.004	External:	0.004
Chord:	0.451	Course:	S 07° 47' 26.4750" W

Tangent Data

Length:	0.520	Course:	S 05° 59' 41.6004" W
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Circular Curve Data

Delta:	03° 44' 53.7165"	Type:	LEFT
Radius:	7.196		
Length:	0.471	Tangent:	0.235
Mid-Ord:	0.004	External:	0.004
Chord:	0.471	Course:	S 04° 07' 14.7421" W

Tangent Data

Length:	0.510	Course:	S 02° 14' 47.8839" W
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Circular Curve Data

Delta:	03° 44' 53.7164"	Type:	LEFT
Radius:	7.196		
Length:	0.471	Tangent:	0.235
Mid-Ord:	0.004	External:	0.004
Chord:	0.471	Course:	S 00° 22' 21.0256" W

Tangent Data

Length:	0.510	Course:	S 01° 30' 05.8326" E
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Circular Curve Data

Delta:	03° 44' 53.7165"	Type:	LEFT
Radius:	7.196		
Length:	0.471	Tangent:	0.235
Mid-Ord:	0.004	External:	0.004
Chord:	0.471	Course:	S 03° 22' 32.6908" E

Tangent Data

Length:	0.510	Course:	S 05° 14' 59.5490" E
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Circular Curve Data

Delta:	03° 44' 53.7164"	Type:	LEFT
Radius:	7.196		
Length:	0.471	Tangent:	0.235
Mid-Ord:	0.004	External:	0.004
Chord:	0.471	Course:	S 07° 07' 26.4072" E

Tangent Data

Length:	0.510	Course:	S 08° 59' 53.2654" E
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Circular Curve Data

Delta:	03° 44' 53.7164"	Type:	LEFT
Radius:	7.196		
Length:	0.471	Tangent:	0.235
Mid-Ord:	0.004	External:	0.004
Chord:	0.471	Course:	S 10° 52' 20.1236" E

Tangent Data

Length:	0.510	Course:	S 12° 44' 46.9819" E
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Circular Curve Data

Delta:	03° 44' 53.7165"	Type:	LEFT
Radius:	7.196		

Length:	0.471	Tangent:	0.235
Mid-Ord:	0.004	External:	0.004
Chord:	0.471	Course:	S 14° 37' 13.8401" E

Tangent Data

Length:	0.510	Course:	S 16° 29' 40.6984" E
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Circular Curve Data

Delta:	03° 44' 53.7164"	Type:	LEFT
Radius:	7.196		
Length:	0.471	Tangent:	0.235
Mid-Ord:	0.004	External:	0.004
Chord:	0.471	Course:	S 18° 22' 07.5565" E

Tangent Data

Length:	0.510	Course:	S 20° 14' 34.4149" E
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Circular Curve Data

Delta:	03° 44' 53.7164"	Type:	LEFT
Radius:	7.196		
Length:	0.471	Tangent:	0.235
Mid-Ord:	0.004	External:	0.004
Chord:	0.471	Course:	S 22° 07' 01.2729" E

Tangent Data

Length:	0.510	Course:	S 23° 59' 28.1311" E
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Circular Curve Data

Delta:	03° 44' 53.7166"	Type:	LEFT
Radius:	7.196		
Length:	0.471	Tangent:	0.235
Mid-Ord:	0.004	External:	0.004
Chord:	0.471	Course:	S 25° 51' 54.9895" E

Tangent Data

Length:	0.510	Course:	S 27° 44' 21.8475" E
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Circular Curve Data

Delta:	03° 44' 53.7165"	Type:	LEFT
Radius:	7.196		
Length:	0.471	Tangent:	0.235
Mid-Ord:	0.004	External:	0.004

Chord: 0.471 Course: S 29° 36' 48.7058" E

Tangent Data

Length: 0.510 Course: S 31° 29' 15.5643" E

Circular Curve Data

Delta:	03° 44' 53.7163"	Type:	LEFT
Radius:	7.196		
Length:	0.471	Tangent:	0.235
Mid- Ord:	0.004	External:	0.004
Chord:	0.471	Course:	S 33° 21' 42.4224" E

Tangent Data

Length: 0.510 Course: S 35° 14' 09.2804" E

Circular Curve Data

Delta:	03° 44' 53.7167"	Type:	LEFT
Radius:	7.196		
Length:	0.471	Tangent:	0.235
Mid- Ord:	0.004	External:	0.004
Chord:	0.471	Course:	S 37° 06' 36.1386" E

Tangent Data

Length: 0.510 Course: S 38° 59' 02.9968" E

Circular Curve Data

Delta:	03° 44' 53.7164"	Type:	LEFT
Radius:	7.196		
Length:	0.471	Tangent:	0.235
Mid- Ord:	0.004	External:	0.004
Chord:	0.471	Course:	S 40° 51' 29.8552" E

Tangent Data

Length: 0.510 Course: S 42° 43' 56.7134" E

Circular Curve Data

Delta:	03° 44' 53.7165"	Type:	LEFT
Radius:	7.196		
Length:	0.471	Tangent:	0.235
Mid-Ord:	0.004	External:	0.004
Chord:	0.471	Course:	S 44° 36' 23.5717" E

Tangent Data

Length:	0.510	Course:	S 46° 28' 50.4297" E
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Circular Curve Data

Delta:	03° 44' 53.7165"	Type:	LEFT
Radius:	7.196		
Length:	0.471	Tangent:	0.235
Mid-Ord:	0.004	External:	0.004
Chord:	0.471	Course:	S 48° 21' 17.2881" E

Tangent Data

Length:	0.510	Course:	S 50° 13' 44.1464" E
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Circular Curve Data

Delta:	03° 44' 53.7161"	Type:	LEFT
Radius:	7.196		
Length:	0.471	Tangent:	0.235
Mid-Ord:	0.004	External:	0.004
Chord:	0.471	Course:	S 52° 06' 11.0046" E

Tangent Data

Length:	0.743	Course:	S 53° 58' 37.8626" E
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Circular Curve Data

Delta:	03° 26' 18.7516"	Type:	LEFT
Radius:	0.097		
Length:	0.006	Tangent:	0.003
Mid-Ord:	0.000	External:	0.000
Chord:	0.006	Course:	S 55° 41' 47.2185" E

Tangent Data

Length:	0.004	Course:	S 57° 24' 56.6127" E
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Circular Curve Data

Delta:	00° 18' 43.3112"	Type:	LEFT
Radius:	0.097		
Length:	0.001	Tangent:	0.000
Mid-Ord:	0.000	External:	0.000
Chord:	0.001	Course:	S 57° 34' 18.3346" E

Tangent Data

Length:	0.972	Course:	S 57° 43' 39.9247" E
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Circular Curve Data

Delta:	01° 52' 18.5125"	Type:	LEFT
Radius:	0.097		
Length:	0.003	Tangent:	0.002
Mid-Ord:	0.000	External:	0.000
Chord:	0.003	Course:	S 58° 39' 49.1926" E

Tangent Data

Length:	5.080	Course:	S 59° 35' 58.4373" E
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23 Alignment: ENLACE F -**EDescription:**Tangent Data

Length:	0.493	Course:	S 20° 16' 14.9469" W
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Circular Curve Data

Delta:	05° 02' 38.4222"	Type:	LEFT
Radius:	7.467		
Length:	0.657	Tangent:	0.329
Mid-Ord:	0.007	External:	0.007
Chord:	0.657	Course:	S 17° 44' 55.7357" W

Tangent Data

Length:	0.833	Course:	S 15° 13' 36.5246" W
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Circular Curve Data

D	05° 02' 38.4223"	Type:	LEFT
elt	7.467		
a:			
Ra			
di			
us:			
Length:	0.657	Tangent:	0.329
Mid-Ord:	0.007	External:	0.007
Chord:	0.657	Course:	S 12° 42' 17.3134" W

Tangent Data

Length:	0.833	Course:	S 10° 10' 58.1022" W
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Circular Curve Data

D	05° 02' 38.4223"	Type:	LEFT
elt	7.467		
a:			
Ra			
di			
us:			
Length:	0.65	Tangent:	0.329
	7		
Mid-	0.00	External:	0.007
Ord:	7		
Chord:	0.65	Course:	S 07° 39' 38.8911" W
	7		

Tangent Data

Length:	0.83	Course:	S 05° 08' 19.6799" W
	3		

Circular Curve Data

Delta:	05° 02' 38.4224"	Type:	LEFT
Radius:	7.467		
Length:	0.657	Tangent:	0.329
Mid-	0.007	External:	0.007
Ord:			
Chord:	0.657	Course:	S 02° 37' 00.4687" W

Tangent Data

Length:	0.83	Course:	S 00° 05' 41.2575" W
	3		

Circular Curve Data

Delta:	05° 02' 38.4224"	Type:	LEFT
Radius:	7.467		
Length:	0.657	Tangent:	0.329
Mid-	0.007	External:	0.007
Ord:			
Chord:	0.657	Course:	S 02° 25' 37.9536" E

Tangent Data

Length:	0.83	Course:	S 04° 56' 57.1648" E
	3		

Circular Curve Data

Delta:	05° 02' 38.4224"	Type:	LEFT
Radius:	7.467		
Length:	0.657	Tangent:	0.329
Mid-	0.007	External:	0.007
Ord:			
Chord:	0.657	Course:	S 07° 28' 16.3760" E

Tangent Data

Length:	0.83 3	Course:	S 09° 59' 35.5872" E
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Circular Curve Data

Delta:	05° 02' 38.4224"	Type:	LEFT
Radius:	7.467		
Length:	0.657	Tangent:	0.329
Mid-Ord:	0.007	External:	0.007
Chord:	0.657	Course:	S 12° 30' 54.7984" E

Tangent Data

Length:	0.833	Course:	S 15° 02' 14.0096" E
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Circular Curve Data

Delta:	05° 02' 38.4223"	Type:	LEFT
Radius:	7.467		
Length:	0.657	Tangent:	0.329
Mid-Ord:	0.007	External:	0.007
Chord:	0.657	Course:	S 17° 33' 33.2207" E

Tangent Data

Length:	0.833	Course:	S 20° 04' 52.4319" E
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Circular Curve Data

Delta:	05° 02' 38.4222"	Type:	LEFT
Radius:	7.467		
Length:	0.657	Tangent:	0.329
Mid-Ord:	0.007	External:	0.007
Chord:	0.657	Course:	S 22° 36' 11.6429" E

Tangent Data

Length:	0.833	Course:	S 25° 07' 30.8540" E
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Circular Curve Data

Delta:	05° 02' 38.4229"	Type:	LEFT
Radius:	7.467		
Length:	0.657	Tangent:	0.329
Mid-Ord:	0.007	External:	0.007
Chord:	0.657	Course:	S 27° 38' 50.0656" E

Tangent Data

Length:	0.833	Course:	S 30° 10' 09.2771" E
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Circular Curve Data

Delta:	05° 02' 38.4215"	Type:	LEFT
Radius:	7.467		
Length:	0.657	Tangent:	0.329
Mid-Ord:	0.007	External:	0.007
Chord:	0.657	Course:	S 32° 41' 28.4877" E

Tangent Data

Length:	0.833	Course:	S 35° 12' 47.6987" E
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Circular Curve Data

Delta:	05° 02' 38.4227"	Type:	LEFT
Radius:	7.467		
Length:	0.65 7	Tangent:	0.329
Mid- Ord:	0.00 7	External:	0.007
Chord:	0.65 7	Course:	S 37° 44' 06.9099" E

Tangent Data

Length:	0.83 3	Course:	S 40° 15' 26.1213" E
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Circular Curve Data

Delta:	05° 02' 38.4226"	Type:	LEFT
Radius:	7.467		
Length:	0.657	Tangent:	0.329
Mid- Ord:	0.007	External:	0.007
Chord:	0.657	Course:	S 42° 46' 45.3325" E

Tangent Data

Length:	0.83 3	Course:	S 45° 18' 04.5438" E
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Circular Curve Data

Delta:	05° 02' 38.4224"	Type:	LEFT
Radius:	7.467		
Length:	0.657	Tangent:	0.329
Mid- Ord:	0.007	External:	0.007
Chord:	0.657	Course:	S 47° 49' 23.7552" E

Tangent Data

Length:	0.83 3	Course:	S 50° 20' 42.9661" E
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Circular Curve Data

Delta:	05° 02' 38.4218"	Type:	LEFT
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Radius:	7.467	Tangent:	0.329
Length:	0.657	External:	0.007
Mid-Ord:	0.007		
Chord:	0.657	Course:	S 52° 52' 02.1770" E

<u>Tangent Data</u>			
Length:	0.989	Course:	S 55° 23' 21.3880" E

<u>Circular Curve Data</u>			
Delta:	02° 39' 05.9150"	Type:	LEFT
Radius:	7.467		
Length:	0.346	Tangent:	0.173
Mid-Ord:	0.002	External:	0.002
Chord:	0.346	Course:	S 56° 42' 54.3457" E

<u>Tangent Data</u>			
Length:	2.800	Course:	S 58° 02' 27.3030" E

<u>Circular Curve Data</u>			
Delta:	00° 04' 47.0705"	Type:	RIGHT
Radius:	7.467		
Length:	0.010	Tangent:	0.005
Mid-Ord:	0.000	External:	0.000
Chord:	0.010	Course:	S 58° 00' 03.7676" E

<u>Tangent Data</u>			
Length:	0.178	Course:	S 57° 57' 40.2321" E

24 Alignment:

ROTONDA Description:

<u>Tangent Data</u>			
Length:	1.221	Course:	N 34° 18' 14.8700" W

<u>Circular Curve Data</u>			
Delta:	354° 59' 59.9999"	Type:	LEFT
Radius:	14.000		
Length:	86.743	Tangent:	0.611
Mid-Ord:	27.987	External:	28.013
Chord:	1.221	Course:	S 34° 18' 14.8701" E

ANEJO N^º2: TRAZADO EN PLANTA

Vertical Alignment:

longitudinal a este

Description:

Station Range: Start: 0+000.00, End: 26+085.00

PVI	Station	Grade Out	Curve Length
0.00	0+000.00	-3.12%	
1.00	0+020.34	-9.70%	30.000m
Vertical Curve Information:(crest curve)			
PVC Station:	0+005.34	Elevation:	468.160m
PVI Station:	0+020.34	Elevation:	467.692m
PVT Station:	0+035.34	Elevation:	466.237m
High Point:	0+005.34	Elevation:	468.160m
Grade in:	-3.12%	Grade out:	-9.70%
Change:	6.58%	K:	4.55866360603403
Curve Length:	30.000m		
Passing Distance:	249.978m	Stopping Distance:	115.986m
2.00	0+079.02	-1.53%	30.000m
Vertical Curve Information:(sag curve)			
PVC Station:	0+064.02	Elevation:	463.455m
PVI Station:	0+079.02	Elevation:	462.000m
PVT Station:	0+094.02	Elevation:	461.771m
Low Point:	0+094.02	Elevation:	461.771m
Grade in:	-9.70%	Grade out:	-1.53%
Change:	8.17%	K:	3.67050428146613
Curve Length:	30.000m		
Headlight Distance:	50.188m		
3.00	0+210.00	8.67%	20.000m
Vertical Curve Information:(sag curve)			
PVC Station:	0+200.00	Elevation:	460.153m
PVI Station:	0+210.00	Elevation:	460.000m
PVT Station:	0+220.00	Elevation:	460.867m
Low Point:	0+203.00	Elevation:	460.130m
Grade in:	-1.53%	Grade out:	8.67%
Change:	10.20%	K:	1.96148893308817
Curve Length:			
20.000m	Headlight		

	Distance: 35.732m		
4.00	0+238.88	3.00%	20.000m
Vertical Curve Information:(crest curve)			
PVC Station:	0+228.88	Elevation:	461.637m
PVI Station:	0+238.88	Elevation:	462.504m
PVT Station:	0+248.88	Elevation:	462.804m
High Point:	0+248.88	Elevation:	462.804m
Grade in:	8.67%	Grade out:	3.00%
Change:	5.67%	K:	3.52773145814293
Curve Length:	20.000m	Passing Distance:	127.222m
5.00	0+260.85		

Vertical Alignment:

longitudinal a oeste

Description:

Station Range: Start: 0+000.00, End: 18+883.00

PVI	Station	Grade Out	Curve Length
0.00	0+000.00	-6.45%	
1.00	0+033.84	-7.37%	50.000m

Vertical Curve Information:(crest curve)

PVC Station: 0+008.84 Elevation: 474.265m

PVI Station: 0+033.84 Elevation: 472.654m

PVT Station: 0+058.84 Elevation: 470.811m

High Point: 0+008.84 Elevation: 474.265m

Grade in: -6.45% Grade out: -7.37%

Change: 0.92% K: 54.1068080846324

Curve Length: 50.000m

Passing Distance: 1,698.375m Stopping Distance: 744.161m

2.00	0+140.00	-3.00%	50.000m
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Vertical Curve Information:(sag curve)

PVC Station: 0+115.00 Elevation: 466.672m

PVI Station:	0+140.00	Elevation:	464.830m
PVT Station:	0+165.00	Elevation:	464.080m
Low Point:	0+165.00	Elevation:	464.080m
Grade in:	-7.37%	Grade out:	-3.00%
Change:	4.37%	K:	11.4414169654908
Curve Length:			
50.000mHeadlight			
Distance: 117.829m			
3.00	0+188.83		

Vertical Alignment:

longitudinal b

Description:

Station Range: Start: 0+000.00, End: 31+422.00

PVI	Station	Grade Out	Curve Length
0.00	0+000.00	-2.00%	
1.00	0+017.22	1.61%	20.000m
Vertical Curve Information:(sag curve)			
PVC Station: 0+007.22 Elevation: 455.891m PVI Station: 0+017.22 Elevation: 455.691m PVT Station: 0+027.22 Elevation: 455.851m Low Point: 0+018.31 Elevation: 455.780m			
Grade in: -2.00% Grade out: 1.61% Change: 3.61% K: 5.54338145272734			
Curve Length:			
20.000mHeadlight			
Distance: 126.761m			
2.00	0+253.52	2.00%	30.000m

Vertical Curve Information:(sag curve)			
PVC Station:	0+238.52 459.249m	PVI	Elevation: Station:
	0+253.52 459.490m	PVT	Elevation: Station:
	0+268.52 459.790m	Low	Elevation: Point:
	0+238.52 459.249m		Elevation:
Grade in:	1.61%	Grade out:	2.00%
Change:	0.39%	K:	76.5122929513768
Curve Length:			
30.000mHeadlight			
Distance:			
3.00	0+314.22		

Vertical Alignment:

longitudinal d norte

Description:

Station Range: Start: 0+000.00, End: 43+841.00

PVI	Station	Grade Out	Curve Length
0.00	0+000.00	0.00%	
1.00	0+035.00	-6.38%	50.000m

Vertical Curve Information:(crest curve)

PVC Station:	0+010.00	Elevation:	479.000m
PVI Station:	0+035.00	Elevation:	479.000m
PVT Station:	0+060.00	Elevation:	477.406m
High Point:	0+010.00	Elevation:	479.000m
Grade in:	0.00%	Grade out:	-6.38%
Change:	6.38%	K:	7.84090909084272
Curve Length:	50.000m		
Passing Distance:	267.498m	Stopping Distance:	129.217m
2.00	0+150.00	-1.07%	50.000m

	Vertical Curve Information:(sag curve)			
PVC Station:	0+125.00	Elevation:		
	473.261m	PVI	Station:	
0+150.00			Elevation:	
471.667m	PVT	Station:		
0+175.00			Elevation:	
471.398m	Low	Point:		
0+175.00			Elevation:	
471.398m				
Grade in:	-6.38%	Grade out:	-1.07%	
Change:	5.30%	K:	9.42899762792505	
Curve Length:				
50.000mHeadlight				
Distance: 93.490m				
3.00	0+279.32	-4.99%		50.000m
	Vertical Curve Information:(crest curve)			
PVC Station:	0+254.32	Elevation:	470.546m	
PVI Station:	0+279.32	Elevation:	470.278m	
PVT Station:	0+304.32	Elevation:	469.030m	
High Point:	0+254.32	Elevation:	470.546m	
Grade in:	-1.07%	Grade out:	-4.99%	
Change:	3.92%	K:	12.7697559700521	
Curve Length:	50.000m			
Passing Distance: 419.933m		Stopping Distance:	194.729m	
4.00	0+380.00	-3.00%		50.000m
	Vertical Curve Information:(sag curve)			
PVC Station:	0+355.00	Elevation:		
	466.502m	PVI	Station:	
0+380.00			Elevation:	
465.254m	PVT	Station:		
0+405.00			Elevation:	
464.504m				
Low Point:	0+405.00	Elevation:	464.504m	
Grade in:	-4.99%	Grade out:	-3.00%	
Change:	1.99%	K:	25.1316572332953	
Curve Length:				
50.000mHeadlight				
Distance: 1,023.449m				
5.00	0+438.41			

Vertical Alignment:
longitudinal d sur
Description:
Station Range: Start: 0+070.00, End: 33+046.00

PVI	Station	Grade Out	Curve Length
0.00	0+090.00	6.49%	50.000m
Vertical Curve Information:(sag curve)			
PVC Station:	0+065.00	Elevation:	448.729m
PVI Station:	0+090.00	Elevation:	449.787m
PVT Station:	0+115.00	Elevation:	451.409m
Low Point:	0+065.00	Elevation:	448.729m
Grade in:	4.23%	Grade out:	6.49%
Change:	2.26%	K:	22.1505457006203
Curve Length:	50.000m		
Headlight Distance:	501.065m		
1.00	0+260.00	3.00%	50.000m
Vertical Curve Information:(crest curve)			
PVC Station:	0+235.00	Elevation:	459.196m
PVI Station:	0+260.00	Elevation:	460.818m
PVT Station:	0+285.00	Elevation:	461.568m
High Point:	0+285.00	Elevation:	461.568m
Grade in:	6.49%	Grade out:	3.00%
Change:	3.49%	K:	14.3309148913555
Curve Length:	50.000m		
Passing Distance:	468.216m	Stopping Distance:	215.479m
2.00	0+330.46		

Vertical Alignment:
long e este
Description:
Station Range: Start: 0+000.00, End: 13+729.00

PVI	Station	Grade Out	Curve Length
0.00	0+040.00	6.63%	30.000m
Vertical Curve Information:(sag curve)			

PVC Station:	0+025.00	Elevation:	455.157m
PVI Station:	0+040.00	Elevation:	455.919m
PVT Station:	0+055.00	Elevation:	456.914m
Low Point:	0+025.00	Elevation:	455.157m
Grade in:	5.08%	Grade out:	6.63%
Change:	1.55%	K:	19.3331820472861
Curve Length:	30.000m		
Headlight Distance:			
1.00	0+115.53	0.16%	20.000m
Vertical Curve Information:(crest curve)			
PVC Station:	0+105.53	Elevation:	460.265m
PVI Station:	0+115.53	Elevation:	460.928m
PVT Station:	0+125.53	Elevation:	460.944m
High Point:	0+125.53	Elevation:	460.944m
Grade in:	6.63%	Grade out:	0.16%
Change:	6.47%	K:	3.09208134213348
Curve Length:	20.000m		
Passing Distance:	249.074m	Stopping Distance:	112.746m
2.00	0+137.29		

Vertical Alignment:

long e oeste

Description:

Station Range: Start: 0+000.00, End: 39+215.00

PVI	Station	Grade Out	Curve Length
0.00	0+000.00	0.23%	
1.00	0+280.00	5.33%	50.000m
Vertical Curve Information:(sag curve)			
PVC Station:	0+255.00	Elevation:	447.942m
PVI Station:	0+280.00	Elevation:	448.000m
PVT Station:	0+305.00	Elevation:	449.333m
Low Point:	0+255.00	Elevation:	447.942m
Grade in:	0.23%	Grade out:	5.33%
Change:	5.10%	K:	9.79770794893979
Curve Length:	50.000m		
Headlight Distance:	97.560m		
2.00	0+355.00	5.08%	40.000m

	Vertical Curve Information:(crest curve)			
PVC Station:	0+335.00	Elevation:	450.933m	
PVI Station:	0+355.00	Elevation:	452.000m	
PVT Station:	0+375.00	Elevation:	453.016m	
High Point:	0+375.00	Elevation:	453.016m	
Grade in:	5.33%	Grade out:	5.08%	
Change:	0.25%	K:	158.171220242329	
Curve Length:	40.000m			
Passing Distance:	6,134.751m	Stopping Distance:	2,647.916m	
3.00	0+392.15			

Vertical Alignment:
long f
Description:
Station Range: Start: 0+000.00, End: 9+915.00

PVI	Station	Grade Out	Curve Length
0.00	0+000.00	0.31%	
1.00	0+065.00	2.00%	30.000m

	Vertical Curve Information:(sag curve)			
PVC Station:	0+050.00	Elevation:	453.157m	
PVI Station:	0+065.00	Elevation:	453.204m	
PVT Station:	0+080.00	Elevation:	453.504m	
Low Point:	0+050.00	Elevation:	453.157m	
Grade in:	0.31%	Grade out:	2.00%	
Change:	1.69%	K:	17.7924495460845	
Curve Length:	30.000m			
Headlight Distance:				
2.00	0+099.15			

Vertical Alignment:
longitudinal g
Description:
Station Range: Start: 0+000.00, End: 34+207.00

PVI	Station	Grade Out	Curve Length
0.00	0+000.00	1.33%	
1.00	0+173.78	4.97%	50.000m

	Vertical Curve Information:(sag curve)			
PVC Station:	0+148.78	Elevation:	471.411m	
PVI Station:	0+173.78	Elevation:		
	471.743m	PVT	Station:	
	0+198.78		Elevation:	
	472.986m	Low	Point:	
	0+148.78		Elevation:	
	471.411m			
Grade in:	1.33%	Grade out:	4.97%	
Change:	3.64%	K:	13.7437178265726	
Curve Length:				
	50.000mHeadlight			
	Distance: 153.737m			
2.00	0+300.00	2.00%	30.000m	
	Vertical Curve Information:(crest curve)			
PVC Station:	0+285.00	Elevation:	477.270m	
PVI Station:	0+300.00	Elevation:	478.015m	
PVT Station:	0+315.00	Elevation:	478.315m	
High Point:	0+315.00	Elevation:	478.315m	
Grade in:	4.97%	Grade out:	2.00%	
Change:	2.97%	K:	10.104716487221	
Curve Length:	30.000m			
	Passing Distance: 535.852m	Stopping Distance:	238.845m	
3.00	0+342.07			

Vertical Alignment:

LONG (3)

Description:

Station Range: Start: 0+000.00, End: 8+000.00

PVI	Station	Grade Out	Curve Length
0.00	0+000.00	7.63%	
1.00	0+030.00	0.00%	20.000m
Vertical Curve Information:(crest curve)			
PVC Station:	0+020.00	Elevation:	461.603m
PVI Station:	0+030.00	Elevation:	462.366m
PVT Station:	0+040.00	Elevation:	462.366m
High Point:	0+040.00	Elevation:	462.366m
Grade in:	7.63%	Grade out:	0.00%

	Change:	7.63%	K:	2.62123197901304
	Curve Length:	20.000m		
	Passing Distance:	212.669m	Stopping Distance:	97.100m
2.00	0+062.20	-7.38%		20.000m
Vertical Curve Information:(crest curve)				
	PVC Station:	0+052.20	Elevation:	462.366m

ANEJO Nº3: VALORACIÓN DE LAS OBRAS

Presupuesto y medición

VALORACIÓN ESTRUCTURAS Y OBRAS
Presupuesto parcial nº 1 PUENTE VIAL A

Página 1

Código	Ud	Denominación	Medición	Precio	Total
1.1 CIMENTACIONES Y ESTRIBOS					
1.1.1 02.02	m3	Excavación en cimientos y pozos en tierra, incluso agotamiento de agua, carga y transporte de los productos de la excavación a vertedero o lugar de empleo.			
	Uds.	Largo	Ancho	Alto	Subtotal
Zapatas pilares	10	5,000	2,200	3,000	330,000
Zapatas Esteribos	2	30,000	7,000	3,000	1.260,000
Zapatas Aletas	4	12,000	3,000	2,000	288,000
	Total m3			1.878,000	3,86 7.249,08
1.1.2 01.01.04	m3	Metro cúbico de hormigón en masa para limpieza tipo HM-15, de tamaño máximo de árido 20 mm y consistencia plástica, puesto en obra, incluso vertido, vibrado y curado.			
	Uds.	Largo	Ancho	Alto	Subtotal
zapatas	8	5,000	2,200	0,100	8,800
Esteribos	2	30,000	7,000	0,100	42,000
Aletas	4	12,000	3,000	0,100	14,400
	Total m3			65,200	82,30 5.365,96
1.1.3 03.01.03	m3	Hormigonado de muros de estribo con hormigón HA-30/B/20 y ambiente I-IIa. Fabricado en central y vertido con bomba. Puesto en obra según EHE.			
	Uds.	Largo	Ancho	Alto	Subtotal
Esteribos	2	30,000	2,250	5,000	675,000
Aletas	2	5,000	12,000	0,500	60,000
	Total m3			735,000	135,00 99.225,00
1.1.4 03.02.03	m3	Hormigonado de lasas con hormigón HA-35/B/20, y ambiente I-IIa fabricado en central y vertido con bomba. Puesto en obra según EHE. i. encofrado y desencofrado			
	Uds.	Largo	Ancho	Alto	Subtotal
	8	5,000	2,200	1,500	132,000
	2	30,000	7,000	1,500	630,000
	4	12,000	3,000	1,000	144,000
	Total m3			906,000	142,00 128.652,00
1.1.5 03.01.02	kg	Acero B-500S en barras corrugadas de diámetro entre 6 y 32 mm colocado en lasas, según EHE. Según mediciones auxiliares			
	Uds.	Largo	Ancho	Alto	Subtotal
	1	735,000	65,000		47.775,000
	1	906,000	55,000		49.830,000
	Total kg			97.605,000	1,29 125.910,45
1.1.6 01.01.05	m3	Relleno hormigón ciclopé			
	Uds.	Largo	Ancho	Alto	Subtotal
Zapatas pilares	8	5,000	2,200	1,500	132,000
Zapatas Esteribos	2	30,000	7,000	1,500	630,000
Zapatas Aletas	4	12,000	3,000	1,000	144,000
	Total m3			906,000	70,81 64.153,86
1.2 TABLERO Y PILAS					
1.2.1 03.03.01	m	Viga Artesa 1,4 x 1,45 metros de largo pretensada, puesta en obra, colocada sobre apoyos.			
	Uds.	Largo	Ancho	Alto	Subtotal
	4	33,000			132,000
	4	16,000			64,000
	Total m			196,000	750,00 147.000,00

VALORACIÓN ESTRUCTURAS Y OBRAS
Presupuesto parcial nº 1 PUENTE VIAL A

Página 2

Código	Ud	Denominación	Medición	Precio	Total
1.2.2 03.03.02	m2	prelosa pretensada de hormigón armado como encofrado perdido en puente de vigas, colocada			
	Uds.	Largo	Ancho	Alto	Subtotal
	1	60,000	23,000		1.380,000
	-4	60,000	1,400		-336,000
		Total m2		1.044,000	27,81
					29.033,64
1.2.3 03.03.03	kg	Aceros B-500S en barras corrugadas de diámetro entre 6 y 32 mm colocado en losas, según EHE. Según mediciones auxiliares			
	Uds.	Largo	Ancho	Alto	Subtotal
	85	444,000			37.740,000
		Total kg		37.740,000	1,29
					48.684,60
1.2.4 03.02.03	m3	Hormigonado de lasas con hormigón HA-35/B/20, y ambiente I-IIa fabricado en central y vertido con bomba. Puesto en obra según EHE. i. encofrado y desencofrado			
	Uds.	Largo	Ancho	Alto	Subtotal
	1	60,000	23,000	0,400	552,000
	-1	1.044,000		0,150	-156,600
		Total m3		395,400	142,00
					56.146,80
1.2.5 10.01	ml	Junta de dilatación desplazamiento máximo admisible 42 mm			
	Uds.	Largo	Ancho	Alto	Subtotal
	6	11,500			69,000
		Total ml		69,000	600,00
					41.400,00
1.2.6 10.02	ud	Imborral de tablero			
	Uds.	Largo	Ancho	Alto	Subtotal
	6				6,000
		Total ud		6,000	283,25
					1.699,50
1.2.7 10.04	ud	Apoyo de neopreno 250x200x41 mm			
	Uds.	Largo	Ancho	Alto	Subtotal
	10				10,000
		Total ud		10,000	475,00
					4.750,00
1.2.8 01.02.PIL	ML	PILA PREFABRICADA HORMIGÓN 1X1 METRO			
	Uds.	Largo	Ancho	Alto	Subtotal
	8	3,900			31,200
		Total ML		31,200	675,00
					21.060,00
1.3 BALIZAMIENTO Y DEFENSAS					
1.3.1 10.20	ml	Barandilla blonda a doble altura			
	Uds.	Largo	Ancho	Alto	Subtotal
Laterales	2	60,000			120,000
		Total ml		120,000	103,00
					12.360,00
1.3.2 10.06B	ml	Pretil metálico marcado CE			
	Uds.	Largo	Ancho	Alto	Subtotal
	2	60,000			120,000
		Total ml		120,000	334,75
					40.170,00
1.3.3 10.06	ml	Barandilla zona peatonal puente 1,35 metros de alto			
	Uds.	Largo	Ancho	Alto	Subtotal
	2	60,000			120,000
		Total ml		120,000	122,00
					14.640,00

1.4 FIRMES

VALORACIÓN ESTRUCTURAS Y OBRAS
Presupuesto parcial n° 1 PUENTE VIAL A

Página 3

Código	Ud	Denominación	Medición	Precio	Total
1.4.1 04.02	Tm	Tm. Pavimento de aglomerado asfáltico en caliente, elaborado en planta, de composición densa AC16 surf D, con árido granítico; extendida y compactación al 98% del ensayo Marshall, según PG-3.			
	Uds.	Largo	Ancho	Alto	Subtotal
	2,55	60,000	14,000	0,060	128,520
		Total Tm			128,520
				66,95	8.604,41
1.4.2 04.08	m2	Riego de imprimación con emulsión bituminosa; sobre superficie barrida y regado del soporte, según PG 3-530, i/protección de elementos ajenos.			
	Uds.	Largo	Ancho	Alto	Subtotal
	1	60,000	14,000		840,000
		Total m2			840,000
				0,77	646,80
1.4.3 PAVPEAT	M2	PAVIMENTO PEATONAL PUENTE			
	Uds.	Largo	Ancho	Alto	Subtotal
	1	60,000	9,000		540,000
		Total M2			540,000
				35,00	18.900,00

VALORACIÓN ESTRUCTURAS Y OBRAS
Presupuesto parcial nº 2 PUENTE VIAL D

Página 4

Código	Ud	Denominación	Medición	Precio	Total
2.1 CIMENTACIONES Y ESTRIBOS					
2.1.1 02.02	m3	Excavación en cimientos y pozos en tierra, incluso agotamiento de agua, carga y transporte de los productos de la excavación a vertedero o lugar de empleo.			
	Uds.	Largo	Ancho	Alto	Subtotal
	2	26,000	8,000	3,000	1.248,000
		Total m3			1.248,000
					3,86
					4.817,28
2.1.2 01.01.04	m3	Metro cúbico de hormigón en masa para limpieza tipo HM-15, de tamaño máximo de árido 20 mm y consistencia plástica, puesto en obra, incluso vertido, vibrado y curado.			
	Uds.	Largo	Ancho	Alto	Subtotal
	2	27,000	8,000	0,100	43,200
		Total m3			43,200
					82,30
					3.555,36
2.1.3 03.01.03	m3	Hormigonado de muros de estribo con hormigón HA-30/B/20 y ambiente I-IIa. Fabricado en central y vertido con bomba. Puesto en obra según EHE.			
	Uds.	Largo	Ancho	Alto	Subtotal
	2	24,000	3,000	6,000	864,000
		Total m3			864,000
					135,00
					116.640,00
2.1.4 03.01.02	kg	Acero B-500S en barras corrugadas de diámetro entre 6 y 32 mm colocado en losas, según EHE. Según mediciones auxiliares			
	Uds.	Largo	Ancho	Alto	Subtotal
	1	864,000	65,000		56.160,000
		Total kg			56.160,000
					1,29
					72.446,40
2.1.5 01.01.05	m3	Relleno hormigón ciclopéo			
	Uds.	Largo	Ancho	Alto	Subtotal
	2	26,000	8,000	1,500	624,000
		Total m3			624,000
					70,81
					44.185,44
2.2 TABLERO					
2.2.1 03.03.01	m	Viga Artesa 1,4 x 1,45 metros de largo pretensada, puesta en obra, colocada sobre apoyos.			
	Uds.	Largo	Ancho	Alto	Subtotal
	4	32,000			128,000
		Total m			128,000
					750,00
					96.000,00
2.2.2 03.03.02	m2	prelosa pretensada de hormigón armado como encofrado perdido en puente de vigas, colocada			
	Uds.	Largo	Ancho	Alto	Subtotal
	2	30,000	11,000		660,000
	-4	30,000	1,450		-174,000
		Total m2			486,000
					27,81
					13.515,66
2.2.3 03.03.03	kg	Acero B-500S en barras corrugadas de diámetro entre 6 y 32 mm colocado en losas, según EHE. Según mediciones auxiliares			
	Uds.	Largo	Ancho	Alto	Subtotal
	1	198,000	65,000		12.870,000
		Total kg			12.870,000
					1,29
					16.602,30
2.2.4 03.02.03	m3	Hormigonado de losas con hormigón HA-35/B/20, y ambiente I-IIa fabricado en central y vertido con bomba. Puesto en obra según EHE. i. encofrado y desencofrado			
	Uds.	Largo	Ancho	Alto	Subtotal
	2	30,000	11,000	0,300	198,000
		Total m3			198,000
					142,00
					28.116,00

VALORACIÓN ESTRUCTURAS Y OBRAS
Presupuesto parcial n° 2 PUENTE VIAL D

Página 5

Código	Ud	Denominación	Medición	Precio	Total
2.2.5 10.01 ml Junta de dilatación desplazamiento máximo admisible 42 mm					
	Uds.	Largo	Ancho	Alto	Subtotal
	4	11,000			44,000
Total ml:					
					44,000
2.2.6 10.02 ud Imborral de tablero					
		Total ud:			
					6,000
2.2.7 10.04 ud Apoyo de neopreno 250x200x41 mm					
	Uds.	Largo	Ancho	Alto	Subtotal
	8				8,000
Total ud:					
					8,000
2.3 BALIZAMIENTO Y DEFENSAS					
2.3.1 10.20 ml Barandilla bionda a doble altura					
	Uds.	Largo	Ancho	Alto	Subtotal
	2	30,000			60,000
Total ml:					
					60,000
2.3.2 10.06 ml Barandilla zona peatonal puente 1,35 metros de alto					
	Uds.	Largo	Ancho	Alto	Subtotal
	2	30,000			60,000
Total ml:					
					60,000
2.3.3 10.06B ml Pretil metálico marcado CE					
	Uds.	Largo	Ancho	Alto	Subtotal
	2	30,000			60,000
Total ml:					
					60,000
2.4 FIRMES					
2.4.1 04.02 Tm Pavimento de aglomerado asfáltico en caliente, elaborado en planta, de composición densa AC16 surf D, con árido granítico; extendida y compactación al 98% del ensayo Marshall, según PG-3.					
	Uds.	Largo	Ancho	Alto	Subtotal
	2,55	30,000	7,000	0,060	32,130
Total Tm:					
					32,130
2.4.2 04.08 m2 Riego de imprimación con emulsión bituminosa; sobre superficie barrida y regado del soporte, según PG 3-530, i/protección de elementos ajenos.					
	Uds.	Largo	Ancho	Alto	Subtotal
	2	30,000	7,000		420,000
Total m2:					
					420,000
2.4.3 PAVPEAT M2 PAVIMENTO PEATONAL PUENTE					
	Uds.	Largo	Ancho	Alto	Subtotal
	2	4,000	30,000		240,000
Total M2:					
					240,000

VALORACIÓN ESTRUCTURAS Y OBRAS
Presupuesto parcial nº 3 MARCO CRUCE CALLE E

Página 6

Código	Ud	Denominación	Medición	Precio	Total			
3.1 CIMENTACIONES								
3.1.1 02.02								
	m3	Excavación en cimientos y pozos en tierra, incluso agotamiento de agua, carga y transporte de los productos de la excavación a vertedero o lugar de empleo.						
	Uds.	Largo	Ancho	Alto	Subtotal			
Aletas	1	26,000	5,500	2,000	286,000			
	4	6,000	3,000	2,000	144,000			
	Total m3			430,000	3,86 1.659,80			
3.1.2 01.01.04								
	m3	Metro cúbico de hormigón en masa para limpieza tipo HM-15, de tamaño máximo de árido 20 mm y consistencia plástica, puesto en obra, incluso vertido, vibrado y curado.						
	Uds.	Largo	Ancho	Alto	Subtotal			
	1	26,000	5,500	0,100	14,300			
	4	6,000	3,000	0,100	7,200			
	Total m3			21,500	82,30 1.769,45			
3.1.3 03.02.03								
	m3	Hormigonado de lasas con hormigón HA-35/B/20, y ambiente I-IIa fabricado en central y vertido con bomba. Puesto en obra según EHE. i. encofrado y desencofrado						
	Uds.	Largo	Ancho	Alto	Subtotal			
	1	26,000	5,500	1,000	143,000			
	4	6,000	3,000	1,000	72,000			
	Total m3			215,000	142,00 30.530,00			
3.1.4 03.01.02								
	kg	Acero B-500S en barras corrugadas de diámetro entre 6 y 32 mm colocado en lasas, según EHE. Según mediciones auxiliares						
	Uds.	Largo	Ancho	Alto	Subtotal			
	1	215,000	55,000		11.825,000			
	Total kg			11.825,000	1,29 15.254,25			
3.1.5 01.01.05								
	m3	Relleno hormigón ciclopé						
	Uds.	Largo	Ancho	Alto	Subtotal			
	1	26,000	5,500	0,900	128,700			
	4	6,000	3,000	0,900	64,800			
	Total m3			193,500	70,81 13.701,74			
3.2 ALZADOS								
3.2.1 03.02.03								
	m3	Hormigonado de lasas con hormigón HA-35/B/20, y ambiente I-IIa fabricado en central y vertido con bomba. Puesto en obra según EHE. i. encofrado y desencofrado						
	Uds.	Largo	Ancho	Alto	Subtotal			
	2	26,000	0,500	2,000	52,000			
	1	26,000	5,500	0,500	71,500			
Aletas	2	6,000	4,500	0,500	27,000			
	Total m3			150,500	142,00 21.371,00			
3.2.2 03.02.02								
	kg	Acero B-500S en barras corrugadas de diámetro entre 6 y 32 mm colocado en lasas, según EHE. Según mediciones auxiliares						
	Uds.	Largo	Ancho	Alto	Subtotal			
	1	150,500	65,000		9.782,500			
	Total kg			9.782,500	1,29 12.619,43			
3.2.3 10.a								
	ud	Impermeabilización trasdos estribo						
	Total ud			1,000	8.940,73 8.940,73			

VALORACIÓN ESTRUCTURAS Y OBRAS
Presupuesto parcial nº 4 PRESA Y PUNTOS VERTIDO

Página 7

Código	Ud	Denominación	Medición	Precio	Total
4.1 PUNTOS VERTIDO PLUVIALES					
4.1.1 04.01.01	UD	SEPARADOR DE GRASAS E HIDROCARBUROS POR COALESCENCIA 1350 L/S, dn 880 mm INCLUSO INSTALACIÓN, EXCAVACIÓN Y EMISARIOS EN PUNTO DE VERTIDO 1			
		Total UD	2,000	48.500,00	97.000,00
4.1.2 04.01.02	UD	SEPARADOR DE GRASAS E HIDROCARBUROS POR COALESCENCIA 1350 L/S, dn 880 mm INCLUSO INSTALACIÓN, EXCAVACIÓN Y EMISARIOS EN PUNTO DE VERTIDO 2			
		Total UD	2,000	48.500,00	97.000,00
4.2 PRESA					
4.2.1 04.02.02	ML	PRESA PERFIL CREAGER 1,2 METROS DE ALTO			
		Total ML	75,000	440,00	33.000,00
4.2.2 02.02	m3	Excavación en cimientos y pozos en tierra, incluso agotamiento de agua, carga y transporte de los productos de la excavación a vertedero o lugar de empleo.			
	Uds.	Largo	Ancho	Alto	Subtotal
	1	75,000	5,000	2,000	750,000
		Total m3		750,000	3,86 2.895,00
4.2.3 01.01.05	m3	Relleno hormigón ciclópeo			
	Uds.	Largo	Ancho	Alto	Subtotal
	1	75,000	2,000	1,250	187,500
		Total m3		187,500	70,81 13.276,88

VALORACIÓN DE TRABAJOS DE MARCO BAJO VÍA DE TREN CON APEO DE VÍAS

UD	DESCRIPCIÓN	MEDICIÓN	PRECIO	COSTE
CAPÍTULO 1: PREPARACIÓN DE SOLERA DE DESLIZAMIENTO				
M2	Desbroce Terreno	170	1,35 €	229,50 €
UD	Traslado árbol existente hasta 10 metros de alto y 30 cm de diámetro	30	525,00 €	15.750,00 €
	Excavación Todo Tipo de terreno hasta 1,5 metros de profundidad	255	3,75 €	956,25 €
m3	RELENO MATERIAL PRÉSTAMO	85	7,80 €	663,00 €
m3	ZAHORRA ARTIFICIAL	68	25,00 €	1.700,00 €
	Demolición paramentos de Hormigón por medios mecánicos	3,5	70,00 €	245,00 €
m2	lámina poliestireno expandido 300 g/m2	14,45	4,25 €	61,41 €
ud	HORM. HA-35/B/20/XC4 Hormigón en masa para armar, con tamaño máximo del árido de 20mm., elaborado en central, i/vertido por medios manuales y mecánicos, vibrado y colocación. Según Código Estructural	48,45	140,00 €	6.783,00 €
ud	Acero B-500S	2907	1,20 €	3.488,40 €
	Total capítulo			29.876,56 €
CAPÍTULO 2: APEO DE VÍAS				
M2	Colocación de Estructura Apeo de Vigas según NAP 6-2-5-1 Apeos de Vía de ADIF, incluyendo refuerzo longitudinal de vía, vigas de atado y maniobra	144	275,00 €	39.600,00 €
	Total capítulo			39.600,00 €
CAPÍTULO 3: CONSTRUCCIÓN DE MARCO DE VÍA DE 9,20X 5,50 DE DIMENSIONES INTERNAS				
ud	HORM. HA-35/B/20/XC4 Hormigón en masa para armar, con tamaño máximo del árido de 20mm., elaborado en central, i/vertido por medios manuales y mecánicos, vibrado y colocación. Según Código Estructural	435,6	140,00 €	60.984,00 €
ud	Acero B-500S	57499,2	1,20 €	68.999,04 €
m2	Montaje de sistema de encofrado recuperable metálico	403,2	28,00 €	11.289,60 €
m2	Desencofrado	403,2	8,00 €	3.225,60 €
	Total capítulo			144.498,24 €
CAPÍTULO 4: EMPUJE E HINCA				
m3	Excavación de terreno no clasificado de vaciado de cajón de hormigón bajo vía férrea por el procedimiento de empuje oleodinámica, con medios mecánicos y manuales, incluidas partes proporcionales de roca, carga y transporte a vertedero, acopio o lugar de uso	1422	14,50 €	20.619,00 €
ud	Superficie de empuje para cajón en pie de obra incluyendo medios auxiliares y ayudas necesarias, totalmente acabado. Incluye el precio del coste energético necesario para realizar todas las operaciones que implica el proceso, durante la descarga y retirada de los equipos y también la traslación de la estructura (P - 1)	225	625,00 €	140.625,00 €

ud	Construcción de dados de hormigón para el apoyo de las vigas de alineación, incluida excavación, hormigonado, placa de anclaje y encofrado de 1x1x1m. (P - 2)	21	525,00 €	11.025,00 €
ud	Transporte de material, carga y descarga e instalación y desinstalación de maquinaria de empuje. Incluye el precio de custodia y vigilancia de los equipos durante el transcurso de la obra. (P - 5)	1	42.000,00 €	42.000,00 €
Total capítulo				214.269,00 €
CAPÍTULO 5: DESMONTAJE ESTRUCTURA DE APEO Y RESTITUCIÓN SUPERESTRUCTURA DE VÍAS				
M3	Sumistro de balasto y vertido en la vía. (P - 6)	32,76	40,00 €	1.310,40 €
ud	Retirada de refuerzo longitudinal, vigas de atado y maniobra	1	5.750,00 €	5.750,00 €
ml	Nivelación, alineación, bateado y perfilado de la vía. (P - 4)	16	88,00 €	1.408,00 €
Total capítulo				8.468,40 €
CAPÍTULO 5: CONSTRUCCIÓN DE ALETAS				
ud	HORM. HA-35/B/20/XC4 Hormigón en masa para armar, con tamaño máximo del árido de 20mm., elaborado en central, y/vertido por medios manuales y mecánicos, vibrado y colocación. Según Código Estructural	64,61	140,00 €	9.045,40 €
ud	Acero B-500S	3876,6	1,20 €	4.651,92 €
M2	Montaje de sistema de encofrado recuperable metálico	46,9	28,00 €	1.313,20 €
M2	Desencofrado	46,9	8,00 €	375,20 €
m3	Hormigón en masa HM-20 de dosificación 200 Kg/m ³ , con tamaño máximo del árido de 20 mm. elaborado en central para limpieza y nivelado de fondos de cimentación, incluso vibrado y colocación. El espesor mínimo será de 10 cm., según CTE/DB-SE-C y EHE-08.	2,1	75,00 €	157,50 €
Total capítulo				15.543,22 €
CAPÍTULO 6: IMPERMEABILIZACIÓN				
m2	impermeabilización marco y aletas con lámina asfática	333,7	40,00 €	13.348,00 €
Total capítulo				13.348,00 €
CAPÍTULO 8: planes gestión residuos, seguridad y salud y calidad				
ud	Gestión de residuos y plan	1	7.250,00 €	7.250,00 €
ud	Plan Seguridad y Salud	1	15.000,00 €	15.000,00 €
ud	Plan Control Calidad	1	6.750,00 €	6.750,00 €
ud	Plan Control Ambiental	1	15.000,00 €	15.000,00 €
Total capítulo				44.000,00 €

PRESUPUESTO DE EJECUCIÓN MATERIAL

1. Puente vial A	875.652,10
2. Puente vial D	472.237,44
3. Marco Cruce Calle E	105.846,40
4. Presa Well, Separadores y Puntos Vertido	243.171,88
5. Ampliación Paso Inferior Bajo vía de ADIF	509.603,42
TOTAL	2.206.511,24

Asciende el presupuesto de ejecución material a la expresada cantidad de DOS MILLONES DOSCIENTOS SEIS MIL QUINIENTOS ONCE EUROS CON VEINTICUATRO CÉNTIMOS

ANEJO Nº4: PLANOS

Nº PLANO	CÓDIGO	NOMBRE	ESCALA
01	27028_PP_202303_AI_MX_03.6ANX_TSERV_01	TRAZADOS Y SERVICIOS. ALZADO PUENTE VIAL A	1/250
02	27028_PP_202303_AI_MX_03.6ANX_TSERV_02	TRAZADOS Y SERVICIOS. ALZADO PUENTE VIAL A	1/250
03	27028_PP_202303_AI_MX_03.6ANX_TSERV_03	TRAZADOS Y SERVICIOS. SECCIÓN TRANSVERSAL Y DETALLES PUENTE VIAL A	1/75 1/100
04	27028_PP_202303_AI_MX_03.6ANX_TSERV_04	TRAZADOS Y SERVICIOS. ALZADO PUENTE VIAL D	1/200
05	27028_PP_202303_AI_MX_03.6ANX_TSERV_05	TRAZADOS Y SERVICIOS. PLANTA PUENTE VIAL D	1/200
06	27028_PP_202303_AI_MX_03.6ANX_TSERV_06	TRAZADOS Y SERVICIOS. SECCIÓN TRANSVERSAL Y DETALLES PUENTE VIAL D	1/75 1/100
07	27028_PP_202303_AI_MX_03.6ANX_TSERV_07	TRAZADOS Y SERVICIOS. ALZADO Y SECCIÓN PASO VIAL E	1/100
08	27028_PP_202303_AI_MX_03.6ANX_TSERV_08	TRAZADOS Y SERVICIOS. PLANTA PASO INFERIOR	1/250
09	27028_PP_202303_AI_MX_03.6ANX_TSERV_09	TRAZADOS Y SERVICIOS. DIMENSIONES PASO INFERIOR	1/200
10	27028_PP_202303_AI_MX_03.6ANX_TSERV_10	TRAZADOS Y SERVICIOS. SECCIÓN TRANSVERSAL PASO INFERIOR	1/100
11	27028_PP_202303_AI_MX_03.6ANX_TSERV_11	TRAZADOS Y SERVICIOS. SECCIÓN TRANSVERSAL VÍA	1/100