



## ANEJO Nº 8. TRAZADO



TÍTULO DEL PROYECTO	
ESTUDIO INFORMATIVO DE AMPLIACIÓN DE LA RED DE METRO DE MADRID AL BARRIO DE VALDEBEBAS	

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## 1. INTRODUCCIÓN

### 1.1. OBJETO

El presente anejo describe el trazado de una nueva línea de Metro que interconecte el barrio de Valdebebas con la estación actual de Metro de Mar de Cristal teniendo parada intermedia o final en el aeropuerto Adolfo Suárez Madrid-Barajas, Terminal 4.

### 1.2. DATOS DE PARTIDA

La actuación contempla la ejecución de una nueva línea de Metro que interconecte el barrio de Valdebebas con la estación actual de Metro de Mar de Cristal teniendo parada intermedia o final en el aeropuerto Adolfo Suárez Madrid-Barajas, Terminal 4.

En cumplimiento del Pliego del contrato, “a efectos de licitación de las obras definidas en el Proyecto, éste se dividirá en dos subtramos, de modo que permita la contratación de dos obras independientes”. En este documento se indicará la propuesta inicialmente prevista de división en subtramos para cada alternativa.

La nueva línea de Metro objeto del proyecto en curso se enmarca a largo plazo dentro del plan de ampliación de la Línea 11, actualmente en servicio entre las estaciones de La Fortuna y Plaza Elíptica y en construcción entre las estaciones de Plaza Elíptica y Conde de Casal.

El presente proyecto entre Mar de Cristal y Valdebebas se diseña en previsión de dos posibles escenarios de servicio una vez construido. Un primer escenario en que el tramo pueda prestar servicio de forma aislada con inicio en Mar de Cristal y final en Valdebebas; y un segundo escenario a más largo plazo en que prestará servicio dentro de la nueva Línea 11 totalmente finalizada entre Cuatro Vientos y Valdebebas, constituyendo este proyecto el subtramo final noreste de la línea completa.

### 1.3. CONDICIONANTES DEL TRAZADO

#### 1.3.1. Cruces bajo infraestructuras superficiales de transporte

Muchos de los límites de las zonas anteriormente descritas las definen arterias de transporte de superficie bajo las cuales ha de perforarse el túnel de línea. Estos cruces son:

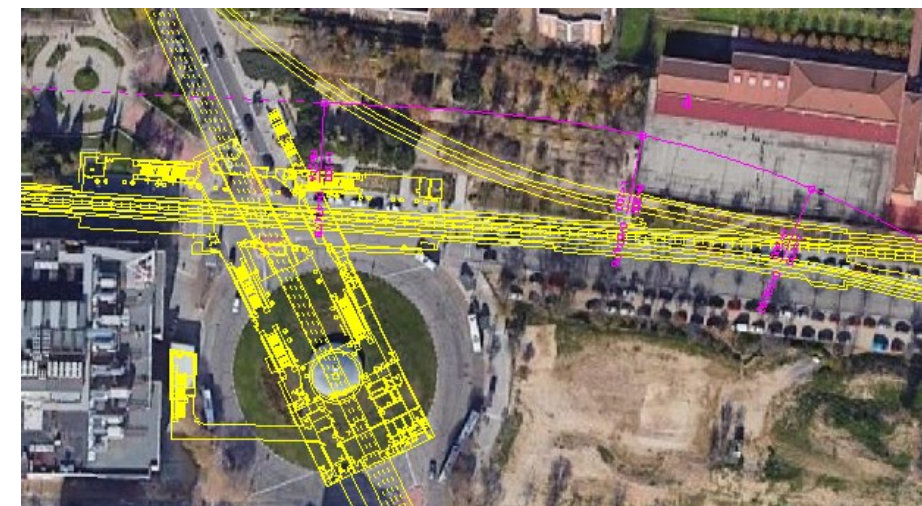
- Cruce bajo M40. Todas las alternativas
- Cruce bajo FC Madrid-Barcelona. Todas las alternativas
- Cruce bajo M11. Todas las alternativas
- Cruce bajo M12-Sur. Alternativas 2 y 4
- Cruce bajo M12-Norte. Todas las alternativas

Ninguna de las infraestructuras indicadas supone un serio condicionante de trazado ya que se pueden mantener distancias de seguridad con ellas sin excesivos problemas.

#### 1.3.2. Cruces con infraestructuras subterráneas

Otros condicionantes y puntos críticos del trazado son los cruces con infraestructuras subterráneas de transporte o servicios. Estas son:

- **Metro L4 en Mar de Cristal.** Todas las alternativas han de cruzar bajo la L4. Las alternativas 1 y 2 lo hacen al norte de la estación de Mar de Cristal, las 2 y 3 al sur de ella. Por su proximidad a la estación proyectada “Mar de Cristal - Parque Alfredo Kraus” en el caso de las alternativas 1 y 2 y para su homóloga en el caso de las alternativas 3 y 4, estación “Mar de Cristal – Calle de Arequipa” afecta notablemente a la cota de dichas estaciones.
- **Ramal de conexión de L4 de metro con L8 de Metro.** Las alternativas 1 y 2 cruzan bajo dicho ramal afectando en mayor medida a la cota de la estación “Mar de Cristal - Parque Alfredo Kraus” que el propio túnel de la línea 4 de metro por encontrarse el ramal a mayor profundidad que el túnel de la línea 4 de metro.
- **Estación “Mar de Cristal” de la línea 4 y 8 de metro.** La profundidad a la que se encuentran las pilas pilotes de dichas estaciones impiden trazar ninguna alternativa que pase el túnel bajo estas estaciones.
- **Recinto de pantallas de conexión del ramal de la línea 4 de metro con la línea 8 de metro.** La profundidad de los muros pantallas en la zona de conexión del ramal con la línea 8 de metro impiden que las alternativas 1 y 2 puedan cruzar bajo la línea 8 de metro en la cercanía a la estación de “Mar de Cristal”. En la figura siguiente se observa el trazado del eje de las alternativas 1 y 2 y el recinto de pantallas indicado.



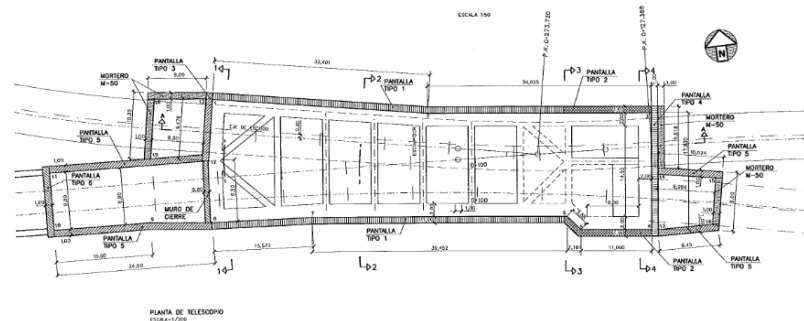


Figura nº1. Planta de estación en Mar de Cristal y recinto de pantallas

- **Metro L8 en tramo Mar de Cristal-Campo de las Naciones.** Todas las alternativas cruzan bajo la L8. Las alternativas 1 y 2 lo hacen dos veces en el tramo inicial entre Mar de Cristal y M40, ambas oblicuamente, la primera en dirección noroeste-sureste, a continuación, tras la curva bajo el Parque Villa Rosa, en dirección suroeste-noreste. Las alternativas 3 y 4, lo hacen sólo una vez, en el tramo de trazado compartido con las alternativas 1 y 2.
- **Tramo de posible conexión de la L11 de Metro con la L8 de Metro.** El ramal que conecte ambos túneles solo es posible que lo haga con la L8 de Metro en torno a un tramo de escasa longitud debido al trazado en planta y alzado de la línea L8 (existencia de clotoideas y curvas en planta y acuerdos verticales en alzado) además de la diferencia de cota entre ambos túneles, siendo el tramo de conexión el localizado antes de la zona de reserva en la L8 de metro para la futura estación de Aconcagua.



Figura nº 2. Reserva de estación en la Línea 8 de Metro de Madrid

Esto afecta a todas las alternativas para poder trazar un ramal que salve la diferente profundidad de ambos túneles, así como proyectar elementos de trazado en planta y alzado que permitan plantear aparatos de vía.

- **Túnel AVE Chamartín-T4.** Esta infraestructura **no existe actualmente**, pero está en fase de estudio previo. Durante la redacción del proyecto se ha solicitado al MITMA planos de trazado previsto de esta infraestructura, habiéndose recibido e incorporado como condicionante de diseño. El presente estudio prevé un cruce sensiblemente ortogonal a unos 150 m al norte de la estación E2 (Cárcavas/Ampliación Ifema). La información recibida de MITMA y las necesidades de implantación de la estación E2 en L11 imponen un cruce del túnel del AVE bajo la L11. Con los datos recibidos, la clave del túnel AVE quedaría a unos 4,5 m de la parte inferior del túnel de L11. Se recomienda deprimir adicionalmente lo más posible el trazado AVE para separarse del túnel de L11, ya que éste, por los condicionantes anterior (estación E2) y posterior (paso bajo túnel de Cercanías Chamartín-T4), no tiene margen de corrección para aumentar la separación entre ambos.
- **Túnel Cercanías Chamartín-T4.** Este túnel existe, se encuentra en servicio y es, por tanto, un importante condicionante de trazado. La L11 cruzará bajo este túnel, construido entre pantallas, en ángulo aproximado de 45°, bajo la Glorieta de Antonio Perpiñá. El trazado propuesto prevé el cruce con la clave de túnel de L11 a 5,36 m bajo el pie de pantallas del túnel de Cercanías.
- **Sótanos de edificaciones.** Pasada la estación "Intercambiador - Ciudad de la Justicia" se encuentran una serie de terrenos no edificadas en la actualidad en los que es necesario tener en cuenta la posibilidad de futuros sótanos. Estos afectan a todas las alternativas ya que se encuentran muy cerca de la estación antes mencionada.

## 2. PARAMETROS DE DISEÑO

A continuación, se exponen los criterios de diseño que justifican los parámetros geométricos utilizados para la definición del trazado. La velocidad máxima de circulación es de 110 km/h.

El ancho de vía es de 1.445 mm, y la distancia entre ejes de carriles (w) es de 1.515 mm (para carril UIC-54). Se considera el uso de trenes de gálibo ancho (2,80 m de ancho) y composiciones de trenes de 6 coches (andenes de 115 m). El material móvil tipo considerado es de la serie tipo 8000. El coeficiente de flexibilidad (s) para estos coches es de 0,424.

Para la definición geométrica de las soluciones en planta y alzado de las vías, se ha aplicado el "Documento Técnico: Geometría de vía." (MM-DT-00-01, Edición 0), perteneciente a la "Normativa Técnica Básica de Vía de Metro de Madrid: 1ª Fase". Los parámetros de diseño son los siguientes:



Tabla nº 1. Parámetros de trazado en planta de Metro de Madrid

PARÁMETROS		VALOR
V	Velocidad máxima de circulación en las nuevas líneas (km/h)	110
R	Radio de curva mínimo en las nuevas líneas (m)	300
h <sub>máx</sub>	Peralte máximo (mm)	150
(a <sub>tn</sub> ) <sub>máx</sub>	Aceleración transversal no compensada máxima (m/s <sup>2</sup> )	0,65 0,85 (excepcional)
(a <sub>tn</sub> ap) <sub>máx</sub>	Aceleración transversal no compensada máxima (m/s <sup>2</sup> )	0,65 0,71 (excepcional)
w <sub>t</sub>	Ancho de vía (mm)	1.445
w	Distancia entre ejes de carriles para carril 54E1 (mm)	1.515
(v <sub>v</sub> ) <sub>máx</sub>	Velocidad vertical máxima (máxima variación del peralte) (mm/s)	50
(r <sub>n</sub> ) <sub>máx</sub>	Rampa de peralte máxima (diagrama de peraltes lineal) (mm/m)	1,5 2 (excepcional)
j <sub>máx</sub>	Sobreaceleración máxima (máxima variación de la aceleración transversal sin compensar) ("jerk") (m/s <sup>3</sup> )	0,2 0,4 (excepcional)
L (m)	Longitud mínima de recta entre curvas circulares	0,4 V (*)
L (m)	Longitud mínima de curva circular	0,4 V (*)

(\*) V: velocidad de proyecto de la curva (km/h)

El trazado definido ha dispuesto en todas las curvas clotoideas que mejoran los condicionantes de confort para el viajero.

La ubicación y tipo de aparatos proyectados para cada una de las alternativas se indica el esquema de vías que se adjunta en el apéndice 3.

Todos los aparatos se disponen en tramos de alineación recta y rasante con inclinación constante con lo que se facilita el montaje y su posterior mantenimiento.

El eje que define el trazado en planta de la línea y que servirá para realizar el replanteo de las obras de la infraestructura es el eje de simetría del túnel y de las estaciones.

El trazado en alzado queda definido por la rasante correspondiente a la cabeza de los carriles de la vía. En el caso de tramos en curva, ésta corresponde a la cabeza del hilo más bajo. Dicha rasante está relacionada con la propia estructura del túnel y estaciones, tal como se indica en las secciones transversales correspondientes incluidas en los planos.

La longitud considerada para las curvas de transición en planta permite establecer a lo largo de ellas unas rampas de peralte dentro de las tolerancias indicadas anteriormente.

El alzado se ha adaptado a la geometría en planta. Las pendientes máximas que vienen obligadas por los cruces con infraestructuras críticas se mantienen en 35 milésimas con acuerdos verticales de 2.000 m como parámetro del acuerdo mínimo.

Los acuerdos verticales son de tipo parabólico en todos los casos.

En lo que respecta a la posición de los andenes dentro del trazado, de 115m, todos se encuentran en alineación recta y con pendiente nula, en toda su longitud.

Los valores de los parámetros geométricos empleados en la definición en alzado han sido los siguientes:

Tabla nº 2. Parámetros de trazado en alzado de Metro de Madrid

PARÁMETROS		VALOR
r <sub>máx</sub>	Rasante máxima (‰)	35
r <sub>mín</sub>	Rasante mínima (‰)	5
a <sub>cv</sub>	Aceleración centrífuga vertical (Máxima aceleración en acuerdos verticales) (m/s <sup>2</sup> )	0,15 0,3 (excepcional)
k <sub>v</sub>	Parámetro mínimo de acuerdo vertical	2000

### 3. DESCRIPCIÓN DEL TRAZADO

#### 3.1. ALTERNATIVA 1

La alternativa 1 (eje 1) comienza bajo la Calle Agustín de Iturbide con dirección noreste girando posteriormente hacia el este para discurrir paralela a la Calle de Ayacucho bajo el Parque Alfredo Kraus, donde se proyecta la primera estación "Mar de Cristal - Parque Alfredo Kraus". El tramo anterior a esta primera estación se corresponde con el fondo de saco inicial del trazado, donde fondo de saco y zona de estación se proyecta con pendiente 0,00 milésimas.

Una vez dejada atrás la estación "Mar de Cristal - Parque Alfredo Kraus" el trazado gira hacia el sureste mediante una curva de radio 300 m manteniendo una distancia prudencial con el recinto de muros pantallas existente correspondiente a la conexión de la línea 4 de metro con la línea 8 de metro, para posteriormente girar mediante otra curva de 300 m hacia el noreste intercalando entre las dos últimas curvas una alineación recta que permita proyectar un ramal que conecte la líneas 11 y 8 de metro. Posteriormente el trazado después de una alineación recta con dirección noreste vuelve a girar hacia el norte con una curva de radio 850 m para localizarse bajo la Calle de Francisco Umbral donde se proyecta la segunda estación "Ifema – Cárcavas"

En este tramo entre inter estaciones se cruza nada más abandonar la estación de “Mar de Cristal - Parque Alfredo Kraus” bajo la línea de metro 4 y el ramal que conecta la línea de metro 4 con la línea de metro 8, posteriormente, en dos ocasiones, se pasa bajo la línea de metro 8 en un primer punto y en un segundo punto, distanciados entre si 430 m, antes de cruzar bajo la línea de metro 8 por segunda vez se cruza bajo el ramal proyectado de conexión de la línea 11 de metro con la línea 8 de metro. Seguidamente se cruza bajo la autopista M-40 y la línea de ferrocarril Madrid-Barcelona. Para salvar dichas infraestructuras el alzado baja mediante dos rampas de 33,1 y 25 milésimas para volver a subir una vez salvado el segundo cruce con la línea 8 de metro mediante rampas de 33,3 y 27,5 milésimas creándose un punto bajo.

A mitad de camino entre la estación primera y la segunda se ha dejado una alineación recta con pendiente 0,00 milésimas como reserva para una posible estación de metro futura localizada entre la autopista M-40 y la Calle Tomas Redondo.

Para llegar a la tercera estación, “Intercambiador - Ciudad de la Justicia”, el trazado describe una sucesión de curva y contra curva de radio 300 m con recta intermedia con la finalidad de situarse paralelo a la Calle de Juan Antonio Samaranch donde esta prefijada de antemano la ubicación de dicha estación. El trazado en alzado de este tramo entre estaciones corresponde con una rampa de pendiente máxima, 33,3 milésimas, para cruzar por encima del túnel AVE Chamartín-T4 (infraestructura que no existe actualmente, pero está en fase de estudio previo) y bajo el muro pantalla del túnel de la línea C1/C10 de Renfe Cercanías.

A continuación, mediante una curva de radio 300 y clotoideas de parámetro 173 que discurren debajo de edificaciones, el trazado se adentra con orientación oeste-noroeste en el Parque Valdebebas. En cuanto al alzado, en este tramo se presenta otro de los puntos bajos del trazado, con una rampa descendente de 33,3 milésimas seguida de una ascendente de 25 milésimas, la primera rampa tiene como finalidad mantenerse a una distancia prudencial de la línea de fondo de sótanos.

Dentro del Parque Valdebebas, el trazado sigue una línea recta de 500 metros, seguida por una curva en dirección norte, de radio 300 y longitud total de 960 metros, que cambia la orientación del trazado casi 180 grados, culminando en dirección este bajo la intersección de la Calle de María de las Mercedes de Borbón con la Avenida de Secundino Zuazo evitando el trazado los sótanos de las edificaciones de dicha avenida de forma que dichos sótanos no condicionen la profundidad de la cuarta estación.

Desde este punto y por los siguientes 1600 metros, el trazado discurre bajo la Avenida de Secundino Zuazo, donde se ubicará la cuarta estación en su intersección con la Calle de Luis Moya Blanco, “Valdebebas Norte”.

Al abandonar el área residencial de Valdebebas y adentrarse en la zona aeroportuaria, una curva de radio 300 y longitud 418 metros orienta el trazado hacia el sur, pasando bajo la autovía M-12 y sus ramales. A esta curva le sigue una recta de 357 metros de longitud, paralela al vial de acceso a los aparcamientos de la Terminal 4, donde se ubicará la quinta y última estación de la alternativa 1, “Aeropuerto T4”. Finalmente, se encuentra la cola de maniobras, que se extiende hasta el punto kilométrico 8+712 finalizando el trazado en el PK 9+243,843 hasta el pozo de ataque de la tuneladora el cual es aprovechable para una futura expansión del trazado hacia COCHERAS, como parte de otro proyecto.

En cuanto al trazado en alzado entre la cuarta y la quinta estación se caracteriza por adaptarse en un primer tramo a la rasante de la Avenida de Secundino Zuazo para lo que es necesario emplear pendiente máxima para después seguir bajando hasta la zona aeroportuaria con pendiente más suave para alcanzar la corta de la quinta estación donde se ha tenido en cuenta la futura ubicación de la estación de AV (infraestructura que no existe actualmente, pero está en fase de estudio previo).

### 3.2. ALTERNATIVA 2

La alternativa 2 (eje 2) coincide con el trazado en planta y alzado con la alternativa 1 hasta la tercera estación “Intercambiador - Ciudad de la Justicia” a partir de esta estación el trazado mediante una curva de 400 metros de radio orienta el trazado hacia el este, seguida de una recta de 545 metros de longitud que discurre bajo la Calle Fernando Higuera. Bajo esta calle, y próxima al Hospital de Emergencias Enfermera Isabel Zendal, donde se proyecta la cuarta estación “Hospital Zendal”. En cuanto al alzado, este tramo presenta inicialmente una importante rampa descendente de 33,8 milésimas para mantener una distancia prudencial con la línea de sótanos de futuras edificaciones para posteriormente suavizar la pendiente de descenso a 12,0 milésimas.

Después de la cuarta estación, se presenta una bifurcación que, mediante salto de carnero, dirige un nuevo ramal hacia el sur con el objeto de conectar el trazado con las cocheras previstas para las líneas 8 y 11 lo cual condiciona la cota de esta cuarta estación. Este nuevo ramal, mediante importantes rampas de hasta 35 milésimas, cruza bajo la línea C1/C10 de Renfe Cercanías y a continuación cruza sobre el trazado de Alta Velocidad previsto. El trazado de dichos ramales se corresponde con los ejes 7 y 8 los cuales no se ejecutan en su totalidad dentro de este proyecto, así el eje 7 comprende su ejecución hasta el PK 0+415,0 y el eje 8 hasta el PK 0+523,072.

Seguidamente, mediante una curva que orienta el trazado en dirección norte, éste abandona el barrio de Valdefuentes y se adentra en la zona aeroportuaria, pasando por debajo de la autovía

M-12 y sus ramales, así como de los viales de acceso a la terminal 4 del Aeropuerto. La tendencia descendente del trazado en alzado continúa hasta alcanzar su punto más bajo, la estación próxima a la Terminal 4 del Aeropuerto, estación “Aeropuerto T4”. Esta estación se ubica sobre una alineación recta de 371 metros de longitud y que discurre paralelamente al vial de acceso a los aparcamientos de la Terminal 4 del Aeropuerto.

Al salir de la Terminal 4, el trazado gira hacia el oeste mediante curva de 300 metros de radio y para volver a cruzar por debajo de la M-12, sus ramales y los accesos a la Terminal 4, abandonando la zona aeroportuaria e ingresando en la zona norte del barrio de Valdefuentes. El trazado en alzado presenta en este tramo pendientes ascendentes de hasta 26 milésimas.

Una vez que el trazado regresa a la zona residencial del barrio de Valdefuentes, sigue bajo la Calle de Secundino Zuazo durante los siguientes 1.600 metros, y la sexta y última estación, “Valdebebas Norte”, se ubicará bajo su intersección con la Calle de Luis Moya Blanco. El trazado proyectado para esta alternativa 2, finaliza entonces, con una longitud total de 8.496,755 metros, bajo la intersección de la Calle Secundino Zuazo con la Calle María de las Mercedes de Borbón en la que los últimos 589,94 m se corresponde con el fondo de saco de final de línea. El alzado de este último tramo se mantiene con pendiente ascendente empelando pendiente máxima con la finalidad de mantenerse paralela a la rasante de la avenida y no tener que proyectar la última estación a excesiva profundidad.

### 3.3. ALTERNATIVA 3

El trazado de la alternativa 3 (eje 3) comienza siguiendo el eje de la Calle de Arequipa desde su intersección con la Glorieta de Sandro Pertini. Antes de llegar a la primera estación pasa bajo el túnel de la línea 4 de metro. La primera estación, “Mar de Cristal – Calle de Arequipa”, se proyecta bajo la intersección de la mencionada calle con la glorieta del Mar de Cristal.

A partir de esta primera estación el trazado sigue con alineación oeste – este con ligero giro hacia el sureste para permitir la proyección de un ramal que comunique la línea 11 de metro con la línea 8 de metro para ya seguidamente girar hacia el noreste mediante una curva de 300 m para que después de una alineación recta vuelva a girar hacia el norte por medio de una curva de radio 850 m orientándose así bajo la Calle de Francisco Umbral, donde se situará la segunda estación “Ifema – Cárcavas”. La lineación recta que se crea entre la curva de radio 300 m y la de curva de radio 850 m sirve para dejar una zona para la ubicación de una posible estación entre la autopista M-40 y la Calle Tomas Redondo en un futuro.

En alzado este tramo entre estaciones se caracteriza por un tramo inicial con pendiente suave que permita proyectar la bretelle y desvíó para el ramal de conexión con la línea 8 de metro, para después bajar con una rampa de pendiente máxima de 33,3 milésimas pasando bajo el

túnel de la línea 8 para después volver a ascender con rampas de pendiente de 32,0 y 27,5 milésimas con un tramo intermedio de pendiente 0,00 milésimas para una posible estación futura.

Antes de llegar a la ubicación de la segunda estación se cruza bajo la autopista M-40, la línea de ferrocarril Madrid-Barcelona y la autopista M-11.

A partir del cruce del trazado con la autopista M-40 la planta y alzado es coincidente con el descrito en la alternativa 1 (eje 1).

### 3.4. ALTERNATIVA 4

El trazado de la alternativa 4 (eje 4) al igual que la alternativa 3 comienza siguiendo el eje de la Calle de Arequipa desde su intersección con la Glorieta de Sandro Pertini. Antes de llegar a la primera estación pasa bajo el túnel de la línea 4 de metro. La primera estación, “Mar de Cristal – Calle de Arequipa”, se proyecta bajo la intersección de la mencionada calle con la glorieta del Mar de Cristal.

A partir de esta primera estación el trazado sigue con alineación oeste – este con ligero giro hacia el sureste para permitir la proyección de un ramal que comunique la línea 11 de metro con la línea 8 de metro para ya seguidamente girar hacia el noreste mediante una curva de 300 m para que después de una alineación recta vuelva a girar hacia el norte por medio de una curva de radio 850 m orientándose así bajo la Calle de Francisco Umbral, donde se situará la segunda estación “Ifema – Cárcavas”. La lineación recta que se crea entre la curva de radio 300 m y la de curva de radio 850 m sirve para dejar una zona para la ubicación de una posible estación entre la autopista M-40 y la Calle Tomas Redondo en un futuro.

En alzado este tramo entre estaciones se caracteriza por un tramo inicial con pendiente suave que permita proyectar la bretelle y desvíó para el ramal de conexión con la línea 8 de metro, para después bajar con una rampa de pendiente máxima de 33,3 milésimas pasando bajo el túnel de la línea 8 para después volver a ascender con rampas de pendiente de 32,0 y 27,5 milésimas con un tramo intermedio de pendiente 0,00 milésimas para una posible estación futura.

Antes de llegar a la ubicación de la segunda estación se cruza bajo la autopista M-40, la línea de ferrocarril Madrid-Barcelona y la autopista M-11.

Hasta el cruce del trazado con la autopista M-40 la planta y alzado es coincidente con el descrito en la alternativa 3 (eje 3) y a partir de dicho cruce la planta y alzado es coincidente con el descrito en la alternativa 2 (eje 2).

Se adjunta a continuación una tabla resumen de cada una de las alternativas:

Tabla nº3. Resumen características de trazado de cada una de las alternativas

	ALTERNATIVA 1		ALTERNATIVA 2		ALTERNATIVA 3		ALTERNATIVA 4	
Longitud total (m)	9.243,843		8.496,755		9.096,742		8.349,654	
PLANTA								
Longitud en curva circular (m)	3.302,37	35,73%	2.796,42	32,91%	3.177,79	34,93%	2.671,84	32,00%
Longitud en clotoide (m)	2.464,00	26,66%	2.384,00	28,06%	2.194,00	24,12%	2.114,00	25,32%
Longitud en recta (m)	3.477,48	37,62%	3.316,33	39,03%	3.724,95	40,95%	3.563,81	42,68%
Longitud de la recta más larga (m)	656,94		783,81		656,94		783,81	
Longitud de la recta más corta (m)	0,40		0,40		37,70		37,70	
Radio máximo (m)	1.200,00		1.200,00		1.800,00		1.800,00	
Radio mínimo (m)	300,00		300,00		300,00		300,00	
Radio medio ponderado (m)	397,83		443,48		421,19		473,40	
Total de curvas a la derecha	7		7		7		7	
Total de curvas a la izquierda	6		6		6		6	
Total de rectas	14		14		14		14	
ALZADO								
Longitud total (m)	9.243,84		8496,755		9096,742		8349,654	
Longitud en rampa/pendiente (m)	6.724,44	72,75%	6118,255	72,01%	6753,772	74,24%	6140,934	73,55%
Longitud en acuerdo vertical (m)	2.519,40	27,25%	2378,5	27,99%	2342,97	25,76%	2208,72	26,45%
Longitud en rampa (m)	3.438,55	37,20%	3821,148	44,97%	3416,145	37,55%	3785,759	45,34%
Longitud en pendiente (m)	3.285,89	35,55%	2297,108	27,04%	3337,628	36,69%	2355,176	28,21%
Longitud pendiente máxima (m)	1.519		1.796		1.471		1.748	
Pendiente máxima (%)	3,38		3,45		3,38		3,45	
Pendiente mínima (%)	0,00		0,00		0,00		0,00	
Pendiente media ponderada (%)	1,5		1,60		1,45		1,54	
P x L (m)	138,45		135,55		131,81		128,91	
Rampa o pendiente mas corta (m)	133,28	entre vértices	133,28	entre vértices	168,91	entre vértices	168,91	entre vértices
Pend. mas larga a la Pend. máxima (m)	119,91	pen= 3,33%	233,46	pen= 3,38%	37,75	pen= 3,20%	233,46	pen= 3,38%
Rampa mas larga a la Pend. máxima (m)	233,46	pen= - 3,38%	345,32	pen= - 3,45%	233,46	pen= - 3,38%	345,33	pen= - 3,45%
Acuerdo cóncavo máximo	20.000,00		10.000,00		20.000,00		10.000,00	
Acuerdo cóncavo mínimo	2.100,00		2.100,00		2.100,00		2.100,00	
Acuerdo Convexo máximo	12.000,00		8.000,00		12.000,00		8.000,00	
Acuerdo Convexo mínimo	2.100,00		2.100,00		2.100,00		2.100,00	
Acuerdo Cóncavo de longitud mínima (m)	54,00		69,93		54,00		69,93	

	ALTERNATIVA 1	ALTERNATIVA 2	ALTERNATIVA 3	ALTERNATIVA 4
Acuerdo Convexo de longitud mínima (m)	66,00	70,98	48,00	48,00
Número de tramos	20	21	19	20
Longitud tramo mínimo (m)	46,867	46,873	37,75	37,75
Longitud tramo máximo (m)	845,525	845,525	845,525	845,525
Total de acuerdos cóncavos	11	11	10	10
Total de acuerdos convexos	9	9	9	9
Profundidad promedio (m) (terreno - cota vías)	30,37	28,99	29,98	28,50
Profundidad promedio (m) (terreno - clave túnel)	23,82	22,44	23,43	21,95
Profundidad mín. - máx. (m). Estación Mar Cristal-Parque Alfredo Kraus	33,4 - 31,4			
Profundidad mín. - máx. (m). Estación Mar de Cristal - C. Arequipa	30,7			
Profundidad mín. - máx. (m). Estación Ifema-Cárcavas	31,6 - 26,9			
Profundidad mín. - máx. (m). Estación Intercambiador-Ciudad de la Justicia	32,6 - 23,5			
Profundidad mín. - máx. (m). Estación Hospital Zendal	32,6 - 26,6			
Profundidad mín. - máx. (m). Estación Barajas-T4	25,5 - 26,2			
Profundidad mín. - máx. (m). Estación Valdebebas Norte	31,1 - 22,8			

#### 4. COMPROBACIÓN DE PARAMETROS

A continuación, se incluyen las comprobaciones de los parámetros de diseño en planta y alzado junto con los listados tanto en planta como en alzado del eje principal además de los listados de replanteo correspondientes a puntos singulares y puntos cada 20 m.

El peralte finalmente planteado en las dos alineaciones circulares previstas en el tramo será objeto del resultado de una simulación y análisis de velocidades y marchas de circulación que realizará el operador de la línea previamente al inicio de las obras.

En el cálculo de las pendientes máximas se ha tenido en cuenta la resistencia específica de las curvas, de tal forma que éstas últimas reducen el valor de pendiente máxima.



A continuación, también se incluyen los listados de las alineaciones de los ejes 5 “Ramal de conexión de la línea 11 de metro con la línea 8 de Metro” para el caso de las alternativas 1 y 2, eje 6 “Ramal de conexión de la línea 11 de metro con la línea 8 de Metro” para el caso de las alternativas 3 y 4, eje 7 ramal a COCHERAS para el caso de las alternativas 2 y 4 y eje 8 Salto de Carnero para el caso de las alternativas 2 y 4

*Tabla nº 4. Ejes trazados*

EJE	Nombre	LONGITUD de proyecto (m)
1	Alternativa 1	9.243,843
2	Alternativa 2	8.496,755
3	Alternativa 3	9.096,472
4	Alternativa 4	8.349,654
5	Ramal de conexión L11 de Metro con L8 de Metro para las alternativas 1 y 2	442,511
6	Ramal de conexión L11 de Metro con L8 de Metro para las alternativas 3 y 4	298,887
7	Ramal a cocheras para las alternativas 2 y 4	415,000
8	Salto de Carnero para las alternativas 2 y 4	530,072





## APÉNDICES



## APÉNDICE 1. COMPROBACIÓN DE PARÁMETROS





ANÁLISIS DE LOS PARÁMETROS GEOMÉTRICOS Y FUNCIONALES DEL TRAZADO EN PLANTA. EJE DE INFRAESTRUCTURA

DEFINICIÓN GEOMÉTRICA DEL TRAZADO EN PLANTA					PARÁMETROS GEOMÉTRICOS						PARÁMETROS FUNCIONALES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Nº	Tipo de alineación	Longitud (m)	P.K. inicio	Radio/parámetro (+) dcha. (-) izda. (m)	Velocidad adoptada (km/h)		Peralte real (mm)	Rampa de peralte (mm/m)	Parámetro		Insuficiencia peralte (mm)	Parámetro	Aceleración sin compensar (m/s <sup>2</sup> )	Parámetro		Var. temporal del peralte (mm/s)	Parámetro	Var. temporal acel. no comp. (m/s <sup>2</sup> )	Parámetro	Long. Mínima curva circular. (m)	Parámetro	Long. Mínima Recta entre curvas circulares. (m)	Parámetro	Long. Mínima curva de transición. Confort viajero (m)	Parámetro	Long. Mínima curva de transición Limit. Geométrica.	Parámetro	Long. Mínima curva de transición. Limit. dinámica.	Parámetro																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
					Vmáx	Vmín			Nr.	Ex.				Nr.	Ex.															Nr.	Nr.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
ALTERNATIVA 2	1	Recta	0,399	0+000,000	355,000	80	0	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										



ANÁLISIS DE LOS PARÁMETROS GEOMÉTRICOS Y FUNCIONALES DEL TRAZADO EN PLANTA. EJE DE INFRAESTRUCTURA

DEFINICIÓN GEOMÉTRICA DEL TRAZADO EN PLANTA					PARÁMETROS GEOMÉTRICOS					PARÁMETROS FUNCIONALES																					
Nº	Tipo de alineación	Longitud (m)	P.K. inicio	Radio/parámetro (*) dcha. (-) izda. (m)	Velocidad adoptada (km/h)		Peralte real (mm)	Rampa de peralte (mm/m)	Parámetro		Insuficiencia peralte (mm)	Parámetro	Aceleración sin compensar (m/s <sup>2</sup> )	Parámetro		Var. temporal del peralte (mm/s)	Parámetro	Var. temporal acel. no comp. (m/s <sup>2</sup> )	Parámetro	Long. Mínima curva circular. (m)	Parámetro	Long. Mínima Recta entre curvas circulares. (m)	Parámetro	Long. Mínima curva de transición. Confort viajero (m)	Parámetro	Long. Mínima curva de transición Limit. Geométrica.	Parámetro	Long. Mínima curva de transición. Limit dinámica.	Parámetro		
					Vmáx	Vmin			Nr.	Ex.		Nr.		Nr.	Ex.		Nr.		Nr.												
ALTERNATIVA 3	1 Recta	293,457	0+000,000		80	0	0																								
	Clotoide	15,000	0+293,457		80	0		1,47	●	1,50	2,00					33	●	50	0,19	●	0,20					15,00	●	14,77	15,00	●	15,00
	2 Circular	37,308	0+308,457	1800,000	80	0	22																								
	Clotoide	15,000	0+345,764		80	0		1,47	●	1,50	2,00	20	●	100				0,13	●	0,65	0,85					15,00	●	14,77	15,00	●	15,00
	3 Recta	169,388	0+360,764		80	0	0																169	●	32		15,00	●	15,00		
	Clotoide	50,000	0+530,152		80	0		1,50	●	1,50	2,00					33	●	50	0,19	●	0,20					50,00	●	49,94	50,00	●	50,00
	4 Circular	34,770	0+580,152	530,000	80	0	75					68	●	100				0,44	●	0,65	0,85					50,00	●	49,94	50,00	●	50,00
	Clotoide	50,000	0+614,923		80	0		1,50	●	1,50	2,00					33	●	50	0,20	●	0,20	35	●	32,00		50,00	●	49,94	50,00	●	50,00
	5 Recta	115,069	0+664,923		80	0	0																								
	Clotoide	100,000	0+779,992		79,5	0		1,50	●	1,50	2,00					33	●	50	0,14	●	0,20					100,00	●	72,63	100,00	●	100,00
	6 Circular	261,932	0+879,992	-300,000	79,5	0	150					100	●	100				0,65	●	0,65	0,85					100,00	●	72,63	100,00	●	100,00
	Clotoide	100,000	1+141,924		79,5	0		1,50	●	1,50	2,00					33	●	50	0,14	●	0,20	262	●	31,80		100,00	●	72,63	100,00	●	100,00
	7 Recta	189,727	1+241,924		110	0	0																								
	Clotoide	95,000	1+431,651		110	0		0,79	●	1,50	2,00					24	●	50	0,20	●	0,20					95,00	●	94,48	95,00	●	95,00
	8 Circular	371,218	1+526,651	-850,000	110	0	75					94	●	100				0,61	●	0,65	0,85					95,00	●	94,48	95,00	●	95,00
	Clotoide	95,000	1+897,869		110	0		0,79	●	1,50	2,00					24	●	50	0,20	●	0,20	371	●	44,00		95,00	●	94,48	95,00	●	95,00
	9 Recta	235,417	1+992,869		110	0	0																								
	Clotoide	100,000	2+228,286		79,5	0		1,50	●	1,50	2,00					33	●	50	0,14	●	0,20					100,00	●	72,63	100,00	●	100,00
	10 Circular	384,622	2+328,286	300,000	79,5	0	150					100	●	100				0,65	●	0,65	0,85					100,00	●	72,63	100,00	●	100,00
	Clotoide	100,000	2+712,908		79,5	0		1,50	●	1,50	2,00					33	●	50	0,14	●	0,20	385	●	31,80		100,00	●	72,63	100,00	●	100,00
	11 Recta	48,373	2+812,908		79,5	0	0																								
	Clotoide	100,000	2+861,281		79,5	0		1,50	●	1,50	2,00					33	●	50	0,14	●	0,20					100,00	●	72,63	100,00	●	100,00
	12 Circular	201,416	2+961,281	-300,000	79,5	0	150					100	●	100				0,65	●	0,65	0,85					100,00	●	72,63	100,00	●	100,00
	Clotoide	100,000	3+162,697		79,5	0		1,50	●	1,50	2,00					33	●	50	0,14	●	0,20	201	●	31,80		100,00	●	72,63	100,00	●	100,00
	13 Recta	170,746	3+262,697		79,5	0	0																								
	Clotoide	100,000	3+433,443		79,5	0		1,50	●	1,50	2,00					33	●	50	0,14	●	0,20					100,00	●	72,63	100,00	●	100,00
	14 Circular	478,667	3+533,443	-300,000	79,5	0	150					100	●	100				0,65	●	0,65	0,85					100,00	●	72,63	100,00	●	100,00
	Clotoide	100,000	4+012,110		79,5	0		1,50	●	1,50	2,00					33	●	50	0,14	●	0,20	479	●	31,80		100,00	●	72,63	100,00	●	100,00
	15 Recta	498,360	4+112,110		79,5	0	0																								
	Clotoide	100,000	4+610,470		79,5	0		1,50	●	1,50	2,00					33	●	50	0,14	●	0,20					100,00	●	72,63	100,00	●	100,00
	16 Circular	759,696	4+710,470	300,000	79,5	0	150					100	●	100				0,65	●	0,65	0,85					100,00	●	72,63	100,00	●	100,00
	Clotoide	100,000	5+470,166		79,5	0		1,50	●	1,50	2,00					33	●	50	0,14	●	0,20	760	●	31,80		100,00	●	72,63	100,00	●	100,00
	17 Recta	656,943	5+570,166		90	0	0																								
	Clotoide	86,000	6+227,109		90	0		1,50	●	1,50	2,00					38	●	50	0,19	●	0,20					86,00	●	82,13	86,00	●	86,00
	18 Circular	37,464	6+313,109	420,000	90	0	129					100	●	100				0,65	●	0,65	0,85					86,00	●	82,13	86,00	●	86,00
	Clotoide	86,000	6+350,573		90	0		1,50	●	1,50	2,00					38	●	50	0,19	●	0,20	37	●	36,00		86,00	●	82,13	86,00	●	86,00
	19 Recta	37,701	6+436,573		90	0	0																								
	Clotoide	86,000	6+474,275		90	0		1,50	●	1,50	2,00					38	●	50	0,19	●	0,20					86,00	●	82,13	86,00	●	86,00
	20 Circular	37,738	6+560,275	-420,000	90	0	129					100	●	100				0,65	●	0,65	0,85					86,00	●	82,13	86,00	●	86,00
	Clotoide	86,000	6+598,013		90	0		1,50	●	1,50	2,00					38	●	50	0,19	●	0,20	38	●	36,00		86,00	●	82,13	86,00	●	86,00
	21 Recta	254,236	6+684,013		110	0	0																								
	Clotoide	65,000	6+938,249		110	0		0,92	●	1,50	2,00					28	●	50	0,18	●	0,20					65,00	●	59,99	65,00	●	65,00
	22 Circular	119,972	7+003,249	-1200,000	110	0	60					59	●	100				0,39	●	0,65	0,85					65,00	●	59,99	65,00	●	65,00
	Clotoide	65,000	7+123,221		110	0		0,92	●	1,50	2,00					28	●	50	0,18	●	0,20	120	●	44,00		65,00	●	59,99	65,00	●	65,00
	23 Recta	228,303	7+188,221		110	0	0																								
	Clotoide	100,000	7+416,525		79,5	0		1,50	●	1,50	2,00					33	●	50	0,14	●	0,20					100,00	●	72,63	100,00	●	100,00
	24 Circular	417,975	7+516,525	300,000	79,5	0	150					100	●	100				0,65	●	0,65	0,85					100,00	●	72,63	100,00	●	100,00
	Clotoide	100,000	7+934,499		79,5	0		1,50	●	1,50	2,00					33	●	50	0,14	●	0,20	418	●	31,80		100,00	●	72,63	100,00	●	100,00
	25 Recta	290,043	8+034,499		79,5	0	0																								
	Clotoide	100,000	8+324,542		79,5	0		1,50	●	1,50	2,00					33	●	50	0,14	●	0,20					100,00	●	72,63	100,00	●	100,00
	26 Circular	35,012	8+424,542	300,000	79,5	0	150					100	●	100				0,65	●	0,65	0,85					100,00	●	72,63	100,00	●	100,00
	Clotoide																														

ANÁLISIS DE LOS PARÁMETROS GEOMÉTRICOS Y FUNCIONALES DEL TRAZADO EN PLANTA. EJE DE INFRAESTRUCTURA

DEFINICIÓN GEOMÉTRICA DEL TRAZADO EN PLANTA					PARÁMETROS GEOMÉTRICOS				PARÁMETROS FUNCIONALES																					
Nº	Tipo de alineación	Longitud (m)	P.K. inicio	Radio/parámetro (+) dcha. (-) izda. (m)	Velocidad adoptada (km/h)		Peralte real (mm)	Rampa de peralte (mm/m)	Parámetro		Insuficiencia peralte (mm)	Parámetro	Aceleración sin compensar (m/s <sup>2</sup> )	Parámetro		Var. temporal del peralte (mm/s)	Parámetro	Var. temporal acel. no comp. (m/s <sup>2</sup> )	Parámetro	Long. Mínima curva circular. (m)	Parámetro	Long. Mínima Recta entre curvas circulares. (m)	Parámetro	Long. Mínima curva de transición. Confort viajero (m)	Parámetro	Long. Mínima curva de transición Limit. Geométrica.	Parámetro	Long. Mínima curva de transición Limit. dinámica.	Parámetro	
					Vmáx	Vmín			Nr.	Ex.		Nr.		Nr.	Ex.		Nr.		Nr.											
ALTERNATIVA 4	1 Recta	293,457	0+000,000	1800,000	80	0	0																							
	Clotoide	15,000	0+293,457		80	0		1,47	1,50	2,00						33		0,19		37				15,00		14,77	15,00		15,00	
	2 Circular	37,308	0+308,457		80	0	22				20		0,13		0,65	0,85									15,00		14,77	15,00		15,00
	Clotoide	15,000	0+345,764		80	0		1,47	1,50	2,00						33		0,19		37				15,00		14,77	15,00		15,00	
	3 Recta	169,388	0+360,764		80	0	0															169		32		50,00		48,33	50,00	50,00
	Clotoide	50,000	0+530,152		79,5	0		1,50	1,50	2,00						33		0,19		35				50,00		48,33	50,00		50,00	
	4 Circular	34,770	0+580,152	530,000	79,5	0	75				66		0,43		0,65	0,85									50,00		48,33	50,00		50,00
	Clotoide	50,000	0+614,923		79,5	0		1,50	1,50	2,00						33		0,19		35				50,00		48,33	50,00		50,00	
	5 Recta	115,069	0+664,923		79,5	0	0															115		32		100,00		72,63	100,00	100,00
	Clotoide	100,000	0+779,992		79,5	0		1,50	1,50	2,00						33		0,14		262				100,00		72,63	100,00		100,00	
	6 Circular	261,932	0+879,992	-300,000	79,5	0	150				100		0,65		0,65	0,85									100,00		72,63	100,00		100,00
	Clotoide	100,000	1+141,924		79,5	0		1,50	1,50	2,00						33		0,14		262				100,00		72,63	100,00		100,00	
	7 Recta	189,727	1+241,924		100	0	0															190		40		95,00		94,48	95,00	95,00
	Clotoide	95,000	1+431,651		110	0		0,79	1,50	2,00						24		0,20		371				95,00		94,48	95,00		95,00	
	8 Circular	371,218	1+526,651	-850,000	110	0	75				94		0,61		0,65	0,85									95,00		94,48	95,00		95,00
	Clotoide	95,000	1+897,869		110	0		0,79	1,50	2,00						24		0,20		371				95,00		94,48	95,00		95,00	
	9 Recta	235,417	1+992,869		110	0	0															235		44		100,00		72,63	100,00	100,00
	Clotoide	100,000	2+228,286		79,5	0		1,50	1,50	2,00						33		0,14		385				100,00		72,63	100,00		100,00	
	10 Circular	384,622	2+328,286	300,000	79,5	0	150				100		0,65		0,65	0,85									100,00		72,63	100,00		100,00
	Clotoide	100,000	2+712,908		79,5	0		1,50	1,50	2,00						33		0,14		385				100,00		72,63	100,00		100,00	
	11 Recta	48,373	2+812,908		79,5	0	0															48		32		100,00		72,63	100,00	100,00
	Clotoide	100,000	2+861,281		79,5	0		1,50	1,50	2,00						33		0,14		201				100,00		72,63	100,00		100,00	
	12 Circular	201,416	2+961,281	-300,000	79,5	0	150				100		0,65		0,65	0,85									100,00		72,63	100,00		100,00
	Clotoide	100,000	3+162,697		79,5	0		1,50	1,50	2,00						33		0,14		201				100,00		72,63	100,00		100,00	
	13 Recta	176,158	3+262,697		90	0	0															176		36		95,00		79,08	95,00	95,00
	Clotoide	95,000	3+438,855		90	0		1,37	1,50	2,00						34		0,16		302				95,00		79,08	95,00		95,00	
	14 Circular	302,491	3+533,855	425,000	90	0	130				96		0,62		0,65	0,85									95,00		79,08	95,00		95,00
	Clotoide	95,000	3+836,346		90	0		1,37	1,50	2,00						34		0,16		302				95,00		79,08	95,00		95,00	
	15 Recta	544,909	3+931,346		110	0	0															545		44		65,00		63,92	65,00	65,00
	Clotoide	65,000	4+476,254		110	0		1,23	1,50	2,00						38		0,19		58				65,00		63,92	65,00		65,00	
	16 Circular	57,648	4+541,254	1000,000	110	0	80				63		0,41		0,65	0,85									65,00		63,92	65,00		65,00
	Clotoide	65,000	4+598,902		110	0		1,23	1,50	2,00						38		0,19		58				65,00		63,92	65,00		65,00	
	17 Recta	116,231	4+663,902		110	0	0															116		44		100,00		72,63	100,00	100,00
	Clotoide	100,000	4+780,133		79,5	0		1,50	1,50	2,00						33		0,14		407				100,00		72,63	100,00		100,00	
	18 Circular	407,289	4+880,133	-300,000	79,5	0	150				100		0,65		0,65	0,85									100,00		72,63	100,00		100,00
	Clotoide	100,000	5+287,422		79,5	0		1,50	1,50	2,00						33		0,14		407				100,00		72,63	100,00		100,00	
	19 Recta	371,033	5+387,422		79,5	0	0															371		32		100,00		72,63	100,00	100,00
	Clotoide	100,000	5+758,455		79,5	0		1,50	1,50	2,00						33		0,14		418				100,00		72,63	100,00		100,00	
	20 Circular	417,975	5+858,455	-300,000	79,5	0	150				100		0,65		0,65	0,85									100,00		72,63	100,00		100,00
	Clotoide	100,000	6+276,430		79,5	0		1,50	1,50	2,00						33		0,14		418				100,00		72,63	100,00		100,00	
	21 Recta	228,303	6+376,430		110	0	0															228		44		65,00		59,99	65,00	65,00
	Clotoide	65,000	6+604,733		110	0		0,92	1,50	2,00						28		0,18		120				65,00		59,99	65,00		65,00	
	22 Circular	119,972	6+669,733	1200,000	110	0	60				59		0,39		0,65	0,85									65,00		59,99	65,00		65,00
	Clotoide	65,000	6+789,705		110	0		0,92	1,50	2,00						28		0,18		120				65,00		59,99	65,00		65,00	
	23 Recta	254,236	6+854,705		110	0	0															254		44		86,00		82,13	86,00	86,00
	Clotoide	86,000	7+108,941		90	0		1,50	1,50	2,00						38		0,19		38				86,00		82,13	86,00		86,00	
	24 Circular	37,738	7+194,941	420,000	90	0	129				100		0,65		0,65	0,85									86,00		82,13	86,00		86,00
	Clotoide	86,000	7+232,679		90	0		1,50	1,50	2,00						38		0,19		38				86,00		82,13	86,00		86,00	
	25 Recta	37,703	7+318,679		90	0	0															38		36		86,00		82,13	86,00	86,00
	Clotoide	86,000	7+356,382		90	0		1,50	1,50	2,00						38		0,19		37				86,00		82,13	86,00		86,00	
	26 Circular	37,464	7+442,382	-420,000	90	0	129				100		0,65		0,65	0,85									86,00		82,13	86,00		86,00
	Clotoide	86,000	7+479,846		90	0		1,50	1,50	2,00						38		0,19		37				86,00		82,13	86,00		86,00	
	27 Recta	783,808	7+565,846		90	0	0															784		36		86,00		82,13	86,00	86,0



ANÁLISIS DE LOS PARÁMETROS GEOMÉTRICOS Y FUNCIONALES DEL TRAZADO EN ALZADO. EJE DE INFRAESTRUCTURA

	PENDIENTE	LONGITUD	Kv	Vértice		Tangente de entrada		Tangente de salida		Aceleración vertical a <sub>v</sub> Máx (m/s²)		Parámetro		PENDIENTE				Long mínima pendiente const	Parámetro	Long curva de acuerdo	Parámetro	Kv mín > 2.000					
				PK	Z	PK	Z	PK	Z					Pte. i adoptado (‰)	VIAJEROS iMáx (‰)	Pte.											
										i adoptado (‰)	i <sub>Mín</sub> (‰)	Nr.	Ex.														
ALTERNATIVA 1	0,00					0+000		0+475	650,00					0,00	●	33,33	0.0‰ Estación	5,00	475,06	●	31,80						
	0,00	109,23	3300	0+530	650,00	0+475	650,00	0+584	648,19	0,15	●	0,150	0,300	-33,10	●	33,33	-33,10	●	5,00	46,87	●	31,80	109,23	●	31,80	3300	●
	-33,10					0+584	648,19	0+631	646,64					-33,10	●	33,33	-33,10	●	5,00								
	-33,10	92,73	3300	0+678	645,11	0+631	646,64	0+724	644,87	0,15	●	0,150	0,300	-5,00	●	33,33	-5,00	●	5,00	53,92	●	31,80	92,73	●	31,80	3300	●
	-5,00					0+724	644,87	0+778	644,61					-5,00	●	33,33	-5,00	●	5,00								
	-5,00	66,00	3300	0+811	644,44	0+778	644,61	0+844	643,62	0,15	●	0,150	0,300	-25,00	●	33,33	-25,00	●	5,00	129,43	●	31,80	66,00	●	31,80	3300	●
	-25,00					0+844	643,62	0+973	640,38					-25,00	●	33,33	-25,00	●	5,00								
	-25,00	192,39	3300	1+069	637,97	0+973	640,38	1+166	641,18	0,15	●	0,150	0,300	33,30	●	33,33	33,30	●	5,00	119,91	●	31,80	192,39	●	31,80	3300	●
	33,30					1+166	641,18	1+286	645,17					33,30	●	33,33	33,30	●	5,00								
	33,30	109,89	3300	1+340	647,00	1+286	645,17	1+395	647,00	0,15	●	0,150	0,300	0,00	●	33,33	0.0‰ Estación	5,00	115,92	●	31,80	109,89	●	31,80	3300	●	
	0,00					1+395	647,00	1+511	647,00					0,00	●	33,33	0.0‰ Estación	5,00									
	0,00	173,25	6300	1+598	647,00	1+511	647,00	1+685	649,38	0,15	●	0,150	0,300	27,50	●	34,41	27,50	●	5,00	341,30	●	44,00	173,25	●	44,00	6300	●
	27,50					1+685	649,38	2+026	658,77					27,50	●	34,41	27,50	●	5,00								
	27,50	173,25	6300	2+113	661,15	2+026	658,77	2+199	661,15	0,15	●	0,150	0,300	0,00	●	34,41	0.0‰ Estación	5,00	185,56	●	44,00	173,25	●	44,00	6300	●	
	0,00					2+199	661,15	2+385	661,15					0,00	●	34,41	0.0‰ Estación	5,00									
	0,00	109,89	3300	2+440	661,15	2+385	661,15	2+495	659,32	0,15	●	0,150	0,300	-33,30	●	33,33	-33,30	●	5,00	845,53	●	31,80	109,89	●	31,80	3300	●
	-33,30					2+495	659,32	3+340	631,16					-33,30	●	33,33	-33,30	●	5,00								
	-33,30	69,93	2100	3+375	630,00	3+340	631,16	3+410	630,00	0,23	●	0,150	0,300	0,00	●	33,33	0.0‰ Estación	5,00	172,66	●	31,80	69,93	●	31,80	2100	●	
	0,00					3+410	630,00	3+583	630,00					0,00	●	33,33	0.0‰ Estación	5,00									
	0,00	69,93	2100	3+618	630,00	3+583	630,00	3+653	628,84	0,23	●	0,150	0,300	-33,30	●	33,33	-33,30	●	5,00	265,41	●	31,80	69,93	●	31,80	2100	●
	-33,30					3+653	628,84	3+918	620,00					-33,30	●	33,33	-33,30	●	5,00								
	-33,30	192,39	3300	4+014	616,79	3+918	620,00	4+110	619,20	0,15	●	0,150	0,300	25,00	●	33,33	25,00	●	5,00	379,00	●	31,80	192,39	●	31,80	3300	●
	25,00					4+110	619,20	4+489	628,67					25,00	●	33,33	25,00	●	5,00								
	25,00	360,00	12000	4+669	633,17	4+489	628,67	4+849	632,27	0,04	●	0,150	0,300	-5,00	●	33,33	-5,00	●	5,00	764,85	●	31,80	360,00	●	31,80	12000	●
	-5,00					4+849	632,27	5+614	628,45					-5,00	●	33,33	-5,00	●	5,00								
	-5,00	100,00	20000	5+664	628,20	5+614	628,45	5+714	628,20	0,02	●	0,150	0,300	0,00	●	33,33	0.0‰ Estación	5,00	639,87	●	31,80	100,00	●	31,80	20000	●	
	0,00					5+714	628,20	6+354	628,20					0,00	●	33,33	0.0‰ Estación	5,00									
	0,00	101,40	3000	6+405	628,20	6+354	628,20	6+456	626,49	0,16	●	0,150	0,300	-33,80	●	33,81	-33,80	●	5,00	233,46	●	36,00	101,40	●	31,80	3000	●
	-33,80					6+456	626,49	6+689	618,60					-33,80	●	33,81	-33,80	●	5,00								
	-33,80	172,80	6000	6+775	615,68	6+689	618,60	6+862	615,24	0,10	●	0,150	0,300	-5,00	●	33,81	-5,00	●	5,00	258,46	●	36,00	172,80	●	36,00	6000	●
	-5,00					6+862	615,24	7+120	613,95					-5,00	●	33,81	-5,00	●	5,00								
	-5,00	168,00	8000	7+204	613,53	7+120	613,95	7+288	611,35	0,12	●	0,150	0,300	-26,00	●	34,58	-26,00	●	5,00	474,32	●	44,00	168,00	●	44,00	8000	●
	-26,00					7+288	611,35	7+763	599,01					-26,00	●	34,58	-26,00	●	5,00								
	-26,00	104,32	6520	7+815	597,66	7+763	599,01	7+867	597,14	0,08	●	0,150	0,300	-10,00	●	33,33	-10,00	●	5,00	213,65	●	31,80	104,32	●	32,00	6520	●
	-10,00					7+867	597,14	8+081	595,00					-10,00	●	33,33	-10,00	●	5,00								
	-10,00	100,00	10000	8+131	594,50	8+081	595,00	8+181	594,50	0,05	●	0,150	0,300	0,00	●	33,33	0.0‰ Estación	5,00	609,70	●	31,80	100,00	●	31,80	10000	●	
0,00					8+181	594,50	8+790	594,50					0,00	●	33,33	0.0‰ Estación	5,00										
0,00	54,00	6000	8+817	594,50	8+790	594,50	8+844	594,74	0,08	●	0,150	0,300															
9,00					8+844	594,74	9+268	598,55																			
9,00	65,00	2500	9+300	598,85	9+268	598,55	9+333	599,98	0,05	●	0,150	0,300															

ANÁLISIS DE LOS PARÁMETROS GEOMÉTRICOS Y FUNCIONALES DEL TRAZADO EN ALZADO. EJE DE INFRAESTRUCTURA

	PENDIENTE (‰)	LONGITUD (m)	Kv	Vértice		Tangente de entrada		Tangente de salida		Aceleración vertical a <sub>v</sub> Máx (m/s²)		Parámetro		PENDIENTE				Long mínima pendiente const		Parámetro		Long curva de acuerdo		Parámetro		Kv mín > 2.000	
				PK	Z	PK	Z	PK	Z					Pte.		VIAJEROS iMáx (‰)	Pte.										
										i adoptado (‰)	●	i adoptado (‰)	i <sub>mín</sub> (‰)														
ALTERNATIVA 2	0,00					0+000		0+475	650,00					0,00	●	33,33	0.0‰ Estación	5,00	475,06	●	31,80						
	0,00	109,23	3300	0+530	650,00	0+475	650,00	0+584	648,19	0,15	●	0,150	0,300	-33,10	●	33,33	-33,10	●	5,00	46,87	●	31,80	109,23	●	31,80	3300	●
	-33,10					0+584	648,19	0+631	646,64																		
	-33,10	92,73	3300	0+678	645,11	0+631	646,64	0+724	644,87	0,15	●	0,150	0,300	-5,00	●	33,33	-5,00	●	5,00	48,92	●	31,80	92,73	●	31,80	3300	●
	-5,00					0+724	644,87	0+773	644,63																		
	-5,00	76,00	3800	0+811	644,44	0+773	644,63	0+849	643,49	0,13	●	0,150	0,300	-25,00	●	33,33	-25,00	●	5,00				76,00	●	31,80	3800	●
	-25,00					0+849	643,49	0+973	640,38																		
	-25,00	192,39	3300	1+069	637,97	0+973	640,38	1+166	641,18	0,15	●	0,150	0,300	33,30	●	33,33	33,30	●	5,00	124,42	●	31,80	192,39	●	31,80	3300	●
	33,30					1+166	641,18	1+294	645,45																		
	33,30	93,24	2800	1+340	647,00	1+294	645,45	1+387	647,00	0,17	●	0,150	0,300	0,00	●	33,33	0.0‰ Estación	5,00	124,27	●	31,80	93,24	●	31,80	2800	●	
	0,00					1+387	647,00	1+511	647,00																		
	0,00	173,25	6300	1+598	647,00	1+511	647,00	1+685	649,38	0,15	●	0,150	0,300	27,50	●	34,41	27,50	●	5,00	341,30	●	44,00	173,25	●	44,00	6300	●
	27,50					1+685	649,38	2+026	658,77																		
	27,50	173,25	6300	2+113	661,15	2+026	658,77	2+199	661,15	0,15	●	0,150	0,300	0,00	●	33,33	0.0‰ Estación	5,00	185,51	●	31,80	173,25	●	44,00	6300	●	
	0,00					2+199	661,15	2+385	661,15																		
	0,00	109,89	3300	2+440	661,15	2+385	661,15	2+495	659,32	0,15	●	0,150	0,300	-33,30	●	33,33	-33,30	●	5,00	845,53	●	31,80	109,89	●	31,80	3300	●
	-33,30					2+495	659,32	3+340	631,16																		
	-33,30	69,93	2100	3+375	630,00	3+340	631,16	3+410	630,00	0,23	●	0,150	0,300	0,00	●	33,33	0.0‰ Estación	5,00	170,36	●	31,80	69,93	●	31,80	2100	●	
	0,00					3+410	630,00	3+580	630,00																		
	0,00	70,98	2100	3+616	630,00	3+580	630,00	3+651	628,80	0,23	●	0,150	0,300	-33,80	●	33,82	-33,80	●	5,00	197,22	●	36,00	70,98	●	31,80	2100	●
	-33,80					3+651	628,80	3+849	622,13																		
	-33,80	91,56	4200	3+894	620,59	3+849	622,13	3+940	620,04	0,15	●	0,150	0,300	-12,00	●	33,82	-12,00	●	5,00	214,14	●	36,00	91,56	●	36,00	4200	●
	-12,00					3+940	620,04	4+154	617,47																		
	-12,00	78,00	6500	4+193	617,00	4+154	617,47	4+232	617,00	0,10	●	0,150	0,300	0,00	●	33,33	0.0‰ Estación	5,00	253,89	●	31,80	78,00	●	36,00	6500	●	
	0,00					4+232	617,00	4+486	617,00																		
	0,00	113,85	3300	4+543	617,00	4+486	617,00	4+600	615,04	0,15	●	0,150	0,300	-34,50	●	34,50	-34,50	●	5,00	345,32	●	44,00	113,85	●	31,80	3300	●
	-34,50					4+600	615,04	4+945	603,12																		
	-34,50	212,00	8000	5+051	599,47	4+945	603,12	5+157	598,62	0,06	●	0,150	0,300	-8,00	●	33,33	-8,00	●	5,00	474,68	●	31,80	212,00	●	31,80	8000	●
	-8,00					5+157	598,62	5+632	594,82																		
	-8,00	80,00	10000	5+672	594,50	5+632	594,82	5+712	594,50	0,05	●	0,150	0,300	0,00	●	33,33	0.0‰ Estación	5,00	194,62	●	31,80	80,00	●	31,80	10000	●	
	0,00					5+712	594,50	5+907	594,50																		
	0,00	100,00	10000	5+957	594,50	5+907	594,50	6+007	595,00	0,05	●	0,150	0,300	10,00	●	33,33	10,00	●	5,00	215,72	●	31,80	100,00	●	31,80	10000	●
10,00					6+007	595,00	6+222	597,16																			
10,00	100,00	6250	6+272	597,66	6+222	597,16	6+322	598,96	0,08	●	0,150	0,300	26,00	●	33,33	26,00	●	5,00	476,51	●	31,80	100,00	●	31,80	6250	●	
26,00					6+322	598,96	6+799	611,35																			
26,00	168,00	8000	6+883	613,53	6+799	611,35	6+967	613,95	0,08	●	0,150	0,300	5,00	●	33,81	5,00	●	5,00	258,47	●	36,00	168,00	●	36,00	8000	●	
5,00					6+967	613,95	7+225	615,24																			
5,00	172,80	6000	7+312	615,68	7+225	615,24	7+398	618,60	0,10	●	0,150	0,300	33,80	●	33,81	33,80	●	5,00	233,46	●	36,00	172,80	●	36,00	6000	●	
33,80					7+398	618,60	7+632	626,49																			
33,80	101,40	3000	7+682	628,20	7+632	626,49	7+733	628,20	0,21	●	0,150	0,300	0,00	●	33,81	0.0‰ Estación	5,00				101,40	●	36,00	3000	●		
0,00					7+733	628,20																					



ANÁLISIS DE LOS PARÁMETROS GEOMÉTRICOS Y FUNCIONALES DEL TRAZADO EN ALZADO. EJE DE INFRAESTRUCTURA

ALTERNATIVA 3	PENDIENTE		LONGITUD	Kv	Vértice		Tangente de entrada		Tangente de salida		Aceleración vertical		Parámetro		PENDIENTE				Long mínima pendiente const		Parámetro		Long curva de acuerdo		Parámetro		Kv min > 2.000		
	(‰)	(m)			PK	Z	PK	Z	PK	Z	a <sub>v</sub> Max (m/s²)		Nr.	Ex.	Pte. adoptado (‰)		VIAJEROS	Pte. adoptado (‰)		i <sub>min</sub> (‰)		Nr.			Nr.				
	0,00						0+000		0+531	650,60						0,00	●	34,94	0.0‰ Estación	5,00	531,45	●	32,00						
	0,00	48,00	6000	0+555	650,60	0+531	650,60	0+579	650,41	0,08	●	0,150	0,300			-8,00	●	34,06	-8,00	●	5,00	189,20	●	32,00	48,00	●	32,00	6000	●
	-8,00					0+579	650,41	0+769	648,89							-8,00	●	34,06	-8,00	●	5,00	189,20	●	32,00					
	-8,00	83,49	3300	0+810	648,56	0+769	648,89	0+852	647,17	0,15	●	0,150	0,300			-25,30	●	33,33	-25,30	●	5,00	89,07	●	31,80	83,49	●	31,80	3300	●
	-25,30					0+852	647,17	0+941	644,20							-25,30	●	33,33	-25,30	●	5,00	89,07	●	31,80					
	-33,30	156,72	2400	1+020	641,60	0+941	644,20	1+098	644,10	0,20	●	0,150	0,300			32,00	●	33,33	32,00	●	5,00	37,75	●	31,80	156,72	●	31,80	2400	●
	32,00					1+098	644,10	1+136	645,31							32,00	●	33,33	32,00	●	5,00	37,75	●	31,80					
	32,00	105,60	3300	1+188	647,00	1+136	645,31	1+241	647,00	0,15	●	0,150	0,300			0,00	●	33,33	0.0‰ Estación	5,00	125,98	●	31,80	105,60	●	31,80	3300	●	
	0,00					1+241	647,00	1+367	647,00							0,00	●	33,33	0.0‰ Estación	5,00	125,98	●	31,80						
	0,00	173,25	6300	1+454	647,00	1+367	647,00	1+541	649,38	0,15	●	0,150	0,300			27,50	●	34,41	27,50	●	5,00	341,30	●	44,00	173,25	●	44,00	6300	●
	27,50					1+541	649,38	1+882	658,77							27,50	●	34,41	27,50	●	5,00	341,30	●	44,00					
	27,50	173,25	6300	1+968	661,15	1+882	658,77	2+055	661,15	0,15	●	0,150	0,300			0,00	●	34,41	0.0‰ Estación	5,00	182,55	●	44,00	173,25	●	44,00	6300	●	
	0,00					2+055	661,15	2+238	661,15							0,00	●	34,41	0.0‰ Estación	5,00	182,55	●	44,00						
	0,00	109,89	3300	2+293	661,15	2+238	661,15	2+347	659,32	0,15	●	0,150	0,300			-33,30	●	33,33	-33,30	●	5,00	845,53	●	31,80	109,89	●	31,80	3300	●
	-33,30					2+347	659,32	3+193	631,16							-33,30	●	33,33	-33,30	●	5,00	845,53	●	31,80					
	-33,30	69,93	2100	3+228	630,00	3+193	631,16	3+263	630,00	0,23	●	0,150	0,300			0,00	●	33,33	0.0‰ Estación	5,00	172,66	●	31,80	69,93	●	31,80	2100	●	
	0,00					3+263	630,00	3+436	630,00							0,00	●	33,33	0.0‰ Estación	5,00	172,66	●	31,80						
	0,00	69,93	2100	3+471	630,00	3+436	630,00	3+506	628,84	0,23	●	0,150	0,300			-33,30	●	33,33	-33,30	●	5,00	265,41	●	31,80	69,93	●	31,80	2100	●
	-33,30					3+506	628,84	3+771	620,00							-33,30	●	33,33	-33,30	●	5,00	265,41	●	31,80					
	-33,30	192,39	3300	3+867	616,79	3+771	620,00	3+963	619,20	0,15	●	0,150	0,300			25,00	●	33,33	25,00	●	5,00	379,01	●	31,80	192,39	●	31,80	3300	●
	25,00					3+963	619,20	4+342	628,67							25,00	●	33,33	25,00	●	5,00	379,01	●	31,80					
	25,00	360,00	12000	4+522	633,17	4+342	628,67	4+702	632,27	0,04	●	0,150	0,300			-5,00	●	33,33	-5,00	●	5,00	764,84	●	31,80	360,00	●	31,80	12000	●
	-5,00					4+702	632,27	5+467	628,45							-5,00	●	33,33	-5,00	●	5,00	764,84	●	31,80					
	-5,00	100,00	20000	5+517	628,20	5+467	628,45	5+567	628,20	0,02	●	0,150	0,300			0,00	●	33,33	0.0‰ Estación	5,00	639,87	●	31,80	100,00	●	31,80	20000	●	
	0,00					5+567	628,20	6+207	628,20							0,00	●	33,33	0.0‰ Estación	5,00	639,87	●	31,80						
	0,00	101,40	3000	6+258	628,20	6+207	628,20	6+308	626,49	0,16	●	0,150	0,300			-33,80	●	33,81	-33,80	●	5,00	233,46	●	36,00	101,40	●	31,80	3000	●
	-33,80					6+308	626,49	6+542	618,60							-33,80	●	33,81	-33,80	●	5,00	233,46	●	36,00					
	-33,80	172,80	6000	6+628	615,68	6+542	618,60	6+715	615,24	0,10	●	0,150	0,300			-5,00	●	33,81	-5,00	●	5,00	258,46	●	36,00	172,80	●	36,00	6000	●
	-5,00					6+715	615,24	6+973	613,95							-5,00	●	33,81	-5,00	●	5,00	258,46	●	36,00					
	-5,00	168,00	8000	7+057	613,53	6+973	613,95	7+141	611,35	0,12	●	0,150	0,300			-26,00	●	34,58	-26,00	●	5,00	472,02	●	44,00	168,00	●	44,00	8000	●
	-26,00					7+141	611,35	7+613	599,07							-26,00	●	34,58	-26,00	●	5,00	472,02	●	44,00					
	-26,00	104,32	6520	7+665	597,72	7+613	599,07	7+718	597,20	0,08	●	0,150	0,300			-10,00	●	33,33	-10,00	●	5,00	219,63	●	31,80	104,32	●	32,00	6520	●
	-10,00					7+718	597,20	7+937	595,00							-10,00	●	33,33	-10,00	●	5,00	219,63	●	31,80					
	-10,00	100,00	10000	7+987	594,50	7+937	595,00	8+037	594,50	0,05	●	0,150	0,300			0,00	●	33,33	0.0‰ Estación	5,00	606,05	●	31,80	100,00	●	31,80	10000	●	
	0,00					8+037	594,50	8+643	594,50							0,00	●	33,33	0.0‰ Estación	5,00	606,05	●	31,80						
	0,00	54,00	6000	8+670	594,50	8+643	594,50	8+697	594,74	0,10	●	0,150	0,300			9,00	●	33,81	9,00	●	5,00	424,45	●	36,00	54,00	●	36,00	6000	●
	9,00					8+697	594,74	9+122	598,56							9,00	●	33,81	9,00	●	5,00	424,45	●	36,00					
	9,00	65,00	2500	9+154	598,86	9+122	598,56	9+187	599,99	0,05	●	0,150	0,300								0,00				65,00	●	16,00	2500	●

ANÁLISIS DE LOS PARÁMETROS GEOMÉTRICOS Y FUNCIONALES DEL TRAZADO EN ALZADO. EJE DE INFRAESTRUCTURA

ALTERNATIVA 4	PENDIENTE	LONGITUD	Kv	Vértice		Tangente de entrada		Tangente de salida		Aceleración vertical a <sub>v</sub> Máx (m/s²)		Parámetro		PENDIENTE				Long mínima pendiente const		Parámetro		Long curva de acuerdo		Parámetro		Kv mín > 2.000	
	(‰)	(m)		PK	Z	PK	Z	PK	Z					Pte. i adoptado (‰)	VIAJEROS iMáx (‰)	Pte. i adoptado (‰)	i <sub>Mín</sub> (‰)										
												Nr.	Ex.						Nr.			Nr.					
	0,00					0+000		0+531	650,60					0,00	●	33,33	0.0‰ Estación	5,00	531,45	●	31,80						
	0,00	48,00	6000	0+555	650,60	0+531	650,60	0+579	650,41	0,08	●	0,150	0,300														
	-8,00					0+579	650,41	0+769	648,89					-8,00	●	33,33	-8,00	●	5,00	189,20	●	31,80	48,00	●	31,80	6000	●
	-8,00	83,49	3300	0+810	648,56	0+769	648,89	0+852	647,17	0,15	●	0,150	0,300														
	-33,30					0+852	647,17	0+941	644,20					-33,30	●	33,33	-33,30	●	5,00	89,07	●	31,80	83,49	●	31,80	3300	●
	-33,30	156,72	2400	1+020	641,60	0+941	644,20	1+098	644,10	0,20	●	0,150	0,300														
	32,00					1+098	644,10	1+136	645,31					32,00	●	33,33	32,00	●	5,00	37,75	●	31,80	156,72	●	31,80	2400	●
	32,00	105,60	3300	1+188	647,00	1+136	645,31	1+241	647,00	0,15	●	0,150	0,300														
	0,00					1+241	647,00	1+364	647,00					0,00	●	33,33	0.0‰ Estación	5,00	122,98	●	31,80	105,60	●	31,80	3300	●	
	0,00	173,25	6300	1+451	647,00	1+364	647,00	1+538	649,38	0,15	●	0,150	0,300														
	27,50					1+538	649,38	1+879	658,77					27,50	●	34,41	27,50	●	5,00	341,30	●	44,00	173,25	●	44,00	6300	●
	27,50	173,25	6300	1+965	661,15	1+879	658,77	2+052	661,15	0,15	●	0,150	0,300														
	0,00					2+052	661,15	2+238	661,15					0,00	●	33,33	0.0‰ Estación	5,00	185,51	●	31,80	173,25	●	44,00	6300	●	
	0,00	109,89	3300	2+293	661,15	2+238	661,15	2+347	659,32	0,15	●	0,150	0,300														
	-33,30					2+347	659,32	3+193	631,16					-33,30	●	33,33	-33,30	●	5,00	845,53	●	31,80	109,89	●	31,80	3300	●
	-33,30	69,93	2100	3+228	630,00	3+193	631,16	3+263	630,00	0,23	●	0,150	0,300														
	0,00					3+263	630,00	3+433	630,00					0,00	●	33,33	0.0‰ Estación	5,00	170,36	●	31,80	69,93	●	31,80	2100	●	
	0,00	70,98	2100	3+469	630,00	3+433	630,00	3+504	628,80	0,23	●	0,150	0,300														
	-33,80					3+504	628,80	3+701	622,14					-33,80	●	33,82	-33,80	●	5,00	197,21	●	36,00	70,98	●	31,80	2100	●
	-33,80	91,56	4200	3+747	620,59	3+701	622,14	3+793	620,04	0,15	●	0,150	0,300														
	-12,00					3+793	620,04	4+007	617,47					-12,00	●	33,82	-12,00	●	5,00	214,18	●	36,00	91,56	●	36,00	4200	●
	-12,00	78,00	6500	4+046	617,00	4+007	617,47	4+085	617,00	0,10	●	0,150	0,300														
	0,00					4+085	617,00	4+339	617,00					0,00	●	33,33	0.0‰ Estación	5,00	253,87	●	31,80	78,00	●	36,00	6500	●	
	0,00	113,85	3300	4+396	617,00	4+339	617,00	4+453	615,04	0,15	●	0,150	0,300														
	-34,50					4+453	615,04	4+798	603,12					-34,50	●	34,50	-34,50	●	5,00	345,33	●	44,00	113,85	●	31,80	3300	●
	-34,50	212,00	8000	4+904	599,47	4+798	603,12	5+010	598,62	0,06	●	0,150	0,300														
	-8,00					5+010	598,62	5+485	594,82					-8,00	●	33,33	-8,00	●	5,00	474,67	●	31,80	212,00	●	31,80	8000	●
	-8,00	80,00	10000	5+525	594,50	5+485	594,82	5+565	594,50	0,05	●	0,150	0,300														
	0,00					5+565	594,50	5+760	594,50					0,00	●	33,33	0.0‰ Estación	5,00	194,60	●	31,80	80,00	●	31,80	10000	●	
	0,00	100,00	10000	5+810	594,50	5+760	594,50	5+860	595,00	0,05	●	0,150	0,300														
	10,00					5+860	595,00	6+075	597,16					10,00	●	33,33	10,00	●	5,00	215,75	●	31,80	100,00	●	31,80	10000	●
	10,00	100,00	6250	6+125	597,66	6+075	597,16	6+175	598,96	0,08	●	0,150	0,300														
	26,00					6+175	598,96	6+652	611,35					26,00	●	33,33	26,00	●	5,00	476,50	●	31,80	100,00	●	31,80	6250	●
	26,00	168,00	8000	6+736	613,53	6+652	611,35	6+820	613,95	0,12	●	0,150	0,300														
	5,00					6+820	613,95	7+078	615,24					5,00	●	33,81	5,00	●	5,00	258,49	●	36,00	168,00	●	44,00	8000	●
	5,00	172,80	6000	7+165	615,68	7+078	615,24	7+251	618,60	0,10	●	0,150	0,300														
	33,80					7+251	618,60	7+485	626,49					33,80	●	33,81	33,80	●	5,00	233,46	●	36,00	172,80	●	36,00	6000	●
	33,80	101,40	3000	7+535	628,20	7+485	626,49	7+586	628,20	0,21	●	0,150	0,300														
	0,00					7+586	628,20							0,00	●	33,81	0.0‰ Estación	5,00									

LEYENDA

- Valor normal
- Valor excepcional
- Valor excesivo

## APÉNDICE 2. LISTADOS DE TRAZADO





## LISTADOS DE LAS ALINEACIONES EN PLANTA.

### EJE 1. ALTERNATIVA 1.

EJE	DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
1	1	Recta	0,400	0,000	445.415,597	4.480.118,978			78,8578	0,9453594	0,3260301	40°28'11.8429"	-3°38'38.0297"
1		Clotoide	100,000	0,400	445.415,975	4.480.119,109		188,414	78,8578	445.415,975	4.480.119,109	40°28'11.8473"	-3°38'38.0137"
1	2	Circular	34,625	100,400	445.511,853	4.480.147,215	355,000		87,8243	445.579,335	4.479.798,688	40°28'12.7814"	-3°38'33.9510"
1		Clotoide	100,000	135,025	445.546,113	4.480.152,130		188,414	94,0335	445.646,025	4.480.152,112	40°28'12.9489"	-3°38'32.4977"
1	3	Recta	239,735	235,025	445.646,025	4.480.152,112			103,0000	0,9988899	-0,0471064	40°28'12.9719"	-3°38'28.2550"
1		Clotoide	100,000	474,760	445.885,493	4.480.140,819		173,205	103,0000	445.885,493	4.480.140,819	40°28'12.6619"	-3°38'18.0826"
1	4	Circular	55,242	574,760	445.984,844	4.480.130,583	300,000		113,6103	445.921,194	4.479.837,413	40°28'12.3532"	-3°38'13.8606"
1		Clotoide	100,000	630,002	446.037,448	4.480.113,972		173,205	125,3330	446.124,660	4.480.065,297	40°28'11.8269"	-3°38'11.6217"
1	5	Recta	89,767	730,002	446.124,660	4.480.065,297			135,9433	0,8448044	-0,5350752	40°28'10.2687"	-3°38'07.9034"
1		Clotoide	100,000	819,769	446.200,496	4.480.017,265		173,205	135,9433	446.200,496	4.480.017,265	40°28'08.7287"	-3°38'04.6684"
1	6	Circular	368,719	919,769	446.287,709	4.479.968,590	-300,000		125,3330	446.403,962	4.480.245,149	40°28'07.1704"	-3°38'00.9502"
1		Clotoide	100,000	1.288,488	446.625,571	4.480.042,938		173,205	47,0884	446.684,295	4.480.123,727	40°28'09.6600"	-3°37'46.6258"
1	7	Recta	190,263	1.388,488	446.684,295	4.480.123,727			36,4780	0,5421517	0,8402806	40°28'12.2936"	-3°37'44.1566"
1		Clotoide	95,000	1.578,752	446.787,447	4.480.283,601		284,165	36,4780	446.787,447	4.480.283,601	40°28'17.5022"	-3°37'39.8246"
1	8	Circular	371,218	1.673,752	446.837,448	4.480.364,362	-850,000		32,9205	446.098,586	4.480.784,579	40°28'20.1329"	-3°37'37.7256"
1		Clotoide	95,000	2.044,970	446.945,841	4.480.716,325		284,165	5,1175	446.949,937	4.480.811,223	40°28'31.5722"	-3°37'33.2286"
1	9	Recta	235,417	2.139,970	446.949,937	4.480.811,223			1,5600	0,0245012	0,9996998	40°28'34.6508"	-3°37'33.0833"
1		Clotoide	100,000	2.375,387	446.955,705	4.481.046,569		173,205	1,5600	446.955,705	4.481.046,569	40°28'42.2845"	-3°37'32.9092"
1	10	Circular	384,622	2.475,387	446.963,691	4.481.146,126	300,000		12,1703	447.258,226	4.481.089,124	40°28'45.5151"	-3°37'32.6000"
1		Clotoide	100,000	2.860,009	447.229,006	4.481.387,697		173,205	93,7897	447.328,874	4.481.386,342	40°28'53.4102"	-3°37'21.4043"
1	11	Recta	48,373	2.960,009	447.328,874	4.481.386,342			104,4000	0,9976125	-0,0690600	40°28'53.3891"	-3°37'17.1623"
1		Clotoide	100,000	3.008,382	447.377,131	4.481.383,001		173,205	104,4000	447.377,131	4.481.383,001	40°28'53.2918"	-3°37'15.1118"
1	12	Circular	201,416	3.108,382	447.476,999	4.481.381,646	-300,000		93,7897	447.447,780	4.481.680,219	40°28'53.2706"	-3°37'10.8698"
1		Clotoide	100,000	3.309,798	447.656,391	4.481.464,624		173,205	51,0479	447.720,023	4.481.541,607	40°28'56.0024"	-3°37'03.2754"
1	13	Recta	170,746	3.409,798	447.720,023	4.481.541,607			40,4375	0,5933315	0,8049582	40°28'58.5135"	-3°37'00.5956"
1		Clotoide	100,000	3.580,544	447.821,332	4.481.679,050		173,205	40,4375	447.821,332	4.481.679,050	40°29'02.9938"	-3°36'56.3335"
1	14	Circular	478,667	3.680,544	447.876,037	4.481.762,613	-300,000		29,8272	447.608,367	4.481.898,084	40°29'05.7161"	-3°36'54.0347"
1		Clotoide	100,000	4.159,210	447.737,169	4.482.169,026		173,205	328,2509	447.642,768	4.482.201,640	40°29'18.8650"	-3°37'00.0536"
1	15	Recta	498,360	4.259,210	447.642,768	4.482.201,640			317,6406	-0,9618533	0,2735656	40°29'19.9013"	-3°37'04.0731"

1		Clotoide	100,000	4.757,571	447.163,418	4.482.337,974		173,205	317,6406	447.163,418	4.482.337,974	40°29'24.2133"	-3°37'24.4751"
1	16	Circular	759,696	4.857,571	447.069,016	4.482.370,588	300,000		328,2509	447.197,819	4.482.641,531	40°29'25.2494"	-3°37'28.4948"
1		Clotoide	100,000	5.617,267	447.148,393	4.482.937,431		173,205	89,4634	447.248,122	4.482.942,860	40°29'43.6506"	-3°37'25.2933"
1	17	Recta	656,943	5.717,267	447.248,122	4.482.942,860			100,0737	0,9999993	-0,0011584	40°29'43.8495"	-3°37'21.0584"
1		Clotoide	86,000	6.374,210	447.905,065	4.482.942,099		190,053	100,0737	447.905,065	4.482.942,099	40°29'43.9742"	-3°36'53.1508"
1	18	Circular	37,464	6.460,210	447.990,972	4.482.939,067	420,000		106,5915	447.947,563	4.482.521,316	40°29'43.8953"	-3°36'49.5005"
1		Clotoide	86,000	6.497,674	448.028,013	4.482.933,539		190,053	112,2702	448.111,062	4.482.911,358	40°29'43.7244"	-3°36'47.9254"
1	19	Recta	37,701	6.583,674	448.111,062	4.482.911,358			118,7880	0,9567671	-0,2908551	40°29'43.0237"	-3°36'44.3908"
1		Clotoide	86,000	6.621,376	448.147,133	4.482.900,392		190,053	118,7880	448.147,133	4.482.900,392	40°29'42.6762"	-3°36'42.8553"
1	20	Circular	37,738	6.707,376	448.230,182	4.482.878,210	-420,000		112,2702	448.310,632	4.483.290,433	40°29'41.9755"	-3°36'39.3208"
1		Clotoide	86,000	6.745,113	448.267,496	4.482.872,654		190,053	106,5500	448.353,404	4.482.869,678	40°29'41.8037"	-3°36'37.7341"
1	21	Recta	254,236	6.831,113	448.353,404	4.482.869,678			100,0322	0,9999999	-0,0005063	40°29'41.7265"	-3°36'34.0838"
1		Clotoide	65,000	7.085,350	448.607,641	4.482.869,550		279,285	100,0322	448.607,641	4.482.869,550	40°29'41.7791"	-3°36'23.2837"
1	22	Circular	119,972	7.150,350	448.672,636	4.482.870,103	-1.200,000		98,3081	448.640,747	4.484.069,680	40°29'41.8115"	-3°36'20.5228"
1		Clotoide	65,000	7.270,322	448.792,207	4.482.879,276		279,285	91,9433	448.856,526	4.482.888,643	40°29'42.1356"	-3°36'15.4460"
1	23	Recta	228,303	7.335,322	448.856,526	4.482.888,643			90,2191	0,9882210	0,1530336	40°29'42.4537"	-3°36'12.7164"
1		Clotoide	100,000	7.563,625	449.082,140	4.482.923,581		173,205	90,2191	449.082,140	4.482.923,581	40°29'43.6367"	-3°36'03.1424"
1	24	Circular	417,975	7.663,625	449.181,537	4.482.933,363	300,000		100,8295	449.177,628	4.482.633,388	40°29'43.9758"	-3°35'58.9227"
1		Clotoide	100,000	8.081,600	449.473,577	4.482.682,521		173,205	189,5265	449.478,908	4.482.582,787	40°29'35.9050"	-3°35'46.4446"
1	25	Recta	290,043	8.181,600	449.478,908	4.482.582,787			200,1368	-0,0021487	-0,9999977	40°29'32.6717"	-3°35'46.1895"
1		Clotoide	100,000	8.471,643	449.478,284	4.482.292,745		173,205	200,1368	449.478,284	4.482.292,745	40°29'23.2653"	-3°35'46.1328"
1	26	Circular	35,012	8.571,643	449.472,526	4.482.193,034	300,000		210,7471	449.176,790	4.482.243,439	40°29'20.0304"	-3°35'46.3488"
1		Clotoide	100,000	8.606,655	449.464,645	4.482.158,941		173,205	218,1768	449.426,060	4.482.066,819	40°29'18.9230"	-3°35'46.6737"
1	27	Recta	642,061	8.706,655	449.426,060	4.482.066,819			228,7871	-0,4369339	-0,8994936	40°29'15.9269"	-3°35'48.2862"
1		Clotoide	100,000	9.348,716	449.145,522	4.481.489,289		173,205	228,7871	449.145,522	4.481.489,289	40°28'57.1355"	-3°36'00.0356"
1	28	Circular	30,471	9.448,716	449.106,937	4.481.397,167	-300,000		218,1768	449.394,791	4.481.312,670	40°28'54.1394"	-3°36'01.6477"
1		Clotoide	100,000	9.479,187	449.099,853	4.481.367,544		173,205	211,7106	449.092,586	4.481.267,932	40°28'53.1771"	-3°36'01.9401"
1	29	Recta	124,931	9.579,187	449.092,586	4.481.267,932			201,1003	-0,0172819	-0,9998507	40°28'49.9450"	-3°36'02.2199"
1		Clotoide	40,000	9.704,119	449.090,426	4.481.143,019		84,853	201,1003	449.090,426	4.481.143,019	40°28'45.8935"	-3°36'02.2755"
1	30	Circular	245,854	9.744,119	449.091,216	4.481.103,049	-180,000		194,0267	449.270,424	4.481.119,913	40°28'44.5974"	-3°36'02.2304"
1		Clotoide	40,000	9.989,973	449.250,465	4.480.941,023		84,853	107,0736	449.290,416	4.480.939,543	40°28'39.3779"	-3°35'55.4203"
1	31	Recta	706,998	10.029,973	449.290,416	4.480.939,543			100,0000	1,0000000	0,0000000	40°28'39.3387"	-3°35'53.7232"
1				10.736,971	449.997,414	4.480.939,543			100,0000			40°28'39.4930"	-3°35'23.6973"

## EJE 1. ALTERNATIVA 1.

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
1	RECTA	Horizontal	0,000	445.415,597	4.480.118,978	0,000	650,000	78,857784	0,000	0,00	689,607	40°28'11.8429"	-3°38'38.0297"
1	CLOT.	Horizontal	0,400	445.415,975	4.480.119,109	1.000.000,000	650,000	78,857784	0,000	0,00	689,605	40°28'11.8473"	-3°38'38.0137"
1	CLOT.	Horizontal	20,000	445.434,516	4.480.125,465	1.811,244	650,000	79,202233	0,000	29,40	688,919	40°28'12.0578"	-3°38'37.2284"
1	CLOT.	Horizontal	40,000	445.453,505	4.480.131,743	896,469	650,000	80,263856	0,000	59,40	688,270	40°28'12.2659"	-3°38'36.4240"
1	CLOT.	Horizontal	60,000	445.472,629	4.480.137,596	595,640	650,000	82,042797	0,000	89,40	687,484	40°28'12.4602"	-3°38'35.6137"
1	CLOT.	Horizontal	80,000	445.491,938	4.480.142,803	445,981	650,000	84,539056	0,000	119,40	687,136	40°28'12.6336"	-3°38'34.7953"
1	CLOT.	Horizontal	100,000	445.511,460	4.480.147,139	356,426	650,000	87,752633	0,000	149,40	686,961	40°28'12.7789"	-3°38'33.9677"
1	CIRC.	Horizontal	100,400	445.511,853	4.480.147,215	355,000	650,000	87,824260	0,000	150,00	686,963	40°28'12.7814"	-3°38'33.9510"
1	CIRC.	Horizontal	120,000	445.531,188	4.480.150,408	355,000	650,000	91,339080	0,000	150,00	687,237	40°28'12.8895"	-3°38'33.1309"
1	CLOT.	Horizontal	135,025	445.546,113	4.480.152,130	355,000	650,000	94,033524	0,000	150,00	686,074	40°28'12.9489"	-3°38'32.4977"
1	CLOT.	Horizontal	140,000	445.551,069	4.480.152,562	373,585	650,000	94,903478	0,000	142,54	685,997	40°28'12.9641"	-3°38'32.2874"
1	CLOT.	Horizontal	160,000	445.571,037	4.480.153,664	473,175	650,000	97,952981	0,000	112,54	686,503	40°28'13.0046"	-3°38'31.4398"
1	CLOT.	Horizontal	180,000	445.591,034	4.480.153,922	645,160	650,000	100,285164	0,000	82,54	685,367	40°28'13.0176"	-3°38'30.5907"
1	CLOT.	Horizontal	200,000	445.611,030	4.480.153,560	1.013,559	650,000	101,900030	0,000	52,54	684,986	40°28'13.0106"	-3°38'29.7415"
1	CLOT.	Horizontal	220,000	445.631,016	4.480.152,804	2.362,713	650,000	102,797578	0,000	22,54	684,748	40°28'12.9908"	-3°38'28.8925"
1	RECTA	Horizontal	235,025	445.646,025	4.480.152,112	0,000	650,000	103,000000	0,000	0,00	684,247	40°28'12.9719"	-3°38'28.2550"
1	RECTA	Horizontal	240,000	445.650,994	4.480.151,877	0,000	650,000	103,000000	0,000	0,00	684,081	40°28'12.9655"	-3°38'28.0439"
1	RECTA	Horizontal	260,000	445.670,972	4.480.150,935	0,000	650,000	103,000000	0,000	0,00	683,917	40°28'12.9396"	-3°38'27.1952"
1	RECTA	Horizontal	280,000	445.690,950	4.480.149,993	0,000	650,000	103,000000	0,000	0,00	683,644	40°28'12.9138"	-3°38'26.3466"
1	RECTA	Horizontal	300,000	445.710,928	4.480.149,051	0,000	650,000	103,000000	0,000	0,00	683,447	40°28'12.8879"	-3°38'25.4980"
1	RECTA	Horizontal	320,000	445.730,905	4.480.148,109	0,000	650,000	103,000000	0,000	0,00	683,276	40°28'12.8620"	-3°38'24.6493"
1	RECTA	Horizontal	340,000	445.750,883	4.480.147,167	0,000	650,000	103,000000	0,000	0,00	682,993	40°28'12.8362"	-3°38'23.8007"
1	RECTA	Horizontal	360,000	445.770,861	4.480.146,225	0,000	650,000	103,000000	0,000	0,00	682,295	40°28'12.8103"	-3°38'22.9521"
1	RECTA	Horizontal	380,000	445.790,839	4.480.145,283	0,000	650,000	103,000000	0,000	0,00	681,890	40°28'12.7845"	-3°38'22.1034"
1	RECTA	Horizontal	400,000	445.810,817	4.480.144,340	0,000	650,000	103,000000	0,000	0,00	682,017	40°28'12.7586"	-3°38'21.2548"
1	RECTA	Horizontal	420,000	445.830,794	4.480.143,398	0,000	650,000	103,000000	0,000	0,00	682,173	40°28'12.7327"	-3°38'20.4061"
1	RECTA	Horizontal	440,000	445.850,772	4.480.142,456	0,000	650,000	103,000000	0,000	0,00	681,524	40°28'12.7069"	-3°38'19.5575"
1	RECTA	Horizontal	460,000	445.870,750	4.480.141,514	0,000	650,000	103,000000	0,000	0,00	681,400	40°28'12.6810"	-3°38'18.7089"
1	CLOT.	Horizontal	474,760	445.885,493	4.480.140,819	1.000.000,000	650,000	103,000000	0,000	0,00	681,142	40°28'12.6619"	-3°38'18.0826"
1	CLOT.	KV -3300	480,000	445.890,728	4.480.140,571	5.724,928	649,996	103,029136	-1,497	7,86	681,097	40°28'12.6551"	-3°38'17.8602"
1	CLOT.	KV -3300	500,000	445.910,701	4.480.139,541	1.188,578	649,906	103,675952	-7,558	37,86	681,269	40°28'12.6264"	-3°38'17.0118"
1	CLOT.	KV -3300	520,000	445.930,654	4.480.138,174	663,126	649,694	105,171594	-13,618	67,86	681,538	40°28'12.5867"	-3°38'16.1640"
1	CLOT.	KV -3300	540,000	445.950,556	4.480.136,207	459,839	649,361	107,516063	-19,679	97,86	681,445	40°28'12.5276"	-3°38'15.3183"
1	CLOT.	KV -3300	560,000	445.970,352	4.480.133,376	351,946	648,907	110,709358	-25,739	127,86	681,280	40°28'12.4404"	-3°38'14.4768"
1	CIRC.	KV -3300	574,760	445.984,844	4.480.130,583	300,000	648,494	113,610329	-30,212	150,00	680,568	40°28'12.3532"	-3°38'13.8606"
1	CIRC.	KV -3300	580,000	445.989,955	4.480.129,426	300,000	648,331	114,722343	-31,800	150,00	680,714	40°28'12.3169"	-3°38'13.6432"
1	CIRC.	Pendiente	600,000	446.009,255	4.480.124,197	300,000	647,672	118,966475	-33,100	150,00	680,368	40°28'12.1519"	-3°38'12.8220"
1	CIRC.	Pendiente	620,000	446.028,165	4.480.117,693	300,000	647,010	123,210607	-33,100	150,00	680,240	40°28'11.9454"	-3°38'12.0170"
1	CLOT.	Pendiente	630,002	446.037,448	4.480.113,972	300,000	646,679	125,333017	-33,100	150,00	680,295	40°28'11.8269"	-3°38'11.66"
1	CLOT.	KV 3300	640,000	446.046,601	4.480.109,950	333,327	646,360	127,348670	-30,420	135,00	680,276	40°28'11.6986"	-3°38'11.2318"
1	CLOT.	KV 3300	660,000	446.064,543	4.480.101,119	428,561	645,812	130,744044	-24,360	105,00	679,969	40°28'11.4164"	-3°38'10.4672"
1	CLOT.	KV 3300	680,000	446.082,055	4.480.091,460	599,980	645,386	133,290592	-18,299	75,00	678,786	40°28'11.1072"	-3°38'09.7206"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
1	CLOT.	KV 3300	700,000	446.099,235	4.480.081,223	999,946	645,080	134,988314	-12,239	45,00	677,999	40°28'10.7792"	-3°38'08.9879"
1	CLOT.	KV 3300	720,000	446.116,208	4.480.070,644	2.999,512	644,896	135,837209	-6,178	15,00	677,677	40°28'10.4401"	-3°38'08.2639"
1	RECTA	Pendiente	730,002	446.124,660	4.480.065,297	0,000	644,844	135,943347	-5,000	0,00	677,546	40°28'10.2687"	-3°38'07.9034"
1	RECTA	Pendiente	740,000	446.133,107	4.480.059,947	0,000	644,794	135,943347	-5,000	0,00	677,663	40°28'10.0972"	-3°38'07.5431"
1	RECTA	Pendiente	760,000	446.150,003	4.480.049,246	0,000	644,694	135,943347	-5,000	0,00	678,201	40°28'09.7540"	-3°38'06.8223"
1	RECTA	KV -3300	780,000	446.166,899	4.480.038,544	0,000	644,593	135,943347	-5,665	0,00	679,133	40°28'09.4109"	-3°38'06.1016"
1	RECTA	KV -3300	800,000	446.183,795	4.480.027,843	0,000	644,419	135,943347	-11,726	0,00	677,900	40°28'09.0678"	-3°38'05.3808"
1	CLOT.	KV -3300	819,769	446.200,496	4.480.017,265	-1.000.000,000	644,128	135,943347	-17,716	0,00	677,641	40°28'08.7287"	-3°38'04.6684"
1	CLOT.	KV -3300	820,000	446.200,691	4.480.017,141	-129.908,639	644,124	135,943290	-17,786	-0,35	677,655	40°28'08.7247"	-3°38'04.6601"
1	CLOT.	KV -3300	840,000	4.466,612	4.480.006,479	-1.482,878	643,708	135,509076	-23,847	-30,35	678,001	40°28'08.3828"	-3°38'03.9383"
1	CLOT.	Pendiente	860,000	446.234,675	4.479.996,045	-745,695	643,210	134,226036	-25,000	-60,35	677,789	40°28'08.0485"	-3°38'03.2106"
1	CLOT.	Pendiente	880,000	446.252,010	4.479.986,074	-498,083	642,710	132,094169	-25,000	-90,35	677,458	40°28'07.7291"	-3°38'02.4714"
1	CLOT.	Pendiente	900,000	446.269,732	4.479.976,806	-373,921	642,210	129,113475	-25,000	-120,35	677,074	40°28'07.4327"	-3°38'01.7161"
1	CIRC.	Pendiente	919,769	446.287,709	4.479.968,590	-300,000	641,716	125,333017	-25,000	-150,00	677,031	40°28'07.1704"	-3°38'00.9502"
1	CIRC.	Pendiente	920,000	446.287,922	4.479.968,500	-300,000	641,710	125,284012	-25,000	-150,00	677,031	40°28'07.1676"	-3°38'00.9411"
1	CIRC.	Pendiente	940,000	446.306,609	4.479.961,385	-300,000	641,210	121,039880	-25,000	-150,00	677,494	40°28'06.9411"	-3°38'00.1454"
1	CIRC.	Pendiente	960,000	446.325,729	4.479.955,530	-300,000	640,710	116,795749	-25,000	-150,00	677,481	40°28'06.7557"	-3°37'59.3317"
1	CIRC.	KV 3300	980,000	446.345,197	4.479.950,961	-300,000	640,600	112,551617	-22,951	-150,00	676,615	40°28'06.6121"	-3°37'58.5037"
1	CIRC.	KV 3300	1.000,000	446.364,925	4.479.947,700	-300,000	639,818	108,307485	-16,891	-150,00	676,619	40°28'06.5109"	-3°37'57.6649"
1	CIRC.	KV 3300	1.020,000	446.384,827	4.479.945,760	-300,000	639,541	104,063353	-10,830	-150,00	676,981	40°28'06.4526"	-3°37'56.8192"
1	CIRC.	KV 3300	1.040,000	446.404,814	4.479.945,150	-300,000	639,385	99,819221	-4,769	-150,00	676,354	40°28'06.4375"	-3°37'55.9703"
1	CIRC.	KV 3300	1.060,000	446.424,798	4.479.945,874	-300,000	639,350	95,575090	1,291	-150,00	676,058	40°28'06.4656"	-3°37'55.1220"
1	CIRC.	KV 3300	1.080,000	446.444,688	4.479.947,926	-300,000	639,437	91,330958	7,352	-150,00	676,030	40°28'06.5368"	-3°37'54.2780"
1	CIRC.	KV 3300	1.100,000	446.464,398	4.479.951,300	-300,000	639,645	87,086826	13,412	-150,00	675,056	40°28'06.6507"	-3°37'53.4421"
1	CIRC.	KV 3300	1.120,000	446.483,839	4.479.955,979	-300,000	639,973	82,842694	19,473	-150,00	675,185	40°28'06.8070"	-3°37'52.65"
1	CIRC.	KV 3300	1.140,000	446.502,926	4.479.961,942	-300,000	640,423	78,598562	25,534	-150,00	674,372	40°28'07.0048"	-3°37'51.8093"
1	CIRC.	KV 3300	1.160,000	446.521,572	4.479.969,164	-300,000	640,995	74,354430	31,594	-150,00	673,319	40°28'07.2433"	-3°37'51.0197"
1	CIRC.	Rampa	1.180,000	446.539,696	4.479.977,612	-300,000	641,656	70,110299	33,300	-150,00	673,235	40°28'07.5215"	-3°37'50.2526"
1	CIRC.	Rampa	1.200,000	446.557,600	4.479.987,248	-300,000	642,322	65,866167	33,300	-150,00	673,728	40°28'07.8381"	-3°37'49.5115"
1	CIRC.	Rampa	1.220,000	446.574,058	4.479.998,031	-300,000	642,988	61,622035	33,300	-150,00	674,224	40°28'08.1917"	-3°37'48.7997"
1	CIRC.	Rampa	1.240,000	446.590,142	4.480.009,911	-300,000	643,654	57,377903	33,300	-150,00	674,728	40°28'08.5807"	-3°37'48.1203"
1	CIRC.	Rampa	1.260,000	446.605,400	4.480.022,836	-300,000	644,320	53,133771	33,300	-150,00	674,637	40°28'09.0034"	-3°37'47.4763"
1	CIRC.	Rampa	1.280,000	446.619,762	4.480.036,749	-300,000	644,986	48,889640	33,300	-150,00	674,170	40°28'09.4579"	-3°37'46.8706"
1	CLOT.	KV -3300	1.288,488	446.625,571	4.480.042,938	-300,000	645,267	47,088366	32,406	-150,00	673,491	40°28'09.6600"	-3°37'46.6258"
1	CLOT.	KV -3300	1.300,000	446.633,172	4.480.051,583	-339,028	645,620	44,786115	28,917	-132,73	670,886	40°28'09.9421"	-3°37'46.3057"
1	CLOT.	KV -3300	1.320,000	446.645,688	4.480.067,180	-438,031	646,138	41,454968	22,857	-102,73	667,366	40°28'10.4508"	-3°37'45.7789"
1	CLOT.	KV -3300	1.340,000	446.657,479	4.480.083,333	-618,706	646,535	38,972648	16,796	-72,73	667,802	40°28'10.9774"	-3°37'45.2831"
1	CLOT.	KV -3300	1.360,000	446.668,742	4.480.099,859	-1.053,064	646,810	37,339153	10,735	-42,73	667,810	40°28'11.5159"	-3°37'44.8098"
1	CLOT.	KV -3300	1.380,000	446.679,690	4.480.116,596	-3.534,277	646,964	36,554486	4,675	-12,73	667,382	40°28'12.0613"	-3°37'44.3500"
1	RECTA	KV -3300	1.388,488	446.684,295	4.480.123,727	0,000	646,993	36,478037	2,102	0,00	667,946	40°28'12.2936"	-3°37'44.1566"
1	RECTA	Horizontal	1.400,000	446.690,536	4.480.133,400	0,000	647,000	36,478037	0,000	0,00	668,935	40°28'12.6087"	-3°37'43.8945"
1	RECTA	Horizontal	1.420,000	446.701,379	4.480.150,205	0,000	647,000	36,478037	0,000	0,00	669,921	40°28'13.1562"	-3°37'43.4392"
1	RECTA	Horizontal	1.440,000	446.712,222	4.480.167,011	0,000	647,000	36,478037	0,000	0,00	670,698	40°28'13.7038"	-3°37'42.9838"



EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
1	RECTA	Horizontal	1.460,000	446.723,065	4.480.183,817	0,000	647,000	36,478037	0,000	0,00	671,198	40°28'14.2513"	-3°37'42.5284"
1	RECTA	Horizontal	1.480,000	446.733,908	4.480.200,622	0,000	647,000	36,478037	0,000	0,00	671,369	40°28'14.7988"	-3°37'42.0731"
1	RECTA	Horizontal	1.500,000	446.744,751	44.806,428	0,000	647,000	36,478037	0,000	0,00	671,350	40°28'15.3463"	-3°37'41.6177"
1	RECTA	KV 6300	1.520,000	446.755,594	4.480.234,233	0,000	647,006	36,478037	1,373	0,00	673,916	40°28'15.8939"	-3°37'41.1623"
1	RECTA	KV 6300	1.540,000	446.766,437	4.480.251,039	0,000	647,065	36,478037	4,548	0,00	672,075	40°28'16.4414"	-3°37'40.7069"
1	RECTA	KV 6300	1.560,000	446.777,280	4.480.267,845	0,000	647,188	36,478037	7,723	0,00	672,733	40°28'16.9889"	-3°37'40.2516"
1	CLOT.	KV 6300	1.578,752	446.787,447	4.480.283,601	-1.000.000,000	647,361	36,478037	10,699	0,00	674,062	40°28'17.5022"	-3°37'39.8246"
1	CLOT.	KV 6300	1.580,000	446.788,123	4.480.284,650	-64.679,559	647,374	36,477423	10,897	-0,99	674,180	40°28'17.5364"	-3°37'39.7962"
1	CLOT.	KV 6300	1.600,000	446.798,950	4.480.301,467	-3.800,275	647,624	36,300060	14,072	-16,78	675,344	40°28'18.0843"	-3°37'39.3415"
1	CLOT.	KV 6300	1.620,000	446.809,688	4.480.318,340	-1.957,649	647,937	35,807345	17,247	-32,56	677,382	40°28'18.6340"	-3°37'38.8906"
1	CLOT.	KV 6300	1.640,000	446.820,252	4.480.335,321	-1.318,400	648,314	34,999276	20,421	-48,35	678,802	40°28'19.1871"	-3°37'38.4471"
1	CLOT.	KV 6300	1.660,000	446.830,558	4.480.352,461	-993,865	648,754	33,875854	23,596	-64,14	680,331	40°28'19.7454"	-3°37'38.0146"
1	CIRC.	KV 6300	1.673,752	446.837,448	4.480.364,362	-850,000	649,093	32,920456	25,778	-75,00	681,526	40°28'20.1329"	-3°37'37.7256"
1	CIRC.	KV 6300	1.680,000	446.840,517	4.480.369,805	-850,000	649,257	32,452468	26,770	-75,00	682,151	40°28'20.3101"	-3°37'37.5969"
1	CIRC.	Rampa	1.700,000	446.850,071	4.480.387,375	-850,000	649,806	30,954539	27,500	-75,00	684,153	40°28'20.8821"	-3°37'37.1966"
1	CIRC.	Rampa	1.720,000	446.859,208	4.480.405,166	-850,000	650,356	29,456610	27,500	-75,00	686,491	40°28'21.4612"	-3°37'36.8139"
1	CIRC.	Rampa	1.740,000	446.867,924	4.480.423,166	-850,000	650,906	27,958682	27,500	-75,00	688,920	40°28'22.0470"	-3°37'36.4492"
1	CIRC.	Rampa	1.760,000	446.876,214	4.480.441,366	-850,000	651,456	26,460753	27,500	-75,00	691,077	40°28'22.6391"	-3°37'36.1026"
1	CIRC.	Rampa	1.780,000	446.884,073	4.480.459,757	-850,000	652,006	24,962824	27,500	-75,00	690,917	40°28'23.2373"	-3°37'35.7744"
1	CIRC.	Rampa	1.800,000	446.891,498	4.480.478,327	-850,000	652,556	23,464895	27,500	-75,00	691,709	40°28'23.8413"	-3°37'35.4647"
1	CIRC.	Rampa	1.820,000	446.898,484	4.480.497,067	-850,000	653,106	21,966966	27,500	-75,00	693,801	40°28'24.4507"	-3°37'35.1737"
1	CIRC.	Rampa	1.840,000	446.905,027	4.480.515,966	-850,000	653,656	20,469037	27,500	-75,00	696,072	40°28'25.0651"	-3°37'34.9015"
1	CIRC.	Rampa	1.860,000	446.911,123	4.480.535,014	-850,000	654,206	18,971108	27,500	-75,00	696,525	40°28'25.6842"	-3°37'34.6484"
1	CIRC.	Rampa	1.880,000	446.916,770	4.480.554,199	-850,000	654,756	17,473500	27,500	-75,00	696,816	40°28'26.3077"	-3°37'34.4144"
1	CIRC.	Rampa	1.900,000	446.921,964	4.480.573,513	-850,000	655,306	15,975251	27,500	-75,00	697,531	40°28'26.9353"	-3°37'34.1996"
1	CIRC.	Rampa	1.920,000	446.926,702	4.480.592,943	-850,000	655,856	14,477322	27,500	-75,00	698,010	40°28'27.5665"	-3°37'34.0043"
1	CIRC.	Rampa	1.940,000	446.930,981	4.480.612,479	-850,000	656,406	12,979393	27,500	-75,00	698,122	40°28'28.2010"	-3°37'33.8284"
1	CIRC.	Rampa	1.960,000	446.934,800	4.480.632,111	-850,000	656,956	11,481464	27,500	-75,00	697,508	40°28'28.8386"	-3°37'33.6722"
1	CIRC.	Rampa	1.980,000	446.938,155	4.480.651,827	-850,000	657,506	9,983535	27,500	-75,00	697,614	40°28'29.4788"	-3°37'33.5356"
1	CIRC.	Rampa	2.000,000	446.941,046	4.480.671,616	-850,000	658,056	8,485606	27,500	-75,00	697,495	40°28'30.1212"	-3°37'33.4188"
1	CIRC.	Rampa	2.020,000	446.943,471	4.480.691,469	-850,000	658,606	6,987677	27,500	-75,00	697,523	40°28'30.7656"	-3°37'33.3218"
1	CIRC.	KV -6300	2.040,000	446.945,428	4.480.711,372	-850,000	659,140	5,489748	25,261	-75,00	697,638	40°28'31.4115"	-3°37'33.2447"
1	CLOT.	KV -6300	2.044,970	446.945,841	4.480.716,325	-850,000	659,264	5,117532	24,472	-75,00	697,599	40°28'31.5722"	-3°37'33.2286"
1	CLOT.	KV -6300	2.060,000	446.946,922	4.480.731,316	-1.009,757	659,613	4,080871	22,086	-63,13	697,567	40°28'32.0586"	-3°37'33.1872"
1	CLOT.	KV -6300	2.080,000	446.948,022	4.480.751,285	-1.346,512	660,023	2,977611	18,912	-47,34	697,472	40°28'32.7065"	-3°37'33.1465"
1	CLOT.	KV -6300	2.100,000	446.948,826	4.480.771,269	-2.020,278	660,370	2,189704	15,737	-31,56	697,265	40°28'33.3548"	-3°37'33.1184"
1	CLOT.	KV -6300	2.120,000	446.949,431	4.480.791,260	-4.043,615	660,653	1,717151	12,562	-15,77	696,986	40°28'34.0032"	-3°37'33.0987"
1	RECTA	KV -6300	2.139,970	446.949,937	4.480.811,223	0,000	660,872	1,559951	9,392	0,00	696,999	40°28'34.6508"	-3°37'33.0833"
1	RECTA	KV -6300	2.140,000	446.949,937	4.480.811,253	0,000	660,872	1,559951	9,388	0,00	696,999	40°28'34.6518"	-3°37'33.0832"
1	RECTA	KV -6300	2.160,000	446.950,427	4.480.831,247	0,000	661,028	1,559951	6,213	0,00	696,205	40°28'35.3003"	-3°37'33.0685"
1	RECTA	KV -6300	2.180,000	446.950,917	4.480.851,241	0,000	661,121	1,559951	3,038	0,00	695,263	40°28'35.9488"	-3°37'33.0537"
1	RECTA	Horizontal	2.200,000	446.951,407	4.480.871,235	0,000	661,150	1,559951	0,000	0,00	694,598	40°28'36.5974"	-3°37'33.0389"
1	RECTA	Horizontal	2.220,000	446.951,897	4.480.891,229	0,000	661,150	1,559951	0,000	0,00	694,048	40°28'37.2459"	-3°37'33.0241"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
1	RECTA	Horizontal	2.240,000	446.952,387	4.480.911,223	0,000	661,150	1,559951	0,000	0,00	693,204	40°28'37.8944"	-3°37'33.0093"
1	RECTA	Horizontal	2.260,000	446.952,878	4.480.931,600	0,000	661,150	1,559951	0,000	0,00	692,546	40°28'38.5430"	-3°37'32.9945"
1	RECTA	Horizontal	2.280,000	446.953,368	4.480.951,211	0,000	661,150	1,559951	0,000	0,00	691,752	40°28'39.1915"	-3°37'32.9797"
1	RECTA	Horizontal	2.300,000	446.953,858	4.480.971,205	0,000	661,150	1,559951	0,000	0,00	691,231	40°28'39.8400"	-3°37'32.9649"
1	RECTA	Horizontal	2.320,000	446.954,348	4.480.991,199	0,000	661,150	1,559951	0,000	0,00	690,425	40°28'40.4886"	-3°37'32.9501"
1	RECTA	Horizontal	2.340,000	446.954,838	4.481.011,193	0,000	661,150	1,559951	0,000	0,00	689,715	40°28'41.1371"	-3°37'32.9353"
1	RECTA	Horizontal	2.360,000	446.955,328	4.481.031,187	0,000	661,150	1,559951	0,000	0,00	689,015	40°28'41.7856"	-3°37'32.9206"
1	CLOT.	Horizontal	2.375,387	446.955,705	4.481.046,569	1.000.000,000	661,150	1,559951	0,000	0,00	688,589	40°28'42.2845"	-3°37'32.9092"
1	CLOT.	Horizontal	2.380,000	446.955,818	4.481.051,181	6.502,703	661,150	1,582534	0,000	6,92	688,495	40°28'42.4341"	-3°37'32.9057"
1	CLOT.	KV -3300	2.400,000	446.956,390	4.481.071,173	1.218,845	661,115	2,202748	-4,637	36,92	688,223	40°28'43.0826"	-3°37'32.8875"
1	CLOT.	KV -3300	2.420,000	446.957,291	4.481.091,152	672,443	660,961	3,675000	-10,698	66,92	688,036	40°28'43.7308"	-3°37'32.8552"
1	CLOT.	KV -3300	2.440,000	446.958,785	4.481.111,095	464,299	660,687	5,989657	-16,758	96,92	687,835	40°28'44.3779"	-3°37'32.7978"
1	CLOT.	KV -3300	2.460,000	446.961,136	4.481.130,955	354,553	660,291	9,156351	-22,819	126,92	687,569	40°28'45.0225"	-3°37'32.7039"
1	CIRC.	KV -3300	2.475,387	446.963,691	4.481.146,126	300,000	659,904	12,170280	-27,481	150,00	687,393	40°28'45.5151"	-3°37'32.6000"
1	CIRC.	KV -3300	2.480,000	446.964,602	4.481.150,648	300,000	659,774	13,149288	-28,879	150,00	687,330	40°28'45.6620"	-3°37'32.5626"
1	CIRC.	Pendiente	2.500,000	446.969,353	4.481.170,072	300,000	659,140	17,393420	-33,300	150,00	687,033	40°28'46.2930"	-3°37'32.3667"
1	CIRC.	Pendiente	2.520,000	446.975,387	4.481.189,136	300,000	658,474	21,637552	-33,300	150,00	686,571	40°28'46.9126"	-3°37'32.1162"
1	CIRC.	Pendiente	2.540,000	446.982,678	4.481.207,756	300,000	657,808	25,881683	-33,300	150,00	685,055	40°28'47.5181"	-3°37'31.8121"
1	CIRC.	Pendiente	2.560,000	446.991,193	4.481.225,849	300,000	657,142	30,125815	-33,300	150,00	683,848	40°28'48.1069"	-3°37'31.4559"
1	CIRC.	Pendiente	2.580,000	447.000,895	4.481.243,334	300,000	656,476	34,369947	-33,300	150,00	682,752	40°28'48.6761"	-3°37'31.0492"
1	CIRC.	Pendiente	2.600,000	447.011,739	4.481.260,134	300,000	655,810	38,614079	-33,300	150,00	682,149	40°28'49.2235"	-3°37'30.5936"
1	CIRC.	Pendiente	2.620,000	447.023,679	4.481.276,174	300,000	655,144	42,858211	-33,300	150,00	681,647	40°28'49.7464"	-3°37'30.0914"
1	CIRC.	Pendiente	2.640,000	447.036,661	4.481.291,384	300,000	654,478	47,102343	-33,300	150,00	680,941	40°28'50.2427"	-3°37'29.5446"
1	CIRC.	Pendiente	2.660,000	447.050,627	4.481.305,695	300,000	653,812	51,346474	-33,300	150,00	680,867	40°28'50.7100"	-3°37'28.9557"
1	CIRC.	Pendiente	2.680,000	447.065,516	4.481.319,043	300,000	653,146	55,590606	-33,300	150,00	682,148	40°28'51.1463"	-3°37'28.3274"
1	CIRC.	Pendiente	2.700,000	447.081,261	4.481.331,370	300,000	652,480	59,834738	-33,300	150,00	682,399	40°28'51.5497"	-3°37'27.6624"
1	CIRC.	Pendiente	2.720,000	447.097,791	4.481.342,621	300,000	651,814	64,078870	-33,300	150,00	680,677	40°28'51.9183"	-3°37'26.9637"
1	CIRC.	Pendiente	2.740,000	447.115,035	4.481.352,745	300,000	651,148	68,323002	-33,300	150,00	675,799	40°28'52.2506"	-3°37'26.2344"
1	CIRC.	Pendiente	2.760,000	447.132,915	4.481.361,699	300,000	650,482	72,567133	-33,300	150,00	675,397	40°28'52.5451"	-3°37'25.4777"
1	CIRC.	Pendiente	2.780,000	447.151,352	4.481.369,441	300,000	649,816	76,811265	-33,300	150,00	675,000	40°28'52.8004"	-3°37'24.6970"
1	CIRC.	Pendiente	2.800,000	447.170,263	4.481.375,938	300,000	649,150	81,055397	-33,300	150,00	674,178	40°28'53.0154"	-3°37'23.8957"
1	CIRC.	Pendiente	2.820,000	447.189,565	4.481.381,161	300,000	648,484	85,299529	-33,300	150,00	673,106	40°28'53.1892"	-3°37'23.0775"
1	CIRC.	Pendiente	2.840,000	447.209,172	4.481.385,086	300,000	647,818	89,543661	-33,300	150,00	672,278	40°28'53.3210"	-3°37'22.2459"
1	CIRC.	Pendiente	2.860,000	447.228,998	4.481.387,696	300,000	647,152	93,787792	-33,300	150,00	671,870	40°28'53.4102"	-3°37'21.4047"
1	CLOT.	Pendiente	2.860,009	447.229,006	4.481.387,697	300,000	647,152	93,789670	-33,300	150,00	671,870	40°28'53.4102"	-3°37'21.4043"
1	CLOT.	Pendiente	2.880,000	447.248,951	4.481.389,025	374,959	646,486	97,607887	-33,300	120,01	671,397	40°28'53.4579"	-3°37'20.5576"
1	CLOT.	Pendiente	2.900,000	447.268,947	4.481.389,287	499,926	645,820	100,579154	-33,300	90,01	670,998	40°28'53.4709"	-3°37'19.7084"
1	CLOT.	Pendiente	2.920,000	447.288,939	4.481.388,750	749,834	645,154	102,701596	-33,300	60,01	670,521	40°28'53.4581"	-3°37'18.8592"
1	CLOT.	Pendiente	2.940,000	447.308,910	4.481.387,679	1.499,337	644,488	103,975211	-33,300	30,01	669,438	40°28'53.4279"	-3°37'18.0107"
1	CLOT.	Pendiente	2.960,000	447.328,865	4.481.386,342	1.000.000,000	643,822	104,400000	-33,300	0,01	668,111	40°28'53.3891"	-3°37'17.1627"
1	RECTA	Pendiente	2.960,009	447.328,874	4.481.386,342	0,000	643,822	104,400000	-33,300	0,00	668,110	40°28'53.3891"	-3°37'17.1623"
1	RECTA	Pendiente	2.980,000	447.348,817	4.481.384,961	0,000	643,156	104,400000	-33,300	0,00	667,040	40°28'53.3489"	-3°37'16.3149"
1	RECTA	Pendiente	3.000,000	447.368,770	4.481.383,580	0,000	642,490	104,400000	-33,300	0,00	666,386	40°28'53.3087"	-3°37'15.4671"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
1	CLOT.	Pendiente	3.008,382	447.377,131	4.481.383,001	-1.000.000,000	642,211	104,400000	-33,300	0,00	666,259	40°28'53.2918"	-3°37'15.1118"
1	CLOT.	Pendiente	3.020,000	447.388,722	4.481.382,207	-2.582,134	641,824	104,256777	-33,300	-17,43	666,141	40°28'53.2687"	-3°37'14.6192"
1	CLOT.	Pendiente	3.040,000	447.408,685	4.481.380,993	-948,818	641,158	103,339268	-33,300	-47,43	667,099	40°28'53.2339"	-3°37'13.7710"
1	CLOT.	Pendiente	3.060,000	447.428,669	4.481.380,199	-581,189	640,492	101,572932	-33,300	-77,43	669,665	40°28'53.2127"	-3°37'12.9220"
1	CLOT.	Pendiente	3.080,000	447.448,667	4.481.380,094	-418,887	639,826	98,957771	-33,300	-107,43	668,355	40°28'53.2138"	-3°37'12.0726"
1	CLOT.	Pendiente	3.100,000	447.468,647	4.481.380,943	-327,446	639,160	95,493782	-33,300	-137,43	667,496	40°28'53.2459"	-3°37'11.2243"
1	CIRC.	Pendiente	3.108,382	447.476,999	4.481.381,646	-300,000	638,881	93,789670	-33,300	-150,00	667,226	40°28'53.2706"	-3°37'10.8698"
1	CIRC.	Pendiente	3.120,000	447.488,537	4.481.383,001	-300,000	638,494	91,324191	-33,300	-150,00	666,649	40°28'53.3172"	-3°37'10.3802"
1	CIRC.	Pendiente	3.140,000	447.508,246	4.481.386,376	-300,000	637,828	87,080060	-33,300	-150,00	666,539	40°28'53.4311"	-3°37'09.5441"
1	CIRC.	Pendiente	3.160,000	447.527,687	4.481.391,057	-300,000	637,162	82,835928	-33,300	-150,00	666,613	40°28'53.5873"	-3°37'08.7198"
1	CIRC.	Pendiente	3.180,000	447.546,773	4.481.397,023	-300,000	636,496	78,595600	-33,300	-150,00	669,171	40°28'53.7852"	-3°37'07.9110"
1	CIRC.	Pendiente	3.200,000	447.565,419	4.481.404,246	-300,000	635,830	74,347664	-33,300	-150,00	669,243	40°28'54.0237"	-3°37'07.1212"
1	CIRC.	Pendiente	3.220,000	447.583,542	4.481.412,696	-300,000	635,164	70,103532	-33,300	-150,00	669,092	40°28'54.3018"	-3°37'06.3540"
1	CIRC.	Pendiente	3.240,000	447.601,062	4.481.422,335	-300,000	634,498	65,859400	-33,300	-150,00	669,251	40°28'54.6184"	-3°37'05.6127"
1	CIRC.	Pendiente	3.260,000	447.617,901	4.481.433,119	-300,000	633,832	61,615269	-33,300	-150,00	669,070	40°28'54.9719"	-3°37'04.9008"
1	CIRC.	Pendiente	3.280,000	447.633,984	4.481.445,001	-300,000	633,166	57,371137	-33,300	-150,00	668,824	40°28'55.3609"	-3°37'04.2212"
1	CIRC.	Pendiente	3.300,000	447.649,240	4.481.457,928	-300,000	632,500	53,127005	-33,300	-150,00	668,573	40°28'55.7836"	-3°37'03.5771"
1	CLOT.	Pendiente	3.309,798	447.656,391	4.481.464,624	-300,000	632,174	51,047863	-33,300	-150,00	668,538	40°28'56.0024"	-3°37'03.2754"
1	CLOT.	Pendiente	3.320,000	447.663,605	4.481.471,838	-334,084	631,834	48,993312	-33,300	-134,70	668,181	40°28'56.2380"	-3°37'02.9711"
1	CLOT.	Pendiente	3.340,000	447.677,117	4.481.486,580	-429,813	631,168	45,606592	-33,300	-104,70	667,596	40°28'56.7192"	-3°37'02.4016"
1	CLOT.	KV 2100	3.360,000	447.689,929	4.481.501,936	-602,437	630,596	43,068697	-23,830	-74,70	667,153	40°28'57.2201"	-3°37'01.8620"
1	CLOT.	KV 2100	3.380,000	447.702,225	4.481.517,709	-1.006,788	630,215	41,379630	-14,306	-44,70	667,025	40°28'57.7344"	-3°37'01.3444"
1	CLOT.	KV 2100	3.400,000	447.714,206	4.481.533,724	-3.061,935	630,024	40,539388	-4,782	-14,70	662,843	40°28'58.2565"	-3°37'00.8404"
1	RECTA	KV 2100	3.409,798	447.720,023	4.481.541,607	0,000	630,000	40,437534	-0,117	0,00	661,974	40°28'58.5135"	-3°37'00.5956"
1	RECTA	Horizontal	3.420,000	447.726,076	4.481.549,820	0,000	630,000	40,437534	0,000	0,00	661,576	40°28'58.7812"	-3°37'00.3410"
1	RECTA	Horizontal	3.440,000	447.737,943	4.481.565,919	0,000	630,000	40,437534	0,000	0,00	661,233	40°28'59.3060"	-3°36'59.8417"
1	RECTA	Horizontal	3.460,000	447.749,810	4.481.582,018	0,000	630,000	40,437534	0,000	0,00	660,983	40°28'59.8308"	-3°36'59.3425"
1	RECTA	Horizontal	3.480,000	447.761,676	4.481.598,117	0,000	630,000	40,437534	0,000	0,00	660,355	40°29'00.3556"	-3°36'58.8433"
1	RECTA	Horizontal	3.500,000	447.773,543	4.481.614,216	0,000	630,000	40,437534	0,000	0,00	653,552	40°29'00.8804"	-3°36'58.3440"
1	RECTA	Horizontal	3.520,000	447.785,410	4.481.630,315	0,000	630,000	40,437534	0,000	0,00	653,388	40°29'01.4052"	-3°36'57.8448"
1	RECTA	Horizontal	3.540,000	447.797,276	4.481.646,415	0,000	630,000	40,437534	0,000	0,00	653,508	40°29'01.9299"	-3°36'57.3455"
1	RECTA	Horizontal	3.560,000	447.809,143	4.481.662,514	0,000	630,000	40,437534	0,000	0,00	653,447	40°29'02.4547"	-3°36'56.8463"
1	RECTA	Horizontal	3.580,000	447.821,009	4.481.678,613	0,000	630,000	40,437534	0,000	0,00	655,910	40°29'02.9795"	-3°36'56.3470"
1	CLOT.	Horizontal	3.580,544	447.821,332	4.481.679,050	-1.000.000,000	630,000	40,437534	0,000	0,00	655,964	40°29'02.9938"	-3°36'56.3335"
1	CLOT.	KV -2100	3.600,000	447.832,843	4.481.694,736	-1.541,905	629,929	40,035876	-8,235	-29,18	653,349	40°29'03.5051"	-3°36'55.8492"
1	CLOT.	KV -2100	3.620,000	447.844,466	4.481.711,012	-760,332	629,669	38,785706	-17,759	-59,18	646,968	40°29'04.0356"	-3°36'55.3603"
1	CLOT.	KV -2100	3.640,000	447.855,657	4.481.727,586	-504,571	629,218	36,686709	-27,283	-89,18	649,882	40°29'04.5756"	-3°36'54.8899"
1	CLOT.	Pendiente	3.660,000	447.866,182	4.481.744,591	-377,565	628,590	33,738886	-33,300	-119,18	651,087	40°29'05.1295"	-3°36'54.4479"
1	CLOT.	Pendiente	3.680,000	447.875,791	4.481.762,128	-301,640	627,924	29,942236	-33,300	-149,18	650,414	40°29'05.7004"	-3°36'54.0450"
1	CIRC.	Pendiente	3.680,544	447.876,037	4.481.762,613	-300,000	627,906	29,827204	-33,300	-150,00	650,368	40°29'05.7161"	-3°36'54.0347"
1	CIRC.	Pendiente	3.700,000	447.884,254	4.481.780,245	-300,000	627,258	25,698418	-33,300	-150,00	649,521	40°29'06.2898"	-3°36'53.6909"
1	CIRC.	Pendiente	3.720,000	447.891,492	44.858,886	-300,000	626,592	21,454286	-33,300	-150,00	649,169	40°29'06.8960"	-3°36'53.3890"
1	CIRC.	Pendiente	3.740,000	447.897,471	4.481.817,967	-300,000	625,926	17,210154	-33,300	-150,00	648,677	40°29'07.5162"	-3°36'53.1407"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
1	CIRC.	Pendiente	3.760,000	447.902,166	4.481.837,404	-300,000	625,260	12,966023	-33,300	-150,00	649,303	40°29'08.1476"	-3°36'52.9470"
1	CIRC.	Pendiente	3.780,000	447.905,556	4.481.857,111	-300,000	624,594	8,721891	-33,300	-150,00	648,952	40°29'08.7875"	-3°36'52.8089"
1	CIRC.	Pendiente	3.800,000	447.907,625	4.481.877,000	-300,000	623,928	4,477759	-33,300	-150,00	649,426	40°29'09.4330"	-3°36'52.7269"
1	CIRC.	Pendiente	3.820,000	447.908,365	4.481.896,983	-300,000	623,262	0,233627	-33,300	-150,00	648,955	40°29'10.0812"	-3°36'52.7014"
1	CIRC.	Pendiente	3.840,000	447.907,772	4.481.916,970	-300,000	622,596	395,989495	-33,300	-150,00	648,662	40°29'10.7292"	-3°36'52.7325"
1	CIRC.	Pendiente	3.860,000	447.905,848	4.481.936,874	-300,000	621,930	391,745363	-33,300	-150,00	648,500	40°29'11.3743"	-3°36'52.8200"
1	CIRC.	Pendiente	3.880,000	447.902,603	4.481.956,605	-300,000	621,264	387,501232	-33,300	-150,00	649,102	40°29'12.0135"	-3°36'52.9637"
1	CIRC.	Pendiente	3.900,000	447.898,051	4.481.976,077	-300,000	620,598	383,257100	-33,300	-150,00	648,360	40°29'12.6439"	-3°36'53.1628"
1	CIRC.	KV 3300	3.920,000	447.892,212	4.481.995,201	-300,000	619,933	379,012968	-32,708	-150,00	648,677	40°29'13.2628"	-3°36'53.4165"
1	CIRC.	KV 3300	3.940,000	447.885,112	4.482.013,895	-300,000	619,339	374,768836	-26,647	-150,00	649,058	40°29'13.8674"	-3°36'53.7236"
1	CIRC.	KV 3300	3.960,000	447.876,782	4.482.032,073	-300,000	618,867	370,524704	-20,587	-150,00	649,110	40°29'14.4551"	-3°36'54.0828"
1	CIRC.	KV 3300	3.980,000	447.867,260	4.482.049,657	-300,000	618,516	366,280573	-14,526	-150,00	649,329	40°29'15.0232"	-3°36'54.4925"
1	CIRC.	KV 3300	4.000,000	447.856,587	4.482.066,567	-300,000	618,286	362,036441	-8,465	-150,00	648,967	40°29'15.5692"	-3°36'54.9508"
1	CIRC.	KV 3300	4.020,000	447.844,812	4.482.082,728	-300,000	618,177	357,792309	-2,405	-150,00	648,779	40°29'16.0907"	-3°36'55.4558"
1	CIRC.	KV 3300	4.040,000	447.831,986	4.482.098,070	-300,000	618,190	353,548177	3,656	-150,00	650,170	40°29'16.5853"	-3°36'56.0051"
1	CIRC.	KV 3300	4.060,000	447.818,167	4.482.112,522	-300,000	618,324	349,304045	9,716	-150,00	651,395	40°29'17.0509"	-3°36'56.5964"
1	CIRC.	KV 3300	4.080,000	447.803,416	4.482.126,022	-300,000	618,579	345,059913	15,777	-150,00	653,143	40°29'17.4853"	-3°36'57.2269"
1	CIRC.	KV 3300	4.100,000	447.787,798	4.482.138,509	-300,000	618,955	340,815782	21,838	-150,00	655,115	40°29'17.8868"	-3°36'57.8940"
1	CIRC.	Rampa	4.120,000	447.771,383	4.482.149,929	-300,000	619,438	336,571650	25,000	-150,00	656,312	40°29'18.2534"	-3°36'58.5947"
1	CIRC.	Rampa	4.140,000	447.754,243	4.482.160,229	-300,000	619,938	332,327518	25,000	-150,00	655,151	40°29'18.5835"	-3°36'59.3257"
1	CLOT.	Rampa	4.159,210	447.737,169	4.482.169,026	-300,000	620,418	328,250942	25,000	-150,00	655,961	40°29'18.8650"	-3°37'00.0536"
1	CLOT.	Rampa	4.160,000	447.736,456	4.482.169,364	-302,388	620,438	328,084048	25,000	-148,82	656,018	40°29'18.8758"	-3°37'00.0840"
1	CLOT.	Rampa	4.180,000	447.718,119	44.867,341	-378,738	620,938	324,297840	25,000	-118,82	657,492	40°29'19.1303"	-3°37'00.8653"
1	CLOT.	Rampa	4.200,000	447.699,385	4.482.184,339	-506,668	621,438	321,360459	25,000	-88,82	658,453	40°29'19.3530"	-3°37'01.6631"
1	CLOT.	Rampa	4.220,000	447.680,388	4.482.190,592	-765,103	621,938	319,271905	25,000	-58,82	660,138	40°29'19.5515"	-3°37'02.4719"
1	CLOT.	Rampa	4.240,000	447.661,235	4.482.196,347	-1.561,653	622,438	318,036600	25,000	-28,82	661,640	40°29'19.7338"	-3°37'03.2871"
1	RECTA	Rampa	4.259,210	447.642,768	4.482.201,640	0,000	622,918	317,640613	25,000	0,00	661,474	40°29'19.9013"	-3°37'04.0731"
1	RECTA	Rampa	4.260,000	447.642,008	4.482.201,856	0,000	622,938	317,640613	25,000	0,00	661,454	40°29'19.9081"	-3°37'04.1054"
1	RECTA	Rampa	4.280,000	447.622,771	4.482.207,327	0,000	623,438	317,640613	25,000	0,00	661,898	40°29'20.0812"	-3°37'04.9242"
1	RECTA	Rampa	4.300,000	447.603,534	4.482.212,799	0,000	623,938	317,640613	25,000	0,00	664,256	40°29'20.2542"	-3°37'05.7430"
1	RECTA	Rampa	4.320,000	447.584,297	4.482.218,270	0,000	624,438	317,640613	25,000	0,00	665,757	40°29'20.4273"	-3°37'06.5617"
1	RECTA	Rampa	4.340,000	447.565,060	4.482.223,741	0,000	624,938	317,640613	25,000	0,00	667,673	40°29'20.6004"	-3°37'07.3805"
1	RECTA	Rampa	4.360,000	447.545,823	4.482.229,213	0,000	625,438	317,640613	25,000	0,00	668,893	40°29'20.7734"	-3°37'08.1992"
1	RECTA	Rampa	4.380,000	447.526,586	4.482.234,684	0,000	625,938	317,640613	25,000	0,00	667,562	40°29'20.9465"	-3°37'09.0180"
1	RECTA	Rampa	4.400,000	447.507,349	4.482.240,155	0,000	626,438	317,640613	25,000	0,00	666,527	40°29'21.1195"	-3°37'09.8367"
1	RECTA	Rampa	4.420,000	447.488,112	4.482.245,627	0,000	626,938	317,640613	25,000	0,00	667,711	40°29'21.2926"	-3°37'10.6555"
1	RECTA	Rampa	4.440,000	447.468,875	4.482.251,098	0,000	627,438	317,640613	25,000	0,00	669,318	40°29'21.4657"	-3°37'11.4742"
1	RECTA	Rampa	4.460,000	447.449,638	4.482.256,569	0,000	627,938	317,640613	25,000	0,00	672,485	40°29'21.6387"	-3°37'12.2930"
1	RECTA	Rampa	4.480,000	447.430,401	4.482.262,040	0,000	628,438	317,640613	25,000	0,00	673,202	40°29'21.8118"	-3°37'13.1118"
1	RECTA	KV -12000	4.500,000	447.411,163	4.482.267,512	0,000	628,934	317,640613	24,120	0,00	674,197	40°29'21.9848"	-3°37'13.9305"
1	RECTA	KV -12000	4.520,000	447.391,926	4.482.272,983	0,000	629,399	317,640613	22,453	0,00	674,424	40°29'22.1579"	-3°37'14.7493"
1	RECTA	KV -12000	4.540,000	447.372,689	4.482.278,454	0,000	629,832	317,640613	20,787	0,00	673,770	40°29'22.3309"	-3°37'15.5681"
1	RECTA	KV -12000	4.560,000	447.353,452	4.482.283,926	0,000	630,231	317,640613	19,120	0,00	673,518	40°29'22.5040"	-3°37'16.3868"



EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
1	RECTA	KV -12000	4.580,000	447.334,215	4.482.289,397	0,000	630,597	317,640613	17,453	0,00	675,533	40°29'22.6770"	-3°37'17.2056"
1	RECTA	KV -12000	4.600,000	447.314,978	4.482.294,868	0,000	630,929	317,640613	15,787	0,00	674,473	40°29'22.8500"	-3°37'18.0244"
1	RECTA	KV -12000	4.620,000	447.295,741	4.482.300,340	0,000	631,228	317,640613	14,120	0,00	673,365	40°29'23.0231"	-3°37'18.8431"
1	RECTA	KV -12000	4.640,000	447.276,504	4.482.305,811	0,000	631,494	317,640613	12,453	0,00	673,047	40°29'23.1961"	-3°37'19.6619"
1	RECTA	KV -12000	4.660,000	447.257,267	4.482.311,282	0,000	631,726	317,640613	10,787	0,00	670,604	40°29'23.3692"	-3°37'20.4807"
1	RECTA	KV -12000	4.680,000	447.238,030	4.482.316,754	0,000	631,925	317,640613	9,120	0,00	668,981	40°29'23.5422"	-3°37'21.2994"
1	RECTA	KV -12000	4.700,000	447.218,793	4.482.322,225	0,000	632,091	317,640613	7,453	0,00	666,263	40°29'23.7152"	-3°37'22.1182"
1	RECTA	KV -12000	4.720,000	447.199,556	4.482.327,696	0,000	632,223	317,640613	5,787	0,00	663,688	40°29'23.8883"	-3°37'22.9370"
1	RECTA	KV -12000	4.740,000	447.180,319	4.482.333,168	0,000	632,322	317,640613	4,120	0,00	659,268	40°29'24.0613"	-3°37'23.7558"
1	CLOT.	KV -12000	4.757,571	447.163,418	4.482.337,974	1.000.000,000	632,382	317,640613	2,656	0,00	656,814	40°29'24.2133"	-3°37'24.4751"
1	CLOT.	KV -12000	4.760,000	447.161,082	4.482.338,639	12.349,828	632,388	317,646874	2,453	3,64	656,673	40°29'24.2343"	-3°37'24.5746"
1	CLOT.	KV -12000	4.780,000	447.141,862	4.482.344,170	1.337,543	632,421	318,174385	0,787	33,64	655,607	40°29'24.4093"	-3°37'25.3926"
1	CLOT.	KV -12000	4.800,000	447.122,727	4.482.349,989	707,061	632,420	319,550722	-0,880	63,64	654,766	40°29'24.5936"	-3°37'26.2071"
1	CLOT.	KV -12000	4.820,000	447.103,765	4.482.356,345	480,544	632,385	321,775886	-2,547	93,64	654,348	40°29'24.7954"	-3°37'27.0145"
1	CLOT.	KV -12000	4.840,000	447.085,085	4.482.363,485	363,949	632,318	324,849876	-4,213	123,64	654,877	40°29'25.0227"	-3°37'27.8101"
1	CIRC.	Pendiente	4.857,571	447.069,016	4.482.370,588	300,000	632,234	328,250942	-5,000	150,00	656,120	40°29'25.2494"	-3°37'28.4948"
1	CIRC.	Pendiente	4.860,000	447.066,827	4.482.371,640	300,000	632,221	328,766431	-5,000	150,00	656,796	40°29'25.2830"	-3°37'28.5882"
1	CIRC.	Pendiente	4.880,000	447.049,138	4.482.380,966	300,000	632,121	333,010563	-5,000	150,00	662,167	40°29'25.5813"	-3°37'29.3423"
1	CIRC.	Pendiente	4.900,000	447.032,111	4.482.391,449	300,000	632,021	337,254695	-5,000	150,00	667,306	40°29'25.9174"	-3°37'30.0688"
1	CIRC.	Pendiente	4.920,000	447.015,819	4.482.403,044	300,000	631,921	341,498827	-5,000	150,00	670,796	40°29'26.2897"	-3°37'30.7643"
1	CIRC.	Pendiente	4.940,000	447.000,336	4.482.415,698	300,000	631,821	345,742959	-5,000	150,00	674,121	40°29'26.6965"	-3°37'31.4258"
1	CIRC.	Pendiente	4.960,000	446.985,730	4.482.429,355	300,000	631,721	349,987090	-5,000	150,00	677,200	40°29'27.1361"	-3°37'32.0503"
1	CIRC.	Pendiente	4.980,000	446.972,067	4.482.443,956	300,000	631,621	354,231222	-5,000	150,00	679,959	40°29'27.6064"	-3°37'32.6351"
1	CIRC.	Pendiente	5.000,000	446.959,406	4.482.459,434	300,000	631,521	358,475354	-5,000	150,00	682,632	40°29'28.1055"	-3°37'33.1775"
1	CIRC.	Pendiente	5.020,000	446.947,805	4.482.475,720	300,000	631,421	362,719486	-5,000	150,00	684,456	40°29'28.6310"	-3°37'33.6752"
1	CIRC.	Pendiente	5.040,000	446.937,315	4.482.492,744	300,000	631,321	366,963618	-5,000	150,00	684,568	40°29'29.1807"	-3°37'34.1260"
1	CIRC.	Pendiente	5.060,000	446.927,982	4.482.510,429	300,000	631,221	371,207749	-5,000	150,00	683,167	40°29'29.7520"	-3°37'34.5278"
1	CIRC.	Pendiente	5.080,000	446.919,847	4.482.528,696	300,000	631,121	375,451881	-5,000	150,00	685,399	40°29'30.3426"	-3°37'34.8788"
1	CIRC.	Pendiente	5.100,000	446.912,948	4.482.547,464	300,000	631,021	379,696013	-5,000	150,00	685,789	40°29'30.9497"	-3°37'35.1775"
1	CIRC.	Pendiente	5.120,000	446.907,315	4.482.566,650	300,000	630,921	383,940145	-5,000	150,00	685,314	40°29'31.5706"	-3°37'35.4226"
1	CIRC.	Pendiente	5.140,000	446.902,972	4.482.586,169	300,000	630,821	388,184277	-5,000	150,00	685,063	40°29'32.2026"	-3°37'35.6130"
1	CIRC.	Pendiente	5.160,000	446.899,939	4.482.605,934	300,000	630,721	392,428408	-5,000	150,00	685,003	40°29'32.8429"	-3°37'35.7478"
1	CIRC.	Pendiente	5.180,000	446.898,229	4.482.625,857	300,000	630,621	396,672540	-5,000	150,00	682,209	40°29'33.4886"	-3°37'35.8264"
1	CIRC.	Pendiente	5.200,000	446.897,850	4.482.645,850	300,000	630,521	0,916672	-5,000	150,00	678,877	40°29'34.1369"	-3°37'35.8485"
1	CIRC.	Pendiente	5.220,000	446.898,804	4.482.665,824	300,000	630,421	5,160804	-5,000	150,00	674,427	40°29'34.7849"	-3°37'35.8140"
1	CIRC.	Pendiente	5.240,000	446.901,087	4.482.685,689	300,000	630,321	9,404936	-5,000	150,00	670,519	40°29'35.4297"	-3°37'35.7231"
1	CIRC.	Pendiente	5.260,000	446.904,688	4.482.705,359	300,000	630,221	13,649068	-5,000	150,00	667,604	40°29'36.0684"	-3°37'35.5760"
1	CIRC.	Pendiente	5.280,000	446.909,591	4.482.724,744	300,000	630,121	17,893199	-5,000	150,00	666,135	40°29'36.6982"	-3°37'35.3736"
1	CIRC.	Pendiente	5.300,000	446.915,775	4.482.743,761	300,000	630,021	22,137331	-5,000	150,00	665,109	40°29'37.3163"	-3°37'35.1167"
1	CIRC.	Pendiente	5.320,000	446.923,212	4.482.762,323	300,000	629,921	26,381463	-5,000	150,00	663,947	40°29'37.9200"	-3°37'34.8063"
1	CIRC.	Pendiente	5.340,000	446.931,869	4.482.780,348	300,000	629,821	30,625595	-5,000	150,00	663,154	40°29'38.5066"	-3°37'34.4440"
1	CIRC.	Pendiente	5.360,000	446.941,707	4.482.797,756	300,000	629,721	34,869727	-5,000	150,00	662,115	40°29'39.0734"	-3°37'34.0314"
1	CIRC.	Pendiente	5.380,000	446.952,683	4.482.814,471	300,000	629,621	39,113858	-5,000	150,00	660,900	40°29'39.6180"	-3°37'33.5701"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
1	CIRC.	Pendiente	5.400,000	446.964,749	4.482.830,417	300,000	629,521	43,357990	-5,000	150,00	659,705	40°29'40.1379"	-3°37'33.0624"
1	CIRC.	Pendiente	5.420,000	446.977,849	4.482.845,524	300,000	629,421	47,602122	-5,000	150,00	658,797	40°29'40.6309"	-3°37'32.5104"
1	CIRC.	Pendiente	5.440,000	446.991,928	4.482.859,725	300,000	629,321	51,846254	-5,000	150,00	657,639	40°29'41.0946"	-3°37'31.9167"
1	CIRC.	Pendiente	5.460,000	447.006,920	4.482.872,956	300,000	629,221	56,090386	-5,000	150,00	656,211	40°29'41.5272"	-3°37'31.2837"
1	CIRC.	Pendiente	5.480,000	447.022,761	4.482.885,159	300,000	629,121	60,334518	-5,000	150,00	655,457	40°29'41.9266"	-3°37'30.6145"
1	CIRC.	Pendiente	5.500,000	447.039,380	4.482.896,280	300,000	629,021	64,578649	-5,000	150,00	653,591	40°29'42.2910"	-3°37'29.9119"
1	CIRC.	Pendiente	5.520,000	447.056,703	4.482.906,268	300,000	628,921	68,822781	-5,000	150,00	650,881	40°29'42.6190"	-3°37'29.50"
1	CIRC.	Pendiente	5.540,000	447.074,652	4.482.915,081	300,000	628,821	73,066913	-5,000	150,00	647,709	40°29'42.9089"	-3°37'28.4191"
1	CIRC.	Pendiente	5.560,000	447.093,149	4.482.922,679	300,000	628,721	77,311045	-5,000	150,00	646,913	40°29'43.1595"	-3°37'27.6357"
1	CIRC.	Pendiente	5.580,000	447.112,111	4.482.929,027	300,000	628,621	81,555177	-5,000	150,00	646,915	40°29'43.3697"	-3°37'26.8321"
1	CIRC.	Pendiente	5.600,000	447.131,454	4.482.934,098	300,000	628,521	85,799308	-5,000	150,00	647,063	40°29'43.5386"	-3°37'26.0119"
1	CLOT.	KV 20000	5.617,267	447.148,393	4.482.937,431	300,000	628,435	89,463419	-4,851	150,00	647,500	40°29'43.6506"	-3°37'25.2933"
1	CLOT.	KV 20000	5.620,000	447.151,091	4.482.937,869	308,430	628,422	90,035513	-4,714	145,90	647,198	40°29'43.6654"	-3°37'25.1788"
1	CLOT.	KV 20000	5.640,000	447.170,929	4.482.940,388	388,266	628,338	93,739228	-3,714	115,90	646,717	40°29'43.7517"	-3°37'24.3369"
1	CLOT.	KV 20000	5.660,000	447.190,871	4.482.941,883	523,865	628,274	96,594116	-2,714	85,90	646,325	40°29'43.8047"	-3°37'23.4902"
1	CLOT.	KV 20000	5.680,000	447.210,857	4.482.942,616	805,008	628,229	98,600178	-1,714	55,90	646,713	40°29'43.8331"	-3°37'22.6414"
1	CLOT.	KV 20000	5.700,000	447.230,855	4.482.942,851	1.737,447	628,205	99,757413	-0,714	25,90	648,290	40°29'43.8453"	-3°37'21.7919"
1	RECTA	Horizontal	5.717,267	447.248,122	4.482.942,860	0,000	628,200	100,073749	0,000	0,00	649,338	40°29'43.8495"	-3°37'21.0584"
1	RECTA	Horizontal	5.720,000	447.250,855	4.482.942,857	0,000	628,200	100,073749	0,000	0,00	649,515	40°29'43.8500"	-3°37'20.9423"
1	RECTA	Horizontal	5.740,000	447.270,855	4.482.942,834	0,000	628,200	100,073749	0,000	0,00	650,846	40°29'43.8539"	-3°37'20.0927"
1	RECTA	Horizontal	5.760,000	447.290,855	4.482.942,810	0,000	628,200	100,073749	0,000	0,00	651,154	40°29'43.8577"	-3°37'19.2431"
1	RECTA	Horizontal	5.780,000	447.310,855	4.482.942,787	0,000	628,200	100,073749	0,000	0,00	651,742	40°29'43.8615"	-3°37'18.3934"
1	RECTA	Horizontal	5.800,000	447.330,855	4.482.942,764	0,000	628,200	100,073749	0,000	0,00	652,350	40°29'43.8653"	-3°37'17.5438"
1	RECTA	Horizontal	5.820,000	447.350,855	4.482.942,741	0,000	628,200	100,073749	0,000	0,00	653,596	40°29'43.8691"	-3°37'16.6942"
1	RECTA	Horizontal	5.840,000	447.370,855	4.482.942,718	0,000	628,200	100,073749	0,000	0,00	655,052	40°29'43.8730"	-3°37'15.8446"
1	RECTA	Horizontal	5.860,000	447.390,855	4.482.942,695	0,000	628,200	100,073749	0,000	0,00	656,716	40°29'43.8768"	-3°37'14.9950"
1	RECTA	Horizontal	5.880,000	447.410,855	4.482.942,671	0,000	628,200	100,073749	0,000	0,00	658,201	40°29'43.8806"	-3°37'14.1453"
1	RECTA	Horizontal	5.900,000	447.430,855	4.482.942,648	0,000	628,200	100,073749	0,000	0,00	659,763	40°29'43.8844"	-3°37'13.2957"
1	RECTA	Horizontal	5.920,000	447.450,855	4.482.942,625	0,000	628,200	100,073749	0,000	0,00	660,857	40°29'43.8882"	-3°37'12.4461"
1	RECTA	Horizontal	5.940,000	447.470,855	4.482.942,602	0,000	628,200	100,073749	0,000	0,00	661,520	40°29'43.8920"	-3°37'11.5965"
1	RECTA	Horizontal	5.960,000	447.490,855	4.482.942,579	0,000	628,200	100,073749	0,000	0,00	662,266	40°29'43.8958"	-3°37'10.7469"
1	RECTA	Horizontal	5.980,000	447.510,855	4.482.942,556	0,000	628,200	100,073749	0,000	0,00	663,576	40°29'43.8996"	-3°37'09.8972"
1	RECTA	Horizontal	6.000,000	447.530,855	4.482.942,532	0,000	628,200	100,073749	0,000	0,00	665,359	40°29'43.9034"	-3°37'09.0476"
1	RECTA	Horizontal	6.020,000	447.550,855	4.482.942,509	0,000	628,200	100,073749	0,000	0,00	666,606	40°29'43.9072"	-3°37'08.1980"
1	RECTA	Horizontal	6.040,000	447.570,855	4.482.942,486	0,000	628,200	100,073749	0,000	0,00	667,372	40°29'43.9110"	-3°37'07.3484"
1	RECTA	Horizontal	6.060,000	447.590,855	4.482.942,463	0,000	628,200	100,073749	0,000	0,00	667,627	40°29'43.9148"	-3°37'06.4988"
1	RECTA	Horizontal	6.080,000	447.610,855	4.482.942,440	0,000	628,200	100,073749	0,000	0,00	667,825	40°29'43.9186"	-3°37'05.6491"
1	RECTA	Horizontal	6.100,000	447.630,855	4.482.942,417	0,000	628,200	100,073749	0,000	0,00	667,518	40°29'43.9224"	-3°37'04.7995"
1	RECTA	Horizontal	6.120,000	447.650,855	4.482.942,393	0,000	628,200	100,073749	0,000	0,00	667,156	40°29'43.9262"	-3°37'03.9499"
1	RECTA	Horizontal	6.140,000	447.670,855	4.482.942,370	0,000	628,200	100,073749	0,000	0,00	665,907	40°29'43.9300"	-3°37'03.1003"
1	RECTA	Horizontal	6.160,000	447.690,855	4.482.942,347	0,000	628,200	100,073749	0,000	0,00	664,575	40°29'43.9338"	-3°37'02.2507"
1	RECTA	Horizontal	6.180,000	447.710,855	4.482.942,324	0,000	628,200	100,073749	0,000	0,00	662,931	40°29'43.9376"	-3°37'01.4010"
1	RECTA	Horizontal	6.200,000	447.730,855	4.482.942,301	0,000	628,200	100,073749	0,000	0,00	661,224	40°29'43.9413"	-3°37'00.5514"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
1	RECTA	Horizontal	6.220,000	447.750,855	4.482.942,278	0,000	628,200	100,073749	0,000	0,00	659,741	40°29'43.9451"	-3°36'59.7018"
1	RECTA	Horizontal	6.240,000	447.770,855	4.482.942,254	0,000	628,200	100,073749	0,000	0,00	659,145	40°29'43.9489"	-3°36'58.8522"
1	RECTA	Horizontal	6.260,000	447.790,855	4.482.942,231	0,000	628,200	100,073749	0,000	0,00	658,531	40°29'43.9527"	-3°36'58.0026"
1	RECTA	Horizontal	6.280,000	447.810,855	4.482.942,208	0,000	628,200	100,073749	0,000	0,00	657,682	40°29'43.9565"	-3°36'57.1529"
1	RECTA	Horizontal	6.300,000	447.830,855	4.482.942,185	0,000	628,200	100,073749	0,000	0,00	656,600	40°29'43.9602"	-3°36'56.3033"
1	RECTA	Horizontal	6.320,000	447.850,855	4.482.942,162	0,000	628,200	100,073749	0,000	0,00	654,565	40°29'43.9640"	-3°36'55.4537"
1	RECTA	Horizontal	6.340,000	447.870,855	4.482.942,139	0,000	628,200	100,073749	0,000	0,00	652,993	40°29'43.9678"	-3°36'54.6041"
1	RECTA	KV -3000	6.360,000	447.890,855	4.482.942,115	0,000	628,194	100,073749	-1,949	0,00	651,584	40°29'43.9716"	-3°36'53.7545"
1	CLOT.	KV -3000	6.374,210	447.905,065	4.482.942,099	1.000.000,000	628,133	100,073749	-6,685	0,00	650,586	40°29'43.9742"	-3°36'53.1508"
1	CLOT.	KV -3000	6.380,000	447.910,855	4.482.942,091	6.238,513	628,089	100,103290	-8,615	8,68	650,221	40°29'43.9753"	-3°36'52.9048"
1	CLOT.	KV -3000	6.400,000	447.930,855	4.482.941,990	1.400,551	627,850	100,659886	-15,282	38,68	649,468	40°29'43.9765"	-3°36'52.0552"
1	CLOT.	KV -3000	6.420,000	447.950,851	4.482.941,603	788,821	627,477	101,921488	-21,949	68,68	648,982	40°29'43.9685"	-3°36'51.2057"
1	CLOT.	KV -3000	6.440,000	447.970,830	4.482.940,709	549,021	626,972	103,888094	-28,615	98,68	648,672	40°29'43.9440"	-3°36'50.3567"
1	CLOT.	Pendiente	6.460,000	447.990,762	4.482.939,088	421,029	626,336	106,559706	-33,800	128,68	647,832	40°29'43.8959"	-3°36'49.5094"
1	CIRC.	Pendiente	6.460,210	447.990,972	4.482.939,067	420,000	626,329	106,591523	-33,800	129,00	647,817	40°29'43.8953"	-3°36'49.5005"
1	CIRC.	Pendiente	6.480,000	448.010,600	4.482.936,558	420,000	625,660	109,591190	-33,800	129,00	646,305	40°29'43.8184"	-3°36'48.6660"
1	CLOT.	Pendiente	6.497,674	448.028,013	4.482.933,539	420,000	625,063	112,270178	-33,800	129,00	644,959	40°29'43.7244"	-3°36'47.9254"
1	CLOT.	Pendiente	6.500,000	448.030,294	4.482.933,087	431,674	624,984	112,654600	-33,800	125,51	644,774	40°29'43.7102"	-3°36'47.8283"
1	CLOT.	Pendiente	6.520,000	448.049,813	4.482.928,732	567,263	624,308	115,214981	-33,800	95,51	643,139	40°29'43.5734"	-3°36'46.9979"
1	CLOT.	Pendiente	6.540,000	448.069,167	4.482.923,692	827,033	623,632	117,107011	-33,800	65,51	641,655	40°29'43.4143"	-3°36'46.1742"
1	CLOT.	Pendiente	6.560,000	448.088,393	4.482.918,185	1.525,711	622,956	118,294035	-33,800	35,51	640,439	40°29'43.2400"	-3°36'45.3558"
1	CLOT.	Pendiente	6.580,000	448.107,546	4.482.912,426	9.830,703	622,280	118,776055	-33,800	5,51	639,930	40°29'43.0576"	-3°36'44.5405"
1	RECTA	Pendiente	6.583,674	448.111,062	4.482.911,358	0,000	622,156	118,787952	-33,800	0,00	639,871	40°29'43.0237"	-3°36'44.3908"
1	RECTA	Pendiente	6.600,000	448.126,682	4.482.906,609	0,000	621,604	118,787952	-33,800	0,00	639,482	40°29'42.8732"	-3°36'43.7259"
1	RECTA	Pendiente	6.620,000	448.145,817	4.482.900,792	0,000	620,928	118,787952	-33,800	0,00	638,638	40°29'42.6889"	-3°36'42.9113"
1	CLOT.	Pendiente	6.621,376	448.147,133	4.482.900,392	-1.000.000,000	620,882	118,787952	-33,800	0,00	638,574	40°29'42.6762"	-3°36'42.8553"
1	CLOT.	Pendiente	6.640,000	448.164,961	4.482.895,003	-1.939,384	620,252	118,482269	-33,800	-27,94	637,866	40°29'42.5055"	-3°36'42.0964"
1	CLOT.	Pendiente	6.660,000	448.184,163	4.482.889,413	-935,158	619,576	117,473249	-33,800	-57,94	637,002	40°29'42.3285"	-3°36'41.2790"
1	CLOT.	Pendiente	6.680,000	448.203,481	4.482.884,234	-616,125	618,900	115,759223	-33,800	-87,94	636,232	40°29'42.1649"	-3°36'40.4569"
1	CLOT.	KV 6000	6.700,000	448.222,955	4.482.879,685	-459,399	618,234	113,340193	-31,970	-117,94	635,660	40°29'42.06"	-3°36'39.6282"
1	CIRC.	KV 6000	6.707,376	448.230,182	4.482.878,210	-420,000	618,003	112,270178	-30,740	-129,00	635,596	40°29'41.9755"	-3°36'39.3208"
1	CIRC.	KV 6000	6.720,000	448.242,607	4.482.875,979	-420,000	617,628	110,356609	-28,636	-129,00	635,235	40°29'41.9059"	-3°36'38.7923"
1	CIRC.	KV 6000	6.740,000	448.262,413	4.482.873,211	-420,000	617,089	107,325086	-25,303	-129,00	634,501	40°29'41.8206"	-3°36'37.9502"
1	CLOT.	KV 6000	6.745,113	448.267,496	4.482.872,654	-420,000	616,961	106,550004	-24,451	-129,00	634,386	40°29'41.8037"	-3°36'37.7341"
1	CLOT.	KV 6000	6.760,000	448.282,326	4.482.871,373	-507,921	616,616	104,488857	-21,970	-106,67	634,210	40°29'41.7655"	-3°36'37.1037"
1	CLOT.	KV 6000	6.780,000	448.302,298	4.482.870,320	-706,663	616,210	102,334591	-18,636	-76,67	633,834	40°29'41.7358"	-3°36'36.2550"
1	CLOT.	KV 6000	6.800,000	448.322,291	4.482.869,833	-1.160,911	615,870	100,885330	-15,303	-46,67	633,542	40°29'41.7245"	-3°36'35.4055"
1	CLOT.	KV 6000	6.820,000	448.342,291	4.482.869,690	-3.250,106	615,598	100,141074	-11,970	-16,67	633,416	40°29'41.7244"	-3°36'34.5559"
1	RECTA	KV 6000	6.831,113	448.353,404	4.482.869,678	0,000	615,475	100,032230	-10,117	0,00	633,353	40°29'41.7265"	-3°36'34.0838"
1	RECTA	KV 6000	6.840,000	448.362,291	4.482.869,674	0,000	615,392	100,032230	-8,636	0,00	633,319	40°29'41.7283"	-3°36'33.7063"
1	RECTA	KV 6000	6.860,000	448.382,291	4.482.869,664	0,000	615,252	100,032230	-5,303	0,00	633,119	40°29'41.7325"	-3°36'32.8567"
1	RECTA	Pendiente	6.880,000	448.402,291	4.482.869,654	0,000	615,152	100,032230	-5,000	0,00	632,953	40°29'41.7366"	-3°36'32.0070"
1	RECTA	Pendiente	6.900,000	448.422,291	4.482.869,643	0,000	615,052	100,032230	-5,000	0,00	633,181	40°29'41.7407"	-3°36'31.1574"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
1	RECTA	Pendiente	6.920,000	448.442,291	4.482.869,633	0,000	614,952	100,032230	-5,000	0,00	633,290	40°29'41.7449"	-3°36'30.3078"
1	RECTA	Pendiente	6.940,000	448.462,291	4.482.869,623	0,000	614,852	100,032230	-5,000	0,00	633,213	40°29'41.7490"	-3°36'29.4582"
1	RECTA	Pendiente	6.960,000	448.482,291	4.482.869,613	0,000	614,752	100,032230	-5,000	0,00	633,704	40°29'41.7532"	-3°36'28.6086"
1	RECTA	Pendiente	6.980,000	448.502,291	4.482.869,603	0,000	614,652	100,032230	-5,000	0,00	634,736	40°29'41.7573"	-3°36'27.7590"
1	RECTA	Pendiente	7.000,000	448.522,291	4.482.869,593	0,000	614,552	100,032230	-5,000	0,00	635,610	40°29'41.7615"	-3°36'26.9094"
1	RECTA	Pendiente	7.020,000	448.542,291	4.482.869,583	0,000	614,452	100,032230	-5,000	0,00	636,365	40°29'41.7656"	-3°36'26.0598"
1	RECTA	Pendiente	7.040,000	448.562,291	4.482.869,573	0,000	614,352	100,032230	-5,000	0,00	637,379	40°29'41.7697"	-3°36'25.2102"
1	RECTA	Pendiente	7.060,000	448.582,291	4.482.869,562	0,000	614,252	100,032230	-5,000	0,00	638,105	40°29'41.7739"	-3°36'24.3606"
1	RECTA	Pendiente	7.080,000	448.602,291	4.482.869,552	0,000	614,152	100,032230	-5,000	0,00	638,712	40°29'41.7780"	-3°36'23.5109"
1	CLOT.	Pendiente	7.085,350	448.607,641	4.482.869,550	-1.000.000,000	614,125	100,032230	-5,000	0,00	638,815	40°29'41.7791"	-3°36'23.2837"
1	CLOT.	Pendiente	7.100,000	448.622,291	4.482.869,549	-5.324,189	614,052	99,944644	-5,000	-13,52	639,247	40°29'41.7823"	-3°36'22.6613"
1	CLOT.	Pendiente	7.120,000	448.642,290	4.482.869,621	-2.251,075	613,952	99,542265	-5,000	-31,98	639,684	40°29'41.7891"	-3°36'21.8118"
1	CLOT.	KV -8000	7.140,000	448.662,289	4.482.869,871	-1.427,261	613,828	98,813415	-7,465	-50,45	640,436	40°29'41.8017"	-3°36'20.9623"
1	CIRC.	KV -8000	7.150,350	448.672,636	4.482.870,103	-1.200,000	613,744	98,308052	-8,759	-60,00	640,726	40°29'41.8115"	-3°36'20.5228"
1	CIRC.	KV -8000	7.160,000	448.682,282	4.482.870,399	-1.200,000	613,653	97,796097	-9,965	-60,00	640,963	40°29'41.8233"	-3°36'20.1131"
1	CIRC.	KV -8000	7.180,000	448.702,263	4.482.871,257	-1.200,000	613,429	96,735064	-12,465	-60,00	640,853	40°29'41.8556"	-3°36'19.2646"
1	CIRC.	KV -8000	7.200,000	448.722,227	4.482.872,449	-1.200,000	613,155	95,674031	-14,965	-60,00	640,460	40°29'41.8986"	-3°36'18.4168"
1	CIRC.	KV -8000	7.220,000	448.742,169	4.482.873,973	-1.200,000	612,831	94,612998	-17,465	-60,00	640,435	40°29'41.9525"	-3°36'17.5702"
1	CIRC.	KV -8000	7.240,000	448.762,082	4.482.875,830	-1.200,000	612,456	93,551965	-19,965	-60,00	643,397	40°29'42.0171"	-3°36'16.7248"
1	CIRC.	KV -8000	7.260,000	448.781,962	4.482.878,018	-1.200,000	612,032	92,490932	-22,465	-60,00	645,013	40°29'42.0925"	-3°36'15.8809"
1	CLOT.	KV -8000	7.270,322	448.792,207	4.482.879,276	-1.200,000	611,793	91,943325	-23,755	-60,00	645,286	40°29'42.1356"	-3°36'15.4460"
1	CLOT.	KV -8000	7.280,000	448.801,803	4.482.880,535	-1.409,924	611,558	91,468121	-24,965	-51,07	644,863	40°29'42.1786"	-3°36'15.0388"
1	CLOT.	Pendiente	7.300,000	448.821,606	4.482.883,331	-2.208,246	611,042	90,728301	-26,000	-32,61	639,516	40°29'42.2736"	-3°36'14.1983"
1	CLOT.	Pendiente	7.320,000	448.841,384	4.482.886,306	-5.090,670	610,522	90,314953	-26,000	-14,14	638,613	40°29'42.3745"	-3°36'13.3590"
1	RECTA	Pendiente	7.335,322	448.856,526	4.482.888,643	0,000	610,124	90,219147	-26,000	0,00	644,146	40°29'42.4537"	-3°36'12.7164"
1	RECTA	Pendiente	7.340,000	448.861,149	4.482.889,359	0,000	610,002	90,219147	-26,000	0,00	643,785	40°29'42.4779"	-3°36'12.5203"
1	RECTA	Pendiente	7.360,000	448.880,914	4.482.892,419	0,000	609,482	90,219147	-26,000	0,00	642,827	40°29'42.5815"	-3°36'11.6816"
1	RECTA	Pendiente	7.380,000	448.900,678	4.482.895,480	0,000	608,962	90,219147	-26,000	0,00	647,857	40°29'42.6852"	-3°36'10.8429"
1	RECTA	Pendiente	7.400,000	448.920,442	4.482.898,541	0,000	608,442	90,219147	-26,000	0,00	651,125	40°29'42.7888"	-3°36'10.0041"
1	RECTA	Pendiente	7.420,000	448.940,207	4.482.901,602	0,000	607,922	90,219147	-26,000	0,00	646,380	40°29'42.8925"	-3°36'09.1654"
1	RECTA	Pendiente	7.440,000	448.959,971	4.482.904,662	0,000	607,402	90,219147	-26,000	0,00	646,227	40°29'42.9961"	-3°36'08.3267"
1	RECTA	Pendiente	7.460,000	448.979,736	4.482.907,723	0,000	606,882	90,219147	-26,000	0,00	644,200	40°29'43.0997"	-3°36'07.4880"
1	RECTA	Pendiente	7.480,000	448.999,500	4.482.910,784	0,000	606,362	90,219147	-26,000	0,00	643,584	40°29'43.2034"	-3°36'06.6493"
1	RECTA	Pendiente	7.500,000	449.019,265	4.482.913,844	0,000	605,842	90,219147	-26,000	0,00	643,435	40°29'43.3070"	-3°36'05.8105"
1	RECTA	Pendiente	7.520,000	449.039,029	4.482.916,905	0,000	605,322	90,219147	-26,000	0,00	645,653	40°29'43.4106"	-3°36'04.9718"
1	RECTA	Pendiente	7.540,000	449.058,793	4.482.919,966	0,000	604,802	90,219147	-26,000	0,00	642,632	40°29'43.5143"	-3°36'04.1331"
1	RECTA	Pendiente	7.560,000	449.078,558	4.482.923,026	0,000	604,282	90,219147	-26,000	0,00	638,704	40°29'43.65"	-3°36'03.2944"
1	CLOT.	Pendiente	7.563,625	449.082,140	4.482.923,581	1.000.000,000	604,188	90,219147	-26,000	0,00	638,235	40°29'43.6367"	-3°36'03.1424"
1	CLOT.	Pendiente	7.580,000	449.098,326	4.482.926,063	1.832,100	603,762	90,503641	-26,000	24,56	636,102	40°29'43.7207"	-3°36'02.4555"
1	CLOT.	Pendiente	7.600,000	449.118,126	4.482.928,883	824,750	603,242	91,623016	-26,000	54,56	634,847	40°29'43.8166"	-3°36'01.6152"
1	CLOT.	Pendiente	7.620,000	449.137,988	4.482.931,222	532,154	602,722	93,591600	-26,000	84,56	635,001	40°29'43.8968"	-3°36'00.7721"
1	CLOT.	Pendiente	7.640,000	449.157,923	4.482.932,814	392,800	602,202	96,408245	-26,000	114,56	635,019	40°29'43.9528"	-3°35'59.9257"
1	CLOT.	Pendiente	7.660,000	449.177,912	4.482.933,388	311,285	601,682	100,074099	-26,000	144,56	636,491	40°29'43.9759"	-3°35'59.0767"



EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
1	CIRC.	Pendiente	7.663,625	449.181,537	4.482.933,363	300,000	601,588	100,829476	-26,000	150,00	636,741	40°29'43.9758"	-3°35'58.9227"
1	CIRC.	Pendiente	7.680,000	449.197,896	4.482.932,703	300,000	601,162	104,304286	-26,000	150,00	628,609	40°29'43.9580"	-3°35'58.2276"
1	CIRC.	Pendiente	7.700,000	4.496,791	4.482.930,688	300,000	600,642	108,548418	-26,000	150,00	618,205	40°29'43.8971"	-3°35'57.3819"
1	CIRC.	Pendiente	7.720,000	449.237,507	4.482.927,352	300,000	600,122	112,792550	-26,000	150,00	618,468	40°29'43.7932"	-3°35'56.5434"
1	CIRC.	Pendiente	7.740,000	449.256,957	4.482.922,710	300,000	599,602	117,036681	-26,000	150,00	624,237	40°29'43.6470"	-3°35'55.7158"
1	CIRC.	Pendiente	7.760,000	449.276,054	4.482.916,782	300,000	599,082	121,280813	-26,000	150,00	625,388	40°29'43.4589"	-3°35'54.9028"
1	CIRC.	KV 6520	7.780,000	449.294,715	4.482.909,596	300,000	598,585	125,524945	-23,332	150,00	625,416	40°29'43.2300"	-3°35'54.1080"
1	CIRC.	KV 6520	7.800,000	449.312,855	4.482.901,182	300,000	598,149	129,769077	-20,264	150,00	625,570	40°29'42.9611"	-3°35'53.3350"
1	CIRC.	KV 6520	7.820,000	449.330,394	4.482.891,579	300,000	597,775	134,013209	-17,197	150,00	624,618	40°29'42.6535"	-3°35'52.5871"
1	CIRC.	KV 6520	7.840,000	449.347,255	4.482.880,829	300,000	597,461	138,257341	-14,129	150,00	621,986	40°29'42.3086"	-3°35'51.8678"
1	CIRC.	KV 6520	7.860,000	449.363,362	4.482.868,979	300,000	597,209	142,501472	-11,062	150,00	621,721	40°29'41.9278"	-3°35'51.1801"
1	CIRC.	Pendiente	7.880,000	449.378,644	4.482.856,083	300,000	597,006	146,745604	-10,000	150,00	621,856	40°29'41.5129"	-3°35'50.5272"
1	CIRC.	Pendiente	7.900,000	449.393,032	4.482.842,197	300,000	596,806	150,989736	-10,000	150,00	617,229	40°29'41.0658"	-3°35'49.9120"
1	CIRC.	Pendiente	7.920,000	449.406,464	4.482.827,383	300,000	596,606	155,233868	-10,000	150,00	618,491	40°29'40.5883"	-3°35'49.3372"
1	CIRC.	Pendiente	7.940,000	449.418,879	4.482.811,708	300,000	596,406	159,478000	-10,000	150,00	619,194	40°29'40.0827"	-3°35'48.8053"
1	CIRC.	Pendiente	7.960,000	449.430,223	4.482.795,240	300,000	596,206	163,722131	-10,000	150,00	618,872	40°29'39.5511"	-3°35'48.3187"
1	CIRC.	Pendiente	7.980,000	449.440,444	4.482.778,054	300,000	596,006	167,966263	-10,000	150,00	618,627	40°29'38.9960"	-3°35'47.8795"
1	CIRC.	Pendiente	8.000,000	449.449,497	4.482.760,224	300,000	595,806	172,210395	-10,000	150,00	618,760	40°29'38.4197"	-3°35'47.4898"
1	CIRC.	Pendiente	8.020,000	449.457,343	4.482.741,831	300,000	595,606	176,454527	-10,000	150,00	618,934	40°29'37.8249"	-3°35'47.1513"
1	CIRC.	Pendiente	8.040,000	449.463,945	4.482.722,957	300,000	595,406	180,698659	-10,000	150,00	619,105	40°29'37.2143"	-3°35'46.8654"
1	CIRC.	Pendiente	8.060,000	449.469,276	4.482.703,684	300,000	595,206	184,942791	-10,000	150,00	618,895	40°29'36.5904"	-3°35'46.6334"
1	CIRC.	Pendiente	8.080,000	449.473,311	4.482.684,099	300,000	595,006	189,186922	-10,000	150,00	618,997	40°29'35.9561"	-3°35'46.4564"
1	CLOT.	KV 10000	8.081,600	449.473,577	4.482.682,521	300,000	594,990	189,526460	-9,897	150,00	619,002	40°29'35.9050"	-3°35'46.4446"
1	CLOT.	KV 10000	8.100,000	449.476,067	4.482.664,293	367,647	594,825	193,071832	-8,057	122,40	619,116	40°29'35.3144"	-3°35'46.3336"
1	CLOT.	KV 10000	8.120,000	449.477,742	4.482.644,365	487,013	594,683	196,110632	-6,057	92,40	619,442	40°29'34.6685"	-3°35'46.2567"
1	CLOT.	KV 10000	8.140,000	449.478,597	4.482.624,384	721,153	594,582	198,300605	-4,057	62,40	619,803	40°29'34.0207"	-3°35'46.2147"
1	CLOT.	KV 10000	8.160,000	449.478,898	4.482.604,387	1.388,887	594,521	199,641752	-2,057	32,40	619,712	40°29'33.3723"	-3°35'46.1962"
1	CLOT.	KV 10000	8.180,000	449.478,911	4.482.584,387	18.749,625	594,500	200,134073	-0,057	2,40	619,633	40°29'32.7236"	-3°35'46.1899"
1	RECTA	Horizontal	8.181,600	449.478,908	4.482.582,787	0,000	594,500	200,136789	0,000	0,00	619,611	40°29'32.6717"	-3°35'46.1895"
1	RECTA	Horizontal	8.200,000	449.478,868	4.482.564,387	0,000	594,500	200,136789	0,000	0,00	619,649	40°29'32.0750"	-3°35'46.1859"
1	RECTA	Horizontal	8.220,000	449.478,825	4.482.544,387	0,000	594,500	200,136789	0,000	0,00	619,819	40°29'31.4264"	-3°35'46.1820"
1	RECTA	Horizontal	8.240,000	449.478,782	4.482.524,387	0,000	594,500	200,136789	0,000	0,00	620,052	40°29'30.7778"	-3°35'46.1781"
1	RECTA	Horizontal	8.260,000	449.478,739	4.482.504,387	0,000	594,500	200,136789	0,000	0,00	620,122	40°29'30.1291"	-3°35'46.1742"
1	RECTA	Horizontal	8.280,000	449.478,696	4.482.484,387	0,000	594,500	200,136789	0,000	0,00	620,409	40°29'29.4805"	-3°35'46.1703"
1	RECTA	Horizontal	8.300,000	449.478,653	4.482.464,387	0,000	594,500	200,136789	0,000	0,00	620,686	40°29'28.8319"	-3°35'46.1664"
1	RECTA	Horizontal	8.320,000	449.478,610	4.482.444,387	0,000	594,500	200,136789	0,000	0,00	620,860	40°29'28.1833"	-3°35'46.1625"
1	RECTA	Horizontal	8.340,000	449.478,567	4.482.424,387	0,000	594,500	200,136789	0,000	0,00	620,991	40°29'27.5347"	-3°35'46.1585"
1	RECTA	Horizontal	8.360,000	449.478,524	4.482.404,387	0,000	594,500	200,136789	0,000	0,00	620,943	40°29'26.8860"	-3°35'46.1546"
1	RECTA	Horizontal	8.380,000	449.478,481	4.482.384,387	0,000	594,500	200,136789	0,000	0,00	620,533	40°29'26.2374"	-3°35'46.1507"
1	RECTA	Horizontal	8.400,000	449.478,438	4.482.364,387	0,000	594,500	200,136789	0,000	0,00	620,695	40°29'25.5888"	-3°35'46.1468"
1	RECTA	Horizontal	8.420,000	449.478,395	4.482.344,388	0,000	594,500	200,136789	0,000	0,00	621,094	40°29'24.9402"	-3°35'46.1429"
1	RECTA	Horizontal	8.440,000	449.478,352	4.482.324,388	0,000	594,500	200,136789	0,000	0,00	621,324	40°29'24.2915"	-3°35'46.1390"
1	RECTA	Horizontal	8.460,000	449.478,310	4.482.304,388	0,000	594,500	200,136789	0,000	0,00	621,490	40°29'23.6429"	-3°35'46.1351"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
1	CLOT.	Horizontal	8.471,643	449.478,284	4.482.292,745	1.000.000,000	594,500	200,136789	0,000	0,00	621,467	40°29'23.2653"	-3°35'46.1328"
1	CLOT.	Horizontal	8.480,000	449.478,263	4.482.284,388	3.589,818	594,500	200,210891	0,000	12,54	621,427	40°29'22.9943"	-3°35'46.1313"
1	CLOT.	Horizontal	8.500,000	449.478,097	4.482.264,388	1.057,941	594,500	200,989985	0,000	42,54	621,557	40°29'22.3457"	-3°35'46.1326"
1	CLOT.	Horizontal	8.520,000	449.477,552	4.482.244,396	620,386	594,500	202,650500	0,000	72,54	621,959	40°29'21.6972"	-3°35'46.1500"
1	CLOT.	Horizontal	8.540,000	449.476,364	4.482.224,433	438,873	594,500	205,094652	0,000	102,54	622,171	40°29'21.0495"	-3°35'46.1947"
1	CLOT.	Horizontal	8.560,000	449.474,267	4.482.204,546	339,532	594,500	208,420225	0,000	132,54	622,406	40°29'20.4041"	-3°35'46.2781"
1	CIRC.	Horizontal	8.571,643	449.472,526	4.482.193,034	300,000	594,500	210,747119	0,000	150,00	622,425	40°29'20.0304"	-3°35'46.3488"
1	CIRC.	Horizontal	8.580,000	449.471,007	4.482.184,817	300,000	594,500	212,520523	0,000	150,00	622,651	40°29'19.7635"	-3°35'46.4109"
1	CIRC.	Horizontal	8.600,000	449.466,448	4.482.165,347	300,000	594,500	216,764654	0,000	150,00	622,579	40°29'19.1311"	-3°35'46.5990"
1	CLOT.	Horizontal	8.606,655	449.464,645	4.482.158,941	300,000	594,500	218,176800	0,000	150,00	622,496	40°29'18.9230"	-3°35'46.6737"
1	CLOT.	Horizontal	8.620,000	449.460,615	4.482.146,220	346,202	594,500	220,819816	0,000	129,98	622,482	40°29'18.5095"	-3°35'46.8413"
1	CLOT.	Horizontal	8.640,000	449.453,688	4.482.127,460	450,082	594,500	224,073137	0,000	99,98	622,749	40°29'17.8996"	-3°35'47.1301"
1	CLOT.	Horizontal	8.660,000	449.445,935	4.482.109,026	643,024	594,500	226,477632	0,000	69,98	623,003	40°29'17.3001"	-3°35'47.4541"
1	CLOT.	Horizontal	8.680,000	449.437,611	4.482.090,840	1.125,510	594,500	228,033301	0,000	39,98	623,367	40°29'16.7085"	-3°35'47.8025"
1	CLOT.	Horizontal	8.700,000	449.428,966	4.482.072,806	4.508,174	594,500	228,740143	0,000	9,98	623,604	40°29'16.16"	-3°35'48.1645"
1	RECTA	Horizontal	8.706,655	449.426,060	4.482.066,819	0,000	594,500	228,787130	0,000	0,00	623,578	40°29'15.9269"	-3°35'48.2862"
1	RECTA	Horizontal	8.720,000	449.420,229	4.482.054,815	0,000	594,500	228,787130	0,000	0,00	623,787	40°29'15.5363"	-3°35'48.5305"
1	RECTA	Horizontal	8.740,000	449.411,490	4.482.036,825	0,000	594,500	228,787130	0,000	0,00	623,940	40°29'14.9510"	-3°35'48.8965"
1	RECTA	Horizontal	8.760,000	449.402,752	4.482.018,835	0,000	594,500	228,787130	0,000	0,00	624,113	40°29'14.3657"	-3°35'49.2625"
1	RECTA	Horizontal	8.780,000	449.394,013	4.482.000,845	0,000	594,500	228,787130	0,000	0,00	622,283	40°29'13.7803"	-3°35'49.6285"
1	RECTA	KV 6000	8.800,000	449.385,274	4.481.982,855	0,000	594,508	228,787130	1,621	0,00	619,536	40°29'13.1950"	-3°35'49.9945"
1	RECTA	KV 6000	8.820,000	449.376,536	4.481.964,866	0,000	594,574	228,787130	4,954	0,00	618,119	40°29'12.6096"	-3°35'50.3605"
1	RECTA	KV 6000	8.840,000	449.367,797	4.481.946,876	0,000	594,706	228,787130	8,288	0,00	619,044	40°29'12.0243"	-3°35'50.7265"
1	RECTA	Rampa	8.860,000	449.359,058	4.481.928,886	0,000	594,885	228,787130	9,000	0,00	625,073	40°29'11.4389"	-3°35'51.0925"
1	RECTA	Rampa	8.880,000	449.350,320	4.481.910,896	0,000	595,065	228,787130	9,000	0,00	619,576	40°29'10.8536"	-3°35'51.4585"
1	RECTA	Rampa	8.900,000	449.341,581	4.481.892,906	0,000	595,245	228,787130	9,000	0,00	618,771	40°29'10.2682"	-3°35'51.8245"
1	RECTA	Rampa	8.920,000	449.332,842	4.481.874,916	0,000	595,425	228,787130	9,000	0,00	618,224	40°29'09.6829"	-3°35'52.1905"
1	RECTA	Rampa	8.940,000	449.324,103	4.481.856,926	0,000	595,605	228,787130	9,000	0,00	620,709	40°29'09.0976"	-3°35'52.5565"
1	RECTA	Rampa	8.960,000	449.315,365	4.481.838,936	0,000	595,785	228,787130	9,000	0,00	618,752	40°29'08.5122"	-3°35'52.9225"
1	RECTA	Rampa	8.980,000	449.306,626	4.481.820,947	0,000	595,965	228,787130	9,000	0,00	614,383	40°29'07.9269"	-3°35'53.2885"
1	RECTA	Rampa	9.000,000	449.297,887	4.481.802,957	0,000	596,145	228,787130	9,000	0,00	619,525	40°29'07.3415"	-3°35'53.6545"
1	RECTA	Rampa	9.020,000	449.289,149	4.481.784,967	0,000	596,325	228,787130	9,000	0,00	620,405	40°29'06.7562"	-3°35'54.0205"
1	RECTA	Rampa	9.040,000	449.280,410	4.481.766,977	0,000	596,505	228,787130	9,000	0,00	620,426	40°29'06.1708"	-3°35'54.3865"
1	RECTA	Rampa	9.060,000	449.271,671	4.481.748,987	0,000	596,685	228,787130	9,000	0,00	621,287	40°29'05.5855"	-3°35'54.7525"
1	RECTA	Rampa	9.080,000	449.262,933	4.481.730,997	0,000	596,865	228,787130	9,000	0,00	622,033	40°29'05.0001"	-3°35'55.1184"
1	RECTA	Rampa	9.100,000	449.254,194	4.481.713,007	0,000	597,045	228,787130	9,000	0,00	624,121	40°29'04.4148"	-3°35'55.4844"
1	RECTA	Rampa	9.120,000	449.245,455	4.481.695,018	0,000	597,225	228,787130	9,000	0,00	630,103	40°29'03.8294"	-3°35'55.8504"
1	RECTA	Rampa	9.140,000	449.236,717	4.481.677,028	0,000	597,405	228,787130	9,000	0,00	631,385	40°29'03.2441"	-3°35'56.2164"
1	RECTA	Rampa	9.160,000	449.227,978	4.481.659,038	0,000	597,585	228,787130	9,000	0,00	631,445	40°29'02.6587"	-3°35'56.5824"
1	RECTA	Rampa	9.180,000	449.219,239	4.481.641,048	0,000	597,765	228,787130	9,000	0,00	631,563	40°29'02.0734"	-3°35'56.9483"
1	RECTA	Rampa	9.200,000	449.210,501	4.481.623,058	0,000	597,945	228,787130	9,000	0,00	631,787	40°29'01.4880"	-3°35'57.3143"
1	RECTA	Rampa	9.220,000	449.201,762	4.481.605,068	0,000	598,125	228,787130	9,000	0,00	631,961	40°29'00.9027"	-3°35'57.6803"
1	RECTA	Rampa	9.240,000	449.193,023	4.481.587,078	0,000	598,305	228,787130	9,000	0,00	631,752	40°29'00.3173"	-3°35'58.0463"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
Final de proyecto	RECTA	Rampa	9.243,843	449.191,344	4.481.583,622	0,000	598,339	228,787130	9,000	0,00	631,656	40°29'00.2049"	-3°35'58.1166"
1	RECTA	Rampa	9.260,000	449.184,285	4.481.569,088	0,000	598,485	228,787130	9,000	0,00	631,857	40°28'59.7320"	-3°35'58.4122"
1	RECTA	KV 2500	9.280,000	449.175,546	4.481.551,099	0,000	598,695	228,787130	13,931	0,00	633,269	40°28'59.1466"	-3°35'58.7782"
1	RECTA	KV 2500	9.300,000	449.166,807	4.481.533,109	0,000	599,054	228,787130	21,931	0,00	632,772	40°28'58.5613"	-3°35'59.1442"
1	RECTA	KV 2500	9.320,000	449.158,069	4.481.515,119	0,000	599,572	228,787130	29,931	0,00	632,856	40°28'57.9759"	-3°35'59.5101"
1	RECTA	Rampa	9.340,000	449.149,330	4.481.497,129	0,000	600,240	228,787130	35,000	0,00	632,946	40°28'57.3906"	-3°35'59.8761"
1	CLOT.	Rampa	9.348,716	449.145,522	4.481.489,289	-1.000.000,000	600,545	228,787130	35,000	0,00	633,025	40°28'57.1355"	-3°36'00.0356"
1	CLOT.	Rampa	9.360,000	449.140,598	4.481.479,136	-2.658,579	600,940	228,652024	35,000	-16,93	633,059	40°28'56.8051"	-3°36'00.2417"
1	CLOT.	Rampa	9.380,000	449.132,006	4.481.461,076	-958,950	601,640	227,748694	35,000	-46,93	633,614	40°28'56.65"	-3°36'00.6015"
1	CLOT.	Rampa	9.400,000	449.123,792	4.481.442,841	-584,975	602,340	225,996537	35,000	-76,93	633,182	40°28'55.6243"	-3°36'00.9451"
1	CLOT.	Rampa	9.420,000	449.116,207	4.481.424,337	-420,850	603,040	223,395553	35,000	-106,93	636,794	40°28'55.0226"	-3°36'01.2619"
1	CLOT.	Rampa	9.440,000	449.109,509	4.481.405,494	-328,644	603,740	219,945744	35,000	-136,93	644,274	40°28'54.4100"	-3°36'01.5409"
1	CIRC.	Rampa	9.448,716	449.106,937	4.481.397,167	-300,000	604,045	218,176800	35,000	-150,00	646,756	40°28'54.1394"	-3°36'01.6477"
1	CIRC.	Rampa	9.460,000	449.103,963	4.481.386,282	-300,000	604,440	215,782213	35,000	-150,00	650,578	40°28'53.7857"	-3°36'01.7709"
1	CLOT.	Rampa	9.479,187	449.099,853	4.481.367,544	-300,000	605,112	211,710586	35,000	-150,00	653,503	40°28'53.1771"	-3°36'01.9401"
1	CLOT.	Rampa	9.480,000	449.099,705	4.481.366,744	-302,459	605,140	211,538782	35,000	-148,78	653,637	40°28'53.1512"	-3°36'01.9461"
1	CLOT.	Rampa	9.500,000	449.096,709	4.481.346,973	-378,850	605,840	207,753565	35,000	-118,78	653,543	40°28'52.5093"	-3°36'02.0676"
1	CLOT.	Rampa	9.520,000	449.094,759	4.481.327,070	-506,867	606,540	204,817173	35,000	-88,78	649,080	40°28'51.8634"	-3°36'02.1447"
1	CLOT.	Rampa	9.540,000	449.093,597	4.481.307,105	-765,558	607,240	202,729608	35,000	-58,78	646,797	40°28'51.2156"	-3°36'02.1883"
1	CLOT.	Rampa	9.560,000	449.092,956	4.481.287,115	-1.563,551	607,940	201,490870	35,000	-28,78	646,029	40°28'50.5672"	-3°36'02.2097"
1	RECTA	Rampa	9.579,187	449.092,586	4.481.267,932	0,000	608,612	201,100256	35,000	0,00	642,997	40°28'49.9450"	-3°36'02.2199"
1	RECTA	Rampa	9.580,000	449.092,571	4.481.267,119	0,000	608,640	201,100256	35,000	0,00	642,976	40°28'49.9187"	-3°36'02.2203"
1	RECTA	Rampa	9.600,000	449.092,226	4.481.247,122	0,000	609,340	201,100256	35,000	0,00	642,939	40°28'49.2701"	-3°36'02.2292"
1	RECTA	Rampa	9.620,000	449.091,880	4.481.227,125	0,000	610,040	201,100256	35,000	0,00	647,415	40°28'48.6215"	-3°36'02.2381"
1	RECTA	Rampa	9.640,000	449.091,535	4.481.207,128	0,000	610,740	201,100256	35,000	0,00	641,815	40°28'47.9729"	-3°36'02.2470"
1	RECTA	Rampa	9.660,000	449.091,189	4.481.187,131	0,000	611,440	201,100256	35,000	0,00	641,601	40°28'47.3243"	-3°36'02.2559"
1	RECTA	Rampa	9.680,000	449.090,843	4.481.167,134	0,000	612,140	201,100256	35,000	0,00	641,986	40°28'46.6757"	-3°36'02.2648"
1	RECTA	Rampa	9.700,000	449.090,498	4.481.147,137	0,000	612,840	201,100256	35,000	0,00	653,721	40°28'46.0271"	-3°36'02.2737"
1	CLOT.	Rampa	9.704,119	449.090,426	4.481.143,019	-1.000.000,000	612,984	201,100256	35,000	0,00	655,318	40°28'45.8935"	-3°36'02.2755"
1	CLOT.	Rampa	9.720,000	449.090,245	4.481.127,139	-453,358	613,540	199,985192	35,000	-15,88	655,035	40°28'45.3785"	-3°36'02.2786"
1	CLOT.	Rampa	9.740,000	449.090,875	4.481.107,153	-200,661	614,240	195,408341	35,000	-35,88	652,540	40°28'44.7305"	-3°36'02.2461"
1	CIRC.	Rampa	9.744,119	449.091,216	4.481.103,049	-180,000	614,384	194,026703	35,000	-40,00	652,128	40°28'44.5974"	-3°36'02.2304"
1	CIRC.	Rampa	9.760,000	449.093,399	4.481.087,323	-180,000	614,940	188,409777	35,000	-40,00	651,789	40°28'44.0879"	-3°36'02.1332"
1	CIRC.	Rampa	9.780,000	449.098,104	4.481.067,895	-180,000	615,640	181,336224	35,000	-40,00	651,257	40°28'43.4589"	-3°36'01.9277"
1	CIRC.	Rampa	9.800,000	449.104,935	4.481.049,109	-180,000	616,340	174,262671	35,000	-40,00	651,000	40°28'42.8511"	-3°36'01.6322"
1	CIRC.	Rampa	9.820,000	449.113,806	4.481.031,196	-180,000	617,040	167,189118	35,000	-40,00	654,533	40°28'42.2721"	-3°36'01.2502"
1	CIRC.	Rampa	9.840,000	449.124,609	4.481.014,376	-180,000	617,740	160,115565	35,000	-40,00	654,464	40°28'41.7291"	-3°36'00.7866"
1	CIRC.	Rampa	9.860,000	449.137,211	4.480.998,859	-180,000	618,440	153,042012	35,000	-40,00	653,235	40°28'41.2286"	-3°36'00.2469"
1	CIRC.	Rampa	9.880,000	449.151,455	4.480.984,834	-180,000	619,140	145,968459	35,000	-40,00	651,036	40°28'40.7769"	-3°35'59.6379"
1	CIRC.	Rampa	9.900,000	449.167,167	4.480.972,476	-180,000	619,840	138,894906	35,000	-40,00	649,378	40°28'40.3796"	-3°35'58.9671"
1	CIRC.	Rampa	9.920,000	449.184,152	4.480.961,935	-180,000	620,540	131,821353	35,000	-40,00	647,993	40°28'40.0415"	-3°35'58.2427"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
1	CIRC.	Rampa	9.940,000	449.202,201	4.480.953,343	-180,000	621,240	124,747800	35,000	-40,00	646,794	40°28'39.7668"	-3°35'57.4737"
1	CIRC.	Rampa	9.960,000	449.221,091	4.480.946,806	-180,000	621,940	117,674247	35,000	-40,00	645,368	40°28'39.5590"	-3°35'56.6695"
1	CIRC.	Rampa	9.980,000	449.240,590	4.480.942,403	-180,000	622,640	110,600694	35,000	-40,00	643,946	40°28'39.4205"	-3°35'55.8402"
1	CLOT.	KV -3000	9.989,973	449.250,465	4.480.941,023	-180,000	622,987	107,073553	33,774	-40,00	643,321	40°28'39.3779"	-3°35'55.4203"
1	CLOT.	KV -3000	10.000,000	449.260,455	4.480.940,166	-240,218	623,309	103,971650	30,431	-29,97	642,886	40°28'39.3523"	-3°35'54.9958"
1	CLOT.	KV -3000	10.020,000	449.280,443	4.480.939,566	-721,967	623,851	100,439692	23,765	-9,97	642,127	40°28'39.3372"	-3°35'54.1468"
1	RECTA	KV -3000	10.029,973	449.290,416	4.480.939,543	0,000	624,071	100,000000	20,440	0,00	641,982	40°28'39.3387"	-3°35'53.7232"
1	RECTA	KV -3000	10.040,000	449.300,443	4.480.939,543	0,000	624,259	100,000000	17,098	0,00	641,698	40°28'39.3409"	-3°35'53.2974"
1	RECTA	KV -3000	10.060,000	449.320,443	4.480.939,543	0,000	624,535	100,000000	10,431	0,00	640,682	40°28'39.3453"	-3°35'52.4480"
1	RECTA	KV -3000	10.080,000	449.340,443	4.480.939,543	0,000	624,677	100,000000	3,765	0,00	639,888	40°28'39.3497"	-3°35'51.5986"
1	RECTA	Rampa	10.100,000	449.360,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	639,252	40°28'39.3541"	-3°35'50.7492"
1	RECTA	Rampa	10.120,000	449.380,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	638,638	40°28'39.3584"	-3°35'49.8998"
1	RECTA	Rampa	10.140,000	449.400,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	638,075	40°28'39.3628"	-3°35'49.0504"
1	RECTA	Rampa	10.160,000	449.420,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	637,175	40°28'39.3672"	-3°35'48.2010"
1	RECTA	Rampa	10.180,000	449.440,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	636,422	40°28'39.3716"	-3°35'47.3516"
1	RECTA	Rampa	10.200,000	449.460,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	635,619	40°28'39.3760"	-3°35'46.5023"
1	RECTA	Rampa	10.220,000	449.480,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	634,937	40°28'39.3804"	-3°35'45.6529"
1	RECTA	Rampa	10.240,000	449.500,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	634,032	40°28'39.3847"	-3°35'44.8035"
1	RECTA	Rampa	10.260,000	449.520,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	632,456	40°28'39.3891"	-3°35'43.9541"
1	RECTA	Rampa	10.280,000	449.540,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	631,569	40°28'39.3935"	-3°35'43.1047"
1	RECTA	Rampa	10.300,000	449.560,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	630,763	40°28'39.3979"	-3°35'42.2553"
1	RECTA	Rampa	10.320,000	449.580,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	629,316	40°28'39.4022"	-3°35'41.4059"
1	RECTA	Rampa	10.340,000	449.600,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	628,448	40°28'39.4066"	-3°35'40.5565"
1	RECTA	Rampa	10.360,000	449.620,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	627,384	40°28'39.4110"	-3°35'39.7071"
1	RECTA	Rampa	10.380,000	449.640,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	626,925	40°28'39.4153"	-3°35'38.8577"
1	RECTA	Rampa	10.400,000	449.660,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	626,880	40°28'39.4197"	-3°35'38.0083"
1	RECTA	Rampa	10.420,000	449.680,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	626,960	40°28'39.4241"	-3°35'37.1590"
1	RECTA	Rampa	10.440,000	449.700,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	626,323	40°28'39.4284"	-3°35'36.3096"
1	RECTA	Rampa	10.460,000	449.720,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	625,992	40°28'39.4328"	-3°35'35.4602"
1	RECTA	Rampa	10.480,000	449.740,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	626,060	40°28'39.4372"	-3°35'34.6108"
1	RECTA	Rampa	10.500,000	449.760,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	624,930	40°28'39.4415"	-3°35'33.7614"
1	RECTA	Rampa	10.520,000	449.780,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	623,000	40°28'39.4459"	-3°35'32.9120"
1	RECTA	Rampa	10.540,000	449.800,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	623,822	40°28'39.4502"	-3°35'32.0626"
1	RECTA	Rampa	10.560,000	449.820,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	624,370	40°28'39.4546"	-3°35'31.2132"
1	RECTA	Rampa	10.580,000	449.840,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	625,260	40°28'39.4589"	-3°35'30.3638"
1	RECTA	Rampa	10.600,000	449.860,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	626,023	40°28'39.4633"	-3°35'29.5144"
1	RECTA	Rampa	10.620,000	449.880,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	626,505	40°28'39.4676"	-3°35'28.6650"
1	RECTA	Rampa	10.640,000	449.900,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	627,505	40°28'39.4720"	-3°35'27.8156"
1	RECTA	Rampa	10.660,000	449.920,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	629,005	40°28'39.4763"	-3°35'26.9663"
1	RECTA	Rampa	10.680,000	449.940,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	630,128	40°28'39.4806"	-3°35'26.1169"
1	RECTA	Rampa	10.700,000	449.960,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	631,743	40°28'39.4850"	-3°35'25.2675"
1	RECTA	Rampa	10.720,000	449.980,443	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	633,242	40°28'39.4893"	-3°35'24.4181"
1	RECTA	Rampa	10.736,971	449.997,414	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	634,009	40°28'39.4930"	-3°35'23.6973"





EJE	DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
2	1	Recta	0,399	0,000	445.415,597	4.480.118,978			78,8576	0,9453587	0,3260322	40°28'11.8429"	-3°38'38.0297"
2		Clotoide	100,000	0,399	445.415,974	4.480.119,108		188,414	78,8576	445.415,974	4.480.119,108	40°28'11.8473"	-3°38'38.0137"
2	2	Circular	34,626	100,399	445.511,851	4.480.147,215	355,000		87,8241	445.579,335	4.479.798,688	40°28'12.7814"	-3°38'33.9511"
2		Clotoide	100,000	135,025	445.546,113	4.480.152,130		188,414	94,0335	445.646,024	4.480.152,112	40°28'12.9489"	-3°38'32.4977"
2	3	Recta	239,735	235,025	445.646,024	4.480.152,112			103,0000	0,9988899	-0,0471065	40°28'12.9719"	-3°38'28.2550"
2		Clotoide	100,000	474,760	445.885,493	4.480.140,819		173,205	103,0000	445.885,493	4.480.140,819	40°28'12.6619"	-3°38'18.0826"
2	4	Circular	55,242	574,760	445.984,844	4.480.130,583	300,000		113,6103	445.921,194	4.479.837,413	40°28'12.3532"	-3°38'13.8606"
2		Clotoide	100,000	630,002	446.037,448	4.480.113,972		173,205	125,3330	446.124,660	4.480.065,297	40°28'11.8269"	-3°38'11.6217"
2	5	Recta	89,767	730,002	446.124,660	4.480.065,297			135,9433	0,8448044	-0,5350752	40°28'10.2687"	-3°38'07.9034"
2		Clotoide	100,000	819,769	446.200,496	4.480.017,265		173,205	135,9433	446.200,496	4.480.017,265	40°28'08.7287"	-3°38'04.6684"
2	6	Circular	368,719	919,769	446.287,709	4.479.968,590	-300,000		125,3330	446.403,962	4.480.245,149	40°28'07.1704"	-3°38'00.9502"
2		Clotoide	100,000	1.288,488	446.625,571	4.480.042,938		173,205	47,0884	446.684,295	4.480.123,727	40°28'09.6600"	-3°37'46.6258"
2	7	Recta	190,263	1.388,488	446.684,295	4.480.123,727			36,4780	0,5421517	0,8402806	40°28'12.2936"	-3°37'44.1566"
2		Clotoide	95,000	1.578,752	446.787,447	4.480.283,601		284,165	36,4780	446.787,447	4.480.283,601	40°28'17.5022"	-3°37'39.8246"
2	8	Circular	371,218	1.673,752	446.837,448	4.480.364,362	-850,000		32,9205	446.098,586	4.480.784,579	40°28'20.1329"	-3°37'37.7256"
2		Clotoide	95,000	2.044,970	446.945,841	4.480.716,325		284,165	5,1175	446.949,937	4.480.811,223	40°28'31.5722"	-3°37'33.2286"
2	9	Recta	235,417	2.139,970	446.949,937	4.480.811,223			1,5600	0,0245012	0,9996998	40°28'34.6508"	-3°37'33.0833"
2		Clotoide	100,000	2.375,387	446.955,705	4.481.046,569		173,205	1,5600	446.955,705	4.481.046,569	40°28'42.2845"	-3°37'32.9092"
2	10	Circular	384,622	2.475,387	446.963,691	4.481.146,126	300,000		12,1703	447.258,226	4.481.089,124	40°28'45.5151"	-3°37'32.6000"
2		Clotoide	100,000	2.860,009	447.229,006	4.481.387,697		173,205	93,7897	447.328,874	4.481.386,342	40°28'53.4102"	-3°37'21.4043"
2	11	Recta	48,373	2.960,009	447.328,874	4.481.386,342			104,4000	0,9976125	-0,0690600	40°28'53.3891"	-3°37'17.1623"
2		Clotoide	100,000	3.008,382	447.377,131	4.481.383,001		173,205	104,4000	447.377,131	4.481.383,001	40°28'53.2918"	-3°37'15.1118"
2	12	Circular	201,417	3.108,382	447.476,999	4.481.381,646	-300,000		93,7897	447.447,780	4.481.680,219	40°28'53.2706"	-3°37'10.8698"
2		Clotoide	100,000	3.309,799	447.656,392	4.481.464,625		173,205	51,0477	447.720,024	4.481.541,608	40°28'56.0025"	-3°37'03.2753"
2	13	Recta	176,155	3.409,799	447.720,024	4.481.541,608			40,4374	0,5933295	0,8049597	40°28'58.5135"	-3°37'00.5956"
2		Clotoide	95,000	3.585,954	447.824,542	4.481.683,406		200,935	40,4374	447.824,542	4.481.683,406	40°29'03.1358"	-3°36'56.1984"
2	14	Circular	302,492	3.680,954	447.883,684	4.481.757,683	425,000		47,5525	448.195,533	4.481.468,936	40°29'05.5580"	-3°36'53.7084"
2		Clotoide	95,000	3.983,446	448.147,992	4.481.891,268		200,935	92,8637	448.242,872	4.481.894,836	40°29'09.9498"	-3°36'42.5216"
2	15	Recta	544,909	4.078,446	448.242,872	4.481.894,836			99,9789	0,9999999	0,0003319	40°29'10.0869"	-3°36'38.4926"
2		Clotoide	65,000	4.623,355	448.787,781	4.481.895,017		254,951	99,9789	448.787,781	4.481.895,017	40°29'10.2144"	-3°36'15.3477"

EJE	DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
2	16	Circular	57,648	4.688,355	448.852,774	4.481.894,334	1.000,000		102,0479	448.820,612	4.480.894,851	40°29'10.2067"	-3°36'12.5869"
2		Clotoide	65,000	4.746,003	448.910,307	4.481.890,821		254,951	105,7179	448.974,901	4.481.883,590	40°29'10.1055"	-3°36'10.1422"
2	17	Recta	116,231	4.811,003	448.974,901	4.481.883,590			107,7869	0,9925287	-0,1220114	40°29'09.8853"	-3°36'07.3965"
2		Clotoide	100,000	4.927,234	449.090,263	4.481.869,408		173,205	107,7869	449.090,263	4.481.869,408	40°29'09.4508"	-3°36'02.4924"
2	18	Circular	407,289	5.027,234	449.189,917	4.481.862,744	-300,000		97,1766	449.176,616	4.482.162,449	40°29'09.2567"	-3°35'58.2577"
2		Clotoide	100,000	5.434,523	449.472,352	4.482.112,045		173,205	10,7471	449.478,110	4.482.211,755	40°29'17.4038"	-3°35'46.3329"
2	19	Recta	371,033	5.534,523	449.478,110	4.482.211,755			0,1368	0,0021487	0,9999977	40°29'20.6387"	-3°35'46.1169"
2		Clotoide	100,000	5.905,556	449.478,908	4.482.582,787		173,205	0,1368	449.478,908	4.482.582,787	40°29'32.6717"	-3°35'46.1895"
2	20	Circular	417,975	6.005,556	449.473,577	4.482.682,521	-300,000		389,5265	449.177,628	4.482.633,388	40°29'35.9050"	-3°35'46.4446"
2		Clotoide	100,000	6.423,531	449.181,537	4.482.933,363		173,205	300,8295	449.082,140	4.482.923,581	40°29'43.9758"	-3°35'58.9227"
2	21	Recta	228,303	6.523,531	449.082,140	4.482.923,581			290,2191	-0,9882210	-0,1530336	40°29'43.6367"	-3°36'03.1424"
2		Clotoide	65,000	6.751,834	448.856,526	4.482.888,643		279,285	290,2191	448.856,526	4.482.888,643	40°29'42.4537"	-3°36'12.7164"
2	22	Circular	119,972	6.816,834	448.792,207	4.482.879,276	1.200,000		291,9433	448.640,747	4.484.069,680	40°29'42.1356"	-3°36'15.4460"
2		Clotoide	65,000	6.936,806	448.672,636	4.482.870,103		279,285	298,3081	448.607,641	4.482.869,550	40°29'41.8115"	-3°36'20.5228"
2	23	Recta	254,236	7.001,806	448.607,641	4.482.869,550			300,0322	-0,9999999	0,0005063	40°29'41.7791"	-3°36'23.2837"
2		Clotoide	86,000	7.256,043	448.353,404	4.482.869,678		190,053	300,0322	448.353,404	4.482.869,678	40°29'41.7265"	-3°36'34.0838"
2	24	Circular	37,738	7.342,043	448.267,496	4.482.872,654	420,000		306,5500	448.310,632	4.483.290,433	40°29'41.8037"	-3°36'37.7341"
2		Clotoide	86,000	7.379,781	448.230,182	4.482.878,210		190,053	312,2702	448.147,133	4.482.900,392	40°29'41.9755"	-3°36'39.3208"
2	25	Recta	37,703	7.465,781	448.147,133	4.482.900,392			318,7880	-0,9567671	0,2908551	40°29'42.6762"	-3°36'42.8553"
2		Clotoide	86,000	7.503,483	448.111,060	4.482.911,358		190,053	318,7880	448.111,060	4.482.911,358	40°29'43.0237"	-3°36'44.3909"
2	26	Circular	37,464	7.589,483	448.028,012	4.482.933,539	-420,000		312,2702	447.947,561	4.482.521,316	40°29'43.7244"	-3°36'47.9254"
2		Clotoide	86,000	7.626,948	447.990,970	4.482.939,067		190,053	306,5915	447.905,063	4.482.942,099	40°29'43.8953"	-3°36'49.5006"
2	27	Recta	783,808	7.712,948	447.905,063	4.482.942,099			300,0737	-0,9999993	0,0011577	40°29'43.9742"	-3°36'53.1509"
2				8.496,755	447.121,256	4.482.943,007			300,0737			40°29'43.8252"	-3°37'26.4478"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
2	RECTA	Horizontal	0,000	445.415,597	4.480.118,978	0,000	650,000	78,857643	0,000	0,00	689,607	40°28'11.8429"	-3°38'38.0297"
2	CLOT.	Horizontal	0,399	445.415,974	4.480.119,108	1.000.000,000	650,000	78,857643	0,000	0,00	689,605	40°28'11.8473"	-3°38'38.0137"
2	CLOT.	Horizontal	20,000	445.434,516	4.480.125,465	1.811,146	650,000	79,202129	0,000	29,40	688,919	40°28'12.0578"	-3°38'37.2284"
2	CLOT.	Horizontal	40,000	445.453,505	4.480.131,743	896,445	650,000	80,263790	0,000	59,40	688,270	40°28'12.2659"	-3°38'36.4240"
2	CLOT.	Horizontal	60,000	445.472,629	4.480.137,596	595,629	650,000	82,042770	0,000	89,40	687,484	40°28'12.4602"	-3°38'35.6137"
2	CLOT.	Horizontal	80,000	445.491,937	4.480.142,803	445,975	650,000	84,539067	0,000	119,40	687,136	40°28'12.6336"	-3°38'34.7953"
2	CLOT.	Horizontal	100,000	445.511,460	4.480.147,139	356,423	650,000	87,752682	0,000	149,40	686,961	40°28'12.7789"	-3°38'33.9677"
2	CIRC.	Horizontal	100,399	445.511,851	4.480.147,215	355,000	650,000	87,824118	0,000	150,00	686,963	40°28'12.7814"	-3°38'33.9511"
2	CIRC.	Horizontal	120,000	445.531,188	4.480.150,408	355,000	650,000	91,339130	0,000	150,00	687,237	40°28'12.8895"	-3°38'33.1309"
2	CLOT.	Horizontal	135,025	445.546,113	4.480.152,130	355,000	650,000	94,033524	0,000	150,00	686,074	40°28'12.9489"	-3°38'32.4977"
2	CLOT.	Horizontal	140,000	445.551,069	4.480.152,562	373,587	650,000	94,903526	0,000	142,54	685,997	40°28'12.9641"	-3°38'32.2874"
2	CLOT.	Horizontal	160,000	445.571,037	4.480.153,664	473,177	650,000	97,953018	0,000	112,54	686,503	40°28'13.0046"	-3°38'31.4398"
2	CLOT.	Horizontal	180,000	445.591,034	4.480.153,922	645,163	650,000	100,285192	0,000	82,54	685,367	40°28'13.0176"	-3°38'30.5907"
2	CLOT.	Horizontal	200,000	445.611,030	4.480.153,560	1.013,567	650,000	101,900048	0,000	52,54	684,986	40°28'13.0106"	-3°38'29.7415"
2	CLOT.	Horizontal	220,000	445.631,016	4.480.152,804	2.362,756	650,000	102,797586	0,000	22,54	684,748	40°28'12.9908"	-3°38'28.8925"
2	RECTA	Horizontal	235,025	445.646,024	4.480.152,112	0,000	650,000	103,000000	0,000	0,00	684,247	40°28'12.9719"	-3°38'28.2550"
2	RECTA	Horizontal	240,000	445.650,994	4.480.151,877	0,000	650,000	103,000000	0,000	0,00	684,081	40°28'12.9655"	-3°38'28.0439"
2	RECTA	Horizontal	260,000	445.670,972	4.480.150,935	0,000	650,000	103,000000	0,000	0,00	683,917	40°28'12.9396"	-3°38'27.1952"
2	RECTA	Horizontal	280,000	445.690,950	4.480.149,993	0,000	650,000	103,000000	0,000	0,00	683,644	40°28'12.9138"	-3°38'26.3466"
2	RECTA	Horizontal	300,000	445.710,928	4.480.149,051	0,000	650,000	103,000000	0,000	0,00	683,447	40°28'12.8879"	-3°38'25.4980"
2	RECTA	Horizontal	320,000	445.730,905	4.480.148,109	0,000	650,000	103,000000	0,000	0,00	683,276	40°28'12.8620"	-3°38'24.6493"
2	RECTA	Horizontal	340,000	445.750,883	4.480.147,167	0,000	650,000	103,000000	0,000	0,00	682,993	40°28'12.8362"	-3°38'23.8007"
2	RECTA	Horizontal	360,000	445.770,861	4.480.146,225	0,000	650,000	103,000000	0,000	0,00	682,295	40°28'12.8103"	-3°38'22.9521"
2	RECTA	Horizontal	380,000	445.790,839	4.480.145,283	0,000	650,000	103,000000	0,000	0,00	681,890	40°28'12.7845"	-3°38'22.1034"
2	RECTA	Horizontal	400,000	445.810,817	4.480.144,340	0,000	650,000	103,000000	0,000	0,00	682,017	40°28'12.7586"	-3°38'21.2548"
2	RECTA	Horizontal	420,000	445.830,794	4.480.143,398	0,000	650,000	103,000000	0,000	0,00	682,173	40°28'12.7327"	-3°38'20.4061"
2	RECTA	Horizontal	440,000	445.850,772	4.480.142,456	0,000	650,000	103,000000	0,000	0,00	681,524	40°28'12.7069"	-3°38'19.5575"
2	RECTA	Horizontal	460,000	445.870,750	4.480.141,514	0,000	650,000	103,000000	0,000	0,00	681,400	40°28'12.6810"	-3°38'18.7089"
2	CLOT.	Horizontal	474,760	445.885,493	4.480.140,819	1.000.000,000	650,000	103,000000	0,000	0,00	681,142	40°28'12.6619"	-3°38'18.0826"
2	CLOT.	KV -3300	480,000	445.890,728	4.480.140,571	5.724,951	649,996	103,029136	-1,496	7,86	681,097	40°28'12.6551"	-3°38'17.8602"
2	CLOT.	KV -3300	500,000	445.910,701	4.480.139,541	1.188,579	649,906	103,675951	-7,557	37,86	681,269	40°28'12.6264"	-3°38'17.0118"
2	CLOT.	KV -3300	520,000	445.930,654	4.480.138,174	663,127	649,694	105,171592	-13,617	67,86	681,538	40°28'12.5867"	-3°38'16.1640"
2	CLOT.	KV -3300	540,000	445.950,556	4.480.136,207	459,839	649,361	107,516060	-19,678	97,86	681,445	40°28'12.5276"	-3°38'15.3183"
2	CLOT.	KV -3300	560,000	445.970,352	4.480.133,376	351,947	648,907	110,709354	-25,739	127,86	681,280	40°28'12.4404"	-3°38'14.4768"
2	CIRC.	KV -3300	574,760	445.984,844	4.480.130,583	300,000	648,494	113,610330	-30,211	150,00	680,568	40°28'12.3532"	-3°38'13.8606"
2	CIRC.	KV -3300	580,000	445.989,955	4.480.129,426	300,000	648,332	114,722339	-31,799	150,00	680,714	40°28'12.3169"	-3°38'13.6432"
2	CIRC.	Pendiente	600,000	446.009,255	4.480.124,197	300,000	647,672	118,966471	-33,100	150,00	680,368	40°28'12.1519"	-3°38'12.8220"
2	CIRC.	Pendiente	620,000	446.028,165	4.480.117,694	300,000	647,010	123,210602	-33,100	150,00	680,240	40°28'11.9454"	-3°38'12.0170"
2	CLOT.	Pendiente	630,002	446.037,448	4.480.113,972	300,000	646,679	125,333017	-33,100	150,00	680,295	40°28'11.8269"	-3°38'11.66"
2	CLOT.	KV 3300	640,000	446.046,601	4.480.109,950	333,327	646,360	127,348666	-30,423	135,00	680,276	40°28'11.6986"	-3°38'11.2318"
2	CLOT.	KV 3300	660,000	446.064,543	4.480.101,119	428,561	645,812	130,744041	-24,362	105,00	679,969	40°28'11.4164"	-3°38'10.4672"
2	CLOT.	KV 3300	680,000	446.082,055	4.480.091,460	599,980	645,386	133,290590	-18,302	75,00	678,786	40°28'11.1072"	-3°38'09.7206"
2	CLOT.	KV 3300	700,000	446.099,235	4.480.081,223	999,945	645,080	134,988313	-12,241	45,00	677,999	40°28'10.7792"	-3°38'08.9879"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
2	CLOT.	KV 3300	720,000	446.116,208	4.480.070,644	2.999,506	644,896	135,837209	-6,181	15,00	677,677	40°28'10.4401"	-3°38'08.2639"
2	RECTA	Pendiente	730,002	446.124,660	4.480.065,297	0,000	644,844	135,943347	-5,000	0,00	677,546	40°28'10.2687"	-3°38'07.9034"
2	RECTA	Pendiente	740,000	446.133,107	4.480.059,947	0,000	644,794	135,943347	-5,000	0,00	677,663	40°28'10.0972"	-3°38'07.5431"
2	RECTA	Pendiente	760,000	446.150,003	4.480.049,246	0,000	644,694	135,943347	-5,000	0,00	678,201	40°28'09.7540"	-3°38'06.8223"
2	RECTA	KV -3800	780,000	446.166,899	4.480.038,544	0,000	644,587	135,943347	-6,891	0,00	679,133	40°28'09.4109"	-3°38'06.1016"
2	RECTA	KV -3800	800,000	446.183,795	4.480.027,843	0,000	644,396	135,943347	-12,154	0,00	677,900	40°28'09.0678"	-3°38'05.3808"
2	CLOT.	KV -3800	819,769	446.200,496	4.480.017,265	-1.000.000,000	644,105	135,943347	-17,357	0,00	677,641	40°28'08.7287"	-3°38'04.6684"
2	CLOT.	KV -3800	820,000	446.200,691	4.480.017,141	-129.919,294	644,101	135,943290	-17,417	-0,35	677,655	40°28'08.7247"	-3°38'04.6601"
2	CLOT.	KV -3800	840,000	4.466,612	4.480.006,479	-1.482,879	643,700	135,509077	-22,680	-30,35	678,001	40°28'08.3828"	-3°38'03.9383"
2	CLOT.	Pendiente	860,000	446.234,675	4.479.996,045	-745,695	643,210	134,226037	-25,000	-60,35	677,789	40°28'08.0485"	-3°38'03.2106"
2	CLOT.	Pendiente	880,000	446.252,010	4.479.986,074	-498,083	642,710	132,094171	-25,000	-90,35	677,458	40°28'07.7291"	-3°38'02.4714"
2	CLOT.	Pendiente	900,000	446.269,732	4.479.976,806	-373,921	642,210	129,113479	-25,000	-120,35	677,074	40°28'07.4327"	-3°38'01.7161"
2	CIRC.	Pendiente	919,769	446.287,709	4.479.968,590	-300,000	641,716	125,333017	-25,000	-150,00	677,031	40°28'07.1704"	-3°38'00.9502"
2	CIRC.	Pendiente	920,000	446.287,922	4.479.968,500	-300,000	641,710	125,284016	-25,000	-150,00	677,031	40°28'07.1676"	-3°38'00.9411"
2	CIRC.	Pendiente	940,000	446.306,609	4.479.961,385	-300,000	641,210	121,039884	-25,000	-150,00	677,494	40°28'06.9411"	-3°38'00.1454"
2	CIRC.	Pendiente	960,000	446.325,729	4.479.955,530	-300,000	640,710	116,795753	-25,000	-150,00	677,481	40°28'06.7557"	-3°37'59.3317"
2	CIRC.	KV 3300	980,000	446.345,197	4.479.950,961	-300,000	640,600	112,551621	-22,951	-150,00	676,615	40°28'06.6121"	-3°37'58.5037"
2	CIRC.	KV 3300	1.000,000	446.364,925	4.479.947,700	-300,000	639,819	108,307489	-16,890	-150,00	676,619	40°28'06.5109"	-3°37'57.6649"
2	CIRC.	KV 3300	1.020,000	446.384,827	4.479.945,760	-300,000	639,541	104,063357	-10,830	-150,00	676,981	40°28'06.4526"	-3°37'56.8192"
2	CIRC.	KV 3300	1.040,000	446.404,814	4.479.945,150	-300,000	639,385	99,819225	-4,769	-150,00	676,354	40°28'06.4375"	-3°37'55.9703"
2	CIRC.	KV 3300	1.060,000	446.424,798	4.479.945,874	-300,000	639,351	95,575094	1,292	-150,00	676,058	40°28'06.4656"	-3°37'55.1220"
2	CIRC.	KV 3300	1.080,000	446.444,688	4.479.947,926	-300,000	639,437	91,330962	7,352	-150,00	676,030	40°28'06.5368"	-3°37'54.2780"
2	CIRC.	KV 3300	1.100,000	446.464,398	4.479.951,300	-300,000	639,645	87,086830	13,413	-150,00	675,056	40°28'06.6507"	-3°37'53.4421"
2	CIRC.	KV 3300	1.120,000	446.483,839	4.479.955,979	-300,000	639,973	82,842698	19,473	-150,00	675,185	40°28'06.8070"	-3°37'52.65"
2	CIRC.	KV 3300	1.140,000	446.502,925	4.479.961,942	-300,000	640,424	78,598566	25,534	-150,00	674,372	40°28'07.0048"	-3°37'51.8093"
2	CIRC.	KV 3300	1.160,000	446.521,572	4.479.969,164	-300,000	640,995	74,354434	31,595	-150,00	673,319	40°28'07.2433"	-3°37'51.0197"
2	CIRC.	Rampa	1.180,000	446.539,696	4.479.977,612	-300,000	641,656	70,110303	33,300	-150,00	673,235	40°28'07.5215"	-3°37'50.2526"
2	CIRC.	Rampa	1.200,000	446.557,600	4.479.987,248	-300,000	642,322	65,866171	33,300	-150,00	673,728	40°28'07.8381"	-3°37'49.5115"
2	CIRC.	Rampa	1.220,000	446.574,058	4.479.998,031	-300,000	642,988	61,622039	33,300	-150,00	674,224	40°28'08.1917"	-3°37'48.7997"
2	CIRC.	Rampa	1.240,000	446.590,142	4.480.009,911	-300,000	643,654	57,377907	33,300	-150,00	674,728	40°28'08.5807"	-3°37'48.1203"
2	CIRC.	Rampa	1.260,000	446.605,400	4.480.022,836	-300,000	644,320	53,133775	33,300	-150,00	674,637	40°28'09.0034"	-3°37'47.4763"
2	CIRC.	Rampa	1.280,000	446.619,762	4.480.036,749	-300,000	644,986	48,889644	33,300	-150,00	674,170	40°28'09.4579"	-3°37'46.8706"
2	CLOT.	Rampa	1.288,488	446.625,571	4.480.042,938	-300,000	645,269	47,088367	33,300	-150,00	673,491	40°28'09.6600"	-3°37'46.6258"
2	CLOT.	KV -2800	1.300,000	446.633,172	4.480.051,583	-339,028	645,645	44,786119	31,107	-132,73	670,886	40°28'09.9421"	-3°37'46.3057"
2	CLOT.	KV -2800	1.320,000	446.645,688	4.480.067,180	-438,031	646,196	41,454971	23,964	-102,73	667,366	40°28'10.4508"	-3°37'45.7789"
2	CLOT.	KV -2800	1.340,000	446.657,479	4.480.083,332	-618,706	646,604	38,972650	16,821	-72,73	667,802	40°28'10.9774"	-3°37'45.2831"
2	CLOT.	KV -2800	1.360,000	446.668,742	4.480.099,859	-1.053,063	646,869	37,339155	9,678	-42,73	667,810	40°28'11.5159"	-3°37'44.8098"
2	CLOT.	KV -2800	1.380,000	446.679,690	4.480.116,596	-3.534,269	646,991	36,554486	2,535	-12,73	667,382	40°28'12.0613"	-3°37'44.3500"
2	RECTA	Horizontal	1.388,488	446.684,295	4.480.123,727	0,000	647,000	36,478037	0,000	0,00	667,946	40°28'12.2936"	-3°37'44.1566"
2	RECTA	Horizontal	1.400,000	446.690,536	4.480.133,400	0,000	647,000	36,478037	0,000	0,00	668,935	40°28'12.6087"	-3°37'43.8945"
2	RECTA	Horizontal	1.420,000	446.701,379	4.480.150,205	0,000	647,000	36,478037	0,000	0,00	669,921	40°28'13.1562"	-3°37'43.4392"
2	RECTA	Horizontal	1.440,000	446.712,222	4.480.167,011	0,000	647,000	36,478037	0,000	0,00	670,698	40°28'13.7038"	-3°37'42.9838"
2	RECTA	Horizontal	1.460,000	446.723,065	4.480.183,817	0,000	647,000	36,478037	0,000	0,00	671,198	40°28'14.2513"	-3°37'42.5284"



EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
2	RECTA	Horizontal	1.480,000	446.733,908	4.480.200,622	0,000	647,000	36,478037	0,000	0,00	671,369	40°28'14.7988"	-3°37'42.0731"
2	RECTA	Horizontal	1.500,000	446.744,751	44.806,428	0,000	647,000	36,478037	0,000	0,00	671,350	40°28'15.3463"	-3°37'41.6177"
2	RECTA	KV 6300	1.520,000	446.755,594	4.480.234,233	0,000	647,006	36,478037	1,371	0,00	673,916	40°28'15.8939"	-3°37'41.1623"
2	RECTA	KV 6300	1.540,000	446.766,437	4.480.251,039	0,000	647,065	36,478037	4,545	0,00	672,075	40°28'16.4414"	-3°37'40.7069"
2	RECTA	KV 6300	1.560,000	446.777,280	4.480.267,845	0,000	647,188	36,478037	7,720	0,00	672,733	40°28'16.9889"	-3°37'40.2516"
2	CLOT.	KV 6300	1.578,752	446.787,447	4.480.283,601	-1.000.000,000	647,360	36,478037	10,696	0,00	674,062	40°28'17.5022"	-3°37'39.8246"
2	CLOT.	KV 6300	1.580,000	446.788,123	4.480.284,650	-64.680,271	647,374	36,477423	10,895	-0,99	674,180	40°28'17.5364"	-3°37'39.7962"
2	CLOT.	KV 6300	1.600,000	446.798,950	4.480.301,467	-3.800,277	647,624	36,300061	14,069	-16,78	675,344	40°28'18.0843"	-3°37'39.3415"
2	CLOT.	KV 6300	1.620,000	446.809,688	4.480.318,340	-1.957,649	647,937	35,807346	17,244	-32,56	677,382	40°28'18.6340"	-3°37'38.8906"
2	CLOT.	KV 6300	1.640,000	446.820,252	4.480.335,321	-1.318,401	648,313	34,999277	20,418	-48,35	678,802	40°28'19.1871"	-3°37'38.4471"
2	CLOT.	KV 6300	1.660,000	446.830,558	4.480.352,461	-993,865	648,753	33,875855	23,593	-64,14	680,331	40°28'19.7454"	-3°37'38.0146"
2	CIRC.	KV 6300	1.673,752	446.837,448	4.480.364,362	-850,000	649,093	32,920456	25,776	-75,00	681,526	40°28'20.1329"	-3°37'37.7256"
2	CIRC.	KV 6300	1.680,000	446.840,517	4.480.369,805	-850,000	649,257	32,452469	26,768	-75,00	682,151	40°28'20.3101"	-3°37'37.5969"
2	CIRC.	Rampa	1.700,000	446.850,070	4.480.387,375	-850,000	649,805	30,954541	27,500	-75,00	684,153	40°28'20.8821"	-3°37'37.1966"
2	CIRC.	Rampa	1.720,000	446.859,208	4.480.405,166	-850,000	650,355	29,456612	27,500	-75,00	686,491	40°28'21.4612"	-3°37'36.8139"
2	CIRC.	Rampa	1.740,000	446.867,924	4.480.423,166	-850,000	650,905	27,958683	27,500	-75,00	688,920	40°28'22.0470"	-3°37'36.4492"
2	CIRC.	Rampa	1.760,000	446.876,214	4.480.441,366	-850,000	651,455	26,460754	27,500	-75,00	691,077	40°28'22.6391"	-3°37'36.1026"
2	CIRC.	Rampa	1.780,000	446.884,073	4.480.459,757	-850,000	652,005	24,962825	27,500	-75,00	690,917	40°28'23.2373"	-3°37'35.7744"
2	CIRC.	Rampa	1.800,000	446.891,498	4.480.478,327	-850,000	652,555	23,464896	27,500	-75,00	691,709	40°28'23.8413"	-3°37'35.4647"
2	CIRC.	Rampa	1.820,000	446.898,484	4.480.497,067	-850,000	653,105	21,966967	27,500	-75,00	693,801	40°28'24.4507"	-3°37'35.1737"
2	CIRC.	Rampa	1.840,000	446.905,027	4.480.515,966	-850,000	653,655	20,469038	27,500	-75,00	696,072	40°28'25.0651"	-3°37'34.9015"
2	CIRC.	Rampa	1.860,000	446.911,123	4.480.535,014	-850,000	654,205	18,971110	27,500	-75,00	696,525	40°28'25.6842"	-3°37'34.6484"
2	CIRC.	Rampa	1.880,000	446.916,770	4.480.554,199	-850,000	654,755	17,473181	27,500	-75,00	696,816	40°28'26.3077"	-3°37'34.4144"
2	CIRC.	Rampa	1.900,000	446.921,964	4.480.573,513	-850,000	655,305	15,975252	27,500	-75,00	697,531	40°28'26.9353"	-3°37'34.1996"
2	CIRC.	Rampa	1.920,000	446.926,702	4.480.592,943	-850,000	655,855	14,477323	27,500	-75,00	698,010	40°28'27.5665"	-3°37'34.0043"
2	CIRC.	Rampa	1.940,000	446.930,981	4.480.612,479	-850,000	656,405	12,979394	27,500	-75,00	698,122	40°28'28.2010"	-3°37'33.8284"
2	CIRC.	Rampa	1.960,000	446.934,800	4.480.632,111	-850,000	656,955	11,481465	27,500	-75,00	697,508	40°28'28.8386"	-3°37'33.6722"
2	CIRC.	Rampa	1.980,000	446.938,155	4.480.651,827	-850,000	657,505	9,983536	27,500	-75,00	697,614	40°28'29.4788"	-3°37'33.5356"
2	CIRC.	Rampa	2.000,000	446.941,046	4.480.671,616	-850,000	658,055	8,485607	27,500	-75,00	697,495	40°28'30.1212"	-3°37'33.4188"
2	CIRC.	Rampa	2.020,000	446.943,471	4.480.691,468	-850,000	658,605	6,987679	27,500	-75,00	697,523	40°28'30.7656"	-3°37'33.3218"
2	CIRC.	KV -6300	2.040,000	446.945,428	4.480.711,372	-850,000	659,140	5,489750	25,263	-75,00	697,638	40°28'31.4115"	-3°37'33.2447"
2	CLOT.	KV -6300	2.044,970	446.945,841	4.480.716,325	-850,000	659,263	5,117532	24,475	-75,00	697,599	40°28'31.5722"	-3°37'33.2286"
2	CLOT.	KV -6300	2.060,000	446.946,922	4.480.731,316	-1.009,757	659,613	4,080872	22,089	-63,13	697,567	40°28'32.0586"	-3°37'33.1872"
2	CLOT.	KV -6300	2.080,000	446.948,022	4.480.751,285	-1.346,512	660,023	2,977612	18,914	-47,34	697,472	40°28'32.7065"	-3°37'33.1465"
2	CLOT.	KV -6300	2.100,000	446.948,826	4.480.771,269	-2.020,277	660,370	2,189705	15,740	-31,56	697,265	40°28'33.3548"	-3°37'33.1184"
2	CLOT.	KV -6300	2.120,000	446.949,431	4.480.791,260	-4.043,613	660,653	1,717151	12,565	-15,77	696,986	40°28'34.0032"	-3°37'33.0987"
2	RECTA	KV -6300	2.139,970	446.949,937	4.480.811,223	0,000	660,872	1,559951	9,395	0,00	696,999	40°28'34.6508"	-3°37'33.0833"
2	RECTA	KV -6300	2.140,000	446.949,937	4.480.811,253	0,000	660,872	1,559951	9,390	0,00	696,999	40°28'34.6518"	-3°37'33.0832"
2	RECTA	KV -6300	2.160,000	446.950,427	4.480.831,247	0,000	661,028	1,559951	6,216	0,00	696,205	40°28'35.3003"	-3°37'33.0685"
2	RECTA	KV -6300	2.180,000	446.950,917	4.480.851,241	0,000	661,121	1,559951	3,041	0,00	695,263	40°28'35.9488"	-3°37'33.0537"
2	RECTA	Horizontal	2.200,000	446.951,407	4.480.871,235	0,000	661,150	1,559951	0,000	0,00	694,598	40°28'36.5974"	-3°37'33.0389"
2	RECTA	Horizontal	2.220,000	446.951,897	4.480.891,229	0,000	661,150	1,559951	0,000	0,00	694,048	40°28'37.2459"	-3°37'33.0241"
2	RECTA	Horizontal	2.240,000	446.952,387	4.480.911,223	0,000	661,150	1,559951	0,000	0,00	693,204	40°28'37.8944"	-3°37'33.0093"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
2	RECTA	Horizontal	2.260,000	446.952,878	4.480.931,600	0,000	661,150	1,559951	0,000	0,00	692,546	40°28'38.5430"	-3°37'32.9945"
2	RECTA	Horizontal	2.280,000	446.953,368	4.480.951,211	0,000	661,150	1,559951	0,000	0,00	691,752	40°28'39.1915"	-3°37'32.9797"
2	RECTA	Horizontal	2.300,000	446.953,858	4.480.971,205	0,000	661,150	1,559951	0,000	0,00	691,231	40°28'39.8400"	-3°37'32.9649"
2	RECTA	Horizontal	2.320,000	446.954,348	4.480.991,199	0,000	661,150	1,559951	0,000	0,00	690,425	40°28'40.4886"	-3°37'32.9501"
2	RECTA	Horizontal	2.340,000	446.954,838	4.481.011,193	0,000	661,150	1,559951	0,000	0,00	689,715	40°28'41.1371"	-3°37'32.9353"
2	RECTA	Horizontal	2.360,000	446.955,328	4.481.031,187	0,000	661,150	1,559951	0,000	0,00	689,015	40°28'41.7856"	-3°37'32.9206"
2	CLOT.	Horizontal	2.375,387	446.955,705	4.481.046,569	1.000.000,000	661,150	1,559951	0,000	0,00	688,589	40°28'42.2845"	-3°37'32.9092"
2	CLOT.	Horizontal	2.380,000	446.955,818	4.481.051,181	6.502,731	661,150	1,582534	0,000	6,92	688,495	40°28'42.4341"	-3°37'32.9057"
2	CLOT.	KV -3300	2.400,000	446.956,390	4.481.071,173	1.218,846	661,114	2,202748	-4,646	36,92	688,223	40°28'43.0826"	-3°37'32.8875"
2	CLOT.	KV -3300	2.420,000	446.957,291	4.481.091,152	672,443	660,961	3,671788	-10,707	66,92	688,036	40°28'43.7308"	-3°37'32.8552"
2	CLOT.	KV -3300	2.440,000	446.958,785	4.481.111,095	464,300	660,686	5,989655	-16,768	96,92	687,835	40°28'44.3779"	-3°37'32.7978"
2	CLOT.	KV -3300	2.460,000	446.961,136	4.481.130,955	354,554	660,290	9,156348	-22,828	126,92	687,569	40°28'45.0225"	-3°37'32.7039"
2	CIRC.	KV -3300	2.475,387	446.963,691	4.481.146,126	300,000	659,903	12,170280	-27,491	150,00	687,393	40°28'45.5151"	-3°37'32.6000"
2	CIRC.	KV -3300	2.480,000	446.964,602	4.481.150,648	300,000	659,773	13,149284	-28,889	150,00	687,330	40°28'45.6620"	-3°37'32.5626"
2	CIRC.	Pendiente	2.500,000	446.969,353	4.481.170,072	300,000	659,139	17,393416	-33,300	150,00	687,033	40°28'46.2930"	-3°37'32.3667"
2	CIRC.	Pendiente	2.520,000	446.975,387	4.481.189,136	300,000	658,473	21,637548	-33,300	150,00	686,571	40°28'46.9126"	-3°37'32.1162"
2	CIRC.	Pendiente	2.540,000	446.982,678	4.481.207,756	300,000	657,807	25,881679	-33,300	150,00	685,055	40°28'47.5181"	-3°37'31.8121"
2	CIRC.	Pendiente	2.560,000	446.991,193	4.481.225,849	300,000	657,141	30,125811	-33,300	150,00	683,848	40°28'48.1069"	-3°37'31.4559"
2	CIRC.	Pendiente	2.580,000	447.000,895	4.481.243,334	300,000	656,475	34,369943	-33,300	150,00	682,752	40°28'48.6761"	-3°37'31.0492"
2	CIRC.	Pendiente	2.600,000	447.011,739	4.481.260,134	300,000	655,809	38,614075	-33,300	150,00	682,149	40°28'49.2235"	-3°37'30.5936"
2	CIRC.	Pendiente	2.620,000	447.023,679	4.481.276,174	300,000	655,143	42,858207	-33,300	150,00	681,647	40°28'49.7464"	-3°37'30.0914"
2	CIRC.	Pendiente	2.640,000	447.036,661	4.481.291,384	300,000	654,477	47,102339	-33,300	150,00	680,941	40°28'50.2426"	-3°37'29.5446"
2	CIRC.	Pendiente	2.660,000	447.050,627	4.481.305,695	300,000	653,811	51,346470	-33,300	150,00	680,867	40°28'50.7100"	-3°37'28.9557"
2	CIRC.	Pendiente	2.680,000	447.065,516	4.481.319,043	300,000	653,145	55,590602	-33,300	150,00	682,148	40°28'51.1463"	-3°37'28.3274"
2	CIRC.	Pendiente	2.700,000	447.081,261	4.481.331,370	300,000	652,479	59,834734	-33,300	150,00	682,399	40°28'51.5497"	-3°37'27.6624"
2	CIRC.	Pendiente	2.720,000	447.097,791	4.481.342,621	300,000	651,813	64,078866	-33,300	150,00	680,677	40°28'51.9183"	-3°37'26.9637"
2	CIRC.	Pendiente	2.740,000	447.115,035	4.481.352,745	300,000	651,147	68,322998	-33,300	150,00	675,799	40°28'52.2506"	-3°37'26.2344"
2	CIRC.	Pendiente	2.760,000	447.132,915	4.481.361,699	300,000	650,481	72,567129	-33,300	150,00	675,397	40°28'52.5451"	-3°37'25.4777"
2	CIRC.	Pendiente	2.780,000	447.151,352	4.481.369,441	300,000	649,815	76,811261	-33,300	150,00	675,000	40°28'52.8004"	-3°37'24.6970"
2	CIRC.	Pendiente	2.800,000	447.170,263	4.481.375,938	300,000	649,149	81,055393	-33,300	150,00	674,178	40°28'53.0154"	-3°37'23.8957"
2	CIRC.	Pendiente	2.820,000	447.189,565	4.481.381,161	300,000	648,483	85,299525	-33,300	150,00	673,106	40°28'53.1892"	-3°37'23.0775"
2	CIRC.	Pendiente	2.840,000	447.209,172	4.481.385,086	300,000	647,817	89,543657	-33,300	150,00	672,278	40°28'53.3210"	-3°37'22.2459"
2	CIRC.	Pendiente	2.860,000	447.228,998	4.481.387,696	300,000	647,151	93,787789	-33,300	150,00	671,870	40°28'53.4102"	-3°37'21.4047"
2	CLOT.	Pendiente	2.860,009	447.229,006	4.481.387,697	300,000	647,151	93,789670	-33,300	150,00	671,870	40°28'53.4102"	-3°37'21.4043"
2	CLOT.	Pendiente	2.880,000	447.248,951	4.481.389,025	374,958	646,485	97,607883	-33,300	120,01	671,397	40°28'53.4579"	-3°37'20.5576"
2	CLOT.	Pendiente	2.900,000	447.268,947	4.481.389,287	499,926	645,819	100,579152	-33,300	90,01	670,998	40°28'53.4709"	-3°37'19.7084"
2	CLOT.	Pendiente	2.920,000	447.288,939	4.481.388,750	749,834	645,153	102,701594	-33,300	60,01	670,521	40°28'53.4581"	-3°37'18.8592"
2	CLOT.	Pendiente	2.940,000	447.308,910	4.481.387,679	1.499,335	644,487	103,975210	-33,300	30,01	669,438	40°28'53.4279"	-3°37'18.0107"
2	CLOT.	Pendiente	2.960,000	447.328,865	4.481.386,342	1.000.000,000	643,821	104,400000	-33,300	0,01	668,111	40°28'53.3891"	-3°37'17.1627"
2	RECTA	Pendiente	2.960,009	447.328,874	4.481.386,342	0,000	643,821	104,400000	-33,300	0,00	668,110	40°28'53.3891"	-3°37'17.1623"
2	RECTA	Pendiente	2.980,000	447.348,817	4.481.384,961	0,000	643,155	104,400000	-33,300	0,00	667,040	40°28'53.3489"	-3°37'16.3149"
2	RECTA	Pendiente	3.000,000	447.368,770	4.481.383,580	0,000	642,489	104,400000	-33,300	0,00	666,386	40°28'53.3087"	-3°37'15.4671"
2	CLOT.	Pendiente	3.008,382	447.377,131	4.481.383,001	-1.000.000,000	642,210	104,400000	-33,300	0,00	666,259	40°28'53.2918"	-3°37'15.1118"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
2	CLOT.	Pendiente	3.020,000	447.388,722	4.481.382,207	-2.582,170	641,823	104,256781	-33,300	-17,43	666,141	40°28'53.2687"	-3°37'14.6192"
2	CLOT.	Pendiente	3.040,000	447.408,685	4.481.380,993	-948,823	641,157	103,339279	-33,300	-47,43	667,099	40°28'53.2339"	-3°37'13.7710"
2	CLOT.	Pendiente	3.060,000	447.428,669	4.481.380,199	-581,191	640,491	101,572950	-33,300	-77,43	669,665	40°28'53.2127"	-3°37'12.9220"
2	CLOT.	Pendiente	3.080,000	447.448,667	4.481.380,094	-418,888	639,825	98,957795	-33,300	-107,43	668,355	40°28'53.2138"	-3°37'12.0726"
2	CLOT.	Pendiente	3.100,000	447.468,647	4.481.380,943	-327,446	639,159	95,493814	-33,300	-137,43	667,496	40°28'53.2459"	-3°37'11.2243"
2	CIRC.	Pendiente	3.108,382	447.476,999	4.481.381,646	-300,000	638,880	93,789670	-33,300	-150,00	667,226	40°28'53.2706"	-3°37'10.8698"
2	CIRC.	Pendiente	3.120,000	447.488,537	4.481.383,001	-300,000	638,493	91,324226	-33,300	-150,00	666,649	40°28'53.3172"	-3°37'10.3802"
2	CIRC.	Pendiente	3.140,000	447.508,246	4.481.386,376	-300,000	637,827	87,080094	-33,300	-150,00	666,539	40°28'53.4311"	-3°37'09.5441"
2	CIRC.	Pendiente	3.160,000	447.527,687	4.481.391,057	-300,000	637,161	82,835962	-33,300	-150,00	666,613	40°28'53.5873"	-3°37'08.7198"
2	CIRC.	Pendiente	3.180,000	447.546,773	4.481.397,022	-300,000	636,495	78,591831	-33,300	-150,00	669,171	40°28'53.7852"	-3°37'07.9110"
2	CIRC.	Pendiente	3.200,000	447.565,419	4.481.404,246	-300,000	635,829	74,347699	-33,300	-150,00	669,243	40°28'54.0237"	-3°37'07.1212"
2	CIRC.	Pendiente	3.220,000	447.583,542	4.481.412,696	-300,000	635,163	70,103567	-33,300	-150,00	669,092	40°28'54.3018"	-3°37'06.3540"
2	CIRC.	Pendiente	3.240,000	447.601,062	4.481.422,334	-300,000	634,497	65,859435	-33,300	-150,00	669,251	40°28'54.6184"	-3°37'05.6127"
2	CIRC.	Pendiente	3.260,000	447.617,901	4.481.433,119	-300,000	633,831	61,615303	-33,300	-150,00	669,070	40°28'54.9719"	-3°37'04.9008"
2	CIRC.	Pendiente	3.280,000	447.633,984	4.481.445,000	-300,000	633,165	57,371172	-33,300	-150,00	668,824	40°28'55.3609"	-3°37'04.2212"
2	CIRC.	Pendiente	3.300,000	447.649,240	4.481.457,927	-300,000	632,499	53,127040	-33,300	-150,00	668,573	40°28'55.7836"	-3°37'03.5771"
2	CLOT.	Pendiente	3.309,799	447.656,392	4.481.464,625	-300,000	632,173	51,047706	-33,300	-150,00	668,538	40°28'56.0025"	-3°37'03.2753"
2	CLOT.	Pendiente	3.320,000	447.663,605	4.481.471,838	-334,081	631,833	48,993327	-33,300	-134,70	668,181	40°28'56.2380"	-3°37'02.9711"
2	CLOT.	Pendiente	3.340,000	447.677,117	4.481.486,580	-429,808	631,167	45,606568	-33,300	-104,70	667,596	40°28'56.7192"	-3°37'02.4016"
2	CLOT.	KV 2100	3.360,000	447.689,929	4.481.501,936	-602,426	630,596	43,068636	-23,816	-74,70	667,153	40°28'57.2201"	-3°37'01.8620"
2	CLOT.	KV 2100	3.380,000	447.702,225	4.481.517,709	-1.006,758	630,214	41,379529	-14,292	-44,70	667,025	40°28'57.7344"	-3°37'01.3444"
2	CLOT.	KV 2100	3.400,000	447.714,205	4.481.533,723	-3.061,653	630,024	40,539249	-4,768	-14,70	662,843	40°28'58.2565"	-3°37'00.8404"
2	RECTA	KV 2100	3.409,799	447.720,024	4.481.541,608	0,000	630,000	40,437376	-0,102	0,00	661,974	40°28'58.5135"	-3°37'00.5956"
2	RECTA	Horizontal	3.420,000	447.726,076	4.481.549,820	0,000	630,000	40,437376	0,000	0,00	661,576	40°28'58.7812"	-3°37'00.3410"
2	RECTA	Horizontal	3.440,000	447.737,943	4.481.565,919	0,000	630,000	40,437376	0,000	0,00	661,233	40°28'59.3060"	-3°36'59.8417"
2	RECTA	Horizontal	3.460,000	447.749,809	4.481.582,018	0,000	630,000	40,437376	0,000	0,00	660,983	40°28'59.8308"	-3°36'59.3425"
2	RECTA	Horizontal	3.480,000	447.761,676	4.481.598,117	0,000	630,000	40,437376	0,000	0,00	660,355	40°29'00.3556"	-3°36'58.8433"
2	RECTA	Horizontal	3.500,000	447.773,543	4.481.614,216	0,000	630,000	40,437376	0,000	0,00	653,552	40°29'00.8804"	-3°36'58.3440"
2	RECTA	Horizontal	3.520,000	447.785,409	4.481.630,316	0,000	630,000	40,437376	0,000	0,00	653,388	40°29'01.4052"	-3°36'57.8448"
2	RECTA	Horizontal	3.540,000	447.797,276	4.481.646,415	0,000	630,000	40,437376	0,000	0,00	653,508	40°29'01.9300"	-3°36'57.3456"
2	RECTA	Horizontal	3.560,000	447.809,142	4.481.662,514	0,000	630,000	40,437376	0,000	0,00	653,447	40°29'02.4547"	-3°36'56.8463"
2	RECTA	Horizontal	3.580,000	447.821,009	4.481.678,613	0,000	630,000	40,437376	0,000	0,00	655,910	40°29'02.9795"	-3°36'56.3471"
2	CLOT.	KV -2100	3.585,954	447.824,542	4.481.683,406	1.000.000,000	629,993	40,437376	-2,660	0,00	655,981	40°29'03.1358"	-3°36'56.1984"
2	CLOT.	KV -2100	3.600,000	447.832,885	4.481.694,706	2.874,477	629,908	40,592917	-9,348	19,22	653,331	40°29'03.5041"	-3°36'55.8474"
2	CLOT.	KV -2100	3.620,000	447.844,873	4.481.710,714	1.185,894	629,626	41,351600	-18,872	46,59	646,991	40°29'04.0260"	-3°36'55.3430"
2	CLOT.	KV -2100	3.640,000	447.857,129	4.481.726,518	747,048	629,153	42,740224	-28,396	73,96	649,615	40°29'04.5413"	-3°36'54.8271"
2	CLOT.	Pendiente	3.660,000	447.869,804	4.481.741,988	545,269	628,508	44,759938	-33,800	101,33	650,688	40°29'05.0459"	-3°36'54.2933"
2	CLOT.	Pendiente	3.680,000	447.883,037	4.481.756,983	429,311	627,832	47,410359	-33,800	128,69	651,135	40°29'05.5351"	-3°36'53.7357"
2	CIRC.	Pendiente	3.680,954	447.883,684	4.481.757,683	425,000	627,800	47,552539	-33,800	130,00	651,054	40°29'05.5580"	-3°36'53.7084"
2	CIRC.	Pendiente	3.700,000	447.896,933	4.481.771,364	425,000	627,156	50,405499	-33,800	130,00	649,484	40°29'06.0047"	-3°36'53.1498"
2	CIRC.	Pendiente	3.720,000	447.911,490	4.481.785,076	425,000	626,480	53,401357	-33,800	130,00	649,953	40°29'06.4527"	-3°36'52.5355"
2	CIRC.	Pendiente	3.740,000	447.926,676	44.858,088	425,000	625,804	56,397215	-33,800	130,00	648,808	40°29'06.8781"	-3°36'51.8943"
2	CIRC.	Pendiente	3.760,000	447.942,458	4.481.810,371	425,000	625,128	59,393072	-33,800	130,00	647,169	40°29'07.2800"	-3°36'51.2277"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
2	CIRC.	Pendiente	3.780,000	447.958,799	4.481.821,898	425,000	624,452	62,388930	-33,800	130,00	646,953	40°29'07.6575"	-3°36'50.5370"
2	CIRC.	Pendiente	3.800,000	447.975,665	4.481.832,643	425,000	623,776	65,384788	-33,800	130,00	647,781	40°29'08.0098"	-3°36'49.8238"
2	CIRC.	Pendiente	3.820,000	447.993,018	4.481.842,584	425,000	623,100	68,380646	-33,800	130,00	651,489	40°29'08.3361"	-3°36'49.0897"
2	CIRC.	Pendiente	3.840,000	448.010,819	4.481.851,697	425,000	622,424	71,376503	-33,800	130,00	651,744	40°29'08.6356"	-3°36'48.3363"
2	CIRC.	KV 4200	3.860,000	448.029,029	4.481.859,962	425,000	621,764	74,372361	-31,078	130,00	652,021	40°29'08.9078"	-3°36'47.5652"
2	CIRC.	KV 4200	3.880,000	448.047,608	4.481.867,362	425,000	621,190	77,368219	-26,316	130,00	652,269	40°29'09.1519"	-3°36'46.7783"
2	CIRC.	KV 4200	3.900,000	448.066,514	4.481.873,879	425,000	620,711	80,364077	-21,554	130,00	652,691	40°29'09.3676"	-3°36'45.9772"
2	CIRC.	KV 4200	3.920,000	448.085,706	4.481.879,500	425,000	620,327	83,359934	-16,792	130,00	653,495	40°29'09.5542"	-3°36'45.1637"
2	CIRC.	KV 4200	3.940,000	448.105,141	4.481.884,212	425,000	620,039	86,355792	-12,030	130,00	654,262	40°29'09.7114"	-3°36'44.3395"
2	CIRC.	Pendiente	3.960,000	448.124,777	4.481.888,004	425,000	619,799	89,351650	-12,000	130,00	654,428	40°29'09.8388"	-3°36'43.5067"
2	CIRC.	Pendiente	3.980,000	448.144,569	4.481.890,869	425,000	619,559	92,347508	-12,000	130,00	655,619	40°29'09.9361"	-3°36'42.6668"
2	CLOT.	Pendiente	3.983,446	448.147,992	4.481.891,268	425,000	619,518	92,863710	-12,000	130,00	655,724	40°29'09.9498"	-3°36'42.5216"
2	CLOT.	Pendiente	4.000,000	448.164,472	4.481.892,818	514,685	619,319	95,127324	-12,000	107,35	655,846	40°29'10.0038"	-3°36'41.8220"
2	CLOT.	Pendiente	4.020,000	448.184,436	4.481.893,992	690,807	619,079	97,285795	-12,000	79,98	655,785	40°29'10.0464"	-3°36'40.9744"
2	CLOT.	Pendiente	4.040,000	448.204,427	4.481.894,589	1.050,171	618,839	98,813560	-12,000	52,61	655,931	40°29'10.0702"	-3°36'40.1255"
2	CLOT.	Pendiente	4.060,000	448.224,426	4.481.894,804	2.188,809	618,599	99,710617	-12,000	25,24	655,206	40°29'10.0817"	-3°36'39.2761"
2	RECTA	Pendiente	4.078,446	448.242,872	4.481.894,836	0,000	618,378	99,978872	-12,000	0,00	654,570	40°29'10.0869"	-3°36'38.4926"
2	RECTA	Pendiente	4.080,000	448.244,426	4.481.894,836	0,000	618,359	99,978872	-12,000	0,00	654,511	40°29'10.0872"	-3°36'38.4266"
2	RECTA	Pendiente	4.100,000	448.264,426	4.481.894,843	0,000	618,119	99,978872	-12,000	0,00	653,831	40°29'10.0919"	-3°36'37.5771"
2	RECTA	Pendiente	4.120,000	448.284,426	4.481.894,850	0,000	617,879	99,978872	-12,000	0,00	652,747	40°29'10.0966"	-3°36'36.7276"
2	RECTA	Pendiente	4.140,000	448.304,426	4.481.894,856	0,000	617,639	99,978872	-12,000	0,00	652,516	40°29'10.1013"	-3°36'35.8781"
2	RECTA	KV 6500	4.160,000	448.324,426	4.481.894,863	0,000	617,402	99,978872	-11,118	0,00	652,017	40°29'10.1060"	-3°36'35.0286"
2	RECTA	KV 6500	4.180,000	448.344,426	4.481.894,870	0,000	617,210	99,978872	-8,042	0,00	651,237	40°29'10.1107"	-3°36'34.51"
2	RECTA	KV 6500	4.200,000	448.364,426	4.481.894,876	0,000	617,080	99,978872	-4,965	0,00	650,364	40°29'10.1154"	-3°36'33.3296"
2	RECTA	KV 6500	4.220,000	448.384,426	4.481.894,883	0,000	617,012	99,978872	-1,888	0,00	649,895	40°29'10.1201"	-3°36'32.4801"
2	RECTA	Horizontal	4.240,000	448.404,426	4.481.894,889	0,000	617,000	99,978872	0,000	0,00	649,462	40°29'10.1248"	-3°36'31.6307"
2	RECTA	Horizontal	4.260,000	448.424,426	4.481.894,896	0,000	617,000	99,978872	0,000	0,00	649,898	40°29'10.1295"	-3°36'30.7812"
2	RECTA	Horizontal	4.280,000	448.444,426	4.481.894,903	0,000	617,000	99,978872	0,000	0,00	649,667	40°29'10.1342"	-3°36'29.9317"
2	RECTA	Horizontal	4.300,000	448.464,426	4.481.894,909	0,000	617,000	99,978872	0,000	0,00	649,361	40°29'10.1389"	-3°36'29.0822"
2	RECTA	Horizontal	4.320,000	448.484,426	4.481.894,916	0,000	617,000	99,978872	0,000	0,00	648,171	40°29'10.1435"	-3°36'28.2327"
2	RECTA	Horizontal	4.340,000	448.504,426	4.481.894,923	0,000	617,000	99,978872	0,000	0,00	647,540	40°29'10.1482"	-3°36'27.3832"
2	RECTA	Horizontal	4.360,000	448.524,426	4.481.894,929	0,000	617,000	99,978872	0,000	0,00	645,923	40°29'10.1529"	-3°36'26.5337"
2	RECTA	Horizontal	4.380,000	448.544,426	4.481.894,936	0,000	617,000	99,978872	0,000	0,00	646,138	40°29'10.1576"	-3°36'25.6842"
2	RECTA	Horizontal	4.400,000	448.564,426	4.481.894,943	0,000	617,000	99,978872	0,000	0,00	643,651	40°29'10.1623"	-3°36'24.8347"
2	RECTA	Horizontal	4.420,000	448.584,426	4.481.894,949	0,000	617,000	99,978872	0,000	0,00	643,568	40°29'10.1669"	-3°36'23.9852"
2	RECTA	Horizontal	4.440,000	448.604,426	4.481.894,956	0,000	617,000	99,978872	0,000	0,00	643,622	40°29'10.1716"	-3°36'23.1357"
2	RECTA	Horizontal	4.460,000	448.624,426	4.481.894,962	0,000	617,000	99,978872	0,000	0,00	643,977	40°29'10.1763"	-3°36'22.2862"
2	RECTA	Horizontal	4.480,000	448.644,426	4.481.894,969	0,000	617,000	99,978872	0,000	0,00	644,034	40°29'10.1810"	-3°36'21.4367"
2	RECTA	KV -3300	4.500,000	448.664,426	4.481.894,976	0,000	616,971	99,978872	-4,195	0,00	644,070	40°29'10.1856"	-3°36'20.5872"
2	RECTA	KV -3300	4.520,000	448.684,426	4.481.894,982	0,000	616,826	99,978872	-10,255	0,00	644,066	40°29'10.1903"	-3°36'19.7377"
2	RECTA	KV -3300	4.540,000	448.704,426	4.481.894,989	0,000	616,561	99,978872	-16,316	0,00	643,434	40°29'10.1950"	-3°36'18.8882"
2	RECTA	KV -3300	4.560,000	448.724,426	4.481.894,996	0,000	616,174	99,978872	-22,377	0,00	643,149	40°29'10.1996"	-3°36'18.0387"
2	RECTA	KV -3300	4.580,000	448.744,426	4.481.895,002	0,000	615,666	99,978872	-28,437	0,00	642,874	40°29'10.2043"	-3°36'17.1892"



EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
2	RECTA	KV -3300	4.600,000	448.764,426	4.481.895,009	0,000	615,036	99,978872	-34,498	0,00	643,653	40°29'10.2089"	-3°36'16.3397"
2	RECTA	Pendiente	4.620,000	448.784,426	4.481.895,016	0,000	614,346	99,978872	-34,500	0,00	643,568	40°29'10.2136"	-3°36'15.4902"
2	CLOT.	Pendiente	4.623,355	448.787,781	4.481.895,017	1.000.000,000	614,231	99,978872	-34,500	0,00	643,513	40°29'10.2144"	-3°36'15.3477"
2	CLOT.	Pendiente	4.640,000	448.804,426	4.481.895,010	3.905,148	613,656	100,114543	-34,500	20,49	643,639	40°29'10.25"	-3°36'14.6407"
2	CLOT.	Pendiente	4.660,000	448.824,425	4.481.894,903	1.773,790	612,966	100,636468	-34,500	45,10	643,713	40°29'10.2188"	-3°36'13.7912"
2	CLOT.	Pendiente	4.680,000	448.844,422	4.481.894,569	1.147,504	612,276	101,550158	-34,500	69,72	642,009	40°29'10.2124"	-3°36'12.9418"
2	CIRC.	Pendiente	4.688,355	448.852,774	4.481.894,334	1.000,000	611,988	102,047886	-34,500	80,00	641,294	40°29'10.2067"	-3°36'12.5869"
2	CIRC.	Pendiente	4.700,000	448.864,411	4.481.893,892	1.000,000	611,586	102,789210	-34,500	80,00	639,756	40°29'10.1949"	-3°36'12.0926"
2	CIRC.	Pendiente	4.720,000	448.884,381	4.481.892,816	1.000,000	610,896	104,062450	-34,500	80,00	636,098	40°29'10.1644"	-3°36'11.2440"
2	CIRC.	Pendiente	4.740,000	448.904,326	4.481.891,341	1.000,000	610,206	105,335690	-34,500	80,00	634,045	40°29'10.1210"	-3°36'10.3964"
2	CLOT.	Pendiente	4.746,003	448.910,307	4.481.890,821	1.000,000	609,999	105,717878	-34,500	80,00	633,622	40°29'10.1055"	-3°36'10.1422"
2	CLOT.	Pendiente	4.760,000	448.924,239	4.481.889,475	1.274,425	609,516	106,512993	-34,500	62,77	633,294	40°29'10.0649"	-3°36'09.5501"
2	CLOT.	Pendiente	4.780,000	448.944,120	4.481.887,297	2.096,544	608,826	107,316180	-34,500	38,16	641,664	40°29'09.9987"	-3°36'08.7050"
2	CLOT.	Pendiente	4.800,000	448.963,979	4.481.884,929	5.907,261	608,136	107,727601	-34,500	13,54	641,200	40°29'09.9263"	-3°36'07.8608"
2	RECTA	Pendiente	4.811,003	448.974,901	4.481.883,590	0,000	607,757	107,786893	-34,500	0,00	641,057	40°29'09.8853"	-3°36'07.3965"
2	RECTA	Pendiente	4.820,000	448.983,830	4.481.882,492	0,000	607,446	107,786893	-34,500	0,00	641,392	40°29'09.8516"	-3°36'07.0169"
2	RECTA	Pendiente	4.840,000	449.003,681	4.481.880,052	0,000	606,756	107,786893	-34,500	0,00	641,294	40°29'09.7769"	-3°36'06.1731"
2	RECTA	Pendiente	4.860,000	449.023,531	4.481.877,612	0,000	606,066	107,786893	-34,500	0,00	641,291	40°29'09.7021"	-3°36'05.3292"
2	RECTA	Pendiente	4.880,000	449.043,382	4.481.875,171	0,000	605,376	107,786893	-34,500	0,00	639,330	40°29'09.6274"	-3°36'04.4854"
2	RECTA	Pendiente	4.900,000	449.063,232	4.481.872,731	0,000	604,686	107,786893	-34,500	0,00	637,038	40°29'09.5526"	-3°36'03.6415"
2	RECTA	Pendiente	4.920,000	449.083,083	4.481.870,291	0,000	603,996	107,786893	-34,500	0,00	636,960	40°29'09.4779"	-3°36'02.7977"
2	CLOT.	Pendiente	4.927,234	449.090,263	4.481.869,408	-1.000.000,000	603,747	107,786893	-34,500	0,00	636,750	40°29'09.4508"	-3°36'02.4924"
2	CLOT.	Pendiente	4.940,000	449.102,935	4.481.867,862	-2.350,026	603,306	107,613980	-34,500	-19,15	635,794	40°29'09.4035"	-3°36'01.9537"
2	CLOT.	KV 8000	4.960,000	449.122,807	4.481.865,604	-915,588	602,630	106,647769	-32,666	-49,15	629,627	40°29'09.3347"	-3°36'01.1090"
2	CLOT.	KV 8000	4.980,000	449.142,723	4.481.863,781	-568,550	602,001	104,832731	-30,166	-79,15	628,270	40°29'09.2799"	-3°36'00.2626"
2	CLOT.	KV 8000	5.000,000	449.162,690	4.481.862,660	-412,281	601,423	102,168867	-27,666	-109,15	627,914	40°29'09.2480"	-3°35'59.4142"
2	CLOT.	KV 8000	5.020,000	449.182,687	4.481.862,508	-323,395	600,895	98,656177	-25,166	-139,15	627,957	40°29'09.2475"	-3°35'58.5648"
2	CIRC.	KV 8000	5.027,234	449.189,917	4.481.862,744	-300,000	600,716	97,176563	-24,262	-150,00	627,729	40°29'09.2567"	-3°35'58.2577"
2	CIRC.	KV 8000	5.040,000	449.202,654	4.481.863,581	-300,000	600,416	94,467572	-22,666	-150,00	626,690	40°29'09.2867"	-3°35'57.7169"
2	CIRC.	KV 8000	5.060,000	449.222,506	4.481.865,980	-300,000	599,988	90,223441	-20,166	-150,00	624,287	40°29'09.3688"	-3°35'56.8744"
2	CIRC.	KV 8000	5.080,000	449.242,154	4.481.869,695	-300,000	599,610	85,979309	-17,666	-150,00	618,420	40°29'09.4936"	-3°35'56.0410"
2	CIRC.	KV 8000	5.100,000	449.261,511	4.481.874,712	-300,000	599,282	81,735177	-15,166	-150,00	618,399	40°29'09.6606"	-3°35'55.2202"
2	CIRC.	KV 8000	5.120,000	449.280,491	4.481.881,006	-300,000	599,003	77,491045	-12,666	-150,00	617,955	40°29'09.8689"	-3°35'54.4159"
2	CIRC.	KV 8000	5.140,000	449.299,009	4.481.888,551	-300,000	598,775	73,246913	-10,166	-150,00	617,787	40°29'10.1177"	-3°35'53.6315"
2	CIRC.	Pendiente	5.160,000	449.316,984	4.481.897,313	-300,000	598,596	69,002781	-8,000	-150,00	618,230	40°29'10.4058"	-3°35'52.8706"
2	CIRC.	Pendiente	5.180,000	449.334,335	4.481.907,253	-300,000	598,436	64,758650	-8,000	-150,00	622,169	40°29'10.7319"	-3°35'52.1364"
2	CIRC.	Pendiente	5.200,000	449.350,985	4.481.918,327	-300,000	598,276	60,514518	-8,000	-150,00	627,083	40°29'11.0947"	-3°35'51.4324"
2	CIRC.	Pendiente	5.220,000	449.366,860	4.481.930,485	-300,000	598,116	56,270386	-8,000	-150,00	623,495	40°29'11.4925"	-3°35'50.7616"
2	CIRC.	Pendiente	5.240,000	449.381,890	4.481.943,674	-300,000	597,956	52,026254	-8,000	-150,00	618,511	40°29'11.9235"	-3°35'50.1270"
2	CIRC.	Pendiente	5.260,000	449.396,008	4.481.957,835	-300,000	597,796	47,782122	-8,000	-150,00	617,788	40°29'12.3859"	-3°35'49.5314"
2	CIRC.	Pendiente	5.280,000	449.409,152	4.481.972,904	-300,000	597,636	43,537991	-8,000	-150,00	622,066	40°29'12.8775"	-3°35'48.9774"
2	CIRC.	Pendiente	5.300,000	449.421,262	4.481.988,816	-300,000	597,476	39,293859	-8,000	-150,00	623,056	40°29'13.3962"	-3°35'48.4676"
2	CIRC.	Pendiente	5.320,000	449.432,286	4.482.005,500	-300,000	597,316	35,049727	-8,000	-150,00	624,045	40°29'13.9397"	-3°35'48.0042"



EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
2	CIRC.	Pendiente	5.340,000	449.442,173	4.482.022,880	-300,000	597,156	30,805595	-8,000	-150,00	623,963	40°29'14.5055"	-3°35'47.5892"
2	CIRC.	Pendiente	5.360,000	449.450,881	4.482.040,881	-300,000	596,996	26,561463	-8,000	-150,00	623,784	40°29'15.0912"	-3°35'47.2245"
2	CIRC.	Pendiente	5.380,000	449.458,371	4.482.059,422	-300,000	596,836	22,317331	-8,000	-150,00	623,788	40°29'15.6941"	-3°35'46.9117"
2	CIRC.	Pendiente	5.400,000	449.464,608	4.482.078,420	-300,000	596,676	18,073200	-8,000	-150,00	623,078	40°29'16.3116"	-3°35'46.6522"
2	CIRC.	Pendiente	5.420,000	449.469,566	4.482.097,792	-300,000	596,516	13,829068	-8,000	-150,00	622,821	40°29'16.9410"	-3°35'46.4472"
2	CLOT.	Pendiente	5.434,523	449.472,352	4.482.112,045	-300,000	596,400	10,747119	-8,000	-150,00	622,820	40°29'17.4038"	-3°35'46.3329"
2	CLOT.	Pendiente	5.440,000	449.473,223	4.482.117,451	-317,382	596,356	9,616760	-8,000	-141,79	622,811	40°29'17.5793"	-3°35'46.2974"
2	CLOT.	Pendiente	5.460,000	449.475,653	4.482.137,301	-402,558	596,196	6,029478	-8,000	-111,79	622,516	40°29'18.2236"	-3°35'46.2000"
2	CLOT.	Pendiente	5.480,000	449.477,093	4.482.157,247	-550,223	596,036	3,291023	-8,000	-81,79	622,650	40°29'18.8708"	-3°35'46.1445"
2	CLOT.	Pendiente	5.500,000	449.477,808	44.867,234	-868,977	595,876	1,401393	-8,000	-51,79	622,704	40°29'19.5191"	-3°35'46.1199"
2	CLOT.	Pendiente	5.520,000	449.478,062	4.482.197,232	-2.065,640	595,716	0,360590	-8,000	-21,79	622,420	40°29'20.1677"	-3°35'46.1148"
2	RECTA	Pendiente	5.534,523	449.478,110	4.482.211,755	0,000	595,600	0,136789	-8,000	0,00	622,347	40°29'20.6387"	-3°35'46.1169"
2	RECTA	Pendiente	5.540,000	449.478,122	44.826,232	0,000	595,556	0,136789	-8,000	0,00	622,274	40°29'20.8163"	-3°35'46.1180"
2	RECTA	Pendiente	5.560,000	449.478,165	4.482.237,232	0,000	595,396	0,136789	-8,000	0,00	622,126	40°29'21.4650"	-3°35'46.1219"
2	RECTA	Pendiente	5.580,000	449.478,208	4.482.257,232	0,000	595,236	0,136789	-8,000	0,00	621,677	40°29'22.1136"	-3°35'46.1258"
2	RECTA	Pendiente	5.600,000	449.478,251	4.482.277,232	0,000	595,076	0,136789	-8,000	0,00	621,432	40°29'22.7622"	-3°35'46.1297"
2	RECTA	Pendiente	5.620,000	449.478,294	4.482.297,232	0,000	594,916	0,136789	-8,000	0,00	621,489	40°29'23.4108"	-3°35'46.1337"
2	RECTA	KV 10000	5.640,000	449.478,337	4.482.317,231	0,000	594,759	0,136789	-7,201	0,00	621,397	40°29'24.0595"	-3°35'46.1376"
2	RECTA	KV 10000	5.660,000	449.478,380	4.482.337,231	0,000	594,635	0,136789	-5,201	0,00	621,201	40°29'24.7081"	-3°35'46.1415"
2	RECTA	KV 10000	5.680,000	449.478,423	4.482.357,231	0,000	594,551	0,136789	-3,201	0,00	620,867	40°29'25.3567"	-3°35'46.1454"
2	RECTA	KV 10000	5.700,000	449.478,466	4.482.377,231	0,000	594,507	0,136789	-1,201	0,00	620,415	40°29'26.0053"	-3°35'46.1493"
2	RECTA	Horizontal	5.720,000	449.478,509	4.482.397,231	0,000	594,500	0,136789	0,000	0,00	620,740	40°29'26.6539"	-3°35'46.1532"
2	RECTA	Horizontal	5.740,000	449.478,552	4.482.417,231	0,000	594,500	0,136789	0,000	0,00	621,200	40°29'27.3026"	-3°35'46.1571"
2	RECTA	Horizontal	5.760,000	449.478,595	4.482.437,231	0,000	594,500	0,136789	0,000	0,00	620,839	40°29'27.9512"	-3°35'46.1611"
2	RECTA	Horizontal	5.780,000	449.478,638	4.482.457,231	0,000	594,500	0,136789	0,000	0,00	620,776	40°29'28.5998"	-3°35'46.1650"
2	RECTA	Horizontal	5.800,000	449.478,681	4.482.477,231	0,000	594,500	0,136789	0,000	0,00	620,515	40°29'29.2484"	-3°35'46.1689"
2	RECTA	Horizontal	5.820,000	449.478,724	4.482.497,231	0,000	594,500	0,136789	0,000	0,00	620,185	40°29'29.8971"	-3°35'46.1728"
2	RECTA	Horizontal	5.840,000	449.478,767	4.482.517,231	0,000	594,500	0,136789	0,000	0,00	620,045	40°29'30.5457"	-3°35'46.1767"
2	RECTA	Horizontal	5.860,000	449.478,810	4.482.537,231	0,000	594,500	0,136789	0,000	0,00	619,946	40°29'31.1943"	-3°35'46.1806"
2	RECTA	Horizontal	5.880,000	449.478,853	4.482.557,231	0,000	594,500	0,136789	0,000	0,00	619,658	40°29'31.8429"	-3°35'46.1845"
2	RECTA	Horizontal	5.900,000	449.478,896	4.482.577,231	0,000	594,500	0,136789	0,000	0,00	619,601	40°29'32.4916"	-3°35'46.1885"
2	CLOT.	Horizontal	5.905,556	449.478,908	4.482.582,787	-1.000.000,000	594,500	0,136789	0,000	0,00	619,611	40°29'32.6717"	-3°35'46.1895"
2	CLOT.	KV 10000	5.920,000	449.478,922	4.482.597,231	-2.076,999	594,509	399,915429	1,337	-21,67	619,764	40°29'33.1402"	-3°35'46.1931"
2	CLOT.	KV 10000	5.940,000	449.478,755	4.482.617,230	-870,981	594,556	398,877998	3,337	-51,67	619,695	40°29'33.7887"	-3°35'46.2059"
2	CLOT.	KV 10000	5.960,000	449.478,128	4.482.637,219	-551,026	594,642	396,991739	5,337	-81,67	619,589	40°29'34.4369"	-3°35'46.2383"
2	CLOT.	KV 10000	5.980,000	449.476,777	4.482.657,172	-402,988	594,769	394,256654	7,337	-111,67	619,227	40°29'35.0837"	-3°35'46.3014"
2	CLOT.	KV 10000	6.000,000	449.474,438	4.482.677,032	-317,649	594,936	390,672743	9,337	-141,67	619,031	40°29'35.7272"	-3°35'46.4065"
2	CIRC.	KV 10000	6.005,556	449.473,577	4.482.682,521	-300,000	594,989	389,526460	9,893	-150,00	619,002	40°29'35.9050"	-3°35'46.4446"
2	CIRC.	Rampa	6.020,000	449.470,870	4.482.696,708	-300,000	595,134	386,461366	10,000	-150,00	618,887	40°29'36.3645"	-3°35'46.5637"
2	CIRC.	Rampa	6.040,000	449.466,000	4.482.716,102	-300,000	595,334	382,623400	10,000	-150,00	619,041	40°29'36.9924"	-3°35'46.7761"
2	CIRC.	Rampa	6.060,000	449.459,849	4.482.735,129	-300,000	595,534	377,973102	10,000	-150,00	619,021	40°29'37.6081"	-3°35'47.0429"
2	CIRC.	Rampa	6.080,000	449.452,445	4.482.753,704	-300,000	595,734	373,728970	10,000	-150,00	618,834	40°29'38.2089"	-3°35'47.3627"
2	CIRC.	Rampa	6.100,000	449.443,819	4.482.771,744	-300,000	595,934	369,484838	10,000	-150,00	618,659	40°29'38.7921"	-3°35'47.7343"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
2	CIRC.	Rampa	6.120,000	449.434,011	4.482.789,169	-300,000	596,134	365,240707	10,000	-150,00	618,682	40°29'39.3550"	-3°35'48.1560"
2	CIRC.	Rampa	6.140,000	449.423,064	4.482.805,903	-300,000	596,334	360,996575	10,000	-150,00	619,222	40°29'39.8953"	-3°35'48.6258"
2	CIRC.	Rampa	6.160,000	449.411,026	4.482.821,870	-300,000	596,534	356,752443	10,000	-150,00	618,714	40°29'40.4105"	-3°35'49.1418"
2	CIRC.	Rampa	6.180,000	449.397,952	4.482.837,000	-300,000	596,734	352,508311	10,000	-150,00	615,184	40°29'40.8983"	-3°35'49.7016"
2	CIRC.	Rampa	6.200,000	449.383,898	4.482.851,225	-300,000	596,934	348,264500	10,000	-150,00	622,722	40°29'41.3565"	-3°35'50.3026"
2	CIRC.	Rampa	6.220,000	449.368,928	4.482.864,482	-300,000	597,134	344,020048	10,000	-150,00	621,642	40°29'41.7832"	-3°35'50.9424"
2	CIRC.	KV 6250	6.240,000	449.353,108	4.482.876,712	-300,000	597,359	339,775916	12,824	-150,00	621,839	40°29'42.1764"	-3°35'51.65"
2	CIRC.	KV 6250	6.260,000	449.336,509	4.482.887,862	-300,000	597,647	335,531784	16,024	-150,00	622,099	40°29'42.5343"	-3°35'52.3263"
2	CIRC.	KV 6250	6.280,000	449.319,204	4.482.897,881	-300,000	598,000	331,287652	19,224	-150,00	625,667	40°29'42.8554"	-3°35'53.0643"
2	CIRC.	KV 6250	6.300,000	449.301,269	4.482.906,725	-300,000	598,416	327,043520	22,424	-150,00	625,434	40°29'43.1383"	-3°35'53.8287"
2	CIRC.	KV 6250	6.320,000	449.282,786	4.482.914,354	-300,000	598,897	322,799388	25,624	-150,00	625,392	40°29'43.3817"	-3°35'54.6161"
2	CIRC.	Rampa	6.340,000	449.263,835	4.482.920,735	-300,000	599,416	318,555257	26,000	-150,00	625,203	40°29'43.5844"	-3°35'55.4230"
2	CIRC.	Rampa	6.360,000	449.244,501	4.482.925,840	-300,000	599,936	314,311125	26,000	-150,00	617,966	40°29'43.7457"	-3°35'56.2458"
2	CIRC.	Rampa	6.380,000	449.224,870	4.482.929,645	-300,000	600,456	310,066993	26,000	-150,00	618,420	40°29'43.8648"	-3°35'57.0808"
2	CIRC.	Rampa	6.400,000	449.205,030	4.482.932,134	-300,000	600,976	305,822861	26,000	-150,00	625,433	40°29'43.9412"	-3°35'57.9244"
2	CIRC.	Rampa	6.420,000	449.185,067	4.482.933,296	-300,000	601,496	301,578729	26,000	-150,00	636,058	40°29'43.9744"	-3°35'58.7728"
2	CLOT.	Rampa	6.423,531	449.181,537	4.482.933,363	-300,000	601,588	300,829476	26,000	-150,00	636,741	40°29'43.9758"	-3°35'58.9227"
2	CLOT.	Rampa	6.440,000	449.165,071	4.482.933,150	-359,149	602,016	297,622387	26,000	-125,30	635,277	40°29'43.9653"	-3°35'59.6222"
2	CLOT.	Rampa	6.460,000	449.145,112	4.482.931,892	-472,212	602,536	294,501644	26,000	-95,30	634,909	40°29'43.9201"	-3°36'00.4697"
2	CLOT.	Rampa	6.480,000	449.125,224	4.482.929,789	-689,168	603,056	292,229728	26,000	-65,30	634,978	40°29'43.8475"	-3°36'01.3139"
2	CLOT.	Rampa	6.500,000	449.105,405	4.482.927,110	-1.274,926	603,576	290,806638	26,000	-35,30	635,386	40°29'43.7563"	-3°36'02.1551"
2	CLOT.	Rampa	6.520,000	449.085,630	4.482.924,121	-8.496,726	604,096	290,232374	26,000	-5,30	637,783	40°29'43.6550"	-3°36'02.9943"
2	RECTA	Rampa	6.523,531	449.082,140	4.482.923,581	0,000	604,188	290,219147	26,000	0,00	638,235	40°29'43.6367"	-3°36'03.1424"
2	RECTA	Rampa	6.540,000	449.065,865	4.482.921,061	0,000	604,616	290,219147	26,000	0,00	641,124	40°29'43.5513"	-3°36'03.8330"
2	RECTA	Rampa	6.560,000	449.046,101	4.482.918,000	0,000	605,136	290,219147	26,000	0,00	644,687	40°29'43.4477"	-3°36'04.6717"
2	RECTA	Rampa	6.580,000	449.026,336	4.482.914,939	0,000	605,656	290,219147	26,000	0,00	643,614	40°29'43.3441"	-3°36'05.5104"
2	RECTA	Rampa	6.600,000	449.006,572	4.482.911,879	0,000	606,176	290,219147	26,000	0,00	643,446	40°29'43.2404"	-3°36'06.3492"
2	RECTA	Rampa	6.620,000	448.986,808	4.482.908,818	0,000	606,696	290,219147	26,000	0,00	643,759	40°29'43.1368"	-3°36'07.1879"
2	RECTA	Rampa	6.640,000	448.967,043	4.482.905,757	0,000	607,216	290,219147	26,000	0,00	646,048	40°29'43.0332"	-3°36'08.0266"
2	RECTA	Rampa	6.660,000	448.947,279	4.482.902,697	0,000	607,736	290,219147	26,000	0,00	646,351	40°29'42.9295"	-3°36'08.8653"
2	RECTA	Rampa	6.680,000	448.927,514	4.482.899,636	0,000	608,256	290,219147	26,000	0,00	652,105	40°29'42.8259"	-3°36'09.7040"
2	RECTA	Rampa	6.700,000	448.907,750	4.482.896,575	0,000	608,776	290,219147	26,000	0,00	649,046	40°29'42.7223"	-3°36'10.5428"
2	RECTA	Rampa	6.720,000	448.887,985	4.482.893,515	0,000	609,296	290,219147	26,000	0,00	644,349	40°29'42.6186"	-3°36'11.3815"
2	RECTA	Rampa	6.740,000	448.868,221	4.482.890,454	0,000	609,816	290,219147	26,000	0,00	643,099	40°29'42.5150"	-3°36'12.2202"
2	CLOT.	Rampa	6.751,834	448.856,526	4.482.888,643	1.000.000,000	610,124	290,219147	26,000	0,00	644,146	40°29'42.4537"	-3°36'12.7164"
2	CLOT.	Rampa	6.760,000	448.848,456	4.482.887,394	9.551,770	610,336	290,246360	26,000	7,54	641,016	40°29'42.4114"	-3°36'13.0589"
2	CLOT.	Rampa	6.780,000	448.828,685	4.482.884,380	2.769,294	610,856	290,542895	26,000	26,00	637,582	40°29'42.3092"	-3°36'13.8979"
2	CLOT.	KV -8000	6.800,000	448.808,892	4.482.881,508	1.619,399	611,376	291,165901	25,858	44,46	643,566	40°29'42.2117"	-3°36'14.7379"
2	CIRC.	KV -8000	6.816,834	448.792,207	4.482.879,276	1.200,000	611,794	291,943325	23,754	60,00	645,286	40°29'42.1356"	-3°36'15.4460"
2	CIRC.	KV -8000	6.820,000	448.789,066	4.482.878,881	1.200,000	611,868	292,111288	23,358	60,00	645,201	40°29'42.1221"	-3°36'15.5794"
2	CIRC.	KV -8000	6.840,000	448.769,199	4.482.876,574	1.200,000	612,310	293,172321	20,858	60,00	644,167	40°29'42.0429"	-3°36'16.4226"
2	CIRC.	KV -8000	6.860,000	448.749,297	4.482.874,599	1.200,000	612,702	294,233354	18,358	60,00	641,476	40°29'41.9744"	-3°36'17.2675"
2	CIRC.	KV -8000	6.880,000	448.729,365	4.482.872,956	1.200,000	613,045	295,294387	15,858	60,00	640,187	40°29'41.9167"	-3°36'18.1138"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
2	CIRC.	KV -8000	6.900,000	448.709,409	4.482.871,646	1.200,000	613,337	296,355420	13,358	60,00	640,757	40°29'41.8697"	-3°36'18.9611"
2	CIRC.	KV -8000	6.920,000	448.689,433	4.482.870,668	1.200,000	613,579	297,416453	10,858	60,00	640,976	40°29'41.8336"	-3°36'19.8094"
2	CLOT.	KV -8000	6.936,806	448.672,636	4.482.870,103	1.200,000	613,744	298,308052	8,757	60,00	640,726	40°29'41.8115"	-3°36'20.5228"
2	CLOT.	KV -8000	6.940,000	448.669,443	4.482.870,023	1.262,009	613,771	298,473323	8,358	57,05	640,643	40°29'41.8082"	-3°36'20.6584"
2	CLOT.	KV -8000	6.960,000	448.649,446	4.482.869,685	1.865,750	613,913	299,318987	5,858	38,59	639,953	40°29'41.7928"	-3°36'21.5078"
2	CLOT.	Rampa	6.980,000	448.629,447	4.482.869,561	3.576,958	614,016	299,838500	5,000	20,13	639,402	40°29'41.7843"	-3°36'22.3573"
2	CLOT.	Rampa	7.000,000	448.609,447	4.482.869,549	43.183,682	614,116	300,030899	5,000	1,67	638,896	40°29'41.7795"	-3°36'23.2069"
2	RECTA	Rampa	7.001,806	448.607,641	4.482.869,550	0,000	614,125	300,032230	5,000	0,00	638,796	40°29'41.7791"	-3°36'23.2837"
2	RECTA	Rampa	7.020,000	448.589,447	4.482.869,559	0,000	614,216	300,032230	5,000	0,00	638,104	40°29'41.7753"	-3°36'24.0566"
2	RECTA	Rampa	7.040,000	448.569,447	4.482.869,569	0,000	614,316	300,032230	5,000	0,00	637,619	40°29'41.7712"	-3°36'24.9062"
2	RECTA	Rampa	7.060,000	448.549,447	4.482.869,579	0,000	614,416	300,032230	5,000	0,00	636,676	40°29'41.7671"	-3°36'25.7558"
2	RECTA	Rampa	7.080,000	448.529,447	4.482.869,589	0,000	614,516	300,032230	5,000	0,00	635,880	40°29'41.7629"	-3°36'26.6054"
2	RECTA	Rampa	7.100,000	448.509,447	4.482.869,599	0,000	614,616	300,032230	5,000	0,00	635,106	40°29'41.7588"	-3°36'27.4550"
2	RECTA	Rampa	7.120,000	448.489,447	4.482.869,609	0,000	614,716	300,032230	5,000	0,00	634,073	40°29'41.7547"	-3°36'28.3046"
2	RECTA	Rampa	7.140,000	448.469,447	4.482.869,620	0,000	614,816	300,032230	5,000	0,00	633,359	40°29'41.7505"	-3°36'29.1542"
2	RECTA	Rampa	7.160,000	448.449,447	4.482.869,630	0,000	614,916	300,032230	5,000	0,00	633,294	40°29'41.7464"	-3°36'30.0038"
2	RECTA	Rampa	7.180,000	448.429,447	4.482.869,640	0,000	615,016	300,032230	5,000	0,00	633,204	40°29'41.7422"	-3°36'30.8534"
2	RECTA	Rampa	7.200,000	448.409,447	4.482.869,650	0,000	615,116	300,032230	5,000	0,00	632,978	40°29'41.7381"	-3°36'31.7031"
2	RECTA	Rampa	7.220,000	448.389,447	4.482.869,660	0,000	615,216	300,032230	5,000	0,00	633,014	40°29'41.7339"	-3°36'32.5527"
2	RECTA	KV 6000	7.240,000	448.369,447	4.482.869,670	0,000	615,334	300,032230	7,444	0,00	633,267	40°29'41.7298"	-3°36'33.4023"
2	CLOT.	KV 6000	7.256,043	448.353,404	4.482.869,678	1.000.000,000	615,475	300,032230	10,117	0,00	633,353	40°29'41.7265"	-3°36'34.0838"
2	CLOT.	KV 6000	7.260,000	448.349,447	4.482.869,681	9.127,278	615,516	300,046031	10,777	5,94	633,359	40°29'41.7256"	-3°36'34.2519"
2	CLOT.	KV 6000	7.280,000	448.329,447	4.482.869,754	1.507,678	615,765	300,538032	14,110	35,94	633,515	40°29'41.7235"	-3°36'35.1015"
2	CLOT.	KV 6000	7.300,000	448.309,450	4.482.870,092	821,705	616,081	301,735038	17,444	65,94	633,676	40°29'41.7300"	-3°36'35.9511"
2	CLOT.	KV 6000	7.320,000	448.289,468	4.482.870,918	564,751	616,463	303,637050	20,777	95,94	634,159	40°29'41.7523"	-3°36'36.8002"
2	CLOT.	KV 6000	7.340,000	448.269,528	4.482.872,450	430,218	616,912	306,244067	24,110	125,94	634,334	40°29'41.7975"	-3°36'37.6477"
2	CIRC.	KV 6000	7.342,043	448.267,496	4.482.872,654	420,000	616,961	306,550004	24,451	129,00	634,386	40°29'41.8037"	-3°36'37.7341"
2	CIRC.	KV 6000	7.360,000	448.249,678	4.482.874,880	420,000	617,427	309,271913	27,444	129,00	634,974	40°29'41.8719"	-3°36'38.4916"
2	CLOT.	KV 6000	7.379,781	448.230,182	4.482.878,210	420,000	618,003	312,270177	30,740	129,00	635,596	40°29'41.9755"	-3°36'39.3208"
2	CLOT.	KV 6000	7.380,000	448.229,967	4.482.878,253	421,074	618,010	312,303393	30,777	128,67	635,600	40°29'41.9768"	-3°36'39.3300"
2	CLOT.	Rampa	7.400,000	448.210,429	4.482.882,522	549,098	618,658	314,974678	33,800	98,67	636,009	40°29'42.1109"	-3°36'40.1612"
2	CLOT.	Rampa	7.420,000	448.191,060	4.482.887,501	788,981	619,334	316,940959	33,800	68,67	636,707	40°29'42.2680"	-3°36'40.9855"
2	CLOT.	Rampa	7.440,000	448.171,822	4.482.892,969	1.401,054	620,010	318,202234	33,800	38,67	637,571	40°29'42.4410"	-3°36'41.8043"
2	CLOT.	Rampa	7.460,000	448.152,664	4.482.898,711	6.248,504	620,686	318,758504	33,800	8,67	638,372	40°29'42.6230"	-3°36'42.6198"
2	RECTA	Rampa	7.465,781	448.147,133	4.482.900,392	0,000	620,882	318,787951	33,800	0,00	638,574	40°29'42.6762"	-3°36'42.8553"
2	RECTA	Rampa	7.480,000	448.133,528	4.482.904,528	0,000	621,362	318,787951	33,800	0,00	639,163	40°29'42.8073"	-3°36'43.4344"
2	RECTA	Rampa	7.500,000	448.114,393	4.482.910,345	0,000	622,038	318,787951	33,800	0,00	639,815	40°29'42.9916"	-3°36'44.2490"
2	CLOT.	Rampa	7.503,483	448.111,060	4.482.911,358	-1.000.000,000	622,156	318,787951	33,800	0,00	639,871	40°29'43.0237"	-3°36'44.3909"
2	CLOT.	Rampa	7.520,000	448.095,252	4.482.916,142	-2.186,870	622,714	318,547541	33,800	-24,78	640,224	40°29'43.1753"	-3°36'45.0639"
2	CLOT.	Rampa	7.540,000	448.076,058	4.482.921,764	-989,135	623,390	317,612819	33,800	-54,78	641,225	40°29'43.3533"	-3°36'45.8809"
2	CLOT.	Rampa	7.560,000	448.056,755	4.482.926,996	-639,103	624,066	315,973091	33,800	-84,78	642,522	40°29'43.5187"	-3°36'46.7024"
2	CLOT.	Rampa	7.580,000	448.037,299	4.482.931,622	-472,053	624,742	313,628358	33,800	-114,78	644,200	40°29'43.6643"	-3°36'47.5303"
2	CIRC.	Rampa	7.589,483	448.028,012	4.482.933,539	-420,000	625,063	312,270177	33,800	-129,00	644,959	40°29'43.7244"	-3°36'47.9254"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
2	CIRC.	Rampa	7.600,000	448.017,666	4.482.935,424	-420,000	625,418	310,676088	33,800	-129,00	645,750	40°29'43.7832"	-3°36'48.3655"
2	CIRC.	Rampa	7.620,000	447.997,874	4.482.938,292	-420,000	626,094	307,644565	33,800	-129,00	647,311	40°29'43.8717"	-3°36'49.2071"
2	CLOT.	Rampa	7.626,948	447.990,970	4.482.939,067	-420,000	626,329	306,591474	33,800	-129,00	647,818	40°29'43.8953"	-3°36'49.5006"
2	CLOT.	KV -3000	7.640,000	447.977,969	4.482.940,224	-495,150	626,758	304,763178	31,001	-109,42	648,514	40°29'43.9299"	-3°36'50.0532"
2	CLOT.	KV -3000	7.660,000	447.958,002	4.482.941,353	-682,184	627,312	302,544258	24,334	-79,42	648,878	40°29'43.9620"	-3°36'50.9018"
2	CLOT.	KV -3000	7.680,000	447.938,010	4.482.941,896	-1.096,286	627,732	301,030344	17,667	-49,42	649,235	40°29'43.9751"	-3°36'51.7512"
2	CLOT.	KV -3000	7.700,000	447.918,011	4.482.942,074	-2.789,705	628,018	300,221434	11,001	-19,42	649,921	40°29'43.9764"	-3°36'52.6008"
2	RECTA	KV -3000	7.712,948	447.905,063	4.482.942,099	0,000	628,133	300,073700	6,685	0,00	650,586	40°29'43.9742"	-3°36'53.1509"
2	RECTA	KV -3000	7.720,000	447.898,011	4.482.942,107	0,000	628,172	300,073700	4,334	0,00	651,043	40°29'43.9729"	-3°36'53.4505"
2	RECTA	Horizontal	7.740,000	447.878,011	4.482.942,131	0,000	628,200	300,073700	0,000	0,00	652,466	40°29'43.9691"	-3°36'54.3001"
2	RECTA	Horizontal	7.760,000	447.858,011	4.482.942,154	0,000	628,200	300,073700	0,000	0,00	653,979	40°29'43.9654"	-3°36'55.1497"
2	RECTA	Horizontal	7.780,000	447.838,011	4.482.942,177	0,000	628,200	300,073700	0,000	0,00	655,610	40°29'43.9616"	-3°36'55.9993"
2	RECTA	Horizontal	7.800,000	447.818,011	4.482.942,200	0,000	628,200	300,073700	0,000	0,00	657,293	40°29'43.9578"	-3°36'56.8489"
2	RECTA	Horizontal	7.820,000	447.798,011	4.482.942,223	0,000	628,200	300,073700	0,000	0,00	658,450	40°29'43.9540"	-3°36'57.6986"
2	RECTA	Horizontal	7.840,000	447.778,011	4.482.942,246	0,000	628,200	300,073700	0,000	0,00	658,984	40°29'43.9503"	-3°36'58.5482"
2	RECTA	Horizontal	7.860,000	447.758,011	4.482.942,270	0,000	628,200	300,073700	0,000	0,00	659,495	40°29'43.9465"	-3°36'59.3978"
2	RECTA	Horizontal	7.880,000	447.738,011	4.482.942,293	0,000	628,200	300,073700	0,000	0,00	660,648	40°29'43.9427"	-3°37'00.2474"
2	RECTA	Horizontal	7.900,000	447.718,011	4.482.942,316	0,000	628,200	300,073700	0,000	0,00	662,248	40°29'43.9389"	-3°37'01.0970"
2	RECTA	Horizontal	7.920,000	447.698,011	4.482.942,339	0,000	628,200	300,073700	0,000	0,00	663,820	40°29'43.9351"	-3°37'01.9467"
2	RECTA	Horizontal	7.940,000	447.678,011	4.482.942,362	0,000	628,200	300,073700	0,000	0,00	665,398	40°29'43.9313"	-3°37'02.7963"
2	RECTA	Horizontal	7.960,000	447.658,011	4.482.942,385	0,000	628,200	300,073700	0,000	0,00	666,910	40°29'43.9276"	-3°37'03.6459"
2	RECTA	Horizontal	7.980,000	447.638,011	4.482.942,408	0,000	628,200	300,073700	0,000	0,00	667,453	40°29'43.9238"	-3°37'04.4955"
2	RECTA	Horizontal	8.000,000	447.618,011	4.482.942,432	0,000	628,200	300,073700	0,000	0,00	667,753	40°29'43.9200"	-3°37'05.3451"
2	RECTA	Horizontal	8.020,000	447.598,011	4.482.942,455	0,000	628,200	300,073700	0,000	0,00	667,683	40°29'43.9162"	-3°37'06.1948"
2	RECTA	Horizontal	8.040,000	447.578,011	4.482.942,478	0,000	628,200	300,073700	0,000	0,00	667,453	40°29'43.9124"	-3°37'07.0444"
2	RECTA	Horizontal	8.060,000	447.558,011	4.482.942,501	0,000	628,200	300,073700	0,000	0,00	666,937	40°29'43.9086"	-3°37'07.8940"
2	RECTA	Horizontal	8.080,000	447.538,011	4.482.942,524	0,000	628,200	300,073700	0,000	0,00	665,878	40°29'43.9048"	-3°37'08.7436"
2	RECTA	Horizontal	8.100,000	447.518,011	4.482.942,547	0,000	628,200	300,073700	0,000	0,00	664,188	40°29'43.9010"	-3°37'09.5932"
2	RECTA	Horizontal	8.120,000	447.498,011	4.482.942,571	0,000	628,200	300,073700	0,000	0,00	662,670	40°29'43.8972"	-3°37'10.4429"
2	RECTA	Horizontal	8.140,000	447.478,011	4.482.942,594	0,000	628,200	300,073700	0,000	0,00	661,729	40°29'43.8934"	-3°37'11.2925"
2	RECTA	Horizontal	8.160,000	447.458,011	4.482.942,617	0,000	628,200	300,073700	0,000	0,00	661,106	40°29'43.8896"	-3°37'12.1421"
2	RECTA	Horizontal	8.180,000	447.438,011	4.482.942,640	0,000	628,200	300,073700	0,000	0,00	660,192	40°29'43.8858"	-3°37'12.9917"
2	RECTA	Horizontal	8.200,000	447.418,011	4.482.942,663	0,000	628,200	300,073700	0,000	0,00	658,771	40°29'43.8819"	-3°37'13.8413"
2	RECTA	Horizontal	8.220,000	447.398,011	4.482.942,686	0,000	628,200	300,073700	0,000	0,00	657,278	40°29'43.8781"	-3°37'14.6910"
2	RECTA	Horizontal	8.240,000	447.378,011	4.482.942,709	0,000	628,200	300,073700	0,000	0,00	655,586	40°29'43.8743"	-3°37'15.5406"
2	RECTA	Horizontal	8.260,000	447.358,011	4.482.942,733	0,000	628,200	300,073700	0,000	0,00	654,121	40°29'43.8705"	-3°37'16.3902"
2	RECTA	Horizontal	8.280,000	447.338,011	4.482.942,756	0,000	628,200	300,073700	0,000	0,00	652,686	40°29'43.8667"	-3°37'17.2398"
2	RECTA	Horizontal	8.300,000	447.318,011	4.482.942,779	0,000	628,200	300,073700	0,000	0,00	651,931	40°29'43.8629"	-3°37'18.0894"
2	RECTA	Horizontal	8.320,000	447.298,012	4.482.942,802	0,000	628,200	300,073700	0,000	0,00	651,353	40°29'43.8591"	-3°37'18.9391"
2	RECTA	Horizontal	8.340,000	447.278,012	4.482.942,825	0,000	628,200	300,073700	0,000	0,00	651,176	40°29'43.8552"	-3°37'19.7887"
2	RECTA	Horizontal	8.360,000	447.258,012	4.482.942,848	0,000	628,200	300,073700	0,000	0,00	649,626	40°29'43.8514"	-3°37'20.6383"
2	RECTA	Horizontal	8.380,000	447.238,012	4.482.942,872	0,000	628,200	300,073700	0,000	0,00	648,712	40°29'43.8476"	-3°37'21.4879"
2	RECTA	Horizontal	8.400,000	447.218,012	4.482.942,895	0,000	628,200	300,073700	0,000	0,00	647,534	40°29'43.8438"	-3°37'22.3375"



EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
2	RECTA	Horizontal	8.420,000	447.198,012	4.482.942,918	0,000	628,200	300,073700	0,000	0,00	646,980	40°29'43.8399"	-3°37'23.1871"
2	RECTA	Horizontal	8.440,000	447.178,012	4.482.942,941	0,000	628,200	300,073700	0,000	0,00	646,618	40°29'43.8361"	-3°37'24.0368"
2	RECTA	Horizontal	8.460,000	447.158,012	4.482.942,964	0,000	628,200	300,073700	0,000	0,00	647,148	40°29'43.8323"	-3°37'24.8864"
2	RECTA	Horizontal	8.480,000	447.138,012	4.482.942,987	0,000	628,200	300,073700	0,000	0,00	647,073	40°29'43.8284"	-3°37'25.7360"
2	RECTA	Horizontal	8.496,755	447.121,256	4.482.943,007	0,000	628,200	300,073700	0,000	0,00	646,797	40°29'43.8252"	-3°37'26.4478"



### EJE 3. ALTERNATIVA 3.

EJE	DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
3	1	Recta	293,457	0,000	445.517,095	4.480.018,499			101,2500	0,9998072	-0,0196337	40°28'08.6083"	-3°38'33.6886"
3		Clotoide	15,000	293,457	445.810,495	4.480.012,738		164,317	101,2500	445.810,495	4.480.012,738	40°28'08.4906"	-3°38'21.2280"
3	2	Circular	37,308	308,457	445.825,492	4.480.012,422	1.800,000		101,5153	445.782,653	4.478.212,932	40°28'08.4839"	-3°38'20.5911"
3		Clotoide	15,000	345,764	445.862,777	4.480.011,148		164,317	102,8347	445.877,760	4.480.010,439	40°28'08.4513"	-3°38'19.0074"
3	3	Recta	169,388	360,764	445.877,760	4.480.010,439			103,1000	0,9988146	-0,0486754	40°28'08.4318"	-3°38'18.3709"
3		Clotoide	50,000	530,152	446.046,947	4.480.002,194		162,788	103,1000	446.046,947	4.480.002,194	40°28'08.2040"	-3°38'11.1841"
3	4	Circular	34,770	580,152	446.096,839	4.479.998,975	530,000		106,1029	446.046,108	4.479.471,409	40°28'08.1113"	-3°38'09.0645"
3		Clotoide	50,000	614,923	446.131,316	4.479.994,515		162,788	110,2794	446.180,383	4.479.984,930	40°28'07.9747"	-3°38'07.5991"
3	5	Recta	115,069	664,923	446.180,383	4.479.984,930			113,2824	0,9783137	-0,2071285	40°28'07.6753"	-3°38'05.5126"
3		Clotoide	100,000	779,992	446.292,957	4.479.961,095		173,205	113,2824	446.292,957	4.479.961,095	40°28'06.9286"	-3°38'00.7250"
3	6	Circular	261,932	879,992	446.391,665	4.479.945,864	-300,000		102,6720	446.404,253	4.480.245,600	40°28'06.4576"	-3°37'56.5289"
3		Clotoide	100,000	1.141,924	446.625,862	4.480.043,389		173,205	47,0884	446.684,586	4.480.124,178	40°28'09.6746"	-3°37'46.6136"
3	7	Recta	189,727	1.241,924	446.684,586	4.480.124,178			36,4780	0,5421517	0,8402806	40°28'12.3083"	-3°37'44.1444"
3		Clotoide	95,000	1.431,651	446.787,447	4.480.283,601		284,165	36,4780	446.787,447	4.480.283,601	40°28'17.5022"	-3°37'39.8246"
3	8	Circular	371,218	1.526,651	446.837,448	4.480.364,362	-850,000		32,9205	446.098,586	4.480.784,579	40°28'20.1329"	-3°37'37.7256"
3		Clotoide	95,000	1.897,869	446.945,841	4.480.716,325		284,165	5,1175	446.949,937	4.480.811,223	40°28'31.5722"	-3°37'33.2286"
3	9	Recta	235,417	1.992,869	446.949,937	4.480.811,223			1,5600	0,0245012	0,9996998	40°28'34.6508"	-3°37'33.0833"
3		Clotoide	100,000	2.228,286	446.955,705	4.481.046,569		173,205	1,5600	446.955,705	4.481.046,569	40°28'42.2845"	-3°37'32.9092"
3	10	Circular	384,622	2.328,286	446.963,691	4.481.146,126	300,000		12,1703	447.258,226	4.481.089,124	40°28'45.5151"	-3°37'32.6000"
3		Clotoide	100,000	2.712,908	447.229,006	4.481.387,697		173,205	93,7897	447.328,874	4.481.386,342	40°28'53.4102"	-3°37'21.4043"
3	11	Recta	48,373	2.812,908	447.328,874	4.481.386,342			104,4000	0,9976125	-0,0690600	40°28'53.3891"	-3°37'17.1623"
3		Clotoide	100,000	2.861,281	447.377,131	4.481.383,001		173,205	104,4000	447.377,131	4.481.383,001	40°28'53.2918"	-3°37'15.1118"
3	12	Circular	201,416	2.961,281	447.476,999	4.481.381,646	-300,000		93,7897	447.447,780	4.481.680,219	40°28'53.2706"	-3°37'10.8698"
3		Clotoide	100,000	3.162,697	447.656,391	4.481.464,624		173,205	51,0479	447.720,023	4.481.541,607	40°28'56.0024"	-3°37'03.2754"
3	13	Recta	170,746	3.262,697	447.720,023	4.481.541,607			40,4375	0,5933315	0,8049582	40°28'58.5135"	-3°37'00.5956"
3		Clotoide	100,000	3.433,443	447.821,332	4.481.679,050		173,205	40,4375	447.821,332	4.481.679,050	40°29'02.9938"	-3°36'56.3335"
3	14	Circular	478,667	3.533,443	447.876,037	4.481.762,613	-300,000		29,8272	447.608,367	4.481.898,084	40°29'05.7161"	-3°36'54.0347"
3		Clotoide	100,000	4.012,110	447.737,169	4.482.169,026		173,205	328,2509	447.642,768	4.482.201,640	40°29'18.8650"	-3°37'00.0536"
3	15	Recta	498,360	4.112,110	447.642,768	4.482.201,640			317,6406	-0,9618533	0,2735656	40°29'19.9013"	-3°37'04.0731"
3		Clotoide	100,000	4.610,470	447.163,418	4.482.337,974		173,205	317,6406	447.163,418	4.482.337,974	40°29'24.2133"	-3°37'24.4751"
3	16	Circular	759,696	4.710,470	447.069,016	4.482.370,588	300,000		328,2509	447.197,819	4.482.641,531	40°29'25.2494"	-3°37'28.4948"

EJE	DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
3		Clotoide	100,000	5.470,166	447.148,393	4.482.937,431		173,205	89,4634	447.248,122	4.482.942,860	40°29'43.6506"	-3°37'25.2933"
3	17	Recta	656,943	5.570,166	447.248,122	4.482.942,860			100,0737	0,9999993	-0,0011584	40°29'43.8495"	-3°37'21.0584"
3		Clotoide	86,000	6.227,109	447.905,065	4.482.942,099		190,053	100,0737	447.905,065	4.482.942,099	40°29'43.9742"	-3°36'53.1508"
3	18	Circular	37,464	6.313,109	447.990,972	4.482.939,067	420,000		106,5915	447.947,563	4.482.521,316	40°29'43.8953"	-3°36'49.5005"
3		Clotoide	86,000	6.350,573	448.028,013	4.482.933,539		190,053	112,2702	448.111,062	4.482.911,358	40°29'43.7244"	-3°36'47.9254"
3	19	Recta	37,701	6.436,573	448.111,062	4.482.911,358			118,7880	0,9567671	-0,2908551	40°29'43.0237"	-3°36'44.3908"
3		Clotoide	86,000	6.474,275	448.147,133	4.482.900,392		190,053	118,7880	448.147,133	4.482.900,392	40°29'42.6762"	-3°36'42.8553"
3	20	Circular	37,738	6.560,275	448.230,182	4.482.878,210	-420,000		112,2702	448.310,632	4.483.290,433	40°29'41.9755"	-3°36'39.3208"
3		Clotoide	86,000	6.598,013	448.267,496	4.482.872,654		190,053	106,5500	448.353,404	4.482.869,678	40°29'41.8037"	-3°36'37.7341"
3	21	Recta	254,236	6.684,013	448.353,404	4.482.869,678			100,0322	0,9999999	-0,0005063	40°29'41.7265"	-3°36'34.0838"
3		Clotoide	65,000	6.938,249	448.607,641	4.482.869,550		279,285	100,0322	448.607,641	4.482.869,550	40°29'41.7791"	-3°36'23.2837"
3	22	Circular	119,972	7.003,249	448.672,636	4.482.870,103	-1.200,000		98,3081	448.640,747	4.484.069,680	40°29'41.8115"	-3°36'20.5228"
3		Clotoide	65,000	7.123,221	448.792,207	4.482.879,276		279,285	91,9433	448.856,526	4.482.888,643	40°29'42.1356"	-3°36'15.4460"
3	23	Recta	228,303	7.188,221	448.856,526	4.482.888,643			90,2191	0,9882210	0,1530336	40°29'42.4537"	-3°36'12.7164"
3		Clotoide	100,000	7.416,525	449.082,140	4.482.923,581		173,205	90,2191	449.082,140	4.482.923,581	40°29'43.6367"	-3°36'03.1424"
3	24	Circular	417,975	7.516,525	449.181,537	4.482.933,363	300,000		100,8295	449.177,628	4.482.633,388	40°29'43.9758"	-3°35'58.9227"
3		Clotoide	100,000	7.934,499	449.473,577	4.482.682,521		173,205	189,5265	449.478,908	4.482.582,787	40°29'35.9050"	-3°35'46.4446"
3	25	Recta	290,043	8.034,499	449.478,908	4.482.582,787			200,1368	-0,0021487	-0,9999977	40°29'32.6717"	-3°35'46.1895"
3		Clotoide	100,000	8.324,542	449.478,284	4.482.292,745		173,205	200,1368	449.478,284	4.482.292,745	40°29'23.2653"	-3°35'46.1328"
3	26	Circular	35,012	8.424,542	449.472,526	4.482.193,034	300,000		210,7471	449.176,790	4.482.243,439	40°29'20.0304"	-3°35'46.3488"
3		Clotoide	100,000	8.459,554	449.464,645	4.482.158,941		173,205	218,1768	449.426,060	4.482.066,819	40°29'18.9230"	-3°35'46.6737"
3	27	Recta	642,061	8.559,554	449.426,060	4.482.066,819			228,7871	-0,4369339	-0,8994936	40°29'15.9269"	-3°35'48.2862"
3		Clotoide	100,000	9.201,615	449.145,522	4.481.489,289		173,205	228,7871	449.145,522	4.481.489,289	40°28'57.1355"	-3°36'00.0356"
3	28	Circular	30,471	9.301,615	449.106,937	4.481.397,167	-300,000		218,1768	449.394,791	4.481.312,670	40°28'54.1394"	-3°36'01.6477"
3		Clotoide	100,000	9.332,086	449.099,853	4.481.367,544		173,205	211,7106	449.092,586	4.481.267,932	40°28'53.1771"	-3°36'01.9401"
3	29	Recta	124,931	9.432,086	449.092,586	4.481.267,932			201,1003	-0,0172819	-0,9998507	40°28'49.9450"	-3°36'02.2199"
3		Clotoide	40,000	9.557,018	449.090,426	4.481.143,019		84,853	201,1003	449.090,426	4.481.143,019	40°28'45.8935"	-3°36'02.2755"
3	30	Circular	245,854	9.597,018	449.091,216	4.481.103,049	-180,000		194,0267	449.270,424	4.481.119,913	40°28'44.5974"	-3°36'02.2304"
3		Clotoide	40,000	9.842,872	449.250,465	4.480.941,023		84,853	107,0736	449.290,416	4.480.939,543	40°28'39.3779"	-3°35'55.4203"
3	31	Recta	706,998	9.882,872	449.290,416	4.480.939,543			100,0000	1,0000000	0,0000000	40°28'39.3387"	-3°35'53.7232"
3				10.589,870	449.997,414	4.480.939,543			100,0000			40°28'39.4930"	-3°35'23.6973"

### EJE 3. ALTERNATIVA 3.

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
3	RECTA	Horizontal	0,000	445.517,095	4.480.018,499	0,000	650,600	101,250000	0,000	0,00	686,830	40°28'08.6083"	-3°38'33.6886"
3	RECTA	Horizontal	20,000	445.537,091	4.480.018,107	0,000	650,600	101,250000	0,000	0,00	686,748	40°28'08.6003"	-3°38'32.8394"
3	RECTA	Horizontal	40,000	445.557,087	4.480.017,714	0,000	650,600	101,250000	0,000	0,00	686,508	40°28'08.5923"	-3°38'31.9902"
3	RECTA	Horizontal	60,000	445.577,083	4.480.017,321	0,000	650,600	101,250000	0,000	0,00	686,264	40°28'08.5843"	-3°38'31.1409"
3	RECTA	Horizontal	80,000	445.597,079	4.480.016,929	0,000	650,600	101,250000	0,000	0,00	686,083	40°28'08.5763"	-3°38'30.2917"
3	RECTA	Horizontal	100,000	445.617,076	4.480.016,536	0,000	650,600	101,250000	0,000	0,00	685,837	40°28'08.5683"	-3°38'29.4425"
3	RECTA	Horizontal	120,000	445.637,072	4.480.016,143	0,000	650,600	101,250000	0,000	0,00	685,651	40°28'08.5602"	-3°38'28.5932"
3	RECTA	Horizontal	140,000	445.657,068	4.480.015,751	0,000	650,600	101,250000	0,000	0,00	685,455	40°28'08.5522"	-3°38'27.7440"
3	RECTA	Horizontal	160,000	445.677,064	4.480.015,358	0,000	650,600	101,250000	0,000	0,00	685,033	40°28'08.5442"	-3°38'26.8948"
3	RECTA	Horizontal	180,000	445.697,060	4.480.014,965	0,000	650,600	101,250000	0,000	0,00	684,837	40°28'08.5362"	-3°38'26.0455"
3	RECTA	Horizontal	200,000	445.717,056	4.480.014,573	0,000	650,600	101,250000	0,000	0,00	684,890	40°28'08.5281"	-3°38'25.1963"
3	RECTA	Horizontal	220,000	445.737,052	4.480.014,180	0,000	650,600	101,250000	0,000	0,00	684,427	40°28'08.5201"	-3°38'24.3471"
3	RECTA	Horizontal	240,000	445.757,049	4.480.013,787	0,000	650,600	101,250000	0,000	0,00	683,960	40°28'08.5121"	-3°38'23.4978"
3	RECTA	Horizontal	260,000	445.777,045	4.480.013,395	0,000	650,600	101,250000	0,000	0,00	683,493	40°28'08.5040"	-3°38'22.6486"
3	RECTA	Horizontal	280,000	445.797,041	4.480.013,002	0,000	650,600	101,250000	0,000	0,00	683,068	40°28'08.4960"	-3°38'21.7994"
3	CLOT.	Horizontal	293,457	445.810,495	4.480.012,738	1.000.000,000	650,600	101,250000	0,000	0,00	682,788	40°28'08.4906"	-3°38'21.2280"
3	CLOT.	Horizontal	300,000	445.817,037	4.480.012,607	4.126,326	650,600	101,300476	0,000	9,60	682,652	40°28'08.4879"	-3°38'20.9501"
3	CIRC.	Horizontal	308,457	445.825,492	4.480.012,422	1.800,000	650,600	101,515258	0,000	22,00	682,551	40°28'08.4839"	-3°38'20.5911"
3	CIRC.	Horizontal	320,000	445.837,031	4.480.012,111	1.800,000	650,600	101,923521	0,000	22,00	682,404	40°28'08.4765"	-3°38'20.1010"
3	CIRC.	Horizontal	340,000	445.857,018	4.480.011,395	1.800,000	650,600	102,630876	0,000	22,00	682,140	40°28'08.4580"	-3°38'19.2520"
3	CLOT.	Horizontal	345,764	445.862,777	4.480.011,148	1.800,000	650,600	102,834742	0,000	22,00	682,109	40°28'08.4513"	-3°38'19.0074"
3	CLOT.	Horizontal	360,000	445.876,997	4.480.010,476	35.332,581	650,600	103,099312	0,000	1,12	681,887	40°28'08.4328"	-3°38'18.4034"
3	RECTA	Horizontal	360,764	445.877,760	4.480.010,439	0,000	650,600	103,100000	0,000	0,00	681,874	40°28'08.4318"	-3°38'18.3709"
3	RECTA	Horizontal	380,000	445.896,973	4.480.009,502	0,000	650,600	103,100000	0,000	0,00	681,456	40°28'08.4059"	-3°38'17.5548"
3	RECTA	Horizontal	400,000	445.916,949	4.480.008,529	0,000	650,600	103,100000	0,000	0,00	681,344	40°28'08.3791"	-3°38'16.7062"
3	RECTA	Horizontal	420,000	445.936,925	4.480.007,555	0,000	650,600	103,100000	0,000	0,00	681,249	40°28'08.3522"	-3°38'15.8577"
3	RECTA	Horizontal	440,000	445.956,902	4.480.006,582	0,000	650,600	103,100000	0,000	0,00	681,083	40°28'08.3253"	-3°38'15.0091"
3	RECTA	Horizontal	460,000	445.976,878	4.480.005,608	0,000	650,600	103,100000	0,000	0,00	680,935	40°28'08.2984"	-3°38'14.1605"
3	RECTA	Horizontal	480,000	445.996,854	4.480.004,635	0,000	650,600	103,100000	0,000	0,00	680,598	40°28'08.2715"	-3°38'13.3120"
3	RECTA	Horizontal	500,000	446.016,831	4.480.003,661	0,000	650,600	103,100000	0,000	0,00	680,205	40°28'08.2446"	-3°38'12.4634"
3	RECTA	Horizontal	520,000	446.036,807	4.480.002,688	0,000	650,600	103,100000	0,000	0,00	680,331	40°28'08.67"	-3°38'11.6148"
3	CLOT.	Horizontal	530,152	446.046,947	4.480.002,194	1.000.000,000	650,600	103,100000	0,000	0,00	680,728	40°28'08.2040"	-3°38'11.1841"
3	CLOT.	KV -6000	540,000	446.056,783	4.480.001,708	2.691,036	650,594	103,216482	-1,425	14,77	681,003	40°28'08.1906"	-3°38'10.7663"
3	CLOT.	KV -6000	560,000	446.076,751	4.480.000,574	887,846	650,532	104,170090	-4,759	44,77	681,075	40°28'08.1585"	-3°38'09.9180"
3	CLOT.	Pendiente	580,000	446.096,687	4.479.998,990	531,621	650,404	106,084635	-8,000	74,77	681,215	40°28'08.1118"	-3°38'09.0710"
3	CIRC.	Pendiente	580,152	446.096,839	4.479.998,975	530,000	650,402	106,102923	-8,000	75,00	681,216	40°28'08.1113"	-3°38'09.0645"
3	CIRC.	Pendiente	600,000	446.116,555	4.479.996,706	530,000	650,244	108,486946	-8,000	75,00	681,639	40°28'08.0423"	-3°38'08.2266"
3	CLOT.	Pendiente	614,923	446.131,316	4.479.994,515	530,000	650,124	110,279442	-8,000	75,00	681,393	40°28'07.9747"	-3°38'07.5991"
3	CLOT.	Pendiente	620,000	446.136,323	4.479.993,675	589,899	650,084	110,858322	-8,000	67,38	679,251	40°28'07.9487"	-3°38'07.3862"
3	CLOT.	Pendiente	640,000	446.155,981	4.479.989,996	1.063,278	649,924	112,536256	-8,000	37,38	679,123	40°28'07.8339"	-3°38'06.5504"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
3	CLOT.	Pendiente	660,000	446.175,567	4.479.985,948	5.382,974	649,764	113,253255	-8,000	7,38	678,037	40°28'07.7072"	-3°38'05.7174"
3	RECTA	Pendiente	664,923	446.180,383	4.479.984,930	0,000	649,724	113,282366	-8,000	0,00	678,052	40°28'07.6753"	-3°38'05.5126"
3	RECTA	Pendiente	680,000	446.195,133	4.479.981,807	0,000	649,604	113,282366	-8,000	0,00	678,022	40°28'07.5775"	-3°38'04.8853"
3	RECTA	Pendiente	700,000	446.214,700	4.479.977,664	0,000	649,444	113,282366	-8,000	0,00	677,693	40°28'07.4477"	-3°38'04.0532"
3	RECTA	Pendiente	720,000	446.234,266	4.479.973,521	0,000	649,284	113,282366	-8,000	0,00	677,727	40°28'07.35"	-3°38'03.2211"
3	RECTA	Pendiente	740,000	446.253,832	4.479.969,379	0,000	649,124	113,282366	-8,000	0,00	677,566	40°28'07.1881"	-3°38'02.3889"
3	RECTA	Pendiente	760,000	446.273,398	4.479.965,236	0,000	648,964	113,282366	-8,000	0,00	677,212	40°28'07.0583"	-3°38'01.5568"
3	CLOT.	KV -3300	779,992	446.292,957	4.479.961,095	-1.000.000,000	648,784	113,282366	-11,437	0,00	677,487	40°28'06.9286"	-3°38'00.7250"
3	CLOT.	KV -3300	780,000	446.292,965	4.479.961,094	-1.000.000,000	648,784	113,282366	-11,440	-0,01	677,487	40°28'06.9285"	-3°38'00.7247"
3	CLOT.	KV -3300	800,000	446.312,540	4.479.956,995	-1.499,410	648,495	112,857618	-17,500	-30,01	677,776	40°28'06.8002"	-3°37'59.8922"
3	CLOT.	KV -3300	820,000	446.332,168	4.479.953,157	-749,852	648,084	111,584045	-23,561	-60,01	677,357	40°28'06.6803"	-3°37'59.0576"
3	CLOT.	KV -3300	840,000	446.351,891	4.479.949,845	-499,934	647,552	109,461645	-29,622	-90,01	676,284	40°28'06.5774"	-3°37'58.2191"
3	CLOT.	Pendiente	860,000	446.371,730	4.479.947,324	-374,963	646,909	106,490419	-33,300	-120,01	676,874	40°28'06.5003"	-3°37'57.3759"
3	CIRC.	Pendiente	879,992	446.391,665	4.479.945,864	-300,000	646,243	102,672036	-33,300	-150,00	677,107	40°28'06.4576"	-3°37'56.5289"
3	CIRC.	Pendiente	880,000	446.391,673	4.479.945,864	-300,000	646,243	102,670366	-33,300	-150,00	677,107	40°28'06.4576"	-3°37'56.5286"
3	CIRC.	Pendiente	900,000	446.411,669	4.479.945,692	-300,000	645,577	98,426234	-33,300	-150,00	676,389	40°28'06.4566"	-3°37'55.6794"
3	CIRC.	Pendiente	920,000	446.431,631	4.479.946,852	-300,000	644,911	94,182102	-33,300	-150,00	675,867	40°28'06.4989"	-3°37'54.8321"
3	CIRC.	Pendiente	940,000	446.451,472	4.479.949,339	-300,000	644,245	89,937971	-33,300	-150,00	675,862	40°28'06.5842"	-3°37'53.9903"
3	CIRC.	KV 2400	960,000	446.471,104	4.479.953,143	-300,000	643,652	85,693839	-25,471	-150,00	674,638	40°28'06.7121"	-3°37'53.1579"
3	CIRC.	KV 2400	980,000	446.490,438	4.479.958,246	-300,000	643,226	81,449707	-17,137	-150,00	675,117	40°28'06.8821"	-3°37'52.3384"
3	CIRC.	KV 2400	1.000,000	446.509,389	4.479.964,626	-300,000	642,967	77,205575	-8,804	-150,00	673,948	40°28'07.0934"	-3°37'51.5356"
3	CIRC.	KV 2400	1.020,000	446.527,873	4.479.972,254	-300,000	642,874	72,961443	-0,471	-150,00	673,331	40°28'07.3450"	-3°37'50.7530"
3	CIRC.	KV 2400	1.040,000	446.545,808	4.479.981,096	-300,000	642,948	68,717312	7,863	-150,00	673,255	40°28'07.6359"	-3°37'49.9941"
3	CIRC.	KV 2400	1.060,000	446.563,114	4.479.991,114	-300,000	643,188	64,473180	16,196	-150,00	673,975	40°28'07.9648"	-3°37'49.2623"
3	CIRC.	KV 2400	1.080,000	446.579,715	4.480.002,262	-300,000	643,596	60,229048	24,529	-150,00	674,321	40°28'08.3302"	-3°37'48.5608"
3	CIRC.	Rampa	1.100,000	446.595,535	4.480.014,491	-300,000	644,169	55,984916	32,000	-150,00	674,767	40°28'08.7305"	-3°37'47.8927"
3	CIRC.	Rampa	1.120,000	446.610,506	4.480.027,748	-300,000	644,809	51,740784	32,000	-150,00	674,564	40°28'09.1638"	-3°37'47.2610"
3	CIRC.	KV -3300	1.140,000	446.624,561	4.480.041,971	-300,000	645,446	47,496652	30,691	-150,00	673,479	40°28'09.6284"	-3°37'46.6684"
3	CLOT.	KV -3300	1.141,924	446.625,862	4.480.043,389	-300,000	645,504	47,088366	30,108	-150,00	673,437	40°28'09.6746"	-3°37'46.6136"
3	CLOT.	KV -3300	1.160,000	446.637,662	4.480.057,079	-366,193	645,999	43,599204	24,630	-122,89	668,915	40°28'10.1214"	-3°37'46.1167"
3	CLOT.	KV -3300	1.180,000	446.649,919	4.480.072,880	-484,465	646,431	40,546655	18,569	-92,89	667,619	40°28'10.6366"	-3°37'45.6010"
3	CLOT.	KV -3300	1.200,000	446.661,515	4.480.089,175	-715,581	646,742	38,342932	12,509	-62,89	667,705	40°28'11.1678"	-3°37'45.1135"
3	CLOT.	KV -3300	1.220,000	446.672,651	4.480.105,787	-1.368,363	646,931	36,988035	6,448	-32,89	667,766	40°28'11.7091"	-3°37'44.6457"
3	CLOT.	KV -3300	1.240,000	446.683,543	4.480.122,561	-15.592,495	647,000	36,481965	0,388	-2,89	667,815	40°28'12.2556"	-3°37'44.1882"
3	RECTA	Horizontal	1.241,924	446.684,586	4.480.124,178	0,000	647,000	36,478037	0,000	0,00	667,997	40°28'12.3083"	-3°37'44.1444"
3	RECTA	Horizontal	1.260,000	446.694,386	4.480.139,366	0,000	647,000	36,478037	0,000	0,00	669,303	40°28'12.8031"	-3°37'43.7329"
3	RECTA	Horizontal	1.280,000	446.705,229	4.480.156,172	0,000	647,000	36,478037	0,000	0,00	670,320	40°28'13.3506"	-3°37'43.2775"
3	RECTA	Horizontal	1.300,000	446.716,072	4.480.172,978	0,000	647,000	36,478037	0,000	0,00	670,824	40°28'13.8982"	-3°37'42.8221"
3	RECTA	Horizontal	1.320,000	446.726,915	4.480.189,783	0,000	647,000	36,478037	0,000	0,00	671,505	40°28'14.4457"	-3°37'42.3668"
3	RECTA	Horizontal	1.340,000	446.737,758	4.480.206,589	0,000	647,000	36,478037	0,000	0,00	671,467	40°28'14.9932"	-3°37'41.9114"
3	RECTA	Horizontal	1.360,000	446.748,601	4.480.223,394	0,000	647,000	36,478037	0,000	0,00	671,306	40°28'15.5407"	-3°37'41.4560"
3	RECTA	KV 6300	1.380,000	446.759,444	4.480.240,200	0,000	647,013	36,478037	2,023	0,00	675,461	40°28'16.0882"	-3°37'41.0006"
3	RECTA	KV 6300	1.400,000	446.770,287	4.480.257,006	0,000	647,085	36,478037	5,197	0,00	671,967	40°28'16.6358"	-3°37'40.5453"



EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
3	RECTA	KV 6300	1.420,000	446.781,130	4.480.273,811	0,000	647,221	36,478037	8,372	0,00	673,221	40°28'17.1833"	-3°37'40.0899"
3	CLOT.	KV 6300	1.431,651	446.787,447	4.480.283,601	-1.000.000,000	647,329	36,478037	10,221	0,00	674,062	40°28'17.5022"	-3°37'39.8246"
3	CLOT.	KV 6300	1.440,000	446.791,972	4.480.290,618	-9.671,510	647,420	36,450558	11,547	-6,59	674,500	40°28'17.7308"	-3°37'39.6346"
3	CLOT.	KV 6300	1.460,000	446.802,777	4.480.307,448	-2.848,398	647,683	36,161233	14,721	-22,38	676,257	40°28'18.2791"	-3°37'39.1808"
3	CLOT.	KV 6300	1.480,000	446.813,463	4.480.324,354	-1.670,139	648,009	35,556554	17,896	-38,17	677,822	40°28'18.8299"	-3°37'38.7321"
3	CLOT.	KV 6300	1.500,000	446.823,945	4.480.341,386	-1.181,432	648,398	34,636522	21,070	-53,96	679,378	40°28'19.3847"	-3°37'38.2921"
3	CLOT.	KV 6300	1.520,000	446.834,138	4.480.358,594	-913,986	648,852	33,401136	24,245	-69,75	680,846	40°28'19.9451"	-3°37'37.8645"
3	CIRC.	KV 6300	1.526,651	446.837,448	4.480.364,362	-850,000	649,016	32,920456	25,301	-75,00	681,526	40°28'20.1329"	-3°37'37.7256"
3	CIRC.	KV 6300	1.540,000	446.843,956	4.480.376,017	-850,000	649,368	31,920643	27,420	-75,00	682,825	40°28'20.5124"	-3°37'37.4528"
3	CIRC.	Rampa	1.560,000	446.853,362	4.480.393,667	-850,000	649,918	30,422715	27,500	-75,00	685,036	40°28'21.0869"	-3°37'37.0587"
3	CIRC.	Rampa	1.580,000	446.862,351	4.480.411,533	-850,000	650,468	28,924786	27,500	-75,00	687,600	40°28'21.6684"	-3°37'36.6824"
3	CIRC.	Rampa	1.600,000	446.870,916	4.480.429,605	-850,000	651,018	27,426857	27,500	-75,00	691,033	40°28'22.2565"	-3°37'36.3241"
3	CIRC.	Rampa	1.620,000	446.879,054	4.480.447,875	-850,000	651,568	25,928928	27,500	-75,00	691,194	40°28'22.8508"	-3°37'35.9840"
3	CIRC.	Rampa	1.640,000	446.886,759	4.480.466,330	-850,000	652,118	24,430999	27,500	-75,00	690,738	40°28'23.4511"	-3°37'35.6623"
3	CIRC.	Rampa	1.660,000	446.894,029	4.480.484,962	-850,000	652,668	22,933070	27,500	-75,00	693,212	40°28'24.0570"	-3°37'35.3592"
3	CIRC.	Rampa	1.680,000	446.900,858	4.480.503,759	-850,000	653,218	21,435141	27,500	-75,00	695,608	40°28'24.6682"	-3°37'35.0749"
3	CIRC.	Rampa	1.700,000	446.907,243	4.480.522,712	-850,000	653,768	19,937212	27,500	-75,00	696,230	40°28'25.2844"	-3°37'34.8095"
3	CIRC.	Rampa	1.720,000	446.913,180	4.480.541,810	-850,000	654,318	18,439283	27,500	-75,00	696,699	40°28'25.9051"	-3°37'34.5631"
3	CIRC.	Rampa	1.740,000	446.918,666	4.480.561,042	-850,000	654,868	16,941355	27,500	-75,00	697,077	40°28'26.5301"	-3°37'34.3359"
3	CIRC.	Rampa	1.760,000	446.923,698	4.480.580,399	-850,000	655,418	15,443426	27,500	-75,00	697,890	40°28'27.1590"	-3°37'34.1280"
3	CIRC.	Rampa	1.780,000	446.928,274	4.480.599,868	-850,000	655,968	13,945497	27,500	-75,00	698,202	40°28'27.7914"	-3°37'33.9396"
3	CIRC.	Rampa	1.800,000	446.932,390	4.480.619,439	-850,000	656,518	12,447568	27,500	-75,00	697,930	40°28'28.4271"	-3°37'33.7707"
3	CIRC.	Rampa	1.820,000	446.936,044	4.480.639,102	-850,000	657,068	10,949639	27,500	-75,00	697,438	40°28'29.0656"	-3°37'33.6214"
3	CIRC.	Rampa	1.840,000	446.939,235	4.480.658,845	-850,000	657,618	9,451710	27,500	-75,00	697,565	40°28'29.7066"	-3°37'33.4919"
3	CIRC.	Rampa	1.860,000	446.941,961	4.480.678,658	-850,000	658,168	7,953781	27,500	-75,00	697,616	40°28'30.3498"	-3°37'33.3821"
3	CIRC.	Rampa	1.880,000	446.944,219	4.480.698,530	-850,000	658,718	6,455852	27,500	-75,00	697,581	40°28'30.9948"	-3°37'33.2921"
3	CLOT.	KV -6300	1.897,869	446.945,841	4.480.716,325	-850,000	659,189	5,117532	24,950	-75,00	697,599	40°28'31.5722"	-3°37'33.2286"
3	CLOT.	KV -6300	1.900,000	446.946,010	4.480.718,449	-869,505	659,242	4,959714	24,611	-73,32	697,600	40°28'31.6412"	-3°37'33.2221"
3	CLOT.	KV -6300	1.920,000	446.947,353	4.480.738,403	-1.108,154	659,702	3,653063	21,437	-57,53	697,536	40°28'32.2886"	-3°37'33.1711"
3	CLOT.	KV -6300	1.940,000	446.948,336	4.480.758,379	-1.527,361	660,099	2,661766	18,262	-41,74	697,420	40°28'32.9367"	-3°37'33.1353"
3	CLOT.	KV -6300	1.960,000	446.949,058	4.480.778,366	-2.456,726	660,433	1,985823	15,088	-25,95	697,045	40°28'33.5850"	-3°37'33.1107"
3	CLOT.	KV -6300	1.980,000	446.949,617	4.480.798,358	-6.274,793	660,703	1,625233	11,913	-10,16	697,041	40°28'34.2335"	-3°37'33.0930"
3	RECTA	KV -6300	1.992,869	446.949,937	4.480.811,223	0,000	660,843	1,559951	9,870	0,00	696,999	40°28'34.6508"	-3°37'33.0833"
3	RECTA	KV -6300	2.000,000	446.950,111	4.480.818,352	0,000	660,909	1,559951	8,738	0,00	696,778	40°28'34.8820"	-3°37'33.0780"
3	RECTA	KV -6300	2.020,000	446.950,601	4.480.838,346	0,000	661,052	1,559951	5,564	0,00	695,870	40°28'35.5306"	-3°37'33.0632"
3	RECTA	KV -6300	2.040,000	446.951,091	4.480.858,340	0,000	661,132	1,559951	2,389	0,00	694,948	40°28'36.51"	-3°37'33.0484"
3	RECTA	Horizontal	2.060,000	446.951,581	4.480.878,334	0,000	661,150	1,559951	0,000	0,00	694,349	40°28'36.8276"	-3°37'33.0336"
3	RECTA	Horizontal	2.080,000	446.952,071	4.480.898,328	0,000	661,150	1,559951	0,000	0,00	693,755	40°28'37.4762"	-3°37'33.0188"
3	RECTA	Horizontal	2.100,000	446.952,561	4.480.918,322	0,000	661,150	1,559951	0,000	0,00	692,940	40°28'38.1247"	-3°37'33.0040"
3	RECTA	Horizontal	2.120,000	446.953,051	4.480.938,316	0,000	661,150	1,559951	0,000	0,00	692,273	40°28'38.7732"	-3°37'32.9893"
3	RECTA	Horizontal	2.140,000	446.953,542	4.480.958,310	0,000	661,150	1,559951	0,000	0,00	691,484	40°28'39.46"	-3°37'32.9745"
3	RECTA	Horizontal	2.160,000	446.954,032	4.480.978,304	0,000	661,150	1,559951	0,000	0,00	690,925	40°28'40.0703"	-3°37'32.9597"
3	RECTA	Horizontal	2.180,000	446.954,522	4.480.998,298	0,000	661,150	1,559951	0,000	0,00	690,128	40°28'40.7188"	-3°37'32.9449"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
3	RECTA	Horizontal	2.200,000	446.955,012	4.481.018,292	0,000	661,150	1,559951	0,000	0,00	689,414	40°28'41.3673"	-3°37'32.9301"
3	RECTA	Horizontal	2.220,000	446.955,502	4.481.038,286	0,000	661,150	1,559951	0,000	0,00	688,729	40°28'42.0159"	-3°37'32.9153"
3	CLOT.	Horizontal	2.228,286	446.955,705	4.481.046,569	1.000.000,000	661,150	1,559951	0,000	0,00	688,589	40°28'42.2845"	-3°37'32.9092"
3	CLOT.	KV -3300	2.240,000	446.956,001	4.481.058,280	2.560,979	661,149	1,705550	-0,728	17,57	688,318	40°28'42.6644"	-3°37'32.9001"
3	CLOT.	KV -3300	2.260,000	446.956,659	4.481.078,269	945,946	661,074	2,627132	-6,789	47,57	688,109	40°28'43.3128"	-3°37'32.8782"
3	CLOT.	KV -3300	2.280,000	446.957,739	4.481.098,239	580,111	660,878	4,397541	-12,849	77,57	687,953	40°28'43.9607"	-3°37'32.8383"
3	CLOT.	KV -3300	2.300,000	446.959,508	4.481.118,159	418,327	660,560	7,016775	-18,910	107,57	687,738	40°28'44.6071"	-3°37'32.7692"
3	CLOT.	KV -3300	2.320,000	446.962,226	4.481.137,971	327,103	660,121	10,484837	-24,971	137,57	687,509	40°28'45.2503"	-3°37'32.6597"
3	CIRC.	KV -3300	2.328,286	446.963,691	4.481.146,126	300,000	659,904	12,170280	-27,481	150,00	687,393	40°28'45.5151"	-3°37'32.6000"
3	CIRC.	KV -3300	2.340,000	446.966,141	4.481.157,580	300,000	659,561	14,656125	-31,031	150,00	687,237	40°28'45.8871"	-3°37'32.4994"
3	CIRC.	Pendiente	2.360,000	446.971,350	4.481.176,886	300,000	658,904	18,900257	-33,300	150,00	686,853	40°28'46.5144"	-3°37'32.2840"
3	CIRC.	Pendiente	2.380,000	446.977,834	4.481.195,802	300,000	658,238	23,144389	-33,300	150,00	686,271	40°28'47.1294"	-3°37'32.0143"
3	CIRC.	Pendiente	2.400,000	446.985,563	4.481.214,244	300,000	657,572	27,388520	-33,300	150,00	684,554	40°28'47.7292"	-3°37'31.6916"
3	CIRC.	Pendiente	2.420,000	446.994,504	4.481.232,130	300,000	656,906	31,632652	-33,300	150,00	683,483	40°28'48.3113"	-3°37'31.3172"
3	CIRC.	Pendiente	2.440,000	447.004,617	4.481.249,381	300,000	656,240	35,876784	-33,300	150,00	682,456	40°28'48.8731"	-3°37'30.8929"
3	CIRC.	Pendiente	2.460,000	447.015,856	4.481.265,920	300,000	655,574	40,120916	-33,300	150,00	682,031	40°28'49.4121"	-3°37'30.4206"
3	CIRC.	Pendiente	2.480,000	447.028,172	4.481.281,673	300,000	654,908	44,365048	-33,300	150,00	681,396	40°28'49.9258"	-3°37'29.9022"
3	CIRC.	Pendiente	2.500,000	447.041,510	4.481.296,571	300,000	654,242	48,609180	-33,300	150,00	680,815	40°28'50.4120"	-3°37'29.3402"
3	CIRC.	Pendiente	2.520,000	447.055,811	4.481.310,547	300,000	653,576	52,853311	-33,300	150,00	680,941	40°28'50.8685"	-3°37'28.7370"
3	CIRC.	Pendiente	2.540,000	447.071,011	4.481.323,540	300,000	652,910	57,097443	-33,300	150,00	682,774	40°28'51.2934"	-3°37'28.0954"
3	CIRC.	Pendiente	2.560,000	447.087,043	4.481.335,491	300,000	652,244	61,341575	-33,300	150,00	681,905	40°28'51.6846"	-3°37'27.4180"
3	CIRC.	Pendiente	2.580,000	447.103,836	4.481.346,347	300,000	651,578	65,585707	-33,300	150,00	679,686	40°28'52.0406"	-3°37'26.7081"
3	CIRC.	Pendiente	2.600,000	447.121,314	4.481.356,061	300,000	650,912	69,829839	-33,300	150,00	675,176	40°28'52.3596"	-3°37'25.9687"
3	CIRC.	Pendiente	2.620,000	447.139,401	4.481.364,588	300,000	650,246	74,073970	-33,300	150,00	675,328	40°28'52.6403"	-3°37'25.2031"
3	CIRC.	Pendiente	2.640,000	447.158,016	4.481.371,892	300,000	649,580	78,318102	-33,300	150,00	674,695	40°28'52.8814"	-3°37'24.4147"
3	CIRC.	Pendiente	2.660,000	447.177,076	4.481.377,940	300,000	648,914	82,562234	-33,300	150,00	673,756	40°28'53.0819"	-3°37'23.6070"
3	CIRC.	Pendiente	2.680,000	447.196,496	4.481.382,704	300,000	648,248	86,806366	-33,300	150,00	672,867	40°28'53.2409"	-3°37'22.7836"
3	CIRC.	Pendiente	2.700,000	447.216,191	4.481.386,164	300,000	647,582	91,050498	-33,300	150,00	672,133	40°28'53.3576"	-3°37'21.9481"
3	CLOT.	Pendiente	2.712,908	447.229,006	4.481.387,697	300,000	647,152	93,789670	-33,300	150,00	671,870	40°28'53.4102"	-3°37'21.4043"
3	CLOT.	Pendiente	2.720,000	447.236,072	4.481.388,306	322,900	646,916	95,241264	-33,300	139,36	671,699	40°28'53.4316"	-3°37'21.1044"
3	CLOT.	Pendiente	2.740,000	447.256,048	4.481.389,226	411,477	646,250	98,759991	-33,300	109,36	671,251	40°28'53.4660"	-3°37'20.2562"
3	CLOT.	Pendiente	2.760,000	447.276,047	4.481.389,174	567,021	645,584	101,429891	-33,300	79,36	670,979	40°28'53.4689"	-3°37'19.4069"
3	CLOT.	Pendiente	2.780,000	447.296,032	4.481.388,417	911,631	644,918	103,250965	-33,300	49,36	670,164	40°28'53.4489"	-3°37'18.5578"
3	CLOT.	Pendiente	2.800,000	447.315,996	4.481.387,221	2.324,132	644,252	104,223213	-33,300	19,36	668,963	40°28'53.4147"	-3°37'17.7096"
3	RECTA	Pendiente	2.812,908	447.328,874	4.481.386,342	0,000	643,822	104,400000	-33,300	0,00	668,110	40°28'53.3891"	-3°37'17.1623"
3	RECTA	Pendiente	2.820,000	447.335,949	4.481.385,852	0,000	643,586	104,400000	-33,300	0,00	667,701	40°28'53.3748"	-3°37'16.8617"
3	RECTA	Pendiente	2.840,000	447.355,901	4.481.384,471	0,000	642,920	104,400000	-33,300	0,00	666,780	40°28'53.3346"	-3°37'16.0139"
3	RECTA	Pendiente	2.860,000	447.375,853	4.481.383,090	0,000	642,254	104,400000	-33,300	0,00	666,278	40°28'53.2944"	-3°37'15.1661"
3	CLOT.	Pendiente	2.861,281	447.377,131	4.481.383,001	-1.000.000,000	642,211	104,400000	-33,300	0,00	666,259	40°28'53.2918"	-3°37'15.1118"
3	CLOT.	Pendiente	2.880,000	447.395,808	4.481.381,745	-1.602,641	641,588	104,028209	-33,300	-28,08	666,546	40°28'53.2553"	-3°37'14.3182"
3	CLOT.	Pendiente	2.900,000	447.415,778	4.481.380,649	-774,811	640,922	102,809333	-33,300	-58,08	667,084	40°28'53.2243"	-3°37'13.4697"
3	CLOT.	Pendiente	2.920,000	447.435,768	4.481.380,069	-510,907	640,256	100,741630	-33,300	-88,08	669,036	40°28'53.2101"	-3°37'12.6205"
3	CLOT.	Pendiente	2.940,000	447.455,766	4.481.380,272	-381,102	639,590	97,825101	-33,300	-118,08	668,040	40°28'53.2212"	-3°37'11.7712"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
3	CLOT.	Pendiente	2.960,000	447.475,724	4.481.381,524	-303,893	638,924	94,059745	-33,300	-148,08	667,267	40°28'53.2663"	-3°37'10.9239"
3	CIRC.	Pendiente	2.961,281	447.476,999	4.481.381,646	-300,000	638,881	93,789670	-33,300	-150,00	667,226	40°28'53.2706"	-3°37'10.8698"
3	CIRC.	Pendiente	2.980,000	447.495,560	4.481.384,049	-300,000	638,258	89,817354	-33,300	-150,00	666,599	40°28'53.3528"	-3°37'10.0822"
3	CIRC.	Pendiente	3.000,000	447.515,184	4.481.387,890	-300,000	637,592	85,573223	-33,300	-150,00	666,483	40°28'53.4818"	-3°37'09.2499"
3	CIRC.	Pendiente	3.020,000	447.534,508	4.481.393,029	-300,000	636,926	81,329091	-33,300	-150,00	665,964	40°28'53.6529"	-3°37'08.4307"
3	CIRC.	Pendiente	3.040,000	447.553,447	4.481.399,445	-300,000	636,260	77,084959	-33,300	-150,00	669,248	40°28'53.8652"	-3°37'07.6282"
3	CIRC.	Pendiente	3.060,000	447.571,917	4.481.407,108	-300,000	635,594	72,840827	-33,300	-150,00	669,185	40°28'54.15"	-3°37'06.8460"
3	CIRC.	Pendiente	3.080,000	447.589,835	4.481.415,984	-300,000	634,928	68,596695	-33,300	-150,00	669,104	40°28'54.4099"	-3°37'06.0877"
3	CIRC.	Pendiente	3.100,000	447.607,122	4.481.426,035	-300,000	634,262	64,352563	-33,300	-150,00	669,377	40°28'54.7398"	-3°37'05.3564"
3	CIRC.	Pendiente	3.120,000	447.623,701	4.481.437,214	-300,000	633,596	60,108432	-33,300	-150,00	668,579	40°28'55.1061"	-3°37'04.6556"
3	CIRC.	Pendiente	3.140,000	447.639,499	4.481.449,473	-300,000	632,930	55,864300	-33,300	-150,00	668,972	40°28'55.5072"	-3°37'03.9883"
3	CIRC.	Pendiente	3.160,000	447.654,445	4.481.462,758	-300,000	632,264	51,620168	-33,300	-150,00	668,547	40°28'55.9415"	-3°37'03.3575"
3	CLOT.	Pendiente	3.162,697	447.656,391	4.481.464,624	-300,000	632,174	51,047863	-33,300	-150,00	668,538	40°28'56.0024"	-3°37'03.2754"
3	CLOT.	Pendiente	3.180,000	447.668,493	4.481.476,989	-362,770	631,598	47,693706	-33,300	-124,05	668,039	40°28'56.4062"	-3°37'02.7650"
3	CLOT.	KV 2100	3.200,000	447.681,737	4.481.491,973	-478,492	630,943	44,608352	-29,973	-94,05	667,450	40°28'56.8951"	-3°37'02.2070"
3	CLOT.	KV 2100	3.220,000	447.694,344	4.481.507,498	-702,627	630,439	42,371826	-20,449	-64,05	666,829	40°28'57.4015"	-3°37'01.6762"
3	CLOT.	KV 2100	3.240,000	447.706,504	4.481.523,376	-1.321,765	630,125	40,984125	-10,925	-34,05	665,262	40°28'57.9192"	-3°37'01.1644"
3	CLOT.	KV 2100	3.260,000	447.718,423	4.481.539,436	-11.123,789	630,002	40,445251	-1,401	-4,05	662,240	40°28'58.4427"	-3°37'00.6629"
3	RECTA	KV 2100	3.262,697	447.720,023	4.481.541,607	0,000	630,000	40,437534	-0,117	0,00	661,974	40°28'58.5135"	-3°37'00.5956"
3	RECTA	Horizontal	3.280,000	447.730,289	4.481.555,535	0,000	630,000	40,437534	0,000	0,00	661,395	40°28'58.9675"	-3°37'00.1637"
3	RECTA	Horizontal	3.300,000	447.742,156	4.481.571,635	0,000	630,000	40,437534	0,000	0,00	661,434	40°28'59.4923"	-3°36'59.6645"
3	RECTA	Horizontal	3.320,000	447.754,023	4.481.587,734	0,000	630,000	40,437534	0,000	0,00	660,698	40°29'00.0171"	-3°36'59.1652"
3	RECTA	Horizontal	3.340,000	447.765,889	4.481.603,833	0,000	630,000	40,437534	0,000	0,00	660,272	40°29'00.5419"	-3°36'58.6660"
3	RECTA	Horizontal	3.360,000	447.777,756	4.481.619,932	0,000	630,000	40,437534	0,000	0,00	653,761	40°29'01.0667"	-3°36'58.1668"
3	RECTA	Horizontal	3.380,000	447.789,623	4.481.636,031	0,000	630,000	40,437534	0,000	0,00	653,490	40°29'01.5915"	-3°36'57.6675"
3	RECTA	Horizontal	3.400,000	447.801,489	4.481.652,130	0,000	630,000	40,437534	0,000	0,00	653,539	40°29'02.1163"	-3°36'57.1683"
3	RECTA	Horizontal	3.420,000	447.813,356	4.481.668,230	0,000	630,000	40,437534	0,000	0,00	653,474	40°29'02.6411"	-3°36'56.6690"
3	CLOT.	Horizontal	3.433,443	447.821,332	4.481.679,050	-1.000.000,000	630,000	40,437534	0,000	0,00	655,964	40°29'02.9938"	-3°36'56.3335"
3	CLOT.	KV -2100	3.440,000	447.825,221	4.481.684,330	-4.575,090	629,995	40,391912	-2,093	-9,84	655,912	40°29'03.1659"	-3°36'56.1698"
3	CLOT.	KV -2100	3.460,000	447.837,005	4.481.700,489	-1.129,635	629,858	39,689200	-11,617	-39,84	652,313	40°29'03.6926"	-3°36'55.6741"
3	CLOT.	KV -2100	3.480,000	447.848,501	4.481.716,855	-644,368	629,531	38,137663	-21,140	-69,84	646,498	40°29'04.2260"	-3°36'55.1907"
3	CLOT.	KV -2100	3.500,000	447.859,483	4.481.733,569	-450,740	629,013	35,737298	-30,664	-99,84	651,710	40°29'04.7705"	-3°36'54.7292"
3	CLOT.	Pendiente	3.520,000	447.869,712	4.481.750,752	-346,591	628,354	32,488108	-33,300	-129,84	651,079	40°29'05.3301"	-3°36'54.2998"
3	CIRC.	Pendiente	3.533,443	447.876,037	4.481.762,613	-300,000	627,906	29,827204	-33,300	-150,00	650,368	40°29'05.7161"	-3°36'54.0347"
3	CIRC.	Pendiente	3.540,000	447.878,934	4.481.768,495	-300,000	627,688	28,435713	-33,300	-150,00	650,007	40°29'05.9076"	-3°36'53.9134"
3	CIRC.	Pendiente	3.560,000	447.886,966	4.481.786,808	-300,000	627,022	24,191581	-33,300	-150,00	649,567	40°29'06.5033"	-3°36'53.5777"
3	CIRC.	Pendiente	3.580,000	447.893,760	4.481.805,614	-300,000	626,356	19,947449	-33,300	-150,00	648,854	40°29'07.1147"	-3°36'53.2947"
3	CIRC.	Pendiente	3.600,000	447.899,286	4.481.824,832	-300,000	625,690	15,703317	-33,300	-150,00	648,917	40°29'07.7392"	-3°36'53.0656"
3	CIRC.	Pendiente	3.620,000	447.903,520	4.481.844,375	-300,000	625,024	11,459185	-33,300	-150,00	649,018	40°29'08.3740"	-3°36'52.8916"
3	CIRC.	Pendiente	3.640,000	447.906,442	4.481.864,156	-300,000	624,358	7,215054	-33,300	-150,00	648,644	40°29'09.0162"	-3°36'52.7733"
3	CIRC.	Pendiente	3.660,000	447.908,040	4.481.884,089	-300,000	623,692	2,970922	-33,300	-150,00	649,292	40°29'09.6629"	-3°36'52.7113"
3	CIRC.	Pendiente	3.680,000	447.908,307	4.481.904,083	-300,000	623,026	398,726790	-33,300	-150,00	649,045	40°29'10.3114"	-3°36'52.7059"
3	CIRC.	Pendiente	3.700,000	447.907,241	4.481.924,051	-300,000	622,360	394,482658	-33,300	-150,00	648,704	40°29'10.9588"	-3°36'52.7571"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
3	CIRC.	Pendiente	3.720,000	447.904,847	4.481.943,904	-300,000	621,694	390,238526	-33,300	-150,00	648,505	40°29'11.6020"	-3°36'52.8647"
3	CIRC.	Pendiente	3.740,000	447.901,136	4.481.963,553	-300,000	621,028	385,994395	-33,300	-150,00	648,982	40°29'12.2384"	-3°36'53.0281"
3	CIRC.	Pendiente	3.760,000	447.896,124	4.481.982,911	-300,000	620,362	381,750263	-33,300	-150,00	648,391	40°29'12.8651"	-3°36'53.2467"
3	CIRC.	KV 3300	3.780,000	447.889,834	4.482.001,892	-300,000	619,708	377,506131	-30,556	-150,00	648,873	40°29'13.4793"	-3°36'53.5195"
3	CIRC.	KV 3300	3.800,000	447.882,293	4.482.020,412	-300,000	619,158	373,261999	-24,495	-150,00	649,054	40°29'14.0782"	-3°36'53.8453"
3	CIRC.	KV 3300	3.820,000	447.873,536	4.482.038,388	-300,000	618,729	369,017867	-18,435	-150,00	649,130	40°29'14.6592"	-3°36'54.2226"
3	CIRC.	KV 3300	3.840,000	447.863,600	4.482.055,742	-300,000	618,421	364,773736	-12,374	-150,00	649,499	40°29'15.2197"	-3°36'54.6497"
3	CIRC.	KV 3300	3.860,000	447.852,530	4.482.072,394	-300,000	618,234	360,529604	-6,313	-150,00	648,751	40°29'15.7573"	-3°36'55.1249"
3	CIRC.	KV 3300	3.880,000	447.840,376	4.482.088,273	-300,000	618,168	356,285472	-0,253	-150,00	649,259	40°29'16.2695"	-3°36'55.6458"
3	CIRC.	KV 3300	3.900,000	447.827,191	4.482.103,306	-300,000	618,224	352,041340	5,808	-150,00	650,597	40°29'16.7540"	-3°36'56.2104"
3	CIRC.	KV 3300	3.920,000	447.813,033	4.482.117,428	-300,000	618,400	347,797208	11,868	-150,00	652,229	40°29'17.2088"	-3°36'56.8159"
3	CIRC.	KV 3300	3.940,000	447.797,966	4.482.130,575	-300,000	618,698	343,553076	17,929	-150,00	654,139	40°29'17.6317"	-3°36'57.4598"
3	CIRC.	KV 3300	3.960,000	447.782,057	4.482.142,689	-300,000	619,117	339,308945	23,990	-150,00	655,632	40°29'18.0210"	-3°36'58.1391"
3	CIRC.	Rampa	3.980,000	447.765,377	4.482.153,716	-300,000	619,616	335,064813	25,000	-150,00	655,577	40°29'18.3749"	-3°36'58.8509"
3	CIRC.	Rampa	4.000,000	447.747,998	4.482.163,608	-300,000	620,116	330,820681	25,000	-150,00	655,314	40°29'18.6917"	-3°36'59.5920"
3	CLOT.	Rampa	4.012,110	447.737,169	4.482.169,026	-300,000	620,418	328,250942	25,000	-150,00	655,961	40°29'18.8650"	-3°37'00.0536"
3	CLOT.	Rampa	4.020,000	447.730,001	44.862,322	-325,699	620,616	326,642607	25,000	-138,16	656,525	40°29'18.9703"	-3°37'00.3591"
3	CLOT.	Rampa	4.040,000	447.711,505	44.825,926	-416,033	621,116	323,157767	25,000	-108,16	658,160	40°29'19.2126"	-3°37'01.1470"
3	CLOT.	Rampa	4.060,000	447.692,664	4.482.186,632	-575,710	621,616	320,565400	25,000	-78,16	658,995	40°29'19.4258"	-3°37'01.9492"
3	CLOT.	Rampa	4.080,000	447.673,601	4.482.192,679	-934,300	622,116	318,734566	25,000	-48,16	660,753	40°29'19.6177"	-3°37'02.7608"
3	CLOT.	Rampa	4.100,000	447.654,413	4.482.198,318	-2.477,372	622,616	317,796206	25,000	-18,16	661,782	40°29'19.7962"	-3°37'03.5775"
3	RECTA	Rampa	4.112,110	447.642,768	4.482.201,640	0,000	622,918	317,640613	25,000	0,00	661,474	40°29'19.9013"	-3°37'04.0731"
3	RECTA	Rampa	4.120,000	447.635,178	4.482.203,799	0,000	623,116	317,640613	25,000	0,00	661,281	40°29'19.9695"	-3°37'04.3961"
3	RECTA	Rampa	4.140,000	447.615,941	4.482.209,270	0,000	623,616	317,640613	25,000	0,00	662,795	40°29'20.1426"	-3°37'05.2149"
3	RECTA	Rampa	4.160,000	447.596,704	4.482.214,741	0,000	624,116	317,640613	25,000	0,00	664,772	40°29'20.3157"	-3°37'06.0336"
3	RECTA	Rampa	4.180,000	447.577,467	4.482.220,213	0,000	624,616	317,640613	25,000	0,00	666,437	40°29'20.4887"	-3°37'06.8524"
3	RECTA	Rampa	4.200,000	447.558,230	4.482.225,684	0,000	625,116	317,640613	25,000	0,00	668,122	40°29'20.6618"	-3°37'07.6711"
3	RECTA	Rampa	4.220,000	447.538,993	4.482.231,155	0,000	625,616	317,640613	25,000	0,00	668,420	40°29'20.8349"	-3°37'08.4899"
3	RECTA	Rampa	4.240,000	447.519,756	4.482.236,626	0,000	626,116	317,640613	25,000	0,00	667,162	40°29'21.0079"	-3°37'09.3087"
3	RECTA	Rampa	4.260,000	447.500,519	4.482.242,098	0,000	626,616	317,640613	25,000	0,00	666,429	40°29'21.1810"	-3°37'10.1274"
3	RECTA	Rampa	4.280,000	447.481,282	4.482.247,569	0,000	627,116	317,640613	25,000	0,00	668,285	40°29'21.3540"	-3°37'10.9462"
3	RECTA	Rampa	4.300,000	447.462,045	4.482.253,040	0,000	627,616	317,640613	25,000	0,00	671,480	40°29'21.5271"	-3°37'11.7649"
3	RECTA	Rampa	4.320,000	447.442,808	4.482.258,512	0,000	628,116	317,640613	25,000	0,00	672,331	40°29'21.7002"	-3°37'12.5837"
3	RECTA	Rampa	4.340,000	447.423,571	4.482.263,983	0,000	628,616	317,640613	25,000	0,00	673,349	40°29'21.8732"	-3°37'13.4025"
3	RECTA	KV -12000	4.360,000	447.404,334	4.482.269,454	0,000	629,103	317,640613	23,528	0,00	674,316	40°29'22.0463"	-3°37'14.2212"
3	RECTA	KV -12000	4.380,000	447.385,097	4.482.274,926	0,000	629,557	317,640613	21,862	0,00	674,476	40°29'22.2193"	-3°37'15.0400"
3	RECTA	KV -12000	4.400,000	447.365,859	4.482.280,397	0,000	629,977	317,640613	20,195	0,00	673,310	40°29'22.3924"	-3°37'15.8588"
3	RECTA	KV -12000	4.420,000	447.346,622	4.482.285,868	0,000	630,364	317,640613	18,528	0,00	675,484	40°29'22.5654"	-3°37'16.6775"
3	RECTA	KV -12000	4.440,000	447.327,385	4.482.291,340	0,000	630,718	317,640613	16,862	0,00	675,255	40°29'22.7384"	-3°37'17.4963"
3	RECTA	KV -12000	4.460,000	447.308,148	4.482.296,811	0,000	631,039	317,640613	15,195	0,00	674,078	40°29'22.9115"	-3°37'18.3151"
3	RECTA	KV -12000	4.480,000	447.288,911	4.482.302,282	0,000	631,326	317,640613	13,528	0,00	674,898	40°29'23.0845"	-3°37'19.1338"
3	RECTA	KV -12000	4.500,000	447.269,674	4.482.307,754	0,000	631,580	317,640613	11,862	0,00	672,352	40°29'23.2576"	-3°37'19.9526"
3	RECTA	KV -12000	4.520,000	447.250,437	4.482.313,225	0,000	631,801	317,640613	10,195	0,00	670,134	40°29'23.4306"	-3°37'20.7714"



EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
3	RECTA	KV -12000	4.540,000	447.231,200	4.482.318,696	0,000	631,988	317,640613	8,528	0,00	668,005	40°29'23.6036"	-3°37'21.5901"
3	RECTA	KV -12000	4.560,000	447.211,963	4.482.324,167	0,000	632,142	317,640613	6,862	0,00	665,290	40°29'23.7767"	-3°37'22.4089"
3	RECTA	KV -12000	4.580,000	447.192,726	4.482.329,639	0,000	632,262	317,640613	5,195	0,00	662,264	40°29'23.9497"	-3°37'23.2277"
3	RECTA	KV -12000	4.600,000	447.173,489	4.482.335,110	0,000	632,350	317,640613	3,528	0,00	657,469	40°29'24.1227"	-3°37'24.0465"
3	CLOT.	KV -12000	4.610,470	447.163,418	4.482.337,974	1.000.000,000	632,382	317,640613	2,656	0,00	656,814	40°29'24.2133"	-3°37'24.4751"
3	CLOT.	KV -12000	4.620,000	447.154,253	4.482.340,586	3.147,958	632,403	317,736977	1,862	14,29	656,152	40°29'24.2959"	-3°37'24.8652"
3	CLOT.	KV -12000	4.640,000	447.135,054	4.482.346,190	1.015,917	632,424	318,565855	0,195	44,29	655,602	40°29'24.4733"	-3°37'25.6824"
3	CLOT.	KV -12000	4.660,000	447.115,970	4.482.352,171	605,694	632,411	320,243560	-1,472	74,29	654,444	40°29'24.6628"	-3°37'26.4948"
3	CLOT.	KV -12000	4.680,000	447.097,095	4.482.358,778	431,469	632,365	322,770091	-3,138	104,29	654,646	40°29'24.8728"	-3°37'27.2986"
3	CLOT.	KV -12000	4.700,000	447.078,546	4.482.366,253	335,083	632,286	326,145448	-4,805	134,29	654,029	40°29'25.1109"	-3°37'28.0887"
3	CIRC.	Pendiente	4.710,470	447.069,016	4.482.370,588	300,000	632,234	328,250942	-5,000	150,00	656,120	40°29'25.2494"	-3°37'28.4948"
3	CIRC.	Pendiente	4.720,000	447.060,476	4.482.374,816	300,000	632,186	330,273268	-5,000	150,00	658,774	40°29'25.3845"	-3°37'28.8589"
3	CIRC.	Pendiente	4.740,000	447.043,013	4.482.384,558	300,000	632,086	334,517400	-5,000	150,00	664,191	40°29'25.6964"	-3°37'29.6036"
3	CIRC.	Pendiente	4.760,000	447.026,238	4.482.395,441	300,000	631,986	338,761532	-5,000	150,00	668,645	40°29'26.0455"	-3°37'30.3194"
3	CIRC.	Pendiente	4.780,000	447.010,226	4.482.407,418	300,000	631,886	343,005664	-5,000	150,00	671,966	40°29'26.4303"	-3°37'31.0032"
3	CIRC.	Pendiente	4.800,000	446.995,046	4.482.420,435	300,000	631,786	347,249796	-5,000	150,00	675,600	40°29'26.8489"	-3°37'31.6519"
3	CIRC.	Pendiente	4.820,000	446.980,768	4.482.434,434	300,000	631,686	351,493927	-5,000	150,00	678,239	40°29'27.2997"	-3°37'32.2626"
3	CIRC.	Pendiente	4.840,000	446.967,454	4.482.449,354	300,000	631,586	355,738059	-5,000	150,00	680,848	40°29'27.7804"	-3°37'32.8327"
3	CIRC.	Pendiente	4.860,000	446.955,163	4.482.465,127	300,000	631,486	359,982191	-5,000	150,00	683,633	40°29'28.2891"	-3°37'33.3595"
3	CIRC.	Pendiente	4.880,000	446.943,951	4.482.481,684	300,000	631,386	364,226323	-5,000	150,00	684,838	40°29'28.8235"	-3°37'33.8408"
3	CIRC.	Pendiente	4.900,000	446.933,866	4.482.498,951	300,000	631,286	368,470455	-5,000	150,00	684,039	40°29'29.3812"	-3°37'34.2743"
3	CIRC.	Pendiente	4.920,000	446.924,954	4.482.516,852	300,000	631,186	372,714586	-5,000	150,00	683,398	40°29'29.9597"	-3°37'34.6583"
3	CIRC.	Pendiente	4.940,000	446.917,255	4.482.535,306	300,000	631,086	376,958718	-5,000	150,00	686,110	40°29'30.5564"	-3°37'34.9909"
3	CIRC.	Pendiente	4.960,000	446.910,802	4.482.554,233	300,000	630,986	381,202850	-5,000	150,00	685,605	40°29'31.1687"	-3°37'35.2708"
3	CIRC.	Pendiente	4.980,000	446.905,624	4.482.573,547	300,000	630,886	385,446982	-5,000	150,00	685,500	40°29'31.7939"	-3°37'35.4965"
3	CIRC.	Pendiente	5.000,000	446.901,744	4.482.593,163	300,000	630,786	389,691114	-5,000	150,00	685,035	40°29'32.4291"	-3°37'35.6673"
3	CIRC.	Pendiente	5.020,000	446.899,180	4.482.612,994	300,000	630,686	393,935246	-5,000	150,00	684,276	40°29'33.0717"	-3°37'35.7822"
3	CIRC.	Pendiente	5.040,000	446.897,942	4.482.632,952	300,000	630,586	398,537700	-5,000	150,00	681,502	40°29'33.7186"	-3°37'35.8408"
3	CIRC.	Pendiente	5.060,000	446.898,037	4.482.652,948	300,000	630,486	2,423509	-5,000	150,00	677,339	40°29'34.3671"	-3°37'35.8428"
3	CIRC.	Pendiente	5.080,000	446.899,463	4.482.672,894	300,000	630,386	6,667641	-5,000	150,00	672,767	40°29'35.0143"	-3°37'35.7882"
3	CIRC.	Pendiente	5.100,000	446.902,215	4.482.692,700	300,000	630,286	10,911773	-5,000	150,00	669,255	40°29'35.6573"	-3°37'35.6773"
3	CIRC.	Pendiente	5.120,000	446.906,281	4.482.712,278	300,000	630,186	15,155905	-5,000	150,00	666,978	40°29'36.2932"	-3°37'35.5105"
3	CIRC.	Pendiente	5.140,000	446.911,641	4.482.731,543	300,000	630,086	19,400036	-5,000	150,00	665,629	40°29'36.9191"	-3°37'35.2886"
3	CIRC.	Pendiente	5.160,000	446.918,273	4.482.750,407	300,000	629,986	23,644168	-5,000	150,00	664,775	40°29'37.5325"	-3°37'35.0125"
3	CIRC.	Pendiente	5.180,000	446.926,147	4.482.768,788	300,000	629,886	27,888300	-5,000	150,00	663,625	40°29'38.1304"	-3°37'34.6836"
3	CIRC.	Pendiente	5.200,000	446.935,228	4.482.786,603	300,000	629,786	32,132432	-5,000	150,00	662,897	40°29'38.7102"	-3°37'34.3032"
3	CIRC.	Pendiente	5.220,000	446.945,476	4.482.803,774	300,000	629,686	36,376564	-5,000	150,00	661,605	40°29'39.2694"	-3°37'33.8731"
3	CIRC.	Pendiente	5.240,000	446.956,845	4.482.820,224	300,000	629,586	40,620696	-5,000	150,00	660,458	40°29'39.8055"	-3°37'33.3951"
3	CIRC.	Pendiente	5.260,000	446.969,284	4.482.835,880	300,000	629,486	44,864827	-5,000	150,00	659,414	40°29'40.3161"	-3°37'32.8714"
3	CIRC.	Pendiente	5.280,000	446.982,739	4.482.850,673	300,000	629,386	49,108959	-5,000	150,00	658,469	40°29'40.7990"	-3°37'32.3043"
3	CIRC.	Pendiente	5.300,000	446.997,149	4.482.864,536	300,000	629,286	53,353091	-5,000	150,00	657,187	40°29'41.2519"	-3°37'31.6963"
3	CIRC.	Pendiente	5.320,000	447.012,451	4.482.877,409	300,000	629,186	57,597223	-5,000	150,00	655,951	40°29'41.6729"	-3°37'31.0501"
3	CIRC.	Pendiente	5.340,000	447.028,576	4.482.889,234	300,000	629,086	61,841355	-5,000	150,00	654,802	40°29'42.0600"	-3°37'30.3687"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
3	CIRC.	Pendiente	5.360,000	447.045,454	4.482.899,958	300,000	628,986	66,085486	-5,000	150,00	652,696	40°29'42.4117"	-3°37'29.6550"
3	CIRC.	Pendiente	5.380,000	447.063,008	4.482.909,534	300,000	628,886	70,329618	-5,000	150,00	649,867	40°29'42.7263"	-3°37'28.9121"
3	CIRC.	Pendiente	5.400,000	447.081,161	4.482.917,920	300,000	628,786	74,573750	-5,000	150,00	647,006	40°29'43.0024"	-3°37'28.1435"
3	CIRC.	Pendiente	5.420,000	447.099,832	4.482.925,077	300,000	628,686	78,817882	-5,000	150,00	647,047	40°29'43.2388"	-3°37'27.3525"
3	CIRC.	Pendiente	5.440,000	447.118,939	4.482.930,975	300,000	628,586	83,062014	-5,000	150,00	647,195	40°29'43.4345"	-3°37'26.5426"
3	CIRC.	Pendiente	5.460,000	447.138,396	4.482.935,587	300,000	628,486	87,306145	-5,000	150,00	647,111	40°29'43.5885"	-3°37'25.7174"
3	CLOT.	KV 20000	5.470,166	447.148,393	4.482.937,431	300,000	628,435	89,463419	-4,851	150,00	647,500	40°29'43.6506"	-3°37'25.2933"
3	CLOT.	KV 20000	5.480,000	447.158,117	4.482.938,897	332,720	628,390	91,447666	-4,359	135,25	647,168	40°29'43.7004"	-3°37'24.8807"
3	CLOT.	KV 20000	5.500,000	447.178,001	4.482.941,023	427,558	628,313	94,850013	-3,359	105,25	646,594	40°29'43.7739"	-3°37'24.0366"
3	CLOT.	KV 20000	5.520,000	447.197,964	4.482.942,600	598,016	628,256	97,403533	-2,359	75,25	646,377	40°29'43.8172"	-3°37'23.1889"
3	CLOT.	KV 20000	5.540,000	4.476,957	4.482.942,742	994,500	628,218	99,108227	-1,359	45,25	647,525	40°29'43.8388"	-3°37'22.3398"
3	CLOT.	KV 20000	5.560,000	447.237,956	4.482.942,866	2.951,039	628,201	99,964095	-0,359	15,25	648,709	40°29'43.8474"	-3°37'21.4903"
3	RECTA	Horizontal	5.570,166	447.248,122	4.482.942,860	0,000	628,200	100,073749	0,000	0,00	649,338	40°29'43.8495"	-3°37'21.0584"
3	RECTA	Horizontal	5.580,000	447.257,956	4.482.942,849	0,000	628,200	100,073749	0,000	0,00	649,974	40°29'43.8514"	-3°37'20.6406"
3	RECTA	Horizontal	5.600,000	447.277,956	4.482.942,825	0,000	628,200	100,073749	0,000	0,00	651,177	40°29'43.8552"	-3°37'19.7910"
3	RECTA	Horizontal	5.620,000	447.297,956	4.482.942,802	0,000	628,200	100,073749	0,000	0,00	651,352	40°29'43.8590"	-3°37'18.9414"
3	RECTA	Horizontal	5.640,000	447.317,956	4.482.942,779	0,000	628,200	100,073749	0,000	0,00	651,958	40°29'43.8629"	-3°37'18.0918"
3	RECTA	Horizontal	5.660,000	447.337,956	4.482.942,756	0,000	628,200	100,073749	0,000	0,00	652,682	40°29'43.8667"	-3°37'17.2422"
3	RECTA	Horizontal	5.680,000	447.357,956	4.482.942,733	0,000	628,200	100,073749	0,000	0,00	654,117	40°29'43.8705"	-3°37'16.3925"
3	RECTA	Horizontal	5.700,000	447.377,956	4.482.942,710	0,000	628,200	100,073749	0,000	0,00	655,581	40°29'43.8743"	-3°37'15.5429"
3	RECTA	Horizontal	5.720,000	447.397,956	4.482.942,686	0,000	628,200	100,073749	0,000	0,00	657,272	40°29'43.8781"	-3°37'14.6933"
3	RECTA	Horizontal	5.740,000	447.417,956	4.482.942,663	0,000	628,200	100,073749	0,000	0,00	658,766	40°29'43.8819"	-3°37'13.8437"
3	RECTA	Horizontal	5.760,000	447.437,956	4.482.942,640	0,000	628,200	100,073749	0,000	0,00	660,188	40°29'43.8857"	-3°37'12.9941"
3	RECTA	Horizontal	5.780,000	447.457,956	4.482.942,617	0,000	628,200	100,073749	0,000	0,00	661,055	40°29'43.8896"	-3°37'12.1445"
3	RECTA	Horizontal	5.800,000	447.477,956	4.482.942,594	0,000	628,200	100,073749	0,000	0,00	661,727	40°29'43.8934"	-3°37'11.2948"
3	RECTA	Horizontal	5.820,000	447.497,956	4.482.942,571	0,000	628,200	100,073749	0,000	0,00	662,667	40°29'43.8972"	-3°37'10.4452"
3	RECTA	Horizontal	5.840,000	447.517,956	4.482.942,547	0,000	628,200	100,073749	0,000	0,00	664,184	40°29'43.9010"	-3°37'09.5956"
3	RECTA	Horizontal	5.860,000	447.537,956	4.482.942,524	0,000	628,200	100,073749	0,000	0,00	665,864	40°29'43.9048"	-3°37'08.7460"
3	RECTA	Horizontal	5.880,000	447.557,956	4.482.942,501	0,000	628,200	100,073749	0,000	0,00	666,934	40°29'43.9086"	-3°37'07.8964"
3	RECTA	Horizontal	5.900,000	447.577,956	4.482.942,478	0,000	628,200	100,073749	0,000	0,00	667,452	40°29'43.9124"	-3°37'07.0467"
3	RECTA	Horizontal	5.920,000	447.597,956	4.482.942,455	0,000	628,200	100,073749	0,000	0,00	667,683	40°29'43.9162"	-3°37'06.1971"
3	RECTA	Horizontal	5.940,000	447.617,956	4.482.942,432	0,000	628,200	100,073749	0,000	0,00	667,618	40°29'43.9200"	-3°37'05.3475"
3	RECTA	Horizontal	5.960,000	447.637,956	4.482.942,408	0,000	628,200	100,073749	0,000	0,00	667,453	40°29'43.9237"	-3°37'04.4979"
3	RECTA	Horizontal	5.980,000	447.657,956	4.482.942,385	0,000	628,200	100,073749	0,000	0,00	666,912	40°29'43.9275"	-3°37'03.6483"
3	RECTA	Horizontal	6.000,000	447.677,956	4.482.942,362	0,000	628,200	100,073749	0,000	0,00	665,402	40°29'43.9313"	-3°37'02.7986"
3	RECTA	Horizontal	6.020,000	447.697,956	4.482.942,339	0,000	628,200	100,073749	0,000	0,00	663,995	40°29'43.9351"	-3°37'01.9490"
3	RECTA	Horizontal	6.040,000	447.717,956	4.482.942,316	0,000	628,200	100,073749	0,000	0,00	662,252	40°29'43.9389"	-3°37'01.0994"
3	RECTA	Horizontal	6.060,000	447.737,956	4.482.942,293	0,000	628,200	100,073749	0,000	0,00	660,653	40°29'43.9427"	-3°37'00.2498"
3	RECTA	Horizontal	6.080,000	447.757,956	4.482.942,269	0,000	628,200	100,073749	0,000	0,00	659,503	40°29'43.9465"	-3°36'59.4002"
3	RECTA	Horizontal	6.100,000	447.777,956	4.482.942,246	0,000	628,200	100,073749	0,000	0,00	658,969	40°29'43.9502"	-3°36'58.5505"
3	RECTA	Horizontal	6.120,000	447.797,956	4.482.942,223	0,000	628,200	100,073749	0,000	0,00	658,453	40°29'43.9540"	-3°36'57.7009"
3	RECTA	Horizontal	6.140,000	447.817,956	4.482.942,200	0,000	628,200	100,073749	0,000	0,00	657,296	40°29'43.9578"	-3°36'56.8513"
3	RECTA	Horizontal	6.160,000	447.837,956	4.482.942,177	0,000	628,200	100,073749	0,000	0,00	655,615	40°29'43.9616"	-3°36'56.0017"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
3	RECTA	Horizontal	6.180,000	447.857,956	4.482.942,154	0,000	628,200	100,073749	0,000	0,00	653,983	40°29'43.9653"	-3°36'55.1521"
3	RECTA	Horizontal	6.200,000	447.877,956	4.482.942,130	0,000	628,200	100,073749	0,000	0,00	652,470	40°29'43.9691"	-3°36'54.3024"
3	RECTA	KV -3000	6.220,000	447.897,956	4.482.942,107	0,000	628,172	100,073749	-4,315	0,00	651,047	40°29'43.9729"	-3°36'53.4528"
3	CLOT.	KV -3000	6.227,109	447.905,065	4.482.942,099	1.000.000,000	628,133	100,073749	-6,685	0,00	650,586	40°29'43.9742"	-3°36'53.1508"
3	CLOT.	KV -3000	6.240,000	447.917,956	4.482.942,074	2.802,032	628,019	100,220186	-10,982	19,34	649,923	40°29'43.9763"	-3°36'52.6032"
3	CLOT.	KV -3000	6.260,000	447.937,955	4.482.941,897	1.098,185	627,733	101,027087	-17,649	49,34	649,237	40°29'43.9751"	-3°36'51.7536"
3	CLOT.	KV -3000	6.280,000	447.957,947	4.482.941,355	682,919	627,313	102,538994	-24,315	79,34	648,879	40°29'43.9620"	-3°36'50.9041"
3	CLOT.	KV -3000	6.300,000	447.977,914	4.482.940,228	495,537	626,760	104,755906	-30,982	109,34	648,516	40°29'43.9300"	-3°36'50.0556"
3	CIRC.	Pendiente	6.313,109	447.990,972	4.482.939,067	420,000	626,329	106,591523	-33,800	129,00	647,817	40°29'43.8953"	-3°36'49.5005"
3	CIRC.	Pendiente	6.320,000	447.997,819	4.482.938,298	420,000	626,096	107,635980	-33,800	129,00	647,316	40°29'43.8719"	-3°36'49.2094"
3	CIRC.	Pendiente	6.340,000	448.017,611	4.482.935,433	420,000	625,420	110,667502	-33,800	129,00	645,754	40°29'43.7835"	-3°36'48.3678"
3	CLOT.	Pendiente	6.350,573	448.028,013	4.482.933,539	420,000	625,063	112,270178	-33,800	129,00	644,959	40°29'43.7244"	-3°36'47.9254"
3	CLOT.	Pendiente	6.360,000	448.037,245	4.482.931,633	471,704	624,744	113,620716	-33,800	114,86	644,204	40°29'43.6647"	-3°36'47.5326"
3	CLOT.	Pendiente	6.380,000	448.056,702	4.482.927,010	638,463	624,068	115,967446	-33,800	84,86	642,527	40°29'43.5191"	-3°36'46.7047"
3	CLOT.	Pendiente	6.400,000	448.076,005	4.482.921,779	987,603	623,392	117,609171	-33,800	54,86	641,228	40°29'43.3538"	-3°36'45.8832"
3	CLOT.	Pendiente	6.420,000	448.095,199	4.482.916,158	25,396	622,716	118,545890	-33,800	24,86	640,226	40°29'43.1758"	-3°36'45.0661"
3	RECTA	Pendiente	6.436,573	448.111,062	4.482.911,358	0,000	622,156	118,787952	-33,800	0,00	639,871	40°29'43.0237"	-3°36'44.3908"
3	RECTA	Pendiente	6.440,000	448.114,340	4.482.910,361	0,000	622,040	118,787952	-33,800	0,00	639,816	40°29'42.9921"	-3°36'44.2513"
3	RECTA	Pendiente	6.460,000	448.133,476	4.482.904,544	0,000	621,364	118,787952	-33,800	0,00	639,165	40°29'42.8078"	-3°36'43.4367"
3	CLOT.	Pendiente	6.474,275	448.147,133	4.482.900,392	-1.000.000,000	620,882	118,787952	-33,800	0,00	638,574	40°29'42.6762"	-3°36'42.8553"
3	CLOT.	Pendiente	6.480,000	448.152,611	4.482.898,727	-6.308,867	620,688	118,759065	-33,800	-8,59	638,373	40°29'42.6235"	-3°36'42.6221"
3	CLOT.	Pendiente	6.500,000	448.171,769	4.482.892,985	-1.404,067	620,012	118,204745	-33,800	-38,59	637,574	40°29'42.4415"	-3°36'41.8066"
3	CLOT.	Pendiente	6.520,000	448.191,006	4.482.887,516	-789,935	619,336	116,945419	-33,800	-68,59	636,709	40°29'42.2685"	-3°36'40.9877"
3	CLOT.	Pendiente	6.540,000	448.210,375	4.482.882,535	-549,560	618,660	114,981089	-33,800	-98,59	636,011	40°29'42.1113"	-3°36'40.1635"
3	CLOT.	KV 6000	6.560,000	448.229,912	4.482.878,263	-421,346	618,011	112,311753	-30,786	-128,59	635,601	40°29'41.9772"	-3°36'39.3323"
3	CIRC.	KV 6000	6.560,275	448.230,182	4.482.878,210	-420,000	618,003	112,270178	-30,741	-129,00	635,596	40°29'41.9755"	-3°36'39.3208"
3	CIRC.	KV 6000	6.580,000	448.249,623	4.482.874,888	-420,000	617,429	109,280297	-27,453	-129,00	634,977	40°29'41.8721"	-3°36'38.4939"
3	CLOT.	KV 6000	6.598,013	448.267,496	4.482.872,654	-420,000	616,961	106,550004	-24,451	-129,00	634,386	40°29'41.8037"	-3°36'37.7341"
3	CLOT.	KV 6000	6.600,000	448.269,473	4.482.872,455	-429,935	616,913	106,252254	-24,120	-126,02	634,335	40°29'41.7977"	-3°36'37.6500"
3	CLOT.	KV 6000	6.620,000	448.289,413	4.482.870,921	-564,263	616,464	103,643288	-20,786	-96,02	634,160	40°29'41.7524"	-3°36'36.8025"
3	CLOT.	KV 6000	6.640,000	448.309,395	4.482.870,094	-820,673	616,082	101,739327	-17,453	-66,02	633,677	40°29'41.7301"	-3°36'35.9534"
3	CLOT.	KV 6000	6.660,000	448.329,392	4.482.869,754	-1.504,205	615,766	100,540371	-14,120	-36,02	633,515	40°29'41.7235"	-3°36'35.1039"
3	CLOT.	KV 6000	6.680,000	448.349,391	4.482.869,681	-9.001,463	615,517	100,046420	-10,786	-6,02	633,359	40°29'41.7256"	-3°36'34.2542"
3	RECTA	KV 6000	6.684,013	448.353,404	4.482.869,678	0,000	615,475	100,032230	-10,118	0,00	633,353	40°29'41.7265"	-3°36'34.0838"
3	RECTA	KV 6000	6.700,000	448.369,391	4.482.869,670	0,000	615,335	100,032230	-7,453	0,00	633,267	40°29'41.7298"	-3°36'33.4046"
3	RECTA	Pendiente	6.720,000	448.389,391	4.482.869,660	0,000	615,600	100,032230	-5,000	0,00	633,015	40°29'41.7339"	-3°36'32.5550"
3	RECTA	Pendiente	6.740,000	448.409,391	4.482.869,650	0,000	615,117	100,032230	-5,000	0,00	632,847	40°29'41.7381"	-3°36'31.7054"
3	RECTA	Pendiente	6.760,000	448.429,391	4.482.869,640	0,000	615,017	100,032230	-5,000	0,00	633,500	40°29'41.7422"	-3°36'30.8558"
3	RECTA	Pendiente	6.780,000	448.449,391	4.482.869,630	0,000	614,917	100,032230	-5,000	0,00	633,294	40°29'41.7464"	-3°36'30.0062"
3	RECTA	Pendiente	6.800,000	448.469,391	4.482.869,620	0,000	614,817	100,032230	-5,000	0,00	633,359	40°29'41.7505"	-3°36'29.1566"
3	RECTA	Pendiente	6.820,000	448.489,391	4.482.869,609	0,000	614,717	100,032230	-5,000	0,00	634,070	40°29'41.7546"	-3°36'28.3070"
3	RECTA	Pendiente	6.840,000	448.509,391	4.482.869,599	0,000	614,617	100,032230	-5,000	0,00	635,103	40°29'41.7588"	-3°36'27.4574"
3	RECTA	Pendiente	6.860,000	448.529,391	4.482.869,589	0,000	614,517	100,032230	-5,000	0,00	635,878	40°29'41.7629"	-3°36'26.6077"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
3	RECTA	Pendiente	6.880,000	448.549,391	4.482.869,579	0,000	614,417	100,032230	-5,000	0,00	636,674	40°29'41.7671"	-3°36'25.7581"
3	RECTA	Pendiente	6.900,000	448.569,391	4.482.869,569	0,000	614,317	100,032230	-5,000	0,00	637,617	40°29'41.7712"	-3°36'24.9085"
3	RECTA	Pendiente	6.920,000	448.589,391	4.482.869,559	0,000	614,600	100,032230	-5,000	0,00	638,373	40°29'41.7753"	-3°36'24.0589"
3	CLOT.	Pendiente	6.938,249	448.607,641	4.482.869,550	-1.000.000,000	614,125	100,032230	-5,000	0,00	638,815	40°29'41.7791"	-3°36'23.2837"
3	CLOT.	Pendiente	6.940,000	448.609,391	4.482.869,549	-44.548,021	614,117	100,030979	-5,000	-1,62	638,894	40°29'41.7795"	-3°36'23.2093"
3	CLOT.	Pendiente	6.960,000	448.629,391	4.482.869,561	-3.586,055	614,017	99,839162	-5,000	-20,08	639,401	40°29'41.7843"	-3°36'22.3597"
3	CLOT.	KV -8000	6.980,000	448.649,391	4.482.869,684	-1.868,222	613,914	99,320873	-5,853	-38,54	639,951	40°29'41.7928"	-3°36'21.5101"
3	CLOT.	KV -8000	7.000,000	448.669,388	4.482.870,021	-1.263,139	613,772	98,476113	-8,353	-57,00	640,642	40°29'41.8082"	-3°36'20.6608"
3	CIRC.	KV -8000	7.003,249	448.672,636	4.482.870,103	-1.200,000	613,744	98,308052	-8,759	-60,00	640,726	40°29'41.8115"	-3°36'20.5228"
3	CIRC.	KV -8000	7.020,000	448.689,377	4.482.870,665	-1.200,000	613,579	97,419388	-10,853	-60,00	640,976	40°29'41.8335"	-3°36'19.8118"
3	CIRC.	KV -8000	7.040,000	448.709,353	4.482.871,642	-1.200,000	613,337	96,358355	-13,353	-60,00	640,757	40°29'41.8696"	-3°36'18.9635"
3	CIRC.	KV -8000	7.060,000	448.729,310	4.482.872,952	-1.200,000	613,045	95,297322	-15,853	-60,00	640,191	40°29'41.9165"	-3°36'18.1161"
3	CIRC.	KV -8000	7.080,000	448.749,242	4.482.874,594	-1.200,000	612,703	94,236289	-18,353	-60,00	641,463	40°29'41.9742"	-3°36'17.2698"
3	CIRC.	KV -8000	7.100,000	448.769,144	4.482.876,569	-1.200,000	612,311	93,175256	-20,853	-60,00	644,161	40°29'42.0427"	-3°36'16.4250"
3	CIRC.	KV -8000	7.120,000	448.789,011	4.482.878,874	-1.200,000	611,869	92,114223	-23,353	-60,00	645,199	40°29'42.1219"	-3°36'15.5817"
3	CLOT.	KV -8000	7.123,221	448.792,207	4.482.879,276	-1.200,000	611,793	91,943325	-23,755	-60,00	645,286	40°29'42.1356"	-3°36'15.4460"
3	CLOT.	KV -8000	7.140,000	448.808,838	4.482.881,500	-1.617,541	611,377	91,168077	-25,853	-44,51	643,578	40°29'42.2114"	-3°36'14.7402"
3	CLOT.	Pendiente	7.160,000	448.828,630	4.482.884,372	-2.763,865	610,857	90,544167	-26,000	-26,05	637,585	40°29'42.3089"	-3°36'13.9003"
3	CLOT.	Pendiente	7.180,000	448.848,402	4.482.887,386	-9.487,496	610,337	90,246730	-26,000	-7,59	640,990	40°29'42.4111"	-3°36'13.0612"
3	RECTA	Pendiente	7.188,221	448.856,526	4.482.888,643	0,000	610,124	90,219147	-26,000	0,00	644,146	40°29'42.4537"	-3°36'12.7164"
3	RECTA	Pendiente	7.200,000	448.868,166	4.482.890,445	0,000	609,817	90,219147	-26,000	0,00	643,102	40°29'42.5147"	-3°36'12.2225"
3	RECTA	Pendiente	7.220,000	448.887,931	4.482.893,506	0,000	609,297	90,219147	-26,000	0,00	644,338	40°29'42.6183"	-3°36'11.3838"
3	RECTA	Pendiente	7.240,000	448.907,695	4.482.896,567	0,000	608,777	90,219147	-26,000	0,00	649,038	40°29'42.7220"	-3°36'10.5451"
3	RECTA	Pendiente	7.260,000	448.927,460	4.482.899,627	0,000	608,257	90,219147	-26,000	0,00	652,099	40°29'42.8256"	-3°36'09.7064"
3	RECTA	Pendiente	7.280,000	448.947,224	4.482.902,688	0,000	607,737	90,219147	-26,000	0,00	646,346	40°29'42.9293"	-3°36'08.8676"
3	RECTA	Pendiente	7.300,000	448.966,988	4.482.905,749	0,000	607,600	90,219147	-26,000	0,00	646,049	40°29'43.0329"	-3°36'08.0289"
3	RECTA	Pendiente	7.320,000	448.986,753	4.482.908,810	0,000	606,697	90,219147	-26,000	0,00	643,755	40°29'43.1365"	-3°36'07.1902"
3	RECTA	Pendiente	7.340,000	449.006,517	4.482.911,870	0,000	606,177	90,219147	-26,000	0,00	643,447	40°29'43.2402"	-3°36'06.3515"
3	RECTA	Pendiente	7.360,000	449.026,282	4.482.914,931	0,000	605,657	90,219147	-26,000	0,00	643,611	40°29'43.3438"	-3°36'05.5128"
3	RECTA	Pendiente	7.380,000	449.046,046	4.482.917,992	0,000	605,137	90,219147	-26,000	0,00	644,694	40°29'43.4474"	-3°36'04.6740"
3	RECTA	Pendiente	7.400,000	449.065,811	4.482.921,052	0,000	604,617	90,219147	-26,000	0,00	641,132	40°29'43.5510"	-3°36'03.8353"
3	CLOT.	Pendiente	7.416,525	449.082,140	4.482.923,581	1.000.000,000	604,188	90,219147	-26,000	0,00	638,235	40°29'43.6367"	-3°36'03.1424"
3	CLOT.	Pendiente	7.420,000	449.085,575	4.482.924,113	8.631,956	604,097	90,231963	-26,000	5,21	637,790	40°29'43.6547"	-3°36'02.9966"
3	CLOT.	Pendiente	7.440,000	449.105,350	4.482.927,102	1.277,930	603,577	90,803879	-26,000	35,21	635,393	40°29'43.7560"	-3°36'02.1574"
3	CLOT.	Pendiente	7.460,000	449.125,169	4.482.929,782	690,044	603,057	92,224621	-26,000	65,21	634,977	40°29'43.8473"	-3°36'01.3162"
3	CLOT.	Pendiente	7.480,000	449.145,057	4.482.931,887	472,624	602,537	94,494190	-26,000	95,21	634,909	40°29'43.9199"	-3°36'00.4720"
3	CLOT.	Pendiente	7.500,000	449.165,016	4.482.933,148	359,387	602,017	97,612586	-26,000	125,21	635,274	40°29'43.9652"	-3°35'59.6245"
3	CIRC.	Pendiente	7.516,525	449.181,537	4.482.933,363	300,000	601,588	100,829476	-26,000	150,00	636,741	40°29'43.9758"	-3°35'58.9227"
3	CIRC.	Pendiente	7.520,000	449.185,012	4.482.933,297	300,000	601,497	101,566991	-26,000	150,00	636,088	40°29'43.9745"	-3°35'58.7751"
3	CIRC.	Pendiente	7.540,000	449.204,974	4.482.932,139	300,000	600,977	105,811123	-26,000	150,00	625,457	40°29'43.9413"	-3°35'57.9267"
3	CIRC.	Pendiente	7.560,000	449.224,816	4.482.929,654	300,000	600,457	110,055255	-26,000	150,00	618,416	40°29'43.8651"	-3°35'57.0831"
3	CIRC.	Pendiente	7.580,000	449.244,447	4.482.925,852	300,000	599,937	114,299387	-26,000	150,00	617,958	40°29'43.7461"	-3°35'56.2481"
3	CIRC.	Pendiente	7.600,000	449.263,782	4.482.920,751	300,000	599,417	118,543519	-26,000	150,00	625,202	40°29'43.5849"	-3°35'55.4253"



EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
3	CIRC.	KV 6520	7.620,000	449.282,734	4.482.914,374	300,000	598,901	122,787650	-24,957	150,00	625,392	40°29'43.3823"	-3°35'54.6183"
3	CIRC.	KV 6520	7.640,000	449.301,219	4.482.906,747	300,000	598,432	127,031782	-21,889	150,00	625,434	40°29'43.1390"	-3°35'53.8309"
3	CIRC.	KV 6520	7.660,000	449.319,155	4.482.897,907	300,000	598,025	131,275914	-18,822	150,00	625,666	40°29'42.8563"	-3°35'53.0664"
3	CIRC.	KV 6520	7.680,000	449.336,462	4.482.887,891	300,000	597,679	135,520046	-15,755	150,00	622,098	40°29'42.5353"	-3°35'52.3283"
3	CIRC.	KV 6520	7.700,000	449.353,064	4.482.876,745	300,000	597,395	139,764178	-12,687	150,00	621,840	40°29'42.1774"	-3°35'51.6199"
3	CIRC.	Pendiente	7.720,000	449.368,886	4.482.864,517	300,000	597,172	144,008309	-10,000	150,00	621,643	40°29'41.7843"	-3°35'50.9442"
3	CIRC.	Pendiente	7.740,000	449.383,858	4.482.851,263	300,000	596,972	148,252441	-10,000	150,00	622,715	40°29'41.3578"	-3°35'50.3044"
3	CIRC.	Pendiente	7.760,000	449.397,914	4.482.837,040	300,000	596,772	152,496573	-10,000	150,00	615,194	40°29'40.8996"	-3°35'49.7032"
3	CIRC.	Pendiente	7.780,000	449.410,991	4.482.821,913	300,000	596,572	156,740705	-10,000	150,00	618,712	40°29'40.4119"	-3°35'49.1433"
3	CIRC.	Pendiente	7.800,000	449.423,032	4.482.805,948	300,000	596,372	160,984837	-10,000	150,00	619,223	40°29'39.8968"	-3°35'48.6272"
3	CIRC.	Pendiente	7.820,000	449.433,982	4.482.789,600	300,000	596,172	165,228968	-10,000	150,00	618,683	40°29'39.3566"	-3°35'48.1572"
3	CIRC.	Pendiente	7.840,000	449.443,794	4.482.771,793	300,000	595,972	169,473100	-10,000	150,00	618,658	40°29'38.7937"	-3°35'47.7354"
3	CIRC.	Pendiente	7.860,000	449.452,423	4.482.753,754	300,000	595,772	173,717232	-10,000	150,00	618,834	40°29'38.2105"	-3°35'47.3637"
3	CIRC.	Pendiente	7.880,000	449.459,831	4.482.735,181	300,000	595,572	177,961364	-10,000	150,00	619,020	40°29'37.6098"	-3°35'47.0437"
3	CIRC.	Pendiente	7.900,000	449.465,985	4.482.716,155	300,000	595,372	182,205496	-10,000	150,00	619,042	40°29'36.9941"	-3°35'46.7768"
3	CIRC.	Pendiente	7.920,000	449.470,858	4.482.696,762	300,000	595,172	186,449628	-10,000	150,00	618,887	40°29'36.3663"	-3°35'46.5642"
3	CLOT.	Pendiente	7.934,499	449.473,577	4.482.682,521	300,000	595,027	189,526460	-10,000	150,00	619,002	40°29'35.9050"	-3°35'46.4446"
3	CLOT.	KV 10000	7.940,000	449.474,429	4.482.677,087	317,463	594,972	190,661654	-9,715	141,75	619,031	40°29'35.7290"	-3°35'46.4068"
3	CLOT.	KV 10000	7.960,000	449.476,772	4.482.657,227	402,689	594,798	194,247913	-7,715	111,75	619,226	40°29'35.0854"	-3°35'46.3016"
3	CLOT.	KV 10000	7.980,000	449.478,126	4.482.637,275	550,466	594,663	196,985345	-5,715	81,75	619,588	40°29'34.4387"	-3°35'46.2384"
3	CLOT.	KV 10000	8.000,000	449.478,754	4.482.617,285	869,585	594,569	198,873951	-3,715	51,75	619,695	40°29'33.7905"	-3°35'46.2060"
3	CLOT.	KV 10000	8.020,000	449.478,922	4.482.597,286	2.069,075	594,515	199,913731	-1,715	21,75	619,763	40°29'33.1420"	-3°35'46.1931"
3	RECTA	KV 10000	8.034,499	449.478,908	4.482.582,787	0,000	594,500	200,136789	-0,265	0,00	619,611	40°29'32.6717"	-3°35'46.1895"
3	RECTA	Horizontal	8.040,000	449.478,896	4.482.577,286	0,000	594,500	200,136789	0,000	0,00	619,601	40°29'32.4934"	-3°35'46.1885"
3	RECTA	Horizontal	8.060,000	449.478,853	4.482.557,286	0,000	594,500	200,136789	0,000	0,00	619,658	40°29'31.8447"	-3°35'46.1846"
3	RECTA	Horizontal	8.080,000	449.478,810	4.482.537,286	0,000	594,500	200,136789	0,000	0,00	619,946	40°29'31.1961"	-3°35'46.1806"
3	RECTA	Horizontal	8.100,000	449.478,767	4.482.517,286	0,000	594,500	200,136789	0,000	0,00	620,045	40°29'30.5475"	-3°35'46.1767"
3	RECTA	Horizontal	8.120,000	449.478,724	4.482.497,286	0,000	594,500	200,136789	0,000	0,00	620,184	40°29'29.8989"	-3°35'46.1728"
3	RECTA	Horizontal	8.140,000	449.478,681	4.482.477,286	0,000	594,500	200,136789	0,000	0,00	620,503	40°29'29.2502"	-3°35'46.1689"
3	RECTA	Horizontal	8.160,000	449.478,638	4.482.457,286	0,000	594,500	200,136789	0,000	0,00	620,775	40°29'28.6016"	-3°35'46.1650"
3	RECTA	Horizontal	8.180,000	449.478,595	4.482.437,286	0,000	594,500	200,136789	0,000	0,00	620,840	40°29'27.9530"	-3°35'46.1611"
3	RECTA	Horizontal	8.200,000	449.478,552	4.482.417,287	0,000	594,500	200,136789	0,000	0,00	621,200	40°29'27.3044"	-3°35'46.1572"
3	RECTA	Horizontal	8.220,000	449.478,509	4.482.397,287	0,000	594,500	200,136789	0,000	0,00	620,741	40°29'26.6557"	-3°35'46.1532"
3	RECTA	Horizontal	8.240,000	449.478,466	4.482.377,287	0,000	594,500	200,136789	0,000	0,00	620,416	40°29'26.0071"	-3°35'46.1493"
3	RECTA	Horizontal	8.260,000	449.478,423	4.482.357,287	0,000	594,500	200,136789	0,000	0,00	620,866	40°29'25.3585"	-3°35'46.1454"
3	RECTA	Horizontal	8.280,000	449.478,380	4.482.337,287	0,000	594,500	200,136789	0,000	0,00	621,201	40°29'24.7099"	-3°35'46.1415"
3	RECTA	Horizontal	8.300,000	449.478,337	4.482.317,287	0,000	594,500	200,136789	0,000	0,00	621,396	40°29'24.0613"	-3°35'46.1376"
3	RECTA	Horizontal	8.320,000	449.478,294	4.482.297,287	0,000	594,500	200,136789	0,000	0,00	621,489	40°29'23.4126"	-3°35'46.1337"
3	CLOT.	Horizontal	8.324,542	449.478,284	4.482.292,745	1.000.000,000	594,500	200,136789	0,000	0,00	621,467	40°29'23.2653"	-3°35'46.1328"
3	CLOT.	Horizontal	8.340,000	449.478,231	4.482.277,287	1.940,772	594,500	200,390315	0,000	23,19	621,432	40°29'22.7640"	-3°35'46.1306"
3	CLOT.	Horizontal	8.360,000	449.477,961	4.482.257,289	846,077	594,500	201,470777	0,000	53,19	621,681	40°29'22.1154"	-3°35'46.1364"
3	CLOT.	Horizontal	8.380,000	449.477,218	4.482.237,304	540,952	594,500	203,400064	0,000	83,19	622,102	40°29'21.4671"	-3°35'46.1622"
3	CLOT.	Horizontal	8.400,000	449.475,737	44.826,360	397,573	594,500	206,178178	0,000	113,19	622,281	40°29'20.8200"	-3°35'46.2193"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
3	CLOT.	Horizontal	8.420,000	449.473,255	4.482.197,517	314,275	594,500	209,805119	0,000	143,19	622,407	40°29'20.1759"	-3°35'46.3191"
3	CIRC.	Horizontal	8.424,542	449.472,526	4.482.193,034	300,000	594,500	210,747119	0,000	150,00	622,425	40°29'20.0304"	-3°35'46.3488"
3	CIRC.	Horizontal	8.440,000	449.469,537	44.867,870	300,000	594,500	214,027359	0,000	150,00	622,734	40°29'19.5379"	-3°35'46.4714"
3	CLOT.	Horizontal	8.459,554	449.464,645	4.482.158,941	300,000	594,500	218,176800	0,000	150,00	622,496	40°29'18.9230"	-3°35'46.6737"
3	CLOT.	Horizontal	8.460,000	449.464,519	4.482.158,513	301,345	594,500	218,271280	0,000	149,33	622,490	40°29'18.9091"	-3°35'46.6790"
3	CLOT.	Horizontal	8.480,000	449.458,267	4.482.139,519	377,103	594,500	222,072060	0,000	119,33	622,564	40°29'18.2917"	-3°35'46.9391"
3	CLOT.	Horizontal	8.500,000	449.451,017	4.482.120,881	503,746	594,500	225,024014	0,000	89,33	622,920	40°29'17.6857"	-3°35'47.2417"
3	CLOT.	Horizontal	8.520,000	449.443,032	4.482.102,545	758,461	594,500	227,127142	0,000	59,33	622,951	40°29'17.0893"	-3°35'47.5756"
3	CLOT.	Horizontal	8.540,000	449.434,566	4.482.084,426	1.534,230	594,500	228,381443	0,000	29,33	623,713	40°29'16.4998"	-3°35'47.9300"
3	RECTA	Horizontal	8.559,554	449.426,060	4.482.066,819	0,000	594,500	228,787130	0,000	0,00	623,578	40°29'15.9269"	-3°35'48.2862"
3	RECTA	Horizontal	8.560,000	449.425,865	4.482.066,418	0,000	594,500	228,787130	0,000	0,00	623,577	40°29'15.9139"	-3°35'48.2944"
3	RECTA	Horizontal	8.580,000	449.417,126	4.482.048,428	0,000	594,500	228,787130	0,000	0,00	623,776	40°29'15.3285"	-3°35'48.6604"
3	RECTA	Horizontal	8.600,000	449.408,388	4.482.030,438	0,000	594,500	228,787130	0,000	0,00	624,051	40°29'14.7432"	-3°35'49.0264"
3	RECTA	Horizontal	8.620,000	449.399,649	4.482.012,448	0,000	594,500	228,787130	0,000	0,00	623,410	40°29'14.1578"	-3°35'49.3924"
3	RECTA	Horizontal	8.640,000	449.390,910	4.481.994,458	0,000	594,500	228,787130	0,000	0,00	622,080	40°29'13.5725"	-3°35'49.7584"
3	RECTA	KV 6000	8.660,000	449.382,172	4.481.976,468	0,000	594,524	228,787130	2,800	0,00	619,458	40°29'12.9872"	-3°35'50.1245"
3	RECTA	KV 6000	8.680,000	449.373,433	4.481.958,478	0,000	594,613	228,787130	6,133	0,00	617,674	40°29'12.4018"	-3°35'50.4905"
3	RECTA	Rampa	8.700,000	449.364,694	4.481.940,489	0,000	594,768	228,787130	9,000	0,00	620,726	40°29'11.8165"	-3°35'50.8565"
3	RECTA	Rampa	8.720,000	449.355,956	4.481.922,499	0,000	594,948	228,787130	9,000	0,00	625,221	40°29'11.2311"	-3°35'51.2225"
3	RECTA	Rampa	8.740,000	449.347,600	4.481.904,509	0,000	595,128	228,787130	9,000	0,00	620,584	40°29'10.6458"	-3°35'51.5885"
3	RECTA	Rampa	8.760,000	449.338,478	4.481.886,519	0,000	595,308	228,787130	9,000	0,00	618,313	40°29'10.0604"	-3°35'51.9545"
3	RECTA	Rampa	8.780,000	449.329,740	4.481.868,529	0,000	595,488	228,787130	9,000	0,00	618,295	40°29'09.4751"	-3°35'52.3205"
3	RECTA	Rampa	8.800,000	449.321,001	4.481.850,539	0,000	595,668	228,787130	9,000	0,00	620,687	40°29'08.8897"	-3°35'52.6865"
3	RECTA	Rampa	8.820,000	449.312,262	4.481.832,549	0,000	595,848	228,787130	9,000	0,00	616,932	40°29'08.3044"	-3°35'53.0525"
3	RECTA	Rampa	8.840,000	449.303,524	4.481.814,559	0,000	596,028	228,787130	9,000	0,00	613,749	40°29'07.7190"	-3°35'53.4184"
3	RECTA	Rampa	8.860,000	449.294,785	44.856,570	0,000	596,208	228,787130	9,000	0,00	622,619	40°29'07.1337"	-3°35'53.7844"
3	RECTA	Rampa	8.880,000	449.286,046	4.481.778,580	0,000	596,388	228,787130	9,000	0,00	620,206	40°29'06.5483"	-3°35'54.1504"
3	RECTA	Rampa	8.900,000	449.277,307	4.481.760,590	0,000	596,568	228,787130	9,000	0,00	620,690	40°29'05.9630"	-3°35'54.5164"
3	RECTA	Rampa	8.920,000	449.268,569	4.481.742,600	0,000	596,748	228,787130	9,000	0,00	621,602	40°29'05.3777"	-3°35'54.8824"
3	RECTA	Rampa	8.940,000	449.259,830	4.481.724,610	0,000	596,928	228,787130	9,000	0,00	622,430	40°29'04.7923"	-3°35'55.2484"
3	RECTA	Rampa	8.960,000	449.251,091	4.481.706,620	0,000	597,108	228,787130	9,000	0,00	626,043	40°29'04.2070"	-3°35'55.6144"
3	RECTA	Rampa	8.980,000	449.242,353	4.481.688,630	0,000	597,288	228,787130	9,000	0,00	631,084	40°29'03.6216"	-3°35'55.9803"
3	RECTA	Rampa	9.000,000	449.233,614	4.481.670,641	0,000	597,468	228,787130	9,000	0,00	631,275	40°29'03.0363"	-3°35'56.3463"
3	RECTA	Rampa	9.020,000	449.224,875	4.481.652,651	0,000	597,648	228,787130	9,000	0,00	631,215	40°29'02.4509"	-3°35'56.7123"
3	RECTA	Rampa	9.040,000	449.216,137	4.481.634,661	0,000	597,828	228,787130	9,000	0,00	631,735	40°29'01.8656"	-3°35'57.0783"
3	RECTA	Rampa	9.060,000	449.207,398	4.481.616,671	0,000	598,008	228,787130	9,000	0,00	631,815	40°29'01.2802"	-3°35'57.4442"
3	RECTA	Rampa	9.080,000	449.198,659	4.481.598,681	0,000	598,188	228,787130	9,000	0,00	632,076	40°29'00.6949"	-3°35'57.8102"
Fin de proyecto	RECTA	Rampa	9.096,742	449.191,344	4.481.583,622	0,000	598,339	228,787130	9,000	0,00	631,656	40°29'00.2049"	-3°35'58.1166"
3	RECTA	Rampa	9.100,000	449.189,921	4.481.580,691	0,000	598,368	228,787130	9,000	0,00	631,574	40°29'00.1095"	-3°35'58.1762"
3	RECTA	Rampa	9.120,000	449.181,182	4.481.562,701	0,000	598,548	228,787130	9,000	0,00	632,315	40°28'59.5242"	-3°35'58.5422"
3	RECTA	KV 2500	9.140,000	449.172,443	4.481.544,711	0,000	598,796	228,787130	16,341	0,00	633,479	40°28'58.9388"	-3°35'58.9081"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
3	RECTA	KV 2500	9.160,000	449.163,705	4.481.526,722	0,000	599,202	228,787130	24,341	0,00	632,669	40°28'58.3535"	-3°35'59.2741"
3	RECTA	KV 2500	9.180,000	449.154,966	4.481.508,732	0,000	599,769	228,787130	32,341	0,00	632,910	40°28'57.7681"	-3°35'59.6400"
3	RECTA	Rampa	9.200,000	449.146,227	4.481.490,742	0,000	600,460	228,787130	35,000	0,00	633,010	40°28'57.1827"	-3°36'00.0060"
3	CLOT.	Rampa	9.201,615	449.145,522	4.481.489,289	-1.000.000,000	600,517	228,787130	35,000	0,00	633,025	40°28'57.1355"	-3°36'00.0356"
3	CLOT.	Rampa	9.220,000	449.137,520	4.481.472,737	-1.631,763	601,160	228,428491	35,000	-26,66	633,272	40°28'56.5969"	-3°36'00.3706"
3	CLOT.	Rampa	9.240,000	449.129,034	4.481.454,627	-781,555	601,860	227,223793	35,000	-55,66	633,765	40°28'56.0077"	-3°36'00.7258"
3	CLOT.	Rampa	9.260,000	449.121,014	4.481.436,306	-513,830	602,560	225,170268	35,000	-84,66	633,548	40°28'55.4118"	-3°36'01.0612"
3	CLOT.	Rampa	9.280,000	449.113,713	4.481.417,688	-382,726	603,260	222,267918	35,000	-113,66	639,641	40°28'54.8064"	-3°36'01.3658"
3	CLOT.	Rampa	9.300,000	449.107,396	4.481.398,715	-304,924	603,960	218,516741	35,000	-142,66	646,149	40°28'54.1897"	-3°36'01.6287"
3	CIRC.	Rampa	9.301,615	449.106,937	4.481.397,167	-300,000	604,017	218,176800	35,000	-145,00	646,756	40°28'54.1394"	-3°36'01.6477"
3	CIRC.	Rampa	9.320,000	449.102,302	4.481.379,378	-300,000	604,660	214,275376	35,000	-145,00	652,218	40°28'53.5615"	-3°36'01.8394"
3	CLOT.	Rampa	9.332,086	449.099,853	4.481.367,544	-300,000	605,083	211,710586	35,000	-145,00	653,503	40°28'53.1771"	-3°36'01.9401"
3	CLOT.	Rampa	9.340,000	449.098,505	4.481.359,746	-325,781	605,360	210,097693	35,000	-133,53	653,493	40°28'52.9239"	-3°36'01.9950"
3	CLOT.	Rampa	9.360,000	449.095,910	4.481.339,917	-416,168	606,060	206,613843	35,000	-104,53	653,601	40°28'52.2803"	-3°36'02.0995"
3	CLOT.	Rampa	9.380,000	449.094,270	4.481.319,986	-575,967	606,760	203,978819	35,000	-75,53	646,857	40°28'51.6335"	-3°36'02.1634"
3	CLOT.	Rampa	9.400,000	449.093,324	4.481.300,009	-934,979	607,460	202,192622	35,000	-46,53	646,898	40°28'50.9855"	-3°36'02.1978"
3	CLOT.	Rampa	9.420,000	449.092,804	4.481.280,016	-2.482,151	608,160	201,255250	35,000	-17,53	645,261	40°28'50.3370"	-3°36'02.2141"
3	RECTA	Rampa	9.432,086	449.092,586	4.481.267,932	0,000	608,583	201,100256	35,000	0,00	642,997	40°28'49.9450"	-3°36'02.2199"
3	RECTA	Rampa	9.440,000	449.092,449	4.481.260,019	0,000	608,860	201,100256	35,000	0,00	642,800	40°28'49.6884"	-3°36'02.2234"
3	RECTA	Rampa	9.460,000	449.092,103	4.481.240,022	0,000	609,560	201,100256	35,000	0,00	645,312	40°28'49.0398"	-3°36'02.2323"
3	RECTA	Rampa	9.480,000	449.091,757	4.481.220,025	0,000	610,260	201,100256	35,000	0,00	646,502	40°28'48.3912"	-3°36'02.2412"
3	RECTA	Rampa	9.500,000	449.091,412	4.481.200,028	0,000	610,960	201,100256	35,000	0,00	641,609	40°28'47.7426"	-3°36'02.2501"
3	RECTA	Rampa	9.520,000	449.091,066	4.481.180,031	0,000	611,660	201,100256	35,000	0,00	641,938	40°28'47.0940"	-3°36'02.2590"
3	RECTA	Rampa	9.540,000	449.090,721	4.481.160,034	0,000	612,360	201,100256	35,000	0,00	645,781	40°28'46.4454"	-3°36'02.2679"
3	CLOT.	Rampa	9.557,018	449.090,426	4.481.143,019	-1.000.000,000	612,956	201,100256	35,000	0,00	655,318	40°28'45.8935"	-3°36'02.2755"
3	CLOT.	Rampa	9.560,000	449.090,376	4.481.140,037	-2.414,255	613,060	201,060936	35,000	-2,98	655,392	40°28'45.7968"	-3°36'02.2768"
3	CLOT.	Rampa	9.580,000	449.090,310	4.481.120,039	-313,285	613,760	198,765164	35,000	-22,98	654,371	40°28'45.1482"	-3°36'02.2738"
3	CIRC.	Rampa	9.597,018	449.091,216	4.481.103,049	-180,000	614,356	194,026703	35,000	-40,00	652,128	40°28'44.5974"	-3°36'02.2304"
3	CIRC.	Rampa	9.600,000	449.091,520	4.481.100,082	-180,000	614,460	192,971935	35,000	-40,00	651,872	40°28'44.5013"	-3°36'02.2166"
3	CIRC.	Rampa	9.620,000	449.094,822	4.481.080,367	-180,000	615,160	185,898382	35,000	-40,00	651,673	40°28'43.8626"	-3°36'02.0707"
3	CIRC.	Rampa	9.640,000	449.100,290	4.481.061,140	-180,000	615,860	178,824829	35,000	-40,00	651,024	40°28'43.2403"	-3°36'01.8329"
3	CIRC.	Rampa	9.660,000	449.107,856	4.481.042,637	-180,000	616,560	171,751276	35,000	-40,00	650,998	40°28'42.6419"	-3°36'01.5063"
3	CIRC.	Rampa	9.680,000	449.117,427	4.481.025,088	-180,000	617,260	164,677723	35,000	-40,00	654,685	40°28'42.0749"	-3°36'01.0947"
3	CIRC.	Rampa	9.700,000	449.128,885	4.481.008,708	-180,000	617,960	157,604170	35,000	-40,00	654,257	40°28'41.5462"	-3°36'00.6034"
3	CIRC.	Rampa	9.720,000	449.142,089	4.480.993,699	-180,000	618,660	150,530617	35,000	-40,00	652,070	40°28'41.0623"	-3°36'00.0383"
3	CIRC.	Rampa	9.740,000	449.156,875	4.480.980,247	-180,000	619,360	143,457064	35,000	-40,00	650,324	40°28'40.6293"	-3°35'59.4064"
3	CIRC.	Rampa	9.760,000	449.173,062	4.480.968,518	-180,000	620,060	136,383511	35,000	-40,00	648,972	40°28'40.2525"	-3°35'58.7156"
3	CIRC.	Rampa	9.780,000	449.190,449	4.480.958,656	-180,000	620,760	129,309958	35,000	-40,00	647,517	40°28'39.9365"	-3°35'57.9743"
3	CIRC.	Rampa	9.800,000	449.208,823	4.480.950,782	-180,000	621,460	122,236405	35,000	-40,00	646,167	40°28'39.6852"	-3°35'57.1917"
3	CIRC.	Rampa	9.820,000	449.227,956	4.480.944,995	-180,000	622,160	115,162852	35,000	-40,00	645,076	40°28'39.5017"	-3°35'56.3774"
3	CIRC.	KV -3000	9.840,000	449.247,614	4.480.941,364	-180,000	622,860	108,089299	34,999	-40,00	643,495	40°28'39.3883"	-3°35'55.5415"
3	CLOT.	KV -3000	9.842,872	449.250,465	4.480.941,023	-180,000	622,960	107,073553	34,042	-40,00	643,321	40°28'39.3779"	-3°35'55.4203"
3	CLOT.	KV -3000	9.860,000	449.267,547	4.480.939,820	-314,796	623,494	102,312726	28,333	-22,87	642,665	40°28'39.3426"	-3°35'54.6945"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
3	CLOT.	KV -3000	9.880,000	449.287,544	4.480.939,544	-2.507,004	623,994	100,036465	21,666	-2,87	642,024	40°28'39.3381"	-3°35'53.8452"
3	RECTA	KV -3000	9.882,872	449.290,416	4.480.939,543	0,000	624,055	100,000000	20,709	0,00	641,982	40°28'39.3387"	-3°35'53.7232"
3	RECTA	KV -3000	9.900,000	449.307,544	4.480.939,543	0,000	624,360	100,000000	14,999	0,00	641,500	40°28'39.3424"	-3°35'52.9958"
3	RECTA	KV -3000	9.920,000	449.327,544	4.480.939,543	0,000	624,594	100,000000	8,333	0,00	640,431	40°28'39.3468"	-3°35'52.1464"
3	RECTA	KV -3000	9.940,000	449.347,544	4.480.939,543	0,000	624,694	100,000000	1,666	0,00	639,602	40°28'39.3512"	-3°35'51.2970"
3	RECTA	Rampa	9.960,000	449.367,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	638,985	40°28'39.3556"	-3°35'50.4476"
3	RECTA	Rampa	9.980,000	449.387,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	638,377	40°28'39.3600"	-3°35'49.5983"
3	RECTA	Rampa	10.000,000	449.407,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	637,721	40°28'39.3644"	-3°35'48.7489"
3	RECTA	Rampa	10.020,000	449.427,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	636,981	40°28'39.3688"	-3°35'47.8995"
3	RECTA	Rampa	10.040,000	449.447,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	635,969	40°28'39.3732"	-3°35'47.0501"
3	RECTA	Rampa	10.060,000	449.467,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	635,506	40°28'39.3775"	-3°35'46.2007"
3	RECTA	Rampa	10.080,000	449.487,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	634,470	40°28'39.3819"	-3°35'45.3513"
3	RECTA	Rampa	10.100,000	449.507,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	633,555	40°28'39.3863"	-3°35'44.5019"
3	RECTA	Rampa	10.120,000	449.527,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	631,951	40°28'39.3907"	-3°35'43.6525"
3	RECTA	Rampa	10.140,000	449.547,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	631,318	40°28'39.3950"	-3°35'42.8031"
3	RECTA	Rampa	10.160,000	449.567,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	630,271	40°28'39.3994"	-3°35'41.9537"
3	RECTA	Rampa	10.180,000	449.587,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	628,951	40°28'39.4038"	-3°35'41.1043"
3	RECTA	Rampa	10.200,000	449.607,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	627,986	40°28'39.4082"	-3°35'40.2550"
3	RECTA	Rampa	10.220,000	449.627,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	626,999	40°28'39.4125"	-3°35'39.4056"
3	RECTA	Rampa	10.240,000	449.647,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	627,058	40°28'39.4169"	-3°35'38.5562"
3	RECTA	Rampa	10.260,000	449.667,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	626,842	40°28'39.4213"	-3°35'37.7068"
3	RECTA	Rampa	10.280,000	449.687,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	626,913	40°28'39.4256"	-3°35'36.8574"
3	RECTA	Rampa	10.300,000	449.707,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	626,203	40°28'39.4300"	-3°35'36.0080"
3	RECTA	Rampa	10.320,000	449.727,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	625,983	40°28'39.4343"	-3°35'35.1586"
3	RECTA	Rampa	10.340,000	449.747,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	625,899	40°28'39.4387"	-3°35'34.3092"
3	RECTA	Rampa	10.360,000	449.767,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	624,362	40°28'39.4431"	-3°35'33.4598"
3	RECTA	Rampa	10.380,000	449.787,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	623,125	40°28'39.4474"	-3°35'32.6104"
3	RECTA	Rampa	10.400,000	449.807,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	624,187	40°28'39.4518"	-3°35'31.7610"
3	RECTA	Rampa	10.420,000	449.827,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	624,879	40°28'39.4561"	-3°35'30.9116"
3	RECTA	Rampa	10.440,000	449.847,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	625,549	40°28'39.4605"	-3°35'30.0623"
3	RECTA	Rampa	10.460,000	449.867,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	626,183	40°28'39.4648"	-3°35'29.2129"
3	RECTA	Rampa	10.480,000	449.887,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	626,768	40°28'39.4692"	-3°35'28.3635"
3	RECTA	Rampa	10.500,000	449.907,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	627,978	40°28'39.4735"	-3°35'27.5141"
3	RECTA	Rampa	10.520,000	449.927,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	629,423	40°28'39.4778"	-3°35'26.6647"
3	RECTA	Rampa	10.540,000	449.947,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	630,676	40°28'39.4822"	-3°35'25.8153"
3	RECTA	Rampa	10.560,000	449.967,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	632,290	40°28'39.4865"	-3°35'24.9659"
3	RECTA	Rampa	10.580,000	449.987,544	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	633,597	40°28'39.4909"	-3°35'24.1165"
3	RECTA	Rampa	10.589,870	449.997,414	4.480.939,543	0,000	624,698	100,000000	0,000	0,00	634,009	40°28'39.4930"	-3°35'23.6973"



#### EJE 4. ALTERNATIVA 4.

EJE	DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
4	1	Recta	293,457	0,000	445.517,095	4.480.018,499			101,2500	0,9998072	-0,0196337	40°28'08.6083"	-3°38'33.6886"
4		Clotoide	15,000	293,457	445.810,495	4.480.012,738		164,317	101,2500	445.810,495	4.480.012,738	40°28'08.4906"	-3°38'21.2280"
4	2	Circular	37,308	308,457	445.825,492	4.480.012,422	1.800,000		101,5153	445.782,653	4.478.212,932	40°28'08.4839"	-3°38'20.5911"
4		Clotoide	15,000	345,764	445.862,777	4.480.011,148		164,317	102,8347	445.877,760	4.480.010,439	40°28'08.4513"	-3°38'19.0074"
4	3	Recta	169,388	360,764	445.877,760	4.480.010,439			103,1000	0,9988146	-0,0486754	40°28'08.4318"	-3°38'18.3709"
4		Clotoide	50,000	530,152	446.046,947	4.480.002,194		162,788	103,1000	446.046,947	4.480.002,194	40°28'08.2040"	-3°38'11.1841"
4	4	Circular	34,770	580,152	446.096,839	4.479.998,975	530,000		106,1029	446.046,108	4.479.471,409	40°28'08.1113"	-3°38'09.0645"
4		Clotoide	50,000	614,923	446.131,316	4.479.994,515		162,788	110,2794	446.180,383	4.479.984,930	40°28'07.9747"	-3°38'07.5991"
4	5	Recta	115,069	664,923	446.180,383	4.479.984,930			113,2824	0,9783137	-0,2071285	40°28'07.6753"	-3°38'05.5126"
4		Clotoide	100,000	779,992	446.292,957	4.479.961,095		173,205	113,2824	446.292,957	4.479.961,095	40°28'06.9286"	-3°38'00.7250"
4	6	Circular	261,932	879,992	446.391,665	4.479.945,864	-300,000		102,6720	446.404,253	4.480.245,600	40°28'06.4576"	-3°37'56.5289"
4		Clotoide	100,000	1.141,924	446.625,862	4.480.043,389		173,205	47,0884	446.684,586	4.480.124,178	40°28'09.6746"	-3°37'46.6136"
4	7	Recta	189,727	1.241,924	446.684,586	4.480.124,178			36,4780	0,5421517	0,8402806	40°28'12.3083"	-3°37'44.1444"
4		Clotoide	95,000	1.431,651	446.787,447	4.480.283,601		284,165	36,4780	446.787,447	4.480.283,601	40°28'17.5022"	-3°37'39.8246"
4	8	Circular	371,218	1.526,651	446.837,448	4.480.364,362	-850,000		32,9205	446.098,586	4.480.784,579	40°28'20.1329"	-3°37'37.7256"
4		Clotoide	95,000	1.897,869	446.945,841	4.480.716,325		284,165	5,1175	446.949,937	4.480.811,223	40°28'31.5722"	-3°37'33.2286"
4	9	Recta	235,417	1.992,869	446.949,937	4.480.811,223			1,5600	0,0245012	0,9996998	40°28'34.6508"	-3°37'33.0833"
4		Clotoide	100,000	2.228,286	446.955,705	4.481.046,569		173,205	1,5600	446.955,705	4.481.046,569	40°28'42.2845"	-3°37'32.9092"
4	10	Circular	384,622	2.328,286	446.963,691	4.481.146,126	300,000		12,1703	447.258,226	4.481.089,124	40°28'45.5151"	-3°37'32.6000"
4		Clotoide	100,000	2.712,908	447.229,006	4.481.387,697		173,205	93,7897	447.328,874	4.481.386,342	40°28'53.4102"	-3°37'21.4043"
4	11	Recta	48,373	2.812,908	447.328,874	4.481.386,342			104,4000	0,9976125	-0,0690600	40°28'53.3891"	-3°37'17.1623"
4		Clotoide	100,000	2.861,281	447.377,131	4.481.383,001		173,205	104,4000	447.377,131	4.481.383,001	40°28'53.2918"	-3°37'15.1118"
4	12	Circular	201,416	2.961,281	447.476,999	4.481.381,646	-300,000		93,7897	447.447,780	4.481.680,219	40°28'53.2706"	-3°37'10.8698"
4		Clotoide	100,000	3.162,697	447.656,391	4.481.464,624		173,205	51,0479	447.720,023	4.481.541,607	40°28'56.0024"	-3°37'03.2754"
4	13	Recta	176,158	3.262,697	447.720,023	4.481.541,607			40,4375	0,5933315	0,8049582	40°28'58.5135"	-3°37'00.5956"
4		Clotoide	95,000	3.438,855	447.824,543	4.481.683,407		200,935	40,4375	447.824,543	4.481.683,407	40°29'03.1358"	-3°36'56.1984"
4	14	Circular	302,491	3.533,855	447.883,685	4.481.757,684	425,000		47,5527	448.195,534	4.481.468,936	40°29'05.5580"	-3°36'53.7084"
4		Clotoide	95,000	3.836,346	448.147,992	4.481.891,268		200,935	92,8637	448.242,872	4.481.894,836	40°29'09.9498"	-3°36'42.5216"
4	15	Recta	544,909	3.931,346	448.242,872	4.481.894,836			99,9789	0,9999999	0,0003319	40°29'10.0869"	-3°36'38.4926"

EJE	DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
4		Clotoide	65,000	4.476,254	448.787,781	4.481.895,017		254,951	99,9789	448.787,781	4.481.895,017	40°29'10.2144"	-3°36'15.3477"
4	16	Circular	57,648	4.541,254	448.852,774	4.481.894,334	1.000,000		102,0479	448.820,612	4.480.894,851	40°29'10.2067"	-3°36'12.5869"
4		Clotoide	65,000	4.598,902	448.910,307	4.481.890,821		254,951	105,7179	448.974,901	4.481.883,590	40°29'10.1055"	-3°36'10.1422"
4	17	Recta	116,231	4.663,902	448.974,901	4.481.883,590			107,7869	0,9925287	-0,1220114	40°29'09.8853"	-3°36'07.3965"
4		Clotoide	100,000	4.780,133	449.090,263	4.481.869,408		173,205	107,7869	449.090,263	4.481.869,408	40°29'09.4508"	-3°36'02.4924"
4	18	Circular	407,289	4.880,133	449.189,917	4.481.862,744	-300,000		97,1766	449.176,616	4.482.162,449	40°29'09.2567"	-3°35'58.2577"
4		Clotoide	100,000	5.287,422	449.472,352	4.482.112,045		173,205	10,7471	449.478,110	4.482.211,755	40°29'17.4038"	-3°35'46.3329"
4	19	Recta	371,033	5.387,422	449.478,110	4.482.211,755			0,1368	0,0021487	0,9999977	40°29'20.6387"	-3°35'46.1169"
4		Clotoide	100,000	5.758,455	449.478,908	4.482.582,787		173,205	0,1368	449.478,908	4.482.582,787	40°29'32.6717"	-3°35'46.1895"
4	20	Circular	417,975	5.858,455	449.473,577	4.482.682,521	-300,000		389,5265	449.177,628	4.482.633,388	40°29'35.9050"	-3°35'46.4446"
4		Clotoide	100,000	6.276,430	449.181,537	4.482.933,363		173,205	300,8295	449.082,140	4.482.923,581	40°29'43.9758"	-3°35'58.9227"
4	21	Recta	228,303	6.376,430	449.082,140	4.482.923,581			290,2191	-0,9882210	-0,1530336	40°29'43.6367"	-3°36'03.1424"
4		Clotoide	65,000	6.604,733	448.856,526	4.482.888,643		279,285	290,2191	448.856,526	4.482.888,643	40°29'42.4537"	-3°36'12.7164"
4	22	Circular	119,972	6.669,733	448.792,207	4.482.879,276	1.200,000		291,9433	448.640,747	4.484.069,680	40°29'42.1356"	-3°36'15.4460"
4		Clotoide	65,000	6.789,705	448.672,636	4.482.870,103		279,285	298,3081	448.607,641	4.482.869,550	40°29'41.8115"	-3°36'20.5228"
4	23	Recta	254,236	6.854,705	448.607,641	4.482.869,550			300,0322	-0,9999999	0,0005063	40°29'41.7791"	-3°36'23.2837"
4		Clotoide	86,000	7.108,941	448.353,404	4.482.869,678		190,053	300,0322	448.353,404	4.482.869,678	40°29'41.7265"	-3°36'34.0838"
4	24	Circular	37,738	7.194,941	448.267,496	4.482.872,654	420,000		306,5500	448.310,632	4.483.290,433	40°29'41.8037"	-3°36'37.7341"
4		Clotoide	86,000	7.232,679	448.230,182	4.482.878,210		190,053	312,2702	448.147,133	4.482.900,392	40°29'41.9755"	-3°36'39.3208"
4	25	Recta	37,703	7.318,679	448.147,133	4.482.900,392			318,7880	-0,9567671	0,2908551	40°29'42.6762"	-3°36'42.8553"
4		Clotoide	86,000	7.356,382	448.111,060	4.482.911,358		190,053	318,7880	448.111,060	4.482.911,358	40°29'43.0237"	-3°36'44.3909"
4	26	Circular	37,464	7.442,382	448.028,012	4.482.933,539	-420,000		312,2702	447.947,561	4.482.521,316	40°29'43.7244"	-3°36'47.9254"
4		Clotoide	86,000	7.479,846	447.990,970	4.482.939,067		190,053	306,5915	447.905,063	4.482.942,099	40°29'43.8953"	-3°36'49.5006"
4	27	Recta	783,808	7.565,846	447.905,063	4.482.942,099			300,0737	-0,9999993	0,0011577	40°29'43.9742"	-3°36'53.1509"
4				8.349,654	447.121,256	4.482.943,007			300,0737			40°29'43.8252"	-3°37'26.4478"

#### EJE 4. ALTERNATIVA 4.

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
4	RECTA	Horizontal	0,000	445.517,095	4.480.018,499	0,000	650,600	101,250000	0,000	0,00	686,830	40°28'08.6083"	-3°38'33.6886"
4	RECTA	Horizontal	20,000	445.537,091	4.480.018,107	0,000	650,600	101,250000	0,000	0,00	686,748	40°28'08.6003"	-3°38'32.8394"
4	RECTA	Horizontal	40,000	445.557,087	4.480.017,714	0,000	650,600	101,250000	0,000	0,00	686,508	40°28'08.5923"	-3°38'31.9902"
4	RECTA	Horizontal	60,000	445.577,083	4.480.017,321	0,000	650,600	101,250000	0,000	0,00	686,264	40°28'08.5843"	-3°38'31.1409"
4	RECTA	Horizontal	80,000	445.597,079	4.480.016,929	0,000	650,600	101,250000	0,000	0,00	686,083	40°28'08.5763"	-3°38'30.2917"
4	RECTA	Horizontal	100,000	445.617,076	4.480.016,536	0,000	650,600	101,250000	0,000	0,00	685,837	40°28'08.5683"	-3°38'29.4425"
4	RECTA	Horizontal	120,000	445.637,072	4.480.016,143	0,000	650,600	101,250000	0,000	0,00	685,651	40°28'08.5602"	-3°38'28.5932"
4	RECTA	Horizontal	140,000	445.657,068	4.480.015,751	0,000	650,600	101,250000	0,000	0,00	685,455	40°28'08.5522"	-3°38'27.7440"
4	RECTA	Horizontal	160,000	445.677,064	4.480.015,358	0,000	650,600	101,250000	0,000	0,00	685,033	40°28'08.5442"	-3°38'26.8948"
4	RECTA	Horizontal	180,000	445.697,060	4.480.014,965	0,000	650,600	101,250000	0,000	0,00	684,837	40°28'08.5362"	-3°38'26.0455"
4	RECTA	Horizontal	200,000	445.717,056	4.480.014,573	0,000	650,600	101,250000	0,000	0,00	684,890	40°28'08.5281"	-3°38'25.1963"
4	RECTA	Horizontal	220,000	445.737,052	4.480.014,180	0,000	650,600	101,250000	0,000	0,00	684,427	40°28'08.5201"	-3°38'24.3471"
4	RECTA	Horizontal	240,000	445.757,049	4.480.013,787	0,000	650,600	101,250000	0,000	0,00	683,960	40°28'08.5121"	-3°38'23.4978"
4	RECTA	Horizontal	260,000	445.777,045	4.480.013,395	0,000	650,600	101,250000	0,000	0,00	683,493	40°28'08.5040"	-3°38'22.6486"
4	RECTA	Horizontal	280,000	445.797,041	4.480.013,002	0,000	650,600	101,250000	0,000	0,00	683,068	40°28'08.4960"	-3°38'21.7994"
4	CLOT.	Horizontal	293,457	445.810,495	4.480.012,738	1.000.000,000	650,600	101,250000	0,000	0,00	682,788	40°28'08.4906"	-3°38'21.2280"
4	CLOT.	Horizontal	300,000	445.817,037	4.480.012,607	4.126,326	650,600	101,300476	0,000	9,60	682,652	40°28'08.4879"	-3°38'20.9501"
4	CIRC.	Horizontal	308,457	445.825,492	4.480.012,422	1.800,000	650,600	101,515258	0,000	22,00	682,551	40°28'08.4839"	-3°38'20.5911"
4	CIRC.	Horizontal	320,000	445.837,031	4.480.012,111	1.800,000	650,600	101,923521	0,000	22,00	682,404	40°28'08.4765"	-3°38'20.1010"
4	CIRC.	Horizontal	340,000	445.857,018	4.480.011,395	1.800,000	650,600	102,630876	0,000	22,00	682,140	40°28'08.4580"	-3°38'19.2520"
4	CLOT.	Horizontal	345,764	445.862,777	4.480.011,148	1.800,000	650,600	102,834742	0,000	22,00	682,109	40°28'08.4513"	-3°38'19.0074"
4	CLOT.	Horizontal	360,000	445.876,997	4.480.010,476	35.332,581	650,600	103,099312	0,000	1,12	681,887	40°28'08.4328"	-3°38'18.4034"
4	RECTA	Horizontal	360,764	445.877,760	4.480.010,439	0,000	650,600	103,100000	0,000	0,00	681,874	40°28'08.4318"	-3°38'18.3709"
4	RECTA	Horizontal	380,000	445.896,973	4.480.009,502	0,000	650,600	103,100000	0,000	0,00	681,456	40°28'08.4059"	-3°38'17.5548"
4	RECTA	Horizontal	400,000	445.916,949	4.480.008,529	0,000	650,600	103,100000	0,000	0,00	681,344	40°28'08.3791"	-3°38'16.7062"
4	RECTA	Horizontal	420,000	445.936,925	4.480.007,555	0,000	650,600	103,100000	0,000	0,00	681,249	40°28'08.3522"	-3°38'15.8577"
4	RECTA	Horizontal	440,000	445.956,902	4.480.006,582	0,000	650,600	103,100000	0,000	0,00	681,083	40°28'08.3253"	-3°38'15.0091"
4	RECTA	Horizontal	460,000	445.976,878	4.480.005,608	0,000	650,600	103,100000	0,000	0,00	680,935	40°28'08.2984"	-3°38'14.1605"
4	RECTA	Horizontal	480,000	445.996,854	4.480.004,635	0,000	650,600	103,100000	0,000	0,00	680,598	40°28'08.2715"	-3°38'13.3120"
4	RECTA	Horizontal	500,000	446.016,831	4.480.003,661	0,000	650,600	103,100000	0,000	0,00	680,205	40°28'08.2446"	-3°38'12.4634"
4	RECTA	Horizontal	520,000	446.036,807	4.480.002,688	0,000	650,600	103,100000	0,000	0,00	680,331	40°28'08.67"	-3°38'11.6148"
4	CLOT.	Horizontal	530,152	446.046,947	4.480.002,194	1.000.000,000	650,600	103,100000	0,000	0,00	680,728	40°28'08.2040"	-3°38'11.1841"
4	CLOT.	KV -6000	540,000	446.056,783	4.480.001,708	2.691,036	650,594	103,216482	-1,425	14,77	681,003	40°28'08.1906"	-3°38'10.7663"
4	CLOT.	KV -6000	560,000	446.076,751	4.480.000,574	887,846	650,532	104,170090	-4,759	44,77	681,075	40°28'08.1585"	-3°38'09.9180"
4	CLOT.	Pendiente	580,000	446.096,687	4.479.998,990	531,621	650,404	106,084635	-8,000	74,77	681,215	40°28'08.1118"	-3°38'09.0710"
4	CIRC.	Pendiente	580,152	446.096,839	4.479.998,975	530,000	650,402	106,102923	-8,000	75,00	681,216	40°28'08.1113"	-3°38'09.0645"
4	CIRC.	Pendiente	600,000	446.116,555	4.479.996,706	530,000	650,244	108,486946	-8,000	75,00	681,639	40°28'08.0423"	-3°38'08.2266"
4	CLOT.	Pendiente	614,923	446.131,316	4.479.994,515	530,000	650,124	110,279442	-8,000	75,00	681,393	40°28'07.9747"	-3°38'07.5991"
4	CLOT.	Pendiente	620,000	446.136,323	4.479.993,675	589,899	650,084	110,858322	-8,000	67,38	679,251	40°28'07.9487"	-3°38'07.3862"
4	CLOT.	Pendiente	640,000	446.155,981	4.479.989,996	1.063,278	649,924	112,536256	-8,000	37,38	679,123	40°28'07.8339"	-3°38'06.5504"
4	CLOT.	Pendiente	660,000	446.175,567	4.479.985,948	5.382,974	649,764	113,253255	-8,000	7,38	678,037	40°28'07.7072"	-3°38'05.7174"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
4	RECTA	Pendiente	664,923	446.180,383	4.479.984,930	0,000	649,724	113,282366	-8,000	0,00	678,052	40°28'07.6753"	-3°38'05.5126"
4	RECTA	Pendiente	680,000	446.195,133	4.479.981,807	0,000	649,604	113,282366	-8,000	0,00	678,022	40°28'07.5775"	-3°38'04.8853"
4	RECTA	Pendiente	700,000	446.214,700	4.479.977,664	0,000	649,444	113,282366	-8,000	0,00	677,693	40°28'07.4477"	-3°38'04.0532"
4	RECTA	Pendiente	720,000	446.234,266	4.479.973,521	0,000	649,284	113,282366	-8,000	0,00	677,727	40°28'07.35"	-3°38'03.2211"
4	RECTA	Pendiente	740,000	446.253,832	4.479.969,379	0,000	649,124	113,282366	-8,000	0,00	677,566	40°28'07.1881"	-3°38'02.3889"
4	RECTA	Pendiente	760,000	446.273,398	4.479.965,236	0,000	648,964	113,282366	-8,000	0,00	677,212	40°28'07.0583"	-3°38'01.5568"
4	CLOT.	KV -3300	779,992	446.292,957	4.479.961,095	-1.000.000,000	648,784	113,282366	-11,437	0,00	677,487	40°28'06.9286"	-3°38'00.7250"
4	CLOT.	KV -3300	780,000	446.292,965	4.479.961,094	-1.000.000,000	648,784	113,282366	-11,440	-0,01	677,487	40°28'06.9285"	-3°38'00.7247"
4	CLOT.	KV -3300	800,000	446.312,540	4.479.956,995	-1.499,410	648,495	112,857618	-17,500	-30,01	677,776	40°28'06.8002"	-3°37'59.8922"
4	CLOT.	KV -3300	820,000	446.332,168	4.479.953,157	-749,852	648,084	111,584045	-23,561	-60,01	677,357	40°28'06.6803"	-3°37'59.0576"
4	CLOT.	KV -3300	840,000	446.351,891	4.479.949,845	-499,934	647,552	109,461645	-29,622	-90,01	676,284	40°28'06.5774"	-3°37'58.2191"
4	CLOT.	Pendiente	860,000	446.371,730	4.479.947,324	-374,963	646,909	106,490419	-33,300	-120,01	676,874	40°28'06.5003"	-3°37'57.3759"
4	CIRC.	Pendiente	879,992	446.391,665	4.479.945,864	-300,000	646,243	102,672036	-33,300	-150,00	677,107	40°28'06.4576"	-3°37'56.5289"
4	CIRC.	Pendiente	880,000	446.391,673	4.479.945,864	-300,000	646,243	102,670366	-33,300	-150,00	677,107	40°28'06.4576"	-3°37'56.5286"
4	CIRC.	Pendiente	900,000	446.411,669	4.479.945,692	-300,000	645,577	98,426234	-33,300	-150,00	676,389	40°28'06.4566"	-3°37'55.6794"
4	CIRC.	Pendiente	920,000	446.431,631	4.479.946,852	-300,000	644,911	94,182102	-33,300	-150,00	675,867	40°28'06.4989"	-3°37'54.8321"
4	CIRC.	Pendiente	940,000	446.451,472	4.479.949,339	-300,000	644,245	89,937971	-33,300	-150,00	675,862	40°28'06.5842"	-3°37'53.9903"
4	CIRC.	KV 2400	960,000	446.471,104	4.479.953,143	-300,000	643,652	85,693839	-25,471	-150,00	674,638	40°28'06.7121"	-3°37'53.1579"
4	CIRC.	KV 2400	980,000	446.490,438	4.479.958,246	-300,000	643,226	81,449707	-17,137	-150,00	675,117	40°28'06.8821"	-3°37'52.3384"
4	CIRC.	KV 2400	1.000,000	446.509,389	4.479.964,626	-300,000	642,967	77,205575	-8,804	-150,00	673,948	40°28'07.0934"	-3°37'51.5356"
4	CIRC.	KV 2400	1.020,000	446.527,873	4.479.972,254	-300,000	642,874	72,961443	-0,471	-150,00	673,331	40°28'07.3450"	-3°37'50.7530"
4	CIRC.	KV 2400	1.040,000	446.545,808	4.479.981,096	-300,000	642,948	68,717312	7,863	-150,00	673,255	40°28'07.6359"	-3°37'49.9941"
4	CIRC.	KV 2400	1.060,000	446.563,114	4.479.991,114	-300,000	643,188	64,473180	16,196	-150,00	673,975	40°28'07.9648"	-3°37'49.2623"
4	CIRC.	KV 2400	1.080,000	446.579,715	4.480.002,262	-300,000	643,596	60,229048	24,529	-150,00	674,321	40°28'08.3302"	-3°37'48.5608"
4	CIRC.	Rampa	1.100,000	446.595,535	4.480.014,491	-300,000	644,169	55,984916	32,000	-150,00	674,767	40°28'08.7305"	-3°37'47.8927"
4	CIRC.	Rampa	1.120,000	446.610,506	4.480.027,748	-300,000	644,809	51,740784	32,000	-150,00	674,564	40°28'09.1638"	-3°37'47.2610"
4	CIRC.	KV -3300	1.140,000	446.624,561	4.480.041,971	-300,000	645,446	47,496652	30,691	-150,00	673,479	40°28'09.6284"	-3°37'46.6684"
4	CLOT.	KV -3300	1.141,924	446.625,862	4.480.043,389	-300,000	645,504	47,088366	30,108	-150,00	673,437	40°28'09.6746"	-3°37'46.6136"
4	CLOT.	KV -3300	1.160,000	446.637,662	4.480.057,079	-366,193	645,999	43,599204	24,630	-122,89	668,915	40°28'10.1214"	-3°37'46.1167"
4	CLOT.	KV -3300	1.180,000	446.649,919	4.480.072,880	-484,465	646,431	40,546655	18,569	-92,89	667,619	40°28'10.6366"	-3°37'45.6010"
4	CLOT.	KV -3300	1.200,000	446.661,515	4.480.089,175	-715,581	646,742	38,342932	12,509	-62,89	667,705	40°28'11.1678"	-3°37'45.1135"
4	CLOT.	KV -3300	1.220,000	446.672,651	4.480.105,787	-1.368,363	646,931	36,988035	6,448	-32,89	667,766	40°28'11.7091"	-3°37'44.6457"
4	CLOT.	KV -3300	1.240,000	446.683,543	4.480.122,561	-15.592,495	647,000	36,481965	0,388	-2,89	667,815	40°28'12.2556"	-3°37'44.1882"
4	RECTA	Horizontal	1.241,924	446.684,586	4.480.124,178	0,000	647,000	36,478037	0,000	0,00	667,997	40°28'12.3083"	-3°37'44.1444"
4	RECTA	Horizontal	1.260,000	446.694,386	4.480.139,366	0,000	647,000	36,478037	0,000	0,00	669,303	40°28'12.8031"	-3°37'43.7329"
4	RECTA	Horizontal	1.280,000	446.705,229	4.480.156,172	0,000	647,000	36,478037	0,000	0,00	670,320	40°28'13.3506"	-3°37'43.2775"
4	RECTA	Horizontal	1.300,000	446.716,072	4.480.172,978	0,000	647,000	36,478037	0,000	0,00	670,824	40°28'13.8982"	-3°37'42.8221"
4	RECTA	Horizontal	1.320,000	446.726,915	4.480.189,783	0,000	647,000	36,478037	0,000	0,00	671,505	40°28'14.4457"	-3°37'42.3668"
4	RECTA	Horizontal	1.340,000	446.737,758	4.480.206,589	0,000	647,000	36,478037	0,000	0,00	671,467	40°28'14.9932"	-3°37'41.9114"
4	RECTA	Horizontal	1.360,000	446.748,601	4.480.223,394	0,000	647,000	36,478037	0,000	0,00	671,306	40°28'15.5407"	-3°37'41.4560"
4	RECTA	KV 6300	1.380,000	446.759,444	4.480.240,200	0,000	647,020	36,478037	2,498	0,00	675,461	40°28'16.0882"	-3°37'41.0006"
4	RECTA	KV 6300	1.400,000	446.770,287	4.480.257,006	0,000	647,101	36,478037	5,673	0,00	671,967	40°28'16.6358"	-3°37'40.5453"
4	RECTA	KV 6300	1.420,000	446.781,130	4.480.273,811	0,000	647,247	36,478037	8,847	0,00	673,221	40°28'17.1833"	-3°37'40.0899"



EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
4	CLOT.	KV 6300	1.431,651	446.787,447	4.480.283,601	-1.000.000,000	647,360	36,478037	10,696	0,00	674,062	40°28'17.5022"	-3°37'39.8246"
4	CLOT.	KV 6300	1.440,000	446.791,972	4.480.290,618	-9.671,509	647,455	36,450558	12,022	-6,59	674,500	40°28'17.7308"	-3°37'39.6346"
4	CLOT.	KV 6300	1.460,000	446.802,777	4.480.307,448	-2.848,398	647,727	36,161233	15,196	-22,38	676,257	40°28'18.2791"	-3°37'39.1808"
4	CLOT.	KV 6300	1.480,000	446.813,463	4.480.324,354	-1.670,139	648,063	35,556554	18,371	-38,17	677,822	40°28'18.8299"	-3°37'38.7321"
4	CLOT.	KV 6300	1.500,000	446.823,945	4.480.341,386	-1.181,432	648,462	34,636522	21,546	-53,96	679,378	40°28'19.3847"	-3°37'38.2921"
4	CLOT.	KV 6300	1.520,000	446.834,138	4.480.358,594	-913,986	648,925	33,401136	24,720	-69,75	680,846	40°28'19.9451"	-3°37'37.8645"
4	CIRC.	KV 6300	1.526,651	446.837,448	4.480.364,362	-850,000	649,093	32,920456	25,776	-75,00	681,526	40°28'20.1329"	-3°37'37.7256"
4	CIRC.	Rampa	1.540,000	446.843,956	4.480.376,017	-850,000	649,451	31,920643	27,500	-75,00	682,825	40°28'20.5124"	-3°37'37.4528"
4	CIRC.	Rampa	1.560,000	446.853,362	4.480.393,667	-850,000	650,001	30,422714	27,500	-75,00	685,036	40°28'21.0869"	-3°37'37.0587"
4	CIRC.	Rampa	1.580,000	446.862,351	4.480.411,533	-850,000	650,551	28,924786	27,500	-75,00	687,600	40°28'21.6684"	-3°37'36.6824"
4	CIRC.	Rampa	1.600,000	446.870,916	4.480.429,605	-850,000	651,101	27,426857	27,500	-75,00	691,033	40°28'22.2565"	-3°37'36.3241"
4	CIRC.	Rampa	1.620,000	446.879,054	4.480.447,875	-850,000	651,651	25,928928	27,500	-75,00	691,194	40°28'22.8508"	-3°37'35.9840"
4	CIRC.	Rampa	1.640,000	446.886,759	4.480.466,330	-850,000	652,201	24,430999	27,500	-75,00	690,738	40°28'23.4511"	-3°37'35.6623"
4	CIRC.	Rampa	1.660,000	446.894,029	4.480.484,962	-850,000	652,751	22,933070	27,500	-75,00	693,212	40°28'24.0570"	-3°37'35.3592"
4	CIRC.	Rampa	1.680,000	446.900,858	4.480.503,759	-850,000	653,301	21,435141	27,500	-75,00	695,608	40°28'24.6682"	-3°37'35.0749"
4	CIRC.	Rampa	1.700,000	446.907,243	4.480.522,712	-850,000	653,851	19,937212	27,500	-75,00	696,230	40°28'25.2844"	-3°37'34.8095"
4	CIRC.	Rampa	1.720,000	446.913,180	4.480.541,810	-850,000	654,401	18,439283	27,500	-75,00	696,699	40°28'25.9051"	-3°37'34.5631"
4	CIRC.	Rampa	1.740,000	446.918,666	4.480.561,042	-850,000	654,951	16,941355	27,500	-75,00	697,077	40°28'26.5301"	-3°37'34.3359"
4	CIRC.	Rampa	1.760,000	446.923,698	4.480.580,399	-850,000	655,501	15,443426	27,500	-75,00	697,890	40°28'27.1590"	-3°37'34.1280"
4	CIRC.	Rampa	1.780,000	446.928,274	4.480.599,868	-850,000	656,051	13,945497	27,500	-75,00	698,202	40°28'27.7914"	-3°37'33.9396"
4	CIRC.	Rampa	1.800,000	446.932,390	4.480.619,439	-850,000	656,601	12,447568	27,500	-75,00	697,930	40°28'28.4271"	-3°37'33.7707"
4	CIRC.	Rampa	1.820,000	446.936,044	4.480.639,102	-850,000	657,151	10,949639	27,500	-75,00	697,438	40°28'29.0656"	-3°37'33.6214"
4	CIRC.	Rampa	1.840,000	446.939,235	4.480.658,845	-850,000	657,701	9,451710	27,500	-75,00	697,565	40°28'29.7066"	-3°37'33.4919"
4	CIRC.	Rampa	1.860,000	446.941,961	4.480.678,658	-850,000	658,251	7,953781	27,500	-75,00	697,616	40°28'30.3498"	-3°37'33.3821"
4	CIRC.	KV -6300	1.880,000	446.944,219	4.480.698,530	-850,000	658,800	6,455852	27,311	-75,00	697,581	40°28'30.9948"	-3°37'33.2921"
4	CLOT.	KV -6300	1.897,869	446.945,841	4.480.716,325	-850,000	659,263	5,117532	24,475	-75,00	697,599	40°28'31.5722"	-3°37'33.2286"
4	CLOT.	KV -6300	1.900,000	446.946,010	4.480.718,449	-869,505	659,315	4,959714	24,136	-73,32	697,600	40°28'31.6412"	-3°37'33.2221"
4	CLOT.	KV -6300	1.920,000	446.947,353	4.480.738,403	-1.108,154	659,766	3,653063	20,962	-57,53	697,536	40°28'32.2886"	-3°37'33.1711"
4	CLOT.	KV -6300	1.940,000	446.948,336	4.480.758,379	-1.527,362	660,153	2,661766	17,787	-41,74	697,420	40°28'32.9367"	-3°37'33.1353"
4	CLOT.	KV -6300	1.960,000	446.949,058	4.480.778,366	-2.456,726	660,477	1,985823	14,612	-25,95	697,045	40°28'33.5850"	-3°37'33.1107"
4	CLOT.	KV -6300	1.980,000	446.949,617	4.480.798,358	-6.274,793	660,738	1,625233	11,438	-10,16	697,041	40°28'34.2335"	-3°37'33.0930"
4	RECTA	KV -6300	1.992,869	446.949,937	4.480.811,223	0,000	660,872	1,559951	9,395	0,00	696,999	40°28'34.6508"	-3°37'33.0833"
4	RECTA	KV -6300	2.000,000	446.950,111	4.480.818,352	0,000	660,935	1,559951	8,263	0,00	696,778	40°28'34.8820"	-3°37'33.0780"
4	RECTA	KV -6300	2.020,000	446.950,601	4.480.838,346	0,000	661,068	1,559951	5,089	0,00	695,870	40°28'35.5306"	-3°37'33.0632"
4	RECTA	KV -6300	2.040,000	446.951,091	4.480.858,340	0,000	661,138	1,559951	1,914	0,00	694,948	40°28'36.51"	-3°37'33.0484"
4	RECTA	Horizontal	2.060,000	446.951,581	4.480.878,334	0,000	661,150	1,559951	0,000	0,00	694,349	40°28'36.8276"	-3°37'33.0336"
4	RECTA	Horizontal	2.080,000	446.952,071	4.480.898,328	0,000	661,150	1,559951	0,000	0,00	693,755	40°28'37.4762"	-3°37'33.0188"
4	RECTA	Horizontal	2.100,000	446.952,561	4.480.918,322	0,000	661,150	1,559951	0,000	0,00	692,940	40°28'38.1247"	-3°37'33.0040"
4	RECTA	Horizontal	2.120,000	446.953,051	4.480.938,316	0,000	661,150	1,559951	0,000	0,00	692,273	40°28'38.7732"	-3°37'32.9893"
4	RECTA	Horizontal	2.140,000	446.953,542	4.480.958,310	0,000	661,150	1,559951	0,000	0,00	691,484	40°28'39.46"	-3°37'32.9745"
4	RECTA	Horizontal	2.160,000	446.954,032	4.480.978,304	0,000	661,150	1,559951	0,000	0,00	690,925	40°28'40.0703"	-3°37'32.9597"
4	RECTA	Horizontal	2.180,000	446.954,522	4.480.998,298	0,000	661,150	1,559951	0,000	0,00	690,128	40°28'40.7188"	-3°37'32.9449"
4	RECTA	Horizontal	2.200,000	446.955,012	4.481.018,292	0,000	661,150	1,559951	0,000	0,00	689,414	40°28'41.3673"	-3°37'32.9301"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
4	RECTA	Horizontal	2.220,000	446.955,502	4.481.038,286	0,000	661,150	1,559951	0,000	0,00	688,729	40°28'42.0159"	-3°37'32.9153"
4	CLOT.	Horizontal	2.228,286	446.955,705	4.481.046,569	1.000.000,000	661,150	1,559951	0,000	0,00	688,589	40°28'42.2845"	-3°37'32.9092"
4	CLOT.	KV -3300	2.240,000	446.956,001	4.481.058,280	2.560,979	661,149	1,705550	-0,737	17,57	688,318	40°28'42.6644"	-3°37'32.9001"
4	CLOT.	KV -3300	2.260,000	446.956,659	4.481.078,269	945,946	661,074	2,627132	-6,798	47,57	688,109	40°28'43.3128"	-3°37'32.8782"
4	CLOT.	KV -3300	2.280,000	446.957,739	4.481.098,239	580,111	660,877	4,397541	-12,858	77,57	687,953	40°28'43.9607"	-3°37'32.8383"
4	CLOT.	KV -3300	2.300,000	446.959,508	4.481.118,159	418,327	660,559	7,016775	-18,919	107,57	687,738	40°28'44.6071"	-3°37'32.7692"
4	CLOT.	KV -3300	2.320,000	446.962,226	4.481.137,971	327,103	660,120	10,484837	-24,980	137,57	687,509	40°28'45.2503"	-3°37'32.6597"
4	CIRC.	KV -3300	2.328,286	446.963,691	4.481.146,126	300,000	659,903	12,170280	-27,490	150,00	687,393	40°28'45.5151"	-3°37'32.6000"
4	CIRC.	KV -3300	2.340,000	446.966,141	4.481.157,580	300,000	659,560	14,656125	-31,040	150,00	687,237	40°28'45.8871"	-3°37'32.4994"
4	CIRC.	Pendiente	2.360,000	446.971,350	4.481.176,886	300,000	658,903	18,900257	-33,300	150,00	686,853	40°28'46.5144"	-3°37'32.2840"
4	CIRC.	Pendiente	2.380,000	446.977,834	4.481.195,802	300,000	658,237	23,144389	-33,300	150,00	686,271	40°28'47.1294"	-3°37'32.0143"
4	CIRC.	Pendiente	2.400,000	446.985,563	4.481.214,244	300,000	657,571	27,388521	-33,300	150,00	684,554	40°28'47.7292"	-3°37'31.6916"
4	CIRC.	Pendiente	2.420,000	446.994,504	4.481.232,130	300,000	656,905	31,632652	-33,300	150,00	683,483	40°28'48.3113"	-3°37'31.3172"
4	CIRC.	Pendiente	2.440,000	447.004,617	4.481.249,381	300,000	656,239	35,876784	-33,300	150,00	682,456	40°28'48.8731"	-3°37'30.8929"
4	CIRC.	Pendiente	2.460,000	447.015,856	4.481.265,920	300,000	655,573	40,120916	-33,300	150,00	682,031	40°28'49.4121"	-3°37'30.4206"
4	CIRC.	Pendiente	2.480,000	447.028,172	4.481.281,673	300,000	654,907	44,365048	-33,300	150,00	681,396	40°28'49.9258"	-3°37'29.9022"
4	CIRC.	Pendiente	2.500,000	447.041,510	4.481.296,571	300,000	654,241	48,609180	-33,300	150,00	680,815	40°28'50.4120"	-3°37'29.3402"
4	CIRC.	Pendiente	2.520,000	447.055,811	4.481.310,547	300,000	653,575	52,853311	-33,300	150,00	680,941	40°28'50.8685"	-3°37'28.7370"
4	CIRC.	Pendiente	2.540,000	447.071,011	4.481.323,540	300,000	652,909	57,097443	-33,300	150,00	682,774	40°28'51.2934"	-3°37'28.0954"
4	CIRC.	Pendiente	2.560,000	447.087,043	4.481.335,491	300,000	652,243	61,341575	-33,300	150,00	681,905	40°28'51.6846"	-3°37'27.4180"
4	CIRC.	Pendiente	2.580,000	447.103,836	4.481.346,347	300,000	651,577	65,585707	-33,300	150,00	679,686	40°28'52.0406"	-3°37'26.7081"
4	CIRC.	Pendiente	2.600,000	447.121,314	4.481.356,061	300,000	650,911	69,829839	-33,300	150,00	675,176	40°28'52.3596"	-3°37'25.9687"
4	CIRC.	Pendiente	2.620,000	447.139,401	4.481.364,588	300,000	650,245	74,073970	-33,300	150,00	675,328	40°28'52.6403"	-3°37'25.2031"
4	CIRC.	Pendiente	2.640,000	447.158,016	4.481.371,892	300,000	649,579	78,318102	-33,300	150,00	674,695	40°28'52.8814"	-3°37'24.4147"
4	CIRC.	Pendiente	2.660,000	447.177,076	4.481.377,940	300,000	648,913	82,562234	-33,300	150,00	673,756	40°28'53.0819"	-3°37'23.6070"
4	CIRC.	Pendiente	2.680,000	447.196,496	4.481.382,704	300,000	648,247	86,806366	-33,300	150,00	672,867	40°28'53.2409"	-3°37'22.7836"
4	CIRC.	Pendiente	2.700,000	447.216,191	4.481.386,164	300,000	647,581	91,050498	-33,300	150,00	672,133	40°28'53.3576"	-3°37'21.9481"
4	CLOT.	Pendiente	2.712,908	447.229,006	4.481.387,697	300,000	647,151	93,789670	-33,300	150,00	671,870	40°28'53.4102"	-3°37'21.4043"
4	CLOT.	Pendiente	2.720,000	447.236,072	4.481.388,306	322,900	646,915	95,241264	-33,300	139,36	671,699	40°28'53.4316"	-3°37'21.1044"
4	CLOT.	Pendiente	2.740,000	447.256,048	4.481.389,226	411,477	646,249	98,759991	-33,300	109,36	671,251	40°28'53.4660"	-3°37'20.2562"
4	CLOT.	Pendiente	2.760,000	447.276,047	4.481.389,174	567,021	645,583	101,429891	-33,300	79,36	670,979	40°28'53.4689"	-3°37'19.4069"
4	CLOT.	Pendiente	2.780,000	447.296,032	4.481.388,417	911,631	644,917	103,250965	-33,300	49,36	670,164	40°28'53.4489"	-3°37'18.5578"
4	CLOT.	Pendiente	2.800,000	447.315,996	4.481.387,221	2.324,132	644,251	104,223213	-33,300	19,36	668,963	40°28'53.4147"	-3°37'17.7096"
4	RECTA	Pendiente	2.812,908	447.328,874	4.481.386,342	0,000	643,821	104,400000	-33,300	0,00	668,110	40°28'53.3891"	-3°37'17.1623"
4	RECTA	Pendiente	2.820,000	447.335,949	4.481.385,852	0,000	643,585	104,400000	-33,300	0,00	667,701	40°28'53.3748"	-3°37'16.8617"
4	RECTA	Pendiente	2.840,000	447.355,901	4.481.384,471	0,000	642,919	104,400000	-33,300	0,00	666,780	40°28'53.3346"	-3°37'16.0139"
4	RECTA	Pendiente	2.860,000	447.375,853	4.481.383,090	0,000	642,253	104,400000	-33,300	0,00	666,278	40°28'53.2944"	-3°37'15.1661"
4	CLOT.	Pendiente	2.861,281	447.377,131	4.481.383,001	-1.000.000,000	642,210	104,400000	-33,300	0,00	666,259	40°28'53.2918"	-3°37'15.1118"
4	CLOT.	Pendiente	2.880,000	447.395,808	4.481.381,745	-1.602,641	641,587	104,028209	-33,300	-28,08	666,546	40°28'53.2553"	-3°37'14.3182"
4	CLOT.	Pendiente	2.900,000	447.415,778	4.481.380,649	-774,811	640,921	102,809333	-33,300	-58,08	667,084	40°28'53.2243"	-3°37'13.4697"
4	CLOT.	Pendiente	2.920,000	447.435,768	4.481.380,069	-510,907	640,255	100,741630	-33,300	-88,08	669,036	40°28'53.2101"	-3°37'12.6205"
4	CLOT.	Pendiente	2.940,000	447.455,766	4.481.380,272	-381,102	639,589	97,825101	-33,300	-118,08	668,040	40°28'53.2212"	-3°37'11.7712"
4	CLOT.	Pendiente	2.960,000	447.475,724	4.481.381,524	-303,893	638,923	94,059745	-33,300	-148,08	667,267	40°28'53.2663"	-3°37'10.9239"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
4	CIRC.	Pendiente	2.961,281	447.476,999	4.481.381,646	-300,000	638,880	93,789670	-33,300	-150,00	667,226	40°28'53.2706"	-3°37'10.8698"
4	CIRC.	Pendiente	2.980,000	447.495,560	4.481.384,049	-300,000	638,257	89,817354	-33,300	-150,00	666,599	40°28'53.3528"	-3°37'10.0822"
4	CIRC.	Pendiente	3.000,000	447.515,184	4.481.387,890	-300,000	637,591	85,573223	-33,300	-150,00	666,483	40°28'53.4818"	-3°37'09.2499"
4	CIRC.	Pendiente	3.020,000	447.534,508	4.481.393,029	-300,000	636,925	81,329091	-33,300	-150,00	665,964	40°28'53.6529"	-3°37'08.4307"
4	CIRC.	Pendiente	3.040,000	447.553,447	4.481.399,445	-300,000	636,259	77,084959	-33,300	-150,00	669,248	40°28'53.8652"	-3°37'07.6282"
4	CIRC.	Pendiente	3.060,000	447.571,917	4.481.407,108	-300,000	635,593	72,840827	-33,300	-150,00	669,185	40°28'54.15"	-3°37'06.8460"
4	CIRC.	Pendiente	3.080,000	447.589,835	4.481.415,984	-300,000	634,927	68,596695	-33,300	-150,00	669,104	40°28'54.4099"	-3°37'06.0877"
4	CIRC.	Pendiente	3.100,000	447.607,122	4.481.426,035	-300,000	634,261	64,352564	-33,300	-150,00	669,377	40°28'54.7398"	-3°37'05.3564"
4	CIRC.	Pendiente	3.120,000	447.623,701	4.481.437,214	-300,000	633,595	60,108432	-33,300	-150,00	668,579	40°28'55.1061"	-3°37'04.6556"
4	CIRC.	Pendiente	3.140,000	447.639,499	4.481.449,473	-300,000	632,929	55,864300	-33,300	-150,00	668,972	40°28'55.5072"	-3°37'03.9883"
4	CIRC.	Pendiente	3.160,000	447.654,445	4.481.462,758	-300,000	632,263	51,620168	-33,300	-150,00	668,547	40°28'55.9415"	-3°37'03.3575"
4	CLOT.	Pendiente	3.162,697	447.656,391	4.481.464,624	-300,000	632,173	51,047863	-33,300	-150,00	668,538	40°28'56.0024"	-3°37'03.2754"
4	CLOT.	Pendiente	3.180,000	447.668,493	4.481.476,989	-362,770	631,597	47,693706	-33,300	-124,05	668,039	40°28'56.4062"	-3°37'02.7650"
4	CLOT.	KV 2100	3.200,000	447.681,737	4.481.491,973	-478,492	630,942	44,608353	-29,958	-94,05	667,450	40°28'56.8951"	-3°37'02.2070"
4	CLOT.	KV 2100	3.220,000	447.694,344	4.481.507,498	-702,627	630,438	42,371826	-20,435	-64,05	666,829	40°28'57.4015"	-3°37'01.6762"
4	CLOT.	KV 2100	3.240,000	447.706,504	4.481.523,376	-1.321,765	630,125	40,984125	-10,911	-34,05	665,262	40°28'57.9192"	-3°37'01.1644"
4	CLOT.	KV 2100	3.260,000	447.718,423	4.481.539,436	-11.123,788	630,002	40,445251	-1,387	-4,05	662,240	40°28'58.4427"	-3°37'00.6629"
4	RECTA	KV 2100	3.262,697	447.720,023	4.481.541,607	0,000	630,000	40,437534	-0,103	0,00	661,974	40°28'58.5135"	-3°37'00.5956"
4	RECTA	Horizontal	3.280,000	447.730,289	4.481.555,535	0,000	630,000	40,437534	0,000	0,00	661,395	40°28'58.9675"	-3°37'00.1637"
4	RECTA	Horizontal	3.300,000	447.742,156	4.481.571,635	0,000	630,000	40,437534	0,000	0,00	661,434	40°28'59.4923"	-3°36'59.6645"
4	RECTA	Horizontal	3.320,000	447.754,023	4.481.587,734	0,000	630,000	40,437534	0,000	0,00	660,698	40°29'00.0171"	-3°36'59.1652"
4	RECTA	Horizontal	3.340,000	447.765,889	4.481.603,833	0,000	630,000	40,437534	0,000	0,00	660,272	40°29'00.5419"	-3°36'58.6660"
4	RECTA	Horizontal	3.360,000	447.777,756	4.481.619,932	0,000	630,000	40,437534	0,000	0,00	653,761	40°29'01.0667"	-3°36'58.1668"
4	RECTA	Horizontal	3.380,000	447.789,623	4.481.636,031	0,000	630,000	40,437534	0,000	0,00	653,490	40°29'01.5915"	-3°36'57.6675"
4	RECTA	Horizontal	3.400,000	447.801,489	4.481.652,130	0,000	630,000	40,437534	0,000	0,00	653,539	40°29'02.1163"	-3°36'57.1683"
4	RECTA	Horizontal	3.420,000	447.813,356	4.481.668,230	0,000	630,000	40,437534	0,000	0,00	653,474	40°29'02.6411"	-3°36'56.6690"
4	CLOT.	KV -2100	3.438,855	447.824,543	4.481.683,407	1.000.000,000	629,993	40,437534	-2,659	0,00	655,981	40°29'03.1358"	-3°36'56.1984"
4	CLOT.	KV -2100	3.440,000	447.825,223	4.481.684,329	35.247,879	629,989	40,438568	-3,205	1,57	655,911	40°29'03.1659"	-3°36'56.1698"
4	CLOT.	KV -2100	3.460,000	447.837,121	4.481.700,405	1.909,393	629,830	40,790044	-12,728	28,94	652,324	40°29'03.6899"	-3°36'55.6692"
4	CLOT.	KV -2100	3.480,000	447.849,186	4.481.716,355	981,275	629,480	41,772227	-22,252	56,30	646,513	40°29'04.2099"	-3°36'55.1615"
4	CLOT.	KV -2100	3.500,000	447.861,574	4.481.732,056	660,311	628,940	43,385116	-31,776	83,67	651,696	40°29'04.7219"	-3°36'54.6399"
4	CLOT.	Pendiente	3.520,000	447.874,432	4.481.747,374	497,563	628,268	45,628713	-33,800	111,04	650,743	40°29'05.2216"	-3°36'54.0984"
4	CIRC.	Pendiente	3.533,855	447.883,685	4.481.757,684	425,000	627,800	47,552696	-33,800	130,00	651,054	40°29'05.5580"	-3°36'53.7084"
4	CIRC.	Pendiente	3.540,000	447.887,893	4.481.762,163	425,000	627,592	48,473242	-33,800	130,00	650,664	40°29'05.7042"	-3°36'53.5310"
4	CIRC.	Pendiente	3.560,000	447.902,028	4.481.776,310	425,000	626,916	51,469100	-33,800	130,00	649,418	40°29'06.1662"	-3°36'52.9348"
4	CIRC.	Pendiente	3.580,000	447.916,812	4.481.789,777	425,000	626,240	54,464957	-33,800	130,00	649,540	40°29'06.6063"	-3°36'52.3109"
4	CIRC.	Pendiente	3.600,000	447.932,213	4.481.802,533	425,000	625,564	57,460815	-33,800	130,00	648,209	40°29'07.0235"	-3°36'51.6605"
4	CIRC.	Pendiente	3.620,000	447.948,198	4.481.814,551	425,000	624,888	60,456673	-33,800	130,00	647,216	40°29'07.4168"	-3°36'50.9851"
4	CIRC.	Pendiente	3.640,000	447.964,730	4.481.825,803	425,000	624,212	63,452531	-33,800	130,00	647,561	40°29'07.7855"	-3°36'50.2862"
4	CIRC.	Pendiente	3.660,000	447.981,773	4.481.836,266	425,000	623,536	66,448388	-33,800	130,00	647,986	40°29'08.1286"	-3°36'49.5654"
4	CIRC.	Pendiente	3.680,000	447.999,289	4.481.845,915	425,000	622,860	69,444246	-33,800	130,00	651,719	40°29'08.4455"	-3°36'48.8243"
4	CIRC.	Pendiente	3.700,000	448.017,240	4.481.854,729	425,000	622,184	72,440104	-33,800	130,00	651,897	40°29'08.7354"	-3°36'48.0644"
4	CIRC.	KV 4200	3.720,000	448.035,586	4.481.862,689	425,000	621,549	75,435962	-29,385	130,00	651,896	40°29'08.9977"	-3°36'47.2876"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
4	CIRC.	KV 4200	3.740,000	448.054,286	4.481.869,777	425,000	621,009	78,431819	-24,623	130,00	652,417	40°29'09.2318"	-3°36'46.4954"
4	CIRC.	KV 4200	3.760,000	448.073,298	4.481.875,978	425,000	620,564	81,427677	-19,861	130,00	652,769	40°29'09.4372"	-3°36'45.6897"
4	CIRC.	KV 4200	3.780,000	448.092,581	4.481.881,278	425,000	620,215	84,423535	-15,099	130,00	653,790	40°29'09.6134"	-3°36'44.8722"
4	CIRC.	Pendiente	3.800,000	448.112,092	4.481.885,664	425,000	619,954	87,419393	-12,000	130,00	654,502	40°29'09.7600"	-3°36'44.0447"
4	CIRC.	Pendiente	3.820,000	448.131,788	4.481.889,128	425,000	619,714	90,415250	-12,000	130,00	655,005	40°29'09.8768"	-3°36'43.2092"
4	CLOT.	Pendiente	3.836,346	448.147,992	4.481.891,268	425,000	619,518	92,863710	-12,000	130,00	655,724	40°29'09.9498"	-3°36'42.5216"
4	CLOT.	Pendiente	3.840,000	448.151,625	4.481.891,662	442,003	619,474	93,400580	-12,000	125,00	655,811	40°29'09.9634"	-3°36'42.3673"
4	CLOT.	Pendiente	3.860,000	448.171,556	4.481.893,313	565,907	619,234	95,965842	-12,000	97,63	655,921	40°29'10.0215"	-3°36'41.5213"
4	CLOT.	Pendiente	3.880,000	448.191,532	4.481.894,260	786,338	618,994	97,900398	-12,000	70,26	656,148	40°29'10.0567"	-3°36'40.6731"
4	CLOT.	Pendiente	3.900,000	448.211,527	4.481.894,698	1.288,058	618,754	99,204247	-12,000	42,89	655,695	40°29'10.0754"	-3°36'39.8239"
4	CLOT.	Pendiente	3.920,000	448.231,527	4.481.894,826	3.558,638	618,514	99,877389	-12,000	15,53	654,938	40°29'10.0840"	-3°36'38.9745"
4	RECTA	Pendiente	3.931,346	448.242,872	4.481.894,836	0,000	618,378	99,978872	-12,000	0,00	654,570	40°29'10.0869"	-3°36'38.4926"
4	RECTA	Pendiente	3.940,000	448.251,527	4.481.894,839	0,000	618,274	99,978872	-12,000	0,00	654,297	40°29'10.0889"	-3°36'38.1250"
4	RECTA	Pendiente	3.960,000	448.271,527	4.481.894,845	0,000	618,034	99,978872	-12,000	0,00	653,058	40°29'10.0936"	-3°36'37.2755"
4	RECTA	Pendiente	3.980,000	448.291,527	4.481.894,852	0,000	617,794	99,978872	-12,000	0,00	652,673	40°29'10.0983"	-3°36'36.4260"
4	RECTA	Pendiente	4.000,000	448.311,527	4.481.894,859	0,000	617,554	99,978872	-12,000	0,00	652,333	40°29'10.1030"	-3°36'35.5765"
4	RECTA	KV 6500	4.020,000	448.331,527	4.481.894,865	0,000	617,327	99,978872	-10,030	0,00	651,880	40°29'10.1077"	-3°36'34.7270"
4	RECTA	KV 6500	4.040,000	448.351,527	4.481.894,872	0,000	617,157	99,978872	-6,953	0,00	651,007	40°29'10.1124"	-3°36'33.8775"
4	RECTA	KV 6500	4.060,000	448.371,527	4.481.894,879	0,000	617,049	99,978872	-3,876	0,00	650,261	40°29'10.1171"	-3°36'33.0280"
4	RECTA	KV 6500	4.080,000	448.391,527	4.481.894,885	0,000	617,002	99,978872	-0,799	0,00	649,932	40°29'10.1218"	-3°36'32.1785"
4	RECTA	Horizontal	4.100,000	448.411,527	4.481.894,892	0,000	617,000	99,978872	0,000	0,00	649,572	40°29'10.1265"	-3°36'31.3290"
4	RECTA	Horizontal	4.120,000	448.431,527	4.481.894,898	0,000	617,000	99,978872	0,000	0,00	649,809	40°29'10.1312"	-3°36'30.4795"
4	RECTA	Horizontal	4.140,000	448.451,527	4.481.894,905	0,000	617,000	99,978872	0,000	0,00	649,568	40°29'10.1358"	-3°36'29.6300"
4	RECTA	Horizontal	4.160,000	448.471,527	4.481.894,912	0,000	617,000	99,978872	0,000	0,00	648,896	40°29'10.1405"	-3°36'28.7806"
4	RECTA	Horizontal	4.180,000	448.491,527	4.481.894,918	0,000	617,000	99,978872	0,000	0,00	648,210	40°29'10.1452"	-3°36'27.9311"
4	RECTA	Horizontal	4.200,000	448.511,527	4.481.894,925	0,000	617,000	99,978872	0,000	0,00	646,734	40°29'10.1499"	-3°36'27.0816"
4	RECTA	Horizontal	4.220,000	448.531,527	4.481.894,932	0,000	617,000	99,978872	0,000	0,00	646,378	40°29'10.1546"	-3°36'26.2321"
4	RECTA	Horizontal	4.240,000	448.551,527	4.481.894,938	0,000	617,000	99,978872	0,000	0,00	644,955	40°29'10.1592"	-3°36'25.3826"
4	RECTA	Horizontal	4.260,000	448.571,527	4.481.894,945	0,000	617,000	99,978872	0,000	0,00	643,626	40°29'10.1639"	-3°36'24.5331"
4	RECTA	Horizontal	4.280,000	448.591,527	4.481.894,952	0,000	617,000	99,978872	0,000	0,00	643,593	40°29'10.1686"	-3°36'23.6836"
4	RECTA	Horizontal	4.300,000	448.611,527	4.481.894,958	0,000	617,000	99,978872	0,000	0,00	643,679	40°29'10.1733"	-3°36'22.8341"
4	RECTA	Horizontal	4.320,000	448.631,527	4.481.894,965	0,000	617,000	99,978872	0,000	0,00	644,039	40°29'10.1779"	-3°36'21.9846"
4	RECTA	KV -3300	4.340,000	448.651,527	4.481.894,971	0,000	617,000	99,978872	-0,283	0,00	643,988	40°29'10.1826"	-3°36'21.1351"
4	RECTA	KV -3300	4.360,000	448.671,527	4.481.894,978	0,000	616,934	99,978872	-6,343	0,00	644,092	40°29'10.1873"	-3°36'20.2856"
4	RECTA	KV -3300	4.380,000	448.691,527	4.481.894,985	0,000	616,746	99,978872	-12,404	0,00	643,816	40°29'10.1919"	-3°36'19.4361"
4	RECTA	KV -3300	4.400,000	448.711,527	4.481.894,991	0,000	616,437	99,978872	-18,464	0,00	643,237	40°29'10.1966"	-3°36'18.5866"
4	RECTA	KV -3300	4.420,000	448.731,527	4.481.894,998	0,000	616,008	99,978872	-24,525	0,00	643,029	40°29'10.2013"	-3°36'17.7371"
4	RECTA	KV -3300	4.440,000	448.751,527	4.481.895,005	0,000	615,456	99,978872	-30,586	0,00	643,033	40°29'10.2059"	-3°36'16.8876"
4	RECTA	Pendiente	4.460,000	448.771,527	4.481.895,011	0,000	614,792	99,978872	-34,500	0,00	643,782	40°29'10.2106"	-3°36'16.0381"
4	CLOT.	Pendiente	4.476,254	448.787,781	4.481.895,017	1.000.000,000	614,231	99,978872	-34,500	0,00	643,513	40°29'10.2144"	-3°36'15.3477"
4	CLOT.	Pendiente	4.480,000	448.791,527	4.481.895,018	17.352,514	614,102	99,985743	-34,500	4,61	643,446	40°29'10.2152"	-3°36'15.1886"
4	CLOT.	Pendiente	4.500,000	448.811,527	4.481.894,990	2.737,320	613,412	100,255001	-34,500	29,23	643,788	40°29'10.2188"	-3°36'14.3391"
4	CLOT.	Pendiente	4.520,000	448.831,526	4.481.894,817	1.485,855	612,722	100,916025	-34,500	53,84	643,109	40°29'10.66"	-3°36'13.4896"



EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
4	CLOT.	Pendiente	4.540,000	448.851,521	4.481.894,374	1.019,674	612,032	101,968815	-34,500	78,46	641,402	40°29'10.2077"	-3°36'12.6402"
4	CIRC.	Pendiente	4.541,254	448.852,774	4.481.894,334	1.000,000	611,988	102,047886	-34,500	80,00	641,294	40°29'10.2067"	-3°36'12.5869"
4	CIRC.	Pendiente	4.560,000	448.871,504	4.481.893,556	1.000,000	611,342	103,241284	-34,500	80,00	638,407	40°29'10.1856"	-3°36'11.7912"
4	CIRC.	Pendiente	4.580,000	448.891,466	4.481.892,338	1.000,000	610,652	104,514524	-34,500	80,00	634,610	40°29'10.1505"	-3°36'10.9429"
4	CLOT.	Pendiente	4.598,902	448.910,307	4.481.890,821	1.000,000	610,000	105,717878	-34,500	80,00	633,622	40°29'10.1055"	-3°36'10.1422"
4	CLOT.	Pendiente	4.600,000	448.911,401	4.481.890,722	1.017,500	609,962	105,787173	-34,500	78,65	633,547	40°29'10.1025"	-3°36'10.0958"
4	CLOT.	Pendiente	4.620,000	448.931,301	4.481.888,731	1.480,562	609,272	106,843027	-34,500	54,03	635,668	40°29'10.0423"	-3°36'09.2499"
4	CLOT.	Pendiente	4.640,000	448.951,173	4.481.886,471	2.719,410	608,582	107,507114	-34,500	29,42	641,985	40°29'09.9735"	-3°36'08.4052"
4	CLOT.	Pendiente	4.660,000	448.971,028	4.481.884,066	16.657,072	607,892	107,779436	-34,500	4,80	640,972	40°29'09.8998"	-3°36'07.5612"
4	RECTA	Pendiente	4.663,902	448.974,901	4.481.883,590	0,000	607,757	107,786893	-34,500	0,00	641,057	40°29'09.8853"	-3°36'07.3965"
4	RECTA	Pendiente	4.680,000	448.990,878	4.481.881,626	0,000	607,202	107,786893	-34,500	0,00	641,587	40°29'09.8251"	-3°36'06.7173"
4	RECTA	Pendiente	4.700,000	449.010,729	4.481.879,185	0,000	606,512	107,786893	-34,500	0,00	641,642	40°29'09.7504"	-3°36'05.8735"
4	RECTA	Pendiente	4.720,000	449.030,579	4.481.876,745	0,000	605,822	107,786893	-34,500	0,00	640,905	40°29'09.6756"	-3°36'05.0296"
4	RECTA	Pendiente	4.740,000	449.050,430	4.481.874,305	0,000	605,132	107,786893	-34,500	0,00	638,583	40°29'09.6009"	-3°36'04.1858"
4	RECTA	Pendiente	4.760,000	449.070,280	4.481.871,865	0,000	604,442	107,786893	-34,500	0,00	636,852	40°29'09.5261"	-3°36'03.3419"
4	RECTA	Pendiente	4.780,000	449.090,131	4.481.869,424	0,000	603,752	107,786893	-34,500	0,00	636,759	40°29'09.4513"	-3°36'02.4980"
4	CLOT.	Pendiente	4.780,133	449.090,263	4.481.869,408	-1.000.000,000	603,747	107,786893	-34,500	0,00	636,750	40°29'09.4508"	-3°36'02.4924"
4	CLOT.	KV 8000	4.800,000	449.109,987	4.481.867,027	-1.510,043	603,062	107,368106	-34,280	-29,80	633,265	40°29'09.3780"	-3°36'01.6540"
4	CLOT.	KV 8000	4.820,000	449.129,872	4.481.864,894	-752,502	602,401	106,100512	-31,780	-59,80	629,037	40°29'09.3132"	-3°36'00.8087"
4	CLOT.	KV 8000	4.840,000	449.149,807	4.481.863,289	-501,111	601,791	103,984092	-29,280	-89,80	627,808	40°29'09.2655"	-3°35'59.9615"
4	CLOT.	KV 8000	4.860,000	449.169,789	4.481.862,481	-375,625	601,230	101,018845	-26,780	-119,80	628,060	40°29'09.2438"	-3°35'59.1126"
4	CLOT.	KV 8000	4.880,000	449.189,784	4.481.862,738	-300,400	600,720	97,204772	-24,280	-149,80	627,739	40°29'09.2565"	-3°35'58.2634"
4	CIRC.	KV 8000	4.880,133	449.189,917	4.481.862,744	-300,000	600,716	97,176563	-24,264	-150,00	627,729	40°29'09.2567"	-3°35'58.2577"
4	CIRC.	KV 8000	4.900,000	449.209,721	4.481.864,281	-300,000	600,259	92,960659	-21,780	-150,00	626,361	40°29'09.3109"	-3°35'57.4170"
4	CIRC.	KV 8000	4.920,000	449.229,510	4.481.867,149	-300,000	599,848	88,716527	-19,280	-150,00	621,207	40°29'09.4083"	-3°35'56.5773"
4	CIRC.	KV 8000	4.940,000	449.249,065	4.481.871,328	-300,000	599,488	84,472396	-16,780	-150,00	618,357	40°29'09.5481"	-3°35'55.7479"
4	CIRC.	KV 8000	4.960,000	449.268,298	4.481.876,801	-300,000	599,177	80,228264	-14,280	-150,00	618,443	40°29'09.7299"	-3°35'54.9326"
4	CIRC.	KV 8000	4.980,000	449.287,123	4.481.883,544	-300,000	598,916	75,984132	-11,780	-150,00	617,862	40°29'09.9526"	-3°35'54.1349"
4	CIRC.	KV 8000	5.000,000	449.305,458	4.481.891,525	-300,000	598,706	71,740000	-9,280	-150,00	617,807	40°29'10.2155"	-3°35'53.3585"
4	CIRC.	Pendiente	5.020,000	449.323,220	4.481.900,710	-300,000	598,539	67,495868	-8,000	-150,00	618,938	40°29'10.5173"	-3°35'52.6067"
4	CIRC.	Pendiente	5.040,000	449.340,330	4.481.911,057	-300,000	598,379	63,251737	-8,000	-150,00	622,186	40°29'10.8566"	-3°35'51.8829"
4	CIRC.	Pendiente	5.060,000	449.356,714	4.481.922,522	-300,000	598,219	59,007605	-8,000	-150,00	625,233	40°29'11.2320"	-3°35'51.1903"
4	CIRC.	Pendiente	5.080,000	449.372,297	4.481.935,053	-300,000	598,059	54,763473	-8,000	-150,00	621,538	40°29'11.6418"	-3°35'50.5320"
4	CIRC.	Pendiente	5.100,000	449.387,011	4.481.948,594	-300,000	597,899	50,519341	-8,000	-150,00	617,780	40°29'12.0842"	-3°35'49.9109"
4	CIRC.	Pendiente	5.120,000	449.400,790	4.481.963,084	-300,000	597,739	46,275209	-8,000	-150,00	617,692	40°29'12.5572"	-3°35'49.3298"
4	CIRC.	Pendiente	5.140,000	449.413,573	4.481.978,461	-300,000	597,579	42,031078	-8,000	-150,00	622,321	40°29'13.0587"	-3°35'48.7912"
4	CIRC.	Pendiente	5.160,000	449.425,303	4.481.994,655	-300,000	597,419	37,786946	-8,000	-150,00	623,828	40°29'13.5864"	-3°35'48.2976"
4	CIRC.	Pendiente	5.180,000	449.435,929	4.482.011,595	-300,000	597,259	33,542814	-8,000	-150,00	623,961	40°29'14.1381"	-3°35'47.8512"
4	CIRC.	Pendiente	5.200,000	449.445,402	4.482.029,205	-300,000	597,099	29,298682	-8,000	-150,00	623,904	40°29'14.7113"	-3°35'47.4538"
4	CIRC.	Pendiente	5.220,000	449.453,682	4.482.047,407	-300,000	596,939	25,054550	-8,000	-150,00	623,789	40°29'15.3034"	-3°35'47.1074"
4	CIRC.	Pendiente	5.240,000	449.460,730	4.482.066,119	-300,000	596,779	20,810418	-8,000	-150,00	623,775	40°29'15.9118"	-3°35'46.8134"
4	CIRC.	Pendiente	5.260,000	449.466,516	4.482.085,260	-300,000	596,619	16,566287	-8,000	-150,00	622,739	40°29'16.5339"	-3°35'46.5731"
4	CIRC.	Pendiente	5.280,000	449.471,014	4.482.104,744	-300,000	596,459	12,322155	-8,000	-150,00	622,830	40°29'17.1667"	-3°35'46.3876"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
4	CLOT.	Pendiente	5.287,422	449.472,352	4.482.112,045	-300,000	596,400	10,747119	-8,000	-150,00	622,820	40°29'17.4038"	-3°35'46.3329"
4	CLOT.	Pendiente	5.300,000	449.474,215	4.482.124,483	-343,162	596,299	8,245880	-8,000	-131,13	622,703	40°29'17.8076"	-3°35'46.2573"
4	CLOT.	Pendiente	5.320,000	449.476,264	4.482.144,375	-444,957	596,139	4,959981	-8,000	-101,13	622,470	40°29'18.4531"	-3°35'46.1760"
4	CLOT.	Pendiente	5.340,000	449.477,416	4.482.164,341	-632,615	595,979	2,522907	-8,000	-71,13	622,737	40°29'19.1009"	-3°35'46.1328"
4	CLOT.	Pendiente	5.360,000	449.477,937	4.482.184,334	-1.094,005	595,819	0,934661	-8,000	-41,13	622,636	40°29'19.7494"	-3°35'46.1164"
4	CLOT.	Pendiente	5.380,000	449.478,092	4.482.204,333	-4.041,938	595,659	0,195240	-8,000	-11,13	622,393	40°29'20.3980"	-3°35'46.1156"
4	RECTA	Pendiente	5.387,422	449.478,110	4.482.211,755	0,000	595,600	0,136789	-8,000	0,00	622,347	40°29'20.6387"	-3°35'46.1169"
4	RECTA	Pendiente	5.400,000	449.478,138	4.482.224,333	0,000	595,499	0,136789	-8,000	0,00	622,199	40°29'21.0466"	-3°35'46.1194"
4	RECTA	Pendiente	5.420,000	449.478,180	4.482.244,333	0,000	595,339	0,136789	-8,000	0,00	621,975	40°29'21.6953"	-3°35'46.1233"
4	RECTA	Pendiente	5.440,000	449.478,223	4.482.264,333	0,000	595,500	0,136789	-8,000	0,00	621,557	40°29'22.3439"	-3°35'46.1272"
4	RECTA	Pendiente	5.460,000	449.478,266	4.482.284,333	0,000	595,019	0,136789	-8,000	0,00	621,427	40°29'22.9925"	-3°35'46.1311"
4	RECTA	Pendiente	5.480,000	449.478,309	4.482.304,333	0,000	594,859	0,136789	-8,000	0,00	621,491	40°29'23.6411"	-3°35'46.1350"
4	RECTA	KV 10000	5.500,000	449.478,352	4.482.324,333	0,000	594,711	0,136789	-6,491	0,00	621,324	40°29'24.2898"	-3°35'46.1390"
4	RECTA	KV 10000	5.520,000	449.478,395	4.482.344,333	0,000	594,601	0,136789	-4,491	0,00	621,095	40°29'24.9384"	-3°35'46.1429"
4	RECTA	KV 10000	5.540,000	449.478,438	4.482.364,333	0,000	594,531	0,136789	-2,491	0,00	620,696	40°29'25.5870"	-3°35'46.1468"
4	RECTA	KV 10000	5.560,000	449.478,481	4.482.384,332	0,000	594,501	0,136789	-0,491	0,00	620,532	40°29'26.2356"	-3°35'46.1507"
4	RECTA	Horizontal	5.580,000	449.478,524	4.482.404,332	0,000	594,500	0,136789	0,000	0,00	620,941	40°29'26.8842"	-3°35'46.1546"
4	RECTA	Horizontal	5.600,000	449.478,567	4.482.424,332	0,000	594,500	0,136789	0,000	0,00	620,993	40°29'27.5329"	-3°35'46.1585"
4	RECTA	Horizontal	5.620,000	449.478,610	4.482.444,332	0,000	594,500	0,136789	0,000	0,00	620,860	40°29'28.1815"	-3°35'46.1624"
4	RECTA	Horizontal	5.640,000	449.478,653	4.482.464,332	0,000	594,500	0,136789	0,000	0,00	620,686	40°29'28.8301"	-3°35'46.1664"
4	RECTA	Horizontal	5.660,000	449.478,696	4.482.484,332	0,000	594,500	0,136789	0,000	0,00	620,410	40°29'29.4787"	-3°35'46.1703"
4	RECTA	Horizontal	5.680,000	449.478,739	4.482.504,332	0,000	594,500	0,136789	0,000	0,00	620,122	40°29'30.1274"	-3°35'46.1742"
4	RECTA	Horizontal	5.700,000	449.478,782	4.482.524,332	0,000	594,500	0,136789	0,000	0,00	620,051	40°29'30.7760"	-3°35'46.1781"
4	RECTA	Horizontal	5.720,000	449.478,825	4.482.544,332	0,000	594,500	0,136789	0,000	0,00	619,820	40°29'31.4246"	-3°35'46.1820"
4	RECTA	Horizontal	5.740,000	449.478,868	4.482.564,332	0,000	594,500	0,136789	0,000	0,00	619,650	40°29'32.0732"	-3°35'46.1859"
4	CLOT.	Horizontal	5.758,455	449.478,908	4.482.582,787	-1.000.000,000	594,500	0,136789	0,000	0,00	619,611	40°29'32.6717"	-3°35'46.1895"
4	CLOT.	KV 10000	5.760,000	449.478,911	4.482.584,332	-19.416,523	594,500	0,134256	0,049	-2,32	619,632	40°29'32.7219"	-3°35'46.1898"
4	CLOT.	KV 10000	5.780,000	449.478,898	4.482.604,332	-1.392,430	594,521	399,644268	2,049	-32,32	619,713	40°29'33.3705"	-3°35'46.1961"
4	CLOT.	KV 10000	5.800,000	449.478,599	4.482.624,329	-722,107	594,582	398,305454	4,049	-62,32	619,804	40°29'34.0189"	-3°35'46.2146"
4	CLOT.	KV 10000	5.820,000	449.477,745	4.482.644,310	-487,448	594,683	396,117813	6,049	-92,32	619,443	40°29'34.6667"	-3°35'46.2566"
4	CLOT.	KV 10000	5.840,000	449.476,073	4.482.664,238	-367,895	594,824	393,081345	8,049	-122,32	619,117	40°29'35.3127"	-3°35'46.3333"
4	CIRC.	KV 10000	5.858,455	449.473,577	4.482.682,521	-300,000	594,990	389,526460	9,895	-150,00	619,002	40°29'35.9050"	-3°35'46.4446"
4	CIRC.	Rampa	5.860,000	449.473,320	4.482.684,045	-300,000	595,005	389,198584	10,000	-150,00	618,997	40°29'35.9544"	-3°35'46.4560"
4	CIRC.	Rampa	5.880,000	449.469,289	4.482.703,630	-300,000	595,205	384,954453	10,000	-150,00	618,894	40°29'36.5887"	-3°35'46.6328"
4	CIRC.	Rampa	5.900,000	449.463,962	4.482.722,904	-300,000	595,405	380,710321	10,000	-150,00	619,105	40°29'37.2126"	-3°35'46.8647"
4	CIRC.	Rampa	5.920,000	449.457,362	4.482.741,780	-300,000	595,605	376,466189	10,000	-150,00	618,935	40°29'37.8233"	-3°35'47.1504"
4	CIRC.	Rampa	5.940,000	449.449,520	4.482.760,174	-300,000	595,805	372,222057	10,000	-150,00	618,761	40°29'38.4181"	-3°35'47.4888"
4	CIRC.	Rampa	5.960,000	449.440,470	4.482.778,005	-300,000	596,005	367,977925	10,000	-150,00	618,628	40°29'38.9944"	-3°35'47.8784"
4	CIRC.	Rampa	5.980,000	449.430,252	4.482.795,194	-300,000	596,205	363,733794	10,000	-150,00	618,870	40°29'39.5496"	-3°35'48.3174"
4	CIRC.	Rampa	6.000,000	449.418,912	4.482.811,664	-300,000	596,405	359,489662	10,000	-150,00	619,196	40°29'40.0812"	-3°35'48.8039"
4	CIRC.	Rampa	6.020,000	449.406,500	4.482.827,341	-300,000	596,605	355,245530	10,000	-150,00	618,491	40°29'40.5870"	-3°35'49.3357"
4	CIRC.	Rampa	6.040,000	449.393,071	4.482.842,157	-300,000	596,805	351,001398	10,000	-150,00	617,202	40°29'41.0645"	-3°35'49.9104"
4	CIRC.	Rampa	6.060,000	449.378,684	4.482.856,046	-300,000	597,005	346,757266	10,000	-150,00	621,861	40°29'41.5118"	-3°35'50.5255"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
4	CIRC.	KV 6250	6.080,000	449.363,405	4.482.868,945	-300,000	597,207	342,513135	10,759	-150,00	621,720	40°29'41.9267"	-3°35'51.1783"
4	CIRC.	KV 6250	6.100,000	449.347,300	4.482.880,798	-300,000	597,454	338,269003	13,959	-150,00	621,984	40°29'42.3076"	-3°35'51.8658"
4	CIRC.	KV 6250	6.120,000	449.330,442	4.482.891,551	-300,000	597,765	334,024871	17,159	-150,00	624,580	40°29'42.6526"	-3°35'52.5851"
4	CIRC.	KV 6250	6.140,000	449.312,904	4.482.901,158	-300,000	598,140	329,780739	20,359	-150,00	625,571	40°29'42.9603"	-3°35'53.3329"
4	CIRC.	KV 6250	6.160,000	449.294,765	4.482.909,574	-300,000	598,579	325,536607	23,559	-150,00	625,416	40°29'43.2293"	-3°35'54.1058"
4	CIRC.	Rampa	6.180,000	449.276,106	4.482.916,764	-300,000	599,081	321,292475	26,000	-150,00	625,388	40°29'43.4584"	-3°35'54.9006"
4	CIRC.	Rampa	6.200,000	449.257,010	4.482.922,695	-300,000	599,601	317,048344	26,000	-150,00	624,273	40°29'43.6465"	-3°35'55.7135"
4	CIRC.	Rampa	6.220,000	449.237,561	4.482.927,341	-300,000	600,121	312,804212	26,000	-150,00	618,464	40°29'43.7929"	-3°35'56.5411"
4	CIRC.	Rampa	6.240,000	4.496,845	4.482.930,680	-300,000	600,641	308,560080	26,000	-150,00	618,172	40°29'43.8968"	-3°35'57.3796"
4	CIRC.	Rampa	6.260,000	449.197,951	4.482.932,699	-300,000	601,161	304,315948	26,000	-150,00	628,596	40°29'43.9579"	-3°35'58.2253"
4	CLOT.	Rampa	6.276,430	449.181,537	4.482.933,363	-300,000	601,588	300,829476	26,000	-150,00	636,741	40°29'43.9758"	-3°35'58.9227"
4	CLOT.	Rampa	6.280,000	449.177,967	4.482.933,388	-311,108	601,681	300,085342	26,000	-144,64	636,497	40°29'43.9759"	-3°35'59.0744"
4	CLOT.	Rampa	6.300,000	449.157,978	4.482.932,817	-392,518	602,201	296,417155	26,000	-114,64	635,020	40°29'43.9529"	-3°35'59.9234"
4	CLOT.	Rampa	6.320,000	449.138,042	4.482.931,228	-531,636	602,721	293,597795	26,000	-84,64	635,000	40°29'43.8970"	-3°36'00.7698"
4	CLOT.	Rampa	6.340,000	449.118,180	4.482.928,890	-823,506	603,241	291,627261	26,000	-54,64	634,847	40°29'43.8168"	-3°36'01.6129"
4	CLOT.	Rampa	6.360,000	449.098,380	4.482.926,071	-1.825,971	603,761	290,505554	26,000	-24,64	636,096	40°29'43.7210"	-3°36'02.4532"
4	RECTA	Rampa	6.376,430	449.082,140	4.482.923,581	0,000	604,188	290,219147	26,000	0,00	638,235	40°29'43.6367"	-3°36'03.1424"
4	RECTA	Rampa	6.380,000	449.078,612	4.482.923,035	0,000	604,281	290,219147	26,000	0,00	638,693	40°29'43.6182"	-3°36'03.2921"
4	RECTA	Rampa	6.400,000	449.058,848	4.482.919,974	0,000	604,801	290,219147	26,000	0,00	642,621	40°29'43.5145"	-3°36'04.1308"
4	RECTA	Rampa	6.420,000	449.039,083	4.482.916,913	0,000	605,321	290,219147	26,000	0,00	645,646	40°29'43.4109"	-3°36'04.9695"
4	RECTA	Rampa	6.440,000	449.019,319	4.482.913,853	0,000	605,841	290,219147	26,000	0,00	643,433	40°29'43.3073"	-3°36'05.8082"
4	RECTA	Rampa	6.460,000	448.999,554	4.482.910,792	0,000	606,361	290,219147	26,000	0,00	643,583	40°29'43.2037"	-3°36'06.6470"
4	RECTA	Rampa	6.480,000	448.979,790	4.482.907,731	0,000	606,881	290,219147	26,000	0,00	644,187	40°29'43.1000"	-3°36'07.4857"
4	RECTA	Rampa	6.500,000	448.960,026	4.482.904,671	0,000	607,401	290,219147	26,000	0,00	646,230	40°29'42.9964"	-3°36'08.3244"
4	RECTA	Rampa	6.520,000	448.940,261	4.482.901,610	0,000	607,921	290,219147	26,000	0,00	646,342	40°29'42.8927"	-3°36'09.1631"
4	RECTA	Rampa	6.540,000	448.920,497	4.482.898,549	0,000	608,441	290,219147	26,000	0,00	651,133	40°29'42.7891"	-3°36'10.0018"
4	RECTA	Rampa	6.560,000	448.900,732	4.482.895,489	0,000	608,961	290,219147	26,000	0,00	647,870	40°29'42.6855"	-3°36'10.8405"
4	RECTA	Rampa	6.580,000	448.880,968	4.482.892,428	0,000	609,481	290,219147	26,000	0,00	642,834	40°29'42.5818"	-3°36'11.6793"
4	RECTA	Rampa	6.600,000	448.861,204	4.482.889,367	0,000	610,001	290,219147	26,000	0,00	643,778	40°29'42.4782"	-3°36'12.5180"
4	CLOT.	Rampa	6.604,733	448.856,526	4.482.888,643	1.000.000,000	610,124	290,219147	26,000	0,00	644,146	40°29'42.4537"	-3°36'12.7164"
4	CLOT.	Rampa	6.620,000	448.841,438	4.482.886,314	5.108,997	610,521	290,314267	26,000	14,09	638,636	40°29'42.3748"	-3°36'13.3567"
4	CLOT.	Rampa	6.640,000	448.821,661	4.482.883,339	2.211,688	611,041	290,726718	26,000	32,55	639,474	40°29'42.2739"	-3°36'14.1960"
4	CLOT.	KV -8000	6.660,000	448.801,857	4.482.880,542	1.411,326	611,557	291,465641	24,970	51,02	644,855	40°29'42.1788"	-3°36'15.0365"
4	CIRC.	KV -8000	6.669,733	448.792,207	4.482.879,276	1.200,000	611,794	291,943325	23,753	60,00	645,286	40°29'42.1356"	-3°36'15.4460"
4	CIRC.	KV -8000	6.680,000	448.782,017	4.482.878,024	1.200,000	612,031	292,488017	22,470	60,00	645,017	40°29'42.0927"	-3°36'15.8786"
4	CIRC.	KV -8000	6.700,000	448.762,137	4.482.875,835	1.200,000	612,455	293,549049	19,970	60,00	643,403	40°29'42.0173"	-3°36'16.7224"
4	CIRC.	KV -8000	6.720,000	448.742,224	4.482.873,978	1.200,000	612,830	294,610082	17,470	60,00	640,438	40°29'41.9527"	-3°36'17.5678"
4	CIRC.	KV -8000	6.740,000	448.722,282	4.482.872,453	1.200,000	613,154	295,671115	14,970	60,00	640,459	40°29'41.8988"	-3°36'18.4145"
4	CIRC.	KV -8000	6.760,000	448.702,318	4.482.871,260	1.200,000	613,429	296,732148	12,470	60,00	640,850	40°29'41.8557"	-3°36'19.2622"
4	CIRC.	KV -8000	6.780,000	448.682,337	4.482.870,401	1.200,000	613,653	297,793181	9,970	60,00	640,964	40°29'41.8233"	-3°36'20.1108"
4	CLOT.	KV -8000	6.789,705	448.672,636	4.482.870,103	1.200,000	613,744	298,308052	8,757	60,00	640,726	40°29'41.8115"	-3°36'20.5228"
4	CLOT.	KV -8000	6.800,000	448.662,344	4.482.869,872	1.425,827	613,827	298,810963	7,470	50,50	640,438	40°29'41.8017"	-3°36'20.9600"
4	CLOT.	Rampa	6.820,000	448.642,345	4.482.869,621	2.247,510	613,952	299,540710	5,000	32,04	639,686	40°29'41.7892"	-3°36'21.8094"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
4	CLOT.	Rampa	6.840,000	448.622,346	4.482.869,549	5.304,290	614,052	299,943985	5,000	13,57	639,248	40°29'41.7824"	-3°36'22.6590"
4	RECTA	Rampa	6.854,705	448.607,641	4.482.869,550	0,000	614,125	300,032230	5,000	0,00	638,796	40°29'41.7791"	-3°36'23.2837"
4	RECTA	Rampa	6.860,000	448.602,346	4.482.869,552	0,000	614,152	300,032230	5,000	0,00	638,590	40°29'41.7780"	-3°36'23.5086"
4	RECTA	Rampa	6.880,000	448.582,346	4.482.869,562	0,000	614,252	300,032230	5,000	0,00	638,107	40°29'41.7739"	-3°36'24.3582"
4	RECTA	Rampa	6.900,000	448.562,346	4.482.869,572	0,000	614,352	300,032230	5,000	0,00	637,363	40°29'41.7697"	-3°36'25.2078"
4	RECTA	Rampa	6.920,000	448.542,346	4.482.869,583	0,000	614,452	300,032230	5,000	0,00	636,367	40°29'41.7656"	-3°36'26.0574"
4	RECTA	Rampa	6.940,000	448.522,346	4.482.869,593	0,000	614,552	300,032230	5,000	0,00	635,612	40°29'41.7615"	-3°36'26.9071"
4	RECTA	Rampa	6.960,000	448.502,346	4.482.869,603	0,000	614,652	300,032230	5,000	0,00	634,739	40°29'41.7573"	-3°36'27.7567"
4	RECTA	Rampa	6.980,000	448.482,346	4.482.869,613	0,000	614,752	300,032230	5,000	0,00	633,706	40°29'41.7532"	-3°36'28.6063"
4	RECTA	Rampa	7.000,000	448.462,346	4.482.869,623	0,000	614,852	300,032230	5,000	0,00	633,214	40°29'41.7490"	-3°36'29.4559"
4	RECTA	Rampa	7.020,000	448.442,346	4.482.869,633	0,000	614,952	300,032230	5,000	0,00	633,293	40°29'41.7449"	-3°36'30.3055"
4	RECTA	Rampa	7.040,000	448.422,346	4.482.869,643	0,000	615,052	300,032230	5,000	0,00	633,181	40°29'41.7408"	-3°36'31.1551"
4	RECTA	Rampa	7.060,000	448.402,346	4.482.869,653	0,000	615,152	300,032230	5,000	0,00	632,953	40°29'41.7366"	-3°36'32.0047"
4	RECTA	KV 6000	7.080,000	448.382,346	4.482.869,664	0,000	615,252	300,032230	5,292	0,00	633,118	40°29'41.7325"	-3°36'32.8543"
4	RECTA	KV 6000	7.100,000	448.362,346	4.482.869,674	0,000	615,391	300,032230	8,625	0,00	633,319	40°29'41.7283"	-3°36'33.7039"
4	CLOT.	KV 6000	7.108,941	448.353,404	4.482.869,678	1.000.000,000	615,475	300,032230	10,115	0,00	633,353	40°29'41.7265"	-3°36'34.0838"
4	CLOT.	KV 6000	7.120,000	448.342,346	4.482.869,690	3.266,257	615,597	300,140000	11,958	16,59	633,415	40°29'41.7244"	-3°36'34.5535"
4	CLOT.	KV 6000	7.140,000	448.322,346	4.482.869,832	1.162,966	615,870	300,882319	15,292	46,59	633,542	40°29'41.7245"	-3°36'35.4032"
4	CLOT.	KV 6000	7.160,000	448.302,353	4.482.870,318	707,423	616,209	302,329643	18,625	76,59	633,832	40°29'41.7358"	-3°36'36.2526"
4	CLOT.	KV 6000	7.180,000	448.282,381	4.482.871,369	508,313	616,615	304,481972	21,958	106,59	634,210	40°29'41.7654"	-3°36'37.1013"
4	CIRC.	KV 6000	7.194,941	448.267,496	4.482.872,654	420,000	616,961	306,550004	24,448	129,00	634,386	40°29'41.8037"	-3°36'37.7341"
4	CIRC.	KV 6000	7.200,000	448.262,467	4.482.873,204	420,000	617,087	307,316756	25,292	129,00	634,500	40°29'41.8204"	-3°36'37.9478"
4	CIRC.	KV 6000	7.220,000	448.242,661	4.482.875,970	420,000	617,626	310,348279	28,625	129,00	635,233	40°29'41.9057"	-3°36'38.7900"
4	CLOT.	KV 6000	7.232,679	448.230,182	4.482.878,210	420,000	618,003	312,270177	30,738	129,00	635,596	40°29'41.9755"	-3°36'39.3208"
4	CLOT.	KV 6000	7.240,000	448.223,009	4.482.879,674	459,078	618,232	313,332574	31,958	118,02	635,658	40°29'42.0214"	-3°36'39.6259"
4	CLOT.	Rampa	7.260,000	448.203,534	4.482.884,220	615,548	618,898	315,753542	33,800	88,02	636,230	40°29'42.1644"	-3°36'40.4546"
4	CLOT.	Rampa	7.280,000	448.184,216	4.482.889,398	933,830	619,574	317,469505	33,800	58,02	636,999	40°29'42.3280"	-3°36'41.2767"
4	CLOT.	Rampa	7.300,000	448.165,014	4.482.894,988	1.933,678	620,250	318,480462	33,800	28,02	637,864	40°29'42.5050"	-3°36'42.0941"
4	RECTA	Rampa	7.318,679	448.147,133	4.482.900,392	0,000	620,881	318,787951	33,800	0,00	638,574	40°29'42.6762"	-3°36'42.8553"
4	RECTA	Rampa	7.320,000	448.145,870	4.482.900,776	0,000	620,926	318,787951	33,800	0,00	638,636	40°29'42.6884"	-3°36'42.9091"
4	RECTA	Rampa	7.340,000	448.126,734	4.482.906,593	0,000	621,602	318,787951	33,800	0,00	639,480	40°29'42.8727"	-3°36'43.7237"
4	CLOT.	Rampa	7.356,382	448.111,060	4.482.911,358	-1.000.000,000	622,156	318,787951	33,800	0,00	639,871	40°29'43.0237"	-3°36'44.3909"
4	CLOT.	Rampa	7.360,000	448.107,599	4.482.912,410	-9.983,652	622,278	318,776416	33,800	-5,43	639,929	40°29'43.0571"	-3°36'44.5383"
4	CLOT.	Rampa	7.380,000	448.088,446	4.482.918,169	-1.529,348	622,954	318,296381	33,800	-35,43	640,438	40°29'43.2395"	-3°36'45.3536"
4	CLOT.	Rampa	7.400,000	448.069,220	4.482.923,677	-828,100	623,630	317,111340	33,800	-65,43	641,652	40°29'43.4138"	-3°36'46.1720"
4	CLOT.	Rampa	7.420,000	448.049,867	4.482.928,719	-567,765	624,306	315,221295	33,800	-95,43	643,134	40°29'43.5730"	-3°36'46.9956"
4	CLOT.	Rampa	7.440,000	448.030,348	4.482.933,076	-431,965	624,982	312,626244	33,800	-125,43	644,770	40°29'43.7099"	-3°36'47.8260"
4	CIRC.	Rampa	7.442,382	448.028,012	4.482.933,539	-420,000	625,062	312,270177	33,800	-129,00	644,959	40°29'43.7244"	-3°36'47.9254"
4	CIRC.	Rampa	7.460,000	448.010,654	4.482.936,550	-420,000	625,658	309,599722	33,800	-129,00	646,300	40°29'43.8181"	-3°36'48.6637"
4	CLOT.	Rampa	7.479,846	447.990,970	4.482.939,067	-420,000	626,329	306,591474	33,800	-129,00	647,818	40°29'43.8953"	-3°36'49.5006"
4	CLOT.	Rampa	7.480,000	447.990,817	4.482.939,083	-420,751	626,334	306,568220	33,800	-128,77	647,828	40°29'43.8958"	-3°36'49.5071"
4	CLOT.	KV -3000	7.500,000	447.970,885	4.482.940,706	-548,549	626,970	303,894612	28,637	-98,77	648,671	40°29'43.9439"	-3°36'50.3543"
4	CLOT.	KV -3000	7.520,000	447.950,906	4.482.941,602	-787,847	627,476	301,926010	21,971	-68,77	648,982	40°29'43.9685"	-3°36'51.2033"



EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
4	CLOT.	KV -3000	7.540,000	447.930,910	4.482.941,990	-1.397,484	627,849	300,662414	15,304	-38,77	649,467	40°29'43.9765"	-3°36'52.0529"
4	CLOT.	KV -3000	7.560,000	447.910,910	4.482.942,092	-6.178,111	628,088	300,103822	8,637	-8,77	650,219	40°29'43.9753"	-3°36'52.9025"
4	RECTA	KV -3000	7.565,846	447.905,063	4.482.942,099	0,000	628,133	300,073700	6,689	0,00	650,587	40°29'43.9742"	-3°36'53.1509"
4	RECTA	KV -3000	7.580,000	447.890,910	4.482.942,116	0,000	628,194	300,073700	1,971	0,00	651,580	40°29'43.9716"	-3°36'53.7521"
4	RECTA	Horizontal	7.600,000	447.870,910	4.482.942,139	0,000	628,200	300,073700	0,000	0,00	652,989	40°29'43.9678"	-3°36'54.6017"
4	RECTA	Horizontal	7.620,000	447.850,910	4.482.942,162	0,000	628,200	300,073700	0,000	0,00	654,560	40°29'43.9640"	-3°36'55.4514"
4	RECTA	Horizontal	7.640,000	447.830,910	4.482.942,185	0,000	628,200	300,073700	0,000	0,00	656,212	40°29'43.9603"	-3°36'56.3010"
4	RECTA	Horizontal	7.660,000	447.810,910	4.482.942,208	0,000	628,200	300,073700	0,000	0,00	657,678	40°29'43.9565"	-3°36'57.1506"
4	RECTA	Horizontal	7.680,000	447.790,910	4.482.942,231	0,000	628,200	300,073700	0,000	0,00	658,438	40°29'43.9527"	-3°36'58.0002"
4	RECTA	Horizontal	7.700,000	447.770,910	4.482.942,255	0,000	628,200	300,073700	0,000	0,00	659,145	40°29'43.9489"	-3°36'58.8498"
4	RECTA	Horizontal	7.720,000	447.750,910	4.482.942,278	0,000	628,200	300,073700	0,000	0,00	659,739	40°29'43.9451"	-3°36'59.6995"
4	RECTA	Horizontal	7.740,000	447.730,910	4.482.942,301	0,000	628,200	300,073700	0,000	0,00	661,210	40°29'43.9414"	-3°37'00.5491"
4	RECTA	Horizontal	7.760,000	447.710,910	4.482.942,324	0,000	628,200	300,073700	0,000	0,00	662,806	40°29'43.9376"	-3°37'01.3987"
4	RECTA	Horizontal	7.780,000	447.690,910	4.482.942,347	0,000	628,200	300,073700	0,000	0,00	664,378	40°29'43.9338"	-3°37'02.2483"
4	RECTA	Horizontal	7.800,000	447.670,910	4.482.942,370	0,000	628,200	300,073700	0,000	0,00	665,903	40°29'43.9300"	-3°37'03.0979"
4	RECTA	Horizontal	7.820,000	447.650,910	4.482.942,394	0,000	628,200	300,073700	0,000	0,00	667,155	40°29'43.9262"	-3°37'03.9476"
4	RECTA	Horizontal	7.840,000	447.630,910	4.482.942,417	0,000	628,200	300,073700	0,000	0,00	667,626	40°29'43.9224"	-3°37'04.7972"
4	RECTA	Horizontal	7.860,000	447.610,910	4.482.942,440	0,000	628,200	300,073700	0,000	0,00	667,826	40°29'43.9186"	-3°37'05.6468"
4	RECTA	Horizontal	7.880,000	447.590,910	4.482.942,463	0,000	628,200	300,073700	0,000	0,00	667,627	40°29'43.9148"	-3°37'06.4964"
4	RECTA	Horizontal	7.900,000	447.570,910	4.482.942,486	0,000	628,200	300,073700	0,000	0,00	667,374	40°29'43.9110"	-3°37'07.3460"
4	RECTA	Horizontal	7.920,000	447.550,910	4.482.942,509	0,000	628,200	300,073700	0,000	0,00	666,609	40°29'43.9072"	-3°37'08.1957"
4	RECTA	Horizontal	7.940,000	447.530,910	4.482.942,532	0,000	628,200	300,073700	0,000	0,00	665,365	40°29'43.9034"	-3°37'09.0453"
4	RECTA	Horizontal	7.960,000	447.510,910	4.482.942,556	0,000	628,200	300,073700	0,000	0,00	663,577	40°29'43.8996"	-3°37'09.8949"
4	RECTA	Horizontal	7.980,000	447.490,910	4.482.942,579	0,000	628,200	300,073700	0,000	0,00	662,269	40°29'43.8958"	-3°37'10.7445"
4	RECTA	Horizontal	8.000,000	447.470,910	4.482.942,602	0,000	628,200	300,073700	0,000	0,00	661,523	40°29'43.8920"	-3°37'11.5941"
4	RECTA	Horizontal	8.020,000	447.450,910	4.482.942,625	0,000	628,200	300,073700	0,000	0,00	660,859	40°29'43.8882"	-3°37'12.4438"
4	RECTA	Horizontal	8.040,000	447.430,910	4.482.942,648	0,000	628,200	300,073700	0,000	0,00	659,767	40°29'43.8844"	-3°37'13.2934"
4	RECTA	Horizontal	8.060,000	447.410,910	4.482.942,671	0,000	628,200	300,073700	0,000	0,00	658,205	40°29'43.8806"	-3°37'14.1430"
4	RECTA	Horizontal	8.080,000	447.390,910	4.482.942,695	0,000	628,200	300,073700	0,000	0,00	656,722	40°29'43.8768"	-3°37'14.9926"
4	RECTA	Horizontal	8.100,000	447.370,910	4.482.942,718	0,000	628,200	300,073700	0,000	0,00	655,056	40°29'43.8730"	-3°37'15.8422"
4	RECTA	Horizontal	8.120,000	447.350,910	4.482.942,741	0,000	628,200	300,073700	0,000	0,00	653,600	40°29'43.8692"	-3°37'16.6919"
4	RECTA	Horizontal	8.140,000	447.330,910	4.482.942,764	0,000	628,200	300,073700	0,000	0,00	652,353	40°29'43.8653"	-3°37'17.5415"
4	RECTA	Horizontal	8.160,000	447.310,910	4.482.942,787	0,000	628,200	300,073700	0,000	0,00	651,709	40°29'43.8615"	-3°37'18.3911"
4	RECTA	Horizontal	8.180,000	447.290,910	4.482.942,810	0,000	628,200	300,073700	0,000	0,00	651,151	40°29'43.8577"	-3°37'19.2407"
4	RECTA	Horizontal	8.200,000	447.270,910	4.482.942,833	0,000	628,200	300,073700	0,000	0,00	650,849	40°29'43.8539"	-3°37'20.0903"
4	RECTA	Horizontal	8.220,000	447.250,910	4.482.942,857	0,000	628,200	300,073700	0,000	0,00	649,293	40°29'43.8500"	-3°37'20.9400"
4	RECTA	Horizontal	8.240,000	447.230,910	4.482.942,880	0,000	628,200	300,073700	0,000	0,00	648,294	40°29'43.8462"	-3°37'21.7896"
4	RECTA	Horizontal	8.260,000	447.210,910	4.482.942,903	0,000	628,200	300,073700	0,000	0,00	647,292	40°29'43.8424"	-3°37'22.6392"
4	RECTA	Horizontal	8.280,000	447.190,910	4.482.942,926	0,000	628,200	300,073700	0,000	0,00	646,808	40°29'43.8386"	-3°37'23.4888"
4	RECTA	Horizontal	8.300,000	447.170,910	4.482.942,949	0,000	628,200	300,073700	0,000	0,00	646,716	40°29'43.8347"	-3°37'24.3384"
4	RECTA	Horizontal	8.320,000	447.150,910	4.482.942,972	0,000	628,200	300,073700	0,000	0,00	647,164	40°29'43.8309"	-3°37'25.1880"
4	RECTA	Horizontal	8.340,000	447.130,910	4.482.942,996	0,000	628,200	300,073700	0,000	0,00	646,931	40°29'43.8271"	-3°37'26.0377"
4	RECTA	Horizontal	8.349,654	447.121,256	4.482.943,007	0,000	628,200	300,073700	0,000	0,00	646,797	40°29'43.8252"	-3°37'26.4478"

**EJE 5. CONEXIÓN LÍNEA 11 DE METRO CON LÍNEA 8 DE METRO PARA LAS ALTERNATIVA 1 Y 2.**

EJE	DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
5	1	Recta	44,745	0,000	446.139,195	4.480.057,775			127,0882	0,9108321	-0,4127770	40°28'10.0281"	-3°38'07.2839"
5		Clotoide	20,000	44,745	446.179,951	4.480.039,305		66,332	127,0882	446.179,951	4.480.039,305	40°28'09.4386"	-3°38'05.5476"
5	2	Circular	42,363	64,745	446.198,289	4.480.031,327	-220,000		124,1945	446.279,901	4.480.235,630	40°28'09.1842"	-3°38'04.7664"
5		Clotoide	20,000	107,108	446.238,895	4.480.019,485		66,332	111,9359	446.258,646	4.480.016,355	40°28'08.8096"	-3°38'03.0385"
5	3	Recta	102,736	127,108	446.258,646	4.480.016,355			109,0422	0,9899301	-0,1415569	40°28'08.7127"	-3°38'02.1989"
5		Clotoide	20,000	229,844	446.360,348	4.480.001,812		66,332	109,0422	446.360,348	4.480.001,812	40°28'08.2647"	-3°37'57.8758"
5	4	Circular	77,497	249,844	446.380,099	4.479.998,681	220,000		111,9359	446.339,093	4.479.782,536	40°28'08.1678"	-3°37'57.0361"
5		Clotoide	20,000	327,341	446.452,155	4.479.971,261		66,332	134,3614	446.468,991	4.479.960,469	40°28'07.2953"	-3°37'53.9680"
5	5	Recta	95,170	347,341	446.468,991	4.479.960,469			137,2551	0,8336007	-0,5523675	40°28'06.9492"	-3°37'53.2498"
5				442,511	446.548,325	4.479.907,900			137,2551			40°28'05.2627"	-3°37'49.8651"

**EJE 5. CONEXIÓN LÍNEA 11 DE METRO CON LÍNEA 8 DE METRO PARA LAS ALTERNATIVA 1 Y 2.**

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
5	RECTA	Pendiente	0,000	446.139,195	4.480.057,775	0,000	644,762	127,088224	-5,000	0,00	677,540	40°28'10.0281"	-3°38'07.2839"
5	RECTA	Pendiente	20,000	446.157,412	4.480.049,519	0,000	644,662	127,088224	-5,000	0,00	678,232	40°28'09.7646"	-3°38'06.5078"
5	RECTA	KV 1400	40,000	446.175,629	4.480.041,264	0,000	644,604	127,088224	2,790	0,00	678,363	40°28'09.5012"	-3°38'05.7317"
5	CLOT.	KV 1400	44,745	4.465,951	4.480.039,305	-1.000.000,000	644,625	127,088224	6,500	0,00	678,041	40°28'09.4386"	-3°38'05.5476"
5	CLOT.	KV 1400	60,000	446.193,900	4.480.033,131	-288,437	644,803	125,404772	17,075	22,88	676,987	40°28'09.2417"	-3°38'04.9534"
5	CIRC.	KV 1400	64,745	446.198,289	4.480.031,327	-220,000	644,892	124,194498	20,465	30,00	676,654	40°28'09.1842"	-3°38'04.7664"
5	CIRC.	KV 1400	80,000	446.212,640	4.480.026,164	-220,000	645,287	119,780226	31,361	30,00	677,279	40°28'09.0201"	-3°38'04.1555"
5	CIRC.	Rampa	100,000	446.231,934	4.480.020,923	-220,000	645,978	113,992773	35,000	30,00	677,889	40°28'08.8546"	-3°38'03.3346"
5	CLOT.	Rampa	107,108	446.238,895	4.480.019,485	-220,000	646,227	111,935892	35,000	30,00	677,805	40°28'08.8096"	-3°38'03.0385"
5	CLOT.	Rampa	120,000	446.251,612	4.480.017,374	-619,015	646,678	109,407677	35,000	10,66	677,514	40°28'08.7441"	-3°38'02.4979"
5	RECTA	Rampa	127,108	446.258,646	4.480.016,355	0,000	646,927	109,042166	35,000	0,00	677,289	40°28'08.7127"	-3°38'02.1989"
5	RECTA	Rampa	140,000	446.271,408	4.480.014,530	0,000	647,378	109,042166	35,000	0,00	676,893	40°28'08.6565"	-3°38'01.6564"
5	RECTA	Rampa	160,000	446.291,207	4.480.011,698	0,000	648,078	109,042166	35,000	0,00	676,164	40°28'08.5693"	-3°38'00.8148"
5	RECTA	Rampa	180,000	446.311,005	4.480.008,867	0,000	648,778	109,042166	35,000	0,00	675,641	40°28'08.4821"	-3°37'59.9732"
5	RECTA	Rampa	200,000	446.330,804	4.480.006,036	0,000	649,478	109,042166	35,000	0,00	675,667	40°28'08.3948"	-3°37'59.1316"
5	RECTA	Rampa	220,000	446.350,603	4.480.003,205	0,000	650,178	109,042166	35,000	0,00	675,091	40°28'08.3076"	-3°37'58.2900"
5	CLOT.	Rampa	229,844	446.360,348	4.480.001,812	1.000.000,000	650,522	109,042166	35,000	0,00	675,216	40°28'08.2647"	-3°37'57.8758"
5	CLOT.	Rampa	240,000	446.370,396	4.480.000,335	433,240	650,878	109,788350	35,000	15,23	675,010	40°28'08.2191"	-3°37'57.4487"
5	CIRC.	Rampa	249,844	446.380,099	4.479.998,681	220,000	651,222	111,935892	35,000	30,00	674,922	40°28'08.1678"	-3°37'57.0361"
5	CIRC.	Rampa	260,000	446.390,030	4.479.996,558	220,000	651,578	114,874772	35,000	30,00	674,793	40°28'08.1012"	-3°37'56.6138"
5	CIRC.	Rampa	280,000	446.409,249	4.479.991,050	220,000	652,278	120,662225	35,000	30,00	674,526	40°28'07.9271"	-3°37'55.7960"
5	CIRC.	Rampa	300,000	446.427,889	4.479.983,820	220,000	652,978	126,449677	35,000	30,00	674,254	40°28'07.6969"	-3°37'55.0022"
5	CIRC.	Rampa	320,000	446.445,796	4.479.974,928	220,000	653,678	132,237130	35,000	30,00	674,216	40°28'07.4127"	-3°37'54.2391"
5	CLOT.	Rampa	327,341	446.452,155	4.479.971,261	220,000	653,935	134,361369	35,000	30,00	674,513	40°28'07.2953"	-3°37'53.9680"
5	CLOT.	Rampa	340,000	446.462,863	4.479.964,511	599,386	654,378	136,865252	35,000	11,01	675,055	40°28'07.0788"	-3°37'53.5112"
5	RECTA	Rampa	347,341	446.468,991	4.479.960,469	0,000	654,635	137,255095	35,000	0,00	675,274	40°28'06.9492"	-3°37'53.2498"
5	RECTA	KV -1400	360,000	446.479,544	4.479.953,476	0,000	655,077	137,255095	34,082	0,00	674,828	40°28'06.7248"	-3°37'52.7996"
5	RECTA	KV -1400	380,000	446.496,216	4.479.942,429	0,000	655,616	137,255095	19,796	0,00	674,392	40°28'06.3704"	-3°37'52.0883"
5	RECTA	KV -1400	400,000	446.512,888	4.479.931,381	0,000	655,869	137,255095	5,510	0,00	676,117	40°28'06.0160"	-3°37'51.3770"
5	RECTA	KV -1400	420,000	446.529,560	4.479.920,334	0,000	655,836	137,255095	-8,775	0,00	675,433	40°28'05.6616"	-3°37'50.6657"
5	RECTA	Pendiente	440,000	446.546,232	4.479.909,287	0,000	655,652	137,255095	-9,200	0,00	674,772	40°28'05.3072"	-3°37'49.9544"
5	RECTA	Pendiente	442,511	446.548,325	4.479.907,900	0,000	655,629	137,255095	-9,200	0,00	674,816	40°28'05.2627"	-3°37'49.8651"

**EJE 6. CONEXIÓN LÍNEA 11 DE METRO CON LÍNEA 8 DE METRO PARA LAS ALTERNATIVAS 3 Y 4.**

EJE	DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
6	1	Recta	27,577	0,000	446.263,308	4.479.968,827			104,4272	0,9975829	-0,0694869	40°28'07.1724"	-3°38'01.9864"
6		Clotoide	20,000	27,577	446.290,818	4.479.966,911		66,332	104,4272	446.290,818	4.479.966,911	40°28'07.1167"	-3°38'00.8176"
6	2	Circular	21,351	47,577	446.310,787	4.479.965,823	-220,000		101,5335	446.316,086	4.480.185,759	40°28'07.0861"	-3°37'59.9694"
6		Clotoide	20,000	68,928	446.332,123	4.479.966,345		66,332	95,3551	446.352,015	4.479.968,406	40°28'07.1079"	-3°37'59.0635"
6	3	Recta	20,627	88,928	446.352,015	4.479.968,406			92,4614	0,9929970	0,1181395	40°28'07.1794"	-3°37'58.2195"
6		Clotoide	35,000	109,555	446.372,497	4.479.970,843		70,000	92,4614	446.372,497	4.479.970,843	40°28'07.2632"	-3°37'57.3505"
6	4	Circular	63,506	144,555	446.407,370	4.479.973,525	140,000		100,4191	446.406,448	4.479.833,528	40°28'07.3583"	-3°37'55.8704"
6		Clotoide	35,000	208,061	446.468,626	4.479.958,963		70,000	129,2973	446.498,561	4.479.940,874	40°28'06.9002"	-3°37'53.2649"
6	5	Recta	59,697	243,061	446.498,561	4.479.940,874			137,2551	0,8336007	-0,5523675	40°28'06.3206"	-3°37'51.9882"
6				302,759	446.548,325	4.479.907,900			137,2551			40°28'05.2627"	-3°37'49.8651"



**EJE 6. CONEXIÓN LÍNEA 11 DE METRO CON LÍNEA 8 DE METRO PARA LAS ALTERNATIVAS 3 Y 4.**

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
6	RECTA	Pendiente	0,000	446.263,308	4.479.968,827	0,000	649,049	104,427243	-8,000	0,00	677,381	40°28'07.1724"	-3°38'01.9864"
6	RECTA	KV 1400	20,000	446.283,259	4.479.967,437	0,000	648,893	104,427243	-5,500	0,00	677,060	40°28'07.1320"	-3°38'01.1388"
6	CLOT.	KV 1400	27,577	446.290,818	4.479.966,911	-1.000.000,000	648,872	104,427243	-0,088	0,00	677,052	40°28'07.1167"	-3°38'00.8176"
6	CLOT.	KV 1400	40,000	446.303,216	4.479.966,120	-354,184	648,926	103,310779	8,786	23,78	676,818	40°28'07.0939"	-3°38'00.2909"
6	CIRC.	KV 1400	47,577	446.310,787	4.479.965,823	-220,000	649,013	101,533517	14,198	30,00	677,113	40°28'07.0861"	-3°37'59.9694"
6	CIRC.	KV 1400	60,000	446.323,208	4.479.965,875	-220,000	649,245	97,938665	23,071	30,00	677,275	40°28'07.0906"	-3°37'59.4419"
6	CLOT.	KV 1400	68,928	446.332,123	4.479.966,345	-220,000	649,479	95,355128	29,448	30,00	677,084	40°28'07.1079"	-3°37'59.0635"
6	CLOT.	Rampa	80,000	446.343,146	4.479.967,378	-492,828	649,845	93,038051	35,000	17,09	676,818	40°28'07.1440"	-3°37'58.5957"
6	RECTA	Rampa	88,928	446.352,015	4.479.968,406	0,000	650,157	92,461402	35,000	0,00	677,314	40°28'07.54"	-3°37'58.2195"
6	RECTA	Rampa	100,000	446.363,009	4.479.969,714	0,000	650,545	92,461402	35,000	0,00	677,432	40°28'07.2244"	-3°37'57.7530"
6	CLOT.	Rampa	109,555	446.372,497	4.479.970,843	1.000.000,000	650,879	92,461402	35,000	0,00	676,985	40°28'07.2632"	-3°37'57.3505"
6	CLOT.	Rampa	120,000	446.382,873	4.479.972,039	469,119	651,245	93,170131	35,000	11,94	676,293	40°28'07.3044"	-3°37'56.9102"
6	CLOT.	Rampa	140,000	446.402,815	4.479.973,484	160,945	651,945	98,482688	35,000	34,79	675,963	40°28'07.3559"	-3°37'56.0638"
6	CIRC.	Rampa	144,555	446.407,370	4.479.973,525	140,000	652,104	100,419149	35,000	40,00	675,826	40°28'07.3583"	-3°37'55.8704"
6	CIRC.	Rampa	160,000	446.422,778	4.479.972,572	140,000	652,645	107,442482	35,000	40,00	675,381	40°28'07.3310"	-3°37'55.2159"
6	CIRC.	Rampa	180,000	446.442,407	4.479.968,831	140,000	653,345	116,537050	35,000	40,00	675,054	40°28'07.2142"	-3°37'54.3812"
6	CIRC.	Rampa	200,000	446.461,304	4.479.962,333	140,000	654,045	125,631618	35,000	40,00	675,304	40°28'07.0078"	-3°37'53.5768"
6	CLOT.	Rampa	208,061	446.468,626	4.479.958,963	140,000	654,327	129,297348	35,000	40,00	675,159	40°28'06.9002"	-3°37'53.2649"
6	CLOT.	Rampa	220,000	446.479,112	4.479.953,261	212,477	654,745	133,800287	35,000	26,36	674,793	40°28'06.7178"	-3°37'52.8178"
6	CLOT.	KV -1400	240,000	446.496,009	4.479.942,565	1.600,595	655,378	137,194214	25,213	3,50	674,373	40°28'06.3748"	-3°37'52.0971"
6	RECTA	KV -1400	243,061	446.498,561	4.479.940,874	0,000	655,452	137,255095	23,027	0,00	674,609	40°28'06.3206"	-3°37'51.9882"
6	RECTA	KV -1400	260,000	446.512,681	4.479.931,518	0,000	655,739	137,255095	10,928	0,00	676,130	40°28'06.0204"	-3°37'51.3858"
6	RECTA	KV -1400	280,000	446.529,353	4.479.920,471	0,000	655,815	137,255095	-3,358	0,00	675,430	40°28'05.6660"	-3°37'50.6745"
6	RECTA	Pendiente	300,000	446.546,025	4.479.909,423	0,000	655,655	137,255095	-9,200	0,00	674,759	40°28'05.3116"	-3°37'49.9632"
6	RECTA	Pendiente	302,759	446.548,325	4.479.907,900	0,000	655,629	137,255095	-9,200	0,00	674,816	40°28'05.2627"	-3°37'49.8651"

**EJE 7. RAMAL A COCHERAS PARA LAS ALTERNATIVAS 2 Y 4.**

EJE	DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
7	1	Recta	76,908	0,000	448.637,860	4.481.893,544			108,8340	0,9903877	-0,1383192	40°29'10.1333"	-3°36'21.7152"
7		Clotoide	75,000	76,908	448.714,029	4.481.882,907		109,545	108,8340	448.714,029	4.481.882,907	40°29'09.8052"	-3°36'18.4768"
7	2	Circular	206,664	151,908	448.787,094	4.481.866,809	160,000		123,7548	448.728,767	4.481.717,819	40°29'09.2994"	-3°36'15.3687"
7		Clotoide	75,000	358,572	448.888,061	4.481.702,802		109,545	205,9838	448.869,530	4.481.630,316	40°29'04.0030"	-3°36'11.0326"
7	3	Recta	466,747	433,572	448.869,530	4.481.630,316			220,9046	-0,3224993	-0,9465697	40°29'01.6481"	-3°36'11.7986"
7		Clotoide	75,000	900,319	448.719,005	4.481.188,508		109,545	220,9046	448.719,005	4.481.188,508	40°28'47.2865"	-3°36'18.0633"
7	4	Circular	228,866	975,319	448.700,475	4.481.116,022	-160,000		205,9838	448.859,768	4.481.101,005	40°28'44.9316"	-3°36'18.8291"
7		Clotoide	75,000	1.204,186	448.822,611	4.480.945,379		109,545	114,9208	448.897,200	4.480.939,543	40°28'39.4246"	-3°36'13.5924"
7	5	Recta	1.234,727	1.279,186	448.897,200	4.480.939,543			100,0000	1,0000000	0,0000000	40°28'39.2519"	-3°36'10.4229"
7		Clotoide	100,000	2.513,913	450.131,927	4.480.939,543		200,000	100,0000	450.131,927	4.480.939,543	40°28'39.5221"	-3°35'17.9846"
7	6	Circular	135,241	2.613,913	450.231,771	4.480.935,381	400,000		107,9577	450.181,901	4.480.538,502	40°28'39.4087"	-3°35'13.7431"
7		Clotoide	100,000	2.749,154	450.360,591	4.480.896,370		200,000	129,4820	450.445,970	4.480.844,442	40°28'38.1713"	-3°35'08.2612"
7	7	Recta	263,218	2.849,154	450.445,970	4.480.844,442			137,4397	0,8319955	-0,5547824	40°28'36.5056"	-3°35'04.6206"
7				3.112,371	450.664,966	4.480.698,413			137,4397			40°28'31.8167"	-3°34'55.2791"

## EJE 7. RAMAL A COCHERAS PARA LAS ALTERNATIVAS 2 Y 4.

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
7	RECTA	Pendiente	0,000	448.637,860	4.481.893,544	0,000	617,000	108,833995	-0,001	0,00	644,050	40°29'10.1333"	-3°36'21.7152"
7	RECTA	Pendiente	20,000	448.657,667	4.481.890,778	0,000	617,000	108,833995	-0,001	0,00	644,051	40°29'10.0480"	-3°36'20.8730"
7	RECTA	KV -8000	40,000	448.677,475	4.481.888,012	0,000	616,997	108,833995	-0,914	0,00	644,195	40°29'09.9627"	-3°36'20.0309"
7	RECTA	KV -8000	60,000	448.697,283	4.481.885,245	0,000	616,953	108,833995	-3,414	0,00	643,677	40°29'09.8774"	-3°36'19.1888"
7	CLOT.	Pendiente	76,908	448.714,029	4.481.882,907	1.000.000,000	616,879	108,833995	-5,000	0,00	643,288	40°29'09.8052"	-3°36'18.4768"
7	CLOT.	Pendiente	80,000	448.717,091	4.481.882,478	3.881,372	616,863	108,859349	-5,000	0,82	643,231	40°29'09.7920"	-3°36'18.3466"
7	CLOT.	Pendiente	100,000	448.736,874	4.481.879,543	519,667	616,763	110,248421	-5,000	6,16	643,071	40°29'09.7013"	-3°36'17.5055"
7	CLOT.	Pendiente	120,000	448.756,527	4.481.875,850	278,476	616,663	113,759558	-5,000	11,49	643,149	40°29'09.5858"	-3°36'16.6697"
7	CLOT.	Pendiente	140,000	448.775,861	4.481.870,756	190,199	616,563	119,392762	-5,000	16,82	643,434	40°29'09.4249"	-3°36'15.8470"
7	CIRC.	Pendiente	151,908	448.787,094	4.481.866,809	160,000	616,504	123,754770	-5,000	20,00	643,458	40°29'09.2994"	-3°36'15.3687"
7	CIRC.	Pendiente	160,000	448.794,551	4.481.863,670	160,000	616,463	126,974352	-5,000	20,00	643,516	40°29'09.1993"	-3°36'15.0511"
7	CIRC.	Pendiente	180,000	448.812,221	4.481.854,331	160,000	616,363	134,932099	-5,000	20,00	643,094	40°29'08.9003"	-3°36'14.2978"
7	CIRC.	Pendiente	200,000	448.828,590	4.481.842,861	160,000	616,263	142,889846	-5,000	20,00	641,879	40°29'08.5320"	-3°36'13.5992"
7	CIRC.	Pendiente	220,000	448.843,400	4.481.829,440	160,000	616,163	150,847593	-5,000	20,00	642,057	40°29'08.1000"	-3°36'12.9662"
7	CIRC.	Pendiente	240,000	448.856,422	4.481.814,277	160,000	616,063	158,805340	-5,000	20,00	642,747	40°29'07.6112"	-3°36'12.4087"
7	CIRC.	Pendiente	260,000	448.867,452	44.857,609	160,000	615,963	166,763088	-5,000	20,00	641,446	40°29'07.0731"	-3°36'11.9354"
7	CIRC.	Pendiente	280,000	448.876,318	4.481.779,696	160,000	615,863	174,720835	-5,000	20,00	640,899	40°29'06.4941"	-3°36'11.5537"
7	CIRC.	KV -3000	300,000	448.882,881	4.481.760,817	160,000	615,726	182,678582	-9,968	20,00	639,907	40°29'05.8833"	-3°36'11.2694"
7	CIRC.	KV -3000	320,000	448.887,040	4.481.741,268	160,000	615,460	190,636329	-16,635	20,00	637,956	40°29'05.2502"	-3°36'11.0871"
7	CIRC.	KV -3000	340,000	448.888,728	4.481.721,352	160,000	615,061	198,594076	-23,301	20,00	635,799	40°29'04.6047"	-3°36'11.0096"
7	CLOT.	KV -3000	358,572	448.888,061	4.481.702,802	160,000	614,571	205,983826	-29,492	20,00	635,028	40°29'04.0030"	-3°36'11.0326"
7	CLOT.	KV -3000	360,000	448.887,921	4.481.701,382	163,104	614,528	206,546418	-29,968	19,62	634,995	40°29'03.9569"	-3°36'11.0381"
7	CLOT.	Pendiente	380,000	448.884,764	4.481.681,642	223,996	613,866	213,291666	-35,000	14,29	634,143	40°29'03.3160"	-3°36'11.1665"
7	CLOT.	Pendiente	400,000	448.879,858	4.481.662,257	357,436	613,166	6,914848	-35,000	8,95	633,441	40°29'02.6862"	-3°36'11.3692"
<b>Fin de proyecto</b>	<b>CLOT.</b>	<b>Pendiente</b>	<b>415,000</b>	<b>448.875,436</b>	<b>4.481.647,925</b>	<b>646,118</b>	<b>612,641</b>	<b>219,989629</b>	<b>-3,500</b>	<b>0,00</b>	<b>632,661</b>	<b>40°29'02.2204"</b>	<b>-3°36'11.5529"</b>
7	CLOT.	Pendiente	420,000	448.873,875	4.481.643,175	884,143	612,466	220,415964	-35,000	3,62	632,596	40°29'02.0661"	-3°36'11.6178"
7	RECTA	Pendiente	433,572	448.869,530	4.481.630,316	0,000	611,991	220,904602	-35,000	0,00	632,955	40°29'01.6481"	-3°36'11.7986"
7	RECTA	Pendiente	440,000	448.867,458	4.481.624,232	0,000	611,766	220,904602	-35,000	0,00	633,133	40°29'01.4503"	-3°36'11.8848"
7	RECTA	Pendiente	460,000	448.861,008	4.481.605,301	0,000	611,066	220,904602	-35,000	0,00	633,548	40°29'00.8349"	-3°36'12.1533"
7	RECTA	Pendiente	480,000	448.854,558	4.481.586,369	0,000	610,366	220,904602	-35,000	0,00	633,977	40°29'00.2195"	-3°36'12.4218"
7	RECTA	Pendiente	500,000	448.848,108	4.481.567,438	0,000	609,666	220,904602	-35,000	0,00	635,245	40°28'59.6041"	-3°36'12.6902"
7	RECTA	Pendiente	520,000	448.841,658	4.481.548,507	0,000	608,966	220,904602	-35,000	0,00	637,008	40°28'58.9887"	-3°36'12.9587"
7	RECTA	Pendiente	540,000	448.835,208	4.481.529,575	0,000	608,266	220,904602	-35,000	0,00	637,013	40°28'58.3734"	-3°36'13.2271"
7	RECTA	KV 1250	560,000	448.828,758	4.481.510,644	0,000	607,702	220,904602	-20,287	0,00	634,272	40°28'57.7580"	-3°36'13.4956"
7	RECTA	KV 1250	580,000	448.822,308	4.481.491,712	0,000	607,456	220,904602	-4,287	0,00	634,445	40°28'57.1426"	-3°36'13.7640"
7	RECTA	KV 1250	600,000	448.815,858	4.481.472,781	0,000	607,530	220,904602	11,713	0,00	635,269	40°28'56.5272"	-3°36'14.0324"
7	RECTA	KV 1250	620,000	448.809,408	4.481.453,850	0,000	607,924	220,904602	27,713	0,00	635,567	40°28'55.9118"	-3°36'14.3009"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
7	RECTA	Rampa	640,000	448.802,958	4.481.434,918	0,000	608,553	220,904602	32,000	0,00	635,262	40°28'55.2964"	-3°36'14.5693"
7	RECTA	Rampa	660,000	448.796,508	4.481.415,987	0,000	609,193	220,904602	32,000	0,00	636,125	40°28'54.6810"	-3°36'14.8378"
7	RECTA	KV -1500	680,000	448.790,058	4.481.397,055	0,000	609,833	220,904602	31,980	0,00	635,998	40°28'54.0656"	-3°36'15.1062"
7	RECTA	KV -1500	700,000	448.783,608	4.481.378,124	0,000	610,339	220,904602	18,646	0,00	634,709	40°28'53.4502"	-3°36'15.3747"
7	RECTA	KV -1500	720,000	448.777,158	4.481.359,193	0,000	610,579	220,904602	5,313	0,00	635,899	40°28'52.8348"	-3°36'15.6431"
7	RECTA	Rampa	740,000	448.770,708	4.481.340,261	0,000	610,600	220,904602	0,001	0,00	636,471	40°28'52.2194"	-3°36'15.9115"
7	RECTA	Rampa	760,000	448.764,258	4.481.321,330	0,000	610,600	220,904602	0,001	0,00	637,216	40°28'51.6041"	-3°36'16.1800"
7	RECTA	Rampa	780,000	448.757,808	4.481.302,398	0,000	610,600	220,904602	0,001	0,00	637,928	40°28'50.9887"	-3°36'16.4484"
7	RECTA	Rampa	800,000	448.751,358	4.481.283,467	0,000	610,600	220,904602	0,001	0,00	638,351	40°28'50.3733"	-3°36'16.7168"
7	RECTA	Rampa	820,000	448.744,908	4.481.264,536	0,000	610,600	220,904602	0,001	0,00	637,935	40°28'49.7579"	-3°36'16.9853"
7	RECTA	Rampa	840,000	448.738,458	4.481.245,604	0,000	610,600	220,904602	0,001	0,00	637,959	40°28'49.1425"	-3°36'17.2537"
7	RECTA	Rampa	860,000	448.732,008	4.481.226,673	0,000	610,600	220,904602	0,001	0,00	638,698	40°28'48.5271"	-3°36'17.5221"
7	RECTA	Rampa	880,000	448.725,558	4.481.207,741	0,000	610,600	220,904602	0,001	0,00	640,169	40°28'47.9117"	-3°36'17.7905"
7	RECTA	Rampa	900,000	448.719,108	4.481.188,810	0,000	610,600	220,904602	0,001	0,00	641,637	40°28'47.2963"	-3°36'18.0590"
7	CLOT.	Rampa	900,319	448.719,005	4.481.188,508	-1.000.000,000	610,600	220,904602	0,001	0,00	641,635	40°28'47.2865"	-3°36'18.0633"
7	CLOT.	Rampa	920,000	448.712,758	4.481.169,845	-609,735	610,600	219,877180	0,001	5,25	641,375	40°28'46.6798"	-3°36'18.3231"
7	CLOT.	Rampa	940,000	448.707,035	4.481.150,684	-302,414	610,600	216,727962	0,001	10,58	640,824	40°28'46.0571"	-3°36'18.5606"
7	CLOT.	Rampa	960,000	448.702,591	4.481.131,190	-201,070	610,600	211,456679	0,001	15,91	640,413	40°28'45.4239"	-3°36'18.7437"
7	CIRC.	Rampa	975,319	448.700,475	4.481.116,022	-160,000	610,600	205,983826	0,001	20,00	640,351	40°28'44.9316"	-3°36'18.8291"
7	CIRC.	Rampa	980,000	448.700,104	4.481.111,356	-160,000	610,600	204,121444	0,001	20,00	640,305	40°28'44.7802"	-3°36'18.8435"
7	CIRC.	Rampa	1.000,000	448.700,059	4.481.091,369	-160,000	610,600	196,163697	0,001	20,00	640,307	40°28'44.1320"	-3°36'18.8396"
7	CIRC.	Rampa	1.020,000	448.702,506	4.481.071,533	-160,000	610,600	188,205950	0,001	20,00	640,456	40°28'43.4892"	-3°36'18.7299"
7	CIRC.	Rampa	1.040,000	448.707,408	4.481.052,156	-160,000	610,600	180,248203	0,001	20,00	640,932	40°28'42.8619"	-3°36'18.5161"
7	CIRC.	Rampa	1.060,000	448.714,687	4.481.033,542	-160,000	610,600	172,290456	0,001	20,00	642,227	40°28'42.2598"	-3°36'18.2015"
7	CIRC.	Rampa	1.080,000	448.724,230	4.481.015,980	-160,000	610,600	164,332708	0,001	20,00	645,461	40°28'41.6924"	-3°36'17.7911"
7	CIRC.	Rampa	1.100,000	448.735,888	4.480.999,745	-160,000	610,600	156,374961	0,001	20,00	647,764	40°28'41.1685"	-3°36'17.2913"
7	CIRC.	KV 2000	1.120,000	448.749,479	4.480.985,090	-160,000	610,700	148,417214	9,969	20,00	650,557	40°28'40.6963"	-3°36'16.7098"
7	CIRC.	KV 2000	1.140,000	448.764,791	4.480.972,244	-160,000	610,999	140,459467	19,969	20,00	653,249	40°28'40.2831"	-3°36'16.0558"
7	CIRC.	KV 2000	1.160,000	448.781,585	4.480.961,408	-160,000	611,498	132,501720	29,969	20,00	656,898	40°28'39.9353"	-3°36'15.3394"
7	CIRC.	Rampa	1.180,000	448.799,599	4.480.952,749	-160,000	612,173	124,543973	35,000	20,00	655,412	40°28'39.6585"	-3°36'14.5718"
7	CIRC.	Rampa	1.200,000	448.818,553	4.480.946,405	-160,000	612,873	116,586225	35,000	20,00	653,212	40°28'39.4570"	-3°36'13.7650"
7	CLOT.	Rampa	1.204,186	448.822,611	4.480.945,379	-160,000	613,020	114,920776	35,000	20,00	652,373	40°28'39.4246"	-3°36'13.5924"
7	CLOT.	Rampa	1.220,000	448.838,140	4.480.942,418	-202,752	613,573	109,291866	35,000	15,78	648,738	40°28'39.3320"	-3°36'12.9320"
7	CLOT.	Rampa	1.240,000	448.858,030	4.480.940,378	-306,234	614,273	104,073097	35,000	10,45	644,937	40°28'39.2703"	-3°36'12.0867"
7	CLOT.	Rampa	1.260,000	448.878,015	4.480.939,641	-625,465	614,973	100,976395	35,000	5,12	645,862	40°28'39.2508"	-3°36'11.2377"
7	RECTA	Rampa	1.279,186	448.897,200	4.480.939,543	0,000	615,645	100,000000	35,000	0,00	648,624	40°28'39.2519"	-3°36'10.4229"
7	RECTA	Rampa	1.280,000	448.898,014	4.480.939,543	0,000	615,673	100,000000	35,000	0,00	648,707	40°28'39.2521"	-3°36'10.3883"
7	RECTA	Rampa	1.300,000	448.918,014	4.480.939,543	0,000	616,373	100,000000	35,000	0,00	650,095	40°28'39.2565"	-3°36'09.5390"
7	RECTA	Rampa	1.320,000	448.938,014	4.480.939,543	0,000	617,073	100,000000	35,000	0,00	650,678	40°28'39.2609"	-3°36'08.6896"
7	RECTA	Rampa	1.340,000	448.958,014	4.480.939,543	0,000	617,773	100,000000	35,000	0,00	649,805	40°28'39.2654"	-3°36'07.8402"
7	RECTA	Rampa	1.360,000	448.978,014	4.480.939,543	0,000	618,473	100,000000	35,000	0,00	648,597	40°28'39.2698"	-3°36'06.9908"
7	RECTA	Rampa	1.380,000	448.998,014	4.480.939,543	0,000	619,173	100,000000	35,000	0,00	648,746	40°28'39.2742"	-3°36'06.1414"
7	RECTA	Rampa	1.400,000	449.018,014	4.480.939,543	0,000	619,873	100,000000	35,000	0,00	648,895	40°28'39.2786"	-3°36'05.2920"



EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
7	RECTA	Rampa	1.420,000	449.038,014	4.480.939,543	0,000	620,573	100,000000	35,000	0,00	648,751	40°28'39.2830"	-3°36'04.4426"
7	RECTA	Rampa	1.440,000	449.058,014	4.480.939,543	0,000	621,273	100,000000	35,000	0,00	648,397	40°28'39.2875"	-3°36'03.5932"
7	RECTA	Rampa	1.460,000	449.078,014	4.480.939,543	0,000	621,973	100,000000	35,000	0,00	648,993	40°28'39.2919"	-3°36'02.7438"
7	RECTA	KV -2000	1.480,000	449.098,014	4.480.939,543	0,000	622,618	100,000000	27,575	0,00	650,244	40°28'39.2963"	-3°36'01.8945"
7	RECTA	KV -2000	1.500,000	449.118,014	4.480.939,543	0,000	623,069	100,000000	17,575	0,00	650,100	40°28'39.3007"	-3°36'01.0451"
7	RECTA	KV -2000	1.520,000	449.138,014	4.480.939,543	0,000	623,321	100,000000	7,575	0,00	649,338	40°28'39.3051"	-3°36'00.1957"
7	RECTA	Rampa	1.540,000	449.158,014	4.480.939,543	0,000	623,378	100,000000	0,001	0,00	648,571	40°28'39.3095"	-3°35'59.3463"
7	RECTA	Rampa	1.560,000	449.178,014	4.480.939,543	0,000	623,378	100,000000	0,001	0,00	647,600	40°28'39.3139"	-3°35'58.4969"
7	RECTA	Rampa	1.580,000	449.198,014	4.480.939,543	0,000	623,378	100,000000	0,001	0,00	646,008	40°28'39.3183"	-3°35'57.6475"
7	RECTA	Rampa	1.600,000	449.218,014	4.480.939,543	0,000	623,378	100,000000	0,001	0,00	645,045	40°28'39.3227"	-3°35'56.7981"
7	RECTA	Rampa	1.620,000	449.238,014	4.480.939,543	0,000	623,378	100,000000	0,001	0,00	643,965	40°28'39.3271"	-3°35'55.9487"
7	RECTA	Rampa	1.640,000	449.258,014	4.480.939,543	0,000	623,378	100,000000	0,001	0,00	642,927	40°28'39.3315"	-3°35'55.0993"
7	RECTA	Rampa	1.660,000	449.278,014	4.480.939,543	0,000	623,378	100,000000	0,001	0,00	642,220	40°28'39.3359"	-3°35'54.2499"
7	RECTA	Rampa	1.680,000	449.298,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	641,819	40°28'39.3403"	-3°35'53.4005"
7	RECTA	Rampa	1.700,000	449.318,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	640,748	40°28'39.3447"	-3°35'52.5512"
7	RECTA	Rampa	1.720,000	449.338,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	640,010	40°28'39.3491"	-3°35'51.7018"
7	RECTA	Rampa	1.740,000	449.358,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	639,308	40°28'39.3535"	-3°35'50.8524"
7	RECTA	Rampa	1.760,000	449.378,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	638,745	40°28'39.3579"	-3°35'50.0030"
7	RECTA	Rampa	1.780,000	449.398,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	638,136	40°28'39.3623"	-3°35'49.1536"
7	RECTA	Rampa	1.800,000	449.418,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	637,254	40°28'39.3667"	-3°35'48.3042"
7	RECTA	Rampa	1.820,000	449.438,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	636,555	40°28'39.3711"	-3°35'47.4548"
7	RECTA	Rampa	1.840,000	449.458,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	635,674	40°28'39.3754"	-3°35'46.6054"
7	RECTA	Rampa	1.860,000	449.478,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	635,101	40°28'39.3798"	-3°35'45.7560"
7	RECTA	Rampa	1.880,000	449.498,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	634,097	40°28'39.3842"	-3°35'44.9066"
7	RECTA	Rampa	1.900,000	449.518,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	632,650	40°28'39.3886"	-3°35'44.0573"
7	RECTA	Rampa	1.920,000	449.538,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	631,651	40°28'39.3930"	-3°35'43.2079"
7	RECTA	Rampa	1.940,000	449.558,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	630,930	40°28'39.3973"	-3°35'42.3585"
7	RECTA	Rampa	1.960,000	449.578,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	629,520	40°28'39.4017"	-3°35'41.5091"
7	RECTA	Rampa	1.980,000	449.598,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	628,654	40°28'39.4061"	-3°35'40.6597"
7	RECTA	Rampa	2.000,000	449.618,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	627,417	40°28'39.4105"	-3°35'39.8103"
7	RECTA	Rampa	2.020,000	449.638,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	626,920	40°28'39.4148"	-3°35'38.9609"
7	RECTA	Rampa	2.040,000	449.658,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	626,922	40°28'39.4192"	-3°35'38.1115"
7	RECTA	Rampa	2.060,000	449.678,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	626,938	40°28'39.4235"	-3°35'37.2621"
7	RECTA	Rampa	2.080,000	449.698,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	626,424	40°28'39.4279"	-3°35'36.4127"
7	RECTA	Rampa	2.100,000	449.718,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	626,000	40°28'39.4323"	-3°35'35.5633"
7	RECTA	Rampa	2.120,000	449.738,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	626,127	40°28'39.4366"	-3°35'34.7139"
7	RECTA	Rampa	2.140,000	449.758,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	625,000	40°28'39.4410"	-3°35'33.8646"
7	RECTA	Rampa	2.160,000	449.778,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	623,172	40°28'39.4453"	-3°35'33.0152"
7	RECTA	Rampa	2.180,000	449.798,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	623,737	40°28'39.4497"	-3°35'32.1658"
7	RECTA	Rampa	2.200,000	449.818,014	4.480.939,543	0,000	623,379	100,000000	0,001	0,00	624,146	40°28'39.4540"	-3°35'31.3164"
7	RECTA	KV -2000	2.220,000	449.838,014	4.480.939,543	0,000	623,364	100,000000	-3,841	0,00	625,229	40°28'39.4584"	-3°35'30.4670"
7	RECTA	KV -2000	2.240,000	449.858,014	4.480.939,543	0,000	623,187	100,000000	-13,841	0,00	626,010	40°28'39.4627"	-3°35'29.6176"
7	RECTA	KV -2000	2.260,000	449.878,014	4.480.939,543	0,000	622,811	100,000000	-23,841	0,00	626,426	40°28'39.4671"	-3°35'28.7682"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
7	RECTA	KV -2000	2.280,000	449.898,014	4.480.939,543	0,000	622,234	100,000000	-33,841	0,00	627,356	40°28'39.4714"	-3°35'27.9188"
7	RECTA	Pendiente	2.300,000	449.918,014	4.480.939,543	0,000	621,535	100,000000	-35,000	0,00	628,815	40°28'39.4758"	-3°35'27.0694"
7	RECTA	Pendiente	2.320,000	449.938,014	4.480.939,543	0,000	620,835	100,000000	-35,000	0,00	629,964	40°28'39.4801"	-3°35'26.2200"
7	RECTA	Pendiente	2.340,000	449.958,014	4.480.939,543	0,000	620,135	100,000000	-35,000	0,00	631,555	40°28'39.4845"	-3°35'25.3706"
7	RECTA	Pendiente	2.360,000	449.978,014	4.480.939,543	0,000	619,435	100,000000	-35,000	0,00	633,117	40°28'39.4888"	-3°35'24.5212"
7	RECTA	Pendiente	2.380,000	449.998,014	4.480.939,543	0,000	618,735	100,000000	-35,000	0,00	634,007	40°28'39.4931"	-3°35'23.6719"
7	RECTA	Pendiente	2.400,000	450.018,014	4.480.939,543	0,000	618,035	100,000000	-35,000	0,00	634,034	40°28'39.4975"	-3°35'22.8225"
7	RECTA	Pendiente	2.420,000	450.038,014	4.480.939,543	0,000	617,335	100,000000	-35,000	0,00	633,860	40°28'39.5018"	-3°35'21.9731"
7	RECTA	Pendiente	2.440,000	450.058,014	4.480.939,543	0,000	616,635	100,000000	-35,000	0,00	632,992	40°28'39.5061"	-3°35'21.1237"
7	RECTA	Pendiente	2.460,000	450.078,014	4.480.939,543	0,000	615,935	100,000000	-35,000	0,00	632,482	40°28'39.5105"	-3°35'20.2743"
7	RECTA	Pendiente	2.480,000	450.098,014	4.480.939,543	0,000	615,235	100,000000	-35,000	0,00	632,174	40°28'39.5148"	-3°35'19.4249"
7	RECTA	Pendiente	2.500,000	450.118,014	4.480.939,543	0,000	614,535	100,000000	-35,000	0,00	631,748	40°28'39.5191"	-3°35'18.5755"
7	CLOT.	Pendiente	2.513,913	450.131,927	4.480.939,543	1.000.000,000	614,048	100,000000	-35,000	0,00	631,241	40°28'39.5221"	-3°35'17.9846"
7	CLOT.	Pendiente	2.520,000	450.138,014	4.480.939,542	6.571,316	613,835	100,029485	-35,000	0,00	631,068	40°28'39.5234"	-3°35'17.7261"
7	CLOT.	Pendiente	2.540,000	450.158,014	4.480.939,469	1.533,327	613,135	100,541552	-35,000	0,00	630,541	40°28'39.5254"	-3°35'16.8767"
7	CLOT.	Pendiente	2.560,000	450.178,011	4.480.939,135	867,923	612,435	101,690239	-35,000	0,00	629,984	40°28'39.5189"	-3°35'16.0273"
7	CLOT.	Pendiente	2.580,000	450.197,994	4.480.938,341	605,262	611,735	103,475546	-35,000	0,00	629,276	40°28'39.4974"	-3°35'15.1784"
7	CLOT.	Pendiente	2.600,000	4.506,940	4.480.936,886	464,646	611,035	105,897472	-35,000	0,00	628,231	40°28'39.4545"	-3°35'14.3309"
7	CIRC.	Pendiente	2.613,913	450.231,771	4.480.935,381	400,000	610,548	107,957747	-35,000	0,00	627,732	40°28'39.4087"	-3°35'13.7431"
7	CIRC.	Pendiente	2.620,000	450.237,804	4.480.934,576	400,000	610,335	108,926533	-35,000	0,00	627,117	40°28'39.3839"	-3°35'13.4866"
7	CIRC.	Pendiente	2.640,000	450.257,530	4.480.931,287	400,000	609,635	112,109632	-35,000	0,00	626,010	40°28'39.2815"	-3°35'12.6480"
7	CIRC.	Pendiente	2.660,000	450.277,067	4.480.927,016	400,000	608,935	115,292731	-35,000	0,00	625,360	40°28'39.1472"	-3°35'11.8171"
7	CIRC.	Pendiente	2.680,000	450.296,365	4.480.921,775	400,000	608,235	118,475830	-35,000	0,00	624,493	40°28'38.9814"	-3°35'10.9960"
7	CIRC.	Pendiente	2.700,000	450.315,378	4.480.915,575	400,000	607,535	121,658928	-35,000	0,00	623,965	40°28'38.7844"	-3°35'10.1868"
7	CIRC.	Pendiente	2.720,000	450.334,057	4.480.908,432	400,000	606,835	124,842027	-35,000	0,00	624,698	40°28'38.5568"	-3°35'09.3915"
7	CIRC.	Pendiente	2.740,000	450.352,356	4.480.900,365	400,000	606,135	128,025126	-35,000	0,00	625,035	40°28'38.2991"	-3°35'08.6121"
7	CLOT.	Pendiente	2.749,154	450.360,591	4.480.896,370	400,000	605,815	129,481953	-35,000	0,00	624,590	40°28'38.1713"	-3°35'08.2612"
7	CLOT.	Pendiente	2.760,000	450.370,231	4.480.891,399	448,664	605,435	131,114605	-35,000	0,00	624,590	40°28'38.0122"	-3°35'07.8504"
7	CLOT.	KV 2000	2.780,000	450.387,691	4.480.881,647	578,423	604,763	133,634140	-29,756	0,00	624,241	40°28'37.6996"	-3°35'07.1061"
7	CLOT.	KV 2000	2.800,000	450.404,803	4.480.871,297	813,777	604,268	135,517054	-19,756	0,00	624,028	40°28'37.3677"	-3°35'06.3764"
7	CLOT.	KV 2000	2.820,000	450.421,657	4.480.860,529	1.372,047	603,972	136,763349	-9,756	0,00	623,893	40°28'37.0221"	-3°35'05.6576"
7	CLOT.	Pendiente	2.840,000	450.438,352	4.480.849,517	4.369,907	603,877	137,373025	-0,001	0,00	623,723	40°28'36.6685"	-3°35'04.9455"
7	RECTA	Pendiente	2.849,154	450.445,970	4.480.844,442	0,000	603,877	137,439700	-0,001	0,00	623,597	40°28'36.5056"	-3°35'04.6206"
7	RECTA	Pendiente	2.860,000	450.454,994	4.480.838,424	0,000	603,877	137,439700	-0,001	0,00	623,503	40°28'36.3124"	-3°35'04.2356"
7	RECTA	Pendiente	2.880,000	450.471,634	4.480.827,329	0,000	603,877	137,439700	-0,001	0,00	623,391	40°28'35.9561"	-3°35'03.5258"
7	RECTA	Pendiente	2.900,000	450.488,274	4.480.816,233	0,000	603,877	137,439700	-0,001	0,00	623,035	40°28'35.5998"	-3°35'02.8160"
7	RECTA	Pendiente	2.920,000	450.504,914	4.480.805,137	0,000	603,877	137,439700	-0,001	0,00	622,898	40°28'35.2435"	-3°35'02.1062"
7	RECTA	Pendiente	2.940,000	450.521,553	4.480.794,042	0,000	603,877	137,439700	-0,001	0,00	623,500	40°28'34.8873"	-3°35'01.3964"
7	RECTA	Pendiente	2.960,000	450.538,193	4.480.782,946	0,000	603,877	137,439700	-0,001	0,00	623,331	40°28'34.5310"	-3°35'00.6867"
7	RECTA	Pendiente	2.980,000	450.554,833	4.480.771,850	0,000	603,877	137,439700	-0,001	0,00	623,575	40°28'34.1747"	-3°34'59.9769"
7	RECTA	Pendiente	3.000,000	450.571,473	4.480.760,755	0,000	603,877	137,439700	-0,001	0,00	623,714	40°28'33.8185"	-3°34'59.2671"
7	RECTA	Pendiente	3.020,000	450.588,113	4.480.749,659	0,000	603,877	137,439700	-0,001	0,00	623,647	40°28'33.4622"	-3°34'58.5573"
7	RECTA	Pendiente	3.040,000	450.604,753	4.480.738,563	0,000	603,877	137,439700	-0,001	0,00	623,855	40°28'33.1059"	-3°34'57.8475"



EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
7	RECTA	Pendiente	3.060,000	450.621,393	4.480.727,468	0,000	603,877	137,439700	-0,001	0,00	623,789	40°28'32.7496"	-3°34'57.1377"
7	RECTA	Pendiente	3.080,000	450.638,033	4.480.716,372	0,000	603,877	137,439700	-0,001	0,00	624,133	40°28'32.3933"	-3°34'56.4279"
7	RECTA	Pendiente	3.100,000	450.654,673	4.480.705,276	0,000	603,877	137,439700	-0,001	0,00	624,354	40°28'32.0371"	-3°34'55.7182"
7	RECTA	Pendiente	3.112,371	450.664,966	4.480.698,413	0,000	603,877	137,439700	-0,001	0,00	624,264	40°28'31.8167"	-3°34'55.2791"

EJE 7. SALTO DE CARNERO PARA LAS ALTERNATIVAS 2 Y 4.

EJE	DATO	TIPO	LONGITUD	P.K.	X TANGENCIA	Y TANGENCIA	RADIO	PARAMETRO	AZIMUT	Cos/Xc/Xinf	Sen/Yc/Yinf	Latitud (N)	Longitud (E)
8	1	Recta	137,749	0,000	448.637,859	4.481.896,389			91,1237	0,9902957	0,1389765	40°29'10.2256"	-3°36'21.7161"
8		Clotoide	82,000	137,749	448.774,271	4.481.915,533		90,554	91,1237	448.774,271	4.481.915,533	40°29'10.8767"	-3°36'15.9275"
8	2	Circular	121,843	219,749	448.855,659	4.481.915,774	100,000		117,2252	448.828,931	4.481.819,412	40°29'10.9026"	-3°36'12.4706"
8		Clotoide	82,000	341,591	448.928,597	4.481.827,583		90,558	194,7926	448.913,084	4.481.747,678	40°29'08.0587"	-3°36'09.3470"
8	3	Circular	125,145	423,591	448.913,086	4.481.747,685	1.000.003,385		220,8966	-497.700,161	4.804.129,648	40°29'05.4641"	-3°36'09.9827"
8				548,736	448.872,735	4.481.629,225			220,9046			40°29'01.6134"	-3°36'11.6622"

EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
8	RECTA	Rampa	0,000	448.637,859	4.481.896,389	0,000	617,000	91,123749	0,001	0,00	644,021	40°29'10.2256"	-3°36'21.7161"
8	RECTA	Rampa	20,000	448.657,665	4.481.899,169	0,000	617,000	91,123749	0,001	0,00	643,929	40°29'10.3201"	-3°36'20.8756"
8	RECTA	KV 1400	40,000	448.677,471	4.481.901,948	0,000	617,078	91,123749	10,562	0,00	643,955	40°29'10.4147"	-3°36'20.0352"
8	RECTA	KV 1400	60,000	448.697,277	4.481.904,728	0,000	617,432	91,123749	24,848	0,00	643,539	40°29'10.5092"	-3°36'19.1947"
8	RECTA	Rampa	80,000	448.717,082	4.481.907,508	0,000	618,060	91,123749	35,000	0,00	643,140	40°29'10.6038"	-3°36'18.3543"
8	RECTA	Rampa	100,000	448.736,888	4.481.910,287	0,000	618,760	91,123749	35,000	0,00	642,964	40°29'10.6983"	-3°36'17.5138"
8	RECTA	Rampa	120,000	448.756,694	4.481.913,067	0,000	619,460	91,123749	35,000	0,00	643,137	40°29'10.7928"	-3°36'16.6734"
8	CLOT.	Rampa	137,749	448.774,271	4.481.915,533	1.000.000,000	620,081	91,123749	35,000	0,00	643,236	40°29'10.8767"	-3°36'15.9275"
8	CLOT.	Rampa	140,000	448.776,500	4.481.915,846	3.642,464	620,160	91,143422	35,000	2,47	643,240	40°29'10.8874"	-3°36'15.8329"
8	CLOT.	Rampa	160,000	448.796,335	4.481.918,404	368,519	620,860	93,045708	35,000	24,42	643,379	40°29'10.9747"	-3°36'14.9912"
8	CLOT.	Rampa	180,000	448.816,275	4.481.919,881	194,077	621,560	98,053456	35,000	46,37	643,416	40°29'11.0271"	-3°36'14.1447"
8	CLOT.	KV -1250	200,000	448.836,253	4.481.919,300	131,724	622,156	106,166666	22,099	68,32	642,607	40°29'11.0127"	-3°36'13.2959"
8	CIRC.	KV -1250	219,749	448.855,659	4.481.915,774	100,000	622,436	117,225160	6,300	90,00	640,939	40°29'10.9026"	-3°36'12.4706"
8	CIRC.	KV -1250	220,000	448.855,901	4.481.915,706	100,000	622,438	117,385094	6,099	90,00	640,919	40°29'10.9005"	-3°36'12.4603"
8	CIRC.	KV -1250	240,000	448.874,495	4.481.908,429	100,000	622,400	130,117489	-9,901	90,00	638,292	40°29'10.6686"	-3°36'11.6685"
8	CIRC.	KV -1250	260,000	448.891,271	4.481.897,602	100,000	622,042	142,849885	-25,901	90,00	635,561	40°29'10.3212"	-3°36'10.9527"
8	CIRC.	Pendiente	280,000	448.905,563	4.481.883,659	100,000	621,394	155,582280	-35,000	90,00	633,295	40°29'09.8722"	-3°36'10.3417"
8	CIRC.	Pendiente	300,000	448.916,799	4.481.867,154	100,000	620,694	168,314676	-35,000	90,00	633,157	40°29'09.3394"	-3°36'09.8596"
8	CIRC.	Pendiente	320,000	448.924,532	4.481.848,745	100,000	619,994	181,047071	-35,000	90,00	632,774	40°29'08.7441"	-3°36'09.5258"
8	CIRC.	Pendiente	340,000	448.928,454	4.481.829,168	100,000	619,294	193,779466	-35,000	90,00	634,042	40°29'08.1100"	-3°36'09.3536"
8	CLOT.	Pendiente	341,591	448.928,597	4.481.827,583	100,000	619,238	194,792614	-35,000	90,00	634,131	40°29'08.0587"	-3°36'09.3470"
8	CLOT.	Pendiente	360,000	448.928,535	4.481.809,195	128,944	618,594	205,196540	-35,000	69,80	634,700	40°29'07.4623"	-3°36'09.3443"
8	CLOT.	Pendiente	380,000	448.925,528	4.481.789,437	188,094	617,894	213,518292	-35,000	47,84	634,011	40°29'06.8209"	-3°36'09.4663"
8	CLOT.	Pendiente	400,000	448.920,438	4.481.770,101	347,498	617,194	218,734893	-35,000	25,89	632,429	40°29'06.1927"	-3°36'09.6769"
8	CLOT.	Pendiente	420,000	448.914,243	4.481.751,085	2.278,228	616,494	220,846341	-35,000	3,94	633,153	40°29'05.5746"	-3°36'09.9345"
8	CIRC.	Pendiente	423,591	448.913,086	4.481.747,685	1.000.003,385	616,368	220,896635	-35,000	0,00	633,542	40°29'05.4641"	-3°36'09.9827"
8	CIRC.	Pendiente	440,000	448.907,796	4.481.732,153	1.000.003,385	615,794	220,897679	-35,000	0,00	632,889	40°29'04.9592"	-3°36'10.2028"
8	CIRC.	Pendiente	460,000	448.901,348	4.481.713,221	1.000.003,385	615,094	220,898952	-35,000	0,00	633,087	40°29'04.3438"	-3°36'10.4712"
8	CIRC.	Pendiente	480,000	448.894,900	4.481.694,289	1.000.003,385	614,394	220,900226	-35,000	0,00	633,107	40°29'03.7284"	-3°36'10.7396"



EJE	TIPO	ALZADO	P.K.	X	Y	RADIO	Z EJE	AZIMUT	PEN(o/oo)	PERALTE	ZT (eje)	Latitud (N)	Longitud (E)
8	CIRC.	Pendiente	500,000	448.888,451	4.481.675,357	1.000.003,385	613,694	220,901499	-35,000	0,00	632,691	40°29'03.1130"	-3°36'11.0080"
8	CIRC.	Pendiente	520,000	448.882,002	4.481.656,426	1.000.003,385	612,994	220,902772	-35,000	0,00	632,113	40°29'02.4976"	-3°36'11.2765"
Final de proyecto	CIRC.	Pendiente	530,072	448.878,754	4.481.646,892	1.000.003,385	612,641	220,903413	-3,500	0,00	632,130	40°29'02.1877"	-3°36'11.4116"
8	CIRC.	Pendiente	540,000	448.875,552	4.481.637,494	1.000.003,385	612,294	220,904045	-35,000	0,00	632,184	40°29'01.8822"	-3°36'11.5449"
8	CIRC.	Pendiente	548,736	448.872,735	4.481.629,225	1.000.003,385	611,988	220,904602	-35,000	0,00	632,189	40°29'01.6134"	-3°36'11.6622"

## LISTADOS DE LAS RASANTES.

### EJE 1. ALTERNATIVA 1.

EJE	PENDIENTE (o/oo)	LONGITUD (m.)	PARAMETRO ( kv )	VÉRTICE		ENTRADA AL ACUERDO		SALIDA DEL ACUERDO		BISECT. (m.)	DIF.PEN (o/oo)
				PK	Z	PK	Z	PK	Z		
1						0,000	650,000				
1	0,000000	109,230	3.300,000	529,675	650,000	475,060	650,000	584,290	648,192	0,452	-3,310
1	-33,100000	92,730	3.300,000	677,522	645,106	631,157	646,641	723,887	644,874	0,326	2,810
1	-5,000000	66,000	3.300,000	810,805	644,440	777,805	644,605	843,805	643,615	0,165	-2,000
1	-25,000000	192,390	3.300,000	1.069,434	637,974	973,239	640,379	1.165,629	641,177	1,402	5,830
1	33,300000	109,890	3.300,000	1.340,482	647,000	1.285,537	645,170	1.395,427	647,000	0,457	-3,330
1	0,000000	173,250	6.300,000	1.597,972	647,000	1.511,347	647,000	1.684,597	649,382	0,596	2,750
1	27,500000	173,250	6.300,000	2.112,517	661,150	2.025,892	658,768	2.199,142	661,150	0,596	-2,750
1	0,000000	109,890	3.300,000	2.439,643	661,150	2.384,698	661,150	2.494,588	659,320	0,457	-3,330
1	-33,300000	69,930	2.100,000	3.375,078	630,000	3.340,113	631,164	3.410,043	630,000	0,291	3,330
1	0,000000	69,930	2.100,000	3.617,672	630,000	3.582,707	630,000	3.652,637	628,836	0,291	-3,330
1	-33,300000	192,390	3.300,000	4.014,241	616,794	3.918,046	619,998	4.110,436	619,199	1,402	5,830
1	25,000000	360,000	12.000,000	4.669,440	633,174	4.489,440	628,674	4.849,440	632,274	1,350	-3,000
1	-5,000000	100,000	20.000,000	5.664,285	628,200	5.614,285	628,450	5.714,285	628,200	0,062	0,500
1	0,000000	101,400	3.000,000	6.404,854	628,200	6.354,154	628,200	6.455,554	626,486	0,428	-3,380
1	-33,800000	172,800	6.000,000	6.775,418	615,675	6.689,018	618,595	6.861,818	615,243	0,622	2,880
1	-5,000000	168,000	8.000,000	7.204,279	613,531	7.120,279	613,951	7.288,279	611,347	0,441	-2,100
1	-26,000000	104,320	6.520,000	7.814,762	597,658	7.762,602	599,014	7.866,922	597,136	0,209	1,600
1	-10,000000	100,000	10.000,000	8.130,569	594,500	8.080,569	595,000	8.180,569	594,500	0,125	1,000
1	0,000000	54,000	6.000,000	8.817,273	594,500	8.790,273	594,500	8.844,273	594,743	0,061	0,900
1	9,000000	65,000	2.500,000	9.300,173	598,846	9.267,673	598,554	9.332,673	599,984	0,211	2,600
1	35,000000	105,000	3.000,000	10.038,794	624,698	9.986,294	622,860	10.091,294	624,698	0,459	-3,500
1	0,000100							11.117,462	624,698		

## EJE 1. ALTERNATIVA 1.

EJE	P.K.	TIPO	COTA	PENDIENTE
1	0+000,000	Horizontal	650.000	0.0000 o/oo
1	0+020,000	Horizontal	650.000	0.0000 o/oo
1	0+040,000	Horizontal	650.000	0.0000 o/oo
1	0+060,000	Horizontal	650.000	0.0000 o/oo
1	0+080,000	Horizontal	650.000	0.0000 o/oo
1	0+100,000	Horizontal	650.000	0.0000 o/oo
1	0+120,000	Horizontal	650.000	0.0000 o/oo
1	0+140,000	Horizontal	650.000	0.0000 o/oo
1	0+160,000	Horizontal	650.000	0.0000 o/oo
1	0+180,000	Horizontal	650.000	0.0000 o/oo
1	0+200,000	Horizontal	650.000	0.0000 o/oo
1	0+220,000	Horizontal	650.000	0.0000 o/oo
1	0+240,000	Horizontal	650.000	0.0000 o/oo
1	0+260,000	Horizontal	650.000	0.0000 o/oo
1	0+280,000	Horizontal	650.000	0.0000 o/oo
1	0+300,000	Horizontal	650.000	0.0000 o/oo
1	0+320,000	Horizontal	650.000	0.0000 o/oo
1	0+340,000	Horizontal	650.000	0.0000 o/oo
1	0+360,000	Horizontal	650.000	0.0000 o/oo
1	0+380,000	Horizontal	650.000	0.0000 o/oo
1	0+400,000	Horizontal	650.000	0.0000 o/oo
1	0+420,000	Horizontal	650.000	0.0000 o/oo
1	0+440,000	Horizontal	650.000	0.0000 o/oo
1	0+460,000	Horizontal	650.000	0.0000 o/oo
1	0+475,060	tg. entrada	650.000	0.0000 o/oo
1	0+480,000	KV -3300	649.996	-1.4969 o/oo
1	0+500,000	KV -3300	649.906	-7.5576 o/oo
1	0+520,000	KV -3300	649.694	-13.6182 o/oo
1	0+540,000	KV -3300	649.361	-19.6788 o/oo
1	0+560,000	KV -3300	648.907	-25.7394 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
1	0+580,000	KV -3300	648.331	-31.8000 o/oo
1	0+584,290	tg. salida	648.192	-33.1000 o/oo
1	0+600,000	Pendiente	647.672	-33.1000 o/oo
1	0+620,000	Pendiente	647.010	-33.1000 o/oo
1	0+631,157	tg. entrada	646.641	-33.1000 o/oo
1	0+640,000	KV 3300	646.360	-30.4204 o/oo
1	0+660,000	KV 3300	645.812	-24.3598 o/oo
1	0+680,000	KV 3300	645.386	-18.2992 o/oo
1	0+700,000	KV 3300	645.080	-12.2386 o/oo
1	0+720,000	KV 3300	644.896	-6.1780 o/oo
1	0+723,887	tg. salida	644.874	-5.0000 o/oo
1	0+740,000	Pendiente	644.794	-5.0000 o/oo
1	0+760,000	Pendiente	644.694	-5.0000 o/oo
1	0+777,805	tg. entrada	644.605	-5.0000 o/oo
1	0+780,000	KV -3300	644.593	-5.6650 o/oo
1	0+800,000	KV -3300	644.419	-11.7257 o/oo
1	0+820,000	KV -3300	644.124	-17.7863 o/oo
1	0+840,000	KV -3300	643.708	-23.8469 o/oo
1	0+843,805	tg. salida	643.615	-25.0000 o/oo
1	0+860,000	Pendiente	643.210	-25.0000 o/oo
1	0+880,000	Pendiente	642.710	-25.0000 o/oo
1	0+900,000	Pendiente	642.210	-25.0000 o/oo
1	0+920,000	Pendiente	641.710	-25.0000 o/oo
1	0+940,000	Pendiente	641.210	-25.0000 o/oo
1	0+960,000	Pendiente	640.710	-25.0000 o/oo
1	0+973,239	tg. entrada	640.379	-25.0000 o/oo
1	0+980,000	KV 3300	640.217	-22.9512 o/oo
1	1+000,000	KV 3300	639.818	-16.8906 o/oo
1	1+020,000	KV 3300	639.541	-10.8300 o/oo
1	1+040,000	KV 3300	639.385	-4.7694 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
1	1+055,739	Punto bajo	639.348	0.0000 o/oo
1	1+060,000	KV 3300	639.350	1.2912 o/oo
1	1+080,000	KV 3300	639.437	7.3518 o/oo
1	1+100,000	KV 3300	639.645	13.4124 o/oo
1	1+120,000	KV 3300	639.973	19.4730 o/oo
1	1+140,000	KV 3300	640.423	25.5336 o/oo
1	1+160,000	KV 3300	640.995	31.5942 o/oo
1	1+165,629	tg. salida	641.177	33.3000 o/oo
1	1+180,000	Rampa	641.656	33.3000 o/oo
1	1+200,000	Rampa	642.322	33.3000 o/oo
1	1+220,000	Rampa	642.988	33.3000 o/oo
1	1+240,000	Rampa	643.654	33.3000 o/oo
1	1+260,000	Rampa	644.320	33.3000 o/oo
1	1+280,000	Rampa	644.986	33.3000 o/oo
1	1+285,537	tg. entrada	645.170	33.3000 o/oo
1	1+300,000	KV -3300	645.620	28.9171 o/oo
1	1+320,000	KV -3300	646.138	22.8565 o/oo
1	1+340,000	KV -3300	646.535	16.7959 o/oo
1	1+360,000	KV -3300	646.810	10.7353 o/oo
1	1+380,000	KV -3300	646.964	4.6747 o/oo
1	1+395,427	tg. salida	647.000	0.0000 o/oo
1	1+400,000	Horizontal	647.000	0.0000 o/oo
1	1+420,000	Horizontal	647.000	0.0000 o/oo
1	1+440,000	Horizontal	647.000	0.0000 o/oo
1	1+460,000	Horizontal	647.000	0.0000 o/oo
1	1+480,000	Horizontal	647.000	0.0000 o/oo
1	1+500,000	Horizontal	647.000	0.0000 o/oo
1	1+511,347	tg. entrada	647.000	0.0000 o/oo
1	1+520,000	KV 6300	647.006	1.3735 o/oo
1	1+540,000	KV 6300	647.065	4.5481 o/oo
1	1+560,000	KV 6300	647.188	7.7227 o/oo
1	1+580,000	KV 6300	647.374	10.8973 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
1	1+600,000	KV 6300	647.624	14.0719 o/oo
1	1+620,000	KV 6300	647.937	17.2465 o/oo
1	1+640,000	KV 6300	648.314	20.4211 o/oo
1	1+660,000	KV 6300	648.754	23.5957 o/oo
1	1+680,000	KV 6300	649.257	26.7703 o/oo
1	1+684,597	tg. salida	649.382	27.5000 o/oo
1	1+700,000	Rampa	649.806	27.5000 o/oo
1	1+720,000	Rampa	650.356	27.5000 o/oo
1	1+740,000	Rampa	650.906	27.5000 o/oo
1	1+760,000	Rampa	651.456	27.5000 o/oo
1	1+780,000	Rampa	652.006	27.5000 o/oo
1	1+800,000	Rampa	652.556	27.5000 o/oo
1	1+820,000	Rampa	653.106	27.5000 o/oo
1	1+840,000	Rampa	653.656	27.5000 o/oo
1	1+860,000	Rampa	654.206	27.5000 o/oo
1	1+880,000	Rampa	654.756	27.5000 o/oo
1	1+900,000	Rampa	655.306	27.5000 o/oo
1	1+920,000	Rampa	655.856	27.5000 o/oo
1	1+940,000	Rampa	656.406	27.5000 o/oo
1	1+960,000	Rampa	656.956	27.5000 o/oo
1	1+980,000	Rampa	657.506	27.5000 o/oo
1	2+000,000	Rampa	658.056	27.5000 o/oo
1	2+020,000	Rampa	658.606	27.5000 o/oo
1	2+025,892	tg. entrada	658.768	27.5000 o/oo
1	2+040,000	KV -6300	659.140	25.2607 o/oo
1	2+060,000	KV -6300	659.613	22.0861 o/oo
1	2+080,000	KV -6300	660.023	18.9115 o/oo
1	2+100,000	KV -6300	660.370	15.7369 o/oo
1	2+120,000	KV -6300	660.653	12.5623 o/oo
1	2+140,000	KV -6300	660.872	9.3877 o/oo
1	2+160,000	KV -6300	661.028	6.2131 o/oo
1	2+180,000	KV -6300	661.121	3.0385 o/oo



EJE	P.K.	TIPO	COTA	PENDIENTE
1	2+199,142	tg. salida	661.150	0.0000 o/oo
1	2+200,000	Horizontal	661.150	0.0000 o/oo
1	2+220,000	Horizontal	661.150	0.0000 o/oo
1	2+240,000	Horizontal	661.150	0.0000 o/oo
1	2+260,000	Horizontal	661.150	0.0000 o/oo
1	2+280,000	Horizontal	661.150	0.0000 o/oo
1	2+300,000	Horizontal	661.150	0.0000 o/oo
1	2+320,000	Horizontal	661.150	0.0000 o/oo
1	2+340,000	Horizontal	661.150	0.0000 o/oo
1	2+360,000	Horizontal	661.150	0.0000 o/oo
1	2+380,000	Horizontal	661.150	0.0000 o/oo
1	2+384,698	tg. entrada	661.150	0.0000 o/oo
1	2+400,000	KV -3300	661.115	-4.6371 o/oo
1	2+420,000	KV -3300	660.961	-10.6977 o/oo
1	2+440,000	KV -3300	660.687	-16.7583 o/oo
1	2+460,000	KV -3300	660.291	-22.8189 o/oo
1	2+480,000	KV -3300	659.774	-28.8795 o/oo
1	2+494,588	tg. salida	659.320	-33.3000 o/oo
1	2+500,000	Pendiente	659.140	-33.3000 o/oo
1	2+520,000	Pendiente	658.474	-33.3000 o/oo
1	2+540,000	Pendiente	657.808	-33.3000 o/oo
1	2+560,000	Pendiente	657.142	-33.3000 o/oo
1	2+580,000	Pendiente	656.476	-33.3000 o/oo
1	2+600,000	Pendiente	655.810	-33.3000 o/oo
1	2+620,000	Pendiente	655.144	-33.3000 o/oo
1	2+640,000	Pendiente	654.478	-33.3000 o/oo
1	2+660,000	Pendiente	653.812	-33.3000 o/oo
1	2+680,000	Pendiente	653.146	-33.3000 o/oo
1	2+700,000	Pendiente	652.480	-33.3000 o/oo
1	2+720,000	Pendiente	651.814	-33.3000 o/oo
1	2+740,000	Pendiente	651.148	-33.3000 o/oo
1	2+760,000	Pendiente	650.482	-33.3000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
1	2+780,000	Pendiente	649.816	-33.3000 o/oo
1	2+800,000	Pendiente	649.150	-33.3000 o/oo
1	2+820,000	Pendiente	648.484	-33.3000 o/oo
1	2+840,000	Pendiente	647.818	-33.3000 o/oo
1	2+860,000	Pendiente	647.152	-33.3000 o/oo
1	2+880,000	Pendiente	646.486	-33.3000 o/oo
1	2+900,000	Pendiente	645.820	-33.3000 o/oo
1	2+920,000	Pendiente	645.154	-33.3000 o/oo
1	2+940,000	Pendiente	644.488	-33.3000 o/oo
1	2+960,000	Pendiente	643.822	-33.3000 o/oo
1	2+980,000	Pendiente	643.156	-33.3000 o/oo
1	3+000,000	Pendiente	642.490	-33.3000 o/oo
1	3+020,000	Pendiente	641.824	-33.3000 o/oo
1	3+040,000	Pendiente	641.158	-33.3000 o/oo
1	3+060,000	Pendiente	640.492	-33.3000 o/oo
1	3+080,000	Pendiente	639.826	-33.3000 o/oo
1	3+100,000	Pendiente	639.160	-33.3000 o/oo
1	3+120,000	Pendiente	638.494	-33.3000 o/oo
1	3+140,000	Pendiente	637.828	-33.3000 o/oo
1	3+160,000	Pendiente	637.162	-33.3000 o/oo
1	3+180,000	Pendiente	636.496	-33.3000 o/oo
1	3+200,000	Pendiente	635.830	-33.3000 o/oo
1	3+220,000	Pendiente	635.164	-33.3000 o/oo
1	3+240,000	Pendiente	634.498	-33.3000 o/oo
1	3+260,000	Pendiente	633.832	-33.3000 o/oo
1	3+280,000	Pendiente	633.166	-33.3000 o/oo
1	3+300,000	Pendiente	632.500	-33.3000 o/oo
1	3+320,000	Pendiente	631.834	-33.3000 o/oo
1	3+340,000	Pendiente	631.168	-33.3000 o/oo
1	3+340,113	tg. entrada	631.164	-33.3000 o/oo
1	3+360,000	KV 2100	630.596	-23.8301 o/oo
1	3+380,000	KV 2100	630.215	-14.3063 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
1	3+400,000	KV 2100	630.024	-4.7825 o/oo
1	3+410,043	tg. salida	630.000	0.0000 o/oo
1	3+420,000	Horizontal	630.000	0.0000 o/oo
1	3+440,000	Horizontal	630.000	0.0000 o/oo
1	3+460,000	Horizontal	630.000	0.0000 o/oo
1	3+480,000	Horizontal	630.000	0.0000 o/oo
1	3+500,000	Horizontal	630.000	0.0000 o/oo
1	3+520,000	Horizontal	630.000	0.0000 o/oo
1	3+540,000	Horizontal	630.000	0.0000 o/oo
1	3+560,000	Horizontal	630.000	0.0000 o/oo
1	3+580,000	Horizontal	630.000	0.0000 o/oo
1	3+582,707	tg. entrada	630.000	0.0000 o/oo
1	3+600,000	KV -2100	629.929	-8.2350 o/oo
1	3+620,000	KV -2100	629.669	-17.7588 o/oo
1	3+640,000	KV -2100	629.218	-27.2826 o/oo
1	3+652,637	tg. salida	628.836	-33.3000 o/oo
1	3+660,000	Pendiente	628.590	-33.3000 o/oo
1	3+680,000	Pendiente	627.924	-33.3000 o/oo
1	3+700,000	Pendiente	627.258	-33.3000 o/oo
1	3+720,000	Pendiente	626.592	-33.3000 o/oo
1	3+740,000	Pendiente	625.926	-33.3000 o/oo
1	3+760,000	Pendiente	625.260	-33.3000 o/oo
1	3+780,000	Pendiente	624.594	-33.3000 o/oo
1	3+800,000	Pendiente	623.928	-33.3000 o/oo
1	3+820,000	Pendiente	623.262	-33.3000 o/oo
1	3+840,000	Pendiente	622.596	-33.3000 o/oo
1	3+860,000	Pendiente	621.930	-33.3000 o/oo
1	3+880,000	Pendiente	621.264	-33.3000 o/oo
1	3+900,000	Pendiente	620.598	-33.3000 o/oo
1	3+918,046	tg. entrada	619.998	-33.3000 o/oo
1	3+920,000	KV 3300	619.933	-32.7078 o/oo
1	3+940,000	KV 3300	619.339	-26.6472 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
1	3+960,000	KV 3300	618.867	-20.5866 o/oo
1	3+980,000	KV 3300	618.516	-14.5260 o/oo
1	4+000,000	KV 3300	618.286	-8.4654 o/oo
1	4+020,000	KV 3300	618.177	-2.4048 o/oo
1	4+027,936	Punto bajo	618.168	0.0000 o/oo
1	4+040,000	KV 3300	618.190	3.6558 o/oo
1	4+060,000	KV 3300	618.324	9.7164 o/oo
1	4+080,000	KV 3300	618.579	15.7771 o/oo
1	4+100,000	KV 3300	618.955	21.8377 o/oo
1	4+110,436	tg. salida	619.199	25.0000 o/oo
1	4+120,000	Rampa	619.438	25.0000 o/oo
1	4+140,000	Rampa	619.938	25.0000 o/oo
1	4+160,000	Rampa	620.438	25.0000 o/oo
1	4+180,000	Rampa	620.938	25.0000 o/oo
1	4+200,000	Rampa	621.438	25.0000 o/oo
1	4+220,000	Rampa	621.938	25.0000 o/oo
1	4+240,000	Rampa	622.438	25.0000 o/oo
1	4+260,000	Rampa	622.938	25.0000 o/oo
1	4+280,000	Rampa	623.438	25.0000 o/oo
1	4+300,000	Rampa	623.938	25.0000 o/oo
1	4+320,000	Rampa	624.438	25.0000 o/oo
1	4+340,000	Rampa	624.938	25.0000 o/oo
1	4+360,000	Rampa	625.438	25.0000 o/oo
1	4+380,000	Rampa	625.938	25.0000 o/oo
1	4+400,000	Rampa	626.438	25.0000 o/oo
1	4+420,000	Rampa	626.938	25.0000 o/oo
1	4+440,000	Rampa	627.438	25.0000 o/oo
1	4+460,000	Rampa	627.938	25.0000 o/oo
1	4+480,000	Rampa	628.438	25.0000 o/oo
1	4+489,440	tg. entrada	628.674	25.0000 o/oo
1	4+500,000	KV -12000	628.934	24.1200 o/oo
1	4+520,000	KV -12000	629.399	22.4533 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
1	4+540,000	KV -12000	629.832	20.7867 o/oo
1	4+560,000	KV -12000	630.231	19.1200 o/oo
1	4+580,000	KV -12000	630.597	17.4533 o/oo
1	4+600,000	KV -12000	630.929	15.7867 o/oo
1	4+620,000	KV -12000	631.228	14.1200 o/oo
1	4+640,000	KV -12000	631.494	12.4533 o/oo
1	4+660,000	KV -12000	631.726	10.7867 o/oo
1	4+680,000	KV -12000	631.925	9.1200 o/oo
1	4+700,000	KV -12000	632.091	7.4533 o/oo
1	4+720,000	KV -12000	632.223	5.7867 o/oo
1	4+740,000	KV -12000	632.322	4.1200 o/oo
1	4+760,000	KV -12000	632.388	2.4533 o/oo
1	4+780,000	KV -12000	632.421	0.7867 o/oo
1	4+789,440	Punto alto	632.424	0.0000 o/oo
1	4+800,000	KV -12000	632.420	-0.8800 o/oo
1	4+820,000	KV -12000	632.385	-2.5467 o/oo
1	4+840,000	KV -12000	632.318	-4.2133 o/oo
1	4+849,440	tg. salida	632.274	-5.0000 o/oo
1	4+860,000	Pendiente	632.221	-5.0000 o/oo
1	4+880,000	Pendiente	632.121	-5.0000 o/oo
1	4+900,000	Pendiente	632.021	-5.0000 o/oo
1	4+920,000	Pendiente	631.921	-5.0000 o/oo
1	4+940,000	Pendiente	631.821	-5.0000 o/oo
1	4+960,000	Pendiente	631.721	-5.0000 o/oo
1	4+980,000	Pendiente	631.621	-5.0000 o/oo
1	5+000,000	Pendiente	631.521	-5.0000 o/oo
1	5+020,000	Pendiente	631.421	-5.0000 o/oo
1	5+040,000	Pendiente	631.321	-5.0000 o/oo
1	5+060,000	Pendiente	631.221	-5.0000 o/oo
1	5+080,000	Pendiente	631.121	-5.0000 o/oo
1	5+100,000	Pendiente	631.021	-5.0000 o/oo
1	5+120,000	Pendiente	630.921	-5.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
1	5+140,000	Pendiente	630.821	-5.0000 o/oo
1	5+160,000	Pendiente	630.721	-5.0000 o/oo
1	5+180,000	Pendiente	630.621	-5.0000 o/oo
1	5+200,000	Pendiente	630.521	-5.0000 o/oo
1	5+220,000	Pendiente	630.421	-5.0000 o/oo
1	5+240,000	Pendiente	630.321	-5.0000 o/oo
1	5+260,000	Pendiente	630.221	-5.0000 o/oo
1	5+280,000	Pendiente	630.121	-5.0000 o/oo
1	5+300,000	Pendiente	630.021	-5.0000 o/oo
1	5+320,000	Pendiente	629.921	-5.0000 o/oo
1	5+340,000	Pendiente	629.821	-5.0000 o/oo
1	5+360,000	Pendiente	629.721	-5.0000 o/oo
1	5+380,000	Pendiente	629.621	-5.0000 o/oo
1	5+400,000	Pendiente	629.521	-5.0000 o/oo
1	5+420,000	Pendiente	629.421	-5.0000 o/oo
1	5+440,000	Pendiente	629.321	-5.0000 o/oo
1	5+460,000	Pendiente	629.221	-5.0000 o/oo
1	5+480,000	Pendiente	629.121	-5.0000 o/oo
1	5+500,000	Pendiente	629.021	-5.0000 o/oo
1	5+520,000	Pendiente	628.921	-5.0000 o/oo
1	5+540,000	Pendiente	628.821	-5.0000 o/oo
1	5+560,000	Pendiente	628.721	-5.0000 o/oo
1	5+580,000	Pendiente	628.621	-5.0000 o/oo
1	5+600,000	Pendiente	628.521	-5.0000 o/oo
1	5+614,285	tg. entrada	628.450	-5.0000 o/oo
1	5+620,000	KV 20000	628.422	-4.7142 o/oo
1	5+640,000	KV 20000	628.338	-3.7142 o/oo
1	5+660,000	KV 20000	628.274	-2.7142 o/oo
1	5+680,000	KV 20000	628.229	-1.7142 o/oo
1	5+700,000	KV 20000	628.205	-0.7142 o/oo
1	5+714,285	tg. salida	628.200	0.0000 o/oo
1	5+720,000	Horizontal	628.200	0.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
1	5+740,000	Horizontal	628.200	0.0000 o/oo
1	5+760,000	Horizontal	628.200	0.0000 o/oo
1	5+780,000	Horizontal	628.200	0.0000 o/oo
1	5+800,000	Horizontal	628.200	0.0000 o/oo
1	5+820,000	Horizontal	628.200	0.0000 o/oo
1	5+840,000	Horizontal	628.200	0.0000 o/oo
1	5+860,000	Horizontal	628.200	0.0000 o/oo
1	5+880,000	Horizontal	628.200	0.0000 o/oo
1	5+900,000	Horizontal	628.200	0.0000 o/oo
1	5+920,000	Horizontal	628.200	0.0000 o/oo
1	5+940,000	Horizontal	628.200	0.0000 o/oo
1	5+960,000	Horizontal	628.200	0.0000 o/oo
1	5+980,000	Horizontal	628.200	0.0000 o/oo
1	6+000,000	Horizontal	628.200	0.0000 o/oo
1	6+020,000	Horizontal	628.200	0.0000 o/oo
1	6+040,000	Horizontal	628.200	0.0000 o/oo
1	6+060,000	Horizontal	628.200	0.0000 o/oo
1	6+080,000	Horizontal	628.200	0.0000 o/oo
1	6+100,000	Horizontal	628.200	0.0000 o/oo
1	6+120,000	Horizontal	628.200	0.0000 o/oo
1	6+140,000	Horizontal	628.200	0.0000 o/oo
1	6+160,000	Horizontal	628.200	0.0000 o/oo
1	6+180,000	Horizontal	628.200	0.0000 o/oo
1	6+200,000	Horizontal	628.200	0.0000 o/oo
1	6+220,000	Horizontal	628.200	0.0000 o/oo
1	6+240,000	Horizontal	628.200	0.0000 o/oo
1	6+260,000	Horizontal	628.200	0.0000 o/oo
1	6+280,000	Horizontal	628.200	0.0000 o/oo
1	6+300,000	Horizontal	628.200	0.0000 o/oo
1	6+320,000	Horizontal	628.200	0.0000 o/oo
1	6+340,000	Horizontal	628.200	0.0000 o/oo
1	6+354,154	tg. entrada	628.200	0.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
1	6+360,000	KV -3000	628.194	-1.9487 o/oo
1	6+380,000	KV -3000	628.089	-8.6154 o/oo
1	6+400,000	KV -3000	627.850	-15.2821 o/oo
1	6+420,000	KV -3000	627.477	-21.9487 o/oo
1	6+440,000	KV -3000	626.972	-28.6154 o/oo
1	6+455,554	tg. salida	626.486	-33.8000 o/oo
1	6+460,000	Pendiente	626.336	-33.8000 o/oo
1	6+480,000	Pendiente	625.660	-33.8000 o/oo
1	6+500,000	Pendiente	624.984	-33.8000 o/oo
1	6+520,000	Pendiente	624.308	-33.8000 o/oo
1	6+540,000	Pendiente	623.632	-33.8000 o/oo
1	6+560,000	Pendiente	622.956	-33.8000 o/oo
1	6+580,000	Pendiente	622.280	-33.8000 o/oo
1	6+600,000	Pendiente	621.604	-33.8000 o/oo
1	6+620,000	Pendiente	620.928	-33.8000 o/oo
1	6+640,000	Pendiente	620.252	-33.8000 o/oo
1	6+660,000	Pendiente	619.576	-33.8000 o/oo
1	6+680,000	Pendiente	618.900	-33.8000 o/oo
1	6+689,018	tg. entrada	618.595	-33.8000 o/oo
1	6+700,000	KV 6000	618.234	-31.9696 o/oo
1	6+720,000	KV 6000	617.628	-28.6363 o/oo
1	6+740,000	KV 6000	617.089	-25.3030 o/oo
1	6+760,000	KV 6000	616.616	-21.9696 o/oo
1	6+780,000	KV 6000	616.210	-18.6363 o/oo
1	6+800,000	KV 6000	615.870	-15.3030 o/oo
1	6+820,000	KV 6000	615.598	-11.9696 o/oo
1	6+840,000	KV 6000	615.392	-8.6363 o/oo
1	6+860,000	KV 6000	615.252	-5.3030 o/oo
1	6+861,818	tg. salida	615.243	-5.0000 o/oo
1	6+880,000	Pendiente	615.152	-5.0000 o/oo
1	6+900,000	Pendiente	615.052	-5.0000 o/oo
1	6+920,000	Pendiente	614.952	-5.0000 o/oo



EJE	P.K.	TIPO	COTA	PENDIENTE
1	6+940,000	Pendiente	614.852	-5.0000 o/oo
1	6+960,000	Pendiente	614.752	-5.0000 o/oo
1	6+980,000	Pendiente	614.652	-5.0000 o/oo
1	7+000,000	Pendiente	614.552	-5.0000 o/oo
1	7+020,000	Pendiente	614.452	-5.0000 o/oo
1	7+040,000	Pendiente	614.352	-5.0000 o/oo
1	7+060,000	Pendiente	614.252	-5.0000 o/oo
1	7+080,000	Pendiente	614.152	-5.0000 o/oo
1	7+100,000	Pendiente	614.052	-5.0000 o/oo
1	7+120,000	Pendiente	613.952	-5.0000 o/oo
1	7+120,279	tg. entrada	613.951	-5.0000 o/oo
1	7+140,000	KV -8000	613.828	-7.4651 o/oo
1	7+160,000	KV -8000	613.653	-9.9651 o/oo
1	7+180,000	KV -8000	613.429	-12.4651 o/oo
1	7+200,000	KV -8000	613.155	-14.9651 o/oo
1	7+220,000	KV -8000	612.831	-17.4651 o/oo
1	7+240,000	KV -8000	612.456	-19.9651 o/oo
1	7+260,000	KV -8000	612.032	-22.4651 o/oo
1	7+280,000	KV -8000	611.558	-24.9651 o/oo
1	7+288,279	tg. salida	611.347	-26.0000 o/oo
1	7+300,000	Pendiente	611.042	-26.0000 o/oo
1	7+320,000	Pendiente	610.522	-26.0000 o/oo
1	7+340,000	Pendiente	610.002	-26.0000 o/oo
1	7+360,000	Pendiente	609.482	-26.0000 o/oo
1	7+380,000	Pendiente	608.962	-26.0000 o/oo
1	7+400,000	Pendiente	608.442	-26.0000 o/oo
1	7+420,000	Pendiente	607.922	-26.0000 o/oo
1	7+440,000	Pendiente	607.402	-26.0000 o/oo
1	7+460,000	Pendiente	606.882	-26.0000 o/oo
1	7+480,000	Pendiente	606.362	-26.0000 o/oo
1	7+500,000	Pendiente	605.842	-26.0000 o/oo
1	7+520,000	Pendiente	605.322	-26.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
1	7+540,000	Pendiente	604.802	-26.0000 o/oo
1	7+560,000	Pendiente	604.282	-26.0000 o/oo
1	7+580,000	Pendiente	603.762	-26.0000 o/oo
1	7+600,000	Pendiente	603.242	-26.0000 o/oo
1	7+620,000	Pendiente	602.722	-26.0000 o/oo
1	7+640,000	Pendiente	602.202	-26.0000 o/oo
1	7+660,000	Pendiente	601.682	-26.0000 o/oo
1	7+680,000	Pendiente	601.162	-26.0000 o/oo
1	7+700,000	Pendiente	600.642	-26.0000 o/oo
1	7+720,000	Pendiente	600.122	-26.0000 o/oo
1	7+740,000	Pendiente	599.602	-26.0000 o/oo
1	7+760,000	Pendiente	599.082	-26.0000 o/oo
1	7+762,602	tg. entrada	599.014	-26.0000 o/oo
1	7+780,000	KV 6520	598.585	-23.3317 o/oo
1	7+800,000	KV 6520	598.149	-20.2642 o/oo
1	7+820,000	KV 6520	597.775	-17.1967 o/oo
1	7+840,000	KV 6520	597.461	-14.1292 o/oo
1	7+860,000	KV 6520	597.209	-11.0617 o/oo
1	7+866,922	tg. salida	597.136	-10.0000 o/oo
1	7+880,000	Pendiente	597.006	-10.0000 o/oo
1	7+900,000	Pendiente	596.806	-10.0000 o/oo
1	7+920,000	Pendiente	596.606	-10.0000 o/oo
1	7+940,000	Pendiente	596.406	-10.0000 o/oo
1	7+960,000	Pendiente	596.206	-10.0000 o/oo
1	7+980,000	Pendiente	596.006	-10.0000 o/oo
1	8+000,000	Pendiente	595.806	-10.0000 o/oo
1	8+020,000	Pendiente	595.606	-10.0000 o/oo
1	8+040,000	Pendiente	595.406	-10.0000 o/oo
1	8+060,000	Pendiente	595.206	-10.0000 o/oo
1	8+080,000	Pendiente	595.006	-10.0000 o/oo
1	8+080,569	tg. entrada	595.000	-10.0000 o/oo
1	8+100,000	KV 10000	594.825	-8.0569 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
1	8+120,000	KV 10000	594.683	-6.0569 o/oo
1	8+140,000	KV 10000	594.582	-4.0569 o/oo
1	8+160,000	KV 10000	594.521	-2.0569 o/oo
1	8+180,000	KV 10000	594.500	-0.0569 o/oo
1	8+180,569	tg. salida	594.500	0.0000 o/oo
1	8+200,000	Horizontal	594.500	0.0000 o/oo
1	8+220,000	Horizontal	594.500	0.0000 o/oo
1	8+240,000	Horizontal	594.500	0.0000 o/oo
1	8+260,000	Horizontal	594.500	0.0000 o/oo
1	8+280,000	Horizontal	594.500	0.0000 o/oo
1	8+300,000	Horizontal	594.500	0.0000 o/oo
1	8+320,000	Horizontal	594.500	0.0000 o/oo
1	8+340,000	Horizontal	594.500	0.0000 o/oo
1	8+360,000	Horizontal	594.500	0.0000 o/oo
1	8+380,000	Horizontal	594.500	0.0000 o/oo
1	8+400,000	Horizontal	594.500	0.0000 o/oo
1	8+420,000	Horizontal	594.500	0.0000 o/oo
1	8+440,000	Horizontal	594.500	0.0000 o/oo
1	8+460,000	Horizontal	594.500	0.0000 o/oo
1	8+480,000	Horizontal	594.500	0.0000 o/oo
1	8+500,000	Horizontal	594.500	0.0000 o/oo
1	8+520,000	Horizontal	594.500	0.0000 o/oo
1	8+540,000	Horizontal	594.500	0.0000 o/oo
1	8+560,000	Horizontal	594.500	0.0000 o/oo
1	8+580,000	Horizontal	594.500	0.0000 o/oo
1	8+600,000	Horizontal	594.500	0.0000 o/oo
1	8+620,000	Horizontal	594.500	0.0000 o/oo
1	8+640,000	Horizontal	594.500	0.0000 o/oo
1	8+660,000	Horizontal	594.500	0.0000 o/oo
1	8+680,000	Horizontal	594.500	0.0000 o/oo
1	8+700,000	Horizontal	594.500	0.0000 o/oo
1	8+720,000	Horizontal	594.500	0.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
1	8+740,000	Horizontal	594.500	0.0000 o/oo
1	8+760,000	Horizontal	594.500	0.0000 o/oo
1	8+780,000	Horizontal	594.500	0.0000 o/oo
1	8+790,273	tg. entrada	594.500	0.0000 o/oo
1	8+800,000	KV 6000	594.508	1.6211 o/oo
1	8+820,000	KV 6000	594.574	4.9544 o/oo
1	8+840,000	KV 6000	594.706	8.2878 o/oo
1	8+844,273	tg. salida	594.743	9.0000 o/oo
1	8+860,000	Rampa	594.885	9.0000 o/oo
1	8+880,000	Rampa	595.065	9.0000 o/oo
1	8+900,000	Rampa	595.245	9.0000 o/oo
1	8+920,000	Rampa	595.425	9.0000 o/oo
1	8+940,000	Rampa	595.605	9.0000 o/oo
1	8+960,000	Rampa	595.785	9.0000 o/oo
1	8+980,000	Rampa	595.965	9.0000 o/oo
1	9+000,000	Rampa	596.145	9.0000 o/oo
1	9+020,000	Rampa	596.325	9.0000 o/oo
1	9+040,000	Rampa	596.505	9.0000 o/oo
1	9+060,000	Rampa	596.685	9.0000 o/oo
1	9+080,000	Rampa	596.865	9.0000 o/oo
1	9+100,000	Rampa	597.045	9.0000 o/oo
1	9+120,000	Rampa	597.225	9.0000 o/oo
1	9+140,000	Rampa	597.405	9.0000 o/oo
1	9+160,000	Rampa	597.585	9.0000 o/oo
1	9+180,000	Rampa	597.765	9.0000 o/oo
1	9+200,000	Rampa	597.945	9.0000 o/oo
1	9+220,000	Rampa	598.125	9.0000 o/oo
1	9+240,000	Rampa	598.305	9.0000 o/oo
<b>Fin de proyecto</b>	<b>9+243,843</b>	<b>Rampa</b>	<b>598.339</b>	<b>9.0000 o/oo</b>
1	9+260,000	Rampa	598.485	9.0000 o/oo
1	9+267,673	tg. entrada	598.554	9.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
1	9+280,000	KV 2500	598.695	13.9306 o/oo
1	9+300,000	KV 2500	599.054	21.9306 o/oo
1	9+320,000	KV 2500	599.572	29.9306 o/oo
1	9+332,673	tg. salida	599.984	35.0000 o/oo
1	9+340,000	Rampa	600.240	35.0000 o/oo
1	9+360,000	Rampa	600.940	35.0000 o/oo
1	9+380,000	Rampa	601.640	35.0000 o/oo
1	9+400,000	Rampa	602.340	35.0000 o/oo
1	9+420,000	Rampa	603.040	35.0000 o/oo
1	9+440,000	Rampa	603.740	35.0000 o/oo
1	9+460,000	Rampa	604.440	35.0000 o/oo
1	9+480,000	Rampa	605.140	35.0000 o/oo
1	9+500,000	Rampa	605.840	35.0000 o/oo
1	9+520,000	Rampa	606.540	35.0000 o/oo
1	9+540,000	Rampa	607.240	35.0000 o/oo
1	9+560,000	Rampa	607.940	35.0000 o/oo
1	9+580,000	Rampa	608.640	35.0000 o/oo
1	9+600,000	Rampa	609.340	35.0000 o/oo
1	9+620,000	Rampa	610.040	35.0000 o/oo
1	9+640,000	Rampa	610.740	35.0000 o/oo
1	9+660,000	Rampa	611.440	35.0000 o/oo
1	9+680,000	Rampa	612.140	35.0000 o/oo
1	9+700,000	Rampa	612.840	35.0000 o/oo
1	9+720,000	Rampa	613.540	35.0000 o/oo
1	9+740,000	Rampa	614.240	35.0000 o/oo
1	9+760,000	Rampa	614.940	35.0000 o/oo
1	9+780,000	Rampa	615.640	35.0000 o/oo
1	9+800,000	Rampa	616.340	35.0000 o/oo
1	9+820,000	Rampa	617.040	35.0000 o/oo
1	9+840,000	Rampa	617.740	35.0000 o/oo
1	9+860,000	Rampa	618.440	35.0000 o/oo
1	9+880,000	Rampa	619.140	35.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
1	9+900,000	Rampa	619.840	35.0000 o/oo
1	9+920,000	Rampa	620.540	35.0000 o/oo
1	9+940,000	Rampa	621.240	35.0000 o/oo
1	9+960,000	Rampa	621.940	35.0000 o/oo
1	9+980,000	Rampa	622.640	35.0000 o/oo
1	9+986,294	tg. entrada	622.860	35.0000 o/oo
1	10+000,000	KV -3000	623.309	30.4313 o/oo
1	10+020,000	KV -3000	623.851	23.7647 o/oo
1	10+040,000	KV -3000	624.259	17.0980 o/oo
1	10+060,000	KV -3000	624.535	10.4313 o/oo
1	10+080,000	KV -3000	624.677	3.7647 o/oo
1	10+091,294	tg. salida	624.698	0.0001 o/oo
1	10+100,000	Rampa	624.698	0.0001 o/oo
1	10+120,000	Rampa	624.698	0.0001 o/oo
1	10+140,000	Rampa	624.698	0.0001 o/oo
1	10+160,000	Rampa	624.698	0.0001 o/oo
1	10+180,000	Rampa	624.698	0.0001 o/oo
1	10+200,000	Rampa	624.698	0.0001 o/oo
1	10+220,000	Rampa	624.698	0.0001 o/oo
1	10+240,000	Rampa	624.698	0.0001 o/oo
1	10+260,000	Rampa	624.698	0.0001 o/oo
1	10+280,000	Rampa	624.698	0.0001 o/oo
1	10+300,000	Rampa	624.698	0.0001 o/oo
1	10+320,000	Rampa	624.698	0.0001 o/oo
1	10+340,000	Rampa	624.698	0.0001 o/oo
1	10+360,000	Rampa	624.698	0.0001 o/oo
1	10+380,000	Rampa	624.698	0.0001 o/oo
1	10+400,000	Rampa	624.698	0.0001 o/oo
1	10+420,000	Rampa	624.698	0.0001 o/oo
1	10+440,000	Rampa	624.698	0.0001 o/oo
1	10+460,000	Rampa	624.698	0.0001 o/oo
1	10+480,000	Rampa	624.698	0.0001 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
1	10+500,000	Rampa	624.698	0.0001 o/oo
1	10+520,000	Rampa	624.698	0.0001 o/oo
1	10+540,000	Rampa	624.698	0.0001 o/oo
1	10+560,000	Rampa	624.698	0.0001 o/oo
1	10+580,000	Rampa	624.698	0.0001 o/oo
1	10+600,000	Rampa	624.698	0.0001 o/oo
1	10+620,000	Rampa	624.698	0.0001 o/oo
1	10+640,000	Rampa	624.698	0.0001 o/oo
1	10+660,000	Rampa	624.698	0.0001 o/oo
1	10+680,000	Rampa	624.698	0.0001 o/oo
1	10+700,000	Rampa	624.698	0.0001 o/oo
1	10+720,000	Rampa	624.698	0.0001 o/oo
1	10+736,971	Rampa	624.698	0.0001 o/oo



## EJE 2. ALTERNATIVA 2.

EJE	PENDIENTE	LONGITUD	PARAMETRO	VÉRTICE		ENTRADA AL ACUERDO		SALIDA DEL ACUERDO		BISECT.	DIF.PEN
	(o/oo)	(m.)	( kv )	PK	Z	PK	Z	PK	Z	(m.)	(o/oo)
2						0,000	650,000				
2	0,000000	109,230	3.300,000	529,678	650,000	475,063	650,000	584,293	648,192	0,452	-3,310
2	-33,100000	92,730	3.300,000	677,531	645,106	631,166	646,641	723,896	644,874	0,326	2,810
2	-5,000000	76,000	3.800,000	810,814	644,440	772,814	644,630	848,814	643,490	0,190	-2,000
2	-25,000000	192,390	3.300,000	1.069,433	637,974	973,238	640,379	1.165,628	641,177	1,402	5,830
2	33,300000	93,240	2.800,000	1.340,479	647,000	1.293,859	645,448	1.387,099	647,000	0,388	-3,330
2	0,000000	173,250	6.300,000	1.597,989	647,000	1.511,364	647,000	1.684,614	649,382	0,596	2,750
2	27,500000	173,250	6.300,000	2.112,535	661,150	2.025,910	658,768	2.199,160	661,150	0,596	-2,750
2	0,000000	109,890	3.300,000	2.439,612	661,150	2.384,667	661,150	2.494,557	659,320	0,457	-3,330
2	-33,300000	69,930	2.100,000	3.375,048	630,000	3.340,083	631,164	3.410,013	630,000	0,291	3,330
2	0,000000	70,980	2.100,000	3.615,859	630,000	3.580,369	630,000	3.651,349	628,800	0,300	-3,380
2	-33,800000	91,560	4.200,000	3.894,348	620,587	3.848,568	622,134	3.940,128	620,038	0,250	2,180
2	-12,000000	78,000	6.500,000	4.193,270	617,000	4.154,270	617,468	4.232,270	617,000	0,117	1,200
2	0,000000	113,850	3.300,000	4.543,082	617,000	4.486,157	617,000	4.600,007	615,036	0,491	-3,450
2	-34,500000	212,000	8.000,000	5.051,329	599,465	4.945,329	603,122	5.157,329	598,617	0,702	2,650
2	-8,000000	80,000	10.000,000	5.672,012	594,500	5.632,012	594,820	5.712,012	594,500	0,080	0,800
2	0,000000	100,000	10.000,000	5.956,629	594,500	5.906,629	594,500	6.006,629	595,000	0,125	1,000
2	10,000000	100,000	6.250,000	6.272,352	597,657	6.222,352	597,157	6.322,352	598,957	0,200	1,600
2	26,000000	168,000	8.000,000	6.882,865	613,531	6.798,865	611,347	6.966,865	613,951	0,441	-2,100
2	5,000000	172,800	6.000,000	7.311,738	615,675	7.225,338	615,243	7.398,138	618,595	0,622	2,880
2	33,800000	101,400	3.000,000	7.682,302	628,200	7.631,602	626,486	7.733,002	628,200	0,428	-3,380
2	0,000000							9.172,905	628,200		

## EJE 2. ALTERNATIVA 2.

EJE	P.K.	TIPO	COTA	PENDIENTE
2	0+000,000	Horizontal	650.000	0.0000 o/oo
2	0+020,000	Horizontal	650.000	0.0000 o/oo
2	0+040,000	Horizontal	650.000	0.0000 o/oo
2	0+060,000	Horizontal	650.000	0.0000 o/oo
2	0+080,000	Horizontal	650.000	0.0000 o/oo
2	0+100,000	Horizontal	650.000	0.0000 o/oo
2	0+120,000	Horizontal	650.000	0.0000 o/oo
2	0+140,000	Horizontal	650.000	0.0000 o/oo
2	0+160,000	Horizontal	650.000	0.0000 o/oo
2	0+180,000	Horizontal	650.000	0.0000 o/oo
2	0+200,000	Horizontal	650.000	0.0000 o/oo
2	0+220,000	Horizontal	650.000	0.0000 o/oo
2	0+240,000	Horizontal	650.000	0.0000 o/oo
2	0+260,000	Horizontal	650.000	0.0000 o/oo
2	0+280,000	Horizontal	650.000	0.0000 o/oo
2	0+300,000	Horizontal	650.000	0.0000 o/oo
2	0+320,000	Horizontal	650.000	0.0000 o/oo
2	0+340,000	Horizontal	650.000	0.0000 o/oo
2	0+360,000	Horizontal	650.000	0.0000 o/oo
2	0+380,000	Horizontal	650.000	0.0000 o/oo
2	0+400,000	Horizontal	650.000	0.0000 o/oo
2	0+420,000	Horizontal	650.000	0.0000 o/oo
2	0+440,000	Horizontal	650.000	0.0000 o/oo
2	0+460,000	Horizontal	650.000	0.0000 o/oo
2	0+475,063	tg. entrada	650.000	0.0000 o/oo
2	0+480,000	KV -3300	649.996	-1.4962 o/oo
2	0+500,000	KV -3300	649.906	-7.5568 o/oo
2	0+520,000	KV -3300	649.694	-13.6174 o/oo
2	0+540,000	KV -3300	649.361	-19.6780 o/oo
2	0+560,000	KV -3300	648.907	-25.7386 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
2	0+580,000	KV -3300	648.332	-31.7992 o/oo
2	0+584,293	tg. salida	648.192	-33.1000 o/oo
2	0+600,000	Pendiente	647.672	-33.1000 o/oo
2	0+620,000	Pendiente	647.010	-33.1000 o/oo
2	0+631,166	tg. entrada	646.641	-33.1000 o/oo
2	0+640,000	KV 3300	646.360	-30.4230 o/oo
2	0+660,000	KV 3300	645.812	-24.3624 o/oo
2	0+680,000	KV 3300	645.386	-18.3018 o/oo
2	0+700,000	KV 3300	645.080	-12.2412 o/oo
2	0+720,000	KV 3300	644.896	-6.1806 o/oo
2	0+723,896	tg. salida	644.874	-5.0000 o/oo
2	0+740,000	Pendiente	644.794	-5.0000 o/oo
2	0+760,000	Pendiente	644.694	-5.0000 o/oo
2	0+772,814	tg. entrada	644.630	-5.0000 o/oo
2	0+780,000	KV -3800	644.587	-6.8910 o/oo
2	0+800,000	KV -3800	644.396	-12.1541 o/oo
2	0+820,000	KV -3800	644.101	-17.4173 o/oo
2	0+840,000	KV -3800	643.700	-22.6804 o/oo
2	0+848,814	tg. salida	643.490	-25.0000 o/oo
2	0+860,000	Pendiente	643.210	-25.0000 o/oo
2	0+880,000	Pendiente	642.710	-25.0000 o/oo
2	0+900,000	Pendiente	642.210	-25.0000 o/oo
2	0+920,000	Pendiente	641.710	-25.0000 o/oo
2	0+940,000	Pendiente	641.210	-25.0000 o/oo
2	0+960,000	Pendiente	640.710	-25.0000 o/oo
2	0+973,238	tg. entrada	640.379	-25.0000 o/oo
2	0+980,000	KV 3300	640.217	-22.9509 o/oo
2	1+000,000	KV 3300	639.819	-16.8902 o/oo
2	1+020,000	KV 3300	639.541	-10.8296 o/oo
2	1+040,000	KV 3300	639.385	-4.7690 o/oo
2	1+055,738	Punto bajo	639.348	0.0000 o/oo
2	1+060,000	KV 3300	639.351	1.2916 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
2	1+080,000	KV 3300	639.437	7.3522 o/oo
2	1+100,000	KV 3300	639.645	13.4128 o/oo
2	1+120,000	KV 3300	639.973	19.4734 o/oo
2	1+140,000	KV 3300	640.424	25.5340 o/oo
2	1+160,000	KV 3300	640.995	31.5946 o/oo
2	1+165,628	tg. salida	641.177	33.3000 o/oo
2	1+180,000	Rampa	641.656	33.3000 o/oo
2	1+200,000	Rampa	642.322	33.3000 o/oo
2	1+220,000	Rampa	642.988	33.3000 o/oo
2	1+240,000	Rampa	643.654	33.3000 o/oo
2	1+260,000	Rampa	644.320	33.3000 o/oo
2	1+280,000	Rampa	644.986	33.3000 o/oo
2	1+293,859	tg. entrada	645.448	33.3000 o/oo
2	1+300,000	KV -2800	645.645	31.1067 o/oo
2	1+320,000	KV -2800	646.196	23.9638 o/oo
2	1+340,000	KV -2800	646.604	16.8210 o/oo
2	1+360,000	KV -2800	646.869	9.6781 o/oo
2	1+380,000	KV -2800	646.991	2.5352 o/oo
2	1+387,099	tg. salida	647.000	0.0000 o/oo
2	1+400,000	Horizontal	647.000	0.0000 o/oo
2	1+420,000	Horizontal	647.000	0.0000 o/oo
2	1+440,000	Horizontal	647.000	0.0000 o/oo
2	1+460,000	Horizontal	647.000	0.0000 o/oo
2	1+480,000	Horizontal	647.000	0.0000 o/oo
2	1+500,000	Horizontal	647.000	0.0000 o/oo
2	1+511,364	tg. entrada	647.000	0.0000 o/oo
2	1+520,000	KV 6300	647.006	1.3707 o/oo
2	1+540,000	KV 6300	647.065	4.5453 o/oo
2	1+560,000	KV 6300	647.188	7.7199 o/oo
2	1+580,000	KV 6300	647.374	10.8945 o/oo
2	1+600,000	KV 6300	647.624	14.0691 o/oo
2	1+620,000	KV 6300	647.937	17.2437 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
2	1+640,000	KV 6300	648.313	20.4183 o/oo
2	1+660,000	KV 6300	648.753	23.5930 o/oo
2	1+680,000	KV 6300	649.257	26.7676 o/oo
2	1+684,614	tg. salida	649.382	27.5000 o/oo
2	1+700,000	Rampa	649.805	27.5000 o/oo
2	1+720,000	Rampa	650.355	27.5000 o/oo
2	1+740,000	Rampa	650.905	27.5000 o/oo
2	1+760,000	Rampa	651.455	27.5000 o/oo
2	1+780,000	Rampa	652.005	27.5000 o/oo
2	1+800,000	Rampa	652.555	27.5000 o/oo
2	1+820,000	Rampa	653.105	27.5000 o/oo
2	1+840,000	Rampa	653.655	27.5000 o/oo
2	1+860,000	Rampa	654.205	27.5000 o/oo
2	1+880,000	Rampa	654.755	27.5000 o/oo
2	1+900,000	Rampa	655.305	27.5000 o/oo
2	1+920,000	Rampa	655.855	27.5000 o/oo
2	1+940,000	Rampa	656.405	27.5000 o/oo
2	1+960,000	Rampa	656.955	27.5000 o/oo
2	1+980,000	Rampa	657.505	27.5000 o/oo
2	2+000,000	Rampa	658.055	27.5000 o/oo
2	2+020,000	Rampa	658.605	27.5000 o/oo
2	2+025,910	tg. entrada	658.768	27.5000 o/oo
2	2+040,000	KV -6300	659.140	25.2635 o/oo
2	2+060,000	KV -6300	659.613	22.0889 o/oo
2	2+080,000	KV -6300	660.023	18.9143 o/oo
2	2+100,000	KV -6300	660.370	15.7397 o/oo
2	2+120,000	KV -6300	660.653	12.5651 o/oo
2	2+140,000	KV -6300	660.872	9.3905 o/oo
2	2+160,000	KV -6300	661.028	6.2159 o/oo
2	2+180,000	KV -6300	661.121	3.0412 o/oo
2	2+199,160	tg. salida	661.150	0.0000 o/oo
2	2+200,000	Horizontal	661.150	0.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
2	2+220,000	Horizontal	661.150	0.0000 o/oo
2	2+240,000	Horizontal	661.150	0.0000 o/oo
2	2+260,000	Horizontal	661.150	0.0000 o/oo
2	2+280,000	Horizontal	661.150	0.0000 o/oo
2	2+300,000	Horizontal	661.150	0.0000 o/oo
2	2+320,000	Horizontal	661.150	0.0000 o/oo
2	2+340,000	Horizontal	661.150	0.0000 o/oo
2	2+360,000	Horizontal	661.150	0.0000 o/oo
2	2+380,000	Horizontal	661.150	0.0000 o/oo
2	2+384,667	tg. entrada	661.150	0.0000 o/oo
2	2+400,000	KV -3300	661.114	-4.6463 o/oo
2	2+420,000	KV -3300	660.961	-10.7069 o/oo
2	2+440,000	KV -3300	660.686	-16.7675 o/oo
2	2+460,000	KV -3300	660.290	-22.8281 o/oo
2	2+480,000	KV -3300	659.773	-28.8887 o/oo
2	2+494,557	tg. salida	659.320	-33.3000 o/oo
2	2+500,000	Pendiente	659.139	-33.3000 o/oo
2	2+520,000	Pendiente	658.473	-33.3000 o/oo
2	2+540,000	Pendiente	657.807	-33.3000 o/oo
2	2+560,000	Pendiente	657.141	-33.3000 o/oo
2	2+580,000	Pendiente	656.475	-33.3000 o/oo
2	2+600,000	Pendiente	655.809	-33.3000 o/oo
2	2+620,000	Pendiente	655.143	-33.3000 o/oo
2	2+640,000	Pendiente	654.477	-33.3000 o/oo
2	2+660,000	Pendiente	653.811	-33.3000 o/oo
2	2+680,000	Pendiente	653.145	-33.3000 o/oo
2	2+700,000	Pendiente	652.479	-33.3000 o/oo
2	2+720,000	Pendiente	651.813	-33.3000 o/oo
2	2+740,000	Pendiente	651.147	-33.3000 o/oo
2	2+760,000	Pendiente	650.481	-33.3000 o/oo
2	2+780,000	Pendiente	649.815	-33.3000 o/oo
2	2+800,000	Pendiente	649.149	-33.3000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
2	2+820,000	Pendiente	648.483	-33.3000 o/oo
2	2+840,000	Pendiente	647.817	-33.3000 o/oo
2	2+860,000	Pendiente	647.151	-33.3000 o/oo
2	2+880,000	Pendiente	646.485	-33.3000 o/oo
2	2+900,000	Pendiente	645.819	-33.3000 o/oo
2	2+920,000	Pendiente	645.153	-33.3000 o/oo
2	2+940,000	Pendiente	644.487	-33.3000 o/oo
2	2+960,000	Pendiente	643.821	-33.3000 o/oo
2	2+980,000	Pendiente	643.155	-33.3000 o/oo
2	3+000,000	Pendiente	642.489	-33.3000 o/oo
2	3+020,000	Pendiente	641.823	-33.3000 o/oo
2	3+040,000	Pendiente	641.157	-33.3000 o/oo
2	3+060,000	Pendiente	640.491	-33.3000 o/oo
2	3+080,000	Pendiente	639.825	-33.3000 o/oo
2	3+100,000	Pendiente	639.159	-33.3000 o/oo
2	3+120,000	Pendiente	638.493	-33.3000 o/oo
2	3+140,000	Pendiente	637.827	-33.3000 o/oo
2	3+160,000	Pendiente	637.161	-33.3000 o/oo
2	3+180,000	Pendiente	636.495	-33.3000 o/oo
2	3+200,000	Pendiente	635.829	-33.3000 o/oo
2	3+220,000	Pendiente	635.163	-33.3000 o/oo
2	3+240,000	Pendiente	634.497	-33.3000 o/oo
2	3+260,000	Pendiente	633.831	-33.3000 o/oo
2	3+280,000	Pendiente	633.165	-33.3000 o/oo
2	3+300,000	Pendiente	632.499	-33.3000 o/oo
2	3+320,000	Pendiente	631.833	-33.3000 o/oo
2	3+340,000	Pendiente	631.167	-33.3000 o/oo
2	3+340,083	tg. entrada	631.164	-33.3000 o/oo
2	3+360,000	KV 2100	630.596	-23.8155 o/oo
2	3+380,000	KV 2100	630.214	-14.2917 o/oo
2	3+400,000	KV 2100	630.024	-4.7679 o/oo
2	3+410,013	tg. salida	630.000	0.0000 o/oo



EJE	P.K.	TIPO	COTA	PENDIENTE
2	3+420,000	Horizontal	630.000	0.0000 o/oo
2	3+440,000	Horizontal	630.000	0.0000 o/oo
2	3+460,000	Horizontal	630.000	0.0000 o/oo
2	3+480,000	Horizontal	630.000	0.0000 o/oo
2	3+500,000	Horizontal	630.000	0.0000 o/oo
2	3+520,000	Horizontal	630.000	0.0000 o/oo
2	3+540,000	Horizontal	630.000	0.0000 o/oo
2	3+560,000	Horizontal	630.000	0.0000 o/oo
2	3+580,000	Horizontal	630.000	0.0000 o/oo
2	3+580,369	tg. entrada	630.000	0.0000 o/oo
2	3+600,000	KV -2100	629.908	-9.3483 o/oo
2	3+620,000	KV -2100	629.626	-18.8721 o/oo
2	3+640,000	KV -2100	629.153	-28.3959 o/oo
2	3+651,349	tg. salida	628.800	-33.8000 o/oo
2	3+660,000	Pendiente	628.508	-33.8000 o/oo
2	3+680,000	Pendiente	627.832	-33.8000 o/oo
2	3+700,000	Pendiente	627.156	-33.8000 o/oo
2	3+720,000	Pendiente	626.480	-33.8000 o/oo
2	3+740,000	Pendiente	625.804	-33.8000 o/oo
2	3+760,000	Pendiente	625.128	-33.8000 o/oo
2	3+780,000	Pendiente	624.452	-33.8000 o/oo
2	3+800,000	Pendiente	623.776	-33.8000 o/oo
2	3+820,000	Pendiente	623.100	-33.8000 o/oo
2	3+840,000	Pendiente	622.424	-33.8000 o/oo
2	3+848,568	tg. entrada	622.134	-33.8000 o/oo
2	3+860,000	KV 4200	621.764	-31.0780 o/oo
2	3+880,000	KV 4200	621.190	-26.3161 o/oo
2	3+900,000	KV 4200	620.711	-21.5542 o/oo
2	3+920,000	KV 4200	620.327	-16.7923 o/oo
2	3+940,000	KV 4200	620.039	-12.0304 o/oo
2	3+940,128	tg. salida	620.038	-12.0000 o/oo
2	3+960,000	Pendiente	619.799	-12.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
2	3+980,000	Pendiente	619.559	-12.0000 o/oo
2	4+000,000	Pendiente	619.319	-12.0000 o/oo
2	4+020,000	Pendiente	619.079	-12.0000 o/oo
2	4+040,000	Pendiente	618.839	-12.0000 o/oo
2	4+060,000	Pendiente	618.599	-12.0000 o/oo
2	4+080,000	Pendiente	618.359	-12.0000 o/oo
2	4+100,000	Pendiente	618.119	-12.0000 o/oo
2	4+120,000	Pendiente	617.879	-12.0000 o/oo
2	4+140,000	Pendiente	617.639	-12.0000 o/oo
2	4+154,270	tg. entrada	617.468	-12.0000 o/oo
2	4+160,000	KV 6500	617.402	-11.1185 o/oo
2	4+180,000	KV 6500	617.210	-8.0416 o/oo
2	4+200,000	KV 6500	617.080	-4.9646 o/oo
2	4+220,000	KV 6500	617.012	-1.8877 o/oo
2	4+232,270	tg. salida	617.000	0.0000 o/oo
2	4+240,000	Horizontal	617.000	0.0000 o/oo
2	4+260,000	Horizontal	617.000	0.0000 o/oo
2	4+280,000	Horizontal	617.000	0.0000 o/oo
2	4+300,000	Horizontal	617.000	0.0000 o/oo
2	4+320,000	Horizontal	617.000	0.0000 o/oo
2	4+340,000	Horizontal	617.000	0.0000 o/oo
2	4+360,000	Horizontal	617.000	0.0000 o/oo
2	4+380,000	Horizontal	617.000	0.0000 o/oo
2	4+400,000	Horizontal	617.000	0.0000 o/oo
2	4+420,000	Horizontal	617.000	0.0000 o/oo
2	4+440,000	Horizontal	617.000	0.0000 o/oo
2	4+460,000	Horizontal	617.000	0.0000 o/oo
2	4+480,000	Horizontal	617.000	0.0000 o/oo
2	4+486,157	tg. entrada	617.000	0.0000 o/oo
2	4+500,000	KV -3300	616.971	-4.1949 o/oo
2	4+520,000	KV -3300	616.826	-10.2555 o/oo
2	4+540,000	KV -3300	616.561	-16.3161 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
2	4+560,000	KV -3300	616.174	-22.3767 o/oo
2	4+580,000	KV -3300	615.666	-28.4373 o/oo
2	4+600,000	KV -3300	615.036	-34.4979 o/oo
2	4+600,007	tg. salida	615.036	-34.5000 o/oo
2	4+620,000	Pendiente	614.346	-34.5000 o/oo
2	4+640,000	Pendiente	613.656	-34.5000 o/oo
2	4+660,000	Pendiente	612.966	-34.5000 o/oo
2	4+680,000	Pendiente	612.276	-34.5000 o/oo
2	4+700,000	Pendiente	611.586	-34.5000 o/oo
2	4+720,000	Pendiente	610.896	-34.5000 o/oo
2	4+740,000	Pendiente	610.206	-34.5000 o/oo
2	4+760,000	Pendiente	609.516	-34.5000 o/oo
2	4+780,000	Pendiente	608.826	-34.5000 o/oo
2	4+800,000	Pendiente	608.136	-34.5000 o/oo
2	4+820,000	Pendiente	607.446	-34.5000 o/oo
2	4+840,000	Pendiente	606.756	-34.5000 o/oo
2	4+860,000	Pendiente	606.066	-34.5000 o/oo
2	4+880,000	Pendiente	605.376	-34.5000 o/oo
2	4+900,000	Pendiente	604.686	-34.5000 o/oo
2	4+920,000	Pendiente	603.996	-34.5000 o/oo
2	4+940,000	Pendiente	603.306	-34.5000 o/oo
2	4+945,329	tg. entrada	603.122	-34.5000 o/oo
2	4+960,000	KV 8000	602.630	-32.6662 o/oo
2	4+980,000	KV 8000	602.001	-30.1662 o/oo
2	5+000,000	KV 8000	601.423	-27.6662 o/oo
2	5+020,000	KV 8000	600.895	-25.1662 o/oo
2	5+040,000	KV 8000	600.416	-22.6662 o/oo
2	5+060,000	KV 8000	599.988	-20.1662 o/oo
2	5+080,000	KV 8000	599.610	-17.6662 o/oo
2	5+100,000	KV 8000	599.282	-15.1662 o/oo
2	5+120,000	KV 8000	599.003	-12.6662 o/oo
2	5+140,000	KV 8000	598.775	-10.1662 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
2	5+157,329	tg. salida	598.617	-8.0000 o/oo
2	5+160,000	Pendiente	598.596	-8.0000 o/oo
2	5+180,000	Pendiente	598.436	-8.0000 o/oo
2	5+200,000	Pendiente	598.276	-8.0000 o/oo
2	5+220,000	Pendiente	598.116	-8.0000 o/oo
2	5+240,000	Pendiente	597.956	-8.0000 o/oo
2	5+260,000	Pendiente	597.796	-8.0000 o/oo
2	5+280,000	Pendiente	597.636	-8.0000 o/oo
2	5+300,000	Pendiente	597.476	-8.0000 o/oo
2	5+320,000	Pendiente	597.316	-8.0000 o/oo
2	5+340,000	Pendiente	597.156	-8.0000 o/oo
2	5+360,000	Pendiente	596.996	-8.0000 o/oo
2	5+380,000	Pendiente	596.836	-8.0000 o/oo
2	5+400,000	Pendiente	596.676	-8.0000 o/oo
2	5+420,000	Pendiente	596.516	-8.0000 o/oo
2	5+440,000	Pendiente	596.356	-8.0000 o/oo
2	5+460,000	Pendiente	596.196	-8.0000 o/oo
2	5+480,000	Pendiente	596.036	-8.0000 o/oo
2	5+500,000	Pendiente	595.876	-8.0000 o/oo
2	5+520,000	Pendiente	595.716	-8.0000 o/oo
2	5+540,000	Pendiente	595.556	-8.0000 o/oo
2	5+560,000	Pendiente	595.396	-8.0000 o/oo
2	5+580,000	Pendiente	595.236	-8.0000 o/oo
2	5+600,000	Pendiente	595.076	-8.0000 o/oo
2	5+620,000	Pendiente	594.916	-8.0000 o/oo
2	5+632,012	tg. entrada	594.820	-8.0000 o/oo
2	5+640,000	KV 10000	594.759	-7.2012 o/oo
2	5+660,000	KV 10000	594.635	-5.2012 o/oo
2	5+680,000	KV 10000	594.551	-3.2012 o/oo
2	5+700,000	KV 10000	594.507	-1.2012 o/oo
2	5+712,012	tg. salida	594.500	0.0000 o/oo
2	5+720,000	Horizontal	594.500	0.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
2	5+740,000	Horizontal	594.500	0.0000 o/oo
2	5+760,000	Horizontal	594.500	0.0000 o/oo
2	5+780,000	Horizontal	594.500	0.0000 o/oo
2	5+800,000	Horizontal	594.500	0.0000 o/oo
2	5+820,000	Horizontal	594.500	0.0000 o/oo
2	5+840,000	Horizontal	594.500	0.0000 o/oo
2	5+860,000	Horizontal	594.500	0.0000 o/oo
2	5+880,000	Horizontal	594.500	0.0000 o/oo
2	5+900,000	Horizontal	594.500	0.0000 o/oo
2	5+906,629	tg. entrada	594.500	0.0000 o/oo
2	5+920,000	KV 10000	594.509	1.3371 o/oo
2	5+940,000	KV 10000	594.556	3.3371 o/oo
2	5+960,000	KV 10000	594.642	5.3371 o/oo
2	5+980,000	KV 10000	594.769	7.3371 o/oo
2	6+000,000	KV 10000	594.936	9.3371 o/oo
2	6+006,629	tg. salida	595.000	10.0000 o/oo
2	6+020,000	Rampa	595.134	10.0000 o/oo
2	6+040,000	Rampa	595.334	10.0000 o/oo
2	6+060,000	Rampa	595.534	10.0000 o/oo
2	6+080,000	Rampa	595.734	10.0000 o/oo
2	6+100,000	Rampa	595.934	10.0000 o/oo
2	6+120,000	Rampa	596.134	10.0000 o/oo
2	6+140,000	Rampa	596.334	10.0000 o/oo
2	6+160,000	Rampa	596.534	10.0000 o/oo
2	6+180,000	Rampa	596.734	10.0000 o/oo
2	6+200,000	Rampa	596.934	10.0000 o/oo
2	6+220,000	Rampa	597.134	10.0000 o/oo
2	6+222,352	tg. entrada	597.157	10.0000 o/oo
2	6+240,000	KV 6250	597.359	12.8236 o/oo
2	6+260,000	KV 6250	597.647	16.0236 o/oo
2	6+280,000	KV 6250	598.000	19.2236 o/oo
2	6+300,000	KV 6250	598.416	22.4236 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
2	6+320,000	KV 6250	598.897	25.6236 o/oo
2	6+322,352	tg. salida	598.957	26.0000 o/oo
2	6+340,000	Rampa	599.416	26.0000 o/oo
2	6+360,000	Rampa	599.936	26.0000 o/oo
2	6+380,000	Rampa	600.456	26.0000 o/oo
2	6+400,000	Rampa	600.976	26.0000 o/oo
2	6+420,000	Rampa	601.496	26.0000 o/oo
2	6+440,000	Rampa	602.016	26.0000 o/oo
2	6+460,000	Rampa	602.536	26.0000 o/oo
2	6+480,000	Rampa	603.056	26.0000 o/oo
2	6+500,000	Rampa	603.576	26.0000 o/oo
2	6+520,000	Rampa	604.096	26.0000 o/oo
2	6+540,000	Rampa	604.616	26.0000 o/oo
2	6+560,000	Rampa	605.136	26.0000 o/oo
2	6+580,000	Rampa	605.656	26.0000 o/oo
2	6+600,000	Rampa	606.176	26.0000 o/oo
2	6+620,000	Rampa	606.696	26.0000 o/oo
2	6+640,000	Rampa	607.216	26.0000 o/oo
2	6+660,000	Rampa	607.736	26.0000 o/oo
2	6+680,000	Rampa	608.256	26.0000 o/oo
2	6+700,000	Rampa	608.776	26.0000 o/oo
2	6+720,000	Rampa	609.296	26.0000 o/oo
2	6+740,000	Rampa	609.816	26.0000 o/oo
2	6+760,000	Rampa	610.336	26.0000 o/oo
2	6+780,000	Rampa	610.856	26.0000 o/oo
2	6+798,865	tg. entrada	611.347	26.0000 o/oo
2	6+800,000	KV -8000	611.376	25.8581 o/oo
2	6+820,000	KV -8000	611.868	23.3581 o/oo
2	6+840,000	KV -8000	612.310	20.8581 o/oo
2	6+860,000	KV -8000	612.702	18.3581 o/oo
2	6+880,000	KV -8000	613.045	15.8581 o/oo
2	6+900,000	KV -8000	613.337	13.3581 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
2	6+920,000	KV -8000	613.579	10.8581 o/oo
2	6+940,000	KV -8000	613.771	8.3581 o/oo
2	6+960,000	KV -8000	613.913	5.8581 o/oo
2	6+966,865	tg. salida	613.951	5.0000 o/oo
2	6+980,000	Rampa	614.016	5.0000 o/oo
2	7+000,000	Rampa	614.116	5.0000 o/oo
2	7+020,000	Rampa	614.216	5.0000 o/oo
2	7+040,000	Rampa	614.316	5.0000 o/oo
2	7+060,000	Rampa	614.416	5.0000 o/oo
2	7+080,000	Rampa	614.516	5.0000 o/oo
2	7+100,000	Rampa	614.616	5.0000 o/oo
2	7+120,000	Rampa	614.716	5.0000 o/oo
2	7+140,000	Rampa	614.816	5.0000 o/oo
2	7+160,000	Rampa	614.916	5.0000 o/oo
2	7+180,000	Rampa	615.016	5.0000 o/oo
2	7+200,000	Rampa	615.116	5.0000 o/oo
2	7+220,000	Rampa	615.216	5.0000 o/oo
2	7+225,338	tg. entrada	615.243	5.0000 o/oo
2	7+240,000	KV 6000	615.334	7.4437 o/oo
2	7+260,000	KV 6000	615.516	10.7770 o/oo
2	7+280,000	KV 6000	615.765	14.1103 o/oo
2	7+300,000	KV 6000	616.081	17.4437 o/oo
2	7+320,000	KV 6000	616.463	20.7770 o/oo
2	7+340,000	KV 6000	616.912	24.1103 o/oo
2	7+360,000	KV 6000	617.427	27.4437 o/oo
2	7+380,000	KV 6000	618.010	30.7770 o/oo
2	7+398,138	tg. salida	618.595	33.8000 o/oo
2	7+400,000	Rampa	618.658	33.8000 o/oo
2	7+420,000	Rampa	619.334	33.8000 o/oo
2	7+440,000	Rampa	620.010	33.8000 o/oo
2	7+460,000	Rampa	620.686	33.8000 o/oo
2	7+480,000	Rampa	621.362	33.8000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
2	7+500,000	Rampa	622.038	33.8000 o/oo
2	7+520,000	Rampa	622.714	33.8000 o/oo
2	7+540,000	Rampa	623.390	33.8000 o/oo
2	7+560,000	Rampa	624.066	33.8000 o/oo
2	7+580,000	Rampa	624.742	33.8000 o/oo
2	7+600,000	Rampa	625.418	33.8000 o/oo
2	7+620,000	Rampa	626.094	33.8000 o/oo
2	7+631,602	tg. entrada	626.486	33.8000 o/oo
2	7+640,000	KV -3000	626.758	31.0007 o/oo
2	7+660,000	KV -3000	627.312	24.3341 o/oo
2	7+680,000	KV -3000	627.732	17.6674 o/oo
2	7+700,000	KV -3000	628.018	11.0007 o/oo
2	7+720,000	KV -3000	628.172	4.3341 o/oo
2	7+733,002	tg. salida	628.200	0.0000 o/oo
2	7+740,000	Horizontal	628.200	0.0000 o/oo
2	7+760,000	Horizontal	628.200	0.0000 o/oo
2	7+780,000	Horizontal	628.200	0.0000 o/oo
2	7+800,000	Horizontal	628.200	0.0000 o/oo
2	7+820,000	Horizontal	628.200	0.0000 o/oo
2	7+840,000	Horizontal	628.200	0.0000 o/oo
2	7+860,000	Horizontal	628.200	0.0000 o/oo
2	7+880,000	Horizontal	628.200	0.0000 o/oo
2	7+900,000	Horizontal	628.200	0.0000 o/oo
2	7+920,000	Horizontal	628.200	0.0000 o/oo
2	7+940,000	Horizontal	628.200	0.0000 o/oo
2	7+960,000	Horizontal	628.200	0.0000 o/oo
2	7+980,000	Horizontal	628.200	0.0000 o/oo
2	8+000,000	Horizontal	628.200	0.0000 o/oo
2	8+020,000	Horizontal	628.200	0.0000 o/oo
2	8+040,000	Horizontal	628.200	0.0000 o/oo
2	8+060,000	Horizontal	628.200	0.0000 o/oo
2	8+080,000	Horizontal	628.200	0.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
2	8+100,000	Horizontal	628.200	0.0000 o/oo
2	8+120,000	Horizontal	628.200	0.0000 o/oo
2	8+140,000	Horizontal	628.200	0.0000 o/oo
2	8+160,000	Horizontal	628.200	0.0000 o/oo
2	8+180,000	Horizontal	628.200	0.0000 o/oo
2	8+200,000	Horizontal	628.200	0.0000 o/oo
2	8+220,000	Horizontal	628.200	0.0000 o/oo
2	8+240,000	Horizontal	628.200	0.0000 o/oo
2	8+260,000	Horizontal	628.200	0.0000 o/oo
2	8+280,000	Horizontal	628.200	0.0000 o/oo
2	8+300,000	Horizontal	628.200	0.0000 o/oo
2	8+320,000	Horizontal	628.200	0.0000 o/oo
2	8+340,000	Horizontal	628.200	0.0000 o/oo
2	8+360,000	Horizontal	628.200	0.0000 o/oo
2	8+380,000	Horizontal	628.200	0.0000 o/oo
2	8+400,000	Horizontal	628.200	0.0000 o/oo
2	8+420,000	Horizontal	628.200	0.0000 o/oo
2	8+440,000	Horizontal	628.200	0.0000 o/oo
2	8+460,000	Horizontal	628.200	0.0000 o/oo
2	8+480,000	Horizontal	628.200	0.0000 o/oo
2	8+496,755	Horizontal	628.200	0.0000 o/oo



### EJE 3. ALTERNATIVA 3.

EJE	PENDIENTE	LONGITUD	PARAMETRO	VÉRTICE		ENTRADA AL ACUERDO		SALIDA DEL ACUERDO		BISECT.	DIF.PEN
	(o/oo)	(m.)	( kv )	PK	Z	PK	Z	PK	Z	(m.)	(o/oo)
3						0,000	650,600				
3	0,000000	48,000	6.000,000	555,448	650,600	531,448	650,600	579,448	650,408	0,048	-0,800
3	-8,000000	83,490	3.300,000	810,394	648,560	768,649	648,894	852,139	647,170	0,264	-2,530
3	-33,300000	156,720	2.400,000	1.019,569	641,595	941,209	644,204	1.097,929	644,102	1,279	6,530
3	32,000000	105,600	3.300,000	1.188,479	647,000	1.135,679	645,310	1.241,279	647,000	0,422	-3,200
3	0,000000	173,250	6.300,000	1.453,881	647,000	1.367,256	647,000	1.540,506	649,382	0,596	2,750
3	27,500000	173,250	6.300,000	1.968,426	661,150	1.881,801	658,768	2.055,051	661,150	0,596	-2,750
3	0,000000	109,890	3.300,000	2.292,542	661,150	2.237,597	661,150	2.347,487	659,320	0,457	-3,330
3	-33,300000	69,930	2.100,000	3.227,978	630,000	3.193,013	631,164	3.262,943	630,000	0,291	3,330
3	0,000000	69,930	2.100,000	3.470,570	630,000	3.435,605	630,000	3.505,535	628,836	0,291	-3,330
3	-33,300000	192,390	3.300,000	3.867,139	616,794	3.770,944	619,998	3.963,334	619,199	1,402	5,830
3	25,000000	360,000	12.000,000	4.522,339	633,174	4.342,339	628,674	4.702,339	632,274	1,350	-3,000
3	-5,000000	100,000	20.000,000	5.517,183	628,200	5.467,183	628,450	5.567,183	628,200	0,062	0,500
3	0,000000	101,400	3.000,000	6.257,754	628,200	6.207,054	628,200	6.308,454	626,486	0,428	-3,380
3	-33,800000	172,800	6.000,000	6.628,318	615,675	6.541,918	618,595	6.714,718	615,243	0,622	2,880
3	-5,000000	168,000	8.000,000	7.057,179	613,531	6.973,179	613,951	7.141,179	611,347	0,441	-2,100
3	-26,000000	104,320	6.520,000	7.665,359	597,718	7.613,199	599,074	7.717,519	597,196	0,209	1,600
3	-10,000000	100,000	10.000,000	7.987,151	594,500	7.937,151	595,000	8.037,151	594,500	0,125	1,000
3	0,000000	54,000	6.000,000	8.670,200	594,500	8.643,200	594,500	8.697,200	594,743	0,061	0,900
3	9,000000	65,000	2.500,000	9.154,148	598,856	9.121,648	598,563	9.186,648	599,993	0,211	2,600
3	35,000000	105,000	3.000,000	9.892,498	624,698	9.839,998	622,860	9.944,998	624,698	0,459	-3,500
3	0,000100							11.206,643	624,698		

### EJE 3. ALTERNATIVA 3.

EJE	P.K.	TIPO	COTA	PENDIENTE
3	0+000,000	Horizontal	650.600	0.0000 o/oo
3	0+020,000	Horizontal	650.600	0.0000 o/oo
3	0+040,000	Horizontal	650.600	0.0000 o/oo
3	0+060,000	Horizontal	650.600	0.0000 o/oo
3	0+080,000	Horizontal	650.600	0.0000 o/oo
3	0+100,000	Horizontal	650.600	0.0000 o/oo
3	0+120,000	Horizontal	650.600	0.0000 o/oo
3	0+140,000	Horizontal	650.600	0.0000 o/oo
3	0+160,000	Horizontal	650.600	0.0000 o/oo
3	0+180,000	Horizontal	650.600	0.0000 o/oo
3	0+200,000	Horizontal	650.600	0.0000 o/oo
3	0+220,000	Horizontal	650.600	0.0000 o/oo
3	0+240,000	Horizontal	650.600	0.0000 o/oo
3	0+260,000	Horizontal	650.600	0.0000 o/oo
3	0+280,000	Horizontal	650.600	0.0000 o/oo
3	0+300,000	Horizontal	650.600	0.0000 o/oo
3	0+320,000	Horizontal	650.600	0.0000 o/oo
3	0+340,000	Horizontal	650.600	0.0000 o/oo
3	0+360,000	Horizontal	650.600	0.0000 o/oo
3	0+380,000	Horizontal	650.600	0.0000 o/oo
3	0+400,000	Horizontal	650.600	0.0000 o/oo
3	0+420,000	Horizontal	650.600	0.0000 o/oo
3	0+440,000	Horizontal	650.600	0.0000 o/oo
3	0+460,000	Horizontal	650.600	0.0000 o/oo
3	0+480,000	Horizontal	650.600	0.0000 o/oo
3	0+500,000	Horizontal	650.600	0.0000 o/oo
3	0+520,000	Horizontal	650.600	0.0000 o/oo
3	0+531,448	tg. entrada	650.600	0.0000 o/oo
3	0+540,000	KV -6000	650.594	-1.4253 o/oo
3	0+560,000	KV -6000	650.532	-4.7587 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
3	0+579,448	tg. salida	650.408	-8.0000 o/oo
3	0+580,000	Pendiente	650.404	-8.0000 o/oo
3	0+600,000	Pendiente	650.244	-8.0000 o/oo
3	0+620,000	Pendiente	650.084	-8.0000 o/oo
3	0+640,000	Pendiente	649.924	-8.0000 o/oo
3	0+660,000	Pendiente	649.764	-8.0000 o/oo
3	0+680,000	Pendiente	649.604	-8.0000 o/oo
3	0+700,000	Pendiente	649.444	-8.0000 o/oo
3	0+720,000	Pendiente	649.284	-8.0000 o/oo
3	0+740,000	Pendiente	649.124	-8.0000 o/oo
3	0+760,000	Pendiente	648.964	-8.0000 o/oo
3	0+768,649	tg. entrada	648.894	-8.0000 o/oo
3	0+780,000	KV -3300	648.784	-11.4397 o/oo
3	0+800,000	KV -3300	648.495	-17.5003 o/oo
3	0+820,000	KV -3300	648.084	-23.5609 o/oo
3	0+840,000	KV -3300	647.552	-29.6215 o/oo
3	0+852,139	tg. salida	647.170	-33.3000 o/oo
3	0+860,000	Pendiente	646.909	-33.3000 o/oo
3	0+880,000	Pendiente	646.243	-33.3000 o/oo
3	0+900,000	Pendiente	645.577	-33.3000 o/oo
3	0+920,000	Pendiente	644.911	-33.3000 o/oo
3	0+940,000	Pendiente	644.245	-33.3000 o/oo
3	0+941,209	tg. entrada	644.204	-33.3000 o/oo
3	0+960,000	KV 2400	643.652	-25.4706 o/oo
3	0+980,000	KV 2400	643.226	-17.1373 o/oo
3	1+000,000	KV 2400	642.967	-8.8039 o/oo
3	1+020,000	KV 2400	642.874	-0.4706 o/oo
3	1+021,129	Punto bajo	642.874	0.0000 o/oo
3	1+040,000	KV 2400	642.948	7.8627 o/oo
3	1+060,000	KV 2400	643.188	16.1961 o/oo
3	1+080,000	KV 2400	643.596	24.5294 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
3	1+097,929	tg. salida	644.102	32.0000 o/oo
3	1+100,000	Rampa	644.169	32.0000 o/oo
3	1+120,000	Rampa	644.809	32.0000 o/oo
3	1+135,679	tg. entrada	645.310	32.0000 o/oo
3	1+140,000	KV -3300	645.446	30.6906 o/oo
3	1+160,000	KV -3300	645.999	24.6300 o/oo
3	1+180,000	KV -3300	646.431	18.5694 o/oo
3	1+200,000	KV -3300	646.742	12.5088 o/oo
3	1+220,000	KV -3300	646.931	6.4482 o/oo
3	1+240,000	KV -3300	647.000	0.3876 o/oo
3	1+241,279	tg. salida	647.000	0.0000 o/oo
3	1+260,000	Horizontal	647.000	0.0000 o/oo
3	1+280,000	Horizontal	647.000	0.0000 o/oo
3	1+300,000	Horizontal	647.000	0.0000 o/oo
3	1+320,000	Horizontal	647.000	0.0000 o/oo
3	1+340,000	Horizontal	647.000	0.0000 o/oo
3	1+360,000	Horizontal	647.000	0.0000 o/oo
3	1+367,256	tg. entrada	647.000	0.0000 o/oo
3	1+380,000	KV 6300	647.013	2.0229 o/oo
3	1+400,000	KV 6300	647.085	5.1975 o/oo
3	1+420,000	KV 6300	647.221	8.3721 o/oo
3	1+440,000	KV 6300	647.420	11.5467 o/oo
3	1+460,000	KV 6300	647.683	14.7213 o/oo
3	1+480,000	KV 6300	648.009	17.8959 o/oo
3	1+500,000	KV 6300	648.398	21.0705 o/oo
3	1+520,000	KV 6300	648.852	24.2451 o/oo
3	1+540,000	KV 6300	649.368	27.4197 o/oo
3	1+540,506	tg. salida	649.382	27.5000 o/oo
3	1+560,000	Rampa	649.918	27.5000 o/oo
3	1+580,000	Rampa	650.468	27.5000 o/oo
3	1+600,000	Rampa	651.018	27.5000 o/oo
3	1+620,000	Rampa	651.568	27.5000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
3	1+640,000	Rampa	652.118	27.5000 o/oo
3	1+660,000	Rampa	652.668	27.5000 o/oo
3	1+680,000	Rampa	653.218	27.5000 o/oo
3	1+700,000	Rampa	653.768	27.5000 o/oo
3	1+720,000	Rampa	654.318	27.5000 o/oo
3	1+740,000	Rampa	654.868	27.5000 o/oo
3	1+760,000	Rampa	655.418	27.5000 o/oo
3	1+780,000	Rampa	655.968	27.5000 o/oo
3	1+800,000	Rampa	656.518	27.5000 o/oo
3	1+820,000	Rampa	657.068	27.5000 o/oo
3	1+840,000	Rampa	657.618	27.5000 o/oo
3	1+860,000	Rampa	658.168	27.5000 o/oo
3	1+880,000	Rampa	658.718	27.5000 o/oo
3	1+881,801	tg. entrada	658.768	27.5000 o/oo
3	1+900,000	KV -6300	659.242	24.6113 o/oo
3	1+920,000	KV -6300	659.702	21.4367 o/oo
3	1+940,000	KV -6300	660.099	18.2621 o/oo
3	1+960,000	KV -6300	660.433	15.0875 o/oo
3	1+980,000	KV -6300	660.703	11.9129 o/oo
3	2+000,000	KV -6300	660.909	8.7383 o/oo
3	2+020,000	KV -6300	661.052	5.5637 o/oo
3	2+040,000	KV -6300	661.132	2.3891 o/oo
3	2+055,051	tg. salida	661.150	0.0000 o/oo
3	2+060,000	Horizontal	661.150	0.0000 o/oo
3	2+080,000	Horizontal	661.150	0.0000 o/oo
3	2+100,000	Horizontal	661.150	0.0000 o/oo
3	2+120,000	Horizontal	661.150	0.0000 o/oo
3	2+140,000	Horizontal	661.150	0.0000 o/oo
3	2+160,000	Horizontal	661.150	0.0000 o/oo
3	2+180,000	Horizontal	661.150	0.0000 o/oo
3	2+200,000	Horizontal	661.150	0.0000 o/oo
3	2+220,000	Horizontal	661.150	0.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
3	2+237,597	tg. entrada	661.150	0.0000 o/oo
3	2+240,000	KV -3300	661.149	-0.7282 o/oo
3	2+260,000	KV -3300	661.074	-6.7888 o/oo
3	2+280,000	KV -3300	660.878	-12.8494 o/oo
3	2+300,000	KV -3300	660.560	-18.9100 o/oo
3	2+320,000	KV -3300	660.121	-24.9706 o/oo
3	2+340,000	KV -3300	659.561	-31.0312 o/oo
3	2+347,487	tg. salida	659.320	-33.3000 o/oo
3	2+360,000	Pendiente	658.904	-33.3000 o/oo
3	2+380,000	Pendiente	658.238	-33.3000 o/oo
3	2+400,000	Pendiente	657.572	-33.3000 o/oo
3	2+420,000	Pendiente	656.906	-33.3000 o/oo
3	2+440,000	Pendiente	656.240	-33.3000 o/oo
3	2+460,000	Pendiente	655.574	-33.3000 o/oo
3	2+480,000	Pendiente	654.908	-33.3000 o/oo
3	2+500,000	Pendiente	654.242	-33.3000 o/oo
3	2+520,000	Pendiente	653.576	-33.3000 o/oo
3	2+540,000	Pendiente	652.910	-33.3000 o/oo
3	2+560,000	Pendiente	652.244	-33.3000 o/oo
3	2+580,000	Pendiente	651.578	-33.3000 o/oo
3	2+600,000	Pendiente	650.912	-33.3000 o/oo
3	2+620,000	Pendiente	650.246	-33.3000 o/oo
3	2+640,000	Pendiente	649.580	-33.3000 o/oo
3	2+660,000	Pendiente	648.914	-33.3000 o/oo
3	2+680,000	Pendiente	648.248	-33.3000 o/oo
3	2+700,000	Pendiente	647.582	-33.3000 o/oo
3	2+720,000	Pendiente	646.916	-33.3000 o/oo
3	2+740,000	Pendiente	646.250	-33.3000 o/oo
3	2+760,000	Pendiente	645.584	-33.3000 o/oo
3	2+780,000	Pendiente	644.918	-33.3000 o/oo
3	2+800,000	Pendiente	644.252	-33.3000 o/oo
3	2+820,000	Pendiente	643.586	-33.3000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
3	2+840,000	Pendiente	642.920	-33.3000 o/oo
3	2+860,000	Pendiente	642.254	-33.3000 o/oo
3	2+880,000	Pendiente	641.588	-33.3000 o/oo
3	2+900,000	Pendiente	640.922	-33.3000 o/oo
3	2+920,000	Pendiente	640.256	-33.3000 o/oo
3	2+940,000	Pendiente	639.590	-33.3000 o/oo
3	2+960,000	Pendiente	638.924	-33.3000 o/oo
3	2+980,000	Pendiente	638.258	-33.3000 o/oo
3	3+000,000	Pendiente	637.592	-33.3000 o/oo
3	3+020,000	Pendiente	636.926	-33.3000 o/oo
3	3+040,000	Pendiente	636.260	-33.3000 o/oo
3	3+060,000	Pendiente	635.594	-33.3000 o/oo
3	3+080,000	Pendiente	634.928	-33.3000 o/oo
3	3+100,000	Pendiente	634.262	-33.3000 o/oo
3	3+120,000	Pendiente	633.596	-33.3000 o/oo
3	3+140,000	Pendiente	632.930	-33.3000 o/oo
3	3+160,000	Pendiente	632.264	-33.3000 o/oo
3	3+180,000	Pendiente	631.598	-33.3000 o/oo
3	3+193,013	tg. entrada	631.164	-33.3000 o/oo
3	3+200,000	KV 2100	630.943	-29.9726 o/oo
3	3+220,000	KV 2100	630.439	-20.4488 o/oo
3	3+240,000	KV 2100	630.125	-10.9250 o/oo
3	3+260,000	KV 2100	630.002	-1.4012 o/oo
3	3+262,943	tg. salida	630.000	0.0000 o/oo
3	3+280,000	Horizontal	630.000	0.0000 o/oo
3	3+300,000	Horizontal	630.000	0.0000 o/oo
3	3+320,000	Horizontal	630.000	0.0000 o/oo
3	3+340,000	Horizontal	630.000	0.0000 o/oo
3	3+360,000	Horizontal	630.000	0.0000 o/oo
3	3+380,000	Horizontal	630.000	0.0000 o/oo
3	3+400,000	Horizontal	630.000	0.0000 o/oo
3	3+420,000	Horizontal	630.000	0.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
3	3+435,605	tg. entrada	630.000	0.0000 o/oo
3	3+440,000	KV -2100	629.995	-2.0928 o/oo
3	3+460,000	KV -2100	629.858	-11.6166 o/oo
3	3+480,000	KV -2100	629.531	-21.1404 o/oo
3	3+500,000	KV -2100	629.013	-30.6642 o/oo
3	3+505,535	tg. salida	628.836	-33.3000 o/oo
3	3+520,000	Pendiente	628.354	-33.3000 o/oo
3	3+540,000	Pendiente	627.688	-33.3000 o/oo
3	3+560,000	Pendiente	627.022	-33.3000 o/oo
3	3+580,000	Pendiente	626.356	-33.3000 o/oo
3	3+600,000	Pendiente	625.690	-33.3000 o/oo
3	3+620,000	Pendiente	625.024	-33.3000 o/oo
3	3+640,000	Pendiente	624.358	-33.3000 o/oo
3	3+660,000	Pendiente	623.692	-33.3000 o/oo
3	3+680,000	Pendiente	623.026	-33.3000 o/oo
3	3+700,000	Pendiente	622.360	-33.3000 o/oo
3	3+720,000	Pendiente	621.694	-33.3000 o/oo
3	3+740,000	Pendiente	621.028	-33.3000 o/oo
3	3+760,000	Pendiente	620.362	-33.3000 o/oo
3	3+770,944	tg. entrada	619.998	-33.3000 o/oo
3	3+780,000	KV 3300	619.708	-30.5559 o/oo
3	3+800,000	KV 3300	619.158	-24.4953 o/oo
3	3+820,000	KV 3300	618.729	-18.4347 o/oo
3	3+840,000	KV 3300	618.421	-12.3741 o/oo
3	3+860,000	KV 3300	618.234	-6.3135 o/oo
3	3+880,000	KV 3300	618.168	-0.2528 o/oo
3	3+880,834	Punto bajo	618.168	0.0000 o/oo
3	3+900,000	KV 3300	618.224	5.8078 o/oo
3	3+920,000	KV 3300	618.400	11.8684 o/oo
3	3+940,000	KV 3300	618.698	17.9290 o/oo
3	3+960,000	KV 3300	619.117	23.9896 o/oo
3	3+963,334	tg. salida	619.199	25.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
3	3+980,000	Rampa	619.616	25.0000 o/oo
3	4+000,000	Rampa	620.116	25.0000 o/oo
3	4+020,000	Rampa	620.616	25.0000 o/oo
3	4+040,000	Rampa	621.116	25.0000 o/oo
3	4+060,000	Rampa	621.616	25.0000 o/oo
3	4+080,000	Rampa	622.116	25.0000 o/oo
3	4+100,000	Rampa	622.616	25.0000 o/oo
3	4+120,000	Rampa	623.116	25.0000 o/oo
3	4+140,000	Rampa	623.616	25.0000 o/oo
3	4+160,000	Rampa	624.116	25.0000 o/oo
3	4+180,000	Rampa	624.616	25.0000 o/oo
3	4+200,000	Rampa	625.116	25.0000 o/oo
3	4+220,000	Rampa	625.616	25.0000 o/oo
3	4+240,000	Rampa	626.116	25.0000 o/oo
3	4+260,000	Rampa	626.616	25.0000 o/oo
3	4+280,000	Rampa	627.116	25.0000 o/oo
3	4+300,000	Rampa	627.616	25.0000 o/oo
3	4+320,000	Rampa	628.116	25.0000 o/oo
3	4+340,000	Rampa	628.616	25.0000 o/oo
3	4+342,339	tg. entrada	628.674	25.0000 o/oo
3	4+360,000	KV -12000	629.103	23.5282 o/oo
3	4+380,000	KV -12000	629.557	21.8615 o/oo
3	4+400,000	KV -12000	629.977	20.1949 o/oo
3	4+420,000	KV -12000	630.364	18.5282 o/oo
3	4+440,000	KV -12000	630.718	16.8615 o/oo
3	4+460,000	KV -12000	631.039	15.1949 o/oo
3	4+480,000	KV -12000	631.326	13.5282 o/oo
3	4+500,000	KV -12000	631.580	11.8615 o/oo
3	4+520,000	KV -12000	631.801	10.1949 o/oo
3	4+540,000	KV -12000	631.988	8.5282 o/oo
3	4+560,000	KV -12000	632.142	6.8615 o/oo
3	4+580,000	KV -12000	632.262	5.1949 o/oo



EJE	P.K.	TIPO	COTA	PENDIENTE
3	4+600,000	KV -12000	632.350	3.5282 o/oo
3	4+620,000	KV -12000	632.403	1.8615 o/oo
3	4+640,000	KV -12000	632.424	0.1949 o/oo
3	4+642,339	Punto alto	632.424	0.0000 o/oo
3	4+660,000	KV -12000	632.411	-1.4718 o/oo
3	4+680,000	KV -12000	632.365	-3.1385 o/oo
3	4+700,000	KV -12000	632.286	-4.8051 o/oo
3	4+702,339	tg. salida	632.274	-5.0000 o/oo
3	4+720,000	Pendiente	632.186	-5.0000 o/oo
3	4+740,000	Pendiente	632.086	-5.0000 o/oo
3	4+760,000	Pendiente	631.986	-5.0000 o/oo
3	4+780,000	Pendiente	631.886	-5.0000 o/oo
3	4+800,000	Pendiente	631.786	-5.0000 o/oo
3	4+820,000	Pendiente	631.686	-5.0000 o/oo
3	4+840,000	Pendiente	631.586	-5.0000 o/oo
3	4+860,000	Pendiente	631.486	-5.0000 o/oo
3	4+880,000	Pendiente	631.386	-5.0000 o/oo
3	4+900,000	Pendiente	631.286	-5.0000 o/oo
3	4+920,000	Pendiente	631.186	-5.0000 o/oo
3	4+940,000	Pendiente	631.086	-5.0000 o/oo
3	4+960,000	Pendiente	630.986	-5.0000 o/oo
3	4+980,000	Pendiente	630.886	-5.0000 o/oo
3	5+000,000	Pendiente	630.786	-5.0000 o/oo
3	5+020,000	Pendiente	630.686	-5.0000 o/oo
3	5+040,000	Pendiente	630.586	-5.0000 o/oo
3	5+060,000	Pendiente	630.486	-5.0000 o/oo
3	5+080,000	Pendiente	630.386	-5.0000 o/oo
3	5+100,000	Pendiente	630.286	-5.0000 o/oo
3	5+120,000	Pendiente	630.186	-5.0000 o/oo
3	5+140,000	Pendiente	630.086	-5.0000 o/oo
3	5+160,000	Pendiente	629.986	-5.0000 o/oo
3	5+180,000	Pendiente	629.886	-5.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
3	5+200,000	Pendiente	629.786	-5.0000 o/oo
3	5+220,000	Pendiente	629.686	-5.0000 o/oo
3	5+240,000	Pendiente	629.586	-5.0000 o/oo
3	5+260,000	Pendiente	629.486	-5.0000 o/oo
3	5+280,000	Pendiente	629.386	-5.0000 o/oo
3	5+300,000	Pendiente	629.286	-5.0000 o/oo
3	5+320,000	Pendiente	629.186	-5.0000 o/oo
3	5+340,000	Pendiente	629.086	-5.0000 o/oo
3	5+360,000	Pendiente	628.986	-5.0000 o/oo
3	5+380,000	Pendiente	628.886	-5.0000 o/oo
3	5+400,000	Pendiente	628.786	-5.0000 o/oo
3	5+420,000	Pendiente	628.686	-5.0000 o/oo
3	5+440,000	Pendiente	628.586	-5.0000 o/oo
3	5+460,000	Pendiente	628.486	-5.0000 o/oo
3	5+467,183	tg. entrada	628.450	-5.0000 o/oo
3	5+480,000	KV 20000	628.390	-4.3591 o/oo
3	5+500,000	KV 20000	628.313	-3.3591 o/oo
3	5+520,000	KV 20000	628.256	-2.3591 o/oo
3	5+540,000	KV 20000	628.218	-1.3591 o/oo
3	5+560,000	KV 20000	628.201	-0.3591 o/oo
3	5+567,183	tg. salida	628.200	0.0000 o/oo
3	5+580,000	Horizontal	628.200	0.0000 o/oo
3	5+600,000	Horizontal	628.200	0.0000 o/oo
3	5+620,000	Horizontal	628.200	0.0000 o/oo
3	5+640,000	Horizontal	628.200	0.0000 o/oo
3	5+660,000	Horizontal	628.200	0.0000 o/oo
3	5+680,000	Horizontal	628.200	0.0000 o/oo
3	5+700,000	Horizontal	628.200	0.0000 o/oo
3	5+720,000	Horizontal	628.200	0.0000 o/oo
3	5+740,000	Horizontal	628.200	0.0000 o/oo
3	5+760,000	Horizontal	628.200	0.0000 o/oo
3	5+780,000	Horizontal	628.200	0.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
3	5+800,000	Horizontal	628.200	0.0000 o/oo
3	5+820,000	Horizontal	628.200	0.0000 o/oo
3	5+840,000	Horizontal	628.200	0.0000 o/oo
3	5+860,000	Horizontal	628.200	0.0000 o/oo
3	5+880,000	Horizontal	628.200	0.0000 o/oo
3	5+900,000	Horizontal	628.200	0.0000 o/oo
3	5+920,000	Horizontal	628.200	0.0000 o/oo
3	5+940,000	Horizontal	628.200	0.0000 o/oo
3	5+960,000	Horizontal	628.200	0.0000 o/oo
3	5+980,000	Horizontal	628.200	0.0000 o/oo
3	6+000,000	Horizontal	628.200	0.0000 o/oo
3	6+020,000	Horizontal	628.200	0.0000 o/oo
3	6+040,000	Horizontal	628.200	0.0000 o/oo
3	6+060,000	Horizontal	628.200	0.0000 o/oo
3	6+080,000	Horizontal	628.200	0.0000 o/oo
3	6+100,000	Horizontal	628.200	0.0000 o/oo
3	6+120,000	Horizontal	628.200	0.0000 o/oo
3	6+140,000	Horizontal	628.200	0.0000 o/oo
3	6+160,000	Horizontal	628.200	0.0000 o/oo
3	6+180,000	Horizontal	628.200	0.0000 o/oo
3	6+200,000	Horizontal	628.200	0.0000 o/oo
3	6+207,054	tg. entrada	628.200	0.0000 o/oo
3	6+220,000	KV -3000	628.172	-4.3154 o/oo
3	6+240,000	KV -3000	628.019	-10.9821 o/oo
3	6+260,000	KV -3000	627.733	-17.6487 o/oo
3	6+280,000	KV -3000	627.313	-24.3154 o/oo
3	6+300,000	KV -3000	626.760	-30.9821 o/oo
3	6+308,454	tg. salida	626.486	-33.8000 o/oo
3	6+320,000	Pendiente	626.096	-33.8000 o/oo
3	6+340,000	Pendiente	625.420	-33.8000 o/oo
3	6+360,000	Pendiente	624.744	-33.8000 o/oo
3	6+380,000	Pendiente	624.068	-33.8000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
3	6+400,000	Pendiente	623.392	-33.8000 o/oo
3	6+420,000	Pendiente	622.716	-33.8000 o/oo
3	6+440,000	Pendiente	622.040	-33.8000 o/oo
3	6+460,000	Pendiente	621.364	-33.8000 o/oo
3	6+480,000	Pendiente	620.688	-33.8000 o/oo
3	6+500,000	Pendiente	620.012	-33.8000 o/oo
3	6+520,000	Pendiente	619.336	-33.8000 o/oo
3	6+540,000	Pendiente	618.660	-33.8000 o/oo
3	6+541,918	tg. entrada	618.595	-33.8000 o/oo
3	6+560,000	KV 6000	618.011	-30.7864 o/oo
3	6+580,000	KV 6000	617.429	-27.4530 o/oo
3	6+600,000	KV 6000	616.913	-24.1197 o/oo
3	6+620,000	KV 6000	616.464	-20.7864 o/oo
3	6+640,000	KV 6000	616.082	-17.4530 o/oo
3	6+660,000	KV 6000	615.766	-14.1197 o/oo
3	6+680,000	KV 6000	615.517	-10.7864 o/oo
3	6+700,000	KV 6000	615.335	-7.4530 o/oo
3	6+714,718	tg. salida	615.243	-5.0000 o/oo
3	6+720,000	Pendiente	615.217	-5.0000 o/oo
3	6+740,000	Pendiente	615.117	-5.0000 o/oo
3	6+760,000	Pendiente	615.017	-5.0000 o/oo
3	6+780,000	Pendiente	614.917	-5.0000 o/oo
3	6+800,000	Pendiente	614.817	-5.0000 o/oo
3	6+820,000	Pendiente	614.717	-5.0000 o/oo
3	6+840,000	Pendiente	614.617	-5.0000 o/oo
3	6+860,000	Pendiente	614.517	-5.0000 o/oo
3	6+880,000	Pendiente	614.417	-5.0000 o/oo
3	6+900,000	Pendiente	614.317	-5.0000 o/oo
3	6+920,000	Pendiente	614.217	-5.0000 o/oo
3	6+940,000	Pendiente	614.117	-5.0000 o/oo
3	6+960,000	Pendiente	614.017	-5.0000 o/oo
3	6+973,179	tg. entrada	613.951	-5.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
3	6+980,000	KV -8000	613.914	-5.8527 o/oo
3	7+000,000	KV -8000	613.772	-8.3527 o/oo
3	7+020,000	KV -8000	613.579	-10.8527 o/oo
3	7+040,000	KV -8000	613.337	-13.3527 o/oo
3	7+060,000	KV -8000	613.045	-15.8527 o/oo
3	7+080,000	KV -8000	612.703	-18.3527 o/oo
3	7+100,000	KV -8000	612.311	-20.8527 o/oo
3	7+120,000	KV -8000	611.869	-23.3527 o/oo
3	7+140,000	KV -8000	611.377	-25.8527 o/oo
3	7+141,179	tg. salida	611.347	-26.0000 o/oo
3	7+160,000	Pendiente	610.857	-26.0000 o/oo
3	7+180,000	Pendiente	610.337	-26.0000 o/oo
3	7+200,000	Pendiente	609.817	-26.0000 o/oo
3	7+220,000	Pendiente	609.297	-26.0000 o/oo
3	7+240,000	Pendiente	608.777	-26.0000 o/oo
3	7+260,000	Pendiente	608.257	-26.0000 o/oo
3	7+280,000	Pendiente	607.737	-26.0000 o/oo
3	7+300,000	Pendiente	607.217	-26.0000 o/oo
3	7+320,000	Pendiente	606.697	-26.0000 o/oo
3	7+340,000	Pendiente	606.177	-26.0000 o/oo
3	7+360,000	Pendiente	605.657	-26.0000 o/oo
3	7+380,000	Pendiente	605.137	-26.0000 o/oo
3	7+400,000	Pendiente	604.617	-26.0000 o/oo
3	7+420,000	Pendiente	604.097	-26.0000 o/oo
3	7+440,000	Pendiente	603.577	-26.0000 o/oo
3	7+460,000	Pendiente	603.057	-26.0000 o/oo
3	7+480,000	Pendiente	602.537	-26.0000 o/oo
3	7+500,000	Pendiente	602.017	-26.0000 o/oo
3	7+520,000	Pendiente	601.497	-26.0000 o/oo
3	7+540,000	Pendiente	600.977	-26.0000 o/oo
3	7+560,000	Pendiente	600.457	-26.0000 o/oo
3	7+580,000	Pendiente	599.937	-26.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
3	7+600,000	Pendiente	599.417	-26.0000 o/oo
3	7+613,199	tg. entrada	599.074	-26.0000 o/oo
3	7+620,000	KV 6520	598.901	-24.9570 o/oo
3	7+640,000	KV 6520	598.432	-21.8895 o/oo
3	7+660,000	KV 6520	598.025	-18.8220 o/oo
3	7+680,000	KV 6520	597.679	-15.7545 o/oo
3	7+700,000	KV 6520	597.395	-12.6870 o/oo
3	7+717,519	tg. salida	597.196	-10.0000 o/oo
3	7+720,000	Pendiente	597.172	-10.0000 o/oo
3	7+740,000	Pendiente	596.972	-10.0000 o/oo
3	7+760,000	Pendiente	596.772	-10.0000 o/oo
3	7+780,000	Pendiente	596.572	-10.0000 o/oo
3	7+800,000	Pendiente	596.372	-10.0000 o/oo
3	7+820,000	Pendiente	596.172	-10.0000 o/oo
3	7+840,000	Pendiente	595.972	-10.0000 o/oo
3	7+860,000	Pendiente	595.772	-10.0000 o/oo
3	7+880,000	Pendiente	595.572	-10.0000 o/oo
3	7+900,000	Pendiente	595.372	-10.0000 o/oo
3	7+920,000	Pendiente	595.172	-10.0000 o/oo
3	7+937,151	tg. entrada	595.000	-10.0000 o/oo
3	7+940,000	KV 10000	594.972	-9.7151 o/oo
3	7+960,000	KV 10000	594.798	-7.7151 o/oo
3	7+980,000	KV 10000	594.663	-5.7151 o/oo
3	8+000,000	KV 10000	594.569	-3.7151 o/oo
3	8+020,000	KV 10000	594.515	-1.7151 o/oo
3	8+037,151	tg. salida	594.500	0.0000 o/oo
3	8+040,000	Horizontal	594.500	0.0000 o/oo
3	8+060,000	Horizontal	594.500	0.0000 o/oo
3	8+080,000	Horizontal	594.500	0.0000 o/oo
3	8+100,000	Horizontal	594.500	0.0000 o/oo
3	8+120,000	Horizontal	594.500	0.0000 o/oo
3	8+140,000	Horizontal	594.500	0.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
3	8+160,000	Horizontal	594.500	0.0000 o/oo
3	8+180,000	Horizontal	594.500	0.0000 o/oo
3	8+200,000	Horizontal	594.500	0.0000 o/oo
3	8+220,000	Horizontal	594.500	0.0000 o/oo
3	8+240,000	Horizontal	594.500	0.0000 o/oo
3	8+260,000	Horizontal	594.500	0.0000 o/oo
3	8+280,000	Horizontal	594.500	0.0000 o/oo
3	8+300,000	Horizontal	594.500	0.0000 o/oo
3	8+320,000	Horizontal	594.500	0.0000 o/oo
3	8+340,000	Horizontal	594.500	0.0000 o/oo
3	8+360,000	Horizontal	594.500	0.0000 o/oo
3	8+380,000	Horizontal	594.500	0.0000 o/oo
3	8+400,000	Horizontal	594.500	0.0000 o/oo
3	8+420,000	Horizontal	594.500	0.0000 o/oo
3	8+440,000	Horizontal	594.500	0.0000 o/oo
3	8+460,000	Horizontal	594.500	0.0000 o/oo
3	8+480,000	Horizontal	594.500	0.0000 o/oo
3	8+500,000	Horizontal	594.500	0.0000 o/oo
3	8+520,000	Horizontal	594.500	0.0000 o/oo
3	8+540,000	Horizontal	594.500	0.0000 o/oo
3	8+560,000	Horizontal	594.500	0.0000 o/oo
3	8+580,000	Horizontal	594.500	0.0000 o/oo
3	8+600,000	Horizontal	594.500	0.0000 o/oo
3	8+620,000	Horizontal	594.500	0.0000 o/oo
3	8+640,000	Horizontal	594.500	0.0000 o/oo
3	8+643,200	tg. entrada	594.500	0.0000 o/oo
3	8+660,000	KV 6000	594.524	2.8000 o/oo
3	8+680,000	KV 6000	594.613	6.1334 o/oo
3	8+697,200	tg. salida	594.743	9.0000 o/oo
3	8+700,000	Rampa	594.768	9.0000 o/oo
3	8+720,000	Rampa	594.948	9.0000 o/oo
3	8+740,000	Rampa	595.128	9.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
3	8+760,000	Rampa	595.308	9.0000 o/oo
3	8+780,000	Rampa	595.488	9.0000 o/oo
3	8+800,000	Rampa	595.668	9.0000 o/oo
3	8+820,000	Rampa	595.848	9.0000 o/oo
3	8+840,000	Rampa	596.028	9.0000 o/oo
3	8+860,000	Rampa	596.208	9.0000 o/oo
3	8+880,000	Rampa	596.388	9.0000 o/oo
3	8+900,000	Rampa	596.568	9.0000 o/oo
3	8+920,000	Rampa	596.748	9.0000 o/oo
3	8+940,000	Rampa	596.928	9.0000 o/oo
3	8+960,000	Rampa	597.108	9.0000 o/oo
3	8+980,000	Rampa	597.288	9.0000 o/oo
3	9+000,000	Rampa	597.468	9.0000 o/oo
3	9+020,000	Rampa	597.648	9.0000 o/oo
3	9+040,000	Rampa	597.828	9.0000 o/oo
3	9+060,000	Rampa	598.008	9.0000 o/oo
3	9+080,000	Rampa	598.188	9.0000 o/oo
Fin de proyecto	9+096,742	Rampa	598.339	9.0000 o/oo
3	9+100,000	Rampa	598.368	9.0000 o/oo
3	9+120,000	Rampa	598.548	9.0000 o/oo
3	9+121,648	tg. entrada	598.563	9.0000 o/oo
3	9+140,000	KV 2500	598.796	16.3410 o/oo
3	9+160,000	KV 2500	599.202	24.3410 o/oo
3	9+180,000	KV 2500	599.769	32.3410 o/oo
3	9+186,648	tg. salida	599.993	35.0000 o/oo
3	9+200,000	Rampa	600.460	35.0000 o/oo
3	9+220,000	Rampa	601.160	35.0000 o/oo
3	9+240,000	Rampa	601.860	35.0000 o/oo
3	9+260,000	Rampa	602.560	35.0000 o/oo
3	9+280,000	Rampa	603.260	35.0000 o/oo
3	9+300,000	Rampa	603.960	35.0000 o/oo
3	9+320,000	Rampa	604.660	35.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
3	9+340,000	Rampa	605.360	35.0000 o/oo
3	9+360,000	Rampa	606.060	35.0000 o/oo
3	9+380,000	Rampa	606.760	35.0000 o/oo
3	9+400,000	Rampa	607.460	35.0000 o/oo
3	9+420,000	Rampa	608.160	35.0000 o/oo
3	9+440,000	Rampa	608.860	35.0000 o/oo
3	9+460,000	Rampa	609.560	35.0000 o/oo
3	9+480,000	Rampa	610.260	35.0000 o/oo
3	9+500,000	Rampa	610.960	35.0000 o/oo
3	9+520,000	Rampa	611.660	35.0000 o/oo
3	9+540,000	Rampa	612.360	35.0000 o/oo
3	9+560,000	Rampa	613.060	35.0000 o/oo
3	9+580,000	Rampa	613.760	35.0000 o/oo
3	9+600,000	Rampa	614.460	35.0000 o/oo
3	9+620,000	Rampa	615.160	35.0000 o/oo
3	9+640,000	Rampa	615.860	35.0000 o/oo
3	9+660,000	Rampa	616.560	35.0000 o/oo
3	9+680,000	Rampa	617.260	35.0000 o/oo
3	9+700,000	Rampa	617.960	35.0000 o/oo
3	9+720,000	Rampa	618.660	35.0000 o/oo
3	9+740,000	Rampa	619.360	35.0000 o/oo
3	9+760,000	Rampa	620.060	35.0000 o/oo
3	9+780,000	Rampa	620.760	35.0000 o/oo
3	9+800,000	Rampa	621.460	35.0000 o/oo
3	9+820,000	Rampa	622.160	35.0000 o/oo
3	9+839,998	tg. entrada	622.860	35.0000 o/oo
3	9+840,000	KV -3000	622.860	34.9994 o/oo
3	9+860,000	KV -3000	623.494	28.3327 o/oo
3	9+880,000	KV -3000	623.994	21.6660 o/oo
3	9+900,000	KV -3000	624.360	14.9994 o/oo
3	9+920,000	KV -3000	624.594	8.3327 o/oo
3	9+940,000	KV -3000	624.694	1.6660 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
3	9+944,998	tg. salida	624.698	0.0001 o/oo
3	9+960,000	Rampa	624.698	0.0001 o/oo
3	9+980,000	Rampa	624.698	0.0001 o/oo
3	10+000,000	Rampa	624.698	0.0001 o/oo
3	10+020,000	Rampa	624.698	0.0001 o/oo
3	10+040,000	Rampa	624.698	0.0001 o/oo
3	10+060,000	Rampa	624.698	0.0001 o/oo
3	10+080,000	Rampa	624.698	0.0001 o/oo
3	10+100,000	Rampa	624.698	0.0001 o/oo
3	10+120,000	Rampa	624.698	0.0001 o/oo
3	10+140,000	Rampa	624.698	0.0001 o/oo
3	10+160,000	Rampa	624.698	0.0001 o/oo
3	10+180,000	Rampa	624.698	0.0001 o/oo
3	10+200,000	Rampa	624.698	0.0001 o/oo
3	10+220,000	Rampa	624.698	0.0001 o/oo
3	10+240,000	Rampa	624.698	0.0001 o/oo
3	10+260,000	Rampa	624.698	0.0001 o/oo
3	10+280,000	Rampa	624.698	0.0001 o/oo
3	10+300,000	Rampa	624.698	0.0001 o/oo
3	10+320,000	Rampa	624.698	0.0001 o/oo
3	10+340,000	Rampa	624.698	0.0001 o/oo
3	10+360,000	Rampa	624.698	0.0001 o/oo
3	10+380,000	Rampa	624.698	0.0001 o/oo
3	10+400,000	Rampa	624.698	0.0001 o/oo
3	10+420,000	Rampa	624.698	0.0001 o/oo
3	10+440,000	Rampa	624.698	0.0001 o/oo
3	10+460,000	Rampa	624.698	0.0001 o/oo
3	10+480,000	Rampa	624.698	0.0001 o/oo
3	10+500,000	Rampa	624.698	0.0001 o/oo
3	10+520,000	Rampa	624.698	0.0001 o/oo
3	10+540,000	Rampa	624.698	0.0001 o/oo
3	10+560,000	Rampa	624.698	0.0001 o/oo



EJE	P.K.	TIPO	COTA	PENDIENTE
3	10+580,000	Rampa	624.698	0.0001 o/oo
3	10+589,870	Rampa	624.698	0.0001 o/oo

#### EJE 4. ALTERNATIVA 4.

EJE	PENDIENTE	LONGITUD	PARAMETRO	VÉRTICE		ENTRADA AL ACUERDO		SALIDA DEL ACUERDO		BISECT.	DIF.PEN
	(o/oo)	(m.)	( kv )	PK	Z	PK	Z	PK	Z	(m.)	(o/oo)
4						0,000	650,600				
4	0,000000	48,000	6.000,000	555,448	650,600	531,448	650,600	579,448	650,408	0,048	-0,800
4	-8,000000	83,490	3.300,000	810,394	648,560	768,649	648,894	852,139	647,170	0,264	-2,530
4	-33,300000	156,720	2.400,000	1.019,569	641,595	941,209	644,204	1.097,929	644,102	1,279	6,530
4	32,000000	105,600	3.300,000	1.188,479	647,000	1.135,679	645,310	1.241,279	647,000	0,422	-3,200
4	0,000000	173,250	6.300,000	1.450,888	647,000	1.364,263	647,000	1.537,513	649,382	0,596	2,750
4	27,500000	173,250	6.300,000	1.965,433	661,150	1.878,808	658,768	2.052,058	661,150	0,596	-2,750
4	0,000000	109,890	3.300,000	2.292,512	661,150	2.237,567	661,150	2.347,457	659,320	0,457	-3,330
4	-33,300000	69,930	2.100,000	3.227,948	630,000	3.192,983	631,164	3.262,913	630,000	0,291	3,330
4	0,000000	70,980	2.100,000	3.468,760	630,000	3.433,270	630,000	3.504,250	628,800	0,300	-3,380
4	-33,800000	91,560	4.200,000	3.747,236	620,588	3.701,456	622,135	3.793,016	620,038	0,250	2,180
4	-12,000000	78,000	6.500,000	4.046,196	617,000	4.007,196	617,468	4.085,196	617,000	0,117	1,200
4	0,000000	113,850	3.300,000	4.395,993	617,000	4.339,068	617,000	4.452,918	615,036	0,491	-3,450
4	-34,500000	212,000	8.000,000	4.904,244	599,465	4.798,244	603,122	5.010,244	598,617	0,702	2,650
4	-8,000000	80,000	10.000,000	5.524,911	594,500	5.484,911	594,820	5.564,911	594,500	0,080	0,800
4	0,000000	100,000	10.000,000	5.809,509	594,500	5.759,509	594,500	5.859,509	595,000	0,125	1,000
4	10,000000	100,000	6.250,000	6.125,256	597,657	6.075,256	597,157	6.175,256	598,957	0,200	1,600
4	26,000000	168,000	8.000,000	6.735,759	613,531	6.651,759	611,347	6.819,759	613,951	0,441	-2,100
4	5,000000	172,800	6.000,000	7.164,651	615,675	7.078,251	615,243	7.251,051	618,595	0,622	2,880
4	33,800000	101,400	3.000,000	7.535,212	628,200	7.484,512	626,486	7.585,912	628,200	0,428	-3,380
4	0,000000							9.032,572	628,200		

#### EJE 4. ALTERNATIVA 4.

EJE	P.K.	TIPO	COTA	PENDIENTE
4	0+000,000	Horizontal	650.600	0.0000 o/oo
4	0+020,000	Horizontal	650.600	0.0000 o/oo
4	0+040,000	Horizontal	650.600	0.0000 o/oo
4	0+060,000	Horizontal	650.600	0.0000 o/oo
4	0+080,000	Horizontal	650.600	0.0000 o/oo
4	0+100,000	Horizontal	650.600	0.0000 o/oo
4	0+120,000	Horizontal	650.600	0.0000 o/oo
4	0+140,000	Horizontal	650.600	0.0000 o/oo
4	0+160,000	Horizontal	650.600	0.0000 o/oo
4	0+180,000	Horizontal	650.600	0.0000 o/oo
4	0+200,000	Horizontal	650.600	0.0000 o/oo
4	0+220,000	Horizontal	650.600	0.0000 o/oo
4	0+240,000	Horizontal	650.600	0.0000 o/oo
4	0+260,000	Horizontal	650.600	0.0000 o/oo
4	0+280,000	Horizontal	650.600	0.0000 o/oo
4	0+300,000	Horizontal	650.600	0.0000 o/oo
4	0+320,000	Horizontal	650.600	0.0000 o/oo
4	0+340,000	Horizontal	650.600	0.0000 o/oo
4	0+360,000	Horizontal	650.600	0.0000 o/oo
4	0+380,000	Horizontal	650.600	0.0000 o/oo
4	0+400,000	Horizontal	650.600	0.0000 o/oo
4	0+420,000	Horizontal	650.600	0.0000 o/oo
4	0+440,000	Horizontal	650.600	0.0000 o/oo
4	0+460,000	Horizontal	650.600	0.0000 o/oo
4	0+480,000	Horizontal	650.600	0.0000 o/oo
4	0+500,000	Horizontal	650.600	0.0000 o/oo
4	0+520,000	Horizontal	650.600	0.0000 o/oo
4	0+531,448	tg. entrada	650.600	0.0000 o/oo
4	0+540,000	KV -6000	650.594	-1.4253 o/oo
4	0+560,000	KV -6000	650.532	-4.7587 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
4	0+579,448	tg. salida	650.408	-8.0000 o/oo
4	0+580,000	Pendiente	650.404	-8.0000 o/oo
4	0+600,000	Pendiente	650.244	-8.0000 o/oo
4	0+620,000	Pendiente	650.084	-8.0000 o/oo
4	0+640,000	Pendiente	649.924	-8.0000 o/oo
4	0+660,000	Pendiente	649.764	-8.0000 o/oo
4	0+680,000	Pendiente	649.604	-8.0000 o/oo
4	0+700,000	Pendiente	649.444	-8.0000 o/oo
4	0+720,000	Pendiente	649.284	-8.0000 o/oo
4	0+740,000	Pendiente	649.124	-8.0000 o/oo
4	0+760,000	Pendiente	648.964	-8.0000 o/oo
4	0+768,649	tg. entrada	648.894	-8.0000 o/oo
4	0+780,000	KV -3300	648.784	-11.4397 o/oo
4	0+800,000	KV -3300	648.495	-17.5003 o/oo
4	0+820,000	KV -3300	648.084	-23.5609 o/oo
4	0+840,000	KV -3300	647.552	-29.6215 o/oo
4	0+852,139	tg. salida	647.170	-33.3000 o/oo
4	0+860,000	Pendiente	646.909	-33.3000 o/oo
4	0+880,000	Pendiente	646.243	-33.3000 o/oo
4	0+900,000	Pendiente	645.577	-33.3000 o/oo
4	0+920,000	Pendiente	644.911	-33.3000 o/oo
4	0+940,000	Pendiente	644.245	-33.3000 o/oo
4	0+941,209	tg. entrada	644.204	-33.3000 o/oo
4	0+960,000	KV 2400	643.652	-25.4706 o/oo
4	0+980,000	KV 2400	643.226	-17.1373 o/oo
4	1+000,000	KV 2400	642.967	-8.8039 o/oo
4	1+020,000	KV 2400	642.874	-0.4706 o/oo
4	1+021,129	Punto bajo	642.874	0.0000 o/oo
4	1+040,000	KV 2400	642.948	7.8627 o/oo
4	1+060,000	KV 2400	643.188	16.1961 o/oo
4	1+080,000	KV 2400	643.596	24.5294 o/oo
4	1+097,929	tg. salida	644.102	32.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
4	1+100,000	Rampa	644.169	32.0000 o/oo
4	1+120,000	Rampa	644.809	32.0000 o/oo
4	1+135,679	tg. entrada	645.310	32.0000 o/oo
4	1+140,000	KV -3300	645.446	30.6906 o/oo
4	1+160,000	KV -3300	645.999	24.6300 o/oo
4	1+180,000	KV -3300	646.431	18.5694 o/oo
4	1+200,000	KV -3300	646.742	12.5088 o/oo
4	1+220,000	KV -3300	646.931	6.4482 o/oo
4	1+240,000	KV -3300	647.000	0.3876 o/oo
4	1+241,279	tg. salida	647.000	0.0000 o/oo
4	1+260,000	Horizontal	647.000	0.0000 o/oo
4	1+280,000	Horizontal	647.000	0.0000 o/oo
4	1+300,000	Horizontal	647.000	0.0000 o/oo
4	1+320,000	Horizontal	647.000	0.0000 o/oo
4	1+340,000	Horizontal	647.000	0.0000 o/oo
4	1+360,000	Horizontal	647.000	0.0000 o/oo
4	1+364,263	tg. entrada	647.000	0.0000 o/oo
4	1+380,000	KV 6300	647.020	2.4979 o/oo
4	1+400,000	KV 6300	647.101	5.6725 o/oo
4	1+420,000	KV 6300	647.247	8.8471 o/oo
4	1+440,000	KV 6300	647.455	12.0218 o/oo
4	1+460,000	KV 6300	647.727	15.1964 o/oo
4	1+480,000	KV 6300	648.063	18.3710 o/oo
4	1+500,000	KV 6300	648.462	21.5456 o/oo
4	1+520,000	KV 6300	648.925	24.7202 o/oo
4	1+537,513	tg. salida	649.382	27.5000 o/oo
4	1+540,000	Rampa	649.451	27.5000 o/oo
4	1+560,000	Rampa	650.001	27.5000 o/oo
4	1+580,000	Rampa	650.551	27.5000 o/oo
4	1+600,000	Rampa	651.101	27.5000 o/oo
4	1+620,000	Rampa	651.651	27.5000 o/oo
4	1+640,000	Rampa	652.201	27.5000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
4	1+660,000	Rampa	652.751	27.5000 o/oo
4	1+680,000	Rampa	653.301	27.5000 o/oo
4	1+700,000	Rampa	653.851	27.5000 o/oo
4	1+720,000	Rampa	654.401	27.5000 o/oo
4	1+740,000	Rampa	654.951	27.5000 o/oo
4	1+760,000	Rampa	655.501	27.5000 o/oo
4	1+780,000	Rampa	656.051	27.5000 o/oo
4	1+800,000	Rampa	656.601	27.5000 o/oo
4	1+820,000	Rampa	657.151	27.5000 o/oo
4	1+840,000	Rampa	657.701	27.5000 o/oo
4	1+860,000	Rampa	658.251	27.5000 o/oo
4	1+878,808	tg. entrada	658.768	27.5000 o/oo
4	1+880,000	KV -6300	658.800	27.3109 o/oo
4	1+900,000	KV -6300	659.315	24.1363 o/oo
4	1+920,000	KV -6300	659.766	20.9617 o/oo
4	1+940,000	KV -6300	660.153	17.7870 o/oo
4	1+960,000	KV -6300	660.477	14.6124 o/oo
4	1+980,000	KV -6300	660.738	11.4378 o/oo
4	2+000,000	KV -6300	660.935	8.2632 o/oo
4	2+020,000	KV -6300	661.068	5.0886 o/oo
4	2+040,000	KV -6300	661.138	1.9140 o/oo
4	2+052,058	tg. salida	661.150	0.0000 o/oo
4	2+060,000	Horizontal	661.150	0.0000 o/oo
4	2+080,000	Horizontal	661.150	0.0000 o/oo
4	2+100,000	Horizontal	661.150	0.0000 o/oo
4	2+120,000	Horizontal	661.150	0.0000 o/oo
4	2+140,000	Horizontal	661.150	0.0000 o/oo
4	2+160,000	Horizontal	661.150	0.0000 o/oo
4	2+180,000	Horizontal	661.150	0.0000 o/oo
4	2+200,000	Horizontal	661.150	0.0000 o/oo
4	2+220,000	Horizontal	661.150	0.0000 o/oo
4	2+237,567	tg. entrada	661.150	0.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
4	2+240,000	KV -3300	661.149	-0.7372 o/oo
4	2+260,000	KV -3300	661.074	-6.7978 o/oo
4	2+280,000	KV -3300	660.877	-12.8584 o/oo
4	2+300,000	KV -3300	660.559	-18.9190 o/oo
4	2+320,000	KV -3300	660.120	-24.9796 o/oo
4	2+340,000	KV -3300	659.560	-31.0403 o/oo
4	2+347,457	tg. salida	659.320	-33.3000 o/oo
4	2+360,000	Pendiente	658.903	-33.3000 o/oo
4	2+380,000	Pendiente	658.237	-33.3000 o/oo
4	2+400,000	Pendiente	657.571	-33.3000 o/oo
4	2+420,000	Pendiente	656.905	-33.3000 o/oo
4	2+440,000	Pendiente	656.239	-33.3000 o/oo
4	2+460,000	Pendiente	655.573	-33.3000 o/oo
4	2+480,000	Pendiente	654.907	-33.3000 o/oo
4	2+500,000	Pendiente	654.241	-33.3000 o/oo
4	2+520,000	Pendiente	653.575	-33.3000 o/oo
4	2+540,000	Pendiente	652.909	-33.3000 o/oo
4	2+560,000	Pendiente	652.243	-33.3000 o/oo
4	2+580,000	Pendiente	651.577	-33.3000 o/oo
4	2+600,000	Pendiente	650.911	-33.3000 o/oo
4	2+620,000	Pendiente	650.245	-33.3000 o/oo
4	2+640,000	Pendiente	649.579	-33.3000 o/oo
4	2+660,000	Pendiente	648.913	-33.3000 o/oo
4	2+680,000	Pendiente	648.247	-33.3000 o/oo
4	2+700,000	Pendiente	647.581	-33.3000 o/oo
4	2+720,000	Pendiente	646.915	-33.3000 o/oo
4	2+740,000	Pendiente	646.249	-33.3000 o/oo
4	2+760,000	Pendiente	645.583	-33.3000 o/oo
4	2+780,000	Pendiente	644.917	-33.3000 o/oo
4	2+800,000	Pendiente	644.251	-33.3000 o/oo
4	2+820,000	Pendiente	643.585	-33.3000 o/oo
4	2+840,000	Pendiente	642.919	-33.3000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
4	2+860,000	Pendiente	642.253	-33.3000 o/oo
4	2+880,000	Pendiente	641.587	-33.3000 o/oo
4	2+900,000	Pendiente	640.921	-33.3000 o/oo
4	2+920,000	Pendiente	640.255	-33.3000 o/oo
4	2+940,000	Pendiente	639.589	-33.3000 o/oo
4	2+960,000	Pendiente	638.923	-33.3000 o/oo
4	2+980,000	Pendiente	638.257	-33.3000 o/oo
4	3+000,000	Pendiente	637.591	-33.3000 o/oo
4	3+020,000	Pendiente	636.925	-33.3000 o/oo
4	3+040,000	Pendiente	636.259	-33.3000 o/oo
4	3+060,000	Pendiente	635.593	-33.3000 o/oo
4	3+080,000	Pendiente	634.927	-33.3000 o/oo
4	3+100,000	Pendiente	634.261	-33.3000 o/oo
4	3+120,000	Pendiente	633.595	-33.3000 o/oo
4	3+140,000	Pendiente	632.929	-33.3000 o/oo
4	3+160,000	Pendiente	632.263	-33.3000 o/oo
4	3+180,000	Pendiente	631.597	-33.3000 o/oo
4	3+192,983	tg. entrada	631.164	-33.3000 o/oo
4	3+200,000	KV 2100	630.942	-29.9584 o/oo
4	3+220,000	KV 2100	630.438	-20.4346 o/oo
4	3+240,000	KV 2100	630.125	-10.9108 o/oo
4	3+260,000	KV 2100	630.002	-1.3870 o/oo
4	3+262,913	tg. salida	630.000	0.0000 o/oo
4	3+280,000	Horizontal	630.000	0.0000 o/oo
4	3+300,000	Horizontal	630.000	0.0000 o/oo
4	3+320,000	Horizontal	630.000	0.0000 o/oo
4	3+340,000	Horizontal	630.000	0.0000 o/oo
4	3+360,000	Horizontal	630.000	0.0000 o/oo
4	3+380,000	Horizontal	630.000	0.0000 o/oo
4	3+400,000	Horizontal	630.000	0.0000 o/oo
4	3+420,000	Horizontal	630.000	0.0000 o/oo
4	3+433,270	tg. entrada	630.000	0.0000 o/oo



EJE	P.K.	TIPO	COTA	PENDIENTE
4	3+440,000	KV -2100	629.989	-3.2046 o/oo
4	3+460,000	KV -2100	629.830	-12.7284 o/oo
4	3+480,000	KV -2100	629.480	-22.2522 o/oo
4	3+500,000	KV -2100	628.940	-31.7760 o/oo
4	3+504,250	tg. salida	628.800	-33.8000 o/oo
4	3+520,000	Pendiente	628.268	-33.8000 o/oo
4	3+540,000	Pendiente	627.592	-33.8000 o/oo
4	3+560,000	Pendiente	626.916	-33.8000 o/oo
4	3+580,000	Pendiente	626.240	-33.8000 o/oo
4	3+600,000	Pendiente	625.564	-33.8000 o/oo
4	3+620,000	Pendiente	624.888	-33.8000 o/oo
4	3+640,000	Pendiente	624.212	-33.8000 o/oo
4	3+660,000	Pendiente	623.536	-33.8000 o/oo
4	3+680,000	Pendiente	622.860	-33.8000 o/oo
4	3+700,000	Pendiente	622.184	-33.8000 o/oo
4	3+701,456	tg. entrada	622.135	-33.8000 o/oo
4	3+720,000	KV 4200	621.549	-29.3849 o/oo
4	3+740,000	KV 4200	621.009	-24.6229 o/oo
4	3+760,000	KV 4200	620.564	-19.8610 o/oo
4	3+780,000	KV 4200	620.215	-15.0991 o/oo
4	3+793,016	tg. salida	620.038	-12.0000 o/oo
4	3+800,000	Pendiente	619.954	-12.0000 o/oo
4	3+820,000	Pendiente	619.714	-12.0000 o/oo
4	3+840,000	Pendiente	619.474	-12.0000 o/oo
4	3+860,000	Pendiente	619.234	-12.0000 o/oo
4	3+880,000	Pendiente	618.994	-12.0000 o/oo
4	3+900,000	Pendiente	618.754	-12.0000 o/oo
4	3+920,000	Pendiente	618.514	-12.0000 o/oo
4	3+940,000	Pendiente	618.274	-12.0000 o/oo
4	3+960,000	Pendiente	618.034	-12.0000 o/oo
4	3+980,000	Pendiente	617.794	-12.0000 o/oo
4	4+000,000	Pendiente	617.554	-12.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
4	4+007,196	tg. entrada	617.468	-12.0000 o/oo
4	4+020,000	KV 6500	617.327	-10.0301 o/oo
4	4+040,000	KV 6500	617.157	-6.9532 o/oo
4	4+060,000	KV 6500	617.049	-3.8763 o/oo
4	4+080,000	KV 6500	617.002	-0.7993 o/oo
4	4+085,196	tg. salida	617.000	0.0000 o/oo
4	4+100,000	Horizontal	617.000	0.0000 o/oo
4	4+120,000	Horizontal	617.000	0.0000 o/oo
4	4+140,000	Horizontal	617.000	0.0000 o/oo
4	4+160,000	Horizontal	617.000	0.0000 o/oo
4	4+180,000	Horizontal	617.000	0.0000 o/oo
4	4+200,000	Horizontal	617.000	0.0000 o/oo
4	4+220,000	Horizontal	617.000	0.0000 o/oo
4	4+240,000	Horizontal	617.000	0.0000 o/oo
4	4+260,000	Horizontal	617.000	0.0000 o/oo
4	4+280,000	Horizontal	617.000	0.0000 o/oo
4	4+300,000	Horizontal	617.000	0.0000 o/oo
4	4+320,000	Horizontal	617.000	0.0000 o/oo
4	4+339,068	tg. entrada	617.000	0.0000 o/oo
4	4+340,000	KV -3300	617.000	-0.2825 o/oo
4	4+360,000	KV -3300	616.934	-6.3432 o/oo
4	4+380,000	KV -3300	616.746	-12.4038 o/oo
4	4+400,000	KV -3300	616.437	-18.4644 o/oo
4	4+420,000	KV -3300	616.008	-24.5250 o/oo
4	4+440,000	KV -3300	615.456	-30.5856 o/oo
4	4+452,918	tg. salida	615.036	-34.5000 o/oo
4	4+460,000	Pendiente	614.792	-34.5000 o/oo
4	4+480,000	Pendiente	614.102	-34.5000 o/oo
4	4+500,000	Pendiente	613.412	-34.5000 o/oo
4	4+520,000	Pendiente	612.722	-34.5000 o/oo
4	4+540,000	Pendiente	612.032	-34.5000 o/oo
4	4+560,000	Pendiente	611.342	-34.5000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
4	4+580,000	Pendiente	610.652	-34.5000 o/oo
4	4+600,000	Pendiente	609.962	-34.5000 o/oo
4	4+620,000	Pendiente	609.272	-34.5000 o/oo
4	4+640,000	Pendiente	608.582	-34.5000 o/oo
4	4+660,000	Pendiente	607.892	-34.5000 o/oo
4	4+680,000	Pendiente	607.202	-34.5000 o/oo
4	4+700,000	Pendiente	606.512	-34.5000 o/oo
4	4+720,000	Pendiente	605.822	-34.5000 o/oo
4	4+740,000	Pendiente	605.132	-34.5000 o/oo
4	4+760,000	Pendiente	604.442	-34.5000 o/oo
4	4+780,000	Pendiente	603.752	-34.5000 o/oo
4	4+798,244	tg. entrada	603.122	-34.5000 o/oo
4	4+800,000	KV 8000	603.062	-34.2805 o/oo
4	4+820,000	KV 8000	602.401	-31.7805 o/oo
4	4+840,000	KV 8000	601.791	-29.2805 o/oo
4	4+860,000	KV 8000	601.230	-26.7805 o/oo
4	4+880,000	KV 8000	600.720	-24.2805 o/oo
4	4+900,000	KV 8000	600.259	-21.7805 o/oo
4	4+920,000	KV 8000	599.848	-19.2805 o/oo
4	4+940,000	KV 8000	599.488	-16.7805 o/oo
4	4+960,000	KV 8000	599.177	-14.2805 o/oo
4	4+980,000	KV 8000	598.916	-11.7805 o/oo
4	5+000,000	KV 8000	598.706	-9.2805 o/oo
4	5+010,244	tg. salida	598.617	-8.0000 o/oo
4	5+020,000	Pendiente	598.539	-8.0000 o/oo
4	5+040,000	Pendiente	598.379	-8.0000 o/oo
4	5+060,000	Pendiente	598.219	-8.0000 o/oo
4	5+080,000	Pendiente	598.059	-8.0000 o/oo
4	5+100,000	Pendiente	597.899	-8.0000 o/oo
4	5+120,000	Pendiente	597.739	-8.0000 o/oo
4	5+140,000	Pendiente	597.579	-8.0000 o/oo
4	5+160,000	Pendiente	597.419	-8.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
4	5+180,000	Pendiente	597.259	-8.0000 o/oo
4	5+200,000	Pendiente	597.099	-8.0000 o/oo
4	5+220,000	Pendiente	596.939	-8.0000 o/oo
4	5+240,000	Pendiente	596.779	-8.0000 o/oo
4	5+260,000	Pendiente	596.619	-8.0000 o/oo
4	5+280,000	Pendiente	596.459	-8.0000 o/oo
4	5+300,000	Pendiente	596.299	-8.0000 o/oo
4	5+320,000	Pendiente	596.139	-8.0000 o/oo
4	5+340,000	Pendiente	595.979	-8.0000 o/oo
4	5+360,000	Pendiente	595.819	-8.0000 o/oo
4	5+380,000	Pendiente	595.659	-8.0000 o/oo
4	5+400,000	Pendiente	595.499	-8.0000 o/oo
4	5+420,000	Pendiente	595.339	-8.0000 o/oo
4	5+440,000	Pendiente	595.179	-8.0000 o/oo
4	5+460,000	Pendiente	595.019	-8.0000 o/oo
4	5+480,000	Pendiente	594.859	-8.0000 o/oo
4	5+484,911	tg. entrada	594.820	-8.0000 o/oo
4	5+500,000	KV 10000	594.711	-6.4911 o/oo
4	5+520,000	KV 10000	594.601	-4.4911 o/oo
4	5+540,000	KV 10000	594.531	-2.4911 o/oo
4	5+560,000	KV 10000	594.501	-0.4911 o/oo
4	5+564,911	tg. salida	594.500	0.0000 o/oo
4	5+580,000	Horizontal	594.500	0.0000 o/oo
4	5+600,000	Horizontal	594.500	0.0000 o/oo
4	5+620,000	Horizontal	594.500	0.0000 o/oo
4	5+640,000	Horizontal	594.500	0.0000 o/oo
4	5+660,000	Horizontal	594.500	0.0000 o/oo
4	5+680,000	Horizontal	594.500	0.0000 o/oo
4	5+700,000	Horizontal	594.500	0.0000 o/oo
4	5+720,000	Horizontal	594.500	0.0000 o/oo
4	5+740,000	Horizontal	594.500	0.0000 o/oo
4	5+759,509	tg. entrada	594.500	0.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
4	5+760,000	KV 10000	594.500	0.0491 o/oo
4	5+780,000	KV 10000	594.521	2.0491 o/oo
4	5+800,000	KV 10000	594.582	4.0491 o/oo
4	5+820,000	KV 10000	594.683	6.0491 o/oo
4	5+840,000	KV 10000	594.824	8.0491 o/oo
4	5+859,509	tg. salida	595.000	10.0000 o/oo
4	5+860,000	Rampa	595.005	10.0000 o/oo
4	5+880,000	Rampa	595.205	10.0000 o/oo
4	5+900,000	Rampa	595.405	10.0000 o/oo
4	5+920,000	Rampa	595.605	10.0000 o/oo
4	5+940,000	Rampa	595.805	10.0000 o/oo
4	5+960,000	Rampa	596.005	10.0000 o/oo
4	5+980,000	Rampa	596.205	10.0000 o/oo
4	6+000,000	Rampa	596.405	10.0000 o/oo
4	6+020,000	Rampa	596.605	10.0000 o/oo
4	6+040,000	Rampa	596.805	10.0000 o/oo
4	6+060,000	Rampa	597.005	10.0000 o/oo
4	6+075,256	tg. entrada	597.157	10.0000 o/oo
4	6+080,000	KV 6250	597.207	10.7591 o/oo
4	6+100,000	KV 6250	597.454	13.9591 o/oo
4	6+120,000	KV 6250	597.765	17.1591 o/oo
4	6+140,000	KV 6250	598.140	20.3591 o/oo
4	6+160,000	KV 6250	598.579	23.5591 o/oo
4	6+175,256	tg. salida	598.957	26.0000 o/oo
4	6+180,000	Rampa	599.081	26.0000 o/oo
4	6+200,000	Rampa	599.601	26.0000 o/oo
4	6+220,000	Rampa	600.121	26.0000 o/oo
4	6+240,000	Rampa	600.641	26.0000 o/oo
4	6+260,000	Rampa	601.161	26.0000 o/oo
4	6+280,000	Rampa	601.681	26.0000 o/oo
4	6+300,000	Rampa	602.201	26.0000 o/oo
4	6+320,000	Rampa	602.721	26.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
4	6+340,000	Rampa	603.241	26.0000 o/oo
4	6+360,000	Rampa	603.761	26.0000 o/oo
4	6+380,000	Rampa	604.281	26.0000 o/oo
4	6+400,000	Rampa	604.801	26.0000 o/oo
4	6+420,000	Rampa	605.321	26.0000 o/oo
4	6+440,000	Rampa	605.841	26.0000 o/oo
4	6+460,000	Rampa	606.361	26.0000 o/oo
4	6+480,000	Rampa	606.881	26.0000 o/oo
4	6+500,000	Rampa	607.401	26.0000 o/oo
4	6+520,000	Rampa	607.921	26.0000 o/oo
4	6+540,000	Rampa	608.441	26.0000 o/oo
4	6+560,000	Rampa	608.961	26.0000 o/oo
4	6+580,000	Rampa	609.481	26.0000 o/oo
4	6+600,000	Rampa	610.001	26.0000 o/oo
4	6+620,000	Rampa	610.521	26.0000 o/oo
4	6+640,000	Rampa	611.041	26.0000 o/oo
4	6+651,759	tg. entrada	611.347	26.0000 o/oo
4	6+660,000	KV -8000	611.557	24.9699 o/oo
4	6+680,000	KV -8000	612.031	22.4699 o/oo
4	6+700,000	KV -8000	612.455	19.9699 o/oo
4	6+720,000	KV -8000	612.830	17.4699 o/oo
4	6+740,000	KV -8000	613.154	14.9699 o/oo
4	6+760,000	KV -8000	613.429	12.4699 o/oo
4	6+780,000	KV -8000	613.653	9.9699 o/oo
4	6+800,000	KV -8000	613.827	7.4699 o/oo
4	6+819,759	tg. salida	613.951	5.0000 o/oo
4	6+820,000	Rampa	613.952	5.0000 o/oo
4	6+840,000	Rampa	614.052	5.0000 o/oo
4	6+860,000	Rampa	614.152	5.0000 o/oo
4	6+880,000	Rampa	614.252	5.0000 o/oo
4	6+900,000	Rampa	614.352	5.0000 o/oo
4	6+920,000	Rampa	614.452	5.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
4	6+940,000	Rampa	614.552	5.0000 o/oo
4	6+960,000	Rampa	614.652	5.0000 o/oo
4	6+980,000	Rampa	614.752	5.0000 o/oo
4	7+000,000	Rampa	614.852	5.0000 o/oo
4	7+020,000	Rampa	614.952	5.0000 o/oo
4	7+040,000	Rampa	615.052	5.0000 o/oo
4	7+060,000	Rampa	615.152	5.0000 o/oo
4	7+078,251	tg. entrada	615.243	5.0000 o/oo
4	7+080,000	KV 6000	615.252	5.2915 o/oo
4	7+100,000	KV 6000	615.391	8.6248 o/oo
4	7+120,000	KV 6000	615.597	11.9582 o/oo
4	7+140,000	KV 6000	615.870	15.2915 o/oo
4	7+160,000	KV 6000	616.209	18.6248 o/oo
4	7+180,000	KV 6000	616.615	21.9582 o/oo
4	7+200,000	KV 6000	617.087	25.2915 o/oo
4	7+220,000	KV 6000	617.626	28.6248 o/oo
4	7+240,000	KV 6000	618.232	31.9582 o/oo
4	7+251,051	tg. salida	618.595	33.8000 o/oo
4	7+260,000	Rampa	618.898	33.8000 o/oo
4	7+280,000	Rampa	619.574	33.8000 o/oo
4	7+300,000	Rampa	620.250	33.8000 o/oo
4	7+320,000	Rampa	620.926	33.8000 o/oo
4	7+340,000	Rampa	621.602	33.8000 o/oo
4	7+360,000	Rampa	622.278	33.8000 o/oo
4	7+380,000	Rampa	622.954	33.8000 o/oo
4	7+400,000	Rampa	623.630	33.8000 o/oo
4	7+420,000	Rampa	624.306	33.8000 o/oo
4	7+440,000	Rampa	624.982	33.8000 o/oo
4	7+460,000	Rampa	625.658	33.8000 o/oo
4	7+480,000	Rampa	626.334	33.8000 o/oo
4	7+484,512	tg. entrada	626.486	33.8000 o/oo
4	7+500,000	KV -3000	626.970	28.6375 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
4	7+520,000	KV -3000	627.476	21.9708 o/oo
4	7+540,000	KV -3000	627.849	15.3041 o/oo
4	7+560,000	KV -3000	628.088	8.6375 o/oo
4	7+580,000	KV -3000	628.194	1.9708 o/oo
4	7+585,912	tg. salida	628.200	0.0000 o/oo
4	7+600,000	Horizontal	628.200	0.0000 o/oo
4	7+620,000	Horizontal	628.200	0.0000 o/oo
4	7+640,000	Horizontal	628.200	0.0000 o/oo
4	7+660,000	Horizontal	628.200	0.0000 o/oo
4	7+680,000	Horizontal	628.200	0.0000 o/oo
4	7+700,000	Horizontal	628.200	0.0000 o/oo
4	7+720,000	Horizontal	628.200	0.0000 o/oo
4	7+740,000	Horizontal	628.200	0.0000 o/oo
4	7+760,000	Horizontal	628.200	0.0000 o/oo
4	7+780,000	Horizontal	628.200	0.0000 o/oo
4	7+800,000	Horizontal	628.200	0.0000 o/oo
4	7+820,000	Horizontal	628.200	0.0000 o/oo
4	7+840,000	Horizontal	628.200	0.0000 o/oo
4	7+860,000	Horizontal	628.200	0.0000 o/oo
4	7+880,000	Horizontal	628.200	0.0000 o/oo
4	7+900,000	Horizontal	628.200	0.0000 o/oo
4	7+920,000	Horizontal	628.200	0.0000 o/oo
4	7+940,000	Horizontal	628.200	0.0000 o/oo
4	7+960,000	Horizontal	628.200	0.0000 o/oo
4	7+980,000	Horizontal	628.200	0.0000 o/oo
4	8+000,000	Horizontal	628.200	0.0000 o/oo
4	8+020,000	Horizontal	628.200	0.0000 o/oo
4	8+040,000	Horizontal	628.200	0.0000 o/oo
4	8+060,000	Horizontal	628.200	0.0000 o/oo
4	8+080,000	Horizontal	628.200	0.0000 o/oo
4	8+100,000	Horizontal	628.200	0.0000 o/oo
4	8+120,000	Horizontal	628.200	0.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
4	8+140,000	Horizontal	628.200	0.0000 o/oo
4	8+160,000	Horizontal	628.200	0.0000 o/oo
4	8+180,000	Horizontal	628.200	0.0000 o/oo
4	8+200,000	Horizontal	628.200	0.0000 o/oo
4	8+220,000	Horizontal	628.200	0.0000 o/oo
4	8+240,000	Horizontal	628.200	0.0000 o/oo
4	8+260,000	Horizontal	628.200	0.0000 o/oo
4	8+280,000	Horizontal	628.200	0.0000 o/oo
4	8+300,000	Horizontal	628.200	0.0000 o/oo
4	8+320,000	Horizontal	628.200	0.0000 o/oo
4	8+340,000	Horizontal	628.200	0.0000 o/oo
4	8+349,654	Horizontal	628.200	0.0000 o/oo



EJE 5. CONEXIÓN LÍNEA 11 DE METRO CON LÍNEA 8 DE METRO PARA LAS ALTERNATIVAS 1 Y 2.

EJE	PENDIENTE	LONGITUD	PARAMETRO	VÉRTICE		ENTRADA AL ACUERDO		SALIDA DEL ACUERDO		BISECT.	DIF.PEN
	(o/oo)	(m.)	( kv )	PK	Z	PK	Z	PK	Z	(m.)	(o/oo)
5						-12,435	644,824				
5	-5,000000	56,000	1.400,000	57,095	644,476	29,095	644,616	85,095	645,456	0,280	4,000
5	35,000000	61,880	1.400,000	389,654	656,116	358,714	655,033	420,594	655,831	0,342	-4,420
5	-9,200000							442,511	655,629		

EJE	P.K.	TIPO	COTA	PENDIENTE
5	0+000,000	Pendiente	644.762	-5.0000 o/oo
5	0+020,000	Pendiente	644.662	-5.0000 o/oo
5	0+029,095	tg. entrada	644.616	-5.0000 o/oo
5	0+036,095	Punto bajo	644.599	0.0000 o/oo
5	0+040,000	KV 1400	644.604	2.7896 o/oo
5	0+060,000	KV 1400	644.803	17.0753 o/oo
5	0+080,000	KV 1400	645.287	31.3611 o/oo
5	0+085,095	tg. salida	645.456	35.0000 o/oo
5	0+100,000	Rampa	645.978	35.0000 o/oo
5	0+120,000	Rampa	646.678	35.0000 o/oo
5	0+140,000	Rampa	647.378	35.0000 o/oo
5	0+160,000	Rampa	648.078	35.0000 o/oo
5	0+180,000	Rampa	648.778	35.0000 o/oo
5	0+200,000	Rampa	649.478	35.0000 o/oo
5	0+220,000	Rampa	650.178	35.0000 o/oo
5	0+240,000	Rampa	650.878	35.0000 o/oo
5	0+260,000	Rampa	651.578	35.0000 o/oo
5	0+280,000	Rampa	652.278	35.0000 o/oo
5	0+300,000	Rampa	652.978	35.0000 o/oo
5	0+320,000	Rampa	653.678	35.0000 o/oo
5	0+340,000	Rampa	654.378	35.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
5	0+358,714	tg. entrada	655.033	35.0000 o/oo
5	0+360,000	KV -1400	655.077	34.0816 o/oo
5	0+380,000	KV -1400	655.616	19.7959 o/oo
5	0+400,000	KV -1400	655.869	5.5102 o/oo
5	0+407,714	Punto alto	655.890	0.0000 o/oo
5	0+420,000	KV -1400	655.836	-8.7755 o/oo
5	0+420,594	tg. salida	655.831	-9.2000 o/oo
5	0+440,000	Pendiente	655.652	-9.2000 o/oo
5	0+442,511	Pendiente	655.629	-9.2000 o/oo

EJE 6. CONEXIÓN LÍNEA 11 DE METRO CON LÍNEA 8 DE METRO PARA LAS ALTERNATIVAS 3 Y 4.

EJE	PENDIENTE	LONGITUD	PARAMETRO	VÉRTICE		ENTRADA AL ACUERDO		SALIDA DEL ACUERDO		BISECT.	DIF.PEN
	(o/oo)	(m.)	( kv )	PK	Z	PK	Z	PK	Z	(m.)	(o/oo)
6						-1,157	649,058				
6	-8,000000	60,200	1.400,000	46,600	648,676	16,500	648,917	76,700	649,729	0,324	4,300
6	35,000000	61,880	1.400,000	257,239	656,048	226,299	654,965	288,179	655,764	0,342	-4,420
6	-9,200000							350,233	655,193		

EJE	P.K.	TIPO	COTA	PENDIENTE
6	0+000,000	Pendiente	649.049	-8.0000 o/oo
6	0+016,500	tg. entrada	648.917	-8.0000 o/oo
6	0+020,000	KV 1400	648.893	-5.5001 o/oo
6	0+027,700	Punto bajo	648.872	0.0000 o/oo
6	0+040,000	KV 1400	648.926	8.7856 o/oo
6	0+060,000	KV 1400	649.245	23.0713 o/oo
6	0+076,700	tg. salida	649.729	35.0000 o/oo
6	0+080,000	Rampa	649.845	35.0000 o/oo
6	0+100,000	Rampa	650.545	35.0000 o/oo
6	0+120,000	Rampa	651.245	35.0000 o/oo
6	0+140,000	Rampa	651.945	35.0000 o/oo
6	0+160,000	Rampa	652.645	35.0000 o/oo
6	0+180,000	Rampa	653.345	35.0000 o/oo
6	0+200,000	Rampa	654.045	35.0000 o/oo
6	0+220,000	Rampa	654.745	35.0000 o/oo
6	0+226,299	tg. entrada	654.965	35.0000 o/oo
6	0+240,000	KV -1400	655.378	25.2132 o/oo
6	0+260,000	KV -1400	655.739	10.9275 o/oo
6	0+275,299	Punto alto	655.823	0.0000 o/oo
6	0+280,000	KV -1400	655.815	-3.3582 o/oo
6	0+288,179	tg. salida	655.764	-9.2000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
6	0+300,000	Pendiente	655.655	-9.2000 o/oo
6	0+302,759	Pendiente	655.629	-9.2000 o/oo

**EJE 7. RAMAL A COCHERAS PARA LAS ALTERNATIVAS 2 Y 4.**

EJE	PENDIENTE	LONGITUD	PARAMETRO	VÉRTICE		ENTRADA AL ACUERDO		SALIDA DEL ACUERDO		BISECT.	DIF.PEN
	(o/oo)	(m.)	( kv )	PK	Z	PK	Z	PK	Z	(m.)	(o/oo)
7						-13,274	617,000				
7	-0,001000	39,992	8.000,000	52,691	617,000	32,695	617,000	72,687	616,900	0,025	-0,500
7	-5,000000	90,000	3.000,000	330,096	615,613	285,096	615,838	375,096	614,038	0,338	-3,000
7	-35,000000	83,750	1.250,000	583,484	606,744	541,609	608,210	625,359	608,084	0,701	6,700
7	32,000000	47,998	1.500,000	703,969	610,600	679,969	609,832	727,968	610,600	0,192	-3,200
7	0,001000	69,998	2.000,000	1.135,063	610,600	1.100,064	610,600	1.170,062	611,825	0,306	3,500
7	35,000000	69,998	2.000,000	1.500,149	623,378	1.465,150	622,153	1.535,148	623,378	0,306	-3,500
7	0,001000	70,002	2.000,000	2.247,317	623,379	2.212,316	623,379	2.282,318	622,154	0,306	-3,500
7	-35,000000	69,998	2.000,000	2.804,512	603,877	2.769,513	605,102	2.839,511	603,877	0,306	3,500
7	-0,001000							2.948,693	603,877		

EJE	P.K.	TIPO	COTA	PENDIENTE
7	0+028,630	Pendiente	617.000	-0.0010 o/oo
7	0+032,695	tg. entrada	617.000	-0.0010 o/oo
7	0+040,000	KV -8000	616.997	-0.9141 o/oo
7	0+060,000	KV -8000	616.953	-3.4141 o/oo
7	0+072,687	tg. salida	616.900	-5.0000 o/oo
7	0+080,000	Pendiente	616.863	-5.0000 o/oo
7	0+100,000	Pendiente	616.763	-5.0000 o/oo
7	0+120,000	Pendiente	616.663	-5.0000 o/oo
7	0+140,000	Pendiente	616.563	-5.0000 o/oo
7	0+160,000	Pendiente	616.463	-5.0000 o/oo
7	0+180,000	Pendiente	616.363	-5.0000 o/oo
7	0+200,000	Pendiente	616.263	-5.0000 o/oo
7	0+220,000	Pendiente	616.163	-5.0000 o/oo
7	0+240,000	Pendiente	616.063	-5.0000 o/oo
7	0+260,000	Pendiente	615.963	-5.0000 o/oo
7	0+280,000	Pendiente	615.863	-5.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
7	0+285,096	tg. entrada	615.838	-5.0000 o/oo
7	0+300,000	KV -3000	615.726	-9.9681 o/oo
7	0+320,000	KV -3000	615.460	-16.6348 o/oo
7	0+340,000	KV -3000	615.061	-23.3014 o/oo
7	0+360,000	KV -3000	614.528	-29.9681 o/oo
7	0+375,096	tg. salida	614.038	-35.0000 o/oo
7	0+380,000	Pendiente	613.866	-35.0000 o/oo
7	0+400,000	Pendiente	613.166	-35.0000 o/oo
<b>Fin de proyecto</b>	0+415,000	<b>Pendiente</b>	<b>613.691</b>	<b>-35.0000 o/oo</b>
7	0+420,000	Pendiente	612.466	-35.0000 o/oo
7	0+440,000	Pendiente	611.766	-35.0000 o/oo
7	0+460,000	Pendiente	611.066	-35.0000 o/oo
7	0+480,000	Pendiente	610.366	-35.0000 o/oo
7	0+500,000	Pendiente	609.666	-35.0000 o/oo
7	0+520,000	Pendiente	608.966	-35.0000 o/oo
7	0+540,000	Pendiente	608.266	-35.0000 o/oo
7	0+541,609	tg. entrada	608.210	-35.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
7	0+560,000	KV 1250	607.702	-20.2869 o/oo
7	0+580,000	KV 1250	607.456	-4.2869 o/oo
7	0+585,359	Punto bajo	607.444	0.0000 o/oo
7	0+600,000	KV 1250	607.530	11.7131 o/oo
7	0+620,000	KV 1250	607.924	27.7131 o/oo
7	0+625,359	tg. salida	608.084	32.0000 o/oo
7	0+640,000	Rampa	608.553	32.0000 o/oo
7	0+660,000	Rampa	609.193	32.0000 o/oo
7	0+679,969	tg. entrada	609.832	32.0000 o/oo
7	0+680,000	KV -1500	609.833	31.9797 o/oo
7	0+700,000	KV -1500	610.339	18.6463 o/oo
7	0+720,000	KV -1500	610.579	5.3130 o/oo
7	0+727,968	tg. salida	610.600	0.0010 o/oo
7	0+740,000	Rampa	610.600	0.0010 o/oo
7	0+760,000	Rampa	610.600	0.0010 o/oo
7	0+780,000	Rampa	610.600	0.0010 o/oo
7	0+800,000	Rampa	610.600	0.0010 o/oo
7	0+820,000	Rampa	610.600	0.0010 o/oo
7	0+840,000	Rampa	610.600	0.0010 o/oo
7	0+860,000	Rampa	610.600	0.0010 o/oo
7	0+880,000	Rampa	610.600	0.0010 o/oo
7	0+900,000	Rampa	610.600	0.0010 o/oo
7	0+920,000	Rampa	610.600	0.0010 o/oo
7	0+940,000	Rampa	610.600	0.0010 o/oo
7	0+960,000	Rampa	610.600	0.0010 o/oo
7	0+980,000	Rampa	610.600	0.0010 o/oo
7	1+000,000	Rampa	610.600	0.0010 o/oo
7	1+020,000	Rampa	610.600	0.0010 o/oo
7	1+040,000	Rampa	610.600	0.0010 o/oo
7	1+060,000	Rampa	610.600	0.0010 o/oo
7	1+080,000	Rampa	610.600	0.0010 o/oo
7	1+100,000	Rampa	610.600	0.0010 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
7	1+100,064	tg. entrada	610.600	0.0010 o/oo
7	1+120,000	KV 2000	610.700	9.9692 o/oo
7	1+140,000	KV 2000	610.999	19.9692 o/oo
7	1+160,000	KV 2000	611.498	29.9692 o/oo
7	1+170,062	tg. salida	611.825	35.0000 o/oo
7	1+180,000	Rampa	612.173	35.0000 o/oo
7	1+200,000	Rampa	612.873	35.0000 o/oo
7	1+220,000	Rampa	613.573	35.0000 o/oo
7	1+240,000	Rampa	614.273	35.0000 o/oo
7	1+260,000	Rampa	614.973	35.0000 o/oo
7	1+280,000	Rampa	615.673	35.0000 o/oo
7	1+300,000	Rampa	616.373	35.0000 o/oo
7	1+320,000	Rampa	617.073	35.0000 o/oo
7	1+340,000	Rampa	617.773	35.0000 o/oo
7	1+360,000	Rampa	618.473	35.0000 o/oo
7	1+380,000	Rampa	619.173	35.0000 o/oo
7	1+400,000	Rampa	619.873	35.0000 o/oo
7	1+420,000	Rampa	620.573	35.0000 o/oo
7	1+440,000	Rampa	621.273	35.0000 o/oo
7	1+460,000	Rampa	621.973	35.0000 o/oo
7	1+465,150	tg. entrada	622.153	35.0000 o/oo
7	1+480,000	KV -2000	622.618	27.5752 o/oo
7	1+500,000	KV -2000	623.069	17.5752 o/oo
7	1+520,000	KV -2000	623.321	7.5752 o/oo
7	1+535,148	tg. salida	623.378	0.0010 o/oo
7	1+540,000	Rampa	623.378	0.0010 o/oo
7	1+560,000	Rampa	623.378	0.0010 o/oo
7	1+580,000	Rampa	623.378	0.0010 o/oo
7	1+600,000	Rampa	623.378	0.0010 o/oo
7	1+620,000	Rampa	623.378	0.0010 o/oo
7	1+640,000	Rampa	623.378	0.0010 o/oo
7	1+660,000	Rampa	623.378	0.0010 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
7	1+680,000	Rampa	623.379	0.0010 o/oo
7	1+700,000	Rampa	623.379	0.0010 o/oo
7	1+720,000	Rampa	623.379	0.0010 o/oo
7	1+740,000	Rampa	623.379	0.0010 o/oo
7	1+760,000	Rampa	623.379	0.0010 o/oo
7	1+780,000	Rampa	623.379	0.0010 o/oo
7	1+800,000	Rampa	623.379	0.0010 o/oo
7	1+820,000	Rampa	623.379	0.0010 o/oo
7	1+840,000	Rampa	623.379	0.0010 o/oo
7	1+860,000	Rampa	623.379	0.0010 o/oo
7	1+880,000	Rampa	623.379	0.0010 o/oo
7	1+900,000	Rampa	623.379	0.0010 o/oo
7	1+920,000	Rampa	623.379	0.0010 o/oo
7	1+940,000	Rampa	623.379	0.0010 o/oo
7	1+960,000	Rampa	623.379	0.0010 o/oo
7	1+980,000	Rampa	623.379	0.0010 o/oo
7	2+000,000	Rampa	623.379	0.0010 o/oo
7	2+020,000	Rampa	623.379	0.0010 o/oo
7	2+040,000	Rampa	623.379	0.0010 o/oo
7	2+060,000	Rampa	623.379	0.0010 o/oo
7	2+080,000	Rampa	623.379	0.0010 o/oo
7	2+100,000	Rampa	623.379	0.0010 o/oo
7	2+120,000	Rampa	623.379	0.0010 o/oo
7	2+140,000	Rampa	623.379	0.0010 o/oo
7	2+160,000	Rampa	623.379	0.0010 o/oo
7	2+180,000	Rampa	623.379	0.0010 o/oo
7	2+200,000	Rampa	623.379	0.0010 o/oo
7	2+212,316	tg. entrada	623.379	0.0010 o/oo
7	2+212,318	Punto alto	623.379	0.0000 o/oo
7	2+220,000	KV -2000	623.364	-3.8412 o/oo
7	2+240,000	KV -2000	623.187	-13.8412 o/oo
7	2+260,000	KV -2000	622.811	-23.8412 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
7	2+280,000	KV -2000	622.234	-33.8412 o/oo
7	2+282,318	tg. salida	622.154	-35.0000 o/oo
7	2+300,000	Pendiente	621.535	-35.0000 o/oo
7	2+320,000	Pendiente	620.835	-35.0000 o/oo
7	2+340,000	Pendiente	620.135	-35.0000 o/oo
7	2+360,000	Pendiente	619.435	-35.0000 o/oo
7	2+380,000	Pendiente	618.735	-35.0000 o/oo
7	2+400,000	Pendiente	618.035	-35.0000 o/oo
7	2+420,000	Pendiente	617.335	-35.0000 o/oo
7	2+440,000	Pendiente	616.635	-35.0000 o/oo
7	2+460,000	Pendiente	615.935	-35.0000 o/oo
7	2+480,000	Pendiente	615.235	-35.0000 o/oo
7	2+500,000	Pendiente	614.535	-35.0000 o/oo
7	2+520,000	Pendiente	613.835	-35.0000 o/oo
7	2+540,000	Pendiente	613.135	-35.0000 o/oo
7	2+560,000	Pendiente	612.435	-35.0000 o/oo
7	2+580,000	Pendiente	611.735	-35.0000 o/oo
7	2+600,000	Pendiente	611.035	-35.0000 o/oo
7	2+620,000	Pendiente	610.335	-35.0000 o/oo
7	2+640,000	Pendiente	609.635	-35.0000 o/oo
7	2+660,000	Pendiente	608.935	-35.0000 o/oo
7	2+680,000	Pendiente	608.235	-35.0000 o/oo
7	2+700,000	Pendiente	607.535	-35.0000 o/oo
7	2+720,000	Pendiente	606.835	-35.0000 o/oo
7	2+740,000	Pendiente	606.135	-35.0000 o/oo
7	2+760,000	Pendiente	605.435	-35.0000 o/oo
7	2+769,513	tg. entrada	605.102	-35.0000 o/oo
7	2+780,000	KV 2000	604.763	-29.7563 o/oo
7	2+800,000	KV 2000	604.268	-19.7563 o/oo
7	2+820,000	KV 2000	603.972	-9.7563 o/oo
7	2+839,511	tg. salida	603.877	-0.0010 o/oo
7	2+840,000	Pendiente	603.877	-0.0010 o/oo



EJE	P.K.	TIPO	COTA	PENDIENTE
7	2+860,000	Pendiente	603.877	-0.0010 o/oo
7	2+880,000	Pendiente	603.877	-0.0010 o/oo
7	2+900,000	Pendiente	603.877	-0.0010 o/oo
7	2+920,000	Pendiente	603.877	-0.0010 o/oo
7	2+940,000	Pendiente	603.877	-0.0010 o/oo
7	2+960,000	Pendiente	603.877	-0.0010 o/oo
7	2+980,000	Pendiente	603.877	-0.0010 o/oo
7	3+000,000	Pendiente	603.877	-0.0010 o/oo
7	3+020,000	Pendiente	603.877	-0.0010 o/oo
7	3+040,000	Pendiente	603.877	-0.0010 o/oo
7	3+060,000	Pendiente	603.877	-0.0010 o/oo
7	3+080,000	Pendiente	603.877	-0.0010 o/oo
7	3+100,000	Pendiente	603.877	-0.0010 o/oo
7	3+112,371	Pendiente	603.877	-0.0010 o/oo

EJE 8. SALTO DE CARNERO PARA LAS ALTERNATIVAS 2 Y 4.

EJE	PENDIENTE	LONGITUD	PARAMETRO	VÉRTICE		ENTRADA AL ACUERDO		SALIDA DEL ACUERDO		BISECT.	DIF.PEN
	(o/oo)	(m.)	( kv )	PK	Z	PK	Z	PK	Z	(m.)	(o/oo)
8						-16,169	617,000				
8	0,001000	48,999	1.400,000	49,714	617,000	25,215	617,000	74,213	617,858	0,214	3,500
8	35,000000	87,500	1.250,000	227,624	623,227	183,874	621,696	271,374	621,696	0,766	-7,000
8	-35,000000							548,736	611,988		

EJE	P.K.	TIPO	COTA	PENDIENTE
8	0+023,996	Rampa	617.000	0.0010 o/oo
8	0+025,215	tg. entrada	617.000	0.0010 o/oo
8	0+040,000	KV 1400	617.078	10.5620 o/oo
8	0+060,000	KV 1400	617.432	24.8477 o/oo
8	0+074,213	tg. salida	617.858	35.0000 o/oo
8	0+080,000	Rampa	618.060	35.0000 o/oo
8	0+100,000	Rampa	618.760	35.0000 o/oo
8	0+120,000	Rampa	619.460	35.0000 o/oo
8	0+140,000	Rampa	620.160	35.0000 o/oo
8	0+160,000	Rampa	620.860	35.0000 o/oo
8	0+180,000	Rampa	621.560	35.0000 o/oo
8	0+183,874	tg. entrada	621.696	35.0000 o/oo
8	0+200,000	KV -1250	622.156	22.0992 o/oo
8	0+220,000	KV -1250	622.438	6.0992 o/oo
8	0+227,624	Punto alto	622.461	0.0000 o/oo
8	0+240,000	KV -1250	622.400	-9.9008 o/oo
8	0+260,000	KV -1250	622.042	-25.9008 o/oo
8	0+271,374	tg. salida	621.696	-35.0000 o/oo
8	0+280,000	Pendiente	621.394	-35.0000 o/oo
8	0+300,000	Pendiente	620.694	-35.0000 o/oo
8	0+320,000	Pendiente	619.994	-35.0000 o/oo
8	0+340,000	Pendiente	619.294	-35.0000 o/oo

EJE	P.K.	TIPO	COTA	PENDIENTE
8	0+360,000	Pendiente	618.594	-35.0000 o/oo
8	0+380,000	Pendiente	617.894	-35.0000 o/oo
8	0+400,000	Pendiente	617.194	-35.0000 o/oo
8	0+420,000	Pendiente	616.494	-35.0000 o/oo
8	0+440,000	Pendiente	615.794	-35.0000 o/oo
8	0+460,000	Pendiente	615.094	-35.0000 o/oo
8	0+480,000	Pendiente	614.394	-35.0000 o/oo
8	0+500,000	Pendiente	613.694	-35.0000 o/oo
8	0+520,000	Pendiente	612.994	-35.0000 o/oo
Fin de proyecto	0+530,072	Pendiente	612,641	-35.0000 o/oo
8	0+540,000	Pendiente	612.294	-35.0000 o/oo
8	0+548,736	Pendiente	611.988	-35.0000 o/oo

## APÉNDICE 3. ESQUEMA DE VÍAS



