ANEJO 21: REPLANTEO

INDICE

1.- INTRODUCCIÓN....2
2.- BASES DE REPLANTEO....2
3.- DATOS....2
4.- REPLANTEO DE ESTRUCTURAS Y MUROS....3
5.- OTROS DATOS....3
APÉNDICE 1. SITUACIÓN BASES DE REPLANTEO....4
APÉNDICE 2. REPLANTEO DE LOS EJES DESDE LAS BASES DE REPLANTEO...5

ANEJO 21: REPLANTEO

1.- INTRODUCCIÓN

El presente anejo tiene por objeto la definición del trazado de una manera analítica, mediante el establecimiento de una red de bases de replanteo, de manera que faciliten la materialización de cualquier punto a la hora de ejecutar las obras.

2.- BASES DE REPLANTEO

Para la ejecución del replanteo de los ejes se han situado bases de replanteo, dotándolas de coordenadas “X” e “Y”, así como de la correspondiente cota altimétrica.

Estas bases se han materializado sobre el terreno mediante Hitos-Fenos, o Clavos Geo-punt de acero con su identificación correspondiente.

En los planos de replanteo incluidos en el documento de planos quedan reflejadas dichas bases, y en el Anejo de Topografía y Cartografía se adjuntan las reseñas de las bases de replanteo utilizadas.

Las coordenadas de las bases empleadas se relacionan a continuación:

BASES TOPOGRÁFICAS					
NOMBRE	COORD. X (m)	COORD. Y (m)	COORD. Z (m)	COORD. Z (m) Nivelación geométrica	DIF
BR100	216887,526	4040069,708	2,098	2,098	0,000
BR101	218295,877	4037680,853	3,454	3,454	0,000
BR102	218228,493	4038066,957	11,647	11,666	-0,019
BR103	218006,187	4038234,184	3,474	3,475	-0,001
BR104	217882,514	4038421,939	3,163	3,177	-0,014
BR105	217801,105	4038542,670	3,191	3,215	-0,024
BR106	217636,655	4038767,559	2,947	2,947	0,000
BR107	217361,844	4039317,532	2,949	2,946	0,003
BR108	217219,511	4039531,044	2,951	2,935	0,016
BR109	217079,635	4039735,680	2,820	2,827	-0,007
BR110	216994,479	4039867,826	2,970	2,974	-0,004
BR111	216753,007	4040250,699	2,451	2,453	-0,002
BR112	216655,745	4040453,497	2,385	2,85	-0,465
BR113	217429,905	4040757,221	2,651	2,658	-0,007
BR114	217151,397	4040742,707	2,684	2,658	0,026
BR115	216842,322	4040806,521	2,923	2,915	0,008
BR116	216384,453	4040650,617	12,487	12,503	-0,016
BR117	216035,432	4040728,808	2,769	2,773	-0,004
BR118	215764,452	4040726,874	2,844	2,847	-0,003
BR119	215491,215	4040776,537	2,636	2,627	0,009
BR120	215267,736	4040931,749	2,853	2,846	0,007

Tabla 1. Bases de replanteo

3.- DATOS

En los listados adjuntos en el Apéndice nº 2 se presenta el cálculo de replanteo por bisección de los ejes proyectados. En éstos aparecen los datos siguientes:

• Información relativa a las bases utilizadas:

Se detalla para cada punto de cada alineación en planta el par de bases (denominadas genéricamente BASE 1 y BASE 2) desde las que se puede bisectar, de las que se especifica:

- Denominación en el listado de bases.
- Coordenadas planimétricas absolutas.
- Distancia en planta entre las dos bases.
- Azimut topográfico de la visual entre la BASE 1 y la BASE 2.

• Puntos del eje en planta:

Se detallan para los puntos de cada eje (tanto los tomados a intervalos regulares como los puntos singulares) sus coordenadas absolutas, así como sus distancias y azimutes relativos al par de bases correspondiente.

• Abreviaturas Utilizadas:

- PK: Distancia al origen (Punto Kilométrico)
- AZ1: Azimut visual (Base 1- Punto)
- d1: Distancia en planta (Base 1- Punto)
- X: Longitud UTM
- Y: Latitud UTM
- AZ2: Azimut visual (Base 2- Punto)
- d2: Distancia en planta (Base 2- Punto)

• Unidades y convenio de signos:

Las distancias al origen (PK), las distancias entre puntos y las coordenadas se expresan en metros (m).

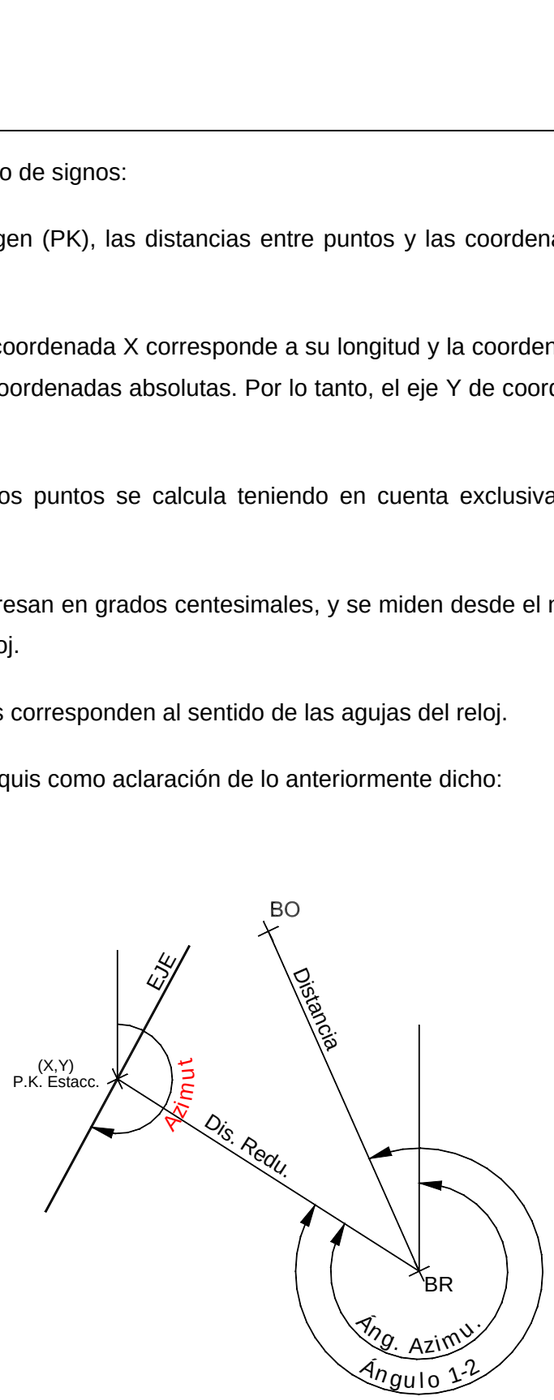
Para cada punto, la coordenada X corresponde a su longitud y la coordenada Y corresponde a su latitud en el sistema de coordenadas absolutas. Por lo tanto, el eje Y de coordenadas coincide con el norte geográfico.

La distancia entre dos puntos se calcula teniendo en cuenta exclusivamente sus pares de coordenadas X e Y.

Los azimutes se expresan en grados centesimales, y se miden desde el norte geográfico en el sentido de las agujas del reloj.

Los ángulos positivos corresponden al sentido de las agujas del reloj.

Sirva el siguiente croquis como aclaración de lo anteriormente dicho:



4.- REPLANTEO DE ESTRUCTURAS Y MUROS

En los planos correspondientes a estos elementos, se han incluido los replanteos de los puntos necesarios.

5.- OTROS DATOS

Con el objeto de no duplicar la información, en el Anejo n º 2 Cartografía y topografía se ha incluido la siguiente documentación:

- Datos del replanteo de campo.
- Reseñas de las bases de replanteo.
- Nivelación geométrica de las bases de replanteo.

En los apéndices siguientes se muestran los siguientes datos:

- Planos con la situación de las bases de replanteo.
- Listados de replanteo de los distintos ejes.

APÉNDICE 1. SITUACIÓN BASES DE REPLANTEO

Nº	X	Y	Z
BR-100	216.887,526	4.040.069,708	2,098
BR-101	218.295,877	4.037.680,853	3,454
BR-102	218.228,493	4.038.066,957	11,666
BR-103	218.006,187	4.038.234,184	3,475
BR-104	217.882,514	4.038.421,939	3,177
BR-105	217.801,105	4.038.542,670	3,215
BR-106	217.636,655	4.038.767,559	2,947
BR-107	217.361,844	4.039.317,532	2,946
BR-108	217.219,511	4.039.531,044	2,935
BR-109	217.079,635	4.039.735,680	2,827
BR-110	216.994,479	4.039.867,826	2,974
BR-111	216.753,007	4.040.250,699	2,453
BR-112	216.655,745	4.040.453,497	2,385
BR-113	217.429,905	4.040.757,221	2,658
BR-114	217.151,397	4.040.742,707	2,658
BR-115	216.842,322	4.040.806,521	2,915
BR-116	216.384,453	4.040.650,617	12,503
BR-117	216.035,432	4.040.728,808	2,773
BR-118	215.764,452	4.040.726,874	2,847
BR-119	215.491,215	4.040.776,537	2,627
BR-120	215.267,736	4.040.931,749	2,846

CAÑO DE SANCTI PETRI

NUEVO PUENTE ZUAZO

A SAN FERNANDO CÁDIZ

A PUERTO REAL

RIO

T.M. de Puerto Real

0+669.35

5+422.13

5+400

0+600

5+300

TREN-TRANVÍA ENTRE CHICLANA DE LA FRONTERA Y SAN FERNANDO
TRAMO: CAÑO ZURRAQUE - SAN FERNANDO

REPOSICION VIA DE SERVICIO CA-33 M.D.
EJE 34

SEVILLA - CADIZ
EJE 1

0+500

CA-33

5+200

BR-120

0+400

000+0

PASO MEDIANA CA-33
(EXISTENTE)

5+100

0+400

0+300

RAMAL POLIGONO - SAN FERNANDO
EJE 27

000+0

ENTRADA AL POLIGONO DE TRES CAMINOS
EJE 12

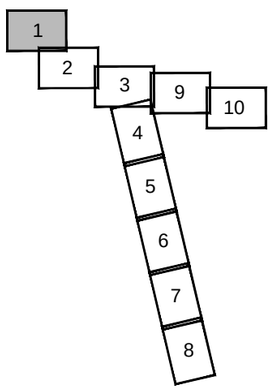
5+000

0+300

0+200

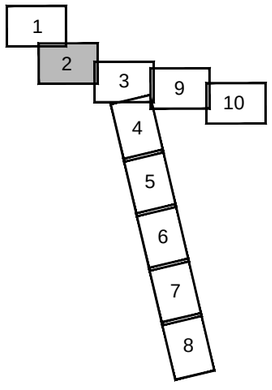
Antiguas Fortificaciones

Venta La Inesperada



GOBIERNO DE ESPAÑA MINISTERIO DE TRANSPORTES, MOVILIDAD Y AGENDA URBANA	SECRETARÍA DE ESTADO DE INFRAESTRUCTURAS, TRANSPORTE Y VIVIENDA SECRETARÍA GENERAL DE INFRAESTRUCTURAS DIRECCIÓN GENERAL DE CARRETERAS DEMARCACIÓN DE CARRETERAS DEL ESTADO EN ANDALUCÍA OCCIDENTAL	CONSULTOR: VS INGENOVA	EL INGENIERO AUTOR DEL PROYECTO: D. JORGE VAZQUEZ MIGUEZ	EL INGENIERO DIRECTOR DEL PROYECTO: D. MARCOS MARTIN GOMEZ	ESCALA: 1:1000 (0 10 20 30 40m) ORIGINAL DIN A–1	TÍTULO DEL PROYECTO: PROYECTO DE CONSTRUCCIÓN ACONDICIONAMIENTO DEL ENLACE TRES CAMINOS CARRETERAS A-4, A-48 Y CA-33 (CÁDIZ)	CLAVE: 29-CA-4140	Nº PLANO: AP21-1	DESIGNACIÓN: **SITUACIÓN DE BASES DE REPLANTEO**	FECHA: MARZO 2020 HOJA 1 DE 10

Nº	X	Y	Z
BR-100	216.887,526	4.040.069,708	2,098
BR-101	218.295,877	4.037.680,853	3,454
BR-102	218.228,493	4.038.066,957	11,666
BR-103	218.006,187	4.038.234,184	3,475
BR-104	217.882,514	4.038.421,939	3,177
BR-105	217.801,105	4.038.542,670	3,215
BR-106	217.636,655	4.038.767,559	2,947
BR-107	217.361,844	4.039.317,532	2,946
BR-108	217.219,511	4.039.531,044	2,935
BR-109	217.079,635	4.039.735,680	2,827
BR-110	216.994,479	4.039.867,826	2,974
BR-111	216.753,007	4.040.250,699	2,453
BR-112	216.655,745	4.040.453,497	2,385
BR-113	217.429,905	4.040.757,221	2,658
BR-114	217.151,397	4.040.742,707	2,658
BR-115	216.842,322	4.040.806,521	2,915
BR-116	216.384,453	4.040.650,617	12,503
BR-117	216.035,432	4.040.728,808	2,773
BR-118	215.764,452	4.040.726,874	2,847
BR-119	215.491,215	4.040.776,537	2,627
BR-120	215.267,736	4.040.931,749	2,846



RAMAL POLIGONO - SAN FERNANDO
EJE 27

REPOSICION CALLE POLIGONO TRES CAMINOS
EJE 35

CADIZ - SEVILLA
EJE 20

SALIDA DEL POLIGONO DE TRES CAMINOS
EJE 18

REPOSICION VIA DE SERVICIO CA-33 M.D.
EJE 34

REPOSICION ACCESO A CA-33 PK 5+080
EJE 36

ESTRUCTURA EXISTENTE

POLÍGONO DE TRES CAMINOS

ACCESO AL POLIGONO DESDE CHICLANA
EJE 2

SEVILLA - CADIZ
EJE 1

CHICLANA - CADIZ
EJE 4

GLORIETA DEL POLIGONO TRES CAMINOS
EJE 13

TREN-TRANVÍA ENTRE CHICLANA DE LA FRONTERA Y SAN FERNANDO
TRAMO: CAÑO ZURRAQUE - SAN FERNANDO

CA-33

POLIGONO DE TRES CAMINOS - CHICLANA
EJE 15

POLIGONO DE TRES CAMINOS - SEVILLA
EJE 16

MURO ESCOLLERA

GOBIERNO DE ESPAÑA	MINISTERIO DE TRANSPORTES, MOVILIDAD Y AGENDA URBANA	SECRETARÍA DE ESTADO DE INFRAESTRUCTURAS, TRANSPORTE Y VIVIENDA SECRETARÍA GENERAL DE INFRAESTRUCTURAS DIRECCIÓN GENERAL DE CARRETERAS DEMARCACIÓN DE CARRETERAS DEL ESTADO EN ANDALUCÍA OCCIDENTAL	CONSULTOR: INGENOVA	EL INGENIERO AUTOR DEL PROYECTO: D. JORGE VÁZQUEZ MÍGUEZ	EL INGENIERO DIRECTOR DEL PROYECTO: D. MARCOS MARTÍN GÓMEZ	ESCALA: 1:1000 (0 10 20 30 40m) ORIGINAL DIN A–1	TÍTULO DEL PROYECTO: PROYECTO DE CONSTRUCCIÓN ACONDICIONAMIENTO DEL ENLACE TRES CAMINOS CARRETERAS A-4, A-48 Y CA-33 (CÁDIZ)	CLAVE: 29-CA-4140	Nº PLANO: AP21-1	DESIGNACIÓN: **SITUACIÓN DE BASES DE REPLANTEO**	FECHA: MARZO 2020 HOJA 2 DE 10

ENLACE TRES CAMINOS

POLÍGONO DE TRES CAMINOS

ACCESO AL POLIGONO DESDE CHICLANA EJE 2

RAMAL SEVILLA - ACCESO AL POLIGONO EJE 22

ESTRUCTURA E2 (EJE 1)

ESTRUCTURA E2 (EJES 1-20)

REPOSICION VIA DE SERVICIO A-4 M.D. EJE 33

CHICLANA - CADIZ EJE 4

SEVILLA - CADIZ EJE 1

MURO E-2 - EJE1 ESTRIBO 2

CADIZ - CHICLANA VI EJE 7

BR-117

BR-116

MURO ESCOLLERA

CADIZ - SEVILLA EJE 20

POLIGONO DE TRES CAMINOS - SEVILLA EJE 16

POLIGONO DE TRES CAMINOS - CHICLANA EJE 15

MURO E-2 - EJE1 - EJE20 ESTRIBO 2

PUERTA VERDE 1 EJE 50

ESTRUCTURA E1 (EJE 7)

REPOSICIÓN VÍA VERDE

TREN-TRANVÍA ENTRE CHICLANA DE LA FRONTERA Y SAN FERNANDO TRAMO: CAÑO ZURRAQUE - SAN FERNANDO

CAÑO ZURRAQUE

ESTRUCTURA E1 (EJES 7-19)

MURO E-1 - EJE7 - EJE19 ESTRIBO 2

SEVILLA - CHICLANA IV EJE 19

ESTRUCTURA E1 (EJE 19)

CHICLANA - SEVILLA EJE 5

ESCARIFICADO FIRME EXISTENTE

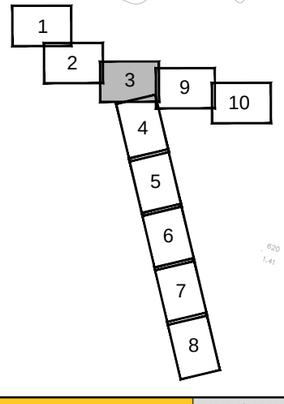
PUENTE EXISTENTE DUQUE DE LA VICTORIA

Hacienda Chica

T.M. de Puerto Real

Puente del Duque de la Victoria

RIO



Nº	X	Y	Z
BR-100	216.887,526	4.040.069,708	2,098
BR-101	218.295,877	4.037.680,853	3,454
BR-102	218.228,493	4.038.066,957	11,666
BR-103	218.006,187	4.038.234,184	3,475
BR-104	217.882,514	4.038.421,939	3,177
BR-105	217.801,105	4.038.542,670	3,215
BR-106	217.636,655	4.038.767,559	2,947
BR-107	217.361,844	4.039.317,532	2,946
BR-108	217.219,511	4.039.531,044	2,935
BR-109	217.079,635	4.039.735,680	2,827
BR-110	216.994,479	4.039.867,826	2,974
BR-111	216.753,007	4.040.250,699	2,453
BR-112	216.655,745	4.040.453,497	2,385
BR-113	217.429,905	4.040.757,221	2,658
BR-114	217.151,397	4.040.742,707	2,658
BR-115	216.842,322	4.040.806,521	2,915
BR-116	216.384,453	4.040.650,617	12,503
BR-117	216.035,432	4.040.728,808	2,773
BR-118	215.764,452	4.040.726,874	2,847
BR-119	215.491,215	4.040.776,537	2,627
BR-120	215.267,736	4.040.931,749	2,846

GOBIERNO DE ESPAÑA

MINISTERIO DE TRANSPORTES, MOVILIDAD Y AGENDA URBANA

SECRETARÍA DE ESTADO DE INFRAESTRUCTURAS, TRANSPORTE Y VIVIENDA

SECRETARÍA GENERAL DE INFRAESTRUCTURAS

DIRECCIÓN GENERAL DE CARRETERAS

DEMARCACIÓN DE CARRETERAS DEL ESTADO EN ANDALUCÍA OCCIDENTAL

CONSULTOR: INGENOVA

EL INGENIERO AUTOR DEL PROYECTO: D. JORGE VÁZQUEZ MÍGUEZ

EL INGENIERO DIRECTOR DEL PROYECTO: D. MARCOS MARTÍN GÓMEZ

ESCALA: 1:1000 (0 10 20 30 40m)

ORIGINAL DIN A−1

TÍTULO DEL PROYECTO: PROYECTO DE CONSTRUCCIÓN ACONDICIONAMIENTO DEL ENLACE TRES CAMINOS CARRETERAS A-4, A-48 Y CA-33 (CÁDIZ)

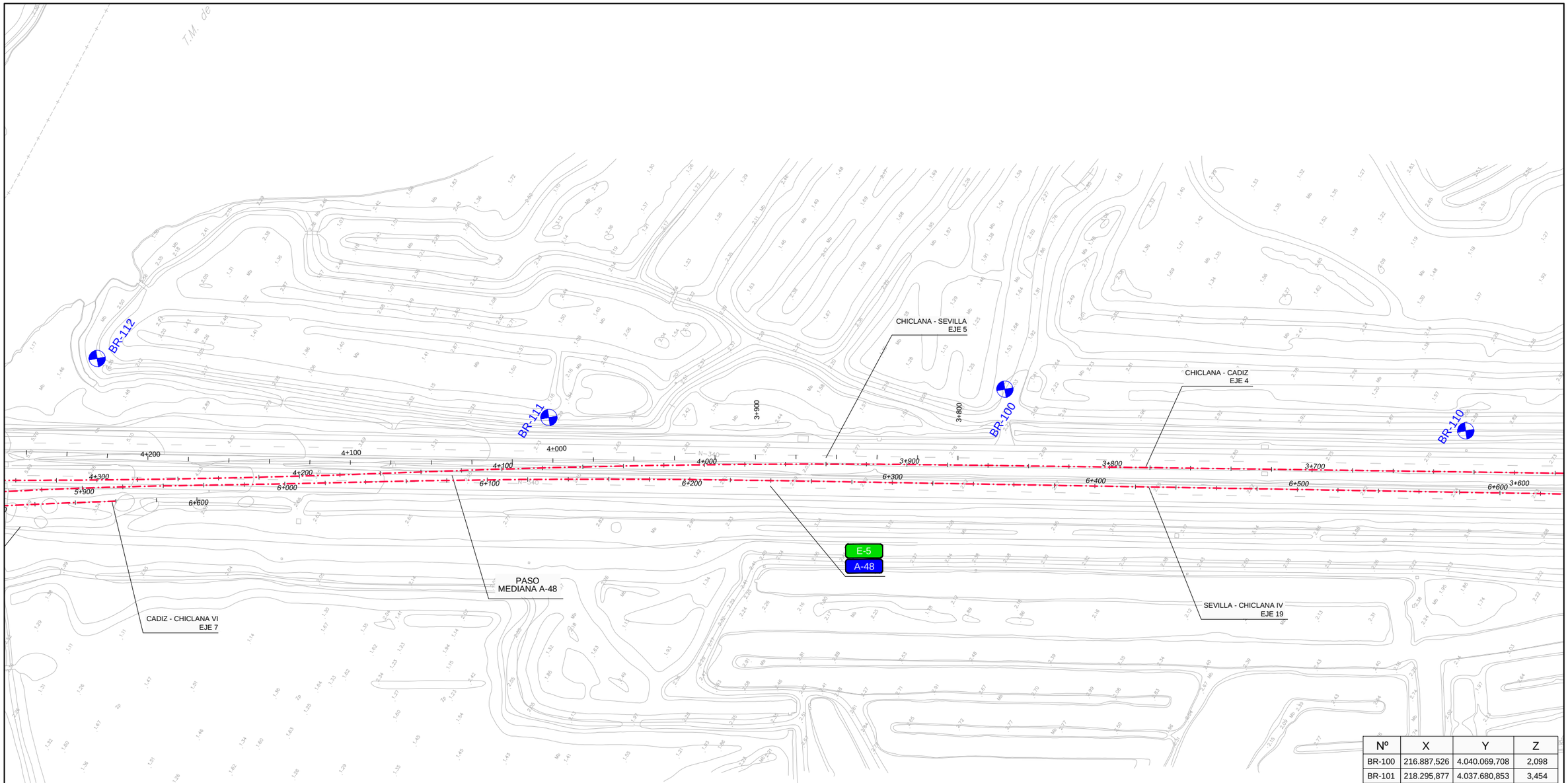
CLAVE: 29-CA-4140

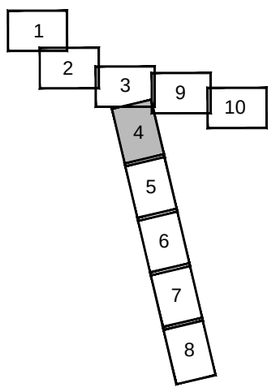
Nº PLANO: AP21-1

DESIGNACIÓN: **SITUACIÓN DE BASES DE REPLANTEO**

FECHA: MARZO 2020

HOJA 3 DE 10





Nº	X	Y	Z
BR-100	216.887,526	4.040.069,708	2,098
BR-101	218.295,877	4.037.680,853	3,454
BR-102	218.228,493	4.038.066,957	11,666
BR-103	218.006,187	4.038.234,184	3,475
BR-104	217.882,514	4.038.421,939	3,177
BR-105	217.801,105	4.038.542,670	3,215
BR-106	217.636,655	4.038.767,559	2,947
BR-107	217.361,844	4.039.317,532	2,946
BR-108	217.219,511	4.039.531,044	2,935
BR-109	217.079,635	4.039.735,680	2,827
BR-110	216.994,479	4.039.867,826	2,974
BR-111	216.753,007	4.040.250,699	2,453
BR-112	216.655,745	4.040.453,497	2,385
BR-113	217.429,905	4.040.757,221	2,658
BR-114	217.151,397	4.040.742,707	2,658
BR-115	216.842,322	4.040.806,521	2,915
BR-116	216.384,453	4.040.650,617	12,503
BR-117	216.035,432	4.040.728,808	2,773
BR-118	215.764,452	4.040.726,874	2,847
BR-119	215.491,215	4.040.776,537	2,627
BR-120	215.267,736	4.040.931,749	2,846

GOBIERNO DE ESPAÑA
MINISTERIO DE TRANSPORTES, MOVILIDAD Y AGENDA URBANA

SECRETARÍA DE ESTADO DE INFRAESTRUCTURAS, TRANSPORTE Y VIVIENDA
SECRETARÍA GENERAL DE INFRAESTRUCTURAS
DIRECCIÓN GENERAL DE CARRETERAS
DEMARCACIÓN DE CARRETERAS DEL ESTADO EN ANDALUCÍA OCCIDENTAL

CONSULTOR: VS INGENOVA

EL INGENIERO AUTOR DEL PROYECTO: D. JORGE VAZQUEZ MIGUEZ

EL INGENIERO DIRECTOR DEL PROYECTO: D. MARCOS MARTÍN GÓMEZ

ESCALA: 1:1000 (0 10 20 30 40m)
ORIGINAL DIN A-1

TÍTULO DEL PROYECTO:
PROYECTO DE CONSTRUCCIÓN
ACONDICIONAMIENTO DEL ENLACE TRES CAMINOS
CARRETERAS A-4, A-48 Y CA-33 (CÁDIZ)

CLAVE: 29-CA-4140

Nº PLANO: AP21-1

DESIGNACIÓN:
SITUACIÓN DE BASES DE REPLANTEO

FECHA: MARZO 2020

CAMBIO DE SENTIDO
CHICLANA - TRES CAMINOS
EJE 23

CHICLANA - CADIZ
EJE 4

BR-109

BR-108

BR-107

1+480.60

1+400

1+300

1+200

1+100

1+000

0+900

0+800

0+700

0+600

0+500

0+400

0+300

0+200

0+100

0+000

6+600 3+600 6+700 3+500 6+800 3+400 6+900 3+300 7+000 3+200 7+100 3+100 7+200 3+000 7+300 2+900

E-5

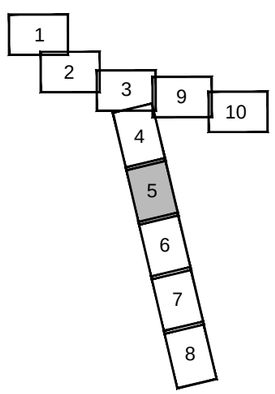
A-48

CAMBIO DE SENTIDO
CHICLANA - TRES CAMINOS
EJE 23

SEVILLA - CHICLANA IV
EJE 19

TREN-TRANVÍA ENTRE CHICLANA DE LA FRONTERA Y SAN FERNANDO
TRAMO: CHICLANA - CAÑO ZURRAQUE
SUBTRAMO INTERURBANO

Bioritz



Nº	X	Y	Z
BR-100	216.887,526	4.040.069,708	2,098
BR-101	218.295,877	4.037.680,853	3,454
BR-102	218.228,493	4.038.066,957	11,666
BR-103	218.006,187	4.038.234,184	3,475
BR-104	217.882,514	4.038.421,939	3,177
BR-105	217.801,105	4.038.542,670	3,215
BR-106	217.636,655	4.038.767,559	2,947
BR-107	217.361,844	4.039.317,532	2,946
BR-108	217.219,511	4.039.531,044	2,935
BR-109	217.079,635	4.039.735,680	2,827
BR-110	216.994,479	4.039.867,826	2,974
BR-111	216.753,007	4.040.250,699	2,453
BR-112	216.655,745	4.040.453,497	2,385
BR-113	217.429,905	4.040.757,221	2,658
BR-114	217.151,397	4.040.742,707	2,658
BR-115	216.842,322	4.040.806,521	2,915
BR-116	216.384,453	4.040.650,617	12,503
BR-117	216.035,432	4.040.728,808	2,773
BR-118	215.764,452	4.040.726,874	2,847
BR-119	215.491,215	4.040.776,537	2,627
BR-120	215.267,736	4.040.931,749	2,846

GOBIERNO DE ESPAÑA
MINISTERIO DE TRANSPORTES, MOVILIDAD Y AGENDA URBANA

SECRETARÍA DE ESTADO DE INFRAESTRUCTURAS, TRANSPORTE Y VIVIENDA
SECRETARÍA GENERAL DE INFRAESTRUCTURAS
DIRECCIÓN GENERAL DE CARRETERAS
DEMARCACIÓN DE CARRETERAS DEL ESTADO EN ANDALUCÍA OCCIDENTAL

CONSULTOR: VS INGENOVA

EL INGENIERO AUTOR DEL PROYECTO: D. JORGE VÁZQUEZ MÍGUEZ

EL INGENIERO DIRECTOR DEL PROYECTO: D. MARCOS MARTÍN GÓMEZ

ESCALA: 1:1000 (0 10 20 30 40m)
ORIGINAL DIN A–1

TÍTULO DEL PROYECTO:
PROYECTO DE CONSTRUCCIÓN
ACONDICIONAMIENTO DEL ENLACE TRES CAMINOS
CARRETERAS A-4, A-48 Y CA-33 (CÁDIZ)

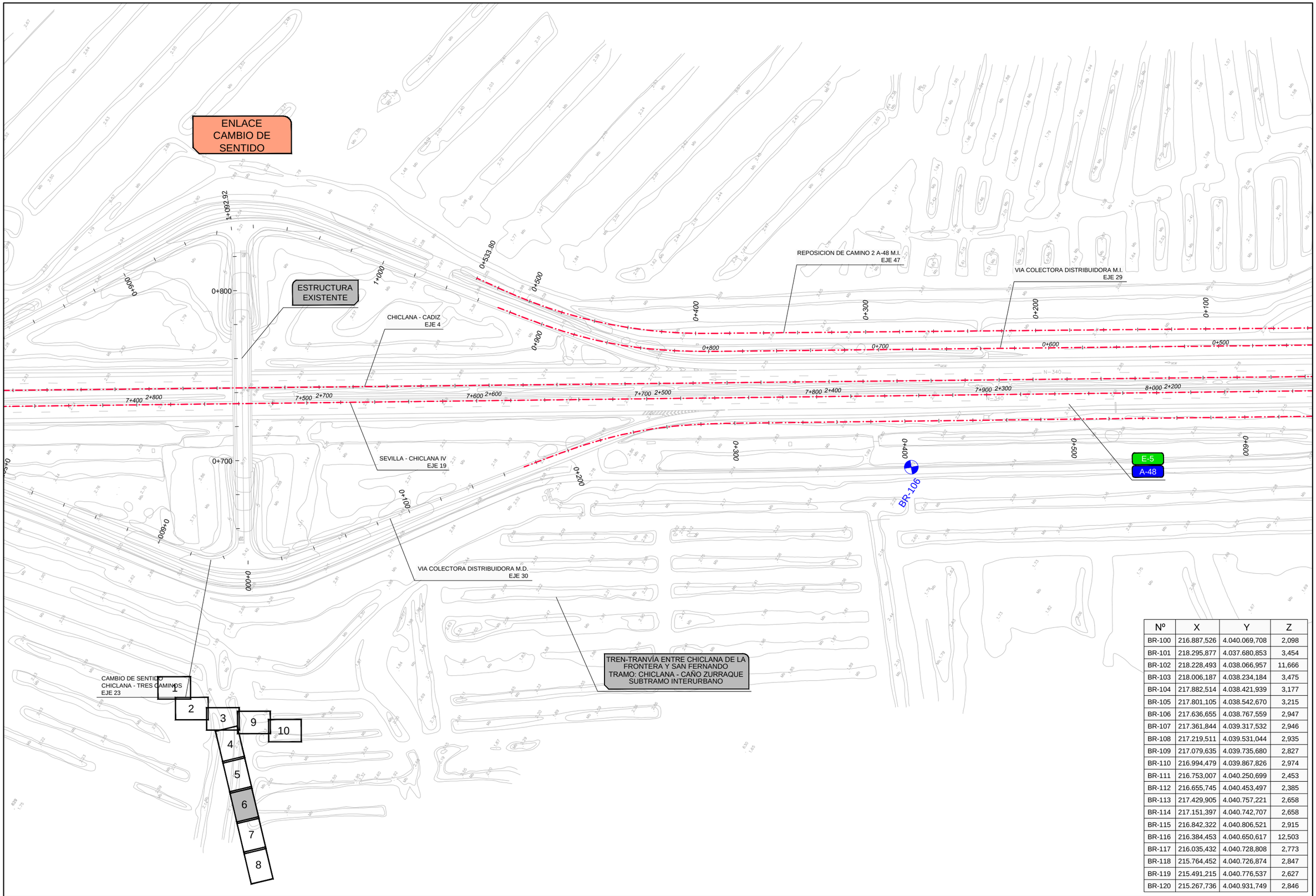
CLAVE: 29-CA-4140

Nº PLANO: AP21-1

DESIGNACIÓN:
SITUACIÓN DE BASES DE REPLANTEO

FECHA: MARZO 2020

HOJA 5 DE 10



Nº	X	Y	Z
BR-100	216.887,526	4.040.069,708	2,098
BR-101	218.295,877	4.037.680,853	3,454
BR-102	218.228,493	4.038.066,957	11,666
BR-103	218.006,187	4.038.234,184	3,475
BR-104	217.882,514	4.038.421,939	3,177
BR-105	217.801,105	4.038.542,670	3,215
BR-106	217.636,655	4.038.767,559	2,947
BR-107	217.361,844	4.039.317,532	2,946
BR-108	217.219,511	4.039.531,044	2,935
BR-109	217.079,635	4.039.735,680	2,827
BR-110	216.994,479	4.039.867,826	2,974
BR-111	216.753,007	4.040.250,699	2,453
BR-112	216.655,745	4.040.453,497	2,385
BR-113	217.429,905	4.040.757,221	2,658
BR-114	217.151,397	4.040.742,707	2,658
BR-115	216.842,322	4.040.806,521	2,915
BR-116	216.384,453	4.040.650,617	12,503
BR-117	216.035,432	4.040.728,808	2,773
BR-118	215.764,452	4.040.726,874	2,847
BR-119	215.491,215	4.040.776,537	2,627
BR-120	215.267,736	4.040.931,749	2,846

GOBIERNO DE ESPAÑA
MINISTERIO DE TRANSPORTES, MOVILIDAD Y AGENDA URBANA

SECRETARÍA DE ESTADO DE INFRAESTRUCTURAS, TRANSPORTE Y VIVIENDA
SECRETARÍA GENERAL DE INFRAESTRUCTURAS
DIRECCIÓN GENERAL DE CARRETERAS
DEMARCACIÓN DE CARRETERAS DEL ESTADO EN ANDALUCÍA OCCIDENTAL

CONSULTOR: VS INGENOVA

EL INGENIERO AUTOR DEL PROYECTO: D. JORGE VÁZQUEZ MÍGUEZ

EL INGENIERO DIRECTOR DEL PROYECTO: D. MARCOS MARTÍN GÓMEZ

ESCALA: 1:1000 (0 10 20 30 40m)
ORIGINAL DIN A-1

TÍTULO DEL PROYECTO:
PROYECTO DE CONSTRUCCIÓN
ACONDICIONAMIENTO DEL ENLACE TRES CAMINOS
CARRETERAS A-4, A-48 Y CA-33 (CÁDIZ)

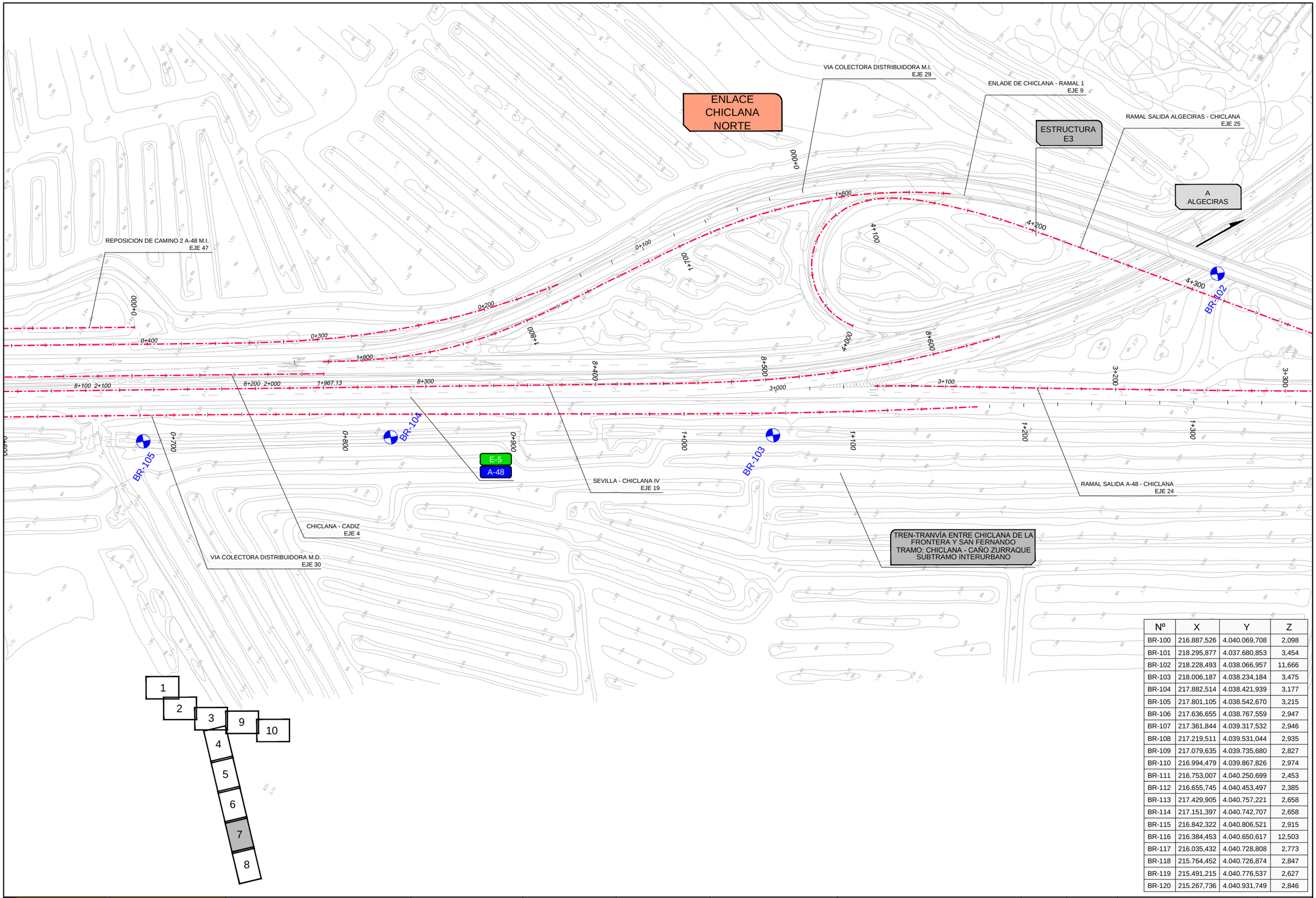
CLAVE: 29-CA-4140

Nº PLANO: AP21-1

DESIGNACIÓN:
SITUACIÓN DE BASES DE REPLANTEO

FECHA: MARZO 2020

HOJA 6 DE 10



Nº	X	Y	Z
BR-100	216.887,526	4.040.069,708	2,098
BR-101	218.295,877	4.037.680,853	3,454
BR-102	218.228,493	4.038.066,957	11,666
BR-103	218.006,187	4.038.234,184	3,475
BR-104	217.882,514	4.038.421,939	3,177
BR-105	217.801,105	4.038.542,670	3,215
BR-106	217.636,655	4.038.767,559	2,947
BR-107	217.361,844	4.039.317,532	2,946
BR-108	217.219,511	4.039.531,044	2,935
BR-109	217.079,635	4.039.735,680	2,827
BR-110	216.994,479	4.039.867,826	2,974
BR-111	216.753,007	4.040.250,699	2,453
BR-112	216.655,745	4.040.453,497	2,385
BR-113	217.429,905	4.040.757,221	2,658
BR-114	217.151,397	4.040.742,707	2,658
BR-115	216.842,322	4.040.806,521	2,915
BR-116	216.384,453	4.040.650,617	12,503
BR-117	216.035,432	4.040.728,808	2,773
BR-118	215.764,452	4.040.726,874	2,847
BR-119	215.491,215	4.040.776,537	2,627
BR-120	215.267,736	4.040.931,749	2,846

GOBIERNO DE ESPAÑA
MINISTERIO DE TRANSPORTES, MOVILIDAD Y AGENDA URBANA

SECRETARÍA DE ESTADO DE INFRAESTRUCTURAS, TRANSPORTE Y VIVIENDA
SECRETARÍA GENERAL DE INFRAESTRUCTURAS
DIRECCIÓN GENERAL DE CARRETERAS
DEMARCACIÓN DE CARRETERAS DEL ESTADO EN ANDALUCÍA OCCIDENTAL

CONSULTOR: INGENOVA

EL INGENIERO AUTOR DEL PROYECTO: D. JORGE VAZQUEZ MIGUEZ

EL INGENIERO DIRECTOR DEL PROYECTO: D. MARCOS MARTÍN GÓMEZ

ESCALA: 1:1000 (0 10 20 30 40m) ORIGINAL DIN A–1

TÍTULO DEL PROYECTO: PROYECTO DE CONSTRUCCIÓN ACONDICIONAMIENTO DEL ENLACE TRES CAMINOS CARRETERAS A-4, A-48 Y CA-33 (CÁDIZ)

CLAVE: 29-CA-4140

Nº PLANO: AP21-1

DESIGNACIÓN: **SITUACIÓN DE BASES DE REPLANTEO**

FECHA: MARZO 2020

Nº	X	Y	Z
BR-100	216.887,526	4.040.069,708	2,098
BR-101	218.295,877	4.037.680,853	3,454
BR-102	218.228,493	4.038.066,957	11,666
BR-103	218.006,187	4.038.234,184	3,475
BR-104	217.882,514	4.038.421,939	3,177
BR-105	217.801,105	4.038.542,670	3,215
BR-106	217.636,655	4.038.767,559	2,947
BR-107	217.361,844	4.039.317,532	2,946
BR-108	217.219,511	4.039.531,044	2,935
BR-109	217.079,635	4.039.735,680	2,827
BR-110	216.994,479	4.039.867,826	2,974
BR-111	216.753,007	4.040.250,699	2,453
BR-112	216.655,745	4.040.453,497	2,385
BR-113	217.429,905	4.040.757,221	2,658
BR-114	217.151,397	4.040.742,707	2,658
BR-115	216.842,322	4.040.806,521	2,915
BR-116	216.384,453	4.040.650,617	12,503
BR-117	216.035,432	4.040.728,808	2,773
BR-118	215.764,452	4.040.726,874	2,847
BR-119	215.491,215	4.040.776,537	2,627
BR-120	215.267,736	4.040.931,749	2,846

RAMAL SALIDA ALGECIRAS - CHICLANA
EJE 25

ENLADE DE CHICLANA - RAMAL 1
EJE 9

VIA COLECTORA
DISTRIBUIDORA M.D.
EJE 30

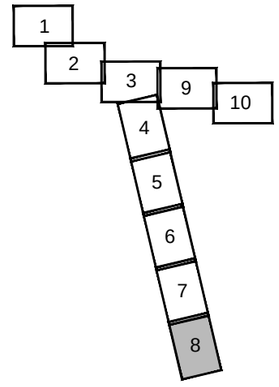
TREN-TRANVÍA ENTRE CHICLANA DE LA FRONTERA Y SAN FERNANDO
TRAMO: CHICLANA - CAÑO ZURRAQUE
SUBTRAMO INTERURBANO

RAMAL SALIDA A-48 - CHICLANA
EJE 24

CHICLANA DE
LA FRONTERA

A CHICLANA DE LA FRONTERA

BR-101



GOBIERNO DE ESPAÑA MINISTERIO DE TRANSPORTES, MOVILIDAD Y AGENDA URBANA	SECRETARÍA DE ESTADO DE INFRAESTRUCTURAS, TRANSPORTE Y VIVIENDA SECRETARÍA GENERAL DE INFRAESTRUCTURAS DIRECCIÓN GENERAL DE CARRETERAS DEMARCACIÓN DE CARRETERAS DEL ESTADO EN ANDALUCÍA OCCIDENTAL	CONSULTOR: VS INGENOVA	EL INGENIERO AUTOR DEL PROYECTO: D. JORGE VÁZQUEZ MÍGUEZ	EL INGENIERO DIRECTOR DEL PROYECTO: D. MARCOS MARTÍN GÓMEZ	ESCALA: 1:1000 (0 10 20 30 40m) ORIGINAL DIN A–1	TÍTULO DEL PROYECTO: PROYECTO DE CONSTRUCCIÓN ACONDICIONAMIENTO DEL ENLACE TRES CAMINOS CARRETERAS A-4, A-48 Y CA-33 (CÁDIZ)	CLAVE: 29-CA-4140	Nº PLANO: AP21-1	DESIGNACIÓN: **SITUACIÓN DE BASES DE REPLANTEO**	FECHA: MARZO 2020 HOJA 8 DE 10

Nº	X	Y	Z
BR-100	216.887,526	4.040.069,708	2,098
BR-101	218.295,877	4.037.680,853	3,454
BR-102	218.228,493	4.038.066,957	11,666
BR-103	218.006,187	4.038.234,184	3,475
BR-104	217.882,514	4.038.421,939	3,177
BR-105	217.801,105	4.038.542,670	3,215
BR-106	217.636,655	4.038.767,559	2,947
BR-107	217.361,844	4.039.317,532	2,946
BR-108	217.219,511	4.039.531,044	2,935
BR-109	217.079,635	4.039.735,680	2,827
BR-110	216.994,479	4.039.867,826	2,974
BR-111	216.753,007	4.040.250,699	2,453
BR-112	216.655,745	4.040.453,497	2,385
BR-113	217.429,905	4.040.757,221	2,658
BR-114	217.151,397	4.040.742,707	2,658
BR-115	216.842,322	4.040.806,521	2,915
BR-116	216.384,453	4.040.650,617	12,503
BR-117	216.035,432	4.040.728,808	2,773
BR-118	215.764,452	4.040.726,874	2,847
BR-119	215.491,215	4.040.776,537	2,627
BR-120	215.267,736	4.040.931,749	2,846

RAMAL SEVILLA - ACCESO AL POLIGONO
EJE 22

CADIZ - SEVILLA
EJE 20

CHICLANA - SEVILLA
EJE 5

SEVILLA - CADIZ
EJE 1

E-5
A-4

REPOSICION VIA DE SERVICIO A-4 M.D.
EJE 33

SEVILLA - CHICLANA IV
EJE 19

ESCARIFICADO
FIRME EXISTENTE

BR-115
BR-114
BR-113

Nuestra Señora de La Soledad

1 2 3 9 10 4 5 6 7 8

GOBIERNO DE ESPAÑA MINISTERIO DE TRANSPORTES, MOVILIDAD Y AGENDA URBANA	SECRETARÍA DE ESTADO DE INFRAESTRUCTURAS, TRANSPORTE Y VIVIENDA SECRETARÍA GENERAL DE INFRAESTRUCTURAS DIRECCIÓN GENERAL DE CARRETERAS DEMARCACIÓN DE CARRETERAS DEL ESTADO EN ANDALUCÍA OCCIDENTAL	CONSULTOR: INGENOVA	EL INGENIERO AUTOR DEL PROYECTO: D. JORGE VÁZQUEZ MÍGUEZ	EL INGENIERO DIRECTOR DEL PROYECTO: D. MARCOS MARTÍN GÓMEZ	ESCALA: 1:1000 (0 10 20 30 40m) ORIGINAL DIN A−1	TÍTULO DEL PROYECTO: PROYECTO DE CONSTRUCCIÓN ACONDICIONAMIENTO DEL ENLACE TRES CAMINOS CARRETERAS A-4, A-48 Y CA-33 (CÁDIZ)	CLAVE: 29-CA-4140	Nº PLANO: AP21-1	DESIGNACIÓN: **SITUACIÓN DE BASES DE REPLANTEO**	FECHA: MARZO 2020 HOJA 9 DE 10

REPOSICION VIA DE SERVICIO A-4 M.D.
EJE 33

E-5
A-4

PASO MEDIANA CA-33
(EXISTENTE)

A
PUERTO REAL
SEVILLA

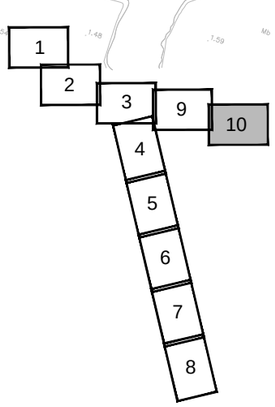
0+500
0+400
0+300
0+200
0+100
0+000

2+700
2+600
2+500
2+400
2+300

ESCARIFICADO
FIRME EXISTENTE

SEVILLA - CADIZ
EJE 1

ZURRAQUE



Nº	X	Y	Z
BR-100	216.887,526	4.040.069,708	2,098
BR-101	218.295,877	4.037.680,853	3,454
BR-102	218.228,493	4.038.066,957	11,666
BR-103	218.006,187	4.038.234,184	3,475
BR-104	217.882,514	4.038.421,939	3,177
BR-105	217.801,105	4.038.542,670	3,215
BR-106	217.636,655	4.038.767,559	2,947
BR-107	217.361,844	4.039.317,532	2,946
BR-108	217.219,511	4.039.531,044	2,935
BR-109	217.079,635	4.039.735,680	2,827
BR-110	216.994,479	4.039.867,826	2,974
BR-111	216.753,007	4.040.250,699	2,453
BR-112	216.655,745	4.040.453,497	2,385
BR-113	217.429,905	4.040.757,221	2,658
BR-114	217.151,397	4.040.742,707	2,658
BR-115	216.842,322	4.040.806,521	2,915
BR-116	216.384,453	4.040.650,617	12,503
BR-117	216.035,432	4.040.728,808	2,773
BR-118	215.764,452	4.040.726,874	2,847
BR-119	215.491,215	4.040.776,537	2,627
BR-120	215.267,736	4.040.931,749	2,846

GOBIERNO DE ESPAÑA
MINISTERIO DE TRANSPORTES, MOVILIDAD Y AGENDA URBANA

SECRETARÍA DE ESTADO DE INFRAESTRUCTURAS, TRANSPORTE Y VIVIENDA
SECRETARÍA GENERAL DE INFRAESTRUCTURAS
DIRECCIÓN GENERAL DE CARRETERAS
DEMARCACIÓN DE CARRETERAS DEL ESTADO EN ANDALUCÍA OCCIDENTAL

CONSULTOR: INGENOVA

EL INGENIERO AUTOR DEL PROYECTO:
D. JORGE VÁZQUEZ MÍGUEZ

EL INGENIERO DIRECTOR DEL PROYECTO:
D. MARCOS MARTÍN GÓMEZ

ESCALA: 1:1000
0 10 20 30 40m
ORIGINAL DIN A–1

TÍTULO DEL PROYECTO:
PROYECTO DE CONSTRUCCIÓN
ACONDICIONAMIENTO DEL ENLACE TRES CAMINOS
CARRETERAS A-4, A-48 Y CA-33 (CÁDIZ)

CLAVE: 29-CA-4140

Nº PLANO: AP21-1

DESIGNACIÓN:
SITUACIÓN DE BASES DE REPLANTEO

FECHA: MARZO 2020

HOJA 10 DE 10

APÉNDICE 2. REPLANTEO DE LOS EJES DESDE LAS BASES DE REPLANTEO

Istram 20.01.01.08 18/03/20 16:42:05 2378 pagina 1
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 1 : Sevilla - Cadiz

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 2865.763 Dis= 18.040
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 3155.638 Dis= 27.279

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	1000.000	207.218309	0.000	218390.683	4042069.249	40.238585	1626.196	143.553229	47.835864	1815.363	351.150508	3.250
RECTA	1020.000	207.218309	0.000	218388.420	4042049.378	40.630910	1608.857	143.945554	48.257327	1799.337	351.571971	3.256
RECTA	1040.000	207.218309	0.000	218386.157	4042029.506	41.031767	1591.580	144.346411	48.686346	1783.391	352.000990	3.261
RECTA	1060.000	207.218309	0.000	218383.894	4042009.635	41.441406	1574.368	144.756050	49.123086	1767.528	352.437730	3.267
RECTA	1080.000	207.218309	0.000	218381.631	4041989.763	41.860082	1557.223	145.174726	49.567714	1751.749	352.882358	3.272
RECTA	1100.000	207.218309	0.000	218379.368	4041969.892	42.288062	1540.146	145.602706	50.020403	1736.057	353.335047	3.278
RECTA	1120.000	207.218309	0.000	218377.106	4041950.020	42.725619	1523.141	146.040263	50.481327	1720.455	353.795970	3.283
RECTA	1140.000	207.218309	0.000	218374.843	4041930.148	43.173034	1506.209	146.487678	50.950661	1704.945	354.265305	3.289
RECTA	1160.000	207.218309	0.000	218372.580	4041910.277	43.630600	1489.353	146.945244	51.428587	1689.529	354.743231	3.294
RECTA	1180.000	207.218309	0.000	218370.317	4041890.405	44.098616	1472.576	147.413260	51.915287	1674.209	355.229931	3.300
RECTA	1200.000	207.218309	0.000	218368.054	4041870.534	44.577393	1455.881	147.892037	52.410946	1658.990	355.725590	3.306
RECTA	1220.000	207.218309	0.000	218365.791	4041850.662	45.067250	1439.269	148.381894	52.915752	1643.873	356.230396	3.311
RECTA	1240.000	207.218309	0.000	218363.528	4041830.790	45.568516	1422.745	148.883159	53.429896	1628.861	356.744540	3.317
RECTA	1260.000	207.218309	0.000	218361.266	4041810.919	46.081529	1406.311	149.396173	53.953570	1613.958	357.268214	3.322
RECTA	1280.000	207.218309	0.000	218359.003	4041791.047	46.606639	1389.971	149.921283	54.486969	1599.165	357.801613	3.328
RECTA	1300.000	207.218309	0.000	218356.740	4041771.176	47.144205	1373.728	150.458849	55.030289	1584.487	358.344932	3.333
RECTA	1320.000	207.218309	0.000	218354.477	4041751.304	47.694595	1357.584	151.009239	55.583727	1569.927	358.898371	3.339
RECTA	1340.000	207.218309	0.000	218352.214	4041731.433	48.258189	1341.545	151.572833	56.147485	1555.487	359.462128	3.344
RECTA	1360.000	207.218309	0.000	218349.951	4041711.561	48.835376	1325.613	152.150020	56.721760	1541.172	360.036404	3.350
RECTA	1380.000	207.218309	0.000	218347.689	4041691.689	49.426556	1309.793	152.741200	57.306756	1526.984	360.621400	3.356

Istram 20.01.01.08 18/03/20 16:42:05 2378 pagina 2
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 1 : Sevilla - Cadiz

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 2865.763 Dis= 18.040
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 3155.638 Dis= 27.279

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	1400.000	207.218309	0.000	218345.426	4041671.818	50.032137	1294.089	153.346781	57.902673	1512.928	361.217317	3.368
RECTA	1420.000	207.218309	0.000	218343.163	4041651.946	50.652540	1278.504	153.967184	58.509712	1499.007	361.824356	3.394
RECTA	1440.000	207.218309	0.000	218340.900	4041632.075	51.288191	1263.044	154.602835	59.128075	1485.225	362.442719	3.434
RECTA	1460.000	207.218309	0.000	218338.637	4041612.203	51.939530	1247.713	155.254174	59.757961	1471.585	363.072605	3.487
RECTA	1480.000	207.218309	0.000	218336.374	4041592.332	52.607002	1232.516	155.921646	60.399568	1458.092	363.714212	3.553
RECTA	1500.000	207.218309	0.000	218334.112	4041572.460	53.291063	1217.458	156.605706	61.053093	1444.750	364.367736	3.632
RECTA	1520.000	207.218309	0.000	218331.849	4041552.588	53.992173	1202.544	157.306817	61.718728	1431.564	365.033372	3.725
RECTA	1540.000	207.218309	0.000	218329.586	4041532.717	54.710803	1187.779	158.025447	62.396666	1418.536	365.711310	3.825
RECTA	1560.000	207.218309	0.000	218327.323	4041512.845	55.447427	1173.170	158.762071	63.087090	1405.672	366.401734	3.925
RECTA	1580.000	207.218309	0.000	218325.060	4041492.974	56.202525	1158.721	159.517169	63.790184	1392.977	367.104827	4.025
RECTA	1600.000	207.218309	0.000	218322.797	4041473.102	56.976579	1144.440	160.291223	64.506121	1380.455	367.820765	4.125
CLOT.	1620.000	207.230153	0.000	218320.534	4041453.231	57.770060	1130.332	161.084704	65.235061	1368.110	368.549705	4.225
CLOT.	1640.000	207.412531	0.000	218318.245	4041433.362	58.582434	1116.384	161.897078	65.976432	1355.927	369.291076	4.325
CLOT.	1660.000	207.815193	0.000	218315.864	4041413.504	59.411588	1102.557	162.726232	66.728543	1343.857	370.043187	4.425
CLOT.	1680.000	208.438138	0.000	218313.324	4041393.666	60.255249	1088.803	163.569893	67.489614	1331.849	370.804258	4.525
CLOT.	1700.000	209.281367	0.000	218310.555	4041373.859	61.111104	1075.075	164.425748	68.257859	1319.849	371.572503	4.625
CLOT.	1720.000	210.344879	0.000	218307.490	4041354.096	61.976771	1061.327	165.291415	69.031462	1307.803	372.346106	4.718
CLOT.	1740.000	211.628675	0.000	218304.061	4041334.392	62.849772	1047.509	166.164416	69.808548	1295.657	373.123192	4.786
CLOT.	1760.000	213.132755	0.000	218300.202	4041314.768	63.727493	1033.574	167.042137	70.587155	1283.358	373.901799	4.828
CLOT.	1780.000	214.857119	0.000	218295.847	4041295.249	64.607150	1019.475	167.921794	71.365200	1270.853	374.679844	4.845

Istram 20.01.01.08 18/03/20 16:42:05 2378 pagina 3
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 1 : Sevilla - Cadiz

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 2865.763 Dis= 18.040
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 3155.638 Dis= 27.279

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CLOT.	1800.000	216.801766	0.000	218290.931	4041275.863	65.485737	1005.164	168.800380	72.140443	1258.091	375.455087	4.837
CLOT.	1820.000	218.966697	0.000	218285.391	4041256.647	66.359977	990.597	169.674621	72.910447	1245.021	376.225091	4.803
CIRC.	1840.000	221.278063	0.000	218279.175	4041237.638	67.226574	975.736	170.541218	73.672757	1231.601	376.987401	4.763
CIRC.	1860.000	223.593044	0.000	218272.272	4041218.869	68.084083	960.573	171.398727	74.426244	1217.822	377.740887	4.722
CIRC.	1880.000	225.908025	0.000	218264.692	4041200.362	68.931872	945.115	172.246516	75.170362	1203.691	378.485006	4.681
CIRC.	1900.000	228.223006	0.000	218256.443	4041182.144	69.769262	929.368	173.083906	75.904537	1189.215	379.219181	4.641
CIRC.	1920.000	230.537987	0.000	218247.538	4041164.237	70.595515	913.337	173.910159	76.628153	1174.398	379.942796	4.600
CIRC.	1940.000	232.852968	0.000	218237.987	4041146.666	71.409827	897.031	174.724470	77.340553	1159.250	380.655197	4.560
CIRC.	1960.000	235.167949	0.000	218227.804	4041129.454	72.211321	880.454	175.525965	78.041037	1143.777	381.355681	4.519
CIRC.	1980.000	237.482930	0.000	218217.002	4041112.623	72.999042	863.616	176.313685	78.728854	1127.986	382.043498	4.478
CIRC.	2000.000	239.797911	0.000	218205.595	4041096.196	73.771940	846.522	177.086584	79.403200	1111.885	382.717843	4.438
CIRC.	2020.000	242.112892	0.000	218193.598	4041080.195	74.528866	829.180	177.843509	80.063210	1095.482	383.377854	4.397
CIRC.	2040.000	244.427873	0.000	218181.028	4041064.641	75.268555	811.599	178.583199	80.707956	1078.787	384.022600	4.357
CIRC.	2060.000	246.742854	0.000	218167.900	4041049.553	75.989615	793.786	179.304258	81.336441	1061.807	384.651085	4.316
CIRC.	2080.000	249.057835	0.000	218154.233	4041034.953	76.690505	775.749	180.005149	81.947587	1044.552	385.262231	4.275
CIRC.	2100.000	251.372816	0.000	218140.044	4041020.860	77.369522	757.498	180.684165	82.540232	1027.031	385.854876	4.235
CIRC.	2120.000	253.687797	0.000	218125.352	4041007.292	78.024772	739.041	181.339416	83.113123	1009.254	386.427766	4.194
CIRC.	2140.000	256.002778	0.000	218110.176	4040994.266	78.654150	720.388	181.968794	83.664899	991.231	386.979543	4.154
CIRC.	2160.000	258.317759	0.000	218094.537	4040981.802	79.255305	701.550	182.569949	84.194089	972.975	387.508733	4.113
CIRC.	2180.000	260.632740	0.000	218078.455	4040969.914	79.825605	682.536	183.140249	84.699096	954.494	388.013740	4.072

Istram 20.01.01.08 18/03/20 16:42:05 2378 pagina 4
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 1 : Sevilla - Cadiz

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 2865.763 Dis= 18.040
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 3155.638 Dis= 27.279

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	2200.000	262.947721	0.000	218061.951	4040958.618	80.362098	663.358	183.676742	85.178184	935.803	388.492828	4.032
CIRC.	2220.000	265.262702	0.000	218045.048	4040947.930	80.861457	644.027	184.176101	85.629465	916.913	388.944109	3.991
CIRC.	2240.000	267.577683	0.000	218027.767	4040937.864	81.319929	624.557	184.634572	86.050883	897.837	389.365527	3.951
CIRC.	2260.000	269.892664	0.000	218010.132	4040928.432	81.733257	604.960	185.047900	86.440192	878.590	389.754836	3.910
CIRC.	2280.000	272.207645	0.000	217992.166	4040919.648	82.096605	585.252	185.411249	86.794942	859.186	390.109586	3.869
CIRC.	2300.000	274.522626	0.000	217973.892	4040911.523	82.404456	565.447	185.719099	87.112453	839.641	390.427097	3.829
CLOT.	2320.000	276.706282	0.000	217955.338	4040904.058	82.651674	545.565	185.966318	87.390566	819.973	390.705210	3.788
CLOT.	2340.000	278.425002	0.000	217936.563	4040897.167	82.843462	525.631	186.158106	87.634152	800.215	390.948796	3.748
CLOT.	2360.000	279.662345	0.000	217917.634	4040890.714	82.992075	505.667	186.306719	87.852618	780.400	391.167262	3.707
CLOT.	2380.000	280.418313	0.000	217898.605	4040884.557	83.111929	485.689	186.426573	88.056492	760.553	391.371136	3.666
CLOT.	2400.000	280.692904	0.000	217879.527	4040878.555	83.219961	465.705	186.534605	88.257485	740.694	391.572129	3.626
RECTA	2420.000	280.694098	0.000	217860.439	4040872.583	83.333271	445.722	186.647915	88.466843	720.839	391.781487	3.585
RECTA	2440.000	280.694098	0.000	217841.352	4040866.610	83.457216	425.740	186.771860	88.688057	700.992	392.002701	3.545
RECTA	2460.000	280.694098	0.000	217822.264	4040860.638	83.593368	405.760	186.908012	88.922159	681.154	392.236803	3.504
RECTA	2480.000	280.694098	0.000	217803.177	4040854.665	83.743622	385.781	187.058266	89.170303	661.326	392.484947	3.463
RECTA	2500.000	280.694098	0.000	217784.090	4040848.692	83.910288	365.806	187.224932	89.433782	641.508	392.748426	3.423
RECTA	2520.000	280.694098	0.000	217765.002	4040842.720	84.096206	345.833	187.410850	89.714054	621.703	393.028698	3.382
RECTA	2540.000	280.694098	0.000	217745.915	4040836.747	84.304913	325.863	187.619557	90.012765	601.910	393.327409	3.342
RECTA	2560.000	280.694098	0.000	217726.828	4040830.775	84.540867	305.897	187.855511	90.331781	582.131	393.646425	3.301
RECTA	2580.000	280.694098	0.000	217707.740	4040824.802	84.809769	285.936	188.124413	90.673229	562.368	393.987873	3.260

Istram 20.01.01.08 18/03/20 16:42:05 2378 pagina 4
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 1 : Sevilla - Cadiz

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 2865.763 Dis= 18.040
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 3155.638 Dis= 27.279

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	2600.000	280.694098	0.000	217688.653	4040818.829	85.119026	265.981	188.433670	91.039538	542.622	394.354182	3.223
RECTA	2620.000	280.694098	0.000	217669.565	4040812.857	85.478439	246.033	188.793083	91.433500	522.895	394.748144	3.199
RECTA	2640.000	280.694098	0.000	217650.478	4040806.884	85.901260	226.095	189.215903	91.858334	503.190	395.172977	3.188
RECTA	2660.000	280.694098	0.000	217631.391	4040800.912	86.405839	206.168	189.720483	92.317774	483.510	395.632418	3.190
RECTA	2680.000	280.694098	0.000	217612.303	4040794.939	87.018343	186.257	190.332987	92.816175	463.856	396.130819	3.206
RECTA	2700.000	280.694098	0.000	217593.216	4040788.966	87.777385	166.368	191.092029	93.358641	444.234	396.673285	3.235
RECTA	2720.000	280.694098	0.000	217574.128	4040782.994	88.742375	146.508	192.057019	93.951198	424.647	397.265841	3.277
RECTA	2740.000	280.694098	0.000	217555.041	4040777.021	90.009595	126.693	193.324239	94.600999	405.100	397.915642	3.330
RECTA	2760.000	280.694098	0.000	217535.954	4040771.049	91.745686	106.946	195.060330	95.316603	385.600	398.631247	3.385
RECTA	2780.000	280.694098	0.000	217516.866	4040765.076	94.265067	87.315	197.579711	96.108329	366.153	399.422973	3.440
RECTA	2800.000	280.694098	0.000	217497.779	4040759.104	98.234770	67.900	201.549414	96.988714	346.770	0.303358	3.495
CLOT.	2820.000	280.745308	0.000	217478.691	4040753.134	105.321371	48.957	208.636014	97.972609	327.460	1.287253	3.550
CLOT.	2840.000	281.130077	0.000	217459.584	4040747.225	120.682855	31.317	223.997499	99.066857	308.220	2.381501	3.604
CLOT.	2860.000	281.891544	0.000	217440.424	4040741.488	162.481449	18.926	265.796093	100.268499	289.030	3.583142	3.659
CLOT.	2880.000	283.029709	0.000	217421.181	4040736.038	224.870033	22.909	328.184677	101.573418	269.867	4.888062	3.714
CLOT.	2900.000	284.544573	0.000	217401.829	4040730.990	252.161535	38.423	355.476179	102.976412	250.706	6.291056	3.769
CIRC.	2920.000	286.345718	0.000	217382.351	4040726.455	263.442763	56.639	366.757407	104.472435	231.525	7.787079	3.824
CIRC.	2940.000	288.164632	0.000	217362.751	4040722.478	269.605142	75.609	372.919786	106.074674	212.320	9.389318	3.878
CIRC.	2960.000	289.983545	0.000	217343.045	4040719.062	273.648313	94.872	376.962957	107.814770	193.102	11.129414	3.933
CIRC.	2980.000	291.802459	0.000	217323.250	4040716.211	276.630836	114.267	379.945480	109.738488	173.884	13.053132	3.988

Istram 20.01.01.08 18/03/20 16:42:05 2378 pagina 5
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 1 : Sevilla - Cadiz

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 2865.763 Dis= 18.040
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 3155.638 Dis= 27.279

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3000.000	293.621372	0.000	217303.382	4040713.927	279.010906	133.725	382.325550	111.914122	154.686	15.228766	4.043
CIRC.	3020.000	295.440286	0.000	217283.456	4040712.211	281.017138	153.209	384.331782	114.448085	135.535	17.762729	4.097
CIRC.	3040.000	297.259200	0.000	217263.490	4040711.065	282.775848	172.697	386.090492	117.515192	116.474	20.829836	4.151
CIRC.	3060.000	299.078113	0.000	217243.499	4040710.489	284.362356	192.175	387.677000	121.422253	97.574	24.736896	4.197
CIRC.	3080.000	300.897027	0.000	217223.500	4040710.485	285.824306	211.630	389.138950	126.754555	78.975	30.069199	4.235
CIRC.	3100.000	302.715941	0.000	217203.508	4040711.053	287.193281	231.056	390.507925	134.750893	60.972	38.065537	4.265
CIRC.	3120.000	304.534854	0.000	217183.542	4040712.191	288.491039	250.445	391.805683	148.345629	44.322	51.660273	4.286
CIRC.	3140.000	306.353768	0.000	217163.615	4040713.899	289.733046	269.791	393.047690	174.462814	31.292	77.777458	4.300

Istram 20.01.01.08 18/03/20 16:42:05 2378 pagina 5
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 1 : Sevilla - Cadiz

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 3155.638 Dis= 27.279
Distancia: 315.594 Azimut: 312.962004
BO : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 3472.527 Dis= 21.592

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3140.000	306.353768	0.000	217163.615	4040713.899	174.462814	31.292	261.500810	117.867857	334.377	4.905853	4.300
CIRC.	3160.000	308.172682	0.000	217143.746	4040716.176	217.874067	27.612	304.912063	118.538745	314.672	5.576741	4.306
CIRC.	3180.000	309.991595	0.000	217123.950	4040719.020	254.672594	36.255	341.710590	119.177704	294.908	6.215700	4.304
CIRC.	3200.000	311.810509	0.000	217104.243	4040722.428	274.143303	51.330	361.181298	119.777741	275.090	6.815737	4.294
CLOT.	3220.000	313.565340	0.000	217084.641	4040726.393	284.741250	68.721	371.779246	120.330673	255.223	7.368669	4.276
CLOT.	3240.000	314.998010	0.000	217065.144	4040730.851	291.303729	87.064	378.341725	120.841538	235.320	7.879534	4.250
CLOT.	3260.000	316.081369	0.000	217045.740	4040735.693	295.780272	105.890	382.818268	121.330564	215.396	8.368560	4.222
CLOT.	3280.000	316.815417	0.000	217026.406	4040740.812	299.035058	125.005	386.073054	121.826665	195.460	8.864661	4.194
CLOT.	3300.000	317.200154	0.000	217007.118	4040746.101	301.497282	144.319	388.535278	122.371927	175.523	9.409923	4.166
CLOT.	3320.000	317.240851	0.000	216987.847	4040751.453	303.401326	163.783	390.439322	123.029890	155.596	10.067886	4.138
CLOT.	3340.000	316.986603	0.000	216968.568	4040756.772	304.888037	183.370	391.926033	123.897186	135.694	10.935182	4.110
CLOT.	3360.000	316.449414	0.000	216949.255	4040761.972	306.048870	203.058	393.086866	125.130066	115.842	12.168062	4.082
CLOT.	3380.000	315.629282	0.000	216929.889	4040766.964	306.943988	222.833	393.981984	127.011235	96.087	14.049231	4.054
CLOT.	3400.000	314.526208	0.000	216910.449	4040771.664	307.614420	242.682	394.652416	130.106921	76.526	17.144917	4.026
CIRC.	3420.000	313.141735	0.000	216890.921	4040775.983	308.089098	262.593	395.127094	135.715087	57.397	22.753083	3.998
CIRC.	3440.000	311.643807	0.000	216871.300	4040779.852	308.393492	282.550	395.431487	147.360649	39.382	34.398645	3.970
CIRC.	3460.000	310.145878	0.000	216851.592	4040783.258	308.558805	302.535	395.596801	175.859139	25.042	62.897135	3.988

Istram 20.01.01.08 18/03/20 16:42:05 2378 pagina 6
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 1 : Sevilla - Cadiz

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 3472.527 Dis= 21.592
Distancia: 399.296 Azimut: 230.952151
BO : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 3696.681 Dis=-336.899

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3460.000	310.145878	0.000	216851.592	4040783.258	175.859139	25.042	344.906988	34.118179	383.534	3.166028	3.988
CIRC.	3480.000	308.647949	0.000	216831.810	4040786.199	230.390243	22.880	399.438092	30.986305	376.417	0.034154	4.129
CIRC.	3500.000	307.150020	0.000	216811.964	4040788.674	266.166113	35.215	35.213962	27.765854	369.795	396.813703	4.395
CIRC.	3520.000	305.652091	0.000	216792.066	4040790.682	280.563050	52.693	49.610899	24.458934	363.699	393.506783	4.786
CIRC.	3540.000	304.154162	0.000	216772.126	4040792.221	287.205865	71.638	56.253714	21.068866	358.159	390.116715	5.302
CIRC.	3560.000	302.656233	0.000	216752.155	4040793.290	290.724430	91.133	59.772279	17.600285	353.205	386.648134	5.943
CIRC.	3580.000	301.158304	0.000	216732.164	4040793.889	292.731468	110.880	61.779317	14.059200	348.865	383.107049	6.709
CIRC.	3600.000	299.660376	0.000	216712.165	4040794.017	293.903041	130.756	62.950890	10.453014	345.163	379.500863	7.600
CIRC.	3620.000	298.162447	0.000	216692.168	4040793.676	294.567023	150.702	63.614872	6.790486	342.123	375.838335	8.591
CIRC.	3640.000	296.664518	0.000	216672.185	4040792.863	294.900441	170.684	63.948291	3.081630	339.764	372.129479	9.591
CIRC.	3660.000	295.166589	0.000	216652.227	4040791.581	295.006907	190.681	64.054756	399.337549	338.102	368.385398	10.591
CIRC.	3680.000	293.668660	0.000	216632.304	4040789.829	294.950968	210.680	63.998817	395.570213	337.148	364.618062	11.591

Istram 20.01.01.08 18/03/20 16:42:05 2378 pagina 7
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 1 : Sevilla - Cadiz

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 3696.681 Dis=-336.899
Distancia: 335.344 Azimut: 340.002277
BO : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 3972.995 Dis= -58.692

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3680.000	293.668660	0.000	216632.304	4040789.829	395.570213	337.148	55.567936	67.420054	284.272	327.417777	11.591
CIRC.	3700.000	292.170731	0.000	216612.428	4040787.610	391.792179	336.909	51.789902	65.553206	265.969	325.550929	12.591
CIRC.	3720.000	290.672802	0.000	216592.610	4040784.923	388.016279	337.386	48.014002	63.521414	247.724	323.519137	13.591
CIRC.	3740.000	289.174873	0.000	216572.860	4040781.771	384.255291	338.576	44.253015	61.286137	229.562	321.283860	14.591
CIRC.	3760.000	287.676944	0.000	216553.190	4040778.155	380.521611	340.470	40.519335	58.796350	211.514	318.794074	15.547
CIRC.	3780.000	286.179016	0.000	216533.611	4040774.077	376.826949	343.057	36.824672	55.983358	193.625	315.981081	16.300
CLOT.	3800.000	284.455989	0.000	216514.137	4040769.521	373.181434	346.301	33.179157	52.758984	175.944	312.756707	16.839
CIRC.	3820.000	282.076256	0.000	216494.822	4040764.339	369.588142	350.027	29.585865	49.047595	158.474	309.045318	17.162
CIRC.	3840.000	279.529777	0.000	216475.726	4040758.399	366.046289	354.079	26.044012	44.731965	141.236	304.729688	17.270
CIRC.	3860.000	276.983298	0.000	216456.882	4040751.701	362.557642	358.430	22.555365	39.580650	124.354	299.578373	17.162
CIRC.	3880.000	274.436819	0.000	216438.321	4040744.254	359.123817	363.060	19.121540	33.234897	108.026	293.232621	16.839
CLOT.	3900.000	271.890568	0.000	216420.074	4040736.071	355.745931	367.953	15.743654	25.142483	92.581	285.140206	16.300
CLOT.	3920.000	269.714748	0.000	216402.149	4040727.201	352.426505	373.128	12.424228	14.456826	78.602	274.454549	15.547
CLOT.	3940.000	268.244323	0.000	216384.486	4040717.820	349.175639	378.745	9.173362	0.031400	67.203	260.029123	14.591
CLOT.	3960.000	267.479294	0.000	216366.990	4040708.131	346.007720	384.991	6.005443	381.233476	60.107	241.231200	13.591

Istram 20.01.01.08 18/03/20 16:42:05 2378 pagina 6
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 1 : Sevilla - Cadiz

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 3972.995 Dis= -58.692
Distancia: 357.672 Azimut: 314.030496
BO : BR117 X: 216035.432 Y: 4040728.808 Z: 4.773 PK: 4320.547 Dis= 105.519

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CLOT.	3960.000	267.479294	0.000	216366.990	4040708.131	381.233476	60.107	67.202981	103.965026	332.202	389.934530	13.591
CLOT.	3980.000	267.419661	0.000	216349.557	4040698.329	359.798234	59.111	45.767738	106.157810	315.600	392.127315	12.591
CLOT.	4000.000	268.065423	0.000	216332.079	4040688.607	339.950380	64.701	25.919884	108.575176	299.359	394.544681	11.591
CLOT.	4020.000	269.416582	0.000	216314.451	4040679.160	324.647792	75.598	10.617296	111.210510	283.402	397.180014	10.591
CLOT.	4040.000	271.473136	0.000	216296.577	4040670.189	313.951200	90.029	399.920704	114.057169	267.643	0.026673	9.591
CIRC.	4060.000	274.006268	0.000	216278.384	4040661.883	306.736613	106.665	392.706117	117.112242	252.002	3.081747	8.591
CIRC.	4080.000	276.552747	0.000	216259.875	4040654.311	301.887218	124.633	387.856722	120.402226	236.483	6.371730	7.626
CIRC.	4100.000	279.099226	0.000	216241.077	4040647.485	298.609729	143.410	384.579233	123.973769	221.141	9.943273	6.788
CIRC.	4120.000	281.645705	0.000	216222.021	4040641.417	296.398034	162.692	382.367538	127.885068	206.041	13.854572	6.084
CIRC.	4140.000	284.192184	0.000	216202.738	4040636.115	294.930186	182.293	380.899690	132.208687	191.268	18.178191	5.513
CIRC.	4160.000	286.738663	0.000	216183.258	4040631.589	293.996985	202.092	379.966489	137.034677	176.930	23.004181	5.076
CIRC.	4180.000	289.285142	0.000	216163.613	4040627.845	293.458637	222.011	379.428141	142.473295	163.168	28.442799	4.772
CIRC.	4200.000	291.831621	0.000	216143.834	4040624.890	293.219035	241.990	379.188540	148.655653	150.166	34.625157	4.601
CIRC.	4220.000	294.378100	0.000	216123.953	4040622.728	293.210320	261.989	379.179824	155.728793	138.162	41.698298	4.515
CIRC.	4240.000	296.924579	0.000	216104.001	4040621.363	293.383404	281.974	379.352908	163.838851	127.460	49.808355	4.430
CIRC.	4260.000	299.471058	0.000	216084.010	4040620.797	293.702001	301.919	379.671505	173.093460	118.432	59.062964	4.346
CIRC.	4280.000	302.017538	0.000	216064.013	4040621.031	294.138761	321.803	380.108265	183.497723	111.502	69.467227	4.261
CIRC.	4300.000	304.564017	0.000	216044.041	4040622.064	294.672708	341.608	380.642212	194.876843	107.090	80.846347	4.176
CLOT.	4320.000	307.098549	0.000	216024.126	4040623.895	295.287467	361.316	381.256971	206.834180	105.520	92.803684	4.091

Istram 20.01.01.08 18/03/20 16:42:05 2378 pagina 7
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 1 : Sevilla - Cadiz

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 4320.547 Dis= 105.519
Distancia: 270.987 Azimut: 299.545648
BO : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 4593.752 Dis= 57.261

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CLOT.	4320.000	307.098549	0.000	216024.126	4040623.895	206.834180	105.520	307.288532	124.035291	279.348	24.489643	4.091
CLOT.	4340.000	309.162505	0.000	216004.292	4040626.461	218.803045	106.980	319.257396	125.241630	260.012	25.695981	4.006
CLOT.	4360.000	310.521065	0.000	215984.534	4040629.559	230.166789	111.540	330.621141	126.504420	240.637	26.958771	3.921
CLOT.	4380.000	311.174230	0.000	215964.827	4040632.968	240.421197	119.039	340.875548	127.900209	221.288	28.354560	3.837
RECTA	4400.000	311.238222	0.000	215945.137	4040636.478	249.290477	129.144	349.744829	129.531896	202.036	29.986248	3.752
RECTA	4420.000	311.238222	0.000	215925.448	4040639.990	256.752501	141.369	357.206852	131.504722	182.944	31.959073	3.667
RECTA	4440.000	311.238222	0.000	215905.759	4040643.502	262.956671	155.217	363.411022	133.934288	164.068	34.388639	3.582
RECTA	4460.000	311.238222	0.000	215886.070	4040647.014	268.104560	170.292	368.558912	136.989663	145.494	37.444015	3.497
RECTA	4480.000	311.238222	0.000	215866.380	4040650.527	272.392197	186.297	372.846548	140.926951	127.351	41.381303	3.413
RECTA	4500.000	311.238222	0.000	215846.691	4040654.039	275.987990	203.011	376.442342	146.144046	109.855	46.598397	3.328
RECTA	4520.000	311.238222	0.000	215827.002	4040657.551	279.028671	220.274	379.483022	153.266664	93.371	53.721015	3.243
RECTA	4540.000	311.238222	0.000	215807.313	4040661.064	281.622439	237.966	382.076791	163.249682	78.537	63.704034	3.163
RECTA	4560.000	311.238222	0.000	215787.624	4040664.576	283.854095	255.998	384.308446	177.330481	66.468	77.784832	3.096
RECTA	4580.000	311.238222	0.000	215767.934	4040668.088	285.790026	274.302	386.244377	196.233083	58.889	96.687434	3.044

Istram 20.01.01.08 18/03/20 16:42:05 2378 pagina 7
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 1 : Sevilla - Cadiz

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 4593.752 Dis= 57.261
Distancia: 277.714 Azimut: 311.446118
BO : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 4884.783 Dis= 23.230

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	4580.000	311.238222	0.000	215767.934	4040668.088	196.233083	58.889	284.786965	123.778508	297.212	12.332390	3.044
RECTA	4600.000	311.238222	0.000	215748.245	4040671.600	218.157369	57.601	306.711251	124.676101	277.626	13.229983	3.006
RECTA	4620.000	311.238222	0.000	215728.556	4040675.113	238.601010	62.990	327.154892	125.709708	258.104	14.263589	2.982
RECTA	4640.000	311.238222	0.000	215708.867	4040678.625	254.490395	73.605	343.044277	126.912085	238.661	15.465966	2.971
CLOT.	4660.000	311.244655	0.000	215689.178	4040682.137	265.862613	87.565	354.416495	128.327104	219.318	16.880986	2.975
CLOT.	4680.000	311.692616	0.000	215669.498	4040685.703	273.954235	103.495	362.508117	129.998431	200.089	18.552313	2.993
CLOT.	4700.000	312.845973	0.000	215649.865	4040689.515	279.936082	120.523	368.489964	131.939289	180.949	20.493171	3.025
CLOT.	4720.000	314.704726	0.000	215630.328	4040693.791	284.604440	138.144	373.158322	134.160671	161.862	22.714553	3.071
CIRC.	4740.000	317.171644	0.000	215610.951	4040698.737	288.458941	156.058	377.012823	136.682429	142.792	25.236311	3.131
CIRC.	4760.000	319.718124	0.000	215591.786	4040704.451	291.778632	174.116	380.332514	139.590880	123.737	28.144762	3.205
CIRC.	4780.000	322.264603	0.000	215572.864	4040710.926	294.712975	192.250	383.266857	143.093513	104.744	31.647395	3.278
CIRC.	4800.000	324.811082	0.000	215554.217	4040718.153	297.360706	210.416	385.914588	147.579040	85.895	36.132921	3.336
CIRC.	4820.000	327.357561	0.000	215535.874	4040726.120	299.789956	228.579	388.343838	153.850969	67.352	42.404851	3.380
CIRC.	4840.000	329.904040	0.000	215517.864	4040734.814	302.049103	246.716	390.602984	163.814951	49.507	52.368833	3.408
CIRC.	4860.000	332.450519	0.000	215500.216	4040744.221	304.173367	264.805	392.727249	182.706878	33.546	71.260760	3.422
CIRC.	4880.000	334.996998	0.000	215482.958	4040754.326	306.188962	282.829	394.742844	222.658551	23.696	111.212432	3.421

Istram 20.01.01.08 18/03/20 16:42:05 2378 pagina 8
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 1 : Sevilla - Cadiz

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 4884.783 Dis= 23.230
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 5158.301 Dis= 19.748

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	4880.000	334.996998	0.000	215482.958	4040754.326	222.658551	23.696	284.013008	143.890180	278.925	5.244638	3.421
CLOT.	4900.000	337.248845	0.000	215466.103	4040765.090	272.772100	27.598	334.126558	144.483854	259.084	5.838312	3.407
CLOT.	4920.000	338.797907	0.000	215449.576	4040776.353	299.718337	41.639	361.072795	145.018218	239.194	6.372676	3.389
CLOT.	4940.000	339.641572	0.000	215433.264	4040787.924	312.352055	59.059	373.706513	145.541008	219.283	6.895465	3.372
RECTA	4960.000	339.812432	0.000	215417.042	4040799.622	319.208698	77.683	380.563156	146.118859	199.373	7.473317	3.354
RECTA	4980.000	339.812432	0.000	215400.827	4040811.330	323.392440	96.854	384.746897	146.820460	179.482	8.174918	3.337
RECTA	5000.000	339.812432	0.000	215384.612	4040823.038	326.185769	116.304	387.540227	147.696814	159.618	9.051271	3.324
RECTA	5020.000	339.812432	0.000	215368.397	4040834.746	328.176007	135.914	389.530465	148.821996	139.793	10.176454	3.319
RECTA	5040.000	339.812432	0.000	215352.182	4040846.454	329.663291	155.623	391.017749	150.318390	120.026	11.672848	3.320
RECTA	5060.000	339.812432	0.000	215335.967	4040858.162	330.815726	175.398	392.170184	152.403094	100.352	13.757552	3.327
RECTA	5080.000	339.812432	0.000	215319.752	4040869.870	331.734396	195.219	393.088853	155.499104	80.837	16.853562	3.342
RECTA	5100.000	339.812432	0.000	215303.537	4040881.578	332.483588	215.073	393.838046	160.543220	61.635	21.897678	3.362
RECTA	5120.000	339.812432	0.000	215287.322	4040893.286	333.106079	234.952	394.460537	170.015114	43.163	31.369572	3.386
CLOT.	5140.000	339.812366	0.000	215271.107	4040904.994	333.631410	254.850	394.985868	192.019853	26.967	53.374311	3.410
CLOT.	5160.000	339.449971	0.000	215254.870	4040916.671	334.071744	274.766	395.426202	244.970340	19.821	106.324797	3.434
CLOT.	5180.000	338.382181	0.000	215238.503	4040928.164	334.404154	294.711	395.758612	292.232164	29.452	153.586622	3.458
CLOT.	5200.000	336.608995	0.000	215221.883	4040939.289	334.604279	314.687	395.958737	310.376370	46.468	171.730828	3.479
CIRC.	5220.000	334.187906	0.000	215204.904	4040949.855	334.653990	334.684	396.008447	317.861557	65.389	179.216015	3.493
CIRC.	5240.000	331.641427	0.000	215187.519	4040959.741	334.555929	354.676	395.910387	321.373724	84.961	182.728182	3.502
CIRC.	5260.000	329.094948	0.000	215169.753	4040968.923	334.332540	374.633	395.686998	323.084646	104.798	184.439104	3.506

Istram 20.01.01.08 18/03/20 16:42:05 2378 pagina 8
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 1 : Sevilla - Cadiz

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 4884.783 Dis= 23.230
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 5158.301 Dis= 19.748

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	5280.000	326.548469	0.000	215151.634	4040977.387	334.003083	394.533	395.357540	323.843361	124.750	185.197819	3.516
CIRC.	5300.000	324.001990	0.000	215133.191	4040985.120	333.583150	414.353	394.937608	324.041179	144.744	185.395637	3.577
CIRC.	5320.000	321.455511	0.000	215114.453	4040992.109	333.085481	434.075	394.439939	323.881867	164.739	185.236325	3.699
CIRC.	5340.000	318.909032	0.000	215095.451	4040998.344	332.520576	453.682	393.875034	323.481528	184.708	184.835986	3.883
CIRC.	5360.000	316.362553	0.000	215076.215	4041003.813	331.897159	473.159	393.251617	322.911015	204.631	184.265473	4.129
CIRC.	5380.000	313.816074	0.000	215056.775	4041008.509	331.222531	492.493	392.576989	322.215963	224.492	183.570421	4.436
CIRC.	5400.000	311.269595	0.000	215037.163	4041012.424	330.502848	511.669	391.857306	321.427065	244.279	182.781523	4.795
CIRC.	5420.000	308.723115	0.000	215017.411	4041015.551	329.743334	530.677	391.097792	320.565714	263.980	181.920172	5.160
CIRC.	5422.128	308.452186	0.000	215015.302	4041015.837	329.660372	532.689	391.014830	320.470485	266.071	181.824943	5.199

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 1
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 8000.000 Dis= 953.326
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 8000.000 Dis= 676.297

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8000.000	357.068348	0.000	216487.176	4040615.472	290.498937	953.326	393.813580	287.951164	676.297	191.265808	5.524
CIRC.	8020.000	352.114108	0.000	216474.093	4040630.593	291.614726	964.163	394.929370	289.556696	686.520	192.871340	5.408
CIRC.	8040.000	347.159869	0.000	216459.874	4040644.650	292.645016	976.541	395.959659	291.032625	698.440	194.347269	5.292
RECTA	8060.000	343.955624	0.000	216444.667	4040657.635	293.586980	990.258	396.901624	292.373485	711.832	195.688129	5.176
CLOT.	8080.000	342.106682	0.000	216429.130	4040670.228	294.480035	1004.549	397.794679	293.632903	725.894	196.947547	5.060
CIRC.	8100.000	337.072828	0.000	216412.897	4040681.902	295.293846	1019.793	398.608490	294.770167	740.999	198.084811	4.944
CIRC.	8120.000	331.767663	0.000	216395.755	4040692.194	296.002199	1036.192	399.316842	295.750630	757.328	199.065274	4.828
CIRC.	8140.000	326.462498	0.000	216377.816	4040701.022	296.602645	1053.589	399.917289	296.572870	774.704	199.887514	4.712
CIRC.	8160.000	321.157333	0.000	216359.204	4040708.327	297.094878	1071.817	0.409522	297.238911	792.939	200.553555	4.596
CIRC.	8180.000	315.852169	0.000	216340.048	4040714.057	297.479996	1090.711	0.794640	297.752963	811.855	201.067606	4.480
CIRC.	8200.000	310.547004	0.000	216320.482	4040718.173	297.760255	1110.110	1.074899	298.120858	831.277	201.435502	4.364
CIRC.	8220.000	305.241839	0.000	216300.641	4040720.646	297.938835	1129.856	1.253479	298.349576	851.042	201.664220	4.248
CIRC.	8240.000	299.936674	0.000	216280.664	4040721.459	298.019631	1149.797	1.334275	298.446829	870.992	201.761473	4.132
CIRC.	8260.000	294.631509	0.000	216260.688	4040720.607	298.007060	1169.790	1.321703	298.420738	890.983	201.735382	4.016
CIRC.	8280.000	289.326345	0.000	216240.852	4040718.094	297.905901	1189.697	1.220545	298.279578	910.878	201.594222	3.900
CLOT.	8300.000	284.106605	0.000	216221.294	4040713.942	297.721298	1209.386	1.035942	298.031758	930.548	201.346402	3.784
CLOT.	8320.000	280.453338	0.000	216202.081	4040708.394	297.469694	1228.794	0.784338	297.699958	949.936	201.014602	3.668
CLOT.	8340.000	278.904598	0.000	216183.109	4040702.066	297.185592	1248.015	0.500236	297.329542	969.140	200.644186	3.552
CLOT.	8360.000	279.362262	0.000	216164.190	4040695.582	296.902192	1267.215	0.216836	296.963379	988.332	200.278023	3.436
CLOT.	8380.000	281.597667	0.000	216145.137	4040689.502	296.647522	1286.551	399.962166	296.637050	1007.665	199.951694	3.320

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 2
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 8000.000 Dis= 953.326
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 8000.000 Dis= 676.297

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8400.000	285.484249	0.000	216125.814	4040684.358	296.446731	1306.125	399.761375	296.381947	1027.242	199.696590	3.204
CIRC.	8420.000	289.728381	0.000	216106.195	4040680.490	296.313837	1325.932	399.628481	296.214882	1047.052	199.529526	3.091
CLOT.	8440.000	293.962021	0.000	216086.362	4040677.937	296.247571	1345.880	399.562215	296.133147	1067.002	199.447791	2.997
CLOT.	8460.000	297.129333	0.000	216066.410	4040676.585	296.239453	1365.877	399.554096	296.125050	1087.000	199.439694	2.925
CIRC.	8480.000	298.532457	0.000	216046.421	4040675.949	296.264513	1385.869	399.579157	296.158491	1106.991	199.473135	2.875
CIRC.	8500.000	299.169077	0.000	216026.424	4040675.588	296.301296	1405.853	399.615940	296.206255	1126.974	199.520899	2.848
CIRC.	8520.000	299.805697	0.000	216006.425	4040675.427	296.345968	1425.828	399.660612	296.263445	1146.947	199.578088	2.840
CIRC.	8540.000	300.442317	0.000	215986.425	4040675.466	296.398200	1445.794	399.712844	296.329571	1166.911	199.644215	2.835
CIRC.	8560.000	301.078936	0.000	215966.426	4040675.705	296.457678	1465.747	399.772322	296.404179	1186.863	199.718823	2.830
CIRC.	8580.000	301.715556	0.000	215946.431	4040676.144	296.524106	1485.688	399.838750	296.486842	1206.803	199.801486	2.825
CIRC.	8600.000	302.352176	0.000	215926.442	4040676.783	296.597204	1505.614	399.911848	296.577164	1226.728	199.891807	2.820
CIRC.	8620.000	302.988796	0.000	215906.459	4040677.621	296.676705	1525.524	399.991349	296.674770	1246.638	199.989414	2.815
CIRC.	8640.000	303.625415	0.000	215886.486	4040678.660	296.762357	1545.417	0.077001	296.779313	1266.531	200.093957	2.811
CIRC.	8660.000	304.262035	0.000	215866.525	4040679.898	296.853920	1565.291	0.168564	296.890464	1286.407	200.205108	2.803
CIRC.	8680.000	304.898655	0.000	215846.577	4040681.336	296.951166	1585.146	0.265810	297.007916	1306.263	200.322560	2.780
CIRC.	8700.000	305.535275	0.000	215826.644	4040682.973	297.053878	1604.980	0.368522	297.131380	1326.099	200.446024	2.742
CIRC.	8720.000	306.171895	0.000	215806.728	4040684.809	297.161851	1624.791	0.476495	297.260585	1345.915	200.575228	2.688
CLOT.	8740.000	306.831459	0.000	215786.832	4040686.845	297.274895	1644.579	0.589539	297.395281	1365.708	200.709925	2.641
CLOT.	8760.000	313.244722	0.000	215767.049	4040689.720	297.417179	1664.226	0.731823	297.564498	1385.362	200.879142	2.656
CLOT.	8780.000	329.843901	0.000	215748.150	4040696.090	297.686925	1682.865	1.001569	297.885863	1404.021	201.200507	2.738

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 3
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 8000.000 Dis= 953.326
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 8000.000 Dis= 676.297

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8800.000	354.610035	0.000	215732.442	4040708.260	298.164264	1698.169	1.478907	298.454822	1419.373	201.769466	2.880
CIRC.	8814.394	372.937379	0.000	215724.713	4040720.344	298.623445	1705.591	1.938088	299.002196	1426.860	202.316840	2.990

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 4
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 8000.000 Dis= 676.297
Distancia: 315.594 Azimut: 312.962004
BO : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 8000.000 Dis= 403.272

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8000.000	357.068348	0.000	216487.176	4040615.472	287.951164	676.297	374.989160	268.580184	403.272	155.618180	5.524
CIRC.	8020.000	352.114108	0.000	216474.093	4040630.593	289.556696	686.520	376.594692	271.625501	408.097	158.663497	5.408
CIRC.	8040.000	347.159869	0.000	216459.874	4040644.650	291.032625	698.440	378.070621	274.510577	415.293	161.548573	5.292
RECTA	8060.000	343.955624	0.000	216444.667	4040657.635	292.373485	711.832	379.411481	277.192967	424.613	164.230963	5.176
CLOT.	8080.000	342.106682	0.000	216429.130	4040670.228	293.632903	725.894	380.670899	279.716326	435.090	166.754322	5.060
CIRC.	8100.000	337.072828	0.000	216412.897	4040681.902	294.770167	740.999	381.808163	282.019247	447.141	169.057243	4.944
CIRC.	8120.000	331.767663	0.000	216395.755	4040692.194	295.750630	757.328	382.788626	284.044350	460.969	171.082346	4.828
CIRC.	8140.000	326.462498	0.000	216377.816	4040701.022	296.572870	774.704	383.610866	285.782286	476.336	172.820282	4.712
CIRC.	8160.000	321.157333	0.000	216359.204	4040708.327	297.238911	792.939	384.276907	287.234586	492.996	174.272582	4.596
CIRC.	8180.000	315.852169	0.000	216340.048	4040714.057	297.752963	811.855	384.790958	288.410229	510.714	175.448225	4.480
CIRC.	8200.000	310.547004	0.000	216320.482	4040718.173	298.120858	831.277	385.158854	289.323248	529.266	176.361244	4.364
CIRC.	8220.000	305.241839	0.000	216300.641	4040720.646	298.349576	851.042	385.387572	289.990732	548.445	177.028728	4.248
CIRC.	8240.000	299.936674	0.000	216280.664	4040721.459	298.446829	870.992	385.484825	290.431279	568.063	177.469275	4.132
CIRC.	8260.000	294.631509	0.000	216260.688	4040720.607	298.420738	890.983	385.458734	290.663873	587.945	177.701869	4.016
CIRC.	8280.000	289.326345	0.000	216240.852	4040718.094	298.279578	910.878	385.317574	290.707121	607.935	177.745117	3.900
CLOT.	8300.000	284.106605	0.000	216221.294	4040713.942	298.031758	930.548	385.069754	290.579028	627.891	177.617024	3.784
CLOT.	8320.000	280.453338	0.000	216202.081	4040708.394	297.699958	949.936	384.737954	290.318164	647.717	177.356160	3.668
CLOT.	8340.000	278.904598	0.000	216183.109	4040702.066	297.329542	969.140	384.367538	289.995664	667.437	177.033660	3.552
CLOT.	8360.000	279.362262	0.000	216164.190	4040695.582	296.963379	988.332	384.001375	289.676702	687.147	176.714698	3.436
CLOT.	8380.000	281.597667	0.000	216145.137	4040689.502	296.637050	1007.665	383.675046	289.413308	706.937	176.451304	3.320

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 5
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 8000.000 Dis= 676.297
Distancia: 315.594 Azimut: 312.962004
BO : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 8000.000 Dis= 403.272

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8400.000	285.484249	0.000	216125.814	4040684.358	296.381947	1027.242	383.419943	289.249157	726.848	176.287153	3.204
CIRC.	8420.000	289.728381	0.000	216106.195	4040680.490	296.214882	1047.052	383.252878	289.205176	746.838	176.243172	3.091
CLOT.	8440.000	293.962021	0.000	216086.362	4040677.937	296.133147	1067.002	383.171143	289.274127	766.817	176.312123	2.997
CLOT.	8460.000	297.129333	0.000	216066.410	4040676.585	296.125050	1087.000	383.163046	289.437016	786.716	176.475012	2.925
CIRC.	8480.000	298.532457	0.000	216046.421	4040675.949	296.158491	1106.991	383.196487	289.648128	806.541	176.686124	2.875
CIRC.	8500.000	299.169077	0.000	216026.424	4040675.588	296.206255	1126.974	383.244251	289.870086	826.337	176.908082	2.848
CIRC.	8520.000	299.805697	0.000	216006.425	4040675.427	296.263445	1146.947	383.301441	290.096550	846.115	177.134546	2.840
CIRC.	8540.000	300.442317	0.000	215986.425	4040675.466	296.329571	1166.911	383.367567	290.327208	865.873	177.365204	2.835
CIRC.	8560.000	301.078936	0.000	215966.426	4040675.705	296.404179	1186.863	383.442175	290.561775	885.611	177.599771	2.830
CIRC.	8580.000	301.715556	0.000	215946.431	4040676.144	296.486842	1206.803	383.524838	290.799992	905.328	177.837988	2.825
CIRC.	8600.000	302.352176	0.000	215926.442	4040676.783	296.577164	1226.728	383.615160	291.041621	925.024	178.079617	2.820
CIRC.	8620.000	302.988796	0.000	215906.459	4040677.621	296.674770	1246.638	383.712766	291.286446	944.698	178.324442	2.815
CIRC.	8640.000	303.625415	0.000	215886.486	4040678.660	296.779313	1266.531	383.817309	291.534268	964.350	178.572264	2.811
CIRC.	8660.000	304.262035	0.000	215866.525	4040679.898	296.890464	1286.407	383.928460	291.784904	983.979	178.822900	2.803
CIRC.	8680.000	304.898655	0.000	215846.577	4040681.336	297.007916	1306.263	384.045912	292.038185	1003.584	179.076181	2.780
CIRC.	8700.000	305.535275	0.000	215826.644	4040682.973	297.131380	1326.099	384.169376	292.293957	1023.165	179.331953	2.742
CIRC.	8720.000	306.171895	0.000	215806.728	4040684.809	297.260585	1345.915	384.298581	292.552076	1042.721	179.590072	2.688
CLOT.	8740.000	306.831459	0.000	215786.832	4040686.845	297.395281	1365.708	384.433277	292.812419	1062.253	179.850415	2.641
CLOT.	8760.000	313.244722	0.000	215767.049	4040689.720	297.564498	1385.362	384.602494	293.111783	1081.598	180.149779	2.656
CLOT.	8780.000	329.843901	0.000	215748.150	4040696.090	297.885863	1404.021	384.923859	293.596483	1099.730	180.634479	2.738

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 4
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 8000.000 Dis= 676.297
Distancia: 315.594 Azimut: 312.962004
BO : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 8000.000 Dis= 403.272

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8800.000	354.610035	0.000	215732.442	4040708.260	298.454822	1419.373	385.492818	294.378467	1114.221	181.416463	2.880
CIRC.	8814.394	372.937379	0.000	215724.713	4040720.344	299.002196	1426.860	386.040192	295.100829	1120.927	182.138825	2.990

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 5
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 8000.000 Dis= 403.272
Distancia: 399.296 Azimut: 230.952151
BO : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 8000.000 Dis= 233.776

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8000.000	357.068348	0.000	216487.176	4040615.472	268.580184	403.272	37.628033	348.730256	233.776	317.778105	5.524
CIRC.	8020.000	352.114108	0.000	216474.093	4040630.593	271.625501	408.097	40.673350	349.191543	253.693	318.239392	5.408
CIRC.	8040.000	347.159869	0.000	216459.874	4040644.650	274.510577	415.293	43.558426	349.224086	273.688	318.271935	5.292
RECTA	8060.000	343.955624	0.000	216444.667	4040657.635	277.192967	424.613	46.240816	348.936078	293.644	317.983927	5.176
CLOT.	8080.000	342.106682	0.000	216429.130	4040670.228	279.716326	435.090	48.764175	348.580988	313.571	317.628837	5.060
CIRC.	8100.000	337.072828	0.000	216412.897	4040681.902	282.019247	447.141	51.067096	348.049598	333.383	317.097447	4.944
CIRC.	8120.000	331.767663	0.000	216395.755	4040692.194	284.044350	460.969	53.092199	347.283368	352.946	316.331217	4.828
CIRC.	8140.000	326.462498	0.000	216377.816	4040701.022	285.782286	476.336	54.830135	346.320476	372.174	315.368325	4.712
CIRC.	8160.000	321.157333	0.000	216359.204	4040708.327	287.234586	492.996	56.282435	345.193131	390.993	314.240980	4.596
CIRC.	8180.000	315.852169	0.000	216340.048	4040714.057	288.410229	510.714	57.458078	343.927292	409.336	312.975141	4.480
CIRC.	8200.000	310.547004	0.000	216320.482	4040718.173	289.323248	529.266	58.371097	342.544059	427.147	311.591908	4.364
CIRC.	8220.000	305.241839	0.000	216300.641	4040720.646	289.990732	548.445	59.038581	341.060733	444.373	310.108582	4.248
CIRC.	8240.000	299.936674	0.000	216280.664	4040721.459	290.431279	568.063	59.479128	339.491616	460.966	308.539465	4.132
CIRC.	8260.000	294.631509	0.000	216260.688	4040720.607	290.663873	587.945	59.711722	337.848629	476.883	306.896478	4.016
CIRC.	8280.000	289.326345	0.000	216240.852	4040718.094	290.707121	607.935	59.754970	336.141791	492.085	305.189640	3.900
CLOT.	8300.000	284.106605	0.000	216221.294	4040713.942	290.579028	627.891	59.626877	334.379815	506.537	303.427664	3.784
CLOT.	8320.000	280.453338	0.000	216202.081	4040708.394	290.318164	647.717	59.366013	332.588958	520.368	301.636807	3.668
CLOT.	8340.000	278.904598	0.000	216183.109	4040702.066	289.995664	667.437	59.043513	330.823137	534.014	299.870986	3.552
CLOT.	8360.000	279.362262	0.000	216164.190	4040695.582	289.676702	687.147	58.724551	329.133011	547.934	298.180860	3.436
CLOT.	8380.000	281.597667	0.000	216145.137	4040689.502	289.413308	706.937	58.461157	327.562843	562.511	296.610692	3.320

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 5
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 8000.000 Dis= 403.272
Distancia: 399.296 Azimut: 230.952151
BO : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 8000.000 Dis= 233.776

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8400.000	285.484249	0.000	216125.814	4040684.358	289.249157	726.848	58.297006	326.155569	578.035	295.203418	3.204
CIRC.	8420.000	289.728381	0.000	216106.195	4040680.490	289.205176	746.838	58.253025	324.936844	594.585	293.984693	3.091
CLOT.	8440.000	293.962021	0.000	216086.362	4040677.937	289.274127	766.817	58.321976	323.903782	612.021	292.951631	2.997
CLOT.	8460.000	297.129333	0.000	216066.410	4040676.585	289.437016	786.716	58.484865	323.037491	630.146	292.085340	2.925
CIRC.	8480.000	298.532457	0.000	216046.421	4040675.949	289.648128	806.541	58.695977	322.284586	648.661	291.332435	2.875
CIRC.	8500.000	299.169077	0.000	216026.424	4040675.588	289.870086	826.337	58.917935	321.598044	667.360	290.645893	2.848
CIRC.	8520.000	299.805697	0.000	216006.425	4040675.427	290.096550	846.115	59.144399	320.966476	686.200	290.014325	2.840
CIRC.	8540.000	300.442317	0.000	215986.425	4040675.466	290.327208	865.873	59.375057	320.385838	705.166	289.433687	2.835
CIRC.	8560.000	301.078936	0.000	215966.426	4040675.705	290.561775	885.611	59.609624	319.852431	724.249	288.900280	2.830
CIRC.	8580.000	301.715556	0.000	215946.431	4040676.144	290.799992	905.328	59.847841	319.362869	743.436	288.410718	2.825
CIRC.	8600.000	302.352176	0.000	215926.442	4040676.783	291.041621	925.024	60.089470	318.914057	762.719	287.961906	2.820
CIRC.	8620.000	302.988796	0.000	215906.459	4040677.621	291.286446	944.698	60.334295	318.503159	782.088	287.551008	2.815
CIRC.	8640.000	303.625415	0.000	215886.486	4040678.660	291.534268	964.350	60.582117	318.127575	801.534	287.175424	2.811
CIRC.	8660.000	304.262035	0.000	215866.525	4040679.898	291.784904	983.979	60.832753	317.784921	821.052	286.832770	2.803
CIRC.	8680.000	304.898655	0.000	215846.577	4040681.336	292.038185	1003.584	61.086034	317.473011	840.633	286.520860	2.780
CIRC.	8700.000	305.535275	0.000	215826.644	4040682.973	292.293957	1023.165	61.341806	317.189834	860.272	286.237683	2.742
CIRC.	8720.000	306.171895	0.000	215806.728	4040684.809	292.552076	1042.721	61.599925	316.933541	879.963	285.981390	2.688
CLOT.	8740.000	306.831459	0.000	215786.832	4040686.845	292.812419	1062.253	61.860268	316.702441	899.700	285.750290	2.641
CLOT.	8760.000	313.244722	0.000	215767.049	4040689.720	293.111783	1081.598	62.159632	316.539480	919.555	285.587329	2.656
CLOT.	8780.000	329.843901	0.000	215748.150	4040696.090	293.596483	1099.730	62.644332	316.627622	939.457	285.675471	2.738

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 6
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 8000.000 Dis= 403.272
Distancia: 399.296 Azimut: 230.952151
BO : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 8000.000 Dis= 233.776

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8800.000	354.610035	0.000	215732.442	4040708.260	294.378467	1114.221	63.426316	317.139492	957.806	286.187341	2.880
CIRC.	8814.394	372.937379	0.000	215724.713	4040720.344	295.100829	1120.927	64.148678	317.770061	968.519	286.817910	2.990

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 7
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 8000.000 Dis= 233.776
Distancia: 335.344 Azimut: 340.002277
BO : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 8107.927 Dis= -41.665

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8000.000	357.068348	0.000	216487.176	4040615.472	348.730256	233.776	8.727979	120.986088	108.569	380.983812	5.524
CIRC.	8020.000	352.114108	0.000	216474.093	4040630.593	349.191543	253.693	9.189266	113.991492	91.850	373.989215	5.408
CIRC.	8040.000	347.159869	0.000	216459.874	4040644.650	349.224086	273.688	9.221809	105.025927	75.657	365.023650	5.292
RECTA	8060.000	343.955624	0.000	216444.667	4040657.635	348.936078	293.644	8.933801	92.612937	60.621	352.610660	5.176
CLOT.	8080.000	342.106682	0.000	216429.130	4040670.228	348.580988	313.571	8.578711	73.667325	48.792	333.665048	5.060
CIRC.	8100.000	337.072828	0.000	216412.897	4040681.902	348.049598	333.383	8.047321	46.974242	42.283	306.971965	4.944
CIRC.	8120.000	331.767663	0.000	216395.755	4040692.194	347.283368	352.946	7.281091	16.897385	43.085	276.895109	4.828
CIRC.	8140.000	326.462498	0.000	216377.816	4040701.022	346.320476	372.174	6.318199	391.664991	50.840	251.662714	4.712
CIRC.	8160.000	321.157333	0.000	216359.204	4040708.327	345.193131	390.993	5.190854	373.744037	62.992	233.741760	4.596
CIRC.	8180.000	315.852169	0.000	216340.048	4040714.057	343.927292	409.336	3.925015	361.122285	77.437	221.120009	4.480
CIRC.	8200.000	310.547004	0.000	216320.482	4040718.173	342.544059	427.147	2.541782	351.735031	93.038	211.732754	4.364
CIRC.	8220.000	305.241839	0.000	216300.641	4040720.646	341.060733	444.373	1.058456	344.311903	109.218	204.309626	4.248
CIRC.	8240.000	299.936674	0.000	216280.664	4040721.459	339.491616	460.966	399.489339	338.128762	125.662	198.126485	4.132
CIRC.	8260.000	294.631509	0.000	216260.688	4040720.607	337.848629	476.883	397.846352	332.764782	142.184	192.762505	4.016
CIRC.	8280.000	289.326345	0.000	216240.852	4040718.094	336.141791	492.085	396.139514	327.965026	158.664	187.962749	3.900
CLOT.	8300.000	284.106605	0.000	216221.294	4040713.942	334.379815	506.537	394.377538	323.568929	175.017	183.566652	3.784
CLOT.	8320.000	280.453338	0.000	216202.081	4040708.394	332.588958	520.368	392.586681	319.531944	191.305	179.529667	3.668
CLOT.	8340.000	278.904598	0.000	216183.109	4040702.066	330.823137	534.014	390.820861	315.926627	207.813	175.924350	3.552
CLOT.	8360.000	279.362262	0.000	216164.190	4040695.582	329.133011	547.934	389.130734	312.820019	224.806	172.817743	3.436
CLOT.	8380.000	281.597667	0.000	216145.137	4040689.502	327.562843	562.511	387.560566	310.254385	242.454	170.252108	3.320

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 6
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 8000.000 Dis= 233.776
Distancia: 335.344 Azimut: 340.002277
BO : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 8107.927 Dis= -41.665

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8400.000	285.484249	0.000	216125.814	4040684.358	326.155569	578.035	386.153293	308.258418	260.831	168.256141	3.204
CIRC.	8420.000	289.728381	0.000	216106.195	4040680.490	324.936844	594.585	384.934567	306.808408	279.857	166.806131	3.091
CLOT.	8440.000	293.962021	0.000	216086.362	4040677.937	323.903782	612.021	383.901506	305.818300	299.340	165.816023	2.997
CLOT.	8460.000	297.129333	0.000	216066.410	4040676.585	323.037491	630.146	383.035214	305.186417	319.101	165.184140	2.925
CIRC.	8480.000	298.532457	0.000	216046.421	4040675.949	322.284586	648.661	382.282309	304.761928	338.980	164.759652	2.875
CIRC.	8500.000	299.169077	0.000	216026.424	4040675.588	321.598044	667.360	381.595767	304.432996	358.899	164.430719	2.848
CIRC.	8520.000	299.805697	0.000	216006.425	4040675.427	320.966476	686.200	380.964199	304.172168	378.842	164.169891	2.840
CIRC.	8540.000	300.442317	0.000	215986.425	4040675.466	320.385838	705.166	380.383561	303.969290	398.803	163.967013	2.835
CIRC.	8560.000	301.078936	0.000	215966.426	4040675.705	319.852431	724.249	379.850154	303.816116	418.779	163.813839	2.830
CIRC.	8580.000	301.715556	0.000	215946.431	4040676.144	319.362869	743.436	379.360593	303.705885	438.765	163.703608	2.825
CIRC.	8600.000	302.352176	0.000	215926.442	4040676.783	318.914057	762.719	378.911781	303.633000	458.758	163.630723	2.820
CIRC.	8620.000	302.988796	0.000	215906.459	4040677.621	318.503159	782.088	378.500882	303.592793	478.756	163.590516	2.815
CIRC.	8640.000	303.625415	0.000	215886.486	4040678.660	318.127575	801.534	378.125298	303.581337	498.756	163.579060	2.811
CIRC.	8660.000	304.262035	0.000	215866.525	4040679.898	317.784921	821.052	377.782644	303.595308	518.755	163.593031	2.803
CIRC.	8680.000	304.898655	0.000	215846.577	4040681.336	317.473011	840.633	377.470734	303.631874	538.753	163.629597	2.780
CIRC.	8700.000	305.535275	0.000	215826.644	4040682.973	317.189834	860.272	377.187557	303.688605	558.747	163.686328	2.742
CIRC.	8720.000	306.171895	0.000	215806.728	4040684.809	316.933541	879.963	376.931264	303.763408	578.736	163.761131	2.688
CLOT.	8740.000	306.831459	0.000	215786.832	4040686.845	316.702441	899.700	376.700164	303.854485	598.718	163.852208	2.641
CLOT.	8760.000	313.244722	0.000	215767.049	4040689.720	316.539480	919.555	376.537203	304.026670	618.641	164.024394	2.656
CLOT.	8780.000	329.843901	0.000	215748.150	4040696.090	316.627622	939.457	376.625345	304.541819	637.925	164.539542	2.738

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 7
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 8000.000 Dis= 233.776
Distancia: 335.344 Azimut: 340.002277
BO : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 8107.927 Dis= -41.665

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8800.000	354.610035	0.000	215732.442	4040708.260	317.139492	957.806	377.137215	305.613627	654.554	165.611350	2.880
CIRC.	8814.394	372.937379	0.000	215724.713	4040720.344	317.770061	968.519	377.767784	306.703465	663.415	166.701188	2.990

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 8
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 8107.927 Dis= -41.665
Distancia: 357.672 Azimut: 314.030496
BO : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 8490.034 Dis= 53.074

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8000.000	357.068348	0.000	216487.176	4040615.472	120.986088	108.569	206.955592	115.648856	465.745	1.618360	5.524
CIRC.	8020.000	352.114108	0.000	216474.093	4040630.593	113.991492	91.850	199.960996	114.022526	449.522	399.992030	5.408
CIRC.	8040.000	347.159869	0.000	216459.874	4040644.650	105.025927	75.657	190.995431	112.461163	432.705	398.430667	5.292
RECTA	8060.000	343.955624	0.000	216444.667	4040657.635	92.612937	60.621	178.582441	110.962199	415.378	396.931703	5.176
CLOT.	8080.000	342.106682	0.000	216429.130	4040670.228	73.667325	48.792	159.636829	109.403501	398.032	395.373005	5.060
CIRC.	8100.000	337.072828	0.000	216412.897	4040681.902	46.974242	42.283	132.943746	107.870588	380.369	393.840092	4.944
CIRC.	8120.000	331.767663	0.000	216395.755	4040692.194	16.897385	43.085	102.866889	106.446903	362.179	392.416407	4.828
CIRC.	8140.000	326.462498	0.000	216377.816	4040701.022	391.664991	50.840	77.634495	105.155101	343.509	391.124605	4.712
CIRC.	8160.000	321.157333	0.000	216359.204	4040708.327	373.744037	62.992	59.713541	104.021711	324.419	389.991215	4.596
CIRC.	8180.000	315.852169	0.000	216340.048	4040714.057	361.122285	77.437	47.091790	103.080329	304.973	389.049834	4.480
CIRC.	8200.000	310.547004	0.000	216320.482	4040718.173	351.735031	93.038	37.704535	102.373999	285.248	388.343503	4.364
CIRC.	8220.000	305.241839	0.000	216300.641	4040720.646	344.311903	109.218	30.281407	101.958528	265.335	387.928032	4.248
CIRC.	8240.000	299.936674	0.000	216280.664	4040721.459	338.128762	125.662	24.098266	101.907127	245.342	387.876631	4.132
CIRC.	8260.000	294.631509	0.000	216260.688	4040720.607	332.764782	142.184	18.734286	102.316849	225.405	388.286353	4.016
CIRC.	8280.000	289.326345	0.000	216240.852	4040718.094	327.965026	158.664	13.934530	103.317338	205.699	389.286842	3.900
CLOT.	8300.000	284.106605	0.000	216221.294	4040713.942	323.568929	175.017	9.538433	105.081215	186.455	391.050719	3.784
CLOT.	8320.000	280.453338	0.000	216202.081	4040708.394	319.531944	191.305	5.501448	107.759625	167.895	393.729130	3.668
CLOT.	8340.000	278.904598	0.000	216183.109	4040702.066	315.926627	207.813	1.896131	111.404588	150.079	397.374092	3.552
CLOT.	8360.000	279.362262	0.000	216164.190	4040695.582	312.820019	224.806	398.789523	116.077138	132.975	2.046642	3.436
CLOT.	8380.000	281.597667	0.000	216145.137	4040689.502	310.254385	242.454	396.223889	121.902271	116.534	7.871775	3.320

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 7
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 8107.927 Dis= -41.665
Distancia: 357.672 Azimut: 314.030496
BO : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 8490.034 Dis= 53.074

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8400.000	285.484249	0.000	216125.814	4040684.358	308.258418	260.831	394.227922	129.097974	100.721	15.067478	3.204
CIRC.	8420.000	289.728381	0.000	216106.195	4040680.490	306.808408	279.857	392.777912	138.140061	85.686	24.109565	3.091
CLOT.	8440.000	293.962021	0.000	216086.362	4040677.937	305.818300	299.340	391.787804	149.963113	71.985	35.932617	2.997
CLOT.	8460.000	297.129333	0.000	216066.410	4040676.585	305.186417	319.101	391.155921	165.915717	60.720	51.885221	2.925
CIRC.	8480.000	298.532457	0.000	216046.421	4040675.949	304.761928	338.980	390.731433	186.951413	53.989	72.920917	2.875
CIRC.	8500.000	299.169077	0.000	216026.424	4040675.588	304.432996	358.899	390.402500	210.674308	53.977	96.643812	2.848
CIRC.	8520.000	299.805697	0.000	216006.425	4040675.427	304.172168	378.842	390.141672	231.688618	60.753	117.658122	2.840
CIRC.	8540.000	300.442317	0.000	215986.425	4040675.466	303.969290	398.803	389.938794	247.305351	72.437	133.274855	2.835
CIRC.	8560.000	301.078936	0.000	215966.426	4040675.705	303.816116	418.779	389.785620	258.244537	87.073	144.214041	2.830
CIRC.	8580.000	301.715556	0.000	215946.431	4040676.144	303.705885	438.765	389.675389	265.984544	103.415	151.954048	2.825
CIRC.	8600.000	302.352176	0.000	215926.442	4040676.783	303.633000	458.758	389.602504	271.647902	120.771	157.617407	2.820
CIRC.	8620.000	302.988796	0.000	215906.459	4040677.621	303.592793	478.756	389.562297	275.947711	138.759	161.917215	2.815
CIRC.	8640.000	303.625415	0.000	215886.486	4040678.660	303.581337	498.756	389.550841	279.324788	157.161	165.294292	2.811
CIRC.	8660.000	304.262035	0.000	215866.525	4040679.898	303.595308	518.755	389.564812	282.056400	175.846	168.025904	2.803
CIRC.	8680.000	304.898655	0.000	215846.577	4040681.336	303.631874	538.753	389.601378	284.322251	194.731	170.291755	2.780
CIRC.	8700.000	305.535275	0.000	215826.644	4040682.973	303.688605	558.747	389.658109	286.242592	213.760	172.212096	2.742
CIRC.	8720.000	306.171895	0.000	215806.728	4040684.809	303.763408	578.736	389.732912	287.900351	232.898	173.869855	2.688
CLOT.	8740.000	306.831459	0.000	215786.832	4040686.845	303.854485	598.718	389.823989	289.354345	252.117	175.323849	2.641
CLOT.	8760.000	313.244722	0.000	215767.049	4040689.720	304.026670	618.641	389.996174	290.792947	271.214	176.762451	2.656
CLOT.	8780.000	329.843901	0.000	215748.150	4040696.090	304.541819	637.925	390.511323	292.780699	289.139	178.750203	2.738

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 8
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 8107.927 Dis= -41.665
Distancia: 357.672 Azimut: 314.030496
BO : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 8490.034 Dis= 53.074

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8800.000	354.610035	0.000	215732.442	4040708.260	305.613627	654.554	391.583131	295.689195	303.686	181.658699	2.880
CIRC.	8814.394	372.937379	0.000	215724.713	4040720.344	306.703465	663.415	392.672969	298.266292	310.835	184.235796	2.990

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 9
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 8490.034 Dis= 53.074
Distancia: 270.987 Azimut: 299.545648
BO : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 8778.480 Dis= 34.820

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8000.000	357.068348	0.000	216487.176	4040615.472	115.648856	465.745	216.103208	109.736341	731.260	10.190692	5.524
CIRC.	8020.000	352.114108	0.000	216474.093	4040630.593	114.022526	449.522	214.476878	108.584991	716.143	9.039343	5.408
CIRC.	8040.000	347.159869	0.000	216459.874	4040644.650	112.461163	432.705	212.915515	107.492329	700.266	7.946681	5.292
RECTA	8060.000	343.955624	0.000	216444.667	4040657.635	110.962199	415.378	211.416550	106.457861	683.730	6.912212	5.176
CLOT.	8080.000	342.106682	0.000	216429.130	4040670.228	109.403501	398.032	209.857852	105.412374	667.087	5.866726	5.060
CIRC.	8100.000	337.072828	0.000	216412.897	4040681.902	107.870588	380.369	208.324939	104.408088	650.003	4.862440	4.944
CIRC.	8120.000	331.767663	0.000	216395.755	4040692.194	106.446903	362.179	206.901254	103.493730	632.255	3.948081	4.828
CIRC.	8140.000	326.462498	0.000	216377.816	4040701.022	105.155101	343.509	205.609452	102.681597	613.908	3.135949	4.712
CIRC.	8160.000	321.157333	0.000	216359.204	4040708.327	104.021711	324.419	204.476063	101.984603	595.041	2.438955	4.596
CIRC.	8180.000	315.852169	0.000	216340.048	4040714.057	103.080329	304.973	203.534681	101.417303	575.739	1.871654	4.480
CIRC.	8200.000	310.547004	0.000	216320.482	4040718.173	102.373999	285.248	202.828350	100.996088	556.098	1.450440	4.364
CIRC.	8220.000	305.241839	0.000	216300.641	4040720.646	101.958528	265.335	202.412879	100.739373	536.226	1.193724	4.248
CIRC.	8240.000	299.936674	0.000	216280.664	4040721.459	101.907127	245.342	202.361478	100.667736	516.240	1.122088	4.132
CIRC.	8260.000	294.631509	0.000	216260.688	4040720.607	102.316849	225.405	202.771200	100.803994	496.275	1.258346	4.016
CIRC.	8280.000	289.326345	0.000	216240.852	4040718.094	103.317338	205.699	203.771689	101.173131	476.481	1.627482	3.900
CLOT.	8300.000	284.106605	0.000	216221.294	4040713.942	105.081215	186.455	205.535567	101.801656	457.025	2.256008	3.784
CLOT.	8320.000	280.453338	0.000	216202.081	4040708.394	107.759625	167.895	208.213977	102.686652	438.019	3.141003	3.668
CLOT.	8340.000	278.904598	0.000	216183.109	4040702.066	111.404588	150.079	211.858939	103.767959	419.392	4.222311	3.552
CLOT.	8360.000	279.362262	0.000	216164.190	4040695.582	116.077138	132.975	216.531490	104.973353	400.960	5.427705	3.436
CLOT.	8380.000	281.597667	0.000	216145.137	4040689.502	121.902271	116.534	222.356623	106.229794	382.515	6.684146	3.320

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 10
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 8490.034 Dis= 53.074
Distancia: 270.987 Azimut: 299.545648
BO : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 8778.480 Dis= 34.820

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8400.000	285.484249	0.000	216125.814	4040684.358	129.097974	100.721	229.552326	107.455884	363.854	7.910235	3.204
CIRC.	8420.000	289.728381	0.000	216106.195	4040680.490	138.140061	85.686	238.594413	108.588285	344.876	9.042637	3.091
CLOT.	8440.000	293.962021	0.000	216086.362	4040677.937	149.963113	71.985	250.417464	109.604454	325.609	10.058805	2.997
CLOT.	8460.000	297.129333	0.000	216066.410	4040676.585	165.915717	60.720	266.370069	110.506069	306.117	10.960420	2.925
CIRC.	8480.000	298.532457	0.000	216046.421	4040675.949	186.951413	53.989	287.405764	111.375031	286.530	11.829382	2.875
CIRC.	8500.000	299.169077	0.000	216026.424	4040675.588	210.674308	53.977	311.128659	112.307360	266.945	12.761712	2.848
CIRC.	8520.000	299.805697	0.000	216006.425	4040675.427	231.688618	60.753	332.142970	113.336864	247.381	13.791215	2.840
CIRC.	8540.000	300.442317	0.000	215986.425	4040675.466	247.305351	72.437	347.759702	114.488409	227.848	14.942761	2.835
CIRC.	8560.000	301.078936	0.000	215966.426	4040675.705	258.244537	87.073	358.698889	115.796036	208.355	16.250387	2.830
CIRC.	8580.000	301.715556	0.000	215946.431	4040676.144	265.984544	103.415	366.438896	117.307552	188.918	17.761903	2.825
CIRC.	8600.000	302.352176	0.000	215926.442	4040676.783	271.647902	120.771	372.102254	119.092138	169.557	19.546490	2.820
CIRC.	8620.000	302.988796	0.000	215906.459	4040677.621	275.947711	138.759	376.402063	121.253491	150.306	21.707842	2.815
CIRC.	8640.000	303.625415	0.000	215886.486	4040678.660	279.324788	157.161	379.779140	123.953653	131.213	24.408004	2.811
CIRC.	8660.000	304.262035	0.000	215866.525	4040679.898	282.056400	175.846	382.510751	127.458693	112.364	27.913044	2.803
CIRC.	8680.000	304.898655	0.000	215846.577	4040681.336	284.322251	194.731	384.776603	132.231590	93.905	32.685941	2.780
CIRC.	8700.000	305.535275	0.000	215826.644	4040682.973	286.242592	213.760	386.696943	139.131347	76.126	39.585698	2.742
CIRC.	8720.000	306.171895	0.000	215806.728	4040684.809	287.900351	232.898	388.354702	149.840277	59.638	50.294629	2.688
CLOT.	8740.000	306.831459	0.000	215786.832	4040686.845	289.354345	252.117	389.808696	167.544982	45.861	67.999334	2.641
CLOT.	8760.000	313.244722	0.000	215767.049	4040689.720	290.792947	271.214	391.247299	195.557405	37.244	96.011757	2.656
CLOT.	8780.000	329.843901	0.000	215748.150	4040696.090	292.780699	289.139	393.235050	231.003600	34.834	131.457951	2.738

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 9
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 8490.034 Dis= 53.074
Distancia: 270.987 Azimut: 299.545648
BO : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 8778.480 Dis= 34.820

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8800.000	354.610035	0.000	215732.442	4040708.260	295.689195	303.686	396.143547	266.468543	37.029	166.922894	2.880
CIRC.	8814.394	372.937379	0.000	215724.713	4040720.344	298.266292	310.835	398.720643	289.631780	40.272	190.086132	2.990

```
 Istram 20.01.01.08 18/03/20 16:58:48   2378                                                                    pagina  10
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :    2 : Chiclana - Poligono de Tres Caminos


                           ==========================================
                           * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                           ==========================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:    8778.480 Dis=  34.820
                                                                      Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:    8814.394 Dis=-240.164

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    8000.000 357.068348     0.000   216487.176  4040615.472 109.736341   731.260 198.290222 110.206928  1008.901 398.760809      5.524

CIRC.    8020.000 352.114108     0.000   216474.093  4040630.593 108.584991   716.143 197.138873 109.384391   993.655 397.938273      5.408

CIRC.    8040.000 347.159869     0.000   216459.874  4040644.650 107.492329   700.266 196.046211 108.614850   977.597 397.168732      5.292

RECTA    8060.000 343.955624     0.000   216444.667  4040657.635 106.457861   683.730 195.011742 107.898280   960.837 396.452162      5.176

CLOT.    8080.000 342.106682     0.000   216429.130  4040670.228 105.412374   667.087 193.966256 107.185153   943.921 395.739034      5.060

CIRC.    8100.000 337.072828     0.000   216412.897  4040681.902 104.408088   650.003 192.961970 106.513728   926.528 395.067609      4.944

CIRC.    8120.000 331.767663     0.000   216395.755  4040692.194 103.493730   632.255 192.047611 105.919011   908.464 394.472893      4.828

CIRC.    8140.000 326.462498     0.000   216377.816  4040701.022 102.681597   613.908 191.235479 105.409242   889.811 393.963124      4.712

CIRC.    8160.000 321.157333     0.000   216359.204  4040708.327 101.984603   595.041 190.538485 104.992540   870.665 393.546421      4.596

CIRC.    8180.000 315.852169     0.000   216340.048  4040714.057 101.417303   575.739 189.971184 104.677496   851.129 393.231377      4.480

CIRC.    8200.000 310.547004     0.000   216320.482  4040718.173 100.996088   556.098 189.549970 104.473140   831.318 393.027022      4.364

CIRC.    8220.000 305.241839     0.000   216300.641  4040720.646 100.739373   536.226 189.293254 104.388870   811.354 392.942752      4.248

CIRC.    8240.000 299.936674     0.000   216280.664  4040721.459 100.667736   516.240 189.221618 104.434332   791.368 392.988214      4.132

CIRC.    8260.000 294.631509     0.000   216260.688  4040720.607 100.803994   496.275 189.357876 104.619248   771.503 393.173130      4.016

CIRC.    8280.000 289.326345     0.000   216240.852  4040718.094 101.173131   476.481 189.727013 104.953167   751.912 393.507048      3.900

CLOT.    8300.000 284.106605     0.000   216221.294  4040713.942 101.801656   457.025 190.355538 105.444913   732.757 393.998795      3.784

CLOT.    8320.000 280.453338     0.000   216202.081  4040708.394 102.686652   438.019 191.240534 106.083966   714.125 394.637847      3.668

CLOT.    8340.000 278.904598     0.000   216183.109  4040702.066 103.767959   419.392 192.321841 106.825885   695.891 395.379767      3.552

CLOT.    8360.000 279.362262     0.000   216164.190  4040695.582 104.973353   400.960 193.527235 107.621520   677.826 396.175402      3.436

CLOT.    8380.000 281.597667     0.000   216145.137  4040689.502 106.229794   382.515 194.783676 108.423723   659.689 396.977604      3.320
```

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 11
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 8778.480 Dis= 34.820
Distancia: 277.714 Azimut: 311.446118
BO : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 8814.394 Dis=-240.164

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8400.000	285.484249	0.000	216125.814	4040684.358	107.455884	363.854	196.009766	109.183040	641.258	397.736921	3.204
CIRC.	8420.000	289.728381	0.000	216106.195	4040680.490	108.588285	344.876	197.142167	109.863030	622.435	398.416911	3.091
CLOT.	8440.000	293.962021	0.000	216086.362	4040677.937	109.604454	325.609	198.158336	110.452180	603.260	399.006062	2.997
CLOT.	8460.000	297.129333	0.000	216066.410	4040676.585	110.506069	306.117	199.059950	110.953226	583.815	399.507108	2.925
CIRC.	8480.000	298.532457	0.000	216046.421	4040675.949	111.375031	286.530	199.928913	111.410019	564.244	399.963901	2.875
CIRC.	8500.000	299.169077	0.000	216026.424	4040675.588	112.307360	266.945	200.861242	111.868225	544.646	0.422107	2.848
CIRC.	8520.000	299.805697	0.000	216006.425	4040675.427	113.336864	247.381	201.890746	112.336877	525.037	0.890759	2.840
CIRC.	8540.000	300.442317	0.000	215986.425	4040675.466	114.488409	227.848	203.042291	112.817198	505.419	1.371080	2.835
CIRC.	8560.000	301.078936	0.000	215966.426	4040675.705	115.796036	208.355	204.349918	113.310608	485.791	1.864490	2.830
CIRC.	8580.000	301.715556	0.000	215946.431	4040676.144	117.307552	188.918	205.861433	113.818766	466.155	2.372648	2.825
CIRC.	8600.000	302.352176	0.000	215926.442	4040676.783	119.092138	169.557	207.646020	114.343625	446.512	2.897507	2.820
CIRC.	8620.000	302.988796	0.000	215906.459	4040677.621	121.253491	150.306	209.807372	114.887497	426.863	3.441378	2.815
CIRC.	8640.000	303.625415	0.000	215886.486	4040678.660	123.953653	131.213	212.507534	115.453139	407.209	4.007021	2.811
CIRC.	8660.000	304.262035	0.000	215866.525	4040679.898	127.458693	112.364	216.012574	116.043870	387.552	4.597751	2.803
CIRC.	8680.000	304.898655	0.000	215846.577	4040681.336	132.231590	93.905	220.785471	116.663714	367.893	5.217595	2.780
CIRC.	8700.000	305.535275	0.000	215826.644	4040682.973	139.131347	76.126	227.685229	117.317604	348.234	5.871485	2.742
CIRC.	8720.000	306.171895	0.000	215806.728	4040684.809	149.840277	59.638	238.394159	118.011648	328.577	6.565530	2.688
CLOT.	8740.000	306.831459	0.000	215786.832	4040686.845	167.544982	45.861	256.098864	118.753471	308.924	7.307353	2.641
CLOT.	8760.000	313.244722	0.000	215767.049	4040689.720	195.557405	37.244	284.111287	119.412202	289.174	7.966084	2.656
CLOT.	8780.000	329.843901	0.000	215748.150	4040696.090	231.003600	34.834	319.557482	119.317223	269.235	7.871105	2.738

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 10
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 8778.480 Dis= 34.820
Distancia: 277.714 Azimut: 311.446118
BO : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 8814.394 Dis=-240.164

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8800.000	354.610035	0.000	215732.442	4040708.260	266.468543	37.029	355.022424	117.559642	250.703	6.113524	2.880
CIRC.	8814.394	372.937379	0.000	215724.713	4040720.344	289.631780	40.272	378.185662	115.034815	240.164	3.588697	2.990

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 11
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 8814.394 Dis=-240.164
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 8814.394 Dis=-503.507

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8000.000	357.068348	0.000	216487.176	4040615.472	110.206928	1008.901	171.561386	116.155548	1259.788	377.510006	5.524
CIRC.	8020.000	352.114108	0.000	216474.093	4040630.593	109.384391	993.655	170.738849	115.574322	1243.380	376.928780	5.408
CIRC.	8040.000	347.159869	0.000	216459.874	4040644.650	108.614850	977.597	169.969308	115.045010	1226.222	376.399468	5.292
RECTA	8060.000	343.955624	0.000	216444.667	4040657.635	107.898280	960.837	169.252738	114.567519	1208.430	375.921977	5.176
CLOT.	8080.000	342.106682	0.000	216429.130	4040670.228	107.185153	943.921	168.539610	114.100119	1190.474	375.454576	5.060
CIRC.	8100.000	337.072828	0.000	216412.897	4040681.902	106.513728	926.528	167.868185	113.675213	1172.100	375.029671	4.944
CIRC.	8120.000	331.767663	0.000	216395.755	4040692.194	105.919011	908.464	167.273469	113.321858	1153.176	374.676315	4.828
CIRC.	8140.000	326.462498	0.000	216377.816	4040701.022	105.409242	889.811	166.763700	113.046197	1133.804	374.400655	4.712
CIRC.	8160.000	321.157333	0.000	216359.204	4040708.327	104.992540	870.665	166.346998	112.853945	1114.100	374.208402	4.596
CIRC.	8180.000	315.852169	0.000	216340.048	4040714.057	104.677496	851.129	166.031954	112.750822	1094.186	374.105280	4.480
CIRC.	8200.000	310.547004	0.000	216320.482	4040718.173	104.473140	831.318	165.827598	112.742469	1074.192	374.096927	4.364
CIRC.	8220.000	305.241839	0.000	216300.641	4040720.646	104.388870	811.354	165.743328	112.834325	1054.257	374.188783	4.248
CIRC.	8240.000	299.936674	0.000	216280.664	4040721.459	104.434332	791.368	165.788790	113.031477	1034.526	374.385935	4.132
CIRC.	8260.000	294.631509	0.000	216260.688	4040720.607	104.619248	771.503	165.973706	113.338482	1015.152	374.692940	4.016
CIRC.	8280.000	289.326345	0.000	216240.852	4040718.094	104.953167	751.912	166.307624	113.759144	996.295	375.113602	3.900
CLOT.	8300.000	284.106605	0.000	216221.294	4040713.942	105.444913	732.757	166.799371	114.296115	978.117	375.650573	3.784
CLOT.	8320.000	280.453338	0.000	216202.081	4040708.394	106.083966	714.125	167.438424	114.938029	960.671	376.292486	3.668
CLOT.	8340.000	278.904598	0.000	216183.109	4040702.066	106.825885	695.891	168.180343	115.650777	943.749	377.005235	3.552
CLOT.	8360.000	279.362262	0.000	216164.190	4040695.582	107.621520	677.826	168.975978	116.398860	927.040	377.753318	3.436
CLOT.	8380.000	281.597667	0.000	216145.137	4040689.502	108.423723	659.689	169.778180	117.149588	910.229	378.504046	3.320

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 11
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 8814.394 Dis=-240.164
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 8814.394 Dis=-503.507

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8400.000	285.484249	0.000	216125.814	4040684.358	109.183040	641.258	170.537497	117.869691	893.028	379.224149	3.204
CIRC.	8420.000	289.728381	0.000	216106.195	4040680.490	109.863030	622.435	171.217488	118.535328	875.297	379.889786	3.091
CLOT.	8440.000	293.962021	0.000	216086.362	4040677.937	110.452180	603.260	171.806638	119.139858	857.070	380.494316	2.997
CLOT.	8460.000	297.129333	0.000	216066.410	4040676.585	110.953226	583.815	172.307684	119.686542	838.444	381.041000	2.925
CIRC.	8480.000	298.532457	0.000	216046.421	4040675.949	111.410019	564.244	172.764477	120.206090	819.624	381.560548	2.875
CIRC.	8500.000	299.169077	0.000	216026.424	4040675.588	111.868225	544.646	173.222683	120.729520	800.766	382.083978	2.848
CIRC.	8520.000	299.805697	0.000	216006.425	4040675.427	112.336877	525.037	173.691335	121.262846	781.896	382.617304	2.840
CIRC.	8540.000	300.442317	0.000	215986.425	4040675.466	112.817198	505.419	174.171656	121.806811	763.017	383.161269	2.835
CIRC.	8560.000	301.078936	0.000	215966.426	4040675.705	113.310608	485.791	174.665066	122.362228	744.128	383.716686	2.830
CIRC.	8580.000	301.715556	0.000	215946.431	4040676.144	113.818766	466.155	175.173224	122.929999	725.232	384.284457	2.825
CIRC.	8600.000	302.352176	0.000	215926.442	4040676.783	114.343625	446.512	175.698083	123.511120	706.329	384.865578	2.820
CIRC.	8620.000	302.988796	0.000	215906.459	4040677.621	114.887497	426.863	176.241955	124.106697	687.421	385.461154	2.815
CIRC.	8640.000	303.625415	0.000	215886.486	4040678.660	115.453139	407.209	176.807597	124.717959	668.510	386.072416	2.811
CIRC.	8660.000	304.262035	0.000	215866.525	4040679.898	116.043870	387.552	177.398327	125.346278	649.597	386.700736	2.803
CIRC.	8680.000	304.898655	0.000	215846.577	4040681.336	116.663714	367.893	178.018172	125.993191	630.685	387.347649	2.780
CIRC.	8700.000	305.535275	0.000	215826.644	4040682.973	117.317604	348.234	178.672061	126.660421	611.774	388.014879	2.742
CIRC.	8720.000	306.171895	0.000	215806.728	4040684.809	118.011648	328.577	179.366106	127.349907	592.868	388.704365	2.688
CLOT.	8740.000	306.831459	0.000	215786.832	4040686.845	118.753471	308.924	180.107929	128.063825	573.968	389.418283	2.641
CLOT.	8760.000	313.244722	0.000	215767.049	4040689.720	119.412202	289.174	180.766660	128.733936	554.879	390.088394	2.656
CLOT.	8780.000	329.843901	0.000	215748.150	4040696.090	119.317223	269.235	180.671681	129.032768	535.101	390.387225	2.738

Istram 20.01.01.08 18/03/20 16:58:48 2378 pagina 12
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 2 : Chiclana - Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 8814.394 Dis=-240.164
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 8814.394 Dis=-503.507

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8800.000	354.610035	0.000	215732.442	4040708.260	117.559642	250.703	178.914100	128.537890	515.654	389.892347	2.880
CIRC.	8814.394	372.937379	0.000	215724.713	4040720.344	115.034815	240.164	176.389273	127.584482	503.507	388.938940	2.990

```
 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    1 : Ejes principales
 EJE        :    4 : Chiclana - Cadiz


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR113                X:  217429.905  Y: 4040757.221  Z:   2.658  PK:    4103.967 Dis= 869.599
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:    4261.325 Dis= 632.690

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ---------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    1967.134 362.583945     0.000   217892.443  4038475.320 187.268310  2328.307 290.582954 179.890166  2385.412  83.204810      3.175

RECTA    1987.134 362.583945     0.000   217881.353  4038491.964 187.476730  2309.804 290.791374 180.034653  2366.153  83.349296      3.192

RECTA    2007.134 362.583945     0.000   217870.264  4038508.608 187.688515  2291.326 291.003159 180.181510  2346.906  83.496154      3.199

RECTA    2027.134 362.583945     0.000   217859.174  4038525.252 187.903740  2272.874 291.218384 180.330795  2327.671  83.645439      3.193

RECTA    2047.134 362.583945     0.000   217848.085  4038541.897 188.122486  2254.448 291.437130 180.482567  2308.450  83.797211      3.174

RECTA    2067.134 362.583945     0.000   217836.995  4038558.541 188.344834  2236.050 291.659478 180.636887  2289.242  83.951531      3.143

RECTA    2087.134 362.583945     0.000   217825.906  4038575.185 188.570869  2217.679 291.885513 180.793817  2270.048  84.108461      3.109

RECTA    2107.134 362.583945     0.000   217814.817  4038591.829 188.800678  2199.337 292.115321 180.953423  2250.867  84.268067      3.075

RECTA    2127.134 362.583945     0.000   217803.727  4038608.473 189.034348  2181.023 292.348992 181.115771  2231.701  84.430415      3.045

RECTA    2147.134 362.583945     0.000   217792.638  4038625.117 189.271973  2162.740 292.586616 181.280931  2212.550  84.595575      3.019

RECTA    2167.134 362.583945     0.000   217781.548  4038641.761 189.513646  2144.487 292.828289 181.448974  2193.414  84.763618      2.997

RECTA    2187.134 362.583945     0.000   217770.459  4038658.405 189.759464  2126.266 293.074108 181.619974  2174.294  84.934618      2.979

RECTA    2207.134 362.583945     0.000   217759.369  4038675.049 190.009529  2108.077 293.324173 181.794006  2155.189  85.108650      2.965

RECTA    2227.134 362.583945     0.000   217748.280  4038691.693 190.263942  2089.921 293.578586 181.971150  2136.101  85.285794      2.955

RECTA    2247.134 362.583945     0.000   217737.190  4038708.337 190.522810  2071.799 293.837454 182.151487  2117.030  85.466131      2.946

RECTA    2267.134 362.583945     0.000   217726.101  4038724.981 190.786242  2053.712 294.100886 182.335102  2097.976  85.649746      2.937

RECTA    2287.134 362.583945     0.000   217715.011  4038741.625 191.054351  2035.660 294.368995 182.522080  2078.940  85.836724      2.928

RECTA    2307.134 362.583945     0.000   217703.922  4038758.269 191.327253  2017.646 294.641897 182.712513  2059.922  86.027157      2.919

RECTA    2327.134 362.583945     0.000   217692.832  4038774.913 191.605066  1999.669 294.919710 182.906493  2040.923  86.221137      2.911

RECTA    2347.134 362.583945     0.000   217681.743  4038791.557 191.887915  1981.731 295.202558 183.104116  2021.943  86.418760      2.902
```

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 9
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 4 : Chiclana - Cadiz

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 4103.967 Dis= 869.599
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 4261.325 Dis= 632.690

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	2367.134	362.583945	0.000	217670.653	4038808.201	192.175924	1963.833	295.490568	183.305483	2002.983	86.620127	2.893
RECTA	2387.134	362.583945	0.000	217659.564	4038824.845	192.469226	1945.975	295.783870	183.510696	1984.043	86.825340	2.886
RECTA	2407.134	362.583945	0.000	217648.475	4038841.489	192.767954	1928.160	296.082598	183.719863	1965.125	87.034507	2.882
RECTA	2427.134	362.583945	0.000	217637.385	4038858.133	193.072247	1910.388	296.386891	183.933094	1946.228	87.247738	2.880
RECTA	2447.134	362.583945	0.000	217626.296	4038874.777	193.382247	1892.661	296.696891	184.150504	1927.353	87.465148	2.881
RECTA	2467.134	362.583945	0.000	217615.206	4038891.421	193.698102	1874.979	297.012746	184.372212	1908.502	87.686855	2.884
RECTA	2487.134	362.583945	0.000	217604.117	4038908.065	194.019963	1857.344	297.334607	184.598340	1889.673	87.912984	2.890
RECTA	2507.134	362.583945	0.000	217593.027	4038924.709	194.347985	1839.758	297.662629	184.829017	1870.870	88.143661	2.896
RECTA	2527.134	362.583945	0.000	217581.938	4038941.353	194.682331	1822.221	297.996975	185.064375	1852.091	88.379018	2.902
RECTA	2547.134	362.583945	0.000	217570.848	4038957.997	195.023164	1804.736	298.337808	185.304550	1833.338	88.619194	2.908
RECTA	2567.134	362.583945	0.000	217559.759	4038974.641	195.370656	1787.303	298.685300	185.549687	1814.612	88.864331	2.914
RECTA	2587.134	362.583945	0.000	217548.669	4038991.285	195.724983	1769.925	299.039627	185.799932	1795.913	89.114576	2.920
RECTA	2607.134	362.583945	0.000	217537.580	4039007.929	196.086326	1752.602	299.400970	186.055439	1777.242	89.370083	2.926
RECTA	2627.134	362.583945	0.000	217526.490	4039024.573	196.454870	1735.338	299.769514	186.316367	1758.601	89.631011	2.932
RECTA	2647.134	362.583945	0.000	217515.401	4039041.217	196.830809	1718.132	300.145453	186.582881	1739.990	89.897525	2.938
RECTA	2667.134	362.583945	0.000	217504.311	4039057.861	197.214339	1700.988	300.528983	186.855154	1721.410	90.169797	2.944
RECTA	2687.134	362.583945	0.000	217493.222	4039074.505	197.605665	1683.906	300.920309	187.133362	1702.863	90.448006	2.950
RECTA	2707.134	362.583945	0.000	217482.133	4039091.149	198.004996	1666.890	301.319640	187.417693	1684.348	90.732337	2.956
RECTA	2727.134	362.583945	0.000	217471.043	4039107.794	198.412547	1649.940	301.727191	187.708338	1665.868	91.022981	2.962
RECTA	2747.134	362.583945	0.000	217459.954	4039124.438	198.828542	1633.060	302.143186	188.005497	1647.423	91.320141	2.968

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 10
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 4 : Chiclana - Cadiz

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 4103.967 Dis= 869.599
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 4261.325 Dis= 632.690

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	2767.134	362.583945	0.000	217448.864	4039141.082	199.253208	1616.251	302.567852	188.309379	1629.015	91.624022	2.974
RECTA	2787.134	362.583945	0.000	217437.775	4039157.726	199.686780	1599.515	303.001424	188.620199	1610.645	91.934843	2.980
RECTA	2807.134	362.583945	0.000	217426.685	4039174.370	200.129500	1582.855	303.444143	188.938184	1592.315	92.252828	2.986
RECTA	2827.134	362.583945	0.000	217415.596	4039191.014	200.581616	1566.273	303.896260	189.263567	1574.025	92.578211	2.992
RECTA	2847.134	362.583945	0.000	217404.506	4039207.658	201.043384	1549.771	304.358027	189.596592	1555.777	92.911236	2.998
RECTA	2867.134	362.583945	0.000	217393.417	4039224.302	201.515065	1533.353	304.829709	189.937512	1537.572	93.252156	3.004
RECTA	2887.134	362.583945	0.000	217382.327	4039240.946	201.996930	1517.022	305.311574	190.286592	1519.413	93.601235	3.010
RECTA	2907.134	362.583945	0.000	217371.238	4039257.590	202.489254	1500.778	305.803897	190.644105	1501.300	93.958749	3.016
RECTA	2927.134	362.583945	0.000	217360.148	4039274.234	202.992320	1484.627	306.306964	191.010338	1483.237	94.324982	3.022
RECTA	2947.134	362.583945	0.000	217349.059	4039290.878	203.506420	1468.570	306.821064	191.385589	1465.223	94.700233	3.028
RECTA	2967.134	362.583945	0.000	217337.969	4039307.522	204.031851	1452.611	307.346495	191.770168	1447.261	95.084812	3.034
RECTA	2987.134	362.583945	0.000	217326.880	4039324.166	204.568918	1436.754	307.883562	192.164397	1429.354	95.479041	3.040
RECTA	3007.134	362.583945	0.000	217315.791	4039340.810	205.117932	1421.001	308.432576	192.568615	1411.503	95.883258	3.046
RECTA	3027.134	362.583945	0.000	217304.701	4039357.454	205.679213	1405.355	308.993857	192.983170	1393.710	96.297813	3.052
RECTA	3047.134	362.583945	0.000	217293.612	4039374.098	206.253085	1389.822	309.567729	193.408428	1375.978	96.723072	3.058
RECTA	3067.134	362.583945	0.000	217282.522	4039390.742	206.839882	1374.404	310.154526	193.844769	1358.309	97.159413	3.064
RECTA	3087.134	362.583945	0.000	217271.433	4039407.386	207.439940	1359.106	310.754584	194.292591	1340.705	97.607235	3.070
RECTA	3107.134	362.583945	0.000	217260.343	4039424.030	208.053606	1343.931	311.368250	194.752306	1323.170	98.066949	3.076
RECTA	3127.134	362.583945	0.000	217249.254	4039440.674	208.681228	1328.883	311.995872	195.224343	1305.705	98.538987	3.082
RECTA	3147.134	362.583945	0.000	217238.164	4039457.318	209.323162	1313.968	312.637806	195.709152	1288.314	99.023796	3.088

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 11
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 4 : Chiclana - Cadiz

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 4261.325 Dis= 632.690
Distancia: 315.594 Azimut: 312.962004
BO : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 4493.233 Dis= 407.384

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	3147.134	362.583945	0.000	217238.164	4039457.318	195.709152	1288.314	282.747148	181.832060	1406.072	68.870056	3.088
RECTA	3167.134	362.583945	0.000	217227.075	4039473.962	196.207200	1271.000	283.245196	182.105403	1386.992	69.143399	3.093
RECTA	3187.134	362.583945	0.000	217215.985	4039490.606	196.718971	1253.766	283.756967	182.386366	1367.939	69.424362	3.096
RECTA	3207.134	362.583945	0.000	217204.896	4039507.250	197.244974	1236.615	284.282969	182.675261	1348.912	69.713257	3.098
RECTA	3227.134	362.583945	0.000	217193.806	4039523.894	197.785733	1219.550	284.823729	182.972416	1329.915	70.010412	3.097
RECTA	3247.134	362.583945	0.000	217182.717	4039540.538	198.341799	1202.577	285.379795	183.278177	1310.947	70.316173	3.095
RECTA	3267.134	362.583945	0.000	217171.627	4039557.182	198.913742	1185.697	285.951738	183.592908	1292.010	70.630904	3.090
RECTA	3287.134	362.583945	0.000	217160.538	4039573.826	199.502155	1168.916	286.540151	183.916994	1273.105	70.954990	3.084
RECTA	3307.134	362.583945	0.000	217149.449	4039590.470	200.107655	1152.238	287.145651	184.250841	1254.235	71.288837	3.078
CIRC.	3327.134	362.657660	0.000	217138.365	4039607.118	200.730573	1135.664	287.768569	184.594552	1235.398	71.632548	3.072
CIRC.	3347.134	362.784983	0.000	217127.311	4039623.786	201.370176	1119.180	288.408172	184.947105	1216.586	71.985101	3.066
CIRC.	3367.134	362.912307	0.000	217116.291	4039640.476	202.026949	1102.790	289.064945	185.308726	1197.798	72.346722	3.060
CIRC.	3387.134	363.039631	0.000	217105.304	4039657.188	202.701564	1086.497	289.739560	185.679836	1179.036	72.717832	3.054
CIRC.	3407.134	363.166955	0.000	217094.351	4039673.922	203.394721	1070.306	290.432717	186.060883	1160.301	73.098878	3.048
CIRC.	3427.134	363.294279	0.000	217083.431	4039690.678	204.107152	1054.222	291.145148	186.452338	1141.595	73.490334	3.042
CIRC.	3447.134	363.421603	0.000	217072.545	4039707.455	204.839613	1038.250	291.877609	186.854706	1122.919	73.892702	3.036
CIRC.	3467.134	363.548927	0.000	217061.692	4039724.255	205.592895	1022.395	292.630891	187.268521	1104.275	74.306517	3.030

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 11
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 4 : Chiclana - Cadiz

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 4493.233 Dis= 407.384
Distancia: 399.296 Azimut: 230.952151
BO : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 4299.360 Dis= 59.920

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3467.134	363.548927	0.000	217061.692	4039724.255	187.268521	1104.275	356.316370	167.662936	834.618	136.710785	3.030
CIRC.	3487.134	363.676251	0.000	217050.873	4039741.076	187.694351	1085.664	356.742201	167.762305	814.659	136.810154	3.024
CIRC.	3507.134	363.803575	0.000	217040.087	4039757.918	188.132803	1067.089	357.180652	167.863468	794.700	136.911317	3.018
CIRC.	3527.134	363.930899	0.000	217029.336	4039774.783	188.584521	1048.551	357.632370	167.966564	774.741	137.014413	3.012
CIRC.	3547.134	364.058223	0.000	217018.618	4039791.668	189.050192	1030.052	358.098041	168.071745	754.781	137.119594	3.006
RECTA	3567.134	364.129062	0.000	217007.930	4039808.573	189.530778	1011.596	358.578627	168.179521	734.821	137.227370	3.000
RECTA	3587.134	364.129062	0.000	216997.248	4039825.481	190.028832	993.197	359.076681	168.292766	714.862	137.340615	2.994
RECTA	3607.134	364.129062	0.000	216986.566	4039842.390	190.545654	974.862	359.593503	168.412516	694.906	137.460365	2.988
RECTA	3627.134	364.129062	0.000	216975.883	4039859.298	191.082252	956.593	360.130101	168.539346	674.953	137.587195	2.982
RECTA	3647.134	364.129062	0.000	216965.201	4039876.206	191.639703	938.395	360.687552	168.673904	655.002	137.721753	2.976
RECTA	3667.134	364.129062	0.000	216954.519	4039893.114	192.219157	920.272	361.267006	168.816914	635.055	137.864763	2.970
RECTA	3687.134	364.129062	0.000	216943.837	4039910.023	192.821840	902.228	361.869689	168.969200	615.111	138.017049	2.964

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 12
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 4 : Chiclana - Cadiz

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 4299.360 Dis= 59.920
Distancia: 335.344 Azimut: 340.002277
BO : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 4634.970 Dis= -31.199

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	3687.134	364.129062	0.000	216943.837	4039910.023	168.969200	615.111	228.966923	158.817360	928.111	18.815084	2.964
RECTA	3707.134	364.129062	0.000	216933.154	4039926.931	169.131691	595.170	229.129414	158.700522	908.182	18.698245	2.958
RECTA	3727.134	364.129062	0.000	216922.472	4039943.839	169.305445	575.234	229.303169	158.578441	888.256	18.576164	2.952
RECTA	3747.134	364.129062	0.000	216911.790	4039960.747	169.491675	555.303	229.489398	158.450757	868.334	18.448480	2.946
RECTA	3767.134	364.129062	0.000	216901.107	4039977.656	169.691769	535.376	229.689492	158.317078	848.415	18.314801	2.940
RECTA	3787.134	364.129062	0.000	216890.425	4039994.564	169.907331	515.456	229.905055	158.176971	828.501	18.174694	2.934
RECTA	3807.134	364.129062	0.000	216879.743	4040011.472	170.140222	495.541	230.137946	158.029964	808.590	18.027687	2.928
RECTA	3827.134	364.129062	0.000	216869.061	4040028.380	170.392612	475.634	230.390335	157.875535	788.684	17.873258	2.922
RECTA	3847.134	364.129062	0.000	216858.378	4040045.289	170.667046	455.735	230.664769	157.713110	768.783	17.710833	2.916
RECTA	3867.134	364.129062	0.000	216847.696	4040062.197	170.966534	435.845	230.964257	157.542054	748.887	17.539777	2.910
CIRC.	3887.134	363.970465	0.000	216837.001	4040079.097	171.297015	415.968	231.294738	157.363009	728.996	17.360732	2.904
CIRC.	3907.134	363.715817	0.000	216826.243	4040095.957	171.672510	396.111	231.670233	157.180554	709.102	17.178277	2.898
CIRC.	3927.134	363.461169	0.000	216815.417	4040112.774	172.101039	376.281	232.098762	156.994916	689.206	16.992640	2.892
CIRC.	3947.134	363.206521	0.000	216804.524	4040129.547	172.591364	356.481	232.589087	156.805812	669.308	16.803535	2.886
CIRC.	3967.134	362.951874	0.000	216793.565	4040146.277	173.154266	336.717	233.151989	156.612921	649.408	16.610644	2.880

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 13
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 4 : Chiclana - Cadiz

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 4634.970 Dis= -31.199
Distancia: 357.672 Azimut: 314.030496
BO : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 5000.883 Dis= 83.854

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3967.134	362.951874	0.000	216793.565	4040146.277	156.612921	649.408	242.582425	141.708667	956.090	27.678172	2.880
CIRC.	3987.134	362.697226	0.000	216782.538	4040162.963	156.415885	629.507	242.385389	141.266266	937.203	27.235770	2.874
CIRC.	4007.134	362.442578	0.000	216771.445	4040179.605	156.214296	609.603	242.183800	140.810912	918.335	26.780416	2.868
CIRC.	4027.134	362.187930	0.000	216760.286	4040196.202	156.007695	589.698	241.977199	140.341804	899.490	26.311308	2.862
CIRC.	4047.134	361.933282	0.000	216749.060	4040212.754	155.795554	569.791	241.765058	139.858077	880.668	25.827581	2.856
CIRC.	4067.134	361.678634	0.000	216737.768	4040229.261	155.577272	549.884	241.546776	139.358794	861.872	25.328298	2.850
CIRC.	4087.134	361.423986	0.000	216726.410	4040245.723	155.352156	529.975	241.321660	138.842938	843.102	24.812442	2.844
CIRC.	4107.134	361.169338	0.000	216714.986	4040262.139	155.119406	510.066	241.088910	138.309402	824.362	24.278906	2.861
CIRC.	4127.134	360.914690	0.000	216703.497	4040278.510	154.878092	490.156	240.847596	137.756985	805.654	23.726489	2.931
CIRC.	4147.134	360.748370	0.000	216691.944	4040294.836	154.626801	470.246	240.596305	137.184195	786.981	23.153699	3.054
CIRC.	4167.134	361.003018	0.000	216680.412	4040311.176	154.349730	450.346	240.319234	136.581664	768.385	22.551169	3.230
CIRC.	4187.134	361.257666	0.000	216668.945	4040327.563	154.035288	430.465	240.004792	135.943033	749.891	21.912537	3.460
CIRC.	4207.134	361.512314	0.000	216657.544	4040343.995	153.678086	410.604	239.647590	135.265787	731.509	21.235291	3.743
CIRC.	4227.134	361.766962	0.000	216646.209	4040360.473	153.271663	390.768	239.241167	134.547202	713.246	20.516706	4.080
CIRC.	4247.134	362.021610	0.000	216634.940	4040376.996	152.808200	370.961	238.777704	133.784322	695.113	19.753826	4.457
CIRC.	4267.134	362.276258	0.000	216623.737	4040393.564	152.278151	351.189	238.247655	132.973945	677.120	18.943449	4.817
CIRC.	4287.134	362.530906	0.000	216612.601	4040410.176	151.669748	331.456	237.639252	132.112598	659.280	18.082102	5.121
CIRC.	4307.134	362.785554	0.000	216601.531	4040426.833	150.968325	311.772	236.937829	131.196519	641.605	17.166024	5.369
CIRC.	4327.134	363.040202	0.000	216590.527	4040443.534	150.155385	292.147	236.124889	130.221635	624.109	16.191139	5.561

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 12
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 4 : Chiclana - Cadiz

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 5000.883 Dis= 83.854
Distancia: 270.987 Azimut: 299.545648
BO : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 5293.084 Dis= 48.261

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	4327.134	363.040202	0.000	216590.527	4040443.534	130.221635	624.109	230.675987	121.035241	873.317	21.489592	5.561
CIRC.	4347.134	363.294850	0.000	216579.591	4040460.279	129.183541	606.809	229.637892	120.122848	857.627	20.577200	5.697
CIRC.	4367.134	363.549497	0.000	216568.722	4040477.068	128.077480	589.721	228.531831	119.172002	842.171	19.626353	5.777
CIRC.	4387.134	363.804145	0.000	216557.919	4040493.900	126.898329	572.866	227.352681	118.181171	826.963	18.635523	5.801
CIRC.	4407.134	364.058793	0.000	216547.185	4040510.775	125.640587	556.264	226.094938	117.148812	812.016	17.603164	5.809
CIRC.	4427.134	364.313441	0.000	216536.518	4040527.692	124.298366	539.939	224.752718	116.073370	797.345	16.527722	5.816
RECTA	4447.134	364.402223	0.000	216525.904	4040544.644	122.867038	523.908	223.321389	114.954280	782.954	15.408632	5.821
RECTA	4467.134	364.402223	0.000	216515.294	4040561.598	121.345698	508.160	221.800049	113.793374	768.818	14.247726	5.776
CLOT.	4487.134	363.706311	0.000	216504.630	4040578.517	119.734446	492.680	220.188798	112.593152	754.899	13.047504	5.667
CLOT.	4507.134	361.253268	0.000	216493.552	4040595.168	118.069685	477.215	218.524037	111.377341	740.901	11.831692	5.493
CIRC.	4527.134	357.031883	0.000	216481.619	4040611.213	116.405394	461.423	216.859745	110.179422	726.434	10.633774	5.268
CIRC.	4547.134	351.938925	0.000	216468.511	4040626.312	114.794594	445.043	215.248945	109.031896	711.205	9.486248	5.038
CIRC.	4567.134	346.845967	0.000	216454.239	4040640.314	113.256742	428.054	213.711094	107.947241	695.196	8.401593	4.808
CIRC.	4587.134	341.753008	0.000	216438.893	4040653.132	111.803782	410.496	212.258134	106.933152	678.460	7.387503	4.578

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 13
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 4 : Chiclana - Cadiz

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 5293.084 Dis= 48.261
Distancia: 277.714 Azimut: 311.446118
BO : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 5356.631 Dis= 219.737

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	4587.134	341.753008	0.000	216438.893	4040653.132	106.933152	678.460	195.487033	108.243583	955.679	396.797465	4.578
CIRC.	4607.134	336.660050	0.000	216422.571	4040664.682	105.998231	661.051	194.552112	107.609306	938.049	396.163188	4.348
CIRC.	4627.134	331.567092	0.000	216405.379	4040674.891	105.152120	643.032	193.706001	107.049647	919.798	395.603529	4.118
CIRC.	4647.134	326.474134	0.000	216387.426	4040683.693	104.405645	624.469	192.959526	106.571696	901.008	395.125578	3.888
CIRC.	4667.134	321.381176	0.000	216368.827	4040691.032	103.770973	605.437	192.324855	106.182993	881.768	394.736875	3.658
CIRC.	4687.134	316.288217	0.000	216349.701	4040696.862	103.261784	586.018	191.815665	105.891515	862.176	394.445396	3.428
CIRC.	4707.134	311.195259	0.000	216330.171	4040701.144	102.893431	566.304	191.447313	105.705644	842.337	394.259526	3.203
CIRC.	4727.134	306.102301	0.000	216310.360	4040703.852	102.683107	546.394	191.236989	105.634111	822.364	394.187993	3.020
CIRC.	4747.134	301.009343	0.000	216290.397	4040704.969	102.649959	526.401	191.203841	105.685892	802.380	394.239773	2.887
CIRC.	4767.134	295.916385	0.000	216270.408	4040704.486	102.815147	506.451	191.369028	105.870057	782.517	394.423939	2.805
CIRC.	4787.134	290.823427	0.000	216250.522	4040702.407	103.201769	486.685	191.755651	106.195564	762.917	394.749445	2.772
CIRC.	4807.134	285.730468	0.000	216230.865	4040698.746	103.834598	467.260	192.388479	106.670963	743.730	395.224844	2.789
CLOT.	4827.134	281.204640	0.000	216211.551	4040693.572	104.733171	448.337	193.287053	107.300175	725.098	395.854057	2.857
CLOT.	4847.134	278.412143	0.000	216192.564	4040687.290	105.869537	429.938	194.423418	108.057666	707.005	396.611548	2.947
CLOT.	4867.134	277.388034	0.000	216173.773	4040680.443	107.190741	411.946	195.744622	108.904156	689.289	397.458038	3.037
CLOT.	4887.134	277.756109	0.000	216155.010	4040673.520	108.643401	394.185	197.197283	109.801801	671.741	398.355682	3.127

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 13
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 4 : Chiclana - Cadiz

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 5356.631 Dis= 219.737
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 5356.631 Dis= 489.280

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CLOT.	4887.134	277.756109	0.000	216155.010	4040673.520	109.801801	671.741	171.156258	118.029937	924.087	379.384395	3.127
CLOT.	4907.134	279.008095	0.000	216136.160	4040666.836	110.725813	654.208	172.080271	118.849253	907.931	380.203711	3.217
CLOT.	4927.134	281.141217	0.000	216117.139	4040660.657	111.654093	636.561	173.008551	119.667562	891.615	381.022020	3.307
CIRC.	4947.134	284.113575	0.000	216097.886	4040655.250	112.561860	618.676	173.916318	120.468273	874.986	381.822731	3.397
CIRC.	4967.134	287.296674	0.000	216078.390	4040650.797	113.429997	600.487	174.784455	121.238904	857.959	382.593362	3.487
CIRC.	4987.134	290.479773	0.000	216058.696	4040647.324	114.252552	582.006	175.607010	121.975895	840.545	383.330353	3.577
CIRC.	5007.134	293.662872	0.000	216038.853	4040644.840	115.024266	563.251	176.378724	122.676327	822.763	384.030784	3.652
CIRC.	5027.134	296.845971	0.000	216018.911	4040643.351	115.739093	544.244	177.093550	123.336986	804.635	384.691444	3.694
CIRC.	5047.134	300.029070	0.000	215998.919	4040642.860	116.390051	525.007	177.744509	123.954331	786.184	385.308789	3.703
CIRC.	5067.134	303.212169	0.000	215978.927	4040643.369	116.969044	505.566	178.323502	124.524449	767.435	385.878907	3.678
CLOT.	5087.134	306.359537	0.000	215958.986	4040644.875	117.466779	485.947	178.821236	125.043100	748.414	386.397558	3.620
CLOT.	5107.134	308.851136	0.000	215939.133	4040647.282	117.885014	466.194	179.239471	125.513464	729.174	386.867922	3.540
CLOT.	5127.134	310.461601	0.000	215919.366	4040650.326	118.249412	446.366	179.603870	125.953647	709.803	387.308105	3.460
CLOT.	5147.134	311.190932	0.000	215899.659	4040653.734	118.593295	426.506	179.947752	126.385704	690.376	387.740162	3.380
RECTA	5167.134	311.238248	0.000	215879.970	4040657.245	118.954487	406.646	180.308945	126.833127	670.956	388.187585	3.300
RECTA	5187.134	311.238248	0.000	215860.280	4040660.757	119.352492	386.800	180.706950	127.307044	651.572	388.661502	3.220
RECTA	5207.134	311.238248	0.000	215840.591	4040664.269	119.793527	366.971	181.147985	127.809994	632.225	389.164452	3.140
RECTA	5227.134	311.238248	0.000	215820.902	4040667.782	120.284919	347.162	181.639377	128.344661	612.920	389.699119	3.060
RECTA	5247.134	311.238248	0.000	215801.213	4040671.294	120.835747	327.376	182.190204	128.914060	593.662	390.268518	2.980
RECTA	5267.134	311.238248	0.000	215781.524	4040674.806	121.457385	307.617	182.811843	129.521588	574.454	390.876046	2.900

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 14
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 4 : Chiclana - Cadiz

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 5356.631 Dis= 219.737
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 5356.631 Dis= 489.280

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	5287.134	311.238248	0.000	215761.834	4040678.318	122.164284	287.892	183.518742	130.171085	555.302	391.525543	2.820
RECTA	5307.134	311.238248	0.000	215742.145	4040681.831	122.975057	268.208	184.329514	130.866905	536.212	392.221363	2.740
RECTA	5327.134	311.238248	0.000	215722.456	4040685.343	123.914083	248.574	185.268541	131.614002	517.191	392.968460	2.660
RECTA	5347.134	311.238248	0.000	215702.767	4040688.855	125.013884	229.003	186.368342	132.418029	498.246	393.772487	2.580
RECTA	5356.631	311.238248	0.000	215693.417	4040690.523	125.604651	219.737	186.959109	132.821602	489.280	394.176060	2.542

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 1
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 5 : Chiclana - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 4227.416 Dis= 47.731
Distancia: 335.344 Azimut: 340.002277
BO : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 4465.395 Dis=-128.081

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3799.833	364.129208	0.000	216846.626	4040070.443	170.569211	427.978	230.566934	157.176415	741.758	17.174138	-1.425
CIRC.	3819.833	363.874738	0.000	216835.910	4040087.330	170.890494	408.090	230.888217	156.987671	721.876	16.985394	-1.111
CIRC.	3839.833	363.620269	0.000	216825.126	4040104.174	171.257709	388.222	231.255432	156.795442	701.992	16.793166	-0.796
CIRC.	3859.833	363.365799	0.000	216814.276	4040120.975	171.678227	368.379	231.675950	156.599424	682.106	16.597148	-0.481
CIRC.	3879.833	363.111329	0.000	216803.358	4040137.732	172.161066	348.564	232.158790	156.399275	662.218	16.396998	-0.166
CIRC.	3899.833	362.856859	0.000	216792.373	4040154.445	172.717378	328.784	232.715101	156.194611	642.328	16.192334	0.148
CIRC.	3919.833	362.602389	0.000	216781.322	4040171.115	173.361101	309.046	233.358824	155.984997	622.437	15.982721	0.463
CIRC.	3939.833	362.347920	0.000	216770.204	4040187.740	174.109878	289.358	234.107602	155.769945	602.544	15.767668	0.778
CIRC.	3959.833	362.093450	0.000	216759.020	4040204.320	174.986350	269.731	234.984073	155.548896	582.650	15.546619	1.093
CIRC.	3979.833	361.838980	0.000	216747.770	4040220.856	176.020012	250.181	236.017735	155.321214	562.755	15.318937	1.407

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 15
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 5 : Chiclana - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 4465.395 Dis=-128.081
Distancia: 357.672 Azimut: 314.030496
BO : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 4474.920 Dis=-484.354

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3979.833	361.838980	0.000	216747.770	4040220.856	155.321214	562.755	241.290718	139.435360	874.894	25.404864	1.407
CIRC.	3999.833	361.584510	0.000	216736.453	4040237.346	155.086169	542.860	241.055673	138.925515	856.134	24.895019	1.722
CIRC.	4019.833	362.003285	0.000	216725.157	4040253.851	154.830227	522.975	240.799731	138.391092	837.440	24.360596	2.037
CIRC.	4039.833	362.427699	0.000	216713.972	4040270.431	154.537303	503.115	240.506807	137.822679	818.856	23.792183	2.352
CIRC.	4059.833	362.852112	0.000	216702.897	4040287.084	154.202892	483.283	240.172396	137.218132	800.393	23.187637	2.666
CIRC.	4079.833	363.276525	0.000	216691.933	4040303.812	153.821741	463.485	239.791245	136.575154	782.059	22.544658	2.981
CIRC.	4099.833	363.700938	0.000	216681.082	4040320.611	153.387691	443.725	239.357196	135.891275	763.864	21.860780	3.296
CIRC.	4119.833	364.125351	0.000	216670.342	4040337.483	152.893475	424.011	238.862979	135.163853	745.819	21.133357	3.610
CIRC.	4139.833	364.549764	0.000	216659.715	4040354.426	152.330463	404.349	238.299967	134.390050	727.936	20.359555	3.925
CIRC.	4159.833	364.974178	0.000	216649.201	4040371.440	151.688338	384.749	237.657842	133.566835	710.229	19.536339	4.240
CIRC.	4179.833	365.398591	0.000	216638.802	4040388.523	150.954677	365.221	236.924181	132.690961	692.711	18.660465	4.555
CIRC.	4199.833	365.823004	0.000	216628.516	4040405.676	150.114406	345.779	236.083910	131.758969	675.398	17.728473	4.869
CIRC.	4219.833	366.247417	0.000	216618.344	4040422.896	149.149081	326.438	235.118585	130.767174	658.308	16.736678	5.184
CIRC.	4239.833	366.059036	0.000	216608.234	4040440.152	148.048500	307.202	234.018004	129.716924	641.423	15.686428	5.499
CIRC.	4259.833	365.549740	0.000	216598.000	4040457.335	146.831423	288.028	232.800927	128.622310	624.644	14.591814	5.769
CIRC.	4279.833	365.040444	0.000	216587.629	4040474.436	145.477343	268.924	231.446847	127.481473	607.969	13.450977	5.960
CIRC.	4299.833	364.531148	0.000	216577.122	4040491.454	143.955541	249.908	229.925045	126.290832	591.409	12.260336	6.071
RECTA	4319.833	364.504198	0.000	216566.540	4040508.425	142.207105	231.028	228.176609	125.039998	575.016	11.009502	6.101
RECTA	4339.833	364.504198	0.000	216555.957	4040525.396	140.149420	212.353	226.118924	123.716320	558.859	9.685824	6.074

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 16
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 5 : Chiclana - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 4474.920 Dis=-484.354
Distancia: 270.987 Azimut: 299.545648
BO : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 4468.796 Dis=-752.606

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	4339.833	364.504198	0.000	216555.957	4040525.396	123.716320	558.859	224.170671	115.868192	816.746	16.322543	6.074
RECTA	4359.833	364.504198	0.000	216545.375	4040542.367	122.314470	542.957	222.768822	114.770435	802.423	15.224787	6.050
CLOT.	4379.833	365.369385	0.000	216534.840	4040559.367	120.823586	527.369	221.277938	113.629991	788.388	14.084342	6.036
CLOT.	4399.833	370.431766	0.000	216525.076	4040576.816	119.161139	512.692	219.615491	112.400168	775.285	12.854520	6.032
CIRC.	4419.833	379.953794	0.000	216517.385	4040595.257	117.209108	500.115	217.663460	111.017120	764.350	11.471471	6.038
CIRC.	4439.833	391.025442	0.000	216512.872	4040614.716	114.933066	490.882	215.387418	109.469926	756.777	9.924277	6.047
CIRC.	4459.833	2.097090	0.000	216511.793	4040634.661	112.421887	485.575	212.876239	107.815598	753.009	8.269949	6.035
CIRC.	4479.833	13.168738	0.000	216514.182	4040654.493	109.803850	484.484	210.258202	106.127132	753.216	6.581484	5.946
CIRC.	4499.833	24.240386	0.000	216519.967	4040673.612	107.221006	487.669	207.675357	104.480639	757.390	4.934991	5.778
CIRC.	4519.833	35.312035	0.000	216528.973	4040691.441	104.810799	494.953	205.265150	102.948409	765.342	3.402761	5.529
CIRC.	4539.833	46.383683	0.000	216540.928	4040707.443	102.689077	505.947	203.143428	101.592768	776.719	2.047119	5.230
CLOT.	4559.833	57.147932	0.000	216555.462	4040721.147	100.937806	520.086	201.392158	100.460922	791.031	0.915274	4.930
CLOT.	4579.833	65.491708	0.000	216571.913	4040732.496	99.562398	536.494	200.016750	99.556777	807.480	0.011128	4.677
CLOT.	4599.833	71.013901	0.000	216589.507	4040741.993	98.485335	554.232	198.939687	98.833519	825.193	399.287871	4.615

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 16
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 5 : Chiclana - Sevilla

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 4468.796 Dis=-752.606
Distancia: 277.714 Azimut: 311.446118
BO : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 4470.717 Dis=-1029.820

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CLOT.	4599.833	71.013901	0.000	216589.507	4040741.993	98.833519	825.193	187.387401	102.001655	1098.835	390.555537	4.615
CIRC.	4619.833	74.349705	0.000	216607.699	4040750.297	98.232141	843.573	186.786022	101.495956	1116.793	390.049838	4.752
CIRC.	4639.833	77.532804	0.000	216626.286	4040757.675	97.725727	862.384	186.279609	101.057779	1135.228	389.611661	5.090
CIRC.	4659.833	80.715903	0.000	216645.218	4040764.116	97.309734	881.553	185.863615	100.685185	1154.070	389.239067	5.627
CIRC.	4679.833	83.899002	0.000	216664.449	4040769.603	96.979830	901.011	185.533712	100.376272	1173.255	388.930153	6.317
CIRC.	4699.833	87.082101	0.000	216683.930	4040774.121	96.731628	920.691	185.285510	100.128955	1192.717	388.682837	6.761
CIRC.	4719.833	90.265199	0.000	216703.612	4040777.660	96.560754	940.532	185.114636	99.941023	1212.398	388.494904	6.731
CIRC.	4739.833	93.448298	0.000	216723.447	4040780.211	96.462902	960.477	185.016783	99.810176	1232.237	388.364057	6.227
CIRC.	4759.833	96.631397	0.000	216743.384	4040781.768	96.433879	980.470	184.987761	99.734063	1252.180	388.287944	5.503
CIRC.	4779.833	99.814496	0.000	216763.374	4040782.326	96.469636	1000.460	185.023517	99.710311	1272.172	388.264192	4.779
CIRC.	4799.833	102.997595	0.000	216783.367	4040781.884	96.566283	1020.399	185.120165	99.736551	1292.163	388.290433	4.056
CLOT.	4819.833	105.910504	0.000	216803.315	4040780.467	96.718687	1040.244	185.272569	99.809305	1312.106	388.363187	3.332
CLOT.	4839.833	108.048928	0.000	216823.192	4040778.259	96.912667	1059.986	185.466549	99.917715	1331.978	388.471597	2.608
CIRC.	4859.833	109.596978	0.000	216842.999	4040775.491	97.132261	1079.642	185.686143	100.049239	1351.784	388.603120	1.885
CIRC.	4879.833	111.110937	0.000	216862.734	4040772.253	97.371095	1099.220	185.924977	100.198846	1371.526	388.752728	1.161
CIRC.	4899.833	112.624896	0.000	216882.387	4040768.546	97.628026	1118.712	186.181908	100.365661	1391.195	388.919543	0.438

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 17
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 5 : Chiclana - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 4470.717 Dis=-1029.820
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 4481.101 Dis=-1276.903

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	4899.833	112.624896	0.000	216882.387	4040768.546	100.365661	1391.195	161.720119	106.412925	1622.878	367.767383	0.438
CIRC.	4908.729	113.298297	0.000	216891.100	4040766.748	100.445181	1399.919	161.799639	106.448564	1631.728	367.803022	0.116

Istram 20.01.01.08 18/03/20 16:59:11 2378 pagina 1
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 7 : Cadiz-Chiclana

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 6603.717 Dis=-891.393
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 6590.053 Dis=-642.942

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	5886.081	106.134508	0.000	216031.558	4040621.108	293.822714	1404.956	397.137358	293.114190	1126.422	196.428833	13.465
CIRC.	5906.081	103.598174	0.000	216051.498	4040619.581	293.664079	1385.262	396.978722	292.903039	1106.769	196.217683	13.095
CIRC.	5926.081	101.061840	0.000	216071.483	4040618.849	293.537547	1365.451	396.852191	292.730233	1086.993	196.044877	12.724
CIRC.	5946.081	98.525507	0.000	216091.482	4040618.914	293.444713	1345.550	396.759357	292.598130	1067.120	195.912773	12.354
CIRC.	5966.081	95.989173	0.000	216111.462	4040619.775	293.387228	1325.588	396.701872	292.509229	1047.176	195.823872	11.983
CIRC.	5986.081	93.452839	0.000	216131.392	4040621.432	293.366799	1305.594	396.681443	292.466175	1027.189	195.780819	11.613
CLOT.	6006.081	90.948313	0.000	216151.240	4040623.880	293.385137	1285.599	396.699781	292.471702	1007.191	195.786346	11.243
CLOT.	6026.081	88.976512	0.000	216170.988	4040627.038	293.440124	1265.630	396.754768	292.523713	987.208	195.838356	10.872
CLOT.	6046.081	87.710106	0.000	216190.650	4040630.698	293.522807	1245.697	396.837450	292.611300	967.254	195.925944	10.502
CLOT.	6066.081	87.149097	0.000	216210.258	4040634.640	293.623026	1225.792	396.937670	292.721813	947.323	196.036457	10.132
CLOT.	6086.081	87.522993	0.000	216229.856	4040638.629	293.729101	1205.894	397.043745	292.840392	927.400	196.155036	9.761
CLOT.	6106.081	89.486330	0.000	216249.522	4040642.262	293.819386	1185.967	397.134030	292.938859	907.451	196.253503	9.391
CLOT.	6126.081	93.079414	0.000	216269.327	4040645.034	293.865204	1165.988	397.179848	292.979229	887.462	196.293873	9.020
CIRC.	6146.081	98.028415	0.000	216289.272	4040646.446	293.836648	1146.000	397.151291	292.921094	867.483	196.235738	8.650
CIRC.	6166.081	103.121373	0.000	216309.266	4040646.265	293.717231	1126.119	397.031875	292.740985	847.636	196.055629	8.280
CIRC.	6186.081	108.214331	0.000	216329.181	4040644.487	293.502543	1106.482	396.817187	292.430987	828.062	195.745631	7.909
CIRC.	6206.081	113.307290	0.000	216348.891	4040641.124	293.189027	1087.231	396.503671	291.984141	808.910	195.298784	7.539
CIRC.	6226.081	118.400248	0.000	216368.269	4040636.196	292.773810	1068.512	396.088454	291.394307	790.338	194.708951	7.169
CIRC.	6246.081	123.493206	0.000	216387.191	4040629.735	292.254898	1050.479	395.569542	290.656572	772.511	193.971216	6.798
CIRC.	6266.081	128.586164	0.000	216405.536	4040621.783	291.631389	1033.284	394.946033	289.767703	755.600	193.082346	6.428

Istram 20.01.01.08 18/03/20 16:59:11 2378 pagina 2
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 7 : Cadiz-Chiclana

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 6603.717 Dis=-891.393
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 6590.053 Dis=-642.942

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	6286.081	133.679122	0.000	216423.187	4040612.390	290.903702	1017.083	394.218346	288.726672	739.779	192.041316	6.058
CIRC.	6306.081	138.772080	0.000	216440.031	4040601.616	290.073797	1002.030	393.388441	287.535204	725.223	190.849848	5.687
CIRC.	6326.081	143.865039	0.000	216455.960	4040589.531	289.145377	988.275	392.460021	286.198302	712.106	189.512946	5.317
CIRC.	6346.081	148.957997	0.000	216470.873	4040576.212	288.124059	975.965	391.438703	284.724713	700.596	188.039356	4.946
CLOT.	6366.081	153.408802	0.000	216484.717	4040561.784	287.019496	965.182	390.334140	283.129768	690.793	186.444412	4.576
CLOT.	6386.081	156.240135	0.000	216497.714	4040546.585	285.852648	955.692	389.167292	281.443754	682.470	184.758398	4.206
CIRC.	6406.081	157.446439	0.000	216510.225	4040530.981	284.644172	947.099	387.958816	279.695466	675.226	183.010110	3.835
CIRC.	6426.081	157.957165	0.000	216522.557	4040515.236	283.407855	939.062	386.722499	277.903732	668.718	181.218376	3.465
CIRC.	6446.081	158.467890	0.000	216534.762	4040499.392	282.146611	931.535	385.461255	276.073932	662.904	179.388576	3.095
CIRC.	6466.081	158.978616	0.000	216546.840	4040483.451	280.861522	924.529	384.176166	274.209518	657.802	177.524162	2.724
CIRC.	6486.081	159.489342	0.000	216558.789	4040467.413	279.553816	918.059	382.868460	272.314360	653.430	175.629003	2.354
CIRC.	6506.081	160.000068	0.000	216570.610	4040451.280	278.224865	912.134	381.539509	270.392718	649.803	173.707362	1.984
CIRC.	6526.081	160.510794	0.000	216582.300	4040435.053	276.876180	906.767	380.190824	268.449204	646.933	171.763848	2.350
CIRC.	6546.081	161.021520	0.000	216593.860	4040418.732	275.509412	901.968	378.824056	266.488729	644.831	169.803373	2.657
CIRC.	6566.081	161.532246	0.000	216605.289	4040402.319	274.126339	897.745	377.440983	264.516442	643.504	167.831086	3.057
CIRC.	6586.081	162.042971	0.000	216616.586	4040385.815	272.728861	894.109	376.043505	262.537663	642.958	165.852307	3.457
CIRC.	6603.717	162.493340	0.000	216626.438	4040371.187	271.486184	891.394	374.800828	260.791661	643.125	164.106304	3.809

Istram 20.01.01.08 18/03/20 16:59:11 2378 pagina 3
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 7 : Cadiz-Chiclana

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 6590.053 Dis=-642.942
Distancia: 315.594 Azimut: 312.962004
BO : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 6397.742 Dis=-431.418

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	5886.081	106.134508	0.000	216031.558	4040621.108	293.114190	1126.422	380.152185	285.687345	831.695	172.725341	13.465
CIRC.	5906.081	103.598174	0.000	216051.498	4040619.581	292.903039	1106.769	379.941035	285.222450	812.619	172.260446	13.095
CIRC.	5926.081	101.061840	0.000	216071.483	4040618.849	292.730233	1086.993	379.768229	284.796376	793.356	171.834372	12.724
CIRC.	5946.081	98.525507	0.000	216091.482	4040618.914	292.598130	1067.120	379.636126	284.412408	773.923	171.450404	12.354
CIRC.	5966.081	95.989173	0.000	216111.462	4040619.775	292.509229	1047.176	379.547225	284.074175	754.341	171.112171	11.983
CIRC.	5986.081	93.452839	0.000	216131.392	4040621.432	292.466175	1027.189	379.504171	283.785686	734.629	170.823682	11.613
CLOT.	6006.081	90.948313	0.000	216151.240	4040623.880	292.471702	1007.191	379.509698	283.551294	714.809	170.589290	11.243
CLOT.	6026.081	88.976512	0.000	216170.988	4040627.038	292.523713	987.208	379.561709	283.368780	694.912	170.406776	10.872
CLOT.	6046.081	87.710106	0.000	216190.650	4040630.698	292.611300	967.254	379.649296	283.223270	674.974	170.261266	10.502
CLOT.	6066.081	87.149097	0.000	216210.258	4040634.640	292.721813	947.323	379.759809	283.096721	655.018	170.134717	10.132
CLOT.	6086.081	87.522993	0.000	216229.856	4040638.629	292.840392	927.400	379.878388	282.967070	635.061	170.005066	9.761
CLOT.	6106.081	89.486330	0.000	216249.522	4040642.262	292.938859	907.451	379.976855	282.791658	615.136	169.829654	9.391
CLOT.	6126.081	93.079414	0.000	216269.327	4040645.034	292.979229	887.462	380.017225	282.511795	595.316	169.549791	9.020
CIRC.	6146.081	98.028415	0.000	216289.272	4040646.446	292.921094	867.483	379.959090	282.063784	575.751	169.101780	8.650
CIRC.	6166.081	103.121373	0.000	216309.266	4040646.265	292.740985	847.636	379.778981	281.408160	556.625	168.446156	8.280
CIRC.	6186.081	108.214331	0.000	216329.181	4040644.487	292.430987	828.062	379.468983	280.528378	538.116	167.566374	7.909
CIRC.	6206.081	113.307290	0.000	216348.891	4040641.124	291.984141	808.910	379.022137	279.409939	520.414	166.447935	7.539
CIRC.	6226.081	118.400248	0.000	216368.269	4040636.196	291.394307	790.338	378.432303	278.040967	503.723	165.078963	7.169
CIRC.	6246.081	123.493206	0.000	216387.191	4040629.735	290.656572	772.511	377.694568	276.413787	488.260	163.451783	6.798
CIRC.	6266.081	128.586164	0.000	216405.536	4040621.783	289.767703	755.600	376.805699	274.526791	474.247	161.564787	6.428

Istram 20.01.01.08 18/03/20 16:59:11 2378 pagina 4
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 7 : Cadiz-Chiclana

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 6590.053 Dis=-642.942
Distancia: 315.594 Azimut: 312.962004
BO : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 6397.742 Dis=-431.418

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	6286.081	133.679122	0.000	216423.187	4040612.390	288.726672	739.779	375.764668	272.386441	461.910	159.424437	6.058
CIRC.	6306.081	138.772080	0.000	216440.031	4040601.616	287.535204	725.223	374.573200	270.009160	451.469	157.047156	5.687
CIRC.	6326.081	143.865039	0.000	216455.960	4040589.531	286.198302	712.106	373.236298	267.422707	443.125	154.460703	5.317
CIRC.	6346.081	148.957997	0.000	216470.873	4040576.212	284.724713	700.596	371.762709	264.666586	437.055	151.704582	4.946
CLOT.	6366.081	153.408802	0.000	216484.717	4040561.784	283.129768	690.793	370.167764	261.792341	433.333	148.830337	4.576
CLOT.	6386.081	156.240135	0.000	216497.714	4040546.585	281.443754	682.470	368.481750	258.858808	431.649	145.896804	4.206
CIRC.	6406.081	157.446439	0.000	216510.225	4040530.981	279.695466	675.226	366.733462	255.908505	431.522	142.946501	3.835
CIRC.	6426.081	157.957165	0.000	216522.557	4040515.236	277.903732	668.718	364.941728	252.965046	432.547	140.003042	3.465
CIRC.	6446.081	158.467890	0.000	216534.762	4040499.392	276.073932	662.904	363.111928	250.044638	434.651	137.082634	3.095
CIRC.	6466.081	158.978616	0.000	216546.840	4040483.451	274.209518	657.802	361.247514	247.162492	437.818	134.200488	2.724
CIRC.	6486.081	159.489342	0.000	216558.789	4040467.413	272.314360	653.430	359.352356	244.332721	442.024	131.370717	2.354
CIRC.	6506.081	160.000068	0.000	216570.610	4040451.280	270.392718	649.803	357.430714	241.567997	447.240	128.605993	1.984
CIRC.	6526.081	160.510794	0.000	216582.300	4040435.053	268.449204	646.933	355.487200	238.879309	453.431	125.917305	2.350
CIRC.	6546.081	161.021520	0.000	216593.860	4040418.732	266.488729	644.831	353.526725	236.275809	460.558	123.313805	2.657
CIRC.	6566.081	161.532246	0.000	216605.289	4040402.319	264.516442	643.504	351.554438	233.764769	468.576	120.802765	3.057
CIRC.	6586.081	162.042971	0.000	216616.586	4040385.815	262.537663	642.958	349.575659	231.351614	477.441	118.389610	3.457
CIRC.	6603.717	162.493340	0.000	216626.438	4040371.187	260.791661	643.125	347.829657	229.307834	485.924	116.345830	3.809

Istram 20.01.01.08 18/03/20 16:59:11 2378 pagina 4
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 7 : Cadiz-Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 6397.742 Dis=-431.418
Distancia: 399.296 Azimut: 230.952151
BO : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 6553.002 Dis= -70.633

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	5886.081	106.134508	0.000	216031.558	4040621.108	285.687345	831.695	54.735194	316.700994	646.300	285.748843	13.465
CIRC.	5906.081	103.598174	0.000	216051.498	4040619.581	285.222450	812.619	54.270299	317.076508	626.657	286.124357	13.095
CIRC.	5926.081	101.061840	0.000	216071.483	4040618.849	284.796376	793.356	53.844225	317.557862	607.209	286.605711	12.724
CIRC.	5946.081	98.525507	0.000	216091.482	4040618.914	284.412408	773.923	53.460257	318.154235	588.010	287.202084	12.354
CIRC.	5966.081	95.989173	0.000	216111.462	4040619.775	284.074175	754.341	53.122024	318.875450	569.116	287.923299	11.983
CIRC.	5986.081	93.452839	0.000	216131.392	4040621.432	283.785686	734.629	52.833535	319.731922	550.589	288.779771	11.613
CLOT.	6006.081	90.948313	0.000	216151.240	4040623.880	283.551294	714.809	52.599143	320.734443	532.499	289.782292	11.243
CLOT.	6026.081	88.976512	0.000	216170.988	4040627.038	283.368780	694.912	52.416629	321.885775	514.884	290.933624	10.872
CLOT.	6046.081	87.710106	0.000	216190.650	4040630.698	283.223270	674.974	52.271119	323.174257	497.708	292.222106	10.502
CLOT.	6066.081	87.149097	0.000	216210.258	4040634.640	283.096721	655.018	52.144570	324.586104	480.907	293.633953	10.132
CLOT.	6086.081	87.522993	0.000	216229.856	4040638.629	282.967070	635.061	52.014919	326.104819	464.387	295.152668	9.761
CLOT.	6106.081	89.486330	0.000	216249.522	4040642.262	282.791658	615.136	51.839507	327.692845	447.939	296.740694	9.391
CLOT.	6126.081	93.079414	0.000	216269.327	4040645.034	282.511795	595.316	51.559645	329.295986	431.284	298.343835	9.020
CIRC.	6146.081	98.028415	0.000	216289.272	4040646.446	282.063784	575.751	51.111633	330.852081	414.164	299.899930	8.650
CIRC.	6166.081	103.121373	0.000	216309.266	4040646.265	281.408160	556.625	50.456009	332.322138	396.494	301.369987	8.280
CIRC.	6186.081	108.214331	0.000	216329.181	4040644.487	280.528378	538.116	49.576227	333.690179	378.314	302.738028	7.909
CIRC.	6206.081	113.307290	0.000	216348.891	4040641.124	279.409939	520.414	48.457788	334.937556	359.671	303.985405	7.539
CIRC.	6226.081	118.400248	0.000	216368.269	4040636.196	278.040967	503.723	47.088816	336.041145	340.619	305.088994	7.169
CIRC.	6246.081	123.493206	0.000	216387.191	4040629.735	276.413787	488.260	45.461636	336.971971	321.218	306.019820	6.798
CIRC.	6266.081	128.586164	0.000	216405.536	4040621.783	274.526791	474.247	43.574640	337.693339	301.537	306.741188	6.428

Istram 20.01.01.08 18/03/20 16:59:11 2378 pagina 5
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 7 : Cadiz-Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 6397.742 Dis=-431.418
Distancia: 399.296 Azimut: 230.952151
BO : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 6553.002 Dis= -70.633

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	6286.081	133.679122	0.000	216423.187	4040612.390	272.386441	461.910	41.434290	338.158261	281.656	307.206110	6.058
CIRC.	6306.081	138.772080	0.000	216440.031	4040601.616	270.009160	451.469	39.057009	338.305916	261.671	307.353765	5.687
CIRC.	6326.081	143.865039	0.000	216455.960	4040589.531	267.422707	443.125	36.470556	338.056788	241.701	307.104637	5.317
CIRC.	6346.081	148.957997	0.000	216470.873	4040576.212	264.666586	437.055	33.714435	337.306091	221.894	306.353940	4.946
CLOT.	6366.081	153.408802	0.000	216484.717	4040561.784	261.792341	433.333	30.840190	335.933365	202.427	304.981214	4.576
CLOT.	6386.081	156.240135	0.000	216497.714	4040546.585	258.858808	431.649	27.906657	333.889134	183.410	302.936983	4.206
CIRC.	6406.081	157.446439	0.000	216510.225	4040530.981	255.908505	431.522	24.956354	331.148494	164.864	300.196343	3.835
CIRC.	6426.081	157.957165	0.000	216522.557	4040515.236	252.965046	432.547	22.012895	327.633133	146.802	296.680982	3.465
CIRC.	6446.081	158.467890	0.000	216534.762	4040499.392	250.044638	434.651	19.092487	323.082449	129.396	292.130298	3.095
CIRC.	6466.081	158.978616	0.000	216546.840	4040483.451	247.162492	437.818	16.210341	317.087221	112.950	286.135070	2.724
CIRC.	6486.081	159.489342	0.000	216558.789	4040467.413	244.332721	442.024	13.380570	309.075305	97.949	278.123154	2.354
CIRC.	6506.081	160.000068	0.000	216570.610	4040451.280	241.567997	447.240	10.615846	298.342461	85.164	267.390310	1.984
CIRC.	6526.081	160.510794	0.000	216582.300	4040435.053	238.879309	453.431	7.927158	284.336246	75.725	253.384095	2.350
CIRC.	6546.081	161.021520	0.000	216593.860	4040418.732	236.275809	460.558	5.323658	267.415478	70.981	236.463327	2.657
CIRC.	6566.081	161.532246	0.000	216605.289	4040402.319	233.764769	468.576	2.812618	249.547723	71.868	218.595572	3.057
CIRC.	6586.081	162.042971	0.000	216616.586	4040385.815	231.351614	477.441	0.399463	233.391805	78.194	202.439654	3.457
CIRC.	6603.717	162.493340	0.000	216626.438	4040371.187	229.307834	485.924	398.355683	221.776498	87.372	190.824347	3.809

Istram 20.01.01.08 18/03/20 16:59:11 2378 pagina 5
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 7 : Cadiz-Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 6553.002 Dis= -70.633
Distancia: 335.344 Azimut: 340.002277
BO : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 6236.694 Dis= -18.678

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	5886.081	106.134508	0.000	216031.558	4040621.108	316.700994	646.300	376.698718	294.689015	354.127	154.686739	13.465
CIRC.	5906.081	103.598174	0.000	216051.498	4040619.581	317.076508	626.657	377.074231	294.082941	334.398	154.080664	13.095
CIRC.	5926.081	101.061840	0.000	216071.483	4040618.849	317.557862	607.209	377.555586	293.560110	314.578	153.557833	12.724
CIRC.	5946.081	98.525507	0.000	216091.482	4040618.914	318.154235	588.010	378.151958	293.137739	294.682	153.135462	12.354
CIRC.	5966.081	95.989173	0.000	216111.462	4040619.775	318.875450	569.116	378.873173	292.838063	274.728	152.835786	11.983
CIRC.	5986.081	93.452839	0.000	216131.392	4040621.432	319.731922	550.589	379.729645	292.690261	254.739	152.687984	11.613
CLOT.	6006.081	90.948313	0.000	216151.240	4040623.880	320.734443	532.499	380.732166	292.733062	234.741	152.730786	11.243
CLOT.	6026.081	88.976512	0.000	216170.988	4040627.038	321.885775	514.884	381.883499	292.996460	214.763	152.994183	10.872
CLOT.	6046.081	87.710106	0.000	216190.650	4040630.698	323.174257	497.708	383.171980	293.479727	194.824	153.477451	10.502
CLOT.	6066.081	87.149097	0.000	216210.258	4040634.640	324.586104	480.907	384.583828	294.177123	174.926	154.174846	10.132
CLOT.	6086.081	87.522993	0.000	216229.856	4040638.629	326.104819	464.387	386.102542	295.073166	155.061	155.070889	9.761
CLOT.	6106.081	89.486330	0.000	216249.522	4040642.262	327.692845	447.939	387.690569	296.063177	135.189	156.060901	9.391
CLOT.	6126.081	93.079414	0.000	216269.327	4040645.034	329.295986	431.284	389.293709	296.915280	115.262	156.913003	9.020
CIRC.	6146.081	98.028415	0.000	216289.272	4040646.446	330.852081	414.164	390.849804	297.211840	95.273	157.209564	8.650
CIRC.	6166.081	103.121373	0.000	216309.266	4040646.265	332.322138	396.494	392.319861	296.319381	75.313	156.317104	8.280
CIRC.	6186.081	108.214331	0.000	216329.181	4040644.487	333.690179	378.314	393.687902	292.968692	55.611	152.966415	7.909
CIRC.	6206.081	113.307290	0.000	216348.891	4040641.124	334.937556	359.671	394.935279	283.392883	36.808	143.390607	7.539
CIRC.	6226.081	118.400248	0.000	216368.269	4040636.196	336.041145	340.619	396.038868	253.663502	21.677	113.661226	7.169
CIRC.	6246.081	123.493206	0.000	216387.191	4040629.735	336.971971	321.218	396.969694	191.701072	21.061	51.698795	6.798
CIRC.	6266.081	128.586164	0.000	216405.536	4040621.783	337.693339	301.537	397.691063	159.807357	35.720	19.805080	6.428

Istram 20.01.01.08 18/03/20 16:59:11 2378 pagina 6
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 7 : Cadiz-Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 6553.002 Dis= -70.633
Distancia: 335.344 Azimut: 340.002277
BO : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 6236.694 Dis= -18.678

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	6286.081	133.679122	0.000	216423.187	4040612.390	338.158261	281.656	398.155984	149.580760	54.421	9.578484	6.058
CIRC.	6306.081	138.772080	0.000	216440.031	4040601.616	338.305916	261.671	398.303639	146.001305	74.094	5.999029	5.687
CIRC.	6326.081	143.865039	0.000	216455.960	4040589.531	338.056788	241.701	398.054511	145.006591	94.046	5.004314	5.317
CIRC.	6346.081	148.957997	0.000	216470.873	4040576.212	337.306091	221.894	397.303814	145.252904	114.037	5.250627	4.946
CLOT.	6366.081	153.408802	0.000	216484.717	4040561.784	335.933365	202.427	395.931088	146.156392	133.956	6.154115	4.576
CLOT.	6386.081	156.240135	0.000	216497.714	4040546.585	333.889134	183.410	393.886857	147.297651	153.788	7.295374	4.206
CIRC.	6406.081	157.446439	0.000	216510.225	4040530.981	331.148494	164.864	391.146217	148.408622	173.583	8.406345	3.835
CIRC.	6426.081	157.957165	0.000	216522.557	4040515.236	327.633133	146.802	387.630857	149.366315	193.393	9.364038	3.465
CIRC.	6446.081	158.467890	0.000	216534.762	4040499.392	323.082449	129.396	383.080172	150.193450	213.218	10.191173	3.095
CIRC.	6466.081	158.978616	0.000	216546.840	4040483.451	317.087221	112.950	377.084944	150.923279	233.054	10.921002	2.724
CIRC.	6486.081	159.489342	0.000	216558.789	4040467.413	309.075305	97.949	369.073028	151.578664	252.897	11.576387	2.354
CIRC.	6506.081	160.000068	0.000	216570.610	4040451.280	298.342461	85.164	358.340184	152.175835	272.745	12.173559	1.984
CIRC.	6526.081	160.510794	0.000	216582.300	4040435.053	284.336246	75.725	344.333969	152.726632	292.595	12.724355	2.350
CIRC.	6546.081	161.021520	0.000	216593.860	4040418.732	267.415478	70.981	327.413201	153.239889	312.445	13.237612	2.657
CIRC.	6566.081	161.532246	0.000	216605.289	4040402.319	249.547723	71.868	309.545446	153.722333	332.296	13.720057	3.057
CIRC.	6586.081	162.042971	0.000	216616.586	4040385.815	233.391805	78.194	293.389528	154.179178	352.144	14.176901	3.457
CIRC.	6603.717	162.493340	0.000	216626.438	4040371.187	221.776498	87.372	281.774221	154.564081	369.645	14.561804	3.809

Istram 20.01.01.08 18/03/20 16:59:11 2378 pagina 6
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 7 : Cadiz-Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 6236.694 Dis= -18.678
Distancia: 357.672 Azimut: 314.030496
BO : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 5886.081 Dis=-107.769

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	5886.081	106.134508	0.000	216031.558	4040621.108	294.689015	354.127	380.658519	202.289195	107.769	88.258699	13.465
CIRC.	5906.081	103.598174	0.000	216051.498	4040619.581	294.082941	334.398	380.052445	190.702804	110.402	76.672308	13.095
CIRC.	5926.081	101.061840	0.000	216071.483	4040618.849	293.560110	314.578	379.529614	179.830781	115.718	65.800285	12.724
CIRC.	5946.081	98.525507	0.000	216091.482	4040618.914	293.137739	294.682	379.107243	169.974248	123.362	55.943753	12.354
CIRC.	5966.081	95.989173	0.000	216111.462	4040619.775	292.838063	274.728	378.807567	161.234918	132.923	47.204422	11.983
CIRC.	5986.081	93.452839	0.000	216131.392	4040621.432	292.690261	254.739	378.659765	153.570561	144.007	39.540065	11.613
CLOT.	6006.081	90.948313	0.000	216151.240	4040623.880	292.733062	234.741	378.702566	146.864686	156.274	32.834190	11.243
CLOT.	6026.081	88.976512	0.000	216170.988	4040627.038	292.996460	214.763	378.965964	140.997343	169.507	26.966847	10.872
CLOT.	6046.081	87.710106	0.000	216190.650	4040630.698	293.479727	194.824	379.449232	135.884512	183.625	21.854016	10.502
CLOT.	6066.081	87.149097	0.000	216210.258	4040634.640	294.177123	174.926	380.146627	131.454132	198.574	17.423636	10.132
CLOT.	6086.081	87.522993	0.000	216229.856	4040638.629	295.073166	155.061	381.042670	127.647974	214.320	13.617478	9.761
CLOT.	6106.081	89.486330	0.000	216249.522	4040642.262	296.063177	135.189	382.032681	124.456595	230.922	10.426099	9.391
CLOT.	6126.081	93.079414	0.000	216269.327	4040645.034	296.915280	115.262	382.884784	121.895484	248.445	7.864988	9.020
CIRC.	6146.081	98.028415	0.000	216289.272	4040646.446	297.211840	95.273	383.181345	119.973849	266.867	5.943353	8.650
CIRC.	6166.081	103.121373	0.000	216309.266	4040646.265	296.319381	75.313	382.288885	118.638451	286.004	4.607955	8.280
CIRC.	6186.081	108.214331	0.000	216329.181	4040644.487	292.968692	55.611	378.938196	117.795683	305.612	3.765187	7.909
CIRC.	6206.081	113.307290	0.000	216348.891	4040641.124	283.392883	36.808	369.362388	117.364413	325.492	3.333917	7.539
CIRC.	6226.081	118.400248	0.000	216368.269	4040636.196	253.663502	21.677	339.633007	117.276992	345.481	3.246497	7.169
CIRC.	6246.081	123.493206	0.000	216387.191	4040629.735	191.701072	21.061	277.670576	117.477665	365.444	3.447169	6.798
CIRC.	6266.081	128.586164	0.000	216405.536	4040621.783	159.807357	35.720	245.776861	117.920683	385.268	3.890187	6.428

Istram 20.01.01.08 18/03/20 16:59:11 2378 pagina 7
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 7 : Cadiz-Chiclana

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 6236.694 Dis= -18.678
Distancia: 357.672 Azimut: 314.030496
BO : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 5886.081 Dis=-107.769

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	6286.081	133.679122	0.000	216423.187	4040612.390	149.580760	54.421	235.550265	118.568523	404.854	4.538027	6.058
CIRC.	6306.081	138.772080	0.000	216440.031	4040601.616	146.001305	74.094	231.970810	119.390337	424.120	5.359841	5.687
CIRC.	6326.081	143.865039	0.000	216455.960	4040589.531	145.006591	94.046	230.976095	120.360660	442.992	6.330165	5.317
CIRC.	6346.081	148.957997	0.000	216470.873	4040576.212	145.252904	114.037	231.222408	121.458369	461.404	7.427873	4.946
CLOT.	6366.081	153.408802	0.000	216484.717	4040561.784	146.156392	133.956	232.125896	122.658781	479.327	8.628285	4.576
CLOT.	6386.081	156.240135	0.000	216497.714	4040546.585	147.297651	153.788	233.267155	123.903805	496.900	9.873309	4.206
CIRC.	6406.081	157.446439	0.000	216510.225	4040530.981	148.408622	173.583	234.378126	125.132787	514.357	11.102291	3.835
CIRC.	6426.081	157.957165	0.000	216522.557	4040515.236	149.366315	193.393	235.335819	126.304784	531.887	12.274288	3.465
CIRC.	6446.081	158.467890	0.000	216534.762	4040499.392	150.193450	213.218	236.162954	127.418138	549.511	13.387642	3.095
CIRC.	6466.081	158.978616	0.000	216546.840	4040483.451	150.923279	233.054	236.892783	128.478043	567.220	14.447547	2.724
CIRC.	6486.081	159.489342	0.000	216558.789	4040467.413	151.578664	252.897	237.548168	129.489132	585.004	15.458637	2.354
CIRC.	6506.081	160.000068	0.000	216570.610	4040451.280	152.175835	272.745	238.145339	130.455545	602.857	16.425049	1.984
CIRC.	6526.081	160.510794	0.000	216582.300	4040435.053	152.726632	292.595	238.696136	131.380988	620.771	17.350492	2.350
CIRC.	6546.081	161.021520	0.000	216593.860	4040418.732	153.239889	312.445	239.209393	132.268786	638.740	18.238290	2.657
CIRC.	6566.081	161.532246	0.000	216605.289	4040402.319	153.722333	332.296	239.691838	133.121928	656.759	19.091432	3.057
CIRC.	6586.081	162.042971	0.000	216616.586	4040385.815	154.179178	352.144	240.148682	133.943108	674.821	19.912612	3.457
CIRC.	6603.717	162.493340	0.000	216626.438	4040371.187	154.564081	369.645	240.533585	134.642664	690.782	20.612168	3.809

```
 Istram 20.01.01.08 18/03/20 16:59:11   2378                                                                    pagina   7
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    1 : Ejes principales
 EJE        :    7 : Cadiz-Chiclana


                           ==========================================
                           * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                           ==========================================

 BR : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:    5886.081 Dis=-107.769
                                                                      Distancia:   270.987  Azimut: 299.545648
 BO : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:    5886.081 Dis=-287.283

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ---------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    5886.081 106.134508     0.000   216031.558  4040621.108 202.289195   107.769 302.743547 124.002289   287.283  24.456641     13.465

CIRC.    5906.081 103.598174     0.000   216051.498  4040619.581 190.702804   110.402 291.157156 122.772108   306.443  23.226459     13.095

CIRC.    5926.081 101.061840     0.000   216071.483  4040618.849 179.830781   115.718 280.285133 121.537468   325.480  21.991819     12.724

CIRC.    5946.081  98.525507     0.000   216091.482  4040618.914 169.974248   123.362 270.428600 120.299134   344.389  20.753486     12.354

CIRC.    5966.081  95.989173     0.000   216111.462  4040619.775 161.234918   132.923 261.689270 119.057705   363.161  19.512056     11.983

CIRC.    5986.081  93.452839     0.000   216131.392  4040621.432 153.570561   144.007 254.024913 117.813656   381.789  18.268008     11.613

CLOT.    6006.081  90.948313     0.000   216151.240  4040623.880 146.864686   156.274 247.319038 116.567519   400.266  17.021870     11.243

CLOT.    6026.081  88.976512     0.000   216170.988  4040627.038 140.997343   169.507 241.451695 115.330502   418.616  15.784854     10.872

CLOT.    6046.081  87.710106     0.000   216190.650  4040630.698 135.884512   183.625 236.338863 114.129315   436.915  14.583667     10.502

CLOT.    6066.081  87.149097     0.000   216210.258  4040634.640 131.454132   198.574 231.908483 112.988009   455.247  13.442361     10.132

CLOT.    6086.081  87.522993     0.000   216229.856  4040638.629 127.647974   214.320 228.102325 111.929333   473.696  12.383685      9.761

CLOT.    6106.081  89.486330     0.000   216249.522  4040642.262 124.456595   230.922 224.910947 110.994058   492.395  11.448409      9.391

CLOT.    6126.081  93.079414     0.000   216269.327  4040645.034 121.895484   248.445 222.349836 110.230567   511.465  10.684918      9.020

CIRC.    6146.081  98.028415     0.000   216289.272  4040646.446 119.973849   266.867 220.428201 109.680837   530.947  10.135188      8.650

CIRC.    6166.081 103.121373     0.000   216309.266  4040646.265 118.638451   286.004 219.092803 109.351372   550.745   9.805724      8.280

CIRC.    6186.081 108.214331     0.000   216329.181  4040644.487 117.795683   305.612 218.250034 109.222392   570.707   9.676744      7.909

CIRC.    6206.081 113.307290     0.000   216348.891  4040641.124 117.364413   325.492 217.818764 109.274462   590.696   9.728813      7.539

CIRC.    6226.081 118.400248     0.000   216368.269  4040636.196 117.276992   345.481 217.731344 109.489529   610.587   9.943880      7.169

CIRC.    6246.081 123.493206     0.000   216387.191  4040629.735 117.477665   365.444 217.932016 109.851040   630.269  10.305391      6.798

CIRC.    6266.081 128.586164     0.000   216405.536  4040621.783 117.920683   385.268 218.375034 110.343947   649.641  10.798299      6.428
```

Istram 20.01.01.08 18/03/20 16:59:11 2378 pagina 8
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 7 : Cadiz-Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 5886.081 Dis=-107.769
Distancia: 270.987 Azimut: 299.545648
BO : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 5886.081 Dis=-287.283

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	6286.081	133.679122	0.000	216423.187	4040612.390	118.568523	404.854	219.022874	110.954650	668.609	11.409001	6.058
CIRC.	6306.081	138.772080	0.000	216440.031	4040601.616	119.390337	424.120	219.844688	111.670898	687.093	12.125249	5.687
CIRC.	6326.081	143.865039	0.000	216455.960	4040589.531	120.360660	442.992	220.815012	112.481681	705.015	12.936032	5.317
CIRC.	6346.081	148.957997	0.000	216470.873	4040576.212	121.458369	461.404	221.912721	113.377105	722.308	13.831456	4.946
CLOT.	6366.081	153.408802	0.000	216484.717	4040561.784	122.658781	479.327	223.113132	114.344042	738.943	14.798394	4.576
CLOT.	6386.081	156.240135	0.000	216497.714	4040546.585	123.903805	496.900	224.358157	115.348273	755.101	15.802625	4.206
CIRC.	6406.081	157.446439	0.000	216510.225	4040530.981	125.132787	514.357	225.587139	116.352740	771.071	16.807091	3.835
CIRC.	6426.081	157.957165	0.000	216522.557	4040515.236	126.304784	531.887	226.759135	117.331124	787.092	17.785476	3.465
CIRC.	6446.081	158.467890	0.000	216534.762	4040499.392	127.418138	549.511	227.872489	118.280588	803.197	18.734940	3.095
CIRC.	6466.081	158.978616	0.000	216546.840	4040483.451	128.478043	567.220	228.932394	119.202699	819.381	19.657051	2.724
CIRC.	6486.081	159.489342	0.000	216558.789	4040467.413	129.489132	585.004	229.943484	120.098924	835.638	20.553276	2.354
CIRC.	6506.081	160.000068	0.000	216570.610	4040451.280	130.455545	602.857	230.909897	120.970640	851.964	21.424991	1.984
CIRC.	6526.081	160.510794	0.000	216582.300	4040435.053	131.380988	620.771	231.835340	121.819134	868.352	22.273485	2.350
CIRC.	6546.081	161.021520	0.000	216593.860	4040418.732	132.268786	638.740	232.723137	122.645616	884.799	23.099968	2.657
CIRC.	6566.081	161.532246	0.000	216605.289	4040402.319	133.121928	656.759	233.576279	123.451220	901.301	23.905571	3.057
CIRC.	6586.081	162.042971	0.000	216616.586	4040385.815	133.943108	674.821	234.397459	124.237008	917.853	24.691359	3.457
CIRC.	6603.717	162.493340	0.000	216626.438	4040371.187	134.642664	690.782	235.097016	124.914288	932.487	25.368639	3.809

Istram 20.01.01.08 18/03/20 16:59:11 2378 pagina 8
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 7 : Cadiz-Chiclana

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 5886.081 Dis=-287.283
Distancia: 277.714 Azimut: 311.446118
BO : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 5886.081 Dis=-562.253

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	5886.081	106.134508	0.000	216031.558	4040621.108	124.002289	287.283	212.556171	117.830887	562.253	6.384768	13.465
CIRC.	5906.081	103.598174	0.000	216051.498	4040619.581	122.772108	306.443	211.325989	117.388356	581.852	5.942238	13.095
CIRC.	5926.081	101.061840	0.000	216071.483	4040618.849	121.537468	325.480	210.091350	116.892192	601.312	5.446073	12.724
CIRC.	5946.081	98.525507	0.000	216091.482	4040618.914	120.299134	344.389	208.853016	116.347805	620.617	4.901687	12.354
CIRC.	5966.081	95.989173	0.000	216111.462	4040619.775	119.057705	363.161	207.611587	115.759930	639.750	4.313812	11.983
CIRC.	5986.081	93.452839	0.000	216131.392	4040621.432	117.813656	381.789	206.367538	115.132723	658.699	3.686605	11.613
CLOT.	6006.081	90.948313	0.000	216151.240	4040623.880	116.567519	400.266	205.121400	114.469935	677.449	3.023817	11.243
CLOT.	6026.081	88.976512	0.000	216170.988	4040627.038	115.330502	418.616	203.884384	113.781429	696.018	2.335311	10.872
CLOT.	6046.081	87.710106	0.000	216190.650	4040630.698	114.129315	436.915	202.683197	113.086634	714.478	1.640515	10.502
CLOT.	6066.081	87.149097	0.000	216210.258	4040634.640	112.988009	455.247	201.541891	112.403807	732.910	0.957688	10.132
CLOT.	6086.081	87.522993	0.000	216229.856	4040638.629	111.929333	473.696	200.483215	111.750742	751.405	0.304624	9.761
CLOT.	6106.081	89.486330	0.000	216249.522	4040642.262	110.994058	492.395	199.547939	111.157078	770.104	399.710960	9.391
CLOT.	6126.081	93.079414	0.000	216269.327	4040645.034	110.230567	511.465	198.784448	110.658317	789.146	399.212199	9.020
CIRC.	6146.081	98.028415	0.000	216289.272	4040646.446	109.680837	530.947	198.234719	110.287061	808.590	398.840943	8.650
CIRC.	6166.081	103.121373	0.000	216309.266	4040646.265	109.351372	550.745	197.905254	110.053540	828.358	398.607422	8.280
CIRC.	6186.081	108.214331	0.000	216329.181	4040644.487	109.222392	570.707	197.776274	109.950250	848.307	398.504132	7.909
CIRC.	6206.081	113.307290	0.000	216348.891	4040641.124	109.274462	590.696	197.828343	109.968915	868.300	398.522797	7.539
CIRC.	6226.081	118.400248	0.000	216368.269	4040636.196	109.489529	610.587	198.043410	110.101201	888.211	398.655083	7.169
CIRC.	6246.081	123.493206	0.000	216387.191	4040629.735	109.851040	630.269	198.404922	110.338893	907.922	398.892775	6.798
CIRC.	6266.081	128.586164	0.000	216405.536	4040621.783	110.343947	649.641	198.897829	110.674009	927.325	399.227890	6.428

Istram 20.01.01.08 18/03/20 16:59:11 2378 pagina 9
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 7 : Cadiz-Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 5886.081 Dis=-287.283
Distancia: 277.714 Azimut: 311.446118
BO : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 5886.081 Dis=-562.253

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	6286.081	133.679122	0.000	216423.187	4040612.390	110.954650	668.609	199.508531	111.098879	946.317	399.652760	6.058
CIRC.	6306.081	138.772080	0.000	216440.031	4040601.616	111.670898	687.093	200.224780	111.606196	964.805	0.160078	5.687
CIRC.	6326.081	143.865039	0.000	216455.960	4040589.531	112.481681	705.015	201.035562	112.189040	982.703	0.742922	5.317
CIRC.	6346.081	148.957997	0.000	216470.873	4040576.212	113.377105	722.308	201.930986	112.840882	999.930	1.394763	4.946
CLOT.	6366.081	153.408802	0.000	216484.717	4040561.784	114.344042	738.943	202.897924	113.552525	1016.447	2.106406	4.576
CLOT.	6386.081	156.240135	0.000	216497.714	4040546.585	115.348273	755.101	203.902155	114.299245	1032.433	2.853126	4.206
CIRC.	6406.081	157.446439	0.000	216510.225	4040530.981	116.352740	771.071	204.906621	115.053933	1048.178	3.607814	3.835
CIRC.	6426.081	157.957165	0.000	216522.557	4040515.236	117.331124	787.092	205.885006	115.797019	1063.928	4.350901	3.465
CIRC.	6446.081	158.467890	0.000	216534.762	4040499.392	118.280588	803.197	206.834470	116.525857	1079.722	5.079739	3.095
CIRC.	6466.081	158.978616	0.000	216546.840	4040483.451	119.202699	819.381	207.756581	117.241026	1095.556	5.794908	2.724
CIRC.	6486.081	159.489342	0.000	216558.789	4040467.413	120.098924	835.638	208.652806	117.943078	1111.428	6.496959	2.354
CIRC.	6506.081	160.000068	0.000	216570.610	4040451.280	120.970640	851.964	209.524521	118.632537	1127.335	7.186419	1.984
CIRC.	6526.081	160.510794	0.000	216582.300	4040435.053	121.819134	868.352	210.373016	119.309904	1143.275	7.863786	2.350
CIRC.	6546.081	161.021520	0.000	216593.860	4040418.732	122.645616	884.799	211.199498	119.975654	1159.246	8.529536	2.657
CIRC.	6566.081	161.532246	0.000	216605.289	4040402.319	123.451220	901.301	212.005101	120.630241	1175.245	9.184123	3.057
CIRC.	6586.081	162.042971	0.000	216616.586	4040385.815	124.237008	917.853	212.790889	121.274095	1191.270	9.827977	3.457
CIRC.	6603.717	162.493340	0.000	216626.438	4040371.187	124.914288	932.487	213.468169	121.833283	1205.421	10.387165	3.809

Istram 20.01.01.08 18/03/20 16:59:11 2378 pagina 9
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 7 : Cadiz-Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 5886.081 Dis=-562.253
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 5886.081 Dis=-824.573

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	5886.081	106.134508	0.000	216031.558	4040621.108	117.830887	562.253	179.185345	124.590243	824.573	385.944701	13.465
CIRC.	5906.081	103.598174	0.000	216051.498	4040619.581	117.388356	581.852	178.742814	124.130125	843.642	385.484583	13.095
CIRC.	5926.081	101.061840	0.000	216071.483	4040618.849	116.892192	601.312	178.246650	123.634467	862.505	384.988925	12.724
CIRC.	5946.081	98.525507	0.000	216091.482	4040618.914	116.347805	620.617	177.702263	123.105926	881.149	384.460384	12.354
CIRC.	5966.081	95.989173	0.000	216111.462	4040619.775	115.759930	639.750	177.114388	122.546920	899.556	383.901378	11.983
CIRC.	5986.081	93.452839	0.000	216131.392	4040621.432	115.132723	658.699	176.487181	121.959658	917.714	383.314116	11.613
CLOT.	6006.081	90.948313	0.000	216151.240	4040623.880	114.469935	677.449	175.824393	121.346218	935.608	382.700676	11.243
CLOT.	6026.081	88.976512	0.000	216170.988	4040627.038	113.781429	696.018	175.135887	120.713045	953.265	382.067503	10.872
CLOT.	6046.081	87.710106	0.000	216190.650	4040630.698	113.086634	714.478	174.441092	120.073469	970.774	381.427927	10.502
CLOT.	6066.081	87.149097	0.000	216210.258	4040634.640	112.403807	732.910	173.758264	119.440351	988.242	380.794809	10.132
CLOT.	6086.081	87.522993	0.000	216229.856	4040638.629	111.750742	751.405	173.105200	118.826582	1005.781	380.181040	9.761
CLOT.	6106.081	89.486330	0.000	216249.522	4040642.262	111.157078	770.104	172.511536	118.253918	1023.576	379.608376	9.391
CLOT.	6126.081	93.079414	0.000	216269.327	4040645.034	110.658317	789.146	172.012775	117.749187	1041.820	379.103645	9.020
CIRC.	6146.081	98.028415	0.000	216289.272	4040646.446	110.287061	808.590	171.641519	117.338268	1060.629	378.692726	8.650
CIRC.	6166.081	103.121373	0.000	216309.266	4040646.265	110.053540	828.358	171.407998	117.031476	1079.947	378.385934	8.280
CIRC.	6186.081	108.214331	0.000	216329.181	4040644.487	109.950250	848.307	171.304708	116.825945	1099.629	378.180403	7.909
CIRC.	6206.081	113.307290	0.000	216348.891	4040641.124	109.968915	868.300	171.323373	116.717787	1119.535	378.072245	7.539
CIRC.	6226.081	118.400248	0.000	216368.269	4040636.196	110.101201	888.211	171.455659	116.702627	1139.528	378.057085	7.169
CIRC.	6246.081	123.493206	0.000	216387.191	4040629.735	110.338893	907.922	171.693351	116.775760	1159.479	378.130218	6.798
CIRC.	6266.081	128.586164	0.000	216405.536	4040621.783	110.674009	927.325	172.028466	116.932278	1179.266	378.286736	6.428

Istram 20.01.01.08 18/03/20 16:59:11 2378 pagina 10
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO   : 1 : Ejes principales
EJE   : 7 : Cadiz-Chiclana

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 5886.081 Dis=-562.253
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 5886.081 Dis=-824.573

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	6286.081	133.679122	0.000	216423.187	4040612.390	111.098879	946.317	172.453337	117.167171	1198.773	378.521629	6.058
CIRC.	6306.081	138.772080	0.000	216440.031	4040601.616	111.606196	964.805	172.960654	117.475410	1217.893	378.829868	5.687
CIRC.	6326.081	143.865039	0.000	216455.960	4040589.531	112.189040	982.703	173.543498	117.852007	1236.523	379.206465	5.317
CIRC.	6346.081	148.957997	0.000	216470.873	4040576.212	112.840882	999.930	174.195339	118.292063	1254.569	379.646521	4.946
CLOT.	6366.081	153.408802	0.000	216484.717	4040561.784	113.552525	1016.447	174.906983	118.788224	1271.974	380.142682	4.576
CLOT.	6386.081	156.240135	0.000	216497.714	4040546.585	114.299245	1032.433	175.653702	119.319765	1288.875	380.674223	4.206
CIRC.	6406.081	157.446439	0.000	216510.225	4040530.981	115.053933	1048.178	176.408391	119.863595	1305.524	381.218052	3.835
CIRC.	6426.081	157.957165	0.000	216522.557	4040515.236	115.797019	1063.928	177.151477	120.402867	1322.141	381.757325	3.465
CIRC.	6446.081	158.467890	0.000	216534.762	4040499.392	116.525857	1079.722	177.880315	120.935091	1338.763	382.289549	3.095
CIRC.	6466.081	158.978616	0.000	216546.840	4040483.451	117.241026	1095.556	178.595484	121.460523	1355.388	382.814981	2.724
CIRC.	6486.081	159.489342	0.000	216558.789	4040467.413	117.943078	1111.428	179.297536	121.979410	1372.015	383.333868	2.354
CIRC.	6506.081	160.000068	0.000	216570.610	4040451.280	118.632537	1127.335	179.986995	122.491986	1388.643	383.846444	1.984
CIRC.	6526.081	160.510794	0.000	216582.300	4040435.053	119.309904	1143.275	180.664362	122.998475	1405.271	384.352933	2.350
CIRC.	6546.081	161.021520	0.000	216593.860	4040418.732	119.975654	1159.246	181.330112	123.499091	1421.897	384.853549	2.657
CIRC.	6566.081	161.532246	0.000	216605.289	4040402.319	120.630241	1175.245	181.984699	123.994038	1438.522	385.348496	3.057
CIRC.	6586.081	162.042971	0.000	216616.586	4040385.815	121.274095	1191.270	182.628553	124.483512	1455.143	385.837969	3.457
CIRC.	6603.717	162.493340	0.000	216626.438	4040371.187	121.833283	1205.421	183.187741	124.910747	1469.796	386.265205	3.809

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 1
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 4 : Enlace Chiclana Norte
EJE : 9 : Enlace de Chiclana - Ramal 1

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 1947.284 Dis=2303.052
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 1947.284 Dis=2360.007

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	1000.000	3.884345	0.000	218299.984	4037703.696	182.328325	3175.068	285.642969	176.995589	3248.822	80.310233	3.486
CIRC.	1020.000	399.640214	0.000	218300.538	4037723.684	182.207095	3156.002	285.521739	176.846117	3230.329	80.160761	3.386
CIRC.	1040.000	395.396082	0.000	218299.758	4037743.665	182.110423	3136.584	285.425067	176.719649	3211.384	80.034293	3.286
CLOT.	1060.000	391.179801	0.000	218297.650	4037763.550	182.039158	3116.897	285.353802	176.617099	3192.064	79.931743	3.186
CLOT.	1080.000	387.854296	0.000	218294.339	4037783.272	181.991678	3097.034	285.306322	176.537008	3172.471	79.851652	3.145
CLOT.	1100.000	385.828015	0.000	218290.201	4037802.838	181.960892	3077.090	285.275535	176.472607	3152.729	79.787251	3.370
CLOT.	1120.000	385.100958	0.000	218285.641	4037822.311	181.938690	3057.119	285.253333	176.416080	3132.925	79.730724	3.880
CIRC.	1140.000	385.338119	0.000	218281.037	4037841.774	181.917149	3037.146	285.231792	176.359755	3113.117	79.674399	4.676
CIRC.	1160.000	385.592767	0.000	218276.510	4037861.255	181.893640	3017.177	285.208284	176.301083	3093.322	79.615727	5.653
RECTA	1180.000	385.815940	0.000	218272.061	4037880.754	181.868135	2997.213	285.182779	176.240028	3073.542	79.554672	6.632
RECTA	1200.000	385.815940	0.000	218267.642	4037900.260	181.841632	2977.252	285.156276	176.177549	3053.770	79.492192	7.612
RECTA	1220.000	385.815940	0.000	218263.222	4037919.765	181.814772	2957.291	285.129416	176.114255	3034.000	79.428899	8.592
RECTA	1240.000	385.815940	0.000	218258.803	4037939.271	181.787546	2937.331	285.102190	176.050131	3014.233	79.364775	9.545
RECTA	1260.000	385.815940	0.000	218254.384	4037958.777	181.759948	2917.371	285.074592	175.985161	2994.470	79.299805	10.339
RECTA	1280.000	385.815940	0.000	218249.964	4037978.282	181.731970	2897.412	285.046613	175.919328	2974.709	79.233972	10.954
RECTA	1300.000	385.815940	0.000	218245.545	4037997.788	181.703603	2877.454	285.018247	175.852614	2954.952	79.167258	11.392
RECTA	1320.000	385.815940	0.000	218241.126	4038017.294	181.674840	2857.496	284.989484	175.785002	2935.198	79.099646	11.652
RECTA	1340.000	385.815940	0.000	218236.707	4038036.799	181.645673	2837.538	284.960317	175.716474	2915.447	79.031118	11.735
RECTA	1360.000	385.815940	0.000	218232.287	4038056.305	181.616092	2817.582	284.930736	175.647012	2895.700	78.961656	11.639
RECTA	1380.000	385.815940	0.000	218227.868	4038075.810	181.586090	2797.625	284.900733	175.576595	2875.957	78.891239	11.366

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 17
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 4 : Enlace Chiclana Norte
EJE : 9 : Enlace de Chiclana - Ramal 1

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 1947.284 Dis=2303.052
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 1947.284 Dis=2360.007

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	1400.000	385.815940	0.000	218223.449	4038095.316	181.555656	2777.670	284.870300	175.505205	2856.217	78.819849	10.915
RECTA	1420.000	385.815940	0.000	218219.029	4038114.822	181.524782	2757.715	284.839426	175.432822	2836.480	78.747466	10.286
CLOT.	1440.000	385.233838	0.000	218214.554	4038134.314	181.494796	2737.757	284.809440	175.360711	2816.738	78.675355	9.525
CLOT.	1460.000	383.354363	0.000	218209.703	4038153.716	181.473408	2717.779	284.788052	175.296277	2796.942	78.610921	8.756
CLOT.	1480.000	380.175665	0.000	218204.085	4038172.909	181.470444	2697.781	284.785088	175.248999	2777.051	78.563643	7.987
CIRC.	1500.000	375.998075	0.000	218197.345	4038191.735	181.495503	2677.813	284.810147	175.228234	2757.075	78.542878	7.218
CIRC.	1520.000	371.753944	0.000	218189.368	4038210.072	181.552689	2657.961	284.867333	175.238112	2737.084	78.552756	6.449
CIRC.	1540.000	367.509812	0.000	218180.187	4038227.836	181.642512	2638.316	284.957156	175.279316	2717.165	78.593960	5.683
CIRC.	1560.000	363.265680	0.000	218169.843	4038244.949	181.765276	2618.973	285.079920	175.352349	2697.412	78.666993	4.996
CIRC.	1580.000	359.021548	0.000	218158.382	4038261.334	181.921115	2600.025	285.235758	175.457569	2677.915	78.772213	4.423
CIRC.	1600.000	354.777416	0.000	218145.855	4038276.920	182.109976	2581.564	285.424620	175.595174	2658.769	78.909818	3.965
CIRC.	1620.000	350.533285	0.000	218132.317	4038291.637	182.331608	2563.686	285.646252	175.765188	2640.066	79.079832	3.621
CIRC.	1640.000	346.289153	0.000	218117.829	4038305.419	182.585544	2546.482	285.900188	175.967447	2621.900	79.282091	3.391
CIRC.	1660.000	342.045021	0.000	218102.455	4038318.206	182.871089	2530.043	286.185733	176.201583	2604.365	79.516227	3.276
CLOT.	1680.000	337.990254	0.000	218086.269	4038329.948	183.187120	2514.452	286.501764	176.466809	2587.546	79.781453	3.255
CLOT.	1700.000	335.254942	0.000	218069.468	4038340.795	183.528070	2499.631	286.842714	176.757643	2571.388	80.072287	3.245
CLOT.	1720.000	334.026423	0.000	218052.337	4038351.115	183.884662	2485.310	287.199306	177.064489	2555.661	80.379133	3.235
RECTA	1740.000	333.951515	0.000	218035.115	4038361.285	184.248561	2471.192	287.563204	177.378542	2540.104	80.693186	3.225
RECTA	1760.000	333.951515	0.000	218017.893	4038371.453	184.616674	2457.157	287.931318	177.696506	2524.611	81.011149	3.215
CLOT.	1780.000	334.673251	0.000	218000.708	4038381.684	184.987659	2443.152	288.302303	178.016939	2509.135	81.331582	3.205

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 18
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 4 : Enlace Chiclana Norte
EJE : 9 : Enlace de Chiclana - Ramal 1

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 1947.284 Dis=2303.052
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 1947.284 Dis=2360.007

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CLOT.	1800.000	336.901439	0.000	217983.766	4038392.310	185.354364	2428.902	288.669008	178.332143	2493.432	81.646787	3.195
CLOT.	1820.000	340.636419	0.000	217967.341	4038403.717	185.707501	2414.088	289.022145	178.632173	2477.224	81.946817	3.185
CIRC.	1840.000	345.608087	0.000	217951.752	4038416.237	186.036919	2398.443	289.351563	178.906337	2460.290	82.220981	3.175
CIRC.	1860.000	350.701045	0.000	217937.209	4038429.960	186.336482	2381.911	289.651125	179.148389	2442.601	82.463033	3.165
CLOT.	1880.000	355.698068	0.000	217923.808	4038444.798	186.603936	2364.580	289.918580	179.356257	2424.253	82.670901	3.155
CLOT.	1900.000	359.499941	0.000	217911.483	4038460.546	186.841681	2346.622	290.156325	179.532648	2405.408	82.847292	3.145
CLOT.	1920.000	361.795021	0.000	217899.925	4038476.867	187.059394	2328.290	290.374037	179.687603	2386.279	83.002247	3.135
CLOT.	1940.000	362.583309	0.000	217888.766	4038493.464	187.268297	2309.794	290.582941	179.832578	2367.025	83.147222	3.125
RECTA	1947.284	362.583713	0.000	217884.727	4038499.526	187.344429	2303.052	290.659073	179.885168	2360.007	83.199812	3.122

```
 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  19
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    4 : Enlace Chiclana Norte
 EJE        :    9 : Enlace de Chiclana -  Ramal 1


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:    1947.284 Dis=2360.007
                                                                       Distancia:   315.594  Azimut: 312.962004
 BO : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:    1947.284 Dis=2531.568

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    3140.000 362.583713     0.000   217223.394  4039492.103 196.339035  1252.674 283.377031 182.035812  1368.543  69.073808      2.525

RECTA    1947.284 362.583713     0.000   217884.727  4038499.526 179.885168  2360.007 266.923164 172.982662  2531.568  60.020658      3.122

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  20
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    4 : Enlace Chiclana Norte
 EJE        :    9 : Enlace de Chiclana -  Ramal 1


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:    1947.284 Dis=2531.568
                                                                       Distancia:   399.296  Azimut: 230.952151
 BO : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:    1947.284 Dis=2308.333

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    3460.000 362.583713     0.000   217045.962  4039758.407 187.783232  1067.713 356.831081 167.433980   797.132 136.481829      2.365

RECTA    1947.284 362.583713     0.000   217884.727  4038499.526 172.982662  2531.568 342.030511 164.257219  2308.333 133.305068      3.122

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  21
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    4 : Enlace Chiclana Norte
 EJE        :    9 : Enlace de Chiclana -  Ramal 1


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:    1947.284 Dis=2308.333
                                                                       Distancia:   335.344  Azimut: 340.002277
 BO : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:    1947.284 Dis=-2622.597

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    3680.000 362.583713     0.000   216923.977  4039941.491 169.278535   578.013 229.276259 158.594520   891.036  18.592243      2.255

RECTA    1947.284 362.583713     0.000   217884.727  4038499.526 164.257219  2308.333 224.254942 161.229156  2622.597  21.226879      3.122
```

```
 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  22
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    4 : Enlace Chiclana Norte
 EJE        :    9 : Enlace de Chiclana -  Ramal 1


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:    1947.284 Dis=-2622.597
                                                                      Distancia:   357.672  Azimut: 314.030496
 BO : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:    1947.284 Dis=-2896.479

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    3960.000 362.583713     0.000   216768.723  4040174.507 156.769857   611.837 242.739361 141.206609   919.220  27.176113      2.115

RECTA    1947.284 362.583713     0.000   217884.727  4038499.526 161.229156  2622.597 247.198660 155.914103  2896.479  41.883607      3.122

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  23
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    4 : Enlace Chiclana Norte
 EJE        :    9 : Enlace de Chiclana -  Ramal 1


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:    1947.284 Dis=-2896.479
                                                                      Distancia:   270.987  Azimut: 299.545648
 BO : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:    1947.284 Dis=-3075.166

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4320.000 362.583713     0.000   216569.112  4040474.099 128.348608   591.347 228.802959 119.377292   843.429  19.831643      1.935

RECTA    1947.284 362.583713     0.000   217884.727  4038499.526 155.914103  2896.479 256.368454 151.567553  3075.166  52.021905      3.122

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  24
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    4 : Enlace Chiclana Norte
 EJE        :    9 : Enlace de Chiclana -  Ramal 1


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:    1947.284 Dis=-3075.166
                                                                      Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:    1947.284 Dis=-3303.586

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4580.000 362.583713     0.000   216424.948  4040690.470 103.505214   661.498 192.059096 105.851489   937.691 394.405371      1.805

RECTA    1947.284 362.583713     0.000   217884.727  4038499.526 151.567553  3075.166 240.121435 148.412358  3303.586  36.966240      3.122
```

```
 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  19
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    4 : Enlace Chiclana Norte
 EJE        :    9 : Enlace de Chiclana -  Ramal 1


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:    1947.284 Dis=-3303.586
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120                X:  215267.736  Y: 4040931.749  Z:   2.846  PK:    1947.284 Dis=-3572.723

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4880.000 362.583713     0.000   216258.605  4040940.130  86.628613   784.634 147.983071  99.461527   990.904 360.815985      1.655

RECTA    1947.284 362.583713     0.000   217884.727  4038499.526 148.412358  3303.586 209.766816 147.671435  3572.723   9.025893      3.122

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   12 : Cadiz - Poligono de Tres Caminos


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR113                X:  217429.905  Y: 4040757.221  Z:   2.658  PK:     395.809 Dis=-1853.234
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:     395.814 Dis=-1574.348

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    1000.000 278.876234     0.000   215558.908  4040632.549 295.764228  1875.146 399.078872 295.603304  1596.295 198.917948     -5.757

CIRC.     411.851 230.784380     0.000   215575.695  4040646.965 296.218953  1857.485 399.533597 296.136556  1578.608 199.451200      3.198

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  20
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   12 : Cadiz - Poligono de Tres Caminos


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:     395.814 Dis=-1574.348
                                                                      Distancia:   315.594  Azimut: 312.962004
 BO : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:     393.980 Dis=-1271.359

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3140.000  20.097277     0.000   215520.617  4040670.227 297.172412  1632.389 384.210408 293.458317  1328.713 180.496313    -38.339

CIRC.     411.851 230.784380     0.000   215575.695  4040646.965 296.136556  1578.608 383.174552 292.022573  1276.637 179.060569      3.198
```

```
 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  21
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   12 : Cadiz - Poligono de Tres Caminos


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:     393.980 Dis=-1271.359
                                                                      Distancia:   399.296  Azimut: 230.952151
 BO : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:     402.902 Dis=-1095.881

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3460.000 299.158368     0.000   215549.532  4040630.916 291.405124  1304.663  60.452974 310.124131  1120.351 279.171980    -43.211

CIRC.     411.851 230.784380     0.000   215575.695  4040646.965 292.022573  1276.637  61.070422 311.284024  1097.241 280.331873      3.198

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  22
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   12 : Cadiz - Poligono de Tres Caminos


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:     402.902 Dis=-1095.881
                                                                      Distancia:   335.344  Azimut: 340.002277
 BO : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:     397.714 Dis=-805.382

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3680.000 366.012867     0.000   215523.310  4040645.647 310.700165  1148.622 370.697888 299.632592   861.158 159.630315    -46.561

CIRC.     411.851 230.784380     0.000   215575.695  4040646.965 311.284024  1097.241 371.281747 299.712540   808.766 159.710263      3.198

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  23
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   12 : Cadiz - Poligono de Tres Caminos


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:     397.714 Dis=-805.382
                                                                      Distancia:   357.672  Azimut: 314.030496
 BO : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:     393.182 Dis=-461.014

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3960.000 160.191322     0.000   215573.458  4040678.474 302.185850   811.473 388.155354 293.090961   464.708 179.060466    -50.824

CIRC.     411.851 230.784380     0.000   215575.695  4040646.965 299.712540   808.766 385.682044 288.784311   466.965 174.753815      3.198
```

```
 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  24
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   12 : Cadiz - Poligono de Tres Caminos


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:     393.182 Dis=-461.014
                                                                       Distancia:   270.987  Azimut: 299.545648
 BO : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:     388.426 Dis=-195.194

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4320.000 124.135049     0.000   215560.238  4040688.783 294.650448   476.877 395.104800 288.260345   207.736 188.714697    -56.305

CIRC.     411.851 230.784380     0.000   215575.695  4040646.965 288.784311   466.965 389.238662 274.505499   204.974 174.959851      3.198

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  25
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   12 : Cadiz - Poligono de Tres Caminos


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:     388.426 Dis=-195.194
                                                                       Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:     255.245 Dis= -42.434

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4580.000 275.872185     0.000   215560.235  4040633.042 272.580654   224.742 361.134535 171.458779   159.231  60.012661    -60.263

CIRC.     411.851 230.784380     0.000   215575.695  4040646.965 274.505499   204.974 363.059381 163.217584   154.680  51.771466      3.198

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  26
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   12 : Cadiz - Poligono de Tres Caminos


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:     255.245 Dis= -42.434
                                                                       Distancia:   272.091  Azimut: 338.645542
 BO : BR120                X:  215267.736  Y: 4040931.749  Z:   2.846  PK:       0.000 Dis= -37.238

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4880.000 112.491957     0.000   215554.984  4040690.337 159.451793   107.223 220.806251 144.494086   375.221   5.848544    -64.831

CIRC.     411.851 230.784380     0.000   215575.695  4040646.965 163.217584   154.680 224.572042 147.512175   419.453   8.866633      3.198
```

```
 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   13 : Glorieta del Poligono de Tres Caminos


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR113               X:  217429.905  Y: 4040757.221  Z:   2.658  PK:       1.548 Dis=1817.926
                                                                    Distancia:   278.886  Azimut: 296.685356
 BO : BR114               X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       1.601 Dis=1539.066

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    1000.000 147.417615     0.000   215575.540  4040620.858 295.326966  1859.372 398.641610 295.087299  1580.561 198.401943     -9.900

CIRC.     150.796   0.000000     0.000   215615.809  4040638.503 295.839779  1817.977 399.154423 295.686566  1539.120 199.001210      3.435

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  21
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   13 : Glorieta del Poligono de Tres Caminos


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR114               X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       1.601 Dis=1539.066
                                                                    Distancia:   315.594  Azimut: 312.962004
 BO : BR115               X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       3.205 Dis=1237.750

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3140.000  70.891312     0.000   215602.404  4040616.969 294.843594  1554.088 381.881590 290.342455  1254.323 177.380451    -44.202

CIRC.     150.796   0.000000     0.000   215615.809  4040638.503 295.686566  1539.120 382.724562 291.333014  1237.968 178.371010      3.435

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  22
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   13 : Glorieta del Poligono de Tres Caminos


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR115               X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       3.205 Dis=1237.750
                                                                    Distancia:   399.296  Azimut: 230.952151
 BO : BR112               X:  216655.745  Y: 4040453.497  Z:   2.850  PK:     146.664 Dis=1055.902

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3460.000  22.064948     0.000   215614.381  4040630.351 290.928432  1240.514  59.976281 310.709459  1056.274 279.757308    -49.332

CIRC.     150.796   0.000000     0.000   215615.809  4040638.503 291.333014  1237.968  60.380863 311.208303  1056.265 280.256152      3.435
```

```
 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  23
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   13 : Glorieta del Poligono de Tres Caminos


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:     146.664 Dis=1055.902
                                                                        Distancia:   335.344  Azimut: 340.002277
 BO : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:       0.367 Dis= 768.737

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3680.000 238.496824     0.000   215572.065  4040652.148 311.541814  1101.737 371.539537 300.119959   812.390 160.117683    -52.858

CIRC.     150.796   0.000000     0.000   215615.809  4040638.503 311.208303  1056.265 371.206026 298.996782   768.740 158.994505      3.435

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  24
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   13 : Glorieta del Poligono de Tres Caminos


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:       0.367 Dis= 768.737
                                                                        Distancia:   357.672  Azimut: 314.030496
 BO : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:       4.820 Dis= 428.721

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3960.000 295.773756     0.000   215590.217  4040662.450 300.948438   794.325 386.917942 290.580780   450.133 176.550284    -57.346

CIRC.     150.796   0.000000     0.000   215615.809  4040638.503 298.996782   768.740 384.966286 286.505489   429.230 172.474993      3.435

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  25
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   13 : Glorieta del Poligono de Tres Caminos


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:       4.820 Dis= 428.721
                                                                        Distancia:   270.987  Azimut: 299.545648
 BO : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:      11.354 Dis= 169.946

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4320.000 140.844097     0.000   215577.446  4040619.276 285.055271   470.902 385.509623 266.761179   215.752 167.215531    -63.117

CIRC.     150.796   0.000000     0.000   215615.809  4040638.503 286.505489   429.230 386.959840 265.853212   172.928 166.307563      3.435
```

```
 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  26
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   13 : Glorieta del Poligono de Tres Caminos


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR118               X:  215764.452  Y: 4040726.874  Z:   2.847  PK:      11.354 Dis= 169.946
                                                                      Distancia:   277.714  Azimut: 311.446118
 BO : BR119               X:  215491.215  Y: 4040776.537  Z:   2.627  PK:      52.814 Dis= 146.799

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4580.000 251.172677     0.000   215575.154  4040655.784 277.129441   202.207 365.683323 161.328825   147.061  49.882707    -67.284

CIRC.     150.796   0.000000     0.000   215615.809  4040638.503 265.853212   172.928 354.407093 153.255098   185.949  41.808980      3.435

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  27
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   13 : Glorieta del Poligono de Tres Caminos


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR119               X:  215491.215  Y: 4040776.537  Z:   2.627  PK:      52.814 Dis= 146.799
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120               X:  215267.736  Y: 4040931.749  Z:   2.846  PK:      57.746 Dis= 413.054

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4880.000 255.397962     0.000   215576.336  4040656.850 160.643985   146.869 221.998443 146.327134   413.284   7.681592    -72.093

CIRC.     150.796   0.000000     0.000   215615.809  4040638.503 153.255098   185.949 214.609556 144.570680   455.135   5.925137      3.435

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   15 : Poligono de Tres Caminos - Chiclana


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR113               X:  217429.905  Y: 4040757.221  Z:   2.658  PK:     924.273 Dis=-980.447
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114               X:  217151.397  Y: 4040742.707  Z:   2.658  PK:     924.273 Dis=-705.387

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    1000.000 169.368899     0.000   216512.423  4040509.026 283.180880   950.459 386.495523 277.679873   680.363 180.994517     20.437

CIRC.     924.273 149.529793     0.000   216467.566  4040569.657 287.745629   980.447 391.060273 284.220970   705.387 187.535614     15.136
```

```
 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  22
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   15 : Poligono de Tres Caminos - Chiclana


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR114               X:  217151.397  Y: 4040742.707  Z:   2.658  PK:     924.273 Dis=-705.387
                                                                      Distancia:   315.594  Azimut: 312.962004
 BO : BR115               X:  216842.322  Y: 4040806.521  Z:   2.915  PK:     924.273 Dis=-443.336

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3140.000 330.013472     0.000   216186.648  4040180.074 266.388523  1116.825 353.426519 251.451014   906.832 138.489010    170.237

CIRC.     924.273 149.529793     0.000   216467.566  4040569.657 284.220970   705.387 371.258966 264.116777   443.336 151.154773     15.136

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  23
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   15 : Poligono de Tres Caminos - Chiclana


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR115               X:  216842.322  Y: 4040806.521  Z:   2.915  PK:     924.273 Dis=-443.336
                                                                      Distancia:   399.296  Azimut: 230.952151
 BO : BR112               X:  216655.745  Y: 4040453.497  Z:   2.850  PK:     924.273 Dis=-221.143

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3460.000  13.848175     0.000   216059.740  4040449.009 272.719268   860.378  41.767117 299.520586   596.022 268.568435    192.637

CIRC.     924.273 149.529793     0.000   216467.566  4040569.657 264.116777   443.336  33.164626 335.207109   221.143 304.254958     15.136

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  24
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   15 : Poligono de Tres Caminos - Chiclana


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR112               X:  216655.745  Y: 4040453.497  Z:   2.850  PK:     924.273 Dis=-221.143
                                                                      Distancia:   335.344  Azimut: 340.002277
 BO : BR116               X:  216384.453  Y: 4040650.617  Z:  12.503  PK:     817.900 Dis= -26.754

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3680.000  71.484533     0.000   216191.772  4040615.594 321.397432   491.474 381.395156 288.553213   195.838 148.550937    208.037

CIRC.     924.273 149.529793     0.000   216467.566  4040569.657 335.207109   221.143 395.204832 149.164629   116.027   9.162352     15.136
```

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 25
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 15 : Poligono de Tres Caminos - Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 817.900 Dis= -26.754
Distancia: 357.672 Azimut: 314.030496
BO : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 412.436 Dis=-168.331

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3960.000	144.839898	0.000	216454.364	4040581.740	149.525619	98.140	235.495123	121.493123	443.996	7.462627	227.637
CIRC.	924.273	149.529793	0.000	216467.566	4040569.657	149.164629	116.027	235.134133	122.464772	460.510	8.434276	15.136

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 26
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 15 : Poligono de Tres Caminos - Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 412.436 Dis=-168.331
Distancia: 270.987 Azimut: 299.545648
BO : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 155.851 Dis= -78.816

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	4320.000	239.153938	0.000	216495.485	4040256.359	150.846233	659.437	251.300584	136.407295	869.364	36.861647	252.837
CIRC.	924.273	149.529793	0.000	216467.566	4040569.657	122.464772	460.510	222.919123	114.004524	720.477	14.458875	15.136

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 27
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 15 : Poligono de Tres Caminos - Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 155.851 Dis= -78.816
Distancia: 277.714 Azimut: 311.446118
BO : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 22.474 Dis=-172.911

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	4580.000	307.269634	0.000	216269.325	4040155.148	153.948117	762.737	242.501999	142.900478	995.781	31.454359	271.037
CIRC.	924.273	149.529793	0.000	216467.566	4040569.657	114.004524	720.477	202.558406	113.292793	998.029	1.846675	15.136

```
 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  28
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   15 : Poligono de Tres Caminos - Chiclana

                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR119               X:  215491.215  Y: 4040776.537  Z:   2.627  PK:      22.474 Dis=-172.911
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120               X:  215267.736  Y: 4040931.749  Z:   2.846  PK:      20.057 Dis=-443.854

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4880.000 385.864667     0.000   216059.978  4040343.053 141.458793   715.123 202.813251 140.683500   987.022   2.037958    292.037

CIRC.     924.273 149.529793     0.000   216467.566  4040569.657 113.292793   998.029 174.647251 118.658984  1253.277 380.013442     15.136


 Istram 20.01.01.08 18/03/20 16:57:30   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   16 : Poligono de Tres Caminos - Sevilla

                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR113               X:  217429.905  Y: 4040757.221  Z:   2.658  PK:    8328.079 Dis=1071.605
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114               X:  217151.397  Y: 4040742.707  Z:   2.658  PK:    8328.079 Dis= 792.814

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    7834.408 123.106600     0.000   215903.894  4040600.770 293.495914  1534.010 396.810558 292.787750  1255.552 196.102394      5.372

CLOT.    7854.408 122.759034     0.000   215922.603  4040593.703 293.120596  1516.145 396.435240 292.317823  1237.795 195.632467      5.304

CLOT.    7874.408 121.706092     0.000   215941.390  4040586.842 292.744681  1498.235 396.059325 291.844411  1220.005 195.159055      5.237

CLOT.    7894.408 119.947753     0.000   215960.322  4040580.398 292.376716  1480.182 395.691360 291.377823  1202.083 194.692467      5.170

CLOT.    7914.408 117.484019     0.000   215979.458  4040574.585 292.025851  1461.900 395.340495 290.929192  1183.937 194.243836      5.103

CIRC.    7934.408 114.315684     0.000   215998.831  4040569.625 291.702009  1443.318 395.016653 290.510709  1165.490 193.825353      5.036

CIRC.    7954.408 110.827356     0.000   216018.440  4040565.701 291.414235  1424.400 394.728879 290.133639  1146.701 193.448283      4.968

CIRC.    7974.408 107.339029     0.000   216038.234  4040562.858 291.165998  1405.178 394.480642 289.802515  1127.598 193.117159      4.901

CIRC.    7994.408 103.850701     0.000   216058.154  4040561.103 290.959548  1385.699 394.274192 289.520461  1108.224 192.835105      4.834

CIRC.    8014.408 100.362374     0.000   216078.141  4040560.441 290.797196  1366.012 394.111840 289.290763  1088.623 192.605407      4.791

CIRC.    8034.408  96.874046     0.000   216098.133  4040560.875 290.681306  1346.168 393.995950 289.116875  1068.844 192.431519      4.886

CIRC.    8054.408  93.385719     0.000   216118.073  4040562.403 290.614282  1326.220 393.928926 289.002410  1048.937 192.317054      5.132

CIRC.    8074.408  89.897391     0.000   216137.898  4040565.021 290.598556  1306.225 393.913200 288.951134  1028.957 192.265777      5.530

CIRC.    8094.408  86.701226     0.000   216157.559  4040568.678 290.634393  1286.240 393.949037 288.964177  1008.960 192.278821      6.073

CIRC.    8114.408  83.518127     0.000   216177.012  4040573.313 290.721531  1266.319 394.036175 289.042068   989.000 192.356712      6.656

CIRC.    8134.408  80.335028     0.000   216196.209  4040578.914 290.862181  1246.514 394.176825 289.188591   969.129 192.503235      7.239

CIRC.    8154.408  77.151929     0.000   216215.103  4040585.468 291.058522  1226.883 394.373166 289.407617   949.405 192.722261      7.821

CIRC.    8174.408  73.968830     0.000   216233.645  4040592.958 291.312670  1207.485 394.627314 289.703070   929.889 193.017714      8.404

CIRC.    8194.408  70.785731     0.000   216251.790  4040601.366 291.626636  1188.379 394.941280 290.078871   910.643 193.393515      8.986

CIRC.    8214.408  67.602632     0.000   216269.492  4040610.669 292.002292  1169.631 395.316936 290.538877   891.735 193.853521      9.569
```

Istram 20.01.01.08 18/03/20 16:57:30 2378 pagina 2
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 16 : Poligono de Tres Caminos - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 8328.079 Dis=1071.605
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 8328.079 Dis= 792.814

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8234.408	64.419533	0.000	216286.707	4040620.846	292.441320	1151.304	395.755964	291.086799	873.235	194.401443	10.151
CLOT.	8254.408	61.254557	0.000	216303.392	4040631.870	292.945139	1133.466	396.259783	291.726084	855.218	195.040728	10.734
CLOT.	8274.408	58.655117	0.000	216319.550	4040643.654	293.511214	1116.148	396.825858	292.454902	837.724	195.769546	11.316
CLOT.	8294.408	56.877758	0.000	216335.294	4040655.986	294.128952	1099.282	397.443596	293.260452	820.697	196.575096	11.899
CLOT.	8314.408	55.922479	0.000	216350.770	4040668.654	294.786822	1082.763	398.101466	294.128393	804.044	197.443037	12.481
RECTA	8328.079	55.742330	0.000	216361.277	4040677.402	295.253684	1071.605	398.568327	294.750106	792.814	198.064750	12.879

Istram 20.01.01.08 18/03/20 16:57:30 2378 pagina 3
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 16 : Poligono de Tres Caminos - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 8328.079 Dis= 792.814
Distancia: 315.594 Azimut: 312.962004
BO : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 8328.079 Dis= 498.073

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	7834.408	123.106600	0.000	215903.894	4040600.770	292.787750	1255.552	379.825746	286.259483	960.719	173.297479	5.372
CLOT.	7854.408	122.759034	0.000	215922.603	4040593.703	292.317823	1237.795	379.355819	285.523728	944.020	172.561724	5.304
CLOT.	7874.408	121.706092	0.000	215941.390	4040586.842	291.844411	1220.005	378.882407	284.774094	927.328	171.812090	5.237
CLOT.	7894.408	119.947753	0.000	215960.322	4040580.398	291.377823	1202.083	378.415819	284.022754	910.525	171.060750	5.170
CLOT.	7914.408	117.484019	0.000	215979.458	4040574.585	290.929192	1183.937	377.967188	283.282956	893.493	170.320952	5.103
CIRC.	7934.408	114.315684	0.000	215998.831	4040569.625	290.510709	1165.490	377.548705	282.569433	876.126	169.607429	5.036
CIRC.	7954.408	110.827356	0.000	216018.440	4040565.701	290.133639	1146.701	377.171635	281.896037	858.357	168.934033	4.968
CIRC.	7974.408	107.339029	0.000	216038.234	4040562.858	289.802515	1127.598	376.840511	281.268435	840.196	168.306431	4.901
CIRC.	7994.408	103.850701	0.000	216058.154	4040561.103	289.520461	1108.224	376.558457	280.690686	821.675	167.728682	4.834
CIRC.	8014.408	100.362374	0.000	216078.141	4040560.441	289.290763	1088.623	376.328759	280.167239	802.825	167.205235	4.791
CIRC.	8034.408	96.874046	0.000	216098.133	4040560.875	289.116875	1068.844	376.154871	279.702979	783.683	166.740975	4.886
CIRC.	8054.408	93.385719	0.000	216118.073	4040562.403	289.002410	1048.937	376.040406	279.303271	764.284	166.341267	5.132
CIRC.	8074.408	89.897391	0.000	216137.898	4040565.021	288.951134	1028.957	375.989130	278.974006	744.671	166.012002	5.530
CIRC.	8094.408	86.701226	0.000	216157.559	4040568.678	288.964177	1008.960	376.002173	278.717834	724.893	165.755830	6.073
CIRC.	8114.408	83.518127	0.000	216177.012	4040573.313	289.042068	989.000	376.080064	278.536828	704.999	165.574824	6.656
CIRC.	8134.408	80.335028	0.000	216196.209	4040578.914	289.188591	969.129	376.226587	278.437919	685.030	165.475915	7.239
CIRC.	8154.408	77.151929	0.000	216215.103	4040585.468	289.407617	949.405	376.445613	278.428730	665.032	165.466726	7.821
CIRC.	8174.408	73.968830	0.000	216233.645	4040592.958	289.703070	929.889	376.741066	278.517624	645.055	165.555620	8.404
CIRC.	8194.408	70.785731	0.000	216251.790	4040601.366	290.078871	910.643	377.116867	278.713743	625.153	165.751739	8.986
CIRC.	8214.408	67.602632	0.000	216269.492	4040610.669	290.538877	891.735	377.576873	279.027036	605.386	166.065032	9.569

Istram 20.01.01.08 18/03/20 16:57:30 2378 pagina 3
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 16 : Poligono de Tres Caminos - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 8328.079 Dis= 792.814
Distancia: 315.594 Azimut: 312.962004
BO : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 8328.079 Dis= 498.073

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8234.408	64.419533	0.000	216286.707	4040620.846	291.086799	873.235	378.124795	279.468272	585.819	166.506268	10.151
CLOT.	8254.408	61.254557	0.000	216303.392	4040631.870	291.726084	855.218	378.764080	280.048963	566.523	167.086959	10.734
CLOT.	8274.408	58.655117	0.000	216319.550	4040643.654	292.454902	837.724	379.492898	280.773138	547.555	167.811134	11.316
CLOT.	8294.408	56.877758	0.000	216335.294	4040655.986	293.260452	820.697	380.298448	281.626724	528.903	168.664720	11.899
CLOT.	8314.408	55.922479	0.000	216350.770	4040668.654	294.128393	804.044	381.166389	282.591838	510.519	169.629834	12.481
RECTA	8328.079	55.742330	0.000	216361.277	4040677.402	294.750106	792.814	381.788102	283.305702	498.073	170.343698	12.879

Istram 20.01.01.08 18/03/20 16:57:30 2378 pagina 4
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 16 : Poligono de Tres Caminos - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 8328.079 Dis= 498.073
Distancia: 399.296 Azimut: 230.952151
BO : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 8328.079 Dis= 369.925

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	7834.408	123.106600	0.000	215903.894	4040600.770	286.259483	960.719	55.307333	312.314215	766.139	281.362064	5.372
CLOT.	7854.408	122.759034	0.000	215922.603	4040593.703	285.523728	944.020	54.571577	312.029461	746.428	281.077310	5.304
CLOT.	7874.408	121.706092	0.000	215941.390	4040586.842	284.774094	927.328	53.821943	311.748259	726.694	280.796108	5.237
CLOT.	7894.408	119.947753	0.000	215960.322	4040580.398	284.022754	910.525	53.070603	311.490633	706.906	280.538482	5.170
CLOT.	7914.408	117.484019	0.000	215979.458	4040574.585	283.282956	893.493	52.330806	311.279068	687.042	280.326917	5.103
CIRC.	7934.408	114.315684	0.000	215998.831	4040569.625	282.569433	876.126	51.617282	311.138924	667.100	280.186773	5.036
CIRC.	7954.408	110.827356	0.000	216018.440	4040565.701	281.896037	858.357	50.943886	311.094657	647.107	280.142506	4.968
CIRC.	7974.408	107.339029	0.000	216038.234	4040562.858	281.268435	840.196	50.316284	311.158787	627.120	280.206636	4.901
CIRC.	7994.408	103.850701	0.000	216058.154	4040561.103	280.690686	821.675	49.738535	311.341796	607.202	280.389645	4.834
CIRC.	8014.408	100.362374	0.000	216078.141	4040560.441	280.167239	802.825	49.215088	311.655090	587.421	280.702939	4.791
CIRC.	8034.408	96.874046	0.000	216098.133	4040560.875	279.702979	783.683	48.750828	312.110996	567.856	281.158845	4.886
CIRC.	8054.408	93.385719	0.000	216118.073	4040562.403	279.303271	764.284	48.351120	312.722694	548.591	281.770543	5.132
CIRC.	8074.408	89.897391	0.000	216137.898	4040565.021	278.974006	744.671	48.021855	313.504085	529.720	282.551934	5.530
CIRC.	8094.408	86.701226	0.000	216157.559	4040568.678	278.717834	724.893	47.765683	314.464548	511.328	283.512397	6.073
CIRC.	8114.408	83.518127	0.000	216177.012	4040573.313	278.536828	704.999	47.584677	315.612442	493.499	284.660291	6.656
CIRC.	8134.408	80.335028	0.000	216196.209	4040578.914	278.437919	685.030	47.485768	316.961675	476.343	286.009524	7.239
CIRC.	8154.408	77.151929	0.000	216215.103	4040585.468	278.428730	665.032	47.476579	318.525371	459.980	287.573220	7.821
CIRC.	8174.408	73.968830	0.000	216233.645	4040592.958	278.517624	645.055	47.565473	320.314985	444.542	289.362834	8.404
CIRC.	8194.408	70.785731	0.000	216251.790	4040601.366	278.713743	625.153	47.761592	322.339170	430.168	291.387019	8.986
CIRC.	8214.408	67.602632	0.000	216269.492	4040610.669	279.027036	605.386	48.074885	324.602388	417.007	293.650237	9.569

Istram 20.01.01.08 18/03/20 16:57:30 2378 pagina 4
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 16 : Poligono de Tres Caminos - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 8328.079 Dis= 498.073
Distancia: 399.296 Azimut: 230.952151
BO : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 8328.079 Dis= 369.925

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8234.408	64.419533	0.000	216286.707	4040620.846	279.468272	585.819	48.516121	327.103357	405.210	296.151206	10.151
CLOT.	8254.408	61.254557	0.000	216303.392	4040631.870	280.048963	566.523	49.096812	329.833404	394.930	298.881253	10.734
CLOT.	8274.408	58.655117	0.000	216319.550	4040643.654	280.773138	547.555	49.820988	332.770144	386.247	301.817993	11.316
CLOT.	8294.408	56.877758	0.000	216335.294	4040655.986	281.626724	528.903	50.674573	335.875940	379.066	304.923789	11.899
CLOT.	8314.408	55.922479	0.000	216350.770	4040668.654	282.591838	510.519	51.639688	339.114100	373.232	308.161949	12.481
RECTA	8328.079	55.742330	0.000	216361.277	4040677.402	283.305702	498.073	52.353551	341.386926	369.925	310.434775	12.879

Istram 20.01.01.08 18/03/20 16:57:30 2378 pagina 5
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 16 : Poligono de Tres Caminos - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 8328.079 Dis= 369.925
Distancia: 335.344 Azimut: 340.002277
BO : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 8328.079 Dis= 35.420

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	7834.408	123.106600	0.000	215903.894	4040600.770	312.314215	766.139	372.311938	293.420048	483.138	153.417771	5.372
CLOT.	7854.408	122.759034	0.000	215922.603	4040593.703	312.029461	746.428	372.027185	292.194232	465.343	152.191955	5.304
CLOT.	7874.408	121.706092	0.000	215941.390	4040586.842	311.748259	726.694	371.745982	290.898961	447.630	150.896684	5.237
CLOT.	7894.408	119.947753	0.000	215960.322	4040580.398	311.490633	706.906	371.488357	289.554877	429.904	149.552601	5.170
CLOT.	7914.408	117.484019	0.000	215979.458	4040574.585	311.279068	687.042	371.276791	288.185935	412.070	148.183658	5.103
CIRC.	7934.408	114.315684	0.000	215998.831	4040569.625	311.138924	667.100	371.136648	286.820626	394.036	146.818349	5.036
CIRC.	7954.408	110.827356	0.000	216018.440	4040565.701	311.094657	647.107	371.092380	285.487073	375.735	145.484796	4.968
CIRC.	7974.408	107.339029	0.000	216038.234	4040562.858	311.158787	627.120	371.156511	284.195904	357.169	144.193627	4.901
CIRC.	7994.408	103.850701	0.000	216058.154	4040561.103	311.341796	607.202	371.339519	282.954782	338.355	142.952505	4.834
CIRC.	8014.408	100.362374	0.000	216078.141	4040560.441	311.655090	587.421	371.652813	281.773303	319.310	141.771026	4.791
CIRC.	8034.408	96.874046	0.000	216098.133	4040560.875	312.110996	567.856	372.108719	280.663650	300.054	140.661373	4.886
CIRC.	8054.408	93.385719	0.000	216118.073	4040562.403	312.722694	548.591	372.720418	279.641517	280.607	139.639240	5.132
CIRC.	8074.408	89.897391	0.000	216137.898	4040565.021	313.504085	529.720	373.501808	278.727459	260.991	138.725182	5.530
CIRC.	8094.408	86.701226	0.000	216157.559	4040568.678	314.464548	511.328	374.462271	277.937455	241.236	137.935178	6.073
CIRC.	8114.408	83.518127	0.000	216177.012	4040573.313	315.612442	493.499	375.610165	277.290916	221.377	137.288639	6.656
CIRC.	8134.408	80.335028	0.000	216196.209	4040578.914	316.961675	476.343	376.959398	276.831107	201.437	136.828830	7.239
CIRC.	8154.408	77.151929	0.000	216215.103	4040585.468	318.525371	459.980	378.523094	276.620372	181.449	136.618095	7.821
CIRC.	8174.408	73.968830	0.000	216233.645	4040592.958	320.314985	444.542	380.312708	276.751658	161.454	136.749381	8.404
CIRC.	8194.408	70.785731	0.000	216251.790	4040601.366	322.339170	430.168	382.336893	277.369358	141.510	137.367081	8.986
CIRC.	8214.408	67.602632	0.000	216269.492	4040610.669	324.602388	417.007	384.600112	278.709080	121.704	138.706803	9.569

Istram 20.01.01.08 18/03/20 16:57:30 2378 pagina 6
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 16 : Poligono de Tres Caminos - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 8328.079 Dis= 369.925
Distancia: 335.344 Azimut: 340.002277
BO : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 8328.079 Dis= 35.420

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8234.408	64.419533	0.000	216286.707	4040620.846	327.103357	405.210	387.101080	281.178426	102.179	141.176149	10.151
CLOT.	8254.408	61.254557	0.000	216303.392	4040631.870	329.833404	394.930	389.831127	285.531360	83.201	145.529084	10.734
CLOT.	8274.408	58.655117	0.000	216319.550	4040643.654	332.770144	386.247	392.767867	293.196007	65.276	153.193731	11.316
CLOT.	8294.408	56.877758	0.000	216335.294	4040655.986	335.875940	379.066	395.873663	306.926067	49.451	166.923791	11.899
CLOT.	8314.408	55.922479	0.000	216350.770	4040668.654	339.114100	373.232	399.111824	331.299415	38.208	191.297138	12.481
RECTA	8328.079	55.742330	0.000	216361.277	4040677.402	341.386926	369.925	1.384649	354.589851	35.420	214.587574	12.879

Istram 20.01.01.08 18/03/20 16:57:30 2378 pagina 5
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 16 : Poligono de Tres Caminos - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 8328.079 Dis= 35.420
Distancia: 357.672 Azimut: 314.030496
BO : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 7934.743 Dis=-163.337

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	7834.408	123.106600	0.000	215903.894	4040600.770	293.420048	483.138	379.389552	250.858381	183.565	136.827885	5.372
CLOT.	7854.408	122.759034	0.000	215922.603	4040593.703	292.194232	465.343	378.163736	244.295346	176.022	130.264850	5.304
CLOT.	7874.408	121.706092	0.000	215941.390	4040586.842	290.898961	447.630	376.868465	237.246277	170.289	123.215781	5.237
CLOT.	7894.408	119.947753	0.000	215960.322	4040580.398	289.554877	429.904	375.524381	229.826395	166.334	115.795899	5.170
CLOT.	7914.408	117.484019	0.000	215979.458	4040574.585	288.185935	412.070	374.155439	222.164520	164.066	108.134024	5.103
CIRC.	7934.408	114.315684	0.000	215998.831	4040569.625	286.820626	394.036	372.790130	214.387842	163.337	100.357346	5.036
CIRC.	7954.408	110.827356	0.000	216018.440	4040565.701	285.487073	375.735	371.456577	206.608470	163.989	92.577974	4.968
CIRC.	7974.408	107.339029	0.000	216038.234	4040562.858	284.195904	357.169	370.165408	198.925261	165.974	84.894765	4.901
CIRC.	7994.408	103.850701	0.000	216058.154	4040561.103	282.954782	338.355	368.924286	191.426742	169.238	77.396246	4.834
CIRC.	8014.408	100.362374	0.000	216078.141	4040560.441	281.773303	319.310	367.742807	184.184808	173.699	70.154312	4.791
CIRC.	8034.408	96.874046	0.000	216098.133	4040560.875	280.663650	300.054	366.633154	177.250858	179.257	63.220362	4.886
CIRC.	8054.408	93.385719	0.000	216118.073	4040562.403	279.641517	280.607	365.611021	170.655464	185.796	56.624969	5.132
CIRC.	8074.408	89.897391	0.000	216137.898	4040565.021	278.727459	260.991	364.696963	164.410738	193.198	50.380242	5.530
CIRC.	8094.408	86.701226	0.000	216157.559	4040568.678	277.937455	241.236	363.906959	158.520267	201.386	44.489771	6.073
CIRC.	8114.408	83.518127	0.000	216177.012	4040573.313	277.290916	221.377	363.260420	152.979744	210.294	38.949248	6.656
CIRC.	8134.408	80.335028	0.000	216196.209	4040578.914	276.831107	201.437	362.800611	147.770621	219.812	33.740125	7.239
CIRC.	8154.408	77.151929	0.000	216215.103	4040585.468	276.620372	181.449	362.589876	142.869479	229.843	28.838983	7.821
CIRC.	8174.408	73.968830	0.000	216233.645	4040592.958	276.751658	161.454	362.721162	138.250719	240.299	24.220223	8.404
CIRC.	8194.408	70.785731	0.000	216251.790	4040601.366	277.369358	141.510	363.338862	133.888421	251.102	19.857925	8.986
CIRC.	8214.408	67.602632	0.000	216269.492	4040610.669	278.709080	121.704	364.678584	129.757538	262.185	15.727042	9.569

Istram 20.01.01.08 18/03/20 16:57:30 2378 pagina 6
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 16 : Poligono de Tres Caminos - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 8328.079 Dis= 35.420
Distancia: 357.672 Azimut: 314.030496
BO : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 7934.743 Dis=-163.337

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8234.408	64.419533	0.000	216286.707	4040620.846	281.178426	102.179	367.147930	125.834589	273.486	11.804093	10.151
CLOT.	8254.408	61.254557	0.000	216303.392	4040631.870	285.531360	83.201	371.500864	122.098061	284.955	8.067565	10.734
CLOT.	8274.408	58.655117	0.000	216319.550	4040643.654	293.196007	65.276	379.165512	118.538024	296.604	4.507528	11.316
CLOT.	8294.408	56.877758	0.000	216335.294	4040655.986	306.926067	49.451	392.895572	115.166717	308.578	1.136221	11.899
CLOT.	8314.408	55.922479	0.000	216350.770	4040668.654	331.299415	38.208	17.268919	111.999931	321.025	397.969435	12.481
RECTA	8328.079	55.742330	0.000	216361.277	4040677.402	354.589851	35.420	40.559355	109.961447	329.875	395.930951	12.879

Istram 20.01.01.08 18/03/20 16:57:30 2378 pagina 7
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 16 : Poligono de Tres Caminos - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 7934.743 Dis=-163.337
Distancia: 270.987 Azimut: 299.545648
BO : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 7834.408 Dis=-188.006

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	7834.408	123.106600	0.000	215903.894	4040600.770	250.858381	183.565	351.312733	146.805127	188.006	47.259478	5.372
CLOT.	7854.408	122.759034	0.000	215922.603	4040593.703	244.295346	176.022	344.749697	144.554424	206.752	45.008775	5.304
CLOT.	7874.408	121.706092	0.000	215941.390	4040586.842	237.246277	170.289	337.700629	142.620844	225.645	43.075196	5.237
CLOT.	7894.408	119.947753	0.000	215960.322	4040580.398	229.826395	166.334	330.280747	140.877682	244.582	41.332033	5.170
CLOT.	7914.408	117.484019	0.000	215979.458	4040574.585	222.164520	164.066	322.618872	139.233303	263.476	39.687655	5.103
CIRC.	7934.408	114.315684	0.000	215998.831	4040569.625	214.387842	163.337	314.842193	137.620499	282.242	38.074851	5.036
CIRC.	7954.408	110.827356	0.000	216018.440	4040565.701	206.608470	163.989	307.062822	135.997730	300.809	36.452081	4.968
CIRC.	7974.408	107.339029	0.000	216038.234	4040562.858	198.925261	165.974	299.379613	134.360921	319.152	34.815273	4.901
CIRC.	7994.408	103.850701	0.000	216058.154	4040561.103	191.426742	169.238	291.881093	132.712511	337.255	33.166863	4.834
CIRC.	8014.408	100.362374	0.000	216078.141	4040560.441	184.184808	173.699	284.639160	131.054406	355.106	31.508757	4.791
CIRC.	8034.408	96.874046	0.000	216098.133	4040560.875	177.250858	179.257	277.705210	129.388118	372.692	29.842470	4.886
CIRC.	8054.408	93.385719	0.000	216118.073	4040562.403	170.655464	185.796	271.109816	127.714863	389.998	28.169215	5.132
CIRC.	8074.408	89.897391	0.000	216137.898	4040565.021	164.410738	193.198	264.865089	126.035629	407.011	26.489981	5.530
CIRC.	8094.408	86.701226	0.000	216157.559	4040568.678	158.520267	201.386	258.974618	124.356758	423.744	24.811110	6.073
CIRC.	8114.408	83.518127	0.000	216177.012	4040573.313	152.979744	210.294	253.434096	122.684463	440.212	23.138814	6.656
CIRC.	8134.408	80.335028	0.000	216196.209	4040578.914	147.770621	219.812	248.224972	121.017945	456.406	21.472297	7.239
CIRC.	8154.408	77.151929	0.000	216215.103	4040585.468	142.869479	229.843	243.323830	119.356524	472.315	19.810875	7.821
CIRC.	8174.408	73.968830	0.000	216233.645	4040592.958	138.250719	240.299	238.705070	117.699617	487.930	18.153968	8.404
CIRC.	8194.408	70.785731	0.000	216251.790	4040601.366	133.888421	251.102	234.342773	116.046726	503.240	16.501077	8.986
CIRC.	8214.408	67.602632	0.000	216269.492	4040610.669	129.757538	262.185	230.211890	114.397422	518.236	14.851773	9.569

Istram 20.01.01.08 18/03/20 16:57:30 2378 pagina 6
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 16 : Poligono de Tres Caminos - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 7934.743 Dis=-163.337
Distancia: 270.987 Azimut: 299.545648
BO : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 7834.408 Dis=-188.006

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8234.408	64.419533	0.000	216286.707	4040620.846	125.834589	273.486	226.288941	112.751333	532.909	13.205685	10.151
CLOT.	8254.408	61.254557	0.000	216303.392	4040631.870	122.098061	284.955	222.552413	111.108169	547.249	11.562521	10.734
CLOT.	8274.408	58.655117	0.000	216319.550	4040643.654	118.538024	296.604	218.992375	109.473636	561.301	9.927988	11.316
CLOT.	8294.408	56.877758	0.000	216335.294	4040655.986	115.166717	308.578	215.621068	107.865325	575.227	8.319677	11.899
CLOT.	8314.408	55.922479	0.000	216350.770	4040668.654	111.999931	321.025	212.454283	106.300790	589.202	6.755142	12.481
RECTA	8328.079	55.742330	0.000	216361.277	4040677.402	109.961447	329.875	210.415799	105.265083	598.872	5.719435	12.879

Istram 20.01.01.08 18/03/20 16:57:30 2378 pagina 7
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 16 : Poligono de Tres Caminos - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 7834.408 Dis=-188.006
Distancia: 277.714 Azimut: 311.446118
BO : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 7834.408 Dis=-448.551

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	7834.408	123.106600	0.000	215903.894	4040600.770	146.805127	188.006	235.359008	125.633340	448.551	14.187222	5.372
CLOT.	7854.408	122.759034	0.000	215922.603	4040593.703	144.554424	206.752	233.108305	125.520606	468.534	14.074488	5.304
CLOT.	7874.408	121.706092	0.000	215941.390	4040586.842	142.620844	225.645	231.174726	125.388455	488.509	13.942337	5.237
CLOT.	7894.408	119.947753	0.000	215960.322	4040580.398	140.877682	244.582	229.431564	125.211495	508.461	13.765377	5.170
CLOT.	7914.408	117.484019	0.000	215979.458	4040574.585	139.233303	263.476	227.787185	124.968272	528.361	13.522154	5.103
CIRC.	7934.408	114.315684	0.000	215998.831	4040569.625	137.620499	282.242	226.174381	124.640668	548.166	13.194550	5.036
CIRC.	7954.408	110.827356	0.000	216018.440	4040565.701	135.997730	300.809	224.551612	124.218154	567.818	12.772035	4.968
CIRC.	7974.408	107.339029	0.000	216038.234	4040562.858	134.360921	319.152	222.914803	123.707621	587.272	12.261503	4.901
CIRC.	7994.408	103.850701	0.000	216058.154	4040561.103	132.712511	337.255	221.266393	123.118416	606.492	11.672298	4.834
CIRC.	8014.408	100.362374	0.000	216078.141	4040560.441	131.054406	355.106	219.608288	122.458716	625.443	11.012598	4.791
CIRC.	8034.408	96.874046	0.000	216098.133	4040560.875	129.388118	372.692	217.942000	121.735695	644.096	10.289577	4.886
CIRC.	8054.408	93.385719	0.000	216118.073	4040562.403	127.714863	389.998	216.268745	120.955665	662.422	9.509547	5.132
CIRC.	8074.408	89.897391	0.000	216137.898	4040565.021	126.035629	407.011	214.589511	120.124195	680.395	8.678077	5.530
CIRC.	8094.408	86.701226	0.000	216157.559	4040568.678	124.356758	423.744	212.910640	119.249736	698.011	7.803618	6.073
CIRC.	8114.408	83.518127	0.000	216177.012	4040573.313	122.684463	440.212	211.238344	118.340302	715.274	6.894183	6.656
CIRC.	8134.408	80.335028	0.000	216196.209	4040578.914	121.017945	456.406	209.571827	117.399042	732.169	5.952924	7.239
CIRC.	8154.408	77.151929	0.000	216215.103	4040585.468	119.356524	472.315	207.910406	116.428767	748.679	4.982649	7.821
CIRC.	8174.408	73.968830	0.000	216233.645	4040592.958	117.699617	487.930	206.253498	115.431992	764.790	3.985873	8.404
CIRC.	8194.408	70.785731	0.000	216251.790	4040601.366	116.046726	503.240	204.600607	114.410977	780.487	2.964858	8.986
CIRC.	8214.408	67.602632	0.000	216269.492	4040610.669	114.397422	518.236	202.951304	113.367760	795.756	1.921642	9.569

Istram 20.01.01.08 18/03/20 16:57:30 2378 pagina 7
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 16 : Poligono de Tres Caminos - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 7834.408 Dis=-188.006
Distancia: 277.714 Azimut: 311.446118
BO : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 7834.408 Dis=-448.551

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	8234.408	64.419533	0.000	216286.707	4040620.846	112.751333	532.909	201.305215	112.304182	810.584	0.858064	10.151
CLOT.	8254.408	61.254557	0.000	216303.392	4040631.870	111.108169	547.249	199.662051	111.221936	824.960	399.775817	10.734
CLOT.	8274.408	58.655117	0.000	216319.550	4040643.654	109.473636	561.301	198.027518	110.126503	838.926	398.680385	11.316
CLOT.	8294.408	56.877758	0.000	216335.294	4040655.986	107.865325	575.227	196.419207	109.031071	852.644	397.584953	11.899
CLOT.	8314.408	55.922479	0.000	216350.770	4040668.654	106.300790	589.202	194.854672	107.948641	866.299	396.502523	12.481
RECTA	8328.079	55.742330	0.000	216361.277	4040677.402	105.265083	598.872	193.818965	107.222545	875.691	395.776427	12.879

Istram 20.01.01.08 18/03/20 16:57:30 2378 pagina 8
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 16 : Poligono de Tres Caminos - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 7834.408 Dis=-448.551
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 7834.408 Dis=-717.108

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	7834.408	123.106600	0.000	215903.894	4040600.770	125.633340	448.551	186.987798	130.541095	717.108	391.895553	5.372
CLOT.	7854.408	122.759034	0.000	215922.603	4040593.703	125.520606	468.534	186.875064	130.336696	736.971	391.691153	5.304
CLOT.	7874.408	121.706092	0.000	215941.390	4040586.842	125.388455	488.509	186.742913	130.124653	756.816	391.479110	5.237
CLOT.	7894.408	119.947753	0.000	215960.322	4040580.398	125.211495	508.461	186.565953	129.887564	776.610	391.242022	5.170
CLOT.	7914.408	117.484019	0.000	215979.458	4040574.585	124.968272	528.361	186.322730	129.609887	796.313	390.964345	5.103
CIRC.	7934.408	114.315684	0.000	215998.831	4040569.625	124.640668	548.166	185.995126	129.277824	815.864	390.632282	5.036
CIRC.	7954.408	110.827356	0.000	216018.440	4040565.701	124.218154	567.818	185.572612	128.882388	835.193	390.236846	4.968
CIRC.	7974.408	107.339029	0.000	216038.234	4040562.858	123.707621	587.272	185.062079	128.426333	854.253	389.780791	4.901
CIRC.	7994.408	103.850701	0.000	216058.154	4040561.103	123.118416	606.492	184.472874	127.914478	873.006	389.268936	4.834
CIRC.	8014.408	100.362374	0.000	216078.141	4040560.441	122.458716	625.443	183.813174	127.351240	891.418	388.705698	4.791
CIRC.	8034.408	96.874046	0.000	216098.133	4040560.875	121.735695	644.096	183.090153	126.740668	909.455	388.095126	4.886
CIRC.	8054.408	93.385719	0.000	216118.073	4040562.403	120.955665	662.422	182.310123	126.086479	927.086	387.440937	5.132
CIRC.	8074.408	89.897391	0.000	216137.898	4040565.021	120.124195	680.395	181.478653	125.392084	944.283	386.746542	5.530
CIRC.	8094.408	86.701226	0.000	216157.559	4040568.678	119.249736	698.011	180.604194	124.663049	961.044	386.017507	6.073
CIRC.	8114.408	83.518127	0.000	216177.012	4040573.313	118.340302	715.274	179.694759	123.904806	977.374	385.259263	6.656
CIRC.	8134.408	80.335028	0.000	216196.209	4040578.914	117.399042	732.169	178.753500	123.119537	993.255	384.473995	7.239
CIRC.	8154.408	77.151929	0.000	216215.103	4040585.468	116.428767	748.679	177.783225	122.309250	1008.670	383.663708	7.821
CIRC.	8174.408	73.968830	0.000	216233.645	4040592.958	115.431992	764.790	176.786450	121.475801	1023.601	382.830259	8.404
CIRC.	8194.408	70.785731	0.000	216251.790	4040601.366	114.410977	780.487	175.765435	120.620905	1038.034	381.975363	8.986
CIRC.	8214.408	67.602632	0.000	216269.492	4040610.669	113.367760	795.756	174.722218	119.746153	1051.954	381.100611	9.569

```
 Istram 20.01.01.08 18/03/20 16:57:30   2378                                                                    pagina   9
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   16 : Poligono de Tres Caminos - Sevilla


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR119               X:  215491.215  Y: 4040776.537  Z:   2.627  PK:    7834.408 Dis=-448.551
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120               X:  215267.736  Y: 4040931.749  Z:   2.846  PK:    7834.408 Dis=-717.108

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    8234.408  64.419533     0.000   216286.707  4040620.846 112.304182   810.584 173.658640 118.853024  1065.346 380.207482     10.151

CLOT.    8254.408  61.254557     0.000   216303.392  4040631.870 111.221936   824.960 172.576394 117.942911  1078.198 379.297369     10.734

CLOT.    8274.408  58.655117     0.000   216319.550  4040643.654 110.126503   838.926 171.480961 117.019789  1090.555 378.374247     11.316

CLOT.    8294.408  56.877758     0.000   216335.294  4040655.986 109.031071   852.644 170.385529 116.092848  1102.599 377.447306     11.899

CLOT.    8314.408  55.922479     0.000   216350.770  4040668.654 107.948641   866.299 169.303099 115.171130  1114.532 376.525588     12.481

RECTA    8328.079  55.742330     0.000   216361.277  4040677.402 107.222545   875.691 168.577003 114.548518  1122.731 375.902976     12.879


 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   18 : Salida del Poligono de Tres Caminos

                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR113               X:  217429.905  Y: 4040757.221  Z:   2.658  PK:       0.000 Dis=-1710.545
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114               X:  217151.397  Y: 4040742.707  Z:   2.658  PK:      10.668 Dis=-1433.097

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    1000.000 334.499812     0.000   215617.969  4040598.569 294.439960  1818.868 397.754604 294.033462  1540.187 197.348106     13.798

CIRC.     358.232 391.659826     0.000   215591.809  4040638.503 295.893947  1841.926 399.208591 295.752746  1563.066 199.067390      3.463
```

```
 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  23
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   18 : Salida del Poligono de Tres Caminos


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:      10.668 Dis=-1433.097
                                                                       Distancia:   315.594  Azimut: 312.962004
 BO : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       0.000 Dis=-1121.674

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3140.000  11.529472     0.000   215592.237  4040655.594 296.446808  1561.592 383.484804 292.350922  1259.163 179.388918     48.259

CIRC.     358.232 391.659826     0.000   215591.809  4040638.503 295.752746  1563.066 382.790742 291.497362  1261.750 178.535358      3.463

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  24
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   18 : Salida del Poligono de Tres Caminos


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       0.000 Dis=-1121.674
                                                                       Distancia:   399.296  Azimut: 230.952151
 BO : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:     189.606 Dis=-964.385

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3460.000 381.926430     0.000   215593.539  4040630.283 291.074449  1261.158  60.122298 310.499183  1076.817 279.547032     53.413

CIRC.     358.232 391.659826     0.000   215591.809  4040638.503 291.497362  1261.750  60.545211 310.960491  1079.902 280.008340      3.463

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  25
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   18 : Salida del Poligono de Tres Caminos


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:     189.606 Dis=-964.385
                                                                       Distancia:   335.344  Azimut: 340.002277
 BO : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:     143.268 Dis=-672.110

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3680.000 236.574339     0.000   215692.508  4040615.800 310.627048   976.816 370.624771 296.799374   692.821 156.797097     56.955

CIRC.     358.232 391.659826     0.000   215591.809  4040638.503 310.960491  1079.902 370.958214 299.027153   792.737 159.024876      3.463
```

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 26
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 18 : Salida del Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 143.268 Dis=-672.110
Distancia: 357.672 Azimut: 314.030496
BO : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 83.681 Dis=-319.436

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3960.000	160.671678	0.000	215691.172	4040677.545	302.471480	693.804	388.440984	290.589395	348.056	176.558899	61.464
CIRC.	358.232	391.659826	0.000	215591.809	4040638.503	299.027153	792.737	384.996657	287.215539	452.721	173.185043	3.463

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 27
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 18 : Salida del Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 83.681 Dis=-319.436
Distancia: 270.987 Azimut: 299.545648
BO : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 99.971 Dis= -48.939

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	4320.000	177.368256	0.000	215697.898	4040664.831	288.074863	343.543	388.529215	252.232250	90.987	152.686602	67.262
CIRC.	358.232	391.659826	0.000	215591.809	4040638.503	287.215539	452.721	387.669891	269.881698	193.946	170.336050	3.463

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 28
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 18 : Salida del Poligono de Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 99.971 Dis= -48.939
Distancia: 277.714 Azimut: 311.446118
BO : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 358.232 Dis=-170.799

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	4580.000	78.315785	0.000	215627.964	4040697.528	286.517608	139.607	375.071489	133.353170	157.932	21.907052	71.449
CIRC.	358.232	391.659826	0.000	215591.809	4040638.503	269.881698	193.946	358.435580	159.907653	170.799	48.461535	3.463

```
 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                    pagina  29
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   18 : Salida del Poligono de Tres Caminos


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:     358.232 Dis=-170.799
                                                                       Distancia:   272.091  Azimut: 338.645542
 BO : BR120                X:  215267.736  Y: 4040931.749  Z:   2.846  PK:     358.232 Dis=-437.054

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4880.000  25.562933     0.000   215595.712  4040667.184 151.445298   151.254 212.799756 143.212997   421.382   4.567454     76.280

CIRC.     358.232 391.659826     0.000   215591.809  4040638.503 159.907653   170.799 221.262111 146.823563   437.054   8.178021      3.463

 Istram 20.01.01.08 18/03/20 16:42:06   2378                                                                     pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    1 : Ejes principales
 EJE        :   19 : Sevilla - Chiclana


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:    5616.858 Dis= 706.360
                                                                       Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:    5612.989 Dis= 983.081

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4598.023 285.085597     0.000   217393.771  4040738.292  99.553865  1629.359 188.107747 101.279547  1902.940 389.833429      4.357

CIRC.    4618.023 286.928201     0.000   217374.253  4040733.932  99.720897  1609.816 188.274779 101.440162  1883.520 389.994044      4.373

CIRC.    4638.023 288.770806     0.000   217354.616  4040730.138  99.869338  1590.168 188.423220 101.584876  1863.979 390.138758      4.389

CIRC.    4658.023 290.613410     0.000   217334.879  4040726.914  99.998393  1570.427 188.552275 101.713088  1844.331 390.266970      4.406

CIRC.    4678.023 292.456014     0.000   217315.056  4040724.262 100.107234  1550.606 188.661116 101.824179  1824.590 390.378061      4.422

CIRC.    4698.023 294.298618     0.000   217295.165  4040722.185 100.194999  1530.720 188.748881 101.917507  1804.768 390.471389      4.438

CIRC.    4718.023 296.141223     0.000   217275.222  4040720.685 100.260791  1510.783 188.814672 101.992414  1784.881 390.546296      4.454

CIRC.    4738.023 297.983827     0.000   217255.244  4040719.763 100.303678  1490.809 188.857559 102.048221  1764.942 390.602103      4.471

CIRC.    4758.023 299.826431     0.000   217235.248  4040719.419 100.322693  1470.814 188.876575 102.084230  1744.968 390.638112      4.487

CIRC.    4778.023 301.669036     0.000   217215.250  4040719.654 100.316834  1450.816 188.870715 102.099724  1724.973 390.653606      4.503

CIRC.    4798.023 303.511640     0.000   217195.267  4040720.467 100.285063  1430.829 188.838944 102.093969  1704.974 390.647851      4.519

CIRC.    4818.023 305.354244     0.000   217175.316  4040721.859 100.226308  1410.873 188.780189 102.066214  1684.988 390.620096      4.536

CIRC.    4838.023 307.196848     0.000   217155.414  4040723.827 100.139462  1390.965 188.693344 102.015691  1665.033 390.569573      4.552

CIRC.    4858.023 309.039453     0.000   217135.577  4040726.370 100.023389  1371.125 188.577271 101.941619  1645.127 390.495501      4.568

CIRC.    4878.023 310.882057     0.000   217115.822  4040729.487  99.876920  1351.372 188.430802 101.843203  1625.288 390.397085      4.584

CIRC.    4898.023 312.724661     0.000   217096.165  4040733.173  99.698860  1331.728 188.252741 101.719641  1605.536 390.273522      4.601
```

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 24
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 19 : Sevilla - Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 5612.989 Dis= 983.081
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 5597.488 Dis=1227.890

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	4898.023	312.724661	0.000	217096.165	4040733.173	101.719641	1605.536	163.074098	106.886981	1839.181	368.241439	4.601
CIRC.	4918.023	314.567265	0.000	217076.624	4040737.428	101.570119	1585.891	162.924576	106.812820	1819.295	368.167278	4.617
CLOT.	4938.023	316.245981	0.000	217057.210	4040742.231	101.394418	1566.370	162.748876	106.717225	1799.481	368.071682	4.633
CLOT.	4958.023	317.503565	0.000	217037.911	4040747.481	101.195806	1546.969	162.550264	106.603171	1779.740	367.957629	4.650
CLOT.	4978.023	318.336914	0.000	217018.702	4040753.047	100.978917	1527.667	162.333375	106.474855	1760.061	367.829312	4.666
CLOT.	4998.023	318.746026	0.000	216999.547	4040758.801	100.748550	1508.437	162.103008	106.336622	1740.426	367.691080	4.682
CLOT.	5018.023	318.730901	0.000	216980.411	4040764.614	100.509698	1489.243	161.864156	106.192989	1720.810	367.547447	4.698
CLOT.	5038.023	318.291540	0.000	216961.253	4040770.358	100.267577	1470.051	161.622035	106.048664	1701.190	367.403122	4.715
CIRC.	5058.023	317.428197	0.000	216942.039	4040775.906	100.027671	1450.824	161.382129	105.908577	1681.540	367.263035	4.731
CIRC.	5078.023	316.367164	0.000	216922.739	4040781.153	99.794731	1431.532	161.149189	105.776982	1661.841	367.131440	4.747
CIRC.	5098.023	315.306131	0.000	216903.355	4040786.077	99.569935	1412.172	160.924392	105.654970	1642.093	367.009428	4.763
CIRC.	5118.023	314.245098	0.000	216883.892	4040790.677	99.353652	1392.748	160.708110	105.542915	1622.301	366.897373	4.780
CIRC.	5138.023	313.184065	0.000	216864.354	4040794.952	99.146273	1373.263	160.500731	105.441207	1602.468	366.795665	4.794
CIRC.	5158.023	312.123032	0.000	216844.748	4040798.901	98.948210	1353.718	160.302668	105.350258	1582.598	366.704715	4.782
CIRC.	5178.023	311.061999	0.000	216825.079	4040802.523	98.759903	1334.117	160.114361	105.270495	1562.695	366.624953	4.733
CIRC.	5198.023	310.000966	0.000	216805.352	4040805.817	98.581815	1314.463	159.936273	105.202372	1542.765	366.556830	4.650
CIRC.	5218.023	308.939933	0.000	216785.573	4040808.781	98.414440	1294.760	159.768898	105.146359	1522.810	366.500817	4.530
CIRC.	5238.023	307.878900	0.000	216765.748	4040811.415	98.258302	1275.010	159.612760	105.102953	1502.837	366.457411	4.376
CIRC.	5258.023	306.817867	0.000	216745.881	4040813.718	98.113959	1255.217	159.468417	105.072675	1482.850	366.427133	4.185
CIRC.	5278.023	305.756834	0.000	216725.979	4040815.690	97.982002	1235.384	159.336460	105.056069	1462.854	366.410527	3.967

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 25
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 19 : Sevilla - Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 5612.989 Dis= 983.081
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 5597.488 Dis=1227.890

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	5298.023	304.695801	0.000	216706.046	4040817.330	97.863063	1215.516	159.217521	105.053709	1442.854	366.408167	3.747
CIRC.	5318.023	303.634768	0.000	216686.089	4040818.638	97.757814	1195.616	159.112272	105.066196	1422.856	366.420654	3.527
CIRC.	5338.023	302.573736	0.000	216666.113	4040819.613	97.666972	1175.688	159.021430	105.094162	1402.866	366.448620	3.307
CLOT.	5358.023	300.771360	0.000	216646.123	4040820.195	97.594559	1155.732	158.949017	105.140991	1382.893	366.495449	3.095
CLOT.	5378.023	296.493991	0.000	216626.130	4040819.833	97.572546	1135.740	158.927004	105.233210	1362.996	366.587667	3.037
CIRC.	5398.023	289.698568	0.000	216606.250	4040817.731	97.649111	1115.796	159.003569	105.409811	1343.361	366.764269	3.187
CIRC.	5418.023	281.981965	0.000	216586.755	4040813.322	97.863206	1096.157	159.217664	105.700542	1324.324	367.055000	3.547
CIRC.	5438.023	274.265361	0.000	216567.935	4040806.588	98.223660	1077.140	159.578118	106.109455	1306.210	367.463913	4.115
CIRC.	5458.023	266.548758	0.000	216550.068	4040797.628	98.732104	1059.063	160.086562	106.634377	1289.327	367.988835	4.893
CIRC.	5478.023	258.832155	0.000	216533.416	4040786.573	99.386969	1042.249	160.741427	107.270373	1273.979	368.624831	5.879
CIRC.	5498.023	251.115551	0.000	216518.223	4040773.586	100.182932	1027.012	161.537390	108.009516	1260.449	369.363974	7.051
CIRC.	5518.023	243.398948	0.000	216504.711	4040758.857	101.110455	1013.650	162.464913	108.840771	1248.999	370.195229	8.251
CIRC.	5538.023	235.682345	0.000	216493.079	4040742.602	102.155523	1002.439	163.509981	109.750062	1239.856	371.104520	9.451
CIRC.	5558.023	227.965742	0.000	216483.499	4040725.060	103.299649	993.618	164.654107	110.720522	1233.207	372.074980	10.651
CIRC.	5578.023	220.249138	0.000	216476.109	4040706.488	104.520219	987.382	165.874677	111.732964	1229.190	373.087422	11.751
CIRC.	5598.023	212.532535	0.000	216471.020	4040687.159	105.791203	983.873	167.145660	112.766534	1227.891	374.120992	12.495
CIRC.	5618.023	204.815932	0.000	216468.305	4040667.357	107.084206	983.171	168.438664	113.799520	1229.337	375.153978	12.871
CIRC.	5638.023	197.099328	0.000	216468.004	4040647.371	108.369772	985.292	169.724230	114.810233	1233.497	376.164691	12.878
CIRC.	5658.023	189.382725	0.000	216470.122	4040627.496	109.618805	990.188	170.973263	115.777890	1240.283	377.132348	12.517
CIRC.	5678.023	181.666122	0.000	216474.628	4040608.023	110.803952	997.747	172.158410	116.683413	1249.555	378.037870	11.786

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 26
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 19 : Sevilla - Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 5612.989 Dis= 983.081
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 5597.488 Dis=1227.890

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	5698.023	173.949518	0.000	216481.455	4040589.237	111.900791	1007.798	173.255249	117.510073	1261.122	378.864531	10.697
CLOT.	5718.023	166.441147	0.000	216490.497	4040571.411	112.889082	1020.118	174.243539	118.244270	1274.750	379.598728	9.497
CLOT.	5738.023	161.027596	0.000	216501.336	4040554.610	113.767990	1034.213	175.122448	118.888384	1289.962	380.242842	8.383
CLOT.	5758.023	158.160524	0.000	216513.247	4040538.546	114.564797	1049.376	175.919255	119.467434	1306.104	380.821892	7.452
CIRC.	5778.023	157.852267	0.000	216525.555	4040522.781	115.315764	1065.012	176.670222	120.012701	1322.635	381.367159	6.703
CIRC.	5798.023	158.361562	0.000	216537.786	4040506.958	116.049372	1080.733	177.403830	120.548265	1339.207	381.902723	6.136
CIRC.	5818.023	158.870858	0.000	216549.891	4040491.037	116.769227	1096.497	178.123685	121.076961	1355.783	382.431419	5.751
CIRC.	5838.023	159.380154	0.000	216561.868	4040475.020	117.475880	1112.299	178.830338	121.599035	1372.362	382.953493	5.549
CIRC.	5858.023	159.889450	0.000	216573.716	4040458.907	118.169855	1128.139	179.524313	122.114725	1388.943	383.469183	5.460
CIRC.	5878.023	160.398746	0.000	216585.435	4040442.700	118.851651	1144.013	180.206109	122.624256	1405.525	383.978714	5.371
CIRC.	5898.023	160.908041	0.000	216597.024	4040426.400	119.521744	1159.918	180.876202	123.127844	1422.106	384.482301	5.257
CIRC.	5918.023	161.417337	0.000	216608.482	4040410.008	120.180587	1175.853	181.535045	123.625693	1438.685	384.980151	5.094
CIRC.	5938.023	161.926633	0.000	216619.809	4040393.524	120.828613	1191.815	182.183071	124.118001	1455.262	385.472459	4.882
CIRC.	5958.023	162.435929	0.000	216631.003	4040376.951	121.466232	1207.803	182.820690	124.604957	1471.835	385.959415	4.623
CIRC.	5978.023	162.267554	0.000	216642.144	4040360.341	122.089885	1223.869	183.444343	125.083380	1488.457	386.437838	4.315
CIRC.	5998.023	162.013059	0.000	216653.349	4040343.774	122.694046	1240.096	184.048504	125.548430	1505.203	386.902888	3.984
CIRC.	6018.023	161.758563	0.000	216664.620	4040327.253	123.279225	1256.478	184.633683	126.000399	1522.071	387.354857	3.654
CIRC.	6038.023	161.735396	0.000	216675.944	4040310.767	123.846669	1272.998	185.201127	126.440208	1539.048	387.794666	3.324
CIRC.	6058.023	161.990044	0.000	216687.221	4040294.250	124.401840	1289.586	185.756298	126.872362	1556.066	388.226820	3.010
CIRC.	6078.023	162.244692	0.000	216698.432	4040277.688	124.946128	1306.225	186.300586	127.297915	1573.114	388.652373	2.761

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 26
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 19 : Sevilla - Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 5612.989 Dis= 983.081
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 5597.488 Dis=1227.890

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	6098.023	162.499340	0.000	216709.577	4040261.081	125.479911	1322.914	186.834369	127.717069	1590.189	389.071527	2.583
CIRC.	6118.023	162.753987	0.000	216720.655	4040244.429	126.003552	1339.650	187.358010	128.130017	1607.291	389.484475	2.474
CIRC.	6138.023	163.008635	0.000	216731.667	4040227.734	126.517401	1356.431	187.871858	128.536947	1624.417	389.891405	2.435
CIRC.	6158.023	163.263283	0.000	216742.612	4040210.994	127.021790	1373.256	188.376248	128.938038	1641.568	390.292496	2.456
CIRC.	6178.023	163.517931	0.000	216753.489	4040194.211	127.517040	1390.122	188.871498	129.333464	1658.742	390.687922	2.487
CIRC.	6198.023	163.772579	0.000	216764.300	4040177.384	128.003460	1407.028	189.357918	129.723392	1675.938	391.077850	2.515
CIRC.	6218.023	164.027227	0.000	216775.043	4040160.515	128.481343	1423.972	189.835801	130.107982	1693.156	391.462440	2.540
CIRC.	6238.023	164.281875	0.000	216785.718	4040143.602	128.950972	1440.953	190.305430	130.487390	1710.394	391.841848	2.561
RECTA	6258.023	164.342662	0.000	216796.346	4040126.659	129.411757	1457.981	190.766215	130.861026	1727.662	392.215484	2.577
RECTA	6278.023	164.342662	0.000	216806.971	4040109.715	129.861964	1475.082	191.216422	131.227327	1744.988	392.581785	2.590
RECTA	6298.023	164.342662	0.000	216817.597	4040092.771	130.301831	1492.255	191.656289	131.586413	1762.371	392.940871	2.598
RECTA	6318.023	164.342662	0.000	216828.222	4040075.827	130.731669	1509.497	192.086127	131.938474	1779.809	393.292932	2.603
RECTA	6338.023	164.342662	0.000	216838.848	4040058.883	131.151780	1526.807	192.506238	132.283694	1797.300	393.638151	2.605
RECTA	6358.023	164.342662	0.000	216849.473	4040041.939	131.562453	1544.182	192.916911	132.622249	1814.843	393.976706	2.607
RECTA	6378.023	164.342662	0.000	216860.099	4040024.995	131.963972	1561.620	193.318430	132.954312	1832.436	394.308770	2.609
RECTA	6398.023	164.342662	0.000	216870.724	4040008.051	132.356607	1579.119	193.711065	133.280051	1850.078	394.634509	2.611
RECTA	6418.023	164.342662	0.000	216881.350	4039991.107	132.740622	1596.676	194.095080	133.599628	1867.768	394.954086	2.613
RECTA	6438.023	164.342662	0.000	216891.975	4039974.163	133.116270	1614.290	194.470728	133.913200	1885.503	395.267658	2.615
RECTA	6458.023	164.342662	0.000	216902.601	4039957.219	133.483796	1631.959	194.838254	134.220922	1903.284	395.575379	2.617
RECTA	6478.023	164.342662	0.000	216913.226	4039940.275	133.843438	1649.682	195.197896	134.522939	1921.108	395.877397	2.619

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 27
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 19 : Sevilla - Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 5612.989 Dis= 983.081
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 5597.488 Dis=1227.890

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	6498.023	164.342662	0.000	216923.852	4039923.331	134.195423	1667.455	195.549881	134.819398	1938.975	396.173856	2.621
RECTA	6518.023	164.342662	0.000	216934.477	4039906.387	134.539974	1685.279	195.894432	135.110437	1956.883	396.464895	2.623
RECTA	6538.023	164.342662	0.000	216945.103	4039889.443	134.877303	1703.151	196.231761	135.396191	1974.832	396.750649	2.625
RECTA	6558.023	164.342662	0.000	216955.728	4039872.499	135.207617	1721.070	196.562075	135.676793	1992.819	397.031251	2.627
RECTA	6578.023	164.342662	0.000	216966.354	4039855.555	135.531115	1739.035	196.885573	135.952369	2010.844	397.306827	2.629
RECTA	6598.023	164.342662	0.000	216976.979	4039838.611	135.847990	1757.043	197.202448	136.223044	2028.907	397.577502	2.631
RECTA	6618.023	164.342662	0.000	216987.605	4039821.667	136.158428	1775.094	197.512886	136.488937	2047.005	397.843395	2.633
RECTA	6638.023	164.342662	0.000	216998.230	4039804.723	136.462609	1793.186	197.817067	136.750165	2065.138	398.104623	2.635
RECTA	6658.023	164.342662	0.000	217008.856	4039787.779	136.760706	1811.318	198.115164	137.006841	2083.306	398.361299	2.637
RECTA	6678.023	164.342662	0.000	217019.481	4039770.835	137.052888	1829.490	198.407346	137.259075	2101.507	398.613533	2.639
CIRC.	6698.023	164.113488	0.000	217030.134	4039753.909	137.338300	1847.712	198.692758	137.506086	2119.753	398.860543	2.641
CIRC.	6718.023	163.858840	0.000	217040.854	4039737.024	137.615647	1866.003	198.970105	137.746706	2138.063	399.101164	2.643
CIRC.	6738.023	163.604192	0.000	217051.642	4039720.183	137.885124	1884.361	199.239582	137.981068	2156.435	399.335526	2.645
CIRC.	6758.023	163.349544	0.000	217062.497	4039703.385	138.146931	1902.782	199.501389	138.209310	2174.866	399.563768	2.647
CIRC.	6778.023	163.094897	0.000	217073.419	4039686.631	138.401263	1921.266	199.755721	138.431566	2193.356	399.786024	2.649
CIRC.	6798.023	162.840249	0.000	217084.408	4039669.920	138.648309	1939.810	200.002767	138.647969	2211.901	0.002427	2.651
CIRC.	6818.023	162.585601	0.000	217095.463	4039653.254	138.888255	1958.412	200.242713	138.858648	2230.502	0.213106	2.653
RECTA	6838.023	162.497858	0.000	217106.571	4039636.622	139.121796	1977.064	200.476254	139.064182	2249.149	0.418640	2.655
RECTA	6858.023	162.497858	0.000	217117.683	4039619.993	139.350827	1995.744	200.705285	139.266209	2267.820	0.620667	2.657
RECTA	6878.023	162.497858	0.000	217128.795	4039603.364	139.575607	2014.449	200.930065	139.464935	2286.514	0.819393	2.659

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 27
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 19 : Sevilla - Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 5612.989 Dis= 983.081
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 5597.488 Dis=1227.890

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	6898.023	162.497858	0.000	217139.907	4039586.735	139.796249	2033.178	201.150707	139.660436	2305.230	1.014894	2.661
RECTA	6918.023	162.497858	0.000	217151.019	4039570.106	140.012860	2051.932	201.367318	139.852786	2323.968	1.207244	2.663
RECTA	6938.023	162.497858	0.000	217162.131	4039553.477	140.225546	2070.709	201.580004	140.042058	2342.726	1.396516	2.665
RECTA	6958.023	162.497858	0.000	217173.243	4039536.848	140.434406	2089.509	201.788864	140.228321	2361.505	1.582779	2.667
RECTA	6978.023	162.497858	0.000	217184.355	4039520.219	140.639539	2108.331	201.993997	140.411643	2380.304	1.766101	2.669
RECTA	6998.023	162.497858	0.000	217195.467	4039503.590	140.841041	2127.174	202.195498	140.592092	2399.122	1.946549	2.671
RECTA	7018.023	162.497858	0.000	217206.579	4039486.961	141.039001	2146.038	202.393459	140.769730	2417.959	2.124187	2.673
RECTA	7038.023	162.497858	0.000	217217.691	4039470.332	141.233510	2164.923	202.587968	140.944620	2436.814	2.299078	2.675
RECTA	7058.023	162.497858	0.000	217228.803	4039453.703	141.424653	2183.827	202.779111	141.116823	2455.688	2.471281	2.677
RECTA	7078.023	162.497858	0.000	217239.915	4039437.074	141.612514	2202.751	202.966972	141.286398	2474.579	2.640856	2.679
RECTA	7098.023	162.497858	0.000	217251.027	4039420.445	141.797172	2221.694	203.151630	141.453403	2493.488	2.807861	2.681
RECTA	7118.023	162.497858	0.000	217262.139	4039403.816	141.978707	2240.655	203.333165	141.617893	2512.414	2.972350	2.683
RECTA	7138.023	162.497858	0.000	217273.251	4039387.187	142.157194	2259.634	203.511652	141.779921	2531.356	3.134379	2.685
RECTA	7158.023	162.497858	0.000	217284.363	4039370.558	142.332706	2278.630	203.687164	141.939542	2550.314	3.294000	2.687
RECTA	7178.023	162.497858	0.000	217295.475	4039353.929	142.505315	2297.644	203.859773	142.096807	2569.288	3.451265	2.689
RECTA	7198.023	162.497858	0.000	217306.587	4039337.300	142.675089	2316.674	204.029547	142.251765	2588.277	3.606223	2.691
RECTA	7218.023	162.497858	0.000	217317.699	4039320.671	142.842095	2335.720	204.196553	142.404464	2607.282	3.758922	2.693
RECTA	7238.023	162.497858	0.000	217328.811	4039304.042	143.006399	2354.782	204.360857	142.554953	2626.301	3.909411	2.695
RECTA	7258.023	162.497858	0.000	217339.923	4039287.413	143.168063	2373.860	204.522521	142.703277	2645.335	4.057735	2.697
RECTA	7278.023	162.497858	0.000	217351.035	4039270.784	143.327148	2392.952	204.681606	142.849481	2664.383	4.203939	2.699

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 28
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 19 : Sevilla - Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 5612.989 Dis= 983.081
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 5597.488 Dis=1227.890

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	7298.023	162.497858	0.000	217362.147	4039254.155	143.483714	2412.060	204.838172	142.993609	2683.445	4.348067	2.701
RECTA	7318.023	162.497858	0.000	217373.259	4039237.526	143.637818	2431.181	204.992276	143.135703	2702.521	4.490161	2.703
RECTA	7338.023	162.497858	0.000	217384.371	4039220.897	143.789516	2450.317	205.143974	143.275804	2721.609	4.630262	2.705
RECTA	7358.023	162.497858	0.000	217395.483	4039204.268	143.938862	2469.467	205.293320	143.413953	2740.711	4.768411	2.707
RECTA	7378.023	162.497858	0.000	217406.594	4039187.639	144.085909	2488.629	205.440366	143.550189	2759.825	4.904647	2.709
RECTA	7398.023	162.497858	0.000	217417.706	4039171.010	144.230707	2507.805	205.585165	143.684550	2778.952	5.039008	2.711
RECTA	7418.023	162.497858	0.000	217428.818	4039154.381	144.373308	2526.994	205.727766	143.817074	2798.091	5.171532	2.713
RECTA	7438.023	162.497858	0.000	217439.930	4039137.752	144.513758	2546.195	205.868216	143.947797	2817.242	5.302255	2.715
RECTA	7458.023	162.497858	0.000	217451.042	4039121.123	144.652106	2565.408	206.006563	144.076753	2836.405	5.431211	2.717
RECTA	7478.023	162.497858	0.000	217462.154	4039104.494	144.788395	2584.634	206.142853	144.203979	2855.579	5.558437	2.719
RECTA	7498.023	162.497858	0.000	217473.266	4039087.865	144.922672	2603.870	206.277130	144.329507	2874.765	5.683965	2.721
RECTA	7518.023	162.497858	0.000	217484.378	4039071.236	145.054979	2623.119	206.409437	144.453370	2893.961	5.807828	2.723
RECTA	7538.023	162.497858	0.000	217495.490	4039054.607	145.185357	2642.378	206.539815	144.575600	2913.169	5.930058	2.725
RECTA	7558.023	162.497858	0.000	217506.602	4039037.978	145.313848	2661.649	206.668306	144.696229	2932.387	6.050686	2.727
RECTA	7578.023	162.497858	0.000	217517.714	4039021.349	145.440492	2680.930	206.794950	144.815286	2951.615	6.169744	2.729
RECTA	7598.023	162.497858	0.000	217528.826	4039004.720	145.565326	2700.221	206.919784	144.932801	2970.854	6.287259	2.731
RECTA	7618.023	162.497858	0.000	217539.938	4038988.091	145.688389	2719.523	207.042847	145.048805	2990.102	6.403262	2.733
RECTA	7638.023	162.497858	0.000	217551.050	4038971.462	145.809717	2738.835	207.164175	145.163323	3009.360	6.517781	2.735
RECTA	7658.023	162.497858	0.000	217562.162	4038954.833	145.929345	2758.157	207.283803	145.276385	3028.628	6.630843	2.737
RECTA	7678.023	162.497858	0.000	217573.274	4038938.204	146.047308	2777.488	207.401766	145.388017	3047.906	6.742475	2.739

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 28
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 19 : Sevilla - Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 5612.989 Dis= 983.081
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 5597.488 Dis=1227.890

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	7698.023	162.497858	0.000	217584.386	4038921.574	146.163641	2796.829	207.518099	145.498246	3067.192	6.852704	2.741
RECTA	7718.023	162.497858	0.000	217595.498	4038904.945	146.278375	2816.178	207.632833	145.607097	3086.488	6.961554	2.743
RECTA	7738.023	162.497858	0.000	217606.610	4038888.316	146.391543	2835.537	207.746001	145.714594	3105.793	7.069052	2.745
RECTA	7758.023	162.497858	0.000	217617.722	4038871.687	146.503176	2854.905	207.857634	145.820764	3125.106	7.175222	2.747
RECTA	7778.023	162.497858	0.000	217628.834	4038855.058	146.613304	2874.281	207.967762	145.925629	3144.428	7.280087	2.749
RECTA	7798.023	162.497858	0.000	217639.946	4038838.429	146.721957	2893.666	208.076415	146.029213	3163.758	7.383670	2.751
RECTA	7818.023	162.497858	0.000	217651.058	4038821.800	146.829163	2913.060	208.183621	146.131538	3183.097	7.485996	2.753
RECTA	7838.023	162.497858	0.000	217662.170	4038805.171	146.934951	2932.461	208.289409	146.232627	3202.444	7.587085	2.755
RECTA	7858.023	162.497858	0.000	217673.282	4038788.542	147.039349	2951.870	208.393806	146.332502	3221.798	7.686960	2.757
RECTA	7878.023	162.497858	0.000	217684.394	4038771.913	147.142382	2971.287	208.496840	146.431184	3241.161	7.785642	2.759
RECTA	7898.023	162.497858	0.000	217695.506	4038755.284	147.244077	2990.712	208.598535	146.528694	3260.531	7.883152	2.761
RECTA	7918.023	162.497858	0.000	217706.618	4038738.655	147.344459	3010.145	208.698917	146.625052	3279.909	7.979510	2.763
RECTA	7938.023	162.497858	0.000	217717.729	4038722.026	147.443553	3029.584	208.798011	146.720277	3299.294	8.074735	2.765
RECTA	7958.023	162.497858	0.000	217728.841	4038705.397	147.541384	3049.031	208.895841	146.814390	3318.687	8.168848	2.767
RECTA	7978.023	162.497858	0.000	217739.953	4038688.768	147.637974	3068.485	208.992432	146.907409	3338.087	8.261867	2.769
RECTA	7998.023	162.497858	0.000	217751.065	4038672.139	147.733347	3087.947	209.087804	146.999354	3357.493	8.353811	2.771
RECTA	8018.023	162.497858	0.000	217762.177	4038655.510	147.827525	3107.414	209.181983	147.090241	3376.907	8.444699	2.773
RECTA	8038.023	162.497858	0.000	217773.289	4038638.881	147.920530	3126.889	209.274988	147.180089	3396.327	8.534546	2.775
RECTA	8058.023	162.497858	0.000	217784.401	4038622.252	148.012383	3146.370	209.366841	147.268915	3415.755	8.623372	2.777
RECTA	8078.023	162.497858	0.000	217795.513	4038605.623	148.103106	3165.858	209.457564	147.356736	3435.188	8.711194	2.779

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 29
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 19 : Sevilla - Chiclana

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 5612.989 Dis= 983.081
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 5597.488 Dis=1227.890

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	8098.023	162.497858	0.000	217806.625	4038588.994	148.192719	3185.352	209.547177	147.443569	3454.629	8.798027	2.781
RECTA	8118.023	162.497858	0.000	217817.737	4038572.365	148.281242	3204.852	209.635700	147.529430	3474.075	8.883888	2.783
RECTA	8138.023	162.497858	0.000	217828.849	4038555.736	148.368693	3224.359	209.723151	147.614335	3493.528	8.968793	2.785
RECTA	8158.023	162.497858	0.000	217839.961	4038539.107	148.455093	3243.871	209.809551	147.698299	3512.987	9.052757	2.787
RECTA	8178.023	162.497858	0.000	217851.073	4038522.478	148.540459	3263.390	209.894917	147.781339	3532.452	9.135797	2.789
RECTA	8198.023	162.497858	0.000	217862.185	4038505.849	148.624810	3282.914	209.979268	147.863468	3551.923	9.217926	2.791
RECTA	8218.023	162.497858	0.000	217873.297	4038489.220	148.708164	3302.444	210.062621	147.944701	3571.400	9.299159	2.793
RECTA	8238.023	162.497858	0.000	217884.409	4038472.591	148.790537	3321.979	210.144995	148.025053	3590.882	9.379511	2.795
RECTA	8258.023	162.497858	0.000	217895.521	4038455.962	148.871947	3341.520	210.226405	148.104538	3610.370	9.458996	2.797
RECTA	8278.023	162.497858	0.000	217906.633	4038439.333	148.952410	3361.066	210.306868	148.183169	3629.864	9.537627	2.799
RECTA	8298.023	162.497858	0.000	217917.745	4038422.704	149.031943	3380.618	210.386401	148.260960	3649.363	9.615418	2.801
RECTA	8318.023	162.497858	0.000	217928.857	4038406.075	149.110561	3400.175	210.465019	148.337924	3668.868	9.692382	2.803
RECTA	8338.023	162.497858	0.000	217939.969	4038389.446	149.188279	3419.737	210.542737	148.414074	3688.378	9.768532	2.805
RECTA	8358.023	162.497858	0.000	217951.081	4038372.817	149.265114	3439.304	210.619571	148.489422	3707.893	9.843880	2.807
RECTA	8378.023	162.497858	0.000	217962.193	4038356.188	149.341079	3458.876	210.695536	148.563981	3727.414	9.918439	2.809
RECTA	8398.023	162.497858	0.000	217973.305	4038339.559	149.416189	3478.452	210.770646	148.637764	3746.939	9.992222	2.811
RECTA	8418.023	162.497858	0.000	217984.417	4038322.930	149.490458	3498.034	210.844916	148.710781	3766.469	10.065239	2.813
CLOT.	8438.023	162.319794	0.000	217995.542	4038306.310	149.563616	3517.624	210.918073	148.782781	3786.008	10.137239	2.815
CLOT.	8458.023	161.665064	0.000	218006.775	4038289.762	149.633666	3537.243	210.988124	148.851913	3805.579	10.206371	2.817
CLOT.	8478.023	160.528958	0.000	218018.240	4038273.375	149.697996	3556.919	211.052454	148.915747	3825.209	10.270205	2.819

Istram 20.01.01.08 18/03/20 16:42:06 2378 pagina 29
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 19 : Sevilla - Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 5612.989 Dis= 983.081
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 5597.488 Dis=1227.890

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CLOT.	8498.023	158.911476	0.000	218030.056	4038257.239	149.754027	3576.671	211.108485	148.971883	3844.920	10.326341	2.829
CIRC.	8518.023	156.907579	0.000	218042.333	4038241.452	149.799323	3596.506	211.153781	149.018046	3864.723	10.372504	2.877
CIRC.	8538.023	154.870396	0.000	218055.108	4038226.065	149.832948	3616.415	211.187406	149.053351	3884.607	10.407809	2.965
CIRC.	8558.023	152.833212	0.000	218068.368	4038211.094	149.855036	3636.374	211.209494	149.077905	3904.549	10.432363	3.093
CIRC.	8578.023	150.796029	0.000	218082.101	4038196.555	149.865752	3656.364	211.220210	149.091847	3924.530	10.446305	3.261
CIRC.	8598.023	148.758846	0.000	218096.292	4038182.463	149.865272	3676.363	211.219730	149.095323	3944.528	10.449781	3.469
CIRC.	8618.023	146.721662	0.000	218110.926	4038168.832	149.853777	3696.351	211.208235	149.088488	3964.523	10.442946	3.711
CIRC.	8638.023	144.684479	0.000	218125.990	4038155.677	149.831456	3716.308	211.185914	149.071504	3984.494	10.425962	3.957
CIRC.	8658.023	142.647296	0.000	218141.466	4038143.010	149.798504	3736.214	211.152962	149.044539	4004.421	10.398997	4.203
CIRC.	8678.023	140.610113	0.000	218157.339	4038130.845	149.755123	3756.050	211.109581	149.007768	4024.285	10.362226	4.449
CIRC.	8698.023	138.572929	0.000	218173.594	4038119.193	149.701518	3775.796	211.055976	148.961372	4044.067	10.315830	4.695
CIRC.	8718.023	136.535746	0.000	218190.213	4038108.068	149.637899	3795.434	210.992357	148.905534	4063.748	10.259992	4.942
CIRC.	8738.023	134.498563	0.000	218207.180	4038097.481	149.564480	3814.945	210.918937	148.840443	4083.309	10.194901	5.188
CIRC.	8758.023	132.461380	0.000	218224.477	4038087.441	149.481475	3834.313	210.835933	148.766291	4102.731	10.120749	5.434
CIRC.	8778.023	130.424196	0.000	218242.086	4038077.960	149.389105	3853.519	210.743563	148.683274	4121.998	10.037732	5.680
CIRC.	8783.475	129.868872	0.000	218246.938	4038075.474	149.362330	3858.724	210.716788	148.659132	4127.221	10.013590	5.747

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 1
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 20 : Cadiz - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 3339.392 Dis=-536.478
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 3339.392 Dis=-259.544

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	1839.060	135.216132	0.000	215476.764	4040747.570	299.685429	1953.165	3.000073	300.184866	1674.640	203.499510	1.368
CIRC.	1859.060	132.714679	0.000	215493.984	4040737.399	299.348188	1936.023	2.662832	299.796123	1657.422	203.110766	1.483
CIRC.	1879.060	130.213226	0.000	215511.589	4040727.913	299.027435	1918.540	2.342079	299.425654	1639.875	202.740298	1.599
CIRC.	1899.060	127.711773	0.000	215529.554	4040719.125	298.723948	1900.733	2.038592	299.074402	1622.015	202.389046	1.714
CIRC.	1919.060	125.210320	0.000	215547.850	4040711.050	298.438536	1882.622	1.753180	298.743349	1603.860	202.057993	1.830
CIRC.	1939.060	122.708867	0.000	215566.449	4040703.700	298.172029	1864.225	1.486673	298.433520	1585.428	201.748164	1.945
CIRC.	1959.060	120.207414	0.000	215585.322	4040697.086	297.925287	1845.563	1.239931	298.145986	1566.739	201.460630	2.060
CIRC.	1979.060	117.705961	0.000	215604.441	4040691.218	297.699195	1826.657	1.013839	297.881861	1547.813	201.196505	2.176
CLOT.	1999.060	115.226430	0.000	215623.775	4040686.106	297.494644	1807.530	0.809288	297.642284	1528.670	200.956928	2.291
CLOT.	2019.060	113.210355	0.000	215643.281	4040681.692	297.310325	1788.220	0.624969	297.425800	1509.350	200.740444	2.407
CLOT.	2039.060	111.830900	0.000	215662.898	4040677.801	297.140557	1768.791	0.455201	297.225762	1489.913	200.540406	2.522
CLOT.	2059.060	111.088065	0.000	215682.578	4040674.236	296.978815	1749.297	0.293459	297.034474	1470.414	200.349118	2.638
CLOT.	2079.060	110.967424	0.000	215702.281	4040670.804	296.818230	1729.784	0.132874	296.843771	1450.899	200.158415	2.753
CLOT.	2099.060	111.281273	0.000	215721.978	4040667.337	296.652698	1710.290	399.967342	296.646335	1431.404	199.960979	2.868
CLOT.	2119.060	111.971819	0.000	215741.647	4040663.714	296.477572	1690.845	399.792215	296.436531	1411.961	199.751175	2.984
CLOT.	2139.060	113.039064	0.000	215761.264	4040659.820	296.288176	1671.481	399.602820	296.208637	1392.601	199.523281	3.099
CLOT.	2159.060	114.483007	0.000	215780.801	4040655.540	296.079686	1652.236	399.394330	295.956696	1373.365	199.271340	3.215
CIRC.	2179.060	116.255693	0.000	215800.221	4040650.764	295.847247	1633.157	399.161891	295.674663	1354.300	198.989307	3.330
CIRC.	2199.060	118.074607	0.000	215819.498	4040645.436	295.588047	1614.282	398.902691	295.358903	1335.446	198.673547	3.446
CLOT.	2219.060	119.841051	0.000	215838.615	4040639.563	295.301469	1595.633	398.616113	295.008403	1316.827	198.323047	3.561

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 30
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 20 : Cadiz - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 3339.392 Dis=-536.478
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 3339.392 Dis=-259.544

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CLOT.	2239.060	121.272794	0.000	215857.578	4040633.207	294.989187	1577.210	398.303831	294.624917	1298.444	197.939561	3.676
CLOT.	2259.060	122.327839	0.000	215876.414	4040626.483	294.654943	1558.983	397.969587	294.212722	1280.270	197.527366	3.792
CLOT.	2279.060	123.006185	0.000	215895.156	4040619.502	294.302617	1540.916	397.617261	293.776291	1262.269	197.090935	3.907
CLOT.	2299.060	123.307834	0.000	215913.843	4040612.377	293.936162	1522.965	397.250806	293.320213	1244.397	196.634857	4.023
CLOT.	2319.060	123.081702	0.000	215932.523	4040605.229	293.560051	1505.077	396.874695	292.849738	1226.603	196.164382	4.138
CLOT.	2339.060	121.888806	0.000	215951.279	4040598.287	293.183296	1487.143	396.497940	292.375695	1208.777	195.690339	4.221
CLOT.	2359.060	119.701192	0.000	215970.212	4040591.845	292.818047	1469.031	396.132691	291.912832	1190.780	195.227476	4.249
CIRC.	2379.060	116.573287	0.000	215989.398	4040586.206	292.477346	1450.623	395.791990	291.477125	1172.490	194.791769	4.221
CIRC.	2399.060	113.222657	0.000	216008.851	4040581.569	292.170648	1431.869	395.485292	291.080305	1153.853	194.394949	4.139
CIRC.	2419.060	109.872027	0.000	216028.520	4040577.961	291.900592	1412.803	395.215236	290.725841	1134.898	194.040485	4.002
CIRC.	2439.060	106.521396	0.000	216048.353	4040575.394	291.669271	1393.466	394.983915	290.416599	1115.661	193.731243	3.842
CIRC.	2459.060	103.170766	0.000	216068.292	4040573.873	291.478844	1373.901	394.793488	290.155609	1096.184	193.470253	3.758
CIRC.	2479.060	99.820135	0.000	216088.285	4040573.403	291.331531	1354.154	394.646175	289.946067	1076.509	193.260711	3.826
CIRC.	2499.060	96.469505	0.000	216108.274	4040573.986	291.229611	1334.273	394.544254	289.791334	1056.680	193.105978	4.046
CIRC.	2519.060	93.118875	0.000	216128.205	4040575.619	291.175402	1314.307	394.490046	289.694934	1036.745	193.009577	4.417
CIRC.	2539.060	89.768244	0.000	216148.022	4040578.299	291.171259	1294.309	394.485903	289.660546	1016.755	192.975190	4.940
CIRC.	2559.060	86.417614	0.000	216167.671	4040582.018	291.219548	1274.336	394.534191	289.691993	996.764	193.006637	5.614
CIRC.	2579.060	83.066984	0.000	216187.097	4040586.765	291.322627	1254.443	394.637270	289.793221	976.828	193.107865	6.435
CIRC.	2599.060	79.716353	0.000	216206.247	4040592.527	291.482822	1234.692	394.797466	289.968272	957.008	193.282916	7.295
CIRC.	2619.060	76.365723	0.000	216225.066	4040599.289	291.702394	1215.146	395.017038	290.221241	937.367	193.535885	8.155

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 31
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 20 : Cadiz - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 3339.392 Dis=-536.478
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 3339.392 Dis=-259.544

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	2639.060	73.015092	0.000	216243.504	4040607.031	291.983501	1195.869	395.298145	290.556229	917.974	193.870873	9.015
CIRC.	2659.060	69.664462	0.000	216261.510	4040615.733	292.328153	1176.931	395.642797	290.977275	898.900	194.291919	9.875
CIRC.	2679.060	66.313832	0.000	216279.032	4040625.370	292.738164	1158.401	396.052808	291.488271	880.221	194.802915	10.735
CIRC.	2699.060	62.963201	0.000	216296.023	4040635.916	293.215090	1140.352	396.529734	292.092859	862.014	195.407503	11.595
CLOT.	2719.060	59.751933	0.000	216312.441	4040647.334	293.759793	1122.854	397.074437	292.793804	844.360	196.108447	12.455
CLOT.	2739.060	57.425209	0.000	216328.340	4040659.465	294.365245	1105.894	397.679889	293.583239	827.256	196.897883	13.315
CLOT.	2759.060	56.093203	0.000	216343.884	4040672.049	295.017477	1089.355	398.332121	294.443702	810.598	197.758346	14.175
CLOT.	2779.060	55.759858	0.000	216359.263	4040684.836	295.702420	1073.086	399.017064	295.357291	794.245	198.671935	15.016
CLOT.	2799.060	56.618543	0.000	216374.689	4040697.565	296.404722	1056.901	399.719366	296.304127	778.019	199.618771	15.741
CLOT.	2819.060	58.776453	0.000	216390.412	4040709.924	297.105374	1040.568	0.420018	297.259159	761.691	200.573803	16.334
CLOT.	2839.060	62.233586	0.000	216406.663	4040721.577	297.783285	1023.862	1.097929	298.194252	745.033	201.508896	16.797
CIRC.	2859.060	66.470454	0.000	216423.605	4040732.199	298.417360	1006.611	1.732003	299.080915	727.868	202.395559	17.128
CIRC.	2879.060	70.714586	0.000	216441.217	4040741.669	298.998681	988.810	2.313325	299.906948	710.181	203.221592	17.329
CIRC.	2899.060	74.958717	0.000	216459.421	4040749.944	299.522681	970.512	2.837325	300.665823	692.014	203.980467	17.398
CLOT.	2919.060	79.068093	0.000	216478.132	4040756.996	299.984939	951.773	3.299583	301.350909	673.416	204.665553	17.336
CLOT.	2939.060	82.297093	0.000	216497.225	4040762.946	300.390793	932.698	3.705436	301.969004	654.485	205.283648	17.143
CLOT.	2959.060	84.651926	0.000	216516.558	4040768.062	300.755590	913.411	4.070234	302.541245	635.345	205.855889	16.790
CIRC.	2979.060	86.331743	0.000	216536.044	4040772.566	301.092774	893.993	4.407418	303.086658	616.077	206.401302	16.231
CIRC.	2999.060	87.833205	0.000	216555.633	4040776.596	301.410612	874.487	4.725256	303.617418	596.727	206.932062	15.449
CIRC.	3019.060	89.334666	0.000	216575.312	4040780.163	301.708654	854.901	5.023298	304.133404	577.302	207.448048	14.484

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 32
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 20 : Cadiz - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 3339.392 Dis=-536.478
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 3339.392 Dis=-259.544

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3039.060	90.836128	0.000	216595.069	4040783.265	301.985425	835.242	5.300069	304.633009	557.804	207.947653	13.481
CIRC.	3059.060	92.337590	0.000	216614.894	4040785.901	302.239306	815.515	5.553950	305.114389	538.239	208.429033	12.479
CIRC.	3079.060	93.839052	0.000	216634.776	4040788.068	302.468513	795.727	5.783157	305.575411	518.608	208.890055	11.477
CIRC.	3099.060	95.340513	0.000	216654.704	4040789.765	302.671081	775.884	5.985725	306.013600	498.918	209.328244	10.474
CIRC.	3119.060	96.841975	0.000	216674.665	4040790.993	302.844838	755.994	6.159482	306.426066	479.171	209.740710	9.472
CIRC.	3139.060	98.343437	0.000	216694.651	4040791.749	302.987382	736.065	6.302026	306.809411	459.372	210.124055	8.470
CIRC.	3159.060	99.844898	0.000	216714.648	4040792.033	303.096045	716.103	6.410689	307.159618	439.525	210.474261	7.494

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 33
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 20 : Cadiz - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 3339.392 Dis=-259.544
Distancia: 315.594 Azimut: 312.962004
BO : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 3283.762 Dis= -23.584

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3159.060	99.844898	0.000	216714.648	4040792.033	307.159618	439.525	394.197614	292.806729	128.493	179.844725	7.494
CIRC.	3179.060	101.346360	0.000	216734.647	4040791.846	307.471899	419.637	394.509895	291.376727	108.671	178.414723	6.640
CIRC.	3199.060	102.847822	0.000	216754.636	4040791.187	307.740508	399.712	394.778504	288.978973	89.017	176.016969	5.862
CIRC.	3219.060	104.349284	0.000	216774.603	4040790.058	307.958486	379.757	394.996482	284.817366	69.691	171.855362	5.233
CIRC.	3239.060	105.850745	0.000	216794.539	4040788.457	308.117331	359.779	395.155327	276.990591	51.084	164.028587	4.729
CIRC.	3259.060	107.352207	0.000	216814.431	4040786.387	308.206544	339.786	395.244540	260.194893	34.399	147.232889	4.363
CIRC.	3279.060	108.853669	0.000	216834.268	4040783.848	308.213024	319.786	395.251020	221.728409	24.061	108.766405	4.103
CIRC.	3299.060	110.355131	0.000	216854.041	4040780.842	308.120211	299.792	395.158207	172.744210	28.226	59.782206	3.974
CIRC.	3319.060	111.856592	0.000	216873.737	4040777.371	307.906892	279.816	394.944888	147.620377	42.856	34.658373	3.978
CIRC.	3339.060	113.358054	0.000	216893.345	4040773.436	307.545481	259.875	394.583477	136.622456	60.811	23.660452	4.002
CIRC.	3339.392	113.383003	0.000	216893.670	4040773.367	307.538033	259.544	394.576029	136.498821	61.122	23.536817	4.002

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  32
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    1 : Ejes principales
 EJE        :   20 : Cadiz - Sevilla


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:    3283.762 Dis= -23.584
                                                                        Distancia:   399.296  Azimut: 230.952151
 BO : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:    3060.123 Dis= 334.904

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3479.060 123.868286     0.000   217027.252  4040733.130 124.051083   198.960 293.098932  58.923566   464.986  27.971415      4.170

CIRC.    3339.392 113.383003     0.000   216893.670  4040773.367 136.498821    61.122 305.546670  40.713965   398.654   9.761814      4.002

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  33
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    1 : Ejes principales
 EJE        :   20 : Cadiz - Sevilla


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:    3060.123 Dis= 334.904
                                                                        Distancia:   335.344  Azimut: 340.002277
 BO : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:    2776.487 Dis=  42.413

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3699.060 140.384365     0.000   217219.289  4040627.060  80.979931   589.666 140.977654 101.795886   835.168 361.793609      4.435

CIRC.    3339.392 113.383003     0.000   216893.670  4040773.367  40.713965   398.654 100.711688  84.941170   523.803 344.938893      4.002

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  34
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    1 : Ejes principales
 EJE        :   20 : Cadiz - Sevilla


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:    2776.487 Dis=  42.413
                                                                        Distancia:   357.672  Azimut: 314.030496
 BO : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:    2391.884 Dis=-149.515

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3979.060 161.404829     0.000   217413.592  4040427.219 113.608190  1053.107 199.577694 113.715256  1410.773 399.684760      4.772

CIRC.    3339.392 113.383003     0.000   216893.670  4040773.367  84.941170   523.803 170.910674  96.697683   859.394 382.667188      4.002
```

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 35
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 20 : Cadiz - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 2391.884 Dis=-149.515
Distancia: 270.987 Azimut: 299.545648
BO : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 2129.143 Dis= -66.349

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	4339.060	188.431140	0.000	217550.751	4040097.290	125.138012	1641.647	225.592364	121.572315	1894.001	22.026666	5.205
CIRC.	3339.392	113.383003	0.000	216893.670	4040773.367	96.697683	859.394	197.152035	97.380337	1130.175	397.834689	4.002

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 36
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 20 : Cadiz - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 2129.143 Dis= -66.349
Distancia: 277.714 Azimut: 311.446118
BO : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 1839.060 Dis= -32.372

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	4599.060	207.950143	0.000	217558.110	4039838.412	129.278698	2001.643	217.832579	127.124893	2269.832	15.678775	5.517
CIRC.	3339.392	113.383003	0.000	216893.670	4040773.367	97.380337	1130.175	185.934219	100.143892	1402.459	388.697774	4.002

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 37
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 1 : Ejes principales
EJE : 20 : Cadiz - Sevilla

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 1839.060 Dis= -32.372
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 1839.060 Dis=-278.594

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	4899.060	230.472069	0.000	217469.412	4039553.460	135.252913	2325.765	196.607370	135.608127	2597.510	396.962585	5.878
CIRC.	3339.392	113.383003	0.000	216893.670	4040773.367	100.143892	1402.459	161.498350	106.181796	1633.630	367.536254	4.002

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   22 : Ramal Sevilla- Acceso al Poligono


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR113                X:  217429.905  Y: 4040757.221  Z:   2.658  PK:    3140.053 Dis= 685.321
                                                                        Distancia:   278.886  Azimut: 296.685356
 BO : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:    3140.053 Dis=-411.317

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3140.053 306.865070     0.000   216747.520  4040820.582 305.894278   685.321   9.208922 312.126419   411.317 215.441063      4.690

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  33
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   22 : Ramal Sevilla- Acceso al Poligono


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:    3140.053 Dis=-411.317
                                                                        Distancia:   315.594  Azimut: 312.962004
 BO : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:    3140.053 Dis= -95.839

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3140.053 306.865070     0.000   216747.520  4040820.582 312.126419   411.317 399.164415 309.374106    95.839 196.412102      4.690
CIRC.    3160.053 305.810190     0.000   216727.619  4040822.570 311.858318   431.238 398.896314 308.849962   115.820 195.887958      4.473
CIRC.    3180.053 304.755311     0.000   216707.688  4040824.228 311.567327   451.136 398.605323 308.324849   135.793 195.362845      4.252
CIRC.    3200.053 303.700431     0.000   216687.732  4040825.555 311.256370   471.008 398.294366 307.799139   155.757 194.837135      4.032
CIRC.    3220.053 302.645552     0.000   216667.757  4040826.551 310.927897   490.853 397.965893 307.273036   175.710 194.311032      3.812
CIRC.    3240.053 301.590672     0.000   216647.769  4040827.217 310.583970   510.670 397.621966 306.746661   195.651 193.784657      3.606
CIRC.    3260.053 300.535793     0.000   216627.772  4040827.551 310.226344   530.454 397.264340 306.220089   215.578 193.258085      3.567
CIRC.    3280.053 299.480913     0.000   216607.772  4040827.553 309.856515   550.206 396.894511 305.693370   235.491 192.731366      3.824
CIRC.    3300.053 298.426034     0.000   216587.775  4040827.224 309.475770   569.924 396.513766 305.166538   255.388 192.204534      4.022
CIRC.    3320.053 297.371154     0.000   216567.786  4040826.564 309.085224   589.605 396.123220 304.639619   275.267 191.677615      3.949
CIRC.    3340.053 296.316275     0.000   216547.811  4040825.573 308.685841   609.248 395.723837 304.112630   295.127 191.150626      3.608
CIRC.    3360.053 295.261395     0.000   216527.855  4040824.251 308.278466   628.852 395.316462 303.585584   314.967 190.623579      3.169
CIRC.    3380.053 292.182862     0.000   216507.948  4040822.351 307.839981   648.360 394.877977 303.011629   334.749 190.049625      2.854
CIRC.    3400.053 288.545035     0.000   216488.179  4040819.336 307.323072   667.630 394.361068 302.302595   354.375 189.340591      2.695
CIRC.    3420.053 284.907207     0.000   216468.615  4040815.196 306.733603   686.619 393.771599 301.477580   373.808 188.515576      2.679
CLOT.    3440.053 281.273906     0.000   216449.319  4040809.946 306.078482   705.291 393.116478 300.554841   393.018 187.592837      2.693
CLOT.    3460.053 278.303177     0.000   216430.329  4040803.675 305.370020   723.641 392.408016 299.560270   412.002 186.598266      2.707
```

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 34
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 22 : Ramal Sevilla- Acceso al Poligono

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 3140.053 Dis= -95.839
Distancia: 399.296 Azimut: 230.952151
BO : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 3214.992 Dis=-373.224

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CLOT.	3460.053	278.303177	0.000	216430.329	4040803.675	299.560270	412.002	68.608119	363.588820	416.458	332.636669	2.707
CLOT.	3480.053	276.464216	0.000	216411.589	4040796.691	298.547397	430.845	67.595246	360.634582	421.182	329.682431	2.721
CLOT.	3500.053	275.757024	0.000	216392.992	4040789.333	297.566012	449.659	66.613861	357.734375	426.410	326.782224	2.735
RECTA	3520.053	275.748202	0.000	216374.426	4040781.898	296.652816	468.544	65.700665	354.906094	432.420	323.953943	2.749
RECTA	3540.053	275.748202	0.000	216355.859	4040774.462	295.810527	487.518	64.858376	352.160600	439.260	321.208449	2.763
RECTA	3560.053	275.748202	0.000	216337.293	4040767.026	295.031469	506.571	64.079318	349.504061	446.891	318.551910	2.797
RECTA	3580.053	275.748202	0.000	216318.727	4040759.590	294.308990	525.694	63.356839	346.941010	455.273	315.988859	2.973
RECTA	3600.053	275.748202	0.000	216300.161	4040752.154	293.637310	544.881	62.685159	344.474461	464.366	313.522311	3.314
RECTA	3620.053	275.748202	0.000	216281.594	4040744.718	293.011386	564.123	62.059235	342.106050	474.129	311.153899	3.796
RECTA	3640.053	275.748202	0.000	216263.028	4040737.282	292.426809	583.417	61.474658	339.836200	484.521	308.884049	4.248
RECTA	3660.053	275.748202	0.000	216244.462	4040729.846	291.879700	602.757	60.927550	337.664297	495.502	306.712146	4.421
RECTA	3680.053	275.748202	0.000	216225.896	4040722.410	291.366644	622.139	60.414493	335.588871	507.035	304.636720	4.283

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 35
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 22 : Ramal Sevilla- Acceso al Poligono

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 3214.992 Dis=-373.224
Distancia: 335.344 Azimut: 340.002277
BO : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 3559.554 Dis=-125.598

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	3680.053	275.748202	0.000	216225.896	4040722.410	335.588871	507.035	395.586594	327.067072	174.054	187.064795	4.283
RECTA	3700.053	275.748202	0.000	216207.329	4040714.974	333.607756	519.083	393.605479	322.186953	188.453	182.184676	3.917
RECTA	3709.463	275.748202	0.000	216198.594	4040711.475	332.707490	524.919	392.705213	320.145060	195.569	180.142784	3.779

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  34
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   22 : Ramal Sevilla- Acceso al Poligono


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:    3559.554 Dis=-125.598
                                                                       Distancia:   357.672  Azimut: 314.030496
 BO : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:    3709.463 Dis= 164.080

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    3960.053 275.748202     0.000   215965.968  4040618.306 295.094411   419.731 381.063915 235.727129   130.522 121.696633      0.388

RECTA    3709.463 275.748202     0.000   216198.594  4040711.475 320.145060   195.569   6.114564 106.737699   164.080 392.707203      3.779

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  35
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   22 : Ramal Sevilla- Acceso al Poligono


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:    3709.463 Dis= 164.080
                                                                       Distancia:   270.987  Azimut: 299.545648
 BO : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:    3709.463 Dis= 434.415

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4320.053 275.748202     0.000   215631.775  4040484.458 265.346435   471.854 365.800786 231.880433   276.349 132.334785     -4.484

RECTA    3709.463 275.748202     0.000   216198.594  4040711.475 106.737699   164.080 207.192051 102.257152   434.415   2.711504      3.779

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  36
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   22 : Ramal Sevilla- Acceso al Poligono


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:    3709.463 Dis= 434.415
                                                                       Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:    3709.463 Dis= 710.364

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4580.053 275.748202     0.000   215390.414  4040387.790 253.117995   504.859 341.671877 216.151729   401.603 104.705610     -8.002

RECTA    3709.463 275.748202     0.000   216198.594  4040711.475 102.257152   434.415 190.811034 105.838964   710.364 394.392846      3.779
```

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  37
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   22 : Ramal Sevilla- Acceso al Poligono

                          ========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ========================================

 BR : BR119               X:  215491.215  Y: 4040776.537  Z:   2.627  PK:    3709.463 Dis= 710.364
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120               X:  215267.736  Y: 4040931.749  Z:   2.846  PK:    3709.463 Dis= 956.565

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4880.053 275.748202     0.000   215111.920  4040276.251 241.297579   627.815 302.652037 214.857141   673.763  76.211599    -12.061

RECTA    3709.463 275.748202     0.000   216198.594  4040711.475 105.838964   710.364 167.193422 114.792587   956.565 376.147045      3.779

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    3 : Enlace cambio de sentido
 EJE        :   23 : Cambio de sentido Chiclana_Tres Caminos


                          ========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ========================================

 BR : BR113               X:  217429.905  Y: 4040757.221  Z:   2.658  PK:    1480.596 Dis=1142.053
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114               X:  217151.397  Y: 4040742.707  Z:   2.658  PK:    1480.596 Dis=1084.312

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CLOT.    1000.000 336.779977     0.000   217392.415  4039267.109 201.601360  1490.584 304.916004 189.692752  1495.152  93.007395      2.712

CIRC.    1020.000 345.519651     0.000   217376.385  4039279.043 202.303966  1479.146 305.618610 190.290138  1480.855  93.604782      2.734

CLOT.    1040.000 354.525287     0.000   217362.322  4039293.240 202.936804  1465.540 306.251448 190.800551  1464.733  94.115195      2.779

CLOT.    1060.000 360.202316     0.000   217349.979  4039308.969 203.509812  1450.456 306.824456 191.238154  1447.426  94.552797      2.825

CLOT.    1080.000 362.550189     0.000   217338.648  4039325.448 204.052139  1434.678 307.366783 191.637287  1429.576  94.951931      2.870

RECTA    1100.000 362.620310     0.000   217327.567  4039342.097 204.595868  1418.819 307.910512 192.034372  1411.646  95.349016      2.916

RECTA    1120.000 362.620310     0.000   217316.487  4039358.748 205.151795  1403.065 308.466439 192.441595  1393.771  95.756239      2.962

RECTA    1140.000 362.620310     0.000   217305.407  4039375.398 205.720303  1387.420 309.034947 192.859382  1375.955  96.174026      3.007

RECTA    1160.000 362.620310     0.000   217294.327  4039392.048 206.301731  1371.888 309.616375 193.288111  1358.200  96.602755      3.053

RECTA    1180.000 362.620310     0.000   217283.247  4039408.699 206.896425  1356.474 310.211069 193.728176  1340.508  97.042820      3.098

RECTA    1200.000 362.620310     0.000   217272.167  4039425.349 207.504735  1341.180 310.819379 194.179991  1322.882  97.494635      3.144

RECTA    1220.000 362.620310     0.000   217261.087  4039442.000 208.127020  1326.012 311.441663 194.643984  1305.324  97.958628      3.190

RECTA    1240.000 362.620310     0.000   217250.007  4039458.650 208.763643  1310.973 312.078287 195.120603  1287.838  98.435247      3.235

RECTA    1260.000 362.620310     0.000   217238.927  4039475.300 209.414976  1296.068 312.729620 195.610316  1270.426  98.924960      3.281

RECTA    1280.000 362.620310     0.000   217227.847  4039491.951 210.081391  1281.303 313.396035 196.113608  1253.091  99.428252      3.326

RECTA    1300.000 362.620310     0.000   217216.767  4039508.601 210.763269  1266.681 314.077912 196.630987  1235.836  99.945630      3.372

RECTA    1320.000 362.620310     0.000   217205.687  4039525.251 211.460990  1252.207 314.775634 197.162981  1218.666 100.477625      3.417

RECTA    1340.000 362.620310     0.000   217194.607  4039541.902 212.174941  1237.888 315.489585 197.710141  1201.583 101.024785      3.463

RECTA    1360.000 362.620310     0.000   217183.527  4039558.552 212.905509  1223.728 316.220152 198.273041  1184.591 101.587684      3.509

RECTA    1380.000 362.620310     0.000   217172.448  4039575.202 213.653080  1209.732 316.967724 198.852277  1167.694 102.166921      3.554
```

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 35
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 3 : Enlace cambio de sentido
EJE : 23 : Cambio de sentido Chiclana_Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 1480.596 Dis=1142.053
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 1480.596 Dis=1084.312

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	1400.000	362.620310	0.000	217161.368	4039591.853	214.418043	1195.908	317.732687	199.448471	1150.897	102.763115	3.600
RECTA	1420.000	362.620310	0.000	217150.288	4039608.503	215.200782	1182.260	318.515426	200.062270	1134.204	103.376914	3.645
RECTA	1440.000	362.620310	0.000	217139.208	4039625.153	216.001679	1168.795	319.316323	200.694345	1117.620	104.008989	3.691
RECTA	1460.000	362.620310	0.000	217128.128	4039641.804	216.821112	1155.519	320.135755	201.345396	1101.149	104.660040	3.737
RECTA	1480.000	362.620310	0.000	217117.048	4039658.454	217.659449	1142.440	320.974093	202.016146	1084.797	105.330790	3.782
RECTA	1480.596	362.620310	0.000	217116.718	4039658.950	217.684712	1142.053	320.999356	202.036433	1084.312	105.351077	3.783

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 36
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 3 : Enlace cambio de sentido
EJE : 23 : Cambio de sentido Chiclana_Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 1480.596 Dis=1084.312
Distancia: 315.594 Azimut: 312.962004
BO : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 1480.596 Dis=1179.920

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	3140.000	362.620310	0.000	216197.411	4041040.434	319.258331	999.365	6.296327	322.151139	686.021	209.189135	7.566
RECTA	1480.596	362.620310	0.000	217116.718	4039658.950	202.036433	1084.312	289.074429	185.058323	1179.920	72.096318	3.783

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 37
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 3 : Enlace cambio de sentido
EJE : 23 : Cambio de sentido Chiclana_Tres Caminos

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 1480.596 Dis=1179.920
Distancia: 399.296 Azimut: 230.952151
BO : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 1480.596 Dis= 918.586

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	3460.000	362.620310	0.000	216020.132	4041306.840	334.801489	962.453	103.849338	359.243766	1064.048	328.291615	8.295
RECTA	1480.596	362.620310	0.000	217116.718	4039658.950	185.058323	1179.920	354.106172	166.532171	918.586	135.580020	3.783

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  38
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    3 : Enlace cambio de sentido
 EJE        :   23 : Cambio de sentido Chiclana_Tres Caminos


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR112               X:  216655.745  Y: 4040453.497  Z:   2.850  PK:    1480.596 Dis= 918.586
                                                                      Distancia:   335.344  Azimut: 340.002277
 BO : BR116               X:  216384.453  Y: 4040650.617  Z:  12.503  PK:       0.000 Dis=1231.472

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    3680.000 362.620310     0.000   215898.252  4041489.994 359.822132  1283.792  19.819856 366.576514   970.023 226.574237      8.796

RECTA    1480.596 362.620310     0.000   217116.718  4039658.950 166.532171   918.586 226.529895 159.507968  1232.727  19.505691      3.783

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  36
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    3 : Enlace cambio de sentido
 EJE        :   23 : Cambio de sentido Chiclana_Tres Caminos


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR116               X:  216384.453  Y: 4040650.617  Z:  12.503  PK:       0.000 Dis=1231.472
                                                                      Distancia:   357.672  Azimut: 314.030496
 BO : BR117               X:  216035.432  Y: 4040728.808  Z:   2.773  PK:       0.000 Dis=1514.966

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    3960.000 362.620310     0.000   215743.133  4041723.099 365.690585  1249.604  51.660089 381.797617  1036.365 267.767121      9.435

RECTA    1480.596 362.620310     0.000   217116.718  4039658.950 159.507968  1232.727 245.477472 149.661802  1521.110  35.631306      3.783

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  37
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    3 : Enlace cambio de sentido
 EJE        :   23 : Cambio de sentido Chiclana_Tres Caminos


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR117               X:  216035.432  Y: 4040728.808  Z:   2.773  PK:       0.000 Dis=1514.966
                                                                      Distancia:   270.987  Azimut: 299.545648
 BO : BR118               X:  215764.452  Y: 4040726.874  Z:   2.847  PK:       0.000 Dis=1713.530

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4320.000 362.620310     0.000   215543.694  4042022.805 376.880514  1384.282  77.334866 389.258467  1314.600 289.712818     10.255

RECTA    1480.596 362.620310     0.000   217116.718  4039658.950 149.661802  1521.110 250.116154 142.554650  1723.103  43.009001      3.783
```

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  38
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    3 : Enlace cambio de sentido
 EJE        :   23 : Cambio de sentido Chiclana_Tres Caminos


                            ============================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ============================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:       0.000 Dis=1713.530
                                                                      Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:       0.000 Dis=1961.066

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4580.000 362.620310     0.000   215399.654  4042239.260 384.932119  1555.760  73.486001 396.020200  1465.586 284.574082     10.848

RECTA    1480.596 362.620310     0.000   217116.718  4039658.950 142.554650  1723.103 231.108532 138.344233  1972.628  26.898115      3.783

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  39
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    3 : Enlace cambio de sentido
 EJE        :   23 : Cambio de sentido Chiclana_Tres Caminos


                            ============================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ============================================

 BR : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:       0.000 Dis=1961.066
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120                X:  215267.736  Y: 4040931.749  Z:   2.846  PK:       0.000 Dis=2233.145

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4880.000 362.620310     0.000   215233.455  4042489.016 390.489075  1731.769  51.843533 398.598792  1557.644 259.953250     11.532

RECTA    1480.596 362.620310     0.000   217116.718  4039658.950 138.344233  1972.628 199.698691 138.380756  2244.716 399.735214      3.783

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    4 : Enlace Chiclana Norte
 EJE        :   24 : Ramal Salida A-48-Chiclana


                            ============================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ============================================

 BR : BR113                X:  217429.905  Y: 4040757.221  Z:   2.658  PK:    3000.000 Dis=-2580.678
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:    3000.000 Dis=-2645.473

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3000.000 158.187693     0.000   218029.019  4038247.049 185.084548  2580.678 288.399192 178.472537  2645.473  81.787181      2.694

CIRC.    3020.000 159.484396     0.000   218041.083  4038231.097 184.887836  2599.007 288.202480 178.327067  2664.531  81.641711      2.944

CIRC.    3040.000 160.899107     0.000   218052.790  4038214.882 184.703840  2617.532 288.018483 178.193740  2683.730  81.508384      3.195

CIRC.    3060.000 162.313817     0.000   218064.133  4038198.411 184.532432  2636.239 287.847076 178.072397  2703.060  81.387041      3.422

CIRC.    3080.000 163.728528     0.000   218075.108  4038181.691 184.373465  2655.116 287.688109 177.962857  2722.507  81.277501      3.509

CIRC.    3100.000 164.545887     0.000   218085.740  4038164.752 184.225931  2674.139 287.540575 177.864088  2742.052  81.178732      3.438

CIRC.    3120.000 164.461004     0.000   218096.323  4038147.781 184.081801  2693.193 287.396445 177.768037  2761.617  81.082681      3.212

CIRC.    3140.000 164.376121     0.000   218106.928  4038130.824 183.939100  2712.254 287.253744 177.672740  2781.182  80.987384      2.972
```

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 37
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 4 : Enlace Chiclana Norte
EJE : 24 : Ramal Salida A-48-Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 3000.000 Dis=-2645.473
Distancia: 315.594 Azimut: 312.962004
BO : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 3000.000 Dis=-2821.196

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3140.000	164.376121	0.000	218106.928	4038130.824	177.672740	2781.182	264.710736	171.892589	2959.490	58.930585	2.972
CIRC.	3160.000	164.291239	0.000	218117.556	4038113.882	177.578182	2800.747	264.616178	171.841966	2979.350	58.879962	2.811
CIRC.	3180.000	164.206356	0.000	218128.206	4038096.953	177.484347	2820.314	264.522343	171.791452	2999.209	58.829448	2.728
CIRC.	3200.000	164.121473	0.000	218138.879	4038080.039	177.391220	2839.880	264.429216	171.741043	3019.067	58.779039	2.712
CIRC.	3220.000	164.036591	0.000	218149.575	4038063.139	177.298787	2859.448	264.336783	171.690739	3038.923	58.728735	2.704
CIRC.	3240.000	163.951708	0.000	218160.293	4038046.254	177.207034	2879.016	264.245030	171.640537	3058.778	58.678533	2.697
CIRC.	3260.000	163.866825	0.000	218171.033	4038029.383	177.115946	2898.584	264.153942	171.590435	3078.631	58.628431	2.689
CIRC.	3280.000	163.781943	0.000	218181.797	4038012.526	177.025510	2918.152	264.063506	171.540431	3098.484	58.578427	2.682
CIRC.	3300.000	163.697060	0.000	218192.582	4037995.683	176.935714	2937.721	263.973710	171.490524	3118.335	58.528520	2.674
CIRC.	3320.000	163.612178	0.000	218203.390	4037978.855	176.846545	2957.291	263.884541	171.440711	3138.184	58.478707	2.666
CIRC.	3340.000	163.527295	0.000	218214.220	4037962.041	176.757990	2976.860	263.795986	171.390990	3158.033	58.428986	2.659
CIRC.	3360.000	163.827533	0.000	218225.067	4037945.238	176.670194	2996.431	263.708190	171.341510	3177.881	58.379506	2.651
CIRC.	3380.000	166.848267	0.000	218235.425	4037928.131	176.595452	3016.116	263.633448	171.304020	3197.790	58.342016	2.688
CIRC.	3400.000	169.869002	0.000	218244.961	4037910.553	176.541346	3035.948	263.579342	171.285722	3217.767	58.323718	2.864
CIRC.	3420.000	172.889736	0.000	218253.651	4037892.542	176.507603	3055.880	263.545599	171.286300	3237.765	58.324296	3.184
CIRC.	3440.000	175.910471	0.000	218261.478	4037874.139	176.493903	3075.868	263.531899	171.305407	3257.740	58.343403	3.578
CIRC.	3460.000	178.931205	0.000	218268.423	4037855.386	176.499890	3095.864	263.537886	171.342662	3277.646	58.380658	3.774

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 38
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 4 : Enlace Chiclana Norte
EJE : 24 : Ramal Salida A-48-Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 3000.000 Dis=-2821.196
Distancia: 399.296 Azimut: 230.952151
BO : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 3000.000 Dis=-2598.903

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3460.000	178.931205	0.000	218268.423	4037855.386	171.342662	3277.646	340.390511	164.635158	3057.926	133.683007	3.774
CIRC.	3480.000	181.951939	0.000	218274.471	4037836.324	171.397657	3297.442	340.445506	164.736825	3077.315	133.784674	3.735
CLOT.	3500.000	183.693173	0.000	218279.690	4037817.018	171.468354	3317.101	340.516203	164.854352	3096.485	133.902201	3.484
CLOT.	3520.000	184.605614	0.000	218284.662	4037797.646	171.543023	3336.716	340.590872	164.975450	3115.592	134.023299	3.210
CLOT.	3540.000	187.228938	0.000	218289.093	4037778.144	171.627120	3356.220	340.674969	165.105803	3134.540	134.153652	3.042
CLOT.	3560.000	191.563147	0.000	218292.453	4037758.432	171.730209	3375.459	340.778058	165.255294	3153.123	134.303143	2.999
CLOT.	3580.000	197.608238	0.000	218294.196	4037738.516	171.861172	3394.200	340.909021	165.432934	3171.063	134.480783	3.068
CIRC.	3600.000	205.728846	0.000	218293.762	4037718.534	172.027969	3412.088	341.075818	165.646532	3187.965	134.694381	3.120
CIRC.	3620.000	215.914763	0.000	218290.382	4037698.843	172.240298	3428.489	341.288147	165.905241	3203.148	134.953090	3.122
CIRC.	3631.051	221.543210	0.000	218287.178	4037688.270	172.376810	3436.728	341.424659	166.066858	3210.616	135.114707	3.101

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 38
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 4 : Enlace Chiclana Norte
EJE : 24 : Ramal Salida A-48-Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 3000.000 Dis=-2598.903
Distancia: 335.344 Azimut: 340.002277
BO : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 3000.000 Dis=-2912.342

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3680.000	246.472512	0.000	218262.415	4037646.410	166.905352	3234.367	226.903075	164.433395	3542.881	24.431118	2.949
CIRC.	3631.051	221.543210	0.000	218287.178	4037688.270	166.066858	3210.616	226.064581	163.652480	3520.776	23.650203	3.101

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 39
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 4 : Enlace Chiclana Norte
EJE : 24 : Ramal Salida A-48-Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 3000.000 Dis=-2912.342
Distancia: 357.672 Azimut: 314.030496
BO : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 3000.000 Dis=3183.319

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3960.000	389.075341	0.000	218046.103	4037708.422	167.270817	3378.993	253.240321	162.609209	3628.434	48.578713	2.074
CIRC.	3631.051	221.543210	0.000	218287.178	4037688.270	163.652480	3520.776	249.621984	159.419198	3783.548	45.388702	3.101

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 40
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 4 : Enlace Chiclana Norte
EJE : 24 : Ramal Salida A-48-Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 3000.000 Dis=3183.319
Distancia: 270.987 Azimut: 299.545648
BO : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 3000.000 Dis=3358.243

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	4320.000	172.421835	0.000	218282.721	4037782.239	158.519956	3705.749	258.974308	154.958605	3874.604	55.412957	0.948
CIRC.	3631.051	221.543210	0.000	218287.178	4037688.270	159.419198	3783.548	259.873549	155.888533	3949.337	56.342884	3.101

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  41
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    4 : Enlace Chiclana Norte
 EJE        :   24 : Ramal Salida A-48-Chiclana


                            ============================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ============================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:    3000.000 Dis=3358.243
                                                                        Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:    3000.000 Dis=3583.122

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4580.000 304.838748     0.000   218159.776  4037605.128 158.334310  3934.828 246.888192 155.468100  4144.762  44.021982      0.134

CIRC.    3631.051 221.543210     0.000   218287.178  4037688.270 155.888533  3949.337 244.442415 153.159860  4165.910  41.713742      3.101

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  42
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    4 : Enlace Chiclana Norte
 EJE        :   24 : Ramal Salida A-48-Chiclana


                            ============================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ============================================

 BR : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:    3000.000 Dis=3583.122
                                                                        Distancia:   272.091  Azimut: 338.645542
 BO : BR120                X:  215267.736  Y: 4040931.749  Z:   2.846  PK:    3000.000 Dis=3851.272

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4880.000  57.627493     0.000   218092.078  4037828.087 153.982342  3931.647 215.336800 152.997464  4196.382  14.351922     -0.804

CIRC.    3631.051 221.543210     0.000   218287.178  4037688.270 153.159860  4165.910 214.514318 152.276340  4431.387  13.630798      3.101
```

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 1
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 4 : Enlace Chiclana Norte
EJE : 25 : Ramal Salida Algeciras-Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 4043.772 Dis=-2935.981
Distancia: 357.672 Azimut: 314.030496
BO : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 4040.993 Dis=-3212.140

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	4000.000	386.919488	0.000	218085.815	4038229.990	160.997933	2958.727	246.967437	156.255227	3232.362	42.224731	3.008
CIRC.	4020.000	20.425792	0.000	218086.955	4038249.727	160.732275	2943.261	246.701779	155.990101	3217.855	41.959605	3.251
CIRC.	4040.000	53.932096	0.000	218097.856	4038266.221	160.332625	2936.170	246.302129	155.615257	3212.153	41.584761	3.495
CIRC.	4060.000	87.438399	0.000	218115.567	4038275.006	159.910095	2939.436	245.879599	155.234915	3216.847	41.204419	3.773
CLOT.	4080.000	120.942935	0.000	218135.294	4038273.705	159.582804	2952.144	245.552308	154.954960	3230.627	40.924464	4.201
CLOT.	4100.000	149.166486	0.000	218152.058	4038263.101	159.428324	2970.633	245.397828	154.840410	3249.587	40.809914	4.789
CLOT.	4120.000	167.204121	0.000	218164.017	4038247.154	159.425705	2990.565	245.395209	154.865966	3269.477	40.835470	5.536
CIRC.	4140.000	175.093772	0.000	218172.533	4038229.072	159.508524	3010.167	245.478028	154.968727	3288.750	40.938231	6.443
CIRC.	4160.000	178.731599	0.000	218179.627	4038210.376	159.621984	3029.427	245.591488	155.098786	3307.578	41.068290	7.508
CIRC.	4180.000	182.369426	0.000	218185.642	4038191.304	159.756816	3048.360	245.726320	155.247768	3326.007	41.217272	8.699
CLOT.	4200.000	185.050156	0.000	218190.654	4038171.944	159.910318	3066.950	245.879822	155.413232	3344.030	41.382736	9.899
RECTA	4220.000	185.816572	0.000	218195.143	4038152.455	160.072293	3085.355	246.041797	155.586102	3361.837	41.555606	10.946
RECTA	4240.000	185.816572	0.000	218199.562	4038132.949	160.233700	3103.752	246.203204	155.758352	3379.637	41.727856	11.627
RECTA	4260.000	185.816572	0.000	218203.981	4038113.443	160.393204	3122.168	246.362708	155.928796	3397.461	41.898300	11.939
RECTA	4280.000	185.816572	0.000	218208.401	4038093.938	160.550836	3140.604	246.520340	156.097459	3415.309	42.066963	11.882
RECTA	4300.000	185.816572	0.000	218212.820	4038074.432	160.706628	3159.059	246.676132	156.264368	3433.181	42.233872	11.456
RECTA	4320.000	185.816572	0.000	218217.239	4038054.926	160.860608	3177.533	246.830112	156.429547	3451.076	42.399051	10.662

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 39
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO   :   4 : Enlace Chiclana Norte
EJE   : 25 : Ramal Salida Algeciras-Chiclana

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 4040.993 Dis=-3212.140
Distancia: 270.987 Azimut: 299.545648
BO : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 4038.676 Dis=-3391.081

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	4320.000	185.816572	0.000	218217.239	4038054.926	156.429547	3451.076	256.883899	152.720867	3627.047	53.175218	10.662
RECTA	4340.000	185.816572	0.000	218221.658	4038035.421	156.593021	3468.994	257.047373	152.894420	3644.418	53.348771	9.528
RECTA	4360.000	185.816572	0.000	218226.077	4038015.915	156.754814	3486.935	257.209165	153.066325	3661.816	53.520677	8.328
RECTA	4380.000	185.816572	0.000	218230.496	4037996.409	156.914949	3504.898	257.369300	153.236603	3679.240	53.690955	7.128
CLOT.	4400.000	185.559678	0.000	218234.937	4037976.909	157.073086	3522.893	257.527438	153.404939	3696.702	53.859290	5.928
CLOT.	4420.000	184.569371	0.000	218239.567	4037957.452	157.226456	3540.992	257.680807	153.568765	3714.282	54.023117	4.739
CIRC.	4440.000	182.947281	0.000	218244.606	4037938.098	157.371395	3559.285	257.825746	153.724675	3732.082	54.179027	3.859
CIRC.	4460.000	181.249628	0.000	218250.156	4037918.884	157.506166	3577.803	257.960518	153.871032	3750.138	54.325383	3.429
CIRC.	4480.000	179.551975	0.000	218256.216	4037899.825	157.630751	3596.530	258.085103	154.007788	3768.434	54.462139	3.437
CIRC.	4500.000	177.854322	0.000	218262.783	4037880.934	157.745199	3615.450	258.199551	154.134961	3786.955	54.589312	3.583
CIRC.	4520.000	177.734189	0.000	218269.773	4037862.196	157.850966	3634.521	258.305317	154.253886	3805.655	54.708238	3.729
CIRC.	4540.000	180.730047	0.000	218276.181	4037843.252	157.965815	3653.408	258.420166	154.381183	3824.142	54.835535	3.876
CIRC.	4560.000	183.725905	0.000	218281.692	4037824.028	158.094775	3671.979	258.549126	154.521542	3842.266	54.975894	4.022
CLOT.	4580.000	184.457538	0.000	218286.612	4037804.643	158.232195	3690.332	258.686547	154.669683	3860.146	55.124035	4.168

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  40
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    4 : Enlace Chiclana Norte
 EJE        :   25 : Ramal Salida Algeciras-Chiclana


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:    4038.676 Dis=-3391.081
                                                                      Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:    4036.969 Dis=-3618.754

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CLOT.    4580.000 184.457538     0.000   218286.612  4037804.643 154.669683  3860.146 243.223565 151.947640  4080.000  40.501522      4.168

CLOT.    4600.000 186.359205     0.000   218291.200  4037785.177 154.821470  3877.891 243.375352 152.102944  4097.334  40.656826      4.315

CLOT.    4620.000 189.971755     0.000   218294.940  4037765.533 154.984297  3895.242 243.538179 152.268416  4114.246  40.822298      4.461

CLOT.    4640.000 195.295190     0.000   218297.293  4037745.677 155.165099  3911.881 243.718981 152.450425  4130.397  41.004307      4.607

CLOT.    4660.000 202.329507     0.000   218297.711  4037725.692 155.369695  3927.403 243.923576 152.654234  4145.368  41.208116      4.754

CIRC.    4680.000 211.927632     0.000   218295.519  4037705.832 155.603669  3941.192 244.157551 152.884763  4158.527  41.438645      4.900

CIRC.    4699.409 221.543210     0.000   218290.480  4037687.108 155.859572  3952.340 244.413454 153.134395  4168.987  41.688276      5.042

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  40
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    4 : Enlace Chiclana Norte
 EJE        :   25 : Ramal Salida Algeciras-Chiclana


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:    4036.969 Dis=-3618.754
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120                X:  215267.736  Y: 4040931.749  Z:   2.846  PK:    4036.549 Dis=-3887.594

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4880.000 311.012421     0.000   218147.150  4037603.185 155.635972  4138.134 216.990429 154.597962  4401.177  15.952420      6.363

CIRC.    4699.409 221.543210     0.000   218290.480  4037687.108 153.134395  4168.987 214.488853 152.253015  4434.487  13.607472      5.042

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                     pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   27 : Ramal Poligono-San Fernando


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR113                X:  217429.905  Y: 4040757.221  Z:   2.658  PK:       0.000 Dis=-1725.082
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis=-1446.321

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    1000.000 339.271814     0.000   214860.325  4041209.541 311.092700  2609.087  14.407343 312.796727  2338.150 216.111371      6.464

RECTA     510.913 339.271814     0.000   215259.267  4040926.608 304.957838  2177.237   8.272482 306.168083  1901.046 209.482726      3.922
```

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  41
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   27 : Ramal Poligono-San Fernando


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis=-1446.321
                                                                        Distancia:   315.594  Azimut: 312.962004
 BO : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       0.000 Dis=-1140.681

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    3140.000 339.271814     0.000   213114.754  4042447.517 325.439960  4381.878  12.477956 326.400715  4072.791 213.438711     17.583

RECTA     510.913 339.271814     0.000   215259.267  4040926.608 306.168083  1901.046 393.206079 304.820004  1587.603 191.858000      3.922

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  42
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   27 : Ramal Poligono-San Fernando


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       0.000 Dis=-1140.681
                                                                        Distancia:   399.296  Azimut: 230.952151
 BO : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:       0.000 Dis=-985.614

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    3460.000 339.271814     0.000   212853.735  4042632.634 327.333273  4386.744  96.381122 333.132610  4382.228 302.180459     19.246

RECTA     510.913 339.271814     0.000   215259.267  4040926.608 304.820004  1587.603  73.867853 320.795316  1474.444 289.843165      3.922

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  43
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   27 : Ramal Poligono-San Fernando


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:       0.000 Dis=-985.614
                                                                        Distancia:   335.344  Azimut: 340.002277
 BO : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:       0.000 Dis=-682.113

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    3680.000 339.271814     0.000   212674.283  4042759.903 333.425691  4601.255 393.423414 332.909850  4267.839 192.907574     20.389

RECTA     510.913 339.271814     0.000   215259.267  4040926.608 320.795316  1474.444 380.793039 315.312967  1158.540 175.310690      3.922
```

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  44
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   27 : Ramal Poligono-San Fernando


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:       0.000 Dis=-682.113
                                                                      Distancia:   357.672  Azimut: 314.030496
 BO : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:       0.000 Dis=-330.388

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    3960.000 339.271814     0.000   212445.891  4042921.881 333.301006  4546.527  19.270510 334.914825  4206.468 220.884329     21.844

RECTA     510.913 339.271814     0.000   215259.267  4040926.608 315.312967  1158.540   1.282471 315.885620   800.972 201.855124      3.922

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  45
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   27 : Ramal Poligono-San Fernando


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:       0.000 Dis=-330.388
                                                                      Distancia:   270.987  Azimut: 299.545648
 BO : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:       0.000 Dis= -60.361

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4320.000 339.271814     0.000   212152.244  4043130.139 335.258102  4565.692  35.712454 337.373897  4338.632 237.828248     23.715

RECTA     510.913 339.271814     0.000   215259.267  4040926.608 315.885620   800.972  16.339972 323.969127   543.236 224.423479      3.922

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  46
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   27 : Ramal Poligono-San Fernando


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:       0.000 Dis= -60.361
                                                                      Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:     234.364 Dis=   5.362

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4580.000 339.271814     0.000   211940.165  4043280.547 337.481189  4598.523  26.035071 339.099372  4345.115 227.653253     25.066

RECTA     510.913 339.271814     0.000   215259.267  4040926.608 323.969127   543.236  12.523009 336.558785   276.263 225.112667      3.922
```

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  47
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   27 : Ramal Poligono-San Fernando


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:     234.364 Dis=   5.362
                                                                       Distancia:   272.091  Azimut: 338.645542
 BO : BR120                X:  215267.736  Y: 4040931.749  Z:   2.846  PK:     506.979 Dis=   9.093

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4880.000 339.271814     0.000   211695.459  4043454.095 339.110509  4645.114   0.464967 339.139439  4373.030 200.493897     26.624

RECTA     510.913 339.271814     0.000   215259.267  4040926.608 336.558785   276.263 397.913243 265.264360     9.907 126.618817      3.922

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    3 : Enlace cambio de sentido
 EJE        :   29 : Via colectora-distribuidora  MI


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR113                X:  217429.905  Y: 4040757.221  Z:   2.658  PK:    1092.918 Dis=1581.505
                                                                       Distancia:   278.886  Azimut: 296.685356
 BO : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:    1092.918 Dis=1610.055

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    1000.000 386.940283     0.000   217567.944  4039093.501 194.730029  1669.436 298.044673 184.250021  1700.997  87.564665      3.553

RECTA    1020.000 386.940283     0.000   217563.870  4039113.082 194.824239  1649.588 298.138883 184.218023  1681.015  87.532667      4.081

CIRC.    1040.000 386.898273     0.000   217559.796  4039132.663 194.920743  1629.743 298.235387 184.185256  1661.033  87.499900      4.657

CIRC.    1060.000 374.165877     0.000   217553.785  4039151.703 195.097640  1610.290 298.412284 184.229678  1641.100  87.544322      5.233

CIRC.    1080.000 361.433482     0.000   217544.111  4039169.170 195.429582  1592.153 298.744226 184.429717  1621.803  87.744361      5.656

CIRC.    1092.918 353.209603     0.000   217536.090  4039179.285 195.722394  1581.505 299.037038 184.640556  1610.055  87.955200      5.688

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  42
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    3 : Enlace cambio de sentido
 EJE        :   29 : Via colectora-distribuidora  MI


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:    1092.918 Dis=1610.055
                                                                       Distancia:   315.594  Azimut: 312.962004
 BO : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:    1092.918 Dis=1768.958

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3140.000 249.996751     0.000   217391.192  4039182.935 190.288831  1578.097 277.326827 179.246288  1713.853  66.284283     -4.547

CIRC.    1092.918 353.209603     0.000   217536.090  4039179.285 184.640556  1610.055 271.678552 174.343487  1768.958  61.381483      5.688
```

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 43
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 3 : Enlace cambio de sentido
EJE : 29 : Via colectora-distribuidora MI

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 1092.918 Dis=1768.958
Distancia: 399.296 Azimut: 230.952151
BO : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 1092.918 Dis=1548.749

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3460.000	46.278424	0.000	217536.627	4039045.769	176.088376	1892.699	345.136225	164.404260	1660.618	133.452109	-6.147
CIRC.	1092.918	353.209603	0.000	217536.090	4039179.285	174.343487	1768.958	343.391336	161.510716	1548.749	130.558565	5.688

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 44
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 3 : Enlace cambio de sentido
EJE : 29 : Via colectora-distribuidora MI

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 1092.918 Dis=1548.749
Distancia: 335.344 Azimut: 340.002277
BO : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 1092.918 Dis=1868.445

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3680.000	306.222074	0.000	217471.664	4039211.750	162.991265	1485.819	222.988988	158.805801	1803.432	18.803524	-7.247
CIRC.	1092.918	353.209603	0.000	217536.090	4039179.285	161.510716	1548.749	221.508439	157.721216	1868.445	17.718939	5.688

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 45
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 3 : Enlace cambio de sentido
EJE : 29 : Via colectora-distribuidora MI

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 1092.918 Dis=1868.445
Distancia: 357.672 Azimut: 314.030496
BO : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 1092.918 Dis=-2157.081

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3960.000	127.968537	0.000	217419.373	4039021.724	163.966780	1929.858	249.936284	156.631293	2197.596	42.600797	-8.647
CIRC.	1092.918	353.209603	0.000	217536.090	4039179.285	157.721216	1868.445	243.690720	151.019797	2157.081	36.989301	5.688

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  46
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    3 : Enlace cambio de sentido
 EJE        :   29 : Via colectora-distribuidora  MI


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:    1092.918 Dis=-2157.081
                                                                       Distancia:   270.987  Azimut: 299.545648
 BO : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:    1092.918 Dis=-2352.389

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4320.000 298.785419     0.000   217459.998  4039212.209 151.991407  2080.736 252.445758 146.416711  2273.562  46.871062    -10.447

CIRC.    1092.918 353.209603     0.000   217536.090  4039179.285 151.019797  2157.081 251.474148 145.709300  2352.389  46.163651      5.688

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  47
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    3 : Enlace cambio de sentido
 EJE        :   29 : Via colectora-distribuidora  MI


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:    1092.918 Dis=-2352.389
                                                                       Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:    1092.918 Dis=-2594.750

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4580.000 133.264279     0.000   217412.000  4039025.571 151.021805  2368.300 239.575686 147.057726  2599.096  35.611607    -11.747

CIRC.    1092.918 353.209603     0.000   217536.090  4039179.285 145.709300  2352.389 234.263182 142.214884  2594.750  30.768766      5.688

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  48
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    3 : Enlace cambio de sentido
 EJE        :   29 : Via colectora-distribuidora  MI


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:    1092.918 Dis=-2594.750
                                                                       Distancia:   272.091  Azimut: 338.645542
 BO : BR120                X:  215267.736  Y: 4040931.749  Z:   2.846  PK:    1092.918 Dis=-2866.455

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4880.000 342.278347     0.000   217523.542  4039190.974 142.178144  2577.666 203.532602 141.840982  2849.378   3.195440    -13.247

CIRC.    1092.918 353.209603     0.000   217536.090  4039179.285 142.214884  2594.750 203.569342 141.876249  2866.455   3.230707      5.688
```

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 1
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 3 : Enlace cambio de sentido
EJE : 30 : Via de colectora-distribuidora MD

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 0.000 Dis=-1694.067
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 0.000 Dis=-1693.797

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	1000.000	163.188968	0.000	217988.200	4038285.021	185.860445	2534.456	289.175088	179.107894	2596.240	82.422538	3.039
CIRC.	1020.000	162.911753	0.000	217999.159	4038268.291	185.685807	2553.199	289.000451	178.986654	2615.614	82.301298	3.184
CIRC.	1040.000	162.547970	0.000	218010.210	4038251.621	185.511138	2571.922	288.825782	178.864599	2634.970	82.179242	3.325
CIRC.	1060.000	162.184187	0.000	218021.356	4038235.015	185.336365	2590.625	288.651009	178.741670	2654.307	82.056314	3.425
CIRC.	1080.000	161.820404	0.000	218032.597	4038218.473	185.161491	2609.306	288.476134	178.617890	2673.625	81.932534	3.471
CIRC.	1100.000	161.456622	0.000	218043.933	4038201.996	184.986516	2627.966	288.301160	178.493276	2692.923	81.807920	3.464
CIRC.	1120.000	161.092839	0.000	218055.362	4038185.583	184.811444	2646.605	288.126088	178.367848	2712.201	81.682491	3.404
CIRC.	1140.000	160.729056	0.000	218066.885	4038169.236	184.636277	2665.222	287.950921	178.241622	2731.459	81.556266	3.290
CIRC.	1160.000	160.583674	0.000	218078.493	4038152.950	184.461243	2683.821	287.775887	178.114848	2750.700	81.429491	3.123
CIRC.	1180.000	160.947456	0.000	218090.053	4038136.629	184.289901	2702.461	287.604545	177.991125	2769.967	81.305769	2.908
CIRC.	1200.000	161.311239	0.000	218101.520	4038120.243	184.123406	2721.162	287.438050	177.871630	2789.274	81.186274	2.684
CIRC.	1220.000	161.675022	0.000	218112.893	4038103.791	183.961673	2739.920	287.276317	177.756282	2808.621	81.070926	2.460
CIRC.	1240.000	162.038804	0.000	218124.172	4038087.275	183.804621	2758.735	287.119265	177.645005	2828.005	80.959649	2.237
CIRC.	1260.000	162.402587	0.000	218135.356	4038070.695	183.652168	2777.604	286.966812	177.537723	2847.424	80.852367	2.013
CIRC.	1280.000	162.766370	0.000	218146.445	4038054.050	183.504233	2796.527	286.818876	177.434363	2866.879	80.749007	1.789
CIRC.	1300.000	163.130153	0.000	218157.439	4038037.343	183.360737	2815.500	286.675381	177.334851	2886.367	80.649495	1.565
CIRC.	1320.000	163.493935	0.000	218168.338	4038020.573	183.221603	2834.523	286.536247	177.239116	2905.887	80.553760	1.342
CIRC.	1340.000	163.783780	0.000	218179.142	4038003.743	183.086714	2853.594	286.401357	177.147049	2925.437	80.461693	1.118
CIRC.	1360.000	163.698937	0.000	218189.927	4037986.900	182.954092	2872.684	286.268736	177.056680	2944.999	80.371324	0.894
CIRC.	1380.000	163.614094	0.000	218200.734	4037970.071	182.822661	2891.778	286.137305	176.966944	2964.560	80.281587	0.671

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  43
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    3 : Enlace cambio de sentido
 EJE        :   30 : Via de colectora-distribuidora MD


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR113                X:  217429.905  Y: 4040757.221  Z:   2.658  PK:       0.000 Dis=-1694.067
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis=-1693.797

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    1400.000 163.529251     0.000   218211.564  4037953.257 182.692398  2910.877 286.007042 176.877828  2984.122  80.192471      0.447

CIRC.    1411.975 163.478451     0.000   218218.059  4037943.197 182.614953  2922.314 285.929597 176.824761  2995.835  80.139405      0.313

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  44
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    3 : Enlace cambio de sentido
 EJE        :   30 : Via de colectora-distribuidora MD


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis=-1693.797
                                                                      Distancia:   315.594  Azimut: 312.962004
 BO : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       0.000 Dis=-1822.684

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3140.000 156.147906     0.000   219237.302  4036548.952 170.616667  4683.863 257.654663 167.379166  4884.958  54.417162    -19.015

CIRC.    1411.975 163.478451     0.000   218218.059  4037943.197 176.824761  2995.835 263.862757 171.485753  3176.677  58.523749      0.313

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  45
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    3 : Enlace cambio de sentido
 EJE        :   30 : Via de colectora-distribuidora MD


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       0.000 Dis=-1822.684
                                                                      Distancia:   399.296  Azimut: 230.952151
 BO : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:       0.000 Dis=-1565.494

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3460.000 154.790417     0.000   219443.322  4036304.102 166.650468  5199.709 335.698317 162.340734  4998.806 131.388583    -22.594

CIRC.    1411.975 163.478451     0.000   218218.059  4037943.197 171.485753  3176.677 340.533602 164.559393  2956.761 133.607242      0.313
```

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  46
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    3 : Enlace cambio de sentido
 EJE        :   30 : Via de colectora-distribuidora MD


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:       0.000 Dis=-1565.494
                                                                      Distancia:   335.344  Azimut: 340.002277
 BO : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:       0.000 Dis=-1871.443

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3680.000 153.857144     0.000   219587.969  4036138.342 162.003564  5217.135 222.001287 160.696597  5533.818  20.694320    -25.055

CIRC.    1411.975 163.478451     0.000   218218.059  4037943.197 164.559393  2956.761 224.557116 162.102324  3269.899  22.100048      0.313

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  47
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    3 : Enlace cambio de sentido
 EJE        :   30 : Via de colectora-distribuidora MD


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:       0.000 Dis=-1871.443
                                                                      Distancia:   357.672  Azimut: 314.030496
 BO : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:       0.000 Dis=2138.013

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3960.000 152.669341     0.000   219775.551  4035930.470 160.339303  5811.999 246.308807 157.849953  6083.793  43.819457    -28.187

CIRC.    1411.975 163.478451     0.000   218218.059  4037943.197 162.102324  3269.899 248.071828 157.688905  3538.855  43.658409      0.313

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  44
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    3 : Enlace cambio de sentido
 EJE        :   30 : Via de colectora-distribuidora MD


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:       0.000 Dis=2138.013
                                                                      Distancia:   270.987  Azimut: 299.545648
 BO : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:       0.000 Dis=2316.269

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4320.000 151.142166     0.000   220022.371  4035668.413 157.518276  6442.304 257.972628 155.456972  6611.951  55.911324    -32.213

CIRC.    1411.975 163.478451     0.000   218218.059  4037943.197 157.688905  3538.855 258.143256 154.006876  3710.667  54.461227      0.313
```

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 45
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 3 : Enlace cambio de sentido
EJE : 30 : Via de colectora-distribuidora MD

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 0.000 Dis=2316.269
Distancia: 277.714 Azimut: 311.446118
BO : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 0.000 Dis=2547.261

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	4580.000	150.039207	0.000	220204.502	4035482.870	155.273018	6871.217	243.826900	153.688114	7087.876	42.241995	-35.121
CIRC.	1411.975	163.478451	0.000	218218.059	4037943.197	154.006876	3710.667	242.560757	151.219188	3932.365	39.773070	0.313

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 46
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 3 : Enlace cambio de sentido
EJE : 30 : Via de colectora-distribuidora MD

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR119 X: 215491.215 Y: 4040776.537 Z: 2.627 PK: 0.000 Dis=2547.261
Distancia: 272.091 Azimut: 338.645542
BO : BR120 X: 215267.736 Y: 4040931.749 Z: 2.846 PK: 0.000 Dis=2817.268

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	4880.000	148.766561	0.000	220418.611	4035272.740	153.514222	7387.220	214.868679	152.990319	7652.182	14.344776	-38.477
CIRC.	1411.975	163.478451	0.000	218218.059	4037943.197	151.219188	3932.365	212.573646	150.409790	4199.506	11.764248	0.313

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 1
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 5 : Caminos y vias de servicio
EJE : 33 : Reposicion via de servicio A-4 margen derecha

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 627.805 Dis= -1.227
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 909.447 Dis= 5.975

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	1000.000	316.116713	0.000	217061.771	4040753.732	299.396715	368.150	2.711359	307.792254	90.301	211.106898	3.428
CIRC.	1020.000	317.935626	0.000	217042.483	4040759.018	300.295208	387.426	3.609852	309.463451	110.128	212.778095	3.648
RECTA	1040.000	318.466903	0.000	217023.312	4040764.715	301.173185	406.662	4.487829	310.832667	129.962	214.147310	3.881
RECTA	1060.000	318.466903	0.000	217004.147	4040770.435	301.975239	425.963	5.289883	311.849270	149.838	215.163914	4.113
RECTA	1080.000	318.466903	0.000	216984.983	4040776.156	302.707657	445.325	6.022301	312.627613	169.742	215.942257	4.345
RECTA	1100.000	318.466903	0.000	216965.818	4040781.876	303.378959	464.741	6.693603	313.242500	189.667	216.557144	4.577
CIRC.	1120.000	317.741182	0.000	216946.630	4040787.516	303.985527	484.223	7.300171	313.714853	209.612	217.029496	4.810
CIRC.	1140.000	316.761767	0.000	216927.360	4040792.869	304.508352	503.808	7.822996	314.022782	229.584	217.337426	5.042
CIRC.	1160.000	315.782352	0.000	216908.010	4040797.926	304.955241	523.480	8.269885	314.202994	249.572	217.517638	5.274
CIRC.	1180.000	314.802937	0.000	216888.585	4040802.684	305.334162	543.226	8.648806	314.283833	269.569	217.598477	5.473
CIRC.	1200.000	313.823522	0.000	216869.088	4040807.143	305.652056	563.034	8.966700	314.285863	289.569	217.600507	5.584
CIRC.	1220.000	312.844107	0.000	216849.525	4040811.301	305.914989	582.894	9.229633	314.224358	309.567	217.539002	5.606
CIRC.	1240.000	311.864692	0.000	216829.901	4040815.158	306.128275	602.795	9.442919	314.110893	329.558	217.425536	5.539
CIRC.	1260.000	310.885277	0.000	216810.220	4040818.713	306.296590	622.729	9.611234	313.954399	349.541	217.269043	5.384
CIRC.	1280.000	309.905862	0.000	216790.486	4040821.964	306.424058	642.688	9.738702	313.761877	369.511	217.076521	5.148
CIRC.	1300.000	308.926447	0.000	216770.704	4040824.911	306.514328	662.667	9.828972	313.538890	389.467	216.853534	4.898
CIRC.	1320.000	307.947032	0.000	216750.880	4040827.554	306.570641	682.658	9.885284	313.289911	409.405	216.604555	4.648
CIRC.	1340.000	306.967617	0.000	216731.017	4040829.891	306.595878	702.656	9.910521	313.018584	429.325	216.333228	4.398
CIRC.	1360.000	305.988202	0.000	216711.121	4040831.923	306.592613	722.655	9.907257	312.727899	449.224	216.042543	4.148
CIRC.	1380.000	305.008787	0.000	216691.196	4040833.648	306.563149	742.652	9.877793	312.420339	469.101	215.734983	3.898

Istram 20.01.01.08 18/03/20 16:42:07 2378 pagina 45
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO   :   5 : Caminos y vias de servicio
EJE   : 33 : Reposicion via de servicio A-4 margen derecha

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR113 X: 217429.905 Y: 4040757.221 Z: 2.658 PK: 627.805 Dis= -1.227
Distancia: 278.886 Azimut: 296.685356
BO : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 909.447 Dis= 5.975

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	1400.000	304.029372	0.000	216671.246	4040835.067	306.509554	762.642	9.824198	312.097979	488.953	215.412623	3.648
CIRC.	1420.000	303.049957	0.000	216651.277	4040836.178	306.433686	782.621	9.748330	311.762568	508.779	215.077212	3.398
CIRC.	1440.000	302.070542	0.000	216631.294	4040836.982	306.337223	802.584	9.651867	311.415590	528.578	214.730233	3.161
CIRC.	1460.000	301.091127	0.000	216611.300	4040837.479	306.221679	822.530	9.536323	311.058312	548.349	214.372956	2.972
CIRC.	1480.000	300.111712	0.000	216591.301	4040837.668	306.088427	842.454	9.403071	310.691824	568.089	214.006468	2.835
CIRC.	1500.000	299.132297	0.000	216571.302	4040837.549	305.938715	862.353	9.253359	310.317066	587.797	213.631710	2.749
CIRC.	1520.000	298.152882	0.000	216551.306	4040837.123	305.773675	882.224	9.088319	309.934856	607.473	213.249500	2.713
CIRC.	1540.000	297.173467	0.000	216531.320	4040836.389	305.594342	902.066	8.908986	309.545906	627.114	212.860550	2.719
CIRC.	1560.000	296.181481	0.000	216511.347	4040835.347	305.401659	921.874	8.716303	309.150842	646.719	212.465486	2.728
CIRC.	1580.000	291.088522	0.000	216491.453	4040833.352	305.153199	941.535	8.467843	308.689716	666.140	212.004360	2.737
CIRC.	1600.000	285.995564	0.000	216471.781	4040829.772	304.811445	960.867	8.126089	308.111523	685.170	211.426167	2.747
CIRC.	1620.000	280.902606	0.000	216452.458	4040824.632	304.383624	979.769	7.698268	307.428181	703.724	210.742825	2.756
RECTA	1640.000	277.400810	0.000	216433.580	4040818.038	303.881184	998.179	7.195828	306.656598	721.759	209.971242	2.765
RECTA	1656.504	277.400810	0.000	216418.106	4040812.302	303.462225	1013.297	6.776869	306.023927	736.586	209.338571	2.773

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  46
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   33 : Reposicion via de servicio A-4 margen derecha


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR114               X:  217151.397  Y: 4040742.707  Z:   2.658  PK:     909.447 Dis=   5.975
                                                                      Distancia:   315.594  Azimut: 312.962004
 BO : BR115               X:  216842.322  Y: 4040806.521  Z:   2.915  PK:    1226.128 Dis=  -6.112

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    3140.000 277.400810     0.000   215027.104  4040296.670 286.824326  2170.615 373.862321 282.568037  1885.461 169.606033      3.460

RECTA    1656.504 277.400810     0.000   216418.106  4040812.302 306.023927   736.586 393.061923 300.867426   424.256 187.905422      2.773

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  46
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   33 : Reposicion via de servicio A-4 margen derecha


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR115               X:  216842.322  Y: 4040806.521  Z:   2.915  PK:    1226.128 Dis=  -6.112
                                                                      Distancia:   399.296  Azimut: 230.952151
 BO : BR112               X:  216655.745  Y: 4040453.497  Z:   2.850  PK:    1387.734 Dis=-381.745

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    3460.000 277.400810     0.000   214727.056  4040185.445 281.818801  2204.561  50.866650 291.208487  1947.227 260.256336      3.608

RECTA    1656.504 277.400810     0.000   216418.106  4040812.302 300.867426   424.256  69.915275 362.759058   430.364 331.806907      2.773

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  47
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   33 : Reposicion via de servicio A-4 margen derecha


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR112               X:  216655.745  Y: 4040453.497  Z:   2.850  PK:    1387.734 Dis=-381.745
                                                                      Distancia:   335.344  Azimut: 340.002277
 BO : BR116               X:  216384.453  Y: 4040650.617  Z:  12.503  PK:    1656.504 Dis=-165.150

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    3680.000 277.400810     0.000   214520.772  4040108.978 289.814710  2162.591 349.812433 281.994018  1940.793 141.991741      3.710

RECTA    1656.504 277.400810     0.000   216418.106  4040812.302 362.759058   430.364  22.756781  13.063967   165.150 273.061691      2.773
```

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  48
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   33 : Reposicion via de servicio A-4 margen derecha


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:    1656.504 Dis=-165.150
                                                                       Distancia:   357.672  Azimut: 314.030496
 BO : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:    1656.504 Dis= 391.676

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    3960.000 277.400810     0.000   214258.230  4040011.656 281.415230  2220.156 367.384734 275.582784  1916.443 161.552288      3.839

RECTA    1656.504 277.400810     0.000   216418.106  4040812.302  13.063967   165.150  99.033471  86.324257   391.676 372.293762      2.773

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  49
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   33 : Reposicion via de servicio A-4 margen derecha


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:    1656.504 Dis= 391.676
                                                                       Distancia:   270.987  Azimut: 299.545648
 BO : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:    1656.504 Dis= 659.212

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4320.000 277.400810     0.000   213920.676  4039886.528 275.870267  2276.319 376.324618 272.775229  2026.251 173.229581      4.006

RECTA    1656.504 277.400810     0.000   216418.106  4040812.302  86.324257   391.676 186.778609  91.726760   659.212 392.181112      2.773

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  50
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   33 : Reposicion via de servicio A-4 margen derecha


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:    1656.504 Dis= 659.212
                                                                       Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:    1656.504 Dis= 927.580

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4580.000 277.400810     0.000   213676.887  4039796.157 273.300949  2285.643 361.854830 268.461388  2062.264 157.015270      4.126

RECTA    1656.504 277.400810     0.000   216418.106  4040812.302  91.726760   659.212 180.280642  97.544791   927.580 386.098672      2.773
```

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  51
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   33 : Reposicion via de servicio A-4 margen derecha


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR119               X:  215491.215  Y: 4040776.537  Z:   2.627  PK:    1656.504 Dis= 927.580
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120               X:  215267.736  Y: 4040931.749  Z:   2.846  PK:    1656.504 Dis=1156.554

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4880.000 277.400810     0.000   213395.591  4039691.884 269.594236  2359.685 330.948694 262.760762  2245.482 124.115220      4.265

RECTA    1656.504 277.400810     0.000   216418.106  4040812.302  97.544791   927.580 158.899249 106.586674  1156.554 367.941132      2.773

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   34 : Reposicion via de servicio CA-33 Margen derecha


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR113               X:  217429.905  Y: 4040757.221  Z:   2.658  PK:       0.000 Dis=1794.963
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114               X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis=1516.298

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    1000.000 189.175575     0.000   215079.604  4041044.696 307.748273  2367.816  11.062916 309.214614  2093.686 212.529258      0.261

CIRC.     669.348 385.844250     0.000   215050.190  4041038.850 307.499235  2396.322  10.813879 308.913769  2121.973 212.228413      2.790

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  47
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   34 : Reposicion via de servicio CA-33 Margen derecha


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR114               X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis=1516.298
                                                                      Distancia:   315.594  Azimut: 312.962004
 BO : BR115               X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       0.000 Dis=1209.623

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3140.000  71.617661     0.000   215058.353  4041055.692 309.449711  2116.316 396.487707 308.834643  1801.286 195.872639    -16.103

CIRC.     669.348 385.844250     0.000   215050.190  4041038.850 308.913769  2121.973 395.951765 308.207254  1807.129 195.245250      2.790
```

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  48
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   34 : Reposicion via de servicio CA-33 Margen derecha


                            ============================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ============================================

 BR : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       0.000 Dis=1209.623
                                                                        Distancia:   399.296  Azimut: 230.952151
 BO : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:       0.000 Dis=-1057.234

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3460.000 229.739842     0.000   215078.214  4041035.403 308.213844  1778.894  77.261693 322.497284  1681.434 291.545133    -18.550

CIRC.     669.348 385.844250     0.000   215050.190  4041038.850 308.207254  1807.129  77.255103 322.256480  1708.931 291.304329      2.790

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  49
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   34 : Reposicion via de servicio CA-33 Margen derecha


                            ============================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ============================================

 BR : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:       0.000 Dis=-1057.234
                                                                        Distancia:   335.344  Azimut: 340.002277
 BO : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:       0.000 Dis= 753.430

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3680.000 363.448842     0.000   215052.226  4041034.011 322.112804  1705.365 382.110527 317.838875  1386.297 177.836598    -20.232

CIRC.     669.348 385.844250     0.000   215050.190  4041038.850 322.256480  1708.931 382.254203 318.026116  1389.598 178.023839      2.790

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  50
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   34 : Reposicion via de servicio CA-33 Margen derecha


                            ============================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ============================================

 BR : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:       0.000 Dis= 753.430
                                                                        Distancia:   357.672  Azimut: 314.030496
 BO : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:       0.000 Dis= 400.275

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3960.000 351.805750     0.000   215053.918  4041031.856 317.765149  1384.077   3.734654 319.064862  1027.234 205.034367    -22.373

CIRC.     669.348 385.844250     0.000   215050.190  4041038.850 318.026116  1389.598   3.995620 319.408954  1032.874 205.378458      2.790
```

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  51
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   34 : Reposicion via de servicio CA-33 Margen derecha


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR117               X:  216035.432  Y: 4040728.808  Z:   2.773  PK:       0.000 Dis= 400.275
                                                                      Distancia:   270.987  Azimut: 299.545648
 BO : BR118               X:  215764.452  Y: 4040726.874  Z:   2.847  PK:       0.000 Dis= 129.320

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4320.000 279.693204     0.000   215069.525  4041027.914 319.117618  1011.159  19.571970 326.024575   757.330 226.478926    -25.126

CIRC.     669.348 385.844250     0.000   215050.190  4041038.850 319.408954  1032.874  19.863305 326.216418   779.422 226.670770      2.790

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  52
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   34 : Reposicion via de servicio CA-33 Margen derecha


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR118               X:  215764.452  Y: 4040726.874  Z:   2.847  PK:       0.000 Dis= 129.320
                                                                      Distancia:   277.714  Azimut: 311.446118
 BO : BR119               X:  215491.215  Y: 4040776.537  Z:   2.627  PK:     152.028 Dis=  -4.303

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4580.000 183.167476     0.000   215079.299  4041046.078 327.755789   755.861  16.309670 336.887896   492.267 225.441778    -27.114

CIRC.     669.348 385.844250     0.000   215050.190  4041038.850 326.216418   779.422  14.770300 334.159262   513.138 222.713143      2.790

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  53
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   34 : Reposicion via de servicio CA-33 Margen derecha


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR119               X:  215491.215  Y: 4040776.537  Z:   2.627  PK:     152.028 Dis=  -4.303
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120               X:  215267.736  Y: 4040931.749  Z:   2.846  PK:     423.936 Dis=  -0.529

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4880.000 256.407020     0.000   215074.308  4041030.539 334.835581   488.189 396.190039 330.061036   217.196 191.415494    -29.408

CIRC.     669.348 385.844250     0.000   215050.190  4041038.850 334.159262   513.138 395.513719 329.124055   242.481 190.478513      2.790
```

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   35 : Reposicion Calle Poligono Tres Caminos


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR113               X:  217429.905  Y: 4040757.221  Z:   2.658  PK:       0.000 Dis=1879.911
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114               X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis=1601.414

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

RECTA    1000.000 399.952889     0.000   215533.292  4041744.615 330.557675  2138.244  33.872319 335.294696  1903.177 238.609340

RECTA      49.943 399.952889     0.000   215533.995  4040794.559 301.253590  1896.277   4.568234 302.040223  1618.232 205.354867

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  48
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   35 : Reposicion Calle Poligono Tres Caminos


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR114               X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis=1601.414
                                                                      Distancia:   315.594  Azimut: 312.962004
 BO : BR115               X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       0.000 Dis=1293.515

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

RECTA    3140.000 399.952889     0.000   215531.709  4043884.615 369.698215  3534.823  56.736211 374.373679  3345.500 261.411675

RECTA      49.943 399.952889     0.000   215533.995  4040794.559 302.040223  1618.232 389.078219 299.417948  1308.381 186.455944

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  49
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   35 : Reposicion Calle Poligono Tres Caminos


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR115               X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       0.000 Dis=1293.515
                                                                      Distancia:   399.296  Azimut: 230.952151
 BO : BR112               X:  216655.745  Y: 4040453.497  Z:   2.850  PK:       0.000 Dis=1145.036

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

RECTA    3460.000 399.952889     0.000   215531.472  4044204.615 376.561510  3642.165 145.609359 381.461825  3915.977 350.509674

RECTA      49.943 399.952889     0.000   215533.995  4040794.559 299.417948  1308.381  68.465797 318.790677  1172.453 287.838526
```

```
 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  50
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   35 : Reposicion Calle Poligono Tres Caminos


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR112               X:  216655.745  Y: 4040453.497  Z:   2.850  PK:       0.000 Dis=1145.036
                                                                    Distancia:   335.344  Azimut: 340.002277
 BO : BR116               X:  216384.453  Y: 4040650.617  Z:  12.503  PK:       0.000 Dis= 840.453

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

RECTA    3680.000 399.952889     0.000   215531.309  4044424.615 382.433716  4127.242  42.431439 385.846566  3869.226 245.844290

RECTA      49.943 399.952889     0.000   215533.995  4040794.559 318.790677  1172.453 378.788400 310.673778   862.553 170.671501

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  51
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   35 : Reposicion Calle Poligono Tres Caminos


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR116               X:  216384.453  Y: 4040650.617  Z:  12.503  PK:       0.000 Dis= 840.453
                                                                    Distancia:   357.672  Azimut: 314.030496
 BO : BR117               X:  216035.432  Y: 4040728.808  Z:   2.773  PK:       0.000 Dis= 485.930

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

RECTA    3960.000 399.952889     0.000   215531.102  4044704.614 386.792216  4142.838  72.761720 391.967395  4007.666 277.936899

RECTA      49.943 399.952889     0.000   215533.995  4040794.559 310.673778   862.553 396.643282 308.300319   505.729 194.269823

 Istram 20.01.01.08 18/03/20 16:42:07   2378                                                                    pagina  52
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   35 : Reposicion Calle Poligono Tres Caminos


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR117               X:  216035.432  Y: 4040728.808  Z:   2.773  PK:       0.000 Dis= 485.930
                                                                    Distancia:   270.987  Azimut: 299.545648
 BO : BR118               X:  215764.452  Y: 4040726.874  Z:   2.847  PK:       0.000 Dis= 215.789

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

RECTA    4320.000 399.952889     0.000   215530.836  4045064.614 392.624268  4365.070  93.078619 396.574684  4344.027 297.029036

RECTA      49.943 399.952889     0.000   215533.995  4040794.559 308.300319   505.729   8.754670 318.186065   240.190 218.640417
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  53
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   35 : Reposicion Calle Poligono Tres Caminos


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:       0.000 Dis= 215.789
                                                                      Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:      31.953 Dis= -42.794

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

RECTA    4580.000 399.952889     0.000   215530.643  4045324.614 396.765384  4603.681  85.319266   0.551884  4548.248 289.105765

RECTA      49.943 399.952889     0.000   215533.995  4040794.559 318.186065   240.190   6.739947  74.617896    46.422 363.171777

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  54
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   35 : Reposicion Calle Poligono Tres Caminos


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:      31.953 Dis= -42.794
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120                X:  215267.736  Y: 4040931.749  Z:   2.846  PK:      49.943 Dis=-299.525

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

RECTA    4880.000 399.952889     0.000   215530.421  4045624.614   0.514820  4848.236  61.869277   3.559791  4700.211 264.914249

RECTA      49.943 399.952889     0.000   215533.995  4040794.559  74.617896    46.422 135.972353 130.288646   299.525 391.643104

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   36 : Reposicion acceso a CA-33 pk 5+080


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR113                X:  217429.905  Y: 4040757.221  Z:   2.658  PK:      41.470 Dis=-1940.000
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:      41.510 Dis=-1661.157

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

RECTA    1000.000 207.916468     0.000   215372.455  4039736.578 270.683642  2296.696 373.998286 267.231647  2043.754 170.546291

RECTA      58.429 207.916468     0.000   215489.239  4040670.878 297.169461  1942.586   0.484105 297.250610  1663.709 200.565254
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  49
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   36 : Reposicion acceso a CA-33 pk 5+080


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR114               X:  217151.397  Y: 4040742.707  Z:   2.658  PK:      41.510 Dis=-1661.157
                                                                      Distancia:   315.594  Azimut: 312.962004
 BO : BR115               X:  216842.322  Y: 4040806.521  Z:   2.915  PK:      40.700 Dis=-1356.364

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

RECTA    3140.000 207.916468     0.000   215107.028  4037613.102 236.837776  3738.164 323.875772 231.688361  3634.442 118.726357

RECTA      58.429 207.916468     0.000   215489.239  4040670.878 297.250610  1663.709 384.288606 293.639314  1359.865 180.677310

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  50
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   36 : Reposicion acceso a CA-33 pk 5+080


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR115               X:  216842.322  Y: 4040806.521  Z:   2.915  PK:      40.700 Dis=-1356.364
                                                                      Distancia:   399.296  Azimut: 230.952151
 BO : BR112               X:  216655.745  Y: 4040453.497  Z:   2.850  PK:      58.429 Dis=-1186.588

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

RECTA    3460.000 207.916468     0.000   215067.338  4037295.573 229.799110  3934.123 398.846959 229.668871  3534.901 198.716720

RECTA      58.429 207.916468     0.000   215489.239  4040670.878 293.639314  1359.865  62.687163 311.729026  1186.588 280.776875

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  51
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   36 : Reposicion acceso a CA-33 pk 5+080


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR112               X:  216655.745  Y: 4040453.497  Z:   2.850  PK:      58.429 Dis=-1186.588
                                                                      Distancia:   335.344  Azimut: 340.002277
 BO : BR116               X:  216384.453  Y: 4040650.617  Z:  12.503  PK:      42.611 Dis=-894.028

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

RECTA    3680.000 207.916468     0.000   215040.051  4037077.272 228.414965  3742.909 288.412688 222.908713  3817.881  82.906436

RECTA      58.429 207.916468     0.000   215489.239  4040670.878 311.729026  1186.588 371.726750 301.440603   895.443 161.438326
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  52
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   36 : Reposicion acceso a CA-33 pk 5+080


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR116               X:  216384.453  Y: 4040650.617  Z:  12.503  PK:      42.611 Dis=-894.028
                                                                      Distancia:   357.672  Azimut: 314.030496
 BO : BR117               X:  216035.432  Y: 4040728.808  Z:   2.773  PK:      40.893 Dis=-545.819

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

RECTA    3960.000 207.916468     0.000   215005.322  4036799.434 221.891934  4090.674 307.861438 216.322086  4062.156 102.291590

RECTA      58.429 207.916468     0.000   215489.239  4040670.878 301.440603   895.443 387.410107 293.273091   549.256 179.242595

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  53
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   36 : Reposicion acceso a CA-33 pk 5+080


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR117               X:  216035.432  Y: 4040728.808  Z:   2.773  PK:      40.893 Dis=-545.819
                                                                      Distancia:   270.987  Azimut: 299.545648
 BO : BR118               X:  215764.452  Y: 4040726.874  Z:   2.847  PK:      39.955 Dis=-276.011

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

RECTA    4320.000 207.916468     0.000   214960.671  4036442.214 215.639328  4419.276 316.093679 211.805466  4359.401 112.259818

RECTA      58.429 207.916468     0.000   215489.239  4040670.878 293.273091   549.256 393.727443 287.221533   280.852 187.675885

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  54
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   36 : Reposicion acceso a CA-33 pk 5+080


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR118               X:  215764.452  Y: 4040726.874  Z:   2.847  PK:      39.955 Dis=-276.011
                                                                      Distancia:   277.714  Azimut: 311.446118
 BO : BR119               X:  215491.215  Y: 4040776.537  Z:   2.627  PK:      20.949 Dis= -75.614

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

RECTA    4580.000 207.916468     0.000   214928.423  4036184.221 211.586690  4618.944 300.140572 207.763124  4626.673  96.317006

RECTA      58.429 207.916468     0.000   215489.239  4040670.878 287.221533   280.852 375.775415 201.190389   105.677  89.744270
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  55
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   36 : Reposicion acceso a CA-33 pk 5+080


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR119               X:  215491.215  Y: 4040776.537  Z:   2.627  PK:      20.949 Dis= -75.614
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120               X:  215267.736  Y: 4040931.749  Z:   2.846  PK:       0.000 Dis=-295.672

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

RECTA    4880.000 207.916468     0.000   214891.213  4035886.538 207.772461  4926.672 269.126919 204.742287  5059.242  66.096745

RECTA      58.429 207.916468     0.000   215489.239  4040670.878 201.190389   105.677 262.544847 155.184118   342.224  16.538576

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                      pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   44 : Glorieta del Poligono de Tres Caminos A2


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR113               X:  217429.905  Y: 4040757.221  Z:   2.658  PK:       0.000 Dis=-1860.518
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114               X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis=-1581.646

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    1000.000 361.979599     0.000   215527.949  4040635.173 295.920415  1905.868 399.235059 295.789299  1627.006 199.103943      6.766

CIRC.      29.820 291.435731     0.000   215551.974  4040624.457 295.506780  1882.618 398.821424 295.301846  1603.788 198.616490      2.781

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  50
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   44 : Glorieta del Poligono de Tres Caminos A2


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR114               X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis=-1581.646
                                                                      Distancia:   315.594  Azimut: 312.962004
 BO : BR115               X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       0.000 Dis=-1279.901

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3140.000 211.444850     0.000   215573.218  4040644.761 296.054039  1581.215 383.092035 291.929175  1279.371 178.967171     15.556

CIRC.      29.820 291.435731     0.000   215551.974  4040624.457 295.301846  1603.788 382.339842 291.076421  1303.129 178.114416      2.781
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  51
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   44 : Glorieta del Poligono de Tres Caminos A2


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       0.000 Dis=-1279.901
                                                                      Distancia:   399.296  Azimut: 230.952151
 BO : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:       0.000 Dis=-1099.353

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3460.000 226.318159     0.000   215571.515  4040639.188 291.665295  1281.776  60.713144 310.798339  1100.016 279.846188     16.871

CIRC.      29.820 291.435731     0.000   215551.974  4040624.457 291.076421  1303.129  60.124270 309.782713  1116.932 278.830562      2.781

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  52
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   44 : Glorieta del Poligono de Tres Caminos A2


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:       0.000 Dis=-1099.353
                                                                      Distancia:   335.344  Azimut: 340.002277
 BO : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:       0.000 Dis=-811.603

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3680.000 386.543559     0.000   215524.178  4040643.986 310.617386  1147.489 370.615109 299.509334   860.301 159.507057     17.774

CIRC.      29.820 291.435731     0.000   215551.974  4040624.457 309.782713  1116.932 369.780436 298.000158   832.890 157.997881      2.781

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  53
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   44 : Glorieta del Poligono de Tres Caminos A2


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:       0.000 Dis=-811.603
                                                                      Distancia:   357.672  Azimut: 314.030496
 BO : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:       0.000 Dis=-470.403

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3960.000 299.557704     0.000   215548.795  4040624.232 297.990616   836.075 383.960121 286.524298   497.747 172.493802     18.924

CIRC.      29.820 291.435731     0.000   215551.974  4040624.457 298.000158   832.890 383.969662 286.466668   494.591 172.436172      2.781
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  54
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   44 : Glorieta del Poligono de Tres Caminos A2


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR117               X:  216035.432  Y: 4040728.808  Z:   2.773  PK:       0.000 Dis=-470.403
                                                                      Distancia:   270.987  Azimut: 299.545648
 BO : BR118               X:  215764.452  Y: 4040726.874  Z:   2.847  PK:       0.000 Dis=-209.043

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4320.000  16.290176     0.000   215524.435  4040655.559 290.936104   516.220 391.390455 281.613343   250.388 182.067695     20.403

CIRC.      29.820 291.435731     0.000   215551.974  4040624.457 286.466668   494.591 386.921019 271.406025   235.873 171.860377      2.781

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  55
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   44 : Glorieta del Poligono de Tres Caminos A2


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR118               X:  215764.452  Y: 4040726.874  Z:   2.847  PK:       0.000 Dis=-209.043
                                                                      Distancia:   277.714  Azimut: 311.446118
 BO : BR119               X:  215491.215  Y: 4040776.537  Z:   2.627  PK:       0.000 Dis= 156.357

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4580.000 278.374739     0.000   215556.951  4040625.660 271.108888   230.870 359.662770 173.841774   164.575  62.395656     21.471

CIRC.      29.820 291.435731     0.000   215551.974  4040624.457 271.406025   235.873 359.959907 175.802437   163.768  64.356319      2.781

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  56
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   44 : Glorieta del Poligono de Tres Caminos A2


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR119               X:  215491.215  Y: 4040776.537  Z:   2.627  PK:       0.000 Dis= 156.357
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120               X:  215267.736  Y: 4040931.749  Z:   2.846  PK:      29.820 Dis= 418.592

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4880.000 242.318466     0.000   215568.298  4040633.810 168.475162   162.212 229.829619 149.720963   423.208  11.075421     22.703

CIRC.      29.820 291.435731     0.000   215551.974  4040624.457 175.802437   163.768 237.156895 152.479816   418.592  13.834274      2.781
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   45 : Glorieta del Poligono de Tres Caminos A3


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR113                X:  217429.905  Y: 4040757.221  Z:   2.658  PK:      55.188 Dis=-1854.355
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:      55.188 Dis=-1575.538

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    1000.000 347.059196     0.000   215555.304  4040591.632 294.391115  1881.900 397.705759 293.992109  1603.227 197.306753     10.810

CIRC.      55.188 139.628745     0.000   215580.439  4040622.661 295.376344  1854.355 398.690988 295.144651  1575.538 198.459295      2.896

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  51
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   45 : Glorieta del Poligono de Tres Caminos A3


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:      55.188 Dis=-1575.538
                                                                      Distancia:   315.594  Azimut: 312.962004
 BO : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:      55.188 Dis=-1275.207

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3140.000 358.890761     0.000   215552.805  4040594.376 294.109783  1605.459 381.147779 289.619650  1306.851 176.657646     28.733

CIRC.      55.188 139.628745     0.000   215580.439  4040622.661 295.144651  1575.538 382.182647 290.789077  1275.207 177.827072      2.896

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  52
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   45 : Glorieta del Poligono de Tres Caminos A3


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:      55.188 Dis=-1275.207
                                                                      Distancia:   399.296  Azimut: 230.952151
 BO : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:      55.188 Dis=-1088.531

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3460.000 177.482396     0.000   215587.540  4040613.340 290.275214  1269.566  59.323063 309.456013  1080.098 278.503862     31.413

CIRC.      55.188 139.628745     0.000   215580.439  4040622.661 290.789077  1275.207  59.836926 309.933695  1088.531 278.981545      2.896
```

Istram 20.01.01.08 18/03/20 16:42:08 2378 pagina 53
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 45 : Glorieta del Poligono de Tres Caminos A3

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 55.188 Dis=-1088.531
Distancia: 335.344 Azimut: 340.002277
BO : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 55.188 Dis=-804.500

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3680.000	77.764146	0.000	215561.933	4040625.205	309.912823	1107.207	369.910546	298.033743	822.912	158.031466	33.256
CIRC.	55.188	139.628745	0.000	215580.439	4040622.661	309.933695	1088.531	369.931419	297.787322	804.500	157.785045	2.896

Istram 20.01.01.08 18/03/20 16:42:08 2378 pagina 54
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 45 : Glorieta del Poligono de Tres Caminos A3

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 55.188 Dis=-804.500
Distancia: 357.672 Azimut: 314.030496
BO : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 55.188 Dis=-467.211

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3960.000	169.031827	0.000	215586.458	4040615.762	297.221128	798.756	383.190632	284.297133	462.987	170.266637	35.601
CIRC.	55.188	139.628745	0.000	215580.439	4040622.661	297.787322	804.500	383.756826	285.409022	467.211	171.378526	2.896

Istram 20.01.01.08 18/03/20 16:42:08 2378 pagina 55
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 2 : Accesos al Poligono
EJE : 45 : Glorieta del Poligono de Tres Caminos A3

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 55.188 Dis=-467.211
Distancia: 270.987 Azimut: 299.545648
BO : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 55.188 Dis=-211.474

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	4320.000	114.947417	0.000	215573.431	4040625.864	286.042666	473.332	386.497018	269.033877	216.084	169.488228	38.616
CIRC.	55.188	139.628745	0.000	215580.439	4040622.661	285.409022	467.211	385.863373	267.195092	211.474	167.649443	2.896

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  56
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   45 : Glorieta del Poligono de Tres Caminos A3


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:      55.188 Dis=-211.474
                                                                      Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:       0.000 Dis=-153.663

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4580.000 142.553122     0.000   215581.173  4040622.108 266.941031   211.109 355.494913 166.420384   178.719  54.974266     40.794

CIRC.      55.188 139.628745     0.000   215580.439  4040622.661 267.195092   211.474 355.748973 166.547776   177.873  55.101658      2.896

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  57
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   45 : Glorieta del Poligono de Tres Caminos A3


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:       0.000 Dis=-153.663
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120                X:  215267.736  Y: 4040931.749  Z:   2.846  PK:       0.000 Dis=-399.838

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4880.000 297.482780     0.000   215569.568  4040586.428 175.112221   205.623 236.466679 154.271657   458.639  15.626114     43.307

CIRC.      55.188 139.628745     0.000   215580.439  4040622.661 166.547776   177.873 227.902234 149.629896   439.680  10.984353      2.896

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                      pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   47 : Reposicion de camino  A-48 Margen Izquierda


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR113                X:  217429.905  Y: 4040757.221  Z:   2.658  PK:     533.800 Dis=1722.388
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:     533.800 Dis=-1756.135

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    1000.000 390.362950     0.000   217520.088  4039503.195 195.429650  1257.265 298.744294 181.594427  1293.183  84.909071      3.150

RECTA     533.800 390.362950     0.000   217590.391  4039042.326 194.059583  1722.388 297.374227 183.915364  1756.135  87.230007      3.028
```

Istram 20.01.01.08 18/03/20 16:42:08 2378 pagina 52
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 5 : Caminos y vias de servicio
EJE : 47 : Reposicion de camino A-48 Margen Izquierda

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 533.800 Dis=-1756.135
Distancia: 315.594 Azimut: 312.962004
BO : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 533.800 Dis=-1916.244

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	3140.000	390.362950	0.000	217197.374	4041618.722	3.338160	877.221	90.376156	26.236017	886.416	313.274013	3.709
RECTA	533.800	390.362950	0.000	217590.391	4039042.326	183.915364	1756.135	270.953360	174.468520	1916.244	61.506516	3.028

Istram 20.01.01.08 18/03/20 16:42:08 2378 pagina 53
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 5 : Caminos y vias de servicio
EJE : 47 : Reposicion de camino A-48 Margen Izquierda

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 533.800 Dis=-1916.244
Distancia: 399.296 Azimut: 230.952151
BO : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 533.800 Dis=-1692.621

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	3460.000	390.362950	0.000	217149.117	4041935.063	16.898203	1169.500	185.946052	20.464598	1561.555	389.512447	3.793
RECTA	533.800	390.362950	0.000	217590.391	4039042.326	174.468520	1916.244	343.516369	162.758571	1692.621	131.806420	3.028

Istram 20.01.01.08 18/03/20 16:42:08 2378 pagina 54
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 5 : Caminos y vias de servicio
EJE : 47 : Reposicion de camino A-48 Margen Izquierda

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 533.800 Dis=-1692.621
Distancia: 335.344 Azimut: 340.002277
BO : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 533.800 Dis=-2010.196

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
RECTA	3680.000	390.362950	0.000	217115.941	4042152.547	16.839137	1760.270	76.836860	28.852855	1670.589	288.850579	3.851
RECTA	533.800	390.362950	0.000	217590.391	4039042.326	162.758571	1692.621	222.756294	159.040545	2010.196	19.038268	3.028

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  55
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   47 : Reposicion de camino  A-48 Margen Izquierda


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:     533.800 Dis=-2010.196
                                                                      Distancia:   357.672  Azimut: 314.030496
 BO : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:     533.800 Dis=-2293.931

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    3960.000 390.362950     0.000   217073.717  4042429.345  23.535044  1907.605 109.504548  34.896326  1992.451 320.865830      3.924

RECTA     533.800 390.362950     0.000   217590.391  4039042.326 159.040545  2010.196 245.010049 152.581696  2293.931  38.551200      3.028

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  56
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   47 : Reposicion de camino  A-48 Margen Izquierda


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:     533.800 Dis=-2293.931
                                                                      Distancia:   270.987  Azimut: 299.545648
 BO : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:     533.800 Dis=-2484.302

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4320.000 390.362950     0.000   217019.429  4042785.228  28.412339  2279.718 128.866690  34.856248  2410.765 335.310600      4.018

RECTA     533.800 390.362950     0.000   217590.391  4039042.326 152.581696  2293.931 253.036048 147.437286  2484.302  47.891637      3.028

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  57
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   47 : Reposicion de camino  A-48 Margen Izquierda


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:     533.800 Dis=-2484.302
                                                                      Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:     533.800 Dis=-2722.871

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4580.000 390.362950     0.000   216980.220  4043042.255  30.781361  2615.163 119.335243  37.013875  2711.201 325.567756      4.086

RECTA     533.800 390.362950     0.000   217590.391  4039042.326 147.437286  2484.302 235.991167 143.957151  2722.871  32.511033      3.028
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  58
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   47 : Reposicion de camino  A-48 Margen Izquierda

                          ========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ========================================

 BR : BR119               X:  215491.215  Y: 4040776.537  Z:   2.627  PK:     533.800 Dis=-2722.871
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120               X:  215267.736  Y: 4040931.749  Z:   2.846  PK:     533.800 Dis=-2994.102

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ---------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4880.000 390.362950     0.000   216934.980  4043338.824  32.666488  2941.049  94.020946  38.564606  2928.090 299.919064      4.165

RECTA     533.800 390.362950     0.000   217590.391  4039042.326 143.957151  2722.871 205.311609 143.475010  2994.102   4.829468      3.028

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                     pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   50 : Puerta Verde Puerto Real - San Fernando


                          ========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ========================================

 BR : BR113               X:  217429.905  Y: 4040757.221  Z:   2.658  PK:    1760.000 Dis=-882.262
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114               X:  217151.397  Y: 4040742.707  Z:   2.658  PK:    1760.000 Dis=-603.590

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ---------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    1760.000 234.135884     0.000   216550.791  4040682.760 294.620667   882.262 397.935311 293.666819   603.590 196.981463      3.466
CIRC.    1780.000 223.525555     0.000   216542.050  4040664.797 293.396687   892.652 396.711331 291.904210   614.307 195.218854      3.544
CIRC.    1800.000 212.915225     0.000   216536.411  4040645.633 292.090225   900.435 395.404869 290.033325   622.601 193.347969      3.294
CIRC.    1820.000 202.304896     0.000   216534.028  4040625.798 290.727107   905.465 394.041751 288.085667   628.340 191.400311      2.971
CIRC.    1840.000 191.694566     0.000   216534.969  4040605.844 289.332624   907.648 392.647268 286.090974   631.438 189.405618      2.688
CIRC.    1860.000 227.935391     0.000   216535.647  4040586.233 287.972567   910.458 391.287211 284.157570   635.321 187.472214      2.532
RECTA    1880.000 268.045424     0.000   216520.037  4040574.380 287.375087   928.057 390.689731 283.412927   653.414 186.727571      2.500
CIRC.    1900.000 315.758196     0.000   216501.467  4040568.774 287.251551   947.369 390.566195 283.352960   672.801 186.667604      2.550
CIRC.    1920.000 397.749853     0.000   216490.136  4040583.467 288.360993   955.697 391.675637 284.955873   680.165 188.270517      2.930
RECTA    1940.000 337.714308     0.000   216478.664  4040598.650 289.484312   964.368 392.798956 286.570453   687.985 189.885097      3.270
RECTA    1960.000 337.714308     0.000   216462.072  4040609.817 290.378055   978.994 393.692699 287.875849   702.018 191.190493      3.355
CIRC.    1980.000 342.521059     0.000   216445.645  4040621.217 291.258618   993.612 394.573262 289.147436   716.133 192.462080      3.241
CIRC.    2000.000 355.253454     0.000   216431.282  4040635.087 292.252450  1006.064 395.567094 290.555704   728.113 193.870348      3.319
CIRC.    2020.000 345.540598     0.000   216419.310  4040651.054 293.336476  1016.156 396.651120 292.071114   737.802 195.385758      3.514
CIRC.    2040.000 260.657962     0.000   216400.781  4040651.956 293.510863  1034.494 396.825506 292.340349   756.082 195.654993      3.353
CIRC.    2060.000 242.391873     0.000   216388.851  4040636.032 292.622304  1048.084 395.936948 291.151523   769.972 194.466167      2.871
CIRC.    2080.000 258.636615     0.000   216374.702  4040621.977 291.884750  1063.835 395.199394 290.182873   786.022 193.497517      2.428
CIRC.    2100.000 275.613142     0.000   216357.362  4040612.131 291.439978  1082.312 394.754622 289.623891   804.700 192.938535      2.179
CIRC.    2120.000 286.460150     0.000   216338.081  4040606.963 291.293450  1102.115 394.608093 289.471723   824.566 192.786366      2.130
CIRC.    2140.000 279.184495     0.000   216318.815  4040601.634 291.142967  1121.931 394.457611 289.314609   844.449 192.629253      2.224
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  53
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   50 : Puerta Verde Puerto Real - San Fernando


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR113               X:  217429.905  Y: 4040757.221  Z:   2.658  PK:    1760.000 Dis=-882.262
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114               X:  217151.397  Y: 4040742.707  Z:   2.658  PK:    1760.000 Dis=-603.590

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    2160.000 271.908840     0.000   216300.282  4040594.144 290.872539  1141.333 394.187183 288.998550   863.983 192.313194      2.324

CIRC.    2180.000 264.633186     0.000   216282.725  4040584.589 290.491229  1160.096 393.805873 288.537539   882.945 191.852183      2.424

CIRC.    2200.000 257.357531     0.000   216266.372  4040573.094 290.008439  1178.012 393.323083 287.945465   901.132 191.260108      2.483

CIRC.    2220.000 236.554844     0.000   216252.596  4040558.740 289.367306  1193.922 392.681950 287.147178   917.435 190.461822      2.256

CIRC.    2230.709 222.919423     0.000   216247.783  4040549.197 288.910596  1200.286 392.225240 286.569542   924.102 189.884186      2.000

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  54
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   50 : Puerta Verde Puerto Real - San Fernando


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR114               X:  217151.397  Y: 4040742.707  Z:   2.658  PK:    1760.000 Dis=-603.590
                                                                      Distancia:   315.594  Azimut: 312.962004
 BO : BR115               X:  216842.322  Y: 4040806.521  Z:   2.915  PK:    1760.000 Dis=-316.713

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3140.000 265.174463     0.000   216268.570  4040574.285 287.999084   898.749 375.037080 275.515077   618.971 162.553073    -23.762

CIRC.    2230.709 222.919423     0.000   216247.783  4040549.197 286.569542   924.102 373.607538 273.995993   647.837 161.033989      2.000

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  55
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   50 : Puerta Verde Puerto Real - San Fernando


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR115               X:  216842.322  Y: 4040806.521  Z:   2.915  PK:    1760.000 Dis=-316.713
                                                                      Distancia:   399.296  Azimut: 230.952151
 BO : BR112               X:  216655.745  Y: 4040453.497  Z:   2.850  PK:    1865.497 Dis=-177.927

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3460.000 257.737809     0.000   216263.770  4040570.963 275.384764   624.668  44.432613 318.535892   409.198 287.583741    -32.828

CIRC.    2230.709 222.919423     0.000   216247.783  4040549.197 273.995993   647.837  43.043842 314.668583   419.036 283.716432      2.000
```

Istram 20.01.01.08 18/03/20 16:42:08 2378 pagina 56
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 5 : Caminos y vias de servicio
EJE : 50 : Puerta Verde Puerto Real - San Fernando

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 1865.497 Dis=-177.927
Distancia: 335.344 Azimut: 340.002277
BO : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 2050.034 Dis= 12.032

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3680.000	377.625109	0.000	216341.521	4040548.796	318.746268	328.357	378.743991	225.402497	110.502	85.400220	-39.061
CIRC.	2230.709	222.919423	0.000	216247.783	4040549.197	314.668583	419.036	374.666306	259.357258	170.190	119.354981	2.000

Istram 20.01.01.08 18/03/20 16:42:08 2378 pagina 54
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 5 : Caminos y vias de servicio
EJE : 50 : Puerta Verde Puerto Real - San Fernando

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 2050.034 Dis= 12.032
Distancia: 357.672 Azimut: 314.030496
BO : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 2216.183 Dis= 275.660

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3960.000	21.118037	0.000	216341.852	4040515.298	219.416855	141.866	305.386359	138.742569	373.469	24.712073	-46.994
CIRC.	2230.709	222.919423	0.000	216247.783	4040549.197	259.357258	170.190	345.326762	144.694797	278.124	30.664302	2.000

Istram 20.01.01.08 18/03/20 16:42:08 2378 pagina 55
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 5 : Caminos y vias de servicio
EJE : 50 : Puerta Verde Puerto Real - San Fernando

* * * DATOS PARA REPLANTEO DE PUNTOS * * *

BR : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 2216.183 Dis= 275.660
Distancia: 270.987 Azimut: 299.545648
BO : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 2230.709 Dis= 514.954

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	4320.000	362.751801	0.000	216336.261	4040559.196	132.683353	345.349	233.137705	118.159261	595.887	18.613612	-57.193
CIRC.	2230.709	222.919423	0.000	216247.783	4040549.197	144.694797	278.124	245.149149	122.426604	514.954	22.880956	2.000

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  56
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   50 : Puerta Verde Puerto Real - San Fernando


                            ============================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ============================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:    2230.709 Dis= 514.954
                                                                        Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:    2230.709 Dis= 789.987

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4580.000  31.709519     0.000   216338.502  4040507.695 123.219411   614.470 211.773293 119.560135   888.916   8.114017    -64.560

CIRC.    2230.709 222.919423     0.000   216247.783  4040549.197 122.426604   514.954 210.980486 118.583277   789.987   7.137158      2.000

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  57
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    5 : Caminos y vias de servicio
 EJE        :   50 : Puerta Verde Puerto Real - San Fernando


                            ============================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ============================================

 BR : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:    2230.709 Dis= 789.987
                                                                        Distancia:   272.091  Azimut: 338.645542
 BO : BR120                X:  215267.736  Y: 4040931.749  Z:   2.846  PK:    2230.130 Dis=1052.060

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4880.000  49.737655     0.000   216330.078  4040496.373 120.520371   884.411 181.874829 124.761257  1148.096 386.115715    -73.059

CIRC.    2230.709 222.919423     0.000   216247.783  4040549.197 118.583277   789.987 179.937734 123.691927  1052.064 385.046385      2.000

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   73 : Glorieta del Poligono de Tres Caminos A4


                            ============================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ============================================

 BR : BR113                X:  217429.905  Y: 4040757.221  Z:   2.658  PK:      25.265 Dis=-1831.668
                                                                        Distancia:   278.886  Azimut: 296.685356
 BO : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:      25.265 Dis=-1552.955

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    1000.000 383.395301     0.000   215504.935  4040544.160 292.982277  1936.726 396.296920 292.359883  1658.391 195.674527

CIRC.      25.265 149.169461     0.000   215604.775  4040602.609 294.619852  1831.668 397.934496 294.248983  1552.955 197.563627
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  55
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   73 : Glorieta del Poligono de Tres Caminos A4


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR114               X:  217151.397  Y: 4040742.707  Z:   2.658  PK:      25.265 Dis=-1552.955
                                                                      Distancia:   315.594  Azimut: 312.962004
 BO : BR115               X:  216842.322  Y: 4040806.521  Z:   2.915  PK:      25.265 Dis=-1254.234

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    3140.000 254.005822     0.000   215602.580  4040514.622 290.691797  1565.521 377.729793 285.278838  1273.643 172.316834

CIRC.      25.265 149.169461     0.000   215604.775  4040602.609 294.248983  1552.955 381.286979 289.603753  1254.234 176.641749

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  56
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   73 : Glorieta del Poligono de Tres Caminos A4


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR115               X:  216842.322  Y: 4040806.521  Z:   2.915  PK:      25.265 Dis=-1254.234
                                                                      Distancia:   399.296  Azimut: 230.952151
 BO : BR112               X:  216655.745  Y: 4040453.497  Z:   2.850  PK:      25.265 Dis=-1061.496

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    3460.000 193.536368     0.000   215622.596  4040565.714 287.590974  1243.269  56.638823 306.887735  1039.225 275.935584

CIRC.      25.265 149.169461     0.000   215604.775  4040602.609 289.603753  1254.234  58.651602 308.972485  1061.496 278.020334

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  57
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   73 : Glorieta del Poligono de Tres Caminos A4


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR112               X:  216655.745  Y: 4040453.497  Z:   2.850  PK:      25.265 Dis=-1061.496
                                                                      Distancia:   335.344  Azimut: 340.002277
 BO : BR116               X:  216384.453  Y: 4040650.617  Z:  12.503  PK:      25.265 Dis=-781.155

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    3680.000  26.963618     0.000   215508.207  4040584.292 307.224945  1154.968 367.222668 295.190467   878.753 155.188190

CIRC.      25.265 149.169461     0.000   215604.775  4040602.609 308.972485  1061.496 368.970208 296.085000   781.155 156.082723
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  58
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   73 : Glorieta del Poligono de Tres Caminos A4


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:      25.265 Dis=-781.155
                                                                      Distancia:   357.672  Azimut: 314.030496
 BO : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:      25.265 Dis=-448.767

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    3960.000 324.052845     0.000   215540.771  4040503.864 289.036128   856.350 375.005632 272.829600   543.405 158.799104

CIRC.      25.265 149.169461     0.000   215604.775  4040602.609 296.085000   781.155 382.054504 281.852655   448.767 167.822159

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  59
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   73 : Glorieta del Poligono de Tres Caminos A4


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:      25.265 Dis=-448.767
                                                                      Distancia:   270.987  Azimut: 299.545648
 BO : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:      25.265 Dis=-202.333

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    4320.000 306.024708     0.000   215557.236  4040499.901 271.577905   530.161 372.032256 247.105243   307.336 147.559594

CIRC.      25.265 149.169461     0.000   215604.775  4040602.609 281.852655   448.767 382.307006 257.898902   202.333 158.353253

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  60
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   73 : Glorieta del Poligono de Tres Caminos A4


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:      25.265 Dis=-202.333
                                                                      Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:       0.000 Dis=-185.224

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    4580.000 181.893276     0.000   215620.495  4040576.469 248.605681   208.196 337.159563 163.478179   238.203  52.032061

CIRC.      25.265 149.169461     0.000   215604.775  4040602.609 257.898902   202.333 346.452783 163.176723   207.718  51.730604
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  61
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   73 : Glorieta del Poligono de Tres Caminos A4


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:       0.000 Dis=-185.224
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120                X:  215267.736  Y: 4040931.749  Z:   2.846  PK:       0.000 Dis=-446.605

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    4880.000 100.203162     0.000   215563.097  4040619.632 172.651534   172.586 234.005992 151.755541   429.715  13.109999

CIRC.      25.265 149.169461     0.000   215604.775  4040602.609 163.176723   207.718 224.531181 149.245242   471.093  10.599700

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                      pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   74 : Glorieta del Poligono de Tres Caminos A1


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR113                X:  217429.905  Y: 4040757.221  Z:   2.658  PK:       0.000 Dis=1800.562
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis=1521.916

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    1000.000  37.504936     0.000   215618.924  4040640.823 295.913833  1814.718 399.228477 295.773740  1535.856 199.088384

CIRC.      47.917  17.122916     0.000   215614.946  4040632.126 295.619052  1819.265 398.933696 295.426013  1540.426 198.740656

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  56
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   74 : Glorieta del Poligono de Tres Caminos A1


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis=1521.916
                                                                      Distancia:   315.594  Azimut: 312.962004
 BO : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       0.000 Dis=1224.068

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    3140.000 178.725978     0.000   215672.208  4040633.993 295.329528  1483.179 382.367524 290.680494  1182.765 177.718490

CIRC.      47.917  17.122916     0.000   215614.946  4040632.126 295.426013  1540.426 382.464009 291.014549  1239.704 178.052545
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  57
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   74 : Glorieta del Poligono de Tres Caminos A1


                          ============================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ============================================

 BR : BR115               X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       0.000 Dis=1224.068
                                                                      Distancia:   399.296  Azimut: 230.952151
 BO : BR112               X:  216655.745  Y: 4040453.497  Z:   2.850  PK:       0.000 Dis=1028.864

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    3460.000  57.787069     0.000   215625.401  4040647.797 291.743111  1227.229  60.790960 311.865863  1048.505 280.913712

CIRC.      47.917  17.122916     0.000   215614.946  4040632.126 291.014549  1239.704  60.062398 310.820656  1056.017 279.868505

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  58
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   74 : Glorieta del Poligono de Tres Caminos A1


                          ============================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ============================================

 BR : BR112               X:  216655.745  Y: 4040453.497  Z:   2.850  PK:       0.000 Dis=1028.864
                                                                      Distancia:   335.344  Azimut: 340.002277
 BO : BR116               X:  216384.453  Y: 4040650.617  Z:  12.503  PK:       0.000 Dis= 749.853

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    3680.000 124.641569     0.000   215655.191  4040651.934 312.464173  1020.042 372.461896 300.114987   729.263 160.112710

CIRC.      47.917  17.122916     0.000   215614.946  4040632.126 310.820656  1056.017 370.818380 298.470491   769.729 158.468214

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  59
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   74 : Glorieta del Poligono de Tres Caminos A1


                          ============================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ============================================

 BR : BR116               X:  216384.453  Y: 4040650.617  Z:  12.503  PK:       0.000 Dis= 749.853
                                                                      Distancia:   357.672  Azimut: 314.030496
 BO : BR117               X:  216035.432  Y: 4040728.808  Z:   2.773  PK:       0.000 Dis= 420.610

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    3960.000 318.820023     0.000   215635.127  4040595.455 295.321931   751.354 381.291435 279.528462   421.933 165.497966

CIRC.      47.917  17.122916     0.000   215614.946  4040632.126 298.470491   769.729 384.439995 285.612283   431.458 171.581787
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  60
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   74 : Glorieta del Poligono de Tres Caminos A1


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR117               X:  216035.432  Y: 4040728.808  Z:   2.773  PK:       0.000 Dis= 420.610
                                                                      Distancia:   270.987  Azimut: 299.545648
 BO : BR118               X:  215764.452  Y: 4040726.874  Z:   2.847  PK:      47.917 Dis= 177.001

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    4320.000 282.763750     0.000   215651.891  4040595.246 278.666920   406.131 379.121272 245.039370   173.193 145.493722

CIRC.      47.917  17.122916     0.000   215614.946  4040632.126 285.612283   431.458 386.066634 264.039855   177.001 164.494207

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  61
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   74 : Glorieta del Poligono de Tres Caminos A1


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR118               X:  215764.452  Y: 4040726.874  Z:   2.847  PK:      47.917 Dis= 177.001
                                                                      Distancia:   277.714  Azimut: 311.446118
 BO : BR119               X:  215491.215  Y: 4040776.537  Z:   2.627  PK:      47.917 Dis=-190.168

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    4580.000  34.500886     0.000   215618.166  4040639.628 265.764178   170.328 354.318059 152.401604   186.710  40.955486

CIRC.      47.917  17.122916     0.000   215614.946  4040632.126 264.039855   177.001 352.593737 154.900271   190.168  43.454153

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  62
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    2 : Accesos al Poligono
 EJE        :   74 : Glorieta del Poligono de Tres Caminos A1


                          ==========================================
                          * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                          ==========================================

 BR : BR119               X:  215491.215  Y: 4040776.537  Z:   2.627  PK:      47.917 Dis=-190.168
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120               X:  215267.736  Y: 4040931.749  Z:   2.846  PK:      47.917 Dis=-458.616

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    4880.000 271.120658     0.000   215657.014  4040597.188 152.497989   244.245 213.852447 145.196751   513.292   6.551209

CIRC.      47.917  17.122916     0.000   215614.946  4040632.126 154.900271   190.168 216.254729 145.324922   458.616   6.679380
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   88 : Caballón V.S. MD 1+020 - 1+080


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR113                X:  217429.905  Y: 4040757.221  Z:   2.658  PK:       0.000 Dis= 354.054
                                                                       Distancia:   278.886  Azimut: 296.685356
 BO : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis=  78.720

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    1000.000 319.627230     0.000   216123.090  4041068.578 314.890245  1343.394  18.204889 319.537131  1078.706 222.851775      2.500

RECTA      90.603 319.627230     0.000   216989.609  4040792.628 305.108420   441.718   8.423064 319.053204   169.315 222.367848      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  57
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   88 : Caballón V.S. MD 1+020 - 1+080


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis=  78.720
                                                                       Distancia:   315.594  Azimut: 312.962004
 BO : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:      90.603 Dis=-147.940

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    3140.000 319.627230     0.000   214083.992  4041717.945 319.597034  3218.705   6.635030 320.316561  2905.009 207.354557      2.500

RECTA      90.603 319.627230     0.000   216989.609  4040792.628 319.053204   169.315   6.091200 105.987424   147.940 393.025420      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  58
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   88 : Caballón V.S. MD 1+020 - 1+080


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:      90.603 Dis=-147.940
                                                                       Distancia:   399.296  Azimut: 230.952151
 BO : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:      90.603 Dis=-475.893

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    3460.000 319.627230     0.000   213779.080  4041815.047 320.248163  3224.992  89.296012 328.142881  3182.612 297.190730      2.500

RECTA      90.603 319.627230     0.000   216989.609  4040792.628 105.987424   147.940 275.035273  49.501764   475.893  18.549613      2.500
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  59
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   88 : Caballón V.S. MD 1+020 - 1+080


                           ==========================================
                           * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                           ==========================================

 BR : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:      90.603 Dis=-475.893
                                                                      Distancia:   335.344  Azimut: 340.002277
 BO : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:      90.603 Dis=-621.595

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    3680.000 319.627230     0.000   213569.453  4041881.804 327.593628  3400.773 387.591351 326.247746  3072.466 186.245469      2.500

RECTA      90.603 319.627230     0.000   216989.609  4040792.628  49.501764   475.893 109.499487  85.326081   621.595 345.323805      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  60
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   88 : Caballón V.S. MD 1+020 - 1+080


                           ==========================================
                           * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                           ==========================================

 BR : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:      90.603 Dis=-621.595
                                                                      Distancia:   357.672  Azimut: 314.030496
 BO : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:      90.603 Dis=-956.308

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    3960.000 319.627230     0.000   213302.655  4041966.768 325.695557  3351.079  11.665061 327.078606  3000.102 213.048110      2.500

RECTA      90.603 319.627230     0.000   216989.609  4040792.628  85.326081   621.595 171.295586  95.748329   956.308 381.717833      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  61
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   88 : Caballón V.S. MD 1+020 - 1+080


                           ==========================================
                           * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                           ==========================================

 BR : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:      90.603 Dis=-956.308
                                                                      Distancia:   270.987  Azimut: 299.545648
 BO : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:      90.603 Dis=-1226.920

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4320.000 319.627230     0.000   212959.629  4042076.008 326.281548  3357.902  26.735899 328.541989  3112.425 228.996341      2.500

RECTA      90.603 319.627230     0.000   216989.609  4040792.628  95.748329   956.308 196.202681  96.586561  1226.920 397.040913      2.500
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  62
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   88 : Caballón V.S. MD 1+020 - 1+080


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:     90.603 Dis=-1226.920
                                                                      Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:     90.603 Dis=-1498.480

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4580.000 319.627230     0.000   212711.889  4042154.903 327.856451  3370.076  16.410333 329.309372  3102.346 217.863254      2.500

RECTA      90.603 319.627230     0.000   216989.609  4040792.628  96.586561  1226.920 185.140443  99.316385  1498.480 387.870266      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  63
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   88 : Caballón V.S. MD 1+020 - 1+080


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:     90.603 Dis=-1498.480
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120                X:  215267.736  Y: 4040931.749  Z:   2.846  PK:     90.603 Dis=-1727.484

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

RECTA    4880.000 319.627230     0.000   212426.034  4042245.936 328.458126  3399.187 389.812584 327.576525  3130.872 188.930983      2.500

RECTA      90.603 319.627230     0.000   216989.609  4040792.628  99.316385  1498.480 160.670842 105.132518  1727.484 366.486975      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   89 : Caballón V.S. MD 1+125 - 1+240


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR113                X:  217429.905  Y: 4040757.221  Z:   2.658  PK:    -11.068 Dis= 473.734
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:    -11.068 Dis= 202.199

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    1000.000 223.077489     0.000   216129.456  4040422.241 283.950362  1342.899 387.265006 280.654829  1071.009 183.969473      2.500

CIRC.     117.990 309.462848     0.000   216833.477  4040834.575 308.210876   601.424  11.525520 317.908379   330.928 221.223023      2.500
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  58
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   89 : Caballón V.S. MD 1+125 - 1+240


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:     -11.068 Dis= 202.199
                                                                      Distancia:   315.594  Azimut: 312.962004
 BO : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:     104.543 Dis= -26.302

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3140.000  13.482671     0.000   217372.692  4040055.109 180.177624   722.331 267.215620 160.871510   919.735  47.909506      2.500

CIRC.     117.990 309.462848     0.000   216833.477  4040834.575 317.908379   330.928   4.946375 380.556081    29.416 267.594077      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  59
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   89 : Caballón V.S. MD 1+125 - 1+240


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:     104.543 Dis= -26.302
                                                                      Distancia:   399.296  Azimut: 230.952151
 BO : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:     117.990 Dis=-420.487

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3460.000 382.141390     0.000   217361.807  4040371.700 144.366772   677.446 313.414621 107.342450   710.784  76.390299      2.500

CIRC.     117.990 309.462848     0.000   216833.477  4040834.575 380.556081    29.416 149.603930  27.782161   420.487 396.830010      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  60
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   89 : Caballón V.S. MD 1+125 - 1+240


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:     117.990 Dis=-420.487
                                                                      Distancia:   335.344  Azimut: 340.002277
 BO : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:     117.990 Dis=-485.245

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3680.000 360.594260     0.000   217266.619  4040568.878  88.115624   621.675 148.113347 105.881939   885.945 365.879662      2.500

CIRC.     117.990 309.462848     0.000   216833.477  4040834.575  27.782161   420.487  87.779884  75.246454   485.245 335.244177      2.500
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  61
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   89 : Caballón V.S. MD 1+125 - 1+240


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:     117.990 Dis=-485.245
                                                                      Distancia:   357.672  Azimut: 314.030496
 BO : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:     117.990 Dis=-805.023

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3960.000 333.170639     0.000   217060.775  4040755.488  90.206507   684.405 176.176012  98.343844  1025.690 384.313348      2.500

CIRC.     117.990 309.462848     0.000   216833.477  4040834.575  75.246454   485.245 161.215958  91.611561   805.023 377.581065      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  62
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   89 : Caballón V.S. MD 1+125 - 1+240


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:     117.990 Dis=-805.023
                                                                      Distancia:   270.987  Azimut: 299.545648
 BO : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:     117.990 Dis=-1074.436

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4320.000 297.911697     0.000   216715.897  4040841.393  89.561472   689.716 190.015823  92.374106   958.312 392.828457      2.500

CIRC.     117.990 309.462848     0.000   216833.477  4040834.575  91.611561   805.023 192.065913  93.607793  1074.436 394.062144      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  63
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   89 : Caballón V.S. MD 1+125 - 1+240


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:     117.990 Dis=-1074.436
                                                                      Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:     117.990 Dis=-1343.516

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4580.000 272.446906     0.000   216464.594  4040781.809  95.015140   702.294 183.569022  99.655210   973.393 388.209092      2.500

CIRC.     117.990 309.462848     0.000   216833.477  4040834.575  93.607793  1074.436 182.161674  97.249016  1343.516 385.802898      2.500
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  64
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   89 : Caballón V.S. MD 1+125 - 1+240


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:     117.990 Dis=-1343.516
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120                X:  215267.736  Y: 4040931.749  Z:   2.846  PK:     117.990 Dis=-1568.753

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4880.000 243.064455     0.000   216230.347  4040598.664 115.034455   760.233 176.388912 121.207523  1018.609 382.561981      2.500

CIRC.     117.990 309.462848     0.000   216833.477  4040834.575  97.249016  1343.516 158.603474 103.945952  1568.753 365.300410      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   90 : Caballón V.S. MD 1+350 - 1+450


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR113                X:  217429.905  Y: 4040757.221  Z:   2.658  PK:       0.000 Dis=-712.813
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis=-441.287

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    1000.000 221.802754     0.000   215937.880  4040354.339 283.210186  1545.462 386.524830 280.281679  1274.148 183.596322      2.500

CIRC.     101.730 298.050268     0.000   216621.358  4040852.122 307.438085   814.097  10.752729 312.959545   541.214 216.274189      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  59
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   90 : Caballón V.S. MD 1+350 - 1+450


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis=-441.287
                                                                      Distancia:   315.594  Azimut: 312.962004
 BO : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       0.000 Dis=-126.495

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3140.000  40.153913     0.000   217250.019  4039660.169 194.216169  1087.021 281.254165 178.246879  1216.693  65.284875      2.500

CIRC.     101.730 298.050268     0.000   216621.358  4040852.122 312.959545   541.214 399.997541 312.956105   225.620 199.994101      2.500
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  60
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   90 : Caballón V.S. MD 1+350 - 1+450


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       0.000 Dis=-126.495
                                                                       Distancia:   399.296  Azimut: 230.952151
 BO : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:      54.367 Dis=-398.791

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3460.000  12.991469     0.000   217378.762  4039950.481 164.362852  1010.234 333.410701 138.696701   880.783 107.744550      2.500

CIRC.     101.730 298.050268     0.000   216621.358  4040852.122 312.956105   225.620  82.003954 394.521843   400.105 363.569692      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  61
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   90 : Caballón V.S. MD 1+350 - 1+450


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:      54.367 Dis=-398.791
                                                                       Distancia:   335.344  Azimut: 340.002277
 BO : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:     101.730 Dis=-311.011

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3680.000 394.317289     0.000   217391.338  4040169.332 123.468767   788.573 183.466490 128.386114  1115.999 388.383837      2.500

CIRC.     101.730 298.050268     0.000   216621.358  4040852.122 394.521843   400.105  54.519566  55.129435   311.011 315.127159      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  62
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   90 : Caballón V.S. MD 1+350 - 1+450


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:     101.730 Dis=-311.011
                                                                       Distancia:   357.672  Azimut: 314.030496
 BO : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:     101.730 Dis=-598.762

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3960.000 370.550151     0.000   217315.497  4040437.179 114.346387   955.195 200.315891 114.260327  1312.865   0.229831      2.500

CIRC.     101.730 298.050268     0.000   216621.358  4040852.122  55.129435   311.011 141.098940  86.794472   598.762 372.763976      2.500
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  63
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   90 : Caballón V.S. MD 1+350 - 1+450


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:     101.730 Dis=-598.762
                                                                      Distancia:   270.987  Azimut: 299.545648
 BO : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:     101.730 Dis=-866.011

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4320.000 339.992402     0.000   217085.091  4040709.289 101.183718  1049.840 201.638069 100.847661  1320.756   1.302013      2.500

CIRC.     101.730 298.050268     0.000   216621.358  4040852.122  86.794472   598.762 187.248824  90.760432   866.011 391.214784      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  64
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   90 : Caballón V.S. MD 1+350 - 1+450


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:     101.730 Dis=-866.011
                                                                      Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:     101.730 Dis=-1132.668

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4580.000 317.922916     0.000   216852.695  4040822.946  94.394324  1092.476 182.948205  97.830768  1362.271 386.384649      2.500

CIRC.     101.730 298.050268     0.000   216621.358  4040852.122  90.760432   866.011 179.314314  95.748586  1132.668 384.302468      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  65
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   90 : Caballón V.S. MD 1+350 - 1+450


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:     101.730 Dis=-1132.668
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120                X:  215267.736  Y: 4040931.749  Z:   2.846  PK:     101.730 Dis=1355.962

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4880.000 292.458126     0.000   216555.681  4040847.216  95.779107  1066.810 157.133565 104.172383  1290.716 365.526841      2.500

CIRC.     101.730 298.050268     0.000   216621.358  4040852.122  95.748586  1132.668 157.103044 103.740635  1355.962 365.095093      2.500
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    1 : Ejes principales
 EJE        :   91 : Eje Auxiliar Pintura (LB_Izda_Eje1_MD)


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR113                X:  217429.905  Y: 4040757.221  Z:   2.658  PK:       0.000 Dis=1537.995
                                                                        Distancia:   278.886  Azimut: 296.685356
 BO : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis=1259.174

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    1000.000 396.075858     0.000   215200.614  4041227.010 313.222325  2278.254  16.536969 315.491580  2010.001 218.806223

CIRC.     448.591 337.077852     0.000   215467.208  4040766.757 300.309316  1962.721   3.623960 300.909033  1684.361 204.223677

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  60
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    1 : Ejes principales
 EJE        :   91 : Eje Auxiliar Pintura (LB_Izda_Eje1_MD)


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis=1259.174
                                                                        Distancia:   315.594  Azimut: 312.962004
 BO : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       0.000 Dis= 959.778

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    3140.000 225.044986     0.000   216344.031  4041035.578 322.153523   858.844   9.191519 327.430596   548.416 214.468592

CIRC.     448.591 337.077852     0.000   215467.208  4040766.757 300.909033  1684.361 387.947029 298.159621  1375.689 185.197617

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  61
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    1 : Ejes principales
 EJE        :   91 : Eje Auxiliar Pintura (LB_Izda_Eje1_MD)


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       0.000 Dis= 959.778
                                                                        Distancia:   399.296  Azimut: 230.952151
 BO : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:       0.000 Dis=-784.227

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    3460.000 259.283360     0.000   216149.613  4040786.265 298.138948   693.005  67.186797 337.026464   605.726 306.074313

CIRC.     448.591 337.077852     0.000   215467.208  4040766.757 298.159621  1375.689  67.207470 316.406144  1229.127 285.453993
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  62
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    1 : Ejes principales
 EJE        :   91 : Eje Auxiliar Pintura (LB_Izda_Eje1_MD)


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:       0.000 Dis=-784.227
                                                                      Distancia:   335.344  Azimut: 340.002277
 BO : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:       0.000 Dis= 488.622

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    3680.000 282.822242     0.000   215953.090  4040690.192 320.685007   741.450 380.682730 305.824276   433.174 165.822000

CIRC.     448.591 337.077852     0.000   215467.208  4040766.757 316.406144  1229.127 376.403867 308.018119   924.569 168.015842

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  63
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    1 : Ejes principales
 EJE        :   91 : Eje Auxiliar Pintura (LB_Izda_Eje1_MD)


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:       0.000 Dis= 488.622
                                                                      Distancia:   357.672  Azimut: 314.030496
 BO : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:       0.000 Dis= 161.643

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    3960.000 312.780820     0.000   215675.832  4040680.613 302.693236   709.255 388.662740 291.518357   362.815 177.487861

CIRC.     448.591 337.077852     0.000   215467.208  4040766.757 308.018119   924.569 393.987623 304.245407   569.490 190.214911

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  64
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    1 : Ejes principales
 EJE        :   91 : Eje Auxiliar Pintura (LB_Izda_Eje1_MD)


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:       0.000 Dis= 161.643
                                                                      Distancia:   270.987  Azimut: 299.545648
 BO : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:     143.622 Dis=  54.476

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    4320.000 351.298991     0.000   215365.259  4040851.606 311.537014   681.331  11.991365 319.279952   418.226 219.734304

CIRC.     448.591 337.077852     0.000   215467.208  4040766.757 304.245407   569.490   4.699758 308.491240   299.908 208.945592
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  65
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    1 : Ejes principales
 EJE        :   91 : Eje Auxiliar Pintura (LB_Izda_Eje1_MD)


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:     143.622 Dis=  54.476
                                                                        Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:     433.329 Dis=  21.178

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    4580.000 379.117670     0.000   215231.208  4041071.973 336.566305   635.171  25.120187 354.055167   393.555 242.609049

CIRC.     448.591 337.077852     0.000   215467.208  4040766.757 308.491240   299.908 397.045122 275.373178    25.923 163.927060

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  66
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :    1 : Ejes principales
 EJE        :   91 : Eje Auxiliar Pintura (LB_Izda_Eje1_MD)


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:     433.329 Dis=  21.178
                                                                        Distancia:   272.091  Azimut: 338.645542
 BO : BR120                X:  215267.736  Y: 4040931.749  Z:   2.846  PK:     448.591 Dis= 258.865

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ----------

CIRC.    4880.000  11.216146     0.000   215208.695  4041367.950 371.628908   655.429  32.983366 391.435189   440.179 252.789647

CIRC.     448.591 337.077852     0.000   215467.208  4040766.757 275.373178    25.923 336.727636 143.995163   258.865   5.349621

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   99 : Caballón A-48 MD 3+916 - 3+934


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR113                X:  217429.905  Y: 4040757.221  Z:   2.658  PK:       0.000 Dis= 839.773
                                                                        Distancia:   278.886  Azimut: 296.685356
 BO : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis= 650.206

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    1000.000  91.177833     0.000   216784.405  4039997.913 244.853775   996.604 348.168418 229.146058   830.302 132.460701      2.500

CIRC.      22.584 313.420083     0.000   216791.516  4040194.740 254.018814   850.838 357.333458 236.994682   655.578 140.309326      2.500
```

Istram 20.01.01.08 18/03/20 16:42:08 2378 pagina 61
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 10 : Caballones
EJE : 99 : Caballón A-48 MD 3+916 - 3+934

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR114 X: 217151.397 Y: 4040742.707 Z: 2.658 PK: 0.000 Dis= 650.206
Distancia: 315.594 Azimut: 312.962004
BO : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 22.584 Dis= 613.887

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3140.000	328.811520	0.000	216814.319	4040186.887	234.705293	650.044	321.743289	202.875095	620.267	89.913091	2.500
CIRC.	22.584	313.420083	0.000	216791.516	4040194.740	236.994682	655.578	324.032678	205.274807	613.887	92.312803	2.500

Istram 20.01.01.08 18/03/20 16:42:08 2378 pagina 62
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 10 : Caballones
EJE : 99 : Caballón A-48 MD 3+916 - 3+934

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR115 X: 216842.322 Y: 4040806.521 Z: 2.915 PK: 22.584 Dis= 613.887
Distancia: 399.296 Azimut: 230.952151
BO : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 22.584 Dis= 292.213

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3460.000	125.093193	0.000	216732.188	4040004.622	208.689094	809.427	377.736943	189.261482	455.337	158.309331	2.500
CIRC.	22.584	313.420083	0.000	216791.516	4040194.740	205.274807	613.887	374.322656	169.237577	292.213	138.285426	2.500

Istram 20.01.01.08 18/03/20 16:42:08 2378 pagina 63
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 10 : Caballones
EJE : 99 : Caballón A-48 MD 3+916 - 3+934

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 22.584 Dis= 292.213
Distancia: 335.344 Azimut: 340.002277
BO : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 22.584 Dis= 611.166

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3680.000	385.036843	0.000	216867.842	4040120.242	163.917426	395.024	223.915149	152.948502	717.609	12.946225	2.500
CIRC.	22.584	313.420083	0.000	216791.516	4040194.740	169.237577	292.213	229.235300	153.597340	611.166	13.595063	2.500

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  64
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   99 : Caballón A-48 MD 3+916 - 3+934


                            ============================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ============================================

 BR : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:      22.584 Dis= 611.166
                                                                        Distancia:   357.672  Azimut: 314.030496
 BO : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:      22.584 Dis= 925.684

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3960.000 206.783306     0.000   216671.158  4040107.589 169.074501   614.068 255.044005 149.265259   888.854  35.234763      2.500

CIRC.      22.584 313.420083     0.000   216791.516  4040194.740 153.597340   611.166 239.566844 139.150972   925.684  25.120476      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  65
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   99 : Caballón A-48 MD 3+916 - 3+934


                            ============================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ============================================

 BR : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:      22.584 Dis= 925.684
                                                                        Distancia:   270.987  Azimut: 299.545648
 BO : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:      22.584 Dis=1156.731

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4320.000 377.600188     0.000   216864.465  4040131.418 139.751135  1021.846 240.205486 131.586059  1250.838  32.040410      2.500

CIRC.      22.584 313.420083     0.000   216791.516  4040194.740 139.150972   925.684 239.605324 130.432445  1156.731  30.886797      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  66
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   99 : Caballón A-48 MD 3+916 - 3+934


                            ============================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ============================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:      22.584 Dis=1156.731
                                                                        Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:      22.584 Dis=1424.524

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4580.000 212.079048     0.000   216672.386  4040115.814 137.712712  1094.412 226.266594 132.468623  1353.410  21.022504      2.500

CIRC.      22.584 313.420083     0.000   216791.516  4040194.740 130.432445  1156.731 218.986327 126.783655  1424.524  15.337537      2.500
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  67
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :   99 : Caballón A-48 MD 3+916 - 3+934


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:      22.584 Dis=1424.524
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120                X:  215267.736  Y: 4040931.749  Z:   2.846  PK:      22.584 Dis=1692.657

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4880.000  21.093116     0.000   216865.152  4040064.424 130.441948  1547.517 191.796406 131.666630  1817.689 393.021088      2.500

CIRC.      22.584 313.420083     0.000   216791.516  4040194.740 126.783655  1424.524 188.138113 128.679696  1692.657 390.034154      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :  100 : Caballón A-48 MD 3+818 - 3+835


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR113                X:  217429.905  Y: 4040757.221  Z:   2.658  PK:      16.664 Dis= 878.352
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:      16.664 Dis= 707.916

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    1000.000 343.655316     0.000   216811.031  4040137.401 249.951408   875.889 353.266052 232.610282   694.438 135.924925      2.500

CIRC.      16.664 360.996221     0.000   216838.762  4040107.566 247.000168   878.352 350.314812 229.119780   707.916 132.434424      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  62
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :  100 : Caballón A-48 MD 3+818 - 3+835


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:      16.664 Dis= 707.916
                                                                      Distancia:   315.594  Azimut: 312.962004
 BO : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:      16.664 Dis= 698.964

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3140.000 235.411107     0.000   216588.657  4040100.507 245.807882   853.872 332.845878 221.958833   750.201 108.996829      2.500

CIRC.      16.664 360.996221     0.000   216838.762  4040107.566 229.119780   707.916 316.157776 200.324283   698.964  87.362279      2.500
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  63
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :  100 : Caballón A-48 MD 3+818 - 3+835


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:     16.664 Dis= 698.964
                                                                      Distancia:   399.296  Azimut: 230.952151
 BO : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:     16.664 Dis= 391.361

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3460.000  99.598889     0.000   216716.989  4039871.311 208.481160   943.571 377.529009 193.327474   585.398 162.375323      2.500

CIRC.      16.664 360.996221     0.000   216838.762  4040107.566 200.324283   698.964 369.372132 169.020736   391.361 138.068585      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  64
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :  100 : Caballón A-48 MD 3+818 - 3+835


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:     16.664 Dis= 391.361
                                                                      Distancia:   335.344  Azimut: 340.002277
 BO : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:     16.664 Dis=-708.026

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3680.000   6.227989     0.000   216865.327  4040006.657 172.079917   493.549 232.077640 159.166250   803.694  19.163974      2.500

CIRC.      16.664 360.996221     0.000   216838.762  4040107.566 169.020736   391.361 229.018459 155.649574   708.026  15.647297      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  65
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :  100 : Caballón A-48 MD 3+818 - 3+835


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR116                X:  216384.453  Y: 4040650.617  Z:  12.503  PK:     16.664 Dis=-708.026
                                                                      Distancia:   357.672  Azimut: 314.030496
 BO : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:     16.664 Dis=-1015.519

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3960.000 287.392299     0.000   216686.532  4040168.376 164.374096   569.041 250.343600 145.244549   859.078  31.214053      2.500

CIRC.      16.664 360.996221     0.000   216838.762  4040107.566 155.649574   708.026 241.619078 141.906645  1015.519  27.876149      2.500
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  66
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :  100 : Caballón A-48 MD 3+818 - 3+835


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR117                X:  216035.432  Y: 4040728.808  Z:   2.773  PK:      16.664 Dis=-1015.519
                                                                      Distancia:   270.987  Azimut: 299.545648
 BO : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:      16.664 Dis=-1240.034

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4320.000 134.603553     0.000   216638.467  4039892.927 160.213264  1030.703 260.667615 148.506789  1208.044  48.961141      2.500

CIRC.      16.664 360.996221     0.000   216838.762  4040107.566 141.906645  1015.519 242.360996 133.291305  1240.034  33.745656      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  67
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :  100 : Caballón A-48 MD 3+818 - 3+835


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:      16.664 Dis=-1240.034
                                                                      Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:      16.664 Dis=-1504.461

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4580.000  24.256126     0.000   216855.287  4039965.529 138.792210  1330.251 227.346092 134.148402  1586.956  22.702284      2.500

CIRC.      16.664 360.996221     0.000   216838.762  4040107.566 133.291305  1240.034 221.845187 129.334952  1504.461  17.888834      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  68
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :  100 : Caballón A-48 MD 3+818 - 3+835


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:      16.664 Dis=-1504.461
                                                                      Distancia:   272.091  Azimut: 338.645542
 BO : BR120                X:  215267.736  Y: 4040931.749  Z:   2.846  PK:      16.664 Dis=-1774.091

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4880.000 296.932171     0.000   216708.819  4040171.134 129.374393  1359.806 190.728851 130.917164  1629.495 392.271622      2.500

CIRC.      16.664 360.996221     0.000   216838.762  4040107.566 129.334952  1504.461 190.689410 130.757945  1774.091 392.112403      2.500
```

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina   1
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :  101 : Caballón (eje25) MD 4+137 - 4+147


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR113                X:  217429.905  Y: 4040757.221  Z:   2.658  PK:       0.000 Dis=-2634.826
                                                                      Distancia:   278.886  Azimut: 296.685356
 BO : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis=-2710.687

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    1000.000 269.936053     0.000   218155.113  4038240.820 182.137139  2618.817 285.451783 175.711295  2695.716  79.025938      2.500

CIRC.      19.705  62.539247     0.000   218167.737  4038219.290 181.988556  2643.007 285.303200 175.624701  2720.400  78.939345      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  63
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :  101 : Caballón (eje25) MD 4+137 - 4+147


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR114                X:  217151.397  Y: 4040742.707  Z:   2.658  PK:       0.000 Dis=-2710.687
                                                                      Distancia:   315.594  Azimut: 312.962004
 BO : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       0.000 Dis=-2895.953

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3140.000 171.005550     0.000   218149.573  4038224.190 175.977623  2709.111 263.015619 170.166833  2894.363  57.204829      2.500

CIRC.      19.705  62.539247     0.000   218167.737  4038219.290 175.624701  2720.400 262.662697 169.860388  2906.972  56.898384      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  64
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :  101 : Caballón (eje25) MD 4+137 - 4+147


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR115                X:  216842.322  Y: 4040806.521  Z:   2.915  PK:       0.000 Dis=-2895.953
                                                                      Distancia:   399.296  Azimut: 230.952151
 BO : BR112                X:  216655.745  Y: 4040453.497  Z:   2.850  PK:       0.000 Dis=2685.117

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    3460.000 141.258933     0.000   218153.253  4038219.722 170.139049  2900.011 339.186898 162.402623  2689.290 131.450472      2.500

CIRC.      19.705  62.539247     0.000   218167.737  4038219.290 169.860388  2906.972 338.908237 162.124397  2697.740 131.172246      2.500
```

Istram 20.01.01.08 18/03/20 16:42:08 2378 pagina 65
PROYECTO : ENLACE DE TRES CAMINOS
GRUPO : 10 : Caballones
EJE : 101 : Caballón (eje25) MD 4+137 - 4+147

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR112 X: 216655.745 Y: 4040453.497 Z: 2.850 PK: 0.000 Dis=2685.117
Distancia: 335.344 Azimut: 340.002277
BO : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 0.000 Dis=3002.115

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3680.000	220.808133	0.000	218148.960	4038233.701	162.302235	2675.292	222.299959	159.853444	2992.485	19.851167	2.500
CIRC.	19.705	62.539247	0.000	218167.737	4038219.290	162.124397	2697.740	222.122120	159.712666	3015.203	19.710389	2.500

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR116 X: 216384.453 Y: 4040650.617 Z: 12.503 PK: 0.000 Dis=3002.115
Distancia: 357.672 Azimut: 314.030496
BO : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 0.000 Dis=3279.172

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	3960.000	394.779843	0.000	218173.257	4038230.712	159.475601	3009.279	245.445106	154.937445	3287.975	40.906949	2.500
CIRC.	19.705	62.539247	0.000	218167.737	4038219.290	159.712666	3015.203	245.682170	155.162082	3293.084	41.131586	2.500

==========
* * * DATOS PARA REPLANTEO DE PUNTOS * * *
==========

BR : BR117 X: 216035.432 Y: 4040728.808 Z: 2.773 PK: 0.000 Dis=3279.172
Distancia: 270.987 Azimut: 299.545648
BO : BR118 X: 215764.452 Y: 4040726.874 Z: 2.847 PK: 0.000 Dis=3458.745

TIPO	PK Estac.	Azimut	Dis.Eje	X	Y	Ang.Azimu.	Dis.Redu	Angulo 1-2	Ang.Az(BO)	Dis.R(BO)	Ang1-2(BO)	COTA
CIRC.	4320.000	161.314899	0.000	218150.536	4038222.551	155.375547	3279.480	255.829899	151.538899	3459.051	51.993251	2.500
CIRC.	19.705	62.539247	0.000	218167.737	4038219.290	155.162082	3293.084	255.616434	151.351875	3473.292	51.806227	2.500

```
 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  68
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :  101 : Caballón (eje25) MD 4+137 - 4+147


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR118                X:  215764.452  Y: 4040726.874  Z:   2.847  PK:       0.000 Dis=3458.745
                                                                        Distancia:   277.714  Azimut: 311.446118
 BO : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:       0.000 Dis=3686.814

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4580.000  37.145772     0.000   218171.230  4038222.801 151.261114  3473.178 239.814996 148.464266  3701.898  37.018148      2.500

CIRC.      19.705  62.539247     0.000   218167.737  4038219.290 151.351875  3473.292 239.905757 148.549426  3701.794  37.103307      2.500

 Istram 20.01.01.08 18/03/20 16:42:08   2378                                                                    pagina  69
 PROYECTO   : ENLACE DE TRES CAMINOS
 GRUPO      :   10 : Caballones
 EJE        :  101 : Caballón (eje25) MD 4+137 - 4+147


                            ==========================================
                            * * *  DATOS PARA REPLANTEO DE PUNTOS  * * *
                            ==========================================

 BR : BR119                X:  215491.215  Y: 4040776.537  Z:   2.627  PK:       0.000 Dis=3686.814
                                                                        Distancia:   272.091  Azimut: 338.645542
 BO : BR120                X:  215267.736  Y: 4040931.749  Z:   2.846  PK:       0.000 Dis=3955.742

TIPO   PK Estac.  Azimut      Dis.Eje        X            Y      Ang.Azimu.  Dis.Redu Angulo 1-2 Ang.Az(BO) Dis.R(BO) Ang1-2(BO)   COTA
----- ----------- ---------- --------- ------------ ------------ ---------- --------- ---------- ---------- --------- ---------- ----------

CIRC.    4880.000 109.258318     0.000   218158.987  4038217.320 148.678048  3696.837 210.032506 147.992553  3965.786   9.347011      2.500

CIRC.      19.705  62.539247     0.000   218167.737  4038219.290 148.549426  3701.794 209.903884 147.873507  3970.823   9.227965      2.500
```